

COMMITTENTE:



PROGETTAZIONE:



## U.O. PROGETTAZIONE INTEGRATA NORD

### PROGETTO DEFINITIVO

## RADDOPPIO DELLA LINEA GENOVA – VENTIMIGLIA TRATTA FINALE LIGURE - ANDORA

### FV01 – FERMATA FINALE LIGURE

Relazione di calcolo

Pensilina in acciaio

SCALA:

-

COMMESSA LOTTO FASE ENTE TIPO DOC. OPERA/DISCIPLINA PROGR. REV.

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Rev.	Descrizione	Redatto	Data	Verificato	Data	Approvato	Data	Autorizzato Data
A	Emissione esecutiva	P.L. Carci <i>P.L. Carci</i>	Febbraio 2022	M. Severi <i>M. Severi</i>	Febbraio 2022	G. Fadda <i>G. Fadda</i>	Febbraio 2022	A Perego Febbraio 2022



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 <p><b>ITALFERR</b> GRUPPO FERROVIE DELLO STATO ITALIANE</p>	<p><b>RADDOPPIO LINEA GENOVA - VENTIMIGLIA</b> <b>TRATTA FINALE LIGURE - ANDORA</b></p>					
<p><b>PROGETTO DEFINITIVO</b> <b>FV01 – Fermata Finale Ligure</b> <b>RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO</b></p>	<p>COMMESSA IV01</p>	<p>LOTTO 00</p>	<p>CODIFICA D 26 CL</p>	<p>DOCUMENTO FV0100 004</p>	<p>REV. A</p>	<p>FOGLIO 2 di 220</p>

## 1. NORMATIVA DI RIFERIMENTO

I dati di progetto, le verifiche di resistenza e stabilità nonché i dettagli costruttivi saranno definiti facendo riferimento ai criteri e alle prescrizioni delle seguenti normative:

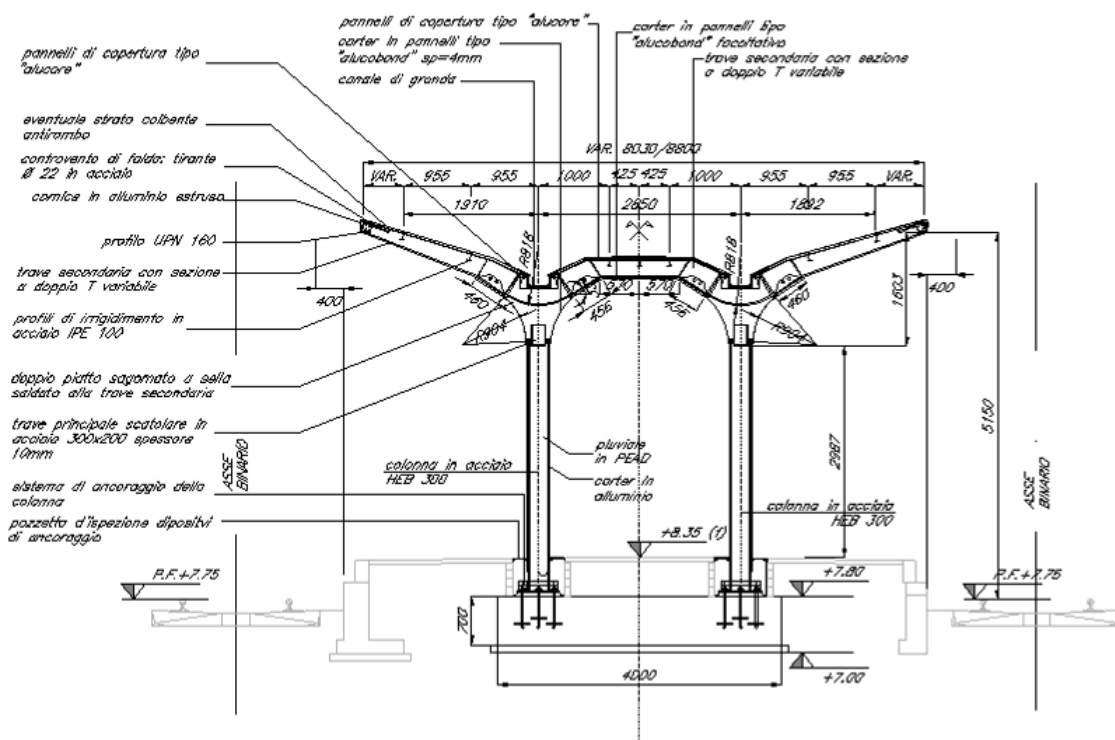
- *D. M. Infrastrutture del 17.01.2018: "Aggiornamento delle Norme Tecniche per le Costruzioni";*
- *Circolare Esplicativa 21 gennaio 2019, n. 7 C.S.LL.PP.*
- *L. 05.11.1971, n. 1086 - Norme per la disciplina delle opere in conglomerato cementizio armato normale e precompresso ed a struttura metallica .*
- *D.M. 11.03.1988 - Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione.*
- *Circ. 24.09.1988, n.30483 - Istruzioni riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione .*
- *D.M. 09.01.1996 e 14.02.1992 - Norme tecniche per il calcolo, l'esecuzione e il collaudo delle strutture in cemento armato normale e precompresso e per le strutture metalliche.*
- *Circ. 15.10.1996, n.252AA.GG./STC. - Istruzioni per l'applicazione delle "Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle opere in cemento armato normale e precompresso e per le strutture metalliche" di cui al decreto ministeriale 09.01.1996 .*
- *UNI EN 1993-1-1 :2005 - Eurocodice 3 - Progettazione delle strutture di acciaio.*
- *Istruzione FS - (ASA Servizi di Ingegneria) n.44 a - Criteri generali e prescrizioni tecniche per la progettazione e il collaudo di cavalcavia e passerelle pedonali sovrastanti la sede ferroviaria.*
- *RFI DTC-ICI-PO SP INF 001 A - Istruzioni per la progettazione e l'esecuzione dei ponti ferroviari.*
- *RFI DTC-ICI-PO SP INF 004 A- Istruzione 44B - Istruzioni tecniche per la progettazione di manufatti sotto binario da costruire in zona sismica.*

## 2. PREMESSA

Il presente documento s'inquadra nell'ambito delle attività inerenti allo sviluppo del progetto definitivo del raddoppio della linea Genova – Ventimiglia, tratta finale Ligure – Andora.

Lo scopo del presente documento è di analizzare le strutture della pensilina ferroviaria in acciaio prevista per la copertura delle banchine a isola nelle stazioni Finale Ligure.

Nella figura seguente si riporta una sezione trasversale della pensilina in esame:



L'intervento previsto da progetto prevede la realizzazione di pensiline con struttura d'acciaio all'interno di una stazione ferroviaria.

La pensilina d'acciaio è costituita da colonne HEB300 collegate nella direzione longitudinale mediante travi principali di sezione scatolare 200x300x10 mm e nella direzione trasversale da travi a doppia "T" di sezione variabile, le quali sono collegate tra loro con travi IPE100 e UPN 160; la controventatura di piano è realizzata attraverso barre in acciaio  $\varnothing 22$ . La copertura è realizzata con pannelli metallici di tipo Alucobond, direttamente fissati alle travi trasversali.

La pensilina ha uno sviluppo complessivo pari a 76.80 m e dal punto di vista strutturale è composta da due unità separate da apposito giunto tecnico, le due unità così definite hanno entrambe lunghezza longitudinale pari a 37.50 m; sul lato corto della struttura si individuano tre campate, le esterne di dimensione variabile e quella centrale pari a 2850.

Le colonne sono poste ad un interasse di 7.50 m mentre le travi secondarie trasversali sono poste ad un interasse di 1.50 m, la massima altezza della pensilina dal piede delle colonne è pari a 5.15 m (dalle ali esterne). Gli sbalzi terminali della pensilina hanno lunghezza variabile.

L'altezza della pensilina dal piano del ferro è di 5.15 m e la sporgenza delle falde oltre il bordo del marciapiede è di 0.40 m, compatibilmente con la T.E. alimentata a 3 kV.

Le colonne sono collegate alle strutture di fondazione mediante collegamento con tirafondi e piastre in acciaio.

Di seguito si riporta una descrizione sintetica degli elementi principali costituenti la struttura delle nuove pensiline:

le colonne in acciaio HEB 300 hanno un'altezza pari a 3600 mm all'estremità inferiore è saldata la piastra per l'ancoraggio dei tirafondi alla fondazione, alla base sono saldate le costole di irrigidimento. Sulle colonne sono posizionati i pluviali in PEAD per il deflusso delle acque meteoriche della pensilina. Nella parte inferiore il pluviale è curvato per consentire il collegamento al pozzetto di raccolta delle acque meteoriche.

Dove necessario, secondo il piano di elettrificazione della linea, il sostegno del palo T.E. è realizzato attraverso una colonna speciale, emergente dall'estradosso della copertura, alla cui estremità è previsto un adeguato sistema di collegamento al palo T.E.

Le travi principali sono costituite da profili scatolari in acciaio, lunghezza = 7500 mm, altezza = 300 mm, larghezza = 200 mm, spessore = 10.00 mm. In corrispondenza delle estremità la sezione risulta chiusa tramite una piastra saldata.

La trave è collegata alle colonne tramite unione bullonata con flange. Lungo entrambi i fianchi della trave sono saldate, ad un interasse di 1500 mm, le piastre di attesa per il collegamento alle travi secondarie.

In corrispondenza dei giunti di dilatazione, lo scorrimento della trave longitudinale è garantito da una sella composta da due piatti in acciaio saldati alla colonna.

Le travi secondarie sono costituite da profili a doppio T ad altezza variabile e sono composte da cinque elementi uniti con collegamenti con flangia: due ali simmetriche rastremate all'estremità, due raccordi curvi per il collegamento con le travi principali e un elemento centrale. La connessione con la trave principale è realizzata attraverso un elemento di collegamento costituito da due piatti sagomati saldati a ciascun raccordo curvo e collegati con bulloni alle piastre di attesa della trave principale.

L'estradosso di entrambi i raccordi curvi è sagomato per accogliere i due canali di gronda longitudinali. Sulle travi secondarie è ancorato il rivestimento di copertura della pensilina.

Le travi d'irrigidimento sono costituite da profili in acciaio IPE 100, lunghezza 1500 mm. Sette travi, due per ogni ala e tre nella parte centrale; sono collegati alle travi secondarie tramite giunto bullonato con squadrette. Le estremità delle travi d'irrigidimento sono opportunamente sagomate in corrispondenza dell'attacco con le travi secondarie.

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Profilo UPN 160 di chiusura. Le travi secondarie sono collegate all'estremità da un profilo UPN 160 tramite bullonatura.

In corrispondenza dei giunti di dilatazione lo scorrimento delle travi di irrigidimento è ottenuto dotando i piatti di collegamento di fori asolati.

I controventi di falda sono realizzati tramite tiranti costituiti da barre in acciaio di diametro pari a 22 mm. Il collegamento del controvento alla trave secondaria è realizzato attraverso il giunto bullonato tra le piastre saldate alle travi secondarie e l'estremità del tirante.

Il tutto è meglio evidenziato negli elaborati grafici di progetto allegati alla presente relazione.

Per la definizione e la determinazione delle azioni naturali, antropiche e accidentali riferite ai carichi ed i sovraccarichi agenti sulla struttura si è considerato il D.M. 17/01/2018.

Per il calcolo e le verifiche degli elementi strutturali si fa riferimento al metodo applicato del Decreto Ministeriale D.M. 17/01/2018 *Nuove Norme Tecniche per le costruzioni*, la struttura trovasi nel Comune di Finale Ligure (SV). Le azioni sismiche di progetto, in base alle quali si sono valutati i diversi stati limite sono stati definiti a partire dalla pericolosità sismica di base del sito in costruzione.

La vita nominale dell'opera strutturale  $V_N$  di progetto come definita al cap. 2.4.1 del D.M. 17/01/2018, viene considerata in base alla tipologia strutturale, (vita nominale di progetto maggiore uguale 75 anni).

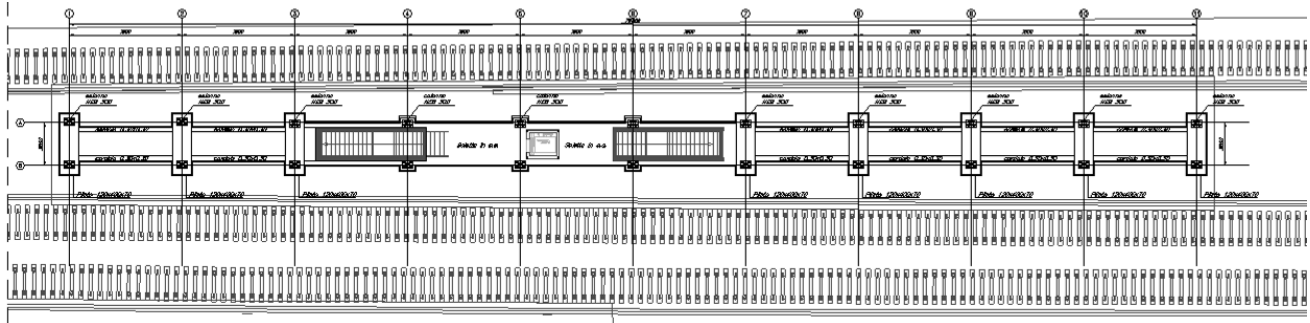
La classe d'uso della struttura viene presa di CLASSE III costruzioni il cui uso preveda affollamenti significativi.

Il periodo di riferimento per l'azione sismica della costruzione è valutata in base ad un periodo di riferimento  $V_R$  che è ricavato moltiplicando la vita nominale  $V_N$  per un coefficiente d'uso preso pari a 1,5 (classe d'uso III).

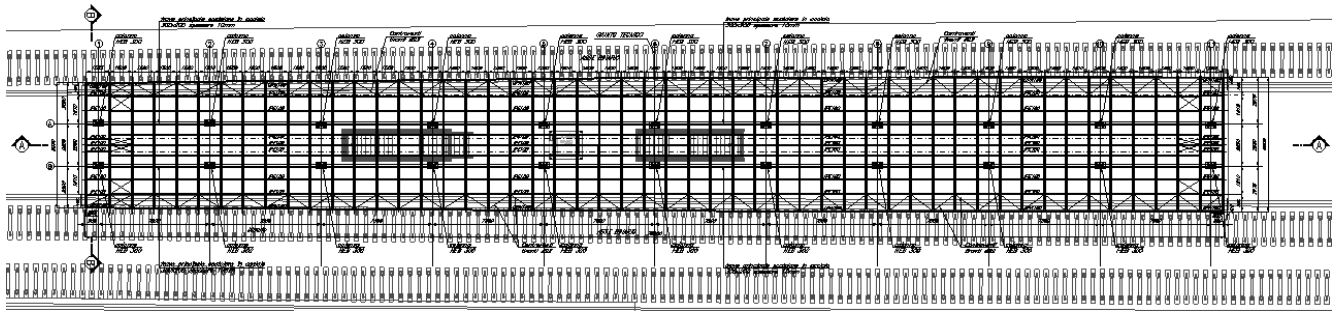
**Per la valutazione delle sollecitazioni, per il calcolo delle tensioni, delle armature e per le verifiche di resistenza è stato applicato il METODO AGLI STATI LIMITE.** [par.4.1.2 (verifiche agli stati limite) D.M. 17/01/2018 *Nuove norme tecniche per le costruzioni*].

Come rappresentato negli elaborati grafici, il dimensionamento di massima dei principali elementi strutturali ha portato a definire le seguenti tipologie:

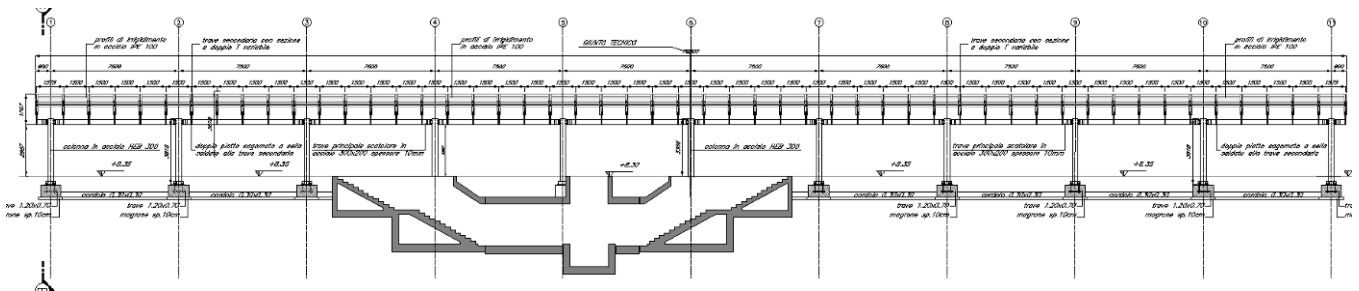
- **Travi di Fondazione 120x70 cm**
- **Colonne HE300B**
- **Travi principali Scatolare 300x200x10 mm**
- **Travi secondarie - travi a doppio T sezione variabile**
- **Travi di irrigidimento IPE 100 - UPN 160**



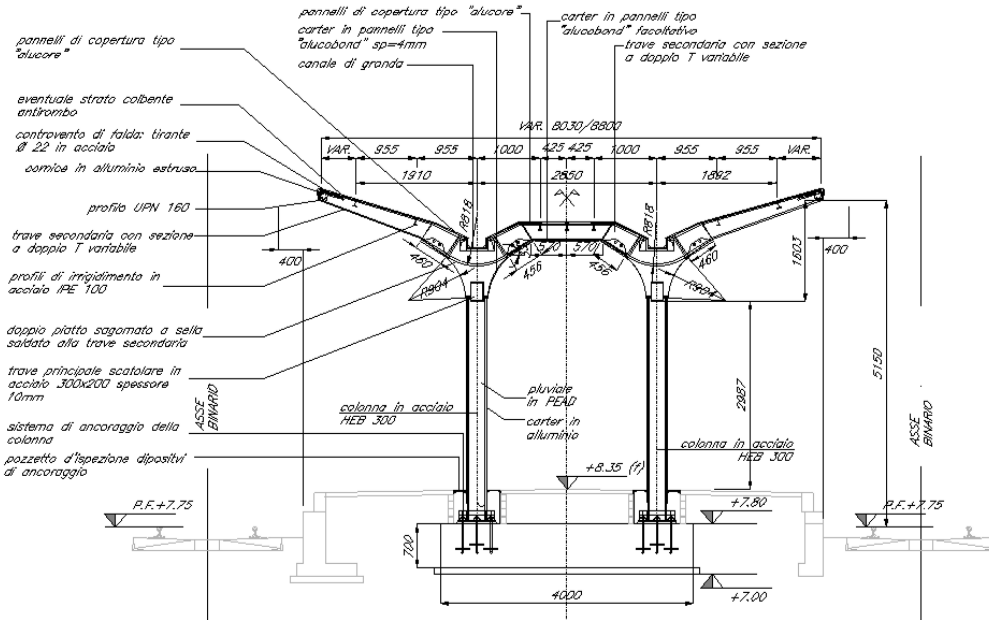
*Carpenteria Fondazioni*



*Carpenteria Copertura*



*Sezione Longitudinale delle nuove pensiline*



Sezione trasversale delle nuove pensiline

### 3. MATERIALI STRUTTURALI

In ottemperanza alla Legge 5/11/71 n.1086 e alle prescrizioni delle NTC 2018, si redige la presente relazione sulla qualità, sulle caratteristiche e sui dosaggi dei materiali impiegati per la realizzazione delle strutture in oggetto.:

- **Calcestruzzo per le strutture di fondazione**

C28/35 (ex Rck 35)

Caratteristiche:

Classe di resistenza del calcestruzzo

Resistenza cilindrica caratteristica

Resistenza cilindrica di calcolo

Resistenza media a trazione

Resistenza media a trazione per flessione

$R_{ck} = 35.00 \text{ N/mm}^2$

$f_{ck} = 29.05 \text{ N/mm}^2$

$f_{cd} = 16.46 \text{ N/mm}^2$

$f_{ctm} = 2.77 \text{ N/mm}^2$

$f_{ctm} = 3.32 \text{ N/mm}^2$

- **Acciaio per cemento armato**

B 450 C

Caratteristiche:

Tensione di rottura caratteristica

Tensione di snervamento caratteristica

$f_{tk} = 540 \text{ N/mm}^2$

$f_{yk} = 450 \text{ N/mm}^2$



Tensione di snervamento di calcolo

$$f_{yd} = 391 \text{ N/mm}^2$$

- **Acciaio da Carpenteria per pensiline (S275 JR/J0 classe di esecuzione EXC3 ai sensi della norma EN1090)**

Laminati a caldo con profili a sezione cava:

TIPO S 275 (ex Fe430)

Caratteristiche:

Spessore nominale dell'elemento  $t < 40\text{mm}$

Tensione di rottura caratteristica

$$f_{tk} = 430 \text{ N/mm}^2$$

Tensione di snervamento caratteristica

$$f_{yk} = 275 \text{ N/mm}^2$$

Tensione di snervamento di calcolo

$$f_{yd} = 261 \text{ N/mm}^2$$

Spessore nominale dell'elemento  $40 < t < 80\text{mm}$

Tensione di rottura caratteristica

$$f_{tk} = 410 \text{ N/mm}^2$$

Tensione di snervamento caratteristica

$$f_{yk} = 255 \text{ N/mm}^2$$

Tensione di snervamento di calcolo

$$f_{yd} = 242 \text{ N/mm}^2$$

Le resistenze di calcolo saranno valutate mediante la seguente espressione:

$$f_d = f_k / \gamma_m$$

dove

$$\gamma_c = 1.5 \text{ ( per c.l.s. )}$$

$$\gamma_s = 1.15 \text{ (per acciaio da c.a.)}$$

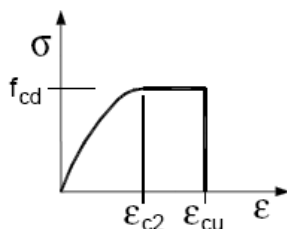
$$\gamma_{m0} = 1.05 \text{ (per acciaio da carpenteria)}$$

In sede di progettazione verranno assunti i seguenti moduli elastici:

$$E_{c25/30} = 22000 * [(f_{ck} + 8) / 10]^{0.3} = 32588.10 \text{ N/mm}^2$$

$$E_s = 210000 \text{ N/mm}^2$$

Per il diagramma tensione - deformazione del calcestruzzo verrà adottato un modello parabola – rettangolo rappresentativo del reale comportamento del materiale, modello definito in base alla resistenza di calcolo  $f_{cd}$  ed alla deformazione ultima  $\xi_{cu}$ .

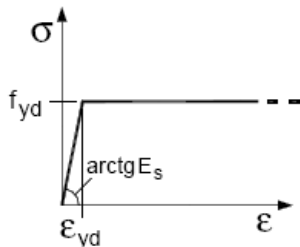


*Modello  $\sigma - \epsilon$  del calcestruzzo*

In particolare si pone:

$$\xi_{c2} = 0.20\% ; \xi_{cu} = 0.35$$

Per il diagramma tensione - deformazione dell'acciaio verrà adottato un modello elastico - perfettamente plastico indefinito, rappresentativo del reale comportamento del materiale, modello definito in base al valore di calcolo  $\xi_{ud} = 0,9\xi_{uk}$  ( $\xi_{uk} = \xi(A_{gt})_k$ ) della deformazione uniforme ultima, al valore di calcolo della tensione di snervamento  $f_{yd}$  ed al rapporto di sovrarresistenza  $k = \xi(f_t / f_y)_k$ .



*Modello  $\sigma - \epsilon$  per l'acciaio*

### **Tensioni di progetto del cls allo S.L.E.**

Le tensioni normali di esercizio non devono superare a compressione i seguenti valori limite:

- Per combinazione di carico caratteristica (rara):  $0,55 f_{ck}$  ;
- Per combinazione di carico quasi permanente:  $0,40 f_{ck}$ .

Per spessori minori di 5 cm le tensioni normali limite di esercizio sono ridotte del 30%.

Per tutte le combinazioni non sono ammesse tensioni di trazione in esercizio.

In corrispondenza della combinazione caratteristica (rara) la tensione principale di trazione, valutata in corrispondenza della fibra baricentrica della sezione non deve superare lo  $0,040 f_{ck}$ .

È richiesto, comunque, il calcolo delle armature resistenti a taglio, anche per valori inferiori a  $0,025 f_{ck}$  della tensione principale di trazione, valutata in corrispondenza della fibra baricentrica della sezione in C.A.P. per la combinazione caratteristica (rara), fermo restando il rispetto delle quantità minime costruttive richieste per esse dalla normativa vigente.

In nessun caso è ammessa precompressione parziale.

Se l'impalcato è costruito a sbalzo per conci successivi le sezioni dovranno risultare, per la combinazione di carico caratteristica (rara), sempre compresse con un valore minimo di 1,0 MPa senza considerare però le variazioni termiche differenziali di cui al punto 2.5.1.4.4.1.1. Considerando queste ultime, sempre nella medesima combinazione caratteristica (rara), la tensione minima di compressione dovrà risultare non minore di 0,5 MPa.

#### 4. CARATTERISTICHE MECCANICHE DEL TERRENO

Il sondaggio BH1 (Imprefond), ubicato nei pressi dell'imbocco della galleria Caprazoppa. Sotto uno spessore di circa 1 m di terreno di riporto (Unità 1), la verticale intercetta un'alternanza di calcari e dolomie grigie di San Pietro dei Monti (SPM). Si riscontra inoltre la presenza di cavità carsiche tra 20,9 m e 24,7 m e tra 25,8 m 30,0 m.

Il sondaggio SAF-21-OC3-A01, anch'esso ubicato nelle vicinanze della galleria, si riscontra la presenza di circa 6m di terreno di riporto e ghiaia in matrice sabbiosa (Unità 1), giacente su uno spesso strato di frammenti litoidi e calcari e dolomie (SPM), fino a 20m pc.

In corrispondenza del sondaggio D7 (eseguito dalla Promogeo nel luglio 2010) si riscontra la presenza di terreno di riporto fino ad una profondità di 8,5 m circa dal boccaforo. Inferiormente si rinvencono i depositi alluvionali di natura prevalentemente incoerente (Unità 2) per uno spessore massimo di circa 12 m. A 20,7 m di profondità si riscontra la porzione alterata del substrato roccioso, probabilmente caratterizzata dai porfiroidi del Melogno (PDM).

##### **UNITÀ 1**

Terreno vegetale e materiale di riporto di varia natura, composto generalmente da ghiaia eterometrica con sabbia debolmente limosa, di colore variabile dal marrone al grigio. Si rinvencono saltuariamente frammenti di laterizi, materiale organico e plastico. In corrispondenza del sondaggio D7, è presente un livello di limo argilloso debolmente sabbioso da 6,4 m e 7,8 m.

##### **UNITÀ 2**

Ghiaia eterometrica, talora sabbiosa e limosa e sabbia, localmente limosa, di colore variabile dal grigio al marrone ocreo. Gli elementi lapidei sono poligenici, ben arrotondati, con diametro massimo 1,5 cm.

##### **SUBSTRATO**

Porfiroidi del Melogno (PDM-alt): Porzione alterata del substrato roccioso PDM (Carbonifero Sup. – Permiano Medio).

Dolomie di San Pietro dei Monti (SPM): dolomie calcaree e calcari dolomitici (Trias medio; Ladinico - Anisico).

Nella tabella seguente si riportano i parametri geotecnici medi dei terreni descritti:

	$\gamma$ [kN/m <sup>3</sup> ]	$c_u$ [kPa]	$c'$ [kPa]	$\phi'$ [°]	$E'$ [MPa]	$\nu$	OCR
Unità 1	18.0	-	0	27÷31	10÷20	0.3	-
Unità 2	19.0	-	0	30÷32	25÷30	0.3	-

Il livello della falda risulta alla profondità di circa 7.00 m dal p.c..

## 5. ANALISI DEI CARICHI

### 5.1 AZIONI ANTROPICHE

#### 5.1.1 PESI PROPRI DEI MATERIALI STRUTTURALI

*Pesi propri dei materiali strutturali; (Par. 3.1.2.)*

I pesi per unità di volume dei più comuni materiali, per la determinazione dei pesi propri strutturali, possono essere assunti pari a quelli riportati nella tabella 3.1.1.

Peso Proprio Del Conglomerato cementizio armato:

Il peso proprio del conglomerato armato, quando il valore effettivo non risulti da determinazione diretta, deve essere assunto pari a 25 kN/m<sup>3</sup>

#### 5.1.2 CARICHI PERMANENTI NON STRUTTURALI

*Par.3.1.3.*

Sono considerati carichi permanenti quelli non rimovibili durante il normale esercizio della costruzione, come tamponature esterne, divisori interni, massetti, isolamenti, pavimenti e rivestimenti del piano di calpestio, intonaci, controsoffitti, impianti, ecc. Essi vanno valutati sulla base delle dimensioni effettive delle opere e dei pesi per unità di volume dei materiali costituenti.

Le azioni permanenti sono quelle relative ai pesi propri degli elementi strutturali e permanenti portati valutati sulla base delle loro caratteristiche geometriche e dei pesi specifici previsti nella normativa vigente. Il peso dell'acciaio è di 78.50 kN/m<sup>3</sup>, nel calcolo si introduce un incremento del 10% rispetto al valore precedente per tenere conto della presenza dei collegamenti.


In particolare si ha:

Pacchetto di copertura:

- rivestimento in alluminio preverniciato/ astre tipo ALUCORE sp. 20 mm      0.10 kN/m<sup>2</sup>
- pannello coibente antirombo      0.08 kN/m<sup>2</sup>
- Incidenza impianti      0.20 kN/m<sup>2</sup>

**Totale peso pacchetto di copertura a mq**

**$g^* = 0.40$  kN/m<sup>2</sup>**

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### 5.1.3 CALCOLO DEL PESO DEGLI ELEMENTI STRUTTURALI

Il peso proprio dei profilati è computato automaticamente all'interno del modello, dal programma di calcolo.

### 5.1.4 CARICHI VARIABILI

"Sulla copertura della pensilina agiscono carichi variabili per manutenzione e carichi variabili da neve. Dato che, come si riporta di seguito, il valore del carico dovuto alle neve risulta il maggiore tra i due e che i coefficienti di combinazione del carico variabile nel caso di copertura accessibile per sola manutenzione risultano tutti nulli (vedi tabella 2.5.1 delle NTC 2018), nel modello di calcolo si terrà conto solo del carico dovuto alla neve."

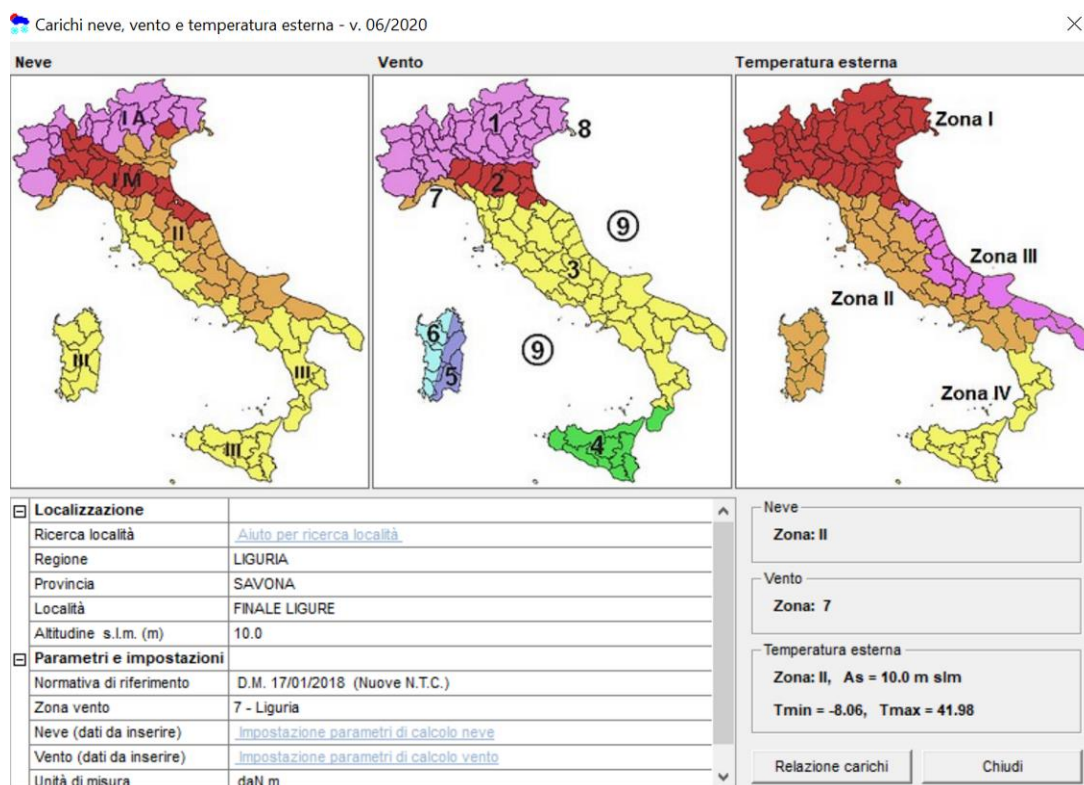
#### - Variabili per manutenzione

Dal paragrafo 3.1.4 del D.M. '18, categoria HI

Coperture e sottotetti accessibili per sola manutenzione:

$$q' \geq 0.50 \text{ KN/m}^2$$

#### 5.1.4.1 AZIONI AMBIENTALI E NATURALI



*Tabella riepilogativa delle caratteristiche del sito oggetto dell'intervento*

#### - Variabili da neve

Le azioni della neve sono definite al capitolo 3.4 delle NTC2018. Il carico provocato dalla neve sulle coperture è definito dall'espressione seguente:

$$q_s = \mu_i C_e C_t q_{sk}$$

dove:

$\mu_i$  - Coefficiente di forma della copertura;

$C_e$  - Coefficiente di esposizione;

$C_t$  - Coefficiente termico;

$q_{sk}$  - Valore di riferimento del carico neve al suolo.

Il carico neve al suolo dipende dalle condizioni locali di clima e di esposizione, considerata la variabilità delle precipitazioni nevose da zona a zona. In mancanza di adeguate indagini statistiche e specifici studi locali, esso viene valutato, per località poste a quota inferiore a 200 m sul livello del mare, in base alle espressioni nel seguito riportate, cui corrispondono valori associati ad un periodo di ritorno pari a 50 anni.

Nel caso in esame, il comune di Albenga fa' riferimento ad un sito in Zona II a 5 m s.l.m., risulta quindi:

$$q_{sk}(50) = 1.00 \text{ kN/m}^2.$$

Tale valore è riferito ad un periodo di ritorno di 50 anni, mentre secondo le istruzioni Italferr per la struttura in esame deve essere considerato un periodo di ritorno pari a 75 anni, pertanto mediante la formulazione riportata al punto C3.4.2 della circolare esplicativa alle NTC 2018 del 21 gennaio 2019 è stato calcolato un valore  $q_{sk}$  per un periodo di riferimento di 75 anni:

Calcolo Azione della Neve per VN=75 anni (cricolare applicativa NTC2018 C3.4.2)						
qs <sub>n</sub> = $q_{sk} \sum 1 - v \cdot (\sqrt{6/\pi}) \cdot [\ln^* (-\ln(1 - P_n)) + 0.57722] / (1 + 2.5923 \cdot v)$					1,079507	kN/mq
Dove:						
q <sub>sk</sub>	1	valore caratteristico della neve al suolo (VN=50 anni)				
q <sub>sn</sub>	1,0795075	il carico della neve al suolo riferito ad un periodo di ritornodi n anni				
P <sub>n</sub>	0,013	la probabilità annuale di superamento (1/n)				
n	75	periodo di riferimento				
v	0,6	è il coefficiente di variazione delle serie dei massimi annui del carico delle neve				

Tabella calcolo azione di riferimento del vento per periodo di ritorno di 75 anni

Per un periodo di riferimento di 75 anni si avrà un q<sub>sk</sub> pari a 1.07 kN/m<sup>2</sup>.

Il coefficiente di esposizione C<sub>e</sub> può essere utilizzato per modificare il valore del carico neve in copertura in funzione delle caratteristiche specifiche dell'area in cui sorge l'opera. Valori del coefficiente di esposizione per diverse classi di topografia sono forniti in tabella 3.4.1. NTC2018. Per il caso in esame, si assume C<sub>e</sub> = 1.0. Il coefficiente termico C<sub>t</sub> può essere utilizzato per tener conto della riduzione del carico neve a causa dello scioglimento della stessa, causata 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<sub>t</sub> = 1.0 (3.4.5 - NTC2018). Per la definizione del coefficiente di forma, si è fatto riferimento ad una schematizzazione di copertura a più falde, con un angolo di inclinazione delle falde pari a 23° (0° < α < 30°). Nella figura seguente si riportano le due condizioni di carico prescritte dalla Circolare 2019 (punto C3.4.3.3):

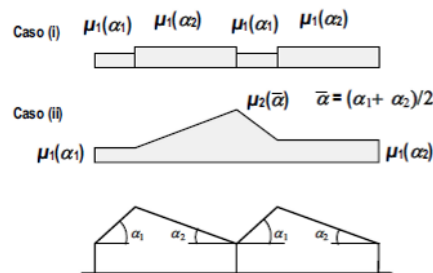
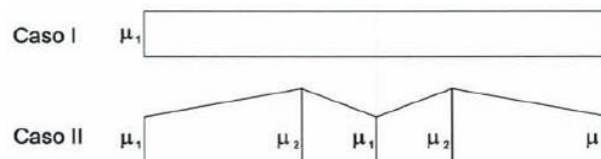


Figura C3.4.3 - Coefficiente di forma per il carico neve – Coperture a più falde

Nel caso in esame si hanno pertanto le due condizioni schematizzate nella figura successiva, con:  $\mu_1 = 0.8$   
 $\mu_2 = 0.8 + 0.8 \alpha/30 = 1.42$ .



Il carico neve sulla copertura assume pertanto i seguenti valori:

- $q_{s1} = 0.8 \cdot 1.07 \cdot 1.00 \cdot 1.00 = 0.86 \text{ kN/m}^2$
- $q_{s2} = 1.42 \cdot 1.07 \cdot 1.00 \cdot 1.00 = 1.52 \text{ kN/m}^2$

Si considerano quindi le seguenti condizioni di carico:

- Caso I: Carico da neve in assenza di vento caratterizzato da  $q_{s1}$  ( $=0.86 \text{ kN/m}^2$ ) su tutta l'impronta;
- Caso II: Carico da neve in presenza di vento  $q_s$  variabile sulle due falde dal valore  $q_{s1}$  ( $=0.86 \text{ kN/m}^2$ ) alle estremità della pensilina e in mezzeria al valore  $q_{s2}$  ( $=1.52 \text{ kN/m}^2$ ) in corrispondenza del compluvio;

#### - Variabili da vento

Il vento, la cui direzione si considera generalmente orizzontale, esercita sulle costruzioni azioni che variano nel tempo e nello spazio provocando, in generale, effetti dinamici.

Per le costruzioni usuali tali azioni sono convenzionalmente ricondotte alle azioni statiche equivalenti definite al punto 3.3.3 - NTC2018.

Per il calcolo dell'azione statica equivalente dovuta al vento, si è fatto riferimento al Comune di Albenga sito in zona 7, con altezza sul livello del mare pari a 5 m;

Pressione del vento:

La pressione del vento, considerata come azione statica agente normalmente alle superfici, è data dall'espressione:

$$p = q_r \cdot C_e \cdot C_p \cdot C_d$$

dove:

- $q_r$  - Pressione cinetica di riferimento
- $C_e$  - Coefficiente di esposizione
- $C_p$  - Coefficiente di forma (o coefficiente aerodinamico)
- $C_d$  - Coefficiente dinamico che si assume unitario.

Pressione cinetica di riferimento:

La pressione cinetica di riferimento  $q_r$  in ( $\text{N/m}^2$ ) è data dall'espressione:

$$q_r = 1/2 \cdot p \cdot v_r^2$$

dove:

- $v_r$  - Velocità di riferimento del vento;
- $p$  - Densità dell'aria assunta convenzionalmente costante e pari a  $1.25 \text{ kg/m}^3$ . In mancanza di indagini statistiche adeguate, la velocità di riferimento del vento  $v_b(T_R)$  riferita ad un generico periodo di ritorno  $T_R$  può essere valutata, nel campo compreso tra 10 e 500 anni, con l'espressione:

$$v_b(T_R) = \alpha_R \cdot v_b$$



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dove:

$v_b$  - Velocità di riferimento del vento associata ad un periodo di ritorno di 50 anni;

$\alpha_R$  - Coefficiente posto in un diagramma in funzione di  $T_R$  espresso in anni (per 75 anni  $\alpha_R = 1.05$ ); Il periodo di ritorno  $T_R$  al quale si è fatto riferimento per la valutazione della velocità di riferimento del vento risulta pari a 75 anni.

### Coefficiente di esposizione:

Il coefficiente d'esposizione  $C_e$  dipende dall'altezza  $z$  sul suolo del punto considerato, dalla topografia del terreno, e dalla categoria di esposizione del sito ove sorge la costruzione .

Nel caso in esame (zona 7, classe di rugosità del terreno D, distanza dalla costa inferiore a 10 km) si può assumere per il sito la categoria d'esposizione III; il coefficiente di esposizione, per un'altezza massima della pensilina di 5.00 m, risulta pari ad 1.71 .

### Coefficiente di forza (o aerodinamico):

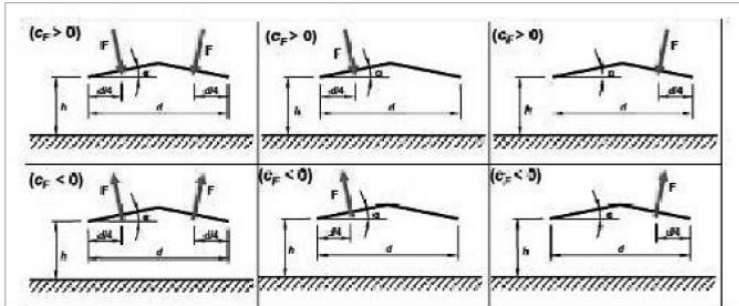
Per valutare le azioni globali del vento sulle coperture in cui lo spazio sottostante non sia delimitato in maniera permanente da pareti, va determinato il grado di bloccaggio  $\phi$  il quale è definito dal rapporto tra l'area esposta al vento al di sotto della tettoia e l'area totale della superficie ortogonale alla direzione del vento al di sotto della tettoia (Figura C3.3.20). Si identificano due situazioni limite:

- $\phi=0$  corrispondenza all'assenza di ostruzioni al di sotto della tettoia
- $\phi=1$  corrisponde alla situazione in cui lo spazio al di sotto della tettoia risulti completamente ostruito

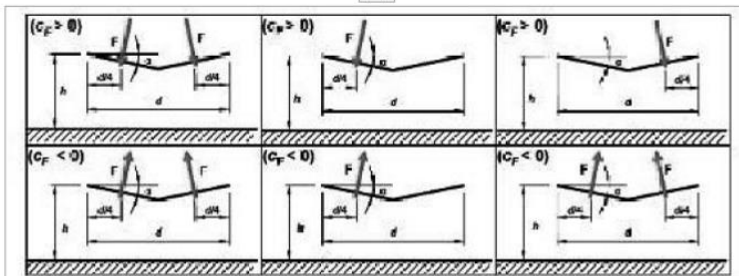
Per le pensiline a doppia falda in esame si assume un fattore  $\phi = 0$  e si ha:

<i>Valori positivi</i>	Tutti i valori di $\Phi$	$C_F = + 0.2 + \alpha/30$
<i>Valori negativi</i>	$\Phi = 0$	$C_F = - 0.5 - 1.3 \alpha/30$
	$\Phi = 1$	$C_F = - 1.4$

La normativa (NTC2018) prevede i seguenti casi di carico:



(a)



In conclusione avremo un azione di sopravvento pari a

$$P = q_r c_e c_p c_d$$

Dove:

$$q_r = 1/2 * (\rho * v_r^2) = 1/2 * 1.25 * 29.12^2 = 530 \text{ N/m}^2$$

$$v_r = v_b * c_r = 28 * 1.04 = 29.12 \text{ m/s}$$

$$v_b = 28 \text{ m/s}$$

$$c_e = 1.71$$

$$c_d = 1.00$$

$$c_p = 1.49$$

$$P = 530 * 1.71 * 1.00 * 1.49 = 1350 \text{ N/m}^2 = 1.35 \text{ kN/m}^2$$

Le azioni sottovento saranno pari a:

$$P = q_r c_e c_p c_d$$

Dove:

$$q_r = 1/2 * (\rho * v_r^2) = 1/2 * 1.25 * 29.12^2 = 530 \text{ N/m}^2$$

$$v_r = v_b * c_r = 28 * 1.04 = 29.12 \text{ m/s}$$

$$v_b = 28 \text{ m/s}$$

$$c_e = 1.71$$

$$c_d = 1.00$$

$$c_p = 0.96$$

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$$P = 530 * 1.71 * 1.00 * 0.96 = 870 \text{ N/m}^2 = 0.87 \text{ kN/mq}$$

Azione tangenziale del vento:

L'azione tangente per unità di superficie parallela alla direzione del vento è data dall'espressione:

$$P_f = q_x c_e c_f$$

dove:

$q_b$ ,  $C_e$  sono stati definiti precedentemente;

$c_f$  - coefficiente d'attrito, funzione della scabrezza della superficie sulla quale il vento esercita l'azione tangente.

Facendo riferimento a documentazione comprovata si assume un valore di 0.01, relativo a superficie liscia (acciaio, cemento a faccia liscia ... ) .

Pertanto sviluppando l'espressione relativa all'azione tangenziale del vento si ottiene un valore ampiamente trascurabile rispetto alle altre azioni in gioco.

$$p_f = 530 * 1.71 * 0.01 = 9.06 \text{ N/m}^2 = 0.0091 \text{ kN/m}^2$$

#### 5.1.5 AZIONE AERODINAMICA DOVUTA AL TRAFFICO FERROVIARIO

In accordo con quanto previsto nelle "Istruzioni per la progettazione e l'esecuzione dei ponti ferroviari" (Documento RFI n° RFIDTCICIPOSPINF001A) si considera l'effetto aerodinamico associato al passaggio dei treni. Tali prescrizioni si riscontrano anche al punto 5.2 della NTC2018 relativo ai ponti ferroviari. Le azioni possono essere schematizzate mediante carichi equivalenti agenti nelle zone prossime alla testa ed alla coda del treno, il cui valore viene determinato con riferimento a due schemi, e deve essere utilizzato quello che meglio approssima la forma della pensilina, nel nostro caso la nostra pensilina si trova in una situazione intermedia tra le due descritte nello schema, pertanto calcoleremo il valore di pressione secondo entrambi gli schemi, ed applicheremo poi al modello di calcolo quello che induce una pressione maggiore:

Superficie orizzontale adiacente ai binari (5.2.2.7.3 - NTC2018):

il valore dell'azione  $q_{3k}$  agente ortogonalmente alla superficie della falda della pensilina, viene valutata in base alla Figura 8 in funzione della distanza  $\alpha_g$  dall'asse del binario più vicino, indipendentemente dalla forma aerodinamica del treno. Poiché ci sono binari su entrambi i lati della pensilina, si considera anche la combinazione delle azioni prodotte dal passaggio contemporaneo dei convogli sui due binari.

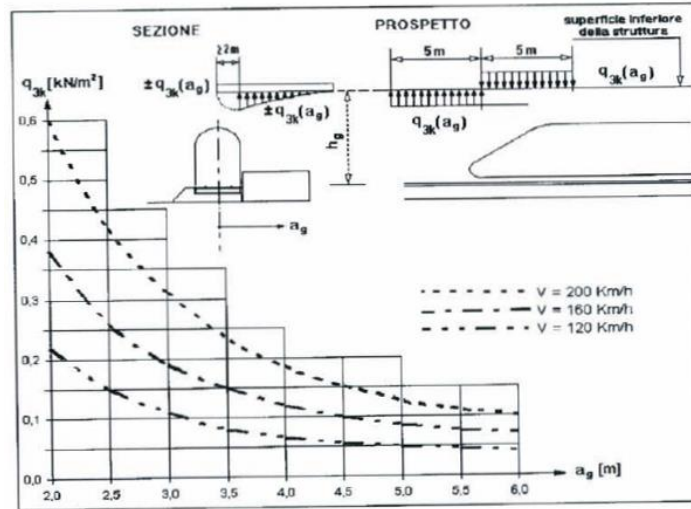


Figura 8

La distanza  $h_g$  dal P.F. alla superficie inferiore della pensilina risulta maggiore di 3.80m per cui l'azione  $q_3$  può essere ridotta del fattore  $k_3$ :

$$k_3 = (7.5 - h_g) / 3.7 = 0.62$$

avendo assunto, a favore di sicurezza,  $h_g = 5.20$  m ed  $a_g = 2.00$  m

Per il caso in esame, per una velocità massima dei convogli in transito di 200 Km/h, si ottiene il seguente andamento di  $q_3$ :

distanza dall'asse binario	$q_{3k}$	$k_3 * q_{3k}$
[m]	[kN/m <sup>2</sup> ]	[kN/m <sup>2</sup> ]
1,15	0,60	0,37
4,09	0,18	0,12

Tabella 1

Superfici multiple a fianco del binario sia verticali che orizzontali o inclinate (5.2.2.7.4 – NTC2018): il valore dell'azione  $\pm Q_{4k}$  agente ortogonalmente alla superficie della falda della pensilina e del pilastro, viene valutato adottando una distanza fittizia  $a_g'$  dal binario:

$$\min a_g = 1.15 \text{ m}$$

$$\max a_g = 4.10 \text{ m}$$

$$a_g' = 0.6 \min a_g + 0.4 \max a_g = 2.33 \text{ m}$$

dove le distanze  $\min a_g$  e  $\max a_g$  sono state determinate in base alla Figura 9 .

A tale valore di  $a_g'$  corrisponde il seguente valore dell'azione  $q_{4k}$  prodotta dal passaggio del convoglio, calcolata secondo quanto riportato nella Figura 10 in base alla velocità  $V = 200$  km/h e con riferimento a treni con forme aerodinamiche sfavorevoli:

$$q_{4k} = q_{1k} = 0.80 \text{ kN/m}^2$$

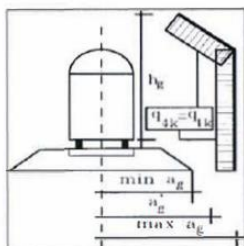


Figura 9

Per i pilastri, trattandosi di elementi di larghezza minore di 2.50 m, tale azione viene incrementata del fattore 1.3, per cui  $q_{5k} = 1.04 \text{ kN/m}^2$

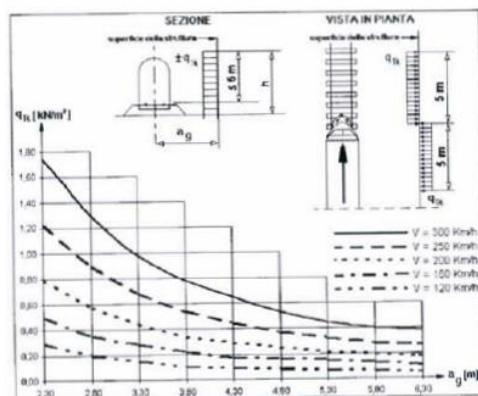


Figura 10

Come mostrato dai calcoli appena svolti i valori di pressione maggiore si hanno considerando le pressioni  $q_{1k} = 0.80 \text{ kN/m}^2$ ;  $q_{5k} = 1.04 \text{ kN/m}^2$ ;

Nel rispetto di quanto riportato al punto §5.2.3.2.2 delle NTC2018 nelle analisi svolte sul modello di calcolo realizzato si applicherà un carico  $q=1.50\text{kN/mq}$ .

#### 5.1.6 AZIONE VARIAZIONE TERMICHE

Si considerano le variazioni di temperatura rispetto a quella iniziale di riferimento, assunta quale convenzionale zero termico. La variazione termica massima nell'arco dell'anno è assunta convenzionalmente pari a  $\pm 25 \text{ }^\circ\text{C}$ .

Si considerano pertanto le due condizioni di carico elementare:

Temp+)  $\Delta T = +25 \text{ }^\circ\text{C}$

Temp-)  $\Delta T = -25 \text{ }^\circ\text{C}$

### 5.1.7 CARICHI INDOTTI DALLA LINEA ELETTRICA

Dove necessario, secondo il piano di elettrificazione della linea, il sostegno del palo T. E. è realizzato attraverso una colonna speciale, emergente dall'estradosso della copertura, alla cui estremità è saldata una piastra per la bullonatura di attacco al palo .

Si riportano di seguito le azioni agenti alla base della palina, posizionata in corrispondenza della colonna:

AZIONI DOVUTE ALLA PRESENZA DI UN PALO TE				
<i>Azioni alla base della palina</i>				
Distanza asse montante-asse binario	a =	4.09	[m]	
	quota			
azioni verticali	[daN]	z[m] - H	x[m]	M[daNm]
Peso proprio palina, PP	2.15	2.15	0	0
Peso corde di terra, PCT	0.50	2.8	0	0
Peso mensola, PM	0.45	1.145	2.73	1.23
Peso della catenaria, PC	2.50	0.33	4.29	10.73
Peso sospensione, PS	0.30	0.33	4.69	1.41
<b>Totale (N, M<sub>v</sub>)</b>	<b>5.90</b>			<b>13.36</b>
azioni orizzontali				
Vento sulla corda di terra alta, WCT1	0.63	4.3	0	2.71
Vento sulla corda di terra bassa, WCT2	0.63	1.3	0	0.82
Vento sulle corde portanti, WCP	1.21	1.73	4.09	2.09
Vento sulla palina, WP	0.50	2.15	0	1.07
Vento sui fili di contatto, WFC	1.02	0.33	4.29	0.34
<b>Totale (T, M<sub>r</sub>)</b>	<b>3.99</b>			<b>7.04</b>

### 5.1.8 AZIONI ECCEZIONALI ROTTURA DELLA CATENARIA

Si dovrà considerare l'eventualità che si verifichi la rottura della catenaria nel punto più sfavorevole per la struttura. La forza trasmessa alla pensilina in seguito ad un simile evento si considererà come una forza di natura statica agente in direzione parallela all'asse dei binari, di intensità pari a  $\pm 20$  kN e applicata sui sostegni alla quota del filo. Si tiene conto della rottura simultanea di due catenarie, ipotizzando un numero di binari compreso tra due e sei.

Si considerano pertanto le tre condizioni di carico elementare:

- Ecc.1)** Rottura di una catenaria (Azioni agenti in corrispondenza del singolo palo T.E.:  $F=20.0$  kN;  $M= (F \times 4.29) = 85.80$  kNm);
- Ecc.2)** Rottura di due catenarie che induce forze agenti nello stesso verso (Azioni agenti in corrispondenza del singolo palo T.E.:  $F= 20$  kN;  $M= 85.80$  kNm);
- Ecc.3)** Rottura di due catenarie che induce forze agenti in verso opposto (Azioni agenti in corrispondenza del singolo palo T.E.:  $F_1=20$  kN;  $M_1 =85.80$  kNm;  $F_2=-20$  kN;  $M_2=-85.80$  kNm).

### 5.1.9 AZIONI ECCEZIONALI

#### INCENDIO

Per la struttura in esame viene considerata una prestazione di sicurezza nei confronti dell'azione accidentale all'incendio idonea a quanto indicato dal D.M. del 16 febbraio 2007. Per tale verifica si rimanda al relativo progetto di prevenzione incendi.

#### ESPLOSIONI

Per la struttura in esame viene considerata una classificazione dell'azione accidentale riguardo alle esplosioni pari alla Categoria di azione 1 (effetti trascurabili sulle strutture).

Le verifiche richieste per tale categoria 1 come indicato al paragrafo 3.6.2.3 non occorrono specifiche verifiche per situazioni eccezionali per esposizioni.

#### URTI

Per la struttura in esame viene considerata una classificazione dell'azione accidentale riguardo agli urti pari alla Categoria di azione 1 (effetti trascurabili sulle strutture).

Le verifiche richieste per tale categoria 1 come indicato al paragrafo 3.6.3.2 non occorrono specifiche verifiche per situazioni eccezionali per urti.

## 6. ANCORAGGIO DELLE BARRE

Le barre tese devono essere prolungate oltre la sezione nella quale esse sono soggette alla massima tensione in misura sufficiente a garantirne l'ancoraggio nell'ipotesi di ripartizione uniforme delle tensioni tangenziali di aderenza:

$$l_b = \frac{\phi}{4} \cdot \frac{f_{yd}}{f_{bd}} \geq \left\{ \begin{array}{l} 20\phi \\ 15cm \end{array} \right\}$$

impiegando barre ad aderenza migliorata si può assumere:

$$f_{bd} = 2.25 \frac{f_{ctk}}{\gamma_c} = 2.25 \frac{0.7 f_{ctm}}{\gamma_c} = 2.25 \frac{0.7 \cdot 0.27^3 \sqrt{R_{ck}^2}}{\gamma_c} = 2.57 MPa$$

si calcolano alcune lunghezze di barre per alcuni diametri più in uso:

$\phi 8$	$\phi 10$	$\phi 12$	$\phi 16$	$\phi 18$	$\phi 20$
291 mm	364 mm	437 mm	580 mm	660 mm	730 mm

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## 7. ANALISI E CALCOLO DEL TELAIO

I calcoli per il dimensionamento delle strutture in c.a. sono stati condotti con i consueti criteri della Scienza delle Costruzioni e, in particolare, il dimensionamento delle sezioni è stato condotto con il metodo semiprobabilistico agli stati limite mediante programma di calcolo secondo i limiti indicati nella sezione "Materiali utilizzati".

Per il calcolo delle parti in cemento armato, le azioni sono state cumulate nel modo più sfavorevole, per ciascuna verifica, considerando tutte le possibili combinazioni di carico e comprendendo tutte le azioni prevedibili sulla costruzione.

### 6.1 VALUTAZIONE DELLA SICUREZZA

La verifica della sicurezza nei riguardi degli stati limite ultimi di resistenza si effettua con il "metodo dei coefficienti parziali" di sicurezza espresso dalla equazione formale:

$$R_d \geq E_d$$

dove

$R_d$  è la resistenza di progetto, valutata in base ai valori di progetto della resistenza dei materiali e ai valori nominali delle grandezze geometriche interessate;

$E_d$  è il valore di progetto dell'effetto delle azioni, valutato in base ai valori di progetto

$$F_{dj} = F_{kj} \cdot$$

$\gamma_{Fj}$  delle azioni come indicato nel § 2.5.3, o direttamente  $E_{dj} = E_{kj} \gamma_{Fj}$ .

I coefficienti parziali di sicurezza,  $\gamma_{Mi}$  e  $\gamma_{Fj}$ , associati rispettivamente al materiale i-esimo e all'azione j-esima, tengono in conto la variabilità delle rispettive grandezze e le incertezze relative alle tolleranze geometriche e alla affidabilità del modello di calcolo.

La verifica della sicurezza nei riguardi degli stati limite di esercizio si esprime controllando aspetti di funzionalità e stato tensionale.

#### 6.1.1 VITA NOMINALE

La vita nominale di un'opera strutturale  $V_N$  è intesa come il numero di anni nel quale la struttura, purché soggetta alla manutenzione ordinaria, deve potere essere usata per lo scopo al quale è destinata. La vita nominale adottata nella definizione delle azioni sismiche è pari a **75 anni ( $V_N$ )**.

#### 6.1.2 CLASSE D'USO

In presenza di azioni sismiche, con riferimento alle conseguenze di una interruzione di operatività o di un eventuale collasso, le costruzioni sono suddivise in classi d'uso così definite:

- *Classe I*: Costruzioni con presenza solo occasionale di persone, edifici agricoli.



