

Autonome Provinz Bozen - Provincia Autonoma di Bolzano
Stadtgemeinde Bozen - Comune di Bolzano

STÄDTEBAULICHER AUFWERTUNGSPLAN - ZONE PERATHONERSTRASSE - SÜDTIROLERSTRASSE
PIANO DI RIQUALIFICAZIONE URBANISTICA - ZONA VIA PERATHONER - ALTO ADIGE

WaltherPark

GEH- UND RADWEGVERBINDUNGEN VERDIPLATZ MIT DER ZONE EISACK
COLLEGAMENTI CICLO-PEDONALI DI PIAZZA VERDI CON LA ZONA ISARCO

Proprietà
Eigentümer



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Stadt Bozen

Città di Bolzano - Stadt Bozen

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Geologia e Ambiente
Geologie und Umweltschutz
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Stempel Gemeinde

Planungsphase | Fase

AUSFÜHRUNGSPROJEKT - PROGETTO ESECUTIVO

Planinhalt | Descr. Tav.

PREISANALYSE TECHNISCHER BERICHT
RELAZIONE STATICA

Plankodierung | Cod.

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WaltherPark

WALTHER PARK – BOLZANO

**SOVRAPASSO-SOTTOPASSO
ÜBERFÜHRUNG-UNTERFÜHRUNG**

PROGETTO DEFINITIVO – EINREICHPROJEKT

**RELAZIONE STATICA
STATISCHER BERICHT**



Mai / Maggio 2021

Rev.00

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ALLEGATI - ANLAGEN:

- OUTPUT DI CALCOLO
- VERIFICHE E DIMENSIONAMENTI ESEGUITI A MANO O CON L'UTILIZZO DI FOGLI DI CALCOLO XLS

1 PREMESSE - PRÄMISE

La presente relazione si riferisce al dimensionamento ed alla verifica degli elementi strutturali previsti nell'ambito della realizzazione di un sovrappasso e un sottopasso pedociclabile relativi al progetto di riqualificazione urbanistica via Perathoner – via Alto Adige a Bolzano.

Nello specifico le opere d'arte oggetto della presente relazione sono:

Sottopasso pedociclabile:

Trattasi di un struttura interamente in conglomerato cementizio armato impermeabile con superfici faccia a vista. Il sottopasso presenta una lunghezza complessiva di circa 110m ed una larghezza di 5m. Data la lunghezza della struttura sono presenti giunti di dilatazione e giunti a fessurazione programmata che fungono anche da giunti per la ripresa dei getti. I carichi agenti sulla soletta di copertura del sottopasso sono quelli previsti da NTC2008 per i ponti di prima categoria.

Sovrapasso pedociclabile:

Trattasi di un struttura interamente in conglomerato cementizio armato con elementi prefabbricati e semiprefabbricati. Il sovrappasso, nel suo complesso, è composto da una rampa di accesso con tratto terminale in curva e da un ponte a tre campate. La prima e la terza campata realizzate con soletta e travi parapetto in conglomerato cementizio armato gettato in opera, mentre la campata centrale realizzata a mezzo di solaio a lastra alveolare precompresso poggiante su travi prefabbricate in CAP che fungono sia da elemento portante che da parapetto. Sia le spalle laterali che le pile sono realizzati in conglomerato cementizio armato gettato in opera. La pila lato tunnel è costituita da una trave a sbalzo a sezione variabile poggiante su pilastro circolare, mentre la pila lato Isarco è costituita da un muro.

Le campate laterali sono incastrate alle strutture d'appoggio, mentre la campata centrale viene separata dalle campate laterali mediante giunto di dilatazione così da assumere uno schema statico in semplice appoggio. Le travi portanti prefabbricate vengono fatte appoggiare su elementi d'appoggio in gomma opportunamente dimensionati. L'estremità inferiore della trave prefabbricata in corrispondenza della pila lato tunnel viene rastremata tipo "sella Gerber" in modo tale da nascondere la trave su cui poggia.

Locale ventilazione:

Trattasi di un struttura interamente in conglomerato cementizio armato impermeabile costituita da un locale seminterrato con porte d'accesso su via Mayr Nusser, da un canale scatolare interrato e da un camino fuori terra a sezione circolare cava di altezza circa 9,20m.

Il canale ed il locale seminterrato fungono in parte da elemento di appoggio per la

rampa di accesso al ponte.

Muri di sostegno:

Trattasi di strutture interamente in conglomerato cementizio armato dimensionate per sostenere il terrapieno sul quale si colloca il percorso pedociclabile.

Tale relazione costituisce parte integrante dei disegni esecutivi di progetto nei quali sono riportate le caratteristiche geometriche e statiche delle sezioni strutturali adottate.

Ai fini delle verifiche sono state individuate le azioni che interessano il manufatto e le relative sollecitazioni nella fase statica; per le sezioni maggiormente caratterizzanti le strutture, sono state riportate le verifiche di stabilità e di resistenza adottando il metodo semiprobabilistico degli stati limite. L'azione sismica è stata trascurata in quanto inferiore rispetto all'azione esercitata dal vento;

Per quanto qui non specificatamente riportato si rimanda alla "Relazione Geologica/Geotecnica" allegate alla documentazione progettuale.

2 NORMATIVE – GESETZE UND NORMEN

I calcoli e le verifiche riportate nella presente relazione sono stati condotti con riferimento al disposto delle seguenti norme:

- Legge 5 novembre 1971, n. 1086 – *"Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso ed a struttura metallica"*.
- Ministero dei Lavori Pubblici. Circolare n. 11951, 14 febbraio 1974 - *"Istruzioni relative alla Legge 5 novembre 1971"*.
- Legge 2 febbraio 1974, n. 64 – *"Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche"*.
- D.M. 14.01.2008 – *"Norme tecniche per le costruzioni"*.
- CIRCOLARE 2 febbraio 2009, n. 617 – *"Istruzioni per l'applicazione delle «Nuove norme tecniche per le costruzioni» di cui al decreto ministeriale 14 gennaio 2008."*
- D.P.R. 6 giugno 2001 n. 380 - *"Testo unico delle disposizioni legislative e regolamentari in materia edilizia"*.

Conformemente a quanto previsto dal paragrafo 12 del D.M. 14.01.2008 si sono considerati anche i seguenti riferimenti tecnici che si intendono coerenti con i principi del D.M. stesso:

- EUROCODICE nella forma internazionale EN

- NORMA UNI EN pubblicata sulla Gazzetta Ufficiale dell'Unione Europea
- NORMA UNI inerente le prove, i materiali e i prodotti

Per quanto non specificatamente indicato nei suddetti documenti e per quanto con essi non in contrasto si sono considerati i seguenti riferimenti:

- Direttiva P.C.M. 9 febbraio 2011 "Valutazione e riduzione del rischio sismico del patrimonio culturale"
- Istruzioni del Consiglio Nazionale delle Ricerche: CNR DT-207/2008

3 METODO E CODICI DI CALCOLO BERECHNUGSMETHODE

Le calcolazioni sono state condotte adottando il metodo semiprobabilistico agli stati limite; sono stati soddisfatti i requisiti per la sicurezza allo stato limite ultimo (anche sotto l'azione sismica) e allo stato limite di esercizio. Per quanto riguarda le azioni sismiche sono state esaminate anche le deformazioni relative.

La schematizzazione della procedura progettuale adottata può essere così sinteticamente riassunta:

- individuazione della classe d'uso dell'opera e della sua vita utile;
- definizione delle azioni agenti in condizioni statiche e dinamiche attraverso l'individuazione delle condizioni di carico;
- predisposizione delle combinazioni di carico (con i relativi coefficienti di combinazione) allo SLU, SLE.
- stima dell'involuppo delle azioni agenti;
- predimensionamento delle membrature strutturali;
- applicazione dei criteri della gerarchia delle resistenze e scelta delle soluzioni strutturali che impediscono rotture fragili;
- verifica della funzionalità allo stato limite di danno delle strutture progettate.

La sicurezza e le prestazioni saranno garantite verificando gli stati limite sopra definiti in funzione dell'utilizzo della struttura, della sua vita nominale e di quanto stabilito dalle norme; in particolare si è verificata:

- la sicurezza nei riguardi degli stati limite ultimi (SLU) che possono provocare eccessive deformazioni permanenti, crolli parziali o globali, dissesti, che possono compromettere l'incolumità delle persone e/o la perdita di beni, provocare danni ambientali e sociali, mettere fuori servizio l'opera. Per le verifiche sono stati utilizzati i coefficienti parziali relativi alle azioni ed alle resistenze dei materiali in

accordo a quando previsto dalle NTC per i vari tipi di materiale. I valori utilizzati sono riportati nel seguito;

- la sicurezza nei riguardi degli stati limite di esercizio (SLE) che possono limitare nell'uso e nella durata l'utilizzo della struttura per le azioni di esercizio. In particolare di concerto con il committente e coerentemente alle norme tecniche si sono definiti i limiti riportati nel seguito:
 - freccia massima solai carrabili: $L / 800$ (solo carichi mobili)
- la robustezza nei confronti di opportune azioni accidentali in modo da evitare danni sproporzionati in caso di incendi, urti, esplosioni, errori umani.

Per quanto riguarda le fasi costruttive intermedie la struttura non risulta sollecitata in maniera più gravosa della fase finale.

L'analisi strutturale condotta è stata del tipo: **statica lineare**

La ricerca dei parametri di sollecitazione è stata fatta secondo le disposizioni di carico più gravose avvalendosi di codici di calcolo automatico per l'analisi strutturale. Tali codici sono di sicura ed accertata validità e sono stati impiegati conformemente alle loro caratteristiche.

Tale affermazione è suffragata dai seguenti elementi:

- grande diffusione del codice di calcolo sul mercato;
- storia consolidata del codice di calcolo (svariati anni di utilizzo);
- utilizzo delle versioni più aggiornate (dopo test);
- pratica d'uso frequente nell'attività professionale.

In particolare, sono stati utilizzati i seguenti programmi di calcolo:

Produttore: Dlubal software srl

Versione: 5.05.0030

Estremi della licenza: nr. 9913 rilasciata a Planpunkt srl

Caratteristiche: *Programma di calcolo strutturale agli elementi finiti che esegue il calcolo di strutture spaziali composte da elementi mono e/o bidimensionali anche con non linearità di materiale o con effetti dinamici*

Il sottoscritto ha esaminato preliminarmente la documentazione a corredo del software per valutarne l'affidabilità e soprattutto l'idoneità al caso specifico. Tale documentazione, contiene una esauriente descrizione delle basi teoriche e degli algoritmi impiegati, l'individuazione dei campi d'impiego, nonché casi prova interamente risolti e commentati.

Il sottoscritto, inoltre, ha verificato l'affidabilità del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche.

La valutazione dell'attendibilità del software ha, inoltre, compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali e adottati, anche in fase di primo proporzionamento della struttura. Si allega al termine della presente relazione

elenco sintetico dei controlli svolti (verifiche di equilibrio tra reazioni vincolari e carichi applicati, comparazioni tra i risultati delle analisi e quelli di valutazioni semplificate, etc.)

4 MATERIALI – VERWENDETE MATERIALIEN

Nell'esecuzione delle opere in oggetto è previsto l'utilizzo dei seguenti materiali:

Calcestruzzo

Classe di resistenza ed esposizione	C12/15 C25/30-XC2 C30/37-XC3 XF2 C32/40-XC4 XF4 C45/55-XF2
-------------------------------------	--

Resistenza caratteristica cubica:	$R_{c,k} \geq 8 \text{ N/mm}^2$ $R_{c,k} \geq 30 \text{ N/mm}^2$ $R_{c,k} \geq 37 \text{ N/mm}^2$ $R_{c,k} \geq 40 \text{ N/mm}^2$ $R_{c,k} \geq 55 \text{ N/mm}^2$
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Acciaio per armatura

Tipologia acciaio:	B 450C
Tensione caratteristica di rottura:	$f_{t,k} \geq 540 \text{ N/mm}^2$
Tensione caratteristica di snervamento:	$f_{y,k} \geq 450 \text{ N/mm}^2$

5 DURABILITÀ - DAUERHAFTIGKEIT

Particolare cura è stata posta per garantire la durabilità della struttura, con la consapevolezza che tutte le prestazioni attese potranno essere garantite solo mediante opportune procedure da seguire non solo in fase di progettazione, ma anche di costruzione, manutenzione e gestione dell'opera; si dovranno, inoltre, utilizzare tutti gli accorgimenti utili alla conservazione delle caratteristiche fisiche e dinamiche dei materiali e delle strutture.

La qualità dei materiali e le dimensioni degli elementi sono coerenti con tali obiettivi.

Per garantire la durabilità della struttura sono stati presi in considerazione opportuni stati limite di esercizio (SLE) in funzione dell'uso e dell'ambiente in cui la struttura dovrà vivere limitando sia gli stati tensionali sia, nel caso delle opere in calcestruzzo, l'ampiezza

delle fessure. La definizione quantitativa delle prestazioni, la classe di esposizione e le verifiche sono riportati nel seguito e negli allegati di calcolo.

Per strutture in c.a.: il copriferro minimo da adottare in funzione delle esigenze di protezione dell'armatura e per garantire la corretta trasmissione delle forze di aderenza è stato determinato in base alle prescrizioni delle NTC (§ C4.1.6.1.3 della Circolare) e dell'Eurocodice 2 prospetti 4.2, 4.3N e 4.4N.

6 **GEOLOGIA - GEOLOGIE**

I parametri geotecnici sono stati ottenuti da questo documento:

"Relazione geotecnica progetto preliminare"

Pubblicato da: Geologia e Ambiente

Data: ottobre 2013

"Le informazioni, che vengono riportate in questo rapporto derivano da analisi e studi precedenti su proprietà adiacenti"

Livello terreno esistente a 4-5 m limoso sabbioso e sabbioso limoso

Niveau A vom bestehendes Gelände bis 4-5 m SCHLUFFIGER SAND UND SANDIGER SCHLUFF

Angolo di attrito - Reibungswinkel $\varphi = 28,00^\circ$

Coesione - Kohäsion $c = 0,00 \text{ N/mm}^2$

Peso proprio secco - Feuchtwichte $\gamma = 18,50 \text{ kN/m}^3$

Saturo - Sättigungswichte $\gamma_{\text{SAT}} = 20,00 \text{ kN/m}^3$

Livello B 4-5 m fino a 20 m dal terreno esistente. Sabbia e ghiaia

Niveau B vom 4-5 m bis 20 m vom bestehendes Gelände. SAND UND KIES

Angolo di attrito - Reibungswinkel $\varphi = 34,00^\circ$

Coesione - Kohäsion $c = 0,00 \text{ N/mm}^2$

Peso proprio secco - Feuchtwichte $\gamma = 19,00 \text{ kN/m}^3$

Saturo - Sättigungswichte $\gamma_{SAT} = 20,00 \text{ kN/m}^3$

Falda - Grundwasserspiegel – 13.0 ÷ - 15.0 m dal piano campagna - vom bestehendes Gelände

7 SISMA- ERBEBEN

I parametri sismicio sono stati ottenuti dal foglio xls fornito dal sito del Consiglio Superiore dei Lavori Pubblici

TIPI DI COSTRUZIONE		VITA NOMINALE V_N
1	Opere provvisorie, Opere provvisionali, Strutture in fase costruttiva	≤ 10 anni
2	Opere ordinarie, ponti, opere infrastrutturali e dighe di dimensioni contenute o di importanza normale	≥ 50 anni
3	Grandi opere, ponti, opere infrastrutturali e dighe di grandi dimensioni o di importanza strategica	≥ 100 anni

FASE 1. INDIVIDUAZIONE DELLA PERICOLOSITÀ DEL SITO

Ricerca per coordinate

LONGITUDINE
11,3346

LATITUDINE
46,4936

Ricerca per comune

REGIONE
Trentino-Alto Adige

PROVINCIA
Bolzano/Bozen

COMUNE
Bolzano

Elaborazioni grafiche

Grafici spettri di risposta ▶▶▶

Variabilità dei parametri ▶▶▶

Elaborazioni numeriche

Tabella parametri ▶▶▶

Nodi del reticolo intorno al sito

Reticolo di riferimento

Controllo sul reticolo
 Sito esterno al reticolo
 Interpolazione su 3 nodi
 Interpolazione corretta

Interpolazione
 superficie rigata

La "Ricerca per comune" utilizza le coordinate ISTAT del comune per identificare il sito. Si sottolinea che all'interno del territorio comunale le azioni sismiche possono essere significativamente diverse da quelle così individuate e si consiglia, quindi, la "Ricerca per coordinate".

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FASE 1
FASE 2
FASE 3

FASE 2. SCELTA DELLA STRATEGIA DI PROGETTAZIONE

Vita nominale della costruzione (in anni) - V_N info

Coefficiente d'uso della costruzione - C_U info

Valori di progetto

Periodo di riferimento per la costruzione (in anni) - V_R info

Periodi di ritorno per la definizione dell'azione sismica (in anni) - T_R info

Stati limite di esercizio - SLE {

- SLO - $P_{VR} = 81\%$
- SLD - $P_{VR} = 63\%$

Stati limite ultimi - SLU {

- SLV - $P_{VR} = 10\%$
- SLC - $P_{VR} = 5\%$

Elaborazioni

- Grafici parametri azione
- Grafici spettri di risposta
- Tabella parametri azione

Strategia di progettazione

LEGENDA GRAFICO

- Strategia per costruzioni ordinarie
- Strategia scelta

INTRO FASE 1 FASE 2 FASE 3

FASE 3. DETERMINAZIONE DELL'AZIONE DI PROGETTO

Stato Limite

Stato Limite considerato info

Risposta sismica locale

Categoria di sottosuolo info $S_S = 1,500$ $C_C = 1,490$ info

Categoria topografica info $h/H = 1,000$ $S_T = 1,200$ info
(h=quota sito, H=altezza rilievo topografico)

Compon. orizzontale

Spettro di progetto elastico (SLE) Smorzamento ξ (%) $\eta = 1,000$ info

Spettro di progetto inelastico (SLU) Fattore q_0 Regol. in altezza info

Compon. verticale

Spettro di progetto Fattore q $\eta = 0,667$ info

Elaborazioni

- Grafici spettri di risposta
- Parametri e punti spettri di risposta

Spettri di risposta

— Spettro di progetto - componente orizzontale

— Spettro di progetto - componente verticale

— Spettro elastico di riferimento (Cat. A-T1, $\xi = 5\%$)

INTRO FASE 1 FASE 2 FASE 3

FASE 3. DETERMINAZIONE DELL'AZIONE DI PROGETTO

Stato Limite

Stato Limite considerato **SLD** info

Risposta sismica locale

Categoria di sottosuolo **C** info

$S_s =$ **1,500**

$C_c =$ **1,826** info

Categoria topografica **T2** info

$h/H =$ **1,000**
(h=quota sito, H=altezza rilievo topografico)

$S_T =$ **1,200** info

Compon. orizzontale

Spettro di progetto elastico (SLE)

Smorzamento ξ (%) **5**

$\eta =$ **1,000** info

Spettro di progetto inelastico (SLU)

Fattore q_0 **2**

Regol. in altezza **no** info

Compon. verticale

Spettro di progetto

Fattore q **1,5**

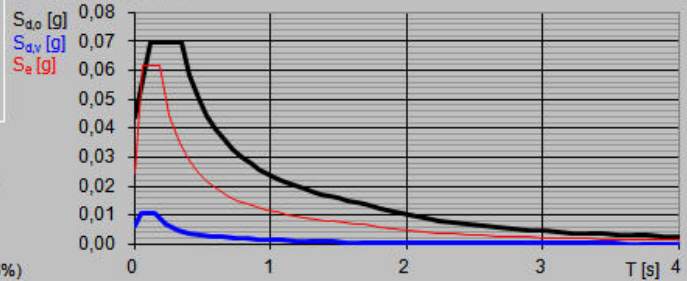
$\eta =$ **0,667** info

Elaborazioni

Grafici spettri di risposta

Parametri e punti spettri di risposta

Spettri di risposta



INTRO

FASE 1

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8 CARICHI - BELASTUNGEN

I valori delle azioni considerati nei calcoli sono quelli previsti dal D.M. 14.01.2008; in particolare sono stati considerati i carichi elementari di seguito riportati:

➤ SOVRACCARICHI PERMANENTI SOTTOPASSO

- Pavimentazione stradale (0,2m x 24kN/m ²)	=	4,80	kN/m ²
- Terreno (0,7m x 18kN/m ³)	=	12,60	kN/m ²
TOTALE		17,4	kN/m²
		0	

SOVRACCAR**ICHI PERMANENTI SOVRAPASSO**

- Pavimentazione stradale (0,08m x 24kN/m ²)	=	1,95	kN/m ²
- Massciata (0,35m x 18kN/m ³)	=	6,30	kN/m ²
- Guaina impermeabile	=	0,15	kN/m ²
TOTALE		8,40	kN/m²

➤ SPINTA DELLE TERRE E DEL SOVRACCARICO SUI MURI CONTROTERRA E DI SOSTEGNO

La spinta delle terre viene valutata con la seguente formula:

$$St = \frac{1}{2} \cdot \gamma \cdot H^2 \cdot Ka = 0,5 \cdot 18 \text{ kN/m}^3 \cdot H^2 \cdot 0,345 \quad \rightarrow \quad \mathbf{St = 3,11 \cdot H^2 \cdot [kN]}$$

$$qt = \gamma \cdot H \cdot Ka = 19 \text{ kN/m}^3 \cdot H \cdot 0,345 \quad \rightarrow \quad \mathbf{Qt = 6,21 \cdot H \quad [kN/ml]}$$

dove

$$\phi = 34^\circ \quad \text{angolo di attrito terreno (valore caratteristico)}$$

$$\gamma = 19 \text{ kN/m}^3 \quad \text{peso specifico terreno (valore caratteristico)}$$

$$\phi' = \arctg(\tg 34^\circ / 1,25) = 29,26^\circ \quad \text{angolo di attrito terreno (valore di calcolo)}$$

$$\gamma' = 19 \text{ kN/m}^3 / 1 = 19 \text{ kN/m}^3 \quad \text{peso specifico terreno (valore di calcolo)}$$

$$Ka = \tg^2(45^\circ - (\phi' / 2)) = 0,345 \quad \text{coefficiente di spinta attiva}$$

La quota di carico accidentale (mobile), che agisce come spinta orizzontale sui muri di contenimento, viene calcolata con la seguente formula:

$$S_q = q \cdot H \cdot B \cdot K_a = 5 \text{ kN/m}^2 \cdot H \cdot 1,00\text{m} \cdot 0,345 \rightarrow \quad \mathbf{S_q = 1,73 \cdot H} \quad [\text{kN}]$$

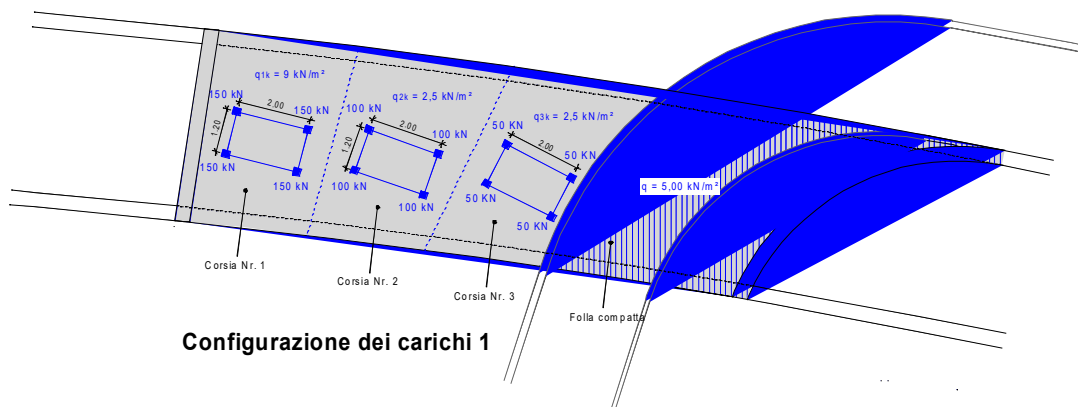
$$S_q = q \cdot K_a = 5 \text{ kN/m}^2 \cdot 0,345 \rightarrow \quad \mathbf{Q_q = 1,73} \quad [\text{kN/m}]$$

➤ CARICHI MOBILI SOTTOPASSO

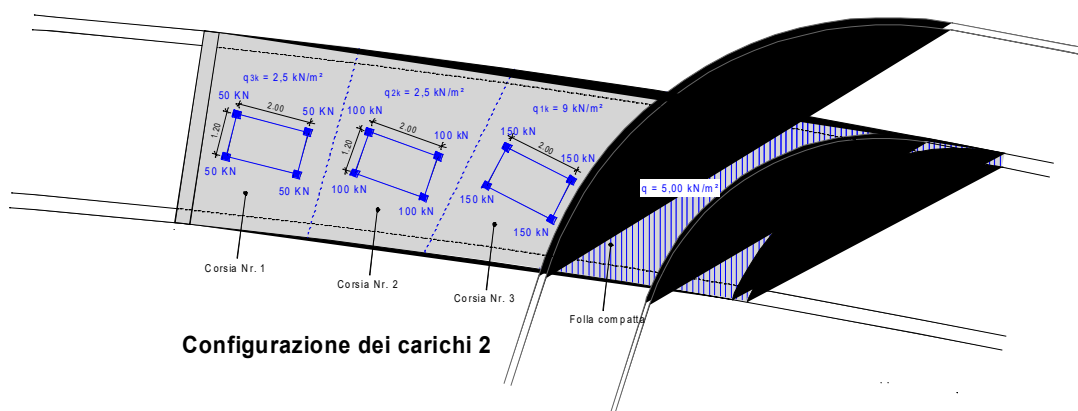
La soletta di copertura del sottopasso viene assimilata ad una soletta di un ponte. Pertanto, su di essa, vengono applicati i carichi mobili previsti dalle NTC2008 per ponti di Prima Categoria. Sulla superficie soggetta a traffico veicolare vengono applicati i carichi come da Schema di carico nr. 1 considerando, data la larghezza della carreggiata, nr. 3 corsie convenzionali.

Sulla superficie soggetta a traffico pedo-ciclabile, invece, vengono applicati i carichi da folla compatta come da Schema di carico nr. 5.

Di seguito si riporta la disposizione dei carichi mobili sulla soletta del sottopasso.



Configurazione dei carichi 1



Configurazione dei carichi 2

Carico su corsia 1	→	$Q_{1k} = 150 \text{ kN}$	$q_{1k} = 9 \text{ kN/m}^2$
Carico su corsia 2	→	$Q_{2k} = 100 \text{ kN}$	$q_{2k} = 2,50 \text{ kN/m}^2$
Carico su corsia 3	→	$Q_{3k} = 50 \text{ kN}$	$q_{3k} = 2,50 \text{ kN/m}^2$
Carico da folla compatta	→	$q = 5,00 \text{ kN/m}^2$	

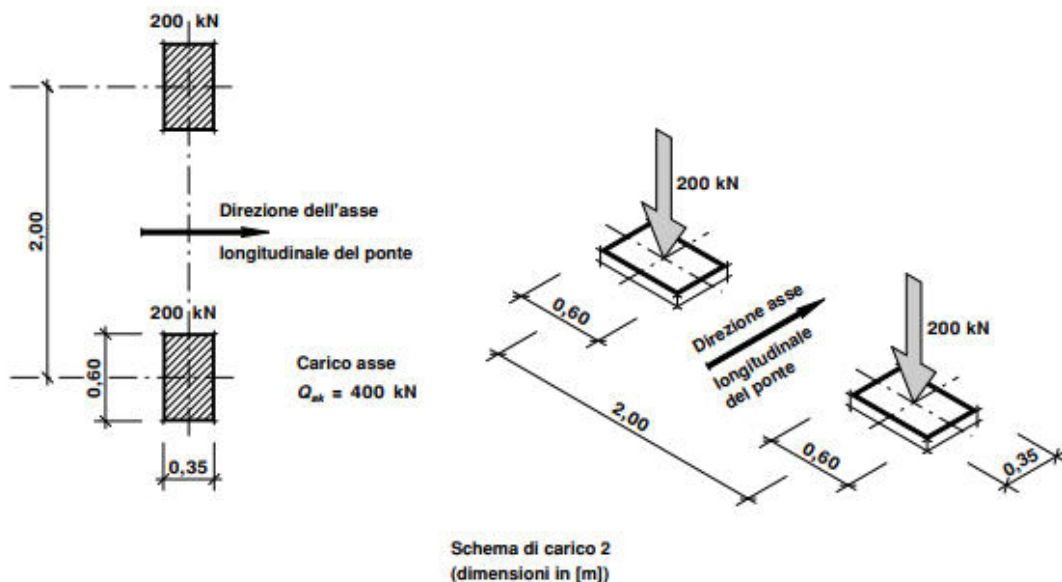
➤ CARICHI MOBILI PONTE

I carichi mobili da applicare al ponte pedociclabile sono quelli previsti dalle NTC2008 per Ponti di Terza Categoria. Di seguito i valori dei carichi mobili considerati nel calcolo del ponte:

$q = 5 \text{ kN/m}^2$ carico verticale uniformemente distribuito (folla compatta)

$F = 1,5 \text{ kN/ml}$ azione orizzontale (urto) distribuita su una lunghezza di 50cm e applicata sul parapetto ad una altezza $H = 1,2 \text{ m}$.

L'azione orizzontale F viene utilizzata per le verifiche locali e si considera agente unitamente al carico verticale isolato dello schema di carico nr. 2, di seguito rappresentato:



➤ **CARICO NEVE**

Il carico provocato dalla neve sulla copertura è stato valutato mediante la seguente espressione:

$$q_s = \mu_i \times q_{sk} \times C_E \times C_T$$

dove:

q_s è il carico neve sulla copertura;

μ_i è il coefficiente di forma della copertura:

q_{sk} valore caratteristico di riferimento del carico neve al suolo per un periodo di ritorno di 50 anni;

C_E è il coefficiente di esposizione;

C_T è il coefficiente termico.

Nel caso in esame si ha:

☉	Zona I - Alpina Aosta, Belluno, Bergamo, Biella, Bolzano, Brescia, Como, Cuneo, Lecco, Pordenone, Sondrio, Torino, Trento, Udine, Verbania, Vercelli, Vicenza.	$q_{sk} = 1,50 \text{ kN/m}^2$ $q_{sk} = 1,39 [1+(a_s/728)^2] \text{ kN/m}^2$	$a_s \leq 200 \text{ m}$ $a_s > 200 \text{ m}$
☽	Zona I - Mediterranea Alessandria, Ancona, Asti, Bologna, Cremona, Forlì-Cesena, Lodi, Milano, Modena, Novara, Parma, Pavia, Pesaro e Urbino, Piacenza, Ravenna, Reggio Emilia, Rimini, Treviso, Varese.	$q_{sk} = 1,50 \text{ kN/m}^2$ $q_{sk} = 1,35 [1+(a_s/602)^2] \text{ kN/m}^2$	$a_s \leq 200 \text{ m}$ $a_s > 200 \text{ m}$
☽	Zona II Arezzo, Ascoli Piceno, Bari, Campobasso, Chieti, Ferrara, Firenze, Foggia, Genova, Gorizia, Imperia, Isernia, La Spezia, Lucca, Macerata, Mantova, Massa Carrara, Padova, Perugia, Pescara, Pistoia, Prato, Rovigo, Savona, Teramo, Trieste, Venezia, Verona.	$q_{sk} = 1,00 \text{ kN/m}^2$ $q_{sk} = 0,85 [1+(a_s/481)^2] \text{ kN/m}^2$	$a_s \leq 200 \text{ m}$ $a_s > 200 \text{ m}$
☽	Zona III Agrigento, Avellino, Benevento, Bindi, Cagliari, Callianisetta, Carbonia-Iglesias, Caserta, Catania, Catanzaro, Cosenza, Crotone, Enna, Frosinone, Grosseto, L'Aquila, Latina, Lecce, Livorno, Matera, Medio Campidano, Messina, Napoli, Nuoro, Ogliastra, Olbia Tempio, Oristano, Palermo, Pesa, Pforzenza, Ragusa, Reggio Calabria, Rieti, Roma, Salerno, Sassari, Siena, Siracusa, Taranto, Terni, Trapani, Vibo Valentia, Viterbo.	$q_{sk} = 0,60 \text{ kN/m}^2$ $q_{sk} = 0,51 [1+(a_s/481)^2] \text{ kN/m}^2$	$a_s \leq 200 \text{ m}$ $a_s > 200 \text{ m}$

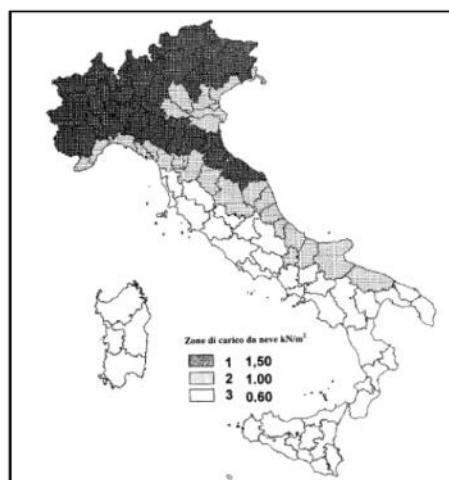
q_s (carico neve sulla copertura [N/mq]) = $\mu_i q_{sk} C_E C_T$
 μ_i (coefficiente di forma)
 q_{sk} (valore caratteristico della neve al suolo [kN/mq])
 C_E (coefficiente di esposizione)
 C_T (coefficiente termico)

Valore caratteristico della neve al suolo

a_s (altitudine sul livello del mare [m])	220
q_{sk} (val. caract. della neve al suolo [kN/mq])	1,52

Coefficiente termico

Il coefficiente termico può essere utilizzato per tener conto della riduzione del carico neve a causa dello scioglimento della stessa, causato dalla perdita di calore della costruzione. Tale coefficiente tiene conto delle proprietà di isolamento termico del materiale utilizzato in copertura. In assenza di uno specifico e documentato studio, deve essere utilizzato $C_T = 1$.

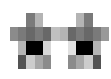


Coefficiente di esposizione

Topografia	Descrizione	C_E
Riparata	Aree in cui la costruzione considerata è sensibilmente più bassa del circostante terreno o circondata da costruzioni o alberi più alti.	1,1

Valore del carico della neve al suolo

q_s (carico della neve al suolo [kN/mq])	1,67
--	------



$v_b (T_R) = v_b \times \alpha_R$ [m/s]	25,018
---	--------

p (pressione del vento [N/mq]) = $q_b \cdot c_e \cdot c_p \cdot c_d$
 q_b (pressione cinetica di riferimento [N/mq])
 c_e (coefficiente di esposizione)
 c_p (coefficiente di forma)
 c_d (coefficiente dinamico)



Figura 3.3.1 – Mappa delle zone in cui è suddiviso il territorio italian

Pressione cinetica di riferimento

$q_b = 1/2 \cdot \rho \cdot v_b^2$ ($\rho = 1,25$ kg/mc)

q_b [N/mq]	391,20
--------------	--------

Coefficiente di forma

E' il coefficiente di forma (o coefficiente aerodinamico), funzione della tipologia e della geometria della costruzione e del suo orientamento rispetto alla direzione del vento. Il suo valore può essere ricavato da dati suffragati da opportuna documentazione o da prove sperimentali in galleria del vento.

Coefficiente dinamico

Esso può essere assunto autelativamente pari ad 1 nelle costruzioni di tipologia ricorrente, quali gli edifici di forma regolare non eccedenti 80 m di altezza ed i capannoni industriali, oppure può essere determinato mediante analisi specifiche o facendo riferimento a dati di comprovata affidabilità.

Coefficiente di esposizione

Classe di rugosità del terreno

C) Aree con ostacoli diffusi (alberi, case, muri, recinzioni,...); aree con rugosità non riconducibile alle classi A, B, D

Categoria di esposizione

$c_e(z) = k_r^2 \cdot c_t \cdot \ln(z/z_0) [7 + c_t \cdot \ln(z/z_0)]$ per $z \geq z_{min}$
 $c_e(z) = c_e(z_{min})$ per $z < z_{min}$

Zona	Classe di rugosità	a_s [m]
1	C	220

Cat. Esposiz.	k_r	z_0 [m]	z_{min} [m]	c_t
III	0,2	0,1	5	1

Coefficienti di forza per impalcati da ponte isolati (CNR DT-207/2008 - G.6.11.1)

Larghezza impalcato	d	5,70	m
Altezza totale ingombro impalcato	h_{TOT}	2,30	m
	d/h_{TOT}	2,48	
Coefficiente di forza	C_{Fx}	0,65	ortogonale all'asse del ponte
	C_{fy}	+/- 0,95	parallelo all'asse del ponte
Coefficiente di momento	C_{fmz}	+/- 0,20	intorno alla linea d'asse del ponte

PRESSIONE DEL VENTO

Pressione cinetica di riferimento	q_b	0,39	kN/m ²
Coefficiente topografico	C_T	1	
Coefficiente di esposizione	C_E	1,82	
Pressione del vento normale all'asse	p_x	0,46	kN/m²
Pressione del vento parallelo all'asse	p_y	+/- 0,67	kN/m²

➤ **VARIAZIONI TERMICHE, RITIRO E VISCOSITÀ**

Le variazioni termiche così come il ritiro e la viscosità non vengono considerate nel calcolo in quanto influenti rispetto alle altre azioni considerate.

9 COMBINAZIONI DI CARICO - LASTFALLKOMBINATIONEN

Con riferimento alle azioni elementari prima determinate, si sono considerate le seguenti combinazioni di carico:

- Combinazione fondamentale, impiegata per gli stati limite ultimi (SLU):

$$F_d = \gamma_g G_k + \gamma_p P_k + \gamma_q \left[Q_{1k} + \sum_{i=2}^{i=n} \psi_{0i} Q_{ik} \right]$$

dove:

G_k = valore caratteristico delle azioni permanenti

P_k = valore caratteristico della forza di precompressione

Q_{1k} = valore caratteristico dell'azione variabile di base di ogni combinazione

Q_{ik} = valore caratteristico dell' i -esima azione variabile

γ_g = coeff. parziale = 1.3 (1.0 se il suo contributo aumenta la sicurezza)

γ_p = coeff. parziale = 0.9 (1.2 se il suo contributo diminuisce la sicurezza)

γ_q = coeff. parziale = 1.5 (0.0 se il suo contributo aumenta la sicurezza)

- Combinazione sismica (SLV):

$$F_d = E + G_k + P_k + \left[\sum_i (\psi_{ji} Q_{ik}) \right]$$

dove:

E = valore dell'azione sismica per lo stato limite in esame

Q_k = valore caratteristico delle azioni permanenti

P_k = valore caratteristico delle azioni di precompressione

Q_{ki} = valori caratteristici delle azioni variabili, tra loro indipendenti

$\psi_{0,i}$ = coeff. che fornisce il valore raro dell'azione variabile

- Stato Limite di Danno (SLD):

L'azione sismica, ottenuta dallo spettro di progetto per lo stato limite di danno, è stata combinata con le altre azioni mediante la seguente relazione:

$$F_d = E + G_k + P_k + \left[\sum_i (\psi_{ji} Q_{ik}) \right]$$

dove:

E = valore dell'azione sismica per lo stato limite in esame

Q_k = valore caratteristico delle azioni permanenti

P_k = valore caratteristico delle azioni di precompressione

Q_{ki} = valori caratteristici delle azioni variabili, tra loro indipendenti

$\psi_{0,i}$ = coeff. che fornisce il valore raro dell'azione variabile

- Stato Limite di Esercizio (SLE):

Le combinazioni previste per gli SLE sono le seguenti:

$$F_r = G_k + P_k + Q_{1k} + \sum_i (\psi_{0i} Q_{ik}) \quad \text{combinazione rara}$$

$$F_f = G_k + P_k + \psi_{11} Q_{1k} + \sum_i (\psi_{2i} Q_{ik}) \quad \text{combinazione frequente}$$

$$F_q = G_k + P_k + \sum_i (\psi_{2i} Q_{ik}) \quad \text{combinazione quasi permanente}$$

dove:

ψ_{1i} = coeff. atto a definire i valori delle azioni ammissibili ai frattali di ordine 0,95 delle

distribuzioni dei valori istantanei;

ψ_{2i} = coeff. atto a definire i valori quasi permanenti delle azioni ammissibili ai valori medi

delle distribuzioni dei valori istantanei

Categoria/Azione variabile	ψ_{0j}	ψ_{1j}	ψ_{2j}
Categoria A Ambienti ad uso residenziale	0,7	0,5	0,3
Categoria B Uffici	0,7	0,5	0,3
Categoria C Ambienti suscettibili di affollamento	0,7	0,7	0,6
Categoria D Ambienti ad uso commerciale	0,7	0,7	0,6
Categoria E Biblioteche, archivi, magazzini e ambienti ad uso industriale	1,0	0,9	0,8
Categoria F Rimesse e parcheggi (per autoveicoli di peso ≤ 30 kN)	0,7	0,7	0,6
Categoria G Rimesse e parcheggi (per autoveicoli di peso > 30 kN)	0,7	0,5	0,3
Categoria H Coperture	0,0	0,0	0,0
Vento	0,6	0,2	0,0
Neve (a quota ≤ 1000 m s.l.m.)	0,5	0,2	0,0
Neve (a quota > 1000 m s.l.m.)	0,7	0,5	0,2
Variazioni termiche	0,6	0,5	0,0

10 SCHEMATIZZAZIONE E MODELLAZIONE DELLA STRUTTURA – MODELLIERUNG DER STRUKTUR

La struttura e il suo comportamento sotto le azioni statiche e dinamiche è stato adeguatamente valutato, interpretato e trasferito in un modello tridimensionale; tale modello ha consentito di effettuare un'analisi particolarmente reale sia della distribuzione di massa che della effettiva rigidità.

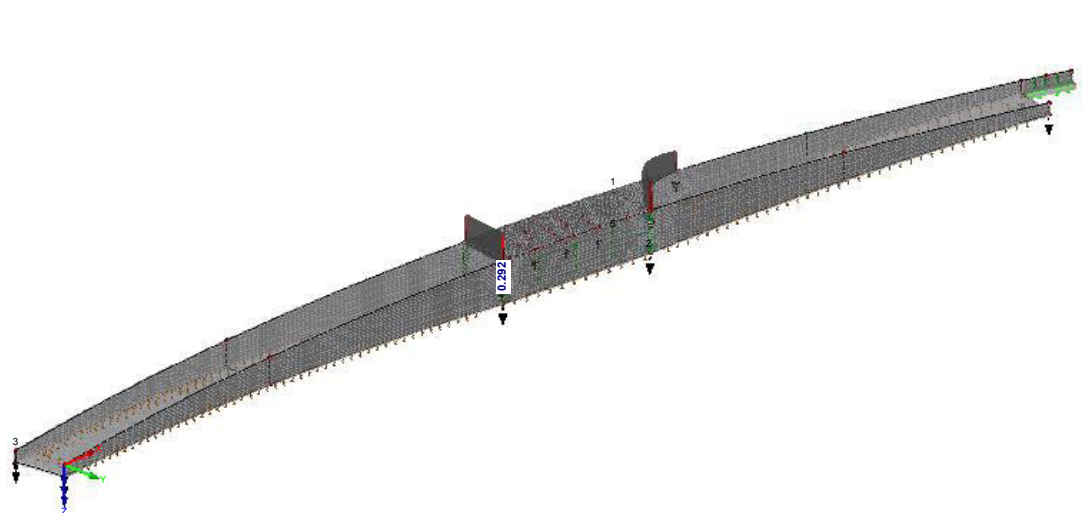
Il modello rappresenta la struttura costituita da: *pareti e pilastri portanti su suolo alla Winkler, travi e solette bidirezionali; l'interazione terreno-struttura è stata tenuta in conto considerando un comportamento del terreno sostanzialmente rappresentato tramite una schematizzazione lineare alla Winkler, caratterizzata da una opportuna costante di sottofondo.*

L'analisi strutturale, nella fase statica, è stata condotta con *il metodo degli spostamenti per la valutazione dello stato tensodeformativo indotto da carichi statici.* L'analisi

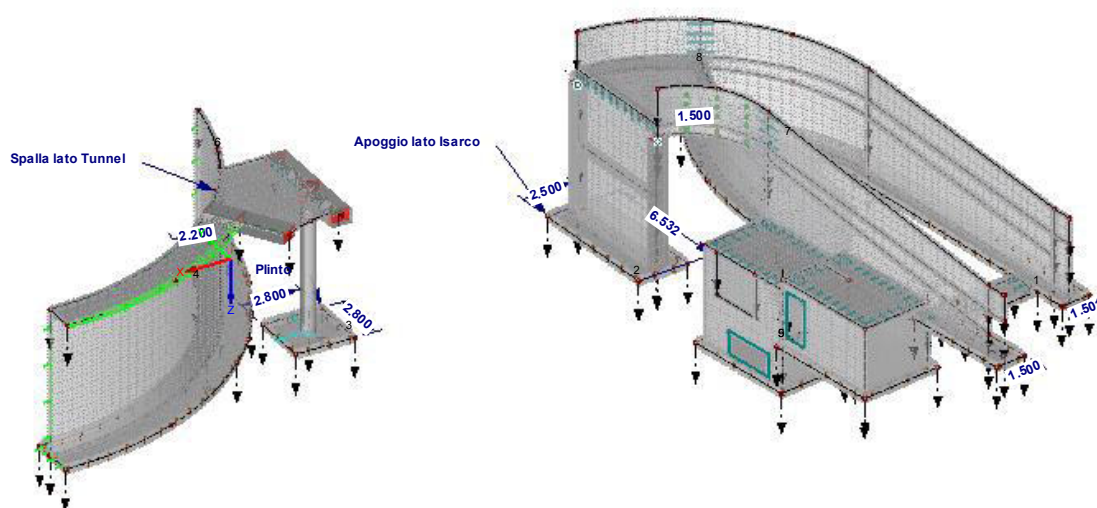
strutturale, nella fase sismica, è stata condotta con *il metodo dell'analisi modale e dello spettro di risposta in termini di accelerazione per la valutazione dello stato tensodeformativo indotto da carichi dinamici.*

In entrambi i casi l'analisi strutturale è stata condotta con il metodo degli elementi finiti.

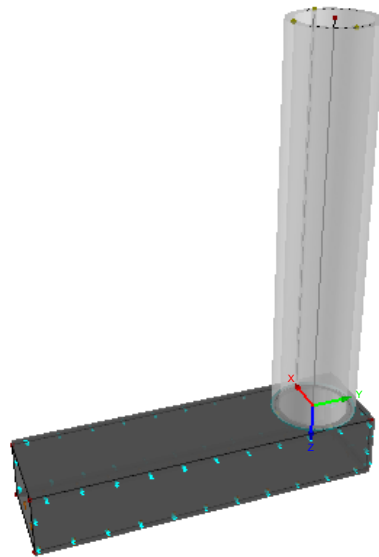
Le figure di seguito riportate illustrano il modello tridimensionale adottato.



Sottopasso



Sovrapasso



Camino

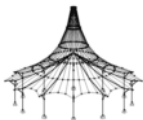
11 CONCLUSIONI - SCHLUSSBEMERKUNGEN

Al fine di fornire un giudizio motivato di accettabilità dei risultati, come richiesto al § 10.2 NTC08, il sottoscritto progettista strutturale assevera di aver:

- a) esaminato preliminarmente la documentazione a corredo del software Dlubal R-Fem e di ritenerlo affidabile ed idoneo per la progettazione della struttura in oggetto;
- b) controllato accuratamente i tabulati di calcolo;
- c) confrontato i risultati del software con quelli ottenuti con semplici calcoli di massima;
- d) esaminato gli stati tensionali e deformativi e di ritenerli consistenti e coerenti con la schematizzazione e modellazione della struttura.

Il sottoscritto, pertanto, ritiene che i risultati riportati nel presente elaborato siano corretti e che il progetto strutturale sia conforme alle Leggi 1086/71 e 64/74, e al DM 14/01/2008 (Norme tecniche per le costruzioni).

ALLEGATI ANLAGEN



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

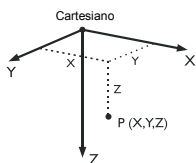
MODELLO - DATI GENERALI

Generale	Nome del modello	: Sottopasso
	Tipo di modello	: 3D
	Direzione positiva dell'asse globale Z	: Verso il basso
	Classificazione dei casi e delle combinazioni di carico	: Secondo la normativa: EN 1990 + EN 1991-2; Road Bridges
	Appendice nazionale: CEN - UE	: <input checked="" type="checkbox"/> Combinazioni di carico
	<input checked="" type="checkbox"/> Crea combinazioni automaticamente	

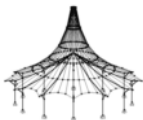
IMPOSTAZIONI MESH EF

Generale	Lunghezza obiettivo degli elementi finiti	l_{FE}	: 0.5 m
	Massima distanza tra un nodo e una linea per integrarlo nella linea	ϵ	: 0.0 m
	Massimo numero di nodi della mesh (in migliaia)		: 500
Aste	Numero di divisioni delle aste di tipo fune, con vincolo esterno elastico, rastremazioni o caratteristiche plastiche		: 10
	<input checked="" type="checkbox"/> Attiva divisioni delle aste per grandi deformazioni o analisi post-critica		
	<input checked="" type="checkbox"/> Usa divisione per aste con nodo giacente su di esse		
Superfici	Massimo rapporto delle diagonali del rettangolo dell'EF	Δ_D	: 1.800
	Massima inclinazione fuori piano di due elementi finiti	α	: 0.50 °
	Direzione di forma degli elementi finiti		: Triangoli e quadrangoli <input checked="" type="checkbox"/> Alcuni quadrati dove possibile

1.1 NODI



Nodo nr.	Tipo di nodo	Nodo di riferimento	Sistema di coordinate	Coordinate del nodo			Commento
				X [m]	Y [m]	Z [m]	
1	Standard	-	Cartesiano	0.000	0.000	0.000	
2	Standard	-	Cartesiano	69.962	-3.239	3.800	
3	Standard	-	Cartesiano	53.705	-0.603	0.000	
4	Standard	-	Cartesiano	-0.614	-4.811	0.000	
5	Standard	-	Cartesiano	69.148	1.542	3.800	
6	Standard	-	Cartesiano	54.440	-5.402	0.000	
7	Standard	-	Cartesiano	55.537	-5.275	0.000	
8	Standard	-	Cartesiano	57.524	-5.048	0.000	
9	Standard	-	Cartesiano	58.622	-4.922	0.000	
10	Standard	-	Cartesiano	59.718	-4.782	0.000	
11	Standard	-	Cartesiano	61.701	-4.520	0.000	
12	Standard	-	Cartesiano	62.795	-4.367	0.000	
13	Standard	-	Cartesiano	63.888	-4.210	0.000	
14	Standard	-	Cartesiano	65.866	-3.911	0.000	
15	Standard	-	Cartesiano	66.957	-3.739	0.000	
16	Standard	-	Cartesiano	69.864	-3.256	0.000	
17	Standard	-	Cartesiano	54.397	-0.531	0.000	
18	Standard	-	Cartesiano	56.384	-0.306	0.000	
19	Standard	-	Cartesiano	57.067	-0.225	0.000	
20	Standard	-	Cartesiano	57.762	-0.140	0.000	
21	Standard	-	Cartesiano	59.746	0.111	0.000	
22	Standard	-	Cartesiano	60.422	0.201	0.000	
23	Standard	-	Cartesiano	61.122	0.292	0.000	
24	Standard	-	Cartesiano	63.102	0.577	0.000	
25	Standard	-	Cartesiano	63.771	0.676	0.000	
26	Standard	-	Cartesiano	69.049	1.526	0.000	
28	Standard	-	Cartesiano	76.157	-2.081	0.000	
29	Standard	-	Cartesiano	73.014	-2.689	0.000	
30	Standard	-	Cartesiano	88.066	5.638	0.000	
31	Standard	-	Cartesiano	92.387	1.774	0.000	
32	Standard	-	Cartesiano	108.307	6.760	0.000	
33	Standard	-	Cartesiano	112.551	8.403	0.000	
34	Standard	-	Cartesiano	106.658	11.347	0.000	
35	Standard	-	Cartesiano	53.705	-0.603	3.800	
36	Standard	-	Cartesiano	54.440	-5.402	3.800	
37	Standard	-	Cartesiano	26.896	-6.708	2.400	
38	Standard	-	Cartesiano	0.000	0.000	1.000	
39	Standard	-	Cartesiano	-0.614	-4.811	1.000	
40	Standard	-	Cartesiano	112.551	8.403	1.000	
41	Standard	-	Cartesiano	106.658	11.347	1.000	
42	Standard	-	Cartesiano	26.896	-6.708	0.002	
44	Standard	-	Cartesiano	72.076	-1.493	0.000	
45	Standard	-	Cartesiano	69.148	1.542	0.000	
46	Standard	-	Cartesiano	69.864	-3.256	3.800	
48	Standard	-	Cartesiano	110.435	7.566	0.000	
54	Standard	-	Cartesiano	108.307	6.760	1.000	
56	Standard	-	Cartesiano	69.049	1.526	3.800	
59	Standard	-	Cartesiano	88.066	5.638	2.400	
60	Standard	-	Cartesiano	88.880	0.857	2.400	
63	Sulla linea	9	Cartesiano	88.881	0.839	0.000	
64	Standard	-	Cartesiano	88.881	0.839	2.400	
66	Standard	-	Cartesiano	110.435	7.566	1.000	
83	Standard	-	Cartesiano	109.372	7.159	0.750	
84	Standard	-	Cartesiano	110.435	7.566	0.750	
85	Standard	-	Cartesiano	111.494	7.981	0.750	
86	Standard	-	Cartesiano	109.372	7.159	0.500	
87	Standard	-	Cartesiano	110.435	7.566	0.500	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

1.1 NODI

Nodo nr.	Tipo di nodo	Nodo di riferimento	Sistema di coordinate	Coordinate del nodo			Commento
				X [m]	Y [m]	Z [m]	
88	Standard	-	Cartesiano	111.494	7.981	0.500	
89	Standard	-	Cartesiano	109.372	7.159	0.250	
90	Standard	-	Cartesiano	110.435	7.566	0.250	
91	Standard	-	Cartesiano	111.494	7.981	0.250	
92	Standard	-	Cartesiano	26.835	-1.857	2.400	
93	Standard	-	Cartesiano	26.835	-1.857	0.002	
116	Standard	-	Cartesiano	65.412	-0.203	3.800	
117	Standard	-	Cartesiano	65.610	-1.399	3.800	
118	Standard	-	Cartesiano	65.809	-2.596	3.800	
119	Standard	-	Cartesiano	61.571	-0.736	3.800	
120	Standard	-	Cartesiano	61.764	-1.934	3.800	
121	Standard	-	Cartesiano	61.958	-3.131	3.800	
122	Standard	-	Cartesiano	57.730	-1.269	3.800	
123	Standard	-	Cartesiano	57.919	-2.468	3.800	
124	Standard	-	Cartesiano	58.107	-3.667	3.800	
125	Standard	-	Cartesiano	57.544	-0.094	2.850	
126	Standard	-	Cartesiano	57.548	-0.118	1.900	
127	Standard	-	Cartesiano	57.551	-0.142	0.950	
128	Standard	-	Cartesiano	61.382	0.428	2.850	
129	Standard	-	Cartesiano	61.386	0.395	1.900	
130	Standard	-	Cartesiano	61.391	0.362	0.950	
131	Standard	-	Cartesiano	65.217	0.970	2.850	
132	Standard	-	Cartesiano	65.220	0.946	1.900	
133	Standard	-	Cartesiano	65.224	0.922	0.950	
134	Standard	-	Cartesiano	66.018	-3.863	0.950	
135	Standard	-	Cartesiano	62.165	-4.424	0.950	
136	Standard	-	Cartesiano	58.305	-4.936	0.950	
137	Standard	-	Cartesiano	66.015	-3.840	1.900	
138	Standard	-	Cartesiano	62.161	-4.392	1.900	
139	Standard	-	Cartesiano	58.302	-4.912	1.900	
140	Standard	-	Cartesiano	66.011	-3.816	2.850	
141	Standard	-	Cartesiano	62.156	-4.360	2.850	
142	Standard	-	Cartesiano	58.299	-4.889	2.850	
144	Standard	-	Cartesiano	66.833	1.154	0.000	
146	Standard	-	Cartesiano	68.594	-3.471	0.000	
147	Standard	-	Cartesiano	54.785	-2.179	0.000	
148	Standard	-	Cartesiano	56.730	-1.712	0.000	
149	Standard	-	Cartesiano	57.010	-2.878	0.000	
150	Standard	-	Cartesiano	55.066	-3.346	0.000	
151	Standard	-	Cartesiano	58.468	-1.910	0.000	
152	Standard	-	Cartesiano	60.311	-1.132	0.000	
153	Standard	-	Cartesiano	60.777	-2.237	0.000	
154	Standard	-	Cartesiano	58.935	-3.015	0.000	
155	Standard	-	Cartesiano	62.184	-1.394	0.000	
156	Standard	-	Cartesiano	64.027	-0.616	0.000	
157	Standard	-	Cartesiano	64.493	-1.721	0.000	
158	Standard	-	Cartesiano	62.651	-2.499	0.000	
159	Standard	-	Cartesiano	53.606	-0.613	0.000	
160	Standard	-	Cartesiano	54.340	-5.413	0.000	
161	Standard	-	Cartesiano	53.606	-0.613	3.795	
162	Standard	-	Cartesiano	54.341	-5.413	3.795	
163	Sulla linea	14	Cartesiano	54.440	-5.402	3.508	
164	Sulla linea	14	Cartesiano	54.440	-5.402	3.215	
166	Sulla linea	14	Cartesiano	54.440	-5.402	2.631	
172	Sulla linea	14	Cartesiano	54.440	-5.402	0.877	
173	Sulla linea	14	Cartesiano	54.440	-5.402	0.585	
174	Sulla linea	14	Cartesiano	54.440	-5.402	0.292	
175	Sulla linea	15	Cartesiano	53.705	-0.603	3.508	
176	Sulla linea	15	Cartesiano	53.705	-0.603	3.215	
187	Sulla linea	43	Cartesiano	54.341	-5.413	3.503	
188	Sulla linea	43	Cartesiano	54.341	-5.413	3.211	
189	Sulla linea	43	Cartesiano	54.341	-5.413	2.919	
190	Sulla linea	43	Cartesiano	54.341	-5.413	2.627	
191	Sulla linea	43	Cartesiano	54.340	-5.413	2.335	
192	Sulla linea	43	Cartesiano	54.340	-5.413	2.043	
193	Sulla linea	43	Cartesiano	54.340	-5.413	1.752	
194	Sulla linea	43	Cartesiano	54.340	-5.413	1.460	
195	Sulla linea	43	Cartesiano	54.340	-5.413	1.168	
196	Sulla linea	43	Cartesiano	54.340	-5.413	0.876	
197	Sulla linea	43	Cartesiano	54.340	-5.413	0.584	
198	Sulla linea	43	Cartesiano	54.340	-5.413	0.292	
199	Sulla linea	45	Cartesiano	53.606	-0.613	3.503	
200	Sulla linea	45	Cartesiano	53.606	-0.613	3.211	
201	Sulla linea	45	Cartesiano	53.606	-0.613	2.919	
202	Sulla linea	45	Cartesiano	53.606	-0.613	2.627	
203	Sulla linea	45	Cartesiano	53.606	-0.613	2.335	
204	Sulla linea	45	Cartesiano	53.606	-0.613	2.043	
205	Sulla linea	45	Cartesiano	53.606	-0.613	1.751	
206	Sulla linea	45	Cartesiano	53.606	-0.613	1.460	
207	Sulla linea	45	Cartesiano	53.606	-0.613	1.168	
208	Sulla linea	45	Cartesiano	53.606	-0.613	0.876	
209	Sulla linea	45	Cartesiano	53.606	-0.613	0.584	
210	Sulla linea	45	Cartesiano	53.606	-0.613	0.292	
213	Sulla linea	15	Cartesiano	53.705	-0.603	2.924	
215	Sulla linea	15	Cartesiano	53.705	-0.603	2.632	
216	Sulla linea	14	Cartesiano	54.440	-5.402	2.924	
217	Sulla linea	15	Cartesiano	53.705	-0.603	2.340	
219	Sulla linea	15	Cartesiano	53.705	-0.603	2.048	
221	Sulla linea	15	Cartesiano	53.705	-0.603	1.756	
223	Sulla linea	15	Cartesiano	53.705	-0.603	1.464	
224	Sulla linea	14	Cartesiano	54.440	-5.402	2.340	



Progetto: _____ Modello: Sottopasso

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1.1 NODI

Nodo nr.	Tipo di nodo	Nodo di riferimento	Sistema di coordinate	Coordinate del nodo			Commento
				X [m]	Y [m]	Z [m]	
225	Sulla linea	15	Cartesiano	53.705	-0.603	1.172	
227	Sulla linea	15	Cartesiano	53.705	-0.603	0.881	
228	Sulla linea	14	Cartesiano	54.440	-5.402	2.048	
229	Sulla linea	15	Cartesiano	53.705	-0.603	0.589	
231	Sulla linea	15	Cartesiano	53.705	-0.603	0.297	
232	Sulla linea	14	Cartesiano	54.440	-5.402	1.756	
235	Sulla linea	14	Cartesiano	54.440	-5.402	1.464	
237	Sulla linea	14	Cartesiano	54.440	-5.402	1.172	
246	Standard	-	Cartesiano	69.962	-3.238	0.000	
247	Sulla linea	16	Cartesiano	69.864	-3.256	3.508	
248	Sulla linea	16	Cartesiano	69.864	-3.256	3.215	
249	Sulla linea	16	Cartesiano	69.864	-3.256	2.923	
250	Sulla linea	16	Cartesiano	69.864	-3.256	2.631	
251	Sulla linea	16	Cartesiano	69.864	-3.256	2.338	
252	Sulla linea	16	Cartesiano	69.864	-3.256	2.046	
253	Sulla linea	16	Cartesiano	69.864	-3.256	1.754	
254	Sulla linea	16	Cartesiano	69.864	-3.256	1.462	
255	Sulla linea	16	Cartesiano	69.864	-3.256	1.169	
256	Sulla linea	16	Cartesiano	69.864	-3.256	0.877	
257	Sulla linea	16	Cartesiano	69.864	-3.256	0.585	
258	Sulla linea	16	Cartesiano	69.864	-3.256	0.292	
259	Sulla linea	17	Cartesiano	69.049	1.526	3.508	
260	Sulla linea	17	Cartesiano	69.049	1.526	3.215	
261	Sulla linea	17	Cartesiano	69.049	1.526	2.923	
262	Sulla linea	17	Cartesiano	69.049	1.526	2.631	
263	Sulla linea	17	Cartesiano	69.049	1.526	2.338	
264	Sulla linea	17	Cartesiano	69.049	1.526	2.046	
265	Sulla linea	17	Cartesiano	69.049	1.526	1.754	
266	Sulla linea	17	Cartesiano	69.049	1.526	1.462	
267	Sulla linea	17	Cartesiano	69.049	1.526	1.169	
268	Sulla linea	17	Cartesiano	69.049	1.526	0.877	
269	Sulla linea	17	Cartesiano	69.049	1.526	0.585	
270	Sulla linea	17	Cartesiano	69.049	1.526	0.292	
271	Sulla linea	23	Cartesiano	69.962	-3.239	3.508	
272	Sulla linea	23	Cartesiano	69.962	-3.239	3.215	
273	Sulla linea	23	Cartesiano	69.962	-3.239	2.923	
274	Sulla linea	23	Cartesiano	69.962	-3.239	2.631	
275	Sulla linea	23	Cartesiano	69.962	-3.239	2.338	
276	Sulla linea	23	Cartesiano	69.962	-3.239	2.046	
277	Sulla linea	23	Cartesiano	69.962	-3.239	1.754	
278	Sulla linea	23	Cartesiano	69.962	-3.239	1.462	
279	Sulla linea	23	Cartesiano	69.962	-3.239	1.169	
280	Sulla linea	23	Cartesiano	69.962	-3.239	0.877	
281	Sulla linea	23	Cartesiano	69.962	-3.239	0.585	
282	Sulla linea	23	Cartesiano	69.962	-3.239	0.292	
283	Sulla linea	28	Cartesiano	69.148	1.542	3.508	
284	Sulla linea	28	Cartesiano	69.148	1.542	3.215	
285	Sulla linea	28	Cartesiano	69.148	1.542	2.923	
286	Sulla linea	28	Cartesiano	69.148	1.542	2.631	
287	Sulla linea	28	Cartesiano	69.148	1.542	2.338	
288	Sulla linea	28	Cartesiano	69.148	1.542	2.046	
289	Sulla linea	28	Cartesiano	69.148	1.542	1.754	
290	Sulla linea	28	Cartesiano	69.148	1.542	1.462	
291	Sulla linea	28	Cartesiano	69.148	1.542	1.169	
292	Sulla linea	28	Cartesiano	69.148	1.542	0.877	
293	Sulla linea	28	Cartesiano	69.148	1.542	0.585	
294	Sulla linea	28	Cartesiano	69.148	1.542	0.292	

1.1.1 NODI DI TIPO "SULLA LINEA"

Nodo nr.	Linea di riferimento nr.	Parametro δ [%]	Commento
63	9	39.13	
163	14	7.69	
164	14	15.38	
166	14	30.77	
172	14	76.92	
173	14	84.62	
174	14	92.31	
175	15	7.69	
176	15	15.38	
187	43	7.69	
188	43	15.38	
189	43	23.08	
190	43	30.77	
191	43	38.46	
192	43	46.15	
193	43	53.85	
194	43	61.54	
195	43	69.23	
196	43	76.92	
197	43	84.62	
198	43	92.31	
199	45	7.69	
200	45	15.38	
201	45	23.08	
202	45	30.77	
203	45	38.46	
204	45	46.15	



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1.1.1 NODI DI TIPO "SULLA LINEA"

Nodo nr.	Linea di riferimento nr.	Parametro δ [%]	Commento
205	45	53.85	
206	45	61.54	
207	45	69.23	
208	45	76.92	
209	45	84.62	
210	45	92.31	
213	15	23.06	
215	15	30.74	
216	14	23.06	
217	15	38.42	
219	15	46.10	
221	15	53.78	
223	15	61.47	
224	14	38.42	
225	15	69.15	
227	15	76.83	
228	14	46.10	
229	15	84.51	
231	15	92.19	
232	14	53.78	
235	14	61.47	
237	14	69.15	
247	16	7.69	
248	16	15.38	
249	16	23.08	
250	16	30.77	
251	16	38.46	
252	16	46.15	
253	16	53.85	
254	16	61.54	
255	16	69.23	
256	16	76.92	
257	16	84.62	
258	16	92.31	
259	17	7.69	
260	17	15.38	
261	17	23.08	
262	17	30.77	
263	17	38.46	
264	17	46.15	
265	17	53.85	
266	17	61.54	
267	17	69.23	
268	17	76.92	
269	17	84.62	
270	17	92.31	
271	23	7.69	
272	23	15.38	
273	23	23.08	
274	23	30.77	
275	23	38.46	
276	23	46.15	
277	23	53.85	
278	23	61.54	
279	23	69.23	
280	23	76.92	
281	23	84.62	
282	23	92.31	
283	28	7.69	
284	28	15.38	
285	28	23.08	
286	28	30.77	
287	28	38.46	
288	28	46.15	
289	28	53.85	
290	28	61.54	
291	28	69.23	
292	28	76.92	
293	28	84.62	
294	28	92.31	

1.2 LINEE

Linea nr.	Tipo di linea	Nodi nr.	Lungh. linea L [m]		Commento
1	Arco	1,93,159	53.729	XY	
2	Arco	38,92,161	53.802		
3	Polilinea	6,3	4.855	XY	
4	Spline	6-9	4.210	XY	
5	Spline	3,17-19	3.383	XY	
6	Polilinea	16,26	4.850	XY	
7	Polilinea	259,283	0.100	XY	
8	Arco	246,29,28	6.302	XY	
9	Spline	28,31,32	33.371	XY	
10	Polilinea	2,5	4.850	XY	
11	Spline	36,46	15.572	XY	
12	Spline	35,56	15.491	XY	
13	Polilinea	36,35	4.855	XY	
14	Polilinea	36,6	3.800	Z	



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1.2 LINEE

Linea nr.	Tipo di linea	Nodi nr.	Lungh. linea		Commento
			L [m]		
15	Polilinea	35,3	3.800	Z	
16	Polilinea	46,16	3.800	Z	
17	Polilinea	56,26	3.800	Z	
18	Polilinea	46,56	4.850	XY	
19	Arco	39,37,162	55.152		
20	Arco	4,42,160	55.081	XY	
21	Polilinea	41,34	1.000	Z	
22	Polilinea	54,32	1.000	Z	
23	Polilinea	2,246	3.800	Z	
24	Polilinea	38,1	1.000	Z	
25	Polilinea	39,4	1.000	Z	
26	Polilinea	30,59	2.400	Z	
27	Polilinea	63,64	2.400	Z	
28	Polilinea	5,45	3.800	Z	
29	Polilinea	41,54	4.875	XY	
30	Polilinea	40,33	1.000	Z	
31	Spline	32,48,33	4.550	XY	
32	Spline	54,66,40	4.550	XY	
33	Polilinea	39,38	4.850	XY	
34	Polilinea	25,15	5.445	XY	
35	Spline	25,144,26	5.346	XY	
36	Spline	15,146,16	2.946	XY	
37	Polilinea	19,9	4.947	XY	
38	Polilinea	22,12	5.148	XY	
39	Spline	19-22	3.382	XY	
40	Spline	22-25	3.383	XY	
41	Spline	9-12	4.210	XY	
42	Spline	12-15	4.210	XY	
43	Polilinea	162,160	3.795	Z	
44	Polilinea	199,175	0.100		
45	Polilinea	161,159	3.795	Z	
46	Polilinea	161,162	4.855	XY	
47	Polilinea	200,176	0.100		
48	Polilinea	201,213	0.100		
49	Polilinea	202,215	0.100		
50	Polilinea	203,217	0.100		
51	Polilinea	204,219	0.100		
52	Polilinea	205,221	0.100		
53	Polilinea	206,223	0.100		
54	Polilinea	207,225	0.100		
55	Polilinea	208,227	0.100		
56	Polilinea	209,229	0.100		
57	Polilinea	210,231	0.100		
58	Polilinea	159,3	0.100	XY	
59	Polilinea	187,163	0.100		
60	Polilinea	188,164	0.100		
61	Polilinea	189,216	0.100		
62	Polilinea	190,166	0.100		
63	Polilinea	191,224	0.100		
64	Polilinea	192,228	0.100		
65	Polilinea	193,232	0.100		
66	Polilinea	194,235	0.100		
67	Polilinea	195,237	0.100		
68	Polilinea	196,172	0.100		
69	Polilinea	197,173	0.100		
70	Polilinea	198,174	0.100		
71	Polilinea	160,6	0.100	XY	
72	Arco	5,59,41	38.918		
73	Arco	45,30,34	38.817	XY	
74	Arco	2,60,54	39.770		
75	Polilinea	59,60	4.850	XY	
76	Polilinea	42,37	2.398	Z	
77	Polilinea	37,92	4.851	XY	
78	Polilinea	92,93	2.398	Z	
79	Spline	45,44,28	8.492	XY	
80	Polilinea	246,45	4.850	XY	
81	Polilinea	260,284	0.100	XY	
82	Polilinea	261,285	0.100	XY	
83	Polilinea	262,286	0.100	XY	
84	Polilinea	263,287	0.100	XY	
85	Polilinea	264,288	0.100	XY	
86	Polilinea	265,289	0.100	XY	
87	Polilinea	266,290	0.100	XY	
88	Polilinea	267,291	0.100	XY	
89	Polilinea	268,292	0.100	XY	
90	Polilinea	269,293	0.100	XY	
91	Polilinea	270,294	0.100	XY	
92	Polilinea	26,45	0.100	XY	
93	Polilinea	247,271	0.100	XY	
94	Polilinea	248,272	0.100	XY	
95	Polilinea	249,273	0.100	XY	
96	Polilinea	250,274	0.100	XY	
97	Polilinea	251,275	0.100	XY	
98	Polilinea	252,276	0.100	XY	
99	Polilinea	253,277	0.100	XY	
100	Polilinea	254,278	0.100	XY	
101	Polilinea	255,279	0.100	XY	
102	Polilinea	256,280	0.100	XY	
103	Polilinea	257,281	0.100	XY	
104	Polilinea	258,282	0.100	XY	
105	Polilinea	16,246	0.100	XY	



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1.3 MATERIALI

Mater. nr.	Modulo E [kN/cm ²]	Modulo G [kN/cm ²]	Coeff. Poisson ν [-]	Peso spec. γ [kN/m ³]	Coeff. dil. term. α [1/°C]	Coeff. parz. γ_M [-]	Modello del materiale
1	Acciaio S 235 DIN 21000.00	18800:1990-11 8100.00	0.296	78.50	1.20E-05	1.10	Isotropo elastico lineare
2	Beton C28/35 UNI 3100.00	EN 1993-1-1 1310.00	0.183	25.00	1.00E-05	1.00	Isotropo elastico lineare
3	Calcestruzzo C20/25 EN 3000.00	EN 1992-1-1:2004/AC:2010 1250.00	0.200	25.00	1.00E-05	1.00	Isotropo elastico lineare

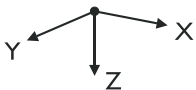
1.4 SUPERFICI

Superf. nr.	Tipo di superficie		Linee del contorno nr.	Mater. nr.	Spessore		Area A [m ²]	Peso W [kg]
	Geometria	Rigidezza			Tipo	d [mm]		
4	B-Spline	Standard	32,30,31,22/3/3	2	Costante	350.0	4.550	3981.67
8	B-Spline	Standard	18,11,13,12/3/3	3	Costante	350.0	75.348	65929.80
9	B-Spline	Standard	15,5,39,40,35,17,12/3/3	2	Costante	350.0	58.887	51526.00
10	B-Spline	Standard	36,42,41,4,14,11,16/3/3	2	Costante	350.0	59.196	51796.80
11	Piana	Standard	36,34,35,6	2	Costante	350.0	20.104	17590.90
13	Piana	Standard	37,4,3,5	2	Costante	350.0	18.382	16084.00
14	Piana	Standard	39,38,41,37	2	Costante	350.0	18.412	16110.40
15	Piana	Standard	34,40,38,42	2	Costante	350.0	18.408	16106.60
16	Quadrangolo	Standard	24,1,45,2	2	Costante	350.0	128.720	112630.00
17	Quadrangolo	Standard	25,20,43,19	2	Costante	350.0	131.964	115468.00
18	Quadrangolo	Standard	46,19,33,2	3	Costante	350.0	264.213	231186.00
19	Piana	Standard	80,79,8	2	Costante	350.0	8.121	7106.16
20	Quadrangolo	Standard	21,73,28,72	2	Costante	350.0	93.074	81440.10
21	Quadrangolo	Standard	9,8,23,74,22	2	Costante	350.0	94.329	82537.60
22	Quadrangolo	Standard	74,10,72,29	3	Costante	350.0	190.524	166708.00

1.4.2 SUPERFICI - OGGETTI INTEGRATI

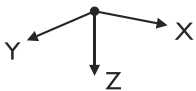
Superf. nr.	Oggetti integrati nr.			Aperture	Commento
	Nodi	Linee			
13	147-150				
14	151-154				
15	155-158				

1.9 VINCOLI ESTERNI DELLE SUPERFICI



Vin. est. nr.	Sulle superfici nr.	Costanti delle molle RF-SOILIN	Vincolo traslazionale o molla [kN/m ³]			Molla a taglio [kN/m]	
			u_x	u_y	u_z	v_{xz}	v_{yz}
1	8,18,22	-	1000.000	1000.000	100000.000	<input type="checkbox"/>	<input type="checkbox"/>

1.10 VINCOLI INTERNI DELLE LINEE



Vincolo nr.	Linea nr.	Superf. nr.	Lato	Rilascio forza assiale/taglio [kN/m ²]			Rilascio momento [kNm/rad/m]		
				u_x	u_y	u_z	φ_x	φ_y	φ_z
2	17	9	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	16	10	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.13 SEZIONI TRASVERSALI

Rettangolo 1000/500 Rettangolo 350/1800



Rettangolo 350/2700 Rettangolo 350/2550



RD 24



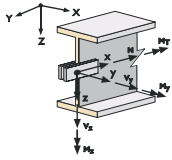
Sezione nr.	Mater. nr.	I_r [cm ⁴]		I_y [cm ⁴]		I_z [cm ⁴]		Assi principali α [°]	Rotazione α' [°]	Dimensioni totali [mm]	
		A [cm ²]		A_y [cm ²]		A_z [cm ²]				Larghezza b	Altezza h
1	Rettangolo 1000/500 3	2860937.50		1041666.69		4166666.65		0.00	0.00	1000.0	500.0
		5000.00		4166.67		4166.67					
2	Rettangolo 350/1800 2	2257406.00		17010000.00		643124.99		0.00	0.00	350.0	1800.0
		6300.00		5250.00		5250.00					
3	Rettangolo 350/2700 2	3543626.00		57408748.00		964687.56		0.00	0.00	350.0	2700.0
		9450.00		7875.00		7875.00					
4	Rettangolo 350/2550 2	3329253.00		48362344.00		911093.76		0.00	0.00	350.0	2550.0
		8925.00		7437.50		7437.50					
5	RD 24 1	3.26		1.63		1.63		0.00	0.00	24.0	24.0
		4.52		3.80		3.80					



Progetto: _____ Modello: Sottopasso

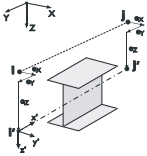
Data: 27.02.2018

1.14 VINCOLI INTERNI DELLE ASTE



Vincolo nr.	Sistema di riferimento	Rilascio assiale/tagliante o molla[kN/m]			Rilascio del momento o molla[kNm/rad]			Commento
		u_x	u_y	u_z	φ_x	φ_y	φ_z	
1	Locale x,y,z	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

1.15/1 ECCENTRICITÀ DELLE ASTE - ASSOLUTA

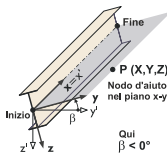


Ecc. nr.	Sistema di riferimento	Inizio asta - Eccentricità [mm]			Fine asta - Eccentricità [mm]			Posizione del vincolo interno dell'	
		$e_{i,x}$	$e_{i,y}$	$e_{i,z}$	$e_{f,x}$	$e_{f,y}$	$e_{f,z}$	Inizio asta	Fine dell'asta
1	Globale	0.0	0.0	0.0	0.0	0.0	0.0	nell'asta	nell'asta
2	Globale	0.0	0.0	0.0	0.0	0.0	0.0	nell'asta	nell'asta
3	Globale	0.0	0.0	0.0	0.0	0.0	0.0	nell'asta	nell'asta

1.15/2 ECCENTRICITÀ DELLE ASTE - RELATIVA

Ecc. nr.	Allineamento sezione trasv.		Offset trasversale dalla sezione di un altro oggetto				Offset assiale dall'adiacente	
	Asse y	Asse z	Tipo oggetto	Oggetto nr.	Asse y	Asse z	Inizio asta	Fine asta
1	Sinistra (-y)	Centro	Superficie	4	Centro	Centro	<input type="checkbox"/>	<input type="checkbox"/>
2	Centro	Inferiore (+z)	Superficie	15	Centro	Inferiore (+z)	<input type="checkbox"/>	<input type="checkbox"/>
3	Centro	Inferiore (+z)	Nessuno/a	0	Centro	Inferiore (+z)	<input type="checkbox"/>	<input type="checkbox"/>

1.17 ASTE



Asta nr.	Linea nr.	Asta	Rotazione		Descrizione		Vinc. int. nr.		Ecc. nr.	Divis. nr.	Lungh. L [m]	
			Tipo	β [°]	Inizio	Fine	Inizio	Fine				
1	32	Trave	Angolo	0.00	1	1	-	-	1	-	-	XY
3	3	Trave	Angolo	0.00	4	4	-	-	2	-	-	XY
4	44	Trave	Angolo	0.00	5	5	-	-	-	-	-	
5	47	Trave	Angolo	0.00	5	5	-	-	-	-	-	
6	48	Trave	Angolo	0.00	5	5	-	-	-	-	-	
7	49	Trave	Angolo	0.00	5	5	-	-	-	-	-	
8	50	Trave	Angolo	0.00	5	5	-	-	-	-	-	
9	51	Trave	Angolo	0.00	5	5	-	-	-	-	-	
10	52	Trave	Angolo	0.00	5	5	-	-	-	-	-	
11	53	Trave	Angolo	0.00	5	5	-	-	-	-	-	
12	54	Trave	Angolo	0.00	5	5	-	-	-	-	-	
13	55	Trave	Angolo	0.00	5	5	-	-	-	-	-	
14	56	Trave	Angolo	0.00	5	5	-	-	-	-	-	
15	57	Trave	Angolo	0.00	5	5	-	-	-	-	-	
16	58	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
17	59	Trave	Angolo	0.00	5	5	-	-	-	-	-	
18	60	Trave	Angolo	0.00	5	5	-	-	-	-	-	
19	61	Trave	Angolo	0.00	5	5	-	-	-	-	-	
20	62	Trave	Angolo	0.00	5	5	-	-	-	-	-	
21	63	Trave	Angolo	0.00	5	5	-	-	-	-	-	
22	64	Trave	Angolo	0.00	5	5	-	-	-	-	-	
23	65	Trave	Angolo	0.00	5	5	-	-	-	-	-	
24	66	Trave	Angolo	0.00	5	5	-	-	-	-	-	
25	67	Trave	Angolo	0.00	5	5	-	-	-	-	-	
26	68	Trave	Angolo	0.00	5	5	-	-	-	-	-	
27	69	Trave	Angolo	0.00	5	5	-	-	-	-	-	
28	70	Trave	Angolo	0.00	5	5	-	-	-	-	-	
29	71	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
30	79	Trave	Angolo	0.00	3	2	-	-	3	-	Lineare	
31	7	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
32	81	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
33	82	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
34	83	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
35	84	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
36	85	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
37	86	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
38	87	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
39	88	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
40	89	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
41	90	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
42	91	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
43	92	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
44	93	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
45	94	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
46	95	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
47	96	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
48	97	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
49	98	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
50	99	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
51	100	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
52	101	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
53	102	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
54	103	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
55	104	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
56	105	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY



Progetto: _____ Modello: Sottopasso

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1.19 VINCOLI ESTERNI ELASTICI DELLE ASTE

Vin. est. nr.	Asta nr.	C _{1,x} [kN/m ²]	C _{1,y} [kN/m ²]	C _{1,z} [kN/m ²]	C _{2,x} [kN]	C _{2,y} [kN]	C _{2,z} [kN]	C _φ [kNm/rad/m]
1	1	1000.000	1000.000	100.000	0.000	0.000	0.000	0.000

1.23 INFITTIMENTO MESH EF

Infittim. nr.	Infittimento mesh EF applicato a	Nodi nr.	Numero di divisioni	Raggio della sfera [m]	Lunghezza EF obiettivo[m]		Commento
					Interno	Esterno	
1	Nodi - Circolare	2,3,5,6, 16,26,28, 35,36,45, 46,56, 159,160, 246		2.500	0.100	0.500	

2.1 CASI DI CARICO

Caso di carico	Descrizione del caso di carico	EN 1990 + EN 1991-2; Ponti stradali C Categoria delle azioni	Peso proprio - Coefficiente in direzione			
			Attiva	X	Y	Z
CC1	Peso proprio	Permanente	<input checked="" type="checkbox"/>	0.000	0.000	1.000
CC2	Sovraccarichi permanenti	Permanente	<input type="checkbox"/>			
CC3	Carichi mobili corsia 1	gr1a - LM1 + Pedoni + Pista ciclabile	<input type="checkbox"/>			
CC4	Carichi mobili corsia 2	gr1a - LM1 + Pedoni + Pista ciclabile	<input type="checkbox"/>			
CC5	Carichi mobili corsia 3	gr1a - LM1 + Pedoni + Pista ciclabile	<input type="checkbox"/>			
CC6	Carichi mobili distribuiti	gr1a - LM1 + Pedoni + Pista ciclabile	<input type="checkbox"/>			
CC7	Carichi mobili muri controterra 1	gr4 - LM4 - Carico della folla + Carico pedoni	<input type="checkbox"/>			
CC8	Carichi mobili muri controterra 2	gr4 - LM4 - Carico della folla + Carico pedoni	<input type="checkbox"/>			
CC11	Spinta delle terre	Permanente	<input type="checkbox"/>			

2.1.1 CASI DI CARICO - PARAMETRI DI CALCOLO

Caso di carico	Descrizione del caso di carico	Parametri di calcolo	
		Metodo di analisi	Metodo risolutivo del sistema di equazioni algebriche non-lineari
CC1	Peso proprio	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC2	Sovraccarichi permanenti	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC3	Carichi mobili corsia 1	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC4	Carichi mobili corsia 2	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC5	Carichi mobili corsia 3	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC6	Carichi mobili distribuiti	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC7	Carichi mobili muri controterra 1	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC8	Carichi mobili muri controterra 2	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC11	Spinta delle terre	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson

2.5 COMBINAZIONI DI CARICO

Comb. di carico	SP	Combinazione di carico Descrizione	nr.	Coeff.	Caso di carico	
					Coeff.	Caso di carico
CO1	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC11	1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC11	Spinta delle terre
CO2	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC11	1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC3	Carichi mobili corsia 1
			4	1.35	CC11	Spinta delle terre
CO3	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC11	1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC3	Carichi mobili corsia 1

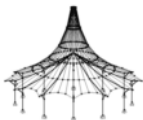


Progetto: _____ Modello: Sottopasso

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2.5 COMBINAZIONI DI CARICO

Comb. di carico	Combinazione di carico		nr.	Coeff.	Caso di carico	
	SP	Descrizione				
CO4	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC5 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC3	Carichi mobili corsia 1
			4	1.35	CC4	Carichi mobili corsia 2
CO5	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	5	1.35	CC5	Carichi mobili corsia 3
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC3	Carichi mobili corsia 1
			4	1.35	CC4	Carichi mobili corsia 2
CO6	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC6 + 1.35*CC11	5	1.35	CC5	Carichi mobili corsia 3
			6	1.35	CC6	Carichi mobili distribuiti
			7	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC3	Carichi mobili corsia 1
CO7	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC5 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC6	Carichi mobili distribuiti
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC3	Carichi mobili corsia 1
CO8	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC6	Carichi mobili distribuiti
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC3	Carichi mobili corsia 1
CO9	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC6 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC6	Carichi mobili distribuiti
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC3	Carichi mobili corsia 1
CO10	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC4	Carichi mobili corsia 2
			4	1.35	CC11	Spinta delle terre
CO11	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC5 + 1.35*CC11	5	1.35	CC5	Carichi mobili corsia 3
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC4	Carichi mobili corsia 2
			4	1.35	CC5	Carichi mobili corsia 3
CO12	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	5	1.35	CC5	Carichi mobili corsia 3
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC4	Carichi mobili corsia 2
			4	1.35	CC5	Carichi mobili corsia 3
CO13	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC6 + 1.35*CC11	5	1.35	CC5	Carichi mobili corsia 3
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC4	Carichi mobili corsia 2
			4	1.35	CC6	Carichi mobili distribuiti
CO14	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC5 + 1.35*CC11	5	1.35	CC5	Carichi mobili corsia 3
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC5	Carichi mobili corsia 3
			4	1.35	CC11	Spinta delle terre
CO15	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC6	Carichi mobili distribuiti
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC5	Carichi mobili corsia 3
CO16	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC6 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC6	Carichi mobili distribuiti
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC6	Carichi mobili distribuiti
CO17	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC7 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC7	Carichi mobili muri controterra 1
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC7	Carichi mobili muri controterra 1
CO18	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC7 + 1.35*CC8 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC8	Carichi mobili muri controterra 2
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC7	Carichi mobili muri controterra 1
CO19	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC8 + 1.35*CC11	4	1.35	CC4	Carichi mobili corsia 2
			5	1.35	CC8	Carichi mobili muri controterra 2
			6	1.35	CC11	Spinta delle terre
			1	1.35	CC1	Peso proprio
			2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC7	Carichi mobili muri controterra 1



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2.5 COMBINAZIONI DI CARICO

Comb. di carico	Combinazione di carico		nr.	Coeff.	Caso di carico	
	SP	Descrizione				
CO20	S Ch	CC1 + CC2 + CC11	2	1.35	CC2	Sovraccarichi permanenti
			3	1.35	CC8	Carichi mobili muri controterra 2
			4	1.35	CC11	Spinta delle terre
CO21	S Ch	CC1 + CC2 + CC3 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC11	Spinta delle terre
CO22	S Ch	CC1 + CC2 + CC3 + CC4 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC3	Carichi mobili corsia 1
			4	1.00	CC4	Carichi mobili corsia 2
CO23	S Ch	CC1 + CC2 + CC3 + CC4 + CC5 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC3	Carichi mobili corsia 1
			4	1.00	CC4	Carichi mobili corsia 2
			5	1.00	CC5	Carichi mobili corsia 3
CO24	S Ch	CC1 + CC2 + CC3 + CC4 + CC5 + CC6 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC3	Carichi mobili corsia 1
			4	1.00	CC4	Carichi mobili corsia 2
			5	1.00	CC5	Carichi mobili corsia 3
			6	1.00	CC6	Carichi mobili distribuiti
			7	1.00	CC11	Spinta delle terre
CO25	S Ch	CC1 + CC2 + CC3 + CC4 + CC6 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC3	Carichi mobili corsia 1
			4	1.00	CC4	Carichi mobili corsia 2
			5	1.00	CC6	Carichi mobili distribuiti
			6	1.00	CC11	Spinta delle terre
CO26	S Ch	CC1 + CC2 + CC3 + CC5 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC3	Carichi mobili corsia 1
			4	1.00	CC5	Carichi mobili corsia 3
			5	1.00	CC11	Spinta delle terre
CO27	S Ch	CC1 + CC2 + CC3 + CC5 + CC6 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC3	Carichi mobili corsia 1
			4	1.00	CC5	Carichi mobili corsia 3
			5	1.00	CC6	Carichi mobili distribuiti
			6	1.00	CC11	Spinta delle terre
CO28	S Ch	CC1 + CC2 + CC3 + CC6 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC3	Carichi mobili corsia 1
			4	1.00	CC6	Carichi mobili distribuiti
			5	1.00	CC11	Spinta delle terre
CO29	S Ch	CC1 + CC2 + CC4 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC4	Carichi mobili corsia 2
			4	1.00	CC11	Spinta delle terre
CO30	S Ch	CC1 + CC2 + CC4 + CC5 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC4	Carichi mobili corsia 2
			4	1.00	CC5	Carichi mobili corsia 3
			5	1.00	CC11	Spinta delle terre
CO31	S Ch	CC1 + CC2 + CC4 + CC5 + CC6 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC4	Carichi mobili corsia 2
			4	1.00	CC5	Carichi mobili corsia 3
			5	1.00	CC6	Carichi mobili distribuiti
			6	1.00	CC11	Spinta delle terre
CO32	S Ch	CC1 + CC2 + CC4 + CC6 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC4	Carichi mobili corsia 2
			4	1.00	CC6	Carichi mobili distribuiti
			5	1.00	CC11	Spinta delle terre
CO33	S Ch	CC1 + CC2 + CC5 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC5	Carichi mobili corsia 3
			4	1.00	CC11	Spinta delle terre
CO34	S Ch	CC1 + CC2 + CC5 + CC6 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC5	Carichi mobili corsia 3
			4	1.00	CC6	Carichi mobili distribuiti
			5	1.00	CC11	Spinta delle terre
CO35	S Ch	CC1 + CC2 + CC6 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC6	Carichi mobili distribuiti
			4	1.00	CC11	Spinta delle terre
CO36	S Ch	CC1 + CC2 + CC7 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC7	Carichi mobili muri controterra 1
			4	1.00	CC11	Spinta delle terre
CO37	S Ch	CC1 + CC2 + CC7 + CC8 + CC11	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC7	Carichi mobili muri controterra 1



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2.5 COMBINAZIONI DI CARICO

Comb. di carico	Combinazione di carico		nr.	Coeff.	Caso di carico	
	SP	Descrizione				
CO38	S Ch	CC1 + CC2 + CC8 + CC11	4	1.00	CC8	Carichi mobili muri controterra 2
			5	1.00	CC11	Spinta delle terre
			1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
CO39	S Qp	CC1 + CC2 + CC11	3	1.00	CC8	Carichi mobili muri controterra 2
			4	1.00	CC11	Spinta delle terre
			1	1.00	CC1	Peso proprio
			2	1.00	CC2	Sovraccarichi permanenti
			3	1.00	CC11	Spinta delle terre

2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo	
CO1	1.35*CC1 + 1.35*CC2 + 1.35*CC11	Metodo di analisi	<input type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input type="radio"/> Picard
CO2	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC11	Metodo di analisi	<input type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input type="radio"/> Picard
CO3	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC11	Metodo di analisi	<input type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input type="radio"/> Picard
CO4	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC5 + 1.35*CC11	Metodo di analisi	<input type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input type="radio"/> Picard
CO5	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	Metodo di analisi	<input type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input type="radio"/> Picard
CO6	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC6 + 1.35*CC11	Metodo di analisi	<input type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input type="radio"/> Picard
CO7	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC5 + 1.35*CC11	Metodo di analisi	<input type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input type="radio"/> Picard



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2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO8	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO9	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC6 + 1.35*CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO10	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO11	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC5 + 1.35*CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO12	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO13	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC6 + 1.35*CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO14	1.35*CC1 + 1.35*CC2 + 1.35*CC5 + 1.35*CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z



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2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo	
CO15	1.35*CC1 + 1.35*CC2 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	Metodo di analisi	<input checked="" type="checkbox"/> Momenti M_y , M_z e M_T <input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input checked="" type="checkbox"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO16	1.35*CC1 + 1.35*CC2 + 1.35*CC6 + 1.35*CC11	Metodo di analisi	<input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input checked="" type="checkbox"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO17	1.35*CC1 + 1.35*CC2 + 1.35*CC7 + 1.35*CC11	Metodo di analisi	<input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input checked="" type="checkbox"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO18	1.35*CC1 + 1.35*CC2 + 1.35*CC7 + 1.35*CC8 + 1.35*CC11	Metodo di analisi	<input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input checked="" type="checkbox"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO19	1.35*CC1 + 1.35*CC2 + 1.35*CC8 + 1.35*CC11	Metodo di analisi	<input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input checked="" type="checkbox"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO20	CC1 + CC2 + CC11	Metodo di analisi	<input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input checked="" type="checkbox"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO21	CC1 + CC2 + CC3 + CC11	Metodo di analisi	<input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input checked="" type="checkbox"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO22	CC1 + CC2 + CC3 + CC4 + CC11	Metodo di analisi	<input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni	<input checked="" type="checkbox"/> Picard <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO23	CC1 + CC2 + CC3 + CC4 + C	Metodo di analisi	<input checked="" type="checkbox"/> Analisi del secondo ordine (P-Delta)



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2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo
	CC5 + CC11	Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO24	CC1 + CC2 + CC3 + CC4 + CC5 + CC6 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO25	CC1 + CC2 + CC3 + CC4 + CC6 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO26	CC1 + CC2 + CC3 + CC5 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO27	CC1 + CC2 + CC3 + CC5 + CC6 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO28	CC1 + CC2 + CC3 + CC6 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO29	CC1 + CC2 + CC4 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO30	CC1 + CC2 + CC4 + CC5 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari Opzioni : <input checked="" type="radio"/> Picard : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO31	CC1 + CC2 + CC4 + CC5 + CC6 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard



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2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo	
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO32	CC1 + CC2 + CC4 + CC6 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T	
CO33	CC1 + CC2 + CC5 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T	
CO34	CC1 + CC2 + CC5 + CC6 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T	
CO35	CC1 + CC2 + CC6 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T	
CO36	CC1 + CC2 + CC7 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T	
CO37	CC1 + CC2 + CC7 + CC8 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T	
CO38	CC1 + CC2 + CC8 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T	
CO39	CC1 + CC2 + CC11	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z	



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2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo
		<input checked="" type="checkbox"/> Momenti M_y , M_z e M_T

2.5.5 COMBINAZIONI DI CARICO - IMPERFEZIONI

Comb. di carico	Descrizione CO	Imperfezione applicata dal modulo RF-IMP	Imperfezione applicata
CO1	1.35*CC1 + 1.35*CC2 + 1.35*CC11	<input type="checkbox"/>	
CO2	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC11	<input type="checkbox"/>	
CO3	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC11	<input type="checkbox"/>	
CO4	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC5 + 1.35*CC11	<input type="checkbox"/>	
CO5	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	<input type="checkbox"/>	
CO6	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC6 + 1.35*CC11	<input type="checkbox"/>	
CO7	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC5 + 1.35*CC11	<input type="checkbox"/>	
CO8	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	<input type="checkbox"/>	
CO9	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC6 + 1.35*CC11	<input type="checkbox"/>	
CO10	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC11	<input type="checkbox"/>	
CO11	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC5 + 1.35*CC11	<input type="checkbox"/>	
CO12	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	<input type="checkbox"/>	
CO13	1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC6 + 1.35*CC11	<input type="checkbox"/>	
CO14	1.35*CC1 + 1.35*CC2 + 1.35*CC5 + 1.35*CC11	<input type="checkbox"/>	
CO15	1.35*CC1 + 1.35*CC2 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11	<input type="checkbox"/>	
CO16	1.35*CC1 + 1.35*CC2 + 1.35*CC6 + 1.35*CC11	<input type="checkbox"/>	
CO17	1.35*CC1 + 1.35*CC2 + 1.35*CC7 + 1.35*CC11	<input type="checkbox"/>	
CO18	1.35*CC1 + 1.35*CC2 + 1.35*CC7 + 1.35*CC8 + 1.35*CC11	<input type="checkbox"/>	
CO19	1.35*CC1 + 1.35*CC2 + 1.35*CC8 + 1.35*CC11	<input type="checkbox"/>	
CO20	CC1 + CC2 + CC11	<input type="checkbox"/>	
CO21	CC1 + CC2 + CC3 + CC11	<input type="checkbox"/>	
CO22	CC1 + CC2 + CC3 + CC4 + CC11	<input type="checkbox"/>	
CO23	CC1 + CC2 + CC3 + CC4 + CC5 + CC11	<input type="checkbox"/>	
CO24	CC1 + CC2 + CC3 + CC4 + CC5 + CC6 + CC11	<input type="checkbox"/>	
CO25	CC1 + CC2 + CC3 + CC4 + CC6 + CC11	<input type="checkbox"/>	
CO26	CC1 + CC2 + CC3 + CC5 + CC11	<input type="checkbox"/>	
CO27	CC1 + CC2 + CC3 + CC5 + CC6 + CC11	<input type="checkbox"/>	
CO28	CC1 + CC2 + CC3 + CC6 + CC11	<input type="checkbox"/>	
CO29	CC1 + CC2 + CC4 + CC11	<input type="checkbox"/>	
CO30	CC1 + CC2 + CC4 + CC5 + CC11	<input type="checkbox"/>	
CO31	CC1 + CC2 + CC4 + CC5 + CC6 + CC11	<input type="checkbox"/>	
CO32	CC1 + CC2 + CC4 + CC6 + CC11	<input type="checkbox"/>	
CO33	CC1 + CC2 + CC5 + CC11	<input type="checkbox"/>	
CO34	CC1 + CC2 + CC5 + CC6 + CC11	<input type="checkbox"/>	
CO35	CC1 + CC2 + CC6 + CC11	<input type="checkbox"/>	
CO36	CC1 + CC2 + CC7 + CC11	<input type="checkbox"/>	
CO37	CC1 + CC2 + CC7 + CC8 + CC11	<input type="checkbox"/>	
CO38	CC1 + CC2 + CC8 + CC11	<input type="checkbox"/>	
CO39	CC1 + CC2 + CC11	<input type="checkbox"/>	

2.6 COMBINAZIONI DI RISULTATI

Combin. di risult.	Combinazione di risultati		nr.	Coeff.	Carico	Criterio	Altra Gruppo
	SP	Descrizione					
CR1	ULS	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10	1	1.00	CO1	Permanente	1
			2	1.00	CO2	Permanente	1
			3	1.00	CO3	Permanente	1
			4	1.00	CO4	Permanente	1
			5	1.00	CO5	Permanente	1
			6	1.00	CO6	Permanente	1
			7	1.00	CO7	Permanente	1
			8	1.00	CO8	Permanente	1
			9	1.00	CO9	Permanente	1
			10	1.00	CO10	Permanente	1
			11	1.00	CO11	Permanente	1



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2.6 COMBINAZIONI DI RISULTATI

Combin. di risult.	Combinazione di risultati		nr.	Coeff.	Carico	Criterio	Alternativa Gruppo
	SP	Descrizione					
CR2	S Ch	SLE - Caratteristica	12	1.00	CO12	Permanente	1
			13	1.00	CO13	Permanente	1
			14	1.00	CO14	Permanente	1
			15	1.00	CO15	Permanente	1
			16	1.00	CO16	Permanente	1
			17	1.00	CO17	Permanente	1
			18	1.00	CO18	Permanente	1
			19	1.00	CO19	Permanente	1
			1	1.00	CO20	Permanente	1
			2	1.00	CO21	Permanente	1
			3	1.00	CO22	Permanente	1
			4	1.00	CO23	Permanente	1
			5	1.00	CO24	Permanente	1
			6	1.00	CO25	Permanente	1
			7	1.00	CO26	Permanente	1
			8	1.00	CO27	Permanente	1
			9	1.00	CO28	Permanente	1
			10	1.00	CO29	Permanente	1
			11	1.00	CO30	Permanente	1
12	1.00	CO31	Permanente	1			
13	1.00	CO32	Permanente	1			
14	1.00	CO33	Permanente	1			
15	1.00	CO34	Permanente	1			
16	1.00	CO35	Permanente	1			
17	1.00	CO36	Permanente	1			
18	1.00	CO37	Permanente	1			
19	1.00	CO38	Permanente	1			
CR3	S Qp	SLE - Quasi permanente	1	1.00	CO39	Permanente	-

CC2
Sovraccarichi permanenti

3.4 CARICHI DELLE SUPERFICI

CC2: Sovraccarichi permanenti

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Parametri del carico		
					Simbolo	Valore	Unità
1	11,13-15,19	Forza	Uniforme	ZL	p	17.40	kN/m ²

CC3
Carichi mobili corsia 1

3.1 CARICHI DEI NODI - PER COMPONENTE - SISTEMA DI COORDINATE

CC3: Carichi mobili corsia 1

nr.	Sui nodi nr.	Sistema di coordinate	Forza [kN]			Momento [kNm]		
			P _x	P _y	P _z	M _x	M _y	M _z
1	147-150	0 Globale XYZ	0.000	0.000	150.000	0.000	0.000	0.000

CC4
Carichi mobili corsia 2

3.1 CARICHI DEI NODI - PER COMPONENTE - SISTEMA DI COORDINATE

CC4: Carichi mobili corsia 2

nr.	Sui nodi nr.	Sistema di coordinate	Forza [kN]			Momento [kNm]		
			P _x	P _y	P _z	M _x	M _y	M _z
1	151-154	0 Globale XYZ	0.000	0.000	100.000	0.000	0.000	0.000

CC5
Carichi mobili corsia 3

3.1 CARICHI DEI NODI - PER COMPONENTE - SISTEMA DI COORDINATE

CC5: Carichi mobili corsia 3

nr.	Sui nodi nr.	Sistema di coordinate	Forza [kN]			Momento [kNm]		
			P _x	P _y	P _z	M _x	M _y	M _z
1	155-158	0 Globale XYZ	0.000	0.000	50.000	0.000	0.000	0.000

CC6
Carichi mobili distribuiti

3.4 CARICHI DELLE SUPERFICI

CC6: Carichi mobili distribuiti

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Parametri del carico		
					Simbolo	Valore	Unità
1	11	Forza	Uniforme	ZL	p	5.00	kN/m ²
2	13	Forza	Uniforme	ZL	p	9.00	kN/m ²
3	14,15	Forza	Uniforme	ZL	p	2.50	kN/m ²
4	19	Forza	Uniforme	z	p	5.00	kN/m ²

CC7
Carichi mobili muri controterra 1

3.4 CARICHI DELLE SUPERFICI

CC7: Carichi mobili muri controterra 1

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Parametri del carico			Sul nodo nr.
					Simbolo	Valore	Unità	
1	16	Forza	Lineare in X	z	p ₁	-8.30	kN/m ²	159
					p ₂	-1.73	kN/m ²	1
2	9	Forza	Uniforme	z	p	-8.30	kN/m ²	
3	20	Forza	Lineare in X	z	p ₁	-8.30	kN/m ²	45
					p ₂	-1.73	kN/m ²	34



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CC8
Carichi mobili muri
controterra 2

3.4 CARICHI DELLE SUPERFICI

CC8: Carichi mobili muri controterra 2

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Parametri del carico			Sul nodo nr.
					Simbolo	Valore	Unità	
1	10	Forza	Uniforme	z	p	-8.30	kN/m ²	
2	17	Forza	Lineare in X	z	p ₁	-8.30	kN/m ²	160
					p ₂	-1.73	kN/m ²	4
3	4,21	Forza	Lineare in X	z	p ₁	-8.30	kN/m ²	246
					p ₂	-1.73	kN/m ²	33

CC11
Spinta delle terre

3.4 CARICHI DELLE SUPERFICI

CC11: Spinta delle terre

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Parametri del carico			Sul nodo nr.
					Simbolo	Valore	Unità	
1	4	Forza	Lineare in Z	z	p ₁	0.00	kN/m ²	3
					p ₂	-58.48	kN/m ²	35
2	9	Forza	Lineare in Z	z	p ₁	-1.00	kN/m ²	3
					p ₂	-72.00	kN/m ²	35
3	10	Forza	Lineare in Z	z	p ₁	-1.00	kN/m ²	3
					p ₂	-42.00	kN/m ²	35
4	21	Forza	Lineare in Z	z	p ₁	-1.00	kN/m ²	159
					p ₂	-72.00	kN/m ²	161
5	16	Forza	Lineare in Z	z	p ₁	-1.00	kN/m ²	159
					p ₂	-72.00	kN/m ²	161
6	17	Forza	Lineare in Z	z	p ₁	-1.00	kN/m ²	159
					p ₂	-72.00	kN/m ²	161
7	20	Forza	Lineare in Z	z	p ₁	-1.00	kN/m ²	159
					p ₂	-72.00	kN/m ²	161



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Peso proprio			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	10694.70	kN	
Somma delle reazioni vincolari in Z	10694.60	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	24.142	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	16.768	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-0.479	kNm	Nel centro di gravità del modello
Max spostamento in X	0.6	mm	Nodo EF nr. 33 (X: 112.551, Y: 8.403, Z: 0.000 m)
Max spostamento in Y	-1.0	mm	Nodo EF nr. 3416 (X: 47.372, Y: -6.044, Z: 0.001 m)
Max spostamento in Z	3.6	mm	Nodo EF nr. 40 (X: 112.551, Y: 8.403, Z: 1.000 m)
Max spostamento vettoriale	3.7	mm	Nodo EF nr. 33 (X: 112.551, Y: 8.403, Z: 0.000 m)
Max rotazione intorno a X	-0.3	mrad	Nodo EF nr. 6791 (X: 108.142, Y: 7.218, Z: 1.000 m)
Max rotazione intorno a Y	-1.8	mrad	Asta nr. 29, x: 0.050 m
Max rotazione intorno a Z	-10.3	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidità moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Sovraccarichi permanenti			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	1451.62	kN	
Somma delle reazioni vincolari in Z	1451.62	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-1287.270	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	-9396.800	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-0.071	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.2	mm	Asta nr. 30, x: 0.000 m
Max spostamento in Y	-0.3	mm	Nodo EF nr. 1890 (X: 63.904, Y: -4.162, Z: 1.425 m)
Max spostamento in Z	1.0	mm	Nodo EF nr. 1966 (X: 69.456, Y: -0.865, Z: 0.000 m)
Max spostamento vettoriale	1.0	mm	Nodo EF nr. 1966 (X: 69.456, Y: -0.865, Z: 0.000 m)
Max rotazione intorno a X	-0.4	mrad	Asta nr. 43, x: 0.037 m
Max rotazione intorno a Y	-2.0	mrad	Asta nr. 28, x: 0.050 m
Max rotazione intorno a Z	-13.5	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidità moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Carichi mobili corsia 1			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	600.00	kN	
Somma delle reazioni vincolari in Z	600.00	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-854.754	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	194.369	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	0.048	kNm	Nel centro di gravità del modello
Max spostamento in X	0.3	mm	Asta nr. 3, x: 2.428 m
Max spostamento in Y	0.2	mm	Nodo EF nr. 1305 (X: 56.073, Y: -0.307, Z: 1.901 m)
Max spostamento in Z	1.0	mm	Nodo EF nr. 2425 (X: 56.635, Y: -2.280, Z: 0.000 m)
Max spostamento vettoriale	1.0	mm	Nodo EF nr. 2425 (X: 56.635, Y: -2.280, Z: 0.000 m)
Max rotazione intorno a X	-0.4	mrad	Nodo EF nr. 2393 (X: 56.628, Y: -0.752, Z: 0.000 m)
Max rotazione intorno a Y	-2.7	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	8.4	mrad	Nodo EF nr. 1450 (X: 69.864, Y: -3.256, Z: 0.146 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidità moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Carichi mobili corsia 2			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	400.00	kN	
Somma delle reazioni vincolari in Z	400.00	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-387.818	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	-1360.410	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	0.019	kNm	Nel centro di gravità del modello
Max spostamento in X	0.1	mm	Asta nr. 3, x: 2.428 m
Max spostamento in Y	-0.2	mm	Nodo EF nr. 1906 (X: 59.907, Y: -4.714, Z: 1.433 m)
Max spostamento in Z	0.8	mm	Nodo EF nr. 2491 (X: 59.550, Y: -2.492, Z: 0.000 m)
Max spostamento vettoriale	0.8	mm	Nodo EF nr. 2491 (X: 59.550, Y: -2.492, Z: 0.000 m)
Max rotazione intorno a X	-0.4	mrad	Nodo EF nr. 2471 (X: 59.759, Y: -0.532, Z: 0.000 m)
Max rotazione intorno a Y	-0.9	mrad	Asta nr. 10, x: 0.050 m
Max rotazione intorno a Z	-1.1	mrad	Nodo EF nr. 853 (X: 69.049, Y: 1.526, Z: 3.362 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidità moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Carichi mobili corsia 3			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	



Progetto: Modello: Sottopasso Data: 27.02.2018

4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	200.00	kN	
Somma delle reazioni vincolari in Z	200.00	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-90.680	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	-1423.400	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-0.010	kNm	Nel centro di gravità del modello
Max spostamento in X	0.0	mm	Asta nr. 3, x: 4.127 m
Max spostamento in Y	-0.1	mm	Nodo EF nr. 1890 (X: 63.904, Y: -4.162, Z: 1.425 m)
Max spostamento in Z	0.4	mm	Nodo EF nr. 2549 (X: 63.259, Y: -1.854, Z: 0.000 m)
Max spostamento vettoriale	0.4	mm	Nodo EF nr. 2549 (X: 63.259, Y: -1.854, Z: 0.000 m)
Max rotazione intorno a X	-0.2	mrad	Nodo EF nr. 2526 (X: 63.458, Y: -0.186, Z: 0.000 m)
Max rotazione intorno a Y	0.4	mrad	Asta nr. 34, x: 0.050 m
Max rotazione intorno a Z	-3.9	mrad	Nodo EF nr. 1450 (X: 69.864, Y: -3.256, Z: 0.146 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Carichi mobili distribuiti			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	398.61	kN	
Somma delle reazioni vincolari in Z	398.61	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-403.319	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	-2182.680	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-0.014	kNm	Nel centro di gravità del modello
Max spostamento in X	0.1	mm	Asta nr. 3, x: 2.428 m
Max spostamento in Y	-0.1	mm	Nodo EF nr. 1914 (X: 57.958, Y: -4.968, Z: 1.417 m)
Max spostamento in Z	0.3	mm	Nodo EF nr. 149 (X: 57.010, Y: -2.878, Z: 0.000 m)
Max spostamento vettoriale	0.3	mm	Nodo EF nr. 149 (X: 57.010, Y: -2.878, Z: 0.000 m)
Max rotazione intorno a X	-0.1	mrad	Asta nr. 43, x: 0.037 m
Max rotazione intorno a Y	-0.8	mrad	Asta nr. 29, x: 0.050 m
Max rotazione intorno a Z	-2.7	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Carichi mobili muri controterra 1			
Somma dei carichi in X	206.17	kN	
Somma delle reazioni vincolari in X	206.17	kN	Deviazione -0.00%
Somma dei carichi in Y	-1720.69	kN	
Somma delle reazioni vincolari in Y	-1720.69	kN	Deviazione -0.00%
Somma dei carichi in Z	11.12	kN	
Somma delle reazioni vincolari in Z	11.12	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-365.777	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	-92.673	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-1692.560	kNm	Nel centro di gravità del modello
Max spostamento in X	0.9	mm	Nodo EF nr. 38 (X: 0.000, Y: 0.000, Z: 1.000 m)
Max spostamento in Y	-7.4	mm	Nodo EF nr. 2653 (X: 49.651, Y: -0.992, Z: 0.001 m)
Max spostamento in Z	-0.3	mm	Nodo EF nr. 2688 (X: 53.606, Y: -0.613, Z: 3.649 m)
Max spostamento vettoriale	7.5	mm	Nodo EF nr. 2653 (X: 49.651, Y: -0.992, Z: 0.001 m)
Max rotazione intorno a X	-0.8	mrad	Nodo EF nr. 2649 (X: 47.672, Y: -1.156, Z: 0.001 m)
Max rotazione intorno a Y	-1.3	mrad	Asta nr. 6, x: 0.050 m
Max rotazione intorno a Z	22.8	mrad	Nodo EF nr. 1450 (X: 69.864, Y: -3.256, Z: 0.146 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Carichi mobili muri controterra 2			
Somma dei carichi in X	-219.63	kN	
Somma delle reazioni vincolari in X	-219.63	kN	Deviazione 0.00%
Somma dei carichi in Y	1781.76	kN	
Somma delle reazioni vincolari in Y	1781.76	kN	Deviazione 0.00%
Somma dei carichi in Z	-13.22	kN	
Somma delle reazioni vincolari in Z	-13.22	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	455.558	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	187.878	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	3089.690	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.9	mm	Nodo EF nr. 1 (X: 0.000, Y: 0.000, Z: 0.000 m)
Max spostamento in Y	7.4	mm	Nodo EF nr. 3422 (X: 50.360, Y: -5.798, Z: 0.001 m)
Max spostamento in Z	-0.3	mm	Asta nr. 29, x: 0.000 m
Max spostamento vettoriale	7.4	mm	Nodo EF nr. 3422 (X: 50.360, Y: -5.798, Z: 0.001 m)
Max rotazione intorno a X	0.8	mrad	Nodo EF nr. 3417 (X: 47.870, Y: -6.005, Z: 0.001 m)
Max rotazione intorno a Y	-0.9	mrad	Asta nr. 29, x: 0.050 m
Max rotazione intorno a Z	-31.9	mrad	Nodo EF nr. 1450 (X: 69.864, Y: -3.256, Z: 0.146 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Spinta delle terre			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione -0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione 0.00%
Somma dei carichi in Z	10.04	kN	



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Somma delle reazioni vincolari in Z	10.04	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	822.847	kNm	Nel centro di gravità del modello (X:56.222, Y:-1.104, Z:1.804 m)
Risultante delle reazioni intorno a Y	349.540	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.120	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-9.6	mm	Nodo EF nr. 2650 (X: 48.167, Y: -1.117, Z: 0.001 m)
Max spostamento in Z	-1.0	mm	Nodo EF nr. 3489 (X: 42.883, Y: -6.341, Z: 3.213 m)
Max spostamento vettoriale	9.7	mm	Nodo EF nr. 2650 (X: 48.167, Y: -1.117, Z: 0.001 m)
Max rotazione intorno a X	2.3	mrad	Nodo EF nr. 3412 (X: 45.377, Y: -6.186, Z: 0.001 m)
Max rotazione intorno a Y	-4.9	mrad	Asta nr. 6, x: 0.050 m
Max rotazione intorno a Z	25.1	mrad	Nodo EF nr. 838 (X: 69.049, Y: 1.526, Z: 0.146 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
CO1 - 1.35*CC1 + 1.35*CC2 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	Deviazione 0.00%
Somma delle reazioni vincolari in X	132.89	kN	
Somma dei carichi in Y	-992.06	kN	Deviazione -0.00%
Somma delle reazioni vincolari in Y	-992.06	kN	
Somma dei carichi in Z	16411.00	kN	Deviazione 0.00%
Somma delle reazioni vincolari in Z	16411.00	kN	
Risultante delle reazioni intorno a X	-601.4	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-12192.3	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-12.1	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	12.2	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.7	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-11.5	mrad	Asta nr. 8, x: 0.050 m
Max rotazione intorno a Z	-53.4	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO2 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	Deviazione -0.00%
Somma delle reazioni vincolari in X	132.89	kN	
Somma dei carichi in Y	-992.06	kN	Deviazione -0.00%
Somma delle reazioni vincolari in Y	-992.06	kN	
Somma dei carichi in Z	17221.00	kN	Deviazione 0.00%
Somma delle reazioni vincolari in Z	17221.00	kN	
Risultante delle reazioni intorno a X	-1756.4	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-11929.7	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.8	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	11.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.6	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-15.3	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-48.8	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO3 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	Deviazione 0.00%
Somma delle reazioni vincolari in X	132.89	kN	
Somma dei carichi in Y	-992.06	kN	Deviazione 0.00%
Somma delle reazioni vincolari in Y	-992.06	kN	
Somma dei carichi in Z	17761.00	kN	Deviazione 0.00%
Somma delle reazioni vincolari in Z	17761.00	kN	
Risultante delle reazioni intorno a X	-2280.6	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-13766.2	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.8	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	11.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.6	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-16.6	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-49.6	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		



Progetto:

Modello: Sottopasso

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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO4 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC5 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	18031.00	kN	
Somma delle reazioni vincolari in Z	18031.00	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-2403.4	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-15687.8	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.8	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	11.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.6	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-16.8	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-52.6	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO5 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	18569.10	kN	
Somma delle reazioni vincolari in Z	18569.10	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-2948.8	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-18634.6	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.8	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	11.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.6	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-17.8	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-56.2	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO6 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC4 + 1.35*CC6 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione 0.00%
Somma dei carichi in Z	18299.10	kN	
Somma delle reazioni vincolari in Z	18299.10	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-2826.0	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-16712.9	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.8	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	11.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.6	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-17.6	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-53.3	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO7 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC5 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	17491.00	kN	
Somma delle reazioni vincolari in Z	17491.00	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-1879.1	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-13851.4	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	11.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.6	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-15.5	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-51.8	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO8 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	18029.10	kN	
Somma delle reazioni vincolari in Z	18029.10	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-2424.4	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-16798.0	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	11.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.6	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-16.5	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-55.4	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO9 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.35*CC6 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione 0.00%
Somma dei carichi in Z	17759.10	kN	
Somma delle reazioni vincolari in Z	17759.10	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-2301.7	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-14876.3	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.8	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	11.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.6	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-16.4	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-52.5	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO10 - 1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	16951.00	kN	
Somma delle reazioni vincolari in Z	16951.00	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-1125.6	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-14028.9	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-12.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	12.1	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.7	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-12.8	mrad	Asta nr. 8, x: 0.050 m
Max rotazione intorno a Z	-54.2	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO11 - 1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC5 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	17221.00	kN	
Somma delle reazioni vincolari in Z	17221.00	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-1248.3	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-15950.5	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-12.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	12.1	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.7	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-13.0	mrad	Asta nr. 8, x: 0.050 m
Max rotazione intorno a Z	-57.2	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO12 - 1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione -0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	17759.10	kN	
Somma delle reazioni vincolari in Z	17759.10	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1793.7	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-18897.2	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-11.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	12.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.7	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-13.9	mrad	Asta nr. 10, x: 0.050 m
Max rotazione intorno a Z	-60.8	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO13 - 1.35*CC1 + 1.35*CC2 + 1.35*CC4 + 1.35*CC6 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	17489.10	kN	
Somma delle reazioni vincolari in Z	17489.10	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1670.9	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-16975.5	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-12.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	12.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.7	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-13.7	mrad	Asta nr. 10, x: 0.050 m
Max rotazione intorno a Z	-57.8	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO14 - 1.35*CC1 + 1.35*CC2 + 1.35*CC5 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	16681.00	kN	
Somma delle reazioni vincolari in Z	16681.00	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-724.1	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-14114.0	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello



Progetto:

Modello: Sottopasso

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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Max spostamento in X	-1.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-12.1	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	12.2	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.7	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-11.7	mrad	Asta nr. 7, x: 0.050 m
Max rotazione intorno a Z	-56.4	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidità moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO15 - 1.35*CC1 + 1.35*CC2 + 1.35*CC5 + 1.35*CC6 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	17219.10	kN	
Somma delle reazioni vincolari in Z	17219.10	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1269.4	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-17060.6	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.8	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-12.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	12.1	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.7	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-12.6	mrad	Asta nr. 10, x: 0.050 m
Max rotazione intorno a Z	-60.0	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidità moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO16 - 1.35*CC1 + 1.35*CC2 + 1.35*CC6 + 1.35*CC11			
Somma dei carichi in X	132.89	kN	
Somma delle reazioni vincolari in X	132.89	kN	Deviazione 0.00%
Somma dei carichi in Y	-992.06	kN	
Somma delle reazioni vincolari in Y	-992.06	kN	Deviazione -0.00%
Somma dei carichi in Z	16949.10	kN	
Somma delle reazioni vincolari in Z	16949.10	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1146.7	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-15138.9	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-4796.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.8	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-12.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	12.1	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.7	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-12.4	mrad	Asta nr. 10, x: 0.050 m
Max rotazione intorno a Z	-57.0	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidità moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO17 - 1.35*CC1 + 1.35*CC2 + 1.35*CC7 + 1.35*CC11			
Somma dei carichi in X	411.22	kN	
Somma delle reazioni vincolari in X	411.22	kN	Deviazione 0.00%
Somma dei carichi in Y	-3315.00	kN	
Somma delle reazioni vincolari in Y	-3315.00	kN	Deviazione 0.00%
Somma dei carichi in Z	16426.00	kN	
Somma delle reazioni vincolari in Z	16426.00	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-1108.4	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-12319.2	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-7081.5	kNm	Nel centro di gravità del modello
Max spostamento in X	-2.7	mm	Nodo EF nr. 5452 (X: 106.658, Y: 11.347, Z: 0.500 m)
Max spostamento in Y	-22.1	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.7	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	22.3	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	-3.8	mrad	Nodo EF nr. 2647 (X: 46.682, Y: -1.232, Z: 0.001 m)
Max rotazione intorno a Y	-13.5	mrad	Asta nr. 7, x: 0.050 m
Max rotazione intorno a Z	-72.2	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidità moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO18 - 1.35*CC1 + 1.35*CC2 + 1.35*CC7 + 1.35*CC8 + 1.35*CC11			
Somma dei carichi in X	114.73	kN	
Somma delle reazioni vincolari in X	114.73	kN	Deviazione 0.00%
Somma dei carichi in Y	-909.61	kN	
Somma delle reazioni vincolari in Y	-909.61	kN	Deviazione 0.00%
Somma dei carichi in Z	16408.20	kN	
Somma delle reazioni vincolari in Z	16408.20	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	-480.0	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-12063.7	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-2909.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-2.1	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-15.2	mm	Nodo EF nr. 2650 (X: 48.167, Y: -1.117, Z: 0.001 m)
Max spostamento in Z	4.6	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	15.3	mm	Nodo EF nr. 2650 (X: 48.167, Y: -1.117, Z: 0.001 m)
Max rotazione intorno a X	3.8	mrad	Nodo EF nr. 3412 (X: 45.377, Y: -6.186, Z: 0.001 m)
Max rotazione intorno a Y	-13.0	mrad	Asta nr. 8, x: 0.050 m
Max rotazione intorno a Z	-52.7	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO19 - 1.35*CC1 + 1.35*CC2 + 1.35*CC8 + 1.35*CC11			
Somma dei carichi in X	-163.60	kN	
Somma delle reazioni vincolari in X	-163.60	kN	Deviazione 0.00%
Somma dei carichi in Y	1413.32	kN	
Somma delle reazioni vincolari in Y	1413.32	kN	Deviazione -0.00%
Somma dei carichi in Z	16393.20	kN	
Somma delle reazioni vincolari in Z	16393.20	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	27.0	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-11936.9	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-625.1	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.9	mm	Asta nr. 30, x: 1.673 m
Max spostamento in Y	14.5	mm	Nodo EF nr. 3415 (X: 46.873, Y: -6.081, Z: 0.001 m)
Max spostamento in Z	4.5	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	14.6	mm	Nodo EF nr. 3415 (X: 46.873, Y: -6.081, Z: 0.001 m)
Max rotazione intorno a X	3.7	mrad	Nodo EF nr. 3413 (X: 45.876, Y: -6.152, Z: 0.001 m)
Max rotazione intorno a Y	-11.0	mrad	Asta nr. 10, x: 0.050 m
Max rotazione intorno a Z	-42.4	mrad	Nodo EF nr. 1450 (X: 69.864, Y: -3.256, Z: 0.146 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO20 - CC1 + CC2 + CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione -0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione -0.00%
Somma dei carichi in Z	12156.30	kN	
Somma delle reazioni vincolari in Z	12156.30	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-444.1	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-9031.1	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.4	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.9	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	9.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.0	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-8.5	mrad	Asta nr. 8, x: 0.050 m
Max rotazione intorno a Z	-39.5	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO21 - CC1 + CC2 + CC3 + CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione 0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione 0.00%
Somma dei carichi in Z	12756.30	kN	
Somma delle reazioni vincolari in Z	12756.30	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1299.5	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-8836.6	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)



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Descrizione	Valore	Unità	Commento
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	8.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.0	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-11.3	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-36.1	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO22 - CC1 + CC2 + CC3 + CC4 + CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione -0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione 0.00%
Somma dei carichi in Z	13156.30	kN	
Somma delle reazioni vincolari in Z	13156.30	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1687.7	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-10197.0	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	8.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	1.9	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-12.2	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-36.7	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO23 - CC1 + CC2 + CC3 + CC4 + CC5 + CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione -0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione 0.00%
Somma dei carichi in Z	13356.30	kN	
Somma delle reazioni vincolari in Z	13356.30	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1778.5	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-11620.4	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	8.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	1.9	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-12.4	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-38.9	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO24 - CC1 + CC2 + CC3 + CC4 + CC5 + CC6 + CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione -0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione -0.00%
Somma dei carichi in Z	13754.90	kN	
Somma delle reazioni vincolari in Z	13754.90	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-2182.3	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-13803.1	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	8.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	1.9	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-13.1	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-41.6	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO25 - CC1 + CC2 + CC3 + CC4 + CC6 + C			



Progetto:

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Descrizione	Valore	Unità	Commento
CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione 0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione -0.00%
Somma dei carichi in Z	13554.90	kN	
Somma delle reazioni vincolari in Z	13554.90	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-2091.5	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-12379.7	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	8.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	1.9	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-13.0	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-39.4	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidità moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO26 - CC1 + CC2 + CC3 + CC5 + CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione -0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione 0.00%
Somma dei carichi in Z	12956.30	kN	
Somma delle reazioni vincolari in Z	12956.30	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1390.3	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-10260.0	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	8.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.0	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-11.4	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-38.3	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidità moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO27 - CC1 + CC2 + CC3 + CC5 + CC6 + CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione -0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione -0.00%
Somma dei carichi in Z	13354.90	kN	
Somma delle reazioni vincolari in Z	13354.90	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1794.1	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-12442.7	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	8.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	1.9	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-12.2	mrad	Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-41.0	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidità moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO28 - CC1 + CC2 + CC3 + CC6 + CC11			
Somma dei carichi in X	98.44	kN	
Somma delle reazioni vincolari in X	98.44	kN	Deviazione 0.00%
Somma dei carichi in Y	-734.86	kN	
Somma delle reazioni vincolari in Y	-734.86	kN	Deviazione -0.00%
Somma dei carichi in Z	13154.90	kN	
Somma delle reazioni vincolari in Z	13154.90	kN	Deviazione -0.00%
Risultante delle reazioni intorno a X	-1703.3	kNm	Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m)
Risultante delle reazioni intorno a Y	-11019.3	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-3553.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-1.3	mm	Asta nr. 1, x: 4.536 m
Max spostamento in Y	-8.7	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	8.8	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	1.9	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidità moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	12954.90 12954.90 -1236.1 -12574.2 -3553.4 -1.3 -8.8 3.4 8.9 2.0 -10.1 -42.8 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad mrad 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	Deviazione -0.00% Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m) Nel centro di gravità del modello Nel centro di gravità del modello Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m) Asta nr. 10, x: 0.050 m Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO33 - CC1 + CC2 + CC5 + CC11 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidità moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	98.44 98.44 -734.86 -734.86 12356.30 12356.30 -535.0 -10454.6 -3553.4 -1.3 -8.9 3.4 9.0 2.0 -8.6 -41.7 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	Deviazione 0.00% Deviazione 0.00% Deviazione -0.00% Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m) Nel centro di gravità del modello Nel centro di gravità del modello Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m) Asta nr. 8, x: 0.050 m Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO34 - CC1 + CC2 + CC5 + CC6 + CC11 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidità moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	98.44 98.44 -734.86 -734.86 12754.90 12754.90 -938.7 -12637.3 -3553.4 -1.3 -8.9 3.4 9.0 2.0 -9.3 -44.4 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	Deviazione 0.00% Deviazione 0.00% Deviazione -0.00% Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m) Nel centro di gravità del modello Nel centro di gravità del modello Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m) Asta nr. 10, x: 0.050 m Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO35 - CC1 + CC2 + CC6 + CC11 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidità moltiplicata per il coefficiente	98.44 98.44 -734.86 -734.86 12554.90 12554.90 -847.9 -11213.9 -3553.4 -1.3 -8.9 3.4 9.0 2.0 -9.2 -42.2 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	Deviazione 0.00% Deviazione -0.00% Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m) Nel centro di gravità del modello Nel centro di gravità del modello Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m) Asta nr. 10, x: 0.050 m Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T



Progetto: Modello: Sottopasso Data: 27.02.2018

4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	<input checked="" type="checkbox"/> <input type="checkbox"/> 1 3		
CO36 - CC1 + CC2 + CC7 + CC11 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidezza moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	304.61 304.61 -2455.55 -2455.55 12167.40 12167.40 -817.1 -9124.7 -5245.7 -2.0 -16.4 3.5 16.5 -2.8 -9.9 -53.5 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad mrad	Deviazione 0.00% Deviazione 0.00% Deviazione 0.00% Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m) Nel centro di gravità del modello Nel centro di gravità del modello Nodo EF nr. 5452 (X: 106.658, Y: 11.347, Z: 0.500 m) Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m) Nodo EF nr. 2647 (X: 46.682, Y: -1.232, Z: 0.001 m) Asta nr. 7, x: 0.050 m Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO37 - CC1 + CC2 + CC7 + CC8 + CC11 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidezza moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	84.98 84.98 -673.79 -673.79 12154.20 12154.20 -354.2 -8935.8 -2155.8 -1.6 -11.2 3.4 11.3 2.8 -9.6 -39.0 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad	Deviazione -0.00% Deviazione 0.00% Deviazione 0.00% Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m) Nel centro di gravità del modello Nel centro di gravità del modello Asta nr. 1, x: 4.536 m Nodo EF nr. 2650 (X: 48.167, Y: -1.117, Z: 0.001 m) Asta nr. 1, x: 4.536 m Nodo EF nr. 2650 (X: 48.167, Y: -1.117, Z: 0.001 m) Nodo EF nr. 3412 (X: 45.377, Y: -6.186, Z: 0.001 m) Asta nr. 8, x: 0.050 m Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO38 - CC1 + CC2 + CC8 + CC11 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidezza moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	-121.19 -121.19 1046.90 1046.90 12143.10 12143.10 18.8 -8842.3 -463.3 -1.4 10.7 3.4 10.8 2.8 -8.1 -31.5 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad	Deviazione -0.00% Deviazione -0.00% Deviazione -0.00% Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m) Nel centro di gravità del modello Nel centro di gravità del modello Asta nr. 30, x: 1.673 m Nodo EF nr. 3415 (X: 46.873, Y: -6.081, Z: 0.001 m) Asta nr. 1, x: 4.536 m Nodo EF nr. 3415 (X: 46.873, Y: -6.081, Z: 0.001 m) Nodo EF nr. 3413 (X: 45.876, Y: -6.152, Z: 0.001 m) Asta nr. 10, x: 0.050 m Nodo EF nr. 1450 (X: 69.864, Y: -3.256, Z: 0.146 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO39 - CC1 + CC2 + CC11 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y	98.44 98.44 -734.86 -734.86 12156.30 12156.30 -444.1 -9031.1 -3553.4 -1.3 -8.9	kN kN kN kN kN kN kNm kNm kNm mm mm	Deviazione -0.00% Deviazione -0.00% Deviazione -0.00% Nel centro di gravità del modello (X:56.2, Y:-1.1, Z:1.8 m) Nel centro di gravità del modello Nel centro di gravità del modello Asta nr. 1, x: 4.536 m Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)



Progetto: Modello: Sottopasso

Data: 27.02.2018

4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Max spostamento in Z	3.4	mm	Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	9.0	mm	Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	2.0	mrad	Nodo EF nr. 3411 (X: 44.879, Y: -6.219, Z: 0.001 m)
Max rotazione intorno a Y	-8.5	mrad	Asta nr. 8, x: 0.050 m
Max rotazione intorno a Z	-39.5	mrad	Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
Sommario			
Max spostamento in X	-2.7	mm	CO17, Nodo EF nr. 5452 (X: 106.658, Y: 11.347, Z: 0.500 m)
Max spostamento in Y	-22.1	mm	CO17, Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max spostamento in Z	4.7	mm	CO17, Asta nr. 1, x: 4.536 m
Max spostamento vettoriale	22.3	mm	CO17, Nodo EF nr. 2651 (X: 48.662, Y: -1.076, Z: 0.001 m)
Max rotazione intorno a X	-3.8	mrad	CO17, Nodo EF nr. 2647 (X: 46.682, Y: -1.232, Z: 0.001 m)
Max rotazione intorno a Y	-17.8	mrad	CO5, Asta nr. 16, x: 0.050 m
Max rotazione intorno a Z	-72.2	mrad	CO17, Nodo EF nr. 1433 (X: 69.864, Y: -3.256, Z: 3.654 m)
Altre impostazioni			
Numero di elementi finiti 1D		:	124
Numero di elementi finiti 2D		:	7387
Numero di elementi finiti 3D		:	0
Numero di nodi della mesh EF		:	7635
Numero di equazioni		:	45810
Max numero di iterazioni		:	100
Numero di divisioni per i risultati delle aste		:	10
Divisione di fune/vincolo est. elast./aste rastremate		:	10
Numero delle divisioni delle aste per la ricerca dei valori massimi		:	10
Suddivisioni della mesh EF per i risultati grafici		:	0
Percentuale di iterazioni secondo il metodo di Picard in combinazione con il metodo di Newton-Raphson		:	5 %
Opzioni			
<input checked="" type="checkbox"/> Attiva rigidezza a taglio delle aste (Ay, Az)			
<input checked="" type="checkbox"/> Attiva divisioni delle aste per l'analisi a grandi spostamenti o post-critica			
<input checked="" type="checkbox"/> Attiva modifiche inserite della rigidezza			
<input type="checkbox"/> Ignora gradi di libertà rotazionali			
<input checked="" type="checkbox"/> Verifica forze critiche delle aste			
Metodo per il sistema di equazioni			<input checked="" type="radio"/> Diretto <input type="radio"/> Iterazione <input type="radio"/> Mindlin <input type="radio"/> Kirchhoff <input type="radio"/> 32-bit <input type="radio"/> 64-bit
Teoria delle piastre inflesse			
Versione del solutore			
Precisione e tolleranza			<input type="checkbox"/> Modifica impostazioni predefinite

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
Sezione nr. 1: Rettangolo 1000/500									
1	CC1	54	0.000	-168.45	-5.36	-6.32	23.08	-14.45	-73.43
		66	2.268	-43.59	0.66	7.74	7.42	-6.40	-18.03
		40	4.536	0.68	0.36	-2.68	1.30	-0.27	0.30
	CC2	54	0.000	-0.03	0.00	0.00	-0.03	0.01	0.07
		66	2.268	0.00	0.03	-0.00	-0.00	0.00	0.03
		40	4.536	0.00	0.00	-0.00	0.00	-0.00	-0.00
	CC3	54	0.000	-0.06	-0.02	-0.00	-0.01	0.00	0.00
		66	2.268	-0.03	0.00	0.00	-0.00	-0.00	0.01
		40	4.536	0.00	0.00	0.00	-0.00	-0.00	-0.00
	CC4	54	0.000	-0.03	-0.01	-0.00	-0.00	0.00	0.01
		66	2.268	-0.01	0.00	0.00	-0.00	0.00	0.00
		40	4.536	0.00	0.00	0.00	-0.00	-0.00	-0.00
	CC5	54	0.000	-0.01	-0.00	0.00	-0.00	0.00	0.01
		66	2.268	-0.00	0.00	-0.00	-0.00	0.00	0.00
		40	4.536	0.00	0.00	-0.00	0.00	-0.00	-0.00
	CC6	54	0.000	-0.01	-0.00	0.00	-0.01	0.00	0.02
		66	2.268	-0.00	0.01	-0.00	-0.00	0.00	0.01
		40	4.536	0.00	0.00	-0.00	0.00	-0.00	-0.00
	CC7	54	0.000	0.98	0.73	0.06	-0.22	0.07	0.98
		66	2.268	0.91	0.33	-0.03	-0.01	0.04	0.11
		40	4.536	0.00	0.00	-0.01	0.00	0.00	0.00
	CC8	54	0.000	-7.31	-2.40	-0.00	0.72	0.27	3.43
		66	2.268	-3.00	1.41	0.06	1.30	0.34	1.44
		40	4.536	0.01	0.05	-0.34	0.17	-0.02	-0.05
	CC11	54	0.000	-24.93	-6.37	-0.10	-0.89	1.46	18.37
		66	2.268	-8.26	7.95	0.03	3.74	1.38	7.11
		40	4.536	0.14	0.25	-1.13	0.57	-0.07	-0.14
	CO1	54	0.000	-261.04	-15.82	-8.63	29.94	-17.55	-74.28
		66	2.268	-69.97	11.66	10.47	15.07	-6.77	-14.72
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO2	54	0.000	-261.13	-15.84	-8.63	29.93	-17.55	-74.27
		66	2.268	-70.02	11.67	10.47	15.07	-6.77	-14.71
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO3	54	0.000	-261.17	-15.85	-8.64	29.93	-17.55	-74.26
		66	2.268	-70.03	11.67	10.47	15.07	-6.77	-14.71



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
1	CO3	40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO4	54	0.000	-261.18	-15.85	-8.64	29.92	-17.55	-74.25
		66	2.268	-70.03	11.68	10.47	15.07	-6.77	-14.71
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO5	54	0.000	-261.19	-15.85	-8.64	29.91	-17.55	-74.23
		66	2.268	-70.03	11.69	10.47	15.07	-6.77	-14.70
		40	4.536	1.12	0.83	-5.14	2.52	-0.47	0.22
	CO6	54	0.000	-261.18	-15.85	-8.64	29.92	-17.55	-74.24
		66	2.268	-70.03	11.69	10.47	15.07	-6.77	-14.70
		40	4.536	1.12	0.83	-5.14	2.52	-0.47	0.22
	CO7	54	0.000	-261.14	-15.84	-8.63	29.93	-17.55	-74.26
		66	2.268	-70.02	11.67	10.47	15.07	-6.77	-14.71
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO8	54	0.000	-261.16	-15.85	-8.63	29.92	-17.55	-74.24
		66	2.268	-70.02	11.69	10.47	15.07	-6.77	-14.70
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO9	54	0.000	-261.15	-15.85	-8.63	29.92	-17.55	-74.25
		66	2.268	-70.02	11.68	10.47	15.07	-6.77	-14.70
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO10	54	0.000	-261.08	-15.83	-8.63	29.94	-17.55	-74.27
		66	2.268	-69.99	11.67	10.47	15.07	-6.77	-14.72
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO11	54	0.000	-261.08	-15.83	-8.63	29.93	-17.55	-74.26
		66	2.268	-69.99	11.67	10.47	15.07	-6.77	-14.71
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO12	54	0.000	-261.10	-15.83	-8.63	29.93	-17.55	-74.24
		66	2.268	-69.99	11.68	10.47	15.07	-6.77	-14.70
		40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22
	CO13	54	0.000	-261.09	-15.83	-8.63	29.93	-17.55	-74.25
		66	2.268	-69.99	11.68	10.47	15.07	-6.77	-14.71
40		4.536	1.11	0.83	-5.14	2.52	-0.47	0.22	
CO14	54	0.000	-261.05	-15.82	-8.63	29.94	-17.55	-74.27	
	66	2.268	-69.97	11.66	10.47	15.07	-6.77	-14.72	
	40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22	
CO15	54	0.000	-261.07	-15.82	-8.63	29.93	-17.55	-74.25	
	66	2.268	-69.98	11.68	10.47	15.07	-6.77	-14.71	
	40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22	
CO16	54	0.000	-261.06	-15.82	-8.63	29.93	-17.55	-74.26	
	66	2.268	-69.97	11.67	10.47	15.07	-6.77	-14.71	
	40	4.536	1.11	0.83	-5.14	2.52	-0.47	0.22	
CO17	54	0.000	-259.66	-14.83	-8.55	29.67	-17.46	-73.01	
	66	2.268	-68.72	12.08	10.43	15.06	-6.71	-14.59	
	40	4.536	1.12	0.84	-5.15	2.53	-0.47	0.22	
CO18	54	0.000	-269.60	-18.08	-8.55	30.63	-17.10	-68.32	
	66	2.268	-72.80	14.01	10.52	16.81	-6.26	-12.63	
	40	4.536	1.14	0.90	-5.61	2.75	-0.50	0.16	
CO19	54	0.000	-270.98	-19.08	-8.63	30.91	-17.19	-69.60	
	66	2.268	-74.05	13.60	10.55	16.83	-6.31	-12.76	
	40	4.536	1.13	0.90	-5.60	2.75	-0.50	0.16	
CO20	54	0.000	-193.37	-11.72	-6.40	22.18	-13.00	-55.02	
	66	2.268	-51.83	8.64	7.76	11.16	-5.01	-10.90	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO21	54	0.000	-193.44	-11.74	-6.40	22.17	-13.00	-55.01	
	66	2.268	-51.86	8.64	7.76	11.16	-5.01	-10.90	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO22	54	0.000	-193.46	-11.74	-6.40	22.17	-13.00	-55.01	
	66	2.268	-51.88	8.65	7.76	11.16	-5.01	-10.89	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO23	54	0.000	-193.47	-11.74	-6.40	22.16	-12.99	-55.00	
	66	2.268	-51.88	8.65	7.76	11.16	-5.01	-10.89	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO24	54	0.000	-193.48	-11.74	-6.40	22.16	-12.99	-54.98	
	66	2.268	-51.88	8.66	7.76	11.16	-5.01	-10.88	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO25	54	0.000	-193.47	-11.74	-6.40	22.16	-12.99	-54.99	
	66	2.268	-51.88	8.66	7.76	11.16	-5.01	-10.89	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO26	54	0.000	-193.44	-11.74	-6.40	22.17	-13.00	-55.01	
	66	2.268	-51.86	8.65	7.76	11.16	-5.01	-10.90	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO27	54	0.000	-193.45	-11.74	-6.40	22.16	-12.99	-54.99	
	66	2.268	-51.87	8.66	7.76	11.16	-5.01	-10.89	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO28	54	0.000	-193.45	-11.74	-6.40	22.16	-12.99	-54.99	
	66	2.268	-51.87	8.65	7.76	11.16	-5.01	-10.89	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO29	54	0.000	-193.39	-11.73	-6.40	22.17	-13.00	-55.01	
	66	2.268	-51.84	8.64	7.76	11.16	-5.01	-10.90	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO30	54	0.000	-193.40	-11.73	-6.40	22.17	-13.00	-55.01	
	66	2.268	-51.84	8.65	7.76	11.16	-5.01	-10.90	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO31	54	0.000	-193.41	-11.73	-6.40	22.16	-12.99	-54.99	
	66	2.268	-51.85	8.65	7.76	11.16	-5.01	-10.89	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO32	54	0.000	-193.41	-11.73	-6.40	22.17	-12.99	-54.99	
	66	2.268	-51.85	8.65	7.76	11.16	-5.01	-10.89	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
CO33	54	0.000	-193.37	-11.72	-6.40	22.18	-13.00	-55.01	
	66	2.268	-51.83	8.64	7.76	11.16	-5.01	-10.90	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	

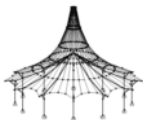


Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
1	CO34	54	0.000	-193.39	-11.72	-6.40	22.17	-12.99	-54.99
		66	2.268	-51.84	8.65	7.76	11.16	-5.01	-10.89
		40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16
	CO35	54	0.000	-193.38	-11.72	-6.40	22.17	-13.00	-55.00
		66	2.268	-51.83	8.65	7.76	11.16	-5.01	-10.90
		40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16
	CO36	54	0.000	-192.35	-10.98	-6.34	21.97	-12.93	-54.08
		66	2.268	-50.91	8.95	7.73	11.15	-4.97	-10.80
		40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16
	CO37	54	0.000	-199.70	-13.39	-6.34	22.69	-12.66	-50.61
		66	2.268	-53.92	10.38	7.79	12.45	-4.63	-9.35
		40	4.536	0.84	0.67	-4.16	2.04	-0.37	0.12
CO38	54	0.000	-200.73	-14.13	-6.40	22.89	-12.73	-51.55	
	66	2.268	-54.85	10.07	7.82	12.46	-4.67	-9.45	
	40	4.536	0.84	0.66	-4.15	2.03	-0.37	0.12	
CO39	54	0.000	-193.37	-11.72	-6.40	22.18	-13.00	-55.02	
	66	2.268	-51.83	8.64	7.76	11.16	-5.01	-10.90	
	40	4.536	0.83	0.62	-3.81	1.87	-0.34	0.16	
Sezione nr. 4: Rettangolo 350/2550									
3	CC1	6	0.000	10.37	5.26	49.16	-5.33	14.39	-0.11
		3	4.855	10.23	-6.47	-51.31	6.89	15.03	0.44
	CC2	6	0.000	1.70	9.26	14.35	-9.56	3.31	-0.28
		3	4.855	2.69	-9.21	-16.41	9.56	5.47	0.24
	CC3	6	0.000	0.10	21.15	24.28	-22.61	1.42	-1.76
		3	4.855	-1.32	-23.11	-29.75	24.58	1.17	-0.70
	CC4	6	0.000	0.70	4.36	-3.84	-4.39	1.29	0.03
		3	4.855	0.81	-4.54	1.50	4.57	1.97	0.25
	CC5	6	0.000	0.15	0.10	-0.07	-0.07	0.25	0.01
		3	4.855	0.47	0.15	-0.51	-0.20	0.72	0.07
	CC6	6	0.000	0.84	4.22	8.14	-4.40	1.55	-0.15
		3	4.855	0.60	-4.24	-8.20	4.46	1.47	-0.01
	CC7	6	0.000	-16.73	-8.51	-16.96	7.54	-25.64	-1.93
		3	4.855	-19.81	-3.62	-2.09	3.49	-20.80	1.59
	CC8	6	0.000	-13.78	12.13	1.48	-12.16	-13.56	1.79
		3	4.855	-10.42	3.41	16.65	-3.04	-17.67	-1.90
	CC11	6	0.000	-102.03	2.07	-61.43	-6.26	-136.53	-2.46
		3	4.855	-73.60	-2.87	31.03	2.90	-90.93	0.37
	CO1	6	0.000	-120.78	21.97	1.94	-28.20	-159.93	-3.98
		3	4.855	-80.44	-24.15	-48.97	25.25	-93.53	1.33
	CO2	6	0.000	-120.66	50.26	34.70	-58.48	-158.01	-6.38
		3	4.855	-82.22	-55.07	-88.93	58.18	-91.94	0.40
	CO3	6	0.000	-119.76	56.07	29.48	-64.34	-156.30	-6.34
		3	4.855	-81.16	-61.13	-86.85	64.29	-89.30	0.74
	CO4	6	0.000	-119.58	56.19	29.37	-64.42	-155.99	-6.33
		3	4.855	-80.55	-60.91	-87.54	64.01	-88.35	0.83
	CO5	6	0.000	-118.48	61.79	40.32	-70.28	-153.92	-6.53
		3	4.855	-79.76	-66.54	-98.56	69.96	-86.38	0.83
	CO6	6	0.000	-118.66	61.67	40.43	-70.20	-154.24	-6.55
		3	4.855	-80.37	-66.76	-97.87	70.24	-87.33	0.73
	CO7	6	0.000	-120.49	50.37	34.59	-58.55	-157.69	-6.36
		3	4.855	-81.61	-54.85	-89.62	57.90	-90.98	0.49
	CO8	6	0.000	-119.39	55.97	45.54	-64.41	-155.63	-6.56
		3	4.855	-80.82	-60.48	-100.65	63.85	-89.01	0.48
	CO9	6	0.000	-119.57	55.86	45.65	-64.34	-155.94	-6.58
		3	4.855	-81.43	-60.70	-99.96	64.13	-89.97	0.39
	CO10	6	0.000	-119.87	27.79	-3.26	-34.07	-158.22	-3.95
		3	4.855	-79.37	-30.22	-46.90	31.37	-90.89	1.68
	CO11	6	0.000	-119.69	27.91	-3.37	-34.15	-157.91	-3.94
		3	4.855	-78.76	-30.00	-47.59	31.09	-89.94	1.77
	CO12	6	0.000	-118.59	33.52	7.58	-40.01	-155.84	-4.14
		3	4.855	-77.97	-35.64	-58.62	37.04	-87.96	1.76
	CO13	6	0.000	-118.77	33.40	7.69	-39.93	-156.16	-4.16
		3	4.855	-78.58	-35.86	-57.93	37.32	-88.92	1.67
	CO14	6	0.000	-120.61	22.09	1.83	-28.28	-159.62	-3.97
		3	4.855	-79.83	-23.93	-49.66	24.97	-92.57	1.43
	CO15	6	0.000	-119.50	27.70	12.80	-34.14	-157.55	-4.17
		3	4.855	-79.04	-29.57	-60.69	30.93	-90.60	1.42
	CO16	6	0.000	-119.68	27.58	12.91	-34.06	-157.86	-4.19
		3	4.855	-79.64	-29.79	-60.01	31.21	-91.55	1.33
	CO17	6	0.000	-143.51	10.53	-21.23	-18.07	-194.80	-6.64
		3	4.855	-106.61	-28.98	-51.50	29.90	-121.09	3.44
	CO18	6	0.000	-161.36	26.76	-19.31	-34.35	-212.29	-4.22
		3	4.855	-120.66	-24.30	-29.04	25.71	-144.89	0.88
CO19	6	0.000	-138.63	38.20	3.79	-44.48	-177.46	-1.57	
	3	4.855	-94.50	-19.48	-26.47	21.07	-117.35	-1.23	
CO20	6	0.000	-89.49	16.27	1.54	-20.88	-118.46	-2.94	
	3	4.855	-59.60	-17.90	-36.32	18.71	-69.29	0.99	
CO21	6	0.000	-89.44	37.24	25.83	-43.32	-117.07	-4.71	
	3	4.855	-60.94	-40.81	-65.97	43.11	-68.13	0.29	
CO22	6	0.000	-88.77	41.55	21.97	-47.67	-115.81	-4.68	
	3	4.855	-60.16	-45.30	-64.44	47.63	-66.18	0.55	
CO23	6	0.000	-88.64	41.64	21.89	-47.73	-115.58	-4.67	
	3	4.855	-59.71	-45.13	-64.94	47.43	-65.48	0.62	
CO24	6	0.000	-87.83	45.79	30.02	-52.07	-114.06	-4.82	
	3	4.855	-59.13	-49.31	-73.12	51.83	-64.02	0.61	
CO25	6	0.000	-87.96	45.71	30.10	-52.01	-114.29	-4.83	
	3	4.855	-59.58	-49.47	-72.61	52.04	-64.73	0.54	
CO26	6	0.000	-89.30	37.33	25.75	-43.38	-116.84	-4.69	
	3	4.855	-60.49	-40.64	-66.48	42.90	-67.43	0.36	
CO27	6	0.000	-88.50	41.48	33.88	-47.72	-115.31	-4.84	
	3	4.855	-59.91	-44.82	-74.66	47.31	-65.97	0.36	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
3	CO28	6	0.000	-88.63	41.39	33.96	-47.66	-115.55	-4.86
		3	4.855	-60.36	-44.98	-74.15	47.52	-66.68	0.29
	CO29	6	0.000	-88.82	20.59	-2.31	-25.23	-117.20	-2.92
		3	4.855	-58.82	-22.39	-34.79	23.24	-67.34	1.24
	CO30	6	0.000	-88.69	20.67	-2.39	-25.29	-116.97	-2.90
		3	4.855	-58.36	-22.23	-35.30	23.03	-66.64	1.31
	CO31	6	0.000	-87.88	24.83	5.74	-29.63	-115.44	-3.06
		3	4.855	-57.78	-26.41	-43.48	27.45	-65.18	1.30
	CO32	6	0.000	-88.01	24.75	5.82	-29.58	-115.68	-3.07
		3	4.855	-58.23	-26.57	-42.97	27.65	-65.89	1.23
	CO33	6	0.000	-89.36	16.36	1.46	-20.94	-118.23	-2.93
		3	4.855	-59.15	-17.73	-36.82	18.50	-68.58	1.06
	CO34	6	0.000	-88.55	20.52	9.59	-25.28	-116.70	-3.08
		3	4.855	-58.57	-21.91	-45.01	22.92	-67.13	1.05
	CO35	6	0.000	-88.68	20.43	9.67	-25.23	-116.94	-3.09
		3	4.855	-59.02	-22.08	-44.50	23.12	-67.84	0.98
	CO36	6	0.000	-106.29	7.80	-15.58	-13.38	-144.23	-4.90
		3	4.855	-79.00	-21.47	-38.22	22.15	-89.70	2.55
CO37	6	0.000	-119.58	19.81	-14.16	-25.43	-157.27	-3.12	
	3	4.855	-89.42	-18.00	-21.58	19.05	-107.35	0.65	
CO38	6	0.000	-102.78	28.29	2.91	-32.94	-131.53	-1.16	
	3	4.855	-70.03	-14.44	-19.65	15.61	-86.95	-0.91	
CO39	6	0.000	-89.49	16.27	1.54	-20.88	-118.46	-2.94	
	3	4.855	-59.60	-17.90	-36.32	18.71	-69.29	0.99	
Sezione nr. 5: RD 24									
4	CC1	199	0.000	-10.31	0.61	3.23	0.00	-0.16	0.03
		175	0.100	-10.31	0.61	3.22	0.00	0.16	-0.03
	CC2	199	0.000	5.20	0.77	4.57	0.00	-0.23	0.04
		175	0.100	5.20	0.77	4.57	0.00	0.23	-0.04
	CC3	199	0.000	32.40	0.56	6.25	0.00	-0.31	0.03
		175	0.100	32.40	0.56	6.25	0.00	0.31	-0.03
	CC4	199	0.000	5.63	0.19	2.37	0.00	-0.12	0.01
		175	0.100	5.63	0.19	2.37	0.00	0.12	-0.01
	CC5	199	0.000	-2.32	0.04	0.37	0.00	-0.02	0.00
		175	0.100	-2.32	0.04	0.37	0.00	0.02	-0.00
	CC6	199	0.000	4.87	0.21	1.67	0.00	-0.08	0.01
		175	0.100	4.87	0.21	1.67	0.00	0.08	-0.01
	CC7	199	0.000	-52.22	-8.47	3.42	0.00	-0.17	-0.42
		175	0.100	-52.22	-8.47	3.42	0.00	0.17	0.42
	CC8	199	0.000	57.69	6.71	-0.75	-0.00	0.04	0.33
		175	0.100	57.69	6.71	-0.75	-0.00	-0.04	-0.34
	CC11	199	0.000	-55.13	-41.52	13.17	0.02	-0.66	-2.08
		175	0.100	-55.13	-41.52	13.17	0.02	0.66	2.07
	CO1	199	0.000	-80.92	-50.63	26.90	0.03	-1.38	-2.60
		175	0.100	-80.92	-50.61	26.96	0.03	1.38	2.59
	CO2	199	0.000	-38.70	-50.36	35.52	0.03	-1.80	-2.55
		175	0.100	-38.69	-50.31	35.59	0.03	1.80	2.54
	CO3	199	0.000	-31.42	-50.17	38.72	0.03	-1.95	-2.54
		175	0.100	-31.42	-50.12	38.78	0.03	1.96	2.53
	CO4	199	0.000	-34.54	-50.09	39.16	0.03	-1.98	-2.53
		175	0.100	-34.54	-50.04	39.22	0.03	1.98	2.52
	CO5	199	0.000	-28.32	-49.87	41.44	0.03	-2.09	-2.52
		175	0.100	-28.31	-49.81	41.50	0.03	2.09	2.51
	CO6	199	0.000	-25.20	-49.95	41.00	0.03	-2.06	-2.52
		175	0.100	-25.19	-49.90	41.06	0.03	2.07	2.51
	CO7	199	0.000	-41.82	-50.27	35.96	0.03	-1.82	-2.55
		175	0.100	-41.81	-50.23	36.03	0.03	1.83	2.54
	CO8	199	0.000	-35.59	-50.06	38.23	0.03	-1.93	-2.53
		175	0.100	-35.59	-50.01	38.29	0.03	1.94	2.52
	CO9	199	0.000	-32.48	-50.14	37.79	0.03	-1.91	-2.54
		175	0.100	-32.47	-50.09	37.85	0.03	1.91	2.53
	CO10	199	0.000	-73.65	-50.45	30.03	0.03	-1.54	-2.58
		175	0.100	-73.64	-50.42	30.09	0.03	1.54	2.58
	CO11	199	0.000	-76.77	-50.37	30.47	0.03	-1.56	-2.58
		175	0.100	-76.76	-50.34	30.53	0.03	1.56	2.57
	CO12	199	0.000	-70.54	-50.15	32.70	0.03	-1.67	-2.57
		175	0.100	-70.54	-50.12	32.76	0.03	1.67	2.56
	CO13	199	0.000	-67.42	-50.24	32.26	0.03	-1.65	-2.57
		175	0.100	-67.42	-50.20	32.32	0.03	1.65	2.56
	CO14	199	0.000	-84.04	-50.55	27.34	0.03	-1.40	-2.60
		175	0.100	-84.04	-50.52	27.40	0.03	1.41	2.59
	CO15	199	0.000	-77.82	-50.34	29.56	0.03	-1.51	-2.58
		175	0.100	-77.81	-50.30	29.62	0.03	1.52	2.57
CO16	199	0.000	-74.70	-50.42	29.12	0.03	-1.49	-2.58	
	175	0.100	-74.70	-50.39	29.18	0.03	1.49	2.57	
CO17	199	0.000	-149.90	-60.00	30.72	0.03	-1.61	-3.15	
	175	0.100	-149.89	-59.97	30.81	0.04	1.61	3.14	
CO18	199	0.000	-74.16	-52.90	30.38	0.03	-1.55	-2.71	
	175	0.100	-74.16	-52.87	30.45	0.03	1.56	2.70	
CO19	199	0.000	-5.17	-43.11	26.44	0.03	-1.32	-2.16	
	175	0.100	-5.17	-43.08	26.49	0.03	1.33	2.15	
CO20	199	0.000	-59.85	-37.77	20.04	0.02	-1.02	-1.93	
	175	0.100	-59.85	-37.75	20.07	0.02	1.02	1.92	
CO21	199	0.000	-28.59	-37.47	26.35	0.02	-1.33	-1.89	
	175	0.100	-28.59	-37.44	26.38	0.02	1.33	1.89	
CO22	199	0.000	-23.20	-37.31	28.70	0.02	-1.44	-1.88	
	175	0.100	-23.20	-37.29	28.73	0.02	1.45	1.87	
CO23	199	0.000	-25.50	-37.26	29.03	0.02	-1.46	-1.88	
	175	0.100	-25.50	-37.23	29.06	0.02	1.47	1.87	
CO24	199	0.000	-20.89	-37.08	30.70	0.02	-1.54	-1.87	
	175	0.100	-20.88	-37.05	30.74	0.03	1.55	1.86	



Progetto: Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]		
				N	V _y	V _z		M _y	M _z	
4	CO25	199	0.000	-18.58	-37.14	30.37	0.02	-1.53	-1.87	
		175	0.100	-18.58	-37.11	30.40	0.03	1.53	1.86	
	CO26	199	0.000	-30.89	-37.41	26.68	0.02	-1.35	-1.89	
		175	0.100	-30.89	-37.39	26.72	0.02	1.35	1.88	
	CO27	199	0.000	-26.28	-37.24	28.35	0.02	-1.43	-1.88	
		175	0.100	-26.27	-37.21	28.38	0.02	1.43	1.87	
	CO28	199	0.000	-23.97	-37.29	28.01	0.02	-1.41	-1.88	
		175	0.100	-23.97	-37.27	28.05	0.02	1.41	1.87	
	CO29	199	0.000	-54.46	-37.62	22.35	0.02	-1.14	-1.91	
		175	0.100	-54.46	-37.60	22.38	0.02	1.14	1.91	
	CO30	199	0.000	-56.77	-37.56	22.68	0.02	-1.15	-1.91	
		175	0.100	-56.77	-37.54	22.72	0.02	1.16	1.91	
	CO31	199	0.000	-52.15	-37.39	24.33	0.02	-1.24	-1.90	
		175	0.100	-52.15	-37.37	24.36	0.02	1.24	1.90	
	CO32	199	0.000	-49.85	-37.44	23.99	0.02	-1.22	-1.90	
		175	0.100	-49.85	-37.42	24.03	0.02	1.22	1.90	
	CO33	199	0.000	-62.16	-37.71	20.37	0.02	-1.04	-1.92	
		175	0.100	-62.16	-37.69	20.40	0.02	1.04	1.92	
	CO34	199	0.000	-57.54	-37.54	22.01	0.02	-1.12	-1.91	
		175	0.100	-57.54	-37.52	22.04	0.02	1.12	1.91	
	CO35	199	0.000	-55.24	-37.59	21.67	0.02	-1.10	-1.91	
		175	0.100	-55.23	-37.58	21.71	0.02	1.10	1.91	
	CO36	199	0.000	-110.89	-45.02	22.99	0.03	-1.19	-2.33	
		175	0.100	-110.89	-45.00	23.04	0.03	1.19	2.33	
	CO37	199	0.000	-54.83	-39.44	22.62	0.02	-1.15	-2.01	
		175	0.100	-54.83	-39.42	22.65	0.02	1.15	2.00	
	CO38	199	0.000	-3.79	-31.96	19.60	0.02	-0.98	-1.60	
		175	0.100	-3.78	-31.95	19.62	0.02	0.98	1.60	
	CO39	199	0.000	-59.85	-37.77	20.04	0.02	-1.02	-1.93	
		175	0.100	-59.85	-37.75	20.07	0.02	1.02	1.92	
	5	CC1	200	0.000	-10.42	0.70	3.21	-0.00	-0.16	0.03
			176	0.100	-10.43	0.70	3.21	-0.00	0.16	-0.04
		CC2	200	0.000	2.87	0.98	4.55	0.00	-0.23	0.05
			176	0.100	2.87	0.98	4.55	0.00	0.23	-0.05
		CC3	200	0.000	22.44	0.95	6.26	0.00	-0.31	0.05
			176	0.100	22.44	0.95	6.26	0.00	0.31	-0.05
		CC4	200	0.000	3.67	0.34	2.36	0.00	-0.12	0.02
			176	0.100	3.67	0.34	2.36	0.00	0.12	-0.02
		CC5	200	0.000	-1.77	0.06	0.37	0.00	-0.02	0.00
176			0.100	-1.77	0.06	0.37	0.00	0.02	-0.00	
CC6		200	0.000	3.22	0.30	1.67	0.00	-0.08	0.01	
		176	0.100	3.22	0.30	1.67	0.00	0.08	-0.02	
CC7		200	0.000	-42.91	-6.76	3.38	0.00	-0.17	-0.34	
		176	0.100	-42.91	-6.76	3.38	0.00	0.17	0.34	
CC8		200	0.000	47.34	5.31	-0.71	-0.00	0.04	0.26	
		176	0.100	47.34	5.31	-0.71	-0.00	-0.04	-0.27	
CC11		200	0.000	-44.60	-31.78	13.01	0.02	-0.65	-1.59	
		176	0.100	-44.60	-31.78	13.01	0.02	0.65	1.59	
CO1		200	0.000	-70.35	-38.62	26.80	0.03	-1.37	-1.98	
		176	0.100	-70.34	-38.59	26.85	0.03	1.37	1.97	
CO2		200	0.000	-40.83	-37.50	35.31	0.03	-1.79	-1.90	
		176	0.100	-40.83	-37.46	35.35	0.03	1.79	1.89	
CO3		200	0.000	-36.05	-37.07	38.46	0.03	-1.94	-1.88	
		176	0.100	-36.04	-37.02	38.50	0.03	1.95	1.87	
CO4		200	0.000	-38.44	-36.97	38.90	0.03	-1.97	-1.87	
		176	0.100	-38.43	-36.93	38.94	0.03	1.97	1.86	
CO5		200	0.000	-34.30	-36.58	41.14	0.03	-2.08	-1.85	
		176	0.100	-34.29	-36.54	41.19	0.03	2.08	1.84	
CO6		200	0.000	-31.90	-36.68	40.70	0.03	-2.05	-1.86	
		176	0.100	-31.90	-36.63	40.75	0.03	2.06	1.85	
CO7		200	0.000	-43.22	-37.40	35.75	0.03	-1.81	-1.90	
		176	0.100	-43.22	-37.36	35.79	0.03	1.81	1.89	
CO8		200	0.000	-39.08	-37.02	37.99	0.03	-1.92	-1.88	
		176	0.100	-39.08	-36.97	38.03	0.03	1.92	1.87	
CO9		200	0.000	-36.69	-37.11	37.54	0.03	-1.90	-1.88	
		176	0.100	-36.68	-37.07	37.59	0.03	1.90	1.87	
CO10		200	0.000	-65.57	-38.19	29.91	0.03	-1.53	-1.95	
		176	0.100	-65.56	-38.16	29.95	0.03	1.53	1.94	
CO11		200	0.000	-67.96	-38.10	30.35	0.03	-1.55	-1.95	
	176	0.100	-67.96	-38.07	30.40	0.03	1.55	1.94		
CO12	200	0.000	-63.82	-37.72	32.56	0.03	-1.66	-1.93		
	176	0.100	-63.82	-37.68	32.60	0.03	1.66	1.92		
CO13	200	0.000	-61.43	-37.81	32.12	0.03	-1.64	-1.93		
	176	0.100	-61.42	-37.78	32.16	0.03	1.64	1.92		
CO14	200	0.000	-72.74	-38.53	27.25	0.03	-1.39	-1.97		
	176	0.100	-72.74	-38.50	27.29	0.03	1.39	1.97		
CO15	200	0.000	-68.60	-38.14	29.45	0.03	-1.50	-1.95		
	176	0.100	-68.60	-38.11	29.49	0.03	1.50	1.94		
CO16	200	0.000	-66.21	-38.24	29.00	0.03	-1.48	-1.95		
	176	0.100	-66.20	-38.21	29.05	0.03	1.48	1.95		
CO17	200	0.000	-127.49	-46.57	30.73	0.03	-1.60	-2.43		
	176	0.100	-127.48	-46.53	30.80	0.03	1.60	2.42		
CO18	200	0.000	-64.77	-40.46	30.28	0.03	-1.55	-2.07		
	176	0.100	-64.76	-40.43	30.33	0.03	1.54	2.06		
CO19	200	0.000	-7.61	-32.28	26.26	0.03	-1.32	-1.62		
	176	0.100	-7.61	-32.26	26.29	0.03	1.32	1.61		
CO20	200	0.000	-52.04	-28.76	19.94	0.02	-1.01	-1.46		
	176	0.100	-52.04	-28.74	19.96	0.02	1.01	1.46		
CO21	200	0.000	-30.19	-27.90	26.19	0.02	-1.32	-1.41		
	176	0.100	-30.18	-27.87	26.21	0.02	1.32	1.40		
CO22	200	0.000	-26.64	-27.57	28.51	0.02	-1.44	-1.39		



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]		
				N	V _y	V _z		M _y	M _z	
5	CO22	176	0.100	-26.64	-27.55	28.54	0.02	1.44	1.39	
	CO23	200	0.000	-28.41	-27.51	28.85	0.02	-1.45	-1.39	
		176	0.100	-28.41	-27.48	28.87	0.02	1.46	1.38	
	CO24	200	0.000	-25.34	-27.21	30.50	0.02	-1.54	-1.37	
		176	0.100	-25.34	-27.19	30.52	0.02	1.54	1.37	
	CO25	200	0.000	-23.57	-27.28	30.16	0.02	-1.52	-1.38	
		176	0.100	-23.57	-27.25	30.19	0.02	1.52	1.37	
	CO26	200	0.000	-31.96	-27.83	26.52	0.02	-1.34	-1.41	
		176	0.100	-31.95	-27.81	26.55	0.02	1.34	1.40	
	CO27	200	0.000	-28.88	-27.54	28.17	0.02	-1.42	-1.39	
		176	0.100	-28.88	-27.51	28.19	0.02	1.42	1.38	
	CO28	200	0.000	-27.11	-27.61	27.84	0.02	-1.40	-1.39	
		176	0.100	-27.11	-27.58	27.86	0.02	1.40	1.39	
	CO29	200	0.000	-48.50	-28.44	22.24	0.02	-1.13	-1.45	
		176	0.100	-48.50	-28.42	22.26	0.02	1.13	1.44	
	CO30	200	0.000	-50.27	-28.37	22.57	0.02	-1.15	-1.44	
		176	0.100	-50.27	-28.35	22.60	0.02	1.15	1.44	
	CO31	200	0.000	-47.20	-28.08	24.20	0.02	-1.23	-1.43	
		176	0.100	-47.20	-28.06	24.23	0.02	1.23	1.42	
	CO32	200	0.000	-45.43	-28.15	23.87	0.02	-1.21	-1.43	
		176	0.100	-45.43	-28.13	23.89	0.02	1.21	1.42	
	CO33	200	0.000	-53.81	-28.69	20.27	0.02	-1.03	-1.46	
		176	0.100	-53.81	-28.68	20.30	0.02	1.03	1.46	
	CO34	200	0.000	-50.74	-28.40	21.90	0.02	-1.11	-1.44	
		176	0.100	-50.74	-28.39	21.93	0.02	1.11	1.44	
	CO35	200	0.000	-48.97	-28.47	21.57	0.02	-1.10	-1.45	
		176	0.100	-48.97	-28.45	21.59	0.02	1.09	1.44	
	CO36	200	0.000	-94.33	-34.82	22.95	0.03	-1.18	-1.79	
		176	0.100	-94.33	-34.80	22.99	0.03	1.18	1.79	
	CO37	200	0.000	-47.90	-30.12	22.52	0.02	-1.14	-1.53	
		176	0.100	-47.90	-30.11	22.55	0.02	1.14	1.52	
	CO38	200	0.000	-5.61	-23.94	19.46	0.02	-0.98	-1.20	
		176	0.100	-5.60	-23.92	19.48	0.02	0.97	1.19	
	CO39	200	0.000	-52.04	-28.76	19.94	0.02	-1.01	-1.46	
		176	0.100	-52.04	-28.74	19.96	0.02	1.01	1.46	
	6	CC1	201	0.000	-10.58	0.69	3.28	-0.00	-0.16	0.03
			213	0.100	-10.58	0.69	3.27	-0.00	0.16	-0.03
		CC2	201	0.000	2.07	1.06	4.66	0.00	-0.23	0.05
			213	0.100	2.07	1.06	4.66	0.00	0.23	-0.05
CC3		201	0.000	16.96	1.18	6.43	0.00	-0.32	0.06	
		213	0.100	16.96	1.18	6.43	0.00	0.32	-0.06	
CC4		201	0.000	2.76	0.41	2.41	0.00	-0.12	0.02	
		213	0.100	2.76	0.41	2.41	0.00	0.12	-0.02	
CC5		201	0.000	-1.35	0.07	0.37	0.00	-0.02	0.00	
		213	0.100	-1.35	0.07	0.37	0.00	0.02	-0.00	
CC6		201	0.000	2.41	0.35	1.71	0.00	-0.09	0.02	
		213	0.100	2.41	0.35	1.71	0.00	0.09	-0.02	
CC7		201	0.000	-37.50	-5.34	3.40	0.00	-0.17	-0.27	
		213	0.100	-37.50	-5.34	3.40	0.00	0.17	0.27	
CC8		201	0.000	42.04	4.18	-0.67	-0.00	0.03	0.21	
		213	0.100	42.04	4.18	-0.67	-0.00	-0.04	-0.21	
CC11		201	0.000	-36.22	-23.64	13.17	0.02	-0.66	-1.18	
		213	0.100	-36.22	-23.64	13.17	0.02	0.66	1.18	
CO1		201	0.000	-60.29	-28.53	27.30	0.03	-1.39	-1.46	
		213	0.100	-60.29	-28.51	27.32	0.03	1.39	1.45	
CO2		201	0.000	-37.87	-26.96	35.96	0.03	-1.82	-1.37	
		213	0.100	-37.87	-26.92	35.98	0.03	1.82	1.36	
CO3		201	0.000	-34.25	-26.41	39.16	0.03	-1.98	-1.34	
		213	0.100	-34.25	-26.37	39.18	0.03	1.98	1.33	
CO4		201	0.000	-36.09	-26.31	39.62	0.03	-2.00	-1.33	
		213	0.100	-36.09	-26.27	39.64	0.03	2.01	1.32	
CO5		201	0.000	-32.98	-25.85	41.90	0.03	-2.11	-1.31	
		213	0.100	-32.98	-25.80	41.92	0.03	2.12	1.30	
CO6		201	0.000	-31.14	-25.94	41.45	0.03	-2.09	-1.31	
		213	0.100	-31.14	-25.90	41.47	0.03	2.10	1.30	
CO7		201	0.000	-39.71	-26.86	36.42	0.03	-1.84	-1.36	
		213	0.100	-39.71	-26.83	36.44	0.03	1.85	1.35	
CO8		201	0.000	-36.60	-26.39	38.69	0.03	-1.95	-1.34	
		213	0.100	-36.60	-26.36	38.71	0.03	1.96	1.33	
CO9		201	0.000	-34.76	-26.49	38.24	0.03	-1.93	-1.34	
		213	0.100	-34.76	-26.45	38.26	0.03	1.94	1.33	
CO10		201	0.000	-56.67	-27.98	30.46	0.03	-1.55	-1.43	
		213	0.100	-56.67	-27.96	30.48	0.03	1.55	1.42	
CO11		201	0.000	-58.50	-27.89	30.92	0.03	-1.57	-1.42	
	213	0.100	-58.50	-27.86	30.94	0.03	1.58	1.41		
CO12	201	0.000	-55.39	-27.42	33.17	0.03	-1.68	-1.40		
	213	0.100	-55.39	-27.39	33.19	0.03	1.69	1.39		
CO13	201	0.000	-53.56	-27.52	32.72	0.03	-1.66	-1.40		
	213	0.100	-53.56	-27.49	32.74	0.03	1.67	1.39		
CO14	201	0.000	-62.12	-28.43	27.75	0.03	-1.41	-1.45		
	213	0.100	-62.12	-28.41	27.77	0.03	1.42	1.44		
CO15	201	0.000	-59.01	-27.97	30.00	0.03	-1.52	-1.43		
	213	0.100	-59.01	-27.94	30.02	0.03	1.53	1.42		
CO16	201	0.000	-57.18	-28.06	29.55	0.03	-1.50	-1.43		
	213	0.100	-57.18	-28.04	29.56	0.03	1.51	1.42		
CO17	201	0.000	-110.28	-35.08	31.37	0.03	-1.62	-1.82		
	213	0.100	-110.28	-35.05	31.39	0.03	1.63	1.81		
CO18	201	0.000	-54.47	-29.97	30.87	0.03	-1.57	-1.53		
	213	0.100	-54.47	-29.95	30.90	0.03	1.57	1.52		
CO19	201	0.000	-4.45	-23.30	26.73	0.02	-1.34	-1.17		
	213	0.100	-4.45	-23.27	26.75	0.02	1.34	1.16		



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
6	CO20	201	0.000	-44.61	-21.21	20.29	0.02	-1.03	-1.08
		213	0.100	-44.61	-21.20	20.30	0.02	1.03	1.07
	CO21	201	0.000	-28.02	-20.04	26.66	0.02	-1.34	-1.01
		213	0.100	-28.02	-20.02	26.67	0.02	1.35	1.01
	CO22	201	0.000	-25.34	-19.64	29.03	0.02	-1.46	-0.99
		213	0.100	-25.34	-19.62	29.04	0.02	1.47	0.99
	CO23	201	0.000	-26.69	-19.57	29.37	0.02	-1.48	-0.99
		213	0.100	-26.69	-19.54	29.38	0.02	1.48	0.98
	CO24	201	0.000	-24.39	-19.22	31.05	0.02	-1.56	-0.97
		213	0.100	-24.39	-19.20	31.06	0.02	1.57	0.96
	CO25	201	0.000	-23.03	-19.29	30.71	0.02	-1.54	-0.97
		213	0.100	-23.03	-19.27	30.72	0.02	1.55	0.97
	CO26	201	0.000	-29.38	-19.97	27.01	0.02	-1.36	-1.01
		213	0.100	-29.38	-19.95	27.02	0.02	1.37	1.00
	CO27	201	0.000	-27.07	-19.63	28.68	0.02	-1.44	-0.99
		213	0.100	-27.07	-19.61	28.70	0.02	1.45	0.99
	CO28	201	0.000	-25.71	-19.70	28.34	0.02	-1.43	-1.00
		213	0.100	-25.71	-19.68	28.35	0.02	1.43	0.99
	CO29	201	0.000	-41.93	-20.81	22.63	0.02	-1.14	-1.06
		213	0.100	-41.93	-20.79	22.64	0.02	1.15	1.05
	CO30	201	0.000	-43.29	-20.74	22.97	0.02	-1.16	-1.05
		213	0.100	-43.29	-20.72	22.98	0.02	1.17	1.05
	CO31	201	0.000	-40.98	-20.39	24.64	0.02	-1.25	-1.04
		213	0.100	-40.98	-20.38	24.65	0.02	1.25	1.03
	CO32	201	0.000	-39.62	-20.46	24.30	0.02	-1.23	-1.04
		213	0.100	-39.63	-20.45	24.31	0.02	1.23	1.03
	CO33	201	0.000	-45.97	-21.14	20.63	0.02	-1.04	-1.07
		213	0.100	-45.97	-21.13	20.64	0.02	1.05	1.07
	CO34	201	0.000	-43.66	-20.80	22.29	0.02	-1.13	-1.06
		213	0.100	-43.66	-20.78	22.30	0.02	1.13	1.05
	CO35	201	0.000	-42.31	-20.87	21.95	0.02	-1.11	-1.06
		213	0.100	-42.31	-20.85	21.96	0.02	1.11	1.05
	CO36	201	0.000	-81.63	-26.16	23.38	0.02	-1.19	-1.34
		213	0.100	-81.63	-26.14	23.39	0.02	1.20	1.34
	CO37	201	0.000	-40.30	-22.28	22.93	0.02	-1.16	-1.13
		213	0.100	-40.30	-22.27	22.95	0.02	1.16	1.12
CO38	201	0.000	-3.27	-17.27	19.81	0.02	-0.99	-0.87	
	213	0.100	-3.27	-17.25	19.81	0.02	0.99	0.86	
CO39	201	0.000	-44.61	-21.21	20.29	0.02	-1.03	-1.08	
	213	0.100	-44.61	-21.20	20.30	0.02	1.03	1.07	
7	CC1	202	0.000	-11.15	0.59	3.32	-0.00	-0.17	0.03
		215	0.100	-11.15	0.59	3.31	-0.00	0.17	-0.03
CC2	202	0.000	1.19	1.05	4.70	-0.00	-0.24	0.05	
	215	0.100	1.19	1.05	4.70	-0.00	0.24	-0.05	
CC3	202	0.000	12.09	1.30	6.53	0.00	-0.33	0.06	
	215	0.100	12.09	1.30	6.53	0.00	0.33	-0.07	
CC4	202	0.000	1.89	0.43	2.43	0.00	-0.12	0.02	
	215	0.100	1.89	0.43	2.43	0.00	0.12	-0.02	
CC5	202	0.000	-1.02	0.07	0.37	-0.00	-0.02	0.00	
	215	0.100	-1.02	0.07	0.37	-0.00	0.02	-0.00	
CC6	202	0.000	1.65	0.36	1.73	0.00	-0.09	0.02	
	215	0.100	1.65	0.36	1.73	0.00	0.09	-0.02	
CC7	202	0.000	-33.83	-4.13	3.40	0.00	-0.17	-0.21	
	215	0.100	-33.83	-4.13	3.40	0.00	0.17	0.21	
CC8	202	0.000	38.49	3.35	-0.65	-0.00	0.03	0.16	
	215	0.100	38.49	3.35	-0.65	-0.00	-0.03	-0.17	
CC11	202	0.000	-30.29	-16.80	13.15	0.02	-0.66	-0.84	
	215	0.100	-30.29	-16.80	13.15	0.02	0.66	0.84	
CO1	202	0.000	-54.11	-20.04	27.45	0.02	-1.40	-1.02	
	215	0.100	-54.11	-20.02	27.46	0.02	1.40	1.01	
CO2	202	0.000	-38.10	-18.24	36.17	0.02	-1.83	-0.93	
	215	0.100	-38.10	-18.21	36.18	0.02	1.83	0.92	
CO3	202	0.000	-35.61	-17.66	39.38	0.02	-1.99	-0.90	
	215	0.100	-35.61	-17.62	39.39	0.02	1.99	0.89	
CO4	202	0.000	-37.00	-17.57	39.84	0.02	-2.01	-0.89	
	215	0.100	-37.00	-17.53	39.85	0.02	2.02	0.88	
CO5	202	0.000	-34.86	-17.07	42.13	0.02	-2.13	-0.87	
	215	0.100	-34.86	-17.04	42.14	0.02	2.13	0.86	
CO6	202	0.000	-33.48	-17.16	41.67	0.02	-2.10	-0.87	
	215	0.100	-33.48	-17.13	41.68	0.02	2.11	0.86	
CO7	202	0.000	-39.48	-18.15	36.63	0.02	-1.85	-0.92	
	215	0.100	-39.48	-18.12	36.64	0.02	1.86	0.91	
CO8	202	0.000	-37.34	-17.66	38.92	0.02	-1.97	-0.90	
	215	0.100	-37.34	-17.62	38.93	0.02	1.97	0.89	
CO9	202	0.000	-35.96	-17.74	38.46	0.02	-1.94	-0.90	
	215	0.100	-35.96	-17.71	38.47	0.02	1.95	0.89	
CO10	202	0.000	-51.63	-19.46	30.63	0.02	-1.56	-0.99	
	215	0.100	-51.63	-19.44	30.65	0.02	1.56	0.98	
CO11	202	0.000	-53.01	-19.37	31.09	0.02	-1.58	-0.99	
	215	0.100	-53.01	-19.35	31.11	0.02	1.58	0.98	
CO12	202	0.000	-50.88	-18.88	33.37	0.02	-1.69	-0.96	
	215	0.100	-50.87	-18.85	33.38	0.02	1.70	0.95	
CO13	202	0.000	-49.49	-18.97	32.91	0.02	-1.67	-0.97	
	215	0.100	-49.49	-18.94	32.92	0.02	1.67	0.96	
CO14	202	0.000	-55.49	-19.95	27.91	0.02	-1.42	-1.02	
	215	0.100	-55.49	-19.93	27.92	0.02	1.42	1.01	
CO15	202	0.000	-53.36	-19.46	30.18	0.02	-1.53	-0.99	
	215	0.100	-53.35	-19.44	30.19	0.02	1.53	0.98	
CO16	202	0.000	-51.98	-19.55	29.72	0.02	-1.51	-1.00	
	215	0.100	-51.97	-19.53	29.73	0.02	1.51	0.99	
CO17	202	0.000	-99.20	-25.27	31.58	0.03	-1.63	-1.31	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
7	CO17	215	0.100	-99.20	-25.25	31.61	0.03	1.63	1.30
	CO18	202	0.000	-48.08	-20.97	31.07	0.03	-1.58	-1.07
		215	0.100	-48.07	-20.95	31.09	0.03	1.58	1.05
	CO19	202	0.000	-2.96	-15.67	26.87	0.02	-1.35	-0.79
		215	0.100	-2.96	-15.65	26.88	0.02	1.35	0.77
	CO20	202	0.000	-40.05	-14.88	20.38	0.02	-1.03	-0.76
		215	0.100	-40.05	-14.87	20.39	0.02	1.03	0.75
	CO21	202	0.000	-28.20	-13.56	26.81	0.02	-1.35	-0.69
		215	0.100	-28.20	-13.54	26.82	0.02	1.35	0.68
	CO22	202	0.000	-26.36	-13.13	29.19	0.02	-1.47	-0.67
		215	0.100	-26.36	-13.11	29.19	0.02	1.47	0.66
	CO23	202	0.000	-27.38	-13.06	29.53	0.02	-1.49	-0.66
		215	0.100	-27.38	-13.05	29.54	0.02	1.49	0.65
	CO24	202	0.000	-25.80	-12.70	31.23	0.02	-1.57	-0.64
		215	0.100	-25.80	-12.68	31.23	0.02	1.58	0.64
	CO25	202	0.000	-24.77	-12.77	30.88	0.02	-1.56	-0.65
		215	0.100	-24.77	-12.75	30.89	0.02	1.56	0.64
	CO26	202	0.000	-29.22	-13.49	27.16	0.02	-1.37	-0.68
		215	0.100	-29.22	-13.48	27.17	0.02	1.37	0.68
	CO27	202	0.000	-27.63	-13.13	28.85	0.02	-1.45	-0.67
		215	0.100	-27.63	-13.11	28.86	0.02	1.46	0.66
	CO28	202	0.000	-26.61	-13.20	28.51	0.02	-1.44	-0.67
		215	0.100	-26.61	-13.18	28.51	0.02	1.44	0.66
	CO29	202	0.000	-38.22	-14.46	22.74	0.02	-1.15	-0.73
		215	0.100	-38.21	-14.44	22.75	0.02	1.15	0.73
	CO30	202	0.000	-39.24	-14.39	23.09	0.02	-1.17	-0.73
		215	0.100	-39.24	-14.38	23.09	0.02	1.17	0.72
	CO31	202	0.000	-37.65	-14.03	24.77	0.02	-1.25	-0.71
		215	0.100	-37.65	-14.01	24.78	0.02	1.25	0.71
	CO32	202	0.000	-36.63	-14.09	24.43	0.02	-1.24	-0.72
		215	0.100	-36.63	-14.08	24.43	0.02	1.24	0.71
	CO33	202	0.000	-41.08	-14.82	20.73	0.02	-1.05	-0.75
		215	0.100	-41.07	-14.81	20.74	0.02	1.05	0.75
	CO34	202	0.000	-39.49	-14.45	22.41	0.02	-1.13	-0.74
		215	0.100	-39.49	-14.44	22.42	0.02	1.13	0.73
	CO35	202	0.000	-38.47	-14.52	22.06	0.02	-1.12	-0.74
		215	0.100	-38.47	-14.51	22.07	0.02	1.12	0.73
	CO36	202	0.000	-73.44	-18.80	23.51	0.02	-1.20	-0.97
		215	0.100	-73.44	-18.79	23.53	0.02	1.20	0.96
	CO37	202	0.000	-35.58	-15.57	23.07	0.02	-1.17	-0.79
		215	0.100	-35.58	-15.56	23.08	0.02	1.17	0.78
	CO38	202	0.000	-2.18	-11.61	19.90	0.02	-1.00	-0.59
215		0.100	-2.18	-11.60	19.91	0.02	1.00	0.57	
CO39	202	0.000	-40.05	-14.88	20.38	0.02	-1.03	-0.76	
	215	0.100	-40.05	-14.87	20.39	0.02	1.03	0.75	
8	CC1	203	0.000	-11.43	0.39	3.35	-0.00	-0.17	0.02
	217	0.100	-11.43	0.39	3.35	-0.00	0.17	-0.02	
CC2	203	0.000	0.29	0.95	4.73	-0.00	-0.24	0.05	
	217	0.100	0.29	0.95	4.73	-0.00	0.24	-0.05	
CC3	203	0.000	7.11	1.32	6.59	-0.00	-0.33	0.07	
	217	0.100	7.11	1.32	6.59	-0.00	0.33	-0.07	
CC4	203	0.000	0.99	0.40	2.44	-0.00	-0.12	0.02	
	217	0.100	0.99	0.40	2.44	-0.00	0.12	-0.02	
CC5	203	0.000	-0.67	0.06	0.37	-0.00	-0.02	0.00	
	217	0.100	-0.67	0.06	0.37	-0.00	0.02	-0.00	
CC6	203	0.000	0.89	0.35	1.75	-0.00	-0.09	0.02	
	217	0.100	0.89	0.35	1.75	-0.00	0.09	-0.02	
CC7	203	0.000	-29.68	-3.08	3.41	0.00	-0.17	-0.15	
	217	0.100	-29.68	-3.08	3.41	0.00	0.17	0.15	
CC8	203	0.000	34.26	2.80	-0.64	-0.00	0.03	0.14	
	217	0.100	34.26	2.80	-0.64	-0.00	-0.03	-0.14	
CC11	203	0.000	-24.45	-10.99	13.09	0.02	-0.66	-0.56	
	217	0.100	-24.45	-10.99	13.09	0.02	0.65	0.54	
CO1	203	0.000	-47.71	-12.91	27.52	0.02	-1.40	-0.66	
	217	0.100	-47.71	-12.89	27.53	0.02	1.40	0.65	
CO2	203	0.000	-38.22	-11.05	36.26	0.02	-1.83	-0.57	
	217	0.100	-38.22	-11.02	36.26	0.02	1.84	0.55	
CO3	203	0.000	-36.90	-10.50	39.46	0.02	-2.00	-0.54	
	217	0.100	-36.90	-10.47	39.47	0.02	2.00	0.52	
CO4	203	0.000	-37.82	-10.43	39.92	0.02	-2.02	-0.53	
	217	0.100	-37.82	-10.40	39.93	0.02	2.02	0.52	
CO5	203	0.000	-36.67	-9.95	42.22	0.02	-2.14	-0.51	
	217	0.100	-36.67	-9.92	42.22	0.02	2.14	0.50	
CO6	203	0.000	-35.75	-10.02	41.76	0.02	-2.11	-0.51	
	217	0.100	-35.75	-9.99	41.76	0.02	2.11	0.50	
CO7	203	0.000	-39.14	-10.97	36.72	0.02	-1.86	-0.56	
	217	0.100	-39.14	-10.95	36.73	0.02	1.86	0.55	
CO8	203	0.000	-37.99	-10.50	39.01	0.02	-1.97	-0.54	
	217	0.100	-37.99	-10.47	39.02	0.02	1.97	0.52	
CO9	203	0.000	-37.07	-10.57	38.55	0.02	-1.95	-0.54	
	217	0.100	-37.07	-10.54	38.55	0.02	1.95	0.53	
CO10	203	0.000	-46.39	-12.36	30.71	0.02	-1.56	-0.63	
	217	0.100	-46.39	-12.34	30.72	0.02	1.56	0.62	
CO11	203	0.000	-47.31	-12.29	31.17	0.02	-1.58	-0.63	
	217	0.100	-47.31	-12.27	31.18	0.02	1.58	0.62	
CO12	203	0.000	-46.16	-11.81	33.46	0.02	-1.70	-0.60	
	217	0.100	-46.16	-11.79	33.46	0.02	1.70	0.59	
CO13	203	0.000	-45.24	-11.88	32.99	0.02	-1.67	-0.61	
	217	0.100	-45.24	-11.86	33.00	0.02	1.67	0.60	
CO14	203	0.000	-48.63	-12.83	27.99	0.02	-1.42	-0.66	
	217	0.100	-48.63	-12.82	27.99	0.02	1.42	0.64	

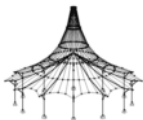


Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
8	CO15	203	0.000	-47.48	-12.36	30.27	0.02	-1.54	-0.63
		217	0.100	-47.48	-12.34	30.27	0.02	1.54	0.62
	CO16	203	0.000	-46.56	-12.43	29.80	0.02	-1.51	-0.64
		217	0.100	-46.56	-12.41	29.81	0.02	1.51	0.62
	CO17	203	0.000	-87.32	-16.89	31.74	0.03	-1.63	-0.88
		217	0.100	-87.31	-16.88	31.76	0.03	1.63	0.86
	CO18	203	0.000	-41.71	-13.13	31.17	0.02	-1.58	-0.68
		217	0.100	-41.71	-13.12	31.18	0.02	1.58	0.65
	CO19	203	0.000	-2.08	-9.13	26.90	0.02	-1.35	-0.47
		217	0.100	-2.08	-9.11	26.90	0.02	1.35	0.44
	CO20	203	0.000	-35.32	-9.57	20.42	0.02	-1.03	-0.49
		217	0.100	-35.32	-9.57	20.43	0.02	1.03	0.48
	CO21	203	0.000	-28.30	-8.22	26.88	0.02	-1.36	-0.42
		217	0.100	-28.30	-8.20	26.88	0.02	1.36	0.41
	CO22	203	0.000	-27.33	-7.81	29.25	0.01	-1.48	-0.40
		217	0.100	-27.32	-7.80	29.25	0.02	1.48	0.39
	CO23	203	0.000	-28.00	-7.76	29.60	0.01	-1.49	-0.40
		217	0.100	-28.00	-7.74	29.60	0.02	1.49	0.39
	CO24	203	0.000	-27.15	-7.41	31.29	0.01	-1.58	-0.38
		217	0.100	-27.15	-7.39	31.29	0.02	1.58	0.37
	CO25	203	0.000	-26.47	-7.46	30.95	0.01	-1.56	-0.38
		217	0.100	-26.47	-7.45	30.95	0.02	1.56	0.37
	CO26	203	0.000	-28.98	-8.16	27.23	0.02	-1.37	-0.42
		217	0.100	-28.98	-8.15	27.23	0.02	1.37	0.41
	CO27	203	0.000	-28.13	-7.81	28.92	0.01	-1.46	-0.40
		217	0.100	-28.13	-7.80	28.92	0.02	1.46	0.39
	CO28	203	0.000	-27.45	-7.87	28.58	0.02	-1.44	-0.40
		217	0.100	-27.45	-7.85	28.58	0.02	1.44	0.39
	CO29	203	0.000	-34.35	-9.17	22.79	0.02	-1.15	-0.47
		217	0.100	-34.35	-9.16	22.79	0.02	1.15	0.46
	CO30	203	0.000	-35.03	-9.12	23.13	0.02	-1.17	-0.47
		217	0.100	-35.03	-9.11	23.14	0.02	1.17	0.46
	CO31	203	0.000	-34.17	-8.77	24.82	0.01	-1.26	-0.45
		217	0.100	-34.17	-8.76	24.83	0.02	1.25	0.44
	CO32	203	0.000	-33.49	-8.82	24.48	0.01	-1.24	-0.45
		217	0.100	-33.49	-8.81	24.48	0.02	1.24	0.44
	CO33	203	0.000	-36.00	-9.52	20.77	0.02	-1.05	-0.49
		217	0.100	-36.00	-9.51	20.77	0.02	1.05	0.48
	CO34	203	0.000	-35.15	-9.17	22.46	0.02	-1.14	-0.47
		217	0.100	-35.15	-9.16	22.46	0.02	1.13	0.46
	CO35	203	0.000	-34.47	-9.22	22.11	0.02	-1.12	-0.47
		217	0.100	-34.47	-9.21	22.12	0.02	1.12	0.46
CO36	203	0.000	-64.65	-12.54	23.60	0.02	-1.21	-0.65	
	217	0.100	-64.65	-12.53	23.61	0.02	1.20	0.63	
CO37	203	0.000	-30.88	-9.74	23.12	0.02	-1.17	-0.50	
	217	0.100	-30.88	-9.74	23.13	0.02	1.17	0.48	
CO38	203	0.000	-1.54	-6.76	19.92	0.01	-1.00	-0.35	
	217	0.100	-1.53	-6.75	19.92	0.01	1.00	0.33	
CO39	203	0.000	-35.32	-9.57	20.42	0.02	-1.03	-0.49	
	217	0.100	-35.32	-9.57	20.43	0.02	1.03	0.48	
9 CC1	204	0.000	-11.60	0.08	3.39	-0.00	-0.17	0.01	
	219	0.100	-11.60	0.08	3.39	-0.00	0.17	-0.00	
CC2	204	0.000	-0.34	0.79	4.75	-0.00	-0.24	0.04	
	219	0.100	-0.34	0.79	4.75	-0.00	0.24	-0.04	
CC3	204	0.000	2.74	1.25	6.67	-0.00	-0.33	0.06	
	219	0.100	2.74	1.25	6.67	-0.00	0.33	-0.06	
CC4	204	0.000	0.25	0.33	2.44	-0.00	-0.12	0.02	
	219	0.100	0.25	0.33	2.44	-0.00	0.12	-0.02	
CC5	204	0.000	-0.34	0.04	0.37	-0.00	-0.02	0.00	
	219	0.100	-0.34	0.04	0.37	-0.00	0.02	-0.00	
CC6	204	0.000	0.24	0.31	1.76	-0.00	-0.09	0.02	
	219	0.100	0.24	0.31	1.76	-0.00	0.09	-0.02	
CC7	204	0.000	-26.00	-2.09	3.39	0.00	-0.17	-0.11	
	219	0.100	-26.00	-2.09	3.39	0.00	0.17	0.10	
CC8	204	0.000	30.54	2.50	-0.61	-0.00	0.03	0.12	
	219	0.100	30.54	2.50	-0.61	-0.00	-0.03	-0.13	
CC11	204	0.000	-19.18	-5.86	13.01	0.02	-0.65	-0.30	
	219	0.100	-19.18	-5.86	13.01	0.02	0.65	0.28	
CO1	204	0.000	-41.59	-6.74	27.57	0.02	-1.40	-0.35	
	219	0.100	-41.58	-6.73	27.57	0.02	1.40	0.33	
CO2	204	0.000	-37.85	-4.98	36.35	0.02	-1.84	-0.26	
	219	0.100	-37.85	-4.96	36.35	0.02	1.84	0.24	
CO3	204	0.000	-37.50	-4.52	39.54	0.02	-2.00	-0.24	
	219	0.100	-37.50	-4.50	39.54	0.02	2.00	0.22	
CO4	204	0.000	-37.96	-4.48	40.01	0.02	-2.02	-0.23	
	219	0.100	-37.96	-4.45	40.01	0.02	2.03	0.22	
CO5	204	0.000	-37.65	-4.05	42.31	0.02	-2.14	-0.21	
	219	0.100	-37.65	-4.03	42.31	0.02	2.14	0.20	
CO6	204	0.000	-37.18	-4.10	41.85	0.02	-2.12	-0.22	
	219	0.100	-37.18	-4.08	41.84	0.02	2.12	0.20	
CO7	204	0.000	-38.31	-4.93	36.81	0.02	-1.86	-0.26	
	219	0.100	-38.31	-4.91	36.81	0.02	1.86	0.24	
CO8	204	0.000	-38.00	-4.51	39.11	0.02	-1.98	-0.24	
	219	0.100	-37.99	-4.49	39.11	0.02	1.98	0.22	
CO9	204	0.000	-37.53	-4.55	38.65	0.02	-1.96	-0.24	
	219	0.100	-37.53	-4.53	38.65	0.02	1.96	0.22	
CO10	204	0.000	-41.24	-6.28	30.76	0.02	-1.56	-0.33	
	219	0.100	-41.23	-6.27	30.76	0.02	1.56	0.31	
CO11	204	0.000	-41.70	-6.24	31.22	0.02	-1.58	-0.32	
	219	0.100	-41.70	-6.22	31.22	0.02	1.58	0.31	
CO12	204	0.000	-41.38	-5.82	33.52	0.02	-1.70	-0.30	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
9	CO12	219	0.100	-41.38	-5.80	33.52	0.02	1.70	0.29
	CO13	204	0.000	-40.92	-5.86	33.05	0.02	-1.67	-0.30
		219	0.100	-40.91	-5.85	33.05	0.02	1.67	0.29
	CO14	204	0.000	-42.05	-6.69	28.03	0.02	-1.42	-0.35
		219	0.100	-42.05	-6.68	28.03	0.02	1.42	0.33
	CO15	204	0.000	-41.73	-6.27	30.33	0.02	-1.54	-0.33
		219	0.100	-41.73	-6.26	30.33	0.02	1.54	0.31
	CO16	204	0.000	-41.27	-6.32	29.86	0.02	-1.51	-0.33
		219	0.100	-41.26	-6.30	29.86	0.02	1.51	0.31
	CO17	204	0.000	-76.28	-9.46	31.84	0.02	-1.63	-0.49
		219	0.100	-76.28	-9.45	31.85	0.02	1.63	0.47
	CO18	204	0.000	-35.57	-6.01	31.24	0.02	-1.58	-0.32
		219	0.100	-35.56	-6.00	31.24	0.02	1.58	0.29
	CO19	204	0.000	-0.84	-3.29	26.93	0.02	-1.35	-0.18
		219	0.100	-0.84	-3.27	26.93	0.02	1.35	0.15
	CO20	204	0.000	-30.80	-4.99	20.45	0.01	-1.03	-0.26
		219	0.100	-30.80	-4.99	20.45	0.01	1.03	0.25
	CO21	204	0.000	-28.04	-3.71	26.94	0.01	-1.36	-0.19
		219	0.100	-28.04	-3.70	26.94	0.01	1.36	0.18
	CO22	204	0.000	-27.78	-3.38	29.31	0.01	-1.48	-0.18
		219	0.100	-27.78	-3.36	29.31	0.01	1.48	0.16
	CO23	204	0.000	-28.12	-3.34	29.66	0.01	-1.50	-0.17
		219	0.100	-28.12	-3.33	29.66	0.01	1.50	0.16
	CO24	204	0.000	-27.89	-3.03	31.36	0.01	-1.58	-0.16
		219	0.100	-27.89	-3.02	31.36	0.01	1.58	0.15
	CO25	204	0.000	-27.54	-3.07	31.02	0.01	-1.56	-0.16
		219	0.100	-27.55	-3.06	31.01	0.01	1.57	0.15
	CO26	204	0.000	-28.38	-3.67	27.29	0.01	-1.38	-0.19
		219	0.100	-28.38	-3.66	27.29	0.01	1.38	0.18
	CO27	204	0.000	-28.14	-3.36	28.99	0.01	-1.46	-0.18
		219	0.100	-28.14	-3.35	28.99	0.01	1.46	0.16
	CO28	204	0.000	-27.80	-3.40	28.65	0.01	-1.44	-0.18
		219	0.100	-27.80	-3.39	28.65	0.01	1.45	0.17
	CO29	204	0.000	-30.54	-4.66	22.81	0.01	-1.15	-0.24
		219	0.100	-30.54	-4.65	22.81	0.01	1.15	0.23
	CO30	204	0.000	-30.88	-4.62	23.16	0.01	-1.17	-0.24
219		0.100	-30.88	-4.62	23.16	0.01	1.17	0.23	
CO31	204	0.000	-30.65	-4.31	24.86	0.01	-1.26	-0.22	
	219	0.100	-30.65	-4.31	24.86	0.01	1.25	0.21	
CO32	204	0.000	-30.31	-4.35	24.51	0.01	-1.24	-0.23	
	219	0.100	-30.30	-4.34	24.51	0.01	1.24	0.21	
CO33	204	0.000	-31.14	-4.96	20.79	0.01	-1.05	-0.26	
	219	0.100	-31.14	-4.95	20.79	0.01	1.05	0.24	
CO34	204	0.000	-30.91	-4.65	22.49	0.01	-1.14	-0.24	
	219	0.100	-30.90	-4.64	22.49	0.01	1.14	0.23	
CO35	204	0.000	-30.56	-4.68	22.15	0.01	-1.12	-0.24	
	219	0.100	-30.56	-4.68	22.15	0.01	1.12	0.23	
CO36	204	0.000	-56.50	-7.01	23.64	0.02	-1.20	-0.36	
	219	0.100	-56.50	-7.01	23.65	0.02	1.20	0.35	
CO37	204	0.000	-26.34	-4.46	23.16	0.02	-1.17	-0.24	
	219	0.100	-26.34	-4.45	23.16	0.02	1.17	0.21	
CO38	204	0.000	-0.63	-2.44	19.94	0.01	-1.00	-0.13	
	219	0.100	-0.63	-2.43	19.94	0.01	1.00	0.11	
CO39	204	0.000	-30.80	-4.99	20.45	0.01	-1.03	-0.26	
	219	0.100	-30.80	-4.99	20.45	0.01	1.03	0.25	
CC1	205	0.000	-11.79	-0.35	3.43	-0.00	-0.17	-0.01	
	221	0.100	-11.79	-0.35	3.43	-0.00	0.17	0.02	
CC2	205	0.000	-0.95	0.54	4.77	-0.00	-0.24	0.03	
	221	0.100	-0.95	0.54	4.77	-0.00	0.24	-0.03	
CC3	205	0.000	-1.55	1.06	6.74	-0.00	-0.34	0.05	
	221	0.100	-1.55	1.06	6.74	-0.00	0.34	-0.05	
CC4	205	0.000	-0.48	0.21	2.44	-0.00	-0.12	0.01	
	221	0.100	-0.48	0.21	2.44	-0.00	0.12	-0.01	
CC5	205	0.000	-0.01	0.02	0.36	-0.00	-0.02	0.00	
	221	0.100	-0.01	0.02	0.36	-0.00	0.02	-0.00	
CC6	205	0.000	-0.39	0.23	1.77	-0.00	-0.09	0.01	
	221	0.100	-0.39	0.23	1.77	-0.00	0.09	-0.01	
CC7	205	0.000	-22.68	-1.02	3.37	0.00	-0.17	-0.05	
	221	0.100	-22.68	-1.02	3.37	0.00	0.17	0.05	
CC8	205	0.000	27.06	2.42	-0.58	-0.00	0.03	0.12	
	221	0.100	27.06	2.42	-0.58	-0.00	-0.03	-0.13	
CC11	205	0.000	-14.74	-0.87	12.92	0.02	-0.65	-0.06	
	221	0.100	-14.74	-0.87	12.92	0.02	0.65	0.03	
CO1	205	0.000	-36.52	-0.94	27.58	0.02	-1.40	-0.06	
	221	0.100	-36.52	-0.93	27.58	0.02	1.39	0.04	
CO2	205	0.000	-38.44	0.57	36.39	0.02	-1.84	0.02	
	221	0.100	-38.44	0.58	36.39	0.02	1.84	-0.04	
CO3	205	0.000	-39.04	0.87	39.57	0.02	-2.00	0.03	
	221	0.100	-39.04	0.88	39.57	0.02	2.00	-0.05	
CO4	205	0.000	-39.05	0.88	40.04	0.02	-2.03	0.03	
	221	0.100	-39.05	0.90	40.04	0.02	2.03	-0.05	
CO5	205	0.000	-39.55	1.20	42.35	0.02	-2.14	0.05	
	221	0.100	-39.55	1.22	42.34	0.02	2.14	-0.07	
CO6	205	0.000	-39.53	1.19	41.88	0.02	-2.12	0.05	
	221	0.100	-39.53	1.21	41.88	0.02	2.12	-0.07	
CO7	205	0.000	-38.45	0.58	36.86	0.02	-1.87	0.02	
	221	0.100	-38.45	0.59	36.85	0.02	1.87	-0.04	
CO8	205	0.000	-38.95	0.90	39.17	0.02	-1.98	0.04	
	221	0.100	-38.95	0.92	39.16	0.02	1.98	-0.06	
CO9	205	0.000	-38.93	0.89	38.70	0.02	-1.96	0.04	
	221	0.100	-38.93	0.91	38.69	0.02	1.96	-0.06	