- *Classe II:* Costruzioni il cui uso preveda normali affollamenti, senza contenuti pericolosi per l'ambiente e senza funzioni pubbliche e sociali essenziali. Industrie con attività non pericolose per l'ambiente. Ponti, opere infrastrutturali, reti viarie non ricadenti in Classe d'uso III o in Classe d'uso IV, reti ferroviarie la cui interruzione non provochi situazioni di emergenza. Dighe il cui collasso non provochi conseguenze rilevanti.
- **Classe III:** Costruzioni il cui uso preveda affollamenti significativi. Industrie con attività pericolose per l'ambiente. Reti viarie extraurbane non ricadenti in Classe d'uso IV. Ponti e reti ferroviarie la cui interruzione provochi situazioni di emergenza. Dighe rilevanti per le conseguenze di un loro eventuale collasso.
- *Classe IV:* Costruzioni con funzioni pubbliche o strategiche importanti, anche con riferimento alla gestione della protezione civile in caso di calamità. Industrie con attività particolarmente pericolose per l'ambiente. Reti viarie di tipo A o B, di cui al D.M. 5 novembre 2001, n. 6792, "Norme funzionali e geometriche per la costruzione delle strade", e di tipo C quando appartenenti ad itinerari di collegamento tra capoluoghi di provincia non altresì serviti da strade di tipo A o B. Ponti e reti ferroviarie di importanza critica per il mantenimento delle vie di comunicazione, particolarmente dopo un evento sismico. Dighe connesse al funzionamento di acquedotti e a impianti di produzione di energia elettrica.

### 6.1.3 PERIODO DI RIFERIMENTO

Le azioni sismiche su ciascuna costruzione vengono valutate in relazione ad un periodo di riferimento o  $V_R$  che si ricava, per ciascun tipo di costruzione, moltiplicandone la vita nominale  $V_N$  per il coefficiente d'uso  $C_U$ :

$$V_R = V_N \times C_U$$

Il valore del coefficiente d'uso  $C_U$  è definito, al variare della classe d'uso, come mostrato in Tab.

2.4.II. Se  $V_R \leq 35$  anni si pone comunque  $V_R = 35$  anni.

Tab. 2.4.II – Valori del coefficiente d'uso  $C_U$

CLASSE D'USO	I	II	III	IV
COEFFICIENTE $C_U$	0,7	1,0	1,5	2,0

$$V_R = V_N \times C_U = 75 * 1.50 = 112.5 \text{ anni}$$

## 8. METODO DI CALCOLO

### 7.1 Criteri e codice di calcolo

Le analisi e le verifiche delle strutture sono stati condotti con i consueti criteri della Scienza delle Costruzioni, con l'ausilio di codice di calcolo su elaboratore elettronico.

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Si riporta di seguito una esauriente documentazione per fornire un inquadramento teorico delle metodologie di calcolo e dell'impostazione generale della traduzione numerica. Si allegano inoltre alcuni esempi di carattere generale comprovanti l'affidabilità e la robustezza del codice stesso.

Il software utilizzato per la determinazione delle sollecitazioni agenti sulla struttura è il Prosap, di cui diseguito si riportano le principali informazioni.

## 7.2 Metodo numerico adottato

Il software esegue l'analisi sulla struttura tramite **metodo di calcolo agli elementi finiti**, ovvero mediante la costruzione di un modello matematico costituito da un numero definito di elementi discreti, per ognuno dei quali è stata definita analiticamente una relazione tra forze e spostamenti. Da queste il programma assembla quindi la matrice di rigidezza e calcola la risposta dell'intera struttura.

## 7.3 Caratteristiche del modello

Il telaio, considerato in materiale perfettamente elastico, è modellato con 2 tipologie di elemento finito:

- **tipo asta**, adatto per elementi aventi proprietà riconducibili a un comportamento unidirezionale. L'elemento asta è calcolato mediante funzioni di forma cubiche. Le matrici di rigidezza e di massa associate all'elemento sono costituite sulla base della teoria delle travi snelle, tipo Eulero – Bernoulli. Il programma esegue il calcolo delle sollecitazioni discretizzando l'elemento in più punti di calcolo. Se l'asta ha proprietà di **suolo elastico**, il software valuta le azioni interne e le pressioni sul terreno secondo la teoria delle travi su suolo elastico alla Winkler.
- **tipo shell** per elementi aventi proprietà riconducibili a un comportamento bidimensionale. Il tipo di elemento utilizzato può lavorare in regime membranale e flessionale e, grazie alla linearità del sistema, i due effetti possono essere considerati separatamente. L'elemento finito utilizzato è isoparametrico, basato sulla teoria dei gusci secondo Mindlin – Reissner. E' adatto sia per gusci spessi che sottili, non contiene modi spuri, consente di valutare i tagli fuori piano e può degenerare in un triangolo. Tutte le componenti del tensore delle deformazioni sono integrate nel piano medio con ordine di integrazione gaussiana 2 x 2.

## 7.4 Tipologie di analisi svolte dal software

La scelta del metodo di analisi è effettuata dal progettista a seconda delle prescrizioni previste dalla normativa. Tali prescrizioni dipendono in generale dalla destinazione d'utilizzo della struttura, dalla forma in pianta e dallo sviluppo in altezza della stessa, nonché dalla zona sismica di riferimento. Il software è in grado esegue i seguenti metodi di analisi:

- **Analisi statica.** La struttura è soggetta a carichi statici, distribuiti concentrati, applicati alle aste, ai nodi o agli elementi shell. L'equazione risolvibile in tal caso ha la seguente forma:

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$$\underline{F} = \underline{K} \underline{X}$$

dove

$\underline{F}$  è il vettore dei carichi agenti sulla struttura

$\underline{K}$  è la matrice di rigidezza

$\underline{X}$  il vettore di spostamenti e rotazioni (gradi di libertà del sistema).

- **Analisi sismica statica.** Se la struttura possiede le caratteristiche previste dalla normativa, l'azione del sisma può essere modellata con un sistema di forze di piano equivalenti, valutate e assegnate in funzione della rigidezza degli elementi. La precedente diventa pertanto:

$$\underline{F} + \underline{F}_S = \underline{K} \underline{X}$$

dove

$\underline{F}_S$  è il vettore dei carichi sismici equivalenti agenti sulla struttura, valutati in base alle relative norme di riferimento.

- **Analisi sismica dinamica modale.** In questo caso il programma valuta un comportamento inerziale della struttura, attribuendo un'accelerazione al sistema di riferimento terreno, secondo uno spettro sismico previsto dalla normativa in funzione della classificazione del territorio e altri parametri.

$$\underline{M} \ddot{\underline{X}} + \underline{K} \underline{X} = -\underline{M} \ddot{\underline{u}}$$

dove

$\underline{M}$  è la matrice di massa della struttura

$\ddot{\underline{u}}$  è il vettore delle accelerazioni sismiche applicate al terreno

Gli effetti dinamici dovuti al comportamento inerziale della struttura e l'effetto dei carichi statici vengono successivamente combinati, secondo opportuni coefficienti stabiliti dalla norma.

## 7.5 Formulazione del metodo

Il software esegue il calcolo ad elementi finiti formulando un'**analisi di tipo lineare**. In questo caso la matrice di rigidezza non varia durante lo sviluppo dell'analisi, considerando l'approssimazione dei piccoli spostamenti. Sotto tali ipotesi valgono i seguenti benefici:

- Vale il principio di sovrapposizione degli effetti.
- Non influisce la sequenza di applicazione dei carichi sulla struttura.

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- La precedente storia di carico della struttura non ha alcuna influenza, pertanto gli sforzi residui possono essere trascurati.

L'applicazione del principio di sovrapposizione degli effetti permette di considerare indipendentemente le ipotesi di carico elementari, per poi combinarle secondo opportuni coefficienti di partecipazione, In questo modo è possibile calcolare la risposta come una combinazione lineare di carichi elementari, rendendo il processo di analisi estremamente efficiente.

Le non linearità trascurate in questo tipo di analisi sono le seguenti:

- Non linearità dovuta a effetti geometrici. Grandi spostamenti e rotazioni possono introdurre significativi cambiamenti di forma e orientamento, variando drasticamente la rigidezza totale delle struttura.
- Non linearità delle caratteristiche dei materiali, legate al legame costitutivo o a eventuali anisotropie.
- Non linearità delle condizioni di vincolo.
- Non linearità dei carichi. La direzione di applicazione può variare in funzione della deformata della struttura.

#### 7.6 Metodo di risoluzione del problema dinamico

La risoluzione del problema dinamico a n gradi di libertà si basa su un **metodo di sovrapposizione modale**. Tale metodo permette di trasformare un sistema di equazioni accoppiate a un sistema di equazioni disaccoppiate, utilizzando le proprietà di ortogonalità di autovalori e autovettori, ovvero i modi di vibrare della struttura. La studio della struttura non necessita dell'estrazione di tutti gli autovalori, ma solo di una parte significativa di essi, secondo limiti previsti dalle norme.

Il metodo utilizzato dal software per l'estrazione degli autovalori è il metodo di *Lanczos*, adatto anche per matrici non simmetriche a termini complessi.

Nel calcolo della risposta sismica i contributi derivanti dai singoli modi sono combinati secondo il metodo *CQC*, che consente di tener conto delle singole componenti modali  $x_k$ , ottenute da una combinazione quadratica delle componenti  $x_{kj}$  secondo opportuni coefficienti.

#### 7.7 Metodi di verifica svolti dal software

Il è in grado di eseguire analisi di sezioni e di verificare il comportamento di strutture secondo due metodi principali di verifica:

- **Tensioni ammissibili.** I carichi sono applicati alla struttura con il loro valore nominale. Le tensioni caratteristiche dei materiali vengono divise per opportuni coefficienti ottenendo delle tensioni massime a cui potranno lavorare i materiali stessi. Tali tensioni risultano al di sotto del limite elastico convenzionale.

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- **Stati limite.** Le tensioni caratteristiche dei materiali vengono divise per dei coefficienti di sicurezza ottenendo dei valori limite in campo plastico. I carichi di esercizio, accidentali o permanenti vengono incrementati secondo opportuni coefficienti definiti dalla normativa (vedi in seguito).

Il programma valuta diverse condizioni di stato limite:

- **Stato limite ultimo.** La normativa prevede in questo caso che la struttura sia soggetta in condizioni straordinarie a carichi che possano causare il collasso della stessa, quali ad esempio l'evento sismico.
- **Stato limite di esercizio.** Anche in questo caso il calcolo della struttura è effettuato incrementando i carichi secondo opportuni coefficienti. A differenza del caso precedente però la struttura è soggetta a carichi in condizioni di esercizio, sotto l'azione dei quali devono prodursi deformazioni controllate, che non impediscano il funzionamento previsto. Esistono tre diverse condizioni di esercizio: **Rara, Frequente, Quasi permanente.**
- **Stato limite di danno.** E' il caso in cui la struttura è soggetta a forze di natura sismica. La verifica al danno è da effettuarsi sugli spostamenti.

La scelta dell'uno o dell'altro metodo dipende dalle prescrizioni previste dalle normative vigenti.

## 7.8 Coefficienti per l'analisi allo stato limite e combinazioni delle azioni

### STATI LIMITE ULTIMI

Si richiama integralmente il paragrafo 2.5.3 del DM 17.01.2018, e si riportano nel seguito le combinazioni delle azioni da utilizzare.

### “2.5.3 Combinazione delle azioni

*Ai fini delle verifiche degli stati limite, si definiscono le seguenti combinazioni delle azioni.*

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

$$\gamma_{G1} \cdot G_1 + \gamma_{G2} \cdot G_2 + \gamma_P \cdot P + \gamma_{Q1} \cdot Q_{k1} + \gamma_{Q2} \cdot \psi_{02} \cdot Q_{k2} + \gamma_{Q3} \cdot \psi_{03} \cdot Q_{k3} + \dots \quad [2.5.1]$$

- **Combinazione caratteristica, cosiddetta rara, generalmente impiegata per gli stati limite di esercizio (SLE) irreversibili:**

$$G_1 + G_2 + P + Q_{k1} + \psi_{02} \cdot Q_{k2} + \psi_{03} \cdot Q_{k3} + \dots \quad [2.5.2]$$

- **Combinazione frequente, generalmente impiegata per gli stati limite di esercizio (SLE) reversibili:**

$$G_1 + G_2 + P + \psi_{11} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots \quad [2.5.3]$$

- **Combinazione quasi permanente (SLE), generalmente impiegata per gli effetti a lungo termine:**

$$G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots \quad [2.5.4]$$

- **Combinazione sismica, impiegata per gli stati limite ultimi e di esercizio connessi all'azione sismica E:**

$$E + G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \dots \quad [2.5.5]$$

- **Combinazione eccezionale, impiegata per gli stati limite ultimi connessi alle azioni eccezionali A:**

$$G_1 + G_2 + P + A_d + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \dots \quad [2.5.6]$$

*Gli effetti dell'azione sismica saranno valutati tenendo conto delle masse associate ai seguenti carichi gravitazionali:*

$$G_1 + G_2 + \sum_j \psi_{2j} Q_{kj} \quad [2.5.7]$$

*Nelle combinazioni si intende che vengano omissi i carichi  $Q_{kj}$  che danno un contributo favorevole ai fini delle verifiche e, se del caso, i carichi  $G_2$ .*

*Altre combinazioni sono da considerare in funzione di specifici aspetti (p. es. fatica, ecc.).*

*Nelle formule sopra riportate il simbolo “+” vuol dire “combinato con”.*

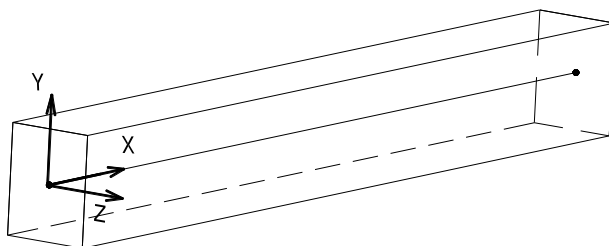
*I valori dei coefficienti  $\psi_{0j}$ ,  $\psi_{1j}$  e  $\psi_{2j}$  sono dati nella Tab. 2.5.I oppure nella Tab. 5.1.VI per i ponti stradali e nella Tab. 5.2.VII per i ponti ferroviari. I valori dei coefficienti parziali di sicurezza  $\gamma_{Gi}$  e  $\gamma_{Qj}$  sono dati nel § 2.6.1.”*

Nel caso dei ponti ferroviari nella precedente espressione [2.5.7], si assumerà, per i carichi dovuti al transito dei convogli, un coefficiente  $\psi_2 = 0,2$ , quando rilevante.

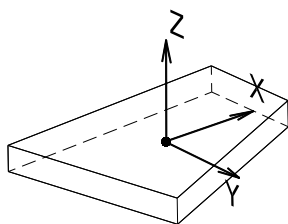
## 7.9 Sistemi di riferimento

Il programma possiede 2 diversi tipi di sistema di riferimento:

- **Riferimento globale.** Il sistema di riferimento è definito da una terna cartesiana destrorsa, è valido per tutti gli elementi della struttura e non dipende dal particolare orientamento di parti di essa.
- **Riferimento locale.** In questo caso il sistema di riferimento è ancora definito da una terna cartesiana destrorsa, l'orientamento del quale varia elemento per elemento.
  - **Aste.** Per l'elemento asta la direzione x è coincidente con l'asse baricentrico dell'asta stessa, mentre y e z sono perpendicolari ad x e diretti secondo gli assi principali d'inerzia della sezione assegnata all'asta. Secondo l'impostazione di default y è diretto secondo la direzione di azione del peso a meno di rotazioni assegnate alla sezione.



- **Shell.** Per gli elementi bidimensionali varia a seconda della distorsione dell'elemento e secondo le modalità di disegno della mesh. Gli assi x e y sono comunque posti nel piano dell'elemento e l'asse z ortogonale ad essi.



## 7.10 Caratteristiche e analisi codice

Caratteristiche dell'analisi	
TIPO DI ANALISI SVOLTA	Analisi sismica dinamica lineare
METODO NUMERICO ADOTTATO	Metodo agli elementi finiti
ELEMENTI ADOTTATI	Elementi asta, shell, asta su suolo elastico e shell su suolo elastico
METODO LOGIA DI VERIFICA	Metodo Semiprobabilistico agli Stati Limite

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## 9. CALCOLO DELL’AZIONE SISMICA

Le azioni sismiche di progetto, in base alle quali valutare il rispetto dei diversi stati limite considerati, si definiscono a partire dalla “pericolosità sismica di base” del sito di costruzione. Essa costituisce l’elemento di conoscenza primario per la determinazione delle azioni sismiche.

Nei confronti delle azioni sismiche gli stati limite, sia di esercizio che ultimi, sono individuati riferendosi alle prestazioni della costruzione nel suo complesso, includendo gli elementi strutturali, quelli non strutturali e gli impianti.

Ai fini delle presenti norme l’azione sismica è caratterizzata da 3 componenti traslazionali, due orizzontali contrassegnate da X ed Y ed una verticale contrassegnata da Z, da considerare tra di loro indipendenti.

Le componenti possono essere descritte, in funzione del tipo di analisi adottata, mediante una delle seguenti rappresentazioni:

- accelerazione massima attesa in superficie;
- accelerazione massima e relativo spettro di risposta attesi in superficie;
- accelerogramma.

Sulla base di apposite analisi di risposta sismica locale si può poi passare dai valori in superficie ai valori sui piani di riferimento in assenza di tali analisi l’azione in superficie può essere assunta come agente su tali piani.

Le due componenti ortogonali indipendenti che descrivono il moto orizzontale sono caratterizzate dallo stesso spettro di risposta o dalle due componenti accelerometriche orizzontali del moto sismico.

La componente che descrive il moto verticale è caratterizzata dal suo spettro di risposta o dalla componente accelerometrica verticale. In mancanza di documentata informazione specifica, in via semplificata l’accelerazione massima e lo spettro di risposta della componente verticale attesa in superficie possono essere determinati sulla base dell’accelerazione massima e dello spettro di risposta delle due componenti orizzontali. La componente accelerometrica verticale può essere correlata alle componenti accelerometriche orizzontali del moto sismico.

### Masse oscillanti

L’analisi sismica della struttura, date le caratteristiche geometriche dell’edificio e sulla base di quanto prescritto dal D.M. 17.01.2018, è stata condotta con il metodo dell’analisi lineare dinamica.

La struttura è stata schematizzata come una struttura spaziale formata da solette e pilastri collegati tra loro, al livello dei vari piani, dal diaframma infinitamente rigido costituito dai solai in soletta gettata in opera armata con doppia armatura ortogonale..



Con l'analisi dei carichi sono state determinate le masse presenti ad ogni livello e più precisamente:

- le masse degli elementi strutturali di tipo trave o pilastro sono state considerate concentrate nei nodi formati dell'incrocio solette-pilastri.

- le masse date dai solai, tamponatura ed aliquota dei carichi accidentali dell' edificio sono state considerate come concentrate al livello dei vari solai, nel risultante baricentro delle masse stesse.

Mediante un programma spaziale agli elementi finiti è stata eseguita una analisi dinamica , nelle due direzioni principali dell'edificio, estesa a un numero di modi di vibrazione pari ad almeno il numero dei piani dell'edificio, mediante la quale si sono determinate le forze sismiche agenti su ogni nodo per ogni piano.

Nel tabulato allegato è riportata l'analisi dinamica secondo le due direzioni principali **X** e **Y**, ognuna comprendente:

**a)** autovalori, frequenza di vibrazione (rad/sec e cicli/sec) per tutti i modi di vibrazione considerati;

**b)** spostamenti e rotazioni generati dal sisma per ognuno dei nodi e per ognuno dei modi di vibrazione


**c)** spostamenti, rotazioni, forze e momenti per ogni nodo , calcolati in base alla combinazione dei vari modi di vibrazione.

Calcolate le forze orizzontali generate dal terremoto di progetto le aste componenti il modello spaziale dell'edificio (travi e pilastri) sono state verificate per almeno l'involuppo delle seguenti condizioni di carico, e cioè:

- carichi verticali
- carichi verticali e forze orizzontali in direzione delle X positive
- carichi verticali e forze orizzontali in direzione delle X negative
- carichi verticali e forze orizzontali in direzione delle Y positive
- carichi verticali e forze orizzontali in direzione delle Y negative

I dati dell'azione sismica sono i seguenti:

ANALISI DINAMICA MODALE	Finale Ligure (SV)
Comune	44.1690
Lat	8.3450
Long	III
Classe d'uso	75
Vita nominale	B
Categoria sottosuolo	T1
Amplificazione topografica	Bassa
Duttilità	1.00
Fattore di struttura calcolato	

 <b>ITALFERR</b> GRUPPO FERROVIE DELLO STATO ITALIANE	<b>RADDOPPIO LINEA GENOVA - VENTIMIGLIA</b> <b>TRATTA FINALE LIGURE - ANDORA</b>					
<b>PROGETTO DEFINITIVO</b> <b>FV01 – Fermata Finale Ligure</b> <b>RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO</b>	COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 33 di 220

Eccentricità accidentale

Si

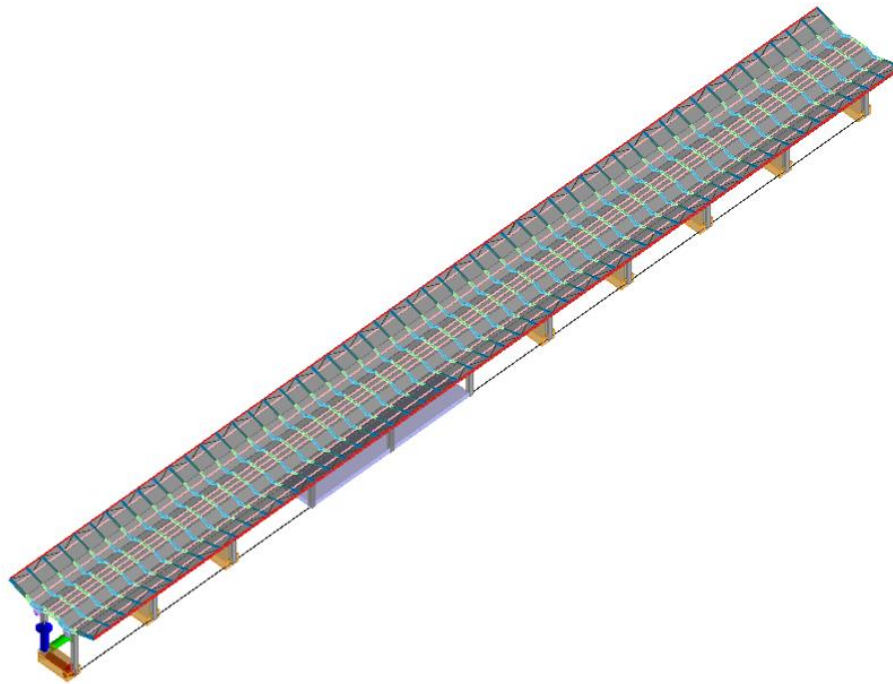
### 8.1 Calcolo del Fattore di struttura

Nell'analisi modale dinamica lineare svolta sulla struttura delle pensiline modellata si è adottato un fattore di struttura unitario, tale scelta rimane ampiamente a favore di sicurezza in quanto si è considerato il comportamento delle strutture in campo elastico non considerando la capacità dissipativa della struttura stessa.

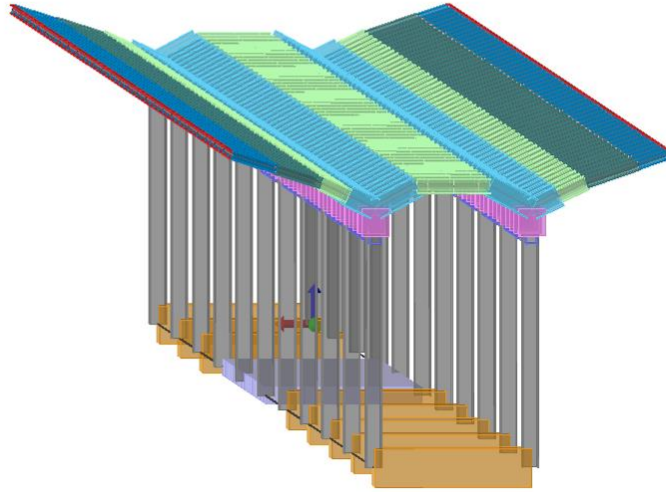
## 8.2 CARATTERISTICHE DEL MODELLO DI CALCOLO

E' stato realizzato un modello 3D agli elementi finiti a simulazione della struttura delle pensiline oggetto dell'intervento. In particolare i pilastri e le travi di quest'ultimo sono stati modellati con opportuni elementi tipo frame, mentre la platea di fondazione mediante elementi tipo shell. Tutti gli elementi finiti sono stati opportunamente infittiti al fine di raggiungere una coerente schematizzazione.

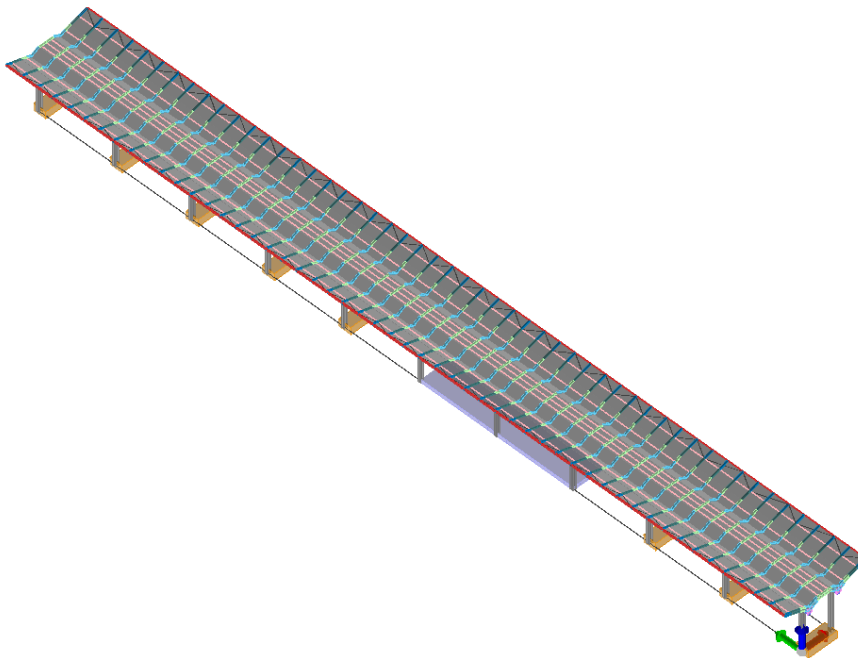
Di seguito si riportano alcune immagini dei modelli realizzati.



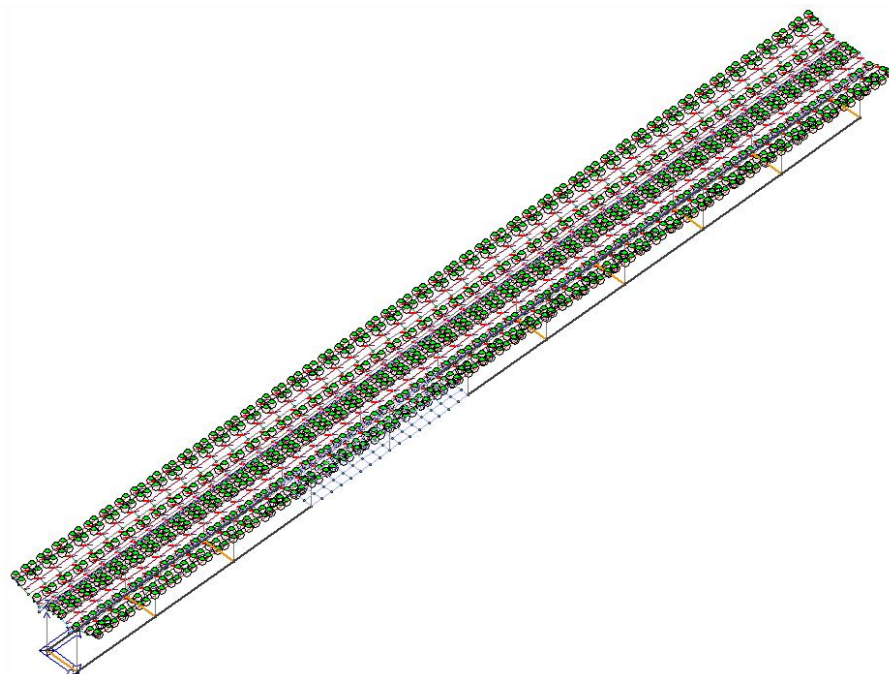
*Vista Modello 3d realizzato*



*Vista Modello 3d realizzato*



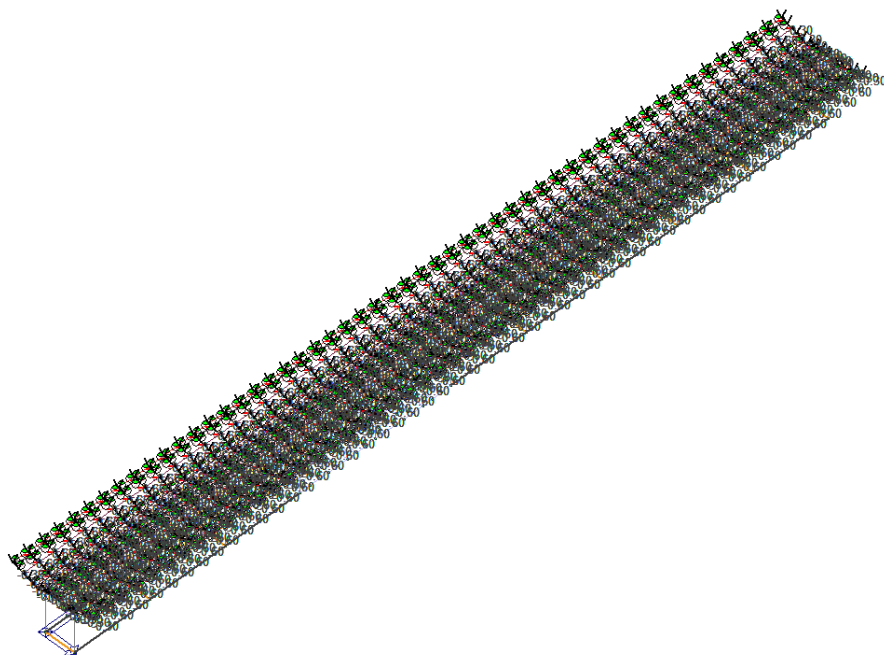
*Vista Modello 3d realizzato*



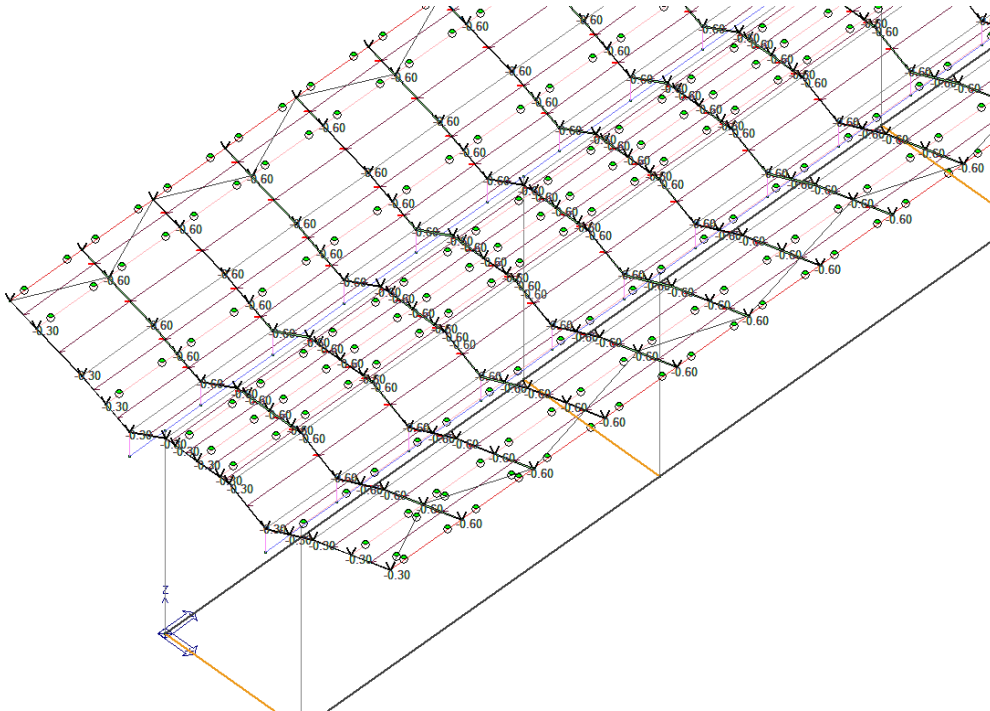
*Vista Modello tridimensionale unifilare*

### 8.3 ASSEGNAZIONE DEI CARICHI AL MODELLO DI CALCOLO

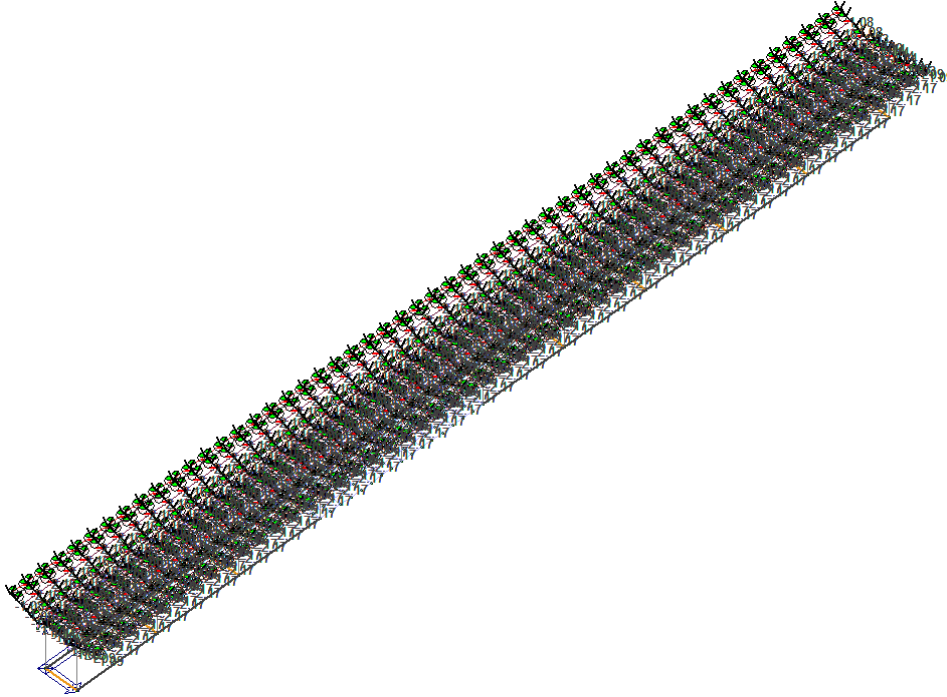
Si riportano di seguito alcune immagini relative all'assegnazione dei carichi principali sugli elementi strutturali componenti i modelli di calcolo dei due edifici:



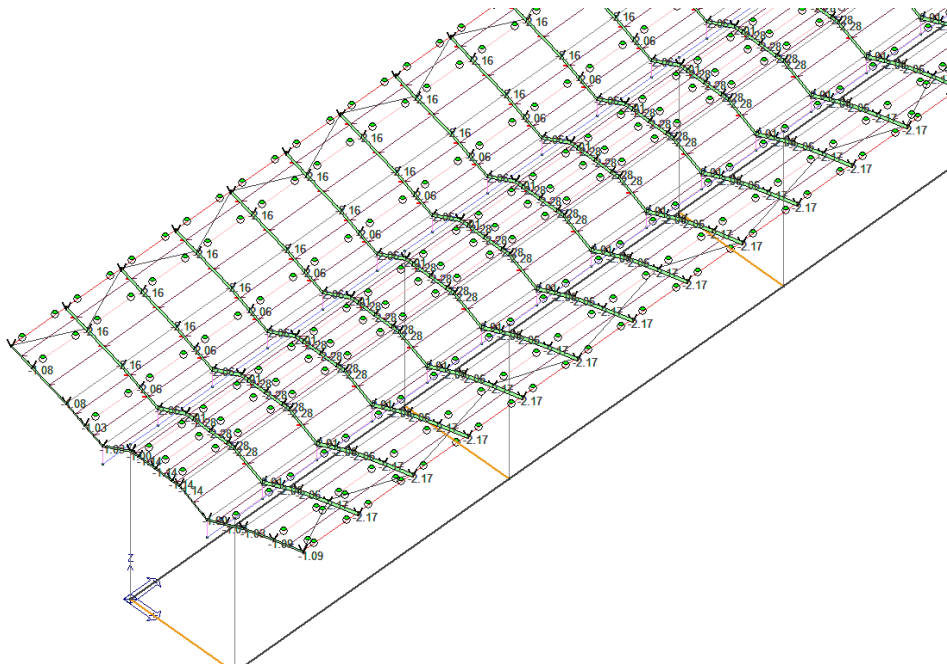
*Carichi permanenti non strutturali*



*Immagine di dettaglio carichi permanenti non strutturali*

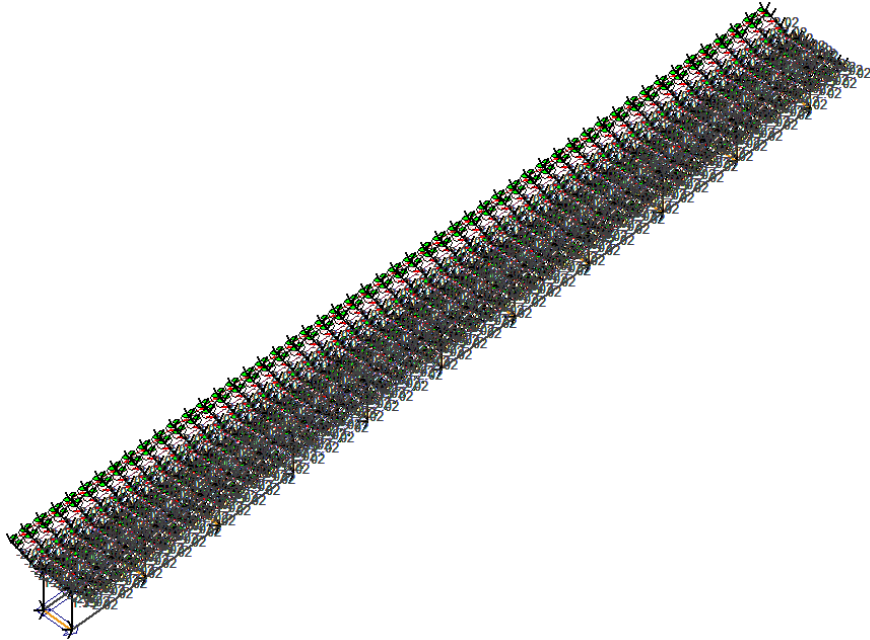


*Carichi Variabili (Neve)*

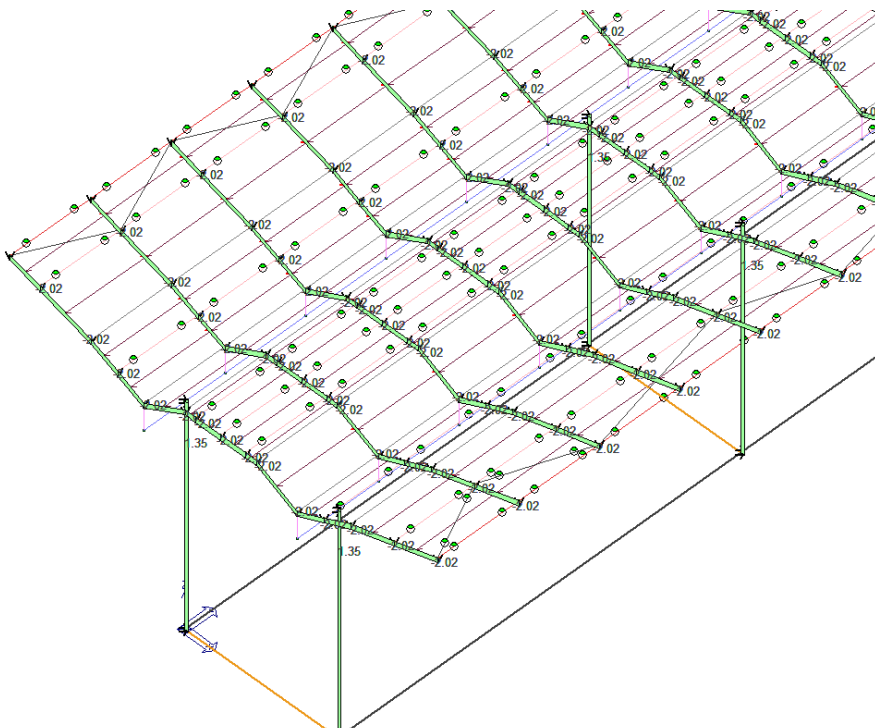


*Immagine di dettaglio Carichi Variabili (Neve)*

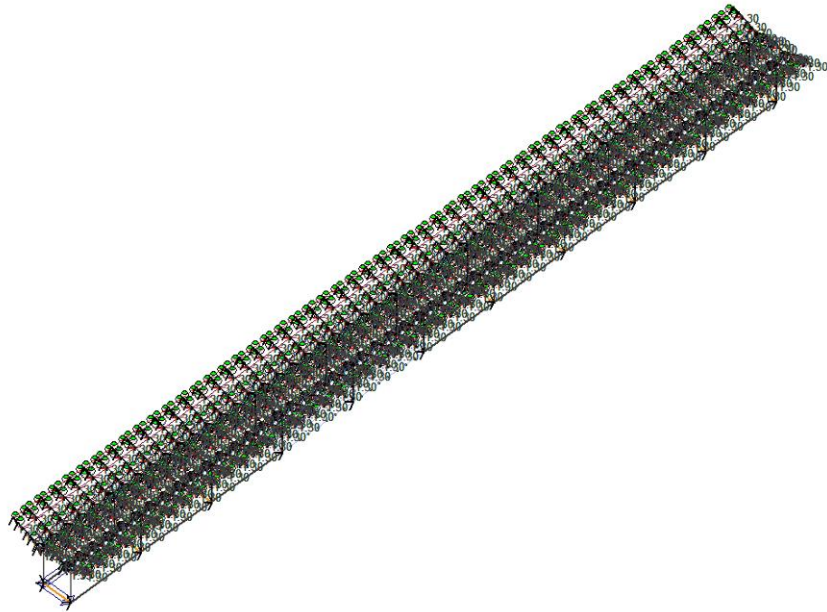




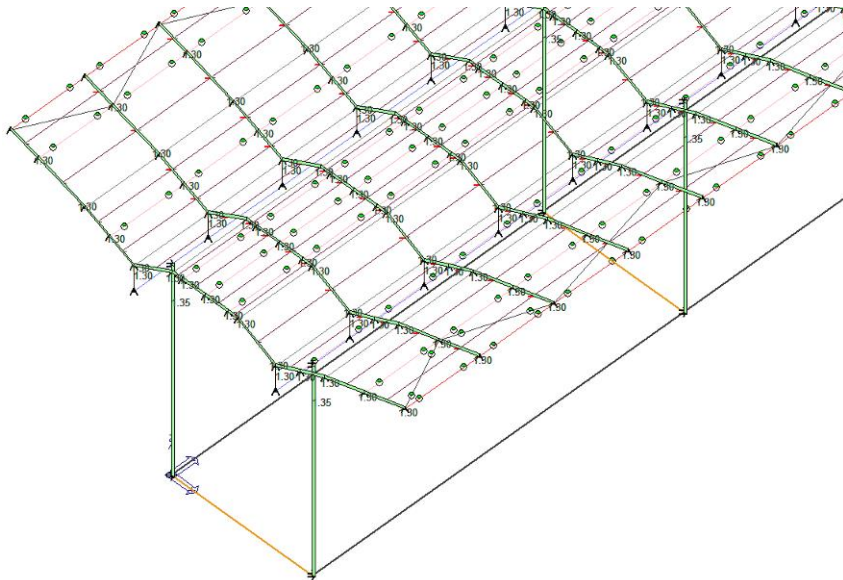
*Carichi Variabili (Vento)*



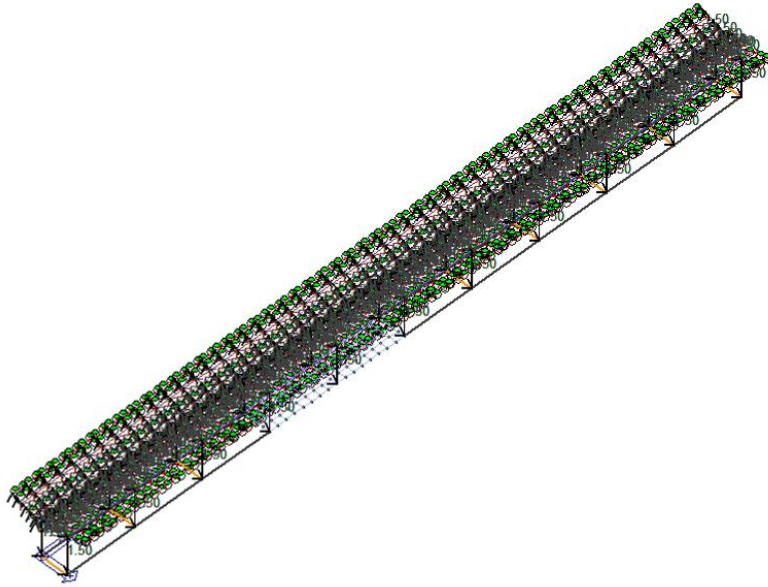
*Immagine di dettaglio Carichi Variabili (Vento)*



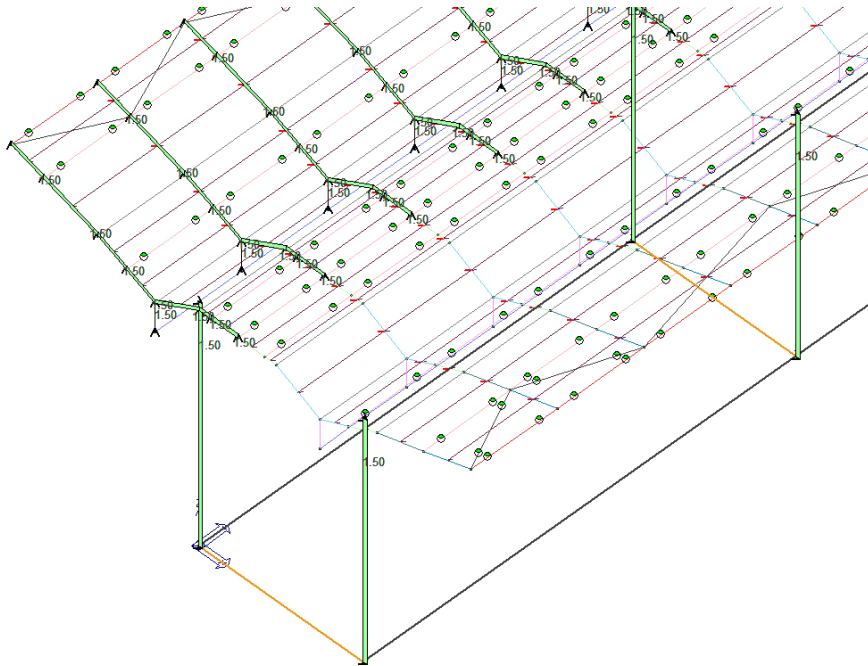
*Carichi Variabili (Vento)*



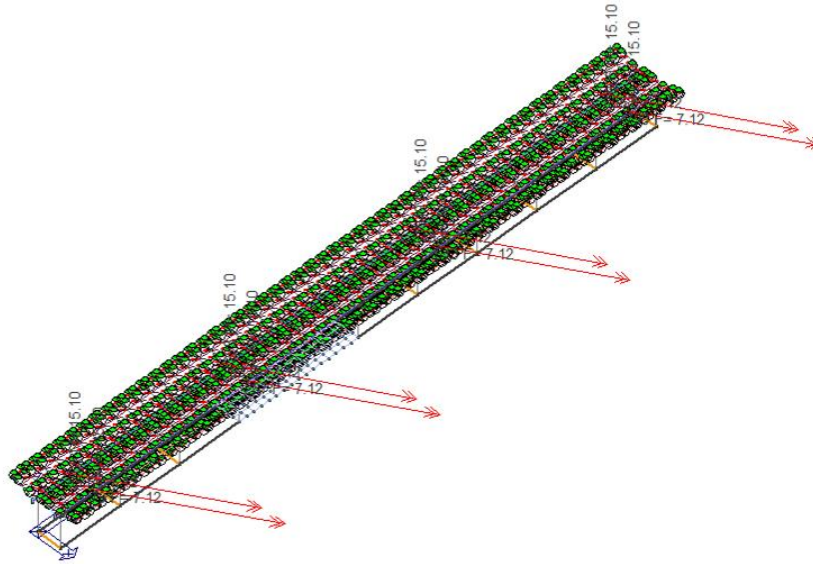
*Immagine di dettaglio Carichi Variabili (Vento)*



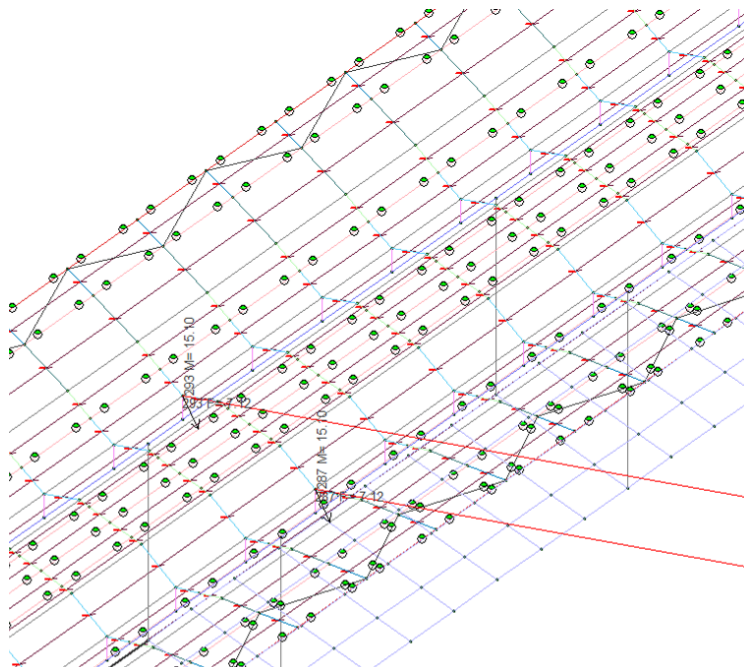
*Carichi Variabili (Azione Ferroviaria)*



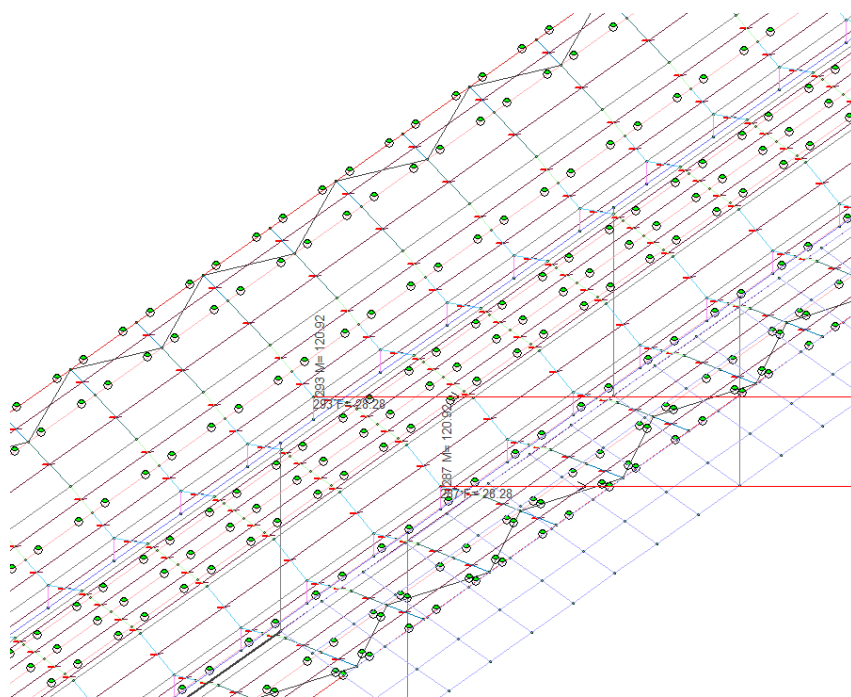
*Immagine di dettaglio Carichi Variabili (Azione Ferroviaria)*



*Carichi Variabili (Azione T.E)*



*Immagine di dettaglio Carichi Variabili Carichi Variabili (Azione T.E)*



*Immagine di dettaglio Carichi Variabili (Rottura Della Catenaria)*

## 10. VERIFICHE DI RESISTENZA E DEFORMABILITA' DELLE PENSILINE

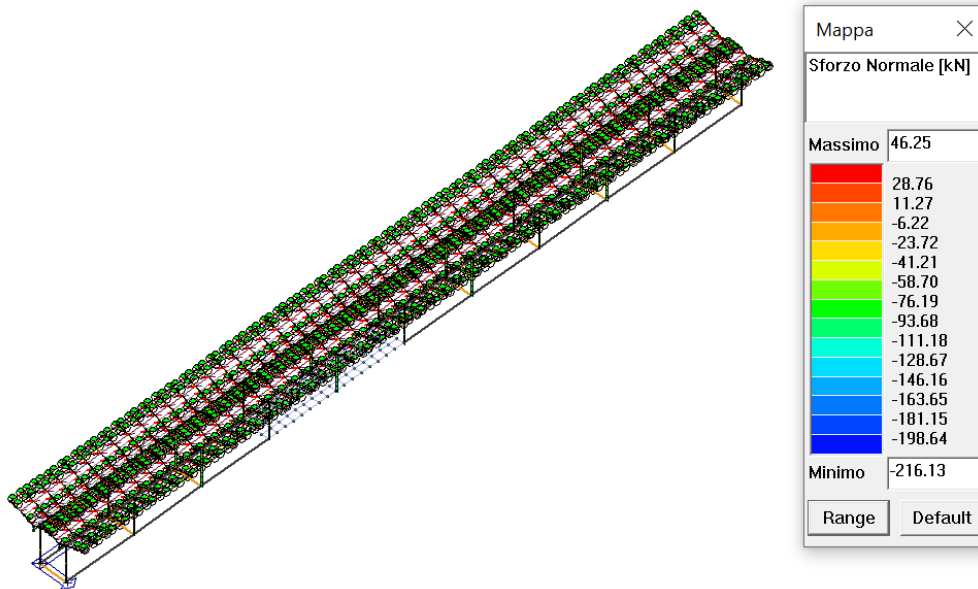
### 10.1 GENERALITÀ

I calcoli delle caratteristiche di sollecitazione sono stati eseguiti manualmente o con l'ausilio di elaboratore elettronico mediante l'utilizzo di software di analisi agli elementi finiti (Prosap®), con criteri basati sugli usuali metodi teorici della Scienza delle Costruzioni nella ipotesi di comportamento lineare elastico dei materiali.

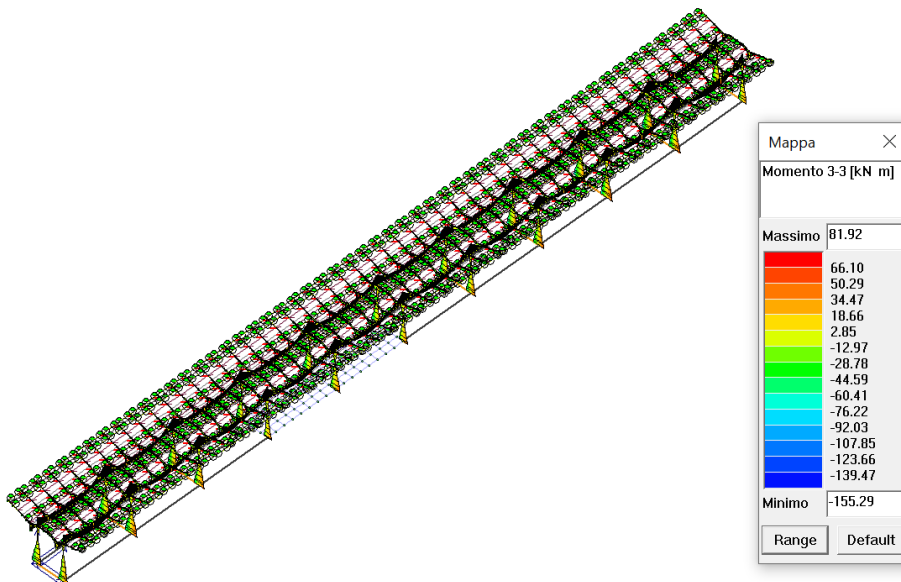
La verifica delle sezioni è stata eseguita manualmente o con elaboratore elettronico, con criteri basati sugli usuali metodi teorici della Tecnica delle Costruzioni; tale verifica è stata eseguita secondo il metodo agli stati limite.

Il calcolo è stato eseguito considerando la struttura libera di oscillare sotto l'azione sismica, al fine di ottenere i valori di sollecitazione massimi, e al fine di verificare l'equilibrio della struttura.

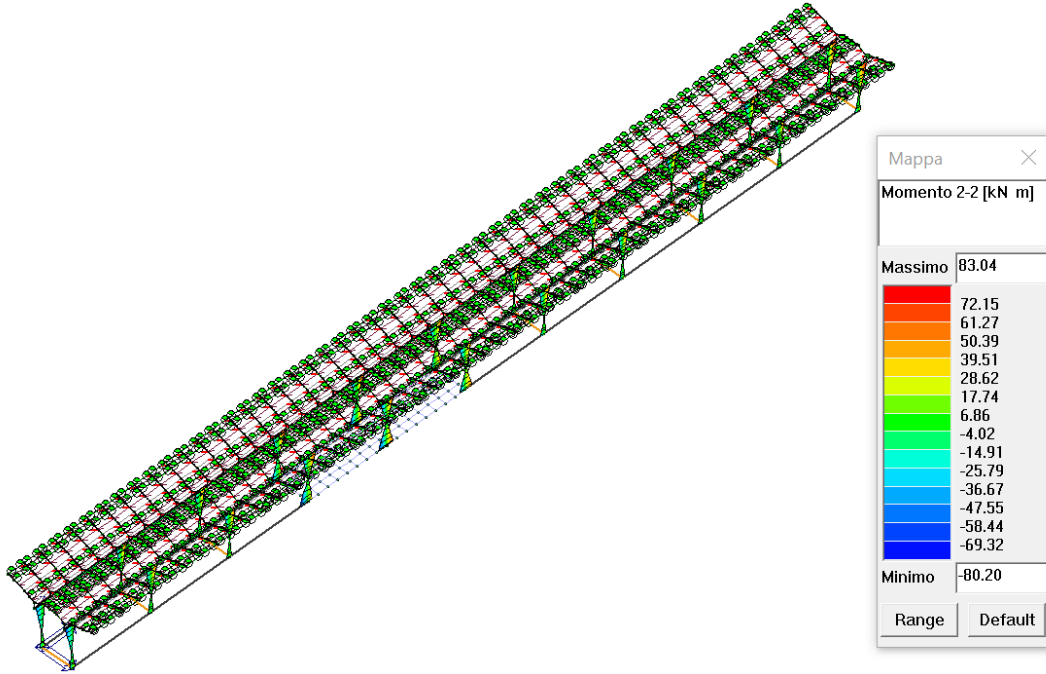
Di seguito si riportano i diagrammi dei massimi momenti, delle azioni assiali e di taglio agenti sugli elementi strutturali modellati e analizzati.



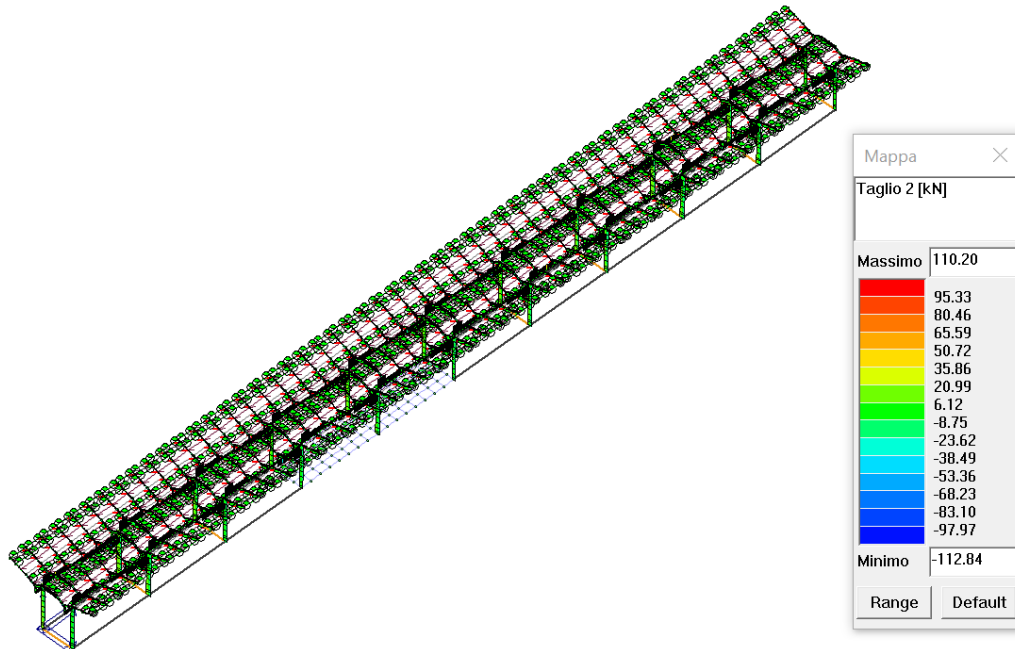
*Massime Azioni Assiali di compressione agenti sui pilastri*



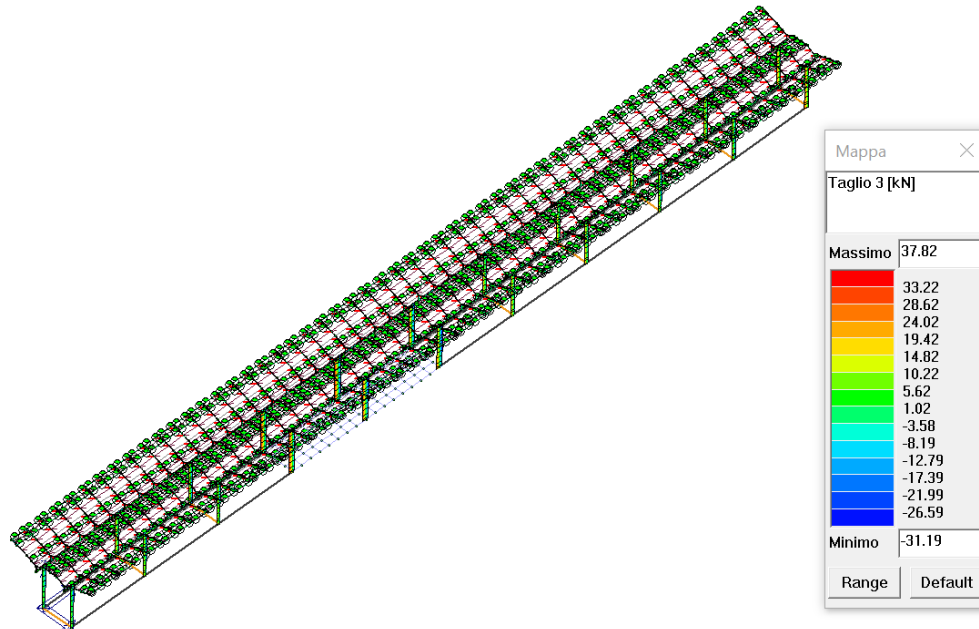
*Massime Azioni Flettenti (M33) Agenti sui pilastri*



*Massime Azioni Flettenti (M22) Agenti sui pilastri*



*Massime Azioni di Taglio(T22) Agenti sui pilastri*



*Massime Azioni di Taglio(T33) Agenti sui pilastri*

## 10.2 VERIFICA ELEMENTI IN ACCIAIO

### DEFINIZIONE DELLE COMBINAZIONI

#### LEGENDA TABELLA COMBINAZIONI DI CARICO

*Il programma combina i diversi tipi di casi di carico (CDC) secondo le regole previste dalla normativa vigente.*

*Le combinazioni previste sono destinate al controllo di sicurezza della struttura ed alla verifica degli spostamenti e delle sollecitazioni.*

*La prima tabella delle combinazioni riportata di seguito comprende le seguenti informazioni: Numero, Tipo, Sigla identificativa. Una seconda tabella riporta il peso nella combinazione assunto per ogni caso di carico.*

*Ai fini delle verifiche degli stati limite si definiscono le seguenti combinazioni delle azioni:*

#### **Combinazione fondamentale SLU**

$$\gamma G1 \cdot G1 + \gamma G2 \cdot G2 + \gamma P \cdot P + \gamma Q1 \cdot Qk1 + \gamma Q2 \cdot \psi 02 \cdot Qk2 + \gamma Q3 \cdot \psi 03 \cdot Qk3 + \dots$$

#### **Combinazione caratteristica (rara) SLE**

$$G1 + G2 + P + Qk1 + \psi 02 \cdot Qk2 + \psi 03 \cdot Qk3 + \dots$$

#### **Combinazione frequente SLE**

$$G1 + G2 + P + \psi 11 \cdot Qk1 + \psi 22 \cdot Qk2 + \psi 23 \cdot Qk3 + \dots$$



**Combinazione quasi permanente SLE**

$$G1 + G2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots$$

**Combinazione sismica**, impiegata per gli stati limite ultimi e di esercizio connessi all'azione sismica *E*

$$E + G1 + G2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \dots$$

**Combinazione eccezionale**, impiegata per gli stati limite connessi alle azioni eccezionali

$$G1 + G2 + A_d + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \dots$$

Dove:

NTC 2018 Tabella 2.5.I

<b>Destinazione d'uso/azione</b>	$\psi_0$	$\psi_1$	$\psi_2$
Categoria A residenziali	0,70	0,50	0,30
Categoria B uffici	0,70	0,50	0,30
Categoria C ambienti suscettibili di affollamento	0,70	0,70	0,60
Categoria D ambienti ad uso commerciale	0,70	0,70	0,60
Categoria E biblioteche, archivi, magazzini, ...	1,00	0,90	0,80
Categoria F Rimesse e parcheggi (autoveicoli $\leq 30kN$ )	0,70	0,70	0,60
Categoria G Rimesse e parcheggi (autoveicoli $> 30kN$ )	0,70	0,50	0,30
Categoria H Coperture	0,00	0,00	0,00
Vento	0,60	0,20	0,00
Neve a quota $\leq 1000$ m	0,50	0,20	0,00
Neve a quota $> 1000$ m	0,70	0,50	0,20
Variazioni Termiche	0,60	0,50	0,00

Nelle verifiche possono essere adottati in alternativa due diversi approcci progettuali:

- per l'approccio 1 si considerano due diverse combinazioni di gruppi di coefficienti di sicurezza parziali per le azioni, per i materiali e per la resistenza globale (combinazione 1 con coefficienti *A1* e combinazione 2 con coefficienti *A2*),

- per l'approccio 2 si definisce un'unica combinazione per le azioni, per la resistenza dei materiali e per la resistenza globale (con coefficienti *A1*).

NTC 2018 Tabella 2.6.I

		Coefficiente $\gamma_f$	<i>EQU</i>	<i>A1</i>	<i>A2</i>
Carichi permanenti	Favorevoli	$\gamma_{G1}$	0,9	1,0	1,0
	Sfavorevoli		1,1	1,3	1,0
Carichi permanenti non strutturali (Non compiutamente definiti)	Favorevoli	$\gamma_{G2}$	0,8	0,8	0,8
	Sfavorevoli		1,5	1,5	1,3
Carichi variabili	Favorevoli	$\gamma_{Qi}$	0,0	0,0	0,0
	Sfavorevoli		1,5	1,5	1,3

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

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Cmb	Tipo	Sigla Id	effetto P-delta
1	SLU	Comb. SLU A1 1	
2	SLU	Comb. SLU A1 2	
3	SLU	Comb. SLU A1 3	
4	SLU	Comb. SLU A1 4	
5	SLU	Comb. SLU A1 5	
6	SLU	Comb. SLU A1 6	
7	SLU	Comb. SLU A1 7	
8	SLU	Comb. SLU A1 8	
9	SLU	Comb. SLU A1 9	
10	SLU	Comb. SLU A1 10	
11	SLU	Comb. SLU A1 11	
12	SLU	Comb. SLU A1 12	
13	SLU	Comb. SLU A1 13	
14	SLU	Comb. SLU A1 14	
15	SLU	Comb. SLU A1 15	
16	SLU	Comb. SLU A1 16	
17	SLU	Comb. SLU A1 17	
18	SLU	Comb. SLU A1 18	
19	SLU	Comb. SLU A1 19	
20	SLU	Comb. SLU A1 20	
21	SLU	Comb. SLU A1 21	
22	SLU	Comb. SLU A1 22	
23	SLU	Comb. SLU A1 23	
24	SLU	Comb. SLU A1 24	
25	SLU	Comb. SLU A1 25	
26	SLU	Comb. SLU A1 26	
27	SLU	Comb. SLU A1 27	
28	SLU	Comb. SLU A1 28	
29	SLU	Comb. SLU A1 29	
30	SLU	Comb. SLU A1 30	
31	SLU	Comb. SLU A1 31	
32	SLU	Comb. SLU A1 32	
33	SLU	Comb. SLU A1 33	
34	SLU	Comb. SLU A1 34	
35	SLU	Comb. SLU A1 35	
36	SLU	Comb. SLU A1 36	
37	SLU	Comb. SLU A1 37	
38	SLU	Comb. SLU A1 38	
39	SLU	Comb. SLU A1 39	
40	SLU	Comb. SLU A1 40	
41	SLU	Comb. SLU A1 (SLV sism.) 41	
42	SLU	Comb. SLU A1 (SLV sism.) 42	
43	SLU	Comb. SLU A1 (SLV sism.) 43	
44	SLU	Comb. SLU A1 (SLV sism.) 44	
45	SLU	Comb. SLU A1 (SLV sism.) 45	
46	SLU	Comb. SLU A1 (SLV sism.) 46	
47	SLU	Comb. SLU A1 (SLV sism.) 47	
48	SLU	Comb. SLU A1 (SLV sism.) 48	
49	SLU	Comb. SLU A1 (SLV sism.) 49	
50	SLU	Comb. SLU A1 (SLV sism.) 50	
51	SLU	Comb. SLU A1 (SLV sism.) 51	
52	SLU	Comb. SLU A1 (SLV sism.) 52	
53	SLU	Comb. SLU A1 (SLV sism.) 53	
54	SLU	Comb. SLU A1 (SLV sism.) 54	
55	SLU	Comb. SLU A1 (SLV sism.) 55	
56	SLU	Comb. SLU A1 (SLV sism.) 56	
57	SLU	Comb. SLU A1 (SLV sism.) 57	
58	SLU	Comb. SLU A1 (SLV sism.) 58	
59	SLU	Comb. SLU A1 (SLV sism.) 59	
60	SLU	Comb. SLU A1 (SLV sism.) 60	
61	SLU	Comb. SLU A1 (SLV sism.) 61	

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Cmb	Tipo	Sigla Id	effetto P-delta
62	SLU	Comb. SLU A1 (SLV sism.) 62	
63	SLU	Comb. SLU A1 (SLV sism.) 63	
64	SLU	Comb. SLU A1 (SLV sism.) 64	
65	SLU	Comb. SLU A1 (SLV sism.) 65	
66	SLU	Comb. SLU A1 (SLV sism.) 66	
67	SLU	Comb. SLU A1 (SLV sism.) 67	
68	SLU	Comb. SLU A1 (SLV sism.) 68	
69	SLU	Comb. SLU A1 (SLV sism.) 69	
70	SLU	Comb. SLU A1 (SLV sism.) 70	
71	SLU	Comb. SLU A1 (SLV sism.) 71	
72	SLU	Comb. SLU A1 (SLV sism.) 72	
73	SLD(sis)	Comb. SLE (SLD Danno sism.) 73	
74	SLD(sis)	Comb. SLE (SLD Danno sism.) 74	
75	SLD(sis)	Comb. SLE (SLD Danno sism.) 75	
76	SLD(sis)	Comb. SLE (SLD Danno sism.) 76	
77	SLD(sis)	Comb. SLE (SLD Danno sism.) 77	
78	SLD(sis)	Comb. SLE (SLD Danno sism.) 78	
79	SLD(sis)	Comb. SLE (SLD Danno sism.) 79	
80	SLD(sis)	Comb. SLE (SLD Danno sism.) 80	
81	SLD(sis)	Comb. SLE (SLD Danno sism.) 81	
82	SLD(sis)	Comb. SLE (SLD Danno sism.) 82	
83	SLD(sis)	Comb. SLE (SLD Danno sism.) 83	
84	SLD(sis)	Comb. SLE (SLD Danno sism.) 84	
85	SLD(sis)	Comb. SLE (SLD Danno sism.) 85	
86	SLD(sis)	Comb. SLE (SLD Danno sism.) 86	
87	SLD(sis)	Comb. SLE (SLD Danno sism.) 87	
88	SLD(sis)	Comb. SLE (SLD Danno sism.) 88	
89	SLD(sis)	Comb. SLE (SLD Danno sism.) 89	
90	SLD(sis)	Comb. SLE (SLD Danno sism.) 90	
91	SLD(sis)	Comb. SLE (SLD Danno sism.) 91	
92	SLD(sis)	Comb. SLE (SLD Danno sism.) 92	
93	SLD(sis)	Comb. SLE (SLD Danno sism.) 93	
94	SLD(sis)	Comb. SLE (SLD Danno sism.) 94	
95	SLD(sis)	Comb. SLE (SLD Danno sism.) 95	
96	SLD(sis)	Comb. SLE (SLD Danno sism.) 96	
97	SLD(sis)	Comb. SLE (SLD Danno sism.) 97	
98	SLD(sis)	Comb. SLE (SLD Danno sism.) 98	
99	SLD(sis)	Comb. SLE (SLD Danno sism.) 99	
100	SLD(sis)	Comb. SLE (SLD Danno sism.) 100	
101	SLD(sis)	Comb. SLE (SLD Danno sism.) 101	
102	SLD(sis)	Comb. SLE (SLD Danno sism.) 102	
103	SLD(sis)	Comb. SLE (SLD Danno sism.) 103	
104	SLD(sis)	Comb. SLE (SLD Danno sism.) 104	
105	SLU(acc.)	Comb. SLU (Accid.) 105	
106	SLU(acc.)	Comb. SLU (Accid.) 106	
107	SLE(p)	Comb. SLE(perm.) 107	
108	SLE(p)	Comb. SLE(perm.) 108	
109	SLE(f)	Comb. SLE(freq.) 109	
110	SLE(f)	Comb. SLE(freq.) 110	
111	SLE(f)	Comb. SLE(freq.) 111	
112	SLE(f)	Comb. SLE(freq.) 112	
113	SLE(f)	Comb. SLE(freq.) 113	
114	SLE(f)	Comb. SLE(freq.) 114	
115	SLE(f)	Comb. SLE(freq.) 115	
116	SLE(f)	Comb. SLE(freq.) 116	
117	SLE(f)	Comb. SLE(freq.) 117	
118	SLE(r)	Comb. SLE(rara) 118	
119	SLE(r)	Comb. SLE(rara) 119	
120	SLE(r)	Comb. SLE(rara) 120	
121	SLE(r)	Comb. SLE(rara) 121	
122	SLE(r)	Comb. SLE(rara) 122	
123	SLE(r)	Comb. SLE(rara) 123	
124	SLE(r)	Comb. SLE(rara) 124	

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 51 di 220

Cmb	Tipo	Sigla Id	effetto P-delta
125	SLE(r)	Comb. SLE(rara) 125	
126	SLE(r)	Comb. SLE(rara) 126	
127	SLE(r)	Comb. SLE(rara) 127	
128	SLE(r)	Comb. SLE(rara) 128	
129	SLE(r)	Comb. SLE(rara) 129	
130	SLE(r)	Comb. SLE(rara) 130	
131	SLE(r)	Comb. SLE(rara) 131	
132	SLE(r)	Comb. SLE(rara) 132	
133	SLE(r)	Comb. SLE(rara) 133	
134	SLE(r)	Comb. SLE(rara) 134	
135	SLE(r)	Comb. SLE(rara) 135	
136	SLE(r)	Comb. SLE(rara) 136	
137	SLE(r)	Comb. SLE(rara) 137	

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
1	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
2	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
3	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
4	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
5	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
6	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
7	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
8	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
9	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
10	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
11	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
12	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
13	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
14	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
15	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
16	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
17	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
18	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
19	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
20	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
21	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
22	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
23	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
24	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
25	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
26	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
27	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
28	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
29	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
30	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
31	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
32	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
33	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
34	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
35	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
36	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
37	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
38	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
39	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
40	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
41	1.00	1.00	1.00	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
42	1.00	1.00	1.00	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
43	1.00	1.00	1.00	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
44	1.00	1.00	1.00	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
45	1.00	1.00	1.00	0.0	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	0.80	0.0
46	1.00	1.00	1.00	0.0	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.80	0.0



Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
109	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0
111	1.00	1.00	1.00	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112	1.00	1.00	1.00	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.0
113	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90	0.0
114	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.50
115	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50
116	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	-0.50
117	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.50
118	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.60
119	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60
120	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	-0.60
121	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
122	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.60
123	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60
124	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	-0.60
125	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
126	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.60
127	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60
128	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	-0.60
129	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
130	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
131	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
132	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	-1.00
133	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
134	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
135	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
136	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	-1.00
137	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00

Cmb	Tipo	Sigla Id	effetto P-delta
1	SLU	Comb. SLU A1 1	
2	SLU	Comb. SLU A1 2	
3	SLU	Comb. SLU A1 3	
4	SLU	Comb. SLU A1 4	
5	SLU	Comb. SLU A1 5	
6	SLU	Comb. SLU A1 6	
7	SLU	Comb. SLU A1 7	
8	SLU	Comb. SLU A1 8	
9	SLU	Comb. SLU A1 9	
10	SLU	Comb. SLU A1 10	
11	SLU	Comb. SLU A1 11	
12	SLU	Comb. SLU A1 12	
13	SLU	Comb. SLU A1 13	
14	SLU	Comb. SLU A1 14	
15	SLU	Comb. SLU A1 15	
16	SLU	Comb. SLU A1 16	
17	SLU	Comb. SLU A1 17	
18	SLU	Comb. SLU A1 18	
19	SLU	Comb. SLU A1 19	
20	SLU	Comb. SLU A1 20	
21	SLU	Comb. SLU A1 21	
22	SLU	Comb. SLU A1 22	
23	SLU	Comb. SLU A1 23	
24	SLU	Comb. SLU A1 24	
25	SLU	Comb. SLU A1 25	
26	SLU	Comb. SLU A1 26	
27	SLU	Comb. SLU A1 27	
28	SLU	Comb. SLU A1 28	

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 54 di 220
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Cmb	Tipo	Sigla Id	effetto P-delta
29	SLU	Comb. SLU A1 29	
30	SLU	Comb. SLU A1 30	
31	SLU	Comb. SLU A1 31	
32	SLU	Comb. SLU A1 32	
33	SLU	Comb. SLU A1 33	
34	SLU	Comb. SLU A1 34	
35	SLU	Comb. SLU A1 35	
36	SLU	Comb. SLU A1 36	
37	SLU	Comb. SLU A1 37	
38	SLU	Comb. SLU A1 38	
39	SLU	Comb. SLU A1 39	
40	SLU	Comb. SLU A1 40	
41	SLU	Comb. SLU A1 41	
42	SLU	Comb. SLU A1 42	
43	SLU	Comb. SLU A1 43	
44	SLU	Comb. SLU A1 44	
45	SLU	Comb. SLU A1 45	
46	SLU	Comb. SLU A1 46	
47	SLU	Comb. SLU A1 47	
48	SLU	Comb. SLU A1 48	
49	SLU	Comb. SLU A1 49	
50	SLU	Comb. SLU A1 50	
51	SLU	Comb. SLU A1 51	
52	SLU	Comb. SLU A1 52	
53	SLU	Comb. SLU A1 53	
54	SLU	Comb. SLU A1 54	
55	SLU	Comb. SLU A1 55	
56	SLU	Comb. SLU A1 56	
57	SLU	Comb. SLU A1 57	
58	SLU	Comb. SLU A1 58	
59	SLU	Comb. SLU A1 59	
60	SLU	Comb. SLU A1 60	
61	SLU	Comb. SLU A1 61	
62	SLU	Comb. SLU A1 62	
63	SLU	Comb. SLU A1 63	
64	SLU	Comb. SLU A1 64	
65	SLU	Comb. SLU A1 65	
66	SLU	Comb. SLU A1 66	
67	SLU	Comb. SLU A1 67	
68	SLU	Comb. SLU A1 68	
69	SLU	Comb. SLU A1 69	
70	SLU	Comb. SLU A1 70	
71	SLU	Comb. SLU A1 71	
72	SLU	Comb. SLU A1 72	
73	SLU	Comb. SLU A1 73	
74	SLU	Comb. SLU A1 74	
75	SLU	Comb. SLU A1 75	
76	SLU	Comb. SLU A1 76	
77	SLU	Comb. SLU A1 77	
78	SLU	Comb. SLU A1 78	
79	SLU	Comb. SLU A1 79	
80	SLU	Comb. SLU A1 80	
81	SLU	Comb. SLU A1 81	
82	SLU	Comb. SLU A1 82	
83	SLU	Comb. SLU A1 83	
84	SLU	Comb. SLU A1 84	
85	SLU	Comb. SLU A1 85	
86	SLU	Comb. SLU A1 86	
87	SLU	Comb. SLU A1 87	
88	SLU	Comb. SLU A1 88	
89	SLU	Comb. SLU A1 89	
90	SLU	Comb. SLU A1 90	
91	SLU	Comb. SLU A1 91	

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 55 di 220
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Cmb	Tipo	Sigla Id	effetto P-delta
92	SLU	Comb. SLU A1 92	
93	SLU	Comb. SLU A1 93	
94	SLU	Comb. SLU A1 94	
95	SLU	Comb. SLU A1 95	
96	SLU	Comb. SLU A1 96	
97	SLU	Comb. SLU A1 97	
98	SLU	Comb. SLU A1 98	
99	SLU	Comb. SLU A1 99	
100	SLU	Comb. SLU A1 100	
101	SLU	Comb. SLU A1 101	
102	SLU	Comb. SLU A1 102	
103	SLU	Comb. SLU A1 103	
104	SLU	Comb. SLU A1 104	
105	SLU	Comb. SLU A1 105	
106	SLU	Comb. SLU A1 106	
107	SLU	Comb. SLU A1 107	
108	SLU	Comb. SLU A1 108	
109	SLU	Comb. SLU A1 109	
110	SLU	Comb. SLU A1 110	
111	SLU	Comb. SLU A1 111	
112	SLU	Comb. SLU A1 112	
113	SLU	Comb. SLU A1 113	
114	SLU	Comb. SLU A1 114	
115	SLU	Comb. SLU A1 115	
116	SLU	Comb. SLU A1 116	
117	SLU	Comb. SLU A1 117	
118	SLU	Comb. SLU A1 118	
119	SLU	Comb. SLU A1 119	
120	SLU	Comb. SLU A1 120	
121	SLU	Comb. SLU A1 121	
122	SLU	Comb. SLU A1 122	
123	SLU	Comb. SLU A1 123	
124	SLU	Comb. SLU A1 124	
125	SLU	Comb. SLU A1 125	
126	SLU	Comb. SLU A1 126	
127	SLU	Comb. SLU A1 127	
128	SLU	Comb. SLU A1 128	
129	SLU	Comb. SLU A1 129	
130	SLU	Comb. SLU A1 130	
131	SLU	Comb. SLU A1 131	
132	SLU	Comb. SLU A1 132	
133	SLU	Comb. SLU A1 133	
134	SLU	Comb. SLU A1 134	
135	SLU	Comb. SLU A1 135	
136	SLU	Comb. SLU A1 136	
137	SLU	Comb. SLU A1 137	
138	SLU	Comb. SLU A1 138	
139	SLU	Comb. SLU A1 139	
140	SLU	Comb. SLU A1 140	
141	SLU	Comb. SLU A1 141	
142	SLU	Comb. SLU A1 142	
143	SLU	Comb. SLU A1 143	
144	SLU	Comb. SLU A1 144	
145	SLU	Comb. SLU A1 145	
146	SLU	Comb. SLU A1 146	
147	SLU	Comb. SLU A1 147	
148	SLU	Comb. SLU A1 148	
149	SLU	Comb. SLU A1 149	
150	SLU	Comb. SLU A1 150	
151	SLU	Comb. SLU A1 151	
152	SLU	Comb. SLU A1 152	
153	SLU	Comb. SLU A1 153	
154	SLU	Comb. SLU A1 154	



**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 56 di 220
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Cmb	Tipo	Sigla Id	effetto P-delta
155	SLU	Comb. SLU A1 155	
156	SLU	Comb. SLU A1 156	
157	SLU	Comb. SLU A1 157	
158	SLU	Comb. SLU A1 158	
159	SLU	Comb. SLU A1 159	
160	SLU	Comb. SLU A1 160	
161	SLU	Comb. SLU A1 161	
162	SLU	Comb. SLU A1 162	
163	SLU	Comb. SLU A1 163	
164	SLU	Comb. SLU A1 164	
165	SLU	Comb. SLU A1 165	
166	SLU	Comb. SLU A1 166	
167	SLU	Comb. SLU A1 167	
168	SLU	Comb. SLU A1 168	
169	SLU	Comb. SLU A1 169	
170	SLU	Comb. SLU A1 170	
171	SLU	Comb. SLU A1 171	
172	SLU	Comb. SLU A1 172	
173	SLU	Comb. SLU A1 173	
174	SLU	Comb. SLU A1 174	
175	SLU	Comb. SLU A1 175	
176	SLU	Comb. SLU A1 176	
177	SLU	Comb. SLU A1 177	
178	SLU	Comb. SLU A1 178	
179	SLU	Comb. SLU A1 179	
180	SLU	Comb. SLU A1 180	
181	SLU	Comb. SLU A1 181	
182	SLU	Comb. SLU A1 182	
183	SLU	Comb. SLU A1 183	
184	SLU	Comb. SLU A1 184	
185	SLU	Comb. SLU A1 185	
186	SLU	Comb. SLU A1 186	
187	SLU	Comb. SLU A1 187	
188	SLU	Comb. SLU A1 188	
189	SLU	Comb. SLU A1 189	
190	SLU	Comb. SLU A1 190	
191	SLU	Comb. SLU A1 191	
192	SLU	Comb. SLU A1 192	
193	SLU	Comb. SLU A1 193	
194	SLU	Comb. SLU A1 194	
195	SLU	Comb. SLU A1 195	
196	SLU	Comb. SLU A1 196	
197	SLU	Comb. SLU A1 197	
198	SLU	Comb. SLU A1 198	
199	SLU	Comb. SLU A1 199	
200	SLU	Comb. SLU A1 200	
201	SLU	Comb. SLU A1 201	
202	SLU	Comb. SLU A1 202	
203	SLU	Comb. SLU A1 203	
204	SLU	Comb. SLU A1 204	
205	SLU	Comb. SLU A1 205	
206	SLU	Comb. SLU A1 206	
207	SLU	Comb. SLU A1 207	
208	SLU	Comb. SLU A1 208	
209	SLU	Comb. SLU A1 209	
210	SLU	Comb. SLU A1 210	
211	SLU	Comb. SLU A1 211	
212	SLU	Comb. SLU A1 212	
213	SLU	Comb. SLU A1 213	
214	SLU	Comb. SLU A1 214	
215	SLU	Comb. SLU A1 215	
216	SLU	Comb. SLU A1 216	
217	SLU	Comb. SLU A1 217	

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 57 di 220
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Cmb	Tipo	Sigla Id	effetto P-delta
218	SLU	Comb. SLU A1 218	
219	SLU	Comb. SLU A1 219	
220	SLU	Comb. SLU A1 220	
221	SLU	Comb. SLU A1 221	
222	SLU	Comb. SLU A1 222	
223	SLU	Comb. SLU A1 223	
224	SLU	Comb. SLU A1 224	
225	SLU	Comb. SLU A1 225	
226	SLU	Comb. SLU A1 226	
227	SLU	Comb. SLU A1 227	
228	SLU	Comb. SLU A1 228	
229	SLU	Comb. SLU A1 229	
230	SLU	Comb. SLU A1 230	
231	SLU	Comb. SLU A1 231	
232	SLU	Comb. SLU A1 232	
233	SLU	Comb. SLU A1 233	
234	SLU	Comb. SLU A1 234	
235	SLU	Comb. SLU A1 235	
236	SLU	Comb. SLU A1 236	
237	SLU	Comb. SLU A1 237	
238	SLU	Comb. SLU A1 238	
239	SLU	Comb. SLU A1 239	
240	SLU	Comb. SLU A1 240	
241	SLU	Comb. SLU A1 241	
242	SLU	Comb. SLU A1 242	
243	SLU	Comb. SLU A1 243	
244	SLU	Comb. SLU A1 244	
245	SLU	Comb. SLU A1 245	
246	SLU	Comb. SLU A1 246	
247	SLU	Comb. SLU A1 247	
248	SLU	Comb. SLU A1 248	
249	SLU	Comb. SLU A1 249	
250	SLU	Comb. SLU A1 250	
251	SLU	Comb. SLU A1 251	
252	SLU	Comb. SLU A1 252	
253	SLU	Comb. SLU A1 253	
254	SLU	Comb. SLU A1 254	
255	SLU	Comb. SLU A1 255	
256	SLU	Comb. SLU A1 256	
257	SLU	Comb. SLU A1 257	
258	SLU	Comb. SLU A1 258	
259	SLU	Comb. SLU A1 259	
260	SLU	Comb. SLU A1 260	
261	SLU	Comb. SLU A1 261	
262	SLU	Comb. SLU A1 262	
263	SLU	Comb. SLU A1 263	
264	SLU	Comb. SLU A1 264	
265	SLU	Comb. SLU A1 265	
266	SLU	Comb. SLU A1 266	
267	SLU	Comb. SLU A1 267	
268	SLU	Comb. SLU A1 268	
269	SLU	Comb. SLU A1 269	
270	SLU	Comb. SLU A1 270	
271	SLU	Comb. SLU A1 271	
272	SLU	Comb. SLU A1 272	
273	SLU	Comb. SLU A1 273	
274	SLU	Comb. SLU A1 274	
275	SLU	Comb. SLU A1 275	
276	SLU	Comb. SLU A1 276	
277	SLU	Comb. SLU A1 277	
278	SLU	Comb. SLU A1 278	
279	SLU	Comb. SLU A1 279	
280	SLU	Comb. SLU A1 280	

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 58 di 220

Cmb	Tipo	Sigla Id	effetto P-delta
281	SLU	Comb. SLU A1 281	
282	SLU	Comb. SLU A1 282	
283	SLU	Comb. SLU A1 283	
284	SLU	Comb. SLU A1 284	
285	SLU	Comb. SLU A1 285	
286	SLU	Comb. SLU A1 286	
287	SLU	Comb. SLU A1 287	
288	SLU	Comb. SLU A1 288	
289	SLU	Comb. SLU A1 289	
290	SLU	Comb. SLU A1 290	
291	SLU	Comb. SLU A1 291	
292	SLU	Comb. SLU A1 292	
293	SLU	Comb. SLU A1 293	
294	SLU	Comb. SLU A1 294	
295	SLU	Comb. SLU A1 295	
296	SLU	Comb. SLU A1 296	
297	SLU	Comb. SLU A1 297	
298	SLU	Comb. SLU A1 298	
299	SLU	Comb. SLU A1 299	
300	SLU	Comb. SLU A1 300	
301	SLU	Comb. SLU A1 301	
302	SLU	Comb. SLU A1 302	
303	SLU	Comb. SLU A1 303	
304	SLU	Comb. SLU A1 304	
305	SLU	Comb. SLU A1 305	
306	SLU	Comb. SLU A1 306	
307	SLU	Comb. SLU A1 307	
308	SLU	Comb. SLU A1 308	
309	SLU	Comb. SLU A1 309	
310	SLU	Comb. SLU A1 310	
311	SLU	Comb. SLU A1 311	
312	SLU	Comb. SLU A1 312	
313	SLU	Comb. SLU A1 313	
314	SLU	Comb. SLU A1 314	
315	SLU	Comb. SLU A1 315	
316	SLU	Comb. SLU A1 316	
317	SLU	Comb. SLU A1 317	
318	SLU	Comb. SLU A1 318	
319	SLU	Comb. SLU A1 319	
320	SLU	Comb. SLU A1 320	
321	SLU	Comb. SLU A1 (SLV sism.) 321	
322	SLU	Comb. SLU A1 (SLV sism.) 322	
323	SLU	Comb. SLU A1 (SLV sism.) 323	
324	SLU	Comb. SLU A1 (SLV sism.) 324	
325	SLU	Comb. SLU A1 (SLV sism.) 325	
326	SLU	Comb. SLU A1 (SLV sism.) 326	
327	SLU	Comb. SLU A1 (SLV sism.) 327	
328	SLU	Comb. SLU A1 (SLV sism.) 328	
329	SLU	Comb. SLU A1 (SLV sism.) 329	
330	SLU	Comb. SLU A1 (SLV sism.) 330	
331	SLU	Comb. SLU A1 (SLV sism.) 331	
332	SLU	Comb. SLU A1 (SLV sism.) 332	
333	SLU	Comb. SLU A1 (SLV sism.) 333	
334	SLU	Comb. SLU A1 (SLV sism.) 334	
335	SLU	Comb. SLU A1 (SLV sism.) 335	
336	SLU	Comb. SLU A1 (SLV sism.) 336	
337	SLU	Comb. SLU A1 (SLV sism.) 337	
338	SLU	Comb. SLU A1 (SLV sism.) 338	
339	SLU	Comb. SLU A1 (SLV sism.) 339	
340	SLU	Comb. SLU A1 (SLV sism.) 340	
341	SLU	Comb. SLU A1 (SLV sism.) 341	
342	SLU	Comb. SLU A1 (SLV sism.) 342	
343	SLU	Comb. SLU A1 (SLV sism.) 343	

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 59 di 220
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Cmb	Tipo	Sigla Id	effetto P-delta
344	SLU	Comb. SLU A1 (SLV sism.) 344	
345	SLU	Comb. SLU A1 (SLV sism.) 345	
346	SLU	Comb. SLU A1 (SLV sism.) 346	
347	SLU	Comb. SLU A1 (SLV sism.) 347	
348	SLU	Comb. SLU A1 (SLV sism.) 348	
349	SLU	Comb. SLU A1 (SLV sism.) 349	
350	SLU	Comb. SLU A1 (SLV sism.) 350	
351	SLU	Comb. SLU A1 (SLV sism.) 351	
352	SLU	Comb. SLU A1 (SLV sism.) 352	
353	SLD(sis)	Comb. SLE (SLD Danno sism.) 353	
354	SLD(sis)	Comb. SLE (SLD Danno sism.) 354	
355	SLD(sis)	Comb. SLE (SLD Danno sism.) 355	
356	SLD(sis)	Comb. SLE (SLD Danno sism.) 356	
357	SLD(sis)	Comb. SLE (SLD Danno sism.) 357	
358	SLD(sis)	Comb. SLE (SLD Danno sism.) 358	
359	SLD(sis)	Comb. SLE (SLD Danno sism.) 359	
360	SLD(sis)	Comb. SLE (SLD Danno sism.) 360	
361	SLD(sis)	Comb. SLE (SLD Danno sism.) 361	
362	SLD(sis)	Comb. SLE (SLD Danno sism.) 362	
363	SLD(sis)	Comb. SLE (SLD Danno sism.) 363	
364	SLD(sis)	Comb. SLE (SLD Danno sism.) 364	
365	SLD(sis)	Comb. SLE (SLD Danno sism.) 365	
366	SLD(sis)	Comb. SLE (SLD Danno sism.) 366	
367	SLD(sis)	Comb. SLE (SLD Danno sism.) 367	
368	SLD(sis)	Comb. SLE (SLD Danno sism.) 368	
369	SLD(sis)	Comb. SLE (SLD Danno sism.) 369	
370	SLD(sis)	Comb. SLE (SLD Danno sism.) 370	
371	SLD(sis)	Comb. SLE (SLD Danno sism.) 371	
372	SLD(sis)	Comb. SLE (SLD Danno sism.) 372	
373	SLD(sis)	Comb. SLE (SLD Danno sism.) 373	
374	SLD(sis)	Comb. SLE (SLD Danno sism.) 374	
375	SLD(sis)	Comb. SLE (SLD Danno sism.) 375	
376	SLD(sis)	Comb. SLE (SLD Danno sism.) 376	
377	SLD(sis)	Comb. SLE (SLD Danno sism.) 377	
378	SLD(sis)	Comb. SLE (SLD Danno sism.) 378	
379	SLD(sis)	Comb. SLE (SLD Danno sism.) 379	
380	SLD(sis)	Comb. SLE (SLD Danno sism.) 380	
381	SLD(sis)	Comb. SLE (SLD Danno sism.) 381	
382	SLD(sis)	Comb. SLE (SLD Danno sism.) 382	
383	SLD(sis)	Comb. SLE (SLD Danno sism.) 383	
384	SLD(sis)	Comb. SLE (SLD Danno sism.) 384	
385	SLU(acc.)	Comb. SLU (Accid.) 385	
386	SLU(acc.)	Comb. SLU (Accid.) 386	
387	SLU(acc.)	Comb. SLU (Accid.) 387	
388	SLU(acc.)	Comb. SLU (Accid.) 388	
389	SLU(acc.)	Comb. SLU (Accid.) 389	
390	SLU(acc.)	Comb. SLU (Accid.) 390	
391	SLU(acc.)	Comb. SLU (Accid.) 391	
392	SLU(acc.)	Comb. SLU (Accid.) 392	
393	SLU(acc.)	Comb. SLU (Accid.) 393	
394	SLU(acc.)	Comb. SLU (Accid.) 394	
395	SLU(acc.)	Comb. SLU (Accid.) 395	
396	SLU(acc.)	Comb. SLU (Accid.) 396	
397	SLU(acc.)	Comb. SLU (Accid.) 397	
398	SLU(acc.)	Comb. SLU (Accid.) 398	
399	SLU(acc.)	Comb. SLU (Accid.) 399	
400	SLU(acc.)	Comb. SLU (Accid.) 400	
401	SLE(p)	Comb. SLE(perm.) 401	
402	SLE(p)	Comb. SLE(perm.) 402	
403	SLE(p)	Comb. SLE(perm.) 403	
404	SLE(p)	Comb. SLE(perm.) 404	
405	SLE(p)	Comb. SLE(perm.) 405	
406	SLE(p)	Comb. SLE(perm.) 406	

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 60 di 220

Cmb	Tipo	Sigla Id	effetto P-delta
407	SLE(p)	Comb. SLE(perm.) 407	
408	SLE(p)	Comb. SLE(perm.) 408	
409	SLE(p)	Comb. SLE(perm.) 409	
410	SLE(p)	Comb. SLE(perm.) 410	
411	SLE(p)	Comb. SLE(perm.) 411	
412	SLE(p)	Comb. SLE(perm.) 412	
413	SLE(p)	Comb. SLE(perm.) 413	
414	SLE(p)	Comb. SLE(perm.) 414	
415	SLE(p)	Comb. SLE(perm.) 415	
416	SLE(p)	Comb. SLE(perm.) 416	
417	SLE(f)	Comb. SLE(freq.) 417	
418	SLE(f)	Comb. SLE(freq.) 418	
419	SLE(f)	Comb. SLE(freq.) 419	
420	SLE(f)	Comb. SLE(freq.) 420	
421	SLE(f)	Comb. SLE(freq.) 421	
422	SLE(f)	Comb. SLE(freq.) 422	
423	SLE(f)	Comb. SLE(freq.) 423	
424	SLE(f)	Comb. SLE(freq.) 424	
425	SLE(f)	Comb. SLE(freq.) 425	
426	SLE(f)	Comb. SLE(freq.) 426	
427	SLE(f)	Comb. SLE(freq.) 427	
428	SLE(f)	Comb. SLE(freq.) 428	
429	SLE(f)	Comb. SLE(freq.) 429	
430	SLE(f)	Comb. SLE(freq.) 430	
431	SLE(f)	Comb. SLE(freq.) 431	
432	SLE(f)	Comb. SLE(freq.) 432	
433	SLE(f)	Comb. SLE(freq.) 433	
434	SLE(f)	Comb. SLE(freq.) 434	
435	SLE(f)	Comb. SLE(freq.) 435	
436	SLE(f)	Comb. SLE(freq.) 436	
437	SLE(f)	Comb. SLE(freq.) 437	
438	SLE(f)	Comb. SLE(freq.) 438	
439	SLE(f)	Comb. SLE(freq.) 439	
440	SLE(f)	Comb. SLE(freq.) 440	
441	SLE(f)	Comb. SLE(freq.) 441	
442	SLE(f)	Comb. SLE(freq.) 442	
443	SLE(f)	Comb. SLE(freq.) 443	
444	SLE(f)	Comb. SLE(freq.) 444	
445	SLE(f)	Comb. SLE(freq.) 445	
446	SLE(f)	Comb. SLE(freq.) 446	
447	SLE(f)	Comb. SLE(freq.) 447	
448	SLE(f)	Comb. SLE(freq.) 448	
449	SLE(f)	Comb. SLE(freq.) 449	
450	SLE(f)	Comb. SLE(freq.) 450	
451	SLE(f)	Comb. SLE(freq.) 451	
452	SLE(f)	Comb. SLE(freq.) 452	
453	SLE(f)	Comb. SLE(freq.) 453	
454	SLE(f)	Comb. SLE(freq.) 454	
455	SLE(f)	Comb. SLE(freq.) 455	
456	SLE(f)	Comb. SLE(freq.) 456	
457	SLE(f)	Comb. SLE(freq.) 457	
458	SLE(f)	Comb. SLE(freq.) 458	
459	SLE(f)	Comb. SLE(freq.) 459	
460	SLE(f)	Comb. SLE(freq.) 460	
461	SLE(f)	Comb. SLE(freq.) 461	
462	SLE(f)	Comb. SLE(freq.) 462	
463	SLE(f)	Comb. SLE(freq.) 463	
464	SLE(f)	Comb. SLE(freq.) 464	
465	SLE(f)	Comb. SLE(freq.) 465	
466	SLE(f)	Comb. SLE(freq.) 466	
467	SLE(f)	Comb. SLE(freq.) 467	
468	SLE(f)	Comb. SLE(freq.) 468	
469	SLE(f)	Comb. SLE(freq.) 469	

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 61 di 220

Cmb	Tipo	Sigla Id	effetto P-delta
470	SLE(f)	Comb. SLE(freq.) 470	
471	SLE(f)	Comb. SLE(freq.) 471	
472	SLE(f)	Comb. SLE(freq.) 472	
473	SLE(f)	Comb. SLE(freq.) 473	
474	SLE(f)	Comb. SLE(freq.) 474	
475	SLE(f)	Comb. SLE(freq.) 475	
476	SLE(f)	Comb. SLE(freq.) 476	
477	SLE(f)	Comb. SLE(freq.) 477	
478	SLE(f)	Comb. SLE(freq.) 478	
479	SLE(f)	Comb. SLE(freq.) 479	
480	SLE(f)	Comb. SLE(freq.) 480	
481	SLE(f)	Comb. SLE(freq.) 481	
482	SLE(f)	Comb. SLE(freq.) 482	
483	SLE(f)	Comb. SLE(freq.) 483	
484	SLE(f)	Comb. SLE(freq.) 484	
485	SLE(f)	Comb. SLE(freq.) 485	
486	SLE(f)	Comb. SLE(freq.) 486	
487	SLE(f)	Comb. SLE(freq.) 487	
488	SLE(f)	Comb. SLE(freq.) 488	
489	SLE(f)	Comb. SLE(freq.) 489	
490	SLE(f)	Comb. SLE(freq.) 490	
491	SLE(f)	Comb. SLE(freq.) 491	
492	SLE(f)	Comb. SLE(freq.) 492	
493	SLE(f)	Comb. SLE(freq.) 493	
494	SLE(f)	Comb. SLE(freq.) 494	
495	SLE(f)	Comb. SLE(freq.) 495	
496	SLE(f)	Comb. SLE(freq.) 496	
497	SLE(f)	Comb. SLE(freq.) 497	
498	SLE(f)	Comb. SLE(freq.) 498	
499	SLE(f)	Comb. SLE(freq.) 499	
500	SLE(f)	Comb. SLE(freq.) 500	
501	SLE(f)	Comb. SLE(freq.) 501	
502	SLE(f)	Comb. SLE(freq.) 502	
503	SLE(f)	Comb. SLE(freq.) 503	
504	SLE(f)	Comb. SLE(freq.) 504	
505	SLE(f)	Comb. SLE(freq.) 505	
506	SLE(f)	Comb. SLE(freq.) 506	
507	SLE(f)	Comb. SLE(freq.) 507	
508	SLE(f)	Comb. SLE(freq.) 508	
509	SLE(f)	Comb. SLE(freq.) 509	
510	SLE(f)	Comb. SLE(freq.) 510	
511	SLE(f)	Comb. SLE(freq.) 511	
512	SLE(f)	Comb. SLE(freq.) 512	
513	SLE(r)	Comb. SLE(rara) 513	
514	SLE(r)	Comb. SLE(rara) 514	
515	SLE(r)	Comb. SLE(rara) 515	
516	SLE(r)	Comb. SLE(rara) 516	
517	SLE(r)	Comb. SLE(rara) 517	
518	SLE(r)	Comb. SLE(rara) 518	
519	SLE(r)	Comb. SLE(rara) 519	
520	SLE(r)	Comb. SLE(rara) 520	
521	SLE(r)	Comb. SLE(rara) 521	
522	SLE(r)	Comb. SLE(rara) 522	
523	SLE(r)	Comb. SLE(rara) 523	
524	SLE(r)	Comb. SLE(rara) 524	
525	SLE(r)	Comb. SLE(rara) 525	
526	SLE(r)	Comb. SLE(rara) 526	
527	SLE(r)	Comb. SLE(rara) 527	
528	SLE(r)	Comb. SLE(rara) 528	
529	SLE(r)	Comb. SLE(rara) 529	
530	SLE(r)	Comb. SLE(rara) 530	
531	SLE(r)	Comb. SLE(rara) 531	
532	SLE(r)	Comb. SLE(rara) 532	

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 62 di 220

Cmb	Tipo	Sigla Id	effetto P-delta
533	SLE(r)	Comb. SLE(rara) 533	
534	SLE(r)	Comb. SLE(rara) 534	
535	SLE(r)	Comb. SLE(rara) 535	
536	SLE(r)	Comb. SLE(rara) 536	
537	SLE(r)	Comb. SLE(rara) 537	
538	SLE(r)	Comb. SLE(rara) 538	
539	SLE(r)	Comb. SLE(rara) 539	
540	SLE(r)	Comb. SLE(rara) 540	
541	SLE(r)	Comb. SLE(rara) 541	
542	SLE(r)	Comb. SLE(rara) 542	
543	SLE(r)	Comb. SLE(rara) 543	
544	SLE(r)	Comb. SLE(rara) 544	
545	SLE(r)	Comb. SLE(rara) 545	
546	SLE(r)	Comb. SLE(rara) 546	
547	SLE(r)	Comb. SLE(rara) 547	
548	SLE(r)	Comb. SLE(rara) 548	
549	SLE(r)	Comb. SLE(rara) 549	
550	SLE(r)	Comb. SLE(rara) 550	
551	SLE(r)	Comb. SLE(rara) 551	
552	SLE(r)	Comb. SLE(rara) 552	
553	SLE(r)	Comb. SLE(rara) 553	
554	SLE(r)	Comb. SLE(rara) 554	
555	SLE(r)	Comb. SLE(rara) 555	
556	SLE(r)	Comb. SLE(rara) 556	
557	SLE(r)	Comb. SLE(rara) 557	
558	SLE(r)	Comb. SLE(rara) 558	
559	SLE(r)	Comb. SLE(rara) 559	
560	SLE(r)	Comb. SLE(rara) 560	
561	SLE(r)	Comb. SLE(rara) 561	
562	SLE(r)	Comb. SLE(rara) 562	
563	SLE(r)	Comb. SLE(rara) 563	
564	SLE(r)	Comb. SLE(rara) 564	
565	SLE(r)	Comb. SLE(rara) 565	
566	SLE(r)	Comb. SLE(rara) 566	
567	SLE(r)	Comb. SLE(rara) 567	
568	SLE(r)	Comb. SLE(rara) 568	
569	SLE(r)	Comb. SLE(rara) 569	
570	SLE(r)	Comb. SLE(rara) 570	
571	SLE(r)	Comb. SLE(rara) 571	
572	SLE(r)	Comb. SLE(rara) 572	
573	SLE(r)	Comb. SLE(rara) 573	
574	SLE(r)	Comb. SLE(rara) 574	
575	SLE(r)	Comb. SLE(rara) 575	
576	SLE(r)	Comb. SLE(rara) 576	
577	SLE(r)	Comb. SLE(rara) 577	
578	SLE(r)	Comb. SLE(rara) 578	
579	SLE(r)	Comb. SLE(rara) 579	
580	SLE(r)	Comb. SLE(rara) 580	
581	SLE(r)	Comb. SLE(rara) 581	
582	SLE(r)	Comb. SLE(rara) 582	
583	SLE(r)	Comb. SLE(rara) 583	
584	SLE(r)	Comb. SLE(rara) 584	
585	SLE(r)	Comb. SLE(rara) 585	
586	SLE(r)	Comb. SLE(rara) 586	
587	SLE(r)	Comb. SLE(rara) 587	
588	SLE(r)	Comb. SLE(rara) 588	
589	SLE(r)	Comb. SLE(rara) 589	
590	SLE(r)	Comb. SLE(rara) 590	
591	SLE(r)	Comb. SLE(rara) 591	
592	SLE(r)	Comb. SLE(rara) 592	
593	SLE(r)	Comb. SLE(rara) 593	
594	SLE(r)	Comb. SLE(rara) 594	
595	SLE(r)	Comb. SLE(rara) 595	

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 63 di 220

Cmb	Tipo	Sigla Id	effetto P-delta
596	SLE(r)	Comb. SLE(rara) 596	
597	SLE(r)	Comb. SLE(rara) 597	
598	SLE(r)	Comb. SLE(rara) 598	
599	SLE(r)	Comb. SLE(rara) 599	
600	SLE(r)	Comb. SLE(rara) 600	
601	SLE(r)	Comb. SLE(rara) 601	
602	SLE(r)	Comb. SLE(rara) 602	
603	SLE(r)	Comb. SLE(rara) 603	
604	SLE(r)	Comb. SLE(rara) 604	
605	SLE(r)	Comb. SLE(rara) 605	
606	SLE(r)	Comb. SLE(rara) 606	
607	SLE(r)	Comb. SLE(rara) 607	
608	SLE(r)	Comb. SLE(rara) 608	
609	SLE(r)	Comb. SLE(rara) 609	
610	SLE(r)	Comb. SLE(rara) 610	
611	SLE(r)	Comb. SLE(rara) 611	
612	SLE(r)	Comb. SLE(rara) 612	
613	SLE(r)	Comb. SLE(rara) 613	
614	SLE(r)	Comb. SLE(rara) 614	
615	SLE(r)	Comb. SLE(rara) 615	
616	SLE(r)	Comb. SLE(rara) 616	
617	SLE(r)	Comb. SLE(rara) 617	
618	SLE(r)	Comb. SLE(rara) 618	
619	SLE(r)	Comb. SLE(rara) 619	
620	SLE(r)	Comb. SLE(rara) 620	
621	SLE(r)	Comb. SLE(rara) 621	
622	SLE(r)	Comb. SLE(rara) 622	
623	SLE(r)	Comb. SLE(rara) 623	
624	SLE(r)	Comb. SLE(rara) 624	
625	SLE(r)	Comb. SLE(rara) 625	
626	SLE(r)	Comb. SLE(rara) 626	
627	SLE(r)	Comb. SLE(rara) 627	
628	SLE(r)	Comb. SLE(rara) 628	
629	SLE(r)	Comb. SLE(rara) 629	
630	SLE(r)	Comb. SLE(rara) 630	
631	SLE(r)	Comb. SLE(rara) 631	
632	SLE(r)	Comb. SLE(rara) 632	
633	SLE(r)	Comb. SLE(rara) 633	
634	SLE(r)	Comb. SLE(rara) 634	
635	SLE(r)	Comb. SLE(rara) 635	
636	SLE(r)	Comb. SLE(rara) 636	
637	SLE(r)	Comb. SLE(rara) 637	
638	SLE(r)	Comb. SLE(rara) 638	
639	SLE(r)	Comb. SLE(rara) 639	
640	SLE(r)	Comb. SLE(rara) 640	
641	SLE(r)	Comb. SLE(rara) 641	
642	SLE(r)	Comb. SLE(rara) 642	
643	SLE(r)	Comb. SLE(rara) 643	
644	SLE(r)	Comb. SLE(rara) 644	
645	SLE(r)	Comb. SLE(rara) 645	
646	SLE(r)	Comb. SLE(rara) 646	
647	SLE(r)	Comb. SLE(rara) 647	
648	SLE(r)	Comb. SLE(rara) 648	
649	SLE(r)	Comb. SLE(rara) 649	
650	SLE(r)	Comb. SLE(rara) 650	
651	SLE(r)	Comb. SLE(rara) 651	
652	SLE(r)	Comb. SLE(rara) 652	
653	SLE(r)	Comb. SLE(rara) 653	
654	SLE(r)	Comb. SLE(rara) 654	
655	SLE(r)	Comb. SLE(rara) 655	
656	SLE(r)	Comb. SLE(rara) 656	
657	SLE(r)	Comb. SLE(rara) 657	
658	SLE(r)	Comb. SLE(rara) 658	



**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 64 di 220

Cmb	Tipo	Sigla Id	effetto P-delta
659	SLE(r)	Comb. SLE(rara) 659	
660	SLE(r)	Comb. SLE(rara) 660	
661	SLE(r)	Comb. SLE(rara) 661	
662	SLE(r)	Comb. SLE(rara) 662	
663	SLE(r)	Comb. SLE(rara) 663	
664	SLE(r)	Comb. SLE(rara) 664	
665	SLE(r)	Comb. SLE(rara) 665	
666	SLE(r)	Comb. SLE(rara) 666	
667	SLE(r)	Comb. SLE(rara) 667	
668	SLE(r)	Comb. SLE(rara) 668	
669	SLE(r)	Comb. SLE(rara) 669	
670	SLE(r)	Comb. SLE(rara) 670	
671	SLE(r)	Comb. SLE(rara) 671	
672	SLE(r)	Comb. SLE(rara) 672	

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
1	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	0.0											
2	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	1.50											
3	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	0.0											
4	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	1.50											
5	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	0.0											
6	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	1.50											
7	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	0.0											
8	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	1.50											
9	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	0.0											
10	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	1.50											
11	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	0.0											
12	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	1.50											
13	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	0.0											
14	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	1.50											
15	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	0.0											
16	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	1.50											
17	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	0.0											
18	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	1.50											
19	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	0.0											
20	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	1.50											
21	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	0.0											
22	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	1.50											
23	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 65 di 220

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	1.50	1.50	0.0											
24	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	1.50											
25	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	0.0											
26	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	1.50											
27	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	0.0											
28	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	1.50											
29	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	0.0											
30	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	1.50											
31	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	0.0											
32	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	1.50											
33	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	0.0											
34	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	1.50											
35	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	0.0											
36	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	1.50											
37	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	0.0											
38	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	1.50											
39	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	0.0											
40	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	1.50											
41	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	0.0											
42	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	1.50											
43	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	0.0											
44	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	1.50											
45	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	0.0											
46	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	1.50											
47	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	0.0											
48	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	1.50											
49	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	0.0											
50	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	1.50											
51	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	0.0											
52	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	1.50											
53	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	0.0											
54	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 66 di 220

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	1.50	0.0	1.50											
55	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	0.0											
56	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	1.50											
57	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	0.0											
58	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	1.50											
59	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	0.0											
60	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	1.50											
61	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	0.0											
62	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	1.50											
63	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	0.0											
64	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	1.50											
65	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	0.0											
66	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	1.50											
67	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	0.0											
68	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	1.50											
69	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	0.0											
70	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	1.50											
71	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	0.0											
72	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	1.50											
73	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	0.0											
74	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	1.50											
75	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	0.0											
76	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	1.50											
77	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	0.0											
78	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	1.50											
79	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	0.0											
80	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	1.50											
81	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	0.0											
82	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	1.50											
83	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	0.0											
84	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	1.50											
85	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 67 di 220

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	1.50	0.0	0.0											
86	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	1.50											
87	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	0.0											
88	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	1.50											
89	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	0.0											
90	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	1.50											
91	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	0.0											
92	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	1.50											
93	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	0.0											
94	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	1.50											
95	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	0.0											
96	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	1.50											
97	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	0.0											
98	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	1.50											
99	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	0.0											
100	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	1.50											
101	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	0.0											
102	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	1.50											
103	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	0.0											
104	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	1.50											
105	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	0.0											
106	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	1.50											
107	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	0.0											
108	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	1.50											
109	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	0.0											
110	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	1.50											
111	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	0.0											
112	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	1.50											
113	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	0.0											
114	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	1.50											
115	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	0.0											
116	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 68 di 220

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	0.0	1.50	1.50											
117	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	0.0											
118	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	1.50											
119	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	0.0											
120	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	1.50											
121	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	0.0											
122	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	1.50											
123	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	0.0											
124	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	1.50											
125	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	0.0											
126	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	1.50											
127	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	0.0											
128	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	1.50											
129	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	0.0											
130	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	1.50											
131	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	0.0											
132	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	1.50											
133	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	0.0											
134	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	1.50											
135	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	0.0											
136	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	1.50											
137	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	0.0											
138	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	1.50											
139	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	0.0											
140	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	1.50											
141	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	0.0											
142	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	1.50											
143	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	0.0											
144	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	1.50											
145	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	0.0											
146	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	1.50											
147	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 69 di 220

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	0.0	1.50	0.0											
148	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	1.50											
149	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	0.0											
150	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	1.50											
151	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	0.0											
152	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	1.50											
153	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	0.0											
154	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	1.50											
155	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	0.0											
156	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	1.50											
157	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	0.0											
158	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	1.50											
159	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	0.0											
160	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	1.50											
161	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	0.0											
162	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	0.0	1.50											
163	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	0.0											
164	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	0.0	1.50	1.50											
165	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	0.0											
166	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	0.0	1.50											
167	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	0.0											
168	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.90
	1.50	1.50	1.50											
169	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	0.0											
170	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	0.0	1.50											
171	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	0.0											
172	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	0.0	1.50	1.50											
173	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	0.0											
174	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	0.0	1.50											
175	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	0.0											
176	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90
	1.50	1.50	1.50											
177	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	0.0	0.0											
178	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 70 di 220

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	0.0	0.0	1.50											
179	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	0.0											
180	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	0.0	1.50	1.50											
181	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	0.0											
182	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	0.0	1.50											
183	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	0.0											
184	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-0.90
	1.50	1.50	1.50											
185	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	0.0											
186	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	0.0	1.50											
187	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	0.0											
188	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	0.0	1.50	1.50											
189	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	0.0											
190	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	0.0	1.50											
191	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	0.0											
192	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	0.90
	1.50	1.50	1.50											
193	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
	0.0	0.0	0.0											
194	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
	0.0	0.0	1.50											
195	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
	0.0	1.50	0.0											
196	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
	0.0	1.50	1.50											
197	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
	1.50	0.0	0.0											
198	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
	1.50	0.0	1.50											
199	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
	1.50	1.50	0.0											
200	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.50
	1.50	1.50	1.50											
201	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.0	0.0											
202	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.0	1.50											
203	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	1.50	0.0											
204	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	1.50	1.50											
205	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	1.50	0.0	0.0											
206	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	1.50	0.0	1.50											
207	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	1.50	1.50	0.0											
208	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	1.50	1.50	1.50											
209	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50









**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 74 di 220

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	1.50	0.0	1.50											
303	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	1.50	1.50	0.0											
304	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	1.50	1.50	1.50											
305	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
	0.0	0.0	0.0											
306	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
	0.0	0.0	1.50											
307	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
	0.0	1.50	0.0											
308	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
	0.0	1.50	1.50											
309	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
	1.50	0.0	0.0											
310	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
	1.50	0.0	1.50											
311	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
	1.50	1.50	0.0											
312	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	-1.50
	1.50	1.50	1.50											
313	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.0	0.0											
314	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.0	1.50											
315	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	1.50	0.0											
316	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	1.50	1.50											
317	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	1.50	0.0	0.0											
318	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	1.50	0.0	1.50											
319	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	1.50	1.50	0.0											
320	1.00	1.00	0.80	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	1.50	1.50	1.50											
321	1.00	1.00	1.00	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
322	1.00	1.00	1.00	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
323	1.00	1.00	1.00	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
324	1.00	1.00	1.00	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
325	1.00	1.00	1.00	0.0	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
326	1.00	1.00	1.00	0.0	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
327	1.00	1.00	1.00	0.0	1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
328	1.00	1.00	1.00	0.0	1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
329	1.00	1.00	1.00	0.0	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
330	1.00	1.00	1.00	0.0	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
331	1.00	1.00	1.00	0.0	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
332	1.00	1.00	1.00	0.0	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
333	1.00	1.00	1.00	0.0	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.80	0.0

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 75 di 220

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	0.80	0.80	0.80											
334	1.00	1.00	1.00	0.0	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
335	1.00	1.00	1.00	0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
336	1.00	1.00	1.00	0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
337	1.00	1.00	1.00	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
338	1.00	1.00	1.00	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
339	1.00	1.00	1.00	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
340	1.00	1.00	1.00	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
341	1.00	1.00	1.00	0.0	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
342	1.00	1.00	1.00	0.0	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
343	1.00	1.00	1.00	0.0	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
344	1.00	1.00	1.00	0.0	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
345	1.00	1.00	1.00	0.0	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
346	1.00	1.00	1.00	0.0	-0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
347	1.00	1.00	1.00	0.0	0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
348	1.00	1.00	1.00	0.0	0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
349	1.00	1.00	1.00	0.0	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
350	1.00	1.00	1.00	0.0	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
351	1.00	1.00	1.00	0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
352	1.00	1.00	1.00	0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.80	0.0
	0.80	0.80	0.80											
353	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0	0.80	0.0
	0.80	0.80	0.80											
354	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0	0.80	0.0
	0.80	0.80	0.80											
355	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0	0.80	0.0
	0.80	0.80	0.80											
356	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0	0.80	0.0
	0.80	0.80	0.80											
357	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	-0.30	0.80	0.0
	0.80	0.80	0.80											
358	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	0.30	0.80	0.0
	0.80	0.80	0.80											
359	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	-0.30	0.80	0.0
	0.80	0.80	0.80											
360	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.30	0.80	0.0
	0.80	0.80	0.80											
361	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	-0.30	0.0	0.80	0.0
	0.80	0.80	0.80											
362	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.30	0.0	0.80	0.0
	0.80	0.80	0.80											
363	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.00	-0.30	0.0	0.80	0.0
	0.80	0.80	0.80											
364	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.30	0.0	0.80	0.0























**VERIFICHE PER ELEMENTI IN ACCIAIO**
**LEGENDA TABELLA VERIFICHE PER ELEMENTI IN ACCIAIO**

*Il programma consente la verifica dei seguenti tipi di elementi:*

**1. aste                      2. travi                      3. pilastri**

*L'esito delle verifiche è espresso con un codice come di seguito indicato*

**Ok:**            *verifica con esito positivo*

**NV:**           *verifica con esito negativo*

**Nr:**           *verifica non richiesta.*

*Per comodità gli elementi vengono raggruppati in tabelle in relazione al tipo.*

*Ai fini delle verifiche (come da D.M. 17 Gennaio 2018 e circolare 21 Gennaio 2019 n.7) i tipi elementi differiscono per i seguenti aspetti:*

<b>Verifica</b>	<b>Aste</b>	<b>Travi</b>	<b>Pilastri</b>
4.2.3.1 <i>Classificazione</i>	X	X	X
4.2.4.1.2.1 <i>Trazione</i>	X	X	X
4.2.4.1.2.2 <i>Compressione</i>	X	X	X
4.2.4.1.2.4 <i>Taglio</i>		X	X
4.2.4.1.2.5 <i>Torsione</i>		X	X
<i>Flessione, taglio e forza assiale</i>		X	X
4.2.4.1.3.1 <i>Aste compresse</i>	X	X	X
4.2.4.1.3.2 <i>Instabilità flessio-torsionale</i>		X	X
4.2.4.1.3.3 <i>Membrature inflesse e compresse</i>		X	X

*Ai fini delle verifiche per strutture dissipative (come da D.M. 17 Gennaio 2018 e 2018 e circolare 21 Gennaio 2019 n.7) per strutture intelaiate e a controventi concentrici) si considerano le verifiche del capitolo 4 con azioni amplificate e le verifiche del capitolo 7:*

<b>Verifica</b>	<b>Travi</b>	<b>Pilastri</b>
4.2.4.1.2.1 <i>Trazione</i>	X	X
4.2.4.1.2.2 <i>Compressione</i>	X	X
4.2.4.1.2.4 <i>Taglio</i>	X	X
4.2.4.1.2.5 <i>Torsione</i>	X	X
<i>Flessione, taglio e forza assiale</i>	X	X
4.2.4.1.3.1 <i>Aste compresse</i>	X	X
4.2.4.1.3.2 <i>Instabilità flessio-torsionale</i>	X	X

4.2.4.1.3.3	Membrature inflesse e compresse	X	X
7.5.3	Sfruttamento per momento	X	
7.5.4	Sfruttamento per sforzo normale	X	
7.5.5	Sfruttamento per taglio da capacità flessionale	X	
7.5.9	Sfruttamento per taglio amplificato		X

Viene inoltre riportata la verifica della “Gerarchia delle resistenze trave-colonna” per ogni colonna, considerando piede e testa in entrambe le direzioni globali X e Y.