10



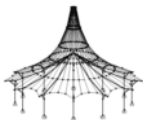
Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
10	CO10	205	0.000	-37.12	-0.64	30.76	0.02	-1.56	-0.04
		221	0.100	-37.12	-0.62	30.76	0.02	1.56	0.02
	CO11	205	0.000	-37.13	-0.62	31.23	0.02	-1.58	-0.04
		221	0.100	-37.13	-0.61	31.23	0.02	1.58	0.02
	CO12	205	0.000	-37.63	-0.30	33.54	0.02	-1.70	-0.03
		221	0.100	-37.63	-0.29	33.54	0.02	1.70	0.00
	CO13	205	0.000	-37.61	-0.31	33.07	0.02	-1.67	-0.03
		221	0.100	-37.61	-0.30	33.07	0.02	1.67	0.01
	CO14	205	0.000	-36.54	-0.93	28.05	0.02	-1.42	-0.06
		221	0.100	-36.53	-0.92	28.04	0.02	1.42	0.04
	CO15	205	0.000	-37.03	-0.60	30.35	0.02	-1.54	-0.04
		221	0.100	-37.03	-0.59	30.35	0.02	1.53	0.02
	CO16	205	0.000	-37.02	-0.61	29.89	0.02	-1.51	-0.04
		221	0.100	-37.02	-0.60	29.89	0.02	1.51	0.02
	CO17	205	0.000	-66.78	-2.23	31.89	0.02	-1.63	-0.13
		221	0.100	-66.78	-2.23	31.89	0.02	1.63	0.10
	CO18	205	0.000	-30.66	1.15	31.27	0.02	-1.58	0.04
		221	0.100	-30.66	1.16	31.26	0.02	1.58	-0.08
	CO19	205	0.000	-0.37	2.43	26.93	0.02	-1.35	0.10
		221	0.100	-0.37	2.45	26.92	0.02	1.35	-0.14
	CO20	205	0.000	-27.06	-0.69	20.44	0.01	-1.03	-0.04
		221	0.100	-27.06	-0.69	20.44	0.01	1.03	0.03
	CO21	205	0.000	-28.49	0.40	26.98	0.01	-1.36	0.01
		221	0.100	-28.49	0.41	26.97	0.01	1.36	-0.03
	CO22	205	0.000	-28.93	0.62	29.34	0.01	-1.48	0.02
		221	0.100	-28.93	0.63	29.33	0.01	1.48	-0.04
	CO23	205	0.000	-28.94	0.63	29.68	0.01	-1.50	0.02
		221	0.100	-28.94	0.64	29.68	0.01	1.50	-0.04
	CO24	205	0.000	-29.31	0.87	31.39	0.01	-1.58	0.04
		221	0.100	-29.31	0.88	31.39	0.01	1.58	-0.05
CO25	205	0.000	-29.30	0.86	31.05	0.01	-1.57	0.04	
	221	0.100	-29.30	0.87	31.04	0.01	1.57	-0.05	
CO26	205	0.000	-28.50	0.41	27.32	0.01	-1.38	0.01	
	221	0.100	-28.50	0.42	27.32	0.01	1.38	-0.03	
CO27	205	0.000	-28.86	0.65	29.03	0.01	-1.47	0.03	
	221	0.100	-28.86	0.66	29.03	0.01	1.47	-0.04	
CO28	205	0.000	-28.85	0.64	28.69	0.01	-1.45	0.02	
	221	0.100	-28.85	0.65	28.68	0.01	1.45	-0.04	
CO29	205	0.000	-27.50	-0.47	22.81	0.01	-1.15	-0.03	
	221	0.100	-27.50	-0.47	22.80	0.01	1.15	0.02	
CO30	205	0.000	-27.52	-0.46	23.15	0.01	-1.17	-0.03	
	221	0.100	-27.52	-0.46	23.15	0.01	1.17	0.02	
CO31	205	0.000	-27.88	-0.22	24.86	0.01	-1.26	-0.02	
	221	0.100	-27.88	-0.22	24.86	0.01	1.25	0.00	
CO32	205	0.000	-27.87	-0.24	24.52	0.01	-1.24	-0.02	
	221	0.100	-27.87	-0.23	24.51	0.01	1.24	0.00	
CO33	205	0.000	-27.07	-0.68	20.79	0.01	-1.05	-0.04	
	221	0.100	-27.07	-0.68	20.79	0.01	1.05	0.03	
CO34	205	0.000	-27.44	-0.45	22.50	0.01	-1.14	-0.03	
	221	0.100	-27.44	-0.44	22.50	0.01	1.13	0.01	
CO35	205	0.000	-27.43	-0.46	22.16	0.01	-1.12	-0.03	
	221	0.100	-27.43	-0.45	22.15	0.01	1.12	0.01	
CO36	205	0.000	-49.49	-1.65	23.66	0.02	-1.20	-0.09	
	221	0.100	-49.48	-1.65	23.66	0.02	1.20	0.07	
CO37	205	0.000	-22.72	0.85	23.17	0.02	-1.17	0.03	
	221	0.100	-22.72	0.85	23.17	0.02	1.17	-0.06	
CO38	205	0.000	-0.28	1.79	19.94	0.01	-1.00	0.08	
	221	0.100	-0.28	1.81	19.94	0.01	1.00	-0.10	
CO39	205	0.000	-27.06	-0.69	20.44	0.01	-1.03	-0.04	
	221	0.100	-27.06	-0.69	20.44	0.01	1.03	0.03	
CC1	206	0.000	-11.98	-0.90	3.48	-0.00	-0.17	-0.04	
	223	0.100	-11.98	-0.90	3.47	-0.00	0.17	0.05	
CC2	206	0.000	-1.46	0.20	4.77	-0.00	-0.24	0.01	
	223	0.100	-1.46	0.20	4.77	-0.00	0.24	-0.01	
CC3	206	0.000	-5.60	0.74	6.79	-0.00	-0.34	0.04	
	223	0.100	-5.60	0.74	6.79	-0.00	0.34	-0.04	
CC4	206	0.000	-1.13	0.06	2.43	-0.00	-0.12	0.00	
	223	0.100	-1.13	0.06	2.43	-0.00	0.12	-0.00	
CC5	206	0.000	0.32	-0.02	0.36	-0.00	-0.02	-0.00	
	223	0.100	0.32	-0.02	0.36	-0.00	0.02	0.00	
CC6	206	0.000	-0.97	0.13	1.78	-0.00	-0.09	0.01	
	223	0.100	-0.97	0.13	1.78	-0.00	0.09	-0.01	
CC7	206	0.000	-19.74	0.21	3.35	0.00	-0.17	0.01	
	223	0.100	-19.74	0.21	3.35	0.00	0.17	-0.01	
CC8	206	0.000	23.84	2.49	-0.57	0.00	0.03	0.12	
	223	0.100	23.84	2.49	-0.57	0.00	-0.03	-0.13	
CC11	206	0.000	-11.07	4.22	12.80	0.02	-0.64	0.19	
	223	0.100	-11.07	4.22	12.80	0.02	0.64	-0.23	
CO1	206	0.000	-32.29	4.77	27.55	0.02	-1.39	0.23	
	223	0.100	-32.30	4.78	27.54	0.02	1.39	-0.26	
CO2	206	0.000	-39.56	5.85	36.38	0.02	-1.84	0.28	
	223	0.100	-39.56	5.86	36.37	0.02	1.84	-0.31	
CO3	206	0.000	-41.02	5.94	39.53	0.02	-2.00	0.29	
	223	0.100	-41.02	5.96	39.53	0.02	2.00	-0.31	
CO4	206	0.000	-40.59	5.91	40.00	0.02	-2.03	0.29	
	223	0.100	-40.59	5.93	39.99	0.02	2.03	-0.31	
CO5	206	0.000	-41.85	6.10	42.31	0.02	-2.14	0.30	
	223	0.100	-41.85	6.11	42.30	0.02	2.14	-0.32	
CO6	206	0.000	-42.27	6.13	41.84	0.02	-2.12	0.30	
	223	0.100	-42.28	6.14	41.83	0.02	2.12	-0.32	
CO7	206	0.000	-39.13	5.82	36.84	0.02	-1.87	0.28	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
11	CO7	223	0.100	-39.14	5.83	36.84	0.02	1.86	-0.31
	CO8	206	0.000	-40.39	6.00	39.15	0.02	-1.98	0.29
		223	0.100	-40.39	6.01	39.14	0.02	1.98	-0.32
	CO9	206	0.000	-40.82	6.03	38.69	0.02	-1.96	0.29
		223	0.100	-40.82	6.04	38.68	0.02	1.96	-0.32
	CO10	206	0.000	-33.75	4.87	30.72	0.02	-1.55	0.23
		223	0.100	-33.75	4.88	30.71	0.02	1.55	-0.26
	CO11	206	0.000	-33.32	4.84	31.18	0.02	-1.58	0.23
		223	0.100	-33.32	4.85	31.17	0.02	1.57	-0.26
	CO12	206	0.000	-34.57	5.03	33.49	0.02	-1.69	0.24
		223	0.100	-34.57	5.04	33.49	0.02	1.69	-0.27
	CO13	206	0.000	-35.00	5.06	33.03	0.02	-1.67	0.24
		223	0.100	-35.00	5.07	33.02	0.02	1.67	-0.27
	CO14	206	0.000	-31.87	4.74	28.01	0.02	-1.42	0.23
		223	0.100	-31.87	4.75	28.01	0.02	1.41	-0.25
	CO15	206	0.000	-33.12	4.93	30.33	0.02	-1.53	0.24
		223	0.100	-33.12	4.94	30.32	0.02	1.53	-0.26
	CO16	206	0.000	-33.54	4.96	29.86	0.02	-1.51	0.24
		223	0.100	-33.55	4.97	29.86	0.02	1.51	-0.27
	CO17	206	0.000	-58.59	5.15	31.89	0.02	-1.63	0.24
		223	0.100	-58.59	5.15	31.88	0.03	1.62	-0.28
	CO18	206	0.000	-26.73	8.62	31.23	0.02	-1.58	0.41
		223	0.100	-26.74	8.63	31.22	0.03	1.57	-0.46
	CO19	206	0.000	-0.41	8.23	26.87	0.02	-1.35	0.39
		223	0.100	-0.42	8.25	26.86	0.02	1.34	-0.44
	CO20	206	0.000	-23.94	3.54	20.41	0.01	-1.03	0.17
		223	0.100	-23.94	3.54	20.41	0.01	1.03	-0.19
	CO21	206	0.000	-29.33	4.31	26.97	0.01	-1.36	0.21
		223	0.100	-29.33	4.32	26.96	0.01	1.36	-0.23
	CO22	206	0.000	-30.41	4.38	29.31	0.01	-1.48	0.21
		223	0.100	-30.41	4.39	29.30	0.01	1.48	-0.23
	CO23	206	0.000	-30.10	4.36	29.65	0.01	-1.50	0.21
		223	0.100	-30.10	4.36	29.65	0.01	1.50	-0.23
	CO24	206	0.000	-31.02	4.49	31.37	0.01	-1.58	0.22
		223	0.100	-31.03	4.50	31.36	0.01	1.58	-0.24
	CO25	206	0.000	-31.34	4.51	31.02	0.01	-1.57	0.22
		223	0.100	-31.34	4.52	31.02	0.01	1.57	-0.24
	CO26	206	0.000	-29.01	4.29	27.31	0.01	-1.38	0.21
		223	0.100	-29.02	4.30	27.31	0.01	1.38	-0.23
	CO27	206	0.000	-29.94	4.42	29.03	0.01	-1.47	0.21
		223	0.100	-29.94	4.43	29.02	0.01	1.46	-0.23
	CO28	206	0.000	-30.26	4.44	28.68	0.01	-1.45	0.21
		223	0.100	-30.26	4.45	28.68	0.01	1.45	-0.23
	CO29	206	0.000	-25.02	3.61	22.76	0.01	-1.15	0.17
		223	0.100	-25.02	3.61	22.76	0.01	1.15	-0.19
	CO30	206	0.000	-24.71	3.59	23.10	0.01	-1.17	0.17
		223	0.100	-24.71	3.59	23.10	0.01	1.16	-0.19
	CO31	206	0.000	-25.63	3.72	24.82	0.01	-1.25	0.18
223		0.100	-25.63	3.73	24.82	0.01	1.25	-0.20	
CO32	206	0.000	-25.95	3.74	24.48	0.01	-1.24	0.18	
	223	0.100	-25.95	3.75	24.47	0.01	1.23	-0.20	
CO33	206	0.000	-23.63	3.52	20.76	0.01	-1.05	0.17	
	223	0.100	-23.63	3.52	20.75	0.01	1.04	-0.19	
CO34	206	0.000	-24.55	3.65	22.47	0.01	-1.13	0.17	
	223	0.100	-24.55	3.66	22.47	0.01	1.13	-0.19	
CO35	206	0.000	-24.87	3.67	22.13	0.01	-1.12	0.17	
	223	0.100	-24.87	3.68	22.13	0.01	1.11	-0.20	
CO36	206	0.000	-43.44	3.82	23.64	0.02	-1.20	0.18	
	223	0.100	-43.44	3.82	23.63	0.02	1.20	-0.21	
CO37	206	0.000	-19.83	6.38	23.13	0.02	-1.17	0.30	
	223	0.100	-19.83	6.38	23.12	0.02	1.16	-0.34	
CO38	206	0.000	-0.32	6.09	19.90	0.01	-1.00	0.29	
	223	0.100	-0.32	6.10	19.89	0.01	0.99	-0.32	
CO39	206	0.000	-23.94	3.54	20.41	0.01	-1.03	0.17	
	223	0.100	-23.94	3.54	20.41	0.01	1.03	-0.19	
12	CC1	207	0.000	-12.24	-1.61	3.54	-0.00	-0.18	-0.08
	225	0.100	-12.24	-1.61	3.54	-0.00	0.18	0.09	
CC2	207	0.000	-2.05	-0.24	4.77	-0.00	-0.24	-0.01	
	225	0.100	-2.05	-0.24	4.77	-0.00	0.24	0.01	
CC3	207	0.000	-9.76	0.26	6.86	-0.00	-0.34	0.01	
	225	0.100	-9.76	0.26	6.86	-0.00	0.34	-0.01	
CC4	207	0.000	-1.82	-0.13	2.42	-0.00	-0.12	-0.01	
	225	0.100	-1.82	-0.13	2.42	-0.00	0.12	0.01	
CC5	207	0.000	0.64	-0.05	0.35	-0.00	-0.02	-0.00	
	225	0.100	0.64	-0.05	0.35	-0.00	0.02	0.00	
CC6	207	0.000	-1.58	-0.01	1.80	-0.00	-0.09	-0.00	
	225	0.100	-1.58	-0.01	1.80	-0.00	0.09	0.00	
CC7	207	0.000	-17.08	1.78	3.33	0.01	-0.17	0.08	
	225	0.100	-17.08	1.78	3.33	0.01	0.17	-0.09	
CC8	207	0.000	20.68	2.66	-0.57	0.00	0.03	0.13	
	225	0.100	20.68	2.66	-0.57	0.00	-0.03	-0.14	
CC11	207	0.000	-8.33	9.95	12.68	0.02	-0.64	0.48	
	225	0.100	-8.33	9.95	12.68	0.02	0.63	-0.52	
CO1	207	0.000	-29.41	10.99	27.52	0.02	-1.39	0.54	
	225	0.100	-29.41	10.99	27.51	0.02	1.39	-0.57	
CO2	207	0.000	-42.14	11.42	36.38	0.02	-1.84	0.56	
	225	0.100	-42.15	11.42	36.37	0.02	1.84	-0.60	
CO3	207	0.000	-44.49	11.26	39.50	0.02	-2.00	0.55	
	225	0.100	-44.50	11.26	39.49	0.02	2.00	-0.59	
CO4	207	0.000	-43.63	11.18	39.97	0.02	-2.03	0.55	
	225	0.100	-43.64	11.19	39.95	0.02	2.03	-0.58	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
12	CO5	207	0.000	-45.67	11.17	42.27	0.02	-2.15	0.55
		225	0.100	-45.68	11.18	42.26	0.02	2.14	-0.58
	CO6	207	0.000	-46.54	11.25	41.81	0.02	-2.12	0.56
		225	0.100	-46.54	11.26	41.80	0.02	2.12	-0.59
	CO7	207	0.000	-41.28	11.34	36.84	0.02	-1.87	0.56
		225	0.100	-41.29	11.35	36.83	0.02	1.87	-0.59
	CO8	207	0.000	-43.32	11.33	39.15	0.02	-1.99	0.56
		225	0.100	-43.33	11.34	39.14	0.02	1.98	-0.59
	CO9	207	0.000	-44.19	11.41	38.69	0.02	-1.96	0.56
		225	0.100	-44.19	11.42	38.68	0.02	1.96	-0.60
	CO10	207	0.000	-31.75	10.83	30.67	0.02	-1.55	0.53
		225	0.100	-31.76	10.84	30.65	0.02	1.55	-0.56
	CO11	207	0.000	-30.89	10.75	31.13	0.02	-1.57	0.53
		225	0.100	-30.90	10.76	31.12	0.02	1.57	-0.56
	CO12	207	0.000	-32.93	10.75	33.45	0.02	-1.69	0.53
		225	0.100	-32.93	10.76	33.44	0.02	1.69	-0.56
	CO13	207	0.000	-33.79	10.83	32.99	0.02	-1.67	0.53
		225	0.100	-33.80	10.83	32.97	0.02	1.67	-0.56
	CO14	207	0.000	-28.54	10.91	27.98	0.02	-1.41	0.53
		225	0.100	-28.55	10.92	27.97	0.02	1.41	-0.57
	CO15	207	0.000	-30.58	10.91	30.31	0.02	-1.53	0.53
		225	0.100	-30.59	10.91	30.30	0.02	1.53	-0.57
	CO16	207	0.000	-31.45	10.98	29.85	0.02	-1.51	0.54
		225	0.100	-31.45	10.99	29.83	0.02	1.51	-0.57
	CO17	207	0.000	-52.10	13.47	31.90	0.03	-1.62	0.66
		225	0.100	-52.11	13.47	31.88	0.03	1.62	-0.71
	CO18	207	0.000	-24.44	17.14	31.19	0.03	-1.57	0.83
		225	0.100	-24.46	17.15	31.16	0.03	1.57	-0.90
	CO19	207	0.000	-1.72	14.63	26.80	0.02	-1.34	0.71
		225	0.100	-1.73	14.66	26.79	0.02	1.34	-0.76
	CO20	207	0.000	-21.82	8.13	20.38	0.01	-1.03	0.40
		225	0.100	-21.82	8.14	20.38	0.02	1.03	-0.42
	CO21	207	0.000	-31.25	8.43	26.97	0.01	-1.36	0.41
		225	0.100	-31.26	8.44	26.96	0.01	1.36	-0.44
	CO22	207	0.000	-33.00	8.31	29.29	0.01	-1.48	0.41
		225	0.100	-33.00	8.32	29.29	0.01	1.48	-0.43
	CO23	207	0.000	-32.36	8.26	29.64	0.01	-1.50	0.41
		225	0.100	-32.36	8.26	29.63	0.01	1.50	-0.43
	CO24	207	0.000	-33.87	8.25	31.35	0.01	-1.59	0.41
		225	0.100	-33.88	8.25	31.34	0.01	1.58	-0.43
	CO25	207	0.000	-34.51	8.30	31.01	0.01	-1.57	0.41
		225	0.100	-34.51	8.31	31.00	0.01	1.57	-0.43
CO26	207	0.000	-30.62	8.38	27.31	0.01	-1.38	0.41	
	225	0.100	-30.62	8.38	27.31	0.01	1.38	-0.44	
CO27	207	0.000	-32.13	8.37	29.03	0.01	-1.47	0.41	
	225	0.100	-32.13	8.37	29.02	0.01	1.47	-0.44	
CO28	207	0.000	-32.77	8.43	28.69	0.01	-1.45	0.41	
	225	0.100	-32.77	8.43	28.68	0.01	1.45	-0.44	
CO29	207	0.000	-23.56	8.01	22.72	0.01	-1.15	0.39	
	225	0.100	-23.56	8.02	22.71	0.01	1.14	-0.42	
CO30	207	0.000	-22.92	7.96	23.06	0.01	-1.16	0.39	
	225	0.100	-22.92	7.96	23.05	0.01	1.16	-0.41	
CO31	207	0.000	-24.43	7.95	24.78	0.01	-1.25	0.39	
	225	0.100	-24.43	7.96	24.78	0.01	1.25	-0.41	
CO32	207	0.000	-25.07	8.01	24.44	0.01	-1.23	0.39	
	225	0.100	-25.07	8.01	24.43	0.01	1.23	-0.42	
CO33	207	0.000	-21.18	8.08	20.73	0.01	-1.04	0.39	
	225	0.100	-21.18	8.08	20.72	0.02	1.04	-0.42	
CO34	207	0.000	-22.69	8.07	22.45	0.01	-1.13	0.39	
	225	0.100	-22.69	8.08	22.44	0.01	1.13	-0.42	
CO35	207	0.000	-23.33	8.13	22.11	0.01	-1.12	0.40	
	225	0.100	-23.33	8.13	22.10	0.01	1.11	-0.42	
CO36	207	0.000	-38.65	9.98	23.63	0.02	-1.20	0.49	
	225	0.100	-38.65	9.98	23.62	0.02	1.19	-0.52	
CO37	207	0.000	-18.15	12.68	23.09	0.02	-1.16	0.61	
	225	0.100	-18.16	12.68	23.08	0.02	1.16	-0.66	
CO38	207	0.000	-1.30	10.82	19.85	0.01	-0.99	0.52	
	225	0.100	-1.30	10.84	19.84	0.02	0.99	-0.56	
CO39	207	0.000	-21.82	8.13	20.38	0.01	-1.03	0.40	
	225	0.100	-21.82	8.14	20.38	0.02	1.03	-0.42	
CC1	208	0.000	-12.14	-2.49	3.62	-0.00	-0.18	-0.12	
	227	0.100	-12.14	-2.49	3.62	-0.00	0.18	0.13	
CC2	208	0.000	-2.41	-0.78	4.76	-0.00	-0.24	-0.04	
	227	0.100	-2.41	-0.78	4.76	-0.00	0.24	0.04	
CC3	208	0.000	-13.41	-0.40	6.91	-0.00	-0.35	-0.02	
	227	0.100	-13.41	-0.40	6.91	-0.00	0.35	0.02	
CC4	208	0.000	-2.37	-0.36	2.39	-0.00	-0.12	-0.02	
	227	0.100	-2.37	-0.36	2.39	-0.00	0.12	0.02	
CC5	208	0.000	0.95	-0.10	0.34	-0.00	-0.02	-0.00	
	227	0.100	0.95	-0.10	0.34	-0.00	0.02	0.00	
CC6	208	0.000	-2.09	-0.20	1.80	-0.00	-0.09	-0.01	
	227	0.100	-2.09	-0.20	1.80	-0.00	0.09	0.01	
CC7	208	0.000	-14.20	3.83	3.30	0.01	-0.17	0.19	
	227	0.100	-14.20	3.83	3.30	0.01	0.16	-0.20	
CC8	208	0.000	17.13	2.82	-0.57	-0.00	0.03	0.13	
	227	0.100	17.13	2.82	-0.57	-0.00	-0.03	-0.15	
CC11	208	0.000	-5.65	16.71	12.49	0.02	-0.63	0.81	
	227	0.100	-5.65	16.71	12.49	0.02	0.62	-0.86	
CO1	208	0.000	-25.90	18.16	27.41	0.02	-1.38	0.89	
	227	0.100	-25.91	18.16	27.39	0.02	1.38	-0.94	
CO2	208	0.000	-43.48	17.70	36.28	0.02	-1.84	0.88	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
13	CO2	227	0.100	-43.49	17.70	36.27	0.02	1.84	-0.92
	CO3	208	0.000	-46.55	17.24	39.37	0.02	-2.00	0.86
		227	0.100	-46.56	17.24	39.35	0.02	2.00	-0.90
	CO4	208	0.000	-45.26	17.11	39.82	0.02	-2.02	0.85
		227	0.100	-45.27	17.12	39.81	0.02	2.02	-0.89
	CO5	208	0.000	-47.96	16.86	42.13	0.02	-2.14	0.84
		227	0.100	-47.97	16.86	42.11	0.02	2.14	-0.88
	CO6	208	0.000	-49.25	16.99	41.67	0.02	-2.12	0.84
		227	0.100	-49.26	16.99	41.65	0.02	2.12	-0.88
	CO7	208	0.000	-42.19	17.57	36.74	0.02	-1.86	0.87
		227	0.100	-42.20	17.58	36.72	0.02	1.86	-0.91
	CO8	208	0.000	-44.89	17.32	39.05	0.02	-1.98	0.86
		227	0.100	-44.90	17.32	39.03	0.02	1.98	-0.90
	CO9	208	0.000	-46.18	17.45	38.59	0.02	-1.96	0.87
		227	0.100	-46.19	17.45	38.57	0.02	1.96	-0.91
	CO10	208	0.000	-28.97	17.70	30.52	0.02	-1.54	0.87
		227	0.100	-28.98	17.71	30.50	0.02	1.54	-0.92
	CO11	208	0.000	-27.69	17.57	30.98	0.02	-1.56	0.87
		227	0.100	-27.70	17.58	30.96	0.02	1.56	-0.91
	CO12	208	0.000	-30.38	17.32	33.30	0.02	-1.68	0.85
		227	0.100	-30.39	17.33	33.28	0.02	1.68	-0.90
	CO13	208	0.000	-31.67	17.45	32.84	0.02	-1.66	0.86
		227	0.100	-31.68	17.46	32.82	0.02	1.66	-0.90
	CO14	208	0.000	-24.61	18.03	27.87	0.02	-1.41	0.89
		227	0.100	-24.63	18.04	27.84	0.02	1.40	-0.93
	CO15	208	0.000	-27.31	17.78	30.19	0.02	-1.53	0.88
		227	0.100	-27.32	17.79	30.17	0.02	1.52	-0.92
	CO16	208	0.000	-28.60	17.91	29.74	0.02	-1.50	0.88
		227	0.100	-28.61	17.92	29.72	0.02	1.50	-0.93
	CO17	208	0.000	-44.71	23.38	31.81	0.03	-1.62	1.16
		227	0.100	-44.73	23.38	31.78	0.03	1.61	-1.22
	CO18	208	0.000	-21.73	27.22	31.04	0.03	-1.56	1.33
		227	0.100	-21.77	27.24	31.00	0.03	1.56	-1.41
	CO19	208	0.000	-2.89	21.99	26.64	0.02	-1.33	1.07
		227	0.100	-2.92	22.01	26.62	0.02	1.33	-1.14
	CO20	208	0.000	-19.23	13.44	20.29	0.02	-1.02	0.66
		227	0.100	-19.24	13.44	20.28	0.02	1.02	-0.69
	CO21	208	0.000	-32.25	13.09	26.90	0.01	-1.36	0.65
		227	0.100	-32.26	13.09	26.89	0.02	1.36	-0.68
	CO22	208	0.000	-34.53	12.74	29.20	0.01	-1.48	0.63
227		0.100	-34.54	12.74	29.19	0.01	1.48	-0.66	
CO23	208	0.000	-33.58	12.65	29.53	0.01	-1.49	0.62	
	227	0.100	-33.59	12.65	29.52	0.01	1.49	-0.65	
CO24	208	0.000	-35.58	12.46	31.25	0.01	-1.58	0.62	
	227	0.100	-35.59	12.46	31.24	0.01	1.58	-0.64	
CO25	208	0.000	-36.54	12.55	30.91	0.01	-1.57	0.62	
	227	0.100	-36.54	12.55	30.90	0.01	1.56	-0.65	
CO26	208	0.000	-31.30	12.99	27.24	0.01	-1.38	0.64	
	227	0.100	-31.31	12.99	27.23	0.01	1.37	-0.67	
CO27	208	0.000	-33.30	12.80	28.96	0.01	-1.46	0.63	
	227	0.100	-33.31	12.80	28.95	0.01	1.46	-0.66	
CO28	208	0.000	-34.26	12.90	28.62	0.01	-1.45	0.64	
	227	0.100	-34.26	12.90	28.61	0.01	1.45	-0.67	
CO29	208	0.000	-21.51	13.10	22.60	0.02	-1.14	0.64	
	227	0.100	-21.52	13.10	22.59	0.02	1.14	-0.68	
CO30	208	0.000	-20.56	13.00	22.94	0.02	-1.16	0.64	
	227	0.100	-20.56	13.01	22.93	0.02	1.15	-0.67	
CO31	208	0.000	-22.56	12.81	24.66	0.01	-1.24	0.63	
	227	0.100	-22.57	12.82	24.65	0.02	1.24	-0.66	
CO32	208	0.000	-23.51	12.91	24.33	0.02	-1.23	0.64	
	227	0.100	-23.52	12.91	24.32	0.02	1.22	-0.67	
CO33	208	0.000	-18.28	13.34	20.63	0.02	-1.04	0.65	
	227	0.100	-18.29	13.35	20.62	0.02	1.04	-0.69	
CO34	208	0.000	-20.28	13.16	22.36	0.02	-1.13	0.65	
	227	0.100	-20.29	13.16	22.35	0.02	1.12	-0.68	
CO35	208	0.000	-21.23	13.25	22.02	0.02	-1.11	0.65	
	227	0.100	-21.24	13.26	22.01	0.02	1.11	-0.68	
CO36	208	0.000	-33.20	17.31	23.54	0.02	-1.19	0.85	
	227	0.100	-33.21	17.31	23.52	0.02	1.19	-0.90	
CO37	208	0.000	-16.16	20.14	22.97	0.02	-1.16	0.98	
	227	0.100	-16.18	20.15	22.95	0.02	1.15	-1.04	
CO38	208	0.000	-2.17	16.26	19.73	0.02	-0.99	0.79	
	227	0.100	-2.19	16.28	19.71	0.02	0.99	-0.84	
CO39	208	0.000	-19.23	13.44	20.29	0.02	-1.02	0.66	
	227	0.100	-19.24	13.44	20.28	0.02	1.02	-0.69	
CC1	209	0.000	-12.19	-3.48	3.64	-0.00	-0.18	-0.17	
	229	0.100	-12.19	-3.48	3.64	-0.00	0.18	0.18	
CC2	209	0.000	-2.70	-1.39	4.65	-0.00	-0.23	-0.07	
	229	0.100	-2.70	-1.39	4.65	-0.00	0.23	0.07	
CC3	209	0.000	-16.96	-1.23	6.83	-0.00	-0.34	-0.06	
	229	0.100	-16.96	-1.23	6.83	-0.00	0.34	0.06	
CC4	209	0.000	-2.88	-0.60	2.32	-0.00	-0.12	-0.03	
	229	0.100	-2.88	-0.60	2.32	-0.00	0.12	0.03	
CC5	209	0.000	1.27	-0.14	0.33	-0.00	-0.02	-0.01	
	229	0.100	1.27	-0.14	0.33	-0.00	0.02	0.01	
CC6	209	0.000	-2.57	-0.42	1.77	-0.00	-0.09	-0.02	
	229	0.100	-2.57	-0.42	1.77	-0.00	0.09	0.02	
CC7	209	0.000	-11.67	6.47	3.20	0.01	-0.16	0.32	
	229	0.100	-11.67	6.47	3.20	0.01	0.16	-0.33	
CC8	209	0.000	13.81	2.85	-0.54	-0.00	0.03	0.13	
	229	0.100	13.81	2.85	-0.54	-0.00	-0.03	-0.15	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
14	CC11	209	0.000	-3.47	24.62	12.11	0.02	-0.61	1.20
		229	0.100	-3.47	24.62	12.11	0.02	0.61	-1.26
	CO1	209	0.000	-23.11	26.51	26.88	0.02	-1.35	1.31
		229	0.100	-23.13	26.51	26.85	0.03	1.35	-1.36
	CO2	209	0.000	-45.39	24.94	35.62	0.02	-1.81	1.24
		229	0.100	-45.41	24.93	35.59	0.02	1.81	-1.29
	CO3	209	0.000	-49.13	24.16	38.60	0.02	-1.96	1.20
		229	0.100	-49.15	24.16	38.57	0.02	1.96	-1.25
	CO4	209	0.000	-47.42	23.98	39.05	0.02	-1.98	1.19
		229	0.100	-47.44	23.98	39.02	0.02	1.98	-1.24
	CO5	209	0.000	-50.74	23.43	41.31	0.02	-2.10	1.17
		229	0.100	-50.76	23.43	41.29	0.02	2.10	-1.22
	CO6	209	0.000	-52.46	23.61	40.87	0.02	-2.08	1.18
		229	0.100	-52.48	23.61	40.84	0.02	2.08	-1.23
	CO7	209	0.000	-43.68	24.76	36.06	0.02	-1.83	1.23
		229	0.100	-43.70	24.76	36.03	0.02	1.83	-1.28
	CO8	209	0.000	-47.00	24.21	38.33	0.02	-1.94	1.20
		229	0.100	-47.02	24.21	38.30	0.02	1.95	-1.25
	CO9	209	0.000	-48.71	24.39	37.89	0.02	-1.92	1.21
		229	0.100	-48.73	24.38	37.86	0.02	1.92	-1.26
	CO10	209	0.000	-26.85	25.73	29.90	0.02	-1.51	1.27
		229	0.100	-26.88	25.74	29.87	0.02	1.51	-1.33
	CO11	209	0.000	-25.14	25.55	30.34	0.02	-1.53	1.26
		229	0.100	-25.16	25.56	30.31	0.02	1.53	-1.32
	CO12	209	0.000	-28.46	25.01	32.63	0.02	-1.65	1.24
		229	0.100	-28.49	25.02	32.60	0.02	1.65	-1.29
	CO13	209	0.000	-30.18	25.19	32.19	0.02	-1.62	1.25
		229	0.100	-30.20	25.19	32.16	0.02	1.63	-1.30
	CO14	209	0.000	-21.40	26.33	27.33	0.02	-1.38	1.30
		229	0.100	-21.42	26.34	27.29	0.02	1.38	-1.35
	CO15	209	0.000	-24.72	25.78	29.62	0.02	-1.49	1.27
		229	0.100	-24.74	25.79	29.59	0.02	1.49	-1.33
	CO16	209	0.000	-26.43	25.96	29.18	0.02	-1.47	1.28
		229	0.100	-26.46	25.97	29.14	0.02	1.47	-1.34
	CO17	209	0.000	-38.46	35.21	31.22	0.03	-1.58	1.75
		229	0.100	-38.50	35.21	31.16	0.04	1.58	-1.82
	CO18	209	0.000	-19.88	39.06	30.42	0.03	-1.53	1.92
		229	0.100	-19.94	39.07	30.36	0.03	1.53	-2.02
	CO19	209	0.000	-4.50	30.34	26.10	0.02	-1.31	1.48
		229	0.100	-4.54	30.36	26.06	0.02	1.31	-1.56
CO20	209	0.000	-17.18	19.61	19.90	0.02	-1.00	0.97	
	229	0.100	-17.20	19.62	19.88	0.02	1.00	-1.01	
CO21	209	0.000	-33.69	18.44	26.41	0.02	-1.33	0.91	
	229	0.100	-33.70	18.44	26.39	0.02	1.34	-0.95	
CO22	209	0.000	-36.46	17.87	28.63	0.02	-1.45	0.89	
	229	0.100	-36.48	17.86	28.62	0.02	1.45	-0.92	
CO23	209	0.000	-35.20	17.73	28.96	0.02	-1.46	0.88	
	229	0.100	-35.21	17.73	28.94	0.02	1.47	-0.92	
CO24	209	0.000	-37.66	17.33	30.65	0.01	-1.55	0.86	
	229	0.100	-37.67	17.32	30.63	0.02	1.55	-0.89	
CO25	209	0.000	-38.93	17.46	30.32	0.01	-1.53	0.87	
	229	0.100	-38.94	17.46	30.30	0.02	1.54	-0.90	
CO26	209	0.000	-32.42	18.31	26.74	0.02	-1.35	0.91	
	229	0.100	-32.43	18.31	26.72	0.02	1.35	-0.94	
CO27	209	0.000	-34.89	17.90	28.43	0.02	-1.44	0.89	
	229	0.100	-34.90	17.90	28.41	0.02	1.44	-0.92	
CO28	209	0.000	-36.15	18.04	28.10	0.02	-1.42	0.89	
	229	0.100	-36.16	18.03	28.08	0.02	1.42	-0.93	
CO29	209	0.000	-19.96	19.04	22.14	0.02	-1.11	0.94	
	229	0.100	-19.97	19.04	22.12	0.02	1.11	-0.98	
CO30	209	0.000	-18.69	18.91	22.46	0.02	-1.13	0.93	
	229	0.100	-18.70	18.91	22.44	0.02	1.13	-0.97	
CO31	209	0.000	-21.16	18.50	24.16	0.02	-1.22	0.91	
	229	0.100	-21.17	18.51	24.15	0.02	1.22	-0.95	
CO32	209	0.000	-22.42	18.63	23.84	0.02	-1.20	0.92	
	229	0.100	-22.44	18.64	23.82	0.02	1.20	-0.96	
CO33	209	0.000	-15.92	19.48	20.22	0.02	-1.02	0.96	
	229	0.100	-15.93	19.49	20.20	0.02	1.02	-1.00	
CO34	209	0.000	-18.38	19.08	21.93	0.02	-1.10	0.94	
	229	0.100	-18.39	19.08	21.91	0.02	1.10	-0.98	
CO35	209	0.000	-19.65	19.21	21.60	0.02	-1.09	0.95	
	229	0.100	-19.66	19.21	21.58	0.02	1.09	-0.99	
CO36	209	0.000	-28.60	26.06	23.09	0.03	-1.17	1.29	
	229	0.100	-28.62	26.06	23.05	0.03	1.16	-1.34	
CO37	209	0.000	-14.81	28.90	22.51	0.02	-1.13	1.42	
	229	0.100	-14.84	28.90	22.48	0.03	1.13	-1.49	
CO38	209	0.000	-3.38	22.45	19.33	0.02	-0.97	1.10	
	229	0.100	-3.40	22.46	19.31	0.02	0.97	-1.15	
CO39	209	0.000	-17.18	19.61	19.90	0.02	-1.00	0.97	
	229	0.100	-17.20	19.62	19.88	0.02	1.00	-1.01	
15	CC1	210	0.000	-13.21	-4.56	3.86	-0.00	-0.19	-0.22
		231	0.100	-13.21	-4.56	3.85	-0.00	0.19	0.23
	CC2	210	0.000	-3.14	-2.02	4.68	-0.00	-0.23	-0.10
		231	0.100	-3.14	-2.02	4.68	-0.00	0.23	0.10
	CC3	210	0.000	-21.42	-2.18	6.97	-0.00	-0.35	-0.11
		231	0.100	-21.42	-2.18	6.97	-0.00	0.35	0.11
CC4	210	0.000	-3.52	-0.82	2.30	-0.00	-0.11	-0.04	
	231	0.100	-3.52	-0.82	2.30	-0.00	0.12	0.04	
CC5	210	0.000	1.64	-0.17	0.32	-0.00	-0.02	-0.01	
	231	0.100	1.64	-0.17	0.32	-0.00	0.02	0.01	
CC6	210	0.000	-3.19	-0.67	1.80	-0.00	-0.09	-0.03	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
15	CC6	231	0.100	-3.19	-0.67	1.80	-0.00	0.09	0.03
	CC7	210	0.000	-9.86	9.93	3.22	0.01	-0.16	0.49
		231	0.100	-9.86	9.93	3.22	0.01	0.16	-0.51
	CC8	210	0.000	11.18	2.54	-0.58	-0.00	0.03	0.12
		231	0.100	11.18	2.54	-0.58	-0.00	-0.03	-0.14
	CC11	210	0.000	-1.77	34.01	12.00	0.02	-0.60	1.67
		231	0.100	-1.77	34.01	12.00	0.02	0.60	-1.74
	CO1	210	0.000	-22.22	36.53	27.07	0.03	-1.36	1.81
		231	0.100	-22.22	36.53	27.02	0.03	1.36	-1.87
	CO2	210	0.000	-50.29	33.67	35.90	0.02	-1.82	1.68
		231	0.100	-50.32	33.65	35.86	0.02	1.82	-1.74
	CO3	210	0.000	-54.84	32.60	38.85	0.02	-1.98	1.63
		231	0.100	-54.87	32.58	38.81	0.02	1.98	-1.69
	CO4	210	0.000	-52.63	32.38	39.29	0.02	-2.00	1.62
		231	0.100	-52.66	32.37	39.25	0.02	2.00	-1.68
	CO5	210	0.000	-56.74	31.51	41.57	0.02	-2.12	1.57
		231	0.100	-56.77	31.50	41.54	0.02	2.12	-1.63
	CO6	210	0.000	-58.95	31.73	41.13	0.02	-2.10	1.59
		231	0.100	-58.99	31.71	41.10	0.02	2.10	-1.65
	CO7	210	0.000	-48.07	33.45	36.34	0.02	-1.85	1.67
		231	0.100	-48.11	33.44	36.30	0.02	1.84	-1.73
	CO8	210	0.000	-52.19	32.58	38.63	0.02	-1.96	1.63
		231	0.100	-52.22	32.57	38.59	0.02	1.96	-1.69
	CO9	210	0.000	-54.40	32.80	38.19	0.02	-1.94	1.64
		231	0.100	-54.44	32.78	38.15	0.02	1.94	-1.70
	CO10	210	0.000	-26.77	35.46	30.06	0.03	-1.52	1.76
		231	0.100	-26.81	35.46	30.01	0.03	1.52	-1.82
	CO11	210	0.000	-24.56	35.24	30.49	0.03	-1.54	1.74
		231	0.100	-24.60	35.25	30.45	0.03	1.54	-1.81
	CO12	210	0.000	-28.67	34.37	32.81	0.02	-1.66	1.70
		231	0.100	-28.71	34.38	32.77	0.03	1.66	-1.77
	CO13	210	0.000	-30.89	34.59	32.37	0.02	-1.63	1.72
		231	0.100	-30.92	34.59	32.33	0.03	1.63	-1.78
	CO14	210	0.000	-20.01	36.31	27.50	0.03	-1.38	1.80
		231	0.100	-20.05	36.32	27.46	0.03	1.38	-1.86
	CO15	210	0.000	-24.12	35.44	29.83	0.03	-1.50	1.75
		231	0.100	-24.16	35.45	29.78	0.03	1.50	-1.82
	CO16	210	0.000	-26.34	35.66	29.39	0.03	-1.48	1.77
		231	0.100	-26.38	35.66	29.34	0.03	1.48	-1.83
	CO17	210	0.000	-34.99	49.71	31.46	0.04	-1.59	2.47
		231	0.100	-35.06	49.71	31.38	0.04	1.59	-2.56
	CO18	210	0.000	-19.97	53.15	30.58	0.03	-1.54	2.62
231		0.100	-20.07	53.16	30.49	0.04	1.54	-2.73	
CO19	210	0.000	-7.16	39.96	26.20	0.02	-1.31	1.96	
	231	0.100	-7.22	39.97	26.16	0.02	1.32	-2.05	
CO20	210	0.000	-16.54	27.03	20.03	0.02	-1.01	1.33	
	231	0.100	-16.57	27.03	20.00	0.02	1.01	-1.38	
CO21	210	0.000	-37.34	24.92	26.63	0.02	-1.35	1.24	
	231	0.100	-37.36	24.91	26.61	0.02	1.35	-1.28	
CO22	210	0.000	-40.71	24.13	28.83	0.02	-1.46	1.20	
	231	0.100	-40.73	24.12	28.81	0.02	1.46	-1.25	
CO23	210	0.000	-39.08	23.96	29.15	0.02	-1.48	1.19	
	231	0.100	-39.10	23.96	29.13	0.02	1.48	-1.24	
CO24	210	0.000	-42.13	23.32	30.86	0.02	-1.56	1.16	
	231	0.100	-42.15	23.31	30.84	0.02	1.56	-1.20	
CO25	210	0.000	-43.77	23.48	30.53	0.02	-1.55	1.17	
	231	0.100	-43.78	23.47	30.51	0.02	1.55	-1.21	
CO26	210	0.000	-35.70	24.76	26.95	0.02	-1.36	1.23	
	231	0.100	-35.72	24.75	26.93	0.02	1.36	-1.28	
CO27	210	0.000	-38.76	24.11	28.66	0.02	-1.45	1.20	
	231	0.100	-38.77	24.10	28.64	0.02	1.45	-1.24	
CO28	210	0.000	-40.39	24.27	28.34	0.02	-1.44	1.21	
	231	0.100	-40.41	24.26	28.32	0.02	1.44	-1.25	
CO29	210	0.000	-19.92	26.24	22.25	0.02	-1.12	1.30	
	231	0.100	-19.94	26.24	22.22	0.02	1.12	-1.35	
CO30	210	0.000	-18.28	26.08	22.57	0.02	-1.14	1.29	
	231	0.100	-18.30	26.08	22.54	0.02	1.14	-1.34	
CO31	210	0.000	-21.34	25.43	24.29	0.02	-1.22	1.26	
	231	0.100	-21.36	25.43	24.27	0.02	1.22	-1.30	
CO32	210	0.000	-22.97	25.59	23.97	0.02	-1.21	1.27	
	231	0.100	-22.99	25.59	23.95	0.02	1.21	-1.31	
CO33	210	0.000	-14.91	26.87	20.35	0.02	-1.02	1.33	
	231	0.100	-14.93	26.87	20.32	0.02	1.02	-1.38	
CO34	210	0.000	-17.96	26.22	22.08	0.02	-1.11	1.30	
	231	0.100	-17.98	26.23	22.05	0.02	1.11	-1.34	
CO35	210	0.000	-19.60	26.38	21.76	0.02	-1.09	1.30	
	231	0.100	-19.62	26.39	21.73	0.02	1.10	-1.35	
CO36	210	0.000	-26.07	36.78	23.25	0.03	-1.17	1.82	
	231	0.100	-26.11	36.78	23.21	0.03	1.17	-1.89	
CO37	210	0.000	-14.90	39.33	22.62	0.03	-1.14	1.94	
	231	0.100	-14.95	39.33	22.57	0.03	1.14	-2.02	
CO38	210	0.000	-5.36	29.57	19.41	0.02	-0.97	1.45	
	231	0.100	-5.39	29.57	19.38	0.02	0.97	-1.52	
CO39	210	0.000	-16.54	27.03	20.03	0.02	-1.01	1.33	
	231	0.100	-16.57	27.03	20.00	0.02	1.01	-1.38	
16	CC1	159	0.000	-18.92	-5.46	4.52	0.00	-0.23	-0.27
		3	0.100	-18.92	-5.46	4.52	0.00	0.22	0.28
	CC2	159	0.000	-9.13	-2.45	4.63	0.00	-0.23	-0.12
		3	0.100	-9.13	-2.45	4.63	0.00	0.23	0.12
CC3	159	0.000	-29.16	-2.93	7.21	0.00	-0.37	-0.14	
	3	0.100	-29.16	-2.93	7.21	0.00	0.35	0.15	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
16	CC4	159	0.000	-5.83	-0.91	2.24	0.00	-0.11	-0.04
		3	0.100	-5.83	-0.91	2.24	0.00	0.11	0.05
	CC5	159	0.000	1.10	-0.19	0.28	0.00	-0.01	-0.01
		3	0.100	1.10	-0.19	0.28	0.00	0.01	0.01
	CC6	159	0.000	-5.45	-0.86	1.84	0.00	-0.09	-0.04
		3	0.100	-5.45	-0.86	1.84	0.00	0.09	0.04
	CC7	159	0.000	-10.48	14.35	3.31	0.01	-0.17	0.71
		3	0.100	-10.48	14.35	3.31	0.01	0.17	-0.73
	CC8	159	0.000	8.13	1.47	-0.82	-0.01	0.04	0.06
		3	0.100	8.13	1.47	-0.82	-0.01	-0.04	-0.08
	CC11	159	0.000	-14.10	44.44	11.58	0.02	-0.57	2.18
		3	0.100	-14.10	44.44	11.58	0.02	0.59	-2.26
	CO1	159	0.000	-54.02	47.75	27.00	0.03	-1.36	2.39
		3	0.100	-54.09	47.72	26.92	0.03	1.38	-2.47
	CO2	159	0.000	-92.58	43.76	35.90	0.03	-1.84	2.22
		3	0.100	-92.63	43.69	35.83	0.03	1.85	-2.28
	CO3	159	0.000	-100.26	42.53	38.69	0.03	-1.99	2.16
		3	0.100	-100.31	42.47	38.62	0.03	2.00	-2.23
	CO4	159	0.000	-98.73	42.29	39.06	0.03	-2.01	2.15
		3	0.100	-98.78	42.23	38.99	0.03	2.02	-2.21
	CO5	159	0.000	-105.84	41.14	41.31	0.03	-2.13	2.09
		3	0.100	-105.89	41.08	41.25	0.03	2.14	-2.16
	CO6	159	0.000	-107.37	41.38	40.94	0.03	-2.11	2.10
		3	0.100	-107.42	41.32	40.87	0.03	2.12	-2.17
	CO7	159	0.000	-91.05	43.52	36.27	0.03	-1.86	2.20
		3	0.100	-91.11	43.46	36.20	0.03	1.87	-2.27
	CO8	159	0.000	-98.17	42.37	38.54	0.03	-1.98	2.15
		3	0.100	-98.22	42.31	38.47	0.03	1.99	-2.22
	CO9	159	0.000	-99.70	42.61	38.16	0.03	-1.96	2.16
		3	0.100	-99.75	42.54	38.10	0.03	1.97	-2.23
	CO10	159	0.000	-61.71	46.52	29.86	0.03	-1.51	2.33
		3	0.100	-61.77	46.48	29.77	0.03	1.53	-2.41
	CO11	159	0.000	-60.18	46.28	30.23	0.03	-1.53	2.32
		3	0.100	-60.24	46.24	30.15	0.03	1.55	-2.39
	CO12	159	0.000	-67.30	45.12	32.53	0.03	-1.65	2.27
		3	0.100	-67.36	45.08	32.45	0.03	1.67	-2.34
	CO13	159	0.000	-68.83	45.36	32.16	0.03	-1.63	2.28
		3	0.100	-68.89	45.32	32.08	0.03	1.65	-2.35
	CO14	159	0.000	-52.49	47.51	27.38	0.03	-1.38	2.38
3		0.100	-52.56	47.48	27.30	0.03	1.40	-2.45	
CO15	159	0.000	-59.61	46.35	29.69	0.03	-1.50	2.32	
	3	0.100	-59.68	46.32	29.61	0.03	1.52	-2.40	
CO16	159	0.000	-61.14	46.59	29.32	0.03	-1.48	2.34	
	3	0.100	-61.21	46.55	29.24	0.03	1.50	-2.41	
CO17	159	0.000	-67.87	66.30	31.46	0.04	-1.59	3.33	
	3	0.100	-67.99	66.24	31.31	0.04	1.61	-3.44	
CO18	159	0.000	-56.59	68.36	30.25	0.03	-1.52	3.41	
	3	0.100	-56.74	68.28	30.12	0.03	1.55	-3.54	
CO19	159	0.000	-42.75	49.79	25.82	0.02	-1.29	2.47	
	3	0.100	-42.84	49.75	25.75	0.02	1.32	-2.57	
CO20	159	0.000	-40.06	35.44	20.04	0.02	-1.00	1.76	
	3	0.100	-40.10	35.42	19.99	0.02	1.02	-1.82	
CO21	159	0.000	-68.63	32.52	26.73	0.02	-1.36	1.63	
	3	0.100	-68.66	32.49	26.69	0.02	1.37	-1.69	
CO22	159	0.000	-74.32	31.62	28.83	0.02	-1.47	1.59	
	3	0.100	-74.35	31.59	28.79	0.02	1.48	-1.64	
CO23	159	0.000	-73.19	31.44	29.10	0.02	-1.48	1.58	
	3	0.100	-73.21	31.41	29.06	0.02	1.49	-1.63	
CO24	159	0.000	-78.46	30.60	30.80	0.02	-1.57	1.54	
	3	0.100	-78.49	30.57	30.76	0.02	1.58	-1.59	
CO25	159	0.000	-79.59	30.78	30.52	0.02	-1.56	1.55	
	3	0.100	-79.62	30.74	30.49	0.02	1.56	-1.60	
CO26	159	0.000	-67.50	32.34	27.00	0.02	-1.37	1.62	
	3	0.100	-67.53	32.31	26.97	0.02	1.38	-1.68	
CO27	159	0.000	-72.77	31.50	28.71	0.02	-1.46	1.59	
	3	0.100	-72.80	31.47	28.67	0.02	1.47	-1.63	
CO28	159	0.000	-73.90	31.68	28.43	0.02	-1.45	1.59	
	3	0.100	-73.93	31.64	28.40	0.02	1.46	-1.64	
CO29	159	0.000	-45.75	34.53	22.17	0.02	-1.11	1.72	
	3	0.100	-45.79	34.51	22.12	0.02	1.13	-1.78	
CO30	159	0.000	-44.62	34.35	22.44	0.02	-1.13	1.71	
	3	0.100	-44.66	34.33	22.40	0.02	1.15	-1.77	
CO31	159	0.000	-49.90	33.51	24.17	0.02	-1.22	1.67	
	3	0.100	-49.94	33.48	24.12	0.02	1.23	-1.73	
CO32	159	0.000	-51.03	33.69	23.89	0.02	-1.20	1.68	
	3	0.100	-51.07	33.66	23.85	0.02	1.22	-1.74	
CO33	159	0.000	-38.93	35.26	20.31	0.02	-1.02	1.76	
	3	0.100	-38.96	35.24	20.27	0.02	1.04	-1.81	
CO34	159	0.000	-44.21	34.41	22.05	0.02	-1.11	1.72	
	3	0.100	-44.24	34.39	22.00	0.02	1.12	-1.77	
CO35	159	0.000	-45.34	34.59	21.77	0.02	-1.09	1.73	
	3	0.100	-45.38	34.57	21.73	0.02	1.11	-1.78	
CO36	159	0.000	-50.33	49.22	23.32	0.03	-1.17	2.46	
	3	0.100	-50.40	49.19	23.24	0.03	1.19	-2.54	
CO37	159	0.000	-41.99	50.74	22.45	0.02	-1.12	2.52	
	3	0.100	-42.07	50.71	22.38	0.02	1.15	-2.62	
CO38	159	0.000	-31.73	36.96	19.18	0.01	-0.96	1.83	
	3	0.100	-31.78	36.93	19.14	0.01	0.98	-1.90	
CO39	159	0.000	-40.06	35.44	20.04	0.02	-1.00	1.76	
	3	0.100	-40.10	35.42	19.99	0.02	1.02	-1.82	
17	CC1	187	0.000	-5.32	-0.13	3.73	-0.00	-0.19	-0.01

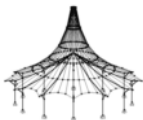


Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
17	CC1	163	0.100	-5.32	-0.13	3.73	-0.00	0.19	0.01
	CC2	187	0.000	6.90	0.32	5.12	-0.00	-0.26	0.02
		163	0.100	6.90	0.32	5.12	-0.00	0.26	-0.02
	CC3	187	0.000	25.67	-0.12	5.08	-0.00	-0.25	-0.01
		163	0.100	25.67	-0.12	5.08	-0.00	0.25	0.01
	CC4	187	0.000	5.82	0.09	2.15	-0.00	-0.11	0.00
		163	0.100	5.82	0.09	2.15	-0.00	0.11	-0.00
	CC5	187	0.000	-1.20	0.01	0.41	-0.00	-0.02	0.00
		163	0.100	-1.20	0.01	0.41	-0.00	0.02	-0.00
	CC6	187	0.000	5.26	0.02	1.82	-0.00	-0.09	0.00
		163	0.100	5.26	0.02	1.82	-0.00	0.09	-0.00
	CC7	187	0.000	48.25	-7.22	-0.88	0.00	0.04	-0.36
		163	0.100	48.25	-7.22	-0.88	0.00	-0.04	0.36
	CC8	187	0.000	-36.49	6.73	1.94	-0.00	-0.10	0.34
		163	0.100	-36.49	6.73	1.94	-0.00	0.10	-0.34
	CC11	187	0.000	92.84	-37.63	-1.42	0.02	0.07	-1.88
		163	0.100	92.84	-37.63	-1.42	0.02	-0.07	1.88
	CO1	187	0.000	122.70	-50.58	10.15	0.02	-0.49	-2.43
		163	0.100	122.69	-50.59	10.19	0.02	0.49	2.45
	CO2	187	0.000	156.12	-51.04	17.26	0.02	-0.82	-2.43
		163	0.100	156.11	-51.06	17.30	0.02	0.83	2.44
	CO3	187	0.000	163.67	-51.00	20.25	0.02	-0.96	-2.42
		163	0.100	163.66	-51.02	20.29	0.02	0.97	2.44
	CO4	187	0.000	162.06	-50.98	20.79	0.02	-0.99	-2.42
		163	0.100	162.04	-51.00	20.83	0.02	1.00	2.44
	CO5	187	0.000	168.87	-51.02	23.35	0.01	-1.11	-2.42
		163	0.100	168.85	-51.04	23.39	0.02	1.12	2.43
	CO6	187	0.000	170.48	-51.04	22.81	0.01	-1.08	-2.42
		163	0.100	170.47	-51.07	22.85	0.02	1.09	2.43
	CO7	187	0.000	154.51	-51.01	17.80	0.02	-0.85	-2.43
		163	0.100	154.50	-51.03	17.85	0.02	0.85	2.44
	CO8	187	0.000	161.32	-51.05	20.35	0.02	-0.97	-2.43
		163	0.100	161.31	-51.08	20.39	0.02	0.97	2.44
	CO9	187	0.000	162.93	-51.08	19.80	0.02	-0.94	-2.43
		163	0.100	162.92	-51.10	19.85	0.02	0.95	2.44
	CO10	187	0.000	130.24	-50.54	13.09	0.02	-0.63	-2.43
		163	0.100	130.23	-50.56	13.13	0.02	0.63	2.44
CO11	187	0.000	128.63	-50.52	13.64	0.02	-0.65	-2.42	
	163	0.100	128.61	-50.54	13.68	0.02	0.66	2.44	
CO12	187	0.000	135.43	-50.56	16.15	0.02	-0.77	-2.42	
	163	0.100	135.42	-50.58	16.19	0.02	0.78	2.44	
CO13	187	0.000	137.05	-50.59	15.61	0.02	-0.75	-2.42	
	163	0.100	137.04	-50.60	15.65	0.02	0.75	2.44	
CO14	187	0.000	121.08	-50.55	10.69	0.02	-0.51	-2.43	
	163	0.100	121.07	-50.57	10.73	0.02	0.52	2.45	
CO15	187	0.000	127.89	-50.59	13.20	0.02	-0.63	-2.43	
	163	0.100	127.88	-50.61	13.24	0.02	0.64	2.44	
CO16	187	0.000	129.50	-50.62	12.66	0.02	-0.61	-2.43	
	163	0.100	129.49	-50.64	12.70	0.02	0.61	2.44	
CO17	187	0.000	186.52	-61.42	8.98	0.02	-0.42	-2.90	
	163	0.100	186.50	-61.46	9.05	0.02	0.43	2.92	
CO18	187	0.000	137.88	-51.46	11.71	0.02	-0.56	-2.46	
	163	0.100	137.86	-51.48	11.76	0.02	0.57	2.48	
CO19	187	0.000	74.01	-40.93	12.83	0.01	-0.62	-2.00	
	163	0.100	74.00	-40.94	12.85	0.01	0.63	2.01	
CO20	187	0.000	90.83	-37.13	7.46	0.01	-0.36	-1.80	
	163	0.100	90.82	-37.14	7.48	0.01	0.37	1.81	
CO21	187	0.000	115.60	-37.42	12.64	0.01	-0.61	-1.80	
	163	0.100	115.60	-37.43	12.66	0.01	0.61	1.81	
CO22	187	0.000	121.20	-37.39	14.82	0.01	-0.71	-1.80	
	163	0.100	121.19	-37.40	14.85	0.01	0.72	1.81	
CO23	187	0.000	120.00	-37.37	15.22	0.01	-0.73	-1.80	
	163	0.100	119.99	-37.38	15.25	0.01	0.74	1.81	
CO24	187	0.000	125.04	-37.39	17.09	0.01	-0.82	-1.80	
	163	0.100	125.03	-37.40	17.11	0.01	0.83	1.81	
CO25	187	0.000	126.24	-37.41	16.69	0.01	-0.80	-1.80	
	163	0.100	126.23	-37.42	16.71	0.01	0.81	1.81	
CO26	187	0.000	114.40	-37.41	13.04	0.01	-0.63	-1.80	
	163	0.100	114.40	-37.42	13.06	0.01	0.63	1.81	
CO27	187	0.000	119.45	-37.43	14.90	0.01	-0.72	-1.80	
	163	0.100	119.44	-37.44	14.92	0.01	0.72	1.81	
CO28	187	0.000	120.64	-37.44	14.50	0.01	-0.70	-1.80	
	163	0.100	120.64	-37.46	14.52	0.01	0.70	1.81	
CO29	187	0.000	96.42	-37.10	9.61	0.01	-0.47	-1.80	
	163	0.100	96.41	-37.11	9.63	0.01	0.47	1.81	
CO30	187	0.000	95.22	-37.08	10.01	0.01	-0.48	-1.80	
	163	0.100	95.21	-37.09	10.03	0.01	0.49	1.81	
CO31	187	0.000	100.26	-37.10	11.85	0.01	-0.57	-1.80	
	163	0.100	100.25	-37.11	11.87	0.01	0.58	1.81	
CO32	187	0.000	101.46	-37.12	11.45	0.01	-0.55	-1.80	
	163	0.100	101.45	-37.13	11.47	0.01	0.56	1.81	
CO33	187	0.000	89.63	-37.12	7.86	0.01	-0.38	-1.80	
	163	0.100	89.62	-37.13	7.88	0.01	0.38	1.81	
CO34	187	0.000	94.67	-37.14	9.69	0.01	-0.47	-1.80	
	163	0.100	94.66	-37.15	9.71	0.01	0.47	1.81	
CO35	187	0.000	95.87	-37.15	9.29	0.01	-0.45	-1.80	
	163	0.100	95.86	-37.16	9.31	0.01	0.45	1.81	
CO36	187	0.000	138.08	-44.89	6.60	0.02	-0.32	-2.15	
	163	0.100	138.07	-44.91	6.63	0.02	0.32	2.16	
CO37	187	0.000	102.06	-37.75	8.58	0.01	-0.41	-1.83	
	163	0.100	102.05	-37.76	8.61	0.01	0.42	1.84	

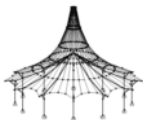


Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
17	CO38	187	0.000	54.78	-30.16	9.41	0.01	-0.46	-1.48
		163	0.100	54.78	-30.17	9.42	0.01	0.47	1.49
	CO39	187	0.000	90.83	-37.13	7.46	0.01	-0.36	-1.80
		163	0.100	90.82	-37.14	7.48	0.01	0.37	1.81
18	CC1	188	0.000	-4.30	-0.46	3.73	-0.00	-0.19	-0.02
		164	0.100	-4.30	-0.46	3.73	-0.00	0.19	0.02
	CC2	188	0.000	5.08	-0.18	5.12	-0.00	-0.26	-0.01
		164	0.100	5.08	-0.18	5.12	-0.00	0.26	0.01
	CC3	188	0.000	18.70	-0.51	5.10	-0.00	-0.25	-0.03
		164	0.100	18.70	-0.51	5.10	-0.00	0.26	0.03
	CC4	188	0.000	4.25	-0.10	2.15	-0.00	-0.11	-0.01
		164	0.100	4.25	-0.10	2.15	-0.00	0.11	0.01
	CC5	188	0.000	-0.85	-0.03	0.41	-0.00	-0.02	-0.00
		164	0.100	-0.85	-0.03	0.41	-0.00	0.02	0.00
	CC6	188	0.000	3.84	-0.13	1.83	-0.00	-0.09	-0.01
		164	0.100	3.84	-0.13	1.83	-0.00	0.09	0.01
	CC7	188	0.000	40.46	-5.41	-0.84	0.00	0.04	-0.27
		164	0.100	40.46	-5.41	-0.84	0.00	-0.04	0.27
	CC8	188	0.000	-33.19	5.25	1.92	-0.00	-0.10	0.26
		164	0.100	-33.19	5.25	1.92	-0.00	0.10	-0.26
	CC11	188	0.000	68.62	-28.44	-1.24	0.02	0.06	-1.41
		164	0.100	68.62	-28.44	-1.24	0.02	-0.06	1.43
	CO1	188	0.000	91.08	-39.31	10.28	0.02	-0.50	-1.90
		164	0.100	91.06	-39.34	10.31	0.02	0.50	1.92
	CO2	188	0.000	115.66	-40.11	17.30	0.02	-0.83	-1.93
		164	0.100	115.64	-40.13	17.34	0.02	0.84	1.95
	CO3	188	0.000	121.22	-40.28	20.24	0.02	-0.97	-1.93
		164	0.100	121.20	-40.31	20.28	0.02	0.98	1.95
	CO4	188	0.000	120.06	-40.32	20.78	0.01	-1.00	-1.93
		164	0.100	120.04	-40.34	20.81	0.01	1.01	1.96
	CO5	188	0.000	125.08	-40.52	23.30	0.01	-1.12	-1.94
		164	0.100	125.06	-40.55	23.33	0.01	1.13	1.96
	CO6	188	0.000	126.24	-40.48	22.76	0.01	-1.09	-1.94
		164	0.100	126.22	-40.51	22.79	0.01	1.10	1.96
	CO7	188	0.000	114.50	-40.14	17.84	0.02	-0.86	-1.93
		164	0.100	114.48	-40.17	17.87	0.02	0.87	1.95
	CO8	188	0.000	119.52	-40.35	20.35	0.02	-0.98	-1.94
		164	0.100	119.50	-40.37	20.38	0.02	0.99	1.96
	CO9	188	0.000	120.68	-40.31	19.81	0.02	-0.95	-1.93
		164	0.100	120.66	-40.34	19.84	0.02	0.96	1.96
	CO10	188	0.000	96.63	-39.49	13.18	0.02	-0.64	-1.91
		164	0.100	96.62	-39.51	13.21	0.02	0.64	1.93
	CO11	188	0.000	95.48	-39.52	13.72	0.02	-0.66	-1.91
		164	0.100	95.46	-39.54	13.75	0.02	0.67	1.93
	CO12	188	0.000	100.49	-39.72	16.21	0.02	-0.78	-1.92
		164	0.100	100.48	-39.75	16.23	0.02	0.79	1.94
	CO13	188	0.000	101.65	-39.69	15.67	0.02	-0.76	-1.91
		164	0.100	101.64	-39.71	15.70	0.02	0.76	1.94
	CO14	188	0.000	89.92	-39.35	10.81	0.02	-0.52	-1.91
		164	0.100	89.90	-39.37	10.84	0.02	0.53	1.93
	CO15	188	0.000	94.93	-39.55	13.29	0.02	-0.64	-1.91
		164	0.100	94.92	-39.58	13.32	0.02	0.65	1.93
	CO16	188	0.000	96.09	-39.52	12.76	0.02	-0.62	-1.91
		164	0.100	96.08	-39.54	12.79	0.02	0.62	1.93
	CO17	188	0.000	145.11	-47.20	9.16	0.02	-0.44	-2.25
		164	0.100	145.09	-47.25	9.21	0.02	0.44	2.27
	CO18	188	0.000	100.53	-39.66	11.82	0.02	-0.57	-1.91
		164	0.100	100.51	-39.70	11.85	0.02	0.58	1.94
	CO19	188	0.000	46.46	-31.96	12.90	0.01	-0.63	-1.57
		164	0.100	46.44	-31.97	12.92	0.01	0.64	1.59
	CO20	188	0.000	67.42	-28.97	7.57	0.01	-0.37	-1.41
		164	0.100	67.41	-28.98	7.58	0.01	0.37	1.43
	CO21	188	0.000	85.64	-29.54	12.71	0.01	-0.62	-1.43
		164	0.100	85.63	-29.55	12.73	0.01	0.62	1.45
	CO22	188	0.000	89.76	-29.66	14.87	0.01	-0.72	-1.44
		164	0.100	89.75	-29.68	14.89	0.01	0.73	1.45
	CO23	188	0.000	88.90	-29.69	15.26	0.01	-0.74	-1.44
		164	0.100	88.89	-29.70	15.28	0.01	0.75	1.45
	CO24	188	0.000	92.62	-29.84	17.11	0.01	-0.83	-1.44
		164	0.100	92.61	-29.85	17.12	0.01	0.83	1.46
	CO25	188	0.000	93.48	-29.81	16.71	0.01	-0.81	-1.44
		164	0.100	93.47	-29.83	16.73	0.01	0.82	1.46
	CO26	188	0.000	84.78	-29.57	13.11	0.01	-0.64	-1.43
		164	0.100	84.77	-29.58	13.13	0.01	0.64	1.45
	CO27	188	0.000	88.50	-29.71	14.95	0.01	-0.73	-1.44
		164	0.100	88.49	-29.73	14.96	0.01	0.73	1.46
	CO28	188	0.000	89.36	-29.69	14.55	0.01	-0.71	-1.44
		164	0.100	89.35	-29.70	14.57	0.01	0.71	1.45
	CO29	188	0.000	71.54	-29.09	9.70	0.01	-0.47	-1.42
		164	0.100	71.53	-29.10	9.72	0.01	0.48	1.43
	CO30	188	0.000	70.68	-29.12	10.10	0.01	-0.49	-1.42
		164	0.100	70.67	-29.13	10.11	0.01	0.50	1.43
	CO31	188	0.000	74.39	-29.26	11.92	0.01	-0.58	-1.42
		164	0.100	74.39	-29.28	11.94	0.01	0.59	1.44
	CO32	188	0.000	75.25	-29.24	11.53	0.01	-0.56	-1.42
		164	0.100	75.25	-29.25	11.54	0.01	0.57	1.44
	CO33	188	0.000	66.56	-29.00	7.96	0.01	-0.39	-1.41
		164	0.100	66.55	-29.01	7.98	0.01	0.39	1.43
	CO34	188	0.000	70.27	-29.14	9.78	0.01	-0.48	-1.42
		164	0.100	70.27	-29.15	9.80	0.01	0.48	1.43
	CO35	188	0.000	71.13	-29.11	9.39	0.01	-0.46	-1.42



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
18	CO35	164	0.100	71.13	-29.13	9.40	0.01	0.46	1.43
	CO36	188	0.000	107.43	-34.67	6.75	0.02	-0.32	-1.67
		164	0.100	107.41	-34.70	6.77	0.02	0.33	1.69
	CO37	188	0.000	74.41	-29.22	8.69	0.01	-0.42	-1.42
		164	0.100	74.40	-29.23	8.71	0.01	0.43	1.44
	CO38	188	0.000	34.39	-23.61	9.49	0.01	-0.47	-1.16
19		164	0.100	34.38	-23.62	9.50	0.01	0.47	1.18
	CO39	188	0.000	67.42	-28.97	7.57	0.01	-0.37	-1.41
		164	0.100	67.41	-28.98	7.58	0.01	0.37	1.43
	CC1	189	0.000	-3.34	-0.64	3.82	-0.00	-0.19	-0.03
		216	0.100	-3.34	-0.64	3.81	-0.00	0.19	0.03
	CC2	189	0.000	4.77	-0.52	5.24	-0.00	-0.26	-0.03
		216	0.100	4.77	-0.52	5.24	-0.00	0.26	0.03
	CC3	189	0.000	15.11	-0.79	5.24	-0.00	-0.26	-0.04
		216	0.100	15.11	-0.79	5.24	-0.00	0.26	0.04
	CC4	189	0.000	3.60	-0.22	2.19	-0.00	-0.11	-0.01
		216	0.100	3.60	-0.22	2.19	-0.00	0.11	0.01
	CC5	189	0.000	-0.56	-0.05	0.41	-0.00	-0.02	-0.00
		216	0.100	-0.56	-0.05	0.41	-0.00	0.02	0.00
	CC6	189	0.000	3.24	-0.23	1.87	-0.00	-0.09	-0.01
		216	0.100	3.24	-0.23	1.87	-0.00	0.09	0.01
	CC7	189	0.000	37.45	-4.01	-0.82	0.00	0.04	-0.20
		216	0.100	37.45	-4.01	-0.82	0.00	-0.04	0.20
	CC8	189	0.000	-33.07	4.06	1.94	-0.00	-0.09	0.20
		216	0.100	-33.07	4.06	1.94	-0.00	0.10	-0.20
	CC11	189	0.000	54.71	-21.15	-1.10	0.01	0.05	-1.05
		216	0.100	54.71	-21.15	-1.10	0.01	-0.06	1.07
	CO1	189	0.000	73.90	-30.40	10.67	0.01	-0.52	-1.47
		216	0.100	73.89	-30.43	10.68	0.01	0.52	1.50
	CO2	189	0.000	93.81	-31.49	17.81	0.01	-0.87	-1.52
		216	0.100	93.80	-31.53	17.82	0.01	0.87	1.55
	CO3	189	0.000	98.53	-31.82	20.79	0.01	-1.01	-1.53
		216	0.100	98.51	-31.85	20.80	0.01	1.01	1.56
	CO4	189	0.000	97.76	-31.89	21.33	0.01	-1.04	-1.53
		216	0.100	97.75	-31.92	21.34	0.01	1.03	1.56
	CO5	189	0.000	102.00	-32.21	23.89	0.01	-1.16	-1.55
		216	0.100	101.99	-32.25	23.89	0.01	1.16	1.58
	CO6	189	0.000	102.77	-32.14	23.34	0.01	-1.13	-1.54
	216	0.100	102.76	-32.18	23.35	0.01	1.13	1.58	
CO7	189	0.000	93.05	-31.56	18.36	0.01	-0.89	-1.52	
	216	0.100	93.03	-31.60	18.36	0.01	0.89	1.55	
CO8	189	0.000	97.29	-31.89	20.90	0.01	-1.02	-1.53	
	216	0.100	97.28	-31.92	20.91	0.01	1.01	1.57	
CO9	189	0.000	98.06	-31.82	20.36	0.01	-0.99	-1.53	
	216	0.100	98.04	-31.86	20.36	0.01	0.99	1.56	
CO10	189	0.000	78.61	-30.72	13.61	0.01	-0.67	-1.49	
	216	0.100	78.60	-30.75	13.62	0.01	0.66	1.52	
CO11	189	0.000	77.84	-30.79	14.16	0.01	-0.69	-1.49	
	216	0.100	77.83	-30.82	14.16	0.01	0.69	1.52	
CO12	189	0.000	82.09	-31.11	16.68	0.01	-0.82	-1.50	
	216	0.100	82.07	-31.14	16.69	0.01	0.81	1.53	
CO13	189	0.000	82.85	-31.04	16.14	0.01	-0.79	-1.50	
	216	0.100	82.84	-31.07	16.15	0.01	0.79	1.53	
CO14	189	0.000	73.13	-30.47	11.21	0.01	-0.55	-1.48	
	216	0.100	73.12	-30.50	11.22	0.01	0.55	1.51	
CO15	189	0.000	77.37	-30.79	13.73	0.01	-0.67	-1.49	
	216	0.100	77.36	-30.82	13.74	0.01	0.67	1.52	
CO16	189	0.000	78.14	-30.72	13.19	0.01	-0.65	-1.49	
	216	0.100	78.13	-30.75	13.19	0.01	0.64	1.52	
CO17	189	0.000	124.00	-36.15	9.59	0.02	-0.47	-1.73	
	216	0.100	123.99	-36.21	9.59	0.02	0.46	1.76	
CO18	189	0.000	79.59	-30.45	12.24	0.01	-0.60	-1.47	
	216	0.100	79.58	-30.50	12.24	0.01	0.60	1.51	
CO19	189	0.000	29.45	-24.81	13.29	0.01	-0.66	-1.21	
	216	0.100	29.44	-24.82	13.29	0.01	0.66	1.25	
CO20	189	0.000	54.71	-22.45	7.86	0.01	-0.39	-1.09	
	216	0.100	54.70	-22.47	7.87	0.01	0.39	1.12	
CO21	189	0.000	69.47	-23.26	13.11	0.01	-0.64	-1.13	
	216	0.100	69.46	-23.28	13.11	0.01	0.64	1.15	
CO22	189	0.000	72.97	-23.49	15.29	0.01	-0.75	-1.14	
	216	0.100	72.96	-23.52	15.30	0.01	0.75	1.16	
CO23	189	0.000	72.40	-23.55	15.69	0.01	-0.77	-1.14	
	216	0.100	72.39	-23.57	15.70	0.01	0.77	1.16	
CO24	189	0.000	75.54	-23.78	17.57	0.01	-0.86	-1.15	
	216	0.100	75.53	-23.80	17.57	0.01	0.86	1.17	
CO25	189	0.000	76.11	-23.73	17.17	0.01	-0.84	-1.15	
	216	0.100	76.10	-23.75	17.17	0.01	0.84	1.17	
CO26	189	0.000	68.90	-23.31	13.51	0.01	-0.66	-1.13	
	216	0.100	68.89	-23.33	13.51	0.01	0.66	1.15	
CO27	189	0.000	72.04	-23.55	15.38	0.01	-0.75	-1.14	
	216	0.100	72.04	-23.57	15.38	0.01	0.75	1.16	
CO28	189	0.000	72.61	-23.50	14.98	0.01	-0.73	-1.14	
	216	0.100	72.61	-23.52	14.98	0.01	0.73	1.16	
CO29	189	0.000	58.20	-22.69	10.03	0.01	-0.49	-1.10	
	216	0.100	58.19	-22.70	10.03	0.01	0.49	1.13	
CO30	189	0.000	57.63	-22.74	10.43	0.01	-0.51	-1.11	
	216	0.100	57.63	-22.75	10.43	0.01	0.51	1.13	
CO31	189	0.000	60.77	-22.97	12.29	0.01	-0.60	-1.12	
	216	0.100	60.77	-22.99	12.29	0.01	0.60	1.14	
CO32	189	0.000	61.34	-22.92	11.89	0.01	-0.58	-1.11	
	216	0.100	61.34	-22.94	11.89	0.01	0.58	1.14	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
19	CO33	189	0.000	54.14	-22.50	8.26	0.01	-0.41	-1.10
		216	0.100	54.13	-22.52	8.26	0.01	0.41	1.12
	CO34	189	0.000	57.28	-22.74	10.11	0.01	-0.50	-1.11
		216	0.100	57.27	-22.75	10.12	0.01	0.50	1.13
	CO35	189	0.000	57.85	-22.69	9.71	0.01	-0.48	-1.10
		216	0.100	57.84	-22.70	9.72	0.01	0.48	1.13
	CO36	189	0.000	91.82	-26.65	7.07	0.01	-0.35	-1.28
		216	0.100	91.81	-26.68	7.07	0.01	0.34	1.31
	CO37	189	0.000	58.92	-22.49	9.01	0.01	-0.44	-1.09
		216	0.100	58.91	-22.51	9.01	0.01	0.44	1.12
	CO38	189	0.000	21.80	-18.35	9.79	0.01	-0.48	-0.90
		216	0.100	21.79	-18.36	9.79	0.01	0.49	0.92
	CO39	189	0.000	54.71	-22.45	7.86	0.01	-0.39	-1.09
		216	0.100	54.70	-22.47	7.87	0.01	0.39	1.12
20	CC1	190	0.000	-4.04	-0.69	3.87	0.00	-0.19	-0.03
		166	0.100	-4.04	-0.69	3.87	0.00	0.19	0.03
	CC2	190	0.000	2.77	-0.73	5.30	-0.00	-0.26	-0.04
		166	0.100	2.77	-0.73	5.30	-0.00	0.26	0.04
	CC3	190	0.000	10.33	-1.00	5.33	-0.00	-0.27	-0.05
		166	0.100	10.33	-1.00	5.33	-0.00	0.27	0.05
	CC4	190	0.000	2.31	-0.30	2.22	-0.00	-0.11	-0.02
		166	0.100	2.31	-0.30	2.22	-0.00	0.11	0.01
	CC5	190	0.000	-0.45	-0.06	0.42	-0.00	-0.02	-0.00
		166	0.100	-0.45	-0.06	0.42	-0.00	0.02	0.00
	CC6	190	0.000	2.10	-0.29	1.90	-0.00	-0.09	-0.01
		166	0.100	2.10	-0.29	1.90	-0.00	0.09	0.01
	CC7	190	0.000	36.40	-3.04	-0.79	0.00	0.04	-0.15
		166	0.100	36.40	-3.04	-0.79	0.00	-0.04	0.16
	CC8	190	0.000	-34.88	3.08	1.93	-0.00	-0.10	0.16
		166	0.100	-34.88	3.08	1.93	-0.00	0.10	-0.15
	CC11	190	0.000	44.66	-15.93	-0.92	0.01	0.05	-0.78
		166	0.100	44.66	-15.93	-0.92	0.01	-0.05	0.81
	CO1	190	0.000	57.14	-23.90	10.97	0.01	-0.54	-1.15
		166	0.100	57.12	-23.94	10.98	0.01	0.54	1.20
	CO2	190	0.000	70.75	-25.22	18.16	0.01	-0.89	-1.21
		166	0.100	70.73	-25.26	18.17	0.01	0.89	1.26
	CO3	190	0.000	73.77	-25.62	21.13	0.01	-1.03	-1.23
		166	0.100	73.76	-25.66	21.14	0.01	1.04	1.27
	CO4	190	0.000	73.17	-25.70	21.68	0.01	-1.06	-1.24
		166	0.100	73.15	-25.74	21.68	0.01	1.06	1.28
	CO5	190	0.000	75.92	-26.10	24.23	0.01	-1.18	-1.26
		166	0.100	75.90	-26.14	24.24	0.01	1.19	1.30
	CO6	190	0.000	76.53	-26.02	23.69	0.01	-1.16	-1.25
		166	0.100	76.51	-26.06	23.70	0.01	1.16	1.29
	CO7	190	0.000	70.14	-25.30	18.70	0.01	-0.91	-1.22
		166	0.100	70.12	-25.34	18.71	0.01	0.92	1.26
	CO8	190	0.000	72.90	-25.69	21.25	0.01	-1.04	-1.24
		166	0.100	72.88	-25.73	21.26	0.01	1.04	1.28
	CO9	190	0.000	73.51	-25.61	20.71	0.01	-1.01	-1.23
		166	0.100	73.49	-25.65	20.72	0.01	1.02	1.27
	CO10	190	0.000	60.16	-24.31	13.92	0.01	-0.68	-1.17
		166	0.100	60.14	-24.34	13.93	0.01	0.69	1.21
	CO11	190	0.000	59.55	-24.39	14.46	0.01	-0.71	-1.18
		166	0.100	59.53	-24.42	14.47	0.01	0.71	1.22
	CO12	190	0.000	62.30	-24.78	17.00	0.01	-0.83	-1.20
		166	0.100	62.29	-24.81	17.01	0.01	0.84	1.24
	CO13	190	0.000	62.91	-24.70	16.46	0.01	-0.81	-1.19
		166	0.100	62.90	-24.73	16.47	0.01	0.81	1.23
	CO14	190	0.000	56.53	-23.98	11.51	0.01	-0.56	-1.16
		166	0.100	56.51	-24.02	11.52	0.01	0.57	1.20
	CO15	190	0.000	59.28	-24.38	14.05	0.01	-0.69	-1.18
		166	0.100	59.26	-24.41	14.05	0.01	0.69	1.22
	CO16	190	0.000	59.89	-24.29	13.50	0.01	-0.66	-1.17
		166	0.100	59.87	-24.33	13.51	0.01	0.67	1.21
	CO17	190	0.000	105.85	-28.19	9.93	0.01	-0.48	-1.34
		166	0.100	105.83	-28.27	9.95	0.01	0.48	1.39
	CO18	190	0.000	59.07	-23.97	12.55	0.01	-0.61	-1.15
		166	0.100	59.05	-24.02	12.56	0.01	0.62	1.20
	CO19	190	0.000	10.32	-19.75	13.56	0.01	-0.67	-0.96
		166	0.100	10.30	-19.75	13.56	0.00	0.68	1.01
	CO20	190	0.000	42.30	-17.69	8.10	0.01	-0.40	-0.86
		166	0.100	42.29	-17.71	8.10	0.01	0.40	0.89
	CO21	190	0.000	52.39	-18.67	13.39	0.01	-0.66	-0.90
		166	0.100	52.38	-18.69	13.39	0.01	0.66	0.93
	CO22	190	0.000	54.63	-18.97	15.58	0.01	-0.76	-0.92
		166	0.100	54.62	-18.99	15.58	0.01	0.77	0.95
	CO23	190	0.000	54.18	-19.03	15.98	0.01	-0.78	-0.92
		166	0.100	54.17	-19.05	15.98	0.01	0.79	0.95
	CO24	190	0.000	56.22	-19.32	17.86	0.01	-0.88	-0.93
		166	0.100	56.21	-19.34	17.86	0.01	0.88	0.97
	CO25	190	0.000	56.67	-19.26	17.46	0.01	-0.86	-0.93
		166	0.100	56.66	-19.28	17.46	0.01	0.86	0.96
	CO26	190	0.000	51.94	-18.73	13.79	0.01	-0.68	-0.91
		166	0.100	51.93	-18.75	13.79	0.01	0.68	0.94
	CO27	190	0.000	53.98	-19.02	15.67	0.01	-0.77	-0.92
		166	0.100	53.97	-19.04	15.67	0.01	0.77	0.95
	CO28	190	0.000	54.43	-18.96	15.27	0.01	-0.75	-0.92
		166	0.100	54.42	-18.98	15.27	0.01	0.75	0.95
	CO29	190	0.000	44.54	-17.99	10.27	0.01	-0.51	-0.87
		166	0.100	44.53	-18.01	10.28	0.01	0.51	0.90
	CO30	190	0.000	44.09	-18.05	10.67	0.01	-0.53	-0.88



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
20	CO30	166	0.100	44.08	-18.06	10.68	0.01	0.53	0.91
	CO31	190	0.000	46.12	-18.34	12.54	0.01	-0.62	-0.89
		166	0.100	46.12	-18.36	12.55	0.01	0.62	0.92
	CO32	190	0.000	46.58	-18.28	12.14	0.01	-0.60	-0.89
		166	0.100	46.57	-18.30	12.15	0.01	0.60	0.92
	CO33	190	0.000	41.85	-17.75	8.50	0.01	-0.42	-0.86
		166	0.100	41.84	-17.77	8.50	0.01	0.42	0.89
	CO34	190	0.000	43.88	-18.04	10.36	0.01	-0.51	-0.88
		166	0.100	43.87	-18.06	10.37	0.01	0.51	0.91
	CO35	190	0.000	44.34	-17.98	9.96	0.01	-0.49	-0.87
		166	0.100	44.33	-18.00	9.97	0.01	0.49	0.90
	CO36	190	0.000	78.37	-20.84	7.33	0.01	-0.36	-1.00
		166	0.100	78.36	-20.88	7.34	0.01	0.36	1.04
	CO37	190	0.000	43.73	-17.74	9.25	0.01	-0.45	-0.86
166		0.100	43.72	-17.77	9.25	0.01	0.46	0.89	
CO38	190	0.000	7.63	-14.62	10.00	0.00	-0.50	-0.71	
	166	0.100	7.63	-14.62	10.00	0.00	0.50	0.75	
CO39	190	0.000	42.30	-17.69	8.10	0.01	-0.40	-0.86	
	166	0.100	42.29	-17.71	8.10	0.01	0.40	0.89	
21 CC1	191	0.000	-2.97	-0.62	3.90	0.00	-0.20	-0.03	
	224	0.100	-2.97	-0.62	3.90	0.00	0.19	0.03	
CC2	191	0.000	3.24	-0.84	5.31	-0.00	-0.27	-0.04	
	224	0.100	3.24	-0.84	5.31	-0.00	0.27	0.04	
CC3	191	0.000	8.03	-1.13	5.38	-0.00	-0.27	-0.06	
	224	0.100	8.03	-1.13	5.38	-0.00	0.27	0.06	
CC4	191	0.000	2.06	-0.34	2.22	-0.00	-0.11	-0.02	
	224	0.100	2.06	-0.34	2.22	-0.00	0.11	0.02	
CC5	191	0.000	-0.14	-0.06	0.41	0.00	-0.02	-0.00	
	224	0.100	-0.14	-0.06	0.41	0.00	0.02	0.00	
CC6	191	0.000	1.85	-0.33	1.91	-0.00	-0.10	-0.02	
	224	0.100	1.85	-0.33	1.91	-0.00	0.10	0.02	
CC7	191	0.000	34.61	-2.44	-0.82	0.00	0.04	-0.12	
	224	0.100	34.61	-2.44	-0.82	0.00	-0.04	0.13	
CC8	191	0.000	-35.18	2.26	1.98	-0.00	-0.10	0.11	
	224	0.100	-35.18	2.26	1.98	-0.00	0.10	-0.11	
CC11	191	0.000	34.76	-12.62	-0.83	0.00	0.04	-0.61	
	224	0.100	34.76	-12.62	-0.83	0.00	-0.04	0.65	
CO1	191	0.000	46.22	-19.64	11.12	0.01	-0.55	-0.94	
	224	0.100	46.21	-19.68	11.12	0.00	0.55	1.00	
CO2	191	0.000	56.86	-21.12	18.32	0.01	-0.90	-1.01	
	224	0.100	56.84	-21.17	18.33	0.00	0.90	1.07	
CO3	191	0.000	59.57	-21.57	21.28	0.01	-1.04	-1.03	
	224	0.100	59.55	-21.62	21.29	0.00	1.05	1.09	
CO4	191	0.000	59.37	-21.65	21.82	0.01	-1.07	-1.04	
	224	0.100	59.35	-21.70	21.83	0.00	1.08	1.09	
CO5	191	0.000	61.82	-22.09	24.38	0.01	-1.19	-1.06	
	224	0.100	61.79	-22.13	24.39	0.00	1.20	1.11	
CO6	191	0.000	62.01	-22.01	23.84	0.01	-1.17	-1.06	
	224	0.100	61.99	-22.05	23.84	0.00	1.17	1.11	
CO7	191	0.000	56.66	-21.20	18.86	0.01	-0.92	-1.02	
	224	0.100	56.64	-21.25	18.87	0.00	0.93	1.07	
CO8	191	0.000	59.10	-21.64	21.42	0.01	-1.05	-1.04	
	224	0.100	59.08	-21.68	21.42	0.00	1.06	1.09	
CO9	191	0.000	59.30	-21.56	20.87	0.01	-1.02	-1.03	
	224	0.100	59.28	-21.60	20.88	0.00	1.03	1.09	
CO10	191	0.000	48.93	-20.08	14.06	0.01	-0.69	-0.96	
	224	0.100	48.92	-20.12	14.06	0.00	0.70	1.02	
CO11	191	0.000	48.74	-20.17	14.60	0.01	-0.72	-0.97	
	224	0.100	48.72	-20.20	14.60	0.00	0.72	1.02	
CO12	191	0.000	51.18	-20.60	17.14	0.01	-0.84	-0.99	
	224	0.100	51.16	-20.64	17.15	0.00	0.85	1.04	
CO13	191	0.000	51.38	-20.52	16.60	0.01	-0.82	-0.99	
	224	0.100	51.36	-20.56	16.61	0.00	0.82	1.04	
CO14	191	0.000	46.02	-19.72	11.66	0.01	-0.57	-0.95	
	224	0.100	46.01	-19.76	11.66	0.00	0.58	1.00	
CO15	191	0.000	48.47	-20.15	14.20	0.01	-0.70	-0.97	
	224	0.100	48.45	-20.19	14.20	0.00	0.70	1.02	
CO16	191	0.000	48.67	-20.07	13.65	0.01	-0.67	-0.96	
	224	0.100	48.65	-20.11	13.66	0.00	0.68	1.02	
CO17	191	0.000	92.55	-23.01	10.05	0.01	-0.49	-1.09	
	224	0.100	92.53	-23.10	10.05	0.01	0.49	1.15	
CO18	191	0.000	45.44	-20.05	12.70	0.00	-0.62	-0.96	
	224	0.100	45.42	-20.10	12.70	0.00	0.63	1.02	
CO19	191	0.000	-0.92	-16.71	13.74	0.00	-0.68	-0.81	
	224	0.100	-0.94	-16.71	13.74	0.00	0.69	0.86	
CO20	191	0.000	34.22	-14.55	8.21	0.00	-0.40	-0.70	
	224	0.100	34.21	-14.57	8.21	0.00	0.41	0.74	
CO21	191	0.000	42.11	-15.65	13.52	0.00	-0.67	-0.75	
	224	0.100	42.10	-15.67	13.52	0.00	0.67	0.79	
CO22	191	0.000	44.12	-15.98	15.70	0.00	-0.77	-0.77	
	224	0.100	44.11	-16.01	15.70	0.00	0.78	0.81	
CO23	191	0.000	43.97	-16.04	16.10	0.00	-0.79	-0.77	
	224	0.100	43.96	-16.06	16.10	0.00	0.80	0.81	
CO24	191	0.000	45.78	-16.36	17.99	0.00	-0.89	-0.79	
	224	0.100	45.77	-16.39	17.99	0.00	0.89	0.83	
CO25	191	0.000	45.93	-16.30	17.59	0.00	-0.87	-0.79	
	224	0.100	45.92	-16.33	17.59	0.00	0.87	0.82	
CO26	191	0.000	41.96	-15.71	13.92	0.00	-0.69	-0.76	
	224	0.100	41.95	-15.73	13.92	0.00	0.69	0.80	
CO27	191	0.000	43.77	-16.03	15.80	0.00	-0.78	-0.77	
	224	0.100	43.76	-16.06	15.80	0.00	0.78	0.81	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
21	CO28	191	0.000	43.92	-15.97	15.40	0.00	-0.76	-0.77
		224	0.100	43.91	-16.00	15.40	0.00	0.76	0.81
	CO29	191	0.000	36.23	-14.88	10.38	0.00	-0.51	-0.72
		224	0.100	36.22	-14.90	10.38	0.00	0.52	0.76
	CO30	191	0.000	36.09	-14.94	10.78	0.00	-0.53	-0.72
		224	0.100	36.08	-14.96	10.78	0.00	0.54	0.76
	CO31	191	0.000	37.90	-15.26	12.66	0.00	-0.62	-0.74
		224	0.100	37.89	-15.28	12.66	0.00	0.63	0.77
	CO32	191	0.000	38.04	-15.20	12.26	0.00	-0.60	-0.73
		224	0.100	38.03	-15.22	12.26	0.00	0.61	0.77
	CO33	191	0.000	34.08	-14.61	8.61	0.00	-0.42	-0.70
		224	0.100	34.07	-14.62	8.61	0.00	0.43	0.74
	CO34	191	0.000	35.89	-14.93	10.48	0.00	-0.52	-0.72
		224	0.100	35.88	-14.95	10.48	0.00	0.52	0.76
	CO35	191	0.000	36.03	-14.87	10.08	0.00	-0.50	-0.72
		224	0.100	36.02	-14.89	10.08	0.00	0.50	0.76
	CO36	191	0.000	68.54	-17.05	7.42	0.00	-0.36	-0.81
		224	0.100	68.53	-17.10	7.42	0.00	0.37	0.86
CO37	191	0.000	33.64	-14.85	9.37	0.00	-0.46	-0.71	
	224	0.100	33.63	-14.88	9.37	0.00	0.47	0.76	
CO38	191	0.000	-0.69	-12.36	10.15	0.00	-0.51	-0.60	
	224	0.100	-0.70	-12.36	10.14	0.00	0.51	0.64	
CO39	191	0.000	34.22	-14.55	8.21	0.00	-0.40	-0.70	
	224	0.100	34.21	-14.57	8.21	0.00	0.41	0.74	
22	CC1	192	0.000	-2.98	-0.43	3.94	0.00	-0.20	-0.02
		228	0.100	-2.98	-0.43	3.94	0.00	0.20	0.02
	CC2	192	0.000	2.50	-0.85	5.34	0.00	-0.27	-0.04
		228	0.100	2.50	-0.85	5.34	0.00	0.27	0.04
	CC3	192	0.000	4.71	-1.18	5.45	0.00	-0.27	-0.06
		228	0.100	4.71	-1.18	5.45	0.00	0.27	0.06
	CC4	192	0.000	1.33	-0.33	2.23	0.00	-0.11	-0.02
		228	0.100	1.33	-0.33	2.23	0.00	0.11	0.02
	CC5	192	0.000	0.05	-0.05	0.41	0.00	-0.02	-0.00
		228	0.100	0.05	-0.05	0.41	0.00	0.02	0.00
	CC6	192	0.000	1.20	-0.33	1.93	0.00	-0.10	-0.02
		228	0.100	1.20	-0.33	1.93	0.00	0.10	0.02
	CC7	192	0.000	33.62	-2.18	-0.81	0.00	0.04	-0.10
		228	0.100	33.62	-2.18	-0.81	0.00	-0.04	0.11
	CC8	192	0.000	-36.30	1.50	1.99	-0.00	-0.10	0.08
		228	0.100	-36.30	1.50	1.99	-0.00	0.10	-0.07
	CC11	192	0.000	26.73	-11.18	-0.69	-0.00	0.04	-0.53
		228	0.100	26.73	-11.18	-0.69	-0.00	-0.03	0.59
CO1	192	0.000	34.66	-17.55	11.34	0.00	-0.56	-0.84	
	228	0.100	34.64	-17.59	11.34	-0.00	0.56	0.90	
CO2	192	0.000	40.92	-19.10	18.59	0.00	-0.92	-0.91	
	228	0.100	40.90	-19.14	18.59	-0.00	0.92	0.98	
CO3	192	0.000	42.68	-19.54	21.53	0.00	-1.06	-0.93	
	228	0.100	42.66	-19.58	21.53	-0.00	1.07	1.00	
CO4	192	0.000	42.74	-19.61	22.07	0.00	-1.09	-0.94	
	228	0.100	42.72	-19.65	22.07	-0.00	1.09	1.00	
CO5	192	0.000	44.33	-20.04	24.63	0.00	-1.21	-0.96	
	228	0.100	44.31	-20.09	24.63	-0.00	1.22	1.02	
CO6	192	0.000	44.27	-19.98	24.09	0.00	-1.19	-0.95	
	228	0.100	44.25	-20.02	24.09	-0.00	1.19	1.02	
CO7	192	0.000	40.98	-19.17	19.12	0.00	-0.94	-0.92	
	228	0.100	40.96	-19.21	19.12	-0.00	0.95	0.98	
CO8	192	0.000	42.57	-19.60	21.68	0.00	-1.07	-0.94	
	228	0.100	42.55	-19.65	21.68	-0.00	1.07	1.00	
CO9	192	0.000	42.51	-19.54	21.14	0.00	-1.04	-0.93	
	228	0.100	42.49	-19.58	21.14	-0.00	1.05	1.00	
CO10	192	0.000	36.42	-17.99	14.28	0.00	-0.70	-0.86	
	228	0.100	36.40	-18.03	14.28	-0.00	0.71	0.92	
CO11	192	0.000	36.48	-18.06	14.82	0.00	-0.73	-0.86	
	228	0.100	36.46	-18.10	14.82	-0.00	0.74	0.93	
CO12	192	0.000	38.07	-18.49	17.37	0.00	-0.86	-0.88	
	228	0.100	38.05	-18.53	17.37	-0.00	0.86	0.95	
CO13	192	0.000	38.01	-18.42	16.83	0.00	-0.83	-0.88	
	228	0.100	37.99	-18.46	16.83	-0.00	0.83	0.94	
CO14	192	0.000	34.72	-17.62	11.88	0.00	-0.59	-0.84	
	228	0.100	34.70	-17.66	11.88	-0.00	0.59	0.91	
CO15	192	0.000	36.31	-18.05	14.43	0.00	-0.71	-0.86	
	228	0.100	36.29	-18.09	14.43	-0.00	0.72	0.93	
CO16	192	0.000	36.25	-17.99	13.89	0.00	-0.68	-0.86	
	228	0.100	36.23	-18.02	13.89	-0.00	0.69	0.92	
CO17	192	0.000	79.66	-20.51	10.29	0.00	-0.50	-0.96	
	228	0.100	79.63	-20.61	10.29	-0.00	0.50	1.04	
CO18	192	0.000	31.11	-18.69	12.93	-0.00	-0.64	-0.89	
	228	0.100	31.08	-18.74	12.93	-0.00	0.64	0.97	
CO19	192	0.000	-13.91	-15.74	13.96	-0.00	-0.70	-0.76	
	228	0.100	-13.93	-15.73	13.95	-0.00	0.70	0.83	
CO20	192	0.000	25.66	-13.00	8.38	0.00	-0.41	-0.62	
	228	0.100	25.65	-13.02	8.38	-0.00	0.42	0.67	
CO21	192	0.000	30.31	-14.15	13.73	0.00	-0.68	-0.68	
	228	0.100	30.30	-14.18	13.73	-0.00	0.68	0.73	
CO22	192	0.000	31.61	-14.48	15.91	0.00	-0.79	-0.69	
	228	0.100	31.60	-14.50	15.91	-0.00	0.79	0.74	
CO23	192	0.000	31.66	-14.53	16.31	0.00	-0.81	-0.70	
	228	0.100	31.65	-14.55	16.31	-0.00	0.81	0.74	
CO24	192	0.000	32.84	-14.85	18.20	0.00	-0.90	-0.71	
	228	0.100	32.82	-14.88	18.20	-0.00	0.90	0.76	
CO25	192	0.000	32.79	-14.80	17.80	0.00	-0.88	-0.71	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
22	CO25	228	0.100	32.78	-14.83	17.80	-0.00	0.88	0.76
	CO26	192	0.000	30.35	-14.20	14.13	0.00	-0.70	-0.68
		228	0.100	30.34	-14.23	14.13	-0.00	0.70	0.73
	CO27	192	0.000	31.53	-14.53	16.02	0.00	-0.79	-0.70
		228	0.100	31.52	-14.55	16.02	-0.00	0.80	0.74
	CO28	192	0.000	31.49	-14.48	15.62	0.00	-0.77	-0.69
		228	0.100	31.47	-14.50	15.62	-0.00	0.78	0.74
	CO29	192	0.000	26.97	-13.33	10.56	0.00	-0.52	-0.64
		228	0.100	26.96	-13.35	10.55	-0.00	0.53	0.69
	CO30	192	0.000	27.01	-13.38	10.95	0.00	-0.54	-0.64
		228	0.100	27.00	-13.40	10.95	-0.00	0.55	0.69
	CO31	192	0.000	28.19	-13.70	12.84	0.00	-0.63	-0.66
		228	0.100	28.18	-13.72	12.84	-0.00	0.64	0.70
	CO32	192	0.000	28.15	-13.65	12.44	0.00	-0.62	-0.65
		228	0.100	28.14	-13.67	12.44	-0.00	0.62	0.70
	CO33	192	0.000	25.71	-13.05	8.78	0.00	-0.43	-0.62
		228	0.100	25.70	-13.07	8.78	-0.00	0.44	0.67
	CO34	192	0.000	26.89	-13.38	10.66	0.00	-0.53	-0.64
		228	0.100	26.87	-13.40	10.66	-0.00	0.53	0.69
	CO35	192	0.000	26.84	-13.33	10.27	0.00	-0.51	-0.64
		228	0.100	26.83	-13.35	10.26	-0.00	0.51	0.69
	CO36	192	0.000	59.00	-15.22	7.60	0.00	-0.37	-0.72
		228	0.100	58.98	-15.27	7.60	0.00	0.38	0.78
	CO37	192	0.000	23.03	-13.84	9.55	-0.00	-0.47	-0.66
		228	0.100	23.02	-13.86	9.55	-0.00	0.48	0.72
	CO38	192	0.000	-10.31	-11.63	10.32	-0.00	-0.52	-0.56
		228	0.100	-10.33	-11.63	10.32	-0.00	0.52	0.61
	CO39	192	0.000	25.66	-13.00	8.38	0.00	-0.41	-0.62
		228	0.100	25.65	-13.02	8.38	-0.00	0.42	0.67
	CC1	193	0.000	-3.13	-0.09	3.99	0.00	-0.20	-0.01
		232	0.100	-3.13	-0.09	3.98	0.00	0.20	0.00
	CC2	193	0.000	1.72	-0.78	5.37	0.00	-0.27	-0.04
		232	0.100	1.72	-0.78	5.37	0.00	0.27	0.04
	CC3	193	0.000	1.38	-1.13	5.52	0.00	-0.28	-0.06
		232	0.100	1.38	-1.13	5.52	0.00	0.28	0.06
	CC4	193	0.000	0.60	-0.28	2.23	0.00	-0.11	-0.01
232		0.100	0.60	-0.28	2.23	0.00	0.11	0.01	
CC5	193	0.000	0.24	-0.04	0.41	0.00	-0.02	-0.00	
	232	0.100	0.24	-0.04	0.41	0.00	0.02	0.00	
CC6	193	0.000	0.54	-0.30	1.94	0.00	-0.10	-0.01	
	232	0.100	0.54	-0.30	1.94	0.00	0.10	0.01	
CC7	193	0.000	32.98	-2.22	-0.81	-0.00	0.04	-0.10	
	232	0.100	32.98	-2.22	-0.81	-0.00	-0.04	0.12	
CC8	193	0.000	-37.66	0.67	2.00	-0.00	-0.10	0.04	
	232	0.100	-37.66	0.67	2.00	-0.00	0.10	-0.03	
CC11	193	0.000	19.43	-11.62	-0.56	-0.01	0.03	-0.55	
	232	0.100	19.43	-11.62	-0.56	-0.01	-0.03	0.62	
CO1	193	0.000	23.80	-17.60	11.55	-0.00	-0.57	-0.83	
	232	0.100	23.78	-17.63	11.54	-0.00	0.58	0.91	
CO2	193	0.000	25.68	-19.09	18.82	-0.00	-0.93	-0.91	
	232	0.100	25.65	-19.12	18.82	-0.00	0.94	0.99	
CO3	193	0.000	26.48	-19.46	21.75	-0.00	-1.08	-0.93	
	232	0.100	26.45	-19.50	21.75	-0.00	1.08	1.01	
CO4	193	0.000	26.79	-19.51	22.29	-0.00	-1.10	-0.93	
	232	0.100	26.76	-19.55	22.28	-0.00	1.11	1.01	
CO5	193	0.000	27.52	-19.91	24.85	-0.00	-1.23	-0.95	
	232	0.100	27.49	-19.95	24.84	-0.00	1.24	1.03	
CO6	193	0.000	27.21	-19.86	24.31	-0.00	-1.20	-0.95	
	232	0.100	27.18	-19.90	24.31	-0.00	1.21	1.03	
CO7	193	0.000	25.99	-19.14	19.36	-0.00	-0.96	-0.91	
	232	0.100	25.96	-19.17	19.35	-0.00	0.96	0.99	
CO8	193	0.000	26.72	-19.53	21.92	-0.00	-1.08	-0.93	
	232	0.100	26.69	-19.57	21.91	-0.00	1.09	1.01	
CO9	193	0.000	26.41	-19.48	21.38	-0.00	-1.06	-0.93	
	232	0.100	26.38	-19.52	21.38	-0.00	1.06	1.01	
CO10	193	0.000	24.60	-17.98	14.47	-0.00	-0.72	-0.85	
	232	0.100	24.58	-18.01	14.47	-0.00	0.72	0.93	
CO11	193	0.000	24.91	-18.03	15.01	-0.00	-0.74	-0.86	
	232	0.100	24.89	-18.06	15.00	-0.00	0.75	0.94	
CO12	193	0.000	25.64	-18.42	17.56	-0.00	-0.87	-0.88	
	232	0.100	25.62	-18.46	17.56	-0.00	0.87	0.95	
CO13	193	0.000	25.33	-18.37	17.03	-0.00	-0.84	-0.87	
	232	0.100	25.31	-18.41	17.02	-0.00	0.85	0.95	
CO14	193	0.000	24.11	-17.65	12.08	-0.00	-0.60	-0.84	
	232	0.100	24.09	-17.68	12.08	-0.00	0.60	0.92	
CO15	193	0.000	24.84	-18.04	14.64	-0.00	-0.72	-0.86	
	232	0.100	24.82	-18.08	14.63	-0.00	0.73	0.94	
CO16	193	0.000	24.53	-17.99	14.10	-0.00	-0.70	-0.85	
	232	0.100	24.51	-18.03	14.10	-0.00	0.70	0.93	
CO17	193	0.000	67.92	-20.58	10.50	-0.00	-0.51	-0.96	
	232	0.100	67.88	-20.69	10.49	-0.00	0.52	1.06	
CO18	193	0.000	17.62	-19.96	13.14	-0.01	-0.65	-0.94	
	232	0.100	17.58	-19.99	13.13	-0.01	0.66	1.04	
CO19	193	0.000	-26.51	-16.99	14.16	-0.01	-0.71	-0.81	
	232	0.100	-26.54	-16.95	14.15	-0.01	0.72	0.90	
CO20	193	0.000	17.63	-13.03	8.54	-0.00	-0.42	-0.62	
	232	0.100	17.61	-13.05	8.54	-0.00	0.43	0.68	
CO21	193	0.000	19.02	-14.13	13.93	-0.00	-0.69	-0.67	
	232	0.100	19.01	-14.15	13.92	-0.00	0.69	0.73	
CO22	193	0.000	19.62	-14.41	16.09	-0.00	-0.80	-0.69	
	232	0.100	19.60	-14.43	16.09	-0.00	0.80	0.75	

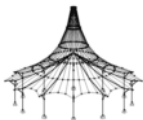


Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
23	CO23	193	0.000	19.85	-14.45	16.49	-0.00	-0.82	-0.69
		232	0.100	19.83	-14.47	16.48	-0.00	0.82	0.75
	CO24	193	0.000	20.39	-14.74	18.38	-0.00	-0.91	-0.70
		232	0.100	20.37	-14.76	18.38	-0.00	0.92	0.76
	CO25	193	0.000	20.16	-14.70	17.98	-0.00	-0.89	-0.70
		232	0.100	20.14	-14.72	17.98	-0.00	0.90	0.76
	CO26	193	0.000	19.25	-14.17	14.32	-0.00	-0.71	-0.68
		232	0.100	19.24	-14.19	14.32	-0.00	0.71	0.73
	CO27	193	0.000	19.79	-14.46	16.21	-0.00	-0.80	-0.69
		232	0.100	19.78	-14.48	16.21	-0.00	0.81	0.75
	CO28	193	0.000	19.56	-14.43	15.82	-0.00	-0.78	-0.69
		232	0.100	19.55	-14.45	15.81	-0.00	0.79	0.75
	CO29	193	0.000	18.22	-13.31	10.71	-0.00	-0.53	-0.63
		232	0.100	18.21	-13.33	10.70	-0.00	0.53	0.69
	CO30	193	0.000	18.45	-13.35	11.10	-0.00	-0.55	-0.64
		232	0.100	18.44	-13.37	11.10	-0.00	0.55	0.69
	CO31	193	0.000	18.99	-13.64	12.99	-0.00	-0.64	-0.65
		232	0.100	18.98	-13.66	12.99	-0.00	0.65	0.71
	CO32	193	0.000	18.76	-13.60	12.60	-0.00	-0.62	-0.65
		232	0.100	18.75	-13.62	12.59	-0.00	0.63	0.71
	CO33	193	0.000	17.86	-13.07	8.94	-0.00	-0.44	-0.62
		232	0.100	17.84	-13.09	8.93	-0.00	0.45	0.68
	CO34	193	0.000	18.40	-13.36	10.83	-0.00	-0.54	-0.64
		232	0.100	18.38	-13.38	10.82	-0.00	0.54	0.69
	CO35	193	0.000	18.17	-13.32	10.43	-0.00	-0.52	-0.63
		232	0.100	18.15	-13.34	10.43	-0.00	0.52	0.69
	CO36	193	0.000	50.31	-15.26	7.77	-0.00	-0.38	-0.72
		232	0.100	50.29	-15.32	7.76	-0.00	0.38	0.79
	CO37	193	0.000	13.04	-14.77	9.72	-0.01	-0.48	-0.70
		232	0.100	13.03	-14.78	9.71	-0.01	0.49	0.77
	CO38	193	0.000	-19.65	-12.54	10.48	-0.01	-0.53	-0.60
		232	0.100	-19.66	-12.52	10.47	-0.01	0.53	0.66
	CO39	193	0.000	17.63	-13.03	8.54	-0.00	-0.42	-0.62
		232	0.100	17.61	-13.05	8.54	-0.00	0.43	0.68
	CC1	194	0.000	-3.34	0.40	4.03	0.00	-0.20	0.02
		235	0.100	-3.34	0.40	4.03	0.00	0.20	-0.02
	CC2	194	0.000	1.03	-0.60	5.38	0.00	-0.27	-0.03
		235	0.100	1.03	-0.60	5.38	0.00	0.27	0.03
	CC3	194	0.000	-1.82	-0.95	5.57	0.00	-0.28	-0.05
		235	0.100	-1.82	-0.95	5.57	0.00	0.28	0.05
CC4	194	0.000	-0.08	-0.20	2.22	0.00	-0.11	-0.01	
	235	0.100	-0.08	-0.20	2.22	0.00	0.11	0.01	
CC5	194	0.000	0.42	-0.02	0.41	0.00	-0.02	-0.00	
	235	0.100	0.42	-0.02	0.41	0.00	0.02	0.00	
CC6	194	0.000	-0.09	-0.23	1.95	0.00	-0.10	-0.01	
	235	0.100	-0.09	-0.23	1.95	0.00	0.10	0.01	
CC7	194	0.000	32.55	-2.48	-0.82	-0.00	0.04	-0.12	
	235	0.100	32.55	-2.48	-0.82	-0.00	-0.04	0.13	
CC8	194	0.000	-39.08	-0.30	2.02	-0.00	-0.10	-0.01	
	235	0.100	-39.08	-0.30	2.02	-0.00	0.10	0.02	
CC11	194	0.000	12.77	-13.64	-0.46	-0.01	0.02	-0.64	
	235	0.100	12.77	-13.64	-0.46	-0.01	-0.02	0.72	
CO1	194	0.000	13.79	-19.39	11.72	-0.01	-0.58	-0.92	
	235	0.100	13.76	-19.41	11.71	-0.01	0.59	1.01	
CO2	194	0.000	11.43	-20.65	19.02	-0.01	-0.95	-0.98	
	235	0.100	11.40	-20.67	19.01	-0.01	0.95	1.08	
CO3	194	0.000	11.34	-20.91	21.92	-0.00	-1.09	-1.00	
	235	0.100	11.31	-20.93	21.91	-0.01	1.10	1.09	
CO4	194	0.000	11.90	-20.93	22.45	-0.00	-1.12	-1.00	
	235	0.100	11.87	-20.96	22.44	-0.01	1.12	1.09	
CO5	194	0.000	11.82	-21.24	25.01	-0.00	-1.24	-1.01	
	235	0.100	11.78	-21.26	25.00	-0.01	1.25	1.11	
CO6	194	0.000	11.26	-21.22	24.48	-0.00	-1.22	-1.01	
	235	0.100	11.22	-21.24	24.47	-0.01	1.22	1.11	
CO7	194	0.000	11.99	-20.67	19.55	-0.01	-0.97	-0.98	
	235	0.100	11.96	-20.69	19.54	-0.01	0.98	1.08	
CO8	194	0.000	11.91	-20.98	22.11	-0.00	-1.10	-1.00	
	235	0.100	11.88	-21.00	22.10	-0.01	1.10	1.09	
CO9	194	0.000	11.35	-20.95	21.57	-0.00	-1.07	-1.00	
	235	0.100	11.32	-20.98	21.56	-0.01	1.08	1.09	
CO10	194	0.000	13.69	-19.65	14.62	-0.01	-0.73	-0.93	
	235	0.100	13.66	-19.68	14.61	-0.01	0.73	1.03	
CO11	194	0.000	14.25	-19.67	15.15	-0.01	-0.75	-0.93	
	235	0.100	14.22	-19.70	15.14	-0.01	0.76	1.03	
CO12	194	0.000	14.17	-19.98	17.71	-0.01	-0.88	-0.95	
	235	0.100	14.14	-20.01	17.70	-0.01	0.88	1.04	
CO13	194	0.000	13.61	-19.96	17.18	-0.01	-0.85	-0.95	
	235	0.100	13.58	-19.99	17.17	-0.01	0.86	1.04	
CO14	194	0.000	14.35	-19.41	12.25	-0.01	-0.61	-0.92	
	235	0.100	14.31	-19.44	12.24	-0.01	0.61	1.02	
CO15	194	0.000	14.26	-19.72	14.80	-0.01	-0.74	-0.94	
	235	0.100	14.23	-19.75	14.79	-0.01	0.74	1.03	
CO16	194	0.000	13.70	-19.70	14.27	-0.01	-0.71	-0.93	
	235	0.100	13.67	-19.72	14.26	-0.01	0.71	1.03	
CO17	194	0.000	57.27	-22.69	10.66	-0.01	-0.52	-1.06	
	235	0.100	57.23	-22.80	10.65	-0.01	0.53	1.18	
CO18	194	0.000	5.17	-23.43	13.31	-0.01	-0.66	-1.11	
	235	0.100	5.12	-23.45	13.29	-0.01	0.67	1.23	
CO19	194	0.000	-38.33	-20.14	14.33	-0.01	-0.72	-0.97	
	235	0.100	-38.37	-20.08	14.31	-0.01	0.73	1.07	
CO20	194	0.000	10.21	-14.35	8.67	-0.01	-0.43	-0.68	

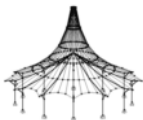


Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
24	CO20	235	0.100	10.20	-14.36	8.67	-0.01	0.43	0.75
	CO21	194	0.000	8.47	-15.27	14.09	-0.00	-0.70	-0.73
		235	0.100	8.46	-15.29	14.08	-0.01	0.70	0.80
	CO22	194	0.000	8.41	-15.47	16.24	-0.00	-0.81	-0.74
		235	0.100	8.39	-15.48	16.23	-0.00	0.81	0.81
	CO23	194	0.000	8.82	-15.48	16.63	-0.00	-0.83	-0.74
		235	0.100	8.81	-15.50	16.62	-0.00	0.83	0.81
	CO24	194	0.000	8.76	-15.71	18.52	-0.00	-0.92	-0.75
		235	0.100	8.74	-15.72	18.52	-0.00	0.93	0.82
	CO25	194	0.000	8.34	-15.69	18.13	-0.00	-0.90	-0.75
		235	0.100	8.33	-15.71	18.12	-0.00	0.91	0.82
	CO26	194	0.000	8.89	-15.29	14.48	-0.00	-0.72	-0.73
		235	0.100	8.87	-15.30	14.47	-0.01	0.72	0.80
	CO27	194	0.000	8.83	-15.52	16.37	-0.00	-0.81	-0.74
		235	0.100	8.81	-15.53	16.37	-0.00	0.82	0.81
	CO28	194	0.000	8.41	-15.50	15.98	-0.00	-0.80	-0.74
		235	0.100	8.39	-15.51	15.97	-0.01	0.80	0.81
	CO29	194	0.000	10.15	-14.54	10.83	-0.00	-0.54	-0.69
		235	0.100	10.13	-14.55	10.82	-0.01	0.54	0.76
	CO30	194	0.000	10.56	-14.56	11.22	-0.00	-0.56	-0.69
		235	0.100	10.54	-14.57	11.21	-0.01	0.56	0.76
	CO31	194	0.000	10.50	-14.78	13.11	-0.00	-0.65	-0.70
		235	0.100	10.48	-14.80	13.11	-0.01	0.66	0.77
	CO32	194	0.000	10.08	-14.77	12.72	-0.00	-0.63	-0.70
		235	0.100	10.07	-14.78	12.71	-0.01	0.64	0.77
	CO33	194	0.000	10.63	-14.36	9.07	-0.01	-0.45	-0.68
		235	0.100	10.61	-14.38	9.06	-0.01	0.45	0.75
	CO34	194	0.000	10.56	-14.59	10.96	-0.00	-0.54	-0.69
		235	0.100	10.55	-14.60	10.95	-0.01	0.55	0.76
	CO35	194	0.000	10.15	-14.57	10.57	-0.00	-0.53	-0.69
		235	0.100	10.13	-14.59	10.56	-0.01	0.53	0.76
	CO36	194	0.000	42.43	-16.81	7.89	-0.01	-0.39	-0.79
		235	0.100	42.41	-16.87	7.89	-0.01	0.39	0.87
	CO37	194	0.000	3.83	-17.32	9.85	-0.01	-0.49	-0.82
		235	0.100	3.80	-17.33	9.84	-0.01	0.49	0.91
	CO38	194	0.000	-28.40	-14.86	10.62	-0.01	-0.53	-0.71
235		0.100	-28.42	-14.83	10.61	-0.01	0.54	0.79	
CO39	194	0.000	10.21	-14.35	8.67	-0.01	-0.43	-0.68	
	235	0.100	10.20	-14.36	8.67	-0.01	0.43	0.75	
CC1	195	0.000	-3.64	1.07	4.09	0.00	-0.20	0.05	
	237	0.100	-3.64	1.07	4.09	0.00	0.20	-0.06	
CC2	195	0.000	0.30	-0.30	5.39	0.00	-0.27	-0.02	
	237	0.100	0.30	-0.30	5.39	0.00	0.27	0.01	
CC3	195	0.000	-5.09	-0.60	5.64	0.00	-0.28	-0.03	
	237	0.100	-5.09	-0.60	5.64	0.00	0.28	0.03	
CC4	195	0.000	-0.77	-0.06	2.21	0.00	-0.11	-0.00	
	237	0.100	-0.77	-0.06	2.21	0.00	0.11	0.00	
CC5	195	0.000	0.60	0.01	0.40	0.00	-0.02	0.00	
	237	0.100	0.60	0.01	0.40	0.00	0.02	-0.00	
CC6	195	0.000	-0.72	-0.12	1.97	0.00	-0.10	-0.01	
	237	0.100	-0.72	-0.12	1.97	0.00	0.10	0.01	
CC7	195	0.000	32.13	-2.89	-0.85	-0.00	0.04	-0.14	
	237	0.100	32.13	-2.89	-0.85	-0.00	-0.04	0.15	
CC8	195	0.000	-40.46	-1.58	2.07	-0.00	-0.10	-0.07	
	237	0.100	-40.46	-1.58	2.07	-0.00	0.10	0.08	
CC11	195	0.000	6.18	-17.30	-0.36	-0.01	0.02	-0.82	
	237	0.100	6.18	-17.30	-0.36	-0.01	-0.02	0.91	
CO1	195	0.000	3.72	-22.90	11.89	-0.01	-0.59	-1.09	
	237	0.100	3.68	-22.91	11.87	-0.01	0.60	1.20	
CO2	195	0.000	-2.95	-23.70	19.23	-0.01	-0.96	-1.13	
	237	0.100	-2.99	-23.71	19.22	-0.01	0.97	1.24	
CO3	195	0.000	-3.94	-23.79	22.10	-0.01	-1.10	-1.14	
	237	0.100	-3.98	-23.79	22.09	-0.01	1.11	1.25	
CO4	195	0.000	-3.13	-23.78	22.63	-0.01	-1.13	-1.14	
	237	0.100	-3.18	-23.78	22.61	-0.01	1.14	1.25	
CO5	195	0.000	-4.05	-23.94	25.18	-0.01	-1.26	-1.15	
	237	0.100	-4.09	-23.94	25.17	-0.01	1.26	1.25	
CO6	195	0.000	-4.85	-23.95	24.66	-0.01	-1.23	-1.15	
	237	0.100	-4.90	-23.95	24.64	-0.01	1.24	1.25	
CO7	195	0.000	-2.14	-23.69	19.75	-0.01	-0.99	-1.13	
	237	0.100	-2.18	-23.70	19.74	-0.01	0.99	1.24	
CO8	195	0.000	-3.06	-23.85	22.31	-0.01	-1.11	-1.14	
	237	0.100	-3.10	-23.86	22.30	-0.01	1.12	1.25	
CO9	195	0.000	-3.86	-23.86	21.79	-0.01	-1.09	-1.14	
	237	0.100	-3.91	-23.87	21.77	-0.01	1.09	1.25	
CO10	195	0.000	2.73	-22.99	14.77	-0.01	-0.74	-1.09	
	237	0.100	2.69	-23.00	14.76	-0.01	0.74	1.20	
CO11	195	0.000	3.53	-22.98	15.29	-0.01	-0.76	-1.09	
	237	0.100	3.49	-22.99	15.28	-0.01	0.77	1.20	
CO12	195	0.000	2.62	-23.14	17.86	-0.01	-0.89	-1.10	
	237	0.100	2.58	-23.16	17.84	-0.01	0.89	1.21	
CO13	195	0.000	1.81	-23.15	17.33	-0.01	-0.86	-1.10	
	237	0.100	1.77	-23.16	17.32	-0.01	0.87	1.21	
CO14	195	0.000	4.53	-22.89	12.41	-0.01	-0.62	-1.09	
	237	0.100	4.48	-22.90	12.40	-0.01	0.62	1.20	
CO15	195	0.000	3.61	-23.05	14.98	-0.01	-0.75	-1.10	
	237	0.100	3.57	-23.07	14.96	-0.01	0.75	1.21	
CO16	195	0.000	2.81	-23.06	14.45	-0.01	-0.72	-1.10	
	237	0.100	2.76	-23.07	14.44	-0.01	0.72	1.21	
CO17	195	0.000	46.58	-26.74	10.80	-0.01	-0.53	-1.25	
	237	0.100	46.53	-26.84	10.79	-0.01	0.54	1.39	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
25	CO18	195	0.000	-7.25	-29.20	13.49	-0.02	-0.67	-1.39
		237	0.100	-7.32	-29.20	13.46	-0.02	0.68	1.54
	CO19	195	0.000	-50.12	-25.37	14.55	-0.02	-0.74	-1.23
		237	0.100	-50.17	-25.29	14.52	-0.02	0.74	1.35
	CO20	195	0.000	2.76	-16.94	8.81	-0.01	-0.44	-0.81
		237	0.100	2.74	-16.94	8.80	-0.01	0.44	0.89
	CO21	195	0.000	-2.17	-17.52	14.26	-0.01	-0.71	-0.84
		237	0.100	-2.20	-17.53	14.25	-0.01	0.72	0.92
	CO22	195	0.000	-2.91	-17.59	16.39	-0.01	-0.82	-0.84
		237	0.100	-2.93	-17.59	16.38	-0.01	0.82	0.92
	CO23	195	0.000	-2.31	-17.58	16.78	-0.01	-0.84	-0.84
		237	0.100	-2.33	-17.58	16.77	-0.01	0.84	0.92
	CO24	195	0.000	-2.99	-17.70	18.67	-0.00	-0.93	-0.85
		237	0.100	-3.01	-17.70	18.67	-0.01	0.94	0.93
	CO25	195	0.000	-3.59	-17.70	18.29	-0.00	-0.91	-0.85
		237	0.100	-3.61	-17.70	18.28	-0.01	0.92	0.93
	CO26	195	0.000	-1.58	-17.52	14.65	-0.01	-0.73	-0.84
		237	0.100	-1.60	-17.52	14.64	-0.01	0.74	0.92
	CO27	195	0.000	-2.26	-17.63	16.54	-0.01	-0.83	-0.84
		237	0.100	-2.28	-17.64	16.53	-0.01	0.83	0.92
	CO28	195	0.000	-2.85	-17.64	16.15	-0.01	-0.81	-0.84
		237	0.100	-2.88	-17.64	16.15	-0.01	0.81	0.92
	CO29	195	0.000	2.03	-17.00	10.95	-0.01	-0.55	-0.81
		237	0.100	2.01	-17.01	10.94	-0.01	0.55	0.89
	CO30	195	0.000	2.63	-16.99	11.33	-0.01	-0.56	-0.81
		237	0.100	2.60	-17.00	11.33	-0.01	0.57	0.89
	CO31	195	0.000	1.95	-17.11	13.23	-0.01	-0.66	-0.82
		237	0.100	1.92	-17.12	13.23	-0.01	0.66	0.90
	CO32	195	0.000	1.35	-17.12	12.85	-0.01	-0.64	-0.82
		237	0.100	1.33	-17.12	12.84	-0.01	0.64	0.90
	CO33	195	0.000	3.36	-16.93	9.20	-0.01	-0.46	-0.81
		237	0.100	3.33	-16.94	9.19	-0.01	0.46	0.89
	CO34	195	0.000	2.68	-17.05	11.10	-0.01	-0.55	-0.81
		237	0.100	2.66	-17.05	11.09	-0.01	0.56	0.89
	CO35	195	0.000	2.08	-17.05	10.71	-0.01	-0.53	-0.81
		237	0.100	2.06	-17.06	10.70	-0.01	0.54	0.89
	CO36	195	0.000	34.52	-19.80	8.00	-0.01	-0.39	-0.93
		237	0.100	34.49	-19.85	7.99	-0.01	0.40	1.03
	CO37	195	0.000	-5.37	-21.58	10.00	-0.01	-0.50	-1.03
237		0.100	-5.41	-21.57	9.98	-0.01	0.50	1.13	
CO38	195	0.000	-37.13	-18.72	10.79	-0.01	-0.54	-0.90	
	237	0.100	-37.16	-18.68	10.77	-0.01	0.55	0.99	
CO39	195	0.000	2.76	-16.94	8.81	-0.01	-0.44	-0.81	
	237	0.100	2.74	-16.94	8.80	-0.01	0.44	0.89	
CC1	196	0.000	-6.94	1.96	4.15	0.00	-0.21	0.09	
	172	0.100	-6.94	1.96	4.15	0.00	0.21	-0.10	
CC2	196	0.000	-4.38	0.13	5.39	0.00	-0.27	0.01	
	172	0.100	-4.38	0.13	5.39	0.00	0.27	-0.01	
CC3	196	0.000	-12.46	-0.03	5.70	0.00	-0.28	-0.00	
	172	0.100	-12.46	-0.03	5.70	0.00	0.28	0.00	
CC4	196	0.000	-3.05	0.12	2.19	0.00	-0.11	0.01	
	172	0.100	-3.05	0.12	2.19	0.00	0.11	-0.01	
CC5	196	0.000	0.47	0.04	0.40	0.00	-0.02	0.00	
	172	0.100	0.47	0.04	0.40	0.00	0.02	-0.00	
CC6	196	0.000	-2.79	0.05	1.98	0.00	-0.10	0.00	
	172	0.100	-2.79	0.05	1.98	0.00	0.10	-0.00	
CC7	196	0.000	31.51	-3.38	-0.83	-0.00	0.04	-0.16	
	172	0.100	31.51	-3.38	-0.83	-0.00	-0.04	0.18	
CC8	196	0.000	-42.35	-3.33	2.06	-0.01	-0.11	-0.16	
	172	0.100	-42.35	-3.33	2.06	-0.01	0.10	0.17	
CC11	196	0.000	-0.59	-22.60	-0.26	-0.02	0.01	-1.07	
	172	0.100	-0.59	-22.60	-0.26	-0.02	-0.01	1.19	
CO1	196	0.000	-15.77	-27.96	12.02	-0.01	-0.60	-1.34	
	172	0.100	-15.82	-27.93	12.00	-0.02	0.60	1.47	
CO2	196	0.000	-32.21	-27.97	19.32	-0.01	-0.97	-1.35	
	172	0.100	-32.27	-27.92	19.30	-0.01	0.98	1.47	
CO3	196	0.000	-36.22	-27.80	22.12	-0.01	-1.12	-1.34	
	172	0.100	-36.28	-27.74	22.10	-0.01	1.12	1.47	
CO4	196	0.000	-35.57	-27.75	22.63	-0.01	-1.14	-1.34	
	172	0.100	-35.63	-27.69	22.61	-0.01	1.15	1.46	
CO5	196	0.000	-39.22	-27.68	25.15	-0.01	-1.27	-1.34	
	172	0.100	-39.27	-27.62	25.12	-0.01	1.27	1.46	
CO6	196	0.000	-39.87	-27.73	24.63	-0.01	-1.24	-1.34	
	172	0.100	-39.92	-27.66	24.61	-0.01	1.25	1.46	
CO7	196	0.000	-31.56	-27.92	19.83	-0.01	-1.00	-1.35	
	172	0.100	-31.62	-27.87	19.81	-0.01	1.00	1.47	
CO8	196	0.000	-35.21	-27.85	22.35	-0.01	-1.13	-1.34	
	172	0.100	-35.26	-27.79	22.33	-0.01	1.13	1.47	
CO9	196	0.000	-35.85	-27.90	21.84	-0.01	-1.10	-1.35	
	172	0.100	-35.91	-27.84	21.82	-0.01	1.11	1.47	
CO10	196	0.000	-19.78	-27.79	14.84	-0.01	-0.74	-1.33	
	172	0.100	-19.83	-27.76	14.82	-0.01	0.75	1.46	
CO11	196	0.000	-19.13	-27.74	15.36	-0.01	-0.77	-1.33	
	172	0.100	-19.19	-27.72	15.34	-0.01	0.77	1.46	
CO12	196	0.000	-22.77	-27.68	17.90	-0.01	-0.90	-1.33	
	172	0.100	-22.83	-27.64	17.87	-0.01	0.90	1.45	
CO13	196	0.000	-23.42	-27.72	17.38	-0.01	-0.87	-1.33	
	172	0.100	-23.48	-27.69	17.36	-0.01	0.88	1.46	
CO14	196	0.000	-15.12	-27.91	12.53	-0.01	-0.63	-1.34	
	172	0.100	-15.18	-27.89	12.51	-0.02	0.63	1.46	
CO15	196	0.000	-18.76	-27.84	15.08	-0.01	-0.76	-1.34	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
26	CO15	172	0.100	-18.82	-27.81	15.05	-0.01	0.76	1.46
	CO16	196	0.000	-19.41	-27.89	14.56	-0.01	-0.73	-1.34
		172	0.100	-19.47	-27.86	14.54	-0.01	0.73	1.46
	CO17	196	0.000	26.39	-32.44	10.97	-0.02	-0.54	-1.53
		172	0.100	26.31	-32.51	10.94	-0.02	0.55	1.69
	CO18	196	0.000	-30.09	-37.15	13.60	-0.02	-0.68	-1.79
		172	0.100	-30.19	-37.09	13.55	-0.02	0.69	1.95
	CO19	196	0.000	-72.27	-32.69	14.62	-0.02	-0.75	-1.60
		172	0.100	-72.34	-32.54	14.58	-0.02	0.74	1.74
	CO20	196	0.000	-11.67	-20.69	8.92	-0.01	-0.45	-0.99
		172	0.100	-11.71	-20.68	8.91	-0.01	0.45	1.08
	CO21	196	0.000	-23.85	-20.70	14.36	-0.01	-0.72	-1.00
		172	0.100	-23.89	-20.67	14.35	-0.01	0.72	1.09
	CO22	196	0.000	-26.83	-20.58	16.45	-0.01	-0.83	-0.99
		172	0.100	-26.86	-20.55	16.44	-0.01	0.83	1.08
	CO23	196	0.000	-26.34	-20.54	16.83	-0.01	-0.85	-0.99
		172	0.100	-26.38	-20.51	16.82	-0.01	0.85	1.08
	CO24	196	0.000	-29.05	-20.49	18.71	-0.01	-0.94	-0.99
		172	0.100	-29.08	-20.45	18.69	-0.01	0.94	1.08
	CO25	196	0.000	-29.53	-20.53	18.32	-0.01	-0.92	-0.99
		172	0.100	-29.56	-20.49	18.31	-0.01	0.93	1.08
	CO26	196	0.000	-23.37	-20.67	14.74	-0.01	-0.74	-0.99
		172	0.100	-23.40	-20.64	14.73	-0.01	0.74	1.09
	CO27	196	0.000	-26.07	-20.62	16.62	-0.01	-0.84	-0.99
		172	0.100	-26.11	-20.58	16.61	-0.01	0.84	1.08
	CO28	196	0.000	-26.55	-20.65	16.24	-0.01	-0.82	-0.99
		172	0.100	-26.59	-20.62	16.23	-0.01	0.82	1.09
	CO29	196	0.000	-14.64	-20.57	11.02	-0.01	-0.55	-0.99
		172	0.100	-14.68	-20.55	11.01	-0.01	0.55	1.08
	CO30	196	0.000	-14.16	-20.53	11.40	-0.01	-0.57	-0.98
		172	0.100	-14.20	-20.52	11.39	-0.01	0.57	1.08
	CO31	196	0.000	-16.86	-20.48	13.29	-0.01	-0.67	-0.98
		172	0.100	-16.90	-20.46	13.28	-0.01	0.67	1.07
	CO32	196	0.000	-17.35	-20.52	12.91	-0.01	-0.65	-0.98
		172	0.100	-17.38	-20.50	12.90	-0.01	0.65	1.08
	CO33	196	0.000	-11.19	-20.66	9.30	-0.01	-0.46	-0.99
172		0.100	-11.22	-20.64	9.29	-0.01	0.47	1.08	
CO34	196	0.000	-13.89	-20.61	11.19	-0.01	-0.56	-0.99	
	172	0.100	-13.93	-20.59	11.18	-0.01	0.56	1.08	
CO35	196	0.000	-14.37	-20.64	10.81	-0.01	-0.54	-0.99	
	172	0.100	-14.41	-20.63	10.80	-0.01	0.54	1.08	
CO36	196	0.000	19.55	-24.02	8.14	-0.01	-0.40	-1.14	
	172	0.100	19.51	-24.06	8.12	-0.01	0.41	1.25	
CO37	196	0.000	-22.28	-27.48	10.10	-0.02	-0.51	-1.32	
	172	0.100	-22.34	-27.45	10.07	-0.02	0.51	1.44	
CO38	196	0.000	-53.52	-24.16	10.86	-0.02	-0.55	-1.18	
	172	0.100	-53.56	-24.08	10.84	-0.02	0.55	1.28	
CO39	196	0.000	-11.67	-20.69	8.92	-0.01	-0.45	-0.99	
	172	0.100	-11.71	-20.68	8.91	-0.01	0.45	1.08	
CC1	197	0.000	-7.70	3.04	4.16	0.00	-0.21	0.15	
	173	0.100	-7.70	3.04	4.15	0.00	0.21	-0.16	
CC2	197	0.000	-5.44	0.68	5.28	0.00	-0.26	0.03	
	173	0.100	-5.44	0.68	5.28	0.00	0.26	-0.03	
CC3	197	0.000	-16.12	0.78	5.64	0.00	-0.28	0.04	
	173	0.100	-16.12	0.78	5.64	0.00	0.28	-0.04	
CC4	197	0.000	-3.84	0.35	2.13	0.00	-0.11	0.02	
	173	0.100	-3.84	0.35	2.13	0.00	0.11	-0.02	
CC5	197	0.000	0.62	0.07	0.39	0.00	-0.02	0.00	
	173	0.100	0.62	0.07	0.39	0.00	0.02	-0.00	
CC6	197	0.000	-3.53	0.27	1.95	0.00	-0.10	0.01	
	173	0.100	-3.53	0.27	1.95	0.00	0.10	-0.01	
CC7	197	0.000	30.59	-3.77	-0.82	-0.00	0.04	-0.18	
	173	0.100	30.59	-3.77	-0.82	-0.00	-0.04	0.20	
CC8	197	0.000	-43.24	-5.63	2.04	-0.01	-0.10	-0.28	
	173	0.100	-43.24	-5.63	2.04	-0.01	0.10	0.29	
CC11	197	0.000	-7.94	-29.02	-0.16	-0.02	0.01	-1.39	
	173	0.100	-7.94	-29.02	-0.16	-0.02	-0.01	1.51	
CO1	197	0.000	-27.85	-34.04	11.98	-0.02	-0.60	-1.64	
	173	0.100	-27.93	-33.98	11.95	-0.02	0.61	1.79	
CO2	197	0.000	-49.15	-32.99	19.15	-0.01	-0.97	-1.60	
	173	0.100	-49.23	-32.89	19.12	-0.01	0.98	1.74	
CO3	197	0.000	-54.20	-32.53	21.86	-0.01	-1.11	-1.58	
	173	0.100	-54.28	-32.42	21.83	-0.01	1.11	1.72	
CO4	197	0.000	-53.35	-32.45	22.35	-0.01	-1.13	-1.58	
	173	0.100	-53.43	-32.34	22.32	-0.01	1.14	1.72	
CO5	197	0.000	-57.99	-32.09	24.81	-0.01	-1.26	-1.56	
	173	0.100	-58.06	-31.97	24.78	-0.01	1.27	1.70	
CO6	197	0.000	-58.84	-32.17	24.32	-0.01	-1.23	-1.57	
	173	0.100	-58.91	-32.05	24.29	-0.01	1.24	1.70	
CO7	197	0.000	-48.30	-32.91	19.65	-0.01	-0.99	-1.60	
	173	0.100	-48.38	-32.81	19.62	-0.01	1.00	1.74	
CO8	197	0.000	-52.93	-32.55	22.12	-0.01	-1.12	-1.58	
	173	0.100	-53.01	-32.44	22.09	-0.01	1.13	1.72	
CO9	197	0.000	-53.78	-32.64	21.62	-0.01	-1.09	-1.59	
	173	0.100	-53.86	-32.53	21.59	-0.01	1.10	1.73	
CO10	197	0.000	-32.90	-33.58	14.71	-0.01	-0.74	-1.62	
	173	0.100	-32.98	-33.51	14.68	-0.02	0.75	1.76	
CO11	197	0.000	-32.05	-33.49	15.21	-0.01	-0.76	-1.62	
	173	0.100	-32.13	-33.43	15.18	-0.02	0.77	1.76	
CO12	197	0.000	-36.69	-33.14	17.70	-0.01	-0.89	-1.60	
	173	0.100	-36.76	-33.06	17.67	-0.01	0.90	1.74	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
27	CO13	197	0.000	-37.54	-33.22	17.20	-0.01	-0.87	-1.61
		173	0.100	-37.61	-33.15	17.17	-0.01	0.87	1.75
	CO14	197	0.000	-27.00	-33.95	12.48	-0.02	-0.63	-1.64
		173	0.100	-27.08	-33.90	12.45	-0.02	0.63	1.78
	CO15	197	0.000	-31.64	-33.60	14.97	-0.01	-0.75	-1.62
		173	0.100	-31.71	-33.53	14.94	-0.02	0.76	1.77
	CO16	197	0.000	-32.48	-33.68	14.48	-0.01	-0.73	-1.63
		173	0.100	-32.56	-33.62	14.45	-0.02	0.73	1.77
	CO17	197	0.000	13.06	-39.04	10.94	-0.02	-0.54	-1.86
		173	0.100	12.95	-39.08	10.90	-0.02	0.55	2.03
	CO18	197	0.000	-44.55	-46.67	13.53	-0.03	-0.68	-2.27
		173	0.100	-44.69	-46.55	13.47	-0.03	0.69	2.45
	CO19	197	0.000	-85.48	-41.67	14.55	-0.03	-0.74	-2.06
		173	0.100	-85.59	-41.47	14.49	-0.03	0.75	2.21
	CO20	197	0.000	-20.62	-25.20	8.90	-0.01	-0.44	-1.21
		173	0.100	-20.67	-25.17	8.88	-0.01	0.45	1.32
	CO21	197	0.000	-36.40	-24.44	14.26	-0.01	-0.72	-1.18
		173	0.100	-36.44	-24.38	14.24	-0.01	0.72	1.29
	CO22	197	0.000	-40.14	-24.09	16.28	-0.01	-0.82	-1.17
		173	0.100	-40.18	-24.03	16.26	-0.01	0.83	1.27
	CO23	197	0.000	-39.51	-24.03	16.65	-0.01	-0.84	-1.16
		173	0.100	-39.55	-23.97	16.63	-0.01	0.85	1.27
	CO24	197	0.000	-42.94	-23.77	18.49	-0.01	-0.93	-1.15
		173	0.100	-42.99	-23.70	18.47	-0.01	0.94	1.25
	CO25	197	0.000	-43.58	-23.83	18.12	-0.01	-0.91	-1.15
		173	0.100	-43.62	-23.76	18.10	-0.01	0.92	1.26
	CO26	197	0.000	-35.77	-24.37	14.63	-0.01	-0.74	-1.18
		173	0.100	-35.81	-24.32	14.61	-0.01	0.74	1.28
	CO27	197	0.000	-39.20	-24.11	16.47	-0.01	-0.83	-1.17
		173	0.100	-39.25	-24.05	16.45	-0.01	0.84	1.27
CO28	197	0.000	-39.83	-24.17	16.10	-0.01	-0.81	-1.17	
	173	0.100	-39.88	-24.11	16.09	-0.01	0.82	1.27	
CO29	197	0.000	-24.36	-24.87	10.94	-0.01	-0.55	-1.20	
	173	0.100	-24.41	-24.83	10.92	-0.01	0.55	1.30	
CO30	197	0.000	-23.73	-24.80	11.31	-0.01	-0.57	-1.20	
	173	0.100	-23.78	-24.77	11.29	-0.01	0.57	1.30	
CO31	197	0.000	-27.17	-24.54	13.16	-0.01	-0.66	-1.18	
	173	0.100	-27.21	-24.50	13.14	-0.01	0.67	1.29	
CO32	197	0.000	-27.80	-24.60	12.79	-0.01	-0.64	-1.19	
	173	0.100	-27.84	-24.56	12.77	-0.01	0.65	1.29	
CO33	197	0.000	-19.99	-25.14	9.27	-0.01	-0.46	-1.21	
	173	0.100	-20.04	-25.11	9.25	-0.01	0.47	1.32	
CO34	197	0.000	-23.42	-24.88	11.13	-0.01	-0.56	-1.20	
	173	0.100	-23.47	-24.84	11.11	-0.01	0.56	1.30	
CO35	197	0.000	-24.05	-24.94	10.76	-0.01	-0.54	-1.20	
	173	0.100	-24.10	-24.91	10.74	-0.01	0.54	1.31	
CO36	197	0.000	9.69	-28.91	8.12	-0.01	-0.40	-1.38	
	173	0.100	9.63	-28.93	8.10	-0.01	0.41	1.51	
CO37	197	0.000	-32.99	-34.55	10.06	-0.02	-0.50	-1.68	
	173	0.100	-33.07	-34.49	10.02	-0.02	0.51	1.81	
CO38	197	0.000	-63.31	-30.85	10.82	-0.02	-0.55	-1.51	
	173	0.100	-63.37	-30.73	10.79	-0.02	0.55	1.63	
CO39	197	0.000	-20.62	-25.20	8.90	-0.01	-0.44	-1.21	
	173	0.100	-20.67	-25.17	8.88	-0.01	0.45	1.32	
28	CC1	198	0.000	-9.38	4.30	4.31	0.00	-0.22	0.21
		174	0.100	-9.38	4.30	4.31	0.00	0.21	-0.22
CC2	198	0.000	-7.14	1.34	5.30	0.00	-0.26	0.07	
	174	0.100	-7.14	1.34	5.30	0.00	0.26	-0.07	
CC3	198	0.000	-21.09	1.82	5.73	0.00	-0.29	0.09	
	174	0.100	-21.09	1.82	5.73	0.00	0.29	-0.09	
CC4	198	0.000	-4.95	0.60	2.11	0.00	-0.11	0.03	
	174	0.100	-4.95	0.60	2.11	0.00	0.11	-0.03	
CC5	198	0.000	0.78	0.10	0.38	0.00	-0.02	0.00	
	174	0.100	0.78	0.10	0.38	0.00	0.02	-0.01	
CC6	198	0.000	-4.60	0.54	1.97	0.00	-0.10	0.03	
	174	0.100	-4.60	0.54	1.97	0.00	0.10	-0.03	
CC7	198	0.000	31.04	-3.87	-0.90	0.00	0.05	-0.18	
	174	0.100	31.04	-3.87	-0.90	0.00	-0.04	0.21	
CC8	198	0.000	-46.34	-8.71	2.17	-0.01	-0.11	-0.43	
	174	0.100	-46.34	-8.71	2.17	-0.01	0.11	0.44	
CC11	198	0.000	-16.51	-36.33	-0.04	-0.02	0.01	-1.75	
	174	0.100	-16.51	-36.33	-0.04	-0.02	0.00	1.89	
CO1	198	0.000	-43.36	-40.75	12.27	-0.01	-0.62	-1.98	
	174	0.100	-43.46	-40.65	12.24	-0.01	0.62	2.14	
CO2	198	0.000	-71.10	-38.33	19.46	-0.01	-0.99	-1.88	
	174	0.100	-71.20	-38.16	19.43	-0.01	1.00	2.03	
CO3	198	0.000	-77.59	-37.54	22.11	-0.01	-1.13	-1.84	
	174	0.100	-77.68	-37.35	22.08	-0.01	1.13	1.99	
CO4	198	0.000	-76.53	-37.42	22.60	-0.01	-1.15	-1.83	
	174	0.100	-76.62	-37.23	22.57	-0.01	1.16	1.99	
CO5	198	0.000	-82.53	-36.71	25.05	-0.01	-1.28	-1.80	
	174	0.100	-82.63	-36.51	25.02	-0.01	1.29	1.95	
CO6	198	0.000	-83.59	-36.83	24.56	-0.01	-1.26	-1.81	
	174	0.100	-83.69	-36.63	24.54	-0.01	1.26	1.96	
CO7	198	0.000	-70.04	-38.20	19.95	-0.01	-1.02	-1.87	
	174	0.100	-70.14	-38.04	19.92	-0.01	1.02	2.03	
CO8	198	0.000	-76.04	-37.50	22.41	-0.01	-1.14	-1.84	
	174	0.100	-76.14	-37.32	22.38	-0.01	1.15	1.99	
CO9	198	0.000	-77.11	-37.62	21.93	-0.01	-1.12	-1.84	
	174	0.100	-77.20	-37.44	21.90	-0.01	1.12	2.00	
CO10	198	0.000	-49.84	-39.96	14.96	-0.01	-0.75	-1.95	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
28	CO10	174	0.100	-49.95	-39.84	14.93	-0.01	0.76	2.10
	CO11	198	0.000	-48.78	-39.83	15.45	-0.01	-0.78	-1.94
		174	0.100	-48.89	-39.72	15.42	-0.01	0.79	2.10
	CO12	198	0.000	-54.79	-39.13	17.94	-0.01	-0.91	-1.91
		174	0.100	-54.89	-39.00	17.91	-0.01	0.92	2.06
	CO13	198	0.000	-55.85	-39.25	17.45	-0.01	-0.88	-1.91
		174	0.100	-55.95	-39.12	17.42	-0.01	0.89	2.07
	CO14	198	0.000	-42.30	-40.63	12.76	-0.01	-0.64	-1.98
		174	0.100	-42.40	-40.52	12.73	-0.01	0.65	2.13
	CO15	198	0.000	-48.30	-39.92	15.26	-0.01	-0.77	-1.94
		174	0.100	-48.41	-39.80	15.23	-0.01	0.78	2.10
	CO16	198	0.000	-49.36	-40.04	14.77	-0.01	-0.75	-1.95
		174	0.100	-49.47	-39.92	14.74	-0.01	0.75	2.11
	CO17	198	0.000	-2.00	-45.93	11.14	-0.01	-0.55	-2.20
		174	0.100	-2.14	-45.93	11.11	-0.01	0.56	2.39
	CO18	198	0.000	-63.44	-57.32	13.87	-0.02	-0.70	-2.82
		174	0.100	-63.64	-57.12	13.79	-0.02	0.71	3.02
	CO19	198	0.000	-104.82	-52.10	14.97	-0.02	-0.77	-2.60
		174	0.100	-104.97	-51.82	14.89	-0.03	0.77	2.77
	CO20	198	0.000	-32.10	-30.21	9.13	-0.01	-0.46	-1.46
		174	0.100	-32.16	-30.15	9.11	-0.01	0.46	1.58
	CO21	198	0.000	-52.66	-28.43	14.52	-0.01	-0.74	-1.38
		174	0.100	-52.71	-28.33	14.50	-0.01	0.74	1.50
	CO22	198	0.000	-57.46	-27.84	16.50	-0.01	-0.84	-1.36
		174	0.100	-57.51	-27.74	16.49	-0.01	0.84	1.47
	CO23	198	0.000	-56.67	-27.75	16.86	-0.01	-0.86	-1.35
		174	0.100	-56.73	-27.65	16.85	-0.01	0.86	1.47
	CO24	198	0.000	-61.12	-27.23	18.70	-0.01	-0.95	-1.33
		174	0.100	-61.18	-27.12	18.69	-0.01	0.95	1.44
	CO25	198	0.000	-61.91	-27.32	18.34	-0.01	-0.93	-1.33
		174	0.100	-61.96	-27.21	18.33	-0.01	0.94	1.45
	CO26	198	0.000	-51.87	-28.33	14.88	-0.01	-0.75	-1.38
		174	0.100	-51.92	-28.24	14.86	-0.01	0.76	1.49
	CO27	198	0.000	-56.32	-27.81	16.72	-0.01	-0.85	-1.35
		174	0.100	-56.37	-27.71	16.71	-0.01	0.85	1.47
	CO28	198	0.000	-57.10	-27.91	16.36	-0.01	-0.83	-1.36
		174	0.100	-57.16	-27.80	16.35	-0.01	0.83	1.47
	CO29	198	0.000	-36.91	-29.62	11.14	-0.01	-0.56	-1.44
		174	0.100	-36.97	-29.56	11.12	-0.01	0.57	1.55
	CO30	198	0.000	-36.12	-29.53	11.50	-0.01	-0.58	-1.43
		174	0.100	-36.18	-29.47	11.48	-0.01	0.58	1.55
	CO31	198	0.000	-40.57	-29.01	13.36	-0.01	-0.67	-1.41
174		0.100	-40.63	-28.94	13.34	-0.01	0.68	1.52	
CO32	198	0.000	-41.36	-29.10	13.00	-0.01	-0.65	-1.41	
	174	0.100	-41.41	-29.03	12.98	-0.01	0.66	1.53	
CO33	198	0.000	-31.32	-30.11	9.49	-0.01	-0.48	-1.46	
	174	0.100	-31.38	-30.06	9.47	-0.01	0.48	1.58	
CO34	198	0.000	-35.77	-29.59	11.36	-0.01	-0.57	-1.44	
	174	0.100	-35.82	-29.53	11.34	-0.01	0.58	1.55	
CO35	198	0.000	-36.55	-29.68	11.00	-0.01	-0.55	-1.44	
	174	0.100	-36.61	-29.62	10.98	-0.01	0.56	1.56	
CO36	198	0.000	-1.46	-34.04	8.28	-0.01	-0.41	-1.63	
	174	0.100	-1.54	-34.04	8.26	-0.01	0.42	1.77	
CO37	198	0.000	-46.99	-42.50	10.32	-0.02	-0.52	-2.08	
	174	0.100	-47.09	-42.39	10.28	-0.02	0.53	2.23	
CO38	198	0.000	-77.64	-38.65	11.15	-0.02	-0.57	-1.91	
	174	0.100	-77.72	-38.50	11.11	-0.02	0.57	2.04	
CO39	198	0.000	-32.10	-30.21	9.13	-0.01	-0.46	-1.46	
	174	0.100	-32.16	-30.15	9.11	-0.01	0.46	1.58	
29	CC1	160	0.000	-13.59	5.51	4.82	0.00	-0.24	0.27
	6	0.100	-13.59	5.51	4.82	0.00	0.24	-0.28	
CC2	160	0.000	-9.61	1.93	5.20	0.00	-0.26	0.10	
	6	0.100	-9.61	1.93	5.20	0.00	0.26	-0.10	
CC3	160	0.000	-22.79	2.89	5.87	0.00	-0.30	0.14	
	6	0.100	-22.79	2.89	5.87	0.00	0.29	-0.15	
CC4	160	0.000	-5.30	0.80	2.02	0.00	-0.10	0.04	
	6	0.100	-5.30	0.80	2.02	0.00	0.10	-0.04	
CC5	160	0.000	0.52	0.12	0.34	0.00	-0.02	0.01	
	6	0.100	0.52	0.12	0.34	0.00	0.02	-0.01	
CC6	160	0.000	-5.49	0.79	2.00	0.00	-0.10	0.04	
	6	0.100	-5.49	0.79	2.00	0.00	0.10	-0.04	
CC7	160	0.000	25.34	-3.16	-1.57	0.01	0.09	-0.15	
	6	0.100	25.34	-3.16	-1.57	0.01	-0.07	0.17	
CC8	160	0.000	-39.04	-12.68	3.06	-0.01	-0.16	-0.62	
	6	0.100	-39.04	-12.68	3.06	-0.01	0.14	0.64	
CC11	160	0.000	-16.35	-42.73	0.15	-0.00	-0.01	-2.06	
	6	0.100	-16.35	-42.73	0.15	-0.00	0.01	2.22	
CO1	160	0.000	-51.95	-46.47	12.95	-0.00	-0.66	-2.27	
	6	0.100	-52.08	-46.32	12.95	-0.00	0.66	2.44	
CO2	160	0.000	-81.96	-42.69	20.27	0.00	-1.05	-2.10	
	6	0.100	-82.08	-42.47	20.28	0.00	1.03	2.27	
CO3	160	0.000	-88.90	-41.65	22.79	0.00	-1.18	-2.05	
	6	0.100	-89.00	-41.41	22.81	0.00	1.16	2.22	
CO4	160	0.000	-88.14	-41.49	23.23	0.00	-1.20	-2.04	
	6	0.100	-88.24	-41.25	23.24	0.00	1.19	2.21	
CO5	160	0.000	-95.27	-40.47	25.69	0.00	-1.33	-2.00	
	6	0.100	-95.37	-40.21	25.71	0.00	1.32	2.16	
CO6	160	0.000	-96.03	-40.63	25.26	0.00	-1.31	-2.00	
	6	0.100	-96.14	-40.37	25.28	0.00	1.29	2.17	
CO7	160	0.000	-81.20	-42.54	20.70	0.00	-1.07	-2.09	
	6	0.100	-81.31	-42.31	20.71	0.00	1.06	2.26	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
29	CO8	160	0.000	-88.34	-41.51	23.18	0.00	-1.20	-2.04
		6	0.100	-88.45	-41.27	23.19	0.00	1.18	2.21
	CO9	160	0.000	-89.10	-41.67	22.75	0.00	-1.18	-2.05
		6	0.100	-89.21	-41.43	22.76	0.00	1.16	2.22
	CO10	160	0.000	-58.89	-45.42	15.53	0.00	-0.79	-2.22
		6	0.100	-59.02	-45.25	15.52	-0.00	0.79	2.39
	CO11	160	0.000	-58.13	-45.26	15.96	0.00	-0.81	-2.21
		6	0.100	-58.26	-45.10	15.95	-0.00	0.81	2.39
	CO12	160	0.000	-65.28	-44.23	18.47	0.00	-0.94	-2.17
		6	0.100	-65.40	-44.05	18.47	-0.00	0.94	2.34
	CO13	160	0.000	-66.04	-44.39	18.04	0.00	-0.92	-2.18
		6	0.100	-66.16	-44.21	18.03	-0.00	0.92	2.35
	CO14	160	0.000	-51.19	-46.31	13.39	-0.00	-0.68	-2.26
		6	0.100	-51.32	-46.17	13.38	-0.00	0.68	2.44
	CO15	160	0.000	-58.34	-45.28	15.91	0.00	-0.81	-2.22
		6	0.100	-58.46	-45.12	15.91	-0.00	0.81	2.39
	CO16	160	0.000	-59.10	-45.44	15.48	0.00	-0.79	-2.22
		6	0.100	-59.22	-45.28	15.47	-0.00	0.79	2.40
	CO17	160	0.000	-17.85	-50.69	10.98	0.01	-0.54	-2.45
		6	0.100	-18.02	-50.63	10.98	0.00	0.56	2.65
	CO18	160	0.000	-70.07	-67.13	14.81	-0.01	-0.76	-3.31
		6	0.100	-70.32	-66.88	14.78	-0.01	0.75	3.54
	CO19	160	0.000	-104.18	-62.84	16.72	-0.01	-0.88	-3.14
		6	0.100	-104.37	-62.51	16.72	-0.02	0.85	3.33
	CO20	160	0.000	-38.49	-34.47	9.64	-0.00	-0.49	-1.68
		6	0.100	-38.56	-34.39	9.64	-0.00	0.49	1.81
	CO21	160	0.000	-60.74	-31.68	15.13	0.00	-0.78	-1.55
		6	0.100	-60.81	-31.56	15.13	-0.00	0.77	1.67
	CO22	160	0.000	-65.89	-30.91	17.03	0.00	-0.87	-1.51
		6	0.100	-65.95	-30.78	17.03	0.00	0.86	1.64
	CO23	160	0.000	-65.32	-30.80	17.35	0.00	-0.89	-1.51
		6	0.100	-65.38	-30.66	17.36	0.00	0.88	1.63
CO24	160	0.000	-70.62	-30.04	19.21	0.00	-0.99	-1.47	
	6	0.100	-70.67	-29.90	19.21	0.00	0.98	1.59	
CO25	160	0.000	-71.18	-30.16	18.88	0.00	-0.97	-1.48	
	6	0.100	-71.24	-30.02	18.89	0.00	0.96	1.60	
CO26	160	0.000	-60.18	-31.57	15.45	0.00	-0.79	-1.54	
	6	0.100	-60.24	-31.44	15.46	-0.00	0.78	1.67	
CO27	160	0.000	-65.48	-30.81	17.31	0.00	-0.89	-1.51	
	6	0.100	-65.53	-30.68	17.32	0.00	0.88	1.63	
CO28	160	0.000	-66.04	-30.93	16.99	0.00	-0.87	-1.51	
	6	0.100	-66.10	-30.80	17.00	0.00	0.86	1.64	
CO29	160	0.000	-43.64	-33.69	11.57	-0.00	-0.59	-1.64	
	6	0.100	-43.71	-33.60	11.56	-0.00	0.59	1.77	
CO30	160	0.000	-43.07	-33.57	11.89	-0.00	-0.60	-1.63	
	6	0.100	-43.14	-33.48	11.88	-0.00	0.60	1.76	
CO31	160	0.000	-48.37	-32.82	13.77	0.00	-0.70	-1.60	
	6	0.100	-48.44	-32.72	13.76	-0.00	0.70	1.73	
CO32	160	0.000	-48.94	-32.93	13.45	0.00	-0.68	-1.61	
	6	0.100	-49.00	-32.83	13.44	-0.00	0.68	1.73	
CO33	160	0.000	-37.92	-34.35	9.97	-0.00	-0.50	-1.67	
	6	0.100	-38.00	-34.27	9.96	-0.00	0.50	1.80	
CO34	160	0.000	-43.22	-33.59	11.85	-0.00	-0.60	-1.64	
	6	0.100	-43.29	-33.50	11.85	-0.00	0.60	1.76	
CO35	160	0.000	-43.79	-33.71	11.53	-0.00	-0.58	-1.64	
	6	0.100	-43.86	-33.62	11.52	-0.00	0.58	1.77	
CO36	160	0.000	-13.23	-37.60	8.18	0.00	-0.40	-1.81	
	6	0.100	-13.32	-37.57	8.18	0.00	0.42	1.96	
CO37	160	0.000	-51.93	-49.81	11.03	-0.01	-0.56	-2.44	
	6	0.100	-52.06	-49.67	11.02	-0.01	0.56	2.61	
CO38	160	0.000	-77.19	-46.63	12.47	-0.01	-0.65	-2.31	
	6	0.100	-77.30	-46.45	12.46	-0.01	0.63	2.46	
CO39	160	0.000	-38.49	-34.47	9.64	-0.00	-0.49	-1.68	
	6	0.100	-38.56	-34.39	9.64	-0.00	0.49	1.81	
CC1	259	0.000	-7.64	0.58	-0.30	-0.00	0.02	-0.00	
	283	0.100	-7.64	0.58	-0.30	-0.00	-0.01	-0.06	
CC2	259	0.000	13.80	-0.27	-4.26	-0.00	0.21	-0.00	
	283	0.100	13.80	-0.27	-4.26	-0.00	-0.21	0.03	
CC3	259	0.000	-15.82	0.08	0.83	-0.00	-0.04	0.00	
	283	0.100	-15.82	0.08	0.83	-0.00	0.04	-0.01	
CC4	259	0.000	-5.29	-0.03	-0.59	-0.00	0.03	-0.00	
	283	0.100	-5.29	-0.03	-0.59	-0.00	-0.03	0.00	
CC5	259	0.000	2.20	-0.05	-1.13	-0.00	0.06	-0.00	
	283	0.100	2.20	-0.05	-1.13	-0.00	-0.06	0.01	
CC6	259	0.000	2.31	-0.07	-0.86	-0.00	0.04	-0.00	
	283	0.100	2.31	-0.07	-0.86	-0.00	-0.04	0.01	
CC7	259	0.000	-47.44	2.04	-0.83	-0.00	0.04	-0.00	
	283	0.100	-47.44	2.04	-0.83	-0.00	-0.04	-0.20	
CC8	259	0.000	62.84	-3.73	0.02	0.00	-0.00	0.00	
	283	0.100	62.84	-3.73	0.02	0.00	0.00	0.37	
CC11	259	0.000	-30.74	9.22	-4.69	-0.01	0.23	-0.00	
	283	0.100	-30.74	9.22	-4.69	-0.01	-0.23	-0.92	
CO1	259	0.000	-32.53	12.57	-11.88	-0.00	0.60	-0.00	
	283	0.100	-32.77	11.92	-11.88	-0.01	-0.60	-1.24	
CO2	259	0.000	-53.66	12.83	-10.66	-0.00	0.54	-0.00	
	283	0.100	-53.91	11.74	-10.66	-0.01	-0.54	-1.25	
CO3	259	0.000	-60.76	12.84	-11.38	-0.00	0.58	-0.00	
	283	0.100	-61.01	11.60	-11.38	-0.01	-0.58	-1.25	
CO4	259	0.000	-57.94	12.74	-12.87	-0.00	0.66	-0.00	
	283	0.100	-58.19	11.58	-12.87	-0.01	-0.65	-1.24	
CO5	259	0.000	-55.09	12.62	-13.98	-0.00	0.71	-0.00	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
31	CO5	283	0.100	-55.33	11.52	-13.98	-0.01	-0.71	-1.23
	CO6	259	0.000	-57.91	12.71	-12.50	-0.00	0.64	-0.00
		283	0.100	-58.15	11.55	-12.49	-0.01	-0.64	-1.24
	CO7	259	0.000	-50.84	12.73	-12.14	-0.00	0.62	-0.00
		283	0.100	-51.09	11.71	-12.14	-0.01	-0.62	-1.24
	CO8	259	0.000	-47.99	12.61	-13.26	-0.00	0.67	-0.00
		283	0.100	-48.23	11.65	-13.26	-0.01	-0.67	-1.23
	CO9	259	0.000	-50.81	12.70	-11.77	-0.00	0.60	-0.00
		283	0.100	-51.05	11.68	-11.77	-0.01	-0.60	-1.24
	CO10	259	0.000	-39.62	12.58	-12.61	-0.00	0.64	-0.00
		283	0.100	-39.87	11.79	-12.61	-0.01	-0.64	-1.23
	CO11	259	0.000	-36.81	12.48	-14.11	0.00	0.71	-0.00
		283	0.100	-37.05	11.76	-14.10	-0.01	-0.71	-1.23
	CO12	259	0.000	-33.95	12.36	-15.23	0.00	0.77	-0.00
		283	0.100	-34.19	11.70	-15.23	-0.01	-0.77	-1.22
	CO13	259	0.000	-36.77	12.45	-13.73	-0.00	0.69	-0.00
		283	0.100	-37.01	11.73	-13.73	-0.01	-0.69	-1.22
	CO14	259	0.000	-29.71	12.47	-13.38	-0.00	0.68	-0.00
		283	0.100	-29.95	11.89	-13.38	-0.01	-0.67	-1.23
	CO15	259	0.000	-26.86	12.35	-14.51	-0.00	0.73	-0.00
		283	0.100	-27.10	11.83	-14.50	-0.01	-0.73	-1.22
	CO16	259	0.000	-29.67	12.44	-13.00	-0.00	0.66	-0.00
		283	0.100	-29.92	11.86	-13.00	-0.01	-0.66	-1.23
	CO17	259	0.000	-94.64	15.60	-12.71	0.00	0.66	-0.00
		283	0.100	-94.99	13.28	-12.71	-0.01	-0.65	-1.49
	CO18	259	0.000	-12.34	10.34	-12.99	-0.00	0.65	-0.00
		283	0.100	-12.51	10.14	-12.99	-0.01	-0.65	-1.03
	CO19	259	0.000	49.79	7.55	-12.11	-0.00	0.60	-0.00
		283	0.100	49.70	8.16	-12.11	-0.01	-0.60	-0.77
	CO20	259	0.000	-24.16	9.29	-8.82	-0.00	0.44	-0.00
		283	0.100	-24.29	8.93	-8.82	-0.01	-0.44	-0.92
	CO21	259	0.000	-39.78	9.45	-7.93	-0.00	0.40	-0.00
		283	0.100	-39.92	8.85	-7.93	-0.01	-0.40	-0.93
	CO22	259	0.000	-45.03	9.45	-8.47	-0.00	0.43	-0.00
		283	0.100	-45.17	8.78	-8.47	-0.01	-0.43	-0.92
	CO23	259	0.000	-42.95	9.39	-9.57	-0.00	0.48	-0.00
		283	0.100	-43.08	8.75	-9.57	-0.01	-0.48	-0.92
	CO24	259	0.000	-40.83	9.30	-10.39	-0.00	0.53	-0.00
		283	0.100	-40.96	8.70	-10.39	-0.01	-0.53	-0.91
	CO25	259	0.000	-42.92	9.37	-9.29	-0.00	0.47	-0.00
		283	0.100	-43.05	8.73	-9.29	-0.01	-0.47	-0.92
	CO26	259	0.000	-37.70	9.39	-9.03	-0.00	0.46	-0.00
283		0.100	-37.83	8.83	-9.03	-0.01	-0.46	-0.92	
CO27	259	0.000	-35.58	9.30	-9.85	-0.00	0.50	-0.00	
	283	0.100	-35.72	8.78	-9.85	-0.01	-0.50	-0.91	
CO28	259	0.000	-37.67	9.37	-8.75	-0.00	0.44	-0.00	
	283	0.100	-37.80	8.81	-8.75	-0.01	-0.44	-0.92	
CO29	259	0.000	-29.40	9.29	-9.36	-0.00	0.47	-0.00	
	283	0.100	-29.54	8.85	-9.36	-0.01	-0.47	-0.92	
CO30	259	0.000	-27.32	9.22	-10.47	-0.00	0.53	-0.00	
	283	0.100	-27.45	8.82	-10.47	-0.01	-0.53	-0.91	
CO31	259	0.000	-25.20	9.14	-11.30	-0.00	0.57	-0.00	
	283	0.100	-25.33	8.77	-11.30	-0.01	-0.57	-0.90	
CO32	259	0.000	-27.29	9.20	-10.19	-0.00	0.51	-0.00	
	283	0.100	-27.42	8.80	-10.19	-0.01	-0.51	-0.91	
CO33	259	0.000	-22.07	9.22	-9.92	-0.00	0.50	-0.00	
	283	0.100	-22.20	8.90	-9.92	-0.01	-0.50	-0.91	
CO34	259	0.000	-19.95	9.14	-10.76	-0.00	0.54	-0.00	
	283	0.100	-20.08	8.85	-10.75	-0.01	-0.54	-0.91	
CO35	259	0.000	-22.04	9.20	-9.65	-0.00	0.49	-0.00	
	283	0.100	-22.17	8.88	-9.65	-0.01	-0.48	-0.91	
CO36	259	0.000	-70.16	11.45	-9.48	-0.00	0.48	-0.00	
	283	0.100	-70.36	10.18	-9.48	-0.01	-0.48	-1.11	
CO37	259	0.000	-9.20	7.65	-9.62	-0.00	0.48	-0.00	
	283	0.100	-9.30	7.54	-9.62	-0.01	-0.48	-0.76	
CO38	259	0.000	36.82	5.62	-8.93	-0.00	0.44	-0.00	
	283	0.100	36.77	5.96	-8.93	-0.01	-0.44	-0.57	
CO39	259	0.000	-24.16	9.29	-8.82	-0.00	0.44	-0.00	
	283	0.100	-24.29	8.93	-8.82	-0.01	-0.44	-0.92	
CC1	260	0.000	-8.19	0.41	-0.30	-0.00	0.02	-0.00	
	284	0.100	-8.19	0.41	-0.30	-0.00	-0.01	-0.04	
CC2	260	0.000	9.31	-0.48	-4.25	-0.00	0.21	-0.00	
	284	0.100	9.31	-0.48	-4.25	-0.00	-0.21	0.05	
CC3	260	0.000	-11.46	0.08	0.84	-0.00	-0.04	0.00	
	284	0.100	-11.46	0.08	0.84	-0.00	0.04	-0.01	
CC4	260	0.000	-3.96	-0.05	-0.59	-0.00	0.03	-0.00	
	284	0.100	-3.96	-0.05	-0.59	-0.00	-0.03	0.00	
CC5	260	0.000	1.45	-0.08	-1.13	-0.00	0.06	-0.00	
	284	0.100	1.45	-0.08	-1.13	-0.00	-0.06	0.01	
CC6	260	0.000	1.51	-0.12	-0.86	-0.00	0.04	-0.00	
	284	0.100	1.51	-0.12	-0.86	-0.00	-0.04	0.01	
CC7	260	0.000	-38.83	1.91	-0.83	-0.00	0.04	-0.00	
	284	0.100	-38.83	1.91	-0.83	-0.00	-0.04	-0.19	
CC8	260	0.000	50.85	-3.28	0.02	0.00	-0.00	-0.00	
	284	0.100	50.85	-3.28	0.02	0.00	0.00	0.33	
CC11	260	0.000	-25.40	8.35	-4.64	-0.01	0.23	-0.00	
	284	0.100	-25.40	8.35	-4.64	-0.01	-0.23	-0.83	
CO1	260	0.000	-32.30	11.06	-11.80	-0.00	0.60	-0.00	
	284	0.100	-32.49	10.49	-11.80	-0.01	-0.60	-1.09	
CO2	260	0.000	-47.75	11.28	-10.60	-0.00	0.54	-0.00	
	284	0.100	-47.95	10.43	-10.60	-0.01	-0.54	-1.10	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
32	CO3	260	0.000	-53.09	11.26	-11.33	-0.00	0.58	-0.00
		284	0.100	-53.29	10.31	-11.33	-0.01	-0.58	-1.10
	CO4	260	0.000	-51.22	11.12	-12.81	-0.00	0.65	-0.00
		284	0.100	-51.41	10.22	-12.81	-0.01	-0.65	-1.08
	CO5	260	0.000	-49.35	10.94	-13.92	-0.00	0.71	-0.00
		284	0.100	-49.53	10.09	-13.91	-0.01	-0.71	-1.07
	CO6	260	0.000	-51.22	11.07	-12.44	-0.00	0.63	-0.00
		284	0.100	-51.41	10.18	-12.43	-0.01	-0.63	-1.08
	CO7	260	0.000	-45.87	11.15	-12.08	-0.00	0.61	-0.00
		284	0.100	-46.07	10.34	-12.08	-0.01	-0.61	-1.09
	CO8	260	0.000	-44.00	10.97	-13.19	-0.00	0.67	-0.00
		284	0.100	-44.18	10.20	-13.19	-0.01	-0.67	-1.07
	CO9	260	0.000	-45.88	11.10	-11.71	-0.00	0.59	-0.00
		284	0.100	-46.06	10.29	-11.71	-0.01	-0.59	-1.09
	CO10	260	0.000	-37.65	11.03	-12.54	-0.00	0.63	-0.00
		284	0.100	-37.83	10.38	-12.54	-0.01	-0.63	-1.08
	CO11	260	0.000	-35.77	10.90	-14.02	-0.00	0.71	-0.00
		284	0.100	-35.95	10.29	-14.02	-0.01	-0.71	-1.07
	CO12	260	0.000	-33.89	10.72	-15.14	-0.00	0.77	-0.00
		284	0.100	-34.07	10.15	-15.14	-0.01	-0.76	-1.05
	CO13	260	0.000	-35.77	10.85	-13.65	-0.00	0.69	-0.00
		284	0.100	-35.95	10.24	-13.65	-0.01	-0.69	-1.07
	CO14	260	0.000	-30.43	10.93	-13.29	-0.00	0.67	-0.00
		284	0.100	-30.61	10.40	-13.29	-0.01	-0.67	-1.08
	CO15	260	0.000	-28.55	10.75	-14.41	-0.00	0.73	-0.00
		284	0.100	-28.73	10.26	-14.41	-0.01	-0.73	-1.06
	CO16	260	0.000	-30.43	10.88	-12.92	-0.00	0.65	-0.00
		284	0.100	-30.61	10.36	-12.92	-0.01	-0.65	-1.07
	CO17	260	0.000	-83.57	13.92	-12.69	0.00	0.65	-0.00
		284	0.100	-83.86	12.09	-12.69	-0.01	-0.65	-1.34
	CO18	260	0.000	-16.40	9.25	-12.89	-0.00	0.65	-0.00
		284	0.100	-16.53	9.01	-12.89	-0.01	-0.65	-0.92
	CO19	260	0.000	34.92	6.61	-11.96	-0.00	0.59	-0.00
		284	0.100	34.85	6.99	-11.96	-0.01	-0.59	-0.67
	CO20	260	0.000	-23.98	8.16	-8.76	-0.00	0.44	-0.00
		284	0.100	-24.08	7.85	-8.76	-0.01	-0.44	-0.81
	CO21	260	0.000	-35.40	8.31	-7.88	-0.00	0.40	-0.00
		284	0.100	-35.51	7.84	-7.88	-0.01	-0.40	-0.82
	CO22	260	0.000	-39.36	8.28	-8.42	-0.00	0.43	-0.00
		284	0.100	-39.46	7.76	-8.42	-0.01	-0.43	-0.81
CO23	260	0.000	-37.97	8.18	-9.52	-0.00	0.48	-0.00	
	284	0.100	-38.07	7.69	-9.52	-0.01	-0.48	-0.80	
CO24	260	0.000	-36.57	8.05	-10.34	-0.00	0.52	-0.00	
	284	0.100	-36.67	7.59	-10.34	-0.01	-0.52	-0.79	
CO25	260	0.000	-37.96	8.15	-9.24	-0.00	0.47	-0.00	
	284	0.100	-38.07	7.66	-9.24	-0.01	-0.47	-0.80	
CO26	260	0.000	-34.01	8.21	-8.97	-0.00	0.45	-0.00	
	284	0.100	-34.12	7.77	-8.97	-0.01	-0.45	-0.81	
CO27	260	0.000	-32.62	8.08	-9.80	-0.00	0.49	-0.00	
	284	0.100	-32.72	7.66	-9.80	-0.01	-0.49	-0.80	
CO28	260	0.000	-34.01	8.17	-8.70	-0.00	0.44	-0.00	
	284	0.100	-34.12	7.73	-8.70	-0.01	-0.44	-0.80	
CO29	260	0.000	-27.93	8.14	-9.31	-0.00	0.47	-0.00	
	284	0.100	-28.03	7.78	-9.31	-0.01	-0.47	-0.80	
CO30	260	0.000	-26.54	8.04	-10.40	-0.00	0.52	-0.00	
	284	0.100	-26.64	7.71	-10.41	-0.01	-0.52	-0.79	
CO31	260	0.000	-25.15	7.91	-11.23	-0.00	0.57	-0.00	
	284	0.100	-25.24	7.60	-11.23	-0.01	-0.57	-0.78	
CO32	260	0.000	-26.54	8.01	-10.13	-0.00	0.51	-0.00	
	284	0.100	-26.64	7.67	-10.13	-0.01	-0.51	-0.79	
CO33	260	0.000	-22.59	8.07	-9.86	-0.00	0.50	-0.00	
	284	0.100	-22.69	7.78	-9.86	-0.01	-0.50	-0.80	
CO34	260	0.000	-21.19	7.94	-10.69	-0.00	0.54	-0.00	
	284	0.100	-21.29	7.68	-10.69	-0.01	-0.54	-0.79	
CO35	260	0.000	-22.58	8.04	-9.58	-0.00	0.48	-0.00	
	284	0.100	-22.69	7.75	-9.58	-0.01	-0.48	-0.79	
CO36	260	0.000	-61.97	10.21	-9.46	-0.00	0.48	-0.00	
	284	0.100	-62.12	9.21	-9.46	-0.01	-0.48	-0.99	
CO37	260	0.000	-12.19	6.83	-9.55	-0.00	0.48	-0.00	
	284	0.100	-12.27	6.70	-9.56	-0.01	-0.48	-0.68	
CO38	260	0.000	25.82	4.91	-8.83	-0.00	0.44	-0.00	
	284	0.100	25.78	5.12	-8.84	-0.01	-0.44	-0.50	
CO39	260	0.000	-23.98	8.16	-8.76	-0.00	0.44	-0.00	
	284	0.100	-24.08	7.85	-8.76	-0.01	-0.44	-0.81	
CC1	261	0.000	-9.11	0.24	-0.29	-0.00	0.02	-0.00	
	285	0.100	-9.11	0.24	-0.29	-0.00	-0.01	-0.02	
CC2	261	0.000	6.53	-0.66	-4.34	-0.00	0.22	-0.00	
	285	0.100	6.53	-0.66	-4.34	-0.00	-0.22	0.07	
CC3	261	0.000	-8.73	0.06	0.86	-0.00	-0.04	0.00	
	285	0.100	-8.73	0.06	0.86	-0.00	0.04	-0.01	
CC4	261	0.000	-3.09	-0.06	-0.60	-0.00	0.03	-0.00	
	285	0.100	-3.09	-0.06	-0.60	-0.00	-0.03	0.01	
CC5	261	0.000	1.00	-0.11	-1.15	-0.00	0.06	-0.00	
	285	0.100	1.00	-0.11	-1.15	-0.00	-0.06	0.01	
CC6	261	0.000	1.02	-0.16	-0.87	-0.00	0.04	-0.00	
	285	0.100	1.02	-0.16	-0.87	-0.00	-0.04	0.02	
CC7	261	0.000	-34.55	1.80	-0.84	-0.00	0.04	-0.00	
	285	0.100	-34.55	1.80	-0.84	-0.00	-0.04	-0.18	
CC8	261	0.000	44.82	-2.84	0.00	0.00	-0.00	-0.00	
	285	0.100	44.82	-2.84	0.00	0.00	-0.00	0.28	
CC11	261	0.000	-22.73	7.60	-4.69	-0.01	0.24	-0.00	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
33	CC11	285	0.100	-22.73	7.60	-4.69	-0.01	-0.23	-0.76
	CO1	261	0.000	-33.70	9.76	-11.96	-0.00	0.61	-0.00
		285	0.100	-33.85	9.24	-11.96	-0.01	-0.60	-0.96
	CO2	261	0.000	-45.49	9.94	-10.73	-0.00	0.55	-0.00
		285	0.100	-45.64	9.22	-10.74	-0.01	-0.54	-0.97
	CO3	261	0.000	-49.68	9.89	-11.48	-0.00	0.59	-0.00
		285	0.100	-49.82	9.11	-11.48	-0.01	-0.58	-0.96
	CO4	261	0.000	-48.39	9.73	-12.98	-0.00	0.66	-0.00
		285	0.100	-48.53	8.99	-12.99	-0.01	-0.66	-0.95
	CO5	261	0.000	-47.13	9.49	-14.11	-0.00	0.72	-0.00
		285	0.100	-47.27	8.79	-14.12	-0.01	-0.71	-0.93
	CO6	261	0.000	-48.42	9.65	-12.61	-0.00	0.64	-0.00
		285	0.100	-48.56	8.91	-12.61	-0.01	-0.64	-0.94
	CO7	261	0.000	-44.20	9.78	-12.24	-0.00	0.62	-0.00
		285	0.100	-44.35	9.10	-12.25	-0.01	-0.62	-0.96
	CO8	261	0.000	-42.95	9.54	-13.37	-0.00	0.68	-0.00
		285	0.100	-43.09	8.90	-13.38	-0.01	-0.67	-0.93
	CO9	261	0.000	-44.23	9.70	-11.86	-0.00	0.60	-0.00
		285	0.100	-44.38	9.02	-11.87	-0.01	-0.60	-0.95
	CO10	261	0.000	-37.88	9.71	-12.70	-0.00	0.65	-0.00
		285	0.100	-38.03	9.13	-12.71	-0.01	-0.64	-0.95
	CO11	261	0.000	-36.60	9.55	-14.22	-0.00	0.72	-0.00
		285	0.100	-36.74	9.00	-14.22	-0.01	-0.72	-0.94
	CO12	261	0.000	-35.34	9.31	-15.35	-0.00	0.78	-0.00
		285	0.100	-35.47	8.79	-15.36	-0.01	-0.77	-0.92
	CO13	261	0.000	-36.63	9.47	-13.84	-0.00	0.70	-0.00
		285	0.100	-36.76	8.92	-13.84	-0.01	-0.70	-0.93
	CO14	261	0.000	-32.41	9.60	-13.47	-0.00	0.68	-0.00
		285	0.100	-32.56	9.11	-13.48	-0.01	-0.68	-0.95
	CO15	261	0.000	-31.15	9.37	-14.61	-0.00	0.74	-0.00
		285	0.100	-31.29	8.91	-14.61	-0.01	-0.73	-0.92
	CO16	261	0.000	-32.44	9.52	-13.09	-0.00	0.66	-0.00
		285	0.100	-32.58	9.04	-13.09	-0.01	-0.66	-0.94
	CO17	261	0.000	-79.43	12.50	-12.87	0.00	0.67	0.00
		285	0.100	-79.66	10.94	-12.89	-0.01	-0.65	-1.20
	CO18	261	0.000	-20.09	8.36	-13.07	-0.00	0.66	-0.00
		285	0.100	-20.20	8.10	-13.07	-0.01	-0.66	-0.83
	CO19	261	0.000	25.69	5.84	-12.11	-0.00	0.60	-0.00
		285	0.100	25.63	6.09	-12.11	-0.01	-0.60	-0.59
	CO20	261	0.000	-25.01	7.19	-8.87	-0.00	0.45	-0.00
		285	0.100	-25.09	6.91	-8.88	-0.01	-0.45	-0.71
	CO21	261	0.000	-33.73	7.31	-7.98	-0.00	0.41	-0.00
285		0.100	-33.81	6.92	-7.98	-0.01	-0.40	-0.72	
CO22	261	0.000	-36.82	7.26	-8.53	-0.00	0.43	-0.00	
	285	0.100	-36.90	6.84	-8.54	-0.01	-0.43	-0.71	
CO23	261	0.000	-35.87	7.15	-9.65	-0.00	0.49	-0.00	
	285	0.100	-35.95	6.74	-9.65	-0.01	-0.49	-0.70	
CO24	261	0.000	-34.93	6.98	-10.49	-0.00	0.53	-0.00	
	285	0.100	-35.01	6.59	-10.49	-0.01	-0.53	-0.69	
CO25	261	0.000	-35.89	7.09	-9.37	-0.00	0.48	-0.00	
	285	0.100	-35.96	6.69	-9.37	-0.01	-0.47	-0.70	
CO26	261	0.000	-32.77	7.19	-9.09	-0.00	0.46	-0.00	
	285	0.100	-32.85	6.82	-9.10	-0.01	-0.46	-0.71	
CO27	261	0.000	-31.84	7.02	-9.93	-0.00	0.50	-0.00	
	285	0.100	-31.91	6.67	-9.93	-0.01	-0.50	-0.69	
CO28	261	0.000	-32.79	7.14	-8.81	-0.00	0.45	-0.00	
	285	0.100	-32.87	6.77	-8.82	-0.01	-0.44	-0.70	
CO29	261	0.000	-28.10	7.15	-9.43	-0.00	0.48	-0.00	
	285	0.100	-28.18	6.83	-9.43	-0.01	-0.47	-0.71	
CO30	261	0.000	-27.15	7.03	-10.55	-0.00	0.53	-0.00	
	285	0.100	-27.22	6.73	-10.55	-0.01	-0.53	-0.69	
CO31	261	0.000	-26.21	6.86	-11.39	-0.00	0.58	-0.00	
	285	0.100	-26.28	6.58	-11.39	-0.01	-0.57	-0.68	
CO32	261	0.000	-27.16	6.98	-10.27	-0.00	0.52	-0.00	
	285	0.100	-27.24	6.68	-10.27	-0.01	-0.52	-0.69	
CO33	261	0.000	-24.05	7.08	-9.99	-0.00	0.51	-0.00	
	285	0.100	-24.13	6.81	-10.00	-0.01	-0.50	-0.70	
CO34	261	0.000	-23.12	6.91	-10.84	-0.00	0.55	-0.00	
	285	0.100	-23.19	6.66	-10.84	-0.01	-0.54	-0.68	
CO35	261	0.000	-24.07	7.02	-9.71	-0.00	0.49	-0.00	
	285	0.100	-24.15	6.75	-9.72	-0.01	-0.49	-0.69	
CO36	261	0.000	-58.90	9.14	-9.59	-0.00	0.49	-0.00	
	285	0.100	-59.02	8.29	-9.59	-0.01	-0.48	-0.89	
CO37	261	0.000	-14.92	6.17	-9.69	-0.00	0.49	-0.00	
	285	0.100	-14.98	6.03	-9.69	-0.01	-0.49	-0.61	
CO38	261	0.000	18.99	4.33	-8.95	-0.00	0.44	-0.00	
	285	0.100	18.96	4.47	-8.95	-0.01	-0.45	-0.44	
CO39	261	0.000	-25.01	7.19	-8.87	-0.00	0.45	-0.00	
	285	0.100	-25.09	6.91	-8.88	-0.01	-0.45	-0.71	
CC1	262	0.000	-10.03	0.08	-0.28	-0.00	0.01	-0.00	
	286	0.100	-10.03	0.08	-0.28	-0.00	-0.01	-0.01	
CC2	262	0.000	4.21	-0.81	-4.37	-0.00	0.22	-0.00	
	286	0.100	4.21	-0.81	-4.37	-0.00	-0.22	0.08	
CC3	262	0.000	-6.36	0.05	0.87	-0.00	-0.04	0.00	
	286	0.100	-6.36	0.05	0.87	-0.00	0.04	-0.01	
CC4	262	0.000	-2.33	-0.07	-0.60	-0.00	0.03	-0.00	
	286	0.100	-2.33	-0.07	-0.60	-0.00	-0.03	0.01	
CC5	262	0.000	0.61	-0.12	-1.16	-0.00	0.06	-0.00	
	286	0.100	0.61	-0.12	-1.16	-0.00	-0.06	0.01	
CC6	262	0.000	0.62	-0.20	-0.88	-0.00	0.04	-0.00	
	286	0.100	0.62	-0.20	-0.88	-0.00	-0.04	0.02	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
34	CC7	262	0.000	-31.37	1.71	-0.87	-0.00	0.04	-0.00
		286	0.100	-31.37	1.71	-0.87	-0.00	-0.04	-0.17
	CC8	262	0.000	40.23	-2.43	0.03	0.00	-0.00	-0.00
		286	0.100	40.23	-2.43	0.03	0.00	0.00	0.24
	CC11	262	0.000	-20.98	7.00	-4.69	-0.01	0.23	-0.00
		286	0.100	-20.98	7.00	-4.69	-0.01	-0.24	-0.70
	CO1	262	0.000	-35.66	8.68	-11.99	-0.00	0.61	-0.00
		286	0.100	-35.78	8.19	-11.99	-0.01	-0.61	-0.85
	CO2	262	0.000	-44.26	8.82	-10.77	-0.00	0.55	-0.00
		286	0.100	-44.38	8.20	-10.77	-0.01	-0.55	-0.86
	CO3	262	0.000	-47.41	8.75	-11.52	-0.00	0.58	-0.00
		286	0.100	-47.53	8.10	-11.52	-0.01	-0.58	-0.86
	CO4	262	0.000	-46.62	8.58	-13.04	-0.00	0.66	-0.00
		286	0.100	-46.73	7.95	-13.04	-0.01	-0.66	-0.84
	CO5	262	0.000	-45.87	8.30	-14.17	-0.00	0.72	-0.00
		286	0.100	-45.98	7.70	-14.17	-0.01	-0.72	-0.81
	CO6	262	0.000	-46.66	8.47	-12.66	-0.00	0.64	-0.00
		286	0.100	-46.77	7.85	-12.66	-0.01	-0.64	-0.83
	CO7	262	0.000	-43.47	8.65	-12.28	-0.00	0.62	-0.00
		286	0.100	-43.59	8.05	-12.28	-0.01	-0.62	-0.85
	CO8	262	0.000	-42.72	8.36	-13.42	-0.00	0.68	-0.00
		286	0.100	-42.83	7.80	-13.42	-0.01	-0.68	-0.82
	CO9	262	0.000	-43.51	8.54	-11.90	-0.00	0.60	-0.00
		286	0.100	-43.62	7.95	-11.90	-0.01	-0.60	-0.84
	CO10	262	0.000	-38.81	8.61	-12.74	-0.00	0.65	-0.00
		286	0.100	-38.93	8.08	-12.74	-0.01	-0.64	-0.85
	CO11	262	0.000	-38.02	8.44	-14.26	-0.00	0.72	-0.00
		286	0.100	-38.13	7.93	-14.26	-0.01	-0.72	-0.83
	CO12	262	0.000	-37.27	8.16	-15.40	-0.00	0.78	-0.00
		286	0.100	-37.38	7.68	-15.40	-0.01	-0.78	-0.80
	CO13	262	0.000	-38.06	8.33	-13.88	-0.00	0.70	-0.00
		286	0.100	-38.17	7.83	-13.88	-0.01	-0.70	-0.82
	CO14	262	0.000	-34.88	8.51	-13.51	-0.00	0.68	-0.00
		286	0.100	-34.99	8.04	-13.51	-0.01	-0.68	-0.84
	CO15	262	0.000	-34.13	8.23	-14.65	-0.00	0.74	-0.00
		286	0.100	-34.23	7.78	-14.65	-0.01	-0.74	-0.81
	CO16	262	0.000	-34.91	8.40	-13.13	-0.00	0.66	-0.00
		286	0.100	-35.02	7.94	-13.13	-0.01	-0.66	-0.83
	CO17	262	0.000	-77.20	11.32	-12.97	0.00	0.66	-0.00
		286	0.100	-77.39	9.95	-12.97	-0.01	-0.66	-1.09
	CO18	262	0.000	-23.90	7.69	-13.09	0.00	0.66	-0.00
		286	0.100	-23.99	7.40	-13.10	-0.01	-0.66	-0.76
CO19	262	0.000	17.70	5.26	-12.08	-0.00	0.60	-0.00	
	286	0.100	17.65	5.41	-12.08	-0.01	-0.60	-0.53	
CO20	262	0.000	-26.45	6.38	-8.90	-0.00	0.45	-0.00	
	286	0.100	-26.52	6.11	-8.90	-0.01	-0.45	-0.63	
CO21	262	0.000	-32.81	6.47	-8.00	-0.00	0.40	-0.00	
	286	0.100	-32.88	6.14	-8.00	-0.01	-0.40	-0.64	
CO22	262	0.000	-35.14	6.42	-8.56	-0.00	0.43	-0.00	
	286	0.100	-35.21	6.06	-8.56	-0.01	-0.43	-0.63	
CO23	262	0.000	-34.56	6.29	-9.68	-0.00	0.49	-0.00	
	286	0.100	-34.62	5.95	-9.69	-0.01	-0.49	-0.62	
CO24	262	0.000	-34.00	6.09	-10.53	-0.00	0.53	-0.00	
	286	0.100	-34.06	5.76	-10.53	-0.01	-0.53	-0.60	
CO25	262	0.000	-34.58	6.21	-9.40	-0.00	0.48	-0.00	
	286	0.100	-34.64	5.87	-9.40	-0.01	-0.48	-0.61	
CO26	262	0.000	-32.23	6.35	-9.12	-0.00	0.46	-0.00	
	286	0.100	-32.29	6.02	-9.12	-0.01	-0.46	-0.63	
CO27	262	0.000	-31.67	6.14	-9.97	-0.00	0.50	-0.00	
	286	0.100	-31.73	5.83	-9.97	-0.01	-0.50	-0.61	
CO28	262	0.000	-32.26	6.27	-8.84	-0.00	0.45	-0.00	
	286	0.100	-32.32	5.95	-8.84	-0.01	-0.45	-0.62	
CO29	262	0.000	-28.78	6.33	-9.46	-0.00	0.48	-0.00	
	286	0.100	-28.84	6.04	-9.46	-0.01	-0.48	-0.62	
CO30	262	0.000	-28.20	6.20	-10.58	-0.00	0.53	-0.00	
	286	0.100	-28.26	5.93	-10.59	-0.01	-0.53	-0.61	
CO31	262	0.000	-27.64	6.00	-11.43	-0.00	0.58	-0.00	
	286	0.100	-27.69	5.74	-11.43	-0.01	-0.58	-0.59	
CO32	262	0.000	-28.22	6.12	-10.30	-0.00	0.52	-0.00	
	286	0.100	-28.28	5.85	-10.30	-0.01	-0.52	-0.60	
CO33	262	0.000	-25.87	6.26	-10.02	-0.00	0.51	-0.00	
	286	0.100	-25.93	6.00	-10.02	-0.01	-0.50	-0.62	
CO34	262	0.000	-25.31	6.05	-10.87	-0.00	0.55	-0.00	
	286	0.100	-25.37	5.81	-10.87	-0.01	-0.55	-0.60	
CO35	262	0.000	-25.90	6.18	-9.74	-0.00	0.49	-0.00	
	286	0.100	-25.96	5.93	-9.74	-0.01	-0.49	-0.61	
CO36	262	0.000	-57.25	8.26	-9.65	-0.00	0.49	-0.00	
	286	0.100	-57.35	7.51	-9.65	-0.01	-0.49	-0.80	
CO37	262	0.000	-17.73	5.66	-9.71	-0.00	0.49	-0.00	
	286	0.100	-17.79	5.50	-9.71	-0.01	-0.49	-0.56	
CO38	262	0.000	13.09	3.90	-8.94	-0.00	0.45	-0.00	
	286	0.100	13.06	3.98	-8.94	-0.00	-0.44	-0.39	
CO39	262	0.000	-26.45	6.38	-8.90	-0.00	0.45	-0.00	
	286	0.100	-26.52	6.11	-8.90	-0.01	-0.45	-0.63	
35	CC1	263	0.000	-10.66	-0.07	-0.27	-0.00	0.01	-0.00
		287	0.100	-10.66	-0.07	-0.28	-0.00	-0.01	0.01
	CC2	263	0.000	2.01	-0.92	-4.38	-0.00	0.22	-0.00
		287	0.100	2.01	-0.92	-4.38	-0.00	-0.22	0.09
CC3	263	0.000	-4.02	0.04	0.87	-0.00	-0.04	0.00	
	287	0.100	-4.02	0.04	0.87	-0.00	0.04	-0.00	
CC4	263	0.000	-1.57	-0.07	-0.60	0.00	0.03	-0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
35	CC4	287	0.100	-1.57	-0.07	-0.60	0.00	-0.03	0.01
	CC5	263	0.000	0.23	-0.13	-1.16	-0.00	0.06	-0.00
		287	0.100	0.23	-0.13	-1.16	-0.00	-0.06	0.01
	CC6	263	0.000	0.24	-0.23	-0.88	-0.00	0.04	-0.00
		287	0.100	0.24	-0.23	-0.88	-0.00	-0.04	0.02
	CC7	263	0.000	-28.06	1.64	-0.89	-0.00	0.04	-0.00
		287	0.100	-28.06	1.64	-0.89	-0.00	-0.05	-0.16
	CC8	263	0.000	35.46	-2.07	0.06	0.00	-0.00	-0.00
		287	0.100	35.46	-2.07	0.06	0.00	0.00	0.21
	CC11	263	0.000	-19.58	6.59	-4.66	-0.00	0.23	-0.00
		287	0.100	-19.58	6.59	-4.66	-0.00	-0.23	-0.66
	CO1	263	0.000	-37.57	7.89	-11.93	-0.00	0.60	-0.00
		287	0.100	-37.66	7.42	-11.94	-0.01	-0.60	-0.78
	CO2	263	0.000	-43.01	8.00	-10.72	-0.00	0.54	-0.00
		287	0.100	-43.11	7.45	-10.72	-0.01	-0.54	-0.78
	CO3	263	0.000	-45.13	7.92	-11.48	-0.00	0.58	-0.00
		287	0.100	-45.23	7.36	-11.48	-0.01	-0.58	-0.77
	CO4	263	0.000	-44.83	7.74	-13.00	0.00	0.66	-0.00
		287	0.100	-44.93	7.19	-13.00	-0.01	-0.66	-0.76
	CO5	263	0.000	-44.56	7.42	-14.13	0.00	0.72	-0.00
		287	0.100	-44.64	6.90	-14.14	-0.01	-0.72	-0.73
	CO6	263	0.000	-44.86	7.60	-12.62	-0.00	0.64	-0.00
		287	0.100	-44.94	7.06	-12.62	-0.01	-0.64	-0.74
	CO7	263	0.000	-42.71	7.82	-12.24	-0.00	0.62	-0.00
		287	0.100	-42.81	7.29	-12.24	-0.01	-0.62	-0.77
	CO8	263	0.000	-42.44	7.50	-13.38	-0.00	0.68	-0.00
		287	0.100	-42.52	6.99	-13.38	-0.01	-0.68	-0.73
	CO9	263	0.000	-42.73	7.68	-11.86	-0.00	0.60	-0.00
		287	0.100	-42.82	7.16	-11.86	-0.01	-0.60	-0.75
	CO10	263	0.000	-39.69	7.82	-12.69	0.00	0.64	-0.00
		287	0.100	-39.78	7.33	-12.70	-0.01	-0.64	-0.77
	CO11	263	0.000	-39.39	7.64	-14.21	0.00	0.72	-0.00
		287	0.100	-39.48	7.16	-14.22	-0.01	-0.72	-0.75
	CO12	263	0.000	-39.11	7.32	-15.35	0.00	0.78	-0.00
		287	0.100	-39.20	6.87	-15.35	-0.01	-0.78	-0.72
	CO13	263	0.000	-39.41	7.50	-13.83	0.00	0.70	-0.00
		287	0.100	-39.50	7.03	-13.83	-0.01	-0.70	-0.74
	CO14	263	0.000	-37.27	7.72	-13.45	0.00	0.68	-0.00
		287	0.100	-37.36	7.26	-13.46	-0.01	-0.68	-0.76
	CO15	263	0.000	-36.99	7.40	-14.59	0.00	0.74	-0.00
		287	0.100	-37.08	6.96	-14.60	-0.01	-0.74	-0.73
	CO16	263	0.000	-37.29	7.58	-13.07	0.00	0.66	-0.00
287		0.100	-37.38	7.13	-13.07	-0.01	-0.66	-0.74	
CO17	263	0.000	-74.79	10.46	-12.96	0.00	0.66	-0.00	
	287	0.100	-74.95	9.23	-12.96	-0.01	-0.66	-1.01	
CO18	263	0.000	-27.73	7.30	-13.03	0.00	0.66	-0.00	
	287	0.100	-27.81	6.98	-13.03	-0.01	-0.66	-0.72	
CO19	263	0.000	9.55	4.93	-11.96	0.00	0.60	-0.00	
	287	0.100	9.51	5.01	-11.97	-0.00	-0.60	-0.50	
CO20	263	0.000	-27.86	5.79	-8.86	-0.00	0.45	-0.00	
	287	0.100	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	
CO21	263	0.000	-31.88	5.86	-7.97	-0.00	0.40	-0.00	
	287	0.100	-31.94	5.56	-7.97	-0.01	-0.40	-0.58	
CO22	263	0.000	-33.45	5.80	-8.53	-0.00	0.43	-0.00	
	287	0.100	-33.51	5.49	-8.53	-0.01	-0.43	-0.57	
CO23	263	0.000	-33.23	5.67	-9.65	-0.00	0.49	-0.00	
	287	0.100	-33.28	5.37	-9.66	-0.01	-0.49	-0.56	
CO24	263	0.000	-33.02	5.44	-10.50	-0.00	0.53	-0.00	
	287	0.100	-33.07	5.15	-10.50	-0.01	-0.53	-0.54	
CO25	263	0.000	-33.25	5.57	-9.37	-0.00	0.47	-0.00	
	287	0.100	-33.29	5.27	-9.37	-0.01	-0.47	-0.55	
CO26	263	0.000	-31.66	5.73	-9.09	-0.00	0.46	-0.00	
	287	0.100	-31.71	5.44	-9.09	-0.01	-0.46	-0.56	
CO27	263	0.000	-31.45	5.50	-9.93	-0.00	0.50	-0.00	
	287	0.100	-31.50	5.22	-9.93	-0.01	-0.50	-0.54	
CO28	263	0.000	-31.68	5.63	-8.81	-0.00	0.44	-0.00	
	287	0.100	-31.73	5.34	-8.81	-0.01	-0.45	-0.55	
CO29	263	0.000	-29.43	5.73	-9.42	-0.00	0.48	-0.00	
	287	0.100	-29.48	5.47	-9.43	-0.01	-0.48	-0.57	
CO30	263	0.000	-29.21	5.60	-10.55	-0.00	0.53	-0.00	
	287	0.100	-29.25	5.34	-10.55	-0.01	-0.53	-0.55	
CO31	263	0.000	-29.00	5.37	-11.39	-0.00	0.57	-0.00	
	287	0.100	-29.04	5.12	-11.40	-0.01	-0.57	-0.53	
CO32	263	0.000	-29.22	5.50	-10.27	-0.00	0.52	-0.00	
	287	0.100	-29.27	5.25	-10.27	-0.01	-0.52	-0.54	
CO33	263	0.000	-27.64	5.66	-9.99	-0.00	0.50	-0.00	
	287	0.100	-27.69	5.41	-9.99	-0.01	-0.50	-0.56	
CO34	263	0.000	-27.43	5.43	-10.83	-0.00	0.55	-0.00	
	287	0.100	-27.47	5.19	-10.83	-0.01	-0.55	-0.54	
CO35	263	0.000	-27.65	5.56	-9.70	-0.00	0.49	-0.00	
	287	0.100	-27.70	5.32	-9.70	-0.01	-0.49	-0.55	
CO36	263	0.000	-55.45	7.61	-9.65	-0.00	0.49	-0.00	
	287	0.100	-55.54	6.94	-9.65	-0.01	-0.49	-0.74	
CO37	263	0.000	-20.57	5.36	-9.66	0.00	0.49	-0.00	
	287	0.100	-20.61	5.19	-9.66	-0.00	-0.49	-0.53	
CO38	263	0.000	7.06	3.65	-8.86	-0.00	0.44	-0.00	
	287	0.100	7.04	3.69	-8.86	-0.00	-0.44	-0.37	
CO39	263	0.000	-27.86	5.79	-8.86	-0.00	0.45	-0.00	
	287	0.100	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	
36	CC1	264	0.000	-11.17	-0.20	-0.25	-0.00	0.01	-0.00
		288	0.100	-11.17	-0.20	-0.26	-0.00	-0.01	0.02



Progetto: _____

Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
36	CC2	264	0.000	0.19	-1.00	-4.39	-0.00	0.22	-0.00
		288	0.100	0.19	-1.00	-4.39	-0.00	-0.22	0.10
	CC3	264	0.000	-1.82	0.03	0.88	-0.00	-0.04	0.00
		288	0.100	-1.82	0.03	0.88	-0.00	0.04	-0.00
	CC4	264	0.000	-0.81	-0.06	-0.60	0.00	0.03	-0.00
		288	0.100	-0.81	-0.06	-0.60	0.00	-0.03	0.01
	CC5	264	0.000	-0.07	-0.13	-1.16	0.00	0.06	-0.00
		288	0.100	-0.07	-0.13	-1.16	0.00	-0.06	0.01
	CC6	264	0.000	-0.06	-0.26	-0.88	-0.00	0.04	-0.00
		288	0.100	-0.06	-0.26	-0.88	-0.00	-0.04	0.03
	CC7	264	0.000	-25.03	1.60	-0.89	-0.00	0.04	0.00
		288	0.100	-25.03	1.60	-0.89	-0.00	-0.05	-0.16
	CC8	264	0.000	31.02	-1.74	0.06	0.00	-0.00	-0.00
		288	0.100	31.02	-1.74	0.06	0.00	0.00	0.17
	CC11	264	0.000	-18.48	6.39	-4.57	-0.00	0.23	0.00
		288	0.100	-18.48	6.39	-4.57	-0.00	-0.23	-0.64
	CO1	264	0.000	-39.23	7.45	-11.81	0.00	0.60	0.00
		288	0.100	-39.31	6.98	-11.81	-0.00	-0.60	-0.73
	CO2	264	0.000	-41.71	7.51	-10.60	0.00	0.54	0.00
		288	0.100	-41.80	7.02	-10.60	-0.01	-0.54	-0.74
	CO3	264	0.000	-42.81	7.44	-11.36	0.00	0.57	0.00
		288	0.100	-42.90	6.93	-11.36	-0.00	-0.58	-0.73
	CO4	264	0.000	-42.91	7.26	-12.88	0.00	0.65	0.00
		288	0.100	-42.99	6.77	-12.88	-0.00	-0.65	-0.71
	CO5	264	0.000	-43.01	6.92	-14.01	0.00	0.71	-0.00
		288	0.100	-43.08	6.45	-14.01	-0.00	-0.71	-0.68
	CO6	264	0.000	-42.91	7.09	-12.50	0.00	0.63	0.00
		288	0.100	-42.99	6.61	-12.50	-0.01	-0.63	-0.69
	CO7	264	0.000	-41.81	7.34	-12.12	0.00	0.61	0.00
		288	0.100	-41.89	6.85	-12.12	-0.00	-0.61	-0.72
	CO8	264	0.000	-41.90	6.99	-13.25	0.00	0.67	-0.00
		288	0.100	-41.98	6.53	-13.25	-0.01	-0.67	-0.68
	CO9	264	0.000	-41.81	7.17	-11.74	0.00	0.59	0.00
		288	0.100	-41.89	6.69	-11.74	-0.01	-0.60	-0.70
	CO10	264	0.000	-40.33	7.37	-12.57	0.00	0.64	0.00
		288	0.100	-40.41	6.90	-12.57	-0.00	-0.64	-0.72
	CO11	264	0.000	-40.43	7.20	-14.09	0.00	0.71	0.00
		288	0.100	-40.51	6.74	-14.09	-0.00	-0.71	-0.71
CO12	264	0.000	-40.52	6.85	-15.23	0.00	0.77	-0.00	
	288	0.100	-40.60	6.41	-15.23	-0.00	-0.77	-0.67	
CO13	264	0.000	-40.43	7.03	-13.71	0.00	0.69	-0.00	
	288	0.100	-40.50	6.58	-13.71	-0.00	-0.69	-0.69	
CO14	264	0.000	-39.32	7.27	-13.33	0.00	0.67	-0.00	
	288	0.100	-39.41	6.82	-13.33	-0.00	-0.67	-0.71	
CO15	264	0.000	-39.42	6.93	-14.47	0.00	0.73	-0.00	
	288	0.100	-39.50	6.50	-14.47	-0.00	-0.73	-0.68	
CO16	264	0.000	-39.32	7.10	-12.95	0.00	0.66	-0.00	
	288	0.100	-39.40	6.66	-12.95	-0.00	-0.66	-0.70	
CO17	264	0.000	-72.49	9.95	-12.86	0.00	0.66	0.00	
	288	0.100	-72.63	8.82	-12.86	-0.01	-0.66	-0.96	
CO18	264	0.000	-31.25	7.24	-12.89	0.00	0.65	-0.00	
	288	0.100	-31.33	6.88	-12.89	-0.00	-0.65	-0.71	
CO19	264	0.000	2.06	4.91	-11.81	0.00	0.59	-0.00	
	288	0.100	2.02	4.93	-11.82	-0.00	-0.59	-0.49	
CO20	264	0.000	-29.08	5.45	-8.77	0.00	0.44	-0.00	
	288	0.100	-29.13	5.20	-8.77	-0.00	-0.44	-0.54	
CO21	264	0.000	-30.92	5.50	-7.87	-0.00	0.40	0.00	
	288	0.100	-30.97	5.23	-7.87	-0.00	-0.40	-0.54	
CO22	264	0.000	-31.74	5.44	-8.44	-0.00	0.43	0.00	
	288	0.100	-31.78	5.17	-8.44	-0.00	-0.43	-0.54	
CO23	264	0.000	-31.81	5.31	-9.56	0.00	0.48	-0.00	
	288	0.100	-31.85	5.04	-9.56	-0.00	-0.48	-0.52	
CO24	264	0.000	-31.88	5.06	-10.40	0.00	0.52	-0.00	
	288	0.100	-31.92	4.80	-10.41	-0.00	-0.53	-0.50	
CO25	264	0.000	-31.81	5.19	-9.28	-0.00	0.47	-0.00	
	288	0.100	-31.85	4.93	-9.28	-0.00	-0.47	-0.51	
CO26	264	0.000	-30.99	5.37	-9.00	-0.00	0.45	-0.00	
	288	0.100	-31.04	5.10	-9.00	-0.00	-0.45	-0.53	
CO27	264	0.000	-31.06	5.12	-9.84	0.00	0.50	-0.00	
	288	0.100	-31.10	4.86	-9.84	-0.00	-0.50	-0.50	
CO28	264	0.000	-30.99	5.24	-8.72	-0.00	0.44	-0.00	
	288	0.100	-31.03	4.99	-8.72	-0.00	-0.44	-0.52	
CO29	264	0.000	-29.90	5.40	-9.33	0.00	0.47	-0.00	
	288	0.100	-29.95	5.14	-9.34	-0.00	-0.47	-0.53	
CO30	264	0.000	-29.97	5.27	-10.46	0.00	0.53	-0.00	
	288	0.100	-30.01	5.02	-10.46	-0.00	-0.53	-0.52	
CO31	264	0.000	-30.04	5.02	-11.30	0.00	0.57	-0.00	
	288	0.100	-30.08	4.78	-11.30	-0.00	-0.57	-0.49	
CO32	264	0.000	-29.97	5.14	-10.18	0.00	0.51	-0.00	
	288	0.100	-30.01	4.90	-10.18	-0.00	-0.51	-0.51	
CO33	264	0.000	-29.16	5.33	-9.89	0.00	0.50	-0.00	
	288	0.100	-29.20	5.08	-9.90	-0.00	-0.50	-0.52	
CO34	264	0.000	-29.23	5.07	-10.74	0.00	0.54	-0.00	
	288	0.100	-29.27	4.84	-10.74	-0.00	-0.54	-0.50	
CO35	264	0.000	-29.15	5.20	-9.61	0.00	0.48	-0.00	
	288	0.100	-29.20	4.96	-9.61	-0.00	-0.49	-0.51	
CO36	264	0.000	-53.75	7.23	-9.56	0.00	0.49	0.00	
	288	0.100	-53.83	6.62	-9.57	-0.00	-0.49	-0.70	
CO37	264	0.000	-23.17	5.30	-9.56	0.00	0.48	-0.00	
	288	0.100	-23.22	5.11	-9.57	-0.00	-0.48	-0.52	
CO38	264	0.000	1.52	3.62	-8.75	0.00	0.44	-0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
36	CO38	288	0.100	1.49	3.63	-8.75	-0.00	-0.44	-0.36
	CO39	264	0.000	-29.08	5.45	-8.77	0.00	0.44	-0.00
37		288	0.100	-29.13	5.20	-8.77	-0.00	-0.44	-0.54
	CC1	265	0.000	-11.68	-0.31	-0.22	-0.00	0.01	-0.00
		289	0.100	-11.68	-0.31	-0.23	-0.00	-0.01	0.03
	CC2	265	0.000	-1.54	-1.05	-4.38	0.00	0.22	-0.00
		289	0.100	-1.54	-1.05	-4.38	0.00	-0.22	0.10
	CC3	265	0.000	0.33	0.02	0.89	-0.00	-0.04	0.00
		289	0.100	0.33	0.02	0.89	-0.00	0.04	-0.00
	CC4	265	0.000	-0.08	-0.05	-0.59	0.00	0.03	-0.00
		289	0.100	-0.08	-0.05	-0.59	0.00	-0.03	0.01
	CC5	265	0.000	-0.37	-0.12	-1.16	0.00	0.06	-0.00
		289	0.100	-0.37	-0.12	-1.16	0.00	-0.06	0.01
	CC6	265	0.000	-0.34	-0.27	-0.88	-0.00	0.04	-0.00
		289	0.100	-0.34	-0.27	-0.88	-0.00	-0.04	0.03
	CC7	265	0.000	-22.35	1.58	-0.89	-0.00	0.04	-0.00
		289	0.100	-22.35	1.58	-0.89	-0.00	-0.05	-0.16
	CC8	265	0.000	26.88	-1.45	0.07	0.00	-0.00	0.00
		289	0.100	26.88	-1.45	0.07	0.00	0.00	0.14
	CC11	265	0.000	-18.09	6.41	-4.47	-0.00	0.22	-0.00
		289	0.100	-18.09	6.41	-4.47	-0.00	-0.22	-0.64
	CO1	265	0.000	-41.67	7.34	-11.64	0.00	0.59	-0.00
		289	0.100	-41.75	6.85	-11.64	-0.00	-0.59	-0.72
	CO2	265	0.000	-41.24	7.37	-10.43	0.00	0.53	-0.00
		289	0.100	-41.32	6.88	-10.43	-0.00	-0.53	-0.72
	CO3	265	0.000	-41.34	7.30	-11.19	0.00	0.57	-0.00
		289	0.100	-41.42	6.82	-11.19	-0.00	-0.57	-0.72
	CO4	265	0.000	-41.82	7.14	-12.70	0.01	0.64	-0.00
		289	0.100	-41.90	6.66	-12.70	-0.00	-0.64	-0.70
	CO5	265	0.000	-42.27	6.78	-13.83	0.01	0.70	-0.00
		289	0.100	-42.34	6.32	-13.83	-0.00	-0.70	-0.66
	CO6	265	0.000	-41.79	6.94	-12.32	0.00	0.62	-0.00
		289	0.100	-41.86	6.48	-12.32	-0.00	-0.62	-0.68
	CO7	265	0.000	-41.72	7.21	-11.94	0.00	0.60	-0.00
		289	0.100	-41.80	6.73	-11.94	-0.00	-0.61	-0.71
	CO8	265	0.000	-42.17	6.85	-13.07	0.01	0.66	-0.00
		289	0.100	-42.24	6.39	-13.08	-0.00	-0.66	-0.67
CO9	265	0.000	-41.68	7.01	-11.56	0.00	0.58	-0.00	
	289	0.100	-41.76	6.55	-11.56	-0.00	-0.59	-0.69	
CO10	265	0.000	-41.77	7.27	-12.40	0.01	0.63	-0.00	
	289	0.100	-41.85	6.78	-12.40	-0.00	-0.63	-0.71	
CO11	265	0.000	-42.26	7.11	-13.91	0.01	0.70	-0.00	
	289	0.100	-42.33	6.63	-13.91	-0.00	-0.70	-0.70	
CO12	265	0.000	-42.70	6.75	-15.04	0.01	0.76	-0.00	
	289	0.100	-42.77	6.29	-15.04	-0.00	-0.76	-0.66	
CO13	265	0.000	-42.22	6.91	-13.53	0.01	0.68	-0.00	
	289	0.100	-42.29	6.45	-13.53	-0.00	-0.69	-0.68	
CO14	265	0.000	-42.15	7.18	-13.15	0.01	0.67	-0.00	
	289	0.100	-42.23	6.69	-13.15	-0.00	-0.67	-0.70	
CO15	265	0.000	-42.60	6.82	-14.28	0.01	0.72	-0.00	
	289	0.100	-42.67	6.36	-14.28	-0.00	-0.72	-0.67	
CO16	265	0.000	-42.12	6.98	-12.77	0.01	0.65	-0.00	
	289	0.100	-42.19	6.51	-12.77	-0.00	-0.65	-0.68	
CO17	265	0.000	-71.41	9.80	-12.70	0.01	0.65	-0.00	
	289	0.100	-71.56	8.70	-12.70	-0.00	-0.65	-0.95	
CO18	265	0.000	-35.63	7.49	-12.68	0.01	0.64	-0.00	
	289	0.100	-35.71	7.06	-12.69	0.00	-0.64	-0.74	
CO19	265	0.000	-5.83	5.19	-11.60	0.01	0.58	-0.00	
	289	0.100	-5.88	5.14	-11.60	0.00	-0.58	-0.52	
CO20	265	0.000	-30.89	5.36	-8.64	0.00	0.44	-0.00	
	289	0.100	-30.94	5.10	-8.64	-0.00	-0.44	-0.53	
CO21	265	0.000	-30.57	5.39	-7.74	0.00	0.39	-0.00	
	289	0.100	-30.62	5.12	-7.75	-0.00	-0.39	-0.53	
CO22	265	0.000	-30.65	5.33	-8.31	0.00	0.42	-0.00	
	289	0.100	-30.69	5.07	-8.31	-0.00	-0.42	-0.53	
CO23	265	0.000	-31.01	5.22	-9.43	0.00	0.48	-0.00	
	289	0.100	-31.05	4.96	-9.43	-0.00	-0.48	-0.51	
CO24	265	0.000	-31.33	4.95	-10.27	0.00	0.52	-0.00	
	289	0.100	-31.37	4.71	-10.27	-0.00	-0.52	-0.49	
CO25	265	0.000	-30.98	5.07	-9.15	0.00	0.46	-0.00	
	289	0.100	-31.02	4.82	-9.15	-0.00	-0.46	-0.50	
CO26	265	0.000	-30.93	5.27	-8.87	0.00	0.45	-0.00	
	289	0.100	-30.97	5.01	-8.87	-0.00	-0.45	-0.52	
CO27	265	0.000	-31.26	5.01	-9.71	0.00	0.49	-0.00	
	289	0.100	-31.30	4.76	-9.71	-0.00	-0.49	-0.49	
CO28	265	0.000	-30.90	5.13	-8.58	0.00	0.43	-0.00	
	289	0.100	-30.94	4.87	-8.59	-0.00	-0.43	-0.51	
CO29	265	0.000	-30.97	5.31	-9.20	0.00	0.46	-0.00	
	289	0.100	-31.01	5.05	-9.21	-0.00	-0.46	-0.52	
CO30	265	0.000	-31.33	5.19	-10.32	0.00	0.52	-0.00	
	289	0.100	-31.37	4.93	-10.33	-0.00	-0.52	-0.51	
CO31	265	0.000	-31.65	4.93	-11.16	0.00	0.56	-0.00	
	289	0.100	-31.69	4.68	-11.17	-0.00	-0.56	-0.49	
CO32	265	0.000	-31.30	5.05	-10.04	0.00	0.51	-0.00	
	289	0.100	-31.34	4.80	-10.05	-0.00	-0.51	-0.50	
CO33	265	0.000	-31.25	5.25	-9.76	0.00	0.49	-0.00	
	289	0.100	-31.29	4.98	-9.76	-0.00	-0.49	-0.52	
CO34	265	0.000	-31.58	4.99	-10.60	0.00	0.54	-0.00	
	289	0.100	-31.62	4.73	-10.60	-0.00	-0.54	-0.49	
CO35	265	0.000	-31.22	5.10	-9.48	0.00	0.48	-0.00	
	289	0.100	-31.26	4.85	-9.48	-0.00	-0.48	-0.50	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
37	CO36	265	0.000	-52.95	7.12	-9.45	0.00	0.48	-0.00
		289	0.100	-53.03	6.52	-9.45	-0.00	-0.48	-0.69
	CO37	265	0.000	-26.41	5.48	-9.41	0.00	0.47	-0.00
		289	0.100	-26.46	5.25	-9.42	0.00	-0.47	-0.54
	CO38	265	0.000	-4.33	3.81	-8.60	0.00	0.43	-0.00
		289	0.100	-4.35	3.79	-8.60	0.00	-0.43	-0.38
	CO39	265	0.000	-30.89	5.36	-8.64	0.00	0.44	-0.00
		289	0.100	-30.94	5.10	-8.64	-0.00	-0.44	-0.53
38	CC1	266	0.000	-12.14	-0.39	-0.19	-0.00	0.01	-0.00
		290	0.100	-12.14	-0.39	-0.19	-0.00	-0.01	0.04
	CC2	266	0.000	-3.10	-1.04	-4.36	0.00	0.22	-0.00
		290	0.100	-3.10	-1.04	-4.36	0.00	-0.22	0.10
	CC3	266	0.000	2.43	0.01	0.89	-0.00	-0.05	0.00
		290	0.100	2.43	0.01	0.89	-0.00	0.04	-0.00
	CC4	266	0.000	0.65	-0.04	-0.59	0.00	0.03	-0.00
		290	0.100	0.65	-0.04	-0.59	0.00	-0.03	0.00
	CC5	266	0.000	-0.64	-0.11	-1.15	0.00	0.06	-0.00
		290	0.100	-0.64	-0.11	-1.15	0.00	-0.06	0.01
	CC6	266	0.000	-0.57	-0.27	-0.88	0.00	0.04	-0.00
		290	0.100	-0.57	-0.27	-0.88	0.00	-0.04	0.03
	CC7	266	0.000	-20.01	1.59	-0.88	-0.00	0.04	-0.00
		290	0.100	-20.01	1.59	-0.88	-0.00	-0.04	-0.16
	CC8	266	0.000	23.05	-1.19	0.09	0.00	-0.00	0.00
		290	0.100	23.05	-1.19	0.09	0.00	0.01	0.12
	CC11	266	0.000	-18.30	6.71	-4.33	0.00	0.22	-0.00
		290	0.100	-18.30	6.71	-4.33	0.00	-0.22	-0.67
	CO1	266	0.000	-44.61	7.67	-11.38	0.01	0.58	-0.00
		290	0.100	-44.70	7.12	-11.38	0.00	-0.58	-0.75
	CO2	266	0.000	-41.34	7.67	-10.17	0.01	0.51	-0.00
		290	0.100	-41.43	7.16	-10.18	0.00	-0.52	-0.75
	CO3	266	0.000	-40.46	7.61	-10.93	0.01	0.55	-0.00
		290	0.100	-40.55	7.11	-10.93	0.00	-0.55	-0.75
	CO4	266	0.000	-41.29	7.47	-12.43	0.01	0.63	-0.00
		290	0.100	-41.38	6.97	-12.44	0.00	-0.63	-0.73
	CO5	266	0.000	-42.03	7.12	-13.56	0.01	0.69	-0.00
		290	0.100	-42.11	6.64	-13.56	0.00	-0.69	-0.70
	CO6	266	0.000	-41.21	7.26	-12.05	0.01	0.61	-0.00
		290	0.100	-41.29	6.78	-12.06	0.00	-0.61	-0.71
	CO7	266	0.000	-42.17	7.53	-11.68	0.01	0.59	-0.00
		290	0.100	-42.26	7.02	-11.68	0.00	-0.59	-0.74
	CO8	266	0.000	-42.92	7.18	-12.80	0.01	0.65	-0.00
		290	0.100	-43.00	6.68	-12.80	0.00	-0.65	-0.70
	CO9	266	0.000	-42.09	7.32	-11.30	0.01	0.57	-0.00
		290	0.100	-42.17	6.82	-11.30	0.00	-0.57	-0.72
	CO10	266	0.000	-43.73	7.61	-12.13	0.01	0.61	-0.00
		290	0.100	-43.82	7.07	-12.14	0.00	-0.62	-0.74
	CO11	266	0.000	-44.56	7.47	-13.63	0.01	0.69	-0.00
		290	0.100	-44.64	6.93	-13.64	0.00	-0.69	-0.73
	CO12	266	0.000	-45.30	7.12	-14.76	0.01	0.75	-0.00
		290	0.100	-45.38	6.60	-14.76	0.00	-0.75	-0.70
	CO13	266	0.000	-44.47	7.26	-13.26	0.01	0.67	-0.00
		290	0.100	-44.55	6.74	-13.26	0.00	-0.67	-0.71
	CO14	266	0.000	-45.44	7.53	-12.88	0.01	0.65	-0.00
		290	0.100	-45.53	6.98	-12.88	0.00	-0.65	-0.74
	CO15	266	0.000	-46.18	7.18	-14.00	0.01	0.71	-0.00
		290	0.100	-46.26	6.65	-14.01	0.00	-0.71	-0.70
	CO16	266	0.000	-45.35	7.32	-12.50	0.01	0.63	-0.00
		290	0.100	-45.44	6.79	-12.51	0.00	-0.63	-0.72
	CO17	266	0.000	-71.27	10.13	-12.45	0.01	0.63	-0.00
		290	0.100	-71.42	8.98	-12.45	0.00	-0.64	-0.98
	CO18	266	0.000	-40.54	8.20	-12.38	0.01	0.63	-0.00
		290	0.100	-40.65	7.66	-12.38	0.00	-0.63	-0.80
	CO19	266	0.000	-13.84	5.88	-11.29	0.01	0.57	-0.00
		290	0.100	-13.90	5.74	-11.29	0.00	-0.57	-0.58
	CO20	266	0.000	-33.07	5.60	-8.45	0.00	0.43	-0.00
		290	0.100	-33.12	5.30	-8.45	0.00	-0.43	-0.55
	CO21	266	0.000	-30.65	5.60	-7.56	0.00	0.38	-0.00
		290	0.100	-30.70	5.33	-7.56	0.00	-0.38	-0.55
	CO22	266	0.000	-30.00	5.56	-8.11	0.00	0.41	-0.00
		290	0.100	-30.05	5.29	-8.12	0.00	-0.41	-0.55
	CO23	266	0.000	-30.61	5.46	-9.23	0.01	0.46	-0.00
		290	0.100	-30.66	5.19	-9.23	0.00	-0.47	-0.54
	CO24	266	0.000	-31.16	5.20	-10.06	0.01	0.51	-0.00
		290	0.100	-31.21	4.94	-10.07	0.00	-0.51	-0.51
	CO25	266	0.000	-30.55	5.30	-8.95	0.00	0.45	-0.00
		290	0.100	-30.59	5.04	-8.95	0.00	-0.45	-0.52
	CO26	266	0.000	-31.26	5.50	-8.67	0.00	0.44	-0.00
		290	0.100	-31.31	5.22	-8.67	0.00	-0.44	-0.54
	CO27	266	0.000	-31.81	5.24	-9.50	0.01	0.48	-0.00
		290	0.100	-31.86	4.97	-9.51	0.00	-0.48	-0.52
	CO28	266	0.000	-31.20	5.35	-8.39	0.00	0.42	-0.00
		290	0.100	-31.25	5.08	-8.39	0.00	-0.42	-0.53
	CO29	266	0.000	-32.42	5.56	-9.01	0.01	0.45	-0.00
		290	0.100	-32.46	5.27	-9.01	0.00	-0.46	-0.55
	CO30	266	0.000	-33.03	5.45	-10.12	0.01	0.51	-0.00
		290	0.100	-33.08	5.16	-10.13	0.00	-0.51	-0.54
	CO31	266	0.000	-33.58	5.20	-10.96	0.01	0.55	-0.00
		290	0.100	-33.62	4.92	-10.96	0.00	-0.55	-0.51
	CO32	266	0.000	-32.97	5.30	-9.84	0.01	0.50	-0.00
		290	0.100	-33.01	5.02	-9.85	0.00	-0.50	-0.52
	CO33	266	0.000	-33.68	5.50	-9.56	0.01	0.48	-0.00



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
38	CO33	290	0.100	-33.73	5.20	-9.57	0.00	-0.48	-0.54
	CO34	266	0.000	-34.23	5.24	-10.40	0.01	0.53	-0.00
		290	0.100	-34.27	4.95	-10.40	0.00	-0.53	-0.52
	CO35	266	0.000	-33.62	5.34	-9.28	0.01	0.47	-0.00
		290	0.100	-33.66	5.06	-9.29	0.00	-0.47	-0.53
	CO36	266	0.000	-52.84	7.35	-9.26	0.01	0.47	-0.00
		290	0.100	-52.92	6.73	-9.26	0.00	-0.47	-0.72
	CO37	266	0.000	-30.06	5.99	-9.19	0.01	0.46	-0.00
		290	0.100	-30.11	5.70	-9.19	0.00	-0.46	-0.59
	CO38	266	0.000	-10.26	4.31	-8.37	0.01	0.42	-0.00
		290	0.100	-10.29	4.24	-8.38	0.00	-0.42	-0.43
	CO39	266	0.000	-33.07	5.60	-8.45	0.00	0.43	-0.00
290		0.100	-33.12	5.30	-8.45	0.00	-0.43	-0.55	
39	CC1	267	0.000	-12.62	-0.46	-0.14	0.00	0.01	-0.00
		291	0.100	-12.62	-0.46	-0.15	0.00	-0.01	0.05
	CC2	267	0.000	-4.74	-0.97	-4.33	0.00	0.22	-0.00
		291	0.100	-4.74	-0.97	-4.33	0.00	-0.22	0.10
	CC3	267	0.000	4.56	0.00	0.90	-0.00	-0.05	0.00
		291	0.100	4.56	0.00	0.90	-0.00	0.04	-0.00
	CC4	267	0.000	1.36	-0.03	-0.58	0.00	0.03	-0.00
		291	0.100	1.36	-0.03	-0.58	0.00	-0.03	0.00
	CC5	267	0.000	-0.92	-0.09	-1.15	0.00	0.06	-0.00
		291	0.100	-0.92	-0.09	-1.15	0.00	-0.06	0.01
	CC6	267	0.000	-0.83	-0.25	-0.87	0.00	0.04	-0.00
		291	0.100	-0.83	-0.25	-0.87	0.00	-0.04	0.03
	CC7	267	0.000	-17.88	1.63	-0.88	-0.00	0.04	-0.00
		291	0.100	-17.88	1.63	-0.88	-0.00	-0.04	-0.16
	CC8	267	0.000	19.24	-0.95	0.13	0.00	-0.01	0.00
		291	0.100	19.24	-0.95	0.13	0.00	0.01	0.09
	CC11	267	0.000	-19.25	7.28	-4.17	0.00	0.21	-0.00
		291	0.100	-19.25	7.28	-4.17	0.00	-0.21	-0.73
	CO1	267	0.000	-48.64	8.44	-11.09	0.01	0.56	-0.00
		291	0.100	-48.75	7.78	-11.10	0.01	-0.56	-0.82
	CO2	267	0.000	-42.50	8.41	-9.89	0.01	0.50	-0.00
		291	0.100	-42.61	7.83	-9.89	0.01	-0.50	-0.82
	CO3	267	0.000	-40.65	8.36	-10.63	0.01	0.54	-0.00
		291	0.100	-40.75	7.81	-10.64	0.01	-0.54	-0.82
	CO4	267	0.000	-41.84	8.25	-12.13	0.01	0.61	-0.00
		291	0.100	-41.95	7.69	-12.13	0.01	-0.62	-0.81
	CO5	267	0.000	-42.90	7.93	-13.24	0.01	0.67	-0.00
		291	0.100	-43.00	7.38	-13.25	0.01	-0.67	-0.78
	CO6	267	0.000	-41.71	8.04	-11.75	0.01	0.59	-0.00
		291	0.100	-41.81	7.50	-11.75	0.01	-0.60	-0.79
CO7	267	0.000	-43.70	8.30	-11.38	0.01	0.57	-0.00	
	291	0.100	-43.80	7.71	-11.38	0.01	-0.58	-0.81	
CO8	267	0.000	-44.76	7.97	-12.49	0.01	0.63	-0.00	
	291	0.100	-44.86	7.40	-12.50	0.01	-0.64	-0.78	
CO9	267	0.000	-43.56	8.09	-11.00	0.01	0.56	-0.00	
	291	0.100	-43.66	7.52	-11.01	0.01	-0.56	-0.79	
CO10	267	0.000	-46.79	8.39	-11.84	0.01	0.60	-0.00	
	291	0.100	-46.90	7.76	-11.84	0.01	-0.60	-0.82	
CO11	267	0.000	-47.99	8.28	-13.33	0.01	0.67	-0.00	
	291	0.100	-48.09	7.64	-13.33	0.01	-0.68	-0.81	
CO12	267	0.000	-49.05	7.96	-14.44	0.02	0.73	-0.00	
	291	0.100	-49.15	7.33	-14.45	0.01	-0.73	-0.78	
CO13	267	0.000	-47.85	8.07	-12.95	0.01	0.66	-0.00	
	291	0.100	-47.95	7.45	-12.96	0.01	-0.66	-0.79	
CO14	267	0.000	-49.84	8.32	-12.58	0.01	0.64	-0.00	
	291	0.100	-49.95	7.66	-12.58	0.01	-0.64	-0.81	
CO15	267	0.000	-50.90	8.00	-13.69	0.01	0.69	-0.00	
	291	0.100	-51.00	7.35	-13.70	0.01	-0.70	-0.78	
CO16	267	0.000	-49.70	8.12	-12.20	0.01	0.62	-0.00	
	291	0.100	-49.80	7.47	-12.21	0.01	-0.62	-0.79	
CO17	267	0.000	-72.48	10.91	-12.18	0.01	0.62	-0.00	
	291	0.100	-72.65	9.66	-12.18	0.00	-0.63	-1.05	
CO18	267	0.000	-46.79	9.35	-12.03	0.02	0.61	-0.00	
	291	0.100	-46.93	8.65	-12.04	0.01	-0.61	-0.91	
CO19	267	0.000	-22.92	6.99	-10.93	0.01	0.55	-0.00	
	291	0.100	-22.99	6.73	-10.94	0.01	-0.55	-0.69	
CO20	267	0.000	-36.05	6.16	-8.24	0.01	0.42	-0.00	
	291	0.100	-36.11	5.81	-8.24	0.00	-0.42	-0.61	
CO21	267	0.000	-31.51	6.15	-7.34	0.01	0.37	-0.00	
	291	0.100	-31.57	5.84	-7.35	0.00	-0.37	-0.61	
CO22	267	0.000	-30.14	6.11	-7.90	0.01	0.40	-0.00	
	291	0.100	-30.20	5.82	-7.90	0.00	-0.40	-0.60	
CO23	267	0.000	-31.03	6.03	-9.00	0.01	0.45	-0.00	
	291	0.100	-31.09	5.73	-9.01	0.00	-0.46	-0.59	
CO24	267	0.000	-31.81	5.79	-9.83	0.01	0.49	-0.00	
	291	0.100	-31.87	5.50	-9.83	0.00	-0.50	-0.57	
CO25	267	0.000	-30.93	5.88	-8.72	0.01	0.44	-0.00	
	291	0.100	-30.98	5.59	-8.73	0.00	-0.44	-0.58	
CO26	267	0.000	-32.40	6.06	-8.45	0.01	0.43	-0.00	
	291	0.100	-32.45	5.75	-8.45	0.00	-0.43	-0.60	
CO27	267	0.000	-33.18	5.83	-9.28	0.01	0.47	-0.00	
	291	0.100	-33.23	5.52	-9.28	0.00	-0.47	-0.57	
CO28	267	0.000	-32.29	5.91	-8.17	0.01	0.41	-0.00	
	291	0.100	-32.35	5.60	-8.17	0.00	-0.41	-0.58	
CO29	267	0.000	-34.68	6.13	-8.79	0.01	0.44	-0.00	
	291	0.100	-34.74	5.79	-8.80	0.00	-0.45	-0.60	
CO30	267	0.000	-35.57	6.05	-9.90	0.01	0.50	-0.00	
	291	0.100	-35.63	5.70	-9.90	0.00	-0.50	-0.59	

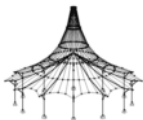


Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
39	CO31	267	0.000	-36.36	5.81	-10.72	0.01	0.54	-0.00
		291	0.100	-36.41	5.47	-10.73	0.00	-0.54	-0.57
	CO32	267	0.000	-35.47	5.89	-9.62	0.01	0.49	-0.00
		291	0.100	-35.52	5.56	-9.62	0.00	-0.49	-0.58
	CO33	267	0.000	-36.94	6.08	-9.34	0.01	0.47	-0.00
		291	0.100	-37.00	5.72	-9.35	0.00	-0.47	-0.60
	CO34	267	0.000	-37.72	5.84	-10.17	0.01	0.51	-0.00
		291	0.100	-37.78	5.49	-10.17	0.00	-0.52	-0.57
	CO35	267	0.000	-36.84	5.92	-9.07	0.01	0.46	-0.00
		291	0.100	-36.89	5.57	-9.07	0.00	-0.46	-0.58
	CO36	267	0.000	-53.74	7.93	-9.05	0.01	0.46	-0.00
		291	0.100	-53.83	7.25	-9.06	0.00	-0.46	-0.77
CO37	267	0.000	-34.68	6.83	-8.94	0.01	0.45	-0.00	
	291	0.100	-34.76	6.45	-8.94	0.01	-0.45	-0.67	
CO38	267	0.000	-16.98	5.12	-8.11	0.01	0.41	-0.00	
	291	0.100	-17.02	4.98	-8.12	0.01	-0.41	-0.51	
CO39	267	0.000	-36.05	6.16	-8.24	0.01	0.42	-0.00	
	291	0.100	-36.11	5.81	-8.24	0.00	-0.42	-0.61	
40 CC1	268	0.000	-12.95	-0.49	-0.08	0.00	0.00	0.00	
	292	0.100	-12.95	-0.49	-0.08	0.00	-0.00	0.05	
CC2	268	0.000	-6.21	-0.82	-4.27	0.00	0.21	-0.00	
	292	0.100	-6.21	-0.82	-4.27	0.00	-0.21	0.08	
CC3	268	0.000	6.53	0.00	0.91	0.00	-0.05	0.00	
	292	0.100	6.53	0.00	0.91	0.00	0.05	-0.00	
CC4	268	0.000	2.04	-0.01	-0.57	0.00	0.03	-0.00	
	292	0.100	2.04	-0.01	-0.57	0.00	-0.03	0.00	
CC5	268	0.000	-1.15	-0.07	-1.13	0.00	0.06	-0.00	
	292	0.100	-1.15	-0.07	-1.13	0.00	-0.06	0.01	
CC6	268	0.000	-1.06	-0.21	-0.86	0.00	0.04	-0.00	
	292	0.100	-1.06	-0.21	-0.86	0.00	-0.04	0.02	
CC7	268	0.000	-15.57	1.69	-0.86	-0.00	0.04	0.00	
	292	0.100	-15.57	1.69	-0.86	-0.00	-0.05	-0.17	
CC8	268	0.000	14.98	-0.73	0.18	0.00	-0.01	-0.00	
	292	0.100	14.98	-0.73	0.18	0.00	0.01	0.07	
CC11	268	0.000	-20.67	8.10	-3.93	0.00	0.19	0.00	
	292	0.100	-20.67	8.10	-3.93	0.00	-0.20	-0.81	
CO1	268	0.000	-52.90	9.66	-10.63	0.02	0.54	0.00	
	292	0.100	-53.05	8.85	-10.63	0.01	-0.54	-0.94	
CO2	268	0.000	-44.08	9.61	-9.42	0.02	0.47	0.00	
	292	0.100	-44.22	8.93	-9.43	0.01	-0.48	-0.94	
CO3	268	0.000	-41.30	9.57	-10.16	0.02	0.51	0.00	
	292	0.100	-41.44	8.94	-10.16	0.01	-0.52	-0.94	
CO4	268	0.000	-42.79	9.50	-11.63	0.02	0.59	0.00	
	292	0.100	-42.93	8.84	-11.64	0.01	-0.59	-0.93	
CO5	268	0.000	-44.14	9.23	-12.73	0.02	0.64	0.00	
	292	0.100	-44.27	8.57	-12.73	0.01	-0.65	-0.90	
CO6	268	0.000	-42.64	9.31	-11.26	0.02	0.57	0.00	
	292	0.100	-42.78	8.67	-11.26	0.01	-0.57	-0.91	
CO7	268	0.000	-45.57	9.53	-10.90	0.02	0.55	0.00	
	292	0.100	-45.71	8.83	-10.90	0.01	-0.56	-0.93	
CO8	268	0.000	-46.92	9.26	-11.99	0.02	0.60	0.00	
	292	0.100	-47.05	8.57	-12.00	0.01	-0.61	-0.90	
CO9	268	0.000	-45.42	9.34	-10.52	0.02	0.53	0.00	
	292	0.100	-45.56	8.66	-10.52	0.01	-0.54	-0.91	
CO10	268	0.000	-50.13	9.63	-11.36	0.02	0.57	0.00	
	292	0.100	-50.27	8.86	-11.37	0.01	-0.58	-0.94	
CO11	268	0.000	-51.62	9.55	-12.83	0.02	0.65	0.00	
	292	0.100	-51.76	8.76	-12.84	0.01	-0.66	-0.93	
CO12	268	0.000	-52.97	9.28	-13.93	0.02	0.70	0.00	
	292	0.100	-53.10	8.50	-13.93	0.01	-0.71	-0.90	
CO13	268	0.000	-51.47	9.36	-12.46	0.02	0.63	0.00	
	292	0.100	-51.61	8.59	-12.46	0.01	-0.64	-0.91	
CO14	268	0.000	-54.40	9.58	-12.10	0.02	0.61	0.00	
	292	0.100	-54.54	8.75	-12.10	0.01	-0.62	-0.93	
CO15	268	0.000	-55.75	9.32	-13.19	0.02	0.67	0.00	
	292	0.100	-55.88	8.49	-13.19	0.01	-0.67	-0.91	
CO16	268	0.000	-54.25	9.40	-11.72	0.02	0.59	0.00	
	292	0.100	-54.39	8.58	-11.72	0.01	-0.60	-0.91	
CO17	268	0.000	-73.71	12.17	-11.72	0.02	0.59	0.00	
	292	0.100	-73.94	10.75	-11.71	0.01	-0.61	-1.17	
CO18	268	0.000	-53.63	10.97	-11.49	0.02	0.58	0.00	
	292	0.100	-53.82	10.03	-11.49	0.01	-0.59	-1.07	
CO19	268	0.000	-32.78	8.55	-10.38	0.02	0.52	-0.00	
	292	0.100	-32.90	8.10	-10.39	0.01	-0.53	-0.84	
CO20	268	0.000	-39.21	7.06	-7.90	0.01	0.40	0.00	
	292	0.100	-39.29	6.62	-7.90	0.01	-0.40	-0.69	
CO21	268	0.000	-32.68	7.03	-7.00	0.01	0.35	0.00	
	292	0.100	-32.76	6.66	-7.00	0.01	-0.36	-0.69	
CO22	268	0.000	-30.63	7.01	-7.54	0.01	0.38	0.00	
	292	0.100	-30.71	6.67	-7.54	0.01	-0.38	-0.69	
CO23	268	0.000	-31.74	6.95	-8.64	0.01	0.43	0.00	
	292	0.100	-31.81	6.60	-8.64	0.01	-0.44	-0.68	
CO24	268	0.000	-32.74	6.75	-9.45	0.01	0.47	0.00	
	292	0.100	-32.81	6.40	-9.45	0.01	-0.48	-0.66	
CO25	268	0.000	-31.63	6.81	-8.36	0.01	0.42	0.00	
	292	0.100	-31.70	6.47	-8.36	0.01	-0.43	-0.67	
CO26	268	0.000	-33.79	6.97	-8.09	0.01	0.41	0.00	
	292	0.100	-33.87	6.59	-8.09	0.01	-0.41	-0.69	
CO27	268	0.000	-34.79	6.78	-8.91	0.01	0.45	0.00	
	292	0.100	-34.86	6.40	-8.91	0.01	-0.45	-0.67	
CO28	268	0.000	-33.68	6.83	-7.81	0.01	0.39	0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
40	CO28	292	0.100	-33.75	6.46	-7.82	0.01	-0.40	-0.67
	CO29	268	0.000	-37.16	7.04	-8.44	0.01	0.42	0.00
		292	0.100	-37.24	6.62	-8.44	0.01	-0.43	-0.69
	CO30	268	0.000	-38.27	6.98	-9.53	0.01	0.48	-0.00
		292	0.100	-38.34	6.55	-9.53	0.01	-0.49	-0.68
	CO31	268	0.000	-39.27	6.78	-10.34	0.01	0.52	-0.00
		292	0.100	-39.34	6.36	-10.35	0.01	-0.53	-0.66
	CO32	268	0.000	-38.16	6.84	-9.25	0.01	0.47	0.00
		292	0.100	-38.23	6.42	-9.26	0.01	-0.47	-0.67
	CO33	268	0.000	-40.32	7.00	-8.99	0.01	0.45	0.00
		292	0.100	-40.40	6.55	-8.99	0.01	-0.46	-0.69
	CO34	268	0.000	-41.32	6.80	-9.80	0.01	0.49	0.00
		292	0.100	-41.39	6.35	-9.80	0.01	-0.50	-0.67
	CO35	268	0.000	-40.21	6.86	-8.71	0.01	0.44	0.00
		292	0.100	-40.28	6.42	-8.71	0.01	-0.44	-0.67
	CO36	268	0.000	-54.66	8.86	-8.71	0.01	0.44	0.00
		292	0.100	-54.78	8.09	-8.71	0.01	-0.45	-0.86
	CO37	268	0.000	-39.75	8.01	-8.54	0.01	0.43	-0.00
		292	0.100	-39.85	7.50	-8.54	0.01	-0.44	-0.79
	CO38	268	0.000	-24.29	6.26	-7.71	0.01	0.39	-0.00
		292	0.100	-24.35	6.01	-7.72	0.01	-0.39	-0.62
	CO39	268	0.000	-39.21	7.06	-7.90	0.01	0.40	0.00
		292	0.100	-39.29	6.62	-7.90	0.01	-0.40	-0.69
	CC1	269	0.000	-13.54	-0.50	0.04	0.00	-0.00	0.00
		293	0.100	-13.54	-0.50	0.03	0.00	0.00	0.05
	CC2	269	0.000	-7.74	-0.59	-4.12	0.00	0.21	-0.00
		293	0.100	-7.74	-0.59	-4.12	0.00	-0.21	0.06
	CC3	269	0.000	8.54	0.00	0.89	0.00	-0.05	0.00
		293	0.100	8.54	0.00	0.89	0.00	0.04	-0.00
	CC4	269	0.000	2.73	0.00	-0.55	0.00	0.03	-0.00
		293	0.100	2.73	0.00	-0.55	0.00	-0.03	-0.00
	CC5	269	0.000	-1.37	-0.04	-1.10	0.00	0.05	-0.00
		293	0.100	-1.37	-0.04	-1.10	0.00	-0.05	0.00
	CC6	269	0.000	-1.30	-0.15	-0.82	0.00	0.04	-0.00
		293	0.100	-1.30	-0.15	-0.82	0.00	-0.04	0.02
	CC7	269	0.000	-13.77	1.78	-0.83	-0.00	0.04	-0.00
293		0.100	-13.77	1.78	-0.83	-0.00	-0.04	-0.18	
CC8	269	0.000	10.98	-0.52	0.22	0.00	-0.01	0.00	
	293	0.100	10.98	-0.52	0.22	0.00	0.01	0.05	
CC11	269	0.000	-23.32	9.19	-3.63	0.01	0.18	-0.00	
	293	0.100	-23.32	9.19	-3.63	0.01	-0.18	-0.92	
CO1	269	0.000	-59.21	11.36	-9.94	0.02	0.50	-0.00	
	293	0.100	-59.40	10.29	-9.94	0.01	-0.51	-1.10	
CO2	269	0.000	-47.67	11.28	-8.76	0.02	0.44	-0.00	
	293	0.100	-47.86	10.42	-8.76	0.01	-0.45	-1.10	
CO3	269	0.000	-43.96	11.26	-9.47	0.02	0.48	-0.00	
	293	0.100	-44.15	10.47	-9.48	0.01	-0.48	-1.10	
CO4	269	0.000	-45.74	11.22	-10.90	0.02	0.55	-0.00	
	293	0.100	-45.94	10.40	-10.91	0.01	-0.56	-1.10	
CO5	269	0.000	-47.40	11.04	-11.96	0.02	0.60	-0.00	
	293	0.100	-47.58	10.20	-11.97	0.01	-0.61	-1.08	
CO6	269	0.000	-45.61	11.08	-10.53	0.02	0.53	-0.00	
	293	0.100	-45.80	10.27	-10.54	0.01	-0.54	-1.08	
CO7	269	0.000	-49.45	11.24	-10.19	0.02	0.51	-0.00	
	293	0.100	-49.65	10.35	-10.20	0.01	-0.52	-1.10	
CO8	269	0.000	-51.11	11.06	-11.24	0.02	0.57	-0.00	
	293	0.100	-51.29	10.16	-11.25	0.01	-0.57	-1.08	
CO9	269	0.000	-49.32	11.10	-9.81	0.02	0.50	-0.00	
	293	0.100	-49.51	10.22	-9.82	0.01	-0.50	-1.08	
CO10	269	0.000	-55.50	11.34	-10.65	0.02	0.54	-0.00	
	293	0.100	-55.70	10.33	-10.66	0.01	-0.54	-1.10	
CO11	269	0.000	-57.29	11.30	-12.08	0.02	0.61	-0.00	
	293	0.100	-57.48	10.27	-12.08	0.01	-0.62	-1.10	
CO12	269	0.000	-58.94	11.12	-13.13	0.03	0.67	-0.00	
	293	0.100	-59.13	10.07	-13.13	0.01	-0.67	-1.08	
CO13	269	0.000	-57.16	11.16	-11.70	0.02	0.59	-0.00	
	293	0.100	-57.35	10.14	-11.71	0.01	-0.60	-1.08	
CO14	269	0.000	-60.99	11.32	-11.36	0.02	0.58	-0.00	
	293	0.100	-61.19	10.22	-11.37	0.01	-0.58	-1.10	
CO15	269	0.000	-62.65	11.14	-12.41	0.02	0.63	-0.00	
	293	0.100	-62.84	10.03	-12.42	0.01	-0.63	-1.08	
CO16	269	0.000	-60.87	11.18	-10.99	0.02	0.56	-0.00	
	293	0.100	-61.05	10.09	-10.99	0.01	-0.56	-1.08	
CO17	269	0.000	-77.64	13.94	-10.99	0.02	0.56	-0.00	
	293	0.100	-77.93	12.22	-10.99	0.01	-0.57	-1.34	
CO18	269	0.000	-62.85	13.09	-10.69	0.02	0.54	-0.00	
	293	0.100	-63.11	11.78	-10.70	0.02	-0.55	-1.27	
CO19	269	0.000	-44.38	10.57	-9.62	0.02	0.49	-0.00	
	293	0.100	-44.56	9.81	-9.63	0.02	-0.49	-1.03	
CO20	269	0.000	-43.89	8.31	-7.39	0.01	0.37	-0.00	
	293	0.100	-43.99	7.72	-7.39	0.01	-0.38	-0.81	
CO21	269	0.000	-35.35	8.27	-6.51	0.01	0.33	-0.00	
	293	0.100	-35.46	7.80	-6.51	0.01	-0.33	-0.81	
CO22	269	0.000	-32.61	8.26	-7.03	0.01	0.35	-0.00	
	293	0.100	-32.72	7.82	-7.04	0.01	-0.36	-0.81	
CO23	269	0.000	-33.93	8.23	-8.10	0.01	0.41	-0.00	
	293	0.100	-34.04	7.78	-8.10	0.01	-0.41	-0.81	
CO24	269	0.000	-35.16	8.09	-8.88	0.02	0.45	-0.00	
	293	0.100	-35.26	7.63	-8.89	0.01	-0.45	-0.79	
CO25	269	0.000	-33.84	8.12	-7.82	0.01	0.39	-0.00	
	293	0.100	-33.94	7.68	-7.82	0.01	-0.40	-0.80	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]		
				N	V _y	V _z		M _y	M _z	
41	CO26	269	0.000	-36.67	8.24	-7.57	0.01	0.38	-0.00	
		293	0.100	-36.78	7.75	-7.57	0.01	-0.38	-0.81	
	CO27	269	0.000	-37.90	8.10	-8.35	0.02	0.42	-0.00	
		293	0.100	-38.00	7.61	-8.36	0.01	-0.42	-0.79	
	CO28	269	0.000	-36.58	8.13	-7.29	0.01	0.37	-0.00	
		293	0.100	-36.68	7.65	-7.29	0.01	-0.37	-0.80	
	CO29	269	0.000	-41.15	8.30	-7.91	0.01	0.40	-0.00	
		293	0.100	-41.26	7.75	-7.92	0.01	-0.40	-0.81	
	CO30	269	0.000	-42.47	8.27	-8.97	0.02	0.45	-0.00	
		293	0.100	-42.58	7.70	-8.98	0.01	-0.46	-0.81	
	CO31	269	0.000	-43.70	8.13	-9.75	0.02	0.49	-0.00	
		293	0.100	-43.80	7.56	-9.76	0.01	-0.50	-0.80	
	CO32	269	0.000	-42.38	8.16	-8.70	0.02	0.44	-0.00	
		293	0.100	-42.48	7.61	-8.70	0.01	-0.44	-0.80	
	CO33	269	0.000	-45.21	8.28	-8.44	0.01	0.43	-0.00	
		293	0.100	-45.32	7.68	-8.45	0.01	-0.43	-0.81	
	CO34	269	0.000	-46.44	8.14	-9.23	0.02	0.47	-0.00	
		293	0.100	-46.54	7.54	-9.23	0.01	-0.47	-0.80	
	CO35	269	0.000	-45.11	8.17	-8.17	0.01	0.41	-0.00	
		293	0.100	-45.22	7.58	-8.17	0.01	-0.42	-0.80	
	CO36	269	0.000	-57.58	10.17	-8.17	0.01	0.41	-0.00	
		293	0.100	-57.73	9.24	-8.18	0.01	-0.42	-0.99	
	CO37	269	0.000	-46.59	9.56	-7.95	0.02	0.40	-0.00	
		293	0.100	-46.73	8.85	-7.96	0.01	-0.41	-0.93	
	CO38	269	0.000	-32.88	7.73	-7.16	0.02	0.36	-0.00	
		293	0.100	-32.98	7.32	-7.16	0.01	-0.36	-0.76	
	CO39	269	0.000	-43.89	8.31	-7.39	0.01	0.37	-0.00	
		293	0.100	-43.99	7.72	-7.39	0.01	-0.38	-0.81	
	42	CC1	270	0.000	-15.45	-0.45	0.23	0.00	-0.01	0.00
			294	0.100	-15.45	-0.45	0.23	0.00	0.01	0.04
	CC2	270	0.000	-10.16	-0.24	-4.03	0.00	0.20	-0.00	
		294	0.100	-10.16	-0.24	-4.03	0.00	-0.20	0.02	
	CC3	270	0.000	10.91	0.01	0.92	0.00	-0.05	0.00	
		294	0.100	10.91	0.01	0.92	0.00	0.05	-0.00	
	CC4	270	0.000	3.48	0.02	-0.54	0.00	0.03	-0.00	
		294	0.100	3.48	0.02	-0.54	0.00	-0.03	-0.00	
CC5	270	0.000	-1.69	-0.01	-1.09	0.00	0.05	-0.00		
	294	0.100	-1.69	-0.01	-1.09	0.00	-0.05	0.00		
CC6	270	0.000	-1.75	-0.06	-0.80	0.00	0.04	-0.00		
	294	0.100	-1.75	-0.06	-0.80	0.00	-0.04	0.01		
CC7	270	0.000	-13.43	1.90	-0.81	0.00	0.04	0.00		
	294	0.100	-13.43	1.90	-0.81	0.00	-0.04	-0.19		
CC8	270	0.000	6.99	-0.38	0.33	0.00	-0.02	-0.00		
	294	0.100	6.99	-0.38	0.33	0.00	0.02	0.04		
CC11	270	0.000	-31.82	10.39	-3.18	0.01	0.16	0.00		
	294	0.100	-31.82	10.39	-3.18	0.01	-0.16	-1.04		
CO1	270	0.000	-75.77	13.44	-8.99	0.02	0.46	0.00		
	294	0.100	-76.04	11.82	-9.00	0.02	-0.46	-1.29		
CO2	270	0.000	-61.05	13.33	-7.79	0.02	0.39	0.00		
	294	0.100	-61.32	12.04	-7.80	0.02	-0.40	-1.29		
CO3	270	0.000	-56.32	13.33	-8.49	0.02	0.43	0.00		
	294	0.100	-56.59	12.13	-8.50	0.02	-0.43	-1.30		
CO4	270	0.000	-58.50	13.33	-9.91	0.03	0.50	0.00		
	294	0.100	-58.77	12.09	-9.92	0.02	-0.51	-1.29		
CO5	270	0.000	-60.72	13.28	-10.93	0.03	0.55	0.00		
	294	0.100	-60.99	11.99	-10.93	0.02	-0.56	-1.29		
CO6	270	0.000	-58.54	13.28	-9.51	0.03	0.48	0.00		
	294	0.100	-58.81	12.03	-9.52	0.02	-0.49	-1.29		
CO7	270	0.000	-63.23	13.34	-9.21	0.02	0.47	0.00		
	294	0.100	-63.50	11.99	-9.22	0.02	-0.47	-1.29		
CO8	270	0.000	-65.45	13.29	-10.22	0.03	0.52	0.00		
	294	0.100	-65.72	11.90	-10.23	0.02	-0.52	-1.29		
CO9	270	0.000	-63.27	13.28	-8.81	0.03	0.45	0.00		
	294	0.100	-63.54	11.94	-8.82	0.02	-0.45	-1.29		
CO10	270	0.000	-71.04	13.43	-9.69	0.03	0.49	0.00		
	294	0.100	-71.31	11.91	-9.69	0.02	-0.50	-1.30		
CO11	270	0.000	-73.22	13.43	-11.10	0.03	0.57	0.00		
	294	0.100	-73.49	11.87	-11.10	0.02	-0.57	-1.29		
CO12	270	0.000	-75.44	13.38	-12.11	0.03	0.62	0.00		
	294	0.100	-75.71	11.78	-12.11	0.02	-0.62	-1.29		
CO13	270	0.000	-73.26	13.38	-10.70	0.03	0.55	0.00		
	294	0.100	-73.53	11.82	-10.71	0.02	-0.55	-1.29		
CO14	270	0.000	-77.95	13.44	-10.40	0.03	0.53	0.00		
	294	0.100	-78.22	11.78	-10.40	0.02	-0.53	-1.29		
CO15	270	0.000	-80.17	13.39	-11.40	0.03	0.58	0.00		
	294	0.100	-80.44	11.69	-11.41	0.02	-0.59	-1.29		
CO16	270	0.000	-77.99	13.39	-10.00	0.03	0.51	0.00		
	294	0.100	-78.26	11.73	-10.01	0.02	-0.51	-1.29		
CO17	270	0.000	-93.68	16.12	-10.02	0.03	0.51	0.00		
	294	0.100	-94.06	13.73	-10.02	0.02	-0.52	-1.54		
CO18	270	0.000	-84.17	15.55	-9.57	0.03	0.49	0.00		
	294	0.100	-84.53	13.47	-9.58	0.02	-0.49	-1.49		
CO19	270	0.000	-66.24	12.90	-8.52	0.03	0.43	-0.00		
	294	0.100	-66.49	11.54	-8.53	0.02	-0.44	-1.25		
CO20	270	0.000	-56.16	9.83	-6.69	0.02	0.34	0.00		
	294	0.100	-56.31	8.95	-6.70	0.01	-0.34	-0.96		
CO21	270	0.000	-45.28	9.77	-5.79	0.02	0.29	0.00		
	294	0.100	-45.43	9.07	-5.80	0.01	-0.30	-0.96		
CO22	270	0.000	-41.78	9.78	-6.31	0.02	0.32	0.00		
	294	0.100	-41.93	9.12	-6.32	0.01	-0.32	-0.96		
CO23	270	0.000	-43.40	9.78	-7.36	0.02	0.37	0.00		
		0.000	-43.40	9.78	-7.36	0.02	0.37	0.00		