L’insieme delle verifiche sopra riportate è condotto sugli elementi purché dotati di sezione idonea come da tabella seguente:

Azione	SEZIONI GENERICHE	PROFILI SEMPLICI	PROFILI ACCOPPIATI
4.2.3.1 Classificazione automatica	L, doppio T, C, rettangolare cava, circolare cava	Tutti	Da profilo semplice
4.2.3.1 Classificazione di default 2	Circolare		
4.2.3.1 Classificazione di default 3	restanti		
4.2.4.1.2.1 Trazione	si	si	si
4.2.4.1.2.2 Compressione	si	si	si
4.2.4.1.2.4 Taglio	si	si	si
4.2.4.1.2.5 Torsione	si	si	si
Flessione, taglio e forza assiale	si	si	si
4.2.4.1.3.1 Aste compresse	si	si	per elementi ravvicinati e a croce o coppie calastrellate
4.2.4.1.3.2 Travi inflesse	doppio T simmetrica	doppio T	no

Le verifiche sono riportate in tabelle con il significato sotto indicato; le verifiche sono espresse dal rapporto tra l’azione di progetto e la capacità ultima, pertanto la verifica ha esito positivo per rapporti non superiori all’unità.

Asta	Trave	Pilastro	numero dell’elemento
	<b>Stato</b>		codice di verifica per resistenza, stabilità, svergolamento
	<b>Note</b>		sezione e materiali adottati per l’elemento
	<b>V N</b>		(ASTE) verifica come da par. 4.2.4.1.2 per punto (4.2.6) e (4.2.10)
	<b>V V/T</b>		(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni taglio-torsione (4.2.16 e 4.2.28)
	<b>V N/M</b>		(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni composte (4.2.33) con riduzione per taglio (4.2.40) ove richiesto





**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 89 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	58,60,0,8
2	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,7,0,8
3	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	8,7,0,8
4	ok	s=5,m=12	0.05	0.08		1					0.08	7.03e-02	1.00	47,7,0,8
5	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	41,7,0,8
6	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	41,46,0,8
7	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	47,44,0,47
8	ok	s=4,m=12	0.03	0.06		1					0.06	2.78e-02	1.00	48,8,0,8
9	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	60,66,0,8
10	ok	s=4,m=12	0.03	0.06		1					0.05	6.48e-02	1.00	45,8,0,8
11	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	45,8,0,8
12	ok	s=4,m=12	0.04	0.06		1					0.06	6.29e-02	1.00	45,8,0,8
13	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,7,0,8
14	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
37	ok	s=6,m=12	0.10	0.34		1					0.33	3.31e-02	1.00	8,32,0,32
38	ok	s=6,m=12	0.11	0.52		1					0.49	3.99e-02	1.00	8,8,0,8
39	ok	s=6,m=12	0.11	0.48		1					0.45	3.97e-02	1.00	45,8,0,8
40	ok	s=6,m=12	0.11	0.42		1					0.39	4.00e-02	1.00	54,8,0,8
41	ok	s=6,m=12	0.11	0.51		1					0.47	4.11e-02	1.00	8,8,0,8
42	ok	s=6,m=12	0.11	0.47		1					0.43	4.10e-02	1.00	7,8,0,8
43	ok	s=6,m=12	0.11	0.48		1					0.45	4.17e-02	1.00	7,7,0,7
44	ok	s=6,m=12	0.11	0.48		1					0.46	4.20e-02	1.00	7,7,0,7
45	ok	s=6,m=12	0.11	0.48		1					0.46	4.22e-02	1.00	7,7,0,7
46	ok	s=6,m=12	0.12	0.56		1					0.54	4.26e-02	1.00	7,7,0,7
47	ok	s=6,m=12	0.11	0.37		1					0.35	3.20e-02	1.00	8,8,0,8
48	ok	s=6,m=12	0.12	0.56		1					0.53	4.00e-02	1.00	8,8,0,8
49	ok	s=6,m=12	0.12	0.52		1					0.48	3.97e-02	1.00	8,8,0,8
50	ok	s=6,m=12	0.11	0.46		1					0.43	4.00e-02	1.00	8,8,0,8
51	ok	s=6,m=12	0.12	0.54		1					0.52	4.11e-02	1.00	8,8,0,8
52	ok	s=6,m=12	0.12	0.51		1					0.48	4.10e-02	1.00	7,8,0,8
53	ok	s=6,m=12	0.12	0.51		1					0.49	4.16e-02	1.00	7,7,0,7
54	ok	s=6,m=12	0.12	0.52		1					0.50	4.19e-02	1.00	7,7,0,7
55	ok	s=6,m=12	0.12	0.52		1					0.50	4.22e-02	1.00	7,7,0,7
56	ok	s=6,m=12	0.13	0.60		1					0.58	4.26e-02	1.00	7,7,0,7
59	ok	s=2,m=12	0.03	0.05		1					0.02	0.2	1.00	58,60,0,8
60	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,8,0,8
61	ok	s=4,m=12	0.05	0.11		1					0.09	6.59e-02	1.00	7,8,0,7
62	ok	s=5,m=12	0.05	0.08		1					0.08	7.03e-02	1.00	47,7,0,7
63	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	41,7,0,7
64	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
65	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
66	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	7,8,0,8
67	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	68,66,0,8
68	ok	s=4,m=12	9.85e-03	0.08		1					0.08	6.53e-02	1.00	43,8,0,8
69	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	8,8,0,8
70	ok	s=4,m=12	0.01	0.08		1					0.08	6.39e-02	1.00	8,8,0,8
71	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
72	ok	s=4,m=12	0.04	0.10		1					0.08	6.57e-02	1.00	7,8,0,7
75	ok	s=2,m=12	0.03	0.05		1					0.02	0.2	1.00	8,60,0,8
76	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,7,0,8
77	ok	s=4,m=12	0.04	0.10		1					0.09	6.61e-02	1.00	7,7,0,8
78	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
79	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	8,8,0,8
80	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
81	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
82	ok	s=4,m=12	0.02	0.09		1					0.09	2.81e-02	1.00	8,8,0,8
83	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	65,66,0,7
84	ok	s=4,m=12	0.01	0.09		1					0.09	6.50e-02	1.00	8,8,0,8
85	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	7,8,0,7
86	ok	s=4,m=12	0.01	0.09		1					0.09	6.46e-02	1.00	7,8,0,7
87	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,8
88	ok	s=4,m=12	0.04	0.09		1					0.08	6.58e-02	1.00	8,7,0,8
91	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	7,60,0,7

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 90 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
92	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,7,0,7
93	ok	s=4,m=12	0.05	0.12		1					0.09	6.61e-02	1.00	8,7,0,8
94	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,7,0,8
95	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	7,7,0,7
96	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
97	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,8,0,7
98	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	44,8,0,7
99	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,66,0,8
100	ok	s=4,m=12	0.01	0.08		1					0.08	6.51e-02	1.00	44,8,0,7
101	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
102	ok	s=4,m=12	0.01	0.08		1					0.08	6.41e-02	1.00	41,8,0,8
103	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
104	ok	s=4,m=12	0.04	0.11		1					0.08	6.58e-02	1.00	7,7,0,7
107	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	7,64,0,8
108	ok	s=3,m=12	0.05	0.09		1					0.08	8.92e-02	1.00	7,7,0,8
109	ok	s=4,m=12	0.04	0.11		1					0.09	6.63e-02	1.00	7,7,0,7
110	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	7,7,0,7
111	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	8,7,0,8
112	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	46,46,0,46
113	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	44,43,0,44
114	ok	s=4,m=12	0.04	0.07		1					0.06	2.79e-02	1.00	47,48,0,47
115	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,66,0,7
116	ok	s=4,m=12	0.04	0.06		1					0.06	6.54e-02	1.00	46,8,0,8
117	ok	s=4,m=12	0.05	0.07		1					0.07	2.75e-02	1.00	46,42,0,8
118	ok	s=4,m=12	0.04	0.07		1					0.06	6.27e-02	1.00	46,8,0,8
119	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
120	ok	s=4,m=12	0.04	0.10		1					0.08	6.60e-02	1.00	8,7,0,8
123	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	8,61,0,7
124	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,7
125	ok	s=4,m=12	0.05	0.10		1					0.09	6.61e-02	1.00	7,7,0,7
126	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,8,0,7
127	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
128	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	42,46,0,42
129	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	43,44,0,43
130	ok	s=4,m=12	0.04	0.06		1					0.06	2.79e-02	1.00	43,48,0,43
131	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,67,0,8
132	ok	s=4,m=12	0.04	0.06		1					0.06	6.51e-02	1.00	42,8,0,8
133	ok	s=4,m=12	0.05	0.07		1					0.07	2.75e-02	1.00	42,8,0,8
134	ok	s=4,m=12	0.05	0.07		1					0.07	6.28e-02	1.00	42,8,0,8
135	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
136	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,7,0,7
139	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	8,57,0,8
140	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,8,0,8
141	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	8,8,0,8
142	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
143	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
144	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,7,0,8
145	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
146	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	48,8,0,8
147	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,67,0,7
148	ok	s=4,m=12	0.01	0.08		1					0.08	6.50e-02	1.00	48,7,0,8
149	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,8,0,8
150	ok	s=4,m=12	0.01	0.08		1					0.08	6.43e-02	1.00	45,7,0,8
151	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
152	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,8,0,8
155	ok	s=2,m=12	0.03	0.05		1					0.02	0.2	1.00	8,57,0,7
156	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,7
157	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,7,0,7
158	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
159	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
160	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
161	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
162	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,8,0,8

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 91 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
163	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	67,68,0,8
164	ok	s=4,m=12	9.19e-03	0.09		1					0.09	6.52e-02	1.00	7,8,0,8
165	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
166	ok	s=4,m=12	0.01	0.09		1					0.09	6.44e-02	1.00	8,8,0,8
167	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,8
168	ok	s=4,m=12	0.04	0.08		1					0.08	6.57e-02	1.00	7,7,0,7
171	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	7,60,0,8
172	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,8
173	ok	s=4,m=12	0.04	0.11		1					0.09	6.61e-02	1.00	7,7,0,8
174	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,7,0,8
175	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	42,7,0,8
176	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,7,0,7
177	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
178	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	44,8,0,8
179	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,7
180	ok	s=4,m=12	0.01	0.08		1					0.08	6.53e-02	1.00	44,8,0,8
181	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,8,0,7
182	ok	s=4,m=12	0.01	0.08		1					0.08	6.40e-02	1.00	41,8,0,7
183	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
184	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
187	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,58,0,7
188	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,7
189	ok	s=4,m=12	0.05	0.10		1					0.09	6.63e-02	1.00	8,8,0,8
190	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	48,7,0,8
191	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	42,7,0,7
192	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	41,45,0,41
193	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	44,43,0,44
194	ok	s=4,m=12	0.04	0.06		1					0.06	2.78e-02	1.00	44,8,0,8
195	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,8
196	ok	s=4,m=12	0.03	0.06		1					0.06	6.47e-02	1.00	41,8,0,8
197	ok	s=4,m=12	0.04	0.07		1					0.07	2.76e-02	1.00	41,8,0,8
198	ok	s=4,m=12	0.04	0.07		1					0.07	6.32e-02	1.00	41,8,0,8
199	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,8
200	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,8,0,7
203	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	8,59,0,8
204	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,8,0,8
205	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,7,0,7
206	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	45,7,0,7
207	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	43,8,0,8
208	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	45,45,0,45
209	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	43,43,0,48
210	ok	s=4,m=12	0.03	0.06		1					0.06	2.79e-02	1.00	48,8,0,8
211	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	66,65,0,7
212	ok	s=4,m=12	0.03	0.06		1					0.06	6.56e-02	1.00	45,8,0,8
213	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	45,8,0,8
214	ok	s=4,m=12	0.04	0.07		1					0.06	6.25e-02	1.00	45,8,0,8
215	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
216	ok	s=4,m=12	0.04	0.10		1					0.08	6.60e-02	1.00	8,7,0,8
219	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,59,0,7
220	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,8,0,7
221	ok	s=4,m=12	0.05	0.11		1					0.09	6.61e-02	1.00	8,8,0,8
222	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	45,8,0,8
223	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
224	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
225	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
226	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7
227	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,65,0,8
228	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	56,7,0,8
229	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
230	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	8,8,0,8
231	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
232	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,8,0,7
235	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,8

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 92 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
236	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,8
237	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,7,0,7
238	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	45,7,0,7
239	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	42,7,0,8
240	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
241	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
242	ok	s=4,m=12	0.01	0.09		1					0.09	2.82e-02	1.00	8,8,0,8
243	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	66,65,0,7
244	ok	s=4,m=12	9.29e-03	0.09		1					0.09	6.57e-02	1.00	8,8,0,8
245	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,7,0,7
246	ok	s=4,m=12	0.01	0.09		1					0.09	6.40e-02	1.00	7,8,0,7
247	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,7
248	ok	s=4,m=12	0.04	0.08		1					0.08	6.58e-02	1.00	8,7,0,8
251	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,7
252	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,7,0,7
253	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,7,0,8
254	ok	s=5,m=12	0.05	0.08		1					0.08	7.04e-02	1.00	45,7,0,8
255	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	42,7,0,7
256	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
257	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,8,0,7
258	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7
259	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,8
260	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	55,8,0,7
261	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
262	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	8,8,0,8
263	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
264	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
267	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,8
268	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	7,7,0,8
269	ok	s=4,m=12	0.04	0.10		1					0.09	6.62e-02	1.00	7,7,0,7
270	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	45,7,0,7
271	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	42,7,0,8
272	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	54,41,0,54
273	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	52,47,0,55
274	ok	s=4,m=12	0.03	0.05		1					0.05	2.78e-02	1.00	55,47,0,55
275	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	59,68,0,7
276	ok	s=4,m=12	0.04	0.05		1					0.05	6.57e-02	1.00	54,8,0,8
277	ok	s=4,m=12	0.04	0.07		1					0.07	2.73e-02	1.00	54,8,0,8
278	ok	s=4,m=12	0.04	0.06		1					0.06	6.18e-02	1.00	54,8,0,8
279	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
280	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,7,0,8
283	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,59,0,7
284	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,8,0,7
285	ok	s=4,m=12	0.04	0.10		1					0.09	6.63e-02	1.00	8,7,0,8
286	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
287	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
288	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	53,45,0,53
289	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	56,43,0,55
290	ok	s=4,m=12	0.03	0.05		1					0.05	2.76e-02	1.00	48,47,0,47
291	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,65,0,8
292	ok	s=4,m=12	0.03	0.05		1					0.05	6.42e-02	1.00	45,8,0,8
293	ok	s=4,m=12	0.04	0.07		1					0.07	2.74e-02	1.00	45,8,0,8
294	ok	s=4,m=12	0.04	0.06		1					0.06	6.29e-02	1.00	45,8,0,8
295	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
296	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	7,7,0,7
299	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,59,0,8
300	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,8
301	ok	s=4,m=12	0.05	0.10		1					0.09	6.60e-02	1.00	7,8,0,7
302	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
303	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
304	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	7,7,0,7
305	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
306	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	8,8,0,8

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 93 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
307	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,65,0,7
308	ok	s=4,m=12	9.69e-03	0.08		1					0.08	6.57e-02	1.00	56,8,0,8
309	ok	s=4,m=12	0.02	0.09		1					0.08	2.78e-02	1.00	7,7,0,7
310	ok	s=4,m=12	0.01	0.08		1					0.08	6.35e-02	1.00	7,7,0,7
311	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,7
312	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	8,8,0,8
315	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,7
316	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,7,0,7
317	ok	s=4,m=12	0.05	0.09		1					0.09	6.61e-02	1.00	8,7,0,8
318	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,7,0,8
319	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
320	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
321	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
322	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,7,0,7
323	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	67,65,0,8
324	ok	s=4,m=12	9.12e-03	0.09		1					0.09	6.49e-02	1.00	7,7,0,7
325	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
326	ok	s=4,m=12	0.01	0.09		1					0.09	6.47e-02	1.00	8,8,0,8
327	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,8
328	ok	s=4,m=12	0.04	0.08		1					0.08	6.57e-02	1.00	7,7,0,7
331	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,8
332	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,7,0,8
333	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,7,0,7
334	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
335	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	8,8,0,8
336	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	7,7,0,7
337	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
338	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	8,8,0,8
339	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,7
340	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	47,8,0,8
341	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
342	ok	s=4,m=12	0.01	0.08		1					0.08	6.36e-02	1.00	7,8,0,7
343	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
344	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
347	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,58,0,7
348	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,7
349	ok	s=4,m=12	0.04	0.11		1					0.09	6.64e-02	1.00	8,8,0,8
350	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
351	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
352	ok	s=5,m=12	0.03	0.08		1					0.08	0.1	1.00	46,45,0,46
353	ok	s=5,m=12	0.03	0.07		1					0.06	0.1	1.00	48,43,0,47
354	ok	s=4,m=12	0.04	0.06		1					0.06	2.77e-02	1.00	47,47,0,47
355	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	59,68,0,8
356	ok	s=4,m=12	0.04	0.05		1					0.05	6.42e-02	1.00	46,8,0,8
357	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	46,8,0,8
358	ok	s=4,m=12	0.04	0.06		1					0.06	6.30e-02	1.00	46,8,0,8
359	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
360	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,8,0,7
363	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	8,57,0,8
364	ok	s=3,m=12	0.05	0.09		1					0.08	8.92e-02	1.00	8,8,0,8
365	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,7,0,7
366	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	7,7,0,7
367	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	8,8,0,8
368	ok	s=5,m=12	0.03	0.08		1					0.08	0.1	1.00	45,46,0,45
369	ok	s=5,m=12	0.03	0.07		1					0.06	0.1	1.00	43,44,0,47
370	ok	s=4,m=12	0.04	0.06		1					0.06	2.79e-02	1.00	48,48,0,48
371	ok	s=2,m=12	0.02	0.06		1					0.01	0.1	1.00	64,67,0,7
372	ok	s=4,m=12	0.04	0.05		1					0.05	6.57e-02	1.00	45,8,0,8
373	ok	s=4,m=12	0.04	0.07		1					0.07	2.73e-02	1.00	45,8,0,8
374	ok	s=4,m=12	0.04	0.06		1					0.06	6.18e-02	1.00	45,8,0,8
375	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
376	ok	s=4,m=12	0.04	0.10		1					0.08	6.60e-02	1.00	8,7,0,8
379	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,57,0,7

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 94 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
380	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,8,0,7
381	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,8,0,8
382	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
383	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	7,7,0,7
384	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
385	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
386	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7
387	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	68,67,0,8
388	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	48,7,0,7
389	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
390	ok	s=4,m=12	0.01	0.08		1					0.08	6.43e-02	1.00	8,8,0,8
391	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
392	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,8,0,7
395	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	62,57,0,8
396	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,8
397	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,8,0,7
398	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
399	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
400	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
401	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
402	ok	s=4,m=12	0.01	0.09		1					0.09	2.82e-02	1.00	8,8,0,8
403	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,66,0,7
404	ok	s=4,m=12	9.17e-03	0.09		1					0.09	6.57e-02	1.00	8,8,0,8
405	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,7,0,7
406	ok	s=4,m=12	0.01	0.09		1					0.09	6.40e-02	1.00	7,7,0,7
407	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,8,0,7
408	ok	s=4,m=12	0.04	0.08		1					0.08	6.58e-02	1.00	8,8,0,8
411	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,60,0,7
412	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,7,0,7
413	ok	s=4,m=12	0.05	0.10		1					0.09	6.62e-02	1.00	8,7,0,8
414	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
415	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
416	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
417	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
418	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7
419	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,66,0,8
420	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	47,7,0,7
421	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
422	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	8,8,0,8
423	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
424	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
427	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	8,60,0,8
428	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	8,8,0,8
429	ok	s=4,m=12	0.04	0.10		1					0.09	6.62e-02	1.00	7,8,0,7
430	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	7,7,0,7
431	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	8,8,0,8
432	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	46,46,0,46
433	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	44,44,0,44
434	ok	s=4,m=12	0.03	0.06		1					0.05	2.78e-02	1.00	44,48,0,44
435	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	63,66,0,7
436	ok	s=4,m=12	0.04	0.05		1					0.05	6.56e-02	1.00	41,8,0,8
437	ok	s=4,m=12	0.04	0.07		1					0.07	2.73e-02	1.00	41,8,0,8
438	ok	s=4,m=12	0.04	0.06		1					0.06	6.18e-02	1.00	41,8,0,8
439	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,8,0,7
440	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,8,0,8
443	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,57,0,7
444	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,7
445	ok	s=4,m=12	0.04	0.11		1					0.09	6.63e-02	1.00	8,7,0,8
446	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	46,8,0,8
447	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	41,7,0,7
448	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	45,46,0,45
449	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	43,44,0,44
450	ok	s=4,m=12	0.04	0.06		1					0.05	2.76e-02	1.00	43,48,0,48

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 95 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
451	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,67,0,8
452	ok	s=4,m=12	0.04	0.05		1					0.05	6.42e-02	1.00	42,8,0,8
453	ok	s=4,m=12	0.04	0.07		1					0.07	2.74e-02	1.00	45,8,0,8
454	ok	s=4,m=12	0.04	0.06		1					0.06	6.29e-02	1.00	45,8,0,8
455	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
456	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,7,0,7
459	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,57,0,8
460	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,7,0,8
461	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,7,0,7
462	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	46,7,0,7
463	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	41,8,0,8
464	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	7,7,0,7
465	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
466	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	8,8,0,8
467	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,67,0,7
468	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	48,8,0,8
469	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
470	ok	s=4,m=12	0.01	0.08		1					0.08	6.35e-02	1.00	7,7,0,7
471	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
472	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	8,7,0,8
475	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,57,0,7
476	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,8,0,7
477	ok	s=4,m=12	0.05	0.09		1					0.09	6.61e-02	1.00	8,8,0,8
478	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	46,8,0,8
479	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	41,7,0,7
480	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
481	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
482	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,7,0,7
483	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	65,66,0,8
484	ok	s=4,m=12	9.21e-03	0.09		1					0.09	6.49e-02	1.00	7,7,0,7
485	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
486	ok	s=4,m=12	0.01	0.09		1					0.09	6.47e-02	1.00	8,8,0,8
487	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
488	ok	s=4,m=12	0.04	0.08		1					0.08	6.57e-02	1.00	7,7,0,7
491	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,60,0,8
492	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,7,0,8
493	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,7,0,7
494	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
495	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
496	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	7,7,0,7
497	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
498	ok	s=4,m=12	0.01	0.08		1					0.08	2.82e-02	1.00	8,8,0,8
499	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,66,0,7
500	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	47,8,0,8
501	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
502	ok	s=4,m=12	0.01	0.08		1					0.08	6.37e-02	1.00	7,7,0,8
503	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
504	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
507	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,57,0,7
508	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,7
509	ok	s=4,m=12	0.04	0.10		1					0.09	6.63e-02	1.00	8,7,0,8
510	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	46,8,0,8
511	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
512	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	46,46,0,46
513	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	44,44,0,44
514	ok	s=4,m=12	0.03	0.06		1					0.06	2.78e-02	1.00	44,8,0,8
515	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,66,0,8
516	ok	s=4,m=12	0.03	0.06		1					0.06	6.43e-02	1.00	41,8,0,8
517	ok	s=4,m=12	0.04	0.07		1					0.07	2.76e-02	1.00	41,8,0,8
518	ok	s=4,m=12	0.04	0.07		1					0.07	6.36e-02	1.00	41,8,0,8
519	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
520	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,7,0,7
523	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,57,0,8



**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 96 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
524	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	8,7,0,8
525	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,8,0,7
526	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	47,7,0,7
527	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	41,8,0,8
528	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	45,46,0,45
529	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	43,44,0,43
530	ok	s=4,m=12	0.03	0.06		1					0.06	2.79e-02	1.00	43,8,0,8
531	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	60,67,0,7
532	ok	s=4,m=12	0.03	0.06		1					0.06	6.56e-02	1.00	42,8,0,8
533	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	42,8,0,8
534	ok	s=4,m=12	0.04	0.07		1					0.06	6.26e-02	1.00	42,8,0,8
535	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
536	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,8,0,8
539	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,61,0,7
540	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,7,0,7
541	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,7,0,8
542	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	55,8,0,8
543	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	49,7,0,7
544	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
545	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
546	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7
547	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,71,0,8
548	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	48,7,0,7
549	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
550	ok	s=4,m=12	0.01	0.08		1					0.08	6.45e-02	1.00	8,8,0,8
551	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
552	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
555	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,61,0,8
556	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,8
557	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,8,0,7
558	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
559	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
560	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
561	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
562	ok	s=4,m=12	0.01	0.09		1					0.09	2.82e-02	1.00	8,8,0,8
563	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	69,71,0,7
564	ok	s=4,m=12	9.30e-03	0.09		1					0.09	6.57e-02	1.00	8,8,0,8
565	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,7,0,7
566	ok	s=4,m=12	0.01	0.09		1					0.09	6.40e-02	1.00	7,7,0,7
567	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
568	ok	s=4,m=12	0.04	0.08		1					0.08	6.58e-02	1.00	8,8,0,8
571	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,64,0,7
572	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,8,0,7
573	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,8,0,8
574	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
575	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
576	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
577	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
578	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	44,7,0,7
579	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,70,0,8
580	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	47,7,0,8
581	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
582	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	46,8,0,8
583	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
584	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,8,0,7
587	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,64,0,8
588	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	8,8,0,8
589	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,7,0,7
590	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	56,7,0,7
591	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	50,8,0,8
592	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	46,45,0,46
593	ok	s=5,m=12	0.03	0.07		1					0.07	0.1	1.00	44,43,0,44
594	ok	s=4,m=12	0.04	0.06		1					0.06	2.80e-02	1.00	44,47,0,47

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 97 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
595	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	63,70,0,7
596	ok	s=4,m=12	0.04	0.06		1					0.06	6.57e-02	1.00	41,8,0,8
597	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	41,8,0,8
598	ok	s=4,m=12	0.04	0.07		1					0.07	6.24e-02	1.00	41,8,0,8
599	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
600	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,7,0,8
603	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,61,0,7
604	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,7
605	ok	s=4,m=12	0.04	0.11		1					0.09	6.64e-02	1.00	8,8,0,8
606	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	55,8,0,8
607	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	49,7,0,7
608	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	45,54,0,45
609	ok	s=5,m=12	0.03	0.07		1					0.07	0.1	1.00	43,52,0,43
610	ok	s=4,m=12	0.04	0.06		1					0.06	2.78e-02	1.00	43,48,0,48
611	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,71,0,8
612	ok	s=4,m=12	0.04	0.06		1					0.06	6.44e-02	1.00	42,8,0,8
613	ok	s=4,m=12	0.04	0.07		1					0.07	2.76e-02	1.00	42,8,0,8
614	ok	s=4,m=12	0.04	0.07		1					0.07	6.36e-02	1.00	42,8,0,8
615	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
616	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	7,8,0,7
619	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,61,0,8
620	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,8
621	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,7,0,7
622	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
623	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	49,7,0,8
624	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
625	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
626	ok	s=4,m=12	0.01	0.08		1					0.08	2.82e-02	1.00	48,8,0,8
627	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,71,0,7
628	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	48,8,0,8
629	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
630	ok	s=4,m=12	0.01	0.08		1					0.08	6.37e-02	1.00	45,8,0,7
631	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
632	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
635	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,61,0,7
636	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,8,0,7
637	ok	s=4,m=12	0.05	0.09		1					0.09	6.61e-02	1.00	8,8,0,8
638	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
639	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
640	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
641	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
642	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,7,0,7
643	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	69,71,0,8
644	ok	s=4,m=12	9.18e-03	0.09		1					0.09	6.49e-02	1.00	7,7,0,7
645	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
646	ok	s=4,m=12	0.01	0.09		1					0.09	6.47e-02	1.00	8,8,0,8
647	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
648	ok	s=4,m=12	0.04	0.08		1					0.08	6.57e-02	1.00	7,8,0,7
651	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,8
652	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,8,0,8
653	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,8,0,7
654	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,8,0,7
655	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	8,8,0,8
656	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
657	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
658	ok	s=4,m=12	0.01	0.08		1					0.08	2.82e-02	1.00	52,8,0,8
659	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,7
660	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	52,8,0,8
661	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
662	ok	s=4,m=12	0.01	0.08		1					0.08	6.36e-02	1.00	54,7,0,8
663	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,7
664	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,8,0,8
667	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,7

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 98 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
668	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,7
669	ok	s=4,m=12	0.04	0.10		1					0.09	6.63e-02	1.00	8,7,0,8
670	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
671	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
672	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	54,53,0,50
673	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	52,51,0,52
674	ok	s=4,m=12	0.04	0.07		1					0.06	2.78e-02	1.00	52,56,0,55
675	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,8
676	ok	s=4,m=12	0.04	0.06		1					0.06	6.44e-02	1.00	49,8,0,8
677	ok	s=4,m=12	0.05	0.07		1					0.07	2.76e-02	1.00	49,8,0,8
678	ok	s=4,m=12	0.05	0.07		1					0.07	6.34e-02	1.00	49,8,0,8
679	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
680	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,7,0,7
683	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,59,0,8
684	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	7,7,0,8
685	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,8,0,7
686	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	7,7,0,7
687	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	8,7,0,8
688	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	53,54,0,49
689	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	51,52,0,51
690	ok	s=4,m=12	0.04	0.07		1					0.06	2.80e-02	1.00	51,56,0,56
691	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	64,65,0,7
692	ok	s=4,m=12	0.04	0.06		1					0.06	6.56e-02	1.00	50,8,0,8
693	ok	s=4,m=12	0.05	0.07		1					0.07	2.75e-02	1.00	50,50,0,8
694	ok	s=4,m=12	0.05	0.07		1					0.07	6.25e-02	1.00	50,8,0,8
695	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
696	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,8,0,8
699	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,59,0,7
700	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,7,0,7
701	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,7,0,8
702	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,7,0,8
703	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
704	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
705	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
706	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	56,7,0,7
707	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,65,0,8
708	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	56,8,0,7
709	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
710	ok	s=4,m=12	0.01	0.08		1					0.08	6.45e-02	1.00	53,8,0,8
711	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
712	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
715	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	8,58,0,8
716	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,8
717	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,8,0,7
718	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
719	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
720	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
721	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
722	ok	s=4,m=12	0.01	0.09		1					0.09	2.82e-02	1.00	8,8,0,8
723	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	69,68,0,7
724	ok	s=4,m=12	9.24e-03	0.09		1					0.09	6.57e-02	1.00	8,8,0,8
725	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,7,0,7
726	ok	s=4,m=12	0.01	0.09		1					0.09	6.40e-02	1.00	7,7,0,7
727	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,8,0,7
728	ok	s=4,m=12	0.04	0.08		1					0.08	6.58e-02	1.00	8,8,0,8
731	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,58,0,7
732	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,8,0,7
733	ok	s=4,m=12	0.05	0.11		1					0.09	6.61e-02	1.00	8,8,0,8
734	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
735	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
736	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
737	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
738	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	52,7,0,7

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
739	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,68,0,8
740	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	55,7,0,8
741	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
742	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	54,8,0,8
743	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
744	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,8,0,7
747	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	8,62,0,8
748	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	8,8,0,8
749	ok	s=4,m=12	0.04	0.10		1					0.09	6.62e-02	1.00	7,7,0,7
750	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	56,7,0,7
751	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	50,8,0,8
752	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	50,53,0,50
753	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	52,51,0,52
754	ok	s=4,m=12	0.04	0.06		1					0.06	2.80e-02	1.00	52,55,0,51
755	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,72,0,7
756	ok	s=4,m=12	0.04	0.06		1					0.06	6.57e-02	1.00	49,8,0,8
757	ok	s=4,m=12	0.05	0.07		1					0.07	2.75e-02	1.00	49,8,0,8
758	ok	s=4,m=12	0.04	0.07		1					0.07	6.24e-02	1.00	49,8,0,8
759	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,7
760	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,7,0,8
763	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,63,0,7
764	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,7
765	ok	s=4,m=12	0.04	0.11		1					0.09	6.64e-02	1.00	8,7,0,8
766	ok	s=5,m=12	0.04	0.08		1					0.08	7.05e-02	1.00	8,8,0,8
767	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
768	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	53,53,0,49
769	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	51,51,0,51
770	ok	s=4,m=12	0.04	0.06		1					0.06	2.78e-02	1.00	51,55,0,52
771	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,69,0,8
772	ok	s=4,m=12	0.04	0.06		1					0.06	6.43e-02	1.00	50,8,0,8
773	ok	s=4,m=12	0.04	0.07		1					0.07	2.76e-02	1.00	50,8,0,8
774	ok	s=4,m=12	0.04	0.07		1					0.07	6.37e-02	1.00	50,8,0,8
775	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
776	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	7,7,0,7
779	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,63,0,8
780	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,8
781	ok	s=4,m=12	0.05	0.12		1					0.09	6.61e-02	1.00	7,7,0,7
782	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
783	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	8,7,0,8
784	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,8,0,7
785	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
786	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	51,8,0,8
787	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,69,0,7
788	ok	s=4,m=12	0.01	0.08		1					0.08	6.56e-02	1.00	51,8,0,8
789	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
790	ok	s=4,m=12	0.01	0.08		1					0.08	6.37e-02	1.00	50,8,0,7
791	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
792	ok	s=4,m=12	0.04	0.11		1					0.08	6.59e-02	1.00	8,7,0,8
795	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,63,0,7
796	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,7,0,7
797	ok	s=4,m=12	0.05	0.10		1					0.09	6.61e-02	1.00	8,7,0,8
798	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
799	ok	s=5,m=12	0.04	0.07		1					0.07	7.00e-02	1.00	7,8,0,7
800	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
801	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
802	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,7,0,7
803	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,69,0,8
804	ok	s=4,m=12	9.28e-03	0.09		1					0.09	6.49e-02	1.00	7,8,0,7
805	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
806	ok	s=4,m=12	0.01	0.09		1					0.09	6.47e-02	1.00	8,8,0,8
807	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
808	ok	s=4,m=12	0.04	0.09		1					0.08	6.57e-02	1.00	7,7,0,7
811	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	61,63,0,8

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 100 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
812	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,8,0,8
813	ok	s=4,m=12	0.05	0.11		1					0.09	6.59e-02	1.00	7,8,0,7
814	ok	s=5,m=12	0.05	0.08		1					0.08	7.03e-02	1.00	56,7,0,7
815	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	50,7,0,8
816	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
817	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,8,0,8
818	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	8,8,0,8
819	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,69,0,7
820	ok	s=4,m=12	9.78e-03	0.08		1					0.08	6.57e-02	1.00	55,8,0,8
821	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,8
822	ok	s=4,m=12	0.01	0.08		1					0.08	6.37e-02	1.00	7,8,0,8
823	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,7
824	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	8,8,0,8
827	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,63,0,8
828	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,7,0,8
829	ok	s=4,m=12	0.04	0.11		1					0.09	6.61e-02	1.00	7,7,0,8
830	ok	s=5,m=12	0.05	0.08		1					0.08	7.03e-02	1.00	56,7,0,8
831	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	50,7,0,7
832	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,53,0,8
833	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	56,51,0,52
834	ok	s=4,m=12	0.03	0.06		1					0.06	2.77e-02	1.00	51,8,0,8
835	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	63,69,0,8
836	ok	s=4,m=12	0.03	0.06		1					0.06	6.44e-02	1.00	50,8,0,8
837	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	50,8,0,8
838	ok	s=4,m=12	0.03	0.06		1					0.06	6.33e-02	1.00	50,8,0,8
839	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,7,0,8
840	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
843	ok	s=2,m=12	0.02	0.07		1					0.02	0.2	1.00	69,63,0,7
844	ok	s=3,m=12	0.04	0.07		1					0.06	8.90e-02	1.00	7,7,0,7
845	ok	s=4,m=12	0.03	0.08		1					0.06	6.63e-02	1.00	8,7,0,8
846	ok	s=5,m=12	0.04	0.06		1					0.06	7.04e-02	1.00	50,7,0,8
847	ok	s=5,m=12	0.04	0.06		1					0.05	7.01e-02	1.00	50,7,0,8
848	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	50,53,0,50
849	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	56,51,0,51
850	ok	s=4,m=12	0.03	0.05		1					0.05	2.79e-02	1.00	51,51,0,51
851	ok	s=2,m=12	0.02	0.06		1					8.57e-03	0.1	1.00	63,69,0,7
852	ok	s=4,m=12	0.04	0.04		1					0.04	6.56e-02	1.00	50,56,0,51
853	ok	s=4,m=12	0.04	0.06		1					0.06	2.73e-02	1.00	50,53,0,53
854	ok	s=4,m=12	0.04	0.05		1					0.04	6.20e-02	1.00	50,50,0,53
855	ok	s=3,m=12	0.03	0.06		1					0.05	0.2	1.00	7,7,0,7
856	ok	s=4,m=12	0.03	0.07		1					0.06	6.60e-02	1.00	8,7,0,8
859	ok	s=2,m=12	0.02	0.06		1					0.02	0.2	1.00	66,60,0,7
860	ok	s=3,m=12	0.04	0.07		1					0.06	8.90e-02	1.00	7,7,0,7
861	ok	s=4,m=12	0.03	0.08		1					0.06	6.63e-02	1.00	8,7,0,8
862	ok	s=5,m=12	0.04	0.06		1					0.06	7.04e-02	1.00	47,7,0,8
863	ok	s=4,m=12	0.04	0.07		1					0.06	2.73e-02	1.00	46,46,0,46
864	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	41,46,0,46
865	ok	s=4,m=12	0.04	0.05		1					0.05	6.22e-02	1.00	46,41,0,46
866	ok	s=4,m=12	0.04	0.06		1					0.06	2.78e-02	1.00	47,44,0,44
867	ok	s=3,m=12	0.03	0.06		1					0.05	0.2	1.00	7,7,0,7
868	ok	s=2,m=12	0.02	0.06		1					8.63e-03	0.1	1.00	60,66,0,7
869	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	47,44,0,47
870	ok	s=4,m=12	0.04	0.04		1					0.04	6.52e-02	1.00	46,47,0,44
871	ok	s=4,m=12	0.03	0.07		1					0.06	6.59e-02	1.00	8,7,0,8
874	ok	s=5,m=12	0.04	0.06		1					0.05	7.01e-02	1.00	46,7,0,8
875	ok	s=6,m=12	0.10	0.10		1					0.08	3.70e-02	1.00	46,44,0,7
876	ok	s=6,m=12	0.08	0.11		1					0.10	3.69e-02	1.00	47,46,0,7
877	ok	s=6,m=12	0.09	0.10		1					0.08	3.70e-02	1.00	53,51,0,7
878	ok	s=6,m=12	0.08	0.11		1					0.10	3.69e-02	1.00	51,7,0,7
879	ok	s=9,m=12	2.61e-03	0.04		1					2.29e-03	0.4	0.83	47,60,0,7
880	ok	s=9,m=12	2.71e-03	0.05		1					2.29e-03	0.4	0.83	41,66,0,25
881	ok	s=8,m=12	4.46e-03	0.13		1					3.02e-03	0.6	0.95	46,46,0,26
882	ok	s=8,m=12	4.48e-03	0.13		1					3.02e-03	0.6	0.95	46,46,0,5

Trave	Stato	Note	V /V T	V /N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
883	ok	s=8,m=12	4.53e-03	0.14		1					3.02e-03	0.6	0.95	46,46,0,3
884	ok	s=8,m=12	3.28e-03	0.10		1					3.02e-03	0.6	0.95	41,41,0,26
885	ok	s=8,m=12	1.41e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	44,44,66,32
886	ok	s=8,m=12	1.89e-03	0.06		1					3.02e-03	0.6	0.95	46,46,0,5
887	ok	s=8,m=12	3.47e-03	0.11		1					3.02e-03	0.6	0.95	46,46,0,5
888	ok	s=9,m=12	2.99e-03	0.04		1					2.29e-03	0.4	0.83	48,48,0,7
889	ok	s=9,m=12	3.12e-03	0.05		1					2.29e-03	0.4	0.83	46,42,0,5
890	ok	s=8,m=12	4.71e-03	0.14		1					3.02e-03	0.6	0.95	46,46,0,25
891	ok	s=8,m=12	4.74e-03	0.14		1					3.02e-03	0.6	0.95	46,46,0,5
892	ok	s=8,m=12	4.78e-03	0.14		1					3.02e-03	0.6	0.95	46,46,0,26
893	ok	s=8,m=12	3.26e-03	0.10	0.06	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	41,41,7,8
894	ok	s=8,m=12	1.61e-03	0.05		1					3.02e-03	0.6	0.95	48,44,0,25
895	ok	s=8,m=12	1.95e-03	0.06	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,41,26
896	ok	s=8,m=12	3.43e-03	0.10	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,41,28
897	ok	s=9,m=12	2.05e-03	0.05		1					2.29e-03	0.4	0.83	48,45,0,28
898	ok	s=9,m=12	2.13e-03	0.06		1					2.29e-03	0.4	0.83	45,43,0,26
899	ok	s=8,m=12	3.68e-03	0.11		1					3.02e-03	0.6	0.95	41,41,0,25
900	ok	s=8,m=12	3.65e-03	0.11		1					3.02e-03	0.6	0.95	41,41,0,8
901	ok	s=8,m=12	3.67e-03	0.11		1					3.02e-03	0.6	0.95	46,46,0,7
902	ok	s=8,m=12	2.62e-03	0.08	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	41,41,47,28
903	ok	s=8,m=12	1.18e-03	0.04		1					3.02e-03	0.6	0.95	60,44,0,27
904	ok	s=8,m=12	1.43e-03	0.05		1					3.02e-03	0.6	0.95	66,46,0,28
905	ok	s=8,m=12	2.67e-03	0.08	0.12	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,41,25
906	ok	s=9,m=12	1.76e-03	0.05		1					2.29e-03	0.4	0.83	45,42,0,26
907	ok	s=9,m=12	1.76e-03	0.05		1					2.29e-03	0.4	0.83	48,44,0,7
908	ok	s=8,m=12	2.78e-03	0.08		1					3.02e-03	0.6	0.95	44,44,0,5
909	ok	s=8,m=12	2.74e-03	0.08		1					3.02e-03	0.6	0.95	44,44,0,27
910	ok	s=8,m=12	2.71e-03	0.08		1					3.02e-03	0.6	0.95	41,46,0,6
911	ok	s=8,m=12	2.01e-03	0.06	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	41,41,44,30
912	ok	s=8,m=12	1.22e-03	0.04		1					3.02e-03	0.6	0.95	59,57,0,8
913	ok	s=8,m=12	1.36e-03	0.04		1					3.02e-03	0.6	0.95	65,65,0,5
914	ok	s=8,m=12	2.03e-03	0.06	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	47,47,46,6
915	ok	s=9,m=12	2.35e-03	0.05		1					2.29e-03	0.4	0.83	46,47,0,8
916	ok	s=9,m=12	2.38e-03	0.05		1					2.29e-03	0.4	0.83	47,45,0,27
917	ok	s=8,m=12	3.07e-03	0.09		1					3.02e-03	0.6	0.95	42,42,0,5
918	ok	s=8,m=12	3.04e-03	0.09		1					3.02e-03	0.6	0.95	42,42,0,28
919	ok	s=8,m=12	3.03e-03	0.09		1					3.02e-03	0.6	0.95	45,45,0,6
920	ok	s=8,m=12	2.06e-03	0.06		1					3.02e-03	0.6	0.95	43,43,0,26
921	ok	s=8,m=12	1.26e-03	0.04		1					3.02e-03	0.6	0.95	46,59,0,25
922	ok	s=8,m=12	1.55e-03	0.05	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,65,41,27
923	ok	s=8,m=12	2.20e-03	0.07	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	45,45,45,25
924	ok	s=9,m=12	1.62e-03	0.04		1					2.29e-03	0.4	0.83	59,65,0,27
925	ok	s=9,m=12	1.62e-03	0.05		1					2.29e-03	0.4	0.83	44,45,0,27
926	ok	s=8,m=12	3.23e-03	0.10		1					3.02e-03	0.6	0.95	44,44,0,30
927	ok	s=8,m=12	3.20e-03	0.10		1					3.02e-03	0.6	0.95	44,44,0,6
928	ok	s=8,m=12	3.17e-03	0.09		1					3.02e-03	0.6	0.95	44,44,0,26
929	ok	s=8,m=12	2.18e-03	0.07		1					3.02e-03	0.6	0.95	44,44,0,25
930	ok	s=8,m=12	1.06e-03	0.03	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	57,57,47,28
931	ok	s=8,m=12	1.21e-03	0.04	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,67,46,6
932	ok	s=8,m=12	2.23e-03	0.07		1					3.02e-03	0.6	0.95	47,47,0,28
933	ok	s=9,m=12	2.21e-03	0.05		1					2.29e-03	0.4	0.83	56,48,0,7
934	ok	s=9,m=12	2.48e-03	0.06		1					2.29e-03	0.4	0.83	53,42,0,27
935	ok	s=8,m=12	3.13e-03	0.09		1					3.02e-03	0.6	0.95	44,44,0,29
936	ok	s=8,m=12	3.11e-03	0.09		1					3.02e-03	0.6	0.95	44,44,0,32
937	ok	s=8,m=12	3.08e-03	0.09		1					3.02e-03	0.6	0.95	44,44,0,26
938	ok	s=8,m=12	2.19e-03	0.07	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	44,44,47,25
939	ok	s=8,m=12	1.26e-03	0.04	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	60,44,48,8
940	ok	s=8,m=12	1.51e-03	0.05	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,42,25
941	ok	s=8,m=12	2.21e-03	0.07	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,46,6
942	ok	s=9,m=12	1.53e-03	0.05		1					2.29e-03	0.4	0.83	72,45,0,6
943	ok	s=9,m=12	1.83e-03	0.06		1					2.29e-03	0.4	0.83	62,42,0,27
944	ok	s=8,m=12	2.12e-03	0.06		1					3.02e-03	0.6	0.95	44,44,0,26
945	ok	s=8,m=12	2.09e-03	0.06		1					3.02e-03	0.6	0.95	44,44,0,28

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01    LOTTO 00    CODIFICA D 26 CL    DOCUMENTO FV0100 004    REV. A    FOGLIO 102 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
946	ok	s=8,m=12	2.09e-03	0.06		1					3.02e-03	0.6	0.95	47,47,0,8
947	ok	s=8,m=12	1.45e-03	0.04	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	44,44,44,25
948	ok	s=8,m=12	1.04e-03	0.03	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	60,46,47,29
949	ok	s=8,m=12	1.34e-03	0.04	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	66,66,46,5
950	ok	s=8,m=12	1.52e-03	0.05	0.12	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,46,6
951	ok	s=9,m=12	1.76e-03	0.06		1					2.29e-03	0.4	0.83	47,46,0,6
952	ok	s=9,m=12	1.96e-03	0.06		1					2.29e-03	0.4	0.83	46,45,0,25
953	ok	s=8,m=12	2.79e-03	0.08		1					3.02e-03	0.6	0.95	42,42,0,25
954	ok	s=8,m=12	2.76e-03	0.08		1					3.02e-03	0.6	0.95	42,42,0,29
955	ok	s=8,m=12	2.74e-03	0.08		1					3.02e-03	0.6	0.95	45,45,0,26
956	ok	s=8,m=12	1.87e-03	0.06	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	43,42,43,27
957	ok	s=8,m=12	1.18e-03	0.04	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	59,59,48,28
958	ok	s=8,m=12	1.38e-03	0.04	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,65,45,8
959	ok	s=8,m=12	1.93e-03	0.06	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	45,45,45,27
960	ok	s=9,m=12	2.53e-03	0.06		1					2.29e-03	0.4	0.83	47,43,0,29
961	ok	s=9,m=12	2.86e-03	0.06		1					2.29e-03	0.4	0.83	46,45,0,28
962	ok	s=8,m=12	3.98e-03	0.12		1					3.02e-03	0.6	0.95	42,42,0,29
963	ok	s=8,m=12	3.95e-03	0.12		1					3.02e-03	0.6	0.95	42,42,0,29
964	ok	s=8,m=12	3.94e-03	0.12		1					3.02e-03	0.6	0.95	45,45,0,5
965	ok	s=8,m=12	2.70e-03	0.08		1					3.02e-03	0.6	0.95	43,43,0,30
966	ok	s=8,m=12	1.46e-03	0.05		1					3.02e-03	0.6	0.95	43,43,0,25
967	ok	s=8,m=12	1.75e-03	0.05	0.13	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	45,45,42,27
968	ok	s=8,m=12	2.77e-03	0.08	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	45,45,42,5
969	ok	s=9,m=12	1.75e-03	0.03		1					2.29e-03	0.4	0.83	45,43,0,5
970	ok	s=9,m=12	1.77e-03	0.05		1					2.29e-03	0.4	0.83	45,58,0,27
971	ok	s=8,m=12	3.55e-03	0.11		1					3.02e-03	0.6	0.95	42,42,0,26
972	ok	s=8,m=12	3.54e-03	0.11		1					3.02e-03	0.6	0.95	45,45,0,27
973	ok	s=8,m=12	3.57e-03	0.11		1					3.02e-03	0.6	0.95	45,45,0,26
974	ok	s=8,m=12	2.42e-03	0.07		1					3.02e-03	0.6	0.95	42,42,0,27
975	ok	s=8,m=12	1.03e-03	0.03	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	32,58,48,26
976	ok	s=8,m=12	1.30e-03	0.04	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	68,68,45,30
977	ok	s=8,m=12	2.48e-03	0.07		1					3.02e-03	0.6	0.95	45,48,0,7
978	ok	s=9,m=12	2.08e-03	0.04		1					2.29e-03	0.4	0.83	45,68,0,8
979	ok	s=9,m=12	2.10e-03	0.04		1					2.29e-03	0.4	0.83	58,58,0,28
980	ok	s=8,m=12	3.07e-03	0.09		1					3.02e-03	0.6	0.95	45,45,0,29
981	ok	s=8,m=12	3.10e-03	0.09		1					3.02e-03	0.6	0.95	45,45,0,27
982	ok	s=8,m=12	3.13e-03	0.09		1					3.02e-03	0.6	0.95	45,45,0,27
983	ok	s=8,m=12	2.16e-03	0.06		1					3.02e-03	0.6	0.95	44,42,0,26
984	ok	s=8,m=12	1.14e-03	0.04		1					3.02e-03	0.6	0.95	60,60,0,28
985	ok	s=8,m=12	1.54e-03	0.05	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	66,66,42,8
986	ok	s=8,m=12	2.22e-03	0.07		1					3.02e-03	0.6	0.95	48,48,0,28
987	ok	s=9,m=12	2.04e-03	0.04		1					2.29e-03	0.4	0.83	41,66,0,28
988	ok	s=9,m=12	2.01e-03	0.05		1					2.29e-03	0.4	0.83	58,59,0,6
989	ok	s=8,m=12	3.36e-03	0.10		1					3.02e-03	0.6	0.95	45,45,0,8
990	ok	s=8,m=12	3.38e-03	0.10		1					3.02e-03	0.6	0.95	45,45,0,28
991	ok	s=8,m=12	3.42e-03	0.10		1					3.02e-03	0.6	0.95	45,45,0,29
992	ok	s=8,m=12	2.35e-03	0.07		1					3.02e-03	0.6	0.95	42,42,0,7
993	ok	s=8,m=12	1.13e-03	0.04		1					3.02e-03	0.6	0.95	58,58,0,32
994	ok	s=8,m=12	1.53e-03	0.05		1					3.02e-03	0.6	0.95	68,68,0,5
995	ok	s=8,m=12	2.42e-03	0.07		1					3.02e-03	0.6	0.95	45,45,0,26
996	ok	s=9,m=12	2.59e-03	0.04		1					2.29e-03	0.4	0.83	41,50,0,28
997	ok	s=9,m=12	2.91e-03	0.04		1					2.29e-03	0.4	0.83	41,61,0,27
998	ok	s=8,m=12	4.08e-03	0.12		1					3.02e-03	0.6	0.95	45,45,0,27
999	ok	s=8,m=12	4.10e-03	0.12		1					3.02e-03	0.6	0.95	45,45,0,29
1000	ok	s=8,m=12	4.13e-03	0.12		1					3.02e-03	0.6	0.95	45,45,0,25
1001	ok	s=8,m=12	2.76e-03	0.08		1					3.02e-03	0.6	0.95	42,42,0,25
1002	ok	s=8,m=12	1.41e-03	0.04		1					3.02e-03	0.6	0.95	41,43,0,28
1003	ok	s=8,m=12	1.72e-03	0.05		1					3.02e-03	0.6	0.95	65,65,0,28
1004	ok	s=8,m=12	2.93e-03	0.09		1					3.02e-03	0.6	0.95	45,45,0,27
1005	ok	s=9,m=12	2.69e-03	0.04		1					2.29e-03	0.4	0.83	48,71,0,5
1006	ok	s=9,m=12	3.12e-03	0.05		1					2.29e-03	0.4	0.83	46,61,0,28
1007	ok	s=8,m=12	4.34e-03	0.13		1					3.02e-03	0.6	0.95	45,45,0,5
1008	ok	s=8,m=12	4.35e-03	0.13		1					3.02e-03	0.6	0.95	45,45,0,26

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 103 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1009	ok	s=8,m=12	4.38e-03	0.13		1					3.02e-03	0.6	0.95	45,45,0,8
1010	ok	s=8,m=12	2.93e-03	0.09		1					3.02e-03	0.6	0.95	42,42,0,26
1011	ok	s=8,m=12	1.46e-03	0.04		1					3.02e-03	0.6	0.95	48,43,0,8
1012	ok	s=8,m=12	1.79e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	45,45,43,27
1013	ok	s=8,m=12	3.11e-03	0.09		1					3.02e-03	0.6	0.95	45,45,0,28
1014	ok	s=9,m=12	1.62e-03	0.03		1					2.29e-03	0.4	0.83	45,66,0,27
1015	ok	s=9,m=12	1.78e-03	0.04		1					2.29e-03	0.4	0.83	65,41,0,5
1016	ok	s=8,m=12	3.52e-03	0.11		1					3.02e-03	0.6	0.95	42,42,0,28
1017	ok	s=8,m=12	3.54e-03	0.11		1					3.02e-03	0.6	0.95	45,45,0,32
1018	ok	s=8,m=12	3.57e-03	0.11		1					3.02e-03	0.6	0.95	45,45,0,25
1019	ok	s=8,m=12	2.46e-03	0.08		1					3.02e-03	0.6	0.95	42,42,0,6
1020	ok	s=8,m=12	1.03e-03	0.03	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	7,42,45,30
1021	ok	s=8,m=12	1.33e-03	0.04		1					3.02e-03	0.6	0.95	65,68,0,26
1022	ok	s=8,m=12	2.53e-03	0.08		1					3.02e-03	0.6	0.95	45,45,0,7
1023	ok	s=9,m=12	1.72e-03	0.04		1					2.29e-03	0.4	0.83	68,68,0,6
1024	ok	s=9,m=12	2.17e-03	0.04		1					2.29e-03	0.4	0.83	58,62,0,25
1025	ok	s=8,m=12	2.65e-03	0.08		1					3.02e-03	0.6	0.95	42,42,0,25
1026	ok	s=8,m=12	2.66e-03	0.08		1					3.02e-03	0.6	0.95	45,45,0,6
1027	ok	s=8,m=12	2.70e-03	0.08		1					3.02e-03	0.6	0.95	45,45,0,6
1028	ok	s=8,m=12	1.92e-03	0.06		1					3.02e-03	0.6	0.95	42,42,0,26
1029	ok	s=8,m=12	1.13e-03	0.04		1					3.02e-03	0.6	0.95	60,60,0,8
1030	ok	s=8,m=12	1.51e-03	0.05	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	66,66,43,5
1031	ok	s=8,m=12	1.93e-03	0.06		1					3.02e-03	0.6	0.95	45,45,0,7
1032	ok	s=9,m=12	1.50e-03	0.04		1					2.29e-03	0.4	0.83	68,67,0,28
1033	ok	s=9,m=12	1.92e-03	0.05		1					2.29e-03	0.4	0.83	58,58,0,6
1034	ok	s=8,m=12	1.83e-03	0.05		1					3.02e-03	0.6	0.95	42,42,0,26
1035	ok	s=8,m=12	1.83e-03	0.05		1					3.02e-03	0.6	0.95	45,45,0,27
1036	ok	s=8,m=12	1.87e-03	0.06		1					3.02e-03	0.6	0.95	45,45,0,26
1037	ok	s=8,m=12	1.37e-03	0.04		1					3.02e-03	0.6	0.95	42,42,0,6
1038	ok	s=8,m=12	1.03e-03	0.03		1					3.02e-03	0.6	0.95	7,60,0,26
1039	ok	s=8,m=12	1.38e-03	0.04		1					3.02e-03	0.6	0.95	68,66,0,6
1040	ok	s=8,m=12	1.42e-03	0.04		1					3.02e-03	0.6	0.95	45,45,0,5
1041	ok	s=9,m=12	1.62e-03	0.03		1					2.29e-03	0.4	0.83	67,43,0,28
1042	ok	s=9,m=12	2.19e-03	0.05		1					2.29e-03	0.4	0.83	57,57,0,26
1043	ok	s=8,m=12	1.82e-03	0.05		1					3.02e-03	0.6	0.95	42,42,0,32
1044	ok	s=8,m=12	1.82e-03	0.05		1					3.02e-03	0.6	0.95	45,45,0,26
1045	ok	s=8,m=12	1.84e-03	0.05		1					3.02e-03	0.6	0.95	45,45,0,30
1046	ok	s=8,m=12	1.28e-03	0.04		1					3.02e-03	0.6	0.95	42,42,0,8
1047	ok	s=8,m=12	1.08e-03	0.03		1					3.02e-03	0.6	0.95	59,59,0,28
1048	ok	s=8,m=12	1.59e-03	0.05	0.07	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,65,43,26
1049	ok	s=8,m=12	1.41e-03	0.04	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	45,45,48,7
1050	ok	s=9,m=12	1.77e-03	0.04		1					2.29e-03	0.4	0.83	67,47,0,25
1051	ok	s=9,m=12	2.35e-03	0.05		1					2.29e-03	0.4	0.83	57,41,0,28
1052	ok	s=8,m=12	1.93e-03	0.06		1					3.02e-03	0.6	0.95	42,42,0,26
1053	ok	s=8,m=12	1.91e-03	0.06		1					3.02e-03	0.6	0.95	45,45,0,27
1054	ok	s=8,m=12	1.93e-03	0.06		1					3.02e-03	0.6	0.95	45,45,0,6
1055	ok	s=8,m=12	1.31e-03	0.04		1					3.02e-03	0.6	0.95	42,42,0,26
1056	ok	s=8,m=12	1.12e-03	0.03	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	59,59,65,1
1057	ok	s=8,m=12	1.62e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,65,44,6
1058	ok	s=8,m=12	1.47e-03	0.04		1					3.02e-03	0.6	0.95	45,45,0,28
1059	ok	s=9,m=12	1.36e-03	0.04		1					2.29e-03	0.4	0.83	64,57,0,31
1060	ok	s=9,m=12	1.66e-03	0.04		1					2.29e-03	0.4	0.83	70,60,0,29
1061	ok	s=8,m=12	1.19e-03	0.04		1					3.02e-03	0.6	0.95	43,43,0,29
1062	ok	s=8,m=12	1.16e-03	0.03		1					3.02e-03	0.6	0.95	43,43,0,28
1063	ok	s=8,m=12	1.19e-03	0.04		1					3.02e-03	0.6	0.95	48,48,0,25
1064	ok	s=8,m=12	1.03e-03	0.03		1					3.02e-03	0.6	0.95	31,41,0,25
1065	ok	s=8,m=12	1.03e-03	0.03	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	31,46,46,7
1066	ok	s=8,m=12	1.13e-03	0.04	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	70,68,43,1
1067	ok	s=8,m=12	1.03e-03	0.03		1					3.02e-03	0.6	0.95	29,68,0,7
1068	ok	s=9,m=12	1.77e-03	0.04		1					2.29e-03	0.4	0.83	68,45,0,26
1069	ok	s=9,m=12	2.36e-03	0.05		1					2.29e-03	0.4	0.83	58,42,0,8
1070	ok	s=8,m=12	2.13e-03	0.06		1					3.02e-03	0.6	0.95	41,41,0,28
1071	ok	s=8,m=12	2.10e-03	0.06		1					3.02e-03	0.6	0.95	41,41,0,7



**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 104 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1072	ok	s=8,m=12	2.12e-03	0.06		1					3.02e-03	0.6	0.95	46,46,0,25
1073	ok	s=8,m=12	1.44e-03	0.04		1					3.02e-03	0.6	0.95	41,41,0,6
1074	ok	s=8,m=12	1.14e-03	0.03		1					3.02e-03	0.6	0.95	60,60,0,8
1075	ok	s=8,m=12	1.63e-03	0.05	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	66,66,44,6
1076	ok	s=8,m=12	1.58e-03	0.05		1					3.02e-03	0.6	0.95	46,46,0,8
1077	ok	s=9,m=12	1.61e-03	0.04		1					2.29e-03	0.4	0.83	68,68,0,2
1078	ok	s=9,m=12	2.19e-03	0.05		1					2.29e-03	0.4	0.83	62,42,0,7
1079	ok	s=8,m=12	1.94e-03	0.06		1					3.02e-03	0.6	0.95	41,41,0,28
1080	ok	s=8,m=12	1.92e-03	0.06		1					3.02e-03	0.6	0.95	46,46,0,5
1081	ok	s=8,m=12	1.95e-03	0.06		1					3.02e-03	0.6	0.95	46,46,0,28
1082	ok	s=8,m=12	1.34e-03	0.04		1					3.02e-03	0.6	0.95	41,41,0,30
1083	ok	s=8,m=12	1.08e-03	0.03		1					3.02e-03	0.6	0.95	64,60,0,31
1084	ok	s=8,m=12	1.59e-03	0.05		1					3.02e-03	0.6	0.95	70,70,0,25
1085	ok	s=8,m=12	1.47e-03	0.04	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,47,27
1086	ok	s=9,m=12	1.50e-03	0.04		1					2.29e-03	0.4	0.83	71,67,0,5
1087	ok	s=9,m=12	1.97e-03	0.04		1					2.29e-03	0.4	0.83	61,58,0,26
1088	ok	s=8,m=12	1.69e-03	0.05		1					3.02e-03	0.6	0.95	41,41,0,28
1089	ok	s=8,m=12	1.66e-03	0.05		1					3.02e-03	0.6	0.95	46,46,0,31
1090	ok	s=8,m=12	1.70e-03	0.05		1					3.02e-03	0.6	0.95	46,46,0,32
1091	ok	s=8,m=12	1.26e-03	0.04		1					3.02e-03	0.6	0.95	41,41,0,7
1092	ok	s=8,m=12	1.04e-03	0.03		1					3.02e-03	0.6	0.95	63,61,0,26
1093	ok	s=8,m=12	1.41e-03	0.04	0.07	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	71,71,44,5
1094	ok	s=8,m=12	1.33e-03	0.04	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,44,27
1095	ok	s=9,m=12	1.71e-03	0.03		1					2.29e-03	0.4	0.83	67,67,0,26
1096	ok	s=9,m=12	2.19e-03	0.05		1					2.29e-03	0.4	0.83	57,57,0,25
1097	ok	s=8,m=12	2.32e-03	0.07		1					3.02e-03	0.6	0.95	43,43,0,28
1098	ok	s=8,m=12	2.29e-03	0.07		1					3.02e-03	0.6	0.95	43,43,0,30
1099	ok	s=8,m=12	2.33e-03	0.07		1					3.02e-03	0.6	0.95	48,48,0,29
1100	ok	s=8,m=12	1.69e-03	0.05		1					3.02e-03	0.6	0.95	43,43,0,6
1101	ok	s=8,m=12	1.12e-03	0.04		1					3.02e-03	0.6	0.95	59,59,0,8
1102	ok	s=8,m=12	1.49e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,65,59,6
1103	ok	s=8,m=12	1.73e-03	0.05		1					3.02e-03	0.6	0.95	48,48,0,6
1104	ok	s=9,m=12	1.46e-03	0.03		1					2.29e-03	0.4	0.83	61,58,0,30
1105	ok	s=9,m=12	1.79e-03	0.04		1					2.29e-03	0.4	0.83	70,62,0,28
1106	ok	s=8,m=12	3.11e-03	0.09		1					3.02e-03	0.6	0.95	41,41,0,26
1107	ok	s=8,m=12	3.08e-03	0.09		1					3.02e-03	0.6	0.95	41,41,0,28
1108	ok	s=8,m=12	3.11e-03	0.09		1					3.02e-03	0.6	0.95	46,46,0,30
1109	ok	s=8,m=12	2.16e-03	0.07		1					3.02e-03	0.6	0.95	41,41,0,32
1110	ok	s=8,m=12	1.03e-03	0.03		1					3.02e-03	0.6	0.95	32,57,0,31
1111	ok	s=8,m=12	1.31e-03	0.04	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	66,70,47,25
1112	ok	s=8,m=12	2.27e-03	0.07		1					3.02e-03	0.6	0.95	46,46,0,28
1113	ok	s=9,m=12	2.45e-03	0.04		1					2.29e-03	0.4	0.83	43,44,0,28
1114	ok	s=9,m=12	2.95e-03	0.05		1					2.29e-03	0.4	0.83	45,58,0,3
1115	ok	s=8,m=12	3.93e-03	0.12		1					3.02e-03	0.6	0.95	41,41,0,6
1116	ok	s=8,m=12	3.90e-03	0.12		1					3.02e-03	0.6	0.95	41,41,0,25
1117	ok	s=8,m=12	3.92e-03	0.12		1					3.02e-03	0.6	0.95	46,46,0,27
1118	ok	s=8,m=12	2.66e-03	0.08		1					3.02e-03	0.6	0.95	41,41,0,5
1119	ok	s=8,m=12	1.33e-03	0.04	0.07	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	43,44,46,7
1120	ok	s=8,m=12	1.73e-03	0.05		1					3.02e-03	0.6	0.95	66,66,0,30
1121	ok	s=8,m=12	2.85e-03	0.09		1					3.02e-03	0.6	0.95	46,46,0,6
1122	ok	s=9,m=12	2.33e-03	0.04		1					2.29e-03	0.4	0.83	46,69,0,8
1123	ok	s=9,m=12	2.63e-03	0.04		1					2.29e-03	0.4	0.83	45,51,0,6
1124	ok	s=8,m=12	3.63e-03	0.11		1					3.02e-03	0.6	0.95	41,41,0,30
1125	ok	s=8,m=12	3.61e-03	0.11		1					3.02e-03	0.6	0.95	46,46,0,25
1126	ok	s=8,m=12	3.64e-03	0.11		1					3.02e-03	0.6	0.95	46,46,0,30
1127	ok	s=8,m=12	2.49e-03	0.08		1					3.02e-03	0.6	0.95	41,41,0,28
1128	ok	s=8,m=12	1.26e-03	0.04		1					3.02e-03	0.6	0.95	46,57,0,31
1129	ok	s=8,m=12	1.66e-03	0.05		1					3.02e-03	0.6	0.95	66,66,0,5
1130	ok	s=8,m=12	2.66e-03	0.08		1					3.02e-03	0.6	0.95	46,46,0,32
1131	ok	s=9,m=12	1.77e-03	0.04		1					2.29e-03	0.4	0.83	45,70,0,25
1132	ok	s=9,m=12	2.05e-03	0.05		1					2.29e-03	0.4	0.83	57,63,0,6
1133	ok	s=8,m=12	3.02e-03	0.09		1					3.02e-03	0.6	0.95	41,41,0,28
1134	ok	s=8,m=12	3.01e-03	0.09		1					3.02e-03	0.6	0.95	46,46,0,6

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 105 di 220

Trave	Stato	Note	V/V T	V/N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1135	ok	s=8,m=12	3.05e-03	0.09		1					3.02e-03	0.6	0.95	46,46,0,32
1136	ok	s=8,m=12	2.16e-03	0.07		1					3.02e-03	0.6	0.95	41,41,0,25
1137	ok	s=8,m=12	1.14e-03	0.03		1					3.02e-03	0.6	0.95	57,57,0,5
1138	ok	s=8,m=12	1.56e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	67,67,49,25
1139	ok	s=8,m=12	2.25e-03	0.07		1					3.02e-03	0.6	0.95	46,46,0,8
1140	ok	s=9,m=12	1.90e-03	0.03		1					2.29e-03	0.4	0.83	41,67,0,27
1141	ok	s=9,m=12	2.25e-03	0.05		1					2.29e-03	0.4	0.83	57,61,0,25
1142	ok	s=8,m=12	2.97e-03	0.09		1					3.02e-03	0.6	0.95	43,43,0,6
1143	ok	s=8,m=12	2.95e-03	0.09		1					3.02e-03	0.6	0.95	48,48,0,6
1144	ok	s=8,m=12	2.99e-03	0.09		1					3.02e-03	0.6	0.95	48,48,0,26
1145	ok	s=8,m=12	2.14e-03	0.06		1					3.02e-03	0.6	0.95	43,43,0,25
1146	ok	s=8,m=12	1.16e-03	0.04	0.07	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	59,59,69,8
1147	ok	s=8,m=12	1.60e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,65,53,28
1148	ok	s=8,m=12	2.22e-03	0.07		1					3.02e-03	0.6	0.95	45,45,0,26
1149	ok	s=9,m=12	1.66e-03	0.03		1					2.29e-03	0.4	0.83	46,59,0,26
1150	ok	s=9,m=12	1.82e-03	0.04		1					2.29e-03	0.4	0.83	66,62,0,26
1151	ok	s=8,m=12	3.38e-03	0.10		1					3.02e-03	0.6	0.95	41,41,0,8
1152	ok	s=8,m=12	3.35e-03	0.10		1					3.02e-03	0.6	0.95	41,41,0,7
1153	ok	s=8,m=12	3.38e-03	0.10		1					3.02e-03	0.6	0.95	46,46,0,8
1154	ok	s=8,m=12	2.36e-03	0.07		1					3.02e-03	0.6	0.95	41,41,0,8
1155	ok	s=8,m=12	1.03e-03	0.03	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	7,57,54,25
1156	ok	s=8,m=12	1.37e-03	0.04	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	66,68,41,27
1157	ok	s=8,m=12	2.48e-03	0.07		1					3.02e-03	0.6	0.95	46,46,0,5
1158	ok	s=9,m=12	2.42e-03	0.04		1					2.29e-03	0.4	0.83	48,48,0,5
1159	ok	s=9,m=12	2.72e-03	0.06		1					2.29e-03	0.4	0.83	49,42,0,27
1160	ok	s=8,m=12	3.76e-03	0.11		1					3.02e-03	0.6	0.95	49,49,0,5
1161	ok	s=8,m=12	3.72e-03	0.11		1					3.02e-03	0.6	0.95	49,49,0,26
1162	ok	s=8,m=12	3.76e-03	0.11		1					3.02e-03	0.6	0.95	54,54,0,28
1163	ok	s=8,m=12	2.52e-03	0.08		1					3.02e-03	0.6	0.95	49,49,0,32
1164	ok	s=8,m=12	1.31e-03	0.04		1					3.02e-03	0.6	0.95	48,44,0,6
1165	ok	s=8,m=12	1.71e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	66,66,52,28
1166	ok	s=8,m=12	2.71e-03	0.08		1					3.02e-03	0.6	0.95	46,46,0,30
1167	ok	s=9,m=12	1.94e-03	0.05		1					2.29e-03	0.4	0.83	56,41,0,5
1168	ok	s=9,m=12	2.13e-03	0.05		1					2.29e-03	0.4	0.83	50,42,0,26
1169	ok	s=8,m=12	3.38e-03	0.10		1					3.02e-03	0.6	0.95	49,49,0,7
1170	ok	s=8,m=12	3.35e-03	0.10		1					3.02e-03	0.6	0.95	54,54,0,28
1171	ok	s=8,m=12	3.39e-03	0.10		1					3.02e-03	0.6	0.95	54,54,0,6
1172	ok	s=8,m=12	2.31e-03	0.07		1					3.02e-03	0.6	0.95	49,49,0,8
1173	ok	s=8,m=12	1.13e-03	0.03		1					3.02e-03	0.6	0.95	64,64,0,6
1174	ok	s=8,m=12	1.57e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	70,66,41,7
1175	ok	s=8,m=12	2.44e-03	0.07	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	54,54,46,28
1176	ok	s=9,m=12	1.72e-03	0.05		1					2.29e-03	0.4	0.83	55,46,0,27
1177	ok	s=9,m=12	2.12e-03	0.06		1					2.29e-03	0.4	0.83	61,41,0,5
1178	ok	s=8,m=12	3.06e-03	0.09		1					3.02e-03	0.6	0.95	50,50,0,26
1179	ok	s=8,m=12	3.03e-03	0.09		1					3.02e-03	0.6	0.95	53,53,0,6
1180	ok	s=8,m=12	3.06e-03	0.09		1					3.02e-03	0.6	0.95	53,53,0,25
1181	ok	s=8,m=12	2.15e-03	0.06		1					3.02e-03	0.6	0.95	51,51,0,30
1182	ok	s=8,m=12	1.11e-03	0.03		1					3.02e-03	0.6	0.95	63,63,0,26
1183	ok	s=8,m=12	1.56e-03	0.05		1					3.02e-03	0.6	0.95	69,69,0,26
1184	ok	s=8,m=12	2.24e-03	0.07	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	53,53,45,27
1185	ok	s=9,m=12	2.17e-03	0.05		1					2.29e-03	0.4	0.83	55,47,0,8
1186	ok	s=9,m=12	2.42e-03	0.05		1					2.29e-03	0.4	0.83	50,41,0,6
1187	ok	s=8,m=12	3.24e-03	0.10		1					3.02e-03	0.6	0.95	50,50,0,26
1188	ok	s=8,m=12	3.20e-03	0.10		1					3.02e-03	0.6	0.95	50,50,0,30
1189	ok	s=8,m=12	3.22e-03	0.10		1					3.02e-03	0.6	0.95	53,53,0,27
1190	ok	s=8,m=12	2.24e-03	0.07		1					3.02e-03	0.6	0.95	51,51,0,7
1191	ok	s=8,m=12	1.17e-03	0.04		1					3.02e-03	0.6	0.95	55,63,0,28
1192	ok	s=8,m=12	1.62e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	69,69,43,28
1193	ok	s=8,m=12	2.35e-03	0.07	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	53,53,42,31
1194	ok	s=9,m=12	1.64e-03	0.03		1					2.29e-03	0.4	0.83	55,64,0,25
1195	ok	s=9,m=12	1.81e-03	0.04		1					2.29e-03	0.4	0.83	72,41,0,27
1196	ok	s=8,m=12	3.46e-03	0.10		1					3.02e-03	0.6	0.95	49,49,0,6
1197	ok	s=8,m=12	3.43e-03	0.10		1					3.02e-03	0.6	0.95	49,49,0,3

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 106 di 220
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Trave	Stato	Note	V/V T	V/N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1198	ok	s=8,m=12	3.45e-03	0.10		1					3.02e-03	0.6	0.95	54,54,0,31
1199	ok	s=8,m=12	2.38e-03	0.07		1					3.02e-03	0.6	0.95	52,49,0,27
1200	ok	s=8,m=12	1.03e-03	0.03	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	25,62,53,6
1201	ok	s=8,m=12	1.34e-03	0.04	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	70,72,52,7
1202	ok	s=8,m=12	2.46e-03	0.07		1					3.02e-03	0.6	0.95	54,55,0,30
1203	ok	s=9,m=12	2.40e-03	0.05		1					2.29e-03	0.4	0.83	52,52,0,29
1204	ok	s=9,m=12	2.69e-03	0.06		1					2.29e-03	0.4	0.83	54,50,0,8
1205	ok	s=8,m=12	3.76e-03	0.11		1					3.02e-03	0.6	0.95	49,49,0,6
1206	ok	s=8,m=12	3.73e-03	0.11		1					3.02e-03	0.6	0.95	49,49,0,25
1207	ok	s=8,m=12	3.75e-03	0.11		1					3.02e-03	0.6	0.95	54,54,0,7
1208	ok	s=8,m=12	2.54e-03	0.08		1					3.02e-03	0.6	0.95	52,52,0,5
1209	ok	s=8,m=12	1.31e-03	0.04		1					3.02e-03	0.6	0.95	52,52,0,25
1210	ok	s=8,m=12	1.71e-03	0.05	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	70,70,54,7
1211	ok	s=8,m=12	2.71e-03	0.08		1					3.02e-03	0.6	0.95	54,54,0,29
1212	ok	s=9,m=12	1.73e-03	0.05		1					2.29e-03	0.4	0.83	56,53,0,25
1213	ok	s=9,m=12	2.11e-03	0.06		1					2.29e-03	0.4	0.83	62,51,0,7
1214	ok	s=8,m=12	2.79e-03	0.08		1					3.02e-03	0.6	0.95	49,49,0,26
1215	ok	s=8,m=12	2.76e-03	0.08		1					3.02e-03	0.6	0.95	54,54,0,6
1216	ok	s=8,m=12	2.79e-03	0.08		1					3.02e-03	0.6	0.95	54,54,0,8
1217	ok	s=8,m=12	1.92e-03	0.06	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	49,49,52,5
1218	ok	s=8,m=12	1.11e-03	0.03		1					3.02e-03	0.6	0.95	64,64,0,28
1219	ok	s=8,m=12	1.56e-03	0.05	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	70,70,50,28
1220	ok	s=8,m=12	2.05e-03	0.06	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	54,54,54,25
1221	ok	s=9,m=12	1.61e-03	0.05		1					2.29e-03	0.4	0.83	67,54,0,27
1222	ok	s=9,m=12	2.11e-03	0.05		1					2.29e-03	0.4	0.83	57,52,0,25
1223	ok	s=8,m=12	2.36e-03	0.07		1					3.02e-03	0.6	0.95	42,42,0,31
1224	ok	s=8,m=12	2.34e-03	0.07		1					3.02e-03	0.6	0.95	45,45,0,6
1225	ok	s=8,m=12	2.36e-03	0.07		1					3.02e-03	0.6	0.95	45,45,0,8
1226	ok	s=8,m=12	1.64e-03	0.05	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	42,42,51,7
1227	ok	s=8,m=12	1.08e-03	0.03		1					3.02e-03	0.6	0.95	59,59,0,30
1228	ok	s=8,m=12	1.53e-03	0.05	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,65,49,27
1229	ok	s=8,m=12	1.73e-03	0.05	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	45,45,53,26
1230	ok	s=9,m=12	2.29e-03	0.04		1					2.29e-03	0.4	0.83	48,55,0,25
1231	ok	s=9,m=12	2.55e-03	0.06		1					2.29e-03	0.4	0.83	45,49,0,25
1232	ok	s=8,m=12	3.30e-03	0.10		1					3.02e-03	0.6	0.95	42,42,0,26
1233	ok	s=8,m=12	3.27e-03	0.10		1					3.02e-03	0.6	0.95	45,45,0,6
1234	ok	s=8,m=12	3.29e-03	0.10		1					3.02e-03	0.6	0.95	45,45,0,26
1235	ok	s=8,m=12	2.23e-03	0.07		1					3.02e-03	0.6	0.95	43,43,0,25
1236	ok	s=8,m=12	1.24e-03	0.04	0.07	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	48,43,69,26
1237	ok	s=8,m=12	1.67e-03	0.05	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	65,65,53,8
1238	ok	s=8,m=12	2.37e-03	0.07	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	45,45,53,4
1239	ok	s=9,m=12	1.45e-03	0.04		1					2.29e-03	0.4	0.83	58,52,0,28
1240	ok	s=9,m=12	1.77e-03	0.05		1					2.29e-03	0.4	0.83	70,54,0,29
1241	ok	s=8,m=12	2.81e-03	0.08		1					3.02e-03	0.6	0.95	43,43,0,8
1242	ok	s=8,m=12	2.78e-03	0.08		1					3.02e-03	0.6	0.95	43,43,0,32
1243	ok	s=8,m=12	2.81e-03	0.08		1					3.02e-03	0.6	0.95	48,48,0,28
1244	ok	s=8,m=12	1.95e-03	0.06		1					3.02e-03	0.6	0.95	42,42,0,26
1245	ok	s=8,m=12	1.03e-03	0.03	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	27,58,54,25
1246	ok	s=8,m=12	1.28e-03	0.04	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	68,68,51,8
1247	ok	s=8,m=12	2.01e-03	0.06		1					3.02e-03	0.6	0.95	48,48,0,30
1248	ok	s=9,m=12	2.01e-03	0.05		1					2.29e-03	0.4	0.83	55,52,0,5
1249	ok	s=9,m=12	2.36e-03	0.06		1					2.29e-03	0.4	0.83	62,54,0,5
1250	ok	s=8,m=12	2.59e-03	0.08		1					3.02e-03	0.6	0.95	49,49,0,30
1251	ok	s=8,m=12	2.57e-03	0.08		1					3.02e-03	0.6	0.95	54,54,0,27
1252	ok	s=8,m=12	2.59e-03	0.08		1					3.02e-03	0.6	0.95	54,54,0,26
1253	ok	s=8,m=12	1.76e-03	0.05		1					3.02e-03	0.6	0.95	52,52,0,26
1254	ok	s=8,m=12	1.17e-03	0.04		1					3.02e-03	0.6	0.95	64,64,0,6
1255	ok	s=8,m=12	1.63e-03	0.05	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	70,70,52,6
1256	ok	s=8,m=12	1.93e-03	0.06	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	54,54,54,26
1257	ok	s=9,m=12	1.60e-03	0.05		1					2.29e-03	0.4	0.83	72,49,0,7
1258	ok	s=9,m=12	2.11e-03	0.06		1					2.29e-03	0.4	0.83	62,50,0,27
1259	ok	s=8,m=12	2.39e-03	0.07		1					3.02e-03	0.6	0.95	41,41,0,6
1260	ok	s=8,m=12	2.38e-03	0.07		1					3.02e-03	0.6	0.95	46,46,0,7

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 107 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1261	ok	s=8,m=12	2.41e-03	0.07		1					3.02e-03	0.6	0.95	46,46,0,7
1262	ok	s=8,m=12	1.67e-03	0.05	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	44,44,52,27
1263	ok	s=8,m=12	1.06e-03	0.03		1					3.02e-03	0.6	0.95	64,64,0,8
1264	ok	s=8,m=12	1.50e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	70,70,54,28
1265	ok	s=8,m=12	1.78e-03	0.05	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,54,28
1266	ok	s=9,m=12	1.61e-03	0.05		1					2.29e-03	0.4	0.83	52,54,0,5
1267	ok	s=9,m=12	2.10e-03	0.06		1					2.29e-03	0.4	0.83	61,49,0,27
1268	ok	s=8,m=12	2.74e-03	0.08		1					3.02e-03	0.6	0.95	42,42,0,27
1269	ok	s=8,m=12	2.73e-03	0.08		1					3.02e-03	0.6	0.95	45,45,0,25
1270	ok	s=8,m=12	2.77e-03	0.08		1					3.02e-03	0.6	0.95	45,45,0,25
1271	ok	s=8,m=12	1.88e-03	0.06	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	42,50,51,8
1272	ok	s=8,m=12	1.09e-03	0.03		1					3.02e-03	0.6	0.95	63,63,0,27
1273	ok	s=8,m=12	1.55e-03	0.05	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	69,69,53,6
1274	ok	s=8,m=12	2.03e-03	0.06	0.12	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	53,53,53,6
1275	ok	s=9,m=12	2.39e-03	0.05		1					2.29e-03	0.4	0.83	56,55,0,26
1276	ok	s=9,m=12	2.65e-03	0.06		1					2.29e-03	0.4	0.83	53,49,0,28
1277	ok	s=8,m=12	3.64e-03	0.11		1					3.02e-03	0.6	0.95	50,50,0,25
1278	ok	s=8,m=12	3.65e-03	0.11		1					3.02e-03	0.6	0.95	53,53,0,26
1279	ok	s=8,m=12	3.67e-03	0.11		1					3.02e-03	0.6	0.95	53,53,0,29
1280	ok	s=8,m=12	2.48e-03	0.07		1					3.02e-03	0.6	0.95	51,51,0,30
1281	ok	s=8,m=12	1.29e-03	0.04		1					3.02e-03	0.6	0.95	56,51,0,27
1282	ok	s=8,m=12	1.67e-03	0.05	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	69,69,49,29
1283	ok	s=8,m=12	2.66e-03	0.08		1					3.02e-03	0.6	0.95	53,53,0,6
1284	ok	s=9,m=12	1.60e-03	0.03		1					2.29e-03	0.4	0.83	56,64,0,26
1285	ok	s=9,m=12	1.83e-03	0.04		1					2.29e-03	0.4	0.83	70,61,0,27
1286	ok	s=8,m=12	3.28e-03	0.10		1					3.02e-03	0.6	0.95	51,51,0,7
1287	ok	s=8,m=12	3.28e-03	0.10		1					3.02e-03	0.6	0.95	56,56,0,25
1288	ok	s=8,m=12	3.31e-03	0.10		1					3.02e-03	0.6	0.95	56,56,0,28
1289	ok	s=8,m=12	2.25e-03	0.07		1					3.02e-03	0.6	0.95	50,50,0,5
1290	ok	s=8,m=12	1.03e-03	0.03		1					3.02e-03	0.6	0.95	32,62,0,5
1291	ok	s=8,m=12	1.38e-03	0.04	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	70,72,54,27
1292	ok	s=8,m=12	2.37e-03	0.07		1					3.02e-03	0.6	0.95	56,56,0,26
1293	ok	s=9,m=12	2.07e-03	0.04		1					2.29e-03	0.4	0.83	54,52,0,7
1294	ok	s=9,m=12	2.41e-03	0.05		1					2.29e-03	0.4	0.83	62,50,0,28
1295	ok	s=8,m=12	2.96e-03	0.09		1					3.02e-03	0.6	0.95	49,49,0,8
1296	ok	s=8,m=12	2.97e-03	0.09		1					3.02e-03	0.6	0.95	54,54,0,30
1297	ok	s=8,m=12	2.99e-03	0.09		1					3.02e-03	0.6	0.95	54,54,0,6
1298	ok	s=8,m=12	2.01e-03	0.06		1					3.02e-03	0.6	0.95	52,52,0,28
1299	ok	s=8,m=12	1.19e-03	0.04		1					3.02e-03	0.6	0.95	64,64,0,7
1300	ok	s=8,m=12	1.72e-03	0.05		1					3.02e-03	0.6	0.95	70,70,0,5
1301	ok	s=8,m=12	2.21e-03	0.07		1					3.02e-03	0.6	0.95	54,54,0,25
1302	ok	s=9,m=12	1.60e-03	0.04		1					2.29e-03	0.4	0.83	54,53,0,6
1303	ok	s=9,m=12	2.10e-03	0.05		1					2.29e-03	0.4	0.83	62,64,0,26
1304	ok	s=8,m=12	2.76e-03	0.08		1					3.02e-03	0.6	0.95	51,51,0,1
1305	ok	s=8,m=12	2.76e-03	0.08		1					3.02e-03	0.6	0.95	56,56,0,25
1306	ok	s=8,m=12	2.80e-03	0.08		1					3.02e-03	0.6	0.95	56,56,0,25
1307	ok	s=8,m=12	1.94e-03	0.06	0.09	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	50,50,52,29
1308	ok	s=8,m=12	1.09e-03	0.03		1					3.02e-03	0.6	0.95	64,62,0,6
1309	ok	s=8,m=12	1.58e-03	0.05		1					3.02e-03	0.6	0.95	70,70,0,28
1310	ok	s=8,m=12	2.10e-03	0.06	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	56,56,53,26
1311	ok	s=9,m=12	1.91e-03	0.04		1					2.29e-03	0.4	0.83	55,70,0,27
1312	ok	s=9,m=12	2.10e-03	0.05		1					2.29e-03	0.4	0.83	61,52,0,5
1313	ok	s=8,m=12	3.60e-03	0.11		1					3.02e-03	0.6	0.95	50,50,0,26
1314	ok	s=8,m=12	3.59e-03	0.11		1					3.02e-03	0.6	0.95	53,53,0,25
1315	ok	s=8,m=12	3.63e-03	0.11		1					3.02e-03	0.6	0.95	53,53,0,27
1316	ok	s=8,m=12	2.51e-03	0.08	0.10	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	50,50,56,31
1317	ok	s=8,m=12	1.10e-03	0.03		1					3.02e-03	0.6	0.95	63,63,0,27
1318	ok	s=8,m=12	1.57e-03	0.05		1					3.02e-03	0.6	0.95	69,69,0,27
1319	ok	s=8,m=12	2.61e-03	0.08	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	53,53,53,26
1320	ok	s=9,m=12	2.66e-03	0.04		1					2.29e-03	0.4	0.83	55,50,0,29
1321	ok	s=9,m=12	3.02e-03	0.05		1					2.29e-03	0.4	0.83	53,61,0,31
1322	ok	s=8,m=12	4.60e-03	0.14		1					3.02e-03	0.6	0.95	50,50,0,6
1323	ok	s=8,m=12	4.57e-03	0.14		1					3.02e-03	0.6	0.95	50,50,0,6

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 108 di 220

Trave	Stato	Note	V/V/T	V/N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1324	ok	s=8,m=12	4.60e-03	0.14		1					3.02e-03	0.6	0.95	53,53,0,28
1325	ok	s=8,m=12	3.12e-03	0.09		1					3.02e-03	0.6	0.95	50,50,0,26
1326	ok	s=8,m=12	1.44e-03	0.04	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	55,51,71,6
1327	ok	s=8,m=12	1.77e-03	0.06		1					3.02e-03	0.6	0.95	53,53,0,26
1328	ok	s=8,m=12	3.27e-03	0.10		1					3.02e-03	0.6	0.95	53,53,0,26
1329	ok	s=9,m=12	2.33e-03	0.05		1					2.29e-03	0.4	0.83	56,63,0,26
1330	ok	s=9,m=12	2.66e-03	0.05		1					2.29e-03	0.4	0.83	50,61,0,27
1331	ok	s=8,m=12	4.38e-03	0.13		1					3.02e-03	0.6	0.95	50,50,0,5
1332	ok	s=8,m=12	4.35e-03	0.13		1					3.02e-03	0.6	0.95	50,50,0,25
1333	ok	s=8,m=12	4.37e-03	0.13		1					3.02e-03	0.6	0.95	53,53,0,1
1334	ok	s=8,m=12	3.18e-03	0.10		1					3.02e-03	0.6	0.95	50,50,0,26
1335	ok	s=8,m=12	1.27e-03	0.04		1					3.02e-03	0.6	0.95	51,51,0,26
1336	ok	s=8,m=12	1.70e-03	0.05		1					3.02e-03	0.6	0.95	69,69,0,1
1337	ok	s=8,m=12	3.28e-03	0.10		1					3.02e-03	0.6	0.95	53,53,0,5
1362	ok	s=6,m=12	0.06	0.29		1				0.28	5.91e-02	1.00	8,7,0,7	
1363	ok	s=6,m=12	0.07	0.24		1				0.22	4.20e-02	1.00	8,8,0,8	
1364	ok	s=6,m=12	0.06	0.21		1				0.19	4.20e-02	1.00	8,8,0,8	
1365	ok	s=6,m=12	0.06	0.18		1				0.16	7.38e-02	1.00	8,7,0,7	
1366	ok	s=6,m=12	0.07	0.22		1				0.20	4.20e-02	1.00	8,8,0,8	
1367	ok	s=6,m=12	0.06	0.19		1				0.17	7.38e-02	1.00	7,8,0,8	
1368	ok	s=6,m=12	0.06	0.20		1				0.19	4.20e-02	1.00	7,7,0,7	
1369	ok	s=6,m=12	0.06	0.21		1				0.20	4.34e-02	1.00	7,7,0,7	
1370	ok	s=6,m=12	0.06	0.21		1				0.20	4.47e-02	1.00	7,7,0,7	
1371	ok	s=6,m=12	0.08	0.25		1				0.25	4.56e-02	1.00	7,7,0,7	
1372	ok	s=6,m=12	0.06	0.29		1				0.29	5.87e-02	1.00	8,7,0,7	
1373	ok	s=6,m=12	0.07	0.25		1				0.23	7.38e-02	1.00	8,8,0,8	
1374	ok	s=6,m=12	0.07	0.22		1				0.20	4.20e-02	1.00	8,8,0,8	
1375	ok	s=6,m=12	0.06	0.19		1				0.17	7.38e-02	1.00	8,7,0,7	
1376	ok	s=6,m=12	0.07	0.23		1				0.22	4.20e-02	1.00	8,8,0,8	
1377	ok	s=6,m=12	0.07	0.21		1				0.19	4.20e-02	1.00	7,8,0,8	
1378	ok	s=6,m=12	0.07	0.21		1				0.20	4.20e-02	1.00	7,7,0,7	
1379	ok	s=6,m=12	0.07	0.21		1				0.21	4.32e-02	1.00	7,7,0,7	
1380	ok	s=6,m=12	0.07	0.22		1				0.21	4.45e-02	1.00	7,7,0,7	
1381	ok	s=6,m=12	0.08	0.26		1				0.26	4.54e-02	1.00	7,7,0,7	
1382	ok	s=6,m=12	0.02	0.31		1				0.30	7.12e-02	1.00	48,7,0,7	
1383	ok	s=6,m=12	0.02	0.24		1				0.23	6.37e-02	1.00	8,8,0,8	
1384	ok	s=6,m=12	0.02	0.25		1				0.24	6.37e-02	1.00	41,7,0,7	
1385	ok	s=6,m=12	0.02	0.25		1				0.24	6.33e-02	1.00	72,8,0,8	
1386	ok	s=6,m=12	0.02	0.26		1				0.24	6.08e-02	1.00	8,7,0,7	
1387	ok	s=6,m=12	0.02	0.25		1				0.24	6.08e-02	1.00	42,7,0,7	
1388	ok	s=6,m=12	0.02	0.25		1				0.24	5.91e-02	1.00	7,7,0,7	
1389	ok	s=6,m=12	0.02	0.25		1				0.24	5.79e-02	1.00	7,8,0,7	
1390	ok	s=6,m=12	0.02	0.24		1				0.23	5.70e-02	1.00	7,8,0,7	
1391	ok	s=6,m=12	0.03	0.31		1				0.30	5.54e-02	1.00	7,7,0,7	
1392	ok	s=6,m=12	0.02	0.32		1				0.32	7.15e-02	1.00	45,7,0,7	
1393	ok	s=6,m=12	0.03	0.26		1				0.25	6.36e-02	1.00	8,8,0,8	
1394	ok	s=6,m=12	0.02	0.26		1				0.25	6.36e-02	1.00	8,8,0,7	
1395	ok	s=6,m=12	0.02	0.27		1				0.25	6.32e-02	1.00	8,7,0,8	
1396	ok	s=6,m=12	0.03	0.27		1				0.26	6.08e-02	1.00	8,7,0,7	
1397	ok	s=6,m=12	0.03	0.27		1				0.25	6.08e-02	1.00	45,7,0,7	
1398	ok	s=6,m=12	0.02	0.26		1				0.25	5.92e-02	1.00	7,8,0,7	
1399	ok	s=6,m=12	0.02	0.26		1				0.25	5.81e-02	1.00	7,7,0,7	
1400	ok	s=6,m=12	0.02	0.25		1				0.24	5.72e-02	1.00	7,8,0,7	
1401	ok	s=6,m=12	0.04	0.32		1				0.32	5.55e-02	1.00	7,7,0,7	
1402	ok	s=6,m=12	0.04	0.31		1				0.30	5.55e-02	1.00	7,7,0,7	
1403	ok	s=6,m=12	0.02	0.24		1				0.23	5.74e-02	1.00	7,8,0,7	
1404	ok	s=6,m=12	0.03	0.25		1				0.24	5.84e-02	1.00	41,7,0,7	
1405	ok	s=6,m=12	0.03	0.25		1				0.24	5.82e-02	1.00	7,8,0,8	
1406	ok	s=6,m=12	0.02	0.26		1				0.24	6.10e-02	1.00	7,7,0,7	
1407	ok	s=6,m=12	0.02	0.25		1				0.24	6.15e-02	1.00	8,7,0,7	
1408	ok	s=6,m=12	0.02	0.25		1				0.24	6.27e-02	1.00	8,7,0,7	
1409	ok	s=6,m=12	0.02	0.25		1				0.24	6.40e-02	1.00	8,8,0,7	
1410	ok	s=6,m=12	0.03	0.24		1				0.23	6.40e-02	1.00	8,8,0,7	



Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
5							0.0	0.0	0.0	0.0	0.0	0.0	0.0
6							0.0	0.0	0.0	0.0	0.0	0.0	0.0
7							0.0	0.0	0.0	0.0	0.0	0.0	0.0
8							0.0	0.0	0.0	0.0	0.0	0.0	0.0
9							0.0	0.0	0.0	0.0	0.0	0.0	0.0
10							0.0	0.0	0.0	0.0	0.0	0.0	0.0
11							0.0	0.0	0.0	0.0	0.0	0.0	0.0
12							0.0	0.0	0.0	0.0	0.0	0.0	0.0
13							0.0	0.0	0.0	0.0	0.0	0.0	0.0
14							0.0	0.0	0.0	0.0	0.0	0.0	0.0
37							0.0	0.0	0.0	0.0	0.0	0.0	0.0
38							0.0	0.0	0.0	0.0	0.0	0.0	0.0
39							0.0	0.0	0.0	0.0	0.0	0.0	0.0
40							0.0	0.0	0.0	0.0	0.0	0.0	0.0
41							0.0	0.0	0.0	0.0	0.0	0.0	0.0
42							0.0	0.0	0.0	0.0	0.0	0.0	0.0
43							0.0	0.0	0.0	0.0	0.0	0.0	0.0
44							0.0	0.0	0.0	0.0	0.0	0.0	0.0
45							0.0	0.0	0.0	0.0	0.0	0.0	0.0
46							0.0	0.0	0.0	0.0	0.0	0.0	0.0
47							0.0	0.0	0.0	0.0	0.0	0.0	0.0
48							0.0	0.0	0.0	0.0	0.0	0.0	0.0
49							0.0	0.0	0.0	0.0	0.0	0.0	0.0
50							0.0	0.0	0.0	0.0	0.0	0.0	0.0
51							0.0	0.0	0.0	0.0	0.0	0.0	0.0
52							0.0	0.0	0.0	0.0	0.0	0.0	0.0
53							0.0	0.0	0.0	0.0	0.0	0.0	0.0
54							0.0	0.0	0.0	0.0	0.0	0.0	0.0
55							0.0	0.0	0.0	0.0	0.0	0.0	0.0
56							0.0	0.0	0.0	0.0	0.0	0.0	0.0
59							0.0	0.0	0.0	0.0	0.0	0.0	0.0
60							0.0	0.0	0.0	0.0	0.0	0.0	0.0
61							0.0	0.0	0.0	0.0	0.0	0.0	0.0
62							0.0	0.0	0.0	0.0	0.0	0.0	0.0
63							0.0	0.0	0.0	0.0	0.0	0.0	0.0
64							0.0	0.0	0.0	0.0	0.0	0.0	0.0
65							0.0	0.0	0.0	0.0	0.0	0.0	0.0
66							0.0	0.0	0.0	0.0	0.0	0.0	0.0
67							0.0	0.0	0.0	0.0	0.0	0.0	0.0
68							0.0	0.0	0.0	0.0	0.0	0.0	0.0
69							0.0	0.0	0.0	0.0	0.0	0.0	0.0
70							0.0	0.0	0.0	0.0	0.0	0.0	0.0
71							0.0	0.0	0.0	0.0	0.0	0.0	0.0
72							0.0	0.0	0.0	0.0	0.0	0.0	0.0
75							0.0	0.0	0.0	0.0	0.0	0.0	0.0
76							0.0	0.0	0.0	0.0	0.0	0.0	0.0
77							0.0	0.0	0.0	0.0	0.0	0.0	0.0
78							0.0	0.0	0.0	0.0	0.0	0.0	0.0
79							0.0	0.0	0.0	0.0	0.0	0.0	0.0
80							0.0	0.0	0.0	0.0	0.0	0.0	0.0
81							0.0	0.0	0.0	0.0	0.0	0.0	0.0
82							0.0	0.0	0.0	0.0	0.0	0.0	0.0
83							0.0	0.0	0.0	0.0	0.0	0.0	0.0
84							0.0	0.0	0.0	0.0	0.0	0.0	0.0
85							0.0	0.0	0.0	0.0	0.0	0.0	0.0
86							0.0	0.0	0.0	0.0	0.0	0.0	0.0
87							0.0	0.0	0.0	0.0	0.0	0.0	0.0
88							0.0	0.0	0.0	0.0	0.0	0.0	0.0
91							0.0	0.0	0.0	0.0	0.0	0.0	0.0
92							0.0	0.0	0.0	0.0	0.0	0.0	0.0
93							0.0	0.0	0.0	0.0	0.0	0.0	0.0
94							0.0	0.0	0.0	0.0	0.0	0.0	0.0
95							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
96							0.0	0.0	0.0	0.0	0.0	0.0	0.0
97							0.0	0.0	0.0	0.0	0.0	0.0	0.0
98							0.0	0.0	0.0	0.0	0.0	0.0	0.0
99							0.0	0.0	0.0	0.0	0.0	0.0	0.0
100							0.0	0.0	0.0	0.0	0.0	0.0	0.0
101							0.0	0.0	0.0	0.0	0.0	0.0	0.0
102							0.0	0.0	0.0	0.0	0.0	0.0	0.0
103							0.0	0.0	0.0	0.0	0.0	0.0	0.0
104							0.0	0.0	0.0	0.0	0.0	0.0	0.0
107							0.0	0.0	0.0	0.0	0.0	0.0	0.0
108							0.0	0.0	0.0	0.0	0.0	0.0	0.0
109							0.0	0.0	0.0	0.0	0.0	0.0	0.0
110							0.0	0.0	0.0	0.0	0.0	0.0	0.0
111							0.0	0.0	0.0	0.0	0.0	0.0	0.0
112							0.0	0.0	0.0	0.0	0.0	0.0	0.0
113							0.0	0.0	0.0	0.0	0.0	0.0	0.0
114							0.0	0.0	0.0	0.0	0.0	0.0	0.0
115							0.0	0.0	0.0	0.0	0.0	0.0	0.0
116							0.0	0.0	0.0	0.0	0.0	0.0	0.0
117							0.0	0.0	0.0	0.0	0.0	0.0	0.0
118							0.0	0.0	0.0	0.0	0.0	0.0	0.0
119							0.0	0.0	0.0	0.0	0.0	0.0	0.0
120							0.0	0.0	0.0	0.0	0.0	0.0	0.0
123							0.0	0.0	0.0	0.0	0.0	0.0	0.0
124							0.0	0.0	0.0	0.0	0.0	0.0	0.0
125							0.0	0.0	0.0	0.0	0.0	0.0	0.0
126							0.0	0.0	0.0	0.0	0.0	0.0	0.0
127							0.0	0.0	0.0	0.0	0.0	0.0	0.0
128							0.0	0.0	0.0	0.0	0.0	0.0	0.0
129							0.0	0.0	0.0	0.0	0.0	0.0	0.0
130							0.0	0.0	0.0	0.0	0.0	0.0	0.0
131							0.0	0.0	0.0	0.0	0.0	0.0	0.0
132							0.0	0.0	0.0	0.0	0.0	0.0	0.0
133							0.0	0.0	0.0	0.0	0.0	0.0	0.0
134							0.0	0.0	0.0	0.0	0.0	0.0	0.0
135							0.0	0.0	0.0	0.0	0.0	0.0	0.0
136							0.0	0.0	0.0	0.0	0.0	0.0	0.0
139							0.0	0.0	0.0	0.0	0.0	0.0	0.0
140							0.0	0.0	0.0	0.0	0.0	0.0	0.0
141							0.0	0.0	0.0	0.0	0.0	0.0	0.0
142							0.0	0.0	0.0	0.0	0.0	0.0	0.0
143							0.0	0.0	0.0	0.0	0.0	0.0	0.0
144							0.0	0.0	0.0	0.0	0.0	0.0	0.0
145							0.0	0.0	0.0	0.0	0.0	0.0	0.0
146							0.0	0.0	0.0	0.0	0.0	0.0	0.0
147							0.0	0.0	0.0	0.0	0.0	0.0	0.0
148							0.0	0.0	0.0	0.0	0.0	0.0	0.0
149							0.0	0.0	0.0	0.0	0.0	0.0	0.0
150							0.0	0.0	0.0	0.0	0.0	0.0	0.0
151							0.0	0.0	0.0	0.0	0.0	0.0	0.0
152							0.0	0.0	0.0	0.0	0.0	0.0	0.0
155							0.0	0.0	0.0	0.0	0.0	0.0	0.0
156							0.0	0.0	0.0	0.0	0.0	0.0	0.0
157							0.0	0.0	0.0	0.0	0.0	0.0	0.0
158							0.0	0.0	0.0	0.0	0.0	0.0	0.0
159							0.0	0.0	0.0	0.0	0.0	0.0	0.0
160							0.0	0.0	0.0	0.0	0.0	0.0	0.0
161							0.0	0.0	0.0	0.0	0.0	0.0	0.0
162							0.0	0.0	0.0	0.0	0.0	0.0	0.0
163							0.0	0.0	0.0	0.0	0.0	0.0	0.0
164							0.0	0.0	0.0	0.0	0.0	0.0	0.0
165							0.0	0.0	0.0	0.0	0.0	0.0	0.0
166							0.0	0.0	0.0	0.0	0.0	0.0	0.0



Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
167							0.0	0.0	0.0	0.0	0.0	0.0	0.0
168							0.0	0.0	0.0	0.0	0.0	0.0	0.0
171							0.0	0.0	0.0	0.0	0.0	0.0	0.0
172							0.0	0.0	0.0	0.0	0.0	0.0	0.0
173							0.0	0.0	0.0	0.0	0.0	0.0	0.0
174							0.0	0.0	0.0	0.0	0.0	0.0	0.0
175							0.0	0.0	0.0	0.0	0.0	0.0	0.0
176							0.0	0.0	0.0	0.0	0.0	0.0	0.0
177							0.0	0.0	0.0	0.0	0.0	0.0	0.0
178							0.0	0.0	0.0	0.0	0.0	0.0	0.0
179							0.0	0.0	0.0	0.0	0.0	0.0	0.0
180							0.0	0.0	0.0	0.0	0.0	0.0	0.0
181							0.0	0.0	0.0	0.0	0.0	0.0	0.0
182							0.0	0.0	0.0	0.0	0.0	0.0	0.0
183							0.0	0.0	0.0	0.0	0.0	0.0	0.0
184							0.0	0.0	0.0	0.0	0.0	0.0	0.0
187							0.0	0.0	0.0	0.0	0.0	0.0	0.0
188							0.0	0.0	0.0	0.0	0.0	0.0	0.0
189							0.0	0.0	0.0	0.0	0.0	0.0	0.0
190							0.0	0.0	0.0	0.0	0.0	0.0	0.0
191							0.0	0.0	0.0	0.0	0.0	0.0	0.0
192							0.0	0.0	0.0	0.0	0.0	0.0	0.0
193							0.0	0.0	0.0	0.0	0.0	0.0	0.0
194							0.0	0.0	0.0	0.0	0.0	0.0	0.0
195							0.0	0.0	0.0	0.0	0.0	0.0	0.0
196							0.0	0.0	0.0	0.0	0.0	0.0	0.0
197							0.0	0.0	0.0	0.0	0.0	0.0	0.0
198							0.0	0.0	0.0	0.0	0.0	0.0	0.0
199							0.0	0.0	0.0	0.0	0.0	0.0	0.0
200							0.0	0.0	0.0	0.0	0.0	0.0	0.0
203							0.0	0.0	0.0	0.0	0.0	0.0	0.0
204							0.0	0.0	0.0	0.0	0.0	0.0	0.0
205							0.0	0.0	0.0	0.0	0.0	0.0	0.0
206							0.0	0.0	0.0	0.0	0.0	0.0	0.0
207							0.0	0.0	0.0	0.0	0.0	0.0	0.0
208							0.0	0.0	0.0	0.0	0.0	0.0	0.0
209							0.0	0.0	0.0	0.0	0.0	0.0	0.0
210							0.0	0.0	0.0	0.0	0.0	0.0	0.0
211							0.0	0.0	0.0	0.0	0.0	0.0	0.0
212							0.0	0.0	0.0	0.0	0.0	0.0	0.0
213							0.0	0.0	0.0	0.0	0.0	0.0	0.0
214							0.0	0.0	0.0	0.0	0.0	0.0	0.0
215							0.0	0.0	0.0	0.0	0.0	0.0	0.0
216							0.0	0.0	0.0	0.0	0.0	0.0	0.0
219							0.0	0.0	0.0	0.0	0.0	0.0	0.0
220							0.0	0.0	0.0	0.0	0.0	0.0	0.0
221							0.0	0.0	0.0	0.0	0.0	0.0	0.0
222							0.0	0.0	0.0	0.0	0.0	0.0	0.0
223							0.0	0.0	0.0	0.0	0.0	0.0	0.0
224							0.0	0.0	0.0	0.0	0.0	0.0	0.0
225							0.0	0.0	0.0	0.0	0.0	0.0	0.0
226							0.0	0.0	0.0	0.0	0.0	0.0	0.0
227							0.0	0.0	0.0	0.0	0.0	0.0	0.0
228							0.0	0.0	0.0	0.0	0.0	0.0	0.0
229							0.0	0.0	0.0	0.0	0.0	0.0	0.0
230							0.0	0.0	0.0	0.0	0.0	0.0	0.0
231							0.0	0.0	0.0	0.0	0.0	0.0	0.0
232							0.0	0.0	0.0	0.0	0.0	0.0	0.0
235							0.0	0.0	0.0	0.0	0.0	0.0	0.0
236							0.0	0.0	0.0	0.0	0.0	0.0	0.0
237							0.0	0.0	0.0	0.0	0.0	0.0	0.0
238							0.0	0.0	0.0	0.0	0.0	0.0	0.0
239							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
240							0.0	0.0	0.0	0.0	0.0	0.0	0.0
241							0.0	0.0	0.0	0.0	0.0	0.0	0.0
242							0.0	0.0	0.0	0.0	0.0	0.0	0.0
243							0.0	0.0	0.0	0.0	0.0	0.0	0.0
244							0.0	0.0	0.0	0.0	0.0	0.0	0.0
245							0.0	0.0	0.0	0.0	0.0	0.0	0.0
246							0.0	0.0	0.0	0.0	0.0	0.0	0.0
247							0.0	0.0	0.0	0.0	0.0	0.0	0.0
248							0.0	0.0	0.0	0.0	0.0	0.0	0.0
251							0.0	0.0	0.0	0.0	0.0	0.0	0.0
252							0.0	0.0	0.0	0.0	0.0	0.0	0.0
253							0.0	0.0	0.0	0.0	0.0	0.0	0.0
254							0.0	0.0	0.0	0.0	0.0	0.0	0.0
255							0.0	0.0	0.0	0.0	0.0	0.0	0.0
256							0.0	0.0	0.0	0.0	0.0	0.0	0.0
257							0.0	0.0	0.0	0.0	0.0	0.0	0.0
258							0.0	0.0	0.0	0.0	0.0	0.0	0.0
259							0.0	0.0	0.0	0.0	0.0	0.0	0.0
260							0.0	0.0	0.0	0.0	0.0	0.0	0.0
261							0.0	0.0	0.0	0.0	0.0	0.0	0.0
262							0.0	0.0	0.0	0.0	0.0	0.0	0.0
263							0.0	0.0	0.0	0.0	0.0	0.0	0.0
264							0.0	0.0	0.0	0.0	0.0	0.0	0.0
267							0.0	0.0	0.0	0.0	0.0	0.0	0.0
268							0.0	0.0	0.0	0.0	0.0	0.0	0.0
269							0.0	0.0	0.0	0.0	0.0	0.0	0.0
270							0.0	0.0	0.0	0.0	0.0	0.0	0.0
271							0.0	0.0	0.0	0.0	0.0	0.0	0.0
272							0.0	0.0	0.0	0.0	0.0	0.0	0.0
273							0.0	0.0	0.0	0.0	0.0	0.0	0.0
274							0.0	0.0	0.0	0.0	0.0	0.0	0.0
275							0.0	0.0	0.0	0.0	0.0	0.0	0.0
276							0.0	0.0	0.0	0.0	0.0	0.0	0.0
277							0.0	0.0	0.0	0.0	0.0	0.0	0.0
278							0.0	0.0	0.0	0.0	0.0	0.0	0.0
279							0.0	0.0	0.0	0.0	0.0	0.0	0.0
280							0.0	0.0	0.0	0.0	0.0	0.0	0.0
283							0.0	0.0	0.0	0.0	0.0	0.0	0.0
284							0.0	0.0	0.0	0.0	0.0	0.0	0.0
285							0.0	0.0	0.0	0.0	0.0	0.0	0.0
286							0.0	0.0	0.0	0.0	0.0	0.0	0.0
287							0.0	0.0	0.0	0.0	0.0	0.0	0.0
288							0.0	0.0	0.0	0.0	0.0	0.0	0.0
289							0.0	0.0	0.0	0.0	0.0	0.0	0.0
290							0.0	0.0	0.0	0.0	0.0	0.0	0.0
291							0.0	0.0	0.0	0.0	0.0	0.0	0.0
292							0.0	0.0	0.0	0.0	0.0	0.0	0.0
293							0.0	0.0	0.0	0.0	0.0	0.0	0.0
294							0.0	0.0	0.0	0.0	0.0	0.0	0.0
295							0.0	0.0	0.0	0.0	0.0	0.0	0.0
296							0.0	0.0	0.0	0.0	0.0	0.0	0.0
299							0.0	0.0	0.0	0.0	0.0	0.0	0.0
300							0.0	0.0	0.0	0.0	0.0	0.0	0.0
301							0.0	0.0	0.0	0.0	0.0	0.0	0.0
302							0.0	0.0	0.0	0.0	0.0	0.0	0.0
303							0.0	0.0	0.0	0.0	0.0	0.0	0.0
304							0.0	0.0	0.0	0.0	0.0	0.0	0.0
305							0.0	0.0	0.0	0.0	0.0	0.0	0.0
306							0.0	0.0	0.0	0.0	0.0	0.0	0.0
307							0.0	0.0	0.0	0.0	0.0	0.0	0.0
308							0.0	0.0	0.0	0.0	0.0	0.0	0.0
309							0.0	0.0	0.0	0.0	0.0	0.0	0.0
310							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
311							0.0	0.0	0.0	0.0	0.0	0.0	0.0
312							0.0	0.0	0.0	0.0	0.0	0.0	0.0
315							0.0	0.0	0.0	0.0	0.0	0.0	0.0
316							0.0	0.0	0.0	0.0	0.0	0.0	0.0
317							0.0	0.0	0.0	0.0	0.0	0.0	0.0
318							0.0	0.0	0.0	0.0	0.0	0.0	0.0
319							0.0	0.0	0.0	0.0	0.0	0.0	0.0
320							0.0	0.0	0.0	0.0	0.0	0.0	0.0
321							0.0	0.0	0.0	0.0	0.0	0.0	0.0
322							0.0	0.0	0.0	0.0	0.0	0.0	0.0
323							0.0	0.0	0.0	0.0	0.0	0.0	0.0
324							0.0	0.0	0.0	0.0	0.0	0.0	0.0
325							0.0	0.0	0.0	0.0	0.0	0.0	0.0
326							0.0	0.0	0.0	0.0	0.0	0.0	0.0
327							0.0	0.0	0.0	0.0	0.0	0.0	0.0
328							0.0	0.0	0.0	0.0	0.0	0.0	0.0
331							0.0	0.0	0.0	0.0	0.0	0.0	0.0
332							0.0	0.0	0.0	0.0	0.0	0.0	0.0
333							0.0	0.0	0.0	0.0	0.0	0.0	0.0
334							0.0	0.0	0.0	0.0	0.0	0.0	0.0
335							0.0	0.0	0.0	0.0	0.0	0.0	0.0
336							0.0	0.0	0.0	0.0	0.0	0.0	0.0
337							0.0	0.0	0.0	0.0	0.0	0.0	0.0
338							0.0	0.0	0.0	0.0	0.0	0.0	0.0
339							0.0	0.0	0.0	0.0	0.0	0.0	0.0
340							0.0	0.0	0.0	0.0	0.0	0.0	0.0
341							0.0	0.0	0.0	0.0	0.0	0.0	0.0
342							0.0	0.0	0.0	0.0	0.0	0.0	0.0
343							0.0	0.0	0.0	0.0	0.0	0.0	0.0
344							0.0	0.0	0.0	0.0	0.0	0.0	0.0
347							0.0	0.0	0.0	0.0	0.0	0.0	0.0
348							0.0	0.0	0.0	0.0	0.0	0.0	0.0
349							0.0	0.0	0.0	0.0	0.0	0.0	0.0
350							0.0	0.0	0.0	0.0	0.0	0.0	0.0
351							0.0	0.0	0.0	0.0	0.0	0.0	0.0
352							0.0	0.0	0.0	0.0	0.0	0.0	0.0
353							0.0	0.0	0.0	0.0	0.0	0.0	0.0
354							0.0	0.0	0.0	0.0	0.0	0.0	0.0
355							0.0	0.0	0.0	0.0	0.0	0.0	0.0
356							0.0	0.0	0.0	0.0	0.0	0.0	0.0
357							0.0	0.0	0.0	0.0	0.0	0.0	0.0
358							0.0	0.0	0.0	0.0	0.0	0.0	0.0
359							0.0	0.0	0.0	0.0	0.0	0.0	0.0
360							0.0	0.0	0.0	0.0	0.0	0.0	0.0
363							0.0	0.0	0.0	0.0	0.0	0.0	0.0
364							0.0	0.0	0.0	0.0	0.0	0.0	0.0
365							0.0	0.0	0.0	0.0	0.0	0.0	0.0
366							0.0	0.0	0.0	0.0	0.0	0.0	0.0
367							0.0	0.0	0.0	0.0	0.0	0.0	0.0
368							0.0	0.0	0.0	0.0	0.0	0.0	0.0
369							0.0	0.0	0.0	0.0	0.0	0.0	0.0
370							0.0	0.0	0.0	0.0	0.0	0.0	0.0
371							0.0	0.0	0.0	0.0	0.0	0.0	0.0
372							0.0	0.0	0.0	0.0	0.0	0.0	0.0
373							0.0	0.0	0.0	0.0	0.0	0.0	0.0
374							0.0	0.0	0.0	0.0	0.0	0.0	0.0
375							0.0	0.0	0.0	0.0	0.0	0.0	0.0
376							0.0	0.0	0.0	0.0	0.0	0.0	0.0
379							0.0	0.0	0.0	0.0	0.0	0.0	0.0
380							0.0	0.0	0.0	0.0	0.0	0.0	0.0
381							0.0	0.0	0.0	0.0	0.0	0.0	0.0
382							0.0	0.0	0.0	0.0	0.0	0.0	0.0
383							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
384							0.0	0.0	0.0	0.0	0.0	0.0	0.0
385							0.0	0.0	0.0	0.0	0.0	0.0	0.0
386							0.0	0.0	0.0	0.0	0.0	0.0	0.0
387							0.0	0.0	0.0	0.0	0.0	0.0	0.0
388							0.0	0.0	0.0	0.0	0.0	0.0	0.0
389							0.0	0.0	0.0	0.0	0.0	0.0	0.0
390							0.0	0.0	0.0	0.0	0.0	0.0	0.0
391							0.0	0.0	0.0	0.0	0.0	0.0	0.0
392							0.0	0.0	0.0	0.0	0.0	0.0	0.0
395							0.0	0.0	0.0	0.0	0.0	0.0	0.0
396							0.0	0.0	0.0	0.0	0.0	0.0	0.0
397							0.0	0.0	0.0	0.0	0.0	0.0	0.0
398							0.0	0.0	0.0	0.0	0.0	0.0	0.0
399							0.0	0.0	0.0	0.0	0.0	0.0	0.0
400							0.0	0.0	0.0	0.0	0.0	0.0	0.0
401							0.0	0.0	0.0	0.0	0.0	0.0	0.0
402							0.0	0.0	0.0	0.0	0.0	0.0	0.0
403							0.0	0.0	0.0	0.0	0.0	0.0	0.0
404							0.0	0.0	0.0	0.0	0.0	0.0	0.0
405							0.0	0.0	0.0	0.0	0.0	0.0	0.0
406							0.0	0.0	0.0	0.0	0.0	0.0	0.0
407							0.0	0.0	0.0	0.0	0.0	0.0	0.0
408							0.0	0.0	0.0	0.0	0.0	0.0	0.0
411							0.0	0.0	0.0	0.0	0.0	0.0	0.0
412							0.0	0.0	0.0	0.0	0.0	0.0	0.0
413							0.0	0.0	0.0	0.0	0.0	0.0	0.0
414							0.0	0.0	0.0	0.0	0.0	0.0	0.0
415							0.0	0.0	0.0	0.0	0.0	0.0	0.0
416							0.0	0.0	0.0	0.0	0.0	0.0	0.0
417							0.0	0.0	0.0	0.0	0.0	0.0	0.0
418							0.0	0.0	0.0	0.0	0.0	0.0	0.0
419							0.0	0.0	0.0	0.0	0.0	0.0	0.0
420							0.0	0.0	0.0	0.0	0.0	0.0	0.0
421							0.0	0.0	0.0	0.0	0.0	0.0	0.0
422							0.0	0.0	0.0	0.0	0.0	0.0	0.0
423							0.0	0.0	0.0	0.0	0.0	0.0	0.0
424							0.0	0.0	0.0	0.0	0.0	0.0	0.0
427							0.0	0.0	0.0	0.0	0.0	0.0	0.0
428							0.0	0.0	0.0	0.0	0.0	0.0	0.0
429							0.0	0.0	0.0	0.0	0.0	0.0	0.0
430							0.0	0.0	0.0	0.0	0.0	0.0	0.0
431							0.0	0.0	0.0	0.0	0.0	0.0	0.0
432							0.0	0.0	0.0	0.0	0.0	0.0	0.0
433							0.0	0.0	0.0	0.0	0.0	0.0	0.0
434							0.0	0.0	0.0	0.0	0.0	0.0	0.0
435							0.0	0.0	0.0	0.0	0.0	0.0	0.0
436							0.0	0.0	0.0	0.0	0.0	0.0	0.0
437							0.0	0.0	0.0	0.0	0.0	0.0	0.0
438							0.0	0.0	0.0	0.0	0.0	0.0	0.0
439							0.0	0.0	0.0	0.0	0.0	0.0	0.0
440							0.0	0.0	0.0	0.0	0.0	0.0	0.0
443							0.0	0.0	0.0	0.0	0.0	0.0	0.0
444							0.0	0.0	0.0	0.0	0.0	0.0	0.0
445							0.0	0.0	0.0	0.0	0.0	0.0	0.0
446							0.0	0.0	0.0	0.0	0.0	0.0	0.0
447							0.0	0.0	0.0	0.0	0.0	0.0	0.0
448							0.0	0.0	0.0	0.0	0.0	0.0	0.0
449							0.0	0.0	0.0	0.0	0.0	0.0	0.0
450							0.0	0.0	0.0	0.0	0.0	0.0	0.0
451							0.0	0.0	0.0	0.0	0.0	0.0	0.0
452							0.0	0.0	0.0	0.0	0.0	0.0	0.0
453							0.0	0.0	0.0	0.0	0.0	0.0	0.0
454							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
455							0.0	0.0	0.0	0.0	0.0	0.0	0.0
456							0.0	0.0	0.0	0.0	0.0	0.0	0.0
459							0.0	0.0	0.0	0.0	0.0	0.0	0.0
460							0.0	0.0	0.0	0.0	0.0	0.0	0.0
461							0.0	0.0	0.0	0.0	0.0	0.0	0.0
462							0.0	0.0	0.0	0.0	0.0	0.0	0.0
463							0.0	0.0	0.0	0.0	0.0	0.0	0.0
464							0.0	0.0	0.0	0.0	0.0	0.0	0.0
465							0.0	0.0	0.0	0.0	0.0	0.0	0.0
466							0.0	0.0	0.0	0.0	0.0	0.0	0.0
467							0.0	0.0	0.0	0.0	0.0	0.0	0.0
468							0.0	0.0	0.0	0.0	0.0	0.0	0.0
469							0.0	0.0	0.0	0.0	0.0	0.0	0.0
470							0.0	0.0	0.0	0.0	0.0	0.0	0.0
471							0.0	0.0	0.0	0.0	0.0	0.0	0.0
472							0.0	0.0	0.0	0.0	0.0	0.0	0.0
475							0.0	0.0	0.0	0.0	0.0	0.0	0.0
476							0.0	0.0	0.0	0.0	0.0	0.0	0.0
477							0.0	0.0	0.0	0.0	0.0	0.0	0.0
478							0.0	0.0	0.0	0.0	0.0	0.0	0.0
479							0.0	0.0	0.0	0.0	0.0	0.0	0.0
480							0.0	0.0	0.0	0.0	0.0	0.0	0.0
481							0.0	0.0	0.0	0.0	0.0	0.0	0.0
482							0.0	0.0	0.0	0.0	0.0	0.0	0.0
483							0.0	0.0	0.0	0.0	0.0	0.0	0.0
484							0.0	0.0	0.0	0.0	0.0	0.0	0.0
485							0.0	0.0	0.0	0.0	0.0	0.0	0.0
486							0.0	0.0	0.0	0.0	0.0	0.0	0.0
487							0.0	0.0	0.0	0.0	0.0	0.0	0.0
488							0.0	0.0	0.0	0.0	0.0	0.0	0.0
491							0.0	0.0	0.0	0.0	0.0	0.0	0.0
492							0.0	0.0	0.0	0.0	0.0	0.0	0.0
493							0.0	0.0	0.0	0.0	0.0	0.0	0.0
494							0.0	0.0	0.0	0.0	0.0	0.0	0.0
495							0.0	0.0	0.0	0.0	0.0	0.0	0.0
496							0.0	0.0	0.0	0.0	0.0	0.0	0.0
497							0.0	0.0	0.0	0.0	0.0	0.0	0.0
498							0.0	0.0	0.0	0.0	0.0	0.0	0.0
499							0.0	0.0	0.0	0.0	0.0	0.0	0.0
500							0.0	0.0	0.0	0.0	0.0	0.0	0.0
501							0.0	0.0	0.0	0.0	0.0	0.0	0.0
502							0.0	0.0	0.0	0.0	0.0	0.0	0.0
503							0.0	0.0	0.0	0.0	0.0	0.0	0.0
504							0.0	0.0	0.0	0.0	0.0	0.0	0.0
507							0.0	0.0	0.0	0.0	0.0	0.0	0.0
508							0.0	0.0	0.0	0.0	0.0	0.0	0.0
509							0.0	0.0	0.0	0.0	0.0	0.0	0.0
510							0.0	0.0	0.0	0.0	0.0	0.0	0.0
511							0.0	0.0	0.0	0.0	0.0	0.0	0.0
512							0.0	0.0	0.0	0.0	0.0	0.0	0.0
513							0.0	0.0	0.0	0.0	0.0	0.0	0.0
514							0.0	0.0	0.0	0.0	0.0	0.0	0.0
515							0.0	0.0	0.0	0.0	0.0	0.0	0.0
516							0.0	0.0	0.0	0.0	0.0	0.0	0.0
517							0.0	0.0	0.0	0.0	0.0	0.0	0.0
518							0.0	0.0	0.0	0.0	0.0	0.0	0.0
519							0.0	0.0	0.0	0.0	0.0	0.0	0.0
520							0.0	0.0	0.0	0.0	0.0	0.0	0.0
523							0.0	0.0	0.0	0.0	0.0	0.0	0.0
524							0.0	0.0	0.0	0.0	0.0	0.0	0.0
525							0.0	0.0	0.0	0.0	0.0	0.0	0.0
526							0.0	0.0	0.0	0.0	0.0	0.0	0.0
527							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
528							0.0	0.0	0.0	0.0	0.0	0.0	0.0
529							0.0	0.0	0.0	0.0	0.0	0.0	0.0
530							0.0	0.0	0.0	0.0	0.0	0.0	0.0
531							0.0	0.0	0.0	0.0	0.0	0.0	0.0
532							0.0	0.0	0.0	0.0	0.0	0.0	0.0
533							0.0	0.0	0.0	0.0	0.0	0.0	0.0
534							0.0	0.0	0.0	0.0	0.0	0.0	0.0
535							0.0	0.0	0.0	0.0	0.0	0.0	0.0
536							0.0	0.0	0.0	0.0	0.0	0.0	0.0
539							0.0	0.0	0.0	0.0	0.0	0.0	0.0
540							0.0	0.0	0.0	0.0	0.0	0.0	0.0
541							0.0	0.0	0.0	0.0	0.0	0.0	0.0
542							0.0	0.0	0.0	0.0	0.0	0.0	0.0
543							0.0	0.0	0.0	0.0	0.0	0.0	0.0
544							0.0	0.0	0.0	0.0	0.0	0.0	0.0
545							0.0	0.0	0.0	0.0	0.0	0.0	0.0
546							0.0	0.0	0.0	0.0	0.0	0.0	0.0
547							0.0	0.0	0.0	0.0	0.0	0.0	0.0
548							0.0	0.0	0.0	0.0	0.0	0.0	0.0
549							0.0	0.0	0.0	0.0	0.0	0.0	0.0
550							0.0	0.0	0.0	0.0	0.0	0.0	0.0
551							0.0	0.0	0.0	0.0	0.0	0.0	0.0
552							0.0	0.0	0.0	0.0	0.0	0.0	0.0
555							0.0	0.0	0.0	0.0	0.0	0.0	0.0
556							0.0	0.0	0.0	0.0	0.0	0.0	0.0
557							0.0	0.0	0.0	0.0	0.0	0.0	0.0
558							0.0	0.0	0.0	0.0	0.0	0.0	0.0
559							0.0	0.0	0.0	0.0	0.0	0.0	0.0
560							0.0	0.0	0.0	0.0	0.0	0.0	0.0
561							0.0	0.0	0.0	0.0	0.0	0.0	0.0
562							0.0	0.0	0.0	0.0	0.0	0.0	0.0
563							0.0	0.0	0.0	0.0	0.0	0.0	0.0
564							0.0	0.0	0.0	0.0	0.0	0.0	0.0
565							0.0	0.0	0.0	0.0	0.0	0.0	0.0
566							0.0	0.0	0.0	0.0	0.0	0.0	0.0
567							0.0	0.0	0.0	0.0	0.0	0.0	0.0
568							0.0	0.0	0.0	0.0	0.0	0.0	0.0
571							0.0	0.0	0.0	0.0	0.0	0.0	0.0
572							0.0	0.0	0.0	0.0	0.0	0.0	0.0
573							0.0	0.0	0.0	0.0	0.0	0.0	0.0
574							0.0	0.0	0.0	0.0	0.0	0.0	0.0
575							0.0	0.0	0.0	0.0	0.0	0.0	0.0
576							0.0	0.0	0.0	0.0	0.0	0.0	0.0
577							0.0	0.0	0.0	0.0	0.0	0.0	0.0
578							0.0	0.0	0.0	0.0	0.0	0.0	0.0
579							0.0	0.0	0.0	0.0	0.0	0.0	0.0
580							0.0	0.0	0.0	0.0	0.0	0.0	0.0
581							0.0	0.0	0.0	0.0	0.0	0.0	0.0
582							0.0	0.0	0.0	0.0	0.0	0.0	0.0
583							0.0	0.0	0.0	0.0	0.0	0.0	0.0
584							0.0	0.0	0.0	0.0	0.0	0.0	0.0
587							0.0	0.0	0.0	0.0	0.0	0.0	0.0
588							0.0	0.0	0.0	0.0	0.0	0.0	0.0
589							0.0	0.0	0.0	0.0	0.0	0.0	0.0
590							0.0	0.0	0.0	0.0	0.0	0.0	0.0
591							0.0	0.0	0.0	0.0	0.0	0.0	0.0
592							0.0	0.0	0.0	0.0	0.0	0.0	0.0
593							0.0	0.0	0.0	0.0	0.0	0.0	0.0
594							0.0	0.0	0.0	0.0	0.0	0.0	0.0
595							0.0	0.0	0.0	0.0	0.0	0.0	0.0
596							0.0	0.0	0.0	0.0	0.0	0.0	0.0
597							0.0	0.0	0.0	0.0	0.0	0.0	0.0
598							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
599							0.0	0.0	0.0	0.0	0.0	0.0	0.0
600							0.0	0.0	0.0	0.0	0.0	0.0	0.0
603							0.0	0.0	0.0	0.0	0.0	0.0	0.0
604							0.0	0.0	0.0	0.0	0.0	0.0	0.0
605							0.0	0.0	0.0	0.0	0.0	0.0	0.0
606							0.0	0.0	0.0	0.0	0.0	0.0	0.0
607							0.0	0.0	0.0	0.0	0.0	0.0	0.0
608							0.0	0.0	0.0	0.0	0.0	0.0	0.0
609							0.0	0.0	0.0	0.0	0.0	0.0	0.0
610							0.0	0.0	0.0	0.0	0.0	0.0	0.0
611							0.0	0.0	0.0	0.0	0.0	0.0	0.0
612							0.0	0.0	0.0	0.0	0.0	0.0	0.0
613							0.0	0.0	0.0	0.0	0.0	0.0	0.0
614							0.0	0.0	0.0	0.0	0.0	0.0	0.0
615							0.0	0.0	0.0	0.0	0.0	0.0	0.0
616							0.0	0.0	0.0	0.0	0.0	0.0	0.0
619							0.0	0.0	0.0	0.0	0.0	0.0	0.0
620							0.0	0.0	0.0	0.0	0.0	0.0	0.0
621							0.0	0.0	0.0	0.0	0.0	0.0	0.0
622							0.0	0.0	0.0	0.0	0.0	0.0	0.0
623							0.0	0.0	0.0	0.0	0.0	0.0	0.0
624							0.0	0.0	0.0	0.0	0.0	0.0	0.0
625							0.0	0.0	0.0	0.0	0.0	0.0	0.0
626							0.0	0.0	0.0	0.0	0.0	0.0	0.0
627							0.0	0.0	0.0	0.0	0.0	0.0	0.0
628							0.0	0.0	0.0	0.0	0.0	0.0	0.0
629							0.0	0.0	0.0	0.0	0.0	0.0	0.0
630							0.0	0.0	0.0	0.0	0.0	0.0	0.0
631							0.0	0.0	0.0	0.0	0.0	0.0	0.0
632							0.0	0.0	0.0	0.0	0.0	0.0	0.0
635							0.0	0.0	0.0	0.0	0.0	0.0	0.0
636							0.0	0.0	0.0	0.0	0.0	0.0	0.0
637							0.0	0.0	0.0	0.0	0.0	0.0	0.0
638							0.0	0.0	0.0	0.0	0.0	0.0	0.0
639							0.0	0.0	0.0	0.0	0.0	0.0	0.0
640							0.0	0.0	0.0	0.0	0.0	0.0	0.0
641							0.0	0.0	0.0	0.0	0.0	0.0	0.0
642							0.0	0.0	0.0	0.0	0.0	0.0	0.0
643							0.0	0.0	0.0	0.0	0.0	0.0	0.0
644							0.0	0.0	0.0	0.0	0.0	0.0	0.0
645							0.0	0.0	0.0	0.0	0.0	0.0	0.0
646							0.0	0.0	0.0	0.0	0.0	0.0	0.0
647							0.0	0.0	0.0	0.0	0.0	0.0	0.0
648							0.0	0.0	0.0	0.0	0.0	0.0	0.0
651							0.0	0.0	0.0	0.0	0.0	0.0	0.0
652							0.0	0.0	0.0	0.0	0.0	0.0	0.0
653							0.0	0.0	0.0	0.0	0.0	0.0	0.0
654							0.0	0.0	0.0	0.0	0.0	0.0	0.0
655							0.0	0.0	0.0	0.0	0.0	0.0	0.0
656							0.0	0.0	0.0	0.0	0.0	0.0	0.0
657							0.0	0.0	0.0	0.0	0.0	0.0	0.0
658							0.0	0.0	0.0	0.0	0.0	0.0	0.0
659							0.0	0.0	0.0	0.0	0.0	0.0	0.0
660							0.0	0.0	0.0	0.0	0.0	0.0	0.0
661							0.0	0.0	0.0	0.0	0.0	0.0	0.0
662							0.0	0.0	0.0	0.0	0.0	0.0	0.0
663							0.0	0.0	0.0	0.0	0.0	0.0	0.0
664							0.0	0.0	0.0	0.0	0.0	0.0	0.0
667							0.0	0.0	0.0	0.0	0.0	0.0	0.0
668							0.0	0.0	0.0	0.0	0.0	0.0	0.0
669							0.0	0.0	0.0	0.0	0.0	0.0	0.0
670							0.0	0.0	0.0	0.0	0.0	0.0	0.0
671							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
672							0.0	0.0	0.0	0.0	0.0	0.0	0.0
673							0.0	0.0	0.0	0.0	0.0	0.0	0.0
674							0.0	0.0	0.0	0.0	0.0	0.0	0.0
675							0.0	0.0	0.0	0.0	0.0	0.0	0.0
676							0.0	0.0	0.0	0.0	0.0	0.0	0.0
677							0.0	0.0	0.0	0.0	0.0	0.0	0.0
678							0.0	0.0	0.0	0.0	0.0	0.0	0.0
679							0.0	0.0	0.0	0.0	0.0	0.0	0.0
680							0.0	0.0	0.0	0.0	0.0	0.0	0.0
683							0.0	0.0	0.0	0.0	0.0	0.0	0.0
684							0.0	0.0	0.0	0.0	0.0	0.0	0.0
685							0.0	0.0	0.0	0.0	0.0	0.0	0.0
686							0.0	0.0	0.0	0.0	0.0	0.0	0.0
687							0.0	0.0	0.0	0.0	0.0	0.0	0.0
688							0.0	0.0	0.0	0.0	0.0	0.0	0.0
689							0.0	0.0	0.0	0.0	0.0	0.0	0.0
690							0.0	0.0	0.0	0.0	0.0	0.0	0.0
691							0.0	0.0	0.0	0.0	0.0	0.0	0.0
692							0.0	0.0	0.0	0.0	0.0	0.0	0.0
693							0.0	0.0	0.0	0.0	0.0	0.0	0.0
694							0.0	0.0	0.0	0.0	0.0	0.0	0.0
695							0.0	0.0	0.0	0.0	0.0	0.0	0.0
696							0.0	0.0	0.0	0.0	0.0	0.0	0.0
699							0.0	0.0	0.0	0.0	0.0	0.0	0.0
700							0.0	0.0	0.0	0.0	0.0	0.0	0.0
701							0.0	0.0	0.0	0.0	0.0	0.0	0.0
702							0.0	0.0	0.0	0.0	0.0	0.0	0.0
703							0.0	0.0	0.0	0.0	0.0	0.0	0.0
704							0.0	0.0	0.0	0.0	0.0	0.0	0.0
705							0.0	0.0	0.0	0.0	0.0	0.0	0.0
706							0.0	0.0	0.0	0.0	0.0	0.0	0.0
707							0.0	0.0	0.0	0.0	0.0	0.0	0.0
708							0.0	0.0	0.0	0.0	0.0	0.0	0.0
709							0.0	0.0	0.0	0.0	0.0	0.0	0.0
710							0.0	0.0	0.0	0.0	0.0	0.0	0.0
711							0.0	0.0	0.0	0.0	0.0	0.0	0.0
712							0.0	0.0	0.0	0.0	0.0	0.0	0.0
715							0.0	0.0	0.0	0.0	0.0	0.0	0.0
716							0.0	0.0	0.0	0.0	0.0	0.0	0.0
717							0.0	0.0	0.0	0.0	0.0	0.0	0.0
718							0.0	0.0	0.0	0.0	0.0	0.0	0.0
719							0.0	0.0	0.0	0.0	0.0	0.0	0.0
720							0.0	0.0	0.0	0.0	0.0	0.0	0.0
721							0.0	0.0	0.0	0.0	0.0	0.0	0.0
722							0.0	0.0	0.0	0.0	0.0	0.0	0.0
723							0.0	0.0	0.0	0.0	0.0	0.0	0.0
724							0.0	0.0	0.0	0.0	0.0	0.0	0.0
725							0.0	0.0	0.0	0.0	0.0	0.0	0.0
726							0.0	0.0	0.0	0.0	0.0	0.0	0.0
727							0.0	0.0	0.0	0.0	0.0	0.0	0.0
728							0.0	0.0	0.0	0.0	0.0	0.0	0.0
731							0.0	0.0	0.0	0.0	0.0	0.0	0.0
732							0.0	0.0	0.0	0.0	0.0	0.0	0.0
733							0.0	0.0	0.0	0.0	0.0	0.0	0.0
734							0.0	0.0	0.0	0.0	0.0	0.0	0.0
735							0.0	0.0	0.0	0.0	0.0	0.0	0.0
736							0.0	0.0	0.0	0.0	0.0	0.0	0.0
737							0.0	0.0	0.0	0.0	0.0	0.0	0.0
738							0.0	0.0	0.0	0.0	0.0	0.0	0.0
739							0.0	0.0	0.0	0.0	0.0	0.0	0.0
740							0.0	0.0	0.0	0.0	0.0	0.0	0.0
741							0.0	0.0	0.0	0.0	0.0	0.0	0.0
742							0.0	0.0	0.0	0.0	0.0	0.0	0.0



Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
743							0.0	0.0	0.0	0.0	0.0	0.0	0.0
744							0.0	0.0	0.0	0.0	0.0	0.0	0.0
747							0.0	0.0	0.0	0.0	0.0	0.0	0.0
748							0.0	0.0	0.0	0.0	0.0	0.0	0.0
749							0.0	0.0	0.0	0.0	0.0	0.0	0.0
750							0.0	0.0	0.0	0.0	0.0	0.0	0.0
751							0.0	0.0	0.0	0.0	0.0	0.0	0.0
752							0.0	0.0	0.0	0.0	0.0	0.0	0.0
753							0.0	0.0	0.0	0.0	0.0	0.0	0.0
754							0.0	0.0	0.0	0.0	0.0	0.0	0.0
755							0.0	0.0	0.0	0.0	0.0	0.0	0.0
756							0.0	0.0	0.0	0.0	0.0	0.0	0.0
757							0.0	0.0	0.0	0.0	0.0	0.0	0.0
758							0.0	0.0	0.0	0.0	0.0	0.0	0.0
759							0.0	0.0	0.0	0.0	0.0	0.0	0.0
760							0.0	0.0	0.0	0.0	0.0	0.0	0.0
763							0.0	0.0	0.0	0.0	0.0	0.0	0.0
764							0.0	0.0	0.0	0.0	0.0	0.0	0.0
765							0.0	0.0	0.0	0.0	0.0	0.0	0.0
766							0.0	0.0	0.0	0.0	0.0	0.0	0.0
767							0.0	0.0	0.0	0.0	0.0	0.0	0.0
768							0.0	0.0	0.0	0.0	0.0	0.0	0.0
769							0.0	0.0	0.0	0.0	0.0	0.0	0.0
770							0.0	0.0	0.0	0.0	0.0	0.0	0.0
771							0.0	0.0	0.0	0.0	0.0	0.0	0.0
772							0.0	0.0	0.0	0.0	0.0	0.0	0.0
773							0.0	0.0	0.0	0.0	0.0	0.0	0.0
774							0.0	0.0	0.0	0.0	0.0	0.0	0.0
775							0.0	0.0	0.0	0.0	0.0	0.0	0.0
776							0.0	0.0	0.0	0.0	0.0	0.0	0.0
779							0.0	0.0	0.0	0.0	0.0	0.0	0.0
780							0.0	0.0	0.0	0.0	0.0	0.0	0.0
781							0.0	0.0	0.0	0.0	0.0	0.0	0.0
782							0.0	0.0	0.0	0.0	0.0	0.0	0.0
783							0.0	0.0	0.0	0.0	0.0	0.0	0.0
784							0.0	0.0	0.0	0.0	0.0	0.0	0.0
785							0.0	0.0	0.0	0.0	0.0	0.0	0.0
786							0.0	0.0	0.0	0.0	0.0	0.0	0.0
787							0.0	0.0	0.0	0.0	0.0	0.0	0.0
788							0.0	0.0	0.0	0.0	0.0	0.0	0.0
789							0.0	0.0	0.0	0.0	0.0	0.0	0.0
790							0.0	0.0	0.0	0.0	0.0	0.0	0.0
791							0.0	0.0	0.0	0.0	0.0	0.0	0.0
792							0.0	0.0	0.0	0.0	0.0	0.0	0.0
795							0.0	0.0	0.0	0.0	0.0	0.0	0.0
796							0.0	0.0	0.0	0.0	0.0	0.0	0.0
797							0.0	0.0	0.0	0.0	0.0	0.0	0.0
798							0.0	0.0	0.0	0.0	0.0	0.0	0.0
799							0.0	0.0	0.0	0.0	0.0	0.0	0.0
800							0.0	0.0	0.0	0.0	0.0	0.0	0.0
801							0.0	0.0	0.0	0.0	0.0	0.0	0.0
802							0.0	0.0	0.0	0.0	0.0	0.0	0.0
803							0.0	0.0	0.0	0.0	0.0	0.0	0.0
804							0.0	0.0	0.0	0.0	0.0	0.0	0.0
805							0.0	0.0	0.0	0.0	0.0	0.0	0.0
806							0.0	0.0	0.0	0.0	0.0	0.0	0.0
807							0.0	0.0	0.0	0.0	0.0	0.0	0.0
808							0.0	0.0	0.0	0.0	0.0	0.0	0.0
811							0.0	0.0	0.0	0.0	0.0	0.0	0.0
812							0.0	0.0	0.0	0.0	0.0	0.0	0.0
813							0.0	0.0	0.0	0.0	0.0	0.0	0.0
814							0.0	0.0	0.0	0.0	0.0	0.0	0.0
815							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
816							0.0	0.0	0.0	0.0	0.0	0.0	0.0
817							0.0	0.0	0.0	0.0	0.0	0.0	0.0
818							0.0	0.0	0.0	0.0	0.0	0.0	0.0
819							0.0	0.0	0.0	0.0	0.0	0.0	0.0
820							0.0	0.0	0.0	0.0	0.0	0.0	0.0
821							0.0	0.0	0.0	0.0	0.0	0.0	0.0
822							0.0	0.0	0.0	0.0	0.0	0.0	0.0
823							0.0	0.0	0.0	0.0	0.0	0.0	0.0
824							0.0	0.0	0.0	0.0	0.0	0.0	0.0
827							0.0	0.0	0.0	0.0	0.0	0.0	0.0
828							0.0	0.0	0.0	0.0	0.0	0.0	0.0
829							0.0	0.0	0.0	0.0	0.0	0.0	0.0
830							0.0	0.0	0.0	0.0	0.0	0.0	0.0
831							0.0	0.0	0.0	0.0	0.0	0.0	0.0
832							0.0	0.0	0.0	0.0	0.0	0.0	0.0
833							0.0	0.0	0.0	0.0	0.0	0.0	0.0
834							0.0	0.0	0.0	0.0	0.0	0.0	0.0
835							0.0	0.0	0.0	0.0	0.0	0.0	0.0
836							0.0	0.0	0.0	0.0	0.0	0.0	0.0
837							0.0	0.0	0.0	0.0	0.0	0.0	0.0
838							0.0	0.0	0.0	0.0	0.0	0.0	0.0
839							0.0	0.0	0.0	0.0	0.0	0.0	0.0
840							0.0	0.0	0.0	0.0	0.0	0.0	0.0
843							0.0	0.0	0.0	0.0	0.0	0.0	0.0
844							0.0	0.0	0.0	0.0	0.0	0.0	0.0
845							0.0	0.0	0.0	0.0	0.0	0.0	0.0
846							0.0	0.0	0.0	0.0	0.0	0.0	0.0
847							0.0	0.0	0.0	0.0	0.0	0.0	0.0
848							0.0	0.0	0.0	0.0	0.0	0.0	0.0
849							0.0	0.0	0.0	0.0	0.0	0.0	0.0
850							0.0	0.0	0.0	0.0	0.0	0.0	0.0
851							0.0	0.0	0.0	0.0	0.0	0.0	0.0
852							0.0	0.0	0.0	0.0	0.0	0.0	0.0
853							0.0	0.0	0.0	0.0	0.0	0.0	0.0
854							0.0	0.0	0.0	0.0	0.0	0.0	0.0
855							0.0	0.0	0.0	0.0	0.0	0.0	0.0
856							0.0	0.0	0.0	0.0	0.0	0.0	0.0
859							0.0	0.0	0.0	0.0	0.0	0.0	0.0
860							0.0	0.0	0.0	0.0	0.0	0.0	0.0
861							0.0	0.0	0.0	0.0	0.0	0.0	0.0
862							0.0	0.0	0.0	0.0	0.0	0.0	0.0
863							0.0	0.0	0.0	0.0	0.0	0.0	0.0
864							0.0	0.0	0.0	0.0	0.0	0.0	0.0
865							0.0	0.0	0.0	0.0	0.0	0.0	0.0
866							0.0	0.0	0.0	0.0	0.0	0.0	0.0
867							0.0	0.0	0.0	0.0	0.0	0.0	0.0
868							0.0	0.0	0.0	0.0	0.0	0.0	0.0
869							0.0	0.0	0.0	0.0	0.0	0.0	0.0
870							0.0	0.0	0.0	0.0	0.0	0.0	0.0
871							0.0	0.0	0.0	0.0	0.0	0.0	0.0
874							0.0	0.0	0.0	0.0	0.0	0.0	0.0
875							0.0	0.0	0.0	0.0	0.0	0.0	0.0
876							0.0	0.0	0.0	0.0	0.0	0.0	0.0
877							0.0	0.0	0.0	0.0	0.0	0.0	0.0
878							0.0	0.0	0.0	0.0	0.0	0.0	0.0
879							0.0	0.0	0.0	0.0	0.0	0.0	0.0
880							0.0	0.0	0.0	0.0	0.0	0.0	0.0
881							0.0	0.0	0.0	0.0	0.0	0.0	0.0
882							0.0	0.0	0.0	0.0	0.0	0.0	0.0
883							0.0	0.0	0.0	0.0	0.0	0.0	0.0
884							0.0	0.0	0.0	0.0	0.0	0.0	0.0
885							0.0	0.0	0.0	0.0	0.0	0.0	0.0
886							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
887							0.0	0.0	0.0	0.0	0.0	0.0	0.0
888							0.0	0.0	0.0	0.0	0.0	0.0	0.0
889							0.0	0.0	0.0	0.0	0.0	0.0	0.0
890							0.0	0.0	0.0	0.0	0.0	0.0	0.0
891							0.0	0.0	0.0	0.0	0.0	0.0	0.0
892							0.0	0.0	0.0	0.0	0.0	0.0	0.0
893							0.0	0.0	0.0	0.0	0.0	0.0	0.0
894							0.0	0.0	0.0	0.0	0.0	0.0	0.0
895							0.0	0.0	0.0	0.0	0.0	0.0	0.0
896							0.0	0.0	0.0	0.0	0.0	0.0	0.0
897							0.0	0.0	0.0	0.0	0.0	0.0	0.0
898							0.0	0.0	0.0	0.0	0.0	0.0	0.0
899							0.0	0.0	0.0	0.0	0.0	0.0	0.0
900							0.0	0.0	0.0	0.0	0.0	0.0	0.0
901							0.0	0.0	0.0	0.0	0.0	0.0	0.0
902							0.0	0.0	0.0	0.0	0.0	0.0	0.0
903							0.0	0.0	0.0	0.0	0.0	0.0	0.0
904							0.0	0.0	0.0	0.0	0.0	0.0	0.0
905							0.0	0.0	0.0	0.0	0.0	0.0	0.0
906							0.0	0.0	0.0	0.0	0.0	0.0	0.0
907							0.0	0.0	0.0	0.0	0.0	0.0	0.0
908							0.0	0.0	0.0	0.0	0.0	0.0	0.0
909							0.0	0.0	0.0	0.0	0.0	0.0	0.0
910							0.0	0.0	0.0	0.0	0.0	0.0	0.0
911							0.0	0.0	0.0	0.0	0.0	0.0	0.0
912							0.0	0.0	0.0	0.0	0.0	0.0	0.0
913							0.0	0.0	0.0	0.0	0.0	0.0	0.0
914							0.0	0.0	0.0	0.0	0.0	0.0	0.0
915							0.0	0.0	0.0	0.0	0.0	0.0	0.0
916							0.0	0.0	0.0	0.0	0.0	0.0	0.0
917							0.0	0.0	0.0	0.0	0.0	0.0	0.0
918							0.0	0.0	0.0	0.0	0.0	0.0	0.0
919							0.0	0.0	0.0	0.0	0.0	0.0	0.0
920							0.0	0.0	0.0	0.0	0.0	0.0	0.0
921							0.0	0.0	0.0	0.0	0.0	0.0	0.0
922							0.0	0.0	0.0	0.0	0.0	0.0	0.0
923							0.0	0.0	0.0	0.0	0.0	0.0	0.0
924							0.0	0.0	0.0	0.0	0.0	0.0	0.0
925							0.0	0.0	0.0	0.0	0.0	0.0	0.0
926							0.0	0.0	0.0	0.0	0.0	0.0	0.0
927							0.0	0.0	0.0	0.0	0.0	0.0	0.0
928							0.0	0.0	0.0	0.0	0.0	0.0	0.0
929							0.0	0.0	0.0	0.0	0.0	0.0	0.0
930							0.0	0.0	0.0	0.0	0.0	0.0	0.0
931							0.0	0.0	0.0	0.0	0.0	0.0	0.0
932							0.0	0.0	0.0	0.0	0.0	0.0	0.0
933							0.0	0.0	0.0	0.0	0.0	0.0	0.0
934							0.0	0.0	0.0	0.0	0.0	0.0	0.0
935							0.0	0.0	0.0	0.0	0.0	0.0	0.0
936							0.0	0.0	0.0	0.0	0.0	0.0	0.0
937							0.0	0.0	0.0	0.0	0.0	0.0	0.0
938							0.0	0.0	0.0	0.0	0.0	0.0	0.0
939							0.0	0.0	0.0	0.0	0.0	0.0	0.0
940							0.0	0.0	0.0	0.0	0.0	0.0	0.0
941							0.0	0.0	0.0	0.0	0.0	0.0	0.0
942							0.0	0.0	0.0	0.0	0.0	0.0	0.0
943							0.0	0.0	0.0	0.0	0.0	0.0	0.0
944							0.0	0.0	0.0	0.0	0.0	0.0	0.0
945							0.0	0.0	0.0	0.0	0.0	0.0	0.0
946							0.0	0.0	0.0	0.0	0.0	0.0	0.0
947							0.0	0.0	0.0	0.0	0.0	0.0	0.0
948							0.0	0.0	0.0	0.0	0.0	0.0	0.0
949							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
950							0.0	0.0	0.0	0.0	0.0	0.0	0.0
951							0.0	0.0	0.0	0.0	0.0	0.0	0.0
952							0.0	0.0	0.0	0.0	0.0	0.0	0.0
953							0.0	0.0	0.0	0.0	0.0	0.0	0.0
954							0.0	0.0	0.0	0.0	0.0	0.0	0.0
955							0.0	0.0	0.0	0.0	0.0	0.0	0.0
956							0.0	0.0	0.0	0.0	0.0	0.0	0.0
957							0.0	0.0	0.0	0.0	0.0	0.0	0.0
958							0.0	0.0	0.0	0.0	0.0	0.0	0.0
959							0.0	0.0	0.0	0.0	0.0	0.0	0.0
960							0.0	0.0	0.0	0.0	0.0	0.0	0.0
961							0.0	0.0	0.0	0.0	0.0	0.0	0.0
962							0.0	0.0	0.0	0.0	0.0	0.0	0.0
963							0.0	0.0	0.0	0.0	0.0	0.0	0.0
964							0.0	0.0	0.0	0.0	0.0	0.0	0.0
965							0.0	0.0	0.0	0.0	0.0	0.0	0.0
966							0.0	0.0	0.0	0.0	0.0	0.0	0.0
967							0.0	0.0	0.0	0.0	0.0	0.0	0.0
968							0.0	0.0	0.0	0.0	0.0	0.0	0.0
969							0.0	0.0	0.0	0.0	0.0	0.0	0.0
970							0.0	0.0	0.0	0.0	0.0	0.0	0.0
971							0.0	0.0	0.0	0.0	0.0	0.0	0.0
972							0.0	0.0	0.0	0.0	0.0	0.0	0.0
973							0.0	0.0	0.0	0.0	0.0	0.0	0.0
974							0.0	0.0	0.0	0.0	0.0	0.0	0.0
975							0.0	0.0	0.0	0.0	0.0	0.0	0.0
976							0.0	0.0	0.0	0.0	0.0	0.0	0.0
977							0.0	0.0	0.0	0.0	0.0	0.0	0.0
978							0.0	0.0	0.0	0.0	0.0	0.0	0.0
979							0.0	0.0	0.0	0.0	0.0	0.0	0.0
980							0.0	0.0	0.0	0.0	0.0	0.0	0.0
981							0.0	0.0	0.0	0.0	0.0	0.0	0.0
982							0.0	0.0	0.0	0.0	0.0	0.0	0.0
983							0.0	0.0	0.0	0.0	0.0	0.0	0.0
984							0.0	0.0	0.0	0.0	0.0	0.0	0.0
985							0.0	0.0	0.0	0.0	0.0	0.0	0.0
986							0.0	0.0	0.0	0.0	0.0	0.0	0.0
987							0.0	0.0	0.0	0.0	0.0	0.0	0.0
988							0.0	0.0	0.0	0.0	0.0	0.0	0.0
989							0.0	0.0	0.0	0.0	0.0	0.0	0.0
990							0.0	0.0	0.0	0.0	0.0	0.0	0.0
991							0.0	0.0	0.0	0.0	0.0	0.0	0.0
992							0.0	0.0	0.0	0.0	0.0	0.0	0.0
993							0.0	0.0	0.0	0.0	0.0	0.0	0.0
994							0.0	0.0	0.0	0.0	0.0	0.0	0.0
995							0.0	0.0	0.0	0.0	0.0	0.0	0.0
996							0.0	0.0	0.0	0.0	0.0	0.0	0.0
997							0.0	0.0	0.0	0.0	0.0	0.0	0.0
998							0.0	0.0	0.0	0.0	0.0	0.0	0.0
999							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1000							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1001							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1002							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1003							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1004							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1006							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1007							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1008							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1009							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1010							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1011							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1012							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1013							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1014							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1015							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1016							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1017							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1018							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1019							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1020							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1021							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1022							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1023							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1024							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1025							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1026							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1027							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1028							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1029							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1030							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1031							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1032							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1033							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1034							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1035							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1036							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1037							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1038							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1039							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1040							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1041							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1042							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1043							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1044							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1045							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1046							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1047							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1048							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1049							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1050							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1051							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1052							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1053							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1054							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1055							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1056							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1057							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1058							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1059							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1060							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1061							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1062							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1063							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1064							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1065							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1066							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1067							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1068							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1069							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1070							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1071							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1072							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1073							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1074							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1075							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1076							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1077							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1078							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1079							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1080							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1081							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1082							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1083							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1084							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1085							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1086							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1087							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1088							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1089							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1090							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1091							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1092							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1093							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1094							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1095							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1096							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1097							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1099							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1100							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1101							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1102							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1103							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1104							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1105							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1106							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1107							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1108							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1109							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1110							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1111							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1112							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1113							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1114							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1115							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1116							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1117							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1118							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1119							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1120							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1121							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1122							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1123							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1124							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1125							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1126							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1127							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1128							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1129							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1130							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1131							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1132							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1133							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1134							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1135							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1136							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1137							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1138							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1139							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1140							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1141							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1142							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1143							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1144							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1145							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1146							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1147							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1148							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1149							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1150							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1151							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1152							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1153							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1154							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1155							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1156							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1157							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1158							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1159							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1160							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1161							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1162							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1163							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1164							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1165							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1166							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1167							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1168							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1169							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1170							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1171							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1172							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1173							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1174							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1175							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1176							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1177							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1178							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1179							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1180							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1181							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1182							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1183							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1184							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1185							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1186							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1187							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1188							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1189							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1190							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1191							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1192							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1193							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1194							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1195							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1196							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1197							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1198							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1199							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1200							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1201							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1202							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1203							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1204							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1205							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1206							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1207							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1208							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1209							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1210							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1211							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1212							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1213							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1214							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1215							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1216							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1217							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1218							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1219							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1220							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1221							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1222							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1223							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1224							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1225							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1226							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1227							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1228							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1229							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1230							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1231							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1232							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1233							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1234							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1235							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1236							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1237							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1238							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1239							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1240							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1241							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1242							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1243							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1244							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1245							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1246							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1247							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1248							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1249							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1250							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1251							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1252							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1253							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1254							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1255							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1256							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1257							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1258							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1259							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1260							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1261							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1262							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1263							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1264							0.0	0.0	0.0	0.0	0.0	0.0	0.0



Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1265							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1266							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1267							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1268							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1269							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1270							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1271							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1272							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1273							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1274							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1275							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1276							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1277							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1278							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1279							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1280							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1281							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1282							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1283							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1284							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1285							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1286							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1287							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1288							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1289							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1290							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1291							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1292							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1293							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1294							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1295							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1296							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1297							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1298							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1299							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1300							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1301							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1302							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1303							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1304							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1305							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1306							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1307							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1308							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1309							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1310							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1311							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1312							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1313							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1314							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1315							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1316							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1317							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1318							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1319							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1320							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1321							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1322							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1323							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1324							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1325							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1326							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1327							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1328							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1329							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1330							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1331							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1332							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1333							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1334							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1335							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1336							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1337							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1362							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1363							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1364							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1365							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1366							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1367							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1368							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1369							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1370							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1371							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1372							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1373							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1374							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1375							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1376							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1377							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1378							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1379							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1380							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1381							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1382							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1383							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1384							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1385							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1386							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1387							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1388							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1389							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1390							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1391							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1392							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1393							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1394							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1395							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1396							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1397							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1398							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1399							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1400							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1401							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1402							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1403							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1404							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1405							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1406							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1407							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1408							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1409							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1410							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1411							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1412							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1413							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1414							0.0	0.0	0.0	0.0	0.0	0.0	0.0

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 130 di 220

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1415							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1416							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1417							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1418							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1419							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1420							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1421							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1422							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1423							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1424							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1425							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1426							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1427							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1428							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1429							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1430							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1431							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1432							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1433							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1434							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1435							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1436							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1437							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1438							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1439							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1440							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1441							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1442							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1443							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1444							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1445							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1446							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1447							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1448							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1449							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1450							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1451							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1452							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1453							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1454							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1455							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1456							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1457							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1458							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1459							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1460							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1461							0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trave	v.Omeg			V N/M	V stab		V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
								0.0		0.0		0.0	0.0
							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pilas.	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
15	ok	s=1,m=12	0.03	0.32	0.37	1	1.3	0.8	111.8	0.39	0.13	0.3	1.00	46,32,8,46
16	ok	s=1,m=12	0.03	0.31	0.30	1	1.3	0.8	111.8	0.39	0.11	0.3	1.00	47,32,8,46
17	ok	s=1,m=12	0.04	0.28	0.36	1	1.3	0.8	111.8	0.39	0.17	0.3	1.00	42,65,31,42
18	ok	s=1,m=12	0.04	0.27	0.28	1	1.3	0.8	111.8	0.39	0.14	0.3	1.00	43,59,31,42
19	ok	s=1,m=12	0.04	0.25	0.27	1	1.3	0.8	111.8	0.39	0.14	0.3	1.00	45,69,31,45
20	ok	s=1,m=12	0.03	0.24	0.22	1	1.3	0.8	111.8	0.39	0.12	0.3	1.00	44,57,31,41
21	ok	s=1,m=12	0.03	0.38	0.36	1	1.3	0.8	111.8	0.39	0.12	0.2	1.00	46,65,7,42
22	ok	s=1,m=12	0.03	0.37	0.29	1	1.3	0.8	111.8	0.39	0.10	0.2	1.00	48,61,7,48





RADDOPPIO LINEA GENOVA - VENTIMIGLIA
TRATTA FINALE LIGURE - ANDORA

PROGETTO DEFINITIVO
FV01 - Fermata Finale Ligure
RELAZIONE DI CALCOLO - PENSILINA IN ACCIAIO

COMMESSA IV01 LOTTO 00 CODIFICA D 26 CL DOCUMENTO FV0100 004 REV. A FOGLIO 132 di 220

Table with 14 columns: Pilas., Stato, Note, V V/T, V N/M, V stab, Cl., LamS 22, LamS 33, Snell., Chi mn, V flst, LamS LT, Chi LT, Rif. cmb. Rows 442 to 873.

Summary table with 14 columns: Pilas., V V/T, V N/M, V stab, LamS 22, LamS 33, Snell., Chi mn, V flst, LamS LT, Chi LT. Values: 0.06, 0.42, 0.45, 1.89, 0.75, 164.03, 0.22, 0.17, 0.47, 0.80.

Table with 14 columns: Pilas., f.Om. N, f.Om. T, Stato, V V/T, V N/M, V stab, V flst, Rif. cmb, V[7.5.10], V Ed, sovr. Xi, sovr. Xf, sovr. Yi, sovr. Yf. Value: kN.