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
42	CO23	294	0.100	-43.55	9.10	-7.37	0.01	-0.38	-0.96
	CO24	270	0.000	-45.04	9.74	-8.12	0.02	0.41	0.00
		294	0.100	-45.19	9.03	-8.13	0.01	-0.41	-0.95
	CO25	270	0.000	-43.43	9.74	-7.07	0.02	0.36	0.00
		294	0.100	-43.57	9.06	-7.07	0.01	-0.36	-0.95
	CO26	270	0.000	-46.89	9.77	-6.85	0.02	0.35	0.00
		294	0.100	-47.04	9.04	-6.85	0.01	-0.35	-0.95
	CO27	270	0.000	-48.54	9.73	-7.60	0.02	0.38	0.00
		294	0.100	-48.68	8.98	-7.61	0.01	-0.39	-0.95
	CO28	270	0.000	-46.92	9.73	-6.55	0.02	0.33	0.00
		294	0.100	-47.07	9.00	-6.56	0.01	-0.33	-0.95
	CO29	270	0.000	-52.67	9.83	-7.21	0.02	0.36	0.00
		294	0.100	-52.82	9.00	-7.21	0.01	-0.37	-0.96
	CO30	270	0.000	-54.29	9.83	-8.25	0.02	0.42	0.00
		294	0.100	-54.43	8.98	-8.26	0.01	-0.42	-0.96
	CO31	270	0.000	-55.93	9.79	-9.01	0.02	0.46	0.00
		294	0.100	-56.07	8.91	-9.01	0.01	-0.46	-0.95
	CO32	270	0.000	-54.31	9.79	-7.96	0.02	0.40	0.00
		294	0.100	-54.46	8.94	-7.97	0.01	-0.41	-0.95
	CO33	270	0.000	-57.78	9.83	-7.74	0.02	0.39	0.00
		294	0.100	-57.93	8.92	-7.74	0.01	-0.40	-0.95
	CO34	270	0.000	-59.42	9.79	-8.49	0.02	0.43	0.00
		294	0.100	-59.57	8.86	-8.50	0.01	-0.43	-0.95
	CO35	270	0.000	-57.81	9.79	-7.44	0.02	0.38	0.00
		294	0.100	-57.95	8.88	-7.45	0.01	-0.38	-0.95
	CO36	270	0.000	-69.47	11.77	-7.46	0.02	0.38	0.00
		294	0.100	-69.67	10.48	-7.46	0.01	-0.38	-1.14
	CO37	270	0.000	-62.39	11.35	-7.13	0.02	0.36	0.00
		294	0.100	-62.59	10.23	-7.13	0.01	-0.37	-1.10
	CO38	270	0.000	-49.08	9.42	-6.35	0.02	0.32	-0.00
		294	0.100	-49.21	8.68	-6.36	0.01	-0.32	-0.92
	CO39	270	0.000	-56.16	9.83	-6.69	0.02	0.34	0.00
		294	0.100	-56.31	8.95	-6.70	0.01	-0.34	-0.96
	CC1	26	0.000	-24.20	-0.85	1.41	0.00	-0.07	-0.04
		45	0.100	-24.20	-0.85	1.41	0.00	0.08	0.04
	CC2	26	0.000	-16.29	0.80	-3.47	0.00	0.18	0.04
		45	0.100	-16.29	0.80	-3.47	0.00	-0.17	-0.04
	CC3	26	0.000	11.16	0.12	0.96	0.00	-0.05	0.01
		45	0.100	11.16	0.12	0.96	0.00	0.05	-0.00
	CC4	26	0.000	3.60	0.16	-0.54	0.00	0.03	0.01
45		0.100	3.60	0.16	-0.54	0.00	-0.03	-0.01	
CC5	26	0.000	-1.58	0.08	-1.11	0.00	0.06	0.00	
	45	0.100	-1.58	0.08	-1.11	0.00	-0.06	-0.00	
CC6	26	0.000	-3.50	0.25	-0.63	0.00	0.03	0.01	
	45	0.100	-3.50	0.25	-0.63	0.00	-0.03	-0.01	
CC7	26	0.000	-17.35	6.44	-0.84	0.00	0.04	0.31	
	45	0.100	-17.35	6.44	-0.84	0.00	-0.04	-0.33	
CC8	26	0.000	-0.79	-1.92	0.64	-0.00	-0.03	-0.10	
	45	0.100	-0.79	-1.92	0.64	-0.00	0.03	0.10	
CC11	26	0.000	-69.42	36.92	-2.28	-0.00	0.11	1.79	
	45	0.100	-69.42	36.92	-2.28	-0.00	-0.12	-1.91	
CO1	26	0.000	-143.27	47.39	-5.62	0.01	0.30	2.40	
	45	0.100	-143.38	47.05	-5.67	0.01	-0.29	-2.54	
CO2	26	0.000	-128.14	47.60	-4.39	0.01	0.24	2.40	
	45	0.100	-128.24	47.30	-4.44	0.01	-0.22	-2.54	
CO3	26	0.000	-123.22	47.83	-5.07	0.01	0.27	2.41	
	45	0.100	-123.33	47.55	-5.12	0.01	-0.26	-2.55	
CO4	26	0.000	-125.27	47.92	-6.48	0.01	0.35	2.42	
	45	0.100	-125.38	47.63	-6.53	0.01	-0.33	-2.55	
CO5	26	0.000	-129.74	48.20	-7.26	0.01	0.39	2.43	
	45	0.100	-129.85	47.90	-7.32	0.01	-0.37	-2.57	
CO6	26	0.000	-127.69	48.11	-5.86	0.01	0.31	2.43	
	45	0.100	-127.79	47.81	-5.92	0.01	-0.30	-2.56	
CO7	26	0.000	-130.19	47.69	-5.80	0.01	0.31	2.41	
	45	0.100	-130.30	47.39	-5.85	0.01	-0.30	-2.54	
CO8	26	0.000	-134.65	47.97	-6.58	0.01	0.35	2.42	
	45	0.100	-134.76	47.65	-6.64	0.01	-0.34	-2.56	
CO9	26	0.000	-132.60	47.87	-5.17	0.01	0.28	2.42	
	45	0.100	-132.71	47.56	-5.23	0.01	-0.26	-2.56	
CO10	26	0.000	-138.36	47.62	-6.30	0.01	0.34	2.41	
	45	0.100	-138.47	47.30	-6.36	0.01	-0.32	-2.55	
CO11	26	0.000	-140.41	47.72	-7.70	0.01	0.41	2.41	
	45	0.100	-140.52	47.38	-7.76	0.01	-0.40	-2.55	
CO12	26	0.000	-144.87	47.99	-8.48	0.01	0.45	2.43	
	45	0.100	-144.98	47.65	-8.54	0.01	-0.44	-2.57	
CO13	26	0.000	-142.82	47.90	-7.08	0.01	0.38	2.43	
	45	0.100	-142.93	47.56	-7.14	0.01	-0.36	-2.57	
CO14	26	0.000	-145.32	47.48	-7.02	0.01	0.38	2.41	
	45	0.100	-145.43	47.14	-7.07	0.01	-0.36	-2.55	
CO15	26	0.000	-149.78	47.76	-7.79	0.01	0.42	2.42	
	45	0.100	-149.89	47.40	-7.86	0.01	-0.40	-2.56	
CO16	26	0.000	-147.73	47.67	-6.39	0.01	0.35	2.42	
	45	0.100	-147.84	47.31	-6.46	0.01	-0.33	-2.56	
CO17	26	0.000	-166.29	54.99	-6.65	0.01	0.36	2.80	
	45	0.100	-166.44	54.52	-6.71	0.01	-0.35	-2.97	
CO18	26	0.000	-166.76	52.86	-5.84	0.00	0.32	2.69	
	45	0.100	-166.90	52.39	-5.89	0.01	-0.30	-2.86	
CO19	26	0.000	-143.73	45.26	-4.79	0.00	0.26	2.29	
	45	0.100	-143.84	44.92	-4.83	0.00	-0.24	-2.43	
CO20	26	0.000	-106.13	35.35	-4.21	0.00	0.22	1.77	
	45	0.100	-106.19	35.16	-4.24	0.01	-0.21	-1.87	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
43	CO21	26	0.000	-94.93	35.49	-3.29	0.00	0.18	1.77
		45	0.100	-94.99	35.32	-3.32	0.01	-0.16	-1.87
	CO22	26	0.000	-91.29	35.66	-3.80	0.00	0.20	1.78
		45	0.100	-91.35	35.50	-3.83	0.01	-0.19	-1.88
	CO23	26	0.000	-92.82	35.73	-4.85	0.01	0.26	1.78
		45	0.100	-92.88	35.57	-4.88	0.01	-0.25	-1.89
	CO24	26	0.000	-96.13	35.94	-5.44	0.01	0.29	1.80
		45	0.100	-96.19	35.78	-5.47	0.01	-0.27	-1.90
	CO25	26	0.000	-94.60	35.87	-4.39	0.01	0.23	1.79
		45	0.100	-94.66	35.71	-4.42	0.01	-0.22	-1.89
	CO26	26	0.000	-96.45	35.56	-4.34	0.01	0.23	1.78
		45	0.100	-96.51	35.39	-4.37	0.01	-0.22	-1.88
	CO27	26	0.000	-99.76	35.77	-4.93	0.01	0.26	1.79
		45	0.100	-99.82	35.60	-4.96	0.01	-0.25	-1.89
	CO28	26	0.000	-98.24	35.70	-3.88	0.01	0.21	1.78
		45	0.100	-98.30	35.53	-3.91	0.01	-0.19	-1.89
	CO29	26	0.000	-102.50	35.51	-4.72	0.00	0.25	1.78
		45	0.100	-102.56	35.34	-4.75	0.01	-0.24	-1.88
	CO30	26	0.000	-104.02	35.59	-5.77	0.01	0.30	1.78
		45	0.100	-104.08	35.40	-5.80	0.01	-0.29	-1.89
	CO31	26	0.000	-107.33	35.80	-6.36	0.01	0.34	1.79
		45	0.100	-107.39	35.61	-6.39	0.01	-0.32	-1.90
	CO32	26	0.000	-105.81	35.73	-5.31	0.01	0.28	1.79
		45	0.100	-105.87	35.54	-5.34	0.01	-0.27	-1.89
	CO33	26	0.000	-107.65	35.42	-5.26	0.01	0.28	1.77
		45	0.100	-107.72	35.23	-5.29	0.01	-0.27	-1.88
	CO34	26	0.000	-110.96	35.63	-5.84	0.01	0.31	1.79
		45	0.100	-111.03	35.44	-5.88	0.01	-0.30	-1.89
	CO35	26	0.000	-109.44	35.56	-4.80	0.01	0.26	1.78
		45	0.100	-109.50	35.37	-4.83	0.01	-0.24	-1.89
	CO36	26	0.000	-123.19	41.13	-4.99	0.01	0.27	2.07
		45	0.100	-123.27	40.88	-5.02	0.01	-0.25	-2.19
	CO37	26	0.000	-123.53	39.46	-4.39	0.00	0.23	1.98
		45	0.100	-123.61	39.20	-4.41	0.00	-0.22	-2.11
	CO38	26	0.000	-106.48	33.67	-3.60	0.00	0.19	1.68
		45	0.100	-106.54	33.48	-3.63	0.00	-0.18	-1.79
CO39	26	0.000	-106.13	35.35	-4.21	0.00	0.22	1.77	
	45	0.100	-106.19	35.16	-4.24	0.01	-0.21	-1.87	
44	CC1	247	0.000	-1.80	0.67	0.39	-0.00	-0.02	0.00
		271	0.100	-1.80	0.67	0.39	-0.00	0.02	-0.07
CC2	247	0.000	17.62	0.02	-3.15	0.00	0.16	-0.00	
	271	0.100	17.62	0.02	-3.15	0.00	-0.16	-0.00	
CC3	247	0.000	-12.36	0.08	0.69	-0.00	-0.03	0.00	
	271	0.100	-12.36	0.08	0.69	-0.00	0.03	-0.01	
CC4	247	0.000	-3.53	-0.00	-0.57	0.00	0.03	-0.00	
	271	0.100	-3.53	-0.00	-0.57	0.00	-0.03	0.00	
CC5	247	0.000	1.81	-0.02	-0.95	0.00	0.05	-0.00	
	271	0.100	1.81	-0.02	-0.95	0.00	-0.05	0.00	
CC6	247	0.000	3.33	0.00	-0.48	0.00	0.02	-0.00	
	271	0.100	3.33	0.00	-0.48	0.00	-0.02	-0.00	
CC7	247	0.000	45.75	1.86	0.07	-0.00	-0.00	0.00	
	271	0.100	45.75	1.86	0.07	-0.00	0.00	-0.19	
CC8	247	0.000	-42.31	-3.73	-1.63	0.00	0.08	-0.00	
	271	0.100	-42.31	-3.73	-1.63	0.00	-0.08	0.37	
CC11	247	0.000	71.74	8.93	-1.98	-0.01	0.10	0.00	
	271	0.100	71.74	8.93	-1.98	-0.01	-0.10	-0.89	
CO1	247	0.000	113.33	12.03	-6.31	0.00	0.31	0.00	
	271	0.100	113.07	14.28	-6.31	-0.00	-0.30	-1.27	
CO2	247	0.000	96.91	12.25	-5.30	0.00	0.26	0.00	
	271	0.100	96.64	14.20	-5.30	-0.01	-0.26	-1.28	
CO3	247	0.000	92.18	12.28	-6.04	0.00	0.30	0.00	
	271	0.100	91.92	14.13	-6.04	-0.00	-0.29	-1.28	
CO4	247	0.000	94.52	12.24	-7.33	0.00	0.36	0.00	
	271	0.100	94.25	14.14	-7.33	-0.00	-0.36	-1.28	
CO5	247	0.000	98.75	12.21	-7.98	0.00	0.39	0.00	
	271	0.100	98.49	14.19	-7.98	-0.00	-0.39	-1.28	
CO6	247	0.000	96.42	12.25	-6.69	0.00	0.33	0.00	
	271	0.100	96.15	14.19	-6.69	-0.00	-0.32	-1.28	
CO7	247	0.000	99.24	12.21	-6.59	0.00	0.32	0.00	
	271	0.100	98.97	14.20	-6.59	-0.00	-0.32	-1.28	
CO8	247	0.000	103.47	12.18	-7.23	0.00	0.35	0.00	
	271	0.100	103.21	14.25	-7.23	-0.00	-0.35	-1.28	
CO9	247	0.000	101.14	12.21	-5.94	0.00	0.29	0.00	
	271	0.100	100.87	14.25	-5.94	-0.00	-0.29	-1.28	
CO10	247	0.000	108.61	12.06	-7.06	0.00	0.34	0.00	
	271	0.100	108.35	14.22	-7.06	-0.00	-0.34	-1.27	
CO11	247	0.000	110.95	12.02	-8.35	0.00	0.41	0.00	
	271	0.100	110.69	14.22	-8.35	-0.00	-0.40	-1.27	
CO12	247	0.000	115.18	11.99	-9.00	0.01	0.44	0.00	
	271	0.100	114.92	14.27	-9.00	-0.00	-0.43	-1.27	
CO13	247	0.000	112.85	12.03	-7.71	0.00	0.37	0.00	
	271	0.100	112.59	14.27	-7.70	-0.00	-0.37	-1.27	
CO14	247	0.000	115.66	11.99	-7.61	0.00	0.37	0.00	
	271	0.100	115.40	14.28	-7.60	-0.00	-0.37	-1.27	
CO15	247	0.000	119.90	11.96	-8.26	0.00	0.40	0.00	
	271	0.100	119.64	14.33	-8.25	-0.00	-0.40	-1.27	
CO16	247	0.000	117.57	12.00	-6.96	0.00	0.34	0.00	
	271	0.100	117.31	14.33	-6.95	-0.00	-0.33	-1.27	
CO17	247	0.000	173.73	13.99	-6.19	-0.00	0.30	0.00	
	271	0.100	173.35	18.05	-6.18	-0.01	-0.29	-1.52	
CO18	247	0.000	117.47	9.77	-8.45	0.00	0.41	-0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
44	CO18	271	0.100	117.29	11.66	-8.45	-0.00	-0.41	-1.03
	CO19	247	0.000	57.07	7.69	-8.51	0.01	0.42	-0.00
		271	0.100	56.97	8.41	-8.52	0.00	-0.42	-0.79
	CO20	247	0.000	83.91	9.02	-4.64	-0.00	0.23	0.00
		271	0.100	83.77	10.26	-4.64	-0.00	-0.22	-0.94
	CO21	247	0.000	71.73	9.16	-3.90	-0.00	0.19	0.00
		271	0.100	71.58	10.23	-3.90	-0.00	-0.19	-0.95
	CO22	247	0.000	68.23	9.18	-4.45	-0.00	0.22	0.00
		271	0.100	68.08	10.20	-4.46	-0.00	-0.22	-0.95
	CO23	247	0.000	69.96	9.15	-5.40	0.00	0.27	0.00
		271	0.100	69.81	10.20	-5.40	-0.00	-0.26	-0.95
	CO24	247	0.000	73.09	9.14	-5.87	0.00	0.29	0.00
		271	0.100	72.95	10.23	-5.87	-0.00	-0.29	-0.95
	CO25	247	0.000	71.36	9.16	-4.93	0.00	0.24	0.00
		271	0.100	71.22	10.23	-4.93	-0.00	-0.24	-0.95
	CO26	247	0.000	73.46	9.14	-4.85	0.00	0.24	0.00
		271	0.100	73.31	10.23	-4.85	-0.00	-0.24	-0.95
	CO27	247	0.000	76.59	9.12	-5.32	0.00	0.26	0.00
		271	0.100	76.45	10.26	-5.32	-0.00	-0.26	-0.95
	CO28	247	0.000	74.86	9.14	-4.38	-0.00	0.21	0.00
		271	0.100	74.72	10.26	-4.37	-0.00	-0.21	-0.95
	CO29	247	0.000	80.41	9.04	-5.19	0.00	0.25	0.00
		271	0.100	80.27	10.23	-5.19	-0.00	-0.25	-0.94
	CO30	247	0.000	82.14	9.01	-6.15	0.00	0.30	0.00
		271	0.100	82.00	10.23	-6.14	-0.00	-0.30	-0.94
	CO31	247	0.000	85.28	9.00	-6.62	0.00	0.32	0.00
		271	0.100	85.14	10.25	-6.62	-0.00	-0.32	-0.94
	CO32	247	0.000	83.55	9.02	-5.67	0.00	0.28	0.00
		271	0.100	83.41	10.25	-5.67	-0.00	-0.28	-0.94
	CO33	247	0.000	85.64	9.00	-5.59	0.00	0.27	0.00
		271	0.100	85.50	10.26	-5.59	-0.00	-0.27	-0.94
	CO34	247	0.000	88.78	8.98	-6.07	0.00	0.30	0.00
		271	0.100	88.63	10.29	-6.07	-0.00	-0.29	-0.94
	CO35	247	0.000	87.05	9.00	-5.12	0.00	0.25	0.00
		271	0.100	86.91	10.29	-5.11	-0.00	-0.25	-0.94
	CO36	247	0.000	128.63	10.55	-4.56	-0.00	0.22	0.00
		271	0.100	128.42	12.80	-4.55	-0.01	-0.22	-1.12
	CO37	247	0.000	86.98	7.33	-6.20	0.00	0.30	-0.00
		271	0.100	86.89	8.37	-6.20	-0.00	-0.30	-0.76
	CO38	247	0.000	42.27	5.73	-6.26	0.00	0.31	-0.00
		271	0.100	42.21	6.12	-6.26	0.00	-0.31	-0.59
	CO39	247	0.000	83.91	9.02	-4.64	-0.00	0.23	0.00
		271	0.100	83.77	10.26	-4.64	-0.00	-0.22	-0.94
	CC1	248	0.000	-1.67	0.61	0.39	-0.00	-0.02	0.00
	272	0.100	-1.67	0.61	0.39	-0.00	0.02	-0.06	
CC2	248	0.000	13.19	0.20	-3.13	0.00	0.16	-0.00	
	272	0.100	13.19	0.20	-3.13	0.00	-0.16	-0.02	
CC3	248	0.000	-8.96	0.07	0.69	-0.00	-0.03	0.00	
	272	0.100	-8.96	0.07	0.69	-0.00	0.03	-0.01	
CC4	248	0.000	-2.52	0.02	-0.57	0.00	0.03	-0.00	
	272	0.100	-2.52	0.02	-0.57	0.00	-0.03	-0.00	
CC5	248	0.000	1.36	0.02	-0.95	0.00	0.05	-0.00	
	272	0.100	1.36	0.02	-0.95	0.00	-0.05	-0.00	
CC6	248	0.000	2.52	0.04	-0.48	0.00	0.02	-0.00	
	272	0.100	2.52	0.04	-0.48	0.00	-0.02	-0.00	
CC7	248	0.000	38.64	1.63	0.07	-0.00	-0.00	0.00	
	272	0.100	38.64	1.63	0.07	-0.00	0.00	-0.16	
CC8	248	0.000	-36.88	-3.22	-1.62	0.00	0.08	-0.00	
	272	0.100	-36.88	-3.22	-1.62	0.00	-0.08	0.32	
CC11	248	0.000	56.08	8.12	-1.99	-0.01	0.10	-0.00	
	272	0.100	56.08	8.12	-1.99	-0.01	-0.10	-0.81	
CO1	248	0.000	88.34	11.28	-6.25	0.00	0.31	-0.00	
	272	0.100	88.11	12.92	-6.25	-0.01	-0.30	-1.18	
CO2	248	0.000	76.33	11.47	-5.25	-0.00	0.26	-0.00	
	272	0.100	76.10	12.90	-5.25	-0.01	-0.26	-1.19	
CO3	248	0.000	72.93	11.52	-5.99	0.00	0.29	-0.00	
	272	0.100	72.70	12.90	-5.99	-0.00	-0.29	-1.19	
CO4	248	0.000	74.69	11.53	-7.26	0.00	0.36	-0.00	
	272	0.100	74.46	12.94	-7.26	-0.00	-0.35	-1.20	
CO5	248	0.000	77.93	11.56	-7.90	0.00	0.39	-0.00	
	272	0.100	77.70	13.04	-7.90	-0.00	-0.38	-1.20	
CO6	248	0.000	76.17	11.55	-6.62	0.00	0.32	-0.00	
	272	0.100	75.93	12.99	-6.62	-0.00	-0.32	-1.20	
CO7	248	0.000	78.09	11.48	-6.53	0.00	0.32	-0.00	
	272	0.100	77.86	12.95	-6.53	-0.00	-0.32	-1.19	
CO8	248	0.000	81.33	11.51	-7.16	0.00	0.35	-0.00	
	272	0.100	81.10	13.04	-7.16	-0.00	-0.35	-1.20	
CO9	248	0.000	79.57	11.49	-5.89	0.00	0.29	-0.00	
	272	0.100	79.33	12.99	-5.89	-0.00	-0.29	-1.20	
CO10	248	0.000	84.94	11.34	-6.99	0.00	0.34	-0.00	
	272	0.100	84.72	12.92	-6.99	-0.00	-0.34	-1.18	
CO11	248	0.000	86.70	11.35	-8.27	0.00	0.40	-0.00	
	272	0.100	86.48	12.96	-8.27	-0.00	-0.40	-1.18	
CO12	248	0.000	89.94	11.38	-8.91	0.00	0.44	-0.00	
	272	0.100	89.71	13.06	-8.91	-0.00	-0.43	-1.19	
CO13	248	0.000	88.18	11.37	-7.63	0.00	0.37	-0.00	
	272	0.100	87.95	13.01	-7.63	-0.00	-0.37	-1.19	
CO14	248	0.000	90.10	11.29	-7.53	0.00	0.37	-0.00	
	272	0.100	89.88	12.97	-7.53	-0.00	-0.36	-1.18	
CO15	248	0.000	93.34	11.32	-8.17	0.00	0.40	-0.00	
	272	0.100	93.11	13.06	-8.17	-0.00	-0.40	-1.19	

45



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
45	CO16	248	0.000	91.57	11.31	-6.89	0.00	0.34	-0.00
		272	0.100	91.35	13.01	-6.89	-0.00	-0.33	-1.18
	CO17	248	0.000	139.82	12.96	-6.12	-0.00	0.30	-0.00
		272	0.100	139.51	15.97	-6.11	-0.01	-0.29	-1.39
	CO18	248	0.000	90.38	9.35	-8.35	0.00	0.41	-0.00
		272	0.100	90.23	10.74	-8.35	-0.00	-0.40	-0.98
	CO19	248	0.000	38.89	7.56	-8.44	0.01	0.42	-0.00
		272	0.100	38.79	8.04	-8.44	0.00	-0.42	-0.77
	CO20	248	0.000	65.41	8.45	-4.61	-0.00	0.23	-0.00
		272	0.100	65.28	9.36	-4.61	-0.00	-0.22	-0.87
	CO21	248	0.000	56.50	8.57	-3.88	-0.00	0.19	-0.00
		272	0.100	56.37	9.36	-3.88	-0.00	-0.19	-0.88
	CO22	248	0.000	53.98	8.61	-4.42	-0.00	0.22	-0.00
		272	0.100	53.85	9.37	-4.42	-0.00	-0.22	-0.88
	CO23	248	0.000	55.29	8.62	-5.36	0.00	0.26	-0.00
		272	0.100	55.16	9.40	-5.36	-0.00	-0.26	-0.89
	CO24	248	0.000	57.68	8.65	-5.83	0.00	0.29	-0.00
		272	0.100	57.55	9.46	-5.83	-0.00	-0.29	-0.89
	CO25	248	0.000	56.37	8.64	-4.89	0.00	0.24	-0.00
		272	0.100	56.25	9.43	-4.89	-0.00	-0.24	-0.89
	CO26	248	0.000	57.81	8.59	-4.82	-0.00	0.24	-0.00
		272	0.100	57.68	9.40	-4.82	-0.00	-0.24	-0.88
	CO27	248	0.000	60.20	8.61	-5.28	0.00	0.26	-0.00
		272	0.100	60.08	9.46	-5.28	-0.00	-0.26	-0.89
	CO28	248	0.000	58.90	8.60	-4.34	-0.00	0.21	-0.00
		272	0.100	58.77	9.43	-4.34	-0.00	-0.21	-0.89
	CO29	248	0.000	62.89	8.49	-5.15	-0.00	0.25	-0.00
		272	0.100	62.76	9.36	-5.15	-0.00	-0.25	-0.88
	CO30	248	0.000	64.19	8.50	-6.10	0.00	0.30	-0.00
		272	0.100	64.07	9.39	-6.09	-0.00	-0.30	-0.88
	CO31	248	0.000	66.59	8.53	-6.56	0.00	0.32	-0.00
		272	0.100	66.47	9.46	-6.56	-0.00	-0.32	-0.88
	CO32	248	0.000	65.28	8.52	-5.62	0.00	0.28	-0.00
		272	0.100	65.16	9.43	-5.62	-0.00	-0.27	-0.88
	CO33	248	0.000	66.71	8.47	-5.55	0.00	0.27	-0.00
		272	0.100	66.59	9.39	-5.55	-0.00	-0.27	-0.88
CO34	248	0.000	69.11	8.49	-6.02	0.00	0.30	-0.00	
	272	0.100	68.99	9.45	-6.02	-0.00	-0.29	-0.88	
CO35	248	0.000	67.80	8.48	-5.07	0.00	0.25	-0.00	
	272	0.100	67.68	9.42	-5.07	-0.00	-0.25	-0.88	
CO36	248	0.000	103.53	9.78	-4.52	-0.00	0.22	-0.00	
	272	0.100	103.36	11.45	-4.52	-0.01	-0.22	-1.03	
CO37	248	0.000	66.93	7.01	-6.15	0.00	0.30	-0.00	
	272	0.100	66.84	7.78	-6.15	-0.00	-0.30	-0.72	
CO38	248	0.000	28.80	5.62	-6.21	0.00	0.31	-0.00	
	272	0.100	28.74	5.88	-6.21	0.00	-0.31	-0.57	
CO39	248	0.000	65.41	8.45	-4.61	-0.00	0.23	-0.00	
	272	0.100	65.28	9.36	-4.61	-0.00	-0.22	-0.87	
CC1	249	0.000	-1.90	0.57	0.41	-0.00	-0.02	0.00	
	273	0.100	-1.90	0.57	0.40	-0.00	0.02	-0.06	
CC2	249	0.000	10.51	0.37	-3.20	0.00	0.16	-0.00	
	273	0.100	10.51	0.37	-3.20	0.00	-0.16	-0.04	
CC3	249	0.000	-6.82	0.06	0.71	-0.00	-0.04	0.00	
	273	0.100	-6.82	0.06	0.71	-0.00	0.04	-0.01	
CC4	249	0.000	-1.86	0.04	-0.58	0.00	0.03	-0.00	
	273	0.100	-1.86	0.04	-0.58	0.00	-0.03	-0.00	
CC5	249	0.000	1.09	0.05	-0.97	0.00	0.05	-0.00	
	273	0.100	1.09	0.05	-0.97	0.00	-0.05	-0.01	
CC6	249	0.000	2.04	0.09	-0.49	0.00	0.02	-0.00	
	273	0.100	2.04	0.09	-0.49	0.00	-0.02	-0.01	
CC7	249	0.000	36.12	1.42	0.06	-0.00	-0.01	0.00	
	273	0.100	36.12	1.42	0.06	-0.00	0.00	-0.14	
CC8	249	0.000	-35.63	-2.74	-1.63	0.00	0.08	-0.00	
	273	0.100	-35.63	-2.74	-1.63	0.00	-0.08	0.27	
CC11	249	0.000	47.93	7.39	-2.07	-0.01	0.10	0.00	
	273	0.100	47.93	7.39	-2.07	-0.01	-0.11	-0.74	
CO1	249	0.000	74.10	10.60	-6.39	0.00	0.31	0.00	
	273	0.100	73.90	11.88	-6.40	-0.00	-0.32	-1.10	
CO2	249	0.000	64.94	10.75	-5.37	-0.00	0.26	0.00	
	273	0.100	64.74	11.89	-5.38	-0.00	-0.27	-1.11	
CO3	249	0.000	62.41	10.83	-6.12	0.00	0.30	0.00	
	273	0.100	62.21	11.93	-6.13	-0.00	-0.30	-1.12	
CO4	249	0.000	63.83	10.88	-7.42	0.00	0.36	0.00	
	273	0.100	63.62	12.01	-7.42	-0.00	-0.37	-1.12	
CO5	249	0.000	66.45	10.96	-8.06	0.00	0.39	0.00	
	273	0.100	66.24	12.15	-8.07	-0.00	-0.40	-1.13	
CO6	249	0.000	65.03	10.91	-6.76	0.00	0.33	0.00	
	273	0.100	64.83	12.07	-6.77	-0.00	-0.33	-1.13	
CO7	249	0.000	66.36	10.81	-6.67	0.00	0.32	0.00	
	273	0.100	66.16	11.98	-6.68	-0.00	-0.33	-1.12	
CO8	249	0.000	68.98	10.89	-7.31	0.00	0.36	0.00	
	273	0.100	68.77	12.12	-7.32	-0.00	-0.36	-1.13	
CO9	249	0.000	67.56	10.84	-6.01	0.00	0.29	0.00	
	273	0.100	67.36	12.03	-6.02	-0.00	-0.30	-1.12	
CO10	249	0.000	71.57	10.67	-7.14	0.00	0.35	0.00	
	273	0.100	71.37	11.92	-7.15	-0.00	-0.35	-1.11	
CO11	249	0.000	72.99	10.72	-8.44	0.00	0.41	0.00	
	273	0.100	72.79	12.00	-8.45	-0.00	-0.42	-1.11	
CO12	249	0.000	75.61	10.81	-9.08	0.00	0.44	0.00	
	273	0.100	75.41	12.15	-9.09	-0.00	-0.45	-1.12	
CO13	249	0.000	74.19	10.76	-7.78	0.00	0.38	0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
46	CO13	273	0.100	73.99	12.06	-7.79	-0.00	-0.38	-1.12
	CO14	249	0.000	75.52	10.65	-7.69	0.00	0.37	0.00
		273	0.100	75.32	11.97	-7.70	-0.00	-0.38	-1.11
	CO15	249	0.000	78.14	10.74	-8.33	0.00	0.40	0.00
		273	0.100	77.94	12.11	-8.34	-0.00	-0.41	-1.12
	CO16	249	0.000	76.72	10.68	-7.03	0.00	0.34	0.00
		273	0.100	76.52	12.03	-7.04	-0.00	-0.35	-1.11
	CO17	249	0.000	122.31	12.00	-6.26	-0.00	0.30	0.00
		273	0.100	122.05	14.43	-6.29	-0.01	-0.31	-1.27
	CO18	249	0.000	74.50	9.00	-8.51	0.00	0.41	-0.00
		273	0.100	74.36	10.10	-8.52	-0.00	-0.42	-0.93
	CO19	249	0.000	26.27	7.49	-8.59	0.01	0.43	-0.00
		273	0.100	26.17	7.80	-8.59	0.00	-0.43	-0.76
	CO20	249	0.000	54.87	7.94	-4.71	-0.00	0.23	0.00
		273	0.100	54.76	8.65	-4.72	-0.00	-0.23	-0.82
	CO21	249	0.000	48.07	8.04	-3.97	-0.00	0.19	0.00
		273	0.100	47.96	8.67	-3.97	-0.00	-0.20	-0.82
	CO22	249	0.000	46.20	8.09	-4.52	-0.00	0.22	0.00
		273	0.100	46.08	8.70	-4.53	-0.00	-0.23	-0.83
	CO23	249	0.000	47.25	8.13	-5.48	0.00	0.27	0.00
		273	0.100	47.13	8.76	-5.48	-0.00	-0.27	-0.83
	CO24	249	0.000	49.19	8.20	-5.95	0.00	0.29	0.00
		273	0.100	49.07	8.86	-5.96	-0.00	-0.30	-0.84
	CO25	249	0.000	48.14	8.16	-4.99	0.00	0.24	0.00
		273	0.100	48.02	8.80	-5.00	-0.00	-0.25	-0.84
	CO26	249	0.000	49.12	8.08	-4.92	-0.00	0.24	0.00
		273	0.100	49.01	8.73	-4.93	-0.00	-0.24	-0.83
	CO27	249	0.000	51.06	8.15	-5.40	0.00	0.26	0.00
		273	0.100	50.95	8.83	-5.40	-0.00	-0.27	-0.84
	CO28	249	0.000	50.01	8.11	-4.44	-0.00	0.22	0.00
		273	0.100	49.90	8.77	-4.45	-0.00	-0.22	-0.83
	CO29	249	0.000	52.99	7.99	-5.27	0.00	0.26	0.00
		273	0.100	52.88	8.68	-5.27	-0.00	-0.26	-0.82
	CO30	249	0.000	54.04	8.03	-6.23	0.00	0.30	0.00
		273	0.100	53.93	8.74	-6.23	-0.00	-0.31	-0.83
	CO31	249	0.000	55.98	8.10	-6.70	0.00	0.33	0.00
273		0.100	55.87	8.84	-6.71	-0.00	-0.33	-0.83	
CO32	249	0.000	54.93	8.06	-5.74	0.00	0.28	0.00	
	273	0.100	54.82	8.78	-5.75	-0.00	-0.28	-0.83	
CO33	249	0.000	55.92	7.98	-5.67	0.00	0.28	0.00	
	273	0.100	55.81	8.71	-5.68	-0.00	-0.28	-0.82	
CO34	249	0.000	57.86	8.05	-6.14	0.00	0.30	0.00	
	273	0.100	57.75	8.81	-6.15	-0.00	-0.30	-0.83	
CO35	249	0.000	56.81	8.01	-5.19	0.00	0.25	0.00	
	273	0.100	56.70	8.75	-5.19	-0.00	-0.26	-0.82	
CO36	249	0.000	90.58	9.06	-4.63	-0.00	0.22	0.00	
	273	0.100	90.43	10.41	-4.64	-0.01	-0.23	-0.95	
CO37	249	0.000	55.17	6.74	-6.27	0.00	0.31	-0.00	
	273	0.100	55.10	7.35	-6.28	-0.00	-0.31	-0.69	
CO38	249	0.000	19.45	5.55	-6.33	0.00	0.31	-0.00	
	273	0.100	19.40	5.73	-6.33	0.00	-0.31	-0.56	
CO39	249	0.000	54.87	7.94	-4.71	-0.00	0.23	0.00	
	273	0.100	54.76	8.65	-4.72	-0.00	-0.23	-0.82	
47	CC1	250	0.000	-2.39	0.53	0.41	-0.00	-0.02	0.00
		274	0.100	-2.39	0.53	0.41	-0.00	0.02	-0.05
CC2	250	0.000	8.10	0.53	-3.22	0.00	0.16	-0.00	
	274	0.100	8.10	0.53	-3.22	0.00	-0.16	-0.05	
CC3	250	0.000	-4.94	0.06	0.71	-0.00	-0.04	0.00	
	274	0.100	-4.94	0.06	0.71	-0.00	0.04	-0.01	
CC4	250	0.000	-1.30	0.05	-0.58	0.00	0.03	-0.00	
	274	0.100	-1.30	0.05	-0.58	0.00	-0.03	-0.01	
CC5	250	0.000	0.84	0.07	-0.98	0.00	0.05	-0.00	
	274	0.100	0.84	0.07	-0.98	0.00	-0.05	-0.01	
CC6	250	0.000	1.60	0.13	-0.49	0.00	0.02	-0.00	
	274	0.100	1.60	0.13	-0.49	0.00	-0.02	-0.01	
CC7	250	0.000	34.82	1.23	0.08	-0.00	-0.00	0.00	
	274	0.100	34.82	1.23	0.08	-0.00	0.00	-0.12	
CC8	250	0.000	-35.53	-2.30	-1.65	0.00	0.08	-0.00	
	274	0.100	-35.53	-2.30	-1.65	0.00	-0.08	0.23	
CC11	250	0.000	41.76	6.76	-2.09	-0.00	0.10	-0.00	
	274	0.100	41.76	6.76	-2.09	-0.00	-0.10	-0.68	
CO1	250	0.000	62.31	10.04	-6.42	0.00	0.32	-0.00	
	274	0.100	62.13	11.06	-6.42	-0.00	-0.31	-1.04	
CO2	250	0.000	55.66	10.16	-5.40	0.00	0.27	-0.00	
	274	0.100	55.48	11.08	-5.41	-0.00	-0.27	-1.04	
CO3	250	0.000	53.88	10.24	-6.16	0.00	0.30	-0.00	
	274	0.100	53.70	11.14	-6.16	-0.00	-0.30	-1.05	
CO4	250	0.000	54.98	10.33	-7.46	0.00	0.37	-0.00	
	274	0.100	54.80	11.25	-7.46	-0.00	-0.37	-1.06	
CO5	250	0.000	57.05	10.47	-8.10	0.00	0.40	-0.00	
	274	0.100	56.86	11.44	-8.10	-0.00	-0.40	-1.08	
CO6	250	0.000	55.95	10.38	-6.80	0.00	0.33	-0.00	
	274	0.100	55.76	11.33	-6.80	-0.00	-0.33	-1.07	
CO7	250	0.000	56.76	10.25	-6.70	0.00	0.33	-0.00	
	274	0.100	56.58	11.19	-6.70	-0.00	-0.33	-1.05	
CO8	250	0.000	58.82	10.39	-7.35	0.00	0.36	-0.00	
	274	0.100	58.64	11.38	-7.35	-0.00	-0.36	-1.07	
CO9	250	0.000	57.72	10.30	-6.05	0.00	0.30	-0.00	
	274	0.100	57.54	11.27	-6.05	-0.00	-0.30	-1.06	
CO10	250	0.000	60.53	10.12	-7.17	0.00	0.35	-0.00	
	274	0.100	60.36	11.12	-7.18	-0.00	-0.35	-1.04	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
47	CO11	250	0.000	61.63	10.20	-8.48	0.00	0.42	-0.00
		274	0.100	61.45	11.23	-8.48	-0.00	-0.42	-1.05
	CO12	250	0.000	63.70	10.34	-9.12	0.00	0.45	-0.00
		274	0.100	63.51	11.42	-9.12	-0.00	-0.45	-1.07
	CO13	250	0.000	62.59	10.26	-7.82	0.00	0.38	-0.00
		274	0.100	62.41	11.31	-7.82	-0.00	-0.38	-1.06
	CO14	250	0.000	63.41	10.12	-7.72	0.00	0.38	-0.00
		274	0.100	63.23	11.17	-7.72	-0.00	-0.38	-1.04
	CO15	250	0.000	65.47	10.26	-8.37	0.00	0.41	-0.00
		274	0.100	65.29	11.36	-8.37	-0.00	-0.41	-1.06
	CO16	250	0.000	64.37	10.18	-7.06	0.00	0.35	-0.00
		274	0.100	64.19	11.24	-7.06	-0.00	-0.35	-1.05
	CO17	250	0.000	108.80	11.20	-6.28	0.00	0.30	-0.00
		274	0.100	108.57	13.21	-6.28	-0.01	-0.30	-1.18
	CO18	250	0.000	61.18	8.76	-8.53	0.01	0.42	-0.00
		274	0.100	61.05	9.64	-8.53	-0.00	-0.42	-0.90
	CO19	250	0.000	14.66	7.49	-8.62	0.01	0.43	-0.00
		274	0.100	14.57	7.66	-8.63	0.00	-0.43	-0.75
	CO20	250	0.000	46.13	7.51	-4.74	0.00	0.23	-0.00
		274	0.100	46.04	8.08	-4.74	-0.00	-0.23	-0.77
	CO21	250	0.000	41.20	7.60	-3.99	-0.00	0.20	-0.00
		274	0.100	41.11	8.10	-4.00	-0.00	-0.20	-0.78
	CO22	250	0.000	39.89	7.66	-4.55	0.00	0.23	-0.00
		274	0.100	39.79	8.15	-4.55	-0.00	-0.22	-0.78
	CO23	250	0.000	40.70	7.72	-5.51	0.00	0.27	-0.00
		274	0.100	40.60	8.23	-5.51	-0.00	-0.27	-0.79
	CO24	250	0.000	42.23	7.83	-5.98	0.00	0.30	-0.00
		274	0.100	42.13	8.37	-5.99	-0.00	-0.30	-0.80
	CO25	250	0.000	41.41	7.76	-5.02	0.00	0.25	-0.00
		274	0.100	41.31	8.29	-5.03	-0.00	-0.25	-0.79
	CO26	250	0.000	42.02	7.66	-4.95	0.00	0.24	-0.00
		274	0.100	41.92	8.19	-4.95	-0.00	-0.24	-0.78
	CO27	250	0.000	43.54	7.77	-5.43	0.00	0.27	-0.00
		274	0.100	43.44	8.32	-5.43	-0.00	-0.27	-0.79
	CO28	250	0.000	42.73	7.70	-4.47	0.00	0.22	-0.00
		274	0.100	42.63	8.24	-4.47	-0.00	-0.22	-0.79
	CO29	250	0.000	44.82	7.57	-5.30	0.00	0.26	-0.00
		274	0.100	44.72	8.13	-5.30	-0.00	-0.26	-0.77
	CO30	250	0.000	45.63	7.64	-6.26	0.00	0.31	-0.00
		274	0.100	45.54	8.21	-6.26	-0.00	-0.31	-0.78
	CO31	250	0.000	47.16	7.75	-6.73	0.00	0.33	-0.00
		274	0.100	47.06	8.34	-6.73	-0.00	-0.33	-0.79
	CO32	250	0.000	46.35	7.68	-5.77	0.00	0.29	-0.00
		274	0.100	46.25	8.26	-5.77	-0.00	-0.28	-0.79
	CO33	250	0.000	46.95	7.58	-5.70	0.00	0.28	-0.00
		274	0.100	46.85	8.16	-5.70	-0.00	-0.28	-0.78
	CO34	250	0.000	48.48	7.69	-6.17	0.00	0.30	-0.00
		274	0.100	48.38	8.29	-6.18	-0.00	-0.30	-0.79
CO35	250	0.000	47.66	7.62	-5.21	0.00	0.26	-0.00	
	274	0.100	47.56	8.21	-5.21	-0.00	-0.26	-0.78	
CO36	250	0.000	80.58	8.46	-4.64	-0.00	0.23	-0.00	
	274	0.100	80.45	9.58	-4.64	-0.00	-0.23	-0.88	
CO37	250	0.000	45.31	6.55	-6.29	0.00	0.31	-0.00	
	274	0.100	45.23	7.04	-6.29	-0.00	-0.31	-0.67	
CO38	250	0.000	10.85	5.54	-6.36	0.00	0.32	-0.00	
	274	0.100	10.80	5.64	-6.36	0.00	-0.32	-0.56	
CO39	250	0.000	46.13	7.51	-4.74	0.00	0.23	-0.00	
	274	0.100	46.04	8.08	-4.74	-0.00	-0.23	-0.77	
CC1	251	0.000	-3.03	0.49	0.41	-0.00	-0.02	0.00	
	275	0.100	-3.03	0.49	0.40	-0.00	0.02	-0.05	
CC2	251	0.000	5.51	0.67	-3.23	0.00	0.16	-0.00	
	275	0.100	5.51	0.67	-3.23	0.00	-0.16	-0.07	
CC3	251	0.000	-3.10	0.05	0.72	-0.00	-0.04	0.00	
	275	0.100	-3.10	0.05	0.72	-0.00	0.04	-0.00	
CC4	251	0.000	-0.79	0.06	-0.59	0.00	0.03	-0.00	
	275	0.100	-0.79	0.06	-0.59	0.00	-0.03	-0.01	
CC5	251	0.000	0.56	0.09	-0.98	0.00	0.05	-0.00	
	275	0.100	0.56	0.09	-0.98	0.00	-0.05	-0.01	
CC6	251	0.000	1.12	0.16	-0.49	0.00	0.02	-0.00	
	275	0.100	1.12	0.16	-0.49	0.00	-0.02	-0.02	
CC7	251	0.000	33.40	1.08	0.10	-0.00	-0.01	-0.00	
	275	0.100	33.40	1.08	0.10	-0.00	0.00	-0.11	
CC8	251	0.000	-35.24	-1.90	-1.66	0.00	0.08	-0.00	
	275	0.100	-35.24	-1.90	-1.66	0.00	-0.08	0.19	
CC11	251	0.000	35.88	6.26	-2.09	-0.00	0.10	-0.00	
	275	0.100	35.88	6.26	-2.09	-0.00	-0.10	-0.63	
CO1	251	0.000	50.49	9.62	-6.40	0.00	0.32	-0.00	
	275	0.100	50.33	10.41	-6.40	-0.00	-0.31	-0.99	
CO2	251	0.000	46.31	9.72	-5.39	0.00	0.27	-0.00	
	275	0.100	46.15	10.45	-5.39	-0.00	-0.26	-0.99	
CO3	251	0.000	45.24	9.81	-6.15	0.00	0.30	-0.00	
	275	0.100	45.08	10.53	-6.15	-0.00	-0.30	-1.00	
CO4	251	0.000	45.97	9.92	-7.45	0.00	0.37	-0.00	
	275	0.100	45.81	10.66	-7.45	-0.00	-0.37	-1.02	
CO5	251	0.000	47.43	10.11	-8.09	0.00	0.40	-0.00	
	275	0.100	47.26	10.89	-8.09	-0.00	-0.40	-1.04	
CO6	251	0.000	46.69	10.00	-6.79	0.00	0.34	-0.00	
	275	0.100	46.53	10.76	-6.79	-0.00	-0.33	-1.02	
CO7	251	0.000	47.05	9.83	-6.69	0.00	0.33	-0.00	
	275	0.100	46.89	10.58	-6.69	-0.00	-0.33	-1.01	
CO8	251	0.000	48.51	10.02	-7.33	0.00	0.36	-0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
48	CO8	275	0.100	48.34	10.81	-7.33	-0.00	-0.36	-1.03
	CO9	251	0.000	47.77	9.91	-6.03	0.00	0.30	-0.00
		275	0.100	47.60	10.68	-6.03	-0.00	-0.30	-1.02
	CO10	251	0.000	49.41	9.71	-7.16	0.00	0.35	-0.00
		275	0.100	49.25	10.49	-7.16	-0.00	-0.35	-1.00
	CO11	251	0.000	50.15	9.82	-8.46	0.00	0.42	-0.00
		275	0.100	49.98	10.63	-8.46	-0.00	-0.42	-1.01
	CO12	251	0.000	51.60	10.02	-9.10	0.01	0.45	-0.00
		275	0.100	51.43	10.86	-9.10	-0.00	-0.45	-1.03
	CO13	251	0.000	50.87	9.91	-7.80	0.00	0.39	-0.00
		275	0.100	50.70	10.73	-7.80	-0.00	-0.38	-1.02
	CO14	251	0.000	51.22	9.74	-7.70	0.00	0.38	-0.00
		275	0.100	51.06	10.55	-7.70	-0.00	-0.38	-1.00
	CO15	251	0.000	52.68	9.93	-8.34	0.01	0.41	-0.00
		275	0.100	52.51	10.78	-8.34	-0.00	-0.41	-1.02
	CO16	251	0.000	51.94	9.82	-7.04	0.00	0.35	-0.00
		275	0.100	51.78	10.65	-7.04	-0.00	-0.35	-1.01
	CO17	251	0.000	95.15	10.60	-6.23	0.00	0.30	-0.00
		275	0.100	94.95	12.25	-6.23	-0.00	-0.30	-1.11
	CO18	251	0.000	47.91	8.66	-8.49	0.01	0.42	-0.00
		275	0.100	47.78	9.33	-8.49	0.00	-0.42	-0.89
	CO19	251	0.000	3.22	7.58	-8.62	0.01	0.43	-0.00
		275	0.100	3.13	7.61	-8.63	0.00	-0.43	-0.76
	CO20	251	0.000	37.38	7.20	-4.73	0.00	0.24	-0.00
		275	0.100	37.29	7.63	-4.73	-0.00	-0.23	-0.73
	CO21	251	0.000	34.28	7.26	-3.99	0.00	0.20	-0.00
		275	0.100	34.19	7.66	-3.99	-0.00	-0.20	-0.74
	CO22	251	0.000	33.48	7.32	-4.55	0.00	0.23	-0.00
		275	0.100	33.40	7.72	-4.55	-0.00	-0.22	-0.74
	CO23	251	0.000	34.03	7.41	-5.51	0.00	0.27	-0.00
		275	0.100	33.94	7.82	-5.51	-0.00	-0.27	-0.75
	CO24	251	0.000	35.11	7.56	-5.98	0.00	0.30	-0.00
		275	0.100	35.01	7.99	-5.98	-0.00	-0.30	-0.77
	CO25	251	0.000	34.56	7.47	-5.02	0.00	0.25	-0.00
		275	0.100	34.47	7.89	-5.02	-0.00	-0.25	-0.76
	CO26	251	0.000	34.83	7.34	-4.95	0.00	0.25	-0.00
		275	0.100	34.74	7.76	-4.95	-0.00	-0.24	-0.75
	CO27	251	0.000	35.91	7.49	-5.42	0.00	0.27	-0.00
		275	0.100	35.81	7.93	-5.42	-0.00	-0.27	-0.76
	CO28	251	0.000	35.36	7.41	-4.46	0.00	0.22	-0.00
		275	0.100	35.27	7.83	-4.46	-0.00	-0.22	-0.75
	CO29	251	0.000	36.58	7.26	-5.29	0.00	0.26	-0.00
		275	0.100	36.49	7.69	-5.29	-0.00	-0.26	-0.74
	CO30	251	0.000	37.13	7.35	-6.25	0.00	0.31	-0.00
		275	0.100	37.04	7.79	-6.25	-0.00	-0.31	-0.75
	CO31	251	0.000	38.21	7.49	-6.72	0.00	0.33	-0.00
		275	0.100	38.11	7.96	-6.73	-0.00	-0.33	-0.76
	CO32	251	0.000	37.66	7.41	-5.76	0.00	0.29	-0.00
275		0.100	37.57	7.86	-5.77	-0.00	-0.28	-0.76	
CO33	251	0.000	37.93	7.28	-5.69	0.00	0.28	-0.00	
	275	0.100	37.84	7.73	-5.69	-0.00	-0.28	-0.74	
CO34	251	0.000	39.00	7.43	-6.16	0.00	0.31	-0.00	
	275	0.100	38.91	7.90	-6.17	-0.00	-0.30	-0.76	
CO35	251	0.000	38.46	7.34	-5.20	0.00	0.26	-0.00	
	275	0.100	38.37	7.80	-5.21	-0.00	-0.26	-0.75	
CO36	251	0.000	70.47	8.00	-4.61	0.00	0.23	-0.00	
	275	0.100	70.36	8.93	-4.61	-0.00	-0.22	-0.83	
CO37	251	0.000	35.48	6.46	-6.27	0.00	0.31	-0.00	
	275	0.100	35.41	6.84	-6.27	0.00	-0.31	-0.66	
CO38	251	0.000	2.38	5.59	-6.36	0.00	0.32	-0.00	
	275	0.100	2.33	5.61	-6.37	0.00	-0.32	-0.56	
CO39	251	0.000	37.38	7.20	-4.73	0.00	0.24	-0.00	
	275	0.100	37.29	7.63	-4.73	-0.00	-0.23	-0.73	
CC1	252	0.000	-3.85	0.47	0.41	-0.00	-0.02	0.00	
	276	0.100	-3.85	0.47	0.40	-0.00	0.02	-0.05	
CC2	252	0.000	3.06	0.80	-3.24	0.00	0.16	-0.00	
	276	0.100	3.06	0.80	-3.24	0.00	-0.16	-0.08	
CC3	252	0.000	-1.36	0.04	0.72	-0.00	-0.04	0.00	
	276	0.100	-1.36	0.04	0.72	-0.00	0.04	-0.00	
CC4	252	0.000	-0.29	0.07	-0.59	0.00	0.03	-0.00	
	276	0.100	-0.29	0.07	-0.59	0.00	-0.03	-0.01	
CC5	252	0.000	0.32	0.11	-0.98	0.00	0.05	-0.00	
	276	0.100	0.32	0.11	-0.98	0.00	-0.05	-0.01	
CC6	252	0.000	0.66	0.20	-0.49	0.00	0.02	-0.00	
	276	0.100	0.66	0.20	-0.49	0.00	-0.02	-0.02	
CC7	252	0.000	32.30	0.97	0.10	-0.00	-0.01	0.00	
	276	0.100	32.30	0.97	0.10	-0.00	0.01	-0.10	
CC8	252	0.000	-35.13	-1.57	-1.66	0.00	0.08	-0.00	
	276	0.100	-35.13	-1.57	-1.66	0.00	-0.08	0.16	
CC11	252	0.000	30.96	5.90	-2.10	-0.00	0.11	0.00	
	276	0.100	30.96	5.90	-2.10	-0.00	-0.10	-0.59	
CO1	252	0.000	39.83	9.38	-6.41	0.00	0.32	0.00	
	276	0.100	39.68	9.99	-6.41	-0.00	-0.32	-0.96	
CO2	252	0.000	37.98	9.44	-5.40	0.00	0.27	0.00	
	276	0.100	37.83	10.02	-5.41	-0.00	-0.27	-0.96	
CO3	252	0.000	37.59	9.53	-6.16	0.00	0.31	0.00	
	276	0.100	37.43	10.11	-6.16	-0.00	-0.30	-0.97	
CO4	252	0.000	38.00	9.67	-7.45	0.00	0.37	0.00	
	276	0.100	37.85	10.26	-7.46	-0.00	-0.37	-0.98	
CO5	252	0.000	38.87	9.91	-8.09	0.01	0.40	0.00	
	276	0.100	38.70	10.53	-8.10	-0.00	-0.40	-1.01	



Progetto: _____

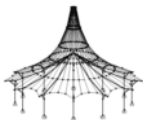
Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
49	CO6	252	0.000	38.45	9.77	-6.80	0.00	0.34	0.00
		276	0.100	38.29	10.38	-6.80	-0.00	-0.34	-1.00
	CO7	252	0.000	38.40	9.58	-6.70	0.00	0.33	0.00
		276	0.100	38.25	10.17	-6.70	-0.00	-0.33	-0.98
	CO8	252	0.000	39.27	9.82	-7.34	0.01	0.36	0.00
		276	0.100	39.10	10.44	-7.34	-0.00	-0.36	-1.00
	CO9	252	0.000	38.85	9.68	-6.04	0.00	0.30	0.00
		276	0.100	38.69	10.29	-6.05	-0.00	-0.30	-0.99
	CO10	252	0.000	39.43	9.47	-7.17	0.00	0.36	0.00
		276	0.100	39.28	10.08	-7.17	-0.00	-0.35	-0.97
	CO11	252	0.000	39.85	9.61	-8.46	0.01	0.42	0.00
		276	0.100	39.69	10.23	-8.46	-0.00	-0.42	-0.98
	CO12	252	0.000	40.71	9.85	-9.10	0.01	0.45	0.00
		276	0.100	40.55	10.50	-9.11	-0.00	-0.45	-1.00
	CO13	252	0.000	40.29	9.71	-7.81	0.01	0.39	0.00
		276	0.100	40.14	10.35	-7.81	-0.00	-0.38	-0.99
	CO14	252	0.000	40.25	9.52	-7.71	0.01	0.38	0.00
		276	0.100	40.09	10.14	-7.71	-0.00	-0.38	-0.97
	CO15	252	0.000	41.11	9.76	-8.35	0.01	0.41	0.00
		276	0.100	40.95	10.41	-8.35	-0.00	-0.41	-1.00
	CO16	252	0.000	40.69	9.62	-7.05	0.00	0.35	0.00
		276	0.100	40.54	10.26	-7.05	-0.00	-0.35	-0.98
	CO17	252	0.000	83.06	10.23	-6.24	0.00	0.31	0.00
		276	0.100	82.88	11.62	-6.24	-0.00	-0.30	-1.07
	CO18	252	0.000	35.97	8.71	-8.48	0.01	0.42	0.00
		276	0.100	35.84	9.22	-8.48	0.00	-0.42	-0.89
	CO19	252	0.000	-7.29	7.76	-8.61	0.01	0.43	-0.00
		276	0.100	-7.38	7.67	-8.62	0.00	-0.43	-0.77
	CO20	252	0.000	29.48	7.00	-4.74	0.00	0.24	0.00
		276	0.100	29.40	7.34	-4.74	-0.00	-0.23	-0.71
	CO21	252	0.000	28.11	7.05	-4.00	0.00	0.20	0.00
		276	0.100	28.03	7.37	-4.00	-0.00	-0.20	-0.71
	CO22	252	0.000	27.82	7.11	-4.56	0.00	0.23	0.00
		276	0.100	27.73	7.43	-4.56	-0.00	-0.23	-0.72
	CO23	252	0.000	28.13	7.21	-5.51	0.00	0.27	0.00
		276	0.100	28.04	7.54	-5.52	-0.00	-0.27	-0.73
	CO24	252	0.000	28.77	7.39	-5.99	0.00	0.30	0.00
		276	0.100	28.67	7.74	-5.99	-0.00	-0.30	-0.75
	CO25	252	0.000	28.46	7.29	-5.03	0.00	0.25	0.00
		276	0.100	28.37	7.63	-5.03	-0.00	-0.25	-0.74
	CO26	252	0.000	28.42	7.15	-4.96	0.00	0.25	0.00
		276	0.100	28.34	7.47	-4.96	-0.00	-0.24	-0.72
	CO27	252	0.000	29.06	7.33	-5.43	0.00	0.27	0.00
		276	0.100	28.97	7.67	-5.43	-0.00	-0.27	-0.74
	CO28	252	0.000	28.75	7.23	-4.47	0.00	0.22	0.00
		276	0.100	28.66	7.56	-4.47	-0.00	-0.22	-0.73
	CO29	252	0.000	29.19	7.07	-5.30	0.00	0.26	0.00
		276	0.100	29.10	7.40	-5.30	-0.00	-0.26	-0.72
CO30	252	0.000	29.50	7.17	-6.26	0.00	0.31	0.00	
	276	0.100	29.41	7.51	-6.26	-0.00	-0.31	-0.73	
CO31	252	0.000	30.13	7.35	-6.73	0.00	0.33	0.00	
	276	0.100	30.05	7.71	-6.73	-0.00	-0.33	-0.75	
CO32	252	0.000	29.83	7.25	-5.77	0.00	0.29	0.00	
	276	0.100	29.74	7.60	-5.78	-0.00	-0.29	-0.74	
CO33	252	0.000	29.79	7.11	-5.70	0.00	0.28	0.00	
	276	0.100	29.71	7.45	-5.70	-0.00	-0.28	-0.72	
CO34	252	0.000	30.43	7.29	-6.17	0.00	0.31	0.00	
	276	0.100	30.34	7.65	-6.17	-0.00	-0.30	-0.74	
CO35	252	0.000	30.12	7.19	-5.21	0.00	0.26	0.00	
	276	0.100	30.04	7.54	-5.22	-0.00	-0.26	-0.73	
CO36	252	0.000	61.51	7.72	-4.62	0.00	0.23	0.00	
	276	0.100	61.41	8.49	-4.62	-0.00	-0.23	-0.80	
CO37	252	0.000	26.63	6.49	-6.26	0.00	0.31	0.00	
	276	0.100	26.56	6.77	-6.27	0.00	-0.31	-0.66	
CO38	252	0.000	-5.41	5.72	-6.36	0.00	0.32	-0.00	
	276	0.100	-5.46	5.67	-6.37	0.00	-0.32	-0.57	
CO39	252	0.000	29.48	7.00	-4.74	0.00	0.24	0.00	
	276	0.100	29.40	7.34	-4.74	-0.00	-0.23	-0.71	
CC1	253	0.000	-4.83	0.44	0.40	-0.00	-0.02	0.00	
	277	0.100	-4.83	0.44	0.40	-0.00	0.02	-0.04	
CC2	253	0.000	0.48	0.89	-3.24	0.00	0.16	-0.00	
	277	0.100	0.48	0.89	-3.24	0.00	-0.16	-0.09	
CC3	253	0.000	0.34	0.02	0.72	-0.00	-0.04	0.00	
	277	0.100	0.34	0.02	0.72	-0.00	0.04	-0.00	
CC4	253	0.000	0.19	0.07	-0.59	0.00	0.03	-0.00	
	277	0.100	0.19	0.07	-0.59	0.00	-0.03	-0.01	
CC5	253	0.000	0.05	0.12	-0.98	0.00	0.05	-0.00	
	277	0.100	0.05	0.12	-0.98	0.00	-0.05	-0.01	
CC6	253	0.000	0.17	0.23	-0.49	0.00	0.02	-0.00	
	277	0.100	0.17	0.23	-0.49	0.00	-0.02	-0.02	
CC7	253	0.000	31.54	0.89	0.10	-0.00	-0.01	0.00	
	277	0.100	31.54	0.89	0.10	-0.00	0.01	-0.09	
CC8	253	0.000	-35.34	-1.28	-1.64	0.00	0.08	-0.00	
	277	0.100	-35.34	-1.28	-1.64	0.00	-0.08	0.13	
CC11	253	0.000	26.60	5.68	-2.11	-0.00	0.11	-0.00	
	277	0.100	26.60	5.68	-2.11	-0.00	-0.10	-0.57	
CO1	253	0.000	29.52	9.30	-6.42	0.00	0.32	-0.00	
	277	0.100	29.37	9.74	-6.42	-0.00	-0.32	-0.94	
CO2	253	0.000	29.97	9.32	-5.41	0.00	0.27	-0.00	
	277	0.100	29.83	9.77	-5.42	-0.00	-0.27	-0.95	
CO3	253	0.000	30.22	9.41	-6.16	0.00	0.31	-0.00	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
50	CO3	277	0.100	30.07	9.87	-6.17	-0.00	-0.30	-0.96
	CO4	253	0.000	30.30	9.56	-7.45	0.01	0.37	-0.00
		277	0.100	30.14	10.02	-7.46	-0.00	-0.37	-0.97
	CO5	253	0.000	30.53	9.84	-8.09	0.01	0.40	-0.00
		277	0.100	30.37	10.32	-8.10	0.00	-0.40	-1.00
	CO6	253	0.000	30.45	9.69	-6.80	0.01	0.34	-0.00
		277	0.100	30.29	10.17	-6.81	0.00	-0.34	-0.98
	CO7	253	0.000	30.05	9.47	-6.70	0.01	0.33	-0.00
		277	0.100	29.90	9.93	-6.70	-0.00	-0.33	-0.96
	CO8	253	0.000	30.28	9.75	-7.34	0.01	0.37	-0.00
		277	0.100	30.12	10.23	-7.34	0.00	-0.36	-0.99
	CO9	253	0.000	30.20	9.61	-6.05	0.00	0.30	-0.00
		277	0.100	30.05	10.07	-6.05	0.00	-0.30	-0.98
	CO10	253	0.000	29.76	9.38	-7.17	0.01	0.36	-0.00
		277	0.100	29.62	9.83	-7.17	-0.00	-0.35	-0.95
	CO11	253	0.000	29.84	9.53	-8.46	0.01	0.42	-0.00
		277	0.100	29.69	9.99	-8.46	0.00	-0.42	-0.97
	CO12	253	0.000	30.07	9.81	-9.10	0.01	0.45	-0.00
		277	0.100	29.91	10.29	-9.10	0.00	-0.45	-1.00
	CO13	253	0.000	29.99	9.67	-7.81	0.01	0.39	-0.00
		277	0.100	29.84	10.13	-7.81	0.00	-0.39	-0.98
	CO14	253	0.000	29.59	9.44	-7.70	0.01	0.38	-0.00
		277	0.100	29.45	9.90	-7.71	0.00	-0.38	-0.96
	CO15	253	0.000	29.82	9.73	-8.34	0.01	0.42	-0.00
		277	0.100	29.67	10.20	-8.35	0.00	-0.41	-0.99
	CO16	253	0.000	29.75	9.58	-7.05	0.01	0.35	-0.00
		277	0.100	29.59	10.04	-7.06	0.00	-0.35	-0.97
	CO17	253	0.000	71.76	10.07	-6.24	0.00	0.31	0.00
		277	0.100	71.58	11.25	-6.24	-0.00	-0.30	-1.04
	CO18	253	0.000	24.40	8.91	-8.45	0.01	0.42	-0.00
		277	0.100	24.27	9.26	-8.46	0.00	-0.42	-0.90
	CO19	253	0.000	-17.86	8.04	-8.59	0.01	0.43	-0.00
		277	0.100	-17.96	7.81	-8.60	0.00	-0.43	-0.80
	CO20	253	0.000	21.84	6.93	-4.75	0.00	0.24	-0.00
		277	0.100	21.76	7.17	-4.75	-0.00	-0.23	-0.70
	CO21	253	0.000	22.18	6.95	-4.01	0.00	0.20	-0.00
		277	0.100	22.10	7.19	-4.01	-0.00	-0.20	-0.70
	CO22	253	0.000	22.36	7.01	-4.56	0.00	0.23	-0.00
		277	0.100	22.28	7.26	-4.57	-0.00	-0.23	-0.71
	CO23	253	0.000	22.42	7.12	-5.52	0.00	0.27	-0.00
		277	0.100	22.33	7.38	-5.52	-0.00	-0.27	-0.72
	CO24	253	0.000	22.58	7.33	-5.99	0.00	0.30	-0.00
277		0.100	22.50	7.60	-5.99	-0.00	-0.30	-0.74	
CO25	253	0.000	22.53	7.22	-5.04	0.00	0.25	-0.00	
	277	0.100	22.44	7.48	-5.04	-0.00	-0.25	-0.73	
CO26	253	0.000	22.23	7.06	-4.96	0.00	0.25	-0.00	
	277	0.100	22.15	7.31	-4.96	-0.00	-0.25	-0.71	
CO27	253	0.000	22.40	7.27	-5.43	0.00	0.27	-0.00	
	277	0.100	22.31	7.53	-5.44	0.00	-0.27	-0.73	
CO28	253	0.000	22.34	7.16	-4.48	0.00	0.22	-0.00	
	277	0.100	22.26	7.41	-4.48	-0.00	-0.22	-0.72	
CO29	253	0.000	22.02	6.99	-5.31	0.00	0.26	-0.00	
	277	0.100	21.94	7.24	-5.31	-0.00	-0.26	-0.71	
CO30	253	0.000	22.08	7.10	-6.26	0.00	0.31	-0.00	
	277	0.100	22.00	7.35	-6.26	-0.00	-0.31	-0.72	
CO31	253	0.000	22.25	7.31	-6.73	0.00	0.34	-0.00	
	277	0.100	22.16	7.57	-6.73	0.00	-0.33	-0.74	
CO32	253	0.000	22.19	7.20	-5.78	0.00	0.29	-0.00	
	277	0.100	22.11	7.46	-5.78	0.00	-0.29	-0.73	
CO33	253	0.000	21.90	7.04	-5.70	0.00	0.28	-0.00	
	277	0.100	21.82	7.28	-5.71	-0.00	-0.28	-0.71	
CO34	253	0.000	22.07	7.25	-6.17	0.00	0.31	-0.00	
	277	0.100	21.98	7.50	-6.18	0.00	-0.31	-0.73	
CO35	253	0.000	22.01	7.14	-5.22	0.00	0.26	-0.00	
	277	0.100	21.93	7.39	-5.22	0.00	-0.26	-0.72	
CO36	253	0.000	53.13	7.58	-4.63	0.00	0.23	-0.00	
	277	0.100	53.04	8.23	-4.63	-0.00	-0.23	-0.78	
CO37	253	0.000	18.06	6.62	-6.25	0.01	0.31	-0.00	
	277	0.100	17.98	6.81	-6.25	0.00	-0.31	-0.67	
CO38	253	0.000	-13.25	5.90	-6.35	0.01	0.32	-0.00	
	277	0.100	-13.30	5.78	-6.36	0.00	-0.32	-0.59	
CO39	253	0.000	21.84	6.93	-4.75	0.00	0.24	-0.00	
	277	0.100	21.76	7.17	-4.75	-0.00	-0.23	-0.70	
CC1	254	0.000	-5.98	0.42	0.39	-0.00	-0.02	0.00	
	278	0.100	-5.98	0.42	0.39	-0.00	0.02	-0.04	
CC2	254	0.000	-2.16	0.96	-3.23	0.00	0.16	-0.00	
	278	0.100	-2.16	0.96	-3.23	0.00	-0.16	-0.10	
CC3	254	0.000	2.01	0.01	0.72	-0.00	-0.04	0.00	
	278	0.100	2.01	0.01	0.72	-0.00	0.04	-0.00	
CC4	254	0.000	0.65	0.07	-0.58	-0.00	0.03	-0.00	
	278	0.100	0.65	0.07	-0.58	-0.00	-0.03	-0.01	
CC5	254	0.000	-0.20	0.12	-0.98	-0.00	0.05	-0.00	
	278	0.100	-0.20	0.12	-0.98	-0.00	-0.05	-0.01	
CC6	254	0.000	-0.35	0.25	-0.49	0.00	0.02	-0.00	
	278	0.100	-0.35	0.25	-0.49	0.00	-0.02	-0.02	
CC7	254	0.000	31.00	0.86	0.11	-0.00	-0.01	0.00	
	278	0.100	31.00	0.86	0.11	-0.00	0.01	-0.09	
CC8	254	0.000	-35.70	-1.05	-1.64	0.00	0.08	-0.00	
	278	0.100	-35.70	-1.05	-1.64	0.00	-0.08	0.10	
CC11	254	0.000	22.65	5.63	-2.10	0.00	0.11	-0.00	
	278	0.100	22.65	5.63	-2.10	0.00	-0.10	-0.56	

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Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
51	CO1	254	0.000	19.41	9.38	-6.38	0.01	0.32	-0.00
		278	0.100	19.27	9.67	-6.38	0.00	-0.32	-0.95
	CO2	254	0.000	22.11	9.37	-5.38	0.01	0.27	-0.00
		278	0.100	21.97	9.70	-5.39	0.00	-0.27	-0.95
	CO3	254	0.000	22.99	9.45	-6.13	0.01	0.31	-0.00
		278	0.100	22.84	9.80	-6.14	0.00	-0.30	-0.96
	CO4	254	0.000	22.73	9.60	-7.41	0.01	0.37	-0.00
		278	0.100	22.58	9.95	-7.42	0.00	-0.37	-0.97
	CO5	254	0.000	22.29	9.91	-8.05	0.01	0.40	-0.00
		278	0.100	22.13	10.27	-8.05	0.00	-0.40	-1.00
	CO6	254	0.000	22.55	9.76	-6.77	0.01	0.34	-0.00
		278	0.100	22.39	10.11	-6.77	0.00	-0.33	-0.99
	CO7	254	0.000	21.85	9.52	-6.66	0.01	0.33	-0.00
		278	0.100	21.71	9.86	-6.67	0.00	-0.33	-0.96
	CO8	254	0.000	21.42	9.83	-7.30	0.01	0.36	-0.00
		278	0.100	21.26	10.17	-7.30	0.00	-0.36	-0.99
	CO9	254	0.000	21.67	9.68	-6.02	0.01	0.30	-0.00
		278	0.100	21.52	10.02	-6.02	0.00	-0.30	-0.98
	CO10	254	0.000	20.29	9.46	-7.13	0.01	0.36	-0.00
		278	0.100	20.14	9.76	-7.13	0.00	-0.35	-0.96
	CO11	254	0.000	20.03	9.61	-8.41	0.01	0.42	-0.00
		278	0.100	19.88	9.92	-8.41	0.00	-0.42	-0.97
	CO12	254	0.000	19.60	9.92	-9.04	0.01	0.45	-0.00
		278	0.100	19.44	10.24	-9.04	0.00	-0.45	-1.00
	CO13	254	0.000	19.85	9.77	-7.76	0.01	0.39	-0.00
		278	0.100	19.70	10.08	-7.77	0.00	-0.38	-0.99
	CO14	254	0.000	19.16	9.53	-7.66	0.01	0.38	-0.00
		278	0.100	19.01	9.82	-7.66	0.00	-0.38	-0.96
	CO15	254	0.000	18.72	9.84	-8.29	0.01	0.41	-0.00
		278	0.100	18.56	10.14	-8.29	0.00	-0.41	-0.99
	CO16	254	0.000	18.98	9.69	-7.01	0.01	0.35	-0.00
		278	0.100	18.82	9.98	-7.02	0.00	-0.35	-0.98
	CO17	254	0.000	60.95	10.13	-6.19	0.01	0.31	0.00
		278	0.100	60.78	11.14	-6.19	0.00	-0.30	-1.04
	CO18	254	0.000	13.13	9.25	-8.38	0.01	0.42	-0.00
		278	0.100	12.99	9.45	-8.38	0.00	-0.42	-0.93
CO19	254	0.000	-28.42	8.41	-8.53	0.01	0.43	-0.00	
	278	0.100	-28.53	8.03	-8.54	0.00	-0.43	-0.83	
CO20	254	0.000	14.35	6.97	-4.72	0.00	0.24	-0.00	
	278	0.100	14.27	7.13	-4.73	0.00	-0.23	-0.70	
CO21	254	0.000	16.35	6.97	-3.99	0.00	0.20	-0.00	
	278	0.100	16.27	7.15	-3.99	0.00	-0.20	-0.70	
CO22	254	0.000	17.00	7.03	-4.54	0.00	0.23	-0.00	
	278	0.100	16.92	7.22	-4.55	0.00	-0.23	-0.71	
CO23	254	0.000	16.81	7.14	-5.49	0.00	0.27	-0.00	
	278	0.100	16.73	7.33	-5.49	0.00	-0.27	-0.72	
CO24	254	0.000	16.48	7.37	-5.96	0.00	0.30	-0.00	
	278	0.100	16.39	7.57	-5.96	0.00	-0.30	-0.74	
CO25	254	0.000	16.67	7.26	-5.01	0.00	0.25	-0.00	
	278	0.100	16.59	7.45	-5.02	0.00	-0.25	-0.73	
CO26	254	0.000	16.16	7.08	-4.94	0.00	0.25	-0.00	
	278	0.100	16.08	7.26	-4.94	0.00	-0.24	-0.71	
CO27	254	0.000	15.83	7.31	-5.40	0.00	0.27	-0.00	
	278	0.100	15.75	7.50	-5.41	0.00	-0.27	-0.74	
CO28	254	0.000	16.02	7.20	-4.46	0.00	0.22	-0.00	
	278	0.100	15.94	7.38	-4.46	0.00	-0.22	-0.73	
CO29	254	0.000	15.00	7.03	-5.28	0.00	0.26	-0.00	
	278	0.100	14.92	7.20	-5.28	0.00	-0.26	-0.71	
CO30	254	0.000	14.81	7.14	-6.23	0.00	0.31	-0.00	
	278	0.100	14.73	7.31	-6.23	0.00	-0.31	-0.72	
CO31	254	0.000	14.48	7.37	-6.70	0.00	0.33	-0.00	
	278	0.100	14.40	7.55	-6.70	0.00	-0.33	-0.74	
CO32	254	0.000	14.68	7.26	-5.75	0.00	0.29	-0.00	
	278	0.100	14.59	7.43	-5.75	0.00	-0.29	-0.73	
CO33	254	0.000	14.16	7.08	-5.67	0.00	0.28	-0.00	
	278	0.100	14.08	7.24	-5.68	0.00	-0.28	-0.71	
CO34	254	0.000	13.84	7.31	-6.14	0.00	0.31	-0.00	
	278	0.100	13.75	7.48	-6.14	0.00	-0.30	-0.74	
CO35	254	0.000	14.03	7.20	-5.19	0.00	0.26	-0.00	
	278	0.100	13.94	7.36	-5.20	0.00	-0.26	-0.73	
CO36	254	0.000	45.12	7.60	-4.59	0.00	0.23	-0.00	
	278	0.100	45.02	8.16	-4.60	0.00	-0.23	-0.78	
CO37	254	0.000	9.70	6.85	-6.20	0.01	0.31	-0.00	
	278	0.100	9.62	6.96	-6.21	0.00	-0.31	-0.69	
CO38	254	0.000	-21.08	6.16	-6.32	0.01	0.32	-0.00	
	278	0.100	-21.13	5.95	-6.32	0.00	-0.32	-0.61	
CO39	254	0.000	14.35	6.97	-4.72	0.00	0.24	-0.00	
	278	0.100	14.27	7.13	-4.73	0.00	-0.23	-0.70	
52	CC1	255	0.000	-7.27	0.39	0.39	-0.00	-0.02	0.00
		279	0.100	-7.27	0.39	0.38	-0.00	0.02	-0.04
CC2	255	0.000	-5.05	0.98	-3.23	-0.00	0.16	-0.00	
	279	0.100	-5.05	0.98	-3.23	-0.00	-0.16	-0.10	
CC3	255	0.000	3.73	0.00	0.72	-0.00	-0.04	0.00	
	279	0.100	3.73	0.00	0.72	-0.00	0.04	-0.00	
CC4	255	0.000	1.11	0.06	-0.58	-0.00	0.03	-0.00	
	279	0.100	1.11	0.06	-0.58	-0.00	-0.03	-0.01	
CC5	255	0.000	-0.49	0.12	-0.97	-0.00	0.05	-0.00	
	279	0.100	-0.49	0.12	-0.97	-0.00	-0.05	-0.01	
CC6	255	0.000	-0.93	0.25	-0.49	-0.00	0.02	-0.00	
	279	0.100	-0.93	0.25	-0.49	-0.00	-0.02	-0.03	
CC7	255	0.000	30.67	0.87	0.12	0.00	-0.01	0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
52	CC7	279	0.100	30.67	0.87	0.12	0.00	0.01	-0.09
	CC8	255	0.000	-36.36	-0.86	-1.63	0.00	0.08	-0.00
		279	0.100	-36.36	-0.86	-1.63	0.00	-0.08	0.09
	CC11	255	0.000	18.72	5.74	-2.09	0.00	0.11	-0.00
		279	0.100	18.72	5.74	-2.09	0.00	-0.10	-0.57
	CO1	255	0.000	8.84	9.61	-6.36	0.01	0.32	-0.00
		279	0.100	8.70	9.74	-6.36	0.00	-0.32	-0.97
	CO2	255	0.000	13.86	9.57	-5.37	0.01	0.27	-0.00
		279	0.100	13.71	9.78	-5.37	0.00	-0.27	-0.96
	CO3	255	0.000	15.37	9.64	-6.11	0.01	0.31	-0.00
		279	0.100	15.22	9.88	-6.12	0.00	-0.30	-0.97
	CO4	255	0.000	14.74	9.79	-7.39	0.01	0.37	-0.00
		279	0.100	14.58	10.02	-7.39	0.00	-0.37	-0.99
	CO5	255	0.000	13.56	10.12	-8.02	0.01	0.40	-0.00
		279	0.100	13.40	10.34	-8.02	0.00	-0.40	-1.02
	CO6	255	0.000	14.19	9.97	-6.75	0.01	0.34	-0.00
		279	0.100	14.03	10.19	-6.75	0.00	-0.33	-1.00
	CO7	255	0.000	13.24	9.72	-6.64	0.01	0.33	-0.00
		279	0.100	13.08	9.93	-6.64	0.00	-0.33	-0.98
	CO8	255	0.000	12.06	10.05	-7.27	0.01	0.36	-0.00
		279	0.100	11.89	10.24	-7.28	0.00	-0.36	-1.01
	CO9	255	0.000	12.69	9.90	-6.00	0.01	0.30	-0.00
		279	0.100	12.53	10.10	-6.00	0.00	-0.30	-1.00
	CO10	255	0.000	10.35	9.68	-7.10	0.01	0.36	-0.00
		279	0.100	10.20	9.84	-7.11	0.00	-0.35	-0.97
	CO11	255	0.000	9.72	9.83	-8.37	0.01	0.42	-0.00
		279	0.100	9.57	9.99	-8.38	0.00	-0.42	-0.99
	CO12	255	0.000	8.54	10.16	-9.00	0.01	0.45	-0.00
		279	0.100	8.38	10.30	-9.01	0.00	-0.45	-1.02
	CO13	255	0.000	9.17	10.01	-7.73	0.01	0.39	-0.00
		279	0.100	9.01	10.16	-7.74	0.00	-0.38	-1.01
	CO14	255	0.000	8.22	9.76	-7.63	0.01	0.38	-0.00
		279	0.100	8.06	9.89	-7.63	0.00	-0.38	-0.98
	CO15	255	0.000	7.04	10.09	-8.26	0.01	0.41	-0.00
		279	0.100	6.87	10.21	-8.26	0.00	-0.41	-1.01
	CO16	255	0.000	7.67	9.94	-6.99	0.01	0.35	-0.00
		279	0.100	7.51	10.06	-6.99	0.00	-0.35	-1.00
	CO17	255	0.000	49.94	10.40	-6.16	0.01	0.31	0.00
		279	0.100	49.76	11.24	-6.16	0.00	-0.30	-1.07
	CO18	255	0.000	1.28	9.74	-8.33	0.01	0.42	-0.00
		279	0.100	1.13	9.76	-8.33	0.00	-0.41	-0.98
	CO19	255	0.000	-39.82	8.87	-8.49	0.01	0.43	-0.00
279		0.100	-39.94	8.31	-8.50	0.00	-0.43	-0.87	
CO20	255	0.000	6.52	7.12	-4.71	0.00	0.24	-0.00	
	279	0.100	6.44	7.19	-4.72	0.00	-0.23	-0.71	
CO21	255	0.000	10.24	7.10	-3.98	0.00	0.20	-0.00	
	279	0.100	10.16	7.21	-3.98	0.00	-0.20	-0.71	
CO22	255	0.000	11.35	7.15	-4.53	0.00	0.23	-0.00	
	279	0.100	11.27	7.28	-4.54	0.00	-0.23	-0.72	
CO23	255	0.000	10.89	7.27	-5.48	0.00	0.27	-0.00	
	279	0.100	10.80	7.39	-5.48	0.00	-0.27	-0.73	
CO24	255	0.000	10.01	7.51	-5.94	0.00	0.30	-0.00	
	279	0.100	9.92	7.63	-5.95	0.00	-0.30	-0.75	
CO25	255	0.000	10.48	7.40	-5.00	0.00	0.25	-0.00	
	279	0.100	10.39	7.52	-5.00	0.00	-0.25	-0.74	
CO26	255	0.000	9.77	7.21	-4.92	0.00	0.25	-0.00	
	279	0.100	9.69	7.32	-4.93	0.00	-0.24	-0.72	
CO27	255	0.000	8.90	7.45	-5.39	0.00	0.27	-0.00	
	279	0.100	8.81	7.56	-5.39	0.00	-0.27	-0.75	
CO28	255	0.000	9.36	7.34	-4.45	0.00	0.22	-0.00	
	279	0.100	9.27	7.45	-4.45	0.00	-0.22	-0.74	
CO29	255	0.000	7.63	7.18	-5.27	0.00	0.26	-0.00	
	279	0.100	7.55	7.26	-5.27	0.00	-0.26	-0.72	
CO30	255	0.000	7.17	7.29	-6.21	0.01	0.31	-0.00	
	279	0.100	7.08	7.37	-6.21	0.00	-0.31	-0.73	
CO31	255	0.000	6.29	7.53	-6.68	0.01	0.33	-0.00	
	279	0.100	6.20	7.61	-6.68	0.00	-0.33	-0.76	
CO32	255	0.000	6.76	7.42	-5.73	0.00	0.29	-0.00	
	279	0.100	6.67	7.50	-5.74	0.00	-0.28	-0.74	
CO33	255	0.000	6.05	7.23	-5.65	0.00	0.28	-0.00	
	279	0.100	5.97	7.30	-5.66	0.00	-0.28	-0.73	
CO34	255	0.000	5.18	7.48	-6.12	0.01	0.31	-0.00	
	279	0.100	5.09	7.54	-6.13	0.00	-0.30	-0.75	
CO35	255	0.000	5.64	7.36	-5.18	0.00	0.26	-0.00	
	279	0.100	5.55	7.43	-5.18	0.00	-0.26	-0.74	
CO36	255	0.000	36.96	7.78	-4.58	0.00	0.23	-0.00	
	279	0.100	36.86	8.25	-4.58	0.00	-0.22	-0.79	
CO37	255	0.000	0.92	7.20	-6.17	0.01	0.31	-0.00	
	279	0.100	0.83	7.21	-6.18	0.00	-0.31	-0.72	
CO38	255	0.000	-29.52	6.49	-6.29	0.01	0.32	-0.00	
	279	0.100	-29.59	6.18	-6.30	0.00	-0.32	-0.64	
CO39	255	0.000	6.52	7.12	-4.71	0.00	0.24	-0.00	
	279	0.100	6.44	7.19	-4.72	0.00	-0.23	-0.71	
53	CC1	256	0.000	-8.60	0.36	0.39	-0.00	-0.02	0.00
		280	0.100	-8.60	0.36	0.39	-0.00	0.02	-0.04
	CC2	256	0.000	-8.00	0.95	-3.21	-0.00	0.16	-0.00
		280	0.100	-8.00	0.95	-3.21	-0.00	-0.16	-0.10
CC3	256	0.000	5.45	-0.01	0.71	-0.00	-0.04	0.00	
	280	0.100	5.45	-0.01	0.71	-0.00	0.04	0.00	
CC4	256	0.000	1.59	0.06	-0.58	-0.00	0.03	-0.00	
	280	0.100	1.59	0.06	-0.58	-0.00	-0.03	-0.01	



Progetto: Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
53	CC5	256	0.000	-0.76	0.11	-0.97	-0.00	0.05	-0.00
		280	0.100	-0.76	0.11	-0.97	-0.00	-0.05	-0.01
	CC6	256	0.000	-1.53	0.25	-0.49	-0.00	0.02	-0.00
		280	0.100	-1.53	0.25	-0.49	-0.00	-0.02	-0.02
	CC7	256	0.000	30.06	0.90	0.08	0.00	-0.00	-0.00
		280	0.100	30.06	0.90	0.08	0.00	0.01	-0.09
	CC8	256	0.000	-36.72	-0.71	-1.56	0.00	0.08	-0.00
		280	0.100	-36.72	-0.71	-1.56	0.00	-0.08	0.07
	CC11	256	0.000	14.46	6.02	-2.10	0.00	0.11	0.00
		280	0.100	14.46	6.02	-2.10	0.00	-0.10	-0.60
	CO1	256	0.000	-2.25	9.98	-6.31	0.01	0.32	0.00
		280	0.100	-2.41	9.94	-6.31	0.00	-0.31	-1.00
	CO2	256	0.000	5.09	9.91	-5.34	0.01	0.27	0.00
		280	0.100	4.93	9.99	-5.34	0.00	-0.27	-0.99
	CO3	256	0.000	7.23	9.97	-6.08	0.01	0.30	0.00
		280	0.100	7.07	10.08	-6.09	0.00	-0.30	-1.00
	CO4	256	0.000	6.26	10.12	-7.34	0.01	0.37	0.00
		280	0.100	6.09	10.22	-7.35	0.00	-0.37	-1.01
	CO5	256	0.000	4.31	10.44	-7.97	0.01	0.40	0.00
		280	0.100	4.13	10.51	-7.97	0.00	-0.40	-1.05
	CO6	256	0.000	5.28	10.30	-6.71	0.01	0.34	0.00
		280	0.100	5.11	10.38	-6.71	0.00	-0.33	-1.03
	CO7	256	0.000	4.11	10.05	-6.60	0.01	0.33	0.00
		280	0.100	3.95	10.12	-6.60	0.00	-0.33	-1.01
	CO8	256	0.000	2.16	10.38	-7.22	0.01	0.36	0.00
		280	0.100	1.98	10.42	-7.23	0.00	-0.36	-1.04
	CO9	256	0.000	3.13	10.24	-5.96	0.01	0.30	0.00
		280	0.100	2.96	10.29	-5.97	0.00	-0.30	-1.03
	CO10	256	0.000	-0.10	10.04	-7.05	0.01	0.35	0.00
		280	0.100	-0.26	10.04	-7.06	0.00	-0.35	-1.00
	CO11	256	0.000	-1.07	10.19	-8.31	0.01	0.42	0.00
		280	0.100	-1.24	10.17	-8.31	0.00	-0.41	-1.02
	CO12	256	0.000	-3.03	10.52	-8.93	0.01	0.45	0.00
		280	0.100	-3.20	10.47	-8.94	0.00	-0.45	-1.05
	CO13	256	0.000	-2.05	10.37	-7.67	0.01	0.39	0.00
		280	0.100	-2.22	10.34	-7.68	0.00	-0.38	-1.04
	CO14	256	0.000	-3.22	10.13	-7.56	0.01	0.38	0.00
		280	0.100	-3.39	10.07	-7.57	0.00	-0.38	-1.01
	CO15	256	0.000	-5.18	10.46	-8.19	0.01	0.41	0.00
		280	0.100	-5.35	10.37	-8.19	0.00	-0.41	-1.04
	CO16	256	0.000	-4.20	10.31	-6.93	0.01	0.35	0.00
		280	0.100	-4.37	10.24	-6.94	0.00	-0.35	-1.03
CO17	256	0.000	38.08	10.86	-6.16	0.01	0.31	0.00	
	280	0.100	37.88	11.53	-6.17	0.00	-0.30	-1.11	
CO18	256	0.000	-11.07	10.37	-8.23	0.01	0.41	0.00	
	280	0.100	-11.24	10.18	-8.24	0.01	-0.41	-1.03	
CO19	256	0.000	-51.38	9.42	-8.35	0.01	0.42	0.00	
	280	0.100	-51.52	8.65	-8.35	0.00	-0.42	-0.92	
CO20	256	0.000	-1.71	7.38	-4.68	0.00	0.24	0.00	
	280	0.100	-1.79	7.35	-4.69	0.00	-0.23	-0.74	
CO21	256	0.000	3.73	7.33	-3.96	0.00	0.20	0.00	
	280	0.100	3.64	7.38	-3.96	0.00	-0.20	-0.73	
CO22	256	0.000	5.32	7.38	-4.51	0.00	0.23	0.00	
	280	0.100	5.24	7.44	-4.52	0.00	-0.22	-0.74	
CO23	256	0.000	4.60	7.49	-5.45	0.01	0.27	0.00	
	280	0.100	4.51	7.54	-5.45	0.00	-0.27	-0.75	
CO24	256	0.000	3.15	7.73	-5.91	0.01	0.30	0.00	
	280	0.100	3.05	7.77	-5.91	0.00	-0.29	-0.77	
CO25	256	0.000	3.87	7.62	-4.98	0.00	0.25	0.00	
	280	0.100	3.78	7.67	-4.98	0.00	-0.25	-0.76	
CO26	256	0.000	3.01	7.44	-4.89	0.00	0.25	0.00	
	280	0.100	2.92	7.48	-4.90	0.00	-0.24	-0.74	
CO27	256	0.000	1.56	7.68	-5.36	0.00	0.27	0.00	
	280	0.100	1.46	7.70	-5.36	0.00	-0.27	-0.77	
CO28	256	0.000	2.28	7.57	-4.42	0.00	0.22	0.00	
	280	0.100	2.19	7.60	-4.43	0.00	-0.22	-0.76	
CO29	256	0.000	-0.11	7.43	-5.23	0.01	0.26	0.00	
	280	0.100	-0.20	7.42	-5.24	0.00	-0.26	-0.74	
CO30	256	0.000	-0.84	7.53	-6.17	0.01	0.31	0.00	
	280	0.100	-0.93	7.52	-6.17	0.00	-0.31	-0.75	
CO31	256	0.000	-2.29	7.78	-6.63	0.01	0.33	0.00	
	280	0.100	-2.38	7.75	-6.63	0.00	-0.33	-0.78	
CO32	256	0.000	-1.56	7.67	-5.70	0.01	0.29	0.00	
	280	0.100	-1.66	7.65	-5.70	0.00	-0.28	-0.77	
CO33	256	0.000	-2.43	7.48	-5.61	0.01	0.28	0.00	
	280	0.100	-2.52	7.45	-5.62	0.00	-0.28	-0.75	
CO34	256	0.000	-3.88	7.73	-6.08	0.01	0.31	0.00	
	280	0.100	-3.98	7.68	-6.08	0.00	-0.30	-0.77	
CO35	256	0.000	-3.16	7.62	-5.14	0.01	0.26	0.00	
	280	0.100	-3.25	7.58	-5.15	0.00	-0.26	-0.76	
CO36	256	0.000	28.16	8.10	-4.58	0.01	0.23	0.00	
	280	0.100	28.05	8.46	-4.58	0.00	-0.23	-0.82	
CO37	256	0.000	-8.24	7.64	-6.11	0.01	0.31	0.00	
	280	0.100	-8.33	7.53	-6.11	0.00	-0.31	-0.76	
CO38	256	0.000	-38.10	6.88	-6.19	0.01	0.31	0.00	
	280	0.100	-38.17	6.46	-6.20	0.00	-0.31	-0.67	
CO39	256	0.000	-1.71	7.38	-4.68	0.00	0.24	0.00	
	280	0.100	-1.79	7.35	-4.69	0.00	-0.23	-0.74	
54	CC1	257	0.000	-10.08	0.31	0.36	-0.00	-0.02	0.00
		281	0.100	-10.08	0.31	0.36	-0.00	0.02	-0.03
CC2	257	0.000	-11.43	0.85	-3.19	-0.00	0.16	-0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
54	CC2	281	0.100	-11.43	0.85	-3.19	-0.00	-0.16	-0.09
	CC3	257	0.000	7.34	-0.02	0.72	-0.00	-0.04	0.00
		281	0.100	7.34	-0.02	0.72	-0.00	0.04	0.00
	CC4	257	0.000	2.07	0.06	-0.57	-0.00	0.03	-0.00
		281	0.100	2.07	0.06	-0.57	-0.00	-0.03	-0.01
	CC5	257	0.000	-1.09	0.09	-0.95	-0.00	0.05	-0.00
		281	0.100	-1.09	0.09	-0.95	-0.00	-0.05	-0.01
	CC6	257	0.000	-2.23	0.23	-0.49	-0.00	0.02	-0.00
		281	0.100	-2.23	0.23	-0.49	-0.00	-0.02	-0.02
	CC7	257	0.000	29.70	0.96	0.14	0.00	-0.01	0.00
		281	0.100	29.70	0.96	0.14	0.00	0.01	-0.10
	CC8	257	0.000	-37.60	-0.59	-1.60	0.00	0.08	-0.00
		281	0.100	-37.60	-0.59	-1.60	0.00	-0.08	0.06
	CC11	257	0.000	9.64	6.45	-2.05	0.00	0.10	-0.00
		281	0.100	9.64	6.45	-2.05	0.00	-0.10	-0.65
	CO1	257	0.000	-14.80	10.45	-6.24	0.01	0.31	-0.00
		281	0.100	-14.97	10.19	-6.24	0.00	-0.31	-1.04
	CO2	257	0.000	-4.94	10.34	-5.27	0.01	0.26	-0.00
		281	0.100	-5.11	10.26	-5.28	0.00	-0.26	-1.03
	CO3	257	0.000	-2.13	10.39	-6.00	0.01	0.30	-0.00
		281	0.100	-2.30	10.35	-6.01	0.00	-0.30	-1.04
	CO4	257	0.000	-3.54	10.52	-7.24	0.01	0.36	-0.00
		281	0.100	-3.72	10.46	-7.24	0.00	-0.36	-1.05
	CO5	257	0.000	-6.39	10.83	-7.86	0.01	0.39	-0.00
		281	0.100	-6.57	10.71	-7.86	0.00	-0.39	-1.08
	CO6	257	0.000	-4.98	10.69	-6.62	0.01	0.33	-0.00
		281	0.100	-5.16	10.61	-6.63	0.00	-0.33	-1.07
	CO7	257	0.000	-6.34	10.47	-6.51	0.01	0.33	-0.00
		281	0.100	-6.52	10.36	-6.51	0.00	-0.33	-1.04
	CO8	257	0.000	-9.19	10.78	-7.13	0.01	0.36	-0.00
		281	0.100	-9.38	10.62	-7.13	0.00	-0.36	-1.07
	CO9	257	0.000	-7.78	10.64	-5.89	0.01	0.30	-0.00
		281	0.100	-7.96	10.51	-5.90	0.00	-0.30	-1.06
	CO10	257	0.000	-12.00	10.50	-6.96	0.01	0.35	-0.00
		281	0.100	-12.17	10.29	-6.97	0.00	-0.35	-1.04
	CO11	257	0.000	-13.41	10.63	-8.20	0.01	0.41	-0.00
		281	0.100	-13.58	10.40	-8.20	0.00	-0.41	-1.06
	CO12	257	0.000	-16.25	10.94	-8.81	0.01	0.44	-0.00
281		0.100	-16.44	10.65	-8.82	0.00	-0.44	-1.08	
CO13	257	0.000	-14.85	10.80	-7.58	0.01	0.38	-0.00	
	281	0.100	-15.03	10.54	-7.59	0.00	-0.38	-1.07	
CO14	257	0.000	-16.21	10.58	-7.47	0.01	0.38	-0.00	
	281	0.100	-16.39	10.30	-7.47	0.00	-0.38	-1.05	
CO15	257	0.000	-19.06	10.88	-8.08	0.01	0.41	-0.00	
	281	0.100	-19.24	10.55	-8.09	0.00	-0.41	-1.08	
CO16	257	0.000	-17.65	10.75	-6.85	0.01	0.35	-0.00	
	281	0.100	-17.83	10.45	-6.86	0.00	-0.34	-1.07	
CO17	257	0.000	25.06	11.46	-6.01	0.01	0.30	0.00	
	281	0.100	24.85	11.92	-6.02	0.00	-0.30	-1.16	
CO18	257	0.000	-25.21	11.08	-8.12	0.01	0.41	-0.00	
	281	0.100	-25.40	10.63	-8.13	0.01	-0.41	-1.09	
CO19	257	0.000	-65.06	10.02	-8.31	0.01	0.42	-0.00	
	281	0.100	-65.21	8.98	-8.32	0.00	-0.42	-0.97	
CO20	257	0.000	-11.02	7.70	-4.63	0.01	0.23	-0.00	
	281	0.100	-11.11	7.56	-4.64	0.00	-0.23	-0.77	
CO21	257	0.000	-3.70	7.64	-3.91	0.00	0.20	-0.00	
	281	0.100	-3.79	7.59	-3.92	0.00	-0.20	-0.76	
CO22	257	0.000	-1.62	7.68	-4.45	0.00	0.22	-0.00	
	281	0.100	-1.71	7.66	-4.46	0.00	-0.22	-0.77	
CO23	257	0.000	-2.66	7.77	-5.37	0.01	0.27	-0.00	
	281	0.100	-2.76	7.74	-5.38	0.00	-0.27	-0.78	
CO24	257	0.000	-4.78	8.00	-5.83	0.01	0.29	-0.00	
	281	0.100	-4.88	7.93	-5.84	0.00	-0.29	-0.80	
CO25	257	0.000	-3.73	7.90	-4.92	0.00	0.25	-0.00	
	281	0.100	-3.83	7.85	-4.92	0.00	-0.25	-0.79	
CO26	257	0.000	-4.74	7.73	-4.83	0.00	0.24	-0.00	
	281	0.100	-4.84	7.67	-4.84	0.00	-0.24	-0.77	
CO27	257	0.000	-6.86	7.95	-5.29	0.00	0.27	-0.00	
	281	0.100	-6.96	7.86	-5.30	0.00	-0.27	-0.79	
CO28	257	0.000	-5.81	7.86	-4.37	0.00	0.22	-0.00	
	281	0.100	-5.91	7.78	-4.38	0.00	-0.22	-0.78	
CO29	257	0.000	-8.94	7.74	-5.17	0.01	0.26	-0.00	
	281	0.100	-9.03	7.63	-5.18	0.00	-0.26	-0.77	
CO30	257	0.000	-9.98	7.84	-6.09	0.01	0.31	-0.00	
	281	0.100	-10.08	7.71	-6.09	0.00	-0.31	-0.78	
CO31	257	0.000	-12.09	8.06	-6.55	0.01	0.33	-0.00	
	281	0.100	-12.20	7.90	-6.55	0.00	-0.33	-0.80	
CO32	257	0.000	-11.05	7.96	-5.63	0.01	0.28	-0.00	
	281	0.100	-11.15	7.82	-5.64	0.00	-0.28	-0.79	
CO33	257	0.000	-12.06	7.79	-5.55	0.01	0.28	-0.00	
	281	0.100	-12.16	7.64	-5.55	0.00	-0.28	-0.77	
CO34	257	0.000	-14.17	8.02	-6.01	0.01	0.30	-0.00	
	281	0.100	-14.27	7.83	-6.01	0.00	-0.30	-0.80	
CO35	257	0.000	-13.13	7.92	-5.09	0.01	0.26	-0.00	
	281	0.100	-13.23	7.75	-5.10	0.00	-0.26	-0.79	
CO36	257	0.000	18.50	8.51	-4.48	0.01	0.22	-0.00	
	281	0.100	18.38	8.76	-4.48	0.00	-0.22	-0.86	
CO37	257	0.000	-18.73	8.14	-6.03	0.01	0.30	-0.00	
	281	0.100	-18.83	7.90	-6.04	0.00	-0.30	-0.81	
CO38	257	0.000	-48.24	7.30	-6.17	0.01	0.31	-0.00	
	281	0.100	-48.32	6.74	-6.18	0.00	-0.31	-0.71	

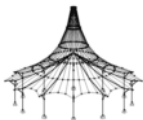


Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
54	CO39	257	0.000	-11.02	7.70	-4.63	0.01	0.23	-0.00
		281	0.100	-11.11	7.56	-4.64	0.00	-0.23	-0.77
55	CC1	258	0.000	-11.98	0.25	0.36	-0.00	-0.02	0.00
		282	0.100	-11.98	0.25	0.35	-0.00	0.02	-0.02
	CC2	258	0.000	-15.46	0.67	-3.18	-0.00	0.16	-0.00
		282	0.100	-15.46	0.67	-3.18	-0.00	-0.16	-0.07
	CC3	258	0.000	9.58	-0.03	0.72	-0.00	-0.04	0.00
		282	0.100	9.58	-0.03	0.72	-0.00	0.04	0.00
	CC4	258	0.000	2.66	0.05	-0.56	-0.00	0.03	-0.00
		282	0.100	2.66	0.05	-0.56	-0.00	-0.03	-0.01
	CC5	258	0.000	-1.46	0.08	-0.94	-0.00	0.05	-0.00
		282	0.100	-1.46	0.08	-0.94	-0.00	-0.05	-0.01
	CC6	258	0.000	-3.06	0.18	-0.49	-0.00	0.02	-0.00
		282	0.100	-3.06	0.18	-0.49	-0.00	-0.02	-0.02
	CC7	258	0.000	30.43	1.04	0.14	0.00	-0.01	-0.00
		282	0.100	30.43	1.04	0.14	0.00	0.01	-0.10
	CC8	258	0.000	-40.02	-0.48	-1.58	0.00	0.08	0.00
		282	0.100	-40.02	-0.48	-1.58	0.00	-0.08	0.05
	CC11	258	0.000	4.65	7.01	-2.08	0.00	0.10	-0.00
		282	0.100	4.65	7.01	-2.08	0.00	-0.10	-0.70
	CO1	258	0.000	-28.82	10.94	-6.23	0.01	0.32	-0.00
		282	0.100	-29.01	10.43	-6.24	0.00	-0.31	-1.08
	CO2	258	0.000	-15.99	10.80	-5.28	0.01	0.27	-0.00
		282	0.100	-16.17	10.53	-5.28	0.00	-0.27	-1.07
	CO3	258	0.000	-12.40	10.84	-6.00	0.01	0.30	-0.00
		282	0.100	-12.58	10.63	-6.01	0.00	-0.30	-1.08
	CO4	258	0.000	-14.27	10.95	-7.22	0.01	0.36	-0.00
		282	0.100	-14.46	10.70	-7.23	0.00	-0.36	-1.09
	CO5	258	0.000	-18.17	11.20	-7.84	0.01	0.39	-0.00
		282	0.100	-18.37	10.88	-7.84	0.00	-0.39	-1.11
	CO6	258	0.000	-16.30	11.09	-6.62	0.01	0.33	-0.00
		282	0.100	-16.49	10.80	-6.62	0.00	-0.33	-1.10
	CO7	258	0.000	-17.87	10.91	-6.50	0.01	0.33	-0.00
		282	0.100	-18.06	10.60	-6.51	0.00	-0.33	-1.08
	CO8	258	0.000	-21.77	11.17	-7.11	0.01	0.36	-0.00
		282	0.100	-21.96	10.77	-7.12	0.00	-0.36	-1.10
	CO9	258	0.000	-19.89	11.05	-5.89	0.01	0.30	-0.00
		282	0.100	-20.08	10.70	-5.90	0.00	-0.30	-1.09
CO10	258	0.000	-25.23	10.98	-6.96	0.01	0.35	-0.00	
	282	0.100	-25.42	10.53	-6.96	0.00	-0.35	-1.08	
CO11	258	0.000	-27.10	11.09	-8.17	0.01	0.41	-0.00	
	282	0.100	-27.30	10.61	-8.18	0.00	-0.41	-1.09	
CO12	258	0.000	-31.01	11.34	-8.78	0.01	0.44	-0.00	
	282	0.100	-31.21	10.78	-8.79	0.00	-0.44	-1.12	
CO13	258	0.000	-29.13	11.23	-7.57	0.01	0.38	-0.00	
	282	0.100	-29.32	10.71	-7.57	0.00	-0.38	-1.11	
CO14	258	0.000	-30.70	11.05	-7.45	0.01	0.38	-0.00	
	282	0.100	-30.89	10.51	-7.46	0.00	-0.38	-1.09	
CO15	258	0.000	-34.60	11.30	-8.06	0.01	0.41	-0.00	
	282	0.100	-34.80	10.68	-8.06	0.00	-0.41	-1.11	
CO16	258	0.000	-32.72	11.19	-6.84	0.01	0.35	-0.00	
	282	0.100	-32.92	10.61	-6.85	0.00	-0.35	-1.10	
CO17	258	0.000	11.93	12.10	-6.02	0.01	0.30	0.00	
	282	0.100	11.69	12.33	-6.02	0.00	-0.30	-1.22	
CO18	258	0.000	-41.37	11.83	-8.08	0.01	0.41	0.00	
	282	0.100	-41.59	11.05	-8.09	0.00	-0.41	-1.16	
CO19	258	0.000	-82.10	10.64	-8.27	0.01	0.42	-0.00	
	282	0.100	-82.27	9.26	-8.28	0.00	-0.42	-1.02	
CO20	258	0.000	-21.41	8.04	-4.64	0.00	0.23	-0.00	
	282	0.100	-21.51	7.77	-4.64	0.00	-0.23	-0.80	
CO21	258	0.000	-11.89	7.96	-3.92	0.00	0.20	-0.00	
	282	0.100	-12.00	7.81	-3.93	0.00	-0.20	-0.79	
CO22	258	0.000	-9.23	8.00	-4.46	0.00	0.22	-0.00	
	282	0.100	-9.33	7.88	-4.46	0.00	-0.22	-0.80	
CO23	258	0.000	-10.62	8.07	-5.37	0.00	0.27	-0.00	
	282	0.100	-10.73	7.94	-5.37	0.00	-0.27	-0.80	
CO24	258	0.000	-13.51	8.26	-5.82	0.00	0.29	-0.00	
	282	0.100	-13.62	8.08	-5.83	0.00	-0.29	-0.82	
CO25	258	0.000	-12.12	8.18	-4.92	0.00	0.25	-0.00	
	282	0.100	-12.23	8.02	-4.92	0.00	-0.25	-0.81	
CO26	258	0.000	-13.29	8.04	-4.83	0.00	0.24	-0.00	
	282	0.100	-13.39	7.87	-4.84	0.00	-0.24	-0.80	
CO27	258	0.000	-16.18	8.22	-5.29	0.00	0.27	-0.00	
	282	0.100	-16.29	8.01	-5.29	0.00	-0.27	-0.82	
CO28	258	0.000	-14.79	8.14	-4.38	0.00	0.22	-0.00	
	282	0.100	-14.89	7.95	-4.38	0.00	-0.22	-0.81	
CO29	258	0.000	-18.74	8.08	-5.17	0.01	0.26	-0.00	
	282	0.100	-18.85	7.83	-5.18	0.00	-0.26	-0.80	
CO30	258	0.000	-20.14	8.16	-6.08	0.01	0.31	-0.00	
	282	0.100	-20.24	7.89	-6.08	0.00	-0.31	-0.81	
CO31	258	0.000	-23.03	8.34	-6.53	0.01	0.33	-0.00	
	282	0.100	-23.14	8.03	-6.54	0.00	-0.33	-0.82	
CO32	258	0.000	-21.64	8.26	-5.63	0.00	0.28	-0.00	
	282	0.100	-21.74	7.97	-5.63	0.00	-0.28	-0.82	
CO33	258	0.000	-22.80	8.12	-5.54	0.01	0.28	-0.00	
	282	0.100	-22.91	7.83	-5.55	0.00	-0.28	-0.80	
CO34	258	0.000	-25.69	8.30	-6.00	0.01	0.30	-0.00	
	282	0.100	-25.80	7.96	-6.00	0.00	-0.30	-0.82	
CO35	258	0.000	-24.30	8.23	-5.09	0.00	0.26	-0.00	
	282	0.100	-24.41	7.90	-5.10	0.00	-0.26	-0.81	
CO36	258	0.000	8.76	8.95	-4.48	0.01	0.22	0.00	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
55	CO36	282	0.100	8.63	9.07	-4.49	0.00	-0.22	-0.90
	CO37	258	0.000	-30.71	8.67	-6.01	0.01	0.30	0.00
		282	0.100	-30.83	8.25	-6.02	0.00	-0.30	-0.85
56	CO38	258	0.000	-60.87	7.74	-6.15	0.01	0.31	-0.00
		282	0.100	-60.96	6.99	-6.16	0.00	-0.31	-0.75
	CO39	258	0.000	-21.41	8.04	-4.64	0.00	0.23	-0.00
56	CC1	282	0.100	-21.51	7.77	-4.64	0.00	-0.23	-0.80
		16	0.000	-13.05	0.65	0.38	-0.00	-0.02	0.03
	CC2	246	0.100	-13.05	0.65	0.38	-0.00	0.02	-0.03
		16	0.000	-18.45	1.48	-3.16	-0.00	0.16	0.08
	CC3	246	0.100	-18.45	1.48	-3.16	-0.00	-0.16	-0.07
		16	0.000	11.30	-0.23	0.72	-0.00	-0.04	-0.01
	CC4	246	0.100	11.30	-0.23	0.72	-0.00	0.04	0.01
		16	0.000	3.10	0.13	-0.56	-0.00	0.03	0.01
	CC5	246	0.100	3.10	0.13	-0.56	-0.00	-0.03	-0.01
		16	0.000	-1.70	0.20	-0.94	-0.00	0.05	0.01
	CC6	246	0.100	-1.70	0.20	-0.94	-0.00	-0.05	-0.01
		16	0.000	-3.68	0.38	-0.48	-0.00	0.02	0.02
	CC7	246	0.100	-3.68	0.38	-0.48	-0.00	-0.02	-0.02
		16	0.000	29.42	3.71	0.12	0.00	-0.01	0.18
	CC8	246	0.100	29.42	3.71	0.12	0.00	0.01	-0.19
		16	0.000	-40.69	-0.96	-1.57	0.00	0.08	-0.04
	CC11	246	0.100	-40.69	-0.96	-1.57	0.00	-0.08	0.05
		16	0.000	-4.40	26.83	-2.19	0.00	0.11	1.33
	CO1	246	0.100	-4.40	26.83	-2.19	0.00	-0.11	-1.36
		16	0.000	-45.93	39.12	-6.28	0.00	0.32	1.97
	CO2	246	0.100	-45.93	39.10	-6.29	0.00	-0.32	-2.00
		16	0.000	-30.77	38.84	-5.34	0.00	0.27	1.94
	CO3	246	0.100	-30.79	38.83	-5.34	0.00	-0.27	-1.98
		16	0.000	-26.58	39.01	-6.06	0.00	0.31	1.95
	CO4	246	0.100	-26.60	39.00	-6.06	0.00	-0.31	-1.98
		16	0.000	-28.78	39.26	-7.27	0.00	0.37	1.96
	CO5	246	0.100	-28.80	39.24	-7.27	-0.00	-0.37	-2.00
		16	0.000	-33.48	39.72	-7.87	-0.00	0.40	1.99
	CO6	246	0.100	-33.50	39.70	-7.87	-0.00	-0.40	-2.02
		16	0.000	-31.28	39.47	-6.66	-0.00	0.34	1.97
	CO7	246	0.100	-31.30	39.45	-6.67	-0.00	-0.34	-2.01
		16	0.000	-32.97	39.09	-6.54	0.00	0.33	1.96
	CO8	246	0.100	-32.99	39.07	-6.55	0.00	-0.33	-1.99
16		0.000	-37.67	39.55	-7.15	-0.00	0.36	1.98	
CO9	246	0.100	-37.69	39.53	-7.15	-0.00	-0.36	-2.02	
	16	0.000	-35.47	39.30	-5.94	-0.00	0.30	1.97	
CO10	246	0.100	-35.49	39.28	-5.95	-0.00	-0.30	-2.00	
	16	0.000	-41.74	39.29	-7.01	0.00	0.35	1.97	
CO11	246	0.100	-41.76	39.27	-7.01	0.00	-0.35	-2.01	
	16	0.000	-43.94	39.53	-8.21	0.00	0.42	1.99	
CO12	246	0.100	-43.96	39.51	-8.21	0.00	-0.42	-2.02	
	16	0.000	-48.64	39.99	-8.81	-0.00	0.45	2.01	
CO13	246	0.100	-48.66	39.97	-8.81	-0.00	-0.45	-2.04	
	16	0.000	-46.44	39.75	-7.61	-0.00	0.39	2.00	
CO14	246	0.100	-46.46	39.72	-7.61	-0.00	-0.39	-2.03	
	16	0.000	-48.13	39.36	-7.49	0.00	0.38	1.98	
CO15	246	0.100	-48.15	39.34	-7.49	0.00	-0.38	-2.01	
	16	0.000	-52.83	39.82	-8.09	-0.00	0.41	2.01	
CO16	246	0.100	-52.85	39.79	-8.09	-0.00	-0.41	-2.04	
	16	0.000	-50.63	39.58	-6.89	-0.00	0.35	1.99	
CO17	246	0.100	-50.65	39.55	-6.89	-0.00	-0.35	-2.02	
	16	0.000	-6.51	44.48	-6.08	0.00	0.31	2.21	
CO18	246	0.100	-6.54	44.48	-6.08	0.00	-0.30	-2.25	
	16	0.000	-60.68	42.81	-8.13	0.00	0.41	2.17	
CO19	246	0.100	-60.70	42.78	-8.14	0.00	-0.41	-2.20	
	16	0.000	-100.08	37.52	-8.31	0.00	0.43	1.92	
CO20	246	0.100	-100.09	37.49	-8.31	0.00	-0.43	-1.94	
	16	0.000	-34.04	28.92	-4.68	0.00	0.24	1.45	
CO21	246	0.100	-34.05	28.90	-4.69	0.00	-0.24	-1.47	
	16	0.000	-22.80	28.71	-3.97	0.00	0.20	1.43	
CO22	246	0.100	-22.81	28.70	-3.97	0.00	-0.20	-1.46	
	16	0.000	-19.69	28.83	-4.51	0.00	0.23	1.44	
CO23	246	0.100	-19.70	28.83	-4.51	0.00	-0.23	-1.46	
	16	0.000	-21.32	29.02	-5.41	-0.00	0.27	1.45	
CO24	246	0.100	-21.34	29.01	-5.41	-0.00	-0.27	-1.47	
	16	0.000	-24.81	29.36	-5.86	-0.00	0.30	1.47	
CO25	246	0.100	-24.82	29.35	-5.86	-0.00	-0.30	-1.49	
	16	0.000	-23.18	29.18	-4.96	-0.00	0.25	1.46	
CO26	246	0.100	-23.19	29.17	-4.96	-0.00	-0.25	-1.48	
	16	0.000	-24.43	28.89	-4.87	0.00	0.25	1.44	
CO27	246	0.100	-24.44	28.88	-4.87	-0.00	-0.25	-1.47	
	16	0.000	-27.92	29.24	-5.32	-0.00	0.27	1.46	
CO28	246	0.100	-27.93	29.22	-5.32	-0.00	-0.27	-1.49	
	16	0.000	-26.29	29.05	-4.42	-0.00	0.22	1.45	
CO29	246	0.100	-26.30	29.04	-4.43	-0.00	-0.22	-1.48	
	16	0.000	-30.93	29.04	-5.22	0.00	0.26	1.45	
CO30	246	0.100	-30.94	29.03	-5.22	0.00	-0.26	-1.48	
	16	0.000	-32.56	29.23	-6.11	0.00	0.31	1.46	
CO31	246	0.100	-32.57	29.21	-6.12	-0.00	-0.31	-1.49	
	16	0.000	-36.05	29.57	-6.56	-0.00	0.33	1.48	
CO32	246	0.100	-36.06	29.56	-6.56	-0.00	-0.33	-1.51	
	16	0.000	-34.41	29.39	-5.67	-0.00	0.29	1.47	
CO33	246	0.100	-34.42	29.37	-5.67	-0.00	-0.29	-1.50	
	16	0.000	-35.67	29.10	-5.58	0.00	0.28	1.46	
		246	0.100	-35.68	29.09	-5.58	0.00	-0.28	-1.48



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
56	CO34	16	0.000	-39.15	29.44	-6.03	-0.00	0.30	1.48
		246	0.100	-39.16	29.43	-6.03	-0.00	-0.31	-1.50
	CO35	16	0.000	-37.52	29.26	-5.13	-0.00	0.26	1.47
		246	0.100	-37.53	29.25	-5.13	-0.00	-0.26	-1.49
	CO36	16	0.000	-4.84	32.82	-4.54	0.00	0.23	1.63
		246	0.100	-4.86	32.82	-4.54	0.00	-0.23	-1.66
	CO37	16	0.000	-44.96	31.63	-6.06	0.00	0.31	1.59
		246	0.100	-44.97	31.61	-6.07	0.00	-0.31	-1.61
	CO38	16	0.000	-74.14	27.75	-6.19	0.00	0.32	1.41
		246	0.100	-74.14	27.74	-6.19	0.00	-0.32	-1.43
	CO39	16	0.000	-34.04	28.92	-4.68	0.00	0.24	1.45
		246	0.100	-34.05	28.90	-4.69	0.00	-0.24	-1.47
Sezione nr.3 - 2 : Rettangolo 350/2700 - Rettangolo 350/1800									
30	CC1	45	0.000	31.18	5.03	72.50	-5.95	40.24	-6.05
		44	4.302	-1.19	5.78	-28.06	16.03	52.62	-7.01
		28	8.503	2.65	-4.35	6.18	1.57	2.09	0.37
	CC2	45	0.000	11.48	-1.90	31.44	2.71	13.06	-1.64
		44	4.302	-6.44	5.01	-17.80	15.09	12.91	-3.93
		28	8.503	7.68	-0.77	5.10	0.14	6.75	0.23
	CC3	45	0.000	0.05	0.62	0.23	-0.70	-0.09	0.23
		44	4.302	-0.99	-0.05	0.13	0.52	-0.64	0.34
		28	8.503	2.09	-0.16	0.14	0.20	1.90	-0.19
	CC4	45	0.000	1.27	0.09	-0.17	0.08	2.11	-0.33
		44	4.302	-0.18	-0.03	-0.19	0.35	-0.66	0.14
		28	8.503	1.83	-0.12	0.38	0.11	1.65	-0.08
	CC5	45	0.000	1.67	-0.19	-0.27	0.42	2.79	-0.48
		44	4.302	0.29	0.01	-0.30	0.20	-0.32	-0.02
		28	8.503	1.09	-0.07	0.36	0.04	0.97	-0.01
	CC6	45	0.000	2.77	-0.44	9.10	0.60	2.88	-0.31
		44	4.302	-1.98	1.43	-5.02	4.29	3.73	-1.10
		28	8.503	1.99	-0.22	1.36	0.05	1.75	0.05
	CC7	45	0.000	-60.21	-25.55	-11.61	35.23	-80.12	6.29
		44	4.302	-39.14	-2.79	-3.14	-8.42	-89.01	4.57
		28	8.503	14.46	3.09	2.62	-2.14	13.08	0.89
	CC8	45	0.000	-13.48	5.51	27.18	-9.98	-33.69	12.16
		44	4.302	-14.67	3.31	18.62	10.02	66.25	-0.70
		28	8.503	-32.10	5.84	-19.30	-1.84	-28.30	-0.72
	CC11	45	0.000	-261.09	-111.17	17.83	145.65	-387.34	34.37
		44	4.302	-200.99	-1.70	30.43	-10.60	-213.42	16.17
		28	8.503	-30.89	27.52	-35.54	-13.50	-26.28	1.77
	CO1	45	0.000	-291.02	-145.26	165.32	191.38	-446.35	36.37
		44	4.302	-281.18	12.51	-20.58	28.40	-196.22	7.01
		28	8.503	-27.69	30.17	-33.04	-15.81	-23.48	3.08
	CO2	45	0.000	-291.28	-144.66	165.47	190.78	-446.82	36.59
		44	4.302	-282.64	12.42	-20.45	29.00	-197.73	7.48
		28	8.503	-24.92	29.97	-32.82	-15.54	-20.97	2.83
	CO3	45	0.000	-289.73	-144.62	165.21	190.98	-444.19	36.14
		44	4.302	-282.95	12.38	-20.71	29.45	-198.82	7.66
		28	8.503	-22.50	29.81	-32.31	-15.40	-18.79	2.71
	CO4	45	0.000	-287.52	-144.83	164.88	191.48	-440.51	35.52
		44	4.302	-282.56	12.39	-21.10	29.72	-199.15	7.64
		28	8.503	-21.05	29.72	-31.85	-15.35	-17.49	2.70
	CO5	45	0.000	-283.86	-145.35	177.23	192.15	-436.81	35.12
		44	4.302	-285.25	14.33	-27.84	35.55	-193.97	6.16
		28	8.503	-18.34	29.42	-30.02	-15.27	-15.11	2.76
	CO6	45	0.000	-286.07	-145.13	177.56	191.66	-440.49	35.74
		44	4.302	-285.63	14.31	-27.46	35.27	-193.64	6.18
		28	8.503	-19.78	29.51	-30.49	-15.32	-16.40	2.78
	CO7	45	0.000	-289.07	-144.88	165.15	191.27	-443.14	35.98
		44	4.302	-282.26	12.44	-20.83	29.28	-198.06	7.46
		28	8.503	-23.48	29.88	-32.36	-15.49	-19.68	2.81
	CO8	45	0.000	-285.41	-145.39	177.50	191.95	-439.45	35.58
		44	4.302	-284.94	14.37	-27.57	35.10	-192.88	5.98
		28	8.503	-20.76	29.58	-30.53	-15.42	-17.30	2.87
	CO9	45	0.000	-287.62	-145.18	177.83	191.45	-443.13	36.20
		44	4.302	-285.33	14.35	-27.19	34.83	-192.55	6.00
		28	8.503	-22.21	29.67	-31.00	-15.46	-18.59	2.89
	CO10	45	0.000	-289.47	-145.22	165.05	191.58	-443.72	35.91
		44	4.302	-281.48	12.46	-20.85	28.85	-197.30	7.19
		28	8.503	-25.26	30.02	-32.53	-15.66	-21.30	2.97
	CO11	45	0.000	-287.26	-145.43	164.73	192.08	-440.04	35.29
		44	4.302	-281.10	12.48	-21.23	29.12	-197.64	7.17
		28	8.503	-23.82	29.92	-32.07	-15.61	-20.01	2.95
	CO12	45	0.000	-283.60	-145.95	177.08	192.75	-436.35	34.90
		44	4.302	-283.78	14.41	-27.97	34.94	-192.46	5.70
		28	8.503	-21.11	29.62	-30.24	-15.54	-17.62	3.02
	CO13	45	0.000	-285.81	-145.73	177.41	192.26	-440.03	35.51
		44	4.302	-284.17	14.40	-27.59	34.67	-192.13	5.72
		28	8.503	-22.55	29.72	-30.71	-15.58	-18.91	3.03
	CO14	45	0.000	-288.81	-145.48	164.99	191.87	-442.67	35.75
		44	4.302	-280.79	12.52	-20.97	28.68	-196.55	6.99
		28	8.503	-26.24	30.08	-32.58	-15.76	-22.19	3.06
	CO15	45	0.000	-285.15	-145.99	177.35	192.54	-438.99	35.35
		44	4.302	-283.48	14.45	-27.71	34.50	-191.37	5.51
		28	8.503	-23.53	29.78	-30.75	-15.68	-19.81	3.13
	CO16	45	0.000	-287.36	-145.78	177.68	192.05	-442.67	35.97
		44	4.302	-283.86	14.44	-27.33	34.23	-191.04	5.53
		28	8.503	-24.97	29.87	-31.22	-15.73	-21.10	3.14
	CO17	45	0.000	-368.98	-180.42	149.64	239.94	-549.65	44.64
		44	4.302	-333.98	8.94	-25.03	17.27	-316.08	13.05
		28	8.503	-8.22	34.29	-29.46	-18.63	-5.88	4.24



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
30	CO18	45	0.000	-389.73	-172.12	186.64	225.16	-599.23	61.44
		44	4.302	-353.65	13.26	0.47	30.72	-225.81	12.22
		28	8.503	-51.48	42.23	-55.74	-21.16	-44.01	3.27
CO19	CO19	45	0.000	-311.30	-137.13	202.27	176.87	-495.14	53.09
		44	4.302	-300.89	16.86	4.85	41.88	-106.11	6.15
		28	8.503	-70.96	38.09	-59.30	-18.32	-61.62	2.12
CO20	CO20	45	0.000	-216.15	-107.58	122.37	141.75	-331.39	26.96
		44	4.302	-208.30	9.23	-15.26	20.96	-145.70	5.21
		28	8.503	-20.52	22.36	-24.44	-11.72	-17.41	2.29
CO21	CO21	45	0.000	-216.29	-107.09	122.51	141.24	-331.68	27.14
		44	4.302	-209.36	9.17	-15.15	21.42	-146.69	5.55
		28	8.503	-18.47	22.20	-24.28	-11.52	-15.55	2.10
CO22	CO22	45	0.000	-215.12	-107.04	122.32	141.37	-329.70	26.81
		44	4.302	-209.57	9.14	-15.34	21.75	-147.45	5.69
		28	8.503	-16.68	22.09	-23.91	-11.41	-13.93	2.02
CO23	CO23	45	0.000	-213.49	-107.20	122.07	141.74	-326.98	26.35
		44	4.302	-209.29	9.15	-15.63	21.95	-147.71	5.67
		28	8.503	-15.61	22.02	-23.56	-11.37	-12.97	2.01
CO24	CO24	45	0.000	-210.79	-107.59	131.22	142.26	-324.24	26.06
		44	4.302	-211.28	10.58	-20.62	26.26	-143.91	4.58
		28	8.503	-13.60	21.80	-22.21	-11.32	-11.21	2.06
CO25	CO25	45	0.000	-212.42	-107.43	131.47	141.89	-326.96	26.52
		44	4.302	-211.57	10.57	-20.34	26.06	-143.65	4.59
		28	8.503	-14.67	21.87	-22.56	-11.35	-12.16	2.06
CO26	CO26	45	0.000	-214.66	-107.25	122.26	141.61	-328.96	26.68
		44	4.302	-209.08	9.18	-15.43	21.62	-146.95	5.54
		28	8.503	-17.41	22.13	-23.94	-11.48	-14.59	2.09
CO27	CO27	45	0.000	-211.96	-107.64	131.41	142.13	-326.22	26.39
		44	4.302	-211.07	10.61	-20.43	25.93	-143.14	4.44
		28	8.503	-15.40	21.91	-22.58	-11.43	-12.83	2.14
CO28	CO28	45	0.000	-213.59	-107.48	131.66	141.75	-328.94	26.85
		44	4.302	-211.35	10.60	-20.15	25.73	-142.88	4.46
		28	8.503	-16.46	21.98	-22.93	-11.46	-13.78	2.15
CO29	CO29	45	0.000	-214.99	-107.53	122.18	141.88	-329.41	26.62
		44	4.302	-208.52	9.20	-15.45	21.29	-146.47	5.34
		28	8.503	-18.73	22.24	-24.06	-11.61	-15.79	2.21
CO30	CO30	45	0.000	-213.36	-107.69	121.93	142.25	-326.70	26.16
		44	4.302	-208.23	9.21	-15.74	21.49	-146.73	5.33
		28	8.503	-17.66	22.17	-23.72	-11.57	-14.84	2.20
CO31	CO31	45	0.000	-210.66	-108.08	131.07	142.77	-323.96	25.87
		44	4.302	-210.23	10.64	-20.73	25.80	-142.92	4.23
		28	8.503	-15.65	21.95	-22.36	-11.52	-13.07	2.24
CO32	CO32	45	0.000	-212.29	-107.92	131.32	142.40	-326.68	26.33
		44	4.302	-210.51	10.63	-20.45	25.60	-142.66	4.25
		28	8.503	-16.72	22.02	-22.71	-11.55	-14.03	2.25
CO33	CO33	45	0.000	-214.52	-107.74	122.12	142.12	-328.67	26.50
		44	4.302	-208.02	9.24	-15.54	21.16	-145.96	5.19
		28	8.503	-19.46	22.29	-24.09	-11.68	-16.45	2.28
CO34	CO34	45	0.000	-211.83	-108.13	131.26	142.64	-325.94	26.20
		44	4.302	-210.01	10.67	-20.54	25.47	-142.16	4.10
		28	8.503	-17.45	22.06	-22.74	-11.62	-14.69	2.33
CO35	CO35	45	0.000	-213.45	-107.97	131.51	142.26	-328.66	26.66
		44	4.302	-210.30	10.66	-20.26	25.27	-141.90	4.11
		28	8.503	-18.52	22.13	-23.09	-11.66	-15.65	2.34
CO36	CO36	45	0.000	-274.45	-133.48	110.77	177.51	-408.73	33.14
		44	4.302	-247.39	6.55	-18.51	12.68	-234.46	9.70
		28	8.503	-6.12	25.41	-21.79	-13.82	-4.39	3.16
CO37	CO37	45	0.000	-289.33	-127.46	138.13	166.77	-444.68	45.53
		44	4.302	-261.98	9.78	0.32	22.67	-167.71	9.07
		28	8.503	-38.15	31.28	-41.23	-15.68	-32.61	2.44
CO38	CO38	45	0.000	-230.77	-101.66	149.71	131.16	-366.90	39.30
		44	4.302	-222.92	12.48	3.53	30.96	-79.04	4.56
		28	8.503	-52.55	28.21	-43.86	-13.57	-45.64	1.57
CO39	CO39	45	0.000	-216.15	-107.58	122.37	141.75	-331.39	26.96
		44	4.302	-208.30	9.23	-15.26	20.96	-145.70	5.21
		28	8.503	-20.52	22.36	-24.44	-11.72	-17.41	2.29

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.		
				N	V _y	V _z	M _T	M _y	M _z			
1	CR1	54	0.000	Sezione nr. 1: Rettangolo 1000/500								
				Max N	>	-259.66	-14.83	-8.55	29.67	-17.46	-73.01	CO 17
				Min N	>	-270.98	-19.08	-8.63	30.91	-17.19	-69.60	CO 19
				Max V _y	>	-259.66	-14.83	-8.55	29.67	-17.46	-73.01	CO 17
				Min V _y	>	-270.98	-19.08	-8.63	30.91	-17.19	-69.60	CO 19
				Max V _z	>	-259.66	-14.83	-8.55	29.67	-17.46	-73.01	CO 17
				Min V _z	>	-261.17	-15.85	-8.64	29.93	-17.55	-74.26	CO 3
				Max M _T	>	-270.98	-19.08	-8.63	30.91	-17.19	-69.60	CO 19
				Min M _T	>	-259.66	-14.83	-8.55	29.67	-17.46	-73.01	CO 17
				Max M _y	>	-269.60	-18.08	-8.55	30.63	-17.10	-68.32	CO 18
				Min M _y	>	-261.04	-15.82	-8.63	29.94	-17.55	-74.28	CO 1
				Max M _z	>	-269.60	-18.08	-8.55	30.63	-17.10	-68.32	CO 18
				Min M _z	>	-261.04	-15.82	-8.63	29.94	-17.55	-74.28	CO 1
				Max N	>	-68.72	12.08	10.43	15.06	-6.71	-14.59	CO 17
				Min N	>	-74.05	13.60	10.55	16.83	-6.31	-12.76	CO 19
				Max V _y	>	-72.80	14.01	10.52	16.81	-6.26	-12.63	CO 18



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.						
				N	V _y	V _z	M _T	M _y	M _z							
1	CR1			Min V _y	-69.97	▷ 11.66	10.47	15.07	-6.77	-14.72	CO 1					
				Max V _z	-74.05	▷ 13.60	▷ 10.55	16.83	-6.31	-12.76	CO 19					
				Min V _z	-68.72	▷ 12.08	▷ 10.43	15.06	-6.71	-14.59	CO 17					
				Max M _T	-74.05	▷ 13.60	▷ 10.55	▷ 16.83	-6.31	-12.76	CO 19					
				Min M _T	-68.72	▷ 12.08	▷ 10.43	▷ 15.06	-6.71	-14.59	CO 17					
				Max M _y	-72.80	▷ 14.01	▷ 10.52	▷ 16.81	▷ -6.26	-12.63	CO 18					
				Min M _y	-70.02	▷ 11.67	▷ 10.47	▷ 15.07	▷ -6.77	-14.71	CO 2					
				Max M _z	-72.80	▷ 14.01	▷ 10.52	▷ 16.81	▷ -6.26	▷ -12.63	CO 18					
				Min M _z	-69.97	▷ 11.66	▷ 10.47	▷ 15.07	▷ -6.77	▷ -14.72	CO 1					
				40	4.536	Max N	▷ 1.14	▷ 0.90	-5.61	2.75	-0.50	0.16	CO 18			
						Min N	▷ 1.11	▷ 0.83	-5.14	2.52	-0.47	0.22	CO 1			
						Max V _y	▷ 1.14	▷ 0.90	-5.61	2.75	-0.50	0.16	CO 18			
						Min V _y	▷ 1.11	▷ 0.83	-5.14	2.52	-0.47	0.22	CO 1			
						Max V _z	▷ 1.11	▷ 0.83	▷ -5.14	2.52	-0.47	0.22	CO 3			
						Min V _z	▷ 1.14	▷ 0.90	▷ -5.61	2.75	-0.50	0.16	CO 18			
	Max M _T	▷ 1.14	▷ 0.90			-5.61	▷ 2.75	-0.50	0.16	CO 18						
	Min M _T	▷ 1.11	▷ 0.83			-5.14	▷ 2.52	-0.47	0.22	CO 2						
	Max M _y	▷ 1.11	▷ 0.83			-5.14	▷ 2.52	▷ -0.47	0.22	CO 1						
	Min M _y	▷ 1.14	▷ 0.90			-5.61	▷ 2.75	▷ -0.50	0.16	CO 18						
	Max M _z	▷ 1.12	▷ 0.84			-5.15	▷ 2.53	-0.47	▷ 0.22	CO 17						
	Min M _z	▷ 1.13	▷ 0.90			-5.60	▷ 2.75	▷ -0.50	▷ 0.16	CO 19						
		CR2	54			0.000	Max N	▷ -192.35	-10.98	-6.34	21.97	-12.93	-54.08	CO 36		
							Min N	▷ -200.73	-14.13	-6.40	22.89	-12.73	-51.55	CO 38		
							Max V _y	▷ -192.35	-10.98	-6.34	21.97	-12.93	-54.08	CO 36		
				Min V _y	▷ -200.73		-14.13	-6.40	22.89	-12.73	-51.55	CO 38				
				Max V _z	▷ -192.35		-10.98	▷ -6.34	21.97	-12.93	-54.08	CO 36				
				Min V _z	▷ -193.46		-11.74	▷ -6.40	22.17	-13.00	-55.01	CO 22				
				Max M _T	▷ -200.73		-14.13	-6.40	▷ 22.89	-12.73	-51.55	CO 38				
				Min M _T	▷ -192.35		-10.98	-6.34	▷ 21.97	-12.93	-54.08	CO 36				
				Max M _y	-199.70		-13.39	-6.34	22.69	▷ -12.66	-50.61	CO 37				
Min M _y				-193.37	-11.72		-6.40	22.18	▷ -13.00	-55.02	CO 20					
Max M _z				-199.70	-13.39		-6.34	22.69	▷ -12.66	▷ -50.61	CO 37					
Min M _z				-193.37	-11.72		-6.40	22.18	▷ -13.00	▷ -55.02	CO 20					
66				2.268	Max N		▷ -50.91	8.95	7.73	11.15	-4.97	-10.80	CO 36			
					Min N		▷ -54.85	10.07	7.82	12.46	-4.67	-9.45	CO 38			
					Max V _y		▷ -53.92	10.38	7.79	12.45	-4.63	-9.35	CO 37			
					Min V _y		▷ -51.83	8.64	7.76	11.16	-5.01	-10.90	CO 20			
					Max V _z		-54.85	10.07	▷ 7.82	12.46	-4.67	-9.45	CO 38			
					Min V _z		-50.91	8.95	▷ 7.73	11.15	-4.97	-10.80	CO 36			
					Max M _T		-54.85	10.07	7.82	▷ 12.46	-4.67	-9.45	CO 38			
					Min M _T		-50.91	8.95	7.73	▷ 11.15	-4.97	-10.80	CO 36			
					Max M _y		-53.92	10.38	7.79	12.45	▷ -4.63	-9.35	CO 37			
					Min M _y		-51.86	8.64	7.76	11.16	▷ -5.01	-10.90	CO 21			
					Max M _z		-53.92	10.38	7.79	12.45	▷ -4.63	-9.35	CO 37			
					Min M _z		-51.83	8.64	7.76	11.16	▷ -5.01	▷ -10.90	CO 20			
					40		4.536	Max N	▷ 0.84	0.67	-4.16	2.04	-0.37	0.12	CO 37	
								Min N	▷ 0.83	0.62	-3.81	1.87	-0.34	0.16	CO 20	
								Max V _y	▷ 0.84	0.67	-4.16	2.04	-0.37	0.12	CO 37	
								Min V _y	▷ 0.83	0.62	-3.81	1.87	-0.34	0.16	CO 20	
								Max V _z	▷ 0.83	0.62	▷ -3.81	1.87	-0.34	0.16	CO 22	
								Min V _z	▷ 0.84	0.67	▷ -4.16	2.04	-0.37	0.12	CO 37	
		Max M _T	▷ 0.84			0.67		-4.16	▷ 2.04	-0.37	0.12	CO 37				
		Min M _T	▷ 0.83			0.62		-3.81	▷ 1.87	-0.34	0.16	CO 21				
		Max M _y	▷ 0.83			0.62		-3.81	▷ 1.87	▷ -0.34	0.16	CO 20				
		Min M _y	▷ 0.84			0.67		-4.16	▷ 2.04	-0.37	0.12	CO 37				
		Max M _z	▷ 0.83			0.62		-3.81	▷ 1.87	-0.34	▷ 0.16	CO 36				
		Min M _z	▷ 0.84			0.66		-4.15	2.03	-0.37	▷ 0.12	CO 38				
			CR3			54		0.000	Max N	▷ -193.37	-11.72	-6.40	22.18	-13.00	-55.02	CO 39
									Min N	▷ -193.37	-11.72	-6.40	22.18	-13.00	-55.02	CO 39
									Max V _y	▷ -193.37	-11.72	-6.40	22.18	-13.00	-55.02	CO 39
									Min V _y	▷ -193.37	-11.72	-6.40	22.18	-13.00	-55.02	CO 39
									Max V _z	▷ -193.37	-11.72	▷ -6.40	22.18	-13.00	-55.02	CO 39
									Min V _z	▷ -193.37	-11.72	▷ -6.40	22.18	-13.00	-55.02	CO 39
Max M _T				▷ -193.37					-11.72	-6.40	▷ 22.18	-13.00	-55.02	CO 39		
Min M _T				▷ -193.37					-11.72	-6.40	▷ 22.18	-13.00	-55.02	CO 39		
Max M _y				-193.37					-11.72	-6.40	22.18	▷ -13.00	-55.02	CO 39		
Min M _y				-193.37					-11.72	-6.40	22.18	▷ -13.00	-55.02	CO 39		
Max M _z				-193.37					-11.72	-6.40	22.18	▷ -13.00	▷ -55.02	CO 39		
Min M _z				-193.37					-11.72	-6.40	22.18	▷ -13.00	▷ -55.02	CO 39		
66				2.268					Max N	▷ -51.83	8.64	7.76	11.16	-5.01	-10.90	CO 39
									Min N	▷ -51.83	8.64	7.76	11.16	-5.01	-10.90	CO 39
									Max V _y	▷ -51.83	8.64	7.76	11.16	-5.01	-10.90	CO 39
									Min V _y	▷ -51.83	8.64	7.76	11.16	-5.01	-10.90	CO 39
									Max V _z	-51.83	8.64	▷ 7.76	11.16	-5.01	-10.90	CO 39
									Min V _z	-51.83	8.64	▷ 7.76	11.16	-5.01	-10.90	CO 39
					Max M _T		-51.83		8.64	7.76	▷ 11.16	-5.01	-10.90	CO 39		
					Min M _T		-51.83		8.64	7.76	▷ 11.16	-5.01	-10.90	CO 39		
					Max M _y		-51.83		8.64	7.76	11.16	▷ -5.01	-10.90	CO 39		
					Min M _y		-51.83		8.64	7.76	11.16	▷ -5.01	-10.90	CO 39		
					Max M _z		-51.83		8.64	7.76	11.16	▷ -5.01	▷ -10.90	CO 39		
					Min M _z		-51.83		8.64	7.76	11.16	▷ -5.01	▷ -10.90	CO 39		
	40				4.536		Max N		▷ 0.83	0.62	-3.81	1.87	-0.34	0.16	CO 39	
							Min N		▷ 0.83	0.62	-3.81	1.87	-0.34	0.16	CO 39	
							Max V _y		▷ 0.83	0.62	-3.81	1.87	-0.34	0.16	CO 39	



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
1	CR3			Min V _y	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
				Max V _z	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
				Min V _z	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
				Max M _T	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
				Min M _T	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
				Max M _y	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
				Min M _y	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
				Max M _z	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
				Min M _z	0.83	▷ 0.62	-3.81	1.87	-0.34	0.16	CO 39
Sezione nr. 4: Rettangolo 350/2550											
3	CR1	6	0.000	Max N	▷ -118.48	61.79	40.32	-70.28	-153.92	-6.53	CO 5
				Min N	▷ -161.36	26.76	-19.31	-34.35	-212.29	-4.22	CO 18
				Max V _y	▷ -118.48	61.79	40.32	-70.28	-153.92	-6.53	CO 5
				Min V _y	▷ -143.51	10.53	-21.23	-18.07	-194.80	-6.64	CO 17
				Max V _z	▷ -119.57	55.86	▷ 45.65	-64.34	-155.94	-6.58	CO 9
				Min V _z	▷ -143.51	10.53	▷ -21.23	-18.07	-194.80	-6.64	CO 17
				Max M _T	▷ -143.51	10.53	-21.23	▷ -18.07	-194.80	-6.64	CO 17
				Min M _T	▷ -118.48	61.79	40.32	▷ -70.28	-153.92	-6.53	CO 5
				Max M _y	▷ -118.48	61.79	40.32	▷ -70.28	-153.92	-6.53	CO 5
				Min M _y	▷ -161.36	26.76	-19.31	▷ -34.35	-212.29	-4.22	CO 18
				Max M _z	▷ -138.63	38.20	3.79	▷ -44.48	-177.46	-1.57	CO 19
				Min M _z	▷ -143.51	10.53	-21.23	▷ -18.07	-194.80	-6.64	CO 17
		3	4.855	Max N	▷ -77.97	-35.64	-58.62	37.04	-87.96	1.76	CO 12
	Min N			▷ -120.66	-24.30	-29.04	25.71	-144.89	0.88	CO 18	
	Max V _y			▷ -94.50	-19.48	-26.47	21.07	-117.35	-1.23	CO 19	
	Min V _y			▷ -80.37	▷ -66.76	-97.87	70.24	-87.33	0.73	CO 6	
	Max V _z			▷ -94.50	-19.48	▷ -26.47	21.07	-117.35	-1.23	CO 19	
	Min V _z			▷ -80.82	-60.48	▷ -100.65	63.85	-89.01	0.48	CO 8	
	Max M _T			▷ -80.37	-66.76	▷ -97.87	70.24	-87.33	0.73	CO 6	
	Min M _T			▷ -94.50	-19.48	▷ -26.47	21.07	-117.35	-1.23	CO 19	
	Max M _y			▷ -79.76	-66.54	-98.56	69.96	-86.38	0.83	CO 5	
	Min M _y			▷ -120.66	-24.30	-29.04	25.71	-144.89	0.88	CO 18	
	Max M _z			▷ -106.61	-28.98	-51.50	29.90	-121.09	3.44	CO 17	
	Min M _z			▷ -94.50	-19.48	-26.47	21.07	-117.35	-1.23	CO 19	
		6	0.000	Max N	▷ -87.83	45.79	30.02	-52.07	-114.06	-4.82	CO 24
	Min N			▷ -119.58	19.81	-14.16	-25.43	-157.27	-3.12	CO 37	
	Max V _y			▷ -87.83	45.79	30.02	-52.07	-114.06	-4.82	CO 24	
	Min V _y			▷ -106.29	7.80	-15.58	-13.38	-144.23	-4.90	CO 36	
	Max V _z			▷ -88.63	41.39	▷ 33.96	-47.66	-115.55	-4.86	CO 28	
	Min V _z			▷ -106.29	7.80	▷ -15.58	-13.38	-144.23	-4.90	CO 36	
	Max M _T			▷ -106.29	7.80	-15.58	▷ -13.38	-144.23	-4.90	CO 36	
	Min M _T			▷ -87.83	45.79	30.02	▷ -52.07	-114.06	-4.82	CO 24	
	Max M _y			▷ -87.83	45.79	30.02	▷ -52.07	-114.06	-4.82	CO 24	
	Min M _y			▷ -119.58	19.81	-14.16	▷ -25.43	-157.27	-3.12	CO 37	
	Max M _z			▷ -102.78	28.29	2.91	▷ -32.94	-131.53	-1.16	CO 38	
	Min M _z			▷ -106.29	7.80	-15.58	-13.38	-144.23	-4.90	CO 36	
		3	4.855	Max N	▷ -57.78	-26.41	-43.48	27.45	-65.18	1.30	CO 31
	Min N			▷ -89.42	-18.00	-21.58	19.05	-107.35	0.65	CO 37	
	Max V _y			▷ -70.03	-14.44	-19.65	15.61	-86.95	-0.91	CO 38	
	Min V _y			▷ -59.58	-49.47	-72.61	52.04	-64.73	0.54	CO 25	
	Max V _z			▷ -70.03	-14.44	▷ -19.65	15.61	-86.95	-0.91	CO 38	
	Min V _z			▷ -59.91	-44.82	▷ -74.66	47.31	-65.97	0.36	CO 27	
	Max M _T			▷ -59.58	-49.47	-72.61	▷ 52.04	-64.73	0.54	CO 25	
	Min M _T			▷ -70.03	-14.44	-19.65	▷ 15.61	-86.95	-0.91	CO 38	
	Max M _y			▷ -59.13	-49.31	-73.12	51.83	-64.02	0.61	CO 24	
	Min M _y			▷ -89.42	-18.00	-21.58	▷ 19.05	-107.35	0.65	CO 37	
	Max M _z			▷ -79.00	-21.47	-38.22	22.15	-89.70	2.55	CO 36	
	Min M _z			▷ -70.03	-14.44	-19.65	15.61	-86.95	-0.91	CO 38	
	6	0.000	Max N	▷ -89.49	16.27	1.54	-20.88	-118.46	-2.94	CO 39	
Min N			▷ -89.49	16.27	1.54	-20.88	-118.46	-2.94	CO 39		
Max V _y			▷ -89.49	16.27	1.54	-20.88	-118.46	-2.94	CO 39		
Min V _y			▷ -89.49	16.27	1.54	-20.88	-118.46	-2.94	CO 39		
Max V _z			▷ -89.49	16.27	▷ 1.54	-20.88	-118.46	-2.94	CO 39		
Min V _z			▷ -89.49	16.27	▷ 1.54	-20.88	-118.46	-2.94	CO 39		
Max M _T			▷ -89.49	16.27	1.54	▷ -20.88	-118.46	-2.94	CO 39		
Min M _T			▷ -89.49	16.27	1.54	▷ -20.88	-118.46	-2.94	CO 39		
Max M _y			▷ -89.49	16.27	1.54	▷ -20.88	-118.46	-2.94	CO 39		
Min M _y			▷ -89.49	16.27	1.54	▷ -20.88	-118.46	-2.94	CO 39		
Max M _z			▷ -89.49	16.27	1.54	▷ -20.88	-118.46	-2.94	CO 39		
Min M _z			▷ -89.49	16.27	1.54	▷ -20.88	-118.46	-2.94	CO 39		
	3	4.855	Max N	▷ -59.60	-17.90	-36.32	18.71	-69.29	0.99	CO 39	
Min N			▷ -59.60	-17.90	-36.32	18.71	-69.29	0.99	CO 39		
Max V _y			▷ -59.60	-17.90	-36.32	18.71	-69.29	0.99	CO 39		
Min V _y			▷ -59.60	-17.90	-36.32	18.71	-69.29	0.99	CO 39		
Max V _z			▷ -59.60	-17.90	▷ -36.32	18.71	-69.29	0.99	CO 39		
Min V _z			▷ -59.60	-17.90	▷ -36.32	18.71	-69.29	0.99	CO 39		
Max M _T			▷ -59.60	-17.90	-36.32	▷ 18.71	-69.29	0.99	CO 39		
Min M _T			▷ -59.60	-17.90	-36.32	▷ 18.71	-69.29	0.99	CO 39		
Max M _y			▷ -59.60	-17.90	-36.32	▷ 18.71	-69.29	0.99	CO 39		
Min M _y			▷ -59.60	-17.90	-36.32	▷ 18.71	-69.29	0.99	CO 39		
Max M _z			▷ -59.60	-17.90	-36.32	▷ 18.71	-69.29	0.99	CO 39		
Min M _z			▷ -59.60	-17.90	-36.32	▷ 18.71	-69.29	0.99	CO 39		
Sezione nr. 5: RD 24											
4	CR1	199	0.000	Max N	▷ -5.17	-43.11	26.44	0.03	-1.32	-2.16	CO 19



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.	
					N	V _y	V _z	M _T	M _y	M _z		
4	CR1			Min N	▷ -149.90	▷ -60.00	▷ 30.72	0.03	-1.61	-3.15	CO 17	
				Max V _y	▷ -5.17	▷ -43.11	▷ 26.44	0.03	-1.32	-2.16	CO 19	
				Min V _y	▷ -149.90	▷ -60.00	▷ 30.72	0.03	-1.61	-3.15	CO 17	
				Max V _z	▷ -28.32	▷ -49.87	▷ 41.44	0.03	-2.09	-2.52	CO 5	
				Min V _z	▷ -5.17	▷ -43.11	▷ 26.44	0.03	-1.32	-2.16	CO 19	
				Max M _T	▷ -149.90	▷ -60.00	▷ 30.72	▷ 0.03	-1.61	-3.15	CO 17	
				Min M _T	▷ -5.17	▷ -43.11	▷ 26.44	▷ 0.03	-1.32	-2.16	CO 19	
				Max M _y	▷ -5.17	▷ -43.11	▷ 26.44	▷ 0.03	▷ -1.32	-2.16	CO 19	
				Min M _y	▷ -28.32	▷ -49.87	▷ 41.44	▷ 0.03	▷ -2.09	-2.52	CO 5	
				Max M _z	▷ -5.17	▷ -43.11	▷ 26.44	▷ 0.03	▷ -1.32	▷ -2.16	CO 19	
				Min M _z	▷ -149.90	▷ -60.00	▷ 30.72	▷ 0.03	▷ -1.61	▷ -3.15	CO 17	
				Max N	▷ -5.17	▷ -43.08	▷ 26.49	▷ 0.03	▷ 1.33	▷ 2.15	CO 19	
				Min N	▷ -149.89	▷ -59.97	▷ 30.81	▷ 0.04	▷ 1.61	▷ 3.14	CO 17	
				Max V _y	▷ -5.17	▷ -43.08	▷ 26.49	▷ 0.03	▷ 1.33	▷ 2.15	CO 19	
				Min V _y	▷ -149.89	▷ -59.97	▷ 30.81	▷ 0.04	▷ 1.61	▷ 3.14	CO 17	
				Max V _z	▷ -28.31	▷ -49.81	▷ 41.50	▷ 0.03	▷ 2.09	▷ 2.51	CO 5	
				Min V _z	▷ -5.17	▷ -43.08	▷ 26.49	▷ 0.03	▷ 1.33	▷ 2.15	CO 19	
				Max M _T	▷ -149.89	▷ -59.97	▷ 30.81	▷ 0.04	▷ 1.61	▷ 3.14	CO 17	
	Min M _T	▷ -5.17	▷ -43.08	▷ 26.49	▷ 0.03	▷ 1.33	▷ 2.15	CO 19				
	Max M _y	▷ -28.31	▷ -49.81	▷ 41.50	▷ 0.03	▷ 2.09	▷ 2.51	CO 5				
	Min M _y	▷ -5.17	▷ -43.08	▷ 26.49	▷ 0.03	▷ 1.33	▷ 2.15	CO 19				
	Max M _z	▷ -149.89	▷ -59.97	▷ 30.81	▷ 0.04	▷ 1.61	▷ 3.14	CO 17				
	Min M _z	▷ -5.17	▷ -43.08	▷ 26.49	▷ 0.03	▷ 1.33	▷ 2.15	CO 19				
	CR2	199	0.100	Max N	▷ -3.79	▷ -31.96	▷ 19.60	0.02	-0.98	-1.60	CO 38	
				Min N	▷ -110.89	▷ -45.02	▷ 22.99	0.03	-1.19	-2.33	CO 36	
				Max V _y	▷ -3.79	▷ -31.96	▷ 19.60	0.02	-0.98	-1.60	CO 38	
				Min V _y	▷ -110.89	▷ -45.02	▷ 22.99	0.03	-1.19	-2.33	CO 36	
				Max V _z	▷ -20.89	▷ -37.08	▷ 30.70	0.02	-1.54	-1.87	CO 24	
				Min V _z	▷ -3.79	▷ -31.96	▷ 19.60	0.02	-0.98	-1.60	CO 38	
				Max M _T	▷ -110.89	▷ -45.02	▷ 22.99	▷ 0.03	-1.19	-2.33	CO 36	
				Min M _T	▷ -3.79	▷ -31.96	▷ 19.60	▷ 0.02	-0.98	-1.60	CO 38	
				Max M _y	▷ -3.79	▷ -31.96	▷ 19.60	▷ 0.02	▷ -0.98	-1.60	CO 38	
				Min M _y	▷ -20.89	▷ -37.08	▷ 30.70	▷ 0.02	▷ -1.54	-1.87	CO 24	
				Max M _z	▷ -3.79	▷ -31.96	▷ 19.60	▷ 0.02	▷ -0.98	▷ -1.60	CO 38	
				Min M _z	▷ -110.89	▷ -45.02	▷ 22.99	▷ 0.03	▷ -1.19	▷ -2.33	CO 36	
				Max N	▷ -3.78	▷ -31.95	▷ 19.62	▷ 0.02	▷ 0.98	▷ 1.60	CO 38	
Min N				▷ -110.89	▷ -45.00	▷ 23.04	▷ 0.03	▷ 1.19	▷ 2.33	CO 36		
Max V _y				▷ -3.78	▷ -31.95	▷ 19.62	▷ 0.02	▷ 0.98	▷ 1.60	CO 38		
Min V _y				▷ -110.89	▷ -45.00	▷ 23.04	▷ 0.03	▷ 1.19	▷ 2.33	CO 36		
Max V _z				▷ -20.88	▷ -37.05	▷ 30.74	▷ 0.03	▷ 1.55	▷ 1.86	CO 24		
Min V _z				▷ -3.78	▷ -31.95	▷ 19.62	▷ 0.02	▷ 0.98	▷ 1.60	CO 38		
Max M _T	▷ -110.89	▷ -45.00	▷ 23.04	▷ 0.03	▷ 1.19	▷ 2.33	CO 36					
Min M _T	▷ -3.78	▷ -31.95	▷ 19.62	▷ 0.02	▷ 0.98	▷ 1.60	CO 38					
Max M _y	▷ -20.88	▷ -37.05	▷ 30.74	▷ 0.03	▷ 1.55	▷ 1.86	CO 24					
Min M _y	▷ -3.78	▷ -31.95	▷ 19.62	▷ 0.02	▷ 0.98	▷ 1.60	CO 38					
Max M _z	▷ -110.89	▷ -45.00	▷ 23.04	▷ 0.03	▷ 1.19	▷ 2.33	CO 36					
Min M _z	▷ -3.78	▷ -31.95	▷ 19.62	▷ 0.02	▷ 0.98	▷ 1.60	CO 38					
CR3	199	0.100	Max N	▷ -59.85	▷ -37.77	▷ 20.04	0.02	-1.02	-1.93	CO 39		
			Min N	▷ -59.85	▷ -37.77	▷ 20.04	0.02	-1.02	-1.93	CO 39		
			Max V _y	▷ -59.85	▷ -37.77	▷ 20.04	0.02	-1.02	-1.93	CO 39		
			Min V _y	▷ -59.85	▷ -37.77	▷ 20.04	0.02	-1.02	-1.93	CO 39		
			Max V _z	▷ -59.85	▷ -37.77	▷ 20.04	0.02	-1.02	-1.93	CO 39		
			Min V _z	▷ -59.85	▷ -37.77	▷ 20.04	0.02	-1.02	-1.93	CO 39		
			Max M _T	▷ -59.85	▷ -37.77	▷ 20.04	▷ 0.02	-1.02	-1.93	CO 39		
			Min M _T	▷ -59.85	▷ -37.77	▷ 20.04	▷ 0.02	-1.02	-1.93	CO 39		
			Max M _y	▷ -59.85	▷ -37.77	▷ 20.04	▷ 0.02	▷ -1.02	-1.93	CO 39		
			Min M _y	▷ -59.85	▷ -37.77	▷ 20.04	▷ 0.02	▷ -1.02	-1.93	CO 39		
			Max M _z	▷ -59.85	▷ -37.77	▷ 20.04	▷ 0.02	▷ -1.02	▷ -1.93	CO 39		
			Min M _z	▷ -59.85	▷ -37.77	▷ 20.04	▷ 0.02	▷ -1.02	▷ -1.93	CO 39		
			Max N	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39		
			Min N	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39		
			Max V _y	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39		
			Min V _y	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39		
			Max V _z	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39		
			Min V _z	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39		
	Max M _T	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39				
	Min M _T	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39				
	Max M _y	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39				
	Min M _y	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39				
	Max M _z	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39				
	Min M _z	▷ -59.85	▷ -37.75	▷ 20.07	▷ 0.02	▷ 1.02	▷ 1.92	CO 39				
	5	CR1	200	0.100	Max N	▷ -7.61	▷ -32.28	▷ 26.26	0.03	-1.32	-1.62	CO 19
					Min N	▷ -127.49	▷ -46.57	▷ 30.73	0.03	-1.60	-2.43	CO 17
					Max V _y	▷ -7.61	▷ -32.28	▷ 26.26	0.03	-1.32	-1.62	CO 19
					Min V _y	▷ -127.49	▷ -46.57	▷ 30.73	0.03	-1.60	-2.43	CO 17
					Max V _z	▷ -34.30	▷ -36.58	▷ 41.14	0.03	-2.08	-1.85	CO 5
					Min V _z	▷ -7.61	▷ -32.28	▷ 26.26	0.03	-1.32	-1.62	CO 19
					Max M _T	▷ -127.49	▷ -46.57	▷ 30.73	▷ 0.03	-1.60	-2.43	CO 17
					Min M _T	▷ -7.61	▷ -32.28	▷ 26.26	▷ 0.03	-1.32	-1.62	CO 19
					Max M _y	▷ -7.61	▷ -32.28	▷ 26.26	▷ 0.03	▷ -1.32	-1.62	CO 19
					Min M _y	▷ -34.30	▷ -36.58	▷ 41.14	▷ 0.03	▷ -2.08	-1.85	CO 5
					Max M _z	▷ -7.61	▷ -32.28	▷ 26.26	▷ 0.03	▷ -1.32	▷ -1.62	CO 19
					Min M _z	▷ -127.49	▷ -46.57	▷ 30.73	▷ 0.03	▷ -1.60	▷ -2.43	CO 17
Max N					▷ -7.61	▷ -32.26	▷ 26.29	▷ 0.03	▷ 1.32	▷ 1.61	CO 19	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.	
					N	V _y	V _z	M _T	M _y	M _z		
5	CR1			Min N	▷ -127.48	▷ -46.53	▷ 30.80	0.03	▷ 1.60	▷ 2.42	CO 17	
				Max V _y	▷ -7.61	▷ -32.26	▷ 26.29	0.03	▷ 1.32	▷ 1.61	CO 19	
				Min V _y	▷ -127.48	▷ -46.53	▷ 30.80	0.03	▷ 1.60	▷ 2.42	CO 17	
				Max V _z	▷ -34.29	▷ -36.54	▷ 41.19	0.03	▷ 2.08	▷ 1.84	CO 5	
				Min V _z	▷ -7.61	▷ -32.26	▷ 26.29	0.03	▷ 1.32	▷ 1.61	CO 19	
				Max M _T	▷ -127.48	▷ -46.53	▷ 30.80	▷ 0.03	▷ 1.60	▷ 2.42	CO 17	
				Min M _T	▷ -7.61	▷ -32.26	▷ 26.29	▷ 0.03	▷ 1.32	▷ 1.61	CO 19	
				Max M _y	▷ -34.29	▷ -36.54	▷ 41.19	▷ 0.03	▷ 2.08	▷ 1.84	CO 5	
				Min M _y	▷ -7.61	▷ -32.26	▷ 26.29	▷ 0.03	▷ 1.32	▷ 1.61	CO 19	
				Max M _z	▷ -127.48	▷ -46.53	▷ 30.80	▷ 0.03	▷ 1.60	▷ 2.42	CO 17	
				Min M _z	▷ -7.61	▷ -32.26	▷ 26.29	▷ 0.03	▷ 1.32	▷ 1.61	CO 19	
				CR2	200	0.000	Max N	▷ -5.61	▷ -23.94	▷ 19.46	0.02	▷ -0.98
				Min N	▷ -94.33	▷ -34.82	▷ 22.95	0.03	▷ -1.18	▷ -1.79	CO 36	
				Max V _y	▷ -5.61	▷ -23.94	▷ 19.46	0.02	▷ -0.98	▷ -1.20	CO 38	
				Min V _y	▷ -94.33	▷ -34.82	▷ 22.95	0.03	▷ -1.18	▷ -1.79	CO 36	
				Max V _z	▷ -25.34	▷ -27.21	▷ 30.50	0.02	▷ -1.54	▷ -1.37	CO 24	
				Min V _z	▷ -5.61	▷ -23.94	▷ 19.46	0.02	▷ -0.98	▷ -1.20	CO 38	
				Max M _T	▷ -94.33	▷ -34.82	▷ 22.95	▷ 0.03	▷ -1.18	▷ -1.79	CO 36	
				Min M _T	▷ -5.61	▷ -23.94	▷ 19.46	▷ 0.02	▷ -0.98	▷ -1.20	CO 38	
				Max M _y	▷ -5.61	▷ -23.94	▷ 19.46	▷ 0.02	▷ -0.98	▷ -1.20	CO 38	
				Min M _y	▷ -25.34	▷ -27.21	▷ 30.50	▷ 0.02	▷ -1.54	▷ -1.37	CO 24	
				Max M _z	▷ -5.61	▷ -23.94	▷ 19.46	▷ 0.02	▷ -0.98	▷ -1.20	CO 38	
				Min M _z	▷ -94.33	▷ -34.82	▷ 22.95	0.03	▷ -1.18	▷ -1.79	CO 36	
		176	0.100	Max N	▷ -5.60	▷ -23.92	▷ 19.48	0.02	▷ 0.97	▷ 1.19	CO 38	
				Min N	▷ -94.33	▷ -34.80	▷ 22.99	0.03	▷ 1.18	▷ 1.79	CO 36	
				Max V _y	▷ -5.60	▷ -23.92	▷ 19.48	0.02	▷ 0.97	▷ 1.19	CO 38	
				Min V _y	▷ -94.33	▷ -34.80	▷ 22.99	0.03	▷ 1.18	▷ 1.79	CO 36	
				Max V _z	▷ -25.34	▷ -27.19	▷ 30.52	0.02	▷ 1.54	▷ 1.37	CO 24	
				Min V _z	▷ -5.60	▷ -23.92	▷ 19.48	0.02	▷ 0.97	▷ 1.19	CO 38	
				Max M _T	▷ -94.33	▷ -34.80	▷ 22.99	▷ 0.03	▷ 1.18	▷ 1.79	CO 36	
				Min M _T	▷ -5.60	▷ -23.92	▷ 19.48	▷ 0.02	▷ 0.97	▷ 1.19	CO 38	
				Max M _y	▷ -25.34	▷ -27.19	▷ 30.52	▷ 0.02	▷ 1.54	▷ 1.37	CO 24	
				Min M _y	▷ -5.60	▷ -23.92	▷ 19.48	▷ 0.02	▷ 0.97	▷ 1.19	CO 38	
				Max M _z	▷ -94.33	▷ -34.80	▷ 22.99	0.03	▷ 1.18	▷ 1.79	CO 36	
				Min M _z	▷ -5.60	▷ -23.92	▷ 19.48	0.02	▷ 0.97	▷ 1.19	CO 38	
		CR3	200	0.000	Max N	▷ -52.04	▷ -28.76	▷ 19.94	0.02	▷ -1.01	▷ -1.46	CO 39
			Min N	▷ -52.04	▷ -28.76	▷ 19.94	0.02	▷ -1.01	▷ -1.46	CO 39		
			Max V _y	▷ -52.04	▷ -28.76	▷ 19.94	0.02	▷ -1.01	▷ -1.46	CO 39		
			Min V _y	▷ -52.04	▷ -28.76	▷ 19.94	0.02	▷ -1.01	▷ -1.46	CO 39		
			Max V _z	▷ -52.04	▷ -28.76	▷ 19.94	0.02	▷ -1.01	▷ -1.46	CO 39		
			Min V _z	▷ -52.04	▷ -28.76	▷ 19.94	0.02	▷ -1.01	▷ -1.46	CO 39		
			Max M _T	▷ -52.04	▷ -28.76	▷ 19.94	▷ 0.02	▷ -1.01	▷ -1.46	CO 39		
			Min M _T	▷ -52.04	▷ -28.76	▷ 19.94	▷ 0.02	▷ -1.01	▷ -1.46	CO 39		
			Max M _y	▷ -52.04	▷ -28.76	▷ 19.94	▷ 0.02	▷ -1.01	▷ -1.46	CO 39		
			Min M _y	▷ -52.04	▷ -28.76	▷ 19.94	▷ 0.02	▷ -1.01	▷ -1.46	CO 39		
			Max M _z	▷ -52.04	▷ -28.76	▷ 19.94	▷ 0.02	▷ -1.01	▷ -1.46	CO 39		
			Min M _z	▷ -52.04	▷ -28.76	▷ 19.94	▷ 0.02	▷ -1.01	▷ -1.46	CO 39		
		176	0.100	Max N	▷ -52.04	▷ -28.74	▷ 19.96	0.02	▷ 1.01	▷ 1.46	CO 39	
			Min N	▷ -52.04	▷ -28.74	▷ 19.96	0.02	▷ 1.01	▷ 1.46	CO 39		
			Max V _y	▷ -52.04	▷ -28.74	▷ 19.96	0.02	▷ 1.01	▷ 1.46	CO 39		
			Min V _y	▷ -52.04	▷ -28.74	▷ 19.96	0.02	▷ 1.01	▷ 1.46	CO 39		
			Max V _z	▷ -52.04	▷ -28.74	▷ 19.96	0.02	▷ 1.01	▷ 1.46	CO 39		
			Min V _z	▷ -52.04	▷ -28.74	▷ 19.96	0.02	▷ 1.01	▷ 1.46	CO 39		
			Max M _T	▷ -52.04	▷ -28.74	▷ 19.96	▷ 0.02	▷ 1.01	▷ 1.46	CO 39		
			Min M _T	▷ -52.04	▷ -28.74	▷ 19.96	▷ 0.02	▷ 1.01	▷ 1.46	CO 39		
			Max M _y	▷ -52.04	▷ -28.74	▷ 19.96	▷ 0.02	▷ 1.01	▷ 1.46	CO 39		
			Min M _y	▷ -52.04	▷ -28.74	▷ 19.96	▷ 0.02	▷ 1.01	▷ 1.46	CO 39		
			Max M _z	▷ -52.04	▷ -28.74	▷ 19.96	▷ 0.02	▷ 1.01	▷ 1.46	CO 39		
			Min M _z	▷ -52.04	▷ -28.74	▷ 19.96	▷ 0.02	▷ 1.01	▷ 1.46	CO 39		
6	CR1	201	0.000	Max N	▷ -4.45	▷ -23.30	▷ 26.73	0.02	▷ -1.34	▷ -1.17	CO 19	
				Min N	▷ -110.28	▷ -35.08	▷ 31.37	0.03	▷ -1.62	▷ -1.82	CO 17	
				Max V _y	▷ -4.45	▷ -23.30	▷ 26.73	0.02	▷ -1.34	▷ -1.17	CO 19	
				Min V _y	▷ -110.28	▷ -35.08	▷ 31.37	0.03	▷ -1.62	▷ -1.82	CO 17	
				Max V _z	▷ -32.98	▷ -25.85	▷ 41.90	0.03	▷ -2.11	▷ -1.31	CO 5	
				Min V _z	▷ -4.45	▷ -23.30	▷ 26.73	0.02	▷ -1.34	▷ -1.17	CO 19	
				Max M _T	▷ -110.28	▷ -35.08	▷ 31.37	▷ 0.03	▷ -1.62	▷ -1.82	CO 17	
				Min M _T	▷ -4.45	▷ -23.30	▷ 26.73	▷ 0.02	▷ -1.34	▷ -1.17	CO 19	
				Max M _y	▷ -4.45	▷ -23.30	▷ 26.73	▷ 0.02	▷ -1.34	▷ -1.17	CO 19	
				Min M _y	▷ -32.98	▷ -25.85	▷ 41.90	▷ 0.03	▷ -2.11	▷ -1.31	CO 5	
				Max M _z	▷ -4.45	▷ -23.30	▷ 26.73	▷ 0.02	▷ -1.34	▷ -1.17	CO 19	
				Min M _z	▷ -110.28	▷ -35.08	▷ 31.37	▷ 0.03	▷ -1.62	▷ -1.82	CO 17	
		213	0.100	Max N	▷ -4.45	▷ -23.27	▷ 26.75	0.02	▷ 1.34	▷ 1.16	CO 19	
				Min N	▷ -110.28	▷ -35.05	▷ 31.39	0.03	▷ 1.63	▷ 1.81	CO 17	
				Max V _y	▷ -4.45	▷ -23.27	▷ 26.75	0.02	▷ 1.34	▷ 1.16	CO 19	
				Min V _y	▷ -110.28	▷ -35.05	▷ 31.39	0.03	▷ 1.63	▷ 1.81	CO 17	
				Max V _z	▷ -32.98	▷ -25.80	▷ 41.92	0.03	▷ 2.12	▷ 1.30	CO 5	
				Min V _z	▷ -4.45	▷ -23.27	▷ 26.75	0.02	▷ 1.34	▷ 1.16	CO 19	
				Max M _T	▷ -110.28	▷ -35.05	▷ 31.39	▷ 0.03	▷ 1.63	▷ 1.81	CO 17	
				Min M _T	▷ -4.45	▷ -23.27	▷ 26.75	▷ 0.02	▷ 1.34	▷ 1.16	CO 19	
				Max M _y	▷ -32.98	▷ -25.80	▷ 41.92	▷ 0.03	▷ 2.12	▷ 1.30	CO 5	
				Min M _y	▷ -4.45	▷ -23.27	▷ 26.75	▷ 0.02	▷ 1.34	▷ 1.16	CO 19	
				Max M _z	▷ -110.28	▷ -35.05	▷ 31.39	▷ 0.03	▷ 1.63	▷ 1.81	CO 17	
				Min M _z	▷ -4.45	▷ -23.27	▷ 26.75	▷ 0.02	▷ 1.34	▷ 1.16	CO 19	
		CR2	201	0.000	Max N	▷ -3.27	▷ -17.27	▷ 19.81	0.02	▷ -0.99	▷ -0.87	CO 38

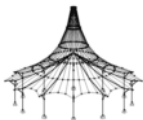


Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
6	CR2			Min N	▷ -81.63	▷ -26.16	▷ 23.38	0.02	▷ -1.19	▷ -1.34	CO 36
				Max V _y	▷ -3.27	▷ -17.27	▷ 19.81	0.02	▷ -0.99	▷ -0.87	CO 38
				Min V _y	▷ -81.63	▷ -26.16	▷ 23.38	0.02	▷ -1.19	▷ -1.34	CO 36
				Max V _z	▷ -24.39	▷ -19.22	▷ 31.05	0.02	▷ -1.56	▷ -0.97	CO 24
				Min V _z	▷ -3.27	▷ -17.27	▷ 19.81	0.02	▷ -0.99	▷ -0.87	CO 38
				Max M _T	▷ -81.63	▷ -26.16	▷ 23.38	▷ 0.02	▷ -1.19	▷ -1.34	CO 36
				Min M _T	▷ -3.27	▷ -17.27	▷ 19.81	▷ 0.02	▷ -0.99	▷ -0.87	CO 38
				Max M _y	▷ -3.27	▷ -17.27	▷ 19.81	▷ 0.02	▷ -0.99	▷ -0.87	CO 38
				Min M _y	▷ -24.39	▷ -19.22	▷ 31.05	▷ 0.02	▷ -1.56	▷ -0.97	CO 24
				Max M _z	▷ -3.27	▷ -17.27	▷ 19.81	▷ 0.02	▷ -0.99	▷ -0.87	CO 38
				Min M _z	▷ -81.63	▷ -26.16	▷ 23.38	▷ 0.02	▷ -1.19	▷ -1.34	CO 36
				Max N	▷ -3.27	▷ -17.25	▷ 19.81	▷ 0.02	▷ 0.99	▷ 0.86	CO 38
	213	0.100	Min N	▷ -81.63	▷ -26.14	▷ 23.39	0.02	▷ 1.20	▷ 1.34	CO 36	
			Max V _y	▷ -3.27	▷ -17.25	▷ 19.81	0.02	▷ 0.99	▷ 0.86	CO 38	
			Min V _y	▷ -81.63	▷ -26.14	▷ 23.39	0.02	▷ 1.20	▷ 1.34	CO 36	
			Max V _z	▷ -24.39	▷ -19.20	▷ 31.06	0.02	▷ 1.57	▷ 0.96	CO 24	
			Min V _z	▷ -3.27	▷ -17.25	▷ 19.81	0.02	▷ 0.99	▷ 0.86	CO 38	
			Max M _T	▷ -81.63	▷ -26.14	▷ 23.39	▷ 0.02	▷ 1.20	▷ 1.34	CO 36	
			Min M _T	▷ -3.27	▷ -17.25	▷ 19.81	▷ 0.02	▷ 0.99	▷ 0.86	CO 38	
			Max M _y	▷ -24.39	▷ -19.20	▷ 31.06	▷ 0.02	▷ 1.57	▷ 0.96	CO 24	
			Min M _y	▷ -3.27	▷ -17.25	▷ 19.81	▷ 0.02	▷ 0.99	▷ 0.86	CO 38	
			Max M _z	▷ -81.63	▷ -26.14	▷ 23.39	▷ 0.02	▷ 1.20	▷ 1.34	CO 36	
			Min M _z	▷ -3.27	▷ -17.25	▷ 19.81	▷ 0.02	▷ 0.99	▷ 0.86	CO 38	
			6	CR3	201	0.000	Max N	▷ -44.61	▷ -21.21	▷ 20.29	0.02
Min N	▷ -44.61	▷ -21.21					▷ 20.29	0.02	▷ -1.03	▷ -1.08	CO 39
Max V _y	▷ -44.61	▷ -21.21					▷ 20.29	0.02	▷ -1.03	▷ -1.08	CO 39
Min V _y	▷ -44.61	▷ -21.21					▷ 20.29	0.02	▷ -1.03	▷ -1.08	CO 39
Max V _z	▷ -44.61	▷ -21.21					▷ 20.29	0.02	▷ -1.03	▷ -1.08	CO 39
Min V _z	▷ -44.61	▷ -21.21					▷ 20.29	0.02	▷ -1.03	▷ -1.08	CO 39
Max M _T	▷ -44.61	▷ -21.21					▷ 20.29	▷ 0.02	▷ -1.03	▷ -1.08	CO 39
Min M _T	▷ -44.61	▷ -21.21					▷ 20.29	▷ 0.02	▷ -1.03	▷ -1.08	CO 39
Max M _y	▷ -44.61	▷ -21.21					▷ 20.29	▷ 0.02	▷ -1.03	▷ -1.08	CO 39
Min M _y	▷ -44.61	▷ -21.21					▷ 20.29	▷ 0.02	▷ -1.03	▷ -1.08	CO 39
Max M _z	▷ -44.61	▷ -21.21					▷ 20.29	▷ 0.02	▷ -1.03	▷ -1.08	CO 39
Min M _z	▷ -44.61	▷ -21.21					▷ 20.29	▷ 0.02	▷ -1.03	▷ -1.08	CO 39
213	0.100	Max N		▷ -44.61	▷ -21.20	▷ 20.30	0.02	▷ 1.03	▷ 1.07	CO 39	
		Min N		▷ -44.61	▷ -21.20	▷ 20.30	0.02	▷ 1.03	▷ 1.07	CO 39	
		Max V _y		▷ -44.61	▷ -21.20	▷ 20.30	0.02	▷ 1.03	▷ 1.07	CO 39	
		Min V _y		▷ -44.61	▷ -21.20	▷ 20.30	0.02	▷ 1.03	▷ 1.07	CO 39	
		Max V _z		▷ -44.61	▷ -21.20	▷ 20.30	0.02	▷ 1.03	▷ 1.07	CO 39	
		Min V _z		▷ -44.61	▷ -21.20	▷ 20.30	0.02	▷ 1.03	▷ 1.07	CO 39	
		Max M _T		▷ -44.61	▷ -21.20	▷ 20.30	▷ 0.02	▷ 1.03	▷ 1.07	CO 39	
		Min M _T		▷ -44.61	▷ -21.20	▷ 20.30	▷ 0.02	▷ 1.03	▷ 1.07	CO 39	
		Max M _y		▷ -44.61	▷ -21.20	▷ 20.30	▷ 0.02	▷ 1.03	▷ 1.07	CO 39	
		Min M _y		▷ -44.61	▷ -21.20	▷ 20.30	▷ 0.02	▷ 1.03	▷ 1.07	CO 39	
		Max M _z		▷ -44.61	▷ -21.20	▷ 20.30	▷ 0.02	▷ 1.03	▷ 1.07	CO 39	
		Min M _z		▷ -44.61	▷ -21.20	▷ 20.30	▷ 0.02	▷ 1.03	▷ 1.07	CO 39	
7	CR1	202	0.000	Max N	▷ -2.96	▷ -15.67	▷ 26.87	0.02	▷ -1.35	▷ -0.79	CO 19
				Min N	▷ -99.20	▷ -25.27	▷ 31.58	0.03	▷ -1.63	▷ -1.31	CO 17
				Max V _y	▷ -2.96	▷ -15.67	▷ 26.87	0.02	▷ -1.35	▷ -0.79	CO 19
				Min V _y	▷ -99.20	▷ -25.27	▷ 31.58	0.03	▷ -1.63	▷ -1.31	CO 17
				Max V _z	▷ -34.86	▷ -17.07	▷ 42.13	0.02	▷ -2.13	▷ -0.87	CO 5
				Min V _z	▷ -2.96	▷ -15.67	▷ 26.87	0.02	▷ -1.35	▷ -0.79	CO 19
				Max M _T	▷ -99.20	▷ -25.27	▷ 31.58	▷ 0.03	▷ -1.63	▷ -1.31	CO 17
				Min M _T	▷ -2.96	▷ -15.67	▷ 26.87	▷ 0.02	▷ -1.35	▷ -0.79	CO 19
				Max M _y	▷ -2.96	▷ -15.67	▷ 26.87	▷ 0.02	▷ -1.35	▷ -0.79	CO 19
				Min M _y	▷ -34.86	▷ -17.07	▷ 42.13	▷ 0.02	▷ -2.13	▷ -0.87	CO 5
				Max M _z	▷ -2.96	▷ -15.67	▷ 26.87	▷ 0.02	▷ -1.35	▷ -0.79	CO 19
				Min M _z	▷ -99.20	▷ -25.27	▷ 31.58	▷ 0.03	▷ -1.63	▷ -1.31	CO 17
	215	0.100	Max N	▷ -2.96	▷ -15.65	▷ 26.88	0.02	▷ 1.35	▷ 0.77	CO 19	
			Min N	▷ -99.20	▷ -25.25	▷ 31.61	0.03	▷ 1.63	▷ 1.30	CO 17	
			Max V _y	▷ -2.96	▷ -15.65	▷ 26.88	0.02	▷ 1.35	▷ 0.77	CO 19	
			Min V _y	▷ -99.20	▷ -25.25	▷ 31.61	0.03	▷ 1.63	▷ 1.30	CO 17	
			Max V _z	▷ -34.86	▷ -17.04	▷ 42.14	0.02	▷ 2.13	▷ 0.86	CO 5	
			Min V _z	▷ -2.96	▷ -15.65	▷ 26.88	0.02	▷ 1.35	▷ 0.77	CO 19	
			Max M _T	▷ -99.20	▷ -25.25	▷ 31.61	▷ 0.03	▷ 1.63	▷ 1.30	CO 17	
			Min M _T	▷ -2.96	▷ -15.65	▷ 26.88	▷ 0.02	▷ 1.35	▷ 0.77	CO 19	
			Max M _y	▷ -34.86	▷ -17.04	▷ 42.14	▷ 0.02	▷ 2.13	▷ 0.86	CO 5	
			Min M _y	▷ -2.96	▷ -15.65	▷ 26.88	▷ 0.02	▷ 1.35	▷ 0.77	CO 19	
			Max M _z	▷ -99.20	▷ -25.25	▷ 31.61	▷ 0.03	▷ 1.63	▷ 1.30	CO 17	
			Min M _z	▷ -2.96	▷ -15.65	▷ 26.88	▷ 0.02	▷ 1.35	▷ 0.77	CO 19	
7	CR2	202	0.000	Max N	▷ -2.18	▷ -11.61	▷ 19.90	0.02	▷ -1.00	▷ -0.59	CO 38
				Min N	▷ -73.44	▷ -18.80	▷ 23.51	0.02	▷ -1.20	▷ -0.97	CO 36
				Max V _y	▷ -2.18	▷ -11.61	▷ 19.90	0.02	▷ -1.00	▷ -0.59	CO 38
				Min V _y	▷ -73.44	▷ -18.80	▷ 23.51	0.02	▷ -1.20	▷ -0.97	CO 36
				Max V _z	▷ -25.80	▷ -12.70	▷ 31.23	0.02	▷ -1.57	▷ -0.64	CO 24
				Min V _z	▷ -2.18	▷ -11.61	▷ 19.90	0.02	▷ -1.00	▷ -0.59	CO 38
				Max M _T	▷ -73.44	▷ -18.80	▷ 23.51	▷ 0.02	▷ -1.20	▷ -0.97	CO 36
				Min M _T	▷ -2.18	▷ -11.61	▷ 19.90	▷ 0.02	▷ -1.00	▷ -0.59	CO 38
				Max M _y	▷ -2.18	▷ -11.61	▷ 19.90	▷ 0.02	▷ -1.00	▷ -0.59	CO 38
				Min M _y	▷ -25.80	▷ -12.70	▷ 31.23	▷ 0.02	▷ -1.57	▷ -0.64	CO 24
				Max M _z	▷ -2.18	▷ -11.61	▷ 19.90	▷ 0.02	▷ -1.00	▷ -0.59	CO 38
				Min M _z	▷ -73.44	▷ -18.80	▷ 23.51	▷ 0.02	▷ -1.20	▷ -0.97	CO 36
215	0.100	Max N	▷ -2.18	▷ -11.60	▷ 19.91	0.02	▷ 1.00	▷ 0.57	CO 38		



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
7	CR2			Min N	▷ -73.44	▷ -18.79	23.53	0.02	1.20	0.96	CO 36
				Max V _y	▷ -2.18	▷ -11.60	19.91	0.02	1.00	0.57	CO 38
				Min V _y	▷ -73.44	▷ -18.79	23.53	0.02	1.20	0.96	CO 36
				Max V _z	▷ -25.80	▷ -12.68	▷ 31.23	0.02	1.58	0.64	CO 24
				Min V _z	▷ -2.18	▷ -11.60	19.91	0.02	1.00	0.57	CO 38
				Max M _T	▷ -73.44	▷ -18.79	23.53	▷ 0.02	1.20	0.96	CO 36
				Min M _T	▷ -2.18	▷ -11.60	19.91	▷ 0.02	1.00	0.57	CO 38
				Max M _y	▷ -25.80	▷ -12.68	▷ 31.23	▷ 0.02	▷ 1.58	0.64	CO 24
				Min M _y	▷ -2.18	▷ -11.60	19.91	▷ 0.02	▷ 1.00	0.57	CO 38
				Max M _z	▷ -73.44	▷ -18.79	23.53	▷ 0.02	▷ 1.20	▷ 0.96	CO 36
				Min M _z	▷ -2.18	▷ -11.60	19.91	▷ 0.02	▷ 1.00	▷ 0.57	CO 38
				CR3	202	0.000	Max N	▷ -40.05	▷ -14.88	20.38	0.02
	Min N	▷ -40.05	▷ -14.88				20.38	0.02	-1.03	-0.76	CO 39
	Max V _y	▷ -40.05	▷ -14.88				20.38	0.02	-1.03	-0.76	CO 39
	Min V _y	▷ -40.05	▷ -14.88				20.38	0.02	-1.03	-0.76	CO 39
	Max V _z	▷ -40.05	▷ -14.88				▷ 20.38	0.02	-1.03	-0.76	CO 39
	Min V _z	▷ -40.05	▷ -14.88				▷ 20.38	0.02	-1.03	-0.76	CO 39
	Max M _T	▷ -40.05	▷ -14.88		20.38	▷ 0.02	-1.03	-0.76	CO 39		
	Min M _T	▷ -40.05	▷ -14.88		20.38	▷ 0.02	-1.03	-0.76	CO 39		
	Max M _y	▷ -40.05	▷ -14.88		20.38	▷ 0.02	-1.03	-0.76	CO 39		
	Min M _y	▷ -40.05	▷ -14.88		20.38	▷ 0.02	-1.03	-0.76	CO 39		
	Max M _z	▷ -40.05	▷ -14.88		20.38	▷ 0.02	-1.03	▷ -0.76	CO 39		
	Min M _z	▷ -40.05	▷ -14.88		20.38	▷ 0.02	-1.03	▷ -0.76	CO 39		
	215	0.100	Max N	▷ -40.05	▷ -14.87	20.39	0.02	1.03	0.75	CO 39	
Min N			▷ -40.05	▷ -14.87	20.39	0.02	1.03	0.75	CO 39		
Max V _y			▷ -40.05	▷ -14.87	20.39	0.02	1.03	0.75	CO 39		
Min V _y			▷ -40.05	▷ -14.87	20.39	0.02	1.03	0.75	CO 39		
Max V _z			▷ -40.05	▷ -14.87	▷ 20.39	0.02	1.03	0.75	CO 39		
Min V _z			▷ -40.05	▷ -14.87	▷ 20.39	0.02	1.03	0.75	CO 39		
Max M _T	▷ -40.05	▷ -14.87	20.39	▷ 0.02	1.03	0.75	CO 39				
Min M _T	▷ -40.05	▷ -14.87	20.39	▷ 0.02	1.03	0.75	CO 39				
Max M _y	▷ -40.05	▷ -14.87	20.39	▷ 0.02	1.03	0.75	CO 39				
Min M _y	▷ -40.05	▷ -14.87	20.39	▷ 0.02	1.03	0.75	CO 39				
Max M _z	▷ -40.05	▷ -14.87	20.39	▷ 0.02	1.03	▷ 0.75	CO 39				
Min M _z	▷ -40.05	▷ -14.87	20.39	▷ 0.02	1.03	▷ 0.75	CO 39				
8	CR1	203	0.000	Max N	▷ -2.08	-9.13	26.90	0.02	-1.35	-0.47	CO 19
				Min N	▷ -87.32	-16.89	31.74	0.03	-1.63	-0.88	CO 17
				Max V _y	▷ -2.08	-9.13	26.90	0.02	-1.35	-0.47	CO 19
				Min V _y	▷ -87.32	-16.89	31.74	0.03	-1.63	-0.88	CO 17
				Max V _z	▷ -36.67	-9.95	▷ 42.22	0.02	-2.14	-0.51	CO 5
				Min V _z	▷ -2.08	-9.13	26.90	0.02	-1.35	-0.47	CO 19
				Max M _T	▷ -87.32	-16.89	31.74	▷ 0.03	-1.63	-0.88	CO 17
				Min M _T	▷ -2.08	-9.13	26.90	▷ 0.02	-1.35	-0.47	CO 19
				Max M _y	▷ -2.08	-9.13	26.90	▷ 0.02	-1.35	-0.47	CO 19
				Min M _y	▷ -36.67	-9.95	42.22	▷ 0.02	-2.14	-0.51	CO 5
				Max M _z	▷ -2.08	-9.13	26.90	▷ 0.02	-1.35	▷ -0.47	CO 19
				Min M _z	▷ -87.32	-16.89	31.74	0.03	-1.63	▷ -0.88	CO 17
		217	0.100	Max N	▷ -2.08	-9.11	26.90	0.02	1.35	0.44	CO 19
				Min N	▷ -87.31	-16.88	31.76	0.03	1.63	0.86	CO 17
				Max V _y	▷ -2.08	-9.11	26.90	0.02	1.35	0.44	CO 19
				Min V _y	▷ -87.31	-16.88	31.76	0.03	1.63	0.86	CO 17
				Max V _z	▷ -36.67	-9.92	▷ 42.22	0.02	2.14	0.50	CO 5
				Min V _z	▷ -2.08	-9.11	26.90	0.02	1.35	0.44	CO 19
		Max M _T	▷ -87.31	-16.88	31.76	▷ 0.03	1.63	0.86	CO 17		
		Min M _T	▷ -2.08	-9.11	26.90	▷ 0.02	1.35	0.44	CO 19		
		Max M _y	▷ -36.67	-9.92	42.22	▷ 0.02	2.14	0.50	CO 5		
		Min M _y	▷ -2.08	-9.11	26.90	▷ 0.02	1.35	0.44	CO 19		
		Max M _z	▷ -87.31	-16.88	31.76	0.03	1.63	▷ 0.86	CO 17		
		Min M _z	▷ -2.08	-9.11	26.90	0.02	1.35	▷ 0.44	CO 19		
	CR2	203	0.000	Max N	▷ -1.54	-6.76	19.92	0.01	-1.00	-0.35	CO 38
				Min N	▷ -64.65	-12.54	23.60	0.02	-1.21	-0.65	CO 36
				Max V _y	▷ -1.54	-6.76	19.92	0.01	-1.00	-0.35	CO 38
				Min V _y	▷ -64.65	-12.54	23.60	0.02	-1.21	-0.65	CO 36
				Max V _z	▷ -27.15	-7.41	▷ 31.29	0.01	-1.58	-0.38	CO 24
				Min V _z	▷ -1.54	-6.76	19.92	0.01	-1.00	-0.35	CO 38
				Max M _T	▷ -64.65	-12.54	23.60	▷ 0.02	-1.21	-0.65	CO 36
				Min M _T	▷ -1.54	-6.76	19.92	▷ 0.01	-1.00	-0.35	CO 38
				Max M _y	▷ -1.54	-6.76	19.92	▷ 0.01	-1.00	-0.35	CO 38
				Min M _y	▷ -27.15	-7.41	31.29	▷ 0.01	-1.58	-0.38	CO 24
				Max M _z	▷ -1.54	-6.76	19.92	▷ 0.01	-1.00	▷ -0.35	CO 38
				Min M _z	▷ -64.65	-12.54	23.60	0.02	-1.21	▷ -0.65	CO 36
		217	0.100	Max N	▷ -1.53	-6.75	19.92	0.01	1.00	0.33	CO 38
				Min N	▷ -64.65	-12.53	23.61	0.02	1.20	0.63	CO 36
				Max V _y	▷ -1.53	-6.75	19.92	0.01	1.00	0.33	CO 38
				Min V _y	▷ -64.65	-12.53	23.61	0.02	1.20	0.63	CO 36
				Max V _z	▷ -27.15	-7.39	▷ 31.29	0.02	1.58	0.37	CO 24
				Min V _z	▷ -1.53	-6.75	19.92	0.01	1.00	0.33	CO 38
		Max M _T	▷ -64.65	-12.53	23.61	▷ 0.02	1.20	0.63	CO 36		
		Min M _T	▷ -1.53	-6.75	19.92	▷ 0.01	1.00	0.33	CO 38		
		Max M _y	▷ -27.15	-7.39	31.29	▷ 0.02	1.58	0.37	CO 24		
		Min M _y	▷ -1.53	-6.75	19.92	▷ 0.01	1.00	0.33	CO 38		
		Max M _z	▷ -64.65	-12.53	23.61	0.02	1.20	▷ 0.63	CO 36		
		Min M _z	▷ -1.53	-6.75	19.92	0.01	1.00	▷ 0.33	CO 38		
CR3	203	0.000	Max N	▷ -35.32	-9.57	20.42	0.02	-1.03	-0.49	CO 39	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.	
					N	V _y	V _z	M _T	M _y	M _z		
8	CR3	217	0.100	Min N	▷ -35.32	▷ -9.57	▷ 20.42	0.02	▷ -1.03	▷ -0.49	CO 39	
				Max V _y	▷ -35.32	▷ -9.57	▷ 20.42	0.02	▷ -1.03	▷ -0.49	CO 39	
				Min V _y	▷ -35.32	▷ -9.57	▷ 20.42	0.02	▷ -1.03	▷ -0.49	CO 39	
				Max V _z	▷ -35.32	▷ -9.57	▷ 20.42	0.02	▷ -1.03	▷ -0.49	CO 39	
				Min V _z	▷ -35.32	▷ -9.57	▷ 20.42	0.02	▷ -1.03	▷ -0.49	CO 39	
				Max M _T	▷ -35.32	▷ -9.57	▷ 20.42	▷ 0.02	▷ -1.03	▷ -0.49	CO 39	
				Min M _T	▷ -35.32	▷ -9.57	▷ 20.42	▷ 0.02	▷ -1.03	▷ -0.49	CO 39	
				Max M _y	▷ -35.32	▷ -9.57	▷ 20.42	▷ 0.02	▷ -1.03	▷ -0.49	CO 39	
				Min M _y	▷ -35.32	▷ -9.57	▷ 20.42	▷ 0.02	▷ -1.03	▷ -0.49	CO 39	
				Max M _z	▷ -35.32	▷ -9.57	▷ 20.42	▷ 0.02	▷ -1.03	▷ -0.49	CO 39	
				Min M _z	▷ -35.32	▷ -9.57	▷ 20.42	▷ 0.02	▷ -1.03	▷ -0.49	CO 39	
				Max N	▷ -35.32	▷ -9.57	▷ 20.43	0.02	▷ 1.03	▷ 0.48	CO 39	
				Min N	▷ -35.32	▷ -9.57	▷ 20.43	0.02	▷ 1.03	▷ 0.48	CO 39	
				Max V _y	▷ -35.32	▷ -9.57	▷ 20.43	0.02	▷ 1.03	▷ 0.48	CO 39	
				Min V _y	▷ -35.32	▷ -9.57	▷ 20.43	0.02	▷ 1.03	▷ 0.48	CO 39	
				Max V _z	▷ -35.32	▷ -9.57	▷ 20.43	0.02	▷ 1.03	▷ 0.48	CO 39	
				Min V _z	▷ -35.32	▷ -9.57	▷ 20.43	0.02	▷ 1.03	▷ 0.48	CO 39	
				Max M _T	▷ -35.32	▷ -9.57	▷ 20.43	▷ 0.02	▷ 1.03	▷ 0.48	CO 39	
				Min M _T	▷ -35.32	▷ -9.57	▷ 20.43	▷ 0.02	▷ 1.03	▷ 0.48	CO 39	
				Max M _y	▷ -35.32	▷ -9.57	▷ 20.43	▷ 0.02	▷ 1.03	▷ 0.48	CO 39	
Min M _y	▷ -35.32	▷ -9.57	▷ 20.43	▷ 0.02	▷ 1.03	▷ 0.48	CO 39					
Max M _z	▷ -35.32	▷ -9.57	▷ 20.43	▷ 0.02	▷ 1.03	▷ 0.48	CO 39					
Min M _z	▷ -35.32	▷ -9.57	▷ 20.43	▷ 0.02	▷ 1.03	▷ 0.48	CO 39					
9	CR1	219	0.100	Max N	▷ -0.84	▷ -3.29	▷ 26.93	0.02	▷ -1.35	▷ -0.18	CO 19	
				Min N	▷ -76.28	▷ -9.46	▷ 31.84	0.02	▷ -1.63	▷ -0.49	CO 17	
				Max V _y	▷ -0.84	▷ -3.29	▷ 26.93	0.02	▷ -1.35	▷ -0.18	CO 19	
				Min V _y	▷ -76.28	▷ -9.46	▷ 31.84	0.02	▷ -1.63	▷ -0.49	CO 17	
				Max V _z	▷ -37.65	▷ -4.05	▷ 42.31	0.02	▷ -2.14	▷ -0.21	CO 5	
				Min V _z	▷ -0.84	▷ -3.29	▷ 26.93	0.02	▷ -1.35	▷ -0.18	CO 19	
				Max M _T	▷ -76.28	▷ -9.46	▷ 31.84	▷ 0.02	▷ -1.63	▷ -0.49	CO 17	
				Min M _T	▷ -37.65	▷ -4.05	▷ 42.31	▷ 0.02	▷ -2.14	▷ -0.21	CO 5	
				Max M _y	▷ -0.84	▷ -3.29	▷ 26.93	▷ 0.02	▷ -1.35	▷ -0.18	CO 19	
				Min M _y	▷ -37.65	▷ -4.05	▷ 42.31	▷ 0.02	▷ -2.14	▷ -0.21	CO 5	
				Max M _z	▷ -0.84	▷ -3.29	▷ 26.93	▷ 0.02	▷ -1.35	▷ -0.18	CO 19	
				Min M _z	▷ -76.28	▷ -9.46	▷ 31.84	▷ 0.02	▷ -1.63	▷ -0.49	CO 17	
				Max N	▷ -0.84	▷ -3.27	▷ 26.93	0.02	▷ 1.35	▷ 0.15	CO 19	
				Min N	▷ -76.28	▷ -9.45	▷ 31.85	0.02	▷ 1.63	▷ 0.47	CO 17	
				Max V _y	▷ -0.84	▷ -3.27	▷ 26.93	0.02	▷ 1.35	▷ 0.15	CO 19	
				Min V _y	▷ -76.28	▷ -9.45	▷ 31.85	0.02	▷ 1.63	▷ 0.47	CO 17	
				Max V _z	▷ -37.65	▷ -4.03	▷ 42.31	0.02	▷ 2.14	▷ 0.20	CO 5	
				Min V _z	▷ -0.84	▷ -3.27	▷ 26.93	0.02	▷ 1.35	▷ 0.15	CO 19	
				Max M _T	▷ -76.28	▷ -9.45	▷ 31.85	▷ 0.02	▷ 1.63	▷ 0.47	CO 17	
				Min M _T	▷ -37.65	▷ -4.03	▷ 42.31	▷ 0.02	▷ 2.14	▷ 0.20	CO 5	
	Max M _y	▷ -37.65	▷ -4.03	▷ 42.31	▷ 0.02	▷ 2.14	▷ 0.20	CO 5				
	Min M _y	▷ -0.84	▷ -3.27	▷ 26.93	▷ 0.02	▷ 1.35	▷ 0.15	CO 19				
	Max M _z	▷ -76.28	▷ -9.45	▷ 31.85	▷ 0.02	▷ 1.63	▷ 0.47	CO 17				
	Min M _z	▷ -0.84	▷ -3.27	▷ 26.93	▷ 0.02	▷ 1.35	▷ 0.15	CO 19				
	CR2	204	0.000	Max N	▷ -0.63	▷ -2.44	▷ 19.94	0.01	▷ -1.00	▷ -0.13	CO 38	
				Min N	▷ -56.50	▷ -7.01	▷ 23.64	0.02	▷ -1.20	▷ -0.36	CO 36	
				Max V _y	▷ -0.63	▷ -2.44	▷ 19.94	0.01	▷ -1.00	▷ -0.13	CO 38	
				Min V _y	▷ -56.50	▷ -7.01	▷ 23.64	0.02	▷ -1.20	▷ -0.36	CO 36	
				Max V _z	▷ -27.89	▷ -3.03	▷ 31.36	0.01	▷ -1.58	▷ -0.16	CO 24	
				Min V _z	▷ -0.63	▷ -2.44	▷ 19.94	0.01	▷ -1.00	▷ -0.13	CO 38	
				Max M _T	▷ -56.50	▷ -7.01	▷ 23.64	▷ 0.02	▷ -1.20	▷ -0.36	CO 36	
				Min M _T	▷ -27.89	▷ -3.03	▷ 31.36	▷ 0.01	▷ -1.58	▷ -0.16	CO 24	
				Max M _y	▷ -0.63	▷ -2.44	▷ 19.94	0.01	▷ -1.00	▷ -0.13	CO 38	
				Min M _y	▷ -27.89	▷ -3.03	▷ 31.36	0.01	▷ -1.58	▷ -0.16	CO 24	
				Max M _z	▷ -0.63	▷ -2.44	▷ 19.94	0.01	▷ -1.00	▷ -0.13	CO 38	
				Min M _z	▷ -56.50	▷ -7.01	▷ 23.64	0.02	▷ -1.20	▷ -0.36	CO 36	
			219	0.100	Max N	▷ -0.63	▷ -2.43	▷ 19.94	0.01	▷ 1.00	▷ 0.11	CO 38
				Min N	▷ -56.50	▷ -7.01	▷ 23.65	0.02	▷ 1.20	▷ 0.35	CO 36	
				Max V _y	▷ -0.63	▷ -2.43	▷ 19.94	0.01	▷ 1.00	▷ 0.11	CO 38	
				Min V _y	▷ -56.50	▷ -7.01	▷ 23.65	0.02	▷ 1.20	▷ 0.35	CO 36	
			Max V _z	▷ -27.89	▷ -3.02	▷ 31.36	0.01	▷ 1.58	▷ 0.15	CO 24		
			Min V _z	▷ -0.63	▷ -2.43	▷ 19.94	0.01	▷ 1.00	▷ 0.11	CO 38		
			Max M _T	▷ -56.50	▷ -7.01	▷ 23.65	▷ 0.02	▷ 1.20	▷ 0.35	CO 36		
			Min M _T	▷ -27.89	▷ -3.02	▷ 31.36	▷ 0.01	▷ 1.58	▷ 0.15	CO 24		
			Max M _y	▷ -27.89	▷ -3.02	▷ 31.36	0.01	▷ 1.58	▷ 0.15	CO 24		
			Min M _y	▷ -0.63	▷ -2.43	▷ 19.94	0.01	▷ 1.00	▷ 0.11	CO 38		
			Max M _z	▷ -56.50	▷ -7.01	▷ 23.65	0.02	▷ 1.20	▷ 0.35	CO 36		
			Min M _z	▷ -0.63	▷ -2.43	▷ 19.94	0.01	▷ 1.00	▷ 0.11	CO 38		
	CR3	204	0.000	Max N	▷ -30.80	▷ -4.99	▷ 20.45	0.01	▷ -1.03	▷ -0.26	CO 39	
			Min N	▷ -30.80	▷ -4.99	▷ 20.45	0.01	▷ -1.03	▷ -0.26	CO 39		
			Max V _y	▷ -30.80	▷ -4.99	▷ 20.45	0.01	▷ -1.03	▷ -0.26	CO 39		
			Min V _y	▷ -30.80	▷ -4.99	▷ 20.45	0.01	▷ -1.03	▷ -0.26	CO 39		
			Max V _z	▷ -30.80	▷ -4.99	▷ 20.45	0.01	▷ -1.03	▷ -0.26	CO 39		
			Min V _z	▷ -30.80	▷ -4.99	▷ 20.45	0.01	▷ -1.03	▷ -0.26	CO 39		
			Max M _T	▷ -30.80	▷ -4.99	▷ 20.45	▷ 0.01	▷ -1.03	▷ -0.26	CO 39		
			Min M _T	▷ -30.80	▷ -4.99	▷ 20.45	▷ 0.01	▷ -1.03	▷ -0.26	CO 39		
			Max M _y	▷ -30.80	▷ -4.99	▷ 20.45	▷ 0.01	▷ -1.03	▷ -0.26	CO 39		
			Min M _y	▷ -30.80	▷ -4.99	▷ 20.45	▷ 0.01	▷ -1.03	▷ -0.26	CO 39		
			Max M _z	▷ -30.80	▷ -4.99	▷ 20.45	▷ 0.01	▷ -1.03	▷ -0.26	CO 39		
			Min M _z	▷ -30.80	▷ -4.99	▷ 20.45	▷ 0.01	▷ -1.03	▷ -0.26	CO 39		
		219	0.100	Max N	▷ -30.80	▷ -4.99	▷ 20.45	0.01	▷ 1.03	▷ 0.25	CO 39	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
9	CR3			Min N	▷ -30.80	-4.99	20.45	0.01	1.03	0.25	CO 39
				Max V _y	▷ -30.80	▷ -4.99	20.45	0.01	1.03	0.25	CO 39
				Min V _y	▷ -30.80	▷ -4.99	20.45	0.01	1.03	0.25	CO 39
				Max V _z	▷ -30.80	▷ -4.99	▷ 20.45	0.01	1.03	0.25	CO 39
				Min V _z	-30.80	-4.99	▷ 20.45	0.01	1.03	0.25	CO 39
				Max M _T	-30.80	-4.99	20.45	▷ 0.01	1.03	0.25	CO 39
				Min M _T	-30.80	-4.99	20.45	▷ 0.01	1.03	0.25	CO 39
				Max M _y	-30.80	-4.99	20.45	0.01	▷ 1.03	0.25	CO 39
				Min M _y	-30.80	-4.99	20.45	0.01	▷ 1.03	0.25	CO 39
				Max M _z	-30.80	-4.99	20.45	0.01	1.03	▷ 0.25	CO 39
				Min M _z	-30.80	-4.99	20.45	0.01	1.03	▷ 0.25	CO 39
				10	CR1	205	0.000	Max N	▷ -0.37	2.43	26.93
Min N	▷ -66.78	-2.23	31.89					0.02	-1.63	-0.13	CO 17
Max V _y	▷ -0.37	2.43	26.93					0.02	-1.35	0.10	CO 19
Min V _y	▷ -66.78	-2.23	31.89					0.02	-1.63	-0.13	CO 17
Max V _z	-39.55	1.20	▷ 42.35					0.02	-2.14	0.05	CO 5
Min V _z	-0.37	2.43	▷ 26.93					0.02	-1.35	0.10	CO 19
Max M _T	-66.78	-2.23	31.89					▷ 0.02	-1.63	-0.13	CO 17
Min M _T	-39.55	1.20	42.35					▷ 0.02	-2.14	0.05	CO 5
Max M _y	-0.37	2.43	26.93					0.02	▷ -1.35	0.10	CO 19
Min M _y	-39.55	1.20	42.35					0.02	▷ -2.14	0.05	CO 5
Max M _z	-0.37	2.43	26.93					0.02	▷ -1.35	0.10	CO 19
Min M _z	-66.78	-2.23	31.89					0.02	-1.63	▷ -0.13	CO 17
221	0.100	Max N	▷ -0.37		2.45	26.92	0.02	1.35	-0.14	CO 19	
		Min N	▷ -66.78		-2.23	31.89	0.02	1.63	0.10	CO 17	
		Max V _y	▷ -0.37		2.45	26.92	0.02	1.35	-0.14	CO 19	
		Min V _y	▷ -66.78		-2.23	31.89	0.02	1.63	0.10	CO 17	
		Max V _z	-39.55		1.22	▷ 42.34	0.02	2.14	-0.07	CO 5	
		Min V _z	-0.37		2.45	▷ 26.92	0.02	1.35	-0.14	CO 19	
		Max M _T	-66.78		-2.23	31.89	▷ 0.02	1.63	0.10	CO 17	
		Min M _T	-39.55		1.22	42.34	▷ 0.02	2.14	-0.07	CO 5	
		Max M _y	-39.55		1.22	42.34	0.02	▷ 2.14	-0.07	CO 5	
		Min M _y	-0.37		2.45	26.92	0.02	▷ 1.35	-0.14	CO 19	
		Max M _z	-66.78		-2.23	31.89	0.02	1.63	▷ 0.10	CO 17	
		Min M _z	-0.37		2.45	26.92	0.02	1.35	▷ -0.14	CO 19	
CR2	205	0.000	Max N		▷ -0.28	1.79	19.94	0.01	-1.00	0.08	CO 38
			Min N		▷ -49.49	-1.65	23.66	0.02	-1.20	-0.09	CO 36
			Max V _y		▷ -0.28	1.79	19.94	0.01	-1.00	0.08	CO 38
			Min V _y		▷ -49.49	-1.65	23.66	0.02	-1.20	-0.09	CO 36
			Max V _z		-29.31	0.87	▷ 31.39	0.01	-1.58	0.04	CO 24
			Min V _z		-0.28	1.79	▷ 19.94	0.01	-1.00	0.08	CO 38
			Max M _T		-49.49	-1.65	23.66	▷ 0.02	-1.20	-0.09	CO 36
			Min M _T		-29.31	0.87	31.39	▷ 0.01	-1.58	0.04	CO 24
			Max M _y		-0.28	1.79	19.94	0.01	▷ -1.00	0.08	CO 38
			Min M _y		-29.31	0.87	31.39	0.01	▷ -1.58	0.04	CO 24
			Max M _z		-0.28	1.79	19.94	0.01	▷ -1.00	0.08	CO 38
			Min M _z		-49.49	-1.65	23.66	0.02	-1.20	▷ -0.09	CO 36
221	0.100	Max N	▷ -0.28		1.81	19.94	0.01	1.00	-0.10	CO 38	
		Min N	▷ -49.48		-1.65	23.66	0.02	1.20	0.07	CO 36	
		Max V _y	▷ -0.28		1.81	19.94	0.01	1.00	-0.10	CO 38	
		Min V _y	▷ -49.48		-1.65	23.66	0.02	1.20	0.07	CO 36	
		Max V _z	-29.31		0.88	▷ 31.39	0.01	1.58	-0.05	CO 24	
		Min V _z	-0.28		1.81	▷ 19.94	0.01	1.00	-0.10	CO 38	
		Max M _T	-49.48		-1.65	23.66	▷ 0.02	1.20	0.07	CO 36	
		Min M _T	-29.31		0.88	31.39	▷ 0.01	1.58	-0.05	CO 24	
		Max M _y	-29.31		0.88	31.39	0.01	▷ 1.58	-0.05	CO 24	
		Min M _y	-0.28		1.81	19.94	0.01	▷ 1.00	-0.10	CO 38	
		Max M _z	-49.48		-1.65	23.66	0.02	1.20	▷ 0.07	CO 36	
		Min M _z	-0.28		1.81	19.94	0.01	▷ 1.00	-0.10	CO 38	
CR3	205	0.000	Max N	▷ -27.06	-0.69	20.44	0.01	-1.03	-0.04	CO 39	
			Min N	▷ -27.06	-0.69	20.44	0.01	-1.03	-0.04	CO 39	
			Max V _y	▷ -27.06	-0.69	20.44	0.01	-1.03	-0.04	CO 39	
			Min V _y	▷ -27.06	-0.69	20.44	0.01	-1.03	-0.04	CO 39	
			Max V _z	-27.06	-0.69	▷ 20.44	0.01	-1.03	-0.04	CO 39	
			Min V _z	-27.06	-0.69	▷ 20.44	0.01	-1.03	-0.04	CO 39	
			Max M _T	-27.06	-0.69	20.44	▷ 0.01	-1.03	-0.04	CO 39	
			Min M _T	-27.06	-0.69	20.44	▷ 0.01	-1.03	-0.04	CO 39	
			Max M _y	-27.06	-0.69	20.44	0.01	▷ -1.03	-0.04	CO 39	
			Min M _y	-27.06	-0.69	20.44	0.01	▷ -1.03	-0.04	CO 39	
			Max M _z	-27.06	-0.69	20.44	0.01	▷ -1.03	-0.04	CO 39	
			Min M _z	-27.06	-0.69	20.44	0.01	-1.03	▷ -0.04	CO 39	
221	0.100	Max N	▷ -27.06	-0.69	20.44	0.01	1.03	0.03	CO 39		
		Min N	▷ -27.06	-0.69	20.44	0.01	1.03	0.03	CO 39		
		Max V _y	▷ -27.06	-0.69	20.44	0.01	1.03	0.03	CO 39		
		Min V _y	▷ -27.06	-0.69	20.44	0.01	1.03	0.03	CO 39		
		Max V _z	-27.06	-0.69	▷ 20.44	0.01	1.03	0.03	CO 39		
		Min V _z	-27.06	-0.69	▷ 20.44	0.01	1.03	0.03	CO 39		
		Max M _T	-27.06	-0.69	20.44	▷ 0.01	1.03	0.03	CO 39		
		Min M _T	-27.06	-0.69	20.44	▷ 0.01	1.03	0.03	CO 39		
		Max M _y	-27.06	-0.69	20.44	0.01	▷ 1.03	0.03	CO 39		
		Min M _y	-27.06	-0.69	20.44	0.01	▷ 1.03	0.03	CO 39		
		Max M _z	-27.06	-0.69	20.44	0.01	1.03	▷ 0.03	CO 39		
		Min M _z	-27.06	-0.69	20.44	0.01	1.03	▷ 0.03	CO 39		
11	CR1	206	0.000	Max N	▷ -0.41	8.23	26.87	0.02	-1.35	0.39	CO 19



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
11	CR1			Min N	▷ -58.59	5.15	31.89	0.02	-1.63	0.24	CO 17
				Max V _y	▷ -26.73	8.62	31.23	0.02	-1.58	0.41	CO 18
				Min V _y	▷ -31.87	4.74	28.01	0.02	-1.42	0.23	CO 14
				Max V _z	▷ -41.85	6.10	42.31	0.02	-2.14	0.30	CO 5
				Min V _z	▷ -0.41	8.23	26.87	0.02	-1.35	0.39	CO 19
				Max M _T	▷ -58.59	5.15	31.89	▷ 0.02	-1.63	0.24	CO 17
				Min M _T	▷ -41.85	6.10	42.31	▷ 0.02	-2.14	0.30	CO 5
				Max M _y	▷ -0.41	8.23	26.87	▷ 0.02	▷ -1.35	0.39	CO 19
				Min M _y	▷ -41.85	6.10	42.31	▷ 0.02	▷ -2.14	0.30	CO 5
				Max M _z	▷ -26.73	8.62	31.23	0.02	▷ -1.58	▷ 0.41	CO 18
				Min M _z	▷ -31.87	4.74	28.01	0.02	▷ -1.42	▷ 0.23	CO 14
				Max N	▷ -0.42	8.25	26.86	0.02	1.34	-0.44	CO 19
				Min N	▷ -58.59	5.15	31.88	0.03	1.62	-0.28	CO 17
				Max V _y	▷ -26.74	8.63	31.22	0.03	1.57	-0.46	CO 18
				Min V _y	▷ -31.87	4.75	28.01	0.02	1.41	-0.25	CO 14
				Max V _z	▷ -41.85	6.11	42.30	0.02	2.14	-0.32	CO 5
				Min V _z	▷ -0.42	8.25	26.86	0.02	1.34	-0.44	CO 19
				Max M _T	▷ -26.74	8.63	31.22	▷ 0.03	1.57	-0.46	CO 18
	Min M _T	▷ -41.85	6.11	42.30	▷ 0.02	2.14	-0.32	CO 5			
	Max M _y	▷ -41.85	6.11	42.30	▷ 0.02	▷ 2.14	-0.32	CO 5			
	Min M _y	▷ -0.42	8.25	26.86	▷ 0.02	▷ 1.34	-0.44	CO 19			
	Max M _z	▷ -31.87	4.75	28.01	0.02	1.41	-0.25	CO 14			
	Min M _z	▷ -26.74	8.63	31.22	0.03	1.57	-0.46	CO 18			
	CR2	206	0.100	Max N	▷ -0.32	6.09	19.90	0.01	-1.00	0.29	CO 38
				Min N	▷ -43.44	3.82	23.64	0.02	-1.20	0.18	CO 36
				Max V _y	▷ -19.83	6.38	23.13	0.02	-1.17	0.30	CO 37
				Min V _y	▷ -23.63	3.52	20.76	0.01	-1.05	0.17	CO 33
				Max V _z	▷ -31.02	4.49	31.37	0.01	-1.58	0.22	CO 24
				Min V _z	▷ -0.32	6.09	19.90	0.01	-1.00	0.29	CO 38
				Max M _T	▷ -43.44	3.82	23.64	▷ 0.02	-1.20	0.18	CO 36
				Min M _T	▷ -31.02	4.49	31.37	▷ 0.01	-1.58	0.22	CO 24
				Max M _y	▷ -0.32	6.09	19.90	▷ 0.01	▷ -1.00	0.29	CO 38
				Min M _y	▷ -31.02	4.49	31.37	▷ 0.01	▷ -1.58	0.22	CO 24
				Max M _z	▷ -19.83	6.38	23.13	0.02	▷ -1.17	▷ 0.30	CO 37
				Min M _z	▷ -23.63	3.52	20.76	0.01	▷ -1.05	▷ 0.17	CO 33
				Max N	▷ -0.32	6.10	19.89	0.01	0.99	-0.32	CO 38
Min N				▷ -43.44	3.82	23.63	0.02	1.20	-0.21	CO 36	
Max V _y				▷ -19.83	6.38	23.12	0.02	1.16	-0.34	CO 37	
Min V _y				▷ -23.63	3.52	20.75	0.01	1.04	-0.19	CO 33	
Max V _z				▷ -31.03	4.50	31.36	0.01	1.58	-0.24	CO 24	
Min V _z				▷ -0.32	6.10	19.89	0.01	0.99	-0.32	CO 38	
Max M _T	▷ -19.83	6.38	23.12	▷ 0.02	1.16	-0.34	CO 37				
Min M _T	▷ -31.03	4.50	31.36	▷ 0.01	1.58	-0.24	CO 24				
Max M _y	▷ -31.03	4.50	31.36	▷ 0.01	▷ 1.58	-0.24	CO 24				
Min M _y	▷ -0.32	6.10	19.89	▷ 0.01	▷ 0.99	-0.32	CO 38				
Max M _z	▷ -23.63	3.52	20.75	0.01	1.04	-0.19	CO 33				
Min M _z	▷ -19.83	6.38	23.12	0.02	1.16	-0.34	CO 37				
CR3	206	0.100	Max N	▷ -23.94	3.54	20.41	0.01	-1.03	0.17	CO 39	
			Min N	▷ -23.94	3.54	20.41	0.01	-1.03	0.17	CO 39	
			Max V _y	▷ -23.94	3.54	20.41	0.01	-1.03	0.17	CO 39	
			Min V _y	▷ -23.94	3.54	20.41	0.01	-1.03	0.17	CO 39	
			Max V _z	▷ -23.94	3.54	20.41	0.01	-1.03	0.17	CO 39	
			Min V _z	▷ -23.94	3.54	20.41	0.01	-1.03	0.17	CO 39	
			Max M _T	▷ -23.94	3.54	20.41	▷ 0.01	-1.03	0.17	CO 39	
			Min M _T	▷ -23.94	3.54	20.41	▷ 0.01	-1.03	0.17	CO 39	
			Max M _y	▷ -23.94	3.54	20.41	▷ 0.01	▷ -1.03	0.17	CO 39	
			Min M _y	▷ -23.94	3.54	20.41	▷ 0.01	▷ -1.03	0.17	CO 39	
			Max M _z	▷ -23.94	3.54	20.41	0.01	▷ -1.03	▷ 0.17	CO 39	
			Min M _z	▷ -23.94	3.54	20.41	0.01	▷ -1.03	▷ 0.17	CO 39	
			Max N	▷ -23.94	3.54	20.41	0.01	1.03	-0.19	CO 39	
			Min N	▷ -23.94	3.54	20.41	0.01	1.03	-0.19	CO 39	
			Max V _y	▷ -23.94	3.54	20.41	0.01	1.03	-0.19	CO 39	
			Min V _y	▷ -23.94	3.54	20.41	0.01	1.03	-0.19	CO 39	
			Max V _z	▷ -23.94	3.54	20.41	0.01	1.03	-0.19	CO 39	
			Min V _z	▷ -23.94	3.54	20.41	0.01	1.03	-0.19	CO 39	
Max M _T	▷ -23.94	3.54	20.41	▷ 0.01	▷ 1.03	-0.19	CO 39				
Min M _T	▷ -23.94	3.54	20.41	▷ 0.01	▷ 1.03	-0.19	CO 39				
Max M _y	▷ -23.94	3.54	20.41	▷ 0.01	▷ 1.03	-0.19	CO 39				
Min M _y	▷ -23.94	3.54	20.41	▷ 0.01	▷ 1.03	-0.19	CO 39				
Max M _z	▷ -23.94	3.54	20.41	0.01	1.03	-0.19	CO 39				
Min M _z	▷ -23.94	3.54	20.41	0.01	1.03	-0.19	CO 39				
12	CR1	207	0.000	Max N	▷ -1.72	14.63	26.80	0.02	-1.34	0.71	CO 19
				Min N	▷ -52.10	13.47	31.90	0.03	-1.62	0.66	CO 17
				Max V _y	▷ -24.44	17.14	31.19	0.03	-1.57	0.83	CO 18
				Min V _y	▷ -32.93	10.75	33.45	0.02	-1.69	0.53	CO 12
				Max V _z	▷ -45.67	11.17	42.27	0.02	-2.15	0.55	CO 5
				Min V _z	▷ -1.72	14.63	26.80	0.02	-1.34	0.71	CO 19
				Max M _T	▷ -52.10	13.47	31.90	▷ 0.03	-1.62	0.66	CO 17
				Min M _T	▷ -45.67	11.17	42.27	▷ 0.02	-2.15	0.55	CO 5
				Max M _y	▷ -1.72	14.63	26.80	▷ 0.02	▷ -1.34	0.71	CO 19
				Min M _y	▷ -45.67	11.17	42.27	▷ 0.02	▷ -2.15	0.55	CO 5
				Max M _z	▷ -24.44	17.14	31.19	0.03	▷ -1.57	▷ 0.83	CO 18
				Min M _z	▷ -30.89	10.75	31.13	0.02	▷ -1.57	▷ 0.53	CO 11
				Max N	▷ -1.73	14.66	26.79	0.02	1.34	-0.76	CO 19