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 133 di 220

Pilas.	f.Om. N	f.Om. T	Stato	V V/T	V N/M	V stab	V flst	Rif. cmb	V[7.5.10]	V Ed	sovr. Xi	sovr. Xf	sovr. Yi	sovr. Yf
15	0.0	0.0	ok	0.0	0.0			0,0,0,0						
16	0.0	0.0	ok	0.0	0.0			0,0,0,0						
17	0.0	0.0	ok	0.0	0.0			0,0,0,0						
18	0.0	0.0	ok	0.0	0.0			0,0,0,0						
19	0.0	0.0	ok	0.0	0.0			0,0,0,0						
20	0.0	0.0	ok	0.0	0.0			0,0,0,0						
21	0.0	0.0	ok	0.0	0.0			0,0,0,0						
22	0.0	0.0	ok	0.0	0.0			0,0,0,0						
23	0.0	0.0	ok	0.0	0.0			0,0,0,0						
24	0.0	0.0	ok	0.0	0.0			0,0,0,0						
25	0.0	0.0	ok	0.0	0.0			0,0,0,0						
26	0.0	0.0	ok	0.0	0.0			0,0,0,0						
27	0.0	0.0	ok	0.0	0.0			0,0,0,0						
28	0.0	0.0	ok	0.0	0.0			0,0,0,0						
29	0.0	0.0	ok	0.0	0.0			0,0,0,0						
30	0.0	0.0	ok	0.0	0.0			0,0,0,0						
31	0.0	0.0	ok	0.0	0.0			0,0,0,0						
32	0.0	0.0	ok	0.0	0.0			0,0,0,0						
33	0.0	0.0	ok	0.0	0.0			0,0,0,0						
34	0.0	0.0	ok	0.0	0.0			0,0,0,0						
35	0.0	0.0	ok	0.0	0.0			0,0,0,0						
36	0.0	0.0	ok	0.0	0.0			0,0,0,0						
57	0.0	0.0	ok	0.0	0.0			0,0,0,0						
58	0.0	0.0	ok	0.0	0.0			0,0,0,0						
73	0.0	0.0	ok	0.0	0.0			0,0,0,0						
74	0.0	0.0	ok	0.0	0.0			0,0,0,0						
89	0.0	0.0	ok	0.0	0.0			0,0,0,0						
90	0.0	0.0	ok	0.0	0.0			0,0,0,0						
105	0.0	0.0	ok	0.0	0.0			0,0,0,0						
106	0.0	0.0	ok	0.0	0.0			0,0,0,0						
121	0.0	0.0	ok	0.0	0.0			0,0,0,0						
122	0.0	0.0	ok	0.0	0.0			0,0,0,0						
137	0.0	0.0	ok	0.0	0.0			0,0,0,0						
138	0.0	0.0	ok	0.0	0.0			0,0,0,0						
153	0.0	0.0	ok	0.0	0.0			0,0,0,0						
154	0.0	0.0	ok	0.0	0.0			0,0,0,0						
169	0.0	0.0	ok	0.0	0.0			0,0,0,0						
170	0.0	0.0	ok	0.0	0.0			0,0,0,0						
185	0.0	0.0	ok	0.0	0.0			0,0,0,0						
186	0.0	0.0	ok	0.0	0.0			0,0,0,0						
201	0.0	0.0	ok	0.0	0.0			0,0,0,0						
202	0.0	0.0	ok	0.0	0.0			0,0,0,0						
217	0.0	0.0	ok	0.0	0.0			0,0,0,0						
218	0.0	0.0	ok	0.0	0.0			0,0,0,0						
233	0.0	0.0	ok	0.0	0.0			0,0,0,0						
234	0.0	0.0	ok	0.0	0.0			0,0,0,0						
249	0.0	0.0	ok	0.0	0.0			0,0,0,0						
250	0.0	0.0	ok	0.0	0.0			0,0,0,0						
265	0.0	0.0	ok	0.0	0.0			0,0,0,0						
266	0.0	0.0	ok	0.0	0.0			0,0,0,0						
281	0.0	0.0	ok	0.0	0.0			0,0,0,0						
282	0.0	0.0	ok	0.0	0.0			0,0,0,0						
297	0.0	0.0	ok	0.0	0.0			0,0,0,0						
298	0.0	0.0	ok	0.0	0.0			0,0,0,0						
313	0.0	0.0	ok	0.0	0.0			0,0,0,0						
314	0.0	0.0	ok	0.0	0.0			0,0,0,0						
329	0.0	0.0	ok	0.0	0.0			0,0,0,0						
330	0.0	0.0	ok	0.0	0.0			0,0,0,0						
345	0.0	0.0	ok	0.0	0.0			0,0,0,0						
346	0.0	0.0	ok	0.0	0.0			0,0,0,0						
361	0.0	0.0	ok	0.0	0.0			0,0,0,0						
362	0.0	0.0	ok	0.0	0.0			0,0,0,0						
377	0.0	0.0	ok	0.0	0.0			0,0,0,0						

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 134 di 220

Pilas.	f.Om. N	f.Om. T	Stato	V V/T	V N/M	V stab	V flst	Rif. cmb	V[7.5.10]	V Ed	sovr. Xi	sovr. Xf	sovr. Yi	sovr. Yf
378	0.0	0.0	ok	0.0	0.0			0,0,0,0						
393	0.0	0.0	ok	0.0	0.0			0,0,0,0						
394	0.0	0.0	ok	0.0	0.0			0,0,0,0						
409	0.0	0.0	ok	0.0	0.0			0,0,0,0						
410	0.0	0.0	ok	0.0	0.0			0,0,0,0						
425	0.0	0.0	ok	0.0	0.0			0,0,0,0						
426	0.0	0.0	ok	0.0	0.0			0,0,0,0						
441	0.0	0.0	ok	0.0	0.0			0,0,0,0						
442	0.0	0.0	ok	0.0	0.0			0,0,0,0						
457	0.0	0.0	ok	0.0	0.0			0,0,0,0						
458	0.0	0.0	ok	0.0	0.0			0,0,0,0						
473	0.0	0.0	ok	0.0	0.0			0,0,0,0						
474	0.0	0.0	ok	0.0	0.0			0,0,0,0						
489	0.0	0.0	ok	0.0	0.0			0,0,0,0						
490	0.0	0.0	ok	0.0	0.0			0,0,0,0						
505	0.0	0.0	ok	0.0	0.0			0,0,0,0						
506	0.0	0.0	ok	0.0	0.0			0,0,0,0						
521	0.0	0.0	ok	0.0	0.0			0,0,0,0						
522	0.0	0.0	ok	0.0	0.0			0,0,0,0						
537	0.0	0.0	ok	0.0	0.0			0,0,0,0						
538	0.0	0.0	ok	0.0	0.0			0,0,0,0						
553	0.0	0.0	ok	0.0	0.0			0,0,0,0						
554	0.0	0.0	ok	0.0	0.0			0,0,0,0						
569	0.0	0.0	ok	0.0	0.0			0,0,0,0						
570	0.0	0.0	ok	0.0	0.0			0,0,0,0						
585	0.0	0.0	ok	0.0	0.0			0,0,0,0						
586	0.0	0.0	ok	0.0	0.0			0,0,0,0						
601	0.0	0.0	ok	0.0	0.0			0,0,0,0						
602	0.0	0.0	ok	0.0	0.0			0,0,0,0						
617	0.0	0.0	ok	0.0	0.0			0,0,0,0						
618	0.0	0.0	ok	0.0	0.0			0,0,0,0						
633	0.0	0.0	ok	0.0	0.0			0,0,0,0						
634	0.0	0.0	ok	0.0	0.0			0,0,0,0						
649	0.0	0.0	ok	0.0	0.0			0,0,0,0						
650	0.0	0.0	ok	0.0	0.0			0,0,0,0						
665	0.0	0.0	ok	0.0	0.0			0,0,0,0						
666	0.0	0.0	ok	0.0	0.0			0,0,0,0						
681	0.0	0.0	ok	0.0	0.0			0,0,0,0						
682	0.0	0.0	ok	0.0	0.0			0,0,0,0						
697	0.0	0.0	ok	0.0	0.0			0,0,0,0						
698	0.0	0.0	ok	0.0	0.0			0,0,0,0						
713	0.0	0.0	ok	0.0	0.0			0,0,0,0						
714	0.0	0.0	ok	0.0	0.0			0,0,0,0						
729	0.0	0.0	ok	0.0	0.0			0,0,0,0						
730	0.0	0.0	ok	0.0	0.0			0,0,0,0						
745	0.0	0.0	ok	0.0	0.0			0,0,0,0						
746	0.0	0.0	ok	0.0	0.0			0,0,0,0						
761	0.0	0.0	ok	0.0	0.0			0,0,0,0						
762	0.0	0.0	ok	0.0	0.0			0,0,0,0						
777	0.0	0.0	ok	0.0	0.0			0,0,0,0						
778	0.0	0.0	ok	0.0	0.0			0,0,0,0						
793	0.0	0.0	ok	0.0	0.0			0,0,0,0						
794	0.0	0.0	ok	0.0	0.0			0,0,0,0						
809	0.0	0.0	ok	0.0	0.0			0,0,0,0						
810	0.0	0.0	ok	0.0	0.0			0,0,0,0						
825	0.0	0.0	ok	0.0	0.0			0,0,0,0						
826	0.0	0.0	ok	0.0	0.0			0,0,0,0						
841	0.0	0.0	ok	0.0	0.0			0,0,0,0						
842	0.0	0.0	ok	0.0	0.0			0,0,0,0						
857	0.0	0.0	ok	0.0	0.0			0,0,0,0						
858	0.0	0.0	ok	0.0	0.0			0,0,0,0						
872	0.0	0.0	ok	0.0	0.0			0,0,0,0						
873	0.0	0.0	ok	0.0	0.0			0,0,0,0						





## STATI LIMITE D' ESERCIZIO ACCIAIO

### LEGENDA TABELLA STATI LIMITE D' ESERCIZIO ACCIAIO

*In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.*

*In particolare vengono riportati, per gli elementi trave, i risultati relativi alle combinazioni considerate (rare o caratteristiche).*

*I valori di interesse sono i seguenti:*

<b><i>f*1000/L</i></b>	<i>massima deformazione normalizzata in combinazioni rare</i>
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*Si precisa che i valori di massima deformazione per travi sono riferiti ai due piani locali (1-2 con momenti flettenti 3-3 e 1-3 con momenti flettenti 2-2). Il valore riportato (massimo) è espresso in 1000/L per rendere agevole il confronto di più valori e in particolare di più range di valori ( ad esempio 2 rappresenta L/500, 4 L/250 e così via ).*

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
1	1.9	2	1.7	3	1.3	4	1.1	5	0.5	6	0.9	7	0.5
8	0.3	9	0.7	10	0.4	11	0.8	12	0.6	13	0.6	14	0.4
37	3.9	38	1.0	39	1.3	40	1.2	41	1.3	42	1.0	43	1.1
44	1.2	45	1.2	46	1.7	47	4.0	48	1.0	49	1.3	50	1.2
51	1.4	52	1.1	53	1.2	54	1.2	55	1.2	56	1.7	59	2.2
60	2.0	61	1.6	62	1.4	63	0.4	64	1.1	65	0.4	66	0.3
67	0.8	68	0.5	69	0.9	70	0.8	71	0.6	72	0.4	75	2.2
76	2.0	77	1.7	78	1.5	79	0.3	80	1.2	81	0.3	82	0.3
83	0.8	84	0.5	85	1.0	86	0.8	87	0.7	88	0.4	91	2.2
92	2.0	93	1.6	94	1.4	95	0.5	96	1.1	97	0.4	98	0.3
99	0.7	100	0.5	101	0.9	102	0.8	103	0.6	104	0.4	107	2.0
108	1.7	109	1.4	110	1.2	111	0.4	112	0.9	113	0.4	114	0.3
115	0.7	116	0.4	117	0.8	118	0.6	119	0.6	120	0.4	123	2.0
124	1.7	125	1.4	126	1.2	127	0.3	128	0.9	129	0.3	130	0.3
131	0.7	132	0.4	133	0.8	134	0.6	135	0.6	136	0.4	139	2.2
140	1.9	141	1.6	142	1.4	143	0.3	144	1.1	145	0.4	146	0.3
147	0.8	148	0.5	149	0.9	150	0.8	151	0.6	152	0.4	155	2.2
156	2.0	157	1.7	158	1.4	159	0.3	160	1.2	161	0.2	162	0.3
163	0.8	164	0.5	165	1.0	166	0.8	167	0.7	168	0.4	171	2.1
172	1.9	173	1.6	174	1.4	175	0.3	176	1.1	177	0.4	178	0.3
179	0.8	180	0.5	181	0.9	182	0.7	183	0.6	184	0.4	187	1.9
188	1.7	189	1.4	190	1.1	191	0.3	192	0.9	193	0.3	194	0.3
195	0.7	196	0.4	197	0.8	198	0.6	199	0.6	200	0.4	203	1.9
204	1.7	205	1.3	206	1.1	207	0.3	208	0.9	209	0.3	210	0.3
211	0.7	212	0.4	213	0.8	214	0.6	215	0.6	216	0.4	219	2.1
220	1.9	221	1.5	222	1.3	223	0.3	224	1.0	225	0.3	226	0.2
227	0.8	228	0.4	229	0.9	230	0.7	231	0.7	232	0.4	235	2.1
236	1.9	237	1.5	238	1.3	239	0.3	240	1.1	241	0.2	242	0.2
243	0.9	244	0.4	245	0.9	246	0.7	247	0.8	248	0.5	251	1.9
252	1.7	253	1.4	254	1.2	255	0.3	256	0.9	257	0.3	258	0.2
259	0.9	260	0.3	261	0.7	262	0.5	263	0.8	264	0.5	267	1.7
268	1.5	269	1.1	270	0.9	271	0.3	272	0.7	273	0.3	274	0.1
275	0.9	276	0.2	277	0.5	278	0.4	279	0.7	280	0.4	283	1.6
284	1.4	285	1.1	286	0.8	287	0.3	288	0.6	289	0.2	290	0.1
291	0.9	292	0.2	293	0.5	294	0.3	295	0.7	296	0.4	299	1.8
300	1.6	301	1.3	302	1.1	303	0.4	304	0.8	305	0.2	306	9.01e-02
307	1.0	308	0.2	309	0.6	310	0.5	311	0.9	312	0.6	315	1.9
316	1.7	317	1.4	318	1.1	319	0.4	320	0.9	321	0.2	322	0.1
323	1.1	324	0.2	325	0.7	326	0.5	327	0.9	328	0.6	331	1.8
332	1.6	333	1.2	334	1.0	335	0.4	336	0.8	337	0.3	338	0.1
339	1.1	340	0.2	341	0.6	342	0.4	343	0.9	344	0.6	347	1.6
348	1.3	349	1.0	350	0.8	351	0.3	352	0.5	353	0.2	354	9.38e-02
355	1.0	356	8.58e-02	357	0.4	358	0.2	359	0.8	360	0.5	363	1.6
364	1.3	365	1.0	366	0.8	367	0.3	368	0.5	369	0.2	370	9.38e-02
371	1.0	372	8.34e-02	373	0.4	374	0.2	375	0.8	376	0.5	379	1.8
380	1.6	381	1.2	382	1.0	383	0.4	384	0.8	385	0.2	386	0.1
387	1.1	388	0.2	389	0.6	390	0.4	391	0.9	392	0.6	395	1.9
396	1.7	397	1.4	398	1.1	399	0.4	400	0.9	401	0.2	402	0.1
403	1.1	404	0.2	405	0.7	406	0.5	407	0.9	408	0.6	411	1.8
412	1.6	413	1.3	414	1.1	415	0.4	416	0.8	417	0.2	418	9.11e-02
419	1.0	420	0.2	421	0.6	422	0.5	423	0.9	424	0.6	427	1.6
428	1.4	429	1.1	430	0.8	431	0.3	432	0.6	433	0.1	434	9.66e-02
435	0.9	436	0.2	437	0.5	438	0.3	439	0.7	440	0.4	443	1.7
444	1.5	445	1.1	446	0.9	447	0.3	448	0.7	449	0.2	450	0.1
451	0.9	452	0.2	453	0.5	454	0.4	455	0.7	456	0.4	459	1.9
460	1.7	461	1.4	462	1.2	463	0.3	464	0.9	465	0.2	466	0.2
467	0.9	468	0.3	469	0.7	470	0.5	471	0.8	472	0.5	475	2.1
476	1.9	477	1.5	478	1.3	479	0.3	480	1.1	481	0.2	482	0.2
483	0.9	484	0.4	485	0.9	486	0.7	487	0.8	488	0.5	491	2.1
492	1.9	493	1.5	494	1.3	495	0.3	496	1.0	497	0.2	498	0.2

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
499	0.8	500	0.4	501	0.9	502	0.7	503	0.7	504	0.4	507	1.9
508	1.7	509	1.3	510	1.1	511	0.2	512	0.9	513	0.2	514	0.3
515	0.7	516	0.4	517	0.7	518	0.6	519	0.6	520	0.4	523	1.9
524	1.7	525	1.4	526	1.1	527	0.3	528	0.9	529	0.2	530	0.3
531	0.7	532	0.4	533	0.8	534	0.6	535	0.6	536	0.4	539	2.1
540	1.9	541	1.6	542	1.4	543	0.3	544	1.1	545	0.2	546	0.3
547	0.7	548	0.5	549	0.9	550	0.7	551	0.6	552	0.4	555	2.2
556	2.0	557	1.7	558	1.4	559	0.3	560	1.2	561	0.2	562	0.3
563	0.8	564	0.5	565	1.0	566	0.8	567	0.7	568	0.4	571	2.2
572	1.9	573	1.6	574	1.4	575	0.3	576	1.1	577	0.3	578	0.3
579	0.7	580	0.5	581	0.9	582	0.8	583	0.6	584	0.4	587	2.0
588	1.7	589	1.4	590	1.2	591	0.2	592	0.9	593	0.2	594	0.3
595	0.7	596	0.4	597	0.8	598	0.6	599	0.6	600	0.4	603	2.0
604	1.7	605	1.4	606	1.2	607	0.3	608	0.9	609	0.3	610	0.3
611	0.7	612	0.5	613	0.8	614	0.6	615	0.6	616	0.4	619	2.2
620	1.9	621	1.6	622	1.4	623	0.3	624	1.1	625	0.3	626	0.3
627	0.7	628	0.5	629	1.0	630	0.8	631	0.6	632	0.4	635	2.2
636	2.0	637	1.7	638	1.5	639	0.3	640	1.2	641	0.2	642	0.3
643	0.8	644	0.5	645	1.0	646	0.8	647	0.6	648	0.4	651	2.2
652	2.0	653	1.6	654	1.4	655	0.3	656	1.1	657	0.3	658	0.3
659	0.7	660	0.5	661	1.0	662	0.8	663	0.6	664	0.4	667	2.0
668	1.8	669	1.4	670	1.2	671	0.3	672	1.0	673	0.3	674	0.3
675	0.7	676	0.5	677	0.8	678	0.6	679	0.6	680	0.4	683	2.0
684	1.7	685	1.4	686	1.2	687	0.3	688	0.9	689	0.3	690	0.3
691	0.7	692	0.5	693	0.8	694	0.6	695	0.6	696	0.4	699	2.2
700	2.0	701	1.6	702	1.4	703	0.3	704	1.1	705	0.3	706	0.3
707	0.7	708	0.5	709	1.0	710	0.8	711	0.6	712	0.4	715	2.2
716	2.0	717	1.7	718	1.5	719	0.3	720	1.2	721	0.2	722	0.3
723	0.8	724	0.5	725	1.0	726	0.8	727	0.6	728	0.4	731	2.2
732	2.0	733	1.6	734	1.4	735	0.4	736	1.1	737	0.4	738	0.3
739	0.7	740	0.5	741	1.0	742	0.8	743	0.6	744	0.4	747	2.0
748	1.7	749	1.4	750	1.2	751	0.3	752	0.9	753	0.3	754	0.3
755	0.7	756	0.5	757	0.8	758	0.6	759	0.6	760	0.4	763	2.0
764	1.7	765	1.4	766	1.2	767	0.4	768	0.9	769	0.4	770	0.3
771	0.7	772	0.5	773	0.8	774	0.6	775	0.6	776	0.4	779	2.2
780	2.0	781	1.6	782	1.4	783	0.5	784	1.1	785	0.5	786	0.3
787	0.7	788	0.5	789	1.0	790	0.8	791	0.6	792	0.4	795	2.2
796	2.0	797	1.7	798	1.5	799	0.3	800	1.2	801	0.3	802	0.3
803	0.8	804	0.5	805	1.0	806	0.8	807	0.6	808	0.4	811	2.2
812	1.9	813	1.6	814	1.4	815	0.4	816	1.1	817	0.5	818	0.3
819	0.8	820	0.5	821	0.9	822	0.8	823	0.7	824	0.4	827	1.9
828	1.7	829	1.3	830	1.1	831	0.5	832	0.9	833	0.5	834	0.3
835	0.7	836	0.4	837	0.8	838	0.6	839	0.6	840	0.4	843	1.4
844	1.3	845	1.0	846	0.9	847	0.3	848	0.7	849	0.3	850	0.3
851	0.4	852	0.4	853	0.6	854	0.5	855	0.3	856	0.3	859	1.4
860	1.3	861	1.0	862	0.9	863	0.6	864	0.7	865	0.5	866	0.3
867	0.3	868	0.4	869	0.4	870	0.4	871	0.3	874	0.4	875	3.5
876	3.6	877	3.1	878	3.2	879	4.0	880	4.4	881	3.6	882	3.6
883	3.7	884	3.7	885	3.9	886	4.2	887	3.9	888	3.5	889	4.0
890	3.3	891	3.3	892	3.4	893	3.4	894	3.4	895	3.9	896	3.6
897	1.2	898	1.4	899	1.2	900	1.2	901	1.2	902	1.2	903	1.2
904	1.4	905	1.3	906	2.0	907	2.1	908	1.9	909	1.9	910	1.9
911	1.9	912	1.9	913	2.1	914	2.0	915	3.0	916	3.3	917	2.8
918	2.8	919	2.9	920	2.9	921	2.9	922	3.2	923	3.0	924	0.5
925	0.5	926	0.5	927	0.5	928	0.5	929	0.5	930	0.5	931	0.5
932	0.5	933	2.1	934	2.4	935	1.9	936	1.9	937	2.0	938	2.0
939	2.1	940	2.3	941	2.1	942	1.1	943	1.3	944	1.1	945	1.1
946	1.1	947	1.1	948	1.1	949	1.3	950	1.2	951	1.2	952	1.4
953	1.1	954	1.1	955	1.2	956	1.1	957	1.2	958	1.3	959	1.2
960	2.1	961	2.5	962	1.9	963	2.0	964	2.0	965	2.0	966	2.1
967	2.4	968	2.2	969	0.5	970	0.4	971	0.4	972	0.4	973	0.4
974	0.5	975	0.5	976	0.4	977	0.4	978	2.4	979	2.5	980	2.1
981	2.1	982	2.1	983	2.2	984	2.3	985	2.4	986	2.2	987	1.2

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
988	1.1	989	1.0	990	1.0	991	1.0	992	1.1	993	1.2	994	1.1
995	1.1	996	1.1	997	1.6	998	1.2	999	1.2	1000	1.2	1001	1.1
1002	1.1	1003	1.5	1004	1.4	1005	2.1	1006	2.7	1007	2.0	1008	2.0
1009	2.0	1010	2.0	1011	2.1	1012	2.5	1013	2.3	1014	0.3	1015	0.2
1016	0.3	1017	0.3	1018	0.3	1019	0.3	1020	0.3	1021	0.2	1022	0.2
1023	2.1	1024	2.3	1025	1.8	1026	1.8	1027	1.8	1028	1.9	1029	2.0
1030	2.2	1031	2.0	1032	0.7	1033	0.8	1034	0.6	1035	0.6	1036	0.6
1037	0.6	1038	0.7	1039	0.7	1040	0.7	1041	1.6	1042	1.9	1043	1.5
1044	1.6	1045	1.6	1046	1.5	1047	1.6	1048	1.8	1049	1.7	1050	2.5
1051	2.9	1052	2.3	1053	2.3	1054	2.3	1055	2.3	1056	2.4	1057	2.8
1058	2.6	1059	0.3	1060	0.3	1061	0.3	1062	0.3	1063	0.3	1064	0.3
1065	0.3	1066	0.3	1067	0.3	1068	2.6	1069	3.0	1070	2.4	1071	2.4
1072	2.4	1073	2.4	1074	2.5	1075	2.9	1076	2.7	1077	1.4	1078	1.8
1079	1.4	1080	1.5	1081	1.5	1082	1.4	1083	1.4	1084	1.7	1085	1.6
1086	0.8	1087	0.9	1088	0.7	1089	0.7	1090	0.7	1091	0.8	1092	0.8
1093	0.9	1094	0.8	1095	2.1	1096	2.3	1097	1.8	1098	1.8	1099	1.8
1100	1.9	1101	2.0	1102	2.2	1103	2.0	1104	0.2	1105	0.3	1106	0.2
1107	0.2	1108	0.2	1109	0.2	1110	0.2	1111	0.3	1112	0.3	1113	2.1
1114	2.7	1115	2.0	1116	2.0	1117	2.1	1118	2.0	1119	2.1	1120	2.6
1121	2.3	1122	0.8	1123	1.3	1124	0.9	1125	0.9	1126	1.0	1127	0.9
1128	0.9	1129	1.2	1130	1.1	1131	1.4	1132	1.2	1133	1.2	1134	1.2
1135	1.2	1136	1.3	1137	1.3	1138	1.2	1139	1.2	1140	2.4	1141	2.5
1142	2.1	1143	2.1	1144	2.2	1145	2.2	1146	2.4	1147	2.4	1148	2.3
1149	0.2	1150	0.3	1151	0.2	1152	0.2	1153	0.2	1154	0.2	1155	0.2
1156	0.3	1157	0.3	1158	2.2	1159	2.6	1160	2.0	1161	2.0	1162	2.1
1163	2.1	1164	2.1	1165	2.5	1166	2.3	1167	1.1	1168	1.3	1169	1.0
1170	1.1	1171	1.1	1172	1.1	1173	1.1	1174	1.2	1175	1.2	1176	1.2
1177	1.4	1178	1.1	1179	1.2	1180	1.2	1181	1.2	1182	1.2	1183	1.3
1184	1.2	1185	2.2	1186	2.5	1187	2.0	1188	2.0	1189	2.1	1190	2.1
1191	2.2	1192	2.4	1193	2.3	1194	0.3	1195	0.3	1196	0.3	1197	0.3
1198	0.3	1199	0.3	1200	0.3	1201	0.3	1202	0.3	1203	2.2	1204	2.6
1205	2.1	1206	2.1	1207	2.1	1208	2.1	1209	2.2	1210	2.5	1211	2.3
1212	1.1	1213	1.3	1214	1.1	1215	1.1	1216	1.1	1217	1.1	1218	1.1
1219	1.3	1220	1.2	1221	1.2	1222	1.4	1223	1.2	1224	1.2	1225	1.2
1226	1.2	1227	1.2	1228	1.4	1229	1.3	1230	2.2	1231	2.6	1232	2.1
1233	2.1	1234	2.1	1235	2.1	1236	2.2	1237	2.5	1238	2.3	1239	0.4
1240	0.4	1241	0.4	1242	0.4	1243	0.4	1244	0.4	1245	0.4	1246	0.4
1247	0.4	1248	2.1	1249	2.5	1250	1.9	1251	2.0	1252	2.0	1253	2.0
1254	2.1	1255	2.4	1256	2.2	1257	1.1	1258	1.3	1259	1.0	1260	1.0
1261	1.1	1262	1.1	1263	1.1	1264	1.2	1265	1.1	1266	1.3	1267	1.4
1268	1.2	1269	1.2	1270	1.2	1271	1.2	1272	1.2	1273	1.4	1274	1.3
1275	2.1	1276	2.4	1277	1.9	1278	1.9	1279	1.9	1280	1.9	1281	2.0
1282	2.3	1283	2.1	1284	0.7	1285	0.7	1286	0.7	1287	0.7	1288	0.7
1289	0.7	1290	0.7	1291	0.7	1292	0.7	1293	2.9	1294	3.3	1295	2.8
1296	2.8	1297	2.8	1298	2.8	1299	2.9	1300	3.2	1301	3.0	1302	1.8
1303	2.0	1304	1.8	1305	1.8	1306	1.8	1307	1.8	1308	1.8	1309	1.9
1310	1.9	1311	1.3	1312	1.5	1313	1.3	1314	1.3	1315	1.3	1316	1.3
1317	1.3	1318	1.5	1319	1.4	1320	3.4	1321	3.9	1322	3.2	1323	3.3
1324	3.3	1325	3.3	1326	3.4	1327	3.8	1328	3.5	1329	3.6	1330	4.1
1331	3.3	1332	3.3	1333	3.3	1334	3.3	1335	3.5	1336	3.8	1337	3.5
1362	3.3	1363	1.9	1364	2.1	1365	1.9	1366	2.4	1367	2.0	1368	2.0
1369	2.1	1370	2.0	1371	2.8	1372	3.5	1373	2.1	1374	2.2	1375	2.0
1376	2.6	1377	2.2	1378	2.2	1379	2.2	1380	2.1	1381	2.9	1382	1.2
1383	1.1	1384	1.1	1385	0.6	1386	1.4	1387	0.9	1388	1.0	1389	1.1
1390	1.0	1391	1.8	1392	1.3	1393	1.2	1394	1.0	1395	0.6	1396	1.6
1397	1.1	1398	1.1	1399	1.2	1400	1.1	1401	1.8	1402	1.9	1403	1.1
1404	1.1	1405	1.5	1406	0.7	1407	1.2	1408	1.2	1409	1.2	1410	1.2
1411	1.3	1412	2.0	1413	1.2	1414	1.3	1415	1.7	1416	0.8	1417	1.2
1418	1.2	1419	1.3	1420	1.3	1421	1.4	1422	2.8	1423	2.0	1424	2.0
1425	2.3	1426	1.8	1427	2.2	1428	2.1	1429	2.1	1430	1.9	1431	3.3
1432	3.0	1433	2.1	1434	2.2	1435	2.5	1436	1.9	1437	2.2	1438	2.2
1439	2.2	1440	2.1	1441	3.5	1442	1.5	1443	1.0	1444	0.7	1445	0.9
1446	0.9	1447	1.0	1448	1.0	1449	1.1	1450	0.8	1451	3.5	1452	1.6

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
1453	1.1	1454	0.8	1455	1.0	1456	0.9	1457	1.0	1458	1.0	1459	1.2
1460	0.9	1461	3.7										

### 10.3 VALUTAZIONE DELL'AZIONE SISMICA E VERIFICHE (7.3.7.2 del D.M. del 17 gennaio 2018)

AZIONE SISMICA

VALUTAZIONE DELL' AZIONE SISMICA

*Il programma consente la verifica dei seguenti tipi di elementi:*

*1. aste                                      2. travi                                      3. pilastri*

*L'esito delle verifiche è espresso con un codice come di seguito indicato*

*Ok:                      verifica con esito positivo*

*NV:                     verifica con esito negativo*

*Nr: verifica non richiesta.*

*Per comodità gli elementi vengono raggruppati in tabelle in relazione al tipo.*

*Ai fini delle verifiche (come da D.M. 17 Gennaio 2018 e circolare 21 Gennaio 2019 n.7) i tipi elementi differiscono per i seguenti aspetti:*

<b>Verifica</b>	<b>Aste</b>	<b>Travi</b>	<b>Pilastr</b>
4.2.3.1 <i>Classificazione</i>	X	X	X
4.2.4.1.2.1 <i>Trazione</i>	X	X	X
4.2.4.1.2.2 <i>Compressione</i>	X	X	X
4.2.4.1.2.4 <i>Taglio</i>		X	X
4.2.4.1.2.5 <i>Torsione</i>		X	X
<i>Flessione, taglio e forza assiale</i>		X	X
4.2.4.1.3.1 <i>Aste compresse</i>	X	X	X
4.2.4.1.3.2 <i>Instabilità flesso-torsionale</i>		X	X
4.2.4.1.3.3 <i>Membrature inflesse e compresse</i>		X	X

*Ai fini delle verifiche per strutture dissipative (come da D.M. 17 Gennaio 2018 e 2018 e circolare 21 Gennaio 2019 n.7) per strutture intelaiate e a controventi concentrici) si considerano le verifiche del capitolo 4 con azioni amplificate e le verifiche del capitolo 7:*

<b>Verifica</b>	<b>Travi</b>	<b>Pilastr</b>
4.2.4.1.2.1 <i>Trazione</i>	X	X
4.2.4.1.2.2 <i>Compressione</i>	X	X
4.2.4.1.2.4 <i>Taglio</i>	X	X
4.2.4.1.2.5 <i>Torsione</i>	X	X
<i>Flessione, taglio e forza assiale</i>	X	X
4.2.4.1.3.1 <i>Aste compresse</i>	X	X
4.2.4.1.3.2 <i>Instabilità flesso-torsionale</i>	X	X
4.2.4.1.3.3 <i>Membrature inflesse e compresse</i>	X	X
7.5.3 <i>Sfruttamento per momento</i>	X	
7.5.4 <i>Sfruttamento per sforzo normale</i>	X	
7.5.5 <i>Sfruttamento per taglio da capacità flessionale</i>	X	
7.5.9 <i>Sfruttamento per taglio amplificato</i>		X

*Viene inoltre riportata la verifica della “Gerarchia delle resistenze trave-colonna” per ogni colonna, considerando piede e testa in entrambe le direzioni globali X e Y.*

*L’insieme delle verifiche sopra riportate è condotto sugli elementi purché dotati di sezione idonea come da tabella seguente:*

<i>Azione</i>	<i>SEZIONI</i>	<i>PROFILI</i>	<i>PROFILI ACCOPPIATI</i>
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	<i>GENERICHE</i>	<i>SEMPLICI</i>	
4.2.3.1 <i>Classificazione automatica</i>	<i>L, doppio T, C, rettangolare cava, circolare cava</i>	<i>Tutti</i>	<i>Da profilo semplice</i>
4.2.3.1 <i>Classificazione di default 2</i>	<i>Circolare</i>		
4.2.3.1 <i>Classificazione di default 3</i>	<i>restanti</i>		
4.2.4.1.2.1 <i>Trazione</i>	<i>si</i>	<i>si</i>	<i>si</i>
4.2.4.1.2.2 <i>Compressione</i>	<i>si</i>	<i>si</i>	<i>si</i>
4.2.4.1.2.4 <i>Taglio</i>	<i>si</i>	<i>si</i>	<i>si</i>
4.2.4.1.2.5 <i>Torsione</i>	<i>si</i>	<i>si</i>	<i>si</i>
<i>Flessione, taglio e forza assiale</i>	<i>si</i>	<i>si</i>	<i>si</i>
4.2.4.1.3.1 <i>Aste compresse</i>	<i>si</i>	<i>si</i>	<i>per elementi ravvicinati e a croce o coppie calastrellate</i>
4.2.4.1.3.2 <i>Travi inflesse</i>	<i>doppio T simmetrica</i>	<i>doppio T</i>	<i>no</i>

Le verifiche sono riportate in tabelle con il significato sotto indicato; le verifiche sono espresse dal rapporto tra l'azione di progetto e la capacità ultima, pertanto la verifica ha esito positivo per rapporti non superiori all'unità.

<i>Asta</i>	<i>Trave</i>	<i>Pilastr</i>				<i>numero dell'elemento</i>
<i>Stato</i>						<i>codice di verifica per resistenza, stabilità, svergolamento</i>
<i>Note</i>						<i>sezione e materiali adottati per l'elemento</i>
<i>V N</i>						<i>(ASTE) verifica come da par. 4.2.4.1.2 per punto (4.2.6) e (4.2.10)</i>
<i>V V/T</i>						<i>(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni taglio-torsione (4.2.16 e 4.2.28)</i>
<i>V N/M</i>						<i>(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni composte (4.2.33) con riduzione per taglio (4.2.40) ove richiesto</i>
<i>N</i>	<i>M</i> 3	<i>M</i> 2	<i>V2</i>	<i>V3</i>	<i>T</i>	<i>sollecitazioni di interesse per la verifica</i>
<i>V stab</i>						<i>(ASTE) verifica come da par. 4.2.4.1.3.1 per punto (4.2.41)</i>
<i>V stab</i>						<i>(TRAVI E PILASTRI) verifica come da par. 4.2.4.1.3 per punti (C4.2.32) o (C4.2.36) (membrature inflesse e compresse senza/con presenza di instabilità flesso-torsionale)</i>
<i>BetaxL</i>	<i>B22x</i> <i>L</i>	<i>B33x</i> <i>L</i>				<i>lunghezze libere di inflessione (se indicato riferiti al piano di normale 22 o 33 rispettivamente)</i>
<i>Snellezza</i>						<i>snellezza massima</i>
<i>Classe</i>						<i>classe del profilo</i>
<i>Chi mn</i>						<i>coefficiente di riduzione (della capacità) per la modalità di instabilità pertinente</i>
<i>Rif. cmb</i>						<i>combinazioni in cui si sono rispettivamente attinti i valori di verifica più elevati</i>
<i>V flst</i>						<i>(TRAVI E PILASTRI) verifica di stabilità come da par. 4.2.4.1.3.2 per punto</i>

	(4.2.48)
<b>BI-1 x L</b>	<i>Beta1-1 x L: interasse tra i ritegni torsionali</i>
<b>Chi LT</b>	<i>coefficiente di riduzione (della capacità) per la modalità di instabilità flessor-torsionale</i>
<b>Snell adim</b>	<i>Valore della snellezza adimensionale, utilizzato per il controllo previsto al par. 7.5.5</i>
<b>v.Omeg</b>	<i>Valore del rapporto capacità/domanda per l' azione di interesse (momento per travi e azione assiale per aste) utilizzato per l' amplificazione delle azioni</i>
<b>f.Om. N</b>	<i>Fattore di amplificazione delle azioni assiali per travi e colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.5</i>
<b>f.Om. T</b>	<i>Fattore di amplificazione delle azioni (assiali, flettenti e taglianti) per colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.4</i>
<b>V.7.5.4 M Ed</b>	<i>Verifica come prevista al punto 7.5.4 e valore dell' azione flettente</i>
<b>V.7.5.5N Ed</b>	<i>Verifica come prevista al punto 7.5.5 e valore dell' azione assiale</i>
<b>V.7.5.6V Ed,G Ed,M</b> V	<i>Verifica come prevista al punto 7.5.6 e valore dei tagli dovuti ai carichi e alla capacità</i>
<b>V.7.5.10 V Ed</b>	<i>Verifica come prevista al punto 7.5.10 e valore dell' azione di taglio</i>
<b>sovr. Xi (Xf, Yi, Yf)</b>	<i>Valore della sovreresistenza come prevista al par. 7.5.4.2 (i valori non sono normalizzati pertanto saranno maggiori uguali a gamma rd in base alla classe di duttilità)</i>

**Nel caso in cui  $\lambda S$  sia minore di 0.2, oppure nel caso in cui la sollecitazione di calcolo  $N_{Ed}$  sia inferiore a  $0.04 N_{cr}$ , gli effetti legati ai fenomeni di instabilità sono trascurati, come da paragrafo 4.2.4.1.3.1**

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	58,60,0,8
2	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,7,0,8
3	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	8,7,0,8
4	ok	s=5,m=12	0.05	0.08		1					0.08	7.03e-02	1.00	47,7,0,8
5	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	41,7,0,8
6	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	41,46,0,8
7	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	47,44,0,47
8	ok	s=4,m=12	0.03	0.06		1					0.06	2.78e-02	1.00	48,8,0,8
9	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	60,66,0,8
10	ok	s=4,m=12	0.03	0.06		1					0.05	6.48e-02	1.00	45,8,0,8
11	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	45,8,0,8
12	ok	s=4,m=12	0.04	0.06		1					0.06	6.29e-02	1.00	45,8,0,8
13	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,7,0,8
14	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
37	ok	s=6,m=12	0.10	0.34		1					0.33	3.31e-02	1.00	8,32,0,32
38	ok	s=6,m=12	0.11	0.52		1					0.49	3.99e-02	1.00	8,8,0,8
39	ok	s=6,m=12	0.11	0.48		1					0.45	3.97e-02	1.00	45,8,0,8
40	ok	s=6,m=12	0.11	0.42		1					0.39	4.00e-02	1.00	54,8,0,8
41	ok	s=6,m=12	0.11	0.51		1					0.47	4.11e-02	1.00	8,8,0,8
42	ok	s=6,m=12	0.11	0.47		1					0.43	4.10e-02	1.00	7,8,0,8
43	ok	s=6,m=12	0.11	0.48		1					0.45	4.17e-02	1.00	7,7,0,7



**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 144 di 220
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Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
44	ok	s=6,m=12	0.11	0.48		1					0.46	4.20e-02	1.00	7,7,0,7
45	ok	s=6,m=12	0.11	0.48		1					0.46	4.22e-02	1.00	7,7,0,7
46	ok	s=6,m=12	0.12	0.56		1					0.54	4.26e-02	1.00	7,7,0,7
47	ok	s=6,m=12	0.11	0.37		1					0.35	3.20e-02	1.00	8,8,0,8
48	ok	s=6,m=12	0.12	0.56		1					0.53	4.00e-02	1.00	8,8,0,8
49	ok	s=6,m=12	0.12	0.52		1					0.48	3.97e-02	1.00	8,8,0,8
50	ok	s=6,m=12	0.11	0.46		1					0.43	4.00e-02	1.00	8,8,0,8
51	ok	s=6,m=12	0.12	0.54		1					0.52	4.11e-02	1.00	8,8,0,8
52	ok	s=6,m=12	0.12	0.51		1					0.48	4.10e-02	1.00	7,8,0,8
53	ok	s=6,m=12	0.12	0.51		1					0.49	4.16e-02	1.00	7,7,0,7
54	ok	s=6,m=12	0.12	0.52		1					0.50	4.19e-02	1.00	7,7,0,7
55	ok	s=6,m=12	0.12	0.52		1					0.50	4.22e-02	1.00	7,7,0,7
56	ok	s=6,m=12	0.13	0.60		1					0.58	4.26e-02	1.00	7,7,0,7
59	ok	s=2,m=12	0.03	0.05		1					0.02	0.2	1.00	58,60,0,8
60	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,8,0,8
61	ok	s=4,m=12	0.05	0.11		1					0.09	6.59e-02	1.00	7,8,0,7
62	ok	s=5,m=12	0.05	0.08		1					0.08	7.03e-02	1.00	47,7,0,7
63	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	41,7,0,7
64	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
65	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
66	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	7,8,0,8
67	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	68,66,0,8
68	ok	s=4,m=12	9.85e-03	0.08		1					0.08	6.53e-02	1.00	43,8,0,8
69	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	8,8,0,8
70	ok	s=4,m=12	0.01	0.08		1					0.08	6.39e-02	1.00	8,8,0,8
71	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
72	ok	s=4,m=12	0.04	0.10		1					0.08	6.57e-02	1.00	7,8,0,7
75	ok	s=2,m=12	0.03	0.05		1					0.02	0.2	1.00	8,60,0,8
76	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,7,0,8
77	ok	s=4,m=12	0.04	0.10		1					0.09	6.61e-02	1.00	7,7,0,8
78	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
79	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	8,8,0,8
80	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
81	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
82	ok	s=4,m=12	0.02	0.09		1					0.09	2.81e-02	1.00	8,8,0,8
83	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	65,66,0,7
84	ok	s=4,m=12	0.01	0.09		1					0.09	6.50e-02	1.00	8,8,0,8
85	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	7,8,0,7
86	ok	s=4,m=12	0.01	0.09		1					0.09	6.46e-02	1.00	7,8,0,7
87	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,8
88	ok	s=4,m=12	0.04	0.09		1					0.08	6.58e-02	1.00	8,7,0,8
91	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	7,60,0,7
92	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,7,0,7
93	ok	s=4,m=12	0.05	0.12		1					0.09	6.61e-02	1.00	8,7,0,8
94	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,7,0,8
95	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	7,7,0,7
96	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
97	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,8,0,7
98	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	44,8,0,7
99	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,66,0,8
100	ok	s=4,m=12	0.01	0.08		1					0.08	6.51e-02	1.00	44,8,0,7
101	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
102	ok	s=4,m=12	0.01	0.08		1					0.08	6.41e-02	1.00	41,8,0,8
103	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
104	ok	s=4,m=12	0.04	0.11		1					0.08	6.58e-02	1.00	7,7,0,7
107	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	7,64,0,8
108	ok	s=3,m=12	0.05	0.09		1					0.08	8.92e-02	1.00	7,7,0,8
109	ok	s=4,m=12	0.04	0.11		1					0.09	6.63e-02	1.00	7,7,0,7
110	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	7,7,0,7
111	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	8,7,0,8
112	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	46,46,0,46
113	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	44,43,0,44
114	ok	s=4,m=12	0.04	0.07		1					0.06	2.79e-02	1.00	47,48,0,47

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 145 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
115	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,66,0,7
116	ok	s=4,m=12	0.04	0.06		1					0.06	6.54e-02	1.00	46,8,0,8
117	ok	s=4,m=12	0.05	0.07		1					0.07	2.75e-02	1.00	46,42,0,8
118	ok	s=4,m=12	0.04	0.07		1					0.06	6.27e-02	1.00	46,8,0,8
119	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
120	ok	s=4,m=12	0.04	0.10		1					0.08	6.60e-02	1.00	8,7,0,8
123	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	8,61,0,7
124	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,7
125	ok	s=4,m=12	0.05	0.10		1					0.09	6.61e-02	1.00	7,7,0,7
126	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,8,0,7
127	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
128	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	42,46,0,42
129	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	43,44,0,43
130	ok	s=4,m=12	0.04	0.06		1					0.06	2.79e-02	1.00	43,48,0,43
131	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,67,0,8
132	ok	s=4,m=12	0.04	0.06		1					0.06	6.51e-02	1.00	42,8,0,8
133	ok	s=4,m=12	0.05	0.07		1					0.07	2.75e-02	1.00	42,8,0,8
134	ok	s=4,m=12	0.05	0.07		1					0.07	6.28e-02	1.00	42,8,0,8
135	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
136	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,7,0,7
139	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	8,57,0,8
140	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,8,0,8
141	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	8,8,0,8
142	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
143	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
144	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,7,0,8
145	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
146	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	48,8,0,8
147	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,67,0,7
148	ok	s=4,m=12	0.01	0.08		1					0.08	6.50e-02	1.00	48,7,0,8
149	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,8,0,8
150	ok	s=4,m=12	0.01	0.08		1					0.08	6.43e-02	1.00	45,7,0,8
151	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
152	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,8,0,8
155	ok	s=2,m=12	0.03	0.05		1					0.02	0.2	1.00	8,57,0,7
156	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,7
157	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,7,0,7
158	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
159	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
160	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
161	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
162	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,8,0,8
163	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	67,68,0,8
164	ok	s=4,m=12	9.19e-03	0.09		1					0.09	6.52e-02	1.00	7,8,0,8
165	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
166	ok	s=4,m=12	0.01	0.09		1					0.09	6.44e-02	1.00	8,8,0,8
167	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,8
168	ok	s=4,m=12	0.04	0.08		1					0.08	6.57e-02	1.00	7,7,0,7
171	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	7,60,0,8
172	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,8
173	ok	s=4,m=12	0.04	0.11		1					0.09	6.61e-02	1.00	7,7,0,8
174	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,7,0,8
175	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	42,7,0,8
176	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,7,0,7
177	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
178	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	44,8,0,8
179	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,7
180	ok	s=4,m=12	0.01	0.08		1					0.08	6.53e-02	1.00	44,8,0,8
181	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,8,0,7
182	ok	s=4,m=12	0.01	0.08		1					0.08	6.40e-02	1.00	41,8,0,7
183	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
184	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
187	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,58,0,7

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 146 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
188	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,7
189	ok	s=4,m=12	0.05	0.10		1					0.09	6.63e-02	1.00	8,8,0,8
190	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	48,7,0,8
191	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	42,7,0,7
192	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	41,45,0,41
193	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	44,43,0,44
194	ok	s=4,m=12	0.04	0.06		1					0.06	2.78e-02	1.00	44,8,0,8
195	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,8
196	ok	s=4,m=12	0.03	0.06		1					0.06	6.47e-02	1.00	41,8,0,8
197	ok	s=4,m=12	0.04	0.07		1					0.07	2.76e-02	1.00	41,8,0,8
198	ok	s=4,m=12	0.04	0.07		1					0.07	6.32e-02	1.00	41,8,0,8
199	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,8
200	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,8,0,7
203	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	8,59,0,8
204	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,8,0,8
205	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,7,0,7
206	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	45,7,0,7
207	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	43,8,0,8
208	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	45,45,0,45
209	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	43,43,0,48
210	ok	s=4,m=12	0.03	0.06		1					0.06	2.79e-02	1.00	48,8,0,8
211	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	66,65,0,7
212	ok	s=4,m=12	0.03	0.06		1					0.06	6.56e-02	1.00	45,8,0,8
213	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	45,8,0,8
214	ok	s=4,m=12	0.04	0.07		1					0.06	6.25e-02	1.00	45,8,0,8
215	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
216	ok	s=4,m=12	0.04	0.10		1					0.08	6.60e-02	1.00	8,7,0,8
219	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,59,0,7
220	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,8,0,7
221	ok	s=4,m=12	0.05	0.11		1					0.09	6.61e-02	1.00	8,8,0,8
222	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	45,8,0,8
223	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
224	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
225	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
226	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7
227	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,65,0,8
228	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	56,7,0,8
229	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
230	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	8,8,0,8
231	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
232	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,8,0,7
235	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,8
236	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,8
237	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,7,0,7
238	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	45,7,0,7
239	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	42,7,0,8
240	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
241	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
242	ok	s=4,m=12	0.01	0.09		1					0.09	2.82e-02	1.00	8,8,0,8
243	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	66,65,0,7
244	ok	s=4,m=12	9.29e-03	0.09		1					0.09	6.57e-02	1.00	8,8,0,8
245	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,7,0,7
246	ok	s=4,m=12	0.01	0.09		1					0.09	6.40e-02	1.00	7,8,0,7
247	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,7
248	ok	s=4,m=12	0.04	0.08		1					0.08	6.58e-02	1.00	8,7,0,8
251	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,7
252	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,7,0,7
253	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,7,0,8
254	ok	s=5,m=12	0.05	0.08		1					0.08	7.04e-02	1.00	45,7,0,8
255	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	42,7,0,7
256	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
257	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,8,0,7
258	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 147 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
259	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,8
260	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	55,8,0,7
261	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
262	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	8,8,0,8
263	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
264	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
267	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,8
268	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	7,7,0,8
269	ok	s=4,m=12	0.04	0.10		1					0.09	6.62e-02	1.00	7,7,0,7
270	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	45,7,0,7
271	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	42,7,0,8
272	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	54,41,0,54
273	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	52,47,0,55
274	ok	s=4,m=12	0.03	0.05		1					0.05	2.78e-02	1.00	55,47,0,55
275	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	59,68,0,7
276	ok	s=4,m=12	0.04	0.05		1					0.05	6.57e-02	1.00	54,8,0,8
277	ok	s=4,m=12	0.04	0.07		1					0.07	2.73e-02	1.00	54,8,0,8
278	ok	s=4,m=12	0.04	0.06		1					0.06	6.18e-02	1.00	54,8,0,8
279	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
280	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,7,0,8
283	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,59,0,7
284	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,8,0,7
285	ok	s=4,m=12	0.04	0.10		1					0.09	6.63e-02	1.00	8,7,0,8
286	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
287	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
288	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	53,45,0,53
289	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	56,43,0,55
290	ok	s=4,m=12	0.03	0.05		1					0.05	2.76e-02	1.00	48,47,0,47
291	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,65,0,8
292	ok	s=4,m=12	0.03	0.05		1					0.05	6.42e-02	1.00	45,8,0,8
293	ok	s=4,m=12	0.04	0.07		1					0.07	2.74e-02	1.00	45,8,0,8
294	ok	s=4,m=12	0.04	0.06		1					0.06	6.29e-02	1.00	45,8,0,8
295	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
296	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	7,7,0,7
299	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,59,0,8
300	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,8
301	ok	s=4,m=12	0.05	0.10		1					0.09	6.60e-02	1.00	7,8,0,7
302	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
303	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
304	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	7,7,0,7
305	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
306	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	8,8,0,8
307	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,65,0,7
308	ok	s=4,m=12	9.69e-03	0.08		1					0.08	6.57e-02	1.00	56,8,0,8
309	ok	s=4,m=12	0.02	0.09		1					0.08	2.78e-02	1.00	7,7,0,7
310	ok	s=4,m=12	0.01	0.08		1					0.08	6.35e-02	1.00	7,7,0,7
311	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,7
312	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	8,8,0,8
315	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,7
316	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,7,0,7
317	ok	s=4,m=12	0.05	0.09		1					0.09	6.61e-02	1.00	8,7,0,8
318	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,7,0,8
319	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
320	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
321	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
322	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,7,0,7
323	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	67,65,0,8
324	ok	s=4,m=12	9.12e-03	0.09		1					0.09	6.49e-02	1.00	7,7,0,7
325	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
326	ok	s=4,m=12	0.01	0.09		1					0.09	6.47e-02	1.00	8,8,0,8
327	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,8
328	ok	s=4,m=12	0.04	0.08		1					0.08	6.57e-02	1.00	7,7,0,7
331	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,8

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 148 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
332	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,7,0,8
333	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,7,0,7
334	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
335	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	8,8,0,8
336	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	7,7,0,7
337	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
338	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	8,8,0,8
339	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,7
340	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	47,8,0,8
341	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
342	ok	s=4,m=12	0.01	0.08		1					0.08	6.36e-02	1.00	7,8,0,7
343	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
344	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
347	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,58,0,7
348	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,7
349	ok	s=4,m=12	0.04	0.11		1					0.09	6.64e-02	1.00	8,8,0,8
350	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
351	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
352	ok	s=5,m=12	0.03	0.08		1					0.08	0.1	1.00	46,45,0,46
353	ok	s=5,m=12	0.03	0.07		1					0.06	0.1	1.00	48,43,0,47
354	ok	s=4,m=12	0.04	0.06		1					0.06	2.77e-02	1.00	47,47,0,47
355	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	59,68,0,8
356	ok	s=4,m=12	0.04	0.05		1					0.05	6.42e-02	1.00	46,8,0,8
357	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	46,8,0,8
358	ok	s=4,m=12	0.04	0.06		1					0.06	6.30e-02	1.00	46,8,0,8
359	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
360	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,8,0,7
363	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	8,57,0,8
364	ok	s=3,m=12	0.05	0.09		1					0.08	8.92e-02	1.00	8,8,0,8
365	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,7,0,7
366	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	7,7,0,7
367	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	8,8,0,8
368	ok	s=5,m=12	0.03	0.08		1					0.08	0.1	1.00	45,46,0,45
369	ok	s=5,m=12	0.03	0.07		1					0.06	0.1	1.00	43,44,0,47
370	ok	s=4,m=12	0.04	0.06		1					0.06	2.79e-02	1.00	48,48,0,48
371	ok	s=2,m=12	0.02	0.06		1					0.01	0.1	1.00	64,67,0,7
372	ok	s=4,m=12	0.04	0.05		1					0.05	6.57e-02	1.00	45,8,0,8
373	ok	s=4,m=12	0.04	0.07		1					0.07	2.73e-02	1.00	45,8,0,8
374	ok	s=4,m=12	0.04	0.06		1					0.06	6.18e-02	1.00	45,8,0,8
375	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
376	ok	s=4,m=12	0.04	0.10		1					0.08	6.60e-02	1.00	8,7,0,8
379	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,57,0,7
380	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,8,0,7
381	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,8,0,8
382	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
383	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	7,7,0,7
384	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
385	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
386	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7
387	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	68,67,0,8
388	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	48,7,0,7
389	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
390	ok	s=4,m=12	0.01	0.08		1					0.08	6.43e-02	1.00	8,8,0,8
391	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
392	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,8,0,7
395	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	62,57,0,8
396	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,8
397	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,8,0,7
398	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
399	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
400	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
401	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
402	ok	s=4,m=12	0.01	0.09		1					0.09	2.82e-02	1.00	8,8,0,8

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 149 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
403	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,66,0,7
404	ok	s=4,m=12	9.17e-03	0.09		1					0.09	6.57e-02	1.00	8,8,0,8
405	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,7,0,7
406	ok	s=4,m=12	0.01	0.09		1					0.09	6.40e-02	1.00	7,7,0,7
407	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,8,0,7
408	ok	s=4,m=12	0.04	0.08		1					0.08	6.58e-02	1.00	8,8,0,8
411	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,60,0,7
412	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,7,0,7
413	ok	s=4,m=12	0.05	0.10		1					0.09	6.62e-02	1.00	8,7,0,8
414	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
415	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
416	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	8,8,0,8
417	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
418	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7
419	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,66,0,8
420	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	47,7,0,7
421	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
422	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	8,8,0,8
423	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
424	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
427	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	8,60,0,8
428	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	8,8,0,8
429	ok	s=4,m=12	0.04	0.10		1					0.09	6.62e-02	1.00	7,8,0,7
430	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	7,7,0,7
431	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	8,8,0,8
432	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	46,46,0,46
433	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	44,44,0,44
434	ok	s=4,m=12	0.03	0.06		1					0.05	2.78e-02	1.00	44,48,0,44
435	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	63,66,0,7
436	ok	s=4,m=12	0.04	0.05		1					0.05	6.56e-02	1.00	41,8,0,8
437	ok	s=4,m=12	0.04	0.07		1					0.07	2.73e-02	1.00	41,8,0,8
438	ok	s=4,m=12	0.04	0.06		1					0.06	6.18e-02	1.00	41,8,0,8
439	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,8,0,7
440	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,8,0,8
443	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,57,0,7
444	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,7
445	ok	s=4,m=12	0.04	0.11		1					0.09	6.63e-02	1.00	8,7,0,8
446	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	46,8,0,8
447	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	41,7,0,7
448	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	45,46,0,45
449	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	43,44,0,44
450	ok	s=4,m=12	0.04	0.06		1					0.05	2.76e-02	1.00	43,48,0,48
451	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,67,0,8
452	ok	s=4,m=12	0.04	0.05		1					0.05	6.42e-02	1.00	42,8,0,8
453	ok	s=4,m=12	0.04	0.07		1					0.07	2.74e-02	1.00	45,8,0,8
454	ok	s=4,m=12	0.04	0.06		1					0.06	6.29e-02	1.00	45,8,0,8
455	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
456	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,7,0,7
459	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,57,0,8
460	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,7,0,8
461	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,7,0,7
462	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	46,7,0,7
463	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	41,8,0,8
464	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	7,7,0,7
465	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
466	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	8,8,0,8
467	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,67,0,7
468	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	48,8,0,8
469	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
470	ok	s=4,m=12	0.01	0.08		1					0.08	6.35e-02	1.00	7,7,0,7
471	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
472	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	8,7,0,8
475	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,57,0,7

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 150 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
476	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,8,0,7
477	ok	s=4,m=12	0.05	0.09		1					0.09	6.61e-02	1.00	8,8,0,8
478	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	46,8,0,8
479	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	41,7,0,7
480	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
481	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
482	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,7,0,7
483	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	65,66,0,8
484	ok	s=4,m=12	9.21e-03	0.09		1					0.09	6.49e-02	1.00	7,7,0,7
485	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
486	ok	s=4,m=12	0.01	0.09		1					0.09	6.47e-02	1.00	8,8,0,8
487	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
488	ok	s=4,m=12	0.04	0.08		1					0.08	6.57e-02	1.00	7,7,0,7
491	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,60,0,8
492	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,7,0,8
493	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,7,0,7
494	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
495	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
496	ok	s=5,m=12	0.02	0.08		1					0.07	0.1	1.00	7,7,0,7
497	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
498	ok	s=4,m=12	0.01	0.08		1					0.08	2.82e-02	1.00	8,8,0,8
499	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,66,0,7
500	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	47,8,0,8
501	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
502	ok	s=4,m=12	0.01	0.08		1					0.08	6.37e-02	1.00	7,7,0,8
503	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
504	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
507	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,57,0,7
508	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,7
509	ok	s=4,m=12	0.04	0.10		1					0.09	6.63e-02	1.00	8,7,0,8
510	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	46,8,0,8
511	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
512	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	46,46,0,46
513	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	44,44,0,44
514	ok	s=4,m=12	0.03	0.06		1					0.06	2.78e-02	1.00	44,8,0,8
515	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,66,0,8
516	ok	s=4,m=12	0.03	0.06		1					0.06	6.43e-02	1.00	41,8,0,8
517	ok	s=4,m=12	0.04	0.07		1					0.07	2.76e-02	1.00	41,8,0,8
518	ok	s=4,m=12	0.04	0.07		1					0.07	6.36e-02	1.00	41,8,0,8
519	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
520	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,7,0,7
523	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,57,0,8
524	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	8,7,0,8
525	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,8,0,7
526	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	47,7,0,7
527	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	41,8,0,8
528	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	45,46,0,45
529	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	43,44,0,43
530	ok	s=4,m=12	0.03	0.06		1					0.06	2.79e-02	1.00	43,8,0,8
531	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	60,67,0,7
532	ok	s=4,m=12	0.03	0.06		1					0.06	6.56e-02	1.00	42,8,0,8
533	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	42,8,0,8
534	ok	s=4,m=12	0.04	0.07		1					0.06	6.26e-02	1.00	42,8,0,8
535	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
536	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,8,0,8
539	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	58,61,0,7
540	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,7,0,7
541	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,7,0,8
542	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	55,8,0,8
543	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	49,7,0,7
544	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
545	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
546	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	7,7,0,7

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 151 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
547	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	68,71,0,8
548	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	48,7,0,7
549	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
550	ok	s=4,m=12	0.01	0.08		1					0.08	6.45e-02	1.00	8,8,0,8
551	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
552	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
555	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,61,0,8
556	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,8
557	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,8,0,7
558	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
559	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
560	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
561	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
562	ok	s=4,m=12	0.01	0.09		1					0.09	2.82e-02	1.00	8,8,0,8
563	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	69,71,0,7
564	ok	s=4,m=12	9.30e-03	0.09		1					0.09	6.57e-02	1.00	8,8,0,8
565	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,7,0,7
566	ok	s=4,m=12	0.01	0.09		1					0.09	6.40e-02	1.00	7,7,0,7
567	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
568	ok	s=4,m=12	0.04	0.08		1					0.08	6.58e-02	1.00	8,8,0,8
571	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,64,0,7
572	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,8,0,7
573	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,8,0,8
574	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
575	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
576	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
577	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
578	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	44,7,0,7
579	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,70,0,8
580	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	47,7,0,8
581	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
582	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	46,8,0,8
583	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
584	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,8,0,7
587	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,64,0,8
588	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	8,8,0,8
589	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,7,0,7
590	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	56,7,0,7
591	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	50,8,0,8
592	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	46,45,0,46
593	ok	s=5,m=12	0.03	0.07		1					0.07	0.1	1.00	44,43,0,44
594	ok	s=4,m=12	0.04	0.06		1					0.06	2.80e-02	1.00	44,47,0,47
595	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	63,70,0,7
596	ok	s=4,m=12	0.04	0.06		1					0.06	6.57e-02	1.00	41,8,0,8
597	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	41,8,0,8
598	ok	s=4,m=12	0.04	0.07		1					0.07	6.24e-02	1.00	41,8,0,8
599	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
600	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,7,0,8
603	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,61,0,7
604	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,7
605	ok	s=4,m=12	0.04	0.11		1					0.09	6.64e-02	1.00	8,8,0,8
606	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	55,8,0,8
607	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	49,7,0,7
608	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	45,54,0,45
609	ok	s=5,m=12	0.03	0.07		1					0.07	0.1	1.00	43,52,0,43
610	ok	s=4,m=12	0.04	0.06		1					0.06	2.78e-02	1.00	43,48,0,48
611	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,71,0,8
612	ok	s=4,m=12	0.04	0.06		1					0.06	6.44e-02	1.00	42,8,0,8
613	ok	s=4,m=12	0.04	0.07		1					0.07	2.76e-02	1.00	42,8,0,8
614	ok	s=4,m=12	0.04	0.07		1					0.07	6.36e-02	1.00	42,8,0,8
615	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
616	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	7,8,0,7
619	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,61,0,8



Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
620	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,8
621	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,7,0,7
622	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
623	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	49,7,0,8
624	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
625	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
626	ok	s=4,m=12	0.01	0.08		1					0.08	2.82e-02	1.00	48,8,0,8
627	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,71,0,7
628	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	48,8,0,8
629	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
630	ok	s=4,m=12	0.01	0.08		1					0.08	6.37e-02	1.00	45,8,0,7
631	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
632	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,7,0,8
635	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,61,0,7
636	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,8,0,7
637	ok	s=4,m=12	0.05	0.09		1					0.09	6.61e-02	1.00	8,8,0,8
638	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
639	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
640	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
641	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
642	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,7,0,7
643	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	69,71,0,8
644	ok	s=4,m=12	9.18e-03	0.09		1					0.09	6.49e-02	1.00	7,7,0,7
645	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
646	ok	s=4,m=12	0.01	0.09		1					0.09	6.47e-02	1.00	8,8,0,8
647	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,8
648	ok	s=4,m=12	0.04	0.08		1					0.08	6.57e-02	1.00	7,8,0,7
651	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,8
652	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,8,0,8
653	ok	s=4,m=12	0.05	0.11		1					0.09	6.60e-02	1.00	7,8,0,7
654	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,8,0,7
655	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	8,8,0,8
656	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
657	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
658	ok	s=4,m=12	0.01	0.08		1					0.08	2.82e-02	1.00	52,8,0,8
659	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,7
660	ok	s=4,m=12	0.01	0.08		1					0.08	6.57e-02	1.00	52,8,0,8
661	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
662	ok	s=4,m=12	0.01	0.08		1					0.08	6.36e-02	1.00	54,7,0,8
663	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,7
664	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	8,8,0,8
667	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	57,58,0,7
668	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	7,7,0,7
669	ok	s=4,m=12	0.04	0.10		1					0.09	6.63e-02	1.00	8,7,0,8
670	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,8,0,8
671	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
672	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	54,53,0,50
673	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	52,51,0,52
674	ok	s=4,m=12	0.04	0.07		1					0.06	2.78e-02	1.00	52,56,0,55
675	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	67,68,0,8
676	ok	s=4,m=12	0.04	0.06		1					0.06	6.44e-02	1.00	49,8,0,8
677	ok	s=4,m=12	0.05	0.07		1					0.07	2.76e-02	1.00	49,8,0,8
678	ok	s=4,m=12	0.05	0.07		1					0.07	6.34e-02	1.00	49,8,0,8
679	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
680	ok	s=4,m=12	0.04	0.09		1					0.08	6.59e-02	1.00	7,7,0,7
683	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,59,0,8
684	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	7,7,0,8
685	ok	s=4,m=12	0.04	0.11		1					0.09	6.62e-02	1.00	7,8,0,7
686	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	7,7,0,7
687	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	8,7,0,8
688	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	53,54,0,49
689	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	51,52,0,51
690	ok	s=4,m=12	0.04	0.07		1					0.06	2.80e-02	1.00	51,56,0,56