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
12	CR1			Min N	▷ -52.11	13.47	31.88	0.03	1.62	-0.71	CO 17
				Max V _y	▷ -24.46	17.15	31.16	0.03	1.57	-0.90	CO 18
				Min V _y	▷ -32.93	10.76	33.44	0.02	1.69	-0.56	CO 12
				Max V _z	▷ -45.68	11.18	▷ 42.26	0.02	2.14	-0.58	CO 5
				Min V _z	-1.73	14.66	▷ 26.79	0.02	1.34	-0.76	CO 19
				Max M _T	-24.46	17.15	31.16	▷ 0.03	1.57	-0.90	CO 18
				Min M _T	-45.68	11.18	42.26	▷ 0.02	2.14	-0.58	CO 5
				Max M _y	-45.68	11.18	42.26	0.02	▷ 2.14	-0.58	CO 5
				Min M _y	-1.73	14.66	26.79	0.02	▷ 1.34	-0.76	CO 19
				Max M _z	-32.93	10.76	33.44	0.02	1.69	▷ -0.56	CO 12
				Min M _z	-24.46	17.15	31.16	0.03	1.57	▷ -0.90	CO 18
				CR2	207	0.000	Max N	▷ -1.30	10.82	19.85	0.01
	Min N	▷ -38.65	9.98				23.63	0.02	-1.20	0.49	CO 36
	Max V _y	▷ -18.15	12.68				23.09	0.02	-1.16	0.61	CO 37
	Min V _y	▷ -24.43	7.95				24.78	0.01	-1.25	0.39	CO 31
	Max V _z	▷ -33.87	8.25				▷ 31.35	0.01	-1.59	0.41	CO 24
	Min V _z	-1.30	10.82				19.85	0.01	-0.99	0.52	CO 38
	Max M _T	-38.65	9.98				23.63	▷ 0.02	-1.20	0.49	CO 36
	Min M _T	-33.87	8.25				31.35	▷ 0.01	-1.59	0.41	CO 24
	Max M _y	-1.30	10.82				19.85	0.01	▷ -0.99	0.52	CO 38
	Min M _y	-33.87	8.25				31.35	0.01	▷ -1.59	0.41	CO 24
	Max M _z	-18.15	12.68				23.09	0.02	-1.16	▷ 0.61	CO 37
	Min M _z	-22.92	7.96				23.06	0.01	-1.16	▷ 0.39	CO 30
	225	0.100	Max N		▷ -1.30	10.84	19.84	0.02	0.99	-0.56	CO 38
			Min N		▷ -38.65	9.98	23.62	0.02	1.19	-0.52	CO 36
			Max V _y		▷ -18.16	12.68	23.08	0.02	1.16	-0.66	CO 37
			Min V _y		▷ -24.43	7.96	24.78	0.01	1.25	-0.41	CO 31
			Max V _z		▷ -33.88	8.25	▷ 31.34	0.01	1.58	-0.43	CO 24
			Min V _z		-1.30	10.84	19.84	0.02	0.99	-0.56	CO 38
			Max M _T		-18.16	12.68	23.08	▷ 0.02	1.16	-0.66	CO 37
			Min M _T		-33.88	8.25	31.34	▷ 0.01	1.58	-0.43	CO 24
			Max M _y		-33.88	8.25	31.34	0.01	▷ 1.58	-0.43	CO 24
			Min M _y		-1.30	10.84	19.84	0.02	▷ 0.99	-0.56	CO 38
			Max M _z		-24.43	7.96	24.78	0.01	1.25	▷ -0.41	CO 31
			Min M _z		-18.16	12.68	23.08	0.02	1.16	▷ -0.66	CO 37
	CR3	207	0.000	Max N	▷ -21.82	8.13	20.38	0.01	-1.03	0.40	CO 39
Min N				▷ -21.82	8.13	20.38	0.01	-1.03	0.40	CO 39	
Max V _y				▷ -21.82	8.13	20.38	0.01	-1.03	0.40	CO 39	
Min V _y				▷ -21.82	8.13	20.38	0.01	-1.03	0.40	CO 39	
Max V _z				▷ -21.82	8.13	▷ 20.38	0.01	-1.03	0.40	CO 39	
Min V _z				-21.82	8.13	▷ 20.38	0.01	-1.03	0.40	CO 39	
Max M _T				-21.82	8.13	20.38	▷ 0.01	-1.03	0.40	CO 39	
Min M _T				-21.82	8.13	20.38	▷ 0.01	-1.03	0.40	CO 39	
Max M _y				-21.82	8.13	20.38	0.01	▷ -1.03	0.40	CO 39	
Min M _y				-21.82	8.13	20.38	0.01	▷ -1.03	0.40	CO 39	
Max M _z				-21.82	8.13	20.38	0.01	-1.03	▷ 0.40	CO 39	
Min M _z				-21.82	8.13	20.38	0.01	-1.03	▷ 0.40	CO 39	
225		0.100	Max N	▷ -21.82	8.14	20.38	0.02	1.03	-0.42	CO 39	
			Min N	▷ -21.82	8.14	20.38	0.02	1.03	-0.42	CO 39	
			Max V _y	▷ -21.82	8.14	20.38	0.02	1.03	-0.42	CO 39	
			Min V _y	▷ -21.82	8.14	20.38	0.02	1.03	-0.42	CO 39	
			Max V _z	▷ -21.82	8.14	▷ 20.38	0.02	1.03	-0.42	CO 39	
			Min V _z	-21.82	8.14	▷ 20.38	0.02	1.03	-0.42	CO 39	
			Max M _T	-21.82	8.14	20.38	▷ 0.02	1.03	-0.42	CO 39	
			Min M _T	-21.82	8.14	20.38	▷ 0.02	1.03	-0.42	CO 39	
			Max M _y	-21.82	8.14	20.38	0.02	▷ 1.03	-0.42	CO 39	
			Min M _y	-21.82	8.14	20.38	0.02	▷ 1.03	-0.42	CO 39	
			Max M _z	-21.82	8.14	20.38	0.02	1.03	▷ -0.42	CO 39	
			Min M _z	-21.82	8.14	20.38	0.02	1.03	▷ -0.42	CO 39	
13	CR1	208	0.000	Max N	▷ -2.89	21.99	26.64	0.02	-1.33	1.07	CO 19
				Min N	▷ -49.25	16.99	41.67	0.02	-2.12	0.84	CO 6
				Max V _y	▷ -21.73	27.22	31.04	0.03	-1.56	1.33	CO 18
				Min V _y	▷ -47.96	16.86	42.13	0.02	-2.14	0.84	CO 5
				Max V _z	▷ -47.96	16.86	▷ 42.13	0.02	-2.14	0.84	CO 5
				Min V _z	-2.89	21.99	▷ 26.64	0.02	-1.33	1.07	CO 19
				Max M _T	-44.71	23.38	31.81	▷ 0.03	-1.62	1.16	CO 17
				Min M _T	-47.96	16.86	42.13	▷ 0.02	-2.14	0.84	CO 5
				Max M _y	-2.89	21.99	26.64	0.02	▷ -1.33	1.07	CO 19
				Min M _y	-47.96	16.86	42.13	0.02	▷ -2.14	0.84	CO 5
				Max M _z	-21.73	27.22	31.04	0.03	-1.56	▷ 1.33	CO 18
				Min M _z	-47.96	16.86	42.13	0.02	-2.14	▷ 0.84	CO 5
	227	0.100	Max N	▷ -2.92	22.01	26.62	0.02	1.33	-1.14	CO 19	
			Min N	▷ -49.26	16.99	41.65	0.02	2.12	-0.88	CO 6	
			Max V _y	▷ -21.77	27.24	31.00	0.03	1.56	-1.41	CO 18	
			Min V _y	▷ -47.97	16.86	42.11	0.02	2.14	-0.88	CO 5	
			Max V _z	▷ -47.97	16.86	▷ 42.11	0.02	2.14	-0.88	CO 5	
			Min V _z	-2.92	22.01	▷ 26.62	0.02	1.33	-1.14	CO 19	
			Max M _T	-44.73	23.38	31.78	▷ 0.03	1.61	-1.22	CO 17	
			Min M _T	-47.97	16.86	42.11	▷ 0.02	2.14	-0.88	CO 5	
			Max M _y	-47.97	16.86	42.11	0.02	▷ 2.14	-0.88	CO 5	
			Min M _y	-2.92	22.01	26.62	0.02	▷ 1.33	-1.14	CO 19	
			Max M _z	-47.97	16.86	42.11	0.02	2.14	▷ -0.88	CO 5	
			Min M _z	-21.77	27.24	31.00	0.03	1.56	▷ -1.41	CO 18	
CR2	208	0.000	Max N	▷ -2.17	16.26	19.73	0.02	-0.99	0.79	CO 38	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
13	CR2			Min N	▷ -36.54	12.55	30.91	0.01	-1.57	0.62	CO 25
				Max V _y	▷ -16.16	20.14	22.97	0.02	-1.16	0.98	CO 37
				Min V _y	▷ -35.58	12.46	31.25	0.01	-1.58	0.62	CO 24
				Max V _z	▷ -35.58	12.46	▷ 31.25	0.01	-1.58	0.62	CO 24
				Min V _z	▷ -2.17	16.26	▷ 19.73	0.02	-0.99	0.79	CO 38
				Max M _T	▷ -33.20	17.31	23.54	▷ 0.02	-1.19	0.85	CO 36
				Min M _T	▷ -35.58	12.46	31.25	▷ 0.01	-1.58	0.62	CO 24
				Max M _y	▷ -2.17	16.26	19.73	0.02	▷ -0.99	0.79	CO 38
				Min M _y	▷ -35.58	12.46	31.25	0.01	▷ -1.58	0.62	CO 24
				Max M _z	▷ -16.16	20.14	22.97	0.02	▷ -1.16	0.98	CO 37
				Min M _z	▷ -35.58	12.46	31.25	0.01	▷ -1.58	0.62	CO 24
				Max N	▷ -2.19	16.28	19.71	0.02	0.99	-0.84	CO 38
	227	0.100	Min N	▷ -36.54	12.55	30.90	0.01	1.56	-0.65	CO 25	
			Max V _y	▷ -16.18	20.15	22.95	0.02	1.15	-1.04	CO 37	
			Min V _y	▷ -35.59	12.46	31.24	0.01	1.58	-0.64	CO 24	
			Max V _z	▷ -35.59	12.46	▷ 31.24	0.01	1.58	-0.64	CO 24	
			Min V _z	▷ -2.19	16.28	▷ 19.71	0.02	0.99	-0.84	CO 38	
			Max M _T	▷ -33.21	17.31	23.52	▷ 0.02	1.19	-0.90	CO 36	
			Min M _T	▷ -35.59	12.46	31.24	▷ 0.01	1.58	-0.64	CO 24	
			Max M _y	▷ -35.59	12.46	31.24	0.01	▷ 1.58	-0.64	CO 24	
			Min M _y	▷ -2.19	16.28	19.71	0.02	▷ 0.99	-0.84	CO 38	
			Max M _z	▷ -35.59	12.46	31.24	0.01	1.58	▷ -0.64	CO 24	
			Min M _z	▷ -16.18	20.15	22.95	0.02	1.15	▷ -1.04	CO 37	
			13	CR3			Max N	▷ -19.23	13.44	20.29	0.02
Min N	▷ -19.23	13.44					20.29	0.02	-1.02	0.66	CO 39
Max V _y	▷ -19.23	13.44					20.29	0.02	-1.02	0.66	CO 39
Min V _y	▷ -19.23	13.44					20.29	0.02	-1.02	0.66	CO 39
Max V _z	▷ -19.23	13.44					▷ 20.29	0.02	-1.02	0.66	CO 39
Min V _z	▷ -19.23	13.44					▷ 20.29	0.02	-1.02	0.66	CO 39
Max M _T	▷ -19.23	13.44					20.29	▷ 0.02	-1.02	0.66	CO 39
Min M _T	▷ -19.23	13.44					20.29	▷ 0.02	-1.02	0.66	CO 39
Max M _y	▷ -19.23	13.44					20.29	0.02	▷ -1.02	0.66	CO 39
Min M _y	▷ -19.23	13.44					20.29	0.02	▷ -1.02	0.66	CO 39
Max M _z	▷ -19.23	13.44					20.29	0.02	▷ -1.02	0.66	CO 39
Min M _z	▷ -19.23	13.44					20.29	0.02	▷ -1.02	0.66	CO 39
227	0.100	Max N		▷ -19.24	13.44	20.28	0.02	1.02	-0.69	CO 39	
		Min N		▷ -19.24	13.44	20.28	0.02	1.02	-0.69	CO 39	
		Max V _y		▷ -19.24	13.44	20.28	0.02	1.02	-0.69	CO 39	
		Min V _y		▷ -19.24	13.44	20.28	0.02	1.02	-0.69	CO 39	
		Max V _z		▷ -19.24	13.44	▷ 20.28	0.02	1.02	-0.69	CO 39	
		Min V _z		▷ -19.24	13.44	▷ 20.28	0.02	1.02	-0.69	CO 39	
		Max M _T		▷ -19.24	13.44	20.28	▷ 0.02	1.02	-0.69	CO 39	
		Min M _T		▷ -19.24	13.44	20.28	▷ 0.02	1.02	-0.69	CO 39	
		Max M _y		▷ -19.24	13.44	20.28	0.02	▷ 1.02	-0.69	CO 39	
		Min M _y		▷ -19.24	13.44	20.28	0.02	▷ 1.02	-0.69	CO 39	
		Max M _z		▷ -19.24	13.44	20.28	0.02	▷ 1.02	-0.69	CO 39	
		Min M _z		▷ -19.24	13.44	20.28	0.02	▷ 1.02	-0.69	CO 39	
14	CR1			Max N	▷ -4.50	30.34	26.10	0.02	-1.31	1.48	CO 19
				Min N	▷ -52.46	23.61	40.87	0.02	-2.08	1.18	CO 6
				Max V _y	▷ -19.88	39.06	30.42	0.03	-1.53	1.92	CO 18
				Min V _y	▷ -50.74	23.43	41.31	0.02	-2.10	1.17	CO 5
				Max V _z	▷ -50.74	23.43	▷ 41.31	0.02	-2.10	1.17	CO 5
				Min V _z	▷ -4.50	30.34	▷ 26.10	0.02	-1.31	1.48	CO 19
				Max M _T	▷ -38.46	35.21	31.22	▷ 0.03	-1.58	1.75	CO 17
				Min M _T	▷ -50.74	23.43	41.31	▷ 0.02	-2.10	1.17	CO 5
				Max M _y	▷ -4.50	30.34	26.10	0.02	▷ -1.31	1.48	CO 19
				Min M _y	▷ -50.74	23.43	41.31	0.02	▷ -2.10	1.17	CO 5
				Max M _z	▷ -19.88	39.06	30.42	0.03	▷ -1.53	1.92	CO 18
				Min M _z	▷ -50.74	23.43	41.31	0.02	▷ -2.10	1.17	CO 5
	229	0.100	Max N	▷ -4.54	30.36	26.06	0.02	1.31	-1.56	CO 19	
			Min N	▷ -52.48	23.61	40.84	0.02	2.08	-1.23	CO 6	
			Max V _y	▷ -19.94	39.07	30.36	0.03	1.53	-2.02	CO 18	
			Min V _y	▷ -50.76	23.43	41.29	0.02	2.10	-1.22	CO 5	
			Max V _z	▷ -50.76	23.43	▷ 41.29	0.02	2.10	-1.22	CO 5	
			Min V _z	▷ -4.54	30.36	▷ 26.06	0.02	1.31	-1.56	CO 19	
			Max M _T	▷ -38.50	35.21	31.16	▷ 0.04	1.58	-1.82	CO 17	
			Min M _T	▷ -50.76	23.43	41.29	▷ 0.02	2.10	-1.22	CO 5	
			Max M _y	▷ -50.76	23.43	41.29	0.02	▷ 2.10	-1.22	CO 5	
			Min M _y	▷ -4.54	30.36	26.06	0.02	▷ 1.31	-1.56	CO 19	
			Max M _z	▷ -50.76	23.43	41.29	0.02	▷ 2.10	-1.22	CO 5	
			Min M _z	▷ -19.94	39.07	30.36	0.03	▷ 1.53	-2.02	CO 18	
14	CR2			Max N	▷ -3.38	22.45	19.33	0.02	-0.97	1.10	CO 38
				Min N	▷ -38.93	17.46	30.32	0.01	-1.53	0.87	CO 25
				Max V _y	▷ -14.81	28.90	22.51	0.02	-1.13	1.42	CO 37
				Min V _y	▷ -37.66	17.33	30.65	0.01	-1.55	0.86	CO 24
				Max V _z	▷ -37.66	17.33	▷ 30.65	0.01	-1.55	0.86	CO 24
				Min V _z	▷ -3.38	22.45	▷ 19.33	0.02	-0.97	1.10	CO 38
				Max M _T	▷ -28.60	26.06	23.09	▷ 0.03	-1.17	1.29	CO 36
				Min M _T	▷ -37.66	17.33	30.65	▷ 0.01	-1.55	0.86	CO 24
				Max M _y	▷ -3.38	22.45	19.33	0.02	▷ -0.97	1.10	CO 38
				Min M _y	▷ -37.66	17.33	30.65	0.01	▷ -1.55	0.86	CO 24
				Max M _z	▷ -14.81	28.90	22.51	0.02	▷ -1.13	1.42	CO 37
				Min M _z	▷ -37.66	17.33	30.65	0.01	▷ -1.55	0.86	CO 24
229	0.100	Max N	▷ -3.40	22.46	19.31	0.02	0.97	-1.15	CO 38		



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.			
					N	V _y	V _z	M _T	M _y	M _z				
14	CR2			Min N	▷ -38.94	17.46	30.30	0.02	1.54	-0.90	CO 25			
				Max V _y	▷ -14.84	28.90	22.48	0.03	1.13	-1.49	CO 37			
				Min V _y	▷ -37.67	17.32	30.63	0.02	1.55	-0.89	CO 24			
				Max V _z	▷ -37.67	17.32	30.63	▷ 0.02	1.55	-0.89	CO 24			
				Min V _z	▷ -3.40	22.46	19.31	0.02	0.97	-1.15	CO 38			
				Max M _T	▷ -28.62	26.06	23.05	▷ 0.03	1.16	-1.34	CO 36			
				Min M _T	▷ -37.67	17.32	30.63	▷ 0.02	1.55	-0.89	CO 24			
				Max M _y	▷ -37.67	17.32	30.63	▷ 0.02	1.55	-0.89	CO 24			
				Min M _y	▷ -3.40	22.46	19.31	▷ 0.02	0.97	-1.15	CO 38			
				Max M _z	▷ -37.67	17.32	30.63	▷ 0.02	1.55	-0.89	CO 24			
				Min M _z	▷ -14.84	28.90	22.48	0.03	1.13	▷ -1.49	CO 37			
				CR3	209	0.000	Max N	▷ -17.18	19.61	19.90	0.02	-1.00	0.97	CO 39
							Min N	▷ -17.18	19.61	19.90	0.02	-1.00	0.97	CO 39
							Max V _y	▷ -17.18	19.61	19.90	0.02	-1.00	0.97	CO 39
	Min V _y	▷ -17.18	19.61				19.90	0.02	-1.00	0.97	CO 39			
	Max V _z	▷ -17.18	19.61				19.90	▷ 0.02	-1.00	0.97	CO 39			
	Min V _z	▷ -17.18	19.61				19.90	▷ 0.02	-1.00	0.97	CO 39			
	229	0.100	Max M _T		▷ -17.18	19.61	19.90	▷ 0.02	-1.00	0.97	CO 39			
			Min M _T		▷ -17.18	19.61	19.90	▷ 0.02	-1.00	0.97	CO 39			
			Max M _y		▷ -17.18	19.61	19.90	▷ 0.02	-1.00	0.97	CO 39			
			Min M _y		▷ -17.18	19.61	19.90	▷ 0.02	-1.00	0.97	CO 39			
			Max M _z		▷ -17.18	19.61	19.90	▷ 0.02	-1.00	0.97	CO 39			
			Min M _z		▷ -17.18	19.61	19.90	▷ 0.02	-1.00	0.97	CO 39			
	15	CR1	210	0.000	Max N	▷ -7.16	39.96	26.20	0.02	-1.31	1.96	CO 19		
					Min N	▷ -58.95	31.73	41.13	0.02	-2.10	1.59	CO 6		
					Max V _y	▷ -19.97	53.15	30.58	0.03	-1.54	2.62	CO 18		
Min V _y					▷ -56.74	31.51	41.57	0.02	-2.12	1.57	CO 5			
Max V _z					▷ -56.74	31.51	41.57	▷ 0.02	-2.12	1.57	CO 5			
Min V _z					▷ -7.16	39.96	26.20	▷ 0.02	-1.31	1.96	CO 19			
Max M _T					▷ -34.99	49.71	31.46	▷ 0.04	-1.59	2.47	CO 17			
Min M _T					▷ -56.74	31.51	41.57	▷ 0.02	-2.12	1.57	CO 5			
Max M _y					▷ -7.16	39.96	26.20	▷ 0.02	-1.31	1.96	CO 19			
Min M _y					▷ -56.74	31.51	41.57	▷ 0.02	-2.12	1.57	CO 5			
Max M _z					▷ -19.97	53.15	30.58	0.03	-1.54	▷ 2.62	CO 18			
Min M _z					▷ -56.74	31.51	41.57	0.02	-2.12	1.57	CO 5			
CR2					210	0.000	Max N	▷ -5.36	29.57	19.41	0.02	-0.97	1.45	CO 38
							Min N	▷ -43.77	23.48	30.53	0.02	-1.55	1.17	CO 25
		Max V _y	▷ -14.90	39.33			22.62	0.03	-1.14	1.94	CO 37			
		Min V _y	▷ -42.13	23.32			30.86	0.02	-1.56	1.16	CO 24			
		Max V _z	▷ -42.13	23.32			30.86	▷ 0.02	-1.56	1.16	CO 24			
		Min V _z	▷ -5.36	29.57			19.41	▷ 0.02	-0.97	1.45	CO 38			
		231	0.100	Max M _T	▷ -26.07	36.78	23.25	▷ 0.03	-1.17	1.82	CO 36			
				Min M _T	▷ -42.13	23.32	30.86	▷ 0.02	-1.56	1.16	CO 24			
				Max M _y	▷ -5.36	29.57	19.41	▷ 0.02	-0.97	1.45	CO 38			
				Min M _y	▷ -42.13	23.32	30.86	▷ 0.02	-1.56	1.16	CO 24			
				Max M _z	▷ -14.90	39.33	22.62	0.03	-1.14	▷ 1.94	CO 37			
				Min M _z	▷ -42.13	23.32	30.86	0.02	-1.56	1.16	CO 24			
CR3		210	0.000	Max N	▷ -5.39	29.57	19.38	0.02	0.97	-1.52	CO 38			
				Min N	▷ -43.78	23.47	30.51	0.02	1.55	-1.21	CO 25			
	Max V _y			▷ -14.95	39.33	22.57	0.03	1.14	-2.02	CO 37				
	Min V _y			▷ -42.15	23.31	30.84	0.02	1.56	-1.20	CO 24				
	Max V _z			▷ -42.15	23.31	30.84	▷ 0.02	1.56	-1.20	CO 24				
	Min V _z			▷ -5.39	29.57	19.38	▷ 0.02	0.97	-1.52	CO 38				
	Max M _T			▷ -26.11	36.78	23.21	▷ 0.03	1.17	-1.89	CO 36				
	Min M _T			▷ -42.15	23.31	30.84	▷ 0.02	1.56	-1.20	CO 24				
	Max M _y			▷ -42.15	23.31	30.84	▷ 0.02	1.56	-1.20	CO 24				
	Min M _y			▷ -5.39	29.57	19.38	▷ 0.02	0.97	-1.52	CO 38				
CR3	210	0.000	Max M _z	▷ -42.15	23.31	30.84	▷ 0.02	1.56	-1.20	CO 24				
			Min M _z	▷ -14.95	39.33	22.57	0.03	1.14	▷ -2.02	CO 37				
			Max N	▷ -16.54	27.03	20.03	0.02	-1.01	1.33	CO 39				



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
15	CR3	231	0.100	Min N	▷ -16.54	27.03	20.03	0.02	-1.01	1.33	CO 39
				Max V _y	▷ -16.54	27.03	20.03	0.02	-1.01	1.33	CO 39
				Min V _y	▷ -16.54	27.03	20.03	0.02	-1.01	1.33	CO 39
				Max V _z	▷ -16.54	27.03	▷ 20.03	0.02	-1.01	1.33	CO 39
				Min V _z	▷ -16.54	27.03	▷ 20.03	0.02	-1.01	1.33	CO 39
				Max M _T	▷ -16.54	27.03	20.03	▷ 0.02	-1.01	1.33	CO 39
				Min M _T	▷ -16.54	27.03	20.03	▷ 0.02	-1.01	1.33	CO 39
				Max M _y	▷ -16.54	27.03	20.03	0.02	▷ -1.01	1.33	CO 39
				Min M _y	▷ -16.54	27.03	20.03	0.02	▷ -1.01	1.33	CO 39
				Max M _z	▷ -16.54	27.03	20.03	0.02	-1.01	▷ 1.33	CO 39
				Min M _z	▷ -16.54	27.03	20.03	0.02	-1.01	▷ 1.33	CO 39
				Max N	▷ -16.57	27.03	20.00	0.02	1.01	-1.38	CO 39
				Min N	▷ -16.57	27.03	20.00	0.02	1.01	-1.38	CO 39
				Max V _y	▷ -16.57	27.03	20.00	0.02	1.01	-1.38	CO 39
				Min V _y	▷ -16.57	27.03	20.00	0.02	1.01	-1.38	CO 39
				Max V _z	▷ -16.57	27.03	▷ 20.00	0.02	1.01	-1.38	CO 39
				Min V _z	▷ -16.57	27.03	▷ 20.00	0.02	1.01	-1.38	CO 39
				Max M _T	▷ -16.57	27.03	20.00	▷ 0.02	1.01	-1.38	CO 39
				Min M _T	▷ -16.57	27.03	20.00	▷ 0.02	1.01	-1.38	CO 39
				Max M _y	▷ -16.57	27.03	20.00	0.02	▷ 1.01	-1.38	CO 39
				Min M _y	▷ -16.57	27.03	20.00	0.02	▷ 1.01	-1.38	CO 39
				Max M _z	▷ -16.57	27.03	20.00	0.02	1.01	▷ -1.38	CO 39
				Min M _z	▷ -16.57	27.03	20.00	0.02	1.01	▷ -1.38	CO 39
				16	CR1	159	0.000	Max N	▷ -42.75	49.79	25.82
Min N	▷ -107.37	41.38	40.94					0.03	-2.11	2.10	CO 6
Max V _y	▷ -56.59	68.36	30.25					0.03	-1.52	3.41	CO 18
Min V _y	▷ -105.84	41.14	41.31					0.03	-2.13	2.09	CO 5
Max V _z	▷ -105.84	41.14	▷ 41.31					0.03	-2.13	2.09	CO 5
Min V _z	▷ -42.75	49.79	▷ 25.82					0.02	-1.29	2.47	CO 19
Max M _T	▷ -67.87	66.30	31.46					▷ 0.04	-1.59	3.33	CO 17
Min M _T	▷ -42.75	49.79	25.82					▷ 0.02	-1.29	2.47	CO 19
Max M _y	▷ -42.75	49.79	25.82					0.02	▷ -1.29	2.47	CO 19
Min M _y	▷ -105.84	41.14	41.31					0.03	▷ -2.13	2.09	CO 5
Max M _z	▷ -56.59	68.36	30.25					0.03	-1.52	▷ 3.41	CO 18
Min M _z	▷ -105.84	41.14	41.31					0.03	-2.13	▷ 2.09	CO 5
Max N	▷ -42.84	49.75	25.75					0.02	1.32	-2.57	CO 19
Min N	▷ -107.42	41.32	40.87					0.03	2.12	-2.17	CO 6
Max V _y	▷ -56.74	68.28	30.12					0.03	1.55	-3.54	CO 18
Min V _y	▷ -105.89	41.08	41.25					0.03	2.14	-2.16	CO 5
Max V _z	▷ -105.89	41.08	▷ 41.25					0.03	2.14	-2.16	CO 5
Min V _z	▷ -42.84	49.75	▷ 25.75					0.02	1.32	-2.57	CO 19
Max M _T	▷ -67.99	66.24	31.31					▷ 0.04	1.61	-3.44	CO 17
Min M _T	▷ -42.84	49.75	25.75					▷ 0.02	1.32	-2.57	CO 19
Max M _y	▷ -105.89	41.08	41.25					0.03	▷ 2.14	-2.16	CO 5
Min M _y	▷ -42.84	49.75	25.75					0.02	▷ 1.32	-2.57	CO 19
Max M _z	▷ -105.89	41.08	41.25					0.03	2.14	▷ -2.16	CO 5
Min M _z	▷ -56.74	68.28	30.12					0.03	1.55	▷ -3.54	CO 18
Max N	▷ -31.73	36.96	19.18		0.01	-0.96	1.83	CO 38			
Min N	▷ -79.59	30.78	30.52		0.02	-1.56	1.55	CO 25			
Max V _y	▷ -41.99	50.74	22.45		0.02	-1.12	2.52	CO 37			
Min V _y	▷ -78.46	30.60	30.80		0.02	-1.57	1.54	CO 24			
Max V _z	▷ -78.46	30.60	▷ 30.80		0.02	-1.57	1.54	CO 24			
Min V _z	▷ -31.73	36.96	▷ 19.18		0.01	-0.96	1.83	CO 38			
Max M _T	▷ -50.33	49.22	23.32		▷ 0.03	-1.17	2.46	CO 36			
Min M _T	▷ -31.73	36.96	19.18		▷ 0.01	-0.96	1.83	CO 38			
Max M _y	▷ -31.73	36.96	19.18		0.01	▷ -0.96	1.83	CO 38			
Min M _y	▷ -78.46	30.60	30.80		0.02	▷ -1.57	1.54	CO 24			
Max M _z	▷ -41.99	50.74	22.45		0.02	-1.12	▷ 2.52	CO 37			
Min M _z	▷ -78.46	30.60	30.80		0.02	-1.57	▷ 1.54	CO 24			
Max N	▷ -31.78	36.93	19.14		0.01	0.98	-1.90	CO 38			
Min N	▷ -79.62	30.74	30.49		0.02	1.56	-1.60	CO 25			
Max V _y	▷ -42.07	50.71	22.38		0.02	1.15	-2.62	CO 37			
Min V _y	▷ -78.49	30.57	30.76		0.02	1.58	-1.59	CO 24			
Max V _z	▷ -78.49	30.57	▷ 30.76		0.02	1.58	-1.59	CO 24			
Min V _z	▷ -31.78	36.93	▷ 19.14		0.01	0.98	-1.90	CO 38			
Max M _T	▷ -50.40	49.19	23.24		▷ 0.03	1.19	-2.54	CO 36			
Min M _T	▷ -31.78	36.93	19.14		▷ 0.01	0.98	-1.90	CO 38			
Max M _y	▷ -78.49	30.57	30.76		0.02	▷ 1.58	-1.59	CO 24			
Min M _y	▷ -31.78	36.93	19.14		0.01	▷ 0.98	-1.90	CO 38			
Max M _z	▷ -78.49	30.57	30.76		0.02	1.58	▷ -1.59	CO 24			
Min M _z	▷ -42.07	50.71	22.38		0.02	1.15	▷ -2.62	CO 37			
Max N	▷ -40.06	35.44	20.04		0.02	-1.00	1.76	CO 39			
Min N	▷ -40.06	35.44	20.04		0.02	-1.00	1.76	CO 39			
Max V _y	▷ -40.06	35.44	20.04		0.02	-1.00	1.76	CO 39			
Min V _y	▷ -40.06	35.44	20.04		0.02	-1.00	1.76	CO 39			
Max V _z	▷ -40.06	35.44	▷ 20.04		0.02	-1.00	1.76	CO 39			
Min V _z	▷ -40.06	35.44	▷ 20.04		0.02	-1.00	1.76	CO 39			
Max M _T	▷ -40.06	35.44	20.04		▷ 0.02	-1.00	1.76	CO 39			
Min M _T	▷ -40.06	35.44	20.04		▷ 0.02	-1.00	1.76	CO 39			
Max M _y	▷ -40.06	35.44	20.04		0.02	▷ -1.00	1.76	CO 39			
Min M _y	▷ -40.06	35.44	20.04		0.02	▷ -1.00	1.76	CO 39			
Max M _z	▷ -40.06	35.44	20.04		0.02	-1.00	▷ 1.76	CO 39			
Min M _z	▷ -40.06	35.44	20.04		0.02	-1.00	▷ 1.76	CO 39			
Max N	▷ -40.10	35.42	19.99	0.02	1.02	-1.82	CO 39				



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
16	CR3			Min N	▷ -40.10	35.42	19.99	0.02	1.02	-1.82	CO 39
				Max V _y	▷ -40.10	35.42	19.99	0.02	1.02	-1.82	CO 39
				Min V _y	▷ -40.10	35.42	19.99	0.02	1.02	-1.82	CO 39
				Max V _z	▷ -40.10	35.42	▷ 19.99	0.02	1.02	-1.82	CO 39
				Min V _z	▷ -40.10	35.42	▷ 19.99	0.02	1.02	-1.82	CO 39
				Max M _T	▷ -40.10	35.42	▷ 19.99	▷ 0.02	1.02	-1.82	CO 39
				Min M _T	▷ -40.10	35.42	▷ 19.99	▷ 0.02	1.02	-1.82	CO 39
				Max M _y	▷ -40.10	35.42	▷ 19.99	▷ 0.02	▷ 1.02	-1.82	CO 39
				Min M _y	▷ -40.10	35.42	▷ 19.99	▷ 0.02	▷ 1.02	-1.82	CO 39
				Max M _z	▷ -40.10	35.42	▷ 19.99	▷ 0.02	▷ 1.02	▷ -1.82	CO 39
				Min M _z	▷ -40.10	35.42	▷ 19.99	▷ 0.02	▷ 1.02	▷ -1.82	CO 39
				17	CR1	187	0.000	Max N	▷ 186.52	-61.42	8.98
Min N	▷ 74.01	-40.93	12.83					0.01	-0.62	-2.00	CO 19
Max V _y	▷ 74.01	-40.93	12.83					0.01	-0.62	-2.00	CO 19
Min V _y	▷ 186.52	-61.42	8.98					0.02	-0.42	-2.90	CO 17
Max V _z	▷ 168.87	-51.02	▷ 23.35					0.01	-1.11	-2.42	CO 5
Min V _z	▷ 186.52	-61.42	▷ 8.98					0.02	-0.42	-2.90	CO 17
Max M _T	▷ 186.52	-61.42	▷ 8.98					▷ 0.02	-0.42	-2.90	CO 17
Min M _T	▷ 74.01	-40.93	12.83					▷ 0.01	-0.62	-2.00	CO 19
Max M _y	▷ 186.52	-61.42	8.98					▷ 0.02	-0.42	-2.90	CO 17
Min M _y	▷ 168.87	-51.02	23.35					▷ 0.01	-1.11	-2.42	CO 5
Max M _z	▷ 74.01	-40.93	12.83					▷ 0.01	-0.62	▷ -2.00	CO 19
Min M _z	▷ 186.52	-61.42	8.98					▷ 0.02	-0.42	▷ -2.90	CO 17
163	0.100	Max N	▷ 186.50		-61.46	9.05	0.02	0.43	2.92	CO 17	
		Min N	▷ 74.00		-40.94	12.85	0.01	0.63	2.01	CO 19	
		Max V _y	▷ 74.00		-40.94	12.85	0.01	0.63	2.01	CO 19	
		Min V _y	▷ 186.50		-61.46	9.05	0.02	0.43	2.92	CO 17	
		Max V _z	▷ 168.85		-51.04	▷ 23.39	0.02	1.12	2.43	CO 5	
		Min V _z	▷ 186.50		-61.46	▷ 9.05	0.02	0.43	2.92	CO 17	
		Max M _T	▷ 186.50		-61.46	▷ 9.05	▷ 0.02	0.43	2.92	CO 17	
		Min M _T	▷ 74.00		-40.94	12.85	▷ 0.01	0.63	2.01	CO 19	
		Max M _y	▷ 168.85		-51.04	23.39	▷ 0.02	1.12	2.43	CO 5	
		Min M _y	▷ 186.50		-61.46	9.05	▷ 0.02	0.43	2.92	CO 17	
		Max M _z	▷ 186.50		-61.46	9.05	▷ 0.02	0.43	▷ 2.92	CO 17	
		Min M _z	▷ 74.00		-40.94	12.85	▷ 0.01	0.63	▷ 2.01	CO 19	
CR2	187	0.000	Max N		▷ 138.08	-44.89	6.60	0.02	-0.32	-2.15	CO 36
			Min N		▷ 54.78	-30.16	9.41	0.01	-0.46	-1.48	CO 38
			Max V _y		▷ 54.78	-30.16	9.41	0.01	-0.46	-1.48	CO 38
			Min V _y		▷ 138.08	-44.89	6.60	0.02	-0.32	-2.15	CO 36
			Max V _z		▷ 125.04	-37.39	▷ 17.09	0.01	-0.82	-1.80	CO 24
			Min V _z		▷ 138.08	-44.89	▷ 6.60	0.02	-0.32	-2.15	CO 36
			Max M _T		▷ 138.08	-44.89	▷ 6.60	▷ 0.02	-0.32	-2.15	CO 36
			Min M _T		▷ 54.78	-30.16	9.41	▷ 0.01	-0.46	-1.48	CO 38
			Max M _y		▷ 138.08	-44.89	6.60	▷ 0.02	-0.32	-2.15	CO 36
			Min M _y		▷ 125.04	-37.39	17.09	▷ 0.01	-0.82	-1.80	CO 24
			Max M _z		▷ 54.78	-30.16	9.41	▷ 0.01	-0.46	▷ -1.48	CO 38
			Min M _z		▷ 138.08	-44.89	6.60	▷ 0.02	-0.32	▷ -2.15	CO 36
163	0.100	Max N	▷ 138.07		-44.91	6.63	0.02	0.32	2.16	CO 36	
		Min N	▷ 54.78		-30.17	9.42	0.01	0.47	1.49	CO 38	
		Max V _y	▷ 54.78		-30.17	9.42	0.01	0.47	1.49	CO 38	
		Min V _y	▷ 138.07		-44.91	6.63	0.02	0.32	2.16	CO 36	
		Max V _z	▷ 125.03		-37.40	▷ 17.11	0.01	0.83	1.81	CO 24	
		Min V _z	▷ 138.07		-44.91	▷ 6.63	0.02	0.32	2.16	CO 36	
		Max M _T	▷ 138.07		-44.91	▷ 6.63	▷ 0.02	0.32	2.16	CO 36	
		Min M _T	▷ 54.78		-30.17	9.42	▷ 0.01	0.47	1.49	CO 38	
		Max M _y	▷ 125.03		-37.40	17.11	▷ 0.01	0.83	1.81	CO 24	
		Min M _y	▷ 138.07		-44.91	6.63	▷ 0.02	0.32	2.16	CO 36	
		Max M _z	▷ 138.07		-44.91	6.63	▷ 0.02	0.32	▷ 2.16	CO 36	
		Min M _z	▷ 54.78		-30.17	9.42	▷ 0.01	0.47	▷ 1.49	CO 38	
CR3	187	0.000	Max N	▷ 90.83	-37.13	7.46	0.01	-0.36	-1.80	CO 39	
			Min N	▷ 90.83	-37.13	7.46	0.01	-0.36	-1.80	CO 39	
			Max V _y	▷ 90.83	-37.13	7.46	0.01	-0.36	-1.80	CO 39	
			Min V _y	▷ 90.83	-37.13	7.46	0.01	-0.36	-1.80	CO 39	
			Max V _z	▷ 90.83	-37.13	▷ 7.46	0.01	-0.36	-1.80	CO 39	
			Min V _z	▷ 90.83	-37.13	▷ 7.46	0.01	-0.36	-1.80	CO 39	
			Max M _T	▷ 90.83	-37.13	▷ 7.46	▷ 0.01	-0.36	-1.80	CO 39	
			Min M _T	▷ 90.83	-37.13	▷ 7.46	▷ 0.01	-0.36	-1.80	CO 39	
			Max M _y	▷ 90.83	-37.13	7.46	▷ 0.01	-0.36	-1.80	CO 39	
			Min M _y	▷ 90.83	-37.13	7.46	▷ 0.01	-0.36	-1.80	CO 39	
			Max M _z	▷ 90.83	-37.13	7.46	▷ 0.01	-0.36	▷ -1.80	CO 39	
			Min M _z	▷ 90.83	-37.13	7.46	▷ 0.01	-0.36	▷ -1.80	CO 39	
163	0.100	Max N	▷ 90.82	-37.14	7.48	0.01	0.37	1.81	CO 39		
		Min N	▷ 90.82	-37.14	7.48	0.01	0.37	1.81	CO 39		
		Max V _y	▷ 90.82	-37.14	7.48	0.01	0.37	1.81	CO 39		
		Min V _y	▷ 90.82	-37.14	7.48	0.01	0.37	1.81	CO 39		
		Max V _z	▷ 90.82	-37.14	▷ 7.48	0.01	0.37	1.81	CO 39		
		Min V _z	▷ 90.82	-37.14	▷ 7.48	0.01	0.37	1.81	CO 39		
		Max M _T	▷ 90.82	-37.14	▷ 7.48	▷ 0.01	0.37	1.81	CO 39		
		Min M _T	▷ 90.82	-37.14	▷ 7.48	▷ 0.01	0.37	1.81	CO 39		
		Max M _y	▷ 90.82	-37.14	7.48	▷ 0.01	0.37	1.81	CO 39		
		Min M _y	▷ 90.82	-37.14	7.48	▷ 0.01	0.37	1.81	CO 39		
		Max M _z	▷ 90.82	-37.14	7.48	▷ 0.01	0.37	▷ 1.81	CO 39		
		Min M _z	▷ 90.82	-37.14	7.48	▷ 0.01	0.37	▷ 1.81	CO 39		
18	CR1	188	0.000	Max N	▷ 145.11	-47.20	9.16	0.02	-0.44	-2.25	CO 17



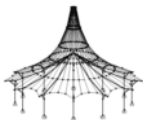
Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
18	CR1			Min N	▷ 46.46	▷ -31.96	▷ 12.90	0.01	▷ -0.63	▷ -1.57	CO 19
				Max V _y	▷ 46.46	▷ -31.96	▷ 12.90	0.01	▷ -0.63	▷ -1.57	CO 19
				Min V _y	▷ 145.11	▷ -47.20	▷ 9.16	0.02	▷ -0.44	▷ -2.25	CO 17
				Max V _z	▷ 125.08	▷ -40.52	▷ 23.30	0.01	▷ -1.12	▷ -1.94	CO 5
				Min V _z	▷ 145.11	▷ -47.20	▷ 9.16	0.02	▷ -0.44	▷ -2.25	CO 17
				Max M _T	▷ 145.11	▷ -47.20	▷ 9.16	▷ 0.02	▷ -0.44	▷ -2.25	CO 17
				Min M _T	▷ 46.46	▷ -31.96	▷ 12.90	▷ 0.01	▷ -0.63	▷ -1.57	CO 19
				Max M _y	▷ 145.11	▷ -47.20	▷ 9.16	▷ 0.02	▷ -0.44	▷ -2.25	CO 17
				Min M _y	▷ 125.08	▷ -40.52	▷ 23.30	▷ 0.01	▷ -1.12	▷ -1.94	CO 5
				Max M _z	▷ 46.46	▷ -31.96	▷ 12.90	▷ 0.01	▷ -0.63	▷ -1.57	CO 19
				Min M _z	▷ 145.11	▷ -47.20	▷ 9.16	▷ 0.02	▷ -0.44	▷ -2.25	CO 17
				Max N	▷ 145.09	▷ -47.25	▷ 9.21	▷ 0.02	▷ 0.44	▷ 2.27	CO 17
				Min N	▷ 46.44	▷ -31.97	▷ 12.92	▷ 0.01	▷ 0.64	▷ 1.59	CO 19
				Max V _y	▷ 46.44	▷ -31.97	▷ 12.92	▷ 0.01	▷ 0.64	▷ 1.59	CO 19
				Min V _y	▷ 145.09	▷ -47.25	▷ 9.21	▷ 0.02	▷ 0.44	▷ 2.27	CO 17
				Max V _z	▷ 125.06	▷ -40.55	▷ 23.33	▷ 0.01	▷ 1.13	▷ 1.96	CO 5
				Min V _z	▷ 145.09	▷ -47.25	▷ 9.21	▷ 0.02	▷ 0.44	▷ 2.27	CO 17
				Max M _T	▷ 145.09	▷ -47.25	▷ 9.21	▷ 0.02	▷ 0.44	▷ 2.27	CO 17
				Min M _T	▷ 46.44	▷ -31.97	▷ 12.92	▷ 0.01	▷ 0.64	▷ 1.59	CO 19
				Max M _y	▷ 125.06	▷ -40.55	▷ 23.33	▷ 0.01	▷ 1.13	▷ 1.96	CO 5
				Min M _y	▷ 145.09	▷ -47.25	▷ 9.21	▷ 0.02	▷ 0.44	▷ 2.27	CO 17
	Max M _z	▷ 145.09	▷ -47.25	▷ 9.21	▷ 0.02	▷ 0.44	▷ 2.27	CO 17			
	Min M _z	▷ 46.44	▷ -31.97	▷ 12.92	▷ 0.01	▷ 0.64	▷ 1.59	CO 19			
	CR2	188	0.000	Max N	▷ 107.43	▷ -34.67	▷ 6.75	0.02	▷ -0.32	▷ -1.67	CO 36
				Min N	▷ 34.39	▷ -23.61	▷ 9.49	0.01	▷ -0.47	▷ -1.16	CO 38
				Max V _y	▷ 34.39	▷ -23.61	▷ 9.49	0.01	▷ -0.47	▷ -1.16	CO 38
				Min V _y	▷ 107.43	▷ -34.67	▷ 6.75	0.02	▷ -0.32	▷ -1.67	CO 36
				Max V _z	▷ 92.62	▷ -29.84	▷ 17.11	0.01	▷ -0.83	▷ -1.44	CO 24
				Min V _z	▷ 107.43	▷ -34.67	▷ 6.75	0.02	▷ -0.32	▷ -1.67	CO 36
				Max M _T	▷ 107.43	▷ -34.67	▷ 6.75	▷ 0.02	▷ -0.32	▷ -1.67	CO 36
				Min M _T	▷ 34.39	▷ -23.61	▷ 9.49	▷ 0.01	▷ -0.47	▷ -1.16	CO 38
				Max M _y	▷ 107.43	▷ -34.67	▷ 6.75	▷ 0.02	▷ -0.32	▷ -1.67	CO 36
				Min M _y	▷ 92.62	▷ -29.84	▷ 17.11	▷ 0.01	▷ -0.83	▷ -1.44	CO 24
				Max M _z	▷ 34.39	▷ -23.61	▷ 9.49	▷ 0.01	▷ -0.47	▷ -1.16	CO 38
				Min M _z	▷ 107.43	▷ -34.67	▷ 6.75	▷ 0.02	▷ -0.32	▷ -1.67	CO 36
		164	0.100	Max N	▷ 107.41	▷ -34.70	▷ 6.77	0.02	▷ 0.33	▷ 1.69	CO 36
				Min N	▷ 34.38	▷ -23.62	▷ 9.50	▷ 0.01	▷ 0.47	▷ 1.18	CO 38
				Max V _y	▷ 34.38	▷ -23.62	▷ 9.50	▷ 0.01	▷ 0.47	▷ 1.18	CO 38
				Min V _y	▷ 107.41	▷ -34.70	▷ 6.77	▷ 0.02	▷ 0.33	▷ 1.69	CO 36
				Max V _z	▷ 92.61	▷ -29.85	▷ 17.12	▷ 0.01	▷ 0.83	▷ 1.46	CO 24
				Min V _z	▷ 107.41	▷ -34.70	▷ 6.77	▷ 0.02	▷ 0.33	▷ 1.69	CO 36
				Max M _T	▷ 107.41	▷ -34.70	▷ 6.77	▷ 0.02	▷ 0.33	▷ 1.69	CO 36
Min M _T				▷ 34.38	▷ -23.62	▷ 9.50	▷ 0.01	▷ 0.47	▷ 1.18	CO 38	
Max M _y				▷ 92.61	▷ -29.85	▷ 17.12	▷ 0.01	▷ 0.83	▷ 1.46	CO 24	
Min M _y	▷ 107.41	▷ -34.70	▷ 6.77	▷ 0.02	▷ 0.33	▷ 1.69	CO 36				
Max M _z	▷ 107.41	▷ -34.70	▷ 6.77	▷ 0.02	▷ 0.33	▷ 1.69	CO 36				
Min M _z	▷ 34.38	▷ -23.62	▷ 9.50	▷ 0.01	▷ 0.47	▷ 1.18	CO 38				
CR3	188	0.000	Max N	▷ 67.42	▷ -28.97	▷ 7.57	0.01	▷ -0.37	▷ -1.41	CO 39	
			Min N	▷ 67.42	▷ -28.97	▷ 7.57	0.01	▷ -0.37	▷ -1.41	CO 39	
			Max V _y	▷ 67.42	▷ -28.97	▷ 7.57	0.01	▷ -0.37	▷ -1.41	CO 39	
			Min V _y	▷ 67.42	▷ -28.97	▷ 7.57	0.01	▷ -0.37	▷ -1.41	CO 39	
			Max V _z	▷ 67.42	▷ -28.97	▷ 7.57	0.01	▷ -0.37	▷ -1.41	CO 39	
			Min V _z	▷ 67.42	▷ -28.97	▷ 7.57	0.01	▷ -0.37	▷ -1.41	CO 39	
			Max M _T	▷ 67.42	▷ -28.97	▷ 7.57	▷ 0.01	▷ -0.37	▷ -1.41	CO 39	
			Min M _T	▷ 67.42	▷ -28.97	▷ 7.57	▷ 0.01	▷ -0.37	▷ -1.41	CO 39	
			Max M _y	▷ 67.42	▷ -28.97	▷ 7.57	▷ 0.01	▷ -0.37	▷ -1.41	CO 39	
			Min M _y	▷ 67.42	▷ -28.97	▷ 7.57	▷ 0.01	▷ -0.37	▷ -1.41	CO 39	
			Max M _z	▷ 67.42	▷ -28.97	▷ 7.57	▷ 0.01	▷ -0.37	▷ -1.41	CO 39	
			Min M _z	▷ 67.42	▷ -28.97	▷ 7.57	▷ 0.01	▷ -0.37	▷ -1.41	CO 39	
	164	0.100	Max N	▷ 67.41	▷ -28.98	▷ 7.58	0.01	▷ 0.37	▷ 1.43	CO 39	
			Min N	▷ 67.41	▷ -28.98	▷ 7.58	0.01	▷ 0.37	▷ 1.43	CO 39	
			Max V _y	▷ 67.41	▷ -28.98	▷ 7.58	0.01	▷ 0.37	▷ 1.43	CO 39	
			Min V _y	▷ 67.41	▷ -28.98	▷ 7.58	0.01	▷ 0.37	▷ 1.43	CO 39	
			Max V _z	▷ 67.41	▷ -28.98	▷ 7.58	0.01	▷ 0.37	▷ 1.43	CO 39	
			Min V _z	▷ 67.41	▷ -28.98	▷ 7.58	0.01	▷ 0.37	▷ 1.43	CO 39	
			Max M _T	▷ 67.41	▷ -28.98	▷ 7.58	▷ 0.01	▷ 0.37	▷ 1.43	CO 39	
			Min M _T	▷ 67.41	▷ -28.98	▷ 7.58	▷ 0.01	▷ 0.37	▷ 1.43	CO 39	
			Max M _y	▷ 67.41	▷ -28.98	▷ 7.58	▷ 0.01	▷ 0.37	▷ 1.43	CO 39	
Min M _y	▷ 67.41	▷ -28.98	▷ 7.58	▷ 0.01	▷ 0.37	▷ 1.43	CO 39				
Max M _z	▷ 67.41	▷ -28.98	▷ 7.58	▷ 0.01	▷ 0.37	▷ 1.43	CO 39				
Min M _z	▷ 67.41	▷ -28.98	▷ 7.58	▷ 0.01	▷ 0.37	▷ 1.43	CO 39				
19	CR1	189	0.000	Max N	▷ 124.00	▷ -36.15	▷ 9.59	0.02	▷ -0.47	▷ -1.73	CO 17
				Min N	▷ 29.45	▷ -24.81	▷ 13.29	▷ 0.01	▷ -0.66	▷ -1.21	CO 19
				Max V _y	▷ 29.45	▷ -24.81	▷ 13.29	▷ 0.01	▷ -0.66	▷ -1.21	CO 19
				Min V _y	▷ 124.00	▷ -36.15	▷ 9.59	▷ 0.02	▷ -0.47	▷ -1.73	CO 17
				Max V _z	▷ 102.00	▷ -32.21	▷ 23.89	▷ 0.01	▷ -1.16	▷ -1.55	CO 5
				Min V _z	▷ 124.00	▷ -36.15	▷ 9.59	▷ 0.02	▷ -0.47	▷ -1.73	CO 17
				Max M _T	▷ 124.00	▷ -36.15	▷ 9.59	▷ 0.02	▷ -0.47	▷ -1.73	CO 17
				Min M _T	▷ 29.45	▷ -24.81	▷ 13.29	▷ 0.01	▷ -0.66	▷ -1.21	CO 19
				Max M _y	▷ 124.00	▷ -36.15	▷ 9.59	▷ 0.02	▷ -0.47	▷ -1.73	CO 17
		Min M _y	▷ 102.00	▷ -32.21	▷ 23.89	▷ 0.01	▷ -1.16	▷ -1.55	CO 5		
		Max M _z	▷ 29.45	▷ -24.81	▷ 13.29	▷ 0.01	▷ -0.66	▷ -1.21	CO 19		
		Min M _z	▷ 124.00	▷ -36.15	▷ 9.59	▷ 0.02	▷ -0.47	▷ -1.73	CO 17		
		216	0.100	Max N	▷ 123.99	▷ -36.21	▷ 9.59	▷ 0.02	▷ 0.46	▷ 1.76	CO 17



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.	
				N	V _y	V _z	M _T	M _y	M _z		
19	CR1			Min N	▷ 29.44	-24.82	13.29	0.01	0.66	1.25	CO 19
				Max V _y	▷ 29.44	-24.82	13.29	0.01	0.66	1.25	CO 19
				Min V _y	▷ 123.99	-36.21	9.59	0.02	0.46	1.76	CO 17
				Max V _z	▷ 101.99	-32.25	▷ 23.89	0.01	1.16	1.58	CO 5
				Min V _z	▷ 123.99	-36.21	▷ 9.59	0.02	0.46	1.76	CO 17
				Max M _T	▷ 123.99	-36.21	▷ 9.59	▷ 0.02	0.46	1.76	CO 17
				Min M _T	▷ 29.44	-24.82	13.29	▷ 0.01	0.66	1.25	CO 19
				Max M _y	▷ 101.99	-32.25	23.89	▷ 0.01	▷ 1.16	1.58	CO 5
				Min M _y	▷ 123.99	-36.21	9.59	▷ 0.02	▷ 0.46	1.76	CO 17
				Max M _z	▷ 123.99	-36.21	9.59	▷ 0.02	▷ 0.46	▷ 1.76	CO 17
				Min M _z	▷ 29.44	-24.82	13.29	▷ 0.01	▷ 0.66	▷ 1.25	CO 19
				CR2	189	0.000	Max N	▷ 91.82	-26.65	7.07	0.01
	Min N	▷ 21.80	-18.35				9.79	0.01	-0.48	-0.90	CO 38
	Max V _y	▷ 21.80	-18.35				9.79	0.01	-0.48	-0.90	CO 38
	Min V _y	▷ 91.82	-26.65				7.07	0.01	-0.35	-1.28	CO 36
	Max V _z	▷ 75.54	-23.78				▷ 17.57	0.01	-0.86	-1.15	CO 24
	Min V _z	▷ 91.82	-26.65				▷ 7.07	0.01	-0.35	-1.28	CO 36
	Max M _T	▷ 91.82	-26.65				7.07	▷ 0.01	-0.35	-1.28	CO 36
	Min M _T	▷ 21.80	-18.35				9.79	▷ 0.01	-0.48	-0.90	CO 38
	Max M _y	▷ 91.82	-26.65				7.07	▷ 0.01	-0.35	-1.28	CO 36
	Min M _y	▷ 75.54	-23.78				17.57	▷ 0.01	-0.86	-1.15	CO 24
	Max M _z	▷ 21.80	-18.35				9.79	▷ 0.01	-0.48	-0.90	CO 38
	Min M _z	▷ 91.82	-26.65				7.07	▷ 0.01	-0.35	-1.28	CO 36
	216	0.100	Max N		▷ 91.81	-26.68	7.07	0.01	0.34	1.31	CO 36
			Min N		▷ 21.79	-18.36	9.79	0.01	0.49	0.92	CO 38
			Max V _y		▷ 21.79	-18.36	9.79	0.01	0.49	0.92	CO 38
			Min V _y		▷ 91.81	-26.68	7.07	0.01	0.34	1.31	CO 36
			Max V _z		▷ 75.53	-23.80	▷ 17.57	0.01	0.86	1.17	CO 24
			Min V _z		▷ 91.81	-26.68	▷ 7.07	0.01	0.34	1.31	CO 36
			Max M _T		▷ 91.81	-26.68	7.07	▷ 0.01	0.34	1.31	CO 36
			Min M _T		▷ 21.79	-18.36	9.79	▷ 0.01	0.49	0.92	CO 38
			Max M _y		▷ 75.53	-23.80	17.57	▷ 0.01	0.86	1.17	CO 24
			Min M _y		▷ 91.81	-26.68	7.07	▷ 0.01	0.34	1.31	CO 36
			Max M _z		▷ 91.81	-26.68	7.07	▷ 0.01	0.34	▷ 1.31	CO 36
			Min M _z		▷ 21.79	-18.36	9.79	▷ 0.01	0.49	▷ 0.92	CO 38
	CR3	189	0.000	Max N	▷ 54.71	-22.45	7.86	0.01	-0.39	-1.09	CO 39
Min N				▷ 54.71	-22.45	7.86	0.01	-0.39	-1.09	CO 39	
Max V _y				▷ 54.71	-22.45	7.86	0.01	-0.39	-1.09	CO 39	
Min V _y				▷ 54.71	-22.45	7.86	0.01	-0.39	-1.09	CO 39	
Max V _z				▷ 54.71	-22.45	▷ 7.86	0.01	-0.39	-1.09	CO 39	
Min V _z				▷ 54.71	-22.45	▷ 7.86	0.01	-0.39	-1.09	CO 39	
Max M _T				▷ 54.71	-22.45	7.86	▷ 0.01	-0.39	-1.09	CO 39	
Min M _T				▷ 54.71	-22.45	7.86	▷ 0.01	-0.39	-1.09	CO 39	
Max M _y				▷ 54.71	-22.45	7.86	▷ 0.01	-0.39	-1.09	CO 39	
Min M _y				▷ 54.71	-22.45	7.86	▷ 0.01	-0.39	-1.09	CO 39	
Max M _z				▷ 54.71	-22.45	7.86	▷ 0.01	-0.39	▷ -1.09	CO 39	
Min M _z				▷ 54.71	-22.45	7.86	▷ 0.01	-0.39	-1.09	CO 39	
216		0.100	Max N	▷ 54.70	-22.47	7.87	0.01	0.39	1.12	CO 39	
			Min N	▷ 54.70	-22.47	7.87	0.01	0.39	1.12	CO 39	
			Max V _y	▷ 54.70	-22.47	7.87	0.01	0.39	1.12	CO 39	
			Min V _y	▷ 54.70	-22.47	7.87	0.01	0.39	1.12	CO 39	
			Max V _z	▷ 54.70	-22.47	▷ 7.87	0.01	0.39	1.12	CO 39	
			Min V _z	▷ 54.70	-22.47	▷ 7.87	0.01	0.39	1.12	CO 39	
			Max M _T	▷ 54.70	-22.47	7.87	▷ 0.01	0.39	1.12	CO 39	
			Min M _T	▷ 54.70	-22.47	7.87	▷ 0.01	0.39	1.12	CO 39	
			Max M _y	▷ 54.70	-22.47	7.87	▷ 0.01	0.39	1.12	CO 39	
			Min M _y	▷ 54.70	-22.47	7.87	▷ 0.01	0.39	1.12	CO 39	
			Max M _z	▷ 54.70	-22.47	7.87	▷ 0.01	0.39	▷ 1.12	CO 39	
			Min M _z	▷ 54.70	-22.47	7.87	▷ 0.01	0.39	▷ 1.12	CO 39	
20	CR1	190	0.000	Max N	▷ 105.85	-28.19	9.93	0.01	-0.48	-1.34	CO 17
				Min N	▷ 10.32	-19.75	13.56	0.01	-0.67	-0.96	CO 19
				Max V _y	▷ 10.32	-19.75	13.56	0.01	-0.67	-0.96	CO 19
				Min V _y	▷ 105.85	-28.19	9.93	0.01	-0.48	-1.34	CO 17
				Max V _z	▷ 75.92	-26.10	▷ 24.23	0.01	-1.18	-1.26	CO 5
				Min V _z	▷ 105.85	-28.19	▷ 9.93	0.01	-0.48	-1.34	CO 17
				Max M _T	▷ 105.85	-28.19	9.93	▷ 0.01	-0.48	-1.34	CO 17
				Min M _T	▷ 10.32	-19.75	13.56	▷ 0.01	-0.67	-0.96	CO 19
				Max M _y	▷ 105.85	-28.19	9.93	▷ 0.01	-0.48	-1.34	CO 17
				Min M _y	▷ 75.92	-26.10	24.23	▷ 0.01	-1.18	-1.26	CO 5
				Max M _z	▷ 10.32	-19.75	13.56	▷ 0.01	-0.67	-0.96	CO 19
				Min M _z	▷ 105.85	-28.19	9.93	▷ 0.01	-0.48	-1.34	CO 17
	166	0.100	Max N	▷ 105.83	-28.27	9.95	0.01	0.48	1.39	CO 17	
			Min N	▷ 10.30	-19.75	13.56	0.00	0.68	1.01	CO 19	
			Max V _y	▷ 10.30	-19.75	13.56	0.00	0.68	1.01	CO 19	
			Min V _y	▷ 105.83	-28.27	9.95	0.01	0.48	1.39	CO 17	
			Max V _z	▷ 75.90	-26.14	▷ 24.24	0.01	1.19	1.30	CO 5	
			Min V _z	▷ 105.83	-28.27	▷ 9.95	0.01	0.48	1.39	CO 17	
			Max M _T	▷ 105.83	-28.27	9.95	▷ 0.01	0.48	1.39	CO 17	
			Min M _T	▷ 10.30	-19.75	13.56	▷ 0.00	0.68	1.01	CO 19	
			Max M _y	▷ 75.90	-26.14	24.24	▷ 0.01	1.19	1.30	CO 5	
			Min M _y	▷ 105.83	-28.27	9.95	▷ 0.01	0.48	1.39	CO 17	
			Max M _z	▷ 105.83	-28.27	9.95	▷ 0.01	0.48	▷ 1.39	CO 17	
			Min M _z	▷ 10.30	-19.75	13.56	▷ 0.00	0.68	▷ 1.01	CO 19	
CR2	190	0.000	Max N	▷ 78.37	-20.84	7.33	0.01	-0.36	-1.00	CO 36	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.	
				N	V _y	V _z	M _T	M _y	M _z		
20	CR2			Min N	▷ 7.63	-14.62	10.00	0.00	-0.50	-0.71	CO 38
				Max V _y	▷ 7.63	-14.62	10.00	0.00	-0.50	-0.71	CO 38
				Min V _y	▷ 78.37	-20.84	7.33	0.01	-0.36	-1.00	CO 36
				Max V _z	▷ 56.22	-19.32	▷ 17.86	0.01	-0.88	-0.93	CO 24
				Min V _z	▷ 78.37	-20.84	▷ 7.33	0.01	-0.36	-1.00	CO 36
				Max M _T	▷ 78.37	-20.84	7.33	▷ 0.01	-0.36	-1.00	CO 36
				Min M _T	▷ 7.63	-14.62	10.00	▷ 0.00	-0.50	-0.71	CO 38
				Max M _y	▷ 78.37	-20.84	7.33	0.01	▷ -0.36	-1.00	CO 36
				Min M _y	▷ 56.22	-19.32	17.86	0.01	▷ -0.88	-0.93	CO 24
				Max M _z	▷ 7.63	-14.62	10.00	0.00	-0.50	▷ -0.71	CO 38
				Min M _z	▷ 78.37	-20.84	7.33	0.01	-0.36	▷ -1.00	CO 36
				Max N	▷ 78.36	-20.88	7.34	0.01	0.36	1.04	CO 36
				Min N	▷ 7.63	-14.62	10.00	0.00	0.50	0.75	CO 38
				Max V _y	▷ 7.63	-14.62	10.00	0.00	0.50	0.75	CO 38
				Min V _y	▷ 78.36	-20.88	7.34	0.01	0.36	1.04	CO 36
				Max V _z	▷ 56.21	-19.34	▷ 17.86	0.01	0.88	0.97	CO 24
				Min V _z	▷ 78.36	-20.88	▷ 7.34	0.01	0.36	1.04	CO 36
				Max M _T	▷ 78.36	-20.88	7.34	▷ 0.01	0.36	1.04	CO 36
	Min M _T	▷ 7.63	-14.62	10.00	▷ 0.00	0.50	0.75	CO 38			
	Max M _y	▷ 56.21	-19.34	17.86	0.01	▷ 0.88	0.97	CO 24			
	Min M _y	▷ 78.36	-20.88	7.34	0.01	▷ 0.36	1.04	CO 36			
	Max M _z	▷ 78.36	-20.88	7.34	0.01	0.36	▷ 1.04	CO 36			
	Min M _z	▷ 7.63	-14.62	10.00	0.00	0.50	▷ 0.75	CO 38			
	CR3	190	0.000	Max N	▷ 42.30	-17.69	8.10	0.01	-0.40	-0.86	CO 39
				Min N	▷ 42.30	-17.69	8.10	0.01	-0.40	-0.86	CO 39
				Max V _y	▷ 42.30	-17.69	8.10	0.01	-0.40	-0.86	CO 39
				Min V _y	▷ 42.30	-17.69	8.10	0.01	-0.40	-0.86	CO 39
				Max V _z	▷ 42.30	-17.69	▷ 8.10	0.01	-0.40	-0.86	CO 39
				Min V _z	▷ 42.30	-17.69	▷ 8.10	0.01	-0.40	-0.86	CO 39
				Max M _T	▷ 42.30	-17.69	8.10	▷ 0.01	-0.40	-0.86	CO 39
				Min M _T	▷ 42.30	-17.69	8.10	▷ 0.01	-0.40	-0.86	CO 39
				Max M _y	▷ 42.30	-17.69	8.10	0.01	▷ -0.40	-0.86	CO 39
				Min M _y	▷ 42.30	-17.69	8.10	0.01	▷ -0.40	-0.86	CO 39
				Max M _z	▷ 42.30	-17.69	8.10	0.01	-0.40	▷ -0.86	CO 39
				Min M _z	▷ 42.30	-17.69	8.10	0.01	-0.40	▷ -0.86	CO 39
				Max N	▷ 42.29	-17.71	8.10	0.01	0.40	0.89	CO 39
Min N				▷ 42.29	-17.71	8.10	0.01	0.40	0.89	CO 39	
Max V _y				▷ 42.29	-17.71	8.10	0.01	0.40	0.89	CO 39	
Min V _y				▷ 42.29	-17.71	8.10	0.01	0.40	0.89	CO 39	
Max V _z				▷ 42.29	-17.71	▷ 8.10	0.01	0.40	0.89	CO 39	
Min V _z				▷ 42.29	-17.71	▷ 8.10	0.01	0.40	0.89	CO 39	
Max M _T	▷ 42.29	-17.71	8.10	▷ 0.01	0.40	0.89	CO 39				
Min M _T	▷ 42.29	-17.71	8.10	▷ 0.01	0.40	0.89	CO 39				
Max M _y	▷ 42.29	-17.71	8.10	0.01	▷ 0.40	0.89	CO 39				
Min M _y	▷ 42.29	-17.71	8.10	0.01	▷ 0.40	0.89	CO 39				
Max M _z	▷ 42.29	-17.71	8.10	0.01	0.40	▷ 0.89	CO 39				
Min M _z	▷ 42.29	-17.71	8.10	0.01	0.40	▷ 0.89	CO 39				
21	CR1	191	0.000	Max N	▷ 92.55	-23.01	10.05	0.01	-0.49	-1.09	CO 17
				Min N	▷ -0.92	-16.71	13.74	0.00	-0.68	-0.81	CO 19
				Max V _y	▷ -0.92	-16.71	13.74	0.00	-0.68	-0.81	CO 19
				Min V _y	▷ 92.55	-23.01	10.05	0.01	-0.49	-1.09	CO 17
				Max V _z	▷ 61.82	-22.09	▷ 24.38	0.01	-1.19	-1.06	CO 5
				Min V _z	▷ 92.55	-23.01	▷ 10.05	0.01	-0.49	-1.09	CO 17
				Max M _T	▷ 92.55	-23.01	10.05	▷ 0.01	-0.49	-1.09	CO 17
				Min M _T	▷ -0.92	-16.71	13.74	▷ 0.00	-0.68	-0.81	CO 19
				Max M _y	▷ 92.55	-23.01	10.05	0.01	▷ -0.49	-1.09	CO 17
				Min M _y	▷ 61.82	-22.09	24.38	0.01	▷ -1.19	-1.06	CO 5
				Max M _z	▷ -0.92	-16.71	13.74	0.00	-0.68	-0.81	CO 19
				Min M _z	▷ 92.55	-23.01	10.05	0.01	-0.49	-1.09	CO 17
				Max N	▷ 92.53	-23.10	10.05	0.01	0.49	1.15	CO 17
				Min N	▷ -0.94	-16.71	13.74	0.00	0.69	0.86	CO 19
				Max V _y	▷ -0.94	-16.71	13.74	0.00	0.69	0.86	CO 19
				Min V _y	▷ 92.53	-23.10	10.05	0.01	0.49	1.15	CO 17
				Max V _z	▷ 61.79	-22.13	▷ 24.39	0.00	1.20	1.11	CO 5
				Min V _z	▷ 92.53	-23.10	▷ 10.05	0.01	0.49	1.15	CO 17
	Max M _T	▷ 92.53	-23.10	10.05	▷ 0.01	0.49	1.15	CO 17			
	Min M _T	▷ -0.94	-16.71	13.74	▷ 0.00	0.69	0.86	CO 19			
	Max M _y	▷ 61.79	-22.13	24.39	0.00	▷ 1.20	1.11	CO 5			
	Min M _y	▷ 92.53	-23.10	10.05	0.01	▷ 0.49	1.15	CO 17			
	Max M _z	▷ 92.53	-23.10	10.05	0.01	0.49	▷ 1.15	CO 17			
	Min M _z	▷ -0.94	-16.71	13.74	0.00	0.69	▷ 0.86	CO 19			
	CR2	191	0.000	Max N	▷ 68.54	-17.05	7.42	0.00	-0.36	-0.81	CO 36
				Min N	▷ -0.69	-12.36	10.15	0.00	-0.51	-0.60	CO 38
				Max V _y	▷ -0.69	-12.36	10.15	0.00	-0.51	-0.60	CO 38
				Min V _y	▷ 68.54	-17.05	7.42	0.00	-0.36	-0.81	CO 36
				Max V _z	▷ 45.78	-16.36	▷ 17.99	0.00	-0.89	-0.79	CO 24
				Min V _z	▷ 68.54	-17.05	▷ 7.42	0.00	-0.36	-0.81	CO 36
				Max M _T	▷ 68.54	-17.05	7.42	▷ 0.00	-0.36	-0.81	CO 36
				Min M _T	▷ -0.69	-12.36	10.15	▷ 0.00	-0.51	-0.60	CO 38
				Max M _y	▷ 68.54	-17.05	7.42	0.00	▷ -0.36	-0.81	CO 36
				Min M _y	▷ 45.78	-16.36	17.99	0.00	▷ -0.89	-0.79	CO 24
				Max M _z	▷ -0.69	-12.36	10.15	0.00	-0.51	-0.60	CO 38
				Min M _z	▷ 68.54	-17.05	7.42	0.00	-0.36	▷ -0.81	CO 36
Max N				▷ 68.53	-17.10	7.42	0.00	0.37	0.86	CO 36	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.		
					N	V _y	V _z	M _T	M _y	M _z			
21	CR2			Min N	▷ -0.70	-12.36	10.14	0.00	0.51	0.64	CO 38		
				Max V _y	▷ -0.70	-12.36	10.14	0.00	0.51	0.64	CO 38		
				Min V _y	▷ 68.53	-17.10	7.42	0.00	0.37	0.86	CO 36		
				Max V _z	▷ 45.77	-16.39	▷ 17.99	0.00	0.89	0.83	CO 24		
				Min V _z	▷ 68.53	-17.10	▷ 7.42	0.00	0.37	0.86	CO 36		
				Max M _T	▷ 68.53	-17.10	7.42	▷ 0.00	0.37	0.86	CO 36		
				Min M _T	▷ -0.70	-12.36	10.14	▷ 0.00	0.51	0.64	CO 38		
				Max M _y	▷ 45.77	-16.39	17.99	▷ 0.00	▷ 0.89	0.83	CO 24		
				Min M _y	▷ 68.53	-17.10	7.42	▷ 0.00	▷ 0.37	0.86	CO 36		
				Max M _z	▷ 68.53	-17.10	7.42	▷ 0.00	▷ 0.37	▷ 0.86	CO 36		
	Min M _z	▷ -0.70	-12.36	10.14	▷ 0.00	▷ 0.51	▷ 0.64	CO 38					
	CR3	191	0.000	Max N	▷ 34.22	-14.55	8.21	0.00	-0.40	-0.70	CO 39		
				Min N	▷ 34.22	-14.55	8.21	0.00	-0.40	-0.70	CO 39		
				Max V _y	▷ 34.22	-14.55	8.21	0.00	-0.40	-0.70	CO 39		
				Min V _y	▷ 34.22	-14.55	8.21	0.00	-0.40	-0.70	CO 39		
				Max V _z	▷ 34.22	-14.55	▷ 8.21	0.00	-0.40	-0.70	CO 39		
		Min V _z	▷ 34.22	-14.55	▷ 8.21	0.00	-0.40	-0.70	CO 39				
		Max M _T	▷ 34.22	-14.55	8.21	▷ 0.00	-0.40	-0.70	CO 39				
		Min M _T	▷ 34.22	-14.55	8.21	▷ 0.00	-0.40	-0.70	CO 39				
		Max M _y	▷ 34.22	-14.55	8.21	▷ 0.00	▷ -0.40	-0.70	CO 39				
Min M _y		▷ 34.22	-14.55	8.21	▷ 0.00	▷ -0.40	-0.70	CO 39					
Max M _z	▷ 34.22	-14.55	8.21	▷ 0.00	▷ -0.40	▷ -0.70	CO 39						
Min M _z	▷ 34.22	-14.55	8.21	▷ 0.00	▷ -0.40	▷ -0.70	CO 39						
224	0.100	Max N	▷ 34.21	-14.57	8.21	0.00	0.41	0.74	CO 39				
		Min N	▷ 34.21	-14.57	8.21	0.00	0.41	0.74	CO 39				
		Max V _y	▷ 34.21	-14.57	8.21	0.00	0.41	0.74	CO 39				
		Min V _y	▷ 34.21	-14.57	8.21	0.00	0.41	0.74	CO 39				
		Max V _z	▷ 34.21	-14.57	▷ 8.21	0.00	0.41	0.74	CO 39				
Min V _z	▷ 34.21	-14.57	▷ 8.21	0.00	0.41	0.74	CO 39						
Max M _T	▷ 34.21	-14.57	8.21	▷ 0.00	0.41	0.74	CO 39						
Min M _T	▷ 34.21	-14.57	8.21	▷ 0.00	0.41	0.74	CO 39						
Max M _y	▷ 34.21	-14.57	8.21	▷ 0.00	▷ 0.41	0.74	CO 39						
Min M _y	▷ 34.21	-14.57	8.21	▷ 0.00	▷ 0.41	0.74	CO 39						
Max M _z	▷ 34.21	-14.57	8.21	▷ 0.00	▷ 0.41	▷ 0.74	CO 39						
Min M _z	▷ 34.21	-14.57	8.21	▷ 0.00	▷ 0.41	▷ 0.74	CO 39						
22	CR1	192	0.000	Max N	▷ 79.66	-20.51	10.29	0.00	-0.50	-0.96	CO 17		
				Min N	▷ -13.91	-15.74	13.96	-0.00	-0.70	-0.76	CO 19		
				Max V _y	▷ -13.91	-15.74	13.96	-0.00	-0.70	-0.76	CO 19		
				Min V _y	▷ 79.66	-20.51	10.29	0.00	-0.50	-0.96	CO 17		
				Max V _z	▷ 44.33	-20.04	▷ 24.63	0.00	-1.21	-0.96	CO 5		
				Min V _z	▷ 79.66	-20.51	▷ 10.29	0.00	-0.50	-0.96	CO 17		
				Max M _T	▷ 44.33	-20.04	24.63	▷ 0.00	-1.21	-0.96	CO 5		
				Min M _T	▷ -13.91	-15.74	13.96	▷ -0.00	-0.70	-0.76	CO 19		
				Max M _y	▷ 79.66	-20.51	10.29	▷ 0.00	▷ -0.50	-0.96	CO 17		
				Min M _y	▷ 44.33	-20.04	24.63	▷ 0.00	▷ -1.21	-0.96	CO 5		
				Max M _z	▷ -13.91	-15.74	13.96	-0.00	▷ -0.70	▷ -0.76	CO 19		
				Min M _z	▷ 79.66	-20.51	10.29	0.00	-0.50	-0.96	CO 17		
				228	0.100	Max N	▷ 79.63	-20.61	10.29	-0.00	0.50	1.04	CO 17
						Min N	▷ -13.93	-15.73	13.95	-0.00	0.70	0.83	CO 19
						Max V _y	▷ -13.93	-15.73	13.95	-0.00	0.70	0.83	CO 19
						Min V _y	▷ 79.63	-20.61	10.29	-0.00	0.50	1.04	CO 17
						Max V _z	▷ 44.31	-20.09	▷ 24.63	-0.00	1.22	1.02	CO 5
				Min V _z	▷ 79.63	-20.61	▷ 10.29	-0.00	0.50	1.04	CO 17		
				Max M _T	▷ 79.63	-20.61	10.29	▷ -0.00	0.50	1.04	CO 17		
				Min M _T	▷ -13.93	-15.73	13.95	▷ -0.00	0.70	0.83	CO 19		
	Max M _y	▷ 44.31	-20.09	24.63	▷ -0.00	▷ 1.22	1.02	CO 5					
	Min M _y	▷ 79.63	-20.61	10.29	▷ -0.00	▷ 0.50	1.04	CO 17					
	Max M _z	▷ 79.63	-20.61	10.29	-0.00	▷ 0.50	▷ 1.04	CO 17					
	Min M _z	▷ -13.93	-15.73	13.95	-0.00	▷ 0.70	▷ 0.83	CO 19					
	CR2	192	0.000	Max N	▷ 59.00	-15.22	7.60	0.00	-0.37	-0.72	CO 36		
				Min N	▷ -10.31	-11.63	10.32	-0.00	-0.52	-0.56	CO 38		
				Max V _y	▷ -10.31	-11.63	10.32	-0.00	-0.52	-0.56	CO 38		
				Min V _y	▷ 59.00	-15.22	7.60	0.00	-0.37	-0.72	CO 36		
				Max V _z	▷ 32.84	-14.85	▷ 18.20	0.00	-0.90	-0.71	CO 24		
				Min V _z	▷ 59.00	-15.22	▷ 7.60	0.00	-0.37	-0.72	CO 36		
				Max M _T	▷ 32.84	-14.85	18.20	▷ 0.00	-0.90	-0.71	CO 24		
				Min M _T	▷ -10.31	-11.63	10.32	▷ -0.00	-0.52	-0.56	CO 38		
				Max M _y	▷ 59.00	-15.22	7.60	▷ 0.00	▷ -0.37	-0.72	CO 36		
				Min M _y	▷ 32.84	-14.85	18.20	▷ 0.00	▷ -0.90	-0.71	CO 24		
		Max M _z	▷ -10.31	-11.63	10.32	-0.00	▷ -0.52	▷ -0.56	CO 38				
		Min M _z	▷ 59.00	-15.22	7.60	0.00	-0.37	-0.72	CO 36				
		228	0.100	Max N	▷ 58.98	-15.27	7.60	0.00	0.38	0.78	CO 36		
				Min N	▷ -10.33	-11.63	10.32	-0.00	0.52	0.61	CO 38		
				Max V _y	▷ -10.33	-11.63	10.32	-0.00	0.52	0.61	CO 38		
				Min V _y	▷ 58.98	-15.27	7.60	0.00	0.38	0.78	CO 36		
Max V _z				▷ 32.82	-14.88	▷ 18.20	-0.00	0.90	0.76	CO 24			
Min V _z				▷ 58.98	-15.27	▷ 7.60	0.00	0.38	0.78	CO 36			
Max M _T				▷ 58.98	-15.27	7.60	▷ 0.00	0.38	0.78	CO 36			
Min M _T				▷ -10.33	-11.63	10.32	▷ -0.00	0.52	0.61	CO 38			
Max M _y	▷ 32.82			-14.88	18.20	▷ -0.00	▷ 0.90	0.76	CO 24				
Min M _y	▷ 58.98			-15.27	7.60	▷ 0.00	▷ 0.38	0.78	CO 36				
Max M _z	▷ 58.98	-15.27	7.60	0.00	▷ 0.38	▷ 0.78	CO 36						
Min M _z	▷ -10.33	-11.63	10.32	-0.00	▷ 0.52	▷ 0.61	CO 38						
CR3	192	0.000	Max N	▷ 25.66	-13.00	8.38	0.00	-0.41	-0.62	CO 39			



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
22	CR3	228	0.100	Min N	▷ 25.66	-13.00	8.38	0.00	-0.41	-0.62	CO 39
				Max V _y	▷ 25.66	-13.00	8.38	0.00	-0.41	-0.62	CO 39
				Min V _y	▷ 25.66	-13.00	8.38	0.00	-0.41	-0.62	CO 39
				Max V _z	▷ 25.66	-13.00	▷ 8.38	0.00	-0.41	-0.62	CO 39
				Min V _z	▷ 25.66	-13.00	▷ 8.38	0.00	-0.41	-0.62	CO 39
				Max M _T	▷ 25.66	-13.00	8.38	▷ 0.00	-0.41	-0.62	CO 39
				Min M _T	▷ 25.66	-13.00	8.38	▷ 0.00	-0.41	-0.62	CO 39
				Max M _y	▷ 25.66	-13.00	8.38	0.00	▷ -0.41	-0.62	CO 39
				Min M _y	▷ 25.66	-13.00	8.38	0.00	▷ -0.41	-0.62	CO 39
				Max M _z	▷ 25.66	-13.00	8.38	0.00	-0.41	▷ -0.62	CO 39
				Min M _z	▷ 25.66	-13.00	8.38	0.00	-0.41	▷ -0.62	CO 39
				Max N	▷ 25.65	-13.02	8.38	-0.00	0.42	0.67	CO 39
				Min N	▷ 25.65	-13.02	8.38	-0.00	0.42	0.67	CO 39
				Max V _y	▷ 25.65	-13.02	8.38	-0.00	0.42	0.67	CO 39
				Min V _y	▷ 25.65	-13.02	8.38	-0.00	0.42	0.67	CO 39
				Max V _z	▷ 25.65	-13.02	▷ 8.38	-0.00	0.42	0.67	CO 39
				Min V _z	▷ 25.65	-13.02	▷ 8.38	-0.00	0.42	0.67	CO 39
				Max M _T	▷ 25.65	-13.02	8.38	▷ -0.00	0.42	0.67	CO 39
				Min M _T	▷ 25.65	-13.02	8.38	▷ -0.00	0.42	0.67	CO 39
				Max M _y	▷ 25.65	-13.02	8.38	-0.00	▷ 0.42	0.67	CO 39
Min M _y	▷ 25.65	-13.02	8.38	-0.00	▷ 0.42	0.67	CO 39				
Max M _z	▷ 25.65	-13.02	8.38	-0.00	0.42	▷ 0.67	CO 39				
Min M _z	▷ 25.65	-13.02	8.38	-0.00	0.42	▷ 0.67	CO 39				
23	CR1	193	0.000	Max N	▷ 67.92	-20.58	10.50	-0.00	-0.51	-0.96	CO 17
				Min N	▷ -26.51	-16.99	14.16	-0.01	-0.71	-0.81	CO 19
				Max V _y	▷ -26.51	-16.99	14.16	-0.01	-0.71	-0.81	CO 19
				Min V _y	▷ 67.92	-20.58	10.50	-0.00	-0.51	-0.96	CO 17
				Max V _z	▷ 27.52	-19.91	▷ 24.85	-0.00	-1.23	-0.95	CO 5
				Min V _z	▷ 67.92	-20.58	▷ 10.50	-0.00	-0.51	-0.96	CO 17
				Max M _T	▷ 27.52	-19.91	24.85	▷ -0.00	-1.23	-0.95	CO 5
				Min M _T	▷ 17.62	-19.96	13.14	▷ -0.01	-0.65	-0.94	CO 18
				Max M _y	▷ 67.92	-20.58	10.50	-0.00	▷ -0.51	-0.96	CO 17
				Min M _y	▷ 27.52	-19.91	24.85	-0.00	▷ -1.23	-0.95	CO 5
				Max M _z	▷ -26.51	-16.99	14.16	-0.01	▷ -0.71	-0.81	CO 19
				Min M _z	▷ 67.92	-20.58	10.50	-0.00	-0.51	▷ -0.96	CO 17
				Max N	▷ 67.88	-20.69	10.49	-0.00	0.52	1.06	CO 17
				Min N	▷ -26.54	-16.95	14.15	-0.01	0.72	0.90	CO 19
				Max V _y	▷ -26.54	-16.95	14.15	-0.01	0.72	0.90	CO 19
				Min V _y	▷ 67.88	-20.69	10.49	-0.00	0.52	1.06	CO 17
				Max V _z	▷ 27.49	-19.95	▷ 24.84	-0.00	1.24	1.03	CO 5
				Min V _z	▷ 67.88	-20.69	▷ 10.49	-0.00	0.52	1.06	CO 17
				Max M _T	▷ 27.49	-19.95	24.84	▷ -0.00	1.24	1.03	CO 5
				Min M _T	▷ 17.58	-19.99	13.13	▷ -0.01	0.66	1.04	CO 18
	Max M _y	▷ 27.49	-19.95	24.84	-0.00	▷ 1.24	1.03	CO 5			
	Min M _y	▷ 67.88	-20.69	10.49	-0.00	▷ 0.52	1.06	CO 17			
	Max M _z	▷ 67.88	-20.69	10.49	-0.00	0.52	▷ 1.06	CO 17			
	Min M _z	▷ -26.54	-16.95	14.15	-0.01	0.72	▷ 0.90	CO 19			
	Max N	▷ 50.31	-15.26	7.77	-0.00	-0.38	-0.72	CO 36			
	Min N	▷ -19.65	-12.54	10.48	-0.01	-0.53	-0.60	CO 38			
	Max V _y	▷ -19.65	-12.54	10.48	-0.01	-0.53	-0.60	CO 38			
	Min V _y	▷ 50.31	-15.26	7.77	-0.00	-0.38	-0.72	CO 36			
	Max V _z	▷ 20.39	-14.74	▷ 18.38	-0.00	-0.91	-0.70	CO 24			
	Min V _z	▷ 50.31	-15.26	▷ 7.77	-0.00	-0.38	-0.72	CO 36			
	Max M _T	▷ 20.39	-14.74	18.38	▷ -0.00	-0.91	-0.70	CO 24			
	Min M _T	▷ 13.04	-14.77	9.72	▷ -0.01	-0.48	-0.70	CO 37			
	Max M _y	▷ 50.31	-15.26	7.77	-0.00	▷ -0.38	-0.72	CO 36			
	Min M _y	▷ 20.39	-14.74	18.38	-0.00	▷ -0.91	-0.70	CO 24			
	Max M _z	▷ -19.65	-12.54	10.48	-0.01	-0.53	▷ -0.60	CO 38			
	Min M _z	▷ 50.31	-15.26	7.77	-0.00	-0.38	▷ -0.72	CO 36			
	Max N	▷ 50.29	-15.32	7.76	-0.00	0.38	0.79	CO 36			
	Min N	▷ -19.66	-12.52	10.47	-0.01	0.53	0.66	CO 38			
	Max V _y	▷ -19.66	-12.52	10.47	-0.01	0.53	0.66	CO 38			
	Min V _y	▷ 50.29	-15.32	7.76	-0.00	0.38	0.79	CO 36			
Max V _z	▷ 20.37	-14.76	▷ 18.38	-0.00	0.92	0.76	CO 24				
Min V _z	▷ 50.29	-15.32	▷ 7.76	-0.00	0.38	0.79	CO 36				
Max M _T	▷ 20.37	-14.76	18.38	▷ -0.00	0.92	0.76	CO 24				
Min M _T	▷ 13.03	-14.78	9.71	▷ -0.01	0.49	0.77	CO 37				
Max M _y	▷ 20.37	-14.76	18.38	-0.00	▷ 0.92	0.76	CO 24				
Min M _y	▷ 50.29	-15.32	7.76	-0.00	▷ 0.38	0.79	CO 36				
Max M _z	▷ 50.29	-15.32	7.76	-0.00	0.38	▷ 0.79	CO 36				
Min M _z	▷ -19.66	-12.52	10.47	-0.01	0.53	▷ 0.66	CO 38				
Max N	▷ 17.63	-13.03	8.54	-0.00	-0.42	-0.62	CO 39				
Min N	▷ 17.63	-13.03	8.54	-0.00	-0.42	-0.62	CO 39				
Max V _y	▷ 17.63	-13.03	8.54	-0.00	-0.42	-0.62	CO 39				
Min V _y	▷ 17.63	-13.03	8.54	-0.00	-0.42	-0.62	CO 39				
Max V _z	▷ 17.63	-13.03	▷ 8.54	-0.00	-0.42	-0.62	CO 39				
Min V _z	▷ 17.63	-13.03	▷ 8.54	-0.00	-0.42	-0.62	CO 39				
Max M _T	▷ 17.63	-13.03	8.54	▷ -0.00	-0.42	-0.62	CO 39				
Min M _T	▷ 17.63	-13.03	8.54	▷ -0.00	-0.42	-0.62	CO 39				
Max M _y	▷ 17.63	-13.03	8.54	-0.00	▷ -0.42	-0.62	CO 39				
Min M _y	▷ 17.63	-13.03	8.54	-0.00	▷ -0.42	-0.62	CO 39				
Max M _z	▷ 17.63	-13.03	8.54	-0.00	-0.42	▷ -0.62	CO 39				
Min M _z	▷ 17.63	-13.03	8.54	-0.00	-0.42	▷ -0.62	CO 39				
Max N	▷ 17.61	-13.05	8.54	-0.00	0.43	0.68	CO 39				



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.	
				N	V _y	V _z	M _T	M _y	M _z		
23	CR3			Min N	▷ 17.61	-13.05	8.54	-0.00	0.43	0.68	CO 39
				Max V _y	▷ 17.61	-13.05	8.54	-0.00	0.43	0.68	CO 39
				Min V _y	▷ 17.61	-13.05	8.54	-0.00	0.43	0.68	CO 39
				Max V _z	▷ 17.61	-13.05	▷ 8.54	-0.00	0.43	0.68	CO 39
				Min V _z	▷ 17.61	-13.05	▷ 8.54	-0.00	0.43	0.68	CO 39
				Max M _T	▷ 17.61	-13.05	8.54	▷ -0.00	0.43	0.68	CO 39
				Min M _T	▷ 17.61	-13.05	8.54	▷ -0.00	0.43	0.68	CO 39
				Max M _y	▷ 17.61	-13.05	8.54	-0.00	▷ 0.43	0.68	CO 39
				Min M _y	▷ 17.61	-13.05	8.54	-0.00	▷ 0.43	0.68	CO 39
				Max M _z	▷ 17.61	-13.05	8.54	-0.00	0.43	▷ 0.68	CO 39
				Min M _z	▷ 17.61	-13.05	8.54	-0.00	0.43	▷ 0.68	CO 39
				24	CR1	194	0.000	Max N	▷ 57.27	-22.69	10.66
Min N	▷ -38.33	-20.14	14.33					-0.01	-0.72	-0.97	CO 19
Max V _y	▷ 13.79	-19.39	11.72					-0.01	-0.58	-0.92	CO 1
Min V _y	▷ 5.17	-23.43	13.31					-0.01	-0.66	-1.11	CO 18
Max V _z	▷ 11.82	-21.24	▷ 25.01					-0.00	-1.24	-1.01	CO 5
Min V _z	▷ 57.27	-22.69	▷ 10.66					-0.01	-0.52	-1.06	CO 17
Max M _T	▷ 11.82	-21.24	25.01					▷ -0.00	-1.24	-1.01	CO 5
Min M _T	▷ 5.17	-23.43	13.31					▷ -0.01	-0.66	-1.11	CO 18
Max M _y	▷ 57.27	-22.69	10.66					-0.01	▷ -0.52	-1.06	CO 17
Min M _y	▷ 11.82	-21.24	25.01					-0.00	▷ -1.24	-1.01	CO 5
Max M _z	▷ 13.79	-19.39	11.72					-0.01	-0.58	▷ -0.92	CO 1
Min M _z	▷ 5.17	-23.43	13.31					-0.01	-0.66	▷ -1.11	CO 18
235	0.100	Max N	▷ 57.23		-22.80	10.65	-0.01	0.53	1.18	CO 17	
		Min N	▷ -38.37		-20.08	14.31	-0.01	0.73	1.07	CO 19	
		Max V _y	▷ 13.76		-19.41	11.71	-0.01	0.59	1.01	CO 1	
		Min V _y	▷ 5.12		-23.45	13.29	-0.01	0.67	1.23	CO 18	
		Max V _z	▷ 11.78		-21.26	▷ 25.00	-0.01	1.25	1.11	CO 5	
		Min V _z	▷ 57.23		-22.80	▷ 10.65	-0.01	0.53	1.18	CO 17	
		Max M _T	▷ 11.78		-21.26	25.00	▷ -0.01	1.25	1.11	CO 5	
		Min M _T	▷ 5.12		-23.45	13.29	▷ -0.01	0.67	1.23	CO 18	
		Max M _y	▷ 11.78		-21.26	25.00	-0.01	▷ 1.25	1.11	CO 5	
		Min M _y	▷ 57.23		-22.80	10.65	-0.01	▷ 0.53	1.18	CO 17	
		Max M _z	▷ 5.12		-23.45	13.29	-0.01	0.67	▷ 1.23	CO 18	
		Min M _z	▷ 13.76		-19.41	11.71	-0.01	0.59	▷ 1.01	CO 1	
CR2	194	0.000	Max N		▷ 42.43	-16.81	7.89	-0.01	-0.39	-0.79	CO 36
			Min N		▷ -28.40	-14.86	10.62	-0.01	-0.53	-0.71	CO 38
			Max V _y		▷ 10.21	-14.35	8.67	-0.01	-0.43	-0.68	CO 20
			Min V _y		▷ 3.83	-17.32	9.85	-0.01	-0.49	-0.82	CO 37
			Max V _z		▷ 8.76	-15.71	▷ 18.52	-0.00	-0.92	-0.75	CO 24
			Min V _z		▷ 42.43	-16.81	▷ 7.89	-0.01	-0.39	-0.79	CO 36
			Max M _T		▷ 8.76	-15.71	18.52	▷ -0.00	-0.92	-0.75	CO 24
			Min M _T		▷ 3.83	-17.32	9.85	▷ -0.01	-0.49	-0.82	CO 37
			Max M _y		▷ 42.43	-16.81	7.89	-0.01	▷ -0.39	-0.79	CO 36
			Min M _y		▷ 8.76	-15.71	18.52	-0.00	▷ -0.92	-0.75	CO 24
			Max M _z		▷ 10.21	-14.35	8.67	-0.01	-0.43	▷ -0.68	CO 20
			Min M _z		▷ 3.83	-17.32	9.85	-0.01	-0.49	▷ -0.82	CO 37
235	0.100	Max N	▷ 42.41		-16.87	7.89	-0.01	0.39	0.87	CO 36	
		Min N	▷ -28.42		-14.83	10.61	-0.01	0.54	0.79	CO 38	
		Max V _y	▷ 10.20		-14.36	8.67	-0.01	0.43	0.75	CO 20	
		Min V _y	▷ 3.80		-17.33	9.84	-0.01	0.49	0.91	CO 37	
		Max V _z	▷ 8.74		-15.72	▷ 18.52	-0.00	0.93	0.82	CO 24	
		Min V _z	▷ 42.41		-16.87	▷ 7.89	-0.01	0.39	0.87	CO 36	
		Max M _T	▷ 8.74		-15.72	18.52	▷ -0.00	0.93	0.82	CO 24	
		Min M _T	▷ 3.80		-17.33	9.84	▷ -0.01	0.49	0.91	CO 37	
		Max M _y	▷ 8.74		-15.72	18.52	-0.00	▷ 0.93	0.82	CO 24	
		Min M _y	▷ 42.41		-16.87	7.89	-0.01	▷ 0.39	0.87	CO 36	
		Max M _z	▷ 3.80		-17.33	9.84	-0.01	0.49	▷ 0.91	CO 37	
		Min M _z	▷ 10.20		-14.36	8.67	-0.01	0.43	▷ 0.75	CO 20	
CR3	194	0.000	Max N	▷ 10.21	-14.35	8.67	-0.01	-0.43	-0.68	CO 39	
			Min N	▷ 10.21	-14.35	8.67	-0.01	-0.43	-0.68	CO 39	
			Max V _y	▷ 10.21	-14.35	8.67	-0.01	-0.43	-0.68	CO 39	
			Min V _y	▷ 10.21	-14.35	8.67	-0.01	-0.43	-0.68	CO 39	
			Max V _z	▷ 10.21	-14.35	▷ 8.67	-0.01	-0.43	-0.68	CO 39	
			Min V _z	▷ 10.21	-14.35	▷ 8.67	-0.01	-0.43	-0.68	CO 39	
			Max M _T	▷ 10.21	-14.35	8.67	▷ -0.01	-0.43	-0.68	CO 39	
			Min M _T	▷ 10.21	-14.35	8.67	▷ -0.01	-0.43	-0.68	CO 39	
			Max M _y	▷ 10.21	-14.35	8.67	-0.01	▷ -0.43	-0.68	CO 39	
			Min M _y	▷ 10.21	-14.35	8.67	-0.01	▷ -0.43	-0.68	CO 39	
			Max M _z	▷ 10.21	-14.35	8.67	-0.01	-0.43	▷ -0.68	CO 39	
			Min M _z	▷ 10.21	-14.35	8.67	-0.01	-0.43	▷ -0.68	CO 39	
235	0.100	Max N	▷ 10.20	-14.36	8.67	-0.01	0.43	0.75	CO 39		
		Min N	▷ 10.20	-14.36	8.67	-0.01	0.43	0.75	CO 39		
		Max V _y	▷ 10.20	-14.36	8.67	-0.01	0.43	0.75	CO 39		
		Min V _y	▷ 10.20	-14.36	8.67	-0.01	0.43	0.75	CO 39		
		Max V _z	▷ 10.20	-14.36	▷ 8.67	-0.01	0.43	0.75	CO 39		
		Min V _z	▷ 10.20	-14.36	▷ 8.67	-0.01	0.43	0.75	CO 39		
		Max M _T	▷ 10.20	-14.36	8.67	▷ -0.01	0.43	0.75	CO 39		
		Min M _T	▷ 10.20	-14.36	8.67	▷ -0.01	0.43	0.75	CO 39		
		Max M _y	▷ 10.20	-14.36	8.67	-0.01	▷ 0.43	0.75	CO 39		
		Min M _y	▷ 10.20	-14.36	8.67	-0.01	▷ 0.43	0.75	CO 39		
		Max M _z	▷ 10.20	-14.36	8.67	-0.01	0.43	▷ 0.75	CO 39		
		Min M _z	▷ 10.20	-14.36	8.67	-0.01	0.43	▷ 0.75	CO 39		
25	CR1	195	0.000	Max N	▷ 46.58	-26.74	10.80	-0.01	-0.53	-1.25	CO 17



Progetto:

Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.							
					N	V _y	V _z	M _T	M _y	M _z								
25	CR1			Min N	>	-50.12	>	-25.37	>	14.55	>	-0.02	>	-0.74	>	-1.23	CO 19	
				Max V _y	>	4.53	>	-22.89	>	12.41	>	-0.01	>	-0.62	>	-1.09	CO 14	
				Min V _y	>	-7.25	>	-29.20	>	13.49	>	-0.02	>	-0.67	>	-1.39	CO 18	
				Max V _z	>	-4.05	>	-23.94	>	25.18	>	-0.01	>	-1.26	>	-1.15	CO 5	
				Min V _z	>	46.58	>	-26.74	>	10.80	>	-0.01	>	-0.53	>	-1.25	CO 17	
				Max M _T	>	-4.05	>	-23.94	>	25.18	>	-0.01	>	-1.26	>	-1.15	CO 5	
				Min M _T	>	-7.25	>	-29.20	>	13.49	>	-0.02	>	-0.67	>	-1.39	CO 18	
				Max M _y	>	46.58	>	-26.74	>	10.80	>	-0.01	>	-0.53	>	-1.25	CO 17	
				Min M _y	>	-4.05	>	-23.94	>	25.18	>	-0.01	>	-1.26	>	-1.15	CO 5	
				Max M _z	>	4.53	>	-22.89	>	12.41	>	-0.01	>	-0.62	>	-1.09	CO 14	
				Min M _z	>	-7.25	>	-29.20	>	13.49	>	-0.02	>	-0.67	>	-1.39	CO 18	
				Max N	>	46.53	>	-26.84	>	10.79	>	-0.01	>	0.54	>	1.39	CO 17	
				Min N	>	-50.17	>	-25.29	>	14.52	>	-0.02	>	0.74	>	1.35	CO 19	
				Max V _y	>	4.48	>	-22.90	>	12.40	>	-0.01	>	0.62	>	1.20	CO 14	
				Min V _y	>	-7.32	>	-29.20	>	13.46	>	-0.02	>	0.68	>	1.54	CO 18	
				Max V _z	>	-4.09	>	-23.94	>	25.17	>	-0.01	>	1.26	>	1.25	CO 5	
				Min V _z	>	46.53	>	-26.84	>	10.79	>	-0.01	>	0.54	>	1.39	CO 17	
				Max M _T	>	-4.09	>	-23.94	>	25.17	>	-0.01	>	1.26	>	1.25	CO 5	
				Min M _T	>	-7.32	>	-29.20	>	13.46	>	-0.02	>	0.68	>	1.54	CO 18	
				Max M _y	>	-4.09	>	-23.94	>	25.17	>	-0.01	>	1.26	>	1.25	CO 5	
				Min M _y	>	46.53	>	-26.84	>	10.79	>	-0.01	>	0.54	>	1.39	CO 17	
				Max M _z	>	-7.32	>	-29.20	>	13.46	>	-0.02	>	0.68	>	1.54	CO 18	
				Min M _z	>	4.48	>	-22.90	>	12.40	>	-0.01	>	0.62	>	1.20	CO 14	
				CR2	195		0.000	Max N	>	34.52	>	-19.80	>	8.00	>	-0.01	>	-0.39
	Min N	>	-37.13					>	-18.72	>	10.79	>	-0.01	>	-0.54	>	-0.90	CO 38
	Max V _y	>	3.36					>	-16.93	>	9.20	>	-0.01	>	-0.46	>	-0.81	CO 33
	Min V _y	>	-5.37					>	-21.58	>	10.00	>	-0.01	>	-0.50	>	-1.03	CO 37
	Max V _z	>	-2.99					>	-17.70	>	18.67	>	-0.00	>	-0.93	>	-0.85	CO 24
	Min V _z	>	34.52					>	-19.80	>	8.00	>	-0.01	>	-0.39	>	-0.93	CO 36
	Max M _T	>	-2.99					>	-17.70	>	18.67	>	-0.00	>	-0.93	>	-0.85	CO 24
	Min M _T	>	-5.37					>	-21.58	>	10.00	>	-0.01	>	-0.50	>	-1.03	CO 37
	Max M _y	>	34.52					>	-19.80	>	8.00	>	-0.01	>	-0.39	>	-0.93	CO 36
	Min M _y	>	-2.99					>	-17.70	>	18.67	>	-0.00	>	-0.93	>	-0.85	CO 24
	Max M _z	>	3.36					>	-16.93	>	9.20	>	-0.01	>	-0.46	>	-0.81	CO 33
	Min M _z	>	-5.37					>	-21.58	>	10.00	>	-0.01	>	-0.50	>	-1.03	CO 37
	Max N	>	34.49					>	-19.85	>	7.99	>	-0.01	>	0.40	>	1.03	CO 36
	Min N	>	-37.16					>	-18.68	>	10.77	>	-0.01	>	0.55	>	0.99	CO 38
	Max V _y	>	3.33					>	-16.94	>	9.19	>	-0.01	>	0.46	>	0.89	CO 33
	Min V _y	>	-5.41					>	-21.57	>	9.98	>	-0.01	>	0.50	>	1.13	CO 37
	Max V _z	>	-3.01					>	-17.70	>	18.67	>	-0.01	>	0.94	>	0.93	CO 24
	Min V _z	>	34.49					>	-19.85	>	7.99	>	-0.01	>	0.40	>	1.03	CO 36
	Max M _T	>	-3.01					>	-17.70	>	18.67	>	-0.01	>	0.94	>	0.93	CO 24
	Min M _T	>	-5.41					>	-21.57	>	9.98	>	-0.01	>	0.50	>	1.13	CO 37
	Max M _y	>	-3.01					>	-17.70	>	18.67	>	-0.01	>	0.94	>	0.93	CO 24
	Min M _y	>	34.49					>	-19.85	>	7.99	>	-0.01	>	0.40	>	1.03	CO 36
	Max M _z	>	-5.41					>	-21.57	>	9.98	>	-0.01	>	0.50	>	1.13	CO 37
	Min M _z	>	3.33					>	-16.94	>	9.19	>	-0.01	>	0.46	>	0.89	CO 33
	CR3	195		0.000	Max N	>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39
Min N					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Max V _y					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Min V _y					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Max V _z					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Min V _z					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Max M _T					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Min M _T					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Max M _y					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Min M _y					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Max M _z					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Min M _z					>	2.76	>	-16.94	>	8.81	>	-0.01	>	-0.44	>	-0.81	CO 39	
Max N					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Min N					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Max V _y					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Min V _y					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Max V _z					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Min V _z					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Max M _T					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Min M _T					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Max M _y					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Min M _y					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Max M _z					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
Min M _z					>	2.74	>	-16.94	>	8.80	>	-0.01	>	0.44	>	0.89	CO 39	
26	CR1	196	0.000	Max N	>	26.39	>	-32.44	>	10.97	>	-0.02	>	-0.54	>	-1.53	CO 17	
				Min N	>	-72.27	>	-32.69	>	14.62	>	-0.02	>	-0.75	>	-1.60	CO 19	
				Max V _y	>	-22.77	>	-27.68	>	17.90	>	-0.01	>	-0.90	>	-1.33	CO 12	
				Min V _y	>	-30.09	>	-37.15	>	13.60	>	-0.02	>	-0.68	>	-1.79	CO 18	
				Max V _z	>	-39.22	>	-27.68	>	25.15	>	-0.01	>	-1.27	>	-1.34	CO 5	
				Min V _z	>	26.39	>	-32.44	>	10.97	>	-0.02	>	-0.54	>	-1.53	CO 17	
				Max M _T	>	-39.22	>	-27.68	>	25.15	>	-0.01	>	-1.27	>	-1.34	CO 5	
				Min M _T	>	-30.09	>	-37.15	>	13.60	>	-0.02	>	-0.68	>	-1.79	CO 18	
				Max M _y	>	26.39	>	-32.44	>	10.97	>	-0.02	>	-0.54	>	-1.53	CO 17	
				Min M _y	>	-39.22	>	-27.68	>	25.15	>	-0.01	>	-1.27	>	-1.34	CO 5	
				Max M _z	>	-22.77	>	-27.68	>	17.90	>	-0.01	>	-0.90	>	-1.33	CO 12	
				Min M _z	>	-30.09	>	-37.15	>	13.60	>	-0.02	>	-0.68	>	-1.79	CO 18	
				Max N	>	26.31	>	-32.51	>	10.94	>	-0.02	>	0.55	>	1.69	CO 17	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
26	CR1			Min N	▷ -72.34	▷ -32.54	14.58	-0.02	0.74	1.74	CO 19
				Max V _y	▷ -39.27	▷ -27.62	25.12	-0.01	1.27	1.46	CO 5
				Min V _y	▷ -30.19	▷ -37.09	13.55	-0.02	0.69	1.95	CO 18
				Max V _z	▷ -39.27	▷ -27.62	25.12	-0.01	1.27	1.46	CO 5
				Min V _z	▷ 26.31	▷ -32.51	10.94	-0.02	0.55	1.69	CO 17
				Max M _T	▷ -39.27	▷ -27.62	25.12	▷ -0.01	1.27	1.46	CO 5
				Min M _T	▷ -30.19	▷ -37.09	13.55	▷ -0.02	0.69	1.95	CO 18
				Max M _y	▷ -39.27	▷ -27.62	25.12	-0.01	▷ 1.27	1.46	CO 5
				Min M _y	▷ 26.31	▷ -32.51	10.94	-0.02	▷ 0.55	1.69	CO 17
				Max M _z	▷ -30.19	▷ -37.09	13.55	-0.02	▷ 0.69	1.95	CO 18
				Min M _z	▷ -22.83	▷ -27.64	17.87	-0.01	▷ 0.90	1.45	CO 12
				CR2	196	0.000	Max N	▷ 19.55	▷ -24.02	8.14	-0.01
	Min N	▷ -53.52	▷ -24.16				10.86	-0.02	-0.55	-1.18	CO 38
	Max V _y	▷ -16.86	▷ -20.48				13.29	-0.01	-0.67	-0.98	CO 31
	Min V _y	▷ -22.28	▷ -27.48				10.10	-0.02	-0.51	-1.32	CO 37
	Max V _z	▷ -29.05	▷ -20.49				18.71	-0.01	-0.94	-0.99	CO 24
	Min V _z	▷ 19.55	▷ -24.02				8.14	-0.01	-0.40	-1.14	CO 36
	Max M _T	▷ -29.05	▷ -20.49				18.71	▷ -0.01	-0.94	-0.99	CO 24
	Min M _T	▷ -22.28	▷ -27.48				10.10	▷ -0.02	-0.51	-1.32	CO 37
	Max M _y	▷ 19.55	▷ -24.02				8.14	-0.01	▷ -0.40	-1.14	CO 36
	Min M _y	▷ -29.05	▷ -20.49				18.71	-0.01	▷ -0.94	-0.99	CO 24
	Max M _z	▷ -16.86	▷ -20.48				13.29	-0.01	-0.67	▷ -0.98	CO 31
	Min M _z	▷ -22.28	▷ -27.48				10.10	-0.02	-0.51	▷ -1.32	CO 37
	172	0.100	Max N		▷ 19.51	▷ -24.06	8.12	-0.01	0.41	1.25	CO 36
			Min N		▷ -53.56	▷ -24.08	10.84	-0.02	0.55	1.28	CO 38
			Max V _y		▷ -29.08	▷ -20.45	18.69	-0.01	0.94	1.08	CO 24
			Min V _y		▷ -22.34	▷ -27.45	10.07	-0.02	0.51	1.44	CO 37
			Max V _z		▷ -29.08	▷ -20.45	18.69	-0.01	0.94	1.08	CO 24
			Min V _z		▷ 19.51	▷ -24.06	8.12	-0.01	0.41	1.25	CO 36
			Max M _T		▷ -29.08	▷ -20.45	18.69	▷ -0.01	0.94	1.08	CO 24
			Min M _T		▷ -22.34	▷ -27.45	10.07	▷ -0.02	0.51	1.44	CO 37
			Max M _y		▷ -29.08	▷ -20.45	18.69	-0.01	▷ 0.94	1.08	CO 24
			Min M _y		▷ 19.51	▷ -24.06	8.12	-0.01	▷ 0.41	1.25	CO 36
			Max M _z		▷ -22.34	▷ -27.45	10.07	-0.02	▷ 0.51	1.44	CO 37
			Min M _z		▷ -16.90	▷ -20.46	13.28	-0.01	▷ 0.67	1.07	CO 31
	CR3	196	0.000	Max N	▷ -11.67	▷ -20.69	8.92	-0.01	-0.45	-0.99	CO 39
				Min N	▷ -11.67	▷ -20.69	8.92	-0.01	-0.45	-0.99	CO 39
				Max V _y	▷ -11.67	▷ -20.69	8.92	-0.01	-0.45	-0.99	CO 39
				Min V _y	▷ -11.67	▷ -20.69	8.92	-0.01	-0.45	-0.99	CO 39
				Max V _z	▷ -11.67	▷ -20.69	8.92	-0.01	-0.45	-0.99	CO 39
				Min V _z	▷ -11.67	▷ -20.69	8.92	-0.01	-0.45	-0.99	CO 39
				Max M _T	▷ -11.67	▷ -20.69	8.92	▷ -0.01	-0.45	-0.99	CO 39
				Min M _T	▷ -11.67	▷ -20.69	8.92	▷ -0.01	-0.45	-0.99	CO 39
				Max M _y	▷ -11.67	▷ -20.69	8.92	-0.01	▷ -0.45	-0.99	CO 39
				Min M _y	▷ -11.67	▷ -20.69	8.92	-0.01	▷ -0.45	-0.99	CO 39
				Max M _z	▷ -11.67	▷ -20.69	8.92	-0.01	-0.45	▷ -0.99	CO 39
				Min M _z	▷ -11.67	▷ -20.69	8.92	-0.01	-0.45	▷ -0.99	CO 39
		172	0.100	Max N	▷ -11.71	▷ -20.68	8.91	-0.01	0.45	1.08	CO 39
Min N				▷ -11.71	▷ -20.68	8.91	-0.01	0.45	1.08	CO 39	
Max V _y				▷ -11.71	▷ -20.68	8.91	-0.01	0.45	1.08	CO 39	
Min V _y				▷ -11.71	▷ -20.68	8.91	-0.01	0.45	1.08	CO 39	
Max V _z				▷ -11.71	▷ -20.68	8.91	-0.01	0.45	1.08	CO 39	
Min V _z				▷ -11.71	▷ -20.68	8.91	-0.01	0.45	1.08	CO 39	
Max M _T				▷ -11.71	▷ -20.68	8.91	▷ -0.01	0.45	1.08	CO 39	
Min M _T				▷ -11.71	▷ -20.68	8.91	▷ -0.01	0.45	1.08	CO 39	
Max M _y				▷ -11.71	▷ -20.68	8.91	-0.01	▷ 0.45	1.08	CO 39	
Min M _y				▷ -11.71	▷ -20.68	8.91	-0.01	▷ 0.45	1.08	CO 39	
Max M _z				▷ -11.71	▷ -20.68	8.91	-0.01	0.45	▷ 1.08	CO 39	
Min M _z				▷ -11.71	▷ -20.68	8.91	-0.01	0.45	▷ 1.08	CO 39	
27	CR1	197	0.000	Max N	▷ 13.06	▷ -39.04	10.94	-0.02	-0.54	-1.86	CO 17
				Min N	▷ -85.48	▷ -41.67	14.55	-0.03	-0.74	-2.06	CO 19
				Max V _y	▷ -57.99	▷ -32.09	24.81	-0.01	-1.26	-1.56	CO 5
				Min V _y	▷ -44.55	▷ -46.67	13.53	-0.03	-0.68	-2.27	CO 18
				Max V _z	▷ -57.99	▷ -32.09	24.81	-0.01	-1.26	-1.56	CO 5
				Min V _z	▷ 13.06	▷ -39.04	10.94	-0.02	-0.54	-1.86	CO 17
				Max M _T	▷ -57.99	▷ -32.09	24.81	▷ -0.01	-1.26	-1.56	CO 5
				Min M _T	▷ -44.55	▷ -46.67	13.53	▷ -0.03	-0.68	-2.27	CO 18
				Max M _y	▷ 13.06	▷ -39.04	10.94	-0.02	▷ -0.54	-1.86	CO 17
				Min M _y	▷ -57.99	▷ -32.09	24.81	-0.01	▷ -1.26	-1.56	CO 5
				Max M _z	▷ -57.99	▷ -32.09	24.81	-0.01	-1.26	▷ -1.56	CO 5
				Min M _z	▷ -44.55	▷ -46.67	13.53	-0.03	-0.68	▷ -2.27	CO 18
	173	0.100	Max N	▷ 12.95	▷ -39.08	10.90	-0.02	0.55	2.03	CO 17	
			Min N	▷ -85.59	▷ -41.47	14.49	-0.03	0.75	2.21	CO 19	
			Max V _y	▷ -58.06	▷ -31.97	24.78	-0.01	1.27	1.70	CO 5	
			Min V _y	▷ -44.69	▷ -46.55	13.47	-0.03	0.69	2.45	CO 18	
			Max V _z	▷ -58.06	▷ -31.97	24.78	-0.01	1.27	1.70	CO 5	
			Min V _z	▷ 12.95	▷ -39.08	10.90	-0.02	0.55	2.03	CO 17	
			Max M _T	▷ -58.06	▷ -31.97	24.78	▷ -0.01	1.27	1.70	CO 5	
			Min M _T	▷ -44.69	▷ -46.55	13.47	▷ -0.03	0.69	2.45	CO 18	
			Max M _y	▷ -58.06	▷ -31.97	24.78	-0.01	▷ 1.27	1.70	CO 5	
			Min M _y	▷ 12.95	▷ -39.08	10.90	-0.02	▷ 0.55	2.03	CO 17	
			Max M _z	▷ -44.69	▷ -46.55	13.47	-0.03	▷ 0.69	2.45	CO 18	
			Min M _z	▷ -58.06	▷ -31.97	24.78	-0.01	▷ 1.27	1.70	CO 5	
CR2	197	0.000	Max N	▷ 9.69	▷ -28.91	8.12	-0.01	-0.40	-1.38	CO 36	



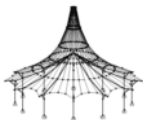
Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.				
					N	V _y	V _z	M _T	M _y	M _z					
27	CR2			Min N	▷ -63.31	▷ -30.85	▷ 10.82	-0.02	-0.55	-1.51	CO 38				
				Max V _y	▷ -42.94	▷ -23.77	▷ 18.49	-0.01	-0.93	-1.15	CO 24				
				Min V _y	▷ -32.99	▷ -34.55	▷ 10.06	-0.02	-0.50	-1.68	CO 37				
				Max V _z	▷ -42.94	▷ -23.77	▷ 18.49	-0.01	-0.93	-1.15	CO 24				
				Min V _z	▷ 9.69	▷ -28.91	▷ 8.12	-0.01	-0.40	-1.38	CO 36				
				Max M _T	▷ -42.94	▷ -23.77	▷ 18.49	▷ -0.01	-0.93	-1.15	CO 24				
				Min M _T	▷ -32.99	▷ -34.55	▷ 10.06	▷ -0.02	-0.50	-1.68	CO 37				
				Max M _y	▷ 9.69	▷ -28.91	▷ 8.12	-0.01	▷ -0.40	-1.38	CO 36				
				Min M _y	▷ -42.94	▷ -23.77	▷ 18.49	-0.01	▷ -0.93	-1.15	CO 24				
				Max M _z	▷ -42.94	▷ -23.77	▷ 18.49	-0.01	▷ -0.93	▷ -1.15	CO 24				
				Min M _z	▷ -32.99	▷ -34.55	▷ 10.06	-0.02	-0.50	▷ -1.68	CO 37				
				Max N	▷ 9.63	▷ -28.93	▷ 8.10	-0.01	0.41	1.51	CO 36				
				Min N	▷ -63.37	▷ -30.73	▷ 10.79	-0.02	0.55	1.63	CO 38				
				Max V _y	▷ -42.99	▷ -23.70	▷ 18.47	-0.01	0.94	1.25	CO 24				
				Min V _y	▷ -33.07	▷ -34.49	▷ 10.02	-0.02	0.51	1.81	CO 37				
				Max V _z	▷ -42.99	▷ -23.70	▷ 18.47	-0.01	0.94	1.25	CO 24				
				Min V _z	▷ 9.63	▷ -28.93	▷ 8.10	-0.01	0.41	1.51	CO 36				
				Max M _T	▷ -42.99	▷ -23.70	▷ 18.47	▷ -0.01	0.94	1.25	CO 24				
	Min M _T	▷ -33.07	▷ -34.49	▷ 10.02	▷ -0.02	0.51	1.81	CO 37							
	Max M _y	▷ -42.99	▷ -23.70	▷ 18.47	-0.01	▷ 0.94	1.25	CO 24							
	Min M _y	▷ 9.63	▷ -28.93	▷ 8.10	-0.01	▷ 0.41	1.51	CO 36							
	Max M _z	▷ -33.07	▷ -34.49	▷ 10.02	-0.02	0.51	▷ 1.81	CO 37							
	Min M _z	▷ -42.99	▷ -23.70	▷ 18.47	-0.01	▷ 0.94	▷ 1.25	CO 24							
	173	0.100													
	CR3	197	0.000		Max N	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	-0.44	-1.21	CO 39			
					Min N	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	-0.44	-1.21	CO 39			
					Max V _y	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	-0.44	-1.21	CO 39			
					Min V _y	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	-0.44	-1.21	CO 39			
					Max V _z	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	-0.44	-1.21	CO 39			
					Min V _z	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	-0.44	-1.21	CO 39			
					Max M _T	▷ -20.62	▷ -25.20	▷ 8.90	▷ -0.01	-0.44	-1.21	CO 39			
					Min M _T	▷ -20.62	▷ -25.20	▷ 8.90	▷ -0.01	-0.44	-1.21	CO 39			
					Max M _y	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	▷ -0.44	-1.21	CO 39			
					Min M _y	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	▷ -0.44	-1.21	CO 39			
					Max M _z	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	-0.44	▷ -1.21	CO 39			
					Min M _z	▷ -20.62	▷ -25.20	▷ 8.90	-0.01	-0.44	▷ -1.21	CO 39			
	173	0.100		Max N	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	0.45	1.32	CO 39				
				Min N	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	0.45	1.32	CO 39				
				Max V _y	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	0.45	1.32	CO 39				
				Min V _y	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	0.45	1.32	CO 39				
				Max V _z	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	0.45	1.32	CO 39				
				Min V _z	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	0.45	1.32	CO 39				
				Max M _T	▷ -20.67	▷ -25.17	▷ 8.88	▷ -0.01	0.45	1.32	CO 39				
				Min M _T	▷ -20.67	▷ -25.17	▷ 8.88	▷ -0.01	0.45	1.32	CO 39				
				Max M _y	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	▷ 0.45	1.32	CO 39				
				Min M _y	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	▷ 0.45	1.32	CO 39				
				Max M _z	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	▷ 0.45	▷ 1.32	CO 39				
				Min M _z	▷ -20.67	▷ -25.17	▷ 8.88	-0.01	▷ 0.45	▷ 1.32	CO 39				
28	CR1			Max N	▷ -2.00	▷ -45.93	▷ 11.14	-0.01	-0.55	-2.20	CO 17				
				Min N	▷ -104.82	▷ -52.10	▷ 14.97	-0.02	-0.77	-2.60	CO 19				
				Max V _y	▷ -82.53	▷ -36.71	▷ 25.05	-0.01	-1.28	-1.80	CO 5				
				Min V _y	▷ -63.44	▷ -57.32	▷ 13.87	-0.02	-0.70	-2.82	CO 18				
				Max V _z	▷ -82.53	▷ -36.71	▷ 25.05	-0.01	-1.28	-1.80	CO 5				
				Min V _z	▷ -2.00	▷ -45.93	▷ 11.14	-0.01	-0.55	-2.20	CO 17				
				Max M _T	▷ -82.53	▷ -36.71	▷ 25.05	▷ -0.01	-1.28	-1.80	CO 5				
				Min M _T	▷ -104.82	▷ -52.10	▷ 14.97	▷ -0.02	-0.77	-2.60	CO 19				
				Max M _y	▷ -2.00	▷ -45.93	▷ 11.14	-0.01	▷ -0.55	-2.20	CO 17				
				Min M _y	▷ -82.53	▷ -36.71	▷ 25.05	-0.01	▷ -1.28	-1.80	CO 5				
				Max M _z	▷ -82.53	▷ -36.71	▷ 25.05	-0.01	-1.28	▷ -1.80	CO 5				
				Min M _z	▷ -63.44	▷ -57.32	▷ 13.87	-0.02	-0.70	▷ -2.82	CO 18				
				174	0.100			Max N	▷ -2.14	▷ -45.93	▷ 11.11	-0.01	0.56	2.39	CO 17
								Min N	▷ -104.97	▷ -51.82	▷ 14.89	-0.03	0.77	2.77	CO 19
								Max V _y	▷ -82.63	▷ -36.51	▷ 25.02	-0.01	1.29	1.95	CO 5
								Min V _y	▷ -63.64	▷ -57.12	▷ 13.79	-0.02	0.71	3.02	CO 18
								Max V _z	▷ -82.63	▷ -36.51	▷ 25.02	-0.01	1.29	1.95	CO 5
								Min V _z	▷ -2.14	▷ -45.93	▷ 11.11	-0.01	0.56	2.39	CO 17
					Max M _T	▷ -82.63	▷ -36.51	▷ 25.02	▷ -0.01	1.29	1.95	CO 5			
					Min M _T	▷ -104.97	▷ -51.82	▷ 14.89	▷ -0.03	0.77	2.77	CO 19			
					Max M _y	▷ -82.63	▷ -36.51	▷ 25.02	-0.01	▷ 1.29	1.95	CO 5			
					Min M _y	▷ -2.14	▷ -45.93	▷ 11.11	-0.01	▷ 0.56	2.39	CO 17			
					Max M _z	▷ -63.64	▷ -57.12	▷ 13.79	-0.02	0.71	▷ 3.02	CO 18			
					Min M _z	▷ -82.63	▷ -36.51	▷ 25.02	-0.01	▷ 1.29	▷ 1.95	CO 5			
	CR2	198	0.000		Max N	▷ -1.46	▷ -34.04	▷ 8.28	-0.01	-0.41	-1.63	CO 36			
					Min N	▷ -77.64	▷ -38.65	▷ 11.15	-0.02	-0.57	-1.91	CO 38			
					Max V _y	▷ -61.12	▷ -27.23	▷ 18.70	-0.01	-0.95	-1.33	CO 24			
					Min V _y	▷ -46.99	▷ -42.50	▷ 10.32	-0.02	-0.52	-2.08	CO 37			
					Max V _z	▷ -61.12	▷ -27.23	▷ 18.70	-0.01	-0.95	-1.33	CO 24			
					Min V _z	▷ -1.46	▷ -34.04	▷ 8.28	-0.01	-0.41	-1.63	CO 36			
					Max M _T	▷ -61.12	▷ -27.23	▷ 18.70	▷ -0.01	-0.95	-1.33	CO 24			
					Min M _T	▷ -77.64	▷ -38.65	▷ 11.15	▷ -0.02	-0.57	-1.91	CO 38			
					Max M _y	▷ -1.46	▷ -34.04	▷ 8.28	-0.01	▷ -0.41	-1.63	CO 36			
					Min M _y	▷ -61.12	▷ -27.23	▷ 18.70	-0.01	▷ -0.95	-1.33	CO 24			
					Max M _z	▷ -61.12	▷ -27.23	▷ 18.70	-0.01	-0.95	▷ -1.33	CO 24			
					Min M _z	▷ -46.99	▷ -42.50	▷ 10.32	-0.02	-0.52	▷ -2.08	CO 37			
174	0.100			Max N	▷ -1.54	▷ -34.04	▷ 8.26	-0.01	0.42	1.77	CO 36				



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
28	CR2			Min N	▷ -77.72	-38.50	11.11	-0.02	0.57	2.04	CO 38
				Max V _y	▷ -61.18	▷ -27.12	18.69	-0.01	0.95	1.44	CO 24
				Min V _y	▷ -47.09	▷ -42.39	10.28	-0.02	0.53	2.23	CO 37
				Max V _z	▷ -61.18	▷ -27.12	▷ 18.69	-0.01	0.95	1.44	CO 24
				Min V _z	▷ -1.54	▷ -34.04	8.26	-0.01	0.42	1.77	CO 36
				Max M _T	▷ -61.18	▷ -27.12	18.69	▷ -0.01	0.95	1.44	CO 24
				Min M _T	▷ -77.72	-38.50	11.11	▷ -0.02	0.57	2.04	CO 38
				Max M _y	▷ -61.18	▷ -27.12	18.69	-0.01	▷ 0.95	1.44	CO 24
				Min M _y	▷ -1.54	▷ -34.04	8.26	-0.01	▷ 0.42	1.77	CO 36
				Max M _z	▷ -47.09	▷ -42.39	10.28	-0.02	▷ 0.53	2.23	CO 37
				Min M _z	▷ -61.18	▷ -27.12	18.69	-0.01	▷ 0.95	1.44	CO 24
				CR3	198	0.000	Max N	▷ -32.10	-30.21	9.13	-0.01
	Min N	▷ -32.10	-30.21				9.13	-0.01	-0.46	-1.46	CO 39
	Max V _y	▷ -32.10	▷ -30.21				9.13	-0.01	-0.46	-1.46	CO 39
	Min V _y	▷ -32.10	▷ -30.21				9.13	-0.01	-0.46	-1.46	CO 39
	Max V _z	▷ -32.10	▷ -30.21				▷ 9.13	-0.01	-0.46	-1.46	CO 39
	Min V _z	▷ -32.10	▷ -30.21				▷ 9.13	-0.01	-0.46	-1.46	CO 39
	Max M _T	▷ -32.10	-30.21		9.13	▷ -0.01	-0.46	-1.46	CO 39		
	Min M _T	▷ -32.10	-30.21		9.13	▷ -0.01	-0.46	-1.46	CO 39		
	Max M _y	▷ -32.10	-30.21		9.13	-0.01	▷ -0.46	-1.46	CO 39		
	Min M _y	▷ -32.10	-30.21		9.13	-0.01	▷ -0.46	-1.46	CO 39		
	Max M _z	▷ -32.10	-30.21		9.13	-0.01	-0.46	▷ -1.46	CO 39		
	Min M _z	▷ -32.10	-30.21		9.13	-0.01	-0.46	▷ -1.46	CO 39		
	174	0.100	Max N	▷ -32.16	-30.15	9.11	-0.01	0.46	1.58	CO 39	
Min N			▷ -32.16	-30.15	9.11	-0.01	0.46	1.58	CO 39		
Max V _y			▷ -32.16	▷ -30.15	9.11	-0.01	0.46	1.58	CO 39		
Min V _y			▷ -32.16	▷ -30.15	9.11	-0.01	0.46	1.58	CO 39		
Max V _z			▷ -32.16	▷ -30.15	▷ 9.11	-0.01	0.46	1.58	CO 39		
Min V _z			▷ -32.16	▷ -30.15	▷ 9.11	-0.01	0.46	1.58	CO 39		
29	CR1	160	0.000	Max N	▷ -17.85	-50.69	10.98	0.01	-0.54	-2.45	CO 17
				Min N	▷ -104.18	-62.84	16.72	-0.01	-0.88	-3.14	CO 19
				Max V _y	▷ -95.27	▷ -40.47	25.69	0.00	-1.33	-2.00	CO 5
				Min V _y	▷ -70.07	▷ -67.13	14.81	-0.01	-0.76	-3.31	CO 18
				Max V _z	▷ -95.27	▷ -40.47	▷ 25.69	0.00	-1.33	-2.00	CO 5
				Min V _z	▷ -17.85	-50.69	▷ 10.98	0.01	-0.54	-2.45	CO 17
				Max M _T	▷ -17.85	-50.69	10.98	▷ 0.01	-0.54	-2.45	CO 17
				Min M _T	▷ -104.18	-62.84	16.72	▷ -0.01	-0.88	-3.14	CO 19
				Max M _y	▷ -17.85	-50.69	10.98	0.01	▷ -0.54	-2.45	CO 17
				Min M _y	▷ -95.27	-40.47	25.69	0.00	▷ -1.33	-2.00	CO 5
				Max M _z	▷ -95.27	-40.47	25.69	0.00	▷ -1.33	▷ -2.00	CO 5
				Min M _z	▷ -70.07	-67.13	14.81	-0.01	▷ -0.76	-3.31	CO 18
6	0.100	Max N	▷ -18.02	-50.63	10.98	0.00	0.56	2.65	CO 17		
		Min N	▷ -104.37	-62.51	16.72	-0.02	0.85	3.33	CO 19		
		Max V _y	▷ -95.37	▷ -40.21	25.71	0.00	1.32	2.16	CO 5		
		Min V _y	▷ -70.32	▷ -66.88	14.78	-0.01	0.75	3.54	CO 18		
		Max V _z	▷ -95.37	▷ -40.21	▷ 25.71	0.00	1.32	2.16	CO 5		
		Min V _z	▷ -18.02	-50.63	▷ 10.98	0.00	0.56	2.65	CO 17		
		Max M _T	▷ -18.02	-50.63	10.98	▷ 0.00	0.56	2.65	CO 17		
		Min M _T	▷ -104.37	-62.51	16.72	▷ -0.02	0.85	3.33	CO 19		
		Max M _y	▷ -95.37	-40.21	25.71	0.00	▷ 1.32	2.16	CO 5		
		Min M _y	▷ -18.02	-50.63	10.98	0.00	▷ 0.56	2.65	CO 17		
		Max M _z	▷ -70.32	-66.88	14.78	-0.01	0.75	▷ 3.54	CO 18		
		Min M _z	▷ -95.37	-40.21	25.71	0.00	▷ 1.32	2.16	CO 5		
CR2	160	0.000	Max N	▷ -13.23	-37.60	8.18	0.00	-0.40	-1.81	CO 36	
			Min N	▷ -77.19	-46.63	12.47	-0.01	-0.65	-2.31	CO 38	
			Max V _y	▷ -70.62	▷ -30.04	19.21	0.00	-0.99	-1.47	CO 24	
			Min V _y	▷ -51.93	▷ -49.81	11.03	-0.01	-0.56	-2.44	CO 37	
			Max V _z	▷ -70.62	▷ -30.04	▷ 19.21	0.00	-0.99	-1.47	CO 24	
			Min V _z	▷ -13.23	-37.60	▷ 8.18	0.00	-0.40	-1.81	CO 36	
			Max M _T	▷ -13.23	-37.60	8.18	▷ 0.00	-0.40	-1.81	CO 36	
			Min M _T	▷ -77.19	-46.63	12.47	▷ -0.01	-0.65	-2.31	CO 38	
			Max M _y	▷ -13.23	-37.60	8.18	0.00	▷ -0.40	-1.81	CO 36	
			Min M _y	▷ -70.62	-30.04	19.21	0.00	▷ -0.99	-1.47	CO 24	
			Max M _z	▷ -70.62	-30.04	19.21	0.00	▷ -0.99	▷ -1.47	CO 24	
			Min M _z	▷ -51.93	-49.81	11.03	-0.01	▷ -0.56	-2.44	CO 37	
	6	0.100	Max N	▷ -13.32	-37.57	8.18	0.00	0.42	1.96	CO 36	
			Min N	▷ -77.30	-46.45	12.46	-0.01	0.63	2.46	CO 38	
			Max V _y	▷ -70.67	▷ -29.90	19.21	0.00	0.98	1.59	CO 24	
			Min V _y	▷ -52.06	▷ -49.67	11.02	-0.01	0.56	2.61	CO 37	
			Max V _z	▷ -70.67	▷ -29.90	▷ 19.21	0.00	0.98	1.59	CO 24	
			Min V _z	▷ -13.32	-37.57	▷ 8.18	0.00	0.42	1.96	CO 36	
			Max M _T	▷ -13.32	-37.57	8.18	▷ 0.00	0.42	1.96	CO 36	
			Min M _T	▷ -77.30	-46.45	12.46	▷ -0.01	0.63	2.46	CO 38	
			Max M _y	▷ -70.67	-29.90	19.21	0.00	▷ 0.98	1.59	CO 24	
			Min M _y	▷ -13.32	-37.57	8.18	0.00	▷ 0.42	1.96	CO 36	
			Max M _z	▷ -52.06	-49.67	11.02	-0.01	▷ 0.56	2.61	CO 37	
			Min M _z	▷ -70.67	-29.90	19.21	0.00	▷ 0.98	1.59	CO 24	
CR3	160	0.000	Max N	▷ -38.49	-34.47	9.64	-0.00	-0.49	-1.68	CO 39	



Progetto:

Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.				
					N	V _y	V _z	M _T	M _y	M _z					
29	CR3	6	0.100	Min N	>	-38.49	>	-34.47	>	9.64	-0.00	-0.49	-1.68	CO 39	
				Max V _y	>	-38.49	>	-34.47	>	9.64	-0.00	-0.49	-1.68	CO 39	
				Min V _y	>	-38.49	>	-34.47	>	9.64	-0.00	-0.49	-1.68	CO 39	
				Max V _z	>	-38.49	>	-34.47	>	9.64	-0.00	-0.49	-1.68	CO 39	
				Min V _z	>	-38.49	>	-34.47	>	9.64	-0.00	-0.49	-1.68	CO 39	
				Max M _T	>	-38.49	>	-34.47	>	9.64	>	-0.00	-0.49	-1.68	CO 39
				Min M _T	>	-38.49	>	-34.47	>	9.64	>	-0.00	-0.49	-1.68	CO 39
				Max M _y	>	-38.49	>	-34.47	>	9.64	>	-0.00	-0.49	-1.68	CO 39
				Min M _y	>	-38.49	>	-34.47	>	9.64	>	-0.00	-0.49	-1.68	CO 39
				Max M _z	>	-38.49	>	-34.47	>	9.64	>	-0.00	-0.49	-1.68	CO 39
				Min M _z	>	-38.49	>	-34.47	>	9.64	>	-0.00	-0.49	-1.68	CO 39
				Max N	>	-38.56	>	-34.39	>	9.64	-0.00	0.49	1.81	CO 39	
				Min N	>	-38.56	>	-34.39	>	9.64	-0.00	0.49	1.81	CO 39	
				Max V _y	>	-38.56	>	-34.39	>	9.64	-0.00	0.49	1.81	CO 39	
				Min V _y	>	-38.56	>	-34.39	>	9.64	-0.00	0.49	1.81	CO 39	
				Max V _z	>	-38.56	>	-34.39	>	9.64	-0.00	0.49	1.81	CO 39	
				Min V _z	>	-38.56	>	-34.39	>	9.64	-0.00	0.49	1.81	CO 39	
				Max M _T	>	-38.56	>	-34.39	>	9.64	>	-0.00	0.49	1.81	CO 39
				Min M _T	>	-38.56	>	-34.39	>	9.64	>	-0.00	0.49	1.81	CO 39
				Max M _y	>	-38.56	>	-34.39	>	9.64	>	-0.00	0.49	1.81	CO 39
Min M _y	>	-38.56	>	-34.39	>	9.64	>	-0.00	0.49	1.81	CO 39				
Max M _z	>	-38.56	>	-34.39	>	9.64	>	-0.00	0.49	1.81	CO 39				
Min M _z	>	-38.56	>	-34.39	>	9.64	>	-0.00	0.49	1.81	CO 39				
31	CR1	283	0.100	Max N	>	49.79	>	7.55	>	-12.11	-0.00	0.60	-0.00	CO 19	
				Min N	>	-94.64	>	15.60	>	-12.71	0.00	0.66	-0.00	CO 17	
				Max V _y	>	-94.64	>	15.60	>	-12.71	0.00	0.66	-0.00	CO 17	
				Min V _y	>	49.79	>	7.55	>	-12.11	-0.00	0.60	-0.00	CO 19	
				Max V _z	>	-53.66	>	12.83	>	-10.66	-0.00	0.54	-0.00	CO 2	
				Min V _z	>	-33.95	>	12.36	>	-15.23	0.00	0.77	-0.00	CO 12	
				Max M _T	>	-94.64	>	15.60	>	-12.71	>	0.00	0.66	-0.00	CO 17
				Min M _T	>	49.79	>	7.55	>	-12.11	>	-0.00	0.60	-0.00	CO 19
				Max M _y	>	-33.95	>	12.36	>	-15.23	0.00	0.77	-0.00	CO 12	
				Min M _y	>	-53.66	>	12.83	>	-10.66	-0.00	0.54	-0.00	CO 2	
				Max M _z	>	-94.64	>	15.60	>	-12.71	0.00	0.66	-0.00	CO 17	
				Min M _z	>	-33.95	>	12.36	>	-15.23	0.00	0.77	-0.00	CO 12	
				Max N	>	49.70	>	8.16	>	-12.11	-0.01	-0.60	-0.77	CO 19	
				Min N	>	-94.99	>	13.28	>	-12.71	-0.01	-0.65	-1.49	CO 17	
				Max V _y	>	-94.99	>	13.28	>	-12.71	-0.01	-0.65	-1.49	CO 17	
				Min V _y	>	49.70	>	8.16	>	-12.11	-0.01	-0.60	-0.77	CO 19	
				Max V _z	>	-53.91	>	11.74	>	-10.66	-0.01	-0.54	-1.25	CO 2	
				Min V _z	>	-34.19	>	11.70	>	-15.23	-0.01	-0.77	-1.22	CO 12	
				Max M _T	>	49.70	>	8.16	>	-12.11	>	-0.01	-0.60	-0.77	CO 19
				Min M _T	>	-55.33	>	11.52	>	-13.98	>	-0.01	-0.71	-1.23	CO 5
	Max M _y	>	-53.91	>	11.74	>	-10.66	-0.01	-0.54	-1.25	CO 2				
	Min M _y	>	-34.19	>	11.70	>	-15.23	-0.01	-0.77	-1.22	CO 12				
	Max M _z	>	49.70	>	8.16	>	-12.11	-0.01	-0.60	-0.77	CO 19				
	Min M _z	>	-94.99	>	13.28	>	-12.71	-0.01	-0.65	-1.49	CO 17				
	CR2	259	0.000	Max N	>	36.82	>	5.62	>	-8.93	-0.00	0.44	-0.00	CO 38	
				Min N	>	-70.16	>	11.45	>	-9.48	-0.00	0.48	-0.00	CO 36	
				Max V _y	>	-70.16	>	11.45	>	-9.48	-0.00	0.48	-0.00	CO 36	
				Min V _y	>	36.82	>	5.62	>	-8.93	-0.00	0.44	-0.00	CO 38	
				Max V _z	>	-39.78	>	9.45	>	-7.93	-0.00	0.40	-0.00	CO 21	
				Min V _z	>	-25.20	>	9.14	>	-11.30	-0.00	0.57	-0.00	CO 31	
				Max M _T	>	-70.16	>	11.45	>	-9.48	>	-0.00	0.48	-0.00	CO 36
				Min M _T	>	-39.78	>	9.45	>	-7.93	>	-0.00	0.40	-0.00	CO 21
				Max M _y	>	-25.20	>	9.14	>	-11.30	>	-0.00	0.57	-0.00	CO 31
				Min M _y	>	-39.78	>	9.45	>	-7.93	>	-0.00	0.40	-0.00	CO 21
				Max M _z	>	-70.16	>	11.45	>	-9.48	>	-0.00	0.48	-0.00	CO 36
				Min M _z	>	-25.20	>	9.14	>	-11.30	>	-0.00	0.57	-0.00	CO 31
			283	0.100	Max N	>	36.77	>	5.96	>	-8.93	-0.01	-0.44	-0.57	CO 38
				Min N	>	-70.36	>	10.18	>	-9.48	-0.01	-0.48	-1.11	CO 36	
				Max V _y	>	-70.36	>	10.18	>	-9.48	-0.01	-0.48	-1.11	CO 36	
				Min V _y	>	36.77	>	5.96	>	-8.93	-0.01	-0.44	-0.57	CO 38	
			Max V _z	>	-39.92	>	8.85	>	-7.93	-0.01	-0.40	-0.93	CO 21		
			Min V _z	>	-25.33	>	8.77	>	-11.30	-0.01	-0.57	-0.90	CO 31		
			Max M _T	>	36.77	>	5.96	>	-8.93	>	-0.01	-0.44	-0.57	CO 38	
			Min M _T	>	-40.96	>	8.70	>	-10.39	>	-0.01	-0.53	-0.91	CO 24	
			Max M _y	>	-39.92	>	8.85	>	-7.93	>	-0.01	-0.40	-0.93	CO 21	
			Min M _y	>	-25.33	>	8.77	>	-11.30	>	-0.01	-0.57	-0.90	CO 31	
			Max M _z	>	36.77	>	5.96	>	-8.93	>	-0.01	-0.44	-0.57	CO 38	
			Min M _z	>	-70.36	>	10.18	>	-9.48	>	-0.01	-0.48	-1.11	CO 36	
	CR3	259	0.000	Max N	>	-24.16	>	9.29	>	-8.82	-0.00	0.44	-0.00	CO 39	
			Min N	>	-24.16	>	9.29	>	-8.82	-0.00	0.44	-0.00	CO 39		
			Max V _y	>	-24.16	>	9.29	>	-8.82	-0.00	0.44	-0.00	CO 39		
			Min V _y	>	-24.16	>	9.29	>	-8.82	-0.00	0.44	-0.00	CO 39		
			Max V _z	>	-24.16	>	9.29	>	-8.82	-0.00	0.44	-0.00	CO 39		
			Min V _z	>	-24.16	>	9.29	>	-8.82	-0.00	0.44	-0.00	CO 39		
			Max M _T	>	-24.16	>	9.29	>	-8.82	>	-0.00	0.44	-0.00	CO 39	
			Min M _T	>	-24.16	>	9.29	>	-8.82	>	-0.00	0.44	-0.00	CO 39	
			Max M _y	>	-24.16	>	9.29	>	-8.82	>	-0.00	0.44	-0.00	CO 39	
			Min M _y	>	-24.16	>	9.29	>	-8.82	>	-0.00	0.44	-0.00	CO 39	
			Max M _z	>	-24.16	>	9.29	>	-8.82	>	-0.00	0.44	-0.00	CO 39	
			Min M _z	>	-24.16	>	9.29	>	-8.82	>	-0.00	0.44	-0.00	CO 39	
		283	0.100	Max N	>	-24.29	>	8.93	>	-8.82	-0.01	-0.44	-0.92	CO 39	



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
31	CR3			Min N	▷ -24.29	8.93	-8.82	-0.01	-0.44	-0.92	CO 39
				Max V _y	▷ -24.29	8.93	-8.82	-0.01	-0.44	-0.92	CO 39
				Min V _y	▷ -24.29	8.93	-8.82	-0.01	-0.44	-0.92	CO 39
				Max V _z	▷ -24.29	8.93 ▷	-8.82	-0.01	-0.44	-0.92	CO 39
				Min V _z	▷ -24.29	8.93 ▷	-8.82	-0.01	-0.44	-0.92	CO 39
				Max M _T	▷ -24.29	8.93	-8.82 ▷	-0.01	-0.44	-0.92	CO 39
				Min M _T	▷ -24.29	8.93	-8.82 ▷	-0.01	-0.44	-0.92	CO 39
				Max M _y	▷ -24.29	8.93	-8.82	-0.01 ▷	-0.44	-0.92	CO 39
				Min M _y	▷ -24.29	8.93	-8.82	-0.01 ▷	-0.44	-0.92	CO 39
				Max M _z	▷ -24.29	8.93	-8.82	-0.01	-0.44 ▷	-0.92	CO 39
				Min M _z	▷ -24.29	8.93	-8.82	-0.01	-0.44 ▷	-0.92	CO 39
				32	CR1	260	0.000	Max N	▷ 34.92	6.61	-11.96
Min N	▷ -83.57	13.92	-12.69					0.00	0.65	-0.00	CO 17
Max V _y	▷ -83.57	13.92	-12.69					0.00	0.65	-0.00	CO 17
Min V _y	▷ 34.92	6.61	-11.96					-0.00	0.59	-0.00	CO 19
Max V _z	▷ -47.75	11.28 ▷	-10.60					-0.00	0.54	-0.00	CO 2
Min V _z	▷ -33.89	10.72 ▷	-15.14					-0.00	0.77	-0.00	CO 12
Max M _T	▷ -83.57	13.92	-12.69 ▷					0.00	0.65	-0.00	CO 17
Min M _T	▷ -47.75	11.28	-10.60 ▷					-0.00	0.54	-0.00	CO 2
Max M _y	▷ -33.89	10.72	-15.14					-0.00 ▷	0.77	-0.00	CO 12
Min M _y	▷ -47.75	11.28	-10.60					-0.00 ▷	0.54	-0.00	CO 2
Max M _z	▷ -83.57	13.92	-12.69					0.00	0.65 ▷	-0.00	CO 17
Min M _z	▷ 34.92	6.61	-11.96					-0.00	0.59 ▷	-0.00	CO 19
284	0.100	Max N	▷ 34.85		6.99	-11.96	-0.01	-0.59	-0.67	CO 19	
		Min N	▷ -83.86		12.09	-12.69	-0.01	-0.65	-1.34	CO 17	
		Max V _y	▷ -83.86		12.09	-12.69	-0.01	-0.65	-1.34	CO 17	
		Min V _y	▷ 34.85		6.99	-11.96	-0.01	-0.59	-0.67	CO 19	
		Max V _z	▷ -47.95		10.43 ▷	-10.60	-0.01	-0.54	-1.10	CO 2	
		Min V _z	▷ -34.07		10.15 ▷	-15.14	-0.01	-0.76	-1.05	CO 12	
		Max M _T	▷ 34.85		6.99	-11.96 ▷	-0.01	-0.59	-0.67	CO 19	
		Min M _T	▷ -49.53		10.09	-13.91 ▷	-0.01	-0.71	-1.07	CO 5	
		Max M _y	▷ -47.95		10.43	-10.60	-0.01 ▷	-0.54	-1.10	CO 2	
		Min M _y	▷ -34.07		10.15	-15.14	-0.01 ▷	-0.76	-1.05	CO 12	
		Max M _z	▷ 34.85		6.99	-11.96	-0.01	-0.59 ▷	-0.67	CO 19	
		Min M _z	▷ -83.86		12.09	-12.69	-0.01	-0.65 ▷	-1.34	CO 17	
CR2	260	0.000	Max N		▷ 25.82	4.91	-8.83	-0.00	0.44	-0.00	CO 38
			Min N		▷ -61.97	10.21	-9.46	-0.00	0.48	-0.00	CO 36
			Max V _y		▷ -61.97	10.21	-9.46	-0.00	0.48	-0.00	CO 36
			Min V _y		▷ 25.82	4.91	-8.83	-0.00	0.44	-0.00	CO 38
			Max V _z		▷ -35.40	8.31 ▷	-7.88	-0.00	0.40	-0.00	CO 21
			Min V _z		▷ -25.15	7.91 ▷	-11.23	-0.00	0.57	-0.00	CO 31
			Max M _T		▷ -12.19	6.83	-9.55 ▷	-0.00	0.48	-0.00	CO 37
			Min M _T		▷ -35.40	8.31	-7.88 ▷	-0.00	0.40	-0.00	CO 21
			Max M _y		▷ -25.15	7.91	-11.23	-0.00 ▷	0.57	-0.00	CO 31
			Min M _y		▷ -35.40	8.31	-7.88	-0.00 ▷	0.40	-0.00	CO 21
			Max M _z		▷ -61.97	10.21	-9.46	-0.00	0.48 ▷	-0.00	CO 36
			Min M _z		▷ 25.82	4.91	-8.83	-0.00	0.44 ▷	-0.00	CO 38
284	0.100	Max N	▷ 25.78		5.12	-8.84	-0.01	-0.44	-0.50	CO 38	
		Min N	▷ -62.12		9.21	-9.46	-0.01	-0.48	-0.99	CO 36	
		Max V _y	▷ -62.12		9.21	-9.46	-0.01	-0.48	-0.99	CO 36	
		Min V _y	▷ 25.78		5.12	-8.84	-0.01	-0.44	-0.50	CO 38	
		Max V _z	▷ -35.51		7.84 ▷	-7.88	-0.01	-0.40	-0.82	CO 21	
		Min V _z	▷ -25.24		7.60 ▷	-11.23	-0.01	-0.57	-0.78	CO 31	
		Max M _T	▷ 25.78		5.12	-8.84 ▷	-0.01	-0.44	-0.50	CO 38	
		Min M _T	▷ -36.67		7.59	-10.34 ▷	-0.01	-0.52	-0.79	CO 24	
		Max M _y	▷ -35.51		7.84	-7.88	-0.01 ▷	-0.40	-0.82	CO 21	
		Min M _y	▷ -25.24		7.60	-11.23	-0.01 ▷	-0.57	-0.78	CO 31	
		Max M _z	▷ 25.78		5.12	-8.84	-0.01	-0.44 ▷	-0.50	CO 38	
		Min M _z	▷ -62.12		9.21	-9.46	-0.01	-0.48 ▷	-0.99	CO 36	
CR3	260	0.000	Max N	▷ -23.98	8.16	-8.76	-0.00	0.44	-0.00	CO 39	
			Min N	▷ -23.98	8.16	-8.76	-0.00	0.44	-0.00	CO 39	
			Max V _y	▷ -23.98	8.16	-8.76	-0.00	0.44	-0.00	CO 39	
			Min V _y	▷ -23.98	8.16	-8.76	-0.00	0.44	-0.00	CO 39	
			Max V _z	▷ -23.98	8.16 ▷	-8.76	-0.00	0.44	-0.00	CO 39	
			Min V _z	▷ -23.98	8.16 ▷	-8.76	-0.00	0.44	-0.00	CO 39	
			Max M _T	▷ -23.98	8.16	-8.76 ▷	-0.00	0.44	-0.00	CO 39	
			Min M _T	▷ -23.98	8.16	-8.76 ▷	-0.00	0.44	-0.00	CO 39	
			Max M _y	▷ -23.98	8.16	-8.76	-0.00 ▷	0.44	-0.00	CO 39	
			Min M _y	▷ -23.98	8.16	-8.76	-0.00 ▷	0.44	-0.00	CO 39	
			Max M _z	▷ -23.98	8.16	-8.76	-0.00	0.44 ▷	-0.00	CO 39	
			Min M _z	▷ -23.98	8.16	-8.76	-0.00	0.44 ▷	-0.00	CO 39	
284	0.100	Max N	▷ -24.08	7.85	-8.76	-0.01	-0.44	-0.81	CO 39		
		Min N	▷ -24.08	7.85	-8.76	-0.01	-0.44	-0.81	CO 39		
		Max V _y	▷ -24.08	7.85	-8.76	-0.01	-0.44	-0.81	CO 39		
		Min V _y	▷ -24.08	7.85	-8.76	-0.01	-0.44	-0.81	CO 39		
		Max V _z	▷ -24.08	7.85 ▷	-8.76	-0.01	-0.44	-0.81	CO 39		
		Min V _z	▷ -24.08	7.85 ▷	-8.76	-0.01	-0.44	-0.81	CO 39		
		Max M _T	▷ -24.08	7.85	-8.76 ▷	-0.01	-0.44	-0.81	CO 39		
		Min M _T	▷ -24.08	7.85	-8.76 ▷	-0.01	-0.44	-0.81	CO 39		
		Max M _y	▷ -24.08	7.85	-8.76	-0.01 ▷	-0.44	-0.81	CO 39		
		Min M _y	▷ -24.08	7.85	-8.76	-0.01 ▷	-0.44	-0.81	CO 39		
		Max M _z	▷ -24.08	7.85	-8.76	-0.01	-0.44 ▷	-0.81	CO 39		
		Min M _z	▷ -24.08	7.85	-8.76	-0.01	-0.44 ▷	-0.81	CO 39		
33	CR1	261	0.000	Max N	▷ 25.69	5.84	-12.11	-0.00	0.60	-0.00	CO 19



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
33	CR1			Min N	▷ -79.43	12.50	-12.87	0.00	0.67	0.00	CO 17
				Max V _y	▷ -79.43	12.50	-12.87	0.00	0.67	0.00	CO 17
				Min V _y	▷ 25.69	5.84	-12.11	-0.00	0.60	-0.00	CO 19
				Max V _z	▷ -45.49	9.94	-10.73	-0.00	0.55	-0.00	CO 2
				Min V _z	▷ -35.34	9.31	-15.35	-0.00	0.78	-0.00	CO 12
				Max M _T	▷ -79.43	12.50	-12.87	▷ 0.00	0.67	0.00	CO 17
				Min M _T	▷ -45.49	9.94	-10.73	▷ -0.00	0.55	-0.00	CO 2
				Max M _y	▷ -35.34	9.31	-15.35	-0.00	▷ 0.78	-0.00	CO 12
				Min M _y	▷ -45.49	9.94	-10.73	-0.00	▷ 0.55	-0.00	CO 2
				Max M _z	▷ -79.43	12.50	-12.87	0.00	▷ 0.67	▷ 0.00	CO 17
				Min M _z	▷ 25.69	5.84	-12.11	-0.00	▷ 0.60	▷ -0.00	CO 19
				Max N	▷ 25.63	6.09	-12.11	-0.01	-0.60	-0.59	CO 19
				Min N	▷ -79.66	10.94	-12.89	-0.01	-0.65	-1.20	CO 17
				Max V _y	▷ -79.66	10.94	-12.89	-0.01	-0.65	-1.20	CO 17
				Min V _y	▷ 25.63	6.09	-12.11	-0.01	-0.60	-0.59	CO 19
				Max V _z	▷ -45.64	9.22	-10.74	-0.01	-0.54	-0.97	CO 2
				Min V _z	▷ -35.47	8.79	-15.36	-0.01	-0.77	-0.92	CO 12
				Max M _T	▷ 25.63	6.09	-12.11	▷ -0.01	-0.60	-0.59	CO 19
	Min M _T	▷ -79.66	10.94	-12.89	▷ -0.01	-0.65	-1.20	CO 17			
	Max M _y	▷ -45.64	9.22	-10.74	-0.01	▷ -0.54	-0.97	CO 2			
	Min M _y	▷ -35.47	8.79	-15.36	-0.01	▷ -0.77	-0.92	CO 12			
	Max M _z	▷ 25.63	6.09	-12.11	-0.01	▷ -0.60	-0.59	CO 19			
	Min M _z	▷ -79.66	10.94	-12.89	-0.01	▷ -0.65	-1.20	CO 17			
	CR2	261	0.000	Max N	▷ 18.99	4.33	-8.95	-0.00	0.44	-0.00	CO 38
				Min N	▷ -58.90	9.14	-9.59	-0.00	0.49	-0.00	CO 36
				Max V _y	▷ -58.90	9.14	-9.59	-0.00	0.49	-0.00	CO 36
				Min V _y	▷ 18.99	4.33	-8.95	-0.00	0.44	-0.00	CO 38
				Max V _z	▷ -33.73	7.31	-7.98	-0.00	0.41	-0.00	CO 21
				Min V _z	▷ -26.21	6.86	-11.39	-0.00	0.58	-0.00	CO 31
				Max M _T	▷ -14.92	6.17	-9.69	▷ -0.00	0.49	-0.00	CO 37
				Min M _T	▷ -33.73	7.31	-7.98	▷ -0.00	0.41	-0.00	CO 21
				Max M _y	▷ -26.21	6.86	-11.39	-0.00	▷ 0.58	-0.00	CO 31
				Min M _y	▷ -33.73	7.31	-7.98	-0.00	▷ 0.41	-0.00	CO 21
				Max M _z	▷ -58.90	9.14	-9.59	-0.00	▷ 0.49	-0.00	CO 36
				Min M _z	▷ 18.99	4.33	-8.95	-0.00	▷ 0.44	-0.00	CO 38
				Max N	▷ 18.96	4.47	-8.95	-0.01	-0.45	-0.44	CO 38
Min N				▷ -59.02	8.29	-9.59	-0.01	-0.48	-0.89	CO 36	
Max V _y				▷ -59.02	8.29	-9.59	-0.01	-0.48	-0.89	CO 36	
Min V _y				▷ 18.96	4.47	-8.95	-0.01	-0.45	-0.44	CO 38	
Max V _z				▷ -33.81	6.92	-7.98	-0.01	-0.40	-0.72	CO 21	
Min V _z				▷ -26.28	6.58	-11.39	-0.01	-0.57	-0.68	CO 31	
Max M _T	▷ 18.96	4.47	-8.95	▷ -0.01	-0.45	-0.44	CO 38				
Min M _T	▷ -59.02	8.29	-9.59	▷ -0.01	-0.48	-0.89	CO 36				
Max M _y	▷ -33.81	6.92	-7.98	-0.01	▷ -0.40	-0.72	CO 21				
Min M _y	▷ -26.28	6.58	-11.39	-0.01	▷ -0.57	-0.68	CO 31				
Max M _z	▷ 18.96	4.47	-8.95	-0.01	▷ -0.45	-0.44	CO 38				
Min M _z	▷ -59.02	8.29	-9.59	-0.01	▷ -0.48	-0.89	CO 36				
CR3	261	0.000	Max N	▷ -25.01	7.19	-8.87	-0.00	0.45	-0.00	CO 39	
			Min N	▷ -25.01	7.19	-8.87	-0.00	0.45	-0.00	CO 39	
			Max V _y	▷ -25.01	7.19	-8.87	-0.00	0.45	-0.00	CO 39	
			Min V _y	▷ -25.01	7.19	-8.87	-0.00	0.45	-0.00	CO 39	
			Max V _z	▷ -25.01	7.19	-8.87	-0.00	0.45	-0.00	CO 39	
			Min V _z	▷ -25.01	7.19	-8.87	-0.00	0.45	-0.00	CO 39	
			Max M _T	▷ -25.01	7.19	-8.87	▷ -0.00	0.45	-0.00	CO 39	
			Min M _T	▷ -25.01	7.19	-8.87	▷ -0.00	0.45	-0.00	CO 39	
			Max M _y	▷ -25.01	7.19	-8.87	-0.00	▷ 0.45	-0.00	CO 39	
			Min M _y	▷ -25.01	7.19	-8.87	-0.00	▷ 0.45	-0.00	CO 39	
			Max M _z	▷ -25.01	7.19	-8.87	-0.00	▷ 0.45	-0.00	CO 39	
			Min M _z	▷ -25.01	7.19	-8.87	-0.00	▷ 0.45	-0.00	CO 39	
			Max N	▷ -25.09	6.91	-8.88	-0.01	-0.45	-0.71	CO 39	
			Min N	▷ -25.09	6.91	-8.88	-0.01	-0.45	-0.71	CO 39	
			Max V _y	▷ -25.09	6.91	-8.88	-0.01	-0.45	-0.71	CO 39	
			Min V _y	▷ -25.09	6.91	-8.88	-0.01	-0.45	-0.71	CO 39	
			Max V _z	▷ -25.09	6.91	-8.88	-0.01	-0.45	-0.71	CO 39	
			Min V _z	▷ -25.09	6.91	-8.88	-0.01	-0.45	-0.71	CO 39	
Max M _T	▷ -25.09	6.91	-8.88	▷ -0.01	-0.45	-0.71	CO 39				
Min M _T	▷ -25.09	6.91	-8.88	▷ -0.01	-0.45	-0.71	CO 39				
Max M _y	▷ -25.09	6.91	-8.88	-0.01	▷ -0.45	-0.71	CO 39				
Min M _y	▷ -25.09	6.91	-8.88	-0.01	▷ -0.45	-0.71	CO 39				
Max M _z	▷ -25.09	6.91	-8.88	-0.01	▷ -0.45	-0.71	CO 39				
Min M _z	▷ -25.09	6.91	-8.88	-0.01	▷ -0.45	-0.71	CO 39				
34	CR1	262	0.000	Max N	▷ 17.70	5.26	-12.08	-0.00	0.60	-0.00	CO 19
				Min N	▷ -77.20	11.32	-12.97	0.00	0.66	-0.00	CO 17
				Max V _y	▷ -77.20	11.32	-12.97	0.00	0.66	-0.00	CO 17
				Min V _y	▷ 17.70	5.26	-12.08	-0.00	0.60	-0.00	CO 19
				Max V _z	▷ -44.26	8.82	-10.77	-0.00	0.55	-0.00	CO 2
				Min V _z	▷ -37.27	8.16	-15.40	-0.00	0.78	-0.00	CO 12
				Max M _T	▷ -77.20	11.32	-12.97	▷ 0.00	0.66	-0.00	CO 17
				Min M _T	▷ -44.26	8.82	-10.77	▷ -0.00	0.55	-0.00	CO 2
				Max M _y	▷ -37.27	8.16	-15.40	-0.00	▷ 0.78	-0.00	CO 12
				Min M _y	▷ -44.26	8.82	-10.77	-0.00	▷ 0.55	-0.00	CO 2
				Max M _z	▷ -77.20	11.32	-12.97	0.00	▷ 0.66	-0.00	CO 17
				Min M _z	▷ 17.70	5.26	-12.08	-0.00	▷ 0.60	-0.00	CO 19
				Max N	▷ 17.65	5.41	-12.08	-0.01	-0.60	-0.53	CO 19



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
34	CR1			Min N	▷ -77.39	9.95	-12.97	-0.01	-0.66	-1.09	CO 17
				Max V _y	▷ -77.39	9.95	-12.97	-0.01	-0.66	-1.09	CO 17
				Min V _y	▷ 17.65	5.41	-12.08	-0.01	-0.60	-0.53	CO 19
				Max V _z	▷ -44.38	8.20	-10.77	-0.01	-0.55	-0.86	CO 2
				Min V _z	▷ -37.38	7.68	-15.40	-0.01	-0.78	-0.80	CO 12
				Max M _T	▷ 17.65	5.41	-12.08	▷ -0.01	-0.60	-0.53	CO 19
				Min M _T	▷ -77.39	9.95	-12.97	▷ -0.01	-0.66	-1.09	CO 17
				Max M _y	▷ -44.38	8.20	-10.77	-0.01	▷ -0.55	-0.86	CO 2
				Min M _y	▷ -37.38	7.68	-15.40	-0.01	▷ -0.78	-0.80	CO 12
				Max M _z	▷ 17.65	5.41	-12.08	-0.01	-0.60	-0.53	CO 19
				Min M _z	▷ -77.39	9.95	-12.97	-0.01	-0.66	▷ -1.09	CO 17
				CR2	262	0.000	Max N	▷ 13.09	3.90	-8.94	-0.00
	Min N	▷ -57.25	8.26				-9.65	-0.00	0.49	-0.00	CO 36
	Max V _y	▷ -57.25	8.26				-9.65	-0.00	0.49	-0.00	CO 36
	Min V _y	▷ 13.09	3.90				-8.94	-0.00	0.45	-0.00	CO 38
	Max V _z	▷ -32.81	6.47				-8.00	-0.00	0.40	-0.00	CO 21
	Min V _z	▷ -27.64	6.00				-11.43	-0.00	0.58	-0.00	CO 31
	Max M _T	▷ -17.73	5.66				-9.71	▷ -0.00	0.49	-0.00	CO 37
	Min M _T	▷ -32.81	6.47				-8.00	-0.00	0.40	-0.00	CO 21
	Max M _y	▷ -27.64	6.00				-11.43	-0.00	▷ 0.58	-0.00	CO 31
	Min M _y	▷ -32.81	6.47				-8.00	-0.00	▷ 0.40	-0.00	CO 21
	Max M _z	▷ -57.25	8.26				-9.65	-0.00	0.49	▷ -0.00	CO 36
	Min M _z	▷ 13.09	3.90				-8.94	-0.00	0.45	▷ -0.00	CO 38
	286	0.100	Max N		▷ 13.06	3.98	-8.94	-0.00	-0.44	-0.39	CO 38
			Min N		▷ -57.35	7.51	-9.65	-0.01	-0.49	-0.80	CO 36
			Max V _y		▷ -57.35	7.51	-9.65	-0.01	-0.49	-0.80	CO 36
			Min V _y		▷ 13.06	3.98	-8.94	-0.00	-0.44	-0.39	CO 38
			Max V _z		▷ -32.88	6.14	-8.00	-0.01	-0.40	-0.64	CO 21
			Min V _z		▷ -27.69	5.74	-11.43	-0.01	-0.58	-0.59	CO 31
			Max M _T		▷ 13.06	3.98	-8.94	▷ -0.00	-0.44	-0.39	CO 38
			Min M _T		▷ -57.35	7.51	-9.65	▷ -0.01	-0.49	-0.80	CO 36
			Max M _y		▷ -32.88	6.14	-8.00	-0.01	▷ -0.40	-0.64	CO 21
			Min M _y		▷ -27.69	5.74	-11.43	-0.01	▷ -0.58	-0.59	CO 31
			Max M _z		▷ 13.06	3.98	-8.94	-0.00	-0.44	▷ -0.39	CO 38
			Min M _z		▷ -57.35	7.51	-9.65	-0.01	-0.49	▷ -0.80	CO 36
	CR3	262	0.000	Max N	▷ -26.45	6.38	-8.90	-0.00	0.45	-0.00	CO 39
				Min N	▷ -26.45	6.38	-8.90	-0.00	0.45	-0.00	CO 39
				Max V _y	▷ -26.45	6.38	-8.90	-0.00	0.45	-0.00	CO 39
				Min V _y	▷ -26.45	6.38	-8.90	-0.00	0.45	-0.00	CO 39
				Max V _z	▷ -26.45	6.38	-8.90	-0.00	0.45	-0.00	CO 39
				Min V _z	▷ -26.45	6.38	-8.90	-0.00	0.45	-0.00	CO 39
				Max M _T	▷ -26.45	6.38	-8.90	▷ -0.00	0.45	-0.00	CO 39
				Min M _T	▷ -26.45	6.38	-8.90	▷ -0.00	0.45	-0.00	CO 39
				Max M _y	▷ -26.45	6.38	-8.90	-0.00	▷ 0.45	-0.00	CO 39
				Min M _y	▷ -26.45	6.38	-8.90	-0.00	▷ 0.45	-0.00	CO 39
				Max M _z	▷ -26.45	6.38	-8.90	-0.00	0.45	▷ -0.00	CO 39
				Min M _z	▷ -26.45	6.38	-8.90	-0.00	0.45	▷ -0.00	CO 39
		286	0.100	Max N	▷ -26.52	6.11	-8.90	-0.01	-0.45	-0.63	CO 39
Min N				▷ -26.52	6.11	-8.90	-0.01	-0.45	-0.63	CO 39	
Max V _y				▷ -26.52	6.11	-8.90	-0.01	-0.45	-0.63	CO 39	
Min V _y				▷ -26.52	6.11	-8.90	-0.01	-0.45	-0.63	CO 39	
Max V _z				▷ -26.52	6.11	-8.90	-0.01	-0.45	-0.63	CO 39	
Min V _z				▷ -26.52	6.11	-8.90	-0.01	-0.45	-0.63	CO 39	
Max M _T				▷ -26.52	6.11	-8.90	▷ -0.01	-0.45	-0.63	CO 39	
Min M _T				▷ -26.52	6.11	-8.90	▷ -0.01	-0.45	-0.63	CO 39	
Max M _y				▷ -26.52	6.11	-8.90	-0.01	▷ -0.45	-0.63	CO 39	
Min M _y				▷ -26.52	6.11	-8.90	-0.01	▷ -0.45	-0.63	CO 39	
Max M _z				▷ -26.52	6.11	-8.90	-0.01	-0.45	▷ -0.63	CO 39	
Min M _z				▷ -26.52	6.11	-8.90	-0.01	-0.45	▷ -0.63	CO 39	
35	CR1	263	0.000	Max N	▷ 9.55	4.93	-11.96	0.00	0.60	-0.00	CO 19
				Min N	▷ -74.79	10.46	-12.96	0.00	0.66	-0.00	CO 17
				Max V _y	▷ -74.79	10.46	-12.96	0.00	0.66	-0.00	CO 17
				Min V _y	▷ 9.55	4.93	-11.96	0.00	0.60	-0.00	CO 19
				Max V _z	▷ -43.01	8.00	-10.72	-0.00	0.54	-0.00	CO 2
				Min V _z	▷ -39.11	7.32	-15.35	0.00	0.78	-0.00	CO 12
				Max M _T	▷ -74.79	10.46	-12.96	▷ 0.00	0.66	-0.00	CO 17
				Min M _T	▷ -43.01	8.00	-10.72	▷ -0.00	0.54	-0.00	CO 2
				Max M _y	▷ -39.11	7.32	-15.35	0.00	▷ 0.78	-0.00	CO 12
				Min M _y	▷ -43.01	8.00	-10.72	-0.00	▷ 0.54	-0.00	CO 2
				Max M _z	▷ -74.79	10.46	-12.96	0.00	0.66	▷ -0.00	CO 17
				Min M _z	▷ 9.55	4.93	-11.96	0.00	0.60	▷ -0.00	CO 19
	287	0.100	Max N	▷ 9.51	5.01	-11.97	-0.00	-0.60	-0.50	CO 19	
			Min N	▷ -74.95	9.23	-12.96	-0.01	-0.66	-1.01	CO 17	
			Max V _y	▷ -74.95	9.23	-12.96	-0.01	-0.66	-1.01	CO 17	
			Min V _y	▷ 9.51	5.01	-11.97	-0.00	-0.60	-0.50	CO 19	
			Max V _z	▷ -43.11	7.45	-10.72	-0.01	-0.54	-0.78	CO 2	
			Min V _z	▷ -39.20	6.87	-15.35	-0.01	-0.78	-0.72	CO 12	
			Max M _T	▷ 9.51	5.01	-11.97	▷ -0.00	-0.60	-0.50	CO 19	
			Min M _T	▷ -74.95	9.23	-12.96	▷ -0.01	-0.66	-1.01	CO 17	
			Max M _y	▷ -43.11	7.45	-10.72	-0.01	▷ -0.54	-0.78	CO 2	
			Min M _y	▷ -39.20	6.87	-15.35	-0.01	▷ -0.78	-0.72	CO 12	
			Max M _z	▷ 9.51	5.01	-11.97	-0.00	-0.60	-0.50	CO 19	
			Min M _z	▷ -74.95	9.23	-12.96	-0.01	-0.66	▷ -1.01	CO 17	
CR2	263	0.000	Max N	▷ 7.06	3.65	-8.86	-0.00	0.44	-0.00	CO 38	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.	
					N	V _y	V _z	M _T	M _y	M _z		
35	CR2			Min N	>	-55.45	7.61	-9.65	-0.00	0.49	-0.00	CO 36
				Max V _y	>	-55.45	7.61	-9.65	-0.00	0.49	-0.00	CO 36
				Min V _y	>	7.06	3.65	-8.86	-0.00	0.44	-0.00	CO 38
				Max V _z	>	-31.88	5.86	-7.97	-0.00	0.40	-0.00	CO 21
				Min V _z	>	-29.00	5.37	-11.39	-0.00	0.57	-0.00	CO 31
				Max M _T	>	-20.57	5.36	-9.66	0.00	0.49	-0.00	CO 37
				Min M _T	>	-31.88	5.86	-7.97	-0.00	0.40	-0.00	CO 21
				Max M _y	>	-29.00	5.37	-11.39	-0.00	0.57	-0.00	CO 31
				Min M _y	>	-31.88	5.86	-7.97	-0.00	0.40	-0.00	CO 21
				Max M _z	>	-55.45	7.61	-9.65	-0.00	0.49	-0.00	CO 36
				Min M _z	>	7.06	3.65	-8.86	-0.00	0.44	-0.00	CO 38
				Max N	>	7.04	3.69	-8.86	-0.00	-0.44	-0.37	CO 38
				Min N	>	-55.54	6.94	-9.65	-0.01	-0.49	-0.74	CO 36
				Max V _y	>	-55.54	6.94	-9.65	-0.01	-0.49	-0.74	CO 36
				Min V _y	>	7.04	3.69	-8.86	-0.00	-0.44	-0.37	CO 38
				Max V _z	>	-31.94	5.56	-7.97	-0.01	-0.40	-0.58	CO 21
				Min V _z	>	-29.04	5.12	-11.40	-0.01	-0.57	-0.53	CO 31
				Max M _T	>	7.04	3.69	-8.86	-0.00	-0.44	-0.37	CO 38
	Min M _T	>	-55.54	6.94	-9.65	-0.01	-0.49	-0.74	CO 36			
	Max M _y	>	-31.94	5.56	-7.97	-0.01	-0.40	-0.58	CO 21			
	Min M _y	>	-29.04	5.12	-11.40	-0.01	-0.57	-0.53	CO 31			
	Max M _z	>	7.04	3.69	-8.86	-0.00	-0.44	-0.37	CO 38			
	Min M _z	>	-55.54	6.94	-9.65	-0.01	-0.49	-0.74	CO 36			
	CR3	263	0.000	Max N	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Min N	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Max V _y	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Min V _y	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Max V _z	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Min V _z	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Max M _T	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Min M _T	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Max M _y	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Min M _y	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Max M _z	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Min M _z	>	-27.86	5.79	-8.86	-0.00	0.45	-0.00	CO 39
				Max N	>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39
Min N				>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39	
Max V _y				>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39	
Min V _y				>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39	
Max V _z				>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39	
Min V _z				>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39	
Max M _T	>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39				
Min M _T	>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39				
Max M _y	>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39				
Min M _y	>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39				
Max M _z	>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39				
Min M _z	>	-27.91	5.54	-8.86	-0.01	-0.45	-0.57	CO 39				
36	CR1	264	0.000	Max N	>	2.06	4.91	-11.81	0.00	0.59	-0.00	CO 19
				Min N	>	-72.49	9.95	-12.86	0.00	0.66	0.00	CO 17
				Max V _y	>	-72.49	9.95	-12.86	0.00	0.66	0.00	CO 17
				Min V _y	>	2.06	4.91	-11.81	0.00	0.59	-0.00	CO 19
				Max V _z	>	-41.71	7.51	-10.60	0.00	0.54	0.00	CO 2
				Min V _z	>	-40.52	6.85	-15.23	0.00	0.77	-0.00	CO 12
				Max M _T	>	-31.25	7.24	-12.89	0.00	0.65	-0.00	CO 18
				Min M _T	>	-41.71	7.51	-10.60	0.00	0.54	0.00	CO 2
				Max M _y	>	-40.52	6.85	-15.23	0.00	0.77	-0.00	CO 12
				Min M _y	>	-41.71	7.51	-10.60	0.00	0.54	0.00	CO 2
				Max M _z	>	-72.49	9.95	-12.86	0.00	0.66	0.00	CO 17
				Min M _z	>	2.06	4.91	-11.81	0.00	0.59	-0.00	CO 19
				Max N	>	2.02	4.93	-11.82	-0.00	-0.59	-0.49	CO 19
				Min N	>	-72.63	8.82	-12.86	-0.01	-0.66	-0.96	CO 17
				Max V _y	>	-72.63	8.82	-12.86	-0.01	-0.66	-0.96	CO 17
				Min V _y	>	2.02	4.93	-11.82	-0.00	-0.59	-0.49	CO 19
				Max V _z	>	-41.80	7.02	-10.60	-0.01	-0.54	-0.74	CO 2
				Min V _z	>	-40.60	6.41	-15.23	-0.00	-0.77	-0.67	CO 12
	Max M _T	>	2.02	4.93	-11.82	-0.00	-0.59	-0.49	CO 19			
	Min M _T	>	-72.63	8.82	-12.86	-0.01	-0.66	-0.96	CO 17			
	Max M _y	>	-41.80	7.02	-10.60	-0.01	-0.54	-0.74	CO 2			
	Min M _y	>	-40.60	6.41	-15.23	-0.00	-0.77	-0.67	CO 12			
	Max M _z	>	2.02	4.93	-11.82	-0.00	-0.59	-0.49	CO 19			
	Min M _z	>	-72.63	8.82	-12.86	-0.01	-0.66	-0.96	CO 17			
	CR2	264	0.000	Max N	>	1.52	3.62	-8.75	0.00	0.44	-0.00	CO 38
				Min N	>	-53.75	7.23	-9.56	0.00	0.49	0.00	CO 36
				Max V _y	>	-53.75	7.23	-9.56	0.00	0.49	0.00	CO 36
				Min V _y	>	1.52	3.62	-8.75	0.00	0.44	-0.00	CO 38
				Max V _z	>	-30.92	5.50	-7.87	-0.00	0.40	0.00	CO 21
				Min V _z	>	-30.04	5.02	-11.30	0.00	0.57	-0.00	CO 31
				Max M _T	>	-23.17	5.30	-9.56	0.00	0.48	-0.00	CO 37
				Min M _T	>	-30.92	5.50	-7.87	-0.00	0.40	0.00	CO 21
				Max M _y	>	-30.04	5.02	-11.30	0.00	0.57	-0.00	CO 31
				Min M _y	>	-30.92	5.50	-7.87	-0.00	0.40	0.00	CO 21
				Max M _z	>	-53.75	7.23	-9.56	0.00	0.49	0.00	CO 36
				Min M _z	>	1.52	3.62	-8.75	0.00	0.44	-0.00	CO 38
Max N				>	1.49	3.63	-8.75	-0.00	-0.44	-0.36	CO 38	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
36	CR2			Min N	▷ -53.83	6.62	-9.57	-0.00	-0.49	-0.70	CO 36
				Max V _y	▷ -53.83	6.62	-9.57	-0.00	-0.49	-0.70	CO 36
				Min V _y	▷ 1.49	3.63	-8.75	-0.00	-0.44	-0.36	CO 38
				Max V _z	▷ -30.97	5.23	-7.87	-0.00	-0.40	-0.54	CO 21
				Min V _z	▷ -30.08	4.78	-11.30	-0.00	-0.57	-0.49	CO 31
				Max M _T	▷ 1.49	3.63	-8.75	▷ -0.00	-0.44	-0.36	CO 38
				Min M _T	▷ -53.83	6.62	-9.57	▷ -0.00	-0.49	-0.70	CO 36
				Max M _y	▷ -30.97	5.23	-7.87	-0.00	▷ -0.40	-0.54	CO 21
				Min M _y	▷ -30.08	4.78	-11.30	-0.00	▷ -0.57	-0.49	CO 31
				Max M _z	▷ 1.49	3.63	-8.75	-0.00	▷ -0.44	-0.36	CO 38
				Min M _z	▷ -53.83	6.62	-9.57	-0.00	▷ -0.49	-0.70	CO 36
				CR3	264	0.000	Max N	▷ -29.08	5.45	-8.77	0.00
	Min N	▷ -29.08	5.45				-8.77	0.00	0.44	-0.00	CO 39
	Max V _y	▷ -29.08	5.45				-8.77	0.00	0.44	-0.00	CO 39
	Min V _y	▷ -29.08	5.45				-8.77	0.00	0.44	-0.00	CO 39
	Max V _z	▷ -29.08	5.45				-8.77	0.00	0.44	-0.00	CO 39
	Min V _z	▷ -29.08	5.45				-8.77	0.00	0.44	-0.00	CO 39
	288	0.100	Max N		▷ -29.13	5.20	-8.77	-0.00	-0.44	-0.54	CO 39
			Min N		▷ -29.13	5.20	-8.77	-0.00	-0.44	-0.54	CO 39
			Max V _y		▷ -29.13	5.20	-8.77	-0.00	-0.44	-0.54	CO 39
			Min V _y		▷ -29.13	5.20	-8.77	-0.00	-0.44	-0.54	CO 39
			Max V _z		▷ -29.13	5.20	-8.77	-0.00	-0.44	-0.54	CO 39
			Min V _z		▷ -29.13	5.20	-8.77	-0.00	-0.44	-0.54	CO 39
	37	CR1	265	0.000	Max N	▷ -5.83	5.19	-11.60	0.01	0.58	-0.00
Min N					▷ -71.41	9.80	-12.70	0.01	0.65	-0.00	CO 17
Max V _y					▷ -71.41	9.80	-12.70	0.01	0.65	-0.00	CO 17
Min V _y					▷ -5.83	5.19	-11.60	0.01	0.58	-0.00	CO 19
Max V _z					▷ -41.24	7.37	-10.43	0.00	0.53	-0.00	CO 2
Min V _z					▷ -42.70	6.75	-15.04	0.01	0.76	-0.00	CO 12
Max M _T					▷ -35.63	7.49	-12.68	▷ 0.01	0.64	-0.00	CO 18
Min M _T					▷ -41.24	7.37	-10.43	▷ 0.00	0.53	-0.00	CO 2
Max M _y					▷ -42.70	6.75	-15.04	0.01	▷ 0.76	-0.00	CO 12
Min M _y					▷ -41.24	7.37	-10.43	0.00	▷ 0.53	-0.00	CO 2
Max M _z					▷ -71.41	9.80	-12.70	0.01	▷ 0.65	-0.00	CO 17
Min M _z					▷ -5.83	5.19	-11.60	0.01	▷ 0.58	-0.00	CO 19
CR2		265	0.000	Max N	▷ -4.33	3.81	-8.60	0.00	0.43	-0.00	CO 38
				Min N	▷ -52.95	7.12	-9.45	0.00	0.48	-0.00	CO 36
				Max V _y	▷ -52.95	7.12	-9.45	0.00	0.48	-0.00	CO 36
				Min V _y	▷ -4.33	3.81	-8.60	0.00	0.43	-0.00	CO 38
				Max V _z	▷ -30.57	5.39	-7.74	0.00	0.39	-0.00	CO 21
				Min V _z	▷ -31.65	4.93	-11.16	0.00	0.56	-0.00	CO 31
		289	0.100	Max M _T	▷ -26.41	5.48	-9.41	▷ 0.00	0.47	-0.00	CO 37
				Min M _T	▷ -30.57	5.39	-7.74	▷ 0.00	0.39	-0.00	CO 21
				Max M _y	▷ -31.65	4.93	-11.16	0.00	▷ 0.56	-0.00	CO 31
				Min M _y	▷ -30.57	5.39	-7.74	0.00	▷ 0.39	-0.00	CO 21
				Max M _z	▷ -52.95	7.12	-9.45	0.00	▷ 0.48	-0.00	CO 36
				Min M _z	▷ -4.33	3.81	-8.60	0.00	▷ 0.43	-0.00	CO 38
CR3	265	0.000	Max N	▷ -4.35	3.79	-8.60	0.00	-0.43	-0.38	CO 38	
			Min N	▷ -53.03	6.52	-9.45	-0.00	-0.48	-0.69	CO 36	
			Max V _y	▷ -53.03	6.52	-9.45	-0.00	-0.48	-0.69	CO 36	
			Min V _y	▷ -4.35	3.79	-8.60	0.00	-0.43	-0.38	CO 38	
			Max V _z	▷ -30.62	5.12	-7.75	-0.00	-0.39	-0.53	CO 21	
			Min V _z	▷ -31.69	4.68	-11.17	-0.00	-0.56	-0.49	CO 31	
	289	0.100	Max M _T	▷ -4.35	3.79	-8.60	▷ 0.00	-0.43	-0.38	CO 38	
			Min M _T	▷ -53.03	6.52	-9.45	▷ -0.00	-0.48	-0.69	CO 36	
			Max M _y	▷ -30.62	5.12	-7.75	-0.00	▷ -0.39	-0.53	CO 21	
			Min M _y	▷ -31.69	4.68	-11.17	-0.00	▷ -0.56	-0.49	CO 31	
			Max M _z	▷ -4.35	3.79	-8.60	0.00	▷ -0.43	-0.38	CO 38	
			Min M _z	▷ -53.03	6.52	-9.45	-0.00	▷ -0.48	-0.69	CO 36	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.				
					N	V _y	V _z	M _T	M _y	M _z					
37	CR3	289	0.100	Min N	>	-30.89	5.36	-8.64	0.00	0.44	-0.00	CO 39			
				Max V _y	>	-30.89	5.36	-8.64	0.00	0.44	-0.00	CO 39			
				Min V _y	>	-30.89	5.36	-8.64	0.00	0.44	-0.00	CO 39			
				Max V _z	>	-30.89	5.36	-8.64	0.00	0.44	-0.00	CO 39			
				Min V _z	>	-30.89	5.36	-8.64	0.00	0.44	-0.00	CO 39			
				Max M _T	>	-30.89	5.36	-8.64	>	0.00	0.44	-0.00	CO 39		
				Min M _T	>	-30.89	5.36	-8.64	>	0.00	0.44	-0.00	CO 39		
				Max M _y	>	-30.89	5.36	-8.64	>	0.00	>	0.44	-0.00	CO 39	
				Min M _y	>	-30.89	5.36	-8.64	>	0.00	>	0.44	-0.00	CO 39	
				Max M _z	>	-30.89	5.36	-8.64	>	0.00	>	0.44	>	-0.00	CO 39
				Min M _z	>	-30.89	5.36	-8.64	>	0.00	>	0.44	>	-0.00	CO 39
				Max N	>	-30.94	5.10	-8.64	-0.00	-0.44	-0.53	CO 39			
				Min N	>	-30.94	5.10	-8.64	-0.00	-0.44	-0.53	CO 39			
				Max V _y	>	-30.94	5.10	-8.64	-0.00	-0.44	-0.53	CO 39			
				Min V _y	>	-30.94	5.10	-8.64	-0.00	-0.44	-0.53	CO 39			
				Max V _z	>	-30.94	5.10	-8.64	-0.00	-0.44	-0.53	CO 39			
				Min V _z	>	-30.94	5.10	-8.64	-0.00	-0.44	-0.53	CO 39			
				Max M _T	>	-30.94	5.10	-8.64	>	-0.00	-0.44	-0.53	CO 39		
				Min M _T	>	-30.94	5.10	-8.64	>	-0.00	-0.44	-0.53	CO 39		
				Max M _y	>	-30.94	5.10	-8.64	-0.00	>	-0.44	-0.53	CO 39		
Min M _y	>	-30.94	5.10	-8.64	-0.00	>	-0.44	-0.53	CO 39						
Max M _z	>	-30.94	5.10	-8.64	-0.00	>	-0.44	>	-0.53	CO 39					
Min M _z	>	-30.94	5.10	-8.64	-0.00	>	-0.44	>	-0.53	CO 39					
38	CR1	290	0.100	Max N	>	-13.84	5.88	-11.29	0.01	0.57	-0.00	CO 19			
				Min N	>	-71.27	10.13	-12.45	0.01	0.63	-0.00	CO 17			
				Max V _y	>	-71.27	10.13	-12.45	0.01	0.63	-0.00	CO 17			
				Min V _y	>	-13.84	5.88	-11.29	0.01	0.57	-0.00	CO 19			
				Max V _z	>	-41.34	7.67	-10.17	0.01	0.51	-0.00	CO 2			
				Min V _z	>	-45.30	7.12	-14.76	0.01	0.75	-0.00	CO 12			
				Max M _T	>	-40.54	8.20	-12.38	>	0.01	0.63	-0.00	CO 18		
				Min M _T	>	-41.34	7.67	-10.17	>	0.01	0.51	-0.00	CO 2		
				Max M _y	>	-45.30	7.12	-14.76	0.01	>	0.75	-0.00	CO 12		
				Min M _y	>	-41.34	7.67	-10.17	0.01	>	0.51	-0.00	CO 2		
				Max M _z	>	-71.27	10.13	-12.45	0.01	>	0.63	>	-0.00	CO 17	
				Min M _z	>	-13.84	5.88	-11.29	0.01	>	0.57	>	-0.00	CO 19	
				Max N	>	-13.90	5.74	-11.29	0.00	-0.57	-0.58	CO 19			
				Min N	>	-71.42	8.98	-12.45	0.00	-0.64	-0.98	CO 17			
				Max V _y	>	-71.42	8.98	-12.45	0.00	-0.64	-0.98	CO 17			
				Min V _y	>	-13.90	5.74	-11.29	0.00	-0.57	-0.58	CO 19			
				Max V _z	>	-41.43	7.16	-10.18	0.00	-0.52	-0.75	CO 2			
				Min V _z	>	-45.38	6.60	-14.76	0.00	-0.75	-0.70	CO 12			
				Max M _T	>	-13.90	5.74	-11.29	>	0.00	-0.57	-0.58	CO 19		
				Min M _T	>	-71.42	8.98	-12.45	>	0.00	-0.64	-0.98	CO 17		
	Max M _y	>	-41.43	7.16	-10.18	0.00	>	-0.52	-0.75	CO 2					
	Min M _y	>	-45.38	6.60	-14.76	0.00	>	-0.75	-0.70	CO 12					
	Max M _z	>	-13.90	5.74	-11.29	0.00	>	-0.57	>	-0.58	CO 19				
	Min M _z	>	-71.42	8.98	-12.45	0.00	>	-0.64	>	-0.98	CO 17				
	Max N	>	-10.26	4.31	-8.37	0.01	0.42	-0.00	CO 38						
	Min N	>	-52.84	7.35	-9.26	0.01	0.47	-0.00	CO 36						
	Max V _y	>	-52.84	7.35	-9.26	0.01	0.47	-0.00	CO 36						
	Min V _y	>	-10.26	4.31	-8.37	0.01	0.42	-0.00	CO 38						
	Max V _z	>	-30.65	5.60	-7.56	0.00	0.38	-0.00	CO 21						
	Min V _z	>	-33.58	5.20	-10.96	0.01	0.55	-0.00	CO 31						
	Max M _T	>	-30.06	5.99	-9.19	>	0.01	0.46	-0.00	CO 37					
	Min M _T	>	-30.65	5.60	-7.56	>	0.00	0.38	-0.00	CO 21					
	Max M _y	>	-33.58	5.20	-10.96	0.01	>	0.55	-0.00	CO 31					
	Min M _y	>	-30.65	5.60	-7.56	0.00	>	0.38	-0.00	CO 21					
	Max M _z	>	-52.84	7.35	-9.26	0.01	0.47	>	-0.00	CO 36					
	Min M _z	>	-10.26	4.31	-8.37	0.01	0.42	>	-0.00	CO 38					
	Max N	>	-10.29	4.24	-8.38	0.00	-0.42	-0.43	CO 38						
	Min N	>	-52.92	6.73	-9.26	0.00	-0.47	-0.72	CO 36						
	Max V _y	>	-52.92	6.73	-9.26	0.00	-0.47	-0.72	CO 36						
	Min V _y	>	-10.29	4.24	-8.38	0.00	-0.42	-0.43	CO 38						
Max V _z	>	-30.70	5.33	-7.56	0.00	-0.38	-0.55	CO 21							
Min V _z	>	-33.62	4.92	-10.96	0.00	-0.55	-0.51	CO 31							
Max M _T	>	-10.29	4.24	-8.38	>	0.00	-0.42	-0.43	CO 38						
Min M _T	>	-52.92	6.73	-9.26	>	0.00	-0.47	-0.72	CO 36						
Max M _y	>	-30.70	5.33	-7.56	0.00	>	-0.38	-0.55	CO 21						
Min M _y	>	-33.62	4.92	-10.96	0.00	>	-0.55	-0.51	CO 31						
Max M _z	>	-10.29	4.24	-8.38	0.00	>	-0.42	>	-0.43	CO 38					
Min M _z	>	-52.92	6.73	-9.26	0.00	>	-0.47	>	-0.72	CO 36					
Max N	>	-33.07	5.60	-8.45	0.00	0.43	-0.00	CO 39							
Min N	>	-33.07	5.60	-8.45	0.00	0.43	-0.00	CO 39							
Max V _y	>	-33.07	5.60	-8.45	0.00	0.43	-0.00	CO 39							
Min V _y	>	-33.07	5.60	-8.45	0.00	0.43	-0.00	CO 39							
Max V _z	>	-33.07	5.60	-8.45	0.00	0.43	-0.00	CO 39							
Min V _z	>	-33.07	5.60	-8.45	0.00	0.43	-0.00	CO 39							
Max M _T	>	-33.07	5.60	-8.45	>	0.00	0.43	-0.00	CO 39						
Min M _T	>	-33.07	5.60	-8.45	>	0.00	0.43	-0.00	CO 39						
Max M _y	>	-33.07	5.60	-8.45	0.00	>	0.43	-0.00	CO 39						
Min M _y	>	-33.07	5.60	-8.45	0.00	>	0.43	-0.00	CO 39						
Max M _z	>	-33.07	5.60	-8.45	0.00	>	0.43	>	-0.00	CO 39					
Min M _z	>	-33.07	5.60	-8.45	0.00	>	0.43	>	-0.00	CO 39					
Max N	>	-33.12	5.30	-8.45	0.00	-0.43	-0.55	CO 39							



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.				
					N	V _y	V _z	M _T	M _y	M _z					
38	CR3			Min N	▷ -33.12	5.30	-8.45	0.00	-0.43	-0.55	CO 39				
				Max V _y	▷ -33.12	5.30	-8.45	0.00	-0.43	-0.55	CO 39				
				Min V _y	▷ -33.12	5.30	-8.45	0.00	-0.43	-0.55	CO 39				
				Max V _z	▷ -33.12	5.30	▷ -8.45	0.00	-0.43	-0.55	CO 39				
				Min V _z	▷ -33.12	5.30	▷ -8.45	0.00	-0.43	-0.55	CO 39				
				Max M _T	▷ -33.12	5.30	-8.45	▷ 0.00	-0.43	-0.55	CO 39				
				Min M _T	▷ -33.12	5.30	-8.45	▷ 0.00	-0.43	-0.55	CO 39				
				Max M _y	▷ -33.12	5.30	-8.45	0.00	▷ -0.43	-0.55	CO 39				
				Min M _y	▷ -33.12	5.30	-8.45	0.00	▷ -0.43	-0.55	CO 39				
				Max M _z	▷ -33.12	5.30	-8.45	0.00	-0.43	▷ -0.55	CO 39				
				Min M _z	▷ -33.12	5.30	-8.45	0.00	-0.43	▷ -0.55	CO 39				
				39	CR1	267	0.000	Max N	▷ -22.92	6.99	-10.93	0.01	0.55	-0.00	CO 19
								Min N	▷ -72.48	10.91	-12.18	0.01	0.62	-0.00	CO 17
								Max V _y	▷ -72.48	10.91	-12.18	0.01	0.62	-0.00	CO 17
Min V _y	▷ -22.92	6.99	-10.93					0.01	0.55	-0.00	CO 19				
Max V _z	▷ -42.50	8.41	▷ -9.89					0.01	0.50	-0.00	CO 2				
Min V _z	▷ -49.05	7.96	▷ -14.44					0.02	0.73	-0.00	CO 12				
Max M _T	▷ -46.79	9.35	-12.03					▷ 0.02	0.61	-0.00	CO 18				
Min M _T	▷ -42.50	8.41	-9.89			▷ 0.01	0.50	-0.00	CO 2						
Max M _y	▷ -49.05	7.96	-14.44			0.02	▷ 0.73	-0.00	CO 12						
Min M _y	▷ -42.50	8.41	-9.89			0.01	▷ 0.50	-0.00	CO 2						
Max M _z	▷ -72.48	10.91	-12.18			0.01	▷ 0.62	-0.00	CO 17						
Min M _z	▷ -22.92	6.99	-10.93			0.01	0.55	▷ -0.00	CO 19						
291	0.100	Max N	▷ -22.99			6.73	-10.94	0.01	-0.55	-0.69	CO 19				
		Min N	▷ -72.65			9.66	-12.18	0.00	-0.63	-1.05	CO 17				
		Max V _y	▷ -72.65		9.66	-12.18	0.00	-0.63	-1.05	CO 17					
		Min V _y	▷ -22.99		6.73	-10.94	0.01	-0.55	-0.69	CO 19					
		Max V _z	▷ -42.61		7.83	▷ -9.89	0.01	-0.50	-0.82	CO 2					
		Min V _z	▷ -49.15		7.33	▷ -14.45	0.01	-0.73	-0.78	CO 12					
		Max M _T	▷ -22.99		6.73	-10.94	▷ 0.01	-0.55	-0.69	CO 19					
Min M _T	▷ -72.65	9.66	-12.18		▷ 0.00	-0.63	-1.05	CO 17							
Max M _y	▷ -42.61	7.83	-9.89		0.01	▷ -0.50	-0.82	CO 2							
Min M _y	▷ -49.15	7.33	-14.45		0.01	▷ -0.73	-0.78	CO 12							
Max M _z	▷ -22.99	6.73	-10.94		0.01	-0.55	▷ -0.69	CO 19							
Min M _z	▷ -72.65	9.66	-12.18		0.00	-0.63	▷ -1.05	CO 17							
CR2	267	0.000	Max N		▷ -16.98	5.12	-8.11	0.01	0.41	-0.00	CO 38				
			Min N		▷ -53.74	7.93	-9.05	0.01	0.46	-0.00	CO 36				
			Max V _y		▷ -53.74	7.93	-9.05	0.01	0.46	-0.00	CO 36				
			Min V _y		▷ -16.98	5.12	-8.11	0.01	0.41	-0.00	CO 38				
			Max V _z		▷ -31.51	6.15	▷ -7.34	0.01	0.37	-0.00	CO 21				
			Min V _z		▷ -36.36	5.81	▷ -10.72	0.01	0.54	-0.00	CO 31				
			Max M _T		▷ -34.68	6.83	-8.94	▷ 0.01	0.45	-0.00	CO 37				
	Min M _T	▷ -31.51	6.15		-7.34	▷ 0.01	0.37	-0.00	CO 21						
	Max M _y	▷ -36.36	5.81		-10.72	0.01	▷ 0.54	-0.00	CO 31						
	Min M _y	▷ -31.51	6.15		-7.34	0.01	▷ 0.37	-0.00	CO 21						
	Max M _z	▷ -53.74	7.93		-9.05	0.01	▷ 0.46	-0.00	CO 36						
	Min M _z	▷ -16.98	5.12		-8.11	0.01	0.41	▷ -0.00	CO 38						
	291	0.100	Max N		▷ -17.02	4.98	-8.12	0.01	-0.41	-0.51	CO 38				
			Min N		▷ -53.83	7.25	-9.06	0.00	-0.46	-0.77	CO 36				
Max V _y			▷ -53.83		7.25	-9.06	0.00	-0.46	-0.77	CO 36					
Min V _y			▷ -17.02		4.98	-8.12	0.01	-0.41	-0.51	CO 38					
Max V _z			▷ -31.57		5.84	▷ -7.35	0.00	-0.37	-0.61	CO 21					
Min V _z			▷ -36.41		5.47	▷ -10.73	0.00	-0.54	-0.57	CO 31					
Max M _T			▷ -17.02	4.98	-8.12	▷ 0.01	-0.41	-0.51	CO 38						
Min M _T	▷ -53.83	7.25	-9.06	▷ 0.00	-0.46	-0.77	CO 36								
Max M _y	▷ -31.57	5.84	-7.35	0.00	▷ -0.37	-0.61	CO 21								
Min M _y	▷ -36.41	5.47	-10.73	0.00	▷ -0.54	-0.57	CO 31								
Max M _z	▷ -17.02	4.98	-8.12	0.01	▷ -0.41	-0.51	CO 38								
Min M _z	▷ -53.83	7.25	-9.06	0.00	-0.46	▷ -0.77	CO 36								
CR3	267	0.000	Max N	▷ -36.05	6.16	-8.24	0.01	0.42	-0.00	CO 39					
			Min N	▷ -36.05	6.16	-8.24	0.01	0.42	-0.00	CO 39					
			Max V _y	▷ -36.05	6.16	-8.24	0.01	0.42	-0.00	CO 39					
			Min V _y	▷ -36.05	6.16	-8.24	0.01	0.42	-0.00	CO 39					
			Max V _z	▷ -36.05	6.16	▷ -8.24	0.01	0.42	-0.00	CO 39					
			Min V _z	▷ -36.05	6.16	▷ -8.24	0.01	0.42	-0.00	CO 39					
			Max M _T	▷ -36.05	6.16	-8.24	▷ 0.01	0.42	-0.00	CO 39					
	Min M _T	▷ -36.05	6.16	-8.24	▷ 0.01	0.42	-0.00	CO 39							
	Max M _y	▷ -36.05	6.16	-8.24	0.01	▷ 0.42	-0.00	CO 39							
	Min M _y	▷ -36.05	6.16	-8.24	0.01	▷ 0.42	-0.00	CO 39							
	Max M _z	▷ -36.05	6.16	-8.24	0.01	▷ 0.42	-0.00	CO 39							
	Min M _z	▷ -36.05	6.16	-8.24	0.01	▷ 0.42	-0.00	CO 39							
	291	0.100	Max N	▷ -36.11	5.81	-8.24	0.00	-0.42	-0.61	CO 39					
			Min N	▷ -36.11	5.81	-8.24	0.00	-0.42	-0.61	CO 39					
Max V _y			▷ -36.11	5.81	-8.24	0.00	-0.42	-0.61	CO 39						
Min V _y			▷ -36.11	5.81	-8.24	0.00	-0.42	-0.61	CO 39						
Max V _z			▷ -36.11	5.81	▷ -8.24	0.00	-0.42	-0.61	CO 39						
Min V _z			▷ -36.11	5.81	▷ -8.24	0.00	-0.42	-0.61	CO 39						
Max M _T			▷ -36.11	5.81	-8.24	▷ 0.00	-0.42	-0.61	CO 39						
Min M _T	▷ -36.11	5.81	-8.24	▷ 0.00	-0.42	-0.61	CO 39								
Max M _y	▷ -36.11	5.81	-8.24	0.00	▷ -0.42	-0.61	CO 39								
Min M _y	▷ -36.11	5.81	-8.24	0.00	▷ -0.42	-0.61	CO 39								
Max M _z	▷ -36.11	5.81	-8.24	0.00	-0.42	▷ -0.61	CO 39								
Min M _z	▷ -36.11	5.81	-8.24	0.00	-0.42	▷ -0.61	CO 39								
40	CR1	268	0.000	Max N	▷ -32.78	8.55	-10.38	0.02	0.52	-0.00	CO 19				



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
40	CR1			Min N	▷ -73.71	12.17	-11.72	0.02	0.59	0.00	CO 17
				Max V _y	▷ -73.71	12.17	-11.72	0.02	0.59	0.00	CO 17
				Min V _y	▷ -32.78	8.55	-10.38	0.02	0.52	-0.00	CO 19
				Max V _z	▷ -44.08	9.61	-9.42	0.02	0.47	0.00	CO 2
				Min V _z	▷ -52.97	9.28	-13.93	0.02	0.70	0.00	CO 12
				Max M _T	▷ -53.63	10.97	-11.49	▷ 0.02	0.58	0.00	CO 18
				Min M _T	▷ -44.08	9.61	-9.42	▷ 0.02	0.47	0.00	CO 2
				Max M _y	▷ -52.97	9.28	-13.93	▷ 0.02	▷ 0.70	0.00	CO 12
				Min M _y	▷ -44.08	9.61	-9.42	▷ 0.02	▷ 0.47	0.00	CO 2
				Max M _z	▷ -73.71	12.17	-11.72	0.02	0.59	▷ 0.00	CO 17
				Min M _z	▷ -32.78	8.55	-10.38	0.02	0.52	▷ -0.00	CO 19
				Max N	▷ -32.90	8.10	-10.39	0.01	-0.53	-0.84	CO 19
				Min N	▷ -73.94	10.75	-11.71	0.01	-0.61	-1.17	CO 17
				Max V _y	▷ -73.94	10.75	-11.71	0.01	-0.61	-1.17	CO 17
				Min V _y	▷ -32.90	8.10	-10.39	0.01	-0.53	-0.84	CO 19
				Max V _z	▷ -44.22	8.93	-9.43	0.01	-0.48	-0.94	CO 2
				Min V _z	▷ -53.10	8.50	-13.93	0.01	-0.71	-0.90	CO 12
				Max M _T	▷ -32.90	8.10	-10.39	▷ 0.01	-0.53	-0.84	CO 19
	Min M _T	▷ -73.94	10.75	-11.71	▷ 0.01	-0.61	-1.17	CO 17			
	Max M _y	▷ -44.22	8.93	-9.43	▷ 0.01	-0.48	-0.94	CO 2			
	Min M _y	▷ -53.10	8.50	-13.93	▷ 0.01	-0.71	-0.90	CO 12			
	Max M _z	▷ -32.90	8.10	-10.39	▷ 0.01	-0.53	-0.84	CO 19			
	Min M _z	▷ -73.94	10.75	-11.71	▷ 0.01	-0.61	-1.17	CO 17			
	CR2	268	0.000	Max N	▷ -24.29	6.26	-7.71	0.01	0.39	-0.00	CO 38
				Min N	▷ -54.66	8.86	-8.71	0.01	0.44	0.00	CO 36
				Max V _y	▷ -54.66	8.86	-8.71	0.01	0.44	0.00	CO 36
				Min V _y	▷ -24.29	6.26	-7.71	0.01	0.39	-0.00	CO 38
				Max V _z	▷ -32.68	7.03	-7.00	0.01	0.35	0.00	CO 21
				Min V _z	▷ -39.27	6.78	-10.34	0.01	0.52	-0.00	CO 31
				Max M _T	▷ -39.75	8.01	-8.54	▷ 0.01	0.43	-0.00	CO 37
				Min M _T	▷ -32.68	7.03	-7.00	▷ 0.01	0.35	0.00	CO 21
				Max M _y	▷ -39.27	6.78	-10.34	▷ 0.01	0.52	-0.00	CO 31
				Min M _y	▷ -32.68	7.03	-7.00	▷ 0.01	0.35	0.00	CO 21
				Max M _z	▷ -54.66	8.86	-8.71	0.01	0.44	▷ 0.00	CO 36
				Min M _z	▷ -24.29	6.26	-7.71	0.01	0.39	▷ -0.00	CO 38
				Max N	▷ -24.35	6.01	-7.72	0.01	-0.39	-0.62	CO 38
Min N				▷ -54.78	8.09	-8.71	0.01	-0.45	-0.86	CO 36	
Max V _y				▷ -54.78	8.09	-8.71	0.01	-0.45	-0.86	CO 36	
Min V _y				▷ -24.35	6.01	-7.72	0.01	-0.39	-0.62	CO 38	
Max V _z				▷ -32.76	6.66	-7.00	0.01	-0.36	-0.69	CO 21	
Min V _z				▷ -39.34	6.36	-10.35	0.01	-0.53	-0.66	CO 31	
Max M _T	▷ -24.35	6.01	-7.72	▷ 0.01	-0.39	-0.62	CO 38				
Min M _T	▷ -54.78	8.09	-8.71	▷ 0.01	-0.45	-0.86	CO 36				
Max M _y	▷ -32.76	6.66	-7.00	▷ 0.01	-0.36	-0.69	CO 21				
Min M _y	▷ -39.34	6.36	-10.35	▷ 0.01	-0.53	-0.66	CO 31				
Max M _z	▷ -24.35	6.01	-7.72	▷ 0.01	-0.39	-0.62	CO 38				
Min M _z	▷ -54.78	8.09	-8.71	▷ 0.01	-0.45	-0.86	CO 36				
CR3	268	0.000	Max N	▷ -39.21	7.06	-7.90	0.01	0.40	0.00	CO 39	
			Min N	▷ -39.21	7.06	-7.90	0.01	0.40	0.00	CO 39	
			Max V _y	▷ -39.21	7.06	-7.90	0.01	0.40	0.00	CO 39	
			Min V _y	▷ -39.21	7.06	-7.90	0.01	0.40	0.00	CO 39	
			Max V _z	▷ -39.21	7.06	-7.90	0.01	0.40	0.00	CO 39	
			Min V _z	▷ -39.21	7.06	-7.90	0.01	0.40	0.00	CO 39	
			Max M _T	▷ -39.21	7.06	-7.90	▷ 0.01	0.40	0.00	CO 39	
			Min M _T	▷ -39.21	7.06	-7.90	▷ 0.01	0.40	0.00	CO 39	
			Max M _y	▷ -39.21	7.06	-7.90	▷ 0.01	0.40	0.00	CO 39	
			Min M _y	▷ -39.21	7.06	-7.90	▷ 0.01	0.40	0.00	CO 39	
			Max M _z	▷ -39.21	7.06	-7.90	▷ 0.01	0.40	0.00	CO 39	
			Min M _z	▷ -39.21	7.06	-7.90	▷ 0.01	0.40	0.00	CO 39	
			Max N	▷ -39.29	6.62	-7.90	0.01	-0.40	-0.69	CO 39	
			Min N	▷ -39.29	6.62	-7.90	0.01	-0.40	-0.69	CO 39	
			Max V _y	▷ -39.29	6.62	-7.90	0.01	-0.40	-0.69	CO 39	
			Min V _y	▷ -39.29	6.62	-7.90	0.01	-0.40	-0.69	CO 39	
			Max V _z	▷ -39.29	6.62	-7.90	0.01	-0.40	-0.69	CO 39	
			Min V _z	▷ -39.29	6.62	-7.90	0.01	-0.40	-0.69	CO 39	
Max M _T	▷ -39.29	6.62	-7.90	▷ 0.01	-0.40	-0.69	CO 39				
Min M _T	▷ -39.29	6.62	-7.90	▷ 0.01	-0.40	-0.69	CO 39				
Max M _y	▷ -39.29	6.62	-7.90	▷ 0.01	-0.40	-0.69	CO 39				
Min M _y	▷ -39.29	6.62	-7.90	▷ 0.01	-0.40	-0.69	CO 39				
Max M _z	▷ -39.29	6.62	-7.90	▷ 0.01	-0.40	-0.69	CO 39				
Min M _z	▷ -39.29	6.62	-7.90	▷ 0.01	-0.40	-0.69	CO 39				
41	CR1	269	0.000	Max N	▷ -43.96	11.26	-9.47	0.02	0.48	-0.00	CO 3
				Min N	▷ -77.64	13.94	-10.99	0.02	0.56	-0.00	CO 17
				Max V _y	▷ -77.64	13.94	-10.99	0.02	0.56	-0.00	CO 17
				Min V _y	▷ -44.38	10.57	-9.62	0.02	0.49	-0.00	CO 19
				Max V _z	▷ -47.67	11.28	-8.76	0.02	0.44	-0.00	CO 2
				Min V _z	▷ -58.94	11.12	-13.13	0.03	0.67	-0.00	CO 12
				Max M _T	▷ -58.94	11.12	-13.13	▷ 0.03	0.67	-0.00	CO 12
				Min M _T	▷ -47.67	11.28	-8.76	▷ 0.02	0.44	-0.00	CO 2
				Max M _y	▷ -58.94	11.12	-13.13	▷ 0.03	0.67	-0.00	CO 12
				Min M _y	▷ -47.67	11.28	-8.76	▷ 0.02	0.44	-0.00	CO 2
				Max M _z	▷ -77.64	13.94	-10.99	0.02	0.56	▷ -0.00	CO 17
				Min M _z	▷ -44.38	10.57	-9.62	0.02	0.49	▷ -0.00	CO 19
				Max N	▷ -44.15	10.47	-9.48	0.01	-0.48	-1.10	CO 3



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.			
					N	V _y	V _z	M _T	M _y	M _z				
41	CR1			Min N	▷ -77.93	12.22	-10.99	0.01	-0.57	-1.34	CO 17			
				Max V _y	▷ -77.93	12.22	-10.99	0.01	-0.57	-1.34	CO 17			
				Min V _y	▷ -44.56	9.81	-9.63	0.02	-0.49	-1.03	CO 19			
				Max V _z	▷ -47.86	10.42	-8.76	0.01	-0.45	-1.10	CO 2			
				Min V _z	▷ -59.13	10.07	-13.13	0.01	-0.67	-1.08	CO 12			
				Max M _T	▷ -44.56	9.81	-9.63	▷ 0.02	-0.49	-1.03	CO 19			
				Min M _T	▷ -77.93	12.22	-10.99	▷ 0.01	-0.57	-1.34	CO 17			
				Max M _y	▷ -47.86	10.42	-8.76	▷ 0.01	-0.45	-1.10	CO 2			
				Min M _y	▷ -59.13	10.07	-13.13	▷ 0.01	-0.67	-1.08	CO 12			
				Max M _z	▷ -44.56	9.81	-9.63	▷ 0.02	-0.49	-1.03	CO 19			
				Min M _z	▷ -77.93	12.22	-10.99	▷ 0.01	-0.57	-1.34	CO 17			
				CR2	269	0.000	Max N	▷ -32.61	8.26	-7.03	0.01	0.35	-0.00	CO 22
							Min N	▷ -57.58	10.17	-8.17	0.01	0.41	-0.00	CO 36
							Max V _y	▷ -57.58	10.17	-8.17	0.01	0.41	-0.00	CO 36
	Min V _y	▷ -32.88	7.73				-7.16	0.02	0.36	-0.00	CO 38			
	Max V _z	▷ -35.35	8.27				-6.51	▷ 0.01	0.33	-0.00	CO 21			
	Min V _z	▷ -43.70	8.13				-9.75	▷ 0.02	0.49	-0.00	CO 31			
	Max M _T	▷ -43.70	8.13				-9.75	▷ 0.02	0.49	-0.00	CO 31			
	Min M _T	▷ -35.35	8.27				-6.51	▷ 0.01	0.33	-0.00	CO 21			
	Max M _y	▷ -43.70	8.13		-9.75	▷ 0.02	0.49	-0.00	CO 31					
	Min M _y	▷ -35.35	8.27		-6.51	▷ 0.01	0.33	-0.00	CO 21					
	Max M _z	▷ -57.58	10.17		-8.17	▷ 0.01	0.41	-0.00	CO 36					
	Min M _z	▷ -32.88	7.73		-7.16	▷ 0.02	0.36	-0.00	CO 38					
	293	0.100	Max N		▷ -32.72	7.82	-7.04	0.01	-0.36	-0.81	CO 22			
			Min N		▷ -57.73	9.24	-8.18	0.01	-0.42	-0.99	CO 36			
			Max V _y		▷ -57.73	9.24	-8.18	0.01	-0.42	-0.99	CO 36			
			Min V _y		▷ -32.98	7.32	-7.16	0.01	-0.36	-0.76	CO 38			
			Max V _z	▷ -35.46	7.80	-6.51	▷ 0.01	-0.33	-0.81	CO 21				
			Min V _z	▷ -43.80	7.56	-9.76	▷ 0.01	-0.50	-0.80	CO 31				
			Max M _T	▷ -32.98	7.32	-7.16	▷ 0.01	-0.36	-0.76	CO 38				
Min M _T			▷ -57.73	9.24	-8.18	▷ 0.01	-0.42	-0.99	CO 36					
Max M _y	▷ -35.46	7.80	-6.51	▷ 0.01	-0.33	-0.81	CO 21							
Min M _y	▷ -43.80	7.56	-9.76	▷ 0.01	-0.50	-0.80	CO 31							
Max M _z	▷ -32.98	7.32	-7.16	▷ 0.01	-0.36	-0.76	CO 38							
Min M _z	▷ -57.73	9.24	-8.18	▷ 0.01	-0.42	-0.99	CO 36							
CR3	269	0.000	Max N	▷ -43.89	8.31	-7.39	0.01	0.37	-0.00	CO 39				
			Min N	▷ -43.89	8.31	-7.39	0.01	0.37	-0.00	CO 39				
			Max V _y	▷ -43.89	8.31	-7.39	0.01	0.37	-0.00	CO 39				
			Min V _y	▷ -43.89	8.31	-7.39	0.01	0.37	-0.00	CO 39				
			Max V _z	▷ -43.89	8.31	-7.39	▷ 0.01	0.37	-0.00	CO 39				
			Min V _z	▷ -43.89	8.31	-7.39	▷ 0.01	0.37	-0.00	CO 39				
			Max M _T	▷ -43.89	8.31	-7.39	▷ 0.01	0.37	-0.00	CO 39				
			Min M _T	▷ -43.89	8.31	-7.39	▷ 0.01	0.37	-0.00	CO 39				
			Max M _y	▷ -43.89	8.31	-7.39	▷ 0.01	0.37	-0.00	CO 39				
			Min M _y	▷ -43.89	8.31	-7.39	▷ 0.01	0.37	-0.00	CO 39				
			Max M _z	▷ -43.89	8.31	-7.39	▷ 0.01	0.37	-0.00	CO 39				
			Min M _z	▷ -43.89	8.31	-7.39	▷ 0.01	0.37	-0.00	CO 39				
			293	0.100	Max N	▷ -43.99	7.72	-7.39	0.01	-0.38	-0.81	CO 39		
					Min N	▷ -43.99	7.72	-7.39	0.01	-0.38	-0.81	CO 39		
	Max V _y	▷ -43.99			7.72	-7.39	0.01	-0.38	-0.81	CO 39				
	Min V _y	▷ -43.99			7.72	-7.39	0.01	-0.38	-0.81	CO 39				
	Max V _z	▷ -43.99			7.72	-7.39	▷ 0.01	-0.38	-0.81	CO 39				
	Min V _z	▷ -43.99			7.72	-7.39	▷ 0.01	-0.38	-0.81	CO 39				
	Max M _T	▷ -43.99			7.72	-7.39	▷ 0.01	-0.38	-0.81	CO 39				
	Min M _T	▷ -43.99			7.72	-7.39	▷ 0.01	-0.38	-0.81	CO 39				
	Max M _y	▷ -43.99	7.72	-7.39	▷ 0.01	-0.38	-0.81	CO 39						
	Min M _y	▷ -43.99	7.72	-7.39	▷ 0.01	-0.38	-0.81	CO 39						
Max M _z	▷ -43.99	7.72	-7.39	▷ 0.01	-0.38	-0.81	CO 39							
Min M _z	▷ -43.99	7.72	-7.39	▷ 0.01	-0.38	-0.81	CO 39							
42	CR1	270	0.000	Max N	▷ -56.32	13.33	-8.49	0.02	0.43	0.00	CO 3			
				Min N	▷ -93.68	16.12	-10.02	0.03	0.51	0.00	CO 17			
				Max V _y	▷ -93.68	16.12	-10.02	0.03	0.51	0.00	CO 17			
				Min V _y	▷ -66.24	12.90	-8.52	0.03	0.43	-0.00	CO 19			
				Max V _z	▷ -61.05	13.33	-7.79	0.02	0.39	0.00	CO 2			
				Min V _z	▷ -75.44	13.38	-12.11	0.03	0.62	0.00	CO 12			
				Max M _T	▷ -75.44	13.38	-12.11	▷ 0.03	0.62	0.00	CO 12			
				Min M _T	▷ -61.05	13.33	-7.79	▷ 0.02	0.39	0.00	CO 2			
				Max M _y	▷ -75.44	13.38	-12.11	▷ 0.03	0.62	0.00	CO 12			
				Min M _y	▷ -61.05	13.33	-7.79	▷ 0.02	0.39	0.00	CO 2			
				Max M _z	▷ -93.68	16.12	-10.02	0.03	0.51	0.00	CO 17			
				Min M _z	▷ -66.24	12.90	-8.52	0.03	0.43	-0.00	CO 19			
				294	0.100	Max N	▷ -56.59	12.13	-8.50	0.02	-0.43	-1.30	CO 3	
						Min N	▷ -94.06	13.73	-10.02	0.02	-0.52	-1.54	CO 17	
	Max V _y	▷ -94.06	13.73			-10.02	0.02	-0.52	-1.54	CO 17				
	Min V _y	▷ -66.49	11.54			-8.53	0.02	-0.44	-1.25	CO 19				
	Max V _z	▷ -61.32	12.04			-7.80	0.02	-0.40	-1.29	CO 2				
	Min V _z	▷ -75.71	11.78			-12.11	0.02	-0.62	-1.29	CO 12				
	Max M _T	▷ -66.49	11.54			-8.53	▷ 0.02	-0.44	-1.25	CO 19				
	Min M _T	▷ -94.06	13.73			-10.02	▷ 0.02	-0.52	-1.54	CO 17				
	Max M _y	▷ -61.32	12.04	-7.80	▷ 0.02	-0.40	-1.29	CO 2						
	Min M _y	▷ -75.71	11.78	-12.11	▷ 0.02	-0.62	-1.29	CO 12						
Max M _z	▷ -66.49	11.54	-8.53	▷ 0.02	-0.44	-1.25	CO 19							
Min M _z	▷ -94.06	13.73	-10.02	▷ 0.02	-0.52	-1.54	CO 17							
CR2	270	0.000	Max N	▷ -41.78	9.78	-6.31	0.02	0.32	0.00	CO 22				



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
42	CR2			Min N	▷ -69.47	11.77	-7.46	0.02	0.38	0.00	CO 36
				Max V _y	▷ -69.47	11.77	-7.46	0.02	0.38	0.00	CO 36
				Min V _y	▷ -49.08	9.42	-6.35	0.02	0.32	-0.00	CO 38
				Max V _z	▷ -45.28	9.77	-5.79	0.02	0.29	0.00	CO 21
				Min V _z	▷ -55.93	9.79	-9.01	0.02	0.46	0.00	CO 31
				Max M _T	▷ -55.93	9.79	-9.01	▷ 0.02	0.46	0.00	CO 31
				Min M _T	▷ -45.28	9.77	-5.79	▷ 0.02	0.29	0.00	CO 21
				Max M _y	▷ -55.93	9.79	-9.01	▷ 0.02	▷ 0.46	0.00	CO 31
				Min M _y	▷ -45.28	9.77	-5.79	▷ 0.02	▷ 0.29	0.00	CO 21
				Max M _z	▷ -69.47	11.77	-7.46	0.02	0.38	▷ 0.00	CO 36
				Min M _z	▷ -49.08	9.42	-6.35	0.02	0.32	▷ -0.00	CO 38
				Max N	▷ -41.93	9.12	-6.32	0.01	-0.32	-0.96	CO 22
				Min N	▷ -69.67	10.48	-7.46	0.01	-0.38	-1.14	CO 36
				Max V _y	▷ -69.67	10.48	-7.46	0.01	-0.38	-1.14	CO 36
	Min V _y	▷ -49.21	8.68	-6.36	0.01	-0.32	-0.92	CO 38			
	Max V _z	▷ -45.43	9.07	-5.80	0.01	-0.30	-0.96	CO 21			
	Min V _z	▷ -56.07	8.91	-9.01	0.01	-0.46	-0.95	CO 31			
	Max M _T	▷ -49.21	8.68	-6.36	▷ 0.01	-0.32	-0.92	CO 38			
	Min M _T	▷ -69.67	10.48	-7.46	▷ 0.01	-0.38	-1.14	CO 36			
	Max M _y	▷ -45.43	9.07	-5.80	▷ 0.01	-0.30	-0.96	CO 21			
	Min M _y	▷ -56.07	8.91	-9.01	▷ 0.01	-0.46	-0.95	CO 31			
	Max M _z	▷ -49.21	8.68	-6.36	▷ 0.01	-0.32	-0.92	CO 38			
	Min M _z	▷ -69.67	10.48	-7.46	▷ 0.01	-0.38	-1.14	CO 36			
	CR3	270	0.000	Max N	▷ -56.16	9.83	-6.69	0.02	0.34	0.00	CO 39
				Min N	▷ -56.16	9.83	-6.69	0.02	0.34	0.00	CO 39
				Max V _y	▷ -56.16	9.83	-6.69	0.02	0.34	0.00	CO 39
				Min V _y	▷ -56.16	9.83	-6.69	0.02	0.34	0.00	CO 39
				Max V _z	▷ -56.16	9.83	-6.69	0.02	0.34	0.00	CO 39
Min V _z				▷ -56.16	9.83	-6.69	0.02	0.34	0.00	CO 39	
Max M _T				▷ -56.16	9.83	-6.69	▷ 0.02	0.34	0.00	CO 39	
Min M _T				▷ -56.16	9.83	-6.69	▷ 0.02	0.34	0.00	CO 39	
Max M _y				▷ -56.16	9.83	-6.69	▷ 0.02	0.34	0.00	CO 39	
Min M _y				▷ -56.16	9.83	-6.69	▷ 0.02	0.34	0.00	CO 39	
Max M _z				▷ -56.16	9.83	-6.69	▷ 0.02	0.34	▷ 0.00	CO 39	
Min M _z				▷ -56.16	9.83	-6.69	▷ 0.02	0.34	▷ 0.00	CO 39	
Max N				▷ -56.31	8.95	-6.70	0.01	-0.34	-0.96	CO 39	
Min N				▷ -56.31	8.95	-6.70	0.01	-0.34	-0.96	CO 39	
Max V _y	▷ -56.31	8.95	-6.70	0.01	-0.34	-0.96	CO 39				
Min V _y	▷ -56.31	8.95	-6.70	0.01	-0.34	-0.96	CO 39				
Max V _z	▷ -56.31	8.95	-6.70	0.01	-0.34	-0.96	CO 39				
Min V _z	▷ -56.31	8.95	-6.70	0.01	-0.34	-0.96	CO 39				
Max M _T	▷ -56.31	8.95	-6.70	▷ 0.01	-0.34	-0.96	CO 39				
Min M _T	▷ -56.31	8.95	-6.70	▷ 0.01	-0.34	-0.96	CO 39				
Max M _y	▷ -56.31	8.95	-6.70	▷ 0.01	-0.34	-0.96	CO 39				
Min M _y	▷ -56.31	8.95	-6.70	▷ 0.01	-0.34	-0.96	CO 39				
Max M _z	▷ -56.31	8.95	-6.70	▷ 0.01	-0.34	-0.96	CO 39				
Min M _z	▷ -56.31	8.95	-6.70	▷ 0.01	-0.34	-0.96	CO 39				
43	CR1	26	0.000	Max N	▷ -123.22	47.83	-5.07	0.01	0.27	2.41	CO 3
				Min N	▷ -166.76	52.86	-5.84	0.00	0.32	2.69	CO 18
				Max V _y	▷ -166.29	54.99	-6.65	0.01	0.36	2.80	CO 17
				Min V _y	▷ -143.73	45.26	-4.79	0.00	0.26	2.29	CO 19
				Max V _z	▷ -128.14	47.60	-4.39	0.01	0.24	2.40	CO 2
				Min V _z	▷ -144.87	47.99	-8.48	0.01	0.45	2.43	CO 12
				Max M _T	▷ -144.87	47.99	-8.48	▷ 0.01	0.45	2.43	CO 12
				Min M _T	▷ -143.73	45.26	-4.79	▷ 0.00	0.26	2.29	CO 19
				Max M _y	▷ -144.87	47.99	-8.48	▷ 0.01	0.45	2.43	CO 12
				Min M _y	▷ -128.14	47.60	-4.39	▷ 0.01	0.24	2.40	CO 2
				Max M _z	▷ -166.29	54.99	-6.65	0.01	0.36	2.80	CO 17
				Min M _z	▷ -143.73	45.26	-4.79	0.00	0.26	2.29	CO 19
				Max N	▷ -123.33	47.55	-5.12	0.01	-0.26	-2.55	CO 3
				Min N	▷ -166.90	52.39	-5.89	0.01	-0.30	-2.86	CO 18
				Max V _y	▷ -166.44	54.52	-6.71	0.01	-0.35	-2.97	CO 17
				Min V _y	▷ -143.84	44.92	-4.83	0.00	-0.24	-2.43	CO 19
	Max V _z	▷ -128.24	47.30	-4.44	0.01	-0.22	-2.54	CO 2			
	Min V _z	▷ -144.98	47.65	-8.54	0.01	-0.44	-2.57	CO 12			
	Max M _T	▷ -129.85	47.90	-7.32	▷ 0.01	-0.37	-2.57	CO 5			
	Min M _T	▷ -143.84	44.92	-4.83	▷ 0.00	-0.24	-2.43	CO 19			
	Max M _y	▷ -128.24	47.30	-4.44	▷ 0.01	-0.22	-2.54	CO 2			
	Min M _y	▷ -144.98	47.65	-8.54	▷ 0.01	-0.44	-2.57	CO 12			
	Max M _z	▷ -143.84	44.92	-4.83	0.00	-0.24	-2.43	CO 19			
	Min M _z	▷ -166.44	54.52	-6.71	0.01	-0.35	-2.97	CO 17			
	CR2	26	0.000	Max N	▷ -91.29	35.66	-3.80	0.00	0.20	1.78	CO 22
				Min N	▷ -123.53	39.46	-4.39	0.00	0.23	1.98	CO 37
				Max V _y	▷ -123.19	41.13	-4.99	0.01	0.27	2.07	CO 36
				Min V _y	▷ -106.48	33.67	-3.60	0.00	0.19	1.68	CO 38
				Max V _z	▷ -94.93	35.49	-3.29	0.00	0.18	1.77	CO 21
				Min V _z	▷ -107.33	35.80	-6.36	0.01	0.34	1.79	CO 31
				Max M _T	▷ -123.19	41.13	-4.99	▷ 0.01	0.27	2.07	CO 36
				Min M _T	▷ -106.48	33.67	-3.60	▷ 0.00	0.19	1.68	CO 38
Max M _y				▷ -107.33	35.80	-6.36	▷ 0.01	0.34	1.79	CO 31	
Min M _y				▷ -94.93	35.49	-3.29	▷ 0.00	0.18	1.77	CO 21	
Max M _z				▷ -123.19	41.13	-4.99	▷ 0.01	0.27	2.07	CO 36	
Min M _z				▷ -106.48	33.67	-3.60	▷ 0.00	0.19	1.68	CO 38	
Max N				▷ -91.35	35.50	-3.83	0.01	-0.19	-1.88	CO 22	



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
43	CR2			Min N	▷ -123.61	39.20	-4.41	0.00	-0.22	-2.11	CO 37
				Max V _y	▷ -123.27	40.88	-5.02	0.01	-0.25	-2.19	CO 36
				Min V _y	▷ -106.54	33.48	-3.63	0.00	-0.18	-1.79	CO 38
				Max V _z	▷ -94.99	35.32	▷ -3.32	0.01	-0.16	-1.87	CO 21
				Min V _z	▷ -107.39	35.61	▷ -6.39	0.01	-0.32	-1.90	CO 31
				Max M _T	▷ -123.27	40.88	-5.02	▷ 0.01	-0.25	-2.19	CO 36
				Min M _T	▷ -106.54	33.48	-3.63	▷ 0.00	-0.18	-1.79	CO 38
				Max M _y	▷ -94.99	35.32	-3.32	0.01	▷ -0.16	-1.87	CO 21
				Min M _y	▷ -107.39	35.61	-6.39	0.01	▷ -0.32	-1.90	CO 31
				Max M _z	▷ -106.54	33.48	-3.63	0.00	-0.18	▷ -1.79	CO 38
				Min M _z	▷ -123.27	40.88	-5.02	0.01	-0.25	▷ -2.19	CO 36
				CR3	26	0.000	Max N	▷ -106.13	35.35	-4.21	0.00
	Min N	▷ -106.13	35.35				-4.21	0.00	0.22	1.77	CO 39
	Max V _y	▷ -106.13	35.35				-4.21	0.00	0.22	1.77	CO 39
	Min V _y	▷ -106.13	35.35				-4.21	0.00	0.22	1.77	CO 39
	Max V _z	▷ -106.13	35.35				▷ -4.21	0.00	0.22	1.77	CO 39
	Min V _z	▷ -106.13	35.35				▷ -4.21	0.00	0.22	1.77	CO 39
	45	0.100	Max M _T		▷ -106.13	35.35	-4.21	▷ 0.00	0.22	1.77	CO 39
			Min M _T		▷ -106.13	35.35	-4.21	▷ 0.00	0.22	1.77	CO 39
			Max M _y		▷ -106.13	35.35	-4.21	0.00	▷ 0.22	1.77	CO 39
			Min M _y		▷ -106.13	35.35	-4.21	0.00	▷ 0.22	1.77	CO 39
			Max M _z		▷ -106.13	35.35	-4.21	0.00	0.22	▷ 1.77	CO 39
			Min M _z		▷ -106.13	35.35	-4.21	0.00	0.22	▷ 1.77	CO 39
	44	CR1	247	0.000	Max N	▷ 173.73	13.99	-6.19	-0.00	0.30	0.00
Min N					▷ 57.07	7.69	-8.51	0.01	0.42	-0.00	CO 19
Max V _y					▷ 173.73	13.99	-6.19	-0.00	0.30	0.00	CO 17
Min V _y					▷ 57.07	7.69	-8.51	0.01	0.42	-0.00	CO 19
Max V _z					▷ 96.91	12.25	▷ -5.30	0.00	0.26	0.00	CO 2
Min V _z					▷ 115.18	11.99	▷ -9.00	0.01	0.44	0.00	CO 12
Max M _T					▷ 57.07	7.69	-8.51	▷ 0.01	0.42	-0.00	CO 19
Min M _T					▷ 173.73	13.99	-6.19	▷ -0.00	0.30	0.00	CO 17
Max M _y					▷ 115.18	11.99	-9.00	0.01	▷ 0.44	0.00	CO 12
Min M _y					▷ 96.91	12.25	-5.30	0.00	▷ 0.26	0.00	CO 2
Max M _z					▷ 173.73	13.99	-6.19	-0.00	0.30	▷ 0.00	CO 17
Min M _z					▷ 57.07	7.69	-8.51	0.01	0.42	▷ -0.00	CO 19
271			0.100	Max N	▷ 173.35	18.05	-6.18	-0.01	-0.29	-1.52	CO 17
				Min N	▷ 56.97	8.41	-8.52	0.00	-0.42	-0.79	CO 19
				Max V _y	▷ 173.35	18.05	-6.18	-0.01	-0.29	-1.52	CO 17
				Min V _y	▷ 56.97	8.41	-8.52	0.00	-0.42	-0.79	CO 19
				Max V _z	▷ 96.64	14.20	▷ -5.30	-0.01	-0.26	-1.28	CO 2
				Min V _z	▷ 114.92	14.27	▷ -9.00	-0.00	-0.43	-1.27	CO 12
				Max M _T	▷ 56.97	8.41	-8.52	▷ 0.00	-0.42	-0.79	CO 19
				Min M _T	▷ 173.35	18.05	-6.18	▷ -0.01	-0.29	-1.52	CO 17
				Max M _y	▷ 96.64	14.20	-5.30	-0.01	▷ -0.26	-1.28	CO 2
				Min M _y	▷ 114.92	14.27	-9.00	-0.00	▷ -0.43	-1.27	CO 12
				Max M _z	▷ 56.97	8.41	-8.52	0.00	-0.42	▷ -0.79	CO 19
				Min M _z	▷ 173.35	18.05	-6.18	-0.01	-0.29	▷ -1.52	CO 17
CR2		247	0.000	Max N	▷ 128.63	10.55	-4.56	-0.00	0.22	0.00	CO 36
				Min N	▷ 42.27	5.73	-6.26	0.00	0.31	-0.00	CO 38
				Max V _y	▷ 128.63	10.55	-4.56	-0.00	0.22	0.00	CO 36
				Min V _y	▷ 42.27	5.73	-6.26	0.00	0.31	-0.00	CO 38
				Max V _z	▷ 71.73	9.16	▷ -3.90	-0.00	0.19	0.00	CO 21
				Min V _z	▷ 85.28	9.00	▷ -6.62	0.00	0.32	0.00	CO 31
				Max M _T	▷ 42.27	5.73	-6.26	▷ 0.00	0.31	-0.00	CO 38
				Min M _T	▷ 128.63	10.55	-4.56	▷ -0.00	0.22	0.00	CO 36
				Max M _y	▷ 85.28	9.00	-6.62	0.00	▷ 0.32	0.00	CO 31
				Min M _y	▷ 71.73	9.16	-3.90	-0.00	▷ 0.19	0.00	CO 21
				Max M _z	▷ 128.63	10.55	-4.56	-0.00	0.22	▷ 0.00	CO 36
				Min M _z	▷ 42.27	5.73	-6.26	0.00	▷ 0.31	-0.00	CO 38
		271	0.100	Max N	▷ 128.42	12.80	-4.55	-0.01	-0.22	-1.12	CO 36
				Min N	▷ 42.21	6.12	-6.26	0.00	-0.31	-0.59	CO 38
				Max V _y	▷ 128.42	12.80	-4.55	-0.01	-0.22	-1.12	CO 36
				Min V _y	▷ 42.21	6.12	-6.26	0.00	-0.31	-0.59	CO 38
				Max V _z	▷ 71.58	10.23	▷ -3.90	-0.00	-0.19	-0.95	CO 21
				Min V _z	▷ 85.14	10.25	▷ -6.62	-0.00	-0.32	-0.94	CO 31
				Max M _T	▷ 42.21	6.12	-6.26	▷ 0.00	-0.31	-0.59	CO 38
				Min M _T	▷ 128.42	12.80	-4.55	▷ -0.01	-0.22	-1.12	CO 36
				Max M _y	▷ 71.58	10.23	-3.90	-0.00	▷ -0.19	-0.95	CO 21
				Min M _y	▷ 85.14	10.25	-6.62	-0.00	▷ -0.32	-0.94	CO 31
				Max M _z	▷ 42.21	6.12	-6.26	0.00	-0.31	▷ -0.59	CO 38
				Min M _z	▷ 128.42	12.80	-4.55	-0.01	-0.22	▷ -1.12	CO 36
CR3	247	0.000	Max N	▷ 83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39	



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
44	CR3	271	0.100	Min N	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Max V _y	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Min V _y	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Max V _z	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Min V _z	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Max M _T	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Min M _T	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Max M _y	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Min M _y	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Max M _z	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Min M _z	83.91	9.02	-4.64	-0.00	0.23	0.00	CO 39
				Max N	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Min N	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Max V _y	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Min V _y	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Max V _z	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Min V _z	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Max M _T	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Min M _T	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Max M _y	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Min M _y	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Max M _z	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				Min M _z	83.77	10.26	-4.64	-0.00	-0.22	-0.94	CO 39
				45	CR1	272	0.100	Max N	139.82	12.96	-6.12
Min N	38.89	7.56	-8.44					0.01	0.42	-0.00	CO 19
Max V _y	139.82	12.96	-6.12					-0.00	0.30	-0.00	CO 17
Min V _y	38.89	7.56	-8.44					0.01	0.42	-0.00	CO 19
Max V _z	76.33	11.47	-5.25					-0.00	0.26	-0.00	CO 2
Min V _z	89.94	11.38	-8.91					0.00	0.44	-0.00	CO 12
Max M _T	38.89	7.56	-8.44					0.01	0.42	-0.00	CO 19
Min M _T	139.82	12.96	-6.12					-0.00	0.30	-0.00	CO 17
Max M _y	89.94	11.38	-8.91					0.00	0.44	-0.00	CO 12
Min M _y	76.33	11.47	-5.25					-0.00	0.26	-0.00	CO 2
Max M _z	139.82	12.96	-6.12					-0.00	0.30	-0.00	CO 17
Min M _z	38.89	7.56	-8.44					0.01	0.42	-0.00	CO 19
Max N	139.51	15.97	-6.11					-0.01	-0.29	-1.39	CO 17
Min N	38.79	8.04	-8.44					0.00	-0.42	-0.77	CO 19
Max V _y	139.51	15.97	-6.11					-0.01	-0.29	-1.39	CO 17
Min V _y	38.79	8.04	-8.44					0.00	-0.42	-0.77	CO 19
Max V _z	76.10	12.90	-5.25					-0.01	-0.26	-1.19	CO 2
Min V _z	89.71	13.06	-8.91					-0.00	-0.43	-1.19	CO 12
Max M _T	38.79	8.04	-8.44					0.00	-0.42	-0.77	CO 19
Min M _T	139.51	15.97	-6.11					-0.01	-0.29	-1.39	CO 17
Max M _y	76.10	12.90	-5.25					-0.01	-0.26	-1.19	CO 2
Min M _y	89.71	13.06	-8.91					-0.00	-0.43	-1.19	CO 12
Max M _z	38.79	8.04	-8.44					0.00	-0.42	-0.77	CO 19
Min M _z	139.51	15.97	-6.11					-0.01	-0.29	-1.39	CO 17
Max N	103.53	9.78	-4.52					-0.00	0.22	-0.00	CO 36
Min N	28.80	5.62	-6.21					0.00	0.31	-0.00	CO 38
Max V _y	103.53	9.78	-4.52					-0.00	0.22	-0.00	CO 36
Min V _y	28.80	5.62	-6.21					0.00	0.31	-0.00	CO 38
Max V _z	56.50	8.57	-3.88					-0.00	0.19	-0.00	CO 21
Min V _z	66.59	8.53	-6.56					0.00	0.32	-0.00	CO 31
Max M _T	28.80	5.62	-6.21		0.00	0.31	-0.00	CO 38			
Min M _T	103.53	9.78	-4.52		-0.00	0.22	-0.00	CO 36			
Max M _y	66.59	8.53	-6.56		0.00	0.32	-0.00	CO 31			
Min M _y	56.50	8.57	-3.88		-0.00	0.19	-0.00	CO 21			
Max M _z	103.53	9.78	-4.52		-0.00	0.22	-0.00	CO 36			
Min M _z	28.80	5.62	-6.21		0.00	0.31	-0.00	CO 38			
Max N	103.36	11.45	-4.52		-0.01	-0.22	-1.03	CO 36			
Min N	28.74	5.88	-6.21		0.00	-0.31	-0.57	CO 38			
Max V _y	103.36	11.45	-4.52		-0.01	-0.22	-1.03	CO 36			
Min V _y	28.74	5.88	-6.21		0.00	-0.31	-0.57	CO 38			
Max V _z	56.37	9.36	-3.88		-0.00	-0.19	-0.88	CO 21			
Min V _z	66.47	9.46	-6.56		-0.00	-0.32	-0.88	CO 31			
Max M _T	28.74	5.88	-6.21		0.00	-0.31	-0.57	CO 38			
Min M _T	103.36	11.45	-4.52		-0.01	-0.22	-1.03	CO 36			
Max M _y	56.37	9.36	-3.88		-0.00	-0.19	-0.88	CO 21			
Min M _y	66.47	9.46	-6.56		-0.00	-0.32	-0.88	CO 31			
Max M _z	28.74	5.88	-6.21		0.00	-0.31	-0.57	CO 38			
Min M _z	103.36	11.45	-4.52		-0.01	-0.22	-1.03	CO 36			
Max N	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Min N	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Max V _y	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Min V _y	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Max V _z	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Min V _z	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Max M _T	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Min M _T	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Max M _y	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Min M _y	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Max M _z	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Min M _z	65.41	8.45	-4.61		-0.00	0.23	-0.00	CO 39			
Max N	65.28	9.36	-4.61	-0.00	-0.22	-0.87	CO 39				



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
45	CR3			Min N	▷ 65.28	9.36	-4.61	-0.00	-0.22	-0.87	CO 39
				Max V _y	▷ 65.28	9.36	-4.61	-0.00	-0.22	-0.87	CO 39
				Min V _y	▷ 65.28	9.36	-4.61	-0.00	-0.22	-0.87	CO 39
				Max V _z	▷ 65.28	9.36	-4.61	-0.00	-0.22	-0.87	CO 39
				Min V _z	▷ 65.28	9.36	-4.61	-0.00	-0.22	-0.87	CO 39
				Max M _T	▷ 65.28	9.36	-4.61	▷ -0.00	-0.22	-0.87	CO 39
				Min M _T	▷ 65.28	9.36	-4.61	▷ -0.00	-0.22	-0.87	CO 39
				Max M _y	▷ 65.28	9.36	-4.61	-0.00	▷ -0.22	-0.87	CO 39
				Min M _y	▷ 65.28	9.36	-4.61	-0.00	▷ -0.22	-0.87	CO 39
				Max M _z	▷ 65.28	9.36	-4.61	-0.00	-0.22	▷ -0.87	CO 39
				Min M _z	▷ 65.28	9.36	-4.61	-0.00	-0.22	▷ -0.87	CO 39
				46	CR1	249	0.000	Max N	▷ 122.31	12.00	-6.26
Min N	▷ 26.27	7.49	-8.59					0.01	0.43	-0.00	CO 19
Max V _y	▷ 122.31	12.00	-6.26					-0.00	0.30	0.00	CO 17
Min V _y	▷ 26.27	7.49	-8.59					0.01	0.43	-0.00	CO 19
Max V _z	▷ 64.94	10.75	-5.37					-0.00	0.26	0.00	CO 2
Min V _z	▷ 75.61	10.81	-9.08					0.00	0.44	0.00	CO 12
Max M _T	▷ 26.27	7.49	-8.59					▷ 0.01	0.43	-0.00	CO 19
Min M _T	▷ 122.31	12.00	-6.26					▷ -0.00	0.30	0.00	CO 17
Max M _y	▷ 75.61	10.81	-9.08					0.00	▷ 0.44	0.00	CO 12
Min M _y	▷ 64.94	10.75	-5.37					-0.00	▷ 0.26	0.00	CO 2
Max M _z	▷ 122.31	12.00	-6.26					-0.00	0.30	▷ 0.00	CO 17
Min M _z	▷ 26.27	7.49	-8.59					0.01	0.43	▷ -0.00	CO 19
273	0.100	Max N	▷ 122.05		14.43	-6.29	-0.01	-0.31	-1.27	CO 17	
		Min N	▷ 26.17		7.80	-8.59	0.00	-0.43	-0.76	CO 19	
		Max V _y	▷ 122.05		14.43	-6.29	-0.01	-0.31	-1.27	CO 17	
		Min V _y	▷ 26.17		7.80	-8.59	0.00	-0.43	-0.76	CO 19	
		Max V _z	▷ 64.74		11.89	-5.38	-0.00	-0.27	-1.11	CO 2	
		Min V _z	▷ 75.41		12.15	-9.09	-0.00	-0.45	-1.12	CO 12	
		Max M _T	▷ 26.17		7.80	-8.59	▷ 0.00	-0.43	-0.76	CO 19	
		Min M _T	▷ 122.05		14.43	-6.29	▷ -0.01	-0.31	-1.27	CO 17	
		Max M _y	▷ 64.74		11.89	-5.38	-0.00	▷ -0.27	-1.11	CO 2	
		Min M _y	▷ 75.41		12.15	-9.09	-0.00	▷ -0.45	-1.12	CO 12	
		Max M _z	▷ 26.17		7.80	-8.59	-0.00	-0.43	▷ -0.76	CO 19	
		Min M _z	▷ 122.05		14.43	-6.29	-0.01	-0.31	▷ -1.27	CO 17	
CR2	249	0.000	Max N		▷ 90.58	9.06	-4.63	-0.00	0.22	0.00	CO 36
			Min N		▷ 19.45	5.55	-6.33	0.00	0.31	-0.00	CO 38
			Max V _y		▷ 90.58	9.06	-4.63	-0.00	0.22	0.00	CO 36
			Min V _y		▷ 19.45	5.55	-6.33	0.00	0.31	-0.00	CO 38
			Max V _z		▷ 48.07	8.04	-3.97	-0.00	0.19	0.00	CO 21
			Min V _z		▷ 55.98	8.10	-6.70	0.00	0.33	0.00	CO 31
			Max M _T		▷ 19.45	5.55	-6.33	▷ 0.00	0.31	-0.00	CO 38
			Min M _T		▷ 90.58	9.06	-4.63	▷ -0.00	0.22	0.00	CO 36
			Max M _y		▷ 55.98	8.10	-6.70	0.00	▷ 0.33	0.00	CO 31
			Min M _y		▷ 48.07	8.04	-3.97	-0.00	▷ 0.19	0.00	CO 21
			Max M _z		▷ 90.58	9.06	-4.63	-0.00	0.22	▷ 0.00	CO 36
			Min M _z		▷ 19.45	5.55	-6.33	0.00	0.31	▷ -0.00	CO 38
273	0.100	Max N	▷ 90.43		10.41	-4.64	-0.01	-0.23	-0.95	CO 36	
		Min N	▷ 19.40		5.73	-6.33	0.00	-0.31	-0.56	CO 38	
		Max V _y	▷ 90.43		10.41	-4.64	-0.01	-0.23	-0.95	CO 36	
		Min V _y	▷ 19.40		5.73	-6.33	0.00	-0.31	-0.56	CO 38	
		Max V _z	▷ 47.96		8.67	-3.97	-0.00	-0.20	-0.82	CO 21	
		Min V _z	▷ 55.87		8.84	-6.71	-0.00	-0.33	-0.83	CO 31	
		Max M _T	▷ 19.40		5.73	-6.33	▷ 0.00	-0.31	-0.56	CO 38	
		Min M _T	▷ 90.43		10.41	-4.64	▷ -0.01	-0.23	-0.95	CO 36	
		Max M _y	▷ 47.96		8.67	-3.97	-0.00	▷ -0.20	-0.82	CO 21	
		Min M _y	▷ 55.87		8.84	-6.71	-0.00	▷ -0.33	-0.83	CO 31	
		Max M _z	▷ 19.40		5.73	-6.33	0.00	-0.31	▷ -0.56	CO 38	
		Min M _z	▷ 90.43		10.41	-4.64	-0.01	-0.23	▷ -0.95	CO 36	
CR3	249	0.000	Max N	▷ 54.87	7.94	-4.71	-0.00	0.23	0.00	CO 39	
			Min N	▷ 54.87	7.94	-4.71	-0.00	0.23	0.00	CO 39	
			Max V _y	▷ 54.87	7.94	-4.71	-0.00	0.23	0.00	CO 39	
			Min V _y	▷ 54.87	7.94	-4.71	-0.00	0.23	0.00	CO 39	
			Max V _z	▷ 54.87	7.94	-4.71	-0.00	0.23	0.00	CO 39	
			Min V _z	▷ 54.87	7.94	-4.71	-0.00	0.23	0.00	CO 39	
			Max M _T	▷ 54.87	7.94	-4.71	▷ -0.00	0.23	0.00	CO 39	
			Min M _T	▷ 54.87	7.94	-4.71	▷ -0.00	0.23	0.00	CO 39	
			Max M _y	▷ 54.87	7.94	-4.71	-0.00	▷ 0.23	0.00	CO 39	
			Min M _y	▷ 54.87	7.94	-4.71	-0.00	▷ 0.23	0.00	CO 39	
			Max M _z	▷ 54.87	7.94	-4.71	-0.00	0.23	▷ 0.00	CO 39	
			Min M _z	▷ 54.87	7.94	-4.71	-0.00	0.23	▷ 0.00	CO 39	
273	0.100	Max N	▷ 54.76	8.65	-4.72	-0.00	-0.23	-0.82	CO 39		
		Min N	▷ 54.76	8.65	-4.72	-0.00	-0.23	-0.82	CO 39		
		Max V _y	▷ 54.76	8.65	-4.72	-0.00	-0.23	-0.82	CO 39		
		Min V _y	▷ 54.76	8.65	-4.72	-0.00	-0.23	-0.82	CO 39		
		Max V _z	▷ 54.76	8.65	-4.72	-0.00	-0.23	-0.82	CO 39		
		Min V _z	▷ 54.76	8.65	-4.72	-0.00	-0.23	-0.82	CO 39		
		Max M _T	▷ 54.76	8.65	-4.72	▷ -0.00	-0.23	-0.82	CO 39		
		Min M _T	▷ 54.76	8.65	-4.72	▷ -0.00	-0.23	-0.82	CO 39		
		Max M _y	▷ 54.76	8.65	-4.72	-0.00	▷ -0.23	-0.82	CO 39		
		Min M _y	▷ 54.76	8.65	-4.72	-0.00	▷ -0.23	-0.82	CO 39		
		Max M _z	▷ 54.76	8.65	-4.72	-0.00	-0.23	▷ -0.82	CO 39		
		Min M _z	▷ 54.76	8.65	-4.72	-0.00	-0.23	▷ -0.82	CO 39		
47	CR1	250	0.000	Max N	▷ 108.80	11.20	-6.28	0.00	0.30	-0.00	CO 17



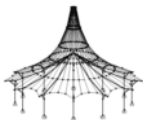
Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
47	CR1			Min N	14.66	7.49	-8.62	0.01	0.43	-0.00	CO 19
				Max V _y	108.80	11.20	-6.28	0.00	0.30	-0.00	CO 17
				Min V _y	14.66	7.49	-8.62	0.01	0.43	-0.00	CO 19
				Max V _z	55.66	10.16	-5.40	0.00	0.27	-0.00	CO 2
				Min V _z	63.70	10.34	-9.12	0.00	0.45	-0.00	CO 12
				Max M _T	14.66	7.49	-8.62	0.01	0.43	-0.00	CO 19
				Min M _T	108.80	11.20	-6.28	0.00	0.30	-0.00	CO 17
				Max M _y	63.70	10.34	-9.12	0.00	0.45	-0.00	CO 12
				Min M _y	55.66	10.16	-5.40	0.00	0.27	-0.00	CO 2
				Max M _z	108.80	11.20	-6.28	0.00	0.30	-0.00	CO 17
				Min M _z	14.66	7.49	-8.62	0.01	0.43	-0.00	CO 19
				Max N	108.57	13.21	-6.28	-0.01	-0.30	-1.18	CO 17
				Min N	14.57	7.66	-8.63	0.00	-0.43	-0.75	CO 19
				Max V _y	108.57	13.21	-6.28	-0.01	-0.30	-1.18	CO 17
				Min V _y	14.57	7.66	-8.63	0.00	-0.43	-0.75	CO 19
				Max V _z	55.48	11.08	-5.41	-0.00	-0.27	-1.04	CO 2
				Min V _z	63.51	11.42	-9.12	-0.00	-0.45	-1.07	CO 12
				Max M _T	14.57	7.66	-8.63	0.00	-0.43	-0.75	CO 19
				Min M _T	108.57	13.21	-6.28	-0.01	-0.30	-1.18	CO 17
				Max M _y	55.48	11.08	-5.41	-0.00	-0.27	-1.04	CO 2
				Min M _y	63.51	11.42	-9.12	-0.00	-0.45	-1.07	CO 12
				Max M _z	14.57	7.66	-8.63	0.00	-0.43	-0.75	CO 19
				Min M _z	108.57	13.21	-6.28	-0.01	-0.30	-1.18	CO 17
				CR2	250	0.000	Max N	80.58	8.46	-4.64	-0.00
	Min N	10.85	5.54				-6.36	0.00	0.32	-0.00	CO 38
	Max V _y	80.58	8.46				-4.64	-0.00	0.23	-0.00	CO 36
	Min V _y	10.85	5.54				-6.36	0.00	0.32	-0.00	CO 38
	Max V _z	41.20	7.60				-3.99	-0.00	0.20	-0.00	CO 21
	Min V _z	47.16	7.75				-6.73	0.00	0.33	-0.00	CO 31
	Max M _T	10.85	5.54				-6.36	0.00	0.32	-0.00	CO 38
	Min M _T	80.58	8.46				-4.64	-0.00	0.23	-0.00	CO 36
	Max M _y	47.16	7.75				-6.73	0.00	0.33	-0.00	CO 31
	Min M _y	41.20	7.60				-3.99	-0.00	0.20	-0.00	CO 21
	Max M _z	80.58	8.46				-4.64	-0.00	0.23	-0.00	CO 36
	Min M _z	10.85	5.54				-6.36	0.00	0.32	-0.00	CO 38
	Max N	80.45	9.58				-4.64	-0.00	-0.23	-0.88	CO 36
	Min N	10.80	5.64				-6.36	0.00	-0.32	-0.56	CO 38
	Max V _y	80.45	9.58				-4.64	-0.00	-0.23	-0.88	CO 36
	Min V _y	10.80	5.64				-6.36	0.00	-0.32	-0.56	CO 38
	Max V _z	41.11	8.10				-4.00	-0.00	-0.20	-0.78	CO 21
	Min V _z	47.06	8.34				-6.73	-0.00	-0.33	-0.79	CO 31
	Max M _T	10.80	5.64				-6.36	0.00	-0.32	-0.56	CO 38
	Min M _T	80.45	9.58				-4.64	-0.00	-0.23	-0.88	CO 36
	Max M _y	41.11	8.10				-4.00	-0.00	-0.20	-0.78	CO 21
	Min M _y	47.06	8.34				-6.73	-0.00	-0.33	-0.79	CO 31
	Max M _z	10.80	5.64				-6.36	0.00	-0.32	-0.56	CO 38
	Min M _z	80.45	9.58				-4.64	-0.00	-0.23	-0.88	CO 36
	CR3	250	0.000	Max N	46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39
Min N				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Max V _y				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Min V _y				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Max V _z				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Min V _z				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Max M _T				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Min M _T				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Max M _y				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Min M _y				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Max M _z				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Min M _z				46.13	7.51	-4.74	0.00	0.23	-0.00	CO 39	
Max N				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Min N				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Max V _y				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Min V _y				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Max V _z				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Min V _z				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Max M _T				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Min M _T				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Max M _y				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Min M _y				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Max M _z				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
Min M _z				46.04	8.08	-4.74	-0.00	-0.23	-0.77	CO 39	
48	CR1	251	0.000	Max N	95.15	10.60	-6.23	0.00	0.30	-0.00	CO 17
				Min N	3.22	7.58	-8.62	0.01	0.43	-0.00	CO 19
				Max V _y	95.15	10.60	-6.23	0.00	0.30	-0.00	CO 17
				Min V _y	3.22	7.58	-8.62	0.01	0.43	-0.00	CO 19
				Max V _z	46.31	9.72	-5.39	0.00	0.27	-0.00	CO 2
				Min V _z	51.60	10.02	-9.10	0.01	0.45	-0.00	CO 12
				Max M _T	3.22	7.58	-8.62	0.01	0.43	-0.00	CO 19
				Min M _T	95.15	10.60	-6.23	0.00	0.30	-0.00	CO 17
				Max M _y	51.60	10.02	-9.10	0.01	0.45	-0.00	CO 12
				Min M _y	46.31	9.72	-5.39	0.00	0.27	-0.00	CO 2
				Max M _z	95.15	10.60	-6.23	0.00	0.30	-0.00	CO 17
				Min M _z	3.22	7.58	-8.62	0.01	0.43	-0.00	CO 19
	275	0.100	Max N	94.95	12.25	-6.23	-0.00	-0.30	-1.11	CO 17	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.	
				N	V _y	V _z	M _T	M _y	M _z		
48	CR1			Min N	▷ 3.13	7.61	-8.63	0.00	-0.43	-0.76	CO 19
				Max V _y	▷ 94.95	▷ 12.25	-6.23	-0.00	-0.30	-1.11	CO 17
				Min V _y	▷ 3.13	7.61	-8.63	0.00	-0.43	-0.76	CO 19
				Max V _z	▷ 46.15	▷ 10.45	▷ -5.39	-0.00	-0.26	-0.99	CO 2
				Min V _z	▷ 51.43	▷ 10.86	▷ -9.10	-0.00	-0.45	-1.03	CO 12
				Max M _T	▷ 3.13	7.61	-8.63	▷ 0.00	-0.43	-0.76	CO 19
				Min M _T	▷ 94.95	▷ 12.25	-6.23	▷ -0.00	-0.30	-1.11	CO 17
				Max M _y	▷ 46.15	▷ 10.45	-5.39	-0.00	▷ -0.26	-0.99	CO 2
				Min M _y	▷ 51.43	▷ 10.86	-9.10	-0.00	▷ -0.45	-1.03	CO 12
				Max M _z	▷ 3.13	7.61	-8.63	0.00	-0.43	▷ -0.76	CO 19
				Min M _z	▷ 94.95	▷ 12.25	-6.23	-0.00	-0.30	▷ -1.11	CO 17
				CR2	251	0.000	Max N	▷ 70.47	8.00	-4.61	0.00
	Min N	▷ 2.38	5.59				-6.36	0.00	0.32	-0.00	CO 38
	Max V _y	▷ 70.47	8.00				-4.61	0.00	0.23	-0.00	CO 36
	Min V _y	▷ 2.38	5.59				-6.36	0.00	0.32	-0.00	CO 38
	Max V _z	▷ 34.28	7.26				▷ -3.99	0.00	0.20	-0.00	CO 21
	Min V _z	▷ 38.21	7.49				▷ -6.72	0.00	0.33	-0.00	CO 31
	Max M _T	▷ 2.38	5.59				-6.36	▷ 0.00	0.32	-0.00	CO 38
	Min M _T	▷ 70.47	8.00				-4.61	▷ 0.00	0.23	-0.00	CO 36
	Max M _y	▷ 38.21	7.49				-6.72	0.00	▷ 0.33	-0.00	CO 31
	Min M _y	▷ 34.28	7.26				-3.99	0.00	▷ 0.20	-0.00	CO 21
	Max M _z	▷ 70.47	8.00				-4.61	0.00	▷ 0.23	-0.00	CO 36
	Min M _z	▷ 2.38	5.59				-6.36	0.00	▷ 0.32	-0.00	CO 38
	275	0.100	Max N		▷ 70.36	8.93	-4.61	-0.00	-0.22	-0.83	CO 36
			Min N		▷ 2.33	5.61	-6.37	0.00	-0.32	-0.56	CO 38
			Max V _y		▷ 70.36	8.93	-4.61	-0.00	-0.22	-0.83	CO 36
			Min V _y		▷ 2.33	5.61	-6.37	0.00	-0.32	-0.56	CO 38
			Max V _z		▷ 34.19	7.66	▷ -3.99	-0.00	-0.20	-0.74	CO 21
			Min V _z		▷ 38.11	7.96	▷ -6.73	-0.00	-0.33	-0.76	CO 31
			Max M _T		▷ 2.33	5.61	-6.37	▷ 0.00	-0.32	-0.56	CO 38
			Min M _T		▷ 70.36	8.93	-4.61	▷ -0.00	-0.22	-0.83	CO 36
			Max M _y		▷ 34.19	7.66	-3.99	-0.00	▷ -0.20	-0.74	CO 21
			Min M _y		▷ 38.11	7.96	-6.73	-0.00	▷ -0.33	-0.76	CO 31
			Max M _z		▷ 2.33	5.61	-6.37	0.00	-0.32	▷ -0.56	CO 38
			Min M _z		▷ 70.36	8.93	-4.61	-0.00	-0.22	▷ -0.83	CO 36
	49	CR3	251	0.000	Max N	▷ 37.38	7.20	-4.73	0.00	0.24	-0.00
Min N					▷ 37.38	7.20	-4.73	0.00	0.24	-0.00	CO 39
Max V _y					▷ 37.38	7.20	-4.73	0.00	0.24	-0.00	CO 39
Min V _y					▷ 37.38	7.20	-4.73	0.00	0.24	-0.00	CO 39
Max V _z					▷ 37.38	7.20	▷ -4.73	0.00	0.24	-0.00	CO 39
Min V _z					▷ 37.38	7.20	▷ -4.73	0.00	0.24	-0.00	CO 39
Max M _T					▷ 37.38	7.20	-4.73	▷ 0.00	0.24	-0.00	CO 39
Min M _T					▷ 37.38	7.20	-4.73	▷ 0.00	0.24	-0.00	CO 39
Max M _y					▷ 37.38	7.20	-4.73	0.00	▷ 0.24	-0.00	CO 39
Min M _y					▷ 37.38	7.20	-4.73	0.00	▷ 0.24	-0.00	CO 39
Max M _z					▷ 37.38	7.20	-4.73	0.00	▷ 0.24	-0.00	CO 39
Min M _z					▷ 37.38	7.20	-4.73	0.00	▷ 0.24	-0.00	CO 39
275			0.100	Max N	▷ 37.29	7.63	-4.73	-0.00	-0.23	-0.73	CO 39
				Min N	▷ 37.29	7.63	-4.73	-0.00	-0.23	-0.73	CO 39
				Max V _y	▷ 37.29	7.63	-4.73	-0.00	-0.23	-0.73	CO 39
				Min V _y	▷ 37.29	7.63	-4.73	-0.00	-0.23	-0.73	CO 39
				Max V _z	▷ 37.29	7.63	▷ -4.73	-0.00	-0.23	-0.73	CO 39
				Min V _z	▷ 37.29	7.63	▷ -4.73	-0.00	-0.23	-0.73	CO 39
				Max M _T	▷ 37.29	7.63	-4.73	▷ -0.00	-0.23	-0.73	CO 39
				Min M _T	▷ 37.29	7.63	-4.73	▷ -0.00	-0.23	-0.73	CO 39
				Max M _y	▷ 37.29	7.63	-4.73	-0.00	▷ -0.23	-0.73	CO 39
				Min M _y	▷ 37.29	7.63	-4.73	-0.00	▷ -0.23	-0.73	CO 39
				Max M _z	▷ 37.29	7.63	-4.73	-0.00	-0.23	▷ -0.73	CO 39
				Min M _z	▷ 37.29	7.63	-4.73	-0.00	-0.23	▷ -0.73	CO 39
CR1		252	0.000	Max N	▷ 83.06	10.23	-6.24	0.00	0.31	0.00	CO 17
				Min N	▷ -7.29	7.76	-8.61	0.01	0.43	-0.00	CO 19
				Max V _y	▷ 83.06	10.23	-6.24	0.00	0.31	0.00	CO 17
				Min V _y	▷ -7.29	7.76	-8.61	0.01	0.43	-0.00	CO 19
				Max V _z	▷ 37.98	9.44	▷ -5.40	0.00	0.27	0.00	CO 2
				Min V _z	▷ 40.71	9.85	▷ -9.10	0.01	0.45	0.00	CO 12
				Max M _T	▷ -7.29	7.76	-8.61	▷ 0.01	0.43	-0.00	CO 19
				Min M _T	▷ 37.98	9.44	-5.40	▷ 0.00	0.27	0.00	CO 2
				Max M _y	▷ 40.71	9.85	-9.10	0.01	▷ 0.45	0.00	CO 12
				Min M _y	▷ 37.98	9.44	-5.40	0.00	▷ 0.27	0.00	CO 2
				Max M _z	▷ 83.06	10.23	-6.24	0.00	0.31	▷ 0.00	CO 17
				Min M _z	▷ -7.29	7.76	-8.61	0.01	0.43	▷ -0.00	CO 19
276	0.100	Max N	▷ 82.88	11.62	-6.24	-0.00	-0.30	-1.07	CO 17		
		Min N	▷ -7.38	7.67	-8.62	0.00	-0.43	-0.77	CO 19		
		Max V _y	▷ 82.88	11.62	-6.24	-0.00	-0.30	-1.07	CO 17		
		Min V _y	▷ -7.38	7.67	-8.62	0.00	-0.43	-0.77	CO 19		
		Max V _z	▷ 37.83	10.02	▷ -5.41	-0.00	-0.27	-0.96	CO 2		
		Min V _z	▷ 40.55	10.50	▷ -9.11	-0.00	-0.45	-1.00	CO 12		
		Max M _T	▷ -7.38	7.67	-8.62	▷ 0.00	-0.43	-0.77	CO 19		
		Min M _T	▷ 82.88	11.62	-6.24	▷ -0.00	-0.30	-1.07	CO 17		
		Max M _y	▷ 37.83	10.02	-5.41	-0.00	▷ -0.27	-0.96	CO 2		
		Min M _y	▷ 40.55	10.50	-9.11	-0.00	▷ -0.45	-1.00	CO 12		
		Max M _z	▷ -7.38	7.67	-8.62	0.00	-0.43	▷ -0.77	CO 19		
		Min M _z	▷ 82.88	11.62	-6.24	-0.00	-0.30	▷ -1.07	CO 17		
CR2	252	0.000	Max N	▷ 61.51	7.72	-4.62	0.00	0.23	0.00	CO 36	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
49	CR2			Min N	▷ -5.41	5.72	-6.36	0.00	0.32	-0.00	CO 38
				Max V _y	▷ 61.51	7.72	-4.62	0.00	0.23	0.00	CO 36
				Min V _y	▷ -5.41	5.72	-6.36	0.00	0.32	-0.00	CO 38
				Max V _z	▷ 28.11	7.05	-4.00	0.00	0.20	0.00	CO 21
				Min V _z	▷ 30.13	7.35	-6.73	0.00	0.33	0.00	CO 31
				Max M _T	▷ -5.41	5.72	-6.36	▷ 0.00	0.32	-0.00	CO 38
				Min M _T	▷ 28.11	7.05	-4.00	▷ 0.00	0.20	0.00	CO 21
				Max M _y	▷ 30.13	7.35	-6.73	0.00	▷ 0.33	0.00	CO 31
				Min M _y	▷ 28.11	7.05	-4.00	0.00	▷ 0.20	0.00	CO 21
				Max M _z	▷ 61.51	7.72	-4.62	0.00	0.23	▷ 0.00	CO 36
				Min M _z	▷ -5.41	5.72	-6.36	0.00	0.32	▷ -0.00	CO 38
				Max N	▷ 61.41	8.49	-4.62	-0.00	-0.23	-0.80	CO 36
				Min N	▷ -5.46	5.67	-6.37	0.00	-0.32	-0.57	CO 38
				Max V _y	▷ 61.41	8.49	-4.62	-0.00	-0.23	-0.80	CO 36
	Min V _y	▷ -5.46	5.67	-6.37	0.00	-0.32	-0.57	CO 38			
	Max V _z	▷ 28.03	7.37	-4.00	-0.00	-0.20	-0.71	CO 21			
	Min V _z	▷ 30.05	7.71	-6.73	-0.00	-0.33	-0.75	CO 31			
	Max M _T	▷ -5.46	5.67	-6.37	▷ 0.00	-0.32	-0.57	CO 38			
	Min M _T	▷ 61.41	8.49	-4.62	▷ -0.00	-0.23	-0.80	CO 36			
	Max M _y	▷ 28.03	7.37	-4.00	-0.00	▷ -0.20	-0.71	CO 21			
	Min M _y	▷ 30.05	7.71	-6.73	-0.00	▷ -0.33	-0.75	CO 31			
	Max M _z	▷ -5.46	5.67	-6.37	0.00	-0.32	-0.57	CO 38			
	Min M _z	▷ 61.41	8.49	-4.62	-0.00	-0.23	▷ -0.80	CO 36			
	CR3	252	0.000	Max N	▷ 29.48	7.00	-4.74	0.00	0.24	0.00	CO 39
				Min N	▷ 29.48	7.00	-4.74	0.00	0.24	0.00	CO 39
				Max V _y	▷ 29.48	7.00	-4.74	0.00	0.24	0.00	CO 39
				Min V _y	▷ 29.48	7.00	-4.74	0.00	0.24	0.00	CO 39
				Max V _z	▷ 29.48	7.00	-4.74	0.00	0.24	0.00	CO 39
Min V _z				▷ 29.48	7.00	-4.74	0.00	0.24	0.00	CO 39	
Max M _T				▷ 29.48	7.00	-4.74	▷ 0.00	0.24	0.00	CO 39	
Min M _T				▷ 29.48	7.00	-4.74	▷ 0.00	0.24	0.00	CO 39	
Max M _y				▷ 29.48	7.00	-4.74	0.00	▷ 0.24	0.00	CO 39	
Min M _y				▷ 29.48	7.00	-4.74	0.00	▷ 0.24	0.00	CO 39	
Max M _z				▷ 29.48	7.00	-4.74	0.00	0.24	▷ 0.00	CO 39	
Min M _z				▷ 29.48	7.00	-4.74	0.00	0.24	▷ 0.00	CO 39	
Max N				▷ 29.40	7.34	-4.74	-0.00	-0.23	-0.71	CO 39	
Min N				▷ 29.40	7.34	-4.74	-0.00	-0.23	-0.71	CO 39	
Max V _y	▷ 29.40	7.34	-4.74	-0.00	-0.23	-0.71	CO 39				
Min V _y	▷ 29.40	7.34	-4.74	-0.00	-0.23	-0.71	CO 39				
Max V _z	▷ 29.40	7.34	-4.74	-0.00	-0.23	-0.71	CO 39				
Min V _z	▷ 29.40	7.34	-4.74	-0.00	-0.23	-0.71	CO 39				
Max M _T	▷ 29.40	7.34	-4.74	▷ -0.00	-0.23	-0.71	CO 39				
Min M _T	▷ 29.40	7.34	-4.74	▷ -0.00	-0.23	-0.71	CO 39				
Max M _y	▷ 29.40	7.34	-4.74	-0.00	▷ -0.23	-0.71	CO 39				
Min M _y	▷ 29.40	7.34	-4.74	-0.00	▷ -0.23	-0.71	CO 39				
Max M _z	▷ 29.40	7.34	-4.74	-0.00	-0.23	▷ -0.71	CO 39				
Min M _z	▷ 29.40	7.34	-4.74	-0.00	-0.23	▷ -0.71	CO 39				
50	CR1	253	0.000	Max N	▷ 71.76	10.07	-6.24	0.00	0.31	0.00	CO 17
				Min N	▷ -17.86	8.04	-8.59	0.01	0.43	-0.00	CO 19
				Max V _y	▷ 71.76	10.07	-6.24	0.00	0.31	0.00	CO 17
				Min V _y	▷ -17.86	8.04	-8.59	0.01	0.43	-0.00	CO 19
				Max V _z	▷ 29.97	9.32	-5.41	0.00	0.27	-0.00	CO 2
				Min V _z	▷ 30.07	9.81	-9.10	0.01	0.45	-0.00	CO 12
				Max M _T	▷ 24.40	8.91	-8.45	▷ 0.01	0.42	-0.00	CO 18
				Min M _T	▷ 29.97	9.32	-5.41	▷ 0.00	0.27	-0.00	CO 2
				Max M _y	▷ 30.07	9.81	-9.10	0.01	▷ 0.45	-0.00	CO 12
				Min M _y	▷ 29.97	9.32	-5.41	0.00	▷ 0.27	-0.00	CO 2
				Max M _z	▷ 71.76	10.07	-6.24	0.00	0.31	▷ 0.00	CO 17
				Min M _z	▷ -17.86	8.04	-8.59	0.01	0.43	▷ -0.00	CO 19
				Max N	▷ 71.58	11.25	-6.24	-0.00	-0.30	-1.04	CO 17
				Min N	▷ -17.96	7.81	-8.60	0.00	-0.43	-0.80	CO 19
				Max V _y	▷ 71.58	11.25	-6.24	-0.00	-0.30	-1.04	CO 17
				Min V _y	▷ -17.96	7.81	-8.60	0.00	-0.43	-0.80	CO 19
	Max V _z	▷ 29.83	9.77	-5.42	-0.00	-0.27	-0.95	CO 2			
	Min V _z	▷ 29.91	10.29	-9.10	0.00	-0.45	-1.00	CO 12			
	Max M _T	▷ -17.96	7.81	-8.60	▷ 0.00	-0.43	-0.80	CO 19			
	Min M _T	▷ 71.58	11.25	-6.24	▷ -0.00	-0.30	-1.04	CO 17			
	Max M _y	▷ 29.83	9.77	-5.42	-0.00	▷ -0.27	-0.95	CO 2			
	Min M _y	▷ 29.91	10.29	-9.10	0.00	▷ -0.45	-1.00	CO 12			
	Max M _z	▷ -17.96	7.81	-8.60	0.00	-0.43	▷ -0.80	CO 19			
	Min M _z	▷ 71.58	11.25	-6.24	-0.00	-0.30	▷ -1.04	CO 17			
	CR2	253	0.000	Max N	▷ 53.13	7.58	-4.63	0.00	0.23	-0.00	CO 36
				Min N	▷ -13.25	5.90	-6.35	0.01	0.32	-0.00	CO 38
				Max V _y	▷ 53.13	7.58	-4.63	0.00	0.23	-0.00	CO 36
				Min V _y	▷ -13.25	5.90	-6.35	0.01	0.32	-0.00	CO 38
				Max V _z	▷ 22.18	6.95	-4.01	0.00	0.20	-0.00	CO 21
				Min V _z	▷ 22.25	7.31	-6.73	0.00	0.34	-0.00	CO 31
				Max M _T	▷ -13.25	5.90	-6.35	▷ 0.01	0.32	-0.00	CO 38
				Min M _T	▷ 22.18	6.95	-4.01	▷ 0.00	0.20	-0.00	CO 21
Max M _y				▷ 22.25	7.31	-6.73	0.00	▷ 0.34	-0.00	CO 31	
Min M _y				▷ 22.18	6.95	-4.01	0.00	▷ 0.20	-0.00	CO 21	
Max M _z				▷ 53.13	7.58	-4.63	0.00	0.23	▷ -0.00	CO 36	
Min M _z				▷ -13.25	5.90	-6.35	0.01	0.32	▷ -0.00	CO 38	
Max N				▷ 53.04	8.23	-4.63	-0.00	-0.23	-0.78	CO 36	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
50	CR2			Min N	▷ -13.30	5.78	-6.36	0.00	-0.32	-0.59	CO 38
				Max V _y	▷ 53.04	8.23	-4.63	-0.00	-0.23	-0.78	CO 36
				Min V _y	▷ -13.30	5.78	-6.36	0.00	-0.32	-0.59	CO 38
				Max V _z	▷ 22.10	7.19	-4.01	-0.00	-0.20	-0.70	CO 21
				Min V _z	▷ 22.16	7.57	-6.73	0.00	-0.33	-0.74	CO 31
				Max M _T	▷ -13.30	5.78	-6.36	▷ 0.00	-0.32	-0.59	CO 38
				Min M _T	▷ 53.04	8.23	-4.63	▷ -0.00	-0.23	-0.78	CO 36
				Max M _y	▷ 22.10	7.19	-4.01	-0.00	▷ -0.20	-0.70	CO 21
				Min M _y	▷ 22.16	7.57	-6.73	0.00	▷ -0.33	-0.74	CO 31
				Max M _z	▷ -13.30	5.78	-6.36	0.00	▷ -0.32	-0.59	CO 38
				Min M _z	▷ 53.04	8.23	-4.63	-0.00	▷ -0.23	-0.78	CO 36
				CR3	253	0.000	Max N	▷ 21.84	6.93	-4.75	0.00
	Min N	▷ 21.84	6.93				-4.75	0.00	0.24	-0.00	CO 39
	Max V _y	▷ 21.84	6.93				-4.75	0.00	0.24	-0.00	CO 39
	Min V _y	▷ 21.84	6.93				-4.75	0.00	0.24	-0.00	CO 39
	Max V _z	▷ 21.84	6.93				-4.75	0.00	0.24	-0.00	CO 39
	Min V _z	▷ 21.84	6.93				-4.75	0.00	0.24	-0.00	CO 39
	277	0.100	Max N		▷ 21.76	7.17	-4.75	-0.00	-0.23	-0.70	CO 39
			Min N		▷ 21.76	7.17	-4.75	-0.00	-0.23	-0.70	CO 39
			Max V _y		▷ 21.76	7.17	-4.75	-0.00	-0.23	-0.70	CO 39
			Min V _y		▷ 21.76	7.17	-4.75	-0.00	-0.23	-0.70	CO 39
			Max V _z		▷ 21.76	7.17	-4.75	-0.00	-0.23	-0.70	CO 39
			Min V _z		▷ 21.76	7.17	-4.75	-0.00	-0.23	-0.70	CO 39
	51	CR1	254	0.000	Max N	▷ 60.95	10.13	-6.19	0.01	0.31	0.00
Min N					▷ -28.42	8.41	-8.53	0.01	0.43	-0.00	CO 19
Max V _y					▷ 60.95	10.13	-6.19	0.01	0.31	0.00	CO 17
Min V _y					▷ -28.42	8.41	-8.53	0.01	0.43	-0.00	CO 19
Max V _z					▷ 22.11	9.37	-5.38	0.01	0.27	-0.00	CO 2
Min V _z					▷ 19.60	9.92	-9.04	0.01	0.45	-0.00	CO 12
Max M _T					▷ 13.13	9.25	-8.38	▷ 0.01	0.42	-0.00	CO 18
Min M _T					▷ 22.11	9.37	-5.38	▷ 0.01	0.27	-0.00	CO 2
Max M _y					▷ 19.60	9.92	-9.04	0.01	▷ 0.45	-0.00	CO 12
Min M _y					▷ 22.11	9.37	-5.38	0.01	▷ 0.27	-0.00	CO 2
Max M _z					▷ 60.95	10.13	-6.19	0.01	▷ 0.31	0.00	CO 17
Min M _z					▷ -28.42	8.41	-8.53	0.01	▷ 0.43	-0.00	CO 19
278	0.100	Max N	▷ 60.78	11.14	-6.19	0.00	-0.30	-1.04	CO 17		
		Min N	▷ -28.53	8.03	-8.54	0.00	-0.43	-0.83	CO 19		
		Max V _y	▷ 60.78	11.14	-6.19	0.00	-0.30	-1.04	CO 17		
		Min V _y	▷ -28.53	8.03	-8.54	0.00	-0.43	-0.83	CO 19		
		Max V _z	▷ 21.97	9.70	-5.39	0.00	-0.27	-0.95	CO 2		
		Min V _z	▷ 19.44	10.24	-9.04	0.00	-0.45	-1.00	CO 12		
		Max M _T	▷ -28.53	8.03	-8.54	▷ 0.00	-0.43	-0.83	CO 19		
		Min M _T	▷ 22.58	9.95	-7.42	▷ 0.00	-0.37	-0.97	CO 4		
		Max M _y	▷ 21.97	9.70	-5.39	0.00	▷ -0.27	-0.95	CO 2		
		Min M _y	▷ 19.44	10.24	-9.04	0.00	▷ -0.45	-1.00	CO 12		
		Max M _z	▷ -28.53	8.03	-8.54	0.00	▷ -0.43	-0.83	CO 19		
		Min M _z	▷ 60.78	11.14	-6.19	0.00	▷ -0.30	-1.04	CO 17		
CR2	254	0.000	Max N	▷ 45.12	7.60	-4.59	0.00	0.23	-0.00	CO 36	
			Min N	▷ -21.08	6.16	-6.32	0.01	0.32	-0.00	CO 38	
			Max V _y	▷ 45.12	7.60	-4.59	0.00	0.23	-0.00	CO 36	
			Min V _y	▷ -21.08	6.16	-6.32	0.01	0.32	-0.00	CO 38	
			Max V _z	▷ 16.35	6.97	-3.99	0.00	0.20	-0.00	CO 21	
			Min V _z	▷ 14.48	7.37	-6.70	0.00	0.33	-0.00	CO 31	
			Max M _T	▷ 9.70	6.85	-6.20	▷ 0.01	0.31	-0.00	CO 37	
			Min M _T	▷ 16.35	6.97	-3.99	▷ 0.00	0.20	-0.00	CO 21	
			Max M _y	▷ 14.48	7.37	-6.70	0.00	▷ 0.33	-0.00	CO 31	
			Min M _y	▷ 16.35	6.97	-3.99	0.00	▷ 0.20	-0.00	CO 21	
			Max M _z	▷ 45.12	7.60	-4.59	0.00	▷ 0.23	-0.00	CO 36	
			Min M _z	▷ -21.08	6.16	-6.32	0.01	▷ 0.32	-0.00	CO 38	
278	0.100	Max N	▷ 45.02	8.16	-4.60	0.00	-0.23	-0.78	CO 36		
		Min N	▷ -21.13	5.95	-6.32	0.00	-0.32	-0.61	CO 38		
		Max V _y	▷ 45.02	8.16	-4.60	0.00	-0.23	-0.78	CO 36		
		Min V _y	▷ -21.13	5.95	-6.32	0.00	-0.32	-0.61	CO 38		
		Max V _z	▷ 16.27	7.15	-3.99	0.00	-0.20	-0.70	CO 21		
		Min V _z	▷ 14.40	7.55	-6.70	0.00	-0.33	-0.74	CO 31		
		Max M _T	▷ -21.13	5.95	-6.32	▷ 0.00	-0.32	-0.61	CO 38		
		Min M _T	▷ 16.73	7.33	-5.49	▷ 0.00	-0.27	-0.72	CO 23		
		Max M _y	▷ 16.27	7.15	-3.99	0.00	▷ -0.20	-0.70	CO 21		
		Min M _y	▷ 14.40	7.55	-6.70	0.00	▷ -0.33	-0.74	CO 31		
		Max M _z	▷ -21.13	5.95	-6.32	0.00	▷ -0.32	-0.61	CO 38		
		Min M _z	▷ 45.02	8.16	-4.60	0.00	▷ -0.23	-0.78	CO 36		
CR3	254	0.000	Max N	▷ 14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
51	CR3	278	0.100	Min N	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Max V _y	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Min V _y	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Max V _z	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Min V _z	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Max M _T	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Min M _T	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Max M _y	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Min M _y	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Max M _z	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Min M _z	14.35	6.97	-4.72	0.00	0.24	-0.00	CO 39
				Max N	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
				Min N	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
				Max V _y	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
				Min V _y	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
				Max V _z	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
				Min V _z	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
				Max M _T	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
				Min M _T	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
				Max M _y	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39
Min M _y	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39				
Max M _z	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39				
Min M _z	14.27	7.13	-4.73	0.00	-0.23	-0.70	CO 39				
52	CR1	279	0.100	Max N	49.94	10.40	-6.16	0.01	0.31	0.00	CO 17
				Min N	-39.82	8.87	-8.49	0.01	0.43	-0.00	CO 19
				Max V _y	49.94	10.40	-6.16	0.01	0.31	0.00	CO 17
				Min V _y	-39.82	8.87	-8.49	0.01	0.43	-0.00	CO 19
				Max V _z	13.86	9.57	-5.37	0.01	0.27	-0.00	CO 2
				Min V _z	8.54	10.16	-9.00	0.01	0.45	-0.00	CO 12
				Max M _T	1.28	9.74	-8.33	0.01	0.42	-0.00	CO 18
				Min M _T	13.86	9.57	-5.37	0.01	0.27	-0.00	CO 2
				Max M _y	8.54	10.16	-9.00	0.01	0.45	-0.00	CO 12
				Min M _y	13.86	9.57	-5.37	0.01	0.27	-0.00	CO 2
				Max M _z	49.94	10.40	-6.16	0.01	0.31	0.00	CO 17
				Min M _z	-39.82	8.87	-8.49	0.01	0.43	-0.00	CO 19
				Max N	49.76	11.24	-6.16	0.00	-0.30	-1.07	CO 17
				Min N	-39.94	8.31	-8.50	0.00	-0.43	-0.87	CO 19
				Max V _y	49.76	11.24	-6.16	0.00	-0.30	-1.07	CO 17
				Min V _y	-39.94	8.31	-8.50	0.00	-0.43	-0.87	CO 19
				Max V _z	13.71	9.78	-5.37	0.00	-0.27	-0.96	CO 2
				Min V _z	8.38	10.30	-9.01	0.00	-0.45	-1.02	CO 12
				Max M _T	1.13	9.76	-8.33	0.00	-0.41	-0.98	CO 18
				Min M _T	13.40	10.34	-8.02	0.00	-0.40	-1.02	CO 5
	Max M _y	13.71	9.78	-5.37	0.00	-0.27	-0.96	CO 2			
	Min M _y	8.38	10.30	-9.01	0.00	-0.45	-1.02	CO 12			
	Max M _z	-39.94	8.31	-8.50	0.00	-0.43	-0.87	CO 19			
	Min M _z	49.76	11.24	-6.16	0.00	-0.30	-1.07	CO 17			
	Max N	36.96	7.78	-4.58	0.00	0.23	-0.00	CO 36			
	Min N	-29.52	6.49	-6.29	0.01	0.32	-0.00	CO 38			
	Max V _y	36.96	7.78	-4.58	0.00	0.23	-0.00	CO 36			
	Min V _y	-29.52	6.49	-6.29	0.01	0.32	-0.00	CO 38			
	Max V _z	10.24	7.10	-3.98	0.00	0.20	-0.00	CO 21			
	Min V _z	6.29	7.53	-6.68	0.01	0.33	-0.00	CO 31			
	Max M _T	0.92	7.20	-6.17	0.01	0.31	-0.00	CO 37			
	Min M _T	10.24	7.10	-3.98	0.00	0.20	-0.00	CO 21			
	Max M _y	6.29	7.53	-6.68	0.01	0.33	-0.00	CO 31			
	Min M _y	10.24	7.10	-3.98	0.00	0.20	-0.00	CO 21			
	Max M _z	36.96	7.78	-4.58	0.00	0.23	-0.00	CO 36			
	Min M _z	-29.52	6.49	-6.29	0.01	0.32	-0.00	CO 38			
	Max N	36.86	8.25	-4.58	0.00	-0.22	-0.79	CO 36			
	Min N	-29.59	6.18	-6.30	0.00	-0.32	-0.64	CO 38			
	Max V _y	36.86	8.25	-4.58	0.00	-0.22	-0.79	CO 36			
	Min V _y	-29.59	6.18	-6.30	0.00	-0.32	-0.64	CO 38			
Max V _z	10.16	7.21	-3.98	0.00	-0.20	-0.71	CO 21				
Min V _z	6.20	7.61	-6.68	0.00	-0.33	-0.76	CO 31				
Max M _T	0.83	7.21	-6.18	0.00	-0.31	-0.72	CO 37				
Min M _T	9.92	7.63	-5.95	0.00	-0.30	-0.75	CO 24				
Max M _y	10.16	7.21	-3.98	0.00	-0.20	-0.71	CO 21				
Min M _y	6.20	7.61	-6.68	0.00	-0.33	-0.76	CO 31				
Max M _z	-29.59	6.18	-6.30	0.00	-0.32	-0.64	CO 38				
Min M _z	36.86	8.25	-4.58	0.00	-0.22	-0.79	CO 36				
Max N	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Min N	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Max V _y	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Min V _y	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Max V _z	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Min V _z	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Max M _T	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Min M _T	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Max M _y	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Min M _y	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Max M _z	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Min M _z	6.52	7.12	-4.71	0.00	0.24	-0.00	CO 39				
Max N	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39				



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
52	CR3			Min N	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Max V _y	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Min V _y	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Max V _z	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Min V _z	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Max M _T	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Min M _T	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Max M _y	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Min M _y	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Max M _z	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				Min M _z	6.44	7.19	-4.72	0.00	-0.23	-0.71	CO 39
				53	CR1	256	0.000	Max N	38.08	10.86	-6.16
Min N	-51.38	9.42	-8.35					0.01	0.42	0.00	CO 19
Max V _y	38.08	10.86	-6.16					0.01	0.31	0.00	CO 17
Min V _y	-51.38	9.42	-8.35					0.01	0.42	0.00	CO 19
Max V _z	5.09	9.91	-5.34					0.01	0.27	0.00	CO 2
Min V _z	-3.03	10.52	-8.93					0.01	0.45	0.00	CO 12
Max M _T	-11.07	10.37	-8.23					0.01	0.41	0.00	CO 18
Min M _T	5.09	9.91	-5.34					0.01	0.27	0.00	CO 2
Max M _y	-3.03	10.52	-8.93					0.01	0.45	0.00	CO 12
Min M _y	5.09	9.91	-5.34					0.01	0.27	0.00	CO 2
Max M _z	38.08	10.86	-6.16					0.01	0.31	0.00	CO 17
Min M _z	-51.38	9.42	-8.35					0.01	0.42	0.00	CO 19
280	0.100	Max N	37.88		11.53	-6.17	0.00	-0.30	-1.11	CO 17	
		Min N	-51.52		8.65	-8.35	0.00	-0.42	-0.92	CO 19	
		Max V _y	37.88		11.53	-6.17	0.00	-0.30	-1.11	CO 17	
		Min V _y	-51.52		8.65	-8.35	0.00	-0.42	-0.92	CO 19	
		Max V _z	4.93		9.99	-5.34	0.00	-0.27	-0.99	CO 2	
		Min V _z	-3.20		10.47	-8.94	0.00	-0.45	-1.05	CO 12	
		Max M _T	-11.24		10.18	-8.24	0.01	-0.41	-1.03	CO 18	
		Min M _T	4.13		10.51	-7.97	0.00	-0.40	-1.05	CO 5	
		Max M _y	4.93		9.99	-5.34	0.00	-0.27	-0.99	CO 2	
		Min M _y	-3.20		10.47	-8.94	0.00	-0.45	-1.05	CO 12	
		Max M _z	-51.52		8.65	-8.35	0.00	-0.42	-0.92	CO 19	
		Min M _z	37.88		11.53	-6.17	0.00	-0.30	-1.11	CO 17	
CR2	256	0.000	Max N		28.16	8.10	-4.58	0.01	0.23	0.00	CO 36
			Min N		-38.10	6.88	-6.19	0.01	0.31	0.00	CO 38
			Max V _y		28.16	8.10	-4.58	0.01	0.23	0.00	CO 36
			Min V _y		-38.10	6.88	-6.19	0.01	0.31	0.00	CO 38
			Max V _z		3.73	7.33	-3.96	0.00	0.20	0.00	CO 21
			Min V _z		-2.29	7.78	-6.63	0.01	0.33	0.00	CO 31
			Max M _T		-8.24	7.64	-6.11	0.01	0.31	0.00	CO 37
			Min M _T		3.73	7.33	-3.96	0.00	0.20	0.00	CO 21
			Max M _y		-2.29	7.78	-6.63	0.01	0.33	0.00	CO 31
			Min M _y		3.73	7.33	-3.96	0.00	0.20	0.00	CO 21
			Max M _z		28.16	8.10	-4.58	0.01	0.23	0.00	CO 36
			Min M _z		-38.10	6.88	-6.19	0.01	0.31	0.00	CO 38
280	0.100	Max N	28.05		8.46	-4.58	0.00	-0.23	-0.82	CO 36	
		Min N	-38.17		6.46	-6.20	0.00	-0.31	-0.67	CO 38	
		Max V _y	28.05		8.46	-4.58	0.00	-0.23	-0.82	CO 36	
		Min V _y	-38.17		6.46	-6.20	0.00	-0.31	-0.67	CO 38	
		Max V _z	3.64		7.38	-3.96	0.00	-0.20	-0.73	CO 21	
		Min V _z	-2.38		7.75	-6.63	0.00	-0.33	-0.78	CO 31	
		Max M _T	-8.33		7.53	-6.11	0.00	-0.31	-0.76	CO 37	
		Min M _T	3.05		7.77	-5.91	0.00	-0.29	-0.77	CO 24	
		Max M _y	3.64		7.38	-3.96	0.00	-0.20	-0.73	CO 21	
		Min M _y	-2.38		7.75	-6.63	0.00	-0.33	-0.78	CO 31	
		Max M _z	-38.17		6.46	-6.20	0.00	-0.31	-0.67	CO 38	
		Min M _z	28.05		8.46	-4.58	0.00	-0.23	-0.82	CO 36	
CR3	256	0.000	Max N	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Min N	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Max V _y	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Min V _y	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Max V _z	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Min V _z	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Max M _T	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Min M _T	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Max M _y	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Min M _y	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Max M _z	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
			Min M _z	-1.71	7.38	-4.68	0.00	0.24	0.00	CO 39	
280	0.100	Max N	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Min N	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Max V _y	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Min V _y	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Max V _z	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Min V _z	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Max M _T	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Min M _T	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Max M _y	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Min M _y	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Max M _z	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
		Min M _z	-1.79	7.35	-4.69	0.00	-0.23	-0.74	CO 39		
54	CR1	257	0.000	Max N	25.06	11.46	-6.01	0.01	0.30	0.00	CO 17



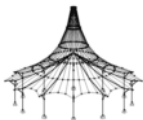
Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
54	CR1			Min N	▷ -65.06	10.02	-8.31	0.01	0.42	-0.00	CO 19
				Max V _y	▷ 25.06	11.46	-6.01	0.01	0.30	0.00	CO 17
				Min V _y	▷ -65.06	10.02	-8.31	0.01	0.42	-0.00	CO 19
				Max V _z	▷ -4.94	10.34	-5.27	0.01	0.26	-0.00	CO 2
				Min V _z	▷ -16.25	10.94	-8.81	0.01	0.44	-0.00	CO 12
				Max M _T	▷ -25.21	11.08	-8.12	▷ 0.01	0.41	-0.00	CO 18
				Min M _T	▷ -4.94	10.34	-5.27	▷ 0.01	0.26	-0.00	CO 2
				Max M _y	▷ -16.25	10.94	-8.81	▷ 0.01	▷ 0.44	-0.00	CO 12
				Min M _y	▷ -4.94	10.34	-5.27	▷ 0.01	▷ 0.26	-0.00	CO 2
				Max M _z	▷ 25.06	11.46	-6.01	▷ 0.01	▷ 0.30	▷ 0.00	CO 17
				Min M _z	▷ -65.06	10.02	-8.31	▷ 0.01	▷ 0.42	▷ -0.00	CO 19
				Max N	▷ 24.85	11.92	-6.02	0.00	-0.30	-1.16	CO 17
				Min N	▷ -65.21	8.98	-8.32	0.00	-0.42	-0.97	CO 19
				Max V _y	▷ 24.85	11.92	-6.02	0.00	-0.30	-1.16	CO 17
				Min V _y	▷ -65.21	8.98	-8.32	0.00	-0.42	-0.97	CO 19
				Max V _z	▷ -5.11	10.26	-5.28	0.00	-0.26	-1.03	CO 2
				Min V _z	▷ -16.44	10.65	-8.82	0.00	-0.44	-1.08	CO 12
				Max M _T	▷ -25.40	10.63	-8.13	▷ 0.01	-0.41	-1.09	CO 18
	Min M _T	▷ -6.57	10.71	-7.86	▷ 0.00	-0.39	-1.08	CO 5			
	Max M _y	▷ -5.11	10.26	-5.28	▷ 0.00	-0.26	-1.03	CO 2			
	Min M _y	▷ -16.44	10.65	-8.82	▷ 0.00	-0.44	-1.08	CO 12			
	Max M _z	▷ -65.21	8.98	-8.32	▷ 0.00	-0.42	-0.97	CO 19			
	Min M _z	▷ 24.85	11.92	-6.02	▷ 0.00	-0.30	-1.16	CO 17			
	CR2	257	0.000	Max N	▷ 18.50	8.51	-4.48	0.01	0.22	-0.00	CO 36
				Min N	▷ -48.24	7.30	-6.17	0.01	0.31	-0.00	CO 38
				Max V _y	▷ 18.50	8.51	-4.48	0.01	0.22	-0.00	CO 36
				Min V _y	▷ -48.24	7.30	-6.17	0.01	0.31	-0.00	CO 38
				Max V _z	▷ -3.70	7.64	-3.91	0.00	0.20	-0.00	CO 21
				Min V _z	▷ -12.09	8.06	-6.55	0.01	0.33	-0.00	CO 31
				Max M _T	▷ -18.73	8.14	-6.03	▷ 0.01	0.30	-0.00	CO 37
				Min M _T	▷ -3.70	7.64	-3.91	▷ 0.00	0.20	-0.00	CO 21
				Max M _y	▷ -12.09	8.06	-6.55	▷ 0.01	▷ 0.33	-0.00	CO 31
				Min M _y	▷ -3.70	7.64	-3.91	▷ 0.00	▷ 0.20	-0.00	CO 21
				Max M _z	▷ 18.50	8.51	-4.48	▷ 0.01	▷ 0.22	-0.00	CO 36
				Min M _z	▷ -48.24	7.30	-6.17	▷ 0.01	▷ 0.31	-0.00	CO 38
				Max N	▷ 18.38	8.76	-4.48	0.00	-0.22	-0.86	CO 36
Min N				▷ -48.32	6.74	-6.18	0.00	-0.31	-0.71	CO 38	
Max V _y				▷ 18.38	8.76	-4.48	0.00	-0.22	-0.86	CO 36	
Min V _y				▷ -48.32	6.74	-6.18	0.00	-0.31	-0.71	CO 38	
Max V _z				▷ -3.79	7.59	-3.92	0.00	-0.20	-0.76	CO 21	
Min V _z				▷ -12.20	7.90	-6.55	0.00	-0.33	-0.80	CO 31	
Max M _T	▷ -18.83	7.90	-6.04	▷ 0.00	-0.30	-0.81	CO 37				
Min M _T	▷ -4.88	7.93	-5.84	▷ 0.00	-0.29	-0.80	CO 24				
Max M _y	▷ -3.79	7.59	-3.92	▷ 0.00	-0.20	-0.76	CO 21				
Min M _y	▷ -12.20	7.90	-6.55	▷ 0.00	-0.33	-0.80	CO 31				
Max M _z	▷ -48.32	6.74	-6.18	0.00	-0.31	-0.71	CO 38				
Min M _z	▷ 18.38	8.76	-4.48	0.00	-0.22	-0.86	CO 36				
CR3	257	0.000	Max N	▷ -11.02	7.70	-4.63	0.01	0.23	-0.00	CO 39	
			Min N	▷ -11.02	7.70	-4.63	0.01	0.23	-0.00	CO 39	
			Max V _y	▷ -11.02	7.70	-4.63	0.01	0.23	-0.00	CO 39	
			Min V _y	▷ -11.02	7.70	-4.63	0.01	0.23	-0.00	CO 39	
			Max V _z	▷ -11.02	7.70	-4.63	0.01	0.23	-0.00	CO 39	
			Min V _z	▷ -11.02	7.70	-4.63	0.01	0.23	-0.00	CO 39	
			Max M _T	▷ -11.02	7.70	-4.63	▷ 0.01	0.23	-0.00	CO 39	
			Min M _T	▷ -11.02	7.70	-4.63	▷ 0.01	0.23	-0.00	CO 39	
			Max M _y	▷ -11.02	7.70	-4.63	▷ 0.01	▷ 0.23	-0.00	CO 39	
			Min M _y	▷ -11.02	7.70	-4.63	▷ 0.01	▷ 0.23	-0.00	CO 39	
			Max M _z	▷ -11.02	7.70	-4.63	▷ 0.01	▷ 0.23	-0.00	CO 39	
			Min M _z	▷ -11.02	7.70	-4.63	▷ 0.01	▷ 0.23	-0.00	CO 39	
			Max N	▷ -11.11	7.56	-4.64	0.00	-0.23	-0.77	CO 39	
			Min N	▷ -11.11	7.56	-4.64	0.00	-0.23	-0.77	CO 39	
			Max V _y	▷ -11.11	7.56	-4.64	0.00	-0.23	-0.77	CO 39	
			Min V _y	▷ -11.11	7.56	-4.64	0.00	-0.23	-0.77	CO 39	
			Max V _z	▷ -11.11	7.56	-4.64	0.00	-0.23	-0.77	CO 39	
			Min V _z	▷ -11.11	7.56	-4.64	0.00	-0.23	-0.77	CO 39	
Max M _T	▷ -11.11	7.56	-4.64	▷ 0.00	-0.23	-0.77	CO 39				
Min M _T	▷ -11.11	7.56	-4.64	▷ 0.00	-0.23	-0.77	CO 39				
Max M _y	▷ -11.11	7.56	-4.64	▷ 0.00	-0.23	-0.77	CO 39				
Min M _y	▷ -11.11	7.56	-4.64	▷ 0.00	-0.23	-0.77	CO 39				
Max M _z	▷ -11.11	7.56	-4.64	▷ 0.00	-0.23	-0.77	CO 39				
Min M _z	▷ -11.11	7.56	-4.64	▷ 0.00	-0.23	-0.77	CO 39				
55	CR1	258	0.000	Max N	▷ 11.93	12.10	-6.02	0.01	0.30	0.00	CO 17
				Min N	▷ -82.10	10.64	-8.27	0.01	0.42	-0.00	CO 19
				Max V _y	▷ 11.93	12.10	-6.02	0.01	0.30	0.00	CO 17
				Min V _y	▷ -82.10	10.64	-8.27	0.01	0.42	-0.00	CO 19
				Max V _z	▷ -15.99	10.80	-5.28	0.01	0.27	-0.00	CO 2
				Min V _z	▷ -31.01	11.34	-8.78	0.01	0.44	-0.00	CO 12
				Max M _T	▷ -41.37	11.83	-8.08	▷ 0.01	0.41	0.00	CO 18
				Min M _T	▷ -19.89	11.05	-5.89	▷ 0.01	0.30	-0.00	CO 9
				Max M _y	▷ -31.01	11.34	-8.78	▷ 0.01	▷ 0.44	-0.00	CO 12
				Min M _y	▷ -15.99	10.80	-5.28	▷ 0.01	▷ 0.27	-0.00	CO 2
				Max M _z	▷ 11.93	12.10	-6.02	▷ 0.01	▷ 0.30	0.00	CO 17
				Min M _z	▷ -18.17	11.20	-7.84	▷ 0.01	▷ 0.39	-0.00	CO 5
				Max N	▷ 11.69	12.33	-6.02	0.00	-0.30	-1.22	CO 17



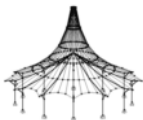
Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.			
					N	V _y	V _z	M _T	M _y	M _z				
55	CR1			Min N	▷ -82.27	9.26	-8.28	0.00	-0.42	-1.02	CO 19			
				Max V _y	▷ 11.69	▷ 12.33	-6.02	0.00	-0.30	-1.22	CO 17			
				Min V _y	▷ -82.27	9.26	-8.28	0.00	-0.42	-1.02	CO 19			
				Max V _z	▷ -16.17	▷ 10.53	▷ -5.28	0.00	-0.27	-1.07	CO 2			
				Min V _z	▷ -31.21	▷ 10.78	▷ -8.79	0.00	-0.44	-1.12	CO 12			
				Max M _T	▷ -41.59	11.05	-8.09	▷ 0.00	-0.41	-1.16	CO 18			
				Min M _T	▷ -18.37	10.88	-7.84	▷ 0.00	-0.39	-1.11	CO 5			
				Max M _y	▷ -16.17	10.53	-5.28	▷ 0.00	▷ -0.27	-1.07	CO 2			
				Min M _y	▷ -31.21	10.78	-8.79	▷ 0.00	▷ -0.44	-1.12	CO 12			
				Max M _z	▷ -82.27	9.26	-8.28	0.00	▷ -0.42	▷ -1.02	CO 19			
				Min M _z	▷ 11.69	12.33	-6.02	0.00	▷ -0.30	▷ -1.22	CO 17			
				CR2	258	0.000	Max N	▷ 8.76	8.95	-4.48	0.01	0.22	0.00	CO 36
							Min N	▷ -60.87	7.74	-6.15	0.01	0.31	-0.00	CO 38
							Max V _y	▷ 8.76	8.95	-4.48	0.01	0.22	0.00	CO 36
	Min V _y	▷ -60.87	7.74				-6.15	0.01	0.31	-0.00	CO 38			
	Max V _z	▷ -11.89	7.96				-3.92	0.00	0.20	-0.00	CO 21			
	Min V _z	▷ -23.03	8.34				-6.53	0.01	0.33	-0.00	CO 31			
	Max M _T	▷ -30.71	8.67				-6.01	▷ 0.01	0.30	0.00	CO 37			
	282	0.100	Min M _T		▷ -14.79	8.14	-4.38	▷ 0.00	0.22	-0.00	CO 28			
			Max M _y		▷ -23.03	8.34	-6.53	▷ 0.01	▷ 0.33	-0.00	CO 31			
			Min M _y		▷ -11.89	7.96	-3.92	▷ 0.00	0.20	-0.00	CO 21			
			Max M _z		▷ 8.76	8.95	-4.48	0.01	0.22	▷ 0.00	CO 36			
			Min M _z		▷ -13.51	8.26	-5.82	0.00	0.29	▷ -0.00	CO 24			
			Max N		▷ 8.63	9.07	-4.49	0.00	-0.22	-0.90	CO 36			
			Min N		▷ -60.96	6.99	-6.16	0.00	-0.31	-0.75	CO 38			
	CR3	258	0.000	Max V _y	▷ 8.63	9.07	-4.49	0.00	-0.22	-0.90	CO 36			
				Min V _y	▷ -60.96	6.99	-6.16	0.00	-0.31	-0.75	CO 38			
				Max V _z	▷ -12.00	7.81	-3.93	0.00	-0.20	-0.79	CO 21			
				Min V _z	▷ -23.14	8.03	-6.54	0.00	-0.33	-0.82	CO 31			
				Max M _T	▷ -30.83	8.25	-6.02	▷ 0.00	-0.30	-0.85	CO 37			
				Min M _T	▷ -13.62	8.08	-5.83	▷ 0.00	-0.29	-0.82	CO 24			
				Max M _y	▷ -12.00	7.81	-3.93	▷ 0.00	-0.20	-0.79	CO 21			
		282	0.100	Min M _y	▷ -23.14	8.03	-6.54	▷ 0.00	-0.33	-0.82	CO 31			
				Max M _z	▷ -60.96	6.99	-6.16	0.00	-0.31	▷ -0.75	CO 38			
				Min M _z	▷ 8.63	9.07	-4.49	0.00	-0.22	▷ -0.90	CO 36			
				Max N	▷ -21.41	8.04	-4.64	0.00	0.23	-0.00	CO 39			
				Min N	▷ -21.41	8.04	-4.64	0.00	0.23	-0.00	CO 39			
				Max V _y	▷ -21.41	8.04	-4.64	0.00	0.23	-0.00	CO 39			
				Min V _y	▷ -21.41	8.04	-4.64	0.00	0.23	-0.00	CO 39			
	CR1	16	0.000	Max V _z	▷ -21.41	8.04	-4.64	0.00	0.23	-0.00	CO 39			
				Min V _z	▷ -21.41	8.04	-4.64	0.00	0.23	-0.00	CO 39			
				Max M _T	▷ -21.41	8.04	-4.64	▷ 0.00	0.23	-0.00	CO 39			
Min M _T				▷ -21.41	8.04	-4.64	▷ 0.00	0.23	-0.00	CO 39				
Max M _y				▷ -21.41	8.04	-4.64	▷ 0.00	0.23	-0.00	CO 39				
Min M _y				▷ -21.41	8.04	-4.64	▷ 0.00	0.23	-0.00	CO 39				
Max M _z				▷ -21.41	8.04	-4.64	0.00	0.23	▷ -0.00	CO 39				
246		0.100	Min M _z	▷ -21.41	8.04	-4.64	0.00	0.23	▷ -0.00	CO 39				
			Max N	▷ -21.51	7.77	-4.64	0.00	-0.23	-0.80	CO 39				
			Min N	▷ -21.51	7.77	-4.64	0.00	-0.23	-0.80	CO 39				
			Max V _y	▷ -21.51	7.77	-4.64	0.00	-0.23	-0.80	CO 39				
			Min V _y	▷ -21.51	7.77	-4.64	0.00	-0.23	-0.80	CO 39				
			Max V _z	▷ -21.51	7.77	-4.64	0.00	-0.23	-0.80	CO 39				
			Min V _z	▷ -21.51	7.77	-4.64	0.00	-0.23	-0.80	CO 39				
CR2	16	0.000	Max M _T	▷ -21.51	7.77	-4.64	▷ 0.00	-0.23	-0.80	CO 39				
			Min M _T	▷ -21.51	7.77	-4.64	▷ 0.00	-0.23	-0.80	CO 39				
			Max M _y	▷ -21.51	7.77	-4.64	▷ 0.00	-0.23	-0.80	CO 39				
			Min M _y	▷ -21.51	7.77	-4.64	▷ 0.00	-0.23	-0.80	CO 39				
			Max M _z	▷ -21.51	7.77	-4.64	0.00	-0.23	▷ -0.80	CO 39				
			Min M _z	▷ -21.51	7.77	-4.64	0.00	-0.23	▷ -0.80	CO 39				
			Max N	▷ -6.51	44.48	-6.08	0.00	0.31	2.21	CO 17				
	246	0.100	Min N	▷ -100.08	37.52	-8.31	0.00	0.43	1.92	CO 19				
			Max V _y	▷ -6.51	44.48	-6.08	0.00	0.31	2.21	CO 17				
			Min V _y	▷ -100.08	37.52	-8.31	0.00	0.43	1.92	CO 19				
			Max V _z	▷ -30.77	38.84	-5.34	0.00	0.27	1.94	CO 2				
			Min V _z	▷ -48.64	39.99	-8.81	-0.00	0.45	2.01	CO 12				
			Max M _T	▷ -60.68	42.81	-8.13	▷ 0.00	0.41	2.17	CO 18				
			Min M _T	▷ -33.48	39.72	-7.87	▷ -0.00	0.40	1.99	CO 5				
CR1	16	0.000	Max M _y	▷ -48.64	39.99	-8.81	-0.00	0.45	2.01	CO 12				
			Min M _y	▷ -30.77	38.84	-5.34	0.00	0.27	1.94	CO 2				
			Max M _z	▷ -6.51	44.48	-6.08	0.00	0.31	▷ 2.21	CO 17				
			Min M _z	▷ -100.08	37.52	-8.31	0.00	0.43	▷ 1.92	CO 19				
			Max N	▷ -6.54	44.48	-6.08	0.00	-0.30	-2.25	CO 17				
			Min N	▷ -100.09	37.49	-8.31	0.00	-0.43	-1.94	CO 19				
			Max V _y	▷ -6.54	44.48	-6.08	0.00	-0.30	-2.25	CO 17				
	246	0.100	Min V _y	▷ -100.09	37.49	-8.31	0.00	-0.43	-1.94	CO 19				
			Max V _z	▷ -30.79	38.83	-5.34	0.00	-0.27	-1.98	CO 2				
			Min V _z	▷ -48.66	39.97	-8.81	-0.00	-0.45	-2.04	CO 12				
			Max M _T	▷ -60.70	42.78	-8.14	▷ 0.00	-0.41	-2.20	CO 18				
			Min M _T	▷ -33.50	39.70	-7.87	▷ -0.00	-0.40	-2.02	CO 5				
			Max M _y	▷ -30.79	38.83	-5.34	▷ 0.00	-0.27	-1.98	CO 2				
			Min M _y	▷ -48.66	39.97	-8.81	-0.00	-0.45	-2.04	CO 12				
CR2	16	0.000	Max M _z	▷ -100.09	37.49	-8.31	0.00	-0.43	-1.94	CO 19				
			Min M _z	▷ -6.54	44.48	-6.08	0.00	-0.30	▷ -2.25	CO 17				
			Max N	▷ -4.84	32.82	-4.54	0.00	0.23	1.63	CO 36				



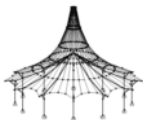
Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
56	CR2			Min N	▷ -74.14	27.75	-6.19	0.00	0.32	1.41	CO 38
				Max V _y	▷ -4.84	32.82	-4.54	0.00	0.23	1.63	CO 36
				Min V _y	▷ -74.14	27.75	-6.19	0.00	0.32	1.41	CO 38
				Max V _z	▷ -22.80	28.71	▷ -3.97	0.00	0.20	1.43	CO 21
				Min V _z	▷ -36.05	29.57	▷ -6.56	-0.00	0.33	1.48	CO 31
				Max M _T	▷ -44.96	31.63	▷ -6.06	▷ 0.00	0.31	1.59	CO 37
				Min M _T	▷ -24.81	29.36	▷ -5.86	▷ -0.00	0.30	1.47	CO 24
				Max M _y	▷ -36.05	29.57	▷ -6.56	-0.00	▷ 0.33	1.48	CO 31
				Min M _y	▷ -22.80	28.71	▷ -3.97	0.00	▷ 0.20	1.43	CO 21
				Max M _z	▷ -4.84	32.82	▷ -4.54	0.00	▷ 0.23	▷ 1.63	CO 36
				Min M _z	▷ -74.14	27.75	▷ -6.19	0.00	▷ 0.32	▷ 1.41	CO 38
				Max N	▷ -4.86	32.82	▷ -4.54	0.00	▷ -0.23	▷ -1.66	CO 36
				Min N	▷ -74.14	27.74	▷ -6.19	0.00	▷ -0.32	▷ -1.43	CO 38
				Max V _y	▷ -4.86	32.82	▷ -4.54	0.00	▷ -0.23	▷ -1.66	CO 36
				Min V _y	▷ -74.14	27.74	▷ -6.19	0.00	▷ -0.32	▷ -1.43	CO 38
				Max V _z	▷ -22.81	28.70	▷ -3.97	0.00	▷ -0.20	▷ -1.46	CO 21
				Min V _z	▷ -36.06	29.56	▷ -6.56	-0.00	▷ -0.33	▷ -1.51	CO 31
				Max M _T	▷ -44.97	31.61	▷ -6.07	▷ 0.00	▷ -0.31	▷ -1.61	CO 37
	Min M _T	▷ -24.82	29.35	▷ -5.86	▷ -0.00	▷ -0.30	▷ -1.49	CO 24			
	Max M _y	▷ -22.81	28.70	▷ -3.97	0.00	▷ -0.20	▷ -1.46	CO 21			
	Min M _y	▷ -36.06	29.56	▷ -6.56	-0.00	▷ -0.33	▷ -1.51	CO 31			
	Max M _z	▷ -74.14	27.74	▷ -6.19	0.00	▷ -0.32	▷ -1.43	CO 38			
	Min M _z	▷ -4.86	32.82	▷ -4.54	0.00	▷ -0.23	▷ -1.66	CO 36			
	CR3	16	0.000	Max N	▷ -34.04	28.92	-4.68	0.00	0.24	1.45	CO 39
				Min N	▷ -34.04	28.92	-4.68	0.00	0.24	1.45	CO 39
				Max V _y	▷ -34.04	28.92	-4.68	0.00	0.24	1.45	CO 39
				Min V _y	▷ -34.04	28.92	-4.68	0.00	0.24	1.45	CO 39
				Max V _z	▷ -34.04	28.92	▷ -4.68	0.00	0.24	1.45	CO 39
				Min V _z	▷ -34.04	28.92	▷ -4.68	0.00	0.24	1.45	CO 39
				Max M _T	▷ -34.04	28.92	▷ -4.68	▷ 0.00	0.24	1.45	CO 39
				Min M _T	▷ -34.04	28.92	▷ -4.68	▷ 0.00	0.24	1.45	CO 39
				Max M _y	▷ -34.04	28.92	▷ -4.68	0.00	▷ 0.24	1.45	CO 39
				Min M _y	▷ -34.04	28.92	▷ -4.68	0.00	▷ 0.24	1.45	CO 39
				Max M _z	▷ -34.04	28.92	▷ -4.68	0.00	▷ 0.24	▷ 1.45	CO 39
				Min M _z	▷ -34.04	28.92	▷ -4.68	0.00	▷ 0.24	▷ 1.45	CO 39
				Max N	▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39
Min N				▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39	
Max V _y				▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39	
Min V _y				▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39	
Max V _z				▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39	
Min V _z				▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39	
Max M _T	▷ -34.05	28.90	▷ -4.69	▷ 0.00	▷ -0.24	▷ -1.47	CO 39				
Min M _T	▷ -34.05	28.90	▷ -4.69	▷ 0.00	▷ -0.24	▷ -1.47	CO 39				
Max M _y	▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39				
Min M _y	▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39				
Max M _z	▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39				
Min M _z	▷ -34.05	28.90	▷ -4.69	0.00	▷ -0.24	▷ -1.47	CO 39				
Sezione nr.3 - 2 : Rettangolo 350/2700 - Rettangolo 350/1800											
30	CR1	45	0.000	Max N	▷ -283.60	-145.95	177.08	192.75	-436.35	34.90	CO 12
				Min N	▷ -389.73	-172.12	186.64	225.16	-599.23	61.44	CO 18
				Max V _y	▷ -311.30	▷ -137.13	202.27	176.87	-495.14	53.09	CO 19
				Min V _y	▷ -368.98	▷ -180.42	149.64	239.94	-549.65	44.64	CO 17
				Max V _z	▷ -311.30	▷ -137.13	▷ 202.27	176.87	-495.14	53.09	CO 19
				Min V _z	▷ -368.98	▷ -180.42	▷ 149.64	239.94	-549.65	44.64	CO 17
				Max M _T	▷ -368.98	▷ -180.42	▷ 149.64	▷ 239.94	-549.65	44.64	CO 17
				Min M _T	▷ -311.30	▷ -137.13	▷ 202.27	▷ 176.87	-495.14	53.09	CO 19
				Max M _y	▷ -283.60	-145.95	177.08	192.75	▷ -436.35	34.90	CO 12
				Min M _y	▷ -389.73	-172.12	186.64	225.16	▷ -599.23	61.44	CO 18
				Max M _z	▷ -389.73	-172.12	186.64	225.16	▷ -599.23	▷ 61.44	CO 18
				Min M _z	▷ -283.60	-145.95	177.08	192.75	▷ -436.35	▷ 34.90	CO 12
				Max N	▷ -280.79	12.52	-20.97	28.68	-196.55	6.99	CO 14
				Min N	▷ -353.65	13.26	0.47	30.72	-225.81	12.22	CO 18
				Max V _y	▷ -300.89	16.86	4.85	41.88	-106.11	6.15	CO 19
				Min V _y	▷ -333.98	8.94	-25.03	17.27	-316.08	13.05	CO 17
				Max V _z	▷ -300.89	16.86	4.85	41.88	-106.11	6.15	CO 19
				Min V _z	▷ -283.78	14.41	▷ -27.97	34.94	-192.46	5.70	CO 12
	Max M _T	▷ -300.89	16.86	4.85	▷ 41.88	-106.11	6.15	CO 19			
	Min M _T	▷ -333.98	8.94	-25.03	▷ 17.27	-316.08	13.05	CO 17			
	Max M _y	▷ -300.89	16.86	4.85	▷ 41.88	▷ -106.11	6.15	CO 19			
	Min M _y	▷ -333.98	8.94	-25.03	▷ 17.27	▷ -316.08	13.05	CO 17			
	Max M _z	▷ -333.98	8.94	-25.03	17.27	▷ -316.08	▷ 13.05	CO 17			
	Min M _z	▷ -283.48	14.45	▷ -27.71	34.50	-191.37	5.51	CO 15			
	Max N	▷ -8.22	34.29	-29.46	-18.63	-5.88	4.24	CO 17			
	Min N	▷ -70.96	38.09	-59.30	-18.32	-61.62	2.12	CO 19			
	Max V _y	▷ -51.48	42.23	-55.74	-21.16	-44.01	3.27	CO 18			
	Min V _y	▷ -18.34	29.42	-30.02	-15.27	-15.11	2.76	CO 5			
	Max V _z	▷ -8.22	34.29	▷ -29.46	-18.63	-5.88	4.24	CO 17			
	Min V _z	▷ -70.96	38.09	▷ -59.30	-18.32	-61.62	2.12	CO 19			
	Max M _T	▷ -18.34	29.42	-30.02	▷ -15.27	-15.11	2.76	CO 5			
	Min M _T	▷ -51.48	42.23	-55.74	▷ -21.16	-44.01	3.27	CO 18			
	Max M _y	▷ -8.22	34.29	-29.46	▷ -18.63	-5.88	4.24	CO 17			
	Min M _y	▷ -70.96	38.09	-59.30	▷ -18.32	-61.62	2.12	CO 19			
	Max M _z	▷ -8.22	34.29	-29.46	▷ -18.63	-5.88	4.24	CO 17			
	Min M _z	▷ -70.96	38.09	-59.30	▷ -18.32	-61.62	2.12	CO 19			



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.
					N	V _y	V _z	M _T	M _y	M _z	
30	CR2	45	0.000	Max N	▷ -210.66	-108.08	131.07	142.77	-323.96	25.87	CO 31
				Min N	▷ -289.33	-127.46	138.13	166.77	-444.68	45.53	CO 37
				Max V _y	▷ -230.77	▷ -101.66	149.71	131.16	-366.90	39.30	CO 38
				Min V _y	▷ -274.45	▷ -133.48	110.77	177.51	-408.73	33.14	CO 36
				Max V _z	-230.77	-101.66	▷ 149.71	131.16	-366.90	39.30	CO 38
				Min V _z	-274.45	-133.48	▷ 110.77	177.51	-408.73	33.14	CO 36
				Max M _T	-274.45	-133.48	▷ 110.77	▷ 177.51	-408.73	33.14	CO 36
				Min M _T	-230.77	-101.66	149.71	▷ 131.16	-366.90	39.30	CO 38
				Max M _y	-210.66	-108.08	131.07	▷ 142.77	-323.96	25.87	CO 31
				Min M _y	-289.33	-127.46	138.13	▷ 166.77	-444.68	45.53	CO 37
				Max M _z	-289.33	-127.46	138.13	▷ 166.77	▷ -444.68	▷ 45.53	CO 37
				Min M _z	-210.66	-108.08	131.07	▷ 142.77	▷ -323.96	▷ 25.87	CO 31
		44	4.302	Max N	▷ -208.02	9.24	-15.54	21.16	-145.96	5.19	CO 33
				Min N	▷ -261.98	9.78	0.32	22.67	-167.71	9.07	CO 37
				Max V _y	▷ -222.92	▷ 12.48	3.53	30.96	-79.04	4.56	CO 38
				Min V _y	▷ -247.39	▷ 6.55	-18.51	12.68	-234.46	9.70	CO 36
				Max V _z	-222.92	12.48	▷ 3.53	30.96	-79.04	4.56	CO 38
				Min V _z	-210.23	10.64	▷ -20.73	25.80	-142.92	4.23	CO 31
				Max M _T	-222.92	12.48	3.53	▷ 30.96	-79.04	4.56	CO 38
				Min M _T	-247.39	6.55	-18.51	▷ 12.68	-234.46	9.70	CO 36
				Max M _y	-222.92	12.48	3.53	▷ 30.96	-79.04	4.56	CO 38
				Min M _y	-247.39	6.55	-18.51	▷ 12.68	-234.46	9.70	CO 36
				Max M _z	-247.39	6.55	-18.51	12.68	-234.46	▷ 9.70	CO 36
				Min M _z	-210.01	10.67	-20.54	25.47	-142.16	▷ 4.10	CO 34
	28	8.503	Max N	▷ -6.12	25.41	-21.79	-13.82	-4.39	3.16	CO 36	
			Min N	▷ -52.55	28.21	-43.86	-13.57	-45.64	1.57	CO 38	
			Max V _y	▷ -38.15	▷ 31.28	-41.23	-15.68	-32.61	2.44	CO 37	
			Min V _y	▷ -13.60	▷ 21.80	-22.21	-11.32	-11.21	2.06	CO 24	
			Max V _z	-6.12	25.41	▷ -21.79	-13.82	-4.39	3.16	CO 36	
			Min V _z	-52.55	28.21	▷ -43.86	-13.57	-45.64	1.57	CO 38	
			Max M _T	-13.60	21.80	-22.21	▷ -11.32	-11.21	2.06	CO 24	
			Min M _T	-38.15	31.28	-41.23	▷ -15.68	-32.61	2.44	CO 37	
			Max M _y	-6.12	25.41	-21.79	▷ -13.82	-4.39	3.16	CO 36	
			Min M _y	-52.55	28.21	-43.86	▷ -13.57	-45.64	1.57	CO 38	
			Max M _z	-6.12	25.41	-21.79	▷ -13.82	-4.39	3.16	CO 36	
			Min M _z	-52.55	28.21	-43.86	▷ -13.57	-45.64	1.57	CO 38	
	CR3	45	0.000	Max N	▷ -216.15	-107.58	122.37	141.75	-331.39	26.96	CO 39
				Min N	▷ -216.15	-107.58	122.37	141.75	-331.39	26.96	CO 39
				Max V _y	▷ -216.15	▷ -107.58	122.37	141.75	-331.39	26.96	CO 39
				Min V _y	▷ -216.15	▷ -107.58	122.37	141.75	-331.39	26.96	CO 39
				Max V _z	-216.15	-107.58	▷ 122.37	141.75	-331.39	26.96	CO 39
				Min V _z	-216.15	-107.58	▷ 122.37	141.75	-331.39	26.96	CO 39
				Max M _T	-216.15	-107.58	▷ 122.37	▷ 141.75	-331.39	26.96	CO 39
				Min M _T	-216.15	-107.58	122.37	▷ 141.75	-331.39	26.96	CO 39
				Max M _y	-216.15	-107.58	122.37	▷ 141.75	-331.39	26.96	CO 39
				Min M _y	-216.15	-107.58	122.37	▷ 141.75	-331.39	26.96	CO 39
				Max M _z	-216.15	-107.58	122.37	141.75	-331.39	▷ 26.96	CO 39
				Min M _z	-216.15	-107.58	122.37	141.75	-331.39	▷ 26.96	CO 39
44			4.302	Max N	▷ -208.30	9.23	-15.26	20.96	-145.70	5.21	CO 39
				Min N	▷ -208.30	9.23	-15.26	20.96	-145.70	5.21	CO 39
				Max V _y	▷ -208.30	▷ 9.23	-15.26	20.96	-145.70	5.21	CO 39
				Min V _y	▷ -208.30	▷ 9.23	-15.26	20.96	-145.70	5.21	CO 39
				Max V _z	-208.30	9.23	▷ -15.26	20.96	-145.70	5.21	CO 39
				Min V _z	-208.30	9.23	▷ -15.26	20.96	-145.70	5.21	CO 39
				Max M _T	-208.30	9.23	-15.26	▷ 20.96	-145.70	5.21	CO 39
				Min M _T	-208.30	9.23	-15.26	▷ 20.96	-145.70	5.21	CO 39
				Max M _y	-208.30	9.23	-15.26	▷ 20.96	-145.70	5.21	CO 39
				Min M _y	-208.30	9.23	-15.26	▷ 20.96	-145.70	5.21	CO 39
				Max M _z	-208.30	9.23	-15.26	20.96	-145.70	▷ 5.21	CO 39
				Min M _z	-208.30	9.23	-15.26	20.96	-145.70	▷ 5.21	CO 39
28		8.503	Max N	▷ -20.52	22.36	-24.44	-11.72	-17.41	2.29	CO 39	
			Min N	▷ -20.52	22.36	-24.44	-11.72	-17.41	2.29	CO 39	
			Max V _y	▷ -20.52	▷ 22.36	-24.44	-11.72	-17.41	2.29	CO 39	
			Min V _y	▷ -20.52	▷ 22.36	-24.44	-11.72	-17.41	2.29	CO 39	
			Max V _z	-20.52	22.36	▷ -24.44	-11.72	-17.41	2.29	CO 39	
			Min V _z	-20.52	22.36	▷ -24.44	-11.72	-17.41	2.29	CO 39	
			Max M _T	-20.52	22.36	-24.44	▷ -11.72	-17.41	2.29	CO 39	
			Min M _T	-20.52	22.36	-24.44	▷ -11.72	-17.41	2.29	CO 39	
			Max M _y	-20.52	22.36	-24.44	▷ -11.72	-17.41	2.29	CO 39	
			Min M _y	-20.52	22.36	-24.44	▷ -11.72	-17.41	2.29	CO 39	
			Max M _z	-20.52	22.36	-24.44	-11.72	-17.41	▷ 2.29	CO 39	
			Min M _z	-20.52	22.36	-24.44	-11.72	-17.41	▷ 2.29	CO 39	



RF-CONCRETE Surfaces
CA1
Progetto del calcestruzzo
armato

Progetto: Modello: Sottopasso

Data: 27.02.2018

1.1 DATI GENERALI

Normativa di progetto:	UNI EN 1992-1-1/NA:2007-07	
STATO LIMITE ULTIMO		
Combinazioni di risultati per il progetto:	CR1	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10 Persistente e transitoria
STATO LIMITE DI ESERCIZIO		
Combinazioni di risultati per il progetto:	CR2	SLE - Caratteristica k_t 0.472
	CR3	SLE - Quasi permanente k_t 0.400
Tipo di metodo SLE:	Metodo analitico Assumendo un rapporto identico degli spostamenti generalizzati dell'armatura longitudinale	
Progettazione di		
Analisi tensionale del calcestruzzo	<input type="checkbox"/>	
Analisi tensionale dell'acciaio	<input checked="" type="checkbox"/>	
Ampiezza delle fessure	<input checked="" type="checkbox"/>	
Strato di armatura longitudinale		
Armatura longitudinale necessaria automaticamente incrementata per il progetto allo stato limite di esercizio:	<input type="checkbox"/>	
DETTAGLI		
Metodo di analisi per l'involuppo dei risultati	Misto	
Applica forze interne medie nelle regioni medie definite per il calcolo SLU e per il metodo analitico del calcolo SLE.	<input type="checkbox"/>	
Applica le forze interne senza le componenti della nervatura	<input type="checkbox"/>	

1.2 MATERIALI

Materiale nr.	Descrizione del materiale		Commento
	Classe di resistenza del cis	Descrizione dell'acciaio	
2	Beton C28/35	B 450 S (A)	
3	Calcestruzzo C20/25	B 450 S (A)	

1.3 SUPERFICI

Superf. nr.	Mat. nr.	$f_{ct,eff,As,min}$ [N/mm ²]	$W_{k,+z}$ (sup) [mm]		Effetti dovuti al vincolo		Note
			$W_{k,-z}$ (inf) [mm]	Applica	k_c [-]		
11	Tipo di spessore: Costante, Spessore: 35.00 cm 2	2.60	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
13	Tipo di spessore: Costante, Spessore: 35.00 cm 2	2.60	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
14	Tipo di spessore: Costante, Spessore: 35.00 cm 2	2.60	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
15	Tipo di spessore: Costante, Spessore: 35.00 cm 2	2.60	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	

Note:
6) Calcolo dell'armatura minima per gli effetti dovuti al vincolo

1.4 GRUPPO DI ARMATURA NR. 1 - PLATEA, MURI, SOLAIO

Applicato alle superfici:	11,13-15
RAPPORTO DI ARMATURA	
Armatura secondaria minima	20.0 %
Armatura di base minima	0.0 %
Armatura compressa minima	0.0 %
Armatura tesa minima	0.0 %
Massima percentuale di armatura	4.0 %
Minima percentuale di armatura a taglio	0.0 %
AREA DI ARMATURA PER PROGETTO ALLO SLE	
Usa armatura di base disposta e armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3	
Copriferro secondo normativa	<input checked="" type="checkbox"/>
STRATO DI ARMATURA DI BASE - SUPERIORE (-z)	
Numero di direzioni	2
Copriferro dal baricentro delle barre	d-1: 4.00, d-2: 5.00 cm
Parametri di definizione del copriferro	
Impostazioni identiche al copriferro	C+z (inf)
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°
Area di armatura	As-1,-z (sup): 0.00, As-2,-z (sup): 0.00 cm ² /m
STRATO DI ARMATURA DI BASE - INFERIORE (+z)	
Numero di direzioni	2



Progetto: _____ Modello: Sottopasso _____ Data: 27.02.2018

1.4 GRUPPO DI ARMATURA NR. 1 - PLATEA, MURI, SOLAIO

Coprifero dal baricentro delle barre	d-1: 4.00, d-2: 5.00 cm	
Parametri di definizione del coprifero		
Classe di esposizione sec. 4.4.1.2(5)	XC2 / XC3	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Direzione dell'armatura	φ1	φ2
Massimo diametro dell'armatura	0.010 m	0.010 m
Coprifero minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	0.010 m	0.010 m
Coprifero minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	0.025 m	0.025 m
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.000 m	0.000 m
Coprifero minimo sec. 4.4.1.2(2)	0.025 m	0.025 m
Tolleranza della deviazione sec. 4.4.1.3	0.010 m	0.010 m
Coprifero nominale dell'armatura sec. 4.4.1.1	0.040 m	0.040 m
Coprifero minimo	0.040 m	0.050 m
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	As-1,+z (inf): 0.00, As-2,+z (inf): 0.00 cm ² /m	
STRATO DI ARMATURA AGGIUNTIVA - SUPERIORE (-z)		
Numero di direzioni	2	
Coprifero dal baricentro delle barre	d-1: 3.00, d-2: 4.00 cm	
Parametri di definizione del coprifero		
Impostazioni identiche al coprifero	C _{+z} (mf)	
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	Usa armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3	
STRATO DI ARMATURA AGGIUNTIVO - INFERIORE (+z)		
Numero di direzioni	2	
Coprifero dal baricentro delle barre	d-1: 3.00, d-2: 4.00 cm	
Parametri di definizione del coprifero		
Classe di esposizione sec. 4.4.1.2(5)	XC2 / XC3	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Direzione dell'armatura	φ1	φ2
Massimo diametro dell'armatura	0.010 m	0.010 m
Coprifero minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	0.010 m	0.010 m
Coprifero minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	0.025 m	0.025 m
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.000 m	0.000 m
Coprifero minimo sec. 4.4.1.2(2)	0.025 m	0.025 m
Tolleranza della deviazione sec. 4.4.1.3	0.010 m	0.010 m
Coprifero nominale dell'armatura sec. 4.4.1.1	0.040 m	0.040 m
Coprifero minimo	0.040 m	0.050 m
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	Usa armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3	
ARMATURA LONGITUDINALE PER IL PROGETTO DELLA FORZA DI TAGLIO		
Applica armatura longitudinale necessaria		
OPZIONI PER UNI EN 1992-1-1/NA:2007-07		
Minima armatura longitudinale delle piastre sec. 9.3.1	<input checked="" type="checkbox"/>	
Direzione dell'armatura minima		
Direzione dell'armatura con la forza di trazione principale dalle superfici sup (-z) e inf (+z) insieme:	<input checked="" type="checkbox"/>	
Minima armatura longitudinale delle pareti sec. 9.6	<input type="checkbox"/>	
Minima armatura a taglio	<input checked="" type="checkbox"/>	
Limitazione profondità asse neutro	<input checked="" type="checkbox"/>	
Inclinazione variabile del puntone - min	21.801 °	
Inclinazione variabile del puntone di calcestruzzo - max	45.000 °	
Coefficiente parziale γ _s	PT 1.15, EC 1.00, SLE 1.00	
Coefficiente parziale γ _c	PT 1.50, EC 1.00, SLE 1.00	
Considerazione degli effetti a lungo termine Alpha-cc	PT 0.85, EC 0.85, SLE 1.00	
Considerazione degli effetti a lungo termine Alpha-ct	SLE 1.00	

2.2 ARMATURA NECESSARIA PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Simbolo	Armatura nec. SLU	Armatura di base	Armatura aggiuntiva		Unità	Note
		X	Y	Z				Necessaria	Disposta		
11	M836	68.938	1.506	0.000	a _{s,1,-z} (sup)	Non progettabile	0.00	8.84	-	cm ² /m	5)
	M836	68.938	1.506	0.000	a _{s,2,-z} (sup)	Non progettabile	0.00	6.16	-	cm ² /m	5)
	M836	68.938	1.506	0.000	a _{s,1,+z} (inf)	Non progettabile	0.00	3.20	-	cm ² /m	5)
	M836	68.938	1.506	0.000	a _{s,2,+z} (inf)	Non progettabile	0.00	12.77	-	cm ² /m	5)
	M1953	69.070	1.406	0.000	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	13)
13	M2234	53.724	-0.723	0.000	a _{s,1,-z} (sup)	20.45	0.00	20.45	-	cm ² /m	
	M149 - E2341	57.010	-2.878	0.000	a _{s,2,-z} (sup)	13.65	0.00	13.65	-	cm ² /m	



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

2.2 ARMATURA NECESSARIA PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Simbolo	Armatura nec. SLU	Armatura di base	Armatura aggiuntiva		Unità	Note
		X	Y	Z				Necessaria	Disposta		
14	M6	54.440	-5.402	0.000	$a_{s,1,+z}$ (inf)	14.29	0.00	14.29	-	cm ² /m	
	M6	54.440	-5.402	0.000	$a_{s,2,+z}$ (inf)	16.29	0.00	16.29	-	cm ² /m	
	M3	53.705	-0.603	0.000	a_{sw}	Non progettabile	-	-	-	cm ² /m ²	7)
	M2205	58.155	-3.513	0.000	$a_{s,1,-z}$ (sup)	4.58	0.00	4.58	-	cm ² /m	
	M153 - E2398	60.777	-2.237	0.000	$a_{s,2,-z}$ (sup)	11.76	0.00	11.76	-	cm ² /m	
15	M2461	58.984	-4.033	0.000	$a_{s,1,+z}$ (inf)	4.58	0.00	4.58	-	cm ² /m	
	M9	58.622	-4.922	0.000	$a_{s,2,+z}$ (inf)	9.55	0.00	9.55	-	cm ² /m	
	M9	58.622	-4.922	0.000	a_{sw}	8.89	-	-	-	cm ² /m ²	
	M1944	66.378	-2.936	0.000	$a_{s,1,-z}$ (sup)	4.58	0.00	4.58	-	cm ² /m	
	M2434	61.609	-2.083	0.000	$a_{s,2,-z}$ (sup)	8.30	0.00	8.30	-	cm ² /m	
	M1944	66.378	-2.936	0.000	$a_{s,1,+z}$ (inf)	4.58	0.00	4.58	-	cm ² /m	
	M22	60.422	0.201	0.000	$a_{s,2,+z}$ (inf)	7.83	0.00	7.83	-	cm ² /m	
	M12	62.795	-4.367	0.000	a_{sw}	8.89	-	-	-	cm ² /m ²	

NOTE

nr.	Descrizione
5)	Tensione di compressione ammissibile del calcestruzzo nella direzione del puntone superata
7)	Capacità a taglio del calcestruzzo superata
13)	La resistenza a taglio non può essere verificata (sezione trasversale completamente fessurata)

3.2 VERIFICA DI ESERCIZIO PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Caso carico	Tipo	Valore esist.	Progetto		Rapporto	Note
		X	Y	Z				Valore limite	Unità		
11	M2072	68.998	-3.265	0.000	σ_s	0.00	-	N/mm ²		225)	
	M2072	68.998	-3.265	0.000	$a_{s,min}$	0.00	-	cm ² /m		225)	
	M2072	68.998	-3.265	0.000	lim d_s	0.00	-	cm		225)	
	M2072	68.998	-3.265	0.000	lim s_i	0.000	-	m		225)	
	M2072	68.998	-3.265	0.000	w_k	0.000	-	mm		225)	
13	M2366	55.074	-3.606	0.000	σ_s	0.00	-	N/mm ²		225)	
	M2383	55.239	-1.734	0.000	$a_{s,min}$	0.00	-	cm ² /m		225)	
	M2366	55.074	-3.606	0.000	lim d_s	0.00	-	cm		213) 214) 225)	
	M2366	55.074	-3.606	0.000	lim s_i	0.000	-	m		217) 218) 225)	
14	M2366	55.074	-3.606	0.000	w_k	0.000	-	mm		219) 225)	
	M21	59.746	0.111	0.000	σ_s	446.51	360.00	N/mm ²	1.3	204)	
	M1397	59.170	-4.852	0.000	$a_{s,min}$	0.02	6.84	cm ² /m	441.8	207) 209) 210)	
	M21	59.746	0.111	0.000	lim d_s	1.00	0.35	cm	2.9	212)	
	M2488	60.125	-3.155	0.000	lim s_i	0.706	0.100	m	7.1	217) 218)	
15	M2488	60.125	-3.155	0.000	w_k	1.343	0.300	mm	4.5	219)	
	M813	61.914	0.402	0.000	σ_s	485.76	360.00	N/mm ²	1.4	204)	
	M2513	62.321	-2.998	0.000	$a_{s,min}$	0.00	7.30	cm ² /m	44425.5	207) 208) 209) 210)	
	M24	63.102	0.577	0.000	lim d_s	1.00	0.35	cm	2.9	212)	
	M157 - E2497	64.493	-1.721	0.000	lim s_i	0.425	0.050	m	8.5	217) 218)	
M2500	64.995	-1.745	0.000	w_k	1.216	0.300	mm	4.1	219)		

NOTE SULLA VERIFICA DI ESERCIZIO

nr.	Descrizione
204)	Tensione dell'acciaio di armatura ammissibile sul lato inferiore (+z) della piastra nella direzione di armatura ϕ_2 superata.
207)	Armatura sul lato inferiore (+z) della piastra nella direzione di armatura ϕ_1 minore dell'armatura minima.
208)	Armatura sul lato inferiore (+z) della piastra nella direzione di armatura ϕ_2 minore dell'armatura minima.
209)	Armatura sul lato superiore (-z) della piastra nella direzione di armatura ϕ_1 minore dell'armatura minima.
210)	Armatura sul lato superiore (-z) della piastra nella direzione di armatura ϕ_2 minore dell'armatura minima.
212)	Diametri ammissibili delle aste sulla superficie inferiore della piastra nella direzione di armatura ϕ_2 superati.
213)	Diametri ammissibili delle aste sulla superficie superiore della piastra nella direzione di armatura ϕ_1 superati.
214)	Diametri ammissibili delle aste sulla superficie superiore della piastra nella direzione di armatura ϕ_2 superati.
217)	Spaziatura ammissibile delle aste sul lato superiore (-z) della piastra nella direzione di armatura ϕ_1 superata.
218)	Spaziatura ammissibile delle aste sul lato superiore (-z) della piastra nella direzione di armatura ϕ_2 superata.
219)	Ampiezza fessure superata.
225)	Armatura longitudinale in una direzione non sufficiente. Nessuna verifica possibile.



Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

1.1 DATI GENERALI

Normativa di progetto:	UNI EN 1992-1-1/NA:2007-07	
STATI LIMITE ULTIMI		
Combinazioni di risultati da calcolare:	CR1	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10 Persistente e transitoria
STATI LIMITE DI ESERCIZIO		
Combinazioni di risultati da calcolare:	CR3	SLE - Quasi permanente k-t: 0.400
Attiva viscosità e ritiro:	<input type="checkbox"/>	
Coefficiente di moltiplicazione del carico	1.000	

1.1 IMPOSTAZIONI - CALCOLO NON-LINEARE (STATO II)

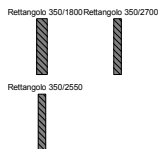
Attiva calcolo non-lineare per stato LIMITE ULTIMO:	<input type="checkbox"/>
Attiva calcolo non-lineare per stato LIMITE DI ESERCIZIO:	<input type="checkbox"/>
Attiva calcolo non-lineare per la resistenza al fuoco	<input type="checkbox"/>

1.2 MATERIALI

Mat. nr.	Definizione materiale	Acciaio di armatura	Commento
2	Calcestruzzo C25/30	B 450 S (A)	

1.3 SEZIONI TRASVERSALI

Sezione nr.	Mat. nr.	Descrizione della sezione	Note	Commento
2	2	Rettangolo 350/1800		
3	2	Rettangolo 350/2700		
4	2	Rettangolo 350/2550		



1.6 GRUPPO DI ARMATURA NR. 1 - TRAVI

Applicato alle aste:	3,30	
ARMATURA LONGITUDINALE		
Diametri disponibili:	10, 12, 14, 16 mm	
Max numero di strati:	4	
Min spaziatura per primo strato:	20.0 mm	
Min spaziatura per strati aggiuntivi:	150.0 mm	
Tipo di ancoraggio:	Diritto	
Superficie acciaio:	Nervata	
Riduzione dell'armatura:	Nessuna	
ARMATURA A TAGLIO		
Diametri disponibili:	10 mm	
Numero di bracci:	2	
Inclinazione:	90°	
Tipo di ancoraggio:	Uncino	
Disposizione staffe:	Passo uniforme staffe	
STRATO DI ARMATURA		
Copriferro sec. normativa	<input checked="" type="checkbox"/>	
Copriferro c-Superiore:	45.0 mm	
Parametri di definizione del copriferro		
Impostazioni identiche al copriferro	C_{+z} (inf)	
Copriferro c-inferiore:	45.0 mm	
Parametri di definizione del copriferro		
Classe di esposizione sec. 4.4.1.2(5)	XC2 / XC3	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Tipo di armatura	Staffa	Longitudinale
Massimo diametro dell'armatura	10.0 mm	16.0 mm
Copriferro minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	10.0 mm	16.0 mm
Copriferro minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	25.0 mm	25.0 mm
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.0 mm	0.0 mm
Copriferro minimo sec. 4.4.1.2(2)	25.0 mm	25.0 mm
Tolleranza della deviazione sec. 4.4.1.3	10.0 mm	10.0 mm
Copriferro nominale dell'armatura sec. 4.4.1.1	35.0 mm	35.0 mm
Copriferro minimo	35.0 mm	45.0 mm
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Copriferro c-laterale:	45.0 mm	
Parametri di definizione del copriferro		
Impostazioni identiche al copriferro	C_{+z} (inf)	
Strato armatura:	-z (sup) - +z (inf) (distribuzione ottimizzata)	



Progetto: _____ Modello: Sottopasso

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1.6 GRUPPO DI ARMATURA NR. 1 - TRAVI

Armatura torsionale distribuita circolarmente:	<input checked="" type="checkbox"/>
Tipo di rastremazione:	
Forze interne pertinenti:	N, V-y, V-z, M-T, M-y, M-z
ARMATURA MINIMA	
Min area di armatura (min A-s, superiore):	0.00 cm ²
Min area di armatura (min A-s, inferiore):	0.00 cm ²
Min armatura longitudinale secondo normativa:	<input checked="" type="checkbox"/>
Min armatura a taglio secondo normativa:	<input checked="" type="checkbox"/>
Armatura longitudinale per il progetto a taglio:	Usa armatura longitudinale necessaria
Limite di progetto dell'ampiezza delle fessure w-k:	0.30 mm
Limite di progetto dell'ampiezza delle fessure w-k:	0.30 mm
Carico dovuto al vincolo:	<input checked="" type="checkbox"/>
- vincolo diretto:	<input type="checkbox"/>
Apertura fessure nei primi 28 giorni:	<input type="checkbox"/>
A _{s,min} associato alla superficie:	-z (sup) / +z (inf)
Strato di armatura longitudinale per Stato limite di esercizio	<input checked="" type="checkbox"/>
Limitazione tensione a compressione del calcestruzzo σ_c	<input checked="" type="checkbox"/>
Limitazione tensione dell'acciaio σ_s	<input checked="" type="checkbox"/>
Minima armatura min A _s	<input checked="" type="checkbox"/>
Diametro limite lim d _s	<input checked="" type="checkbox"/>
Massimo interasse delle aste lim s _i	<input checked="" type="checkbox"/>
Ampiezza fessura w _k	<input checked="" type="checkbox"/>
Trova armatura economica per il progetto dell'ampiezza delle fessure	<input checked="" type="checkbox"/>
Inflessione limite u _{l,z}	<input type="checkbox"/>
GIUNTO A TAGLIO	
Giunto a taglio disponibile:	<input type="checkbox"/>
Progettazione dei collegamenti delle ali sulle sezioni trasversali segmentate	<input type="checkbox"/>
OPZIONI PER EN 1992-1-1:2004/AC:2010	
Max percentuale di armatura:	8.00 %
Limitazione della profondità dell'asse neutro	<input checked="" type="checkbox"/>

2.3 ARMATURA NECESSARIA PER ASTA

Armatura	Asta nr.	Posizione x [mm]	CC/CO CR	Area di armatura	Unità	Messaggio di errore o nota
Asta nr. 3 - Rettangolo 350/2550						
A _{s,-z} (sup)	3	0.0	CR1	13.39	cm ²	(25)
A _{s,+z} (inf)	3	0.0	CR1	13.39	cm ²	(25)
A _{s,T}	3	0.0	CR1	24.77	cm ²	
a _{sw,V,staffa}	3	0.0	CR1	3.11	cm ² /m	(58) (69)
a _{sw,T,staffa}	3	0.0	CR1	0.76	cm ² /m	
Asta nr. 30 - Rettangolo 350/2700 - Rettangolo 350/1800						
A _{s,-z} (sup)	30	0.0	CR1	14.18	cm ²	(25)
A _{s,+z} (inf)	30	0.0	CR1	14.18	cm ²	(25)
A _{s,T}	30	0.0	CR1	84.61	cm ²	
a _{sw,V,staffa}	30	0.0	CR1	3.11	cm ² /m	(58) (69)
a _{sw,T,staffa}	30	0.0	CR1	2.47	cm ² /m	

3.1 ARMATURA LONGITUDINALE DISPOSTA

RF-CONCRETE Members
CA1
Progettazione delle aste di calcestruzzo

Elem. nr.	Posizione dell'armatura	nr. di Barre	d _s [mm]	A _s [cm ²]	Lunghezza [mm]	Posizione x [mm]		Peso [Kg]	Note
		da	a						
Asta nr.3 - Rettangolo 350/2550									
1	-z (sup)	2	12.0	2.26	5095.000	-120.000	4975.000	9.05	116)
2	-z (sup)	2	12.0	2.26	5095.000	-120.000	4975.000	9.05	116)
3	-z (sup)	2	12.0	2.26	5095.000	-120.000	4975.000	9.05	116)
4	-z (sup)	8	12.0	9.05	5095.000	-120.000	4975.000	36.19	116)
5	+z (inf)	2	12.0	2.26	5095.000	-120.000	4975.000	9.05	116)
6	+z (inf)	2	12.0	2.26	5095.000	-120.000	4975.000	9.05	116)
7	+z (inf)	2	12.0	2.26	5095.000	-120.000	4975.000	9.05	116)
8	+z (inf)	8	12.0	9.05	5095.000	-120.000	4975.000	36.19	116)
9	+y (lat)	18	10.0	14.14	5055.000	-100.000	4955.000	56.10	158)
Asta nr.30 - Rettangolo 350/2700 - Rettangolo 350/1800									
1	-z (sup)	2	14.0	3.08	8784.000	-140.000	8644.000	21.23	
2	-z (sup)	2	14.0	3.08	8784.000	-140.000	8644.000	21.23	
3	-z (sup)	2	14.0	3.08	8784.000	-140.000	8644.000	21.23	
4	-z (sup)	8	14.0	12.32	8784.000	-140.000	8644.000	84.92	
5	+z (inf)	2	14.0	3.08	8784.000	-140.000	8644.000	21.23	
6	+z (inf)	2	14.0	3.08	8784.000	-140.000	8644.000	21.23	
7	+z (inf)	2	14.0	3.08	8784.000	-140.000	8644.000	21.23	
8	+z (inf)	8	14.0	12.32	8784.000	-140.000	8644.000	84.92	
9	+y (lat)	8	10.0	6.28	8704.000	-100.000	8604.000	42.93	158)

3.1.1 ARMATURA LONGITUDINALE DISPOSTA - ANCORAGGIO

Elem. nr.	Tipo di ancoraggio	Aderenza	l _{bd} [mm]	l ₁ [mm]	l ₂ [mm]	Totale [mm]	d _{br} [mm]
Asta nr.3 - Rettangolo 350/2550							
1 Inizio	Diritto	debole	120.000	120.000	-	120.000	-
1 Fine	Diritto	debole	120.000	120.000	-	120.000	-
2 Inizio	Diritto	debole	120.000	120.000	-	120.000	-
2 Fine	Diritto	debole	120.000	120.000	-	120.000	-



Progetto: _____ Modello: Sottopasso

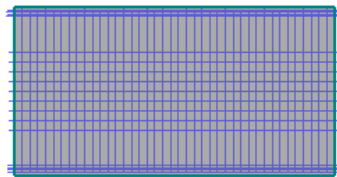
Data: 27.02.2018

3.1.1 ARMATURA LONGITUDINALE DISPOSTA - ANCORAGGIO

Elem. nr.	Tipo di ancoraggio	Aderenza	l_{bd} [mm]	l_1 [mm]	l_2 [mm]	Totale [mm]	d_{br} [mm]
3 Inizio	Diritto	debole	120.000	120.000	-	120.000	-
3 Fine	Diritto	debole	120.000	120.000	-	120.000	-
4 Inizio	Diritto	debole	120.000	120.000	-	120.000	-
4 Fine	Diritto	debole	120.000	120.000	-	120.000	-
5 Inizio	Diritto	buono	120.000	120.000	-	120.000	-
5 Fine	Diritto	buono	120.000	120.000	-	120.000	-
6 Inizio	Diritto	buono	120.000	120.000	-	120.000	-
6 Fine	Diritto	buono	120.000	120.000	-	120.000	-
7 Inizio	Diritto	buono	120.000	120.000	-	120.000	-
7 Fine	Diritto	buono	120.000	120.000	-	120.000	-
8 Inizio	Diritto	buono	120.000	120.000	-	120.000	-
8 Fine	Diritto	buono	120.000	120.000	-	120.000	-
9 Inizio	Diritto	debole	100.000	100.000	-	100.000	-
9 Fine	Diritto	debole	100.000	100.000	-	100.000	-
Asta nr.30 - Rettangolo 350/2700 - Rettangolo 350/1800							
1 Inizio	Diritto	debole	140.000	140.000	-	140.000	-
1 Fine	Diritto	debole	140.000	140.000	-	140.000	-
2 Inizio	Diritto	debole	140.000	140.000	-	140.000	-
2 Fine	Diritto	debole	140.000	140.000	-	140.000	-
3 Inizio	Diritto	debole	140.000	140.000	-	140.000	-
3 Fine	Diritto	debole	140.000	140.000	-	140.000	-
4 Inizio	Diritto	debole	140.000	140.000	-	140.000	-
4 Fine	Diritto	debole	140.000	140.000	-	140.000	-
5 Inizio	Diritto	buono	140.000	140.000	-	140.000	-
5 Fine	Diritto	buono	140.000	140.000	-	140.000	-
6 Inizio	Diritto	buono	140.000	140.000	-	140.000	-
6 Fine	Diritto	buono	140.000	140.000	-	140.000	-
7 Inizio	Diritto	buono	140.000	140.000	-	140.000	-
7 Fine	Diritto	buono	140.000	140.000	-	140.000	-
8 Inizio	Diritto	buono	140.000	140.000	-	140.000	-
8 Fine	Diritto	buono	140.000	140.000	-	140.000	-
9 Inizio	Diritto	debole	100.000	100.000	-	100.000	-
9 Fine	Diritto	debole	100.000	100.000	-	100.000	-

RF-CONCRETE MEMBERS - ASTA NR. 3 - RETTANGOLO 350/2550

- ④ 8 ϕ 12.0, l = 5095.0 mm
- ③ 2 ϕ 12.0, l = 5095.0 mm
- ② 2 ϕ 12.0, l = 5095.0 mm
- ① 2 ϕ 12.0, l = 5095.0 mm



- ⑤ 2 ϕ 12.0, l = 5095.0 mm
- ⑥ 2 ϕ 12.0, l = 5095.0 mm
- ⑦ 2 ϕ 12.0, l = 5095.0 mm
- ⑧ 8 ϕ 12.0, l = 5095.0 mm
- ⑨ 18 ϕ 10.0, l = 5055.0 mm

2.295 m

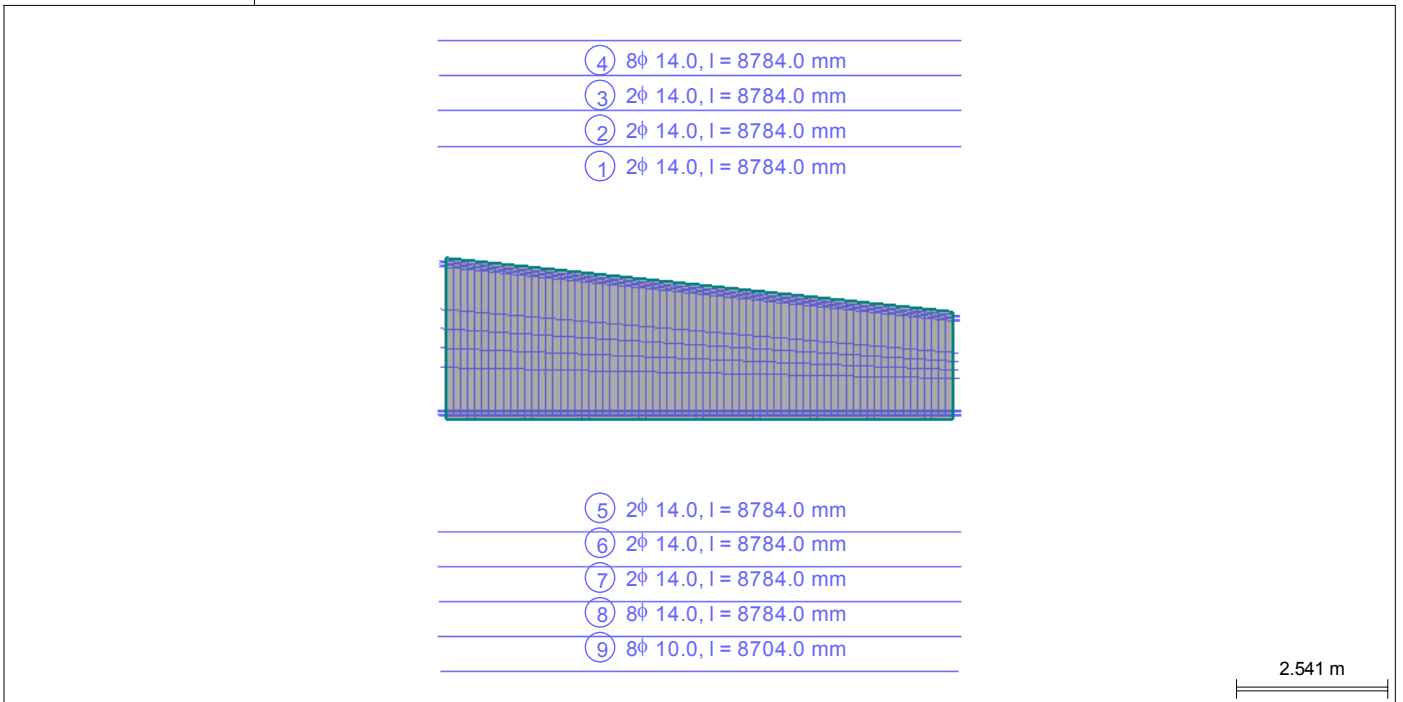


Progetto:

Modello: Sottopasso

Data: 27.02.2018

■ **RF-CONCRETE MEMBERS - ASTA NR. 30 - RETTANGOLO 350/2700 -
 RETTANGOLO 350/1800**



■ **3.2 ARMATURA A TAGLIO DISPOSTA**

Elem. nr.	nr. di Staffe	d _s [mm]	Lunghezza [mm]	Posizione x [mm]		Interasse s _{ii} [mm]	Dimensioni staffa [mm]	nr. di Bracci	Peso [kg]	Note
				da	a					
Asta nr. 3 - Rettangolo 350/2550										
1	42	10.0	4855.000	0.000	4855.000	118.415	2480.0/280.0/108.9	2	148.6	113)
Asta nr. 30 - Rettangolo 350/2700 - Rettangolo 350/1800										
1	72	10.0	8504.000	0.000	8504.000	119.775	2630.0/280.0/108.9	2	228.1	113)

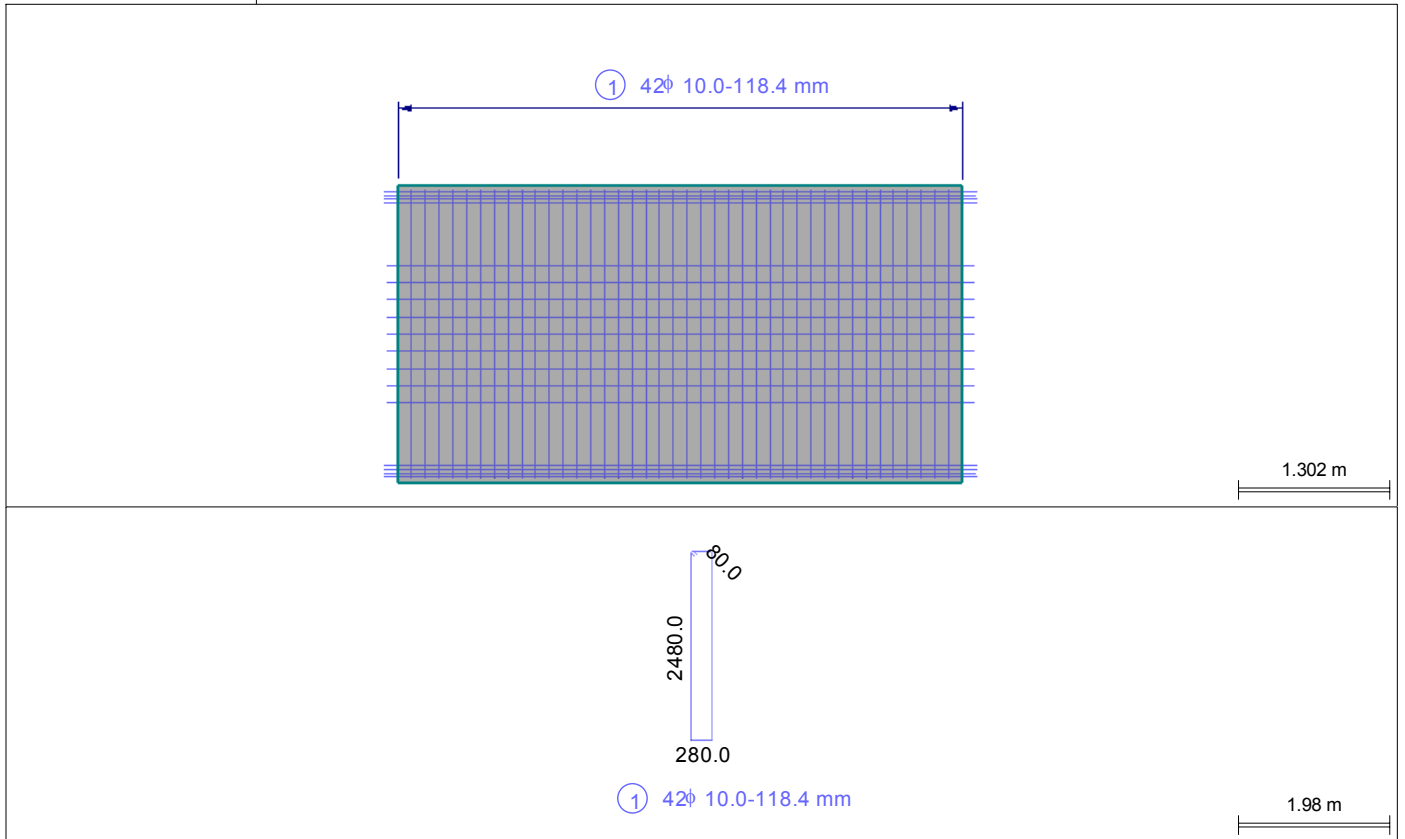


Progetto:

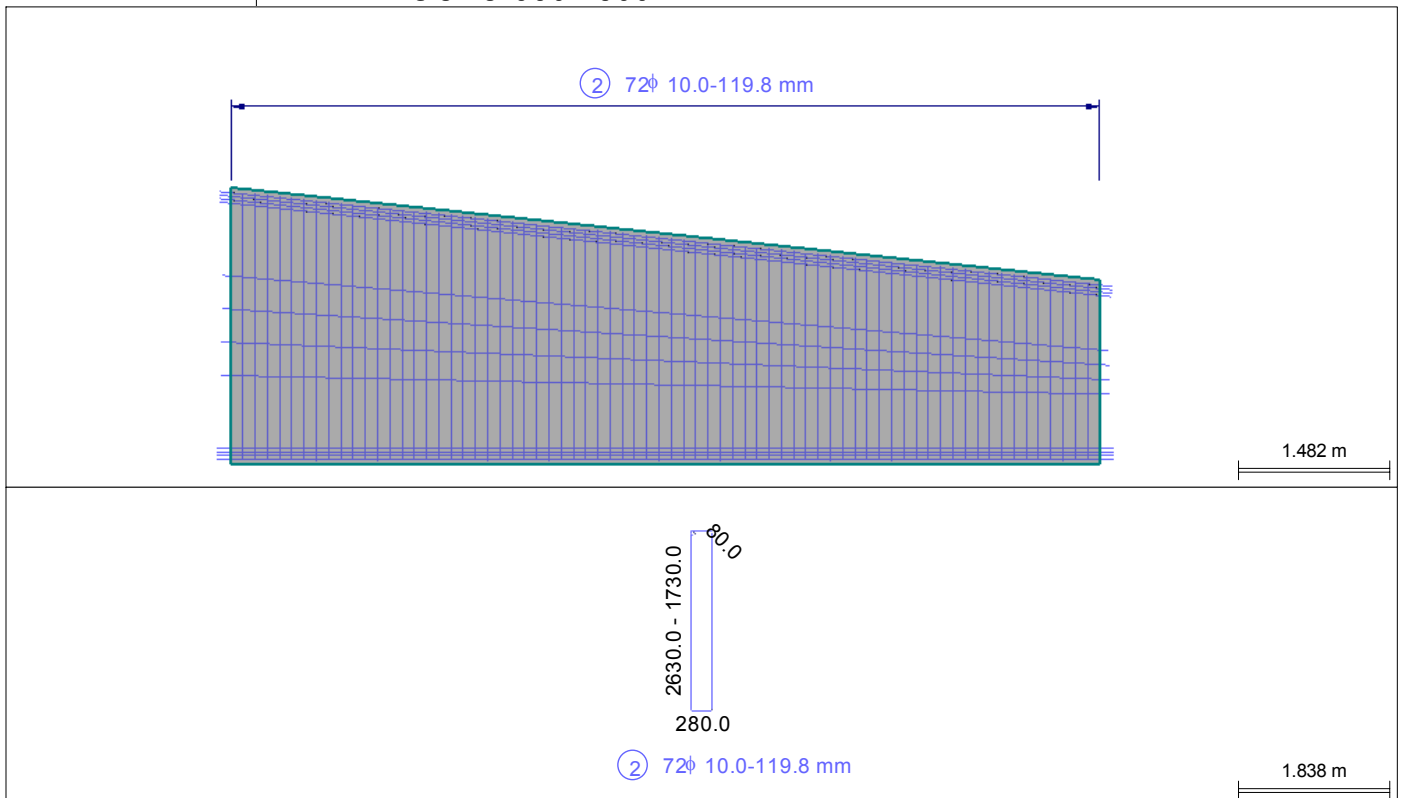
Modello: Sottopasso

Data: 27.02.2018

■ **RF-CONCRETE MEMBERS - ASTA NR. 3 - RETTANGOLO 350/2550**



■ **RF-CONCRETE MEMBERS - ASTA NR. 30 - RETTANGOLO 350/2700 - RETTANGOLO 350/1800**





Progetto: _____ Modello: Sottopasso

Data: 27.02.2018

3.4 DISTINTA DEI FERRI

Elem. nr.	Tipo di armatura	d _s [mm]	Superficie	nr. di Barre	Lunghezza [mm]	Tipo di ancoraggio		Diametro di curvatura [mm]	Peso [Kg]
						Inizio	Fine		
Materiale nr. 2 - Acciaio di armatura B 450 S (A)									
1	Lunghezza	10.0	Nervata	18	5055.000	Diritto	Diritto		56.1
2	Lunghezza	10.0	Nervata	8	8704.000	Diritto	Diritto		42.9
3	Lunghezza	12.0	Nervata	28	5095.000	Diritto	Diritto		126.7
4	Lunghezza	14.0	Nervata	28	8784.000	Diritto	Diritto		297.2
5	A-s, staffa	10.0	Nervata	42	5737.810	Uncino	Uncino	40.000	148.6
6	A-s, staffa	10.0	Nervata	72	6037.810	Uncino	Uncino	40.000	228.1
Totale				196					899.5

4.3 VERIFICA DI ESERCIZIO PER ASTA

Asta nr.	Posizione [mm]	CC/CO CR	Sigma-s [N/mm ²]	Sigma-c [N/mm ²]	min A-s [cm ²]	max D [mm]	lim s _i interasse [S _{r,max} interasse [m	max w _k larghezza [u _{i,z} [mm]	- Messaggio
Valori massimi per asta											
3	121.000	CR3	9.4	-0.9	13.41	146.3	300.0	0.0	0.000	0.7	207)
30	956.000	CR3	88.7	-6.4	13.66	149.1	300.0	0.0	0.000	0.2	207) 334)
Determinante:											
30	956.000	CR3	88.7	-6.4	13.66	149.1	300.0	0.0	0.000	0.2	207) 334)

NOTE

nr.	Descrizione
25)	Min armatura aste compresse sec. 9.5.2 (2)
58)	Adottando un valore approssimato per il braccio interno z
69)	Min armatura a taglio sec. 9.2.2 (5)
113)	Minima armatura a taglio aste compresse sec. 9.5.3
116)	Il diametro non dovrebbe essere maggiore di 10 mm sec. 3.2.2(3)P
158)	Armatura torsionale con distribuzione circonferenziale
207)	Ampiezza fessure direttamente limitata (soddisfatta)
334)	L'effetto del momento flettente M _z non è considerato nelle inflessioni date u _{i,z} .



Progetto: _____ Modello: Sovrapasso Data: 27.02.2018

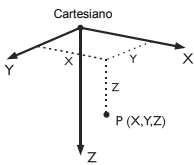
MODELLO - DATI GENERALI

Generale	Nome del modello	: Sovrapasso
	Tipo di modello	: 3D
	Direzione positiva dell'asse globale Z	: Verso il basso
	Classificazione dei casi e delle combinazioni di carico	: Secondo la normativa: EN 1990 + EN 1991-2; Road Bridges
		: Appendice nazionale: CEN - UE
	<input checked="" type="checkbox"/> Crea combinazioni automaticamente	: <input checked="" type="checkbox"/> Combinazioni di carico

IMPOSTAZIONI MESH EF

Generale	Lunghezza obiettivo degli elementi finiti	l_{FE}	: 0.5 m
	Massima distanza tra un nodo e una linea per integrarlo nella linea	ϵ	: 0.0 m
	Massimo numero di nodi della mesh (in migliaia)		: 500
Aste	Numero di divisioni delle aste di tipo fune, con vincolo esterno elastico, rastremazioni o caratteristiche plastiche		: 10
	<input checked="" type="checkbox"/> Attiva divisioni delle aste per grandi deformazioni o analisi post-critica		
	<input checked="" type="checkbox"/> Usa divisione per aste con nodo giacente su di esse		
Superfici	Massimo rapporto delle diagonali del rettangolo dell'EF	Δ_D	: 1.800
	Massima inclinazione fuori piano di due elementi finiti	α	: 0.50 °
	Direzione di forma degli elementi finiti		: Triangoli e quadrangoli <input checked="" type="checkbox"/> Alcuni quadrati dove possibile

1.1 NODI



Nodo nr.	Tipo di nodo	Nodo di riferimento	Sistema di coordinate	Coordinate del nodo			Commento
				X [m]	Y [m]	Z [m]	
1	Standard	-	Cartesiano	-25.848	-5.007	5.325	
2	Standard	-	Cartesiano	-24.681	0.712	3.325	
3	Standard	-	Cartesiano	-22.357	5.560	-2.200	
4	Standard	-	Cartesiano	-22.357	5.560	-0.425	
5	Standard	-	Cartesiano	-22.357	5.560	0.100	
6	Standard	-	Cartesiano	-18.400	5.964	6.225	
7	Standard	-	Cartesiano	-19.093	-0.530	6.225	
8	Standard	-	Cartesiano	-20.293	0.000	-0.600	
9	Standard	-	Cartesiano	-20.885	6.230	6.225	
10	Standard	-	Cartesiano	-19.685	5.699	-0.600	
11	Standard	-	Cartesiano	-25.081	-13.159	3.325	
12	Standard	-	Cartesiano	-22.719	-0.786	-0.300	
13	Standard	-	Cartesiano	-21.579	-0.265	6.225	
14	Standard	-	Cartesiano	-19.685	5.700	-2.375	
15	Standard	-	Cartesiano	-4.082	8.494	0.100	
16	Standard	-	Cartesiano	-24.345	-5.469	5.325	
17	Standard	-	Cartesiano	-23.195	0.915	3.325	
18	Standard	-	Cartesiano	-20.293	0.000	-2.375	
19	Standard	-	Cartesiano	-20.527	-3.655	3.325	
20	Standard	-	Cartesiano	-26.554	-12.872	3.325	
21	Standard	-	Cartesiano	-20.527	-3.655	8.025	
22	Standard	-	Cartesiano	-21.171	-8.522	5.925	
23	Standard	-	Cartesiano	-23.865	-3.004	3.325	
24	Standard	-	Cartesiano	-20.293	0.000	-0.075	
25	Standard	-	Cartesiano	-19.685	5.699	-0.075	
26	Standard	-	Cartesiano	-23.865	-3.004	0.525	
27	Standard	-	Cartesiano	-19.696	5.600	-0.075	
28	Standard	-	Cartesiano	9.086	-2.130	6.400	
29	Standard	-	Cartesiano	-20.283	0.099	-0.075	
30	Standard	-	Cartesiano	-23.865	-3.004	0.000	
31	Standard	-	Cartesiano	-4.082	8.494	6.400	
32	Standard	-	Cartesiano	3.943	0.110	-0.600	
33	Standard	-	Cartesiano	3.943	0.110	6.400	
34	Standard	-	Cartesiano	-5.106	7.549	6.400	
35	Standard	-	Cartesiano	3.468	-1.101	6.400	
36	Standard	-	Cartesiano	-1.425	2.031	6.400	
37	Standard	-	Cartesiano	-23.865	-3.004	-1.775	
38	Standard	-	Cartesiano	-27.566	-18.061	3.325	
39	Standard	-	Cartesiano	-2.736	3.441	6.400	
40	Standard	-	Cartesiano	9.088	-2.330	-0.600	
41	Standard	-	Cartesiano	3.395	-1.287	-0.600	
42	Standard	-	Cartesiano	-1.335	1.671	-0.600	
43	Standard	-	Cartesiano	-4.503	6.252	6.400	
44	Standard	-	Cartesiano	-21.572	-0.151	-0.333	
45	Standard	-	Cartesiano	-21.572	-0.151	-0.202	
46	Standard	-	Cartesiano	-21.572	-0.151	-0.071	
47	Standard	-	Cartesiano	-26.093	-18.348	3.325	
48	Standard	-	Cartesiano	-22.699	-0.769	-0.172	
49	Standard	-	Cartesiano	-23.865	-3.004	8.025	
50	Standard	-	Cartesiano	-23.856	-2.907	-0.009	
51	Standard	-	Cartesiano	-22.699	-0.769	-0.041	
52	Standard	-	Cartesiano	-22.719	-0.786	-2.075	
53	Standard	-	Cartesiano	-22.719	-0.786	0.225	
54	Standard	-	Cartesiano	-22.699	-0.769	0.090	
55	Standard	-	Cartesiano	-23.501	-1.772	-0.009	
56	Standard	-	Cartesiano	-23.500	-1.772	0.122	
57	Standard	-	Cartesiano	-23.500	-1.772	0.253	



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

1.1 NODI

Nodo nr.	Tipo di nodo	Nodo di riferimento	Sistema di coordinate	Coordinate del nodo			Commento
				X [m]	Y [m]	Z [m]	
58	Standard	-	Cartesiano	-21.572	-0.151	-0.908	
59	Standard	-	Cartesiano	-21.572	-0.151	-1.352	
60	Standard	-	Cartesiano	-21.572	-0.151	-1.796	
61	Standard	-	Cartesiano	-22.699	-0.769	-0.747	
62	Standard	-	Cartesiano	-22.699	-0.769	-1.191	
63	Standard	-	Cartesiano	-22.699	-0.769	-1.635	
64	Standard	-	Cartesiano	-23.501	-1.772	-0.584	
65	Standard	-	Cartesiano	-23.500	-1.772	-1.028	
66	Standard	-	Cartesiano	-23.500	-1.772	-1.472	
67	Standard	-	Cartesiano	-20.293	0.000	6.225	
68	Standard	-	Cartesiano	-19.685	5.699	6.225	
69	Standard	-	Cartesiano	-20.193	0.937	-0.600	
70	Standard	-	Cartesiano	-5.298	8.034	6.400	
71	Standard	-	Cartesiano	-6.176	11.287	6.400	
72	Standard	-	Cartesiano	-19.683	5.701	2.728	
73	Standard	-	Cartesiano	-3.811	5.035	6.400	
74	Standard	-	Cartesiano	9.065	0.070	6.400	
75	Standard	-	Cartesiano	-1.013	4.809	6.400	
76	Standard	-	Cartesiano	-22.243	-14.019	5.925	
77	Standard	-	Cartesiano	-5.293	5.700	-0.600	
78	Standard	-	Cartesiano	-5.293	0.000	-0.600	
79	Standard	-	Cartesiano	-2.693	5.700	-0.600	
80	Standard	-	Cartesiano	-2.693	5.700	6.400	
81	Standard	-	Cartesiano	-25.155	-8.051	8.025	
82	Standard	-	Cartesiano	-30.387	-12.228	3.325	
83	Standard	-	Cartesiano	-4.893	11.500	6.400	
84	Standard	-	Cartesiano	4.271	0.948	6.400	
85	Standard	-	Cartesiano	0.096	3.620	6.400	
86	Standard	-	Cartesiano	-2.548	7.261	6.400	
87	Sulla linea	54	Cartesiano	-5.293	4.275	-0.600	
88	Standard	-	Cartesiano	-24.102	-2.653	8.025	
89	Sulla linea	85	Cartesiano	-5.293	1.425	-0.600	
90	Standard	-	Cartesiano	-4.005	11.648	6.400	
91	Standard	-	Cartesiano	-20.176	-3.418	8.025	
92	Standard	-	Cartesiano	-3.073	8.391	6.400	
93	Standard	-	Cartesiano	-5.293	2.850	6.400	
94	Standard	-	Cartesiano	-3.893	4.250	6.400	
95	Standard	-	Cartesiano	-6.693	4.250	6.400	
96	Standard	-	Cartesiano	-21.229	-8.817	8.025	
98	Standard	-	Cartesiano	-20.283	0.099	6.225	
99	Standard	-	Cartesiano	-19.696	5.600	6.225	
100	Standard	-	Cartesiano	-24.601	-2.861	3.325	
101	Standard	-	Cartesiano	-3.893	1.450	6.400	
102	Standard	-	Cartesiano	-26.169	-13.253	5.925	
103	Standard	-	Cartesiano	-6.693	1.450	6.400	
104	Standard	-	Cartesiano	-30.635	-13.707	3.325	
107	Standard	-	Cartesiano	-24.927	4.605	3.325	
108	Standard	-	Cartesiano	-24.927	4.605	-2.025	
110	Standard	-	Cartesiano	-5.293	0.350	-0.600	
111	Standard	-	Cartesiano	-1.931	6.178	6.400	
112	Standard	-	Cartesiano	-3.241	8.813	6.400	
113	Standard	-	Cartesiano	-2.693	5.700	0.100	
114	Standard	-	Cartesiano	-4.893	11.500	0.100	
115	Standard	-	Cartesiano	-19.696	5.600	2.925	
116	Standard	-	Cartesiano	-20.283	0.099	2.925	
117	Standard	-	Cartesiano	-0.526	2.970	-0.600	
118	Standard	-	Cartesiano	-1.717	4.250	-0.600	
119	Standard	-	Cartesiano	-2.593	-0.350	-0.600	
120	Standard	-	Cartesiano	-3.893	0.230	-0.600	
121	Standard	-	Cartesiano	-0.526	2.970	6.400	
123	Standard	-	Cartesiano	-1.717	4.250	6.400	
124	Standard	-	Cartesiano	-26.753	-17.812	3.325	
125	Standard	-	Cartesiano	-3.905	8.046	6.400	
126	Standard	-	Cartesiano	-3.348	6.848	6.400	
127	Standard	-	Cartesiano	-3.905	8.046	0.100	
128	Standard	-	Cartesiano	-3.348	6.848	0.100	
129	Standard	-	Cartesiano	-29.373	-1.662	3.325	
130	Standard	-	Cartesiano	9.074	-0.830	-0.600	
131	Standard	-	Cartesiano	9.074	-0.830	6.400	
132	Standard	-	Cartesiano	-5.293	2.850	-0.600	
133	Standard	-	Cartesiano	-31.573	-14.762	3.325	
134	Standard	-	Cartesiano	-26.753	-17.812	0.325	
135	Standard	-	Cartesiano	-19.685	5.699	3.325	
136	Standard	-	Cartesiano	-26.992	-4.193	5.025	
137	Standard	-	Cartesiano	-30.903	-15.300	3.325	
138	Standard	-	Cartesiano	-31.573	-14.762	-0.435	
139	Standard	-	Cartesiano	-27.845	3.903	4.725	
140	Standard	-	Cartesiano	-28.633	-1.786	3.325	
141	Standard	-	Cartesiano	-27.753	2.093	3.325	
142	Standard	-	Cartesiano	-27.828	1.990	-1.800	
143	Standard	-	Cartesiano	-29.373	-1.662	-1.575	
144	Standard	-	Cartesiano	-27.828	1.990	-0.162	
145	Standard	-	Cartesiano	-26.562	-16.831	3.325	
146	Standard	-	Cartesiano	-26.562	-16.831	0.325	
147	Standard	-	Cartesiano	-26.562	-16.831	2.625	
148	Standard	-	Cartesiano	-27.828	1.990	0.500	
149	Standard	-	Cartesiano	-29.499	0.526	3.325	
150	Standard	-	Cartesiano	-31.407	-13.776	3.325	
151	Standard	-	Cartesiano	-31.407	-13.776	-0.435	
152	Standard	-	Cartesiano	-31.407	-13.776	1.865	
153	Standard	-	Cartesiano	-29.373	-1.662	0.725	



Progetto: _____ Modello: Sovrapasso

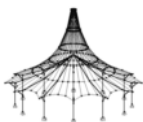
Data: 27.02.2018

1.1 NODI

Nodo nr.	Tipo di nodo	Nodo di riferimento	Sistema di coordinate	Coordinate del nodo			Commento
				X [m]	Y [m]	Z [m]	
154	Standard	-	Cartesiano	-23.938	0.814	3.325	
155	Standard	-	Cartesiano	-32.376	-15.013	3.325	
156	Standard	-	Cartesiano	-23.938	0.814	-0.125	
157	Standard	-	Cartesiano	-30.113	-1.538	3.325	
158	Standard	-	Cartesiano	-24.927	4.605	-0.250	
159	Standard	-	Cartesiano	-24.927	4.605	0.275	
160	Standard	-	Cartesiano	-23.855	-2.905	-0.003	
161	Standard	-	Cartesiano	-23.860	-2.955	-0.002	
162	Standard	-	Cartesiano	-26.753	-17.812	1.575	
163	Standard	-	Cartesiano	-31.573	-14.762	0.815	
164	Standard	-	Cartesiano	-26.562	-16.831	1.575	
165	Standard	-	Cartesiano	-31.407	-13.776	0.815	
166	Standard	-	Cartesiano	-29.373	-1.662	-0.075	
167	Standard	-	Cartesiano	-25.817	-13.016	3.325	
168	Standard	-	Cartesiano	-24.411	5.344	3.325	
169	Standard	-	Cartesiano	-25.808	4.797	3.325	
170	Standard	-	Cartesiano	-22.480	-13.667	2.825	
171	Standard	-	Cartesiano	-24.803	-7.814	3.325	
172	Standard	-	Cartesiano	-21.466	-8.465	3.325	
173	Standard	-	Cartesiano	-24.803	-7.814	2.825	
174	Standard	-	Cartesiano	-21.466	-8.465	2.825	
175	Standard	-	Cartesiano	-25.817	-13.016	2.825	
176	Standard	-	Cartesiano	-24.803	-7.814	8.025	
177	Standard	-	Cartesiano	-21.466	-8.465	8.025	
178	Standard	-	Cartesiano	-25.848	-5.007	3.325	
179	Standard	-	Cartesiano	-27.508	-2.747	3.325	
180	Standard	-	Cartesiano	-25.817	-13.016	5.925	
181	Standard	-	Cartesiano	-22.480	-13.667	5.925	
182	Standard	-	Cartesiano	-21.466	-8.465	5.925	
183	Standard	-	Cartesiano	-24.803	-7.814	5.925	
184	Standard	-	Cartesiano	-25.097	-7.756	5.925	
186	Standard	-	Cartesiano	-20.661	-4.342	3.325	
187	Standard	-	Cartesiano	-21.140	-6.796	3.325	
188	Standard	-	Cartesiano	-20.661	-4.342	5.425	
189	Standard	-	Cartesiano	-21.140	-6.796	5.425	
190	Standard	-	Cartesiano	-26.992	-4.193	3.325	
191	Standard	-	Cartesiano	-20.815	-5.128	7.825	
192	Standard	-	Cartesiano	-20.815	-5.128	6.825	
193	Standard	-	Cartesiano	-25.414	-2.964	5.025	
194	Standard	-	Cartesiano	-21.293	-7.581	7.825	
195	Standard	-	Cartesiano	-21.293	-7.581	6.825	
196	Standard	-	Cartesiano	-23.527	-8.063	3.325	
197	Standard	-	Cartesiano	-23.527	-8.063	5.925	
198	Standard	-	Cartesiano	-23.871	-9.829	5.925	
200	Standard	-	Cartesiano	-23.527	-8.063	2.825	
201	Standard	-	Cartesiano	-23.871	-9.829	2.825	
202	Standard	-	Cartesiano	-23.960	-3.495	3.325	
203	Standard	-	Cartesiano	-25.414	-2.964	3.325	
204	Standard	-	Cartesiano	-23.960	-3.495	5.325	
205	Standard	-	Cartesiano	-28.358	2.536	3.325	
206	Standard	-	Cartesiano	-23.128	-3.148	3.325	
207	Standard	-	Cartesiano	-25.260	-3.095	3.325	
208	Standard	-	Cartesiano	-25.260	-3.095	5.325	
209	Standard	-	Cartesiano	-25.510	-2.645	3.325	
210	Standard	-	Cartesiano	-27.810	3.215	3.325	
211	Standard	-	Cartesiano	-28.116	-0.056	3.325	
212	Standard	-	Cartesiano	-27.688	0.814	3.325	
215	Standard	-	Cartesiano	-25.848	4.004	3.325	
216	Standard	-	Cartesiano	-24.345	-5.469	3.325	
217	Standard	-	Cartesiano	-25.848	4.004	4.725	
220	Standard	-	Cartesiano	-25.491	-3.024	3.325	
221	Standard	-	Cartesiano	-25.510	-2.645	4.725	
222	Standard	-	Cartesiano	-27.508	-2.747	4.725	
223	Standard	-	Cartesiano	-28.052	2.931	3.325	
224	Standard	-	Cartesiano	-28.807	0.235	3.325	
225	Standard	-	Cartesiano	-25.939	5.802	4.725	
226	Standard	-	Cartesiano	-25.939	5.802	3.325	
227	Standard	-	Cartesiano	-27.936	5.701	4.725	
228	Standard	-	Cartesiano	-27.936	5.701	3.325	
229	Standard	-	Cartesiano	-26.879	4.603	3.325	
230	Standard	-	Cartesiano	-25.979	4.603	3.325	Generato da Linea nr. 207
231	Standard	-	Cartesiano	-27.779	4.603	3.325	Generato da Linea nr. 207
232	Standard	-	Cartesiano	-26.879	5.503	3.325	Generato da Linea nr. 207
234	Standard	-	Cartesiano	-21.533	-8.808	5.425	
235	Standard	-	Cartesiano	-21.533	-8.808	3.325	
236	Standard	-	Cartesiano	-21.724	-9.790	3.325	
238	Standard	-	Cartesiano	-21.724	-9.790	5.425	
239	Standard	-	Cartesiano	-26.841	-14.344	3.325	

1.1.1 NODI DI TIPO "SULLA LINEA"

Nodo nr.	Linea di riferimento nr.	Parametro δ [%]	Commento
87	54	50.00	
89	85	57.00	



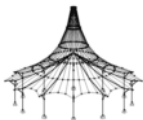
Progetto:

Modello: Sovrapasso

Data: 27.02.2018

1.2 LINEE

Linea nr.	Tipo di linea	Nodi nr.	Lungh. linea L [m]		Commento
1	Spline	30,50	0.098		
2	Polilinea	23,202	0.500	XY	
3	Spline	129,224,141	4.124	XY	
4	Spline	23,154,107	7.755	XY	
5	Spline	37,52,18	5.209		
6	Spline	26,53,24	5.209		
7	Polilinea	23,26	2.800	Z	
8	Polilinea	10,14	1.775	Z	
9	Spline	143,142,108	7.946		
10	Polilinea	25,10	0.525	Z	
11	Spline	30,161,160	0.100		
12	Polilinea	24,8	0.525	Z	
13	Polilinea	8,18	1.775	Z	
14	Polilinea	68,25	6.300	Z	
15	Polilinea	26,30	0.525	Z	
16	Polilinea	101,94	2.800	Y	
17	Polilinea	67,24	6.300	Z	
18	Polilinea	50,160	0.007		
19	Polilinea	99,115	3.300	Z	
20	Spline	50,12,8	5.112		
21	Polilinea	30,37	1.775	Z	
22	Spline	130,32,117	10.588	XY	
23	Polilinea	25,27	0.100	XY	
24	Polilinea	162,164	1.000	XY	
25	Polilinea	115,27	3.000	Z	
26	Polilinea	145,147	0.700	Z	
27	Polilinea	6,7	6.532	XY	
28	Spline	28,35,36	11.593	XY	
29	Polilinea	9,13	6.532	XY	
30	Polilinea	37,146	14.243		
31	Polilinea	94,95	2.800	X	
32	Polilinea	147,26	14.243		
33	Polilinea	83,71	1.300	XY	
34	Polilinea	93,132	7.000	Z	
35	Polilinea	90,83	0.900	XY	
36	Spline	131,33,121	10.588	XY	
37	Polilinea	131,130	7.000	Z	
38	Arco	36,39,73	3.852	XY	
39	Polilinea	77,79	2.600	X	
40	Polilinea	24,29	0.100	XY	
41	Arco	73,43,34	2.831	XY	
42	Polilinea	28,131	1.300	XY	
43	Polilinea	113,79	0.700	Z	
44	Polilinea	116,115	5.532	XY	
45	Polilinea	98,116	3.300	Z	
46	Polilinea	116,29	3.000	Z	
47	Polilinea	131,74	0.900	XY	
48	Polilinea	40,130	1.500	XY	
49	Polilinea	6,9	2.500	XY	
50	Polilinea	7,13	2.500	XY	
51	Polilinea	107,159	3.050	Z	
52	Polilinea	133,163	2.510	Z	
53	Polilinea	95,103	2.800	Y	
54	Polilinea	77,132	2.850	Y	
55	Polilinea	103,101	2.800	X	
56	Polilinea	119,42	2.381	XY	
57	Polilinea	8,10	5.732	XY	
58	Polilinea	133,150	1.000	XY	
59	Polilinea	99,98	5.532	XY	
60	Arco	110,120,119	2.842	XY	
61	Polilinea	138,151	1.000	XY	
62	Polilinea	150,152	1.460	Z	
63	Polilinea	151,143	12.336		
64	Polilinea	129,153	2.600	Z	
65	Polilinea	152,153	12.336		
66	Polilinea	164,30	14.175		
67	Spline	40-42	11.434	XY	
68	Polilinea	110,78	0.350	Y	
69	Arco	117,118,79	3.500	XY	
70	Polilinea	163,165	1.000	XY	
71	Spline	166,144,158	7.936		
72	Polilinea	83,114	6.300	Z	
73	Arco	121,123,80	3.500	XY	
74	Polilinea	80,113	6.300	Z	
75	Arco	34,70,71	3.897	XY	
76	Arco	113,128,127	2.644	XY	
77	Arco	80,126,125	2.644	XY	
78	Spline	74,84,85	9.893	XY	
79	Arco	85,75,111	3.278	XY	
80	Arco	125,31,83	3.600	XY	
81	Arco	127,15,114	3.600	XY	
82	Polilinea	42,117	1.530	XY	
83	Arco	111,86,92	2.493	XY	
84	Arco	92,112,90	3.395	XY	
85	Polilinea	132,110	2.500	Y	
86	Polilinea	165,166	12.316		
87	Spline	153,148,159	7.946		
88	Polilinea	145,124	1.000	XY	
89	Polilinea	146,134	1.000	XY	
90	Polilinea	147,164	1.050	Z	
91	Spline	100,2,169	7.831	XY	



Progetto:

Modello: Sovrapasso

Data: 27.02.2018

1.2 LINEE

Linea nr.	Tipo di linea	Nodi nr.	Lungh. linea		Commento
			L [m]		
92	Polilinea	150,129	12,283	XY	
93	Polilinea	152,165	1,050	Z	
94	Polilinea	153,166	0,800	Z	
95	Spline	206,17,168	8,680	XY	
96	Polilinea	11,47	5,287	XY	
97	Polilinea	158,108	1,775	Z	
98	Polilinea	159,158	0,525	Z	
99	Polilinea	20,239	1,500	XY	
100	Spline	108,3,14	5,450		
101	Spline	158,4,10	5,450		
102	Spline	159,5,25	5,450		
103	Spline	160,156,158	7,659		
104	Polilinea	162,134	1,250	Z	
105	Polilinea	163,138	1,250	Z	
106	Polilinea	164,146	1,250	Z	
107	Polilinea	165,151	1,250	Z	
108	Polilinea	166,143	1,500	Z	
109	Polilinea	167,145	3,887	XY	
110	Polilinea	38,47	1,500	XY	
111	Polilinea	20,167	0,750	XY	
112	Polilinea	167,11	0,750	XY	
113	Polilinea	169,168	1,500	XY	
114	Polilinea	23,206	0,750	XY	
115	Polilinea	171,196	1,300	XY	
116	Polilinea	175,170	3,400	XY	
117	Polilinea	173,174	3,400	XY	
118	Polilinea	171,173	0,500	Z	
119	Polilinea	172,174	0,500	Z	
120	Polilinea	19,186	0,700	XY	
121	Polilinea	234,235	2,100	Z	
122	Polilinea	173,175	5,300	XY	
123	Polilinea	167,175	0,500	Z	
124	Polilinea	176,49	4,900	XY	
125	Polilinea	49,21	3,400	XY	
126	Polilinea	177,176	3,400	XY	
127	Polilinea	21,177	4,900	XY	
128	Polilinea	180,183	5,300	XY	
129	Polilinea	49,23	4,700	Z	
130	Polilinea	21,19	4,700	Z	
131	Polilinea	177,182	2,100	Z	
132	Polilinea	176,183	2,100	Z	
133	Polilinea	183,197	1,300	XY	
134	Polilinea	182,181	5,300	XY	
135	Polilinea	181,170	3,100	Z	
136	Polilinea	180,167	2,600	Z	
137	Polilinea	181,180	3,400	XY	
138	Polilinea	238,236	2,100	Z	
139	Polilinea	91,96	5,500	XY	
140	Polilinea	81,88	5,500	XY	
141	Polilinea	88,91	4,000	XY	
142	Polilinea	96,81	4,000	XY	
143	Polilinea	22,76	5,600	XY	
144	Polilinea	76,102	4,000	XY	
145	Polilinea	102,184	5,600	XY	
146	Polilinea	184,183	0,300	XY	
147	Polilinea	186,187	2,500	XY	
148	Polilinea	187,172	1,700	XY	
149	Polilinea	188,189	2,500	XY	
150	Polilinea	188,186	2,100	Z	
151	Polilinea	189,187	2,100	Z	
152	Polilinea	191,192	1,000	Z	
153	Polilinea	192,195	2,500	XY	
154	Polilinea	195,194	1,000	Z	
155	Polilinea	194,191	2,500	XY	
156	Polilinea	196,172	2,100	XY	
157	Polilinea	197,182	2,100	XY	
158	Polilinea	197,196	2,600	Z	
159	Polilinea	198,201	3,100	Z	
160	Polilinea	198,197	1,800	XY	
161	Polilinea	196,200	0,500	Z	
162	Polilinea	200,201	1,800	XY	
163	Polilinea	202,216	2,011	XY	
164	Polilinea	216,171	2,389	XY	
165	Polilinea	204,16	2,011	XY	
166	Polilinea	204,202	2,000	Z	
167	Polilinea	16,216	2,000	Z	
168	Polilinea	206,19	2,650	XY	
169	Polilinea	100,23	0,750	XY	
170	Polilinea	208,207	2,000	Z	
171	Polilinea	207,202	1,360	XY	
172	Polilinea	208,204	1,360	XY	
173	Polilinea	222,139	6,658	XY	
174	Polilinea	1,16	1,573	XY	
175	Polilinea	222,221	2,000	XY	
176	Spline	207,203,209	0,544	XY	
177	Polilinea	208,1	2,000	XY	
178	Polilinea	216,178	1,573	XY	
179	Polilinea	221,217	6,658	XY	
180	Polilinea	1,178	2,000	Z	
181	Spline	1,136,222	3,045		
182	Polilinea	227,228	1,400	Z	



Progetto: Modello: Sovrapasso

Data: 27.02.2018

1.2 LINEE

Linea nr.	Tipo di linea	Nodi nr.	Lungh. linea		Commento
			L [m]		
183	Spline	208,193,221	0.817		
184	Polilinea	217,225	1.800	XY	
185	Spline	178,190,179	2.985	XY	
186	Polilinea	139,227	1.800	XY	
187	Polilinea	209,215	6.658	XY	
188	Polilinea	228,226	2.000	XY	
189	Polilinea	179,212	3.565	XY	
190	Polilinea	141,210	1.123	XY	
191	Polilinea	221,209	1.400	Z	
192	Polilinea	222,179	1.400	Z	
193	Spline	141,215,107	3.809	XY	
194	Polilinea	215,226	1.800	XY	
195	Polilinea	210,228	2.489	XY	
196	Polilinea	225,226	1.400	Z	
197	Polilinea	227,225	2.000	XY	
198	Polilinea	178,207	2.000	XY	
199	Polilinea	209,179	2.000	XY	
200	Polilinea	155,137	1.501	XY	
201	Polilinea	137,104	1.616	XY	
202	Spline	157,149,205	4.474	XY	
203	Polilinea	155,157	13.664	XY	
204	Spline	140,211,212	2.780	XY	
205	Polilinea	235,236	1.000	XY	
206	Spline	205,223,210	0.873	XY	
207	Cerchio	230,232,231	5.655	XY	
208	Polilinea	212,141	1.280	XY	
209	Polilinea	183,171	2.600	Z	
210	Polilinea	174,170	5.300	XY	
211	Polilinea	234,238	1.000	XY	
212	Polilinea	182,22	0.300	XY	
213	Polilinea	182,172	2.600	Z	
214	Polilinea	239,38	3.787	XY	
215	Polilinea	20,82	3.887	XY	
216	Polilinea	239,104	3.848	XY	
217	Polilinea	82,140	10.588	XY	
218	Polilinea	104,82	1.499	XY	

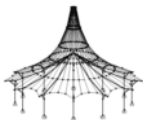
1.3 MATERIALI

Mater. nr.	Modulo E [kN/cm ²]	Modulo G [kN/cm ²]	Coeff. Poisson ν [-]	Peso spec. γ [kN/m ³]	Coeff. dil. term. α [1/°C]	Coeff. parz. γ_M [-]	Modello del materiale
1	Calcestruzzo C30/37 EN 1992-1-1:2004/AC:2010 3300.00	1375.00	0.200	25.00	1.00E-05	1.00	Isotropo elastico lineare
2	Calcestruzzo C20/25 EN 1992-1-1:2004/AC:2010 3000.00	1250.00	0.200	25.00	1.00E-05	1.00	Isotropo elastico lineare
3	Calcestruzzo C28/35_2018 EN 1992-1-1:2004/AC:2010 3200.00	1291.67	0.239	25.00	1.00E-05	1.00	Isotropo elastico lineare

Materiale definito dall'utente

1.4 SUPERFICI

Superf. nr.	Tipo di superficie		Linee del contorno nr.	Mater. nr.	Spessore		Area A [m ²]	Peso W [kg]
	Geometria	Rigidezza			Tipo	d [mm]		
13	B-Spline	Standard	12,6,15,1,20/3/3	1	Costante	350.0	2.715	2375.72
14	B-Spline	Standard	13,5,21,1,20/3/3	1	Costante	350.0	9.178	8031.03
36	Piana	Standard	44,19,59,45	1	Costante	800.0	18.254	36508.90
42	Piana	Standard	27,50,29,49	2	Costante	500.0	16.329	20411.40
44	Piana	Standard	55,16,31,53	2	Costante	500.0	7.840	9800.00
48	Piana	Standard	39,54,85,60,56,82,69	3	Costante	250.0	20.750	12968.90
49	Piana	Standard	22,82,67,48	3	Costante	300.0	16.516	12386.80
51	Quadrangolo	Standard	77,80,72,81,76,74	1	Costante	350.0	39.335	34418.20
52	Quadrangolo	Standard	36,73,74,43,69,22,37	1	Costante	350.0	98.614	86286.80
53	Piana	Standard	35,84,83,79,78,47,42,28,38,41,75,33	2	Costante	500.0	45.347	56684.10
55	Piana	Standard	40,46,44,25,23,10,57,12	1	Costante	800.0	19.604	39208.20
56	Quadrangolo	Standard	7,15,11,103,98,51,4	1	Costante	400.0	26.761	26761.40
57	Quadrangolo	Standard	8,100,97,101	1	Costante	350.0	9.652	8445.82
58	Quadrangolo	Standard	101,98,102,10	1	Costante	350.0	2.855	2498.02
59	Quadrangolo	Standard	101,57,20,18,103	3	Costante	250.0	26.036	16272.80
60	Quadrangolo	Standard	87,64,3,193,51	1	Costante	300.0	22.400	16800.20
61	Quadrangolo	Standard	71,94,87,98	1	Costante	350.0	5.261	4603.60
62	Quadrangolo	Standard	9,108,71,97	1	Costante	350.0	12.984	11361.00
63	Piana	Standard	93,70,52,58,62	1	Costante	350.0	2.510	2196.25
64	Piana	Standard	61,105,70,107	1	Costante	350.0	1.250	1093.75
65	Piana	Standard	93,86,94,65	1	Costante	350.0	11.362	9941.92
66	Piana	Standard	63,107,86,108	1	Costante	350.0	16.890	14778.50
67	Piana	Standard	65,62,92,64	1	Costante	300.0	24.935	18701.60
69	Piana	Standard	32,15,66,90	1	Costante	350.0	11.093	9706.73
71	Piana	Standard	106,89,104,24	1	Costante	350.0	1.250	1093.75
72	Piana	Standard	66,21,30,106	1	Costante	350.0	21.306	18643.10
73	Piana	Standard	118,122,123,109,26,32,7,2,163,164	1	Costante	300.0	22.002	16501.50
74	Quadrangolo	Standard	181,192,185,180	3	Costante	250.0	5.037	3148.23
75	Piana	Standard	174,167,178,180	3	Costante	250.0	3.145	1965.81



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1.4 SUPERFICI

Superf. nr.	Tipo di superficie		Linee del contorno nr.	Mater. nr.	Spessore		Area A [m ²]	Peso W [kg]
	Geometria	Rigidità			Tipo	d [mm]		
77	Piana	Standard	172,166,171,170	3	Costante	250.0	2.720	1700.18
78	Piana	Standard	174,177,172,165	3	Costante	250.0	2.933	1832.99
79	Quadrangolo	Standard	183,175,181,177	3	Costante	250.0	3.750	2343.74
80	Quadrangolo	Standard	183,191,176,170	3	Costante	250.0	0.891	556.81
81	Piana	Standard	195,190,208,189,192,173,186,182	3	Costante	250.0	11.841	7400.80
82	Piana	Standard	194,187,191,179,184,196	3	Costante	250.0	11.841	7400.80
83	Piana	Standard	184,179,175,173,186,197	3	Costante	250.0	16.916	10572.60
84	Piana	Standard	163,178,198,171	3	Costante	250.0	2.933	1832.99
85	Piana	Standard	176,198,185,199	3	Costante	250.0	3.508	2192.77
86	Piana	Standard	190,195,188,194,187,199,189,208	3	Costante	250.0	14.486	9053.83
87	Piana	Standard	206,202,203,200,201,218,217,204,208,190	2	Costante	500.0	26.674	33342.60
88	Piana	Standard	111,99,214,110,96,112	2	Costante	500.0	7.930	9912.89
89	Piana	Standard	169,91,113,95,114	2	Costante	500.0	12.374	15467.30
90	Piana	Standard	148,151,149,150,120,130,127,131,213	3	Costante	300.0	15.280	11460.00
91	Piana	Standard	125,130,168,114,129	3	Costante	300.0	15.980	11985.00
92	Piana	Standard	129,2,166,165,167,164,209,132,124	3	Costante	300.0	19.007	14255.60
93	Piana	Standard	132,133,158,115,118,117,119,213,131,126	3	Costante	250.0	14.300	8937.50
94	Piana	Standard	139,142,140,141	2	Costante	500.0	22.000	27500.00
95	Piana	Standard	157,212,143-146,133	2	Costante	500.0	22.400	28000.10
96	Piana	Standard	161,162,159,160,158	3	Costante	200.0	5.580	2790.00
97	Piana	Standard	210,119,213,134,135	3	Costante	300.0	14.330	10747.50
98	Piana	Standard	128,209,118,122,123,136	3	Costante	300.0	16.430	12322.50
99	Piana	Standard	116,135,137,136,123	3	Costante	300.0	10.540	7905.00
100	Piana	Standard	148,156,115,164,163,2,114,168,120,147	3	Costante	300.0	16.660	12495.00
101	Piana	Standard	122,117,210,116	3	Costante	300.0	18.020	13515.00
102	Piana	Incastro	207	-	-	-	2.430	-
103	Piana	Standard	215,99,216,218	2	Costante	500.0	5.799	7248.95
104	Piana	Standard	188,182,197,196	3	Costante	250.0	2.800	1750.00

1.4.2 SUPERFICI - OGGETTI INTEGRATI

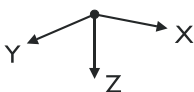
Superf. nr.	Oggetti integrati nr.		Aperture	Commento
	Nodi	Linee		
42	67,68	59		
44	93			
48	87,89			
53		36,73,77,80		
55	69			
85	220			
86			1	
87		3,58,92		
88		88,109		
89		4		
90			2	
93		156,157,161		
94		124-127		
95		128,134,137,160		
97			3	
99		112		
101		162		
102	229			

1.6 APERTURE

Apert. nr.	Linee del contorno nr.	Nella superf. nr.	Area A [m ²]	Commento
1	207	86	2.528	
2	155,152-154	90	2.500	
3	211,138,205,121	97	2.100	

1.7 VINCOLI ESTERNI DEI NODI

Vincolo nr.	Nodi nr.	Seq.	Rotazione [°]			Col. in Z	Condizioni di vincolo						
			X	Y	Z		u _x	u _y	u _z	φ _x	φ _y	φ _z	
1	77,110	XYZ	0.00	0.00	0.00	<input type="checkbox"/>	Molla	Molla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	





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1.7.2 VINCOLI ESTERNI DEI NODI - MOLLE

Vincolo nr.	Nodi nr.	Molla traslazionale [kN/m]			Molla rotazionale [kNm/rad]		
		$C_{u,x}$	$C_{u,y}$	$C_{u,z}$	$C_{\varphi,x}$	$C_{\varphi,y}$	$C_{\varphi,z}$
1	77,110	1410.000	1410.000	-	-	-	-

1.8 VINCOLI ESTERNI DELLE LINEE

Vincolo nr.	Linea nr.	Sistema di riferimento	Rotaz. β [°]	Parete in Z	Condizioni di vincolo					
					$u_{x,x}$	$u_{y,y}$	$u_{z,z}$	$\varphi_{x,x}$	$\varphi_{y,y}$	$\varphi_{z,z}$
5	33,35,72	Locale		<input type="checkbox"/>	<input type="checkbox"/>	Molla	Molla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	37	Locale		<input type="checkbox"/>	<input type="checkbox"/>	Molla	Molla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	42,47	Globale		<input type="checkbox"/>	Molla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	56	Locale		<input type="checkbox"/>	<input type="checkbox"/>	Molla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	67	Locale		<input checked="" type="checkbox"/>	Molla	<input type="checkbox"/>	Molla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

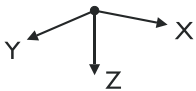
1.8.1 VINCOLI ESTERNI DELLE LINEE - PARETI

Vincolo nr.	Largh. t [mm]	Altezza h [m]	Materiale	Tipo di vincolo alla		Rigidezza a taglio	Commento
				Testa	Base		
10	400.0	7.000	1 - Calcestruzzo C30/37	Cerniera	Cerniera	<input checked="" type="checkbox"/>	

1.8.2 VINCOLI ESTERNI DELLE LINEE - MOLLE

Vincolo nr.	Linea nr.	Molla traslazionale [kN/m ²]			Molla rotazionale [kNm/rad/m]		
		$C_{u,x}$	$C_{u,y}$	$C_{u,z}$	$C_{\varphi,x}$	$C_{\varphi,y}$	$C_{\varphi,z}$
5	33,35,72	-	30000.000	30000.000	-	-	-
7	37	-	-	200000.000	-	-	-
8	42,47	200000.000	-	-	-	-	-
9	56	-	100000.000	-	-	-	-
10	67	785714.000	-	1885710.000	-	-	-

1.9 VINCOLI ESTERNI DELLE SUPERFICI

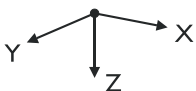


Vin. est. nr.	Sulle superfici nr.	Costanti delle molle RF-SOILIN	Vincolo traslazionale o molla [kN/m ²]			Molla a taglio [kN/m]	
			u_x	u_y	u_z	v_{xz}	v_{yz}
1	42,44,53,78,79,83,87-89,94,95,103	-	10000.000	10000.000	80000.000	<input type="checkbox"/>	<input type="checkbox"/>

1.9.1 VINCOLI ESTERNI DELLE SUPERFICI - INEFFICACI

Vin. est. nr.	Sulle superfici nr.	Vincolo esterno inefficace per σ_z	Snerv. dalla tens. di contatto σ_z [kN/m ²]	Coefficiente d'attrito μ_z [-]

1.10 VINCOLI INTERNI DELLE LINEE



Vincolo nr.	Linea nr.	Superf. nr.	Lato	Rilascio forza assiale/taglio [kN/m ²]			Rilascio momento [kNm/rad/m]		
				u_x	u_y	u_z	φ_x	φ_y	φ_z
8	54	48	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	56	48	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10	82	48	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11	22	52	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	69	52	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	85	48	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	10	55	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	12	55	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	57	55	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	21	72	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
21	21	14	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22	103	56	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	97	62	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
24	97	57	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	165	78	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	166	77	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	167	75	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	163	84	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	114	89	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	112	88	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	158	96	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	161	96	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	160	96	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	133	95	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	157	95	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37	116	101	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38	117	101	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39	122	101	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40	210	101	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

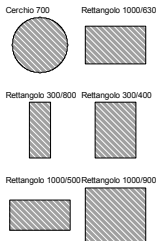


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1.10 VINCOLI INTERNI DELLE LINEE

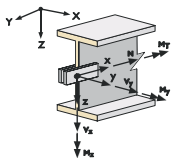
Vincolo nr.	Linea nr.	Superf. nr.	Lato	Rilascio forza assiale/taglio [kN/m²]			Rilascio momento [kNm/rad/m]		
				U _x	U _y	U _z	φ _x	φ _y	φ _z
41	2	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42	114	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43	115	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44	120	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45	147	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46	148	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47	156	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48	163	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49	164	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50	168	100	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51	99	103	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52	218	103	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.13 SEZIONI TRASVERSALI



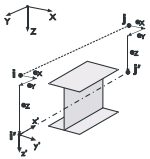
Sezione nr.	Mater. nr.	I _T [cm⁴] A [cm²]	I _y [cm⁴] A _y [cm²]	I _z [cm⁴] A _z [cm²]	Assi principali α [°]	Rotazione α' [°]	Dimensioni totali [mm]	
							Larghezza b	Altezza h
1	Cerchio 700 3	2357176.25 3848.45	1178588.13 3261.40	1178588.12 3261.40	0.00	0.00	700.0	700.0
2	Rettangolo 1000/630 3	5069792.00 6300.00	2083725.13 5250.00	5250000.08 5250.00	0.00	0.00	1000.0	630.0
3	Rettangolo 300/800 1	550177.63 2400.00	1280000.00 2000.00	180000.00 2000.00	0.00	0.00	300.0	800.0
4	Rettangolo 300/400 1	194342.34 1200.00	160000.00 1000.00	90000.00 1000.00	0.00	0.00	300.0	400.0
5	Rettangolo 1000/500 3	2860937.50 5000.00	1041666.69 4166.67	4166666.65 4166.67	0.00	0.00	1000.0	500.0
6	Rettangolo 1000/900 3	11268043.00 9000.00	6075000.00 7500.00	7499999.64 7500.00	0.00	0.00	1000.0	900.0

1.14 VINCOLI INTERNI DELLE ASTE



Vincolo nr.	Sistema di riferimento	Rilascio assiale/tagliante o molla[kN/m]			Rilascio del momento o molla[kNm/rad]			Commento
		U _x	U _y	U _z	φ _x	φ _y	φ _z	
1	Locale x,y,z	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

1.15/1 ECCENTRICITÀ DELLE ASTE - ASSOLUTA

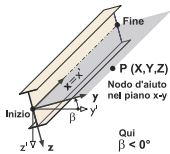


Ecc. nr.	Sistema di riferimento	Inizio asta - Eccentricità [mm]			Fine asta - Eccentricità [mm]			Posizione del vincolo interno dell'	
		e _{i,x}	e _{i,y}	e _{i,z}	e _{f,x}	e _{f,y}	e _{f,z}	Inizio asta	Fine dell'asta
1	Globale	0.0	0.0	0.0	0.0	0.0	0.0	nell'asta	nell'asta

1.15/2 ECCENTRICITÀ DELLE ASTE - RELATIVA

Ecc. nr.	Allineamento sezione trasv.		Offset trasversale dalla sezione di un altro oggetto				Offset assiale dall'adiacente	
	Asse y	Asse z	Tipo oggetto	Oggetto nr.	Asse y	Asse z	Inizio asta	Fine asta
1	Centro	Superiore (-z)	Superficie	48	Centro	Superiore (-z)	<input type="checkbox"/>	<input type="checkbox"/>

1.17 ASTE



Asta nr.	Linea nr.	Asta	Rotazione		Descrizione		Vinc. int. nr.		Ecc. nr.	Divis. nr.	Lungh. L [m]	
			Tipo	β [°]	Inizio	Fine	Inizio	Fine				
1	54	Trave	Angolo	0.00	2	6	-	-	1	-	Lineare	YZ
2	34	Trave	Angolo	0.00	1	1	-	-	-	-	-	Z
3	14	Trave	Nodo	98 / x-y	3	3	-	1	-	-	-	Z
4	17	Trave	Nodo	99 / x-y	3	3	-	1	-	-	-	Z
7	68	Trave	Angolo	0.00	2	2	-	-	1	-	-	Y
8	56	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
9	82	Trave	Angolo	0.00	5	5	-	-	-	-	-	XY
10	85	Trave	Angolo	0.00	6	2	-	-	1	-	Lineare	YZ



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1.23 INFITTIMENTO MESH EF

Infitto- nr.	Infitto- applicato a	Nodi nr.	Numero di divisioni	Raggio della sfera [m]	Lunghezza EF obiettivo[m]		Commento
					Interno	Esterno	
1	Nodi - Circolare	8, 10, 20, 23-26, 30, 50, 77, 79, 82, 83, 93, 104, 107, 110, 113, 117, 119, 132, 158, 159, 167, 171-175, 183, 202, 212, 216, 239		1.000	0.100	0.500	

2.1 CASI DI CARICO

Caso di carico	Descrizione del caso di carico	EN 1990 + EN 1991-2; Ponti stradali C Categoria delle azioni	Peso proprio - Coefficiente in direzione			
			Attiva	X	Y	Z
CC1	Peso proprio	Permanente	<input checked="" type="checkbox"/>	0.000	0.000	1.000
CC2	Sovraccarichi permanenti	Permanente	<input type="checkbox"/>			
CC3	Carichi mobili	gr1a - LM1 + Pedoni + Pista ciclabile	<input type="checkbox"/>			
CC4	Vento +Y	Carichi del vento - Fw''	<input type="checkbox"/>			
CC5	Vento -Y	Carichi del vento - Fw''	<input type="checkbox"/>			

2.1.1 CASI DI CARICO - PARAMETRI DI CALCOLO

Caso di carico	Descrizione del caso di carico	Parametri di calcolo	
		Metodo di analisi	Parametri di calcolo
CC1	Peso proprio	Metodo risolutivo del sistema di equazioni algebriche non-lineari	: <input checked="" type="radio"/> Analisi statica geometricamente lineare : <input checked="" type="radio"/> Newton-Raphson
CC2	Sovraccarichi permanenti	Metodo di analisi Metodo risolutivo del sistema di equazioni algebriche non-lineari	: <input checked="" type="radio"/> Analisi statica geometricamente lineare : <input checked="" type="radio"/> Newton-Raphson
CC3	Carichi mobili	Metodo di analisi Metodo risolutivo del sistema di equazioni algebriche non-lineari	: <input checked="" type="radio"/> Analisi statica geometricamente lineare : <input checked="" type="radio"/> Newton-Raphson
CC4	Vento +Y	Metodo di analisi Metodo risolutivo del sistema di equazioni algebriche non-lineari	: <input checked="" type="radio"/> Analisi statica geometricamente lineare : <input checked="" type="radio"/> Newton-Raphson
CC5	Vento -Y	Metodo di analisi Metodo risolutivo del sistema di equazioni algebriche non-lineari	: <input checked="" type="radio"/> Analisi statica geometricamente lineare : <input checked="" type="radio"/> Newton-Raphson

2.5 COMBINAZIONI DI CARICO

Comb. di carico	Combinazione di carico		nr.	Coeff.	Caso di carico
	SP	Descrizione			
CO1	ULS	1.35*CC1 + 1.35*CC2	1	1.35	CC1
			2	1.35	CC2
CO2	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3	1	1.35	CC1
			2	1.35	CC2
			3	1.35	CC3
CO3	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC4	1	1.35	CC1
			2	1.35	CC2
			3	1.35	CC3
			4	1.50	CC4
CO4	ULS	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC5	1	1.35	CC1
			2	1.35	CC2
			3	1.35	CC3
			4	1.50	CC5
CO5	S Ch	CC1 + CC2	1	1.00	CC1
CO6	S Ch	CC1 + CC2 + CC3	1	1.00	CC1
			2	1.00	CC2
CO7	S Ch	CC1 + CC2 + CC3 + CC4	1	1.00	CC1
			2	1.00	CC2
			3	1.00	CC3
CO8	S Ch	CC1 + CC2 + CC3 + CC5	1	1.00	CC1
			2	1.00	CC2
			3	1.00	CC3
			4	1.00	CC4
CO9	S Qp	CC1 + CC2	1	1.00	CC1
			2	1.00	CC2

2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo	
		Metodo di analisi	Parametri di calcolo
CO1	1.35*CC1 + 1.35*CC2	Metodo risolutivo del sistema di equazioni algebriche non-lineari	: <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) : <input checked="" type="radio"/> Picard



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2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo	
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO2	1.35*CC1 + 1.35*CC2 + 1.35*CC3	Metodo di analisi	<input checked="" type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari	<input checked="" type="radio"/> Picard
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO3	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC4	Metodo di analisi	<input checked="" type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari	<input checked="" type="radio"/> Picard
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO4	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC5	Metodo di analisi	<input checked="" type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari	<input checked="" type="radio"/> Picard
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO5	CC1 + CC2	Metodo di analisi	<input checked="" type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari	<input checked="" type="radio"/> Picard
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO6	CC1 + CC2 + CC3	Metodo di analisi	<input checked="" type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari	<input checked="" type="radio"/> Picard
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO7	CC1 + CC2 + CC3 + CC4	Metodo di analisi	<input checked="" type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari	<input checked="" type="radio"/> Picard
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO8	CC1 + CC2 + CC3 + CC5	Metodo di analisi	<input checked="" type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari	<input checked="" type="radio"/> Picard
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO9	CC1 + CC2	Metodo di analisi	<input checked="" type="radio"/> Analisi del secondo ordine (P-Delta)
		Metodo risolutivo del sistema di equazioni algebriche non-lineari	<input checked="" type="radio"/> Picard
		Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z



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2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo
		<input checked="" type="checkbox"/> Momenti M_y , M_z e M_T

2.5.5 COMBINAZIONI DI CARICO - IMPERFEZIONI

Comb. di carico	Descrizione CO	Imperfezione applicata dal modulo RF-IMP	Imperfezione applicata
CO1	1.35*CC1 + 1.35*CC2	<input type="checkbox"/>	
CO2	1.35*CC1 + 1.35*CC2 + 1.35*CC3	<input type="checkbox"/>	
CO3	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC4	<input type="checkbox"/>	
CO4	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC5	<input type="checkbox"/>	
CO5	CC1 + CC2	<input type="checkbox"/>	
CO6	CC1 + CC2 + CC3	<input type="checkbox"/>	
CO7	CC1 + CC2 + CC3 + CC4	<input type="checkbox"/>	
CO8	CC1 + CC2 + CC3 + CC5	<input type="checkbox"/>	
CO9	CC1 + CC2	<input type="checkbox"/>	

2.6 COMBINAZIONI DI RISULTATI

Combin. di risult.	Combinazione di risultati				Carico	Criterio	Alterna Gruppo
	SP	Descrizione	nr.	Coeff.			
CR1	ULS	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10	1	1.00	CO1	Permanente	1
			2	1.00	CO2		
			3	1.00	CO3		
			4	1.00	CO4		
CR2	S Ch	SLE - Caratteristica	1	1.00	CO5	Permanente	1
			2	1.00	CO6		
			3	1.00	CO7		
			4	1.00	CO8		
CR3	S Qp	SLE - Quasi permanente	1	1.00	CO9	Permanente	-

3.1 CARICHI DEI NODI - PER COMPONENTE - SISTEMA DI COORDINATE

CC1
Peso proprio

CC1: Peso proprio

nr.	Sui nodi nr.	Sistema di coordinate	Forza [kN]			Momento [kNm]		
			P_x	P_y	P_z	M_x	M_y	M_z
1	24,25,77,78	0 Globale XYZ	0.000	0.000	245.000	0.000	0.000	0.000
2	78	0 Globale XYZ	0.000	0.000	100.000	0.000	0.000	0.000
3	229	0 Globale XYZ	0.000	0.000	260.000	0.000	0.000	0.000

3.1 CARICHI DEI NODI - PER COMPONENTE - SISTEMA DI COORDINATE

CC2
Sovraccarichi permanenti

CC2: Sovraccarichi permanenti

nr.	Sui nodi nr.	Sistema di coordinate	Forza [kN]			Momento [kNm]		
			P_x	P_y	P_z	M_x	M_y	M_z
1	24,25,77,78	0 Globale XYZ	0.000	0.000	180.000	0.000	0.000	0.000

3.4 CARICHI DELLE SUPERFICI

CC2: Sovraccarichi permanenti

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Simbolo	Parametri del carico		Sul nodo nr.
						Valore	Unità	
1	49	Forza	Uniforme	ZL	p	8.40	kN/m ²	
2	36	Forza	Lineare	z	p ₁	0.00	kN/m ²	116
					p ₂	0.00	kN/m ²	115
					p ₃	20.50	kN/m ²	99
5	48,59	Forza	Uniforme	z	p	8.40	kN/m ²	
6	51,52	Forza	Lineare in Z	z	p ₁	0.00	kN/m ²	130
					p ₂	43.50	kN/m ²	131
7	60,61,65,67,69,73-75,77,80-82,92	Forza	Lineare in Z	z	p ₁	0.00	kN/m ²	158
					p ₂	-22.50	kN/m ²	107
8	91,99	Forza	Lineare in Z	z	p ₁	0.00	kN/m ²	170
					p ₂	-22.50	kN/m ²	21
9	98	Forza	Lineare in Z	z	p ₁	0.00	kN/m ²	158
					p ₂	-22.50	kN/m ²	107
10	100,101	Forza	Uniforme	ZL	p	5.50	kN/m ²	
11	84-86	Forza	Uniforme	ZL	p	63.00	kN/m ²	
12	56	Forza	Lineare in Z	z	p ₁	0.00	kN/m ²	158
					p ₂	-22.50	kN/m ²	107



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**3.1 CARICHI DEI NODI - PER COMPONENTE
 - SISTEMA DI COORDINATE**

CC3: Carichi mobili

CC3
Carichi mobili

nr.	Sui nodi nr.	Sistema di coordinate	Forza [kN]			Momento [kNm]		
			P _x	P _y	P _z	M _x	M _y	M _z
1	24,25,77,78	0 Globale XYZ	0.000	0.000	107.000	0.000	0.000	0.000
2	78	0 Globale XYZ	0.000	0.000	25.000	0.000	0.000	0.000

3.4 CARICHI DELLE SUPERFICI

CC3: Carichi mobili

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Parametri del carico		
					Simbolo	Valore	Unità
1	49	Forza	Uniforme	ZL	p	5.00	kN/m ²
2	36	Forza	Uniforme	z	p	1.80	kN/m ²
3	48,59,84-86,100,101	Forza	Uniforme	z	p	5.00	kN/m ²
4	52	Forza	Uniforme	z	p	1.80	kN/m ²
5	56,60,61,65,67,69,73-75,77,81,82,91, 98,99	Forza	Uniforme	z	p	-1.80	kN/m ²

**3.1 CARICHI DEI NODI - PER COMPONENTE
 - SISTEMA DI COORDINATE**

CC4: Vento +Y

CC4
Vento +Y

nr.	Sui nodi nr.	Sistema di coordinate	Forza [kN]			Momento [kNm]		
			P _x	P _y	P _z	M _x	M _y	M _z
1	24,25,77,78	0 Globale XYZ	0.000	8.000	0.000	0.000	0.000	0.000
2	229	0 Globale XYZ	0.000	0.000	0.000	8.700	0.000	0.000

**3.1 CARICHI DEI NODI - PER COMPONENTE
 - SISTEMA DI COORDINATE**

CC5: Vento -Y

CC5
Vento -Y

nr.	Sui nodi nr.	Sistema di coordinate	Forza [kN]			Momento [kNm]		
			P _x	P _y	P _z	M _x	M _y	M _z
1	24,25,77,78	0 Globale XYZ	0.000	-8.000	0.000	0.000	0.000	0.000
2	229	0 Globale XYZ	0.000	0.000	0.000	0.000	8.700	0.000



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Peso proprio			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	9420.96	kN	
Somma delle reazioni vincolari in Z	9420.96	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	6291.380	kNm	Nel centro di gravità del modello (X:-17.372, Y:-1.717, Z:3.218 m)
Risultante delle reazioni intorno a Y	-3374.180	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	0.957	kNm	Nel centro di gravità del modello
Max spostamento in X	0.5	mm	Nodo EF nr. 3116 (X: -28.594, Y: 0.704, Z: -1.713 m)
Max spostamento in Y	1.0	mm	Asta nr. 2, x: 4.000 m
Max spostamento in Z	6.4	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	6.4	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-1.8	mrad	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a Y	-4.2	mrad	Nodo EF nr. 37 (X: -23.865, Y: -3.004, Z: -1.775 m)
Max rotazione intorno a Z	64.5	mrad	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Sovraccarichi permanenti			
Somma dei carichi in X	-369.10	kN	Deviazione -0.00%
Somma delle reazioni vincolari in X	-369.10	kN	
Somma dei carichi in Y	-2202.36	kN	Deviazione -0.00%
Somma delle reazioni vincolari in Y	-2202.36	kN	
Somma dei carichi in Z	2759.14	kN	
Somma delle reazioni vincolari in Z	2759.12	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	8597.950	kNm	Nel centro di gravità del modello (X:-17.372, Y:-1.717, Z:3.218 m)
Risultante delle reazioni intorno a Y	6666.250	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-2.21E+04	kNm	Nel centro di gravità del modello
Max spostamento in X	-4.5	mm	Nodo EF nr. 3318 (X: -30.431, Y: -7.961, Z: -0.982 m)
Max spostamento in Y	-3.9	mm	Nodo EF nr. 1021 (X: -3.730, Y: 7.642, Z: 0.100 m)
Max spostamento in Z	2.9	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	5.2	mm	Nodo EF nr. 1021 (X: -3.730, Y: 7.642, Z: 0.100 m)
Max rotazione intorno a X	-0.8	mrad	Asta nr. 7, x: 0.350 m
Max rotazione intorno a Y	1.7	mrad	Nodo EF nr. 37 (X: -23.865, Y: -3.004, Z: -1.775 m)
Max rotazione intorno a Z	68.0	mrad	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Carichi mobili			
Somma dei carichi in X	0.06	kN	Deviazione -0.01%
Somma delle reazioni vincolari in X	0.06	kN	
Somma dei carichi in Y	-125.13	kN	Deviazione 0.00%
Somma delle reazioni vincolari in Y	-125.13	kN	
Somma dei carichi in Z	1046.66	kN	
Somma delle reazioni vincolari in Z	1046.65	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	2199.590	kNm	Nel centro di gravità del modello (X:-17.372, Y:-1.717, Z:3.218 m)
Risultante delle reazioni intorno a Y	-2908.260	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-2908.090	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.8	mm	Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m)
Max spostamento in Y	-0.3	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	2.1	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	2.1	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-0.6	mrad	Asta nr. 7, x: 0.350 m
Max rotazione intorno a Y	0.6	mrad	Nodo EF nr. 640 (X: -2.666, Y: -0.207, Z: -0.600 m)
Max rotazione intorno a Z	20.1	mrad	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Vento +Y			
Somma dei carichi in X	0.00	kN	Deviazione 0.00%
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	32.00	kN	
Somma delle reazioni vincolari in Y	32.00	kN	
Somma dei carichi in Z	0.00	kN	
Somma delle reazioni vincolari in Z	0.00	kN	
Risultante delle reazioni intorno a X	122.199	kNm	Nel centro di gravità del modello (X:-17.372, Y:-1.717, Z:3.218 m)
Risultante delle reazioni intorno a Y	0.295	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	150.559	kNm	Nel centro di gravità del modello
Max spostamento in X	0.2	mm	Nodo EF nr. 530 (X: -5.033, Y: 5.700, Z: -0.600 m)
Max spostamento in Y	0.3	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	-0.1	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	0.3	mm	Nodo EF nr. 77 (X: -5.293, Y: 5.700, Z: -0.600 m)
Max rotazione intorno a X	0.0	mrad	Nodo EF nr. 1304 (X: -2.630, Y: 5.590, Z: -0.461 m)
Max rotazione intorno a Y	0.1	mrad	Nodo EF nr. 37 (X: -23.865, Y: -3.004, Z: -1.775 m)
Max rotazione intorno a Z	3.3	mrad	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
Vento -Y			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Somma dei carichi in Y	-32.00	kN	
Somma delle reazioni vincolari in Y	-32.00	kN	Deviazione 0.00%
Somma dei carichi in Z	0.00	kN	
Somma delle reazioni vincolari in Z	0.00	kN	
Risultante delle reazioni intorno a X	-113.499	kNm	Nel centro di gravità del modello (X:-17.372, Y:-1.717, Z:3.218 m)
Risultante delle reazioni intorno a Y	8.405	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-150.559	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.2	mm	Nodo EF nr. 530 (X: -5.033, Y: 5.700, Z: -0.600 m)
Max spostamento in Y	-0.3	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	0.1	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	0.3	mm	Nodo EF nr. 77 (X: -5.293, Y: 5.700, Z: -0.600 m)
Max rotazione intorno a X	-0.0	mrad	Nodo EF nr. 1304 (X: -2.630, Y: 5.590, Z: -0.461 m)
Max rotazione intorno a Y	-0.1	mrad	Nodo EF nr. 37 (X: -23.865, Y: -3.004, Z: -1.775 m)
Max rotazione intorno a Z	-2.7	mrad	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	1		
CO1 - 1.35*CC1 + 1.35*CC2			
Somma dei carichi in X	-498.29	kN	
Somma delle reazioni vincolari in X	-498.29	kN	Deviazione 0.00%
Somma dei carichi in Y	-2973.18	kN	
Somma delle reazioni vincolari in Y	-2973.18	kN	Deviazione 0.00%
Somma dei carichi in Z	16443.10	kN	
Somma delle reazioni vincolari in Z	16443.10	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	20094.5	kNm	Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m)
Risultante delle reazioni intorno a Y	4448.9	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-29890.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-6.0	mm	Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m)
Max spostamento in Y	-5.6	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	12.6	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	13.9	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-3.6	mrad	Asta nr. 7, x: 0.350 m
Max rotazione intorno a Y	3.4	mrad	Nodo EF nr. 578 (X: -2.899, Y: -0.164, Z: -0.600 m)
Max rotazione intorno a Z	179.2	mrad	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO2 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3			
Somma dei carichi in X	-498.21	kN	
Somma delle reazioni vincolari in X	-498.21	kN	Deviazione -0.00%
Somma dei carichi in Y	-3142.11	kN	
Somma delle reazioni vincolari in Y	-3142.11	kN	Deviazione 0.00%
Somma dei carichi in Z	17856.10	kN	
Somma delle reazioni vincolari in Z	17856.10	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	23061.6	kNm	Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m)
Risultante delle reazioni intorno a Y	523.5	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-33817.9	kNm	Nel centro di gravità del modello
Max spostamento in X	-7.1	mm	Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m)
Max spostamento in Y	-6.1	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	15.4	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	16.7	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-4.4	mrad	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a Y	4.3	mrad	Nodo EF nr. 640 (X: -2.666, Y: -0.207, Z: -0.600 m)
Max rotazione intorno a Z	206.5	mrad	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO3 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC4			
Somma dei carichi in X	-498.21	kN	
Somma delle reazioni vincolari in X	-498.21	kN	Deviazione 0.00%
Somma dei carichi in Y	-3094.11	kN	
Somma delle reazioni vincolari in Y	-3094.11	kN	Deviazione 0.00%
Somma dei carichi in Z	17856.10	kN	
Somma delle reazioni vincolari in Z	17856.10	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	23245.4	kNm	Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m)
Risultante delle reazioni intorno a Y	523.6	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-33591.6	kNm	Nel centro di gravità del modello
Max spostamento in X	-7.1	mm	Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m)
Max spostamento in Y	-5.7	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	15.3	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	16.5	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-4.4	mrad	Asta nr. 7, x: 0.350 m
Max rotazione intorno a Y	4.2	mrad	Nodo EF nr. 640 (X: -2.666, Y: -0.207, Z: -0.600 m)
Max rotazione intorno a Z	211.4	mrad	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	<input checked="" type="checkbox"/> <input type="checkbox"/> 1 3		
CO4 - 1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC5 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidezza moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	-498.21 -498.21 -3190.11 -3190.11 17856.10 17856.10 22890.7 536.4 -34044.2 -7.1 -6.4 15.5 16.9 -4.4 4.3 202.3 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad	Deviazione 0.00% Deviazione -0.00% Deviazione 0.00% Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m) Nel centro di gravità del modello Nel centro di gravità del modello Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m) Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m) Asta nr. 7, x: 0.350 m Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m) Asta nr. 7, x: 0.350 m Nodo EF nr. 640 (X: -2.666, Y: -0.207, Z: -0.600 m) Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO5 - CC1 + CC2 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidezza moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	-369.10 -369.10 -2202.36 -2202.36 12180.10 12180.10 14886.0 3294.6 -22139.8 -4.4 -4.1 9.3 10.3 -2.6 2.6 132.7 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad	Deviazione -0.00% Deviazione -0.00% Deviazione 0.00% Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m) Nel centro di gravità del modello Nel centro di gravità del modello Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m) Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m) Asta nr. 7, x: 0.350 m Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m) Asta nr. 7, x: 0.350 m Nodo EF nr. 578 (X: -2.899, Y: -0.164, Z: -0.600 m) Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO6 - CC1 + CC2 + CC3 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidezza moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	-369.04 -369.04 -2327.49 -2327.49 13226.80 13226.70 17084.3 386.7 -25048.5 -5.3 -4.5 11.4 12.4 -3.3 3.1 152.9 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 3	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mrad mrad mrad	Deviazione -0.00% Deviazione 0.00% Deviazione 0.00% Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m) Nel centro di gravità del modello Nel centro di gravità del modello Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m) Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m) Asta nr. 7, x: 0.350 m Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m) Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m) Nodo EF nr. 640 (X: -2.666, Y: -0.207, Z: -0.600 m) Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO7 - CC1 + CC2 + CC3 + CC4 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X	-369.04 -369.04 -2295.49 -2295.49 13226.80 13226.70 17206.8 386.9 -24897.7 -5.3	kN kN kN kN kN kN kNm kNm kNm mm	Deviazione -0.00% Deviazione 0.00% Deviazione 0.00% Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m) Nel centro di gravità del modello Nel centro di gravità del modello Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m)



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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Max spostamento in Y	-4.2	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	11.4	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	12.2	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-3.2	mrاد	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a Y	3.1	mrاد	Nodo EF nr. 640 (X: -2.666, Y: -0.207, Z: -0.600 m)
Max rotazione intorno a Z	156.1	mrاد	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO8 - CC1 + CC2 + CC3 + CC5			
Somma dei carichi in X	-369.04	kN	Deviazione 0.00%
Somma delle reazioni vincolari in X	-369.04	kN	
Somma dei carichi in Y	-2359.49	kN	Deviazione 0.00%
Somma delle reazioni vincolari in Y	-2359.49	kN	
Somma dei carichi in Z	13226.80	kN	Deviazione 0.00%
Somma delle reazioni vincolari in Z	13226.70	kN	
Risultante delle reazioni intorno a X	16970.5	kNm	Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m)
Risultante delle reazioni intorno a Y	395.3	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-25199.3	kNm	Nel centro di gravità del modello
Max spostamento in X	-5.3	mm	Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m)
Max spostamento in Y	-4.7	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	11.5	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	12.5	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-3.3	mrاد	Asta nr. 7, x: 0.350 m
Max rotazione intorno a Y	3.2	mrاد	Nodo EF nr. 640 (X: -2.666, Y: -0.207, Z: -0.600 m)
Max rotazione intorno a Z	150.1	mrاد	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CO9 - CC1 + CC2			
Somma dei carichi in X	-369.10	kN	Deviazione -0.00%
Somma delle reazioni vincolari in X	-369.10	kN	
Somma dei carichi in Y	-2202.36	kN	Deviazione -0.00%
Somma delle reazioni vincolari in Y	-2202.36	kN	
Somma dei carichi in Z	12180.10	kN	Deviazione 0.00%
Somma delle reazioni vincolari in Z	12180.10	kN	
Risultante delle reazioni intorno a X	14886.0	kNm	Nel centro di gravità del modello (X:-17.4, Y:-1.7, Z:3.2 m)
Risultante delle reazioni intorno a Y	3294.6	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-22139.8	kNm	Nel centro di gravità del modello
Max spostamento in X	-4.4	mm	Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m)
Max spostamento in Y	-4.1	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	9.3	mm	Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	10.3	mm	Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-2.6	mrاد	Asta nr. 7, x: 0.350 m
Max rotazione intorno a Y	2.6	mrاد	Nodo EF nr. 578 (X: -2.899, Y: -0.164, Z: -0.600 m)
Max rotazione intorno a Z	132.7	mrاد	Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
Sommario			
Max spostamento in X	-7.1	mm	CO3, Nodo EF nr. 3320 (X: -30.512, Y: -8.446, Z: -0.937 m)
Max spostamento in Y	-6.4	mm	CO4, Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max spostamento in Z	15.5	mm	CO4, Asta nr. 7, x: 0.350 m
Max spostamento vettoriale	16.9	mm	CO4, Nodo EF nr. 78 (X: -5.293, Y: 0.000, Z: -0.600 m)
Max rotazione intorno a X	-4.4	mrاد	CO4, Asta nr. 7, x: 0.350 m
Max rotazione intorno a Y	4.3	mrاد	CO4, Nodo EF nr. 640 (X: -2.666, Y: -0.207, Z: -0.600 m)
Max rotazione intorno a Z	211.4	mrاد	CO3, Nodo EF nr. 108 (X: -24.927, Y: 4.605, Z: -2.025 m)
Altre impostazioni			
Numero di elementi finiti 1D	:		118
Numero di elementi finiti 2D	:		7094
Numero di elementi finiti 3D	:		0
Numero di nodi della mesh EF	:		6742
Numero di equazioni	:		40452
Max numero di iterazioni	:		100
Numero di divisioni per i risultati delle aste	:		10
Divisione di fune/vincolo est. elast./aste rastremate	:		10
Numero delle divisioni delle aste per la ricerca dei valori massimi	:		10
Suddivisioni della mesh EF per i risultati grafici	:		0
Percentuale di iterazioni secondo il metodo di Picard in combinazione con il metodo di Newton-Raphson	:		5 %
Opzioni			
<input checked="" type="checkbox"/> Attiva rigidezza a taglio delle aste (Ay, Az)			
<input checked="" type="checkbox"/> Attiva divisioni delle aste per l'analisi a grandi spostamenti o post-critica			
<input checked="" type="checkbox"/> Attiva modifiche inserite della rigidezza			
<input type="checkbox"/> Ignora gradi di libertà rotazionali			
<input checked="" type="checkbox"/> Verifica forze critiche delle aste			
Metodo per il sistema di equazioni			● Diretto



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4.0 RISULTATI - SOMMARIO

Teoria delle piastre inflesse		<input type="radio"/> Iterazione
Versione del solutore		<input checked="" type="radio"/> Mindlin
		<input type="radio"/> Kirchhoff
		<input type="radio"/> 32-bit
		<input checked="" type="radio"/> 64-bit
Precisione e tolleranza		<input type="checkbox"/> Modifica impostazioni predefinite

4.1 NODI - REAZIONI VINCOLARI

Nodo nr.	CC/CO	Forze vincolari [kN]			Momenti vincolari [kNm]			Commento
		P _x	P _y	P _z	M _x	M _y	M _z	
77	CC1	-0.32	-0.30	0.00	0.00	0.00	0.00	
	CC2	-3.28	-4.74	0.00	0.00	0.00	0.00	
	CC3	-0.18	-0.30	0.00	0.00	0.00	0.00	
	CC4	0.30	0.36	0.00	0.00	0.00	0.00	
	CC5	-0.30	-0.36	0.00	0.00	0.00	0.00	
	CO1	-4.88	-6.83	0.00	0.00	0.00	0.00	
	CO2	-5.12	-7.25	0.00	0.00	0.00	0.00	
	CO3	-4.67	-6.72	0.00	0.00	0.00	0.00	
	CO4	-5.58	-7.79	0.00	0.00	0.00	0.00	
	CO5	-3.61	-5.06	0.00	0.00	0.00	0.00	
CO6	-3.79	-5.37	0.00	0.00	0.00	0.00		
CO7	-3.48	-5.01	0.00	0.00	0.00	0.00		
CO8	-4.09	-5.72	0.00	0.00	0.00	0.00		
CO9	-3.61	-5.06	0.00	0.00	0.00	0.00		
110	CC1	0.10	-0.77	0.00	0.00	0.00	0.00	
	CC2	-2.24	-5.02	0.00	0.00	0.00	0.00	
	CC3	-0.18	-0.49	0.00	0.00	0.00	0.00	
	CC4	0.04	0.36	0.00	0.00	0.00	0.00	
	CC5	-0.04	-0.36	0.00	0.00	0.00	0.00	
	CO1	-2.90	-7.84	0.00	0.00	0.00	0.00	
	CO2	-3.14	-8.51	0.00	0.00	0.00	0.00	
	CO3	-3.08	-7.97	0.00	0.00	0.00	0.00	
	CO4	-3.20	-9.05	0.00	0.00	0.00	0.00	
	CO5	-2.15	-5.80	0.00	0.00	0.00	0.00	
CO6	-2.33	-6.30	0.00	0.00	0.00	0.00		
CO7	-2.29	-5.94	0.00	0.00	0.00	0.00		
CO8	-2.37	-6.65	0.00	0.00	0.00	0.00		
CO9	-2.15	-5.80	0.00	0.00	0.00	0.00		

4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]				
				p _x	p _y	p _z	m _x	m _y	m _z		
33	CC1	83	0.000	0.00	-0.44	12.78	0.00	0.00	0.00		
			0.108	0.00	-0.55	12.44	0.00	0.00	0.00		
			0.217	0.00	-0.55	12.23	0.00	0.00	0.00		
			0.325	0.00	-0.55	11.94	0.00	0.00	0.00		
			0.433	0.00	-0.55	11.64	0.00	0.00	0.00		
			0.542	0.00	-0.55	11.34	0.00	0.00	0.00		
			0.650	0.00	-0.55	10.96	0.00	0.00	0.00		
			0.867	0.00	-0.55	10.43	0.00	0.00	0.00		
			1.083	0.00	-0.56	9.97	0.00	0.00	0.00		
			1.300	0.00	-0.56	9.22	0.00	0.00	0.00		
			CC2	83	0.000	0.00	64.88	-11.81	0.00	0.00	0.00
					0.108	0.00	64.44	-10.76	0.00	0.00	0.00
					0.217	0.00	64.18	-10.11	0.00	0.00	0.00
					0.325	0.00	63.84	-9.21	0.00	0.00	0.00
					0.433	0.00	63.50	-8.29	0.00	0.00	0.00
	0.542	0.00			63.17	-7.36	0.00	0.00	0.00		
	0.650	0.00			62.75	-6.17	0.00	0.00	0.00		
	0.867	0.00			62.16	-4.50	0.00	0.00	0.00		
	1.083	0.00			61.65	-3.05	0.00	0.00	0.00		
	1.300	0.00			60.78	-0.63	0.00	0.00	0.00		
	CC3	83			0.000	0.00	3.15	-1.17	0.00	0.00	0.00
					0.108	0.00	3.29	-1.12	0.00	0.00	0.00
			0.217	0.00	3.26	-1.10	0.00	0.00	0.00		
			0.325	0.00	3.22	-1.06	0.00	0.00	0.00		
			0.433	0.00	3.18	-1.03	0.00	0.00	0.00		
			0.542	0.00	3.13	-0.99	0.00	0.00	0.00		
	CC4	83	0.000	0.00	0.00	0.80	0.00	0.00	0.00		
0.108			0.00	0.02	0.78	0.00	0.00	0.00			
0.217			0.00	0.03	0.76	0.00	0.00	0.00			
0.325			0.00	0.03	0.74	0.00	0.00	0.00			
0.433			0.00	0.04	0.72	0.00	0.00	0.00			
0.542			0.00	0.05	0.69	0.00	0.00	0.00			
CC5	83	0.000	0.00	0.00	-0.80	0.00	0.00	0.00			
		0.108	0.00	-0.02	-0.78	0.00	0.00	0.00			
		0.217	0.00	-0.03	-0.76	0.00	0.00	0.00			
		0.325	0.00	-0.03	-0.74	0.00	0.00	0.00			
		0.433	0.00	0.04	-0.72	0.00	0.00	0.00			
		0.542	0.00	0.05	-0.69	0.00	0.00	0.00			



Progetto: Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]			
				Px	Py	Pz	mx	my	mz	
33	CC5	83	0.325	0.00	-0.03	-0.74	0.00	0.00	0.00	
			0.433	0.00	-0.04	-0.72	0.00	0.00	0.00	
			0.542	0.00	-0.05	-0.69	0.00	0.00	0.00	
			0.650	0.00	-0.06	-0.66	0.00	0.00	0.00	
			0.867	0.00	-0.08	-0.62	0.00	0.00	0.00	
			1.083	0.00	-0.09	-0.59	0.00	0.00	0.00	
		1.300	0.00	-0.12	-0.53	0.00	0.00	0.00		
		71	0.00	86.97	1.26	0.00	0.00	0.00		
		CO1	83	0.108	0.00	86.22	2.22	0.00	0.00	0.00
				0.217	0.00	85.88	2.82	0.00	0.00	0.00
				0.325	0.00	85.42	3.65	0.00	0.00	0.00
				0.433	0.00	84.97	4.49	0.00	0.00	0.00
	0.542			0.00	84.51	5.34	0.00	0.00	0.00	
	0.650			0.00	83.94	6.43	0.00	0.00	0.00	
	0.867	0.00	83.14	7.97	0.00	0.00	0.00			
	1.083	0.00	82.45	9.31	0.00	0.00	0.00			
	1.300	0.00	81.27	11.58	0.00	0.00	0.00			
	71	0.00	91.22	-0.34	0.00	0.00	0.00			
	CO2	83	0.108	0.00	90.66	0.68	0.00	0.00	0.00	
			0.217	0.00	90.27	1.32	0.00	0.00	0.00	
			0.325	0.00	89.76	2.19	0.00	0.00	0.00	
			0.433	0.00	89.25	3.08	0.00	0.00	0.00	
			0.542	0.00	88.74	3.98	0.00	0.00	0.00	
			0.650	0.00	88.10	5.13	0.00	0.00	0.00	
		0.867	0.00	87.20	6.76	0.00	0.00	0.00		
		1.083	0.00	86.43	8.18	0.00	0.00	0.00		
		1.300	0.00	85.11	10.56	0.00	0.00	0.00		
		71	0.00	91.23	0.87	0.00	0.00	0.00		
		CO3	83	0.108	0.00	90.69	1.85	0.00	0.00	0.00
				0.217	0.00	90.31	2.47	0.00	0.00	0.00
	0.325			0.00	89.81	3.30	0.00	0.00	0.00	
	0.433			0.00	89.32	4.16	0.00	0.00	0.00	
	0.542			0.00	88.82	5.03	0.00	0.00	0.00	
	0.650			0.00	88.20	6.13	0.00	0.00	0.00	
	0.867		0.00	87.32	7.70	0.00	0.00	0.00		
	1.083		0.00	86.57	9.06	0.00	0.00	0.00		
	1.300		0.00	85.28	11.35	0.00	0.00	0.00		
	71		0.00	91.22	-1.55	0.00	0.00	0.00		
	CO4		83	0.108	0.00	90.63	-0.49	0.00	0.00	0.00
				0.217	0.00	90.23	0.17	0.00	0.00	0.00
		0.325		0.00	89.71	1.08	0.00	0.00	0.00	
		0.433		0.00	89.18	2.00	0.00	0.00	0.00	
		0.542		0.00	88.66	2.94	0.00	0.00	0.00	
		0.650		0.00	88.00	4.13	0.00	0.00	0.00	
		0.867	0.00	87.08	5.83	0.00	0.00	0.00		
		1.083	0.00	86.29	7.30	0.00	0.00	0.00		
		1.300	0.00	84.93	9.77	0.00	0.00	0.00		
		71	0.00	91.22	0.94	0.00	0.00	0.00		
CO5		83	0.108	0.00	63.87	1.65	0.00	0.00	0.00	
			0.217	0.00	63.62	2.10	0.00	0.00	0.00	
	0.325		0.00	63.28	2.71	0.00	0.00	0.00		
	0.433		0.00	62.94	3.33	0.00	0.00	0.00		
	0.542		0.00	62.61	3.96	0.00	0.00	0.00		
	0.650		0.00	62.18	4.77	0.00	0.00	0.00		
	0.867	0.00	61.59	5.91	0.00	0.00	0.00			
	1.083	0.00	61.08	6.90	0.00	0.00	0.00			
	1.300	0.00	60.20	8.58	0.00	0.00	0.00			
	71	0.00	67.58	-0.24	0.00	0.00	0.00			
	CO6	83	0.108	0.00	67.16	0.52	0.00	0.00	0.00	
			0.217	0.00	66.87	0.99	0.00	0.00	0.00	
0.325			0.00	66.49	1.64	0.00	0.00	0.00		
0.433			0.00	66.12	2.29	0.00	0.00	0.00		
0.542			0.00	65.74	2.96	0.00	0.00	0.00		
0.650			0.00	65.26	3.81	0.00	0.00	0.00		
0.867		0.00	64.60	5.02	0.00	0.00	0.00			
1.083		0.00	64.03	6.07	0.00	0.00	0.00			
1.300		0.00	63.05	7.83	0.00	0.00	0.00			
71		0.00	67.58	0.57	0.00	0.00	0.00			
CO7		83	0.108	0.00	67.18	1.30	0.00	0.00	0.00	
			0.217	0.00	66.90	1.76	0.00	0.00	0.00	
	0.325		0.00	66.53	2.38	0.00	0.00	0.00		
	0.433		0.00	66.16	3.01	0.00	0.00	0.00		
	0.542		0.00	65.79	3.66	0.00	0.00	0.00		
	0.650		0.00	65.33	4.48	0.00	0.00	0.00		
	0.867	0.00	64.68	5.64	0.00	0.00	0.00			
	1.083	0.00	64.12	6.65	0.00	0.00	0.00			
	1.300	0.00	63.16	8.36	0.00	0.00	0.00			
	71	0.00	67.57	-1.05	0.00	0.00	0.00			
	CO8	83	0.108	0.00	67.14	-0.26	0.00	0.00	0.00	
			0.217	0.00	66.85	0.23	0.00	0.00	0.00	
0.325			0.00	66.46	0.89	0.00	0.00	0.00		
0.433			0.00	66.07	1.57	0.00	0.00	0.00		
0.542			0.00	65.68	2.27	0.00	0.00	0.00		
0.650			0.00	65.20	3.15	0.00	0.00	0.00		
0.867		0.00	64.52	4.40	0.00	0.00	0.00			
1.083		0.00	63.93	5.48	0.00	0.00	0.00			
1.300		0.00	62.93	7.30	0.00	0.00	0.00			
71		0.00	64.42	0.94	0.00	0.00	0.00			
CO9		83	0.108	0.00	63.87	1.65	0.00	0.00	0.00	
			0.217	0.00	63.62	2.10	0.00	0.00	0.00	
	0.325		0.00	63.28	2.71	0.00	0.00	0.00		

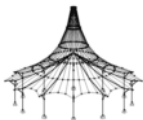


Progetto: Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]		
				Px	Py	Pz	m _x	m _y	m _z
33	CO9	83	0.433	0.00	62.94	3.33	0.00	0.00	0.00
			0.542	0.00	62.61	3.96	0.00	0.00	0.00
			0.650	0.00	62.18	4.77	0.00	0.00	0.00
			0.867	0.00	61.59	5.91	0.00	0.00	0.00
			1.083	0.00	61.08	6.90	0.00	0.00	0.00
			1.300	0.00	60.20	8.58	0.00	0.00	0.00
35	CC1	90	0.000	0.00	-0.48	14.12	0.00	0.00	0.00
			0.225	0.00	-0.49	13.74	0.00	0.00	0.00
			0.338	0.00	-0.50	13.62	0.00	0.00	0.00
			0.450	0.00	-0.51	13.45	0.00	0.00	0.00
			0.563	0.00	-0.52	13.29	0.00	0.00	0.00
			0.675	0.00	-0.53	13.13	0.00	0.00	0.00
	83	90	0.788	0.00	-0.54	13.00	0.00	0.00	0.00
			0.900	0.00	-0.44	12.78	0.00	0.00	0.00
			0.000	0.00	67.62	-18.53	0.00	0.00	0.00
			0.225	0.00	66.84	-16.54	0.00	0.00	0.00
			0.338	0.00	66.58	-15.89	0.00	0.00	0.00
			0.450	0.00	66.24	-15.03	0.00	0.00	0.00
	83	90	0.563	0.00	65.90	-14.20	0.00	0.00	0.00
			0.675	0.00	65.55	-13.38	0.00	0.00	0.00
			0.788	0.00	65.30	-12.78	0.00	0.00	0.00
			0.900	0.00	64.88	-11.81	0.00	0.00	0.00
			0.000	0.00	3.67	-1.34	0.00	0.00	0.00
			0.225	0.00	3.58	-1.30	0.00	0.00	0.00
	83	90	0.338	0.00	3.55	-1.28	0.00	0.00	0.00
			0.450	0.00	3.51	-1.26	0.00	0.00	0.00
			0.563	0.00	3.47	-1.24	0.00	0.00	0.00
			0.675	0.00	3.42	-1.21	0.00	0.00	0.00
			0.788	0.00	3.39	-1.20	0.00	0.00	0.00
			0.900	0.00	3.15	-1.17	0.00	0.00	0.00
	83	90	0.000	0.00	-0.07	0.91	0.00	0.00	0.00
			0.225	0.00	-0.05	0.88	0.00	0.00	0.00
			0.338	0.00	-0.04	0.87	0.00	0.00	0.00
			0.450	0.00	-0.03	0.86	0.00	0.00	0.00
			0.563	0.00	-0.02	0.84	0.00	0.00	0.00
			0.675	0.00	-0.01	0.83	0.00	0.00	0.00
	83	90	0.788	0.00	0.00	0.82	0.00	0.00	0.00
			0.900	0.00	0.00	0.80	0.00	0.00	0.00
			0.000	0.00	0.07	-0.91	0.00	0.00	0.00
			0.225	0.00	0.05	-0.88	0.00	0.00	0.00
			0.338	0.00	0.04	-0.87	0.00	0.00	0.00
			0.450	0.00	0.03	-0.86	0.00	0.00	0.00
	83	90	0.563	0.00	0.02	-0.84	0.00	0.00	0.00
			0.675	0.00	0.01	-0.83	0.00	0.00	0.00
			0.788	0.00	0.00	-0.82	0.00	0.00	0.00
			0.900	0.00	0.00	-0.80	0.00	0.00	0.00
			0.000	0.00	90.61	-6.03	0.00	0.00	0.00
			0.225	0.00	89.54	-3.84	0.00	0.00	0.00
	83	90	0.338	0.00	89.18	-3.13	0.00	0.00	0.00
			0.450	0.00	88.70	-2.19	0.00	0.00	0.00
			0.563	0.00	88.23	-1.28	0.00	0.00	0.00
			0.675	0.00	87.76	-0.39	0.00	0.00	0.00
			0.788	0.00	87.40	0.25	0.00	0.00	0.00
			0.900	0.00	86.97	1.26	0.00	0.00	0.00
83	90	0.000	0.00	95.57	-7.87	0.00	0.00	0.00	
		0.225	0.00	94.37	-5.62	0.00	0.00	0.00	
		0.338	0.00	93.97	-4.88	0.00	0.00	0.00	
		0.450	0.00	93.43	-3.92	0.00	0.00	0.00	
		0.563	0.00	92.90	-2.97	0.00	0.00	0.00	
		0.675	0.00	92.38	-2.06	0.00	0.00	0.00	
83	90	0.788	0.00	91.98	-1.39	0.00	0.00	0.00	
		0.900	0.00	91.22	-0.34	0.00	0.00	0.00	
		0.000	0.00	95.47	-6.49	0.00	0.00	0.00	
		0.225	0.00	94.31	-4.29	0.00	0.00	0.00	
		0.338	0.00	93.91	-3.57	0.00	0.00	0.00	
		0.450	0.00	93.39	-2.63	0.00	0.00	0.00	
83	90	0.563	0.00	92.88	-1.70	0.00	0.00	0.00	
		0.675	0.00	92.36	-0.81	0.00	0.00	0.00	
		0.788	0.00	91.97	-0.16	0.00	0.00	0.00	
		0.900	0.00	91.23	0.87	0.00	0.00	0.00	
		0.000	0.00	95.67	-9.25	0.00	0.00	0.00	
		0.225	0.00	94.44	-6.94	0.00	0.00	0.00	
83	90	0.338	0.00	94.03	-6.19	0.00	0.00	0.00	
		0.450	0.00	93.48	-5.21	0.00	0.00	0.00	
		0.563	0.00	92.93	-4.24	0.00	0.00	0.00	
		0.675	0.00	92.39	-3.31	0.00	0.00	0.00	
		0.788	0.00	91.98	-2.63	0.00	0.00	0.00	
		0.900	0.00	91.22	-1.55	0.00	0.00	0.00	
83	90	0.000	0.00	67.13	-4.45	0.00	0.00	0.00	
		0.225	0.00	66.33	-2.83	0.00	0.00	0.00	
		0.338	0.00	66.07	-2.31	0.00	0.00	0.00	
		0.450	0.00	65.71	-1.61	0.00	0.00	0.00	
		0.563	0.00	65.36	-0.93	0.00	0.00	0.00	
		0.675	0.00	65.01	-0.28	0.00	0.00	0.00	
83	90	0.788	0.00	64.75	0.20	0.00	0.00	0.00	
		0.900	0.00	64.42	0.94	0.00	0.00	0.00	
		0.000	0.00	70.80	-5.81	0.00	0.00	0.00	
		0.225	0.00	69.91	-4.14	0.00	0.00	0.00	
		0.338	0.00	69.61	-3.60	0.00	0.00	0.00	
		0.450	0.00	69.22	-2.88	0.00	0.00	0.00	
83	90	0.563	0.00	68.82	-2.19	0.00	0.00	0.00	

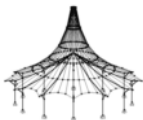


Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]			
				Px	Py	Pz	m _x	m _y	m _z	
35	CO6	90	0.675	0.00	68.43	-1.51	0.00	0.00	0.00	
			0.788	0.00	68.14	-1.02	0.00	0.00	0.00	
			0.900	0.00	67.58	-0.24	0.00	0.00	0.00	
	CO7	90	0.000	0.00	70.73	-4.89	0.00	0.00	0.00	
			0.225	0.00	69.87	-3.26	0.00	0.00	0.00	
			0.338	0.00	69.58	-2.73	0.00	0.00	0.00	
			0.450	0.00	69.19	-2.02	0.00	0.00	0.00	
			0.563	0.00	68.81	-1.34	0.00	0.00	0.00	
			0.675	0.00	68.42	-0.68	0.00	0.00	0.00	
			0.788	0.00	68.13	-0.19	0.00	0.00	0.00	
	CO8	90	0.900	0.00	67.58	0.57	0.00	0.00	0.00	
			0.000	0.00	70.86	-6.73	0.00	0.00	0.00	
			0.225	0.00	69.96	-5.03	0.00	0.00	0.00	
			0.338	0.00	69.65	-4.47	0.00	0.00	0.00	
			0.450	0.00	69.25	-3.74	0.00	0.00	0.00	
			0.563	0.00	68.84	-3.03	0.00	0.00	0.00	
			0.675	0.00	68.44	-2.34	0.00	0.00	0.00	
	CO9	90	0.788	0.00	68.14	-1.84	0.00	0.00	0.00	
			0.900	0.00	67.57	-1.05	0.00	0.00	0.00	
			0.000	0.00	67.13	-4.45	0.00	0.00	0.00	
			0.225	0.00	66.33	-2.83	0.00	0.00	0.00	
			0.338	0.00	66.07	-2.31	0.00	0.00	0.00	
			0.450	0.00	65.71	-1.61	0.00	0.00	0.00	
			0.563	0.00	65.36	-0.93	0.00	0.00	0.00	
	37	CC1	131	0.675	0.00	68.43	-1.51	0.00	0.00	0.00
				0.788	0.00	68.14	-1.02	0.00	0.00	0.00
				0.900	0.00	67.58	-0.24	0.00	0.00	0.00
0.000				0.00	70.73	-4.89	0.00	0.00	0.00	
0.225				0.00	69.87	-3.26	0.00	0.00	0.00	
0.338				0.00	69.58	-2.73	0.00	0.00	0.00	
0.450				0.00	69.19	-2.02	0.00	0.00	0.00	
0.563				0.00	68.81	-1.34	0.00	0.00	0.00	
0.675				0.00	68.42	-0.68	0.00	0.00	0.00	
0.788				0.00	68.13	-0.19	0.00	0.00	0.00	
0.900				0.00	67.58	0.57	0.00	0.00	0.00	
CC2	131	0.000	0.00	70.86	-6.73	0.00	0.00	0.00		
		0.225	0.00	69.96	-5.03	0.00	0.00	0.00		
		0.338	0.00	69.65	-4.47	0.00	0.00	0.00		
		0.450	0.00	69.25	-3.74	0.00	0.00	0.00		
		0.563	0.00	68.84	-3.03	0.00	0.00	0.00		
		0.675	0.00	68.44	-2.34	0.00	0.00	0.00		
		0.788	0.00	68.14	-1.84	0.00	0.00	0.00		
		0.900	0.00	67.57	-1.05	0.00	0.00	0.00		
		0.000	0.00	67.13	-4.45	0.00	0.00	0.00		
		0.225	0.00	66.33	-2.83	0.00	0.00	0.00		
		0.338	0.00	66.07	-2.31	0.00	0.00	0.00		
		0.450	0.00	65.71	-1.61	0.00	0.00	0.00		
		0.563	0.00	65.36	-0.93	0.00	0.00	0.00		
		0.675	0.00	65.01	-0.28	0.00	0.00	0.00		
		0.788	0.00	64.75	0.20	0.00	0.00	0.00		
0.900	0.00	64.42	0.94	0.00	0.00	0.00				
CC3	131	0.000	0.00	0.00	-6.71	0.00	0.00	0.00		
		0.500	0.00	0.00	-4.78	0.00	0.00	0.00		
		1.000	0.00	0.00	-3.84	0.00	0.00	0.00		
		1.500	0.00	0.00	-2.74	0.00	0.00	0.00		
		2.000	0.00	0.00	-1.86	0.00	0.00	0.00		
		2.500	0.00	0.00	-1.18	0.00	0.00	0.00		
		3.000	0.00	0.00	-0.67	0.00	0.00	0.00		
		3.500	0.00	0.00	-0.32	0.00	0.00	0.00		
		4.000	0.00	0.00	-0.08	0.00	0.00	0.00		
		4.500	0.00	0.00	0.07	0.00	0.00	0.00		
		5.000	0.00	0.00	0.15	0.00	0.00	0.00		
		5.500	0.00	0.00	0.18	0.00	0.00	0.00		
		6.000	0.00	0.00	0.18	0.00	0.00	0.00		
		6.500	0.00	0.00	0.16	0.00	0.00	0.00		
		7.000	0.00	0.00	0.26	0.00	0.00	0.00		
CC4	131	0.000	0.00	0.00	-154.89	0.00	0.00	0.00		
		0.500	0.00	0.00	-166.33	0.00	0.00	0.00		
		1.000	0.00	0.00	-172.80	0.00	0.00	0.00		
		1.500	0.00	0.00	-180.60	0.00	0.00	0.00		
		2.000	0.00	0.00	-186.84	0.00	0.00	0.00		
		2.500	0.00	0.00	-191.19	0.00	0.00	0.00		
		3.000	0.00	0.00	-193.51	0.00	0.00	0.00		
		3.500	0.00	0.00	-193.85	0.00	0.00	0.00		
		4.000	0.00	0.00	-192.40	0.00	0.00	0.00		
		4.500	0.00	0.00	-189.45	0.00	0.00	0.00		
		5.000	0.00	0.00	-185.35	0.00	0.00	0.00		
		5.500	0.00	0.00	-180.50	0.00	0.00	0.00		
		6.000	0.00	0.00	-175.27	0.00	0.00	0.00		
		6.500	0.00	0.00	-171.27	0.00	0.00	0.00		
		7.000	0.00	0.00	-165.22	0.00	0.00	0.00		
CC5	131	0.000	0.00	0.00	-7.32	0.00	0.00	0.00		
		0.500	0.00	0.00	-9.08	0.00	0.00	0.00		
		1.000	0.00	0.00	-10.13	0.00	0.00	0.00		
		1.500	0.00	0.00	-11.50	0.00	0.00	0.00		
		2.000	0.00	0.00	-12.79	0.00	0.00	0.00		
		2.500	0.00	0.00	-13.99	0.00	0.00	0.00		
		3.000	0.00	0.00	-15.06	0.00	0.00	0.00		
		3.500	0.00	0.00	-15.98	0.00	0.00	0.00		
		4.000	0.00	0.00	-16.77	0.00	0.00	0.00		
		4.500	0.00	0.00	-17.42	0.00	0.00	0.00		
		5.000	0.00	0.00	-17.94	0.00	0.00	0.00		
		5.500	0.00	0.00	-18.36	0.00	0.00	0.00		
		6.000	0.00	0.00	-18.73	0.00	0.00	0.00		
		6.500	0.00	0.00	-18.99	0.00	0.00	0.00		
		7.000	0.00	0.00	-19.49	0.00	0.00	0.00		



Progetto: Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]					
				P _x	P _y	P _z	m _x	m _y	m _z			
37	CC5	131	2.000	0.00	0.00	-1.25	0.00	0.00	0.00			
			2.500	0.00	0.00	-1.28	0.00	0.00	0.00			
			3.000	0.00	0.00	-1.29	0.00	0.00	0.00			
			3.500	0.00	0.00	-1.31	0.00	0.00	0.00			
			4.000	0.00	0.00	-1.34	0.00	0.00	0.00			
			4.500	0.00	0.00	-1.37	0.00	0.00	0.00			
			5.000	0.00	0.00	-1.42	0.00	0.00	0.00			
			5.500	0.00	0.00	-1.46	0.00	0.00	0.00			
			6.000	0.00	0.00	-1.51	0.00	0.00	0.00			
			6.500	0.00	0.00	-1.53	0.00	0.00	0.00			
			7.000	0.00	0.00	-1.55	0.00	0.00	0.00			
					130	7.000	0.00	0.00	-1.55	0.00	0.00	0.00
				CO1	131	0.000	0.00	0.00	-218.26	0.00	0.00	0.00
			0.500			0.00	0.00	-231.11	0.00	0.00	0.00	
	1.000	0.00	0.00			-238.59	0.00	0.00	0.00			
	1.500	0.00	0.00			-247.65	0.00	0.00	0.00			
	2.000	0.00	0.00			-254.90	0.00	0.00	0.00			
	2.500	0.00	0.00			-259.87	0.00	0.00	0.00			
	3.000	0.00	0.00			-262.32	0.00	0.00	0.00			
	3.500	0.00	0.00			-262.30	0.00	0.00	0.00			
	4.000	0.00	0.00			-260.02	0.00	0.00	0.00			
	4.500	0.00	0.00			-255.83	0.00	0.00	0.00			
	5.000	0.00	0.00			-250.18	0.00	0.00	0.00			
	5.500	0.00	0.00			-243.57	0.00	0.00	0.00			
	6.000	0.00	0.00			-236.49	0.00	0.00	0.00			
	6.500	0.00	0.00			-231.10	0.00	0.00	0.00			
	7.000	0.00	0.00	-222.77	0.00	0.00	0.00					
			130	7.000	0.00	0.00	-222.77	0.00	0.00	0.00		
		CO2	131	0.000	0.00	0.00	-228.17	0.00	0.00	0.00		
	0.500			0.00	0.00	-243.40	0.00	0.00	0.00			
	1.000			0.00	0.00	-252.31	0.00	0.00	0.00			
	1.500			0.00	0.00	-263.21	0.00	0.00	0.00			
	2.000			0.00	0.00	-272.22	0.00	0.00	0.00			
	2.500			0.00	0.00	-278.80	0.00	0.00	0.00			
	3.000			0.00	0.00	-282.70	0.00	0.00	0.00			
	3.500			0.00	0.00	-283.93	0.00	0.00	0.00			
	4.000			0.00	0.00	-282.71	0.00	0.00	0.00			
	4.500			0.00	0.00	-279.40	0.00	0.00	0.00			
	5.000			0.00	0.00	-274.45	0.00	0.00	0.00			
	5.500			0.00	0.00	-268.41	0.00	0.00	0.00			
	6.000			0.00	0.00	-261.83	0.00	0.00	0.00			
	6.500			0.00	0.00	-256.78	0.00	0.00	0.00			
7.000	0.00	0.00	-249.11	0.00	0.00	0.00						
		130	7.000	0.00	0.00	-249.11	0.00	0.00	0.00			
	CO3	131	0.000	0.00	0.00	-226.64	0.00	0.00	0.00			
0.500			0.00	0.00	-241.70	0.00	0.00	0.00				
1.000			0.00	0.00	-250.54	0.00	0.00	0.00				
1.500			0.00	0.00	-261.37	0.00	0.00	0.00				
2.000			0.00	0.00	-270.33	0.00	0.00	0.00				
2.500			0.00	0.00	-276.87	0.00	0.00	0.00				
3.000			0.00	0.00	-280.75	0.00	0.00	0.00				
3.500			0.00	0.00	-281.95	0.00	0.00	0.00				
4.000			0.00	0.00	-280.69	0.00	0.00	0.00				
4.500			0.00	0.00	-277.32	0.00	0.00	0.00				
5.000			0.00	0.00	-272.31	0.00	0.00	0.00				
5.500			0.00	0.00	-266.20	0.00	0.00	0.00				
6.000			0.00	0.00	-259.55	0.00	0.00	0.00				
6.500			0.00	0.00	-254.47	0.00	0.00	0.00				
7.000	0.00	0.00	-246.77	0.00	0.00	0.00						
		130	7.000	0.00	0.00	-246.77	0.00	0.00	0.00			
	CO4	131	0.000	0.00	0.00	-229.70	0.00	0.00	0.00			
0.500			0.00	0.00	-245.10	0.00	0.00	0.00				
1.000			0.00	0.00	-254.08	0.00	0.00	0.00				
1.500			0.00	0.00	-265.06	0.00	0.00	0.00				
2.000			0.00	0.00	-274.12	0.00	0.00	0.00				
2.500			0.00	0.00	-280.73	0.00	0.00	0.00				
3.000			0.00	0.00	-284.65	0.00	0.00	0.00				
3.500			0.00	0.00	-285.92	0.00	0.00	0.00				
4.000			0.00	0.00	-284.73	0.00	0.00	0.00				
4.500			0.00	0.00	-281.47	0.00	0.00	0.00				
5.000			0.00	0.00	-276.59	0.00	0.00	0.00				
5.500			0.00	0.00	-270.62	0.00	0.00	0.00				
6.000			0.00	0.00	-264.10	0.00	0.00	0.00				
6.500			0.00	0.00	-259.10	0.00	0.00	0.00				
7.000	0.00	0.00	-251.46	0.00	0.00	0.00						
		130	7.000	0.00	0.00	-251.46	0.00	0.00	0.00			
	CO5	131	0.000	0.00	0.00	-161.66	0.00	0.00	0.00			
0.500			0.00	0.00	-171.17	0.00	0.00	0.00				
1.000			0.00	0.00	-176.71	0.00	0.00	0.00				
1.500			0.00	0.00	-183.41	0.00	0.00	0.00				
2.000			0.00	0.00	-188.79	0.00	0.00	0.00				
2.500			0.00	0.00	-192.46	0.00	0.00	0.00				
3.000			0.00	0.00	-194.28	0.00	0.00	0.00				
3.500			0.00	0.00	-194.26	0.00	0.00	0.00				
4.000			0.00	0.00	-192.57	0.00	0.00	0.00				
4.500			0.00	0.00	-189.47	0.00	0.00	0.00				
5.000			0.00	0.00	-185.29	0.00	0.00	0.00				
5.500			0.00	0.00	-180.39	0.00	0.00	0.00				
6.000			0.00	0.00	-175.16	0.00	0.00	0.00				
6.500			0.00	0.00	-171.16	0.00	0.00	0.00				
7.000	0.00	0.00	-165.00	0.00	0.00	0.00						
		130	7.000	0.00	0.00	-165.00	0.00	0.00	0.00			
	CO6	131	0.000	0.00	0.00	-168.99	0.00	0.00	0.00			
0.500			0.00	0.00	-180.27	0.00	0.00	0.00				
1.000			0.00	0.00	-186.86	0.00	0.00	0.00				
1.500			0.00	0.00	-194.94	0.00	0.00	0.00				
2.000			0.00	0.00	-201.61	0.00	0.00	0.00				



Progetto: Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]					
				Px	Py	Pz	m _x	m _y	m _z			
37	CO6	131	2.500	0.00	0.00	-206.48	0.00	0.00	0.00			
			3.000	0.00	0.00	-209.36	0.00	0.00	0.00			
			3.500	0.00	0.00	-210.28	0.00	0.00	0.00			
			4.000	0.00	0.00	-209.37	0.00	0.00	0.00			
			4.500	0.00	0.00	-206.92	0.00	0.00	0.00			
			5.000	0.00	0.00	-203.26	0.00	0.00	0.00			
			5.500	0.00	0.00	-198.79	0.00	0.00	0.00			
			6.000	0.00	0.00	-193.91	0.00	0.00	0.00			
			6.500	0.00	0.00	-190.18	0.00	0.00	0.00			
			7.000	0.00	0.00	-184.51	0.00	0.00	0.00			
				CO7	131	0.000	0.00	0.00	-167.97	0.00	0.00	0.00
			0.500			0.00	0.00	-179.14	0.00	0.00	0.00	
			1.000			0.00	0.00	-185.68	0.00	0.00	0.00	
			1.500			0.00	0.00	-193.71	0.00	0.00	0.00	
	2.000	0.00	0.00			-200.35	0.00	0.00	0.00			
	2.500	0.00	0.00			-205.19	0.00	0.00	0.00			
	3.000	0.00	0.00			-208.06	0.00	0.00	0.00			
	3.500	0.00	0.00			-208.96	0.00	0.00	0.00			
	4.000	0.00	0.00			-208.03	0.00	0.00	0.00			
	4.500	0.00	0.00			-205.54	0.00	0.00	0.00			
	5.000	0.00	0.00			-201.83	0.00	0.00	0.00			
	5.500	0.00	0.00			-197.32	0.00	0.00	0.00			
	6.000	0.00	0.00			-192.40	0.00	0.00	0.00			
	6.500	0.00	0.00			-188.64	0.00	0.00	0.00			
	7.000	0.00	0.00	-182.95	0.00	0.00	0.00					
		CO8	131	0.000	0.00	0.00	-170.01	0.00	0.00	0.00		
	0.500			0.00	0.00	-181.40	0.00	0.00	0.00			
	1.000			0.00	0.00	-188.04	0.00	0.00	0.00			
	1.500			0.00	0.00	-196.16	0.00	0.00	0.00			
	2.000			0.00	0.00	-202.87	0.00	0.00	0.00			
	2.500			0.00	0.00	-207.76	0.00	0.00	0.00			
	3.000			0.00	0.00	-210.66	0.00	0.00	0.00			
	3.500			0.00	0.00	-211.60	0.00	0.00	0.00			
	4.000			0.00	0.00	-210.72	0.00	0.00	0.00			
	4.500			0.00	0.00	-208.30	0.00	0.00	0.00			
	5.000			0.00	0.00	-204.68	0.00	0.00	0.00			
	5.500			0.00	0.00	-200.26	0.00	0.00	0.00			
	6.000			0.00	0.00	-195.43	0.00	0.00	0.00			
	6.500			0.00	0.00	-191.72	0.00	0.00	0.00			
	7.000	0.00	0.00	-186.07	0.00	0.00	0.00					
		CO9	131	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
	0.500			0.00	0.00	-171.17	0.00	0.00	0.00			
1.000	0.00			0.00	-176.71	0.00	0.00	0.00				
1.500	0.00			0.00	-183.41	0.00	0.00	0.00				
2.000	0.00			0.00	-188.79	0.00	0.00	0.00				
2.500	0.00			0.00	-192.46	0.00	0.00	0.00				
3.000	0.00			0.00	-194.28	0.00	0.00	0.00				
3.500	0.00			0.00	-194.26	0.00	0.00	0.00				
4.000	0.00			0.00	-192.57	0.00	0.00	0.00				
4.500	0.00			0.00	-189.47	0.00	0.00	0.00				
5.000	0.00			0.00	-185.29	0.00	0.00	0.00				
5.500	0.00			0.00	-180.39	0.00	0.00	0.00				
6.000	0.00			0.00	-175.16	0.00	0.00	0.00				
6.500	0.00			0.00	-171.16	0.00	0.00	0.00				
7.000	0.00	0.00	-165.00	0.00	0.00	0.00						
42	CC1	28	0.000	-5.71	0.00	0.00	0.00	0.00	0.00			
			0.433	-6.16	0.00	0.00	0.00	0.00	0.00			
			0.867	-6.33	0.00	0.00	0.00	0.00	0.00			
		131	1.300	1.300	-6.71	0.00	0.00	0.00	0.00			
		CC2	28	0.000	-119.23	0.00	0.00	0.00	0.00			
	0.433			-134.42	0.00	0.00	0.00	0.00				
	0.867			-140.27	0.00	0.00	0.00	0.00				
		131	1.300	1.300	-154.89	0.00	0.00	0.00	0.00			
		CC3	28	0.000	-5.60	0.00	0.00	0.00	0.00			
	0.433			-6.33	0.00	0.00	0.00	0.00				
	0.867			-6.61	0.00	0.00	0.00	0.00				
		131	1.300	1.300	-7.32	0.00	0.00	0.00	0.00			
		CC4	28	0.000	0.00	0.00	0.00	0.00	0.00			
	0.433			0.42	0.00	0.00	0.00	0.00				
	0.867			0.59	0.00	0.00	0.00	0.00				
		131	1.300	1.300	1.02	0.00	0.00	0.00	0.00			
		CC5	28	0.000	0.00	0.00	0.00	0.00	0.00			
	0.433			-0.42	0.00	0.00	0.00	0.00				
	0.867			-0.59	0.00	0.00	0.00	0.00				
		131	1.300	1.300	-1.02	0.00	0.00	0.00	0.00			
		CO1	28	0.000	1.58	168.87	0.00	0.00	0.00			
	0.433			1.78	189.94	0.00	0.00	0.00				
	0.867			1.86	198.04	0.00	0.00	0.00				
		131	1.300	1.300	2.05	218.25	0.00	0.00	0.00			
	CO2	28	0.000	1.65	176.46	0.00	0.00	0.00				
0.433			1.86	198.52	0.00	0.00	0.00					
0.867			1.94	207.00	0.00	0.00	0.00					
	131	1.300	1.300	2.14	228.16	0.00	0.00	0.00				
	CO3	28	0.000	1.65	176.44	0.00	0.00	0.00				
0.433			1.86	197.87	0.00	0.00	0.00					
0.867			1.93	206.10	0.00	0.00	0.00					
	131	1.300	1.300	2.13	226.63	0.00	0.00	0.00				
	CO4	28	0.000	1.66	176.47	0.00	0.00	0.00				
0.433			1.87	199.16	0.00	0.00	0.00					
0.867			1.95	207.90	0.00	0.00	0.00					
	131	1.300	1.300	2.15	229.69	0.00	0.00	0.00				



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]		
				Px	Py	Pz	mx	my	mz
42	CO5	28	0.000	1.17	125.05	0.00	0.00	0.00	0.00
			0.433	1.32	140.67	0.00	0.00	0.00	
			0.867	1.38	146.67	0.00	0.00	0.00	
	131	1.300	1.300	1.52	161.65	0.00	0.00	0.00	
			0.000	1.23	130.66	0.00	0.00	0.00	
			0.433	1.38	147.01	0.00	0.00	0.00	
	CO6	28	0.867	1.44	153.30	0.00	0.00	0.00	
			1.300	1.58	168.99	0.00	0.00	0.00	
			0.000	1.23	130.65	0.00	0.00	0.00	
	CO7	28	0.433	1.37	146.59	0.00	0.00	0.00	
			0.867	1.43	152.70	0.00	0.00	0.00	
			1.300	1.58	167.97	0.00	0.00	0.00	
CO8	28	0.000	1.23	130.67	0.00	0.00	0.00		
		0.433	1.38	147.44	0.00	0.00	0.00		
		0.867	1.44	153.89	0.00	0.00	0.00		
131	1.300	1.300	1.59	170.00	0.00	0.00	0.00		
		0.000	1.17	125.05	0.00	0.00	0.00		
		0.433	1.32	140.67	0.00	0.00	0.00		
CO9	28	0.867	1.38	146.67	0.00	0.00	0.00		
		1.300	1.52	161.65	0.00	0.00	0.00		
		0.000	1.23	130.65	0.00	0.00	0.00		
47	CC1	131	0.000	-6.71	0.00	0.00	0.00	0.00	
			0.450	-7.23	0.00	0.00	0.00	0.00	
			0.900	-7.65	0.00	0.00	0.00	0.00	
	74	0.900	0.900	-7.65	0.00	0.00	0.00	0.00	
			0.000	-154.89	0.00	0.00	0.00	0.00	
			0.450	-166.43	0.00	0.00	0.00	0.00	
	CC2	131	0.900	-176.86	0.00	0.00	0.00	0.00	
			0.000	-7.32	0.00	0.00	0.00	0.00	
			0.450	-7.86	0.00	0.00	0.00	0.00	
	CC3	131	0.900	-8.36	0.00	0.00	0.00	0.00	
			0.000	1.02	0.00	0.00	0.00	0.00	
			0.450	1.36	0.00	0.00	0.00	0.00	
	CC4	131	0.900	1.69	0.00	0.00	0.00	0.00	
			0.000	-1.02	0.00	0.00	0.00	0.00	
			0.450	-1.36	0.00	0.00	0.00	0.00	
	CC5	131	0.900	-1.69	0.00	0.00	0.00	0.00	
			0.000	2.05	218.25	0.00	0.00	0.00	
			0.450	2.20	234.48	0.00	0.00	0.00	
	CO1	131	0.900	2.34	249.09	0.00	0.00	0.00	
			0.000	2.14	228.16	0.00	0.00	0.00	
			0.450	2.30	245.13	0.00	0.00	0.00	
	CO2	131	0.900	2.44	260.42	0.00	0.00	0.00	
			0.000	2.13	226.63	0.00	0.00	0.00	
			0.450	2.28	243.09	0.00	0.00	0.00	
	CO3	131	0.900	2.42	257.88	0.00	0.00	0.00	
			0.000	2.15	229.69	0.00	0.00	0.00	
			0.450	2.32	247.17	0.00	0.00	0.00	
	CO4	131	0.900	2.47	262.96	0.00	0.00	0.00	
			0.000	1.52	161.65	0.00	0.00	0.00	
			0.450	1.63	173.68	0.00	0.00	0.00	
	CO5	131	0.900	1.73	184.51	0.00	0.00	0.00	
			0.000	1.59	168.99	0.00	0.00	0.00	
			0.450	1.70	181.56	0.00	0.00	0.00	
	CO6	131	0.900	1.81	192.89	0.00	0.00	0.00	
			0.000	1.58	167.97	0.00	0.00	0.00	
			0.450	1.69	180.20	0.00	0.00	0.00	
CO7	131	0.900	1.79	191.20	0.00	0.00	0.00		
		0.000	1.59	170.00	0.00	0.00	0.00		
		0.450	1.72	182.92	0.00	0.00	0.00		
CO8	131	0.900	1.83	194.59	0.00	0.00	0.00		
		0.000	1.52	161.65	0.00	0.00	0.00		
		0.450	1.63	173.68	0.00	0.00	0.00		
CO9	131	0.900	1.73	184.51	0.00	0.00	0.00		
		0.000	0.00	-16.45	0.00	0.00	0.00		
		0.119	0.00	-15.41	0.00	0.00	0.00		
56	CC1	119	0.238	0.00	-14.79	0.00	0.00	0.00	
			0.357	0.00	-13.95	0.00	0.00	0.00	
			0.476	0.00	-13.11	0.00	0.00	0.00	
			0.595	0.00	-12.27	0.00	0.00	0.00	
			0.714	0.00	-11.20	0.00	0.00	0.00	
			0.952	0.00	-9.72	0.00	0.00	0.00	
			1.191	0.00	-8.02	0.00	0.00	0.00	
			1.429	0.00	-5.96	0.00	0.00	0.00	
			1.905	0.00	-3.94	0.00	0.00	0.00	
			2.381	0.00	-2.87	0.00	0.00	0.00	
			0.000	0.00	-34.21	0.00	0.00	0.00	
			0.119	0.00	-31.91	0.00	0.00	0.00	
			0.238	0.00	-30.52	0.00	0.00	0.00	
			0.357	0.00	-28.68	0.00	0.00	0.00	
			0.476	0.00	-26.83	0.00	0.00	0.00	
0.595	0.00	-24.98	0.00	0.00	0.00				
0.714	0.00	-22.68	0.00	0.00	0.00				
0.952	0.00	-19.45	0.00	0.00	0.00				
1.191	0.00	-15.76	0.00	0.00	0.00				
1.429	0.00	-11.17	0.00	0.00	0.00				
1.905	0.00	-6.59	0.00	0.00	0.00				
2.381	0.00	-55.74	0.00	0.00	0.00				
0.000	0.00	-2.35	0.00	0.00	0.00				
0.119	0.00	-2.25	0.00	0.00	0.00				
0.238	0.00	-2.19	0.00	0.00	0.00				
0.357	0.00	-2.11	0.00	0.00	0.00				
0.476	0.00	-2.03	0.00	0.00	0.00				



Progetto: Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]				
				Px	Py	Pz	mx	my	mz		
56	CC3	119	0.595	0.00	-1.95	0.00	0.00	0.00	0.00		
			0.714	0.00	-1.84	0.00	0.00	0.00	0.00		
			0.952	0.00	-1.69	0.00	0.00	0.00	0.00		
			1.191	0.00	-1.52	0.00	0.00	0.00	0.00		
			1.429	0.00	-1.33	0.00	0.00	0.00	0.00		
			1.905	0.00	-1.16	0.00	0.00	0.00	0.00		
			2.381	0.00	-6.30	0.00	0.00	0.00	0.00		
			CC4	119	0.000	0.00	7.82	0.00	0.00	0.00	0.00
					0.119	0.00	7.30	0.00	0.00	0.00	0.00
					0.238	0.00	6.99	0.00	0.00	0.00	0.00
					0.357	0.00	6.57	0.00	0.00	0.00	0.00
					0.476	0.00	6.16	0.00	0.00	0.00	0.00
					0.595	0.00	5.74	0.00	0.00	0.00	0.00
					0.714	0.00	5.22	0.00	0.00	0.00	0.00
					0.952	0.00	4.50	0.00	0.00	0.00	0.00
	1.191	0.00			3.67	0.00	0.00	0.00	0.00		
	1.429	0.00			2.63	0.00	0.00	0.00	0.00		
	1.905	0.00			1.59	0.00	0.00	0.00	0.00		
	2.381	0.00			1.81	0.00	0.00	0.00	0.00		
	CC5	119			0.000	0.00	-7.82	0.00	0.00	0.00	0.00
					0.119	0.00	-7.30	0.00	0.00	0.00	0.00
					0.238	0.00	-6.99	0.00	0.00	0.00	0.00
			0.357	0.00	-6.57	0.00	0.00	0.00	0.00		
			0.476	0.00	-6.16	0.00	0.00	0.00	0.00		
			0.595	0.00	-5.74	0.00	0.00	0.00	0.00		
			0.714	0.00	-5.22	0.00	0.00	0.00	0.00		
			0.952	0.00	-4.50	0.00	0.00	0.00	0.00		
			1.191	0.00	-3.67	0.00	0.00	0.00	0.00		
			1.429	0.00	-2.63	0.00	0.00	0.00	0.00		
			1.905	0.00	-1.59	0.00	0.00	0.00	0.00		
			2.381	0.00	-1.81	0.00	0.00	0.00	0.00		
			CO1	119	0.000	0.00	-69.01	0.00	0.00	0.00	0.00
					0.119	0.00	-64.46	0.00	0.00	0.00	0.00
					0.238	0.00	-61.72	0.00	0.00	0.00	0.00
	0.357	0.00			-58.07	0.00	0.00	0.00	0.00		
	0.476	0.00			-54.42	0.00	0.00	0.00	0.00		
	0.595	0.00			-50.75	0.00	0.00	0.00	0.00		
	0.714	0.00			-46.16	0.00	0.00	0.00	0.00		
	0.952	0.00			-39.74	0.00	0.00	0.00	0.00		
	1.191	0.00			-32.43	0.00	0.00	0.00	0.00		
	1.429	0.00			-23.37	0.00	0.00	0.00	0.00		
	1.905	0.00			-14.38	0.00	0.00	0.00	0.00		
	2.381	0.00			-79.28	0.00	0.00	0.00	0.00		
	CO2	119			0.000	0.00	-72.42	0.00	0.00	0.00	0.00
					0.119	0.00	-67.73	0.00	0.00	0.00	0.00
0.238					0.00	-64.91	0.00	0.00	0.00	0.00	
0.357			0.00	-61.14	0.00	0.00	0.00	0.00			
0.476			0.00	-57.36	0.00	0.00	0.00	0.00			
0.595			0.00	-53.56	0.00	0.00	0.00	0.00			
0.714			0.00	-48.82	0.00	0.00	0.00	0.00			
0.952			0.00	-42.17	0.00	0.00	0.00	0.00			
1.191			0.00	-34.60	0.00	0.00	0.00	0.00			
1.429			0.00	-25.25	0.00	0.00	0.00	0.00			
1.905			0.00	-15.99	0.00	0.00	0.00	0.00			
2.381			0.00	-87.85	0.00	0.00	0.00	0.00			
CO3			119	0.000	0.00	-60.65	0.00	0.00	0.00	0.00	
				0.119	0.00	-56.73	0.00	0.00	0.00	0.00	
				0.238	0.00	-54.38	0.00	0.00	0.00	0.00	
	0.357	0.00		-51.24	0.00	0.00	0.00	0.00			
	0.476	0.00		-48.08	0.00	0.00	0.00	0.00			
	0.595	0.00		-44.91	0.00	0.00	0.00	0.00			
	0.714	0.00		-40.95	0.00	0.00	0.00	0.00			
	0.952	0.00		-35.40	0.00	0.00	0.00	0.00			
	1.191	0.00		-29.08	0.00	0.00	0.00	0.00			
	1.429	0.00		-21.29	0.00	0.00	0.00	0.00			
	1.905	0.00		-13.60	0.00	0.00	0.00	0.00			
	2.381	0.00		-85.12	0.00	0.00	0.00	0.00			
	CO4	119		0.000	0.00	-84.20	0.00	0.00	0.00	0.00	
				0.119	0.00	-78.72	0.00	0.00	0.00	0.00	
				0.238	0.00	-75.43	0.00	0.00	0.00	0.00	
0.357			0.00	-71.04	0.00	0.00	0.00	0.00			
0.476			0.00	-66.63	0.00	0.00	0.00	0.00			
0.595			0.00	-62.21	0.00	0.00	0.00	0.00			
0.714			0.00	-56.68	0.00	0.00	0.00	0.00			
0.952			0.00	-48.95	0.00	0.00	0.00	0.00			
1.191			0.00	-40.13	0.00	0.00	0.00	0.00			
1.429			0.00	-29.21	0.00	0.00	0.00	0.00			
1.905			0.00	-18.39	0.00	0.00	0.00	0.00			
2.381			0.00	-90.57	0.00	0.00	0.00	0.00			
CO5			119	0.000	0.00	-51.00	0.00	0.00	0.00	0.00	
				0.119	0.00	-47.64	0.00	0.00	0.00	0.00	
				0.238	0.00	-45.62	0.00	0.00	0.00	0.00	
	0.357	0.00		-42.92	0.00	0.00	0.00	0.00			
	0.476	0.00		-40.21	0.00	0.00	0.00	0.00			
	0.595	0.00		-37.50	0.00	0.00	0.00	0.00			
	0.714	0.00		-34.11	0.00	0.00	0.00	0.00			
	0.952	0.00		-29.37	0.00	0.00	0.00	0.00			
	1.191	0.00		-23.96	0.00	0.00	0.00	0.00			
	1.429	0.00		-17.26	0.00	0.00	0.00	0.00			
	1.905	0.00		-10.62	0.00	0.00	0.00	0.00			
	2.381	0.00		-58.70	0.00	0.00	0.00	0.00			



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]						
				Px	Py	Pz	mx	my	mz				
56	CO6	119	0.000	0.00	-53.48	0.00	0.00	0.00	0.00				
			0.119	0.00	-50.01	0.00	0.00	0.00					
			0.238	0.00	-47.93	0.00	0.00	0.00					
			0.357	0.00	-45.14	0.00	0.00	0.00					
			0.476	0.00	-42.35	0.00	0.00	0.00					
			0.595	0.00	-39.55	0.00	0.00	0.00					
			0.714	0.00	-36.05	0.00	0.00	0.00					
			0.952	0.00	-31.14	0.00	0.00	0.00					
			1.191	0.00	-25.55	0.00	0.00	0.00					
			1.429	0.00	-18.64	0.00	0.00	0.00					
			1.905	0.00	-11.80	0.00	0.00	0.00					
			2.381	0.00	-65.03	0.00	0.00	0.00					
			CO7	119	0.000	0.00	-45.64	0.00	0.00	0.00	0.00		
					0.119	0.00	-42.69	0.00	0.00	0.00			
	0.238	0.00			-40.92	0.00	0.00	0.00					
	0.357	0.00			-38.55	0.00	0.00	0.00					
	0.476	0.00			-36.18	0.00	0.00	0.00					
	0.595	0.00			-33.79	0.00	0.00	0.00					
	0.714	0.00			-30.81	0.00	0.00	0.00					
	0.952	0.00			-26.63	0.00	0.00	0.00					
	1.191	0.00			-21.87	0.00	0.00	0.00					
	1.429	0.00			-16.01	0.00	0.00	0.00					
	1.905	0.00			-10.21	0.00	0.00	0.00					
	2.381	0.00			-63.21	0.00	0.00	0.00					
	CO8	119			0.000	0.00	-61.32	0.00	0.00	0.00	0.00		
					0.119	0.00	-57.33	0.00	0.00	0.00			
			0.238	0.00	-54.94	0.00	0.00	0.00					
			0.357	0.00	-51.74	0.00	0.00	0.00					
			0.476	0.00	-48.53	0.00	0.00	0.00					
			0.595	0.00	-45.31	0.00	0.00	0.00					
			0.714	0.00	-41.28	0.00	0.00	0.00					
			0.952	0.00	-35.65	0.00	0.00	0.00					
			1.191	0.00	-29.23	0.00	0.00	0.00					
			1.429	0.00	-21.28	0.00	0.00	0.00					
			1.905	0.00	-13.40	0.00	0.00	0.00					
			2.381	0.00	-66.85	0.00	0.00	0.00					
			CO9	119	0.000	0.00	-51.00	0.00	0.00	0.00	0.00		
					0.119	0.00	-47.64	0.00	0.00	0.00			
	0.238	0.00			-45.62	0.00	0.00	0.00					
	0.357	0.00			-42.92	0.00	0.00	0.00					
	0.476	0.00			-40.21	0.00	0.00	0.00					
	0.595	0.00			-37.50	0.00	0.00	0.00					
0.714	0.00	-34.11			0.00	0.00	0.00						
0.952	0.00	-29.37			0.00	0.00	0.00						
1.191	0.00	-23.96			0.00	0.00	0.00						
1.429	0.00	-17.26			0.00	0.00	0.00						
1.905	0.00	-10.62			0.00	0.00	0.00						
2.381	0.00	-58.70			0.00	0.00	0.00						
67	CC1	40			0.000	12.96	0.14	11.17	0.00	0.00	0.00		
					0.485	9.61	-0.27	4.96	0.00	0.00	0.00		
			0.970	7.75	-0.38	4.71	0.00	0.00	0.00				
			1.456	5.50	-0.44	4.91	0.00	0.00	0.00				
			1.941	3.58	-0.39	5.32	0.00	0.00	0.00				
			2.426	1.97	-0.27	5.54	0.00	0.00	0.00				
			2.911	0.66	-0.10	5.62	0.00	0.00	0.00				
			3.397	-0.41	0.10	5.62	0.00	0.00	0.00				
			3.882	-1.26	0.33	5.61	0.00	0.00	0.00				
			4.367	-1.88	0.54	5.60	0.00	0.00	0.00				
			4.852	-2.30	0.74	5.59	0.00	0.00	0.00				
			5.338	-2.51	0.90	5.59	0.00	0.00	0.00				
			CC2	40	0.000	2.54	0.03	8.04	0.00	0.00	0.00		
					0.485	-30.55	1.02	6.00	0.00	0.00	0.00		
					0.970	-44.96	2.70	4.96	0.00	0.00	0.00		
					1.456	-60.39	5.38	4.22	0.00	0.00	0.00		
					1.941	-70.81	8.49	4.15	0.00	0.00	0.00		
					2.426	-77.00	11.66	4.39	0.00	0.00	0.00		
					2.911	-79.47	14.58	4.70	0.00	0.00	0.00		
					3.397	-78.47	16.94	5.00	0.00	0.00	0.00		
					3.882	-74.15	18.45	5.30	0.00	0.00	0.00		
					4.367	-66.73	18.83	5.55	0.00	0.00	0.00		
					4.852	-56.39	17.81	5.75	0.00	0.00	0.00		
					5.338	-43.10	15.05	5.87	0.00	0.00	0.00		
					CC1	41	5.823	-2.52	0.99	5.61	0.00	0.00	0.00
							6.333	-2.29	0.98	5.63	0.00	0.00	0.00
			6.843	-1.84			0.86	5.67	0.00	0.00	0.00		
			7.353	-1.14			0.57	5.69	0.00	0.00	0.00		
	7.863	-0.21	0.09	5.57			0.00	0.00	0.00				
	8.373	0.99	-0.63	4.95			0.00	0.00	0.00				
	8.883	2.49	-1.66	3.14			0.00	0.00	0.00				
	9.393	4.32	-3.07	0.32			0.00	0.00	0.00				
	9.904	6.56	-4.99	4.38			0.00	0.00	0.00				
	10.414	9.34	-7.59	50.78			0.00	0.00	0.00				
	10.924	11.72	-9.95	126.20			0.00	0.00	0.00				
	11.434	16.12	-14.84	488.27			0.00	0.00	0.00				
	CC2	41	0.000	-26.84			10.21	6.00	0.00	0.00	0.00		
			0.485	-7.86			2.99	6.17	0.00	0.00	0.00		
			0.970	13.58	-6.89	6.30	0.00	0.00	0.00				
			1.456	37.54	-19.86	6.40	0.00	0.00	0.00				
			1.941	63.96	-36.29	6.45	0.00	0.00	0.00				
			2.426	92.81	-56.64	6.19	0.00	0.00	0.00				
2.911			124.34	-81.55	5.27	0.00	0.00	0.00					



Progetto: Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]		
				Px	Py	Pz	mx	my	mz
67	CC2	41	9.393	158.82	-111.81	3.74	0.00	0.00	0.00
			9.904	197.13	-148.84	5.76	0.00	0.00	0.00
			10.414	240.29	-194.39	30.45	0.00	0.00	0.00
			10.924	275.29	-233.35	70.88	0.00	0.00	0.00
			11.434	313.20	-288.40	271.66	0.00	0.00	0.00
			42	0.00	0.00	0.00			
	CC3	40	0.000	-12.53	-0.14	2.72	0.00	0.00	0.00
			0.485	-13.29	0.39	3.33	0.00	0.00	0.00
			0.970	-13.26	0.71	3.42	0.00	0.00	0.00
			1.456	-12.99	1.11	3.49	0.00	0.00	0.00
			1.941	-12.44	1.46	3.53	0.00	0.00	0.00
			2.426	-11.66	1.74	3.57	0.00	0.00	0.00
			2.911	-10.69	1.94	3.60	0.00	0.00	0.00
			3.397	-9.51	2.04	3.62	0.00	0.00	0.00
			3.882	-8.12	2.01	3.65	0.00	0.00	0.00
			4.367	-6.53	1.83	3.67	0.00	0.00	0.00
			4.852	-4.75	1.49	3.69	0.00	0.00	0.00
			5.338	-2.76	0.94	3.70	0.00	0.00	0.00
			5.823	-0.56	0.18	3.72	0.00	0.00	0.00
			6.333	1.81	-0.83	3.73	0.00	0.00	0.00
			6.843	4.32	-2.10	3.75	0.00	0.00	0.00
			7.353	6.99	-3.66	3.76	0.00	0.00	0.00
			7.863	9.81	-5.54	3.73	0.00	0.00	0.00
			8.373	12.79	-7.78	3.53	0.00	0.00	0.00
	8.883	15.97	-10.45	2.94	0.00	0.00	0.00		
	9.393	19.38	-13.62	2.03	0.00	0.00	0.00		
	9.904	23.14	-17.45	3.39	0.00	0.00	0.00		
	10.414	27.38	-22.13	18.73	0.00	0.00	0.00		
	10.924	30.83	-26.13	43.63	0.00	0.00	0.00		
	11.434	35.33	-32.53	162.83	0.00	0.00	0.00		
	42	0.00	0.00	0.00					
	CC4	40	0.000	-9.49	-0.11	0.27	0.00	0.00	0.00
			0.485	-6.58	0.18	0.04	0.00	0.00	0.00
			0.970	-5.00	0.23	0.03	0.00	0.00	0.00
			1.456	-3.10	0.24	0.03	0.00	0.00	0.00
			1.941	-1.50	0.15	0.04	0.00	0.00	0.00
			2.426	-0.16	0.01	0.05	0.00	0.00	0.00
			2.911	0.93	-0.19	0.04	0.00	0.00	0.00
			3.397	1.82	-0.41	0.04	0.00	0.00	0.00
			3.882	2.51	-0.64	0.03	0.00	0.00	0.00
			4.367	3.02	-0.87	0.03	0.00	0.00	0.00
			4.852	3.35	-1.07	0.02	0.00	0.00	0.00
5.338			3.51	-1.25	0.02	0.00	0.00	0.00	
5.823			3.50	-1.37	0.01	0.00	0.00	0.00	
6.333			3.29	-1.42	0.00	0.00	0.00	0.00	
6.843			2.89	-1.36	0.00	0.00	0.00	0.00	
7.353			2.30	-1.17	-0.01	0.00	0.00	0.00	
7.863			1.51	-0.82	-0.02	0.00	0.00	0.00	
8.373			0.51	-0.28	-0.02	0.00	0.00	0.00	
8.883	-0.71	0.49	-0.01	0.00	0.00	0.00			
9.393	-2.17	1.55	0.02	0.00	0.00	0.00			
9.904	-3.91	2.98	0.01	0.00	0.00	0.00			
10.414	-5.98	4.87	-0.35	0.00	0.00	0.00			
10.924	-7.72	6.56	-0.96	0.00	0.00	0.00			
11.434	-10.19	9.38	-4.57	0.00	0.00	0.00			
42	0.00	0.00	0.00						
CC5	40	0.000	9.49	0.11	-0.27	0.00	0.00	0.00	
		0.485	6.58	-0.18	-0.04	0.00	0.00	0.00	
		0.970	5.00	-0.23	-0.03	0.00	0.00	0.00	
		1.456	3.10	-0.24	-0.03	0.00	0.00	0.00	
		1.941	1.50	-0.15	-0.04	0.00	0.00	0.00	
		2.426	0.16	-0.01	-0.05	0.00	0.00	0.00	
		2.911	-0.93	0.19	-0.04	0.00	0.00	0.00	
		3.397	-1.82	0.41	-0.04	0.00	0.00	0.00	
		3.882	-2.51	0.64	-0.03	0.00	0.00	0.00	
		4.367	-3.02	0.87	-0.03	0.00	0.00	0.00	
		4.852	-3.35	1.07	-0.02	0.00	0.00	0.00	
		5.338	-3.51	1.25	-0.02	0.00	0.00	0.00	
		5.823	-3.50	1.37	-0.01	0.00	0.00	0.00	
		6.333	-3.29	1.42	0.00	0.00	0.00	0.00	
		6.843	-2.89	1.36	0.00	0.00	0.00	0.00	
		7.353	-2.30	1.17	0.01	0.00	0.00	0.00	
		7.863	-1.51	0.82	0.02	0.00	0.00	0.00	
		8.373	-0.51	0.28	0.02	0.00	0.00	0.00	
8.883	0.71	-0.49	0.01	0.00	0.00	0.00			
9.393	2.17	-1.55	-0.02	0.00	0.00	0.00			
9.904	3.91	-2.98	-0.01	0.00	0.00	0.00			
10.414	5.98	-4.87	0.35	0.00	0.00	0.00			
10.924	7.72	-6.56	0.96	0.00	0.00	0.00			
11.434	10.19	-9.38	4.57	0.00	0.00	0.00			
42	0.00	0.00	0.00						
CO1	40	0.000	-21.11	0.00	25.95	0.00	0.00	0.00	
		0.485	28.21	0.00	14.79	0.00	0.00	0.00	
		0.970	50.32	0.00	13.05	0.00	0.00	0.00	
		1.456	74.48	0.00	12.31	0.00	0.00	0.00	
		1.941	91.56	0.00	12.77	0.00	0.00	0.00	
		2.426	102.63	0.00	13.40	0.00	0.00	0.00	
		2.911	108.40	0.00	13.92	0.00	0.00	0.00	
		3.397	109.20	0.00	14.34	0.00	0.00	0.00	
		3.882	105.19	0.00	14.72	0.00	0.00	0.00	
		4.367	96.54	0.00	15.05	0.00	0.00	0.00	
		4.852	83.38	0.00	15.30	0.00	0.00	0.00	
		5.338	65.52	0.00	15.47	0.00	0.00	0.00	
		5.823	42.67	0.00	15.66	0.00	0.00	0.00	
		6.333	14.93	0.00	15.91	0.00	0.00	0.00	

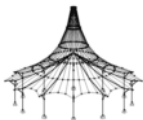


Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]				
				Px	Py	Pz	m _x	m _y	m _z		
67	CO1	41	6.843	-17.66	0.00	16.14	0.00	0.00	0.00		
			7.353	-55.51	0.00	16.30	0.00	0.00	0.00		
			7.863	-98.97	0.00	16.20	0.00	0.00	0.00		
			8.373	-148.49	0.00	15.01	0.00	0.00	0.00		
			8.883	-205.02	0.00	11.34	0.00	0.00	0.00		
			9.393	-269.77	0.00	5.47	0.00	0.00	0.00		
			9.904	-345.19	0.00	13.67	0.00	0.00	0.00		
			10.414	-434.33	0.00	109.67	0.00	0.00	0.00		
			10.924	-508.87	0.00	266.12	0.00	0.00	0.00		
			11.434	-605.51	0.00	1026.45	0.00	0.00	0.00		
	CO2	40	0.000	-4.40	0.00	29.63	0.00	0.00	0.00		
			0.485	46.04	0.00	19.28	0.00	0.00	0.00		
			0.970	68.16	0.00	17.66	0.00	0.00	0.00		
			1.456	92.04	0.00	17.02	0.00	0.00	0.00		
			1.941	108.47	0.00	17.54	0.00	0.00	0.00		
			2.426	118.59	0.00	18.21	0.00	0.00	0.00		
			2.911	123.14	0.00	18.78	0.00	0.00	0.00		
			3.397	122.43	0.00	19.23	0.00	0.00	0.00		
			3.882	116.59	0.00	19.64	0.00	0.00	0.00		
			4.367	105.81	0.00	20.00	0.00	0.00	0.00		
	CO2	41	4.852	90.23	0.00	20.28	0.00	0.00	0.00		
			5.338	69.58	0.00	20.46	0.00	0.00	0.00		
			5.823	43.58	0.00	20.67	0.00	0.00	0.00		
			6.333	12.35	0.00	20.95	0.00	0.00	0.00		
			6.843	-24.04	0.00	21.20	0.00	0.00	0.00		
			7.353	-66.09	0.00	21.38	0.00	0.00	0.00		
			7.863	-114.15	0.00	21.22	0.00	0.00	0.00		
			8.373	-168.71	0.00	19.76	0.00	0.00	0.00		
			8.883	-230.84	0.00	15.30	0.00	0.00	0.00		
			9.393	-301.86	0.00	8.20	0.00	0.00	0.00		
	CO2	42	9.904	-384.49	0.00	18.25	0.00	0.00	0.00		
			10.414	-482.12	0.00	134.97	0.00	0.00	0.00		
			10.924	-563.76	0.00	325.09	0.00	0.00	0.00		
			11.434	-670.78	0.00	1246.66	0.00	0.00	0.00		
			CO3	40	0.000	9.88	0.00	30.03	0.00	0.00	0.00
					0.485	55.93	0.00	19.34	0.00	0.00	0.00
					0.970	75.68	0.00	17.70	0.00	0.00	0.00
					1.456	96.72	0.00	17.06	0.00	0.00	0.00
					1.941	110.74	0.00	17.60	0.00	0.00	0.00
					2.426	118.83	0.00	18.28	0.00	0.00	0.00
	2.911	121.70			0.00	18.84	0.00	0.00	0.00		
	3.397	119.61			0.00	19.29	0.00	0.00	0.00		
	3.882	112.67			0.00	19.69	0.00	0.00	0.00		
	4.367	101.08			0.00	20.04	0.00	0.00	0.00		
	CO3	41	4.852	84.93	0.00	20.31	0.00	0.00	0.00		
			5.338	63.97	0.00	20.49	0.00	0.00	0.00		
			5.823	37.92	0.00	20.69	0.00	0.00	0.00		
			6.333	6.95	0.00	20.95	0.00	0.00	0.00		
			6.843	-28.86	0.00	21.20	0.00	0.00	0.00		
			7.353	-69.97	0.00	21.36	0.00	0.00	0.00		
			7.863	-116.73	0.00	21.19	0.00	0.00	0.00		
			8.373	-169.58	0.00	19.73	0.00	0.00	0.00		
			8.883	-229.53	0.00	15.29	0.00	0.00	0.00		
			9.393	-297.84	0.00	8.23	0.00	0.00	0.00		
	CO3	42	9.904	-377.08	0.00	18.26	0.00	0.00	0.00		
			10.414	-470.50	0.00	134.47	0.00	0.00	0.00		
			10.924	-548.49	0.00	323.70	0.00	0.00	0.00		
			11.434	-649.90	0.00	1239.92	0.00	0.00	0.00		
			CO4	40	0.000	-18.67	0.00	29.23	0.00	0.00	0.00
					0.485	36.15	0.00	19.23	0.00	0.00	0.00
					0.970	60.64	0.00	17.62	0.00	0.00	0.00
					1.456	87.37	0.00	16.97	0.00	0.00	0.00
					1.941	106.21	0.00	17.48	0.00	0.00	0.00
					2.426	118.35	0.00	18.15	0.00	0.00	0.00
	2.911	124.58			0.00	18.71	0.00	0.00	0.00		
	3.397	125.24			0.00	19.17	0.00	0.00	0.00		
	3.882	120.50			0.00	19.59	0.00	0.00	0.00		
	4.367	110.55			0.00	19.96	0.00	0.00	0.00		
	CO4	41	4.852	95.53	0.00	20.25	0.00	0.00	0.00		
			5.338	75.20	0.00	20.44	0.00	0.00	0.00		
			5.823	49.24	0.00	20.65	0.00	0.00	0.00		
			6.333	17.75	0.00	20.95	0.00	0.00	0.00		
			6.843	-19.23	0.00	21.21	0.00	0.00	0.00		
			7.353	-62.20	0.00	21.40	0.00	0.00	0.00		
			7.863	-111.56	0.00	21.25	0.00	0.00	0.00		
			8.373	-167.83	0.00	19.79	0.00	0.00	0.00		
			8.883	-232.15	0.00	15.31	0.00	0.00	0.00		
			9.393	-305.89	0.00	8.17	0.00	0.00	0.00		
	CO4	42	9.904	-391.89	0.00	18.24	0.00	0.00	0.00		
			10.414	-493.74	0.00	135.48	0.00	0.00	0.00		
			10.924	-579.03	0.00	326.49	0.00	0.00	0.00		
			11.434	-691.65	0.00	1253.40	0.00	0.00	0.00		
			CO5	40	0.000	-15.60	0.00	19.22	0.00	0.00	0.00
					0.485	20.91	0.00	10.95	0.00	0.00	0.00
					0.970	37.28	0.00	9.67	0.00	0.00	0.00
					1.456	55.16	0.00	9.12	0.00	0.00	0.00
					1.941	67.80	0.00	9.46	0.00	0.00	0.00
					2.426	75.99	0.00	9.92	0.00	0.00	0.00
	2.911	80.26			0.00	10.31	0.00	0.00	0.00		
	3.397	80.85			0.00	10.62	0.00	0.00	0.00		
	3.882	77.87			0.00	10.90	0.00	0.00	0.00		

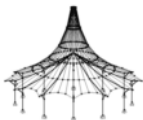


Progetto: Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]			
				P _x	P _y	P _z	m _x	m _y	m _z	
67	CO5	40	4.367	71.46	0.00	11.15	0.00	0.00	0.00	
			4.852	61.71	0.00	11.34	0.00	0.00	0.00	
			5.338	48.48	0.00	11.46	0.00	0.00	0.00	
			5.823	31.56	0.00	11.60	0.00	0.00	0.00	
			6.333	11.02	0.00	11.79	0.00	0.00	0.00	
			6.843	-13.11	0.00	11.96	0.00	0.00	0.00	
		7.353	-41.14	0.00	12.08	0.00	0.00	0.00		
		7.863	-73.32	0.00	12.00	0.00	0.00	0.00		
		8.373	-109.98	0.00	11.12	0.00	0.00	0.00		
		8.883	-151.83	0.00	8.40	0.00	0.00	0.00		
		9.393	-199.77	0.00	4.05	0.00	0.00	0.00		
		9.904	-255.60	0.00	10.13	0.00	0.00	0.00		
		10.414	-321.59	0.00	81.23	0.00	0.00	0.00		
		10.924	-376.77	0.00	197.12	0.00	0.00	0.00		
		42	11.434	-448.30	760.23	0.00	0.00	0.00		
		CO6	40	0.000	-3.18	0.00	21.94	0.00	0.00	0.00
				0.485	34.14	0.00	14.28	0.00	0.00	0.00
				0.970	50.51	0.00	13.08	0.00	0.00	0.00
	1.456			68.18	0.00	12.61	0.00	0.00	0.00	
	1.941			80.33	0.00	12.99	0.00	0.00	0.00	
	2.426			87.81	0.00	13.49	0.00	0.00	0.00	
	2.911		91.16	0.00	13.91	0.00	0.00	0.00		
	3.397		90.63	0.00	14.25	0.00	0.00	0.00		
	3.882		86.29	0.00	14.55	0.00	0.00	0.00		
	4.367		78.31	0.00	14.82	0.00	0.00	0.00		
	4.852		66.76	0.00	15.02	0.00	0.00	0.00		
	5.338		51.47	0.00	15.16	0.00	0.00	0.00		
	5.823		32.21	0.00	15.31	0.00	0.00	0.00		
	6.333		9.09	0.00	15.52	0.00	0.00	0.00		
	6.843		-17.86	0.00	15.71	0.00	0.00	0.00		
	7.353		-48.99	0.00	15.84	0.00	0.00	0.00		
	7.863		-84.57	0.00	15.73	0.00	0.00	0.00		
	8.373		-124.95	0.00	14.65	0.00	0.00	0.00		
	8.883	-170.95	0.00	11.34	0.00	0.00	0.00			
	9.393	-223.52	0.00	6.08	0.00	0.00	0.00			
	9.904	-284.68	0.00	13.52	0.00	0.00	0.00			
	10.414	-356.94	0.00	99.97	0.00	0.00	0.00			
	10.924	-417.37	0.00	240.79	0.00	0.00	0.00			
	42	11.434	-496.56	923.27	0.00	0.00	0.00			
	CO7	40	0.000	6.33	0.00	22.21	0.00	0.00	0.00	
			0.485	40.73	0.00	14.32	0.00	0.00	0.00	
			0.970	55.52	0.00	13.11	0.00	0.00	0.00	
1.456			71.29	0.00	12.64	0.00	0.00	0.00		
1.941			81.84	0.00	13.03	0.00	0.00	0.00		
2.426			87.97	0.00	13.54	0.00	0.00	0.00		
2.911		90.20	0.00	13.95	0.00	0.00	0.00			
3.397		88.75	0.00	14.28	0.00	0.00	0.00			
3.882		83.69	0.00	14.58	0.00	0.00	0.00			
4.367		75.15	0.00	14.85	0.00	0.00	0.00			
4.852		63.23	0.00	15.04	0.00	0.00	0.00			
5.338		47.73	0.00	15.18	0.00	0.00	0.00			
5.823		28.44	0.00	15.33	0.00	0.00	0.00			
6.333		5.49	0.00	15.53	0.00	0.00	0.00			
6.843		-21.07	0.00	15.71	0.00	0.00	0.00			
7.353		-51.58	0.00	15.83	0.00	0.00	0.00			
7.863		-86.29	0.00	15.71	0.00	0.00	0.00			
8.373		-125.54	0.00	14.63	0.00	0.00	0.00			
8.883	-170.08	0.00	11.33	0.00	0.00	0.00				
9.393	-220.84	0.00	6.09	0.00	0.00	0.00				
9.904	-279.75	0.00	13.53	0.00	0.00	0.00				
10.414	-349.20	0.00	99.63	0.00	0.00	0.00				
10.924	-407.20	0.00	239.85	0.00	0.00	0.00				
42	11.434	-482.66	918.76	0.00	0.00	0.00				
CO8	40	0.000	-12.69	0.00	21.68	0.00	0.00	0.00		
		0.485	27.55	0.00	14.25	0.00	0.00	0.00		
		0.970	45.50	0.00	13.06	0.00	0.00	0.00		
		1.456	65.06	0.00	12.58	0.00	0.00	0.00		
		1.941	78.82	0.00	12.95	0.00	0.00	0.00		
		2.426	87.65	0.00	13.45	0.00	0.00	0.00		
	2.911	92.12	0.00	13.87	0.00	0.00	0.00			
	3.397	92.50	0.00	14.21	0.00	0.00	0.00			
	3.882	88.90	0.00	14.52	0.00	0.00	0.00			
	4.367	81.46	0.00	14.79	0.00	0.00	0.00			
	4.852	70.29	0.00	15.00	0.00	0.00	0.00			
	5.338	55.21	0.00	15.14	0.00	0.00	0.00			
	5.823	35.98	0.00	15.30	0.00	0.00	0.00			
	6.333	12.68	0.00	15.52	0.00	0.00	0.00			
	6.843	-14.66	0.00	15.71	0.00	0.00	0.00			
	7.353	-46.40	0.00	15.86	0.00	0.00	0.00			
	7.863	-82.84	0.00	15.75	0.00	0.00	0.00			
	8.373	-124.37	0.00	14.67	0.00	0.00	0.00			
8.883	-171.82	0.00	11.35	0.00	0.00	0.00				
9.393	-226.20	0.00	6.06	0.00	0.00	0.00				
9.904	-289.61	0.00	13.51	0.00	0.00	0.00				
10.414	-364.68	0.00	100.31	0.00	0.00	0.00				
10.924	-427.53	0.00	241.72	0.00	0.00	0.00				
42	11.434	-510.46	927.79	0.00	0.00	0.00				
CO9	40	0.000	-15.60	0.00	19.22	0.00	0.00	0.00		
		0.485	20.91	0.00	10.95	0.00	0.00	0.00		
		0.970	37.28	0.00	9.67	0.00	0.00	0.00		
		1.456	55.16	0.00	9.12	0.00	0.00	0.00		

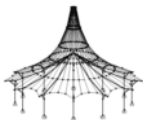


Progetto: Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]					
				P _x	P _y	P _z	m _x	m _y	m _z			
67	CO9	40	1.941	67.80	0.00	9.46	0.00	0.00	0.00			
			2.426	75.99	0.00	9.92	0.00	0.00	0.00			
			2.911	80.26	0.00	10.31	0.00	0.00	0.00			
			3.397	80.85	0.00	10.62	0.00	0.00	0.00			
			3.882	77.87	0.00	10.90	0.00	0.00	0.00			
			4.367	71.46	0.00	11.15	0.00	0.00	0.00			
			4.852	61.71	0.00	11.34	0.00	0.00	0.00			
			5.338	48.48	0.00	11.46	0.00	0.00	0.00			
			5.823	31.56	0.00	11.60	0.00	0.00	0.00			
			6.333	11.02	0.00	11.79	0.00	0.00	0.00			
		41			6.843	-13.11	0.00	11.96	0.00	0.00	0.00	
					7.353	-41.14	0.00	12.08	0.00	0.00	0.00	
					7.863	-73.32	0.00	12.00	0.00	0.00	0.00	
					8.373	-109.98	0.00	11.12	0.00	0.00	0.00	
					8.883	-151.83	0.00	8.40	0.00	0.00	0.00	
					9.393	-199.77	0.00	4.05	0.00	0.00	0.00	
					9.904	-255.60	0.00	10.13	0.00	0.00	0.00	
					10.414	-321.59	0.00	81.23	0.00	0.00	0.00	
					10.924	-376.77	0.00	197.12	0.00	0.00	0.00	
					11.434	-448.30	0.00	760.23	0.00	0.00	0.00	
72	CC1	83	0.000	0.00	0.45	-1.92	0.00	0.00	0.00			
			0.121	0.00	0.28	-1.53	0.00	0.00	0.00			
			0.242	0.00	0.29	-1.36	0.00	0.00	0.00			
			0.363	0.00	0.30	-1.15	0.00	0.00	0.00			
			0.485	0.00	0.31	-0.91	0.00	0.00	0.00			
			0.727	0.00	0.32	-0.61	0.00	0.00	0.00			
			0.969	0.00	0.31	-0.32	0.00	0.00	0.00			
			1.212	0.00	0.29	-0.09	0.00	0.00	0.00			
			1.454	0.00	0.24	0.13	0.00	0.00	0.00			
			1.938	0.00	0.14	0.34	0.00	0.00	0.00			
			2.423	0.00	-0.01	0.49	0.00	0.00	0.00			
			2.908	0.00	-0.19	0.56	0.00	0.00	0.00			
			3.392	0.00	-0.39	0.58	0.00	0.00	0.00			
			3.877	0.00	-0.62	0.55	0.00	0.00	0.00			
			4.362	0.00	-0.85	0.51	0.00	0.00	0.00			
			4.846	0.00	-1.09	0.44	0.00	0.00	0.00			
			5.331	0.00	-1.34	0.36	0.00	0.00	0.00			
			5.815	0.00	-1.53	0.29	0.00	0.00	0.00			
			6.300	0.00	-1.83	0.15	0.00	0.00	0.00			
			114			0.000	0.00	-67.64	-11.41	0.00	0.00	0.00
						0.121	0.00	-71.79	-31.73	0.00	0.00	0.00
						0.242	0.00	-72.26	-31.87	0.00	0.00	0.00
						0.363	0.00	-72.89	-32.00	0.00	0.00	0.00
						0.485	0.00	-73.65	-32.04	0.00	0.00	0.00
						0.727	0.00	-74.69	-31.97	0.00	0.00	0.00
						0.969	0.00	-75.85	-31.75	0.00	0.00	0.00
						1.212	0.00	-76.97	-31.44	0.00	0.00	0.00
						1.454	0.00	-78.33	-30.91	0.00	0.00	0.00
						1.938	0.00	-80.13	-29.99	0.00	0.00	0.00
			114			2.423	0.00	-82.05	-28.74	0.00	0.00	0.00
						2.908	0.00	-83.81	-27.28	0.00	0.00	0.00
						3.392	0.00	-85.44	-25.70	0.00	0.00	0.00
						3.877	0.00	-86.96	-24.11	0.00	0.00	0.00
						4.362	0.00	-88.43	-22.65	0.00	0.00	0.00
						4.846	0.00	-89.91	-21.45	0.00	0.00	0.00
						5.331	0.00	-91.45	-20.60	0.00	0.00	0.00
						5.815	0.00	-92.65	-20.17	0.00	0.00	0.00
						6.300	0.00	-94.65	-19.99	0.00	0.00	0.00
						114			0.000	0.00	-3.27	2.76
			0.121	0.00	-3.13				1.86	0.00	0.00	0.00
			0.242	0.00	-3.17				1.83	0.00	0.00	0.00
			0.363	0.00	-3.22				1.80	0.00	0.00	0.00
			0.485	0.00	-3.28				1.76	0.00	0.00	0.00
			0.727	0.00	-3.36				1.71	0.00	0.00	0.00
			0.969	0.00	-3.46				1.66	0.00	0.00	0.00
			1.212	0.00	-3.55				1.62	0.00	0.00	0.00
			1.454	0.00	-3.67				1.58	0.00	0.00	0.00
			1.938	0.00	-3.83				1.54	0.00	0.00	0.00
			114			2.423	0.00	-4.00	1.51	0.00	0.00	0.00
						2.908	0.00	-4.18	1.50	0.00	0.00	0.00
						3.392	0.00	-4.35	1.50	0.00	0.00	0.00
						3.877	0.00	-4.53	1.50	0.00	0.00	0.00
						4.362	0.00	-4.70	1.51	0.00	0.00	0.00
						4.846	0.00	-4.87	1.51	0.00	0.00	0.00
						5.331	0.00	-5.04	1.52	0.00	0.00	0.00
						5.815	0.00	-5.17	1.51	0.00	0.00	0.00
						6.300	0.00	-5.38	1.50	0.00	0.00	0.00
						114			0.000	0.00	0.00	0.09
			0.121	0.00	0.05				0.10	0.00	0.00	0.00
			0.242	0.00	0.07				0.10	0.00	0.00	0.00
			0.363	0.00	0.10				0.10	0.00	0.00	0.00
			0.485	0.00	0.13				0.10	0.00	0.00	0.00
			0.727	0.00	0.18				0.09	0.00	0.00	0.00
			0.969	0.00	0.24				0.08	0.00	0.00	0.00
			1.212	0.00	0.30				0.06	0.00	0.00	0.00
			1.454	0.00	0.37				0.04	0.00	0.00	0.00
			1.938	0.00	0.47				0.01	0.00	0.00	0.00
			114			2.423	0.00	0.58	-0.03	0.00	0.00	0.00
						2.908	0.00	0.70	-0.06	0.00	0.00	0.00
						3.392	0.00	0.83	-0.07	0.00	0.00	0.00
						3.877	0.00	0.96	-0.08	0.00	0.00	0.00



Progetto: Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]		
				Px	Py	Pz	mx	my	mz
72	CC4	83	4.362	0.00	1.10	-0.07	0.00	0.00	0.00
			4.846	0.00	1.24	-0.04	0.00	0.00	0.00
			5.331	0.00	1.38	0.01	0.00	0.00	0.00
			5.815	0.00	1.49	0.05	0.00	0.00	0.00
			6.300	0.00	1.67	0.15	0.00	0.00	0.00
	CC5	83	0.000	0.00	0.00	-0.09	0.00	0.00	0.00
			0.121	0.00	-0.05	-0.10	0.00	0.00	0.00
			0.242	0.00	-0.07	-0.10	0.00	0.00	0.00
			0.363	0.00	-0.10	-0.10	0.00	0.00	0.00
			0.485	0.00	-0.13	-0.10	0.00	0.00	0.00
			0.727	0.00	-0.18	-0.09	0.00	0.00	0.00
			0.969	0.00	-0.24	-0.08	0.00	0.00	0.00
			1.212	0.00	-0.30	-0.06	0.00	0.00	0.00
			1.454	0.00	-0.37	-0.04	0.00	0.00	0.00
			1.938	0.00	-0.47	-0.01	0.00	0.00	0.00
			2.423	0.00	-0.58	0.03	0.00	0.00	0.00
			2.908	0.00	-0.70	0.06	0.00	0.00	0.00
			3.392	0.00	-0.83	0.07	0.00	0.00	0.00
			3.877	0.00	-0.96	0.08	0.00	0.00	0.00
			4.362	0.00	-1.10	0.07	0.00	0.00	0.00
			4.846	0.00	-1.24	0.04	0.00	0.00	0.00
			5.331	0.00	-1.38	-0.01	0.00	0.00	0.00
			5.815	0.00	-1.49	-0.05	0.00	0.00	0.00
	6.300	0.00	-1.67	-0.15	0.00	0.00	0.00		
	CO1	83	0.000	0.00	-90.68	-17.99	0.00	0.00	0.00
			0.121	0.00	-96.51	-44.91	0.00	0.00	0.00
			0.242	0.00	-97.14	-44.87	0.00	0.00	0.00
			0.363	0.00	-97.97	-44.76	0.00	0.00	0.00
			0.485	0.00	-98.99	-44.49	0.00	0.00	0.00
			0.727	0.00	-100.39	-43.99	0.00	0.00	0.00
			0.969	0.00	-101.97	-43.33	0.00	0.00	0.00
			1.212	0.00	-103.52	-42.58	0.00	0.00	0.00
			1.454	0.00	-105.42	-41.59	0.00	0.00	0.00
			1.938	0.00	-108.00	-40.07	0.00	0.00	0.00
			2.423	0.00	-110.80	-38.18	0.00	0.00	0.00
			2.908	0.00	-113.44	-36.12	0.00	0.00	0.00
			3.392	0.00	-115.92	-33.98	0.00	0.00	0.00
			3.877	0.00	-118.29	-31.88	0.00	0.00	0.00
			4.362	0.00	-120.60	-29.97	0.00	0.00	0.00
			4.846	0.00	-122.94	-28.44	0.00	0.00	0.00
			5.331	0.00	-125.36	-27.42	0.00	0.00	0.00
			5.815	0.00	-127.24	-26.94	0.00	0.00	0.00
	6.300	0.00	-130.36	-26.90	0.00	0.00	0.00		
	CO2	83	0.000	0.00	-95.10	-14.27	0.00	0.00	0.00
			0.121	0.00	-100.74	-42.41	0.00	0.00	0.00
			0.242	0.00	-101.42	-42.41	0.00	0.00	0.00
			0.363	0.00	-102.31	-42.34	0.00	0.00	0.00
0.485			0.00	-103.42	-42.12	0.00	0.00	0.00	
0.727			0.00	-104.93	-41.69	0.00	0.00	0.00	
0.969			0.00	-106.64	-41.09	0.00	0.00	0.00	
1.212			0.00	-108.33	-40.40	0.00	0.00	0.00	
1.454			0.00	-110.38	-39.46	0.00	0.00	0.00	
1.938			0.00	-113.18	-38.00	0.00	0.00	0.00	
2.423			0.00	-116.23	-36.14	0.00	0.00	0.00	
2.908			0.00	-119.10	-34.10	0.00	0.00	0.00	
3.392			0.00	-121.82	-31.96	0.00	0.00	0.00	
3.877			0.00	-124.42	-29.85	0.00	0.00	0.00	
4.362			0.00	-126.98	-27.94	0.00	0.00	0.00	
4.846			0.00	-129.55	-26.40	0.00	0.00	0.00	
5.331			0.00	-132.21	-25.38	0.00	0.00	0.00	
5.815			0.00	-134.26	-24.91	0.00	0.00	0.00	
6.300	0.00	-137.68	-24.88	0.00	0.00	0.00			
CO3	83	0.000	0.00	-95.10	-14.14	0.00	0.00	0.00	
		0.121	0.00	-100.67	-42.26	0.00	0.00	0.00	
		0.242	0.00	-101.32	-42.25	0.00	0.00	0.00	
		0.363	0.00	-102.17	-42.18	0.00	0.00	0.00	
		0.485	0.00	-103.22	-41.97	0.00	0.00	0.00	
		0.727	0.00	-104.66	-41.55	0.00	0.00	0.00	
		0.969	0.00	-106.29	-40.97	0.00	0.00	0.00	
		1.212	0.00	-107.88	-40.31	0.00	0.00	0.00	
		1.454	0.00	-109.83	-39.40	0.00	0.00	0.00	
		1.938	0.00	-112.47	-37.99	0.00	0.00	0.00	
		2.423	0.00	-115.35	-36.18	0.00	0.00	0.00	
		2.908	0.00	-118.04	-34.18	0.00	0.00	0.00	
		3.392	0.00	-120.57	-32.07	0.00	0.00	0.00	
		3.877	0.00	-122.98	-29.97	0.00	0.00	0.00	
		4.362	0.00	-125.33	-28.04	0.00	0.00	0.00	
		4.846	0.00	-127.69	-26.46	0.00	0.00	0.00	
		5.331	0.00	-130.13	-25.37	0.00	0.00	0.00	
		5.815	0.00	-132.02	-24.83	0.00	0.00	0.00	
6.300	0.00	-135.16	-24.65	0.00	0.00	0.00			
CO4	83	0.000	0.00	-95.09	-14.40	0.00	0.00	0.00	
		0.121	0.00	-100.81	-42.56	0.00	0.00	0.00	
		0.242	0.00	-101.52	-42.56	0.00	0.00	0.00	
		0.363	0.00	-102.46	-42.49	0.00	0.00	0.00	
		0.485	0.00	-103.61	-42.27	0.00	0.00	0.00	
		0.727	0.00	-105.21	-41.83	0.00	0.00	0.00	
		0.969	0.00	-107.00	-41.21	0.00	0.00	0.00	
		1.212	0.00	-108.77	-40.50	0.00	0.00	0.00	
		1.454	0.00	-110.93	-39.52	0.00	0.00	0.00	
		1.938	0.00	-113.88	-38.01	0.00	0.00	0.00	



Progetto: Modello: Sovrapasso

Data: 27.02.2018

■ 4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]				
				Px	Py	Pz	mx	my	mz		
72	CO4	83	2.423	0.00	-117.10	-36.11	0.00	0.00	0.00		
			2.908	0.00	-120.16	-34.02	0.00	0.00	0.00		
			3.392	0.00	-123.07	-31.85	0.00	0.00	0.00		
			3.877	0.00	-125.87	-29.74	0.00	0.00	0.00		
			4.362	0.00	-128.62	-27.84	0.00	0.00	0.00		
			4.846	0.00	-131.41	-26.35	0.00	0.00	0.00		
			5.331	0.00	-134.29	-25.40	0.00	0.00	0.00		
		5.815	0.00	-136.51	-25.00	0.00	0.00	0.00			
		6.300	0.00	-140.20	-25.12	0.00	0.00	0.00			
		114	6.300	0.00	-140.20	-25.12	0.00	0.00	0.00		
			CO5	83	0.000	0.00	-67.18	-13.33	0.00	0.00	0.00
					0.121	0.00	-71.49	-33.27	0.00	0.00	0.00
					0.242	0.00	-71.96	-33.24	0.00	0.00	0.00
					0.363	0.00	-72.57	-33.15	0.00	0.00	0.00
	0.485				0.00	-73.33	-32.96	0.00	0.00	0.00	
	0.727				0.00	-74.37	-32.59	0.00	0.00	0.00	
	0.969	0.00			-75.53	-32.09	0.00	0.00	0.00		
	1.212	0.00		-76.68	-31.54	0.00	0.00	0.00			
	1.454	0.00		-78.09	-30.80	0.00	0.00	0.00			
	1.938	0.00		-80.00	-29.68	0.00	0.00	0.00			
	2.423	0.00		-82.07	-28.27	0.00	0.00	0.00			
	2.908	0.00		-84.02	-26.75	0.00	0.00	0.00			
	3.392	0.00		-85.86	-25.16	0.00	0.00	0.00			
	3.877	0.00		-87.61	-23.60	0.00	0.00	0.00			
	4.362	0.00	-89.32	-22.19	0.00	0.00	0.00				
	4.846	0.00	-91.05	-21.05	0.00	0.00	0.00				
	5.331	0.00	-92.84	-20.29	0.00	0.00	0.00				
	5.815	0.00	-94.23	-19.94	0.00	0.00	0.00				
	6.300	0.00	-96.54	-19.90	0.00	0.00	0.00				
	114	6.300	0.00	-96.54	-19.90	0.00	0.00	0.00			
		CO6	83	0.000	0.00	-70.45	-10.57	0.00	0.00	0.00	
				0.121	0.00	-74.63	-31.41	0.00	0.00	0.00	
				0.242	0.00	-75.13	-31.41	0.00	0.00	0.00	
				0.363	0.00	-75.79	-31.36	0.00	0.00	0.00	
				0.485	0.00	-76.61	-31.20	0.00	0.00	0.00	
				0.727	0.00	-77.73	-30.88	0.00	0.00	0.00	
	0.969			0.00	-79.00	-30.43	0.00	0.00	0.00		
	1.212		0.00	-80.24	-29.92	0.00	0.00	0.00			
	1.454		0.00	-81.76	-29.22	0.00	0.00	0.00			
	1.938		0.00	-83.83	-28.14	0.00	0.00	0.00			
	2.423		0.00	-86.09	-26.76	0.00	0.00	0.00			
	2.908		0.00	-88.21	-25.25	0.00	0.00	0.00			
3.392	0.00		-90.22	-23.66	0.00	0.00	0.00				
3.877	0.00		-92.15	-22.10	0.00	0.00	0.00				
4.362	0.00	-94.04	-20.68	0.00	0.00	0.00					
4.846	0.00	-95.94	-19.54	0.00	0.00	0.00					
5.331	0.00	-97.91	-18.78	0.00	0.00	0.00					
5.815	0.00	-99.43	-18.43	0.00	0.00	0.00					
6.300	0.00	-101.95	-18.41	0.00	0.00	0.00					
114	6.300	0.00	-101.95	-18.41	0.00	0.00	0.00				
	CO7	83	0.000	0.00	-70.45	-10.48	0.00	0.00	0.00		
			0.121	0.00	-74.58	-31.31	0.00	0.00	0.00		
			0.242	0.00	-75.06	-31.31	0.00	0.00	0.00		
			0.363	0.00	-75.70	-31.26	0.00	0.00	0.00		
			0.485	0.00	-76.47	-31.10	0.00	0.00	0.00		
			0.727	0.00	-77.55	-30.78	0.00	0.00	0.00		
0.969			0.00	-78.76	-30.35	0.00	0.00	0.00			
1.212		0.00	-79.95	-29.86	0.00	0.00	0.00				
1.454		0.00	-81.40	-29.18	0.00	0.00	0.00				
1.938		0.00	-83.36	-28.13	0.00	0.00	0.00				
2.423		0.00	-85.50	-26.79	0.00	0.00	0.00				
2.908		0.00	-87.51	-25.30	0.00	0.00	0.00				
3.392		0.00	-89.39	-23.73	0.00	0.00	0.00				
3.877		0.00	-91.19	-22.18	0.00	0.00	0.00				
4.362	0.00	-92.94	-20.75	0.00	0.00	0.00					
4.846	0.00	-94.70	-19.58	0.00	0.00	0.00					
5.331	0.00	-96.52	-18.77	0.00	0.00	0.00					
5.815	0.00	-97.93	-18.37	0.00	0.00	0.00					
6.300	0.00	-100.27	-18.25	0.00	0.00	0.00					
114	6.300	0.00	-100.27	-18.25	0.00	0.00	0.00				
	CO8	83	0.000	0.00	-70.44	-10.66	0.00	0.00	0.00		
			0.121	0.00	-74.67	-31.51	0.00	0.00	0.00		
			0.242	0.00	-75.20	-31.51	0.00	0.00	0.00		
			0.363	0.00	-75.89	-31.46	0.00	0.00	0.00		
			0.485	0.00	-76.74	-31.30	0.00	0.00	0.00		
			0.727	0.00	-77.91	-30.97	0.00	0.00	0.00		
0.969			0.00	-79.23	-30.51	0.00	0.00	0.00			
1.212		0.00	-80.54	-29.99	0.00	0.00	0.00				
1.454		0.00	-82.13	-29.26	0.00	0.00	0.00				
1.938		0.00	-84.30	-28.15	0.00	0.00	0.00				
2.423		0.00	-86.67	-26.74	0.00	0.00	0.00				
2.908		0.00	-88.92	-25.19	0.00	0.00	0.00				
3.392		0.00	-91.06	-23.59	0.00	0.00	0.00				
3.877		0.00	-93.11	-22.02	0.00	0.00	0.00				
4.362	0.00	-95.14	-20.61	0.00	0.00	0.00					
4.846	0.00	-97.18	-19.50	0.00	0.00	0.00					
5.331	0.00	-99.29	-18.79	0.00	0.00	0.00					
5.815	0.00	-100.92	-18.49	0.00	0.00	0.00					
6.300	0.00	-103.63	-18.56	0.00	0.00	0.00					
114	6.300	0.00	-103.63	-18.56	0.00	0.00	0.00				
	CO9	83	0.000	0.00	-67.18	-13.33	0.00	0.00	0.00		
			0.121	0.00	-71.49	-33.27	0.00	0.00	0.00		
			0.242	0.00	-71.96	-33.24	0.00	0.00	0.00		
			0.363	0.00	-72.57	-33.15	0.00	0.00	0.00		
			0.485	0.00	-73.33	-32.96	0.00	0.00	0.00		
			0.727	0.00	-74.37	-32.59	0.00	0.00	0.00		



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Linea nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]					
				P _x	P _y	P _z	m _x	m _y	m _z			
72	CO9	83	0.969	0.00	-75.53	-32.09	0.00	0.00	0.00			
			1.212	0.00	-76.68	-31.54	0.00	0.00	0.00			
			1.454	0.00	-78.09	-30.80	0.00	0.00	0.00			
			1.938	0.00	-80.00	-29.68	0.00	0.00	0.00			
			2.423	0.00	-82.07	-28.27	0.00	0.00	0.00			
			2.908	0.00	-84.02	-26.75	0.00	0.00	0.00			
			3.392	0.00	-85.86	-25.16	0.00	0.00	0.00			
			3.877	0.00	-87.61	-23.60	0.00	0.00	0.00			
			4.362	0.00	-89.32	-22.19	0.00	0.00	0.00			
			4.846	0.00	-91.05	-21.05	0.00	0.00	0.00			
			5.331	0.00	-92.84	-20.29	0.00	0.00	0.00			
			5.815	0.00	-94.23	-19.94	0.00	0.00	0.00			
			6.300	0.00	-96.54	-19.90	0.00	0.00	0.00			
					114							
			Σ Vinc.	CC1			25.62	-28.04	293.44			
Σ Caric	CC1			0.00	0.00	9420.96						
Σ Vinc.	CC2			-1348.63	-1152.63	154.79						
Σ Caric	CC2			-369.10	-2202.36	2759.14						
Σ Vinc.	CC3			-73.22	-93.13	106.23						
Σ Caric	CC3			0.06	-125.13	1046.66						
Σ Vinc.	CC4			-5.50	15.61	0.04						
Σ Caric	CC4			0.00	32.00	0.00						
Σ Vinc.	CC5			5.50	-15.61	-0.04						
Σ Caric	CC5			0.00	-32.00	0.00						
Σ Vinc.	CO1			-1786.84	-1595.21	605.06						
Σ Caric	CO1			-498.29	-2973.18	16443.10						
Σ Vinc.	CO2			-1885.79	-1721.41	748.54						
Σ Caric	CO2			-498.21	-3142.11	17856.10						
Σ Vinc.	CO3			-1894.00	-1697.90	748.66						
Σ Caric	CO3			-498.21	-3094.11	17856.10						
Σ Vinc.	CO4			-1877.57	-1744.91	748.42						
Σ Caric	CO4			-498.21	-3190.11	17856.10						
Σ Vinc.	CO5			-1323.43	-1181.39	448.20						
Σ Caric	CO5			-369.10	-2202.36	12180.10						
Σ Vinc.	CO6			-1396.71	-1274.77	554.47						
Σ Caric	CO6			-369.04	-2327.49	13226.80						
Σ Vinc.	CO7			-1402.19	-1259.12	554.53						
Σ Caric	CO7			-369.04	-2295.49	13226.80						
Σ Vinc.	CO8			-1391.23	-1290.42	554.40						
Σ Caric	CO8			-369.04	-2359.49	13226.80						
Σ Vinc.	CO9			-1323.43	-1181.39	448.20						
Σ Caric	CO9			-369.10	-2202.36	12180.10						

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			
				N	V _y	V _z	M _T	M _y	M _z	
2	Sezione nr. 1: Cerchio 700									
	CC1	93	0.000	-810.51	26.49	-0.31	-0.00	2.14	33.10	
		132	7.000	-743.16	26.49	-0.31	-0.00	-0.01	-152.36	
	CC2	93	0.000	-429.66	-13.68	-3.61	-0.01	25.27	-54.01	
		132	7.000	-429.66	-13.68	-3.61	-0.01	0.00	41.78	
	CC3	93	0.000	-280.39	6.73	-0.30	-0.00	2.10	6.54	
		132	7.000	-280.39	6.73	-0.30	-0.00	-0.00	-40.56	
	CC4	93	0.000	0.05	1.13	0.21	0.00	-1.45	4.12	
		132	7.000	0.05	1.13	0.21	0.00	-0.00	-3.79	
	CC5	93	0.000	-0.05	-1.13	-0.21	-0.00	1.45	-4.12	
		132	7.000	-0.05	-1.13	-0.21	-0.00	0.00	3.79	
	CO1	93	0.000	-1674.24	18.32	-4.90	-0.01	36.93	-27.57	
		132	7.000	-1583.34	15.70	-5.44	0.07	0.02	-148.63	
	CO2	93	0.000	-2052.75	27.88	-5.18	-0.01	39.76	-18.33	
		132	7.000	-1961.88	23.77	-5.90	0.10	0.03	-203.01	
	CO3	93	0.000	-2052.68	29.54	-4.90	-0.01	37.58	-12.12	
		132	7.000	-1961.81	25.44	-5.58	0.10	0.02	-208.73	
	CO4	93	0.000	-2052.82	26.22	-5.46	-0.02	41.93	-24.53	
		132	7.000	-1961.94	22.10	-6.23	0.10	0.04	-197.29	
	CO5	93	0.000	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	
132		7.000	-1172.84	11.94	-4.00	0.03	0.01	-110.22		
CO6	93	0.000	-1520.55	20.36	-3.94	-0.01	29.47	-13.78		
	132	7.000	-1453.23	18.11	-4.33	0.05	0.01	-150.58		
CO7	93	0.000	-1520.51	21.48	-3.74	-0.01	28.02	-9.65		
	132	7.000	-1453.19	19.23	-4.12	0.05	0.01	-154.39		
CO8	93	0.000	-1520.60	19.25	-4.13	-0.01	30.92	-17.91		
	132	7.000	-1453.28	17.00	-4.54	0.05	0.02	-146.77		
CO9	93	0.000	-1240.17	13.37	-3.71	-0.01	27.37	-20.55		
	132	7.000	-1172.84	11.94	-4.00	0.03	0.01	-110.22		
7	Sezione nr. 2: Rettangolo 1000/630									
	CC1	110	0.000	0.00	0.00	350.51	0.00	-121.71	0.00	
		78	0.350	0.00	0.00	345.00	0.00	0.00	0.00	
	CC2	110	0.000	-0.00	0.00	180.00	0.00	-63.00	0.00	
		78	0.350	0.00	0.00	180.00	0.00	0.00	0.00	
	CC3	110	0.000	0.00	0.00	132.00	0.00	-46.20	0.00	
		78	0.350	0.00	0.00	132.00	0.00	0.00	0.00	
	CC4	110	0.000	-8.00	0.00	0.00	0.00	1.52	0.00	
		78	0.350	-8.00	0.00	0.00	0.00	1.52	0.00	
	CC5	110	0.000	8.00	-0.00	0.00	-0.00	-1.52	-0.00	
		78	0.350	8.00	-0.00	0.00	-0.00	-1.52	0.00	
	CO1	110	0.000	2.50	-0.36	716.19	-0.10	-249.36	-0.12	
		78	0.350	2.52	-0.35	708.75	0.00	0.00	0.00	
	CO2	110	0.000	3.86	-0.47	894.38	-0.13	-311.73	-0.17	



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]	
				N	V _y	V _z		M _y	M _z
7	CO2	78	0.350	3.90	-0.47	886.94	0.00	0.00	0.00
	CO3	110	0.000	-8.17	-0.44	894.44	-0.12	-309.47	-0.15
		78	0.350	-8.13	-0.44	886.99	0.00	2.28	0.00
	CO4	110	0.000	15.89	-0.51	894.33	-0.15	-314.00	-0.18
		78	0.350	15.93	-0.50	886.89	-0.00	-2.28	-0.00
	CO5	110	0.000	1.37	-0.19	530.51	-0.05	-184.71	-0.07
		78	0.350	1.38	-0.19	525.00	0.00	0.00	0.00
	CO6	110	0.000	2.11	-0.26	662.51	-0.07	-230.91	-0.09
		78	0.350	2.14	-0.26	657.00	0.00	0.00	0.00
	CO7	110	0.000	-5.90	-0.24	662.53	-0.06	-229.40	-0.08
		78	0.350	-5.88	-0.24	657.02	0.00	1.52	0.00
	CO8	110	0.000	10.13	-0.28	662.48	-0.08	-232.43	-0.10
78		0.350	10.15	-0.27	656.97	-0.00	-1.52	-0.00	
CO9	110	0.000	1.37	-0.19	530.51	-0.05	-184.71	-0.07	
	78	0.350	1.38	-0.19	525.00	0.00	0.00	0.00	
Sezione nr. 3: Rettangolo 300/800									
3	CC1	68	0.000	-123.12	-0.07	-0.20	-0.12	1.27	-0.44
		25	6.300	-85.32	-0.07	-0.20	-0.12	0.00	0.00
	CC2	68	0.000	-57.51	-0.05	0.90	-0.03	-5.66	-0.34
		25	6.300	-57.51	-0.05	0.90	-0.03	0.00	0.00
	CC3	68	0.000	-32.01	-0.01	0.13	0.07	-0.82	-0.05
		25	6.300	-32.01	-0.01	0.13	0.07	0.00	0.00
	CC4	68	0.000	0.17	-0.00	0.02	-0.01	-0.10	-0.02
		25	6.300	0.17	-0.00	0.02	-0.01	0.00	0.00
	CC5	68	0.000	-0.13	0.00	-0.01	0.01	0.09	0.02
		25	6.300	-0.13	0.00	-0.01	0.01	0.00	0.00
	CO1	68	0.000	-243.83	-0.16	0.93	-0.20	-5.93	-1.04
		25	6.300	-192.80	-0.17	0.94	-0.20	-0.00	0.00
	CO2	68	0.000	-287.05	-0.17	1.10	-0.11	-7.03	-1.11
		25	6.300	-236.02	-0.18	1.12	-0.11	-0.00	-0.00
	CO3	68	0.000	-286.79	-0.17	1.13	-0.13	-7.17	-1.14
		25	6.300	-235.76	-0.18	1.14	-0.13	-0.00	0.00
	CO4	68	0.000	-287.24	-0.16	1.08	-0.09	-6.89	-1.07
		25	6.300	-236.21	-0.17	1.10	-0.09	-0.00	-0.00
CO5	68	0.000	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	
	25	6.300	-142.82	-0.12	0.70	-0.15	-0.00	0.00	
CO6	68	0.000	-212.63	-0.13	0.82	-0.08	-5.21	-0.82	
	25	6.300	-174.83	-0.13	0.83	-0.08	-0.00	-0.00	
CO7	68	0.000	-212.45	-0.13	0.84	-0.10	-5.30	-0.84	
	25	6.300	-174.65	-0.13	0.84	-0.10	-0.00	0.00	
CO8	68	0.000	-212.76	-0.12	0.81	-0.07	-5.11	-0.80	
	25	6.300	-174.96	-0.13	0.81	-0.07	-0.00	-0.00	
CO9	68	0.000	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	
	25	6.300	-142.82	-0.12	0.70	-0.15	-0.00	0.00	
4	CC1	67	0.000	-111.22	-0.06	0.18	-0.33	-1.14	-0.40
		24	6.300	-73.42	-0.06	0.18	-0.33	0.00	0.00
	CC2	67	0.000	-48.25	0.05	-0.49	-0.42	3.12	0.35
		24	6.300	-48.25	0.05	-0.49	-0.42	0.00	0.00
	CC3	67	0.000	-29.84	0.01	-0.08	-0.19	0.53	0.05
		24	6.300	-29.84	0.01	-0.08	-0.19	0.00	0.00
	CC4	67	0.000	-0.38	0.00	-0.00	-0.02	0.00	0.02
		24	6.300	-0.38	0.00	-0.00	-0.02	0.00	0.00
	CC5	67	0.000	0.40	-0.00	-0.00	0.02	0.00	-0.02
		24	6.300	0.40	-0.00	-0.00	0.02	0.00	0.00
	CO1	67	0.000	-215.29	-0.01	-0.42	-1.01	2.66	-0.07
		24	6.300	-164.26	-0.01	-0.43	-1.01	0.00	0.00
	CO2	67	0.000	-255.57	0.00	-0.53	-1.27	3.37	0.00
		24	6.300	-204.54	-0.00	-0.54	-1.27	0.00	0.00
	CO3	67	0.000	-256.14	0.01	-0.53	-1.30	3.37	0.04
		24	6.300	-205.11	0.00	-0.54	-1.30	0.00	0.00
	CO4	67	0.000	-254.98	-0.00	-0.53	-1.24	3.37	-0.04
		24	6.300	-203.95	-0.01	-0.54	-1.24	0.00	0.00
CO5	67	0.000	-159.47	-0.01	-0.31	-0.75	1.97	-0.05	
	24	6.300	-121.67	-0.01	-0.32	-0.75	0.00	0.00	
CO6	67	0.000	-189.31	0.00	-0.39	-0.94	2.50	-0.00	
	24	6.300	-151.51	-0.00	-0.40	-0.94	0.00	0.00	
CO7	67	0.000	-189.69	0.01	-0.39	-0.96	2.50	0.02	
	24	6.300	-151.89	0.00	-0.40	-0.96	0.00	0.00	
CO8	67	0.000	-188.91	-0.00	-0.39	-0.92	2.50	-0.03	
	24	6.300	-151.11	-0.01	-0.40	-0.92	0.00	0.00	
CO9	67	0.000	-159.47	-0.01	-0.31	-0.75	1.97	-0.05	
	24	6.300	-121.67	-0.01	-0.32	-0.75	0.00	0.00	
Sezione nr. 5: Rettangolo 1000/500									
8	CC1	119	0.000	0.21	-1.77	-11.19	0.00	0.00	-0.01
		42	2.381	-48.44	-1.61	7.12	-8.14	-130.43	-16.28
	CC2	119	0.000	0.55	0.33	-4.26	0.00	0.00	0.04
		42	2.381	9.70	-8.45	3.14	-4.03	-64.67	-18.02
	CC3	119	0.000	0.03	-0.70	-2.97	0.00	0.00	-0.01
		42	2.381	-18.27	-1.34	2.05	-2.68	-41.04	-7.78
	CC4	119	0.000	-0.10	-0.08	0.20	-0.00	-0.00	-0.01
		42	2.381	0.56	-1.10	-0.16	0.04	1.27	2.76
	CC5	119	0.000	0.10	0.08	-0.20	0.00	0.00	0.01
		42	2.381	-0.56	1.10	0.16	-0.04	-1.27	-2.76
	CO1	119	0.000	1.05	-1.95	-20.99	-0.00	0.00	0.03
		42	2.381	-52.28	-13.46	13.99	-16.50	-263.63	-46.50
	CO2	119	0.000	1.11	-2.89	-25.06	-0.00	0.00	0.02
		42	2.381	-76.95	-15.24	16.84	-20.13	-319.23	-57.05
	CO3	119	0.000	0.96	-3.01	-24.76	0.00	0.00	0.00
		42	2.381	-76.11	-16.89	16.59	-20.06	-317.35	-52.90
CO4	119	0.000	1.26	-2.78	-25.36	-0.00	0.00	0.03	
	42	2.381	-77.79	-13.58	17.08	-20.20	-321.10	-61.21	



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			M _T	Momenti [kNm]		
				N	V _y	V _z		M _y	M _z	
8	CO5	119	0.000	0.78	-1.44	-15.52	-0.00	0.00	0.02	
		42	2.381	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	
	CO6	119	0.000	0.82	-2.14	-18.52	-0.00	0.00	0.01	
		42	2.381	-57.00	-11.31	12.43	-14.89	-236.38	-42.21	
	CO7	119	0.000	0.72	-2.22	-18.32	0.00	0.00	0.00	
		42	2.381	-56.44	-12.42	12.27	-14.85	-235.12	-39.45	
	CO8	119	0.000	0.91	-2.07	-18.72	-0.00	0.00	0.02	
		42	2.381	-57.56	-10.21	12.59	-14.93	-237.64	-44.98	
	CO9	119	0.000	0.78	-1.44	-15.52	-0.00	0.00	0.02	
42		2.381	-38.73	-9.99	10.34	-12.21	-195.24	-34.41		
9	CC1	42	0.000	-48.44	-1.61	7.12	-8.14	-130.43	-16.28	
		117	1.530	-8.93	1.89	17.17	0.29	0.84	0.53	
	CC2	42	0.000	9.70	-8.45	3.14	-4.03	-64.67	-18.02	
		117	1.530	-5.47	-1.81	10.08	0.19	0.37	2.36	
	CC3	42	0.000	-18.27	-1.34	2.05	-2.68	-41.04	-7.78	
		117	1.530	-4.40	0.04	6.17	0.13	0.25	0.32	
	CC4	42	0.000	0.56	-1.10	-0.16	0.04	1.27	2.76	
		117	1.530	1.21	-0.16	-0.43	-0.01	-0.00	0.01	
	CC5	42	0.000	-0.56	1.10	0.16	-0.04	-1.27	-2.76	
117		1.530	-1.21	0.16	0.43	0.01	0.00	-0.01		
CO1	42	0.000	-52.28	-13.46	13.99	-16.50	-263.63	-46.50		
	117	1.530	-19.58	0.11	36.81	0.66	1.63	3.90		
CO2	42	0.000	-76.95	-15.24	16.84	-20.13	-319.23	-57.05		
	117	1.530	-25.57	0.18	45.17	0.84	1.96	4.34		
CO3	42	0.000	-76.11	-16.89	16.59	-20.06	-317.35	-52.90		
	117	1.530	-23.75	-0.05	44.55	0.82	1.96	4.35		
CO4	42	0.000	-77.79	-13.58	17.08	-20.20	-321.10	-61.21		
	117	1.530	-27.39	0.42	45.80	0.85	1.97	4.33		
CO5	42	0.000	-38.73	-9.99	10.34	-12.21	-195.24	-34.41		
	117	1.530	-14.48	0.08	27.27	0.49	1.21	2.89		
CO6	42	0.000	-57.00	-11.31	12.43	-14.89	-236.38	-42.21		
	117	1.530	-18.90	0.13	33.45	0.62	1.46	3.21		
CO7	42	0.000	-56.44	-12.42	12.27	-14.85	-235.12	-39.45		
	117	1.530	-17.69	-0.03	33.03	0.61	1.45	3.22		
CO8	42	0.000	-57.56	-10.21	12.59	-14.93	-237.64	-44.98		
	117	1.530	-20.12	0.29	33.87	0.63	1.46	3.20		
CO9	42	0.000	-38.73	-9.99	10.34	-12.21	-195.24	-34.41		
	117	1.530	-14.48	0.08	27.27	0.49	1.21	2.89		
Sezione nr.2 - 6 : Rettangolo 1000/630 - Rettangolo 1000/900										
1	CC1	77	0.000	-15.71	-19.02	-242.70	-3.58	0.74	-0.13	
		132	2.853	-322.93	-16.61	-272.06	-2.19	-294.97	44.23	
CC2	77	0.000	-6.90	-16.29	-175.62	-3.07	-0.31	-0.06		
	132	2.853	-209.25	-13.52	-182.89	-1.82	-206.01	35.11		
CC3	77	0.000	-6.54	-7.91	-104.54	-1.49	0.28	-0.05		
	132	2.853	-130.70	-6.79	-109.07	-0.88	-121.72	18.34		
CC4	77	0.000	7.25	-0.22	-0.04	-0.04	-1.38	-0.00		
	132	2.853	4.43	0.08	0.48	0.04	-0.20	0.48		
CC5	77	0.000	0.91	0.25	0.76	0.09	1.68	0.06		
	132	2.853	-7.25	0.22	0.04	0.04	1.38	0.00		
CO1	77	0.000	-30.72	-47.43	-564.90	-8.99	0.59	-0.24		
	132	2.853	-719.28	-40.41	-614.59	-5.51	-676.93	106.83		
CO2	77	0.000	-1177.64	-10.42	-704.41	3.18	-1482.64	146.22		
	132	2.853	-39.61	-58.03	-706.11	-11.00	0.96	-0.31		
CO3	77	0.000	-896.19	-49.49	-762.06	-6.69	-841.57	131.51		
	132	2.853	-1465.59	-14.82	-868.42	3.36	-1837.04	180.94		
CO4	77	0.000	-28.71	-58.39	-706.16	-11.07	-1.11	-0.32		
	132	2.853	-889.52	-49.40	-761.36	-6.57	-841.87	132.25		
CO5	77	0.000	-1464.27	-14.45	-867.29	3.61	-1834.52	181.08		
	132	2.853	-50.52	-57.68	-706.05	-10.94	3.03	-0.31		
CO6	77	0.000	-902.85	-49.58	-762.77	-6.80	-841.26	130.77		
	132	2.853	-1466.92	-15.19	-869.54	3.12	-1839.56	180.81		
CO7	77	0.000	-22.72	-35.18	-418.41	-6.66	0.44	-0.18		
	132	2.853	-532.64	-29.99	-455.17	-4.06	-501.31	79.19		
CO8	77	0.000	-872.11	-7.74	-521.79	2.42	-1098.03	108.41		
	132	2.853	-29.29	-43.05	-523.00	-8.15	0.71	-0.23		
CO9	77	0.000	-663.59	-36.73	-564.37	-4.94	-623.21	97.48		
	132	2.853	-1085.27	-11.02	-643.27	2.56	-1360.43	134.17		
CO10	77	0.000	-22.03	-43.28	-523.03	-8.19	-0.67	-0.23		
	132	2.853	-659.15	-36.66	-563.89	-4.87	-623.41	97.97		
CO11	77	0.000	-1084.38	-10.77	-642.52	2.70	-1358.75	134.25		
	132	2.853	-36.55	-42.82	-522.96	-8.11	2.09	-0.23		
CO12	77	0.000	-668.03	-36.79	-564.84	-5.01	-623.00	96.99		
	132	2.853	-1086.16	-11.26	-644.03	2.41	-1362.11	134.09		
CO13	77	0.000	-22.72	-35.18	-418.41	-6.66	0.44	-0.18		
	132	2.853	-532.64	-29.99	-455.17	-4.06	-501.31	79.19		
CO14	77	0.000	-872.11	-7.74	-521.79	2.42	-1098.03	108.41		
	132	2.853	-29.29	-43.05	-523.00	-8.15	0.71	-0.23		
Sezione nr.6 - 2 : Rettangolo 1000/900 - Rettangolo 1000/630										
10	CC1	132	0.000	-581.36	-11.71	363.26	-7.29	-790.86	64.75	
		110	2.504	-368.95	24.56	311.16	3.10	-369.75	55.61	
CC2	132	0.000	-37.13	41.04	319.68	7.74	-118.11	-0.19		
	110	2.504	-315.48	1.02	186.87	-2.02	-410.58	43.73		
CC3	132	0.000	-193.08	16.42	164.00	2.38	-194.35	31.56		
	110	2.504	-23.64	23.12	165.97	4.37	-60.30	-0.08		
CO1	132	0.000	-223.63	-3.38	134.09	-2.49	-299.59	25.77		
	110	2.504	-141.26	9.69	119.03	1.25	-142.19	21.49		
CO2	132	0.000	-14.33	15.87	122.08	3.00	-44.79	-0.07		
	110	2.504	-14.33	15.87	122.08	3.00	-44.79	-0.07		



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Asta nr.	CC/CO	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]		
				N	V _y	V _z	M _T	M _y	M _z
10	CC4	132	0.000	-0.51	0.45	0.73	0.14	-1.67	0.07
			1.427	-4.56	0.05	0.50	0.04	0.33	-0.51
		110	2.504	-7.29	-0.56	-0.02	-0.11	1.38	-0.00
	CC5	132	0.000	0.51	-0.45	-0.73	-0.14	1.67	-0.07
			1.427	4.56	-0.05	-0.50	-0.04	-0.33	0.51
		110	2.504	7.29	0.56	0.02	0.11	-1.38	0.00
CO1	132	0.000	0.000	-1210.20	-14.47	742.69	-12.66	-1622.07	145.81
			1.427	-756.86	55.03	641.69	7.44	-761.46	117.26
		110	2.504	-79.73	86.25	655.46	16.25	-240.84	-0.54
CO2	132	0.000	0.000	-1511.78	-19.04	923.69	-15.95	-2026.63	180.40
			1.427	-946.58	68.00	802.51	9.20	-953.39	146.13
		110	2.504	-97.83	107.56	820.19	20.26	-301.31	-0.71
CO3	132	0.000	0.000	-1512.57	-18.36	924.78	-15.63	-2029.20	180.57
			1.427	-953.48	68.10	803.29	9.31	-952.94	145.41
		110	2.504	-108.79	106.75	820.20	20.12	-299.25	-0.70
CO4	132	0.000	0.000	-1510.99	-19.72	922.61	-16.27	-2024.06	180.23
			1.427	-939.67	67.90	801.74	9.09	-953.84	146.86
		110	2.504	-86.86	108.36	820.17	20.40	-303.37	-0.73
CO5	132	0.000	0.000	-896.55	-10.71	550.14	-9.36	-1201.51	108.13
			1.427	-561.00	40.82	475.29	5.50	-564.06	86.94
		110	2.504	-59.50	63.96	485.56	12.06	-178.40	-0.37
CO6	132	0.000	0.000	-1120.00	-14.10	684.22	-11.81	-1501.16	133.79
			1.427	-701.72	50.45	594.39	6.79	-706.23	108.36
		110	2.504	-73.15	79.77	607.59	15.03	-223.20	-0.48
CO7	132	0.000	0.000	-1120.53	-13.64	684.94	-11.62	-1502.87	133.89
			1.427	-706.31	50.51	594.90	6.86	-705.93	107.86
		110	2.504	-80.45	79.22	607.60	14.94	-221.82	-0.47
CO8	132	0.000	0.000	-1119.48	-14.55	683.49	-12.01	-1499.46	133.69
			1.427	-697.13	50.38	593.87	6.73	-706.54	108.85
		110	2.504	-65.84	80.31	607.59	15.13	-224.57	-0.49
CO9	132	0.000	0.000	-896.55	-10.71	550.14	-9.36	-1201.51	108.13
			1.427	-561.00	40.82	475.29	5.50	-564.06	86.94
		110	2.504	-59.50	63.96	485.56	12.06	-178.40	-0.37

4.1 NODI - REAZIONI VINCOLARI

Combinazioni di risultati

Nodo nr.	CR		Forze vincolari [kN]			Momenti vincolari [kNm]			Commento
			P _x	P _y	P _z	M _x	M _y	M _z	
77	CR1	Max	-4.67	-6.72	0.00	0.00	0.00	0.00	
		Min	-5.58	-7.79	0.00	0.00	0.00	0.00	
	CR2	Max	-3.48	-5.01	0.00	0.00	0.00	0.00	
		Min	-4.09	-5.72	0.00	0.00	0.00	0.00	
	CR3	Max	-3.61	-5.06	0.00	0.00	0.00	0.00	
		Min	-3.61	-5.06	0.00	0.00	0.00	0.00	
110	CR1	Max	-2.90	-7.84	0.00	0.00	0.00	0.00	
		Min	-3.20	-9.05	0.00	0.00	0.00	0.00	
	CR2	Max	-2.15	-5.80	0.00	0.00	0.00	0.00	
		Min	-2.37	-6.65	0.00	0.00	0.00	0.00	
	CR3	Max	-2.15	-5.80	0.00	0.00	0.00	0.00	
		Min	-2.15	-5.80	0.00	0.00	0.00	0.00	

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]			
				p _x	p _y	p _z	m _x	m _y	m _z	
33	CR1	83	0.000	0.00	91.23	1.26	0.00	0.00	0.00	
			0.000	0.00	86.97	-1.55	0.00	0.00	0.00	
			0.108	0.00	90.69	2.22	0.00	0.00	0.00	
			0.108	0.00	86.22	-0.49	0.00	0.00	0.00	
			0.217	0.00	90.31	2.82	0.00	0.00	0.00	
			0.217	0.00	85.88	0.17	0.00	0.00	0.00	
			0.325	0.00	89.81	3.65	0.00	0.00	0.00	
			0.325	0.00	85.42	1.08	0.00	0.00	0.00	
			0.433	0.00	89.32	4.49	0.00	0.00	0.00	
			0.433	0.00	84.97	2.00	0.00	0.00	0.00	
			0.542	0.00	88.82	5.34	0.00	0.00	0.00	
			0.542	0.00	84.51	2.94	0.00	0.00	0.00	
			0.650	0.00	88.20	6.43	0.00	0.00	0.00	
			0.650	0.00	83.94	4.13	0.00	0.00	0.00	
			0.867	0.00	87.32	7.97	0.00	0.00	0.00	
			0.867	0.00	83.14	5.83	0.00	0.00	0.00	
			1.083	0.00	86.57	9.31	0.00	0.00	0.00	
			1.083	0.00	82.45	7.30	0.00	0.00	0.00	
		71	1.300	0.00	85.28	11.58	0.00	0.00	0.00	
			1.300	0.00	81.27	9.77	0.00	0.00	0.00	
			Max p _x	0.00	>	91.23	1.26	0.00	0.00	0.00
			Min p _x	0.00	>	86.97	-1.55	0.00	0.00	0.00
			Max p _y	1.300	>	91.23	1.26	0.00	0.00	0.00
			Min p _y	0.000	>	81.27	9.77	0.00	0.00	0.00
Max p _z	1.300	>	85.28	11.58	0.00	0.00	0.00			
Min p _z	0.000	>	86.97	-1.55	0.00	0.00	0.00			
Max m _x	0.000	>	91.23	1.26	>	0.00	0.00			
Min m _x	0.000	>	86.97	-1.55	>	0.00	0.00			
Max m _y	0.000	>	91.23	1.26	>	0.00	0.00			
Min m _y	0.000	>	86.97	-1.55	>	0.00	0.00			



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]						
				p _x	p _y	p _z	m _x	m _y	m _z				
33	CR1	Max m _z	0.000	0.00	91.23	1.26	0.00	0.00	0.00				
			0.000	0.00	86.97	-1.55	0.00	0.00	0.00				
	CR2	83	0.000	0.00	67.58	0.94	0.00	0.00	0.00				
			0.000	0.00	64.42	-1.05	0.00	0.00	0.00				
			0.108	0.00	67.18	1.65	0.00	0.00	0.00				
			0.108	0.00	63.87	-0.26	0.00	0.00	0.00				
			0.217	0.00	66.90	2.10	0.00	0.00	0.00				
			0.217	0.00	63.62	0.23	0.00	0.00	0.00				
			0.325	0.00	66.53	2.71	0.00	0.00	0.00				
			0.325	0.00	63.28	0.89	0.00	0.00	0.00				
			0.433	0.00	66.16	3.33	0.00	0.00	0.00				
			0.433	0.00	62.94	1.57	0.00	0.00	0.00				
			0.542	0.00	65.79	3.96	0.00	0.00	0.00				
			0.542	0.00	62.61	2.27	0.00	0.00	0.00				
			0.650	0.00	65.33	4.77	0.00	0.00	0.00				
			0.650	0.00	62.18	3.15	0.00	0.00	0.00				
			0.867	0.00	64.68	5.91	0.00	0.00	0.00				
			0.867	0.00	61.59	4.40	0.00	0.00	0.00				
			1.083	0.00	64.12	6.90	0.00	0.00	0.00				
			1.083	0.00	61.08	5.48	0.00	0.00	0.00				
			71	1.300	0.00	1.300	0.00	63.16	8.58	0.00	0.00	0.00	
						1.300	0.00	60.20	7.30	0.00	0.00	0.00	
	Max p _x	0.000				0.00	67.58	0.94	0.00	0.00	0.00		
	Min p _x	0.000				0.00	64.42	-1.05	0.00	0.00	0.00		
	Max p _y	1.300				0.00	67.58	0.94	0.00	0.00	0.00		
	Min p _y	0.000				0.00	60.20	7.30	0.00	0.00	0.00		
	Max p _z	1.300				0.00	63.16	8.58	0.00	0.00	0.00		
	Min p _z	0.000				0.00	64.42	-1.05	0.00	0.00	0.00		
	Max m _x	0.000				0.00	67.58	0.94	0.00	0.00	0.00		
	Min m _x	0.000				0.00	64.42	-1.05	0.00	0.00	0.00		
	Max m _y	0.000	0.00	67.58	0.94	0.00	0.00	0.00					
	Min m _y	0.000	0.00	64.42	-1.05	0.00	0.00	0.00					
	Max m _z	0.000	0.00	67.58	0.94	0.00	0.00	0.00					
	Min m _z	0.000	0.00	64.42	-1.05	0.00	0.00	0.00					
	CR3	83	0.000	0.000	0.00	64.42	0.94	0.00	0.00	0.00			
				0.000	0.00	64.42	0.94	0.00	0.00	0.00			
				0.108	0.00	63.87	1.65	0.00	0.00	0.00			
				0.108	0.00	63.87	1.65	0.00	0.00	0.00			
				0.217	0.00	63.62	2.10	0.00	0.00	0.00			
				0.217	0.00	63.62	2.10	0.00	0.00	0.00			
0.325				0.00	63.28	2.71	0.00	0.00	0.00				
0.325				0.00	63.28	2.71	0.00	0.00	0.00				
0.433				0.00	62.94	3.33	0.00	0.00	0.00				
0.433				0.00	62.94	3.33	0.00	0.00	0.00				
0.542				0.00	62.61	3.96	0.00	0.00	0.00				
0.542				0.00	62.61	3.96	0.00	0.00	0.00				
0.650				0.00	62.18	4.77	0.00	0.00	0.00				
0.650				0.00	62.18	4.77	0.00	0.00	0.00				
0.867				0.00	61.59	5.91	0.00	0.00	0.00				
0.867				0.00	61.59	5.91	0.00	0.00	0.00				
1.083				0.00	61.08	6.90	0.00	0.00	0.00				
1.083				0.00	61.08	6.90	0.00	0.00	0.00				
71				1.300	0.00	1.300	0.00	60.20	8.58	0.00	0.00	0.00	
						1.300	0.00	60.20	8.58	0.00	0.00	0.00	
	Max p _x	0.000	0.00			64.42	0.94	0.00	0.00	0.00			
	Min p _x	0.000	0.00			64.42	0.94	0.00	0.00	0.00			
	Max p _y	1.300	0.00			64.42	0.94	0.00	0.00	0.00			
	Min p _y	0.000	0.00			60.20	8.58	0.00	0.00	0.00			
	Max p _z	1.300	0.00			60.20	8.58	0.00	0.00	0.00			
	Min p _z	0.000	0.00			64.42	0.94	0.00	0.00	0.00			
	Max m _x	0.000	0.00			64.42	0.94	0.00	0.00	0.00			
	Min m _x	0.000	0.00			64.42	0.94	0.00	0.00	0.00			
Max m _y	0.000	0.00	64.42	0.94	0.00	0.00	0.00						
Min m _y	0.000	0.00	64.42	0.94	0.00	0.00	0.00						
Max m _z	0.000	0.00	64.42	0.94	0.00	0.00	0.00						
Min m _z	0.000	0.00	64.42	0.94	0.00	0.00	0.00						
35	CR1	90	0.000	0.00	95.67	-6.03	0.00	0.00	0.00				
			0.000	0.00	90.61	-9.25	0.00	0.00	0.00				
			0.225	0.00	94.44	-3.84	0.00	0.00	0.00				
			0.225	0.00	89.54	-6.94	0.00	0.00	0.00				
			0.338	0.00	94.03	-3.13	0.00	0.00	0.00				
			0.338	0.00	89.18	-6.19	0.00	0.00	0.00				
			0.450	0.00	93.48	-2.19	0.00	0.00	0.00				
			0.450	0.00	88.70	-5.21	0.00	0.00	0.00				
			0.563	0.00	92.93	-1.28	0.00	0.00	0.00				
			0.563	0.00	88.23	-4.24	0.00	0.00	0.00				
			0.675	0.00	92.39	-0.39	0.00	0.00	0.00				
			0.675	0.00	87.76	-3.31	0.00	0.00	0.00				
			0.788	0.00	91.98	0.25	0.00	0.00	0.00				
			0.788	0.00	87.40	-2.63	0.00	0.00	0.00				
			83	0.900	0.00	0.900	0.00	91.23	1.26	0.00	0.00	0.00	
						0.900	0.00	86.97	-1.55	0.00	0.00	0.00	
						Max p _x	0.000	0.00	95.67	-6.03	0.00	0.00	0.00
						Min p _x	0.000	0.00	90.61	-9.25	0.00	0.00	0.00
						Max p _y	0.900	0.00	95.67	-6.03	0.00	0.00	0.00
						Min p _y	0.000	0.00	86.97	-1.55	0.00	0.00	0.00
Max p _z	0.900	0.00				91.23	1.26	0.00	0.00	0.00			
Min p _z	0.000	0.00				90.61	-9.25	0.00	0.00	0.00			



Progetto: _____ Modello: Sovrapasso Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]				
				p _x	p _y	p _z	m _x	m _y	m _z		
35	CR1	Max m _x	0.000	0.00	95.67	-6.03	▷	0.00	0.00	0.00	
			0.000	0.00	90.61	-9.25	▷	0.00	0.00	0.00	
		Min m _x	0.000	0.00	95.67	-6.03	▷	0.00	▷	0.00	
			0.000	0.00	90.61	-9.25	▷	0.00	▷	0.00	
		Max m _y	0.000	0.00	95.67	-6.03	▷	0.00	0.00	▷	0.00
			0.000	0.00	90.61	-9.25	▷	0.00	0.00	▷	0.00
	Min m _y	0.000	0.00	95.67	-6.03	▷	0.00	0.00	▷	0.00	
		0.000	0.00	90.61	-9.25	▷	0.00	0.00	▷	0.00	
	CR2	90	Max m _z	0.000	0.00	70.86	-4.45	▷	0.00	0.00	0.00
				0.000	0.00	67.13	-6.73	▷	0.00	0.00	0.00
			Min m _z	0.225	0.00	69.96	-2.83	▷	0.00	0.00	0.00
				0.225	0.00	66.33	-5.03	▷	0.00	0.00	0.00
			Max p _x	0.338	0.00	69.65	-2.31	▷	0.00	0.00	0.00
				0.338	0.00	66.07	-4.47	▷	0.00	0.00	0.00
	Min p _x		0.450	0.00	69.25	-1.61	▷	0.00	0.00	0.00	
			0.450	0.00	65.71	-3.74	▷	0.00	0.00	0.00	
	Max p _y		0.563	0.00	68.84	-0.93	▷	0.00	0.00	0.00	
			0.563	0.00	65.36	-3.03	▷	0.00	0.00	0.00	
	Min p _y		0.675	0.00	68.44	-0.28	▷	0.00	0.00	0.00	
			0.675	0.00	65.01	-2.34	▷	0.00	0.00	0.00	
	Max p _z	0.788	0.00	68.14	0.20	▷	0.00	0.00	0.00		
		0.788	0.00	64.75	-1.84	▷	0.00	0.00	0.00		
	Min p _z	0.900	0.00	67.58	0.94	▷	0.00	0.00	0.00		
		0.900	0.00	64.42	-1.05	▷	0.00	0.00	0.00		
	83	Max p _x	0.000	▷	0.00	70.86	-4.45	▷	0.00	0.00	
			0.000	▷	0.00	67.13	-6.73	▷	0.00	0.00	
		Min p _x	0.900	▷	0.00	70.86	-4.45	▷	0.00	0.00	
			0.900	▷	0.00	64.42	-1.05	▷	0.00	0.00	
		Max p _y	0.000	▷	0.00	70.86	-4.45	▷	0.00	0.00	
			0.000	▷	0.00	64.42	-1.05	▷	0.00	0.00	
		Min p _y	0.900	▷	0.00	70.86	-4.45	▷	0.00	0.00	
			0.900	▷	0.00	67.58	0.94	▷	0.00	0.00	
		Max p _z	0.000	▷	0.00	70.86	-4.45	▷	0.00	0.00	
			0.000	▷	0.00	67.13	-6.73	▷	0.00	0.00	
		Min p _z	0.000	▷	0.00	70.86	-4.45	▷	0.00	0.00	
			0.000	▷	0.00	67.13	-6.73	▷	0.00	0.00	
	Max m _x	0.000	▷	0.00	70.86	-4.45	▷	0.00	0.00		
		0.000	▷	0.00	67.13	-6.73	▷	0.00	0.00		
	Min m _x	0.000	▷	0.00	70.86	-4.45	▷	0.00	0.00		
		0.000	▷	0.00	67.13	-6.73	▷	0.00	0.00		
	Max m _y	0.000	▷	0.00	70.86	-4.45	▷	0.00	0.00		
		0.000	▷	0.00	67.13	-6.73	▷	0.00	0.00		
Min m _y	0.000	▷	0.00	70.86	-4.45	▷	0.00	0.00			
	0.000	▷	0.00	67.13	-6.73	▷	0.00	0.00			
Max m _z	0.000	▷	0.00	70.86	-4.45	▷	0.00	▷	0.00		
	0.000	▷	0.00	67.13	-6.73	▷	0.00	▷	0.00		
Min m _z	0.000	▷	0.00	70.86	-4.45	▷	0.00	▷	0.00		
	0.000	▷	0.00	67.13	-6.73	▷	0.00	▷	0.00		
37	CR1	131	0.000	0.00	0.00	-218.26	▷	0.00	0.00	0.00	
			0.000	0.00	0.00	-229.70	▷	0.00	0.00	0.00	
			0.500	0.00	0.00	-231.11	▷	0.00	0.00	0.00	
			0.500	0.00	0.00	-245.10	▷	0.00	0.00	0.00	
			1.000	0.00	0.00	-238.59	▷	0.00	0.00	0.00	
			1.000	0.00	0.00	-254.08	▷	0.00	0.00	0.00	
			1.500	0.00	0.00	-247.65	▷	0.00	0.00	0.00	
			1.500	0.00	0.00	-265.06	▷	0.00	0.00	0.00	
			2.000	0.00	0.00	-254.90	▷	0.00	0.00	0.00	
			2.000	0.00	0.00	-274.12	▷	0.00	0.00	0.00	
			2.500	0.00	0.00	-259.87	▷	0.00	0.00	0.00	
			2.500	0.00	0.00	-280.73	▷	0.00	0.00	0.00	
		3.000	0.00	0.00	-262.32	▷	0.00	0.00	0.00		
		3.000	0.00	0.00	-284.65	▷	0.00	0.00	0.00		
		3.500	0.00	0.00	-262.30	▷	0.00	0.00	0.00		
		3.500	0.00	0.00	-285.92	▷	0.00	0.00	0.00		
		4.000	0.00	0.00	-260.02	▷	0.00	0.00	0.00		
		4.000	0.00	0.00	-284.73	▷	0.00	0.00	0.00		
		4.500	0.00	0.00	-255.83	▷	0.00	0.00	0.00		
		4.500	0.00	0.00	-281.47	▷	0.00	0.00	0.00		
		5.000	0.00	0.00	-250.18	▷	0.00	0.00	0.00		
		5.000	0.00	0.00	-276.59	▷	0.00	0.00	0.00		
		5.500	0.00	0.00	-243.57	▷	0.00	0.00	0.00		
		5.500	0.00	0.00	-270.62	▷	0.00	0.00	0.00		
	6.000	0.00	0.00	-236.49	▷	0.00	0.00	0.00			
	6.000	0.00	0.00	-264.10	▷	0.00	0.00	0.00			



Progetto: _____ Modello: Sovrapasso Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]			
				p _x	p _y	p _z	m _x	m _y	m _z	
37	CR1	131	6.500	0.00	0.00	-231.10	0.00	0.00	0.00	
			6.500	0.00	0.00	-259.10	0.00	0.00	0.00	
		130	7.000	0.00	0.00	-222.77	0.00	0.00	0.00	
			7.000	0.00	0.00	-251.46	0.00	0.00	0.00	
		Max p _x	0.000	▷	0.00	0.00	-218.26	0.00	0.00	0.00
		Min p _x	0.000	▷	0.00	0.00	-229.70	0.00	0.00	0.00
		Max p _y	0.000	0.00	▷	0.00	-218.26	0.00	0.00	0.00
		Min p _y	0.000	0.00	▷	0.00	-229.70	0.00	0.00	0.00
		Max p _z	3.500	0.00	0.00	▷	-218.26	0.00	0.00	0.00
		Min p _z	0.000	0.00	0.00	▷	-285.92	0.00	0.00	0.00
		Max m _x	0.000	0.00	0.00	▷	-218.26	▷	0.00	0.00
		Min m _x	0.000	0.00	0.00	▷	-229.70	▷	0.00	0.00
		Max m _y	0.000	0.00	0.00	0.00	-218.26	▷	0.00	0.00
		Min m _y	0.000	0.00	0.00	0.00	-229.70	▷	0.00	0.00
		Max m _z	0.000	0.00	0.00	0.00	-218.26	0.00	▷	0.00
		Min m _z	0.000	0.00	0.00	0.00	-229.70	0.00	▷	0.00
		CR2	131	0.000	0.00	0.00	-161.66	0.00	0.00	0.00
				0.000	0.00	0.00	-170.01	0.00	0.00	0.00
	0.500			0.00	0.00	-171.17	0.00	0.00	0.00	
	0.500			0.00	0.00	-181.40	0.00	0.00	0.00	
	1.000			0.00	0.00	-176.71	0.00	0.00	0.00	
	1.000			0.00	0.00	-188.04	0.00	0.00	0.00	
	1.500			0.00	0.00	-183.41	0.00	0.00	0.00	
	1.500			0.00	0.00	-196.16	0.00	0.00	0.00	
	2.000			0.00	0.00	-188.79	0.00	0.00	0.00	
	2.000			0.00	0.00	-202.87	0.00	0.00	0.00	
	2.500			0.00	0.00	-192.46	0.00	0.00	0.00	
	2.500			0.00	0.00	-207.76	0.00	0.00	0.00	
	3.000			0.00	0.00	-194.28	0.00	0.00	0.00	
	3.000			0.00	0.00	-210.66	0.00	0.00	0.00	
	3.500			0.00	0.00	-194.26	0.00	0.00	0.00	
	3.500			0.00	0.00	-211.60	0.00	0.00	0.00	
	4.000			0.00	0.00	-192.57	0.00	0.00	0.00	
	4.000			0.00	0.00	-210.72	0.00	0.00	0.00	
	4.500	0.00	0.00	-189.47	0.00	0.00	0.00			
	4.500	0.00	0.00	-208.30	0.00	0.00	0.00			
5.000	0.00	0.00	-185.29	0.00	0.00	0.00				
5.000	0.00	0.00	-204.68	0.00	0.00	0.00				
5.500	0.00	0.00	-180.39	0.00	0.00	0.00				
5.500	0.00	0.00	-200.26	0.00	0.00	0.00				
6.000	0.00	0.00	-175.16	0.00	0.00	0.00				
6.000	0.00	0.00	-195.43	0.00	0.00	0.00				
6.500	0.00	0.00	-171.16	0.00	0.00	0.00				
6.500	0.00	0.00	-191.72	0.00	0.00	0.00				
CR3	130	7.000	0.00	0.00	-165.00	0.00	0.00	0.00		
		7.000	0.00	0.00	-186.07	0.00	0.00	0.00		
		Max p _x	0.000	▷	0.00	0.00	-161.66	0.00	0.00	
		Min p _x	0.000	▷	0.00	0.00	-170.01	0.00	0.00	
		Max p _y	0.000	0.00	▷	0.00	-161.66	0.00	0.00	
		Min p _y	0.000	0.00	▷	0.00	-170.01	0.00	0.00	
		Max p _z	3.500	0.00	0.00	▷	-161.66	0.00	0.00	
		Min p _z	0.000	0.00	0.00	▷	-211.60	0.00	0.00	
		Max m _x	0.000	0.00	0.00	▷	-161.66	▷	0.00	
		Min m _x	0.000	0.00	0.00	▷	-170.01	▷	0.00	
		Max m _y	0.000	0.00	0.00	0.00	-161.66	▷	0.00	
		Min m _y	0.000	0.00	0.00	0.00	-170.01	▷	0.00	
		Max m _z	0.000	0.00	0.00	0.00	-161.66	0.00	▷	
		Min m _z	0.000	0.00	0.00	0.00	-170.01	0.00	▷	



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]				
				p _x	p _y	p _z	m _x	m _y	m _z		
37	CR3	Min p _x	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Max p _y	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Min p _y	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Max p _z	3.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Min p _z	0.000	0.00	0.00	-194.28	0.00	0.00	0.00		
		Max m _x	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Min m _x	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Max m _y	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Min m _y	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Max m _z	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		Min m _z	0.000	0.00	0.00	-161.66	0.00	0.00	0.00		
		42	CR1	28	0.000	1.66	176.47	0.00	0.00	0.00	0.00
					0.000	1.58	168.87	0.00	0.00	0.00	0.00
					0.433	1.87	199.16	0.00	0.00	0.00	0.00
0.433	1.78				189.94	0.00	0.00	0.00	0.00		
0.867	1.95				207.90	0.00	0.00	0.00	0.00		
0.867	1.86				198.04	0.00	0.00	0.00	0.00		
131	1.300			2.15	229.69	0.00	0.00	0.00	0.00		
	1.300			2.05	218.25	0.00	0.00	0.00	0.00		
	Max p _x			0.000	2.15	229.69	0.00	0.00	0.00	0.00	
	Min p _x			0.000	1.58	168.87	0.00	0.00	0.00	0.00	
	Max p _y			1.300	2.15	229.69	0.00	0.00	0.00	0.00	
	Min p _y			0.000	1.58	168.87	0.00	0.00	0.00	0.00	
Max p _z	0.000			1.66	176.47	0.00	0.00	0.00	0.00		
	0.000			1.58	168.87	0.00	0.00	0.00	0.00		
	Max m _x		0.000	1.66	176.47	0.00	0.00	0.00	0.00		
	Min m _x		0.000	1.58	168.87	0.00	0.00	0.00	0.00		
	Max m _y		0.000	1.66	176.47	0.00	0.00	0.00	0.00		
	Min m _y		0.000	1.58	168.87	0.00	0.00	0.00	0.00		
Max m _z	0.000		1.66	176.47	0.00	0.00	0.00	0.00			
	0.000		1.58	168.87	0.00	0.00	0.00	0.00			
	CR2		28	0.000	1.23	130.67	0.00	0.00	0.00	0.00	
				0.000	1.17	125.05	0.00	0.00	0.00	0.00	
				0.433	1.38	147.44	0.00	0.00	0.00	0.00	
				0.433	1.32	140.67	0.00	0.00	0.00	0.00	
0.867				1.44	153.89	0.00	0.00	0.00	0.00		
0.867				1.38	146.67	0.00	0.00	0.00	0.00		
131	1.300		1.59	170.00	0.00	0.00	0.00	0.00			
	1.300		1.52	161.65	0.00	0.00	0.00	0.00			
	Max p _x		0.000	1.59	170.00	0.00	0.00	0.00	0.00		
	Min p _x		0.000	1.17	125.05	0.00	0.00	0.00	0.00		
	Max p _y		1.300	1.59	170.00	0.00	0.00	0.00	0.00		
	Min p _y		0.000	1.17	125.05	0.00	0.00	0.00	0.00		
Max p _z	0.000		1.23	130.67	0.00	0.00	0.00	0.00			
	0.000		1.17	125.05	0.00	0.00	0.00	0.00			
	Max m _x		0.000	1.23	130.67	0.00	0.00	0.00	0.00		
	Min m _x		0.000	1.17	125.05	0.00	0.00	0.00	0.00		
	Max m _y		0.000	1.23	130.67	0.00	0.00	0.00	0.00		
	Min m _y		0.000	1.17	125.05	0.00	0.00	0.00	0.00		
Max m _z	0.000		1.23	130.67	0.00	0.00	0.00	0.00			
	0.000		1.17	125.05	0.00	0.00	0.00	0.00			
	CR3		28	0.000	1.17	125.05	0.00	0.00	0.00	0.00	
				0.000	1.17	125.05	0.00	0.00	0.00	0.00	
		0.433		1.32	140.67	0.00	0.00	0.00	0.00		
		0.433		1.32	140.67	0.00	0.00	0.00	0.00		
0.867		1.38		146.67	0.00	0.00	0.00	0.00			
0.867		1.38		146.67	0.00	0.00	0.00	0.00			
131	1.300	1.52	161.65	0.00	0.00	0.00	0.00				
	1.300	1.52	161.65	0.00	0.00	0.00	0.00				
	Max p _x	0.000	1.52	161.65	0.00	0.00	0.00	0.00			
	Min p _x	0.000	1.17	125.05	0.00	0.00	0.00	0.00			
	Max p _y	1.300	1.52	161.65	0.00	0.00	0.00	0.00			
	Min p _y	0.000	1.17	125.05	0.00	0.00	0.00	0.00			
Max p _z	0.000	1.17	125.05	0.00	0.00	0.00	0.00				
	0.000	1.17	125.05	0.00	0.00	0.00	0.00				
	Max m _x	0.000	1.17	125.05	0.00	0.00	0.00	0.00			
	Min m _x	0.000	1.17	125.05	0.00	0.00	0.00	0.00			
	Max m _y	0.000	1.17	125.05	0.00	0.00	0.00	0.00			
	Min m _y	0.000	1.17	125.05	0.00	0.00	0.00	0.00			
Max m _z	0.000	1.17	125.05	0.00	0.00	0.00	0.00				
	0.000	1.17	125.05	0.00	0.00	0.00	0.00				
	47	CR1	131	0.000	2.15	229.69	0.00	0.00	0.00	0.00	
				0.000	2.05	218.25	0.00	0.00	0.00	0.00	
				0.450	2.32	247.17	0.00	0.00	0.00	0.00	
				0.450	2.20	234.48	0.00	0.00	0.00	0.00	
0.900				2.47	262.96	0.00	0.00	0.00	0.00		
0.900				2.34	249.09	0.00	0.00	0.00	0.00		
74			0.900	2.47	262.96	0.00	0.00	0.00	0.00		
			0.000	2.05	218.25	0.00	0.00	0.00	0.00		
			Max p _x	0.000	2.47	262.96	0.00	0.00	0.00	0.00	
			Min p _x	0.000	2.05	218.25	0.00	0.00	0.00	0.00	
			Max p _y	0.900	2.47	262.96	0.00	0.00	0.00	0.00	
			Min p _y	0.000	2.05	218.25	0.00	0.00	0.00	0.00	
Max p _z			0.000	2.15	229.69	0.00	0.00	0.00	0.00		
			0.000	2.15	229.69	0.00	0.00	0.00	0.00		
	Max m _x	0.000	2.15	229.69	0.00	0.00	0.00	0.00			
	Min m _x	0.000	2.05	218.25	0.00	0.00	0.00	0.00			
	Max m _y	0.000	2.15	229.69	0.00	0.00	0.00	0.00			
	Min m _y	0.000	2.05	218.25	0.00	0.00	0.00	0.00			
Max m _z	0.000	2.15	229.69	0.00	0.00	0.00	0.00				
	0.000	2.05	218.25	0.00	0.00	0.00	0.00				



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]				
				p _x	p _y	p _z	m _x	m _y	m _z		
47	CR1	Max m _y	0.000	2.15	229.69	0.00	0.00	0.00	0.00		
			0.000	2.05	218.25	0.00	0.00	0.00	0.00		
		Max m _z	0.000	2.15	229.69	0.00	0.00	0.00	0.00		
			0.000	2.05	218.25	0.00	0.00	0.00	0.00		
		CR2	131	0.000	1.59	170.00	0.00	0.00	0.00	0.00	
	0.000			1.52	161.65	0.00	0.00	0.00	0.00		
	0.450			1.72	182.92	0.00	0.00	0.00	0.00		
	0.450			1.63	173.68	0.00	0.00	0.00	0.00		
	0.900			1.83	194.59	0.00	0.00	0.00	0.00		
	74		0.900	1.73	184.51	0.00	0.00	0.00	0.00		
			Max p _x	0.000	1.83	194.59	0.00	0.00	0.00	0.00	
			Min p _x	0.000	1.52	161.65	0.00	0.00	0.00	0.00	
			Max p _y	0.900	1.83	194.59	0.00	0.00	0.00	0.00	
			Min p _y	0.000	1.52	161.65	0.00	0.00	0.00	0.00	
	CR3		131	0.000	1.52	161.65	0.00	0.00	0.00	0.00	
				0.000	1.52	161.65	0.00	0.00	0.00	0.00	
				0.450	1.63	173.68	0.00	0.00	0.00	0.00	
				0.450	1.63	173.68	0.00	0.00	0.00	0.00	
				0.900	1.73	184.51	0.00	0.00	0.00	0.00	
	CR2	74	0.900	1.73	184.51	0.00	0.00	0.00	0.00		
			Max p _x	0.000	1.73	184.51	0.00	0.00	0.00	0.00	
			Min p _x	0.000	1.52	161.65	0.00	0.00	0.00	0.00	
			Max p _y	0.900	1.73	184.51	0.00	0.00	0.00	0.00	
			Min p _y	0.000	1.52	161.65	0.00	0.00	0.00	0.00	
		CR3	131	0.000	1.52	161.65	0.00	0.00	0.00	0.00	
				0.000	1.52	161.65	0.00	0.00	0.00	0.00	
				0.450	1.63	173.68	0.00	0.00	0.00	0.00	
				0.450	1.63	173.68	0.00	0.00	0.00	0.00	
				0.900	1.73	184.51	0.00	0.00	0.00	0.00	
		CR2	74	0.900	1.73	184.51	0.00	0.00	0.00	0.00	
				Max p _x	0.000	1.73	184.51	0.00	0.00	0.00	0.00
				Min p _x	0.000	1.52	161.65	0.00	0.00	0.00	0.00
				Max p _y	0.900	1.73	184.51	0.00	0.00	0.00	0.00
				Min p _y	0.000	1.52	161.65	0.00	0.00	0.00	0.00
	CR3	131	0.000	1.52	161.65	0.00	0.00	0.00	0.00		
			0.000	1.52	161.65	0.00	0.00	0.00	0.00		
			0.450	1.63	173.68	0.00	0.00	0.00	0.00		
			0.450	1.63	173.68	0.00	0.00	0.00	0.00		
			0.900	1.73	184.51	0.00	0.00	0.00	0.00		
	56	CR1	119	0.000	0.00	-60.65	0.00	0.00	0.00	0.00	
				0.000	0.00	-84.20	0.00	0.00	0.00	0.00	
				0.119	0.00	-56.73	0.00	0.00	0.00	0.00	
				0.119	0.00	-78.72	0.00	0.00	0.00	0.00	
				0.238	0.00	-54.38	0.00	0.00	0.00	0.00	
				0.238	0.00	-75.43	0.00	0.00	0.00	0.00	
0.357				0.00	-51.24	0.00	0.00	0.00	0.00		
0.357				0.00	-71.04	0.00	0.00	0.00	0.00		
0.476				0.00	-48.08	0.00	0.00	0.00	0.00		
0.476				0.00	-66.63	0.00	0.00	0.00	0.00		
0.595				0.00	-44.91	0.00	0.00	0.00	0.00		
0.595				0.00	-62.21	0.00	0.00	0.00	0.00		
0.714				0.00	-40.95	0.00	0.00	0.00	0.00		
0.714				0.00	-56.68	0.00	0.00	0.00	0.00		
0.952				0.00	-35.40	0.00	0.00	0.00	0.00		
0.952			0.00	-48.95	0.00	0.00	0.00	0.00			
1.191			0.00	-29.08	0.00	0.00	0.00	0.00			
1.191			0.00	-40.13	0.00	0.00	0.00	0.00			
1.429			0.00	-21.29	0.00	0.00	0.00	0.00			
1.429			0.00	-29.21	0.00	0.00	0.00	0.00			
1.905			0.00	-13.60	0.00	0.00	0.00	0.00			
1.905			0.00	-18.39	0.00	0.00	0.00	0.00			
42			2.381	0.00	-79.28	0.00	0.00	0.00	0.00		
			2.381	0.00	-90.57	0.00	0.00	0.00	0.00		
			Max p _x	0.000	0.00	-60.65	0.00	0.00	0.00		
			Min p _x	0.000	0.00	-84.20	0.00	0.00	0.00		
			Max p _y	2.381	0.00	-13.60	0.00	0.00	0.00		
			Min p _y	0.000	0.00	-90.57	0.00	0.00	0.00		
			Max p _z	0.000	0.00	-60.65	0.00	0.00	0.00		
			Min p _z	0.000	0.00	-84.20	0.00	0.00	0.00		
			Max m _x	0.000	0.00	-60.65	0.00	0.00	0.00		
			Min m _x	0.000	0.00	-84.20	0.00	0.00	0.00		
CR2			119	0.000	0.00	-45.64	0.00	0.00	0.00		
				0.000	0.00	-61.32	0.00	0.00	0.00		
				0.119	0.00	-42.69	0.00	0.00	0.00		
		0.119		0.00	-57.33	0.00	0.00	0.00			
		0.238		0.00	-40.92	0.00	0.00	0.00			
		0.238		0.00	-54.94	0.00	0.00	0.00			
		0.357		0.00	-38.55	0.00	0.00	0.00			
		0.357		0.00	-51.74	0.00	0.00	0.00			
		0.476		0.00	-36.18	0.00	0.00	0.00			
		0.476		0.00	-48.53	0.00	0.00	0.00			



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]			
				px	py	pz	mx	my	mz	
56	CR2	119	0.595	0.00	-45.31	0.00	0.00	0.00	0.00	0.00
			0.714	0.00	-30.81	0.00	0.00	0.00	0.00	0.00
			0.714	0.00	-41.28	0.00	0.00	0.00	0.00	0.00
			0.952	0.00	-26.63	0.00	0.00	0.00	0.00	0.00
			0.952	0.00	-35.65	0.00	0.00	0.00	0.00	0.00
			1.191	0.00	-21.87	0.00	0.00	0.00	0.00	0.00
			1.191	0.00	-29.23	0.00	0.00	0.00	0.00	0.00
			1.429	0.00	-16.01	0.00	0.00	0.00	0.00	0.00
			1.429	0.00	-21.28	0.00	0.00	0.00	0.00	0.00
			1.905	0.00	-10.21	0.00	0.00	0.00	0.00	0.00
			1.905	0.00	-13.40	0.00	0.00	0.00	0.00	0.00
		42	2.381	0.00	-58.70	0.00	0.00	0.00	0.00	0.00
			2.381	0.00	-66.85	0.00	0.00	0.00	0.00	0.00
			Max px	0.000	0.00	-45.64	0.00	0.00	0.00	0.00
			Min px	0.000	0.00	-61.32	0.00	0.00	0.00	0.00
			Max py	2.381	0.00	-10.21	0.00	0.00	0.00	0.00
			Min py	0.000	0.00	-66.85	0.00	0.00	0.00	0.00
			Max pz	0.000	0.00	-45.64	0.00	0.00	0.00	0.00
			Min pz	0.000	0.00	-61.32	0.00	0.00	0.00	0.00
			Max mx	0.000	0.00	-45.64	0.00	0.00	0.00	0.00
			Min mx	0.000	0.00	-61.32	0.00	0.00	0.00	0.00
	Max my	0.000	0.00	-45.64	0.00	0.00	0.00	0.00		
	Min my	0.000	0.00	-61.32	0.00	0.00	0.00	0.00		
	Max mz	0.000	0.00	-45.64	0.00	0.00	0.00	0.00		
	Min mz	0.000	0.00	-61.32	0.00	0.00	0.00	0.00		
	CR3	119	0.000	0.00	-51.00	0.00	0.00	0.00	0.00	0.00
			0.000	0.00	-51.00	0.00	0.00	0.00	0.00	0.00
			0.119	0.00	-47.64	0.00	0.00	0.00	0.00	0.00
			0.119	0.00	-47.64	0.00	0.00	0.00	0.00	0.00
			0.238	0.00	-45.62	0.00	0.00	0.00	0.00	0.00
			0.238	0.00	-45.62	0.00	0.00	0.00	0.00	0.00
			0.357	0.00	-42.92	0.00	0.00	0.00	0.00	0.00
			0.357	0.00	-42.92	0.00	0.00	0.00	0.00	0.00
			0.476	0.00	-40.21	0.00	0.00	0.00	0.00	0.00
			0.476	0.00	-40.21	0.00	0.00	0.00	0.00	0.00
			0.595	0.00	-37.50	0.00	0.00	0.00	0.00	0.00
		0.595	0.00	-37.50	0.00	0.00	0.00	0.00	0.00	
		0.714	0.00	-34.11	0.00	0.00	0.00	0.00	0.00	
		0.714	0.00	-34.11	0.00	0.00	0.00	0.00	0.00	
		0.952	0.00	-29.37	0.00	0.00	0.00	0.00	0.00	
		0.952	0.00	-29.37	0.00	0.00	0.00	0.00	0.00	
		1.191	0.00	-23.96	0.00	0.00	0.00	0.00	0.00	
1.191		0.00	-23.96	0.00	0.00	0.00	0.00	0.00		
1.429		0.00	-17.26	0.00	0.00	0.00	0.00	0.00		
1.429		0.00	-17.26	0.00	0.00	0.00	0.00	0.00		
1.905		0.00	-10.62	0.00	0.00	0.00	0.00	0.00		
1.905	0.00	-10.62	0.00	0.00	0.00	0.00	0.00			
42	2.381	0.00	-58.70	0.00	0.00	0.00	0.00	0.00		
	2.381	0.00	-58.70	0.00	0.00	0.00	0.00	0.00		
	Max px	0.000	0.00	-51.00	0.00	0.00	0.00	0.00		
	Min px	0.000	0.00	-47.64	0.00	0.00	0.00	0.00		
	Max py	2.381	0.00	-10.62	0.00	0.00	0.00	0.00		
	Min py	0.000	0.00	-58.70	0.00	0.00	0.00	0.00		
	Max pz	0.000	0.00	-51.00	0.00	0.00	0.00	0.00		
	Min pz	0.000	0.00	-51.00	0.00	0.00	0.00	0.00		
	Max mx	0.000	0.00	-51.00	0.00	0.00	0.00	0.00		
	Min mx	0.000	0.00	-51.00	0.00	0.00	0.00	0.00		
Max my	0.000	0.00	-51.00	0.00	0.00	0.00	0.00			
Min my	0.000	0.00	-51.00	0.00	0.00	0.00	0.00			
Max mz	0.000	0.00	-51.00	0.00	0.00	0.00	0.00			
Min mz	0.000	0.00	-51.00	0.00	0.00	0.00	0.00			
67	CR1	40	0.000	9.88	0.00	30.03	0.00	0.00	0.00	0.00
			0.000	-21.11	0.00	25.95	0.00	0.00	0.00	0.00
			0.485	55.93	0.00	19.34	0.00	0.00	0.00	0.00
			0.485	28.21	0.00	14.79	0.00	0.00	0.00	0.00
			0.970	75.68	0.00	17.70	0.00	0.00	0.00	0.00
			0.970	50.32	0.00	13.05	0.00	0.00	0.00	0.00
			1.456	96.72	0.00	17.06	0.00	0.00	0.00	0.00
			1.456	74.48	0.00	12.31	0.00	0.00	0.00	0.00
			1.941	110.74	0.00	17.60	0.00	0.00	0.00	0.00
			1.941	91.56	0.00	12.77	0.00	0.00	0.00	0.00
			2.426	118.83	0.00	18.28	0.00	0.00	0.00	0.00
			2.426	102.63	0.00	13.40	0.00	0.00	0.00	0.00
			2.911	124.58	0.00	18.84	0.00	0.00	0.00	0.00
			2.911	108.40	0.00	13.92	0.00	0.00	0.00	0.00
			3.397	125.24	0.00	19.29	0.00	0.00	0.00	0.00
		3.397	109.20	0.00	14.34	0.00	0.00	0.00	0.00	
		3.882	120.50	0.00	19.69	0.00	0.00	0.00	0.00	
		3.882	105.19	0.00	14.72	0.00	0.00	0.00	0.00	
		4.367	110.55	0.00	20.04	0.00	0.00	0.00	0.00	
		4.367	96.54	0.00	15.05	0.00	0.00	0.00	0.00	
		4.852	95.53	0.00	20.31	0.00	0.00	0.00	0.00	
		4.852	83.38	0.00	15.30	0.00	0.00	0.00	0.00	
		5.338	75.20	0.00	20.49	0.00	0.00	0.00	0.00	
		5.338	63.97	0.00	15.47	0.00	0.00	0.00	0.00	
		41	5.823	49.24	0.00	20.69	0.00	0.00	0.00	0.00
			5.823	37.92	0.00	15.66	0.00	0.00	0.00	0.00
			6.333	17.75	0.00	20.95	0.00	0.00	0.00	0.00
			6.333	6.95	0.00	15.91	0.00	0.00	0.00	0.00



Progetto: _____ Modello: Sovrapasso Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]				
				p _x	p _y	p _z	m _x	m _y	m _z		
67	CR1	41	6.843	-17.66	0.00	21.21	0.00	0.00	0.00		
			6.843	-28.86	0.00	16.14	0.00	0.00	0.00		
			7.353	-55.51	0.00	21.40	0.00	0.00	0.00		
			7.353	-69.97	0.00	16.30	0.00	0.00	0.00		
			7.863	-98.97	0.00	21.25	0.00	0.00	0.00		
			7.863	-116.73	0.00	16.20	0.00	0.00	0.00		
			8.373	-148.49	0.00	19.79	0.00	0.00	0.00		
			8.373	-169.58	0.00	15.01	0.00	0.00	0.00		
			8.883	-205.02	0.00	15.31	0.00	0.00	0.00		
			8.883	-232.15	0.00	11.34	0.00	0.00	0.00		
				42	9.393	-269.77	0.00	8.23	0.00	0.00	0.00
		9.393	-305.89		0.00	5.47	0.00	0.00	0.00		
		9.904	-345.19		0.00	18.26	0.00	0.00	0.00		
		9.904	-391.89		0.00	13.67	0.00	0.00	0.00		
		10.414	-434.33		0.00	135.48	0.00	0.00	0.00		
		10.414	-493.74		0.00	109.67	0.00	0.00	0.00		
		10.924	-508.87		0.00	326.49	0.00	0.00	0.00		
		10.924	-579.03		0.00	266.12	0.00	0.00	0.00		
		11.434	-605.51		0.00	1253.40	0.00	0.00	0.00		
		11.434	-691.65		0.00	1026.45	0.00	0.00	0.00		
				Max p _x	0.00	125.24	0.00	19.29	0.00	-0.01	
				Min p _x	0.00	-691.65	0.00	1026.45	0.00	0.00	
				Max p _y	0.00	9.88	0.00	30.03	0.00	0.00	
				Min p _y	0.00	-21.11	0.00	25.95	0.00	0.00	
				Max p _z	11.434	-605.51	0.00	1253.40	0.00	0.00	
				Min p _z	0.00	-305.89	0.00	5.47	0.00	0.00	
				Max m _x	0.00	9.88	0.00	30.03	0.00	0.00	
				Min m _x	0.00	-21.11	0.00	25.95	0.00	0.00	
				Max m _y	0.00	9.88	0.00	30.03	0.00	0.00	
				Min m _y	0.00	-21.11	0.00	25.95	0.00	0.00	
				Max m _z	0.00	9.88	0.00	30.03	0.00	0.00	
				Min m _z	0.00	-21.11	0.00	25.95	0.00	0.00	
		CR2	40	0.000	6.33	0.00	22.21	0.00	0.00	0.00	
	0.000			-15.60	0.00	19.22	0.00	0.00	0.00		
	0.485			40.73	0.00	14.32	0.00	0.00	0.00		
	0.485			20.91	0.00	10.95	0.00	0.00	0.00		
	0.970			55.52	0.00	13.11	0.00	0.00	0.00		
	0.970			37.28	0.00	9.67	0.00	0.00	0.00		
	1.456			71.29	0.00	12.64	0.00	0.00	0.00		
	1.456			55.16	0.00	9.12	0.00	0.00	0.00		
1.941	81.84			0.00	13.03	0.00	0.00	0.00			
1.941	67.80			0.00	9.46	0.00	0.00	0.00			
			41	2.426	87.97	0.00	13.54	0.00	0.00	0.00	
2.426	75.99			0.00	9.92	0.00	0.00	0.00			
2.911	92.12			0.00	13.95	0.00	0.00	0.00			
2.911	80.26			0.00	10.31	0.00	0.00	0.00			
3.397	92.50			0.00	14.28	0.00	0.00	0.00			
3.397	80.85			0.00	10.62	0.00	0.00	0.00			
3.882	88.90			0.00	14.58	0.00	0.00	0.00			
3.882	77.87			0.00	10.90	0.00	0.00	0.00			
4.367	81.46			0.00	14.85	0.00	0.00	0.00			
4.367	71.46			0.00	11.15	0.00	0.00	0.00			
		42	4.852	70.29	0.00	15.04	0.00	0.00	0.00		
4.852	61.71		0.00	11.34	0.00	0.00	0.00				
5.338	55.21		0.00	15.18	0.00	0.00	0.00				
5.338	47.73		0.00	11.46	0.00	0.00	0.00				
5.823	35.98		0.00	15.33	0.00	0.00	0.00				
5.823	28.44		0.00	11.60	0.00	0.00	0.00				
6.333	12.68		0.00	15.53	0.00	0.00	0.00				
6.333	5.49		0.00	11.79	0.00	0.00	0.00				
6.843	-13.11		0.00	15.71	0.00	0.00	0.00				
6.843	-21.07		0.00	11.96	0.00	0.00	0.00				
			7.353	-41.14	0.00	15.86	0.00	0.00	0.00		
			7.353	-51.58	0.00	12.08	0.00	0.00	0.00		
			7.863	-73.32	0.00	15.75	0.00	0.00	0.00		
			7.863	-86.29	0.00	12.00	0.00	0.00	0.00		
			8.373	-109.98	0.00	14.67	0.00	0.00	0.00		
			8.373	-125.54	0.00	11.12	0.00	0.00	0.00		
			8.883	-151.83	0.00	11.35	0.00	0.00	0.00		
			8.883	-171.82	0.00	8.40	0.00	0.00	0.00		
			9.393	-199.77	0.00	6.09	0.00	0.00	0.00		
			9.393	-226.20	0.00	4.05	0.00	0.00	0.00		
			9.904	-255.60	0.00	13.53	0.00	0.00	0.00		
			9.904	-289.61	0.00	10.13	0.00	0.00	0.00		
			10.414	-321.59	0.00	100.31	0.00	0.00	0.00		
			10.414	-364.68	0.00	81.23	0.00	0.00	0.00		
			10.924	-376.77	0.00	241.72	0.00	0.00	0.00		
			10.924	-427.53	0.00	197.12	0.00	0.00	0.00		
		42	11.434	-448.30	0.00	927.79	0.00	0.00	0.00		
11.434	-510.46		0.00	760.23	0.00	0.00	0.00				
Max p _x	0.00		92.50	0.00	14.28	0.00	0.00	-0.01			
Min p _x	0.00		-510.46	0.00	760.23	0.00	0.00	0.00			
Max p _y	0.00		6.33	0.00	22.21	0.00	0.00	0.00			
Min p _y	0.00		-15.60	0.00	19.22	0.00	0.00	0.00			
Max p _z	11.434		-448.30	0.00	927.79	0.00	0.00	0.00			
Min p _z	0.00		-226.20	0.00	4.05	0.00	0.00	0.00			
Max m _x	0.00		6.33	0.00	22.21	0.00	0.00	0.00			
Min m _x	0.00		-15.60	0.00	19.22	0.00	0.00	0.00			
			Max m _y	0.00	6.33	0.00	22.21	0.00	0.00		



Progetto: _____ Modello: Sovrapasso Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]			
				p _x	p _y	p _z	m _x	m _y	m _z	
67	CR2	Min m _y	0.000	-15.60	0.00	19.22	0.00	0.00	0.00	
		Max m _z	0.000	6.33	0.00	22.21	0.00	0.00	0.00	
		Min m _z	0.000	-15.60	0.00	19.22	0.00	0.00	0.00	
	CR3	40	0.000	0.000	-15.60	0.00	19.22	0.00	0.00	0.00
			0.000	0.000	-15.60	0.00	19.22	0.00	0.00	0.00
			0.485	0.000	20.91	0.00	10.95	0.00	0.00	0.00
			0.485	0.000	20.91	0.00	10.95	0.00	0.00	0.00
			0.970	0.000	37.28	0.00	9.67	0.00	0.00	0.00
			0.970	0.000	37.28	0.00	9.67	0.00	0.00	0.00
			1.456	0.000	55.16	0.00	9.12	0.00	0.00	0.00
			1.456	0.000	55.16	0.00	9.12	0.00	0.00	0.00
			1.941	0.000	67.80	0.00	9.46	0.00	0.00	0.00
			1.941	0.000	67.80	0.00	9.46	0.00	0.00	0.00
			2.426	0.000	75.99	0.00	9.92	0.00	0.00	0.00
			2.426	0.000	75.99	0.00	9.92	0.00	0.00	0.00
		2.911	0.000	80.26	0.00	10.31	0.00	0.00	0.00	
		2.911	0.000	80.26	0.00	10.31	0.00	0.00	0.00	
		3.397	0.000	80.85	0.00	10.62	0.00	0.00	0.00	
		3.397	0.000	80.85	0.00	10.62	0.00	0.00	0.00	
		3.882	0.000	77.87	0.00	10.90	0.00	0.00	0.00	
		3.882	0.000	77.87	0.00	10.90	0.00	0.00	0.00	
		4.367	0.000	71.46	0.00	11.15	0.00	0.00	0.00	
		4.367	0.000	71.46	0.00	11.15	0.00	0.00	0.00	
		4.852	0.000	61.71	0.00	11.34	0.00	0.00	0.00	
		4.852	0.000	61.71	0.00	11.34	0.00	0.00	0.00	
		5.338	0.000	48.48	0.00	11.46	0.00	0.00	0.00	
		5.338	0.000	48.48	0.00	11.46	0.00	0.00	0.00	
		5.823	0.000	31.56	0.00	11.60	0.00	0.00	0.00	
		5.823	0.000	31.56	0.00	11.60	0.00	0.00	0.00	
		6.333	0.000	11.02	0.00	11.79	0.00	0.00	0.00	
		6.333	0.000	11.02	0.00	11.79	0.00	0.00	0.00	
		6.843	0.000	-13.11	0.00	11.96	0.00	0.00	0.00	
		6.843	0.000	-13.11	0.00	11.96	0.00	0.00	0.00	
		7.353	0.000	-41.14	0.00	12.08	0.00	0.00	0.00	
		7.353	0.000	-41.14	0.00	12.08	0.00	0.00	0.00	
		7.863	0.000	-73.32	0.00	12.00	0.00	0.00	0.00	
		7.863	0.000	-73.32	0.00	12.00	0.00	0.00	0.00	
		8.373	0.000	-109.98	0.00	11.12	0.00	0.00	0.00	
		8.373	0.000	-109.98	0.00	11.12	0.00	0.00	0.00	
	8.883	0.000	-151.83	0.00	8.40	0.00	0.00	0.00		
8.883	0.000	-151.83	0.00	8.40	0.00	0.00	0.00			
9.393	0.000	-199.77	0.00	4.05	0.00	0.00	0.00			
9.393	0.000	-199.77	0.00	4.05	0.00	0.00	0.00			
9.904	0.000	-255.60	0.00	10.13	0.00	0.00	0.00			
9.904	0.000	-255.60	0.00	10.13	0.00	0.00	0.00			
10.414	0.000	-321.59	0.00	81.23	0.00	0.00	0.00			
10.414	0.000	-321.59	0.00	81.23	0.00	0.00	0.00			
10.924	0.000	-376.77	0.00	197.12	0.00	0.00	0.00			
10.924	0.000	-376.77	0.00	197.12	0.00	0.00	0.00			
11.434	0.000	-448.30	0.00	760.23	0.00	0.00	0.00			
11.434	0.000	-448.30	0.00	760.23	0.00	0.00	0.00			
	Max p _x	0.000	▷	80.85	0.00	10.62	0.00	0.00	-0.01	
	Min p _x	0.000	▷	-448.30	0.00	760.23	0.00	0.00	0.00	
	Max p _y	0.000		-15.60	▷	0.00	0.00	0.00	0.00	
	Min p _y	0.000		-15.60	▷	0.00	0.00	0.00	0.00	
	Max p _z	11.434		-448.30	▷	760.23	0.00	0.00	0.00	
	Min p _z	0.000		-199.77	▷	4.05	0.00	0.00	0.00	
	Max m _x	0.000		-15.60	▷	19.22	▷	0.00	0.00	
	Min m _x	0.000		-15.60	▷	19.22	▷	0.00	0.00	
	Max m _y	0.000		-15.60	▷	0.00	▷	0.00	0.00	
	Min m _y	0.000		-15.60	▷	0.00	▷	0.00	0.00	
	Max m _z	0.000		-15.60	▷	19.22	▷	0.00	0.00	
	Min m _z	0.000		-15.60	▷	19.22	▷	0.00	0.00	
72	CR1	83	0.000	0.00	-90.68	-14.14	0.00	0.00	0.00	
			0.000	0.00	-95.10	-17.99	0.00	0.00	0.00	
			0.121	0.00	-96.51	-42.26	0.00	0.00	0.00	
			0.121	0.00	-100.81	-44.91	0.00	0.00	0.00	
			0.242	0.00	-97.14	-42.25	0.00	0.00	0.00	
			0.242	0.00	-101.52	-44.87	0.00	0.00	0.00	
			0.363	0.00	-97.97	-42.18	0.00	0.00	0.00	
			0.363	0.00	-102.46	-44.76	0.00	0.00	0.00	
			0.485	0.00	-98.99	-41.97	0.00	0.00	0.00	
			0.485	0.00	-103.61	-44.49	0.00	0.00	0.00	
			0.727	0.00	-100.39	-41.55	0.00	0.00	0.00	
			0.727	0.00	-105.21	-43.99	0.00	0.00	0.00	
			0.969	0.00	-101.97	-40.97	0.00	0.00	0.00	
			0.969	0.00	-107.00	-43.33	0.00	0.00	0.00	
			1.212	0.00	-103.52	-40.31	0.00	0.00	0.00	
			1.212	0.00	-108.77	-42.58	0.00	0.00	0.00	
			1.454	0.00	-105.42	-39.40	0.00	0.00	0.00	
			1.454	0.00	-110.93	-41.59	0.00	0.00	0.00	
			1.938	0.00	-108.00	-37.99	0.00	0.00	0.00	
			1.938	0.00	-113.88	-40.07	0.00	0.00	0.00	
2.423	0.00	-110.80	-36.11	0.00	0.00	0.00				
2.423	0.00	-117.10	-38.18	0.00	0.00	0.00				
2.908	0.00	-113.44	-34.02	0.00	0.00	0.00				
2.908	0.00	-120.16	-36.12	0.00	0.00	0.00				
3.392	0.00	-115.92	-31.85	0.00	0.00	0.00				
3.392	0.00	-123.07	-33.98	0.00	0.00	0.00				
3.877	0.00	-118.29	-29.74	0.00	0.00	0.00				



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.3 LINEE - REAZIONI VINCOLARI

Combinazioni di risultati

Linea nr.	CR	Nodo nr.	Posizione x [m]	Forze vincolari [kN/m]			Momenti vincolari [kNm/m]					
				p _x	p _y	p _z	m _x	m _y	m _z			
72	CR1	83	3.877	0.00	-125.87	-31.88	0.00	0.00	0.00			
			4.362	0.00	-120.60	-27.84	0.00	0.00	0.00			
			4.362	0.00	-128.62	-29.97	0.00	0.00	0.00			
			4.846	0.00	-122.94	-26.35	0.00	0.00	0.00			
			4.846	0.00	-131.41	-28.44	0.00	0.00	0.00			
			5.331	0.00	-125.36	-25.37	0.00	0.00	0.00			
			5.331	0.00	-134.29	-27.42	0.00	0.00	0.00			
			5.815	0.00	-127.24	-24.83	0.00	0.00	0.00			
			5.815	0.00	-136.51	-26.94	0.00	0.00	0.00			
				114	6.300	0.00	-130.36	-24.65	0.00	0.00	0.00	
			6.300		0.00	-140.20	-26.90	0.00	0.00	0.00		
			Max p _x		0.000	▷	0.00	-90.68	-14.14	0.00	0.00	0.00
			Min p _x		0.000	▷	0.00	-95.10	-17.99	0.00	0.00	0.00
			Max p _y		6.300	▷	0.00	-90.68	-14.14	0.00	0.00	0.00
			Min p _y		0.000	▷	0.00	-140.20	-26.90	0.00	0.00	0.00
	Max p _z	0.121	▷		0.00	-90.68	-14.14	0.00	0.00	0.00		
	Min p _z	0.000	▷		0.00	-100.81	-44.91	0.00	0.00	0.00		
	Max m _x	0.000	▷		0.00	-90.68	-14.14	▷	0.00	0.00		
	Min m _x	0.000	▷		0.00	-95.10	-17.99	▷	0.00	0.00		
	Max m _y	0.000	▷	0.00	-90.68	-14.14	▷	0.00	0.00			
	Min m _y	0.000	▷	0.00	-95.10	-17.99	▷	0.00	0.00			
	Max m _z	0.000	▷	0.00	-90.68	-14.14	▷	0.00	▷			
	Min m _z	0.000	▷	0.00	-95.10	-17.99	▷	0.00	▷			
		CR2	83	0.000	0.00	-67.18	-10.48	0.00	0.00	0.00		
	0.000			0.00	-70.45	-13.33	0.00	0.00	0.00			
	0.121			0.00	-71.49	-31.31	0.00	0.00	0.00			
	0.121			0.00	-74.67	-33.27	0.00	0.00	0.00			
	0.242			0.00	-71.96	-31.31	0.00	0.00	0.00			
	0.242			0.00	-75.20	-33.24	0.00	0.00	0.00			
	0.363			0.00	-72.57	-31.26	0.00	0.00	0.00			
	0.363			0.00	-75.89	-33.15	0.00	0.00	0.00			
	0.485			0.00	-73.33	-31.10	0.00	0.00	0.00			
	0.485			0.00	-76.74	-32.96	0.00	0.00	0.00			
	0.727			0.00	-74.37	-30.78	0.00	0.00	0.00			
	0.727			0.00	-77.91	-32.59	0.00	0.00	0.00			
0.969	0.00			-75.53	-30.35	0.00	0.00	0.00				
0.969	0.00			-79.23	-32.09	0.00	0.00	0.00				
1.212	0.00			-76.68	-29.86	0.00	0.00	0.00				
1.212	0.00			-80.54	-31.54	0.00	0.00	0.00				
1.454	0.00			-78.09	-29.18	0.00	0.00	0.00				
1.454	0.00			-82.13	-30.80	0.00	0.00	0.00				
1.938	0.00			-80.00	-28.13	0.00	0.00	0.00				
1.938	0.00			-84.30	-29.68	0.00	0.00	0.00				
2.423	0.00			-82.07	-26.74	0.00	0.00	0.00				
2.423	0.00			-86.67	-28.27	0.00	0.00	0.00				
2.908	0.00			-84.02	-25.19	0.00	0.00	0.00				
2.908	0.00			-88.92	-26.75	0.00	0.00	0.00				
3.392	0.00			-85.86	-23.59	0.00	0.00	0.00				
3.392	0.00			-91.06	-25.16	0.00	0.00	0.00				
3.877	0.00			-87.61	-22.02	0.00	0.00	0.00				
3.877	0.00			-93.11	-23.60	0.00	0.00	0.00				
4.362	0.00			-89.32	-20.61	0.00	0.00	0.00				
4.362	0.00			-95.14	-22.19	0.00	0.00	0.00				
4.846	0.00	-91.05	-19.50	0.00	0.00	0.00						
4.846	0.00	-97.18	-21.05	0.00	0.00	0.00						
5.331	0.00	-92.84	-18.77	0.00	0.00	0.00						
5.331	0.00	-99.29	-20.29	0.00	0.00	0.00						
5.815	0.00	-94.23	-18.37	0.00	0.00	0.00						
5.815	0.00	-100.92	-19.94	0.00	0.00	0.00						
	114	6.300	0.00	-96.54	-18.25	0.00	0.00	0.00				
6.300		0.00	-103.63	-19.90	0.00	0.00	0.00					
Max p _x		0.000	▷	0.00	-67.18	-10.48	0.00	0.00	0.00			
Min p _x		0.000	▷	0.00	-70.45	-13.33	0.00	0.00	0.00			
Max p _y		6.300	▷	0.00	-67.18	-10.48	0.00	0.00	0.00			
Min p _y		0.000	▷	0.00	-103.63	-19.90	0.00	0.00	0.00			
Max p _z		0.121	▷	0.00	-67.18	-10.48	▷	0.00	0.00			
Min p _z		0.000	▷	0.00	-74.67	-33.27	▷	0.00	0.00			
Max m _x		0.000	▷	0.00	-67.18	-10.48	▷	0.00	0.00			
Min m _x		0.000	▷	0.00	-70.45	-13.33	▷	0.00	0.00			
Max m _y		0.000	▷	0.00	-67.18	-10.48	▷	0.00	0.00			
Min m _y		0.000	▷	0.00	-70.45	-13.33	▷	0.00	0.00			
Max m _z		0.000	▷	0.00	-67.18	-10.48	▷	0.00	▷			
Min m _z		0.000	▷	0.00	-70.45	-13.33	▷	0.00	▷			
		CR3	83	0.000	0.00	-67.18	-13.33	0.00	0.00	0.00		
0.000	0.00			-67.18	-13.33	0.00	0.00	0.00				
0.121	0.00			-71.49	-33.27	0.00	0.00	0.00				
0.121	0.00			-71.49	-33.27	0.00	0.00	0.00				
0.242	0.00			-71.96	-33.24	0.00	0.00	0.00				
0.242	0.00			-71.96	-33.24	0.00	0.00	0.00				
0.363	0.00			-72.57	-33.15	0.00	0.00	0.00				
0.363	0.00			-72.57	-33.15	0.00	0.00	0.00				
0.485	0.00			-73.33	-32.96	0.00	0.00	0.00				
0.485	0.00			-73.33	-32.96	0.00	0.00	0.00				
0.727	0.00			-74.37	-32.59	0.00	0.00	0.00				
0.727	0.00			-74.37	-32.59	0.00	0.00	0.00				
0.969	0.00			-75.53	-32.09	0.00	0.00	0.00				
0.969	0.00			-75.53	-32.09	0.00	0.00	0.00				
1.212	0.00			-76.68	-31.54	0.00	0.00	0.00				
1.212	0.00	-76.68	-31.54	0.00	0.00	0.00						



Progetto: _____ Modello: Sovrapasso _____ Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.			
				N	V _y	V _z	M _T	M _y	M _z				
2	CR2			Max M _y	-1453.28	17.00	-4.54	0.05	0.02	-146.77	CO 8		
				Min M _y	-1453.19	19.23	-4.12	0.05	0.01	-154.39	CO 7		
				Max M _z	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 5		
				Min M _z	-1453.19	19.23	-4.12	0.05	0.01	-154.39	CO 7		
	CR3	93	0.000	Max N	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Min N	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Max V _y	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Min V _y	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Max V _z	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Min V _z	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Max M _T	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Min M _T	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Max M _y	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
				Min M _y	-1240.17	13.37	-3.71	-0.01	27.37	-20.55	CO 9		
		132	7.000	Max N	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Min N	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Max V _y	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Min V _y	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Max V _z	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Min V _z	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Max M _T	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Min M _T	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Max M _y	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
				Min M _y	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9		
Max M _z	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9						
Min M _z	-1172.84	11.94	-4.00	0.03	0.01	-110.22	CO 9						
Sezione nr. 2: Rettangolo 1000/630													
7	CR1	110	0.000	Max N	15.89	-0.51	894.33	-0.15	-314.00	-0.18	CO 4		
				Min N	-8.17	-0.44	894.44	-0.12	-309.47	-0.15	CO 3		
				Max V _y	2.50	-0.36	716.19	-0.10	-249.36	-0.12	CO 1		
				Min V _y	15.89	-0.51	894.33	-0.15	-314.00	-0.18	CO 4		
				Max V _z	-8.17	-0.44	894.44	-0.12	-309.47	-0.15	CO 3		
				Min V _z	2.50	-0.36	716.19	-0.10	-249.36	-0.12	CO 1		
				Max M _T	2.50	-0.36	716.19	-0.10	-249.36	-0.12	CO 1		
				Min M _T	15.89	-0.51	894.33	-0.15	-314.00	-0.18	CO 4		
				Max M _y	2.50	-0.36	716.19	-0.10	-249.36	-0.12	CO 1		
				Min M _y	15.89	-0.51	894.33	-0.15	-314.00	-0.18	CO 4		
				Max M _z	2.50	-0.36	716.19	-0.10	-249.36	-0.12	CO 1		
				Min M _z	15.89	-0.51	894.33	-0.15	-314.00	-0.18	CO 4		
				Max N	15.93	-0.50	886.89	-0.00	-2.28	-0.00	CO 4		
				Min N	-8.13	-0.44	886.99	0.00	2.28	0.00	CO 3		
				Max V _y	2.52	-0.35	708.75	0.00	0.00	0.00	CO 1		
				Min V _y	15.93	-0.50	886.89	-0.00	-2.28	-0.00	CO 4		
				Max V _z	-8.13	-0.44	886.99	0.00	2.28	0.00	CO 3		
				Min V _z	2.52	-0.35	708.75	0.00	0.00	0.00	CO 1		
				Max M _T	-8.13	-0.44	886.99	0.00	2.28	0.00	CO 3		
				Min M _T	15.93	-0.50	886.89	-0.00	-2.28	-0.00	CO 4		
				Max M _y	-8.13	-0.44	886.99	0.00	2.28	0.00	CO 3		
				Min M _y	15.93	-0.50	886.89	-0.00	-2.28	-0.00	CO 4		
				Max M _z	-8.13	-0.44	886.99	0.00	2.28	0.00	CO 3		
				Min M _z	15.93	-0.50	886.89	-0.00	-2.28	-0.00	CO 4		
	CR2	110	0.000	Max N	10.13	-0.28	662.48	-0.08	-232.43	-0.10	CO 8		
				Min N	-5.90	-0.24	662.53	-0.06	-229.40	-0.08	CO 7		
				Max V _y	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 5		
				Min V _y	10.13	-0.28	662.48	-0.08	-232.43	-0.10	CO 8		
				Max V _z	-5.90	-0.24	662.53	-0.06	-229.40	-0.08	CO 7		
				Min V _z	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 5		
				Max M _T	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 5		
				Min M _T	10.13	-0.28	662.48	-0.08	-232.43	-0.10	CO 8		
				Max M _y	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 5		
				Min M _y	10.13	-0.28	662.48	-0.08	-232.43	-0.10	CO 8		
				Max M _z	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 5		
				Min M _z	10.13	-0.28	662.48	-0.08	-232.43	-0.10	CO 8		
		78	0.350	Max N	10.15	-0.27	656.97	-0.00	-1.52	-0.00	CO 8		
				Min N	-5.88	-0.24	657.02	0.00	1.52	0.00	CO 7		
				Max V _y	1.38	-0.19	525.00	0.00	0.00	0.00	CO 5		
				Min V _y	10.15	-0.27	656.97	-0.00	-1.52	-0.00	CO 8		
				Max V _z	-5.88	-0.24	657.02	0.00	1.52	0.00	CO 7		
				Min V _z	1.38	-0.19	525.00	0.00	0.00	0.00	CO 5		
				Max M _T	-5.88	-0.24	657.02	0.00	1.52	0.00	CO 7		
				Min M _T	10.15	-0.27	656.97	-0.00	-1.52	-0.00	CO 8		
				Max M _y	-5.88	-0.24	657.02	0.00	1.52	0.00	CO 7		
				Min M _y	10.15	-0.27	656.97	-0.00	-1.52	-0.00	CO 8		
				Max M _z	-5.88	-0.24	657.02	0.00	1.52	0.00	CO 7		
				Min M _z	10.15	-0.27	656.97	-0.00	-1.52	-0.00	CO 8		
CR3	110	0.000	Max N	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 9			
			Min N	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 9			
			Max V _y	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 9			
			Min V _y	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 9			
			Max V _z	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 9			
			Min V _z	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 9			
Max M _T	1.37	-0.19	530.51	-0.05	-184.71	-0.07	CO 9						



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.			
					N	V _y	V _z	M _T	M _y	M _z				
7	CR3	78	0.350	Min M _T	1.37	-0.19	530.51	▷	-0.05	-184.71	-0.07	CO 9		
				Max M _y	1.37	-0.19	530.51	▷	-0.05	-184.71	-0.07	CO 9		
				Min M _y	1.37	-0.19	530.51	▷	-0.05	-184.71	-0.07	CO 9		
				Max M _z	1.37	-0.19	530.51	▷	-0.05	-184.71	-0.07	CO 9		
				Min M _z	1.37	-0.19	530.51	▷	-0.05	-184.71	-0.07	CO 9		
				Max N	▷	1.38	-0.19	525.00	0.00	0.00	0.00	0.00	CO 9	
				Min N	▷	1.38	-0.19	525.00	0.00	0.00	0.00	0.00	CO 9	
				Max V _y	▷	1.38	-0.19	525.00	0.00	0.00	0.00	0.00	CO 9	
				Min V _y	▷	1.38	-0.19	525.00	0.00	0.00	0.00	0.00	CO 9	
				Max V _z	▷	1.38	-0.19	▷	525.00	0.00	0.00	0.00	0.00	CO 9
				Min V _z	▷	1.38	-0.19	▷	525.00	0.00	0.00	0.00	0.00	CO 9
				Max M _T	▷	1.38	-0.19	▷	525.00	0.00	0.00	0.00	0.00	CO 9
				Min M _T	▷	1.38	-0.19	▷	525.00	0.00	0.00	0.00	0.00	CO 9
				Max M _y	▷	1.38	-0.19	▷	525.00	0.00	0.00	0.00	0.00	CO 9
				Min M _y	▷	1.38	-0.19	▷	525.00	0.00	0.00	0.00	0.00	CO 9
				Max M _z	▷	1.38	-0.19	▷	525.00	0.00	0.00	0.00	0.00	CO 9
Min M _z	▷	1.38	-0.19	▷	525.00	0.00	0.00	0.00	0.00	CO 9				
Sezione nr. 3: Rettangolo 300/800														
3	CR1	68	0.000	Max N	▷	-243.83	-0.16	0.93	-0.20	-5.93	-1.04	CO 1		
				Min N	▷	-287.24	-0.16	1.08	-0.09	-6.89	-1.07	CO 4		
				Max V _y	▷	-243.83	-0.16	0.93	-0.20	-5.93	-1.04	CO 1		
				Min V _y	▷	-286.79	-0.17	1.13	-0.13	-7.17	-1.14	CO 3		
				Max V _z	▷	-286.79	-0.17	▷	1.13	-0.13	-7.17	-1.14	CO 3	
				Min V _z	▷	-243.83	-0.16	▷	0.93	-0.20	-5.93	-1.04	CO 1	
				Max M _T	▷	-287.24	-0.16	1.08	▷	-0.09	-6.89	-1.07	CO 4	
				Min M _T	▷	-243.83	-0.16	0.93	▷	-0.20	-5.93	-1.04	CO 1	
				Max M _y	▷	-243.83	-0.16	0.93	▷	-0.20	-5.93	-1.04	CO 1	
				Min M _y	▷	-286.79	-0.17	1.13	▷	-0.13	-7.17	-1.14	CO 3	
				Max M _z	▷	-243.83	-0.16	0.93	▷	-0.20	-5.93	-1.04	CO 1	
				Min M _z	▷	-286.79	-0.17	1.13	▷	-0.13	-7.17	-1.14	CO 3	
		Max N	▷	-192.80	-0.17	0.94	-0.20	-0.00	0.00	0.00	CO 1			
		Min N	▷	-236.21	-0.17	1.10	-0.09	-0.00	-0.00	0.00	CO 4			
		Max V _y	▷	-192.80	-0.17	0.94	-0.20	-0.00	0.00	0.00	CO 1			
		Min V _y	▷	-235.76	-0.18	1.14	-0.13	-0.00	0.00	0.00	CO 3			
		Max V _z	▷	-235.76	-0.18	▷	1.14	-0.13	-0.00	0.00	0.00	CO 3		
		Min V _z	▷	-192.80	-0.17	▷	0.94	-0.20	-0.00	0.00	0.00	CO 1		
		Max M _T	▷	-236.21	-0.17	1.10	▷	-0.09	-0.00	-0.00	0.00	CO 4		
		Min M _T	▷	-192.80	-0.17	0.94	▷	-0.20	-0.00	0.00	0.00	CO 1		
		Max M _y	▷	-236.21	-0.17	1.10	▷	-0.09	-0.00	-0.00	0.00	CO 4		
		Min M _y	▷	-192.80	-0.17	0.94	▷	-0.20	-0.00	0.00	0.00	CO 1		
		Max M _z	▷	-235.76	-0.18	1.14	-0.13	-0.00	0.00	0.00	0.00	CO 3		
		Min M _z	▷	-236.21	-0.17	1.10	-0.09	-0.00	0.00	0.00	0.00	CO 4		
	CR2	68	0.000	Max N	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 5		
				Min N	▷	-212.76	-0.12	0.81	-0.07	-5.11	-0.80	CO 8		
				Max V _y	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 5		
				Min V _y	▷	-212.45	-0.13	0.84	-0.10	-5.30	-0.84	CO 7		
				Max V _z	▷	-212.45	-0.13	▷	0.84	-0.10	-5.30	-0.84	CO 7	
				Min V _z	▷	-180.62	-0.12	▷	0.69	-0.15	-4.39	-0.77	CO 5	
				Max M _T	▷	-212.76	-0.12	0.81	▷	-0.07	-5.11	-0.80	CO 8	
				Min M _T	▷	-180.62	-0.12	0.69	▷	-0.15	-4.39	-0.77	CO 5	
				Max M _y	▷	-180.62	-0.12	0.69	▷	-0.15	-4.39	-0.77	CO 5	
				Min M _y	▷	-212.45	-0.13	0.84	-0.10	-5.30	-0.84	CO 7		
				Max M _z	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 5		
				Min M _z	▷	-212.45	-0.13	0.84	-0.10	-5.30	-0.84	CO 7		
		Max N	▷	-142.82	-0.12	0.70	-0.15	-0.00	0.00	0.00	CO 5			
		Min N	▷	-174.96	-0.13	0.81	-0.07	-0.00	-0.00	0.00	CO 8			
		Max V _y	▷	-142.82	-0.12	0.70	-0.15	-0.00	0.00	0.00	CO 5			
		Min V _y	▷	-174.65	-0.13	0.84	-0.10	-0.00	0.00	0.00	CO 7			
		Max V _z	▷	-174.65	-0.13	▷	0.84	-0.10	-0.00	0.00	0.00	CO 7		
		Min V _z	▷	-142.82	-0.12	▷	0.70	-0.15	-0.00	0.00	0.00	CO 5		
		Max M _T	▷	-174.96	-0.13	0.81	▷	-0.07	-0.00	-0.00	0.00	CO 8		
		Min M _T	▷	-142.82	-0.12	0.70	▷	-0.15	-0.00	0.00	0.00	CO 5		
		Max M _y	▷	-174.96	-0.13	0.81	▷	-0.07	-0.00	-0.00	0.00	CO 8		
		Min M _y	▷	-142.82	-0.12	0.70	▷	-0.15	-0.00	0.00	0.00	CO 5		
		Max M _z	▷	-174.65	-0.13	0.84	-0.10	-0.00	0.00	0.00	0.00	CO 7		
		Min M _z	▷	-174.96	-0.13	0.81	-0.07	-0.00	0.00	0.00	0.00	CO 8		
CR3	68	0.000	Max N	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 9			
			Min N	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 9			
			Max V _y	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 9			
			Min V _y	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 9			
			Max V _z	▷	-180.62	-0.12	▷	0.69	-0.15	-4.39	-0.77	CO 9		
			Min V _z	▷	-180.62	-0.12	▷	0.69	-0.15	-4.39	-0.77	CO 9		
			Max M _T	▷	-180.62	-0.12	▷	0.69	-0.15	-4.39	-0.77	CO 9		
			Min M _T	▷	-180.62	-0.12	▷	0.69	-0.15	-4.39	-0.77	CO 9		
			Max M _y	▷	-180.62	-0.12	0.69	▷	-0.15	-4.39	-0.77	CO 9		
			Min M _y	▷	-180.62	-0.12	0.69	▷	-0.15	-4.39	-0.77	CO 9		
			Max M _z	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 9			
			Min M _z	▷	-180.62	-0.12	0.69	-0.15	-4.39	-0.77	CO 9			
25	6.300	Max N	▷	-142.82	-0.12	0.70	-0.15	-0.00	0.00	0.00	CO 9			
		Min N	▷	-142.82	-0.12	0.70	-0.15	-0.00	0.00	0.00	CO 9			
		Max V _y	▷	-142.82	-0.12	0.70	-0.15	-0.00	0.00	0.00	CO 9			
		Min V _y	▷	-142.82	-0.12	0.70	-0.15	-0.00	0.00	0.00	CO 9			
		Max V _z	▷	-142.82	-0.12	▷	0.70	-0.15	-0.00	0.00	CO 9			
		Min V _z	▷	-142.82	-0.12	▷	0.70	-0.15	-0.00	0.00	CO 9			
		Max M _T	▷	-142.82	-0.12	▷	0.70	-0.15	-0.00	0.00	CO 9			
		Min M _T	▷	-142.82	-0.12	▷	0.70	-0.15	-0.00	0.00	CO 9			
		Max M _y	▷	-142.82	-0.12	0.70	▷	-0.15	-0.00	0.00	CO 9			
		Min M _y	▷	-142.82	-0.12	0.70	▷	-0.15	-0.00	0.00	CO 9			
		Max M _z	▷	-142.82	-0.12	0.70	-0.15	-0.00	0.00	0.00	CO 9			
		Min M _z	▷	-142.82	-0.12	▷	0.70	-0.15	-0.00	0.00	CO 9			



Progetto: _____ Modello: Sovrapasso _____ Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]		Forze [kN]			Momenti [kNm]			Casi di carico corrispond.			
					N	V _y	V _z	M _T	M _y	M _z				
3	CR3			Max M _T	-142.82	-0.12	0.70	▷	-0.15	-0.00	0.00	CO 9		
				Min M _T	-142.82	-0.12	0.70	▷	-0.15	-0.00	0.00	CO 9		
				Max M _y	-142.82	-0.12	0.70	▷	-0.15	▷	-0.00	0.00	CO 9	
				Min M _y	-142.82	-0.12	0.70	▷	-0.15	▷	-0.00	0.00	CO 9	
				Max M _z	-142.82	-0.12	0.70	▷	-0.15	▷	-0.00	▷	0.00	CO 9
				Min M _z	-142.82	-0.12	0.70	▷	-0.15	▷	-0.00	▷	0.00	CO 9
4	CR1	67	0.000	Max N	▷	-215.29	-0.01	-0.42	-1.01	2.66	-0.07	CO 1		
				Min N	▷	-256.14	0.01	-0.53	-1.30	3.37	0.04	CO 3		
				Max V _y	▷	-256.14	0.01	-0.53	-1.30	3.37	0.04	CO 3		
				Min V _y	▷	-215.29	-0.01	-0.42	-1.01	2.66	-0.07	CO 1		
				Max V _z	▷	-215.29	-0.01	▷	-0.42	-1.01	2.66	-0.07	CO 1	
				Min V _z	▷	-254.98	-0.00	▷	-0.53	-1.24	3.37	-0.04	CO 4	
				Max M _T	▷	-215.29	-0.01	-0.42	▷	-1.01	2.66	-0.07	CO 1	
				Min M _T	▷	-256.14	0.01	-0.53	▷	-1.30	3.37	0.04	CO 3	
				Max M _y	▷	-254.98	-0.00	-0.53	▷	-1.24	3.37	-0.04	CO 4	
				Min M _y	▷	-215.29	-0.01	-0.42	▷	-1.01	2.66	-0.07	CO 1	
				Max M _z	▷	-256.14	0.01	-0.53	▷	-1.30	3.37	▷	0.04	CO 3
				Min M _z	▷	-215.29	-0.01	-0.42	▷	-1.01	2.66	▷	-0.07	CO 1
	24	6.300	Max N	▷	-164.26	-0.01	-0.43	-1.01	0.00	0.00	0.00	CO 1		
			Min N	▷	-205.11	0.00	-0.54	-1.30	0.00	0.00	0.00	CO 3		
			Max V _y	▷	-205.11	0.00	-0.54	-1.30	0.00	0.00	0.00	CO 3		
			Min V _y	▷	-164.26	-0.01	-0.43	-1.01	0.00	0.00	0.00	CO 1		
			Max V _z	▷	-164.26	-0.01	▷	-0.43	-1.01	0.00	0.00	CO 1		
			Min V _z	▷	-203.95	-0.01	▷	-0.54	-1.24	0.00	0.00	CO 4		
			Max M _T	▷	-164.26	-0.01	-0.43	▷	-1.01	0.00	0.00	CO 1		
			Min M _T	▷	-205.11	0.00	-0.54	▷	-1.30	0.00	0.00	CO 3		
			Max M _y	▷	-205.11	0.00	-0.54	▷	-1.30	▷	0.00	0.00	CO 3	
			Min M _y	▷	-164.26	-0.01	-0.43	▷	-1.01	▷	0.00	0.00	CO 1	
			Max M _z	▷	-205.11	0.00	-0.54	▷	-1.30	▷	0.00	0.00	CO 3	
			Min M _z	▷	-164.26	-0.01	-0.43	▷	-1.01	▷	0.00	0.00	CO 1	
	CR2	67	0.000	Max N	▷	-159.47	-0.01	-0.31	-0.75	1.97	-0.05	CO 5		
				Min N	▷	-189.69	0.01	-0.39	-0.96	2.50	0.02	CO 7		
				Max V _y	▷	-189.69	0.01	-0.39	-0.96	2.50	0.02	CO 7		
				Min V _y	▷	-159.47	-0.01	-0.31	-0.75	1.97	-0.05	CO 5		
				Max V _z	▷	-159.47	-0.01	▷	-0.31	-0.75	1.97	-0.05	CO 5	
				Min V _z	▷	-188.91	-0.00	▷	-0.39	-0.92	2.50	-0.03	CO 8	
				Max M _T	▷	-159.47	-0.01	-0.31	▷	-0.75	1.97	-0.05	CO 5	
				Min M _T	▷	-189.69	0.01	-0.39	▷	-0.96	2.50	0.02	CO 7	
				Max M _y	▷	-188.91	-0.00	-0.39	▷	-0.92	2.50	-0.03	CO 8	
				Min M _y	▷	-159.47	-0.01	-0.31	▷	-0.75	1.97	-0.05	CO 5	
				Max M _z	▷	-189.69	0.01	-0.39	▷	-0.96	2.50	▷	0.02	CO 7
				Min M _z	▷	-159.47	-0.01	-0.31	▷	-0.75	1.97	▷	-0.05	CO 5
	24	6.300	Max N	▷	-121.67	-0.01	-0.32	-0.75	0.00	0.00	0.00	CO 5		
			Min N	▷	-151.89	0.00	-0.40	-0.96	0.00	0.00	0.00	CO 7		
			Max V _y	▷	-151.89	0.00	-0.40	-0.96	0.00	0.00	0.00	CO 7		
			Min V _y	▷	-121.67	-0.01	-0.32	-0.75	0.00	0.00	0.00	CO 5		
			Max V _z	▷	-121.67	-0.01	▷	-0.32	-0.75	0.00	0.00	CO 5		
			Min V _z	▷	-151.11	-0.01	▷	-0.40	-0.92	0.00	0.00	CO 8		
			Max M _T	▷	-121.67	-0.01	-0.32	▷	-0.75	0.00	0.00	CO 5		
			Min M _T	▷	-151.89	0.00	-0.40	▷	-0.96	0.00	0.00	CO 7		
			Max M _y	▷	-151.89	0.00	-0.40	▷	-0.96	▷	0.00	0.00	CO 7	
			Min M _y	▷	-121.67	-0.01	-0.32	▷	-0.75	▷	0.00	0.00	CO 5	
			Max M _z	▷	-151.89	0.00	-0.40	▷	-0.96	▷	0.00	0.00	CO 7	
			Min M _z	▷	-121.67	-0.01	-0.32	▷	-0.75	▷	0.00	0.00	CO 5	
CR3	67	0.000	Max N	▷	-159.47	-0.01	-0.31	-0.75	1.97	-0.05	CO 9			
			Min N	▷	-159.47	-0.01	-0.31	-0.75	1.97	-0.05	CO 9			
			Max V _y	▷	-159.47	-0.01	-0.31	-0.75	1.97	-0.05	CO 9			
			Min V _y	▷	-159.47	-0.01	-0.31	-0.75	1.97	-0.05	CO 9			
			Max V _z	▷	-159.47	-0.01	▷	-0.31	-0.75	1.97	-0.05	CO 9		
			Min V _z	▷	-159.47	-0.01	▷	-0.31	-0.75	1.97	-0.05	CO 9		
			Max M _T	▷	-159.47	-0.01	-0.31	▷	-0.75	1.97	-0.05	CO 9		
			Min M _T	▷	-159.47	-0.01	-0.31	▷	-0.75	1.97	-0.05	CO 9		
			Max M _y	▷	-159.47	-0.01	-0.31	▷	-0.75	▷	1.97	-0.05	CO 9	
			Min M _y	▷	-159.47	-0.01	-0.31	▷	-0.75	▷	1.97	-0.05	CO 9	
			Max M _z	▷	-159.47	-0.01	-0.31	▷	-0.75	▷	1.97	▷	-0.05	CO 9
			Min M _z	▷	-159.47	-0.01	-0.31	▷	-0.75	▷	1.97	▷	-0.05	CO 9
24	6.300	Max N	▷	-121.67	-0.01	-0.32	-0.75	0.00	0.00	0.00	CO 9			
		Min N	▷	-121.67	-0.01	-0.32	-0.75	0.00	0.00	0.00	CO 9			
		Max V _y	▷	-121.67	-0.01	-0.32	-0.75	0.00	0.00	0.00	CO 9			
		Min V _y	▷	-121.67	-0.01	-0.32	-0.75	0.00	0.00	0.00	CO 9			
		Max V _z	▷	-121.67	-0.01	▷	-0.32	-0.75	0.00	0.00	CO 9			
		Min V _z	▷	-121.67	-0.01	▷	-0.32	-0.75	0.00	0.00	CO 9			
		Max M _T	▷	-121.67	-0.01	-0.32	▷	-0.75	0.00	0.00	CO 9			
		Min M _T	▷	-121.67	-0.01	-0.32	▷	-0.75	0.00	0.00	CO 9			
		Max M _y	▷	-121.67	-0.01	-0.32	▷	-0.75	▷	0.00	0.00	CO 9		
		Min M _y	▷	-121.67	-0.01	-0.32	▷	-0.75	▷	0.00	0.00	CO 9		
		Max M _z	▷	-121.67	-0.01	-0.32	▷	-0.75	▷	0.00	0.00	CO 9		
		Min M _z	▷	-121.67	-0.01	-0.32	▷	-0.75	▷	0.00	0.00	CO 9		
8	Sezione nr. 5: Rettangolo 1000/500													
	CR1	119	0.000	Max N	▷	1.26	-2.78	-25.36	-0.00	0.00	0.03	CO 4		
				Min N	▷	0.96	-3.01	-24.76	0.00	0.00	0.00	CO 3		
				Max V _y	▷	1.05	-1.95	-20.99	-0.00	0.00	0.03	CO 1		
				Min V _y	▷	0.96	-3.01	-24.76	0.00	0.00	0.00	CO 3		
				Max V _z	▷	1.05	-1.95	-20.99	-0.00	0.00	0.03	CO 1		
				Min V _z	▷	1.05	-1.95	-20.99	-0.00	0.00	0.03	CO 1		



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.						
				N	V _y	V _z	M _T	M _y	M _z							
8	CR1			Min V _z	1.26	-2.78	▷	-25.36	-0.00	0.00	0.03	CO 4				
				Max M _T	0.96	-3.01	▷	-24.76	▷	0.00	0.00	0.00	CO 3			
				Min M _T	1.26	-2.78	▷	-25.36	▷	-0.00	0.00	0.03	CO 4			
				Max M _y	1.26	-2.78	▷	-25.36	▷	-0.00	0.00	0.03	CO 4			
				Min M _y	0.96	-3.01	▷	-24.76	▷	0.00	0.00	0.00	CO 3			
				Max M _z	1.05	-1.95	▷	-20.99	-0.00	0.00	▷	0.03	CO 1			
				Min M _z	0.96	-3.01	▷	-24.76	0.00	0.00	▷	0.00	CO 3			
				42	2.381	Max N	▷	-52.28	-13.46	▷	13.99	-16.50	-263.63	-46.50	CO 1	
						Min N	▷	-77.79	-13.58	▷	17.08	-20.20	-321.10	-61.21	CO 4	
						Max V _y	▷	-52.28	▷	-13.46	▷	13.99	-16.50	-263.63	-46.50	CO 1
						Min V _y	▷	-76.11	▷	-16.89	▷	16.59	-20.06	-317.35	-52.90	CO 3
						Max V _z	▷	-77.79	▷	-13.58	▷	17.08	-20.20	-321.10	-61.21	CO 4
	Min V _z	▷	-52.28			▷	-13.46	▷	13.99	-16.50	-263.63	-46.50	CO 1			
	Max M _T	▷	-52.28			▷	-13.46	▷	13.99	▷	-16.50	-263.63	-46.50	CO 1		
	Min M _T	▷	-77.79			▷	-13.58	▷	17.08	▷	-20.20	-321.10	-61.21	CO 4		
	Max M _y	▷	-52.28			▷	-13.46	▷	13.99	▷	-16.50	-263.63	-46.50	CO 1		
	Min M _y	▷	-77.79			▷	-13.58	▷	17.08	▷	-20.20	-321.10	-61.21	CO 4		
	Max M _z	▷	-52.28			▷	-13.46	▷	13.99	▷	-16.50	-263.63	-46.50	CO 1		
	Min M _z	▷	-77.79			▷	-13.58	▷	17.08	▷	-20.20	-321.10	-61.21	CO 4		
	CR2	119	0.000	Max N	▷	0.91	-2.07	▷	-18.72	-0.00	0.00	0.02	CO 8			
				Min N	▷	0.72	-2.22	▷	-18.32	0.00	0.00	0.00	0.00	CO 7		
				Max V _y	▷	0.78	▷	-1.44	▷	-15.52	-0.00	0.00	0.02	CO 5		
				Min V _y	▷	0.72	▷	-2.22	▷	-18.32	0.00	0.00	0.00	CO 7		
				Max V _z	▷	0.78	▷	-1.44	▷	-15.52	-0.00	0.00	0.02	CO 5		
				Min V _z	▷	0.91	-2.07	▷	-18.72	-0.00	0.00	0.02	CO 8			
				Max M _T	▷	0.72	-2.22	▷	-18.32	▷	0.00	0.00	0.00	CO 7		
				Min M _T	▷	0.91	-2.07	▷	-18.72	▷	-0.00	0.00	0.02	CO 8		
				Max M _y	▷	0.91	-2.07	▷	-18.72	-0.00	▷	0.00	0.02	CO 8		
				Min M _y	▷	0.72	-2.22	▷	-18.32	0.00	▷	0.00	0.00	CO 7		
				Max M _z	▷	0.78	-1.44	▷	-15.52	-0.00	▷	0.00	0.02	CO 5		
				Min M _z	▷	0.72	-2.22	▷	-18.32	0.00	▷	0.00	0.00	CO 7		
		42	2.381	Max N	▷	-38.73	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 5			
				Min N	▷	-57.56	-10.21	▷	12.59	-14.93	-237.64	-44.98	CO 8			
				Max V _y	▷	-38.73	▷	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 5		
				Min V _y	▷	-56.44	▷	-12.42	▷	12.27	-14.85	-235.12	-39.45	CO 7		
				Max V _z	▷	-57.56	▷	-10.21	▷	12.59	-14.93	-237.64	-44.98	CO 8		
Min V _z				▷	-38.73	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 5				
Max M _T				▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 5			
Min M _T				▷	-57.56	-10.21	▷	12.59	▷	-14.93	-237.64	-44.98	CO 8			
Max M _y				▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 5			
Min M _y				▷	-57.56	-10.21	▷	12.59	▷	-14.93	-237.64	-44.98	CO 8			
Max M _z				▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 5			
Min M _z				▷	-57.56	-10.21	▷	12.59	▷	-14.93	-237.64	-44.98	CO 8			
CR3	119	0.000	Max N	▷	0.78	-1.44	▷	-15.52	-0.00	0.00	0.02	CO 9				
			Min N	▷	0.78	-1.44	▷	-15.52	-0.00	0.00	0.02	CO 9				
			Max V _y	▷	0.78	▷	-1.44	▷	-15.52	-0.00	0.00	0.02	CO 9			
			Min V _y	▷	0.78	▷	-1.44	▷	-15.52	-0.00	0.00	0.02	CO 9			
			Max V _z	▷	0.78	-1.44	▷	-15.52	-0.00	0.00	0.02	CO 9				
			Min V _z	▷	0.78	-1.44	▷	-15.52	-0.00	0.00	0.02	CO 9				
			Max M _T	▷	0.78	-1.44	▷	-15.52	▷	-0.00	0.00	0.02	CO 9			
			Min M _T	▷	0.78	-1.44	▷	-15.52	▷	-0.00	0.00	0.02	CO 9			
			Max M _y	▷	0.78	-1.44	▷	-15.52	-0.00	▷	0.00	0.02	CO 9			
			Min M _y	▷	0.78	-1.44	▷	-15.52	-0.00	▷	0.00	0.02	CO 9			
			Max M _z	▷	0.78	-1.44	▷	-15.52	-0.00	▷	0.00	0.02	CO 9			
			Min M _z	▷	0.78	-1.44	▷	-15.52	-0.00	▷	0.00	0.02	CO 9			
42	2.381	Max N	▷	-38.73	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 9					
		Min N	▷	-38.73	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 9					
		Max V _y	▷	-38.73	▷	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 9				
		Min V _y	▷	-38.73	▷	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 9				
		Max V _z	▷	-38.73	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 9					
		Min V _z	▷	-38.73	-9.99	▷	10.34	-12.21	-195.24	-34.41	CO 9					
		Max M _T	▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 9				
		Min M _T	▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 9				
		Max M _y	▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 9				
		Min M _y	▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 9				
		Max M _z	▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 9				
		Min M _z	▷	-38.73	-9.99	▷	10.34	▷	-12.21	-195.24	-34.41	CO 9				
9	CR1	42	0.000	Max N	▷	-52.28	-13.46	▷	13.99	-16.50	-263.63	-46.50	CO 1			
				Min N	▷	-77.79	-13.58	▷	17.08	-20.20	-321.10	-61.21	CO 4			
				Max V _y	▷	-52.28	▷	-13.46	▷	13.99	-16.50	-263.63	-46.50	CO 1		
				Min V _y	▷	-76.11	▷	-16.89	▷	16.59	-20.06	-317.35	-52.90	CO 3		
				Max V _z	▷	-77.79	▷	-13.58	▷	17.08	-20.20	-321.10	-61.21	CO 4		
				Min V _z	▷	-52.28	▷	-13.46	▷	13.99	-16.50	-263.63	-46.50	CO 1		
				Max M _T	▷	-52.28	▷	-13.46	▷	13.99	▷	-16.50	-263.63	-46.50	CO 1	
				Min M _T	▷	-77.79	▷	-13.58	▷	17.08	▷	-20.20	-321.10	-61.21	CO 4	
				Max M _y	▷	-52.28	▷	-13.46	▷	13.99	▷	-16.50	-263.63	-46.50	CO 1	
				Min M _y	▷	-77.79	▷	-13.58	▷	17.08	▷	-20.20	-321.10	-61.21	CO 4	
				Max M _z	▷	-52.28	▷	-13.46	▷	13.99	▷	-16.50	-263.63	-46.50	CO 1	
				Min M _z	▷	-77.79	▷	-13.58	▷	17.08	▷	-20.20	-321.10	-61.21	CO 4	
	117	1.530	Max N	▷	-19.58	0.11	▷	36.81	0.66	1.63	3.90	CO 1				
			Min N	▷	-27.39	0.42	▷	45.80	0.85	1.97	4.33	CO 4				
			Max V _y	▷	-27.39	▷	0.42	▷	45.80	0.85	1.97	4.33	CO 4			
			Min V _y	▷	-23.75	▷	-0.05	▷	44.55	0.82	1.96	4.35	CO 3			
			Max V _z	▷	-27.39	▷	0.42	▷	45.80	0.85	1.97	4.33	CO 4			



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.			
				N	V _y	V _z	M _T	M _y	M _z				
9	CR1			Min V _z	-19.58	0.11	▷	36.81	0.66	1.63	3.90	CO 1	
				Max M _T	-27.39	0.42		45.80	▷	0.85	1.97	4.33	CO 4
				Min M _T	-19.58	0.11	▷	36.81	▷	0.66	1.63	3.90	CO 1
				Max M _y	-27.39	0.42		45.80	▷	0.85	1.97	4.33	CO 4
				Min M _y	-19.58	0.11	▷	36.81	▷	0.66	1.63	3.90	CO 1
				Max M _z	-23.75	-0.05		44.55	▷	0.82	1.96	4.35	CO 3
	Min M _z	-19.58	0.11	▷	36.81	▷	0.66	1.63	3.90	CO 1			
	CR2	42	0.000	Max N	▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 5	
				Min N	▷	-57.56	-10.21	12.59	-14.93	-237.64	-44.98	CO 8	
				Max V _y	▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 5	
				Min V _y	▷	-56.44	-12.42	12.27	-14.85	-235.12	-39.45	CO 7	
				Max V _z	▷	-57.56	-10.21	12.59	-14.93	-237.64	-44.98	CO 8	
				Min V _z	▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 5	
		Max M _T	▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 5		
		Min M _T	▷	-57.56	-10.21	12.59	▷	-14.93	-237.64	-44.98	CO 8		
		Max M _y	▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 5		
		Min M _y	▷	-57.56	-10.21	12.59	▷	-14.93	-237.64	-44.98	CO 8		
		Max M _z	▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 5		
		Min M _z	▷	-57.56	-10.21	12.59	▷	-14.93	-237.64	-44.98	CO 8		
		117	1.530	Max N	▷	-14.48	0.08	27.27	0.49	1.21	2.89	CO 5	
				Min N	▷	-20.12	0.29	33.87	0.63	1.46	3.20	CO 8	
				Max V _y	▷	-20.12	0.29	33.87	0.63	1.46	3.20	CO 8	
				Min V _y	▷	-17.69	-0.03	33.03	0.61	1.45	3.22	CO 7	
				Max V _z	▷	-20.12	0.29	33.87	0.63	1.46	3.20	CO 8	
				Min V _z	▷	-14.48	0.08	27.27	0.49	1.21	2.89	CO 5	
	Max M _T	▷	-20.12	0.29	33.87	▷	0.63	1.46	3.20	CO 8			
	Min M _T	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 5			
	Max M _y	▷	-20.12	0.29	33.87	▷	0.63	1.46	3.20	CO 8			
	Min M _y	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 5			
	Max M _z	▷	-17.69	-0.03	33.03	▷	0.61	1.45	3.22	CO 7			
	Min M _z	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 5			
	CR3	42	0.000	Max N	▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 9	
				Min N	▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 9	
				Max V _y	▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 9	
				Min V _y	▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 9	
				Max V _z	▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 9	
Min V _z				▷	-38.73	-9.99	10.34	-12.21	-195.24	-34.41	CO 9		
Max M _T		▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 9			
Min M _T		▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 9			
Max M _y		▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 9			
Min M _y		▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 9			
Max M _z		▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 9			
Min M _z		▷	-38.73	-9.99	10.34	▷	-12.21	-195.24	-34.41	CO 9			
117		1.530	Max N	▷	-14.48	0.08	27.27	0.49	1.21	2.89	CO 9		
			Min N	▷	-14.48	0.08	27.27	0.49	1.21	2.89	CO 9		
			Max V _y	▷	-14.48	0.08	27.27	0.49	1.21	2.89	CO 9		
			Min V _y	▷	-14.48	0.08	27.27	0.49	1.21	2.89	CO 9		
			Max V _z	▷	-14.48	0.08	27.27	0.49	1.21	2.89	CO 9		
			Min V _z	▷	-14.48	0.08	27.27	0.49	1.21	2.89	CO 9		
Max M _T	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 9				
Min M _T	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 9				
Max M _y	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 9				
Min M _y	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 9				
Max M _z	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 9				
Min M _z	▷	-14.48	0.08	27.27	▷	0.49	1.21	2.89	CO 9				
Sezione nr.2 - 6 : Rettangolo 1000/630 - Rettangolo 1000/900													
1	CR1	77	0.000	Max N	▷	-28.71	-58.39	-706.16	-11.07	-1.11	-0.32	CO 3	
				Min N	▷	-50.52	-57.68	-706.05	-10.94	3.03	-0.31	CO 4	
				Max V _y	▷	-30.72	-47.43	-564.90	-8.99	0.59	-0.24	CO 1	
				Min V _y	▷	-28.71	-58.39	-706.16	-11.07	-1.11	-0.32	CO 3	
				Max V _z	▷	-30.72	-47.43	-564.90	-8.99	0.59	-0.24	CO 1	
				Min V _z	▷	-28.71	-58.39	-706.16	-11.07	-1.11	-0.32	CO 3	
	Max M _T	▷	-30.72	-47.43	-564.90	▷	-8.99	0.59	-0.24	CO 1			
	Min M _T	▷	-28.71	-58.39	-706.16	▷	-11.07	-1.11	-0.32	CO 3			
	Max M _y	▷	-50.52	-57.68	-706.05	▷	-10.94	3.03	-0.31	CO 4			
	Min M _y	▷	-28.71	-58.39	-706.16	▷	-11.07	-1.11	-0.32	CO 3			
	Max M _z	▷	-30.72	-47.43	-564.90	▷	-8.99	0.59	-0.24	CO 1			
	Min M _z	▷	-28.71	-58.39	-706.16	▷	-11.07	-1.11	-0.32	CO 3			
	1.427	Max N	▷	-719.28	-40.41	-614.59	-5.51	-676.93	106.83	CO 1			
		Min N	▷	-902.85	-49.58	-762.77	-6.80	-841.26	130.77	CO 4			
		Max V _y	▷	-719.28	-40.41	-614.59	-5.51	-676.93	106.83	CO 1			
		Min V _y	▷	-902.85	-49.58	-762.77	-6.80	-841.26	130.77	CO 4			
		Max V _z	▷	-719.28	-40.41	-614.59	-5.51	-676.93	106.83	CO 1			
		Min V _z	▷	-902.85	-49.58	-762.77	-6.80	-841.26	130.77	CO 4			
	Max M _T	▷	-719.28	-40.41	-614.59	▷	-5.51	-676.93	106.83	CO 1			
	Min M _T	▷	-902.85	-49.58	-762.77	▷	-6.80	-841.26	130.77	CO 4			
	Max M _y	▷	-719.28	-40.41	-614.59	▷	-5.51	-676.93	106.83	CO 1			
	Min M _y	▷	-889.52	-49.40	-761.36	▷	-6.57	-841.87	132.25	CO 3			
	Max M _z	▷	-889.52	-49.40	-761.36	▷	-6.57	-841.87	132.25	CO 3			
	Min M _z	▷	-719.28	-40.41	-614.59	▷	-5.51	-676.93	106.83	CO 1			
	132	2.853	Max N	▷	-1177.64	-10.42	-704.41	3.18	-1482.64	146.22	CO 1		
			Min N	▷	-1466.92	-15.19	-869.54	3.12	-1839.56	180.81	CO 4		
			Max V _y	▷	-1177.64	-10.42	-704.41	3.18	-1482.64	146.22	CO 1		
			Min V _y	▷	-1466.92	-15.19	-869.54	3.12	-1839.56	180.81	CO 4		



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.						
				N	V _y	V _z	M _T	M _y	M _z							
1	CR1			Max V _z	-1177.64	-10.42	▷	-704.41	3.18	-1482.64	146.22	CO 1				
				Min V _z	-1466.92	-15.19	▷	-869.54	3.12	-1839.56	180.81	CO 4				
				Max M _T	-1464.27	-14.45	▷	-867.29	3.61	-1834.52	181.08	CO 3				
				Min M _T	-1466.92	-15.19	▷	-869.54	3.12	-1839.56	180.81	CO 4				
				Max M _y	-1177.64	-10.42	▷	-704.41	3.18	-1482.64	146.22	CO 1				
				Min M _y	-1466.92	-15.19	▷	-869.54	3.12	-1839.56	180.81	CO 4				
				Max M _z	-1464.27	-14.45	▷	-867.29	3.61	-1834.52	181.08	CO 3				
				Min M _z	-1177.64	-10.42	▷	-704.41	3.18	-1482.64	146.22	CO 1				
				CR2	77	0.000	Max N	▷	-22.03	-43.28	-523.03	-8.19	-0.67	-0.23	CO 7	
							Min N	▷	-36.55	-42.82	-522.96	-8.11	2.09	-0.23	CO 8	
							Max V _y	▷	-22.72	▷	-35.18	-418.41	-6.66	0.44	-0.18	CO 5
							Min V _y	▷	-22.03	▷	-43.28	-523.03	-8.19	-0.67	-0.23	CO 7
	Max V _z	▷	-22.72				▷	-35.18	▷	-418.41	-6.66	0.44	-0.18	CO 5		
	Min V _z	▷	-22.03				▷	-43.28	▷	-523.03	-8.19	-0.67	-0.23	CO 7		
	Max M _T	▷	-22.72				-35.18	-418.41	▷	-6.66	0.44	-0.18	CO 5			
	Min M _T	▷	-22.03				-43.28	-523.03	▷	-8.19	-0.67	-0.23	CO 7			
	Max M _y	▷	-36.55				-42.82	-522.96	-8.11	▷	2.09	-0.23	CO 8			
	Min M _y	▷	-22.03				-43.28	-523.03	-8.19	▷	-0.67	-0.23	CO 7			
	Max M _z	▷	-22.72				-35.18	-418.41	-6.66	▷	0.44	-0.18	CO 5			
	Min M _z	▷	-22.03				-43.28	-523.03	-8.19	▷	-0.67	-0.23	CO 7			
	1.427	Max N	▷		-532.64	-29.99	-455.17	-4.06	-501.31	79.19	99.99	CO 5				
		Min N	▷		-668.03	-36.79	-564.84	-5.01	-623.00	96.99	96.99	CO 8				
		Max V _y	▷		-532.64	▷	-29.99	-455.17	-4.06	-501.31	79.19	99.99	CO 5			
		Min V _y	▷		-668.03	▷	-36.79	-564.84	-5.01	-623.00	96.99	96.99	CO 8			
		Max V _z	▷		-532.64	-29.99	▷	-455.17	-4.06	-501.31	79.19	99.99	CO 5			
		Min V _z	▷		-668.03	-36.79	▷	-564.84	-5.01	-623.00	96.99	96.99	CO 8			
		Max M _T	▷		-532.64	-29.99	-455.17	▷	-4.06	-501.31	79.19	99.99	CO 5			
		Min M _T	▷		-668.03	-36.79	-564.84	▷	-5.01	-623.00	96.99	96.99	CO 8			
		Max M _y	▷		-532.64	-29.99	-455.17	-4.06	▷	-501.31	79.19	99.99	CO 5			
		Min M _y	▷		-659.15	-36.66	-563.89	-4.87	▷	-623.41	97.97	97.97	CO 7			
		Max M _z	▷		-659.15	-36.66	-563.89	-4.87	▷	-623.41	97.97	97.97	CO 7			
		Min M _z	▷		-532.64	-29.99	-455.17	-4.06	-501.31	79.19	99.99	CO 5				
	132	2.853	Max N	▷	-872.11	-7.74	-521.79	2.42	-1098.03	108.41	108.41	CO 5				
			Min N	▷	-1086.16	-11.26	-644.03	2.41	-1362.11	134.09	134.09	CO 8				
			Max V _y	▷	-872.11	▷	-7.74	-521.79	2.42	-1098.03	108.41	108.41	CO 5			
			Min V _y	▷	-1086.16	▷	-11.26	-644.03	2.41	-1362.11	134.09	134.09	CO 8			
			Max V _z	▷	-872.11	-7.74	▷	-521.79	2.42	-1098.03	108.41	108.41	CO 5			
			Min V _z	▷	-1086.16	-11.26	▷	-644.03	2.41	-1362.11	134.09	134.09	CO 8			
			Max M _T	▷	-1084.38	-10.77	-642.52	▷	2.70	-1358.75	134.25	134.25	CO 7			
			Min M _T	▷	-1086.16	-11.26	-644.03	▷	2.41	-1362.11	134.09	134.09	CO 8			
			Max M _y	▷	-872.11	-7.74	-521.79	2.42	▷	-1098.03	108.41	108.41	CO 5			
			Min M _y	▷	-1086.16	-11.26	-644.03	2.41	▷	-1362.11	134.09	134.09	CO 8			
			Max M _z	▷	-1084.38	-10.77	-642.52	2.70	▷	-1358.75	134.25	134.25	CO 7			
			Min M _z	▷	-872.11	-7.74	-521.79	2.42	▷	-1098.03	108.41	108.41	CO 5			
	CR3	77	0.000	Max N	▷	-22.72	-35.18	-418.41	-6.66	0.44	-0.18	CO 9				
				Min N	▷	-22.72	-35.18	-418.41	-6.66	0.44	-0.18	CO 9				
				Max V _y	▷	-22.72	▷	-35.18	-418.41	-6.66	0.44	-0.18	CO 9			
				Min V _y	▷	-22.72	▷	-35.18	-418.41	-6.66	0.44	-0.18	CO 9			
Max V _z				▷	-22.72	▷	-35.18	▷	-418.41	-6.66	0.44	-0.18	CO 9			
Min V _z				▷	-22.72	▷	-35.18	▷	-418.41	-6.66	0.44	-0.18	CO 9			
Max M _T				▷	-22.72	-35.18	-418.41	▷	-6.66	0.44	-0.18	CO 9				
Min M _T				▷	-22.72	-35.18	-418.41	▷	-6.66	0.44	-0.18	CO 9				
Max M _y				▷	-22.72	-35.18	-418.41	-6.66	▷	0.44	-0.18	CO 9				
Min M _y				▷	-22.72	-35.18	-418.41	-6.66	▷	0.44	-0.18	CO 9				
Max M _z				▷	-22.72	-35.18	-418.41	-6.66	▷	0.44	-0.18	CO 9				
Min M _z				▷	-22.72	-35.18	-418.41	-6.66	▷	0.44	-0.18	CO 9				
1.427		Max N	▷	-532.64	-29.99	-455.17	-4.06	-501.31	79.19	99.99	CO 5					
		Min N	▷	-668.03	-36.79	-564.84	-5.01	-623.00	96.99	96.99	CO 8					
		Max V _y	▷	-532.64	▷	-29.99	-455.17	-4.06	-501.31	79.19	99.99	CO 5				
		Min V _y	▷	-668.03	▷	-36.79	-564.84	-5.01	-623.00	96.99	96.99	CO 8				
		Max V _z	▷	-532.64	-29.99	▷	-455.17	-4.06	-501.31	79.19	99.99	CO 5				
		Min V _z	▷	-668.03	-36.79	▷	-564.84	-5.01	-623.00	96.99	96.99	CO 8				
		Max M _T	▷	-532.64	-29.99	-455.17	▷	-4.06	-501.31	79.19	99.99	CO 5				
		Min M _T	▷	-668.03	-36.79	-564.84	▷	-5.01	-623.00	96.99	96.99	CO 8				
		Max M _y	▷	-532.64	-29.99	-455.17	-4.06	▷	-501.31	79.19	99.99	CO 5				
		Min M _y	▷	-532.64	-29.99	-455.17	-4.06	▷	-501.31	79.19	99.99	CO 5				
		Max M _z	▷	-532.64	-29.99	-455.17	-4.06	▷	-501.31	79.19	99.99	CO 5				
		Min M _z	▷	-532.64	-29.99	-455.17	-4.06	▷	-501.31	79.19	99.99	CO 5				
132		2.853	Max N	▷	-872.11	-7.74	-521.79	2.42	-1098.03	108.41	108.41	CO 5				
			Min N	▷	-872.11	-7.74	-521.79	2.42	-1098.03	108.41	108.41	CO 5				
			Max V _y	▷	-872.11	▷	-7.74	-521.79	2.42	-1098.03	108.41	108.41	CO 5			
			Min V _y	▷	-872.11	▷	-7.74	-521.79	2.42	-1098.03	108.41	108.41	CO 5			
			Max V _z	▷	-872.11	-7.74	▷	-521.79	2.42	-1098.03	108.41	108.41	CO 5			
			Min V _z	▷	-872.11	-7.74	▷	-521.79	2.42	-1098.03	108.41	108.41	CO 5			
			Max M _T	▷	-872.11	-7.74	-521.79	▷	2.42	-1098.03	108.41	108.41	CO 5			
			Min M _T	▷	-872.11	-7.74	-521.79	▷	2.42	-1098.03	108.41	108.41	CO 5			
			Max M _y	▷	-872.11	-7.74	-521.79	2.42	▷	-1098.03	108.41	108.41	CO 5			
			Min M _y	▷	-872.11	-7.74	-521.79	2.42	▷	-1098.03	108.41	108.41	CO 5			
			Max M _z	▷	-872.11	-7.74	-521.79	2.42	▷	-1098.03	108.41	108.41	CO 5			
			Min M _z	▷	-872.11	-7.74	-521.79	2.42	▷	-1098.03	108.41	108.41	CO 5			
Sezione nr.6 - 2 : Rettangolo 1000/900 - Rettangolo 1000/630																
10		CR1	132	0.000	Max N	▷	-1210.20	-14.47	742.69	-12.66	-1622.07	145.81	CO 1			
					Min N	▷	-1512.57	-18.36	924.78	-15.63	-2029.20	180.57	CO 3			
					Max V _y	▷	-1210.20	▷	-14.47	742.69	-12.66	-1622.07	145.81	CO 1		



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

■ 4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]						Momenti [kNm]			Casi di carico corrispond.	
				N	V _y	V _z	M _T	M _y	M _z					
10	CR1			Min V _y	-1510.99	▷	-19.72	922.61	-16.27	-2024.06	180.23	CO 4		
				Max V _z	-1512.57	▷	-18.36	924.78	-15.63	-2029.20	180.57	CO 3		
				Min V _z	-1210.20	▷	-14.47	742.69	-12.66	-1622.07	145.81	CO 1		
				Max M _T	-1210.20	▷	-14.47	742.69	▷	-12.66	-1622.07	145.81	CO 1	
				Min M _T	-1510.99	▷	-19.72	922.61	▷	-16.27	-2024.06	180.23	CO 4	
				Max M _y	-1210.20	▷	-14.47	742.69	▷	-12.66	-1622.07	145.81	CO 1	
				Min M _y	-1512.57	▷	-18.36	924.78	▷	-15.63	-2029.20	180.57	CO 3	
				Max M _z	-1512.57	▷	-18.36	924.78	▷	-15.63	-2029.20	▷	180.57	CO 3
				Min M _z	-1210.20	▷	-14.47	742.69	▷	-12.66	-1622.07	▷	145.81	CO 1
				Max N	-756.86	▷	55.03	641.69	7.44	-761.46	117.26	CO 1		
				Min N	-953.48	▷	68.10	803.29	9.31	-952.94	145.41	CO 3		
				Max V _y	-953.48	▷	68.10	803.29	9.31	-952.94	145.41	CO 3		
				Min V _y	-756.86	▷	55.03	641.69	7.44	-761.46	117.26	CO 1		
				Max V _z	-953.48	▷	68.10	803.29	9.31	-952.94	145.41	CO 3		
				Min V _z	-756.86	▷	55.03	641.69	7.44	-761.46	117.26	CO 1		
				Max M _T	-953.48	▷	68.10	803.29	▷	9.31	-952.94	145.41	CO 3	
				Min M _T	-756.86	▷	55.03	641.69	▷	7.44	-761.46	117.26	CO 1	
				Max M _y	-756.86	▷	55.03	641.69	7.44	▷	-761.46	117.26	CO 1	
				Min M _y	-939.67	▷	67.90	801.74	9.09	▷	-953.84	146.86	CO 4	
				Max M _z	-939.67	▷	67.90	801.74	9.09	▷	-953.84	▷	146.86	CO 4
				Min M _z	-756.86	▷	55.03	641.69	7.44	▷	-761.46	▷	117.26	CO 1
				Max N	-79.73	▷	86.25	655.46	16.25	-240.84	-0.54	CO 1		
				Min N	-108.79	▷	106.75	820.20	20.12	-299.25	-0.70	CO 3		
				Max V _y	-86.86	▷	108.36	820.17	20.40	-303.37	-0.73	CO 4		
	Min V _y	-79.73	▷	86.25	655.46	16.25	-240.84	-0.54	CO 1					
	Max V _z	-108.79	▷	106.75	820.20	20.12	-299.25	-0.70	CO 3					
	Min V _z	-79.73	▷	86.25	655.46	16.25	-240.84	-0.54	CO 1					
	Max M _T	-86.86	▷	108.36	820.17	▷	20.40	-303.37	-0.73	CO 4				
	Min M _T	-79.73	▷	86.25	655.46	▷	16.25	-240.84	-0.54	CO 1				
	Max M _y	-79.73	▷	86.25	655.46	▷	16.25	-240.84	-0.54	CO 1				
	Min M _y	-86.86	▷	108.36	820.17	▷	20.40	-303.37	-0.73	CO 4				
	Max M _z	-79.73	▷	86.25	655.46	▷	16.25	-240.84	-0.54	CO 1				
	Min M _z	-86.86	▷	108.36	820.17	▷	20.40	-303.37	-0.73	CO 4				
	Max N	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 5					
	Min N	-1120.53	▷	-13.64	684.94	-11.62	-1502.87	133.89	CO 7					
	Max V _y	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 5					
	Min V _y	-1119.48	▷	-14.55	683.49	-12.01	-1499.46	133.69	CO 8					
	Max V _z	-1120.53	▷	-13.64	684.94	-11.62	-1502.87	133.89	CO 7					
	Min V _z	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 5					
	Max M _T	-896.55	▷	-10.71	550.14	▷	-9.36	-1201.51	108.13	CO 5				
	Min M _T	-1119.48	▷	-14.55	683.49	▷	-12.01	-1499.46	133.69	CO 8				
	Max M _y	-896.55	▷	-10.71	550.14	▷	-9.36	-1201.51	108.13	CO 5				
	Min M _y	-1120.53	▷	-13.64	684.94	-11.62	-1502.87	133.89	CO 7					
	Max M _z	-1120.53	▷	-13.64	684.94	-11.62	-1502.87	▷	133.89	CO 7				
	Min M _z	-896.55	▷	-10.71	550.14	-9.36	-1201.51	▷	108.13	CO 5				
	Max N	-561.00	▷	40.82	475.29	5.50	-564.06	86.94	CO 5					
	Min N	-706.31	▷	50.51	594.90	6.86	-705.93	107.86	CO 7					
	Max V _y	-706.31	▷	50.51	594.90	6.86	-705.93	107.86	CO 7					
Min V _y	-561.00	▷	40.82	475.29	5.50	-564.06	86.94	CO 5						
Max V _z	-706.31	▷	50.51	594.90	6.86	-705.93	107.86	CO 7						
Min V _z	-561.00	▷	40.82	475.29	5.50	-564.06	86.94	CO 5						
Max M _T	-706.31	▷	50.51	594.90	▷	6.86	-705.93	107.86	CO 7					
Min M _T	-561.00	▷	40.82	475.29	▷	5.50	-564.06	86.94	CO 5					
Max M _y	-561.00	▷	40.82	475.29	▷	5.50	-564.06	86.94	CO 5					
Min M _y	-697.13	▷	50.38	593.87	6.73	-706.54	108.85	CO 8						
Max M _z	-697.13	▷	50.38	593.87	6.73	-706.54	▷	108.85	CO 8					
Min M _z	-561.00	▷	40.82	475.29	5.50	-564.06	▷	86.94	CO 5					
Max N	-59.50	▷	63.96	485.56	12.06	-178.40	-0.37	CO 5						
Min N	-80.45	▷	79.22	607.60	14.94	-221.82	-0.47	CO 7						
Max V _y	-65.84	▷	80.31	607.59	15.13	-224.57	-0.49	CO 8						
Min V _y	-59.50	▷	63.96	485.56	12.06	-178.40	-0.37	CO 5						
Max V _z	-80.45	▷	79.22	607.60	14.94	-221.82	-0.47	CO 7						
Min V _z	-59.50	▷	63.96	485.56	12.06	-178.40	-0.37	CO 5						
Max M _T	-65.84	▷	80.31	607.59	▷	15.13	-224.57	-0.49	CO 8					
Min M _T	-59.50	▷	63.96	485.56	▷	12.06	-178.40	-0.37	CO 5					
Max M _y	-59.50	▷	63.96	485.56	▷	12.06	-178.40	-0.37	CO 5					
Min M _y	-65.84	▷	80.31	607.59	▷	15.13	-224.57	-0.49	CO 8					
Max M _z	-59.50	▷	63.96	485.56	▷	12.06	-178.40	-0.37	CO 5					
Min M _z	-65.84	▷	80.31	607.59	▷	15.13	-224.57	-0.49	CO 8					
Max N	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 9						
Min N	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 9						
Max V _y	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 9						
Min V _y	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 9						
Max V _z	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 9						
Min V _z	-896.55	▷	-10.71	550.14	-9.36	-1201.51	108.13	CO 9						
Max M _T	-896.55	▷	-10.71	550.14	▷	-9.36	-1201.51	108.13	CO 9					
Min M _T	-896.55	▷	-10.71	550.14	▷	-9.36	-1201.51	108.13	CO 9					
Max M _y	-896.55	▷	-10.71	550.14	▷	-9.36	-1201.51	108.13	CO 9					
Min M _y	-896.55	▷	-10.71	550.14	▷	-9.36	-1201.51	108.13	CO 9					
Max M _z	-896.55	▷	-10.71	550.14	-9.36	-1201.51	▷	108.13	CO 9					
Min M _z	-896.55	▷	-10.71	550.14	-9.36	-1201.51	▷	108.13	CO 9					
Max N	-561.00	▷	40.82	475.29	5.50	-564.06	86.94	CO 9						
Min N	-561.00	▷	40.82	475.29	5.50	-564.06	86.94	CO 9						
Max V _y	-561.00	▷	40.82	475.29	5.50	-564.06	86.94	CO 9						

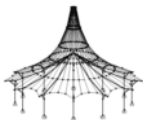


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4.12 SEZIONI TRASVERSALI - FORZE INTERNE

Combinazioni di risultati

Asta nr.	CR	Nodo nr.	Posizione x [m]	Forze [kN]			Momenti [kNm]			Casi di carico corrispond.				
				N	V _y	V _z	M _T	M _y	M _z					
10	CR3			Min V _y	-561.00	▷ 40.82	▷ 475.29	5.50	-564.06	86.94	CO 9			
				Max V _z	-561.00	▷ 40.82	▷ 475.29	5.50	-564.06	86.94	CO 9			
				Min V _z	-561.00	▷ 40.82	▷ 475.29	5.50	-564.06	86.94	CO 9			
				Max M _T	-561.00	▷ 40.82	▷ 475.29	▷ 5.50	-564.06	86.94	CO 9			
				Min M _T	-561.00	▷ 40.82	▷ 475.29	▷ 5.50	-564.06	86.94	CO 9			
				Max M _y	-561.00	▷ 40.82	▷ 475.29	5.50	▷ -564.06	86.94	CO 9			
				Min M _y	-561.00	▷ 40.82	▷ 475.29	5.50	▷ -564.06	86.94	CO 9			
				Max M _z	-561.00	▷ 40.82	▷ 475.29	5.50	-564.06	▷ 86.94	CO 9			
				Min M _z	-561.00	▷ 40.82	▷ 475.29	5.50	-564.06	▷ 86.94	CO 9			
					110	2.504	Max N	▷ -59.50	▷ 63.96	▷ 485.56	12.06	-178.40	-0.37	CO 9
							Min N	▷ -59.50	▷ 63.96	▷ 485.56	12.06	-178.40	-0.37	CO 9
							Max V _y	▷ -59.50	▷ 63.96	▷ 485.56	12.06	-178.40	-0.37	CO 9
							Min V _y	-59.50	▷ 63.96	▷ 485.56	12.06	-178.40	-0.37	CO 9
							Max V _z	-59.50	▷ 63.96	▷ 485.56	12.06	-178.40	-0.37	CO 9
							Min V _z	-59.50	▷ 63.96	▷ 485.56	12.06	-178.40	-0.37	CO 9
							Max M _T	-59.50	▷ 63.96	▷ 485.56	▷ 12.06	-178.40	-0.37	CO 9
							Min M _T	-59.50	▷ 63.96	▷ 485.56	▷ 12.06	-178.40	-0.37	CO 9
							Max M _y	-59.50	▷ 63.96	▷ 485.56	12.06	▷ -178.40	-0.37	CO 9
							Min M _y	-59.50	▷ 63.96	▷ 485.56	12.06	▷ -178.40	-0.37	CO 9
							Max M _z	-59.50	▷ 63.96	▷ 485.56	12.06	-178.40	▷ -0.37	CO 9
			Min M _z	-59.50	▷ 63.96	▷ 485.56	12.06	-178.40	▷ -0.37	CO 9				



RF-CONCRETE Surfaces
CA1
Progetto del calcestruzzo
armato

Progetto: _____ Modello: Sovrapasso Data: 27.02.2018

1.1 DATI GENERALI

Normativa di progetto:	UNI EN 1992-1-1/NA:2007-07	
STATO LIMITE ULTIMO		
Combinazioni di risultati per il progetto:	CR1	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10 Persistente e transitoria
STATO LIMITE DI ESERCIZIO		
Combinazioni di risultati per il progetto:	CR3	SLE - Quasi permanente k _t 0.400
Tipo di metodo SLE:	Metodo analitico Assumendo un rapporto identico degli spostamenti generalizzati dell'armatura longitudinale	
Progettazione di		
Analisi tensionale del calcestruzzo	<input type="checkbox"/>	
Analisi tensionale dell'acciaio	<input checked="" type="checkbox"/>	
Ampiezza delle fessure	<input checked="" type="checkbox"/>	
Strato di armatura longitudinale		
Armatura longitudinale necessaria automaticamente incrementata per il progetto allo stato limite di esercizio:	<input type="checkbox"/>	
DETTAGLI		
Metodo di analisi per l'involuppo dei risultati	Misto	
Applica forze interne medie nelle regioni medie definite per il calcolo SLU e per il metodo analitico del calcolo SLE.	<input type="checkbox"/>	
Applica le forze interne senza le componenti della nervatura	<input type="checkbox"/>	

1.2 MATERIALI

Materiale nr.	Descrizione del materiale		Commento
	Classe di resistenza del cls	Descrizione dell'acciaio	
1	Calcestruzzo C30/37	B 450 S (A)	
2	Calcestruzzo C20/25	B 450 S (A)	
3	Calcestruzzo C28/35_2018	B 450 S (A)	

1.3 SUPERFICI

Superf. nr.	Mat. nr.	f _{ct,eff,As,min} [N/mm ²]	W _{k,+z} (sup) [mm]		Effetti dovuti al vincolo		Note
			W _{k,-z} (inf) [mm]	Applica	k _c [-]		
13	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
14	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
36	Tipo di spessore: Costante, Spessore: 80.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
42	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
44	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
51	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
52	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
53	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
55	Tipo di spessore: Costante, Spessore: 80.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
56	Tipo di spessore: Costante, Spessore: 40.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
57	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
58	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
60	Tipo di spessore: Costante, Spessore: 30.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
61	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
62	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>		var.	6)
63	Tipo di spessore: Costante, Spessore: 35.00 cm						



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1.3 SUPERFICI

Superf. nr.	Mat. nr.	f _{ct,eff,As,min} [N/mm ²]	W _{k,+z (sup)} [mm]		Effetti dovuti al vincolo		Note
			W _{k,-z (inf)} [mm]	Applica	k _c [-]		
	1	2.90	0.300	<input checked="" type="checkbox"/>	var.	6)	
64	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
65	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
66	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
67	Tipo di spessore: Costante, Spessore: 30.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
69	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
71	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
72	Tipo di spessore: Costante, Spessore: 35.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
73	Tipo di spessore: Costante, Spessore: 30.00 cm 1	2.90	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
87	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
88	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
89	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
94	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
95	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	
103	Tipo di spessore: Costante, Spessore: 50.00 cm 2	2.20	0.300 0.300	<input checked="" type="checkbox"/>	var.	6)	

Note:

6) Calcolo dell'armatura minima per gli effetti dovuti al vincolo

1.4 GRUPPO DI ARMATURA NR. 1 - FONDAZIONI, SOLAI, ELEMENTI IN CLS IMPERMEABILE

Applicato alle superfici: 42,44,51-53,87-89,94,95,103

RAPPORTO DI ARMATURA

Armatura secondaria minima	20.0 %
Armatura di base minima	0.0 %
Armatura compressa minima	0.0 %
Armatura tesa minima	0.0 %
Massima percentuale di armatura	4.0 %
Minima percentuale di armatura a taglio	0.0 %

AREA DI ARMATURA PER PROGETTO ALLO SLE

Usa armatura di base disposta e armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3

Copriferro secondo normativa

STRATO DI ARMATURA DI BASE - SUPERIORE (-z)

Numero di direzioni	2
Copriferro dal baricentro delle barre	d-1: 4.00, d-2: 5.00 cm
Parametri di definizione del copriferro	
Impostazioni identiche al copriferro	
Diametro della barra	C _{+z (inf)} ds-1: 10.00, ds-2: 10.00 mm
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°
Area di armatura	As-1,-z (sup): 0.00, As-2,-z (sup): 0.00 cm ² /m

STRATO DI ARMATURA DI BASE - INFERIORE (+z)

Numero di direzioni	2
Copriferro dal baricentro delle barre	d-1: 4.00, d-2: 5.00 cm
Parametri di definizione del copriferro	
Classe di esposizione sec. 4.4.1.2(5)	XC2 / XC3
Classe di abrasione sec. 4.4.1.2(13)	No
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>
Direzione dell'armatura	φ1 φ2



Progetto: _____ Modello: Sovrapasso

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1.4 GRUPPO DI ARMATURA NR. 1 - FONDAZIONI, SOLAI, ELEMENTI IN CLS IMPERMEABILE

Massimo diametro dell'armatura	0.010 m	0.010 m
Copriferro minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	0.010 m	0.010 m
Copriferro minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	0.025 m	0.025 m
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.000 m	0.000 m
Copriferro minimo sec. 4.4.1.2(2)	0.025 m	0.025 m
Tolleranza della deviazione sec. 4.4.1.3	0.010 m	0.010 m
Copriferro nominale dell'armatura sec. 4.4.1.1	0.040 m	0.040 m
Copriferro minimo	0.040 m	0.050 m
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	As-1,+z (inf): 0.00, As-2,+z (inf): 0.00 cm ² /m	

STRATO DI ARMATURA AGGIUNTIVA - SUPERIORE (-z)

Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 3.00, d-2: 4.00 cm	
Parametri di definizione del copriferro		
Impostazioni identiche al copriferro	C+z (inf)	
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	Usa armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3	

STRATO DI ARMATURA AGGIUNTIVO - INFERIORE (+z)

Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 3.00, d-2: 4.00 cm	
Parametri di definizione del copriferro		
Classe di esposizione sec. 4.4.1.2(5)	XC2 / XC3	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Direzione dell'armatura	φ1	φ2
Massimo diametro dell'armatura	0.010 m	0.010 m
Copriferro minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	0.010 m	0.010 m
Copriferro minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	0.025 m	0.025 m
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.000 m	0.000 m
Copriferro minimo sec. 4.4.1.2(2)	0.025 m	0.025 m
Tolleranza della deviazione sec. 4.4.1.3	0.010 m	0.010 m
Copriferro nominale dell'armatura sec. 4.4.1.1	0.040 m	0.040 m
Copriferro minimo	0.040 m	0.050 m
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	Usa armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3	

ARMATURA LONGITUDINALE PER IL PROGETTO DELLA FORZA DI TAGLIO

Applica armatura longitudinale necessaria	
OPZIONI PER UNI EN 1992-1-1/NA:2007-07	
Minima armatura longitudinale delle piastre sec. 9.3.1	<input checked="" type="checkbox"/>
Direzione dell'armatura minima	
Direzione dell'armatura con la forza di trazione principale dalle superfici sup (-z) e inf (+z) insieme:	<input checked="" type="checkbox"/>
Minima armatura longitudinale delle pareti sec. 9.6	<input type="checkbox"/>
Minima armatura a taglio	<input type="checkbox"/>
Limitazione profondità asse neutro	<input checked="" type="checkbox"/>
Inclinazione variabile del puntone - min	21.801 °
Inclinazione variabile del puntone di calcestruzzo - max	45.000 °
Coefficiente parziale γ _s	PT 1.15, EC 1.00, SLE 1.00
Coefficiente parziale γ _c	PT 1.50, EC 1.00, SLE 1.00
Considerazione degli effetti a lungo termine Alpha-cc	PT 0.85, EC 0.85, SLE 1.00
Considerazione degli effetti a lungo termine Alpha-ct	SLE 1.00

1.4 GRUPPO DI ARMATURA NR. 2 - MURI IN VISTA

Applicato alle superfici:	13,14,36,55-58,60-67,69,71-73
RAPPORTO DI ARMATURA	
Armatura secondaria minima	20.0 %
Armatura di base minima	0.0 %
Armatura compressa minima	0.0 %
Armatura tesa minima	0.0 %
Massima percentuale di armatura	4.0 %
Minima percentuale di armatura a taglio	0.0 %
AREA DI ARMATURA PER PROGETTO ALLO SLE	
Usa armatura di base disposta e armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3	
Copriferro secondo normativa	<input checked="" type="checkbox"/>
STRATO DI ARMATURA DI BASE - SUPERIORE (-z)	
Numero di direzioni	2
Copriferro dal baricentro delle barre	d-1: 4.50, d-2: 5.50 cm
Parametri di definizione del copriferro	
Impostazioni identiche al copriferro	C+z (inf)
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm



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■ 1.4 GRUPPO DI ARMATURA NR. 2 - MURI IN VISTA

Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	As-1,-z (sup): 0.00, As-2,-z (sup): 0.00 cm ² /m	
STRATO DI ARMATURA DI BASE - INFERIORE (+z)		
Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 4.50, d-2: 5.50 cm	
Parametri di definizione del copriferro		
Classe di esposizione sec. 4.4.1.2(5)	XC4	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Direzioni dell'armatura		
Massimo diametro dell'armatura	φ1	φ2
Copriferro minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	0.010 m	0.010 m
Copriferro minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	0.010 m	0.010 m
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.030 m	0.030 m
Copriferro minimo sec. 4.4.1.2(2)	0.000 m	0.000 m
Tolleranza della deviazione sec. 4.4.1.3	0.030 m	0.030 m
Copriferro nominale dell'armatura sec. 4.4.1.1	0.010 m	0.010 m
Copriferro minimo	0.045 m	0.045 m
Diametro della barra	0.045 m	0.055 m
Direzioni di armatura	ds-1: 10.00, ds-2: 10.00 mm	
Area di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
	As-1,+z (inf): 0.00, As-2,+z (inf): 0.00 cm ² /m	
STRATO DI ARMATURA AGGIUNTIVA - SUPERIORE (-z)		
Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 3.00, d-2: 4.00 cm	
Parametri di definizione del copriferro		
Impostazioni identiche al copriferro	C+z (inf)	
Diametro della barra	ds-1: 10.00, ds-2: 10.00 mm	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	Usa armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3	
STRATO DI ARMATURA AGGIUNTIVO - INFERIORE (+z)		
Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 3.00, d-2: 4.00 cm	
Parametri di definizione del copriferro		
Classe di esposizione sec. 4.4.1.2(5)	XC4	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Direzioni dell'armatura		
Massimo diametro dell'armatura	φ1	φ2
Copriferro minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	0.010 m	0.010 m
Copriferro minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	0.010 m	0.010 m
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.030 m	0.030 m
Copriferro minimo sec. 4.4.1.2(2)	0.000 m	0.000 m
Tolleranza della deviazione sec. 4.4.1.3	0.030 m	0.030 m
Copriferro nominale dell'armatura sec. 4.4.1.1	0.010 m	0.010 m
Copriferro minimo	0.045 m	0.045 m
Diametro della barra	0.045 m	0.055 m
Direzioni di armatura	ds-1: 10.00, ds-2: 10.00 mm	
Area di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
	Usa armatura aggiuntiva necessaria sec. Tabelle 2.1, 2.2, 2.3	
ARMATURA LONGITUDINALE PER IL PROGETTO DELLA FORZA DI TAGLIO		
Applica armatura longitudinale necessaria		
OPZIONI PER UNI EN 1992-1-1/NA:2007-07		
Minima armatura longitudinale delle piastre sec. 9.3.1	<input checked="" type="checkbox"/>	
Direzioni dell'armatura minima		
Direzioni dell'armatura con la forza di trazione principale dalle superfici sup (-z) e inf (+z) insieme:	<input checked="" type="checkbox"/>	
Minima armatura longitudinale delle pareti sec. 9.6	<input type="checkbox"/>	
Minima armatura a taglio	<input checked="" type="checkbox"/>	
Limitazione profondità asse neutro	<input checked="" type="checkbox"/>	
Inclinazione variabile del puntone - min	21.801 °	
Inclinazione variabile del puntone di calcestruzzo - max	45.000 °	
Coefficiente parziale γ _s	PT 1.15, EC 1.00, SLE 1.00	
Coefficiente parziale γ _c	PT 1.50, EC 1.00, SLE 1.00	
Considerazione degli effetti a lungo termine Alpha-cc	PT 0.85, EC 0.85, SLE 1.00	
Considerazione degli effetti a lungo termine Alpha-ct	SLE 1.00	

■ 2.2 ARMATURA NECESSARIA PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Simbolo	Armatura nec. SLU	Armatura di base	Armatura aggiuntiva		Unità	Note
		X	Y	Z				Necessaria	Disposta		
13	M24	-20.293	0.000	-0.075	a _{s,1,-z (sup)}	Non progettabile	0.00	20.94	-	cm ² /m	5)
	M24	-20.293	0.000	-0.075	a _{s,2,-z (sup)}	Non progettabile	0.00	60.85	-	cm ² /m	5)
	M24	-20.293	0.000	-0.075	a _{s,1,+z (inf)}	Non progettabile	0.00	29.27	-	cm ² /m	5)



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

2.2 ARMATURA NECESSARIA PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Simbolo	Armatura nec. SLU	Armatura di base	Armatura aggiuntiva		Unità	Note
		X	Y	Z				Necessaria	Disposta		
14	M24	-20.293	0.000	-0.075	a _{s,2,+z} (inf)	Non progettabile	0.00	52.42	-	cm ² /m	5)
	M2499	-20.293	0.000	-0.206	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	13)
	M18	-20.293	0.000	-2.375	a _{s,1,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M48	-20.686	0.007	-0.563	a _{s,2,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M8	-20.293	0.000	-0.600	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
36	M44	-21.585	-0.155	-0.463	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M8	-20.293	0.000	-0.600	a _{sw}	13.30	-	-	-	cm ² /m ²	
	M98	-20.283	0.099	6.225	a _{s,1,-z} (sup)	12.57	0.00	12.57	-	cm ² /m	
	M98	-20.283	0.099	6.225	a _{s,2,-z} (sup)	12.57	0.00	12.57	-	cm ² /m	
	M116	-20.283	0.099	2.925	a _{s,1,+z} (inf)	12.57	0.00	12.57	-	cm ² /m	
42	M116	-20.283	0.099	2.925	a _{s,2,+z} (inf)	2.51	0.00	2.51	-	cm ² /m	
	M98	-20.283	0.099	6.225	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M6	-18.400	5.964	6.225	a _{s,1,-z} (sup)	1.18	0.00	1.18	-	cm ² /m	
	M6	-18.400	5.964	6.225	a _{s,2,-z} (sup)	5.91	0.00	5.91	-	cm ² /m	
	M68 - E318	-19.685	5.699	6.225	a _{s,1,+z} (inf)	9.40	0.00	9.40	-	cm ² /m	
44	M6720	-18.560	4.466	6.225	a _{s,2,+z} (inf)	5.91	0.00	5.91	-	cm ² /m	
	M67 - E311	-20.293	0.000	6.225	a _{sw}	10.75	-	-	-	cm ² /m ²	
	M93 - E524	-5.293	2.850	6.400	a _{s,1,-z} (sup)	18.42	0.00	18.42	-	cm ² /m	
	M93 - E526	-5.293	2.850	6.400	a _{s,2,-z} (sup)	14.15	0.00	14.15	-	cm ² /m	
	M93 - E524	-5.293	2.850	6.400	a _{s,1,+z} (inf)	90.75	0.00	90.75	-	cm ² /m	
51	M93 - E524	-5.293	2.850	6.400	a _{s,2,+z} (inf)	78.51	0.00	78.51	-	cm ² /m	
	M93 - E524	-5.293	2.850	6.400	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	7)
	M114	-4.893	11.500	0.100	a _{s,1,-z} (sup)	5.11	0.00	5.11	-	cm ² /m	
	M125	-3.905	8.046	6.400	a _{s,2,-z} (sup)	6.26	0.00	6.26	-	cm ² /m	
	M1044	-2.693	5.700	3.492	a _{s,1,+z} (inf)	7.55	0.00	7.55	-	cm ² /m	
52	M83	-4.893	11.500	6.400	a _{s,2,+z} (inf)	8.44	0.00	8.44	-	cm ² /m	
	M113	-2.693	5.700	0.100	a _{sw}	90.31	-	-	-	cm ² /m ²	
	M1740	3.854	0.145	2.900	a _{s,1,-z} (sup)	6.49	0.00	6.49	-	cm ² /m	
	M117	-0.526	2.970	-0.600	a _{s,2,-z} (sup)	6.85	0.00	6.85	-	cm ² /m	
	M1044	-2.693	5.700	3.492	a _{s,1,+z} (inf)	7.56	0.00	7.56	-	cm ² /m	
53	M117	-0.526	2.970	-0.600	a _{s,2,+z} (inf)	10.88	0.00	10.88	-	cm ² /m	
	M113	-2.693	5.700	0.100	a _{sw}	22.75	-	-	-	cm ² /m ²	
	M1836	-4.283	5.840	6.400	a _{s,1,-z} (sup)	8.67	0.00	8.67	-	cm ² /m	
	M83 - E2032	-4.893	11.500	6.400	a _{s,2,-z} (sup)	7.43	0.00	7.43	-	cm ² /m	
	M1836	-4.283	5.840	6.400	a _{s,1,+z} (inf)	9.84	0.00	9.84	-	cm ² /m	
55	M31 - E1890	-4.082	8.494	6.400	a _{s,2,+z} (inf)	5.91	0.00	5.91	-	cm ² /m	
	M28	9.086	-2.130	6.400	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M24	-20.293	0.000	-0.075	a _{s,1,-z} (sup)	Non progettabile	0.00	57.70	-	cm ² /m	5)
	M24	-20.293	0.000	-0.075	a _{s,2,-z} (sup)	Non progettabile	0.00	134.73	-	cm ² /m	5)
	M24	-20.293	0.000	-0.075	a _{s,1,+z} (inf)	Non progettabile	0.00	57.75	-	cm ² /m	5)
56	M24	-20.293	0.000	-0.075	a _{s,2,+z} (inf)	Non progettabile	0.00	136.34	-	cm ² /m	5)
	M2051	-19.685	5.699	-0.206	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	13)
	M2238	-24.927	4.605	0.012	a _{s,1,-z} (sup)	6.80	0.00	6.80	-	cm ² /m	
	M2229	-24.673	3.914	-0.227	a _{s,2,-z} (sup)	5.86	0.00	5.86	-	cm ² /m	
	M2257	-24.927	4.605	3.198	a _{s,1,+z} (inf)	7.25	0.00	7.25	-	cm ² /m	
57	M158	-24.927	4.605	-0.250	a _{s,2,+z} (inf)	5.86	0.00	5.86	-	cm ² /m	
	M107	-24.927	4.605	3.325	a _{sw}	12.83	-	-	-	cm ² /m ²	
	M14	-19.685	5.700	-2.375	a _{s,1,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M3	-22.357	5.560	-2.200	a _{s,2,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M2486	-19.685	5.699	-0.711	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
58	M4	-22.357	5.560	-0.425	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M158	-24.927	4.605	-0.250	a _{sw}	16.08	-	-	-	cm ² /m ²	
	M25	-19.685	5.699	-0.075	a _{s,1,-z} (sup)	38.96	0.00	38.96	-	cm ² /m	
	M25	-19.685	5.699	-0.075	a _{s,2,-z} (sup)	61.49	0.00	61.49	-	cm ² /m	
	M25	-19.685	5.699	-0.075	a _{s,1,+z} (inf)	42.82	0.00	42.82	-	cm ² /m	
60	M25	-19.685	5.699	-0.075	a _{s,2,+z} (inf)	51.82	0.00	51.82	-	cm ² /m	
	M25	-19.685	5.699	-0.075	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	13)
	M215	-25.848	4.004	3.325	a _{s,1,-z} (sup)	11.34	0.00	11.34	-	cm ² /m	
	M215	-25.848	4.004	3.325	a _{s,2,-z} (sup)	13.05	0.00	13.05	-	cm ² /m	
	M2257	-24.927	4.605	3.198	a _{s,1,+z} (inf)	11.25	0.00	11.25	-	cm ² /m	
61	M141	-27.753	2.093	3.325	a _{s,2,+z} (inf)	6.15	0.00	6.15	-	cm ² /m	
	M215	-25.848	4.004	3.325	a _{sw}	22.73	-	-	-	cm ² /m ²	
	M158	-24.927	4.605	-0.250	a _{s,1,-z} (sup)	7.02	0.00	7.02	-	cm ² /m	
	M158	-24.927	4.605	-0.250	a _{s,2,-z} (sup)	5.43	0.00	5.43	-	cm ² /m	
	M158	-24.927	4.605	-0.250	a _{s,1,+z} (inf)	5.82	0.00	5.82	-	cm ² /m	
62	M3054	-28.594	0.704	-0.129	a _{s,2,+z} (inf)	1.25	0.00	1.25	-	cm ² /m	
	M158	-24.927	4.605	-0.250	a _{sw}	16.00	-	-	-	cm ² /m ²	
	M108	-24.927	4.605	-2.025	a _{s,1,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M3039	-25.034	4.543	-0.247	a _{s,2,-z} (sup)	2.36	0.00	2.36	-	cm ² /m	
	M142	-27.828	1.990	-1.800	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
63	M3122	-29.373	-1.662	-1.075	a _{s,2,+z} (inf)	1.33	0.00	1.33	-	cm ² /m	
	M158	-24.927	4.605	-0.250	a _{sw}	15.86	-	-	-	cm ² /m ²	
	M3210	-31.493	-14.283	2.357	a _{s,1,-z} (sup)	0.33	0.00	0.33	-	cm ² /m	
	M3210	-31.493	-14.283	2.357	a _{s,2,-z} (sup)	0.07	0.00	0.07	-	cm ² /m	
	M165	-31.407	-13.776	0.815	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
64	M133	-31.573	-14.762	3.325	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M133	-31.573	-14.762	3.325	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M151	-31.407	-13.776	-0.435	a _{s,1,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M151	-31.407	-13.776	-0.435	a _{s,2,-z} (sup)	1.01	0.00	1.01	-	cm ² /m	
	M138	-31.573	-14.762	-0.435	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
65	M163	-31.573	-14.762	0.815	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M138	-31.573	-14.762	-0.435	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M3223	-31.326	-13.291	0.779	a _{s,1,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	



Progetto: _____ Modello: Sovrapasso

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2.2 ARMATURA NECESSARIA PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Simbolo	Armatura nec. SLU	Armatura di base	Armatura aggiuntiva		Unità	Note
		X	Y	Z				Necessaria	Disposta		
66	M3269	-30.024	-5.539	0.650	a _{s,2,-z} (sup)	2.35	0.00	2.35	-	cm ² /m	
	M153	-29.373	-1.662	0.725	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M152	-31.407	-13.776	1.865	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M152	-31.407	-13.776	1.865	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M3307	-30.024	-5.539	-0.737	a _{s,1,-z} (sup)	5.57	0.00	5.57	-	cm ² /m	
	M3271	-30.024	-5.539	0.210	a _{s,2,-z} (sup)	2.24	0.00	2.24	-	cm ² /m	
67	M143	-29.373	-1.662	-1.575	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M165	-31.407	-13.776	0.815	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M3298	-29.617	-3.116	-1.438	a _{sw}	9.74	-	-	-	cm ² /m ²	
	M2899	-29.373	-1.662	1.245	a _{s,1,-z} (sup)	4.19	0.00	4.19	-	cm ² /m	
	M3231	-31.082	-11.838	1.683	a _{s,2,-z} (sup)	4.19	0.00	4.19	-	cm ² /m	
	M153	-29.373	-1.662	0.725	a _{s,1,+z} (inf)	4.19	0.00	4.19	-	cm ² /m	
69	M3371	-31.123	-12.080	3.325	a _{s,2,+z} (inf)	6.31	0.00	6.31	-	cm ² /m	
	M129	-29.373	-1.662	3.325	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M26	-23.865	-3.004	0.525	a _{s,1,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M3488	-24.731	-7.449	1.200	a _{s,2,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M147	-26.562	-16.831	2.625	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M3465	-26.465	-16.337	2.550	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
71	M26	-23.865	-3.004	0.525	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M162	-26.753	-17.812	1.575	a _{s,1,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M3566	-26.657	-17.321	1.575	a _{s,2,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M146	-26.562	-16.831	0.325	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M3567	-26.657	-17.321	1.158	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M134	-26.753	-17.812	0.325	a _{sw}	0.00	-	-	-	cm ² /m ²	
72	M146	-26.562	-16.831	0.325	a _{s,1,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M3518	-25.020	-8.930	0.675	a _{s,2,-z} (sup)	5.03	0.00	5.03	-	cm ² /m	
	M37	-23.865	-3.004	-1.775	a _{s,1,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M30	-23.865	-3.004	0.000	a _{s,2,+z} (inf)	5.03	0.00	5.03	-	cm ² /m	
	M30	-23.865	-3.004	0.000	a _{sw}	9.74	-	-	-	cm ² /m ²	
	M26	-23.865	-3.004	0.525	a _{s,1,-z} (sup)	4.19	0.00	4.19	-	cm ² /m	
73	M202	-23.960	-3.495	3.325	a _{s,2,-z} (sup)	4.23	0.00	4.23	-	cm ² /m	
	M202	-23.960	-3.495	3.325	a _{s,1,+z} (inf)	10.99	0.00	10.99	-	cm ² /m	
	M202	-23.960	-3.495	3.325	a _{s,2,+z} (inf)	12.70	0.00	12.70	-	cm ² /m	
	M202	-23.960	-3.495	3.325	a _{sw}	20.78	-	-	-	cm ² /m ²	
	M212	-27.688	0.814	3.325	a _{s,1,-z} (sup)	37.78	0.00	37.78	-	cm ² /m	
	M212	-27.688	0.814	3.325	a _{s,2,-z} (sup)	65.74	0.00	65.74	-	cm ² /m	
87	M212	-27.688	0.814	3.325	a _{s,1,+z} (inf)	47.13	0.00	47.13	-	cm ² /m	
	M212	-27.688	0.814	3.325	a _{s,2,+z} (inf)	71.47	0.00	71.47	-	cm ² /m	
	M82	-30.387	-12.228	3.325	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	13)
	M167 - E5112	-25.817	-13.016	3.325	a _{s,1,-z} (sup)	13.37	0.00	13.37	-	cm ² /m	
	M167 - E5112	-25.817	-13.016	3.325	a _{s,2,-z} (sup)	33.38	0.00	33.38	-	cm ² /m	
	M167 - E5112	-25.817	-13.016	3.325	a _{s,1,+z} (inf)	14.14	0.00	14.14	-	cm ² /m	
88	M167 - E5112	-25.817	-13.016	3.325	a _{s,2,+z} (inf)	44.98	0.00	44.98	-	cm ² /m	
	M11	-25.081	-13.159	3.325	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	13)
	M206	-23.128	-3.148	3.325	a _{s,1,-z} (sup)	22.34	0.00	22.34	-	cm ² /m	
	M206	-23.128	-3.148	3.325	a _{s,2,-z} (sup)	11.27	0.00	11.27	-	cm ² /m	
	M206	-23.128	-3.148	3.325	a _{s,1,+z} (inf)	24.17	0.00	24.17	-	cm ² /m	
	M206	-23.128	-3.148	3.325	a _{s,2,+z} (inf)	10.80	0.00	10.80	-	cm ² /m	
89	M206	-23.128	-3.148	3.325	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	13)
	M88	-24.102	-2.653	8.025	a _{s,1,-z} (sup)	5.91	0.00	5.91	-	cm ² /m	
	M21 - E5988	-20.527	-3.655	8.025	a _{s,2,-z} (sup)	5.91	0.00	5.91	-	cm ² /m	
	M21 - E5975	-20.527	-3.655	8.025	a _{s,1,+z} (inf)	5.91	0.00	5.91	-	cm ² /m	
	M177 - E5966	-21.466	-8.465	8.025	a _{s,2,+z} (inf)	5.91	0.00	5.91	-	cm ² /m	
	M21 - E5975	-20.527	-3.655	8.025	a _{sw}	0.00	-	-	-	cm ² /m ²	
94	M181 - E6113	-22.480	-13.667	5.925	a _{s,1,-z} (sup)	5.91	0.00	5.91	-	cm ² /m	
	M76	-22.243	-14.019	5.925	a _{s,2,-z} (sup)	5.91	0.00	5.91	-	cm ² /m	
	M180 - E6186	-25.817	-13.016	5.925	a _{s,1,+z} (inf)	5.91	0.00	5.91	-	cm ² /m	
	M22	-21.171	-8.522	5.925	a _{s,2,+z} (inf)	5.91	0.00	5.91	-	cm ² /m	
	M183 - E6051	-24.803	-7.814	5.925	a _{sw}	8.67	-	-	-	cm ² /m ²	
	M82	-30.387	-12.228	3.325	a _{s,1,-z} (sup)	64.41	0.00	64.41	-	cm ² /m	
103	M82	-30.387	-12.228	3.325	a _{s,2,-z} (sup)	45.93	0.00	45.93	-	cm ² /m	
	M82	-30.387	-12.228	3.325	a _{s,1,+z} (inf)	64.37	0.00	64.37	-	cm ² /m	
	M82	-30.387	-12.228	3.325	a _{s,2,+z} (inf)	45.96	0.00	45.96	-	cm ² /m	
	M82	-30.387	-12.228	3.325	a _{sw}	Non progettabile	-	-	-	cm ² /m ²	13)

NOTE

nr.	Descrizione
5)	Tensione di compressione ammissibile del calcestruzzo nella direzione del puntone superata
7)	Capacità a taglio del calcestruzzo superata
13)	La resistenza a taglio non può essere verificata (sezione trasversale completamente fessurata)



■ 3.2 VERIFICA DI ESERCIZIO PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Caso carico	Progetto					Rapporto	Note
		X	Y	Z		Tipo	Valore esist.	Valore limite	Unità			
13	M2499	-20.293	0.000	-0.206	CR3	σ_s	266.12	360.00	N/mm ²	0.8		
	M46	-21.077	-0.032	-0.522	CR3	$a_{s,min}$	0.00	8.07	cm ² /m	7245.6	207) 208) 209) 210)	
	M2499	-20.293	0.000	-0.206	CR3	lim d_s	1.00	1.96	cm	0.6		
	M2499	-20.293	0.000	-0.206	CR3	lim s_i	0.147	0.300	m	0.5		
14	M2499	-20.293	0.000	-0.206	CR3	w_k	0.281	0.300	mm	1.0		
	M8	-20.293	0.000	-0.600	CR3	σ_s	0.00	360.00	N/mm ²	0.0	226)	
	M2242	-20.486	0.009	-1.695	CR3	$a_{s,min}$	0.00	8.07	cm ² /m	34251.8	207) 208) 209) 210)	
	M8	-20.293	0.000	-0.600	CR3	lim d_s	1.00	-	cm	0.0	226)	
36	M8	-20.293	0.000	-0.600	CR3	lim s_i	5.074	-	m	0.0	226)	
	M8	-20.293	0.000	-0.600	CR3	w_k	0.000	0.300	mm	0.0	226)	
	M98	-20.283	0.099	6.225	CR3	σ_s	0.00	360.00	N/mm ²	0.0	226)	
	M2908	-20.283	0.099	4.339	CR3	$a_{s,min}$	0.00	16.60	cm ² /m	7205.6	208) 209) 210)	
42	M98	-20.283	0.099	6.225	CR3	lim d_s	1.00	-	cm	0.0	226)	
	M98	-20.283	0.099	6.225	CR3	lim s_i	19.074	-	m	0.0	226)	
	M98	-20.283	0.099	6.225	CR3	w_k	0.000	0.300	mm	0.0	226)	
	M6717 - E329	-19.749	5.100	6.225	CR3	σ_s	308.54	360.00	N/mm ²	0.9		
44	M6734	-21.525	0.235	6.225	CR3	$a_{s,min}$	0.00	7.46	cm ² /m	3341.4	208) 209) 210)	
	M68 - E320	-19.685	5.699	6.225	CR3	lim d_s	1.00	0.93	cm	1.1	212) 226)	
	M6714 - E377	-19.909	3.600	6.225	CR3	lim s_i	0.398	0.122	m	3.3	216)	
	M6714 - E377	-19.909	3.600	6.225	CR3	w_k	0.975	0.300	mm	3.3	219)	
51	M436	-5.293	2.110	6.400	CR3	σ_s	282.73	360.00	N/mm ²	0.8		
	M483	-6.251	2.129	6.400	CR3	$a_{s,min}$	0.00	6.70	cm ² /m	3275.3	207) 208) 209) 210)	
	M437	-5.065	2.133	6.400	CR3	lim d_s	1.00	1.01	cm	1.0		
	M448	-4.553	2.850	6.400	CR3	lim s_i	0.342	0.151	m	2.3	215)	
52	M440	-5.293	3.590	6.400	CR3	w_k	0.761	0.300	mm	2.6	219)	
	M1235	-3.741	7.666	2.523	CR3	σ_s	0.00	-	N/mm ²	0.0	225)	
	M1017	-4.374	9.336	0.100	CR3	$a_{s,min}$	0.00	6.12	cm ² /m	1900.4	207) 208) 209) 210)	
	M1235	-3.741	7.666	2.523	CR3	lim d_s	0.00	-	cm	0.0	225)	
53	M1235	-3.741	7.666	2.523	CR3	lim s_i	0.000	-	m	0.0	225)	
	M1235	-3.741	7.666	2.523	CR3	w_k	0.000	-	mm	0.0	225)	
	M32	3.943	0.110	-0.600	CR3	σ_s	0.00	360.00	N/mm ²	0.0	226)	
	M1282	-2.693	5.700	-0.250	CR3	$a_{s,min}$	0.01	7.22	cm ² /m	914.8	207) 208) 209) 210)	
55	M32	3.943	0.110	-0.600	CR3	lim d_s	1.00	-	cm	0.0	226)	
	M32	3.943	0.110	-0.600	CR3	lim s_i	15.211	-	m	0.0	226)	
	M32	3.943	0.110	-0.600	CR3	w_k	0.000	0.300	mm	0.0	226)	
	M1276 - E2003	-1.439	3.912	6.400	CR3	σ_s	0.00	-	N/mm ²	0.0	225) 226)	
56	M1786	2.913	1.575	6.400	CR3	$a_{s,min}$	0.00	7.66	cm ² /m	3051.7	207) 208) 209) 210)	
	M1276 - E2003	-1.439	3.912	6.400	CR3	lim d_s	0.00	-	cm	0.0	225) 226)	
	M1276 - E2003	-1.439	3.912	6.400	CR3	lim s_i	0.000	-	m	0.0	225) 226)	
	M1276 - E2003	-1.439	3.912	6.400	CR3	w_k	0.000	-	mm	0.0	225) 226)	
57	M2499	-20.293	0.000	-0.206	CR3	σ_s	272.15	360.00	N/mm ²	0.8		
	M2134	-19.802	4.603	0.503	CR3	$a_{s,min}$	0.00	12.97	cm ² /m	2725.0	207) 208) 209)	
	M2499	-20.293	0.000	-0.206	CR3	lim d_s	1.00	5.23	cm	0.2		
	M2499	-20.293	0.000	-0.206	CR3	lim s_i	0.036	0.166	m	0.3		
58	M2499	-20.293	0.000	-0.206	CR3	w_k	0.261	0.300	mm	0.9		
	M2300	-24.882	4.489	0.544	CR3	σ_s	0.00	-	N/mm ²	0.0	225)	
	M2410	-24.014	1.313	2.831	CR3	$a_{s,min}$	0.00	10.42	cm ² /m	4709.4	207) 208) 209) 210)	
	M2300	-24.882	4.489	0.544	CR3	lim d_s	0.00	-	cm	0.0	225)	
59	M2300	-24.882	4.489	0.544	CR3	lim s_i	0.000	-	m	0.0	225)	
	M2300	-24.882	4.489	0.544	CR3	w_k	0.000	-	mm	0.0	225)	
	M3	-22.357	5.560	-2.200	CR3	σ_s	0.00	360.00	N/mm ²	0.0	226)	
	M2492	-19.685	5.699	-1.709	CR3	$a_{s,min}$	0.00	16.17	cm ² /m	6310.7	207) 208) 209) 210)	
60	M3	-22.357	5.560	-2.200	CR3	lim d_s	1.00	-	cm	0.0	226)	
	M3	-22.357	5.560	-2.200	CR3	lim s_i	37.703	-	m	0.0	226)	
	M3	-22.357	5.560	-2.200	CR3	w_k	0.000	0.300	mm	0.0	226)	
	M2051	-19.685	5.699	-0.206	CR3	σ_s	276.44	360.00	N/mm ²	0.8		
61	M2238	-24.927	4.605	0.012	CR3	$a_{s,min}$	0.01	6.76	cm ² /m	598.5	207) 208) 209) 210)	
	M2051	-19.685	5.699	-0.206	CR3	lim d_s	1.00	1.96	cm	0.6		
	M2051	-19.685	5.699	-0.206	CR3	lim s_i	0.099	0.154	m	0.7		
	M2051	-19.685	5.699	-0.206	CR3	w_k	0.322	0.300	mm	1.1		
62	M2920	-26.545	3.431	3.325	CR3	σ_s	0.00	-	N/mm ²	0.0	225)	
	M2927	-25.164	4.465	3.325	CR3	$a_{s,min}$	0.00	6.50	cm ² /m	2979.7	207) 208) 209) 210)	
	M2920	-26.545	3.431	3.325	CR3	lim d_s	0.00	-	cm	0.0	225)	
	M2920	-26.545	3.431	3.325	CR3	lim s_i	0.000	-	m	0.0	225)	
63	M2920	-26.545	3.431	3.325	CR3	w_k	0.000	-	mm	0.0	225)	
	M144	-27.828	1.990	-0.163	CR3	σ_s	0.00	360.00	N/mm ²	0.0	226)	
	M3078	-25.371	4.335	0.170	CR3	$a_{s,min}$	0.03	6.41	cm ² /m	189.5	207) 208) 210)	

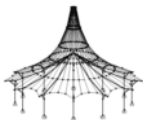


Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

3.2 VERIFICA DI ESERCIZIO PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Caso carico	Progetto					Note
		X	Y	Z		Tipo	Valore esist.	Valore limite	Unità	Rapporto	
62	M144	-27.828	1.990	-0.163	CR3	lim d _s	1.00	-	cm	0.0	209) 210) 226)
	M144	-27.828	1.990	-0.163	CR3	lim s _i	5.982	-	m	0.0	226)
	M144	-27.828	1.990	-0.163	CR3	w _k	0.000	0.300	mm	0.0	226)
	M3115	-28.362	1.147	-1.742	CR3	σ _s	0.00	-	N/mm ²	-	225)
	M3110	-26.875	3.116	-1.886	CR3	a _{s,min}	0.00	6.80	cm ² /m	4379.2	207) 208) 209) 210) 225)
63	M3115	-28.362	1.147	-1.742	CR3	lim d _s	0.00	-	cm	-	225)
	M3115	-28.362	1.147	-1.742	CR3	lim s _i	0.000	-	m	-	225)
	M3115	-28.362	1.147	-1.742	CR3	w _k	0.000	-	mm	-	225)
	M133	-31.573	-14.762	3.325	CR3	σ _s	0.00	360.00	N/mm ²	0.0	226)
	M165	-31.407	-13.776	0.815	CR3	a _{s,min}	0.00	11.03	cm ² /m	16691.1	207) 208) 209) 210) 226)
64	M133	-31.573	-14.762	3.325	CR3	lim d _s	1.00	-	cm	0.0	226)
	M133	-31.573	-14.762	3.325	CR3	lim s _i	14.023	-	m	0.0	226)
	M133	-31.573	-14.762	3.325	CR3	w _k	0.000	0.300	mm	0.0	226)
	M138	-31.573	-14.762	-0.435	CR3	σ _s	0.00	360.00	N/mm ²	0.0	226)
	M138	-31.573	-14.762	-0.435	CR3	a _{s,min}	0.00	8.35	cm ² /m	21690.1	207) 208) 209) 210) 226)
65	M138	-31.573	-14.762	-0.435	CR3	lim d _s	1.00	-	cm	0.0	226)
	M138	-31.573	-14.762	-0.435	CR3	lim s _i	2041.368	-	m	0.0	226)
	M138	-31.573	-14.762	-0.435	CR3	w _k	0.000	0.300	mm	0.0	226)
	M3265	-30.187	-6.508	0.281	CR3	σ _s	0.00	-	N/mm ²	-	225)
	M3232	-31.082	-11.838	0.673	CR3	a _{s,min}	0.00	9.43	cm ² /m	20069.3	207) 208) 209) 210) 225)
66	M3265	-30.187	-6.508	0.281	CR3	lim d _s	0.00	-	cm	-	225)
	M3265	-30.187	-6.508	0.281	CR3	lim s _i	0.000	-	m	-	225)
	M3265	-30.187	-6.508	0.281	CR3	w _k	0.000	-	mm	-	225)
	M3319	-30.512	-8.446	-0.483	CR3	σ _s	0.00	-	N/mm ²	-	225)
	M3338	-31.245	-12.807	-0.526	CR3	a _{s,min}	0.00	7.44	cm ² /m	4532.9	207) 208) 209) 210) 225)
67	M3319	-30.512	-8.446	-0.483	CR3	lim d _s	0.00	-	cm	-	225)
	M3319	-30.512	-8.446	-0.483	CR3	lim s _i	0.000	-	m	-	225)
	M3319	-30.512	-8.446	-0.483	CR3	w _k	0.000	-	mm	-	225)
	M129	-29.373	-1.662	3.325	CR3	σ _s	0.00	360.00	N/mm ²	0.0	226)
	M3399	-29.780	-4.085	1.405	CR3	a _{s,min}	0.01	15.91	cm ² /m	1418.7	207) 208) 209) 210) 226)
69	M129	-29.373	-1.662	3.325	CR3	lim d _s	1.00	-	cm	0.0	226)
	M129	-29.373	-1.662	3.325	CR3	lim s _i	0.937	-	m	0.0	226)
	M129	-29.373	-1.662	3.325	CR3	w _k	0.000	0.300	mm	0.0	226)
	M3555	-25.973	-13.815	1.604	CR3	σ _s	0.00	-	N/mm ²	-	225)
	M3555	-25.973	-13.815	1.604	CR3	a _{s,min}	0.00	-	cm ² /m	-	225)
71	M3555	-25.973	-13.815	1.604	CR3	lim d _s	0.00	-	cm	-	225)
	M3555	-25.973	-13.815	1.604	CR3	lim s _i	0.000	-	m	-	225)
	M3555	-25.973	-13.815	1.604	CR3	w _k	0.000	-	mm	-	225)
	M134	-26.753	-17.812	0.325	CR3	σ _s	0.00	360.00	N/mm ²	0.0	226)
	M3574	-26.753	-17.812	1.158	CR3	a _{s,min}	0.00	9.25	cm ² /m	8394.9	207) 208) 209) 210) 226)
72	M134	-26.753	-17.812	0.325	CR3	lim d _s	1.00	-	cm	0.0	226)
	M134	-26.753	-17.812	0.325	CR3	lim s _i	0.000	-	m	0.0	226)
	M134	-26.753	-17.812	0.325	CR3	w _k	0.000	0.300	mm	0.0	226)
	M3646	-25.406	-10.904	0.511	CR3	σ _s	0.00	-	N/mm ²	-	225)
	M3675	-24.102	-4.221	-0.157	CR3	a _{s,min}	0.00	7.44	cm ² /m	54277.5	207) 208) 209) 210) 225)
73	M3646	-25.406	-10.904	0.511	CR3	lim d _s	0.00	-	cm	-	225)
	M3646	-25.406	-10.904	0.511	CR3	lim s _i	0.000	-	m	-	225)
	M3646	-25.406	-10.904	0.511	CR3	w _k	0.000	-	mm	-	225)
	M3731	-25.957	-13.731	3.325	CR3	σ _s	0.00	-	N/mm ²	-	225)
	M3795	-23.888	-3.125	3.084	CR3	a _{s,min}	0.00	8.73	cm ² /m	2604.7	207) 208) 209) 210) 225)
87	M3731	-25.957	-13.731	3.325	CR3	lim d _s	0.00	-	cm	-	225)
	M3731	-25.957	-13.731	3.325	CR3	lim s _i	0.000	-	m	-	225)
	M3731	-25.957	-13.731	3.325	CR3	w _k	0.000	-	mm	-	225)
	M4736	-27.914	0.968	3.325	CR3	σ _s	322.05	360.00	N/mm ²	0.9	225)
	M155	-32.376	-15.013	3.325	CR3	a _{s,min}	0.00	7.24	cm ² /m	31900.8	207) 208) 209) 210) 225)
88	M4744	-28.110	0.576	3.325	CR3	lim d _s	1.00	1.67	cm	0.6	217)
	M4746	-28.019	0.967	3.325	CR3	lim s _i	0.164	0.102	m	1.7	219)
	M4716	-27.903	0.608	3.325	CR3	w _k	0.724	0.300	mm	2.5	219)
	M167 - E5112	-25.817	-13.016	3.325	CR3	σ _s	341.25	360.00	N/mm ²	1.0	225)
	M38	-27.566	-18.061	3.325	CR3	a _{s,min}	0.00	8.86	cm ² /m	50428.2	207) 208) 209) 210) 226)
89	M3727 - E5088	-25.864	-13.254	3.325	CR3	lim d _s	1.00	1.48	cm	0.7	226)
	M3727 - E5088	-25.864	-13.254	3.325	CR3	lim s _i	0.204	0.094	m	2.2	215) 226)
	M4908	-26.139	-13.109	3.325	CR3	w _k	0.801	0.300	mm	2.7	219)
	M5041	-23.579	-2.749	3.325	CR3	σ _s	0.00	-	N/mm ²	-	225)
	M169	-25.808	4.797	3.325	CR3	a _{s,min}	0.00	8.71	cm ² /m	15727.9	207) 208) 209) 210) 225)
94	M5041	-23.579	-2.749	3.325	CR3	lim d _s	0.00	-	cm	-	225)
	M5041	-23.579	-2.749	3.325	CR3	lim s _i	0.000	-	m	-	225)
	M5041	-23.579	-2.749	3.325	CR3	w _k	0.000	-	mm	-	225)
M5179 - E5972	-20.809	-5.098	8.025	CR3	σ _s	0.00	-	N/mm ²	-	225) 226)	



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

3.2 VERIFICA DI ESERCIZIO PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Caso carico	Progetto					Note
		X	Y	Z		Tipo	Valore esist.	Valore limite	Unità	Rapporto	
95	M5179 - E5972	-20.809	-5.098	8.025	CR3	$a_{s,min}$	0.00	-	cm ² /m		207) 208) 209) 210) 225)
	M5179 - E5972	-20.809	-5.098	8.025	CR3	lim d_s	0.00	-	cm		225) 226)
	M5179 - E5972	-20.809	-5.098	8.025	CR3	lim s_i	0.000	-	m		225) 226)
	M5179 - E5972	-20.809	-5.098	8.025	CR3	w_k	0.000	-	mm		225) 226)
	M5845 - E6145	-23.910	-13.388	5.925	CR3	σ_s	0.00	-	N/mm ²		225) 226)
	M5890	-24.865	-10.697	5.925	CR3	$a_{s,min}$	0.00	6.12	cm ² /m	8102.7	208) 209) 210)
	M5845 - E6145	-23.910	-13.388	5.925	CR3	lim d_s	0.00	-	cm		225) 226)
	M5845 - E6145	-23.910	-13.388	5.925	CR3	lim s_i	0.000	-	m		225) 226)
	M5845 - E6145	-23.910	-13.388	5.925	CR3	w_k	0.000	-	mm		225) 226)
103	M6579	-28.470	-12.550	3.325	CR3	σ_s	304.45	360.00	N/mm ²	0.9	
	M6596	-28.738	-14.026	3.325	CR3	$a_{s,min}$	0.00	8.77	cm ² /m	8313.2	207) 208) 209) 210)
	M6606	-30.168	-12.397	3.325	CR3	lim d_s	1.00	2.22	cm	0.5	
	M6606	-30.168	-12.397	3.325	CR3	lim s_i	0.168	0.134	m	1.3	216)
	M6606	-30.168	-12.397	3.325	CR3	w_k	0.794	0.300	mm	2.7	219)

NOTE SULLA VERIFICA DI ESERCIZIO

nr.	Descrizione
207)	Armatura sul lato inferiore (+z) della piastra nella direzione di armatura ϕ_1 minore dell'armatura minima.
208)	Armatura sul lato inferiore (+z) della piastra nella direzione di armatura ϕ_2 minore dell'armatura minima.
209)	Armatura sul lato superiore (-z) della piastra nella direzione di armatura ϕ_1 minore dell'armatura minima.
210)	Armatura sul lato superiore (-z) della piastra nella direzione di armatura ϕ_2 minore dell'armatura minima.
212)	Diametri ammissibili delle aste sulla superficie inferiore della piastra nella direzione di armatura ϕ_2 superati.
215)	Spaziatura ammissibile delle aste sul lato inferiore (+z) della piastra nella direzione di armatura ϕ_1 superata.
216)	Spaziatura ammissibile delle aste sul lato inferiore (+z) della piastra nella direzione di armatura ϕ_2 superata.
217)	Spaziatura ammissibile delle aste sul lato superiore (-z) della piastra nella direzione di armatura ϕ_1 superata.
219)	Ampiezza fessure superata.
225)	Armatura longitudinale in una direzione non sufficiente. Nessuna verifica possibile.
226)	Fessure del calcestruzzo in nessuno dei lati.



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

1.1 DATI GENERALI

Normativa di progetto:	UNI EN 1992-1-1/NA:2007-07	
STATI LIMITE ULTIMI		
Combinazioni di risultati da calcolare:	CR1	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10 Persistente e transitoria
STATI LIMITE DI ESERCIZIO		
Combinazioni di risultati da calcolare:	CR2	SLE - Caratteristica k-t: 0.467
Attiva viscosità e ritiro:	<input type="checkbox"/>	
Coefficiente di moltiplicazione del carico	1.000	

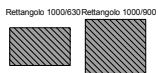
1.1 IMPOSTAZIONI - CALCOLO NON-LINEARE (STATO II)

Attiva calcolo non-lineare per stato LIMITE ULTIMO:	<input type="checkbox"/>
Attiva calcolo non-lineare per stato LIMITE DI ESERCIZIO:	<input type="checkbox"/>
Attiva calcolo non-lineare per la resistenza al fuoco	<input type="checkbox"/>

1.2 MATERIALI

Mat. nr.	Definizione materiale	Acciaio di armatura	Commento
3	Calcestruzzo C25/30	B 450 S (A)	

1.3 SEZIONI TRASVERSALI



Sezione nr.	Mat. nr.	Descrizione della sezione	Note	Commento
2	3	Rettangolo 1000/630		
6	3	Rettangolo 1000/900		

1.5 VINCOLI ESTERNI

Vincolo nr.	Nodo nr.	Largh. vincolo b [mm]	Vincolo diretto	Collegamento monolitico	Vincolo estremo	Commento
1	77	0.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2	110	0.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

IMPOSTAZIONI

- Considerazione della ridistribuzione limitata dei momenti agli appoggi
 Riduzione dei momenti o dimensionamento per momenti in faccia a un vincolo monolitico
 Riduzione delle forze di taglio nell'area dei vincoli esterni sec. 6.2.2
 Riduzione delle forze di taglio con carico concentrato sec. 6.2.2(6) e 6.2.3(8)

1.6 GRUPPO DI ARMATURA NR. 1

Applicato alle aste:	1,7,10	
ARMATURA LONGITUDINALE		
Diametri disponibili:	20 mm	
Max numero di strati:	1	
Min spaziatura per primo strato:	20,0 mm	
Tipo di ancoraggio:	Diritto	
Superficie acciaio:	Nervata	
Riduzione dell'armatura:	Nessuna	
ARMATURA A TAGLIO		
Diametri disponibili:	10 mm	
Numero di bracci:	2	
Inclinazione:	90°	
Tipo di ancoraggio:	Uncino	
Disposizione staffe:	Passo uniforme staffe	
STRATO DI ARMATURA		
Copriferro sec. normativa	<input checked="" type="checkbox"/>	
Copriferro c-Superiore:	45.0 mm	
Parametri di definizione del copriferro		
Impostazioni identiche al copriferro	C _{s2} (inf)	
Copriferro c-inferiore:	45.0 mm	
Parametri di definizione del copriferro		
Classe di esposizione sec. 4.4.1.2(5)	XC2 / XC3	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Tipo di armatura	Staffa	Longitudinale
Massimo diametro dell'armatura	10.0 mm	20.0 mm
Copriferro minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	10.0 mm	20.0 mm
Copriferro minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	25.0 mm	25.0 mm



Progetto: _____ Modello: Sovrapasso

Data: 27.02.2018

1.6 GRUPPO DI ARMATURA NR. 1

Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.0 mm	0.0 mm
Copriferro minimo sec. 4.4.1.2(2)	25.0 mm	25.0 mm
Tolleranza della deviazione sec. 4.4.1.3	10.0 mm	10.0 mm
Copriferro nominale dell'armatura sec. 4.4.1.1	35.0 mm	35.0 mm
Copriferro minimo	35.0 mm	45.0 mm
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Copriferro c-laterale:	45.0 mm	
Parametri di definizione del copriferro		
Impostazioni identiche al copriferro	$C_{+z (inf)}$	
Strato armatura:		
Armatura torsionale distribuita circolarmente:	<input checked="" type="checkbox"/>	-z (sup) - +z (inf) (distribuzione ottimizzata)
Tipo di rastremazione:		
Forze interne pertinenti:		N, V-y, V-z, M-T, M-y, M-z
ARMATURA MINIMA		
Min area di armatura (min A-s, superiore):	0.00 cm ²	
Min area di armatura (min A-s, inferiore):	0.00 cm ²	
Min armatura longitudinale secondo normativa:	<input checked="" type="checkbox"/>	
Min armatura a taglio secondo normativa:	<input checked="" type="checkbox"/>	
Armatura longitudinale per il progetto a taglio:		Usa armatura longitudinale necessaria
Limite di progetto dell'ampiezza delle fessure w-k:	0.30 mm	
Limite di progetto dell'ampiezza delle fessure w-k:	0.30 mm	
Carico dovuto al vincolo:	<input checked="" type="checkbox"/>	
- vincolo diretto:	<input type="checkbox"/>	
Apertura fessure nei primi 28 giorni:	<input type="checkbox"/>	
$A_{s,min}$ associato alla superficie:		-z (sup) / +z (inf)
Strato di armatura longitudinale per Stato limite di esercizio	<input checked="" type="checkbox"/>	
Limitazione tensione a compressione del calcestruzzo σ_c	<input checked="" type="checkbox"/>	
Limitazione tensione dell'acciaio σ_s	<input checked="" type="checkbox"/>	
Minima armatura min A_s	<input checked="" type="checkbox"/>	
Diametro limite lim d_s	<input checked="" type="checkbox"/>	
Massimo interasse delle aste lim s_i	<input checked="" type="checkbox"/>	
Ampiezza fessura w_k	<input checked="" type="checkbox"/>	
Trova armatura economica per il progetto dell'ampiezza delle fessure	<input checked="" type="checkbox"/>	
Inflessione limite $u_{l,z}$	<input type="checkbox"/>	
GIUNTO A TAGLIO		
Giunto a taglio disponibile:	<input type="checkbox"/>	
Progettazione dei collegamenti delle ali sulle sezioni trasversali segmentate	<input type="checkbox"/>	
OPZIONI PER EN 1992-1-1:2004/AC:2010		
Max percentuale di armatura:	8.00 %	
Limitazione della profondità dell'asse neutro	<input checked="" type="checkbox"/>	



RF-CONCRETE
Columns
CA1

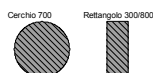
Progetto: _____ Modello: Sovrapasso Data: 27.02.2018

1.1 DATI GENERALI

Normativa di progetto:	UNI EN 1992-1-1/NA:2007-07		
STATI LIMITE ULTIMI			
Combinazioni di risultati da calcolare:	CR1	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10 Persistente e transitoria	
CARICO PERMANENTE CHE PRODUCE VISCOSITA'			
Combinazioni di carico da calcolare:	CO3	1.35*CC1 + 1.35*CC2 + 1.35*CC3 + 1.5*CC4	

1.2 MATERIALI

Materiale nr.	Descrizione del materiale		Note	Commento
	Classe di resistenza del cls	Acciaio d'armatura		
1	Calcestruzzo C30/37	B 450 S (A)		
3	Calcestruzzo C28/35_2018	B 450 S (A)		



1.3 SEZIONI TRASVERSALI

Sezione nr.	Materiale nr.	Descrizione della sezione	Note	Commento
1	3	Cerchio 700		
3	1	Rettangolo 300/800		

1.4 GRUPPO DI ARMATURA NR. 1

Applicato alle aste:	Tutto (2-4)
ARMATURA LONGITUDINALE	
Diametri possibili:	20.0 mm
Strato di armatura - Rettangolare:	Circondato uniformemente
Strato di armatura - Cerchio:	Circondato uniformemente
Min interasse del primo strato:	20.0 mm
Tipo di ancoraggio:	Ancoraggio diritto
Superficie acciaio:	Nervato
STAFFE	
Diametri possibili:	8.0 mm, 10.0 mm
Numero di bracci - Rettangolare:	2
Numero di bracci - Cerchio:	2
Min armatura a taglio A_{sw} :	Secondo la normativa
Tipo di ancoraggio:	Uncino
ARMATURA SECONDARIA	
Max interasse armatura secondaria:	300.0 mm
COPRIFERRO	
Copriferro secondo normativa	<input type="checkbox"/>
Interasse copriferro - Rettangolo C_z :	30.0 mm
Interasse copriferro - Rettangolo C_y :	30.0 mm
Interasse copriferro - Cerchio C:	30.0 mm
Forze interne pertinenti:	N, V-y, V-z, M-y, M-z
IMPOSTAZIONI PER UNI EN 1992-1-1/NA:2007-07	
Massima armatura longitudinale secondo normativa	<input checked="" type="checkbox"/>
Minima armatura longitudinale secondo normativa	<input checked="" type="checkbox"/>
Coefficiente parziale sec. Tabella 2.1N: γ_c :	1.5000
Coefficiente parziale sec. Tabella 2.1N: γ_s :	1.1500
Coefficiente α_{cc} :	0.8500
Min inclinazione del puntone di calcestruzzo:	21.801 °
Max inclinazione del puntone di calcestruzzo:	45.000 °

1.5 PARAMETRI - PER ASTA

Asta nr.	Sezione trasversale	Direzione	Instabilità Rischio	Sistema Nodi spostabili	Lunghezza del sist [m]	Coefficiente β	Altezza equivalente [m] / Snellezza
2	1 - Cerchio 700	intorno all'asse y	+	+	7.000	1.2200	8.540 / 48.8
		intorno all'asse z	+	+	7.000	1.2200	8.540 / 48.8
Indice di stabilità per un piano in direzione z					Q_z		0.050
Indice di stabilità per un piano in direzione y					Q_y		0.050
3	3 - Rettangolo 300/800	intorno all'asse y	+	+	6.300	-1.0000	-6.300 / -27.3
		intorno all'asse z	+	+	6.300	-1.0000	-6.300 / -72.7
Indice di stabilità per un piano in direzione z					Q_z		0.050
Indice di stabilità per un piano in direzione y					Q_y		0.050
4	3 - Rettangolo 300/800	intorno all'asse y	+	+	6.300	-1.0000	-6.300 / -27.3
		intorno all'asse z	+	+	6.300	-1.0000	-6.300 / -72.7
Indice di stabilità per un piano in direzione z					Q_z		0.050
Indice di stabilità per un piano in direzione y					Q_y		0.050



Progetto: _____ Modello: Sovrapasso

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2.1 VERIFICA DELLE ASTE

Asta nr.	Determinante	Verifica		Commento
		Caso di carico	Rapporto	
2	Sezione trasversale nr. 1 - Cerchio 700			
	CR1	0.7774	≤ 1	100) VERIFICA NELLA SEZIONE CRITICA DELLA COLONNA MODELLO SEC. PAR. 5.8.8
2	Sezione trasversale nr. 1 - Cerchio 700			
	CR1	0.0359	≤ 1	201) VERIFICA A TAGLIO ($V_{Ed} / V_{Rd,c} \leq 1$) SEC. 6.2.2 (2) CON (6.4)
2	Sezione trasversale nr. 1 - Cerchio 700			
	CR1	0.1224	≤ 1	202) VERIFICA A TAGLIO ($V_{Ed} / V_{Rd,c} \leq 1$) SEC. 6.2.2 (1) CON (6.2.a)
3	Sezione trasversale nr. 3 - Rettangolo 300/800			
	CR1	0.3459	≤ 1	100) VERIFICA NELLA SEZIONE CRITICA DELLA COLONNA MODELLO SEC. PAR. 5.8.8
3	Sezione trasversale nr. 3 - Rettangolo 300/800			
	CR1	0.0041	≤ 1	201) VERIFICA A TAGLIO ($V_{Ed} / V_{Rd,c} \leq 1$) SEC. 6.2.2 (2) CON (6.4)
4	Sezione trasversale nr. 3 - Rettangolo 300/800			
	CR1	0.3007	≤ 1	100) VERIFICA NELLA SEZIONE CRITICA DELLA COLONNA MODELLO SEC. PAR. 5.8.8
4	Sezione trasversale nr. 3 - Rettangolo 300/800			
	CR1	0.0020	≤ 1	201) VERIFICA A TAGLIO ($V_{Ed} / V_{Rd,c} \leq 1$) SEC. 6.2.2 (2) CON (6.4)

3.2 ARMATURA NECESSARIA PER ASTA

Asta nr.	Tipo di armatura	Posizione x [m]	CC/ CO CR	Armatura			Errore o nota	
				Area	Unità			
2	Cerchio 700	7.000	CR1	As	14.91	cm ²		
	Longitudinale							
2	Cerchio 700	-	-	a _{sw}	6.98	cm ² /m		
	Taglio							
Snellezza intorno all'asse y							λ_y	48.8000
Lunghezza libera d'inflessione							$l_{0,y}$	8.540 m
Coefficiente di imbozzamento							β_y	1.220
Lunghezza geometrica							l_y	7.000 m
Snellezza intorno all'asse z							λ_z	48.8000
Lunghezza libera d'inflessione							$l_{0,z}$	8.540 m
Coefficiente di imbozzamento							β_z	1.220
Lunghezza geometrica							l_z	7.000 m
Condizione del progetto standard soddisfatta?								No
Verifica di stabilità necessaria								
Momenti in accordo con la teoria del primo ordine								
Forza normale di progetto							N_{Ed}	-1961.810 kN
Momento intorno all'asse y							$M_{Ed,1,y}$	31.680 kNm
Momento intorno all'asse z							$M_{Ed,1,z}$	-240.396 kNm
Momenti dovuti agli effetti del secondo ordine (viscosità)								
Forza normale di progetto							N_{Ed}	-1961.810 kN
Momento intorno all'asse y							$M_{Ed,y2}$	187.760 kNm
Momento intorno all'asse z							$M_{Ed,z2}$	-396.477 kNm
3	Rettangolo 300/800	0.000	CR1	As	9.04	cm ²		
	Longitudinale							
3	Rettangolo 300/800	-	-	a _{sw}	6.98	cm ² /m		
	Taglio							
Snellezza intorno all'asse y							λ_y	-27.2798
Lunghezza libera d'inflessione							$l_{0,y}$	-6.300 m
Coefficiente di imbozzamento							β_y	-1.000
Lunghezza geometrica							l_y	6.300 m
Snellezza intorno all'asse z							λ_z	-72.7461
Lunghezza libera d'inflessione							$l_{0,z}$	-6.300 m
Coefficiente di imbozzamento							β_z	-1.000
Lunghezza geometrica							l_z	6.300 m
Condizione del progetto standard soddisfatta?								No
Verifica di stabilità necessaria								
Momenti in accordo con la teoria del primo ordine								
Forza normale di progetto							N_{Ed}	-286.785 kN
Momento intorno all'asse y							$M_{Ed,1,y}$	-10.772 kNm
Momento intorno all'asse z							$M_{Ed,1,z}$	-4.742 kNm
Momenti dovuti agli effetti del secondo ordine (viscosità)								
Forza normale di progetto							N_{Ed}	-286.785 kN
Momento intorno all'asse y							$M_{Ed,y2}$	-10.772 kNm
Momento intorno all'asse z							$M_{Ed,z2}$	-81.670 kNm
4	Rettangolo 300/800	0.000	CR1	As	7.88	cm ²		
	Longitudinale							
4	Rettangolo 300/800	-	-	a _{sw}	6.98	cm ² /m		
	Taglio							
Snellezza intorno all'asse y							λ_y	-27.2798
Lunghezza libera d'inflessione							$l_{0,y}$	-6.300 m
Coefficiente di imbozzamento							β_y	-1.000
Lunghezza geometrica							l_y	6.300 m
Snellezza intorno all'asse z							λ_z	-72.7461
Lunghezza libera d'inflessione							$l_{0,z}$	-6.300 m
Coefficiente di imbozzamento							β_z	-1.000
Lunghezza geometrica							l_z	6.300 m
Condizione del progetto standard soddisfatta?								No
Verifica di stabilità necessaria								



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3.2 ARMATURA NECESSARIA PER ASTA

Asta nr.	Tipo di armatura	Posizione x [m]	CC/ CO CR	Armatura		Errore o nota
				Area	Unità	
Momenti in accordo con la teoria del primo ordine						
	Forza normale di progetto				N_{Ed}	-256.136 kN
	Momento intorno all'asse y				$M_{Ed,1,y}$	-6.830 kNm
	Momento intorno all'asse z				$M_{Ed,1,z}$	3.253 kNm
Momenti dovuti agli effetti del secondo ordine (viscosità)						
	Forza normale di progetto				N_{Ed}	-256.136 kN
	Momento intorno all'asse y				$M_{Ed,y2}$	-6.830 kNm
	Momento intorno all'asse z				$M_{Ed,z2}$	71.959 kNm

4.1 ARMATURA LONGITUDINALE DISPOSTA

Voce nr.	Numero di Barre	d_s [mm]	Posizione x [m]		Ancoraggio	Messaggio
			d_a	a		
Asta nr. 2 - Cerchio 700						
1	6	20.0	-0.652	7.652	<input checked="" type="checkbox"/>	
Asta nr. 3 - Rettangolo 300/800						
1	4	20.0	-0.281	6.581	<input checked="" type="checkbox"/>	
2	4	20.0	-0.281	6.581	<input checked="" type="checkbox"/>	
Asta nr. 4 - Rettangolo 300/800						
1	4	20.0	-0.245	6.545	<input checked="" type="checkbox"/>	
2	4	20.0	-0.245	6.545	<input checked="" type="checkbox"/>	

4.2 ARMATURA A TAGLIO DISPOSTA

Voce nr.	Numero di Staffe	d_s [mm]	Posizione x [m]		Spaziatura s_{sw} [mm]	Numero di Bracci	Messaggio
			d_a	a			
Asta nr. 2 - Cerchio 700							
1	6	8.0	0.280	1.000	144.0	2	
2	21	8.0	1.000	6.040	240.0	2	
3	5	8.0	6.040	6.760	144.0	2	
Asta nr. 3 - Rettangolo 300/800							
1	7	8.0	0.280	1.144	144.0	2	
2	16	8.0	1.144	4.984	240.0	2	
3	6	8.0	4.984	5.848	144.0	2	
Asta nr. 4 - Rettangolo 300/800							
1	7	8.0	0.280	1.144	144.0	2	
2	17	8.0	1.144	5.224	240.0	2	
3	6	8.0	5.224	6.088	144.0	2	

4.3 DISTINTA DEI FERRI

Voce nr.	Tipo di armatura	d_s [mm]	Tipo di superficie	nr. di Barre	Lunghezz [m]	Tipo di ancoraggio		Flessione Diametro [mm]	Peso [kg]	Messaggio
						Inizio	Fine			
Materiale nr. 3 - Acciaio da armatura B 450 S (A)										
1	Longitudinale	20.0	Nervato	22	8.304	Ancorag gio diritto	Ancorag gio diritto		392.24	
2	Taglio	8.0	Nervato	91	2.099	Uncino	Uncino		77.06	
Somma				113					469.30	



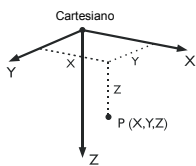
Progetto: _____ Modello: Camino Data: 27.02.2018

MODELLO - DATI GENERALI

Generale	Nome del modello	: Camino
	Tipo di modello	: 3D
	Direzione positiva dell'asse globale Z	: Verso il basso
	Classificazione dei casi e delle combinazioni di carico	: Secondo la normativa: EN 1990 Appendice nazionale: UNI - Italia
	<input checked="" type="checkbox"/> Crea combinazioni automaticamente	: <input checked="" type="checkbox"/> Combinazioni di carico

IMPOSTAZIONI MESH EF

Generale	Lunghezza obiettivo degli elementi finiti	l_{FE}	: 0.2 m
	Massima distanza tra un nodo e una linea per integrarlo nella linea	ϵ	: 0.0 m
	Massimo numero di nodi della mesh (in migliaia)		: 500
Aste	Numero di divisioni delle aste di tipo fune, con vincolo esterno elastico, rastremazioni o caratteristiche plastiche		: 10
	<input checked="" type="checkbox"/> Attiva divisioni delle aste per grandi deformazioni o analisi post-critica		
	<input checked="" type="checkbox"/> Usa divisione per aste con nodo giacente su di esse		
Superfici	Massimo rapporto delle diagonali del rettangolo dell'EF	Δ_D	: 1.800
	Massima inclinazione fuori piano di due elementi finiti	α	: 0.50 °
	Direzione di forma degli elementi finiti		: Triangoli e quadrangoli
			<input checked="" type="checkbox"/> Alcuni quadrati dove possibile

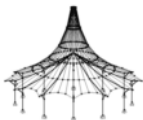


1.1 NODI

Nodo nr.	Tipo di nodo	Nodo di riferimento	Sistema di coordinate	Coordinate del nodo			Commento
				X [m]	Y [m]	Z [m]	
1	Standard	-	Cartesiano	0.900	0.000	0.000	Generato da Linea nr. 2
2	Standard	-	Cartesiano	0.000	0.900	0.000	Generato da Linea nr. 2
3	Standard	-	Cartesiano	-0.900	0.000	0.000	Generato da Linea nr. 2
4	Standard	-	Cartesiano	0.000	0.000	0.000	
5	Standard	-	Cartesiano	0.000	0.000	-9.200	
8	Standard	-	Cartesiano	0.900	0.000	-9.200	Generato da Superficie nr. 2
9	Standard	-	Cartesiano	0.000	-0.900	-9.200	Generato da Superficie nr. 2
10	Standard	-	Cartesiano	-0.900	0.000	-9.200	Generato da Superficie nr. 2
11	Standard	-	Cartesiano	0.000	-0.900	0.000	Generato da Superficie nr. 2
12	Standard	-	Cartesiano	1.000	-7.000	0.000	
13	Standard	-	Cartesiano	1.000	1.000	0.000	
14	Standard	-	Cartesiano	-1.000	1.000	0.000	
15	Standard	-	Cartesiano	-1.000	-7.000	0.000	
16	Standard	-	Cartesiano	1.000	-7.000	1.400	
17	Standard	-	Cartesiano	1.000	1.000	1.400	
18	Standard	-	Cartesiano	-1.000	1.000	1.400	
19	Standard	-	Cartesiano	-1.000	-7.000	1.400	

1.2 LINEE

Linea nr.	Tipo di linea	Nodi nr.	Lungh. linea		Commento
			L [m]		
1	Polilinea	4,5	9.200	Z	
2	Cerchio	1-3	5.655	XY	
3	Polilinea	15,14	8.000	Y	
4	Polilinea	12,13	8.000	Y	
5	Polilinea	1,8	9.200	Z	Generato da Superficie nr. 2
6	Cerchio	8-10	5.655	XY	Generato da Superficie nr. 2
7	Cerchio	1,11,3	5.655	XY	Generato da Superficie nr. 2
8	Polilinea	14,13	2.000	X	
9	Polilinea	19,18	8.000	Y	
10	Polilinea	16,17	8.000	Y	
11	Polilinea	18,17	2.000	X	
12	Polilinea	19,15	1.400	Z	
13	Polilinea	18,14	1.400	Z	
14	Polilinea	17,13	1.400	Z	
15	Polilinea	16,12	1.400	Z	
16	Polilinea	19,16	2.000	X	
17	Polilinea	15,12	2.000	X	



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1.3 MATERIALI

Mater. nr.	Modulo E [kN/cm ²]	Modulo G [kN/cm ²]	Coeff. Poisson ν [-]	Peso spec. γ [kN/m ³]	Coeff. dil. term. α [1/°C]	Coeff. parz. γ_M [-]	Modello del materiale
1	Calcestruzzo C30/37 EN 1992-1-1:2004/AC:2010 3300.00 1375.00		0.200	25.00	1.00E-05	1.00	Isotropo elastico lineare
2	Beton C28/35 UNI EN 1993-1-1 3100.00 1310.00		0.183	25.00	1.00E-05	1.00	Isotropo elastico lineare
3	Acciaio S 235 DIN 18800:1990-11 21000.00 8100.00		0.296	78.50	1.20E-05	1.10	Isotropo elastico lineare

1.4 SUPERFICI

Superf. nr.	Tipo di superficie			Mater. nr.	Spessore		Area A [m ²]	Peso W [kg]
	Geometria	Rigidezza	Linee del contorno nr.		Tipo	d [mm]		
2	Tubo	Standard	1/0.900	1	Costante	200.0	51.916	25957.80
3	Piana	Standard	16,10,11,9	2	Costante	250.0	16.000	10000.00
4	Piana	Standard	3,12,9,13	2	Costante	250.0	11.200	7000.00
5	Piana	Standard	8,13,11,14	2	Costante	250.0	2.800	1750.00
6	Piana	Standard	10,14,4,15	2	Costante	250.0	11.200	7000.00
7	Piana	Standard	4,8,3,17	2	Costante	250.0	13.477	8422.88

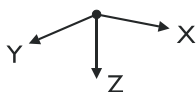
1.4.2 SUPERFICI - OGGETTI INTEGRATI

Superf. nr.	Oggetti integrati nr.			Aperture	Commento
	Nodi	Linee			
7		7		1	

1.6 APERTURE

Apert. nr.	Linee del contorno nr.	Nella superf. nr.	Area A [m ²]	Commento
1	2	7	2.528	

1.9 VINCOLI ESTERNI DELLE SUPERFICI



Vin. est. nr.	Sulle superfici nr.	Costanti delle molle RF-SOILIN	Vincolo traslazionale o molla [kN/m ²]			Molla a taglio [kN/m]	
			u_x	u_y	u_z	v_{xz}	v_{yz}
1	3	-	1000.000	1000.000	100000.000	<input type="checkbox"/>	<input type="checkbox"/>
2	4-6	-	<input type="checkbox"/>	<input type="checkbox"/>	50000.000	<input type="checkbox"/>	<input type="checkbox"/>

1.9.1 VINCOLI ESTERNI DELLE SUPERFICI - INEFFICACI

Vin. est. nr.	Sulle superfici nr.	Vincolo esterno inefficace per σ_z	Snerv. dalla tens. di contatto σ_z [kN/m ²]	Coefficiente d'attrito μ_z [-]
2	4-6	Positivo		

1.13 SEZIONI TRASVERSALI

Rettangolo 1000/500 Rettangolo 350/1800



Rettangolo 350/2700 Rettangolo 350/2550



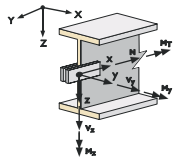
RD 24



Sezione nr.	Mater. nr.	I_x [cm ⁴]	I_y [cm ⁴]	I_z [cm ⁴]	Assi principali α [°]	Rotazione α' [°]	Dimensioni totali [mm]	
		A [cm ²]	A_y [cm ²]	A_z [cm ²]			Larghezza b	Altezza h
1	Rettangolo 1000/500 2	2860937.50	1041666.69	4166666.65	0.00	0.00	1000.0	500.0
		5000.00	4166.67	4166.67				
2	Rettangolo 350/1800 1	2257406.00	17010000.00	643124.99	0.00	0.00	350.0	1800.0
		6300.00	5250.00	5250.00				
3	Rettangolo 350/2700 1	3543626.00	57408748.00	964687.56	0.00	0.00	350.0	2700.0
		9450.00	7875.00	7875.00				
4	Rettangolo 350/2550 1	3329253.00	48362344.00	911093.76	0.00	0.00	350.0	2550.0
		8925.00	7437.50	7437.50				
5	RD 24 3	3.26	1.63	1.63	0.00	0.00	24.0	24.0
		4.52	3.80	3.80				

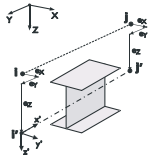


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1.14 VINCOLI INTERNI DELLE ASTE

Vincolo nr.	Sistema di riferimento	Rilascio assiale/tagliante o molla[kN/m]			Rilascio del momento o molla[kNm/rad]			Commento
		u_x	u_y	u_z	φ_x	φ_y	φ_z	
1	Locale x,y,z	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	



1.15/1 ECCENTRICITÀ DELLE ASTE - ASSOLUTA

Ecc. nr.	Sistema di riferimento	Inizio asta - Eccentricità [mm]			Fine asta - Eccentricità [mm]			Posizione del vincolo interno dell'	
		$e_{i,x}$	$e_{i,y}$	$e_{i,z}$	$e_{f,x}$	$e_{f,y}$	$e_{f,z}$	Inizio asta	Fine dell'asta
1	Globale	0.0	0.0	0.0	0.0	0.0	0.0	nell'asta	nell'asta
3	Globale	0.0	0.0	0.0	0.0	0.0	0.0	nell'asta	nell'asta

1.15/2 ECCENTRICITÀ DELLE ASTE - RELATIVA

Ecc. nr.	Allineamento sezione trasv.		Offset trasversale dalla sezione di un altro oggetto				Offset assiale dall'adiacente	
	Asse y	Asse z	Tipo oggetto	Oggetto nr.	Asse y	Asse z	Inizio asta	Fine asta
1	Sinistra (-y)	Centro	Nessuno/a	0	Centro	Centro	<input type="checkbox"/>	<input type="checkbox"/>
3	Centro	Inferiore (+z)	Nessuno/a	0	Centro	Inferiore (+z)	<input type="checkbox"/>	<input type="checkbox"/>

2.1 CASI DI CARICO

Caso di carico nr.	Descrizione del caso di carico	EN 1990 UNI Categoria delle azioni	Peso proprio - Coefficiente in direzione			
			Attiva	X	Y	Z
CC1	Peso proprio	Permanente	<input checked="" type="checkbox"/>	0.000	0.000	1.000
CC2	Vento in X	Vento	<input type="checkbox"/>			
CC3	Vento in Y	Vento	<input type="checkbox"/>			
CC4	CCD1 - Forma modale 1, direzione - X	Sisma	<input type="checkbox"/>			
CC5	CCD1 - Forma modale 2, direzione - Y	Sisma	<input type="checkbox"/>			
CC6	CCD1 - Forma modale 3, direzione - Y	Sisma	<input type="checkbox"/>			
CC7	CCD1 - Forma modale 4, direzione - Z	Sisma	<input type="checkbox"/>			
CC8	CCD1 - Forma modale 5, direzione - X	Sisma	<input type="checkbox"/>			
CC9	CCD1 - Forma modale 6, direzione - X	Sisma	<input type="checkbox"/>			
CC10	CCD1 - Forma modale 7, direzione - Z	Sisma	<input type="checkbox"/>			

2.1.1 CASI DI CARICO - PARAMETRI DI CALCOLO

Caso di carico nr.	Descrizione del caso di carico	Parametri di calcolo	
		Metodo di analisi	Metodo risolutivo del sistema di equazioni algebriche non-lineari
CC1	Peso proprio	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC2	Vento in X	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC3	Vento in Y	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC4	CCD1 - Forma modale 1, direzione - X	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC5	CCD1 - Forma modale 2, direzione - Y	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC6	CCD1 - Forma modale 3, direzione - Y	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC7	CCD1 - Forma modale 4, direzione - Z	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC8	CCD1 - Forma modale 5, direzione - X	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC9	CCD1 - Forma modale 6, direzione - X	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson
CC10	CCD1 - Forma modale 7, direzione - Z	: <input checked="" type="radio"/> Analisi statica geometricamente lineare	: <input checked="" type="radio"/> Newton-Raphson



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2.1.1 CASI DI CARICO - PARAMETRI DI CALCOLO

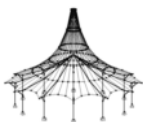
Caso di carico	Descrizione del caso di carico	Parametri di calcolo
		Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Newton-Raphson

2.5 COMBINAZIONI DI CARICO

Comb. di carico	Combinazione di carico		nr.	Coeff.	Caso di carico	
	SP	Descrizione				
CO1	ULS	1.3*CC1	1	1.30	CC1	Peso proprio
CO2	ULS	1.3*CC1 + 1.5*CC2	1	1.30	CC1	Peso proprio
			2	1.50	CC2	Vento in X
CO3	ULS	1.3*CC1 + 1.5*CC3	1	1.30	CC1	Peso proprio
			2	1.50	CC3	Vento in Y
CO4	S Ch	CC1	1	1.00	CC1	Peso proprio
CO5	S Ch	CC1 + CC2	1	1.00	CC1	Peso proprio
			2	1.00	CC2	Vento in X
CO6	S Ch	CC1 + CC3	1	1.00	CC1	Peso proprio
			2	1.00	CC3	Vento in Y
CO7	S Qp	CC1	1	1.00	CC1	Peso proprio

2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo
CO1	1.3*CC1	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: : <input checked="" type="checkbox"/> Forze normali N : <input checked="" type="checkbox"/> Forze di taglio V_y e V_z : <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO2	1.3*CC1 + 1.5*CC2	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: : <input checked="" type="checkbox"/> Forze normali N : <input checked="" type="checkbox"/> Forze di taglio V_y e V_z : <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO3	1.3*CC1 + 1.5*CC3	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: : <input checked="" type="checkbox"/> Forze normali N : <input checked="" type="checkbox"/> Forze di taglio V_y e V_z : <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO4	CC1	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: : <input checked="" type="checkbox"/> Forze normali N : <input checked="" type="checkbox"/> Forze di taglio V_y e V_z : <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO5	CC1 + CC2	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: : <input checked="" type="checkbox"/> Forze normali N : <input checked="" type="checkbox"/> Forze di taglio V_y e V_z : <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO6	CC1 + CC3	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard Opzioni : <input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione : <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: : <input checked="" type="checkbox"/> Forze normali N : <input checked="" type="checkbox"/> Forze di taglio V_y e V_z : <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T
CO7	CC1	Metodo di analisi : <input checked="" type="radio"/> Analisi del secondo ordine (P-Delta) Metodo risolutivo del sistema di equazioni algebriche non-lineari : <input checked="" type="radio"/> Picard



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2.5.2 COMBINAZIONI DI CARICO - PARAMETRI DI CALCOLO

Comb. di carico	Descrizione	Parametri di calcolo
	Opzioni	<input checked="" type="checkbox"/> Considera gli effetti favorevoli dovuti alla trazione <input checked="" type="checkbox"/> Riferisci le forze interne al sistema deformato per: <input checked="" type="checkbox"/> Forze normali N <input checked="" type="checkbox"/> Forze di taglio V_y e V_z <input checked="" type="checkbox"/> Momenti M_y , M_z e M_T

2.5.5 COMBINAZIONI DI CARICO - IMPERFEZIONI

Comb. di carico	Descrizione CO	Imperfezione applicata dal modulo RF-IMP	Imperfezione applicata
CO1	1.3*CC1	<input type="checkbox"/>	
CO2	1.3*CC1 + 1.5*CC2	<input type="checkbox"/>	
CO3	1.3*CC1 + 1.5*CC3	<input type="checkbox"/>	
CO4	CC1	<input type="checkbox"/>	
CO5	CC1 + CC2	<input type="checkbox"/>	
CO6	CC1 + CC3	<input type="checkbox"/>	
CO7	CC1	<input type="checkbox"/>	

2.6 COMBINAZIONI DI RISULTATI

Combin. di risult.	Combinazione di risultati		nr.	Coeff.	Carico	Criterio	Alterna Gruppo
	SP	Descrizione					
CR1	ULS	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10	1	1.00	CO1	Permanente	1
			2	1.00	CO2	Permanente	1
			3	1.00	CO3	Permanente	1
CR2	S Ch	SLE - Caratteristica	1	1.00	CO4	Permanente	1
			2	1.00	CO5	Permanente	1
			3	1.00	CO6	Permanente	1
CR3	S Qp	SLE - Quasi permanente	1	1.00	CO7	Permanente	-
			1	1.00	CC4	Permanente	-
CR4		CCD1 - Inviluppo dei risultati - X	2	1.00	CC8	Permanente	-
			3	1.00	CC9	Permanente	-
			1	1.00	CC5	Permanente	-
CR5		CCD1 - Inviluppo dei risultati - Y	2	1.00	CC6	Permanente	-
			1	1.00	CC7	Permanente	-
CR6		CCD1 - Inviluppo dei risultati - Z	2	1.00	CC10	Permanente	-
			1	1.00	CR4	Permanente	-
CR7		CCD1 - Inviluppo dei risultati - 100% X/ 30% Y/ 30% Z	1	1.00	CR4	Permanente	-
			2	0.30	CR5	Permanente	-
			3	0.30	CR6	Permanente	-
CR8		CCD1 - Inviluppo dei risultati - 30% X/ 100% Y/ 30% Z	1	0.30	CR4	Permanente	-
			2	1.00	CR5	Permanente	-
			3	0.30	CR6	Permanente	-
CR9		CCD1 - Inviluppo dei risultati - 30% X/ 30% Y/ 100% Z	1	0.30	CR4	Permanente	-
			2	0.30	CR5	Permanente	-
CR10	SEIS	SLV - Sisma	1	1.00	CC1	Permanente	-
			2	1.00	CR7	Variabile	1
			3	1.00	CR8	Variabile	1
			4	1.00	CR9	Variabile	1

2.6.2 COMBINAZIONI DI RISULTATI - PARAMETRI DI CALCOLO

Combin. di risult.	SP	Descrizione	Parametri di calcolo
CR4		CCD1 - Inviluppo dei risultati - X	Opzioni : <input checked="" type="checkbox"/> Combinazione quadratica <input checked="" type="checkbox"/> Preserva segni <input type="radio"/> Positivo (max) / negativo (min)
CR5		CCD1 - Inviluppo dei risultati - Y	Opzioni : <input checked="" type="checkbox"/> Combinazione quadratica <input checked="" type="checkbox"/> Preserva segni <input type="radio"/> Positivo (max) / negativo (min)
CR6		CCD1 - Inviluppo dei risultati - Z	Opzioni : <input checked="" type="checkbox"/> Combinazione quadratica <input checked="" type="checkbox"/> Preserva segni <input type="radio"/> Positivo (max) / negativo (min)



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CC2
Vento in X

3.4 CARICHI DELLE SUPERFICI

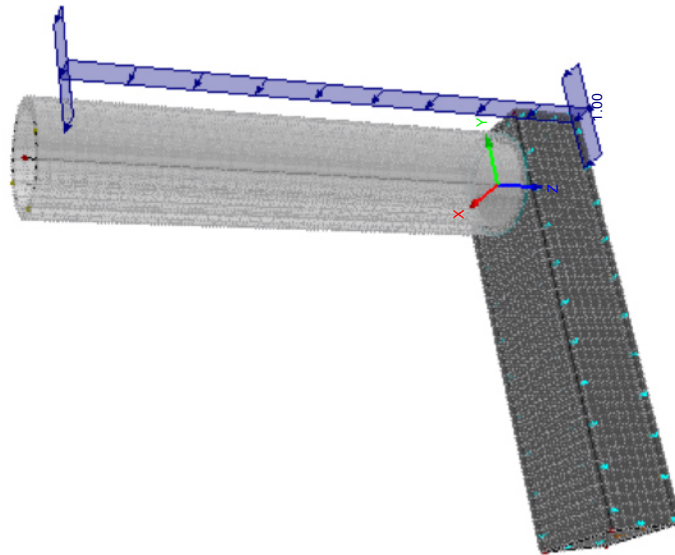
CC2: Vento in X

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Parametri del carico		
					Simbolo	Valore	Unità
1	2	Forza	Uniforme	XP	p	1.00	kN/m ²

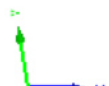


■ CC2: VENTO IN X

Isometrico



CC2: Vento in X
Carichi [kN/m²]





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CC3
Vento in Y

3.4 CARICHI DELLE SUPERFICI

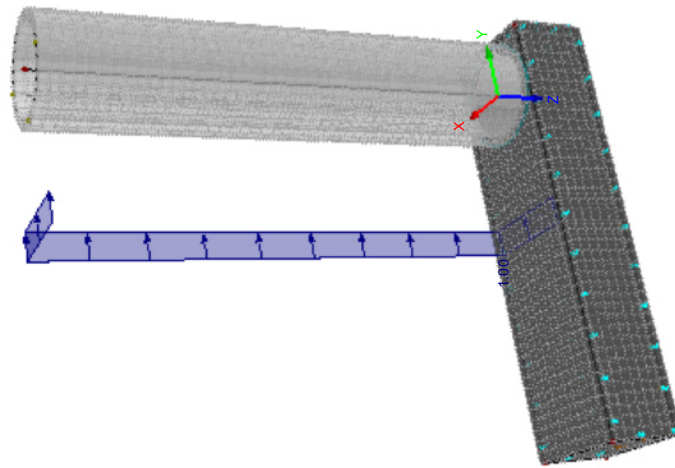
CC3: Vento in Y

nr.	Sulle superfici nr.	Tipo di carico	Distribuz. del carico	Direzione del carico	Parametri del carico		
					Simbolo	Valore	Unità
1	2	Forza	Uniforme	YP	p	1.00	kN/m ²

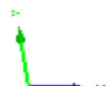


■ CC3: VENTO IN Y

Isometrico



CC3: Vento in Y
Carichi [kN/m²]





Progetto:

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4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Peso proprio			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	601.31	kN	
Somma delle reazioni vincolari in Z	601.31	kN	
Risultante delle reazioni intorno a X	0.000	kNm	Deviazione 0.00%
Risultante delle reazioni intorno a Y	0.000	kNm	Nel centro di gravità del modello (X:0.000, Y:-1.667, Z:-1.570 m)
Risultante delle reazioni intorno a Z	0.000	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.0	mm	Nel centro di gravità del modello
Max spostamento in Y	1.0	mm	Nodo EF nr. 1940 (X: -1.000, Y: -0.600, Z: 0.800 m)
Max spostamento in Z	0.9	mm	Nodo EF nr. 9 (X: 0.000, Y: -0.900, Z: -9.200 m)
Max spostamento vettoriale	1.4	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max rotazione intorno a X	0.2	mrad	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max rotazione intorno a Y	-0.1	mrad	Nodo EF nr. 1740 (X: 0.000, Y: 0.600, Z: 1.400 m)
Max rotazione intorno a Z	-0.0	mrad	Nodo EF nr. 1678 (X: 0.800, Y: -0.600, Z: 1.400 m)
Metodo di analisi	Lineare		Nodo EF nr. 1894 (X: -1.000, Y: 0.400, Z: 0.600 m)
Riduzione della rigidità moltiplicata per il coefficiente	<input type="checkbox"/>		Analisi statica geometricamente lineare
Numero di incrementi di carico	1		
Numero di iterazioni	4		
Vento in X			
Somma dei carichi in X	33.12	kN	
Somma delle reazioni vincolari in X	33.12	kN	Deviazione -0.00%
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	0.00	kN	
Somma delle reazioni vincolari in Z	0.00	kN	
Risultante delle reazioni intorno a X	0.000	kNm	Nel centro di gravità del modello (X:0.000, Y:-1.667, Z:-1.570 m)
Risultante delle reazioni intorno a Y	-100.363	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-55.220	kNm	Nel centro di gravità del modello
Max spostamento in X	3.7	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento in Y	0.1	mm	Nodo EF nr. 1626 (X: -1.000, Y: -1.400, Z: 1.400 m)
Max spostamento in Z	0.3	mm	Nodo EF nr. 8 (X: 0.900, Y: 0.000, Z: -9.200 m)
Max spostamento vettoriale	3.7	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max rotazione intorno a X	-0.0	mrad	Nodo EF nr. 2497 (X: -0.576, Y: -0.881, Z: 0.000 m)
Max rotazione intorno a Y	-0.4	mrad	Nodo EF nr. 1307 (X: 0.877, Y: 0.200, Z: -7.400 m)
Max rotazione intorno a Z	-0.1	mrad	Nodo EF nr. 989 (X: 0.900, Y: 0.000, Z: -0.200 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidità moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	4		
Vento in Y			
Stato del calcolo :			
La risultante dei carichi e la risultante delle reazioni vincolari in direzione X non sono equilibrate (deviazione -3.57%).			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	33.12	kN	
Somma delle reazioni vincolari in Y	33.12	kN	Deviazione 0.00%
Somma dei carichi in Z	0.00	kN	
Somma delle reazioni vincolari in Z	0.00	kN	
Risultante delle reazioni intorno a X	100.367	kNm	Nel centro di gravità del modello (X:0.000, Y:-1.667, Z:-1.570 m)
Risultante delle reazioni intorno a Y	0.000	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	0.000	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.0	mm	Nodo EF nr. 2358 (X: 1.000, Y: -0.400, Z: 0.200 m)
Max spostamento in Y	3.1	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento in Z	0.2	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento vettoriale	3.2	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max rotazione intorno a X	0.1	mrad	Nodo EF nr. 1024 (X: 0.000, Y: 0.900, Z: -7.200 m)
Max rotazione intorno a Y	-0.1	mrad	Nodo EF nr. 2444 (X: 0.750, Y: -0.798, Z: 0.000 m)
Max rotazione intorno a Z	-0.0	mrad	Nodo EF nr. 518 (X: -0.704, Y: -0.561, Z: -0.200 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidità moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	3		
CCD1 - Forma modale 1, direzione - X			
Stato del calcolo :			
La risultante dei carichi e la risultante delle reazioni vincolari in direzione Y non sono equilibrate (deviazione -29.41%).			
Somma dei carichi in X	-40.87	kN	
Somma delle reazioni vincolari in X	-40.87	kN	Deviazione -0.00%
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	0.01	kN	
Somma delle reazioni vincolari in Z	0.01	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	0.015	kNm	Nel centro di gravità del modello (X:0.000, Y:-1.667, Z:-1.570 m)
Risultante delle reazioni intorno a Y	185.486	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	68.740	kNm	Nel centro di gravità del modello
Max spostamento in X	-5.8	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento in Y	0.1	mm	Nodo EF nr. 1624 (X: 1.000, Y: -1.600, Z: 1.400 m)
Max spostamento in Z	0.5	mm	Nodo EF nr. 10 (X: -0.900, Y: 0.000, Z: -9.200 m)
Max spostamento vettoriale	5.8	mm	Nodo EF nr. 987 (X: -0.200, Y: 0.877, Z: -9.200 m)
Max rotazione intorno a X	-0.0	mrad	Nodo EF nr. 2491 (X: 0.576, Y: -0.881, Z: 0.000 m)
Max rotazione intorno a Y	0.6	mrad	Nodo EF nr. 744 (X: -0.877, Y: 0.200, Z: -7.600 m)
Max rotazione intorno a Z	0.1	mrad	Nodo EF nr. 659 (X: -0.900, Y: 0.000, Z: -0.200 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidità moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		



Progetto: _____ Modello: Camino Data: 27.02.2018

4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Numero di incrementi di carico	1		
Numero di iterazioni	4		
CCD1 - Forma modale 6, direzione - X			
Somma dei carichi in X	-29.36	kN	
Somma delle reazioni vincolari in X	-29.36	kN	Deviazione 0.00%
Somma dei carichi in Y	0.01	kN	
Somma delle reazioni vincolari in Y	0.01	kN	Deviazione 0.00%
Somma dei carichi in Z	0.00	kN	
Somma delle reazioni vincolari in Z	0.00	kN	
Risultante delle reazioni intorno a X	-0.010	kNm	Nel centro di gravità del modello (X:0.000, Y:-1.667, Z:-1.570 m)
Risultante delle reazioni intorno a Y	-66.961	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-72.411	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.1	mm	Nodo EF nr. 1931 (X: -1.000, Y: -7.000, Z: 0.600 m)
Max spostamento in Y	0.0	mm	Nodo EF nr. 1776 (X: -1.000, Y: 0.200, Z: 0.000 m)
Max spostamento in Z	0.0	mm	Nodo EF nr. 2409 (X: 0.000, Y: -7.000, Z: 0.000 m)
Max spostamento vettoriale	0.1	mm	Nodo EF nr. 1931 (X: -1.000, Y: -7.000, Z: 0.600 m)
Max rotazione intorno a X	-0.0	mrاد	Nodo EF nr. 145 (X: 0.704, Y: -0.561, Z: -0.600 m)
Max rotazione intorno a Y	0.0	mrاد	Nodo EF nr. 2325 (X: 1.000, Y: -7.000, Z: 0.200 m)
Max rotazione intorno a Z	-0.0	mrاد	Nodo EF nr. 9 (X: 0.000, Y: -0.900, Z: -9.200 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	4		
CCD1 - Forma modale 7, direzione - Z			
Stato del calcolo :			
La risultante dei carichi e la risultante delle reazioni vincolari in direzione Y non sono equilibrate (deviazione -2.67%).			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	-0.04	kN	
Somma delle reazioni vincolari in Y	-0.04	kN	Deviazione -2.67%
Somma dei carichi in Z	-6.24	kN	
Somma delle reazioni vincolari in Z	-6.24	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	20.073	kNm	Nel centro di gravità del modello (X:0.000, Y:-1.667, Z:-1.570 m)
Risultante delle reazioni intorno a Y	0.000	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-0.001	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.0	mm	Nodo EF nr. 2205 (X: 1.000, Y: -7.000, Z: 0.800 m)
Max spostamento in Y	-0.0	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento in Z	-0.0	mm	Nodo EF nr. 2409 (X: 0.000, Y: -7.000, Z: 0.000 m)
Max spostamento vettoriale	0.0	mm	Nodo EF nr. 2409 (X: 0.000, Y: -7.000, Z: 0.000 m)
Max rotazione intorno a X	0.0	mrاد	Nodo EF nr. 2622 (X: 0.000, Y: -1.414, Z: 0.000 m)
Max rotazione intorno a Y	0.0	mrاد	Nodo EF nr. 1335 (X: 0.800, Y: -7.000, Z: 1.400 m)
Max rotazione intorno a Z	-0.0	mrاد	Nodo EF nr. 142 (X: 0.704, Y: -0.561, Z: -0.200 m)
Metodo di analisi	Lineare		Analisi statica geometricamente lineare
Riduzione della rigidezza moltiplicata per il coefficiente	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	2		
CO1 - 1.3*CC1			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	781.70	kN	
Somma delle reazioni vincolari in Z	781.70	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	0.3	kNm	Nel centro di gravità del modello (X:0.0, Y:-1.7, Z:-1.6 m)
Risultante delle reazioni intorno a Y	0.0	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	0.0	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.0	mm	Nodo EF nr. 1940 (X: -1.000, Y: -0.600, Z: 0.800 m)
Max spostamento in Y	1.3	mm	Nodo EF nr. 9 (X: 0.000, Y: -0.900, Z: -9.200 m)
Max spostamento in Z	1.1	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento vettoriale	1.8	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max rotazione intorno a X	0.3	mrاد	Nodo EF nr. 1740 (X: 0.000, Y: 0.600, Z: 1.400 m)
Max rotazione intorno a Y	-0.2	mrاد	Nodo EF nr. 1678 (X: 0.800, Y: -0.600, Z: 1.400 m)
Max rotazione intorno a Z	-0.0	mrاد	Nodo EF nr. 1894 (X: -1.000, Y: 0.400, Z: 0.600 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	14		
CO2 - 1.3*CC1 + 1.5*CC2			
Somma dei carichi in X	49.68	kN	
Somma delle reazioni vincolari in X	49.68	kN	Deviazione 0.00%
Somma dei carichi in Y	-0.00	kN	
Somma delle reazioni vincolari in Y	-0.00	kN	
Somma dei carichi in Z	781.70	kN	
Somma delle reazioni vincolari in Z	781.70	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	0.3	kNm	Nel centro di gravità del modello (X:0.0, Y:-1.7, Z:-1.6 m)
Risultante delle reazioni intorno a Y	-151.7	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	-82.8	kNm	Nel centro di gravità del modello
Max spostamento in X	5.6	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento in Y	1.4	mm	Nodo EF nr. 10 (X: -0.900, Y: 0.000, Z: -9.200 m)
Max spostamento in Z	1.6	mm	Nodo EF nr. 17 (X: 1.000, Y: 1.000, Z: 1.400 m)
Max spostamento vettoriale	5.9	mm	Nodo EF nr. 1222 (X: 0.704, Y: 0.561, Z: -9.200 m)
Max rotazione intorno a X	0.3	mrاد	Nodo EF nr. 1740 (X: 0.000, Y: 0.600, Z: 1.400 m)
Max rotazione intorno a Y	-0.7	mrاد	Nodo EF nr. 1689 (X: 0.800, Y: -0.400, Z: 1.400 m)
Max rotazione intorno a Z	-0.1	mrاد	Nodo EF nr. 5 (X: 0.900, Y: 0.000, Z: -0.400 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)



Progetto:

Modello: Camino

Data: 27.02.2018

4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Forze interne riferite al sistema deformato per... Riduzione della rigidità moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 44		N, V _y , V _z , M _y , M _z , M _T
CO3 - 1.3°CC1 + 1.5°CC3 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidità moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	0.00 0.00 49.68 49.68 781.70 781.70 151.1 0.0 0.0 -0.0 6.1 1.4 6.2 0.4 -0.2 -0.0 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 36	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mm mrad mrad mrad 2° Ordine	Deviazione 0.00% Deviazione 0.00% Nel centro di gravità del modello (X:0.0, Y:-1.7, Z:-1.6 m) Nel centro di gravità del modello Nel centro di gravità del modello Nodo EF nr. 1940 (X: -1.000, Y: -0.600, Z: 0.800 m) Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m) Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m) Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m) Nodo EF nr. 1751 (X: 0.000, Y: 0.800, Z: 1.400 m) Nodo EF nr. 1678 (X: 0.800, Y: -0.600, Z: 1.400 m) Nodo EF nr. 2087 (X: 0.600, Y: 1.000, Z: 0.600 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO4 - CC1 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidità moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	0.00 0.00 0.00 0.00 601.31 601.31 0.2 0.0 0.0 -0.0 1.0 0.9 1.4 0.2 -0.1 -0.0 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 14	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mm mrad mrad mrad 2° Ordine	Deviazione 0.00% Nel centro di gravità del modello (X:0.0, Y:-1.7, Z:-1.6 m) Nel centro di gravità del modello Nel centro di gravità del modello Nodo EF nr. 1940 (X: -1.000, Y: -0.600, Z: 0.800 m) Nodo EF nr. 9 (X: 0.000, Y: -0.900, Z: -9.200 m) Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m) Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m) Nodo EF nr. 1740 (X: 0.000, Y: 0.600, Z: 1.400 m) Nodo EF nr. 1678 (X: 0.800, Y: -0.600, Z: 1.400 m) Nodo EF nr. 1894 (X: -1.000, Y: 0.400, Z: 0.600 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO5 - CC1 + CC2 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y Risultante delle reazioni intorno a Z Max spostamento in X Max spostamento in Y Max spostamento in Z Max spostamento vettoriale Max rotazione intorno a X Max rotazione intorno a Y Max rotazione intorno a Z Metodo di analisi Forze interne riferite al sistema deformato per... Riduzione della rigidità moltiplicata per il coefficiente Considera gli effetti favorevoli del taglio Dividi i risultati per il coeff. della CO Numero di incrementi di carico Numero di iterazioni	33.12 33.12 0.00 0.00 601.31 601.31 0.2 -100.9 -55.2 3.7 1.1 1.2 4.0 0.2 -0.5 -0.1 2° Ordine <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1 43	kN kN kN kN kN kN kNm kNm kNm mm mm mm mm mm mrad mrad mrad 2° Ordine	Deviazione 0.00% Deviazione 0.00% Nel centro di gravità del modello (X:0.0, Y:-1.7, Z:-1.6 m) Nel centro di gravità del modello Nel centro di gravità del modello Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m) Nodo EF nr. 10 (X: -0.900, Y: 0.000, Z: -9.200 m) Nodo EF nr. 17 (X: 1.000, Y: 1.000, Z: 1.400 m) Nodo EF nr. 1222 (X: 0.704, Y: 0.561, Z: -9.200 m) Nodo EF nr. 1740 (X: 0.000, Y: 0.600, Z: 1.400 m) Nodo EF nr. 1678 (X: 0.800, Y: -0.600, Z: 1.400 m) Nodo EF nr. 5 (X: 0.900, Y: 0.000, Z: -0.400 m) Analisi del secondo ordine (non-lineare, Timoshenko) N, V _y , V _z , M _y , M _z , M _T
CO6 - CC1 + CC3 Somma dei carichi in X Somma delle reazioni vincolari in X Somma dei carichi in Y Somma delle reazioni vincolari in Y Somma dei carichi in Z Somma delle reazioni vincolari in Z Risultante delle reazioni intorno a X Risultante delle reazioni intorno a Y	0.00 0.00 33.12 33.12 601.31 601.31 100.7 0.0	kN kN kN kN kN kN kNm kNm	Deviazione 0.00% Deviazione 0.00% Nel centro di gravità del modello (X:0.0, Y:-1.7, Z:-1.6 m) Nel centro di gravità del modello



Progetto:

Modello: Camino

Data: 27.02.2018

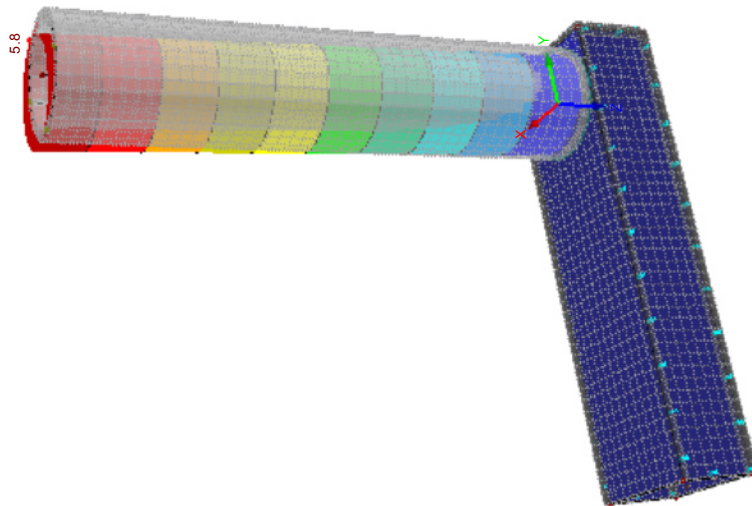
4.0 RISULTATI - SOMMARIO

Descrizione	Valore	Unità	Commento
Risultante delle reazioni intorno a Z	0.0	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.0	mm	Nodo EF nr. 1940 (X: -1.000, Y: -0.600, Z: 0.800 m)
Max spostamento in Y	4.2	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento in Z	1.1	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento vettoriale	4.3	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max rotazione intorno a X	0.3	mrاد	Nodo EF nr. 1751 (X: 0.000, Y: 0.800, Z: 1.400 m)
Max rotazione intorno a Y	-0.2	mrاد	Nodo EF nr. 1678 (X: 0.800, Y: -0.600, Z: 1.400 m)
Max rotazione intorno a Z	-0.0	mrاد	Nodo EF nr. 2097 (X: 0.600, Y: 1.000, Z: 0.800 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	38		
CO7 - CC1			
Somma dei carichi in X	0.00	kN	
Somma delle reazioni vincolari in X	0.00	kN	
Somma dei carichi in Y	0.00	kN	
Somma delle reazioni vincolari in Y	0.00	kN	
Somma dei carichi in Z	601.31	kN	
Somma delle reazioni vincolari in Z	601.31	kN	Deviazione 0.00%
Risultante delle reazioni intorno a X	0.2	kNm	Nel centro di gravità del modello (X:0.0, Y:-1.7, Z:-1.6 m)
Risultante delle reazioni intorno a Y	0.0	kNm	Nel centro di gravità del modello
Risultante delle reazioni intorno a Z	0.0	kNm	Nel centro di gravità del modello
Max spostamento in X	-0.0	mm	Nodo EF nr. 1940 (X: -1.000, Y: -0.600, Z: 0.800 m)
Max spostamento in Y	1.0	mm	Nodo EF nr. 9 (X: 0.000, Y: -0.900, Z: -9.200 m)
Max spostamento in Z	0.9	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento vettoriale	1.4	mm	Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max rotazione intorno a X	0.2	mrاد	Nodo EF nr. 1740 (X: 0.000, Y: 0.600, Z: 1.400 m)
Max rotazione intorno a Y	-0.1	mrاد	Nodo EF nr. 1678 (X: 0.800, Y: -0.600, Z: 1.400 m)
Max rotazione intorno a Z	-0.0	mrاد	Nodo EF nr. 1894 (X: -1.000, Y: 0.400, Z: 0.600 m)
Metodo di analisi	2° Ordine		Analisi del secondo ordine (non-lineare, Timoshenko)
Forze interne riferite al sistema deformato per...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
Riduzione della rigidezza moltiplicata per il coefficiente	<input checked="" type="checkbox"/>		
Considera gli effetti favorevoli del taglio	<input checked="" type="checkbox"/>		
Dividi i risultati per il coeff. della CO	<input type="checkbox"/>		
Numero di incrementi di carico	1		
Numero di iterazioni	14		
Sommario			
Stato del calcolo: Problema in CC3, CC4, CC5, CC7, CC10			
Max spostamento in X	-5.8	mm	CC4, Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento in Y	6.1	mm	CO3, Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max spostamento in Z	1.6	mm	CO2, Nodo EF nr. 17 (X: 1.000, Y: 1.000, Z: 1.400 m)
Max spostamento vettoriale	6.2	mm	CO3, Nodo EF nr. 1034 (X: -0.000, Y: 0.900, Z: -9.200 m)
Max rotazione intorno a X	0.4	mrاد	CO3, Nodo EF nr. 1751 (X: 0.000, Y: 0.800, Z: 1.400 m)
Max rotazione intorno a Y	-0.7	mrاد	CO2, Nodo EF nr. 1689 (X: 0.800, Y: -0.400, Z: 1.400 m)
Max rotazione intorno a Z	-0.1	mrاد	CO2, Nodo EF nr. 5 (X: 0.900, Y: 0.000, Z: -0.400 m)
Altre impostazioni			
Numero di elementi finiti 1D		:	0
Numero di elementi finiti 2D		:	2672
Numero di elementi finiti 3D		:	0
Numero di nodi della mesh EF		:	2695
Numero di equazioni		:	16170
Max numero di iterazioni		:	100
Numero di divisioni per i risultati delle aste		:	10
Divisione di fune/vincolo est. elast./aste rastremate		:	10
Numero delle divisioni delle aste per la ricerca dei valori massimi		:	10
Suddivisioni della mesh EF per i risultati grafici		:	0
Percentuale di iterazioni secondo il metodo di Picard in combinazione con il metodo di Newton-Raphson		:	5 %
Attiva vincoli esterni unilaterali		:	<input checked="" type="checkbox"/>
Opzioni			
<input checked="" type="checkbox"/> Attiva rigidezza a taglio delle aste (Ay, Az)			
<input checked="" type="checkbox"/> Attiva divisioni delle aste per l'analisi a grandi spostamenti o post-critica			
<input checked="" type="checkbox"/> Attiva modifiche inserite della rigidezza			
<input type="checkbox"/> Ignora gradi di libertà rotazionali			
<input checked="" type="checkbox"/> Verifica forze critiche delle aste			
Metodo per il sistema di equazioni			<input checked="" type="radio"/> Diretto <input type="radio"/> Iterazione
Teoria delle piastre inflesse			<input checked="" type="radio"/> Mindlin <input type="radio"/> Kirchhoff
Versione del solutore			<input type="radio"/> 32-bit <input checked="" type="radio"/> 64-bit
Precisione e tolleranza	<input type="checkbox"/> Modifica impostazioni predefinite		
Effetti non-lineari - Attiva	<input checked="" type="checkbox"/> Vincoli esterni e vincoli esterni elastici		

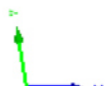


■ SPOSTAMENTI GENERALIZZATI GLOBALI u_x

Isometrico



CR10: SLV - Sisma
Spostamenti generalizzati globali u-X
Combinazioni di risultati: Valori max

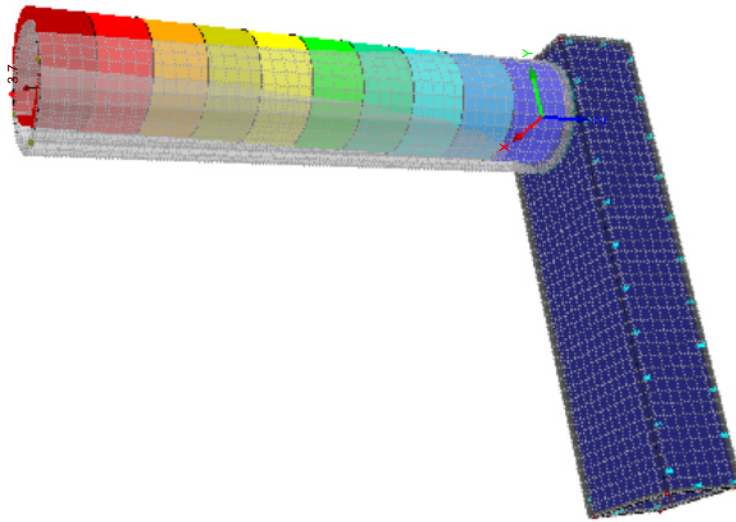


Max u-X: 5.8 Min u-X: 0.0 mm
Fattore di deformazione: 100.00

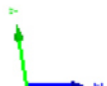


■ SPOSTAMENTI GENERALIZZATI GLOBALI u_Y

Isometrico



CR10: SLV - Sisma
Spostamenti generalizzati globali u-Y
Combinazioni di risultati: Valori max

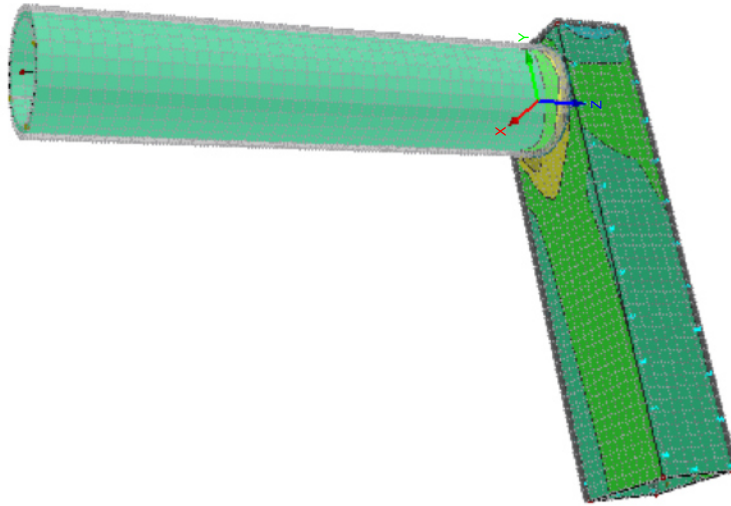


Max u-Y: 3.7 Min u-Y: 0.5 mm
Fattore di deformazione: 100.00

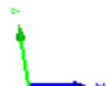


■ VALORI BASE m_x

Isometrico



CR1: S.LU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Forze interne di base m_x
Combinazioni di risultati: Valori max

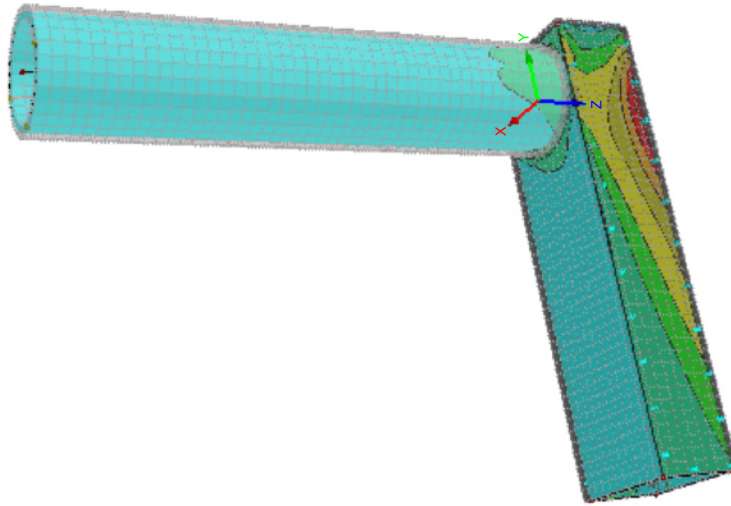


Max m_x : 23.33, Min m_x : -16.32 kNm/m

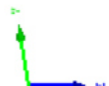


■ VALORI BASE m_y

Isometrico



CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Forze interne di base m-y
Combinazioni di risultati: Valori max



Max m-y: 15.63, Min m-y: -7.56 kNm/m



RF-CONCRETE Surfaces
CA1
Progetto del calcestruzzo
armato

Progetto: _____ Modello: Camino Data: 27.02.2018

1.1 DATI GENERALI

Normativa di progetto:	UNI EN 1992-1-1/NA:2007-07	
STATO LIMITE ULTIMO		
Combinazioni di risultati per il progetto:	CR1	SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
	CR10	Persistente e transitoria
		SLV - Sisma
		Persistente e transitoria
DETTAGLI		
Metodo di analisi per l'involuppo dei risultati	Misto	
Applica forze interne medie nelle regioni medie definite per il calcolo SLU e per il metodo analitico del calcolo SLE.	<input type="checkbox"/>	
Applica le forze interne senza le componenti della nervatura	<input type="checkbox"/>	

1.2 MATERIALI

Materiale nr.	Descrizione del materiale		Commento
	Classe di resistenza del cls	Descrizione dell'acciaio	
1	Calcestruzzo C30/37	B 450 S (A)	
2	Beton C28/35	B 450 S (A)	

1.3 SUPERFICI

Superf. nr.	Mat. nr.	Tipo di spessore	Spessore [cm]	Note	Commento
2	1	Costante	20.00		
3	2	Costante	25.00		
4	2	Costante	25.00		
5	2	Costante	25.00		
6	2	Costante	25.00		
7	2	Costante	25.00		

1.4 GRUPPO DI ARMATURA NR. 1 - CAMINO

Applicato alle superfici:	2	
RAPPORTO DI ARMATURA		
Armatura secondaria minima	20.0 %	
Armatura di base minima	0.0 %	
Armatura compressa minima	0.0 %	
Armatura tesa minima	0.0 %	
Massima percentuale di armatura	4.0 %	
Minima percentuale di armatura a taglio	0.0 %	
Copriferro secondo normativa	<input checked="" type="checkbox"/>	
STRATO DI ARMATURA DI BASE - SUPERIORE (-z)		
Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 4.50, d-2: 5.50 cm	
Parametri di definizione del copriferro		
Impostazioni identiche al copriferro	C+z (inf)	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	As-1,-z (sup): 0.00, As-2,-z (sup): 0.00 cm²/m	
STRATO DI ARMATURA DI BASE - INFERIORE (+z)		
Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 4.50, d-2: 5.50 cm	
Parametri di definizione del copriferro		
Classe di esposizione sec. 4.4.1.2(5)	XC4	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Direzione dell'armatura	φ1	φ2
Massimo diametro dell'armatura	0.010 m	0.010 m
Copriferro minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	0.010 m	0.010 m
Copriferro minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	0.030 m	0.030 m
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.000 m	0.000 m
Copriferro minimo sec. 4.4.1.2(2)	0.030 m	0.030 m
Tolleranza della deviazione sec. 4.4.1.3	0.010 m	0.010 m
Copriferro nominale dell'armatura sec. 4.4.1.1	0.045 m	0.045 m
Copriferro minimo	0.045 m	0.055 m
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	As-1,+z (inf): 0.00, As-2,+z (inf): 0.00 cm²/m	
ARMATURA LONGITUDINALE PER IL PROGETTO DELLA FORZA DI TAGLIO		
Incrementa automaticamente l'armatura longitudinale necessaria per evitare armatura a taglio		
OPZIONI PER UNI EN 1992-1-1/NA:2007-07		
Minima armatura longitudinale delle piastre sec. 9.3.1	<input checked="" type="checkbox"/>	
Direzione dell'armatura minima		



Progetto: _____ Modello: Camino

Data: 27.02.2018

1.4 GRUPPO DI ARMATURA NR. 1 - CAMINO

Direzione dell'armatura con la forza di trazione principale dalle superfici sup (-z) e inf (+z) insieme:	<input checked="" type="checkbox"/>
Minima armatura longitudinale delle pareti sec. 9.6	<input type="checkbox"/>
Minima armatura a taglio	<input checked="" type="checkbox"/>
Limitazione profondità asse neutro	<input checked="" type="checkbox"/>
Inclinazione variabile del puntone - min	21.801 °
Inclinazione variabile del puntone di calcestruzzo - max	45.000 °
Coefficiente parziale γ_s	PT 1.15, EC 1.00, SLE 1.00
Coefficiente parziale γ_c	PT 1.50, EC 1.00, SLE 1.00
Considerazione degli effetti a lungo termine Alpha-cc	PT 0.85, EC 0.85, SLE 1.00
Considerazione degli effetti a lungo termine Alpha-ct	SLE 1.00

1.4 GRUPPO DI ARMATURA NR. 2 - CANALE

Applicato alle superfici:	3-7	
RAPPORTO DI ARMATURA		
Armatura secondaria minima	20.0 %	
Armatura di base minima	0.0 %	
Armatura compressa minima	0.0 %	
Armatura tesa minima	0.0 %	
Massima percentuale di armatura	4.0 %	
Minima percentuale di armatura a taglio	0.0 %	
Copriferro secondo normativa	<input checked="" type="checkbox"/>	
STRATO DI ARMATURA DI BASE - SUPERIORE (-z)		
Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 4.00, d-2: 5.00 cm	
Parametri di definizione del copriferro		
Impostazioni identiche al copriferro		
Direzioni di armatura	C ^{+z} (inf) Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	As-1,-z (sup): 0.00, As-2,-z (sup): 0.00 cm ² /m	
STRATO DI ARMATURA DI BASE - INFERIORE (+z)		
Numero di direzioni	2	
Copriferro dal baricentro delle barre	d-1: 4.00, d-2: 5.00 cm	
Parametri di definizione del copriferro		
Classe di esposizione sec. 4.4.1.2(5)	XC2 / XC3	
Classe di abrasione sec. 4.4.1.2(13)	No	
Vita utile di progetto sec. 4.4.1.2(5) Tabella 4.3N	50 anni	
Calcestruzzo messo in opera sec. 4.4.1.3(4)	calcestruzzo gettato in opera	
Aria aggiunta maggiore del 4% sec. 4.4.1.2(5) Nota 2.	<input type="checkbox"/>	
Controllo speciale della qualità della produzione del calcestruzzo sec. 4.4.1.2(5) Tabella 4.3N	<input type="checkbox"/>	
Dimensione massima nominale dell'aggregato più grande di 32 mm sec. 4.4.1.2(3) Tabella 4.2	<input type="checkbox"/>	
Direzione dell'armatura	ϕ_1 ϕ_2	
Massimo diametro dell'armatura	0.010 m 0.010 m	
Copriferro minimo dovuto ai requisiti di aderenza sec. 4.4.1.2(3)	0.010 m 0.010 m	
Copriferro minimo dovuto alle condizioni ambientali sec. 4.4.1.2(5)	0.025 m 0.025 m	
Margine di sicurezza aggiuntivo sec. 4.4.1.2(6)	0.000 m 0.000 m	
Copriferro minimo sec. 4.4.1.2(2)	0.025 m 0.025 m	
Tolleranza della deviazione sec. 4.4.1.3	0.010 m 0.010 m	
Copriferro nominale dell'armatura sec. 4.4.1.1	0.040 m 0.040 m	
Copriferro minimo	0.040 m 0.050 m	
Direzioni di armatura	Phi-1: 0.000°, Phi-2: 90.000°	
Area di armatura	As-1,+z (inf): 0.00, As-2,+z (inf): 0.00 cm ² /m	

ARMATURA LONGITUDINALE PER IL PROGETTO DELLA FORZA DI TAGLIO

Applica il valore maggiore tra l'armatura necessaria e l'armatura disposta (armatura di base e aggiuntiva) per direzione di armatura

OPZIONI PER UNI EN 1992-1-1/NA:2007-07

Minima armatura longitudinale delle piastre sec. 9.3.1	<input checked="" type="checkbox"/>
Direzione dell'armatura minima	
Direzione dell'armatura con la forza di trazione principale dalle superfici sup (-z) e inf (+z) insieme:	<input checked="" type="checkbox"/>
Minima armatura longitudinale delle pareti sec. 9.6	<input type="checkbox"/>
Minima armatura a taglio	<input checked="" type="checkbox"/>
Limitazione profondità asse neutro	<input checked="" type="checkbox"/>
Inclinazione variabile del puntone - min	21.801 °
Inclinazione variabile del puntone di calcestruzzo - max	45.000 °
Coefficiente parziale γ_s	PT 1.15, EC 1.00, SLE 1.00
Coefficiente parziale γ_c	PT 1.50, EC 1.00, SLE 1.00
Considerazione degli effetti a lungo termine Alpha-cc	PT 0.85, EC 0.85, SLE 1.00
Considerazione degli effetti a lungo termine Alpha-ct	SLE 1.00

2.2 ARMATURA NECESSARIA PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Simbolo	Armatura nec. SLU	Armatura di base	Armatura aggiuntiva		Unità	Note
		X	Y	Z				Necessaria	Disposta		
2	M143	0.704	-0.561	0.000	a _{s,1,-z} (sup)	3.76	0.00	3.76	-	cm ² /m	
	M5 - E2	0.900	0.000	-0.400	a _{s,2,-z} (sup)	2.51	0.00	2.51	-	cm ² /m	
	M425	-0.390	-0.811	0.000	a _{s,1,+z} (inf)	3.39	0.00	3.39	-	cm ² /m	
	M519	-0.704	-0.561	0.000	a _{s,2,+z} (inf)	3.32	0.00	3.32	-	cm ² /m	
	M1 - E1	0.900	0.000	0.000	a _{sw}	0.00	-	-	-	cm ² /m ²	
3	M16	1.000	-7.000	1.400	a _{s,1,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M17	1.000	1.000	1.400	a _{s,2,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M16	1.000	-7.000	1.400	a _{s,1,+z} (inf)	3.08	0.00	3.08	-	cm ² /m	



Progetto:

Modello: Camino

Data: 27.02.2018

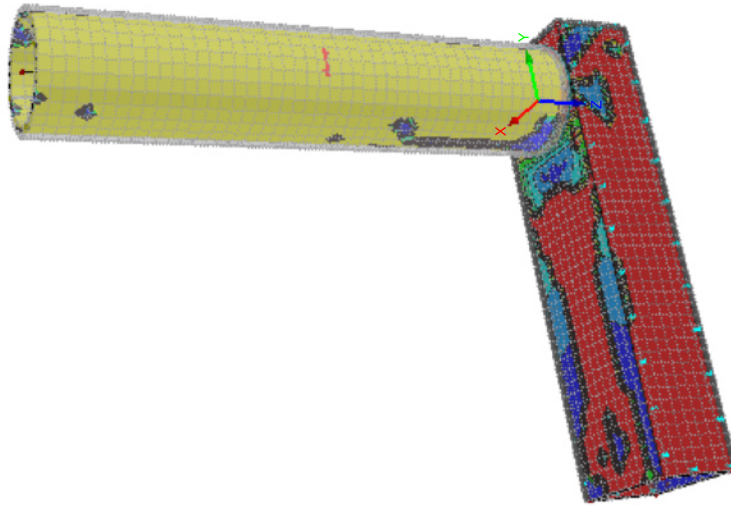
2.2 ARMATURA NECESSARIA PER SUPERFICIE

Superf. nr.	Punto nr.	Coordinate punto [m]			Simbolo	Armatura nec. SLU	Armatura di base	Armatura aggiuntiva		Unità	Note
		X	Y	Z				Necessaria	Disposta		
4	M17	1.000	1.000	1.400	a _{s,2,+z} (inf)	3.08	0.00	3.08	-	cm ² /m	
	M16	1.000	-7.000	1.400	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M15	-1.000	-7.000	0.000	a _{s,1,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M14	-1.000	1.000	0.000	a _{s,2,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M1593	-1.000	-2.000	1.400	a _{s,1,+z} (inf)	3.08	0.00	3.08	-	cm ² /m	
5	M14	-1.000	1.000	0.000	a _{s,2,+z} (inf)	3.08	0.00	3.08	-	cm ² /m	
	M14	-1.000	1.000	0.000	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M13	1.000	1.000	0.000	a _{s,1,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M13	1.000	1.000	0.000	a _{s,2,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M1759	-0.600	1.000	1.400	a _{s,1,+z} (inf)	3.08	0.00	3.08	-	cm ² /m	
6	M13	1.000	1.000	0.000	a _{s,2,+z} (inf)	3.08	0.00	3.08	-	cm ² /m	
	M13	1.000	1.000	0.000	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M16	1.000	-7.000	1.400	a _{s,1,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M12	1.000	-7.000	0.000	a _{s,2,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M1602	1.000	-2.000	1.400	a _{s,1,+z} (inf)	3.08	0.00	3.08	-	cm ² /m	
7	M12	1.000	-7.000	0.000	a _{s,2,+z} (inf)	3.08	0.00	3.08	-	cm ² /m	
	M12	1.000	-7.000	0.000	a _{sw}	0.00	-	-	-	cm ² /m ²	
	M1	0.900	0.000	0.000	a _{s,1,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M1	0.900	0.000	0.000	a _{s,2,-z} (sup)	3.08	0.00	3.08	-	cm ² /m	
	M190	0.561	-0.704	0.000	a _{s,1,+z} (inf)	4.40	0.00	4.40	-	cm ² /m	
	M190	0.561	-0.704	0.000	a _{s,2,+z} (inf)	3.50	0.00	3.50	-	cm ² /m	
	M4	0.877	-0.200	0.000	a _{sw}	13.25	-	-	-	cm ² /m ²	

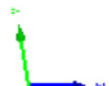


■ **ARMATURA NECESSARIA $a_{s,2,+z}$ (inf)**

Isometrico



RF-CONCRETE Surfaces CA1
Progetto del calcestruzzo armato
Armatura necessaria a-s,2,+z (inf)

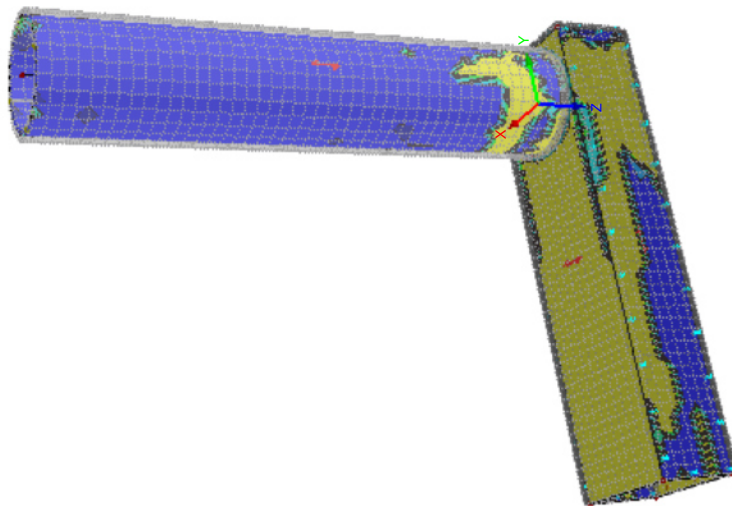


Max a-s,2,+z (inf): 3.50, Min a-s,2,+z (inf): 0.00 [cm²/m]



■ **ARMATURA NECESSARIA $a_{s,1,+z}$ (inf)**

Isometrico



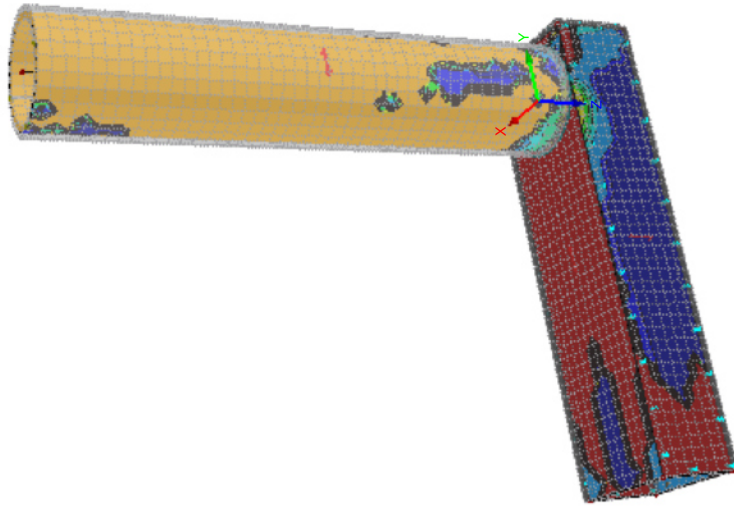
RF-CONCRETE Surfaces CA1
Progetto del calcestruzzo armato
Armatura necessaria $a_{s,1,+z}$ (inf)

Max $a_{s,1,+z}$ (inf): 4.40, Min $a_{s,1,+z}$ (inf): 0.00 [cm²/m]

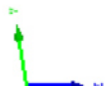


■ ARMATURA NECESSARIA $a_{s,2,-z}$ (sup)

Isometrico



RF-CONCRETE Surfaces CA1
Progetto del calcestruzzo armato
Armatura necessaria a-s,-z (sup)

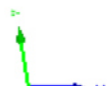
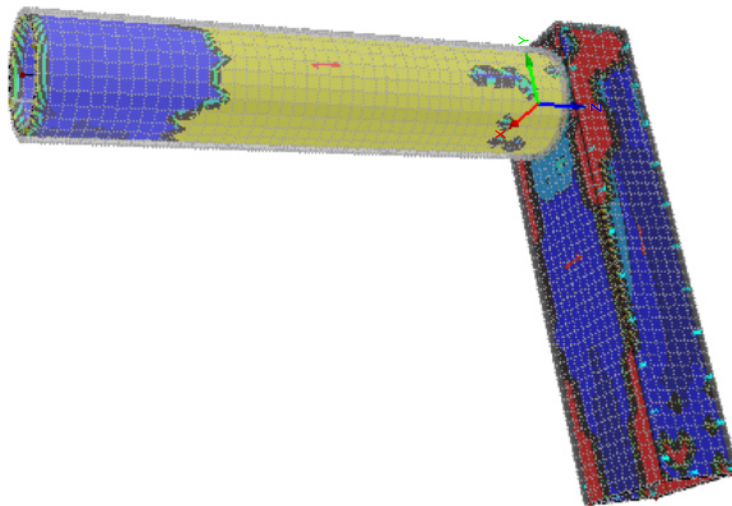


Max a-s,-z (sup): 3.08, Min a-s,-z (sup): 0.01 [cm²/m]



■ **ARMATURA NECESSARIA $a_{s,1,-z}$ (sup)**

Isometrico



Max $a_{s,1,-z}$ (sup): 3.76. Min $a_{s,1,-z}$ (sup): 0.00 [cm²/m]



Progetto:

Modello: Camino

Data: 27.02.2018

1.1 DATI GLOBALI

Attività	<input checked="" type="checkbox"/> Analisi modale (autovettori) <input checked="" type="checkbox"/> Combinazioni di massa <input type="checkbox"/> Vibrazioni forzate <input type="checkbox"/> Spettro di risposta <input type="checkbox"/> Accelerogrammi <input type="checkbox"/> Diagrammi del tempo <input checked="" type="checkbox"/> Analisi con forze statiche equivalenti
Impostazione	Accelerazione di gravità : 10.00 m/s ²

1.2.1 CASI DI MASSE - GENERALE

No.	Descrizione del caso di massa	Parameters
CM1	Peso proprio	Tipo di caso di massa : Permanente Masse <input checked="" type="checkbox"/> : Dal peso proprio della struttura

1.3.1 COMBINAZIONI DI MASSA - GENERALE

nr.	Descrizione della combinazione di massa	Parametri
COM1	Massa sismica	Mass Cases : 1.00 CM1 - Peso proprio Commento :

1.4.1 CASO DI VIBRAZIONE NATURALE - GENERALE

Caso CVN	Descrizione del caso di vibrazione naturale	Parametri
CVN1	Modo di vibrare	Numero di autovalori minori : 10 Masse agenti : CM1 - Peso proprio Masse considerate in <input checked="" type="checkbox"/> Direzione X <input checked="" type="checkbox"/> Direzione Y <input checked="" type="checkbox"/> Direzione Z

1.4.2 CASO DI VIBRAZIONE NATURALE - PARAMETRI DI CALCOLO

Caso CVN	Descrizione del caso di vibrazione naturale	Parametri di calcolo
CVN1	Modo di vibrare	Tipo di matrice delle masse : Matrice diagonale Scala forme modali : Max {u _i } = 1 Metodo di risoluzione degli autovalori : Lanzcos

1.5.1 SPETTRO DI RISPOSTA - GENERAL

Caso SR	Descrizione dello spettro di risposta	Tipo di definizione	Commento
RS1	Spettro orizzontale	Secondo la normativa: NTC 2008 - Italy Appendice nazionale: UNI - Italia	
RS2	Spettro verticale	Secondo la normativa: NTC 2008 - Italy Appendice nazionale: UNI - Italia	

1.5.2 SPETTRO DI RISPOSTA - PARAMETRI DELLE NORMATIVA

nr.	Descrizione dello spettro di risposta	Parametri del caso di massa
SR1	Spettro orizzontale	Tipo di spettro : Design spectrum for linear calculation Tipo di spettro : Horizontal spectrum Direzione dello spettro : Azione sismica Accelerazione del terreno di progetto a _g : 0.5100 Spectral amplification F ₀ : 2.5980 Time factor T _C ⁺ : 0.3460 Parametro per la descrizione dello spettro di risposta Tipo di terreno : C Topography zone : T1 Coefficiente del terreno S _S : 1.5000 Topography factor S _T : 1.0000 Functioning factor C _C : 1.4904 Limite inferiore dell'area con accelerazione spettrale costante (orizzontale) T _{B-H} : 0.1719 Limite superiore dell'area con accelerazione spettrale costante (orizzontale) T _{C-H} : 0.5157 RXDynam11_UnitAccelerations RXDynam11_UnitTimes RXDynam11_UnitTimes



Progetto:

Modello: Camino

Data:

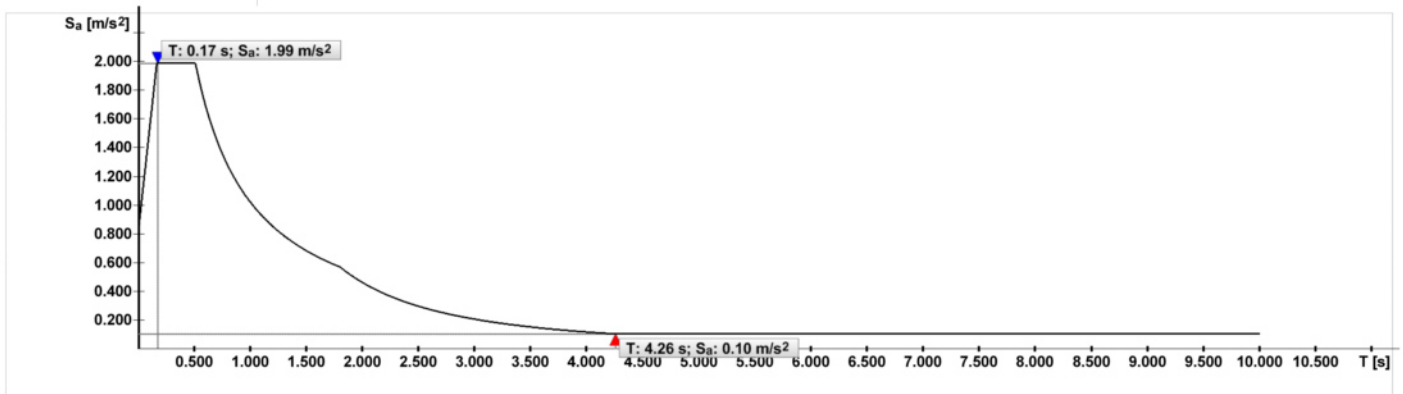
27.02.2018

1.5.2 SPETTRO DI RISPOSTA - PARAMETRI DELLE NORMATIVA

nr.	Descrizione dello spettro di risposta	Parametri del caso di massa	
		Valore che definisce l'inizio dell'area con spostamenti spettrali costanti (orizzontale)	T_{D-H} : 1.8040 RXDynam11_UnitTimes
		Coefficienti	
		Coefficiente di comportamento	q : 1.0000
		Valore limite dello spettro di progetto orizzontale	β : 0.2000
SR2	Spettro verticale	Tipo di spettro	: Design spectrum for linear calculation
		Tipo di spettro	: Vertical spectrum
		Direzione dello spettro	: Vertical spectrum
		Azione sismica	
		Accelerazione del terreno di progetto	a_g : 0.5100 RXDynam11_UnitAccelerations
		Spectral amplification	F_0 : 2.5980
		Time factor	T_C^* : 0.3460
		Vertical spectral amplification	F_V : 0.7921
		Parametro per la descrizione dello spettro di risposta	
		Tipo di terreno	: C
		Topography zone	: T1
		Coefficiente del terreno	S_S : 1.0000
		Topography factor	S_T : 1.0000
		Functioning factor	C_C : 1.4904
		Limite inferiore dell'aria con accelerazione spettrale costante (verticale)	T_{B-V} : 0.0500 RXDynam11_UnitTimes
		Limite superiore dell'aria con accelerazione spettrale costante (verticale)	T_{C-V} : 0.1500 RXDynam11_UnitTimes
		Valore che definisce l'inizio dell'area con spostamenti spettrali costanti (verticale)	T_{D-V} : 1.0000 RXDynam11_UnitTimes
		Coefficienti	
		Coefficiente di comportamento	q : 1.5000
		Valore limite dello spettro di progetto orizzontale	β : 0.2000

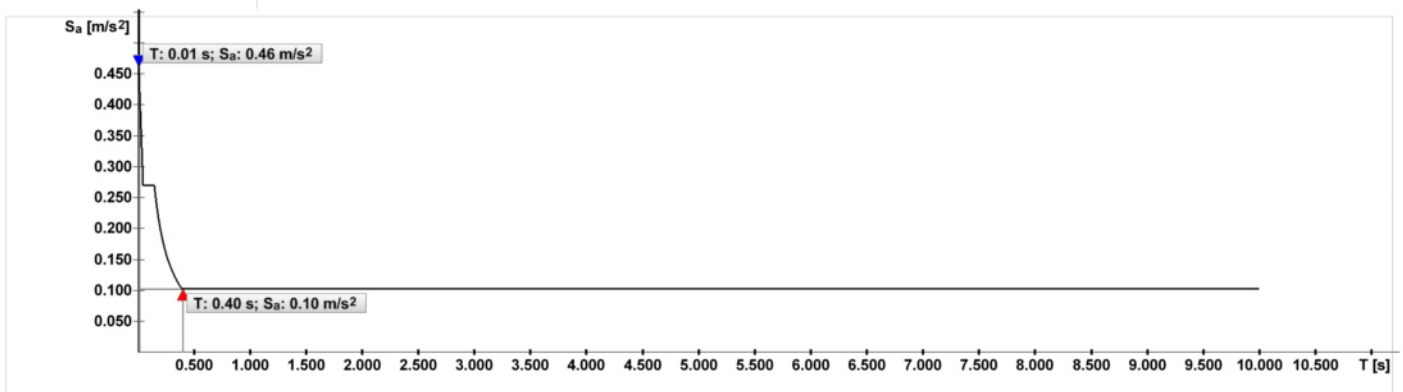
1.5.3.1 SPETTRO DI RISPOSTA - GRAFICO

RS1



1.5.3.2 SPETTRO DI RISPOSTA - GRAFICO

RS2





Progetto: _____ Modello: Camino Data: 27.02.2018

1.8.1 CASI DI CARICO DINAMICI - GENERALE

Caso di CCD	Descrizione dei casi di carico dinamici	parametri
CCD1	Modi di vibrare	Tipo di metodo : Analisi con forze statiche equivalenti (spettro di risposta necessario) <input checked="" type="checkbox"/> Assegna vibrazione naturale : <input checked="" type="checkbox"/> Caso di vibrazione naturale: Modo di vibrare

1.8.2.4 CASI DI CARICO DINAMICI - ANALISI CON FORZE STATICHE EQUIVALENTI

Caso di CCD	Descrizione dei casi di carico dinamici	parametri
CCD1	Modi di vibrare	Assegna spettro di risposta: Spettro di risposta in direzione <input checked="" type="checkbox"/> x: SR1 - Spettro orizzontale Coefficiente moltiplicativo 1.000 <input checked="" type="checkbox"/> y: SR1 - Spettro orizzontale 1.000 <input checked="" type="checkbox"/> z: SR2 - Spettro verticale 1.000 Ruota a_x a_y intorno a Z: $\alpha = 0.00$ [°] Impostazioni: <input type="checkbox"/> Considera azioni torsionali accidentali: Da generare: <input checked="" type="checkbox"/> Casi di carico con $E_{x,i} / E_{z,i}$ da tutte le forme modali Numero del primo caso di carico generato: 1 <input checked="" type="checkbox"/> Dati di input delle combinazioni di risultati: Numero della prima combinazione di risultati generata: 1 Espressione di combinazione: <input checked="" type="checkbox"/> Quadratica (SRSS)

CVN1
Modo di vibrare

5.1 FREQUENZE NATURALI CVN1

CVN1

Modo nr.	Autovalore λ [1/s ²]	Frequenza angolare ω [rad/s]	Frequenza naturale f [Hz]	Periodo proprio T [s]
1	578.794	24.058	3.829	0.261
2	1366.472	36.966	5.883	0.170
3	4873.784	69.812	11.111	0.090
4	15041.967	122.646	19.520	0.051
5	18561.021	136.239	21.683	0.046
6	30979.891	176.011	28.013	0.036
7	45704.602	213.786	34.025	0.029
8	66532.211	257.938	41.052	0.024
9	122561.484	350.088	55.718	0.018
10	142198.813	377.093	60.016	0.017

CVN1
Modo di vibrare

5.7 COEFFICIENTI DI MASSA MODALE EFFICACE CVN1

CVN1

Modo nr.	Massa nodal M_i [kg]	Massa modale efficace						Coefficiente di massa modale efficace		
		m_{ex} [kg]	m_{ey} [kg]	m_{ez} [kg]	m_{ex} [kgm ²]	m_{ey} [kgm ²]	m_{ez} [kgm ²]	f_{mex} [kg]	f_{mey} [kg]	f_{mez} [kg]
1	9366.78	20569.16	0.00	0.00	0.00	423439.06	58181.67	0.342	0.000	0.000
2	11639.83	0.00	39975.59	191.69	250209.77	0.00	0.00	0.000	0.665	0.003
3	25726.58	0.00	20137.81	654.56	498578.33	0.00	0.00	0.000	0.335	0.011
4	26357.96	0.00	13.68	42022.38	20974.93	0.00	0.00	0.000	0.000	0.699
5	13511.76	10416.23	0.00	0.00	0.00	66149.67	128758.40	0.173	0.000	0.000
6	13367.83	28828.88	0.00	0.00	0.00	149902.78	175139.69	0.479	0.000	0.000
7	7832.20	0.00	0.74	16931.66	175138.47	0.00	0.00	0.000	0.000	0.282
8	14654.65	249.80	0.00	0.00	0.00	6260.94	257.49	0.004	0.000	0.000
9	10933.46	2.86	0.00	0.00	0.00	112.81	1565.42	0.000	0.000	0.000
10	8448.01	0.00	1.05	9.33	431.16	0.00	0.00	0.000	0.000	0.000
Somma	141839.07	60066.93	60128.87	59809.62	945332.65	645865.26	363902.67	0.999	1.000	0.995

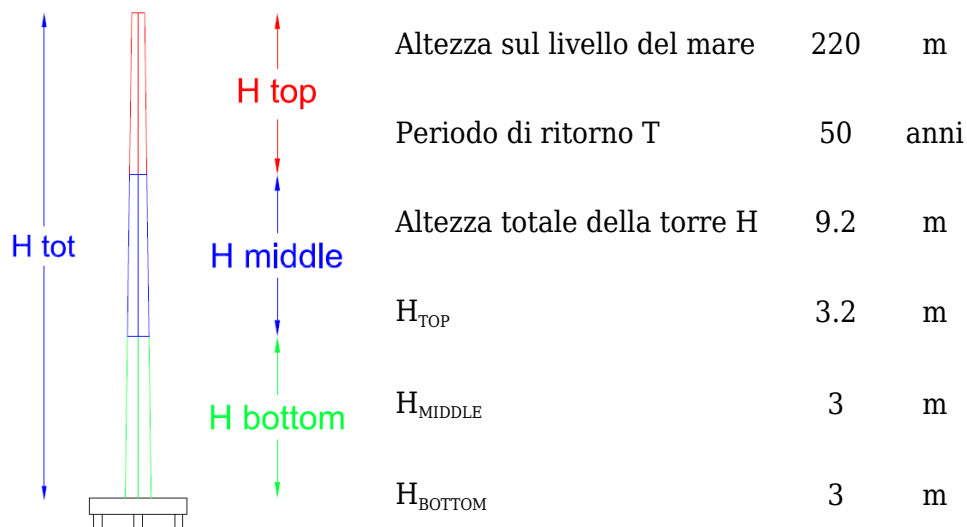


edilTOOL

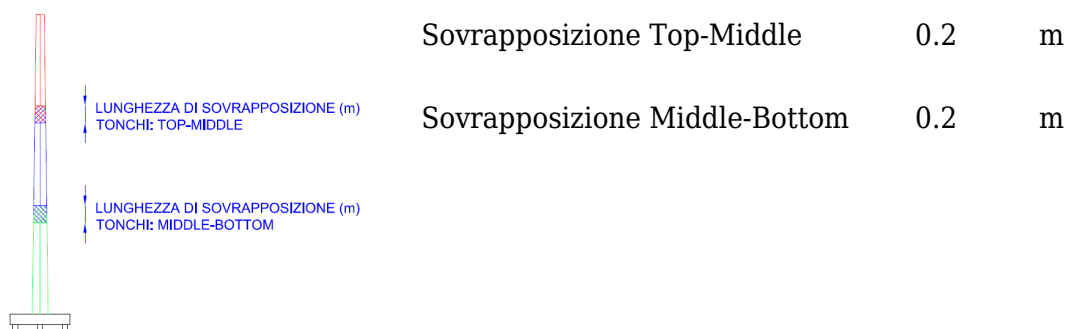
strumenti semplici per problemi complessi

RELAZIONE DI CALCOLO

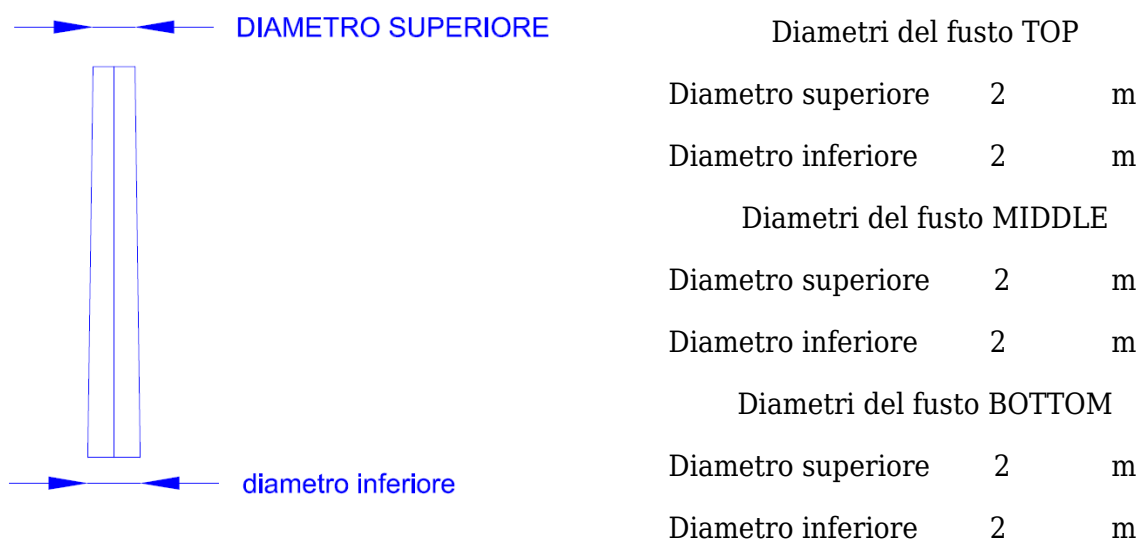
CARATTERISTICHE GEOMETRICHE DELLA TORRE



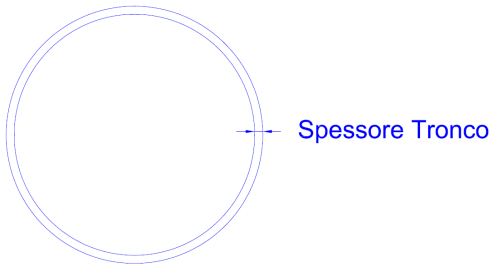
SOVRAPPOSIZIONE DEI TRONCHI



INSERIMENTO DIAMETRI SUPERIORE E INFERIORE PER OGNI TRONCO

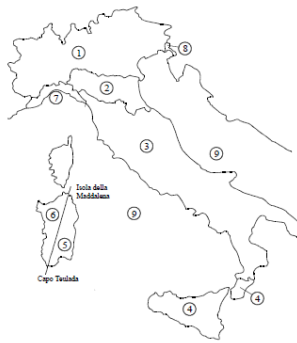


SPESORE SINGOLO TRONCO



Spessore top	200	m
Spessore middle	200	m
Spessore bottom	200	m

AZIONE DEL VENTO



Zona di riferimento	Zona 1
$v_{b,0}$ (m/s)	25 m/s
a_0 (m)	1000
k_a	0.01

Valle d'Aosta, Piemonte, Lombardia, Trentino
Alto Adige, Friuli Venezia Giulia (con l'eccezione
della provincia di Trieste) Veneto

ZONA 1, 2, 3, 4, 5					
costa					
mare					
2 km	10 km	30 km	500m	750m	
A	--	IV	IV	V	V
B	--	III	III	IV	IV
C	--	*	III	III	IV
D	I	II	II	III	**

* Categoria II in zona 1, 2, 3, 4
 Categoria III in zona 5
 ** Categoria III in zona 2, 3, 4, 5
 Categoria IV in zona 1

ZONA 9	
costa	
mare	
A	-- I
B	-- I
C	-- I
D	I I I

ZONA 6					
costa					
mare					
2 km	10 km	30 km	500m		
A	--	III	IV	V	V
B	--	II	III	IV	IV
C	--	II	III	III	IV
D	I	I	II	II	III

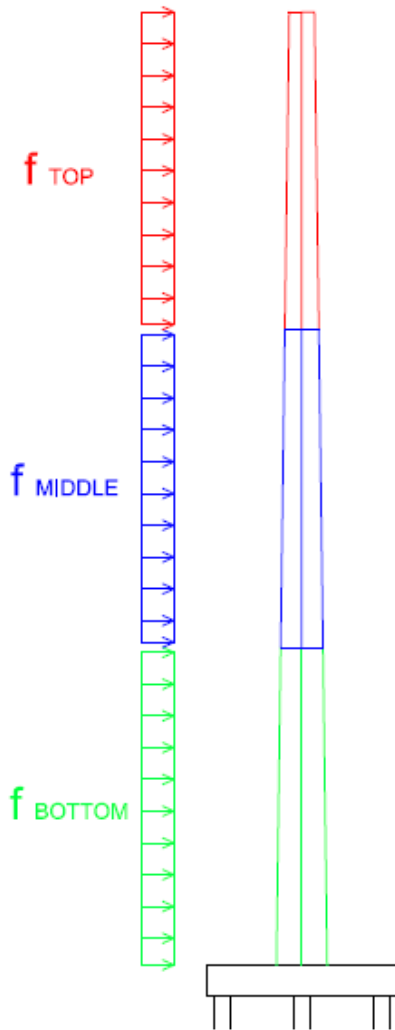
ZONA 7, 8			
costa			
mare			
1.5 km	0.5 km		
A	--	--	IV
B	--	--	IV
C	--	--	III
D	I	II	*

* Categoria II in zona 8
 Categoria III in zona 7

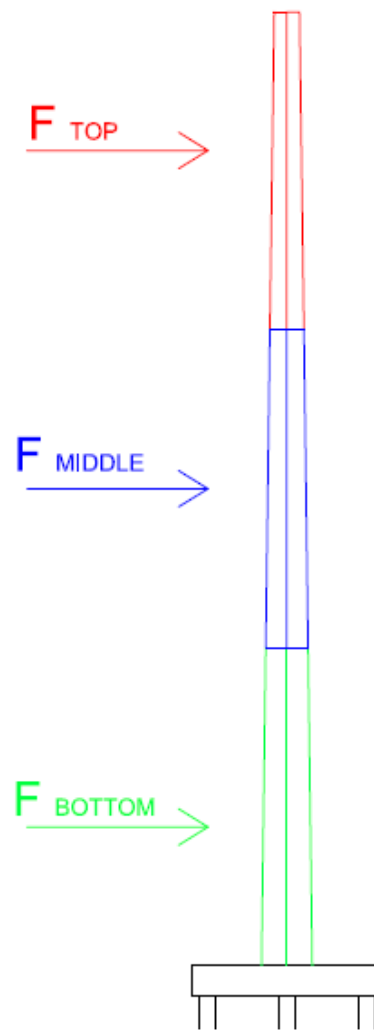
Categoria di Esposizione	III
K_r	0.20
Z_0	0.1 m
Z_{min}	5 m

RISULTATI DI CALCOLO

PRESSIONE AGENTE SUI FUSTI



AZIONE APPLICATA NEI BARICENTRI



$$f_{TOP} = 907.83 \text{ N/m}$$

$$f_{MIDDLE} = 803.57 \text{ N/m}$$

$$f_{BOTTOM} = 803.57 \text{ N/m}$$

$$F_{TOP} = 2905.06 \text{ N}$$

$$F_{MIDDLE} = 2250 \text{ N}$$

$$F_{BOTTOM} = 2250 \text{ N}$$

Caratteristiche dell'intera torre:

DIAMETRO MEDIO TORRE D_M (m)	2
Coefficiente alfa (adimensionale)	1
Velocità di riferimento v_r (m/s)	25
Pressione cinetica P di riferimento	390.63
Snellezza λ	4.6
Funzione ψ	0.66628

Caratteristiche di ogni singolo tronco

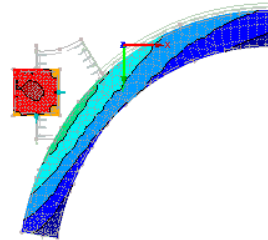
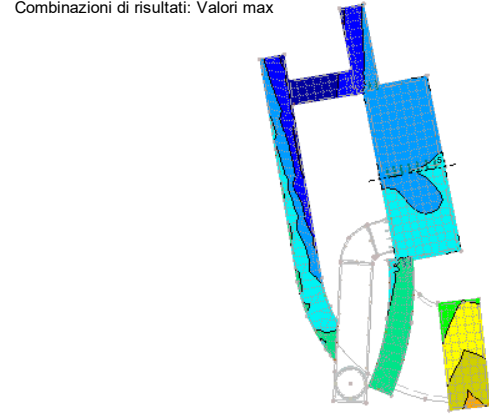
	BOTTOM	MIDDLE	HUB
Diametro medio di ogni tronco d_m (m)	2	2	2
Altezza baricentrica del singolo tronco	1.5	4.3	7.199999999999999
Coefficiente di Esposizione C_E	1.71	1.71	1.93
Pressione del Vento P_V (N/mm ²)	800.41	800.41	904.26
Numero di Reynolds Re	3333333.33	3333333.33	3333333.33
rapporto k/dm	0.0001	0.0001	0.0001
C_{fx}	0.75341	0.75341	0.75341
C_{fy}	0.50198	0.50198	0.50198

PONTE PEDOCICLABILE

➤ PRESSIONI SUL TERRENO DELLE STRUTTURE DI APPOGGIO

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Tensioni di contatto Sigma-z
Combinazioni di risultati: Valori max

In direzione Z

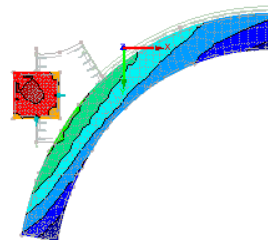
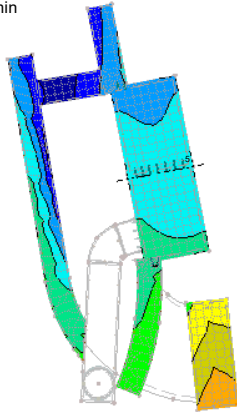


Max Sigma-z: 325.86, Min Sigma-z: -16.69 kN/m²

Pressioni massime – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Tensioni di contatto Sigma-z
Combinazioni di risultati: Valori min

In direzione Z



Max Sigma-z: 269.49, Min Sigma-z: -25.17 kN/m²

Pressioni minime - SLU

➤ VERIFICA ALLO SLU DI COLLASSO PER CARICO LIMITE

• SPALLA LATO ISARCO

La suola di fondazione risulta paralizzata

Larghezza efficace = 1,3m

Lunghezza = 8,30m

Risultante delle pressioni = $135 \text{ kN/m}^2 \cdot 1,3\text{m} \cdot 8,30\text{m} = 1.457 \text{ kN} = E_d$

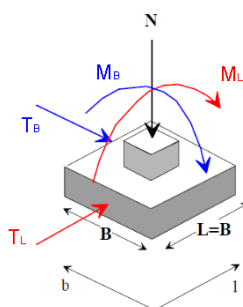
APPROCCIO 2

A1	M1	R3
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Elemento: Spalla lato isarco

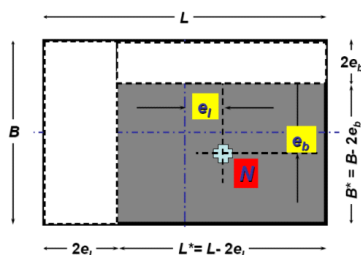
Carichi

N_{sd}	1457	kN	Azione assiale
$M_{sd,B}$	0	kN·m	Momento in B
$M_{sd,L}$	0	kN·m	Momento in L
$T_{sd,B}$	0	kN	Azione orizzontale in B
$T_{sd,L}$	0	kN	Azione orizzontale in L
H_{sd}	0,00	kN	Risultante orizzontale
e_B	0,00	m	eccentricità in B
e_L	0,00	m	eccentricità in L



Geometria e caratteristiche del terreno

B	1,30	m	Larghezza
B^*	1,30	m	Larghezza efficace
L	8,30	m	Lunghezza
L^*	8,30	m	Lunghezza efficace
h	0,50	m	Altezza fondazione
D	1,00	m	Profondità di posa
c	0,00	kN/m ²	Coesione
ϕ	35	°	Angolo di attrito
γ	18,00	kN/m ³	Peso specifico



Parametri di calcolo in condizioni drenate (CD)

c'	0	kN/m ²	$\gamma_{c'}$	1,00
ϕ'	0,61	rad	$\gamma_{\phi'}$	1,00
γ'	18,00	kN/m ³	$\gamma_{\gamma'}$	1,00

Carico limite - in condizioni drenate (CD)

$$q'_{lim} = \frac{1}{2} \gamma' B N_{\gamma} s_{\gamma} i_{\gamma} b_{\gamma} g_{\gamma} + c' N_{c} s_{c} d_{c} i_{c} b_{c} g_{c} + q' N_{q} s_{q} d_{q} i_{q} b_{q} g_{q}$$

N_q	33,30	s_q	1,11	d_q	1,20	i_q	1,00	m_B	1,86
N_{γ}	33,92	s_{γ}	0,94	d_{γ}	1,00	i_{γ}	1,00	m_L	1,14
N_c	46,12	s_c	1,11	d_c	1,20	i_c	0,00	m	1,14

q_{lim}	1.167,34	kN/m ²	γ_R	2,30
R_d	507,54	kN/m ²		
R_d	5.476,36	kN	R_d	660 kN/ml

η 3,76 < 1 VERIFICATO

• **APPOGGIO LATO ISARCO**

Larghezza = 2,50m
 Lunghezza = 6,50m
 Pressione media = $(360\text{kN/m}^2 + 256\text{kN/m}^2 + 167\text{kN/m}^2 + 96\text{kN/m}^2) / 4 = 220 \text{ kN/m}^2$
 Risultante delle pressioni = $220 \text{ kN/m}^2 \cdot 2,50\text{m} \cdot 6,50\text{m} = \mathbf{3.575 \text{ kN} = Ed}$

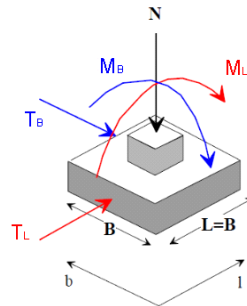
APPROCCIO 2

A1	M1	R3
----	----	----

Elemento: Appoggio lato isarco

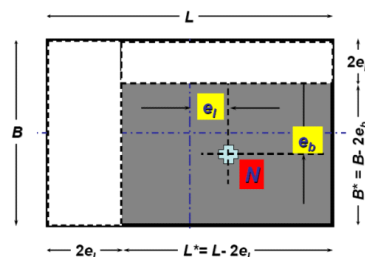
Carichi

N_{sd}	3575	kN	Azione assiale
$M_{sd,B}$	0	kN·m	Momento in B
$M_{sd,L}$	0	kN·m	Momento in L
$T_{sd,B}$	0	kN	Azione orizzontale in B
$T_{sd,L}$	0	kN	Azione orizzontale in L
H_{sd}	0,00	kN	Risultante orizzontale
e_B	0,00	m	eccentricità in B
e_L	0,00	m	eccentricità in L



Geometria e caratteristiche del terreno

B	2,50	m	Larghezza
B^*	2,50	m	Larghezza efficace
L	6,50	m	Lunghezza
L^*	6,50	m	Lunghezza efficace
h	0,50	m	Altezza fondazione
D	1,00	m	Profondità di posa
c	0,00	kN/m ²	Coesione
ϕ	35	°	Angolo di attrito
γ	18,00	kN/m ³	Peso specifico



Parametri di calcolo in condizioni drenate (CD)

c'	0	kN/m ²	$\gamma_{c'}$	1,00
ϕ'	0,61	rad	$\gamma_{\phi'}$	1,00
γ'	18,00	kN/m ³	$\gamma_{\gamma'}$	1,00

Carico limite - in condizioni drenate (CD)

$$q'_{lim} = \frac{1}{2} \gamma' B N_{\gamma} s_{\gamma} i_{\gamma} b_{\gamma} g_{\gamma} + c' N_c s_c d_c i_c b_c g_c + q' N_q s_q d_q i_q b_q g_q$$

N_q	33,30	s_q	1,27	d_q	1,10	i_q	1,00	m_B	1,72
N_{γ}	33,92	s_{γ}	0,85	d_{γ}	1,00	i_{γ}	1,00	m_L	1,28
N_c	46,12	s_c	1,28	d_c	1,11	i_c	0,00	m	1,28

q_{lim}	1.484,03	kN/m ²	γ_R	2,30
R_d	645,23	kN/m ²		
R_d	10.484,97	kN	R_d	1.613 kN/ml

η	2,93	<	1	VERIFICATO
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• **PLINTO**

Carichi alla base del pilastro:

$N_{sd} = 1.985 \text{ kN}$

$V_{y,sd} = 12,60 \text{ kN}$

$V_{z,sd} = 6,40 \text{ kN}$

$M_{y,sd} = 48,80 \text{ kN}\cdot\text{m}$

$M_{z,sd} = 87,80 \text{ kN}\cdot\text{m}$

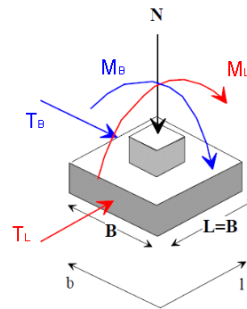
APPROCCIO 2

A1	M1	R3
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Elemento: Plinto

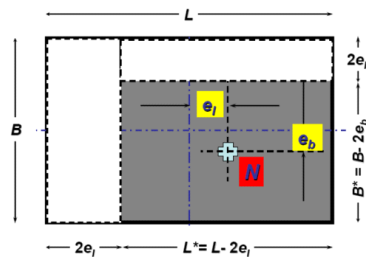
Carichi

N_{sd}	1985	kN	Azione assiale
$M_{sd,B}$	48,8	kN·m	Momento in B
$M_{sd,L}$	87,8	kN·m	Momento in L
$T_{sd,B}$	12,6	kN	Azione orizzontale in B
$T_{sd,L}$	6,4	kN	Azione orizzontale in L
H_{sd}	14,13	kN	Risultante orizzontale
e_B	0,02	m	eccentricità in B
e_L	0,04	m	eccentricità in L



Geometria e caratteristiche del terreno

B	2,80	m	Larghezza
B^*	2,75	m	Larghezza efficace
L	2,80	m	Lunghezza
L^*	2,71	m	Lunghezza efficace
h	0,50	m	Altezza fondazione
D	1,00	m	Profondità di posa
c	0,00	kN/m ²	Coesione
ϕ	35	°	Angolo di attrito
γ	18,00	kN/m ³	Peso specifico



Parametri di calcolo in condizioni drenate (CD)

c'	0	kN/m ²	$\gamma_{c'}$	1,00
ϕ'	0,61	rad	$\gamma_{\phi'}$	1,00
γ'	18,00	kN/m ³	$\gamma_{\gamma'}$	1,00

Carico limite - in condizioni drenate (CD)

$$q'_{lim} = \frac{1}{2} \gamma' B N_{\gamma} s_{\gamma} i_{\gamma} b_{\gamma} g_{\gamma} + c' N_c s_c d_c i_c b_c g_c + q' N_q s_q d_q i_q b_q g_q$$

N_q	33,30	s_q	1,71	d_q	1,09	i_q	0,99	m_B	1,50
N_{γ}	33,92	s_{γ}	0,59	d_{γ}	1,00	i_{γ}	0,98	m_L	1,50
N_c	46,12	s_c	1,73	d_c	1,10	i_c	0,00	m	1,50

q_{lim}	1.598,24	kN/m ²	γ_R	2,30	
R_d	694,89	kN/m ²			
R_d	5.183,14	kN	R_d	1.912	kN/ml

η	2,61	<	1	VERIFICATO
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• **SPALLA LATO TUNNEL**

La suola di fondazione risulta paralizzata

Larghezza efficace = 2,30m

Lunghezza = 1,00m

Risultante delle pressioni = $0,5 \cdot 214 \text{ kN/m}^2 \cdot 2,3\text{m} \cdot 1,00\text{m} = 246 \text{ kN} = \text{Ed}$

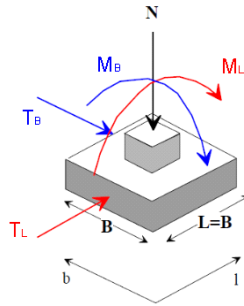
APPROCCIO 2

A1	M1	R3
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Elemento: Spalla lato tunnel

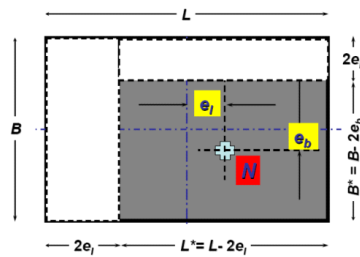
Carichi

N_{sd}	246	kN	Azione assiale
$M_{sd,B}$	0	kN·m	Momento in B
$M_{sd,L}$	0	kN·m	Momento in L
$T_{sd,B}$	0	kN	Azione orizzontale in B
$T_{sd,L}$	0	kN	Azione orizzontale in L
H_{sd}	0,00	kN	Risultante orizzontale
e_B	0,00	m	eccentricità in B
e_L	0,00	m	eccentricità in L



Geometria e caratteristiche del terreno

B	2,30	m	Larghezza
B^*	2,30	m	Larghezza efficace
L	1,00	m	Lunghezza
L^*	1,00	m	Lunghezza efficace
h	0,50	m	Altezza fondazione
D	1,00	m	Profondità di posa
c	0,00	kN/m ²	Coesione
ϕ	35	°	Angolo di attrito
γ	18,00	kN/m ³	Peso specifico



Parametri di calcolo in condizioni drenate (CD)

c'	0	kN/m ²	$\gamma_{c'}$	1,00
ϕ'	0,61	rad	$\gamma_{\phi'}$	1,00
γ'	18,00	kN/m ³	$\gamma_{\gamma'}$	1,00

Carico limite - in condizioni drenate (CD)

$$q'_{lim} = \frac{1}{2} \gamma' B N_{\gamma} s_{\gamma} i_{\gamma} b_{\gamma} g_{\gamma} + c' N_c s_c d_c i_c b_c g_c + q' N_q s_q d_q i_q b_q g_q$$

N_q	33,30	s_q	2,61	d_q	1,11	i_q	1,00	m_B	1,30
N_{γ}	33,92	s_{γ}	0,08	d_{γ}	1,00	i_{γ}	1,00	m_L	1,70
N_c	46,12	s_c	2,66	d_c	1,11	i_c	0,00	m	1,70

q_{lim}	1.793,93	kN/m ²	γ_R	2,30	
R_d	779,97	kN/m ²			
R_d	1.793,93	kN	R_d	1.794	kN/ml

η	7,29	>	1	VERIFICATO
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• PLATEA LOCALE VENTILAZIONE

Larghezza	=	4,00m
Lunghezza	=	5,50m
Pressione media	=	$(108\text{kN/m}^2 + 101\text{kN/m}^2 + 73\text{kN/m}^2 + 83\text{kN/m}^2) / 4 = 91,25 \text{ kN/m}^2$
Risultante delle pressioni	=	$91,25 \text{ kN/m}^2 \cdot 5,50\text{m} \cdot 4,00\text{m} = \mathbf{2.008 \text{ kN} = Ed}$

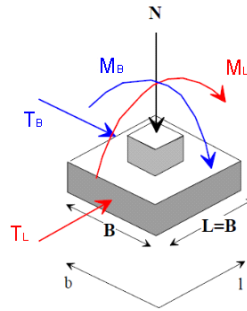
APPROCCIO 2

A1	M1	R3
----	----	----

Elemento: Platea locale ventilazione

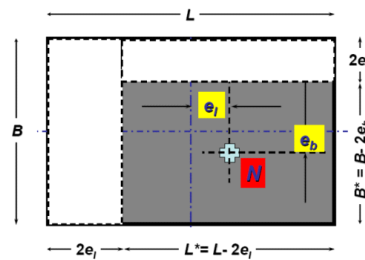
Carichi

N_{sd}	2008	kN	Azione assiale
$M_{sd,B}$	0	kN·m	Momento in B
$M_{sd,L}$	0	kN·m	Momento in L
$T_{sd,B}$	0	kN	Azione orizzontale in B
$T_{sd,L}$	0	kN	Azione orizzontale in L
H_{sd}	0,00	kN	Risultante orizzontale
e_B	0,00	m	eccentricità in B
e_L	0,00	m	eccentricità in L



Geometria e caratteristiche del terreno

B	4,00	m	Larghezza
B^*	4,00	m	Larghezza efficace
L	5,50	m	Lunghezza
L^*	5,50	m	Lunghezza efficace
h	0,50	m	Altezza fondazione
D	1,00	m	Profondità di posa
c	0,00	kN/m ²	Coesione
ϕ	35	°	Angolo di attrito
γ	18,00	kN/m ³	Peso specifico



Parametri di calcolo in condizioni drenate (CD)

c'	0	kN/m ²	γ_c	1,00
ϕ'	0,61	rad	γ_ϕ	1,00
γ'	18,00	kN/m ³	γ_γ	1,00

Carico limite - in condizioni drenate (CD)

$$q'_{lim} = \frac{1}{2} \gamma' B N_{\gamma'} s_{\gamma'} i_{\gamma'} b_{\gamma'} g_{\gamma'} + c' N_c s_c d_c i_c b_c g_c + q' N_q s_q d_q i_q b_q g_q$$

N_q	33,30	s_q	1,51	d_q	1,06	i_q	1,00	m_B	1,58
N_γ	33,92	s_γ	0,71	d_γ	1,00	i_γ	1,00	m_L	1,42
N_c	46,12	s_c	1,53	d_c	1,07	i_c	0,00	m	1,42

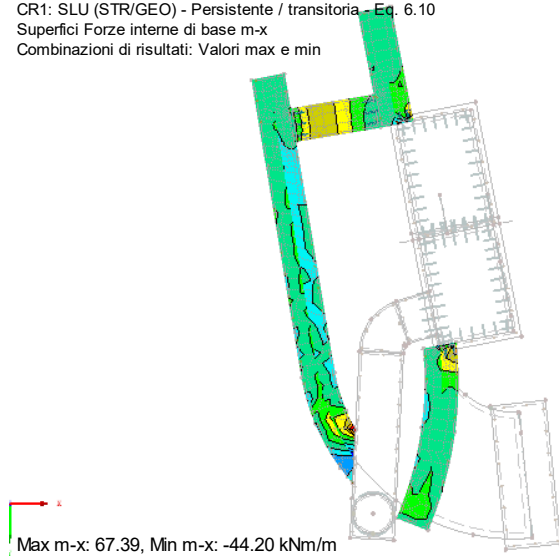
q_{lim}	1.828,03	kN/m ²	Y_R	2,30	
R_d	794,79	kN/m ²			
R_d	17.485,48	kN	R_d	3.179	kN/ml

η 8,71 < 1 VERIFICATO

➤ DIMENSIONAMENTO DELLE ARMATURE

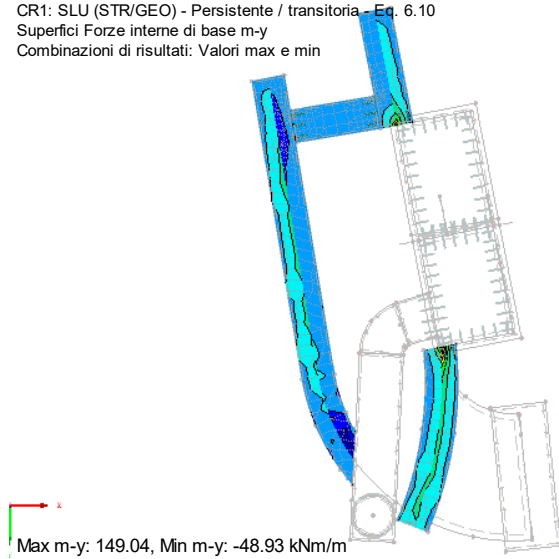
➤ FONDAZIONI SPALLA LATO ISARCO

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-x
Combinazioni di risultati: Valori max e min

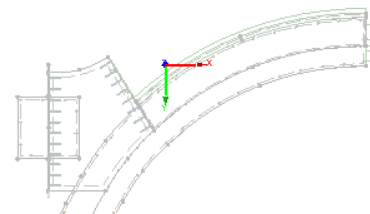


Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-y
Combinazioni di risultati: Valori max e min



In direzione Z



Momento sollecitante my – SLU

Sollecitazioni di progetto $M_{sd,x} = 70 \text{ kN}\cdot\text{m}$
 $M_{sd,y} = 50 \text{ kN}\cdot\text{m}$ (trascurando i picchi di sollecitazioni puntuali)

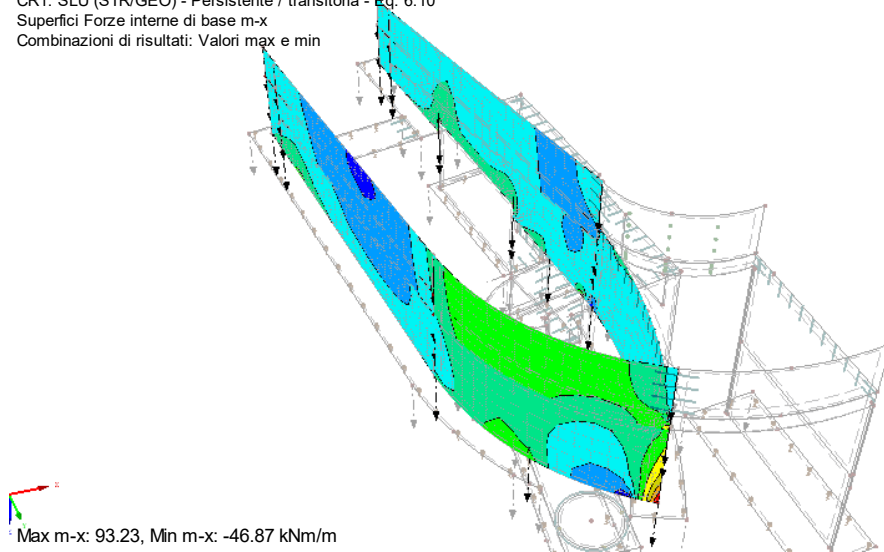
Staffe $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 70 \cdot 10^6 / (0,9 \cdot 450 \cdot 394) = 4,40 \text{ cm}^2/\text{ml}$
 $\varnothing 12/20\text{cm} = 5,65 \text{ cm}^2/\text{ml}$

Armatura longitudinale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 50 \cdot 10^6 / (0,9 \cdot 450 \cdot 394) = 3,14 \text{ cm}^2/\text{ml}$
 $\varnothing 12/20\text{cm} = 5,65 \text{ cm}^2/\text{ml}$

➤ MURI SPALLA LATO ISARCO

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-x
 Combinazioni di risultati: Valori max e min

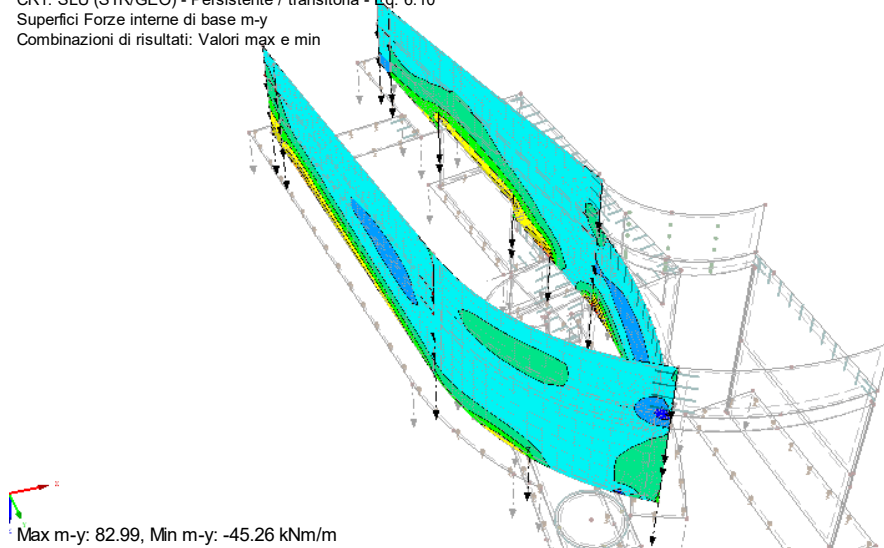
Isometrico



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-y
 Combinazioni di risultati: Valori max e min

Isometrico



Momento sollecitante my – SLU

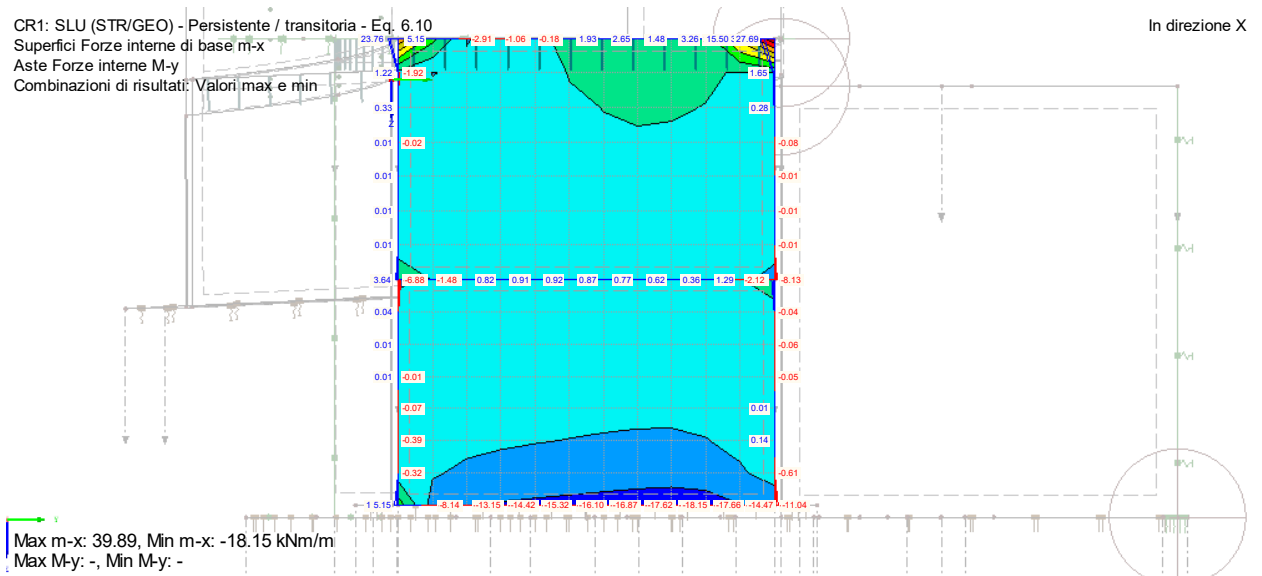
Sollecitazioni di progetto $M_{sd,x} = 29 \text{ kN}\cdot\text{m}$ (47kN·m negli angoli)
 $M_{sd,y} = 50 \text{ kN}\cdot\text{m}$ (68kN·m alla base del muro)

Armatura longitudinale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 50 \cdot 10^6 / (0,9 \cdot 350 \cdot 394) = 5,64 \text{ cm}^2/\text{ml}$
 $\varnothing 12/20\text{cm} = 5,65 \text{ cm}^2/\text{ml}$
 $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 68 \cdot 10^6 / (0,9 \cdot 350 \cdot 394) = 7,67 \text{ cm}^2/\text{ml}$
 $\varnothing 14/20\text{cm} = 7,70 \text{ cm}^2/\text{ml}$

Armatura trasversale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 29 \cdot 10^6 / (0,9 \cdot 250 \cdot 394) = 3,28 \text{ cm}^2/\text{ml}$
 $\varnothing 8/15\text{cm} = 3,33 \text{ cm}^2/\text{ml}$
 $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 47 \cdot 10^6 / (0,9 \cdot 250 \cdot 394) = 5,10 \text{ cm}^2/\text{ml}$
 $\varnothing 10/15\text{cm} = 5,26 \text{ cm}^2/\text{ml}$ come rinforzi negli angoli

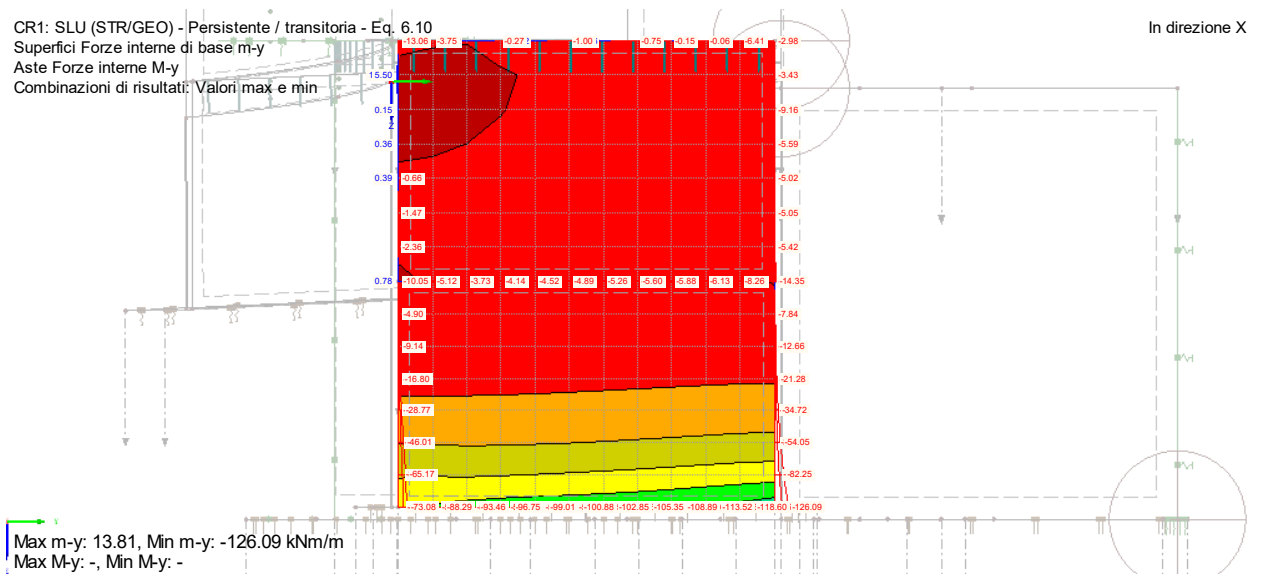
➤ MURO APPOGGIO LATO ISARCO

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-x
 Aste Forze interne M-y
 Combinazioni di risultati: Valori max e min



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-y
 Aste Forze interne M-y
 Combinazioni di risultati: Valori max e min



Momento sollecitante my – SLU

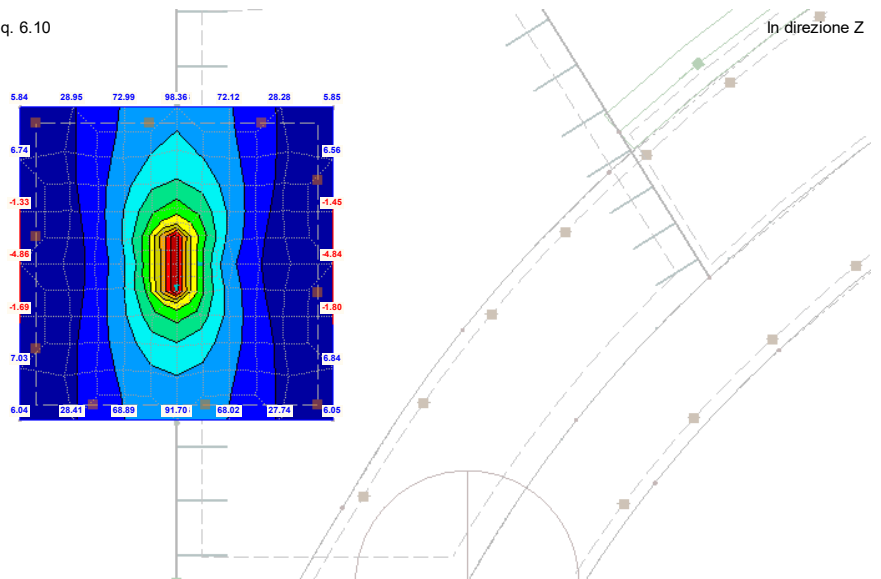
Sollecitazioni di progetto $M_{sd,x} = 40 \text{ kN}\cdot\text{m}$
 $M_{sd,y} = 70 \text{ kN}\cdot\text{m}$

Armatura longitudinale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 40 \cdot 10^6 / (0,9 \cdot 750 \cdot 394) = 1,51 \text{ cm}^2/\text{ml}$
 $\varnothing 12/15\text{cm} = 7,53 \text{ cm}^2/\text{ml}$

Armatura trasversale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 70 \cdot 10^6 / (0,9 \cdot 750 \cdot 394) = 2,64 \text{ cm}^2/\text{ml}$
 $\varnothing 16/20\text{cm} = 10,05 \text{ cm}^2/\text{ml}$

➤ PLINTO

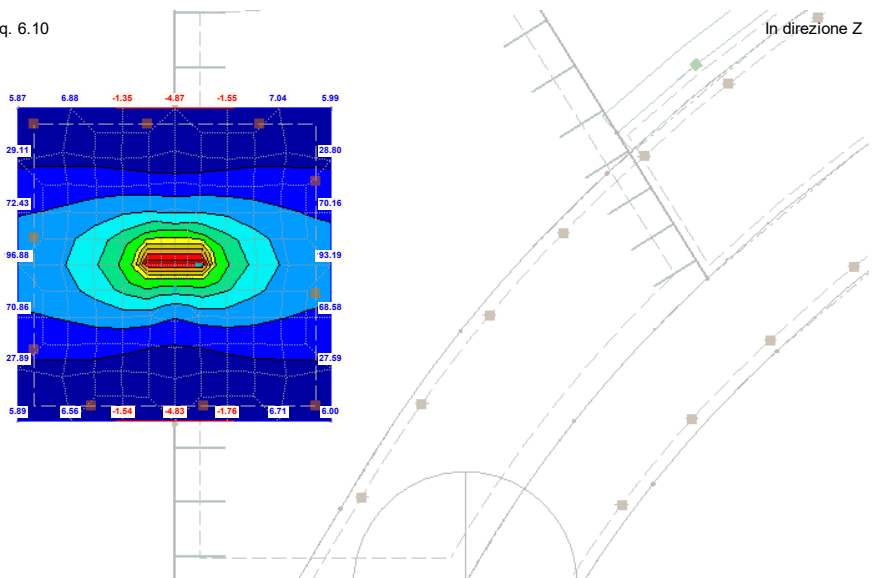
CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-x
 Aste Forze interne M-y
 Combinazioni di risultati: Valori max e min



Max m-x: 484.85, Min m-x: -4.86 kNm/m
 Max M-y: -, Min M-y: -

Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-y
 Aste Forze interne M-y
 Combinazioni di risultati: Valori max e min



Max m-y: 522.46, Min m-y: -4.87 kNm/m
 Max M-x: -, Min M-x: -

Momento sollecitante my – SLU

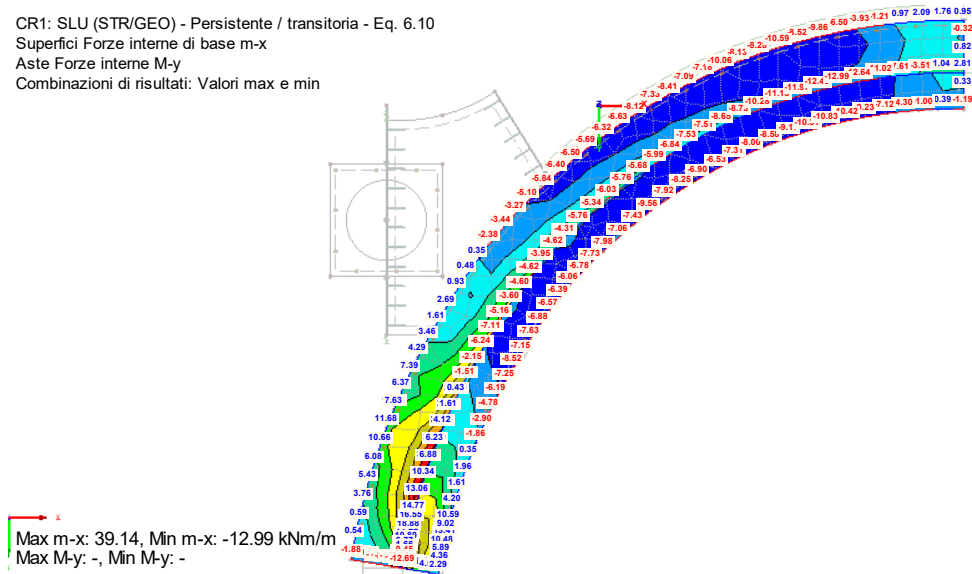
Sollecitazioni di progetto $M_{sd,x} = 190 \text{ kN}\cdot\text{m}$ (valori letti al bordo del pilastro $\varnothing 70\text{cm}$)
 $M_{sd,y} = 190 \text{ kN}\cdot\text{m}$

Armatura inferiore $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 190 \cdot 10^6 / (0,9 \cdot 450 \cdot 394) = 11,93 \text{ cm}^2/\text{ml}$
 $\varnothing 14/10\text{cm} = 15,4 \text{ cm}^2/\text{ml}$

➤ FONDAZIONE SPALLA LATO TUNNEL

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-x
 Aste Forze interne M-y
 Combinazioni di risultati: Valori max e min

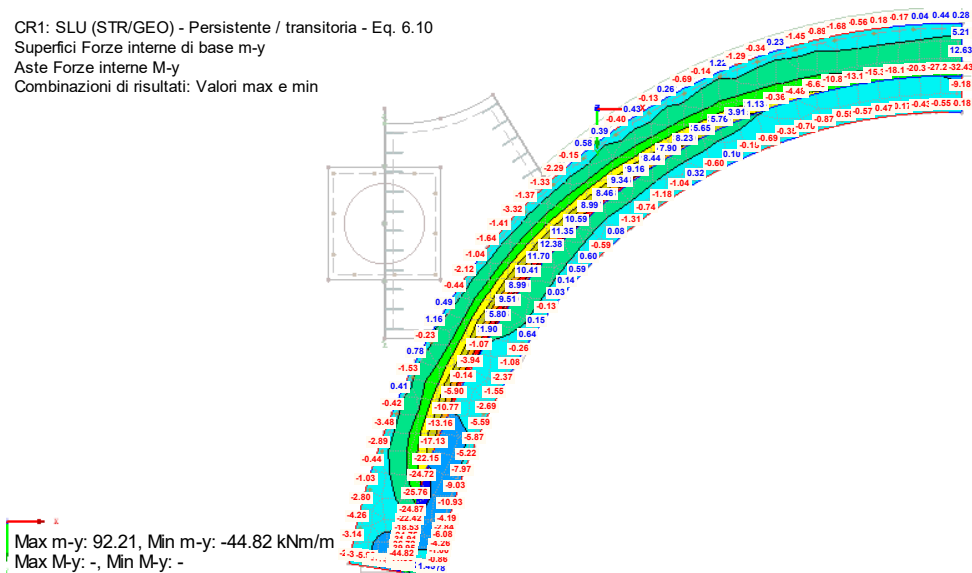
In direzione Z



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-y
 Aste Forze interne M-y
 Combinazioni di risultati: Valori max e min

In direzione Z



Momento sollecitante my – SLU

Sollecitazioni di progetto $M_{sd,x} = 40 \text{ kN}\cdot\text{m}$
 $M_{sd,y} = 93 \text{ kN}\cdot\text{m}$

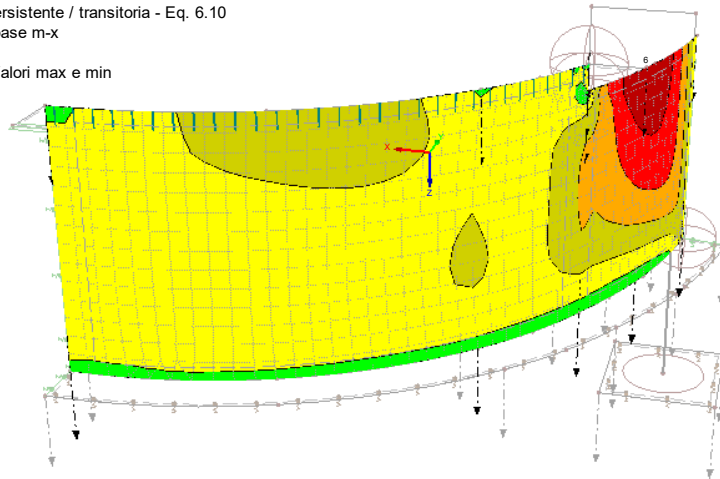
Staffe $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 93 \cdot 10^6 / (0,9 \cdot 450 \cdot 394) = 5,84 \text{ cm}^2/\text{ml}$
 $2\text{Ø}14/20\text{cm} = 11,30 \text{ cm}^2/\text{ml}$

Armatura longitudinale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 40 \cdot 10^6 / (0,9 \cdot 450 \cdot 394) = 2,51 \text{ cm}^2/\text{ml}$
 $\text{Ø}10/20\text{cm} = 3,95 \text{ cm}^2/\text{ml}$

➤ MURO SPALLA LATO TUNNEL

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-x
 Aste Forze interne M-y
 Combinazioni di risultati: Valori max e min

Isometrico

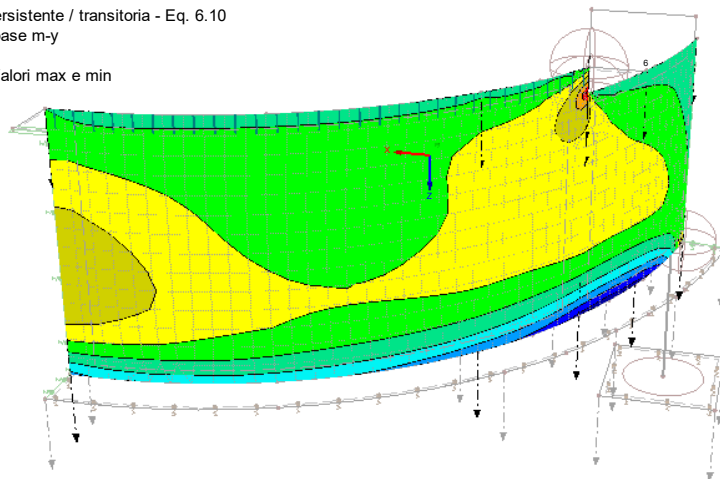


Max m-x: 62.15, Min m-x: -79.62 kNm/m
 Max M-y: -, Min M-y: -

Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-y
 Aste Forze interne M-x
 Combinazioni di risultati: Valori max e min

Isometrico



Max m-y: 117.23, Min m-y: -85.28 kNm/m
 Max M-x: -, Min M-x: -

Momento sollecitante my – SLU

Sollecitazioni di progetto in sezione 3-3

$$Msd,x = 63 \text{ kN}\cdot\text{m}$$

$$Msd,y = 86 \text{ kN}\cdot\text{m} \text{ (in campata } 65\text{kN}\cdot\text{m)}$$

Sollecitazioni di progetto in sezione 4-4

$$Msd,x = 28 \text{ kN}\cdot\text{m}$$

$$Msd,y = 70 \text{ kN}\cdot\text{m}$$

SEZIONE 3-3

Armatura longitudinale

$$As \geq Msd / (0,9 \cdot d \cdot fsd) = 86 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 8,10 \text{ cm}^2/\text{ml}$$

$$\text{Ø16/20cm} = 10,05 \text{ cm}^2/\text{ml di ripresa}$$

$$As \geq Msd / (0,9 \cdot d \cdot fsd) = 65 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 6,12 \text{ cm}^2/\text{ml}$$

$$\text{Ø14/20cm} = 7,70 \text{ cm}^2/\text{ml in campata}$$

Armatura trasversale

$$As \geq Msd / (0,9 \cdot d \cdot fsd) = 60 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 5,65 \text{ cm}^2/\text{ml}$$

$$\emptyset 12/15\text{cm} = 7,53 \text{ cm}^2/\text{ml}$$

SEZIONE 4-4

Armatura longitudinale

$$A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 70 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 6,59 \text{ cm}^2/\text{ml}$$

$$\emptyset 14/20\text{cm} = 7,70 \text{ cm}^2/\text{ml}$$

Armatura trasversale

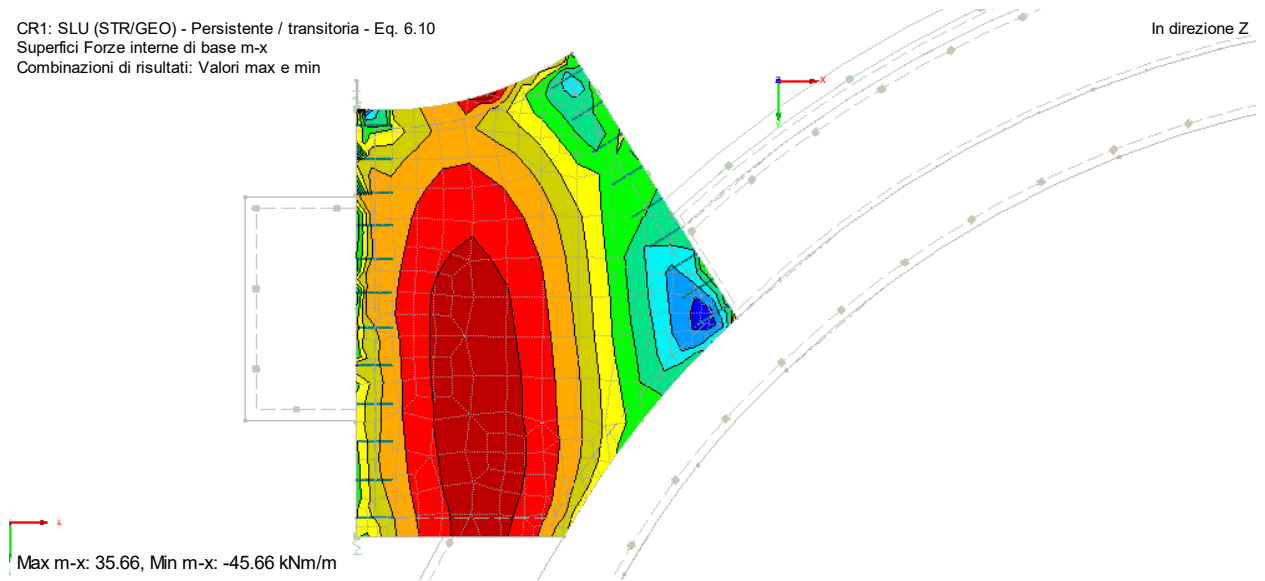
$$A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 28 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 2,63 \text{ cm}^2/\text{ml}$$

$$\emptyset 10/15\text{cm} = 5,26 \text{ cm}^2/\text{ml}$$

➤ SOLAIO PONTE

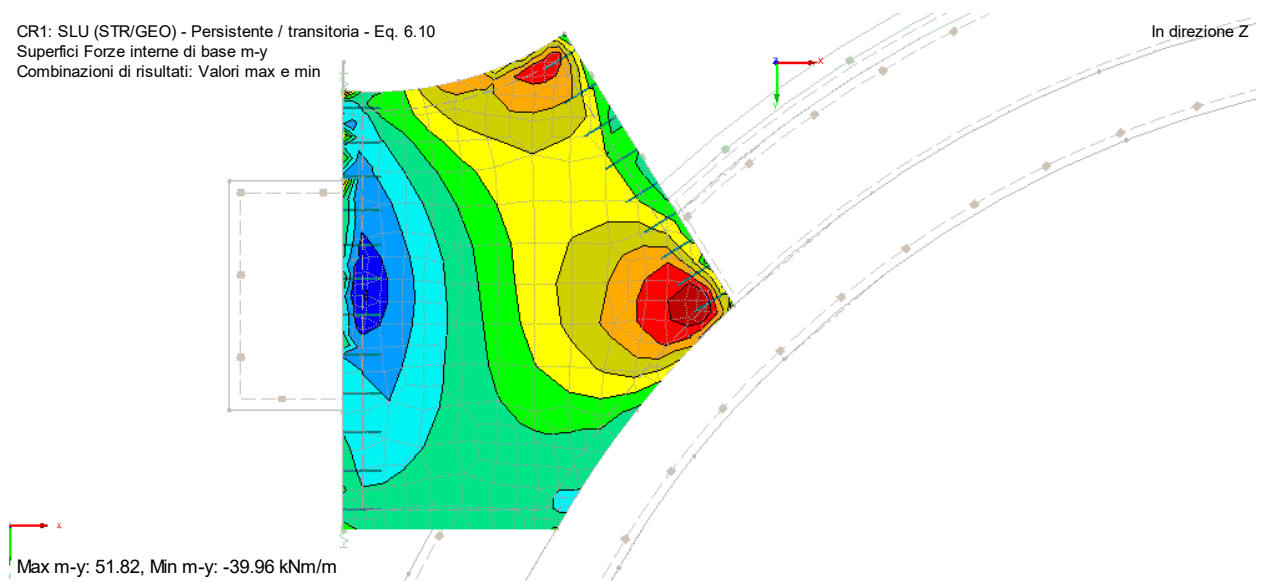
CAMPATA LATO TUNNEL

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-x
Combinazioni di risultati: Valori max e min



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-y
Combinazioni di risultati: Valori max e min



Momento sollecitante my – SLU

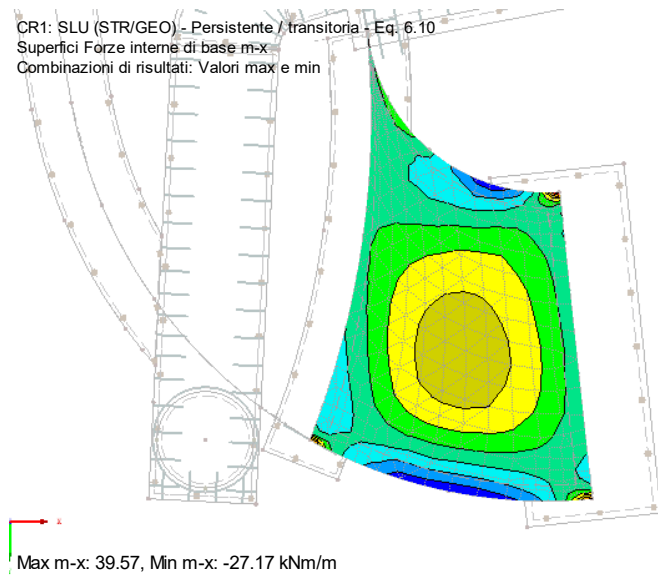
Sollecitazioni di progetto $M_{sd,x} = 46 \text{ kN}\cdot\text{m}$
 $M_{sd,y} = 52 \text{ kN}\cdot\text{m}$

Armatura sup. + inf. $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 52 \cdot 10^6 / (0,9 \cdot 240 \cdot 394) = 7,35 \text{ cm}^2/\text{ml}$
 $\varnothing 14/20\text{cm} = 7,70 \text{ cm}^2/\text{ml}$

CAMPATA LATO ISARCO

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-x
Combinazioni di risultati: Valori max e min

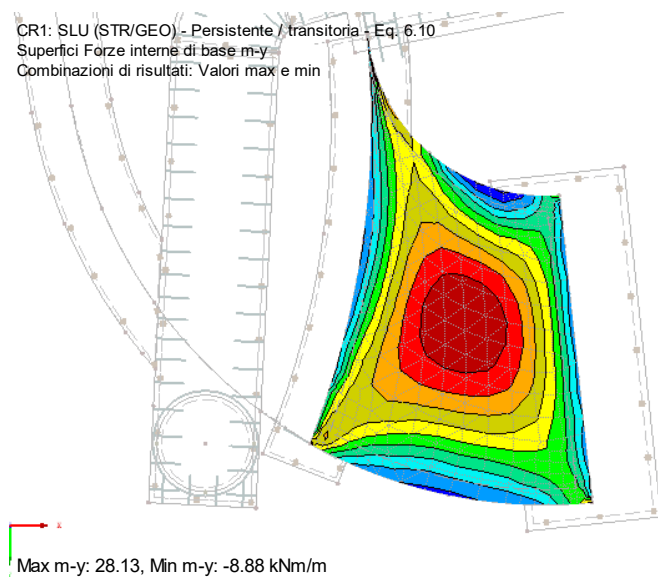
In direzione Z



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-y
Combinazioni di risultati: Valori max e min

In direzione Z



Momento sollecitante my – SLU

Sollecitazioni di progetto $M_{sd,x} = 40 \text{ kN}\cdot\text{m}$

$M_{sd,y} = 30 \text{ kN}\cdot\text{m}$

Vengono trascurati i „picchi“ di sollecitazione in corrispondenza degli angoli

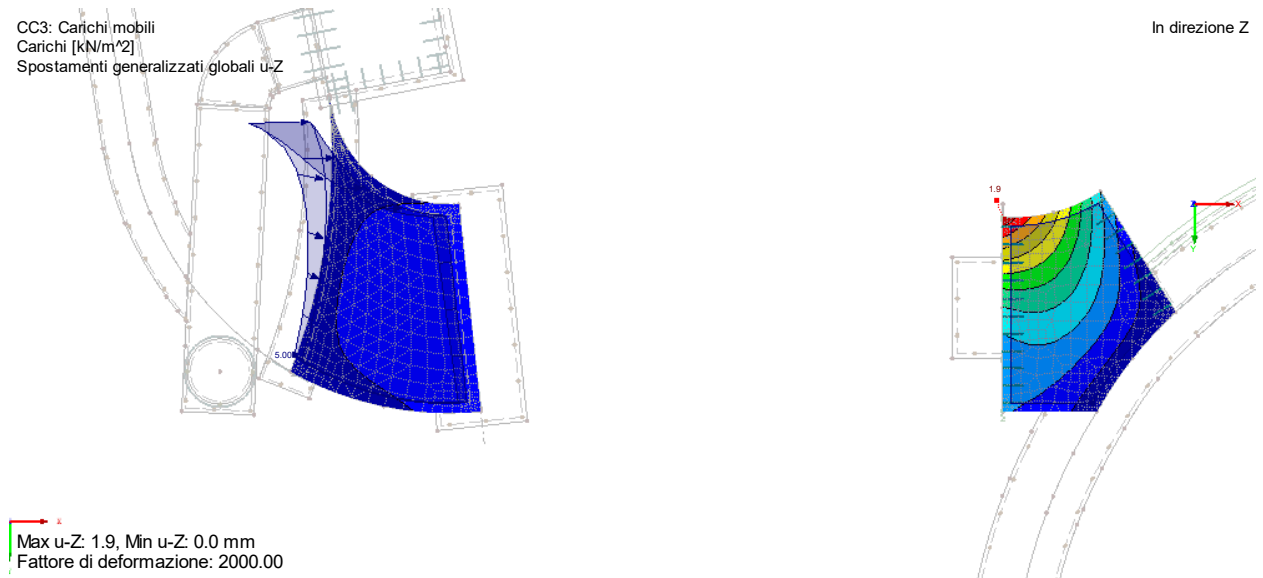
Armatura sup. + inf. $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 40 \cdot 10^6 / (0,9 \cdot 210 \cdot 394) = 5,37 \text{ cm}^2/\text{ml}$

$\varnothing 14/20\text{cm} = 7,70 \text{ cm}^2/\text{ml}$

VERIFICA SLE SOLAIO PONTE

Le seguenti figure riportano l'andamento delle deformate nelle diverse condizioni di carico ai fini delle verifiche agli SLE-SLD. I suddetti valori sono ricavabili dagli output di calcolo allegati alla presente relazione quale sua parte integrante.

SPOSTAMENTI VERTICALI



Spostamento verticale (in z) per carichi mobili distribuiti

SLE - VERIFICA DELLA FRECCIA

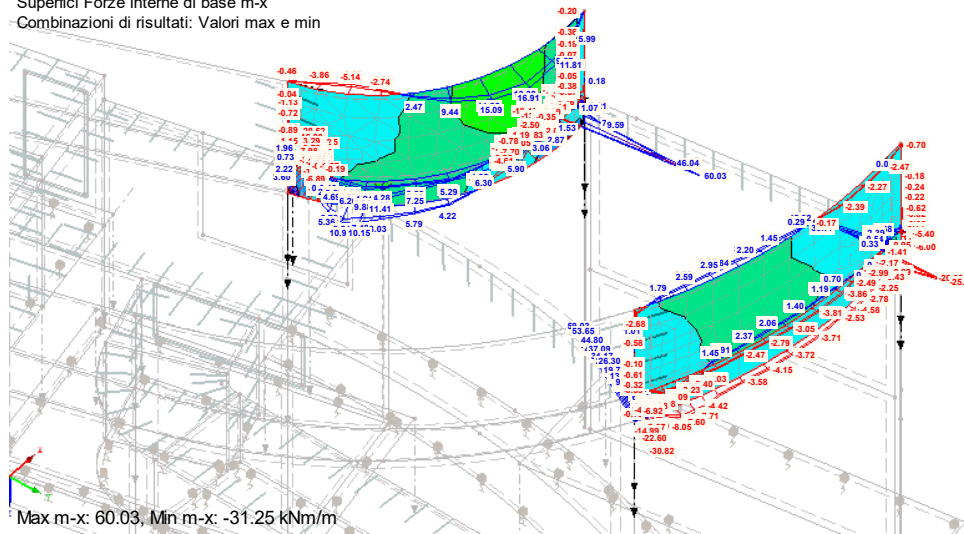
Lo spostamento massimo verticale viene assunto pari a :

$$u_{\max} \leq L/800 = 2.800\text{mm} / 800 = 3,50 \text{ mm}$$

$$u = 1,9 \text{ mm} < u_{\max} = 3,50 \text{ mm}$$

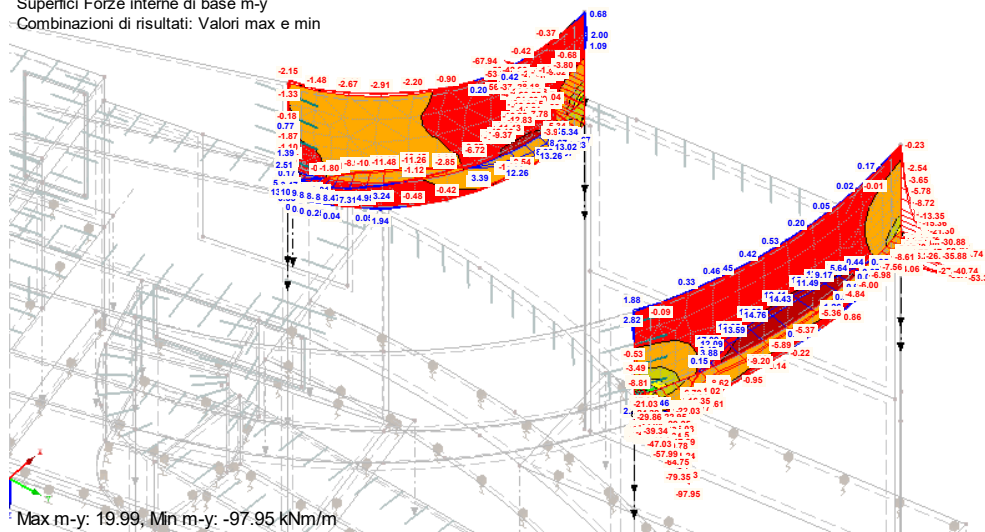
PARAPETTI

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-x
 Combinazioni di risultati: Valori max e min



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-y
 Combinazioni di risultati: Valori max e min



Momento sollecitante my – SLU

Sollecitazioni di progetto $M_{sd,x} = 40 \text{ kN}\cdot\text{m}$
 $M_{sd,y} = 98 \text{ kN}\cdot\text{m}$ in prossimità dell'appoggio (50kN·m in mezzeria)

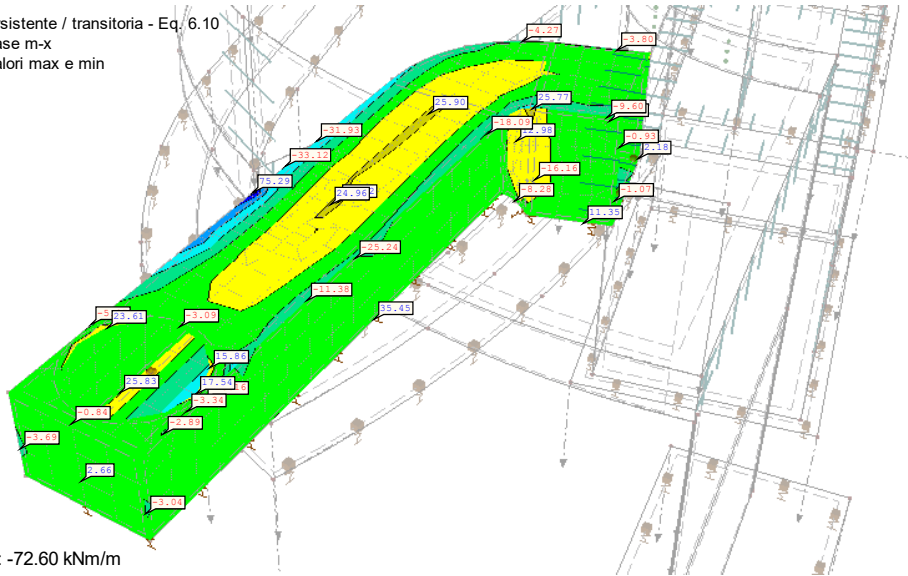
Armatura orizzontale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 40 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 3,87 \text{ cm}^2/\text{ml}$
 $\varnothing 10/15\text{cm} = 5,26 \text{ cm}^2/\text{ml}$

Armatura verticale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 98 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 9,89 \text{ cm}^2/\text{ml}$
 $\varnothing 10/20\text{cm} = 3,93 \text{ cm}^2/\text{ml}$ in prossimità dell'appoggio
 $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 50 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 4,71 \text{ cm}^2/\text{ml}$
 $\varnothing 12/20\text{cm} = 5,65 \text{ cm}^2/\text{ml}$ in mezzeria

LOCALE DI VENTILAZIONE

➤ CANALE DI ESPULSIONE

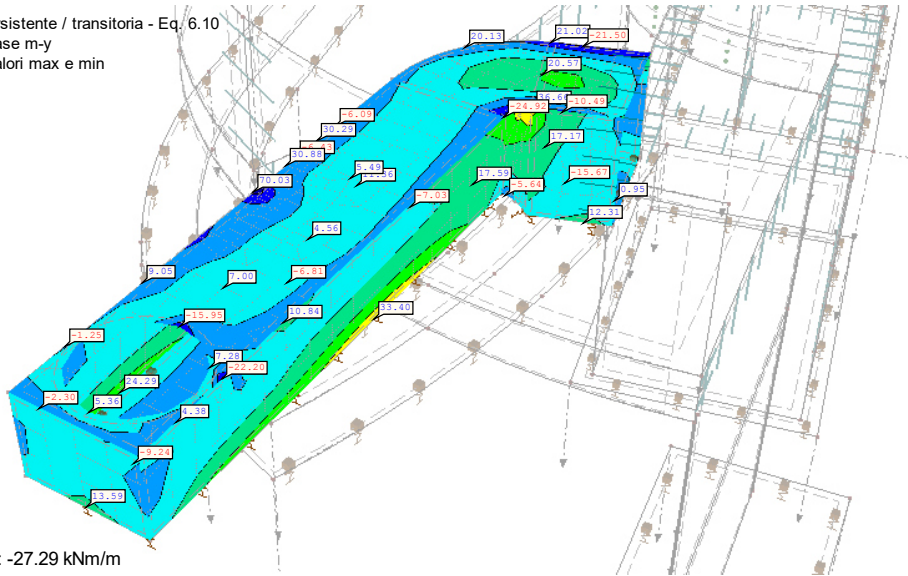
CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-x
 Combinazioni di risultati: Valori max e min
 Valori: m-x [kNm/m]



Isometrico

Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
 Superfici Forze interne di base m-y
 Combinazioni di risultati: Valori max e min
 Valori: m-y [kNm/m]



Isometrico

Momento sollecitante my – SLU

Sollecitazioni di progetto $M_{sd,x} = 33 \text{ kN}\cdot\text{m}$
 $M_{sd,y} = 24 \text{ kN}\cdot\text{m}$

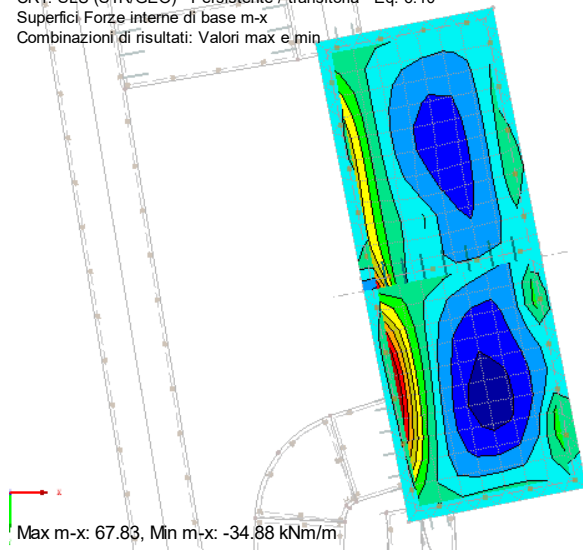
Armatura longitudinale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 24 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 3,22 \text{ cm}^2/\text{ml}$
 $\varnothing 8/15\text{cm} = 3,33 \text{ cm}^2/\text{ml}$

Armatura trasversale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 33 \cdot 10^6 / (0,9 \cdot 210 \cdot 394) = 4,43 \text{ cm}^2/\text{ml}$
 $\varnothing 10/15\text{cm} = 5,26\text{cm}^2/\text{ml}$

➤ PLATEA LOCALE

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-x
Combinazioni di risultati: Valori max e min

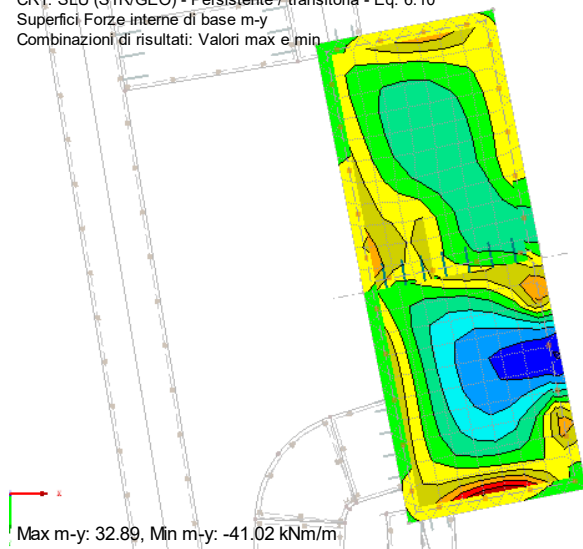
In direzione Z



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-y
Combinazioni di risultati: Valori max e min

In direzione Z



Momento sollecitante my – SLU

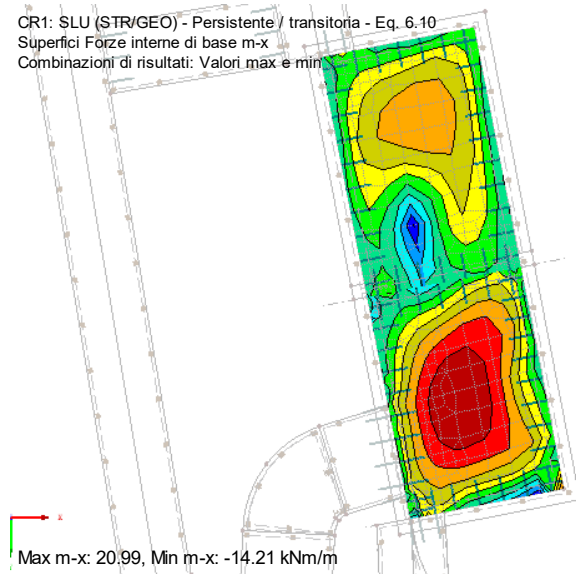
Sollecitazioni di progetto $M_{sd,x} = 67 \text{ kN}\cdot\text{m}$
 $M_{sd,y} = 42 \text{ kN}\cdot\text{m}$

Armatura longitudinale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 67 \cdot 10^6 / (0,9 \cdot 450 \cdot 394) = 4,19 \text{ cm}^2/\text{ml}$
e trasversale $\varnothing 10/15\text{cm} = 5,26 \text{ cm}^2/\text{ml}$

➤ SOLAIO LOCALE

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-x
Combinazioni di risultati: Valori max e min

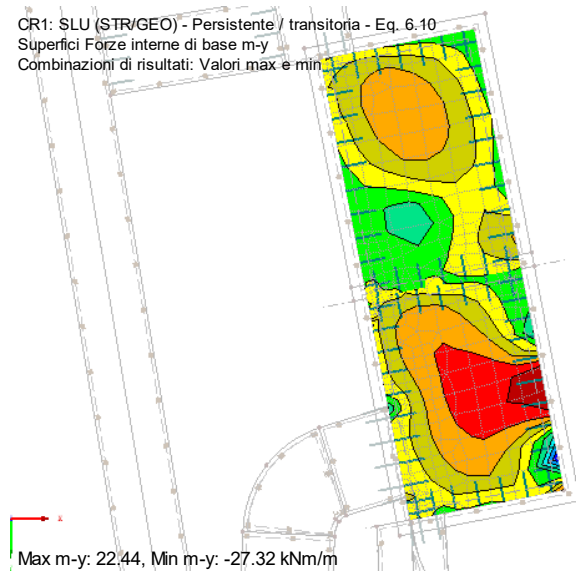
In direzione Z



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-y
Combinazioni di risultati: Valori max e min

In direzione Z



Momento sollecitante my – SLU

Sollecitazioni di progetto $M_{sd,x} = M_{sd,y} = 27,40 \text{ kN}\cdot\text{m}$

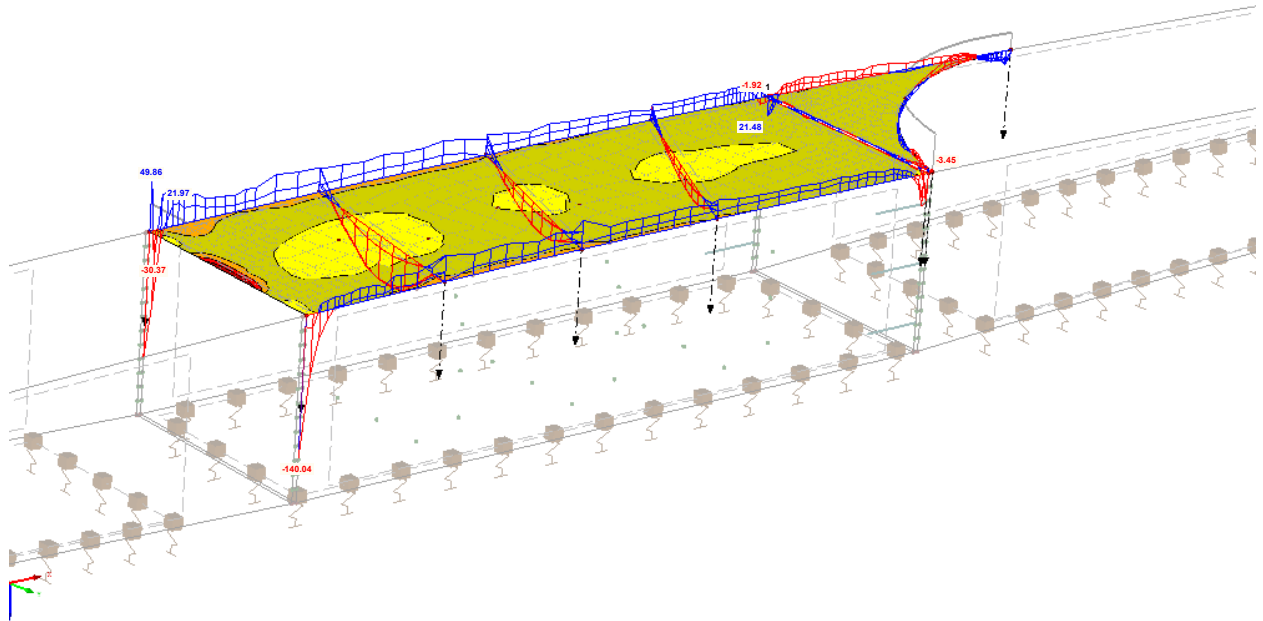
Armatura longitudinale e trasversale $A_s \geq M_{sd} / (0,9 \cdot d \cdot f_{sd}) = 27,40 \cdot 10^6 / (0,9 \cdot 250 \cdot 394) = 3,09 \text{ cm}^2/\text{ml}$
 $\text{Ø}10/15\text{cm} = 5,26 \text{ cm}^2/\text{ml inf. + sup.}$

SOTTOPASSO PEDOCICLABILE

➤ SOLAIO

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-x
Combinazioni di risultati: Valori max e min

Isometrico

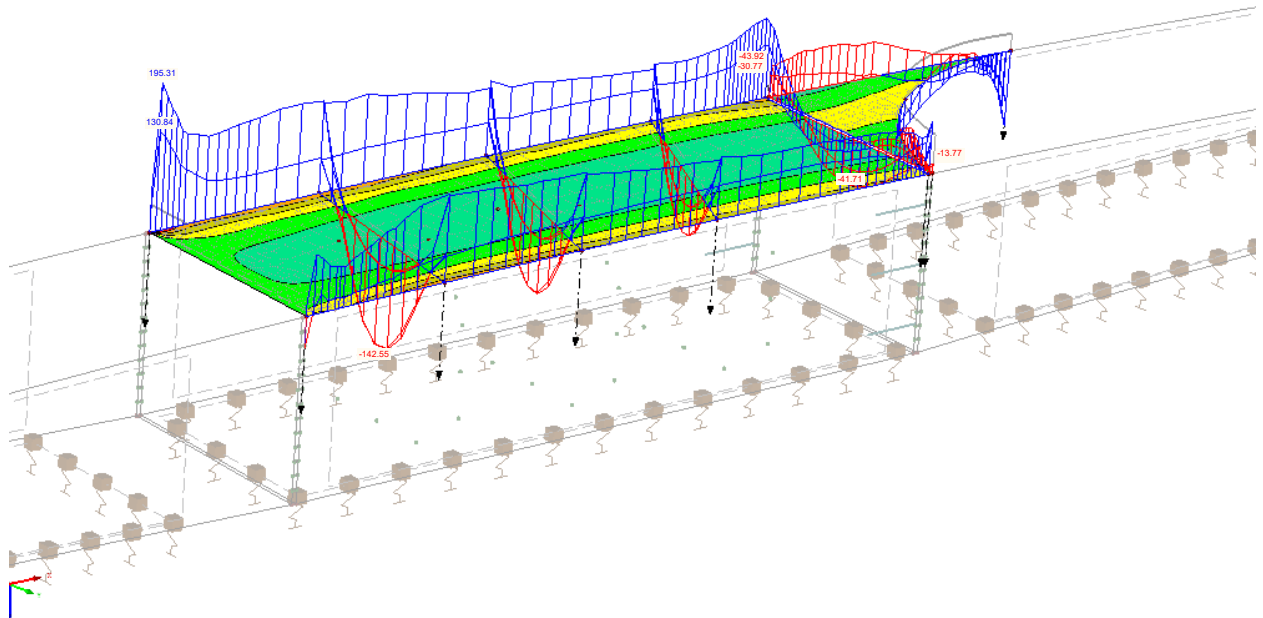


Max m-x: 75.46, Min m-x: -146.95 kNm/m

Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-y
Combinazioni di risultati: Valori max e min

Isometrico



Max m-y: 195.31, Min m-y: -176.73 kNm/m

Momento sollecitante my – SLU

Sollecitazioni di progetto	Msd,x (+)	= 45 kN·m
	Msd,x (-)	= 30 kN·m
	Msd,y (+)	= 150 kN·m
	Msd,y (-)	= 130 kN·m

Armatura longitudinale – positiva $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 150 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 14,10 \text{ cm}^2/\text{ml}$
 $\emptyset 18/15\text{cm} = 16,93 \text{ cm}^2/\text{ml}$

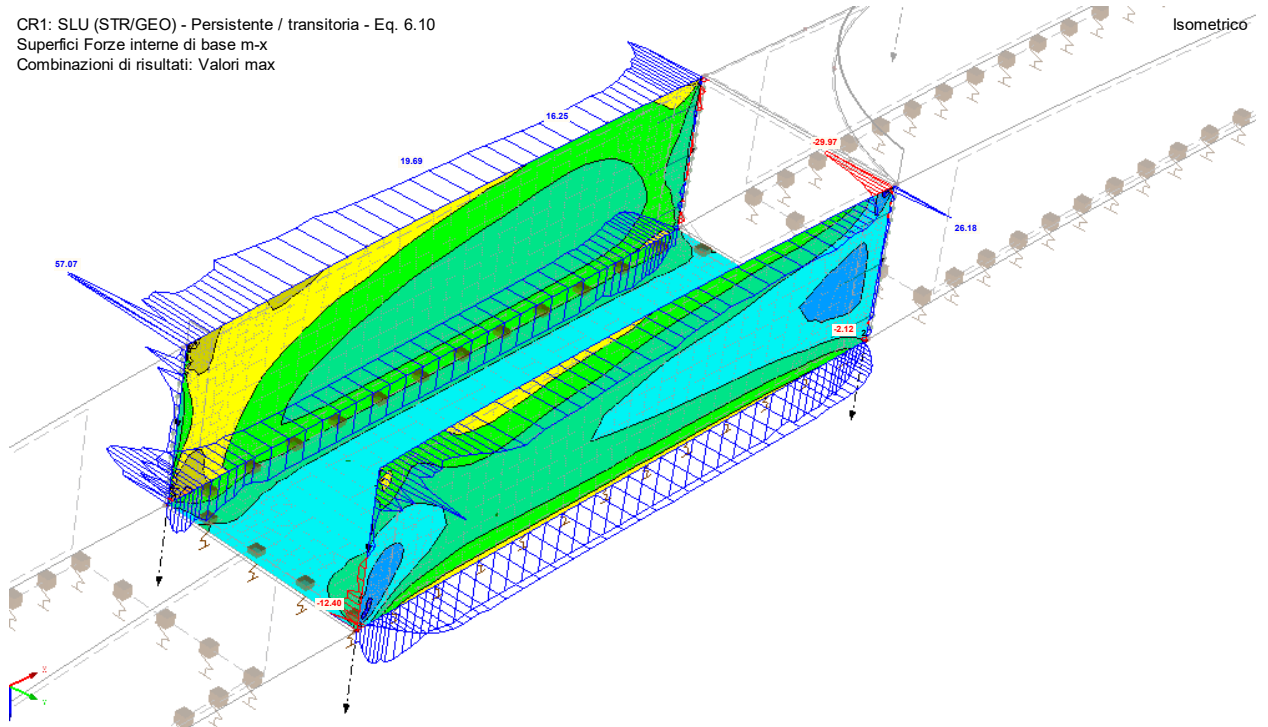
Armatura longitudinale - negativa $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 130 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 12,22 \text{ cm}^2/\text{ml}$
 $\emptyset 18/20\text{cm} = 12,70 \text{ cm}^2/\text{ml}$

Armatura trasversale – positiva $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 45 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 4,23 \text{ cm}^2/\text{ml}$
 $\emptyset 12/15\text{cm} = 7,73 \text{ cm}^2/\text{ml}$

Armatura trasversale – negativa $\emptyset 12/15\text{cm} = 7,73 \text{ cm}^2/\text{ml}$

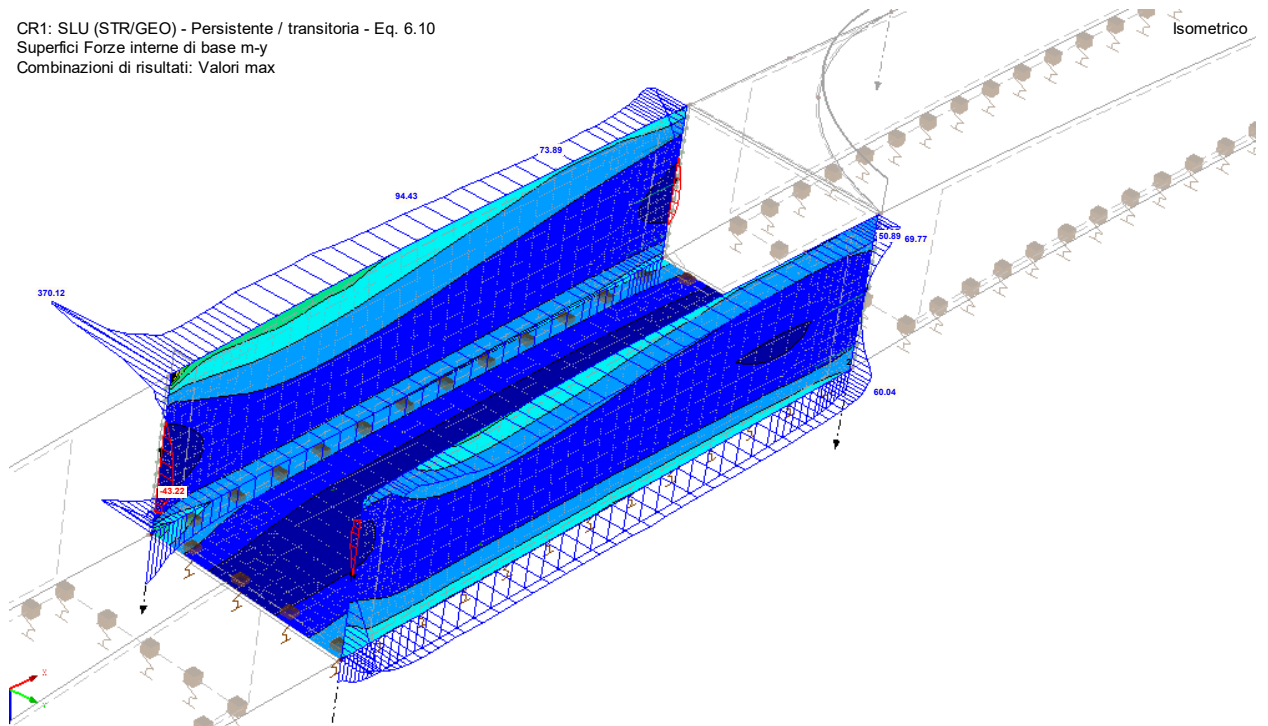
➤ PLATEA E MURI SOTTOPASSO

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-x
Combinazioni di risultati: Valori max



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-y
Combinazioni di risultati: Valori max



Momento sollecitante my – SLU

MURI

Sollecitazioni di progetto	Msd,x (+)	= 35 kN·m
	Msd,x (-)	= 35 kN·m
	Msd,y (+)	= 80 kN·m
	Msd,y (-)	= 110 kN·m

Armatura longitudinale – positiva $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 80 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 10,20 \text{ cm}^2/\text{ml}$
 $\emptyset 14/15\text{cm} = 10,26 \text{ cm}^2/\text{ml}$

Armatura longitudinale - negativa $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 110 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 7,52 \text{ cm}^2/\text{ml}$
 $\emptyset 16/20\text{cm} = 10,05 \text{ cm}^2/\text{ml}$

Armatura trasversale – positiva $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 35 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 3,29 \text{ cm}^2/\text{ml}$
 $\emptyset 12/15\text{cm} = 9,41 \text{ cm}^2/\text{ml}$

Armatura trasversale – negativa $\emptyset 12/15\text{cm} = 9,41 \text{ cm}^2/\text{ml}$

PLATEA

Sollecitazioni di progetto	Msd,x (+)	= 25 kN·m
	Msd,x (-)	= 25 kN·m
	Msd,y (+)	= 70 kN·m
	Msd,y (-)	= 110 kN·m

Armatura longitudinale – positiva $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 70 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 6,58 \text{ cm}^2/\text{ml}$
 $\emptyset 14/15\text{cm} = 10,26 \text{ cm}^2/\text{ml}$

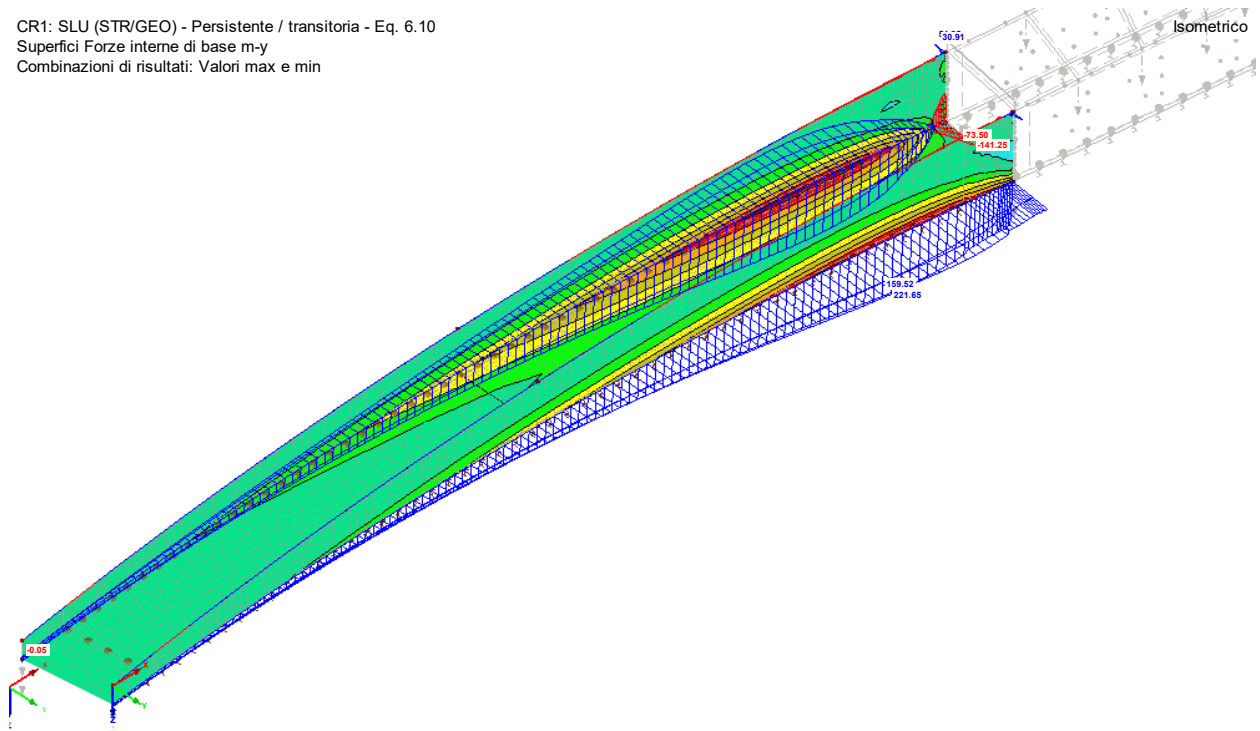
Armatura longitudinale - negativa $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 110 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 7,52 \text{ cm}^2/\text{ml}$
 $\emptyset 14/15\text{cm} = 10,26 \text{ cm}^2/\text{ml}$

Armatura trasversale – positiva $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 25 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 2,35 \text{ cm}^2/\text{ml}$
 $\emptyset 10/15\text{cm} = 5,26 \text{ cm}^2/\text{ml}$

Armatura trasversale – negativa $\emptyset 10/15\text{cm} = 5,26 \text{ cm}^2/\text{ml}$

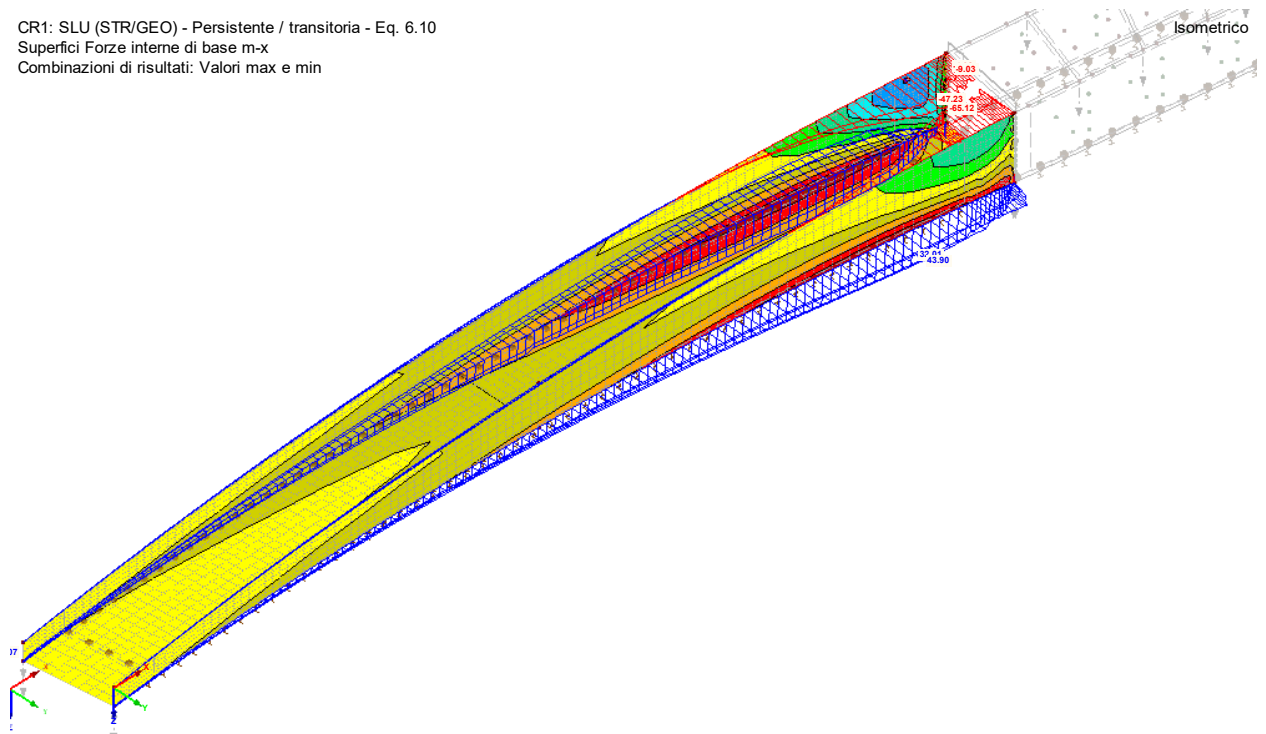
➤ MURI RAMPE

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-y
Combinazioni di risultati: Valori max e min



Momento sollecitante mx – SLU

CR1: SLU (STR/GEO) - Persistente / transitoria - Eq. 6.10
Superfici Forze interne di base m-x
Combinazioni di risultati: Valori max e min



Momento sollecitante my – SLU

MURI e PLATEA

Sollecitazioni di progetto

- Sezione A-A
 - Msd,y = 50 kN·m
 - Msd,x = 12 kN·m
- Sezione B-B
 - Msd,y = 105 kN·m
 - Msd,x = 23 kN·m
- Sezione C-C
 - Msd,y = 221,65 kN·m
 - Msd,x = 44 kN·m

- Sezione A-A
 - Armatura longitudinale $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 50 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 4,70 \text{ cm}^2/\text{ml}$
 $\text{Ø}10/15\text{cm} = 5,27 \text{ cm}^2/\text{ml}$
 - Armatura trasversale $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 12 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 1,12 \text{ cm}^2/\text{ml}$
 $\text{Ø}8/15\text{cm} = 3,33 \text{ cm}^2/\text{ml}$
- Sezione B-B
 - Armatura longitudinale $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 105 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 9,87 \text{ cm}^2/\text{ml}$
 $\text{Ø}16/20 = 10,05 \text{ cm}^2/\text{ml}$
 - Armatura trasversale $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 23 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 2,16 \text{ cm}^2/\text{ml}$
 $\text{Ø}10/15\text{cm} = 3,33 \text{ cm}^2/\text{ml}$
- Sezione C-C
 - Armatura longitudinale $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 221,65 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 20,83 \text{ cm}^2/\text{ml}$
 $\text{Ø}20/15\text{cm} = 20,93 \text{ cm}^2/\text{ml}$
 - Armatura trasversale $As \geq Msd / (0,9 \cdot d \cdot f_{sd}) = 44 \cdot 10^6 / (0,9 \cdot 300 \cdot 394) = 4,14 \text{ cm}^2/\text{ml}$
 $\text{Ø}14/15\text{cm} = 10,26 \text{ cm}^2/\text{ml}$

N.B.

Si é disposto il doppio dell'armatura longitudinale necessaria per via della presenza dei giunti di fessurazione programmata dove é previsto il taglio di ogni secondo ferro dell'armatura trasversale

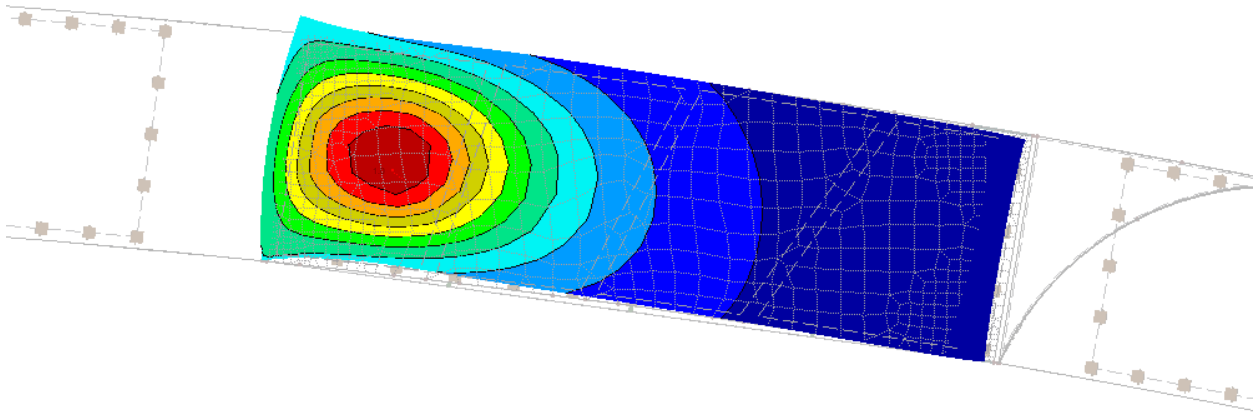
VERIFICA SLE SOLAIO SOTTOPASSO

Le seguenti figure riportano l'andamento delle deformate nelle diverse condizioni di carico ai fini delle verifiche agli SLE-SLD. I suddetti valori sono ricavabili dagli output di calcolo allegati alla presente relazione quale sua parte integrante.

SPOSTAMENTI VERTICALI

CC3: Carichi mobili corsia 1
Spostamenti generalizzati globali u

In direzione Z

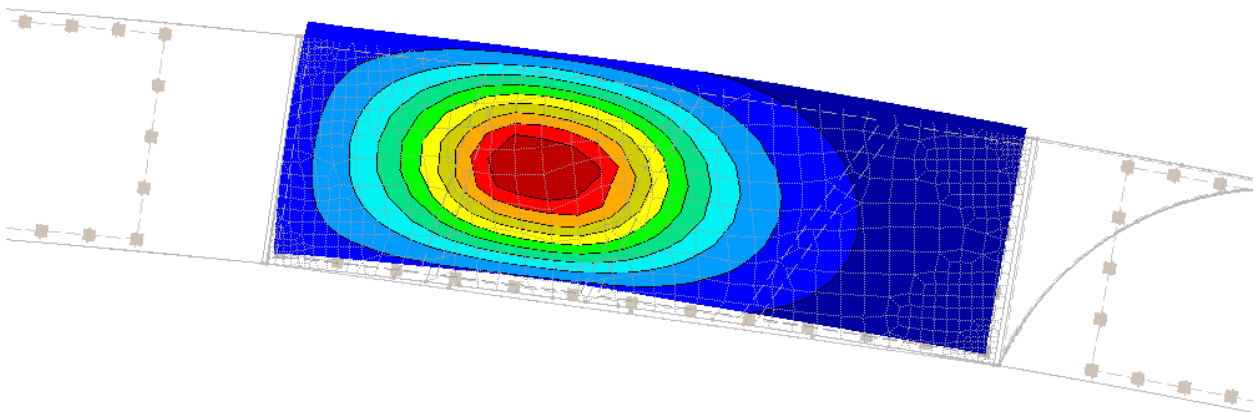


Max u: 1.0, Min u: 0.0 mm
Fattore di deformazione: 10000.00

Spostamento verticale (in z) per carichi mobili corsia 1

CC4: Carichi mobili corsia 2
Spostamenti generalizzati globali u

In direzione Z

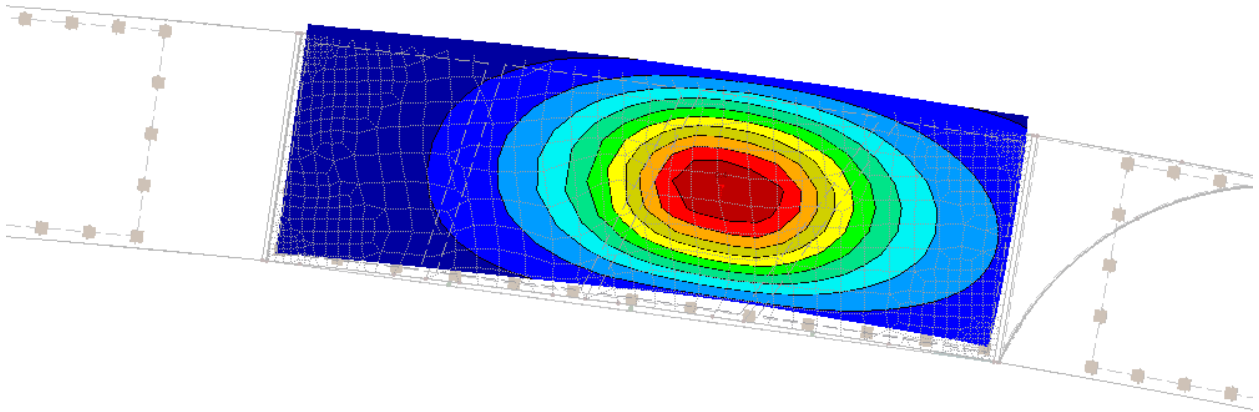


Max u: 0.8, Min u: 0.0 mm
Fattore di deformazione: 14000.00

Spostamento verticale (in z) per carichi mobili corsia 2

CC5: Carichi mobili corsia 3
Spostamenti generalizzati globali u

In direzione Z

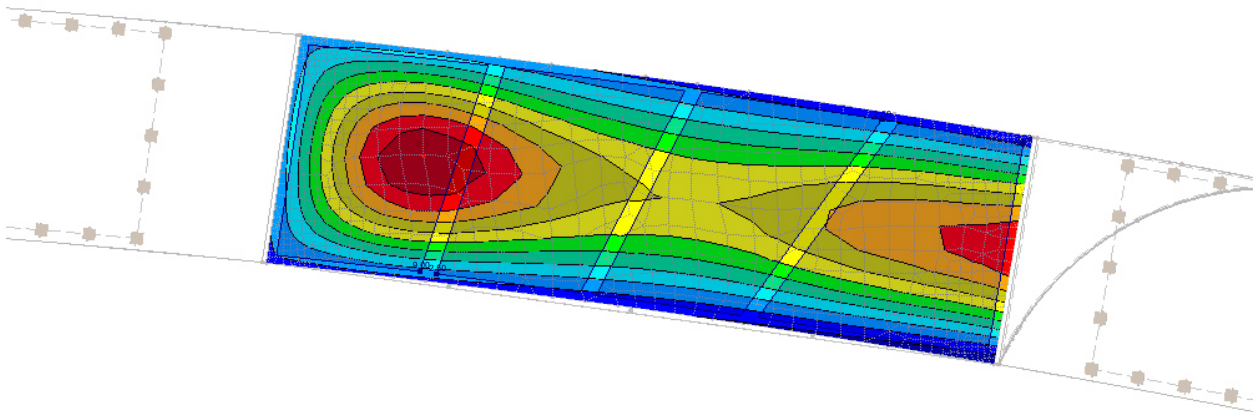


Max u: 0.4, Min u: 0.0 mm
Fattore di deformazione: 27000.00

Spostamento verticale (in z) per carichi mobili corsia 3

CC6: Carichi mobili distribuiti
Carichi [kN/m²]
Spostamenti generalizzati globali u-Z

In direzione Z



Max u-Z: 0.3, Min u-Z: 0.1 mm
Fattore di deformazione: 35000.00

Spostamento verticale (in z) per carichi mobili distribuiti

SLE - VERIFICA DELLA FRECCIA

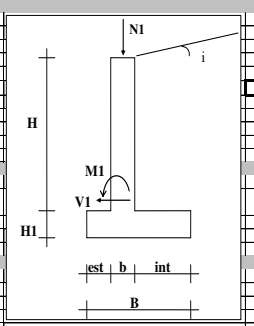
Lo spostamento massimo verticale viene assunto pari a :

$$u_{\max} \leq L/800 = 4.800 \text{ mm} / 800 = 6 \text{ mm}$$

$$u = 1\text{mm} + 0,3\text{mm} = 1,3\text{mm} < u_{\max} = 6 \text{ mm}$$

Muro di sostegno tipo 2 - lato Isarco

			condizioni statiche			condiz. sismiche -down-		condiz. sismiche -up-		
			EQU	STR	GEO	STR	GEO	STR	GEO	
Geometria e materiale (vedi disegno a lato)										
Altezza parete (cm)	H	320	H	320						
Altezza fondazione (cm)	H1	50	H1	50						
Spessore parete alla base (cm)	b	30	b	30						
Spessore parete alla sommità (cm)	est	50	est	50						
Lunghezza suola esterna (di valle) (cm)	int	100	int	100						
Lunghezza suola interna (di monte) (cm)	ym	2500	ym	2500						
Peso specifico parete (daN/mc.)										
Inclinazione superficie terrapieno (gradi)	i	0	i	0						
Sovraccarico variabile sul terrapieno										
Il sovracc. interessa anche la scarpa di monte, stabilizzando il manufatto										
Coef. di contemp. in condiz. sismica	w2	0	w2	0						
Sovraccarico variabile distribuito (daN/mq.)	q	500	q	500						
Azione esterna aggiuntiva										
Tipologia dell'azione aggiuntiva										
Contemp. in condiz. sismica per il tipo Q	w2	0,6	w2	0,6						
Carico verticale centrato esterno (daN)	N1	1200	N1	1200						
Carico orizzontale esterno (daN)	V1	300	V1	300						
Momento ribaltante esterno (daNm)	M1	360	M1	360						
Condizioni sismiche										
Categoria di sottosuolo	Cat.	B	SS	1,200						
Categoria topografica	Cat.	T1	Bm	0,18						
Altezza massima della cresta del pendio o del rilievo (m)	h	0	h	0,000						
Quota del sito rispetto alla base del pendio o del rilievo (m)	h	0	ST	1,000						
Accelerazione di base	ag (g)	0,052	S=SS+ST	1,200						
Fattore "F"	Fo	2,6	kh	0,011						
Terrreno spingente										
Peso specifico efficace terreno (daN/mc.)	γt	1800	γt	1800						
Angolo di attrito interno (gradi)	φ	35	φ	35,00						
Angolo di attrito terra-muro (gradi)	δ	23,3	δ	23,33						
Terrreno sotto la fondazione										
Peso specifico terreno (daN/mc.)	γt fond	1800	γt fond	1800						
Angolo di attrito interno (gradi)	φ fond	35	φ fond	35,00						
Angolo di attrito terra-fondazione (gradi)	δ fond	35	δ fond	35,00						
Coesione efficace (daN/mq.)	c' fond	0	c' fond	0,0						
Risultati parete in elevazione										
azione assiale alla base della parete in elevazione										
momento alla base della parete in elevazione										
Risultati intero manufatto										
azione verticale totale sotto la fondazione										
momento ribaltante totale										
momento stabilizzante totale										
STATI LIMITE TIPO "EQU" E "GEO"										
1. Schiacciamento										
Profondità di incasso fondazione a valle (cm)										
Aumenta/riduci la mensola di valle...										
Aumenta/riduci la mensola di monte...										
Seguire almeno uno dei due approcci										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (A2+M2+R2)										
approccio 2 (A1+M1+R3)										
2. Scorrimento										
Seguire almeno uno dei due approcci										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (A2+M2+R2)										
approccio 2 (A1+M1+R3)										
3. Ribaltamento										
E' obbligatorio l'approccio 1 con combinazione 2										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (EQU+M2+R2)										
approccio 2 (A1+M1+R3)										
STATI LIMITE TIPO "STR"										
1. Parete in elevazione										
Calcestruzzo										
Acciaio										
Ricoprimento di calcestr. sulle barre (cm)										
Armatura tesa parete in elevazione										
Armatura compressa parete in elevazione										
Verifica a pressoflessione SLE (comb. rara)										
2. Fondazione esterna (di valle)										
Calcestruzzo										
Acciaio										
Ricoprimento di calcestr. sulle barre (cm)										
Armatura tesa (inferiore)										
Armatura compressa (superiore)										
Verifica a pressoflessione SLE (comb. rara)										
3. Fondazione interna (di monte)										
Calcestruzzo										
Acciaio										
Ricoprimento di calcestr. sulle barre (cm)										
Armatura tesa (superiore)										
Armatura compressa (inferiore)										
Verifica a pressoflessione SLE (comb. rara)										



5

23,3

35,0

3295

11563

0,09

0,85

8,84

2,60

2,37

6,48

STR

Ned

2,42

5,09

STR

Ned

2,79

5,06

STR

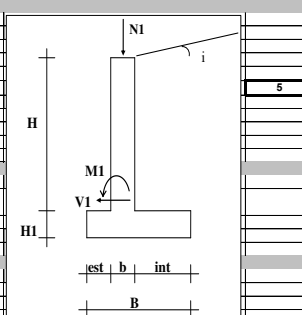
Ned

2,43

STR

Muro di sostegno tipo 1 - lato Isarco

			condizioni statiche			condiz. sismiche -down-		condiz. sismiche -up-		
			EQU	STR	GEO	STR	GEO	STR	GEO	
Geometria e materiale (vedi disegno a lato)										
Altezza parete (cm)	H	100	H	1,00						
Altezza fondazione (cm)	H1	50	H1	0,50						
Spessore parete alla base (cm)	b	30	b	0,30						
Spessore parete alla sommità (cm)	est	20	est	0,20						
Lunghezza suola esterna (di valle) (cm)	est	20	est	0,20						
Lunghezza suola interna (di monte) (cm)	int	60	int	0,60						
Peso specifico parete (daN/mc.)	γm	25000	γm	1,10						
Inclinazione superficie terrapieno (gradi)	i	0	i	0,00						
Sovraccarico variabile sul terrapieno										
Il sovracc. interessa anche la scarpa di monte, stabilizzando il manufatto										
Coef. di contemp. in condiz. sismica	ψ2	0	ψ2	0,00						
Sovraccarico variabile distribuito (daN/mq.)	q	500	q	500	750	750	650	650		
Azione esterna aggiuntiva										
Tipologia dell'azione aggiuntiva										
Contemp. in condiz. sismica per il tipo Q	ψ2	0,6	ψ2	0,60						
Carico verticale centrato esterno (daN)	N1	600	N1	600	0	0	0	0		
Carico orizzontale esterno (daN)	V1	300	V1	300	450	450	390	390		
Momento ribaltante esterno (daNm)	M1	360	M1	360	540	540	468	468		
Condizioni sismiche										
Categoria di sottosuolo	Cat.	B	SS	1,200						
Categoria topografica	Cat.	T1	βm	0,18						
Altezza massima della cresta del pendio o del rilievo (m)	h	0	h	0,000						
Quota del sito rispetto alla base del pendio o del rilievo (m)	h	0	ST	1,000						
Accelerazione di base	ag (g)	0,052	SS+SxST	1,200						
Fattore "Fo"	Fo	2,6	kh	0,011						
Terreno spingente										
Peso specifico efficace terreno (daN/mc.)	γ't	1800	γ't	1800	1800	1800	1800	1800		
Angolo di attrito interno (gradi)	φ'	35	φ'	35,00	29,26	35,00	29,26	29,26		
Angolo di attrito terra-muro (gradi)	δ'	23,3	δ'	23,33	19,50	23,33	19,50	19,50		
Terreno sotto la fondazione										
Peso specifico terreno (daN/mc.)	γ	1800	γ	1800	1800	1800	1800	1800		
Angolo di attrito interno (gradi)	φ	35	φ	35,00	29,26	35,00	29,26	29,26		
Angolo di attrito terra-fondazione (gradi)	δ	35	δ	35,00	29,26	35,00	29,26	29,26		
Coesione efficace (daN/mq.)	c'	0	c'	0,00	0,00	0,00	0,00	0,00		
Risultati parete in elevazione										
azione assiale alla base della parete in elevazione										
momento alla base della parete in elevazione										
Risultati intero manufatto										
azione verticale totale sotto la fondazione										
momento ribaltante totale										
momento stabilizzante totale										
STATI LIMITE TIPO "EQU" E "GEO"										
1. Schiacciamento										
Profondità di incasso fondazione a valle (cm)										
Aumenta/riduci la mensola di valle...										
Aumenta/riduci la mensola di monte...										
Seguire almeno uno dei due approcci										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (A2+M2+R2)										
approccio 2 (A1+M1+R3)										
2. Scorrimento										
Seguire almeno uno dei due approcci										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (A2+M2+R2)										
approccio 2 (A1+M1+R3)										
3. Ribaltamento										
E' obbligatorio l'approccio 1 con combinazione 2										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (EQU+M2+R2)										
approccio 2 (A1+M1+R3)										
STATI LIMITE TIPO "STR"										
1. Parete in elevazione										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	3	Ned	1486	853	936	806	844	844	834
Armatura tesa parete in elevazione	φ	passo	Med	463	711	604	625	300	300	281
Armatura compressa parete in elevazione	φ	passo	Mrd	4095	4037	4108	4104	4095	4095	4095
Verifica a flessione										
Verifica a taglio										
Verifica a pressoflessione SLE (comb. rara)										
Verifica alle tensioni lato acciaio										
Verifica alle tensioni lato c/s										
2. Fondazione esterna (di valle)										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	4	Ned	0	0	0	0	0	0	0
Armatura tesa (inferiore)	φ	passo	Med	96	110	127	96	58	64	58
Armatura compressa (superiore)	φ	passo	Mrd	6868	6868	6868	6868	6868	6868	6868
Verifica a flessione										
Verifica a taglio										
Verifica a pressoflessione SLE (comb. rara)										
Verifica alle tensioni lato acciaio										
Verifica alle tensioni lato c/s										
3. Fondazione interna (di monte)										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	4	Ned	0	0	0	0	0	0	0
Armatura tesa (superiore)	φ	passo	Med	549	854	714	549	549	549	549
Armatura compressa (inferiore)	φ	passo	Mrd	6868	6868	6868	6868	6868	6868	6868
Verifica a flessione										
Verifica a taglio										
Verifica a pressoflessione SLE (comb. rara)										
Verifica alle tensioni lato acciaio										
Verifica alle tensioni lato c/s										



5

23,3

35,0

834

281

1894

0,07

0,36

18,86

13,47

684

3,51

3,19

7,52

5,31

844

14,52

29,23

7,55

14,61

117,58

29,92

12,51

9,31

11,11

3,8

29,77

12,51

9,31

11,11

3,8

29,77

Muro di sostegno tipo 1 - lato Tunnel

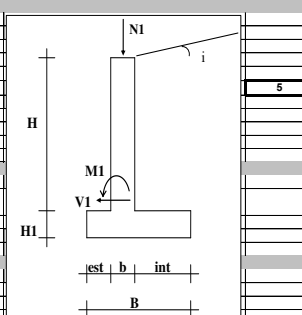
			condizioni statiche			condiz. sismiche -down-		condiz. sismiche -up-		
			EQU	STR	GEO	STR	GEO	STR	GEO	
Geometria e materiale (vedi disegno a lato)										
Altezza parete (cm)	H	300	H	300	H	300	H	300	H	300
Altezza fondazione (cm)	H1	50	H1	50	H1	50	H1	50	H1	50
Spessore parete alla base (cm)	b	30	b	30	b	30	b	30	b	30
Spessore parete alla base (cm)	est	50	est	50	est	50	est	50	est	50
Lunghezza suola esterna (di valle) (cm)	int	60	int	60	int	60	int	60	int	60
Lunghezza suola interna (di monte) (cm)	ym	2500	ym	2500	ym	2500	ym	2500	ym	2500
Peso specifico parete (daN/mc.)	i	0	i	0	i	0	i	0	i	0
Inclinazione superficie terrapieno (gradi)	phi	0	phi	0	phi	0	phi	0	phi	0
Sovraccarico variabile sul terrapieno										
Il sovracc. interessa anche la scarpa di monte, stabilizzando il manufatto										
Coef. di contemp. in condiz. sismica	psi	0	psi	0	psi	0	psi	0	psi	0
Sovraccarico variabile distribuito (daN/mq.)	q	500	q	500	q	500	q	500	q	500
Azione esterna aggiuntiva										
Tipologia dell'azione aggiuntiva										
Contemp. in condiz. sismica per il tipo Q	psi	0,6	psi	0,6	psi	0,6	psi	0,6	psi	0,6
Carico verticale centrato esterno (daN)	N1	0	N1	0	N1	0	N1	0	N1	0
Carico orizzontale esterno (daN)	V1	0	V1	0	V1	0	V1	0	V1	0
Momento ribaltante esterno (daNm)	M1	0	M1	0	M1	0	M1	0	M1	0
Condizioni sismiche										
Categoria di sottosuolo	Cat.	B	SS	1,200	SS	1,200	SS	1,200	SS	1,200
Categoria topografica	Cat.	T1	Bm	0,18	Bm	0,18	Bm	0,18	Bm	0,18
Altezza massima della cresta del pendio o del rilievo (m)	h	0	h	0,000	h	0,000	h	0,000	h	0,000
Quota del sito rispetto alla base del pendio o del rilievo (m)	h	0	ST	1,000	ST	1,000	ST	1,000	ST	1,000
Accelerazione di base	ag (g)	0,052	S=SSxST	1,200	S=SSxST	1,200	S=SSxST	1,200	S=SSxST	1,200
Fattore "Fo"	Fo	2,6	kh	0,011	kh	0,011	kh	0,011	kh	0,011
Terrone spingente										
Peso specifico efficace terreno (daN/mc.)	gamma	1800	gamma	1800	gamma	1800	gamma	1800	gamma	1800
Angolo di attrito interno (gradi)	phi	35	phi	35	phi	35	phi	35	phi	35
Angolo di attrito terra-muro (gradi)	delta	23,3	delta	23,3	delta	23,3	delta	23,3	delta	23,3
Terrone sotto la fondazione										
Peso specifico terreno (daN/mc.)	gamma	1800	gamma	1800	gamma	1800	gamma	1800	gamma	1800
Angolo di attrito interno (gradi)	phi	35	phi	35	phi	35	phi	35	phi	35
Angolo di attrito terra-fondazione (gradi)	delta	35	delta	35	delta	35	delta	35	delta	35
Coesione efficace (daN/mq.)	c	0	c	0	c	0	c	0	c	0
Risultati parete in elevazione										
azione assiale alla base della parete in elevazione										
momento alla base della parete in elevazione										
momento ribaltante totale										
momento stabilizzante totale										
STATI LIMITE TIPO "EQU" E "GEO"										
1. Schiacciamento										
Profondità di incasso fondazione a valle (cm)	D	100	ecc.	0,18	ecc.	0,18	ecc.	0,18	ecc.	0,18
Aumenta/riduci la mensola di valle...										
Aumenta/riduci la mensola di monte...										
Seguire almeno uno dei due approcci										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (A2+M2+R2)										
approccio 2 (A1+M1+R3)										
2. Scorrimento										
Seguire almeno uno dei due approcci										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (A2+M2+R2)										
approccio 2 (A1+M1+R3)										
3. Ribaltamento										
E' obbligatorio l'approccio 1 con combinazione 2										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (EQU+M2+R2)										
approccio 2 (A1+M1+R3)										
STATI LIMITE TIPO "STR"										
1. Parete in elevazione										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	3	Ned	3179	3185	3487	3277	3072	3115	3036
Armatura tesa parete in elevazione	phi	20	Med	2183	2189	2935	3026	1935	2061	1913
Armatura compressa parete in elevazione	phi	20	Mstab	6252	6256	6252	6252	1844	1823	1823
Verifica a pressoflessione SLE (comb. rara)										
Verifica a flessione										
Verifica a taglio										
Verifica alle tensioni lato acciaio										
Verifica alle tensioni lato c/s										
2. Fondazione esterna (di valle)										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	4	Ned	0	0	0	0	0	0	0
Armatura tesa (inferiore)	phi	20	Med	983	976	1360	1443	925	1163	913
Armatura compressa (superiore)	phi	20	Mstab	9766	9766	9766	9766	1935	2464	1913
Verifica a pressoflessione SLE (comb. rara)										
Verifica a flessione										
Verifica a taglio										
Verifica alle tensioni lato acciaio										
Verifica alle tensioni lato c/s										
3. Fondazione interna (di monte)										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	4	Ned	0	0	0	0	0	0	0
Armatura tesa (superiore)	phi	20	Med	1197	1197	1556	1197	1197	1197	1197
Armatura compressa (inferiore)	phi	20	Mstab	13143	13143	13143	13143	3492	4299	3445
Verifica a pressoflessione SLE (comb. rara)										
Verifica a flessione										
Verifica a taglio										
Verifica alle tensioni lato acciaio										
Verifica alle tensioni lato c/s										

Muro di sostegno tipo 2 - lato Tunnel

			condizioni statiche			condiz. sismiche -down-		condiz. sismiche -up-			
			EQU	STR	GEO	STR	GEO	STR	GEO		
Geometria e materiale (vedi disegno a lato)			Coeff. parziali sui parametri geot. (M)								
Altezza parete (cm)	H	210	1.25	1.00	1.25	1.00	1.25	1.00	γ _c		
Altezza fondazione (cm)	H1	50	1.25	1.00	1.25	1.00	1.25	1.00	γ _c		
Spessore parete alla base (cm)	b	20	1.00	1.00	1.00	1.00	1.00	1.00	γ _r		
Spessore parete alla base (cm)	b1	20	1.00	1.00	1.00	1.00	1.00	1.00	γ _r		
Lunghezza suola esterna (di valle) (cm)	est	40									
Lunghezza suola interna (di monte) (cm)	int	40									
Peso specifico parete (daN/mc.)	γ _m	2500							γ _{G1 fav.}		
Inclinazione superficie terrapieno (gradi)	i	0							γ _{G1 sfav.}		
									γ _{G2 fav.}		
									γ _{G2 sfav.}		
Sovraccarico variabile sul terrapieno			Coeff. parziali azioni variabili (A)								
Il sovracc. interessa anche la scarpa di monte, stabilizzando il manufatto			0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Coeff. di contemp. in condiz. sismica			1.5	1.5	1.3	0.0	0.0	0.0	0.0		
Sovraccarico variabile distribuito (daN/mq.)			750	750	650	0	0	0	0		
Coeff. parziali azione aggiuntiva (A)											
Tipologia dell'azione aggiuntiva			1.5	1.5	1.3	0.6	0.6	0.6	0.6		
Contemp. in condiz. sismica per il tipo Q			1.5	1.5	1.3	0.6	0.6	0.6	0.6		
Carico verticale centrato esterno (daN)			0	0	0	0	0	0	0		
Carico orizzontale esterno (daN)			0	0	0	0	0	0	0		
Momento ribaltante esterno (daNm)			0	0	0	0	0	0	0		
Condizioni sismiche			In condizioni statiche			In condizioni sismiche		In condizioni sismiche			
Categorie di sottosuolo			SS	1.200							
Categorie topografica			β _m	0.18							
Altezza massima della cresta del pendio o del rilievo (m)			h _M	0.000							
Quota del sito rispetto alla base del pendio o del rilievo (m)			ST	1.000							
Accelerazione di base			S _s S _s ST	1.200							
Fattore F ₀			kh	0.011	EQU	STR	GEO	STR	GEO		
			kv	± 0.006	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)		
Terrreno spingente			In condizioni statiche			In condizioni sismiche		In condizioni sismiche			
Peso specifico efficace terreno (daN/mc.)			γ _t	1800	1800	1800	1800	1800	1800		
Angolo di attrito interno (gradi)			φ	35	29.26	35.00	29.26	35.00	29.26		
Angolo di attrito terra-muro (gradi)			δ	23.33	19.50	23.33	19.50	23.33	19.50		
Angolo di attrito interno (gradi)			φ _{int}	35	29.26	35.00	29.26	35.00	29.26		
Angolo di attrito terra-fondazione (gradi)			δ _{fond}	35	29.26	35.00	29.26	35.00	29.26		
Coesione efficace (daN/mq.)			c _{fond}	0	0.0	0.0	0.0	0.0	0.0		
Coesione efficace (daN/mq.)			c _{fond}	0	0.0	0.0	0.0	0.0	0.0		
Coesione efficace (daN/mq.)			c _{fond}	0	0.0	0.0	0.0	0.0	0.0		
Coesione efficace (daN/mq.)			c _{fond}	0	0.0	0.0	0.0	0.0	0.0		
Risultati parete in elevazione			(espandere le righe)								
azione assiale alla base della parete in elevazione			N	1336	1702	1336	1452	1452	1435		
taglio alla base della parete in elevazione			V	1128	1511	1128	947	947	936		
momento alla base della parete in elevazione			M	822	1117	822	633	633	626		
Risultati intero manufatto			(espandere le righe)								
azione verticale totale sotto la fondazione			N tot	4527	4314	4766	4442	4474	4389		
azione orizzontale totale sotto la fondazione			V tot	1657	2493	2213	1450	1847	1433		
momento ribaltante totale			M tot	822	1121	1153	680	972	653		
momento stabilizzante totale			Mstab tot	2360	2124	2360	2374	2374	2345		
STATI LIMITE TIPO "EQU" E "GEO"											
1. Schiacciamento											
Profondità di incasso fondazione a valle (cm)			D	100							
Aumenta/riduci la mensola di valle...			est	40							
Aumenta/riduci la mensola di monte...			int	40							
Seguire almeno uno dei due approcci			approccio 1, comb. 1 (A1+M1+R1)			7.58		7.67			
			approccio 1, comb. 2 (A2+M2+R2)			2.22		2.25			
			approccio 2 (A1+M1+R3)			5.42		5.48			
2. Scorrimento											
Seguire almeno uno dei due approcci			approccio 1, comb. 1 (A1+M1+R1)			2.15		2.14			
			approccio 1, comb. 2 (A2+M2+R2)			1.36		1.36			
			approccio 2 (A1+M1+R3)			1.95		1.95			
3. Ribaltamento											
E' obbligatorio l'approccio 1 con combinazione 2			approccio 1, comb. 1 (A1+M1+R1)			3.80		3.59			
			approccio 1, comb. 2 (EQU+M2+R2)			2.44		2.44			
			approccio 2 (A1+M1+R3)			2.57		2.57			
STATI LIMITE TIPO "STR"											
1. Parete in elevazione											
Calcestruzzo			Classe	C25/30							
Acciaio			Tipo	B450C							
Ricoprimento di calcestr. sulle barre (cm)			c	3							
Armatura tesa parete in elevazione			φ	12	20						
Armatura compressa parete in elevazione			φ	12	20						
Verifica a pressoflessione SLE (comb. rara)											
2. Fondazione esterna (di valle)											
Calcestruzzo			Classe	C25/30							
Acciaio			Tipo	B450C							
Ricoprimento di calcestr. sulle barre (cm)			c	4							
Armatura tesa (inferiore)			φ	12	20						
Armatura compressa (superiore)			φ	12	20						
Verifica a pressoflessione SLE (comb. rara)											
3. Fondazione interna (di monte)											
Calcestruzzo			Classe	C25/30							
Acciaio			Tipo	B450C							
Ricoprimento di calcestr. sulle barre (cm)			c	4							
Armatura tesa (superiore)			φ	12	20						
Armatura compressa (inferiore)			φ	12	20						
Verifica a pressoflessione SLE (comb. rara)											

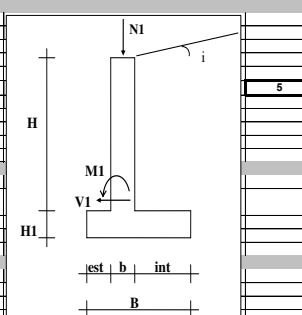
Muro di sostegno tipo 2 - lato Tunnel

			condizioni statiche			condiz. sismiche -down-		condiz. sismiche -up-		
			EQU	STR	GEO	STR	GEO	STR	GEO	
Geometria e materiale (vedi disegno a lato)										
Altezza parete (cm)	H	700	H	700						
Altezza fondazione (cm)	H1	50	H1	50						
Spessore parete alla base (cm)	b	40	b	40						
Spessore parete alla sommità (cm)	b1	40	b1	40						
Lunghezza suola esterna (di valle) (cm)	est	120	est	120						
Lunghezza suola interna (di monte) (cm)	int	70	int	70						
Peso specifico parete (daN/mc.)	γm	2500	γm	2500						
Incl. muro risp. alla verticale (gradi)	i	0	i	0						
Inclinazione superficie terrapieno (gradi)	v	0	v	0						
Sovraccarico variabile sul terrapieno										
Il sovracc. interessa anche la scarpa di monte, stabilizzando il manufatto										
si/no		no		no						
Coef. di contemp. in condiz. sismica										
ψ2		0		0						
Sovraccarico variabile distribuito (daN/mq.)										
q		0		0						
Azione esterna aggiuntiva										
Tipologia dell'azione aggiuntiva										
tipo		Q		Q						
Contemp. in condiz. sismica per il tipo Q										
ψ2		0,6		0,6						
Carico verticale centrato esterno (daN)										
N1		0		0						
Carico orizzontale esterno (daN)										
V1		0		0						
Momento ribaltante esterno (daNm)										
M1		0		0						
Condizioni sismiche										
Categoria di sottosuolo	Cat.	B	SS	1,200						
Categoria topografica	Cat.	T1	βm	0,18						
Altezza massima della cresta del pendio o del rilievo (m)	h	0	h	0,000						
Quota del sito rispetto alla base del pendio o del rilievo (m)	h	0	ST	1,000						
Accelerazione di base										
ag (g)		0,052	kh	0,011						
Fattore "F0"	F0	2,6	kv	± 0,006						
Terrreno spingente										
Peso specifico efficace terreno (daN/mc.)										
γ't		1800	γ't	1800	1800	1800	1800	1800	daN/mc.	peso specifico del terreno
Angolo di attrito interno (gradi)										
φ'		35	φ'	35,00	29,26	35,00	29,26	35,00	gradi	angolo di attrito interno
Angolo di attrito terra-muro (gradi)										
δ'		23,3	δ'	23,33	19,50	23,33	19,50	23,33	gradi	angolo di attrito terra muro
Angolo di attrito interno (gradi)										
φ		35	φ	35,00	29,26	35,00	29,26	35,00	gradi	angolo di attrito interno del terreno sotto la fond.
Angolo di attrito terra-fondazione (gradi)										
δ' fond		35	δ' fond	35,00	29,26	35,00	29,26	35,00	gradi	angolo di attrito terra muro sotto la fond.
Coesione efficace (daN/mq.)										
c' fond		0	c' fond	0,0	0,0	0,0	0,0	0,0	daN/mq.	coesione efficace del terreno sotto la fond.
Risultati parete in elevazione										
azione assiale alla base della parete in elevazione										
N		12299	N	12299	12550	12550	12550	12550	daN	azione assiale alla base della parete
taglio alla base della parete in elevazione										
V		22239	V	22239	12866	12866	12866	12866	daN	taglio alla base della parete in elevazione
momento alla base della parete in elevazione										
M		22239	M	22239	28911	28911	28911	28911	daNm	momento alla base della parete in elevazione
Risultati intero manufatto										
azione verticale totale sotto la fondazione										
N tot		23596	N tot	23596	22515	25066	23866	23866	daN	azione verticale totale sotto la fondazione
momento ribaltante totale										
M tot		17113	M tot	17113	16064	14770	14604	14604	daNm	momento ribaltante totale sotto la fondazione
momento stabilizzante totale										
Mstab tot		30305	Mstab tot	30305	27275	30305	30305	30305	daNm	momento stabilizzante totale
STATI LIMITE TIPO "EQU" E "GEO"										
1. Schiacciamento										
ecc. 0,59										
B nd 1,12										
scomp 1%										
qlim 7,00										
Profondità di incasso fondazione a valle (cm)										
D		300		300						
Aumenta/riduci la mensola di valle...										
est		120		120						
Aumenta/riduci la mensola di monte...										
int		70		70						
Seguire almeno uno dei due approcci										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (A2+M2+R2)										
approccio 2 (A1+M1+R3)										
2. Scorrimento										
Seguire almeno uno dei due approcci										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (A2+M2+R2)										
approccio 2 (A1+M1+R3)										
3. Ribaltamento										
E' obbligatorio l'approccio 1 con combinazione 2										
approccio 1, comb. 1 (A1+M1+R1)										
approccio 1, comb. 2 (EQU+M2+R2)										
approccio 2 (A1+M1+R3)										
STATI LIMITE TIPO "STR"										
1. Parete in elevazione										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARA)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	3	Ned	11269	11269	12550	11677	11677	11309	11338
φ passo			Med	22239	31680	28911	28911	28911	23272	28867
Armatura tesa parete in elevazione			Med	11269	32583	34497	34336	34336	23272	34336
Armatura compressa parete in elevazione			Med	11269	10697	12866	12721	12721	10260	13108
Verifica a pressoflessione SLE (comb. rara)			Med	11269	21074	21248	21107	21107	21081	21111
cs limite		3600	Med	11269	11269	11269	11269	11269	11269	11269
cs		2750	Med	11269	11269	11269	11269	11269	11269	11269
f acciaio		1,31	Med	11269	11269	11269	11269	11269	11269	11269
cc limite		112,1	Med	11269	11269	11269	11269	11269	11269	11269
cc		92,6	Med	11269	11269	11269	11269	11269	11269	11269
f ds		1,21	Med	11269	11269	11269	11269	11269	11269	11269
2. Fondazione esterna (di valle)										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARA)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	4	Ned	0	0	0	0	0	0	0
φ passo			Med	13371	107	18904	10488	10488	15729	9037
Armatura tesa (inferiore)			Med	13371	33519	33519	33519	33519	33519	33519
Armatura compressa (superiore)			Med	13371	21165	28258	23368	23368	21022	22341
Verifica a pressoflessione SLE (comb. rara)			Med	13371	20227	20227	20227	20227	20227	20227
cs limite		3600	Med	13371	13371	13371	13371	13371	13371	13371
cs		1599	Med	13371	13371	13371	13371	13371	13371	13371
f acciaio		2,25	Med	13371	13371	13371	13371	13371	13371	13371
cc limite		112,1	Med	13371	13371	13371	13371	13371	13371	13371
cc		38,5	Med	13371	13371	13371	13371	13371	13371	13371
f ds		2,91	Med	13371	13371	13371	13371	13371	13371	13371
3. Fondazione interna (di monte)										
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO
Acciaio	Tipo	B450C	(RARA)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)
Ricoprimento di calcestr. sulle barre (cm)	c	4	Ned	0	0	0	0	0	0	0
φ passo			Med	3393	3054	4411	3393	3393	3393	3393
Armatura tesa (superiore)			Med	3393	17352	17352	17352	17352	17352	17352
Armatura compressa (inferiore)			Med	3393	10655	12604	9695	9695	9695	9695
Verifica a pressoflessione SLE (comb. rara)			Med	3393	16889	16889	16889	16889	16889	16889
cs limite		3600	Med	3393	3393	3393	3393	3393	3393	3393
cs		790	Med	3393	3393	3393	3393	3393	3393	3393
f acciaio		4,56	Med	3393	3393	3393	3393	3393	3393	3393
cc limite		112,1	Med	3393	3393	3393	3393	3393	3393	3393
cc		15,0	Med	3393	3393	3393	3393	3393	3393	3393
f ds		7,45	Med	3393	3393	3393	3393	3393	3393	3393



Muro di sostegno tipo 1 - lungo ciclabile

			condizioni statiche			condiz. sismiche -down-		condiz. sismiche -up-			
			EQU	STR	GEO	STR	GEO	STR	GEO		
Geometria e materiale (vedi disegno a lato)											
Altezza parete (cm)	H	180	H	180	H	180	H	180	H	180	
Altezza fondazione (cm)	H1	50	H1	50	H1	50	H1	50	H1	50	
Spessore parete alla base (cm)	est	35	est	35	est	35	est	35	est	35	
Spessore parete alla sommità (cm)	int	30	int	30	int	30	int	30	int	30	
Lunghezza suola esterna (di valle) (cm)	b	30	b	30	b	30	b	30	b	30	
Lunghezza suola interna (di monte) (cm)	int	35	int	35	int	35	int	35	int	35	
Peso specifico parete (daN/mc.)	γm	2500	γm	2500	γm	2500	γm	2500	γm	2500	
Inclinazione superficie terrapieno (gradi)	i	0	i	0	i	0	i	0	i	0	
Sovraccarico variabile sul terrapieno											
Il sovracc. interessa anche la scarpa di monte, stabilizzando il manufatto											
Coef. di contemp. in condiz. sismica	ψ2	0	ψ2	0	ψ2	0	ψ2	0	ψ2	0	
Sovraccarico variabile distribuito (daN/mq.)	q	500	q	500	q	500	q	500	q	500	
Azione esterna aggiuntiva											
Tipologia dell'azione aggiuntiva											
Contemp. in condiz. sismica per il tipo Q	ψ2	0,6	ψ2	0,6	ψ2	0,6	ψ2	0,6	ψ2	0,6	
Carico verticale centrato esterno (daN)	N1	1500	N1	1500	N1	1500	N1	1500	N1	1500	
Carico orizzontale esterno (daN)	V1	300	V1	300	V1	300	V1	300	V1	300	
Momento ribaltante esterno (daNm)	M1	360	M1	360	M1	360	M1	360	M1	360	
Condizioni sismiche											
Categoria di sottosuolo	Cat.	B	SS	1,200	SS	1,200	SS	1,200	SS	1,200	
Categoria topografica	Cat.	T1	βm	0,18	βm	0,18	βm	0,18	βm	0,18	
Altezza massima della cresta del pendio o del rilievo (m)	h	0	h	0,000	h	0,000	h	0,000	h	0,000	
Quota del sito rispetto alla base del pendio o del rilievo (m)	h	0	ST	1,000	ST	1,000	ST	1,000	ST	1,000	
Accelerazione di base	ag (g)	0,052	kh	0,011	kh	0,011	kh	0,011	kh	0,011	
Fattore "F0"	F0	2,6	kv	± 0,006	kv	± 0,006	kv	± 0,006	kv	± 0,006	
Terreno spingente											
Peso specifico efficace terreno (daN/mc.)											
Angolo di attrito interno (gradi)	φ'	35	φ'	35,00	φ'	35,00	φ'	35,00	φ'	35,00	
Angolo di attrito terra-muro (gradi)	δ'	23,3	δ'	23,33	δ'	23,33	δ'	23,33	δ'	23,33	
Terrano sotto la fondazione											
Peso specifico terreno (daN/mc.)											
Angolo di attrito interno (gradi)	φ	35	φ	35,00	φ	35,00	φ	35,00	φ	35,00	
Angolo di attrito terra-fondazione (gradi)	δ	35	δ	35,00	δ	35,00	δ	35,00	δ	35,00	
Coesione efficace (daN/mq.)	c'	0	c'	0,0	c'	0,0	c'	0,0	c'	0,0	
Risultati parete in elevazione											
azione assiale alla base della parete in elevazione											
momento alla base della parete in elevazione											
Risultati intero manufatto											
azione verticale totale sotto la fondazione											
momento ribaltante totale											
momento stabilizzante totale											
STATI LIMITE TIPO "EQU" E "GEO"											
1. Schiacciamento											
Profondità di incasso fondazione a valle (cm)											
Aumenta/riduci la mensola di valle...											
Aumenta/riduci la mensola di monte...											
Seguire almeno uno dei due approcci											
approccio 1, comb. 1 (A1+M1+R1)											
approccio 1, comb. 2 (A2+M2+R2)											
approccio 2 (A1+M1+R3)											
2. Scorrimento											
Seguire almeno uno dei due approcci											
approccio 1, comb. 1 (A1+M1+R1)											
approccio 1, comb. 2 (A2+M2+R2)											
approccio 2 (A1+M1+R3)											
3. Ribaltamento											
E' obbligatorio l'approccio 1 con combinazione 2											
approccio 1, comb. 1 (A1+M1+R1)											
approccio 1, comb. 2 (EQU+M2+R2)											
approccio 2 (A1+M1+R3)											
STATI LIMITE TIPO "STR"											
1. Parete in elevazione											
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO	
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)	
Ricoprimento di calcestr. sulle barre (cm)	c	3	Ned	3444	1983	2073	1891	1876	1891	1853	
Armatura tesa parete in elevazione	φ passo	10 20	Med	870	1358	1236	1263	885	708	1300	
Armatura compressa parete in elevazione	φ passo	10 20	Mrd	3019	5045	5013	5017	631	844	626	
Verifica a flessione											
Verifica a taglio											
Verifica a pressoflessione SLE (comb. rara)											
cs limite											
cs											
f acciaio											
cc limite											
cc											
f ds											
2. Fondazione esterna (di valle)											
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO	
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)	
Ricoprimento di calcestr. sulle barre (cm)	c	4	Ned	0	0	0	0	0	0	0	
Armatura tesa (inferiore)	φ passo	10 20	Med	409	716	497	513	260	310	257	
Armatura compressa (superiore)	φ passo	10 20	Mrd	6868	6868	6868	6868	6868	6868	6868	
Verifica a flessione											
Verifica a taglio											
Verifica a pressoflessione SLE (comb. rara)											
cs limite											
cs											
f acciaio											
cc limite											
cc											
f ds											
3. Fondazione interna (di monte)											
Calcestruzzo	Classe	C25/30	SLE	EQU	STR	GEO	STR	GEO	STR	GEO	
Acciaio	Tipo	B450C	(RARAR)	(EQU+M2)	(A1+M1)	(A2+M2)	(SISMA+M1)	(SISMA+M2)	(SISMA+M1)	(SISMA+M2)	
Ricoprimento di calcestr. sulle barre (cm)	c	4	Ned	0	0	0	0	0	0	0	
Armatura tesa (superiore)	φ passo	10 20	Med	275	245	358	276	275	275	275	
Armatura compressa (inferiore)	φ passo	10 20	Mrd	6868	6868	6868	6868	6868	6868	6868	
Verifica a flessione											
Verifica a taglio											
Verifica a pressoflessione SLE (comb. rara)											
cs limite											
cs											
f acciaio											
cc limite											
cc											
f ds											



5

23.3

35.0

daN

daNm

daN

daNm

daN/cmq.

daN/cmq.

daN/cmq.

daN/cmq.

daN/cmq.

daN/cmq.

daN/cmq.

daN/cmq.

daN/cmq.

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daN/cmq.

daN/cmq.

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daN/cmq.

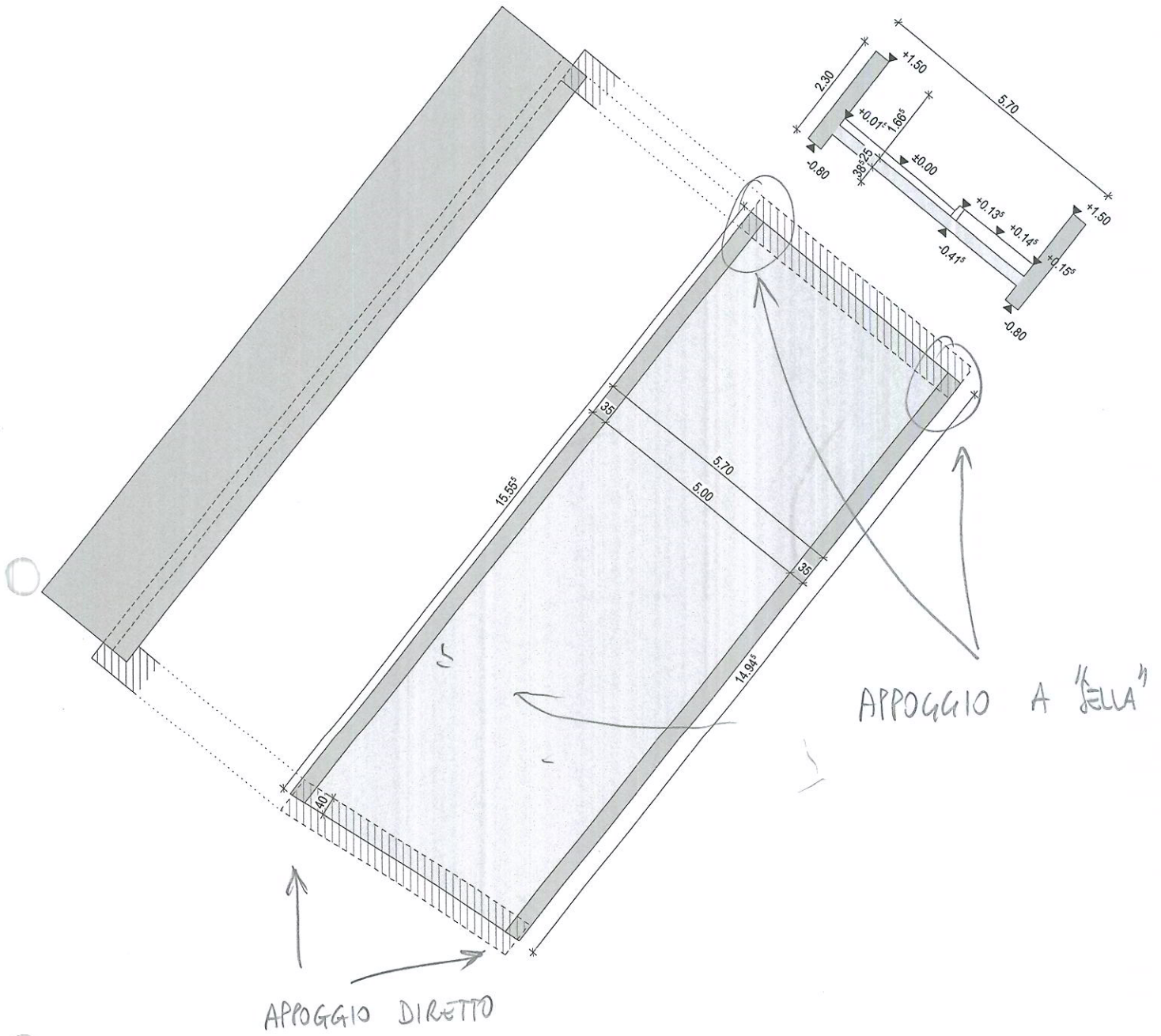
daN/cmq.

daN/cmq.

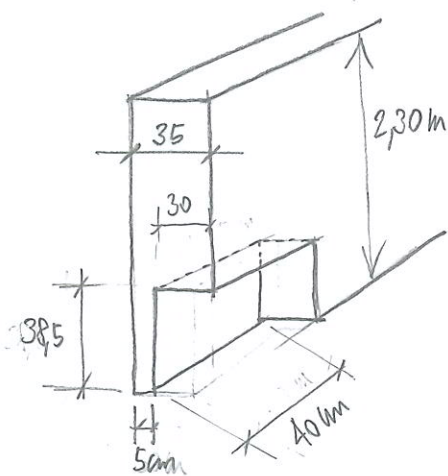
daN/cmq.

Muro di sostegno tipo 2 - lungo ciclabile

			condizioni statiche			condiz. sismiche -down-		condiz. sismiche -up-		H	H1	
			EQU	STR	GEO	STR	GEO	STR	GEO			
Geometria e materiale (vedi disegno a lato)			Coeff. parziali sui parametri geot. (M)			STR		GEO				
Altezza parete (cm)	H	370	1,25	1,00	1,25	1,00	1,25	1,00	1,25	1,00	γ _c	
Altezza fondazione (cm)	H1	50	1,25	1,00	1,25	1,00	1,25	1,00	1,25	1,00	γ _c	
Spessore parete alla base (cm)	b	35	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	γ _r	
Spessore parete alla base (cm)	b	35	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	γ _r	
Lunghezza suola esterna (di valle) (cm)	est	50										
Lunghezza suola interna (di monte) (cm)	int	85										
Peso specifico parete (daN/mc.)	γ _m	2500									γ _{G1 fav.}	
Inclinazione superficie terrapieno (gradi)	i	0									γ _{G2 sfav.}	
			Coeff. parziali azioni permanenti (A)			STR		GEO		γ _{G2 sfav.}		
			Coeff. parziali azioni variabili (A)			STR		GEO		γ _{G1 fav.}		
			Coeff. parziali azione aggiuntiva (A)			STR		GEO		γ _{G1 fav.}		
Sovraccarico variabile sul terrapieno			Coeff. parziali azioni variabili (A)			STR		GEO		γ _{G1 fav.}		
Il sovracc. interessa anche la scarpa di monte, stabilizzando il manufatto			si/no			no		no		no		
Coeff. di contemp. in condiz. sismica			ψ ₂			0		0		0		
Sovraccarico variabile distribuito (daN/mq.)			q			500		500		500		
Azione esterna aggiuntiva			Coeff. parziali azione aggiuntiva (A)			STR		GEO		γ _{G1 fav.}		
Tipologia dell'azione aggiuntiva			tipo			Q		Q		Q _{fav}		
Contemp. in condiz. sismica per il tipo Q			ψ ₂			0,6		0,6		0,6		
Carico verticale centrato esterno (daN)			N1			1500		1500		1500		
Carico orizzontale esterno (daN)			V1			300		300		300		
Momento ribaltante esterno (daNm)			M1			360		360		360		
Condizioni sismiche			Cat.			B		B		B		
Categorie topografica			Cat.			T1		T1		T1		
Altezza massima della cresta del pendio o del rilievo (m)			h			0		0		0		
Quota del sito rispetto alla base del pendio o del rilievo (m)			h			0		0		0		
Accelerazione di base			ag (g)			0,052		0,052		0,052		
Fattore "F ₀ "			F ₀			2,6		2,6		2,6		
Terrreno spingente			In condizioni statiche			STR		GEO		STR		
Peso specifico efficace terreno (daN/mc.)			γ _t			1800		1800		1800		
Angolo di attrito interno (gradi)			φ			35		35		35		
Angolo di attrito terra-muro (gradi)			δ			23,3		23,3		23,3		
Angolo di attrito terra-fondazione (gradi)			δ' fond.			35		35		35		
Coesione efficace (daN/mq.)			c' fond.			0		0		0		
Terrreno sotto la fondazione			In condizioni sismiche			STR		GEO		STR		
Peso specifico terreno (daN/mc.)			γ _t			1800		1800		1800		
Angolo di attrito interno (gradi)			φ			35		35		35		
Angolo di attrito terra-muro (gradi)			δ			23,3		23,3		23,3		
Angolo di attrito terra-fondazione (gradi)			δ' fond.			35		35		35		
Coesione efficace (daN/mq.)			c' fond.			0		0		0		
Risultati parete in elevazione			In condizioni sismiche			STR		GEO		STR		
azione assiale alla base della parete in elevazione			N			4487		4434		4434		
taglio alla base della parete in elevazione			M			3129		3096		3096		
momento alla base della parete in elevazione			M			3698		3660		3660		
Risultati intero manufatto			In condizioni sismiche			STR		GEO		STR		
azione verticale totale sotto la fondazione			N tot			12674		12524		12524		
momento ribaltante totale			M tot			3975		3932		3932		
momento stabilizzante totale			Mstab tot			11277		11142		11142		
STATI LIMITE TIPO "EQU" E "GEO"			In condizioni sismiche			STR		GEO		STR		
1. Schiacciamento			In condizioni sismiche			STR		GEO		STR		
Profondità di incasso fondazione a valle (cm)			D			100		100		100		
Aumenta/riduci la mensola di valle...			est			50		50		50		
Aumenta/riduci la mensola di monte...			int			85		85		85		
Seguire almeno uno dei due approcci			In condizioni sismiche			STR		GEO		STR		
approccio 1, comb. 1 (A1+M1+R1)			approccio 1			2,29		1,62		1,62		
approccio 2, comb. 2 (A2+M2+R2)			approccio 2			1,64		1,17		1,17		
2. Scorrimento			In condizioni sismiche			STR		GEO		STR		
Seguire almeno uno dei due approcci			In condizioni sismiche			STR		GEO		STR		
approccio 1, comb. 1 (A1+M1+R1)			approccio 1			1,61		1,26		1,26		
approccio 2, comb. 2 (A2+M2+R2)			approccio 2			1,47		1,11		1,11		
3. Ribaltamento			In condizioni sismiche			STR		GEO		STR		
E' obbligatorio l'approccio 1 con combinazione 2			In condizioni sismiche			STR		GEO		STR		
approccio 1, comb. 1 (A1+M1+R1)			approccio 1			1,70		1,26		1,26		
approccio 1, comb. 2 (EQU+M2+R2)			approccio 1			1,70		1,26		1,26		
STATI LIMITE TIPO "STR"			In condizioni sismiche			STR		GEO		STR		
1. Parete in elevazione			In condizioni sismiche			STR		GEO		STR		
Calcestruzzo			Classe			C25/30		C25/30		C25/30		
Acciaio			Tipo			B450C		B450C		B450C		
Ricoprimento di calcestr. sulle barre (cm)			c			3		3		3		
Armatura tesa parete in elevazione			φ			12		12		12		
Armatura compressa parete in elevazione			φ			12		12		12		
Verifica a pressoflessione SLE (comb. rara)			SLE			1,38		1,38		1,38		
2. Fondazione esterna (di valle)			In condizioni sismiche			STR		GEO		STR		
Calcestruzzo			Classe			C25/30		C25/30		C25/30		
Acciaio			Tipo			B450C		B450C		B450C		
Ricoprimento di calcestr. sulle barre (cm)			c			4		4		4		
Armatura tesa (inferiore)			φ			12		12		12		
Armatura compressa (superiore)			φ			12		12		12		
Verifica a pressoflessione SLE (comb. rara)			SLE			5,92		5,92		5,92		
3. Fondazione interna (di monte)			In condizioni sismiche			STR		GEO		STR		
Calcestruzzo			Classe			C25/30		C25/30		C25/30		
Acciaio			Tipo			B450C		B450C		B450C		
Ricoprimento di calcestr. sulle barre (cm)			c			4		4		4		
Armatura tesa (superiore)			φ			12		12		12		
Armatura compressa (inferiore)			φ			12		12		12		
Verifica a pressoflessione SLE (comb. rara)			SLE			6,74		6,74		6,74		



• DETTAGLIO APPOGGIO A SELLA



PONTE PEDOCICLABILE

1) ANALISI DEI CARICHI:

- Peso proprio solai alveolari $H = 25\text{cm}$ ————— $6,25 \text{ kJ/m}^2$
- Peso proprio trave parapetto $0,35\text{m} \times 2,30\text{m} \times 25 \text{ kJ/m}^3$ ————— $20,13 \text{ kJ/ml}$
- Manicata: $0,1\text{m} \times 18 \text{ kJ/m}^3$ ————— $1,80 \text{ kJ/m}^2$
- Strato d'usine + binder: $0,08 \times 24 \text{ kJ/m}^3$ ————— $1,95 \text{ kJ/m}^2$
- Gravame bituminoso: ————— $0,15 \text{ kJ/m}^2$

2) CARICHI GRAVANTI SUL SOLAIO:

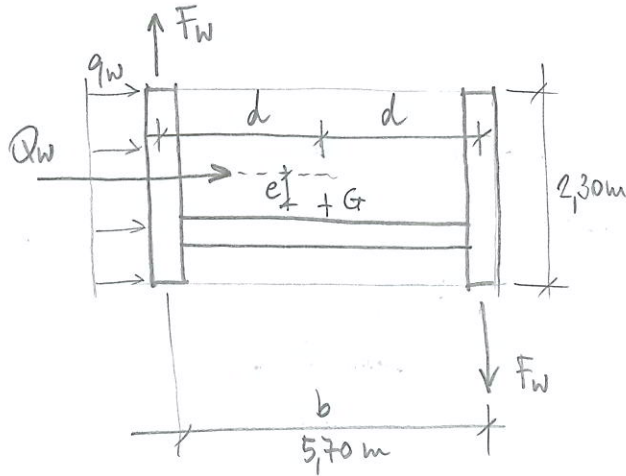
- Peso proprio $G_1 = 6,25 \text{ kJ/m}^2$
- Sovracc. permanenti $G_2 = 3,75 \text{ kJ/m}^2$
- Carico mobile $Q = 5,00 \text{ kN/m}^2$

b) CARICHI GRAVANTI SULLA TRAVE PARAPETTO:

N.B. Si considera una lunghezza di competenza pari a $L_B = \frac{5,70\text{m}}{2} = 2,85\text{m}$

- Peso proprio solai $G_1 = 6,25 \text{ kJ/m}^2 \cdot 2,85\text{m} = 17,81 \text{ kJ/ml}$
 - Peso proprio trave $G_4 = 20,13 \text{ kJ/ml}$
 - Sovraccarico permanenti $G_2 = 3,75 \text{ kJ/m}^2 \cdot 2,85\text{m} = 10,69 \text{ kJ/ml}$
 - Carico mobile $Q = 5,00 \text{ kJ/m}^2 \cdot 2,85\text{m} = 14,25 \text{ kJ/ml}$
- $G_{1\text{TOT}} = 37,94 \text{ kJ/ml}$
 $G_{2\text{TOT}} = 10,69 \text{ kJ/ml}$
 $Q = 14,25 \text{ kJ/ml}$

c) SPINTA DEL VENTO



$$d = 2,85 \text{ m}$$

$$b = 5,70 \text{ m}$$

$$q_w = 0,46 \text{ kN/m}^2$$

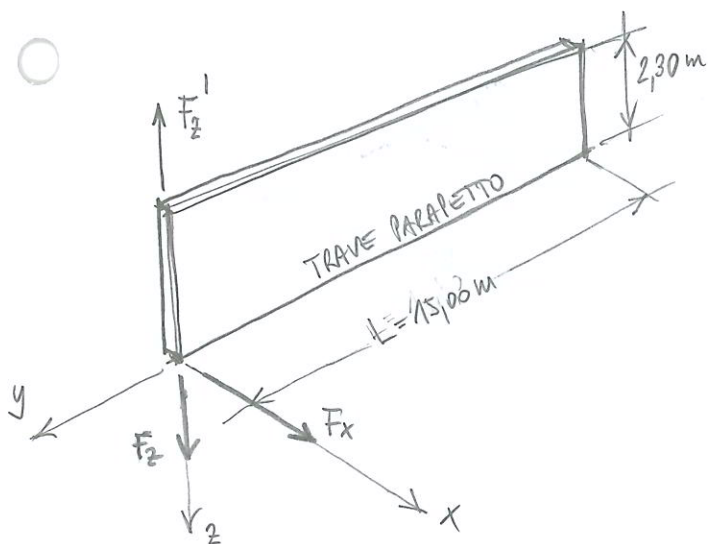
$$e = 0,275 \text{ m}$$

$$Q_w = 0,46 \text{ kN/m}^2 \cdot 2,30 \text{ m} = 1,06 \text{ kN/ml}$$

$$M_T = 1,06 \text{ kN/ml} \cdot 0,275 \text{ m} = 0,29 \text{ kN}\cdot\text{m/ml}$$

$$F_w = \frac{M_T}{b} = \frac{0,29 \text{ kN}\cdot\text{m/ml}}{5,70 \text{ m}} = 0,05 \text{ kN/ml}$$

② REAZIONI ALL'ALLOGGIO DELLA TRAVE PARAPETTO



$$F_z = \begin{cases} G_1 = 37,94 \text{ kN/ml} \cdot \frac{15,00 \text{ m}}{2} = 284,55 \text{ kN} \\ G_2 = 10,69 \text{ kN/ml} \cdot \frac{15,00 \text{ m}}{2} = 80,18 \text{ kN} \\ Q = 14,25 \text{ kN/ml} \cdot \frac{15,00 \text{ m}}{2} = 106,88 \text{ kN} \quad (\text{carico mobile}) \end{cases}$$

$$F_z^1 = 0,05 \text{ kN/ml} \cdot \frac{15,00 \text{ m}}{2} = 0,38 \text{ kN} \quad (\text{spinta vento - trascinabile})$$

$$F_x = 1,06 \text{ kN/ml} \cdot \frac{15,00 \text{ m}}{2} = 7,95 \text{ kN} \quad (\text{spinta vento})$$

- Calcolo larghezza minima appoggio trave

$$N_{k, \text{tot}} = 285 + 81 + 107 = 473 \text{ kN}$$

$$A = 0,3 \text{ m} \cdot x$$

$$\sigma_c = 47 \text{ kg/cm}^2 = \frac{N_{k, \text{tot}}}{A} = \frac{473 \cdot \text{kN} \cdot 10^2}{30 \text{ cm} \cdot x} \rightarrow x = \frac{473 \cdot 10^2}{30 \cdot 47} = 33,55 \text{ cm}$$

Si assume una larghezza minima di 40 cm!

2) VERIFICHE LOCALI:

- Spinte orizzontali su parapetto:

→ (Cat. C3)

$F = 3,00 \text{ kN/m}$ applicato ad
altre met parapetto!



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Componente: lastra h20

DATI di PROGETTO

Luce di calcolo = 5,00 m
 Interasse di carico = 1,20 m
 Peso lastra = 16,2 kN
 Tempo di esposiz. R = 90 minuti
 Altezza getto coll. = 5 cm
 Coeff. getto Kw = 0,723
 J inerzia = 0,001130 m⁴
 Trefolatura tipo = VA01
 Peso pr. componente = 2,700 kN/m²
 P. getto cappa collab. = 1,250 kN/m² = 0,050 m³/m²
 P. getto giunto longit. = 0,125 kN/m² = 0,005 m³/m²
 Peso getto alveoli = 0,305 kN/m² = 0,012 m³/m²
 Sovracc. permanente = 3,600 kN/m²
 Sovracc. variabile = 5,000 kN/m² coeff. fuoco = 0.50

Coeff. fuoco Kmcr = 1,000
 E modulo el.co cls = 42272331 N/m²

Handwritten notes:
 4,38 kN/m² (circled)
 = 4,227 kN/cm²
 = $\frac{b \cdot h^3}{12}$
 $h = \sqrt[3]{\frac{12 \cdot 0,001130}{1 \text{ m}}} = 0,238 \text{ m}$

SOLLECITAZIONI CALCOLATE

	VERIFICHE a FREDDO	VERIFICHE A CALDO
Momento peso proprio	= 10,13 kNm	10,13 kNm
Momento getto collab.	= 5,16 kNm	5,16 kNm
Momento sovr. per.	= 13,50 kNm	13,50 kNm
Momento sovr. var.	= 18,75 kNm	9,38 kNm
MOMENTO TOTALE	= 47,53 kNm	38,16 kNm

VERIFICHE EFFETTUATE

M di DECOMPR. di confr. = 25,04 kNm
 M AMMISSIBILE = 45,50 kNm

M TOTALE di confronto = 38,60 kNm 31,82 kNm
 M AMMISSIBILE = 55,30 kNm 97,87 kNm

TAGLIO TOTALE = 38,03 kN
 TAGLIO RESISTENTE = 54,15 kN (con 2 alveoli riempiti e 4 tappi fermagetto)
 Per ogni testata --> armatura in appoggio inf.: 2ø10 L=135cm
 sup.: 2ø10 L=95cm
 Incidenza complessiva armatura --> inf. : 0,555 kg/m²
 sup. : 0,390 kg/m²

Snellezza solaio = 20
 Limite Normativo = 35

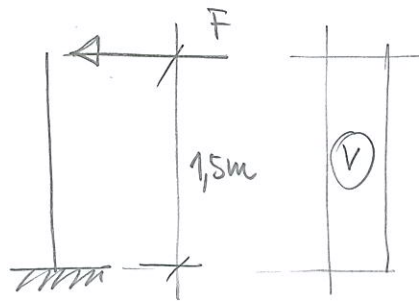
Freccia istantanea = 0,18 cm
 Limite Normativo L/1000 = 0,50 cm

MARGINI di IMPIEGO (se >1 --->ok)

Decompressione = 1,82 ---> ok
 Flessione finale = 1,43 ---> ok
 Resistenza al fuoco = 3,08 ---> ok
 Taglio finale = 1,42 ---> ok
 Snellezza = 1,75 ---> ok

- Dimensionamento ferri di collegamento giunto di dilatazione;

Carichi applicati



$$F = 3kN/ml \cdot 1,5 = 4,5kN/ml \quad (\text{cat. C3})$$

$$V = F = 4,5kN/ml$$

Ferri di collegamento $\phi 16/20 \text{ cm}$

↓
vedi foglio di "verifica e taglio per sconnimenti"

Resistenza a taglio all'interfaccia

Determinazione della resistenza di progetto a taglio all'interfaccia tra due elementi gettati in tempi diversi, V_{Rd}

Nome: ferri di collegamento parapetto

● Caratteristiche dei materiali:

Calcestruzzo: ▼

$\tau_{Rd} = 0,35 \text{ N/mm}^2$

$f_{cd} = 21,88 \text{ N/mm}^2$

Connettori: ▼

$f_{yd} = 373,9 \text{ N/mm}^2$

Trattamento della superficie del calcestruzzo:

▼

contatto con roccia

● Caratteristiche geometriche:

lunghezza dell'interfaccia: $l_j = 1.000 \text{ mm}$

larghezza dell'interfaccia: $b_j = 350 \text{ mm}$

armatura passante per l'interfaccia: $A_s = 8,47 \text{ cm}^2$ $\varnothing 18/30\text{cm}$

● Azioni sollecitanti:

Taglio sollecitante di progetto: $V_{sd} = 4,5 \text{ kN}$ (forza agente parallelamente all'interfaccia)

Azione assiale sollecitante di progetto: $N_{sd} = 0,0 \text{ kN}$ (forza agente ortogonalmente all'interfaccia, (+) se di compressione)
si trascura a favore di sicurezza

● Dati:

$k_T = 0,000$	fattore di coesione come da Tabella 1, punto 11.2.2 [1]
$\mu = 0,500$	coefficiente di attrito come da Tabella 1, punto 11.2.2 [1]
$\kappa = 0,000$	coefficiente per la forza effettiva dovuta alla trazione nel connettore come da Tabella 1, punto 11.2.2 [1]
$\alpha = 1,500$	coefficiente per la forza effettiva dovuta all'effetto bietta come da Tabella 1, punto 11.2.2 [1]
$\beta = 0,200$	coefficiente per la forza effettiva dovuta alla resistenza del calcestruzzo come da Tabella 1, punto 11.2.2 [1]
$v = 0,525$	fattore di efficienza come da [2], formula 4.20
$\rho = A_s / (b_j \cdot l_j) = 0,002$	rapporto d'armatura corrispondente ai connettori dell'interfaccia in oggetto
$\sigma_n = N_{sd} / (b_j \cdot l_j) = 0,0 \text{ N/mm}^2$	sforzo normale certamente agente all'interfaccia (compressione positiva, e comunque $\sigma_n \leq 0,6 \cdot f_{cd}$)
$R_T = -$	profondità media della ruvidità, misurata in accordo al metodo standard del send-patch

$$\tau_{Rdj} = \underbrace{k_T \cdot \tau_{Rd}}_{\text{coesione}} + \underbrace{\mu \cdot (\rho \cdot \kappa \cdot f_{yd} + \sigma_n)}_{\text{attrito}} + \underbrace{\alpha \cdot \rho \cdot \sqrt{f_{cd} \cdot f_{yd}}}_{\text{effetto bietta}} \leq \underbrace{\beta \cdot v \cdot f_{cd}}_{\substack{\text{parte compressa} \\ \text{in cls}}}$$

$\tau_{Rdj} \text{ (coesione)} = 0,00 \text{ N/mm}^2$

$\tau_{Rdj} \text{ (attrito)} = 0,00 \text{ N/mm}^2$

$\tau_{Rdj} \text{ (effetto bietta)} = 0,33 \text{ N/mm}^2$

$\tau_{Rdj} \text{ (max)} = 2,30 \text{ N/mm}^2$

$\tau_{Rdj} = 0,33 \text{ N/mm}^2$

[1]...Manuale di Tecnologia del Fissaggio, Hilti; Ed. 2004/2005

[2]...UNI ENV 1992-1-1, Parte 1.1 con le modifiche secondo D.M. 9 gennaio 1996

● Verifica:

$V_{Rd} = b_j \cdot l_j \cdot \tau_{Rdj} = 114,9 \text{ kN}$

$V_{sd} = 4,5 \text{ kN}$

$V_{Rdmax} = 803,9 \text{ kN}$

$$V_{Rd} \geq V_{sd}$$

OK, verifica soddisfatta!

- Dimensionamento apparecchio di appoggio ponte:

Carchi agenti alla base di appoggio della trave

- CARICO VERTICALE: $V_{Ed} = 1,35(284,55 \text{ kN} + 80,18 \text{ kN}) + 106,88 \text{ kN} \cdot 1,5 \approx 652,7 \text{ kN}$
- CARICO ORIZZONTALE: $H_{Ed} = 1,5 \cdot 13,00 \text{ kN} \approx 19,5 \text{ kN}$
- SPOSTAMENTO: $s_x = \pm 20 \text{ mm}$

$$\frac{H_{Ed}}{V_{Ed}} = \frac{19,5 \text{ kN}}{653 \text{ kN}} \times 100 = 3 \% \approx 3\% \rightarrow \text{Combinazione 2}$$

- Calcolo del carico orizzontale e dello spostamento equivalente

$$H = H_{Ed} + s_x \cdot K_H = 19,5 \text{ kN} + 20 \text{ mm} \cdot 1,16 \text{ kN/mm} = 42 \text{ kN}$$

$$s^* = \frac{H_{Ed}}{K_H} + s_x = \frac{19,5 \text{ kN}}{1,16 \text{ kN/mm}} + 20 \text{ mm} = 37 \text{ mm}$$

$$K_H = \text{rigidezza trasversale} = 1,16 \text{ kN/mm}$$

- Scelta dell'appoggio:

$$\underline{\text{ALGA NB } 200 \times 250 \times 52 \text{ mm}} \rightarrow$$

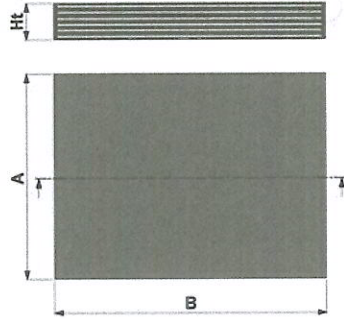
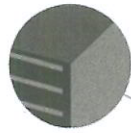
$$V = 823 \text{ kN} > 653 \text{ kN}$$

$$H = 52 \text{ kN} > 19,5 \text{ kN}$$

$$s^* = 37 \text{ mm} \geq 37 \text{ mm}$$

$$K_H = 1,41 \text{ kN/mm}$$

NB



Ht altezza appoggio senza contropiastra / height of bearing

W peso appoggio / weight of bearing

D dimensione elemento / bearing dimension

hg altezza gomma / height of rubber

V carico verticale / vertical load

H carico orizzontale / horizontal load

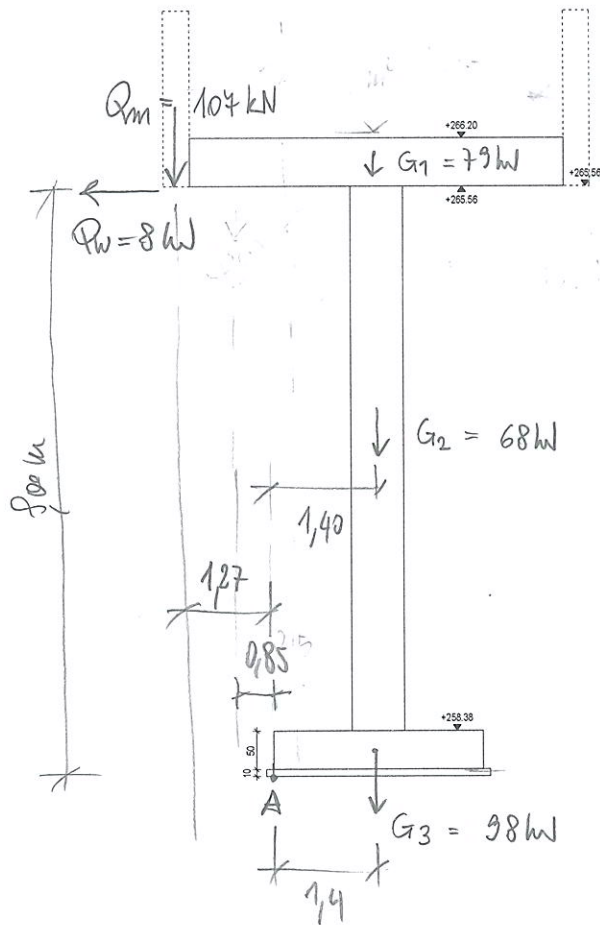
s* spostamento equivalente al carico orizzontale / equivalent displacement

Kh rigidezza trasversale / horizontal stiffness

Combo 1
deformazione gomma / rubber shear strain
 $\gamma = 0,2$
rotazione / rotation 0.01 rad | $V=V_{max}$

Combo 2
deformazione gomma / rubber shear strain
 $\gamma = 1,0$
rotazione / rotation 0.005 rad | $H=H_{max}$

DATA	Dimensioni			hg	Combo 1			Combo 2			Kh	W
	Ht	A	B		V	H	s*	V	H	s*		
	mm	mm	mm		kN	kN	mm	kN	kN	mm		
NB 150x300xHt	21	150	300	10	1087	12	3,0	1029	61	15,0	4,05	3,0
	28	150	300	15	1225	11	4,0	1052	54	20,0	2,70	4,0
	35	150	300	20	1289	10	5,0	1039	51	25,0	2,03	5,0
	42	150	300	25	1231	10	6,0	1011	49	30,0	1,62	6,0
	49	150	300	30	1018	9	7,0	803	47	35,0	1,35	7,0
	56	150	300	35	865	9	8,0	655	46	40,0	1,16	8,0
	63	150	300	40	751	9	9,0	544	46	45,0	1,01	9,0
	70	150	300	45	662	9	10,0	458	45	50,0	0,90	10,0
NB 200x250xHt	30	200	250	16	954	12	4,2	852	59	21,0	2,81	4,9
	41	200	250	24	1028	11	5,8	848	54	29,0	1,88	6,6
	52	200	250	32	1033	10	7,4	823	52	37,0	1,41	8,3
	63	200	250	40	819	10	9,0	655	51	45,0	1,13	10,0
	74	200	250	48	676	10	10,6	516	50	53,0	0,94	11,7
	85	200	250	56	574	10	12,2	416	49	60,5	0,80	13,4
	96	200	250	64	497	10	13,8	341	43	61,4	0,70	15,1
	107	200	250	72	438	10	15,4	283	39	61,7	0,63	16,8
NB 200x300xHt	30	200	300	16	1248	14	4,2	1115	71	21,0	3,38	5,9
	41	200	300	24	1345	13	5,8	1109	65	29,0	2,25	7,9
	52	200	300	32	1351	12	7,4	1077	62	37,0	1,69	10,0
	63	200	300	40	1071	12	9,0	858	61	45,0	1,35	12,0
	74	200	300	48	884	12	10,6	675	60	53,0	1,13	14,0
	85	200	300	56	751	12	12,2	544	59	61,0	0,96	16,1
	96	200	300	64	651	12	13,8	446	54	63,9	0,84	18,1
	107	200	300	72	573	12	15,4	370	48	64,0	0,75	20,1
NB 200x400xHt	30	200	400	16	1869	19	4,2	1670	95	21,0	4,50	7,8
	41	200	400	24	2015	17	5,8	1662	87	29,0	3,00	10,6
	52	200	400	32	2024	17	7,4	1612	83	37,0	2,25	13,3
	63	200	400	40	1604	16	9,0	1285	81	45,0	1,80	16,0
	74	200	400	48	1325	16	10,6	1011	80	53,0	1,50	18,7
	85	200	400	56	1125	16	12,2	816	78	61,0	1,29	21,4
	96	200	400	64	975	16	13,8	669	76	67,5	1,13	24,1
	107	200	400	72	859	15	15,4	555	67	67,4	1,00	26,8
NB 250x300xHt	30	250	300	16	1530	18	4,2	1523	89	21,0	4,22	7,3
	41	250	300	24	1771	16	5,8	1580	82	29,0	2,81	9,9
	52	250	300	32	1883	16	7,4	1574	78	37,0	2,11	12,4
	63	250	300	40	1944	15	9,0	1544	76	45,0	1,69	15,0
	74	250	300	48	1636	15	10,6	1333	75	53,0	1,41	17,5
	85	250	300	56	1392	15	12,2	1094	74	61,0	1,21	20,1
	96	250	300	64	1209	15	13,8	914	73	69,0	1,05	22,6
	107	250	300	72	1067	14	15,4	774	72	77,0	0,94	25,2



$$M_{ed} = 0,9 \cdot 79 \text{ kN} \cdot 1,4 \text{ m} + 0,9 \cdot 68 \text{ kN} \cdot 1,4 \text{ m} + 0,9 \cdot 98 \text{ kN} \cdot 1,4 \text{ m} = 308,7 \text{ kN} \cdot \text{m}$$

$$M_{sd} = 1,5 \cdot 107 \text{ kN} \cdot 1,27 \text{ m} + 8 \text{ kN} \cdot 1,5 \cdot 8 \text{ m} = 299 \text{ kN} \cdot \text{m} < M_{ed} \quad \checkmark$$

Programma DC-Slope/Win Version 8.06

File input: C:\Users\AndreaD\Desktop\180215_KHB2_Berlinese.dbb

Calcolo secondo: UNI EN 1997-1 (Eurocode 7) e NTC 2008

Calcolo con approccio 1
combinazione con fattori di sicurezza dei gruppi A2 + M2 + R1

Parametri degli strati		1
Angolo attrito cal φ'	[gradi]	35.00
Coesione cal c'	[kN/m ²]	0.0
Peso spec. terreno	[kN/m ³]	20.0
Peso spec. saturo	[kN/m ³]	20.0
Peso spec. sotto spinta	[kN/m ³]	10.0

Andamento del terreno e degli strati

x [m]		-5.45	-0.07	-0.07	0.07	0.07
		5.07				
z Terreno		-5.50	-5.50	-10.77	-10.77	0.00
		0.00				
z Strato	1	-1000.00	-1000.00	-1000.00	-1000.00	-1000.00
		-1000.00				

Posizione delle strutture

Numero	x da [m]	x a [m]	z da [m]	z a [m]	Peso [kN/m]
1	-0.07	0.07	-10.77	0.00	7.67

Carichi unici

Tutti i carichi si intendono per 1 m di lunghezza

Caso car.	q	x_A	x_E	z_Q	γ	ψ
1 Q	5.0	0.5	4.0	0.00	1.30	1.00

Range di concii

da x [m]	a x [m]	Larghezza[m]
-10000.00	10000.00	1.00

Coefficients di sicurezza parziali (GEO) per Ap. 1

γ	G	Q	W	E	φ	c	c_u	R_a	R_e
	1.00	1.30	1.00	1.30	1.25	1.25	1.40	1.20	1.30

 γ -Coeff. di sicurezza parziale per...

G	Carichi permanenti
Q	Carichi variabili
W	Pressione dell'acqua
E	Sisma
φ	Coefficiente di attrito $\tan(\varphi)$
c	Coesione c
c_u	Coesione non drenata c_u
R_a	Ancoraggi
R_e	Resistenti a taglio

Verifica di sicurezza (metodo di Krey-Bishop)

Cerchio di scorrimento con iterazione del centro:

Punto di partenza: $x_M = -2.07$ m, $z_M = 2.00$ m,

$\Delta x = 1.00$ m, $\Delta z = 1.00$ m,

con iterazione del raggio: $\Delta R = 1.00$ m da $R = 12.95$ m

Caso di carico 1

Corpo di scorrimento da $x = -11.21$ a 9.75 m

Cerchio scor.: $x_M = -1.57$ m, $z_M = 0.44$ m, $R = 11.33$ m

Calcolo delle componenti dei conci

x_M	Largh. b	Peso- proprio [kN/m]	Sovraccar. [kN/m]	Sovraccar. acqua [kN/m]	φ [gradi]	c [kN/m ²]	γ [gradi]
-6.40	0.80	68.76	0.00	0.00	35.00	0.0	-25.24
-5.50	1.00	93.57	0.00	0.00	35.00	0.0	-20.31
-4.50	1.00	99.92	0.00	0.00	35.00	0.0	-14.99
-3.50	1.00	104.32	0.00	0.00	35.00	0.0	-9.81
-2.50	1.00	106.87	0.00	0.00	35.00	0.0	-4.71
-1.50	1.00	107.64	0.00	0.00	35.00	0.0	0.35
-0.50	1.00	99.26	0.00	0.00	35.00	0.0	5.42
0.50	1.00	198.75	0.00	0.00	35.00	0.0	10.53
1.50	1.00	209.15	0.00	0.00	35.00	0.0	15.73
2.50	1.00	202.48	0.00	0.00	35.00	0.0	21.06
3.50	1.00	193.63	0.00	0.00	35.00	0.0	26.60
4.50	1.00	182.28	0.00	0.00	35.00	0.0	32.41
5.50	1.00	167.97	0.00	0.00	35.00	0.0	38.63
6.50	1.00	149.84	0.00	0.00	35.00	0.0	45.45
7.50	1.00	126.36	0.00	0.00	35.00	0.0	53.21
8.50	1.00	93.67	0.00	0.00	35.00	0.0	62.77
9.37	0.75	32.04	0.00	0.00	35.00	0.0	75.08
x_M						$R \cdot T_i$	$R \cdot G^* \sin(\gamma)$
[m]						[kNm/m]	[kNm/m]
-6.40						494.09	-332.09
-5.50						631.23	-367.75
-4.50						637.34	-292.75
-3.50						636.89	-201.34
-2.50						630.87	-99.39
-1.50						619.85	7.53
-0.50						562.25	106.21
0.50						1116.27	411.41
1.50						1174.08	642.08
2.50						1145.89	824.10
3.50						1115.38	981.70
4.50						1081.19	1106.46
5.50						1041.21	1187.57
6.50						991.12	1209.19
7.50						922.22	1146.10
8.50						806.27	943.31
9.37						378.40	350.66

Somme:

13984.54

7623.01

Azione di strutture:

Peso [kN/m]	Braccio [m]	φ [gradi]	ψ [gradi]	$M_{res.}$ [kNm/m]	$M_{dev.}$ [kNm/m]
7.67	1.57	29.26	7.97	43.25	12.05

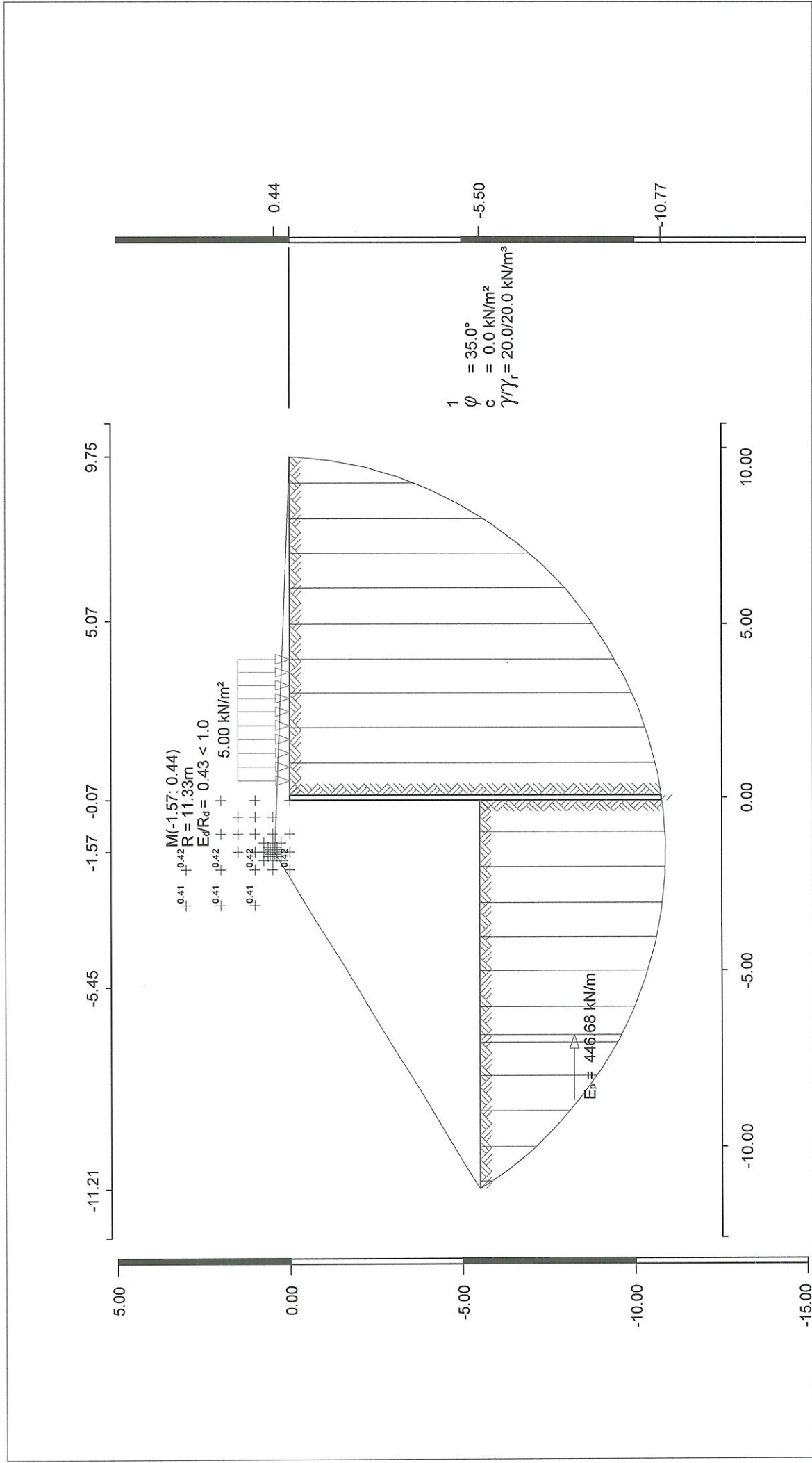
Azione resistenza terra con x = -6.80 m:

Forza Ep [kN/m]	Braccio [m]	Pressione acqua W [kN/m]	Braccio [m]	$M_{res.}$ [kNm/m]	$M_{dev.}$ [kNm/m]
446.68	8.68	0.00	0.00	3875.41	0.00

Forze agenti $E_d = 7635.06$ kNForze resistenti $R_d = 17903.20$ kN

$$E_d/R_d = 0.43 < 1.0$$

***** verifica soddisfatta *****



Pagina	5
Caso carico	1
Scala	1 : 150

PARATIA DI MICROPALI

La paratia provvisoria di micropali viene calcolata allo SLU e allo SLV ipotizzando agenti in testa al fronte di scavo i seguenti carichi:

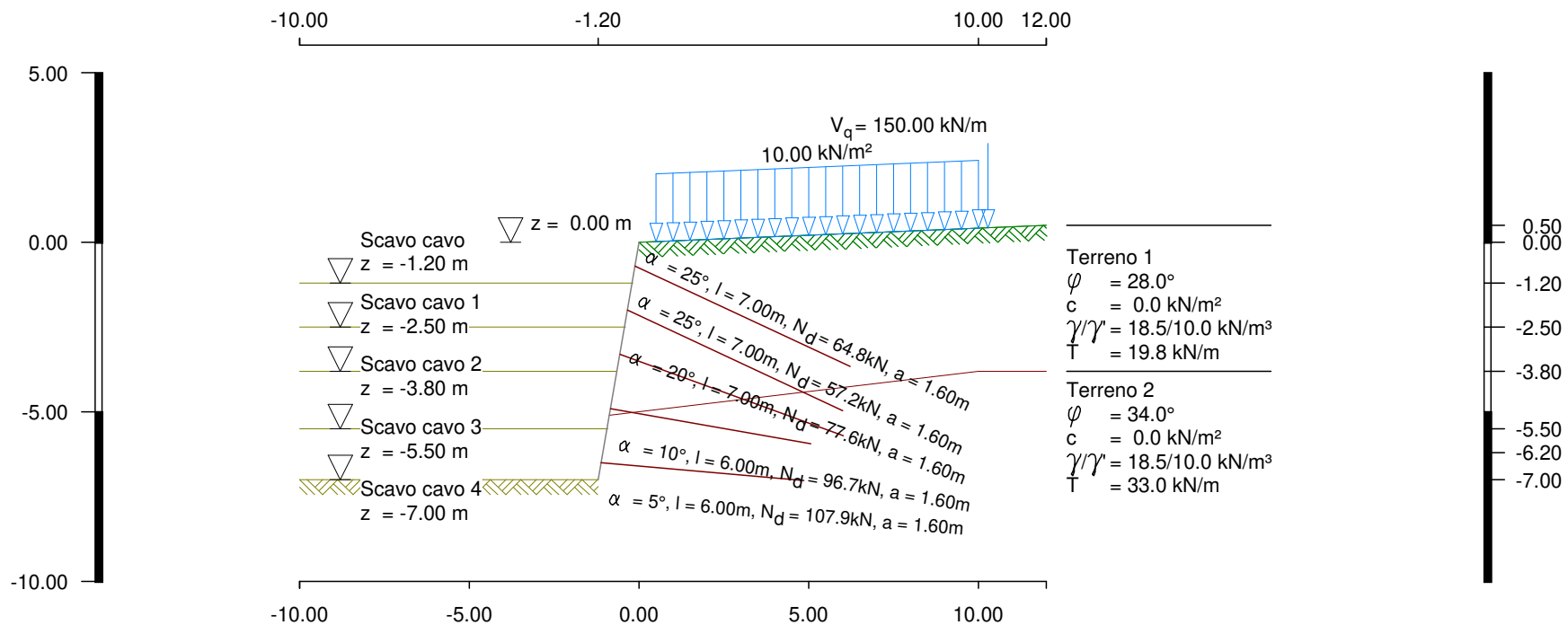
- Carichi uniformemente distribuiti: 10 kN/m²
Trattasi di carichi sui marciapiedi non aperti al pubblico
così come definiti nelle NTC par. 5.2.2.3.2;

- Treno di carico SW: 150 kN/ml
Trattasi di carico prodotto da traffico ferroviario pesante,
così come definiti nelle NTC par. 5.2.2.3.1.2, applicato ad
una distanza di 10m dal ciglio scavo

Di seguito si riporta la relazione di calcolo eseguita con l'ausilio del software DC- Nagel versione 5.06.

Armatura Spritzbeton:

si dispone rete elettrosaldata $\varnothing 8/15/15\text{cm} = 3,35 \text{ cm}^2/\text{ml}$ > 3,28 cm²/ml



File inserimento dati: KHB2_181106 Parete chiodata SLU-SLV.dbn

Sistema stratigrafico con 2 strati**Parametri stratigrafici** (valori d'esercizio)

φ	Angolo di attrito phi
δ	Angolo di attrito parete (la spinta del terreno che agisce in direzione di chiodi, δ vedi tabella spinta terreno)
c	Coesione
c_u	Coesione (non drainato)
γ	Peso spec.
γ_w	Peso spec. immerso
δ_{SW}	Angolo d'attrito parete sulla parete sostitutiva definita dai punti terminali dei chiodi
T_{chiodo}	Aderenza attivabile da un chiodo nel terreno
ψ_A	Angolo massimo tra direzione blocco scorrevole e direzione chiodo per la verifica, se il chiodo va in tensione nella fase della rottura del terreno.
T_{gb}	mobilizable skin friction in soil layer
Dm_{gb}	Diametro corpo compressione ($T_{chiodo} = \tau_{gb} * Dm_{gb} * \pi$)

Num.	Nome	φ [°]	δ [°]	c [kN/m ²]	c_u [kN/m ²]	γ [kN/m ³]	γ_w [kN/m ³]	δ_{EW} [°]	T_{chiodo} [kN/m]	ψ_A [°]	[kN/m ²]	[mm]
1	Terreno 1	28.0	-.	0.0	-.	18.5	10.0	28.0	19.8	90.0	90	70
2	Terreno 2	34.0	-.	0.0	-.	18.5	10.0	34.0	33.0	90.0	150	70

Soil specific seismic parameter S:

Num.	Nome	S [-]
1	Terreno 1	1.500
2	Terreno 2	1.500

Andamento del terreno:

x	z
[m]	[m]
0.00	0.00
12.00	0.50

Andamento piano inferiore dello 1. strato Terreno 1:

x	z
[m]	[m]
-10.00	-6.20
10.00	-3.80

Calcolo con carichi sismici secondo Eurocode 8Effetti orizzontali: Carico orizzontale * (1 + k_h) + Carico verticale * k_h Effetti Verticali: Carico verticale * (1 + k_v)

$$k_h/S = a_g/g = 0.052$$

$$k_v/S = a_{vg}/g = 0.010$$

Carichi lineari:

x	z	P_x	P_z	Tipo Caso carico	$\gamma_{Ap,2}$	$\gamma_{Ap,3}$	ψ
[m]	[m]	[kN/m]	[kN/m]				
10.27	0.43	0.00	150.00	traffico Carico	1.000	1.000	1.00

Carichi distribuiti:

x_A	z_A	x_E	z_E	p_x	p_z	Tipo Caso carico	$\gamma_{Ap,2}$	$\gamma_{Ap,3}$	ψ
[m]	[m]	[m]	[m]	[kN/m ²]	[kN/m ²]				
0.50	0.02	10.00	0.41	0.00	10.00	traffico Carico	1.000	1.000	1.00

Sintesi dei chiodi:

Num.	z-quota	Inclin.	Min-lungh.	Largh-orizon.	Dist. piastra	Largh Limit	Strain	Pretensione
Num.	z-quota [m]	Inclin. [°]	Min-lungh. [m]	Largh-lungh. [m]	Dist. orizon. [m]	Largh piastra [mm]	Strain Limit [N/mm ²]	Pretensione [kN]
1	-0.70	25.00	7.00	7.00	1.60	200	500	-
2	-2.00	25.00	7.00	7.00	1.60	200	500	-
3	-3.30	20.00	7.00	7.00	1.60	200	500	-
4	-4.90	10.00	6.00	6.00	1.60	200	500	-
5	-6.50	5.00	6.00	6.00	1.60	200	500	-

Scavi:

Stato	Intersezione parete-fondo scavo		Chiodi
	x [m]	z [m]	
1: cavo	-0.21	-1.20	1
2: cavo 1	-0.43	-2.50	1, 2
3: cavo 2	-0.65	-3.80	1, 2, 3
4: cavo 3	-0.94	-5.50	1, 2, 3, 4
5: cavo 4	-1.20	-7.00	1, 2, 3, 4, 5

Calcolo mediante UNI EN 1997-1 (Eurocode 7) e NTC 2008

γ -	G,dst	G,stb	Q,dst	Q,stb	φ	c	cu	γ	Ep	a	bt
DA-E	1.000	1.000	1.000	0.000	1.250	1.400	1.400	1.000	1.000	1.000	1.000

γ -	Fattori parziali per...
G,dst	Azioni permanenti sfavorevoli
G,stb	Azioni permanenti favorevoli
Q,dst	Azioni variabili sfavorevoli
Q,stb	Azioni variabili favorevoli
φ	Frizione $\tan(\varphi)$
c	Coesione c
cu	Coesione non drenata cu
γ	Peso dell' unità di volume
Ep	Resistenza dell' terreno
R,v	Resistenza a rottura
bt	Resistenza di elementi (sezione cerchio slittamento - parete)
a	Resistenza chiodi (friz. cemento-terreno)

Calcolo Caso carico Carico accidentale**Scavo No. 1 Nome: cavo Caso carico: Carico accidentale****Verifiche di stabilità interna**

Verifica di stabilità (Scavo cavo):

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -0.21$ $z = -1.20$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
-20.9	47.1	90.0	7.0	298.0	362.2	85.1	-165.0	0.4	0.44* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

7.1	44.0	90.0	-	17.6	24.9	11.0	5.1	75.3	0.07 (+)
-13.7	44.0	90.0	-	67.6	83.6	25.0	-24.1	54.9	0.44* (+)
-15.7	44.0	90.0	-	89.1	109.5	30.8	-36.8	48.1	0.45* (+)
-17.1	44.0	90.0	-	113.1	138.3	37.2	-51.2	41.3	0.45* (+)
-18.2	44.0	90.0	-	139.4	170.1	44.2	-67.1	34.5	0.45* (+)
-19.0	44.0	90.0	-	168.1	204.8	51.7	-84.6	27.7	0.45* (+)
-19.6	43.8	90.0	-	193.4	235.7	58.4	-100.1	20.8	0.45* (-)
-19.6	42.3	100.7	-	210.7	239.5	50.8	-106.0	20.8	0.45* (-)
-19.6	42.6	98.5	-	207.1	238.5	52.2	-104.6	20.8	0.45* (-)
-19.6	43.0	96.4	-	203.6	237.6	53.6	-103.3	20.8	0.45* (-)
-19.6	43.3	94.3	-	200.1	236.9	55.2	-102.1	20.8	0.45* (-)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
40.1	22.27	23.30	8.93	74.43	0.12 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -0.21$ $z = -1.20$ a $x = 4.72$ $z = -2.96$

$\vartheta_1 = -19.6^\circ$ $\vartheta_2 = 43.3^\circ$ $\vartheta_{12} = 94.3^\circ$ $Z_{\text{Nec}} = -102.09$ [kN/m] $Z_{\text{Esist}} = 20.84$ [kN/m] $E_d/R_d = 0.45^* (-)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con '*' sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.

(-): $-a_v$ is critical.

Specifiche chiodi (Scavo cavo) (valori di progetto):

x-Testa [m]	z-Testa [m]	Incl. [°]	Lungh [m]	a [m]	F_{Sty} [kN]	F_{Nec} [kN]
-0.12	-0.70	25.0	7.00	1.60	131.4	15.8

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1 = -0.21$ $z_1 = -1.20$ $x_2 = 6.22$ $z_2 = -1.20$

Parete teorico: (x_2, z_2) a $x_3 = 6.22$ $z_3 = 0.26$

Carico:

Verticale	V _c / V _d	=	216.22 /	216.12 kN/m
Orizzontale	H _c / H _d	=	-24.24 /	-27.03 kN/m
Momento	My _c / My _d	=	0.00 /	0.00 kNm/m

*** Annotazione: My è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t = 0.00 m

Larghezza b'	=	6.43 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00
Parametri determinanti del suolo		
γ sopra la base	=	0.00 kN/m ³
γ sotto la base	=	18.50 kN/m ³
Angolo dell' attito φ	=	33.67 °
Cohesion c	=	0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	=	25.92 14.81 14.73
Coeff. dell' inclinazione i_c, i_d, i_b	=	1.00 1.00 1.00
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	=	1.00 1.00 1.00
Larghezza del meccanismo del guasto	=	40.63 m
Profondità del meccanismo del guasto	=	11.63 m
Fattore parziale sicurezza modello γ_{Rd}	=	1.15
Parametri numerici: a / b / c / d / e / f / m / k / k' / c _T / c _M / c' _M / β / γ		
=		0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 867.09$ kN/m²

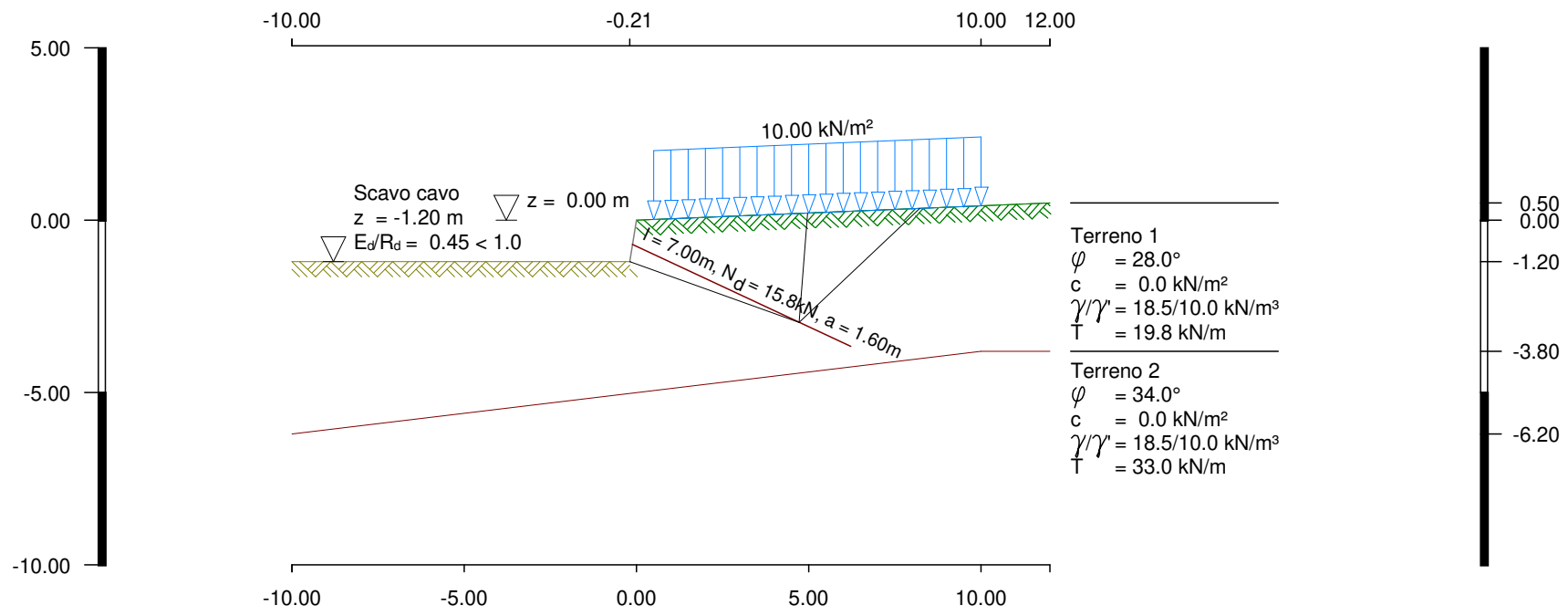
Resistenza ultima $N_{max} = 5575.27$ kN

Resistenza terreno ultima $F = 0.10$

Coefficiente rottura = -0.83 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo.
Non viene fatto un ulteriore verifica.



Scavo No. 2 Nome: cavo 1 Caso carico: Carico accidentale**Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo 1):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -0.43$ $z = -2.50$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
-9.9	47.1	90.0	7.0	390.9	434.9	87.3	-139.2	73.2	0.48* (+)
-20.9	47.1	99.7	7.0	485.0	559.0	110.5	-276.9	0.7	0.43* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

31.8	44.0	90.0	-	64.8	87.4	16.4	36.1	157.9	0.23 (+)
9.0	44.0	90.0	-	147.1	162.6	30.4	-2.2	134.8	0.51* (+)
9.0	44.4	82.5	-	138.7	160.0	33.7	-0.9	134.8	0.51* (+)
9.0	45.1	75.0	-	110.4	138.9	36.9	4.4	134.8	0.03 (-)
4.6	44.4	82.5	-	144.9	169.7	40.0	-9.1	127.1	0.51* (+)
4.6	45.1	75.0	-	138.0	170.3	45.0	-8.8	127.1	0.51* (+)
4.6	44.5	80.9	-	143.5	169.7	40.9	-9.0	127.1	0.51* (+)
4.6	45.8	74.4	-	137.4	170.4	45.4	-8.8	127.1	0.51* (+)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
44.3	69.32	74.40	34.29	150.08	0.23 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -0.43$ $z = -2.50$ a $x = 3.13$ $z = -2.21$

$\vartheta_1 = 4.6^\circ$ $\vartheta_2 = 45.8^\circ$ $\vartheta_{12} = 74.4^\circ$ $Z_{\text{Nec}} = -8.80$ [kN/m] $Z_{\text{Esist}} = 127.12$ [kN/m] $E_d/R_d = 0.51^* (+)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con **
sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.

(-): $-a_v$ is critical.

Specifiche chiodi (Scavo cavo 1) (valori di progetto):

x-Testa [m]	z-Testa [m]	Incl. [°]	Lungh [m]	a [m]	F_{Sty} [kN]	F_{Nec} [kN]
-0.12	-0.70	25.0	7.00	1.60	115.9	26.5
-0.34	-2.00	25.0	7.00	1.60	149.1	34.1

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-0.43$ $z_1=-2.50$ $x_2=6.11$ $z_2=-2.50$

Parete teorico: (x_2, z_2) a $x_3=6.11$ $z_3=0.25$

Carico:

Verticale	V,c / V,d	=	376.42 /	376.13 kN/m
Orizzontale	H,c / H,d	=	-58.53 /	-66.49 kN/m
Momento	My,c / My,d	=	0.00 /	0.00 kNm/m

*** Annotazione: My è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t	=	0.00 m
Larghezza b'	=	6.54 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00
Parametri determinanti del suolo	γ sopra la base	= 0.00 kN/m ³
	γ sotto la base	= 18.50 kN/m ³
	Angolo dell' attito φ	= 33.84 °
	Cohesion c	= 0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	= 26.21 15.06 15.08	
Coeff. dell' inclinazione i_c, i_d, i_b	= 1.00 1.00 1.00	
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	= 1.00 1.00 1.00	
Larghezza del meccanismo del guasto	=	41.69 m
Profondità del meccanismo del guasto	=	11.91 m

Fattore parziale sicurezza modello γ_{Rd} = 1.15

Parametri numerici: a / b / c / d / e / f / m / k / k' / c_T / c_M / c'_M / β / γ
 = 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 903.33$ kN/m²

Resistenza ultima $N_{max} = 5908.92$ kN

Resistenza terreno ultima F = 0.10

Coefficiente rottura = -0.71 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo. Non viene fatto un ulteriore verifica.

Scavo No. 3 Nome: cavo 2 Caso carico: Carico accidentale**Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo 2):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -0.65$ $z = -3.80$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
1.2	47.1	90.0	7.0	474.8	514.8	87.3	-80.7	142.1	0.56* (+)
-9.9	47.3	99.7	7.0	583.6	648.0	113.3	-229.5	76.8	0.48* (+)
-15.9	48.6	94.2	7.0	592.9	720.3	148.4	-313.3	0.7	0.47* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

38.7	44.0	90.0	-	129.6	177.3	22.5	84.0	245.4	0.34 (+)
32.6	44.0	90.0	-	159.1	200.9	26.8	74.6	236.2	0.32 (+)
9.2	44.0	90.0	-	323.9	354.2	59.3	-6.1	180.1	0.57* (+)
9.2	44.6	82.5	-	311.8	353.2	66.2	-4.2	180.1	0.58* (+)
9.2	45.1	75.0	-	299.4	353.8	74.9	-3.2	180.1	0.58* (+)
1.3	45.2	75.0	-	225.7	309.1	108.5	-12.9	168.8	0.58* (+)
1.3	44.9	80.6	-	239.6	308.6	98.5	-14.1	168.7	0.58* (+)
1.3	45.0	78.3	-	234.1	308.6	102.3	-13.5	168.7	0.58* (+)
1.3	45.2	76.1	-	228.5	308.9	106.4	-13.1	168.7	0.58* (+)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
45.5	141.29	152.91	73.77	234.58	0.31 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -0.65$ $z = -3.80$ a $x = 3.33$ $z = -3.71$

$\vartheta_1 = 1.3^\circ$ $\vartheta_2 = 45.2^\circ$ $\vartheta_{12} = 76.1^\circ$ $Z_{\text{Nec}} = -13.05$ [kN/m] $Z_{\text{Esist}} = 168.75$ [kN/m] $E_d/R_d = 0.58^* (+)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con **
sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.
(-): $-a_v$ is critical.

Specifiche chiodi (Scavo cavo 2) (valori di progetto):

x-Testa [m]	z-Testa [m]	Incl. [°]	Lungh [m]	a [m]	F_{Sty} [kN]	F_{Nec} [kN]
-0.12	-0.70	25.0	7.00	1.60	100.9	31.7
-0.34	-2.00	25.0	7.00	1.60	133.5	44.0
-0.57	-3.30	20.0	7.00	1.60	173.3	58.8

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-0.65$ $z_1=-3.80$ $x_2=6.08$ $z_2=-3.80$

Parete teorico: (x_2, z_2) a $x_3=6.08$ $z_3=0.25$

Carico:

Verticale	V,c / V,d	=	549.04 /	548.25 kN/m
Orizzontale	H,c / H,d	=	-104.36 /	-119.52 kN/m
Momento	My,c / My,d	=	0.00 /	0.00 kNm/m

*** Annotazione: My è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t	=	0.00 m
Larghezza b'	=	6.73 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00
Parametri determinanti del suolo	γ sopra la base	= 0.00 kN/m ³
	γ sotto la base	= 18.50 kN/m ³
	Angolo dell' attito φ	= 33.95 °
	Cohesion c	= 0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	= 26.40 15.22 15.31	
Coeff. dell' inclinazione i_c, i_d, i_b	= 1.00 1.00 1.00	
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	= 1.00 1.00 1.00	
Larghezza del meccanismo del guasto	=	43.13 m
Profondità del meccanismo del guasto	=	12.30 m

Fattore parziale sicurezza modello γ_{Rd} = 1.15

Parametri numerici: a / b / c / d / e / f / m / k / k' / c_T / c_M / c'_M / β / γ
 = 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 943.89$ kN/m²

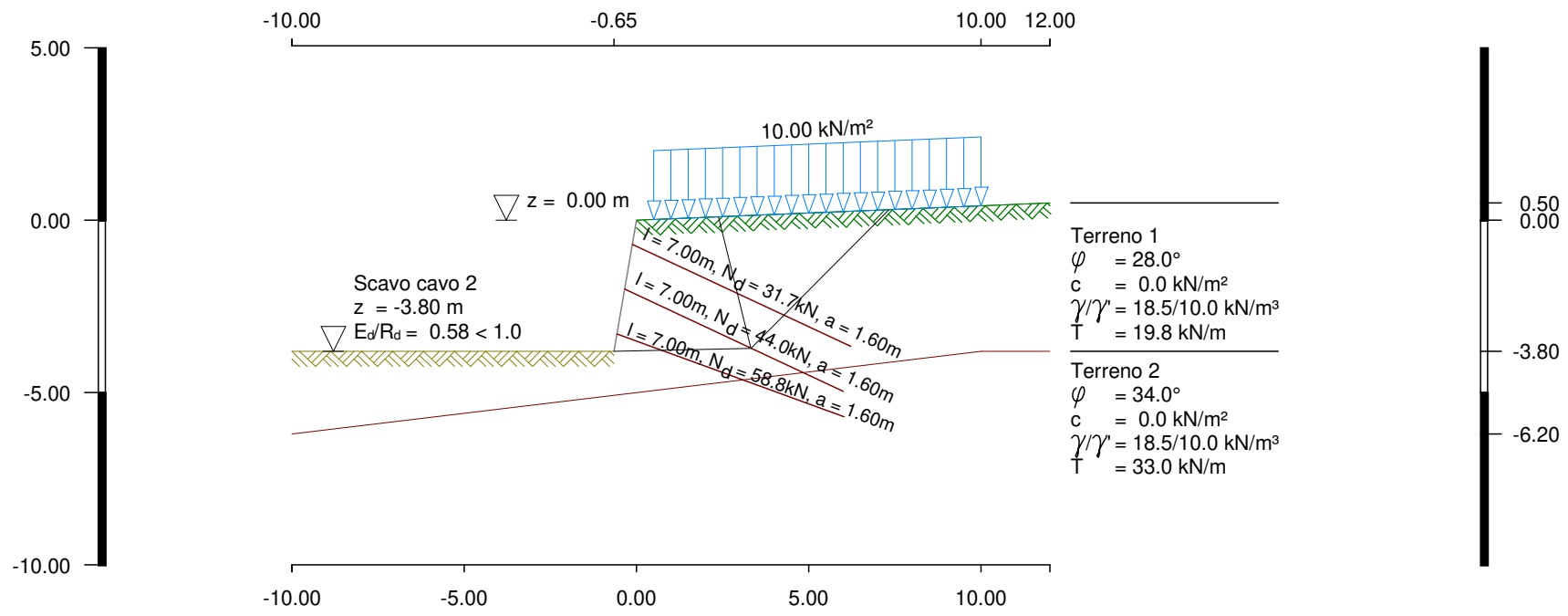
Resistenza ultima $N_{max} = 6352.93$ kN

Resistenza terreno ultima F = 0.10

Coefficiente rottura = -0.59 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo. Non viene fatto un ulteriore verifica.



Scavo No. 4 Nome: cavo 3 Caso carico: Carico accidentale**Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo 3):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -0.94$ $z = -5.50$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
14.4	47.1	90.0	7.0	642.1	685.9	87.3	-3.3	196.7	0.67* (+)
4.5	47.3	99.7	7.0	693.3	750.8	113.3	-145.2	111.4	0.60* (+)
-1.6	48.6	94.2	7.0	701.5	824.2	148.4	-221.0	39.0	0.59* (-)
-4.2	41.7	115.0	6.0	755.6	785.9	99.3	-280.3	10.9	0.51* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

42.7	44.0	90.0	-	242.8	321.8	31.7	158.5	318.7	0.50 (+)
14.4	47.1	90.0	-	642.1	685.9	87.3	-3.3	196.7	0.67* (+)
7.3	45.6	82.5	-	389.7	495.9	153.5	-17.4	174.8	0.67* (+)
7.3	45.6	82.7	-	390.8	496.0	152.8	-17.6	174.8	0.67* (+)
7.3	45.8	80.5	-	381.4	495.3	158.9	-16.0	174.9	0.67* (+)
7.3	48.0	78.3	-	371.9	494.8	165.1	-14.9	176.5	0.67* (+)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
46.4	269.65	293.42	145.51	311.95	0.47 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -0.94$ $z = -5.50$ a $x = 3.80$ $z = -4.89$

$\vartheta_1 = 7.3^\circ$ $\vartheta_2 = 48.0^\circ$ $\vartheta_{12} = 78.3^\circ$ $Z_{\text{Nec}} = -14.87$ [kN/m] $Z_{\text{Esist}} = 176.50$ [kN/m] $E_d/R_d = 0.67^* (+)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con **
sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.

(-): $-a_v$ is critical.

Specifiche chiodi (Scavo cavo 3) (valori di progetto):

x-Testa [m]	z-Testa [m]	Incl. [°]	Lungh [m]	a [m]	F_{Sty} [kN]	F_{Nec} [kN]
-0.12	-0.70	25.0	7.00	1.60	92.0	38.2
-0.34	-2.00	25.0	7.00	1.60	118.2	54.3
-0.57	-3.30	20.0	7.00	1.60	152.7	74.3
-0.84	-4.90	10.0	6.00	1.60	180.8	89.3

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-0.94$ $z_1=-5.50$ $x_2=5.83$ $z_2=-5.50$

Parete teorico: (x_2, z_2) a $x_3= 5.83$ $z_3= 0.24$

Carico:

Verticale	V,c / V,d	=	762.96 /	761.56 kN/m
Orizzontale	H,c / H,d	=	-165.89 /	-190.91 kN/m
Momento	My,c / My,d	=	0.00 /	0.00 kNm/m

*** Annotazione: My è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t	=	0.00 m
Larghezza b'	=	6.77 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00
Parametri determinanti del suolo	γ sopra la base	= 0.00 kN/m ³
	γ sotto la base	= 18.50 kN/m ³
	Angolo dell' attito φ	= 34.00 °
	Cohesion c	= 0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	= 26.50 15.30 15.43	
Coeff. dell' inclinazione i_c, i_d, i_b	= 1.00 1.00 1.00	
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	= 1.00 1.00 1.00	
Larghezza del meccanismo del guasto	=	43.50 m
Profondità del meccanismo del guasto	=	12.40 m

Fattore parziale sicurezza modello γ_{Rd} = 1.15

Parametri numerici: a / b / c / d / e / f / m / k / k' / $c_T / c_M / c'_M / \beta / \gamma$
 = 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 956.78$ kN/m²

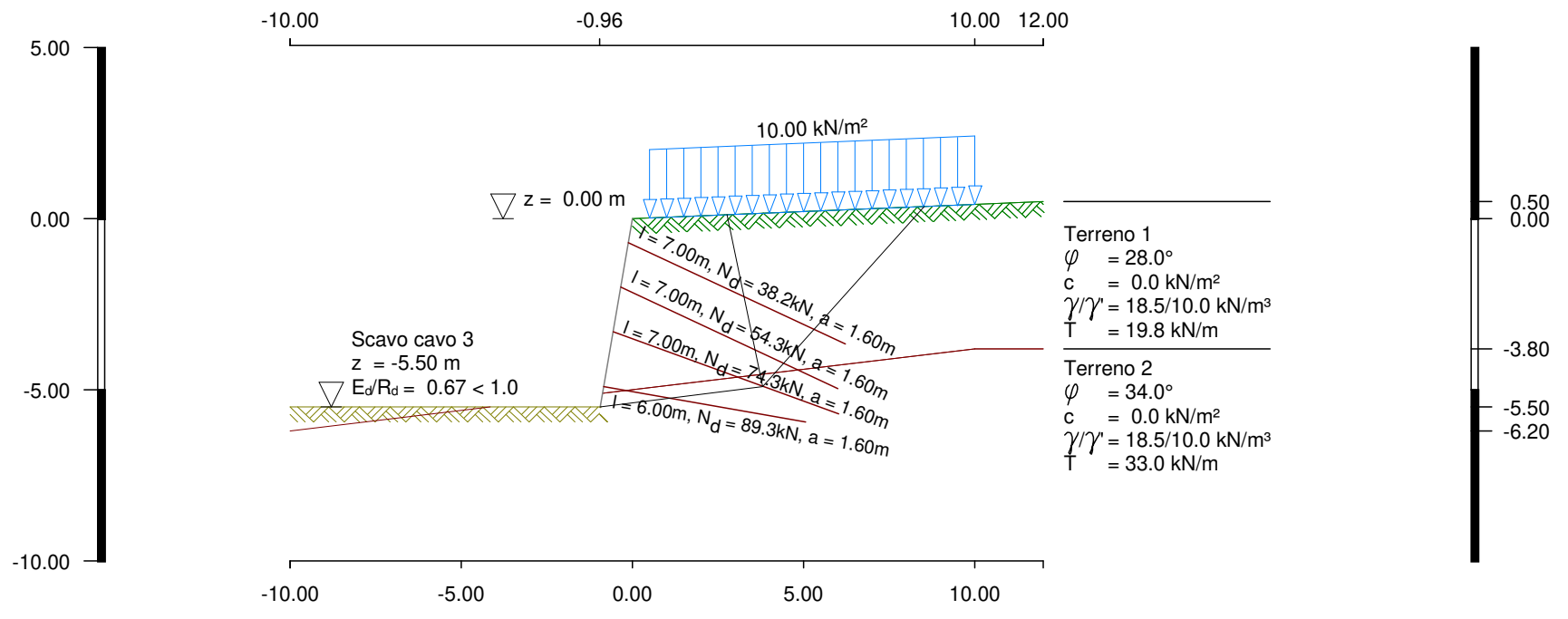
Resistenza ultima $N_{max} = 6476.87$ kN

Resistenza terreno ultima F = 0.10

Coefficiente rottura = -0.46 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo.
 Non viene fatto un ulteriore verifica.



Scavo No. 5 Nome: cavo 4 Caso carico: Carico accidentale**Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo 4):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -1.20$ $z = -7.00$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
24.2	47.1	90.0	7.0	681.2	734.1	87.3	97.7	243.7	0.40 (+)
15.8	47.3	99.7	7.0	790.0	834.6	113.3	-10.9	154.5	0.75* (+)
10.3	48.7	94.2	7.0	821.4	911.6	152.1	-78.5	91.1	0.75* (+)
9.6	41.8	115.0	6.0	864.5	898.5	101.7	-122.5	95.2	0.67* (+)
-0.2	51.9	115.0	6.0	936.2	983.4	132.4	-277.1	2.5	0.60* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

46.3	44.0	90.0	-	347.5	447.1	38.3	225.6	390.3	0.58 (+)
43.8	44.0	90.0	-	379.7	473.7	42.0	220.9	378.1	0.58 (+)
15.8	50.2	90.0	-	801.4	874.4	135.8	-8.7	154.5	0.77* (+)
13.8	50.8	90.0	-	733.1	821.2	157.0	-11.0	140.8	0.78* (+)
11.9	50.3	90.0	-	740.7	836.3	161.2	-33.4	113.2	0.78* (+)
11.9	52.0	82.5	-	699.3	827.6	186.8	-22.0	113.2	0.80* (+)
11.9	53.1	75.0	-	657.0	825.2	217.8	-14.5	113.2	0.81* (+)
10.8	49.8	82.5	-	597.3	740.0	206.9	-2.0	124.7	0.81* (+)
10.8	51.4	75.0	-	576.8	762.8	239.6	-2.7	126.0	0.81* (+)
9.6	52.2	75.0	-	600.5	794.4	244.8	-21.4	100.4	0.81* (+)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
48.7	381.76	418.21	213.37	389.29	0.55 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -1.20$ $z = -7.00$ a $x = 5.07$ $z = -5.94$

$\vartheta_1 = 9.6^\circ$ $\vartheta_2 = 52.2^\circ$ $\vartheta_{12} = 75.0^\circ$ $Z_{\text{Nec}} = -21.40$ [kN/m] $Z_{\text{Esist}} = 100.43$ [kN/m] $E_d/R_d = 0.81^* (+)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con ^{***} sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.

(-): $-a_v$ is critical.

Dimensionamento mediante UNI EN 1992 (Eurocode 2)

Parete, Forze (valori di progetto)

Spess. calcestruzzo $d = 15.0$ [cm]

Dist. centro armatura lato aria $d_{aria} = 10.0$ [cm]

Dist. centro armatura lato terreno $d_{terreno} = 5.0$ [cm]

Modulo elastico calcestruzzo $E = 30000$ [MN/m²]

Res. a flessione $EI = 8437$ [kN*m²]

Calcestruzzo: C20/25, res. nom. calcestruzzo $f_{ck} = 20.0$ [MN/m²]

Tensione max. cls nella verifica a punzonam. $\tau_{011} = 0.500$ [MN/m²]

Res. nom. armatura $f_{yk} = 500.0$ [MN/m²]

Armatura a fless. per definire

il grado di armatura longitudinale μ

per la verifica a punzonamento $A_s \mu = \text{MAX}(a_{s1}, a_{s2})$ (calc. parete)

- *** Le forze di spinta del terreno sono calcolate ottimizzando Theta considerando tutti i carichi della condizione di carico attuale.
- *** L'andamento delle spinte del terreno viene calcolato con derivazione di E_{ah} rispetto a z.
- *** La coesione è stata considerata ai fini del calcolo delle spinte del terreno.
- *** Spinta del terr. minimo considerata ($\varphi=40.0^\circ$).
- *** L'angolo d'attrito della parete è definito dalla inclin. dei chiodi ($\delta = -7.3^\circ$)
- *** Il diagramma della forze di spinta del terreno (carichi permanenti) è trasformato in rettangolare lungo l'intera parete.
- *** Spinta terreno e_{ah} (carichi permanenti) è calcolato con 85.00 %.

Spinta del terreno per m parete (valori di progetto):

And. par.		pess. par.		Dist.armat.		Angolo scorrim	Spinta terr.	
x	z	h	d_{air}	d_{lay}	ϑ	E_{ah}	e_{ah}	
[m]	[m]	[cm]	[cm]	[cm]	[°]	[kN]	[kN/m]	
0.00	0.00	15.0	10.0	5.0	0.00	0.0	23.70	
-0.02	-0.10	15.0	10.0	5.0	49.00	0.0	23.70	
-0.03	-0.20	15.0	10.0	5.0	49.00	0.2	23.70	
-0.05	-0.30	15.0	10.0	5.0	48.99	0.4	24.57	
-0.07	-0.40	15.0	10.0	5.0	29.00	0.9	25.84	
-0.09	-0.50	15.0	10.0	5.0	31.60	1.5	26.46	
-0.10	-0.60	15.0	10.0	5.0	33.74	2.3	26.83	
-0.12	-0.70	15.0	10.0	5.0	35.53	3.2	27.11	
-0.14	-0.80	15.0	10.0	5.0	37.03	4.2	27.33	
-0.15	-0.90	15.0	10.0	5.0	38.31	5.3	27.50	
-0.17	-1.00	15.0	10.0	5.0	39.41	6.5	27.63	
-0.19	-1.10	15.0	10.0	5.0	40.35	7.8	27.75	
-0.21	-1.20	15.0	10.0	5.0	41.16	9.2	27.84	
-0.22	-1.30	15.0	10.0	5.0	41.87	10.7	27.91	
-0.24	-1.40	15.0	10.0	5.0	42.49	12.3	27.97	
-0.26	-1.50	15.0	10.0	5.0	43.04	14.0	28.03	
-0.27	-1.60	15.0	10.0	5.0	43.52	15.8	28.07	
-0.29	-1.70	15.0	10.0	5.0	43.95	17.6	28.11	
-0.31	-1.80	15.0	10.0	5.0	44.33	19.6	28.14	
-0.33	-1.90	15.0	10.0	5.0	44.67	21.6	28.17	
-0.34	-2.00	15.0	10.0	5.0	44.97	23.8	28.20	
-0.36	-2.10	15.0	10.0	5.0	45.25	26.0	28.22	
-0.38	-2.20	15.0	10.0	5.0	45.50	28.3	28.24	
-0.39	-2.30	15.0	10.0	5.0	45.72	30.7	28.25	
-0.41	-2.40	15.0	10.0	5.0	45.93	33.2	28.27	
-0.43	-2.50	15.0	10.0	5.0	46.11	35.8	28.28	
-0.45	-2.60	15.0	10.0	5.0	46.28	38.4	28.29	
-0.46	-2.70	15.0	10.0	5.0	46.44	41.2	31.42	

And. par.		pess. par.	Dist. armat.		Angolo scorrim	Spinta terr.	
x	z	h	d _{air}	d _{lay}	ϑ	E _{ah}	e _{ah}
[m]	[m]	[cm]	[cm]	[cm]	[°]	[kN]	[kN/m]
-0.48	-2.80	15.0	10.0	5.0	46.58	44.0	31.42
-0.50	-2.90	15.0	10.0	5.0	46.71	46.9	31.42
-0.51	-3.00	15.0	10.0	5.0	46.83	50.0	31.42
-0.53	-3.10	15.0	10.0	5.0	46.95	53.1	31.42
-0.55	-3.20	15.0	10.0	5.0	47.05	56.3	31.42
-0.57	-3.30	15.0	10.0	5.0	47.14	59.5	31.42
-0.58	-3.40	15.0	10.0	5.0	47.23	62.9	31.42
-0.60	-3.50	15.0	10.0	5.0	47.32	66.3	31.42
-0.62	-3.60	15.0	10.0	5.0	47.39	69.9	31.42
-0.63	-3.70	15.0	10.0	5.0	47.47	73.5	31.42
-0.65	-3.80	15.0	10.0	5.0	47.53	77.2	31.42
-0.67	-3.90	15.0	10.0	5.0	47.60	81.0	31.42
-0.69	-4.00	15.0	10.0	5.0	47.65	84.9	31.42
-0.70	-4.10	15.0	10.0	5.0	47.71	88.9	33.50
-0.72	-4.20	15.0	10.0	5.0	47.76	92.9	33.50
-0.74	-4.30	15.0	10.0	5.0	47.81	97.1	33.50
-0.75	-4.40	15.0	10.0	5.0	47.86	101.3	33.50
-0.77	-4.50	15.0	10.0	5.0	47.90	105.6	33.50
-0.79	-4.60	15.0	10.0	5.0	47.94	110.0	33.50
-0.81	-4.70	15.0	10.0	5.0	47.98	114.5	33.50
-0.82	-4.80	15.0	10.0	5.0	48.02	119.1	33.50
-0.84	-4.90	15.0	10.0	5.0	48.05	123.8	33.50
-0.86	-5.00	15.0	10.0	5.0	48.09	128.5	33.50
-0.87	-5.10	15.0	10.0	5.0	48.12	133.3	33.50
-0.89	-5.20	15.0	10.0	5.0	48.16	138.2	33.50
-0.91	-5.30	15.0	10.0	5.0	48.25	143.0	33.50
-0.93	-5.40	15.0	10.0	5.0	48.36	147.9	33.50
-0.94	-5.50	15.0	10.0	5.0	48.51	152.6	33.50
-0.96	-5.60	15.0	10.0	5.0	48.67	157.4	33.50
-0.98	-5.70	15.0	10.0	5.0	48.86	162.1	51.69
-0.99	-5.80	15.0	10.0	5.0	49.06	166.8	51.69
-1.01	-5.90	15.0	10.0	5.0	49.27	171.5	51.69
-1.03	-6.00	15.0	10.0	5.0	49.49	176.2	51.69
-1.05	-6.10	15.0	10.0	5.0	49.72	180.9	51.69
-1.06	-6.20	15.0	10.0	5.0	49.95	185.6	51.69
-1.08	-6.30	15.0	10.0	5.0	50.18	190.2	51.69
-1.10	-6.40	15.0	10.0	5.0	50.24	194.9	51.69
-1.11	-6.50	15.0	10.0	5.0	50.30	199.7	51.69
-1.13	-6.60	15.0	10.0	5.0	50.35	204.5	51.69
-1.15	-6.70	15.0	10.0	5.0	50.40	209.4	51.69
-1.17	-6.80	15.0	10.0	5.0	50.45	214.4	51.69
-1.18	-6.90	15.0	10.0	5.0	50.50	219.4	51.69
-1.20	-7.00	15.0	10.0	5.0	50.54	224.5	51.69

Forze per m parete (valori di progetto):

Coord.Z	Poriz	Deform.	Par. soll.		R.app.	Arm.compr.	Arm. taglio.
z	h	w	T	M	A _H	as	as _{Tras}
[m]	[kN/m]	[mm]	[kN]	[kN*m]	[kN]	[cm ² /m]	[cm ² /m]
0.00	23.70	-0.1	0.00	0.00	---	0.00	---
-0.10	23.70	-0.1	-2.34	-0.12	---	0.03	---
-0.20	23.70	-0.1	-4.67	-0.47	---	0.10	---
-0.30	24.57	-0.1	-7.05	-1.07	---	0.24	---
-0.40	25.84	0.0	-9.54	-1.91	---	0.42	---
-0.50	26.46	0.0	-12.11	-3.01	---	0.67	---
-0.60	26.83	0.0	-14.74	-4.37	---	0.98	---
-0.70	27.11	0.0	1.20	-4.24	36.7	0.95	---
-0.70	27.11	0.0	1.20	-4.24	---	0.95	---
-0.80	27.33	0.0	17.15	-4.12	---	0.92	---

Coord.Z	Poriz	Deform.	Par. soll.		R.app.	Arm.compr.	Arm. taglio.
z	h	w	T	M	A _H	as	as _{Tras}
[m]	[kN/m]	[mm]	[kN]	[kN*m]	[kN]	[cm ² /m]	[cm ² /m]
-0.90	27.50	0.0	14.44	-2.52	---	0.56	---
-1.00	27.63	0.0	11.73	-1.19	---	0.26	---
-1.10	27.74	0.0	9.00	-0.14	---	0.03	---
-1.20	27.84	0.0	6.26	0.63	---	0.28	---
-1.30	27.91	0.0	3.51	1.13	---	0.51	---
-1.40	27.97	0.0	0.76	1.35	---	0.60	---
-1.50	28.03	0.0	-2.00	1.28	---	0.58	---
-1.60	28.07	0.0	-4.77	0.94	---	0.42	---
-1.70	28.11	0.0	-7.54	0.32	---	0.14	---
-1.80	28.14	0.0	-10.31	-0.59	---	0.13	---
-1.90	28.17	0.0	-13.08	-1.78	---	0.39	---
-2.00	28.20	0.0	0.57	-1.72	32.4	0.38	---
-2.00	28.20	0.0	0.57	-1.72	---	0.38	---
-2.10	28.22	0.0	14.23	-1.66	---	0.37	---
-2.10	28.22	0.0	14.23	-1.66	---	0.37	---
-2.20	28.24	0.0	11.45	-0.36	---	0.08	---
-2.30	28.25	0.0	8.67	0.66	---	0.30	---
-2.40	28.27	0.0	5.88	1.40	---	0.63	---
-2.50	28.28	0.0	3.09	1.86	---	0.84	---
-2.60	28.29	0.0	0.31	2.03	---	0.92	---
-2.60	28.30	0.0	0.31	2.03	---	0.92	---
-2.70	31.42	0.0	-2.64	1.91	---	0.87	---
-2.80	31.42	0.0	-5.73	1.49	---	0.67	---
-2.90	31.42	0.0	-8.83	0.75	---	0.33	---
-3.00	31.42	0.0	-11.93	-0.30	---	0.07	---
-3.10	31.42	0.0	-15.02	-1.67	---	0.37	---
-3.20	31.42	0.0	-18.12	-3.35	---	0.75	---
-3.30	31.42	0.0	0.87	-3.26	43.5	0.73	---
-3.30	31.42	0.0	0.87	-3.26	---	0.73	---
-3.40	31.42	0.0	19.86	-3.17	---	0.71	---
-3.40	31.42	0.0	19.86	-3.17	---	0.71	---
-3.50	31.42	0.0	16.76	-1.32	---	0.29	---
-3.60	31.42	0.0	13.67	0.23	---	0.10	---
-3.70	31.42	0.0	10.57	1.46	---	0.66	---
-3.80	31.42	-0.1	7.47	2.37	---	1.08	---
-3.90	31.42	-0.1	4.38	2.97	---	1.37	---
-4.00	31.42	-0.1	1.28	3.26	---	1.51	---
-4.10	33.50	-0.1	-1.92	3.23	---	1.49	---
-4.20	33.50	-0.1	-5.22	2.87	---	1.32	---
-4.30	33.50	0.0	-8.52	2.17	---	0.99	---
-4.40	33.50	0.0	-11.83	1.14	---	0.51	---
-4.50	33.50	0.0	-15.13	-0.23	---	0.05	---
-4.60	33.50	0.0	-18.43	-1.93	---	0.43	---
-4.70	33.50	0.0	-21.73	-3.97	---	0.89	---
-4.80	33.50	0.0	-25.03	-6.34	---	1.43	---
-4.80	33.50	0.0	-25.03	-6.34	---	1.43	---
-4.90	33.50	0.0	1.86	-6.15	59.5	1.39	---
-4.90	33.50	0.0	1.86	-6.15	---	1.39	---
-5.00	33.50	0.0	28.76	-5.96	---	1.34	---
-5.10	33.50	0.0	25.46	-3.21	---	0.72	---
-5.20	33.50	-0.1	22.16	-0.80	---	0.18	---
-5.30	33.50	-0.1	18.85	1.28	---	0.58	---
-5.40	33.50	-0.1	15.55	3.03	---	1.40	---
-5.50	33.50	-0.1	12.25	4.44	---	2.13	---
-5.60	33.50	-0.1	8.95	5.51	---	2.73	---
-5.60	33.52	-0.1	8.95	5.51	---	2.73	---
-5.70	51.67	-0.1	4.75	6.22	---	3.15	---
-5.70	51.69	-0.1	4.75	6.22	---	3.15	---

Coord.Z	Poriz	Deform.	Par. soll.		R.app.	Arm.compr.	Arm. taglio.
z	h	w	T	M	A _H	as	as _{Tras}
[m]	[kN/m]	[mm]	[kN]	[kN*m]	[kN]	[cm ² /m]	[cm ² /m]
-5.80	51.69	-0.2	-0.34	6.45	---	3.28	---
-5.90	51.69	-0.1	-5.44	6.15	---	3.11	---
-6.00	51.69	-0.1	-10.53	5.34	---	2.64	---
-6.10	51.69	-0.1	-15.63	4.02	---	1.90	---
-6.20	51.69	-0.1	-20.72	2.17	---	0.99	---
-6.30	51.69	-0.1	-25.82	-0.19	---	0.04	---
-6.40	51.69	0.0	-30.91	-3.07	---	0.68	---
-6.40	51.69	0.0	-30.91	-3.07	---	0.68	---
-6.50	51.69	0.0	-5.27	-3.60	60.6	0.80	---
-6.50	51.69	0.0	-5.27	-3.60	---	0.80	---
-6.60	51.69	0.0	20.38	-4.14	---	0.93	---
-6.70	51.69	0.0	15.28	-2.33	---	0.52	---
-6.80	51.69	0.0	10.19	-1.03	---	0.23	---
-6.90	51.69	0.0	5.09	-0.26	---	0.06	---
-7.00	51.69	0.1	0.00	0.00	---	0.00	---

*** Annotazione : Per i chiodi, la forza trasversale T ed il momento M sul p.to d'appoggio sono calcolati mediante interpolazione lineare di T e M ai bordi della piastra di testa.

Specifiche chiodi (Scavo cavo 4) (valori di progetto):

x-Testa	z-Testa	Incl.	Lungh.	a	f _{yk}	γ _M	F _{Sty}	F _{Nec}	F _{Dim}	Dm _{Nec}
[m]	[m]	[°]	[m]	[m]	[MN/m ²]	[-]	[kN]	[kN]	[kN]	[mm]
-0.12	-0.70	25.0	7.00	1.60	500	1.150	82.3	38.1	64.8	13.8
-0.34	-2.00	25.0	7.00	1.60	500	1.150	108.6	55.5	57.2	12.9
-0.57	-3.30	20.0	7.00	1.60	500	1.150	141.7	77.6	74.1	15.1
-0.84	-4.90	10.0	6.00	1.60	500	1.150	154.9	87.1	96.7	16.8
-1.11	-6.50	5.0	6.00	1.60	500	1.150	187.1	107.9	97.3	17.8

Verifica di punzonamento UNI EN 1992 (Eurocode 2)

F	Forza chiodi da calc. spinta terreno sulla parete $MAX(F_{Nec}, F_{Dim}) * \cos(Incl)$
H-Press	Spinta terreno sulla piastra di testa Fattore per H-Press = 1.000
B	Larghezza piastra di testa Sezione in $1.0 * d$ distanza dalla piastra
h	Larghezza muro
A_{sl}	Armatura longitudinale/trasversale vicino piastra di testa in cm^2/m parete ($A_{sl} = A_{slx} = A_{slz}$)
φ_l	Grado di armatura longitudinale vicino piastra di testa
d	Altezza statica della parete
V_{Ed}	T-Forza per dimensionamento
$V_{Rd,c}$	Resist. a punzamento senza aramtura
A_{swNec}	Armatura minima necessaria a punzamento in una riga Calcolazione A_{sw} e $v_{Rd,cs}$ secondo 6.4.5 (1), GI 6.52
A_{slNec}	Alternativa per A_{swNec} : Armatura longitudinale/trasversale necessaria per evitare armatura a punzamento
φ_{INec}	Grado di armatura longitudinale per A_{slNec}

Fattore posizione chiodo interno $\beta = 1.150$ (6.4.3 (6))

Parametri per $v_{Rd,c}$ (6.4.4 (1) (Gl. 6.47)):

$$C_{Rd,c} = 0.180 / \gamma_c \text{ (Gl. 6.47, 6.50)}$$

$$k_1 = 0.100 \text{ (Gl. 6.47)}$$

$$\nu_{min} = 0.035 * k^{(1.500)} * f_{ck}^{(0.500)} \text{ (d < 99999 mm) (Gl. 6.3)}$$

Parametri per $v_{Rd,max}$ (6.4.5 (3)):

$$\nu = \text{MIN}(0.600 * (1.000 - f_{ck}/250.0), 99999.000) \text{ (Gl. 6.6N)}$$

$$v_{Rd,max} = 0.400 * \nu * f_{cd} \text{ (Gl. 6.3)}$$

z-Testa [m]	F [kN]	H-Press [kN/m ²]	B [cm]	h [cm]	d [cm]	A_{sl} [cm ² /m]	φ_l [%]	V_{Ed} [MN/m ²]	$V_{Rd,c}$ [MN/m ²]	A_{swNec} [cm ²]	A_{slNec} [cm ² /m]	φ_{INec} [%]
-0.70	62.5	27.11	20.0	15.0	10.0	0.95	0.10	0.470	> 0.443	0.71	3.76	0.38
-2.00	55.2	28.20	20.0	15.0	10.0	0.38	0.04	0.410	< 0.443	-	-	-
-3.30	76.3	31.42	20.0	15.0	10.0	0.73	0.07	0.576	> 0.443	1.26	6.92	0.69
-4.90	96.7	33.50	20.0	15.0	10.0	1.39	0.14	0.738	> 0.443	2.10	14.53	1.45
-6.50	107.6	51.69	20.0	15.0	10.0	0.80	0.08	0.803	> 0.443	2.43	18.73	1.87

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-1.20$ $z_1=-7.00$ $x_2=5.63$ $z_2=-7.00$

Parete teorico: (x_2, z_2) a $x_3=5.63$ $z_3=0.23$

Carico:

Verticale	V_c / V_d	=	957.70 /	956.88 kN/m
Orizzontale	H_c / H_d	=	-227.27 /	-265.24 kN/m
Momento	$M_{y,c} / M_{y,d}$	=	0.00 /	0.00 kN/m/m

*** Annotazione: M_y è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t	=	0.00 m	
Larghezza b'	=	6.83 m	
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00	
Parametri determinanti del suolo	γ sopra la base	=	0.00 kN/m ³
	γ sotto la base	=	18.50 kN/m ³
	Angolo dell' attito φ	=	34.00 °
	Cohesion c	=	0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	=	26.50 15.30 15.43	
Coeff. dell' inclinazione i_c, i_d, i_b	=	1.00 1.00 1.00	
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	=	1.00 1.00 1.00	
Larghezza del meccanismo del guasto	=	43.91 m	
Profondità del meccanismo del guasto	=	12.52 m	

Fattore parziale sicurezza modello γ_{Rd} = 1.15

Parametri numerici: a / b / c / d / e / f / m / k / k' / c_T / c_M / c'_M / β / γ
 = 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 965.88 \text{ kN/m}^2$

Resistenza ultima $N_{max} = 6600.68 \text{ kN}$

Resistenza terreno ultima $F = 0.10$

Coefficiente rottura = -0.33 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo.
 Non viene fatto un ulteriore verifica.

Stabilità dei pendii, metodo delle strisce Caso carico Carico accidentale

Parametri terremoto: orizzontale: 0.026 , verticale: 0.005

Fattore per terremoto = 0.50

Fattore press. interstiz. = 1.000

*** Annotazione: Positive (=upwards) seismic acceleration +a_v ist critical.

Azioni variabili orizzontali vanno considerati solo, se girano nel senso orario.

Azioni variabili verticali vanno considerati solo, se girano nel senso orario,
 e sono fuori di $R \cdot \sin(\varphi)$

Centro = (-2.25, 4.21), raggio = 12.33

Punto a sinistra = (-7.39, -7.00), punto a destra = (9.48, 0.39)

Geometria di lamelle:

No	x	Largh.	dxM	Peso	Charico	Peso aqu.	u	φ	c	ϑ
	[m]	b	[m]	G	P	W	[kN/m]	[°]	[kN/m ²]	[°]
1	-6.77	1.23	-4.52	6.0	0.0	0.0	0.0	28.35	0.00	-21.52
2	-5.54	1.23	-3.29	15.5	0.0	0.0	0.0	28.35	0.00	-15.47
3	-4.31	1.23	-2.06	21.8	0.0	0.0	0.0	28.35	0.00	-9.60
4	-3.07	1.23	-0.82	25.2	0.0	0.0	0.0	28.35	0.00	-3.83
5	-1.84	1.23	0.41	25.6	0.0	0.0	0.0	28.35	0.00	1.90
6	-0.61	1.23	1.64	102.8	0.0	0.0	0.0	28.35	0.00	7.65
7	0.63	1.23	2.88	179.5	0.0	0.0	0.0	28.35	0.00	13.49
8	1.86	1.23	4.11	172.3	0.0	0.0	0.0	28.35	0.00	19.46
9	3.09	1.23	5.34	161.7	0.0	0.0	0.0	28.35	0.00	25.67
10	4.33	1.23	6.58	147.2	0.0	0.0	0.0	28.35	0.00	32.22
11	5.56	1.23	7.81	128.0	12.4	0.0	0.0	28.35	0.00	39.29
12	6.79	1.23	9.04	102.5	12.4	0.0	0.0	23.04	0.00	47.15
13	8.03	1.23	10.28	67.7	12.4	0.0	0.0	23.04	0.00	56.43
14	9.06	0.84	11.31	16.9	8.4	0.0	0.0	23.04	0.00	66.50

Contributo die charici verticali:

No.	S=G+P+W	$E_d=S \cdot \sin \vartheta$	$(S-u \cdot b) \cdot \tan \varphi$ + c*b	$\cos \vartheta +$ $\mu \cdot \tan \varphi \cdot \sin \vartheta$	R_d
	[kN/m]	[kN/m]	[kN/m]	[-]	[kN/m]
1	6.0	-2.22	3.26	0.770901	4.23
2	15.5	-4.14	8.38	0.847809	9.88
3	21.8	-3.64	11.78	0.913503	12.90
4	25.2	-1.68	13.58	0.968735	14.02
5	25.6	0.85	13.84	1.013873	13.65
6	102.8	13.69	55.47	1.048969	52.88
7	179.5	41.86	96.86	1.073765	90.21

No.	S=G+P+W [kN/m]	$E_d=S*\sin \vartheta$ [kN/m]	$(S-u*b)*\tan \varphi + c*b$ [kN/m]	$\cos \vartheta + \mu * \tan \varphi * \sin \vartheta$ [-]	R_d [kN/m]
8	172.3	57.41	92.98	1.087648	85.48
9	161.7	70.05	87.26	1.089546	80.08
10	147.2	78.49	79.43	1.077694	73.70
11	140.4	88.88	75.75	1.049149	72.20
12	114.9	84.25	48.88	0.931178	52.49
13	80.1	66.71	34.06	0.838395	40.62
14	25.3	23.19	10.76	0.712896	15.09
		-----			-----
		513.70			617.44

Contributo carico orizzontale:

No	Lineload*dzM [kN/m] [m]	Areaload*dzM [kN/m] [m]	press aqua*dzM [kN/m] [m]	terremoto horiz.*dzM [kN/m] [m]
1	--	--	--	0.16 * 11.29
2	--	--	--	0.40 * 11.49
3	--	--	--	0.56 * 11.63
4	--	--	--	0.65 * 11.70
5	--	--	--	0.66 * 11.71
6	--	--	--	2.66 * 9.81
7	--	--	--	4.64 * 8.06
8	--	--	--	4.46 * 7.85
9	--	--	--	4.18 * 7.57
10	--	--	--	3.81 * 7.21
11	--	--	--	3.31 * 6.74
12	--	--	--	2.65 * 6.15
13	--	--	--	1.75 * 6.05
14	--	--	--	0.44 * 5.97

*** Annotazione: Colonna 'terremoto horiz.' rappresenta influsso del parametro terremoto orizzontale sul peso proprio.

Sum momente deo 'Contributo carico orizzontale': 237.8 kN*m/m

Contributo chiodi:

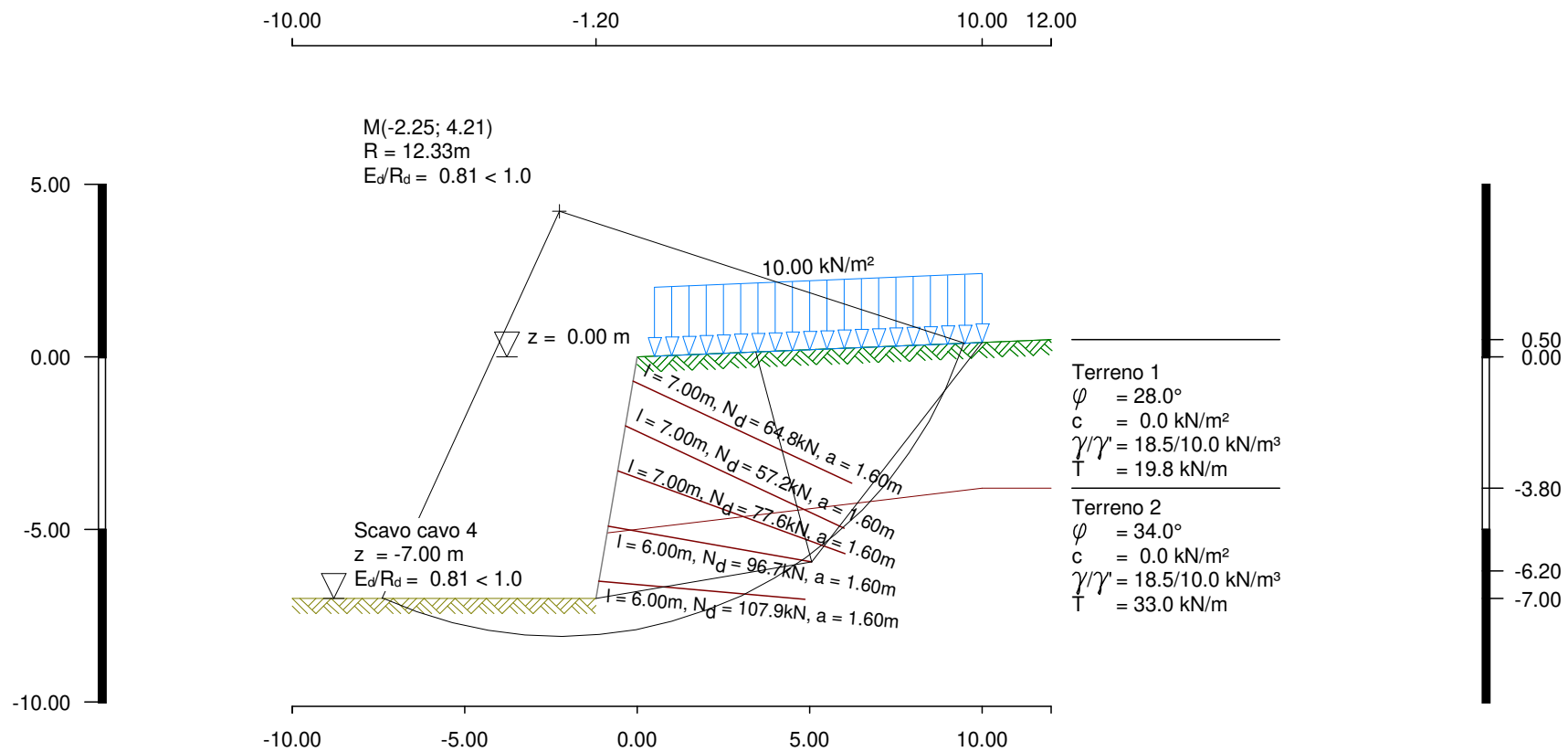
chiodo non tensionato $F_A = F_{Esist}$

$$M_{resistente} = R * ((\mu * F_A * \sin \alpha * \tan \varphi) / (\cos \vartheta + \mu * \sin \vartheta * \tan \varphi) + F_A * \cos(\vartheta + \alpha))$$

$$M_{attivo} = 0$$

Chiodo	x_s [m]	z_s [m]	$F_{Esist,c}$ [kN/chiodo]	sotto tensione	$F_{Esist,d}$ [kN/chiodo]	$M_{resist,d}$ [kNm/m]	$M_{attivo,d}$ [kNm/m]	$F_{Esist,d} * \mu$ [kN/chiodo]
2	6.00	-4.96	0.1	si	0.1	0.3	0.0	0.1
3	5.39	-5.47	21.7	si	21.7	111.7	0.0	17.5
4	4.82	-5.90	8.5	si	8.5	50.7	0.0	6.8
5	3.16	-6.87	56.5	si	56.5	388.2	0.0	45.5

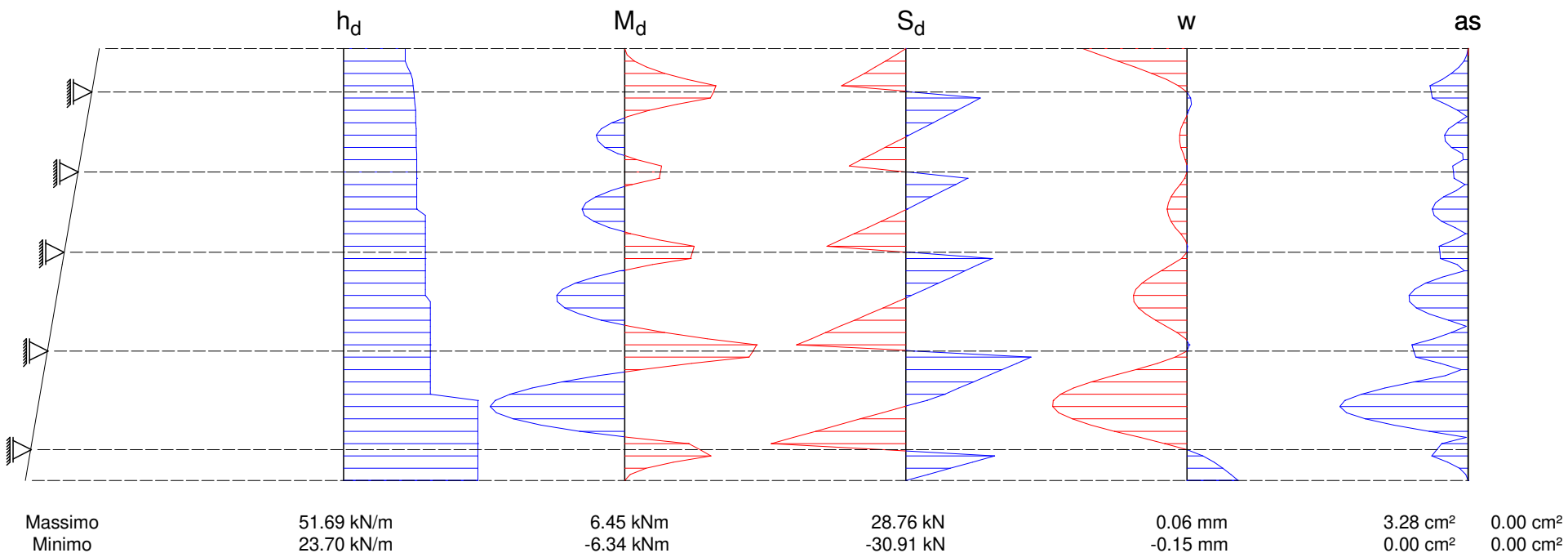
Sum $M_{resistente,d}$: 550.9 kNm/mCharico $E_d = 513.7 * 12.3 + 237.8 = 6573.8$ kNm/mResistenza $R_d = 617.4 * 12.3 + 550.9 = 8166.3$ kNm/m $\mu = E_d / R_d = 0.81 < 1.0$: verifica compiuta.



Sistema

Carico

Param. di soll.



Panoramica di fattori di utilizzazione E_d / R_d di tutte le fasi (Caso carico Carico accidentale)

Fase	Sicurezza interna	Capacità port.	Rottura del pendio
1: cavo	0.45	-0.83	---
2: cavo 1	0.51	-0.71	---
3: cavo 2	0.58	-0.59	---
4: cavo 3	0.67	-0.46	---
5: cavo 4	0.81	-0.33	0.81

*** Annotazione: Valore a capacità portante significa 'Coefficiente rottura'

Sommario (Caso carico Carico accidentale)

Tutte le verifiche sono soddisfatte.

Calcolo Caso carico Carico ferroviario**Scavo No. 1 Nome: cavo Caso carico: Carico ferroviario****Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -0.21$ $z = -1.20$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
-20.9	45.3	90.0	7.0	298.0	401.9	135.7	-144.1	0.4	0.55* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno

della chiodatura:

9.2	43.8	90.0	-	15.7	18.9	5.2	1.6	76.1	0.02 (-)
9.2	45.5	82.5	-	14.7	19.1	6.1	2.0	76.1	0.03 (+)
9.2	46.7	75.0	-	13.2	19.0	7.1	2.2	76.1	0.03 (+)
9.2	53.0	67.5	-	11.6	19.0	8.3	2.3	76.1	0.03 (+)
-20.9	45.3	90.0	-	298.0	401.9	135.7	-144.1	0.4	0.55* (-)
-20.9	45.3	105.0	-	336.0	401.8	119.6	-147.9	0.4	0.58* (-)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
46.7	10.77	11.76	5.93	75.16	0.08 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -0.21$ $z = -1.20$ a $x = 6.22$ $z = -3.66$

$\vartheta_1 = -20.9^\circ$ $\vartheta_2 = 45.3^\circ$ $\vartheta_{12} = 105.0^\circ$ $Z_{\text{Nec}} = -147.88$ [kN/m] $Z_{\text{Esist}} = 0.40$ [kN/m] $E_d/R_d = 0.58^* (-)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con *** sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.

(-): $-a_v$ is critical.

Specifiche chiodi (Scavo cavo) (valori di progetto):

x-Testa [m]	z-Testa [m]	Incl. [°]	Lungh [m]	a [m]	F_{Sty} [kN]	F_{Nec} [kN]
-0.12	-0.70	25.0	7.00	1.60	132.7	10.5

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-0.21$ $z_1=-1.20$ $x_2=6.22$ $z_2=-1.20$

Parete teorico: (x_2, z_2) a $x_3=6.22$ $z_3=0.26$

Carico:

Verticale	V_c / V_d	=	156.77 /	156.71 kN/m
Orizzontale	H_c / H_d	=	-19.09 /	-20.70 kN/m
Momento	$M_{y,c} / M_{y,d}$	=	0.00 /	0.00 kNm/m

*** Annotazione: M_y è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t	=	0.00 m
Larghezza b'	=	6.43 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00
Parametri determinanti del suolo	γ sopra la base	= 0.00 kN/m ³
	γ sotto la base	= 18.50 kN/m ³
	Angolo dell' attito φ	= 33.68 °
	Cohesion c	= 0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	= 25.93 14.83 14.74	
Coeff. dell' inclinazione i_c, i_d, i_b	= 1.00 1.00 1.00	
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	= 1.00 1.00 1.00	
Larghezza del meccanismo del guasto	=	40.65 m
Profondità del meccanismo del guasto	=	11.64 m
Fattore parziale sicurezza modello γ_{Rd}	=	1.15
Parametri numerici: $a / b / c / d / e / f / m / k / k' / c_T / c_M / c'_M / \beta / \gamma$		
	= 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80	

Tensione Rottura terreno $p_d = 868.10$ kN/m²

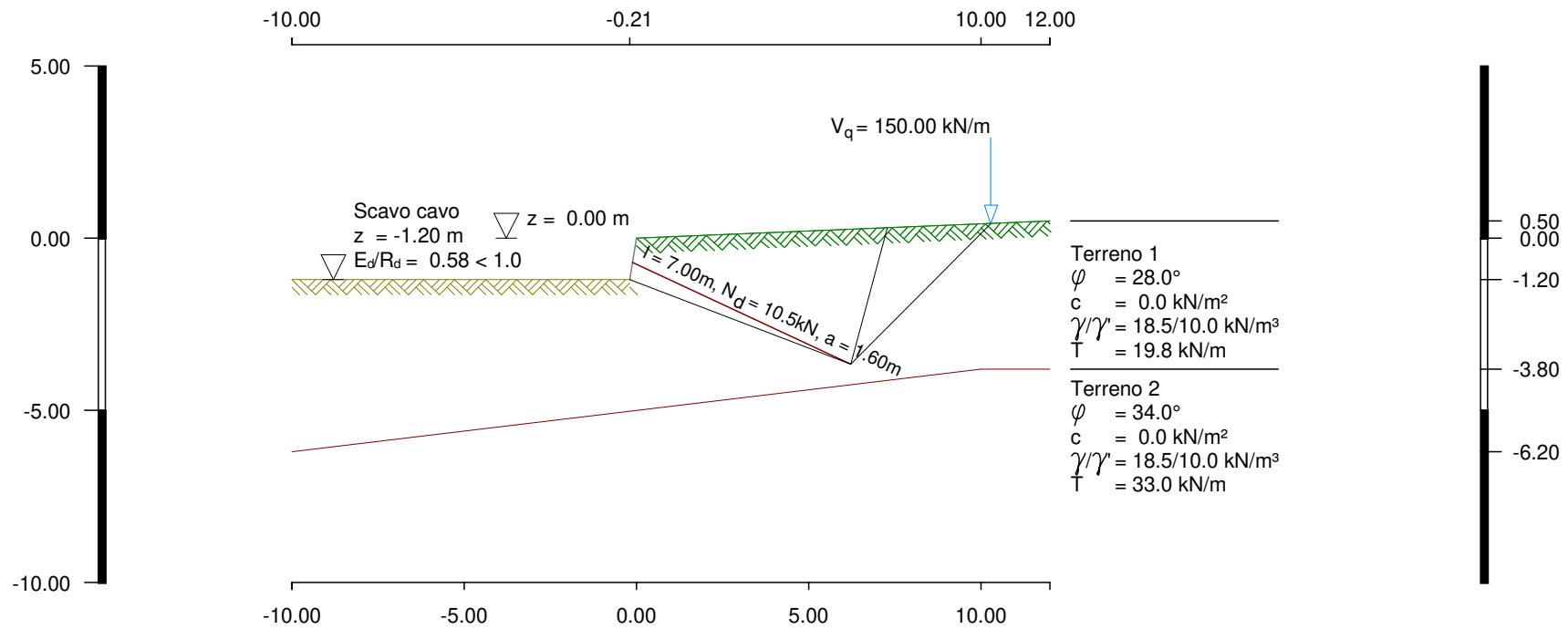
Resistenza ultima $N_{max} = 5581.79$ kN

Resistenza terreno ultima $F = 0.10$

Coefficiente rottura = -0.84 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo. Non viene fatto un ulteriore verifica.



Scavo No. 2 Nome: cavo 1 Caso carico: Carico ferroviario**Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo 1):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -0.43$ $z = -2.50$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
-9.9	45.3	90.0	7.0	390.9	473.8	139.1	-109.9	73.2	0.59* (+)
-20.9	51.6	99.7	7.0	485.0	599.6	172.2	-242.2	0.7	0.54* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

33.6	43.9	90.0	-	53.1	69.2	8.9	27.5	159.1	0.17 (+)
33.6	45.5	82.5	-	50.6	68.6	10.3	27.9	159.1	0.18 (+)
33.6	46.7	75.0	-	48.1	68.4	11.9	28.2	159.1	0.18 (+)
33.6	53.0	67.5	-	45.4	68.4	13.9	28.4	159.1	0.18 (+)
-9.9	45.3	90.0	-	390.9	473.8	139.1	-109.9	73.2	0.59* (+)
-9.9	45.3	105.0	-	430.1	473.9	122.6	-113.9	73.2	0.60* (+)
-9.9	45.3	102.8	-	424.1	473.3	124.6	-112.7	73.2	0.60* (+)
-9.9	45.3	100.6	-	418.2	473.0	126.7	-111.7	73.2	0.60* (+)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
46.7	46.75	51.04	25.74	151.25	0.17 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -0.43$ $z = -2.50$ a $x = 6.22$ $z = -3.66$

$\vartheta_1 = -9.9^\circ$ $\vartheta_2 = 45.3^\circ$ $\vartheta_{12} = 100.6^\circ$ $Z_{\text{Nec}} = -111.73$ [kN/m] $Z_{\text{Esist}} = 73.21$ [kN/m] $E_d/R_d = 0.60^* (+)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con **
sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.

(-): $-a_v$ is critical.

Specifiche chiodi (Scavo cavo 1) (valori di progetto):

x-Testa [m]	z-Testa [m]	Incl. [°]	Lungh [m]	a [m]	F_{Sty} [kN]	F_{Nec} [kN]
-0.12	-0.70	25.0	7.00	1.60	117.5	20.0
-0.34	-2.00	25.0	7.00	1.60	149.5	26.2

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-0.43$ $z_1=-2.50$ $x_2=6.11$ $z_2=-2.50$

Parete teorico: (x_2, z_2) a $x_3=6.11$ $z_3=0.25$

Carico:

Verticale	V,c / V,d	=	328.79 /	331.99 kN/m
Orizzontale	H,c / H,d	=	-73.55 /	-93.46 kN/m
Momento	My,c / My,d	=	0.00 /	0.00 kNm/m

*** Annotazione: My è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t	=	0.00 m
Larghezza b'	=	6.54 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00
Parametri determinanti del suolo	γ sopra la base	= 0.00 kN/m ³
	γ sotto la base	= 18.50 kN/m ³
	Angolo dell' attito φ	= 33.84 °
	Cohesion c	= 0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	= 26.22 15.06 15.09	
Coeff. dell' inclinazione i_c, i_d, i_b	= 1.00 1.00 1.00	
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	= 1.00 1.00 1.00	
Larghezza del meccanismo del guasto	=	41.70 m
Profondità del meccanismo del guasto	=	11.91 m

Fattore parziale sicurezza modello γ_{Rd} = 1.15

Parametri numerici: a / b / c / d / e / f / m / k / k' / $c_T / c_M / c'_M / \beta / \gamma$
 = 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 903.88$ kN/m²

Resistenza ultima $N_{max} = 5912.51$ kN

Resistenza terreno ultima F = 0.10

Coefficiente rottura = -0.53 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo.
 Non viene fatto un ulteriore verifica.

Scavo No. 3 Nome: cavo 2 Caso carico: Carico ferroviario**Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo 2):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -0.65$ $z = -3.80$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
1.2	45.3	90.0	7.0	474.8	551.2	139.1	-44.0	142.1	0.66* (+)
-9.9	51.6	99.7	7.0	583.6	683.8	176.7	-185.4	76.8	0.59* (+)
-15.9	55.2	94.2	7.0	592.9	764.1	214.1	-277.9	0.7	0.56* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

39.7	43.9	90.0	-	110.8	148.8	13.5	69.0	246.8	0.28 (+)
39.7	45.5	82.5	-	107.1	147.8	15.5	69.4	246.8	0.28 (+)
39.7	46.7	75.0	-	103.3	147.4	18.1	69.9	246.8	0.28 (+)
39.7	53.0	67.5	-	99.2	147.4	21.1	70.1	246.8	0.28 (+)
1.2	45.3	90.0	-	474.8	551.2	139.1	-44.0	142.1	0.66* (+)
1.2	45.3	96.1	-	490.3	550.2	131.5	-44.7	142.1	0.66* (+)
1.2	45.3	93.9	-	484.6	550.4	134.1	-44.3	142.1	0.66* (+)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
46.7	108.00	117.91	59.46	235.97	0.25 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -0.65$ $z = -3.80$ a $x = 6.22$ $z = -3.66$

$\vartheta_{1=}$ 1.2° $\vartheta_{2=}$ 45.3° $\vartheta_{12=}$ 93.9° $Z_{\text{Nec}}=-44.32[\text{kN/m}]$ $Z_{\text{Esist}}=142.06[\text{kN/m}]$ $E_d/R_d= 0.66^* (+)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con **
sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.

(-): $-a_v$ is critical.

Specifiche chiodi (Scavo cavo 2) (valori di progetto):

x-Testa [m]	z-Testa [m]	Incl. [°]	Lungh [m]	a [m]	F_{Sty} [kN]	F_{Nec} [kN]
-0.12	-0.70	25.0	7.00	1.60	102.3	26.6
-0.34	-2.00	25.0	7.00	1.60	134.3	36.8
-0.57	-3.30	20.0	7.00	1.60	173.6	48.9

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-0.65$ $z_1=-3.80$ $x_2=6.08$ $z_2=-3.80$

Parete teorico: (x_2, z_2) a $x_3=6.08$ $z_3=0.25$

Carico:

Verticale	V,c / V,d	=	513.14 /	512.49 kN/m
Orizzontale	H,c / H,d	=	-140.80 /	-165.40 kN/m
Momento	My,c / My,d	=	0.00 /	0.00 kNm/m

*** Annotazione: My è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t	=	0.00 m
Larghezza b'	=	6.73 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00
Parametri determinanti del suolo	γ sopra la base	= 0.00 kN/m ³
	γ sotto la base	= 18.50 kN/m ³
	Angolo dell' attito φ	= 33.95 °
	Cohesion c	= 0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	= 26.41 15.22 15.32	
Coeff. dell' inclinazione i_c, i_d, i_b	= 1.00 1.00 1.00	
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	= 1.00 1.00 1.00	
Larghezza del meccanismo del guasto	=	43.13 m
Profondità del meccanismo del guasto	=	12.30 m

Fattore parziale sicurezza modello γ_{Rd} = 1.15

Parametri numerici: a / b / c / d / e / f / m / k / k' / c_T / c_M / c'_M / β / γ
 = 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 944.09$ kN/m²

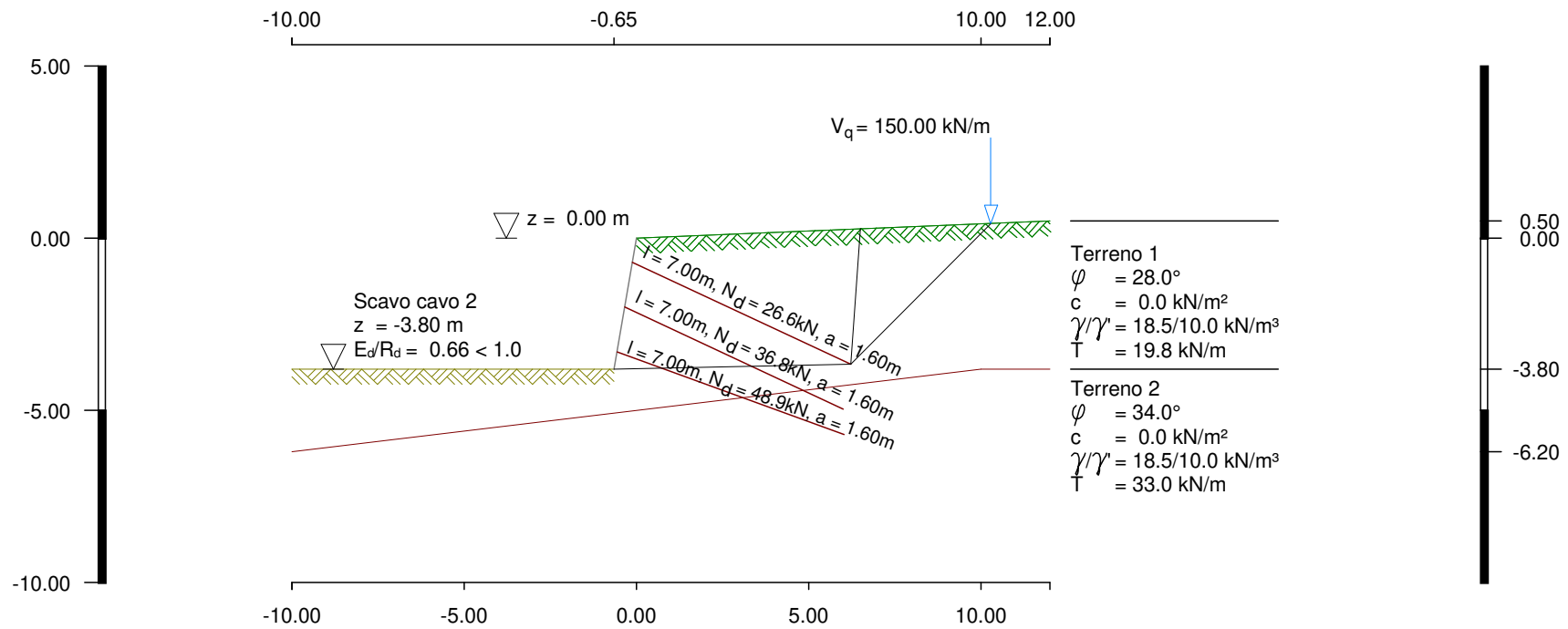
Resistenza ultima $N_{max} = 6354.30$ kN

Resistenza terreno ultima F = 0.10

Coefficiente rottura = -0.38 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo.
 Non viene fatto un ulteriore verifica.



Scavo No. 4 Nome: cavo 3 Caso carico: Carico ferroviario**Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo 3):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante punti terminali chiodi.

Intersezione parete - fondo scavo $x = -0.94$ $z = -5.50$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
14.4	45.3	90.0	7.0	567.3	644.1	135.7	51.2	196.7	0.26 (-)
4.5	51.6	99.7	7.0	693.3	779.5	176.7	-93.6	111.4	0.71* (+)
-1.6	55.2	94.2	7.0	722.7	882.6	219.7	-181.9	39.0	0.69* (+)
-4.2	50.6	115.0	6.0	755.6	798.5	151.1	-233.6	15.1	0.62* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

43.3	43.9	90.0	-	215.2	281.8	20.7	136.7	320.4	0.43 (+)
43.3	45.5	82.5	-	209.5	280.2	23.7	137.2	320.4	0.43 (+)
43.3	46.7	75.0	-	203.7	279.5	27.6	137.8	320.4	0.43 (+)
43.3	53.0	67.5	-	197.5	279.4	32.2	138.2	320.4	0.43 (+)
8.2	45.1	90.0	-	551.8	651.9	172.5	-25.0	153.8	0.73* (+)
8.2	45.1	82.5	-	523.0	652.8	189.8	-22.7	153.8	0.73* (+)
8.2	45.1	85.0	-	532.5	652.1	183.6	-23.2	153.8	0.73* (+)
8.2	45.1	82.7	-	524.0	652.7	189.2	-22.8	153.8	0.73* (+)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
47.1	222.63	243.46	123.65	313.61	0.39 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -0.94$ $z = -5.50$ a $x = 5.25$ $z = -4.61$

$\vartheta_1 = 8.2^\circ$ $\vartheta_2 = 45.1^\circ$ $\vartheta_{12} = 82.7^\circ$ $Z_{\text{Nec}} = -22.78$ [kN/m] $Z_{\text{Esist}} = 153.75$ [kN/m] $E_d/R_d = 0.73^*$ (+)

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con **
sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.
(-): $-a_v$ is critical.

Specifiche chiodi (Scavo cavo 3) (valori di progetto):

x-Testa [m]	z-Testa [m]	Incl. [°]	Lungh [m]	a [m]	F_{Sty} [kN]	F_{Nec} [kN]
-0.12	-0.70	25.0	7.00	1.60	92.2	32.9
-0.34	-2.00	25.0	7.00	1.60	118.4	47.4
-0.57	-3.30	20.0	7.00	1.60	153.3	64.7
-0.84	-4.90	10.0	6.00	1.60	181.0	77.6

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-0.94$ $z_1=-5.50$ $x_2=5.83$ $z_2=-5.50$

Parete teorico: (x_2, z_2) a $x_3= 5.83$ $z_3= 0.24$

Carico:

Verticale	V,c / V,d	=	735.94 /	732.95 kN/m
Orizzontale	H,c / H,d	=	-215.27 /	-249.19 kN/m
Momento	My,c / My,d	=	0.00 /	0.00 kNm/m

*** Annotazione: My è definito zero, siccome la massa del terreno con chiodi gira a destra e rimane sul supporto.

Profondità di fissaggio t	=	0.00 m
Larghezza b'	=	6.77 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$	=	0.00
Parametri determinanti del suolo	γ sopra la base	= 0.00 kN/m ³
	γ sotto la base	= 18.50 kN/m ³
	Angolo dell' attito φ	= 34.00 °
	Cohesion c	= 0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	= 26.50 15.30 15.43	
Coeff. dell' inclinazione i_c, i_d, i_b	= 1.00 1.00 1.00	
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	= 1.00 1.00 1.00	
Larghezza del meccanismo del guasto	=	43.50 m
Profondità del meccanismo del guasto	=	12.40 m

Fattore parziale sicurezza modello γ_{Rd} = 1.15

Parametri numerici: a / b / c / d / e / f / m / k / k' / $c_T / c_M / c'_M / \beta / \gamma$
 = 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 956.78$ kN/m²

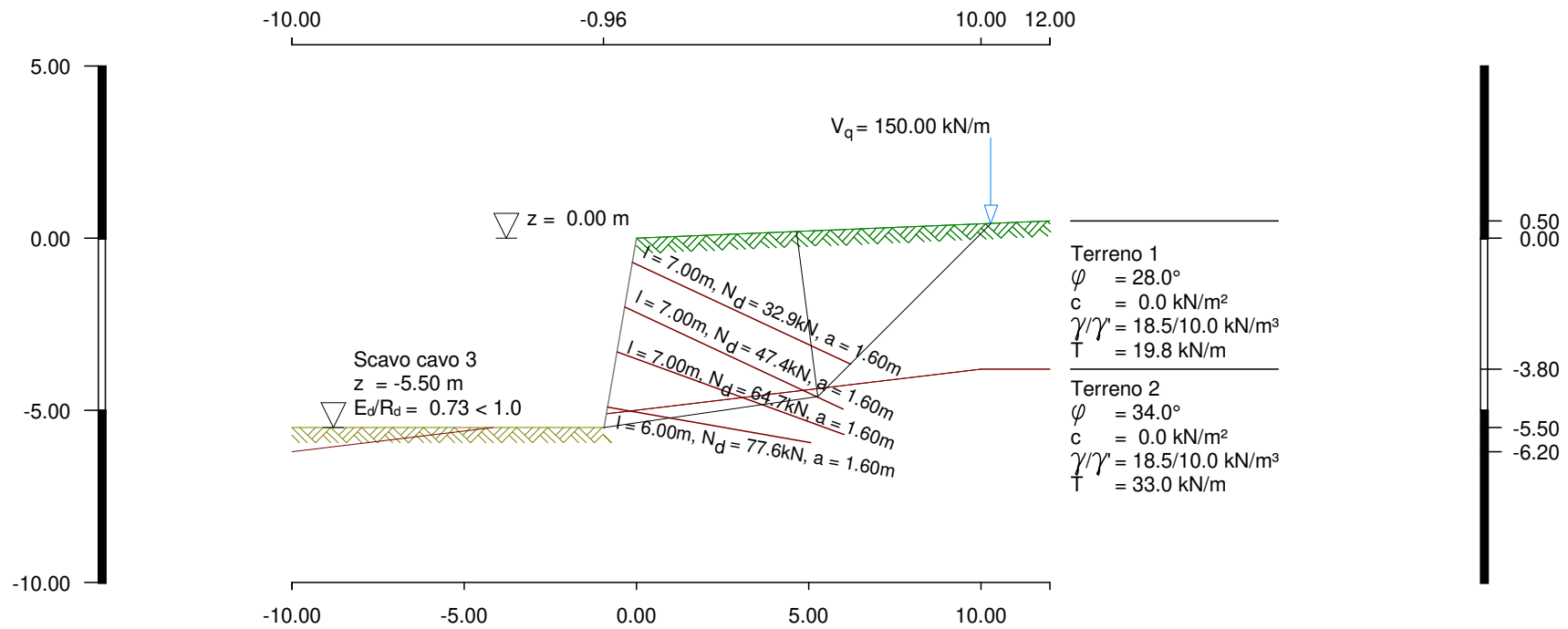
Resistenza ultima $N_{max} = 6476.87$ kN

Resistenza terreno ultima F = 0.10

Coefficiente rottura = -0.25 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo.
 Non viene fatto un ulteriore verifica.



Scavo No. 5 Nome: cavo 4 Caso carico: Carico ferroviario**Verifiche di stabilità interna****Verifica di stabilità (Scavo cavo 4):**

Risultati sono design values per m parete.

L'ultimo chiodo sopra la quota di scavo è già posto in opera.

Il calcolo delle verifiche è effettuato con le lunghezze dei chiodi date.

Calcolo automatico dell'inclinazione della parete sost. mediante

punti terminali chiodi.

Intersezione parete - fondo scavo $x = -1.20$ $z = -7.00$

ϑ_1 [°]	ϑ_2 [°]	ϑ_{12} [°]	L_{chiodo} [m]	R [kN/m]	Q_1 [kN/m]	Q_{12} [kN/m]	Z_{Nec} [kN/m]	Z_{Esist} [kN/m]	E_d/R_d [-]
24.2	45.3	90.0	7.0	681.2	764.0	139.1	144.9	243.7	0.59 (+)
15.8	51.6	99.7	7.0	766.8	833.1	172.2	47.5	154.5	0.31 (-)
10.3	55.2	94.2	7.0	821.4	939.3	219.7	-22.6	91.1	0.85* (+)
9.6	50.7	115.0	6.0	864.5	902.0	155.0	-69.9	99.4	0.76* (+)
-0.2	46.6	115.0	6.0	936.2	1043.1	168.4	-257.6	0.6	0.66* (-)

Meccanismi con intersezione delle linee di scorrimento all'interno della chiodatura:

46.7	43.9	90.0	-	314.5	400.8	26.1	199.4	392.3	0.51 (+)
46.7	45.5	82.5	-	307.4	398.6	30.0	199.9	392.3	0.51 (+)
46.7	46.7	75.0	-	300.0	397.7	34.8	200.6	392.3	0.51 (+)
46.7	53.0	67.5	-	292.2	397.5	40.6	201.0	392.3	0.51 (+)
44.2	43.9	90.0	-	344.4	425.4	29.1	195.3	379.9	0.51 (+)
44.2	45.5	82.5	-	336.4	423.1	33.5	196.0	379.9	0.52 (+)
44.2	46.7	75.0	-	328.2	422.0	38.9	196.9	379.9	0.52 (+)
44.2	53.0	67.5	-	319.5	421.9	45.4	197.4	379.9	0.52 (+)
35.2	30.5	90.0	-	470.8	548.5	69.0	192.6	329.2	0.58 (+)
33.2	32.7	90.0	-	504.1	582.1	80.6	189.1	316.2	0.60 (+)
31.2	35.0	90.0	-	538.1	616.6	92.4	183.8	303.0	0.61 (+)
10.3	55.2	90.0	-	797.2	935.6	233.6	-16.6	91.1	0.85* (+)
10.3	55.2	82.5	-	753.6	934.0	261.6	-9.6	91.1	0.86* (+)
10.3	55.2	75.0	-	709.0	939.0	295.8	-7.6	91.1	0.86* (+)
10.3	55.2	80.2	-	739.9	934.8	271.5	-8.4	91.1	0.86* (+)
10.3	55.2	77.9	-	726.5	936.2	281.7	-7.8	91.1	0.86* (+)
10.3	55.2	75.6	-	712.9	938.3	292.6	-7.5	91.1	0.86* (+)

Risultati di un prisma di spinta semplice:

ϑ [°]	R [kN/m]	Q [kN/m]	$ZH_{\text{Nec}}=E_{\text{ah}}$ [kN/m]	ZH_{Esist} [kN/m]	E_d/R_d [-]
49.2	328.03	360.05	185.30	391.31	0.47 (+)

Meccanismo di rottura determinante nella fase attuale:

linea di scorrimento piana da $x = -1.20$ $z = -7.00$ a $x = 6.01$ $z = -5.69$

$\vartheta_1 = 10.3^\circ$ $\vartheta_2 = 55.2^\circ$ $\vartheta_{12} = 75.6^\circ$ $Z_{\text{Nec}} = -7.54$ [kN/m] $Z_{\text{Esist}} = 91.13$ [kN/m] $E_d/R_d = 0.86^* (+)$

*** Annotazione : Tutti i fattori di sicurezza contrassegnati con **
sono definiti mediante teorema di Fellenius (φ -c reduction).

*** Annotazione: (+): $+a_v$ is critical.

(-): $-a_v$ is critical.

Dimensionamento mediante UNI EN 1992 (Eurocode 2)

Parete, Forze (valori di progetto)

Spess. calcestruzzo $d = 15.0$ [cm]

Dist. centro armatura lato aria $d_{aria} = 10.0$ [cm]

Dist. centro armatura lato terreno $d_{terreno} = 5.0$ [cm]

Modulo elastico calcestruzzo $E = 30000$ [MN/m²]

Res. a flessione $EI = 8437$ [kN*m²]

Calcestruzzo: C20/25, res. nom. calcestruzzo $f_{ck} = 20.0$ [MN/m²]

Tensione max. cls nella verifica a punzonam. $\tau_{011} = 0.500$ [MN/m²]

Res. nom. armatura $f_{yk} = 500.0$ [MN/m²]

Armatura a fless. per definire

il grado di armatura longitudinale μ

per la verifica a punzonamento $As \mu = \text{MAX}(as_1, as_2)$ (calc. parete)

- *** Le forze di spinta del terreno sono calcolate ottimizzando Theta considerando tutti i carichi della condizione di carico attuale.
- *** L'andamento delle spinte del terreno viene calcolato con derivazione di E_{ah} rispetto a z.
- *** La coesione è stata considerata ai fini del calcolo delle spinte del terreno.
- *** Spinta del terr. minimo considerata ($\varphi=40.0^\circ$).
- *** L'angolo d'attrito della parete è definito dalla inclin. dei chiodi ($\delta = -7.3^\circ$)
- *** Il diagramma della forze di spinta del terreno (carichi permanenti) è trasformato in rettangolare lungo l'intera parete.
- *** Spinta terreno e_{ah} (carichi permanenti) è calcolato con 85.00 %.

Spinta del terreno per m parete (valori di progetto):

And. par.		pers. par.	Dist.armat.		Angolo scorrim	Spinta terr.	
x	z	h	d_{air}	d_{lay}	ϑ	E_{ah}	e_{ah}
[m]	[m]	[cm]	[cm]	[cm]	[°]	[kN]	[kN/m]
0.00	0.00	15.0	10.0	5.0	0.00	0.0	23.70
-0.02	-0.10	15.0	10.0	5.0	49.00	0.0	23.70
-0.03	-0.20	15.0	10.0	5.0	49.00	0.2	23.70
-0.05	-0.30	15.0	10.0	5.0	48.99	0.4	23.70
-0.07	-0.40	15.0	10.0	5.0	48.99	0.7	23.70
-0.09	-0.50	15.0	10.0	5.0	48.99	1.1	23.70
-0.10	-0.60	15.0	10.0	5.0	48.99	1.6	23.70
-0.12	-0.70	15.0	10.0	5.0	48.99	2.1	23.70
-0.14	-0.80	15.0	10.0	5.0	48.99	2.8	23.70
-0.15	-0.90	15.0	10.0	5.0	48.99	3.5	23.70
-0.17	-1.00	15.0	10.0	5.0	48.99	4.3	23.70
-0.19	-1.10	15.0	10.0	5.0	48.99	5.2	23.70
-0.21	-1.20	15.0	10.0	5.0	48.99	6.2	23.70
-0.22	-1.30	15.0	10.0	5.0	48.99	7.3	23.70
-0.24	-1.40	15.0	10.0	5.0	48.99	8.5	23.70
-0.26	-1.50	15.0	10.0	5.0	48.99	9.7	23.70
-0.27	-1.60	15.0	10.0	5.0	48.99	11.1	23.70
-0.29	-1.70	15.0	10.0	5.0	48.99	12.5	23.70
-0.31	-1.80	15.0	10.0	5.0	48.99	14.0	23.70
-0.33	-1.90	15.0	10.0	5.0	48.99	15.6	23.70
-0.34	-2.00	15.0	10.0	5.0	48.99	17.3	23.70
-0.36	-2.10	15.0	10.0	5.0	48.99	19.1	23.70
-0.38	-2.20	15.0	10.0	5.0	48.99	20.9	23.70
-0.39	-2.30	15.0	10.0	5.0	48.99	22.9	23.70
-0.41	-2.40	15.0	10.0	5.0	48.99	24.9	23.70
-0.43	-2.50	15.0	10.0	5.0	48.99	27.0	23.70
-0.45	-2.60	15.0	10.0	5.0	48.99	29.2	23.70
-0.46	-2.70	15.0	10.0	5.0	48.99	31.5	27.99

And. par.		pess. par.	Dist. armat.		Angolo scorrim	Spinta terr.	
x	z	h	d _{air}	d _{lay}	ϕ	E _{ah}	e _{ah}
[m]	[m]	[cm]	[cm]	[cm]	[°]	[kN]	[kN/m]
-0.48	-2.80	15.0	10.0	5.0	48.99	33.9	27.99
-0.50	-2.90	15.0	10.0	5.0	48.99	36.4	27.99
-0.51	-3.00	15.0	10.0	5.0	48.99	38.9	27.99
-0.53	-3.10	15.0	10.0	5.0	48.99	41.6	27.99
-0.55	-3.20	15.0	10.0	5.0	48.99	44.3	27.99
-0.57	-3.30	15.0	10.0	5.0	48.99	47.1	27.99
-0.58	-3.40	15.0	10.0	5.0	48.99	50.0	27.99
-0.60	-3.50	15.0	10.0	5.0	48.99	53.0	27.99
-0.62	-3.60	15.0	10.0	5.0	48.99	56.1	27.99
-0.63	-3.70	15.0	10.0	5.0	48.99	59.2	27.99
-0.65	-3.80	15.0	10.0	5.0	48.99	62.5	27.99
-0.67	-3.90	15.0	10.0	5.0	48.99	65.8	27.99
-0.69	-4.00	15.0	10.0	5.0	48.99	69.2	27.99
-0.70	-4.10	15.0	10.0	5.0	48.99	72.7	29.84
-0.72	-4.20	15.0	10.0	5.0	48.99	76.3	29.84
-0.74	-4.30	15.0	10.0	5.0	48.99	80.0	29.84
-0.75	-4.40	15.0	10.0	5.0	48.99	83.7	29.84
-0.77	-4.50	15.0	10.0	5.0	48.99	87.6	29.84
-0.79	-4.60	15.0	10.0	5.0	48.99	91.5	29.84
-0.81	-4.70	15.0	10.0	5.0	48.99	95.6	29.84
-0.82	-4.80	15.0	10.0	5.0	48.99	99.7	29.84
-0.84	-4.90	15.0	10.0	5.0	48.99	103.9	29.84
-0.86	-5.00	15.0	10.0	5.0	48.99	108.1	29.84
-0.87	-5.10	15.0	10.0	5.0	48.99	112.5	29.84
-0.89	-5.20	15.0	10.0	5.0	49.01	116.9	29.84
-0.91	-5.30	15.0	10.0	5.0	49.08	121.3	29.84
-0.93	-5.40	15.0	10.0	5.0	49.18	125.6	29.84
-0.94	-5.50	15.0	10.0	5.0	49.32	130.0	29.84
-0.96	-5.60	15.0	10.0	5.0	49.48	134.3	29.84
-0.98	-5.70	15.0	10.0	5.0	49.67	138.6	51.31
-0.99	-5.80	15.0	10.0	5.0	49.87	142.9	51.31
-1.01	-5.90	15.0	10.0	5.0	50.08	147.1	51.31
-1.03	-6.00	15.0	10.0	5.0	50.31	151.4	51.31
-1.05	-6.10	15.0	10.0	5.0	50.55	155.6	51.31
-1.06	-6.20	15.0	10.0	5.0	50.78	159.9	51.31
-1.08	-6.30	15.0	10.0	5.0	51.03	164.1	51.31
-1.10	-6.40	15.0	10.0	5.0	51.17	168.3	51.31
-1.11	-6.50	15.0	10.0	5.0	51.21	172.6	51.31
-1.13	-6.60	15.0	10.0	5.0	51.25	177.0	51.31
-1.15	-6.70	15.0	10.0	5.0	51.28	181.5	51.31
-1.17	-6.80	15.0	10.0	5.0	51.31	186.0	51.31
-1.18	-6.90	15.0	10.0	5.0	51.34	190.5	51.31
-1.20	-7.00	15.0	10.0	5.0	51.37	195.2	51.31

Forze per m parete (valori di progetto):

Coord.Z	Poriz	Deform.	Par. soll.		R.app.	Arm.compr.	Arm. taglio.
z	h	w	T	M	A _H	as	as _{Tras}
[m]	[kN/m]	[mm]	[kN]	[kN*m]	[kN]	[cm ² /m]	[cm ² /m]
0.00	23.70	-0.1	0.00	0.00	---	0.00	---
-0.10	23.70	-0.1	-2.34	-0.12	---	0.03	---
-0.20	23.70	-0.1	-4.67	-0.47	---	0.10	---
-0.30	23.70	-0.1	-7.01	-1.07	---	0.24	---
-0.40	23.70	0.0	-9.34	-1.90	---	0.42	---
-0.50	23.70	0.0	-11.68	-2.96	---	0.66	---
-0.60	23.70	0.0	-14.02	-4.27	---	0.96	---
-0.70	23.70	0.0	0.64	-4.20	33.5	0.94	---
-0.70	23.70	0.0	0.64	-4.20	---	0.94	---
-0.80	23.70	0.0	15.30	-4.14	---	0.93	---

Coord.Z	Poriz	Deform.	Par. soll.		R.app.	Arm.compr.	Arm. taglio.
z	h	w	T	M	A _H	as	as _{Tras}
[m]	[kN/m]	[mm]	[kN]	[kN*m]	[kN]	[cm ² /m]	[cm ² /m]
-0.90	23.70	0.0	12.96	-2.70	---	0.60	---
-1.00	23.70	0.0	10.62	-1.51	---	0.33	---
-1.10	23.70	0.0	8.29	-0.55	---	0.12	---
-1.20	23.70	0.0	5.95	0.18	---	0.08	---
-1.30	23.70	0.0	3.62	0.66	---	0.29	---
-1.40	23.70	0.0	1.28	0.91	---	0.41	---
-1.50	23.70	0.0	-1.06	0.92	---	0.41	---
-1.60	23.70	0.0	-3.39	0.69	---	0.31	---
-1.70	23.70	0.0	-5.73	0.23	---	0.10	---
-1.80	23.70	0.0	-8.06	-0.47	---	0.10	---
-1.90	23.70	0.0	-10.40	-1.40	---	0.31	---
-2.00	23.70	0.0	0.76	-1.33	26.6	0.29	---
-2.00	23.70	0.0	0.76	-1.33	---	0.29	---
-2.10	23.70	0.0	11.93	-1.25	---	0.28	---
-2.10	23.70	0.0	11.93	-1.25	---	0.28	---
-2.20	23.70	0.0	9.59	-0.16	---	0.03	---
-2.30	23.70	0.0	7.26	0.70	---	0.31	---
-2.40	23.70	0.0	4.92	1.31	---	0.59	---
-2.50	23.70	0.0	2.58	1.70	---	0.77	---
-2.60	23.70	0.0	0.25	1.84	---	0.83	---
-2.60	23.71	0.0	0.25	1.84	---	0.83	---
-2.70	27.99	0.0	-2.30	1.74	---	0.79	---
-2.80	27.99	0.0	-5.06	1.36	---	0.61	---
-2.90	27.99	0.0	-7.82	0.71	---	0.32	---
-3.00	27.99	0.0	-10.58	-0.22	---	0.05	---
-3.10	27.99	0.0	-13.33	-1.43	---	0.32	---
-3.20	27.99	0.0	-16.09	-2.93	---	0.65	---
-3.30	27.99	0.0	0.70	-2.86	38.5	0.64	---
-3.30	27.99	0.0	0.70	-2.86	---	0.64	---
-3.40	27.99	0.0	17.49	-2.78	---	0.62	---
-3.40	27.99	0.0	17.49	-2.78	---	0.62	---
-3.50	27.99	0.0	14.73	-1.15	---	0.25	---
-3.60	27.99	0.0	11.98	0.20	---	0.09	---
-3.70	27.99	0.0	9.22	1.28	---	0.57	---
-3.80	27.99	0.0	6.46	2.08	---	0.94	---
-3.90	27.99	0.0	3.70	2.59	---	1.19	---
-4.00	27.99	0.0	0.94	2.83	---	1.30	---
-4.10	29.84	0.0	-1.91	2.78	---	1.28	---
-4.20	29.84	0.0	-4.85	2.44	---	1.11	---
-4.30	29.84	0.0	-7.79	1.79	---	0.81	---
-4.40	29.84	0.0	-10.73	0.85	---	0.38	---
-4.50	29.84	0.0	-13.67	-0.38	---	0.08	---
-4.60	29.84	0.0	-16.62	-1.92	---	0.43	---
-4.70	29.84	0.0	-19.56	-3.76	---	0.84	---
-4.80	29.84	0.0	-22.50	-5.89	---	1.33	---
-4.80	29.84	0.0	-22.50	-5.89	---	1.33	---
-4.90	29.84	0.0	2.02	-5.68	54.1	1.28	---
-4.90	29.84	0.0	2.02	-5.68	---	1.28	---
-5.00	29.84	0.0	26.55	-5.48	---	1.23	---
-5.10	29.84	0.0	23.61	-2.93	---	0.65	---
-5.20	29.84	-0.1	20.66	-0.69	---	0.15	---
-5.30	29.84	-0.1	17.72	1.26	---	0.57	---
-5.40	29.84	-0.1	14.78	2.91	---	1.34	---
-5.50	29.84	-0.1	11.84	4.26	---	2.03	---
-5.60	29.84	-0.1	8.90	5.31	---	2.62	---
-5.60	29.86	-0.1	8.90	5.31	---	2.62	---
-5.70	51.29	-0.1	4.90	6.03	---	3.03	---
-5.70	51.31	-0.1	4.90	6.03	---	3.03	---

Coord.Z	Poriz	Deform.	Par. soll.		R.app.	Arm.compr.	Arm. taglio.
z	h	w	T	M	A_H	as	as_{Tras}
[m]	[kN/m]	[mm]	[kN]	[kN*m]	[kN]	[cm ² /m]	[cm ² /m]
-5.80	51.31	-0.1	-0.16	6.27	---	3.17	---
-5.90	51.31	-0.1	-5.21	6.00	---	3.01	---
-6.00	51.31	-0.1	-10.27	5.21	---	2.56	---
-6.10	51.31	-0.1	-15.33	3.91	---	1.85	---
-6.20	51.31	-0.1	-20.39	2.10	---	0.95	---
-6.30	51.31	-0.1	-25.44	-0.22	---	0.05	---
-6.40	51.31	0.0	-30.50	-3.06	---	0.68	---
-6.40	51.31	0.0	-30.50	-3.06	---	0.68	---
-6.50	51.31	0.0	-5.14	-3.58	60.0	0.80	---
-6.50	51.31	0.0	-5.14	-3.58	---	0.80	---
-6.60	51.31	0.0	20.23	-4.10	---	0.92	---
-6.70	51.31	0.0	15.17	-2.31	---	0.51	---
-6.80	51.31	0.0	10.11	-1.03	---	0.23	---
-6.90	51.31	0.0	5.06	-0.26	---	0.06	---
-7.00	51.31	0.1	0.00	0.00	---	0.00	---

*** Annotazione : Per i chiodi, la forza trasversale T ed il momento M sul p.to d'appoggio sono calcolati mediante interpolazione lineare di T e M ai bordi della piastra di testa.

Specifiche chiodi (Scavo cavo 4) (valori di progetto):

x-Testa	z-Testa	Incl.	Lungh.	a	f_{yk}	γ_M	F_{Sty}	F_{Nec}	F_{Dim}	Dm_{Nec}
[m]	[m]	[°]	[m]	[m]	[MN/m ²]	[-]	[kN]	[kN]	[kN]	[mm]
-0.12	-0.70	25.0	7.00	1.60	500	1.150	82.4	33.4	59.1	13.2
-0.34	-2.00	25.0	7.00	1.60	500	1.150	108.7	49.6	47.0	12.1
-0.57	-3.30	20.0	7.00	1.60	500	1.150	141.8	69.1	65.6	14.2
-0.84	-4.90	10.0	6.00	1.60	500	1.150	155.7	77.6	88.0	16.0
-1.11	-6.50	5.0	6.00	1.60	500	1.150	187.3	107.1	96.3	17.7

Verifica di punzonamento UNI EN 1992 (Eurocode 2)

F	Forza chiodi da calc. spinta terreno sulla parete $MAX(F_{Nec}, F_{Dim}) * \cos(Incl)$
H-Press	Spinta terreno sulla piastra di testa Fattore per H-Press = 1.000
B	Larghezza piastra di testa Sezione in $1.0 * d$ distanza dalla piastra
h	Larghezza muro
A_{sl}	Armatura longitudinale/trasversale vicino piastra di testa in cm^2/m parete ($A_{sl} = A_{slx} = A_{slz}$)
φ_l	Grado di armatura longitudinale vicino piastra di testa
d	Altezza statica della parete
V_{Ed}	T-Forza per dimensionamento
$V_{Rd,c}$	Resist. a punzamento senza aramtura
A_{swNec}	Armatura minima necessaria a punzamento in una riga Calcolazione A_{sw} e $v_{Rd,cs}$ secondo 6.4.5 (1), GI 6.52
A_{slNec}	Alternativa per A_{swNec} : Armatura longitudinale/trasversale necessaria per evitare armatura a punzamento
φ_{INec}	Grado di armatura longitudinale per A_{slNec}

Fattore posizione chiodo interno $\beta = 1.150$ (6.4.3 (6))

Parametri per $v_{Rd,c}$ (6.4.4 (1) (Gl. 6.47)):

$$C_{Rd,c} = 0.180 / \gamma_c \text{ (Gl. 6.47, 6.50)}$$

$$k_1 = 0.100 \text{ (Gl. 6.47)}$$

$$\nu_{min} = 0.035 * k^{(1.500)} * f_{ck}^{(0.500)} \text{ (d < 99999 mm) (Gl. 6.3)}$$

Parametri per $v_{Rd,max}$ (6.4.5 (3)):

$$\nu = \text{MIN}(0.600 * (1.000 - f_{ck}/250.0), 99999.000) \text{ (Gl. 6.6N)}$$

$$v_{Rd,max} = 0.400 * \nu * f_{cd} \text{ (Gl. 6.3)}$$

z-Testa [m]	F [kN]	H-Press [kN/m ²]	B [cm]	h [cm]	d [cm]	A_{sl} [cm ² /m]	φ_l [%]	V_{Ed} [MN/m ²]	$V_{Rd,c}$ [MN/m ²]	A_{swNec} [cm ²]	A_{slNec} [cm ² /m]	φ_{INec} [%]
-0.70	57.0	23.70	20.0	15.0	10.0	0.94	0.09	0.430	< 0.443	-	-	-
-2.00	47.9	23.70	20.0	15.0	10.0	0.29	0.03	0.357	< 0.443	-	-	-
-3.30	68.0	27.99	20.0	15.0	10.0	0.64	0.06	0.513	> 0.443	0.94	4.89	0.49
-4.90	88.0	29.84	20.0	15.0	10.0	1.28	0.13	0.672	> 0.443	1.76	10.97	1.10
-6.50	106.8	51.31	20.0	15.0	10.0	0.80	0.08	0.797	> 0.443	2.40	18.32	1.83

Verifiche di stabilità esterna**Capacità portante**

*** Annotazione: Negative seismic acceleration $-a_v$ ist critical.

Bordo inferiore fittiva fondazione: $x_1=-1.20$ $z_1=-7.00$ $x_2=5.63$ $z_2=-7.00$

Parete teorico: (x_2, z_2) a $x_3=5.63$ $z_3=0.23$

Carico:

Verticale	V_c / V_d	=	933.86 /	929.13 kN/m
Orizzontale	H_c / H_d	=	-281.22 /	-324.51 kN/m
Momento	$M_{y,c} / M_{y,d}$	=	-61.94 /	-182.52 kN/m/m
Profondità di fissaggio t		=		0.00 m
Larghezza b'		=		6.83 m
Inclin. della forza risultata $\tan(\delta_s)=H/V$		=		0.00
Parametri determinanti del suolo	γ sopra la base	=		0.00 kN/m ³
	γ sotto la base	=		18.50 kN/m ³
	Angolo dell' attito φ	=		34.00 °
	Cohesion c	=		0.00 kN/m ²
Coeff. dell' appoggio N_c, N_d, N_b	= 26.50 15.30	15.43		
Coeff. dell' inclinazione i_c, i_d, i_b	= 1.00 1.00	1.00		
Coeff. della scarpata $\lambda_c, \lambda_d, \lambda_b$	= 1.00 1.00	1.00		
Larghezza del meccanismo del guasto		=		43.91 m
Profondità del meccanismo del guasto		=		12.52 m

Fattore parziale sicurezza modello γ_{Rd} = 1.15

Parametri numerici: a / b / c / d / e / f / m / k / k' / c_T / c_M / c'_M / β / γ
 = 0.92 / 1.25 / 0.92 / 1.25 / 0.41 / 0.32 / 0.96 / 1.00 / 0.39 / 1.14 / 1.01 / 1.01 / 2.90 / 2.80

Tensione Rottura terreno $p_d = 965.88 \text{ kN/m}^2$

Resistenza ultima $N_{max} = 6600.68 \text{ kN}$

Resistenza terreno ultima $F = 0.10$

Coefficiente rottura = -0.06 <= 0.0: verifica compiuta.

*** Nota:

La verifica a scorrimento è implicitamente contenuto nella verifica interna dai meccanismi di rottura a doppio cuneo.
 Non viene fatto un ulteriore verifica.

Stabilità dei pendii, metodo delle strisce Caso carico Carico ferroviario

Parametri terremoto: orizzontale: 0.026 , verticale: 0.005

Fattore per terremoto = 0.50

Fattore press. interstiz. = 1.000

*** Annotazione: Positive (=upwards) seismic acceleration +a_v ist critical.

Azioni variabili orizzontali vanno considerati solo, se girano nel senso orario.

Azioni variabili verticali vanno considerati solo, se girano nel senso orario,
 e sono fuori di $R \cdot \sin(\varphi)$

Centro = (-2.82, 6.41), raggio = 14.39

Punto a sinistra = (-8.04, -7.00), punto a destra = (10.27, 0.43)

Geometria di lamelle:

No	x	Largh.	dxM	Peso	Charico	Peso aqu.	u	φ	c	ψ
	[m]	b	[m]	G	P	W	[kN/m]	[°]	[kN/m ²]	[°]
1	-7.33	1.44	-4.51	6.9	0.0	0.0	0.0	28.35	0.00	-18.25
2	-5.89	1.44	-3.07	17.5	0.0	0.0	0.0	28.35	0.00	-12.31
3	-4.45	1.44	-1.63	23.9	0.0	0.0	0.0	28.35	0.00	-6.50
4	-3.01	1.44	-0.19	26.3	0.0	0.0	0.0	28.35	0.00	-0.76
5	-1.57	1.44	1.25	31.6	0.0	0.0	0.0	28.35	0.00	4.98
6	-0.13	1.44	2.69	168.2	0.0	0.0	0.0	28.35	0.00	10.76
7	1.31	1.44	4.13	199.4	0.0	0.0	0.0	28.35	0.00	16.67
8	2.75	1.44	5.57	187.1	0.0	0.0	0.0	28.35	0.00	22.75
9	4.19	1.44	7.00	170.0	0.0	0.0	0.0	28.35	0.00	29.13
10	5.63	1.44	8.44	147.0	0.0	0.0	0.0	28.35	0.00	35.93
11	7.07	1.44	9.88	116.6	0.0	0.0	0.0	23.04	0.00	43.38
12	8.50	1.44	11.32	75.9	0.0	0.0	0.0	23.04	0.00	51.89
13	9.75	1.05	12.57	19.8	150.8	0.0	0.0	23.04	0.00	60.83

Contributo die charici verticali:

No.	S=G+P+W	E _d =S* $\sin \psi$	(S-u*b)* $\tan \varphi$ + c*b	cos ψ + μ* $\tan \varphi$ * $\sin \psi$	R _d
	[kN/m]	[kN/m]	[kN/m]	[-]	[kN/m]
1	6.9	-2.17	3.74	0.801375	4.67
2	17.5	-3.73	9.44	0.876047	10.77
3	23.9	-2.70	12.89	0.939962	13.71
4	26.3	-0.35	14.21	0.993653	14.30
5	31.6	2.74	17.04	1.037316	16.43
6	168.2	31.42	90.77	1.070838	84.76
7	199.4	57.17	107.58	1.093781	98.36
8	187.1	72.38	100.99	1.105305	91.36
9	170.0	82.74	91.72	1.104006	83.08

No.	S=G+P+W [kN/m]	$E_d=S*\sin \vartheta$ [kN/m]	$(S-u*b)*\tan \varphi$ + c*b [kN/m]	$\cos \vartheta +$ $\mu * \tan \varphi * \sin \vartheta$ [-]	R_d [kN/m]
10	147.0	86.24	79.31	1.087577	72.92
11	116.6	80.07	49.59	0.983201	50.44
12	75.9	59.70	32.28	0.910894	35.43
13	170.5	148.89	72.53	0.813307	89.18
		-----			-----
		612.41			665.42

Contributo carico orizzontale:

No	Lineload*dzM [kN/m] [m]	Areaload*dzM [kN/m] [m]	press aqua*dzM [kN/m] [m]	terremoto oriz.*dzM [kN/m] [m]
1	--	--	--	0.18 * 13.48
2	--	--	--	0.45 * 13.68
3	--	--	--	0.62 * 13.80
4	--	--	--	0.68 * 13.84
5	--	--	--	0.82 * 13.82
6	--	--	--	4.35 * 10.77
7	--	--	--	5.16 * 10.04
8	--	--	--	4.84 * 9.76
9	--	--	--	4.40 * 9.38
10	--	--	--	3.80 * 8.89
11	--	--	--	3.02 * 8.32
12	--	--	--	1.96 * 8.21
13	--	--	--	0.51 * 8.11

*** Annotazione: Colonna 'terremoto oriz.' rappresenta influsso del parametro terremoto orizzontale sul peso proprio.

Sum momento deo 'Contributo carico orizzontale': 304.2 kN*m/m

Contributo chiodi:

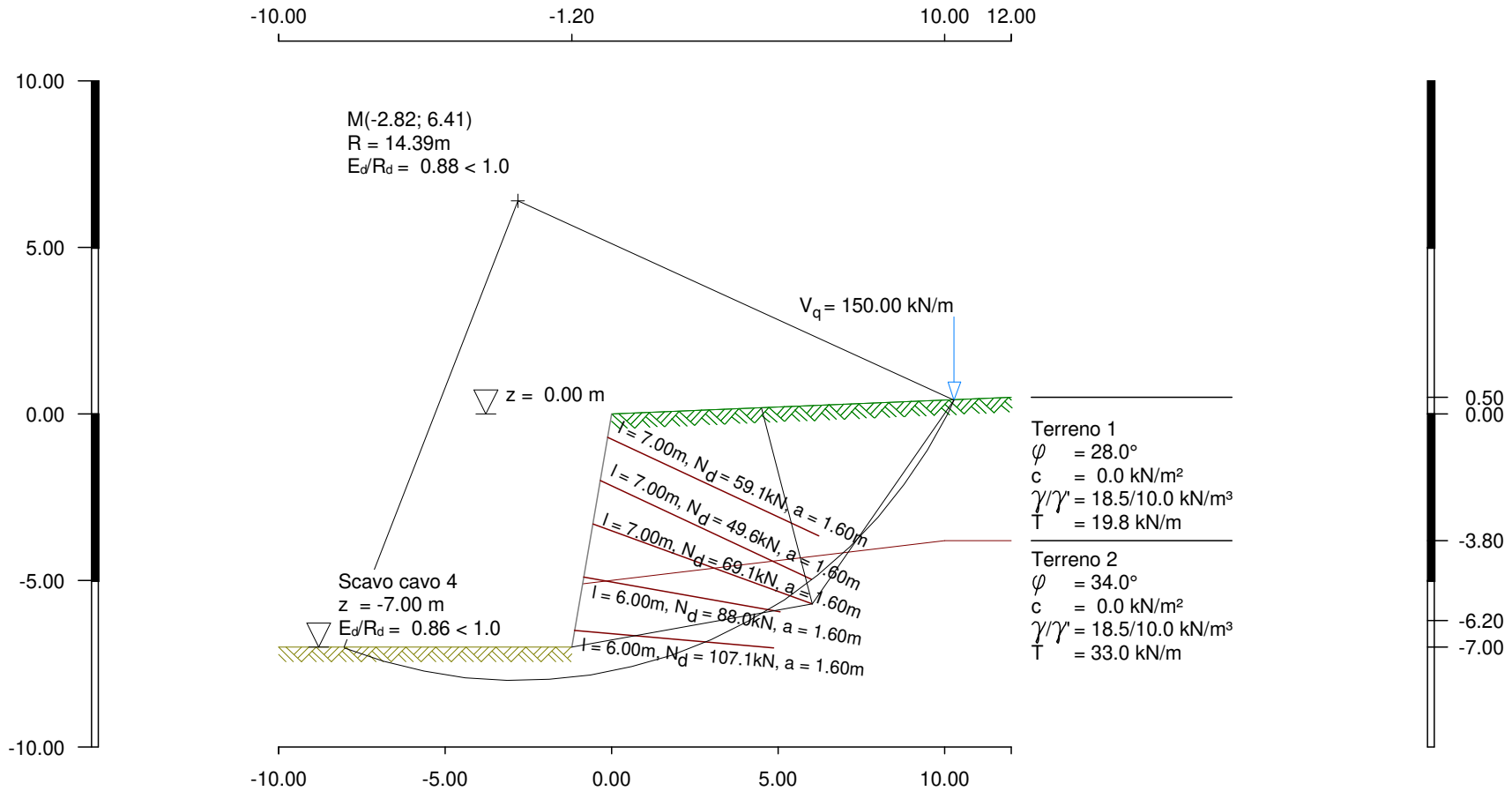
chiodo non tensionato $F_A = F_{Esist}$

$$M_{resistente} = R * ((\mu * F_A * \sin \alpha * \tan \varphi) / (\cos \vartheta + \mu * \sin \vartheta * \tan \varphi) + F_A * \cos(\vartheta + \alpha))$$

$$M_{attivo} = 0$$

Chiodo	x_s [m]	z_s [m]	$F_{Esist,c}$ [kN/chiodo]	sotto tensione	$F_{Esist,d}$ [kN/chiodo]	$M_{resist,d}$ [kNm/m]	$M_{attivo,d}$ [kNm/m]	$F_{Esist,d} * \mu$ [kN/chiodo]
3	5.34	-5.45	23.7	si	23.7	155.2	0.0	20.8
4	4.68	-5.87	13.0	si	13.0	96.1	0.0	11.4
5	2.80	-6.84	68.4	si	68.4	566.4	0.0	60.0

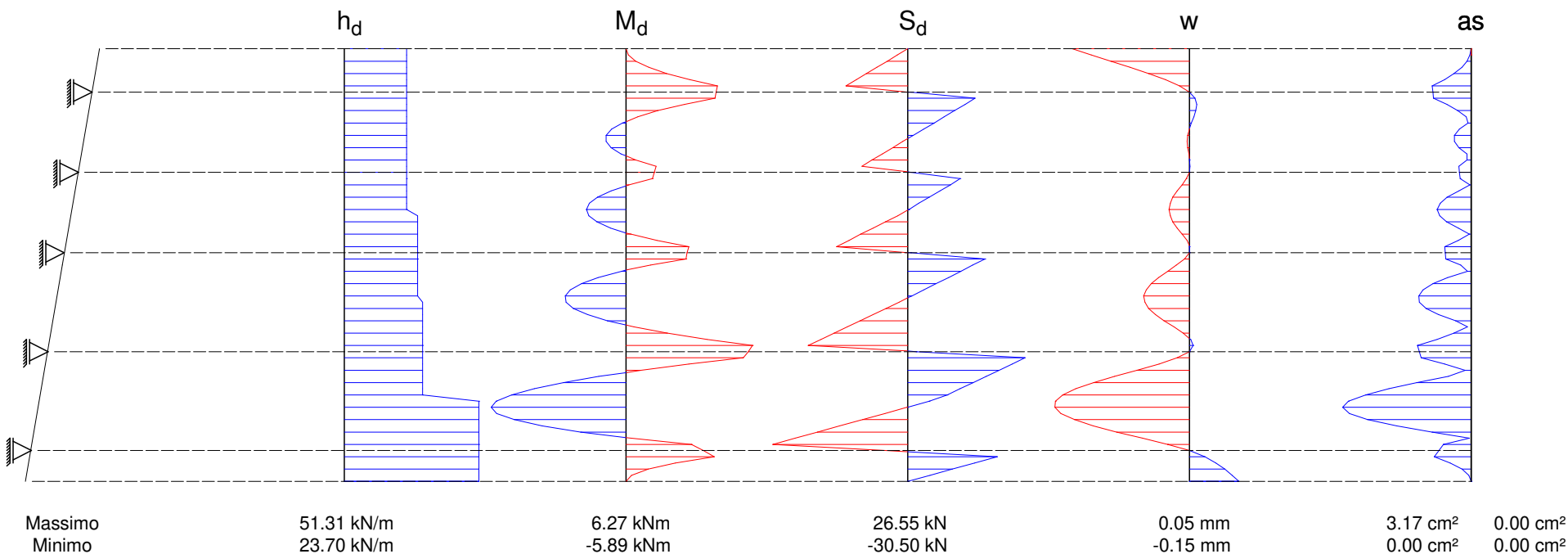
Sum $M_{resistente,d}$: 817.7 kNm/mCharico $E_d = 612.4 * 14.4 + 304.2 = 9117.0$ kNm/mResistenza $R_d = 665.4 * 14.4 + 817.7 = 10393.4$ kNm/m $\mu = E_d/R_d = 0.88 < 1.0$: verifica compiuta.



Sistema

Carico

Param. di soll.



Panoramica di fattori di utilizzazione E_d / R_d di tutte le fasi (Caso carico Carico ferroviario)

Fase	Sicurezza interna	Capacità port.	Rottura del pendio
1: cavo	0.58	-0.84	---
2: cavo 1	0.60	-0.53	---
3: cavo 2	0.66	-0.38	---
4: cavo 3	0.73	-0.25	---
5: cavo 4	0.86	-0.06	0.88

*** Annotazione: Valore a capacità portante significa 'Coefficiente rottura'

Sommario (Caso carico Carico ferroviario)

Tutte le verifiche sono soddisfatte.

Sintesi delle lunghezze e forze chiodi eff. necessarie: (tutti i casi di carichi)

Strato	z-quota	Forza (Dim.) N_d	Lungh.	Largh. Lungh.	Min. Diametro.	Largh. piastra	Fatt. corr. F. taglio	Punching	
	[m]	[kN]	[m]	[m]	[mm]	[mm]	[%]	[cm ²]	[cm ² /m]
1	-0.70	64.8	7.00	7.00	13.8	200	100	-	-
2	-2.00	57.2	7.00	7.00	12.9	200	100	-	-
3	-3.30	77.6	7.00	7.00	15.1	200	100	0.94	4.89
4	-4.90	96.7	6.00	6.00	16.8	200	100	1.76	10.97
5	-6.50	107.9	6.00	6.00	17.8	200	100	2.40	18.32
	$\Sigma =$	404.2							

Termini nella versione stampa 'Verifiche di stabilità':

Tutte le forze sono riferite a kN per m parete perpend. al foglio.

ϑ_1	Inclinazione della linea di scorrimento piana
ϑ_2	Inclinazione della linea di scorrimento con pend. elev.
ϑ_{12}	Inclinazione della linea di scorrimento intermedia (parete sost.) (=90°+ φ)
L_{chiodo}	Lunghezza chiodo
R	Carico complessivo agente sul prisma principale di scorrimento (peso proprio, carichi, press. idraul.)
Q_1	Forza sulla superficie di scorrimento piana
Q_{12}	Forza di spinta attiva del terreno sulla superficie intermedia di scorrimento
Z_{Nec}	Forza risultante dei chiodi sul prisma principale necessaria (tensione=positiva) per soddisfare l'equilibrio delle forze H/V
Z_{Esist}	Max. forze chiodi attivabili (= somma delle forze di estrazione possibili relative ai tronchi di chiodo posti dietro la linea di scorrimento)
E_d/R_d	Fattore di utilizzazione per forze chiodi Z_{Nec} e Z_{Esist} o secondo Fellenius

Denominazioni nel tabulato 'Specifiche chiodi':

a	Interasse orizzontale dei chiodi
f_{yk}	Resistenza nominale acciaio chiodi
γ_M	Acciaio: Resistenza scorrimento
F_{Sty}	Max. forza di estrazione possibile per chiodo derivante dal calc. di stabilità di tutti mechanismi di rottura calcolati.
F_{Nec}	Forza chiodo richiesta per coprire Z_{Nec} Tutti mechanismi dello stato di avanzamento sono preso in considerazione.
F_{Dim}	Forza max. per chiodo dal calcolo dei Param. di Soll. d. parete
D_{mNec}	Diametro min. chiodi d'acciaio per la $As = \text{MAX}(F_{Nec}, F_{Dim}) * \gamma_s / f_{yk}$