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 153 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
691	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	64,65,0,7
692	ok	s=4,m=12	0.04	0.06		1					0.06	6.56e-02	1.00	50,8,0,8
693	ok	s=4,m=12	0.05	0.07		1					0.07	2.75e-02	1.00	50,50,0,8
694	ok	s=4,m=12	0.05	0.07		1					0.07	6.25e-02	1.00	50,8,0,8
695	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,7,0,7
696	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,8,0,8
699	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,59,0,7
700	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	7,7,0,7
701	ok	s=4,m=12	0.05	0.11		1					0.09	6.62e-02	1.00	8,7,0,8
702	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	8,7,0,8
703	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
704	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
705	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
706	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	56,7,0,7
707	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,65,0,8
708	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	56,8,0,7
709	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
710	ok	s=4,m=12	0.01	0.08		1					0.08	6.45e-02	1.00	53,8,0,8
711	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
712	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
715	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	8,58,0,8
716	ok	s=3,m=12	0.05	0.08		1					0.08	8.91e-02	1.00	8,8,0,8
717	ok	s=4,m=12	0.05	0.09		1					0.09	6.60e-02	1.00	7,8,0,7
718	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
719	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	8,8,0,8
720	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
721	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
722	ok	s=4,m=12	0.01	0.09		1					0.09	2.82e-02	1.00	8,8,0,8
723	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	69,68,0,7
724	ok	s=4,m=12	9.24e-03	0.09		1					0.09	6.57e-02	1.00	8,8,0,8
725	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	7,7,0,7
726	ok	s=4,m=12	0.01	0.09		1					0.09	6.40e-02	1.00	7,7,0,7
727	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	7,8,0,7
728	ok	s=4,m=12	0.04	0.08		1					0.08	6.58e-02	1.00	8,8,0,8
731	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,58,0,7
732	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,8,0,7
733	ok	s=4,m=12	0.05	0.11		1					0.09	6.61e-02	1.00	8,8,0,8
734	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
735	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,8,0,7
736	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
737	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
738	ok	s=4,m=12	0.01	0.08		1					0.08	2.80e-02	1.00	52,7,0,7
739	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,68,0,8
740	ok	s=4,m=12	0.01	0.08		1					0.08	6.48e-02	1.00	55,7,0,8
741	ok	s=4,m=12	0.02	0.09		1					0.09	2.79e-02	1.00	8,8,0,8
742	ok	s=4,m=12	0.01	0.08		1					0.08	6.44e-02	1.00	54,8,0,8
743	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,8
744	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,8,0,7
747	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	8,62,0,8
748	ok	s=3,m=12	0.05	0.08		1					0.08	8.92e-02	1.00	8,8,0,8
749	ok	s=4,m=12	0.04	0.10		1					0.09	6.62e-02	1.00	7,7,0,7
750	ok	s=5,m=12	0.04	0.08		1					0.08	7.04e-02	1.00	56,7,0,7
751	ok	s=5,m=12	0.04	0.07		1					0.07	7.02e-02	1.00	50,8,0,8
752	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	50,53,0,50
753	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	52,51,0,52
754	ok	s=4,m=12	0.04	0.06		1					0.06	2.80e-02	1.00	52,55,0,51
755	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,72,0,7
756	ok	s=4,m=12	0.04	0.06		1					0.06	6.57e-02	1.00	49,8,0,8
757	ok	s=4,m=12	0.05	0.07		1					0.07	2.75e-02	1.00	49,8,0,8
758	ok	s=4,m=12	0.04	0.07		1					0.07	6.24e-02	1.00	49,8,0,8
759	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,8,0,7
760	ok	s=4,m=12	0.04	0.09		1					0.08	6.60e-02	1.00	8,7,0,8
763	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,63,0,7

**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 154 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
764	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,7
765	ok	s=4,m=12	0.04	0.11		1					0.09	6.64e-02	1.00	8,7,0,8
766	ok	s=5,m=12	0.04	0.08		1					0.08	7.05e-02	1.00	8,8,0,8
767	ok	s=5,m=12	0.04	0.07		1					0.07	7.01e-02	1.00	7,7,0,7
768	ok	s=5,m=12	0.03	0.09		1					0.08	0.1	1.00	53,53,0,49
769	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	51,51,0,51
770	ok	s=4,m=12	0.04	0.06		1					0.06	2.78e-02	1.00	51,55,0,52
771	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,69,0,8
772	ok	s=4,m=12	0.04	0.06		1					0.06	6.43e-02	1.00	50,8,0,8
773	ok	s=4,m=12	0.04	0.07		1					0.07	2.76e-02	1.00	50,8,0,8
774	ok	s=4,m=12	0.04	0.07		1					0.07	6.37e-02	1.00	50,8,0,8
775	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,8
776	ok	s=4,m=12	0.04	0.10		1					0.08	6.59e-02	1.00	7,7,0,7
779	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	62,63,0,8
780	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	7,7,0,8
781	ok	s=4,m=12	0.05	0.12		1					0.09	6.61e-02	1.00	7,7,0,7
782	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	7,7,0,7
783	ok	s=5,m=12	0.04	0.08		1					0.07	7.01e-02	1.00	8,7,0,8
784	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,8,0,7
785	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	8,8,0,8
786	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	51,8,0,8
787	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	72,69,0,7
788	ok	s=4,m=12	0.01	0.08		1					0.08	6.56e-02	1.00	51,8,0,8
789	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,7
790	ok	s=4,m=12	0.01	0.08		1					0.08	6.37e-02	1.00	50,8,0,7
791	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	7,7,0,7
792	ok	s=4,m=12	0.04	0.11		1					0.08	6.59e-02	1.00	8,7,0,8
795	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	7,63,0,7
796	ok	s=3,m=12	0.05	0.08		1					0.08	8.90e-02	1.00	7,7,0,7
797	ok	s=4,m=12	0.05	0.10		1					0.09	6.61e-02	1.00	8,7,0,8
798	ok	s=5,m=12	0.04	0.08		1					0.08	7.03e-02	1.00	8,8,0,8
799	ok	s=5,m=12	0.04	0.07		1					0.07	7.00e-02	1.00	7,8,0,7
800	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	8,8,0,8
801	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,7,0,7
802	ok	s=4,m=12	0.01	0.09		1					0.09	2.81e-02	1.00	7,7,0,7
803	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,69,0,8
804	ok	s=4,m=12	9.28e-03	0.09		1					0.09	6.49e-02	1.00	7,8,0,7
805	ok	s=4,m=12	0.02	0.09		1					0.09	2.80e-02	1.00	8,8,0,8
806	ok	s=4,m=12	0.01	0.09		1					0.09	6.47e-02	1.00	8,8,0,8
807	ok	s=3,m=12	0.05	0.07		1					0.07	0.2	1.00	8,7,0,8
808	ok	s=4,m=12	0.04	0.09		1					0.08	6.57e-02	1.00	7,7,0,7
811	ok	s=2,m=12	0.03	0.06		1					0.02	0.2	1.00	61,63,0,8
812	ok	s=3,m=12	0.05	0.09		1					0.08	8.91e-02	1.00	8,8,0,8
813	ok	s=4,m=12	0.05	0.11		1					0.09	6.59e-02	1.00	7,8,0,7
814	ok	s=5,m=12	0.05	0.08		1					0.08	7.03e-02	1.00	56,7,0,7
815	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	50,7,0,8
816	ok	s=5,m=12	0.02	0.08		1					0.08	0.1	1.00	7,7,0,7
817	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,8,0,8
818	ok	s=4,m=12	0.01	0.08		1					0.08	2.81e-02	1.00	8,8,0,8
819	ok	s=2,m=12	0.03	0.06		1					0.01	0.1	1.00	71,69,0,7
820	ok	s=4,m=12	9.78e-03	0.08		1					0.08	6.57e-02	1.00	55,8,0,8
821	ok	s=4,m=12	0.02	0.09		1					0.09	2.78e-02	1.00	7,7,0,8
822	ok	s=4,m=12	0.01	0.08		1					0.08	6.37e-02	1.00	7,8,0,8
823	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,8,0,7
824	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	8,8,0,8
827	ok	s=2,m=12	0.03	0.07		1					0.02	0.2	1.00	61,63,0,8
828	ok	s=3,m=12	0.05	0.09		1					0.08	8.90e-02	1.00	8,7,0,8
829	ok	s=4,m=12	0.04	0.11		1					0.09	6.61e-02	1.00	7,7,0,8
830	ok	s=5,m=12	0.05	0.08		1					0.08	7.03e-02	1.00	56,7,0,8
831	ok	s=5,m=12	0.05	0.08		1					0.07	7.01e-02	1.00	50,7,0,7
832	ok	s=5,m=12	0.02	0.07		1					0.07	0.1	1.00	7,53,0,8
833	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	56,51,0,52
834	ok	s=4,m=12	0.03	0.06		1					0.06	2.77e-02	1.00	51,8,0,8

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
835	ok	s=2,m=12	0.03	0.05		1					0.01	0.1	1.00	63,69,0,8
836	ok	s=4,m=12	0.03	0.06		1					0.06	6.44e-02	1.00	50,8,0,8
837	ok	s=4,m=12	0.04	0.07		1					0.07	2.75e-02	1.00	50,8,0,8
838	ok	s=4,m=12	0.03	0.06		1					0.06	6.33e-02	1.00	50,8,0,8
839	ok	s=3,m=12	0.05	0.08		1					0.07	0.2	1.00	8,7,0,8
840	ok	s=4,m=12	0.04	0.10		1					0.08	6.58e-02	1.00	7,7,0,7
843	ok	s=2,m=12	0.02	0.07		1					0.02	0.2	1.00	69,63,0,7
844	ok	s=3,m=12	0.04	0.07		1					0.06	8.90e-02	1.00	7,7,0,7
845	ok	s=4,m=12	0.03	0.08		1					0.06	6.63e-02	1.00	8,7,0,8
846	ok	s=5,m=12	0.04	0.06		1					0.06	7.04e-02	1.00	50,7,0,8
847	ok	s=5,m=12	0.04	0.06		1					0.05	7.01e-02	1.00	50,7,0,8
848	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	50,53,0,50
849	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	56,51,0,51
850	ok	s=4,m=12	0.03	0.05		1					0.05	2.79e-02	1.00	51,51,0,51
851	ok	s=2,m=12	0.02	0.06		1					8.57e-03	0.1	1.00	63,69,0,7
852	ok	s=4,m=12	0.04	0.04		1					0.04	6.56e-02	1.00	50,56,0,51
853	ok	s=4,m=12	0.04	0.06		1					0.06	2.73e-02	1.00	50,53,0,53
854	ok	s=4,m=12	0.04	0.05		1					0.04	6.20e-02	1.00	50,50,0,53
855	ok	s=3,m=12	0.03	0.06		1					0.05	0.2	1.00	7,7,0,7
856	ok	s=4,m=12	0.03	0.07		1					0.06	6.60e-02	1.00	8,7,0,8
859	ok	s=2,m=12	0.02	0.06		1					0.02	0.2	1.00	66,60,0,7
860	ok	s=3,m=12	0.04	0.07		1					0.06	8.90e-02	1.00	7,7,0,7
861	ok	s=4,m=12	0.03	0.08		1					0.06	6.63e-02	1.00	8,7,0,8
862	ok	s=5,m=12	0.04	0.06		1					0.06	7.04e-02	1.00	47,7,0,8
863	ok	s=4,m=12	0.04	0.07		1					0.06	2.73e-02	1.00	46,46,0,46
864	ok	s=5,m=12	0.03	0.08		1					0.07	0.1	1.00	41,46,0,46
865	ok	s=4,m=12	0.04	0.05		1					0.05	6.22e-02	1.00	46,41,0,46
866	ok	s=4,m=12	0.04	0.06		1					0.06	2.78e-02	1.00	47,44,0,44
867	ok	s=3,m=12	0.03	0.06		1					0.05	0.2	1.00	7,7,0,7
868	ok	s=2,m=12	0.02	0.06		1					8.63e-03	0.1	1.00	60,66,0,7
869	ok	s=5,m=12	0.02	0.07		1					0.06	0.1	1.00	47,44,0,47
870	ok	s=4,m=12	0.04	0.04		1					0.04	6.52e-02	1.00	46,47,0,44
871	ok	s=4,m=12	0.03	0.07		1					0.06	6.59e-02	1.00	8,7,0,8
874	ok	s=5,m=12	0.04	0.06		1					0.05	7.01e-02	1.00	46,7,0,8
875	ok	s=6,m=12	0.10	0.10		1					0.08	3.70e-02	1.00	46,44,0,7
876	ok	s=6,m=12	0.08	0.11		1					0.10	3.69e-02	1.00	47,46,0,7
877	ok	s=6,m=12	0.09	0.10		1					0.08	3.70e-02	1.00	53,51,0,7
878	ok	s=6,m=12	0.08	0.11		1					0.10	3.69e-02	1.00	51,7,0,7
879	ok	s=9,m=12	2.61e-03	0.04		1					2.29e-03	0.4	0.83	47,60,0,7
880	ok	s=9,m=12	2.71e-03	0.05		1					2.29e-03	0.4	0.83	41,66,0,25
881	ok	s=8,m=12	4.46e-03	0.13		1					3.02e-03	0.6	0.95	46,46,0,26
882	ok	s=8,m=12	4.48e-03	0.13		1					3.02e-03	0.6	0.95	46,46,0,5
883	ok	s=8,m=12	4.53e-03	0.14		1					3.02e-03	0.6	0.95	46,46,0,3
884	ok	s=8,m=12	3.28e-03	0.10		1					3.02e-03	0.6	0.95	41,41,0,26
885	ok	s=8,m=12	1.41e-03	0.05	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	44,44,66,32
886	ok	s=8,m=12	1.89e-03	0.06		1					3.02e-03	0.6	0.95	46,46,0,5
887	ok	s=8,m=12	3.47e-03	0.11		1					3.02e-03	0.6	0.95	46,46,0,5
888	ok	s=9,m=12	2.99e-03	0.04		1					2.29e-03	0.4	0.83	48,48,0,7
889	ok	s=9,m=12	3.12e-03	0.05		1					2.29e-03	0.4	0.83	46,42,0,5
890	ok	s=8,m=12	4.71e-03	0.14		1					3.02e-03	0.6	0.95	46,46,0,25
891	ok	s=8,m=12	4.74e-03	0.14		1					3.02e-03	0.6	0.95	46,46,0,5
892	ok	s=8,m=12	4.78e-03	0.14		1					3.02e-03	0.6	0.95	46,46,0,26
893	ok	s=8,m=12	3.26e-03	0.10	0.06	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	41,41,7,8
894	ok	s=8,m=12	1.61e-03	0.05		1					3.02e-03	0.6	0.95	48,44,0,25
895	ok	s=8,m=12	1.95e-03	0.06	0.08	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,41,26
896	ok	s=8,m=12	3.43e-03	0.10	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	46,46,41,28
897	ok	s=9,m=12	2.05e-03	0.05		1					2.29e-03	0.4	0.83	48,45,0,28
898	ok	s=9,m=12	2.13e-03	0.06		1					2.29e-03	0.4	0.83	45,43,0,26
899	ok	s=8,m=12	3.68e-03	0.11		1					3.02e-03	0.6	0.95	41,41,0,25
900	ok	s=8,m=12	3.65e-03	0.11		1					3.02e-03	0.6	0.95	41,41,0,8
901	ok	s=8,m=12	3.67e-03	0.11		1					3.02e-03	0.6	0.95	46,46,0,7
902	ok	s=8,m=12	2.62e-03	0.08	0.11	1	1.4	0.4	120.4	0.39	3.02e-03	0.6	0.95	41,41,47,28
903	ok	s=8,m=12	1.18e-03	0.04		1					3.02e-03	0.6	0.95	60,44,0,27

















**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 163 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1369	ok	s=6,m=12	0.06	0.21		1					0.20	4.34e-02	1.00	7,7,0,7
1370	ok	s=6,m=12	0.06	0.21		1					0.20	4.47e-02	1.00	7,7,0,7
1371	ok	s=6,m=12	0.08	0.25		1					0.25	4.56e-02	1.00	7,7,0,7
1372	ok	s=6,m=12	0.06	0.29		1					0.29	5.87e-02	1.00	8,7,0,7
1373	ok	s=6,m=12	0.07	0.25		1					0.23	7.38e-02	1.00	8,8,0,8
1374	ok	s=6,m=12	0.07	0.22		1					0.20	4.20e-02	1.00	8,8,0,8
1375	ok	s=6,m=12	0.06	0.19		1					0.17	7.38e-02	1.00	8,7,0,7
1376	ok	s=6,m=12	0.07	0.23		1					0.22	4.20e-02	1.00	8,8,0,8
1377	ok	s=6,m=12	0.07	0.21		1					0.19	4.20e-02	1.00	7,8,0,8
1378	ok	s=6,m=12	0.07	0.21		1					0.20	4.20e-02	1.00	7,7,0,7
1379	ok	s=6,m=12	0.07	0.21		1					0.21	4.32e-02	1.00	7,7,0,7
1380	ok	s=6,m=12	0.07	0.22		1					0.21	4.45e-02	1.00	7,7,0,7
1381	ok	s=6,m=12	0.08	0.26		1					0.26	4.54e-02	1.00	7,7,0,7
1382	ok	s=6,m=12	0.02	0.31		1					0.30	7.12e-02	1.00	48,7,0,7
1383	ok	s=6,m=12	0.02	0.24		1					0.23	6.37e-02	1.00	8,8,0,8
1384	ok	s=6,m=12	0.02	0.25		1					0.24	6.37e-02	1.00	41,7,0,7
1385	ok	s=6,m=12	0.02	0.25		1					0.24	6.33e-02	1.00	72,8,0,8
1386	ok	s=6,m=12	0.02	0.26		1					0.24	6.08e-02	1.00	8,7,0,7
1387	ok	s=6,m=12	0.02	0.25		1					0.24	6.08e-02	1.00	42,7,0,7
1388	ok	s=6,m=12	0.02	0.25		1					0.24	5.91e-02	1.00	7,7,0,7
1389	ok	s=6,m=12	0.02	0.25		1					0.24	5.79e-02	1.00	7,8,0,7
1390	ok	s=6,m=12	0.02	0.24		1					0.23	5.70e-02	1.00	7,8,0,7
1391	ok	s=6,m=12	0.03	0.31		1					0.30	5.54e-02	1.00	7,7,0,7
1392	ok	s=6,m=12	0.02	0.32		1					0.32	7.15e-02	1.00	45,7,0,7
1393	ok	s=6,m=12	0.03	0.26		1					0.25	6.36e-02	1.00	8,8,0,8
1394	ok	s=6,m=12	0.02	0.26		1					0.25	6.36e-02	1.00	8,8,0,7
1395	ok	s=6,m=12	0.02	0.27		1					0.25	6.32e-02	1.00	8,7,0,8
1396	ok	s=6,m=12	0.03	0.27		1					0.26	6.08e-02	1.00	8,7,0,7
1397	ok	s=6,m=12	0.03	0.27		1					0.25	6.08e-02	1.00	45,7,0,7
1398	ok	s=6,m=12	0.02	0.26		1					0.25	5.92e-02	1.00	7,8,0,7
1399	ok	s=6,m=12	0.02	0.26		1					0.25	5.81e-02	1.00	7,7,0,7
1400	ok	s=6,m=12	0.02	0.25		1					0.24	5.72e-02	1.00	7,8,0,7
1401	ok	s=6,m=12	0.04	0.32		1					0.32	5.55e-02	1.00	7,7,0,7
1402	ok	s=6,m=12	0.04	0.31		1					0.30	5.55e-02	1.00	7,7,0,7
1403	ok	s=6,m=12	0.02	0.24		1					0.23	5.74e-02	1.00	7,8,0,7
1404	ok	s=6,m=12	0.03	0.25		1					0.24	5.84e-02	1.00	41,7,0,7
1405	ok	s=6,m=12	0.03	0.25		1					0.24	5.82e-02	1.00	7,8,0,8
1406	ok	s=6,m=12	0.02	0.26		1					0.24	6.10e-02	1.00	7,7,0,7
1407	ok	s=6,m=12	0.02	0.25		1					0.24	6.15e-02	1.00	8,7,0,7
1408	ok	s=6,m=12	0.02	0.25		1					0.24	6.27e-02	1.00	8,7,0,7
1409	ok	s=6,m=12	0.02	0.25		1					0.24	6.40e-02	1.00	8,8,0,7
1410	ok	s=6,m=12	0.03	0.24		1					0.23	6.40e-02	1.00	8,8,0,7
1411	ok	s=6,m=12	0.02	0.31		1					0.30	7.04e-02	1.00	32,7,0,7
1412	ok	s=6,m=12	0.04	0.33		1					0.32	5.57e-02	1.00	7,7,0,7
1413	ok	s=6,m=12	0.03	0.26		1					0.25	5.76e-02	1.00	7,8,0,7
1414	ok	s=6,m=12	0.03	0.26		1					0.25	5.86e-02	1.00	41,8,0,7
1415	ok	s=6,m=12	0.03	0.27		1					0.25	5.83e-02	1.00	7,7,0,8
1416	ok	s=6,m=12	0.02	0.27		1					0.26	6.10e-02	1.00	7,7,0,7
1417	ok	s=6,m=12	0.02	0.27		1					0.26	6.15e-02	1.00	8,7,0,7
1418	ok	s=6,m=12	0.03	0.26		1					0.25	6.27e-02	1.00	8,8,0,7
1419	ok	s=6,m=12	0.03	0.26		1					0.25	6.39e-02	1.00	8,7,0,7
1420	ok	s=6,m=12	0.03	0.26		1					0.24	6.39e-02	1.00	8,8,0,7
1421	ok	s=6,m=12	0.02	0.32		1					0.31	7.08e-02	1.00	32,7,0,7
1422	ok	s=6,m=12	0.08	0.28		1					0.27	4.53e-02	1.00	7,7,0,7
1423	ok	s=6,m=12	0.07	0.23		1					0.22	4.42e-02	1.00	7,7,0,7
1424	ok	s=6,m=12	0.07	0.23		1					0.22	4.26e-02	1.00	7,7,0,7
1425	ok	s=6,m=12	0.07	0.26		1					0.24	4.32e-02	1.00	7,7,0,7
1426	ok	s=6,m=12	0.06	0.19		1					0.18	4.20e-02	1.00	7,7,0,7
1427	ok	s=6,m=12	0.07	0.23		1					0.21	7.38e-02	1.00	8,8,0,8
1428	ok	s=6,m=12	0.07	0.23		1					0.22	7.38e-02	1.00	8,8,0,8
1429	ok	s=6,m=12	0.07	0.24		1					0.22	4.20e-02	1.00	8,8,0,8
1430	ok	s=6,m=12	0.07	0.26		1					0.25	4.20e-02	1.00	8,8,0,8
1431	ok	s=6,m=12	0.06	0.27		1					0.26	5.96e-02	1.00	8,7,0,7

**PROGETTO DEFINITIVO**  
**FV01 – Fermata Finale Ligure**  
**RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 164 di 220

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1432	ok	s=6,m=12	0.08	0.29		1					0.28	4.51e-02	1.00	7,7,0,7
1433	ok	s=6,m=12	0.07	0.24		1					0.23	4.40e-02	1.00	7,7,0,7
1434	ok	s=6,m=12	0.07	0.24		1					0.24	4.25e-02	1.00	7,7,0,7
1435	ok	s=6,m=12	0.07	0.27		1					0.26	4.31e-02	1.00	7,7,0,7
1436	ok	s=6,m=12	0.07	0.20		1					0.19	7.38e-02	1.00	7,7,0,7
1437	ok	s=6,m=12	0.07	0.23		1					0.22	7.38e-02	1.00	8,8,0,8
1438	ok	s=6,m=12	0.07	0.24		1					0.23	7.38e-02	1.00	8,8,0,8
1439	ok	s=6,m=12	0.07	0.25		1					0.23	4.20e-02	1.00	8,8,0,8
1440	ok	s=6,m=12	0.07	0.27		1					0.26	4.20e-02	1.00	8,8,0,8
1441	ok	s=6,m=12	0.07	0.27		1					0.27	5.92e-02	1.00	8,7,0,7
1442	ok	s=6,m=12	0.13	0.59		1					0.57	4.26e-02	1.00	7,7,0,7
1443	ok	s=6,m=12	0.11	0.51		1					0.49	4.22e-02	1.00	7,7,0,7
1444	ok	s=6,m=12	0.11	0.52		1					0.49	4.18e-02	1.00	7,7,0,7
1445	ok	s=6,m=12	0.12	0.55		1					0.52	4.19e-02	1.00	7,7,0,7
1446	ok	s=6,m=12	0.11	0.47		1					0.44	4.10e-02	1.00	41,7,0,7
1447	ok	s=6,m=12	0.11	0.51		1					0.48	4.07e-02	1.00	8,8,0,8
1448	ok	s=6,m=12	0.11	0.51		1					0.48	4.02e-02	1.00	8,8,0,8
1449	ok	s=6,m=12	0.11	0.52		1					0.49	3.95e-02	1.00	8,8,0,8
1450	ok	s=6,m=12	0.12	0.55		1					0.52	3.97e-02	1.00	8,8,0,8
1451	ok	s=6,m=12	0.11	0.40		1					0.38	3.44e-02	1.00	8,32,0,32
1452	ok	s=6,m=12	0.13	0.63		1					0.61	4.25e-02	1.00	7,7,0,7
1453	ok	s=6,m=12	0.12	0.54		1					0.52	4.21e-02	1.00	7,7,0,7
1454	ok	s=6,m=12	0.12	0.56		1					0.54	4.18e-02	1.00	7,7,0,7
1455	ok	s=6,m=12	0.13	0.59		1					0.56	4.18e-02	1.00	7,7,0,7
1456	ok	s=6,m=12	0.12	0.51		1					0.48	4.10e-02	1.00	7,7,0,7
1457	ok	s=6,m=12	0.12	0.54		1					0.51	4.07e-02	1.00	8,8,0,8
1458	ok	s=6,m=12	0.12	0.55		1					0.52	4.02e-02	1.00	8,8,0,8
1459	ok	s=6,m=12	0.12	0.56		1					0.53	3.96e-02	1.00	8,8,0,8
1460	ok	s=6,m=12	0.12	0.59		1					0.56	3.98e-02	1.00	8,8,0,8
1461	ok	s=6,m=12	0.12	0.42		1					0.41	3.33e-02	1.00	8,8,0,32
<b>Trave</b>			<b>V V/T</b>	<b>V N/M</b>	<b>V stab</b>		<b>LamS 22</b>	<b>LamS 33</b>	<b>Snell.</b>	<b>Chi mn</b>	<b>V flst</b>	<b>LamS LT</b>	<b>Chi LT</b>	
			0.13	0.63	0.13		1.39	0.42	120.35	0.39	0.61	0.59	0.83	

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
								kN m		kN		kN	kN
1							0.0	0.0	0.0	0.0	0.0	0.0	0.0
2							0.0	0.0	0.0	0.0	0.0	0.0	0.0
3							0.0	0.0	0.0	0.0	0.0	0.0	0.0
4							0.0	0.0	0.0	0.0	0.0	0.0	0.0
5							0.0	0.0	0.0	0.0	0.0	0.0	0.0
6							0.0	0.0	0.0	0.0	0.0	0.0	0.0
7							0.0	0.0	0.0	0.0	0.0	0.0	0.0
8							0.0	0.0	0.0	0.0	0.0	0.0	0.0
9							0.0	0.0	0.0	0.0	0.0	0.0	0.0
10							0.0	0.0	0.0	0.0	0.0	0.0	0.0
11							0.0	0.0	0.0	0.0	0.0	0.0	0.0
12							0.0	0.0	0.0	0.0	0.0	0.0	0.0
13							0.0	0.0	0.0	0.0	0.0	0.0	0.0
14							0.0	0.0	0.0	0.0	0.0	0.0	0.0
37							0.0	0.0	0.0	0.0	0.0	0.0	0.0
38							0.0	0.0	0.0	0.0	0.0	0.0	0.0
39							0.0	0.0	0.0	0.0	0.0	0.0	0.0
40							0.0	0.0	0.0	0.0	0.0	0.0	0.0
41							0.0	0.0	0.0	0.0	0.0	0.0	0.0
42							0.0	0.0	0.0	0.0	0.0	0.0	0.0
43							0.0	0.0	0.0	0.0	0.0	0.0	0.0
44							0.0	0.0	0.0	0.0	0.0	0.0	0.0
45							0.0	0.0	0.0	0.0	0.0	0.0	0.0
46							0.0	0.0	0.0	0.0	0.0	0.0	0.0
47							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
48							0.0	0.0	0.0	0.0	0.0	0.0	0.0
49							0.0	0.0	0.0	0.0	0.0	0.0	0.0
50							0.0	0.0	0.0	0.0	0.0	0.0	0.0
51							0.0	0.0	0.0	0.0	0.0	0.0	0.0
52							0.0	0.0	0.0	0.0	0.0	0.0	0.0
53							0.0	0.0	0.0	0.0	0.0	0.0	0.0
54							0.0	0.0	0.0	0.0	0.0	0.0	0.0
55							0.0	0.0	0.0	0.0	0.0	0.0	0.0
56							0.0	0.0	0.0	0.0	0.0	0.0	0.0
59							0.0	0.0	0.0	0.0	0.0	0.0	0.0
60							0.0	0.0	0.0	0.0	0.0	0.0	0.0
61							0.0	0.0	0.0	0.0	0.0	0.0	0.0
62							0.0	0.0	0.0	0.0	0.0	0.0	0.0
63							0.0	0.0	0.0	0.0	0.0	0.0	0.0
64							0.0	0.0	0.0	0.0	0.0	0.0	0.0
65							0.0	0.0	0.0	0.0	0.0	0.0	0.0
66							0.0	0.0	0.0	0.0	0.0	0.0	0.0
67							0.0	0.0	0.0	0.0	0.0	0.0	0.0
68							0.0	0.0	0.0	0.0	0.0	0.0	0.0
69							0.0	0.0	0.0	0.0	0.0	0.0	0.0
70							0.0	0.0	0.0	0.0	0.0	0.0	0.0
71							0.0	0.0	0.0	0.0	0.0	0.0	0.0
72							0.0	0.0	0.0	0.0	0.0	0.0	0.0
75							0.0	0.0	0.0	0.0	0.0	0.0	0.0
76							0.0	0.0	0.0	0.0	0.0	0.0	0.0
77							0.0	0.0	0.0	0.0	0.0	0.0	0.0
78							0.0	0.0	0.0	0.0	0.0	0.0	0.0
79							0.0	0.0	0.0	0.0	0.0	0.0	0.0
80							0.0	0.0	0.0	0.0	0.0	0.0	0.0
81							0.0	0.0	0.0	0.0	0.0	0.0	0.0
82							0.0	0.0	0.0	0.0	0.0	0.0	0.0
83							0.0	0.0	0.0	0.0	0.0	0.0	0.0
84							0.0	0.0	0.0	0.0	0.0	0.0	0.0
85							0.0	0.0	0.0	0.0	0.0	0.0	0.0
86							0.0	0.0	0.0	0.0	0.0	0.0	0.0
87							0.0	0.0	0.0	0.0	0.0	0.0	0.0
88							0.0	0.0	0.0	0.0	0.0	0.0	0.0
91							0.0	0.0	0.0	0.0	0.0	0.0	0.0
92							0.0	0.0	0.0	0.0	0.0	0.0	0.0
93							0.0	0.0	0.0	0.0	0.0	0.0	0.0
94							0.0	0.0	0.0	0.0	0.0	0.0	0.0
95							0.0	0.0	0.0	0.0	0.0	0.0	0.0
96							0.0	0.0	0.0	0.0	0.0	0.0	0.0
97							0.0	0.0	0.0	0.0	0.0	0.0	0.0
98							0.0	0.0	0.0	0.0	0.0	0.0	0.0
99							0.0	0.0	0.0	0.0	0.0	0.0	0.0
100							0.0	0.0	0.0	0.0	0.0	0.0	0.0
101							0.0	0.0	0.0	0.0	0.0	0.0	0.0
102							0.0	0.0	0.0	0.0	0.0	0.0	0.0
103							0.0	0.0	0.0	0.0	0.0	0.0	0.0
104							0.0	0.0	0.0	0.0	0.0	0.0	0.0
107							0.0	0.0	0.0	0.0	0.0	0.0	0.0
108							0.0	0.0	0.0	0.0	0.0	0.0	0.0
109							0.0	0.0	0.0	0.0	0.0	0.0	0.0
110							0.0	0.0	0.0	0.0	0.0	0.0	0.0
111							0.0	0.0	0.0	0.0	0.0	0.0	0.0
112							0.0	0.0	0.0	0.0	0.0	0.0	0.0
113							0.0	0.0	0.0	0.0	0.0	0.0	0.0
114							0.0	0.0	0.0	0.0	0.0	0.0	0.0
115							0.0	0.0	0.0	0.0	0.0	0.0	0.0
116							0.0	0.0	0.0	0.0	0.0	0.0	0.0
117							0.0	0.0	0.0	0.0	0.0	0.0	0.0
118							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
119							0.0	0.0	0.0	0.0	0.0	0.0	0.0
120							0.0	0.0	0.0	0.0	0.0	0.0	0.0
123							0.0	0.0	0.0	0.0	0.0	0.0	0.0
124							0.0	0.0	0.0	0.0	0.0	0.0	0.0
125							0.0	0.0	0.0	0.0	0.0	0.0	0.0
126							0.0	0.0	0.0	0.0	0.0	0.0	0.0
127							0.0	0.0	0.0	0.0	0.0	0.0	0.0
128							0.0	0.0	0.0	0.0	0.0	0.0	0.0
129							0.0	0.0	0.0	0.0	0.0	0.0	0.0
130							0.0	0.0	0.0	0.0	0.0	0.0	0.0
131							0.0	0.0	0.0	0.0	0.0	0.0	0.0
132							0.0	0.0	0.0	0.0	0.0	0.0	0.0
133							0.0	0.0	0.0	0.0	0.0	0.0	0.0
134							0.0	0.0	0.0	0.0	0.0	0.0	0.0
135							0.0	0.0	0.0	0.0	0.0	0.0	0.0
136							0.0	0.0	0.0	0.0	0.0	0.0	0.0
139							0.0	0.0	0.0	0.0	0.0	0.0	0.0
140							0.0	0.0	0.0	0.0	0.0	0.0	0.0
141							0.0	0.0	0.0	0.0	0.0	0.0	0.0
142							0.0	0.0	0.0	0.0	0.0	0.0	0.0
143							0.0	0.0	0.0	0.0	0.0	0.0	0.0
144							0.0	0.0	0.0	0.0	0.0	0.0	0.0
145							0.0	0.0	0.0	0.0	0.0	0.0	0.0
146							0.0	0.0	0.0	0.0	0.0	0.0	0.0
147							0.0	0.0	0.0	0.0	0.0	0.0	0.0
148							0.0	0.0	0.0	0.0	0.0	0.0	0.0
149							0.0	0.0	0.0	0.0	0.0	0.0	0.0
150							0.0	0.0	0.0	0.0	0.0	0.0	0.0
151							0.0	0.0	0.0	0.0	0.0	0.0	0.0
152							0.0	0.0	0.0	0.0	0.0	0.0	0.0
155							0.0	0.0	0.0	0.0	0.0	0.0	0.0
156							0.0	0.0	0.0	0.0	0.0	0.0	0.0
157							0.0	0.0	0.0	0.0	0.0	0.0	0.0
158							0.0	0.0	0.0	0.0	0.0	0.0	0.0
159							0.0	0.0	0.0	0.0	0.0	0.0	0.0
160							0.0	0.0	0.0	0.0	0.0	0.0	0.0
161							0.0	0.0	0.0	0.0	0.0	0.0	0.0
162							0.0	0.0	0.0	0.0	0.0	0.0	0.0
163							0.0	0.0	0.0	0.0	0.0	0.0	0.0
164							0.0	0.0	0.0	0.0	0.0	0.0	0.0
165							0.0	0.0	0.0	0.0	0.0	0.0	0.0
166							0.0	0.0	0.0	0.0	0.0	0.0	0.0
167							0.0	0.0	0.0	0.0	0.0	0.0	0.0
168							0.0	0.0	0.0	0.0	0.0	0.0	0.0
171							0.0	0.0	0.0	0.0	0.0	0.0	0.0
172							0.0	0.0	0.0	0.0	0.0	0.0	0.0
173							0.0	0.0	0.0	0.0	0.0	0.0	0.0
174							0.0	0.0	0.0	0.0	0.0	0.0	0.0
175							0.0	0.0	0.0	0.0	0.0	0.0	0.0
176							0.0	0.0	0.0	0.0	0.0	0.0	0.0
177							0.0	0.0	0.0	0.0	0.0	0.0	0.0
178							0.0	0.0	0.0	0.0	0.0	0.0	0.0
179							0.0	0.0	0.0	0.0	0.0	0.0	0.0
180							0.0	0.0	0.0	0.0	0.0	0.0	0.0
181							0.0	0.0	0.0	0.0	0.0	0.0	0.0
182							0.0	0.0	0.0	0.0	0.0	0.0	0.0
183							0.0	0.0	0.0	0.0	0.0	0.0	0.0
184							0.0	0.0	0.0	0.0	0.0	0.0	0.0
187							0.0	0.0	0.0	0.0	0.0	0.0	0.0
188							0.0	0.0	0.0	0.0	0.0	0.0	0.0
189							0.0	0.0	0.0	0.0	0.0	0.0	0.0
190							0.0	0.0	0.0	0.0	0.0	0.0	0.0
191							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
192							0.0	0.0	0.0	0.0	0.0	0.0	0.0
193							0.0	0.0	0.0	0.0	0.0	0.0	0.0
194							0.0	0.0	0.0	0.0	0.0	0.0	0.0
195							0.0	0.0	0.0	0.0	0.0	0.0	0.0
196							0.0	0.0	0.0	0.0	0.0	0.0	0.0
197							0.0	0.0	0.0	0.0	0.0	0.0	0.0
198							0.0	0.0	0.0	0.0	0.0	0.0	0.0
199							0.0	0.0	0.0	0.0	0.0	0.0	0.0
200							0.0	0.0	0.0	0.0	0.0	0.0	0.0
203							0.0	0.0	0.0	0.0	0.0	0.0	0.0
204							0.0	0.0	0.0	0.0	0.0	0.0	0.0
205							0.0	0.0	0.0	0.0	0.0	0.0	0.0
206							0.0	0.0	0.0	0.0	0.0	0.0	0.0
207							0.0	0.0	0.0	0.0	0.0	0.0	0.0
208							0.0	0.0	0.0	0.0	0.0	0.0	0.0
209							0.0	0.0	0.0	0.0	0.0	0.0	0.0
210							0.0	0.0	0.0	0.0	0.0	0.0	0.0
211							0.0	0.0	0.0	0.0	0.0	0.0	0.0
212							0.0	0.0	0.0	0.0	0.0	0.0	0.0
213							0.0	0.0	0.0	0.0	0.0	0.0	0.0
214							0.0	0.0	0.0	0.0	0.0	0.0	0.0
215							0.0	0.0	0.0	0.0	0.0	0.0	0.0
216							0.0	0.0	0.0	0.0	0.0	0.0	0.0
219							0.0	0.0	0.0	0.0	0.0	0.0	0.0
220							0.0	0.0	0.0	0.0	0.0	0.0	0.0
221							0.0	0.0	0.0	0.0	0.0	0.0	0.0
222							0.0	0.0	0.0	0.0	0.0	0.0	0.0
223							0.0	0.0	0.0	0.0	0.0	0.0	0.0
224							0.0	0.0	0.0	0.0	0.0	0.0	0.0
225							0.0	0.0	0.0	0.0	0.0	0.0	0.0
226							0.0	0.0	0.0	0.0	0.0	0.0	0.0
227							0.0	0.0	0.0	0.0	0.0	0.0	0.0
228							0.0	0.0	0.0	0.0	0.0	0.0	0.0
229							0.0	0.0	0.0	0.0	0.0	0.0	0.0
230							0.0	0.0	0.0	0.0	0.0	0.0	0.0
231							0.0	0.0	0.0	0.0	0.0	0.0	0.0
232							0.0	0.0	0.0	0.0	0.0	0.0	0.0
235							0.0	0.0	0.0	0.0	0.0	0.0	0.0
236							0.0	0.0	0.0	0.0	0.0	0.0	0.0
237							0.0	0.0	0.0	0.0	0.0	0.0	0.0
238							0.0	0.0	0.0	0.0	0.0	0.0	0.0
239							0.0	0.0	0.0	0.0	0.0	0.0	0.0
240							0.0	0.0	0.0	0.0	0.0	0.0	0.0
241							0.0	0.0	0.0	0.0	0.0	0.0	0.0
242							0.0	0.0	0.0	0.0	0.0	0.0	0.0
243							0.0	0.0	0.0	0.0	0.0	0.0	0.0
244							0.0	0.0	0.0	0.0	0.0	0.0	0.0
245							0.0	0.0	0.0	0.0	0.0	0.0	0.0
246							0.0	0.0	0.0	0.0	0.0	0.0	0.0
247							0.0	0.0	0.0	0.0	0.0	0.0	0.0
248							0.0	0.0	0.0	0.0	0.0	0.0	0.0
251							0.0	0.0	0.0	0.0	0.0	0.0	0.0
252							0.0	0.0	0.0	0.0	0.0	0.0	0.0
253							0.0	0.0	0.0	0.0	0.0	0.0	0.0
254							0.0	0.0	0.0	0.0	0.0	0.0	0.0
255							0.0	0.0	0.0	0.0	0.0	0.0	0.0
256							0.0	0.0	0.0	0.0	0.0	0.0	0.0
257							0.0	0.0	0.0	0.0	0.0	0.0	0.0
258							0.0	0.0	0.0	0.0	0.0	0.0	0.0
259							0.0	0.0	0.0	0.0	0.0	0.0	0.0
260							0.0	0.0	0.0	0.0	0.0	0.0	0.0
261							0.0	0.0	0.0	0.0	0.0	0.0	0.0
262							0.0	0.0	0.0	0.0	0.0	0.0	0.0



Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
263							0.0	0.0	0.0	0.0	0.0	0.0	0.0
264							0.0	0.0	0.0	0.0	0.0	0.0	0.0
267							0.0	0.0	0.0	0.0	0.0	0.0	0.0
268							0.0	0.0	0.0	0.0	0.0	0.0	0.0
269							0.0	0.0	0.0	0.0	0.0	0.0	0.0
270							0.0	0.0	0.0	0.0	0.0	0.0	0.0
271							0.0	0.0	0.0	0.0	0.0	0.0	0.0
272							0.0	0.0	0.0	0.0	0.0	0.0	0.0
273							0.0	0.0	0.0	0.0	0.0	0.0	0.0
274							0.0	0.0	0.0	0.0	0.0	0.0	0.0
275							0.0	0.0	0.0	0.0	0.0	0.0	0.0
276							0.0	0.0	0.0	0.0	0.0	0.0	0.0
277							0.0	0.0	0.0	0.0	0.0	0.0	0.0
278							0.0	0.0	0.0	0.0	0.0	0.0	0.0
279							0.0	0.0	0.0	0.0	0.0	0.0	0.0
280							0.0	0.0	0.0	0.0	0.0	0.0	0.0
283							0.0	0.0	0.0	0.0	0.0	0.0	0.0
284							0.0	0.0	0.0	0.0	0.0	0.0	0.0
285							0.0	0.0	0.0	0.0	0.0	0.0	0.0
286							0.0	0.0	0.0	0.0	0.0	0.0	0.0
287							0.0	0.0	0.0	0.0	0.0	0.0	0.0
288							0.0	0.0	0.0	0.0	0.0	0.0	0.0
289							0.0	0.0	0.0	0.0	0.0	0.0	0.0
290							0.0	0.0	0.0	0.0	0.0	0.0	0.0
291							0.0	0.0	0.0	0.0	0.0	0.0	0.0
292							0.0	0.0	0.0	0.0	0.0	0.0	0.0
293							0.0	0.0	0.0	0.0	0.0	0.0	0.0
294							0.0	0.0	0.0	0.0	0.0	0.0	0.0
295							0.0	0.0	0.0	0.0	0.0	0.0	0.0
296							0.0	0.0	0.0	0.0	0.0	0.0	0.0
299							0.0	0.0	0.0	0.0	0.0	0.0	0.0
300							0.0	0.0	0.0	0.0	0.0	0.0	0.0
301							0.0	0.0	0.0	0.0	0.0	0.0	0.0
302							0.0	0.0	0.0	0.0	0.0	0.0	0.0
303							0.0	0.0	0.0	0.0	0.0	0.0	0.0
304							0.0	0.0	0.0	0.0	0.0	0.0	0.0
305							0.0	0.0	0.0	0.0	0.0	0.0	0.0
306							0.0	0.0	0.0	0.0	0.0	0.0	0.0
307							0.0	0.0	0.0	0.0	0.0	0.0	0.0
308							0.0	0.0	0.0	0.0	0.0	0.0	0.0
309							0.0	0.0	0.0	0.0	0.0	0.0	0.0
310							0.0	0.0	0.0	0.0	0.0	0.0	0.0
311							0.0	0.0	0.0	0.0	0.0	0.0	0.0
312							0.0	0.0	0.0	0.0	0.0	0.0	0.0
315							0.0	0.0	0.0	0.0	0.0	0.0	0.0
316							0.0	0.0	0.0	0.0	0.0	0.0	0.0
317							0.0	0.0	0.0	0.0	0.0	0.0	0.0
318							0.0	0.0	0.0	0.0	0.0	0.0	0.0
319							0.0	0.0	0.0	0.0	0.0	0.0	0.0
320							0.0	0.0	0.0	0.0	0.0	0.0	0.0
321							0.0	0.0	0.0	0.0	0.0	0.0	0.0
322							0.0	0.0	0.0	0.0	0.0	0.0	0.0
323							0.0	0.0	0.0	0.0	0.0	0.0	0.0
324							0.0	0.0	0.0	0.0	0.0	0.0	0.0
325							0.0	0.0	0.0	0.0	0.0	0.0	0.0
326							0.0	0.0	0.0	0.0	0.0	0.0	0.0
327							0.0	0.0	0.0	0.0	0.0	0.0	0.0
328							0.0	0.0	0.0	0.0	0.0	0.0	0.0
331							0.0	0.0	0.0	0.0	0.0	0.0	0.0
332							0.0	0.0	0.0	0.0	0.0	0.0	0.0
333							0.0	0.0	0.0	0.0	0.0	0.0	0.0
334							0.0	0.0	0.0	0.0	0.0	0.0	0.0
335							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
336							0.0	0.0	0.0	0.0	0.0	0.0	0.0
337							0.0	0.0	0.0	0.0	0.0	0.0	0.0
338							0.0	0.0	0.0	0.0	0.0	0.0	0.0
339							0.0	0.0	0.0	0.0	0.0	0.0	0.0
340							0.0	0.0	0.0	0.0	0.0	0.0	0.0
341							0.0	0.0	0.0	0.0	0.0	0.0	0.0
342							0.0	0.0	0.0	0.0	0.0	0.0	0.0
343							0.0	0.0	0.0	0.0	0.0	0.0	0.0
344							0.0	0.0	0.0	0.0	0.0	0.0	0.0
347							0.0	0.0	0.0	0.0	0.0	0.0	0.0
348							0.0	0.0	0.0	0.0	0.0	0.0	0.0
349							0.0	0.0	0.0	0.0	0.0	0.0	0.0
350							0.0	0.0	0.0	0.0	0.0	0.0	0.0
351							0.0	0.0	0.0	0.0	0.0	0.0	0.0
352							0.0	0.0	0.0	0.0	0.0	0.0	0.0
353							0.0	0.0	0.0	0.0	0.0	0.0	0.0
354							0.0	0.0	0.0	0.0	0.0	0.0	0.0
355							0.0	0.0	0.0	0.0	0.0	0.0	0.0
356							0.0	0.0	0.0	0.0	0.0	0.0	0.0
357							0.0	0.0	0.0	0.0	0.0	0.0	0.0
358							0.0	0.0	0.0	0.0	0.0	0.0	0.0
359							0.0	0.0	0.0	0.0	0.0	0.0	0.0
360							0.0	0.0	0.0	0.0	0.0	0.0	0.0
363							0.0	0.0	0.0	0.0	0.0	0.0	0.0
364							0.0	0.0	0.0	0.0	0.0	0.0	0.0
365							0.0	0.0	0.0	0.0	0.0	0.0	0.0
366							0.0	0.0	0.0	0.0	0.0	0.0	0.0
367							0.0	0.0	0.0	0.0	0.0	0.0	0.0
368							0.0	0.0	0.0	0.0	0.0	0.0	0.0
369							0.0	0.0	0.0	0.0	0.0	0.0	0.0
370							0.0	0.0	0.0	0.0	0.0	0.0	0.0
371							0.0	0.0	0.0	0.0	0.0	0.0	0.0
372							0.0	0.0	0.0	0.0	0.0	0.0	0.0
373							0.0	0.0	0.0	0.0	0.0	0.0	0.0
374							0.0	0.0	0.0	0.0	0.0	0.0	0.0
375							0.0	0.0	0.0	0.0	0.0	0.0	0.0
376							0.0	0.0	0.0	0.0	0.0	0.0	0.0
379							0.0	0.0	0.0	0.0	0.0	0.0	0.0
380							0.0	0.0	0.0	0.0	0.0	0.0	0.0
381							0.0	0.0	0.0	0.0	0.0	0.0	0.0
382							0.0	0.0	0.0	0.0	0.0	0.0	0.0
383							0.0	0.0	0.0	0.0	0.0	0.0	0.0
384							0.0	0.0	0.0	0.0	0.0	0.0	0.0
385							0.0	0.0	0.0	0.0	0.0	0.0	0.0
386							0.0	0.0	0.0	0.0	0.0	0.0	0.0
387							0.0	0.0	0.0	0.0	0.0	0.0	0.0
388							0.0	0.0	0.0	0.0	0.0	0.0	0.0
389							0.0	0.0	0.0	0.0	0.0	0.0	0.0
390							0.0	0.0	0.0	0.0	0.0	0.0	0.0
391							0.0	0.0	0.0	0.0	0.0	0.0	0.0
392							0.0	0.0	0.0	0.0	0.0	0.0	0.0
395							0.0	0.0	0.0	0.0	0.0	0.0	0.0
396							0.0	0.0	0.0	0.0	0.0	0.0	0.0
397							0.0	0.0	0.0	0.0	0.0	0.0	0.0
398							0.0	0.0	0.0	0.0	0.0	0.0	0.0
399							0.0	0.0	0.0	0.0	0.0	0.0	0.0
400							0.0	0.0	0.0	0.0	0.0	0.0	0.0
401							0.0	0.0	0.0	0.0	0.0	0.0	0.0
402							0.0	0.0	0.0	0.0	0.0	0.0	0.0
403							0.0	0.0	0.0	0.0	0.0	0.0	0.0
404							0.0	0.0	0.0	0.0	0.0	0.0	0.0
405							0.0	0.0	0.0	0.0	0.0	0.0	0.0
406							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
407							0.0	0.0	0.0	0.0	0.0	0.0	0.0
408							0.0	0.0	0.0	0.0	0.0	0.0	0.0
411							0.0	0.0	0.0	0.0	0.0	0.0	0.0
412							0.0	0.0	0.0	0.0	0.0	0.0	0.0
413							0.0	0.0	0.0	0.0	0.0	0.0	0.0
414							0.0	0.0	0.0	0.0	0.0	0.0	0.0
415							0.0	0.0	0.0	0.0	0.0	0.0	0.0
416							0.0	0.0	0.0	0.0	0.0	0.0	0.0
417							0.0	0.0	0.0	0.0	0.0	0.0	0.0
418							0.0	0.0	0.0	0.0	0.0	0.0	0.0
419							0.0	0.0	0.0	0.0	0.0	0.0	0.0
420							0.0	0.0	0.0	0.0	0.0	0.0	0.0
421							0.0	0.0	0.0	0.0	0.0	0.0	0.0
422							0.0	0.0	0.0	0.0	0.0	0.0	0.0
423							0.0	0.0	0.0	0.0	0.0	0.0	0.0
424							0.0	0.0	0.0	0.0	0.0	0.0	0.0
427							0.0	0.0	0.0	0.0	0.0	0.0	0.0
428							0.0	0.0	0.0	0.0	0.0	0.0	0.0
429							0.0	0.0	0.0	0.0	0.0	0.0	0.0
430							0.0	0.0	0.0	0.0	0.0	0.0	0.0
431							0.0	0.0	0.0	0.0	0.0	0.0	0.0
432							0.0	0.0	0.0	0.0	0.0	0.0	0.0
433							0.0	0.0	0.0	0.0	0.0	0.0	0.0
434							0.0	0.0	0.0	0.0	0.0	0.0	0.0
435							0.0	0.0	0.0	0.0	0.0	0.0	0.0
436							0.0	0.0	0.0	0.0	0.0	0.0	0.0
437							0.0	0.0	0.0	0.0	0.0	0.0	0.0
438							0.0	0.0	0.0	0.0	0.0	0.0	0.0
439							0.0	0.0	0.0	0.0	0.0	0.0	0.0
440							0.0	0.0	0.0	0.0	0.0	0.0	0.0
443							0.0	0.0	0.0	0.0	0.0	0.0	0.0
444							0.0	0.0	0.0	0.0	0.0	0.0	0.0
445							0.0	0.0	0.0	0.0	0.0	0.0	0.0
446							0.0	0.0	0.0	0.0	0.0	0.0	0.0
447							0.0	0.0	0.0	0.0	0.0	0.0	0.0
448							0.0	0.0	0.0	0.0	0.0	0.0	0.0
449							0.0	0.0	0.0	0.0	0.0	0.0	0.0
450							0.0	0.0	0.0	0.0	0.0	0.0	0.0
451							0.0	0.0	0.0	0.0	0.0	0.0	0.0
452							0.0	0.0	0.0	0.0	0.0	0.0	0.0
453							0.0	0.0	0.0	0.0	0.0	0.0	0.0
454							0.0	0.0	0.0	0.0	0.0	0.0	0.0
455							0.0	0.0	0.0	0.0	0.0	0.0	0.0
456							0.0	0.0	0.0	0.0	0.0	0.0	0.0
459							0.0	0.0	0.0	0.0	0.0	0.0	0.0
460							0.0	0.0	0.0	0.0	0.0	0.0	0.0
461							0.0	0.0	0.0	0.0	0.0	0.0	0.0
462							0.0	0.0	0.0	0.0	0.0	0.0	0.0
463							0.0	0.0	0.0	0.0	0.0	0.0	0.0
464							0.0	0.0	0.0	0.0	0.0	0.0	0.0
465							0.0	0.0	0.0	0.0	0.0	0.0	0.0
466							0.0	0.0	0.0	0.0	0.0	0.0	0.0
467							0.0	0.0	0.0	0.0	0.0	0.0	0.0
468							0.0	0.0	0.0	0.0	0.0	0.0	0.0
469							0.0	0.0	0.0	0.0	0.0	0.0	0.0
470							0.0	0.0	0.0	0.0	0.0	0.0	0.0
471							0.0	0.0	0.0	0.0	0.0	0.0	0.0
472							0.0	0.0	0.0	0.0	0.0	0.0	0.0
475							0.0	0.0	0.0	0.0	0.0	0.0	0.0
476							0.0	0.0	0.0	0.0	0.0	0.0	0.0
477							0.0	0.0	0.0	0.0	0.0	0.0	0.0
478							0.0	0.0	0.0	0.0	0.0	0.0	0.0
479							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
480							0.0	0.0	0.0	0.0	0.0	0.0	0.0
481							0.0	0.0	0.0	0.0	0.0	0.0	0.0
482							0.0	0.0	0.0	0.0	0.0	0.0	0.0
483							0.0	0.0	0.0	0.0	0.0	0.0	0.0
484							0.0	0.0	0.0	0.0	0.0	0.0	0.0
485							0.0	0.0	0.0	0.0	0.0	0.0	0.0
486							0.0	0.0	0.0	0.0	0.0	0.0	0.0
487							0.0	0.0	0.0	0.0	0.0	0.0	0.0
488							0.0	0.0	0.0	0.0	0.0	0.0	0.0
491							0.0	0.0	0.0	0.0	0.0	0.0	0.0
492							0.0	0.0	0.0	0.0	0.0	0.0	0.0
493							0.0	0.0	0.0	0.0	0.0	0.0	0.0
494							0.0	0.0	0.0	0.0	0.0	0.0	0.0
495							0.0	0.0	0.0	0.0	0.0	0.0	0.0
496							0.0	0.0	0.0	0.0	0.0	0.0	0.0
497							0.0	0.0	0.0	0.0	0.0	0.0	0.0
498							0.0	0.0	0.0	0.0	0.0	0.0	0.0
499							0.0	0.0	0.0	0.0	0.0	0.0	0.0
500							0.0	0.0	0.0	0.0	0.0	0.0	0.0
501							0.0	0.0	0.0	0.0	0.0	0.0	0.0
502							0.0	0.0	0.0	0.0	0.0	0.0	0.0
503							0.0	0.0	0.0	0.0	0.0	0.0	0.0
504							0.0	0.0	0.0	0.0	0.0	0.0	0.0
507							0.0	0.0	0.0	0.0	0.0	0.0	0.0
508							0.0	0.0	0.0	0.0	0.0	0.0	0.0
509							0.0	0.0	0.0	0.0	0.0	0.0	0.0
510							0.0	0.0	0.0	0.0	0.0	0.0	0.0
511							0.0	0.0	0.0	0.0	0.0	0.0	0.0
512							0.0	0.0	0.0	0.0	0.0	0.0	0.0
513							0.0	0.0	0.0	0.0	0.0	0.0	0.0
514							0.0	0.0	0.0	0.0	0.0	0.0	0.0
515							0.0	0.0	0.0	0.0	0.0	0.0	0.0
516							0.0	0.0	0.0	0.0	0.0	0.0	0.0
517							0.0	0.0	0.0	0.0	0.0	0.0	0.0
518							0.0	0.0	0.0	0.0	0.0	0.0	0.0
519							0.0	0.0	0.0	0.0	0.0	0.0	0.0
520							0.0	0.0	0.0	0.0	0.0	0.0	0.0
523							0.0	0.0	0.0	0.0	0.0	0.0	0.0
524							0.0	0.0	0.0	0.0	0.0	0.0	0.0
525							0.0	0.0	0.0	0.0	0.0	0.0	0.0
526							0.0	0.0	0.0	0.0	0.0	0.0	0.0
527							0.0	0.0	0.0	0.0	0.0	0.0	0.0
528							0.0	0.0	0.0	0.0	0.0	0.0	0.0
529							0.0	0.0	0.0	0.0	0.0	0.0	0.0
530							0.0	0.0	0.0	0.0	0.0	0.0	0.0
531							0.0	0.0	0.0	0.0	0.0	0.0	0.0
532							0.0	0.0	0.0	0.0	0.0	0.0	0.0
533							0.0	0.0	0.0	0.0	0.0	0.0	0.0
534							0.0	0.0	0.0	0.0	0.0	0.0	0.0
535							0.0	0.0	0.0	0.0	0.0	0.0	0.0
536							0.0	0.0	0.0	0.0	0.0	0.0	0.0
539							0.0	0.0	0.0	0.0	0.0	0.0	0.0
540							0.0	0.0	0.0	0.0	0.0	0.0	0.0
541							0.0	0.0	0.0	0.0	0.0	0.0	0.0
542							0.0	0.0	0.0	0.0	0.0	0.0	0.0
543							0.0	0.0	0.0	0.0	0.0	0.0	0.0
544							0.0	0.0	0.0	0.0	0.0	0.0	0.0
545							0.0	0.0	0.0	0.0	0.0	0.0	0.0
546							0.0	0.0	0.0	0.0	0.0	0.0	0.0
547							0.0	0.0	0.0	0.0	0.0	0.0	0.0
548							0.0	0.0	0.0	0.0	0.0	0.0	0.0
549							0.0	0.0	0.0	0.0	0.0	0.0	0.0
550							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
551							0.0	0.0	0.0	0.0	0.0	0.0	0.0
552							0.0	0.0	0.0	0.0	0.0	0.0	0.0
555							0.0	0.0	0.0	0.0	0.0	0.0	0.0
556							0.0	0.0	0.0	0.0	0.0	0.0	0.0
557							0.0	0.0	0.0	0.0	0.0	0.0	0.0
558							0.0	0.0	0.0	0.0	0.0	0.0	0.0
559							0.0	0.0	0.0	0.0	0.0	0.0	0.0
560							0.0	0.0	0.0	0.0	0.0	0.0	0.0
561							0.0	0.0	0.0	0.0	0.0	0.0	0.0
562							0.0	0.0	0.0	0.0	0.0	0.0	0.0
563							0.0	0.0	0.0	0.0	0.0	0.0	0.0
564							0.0	0.0	0.0	0.0	0.0	0.0	0.0
565							0.0	0.0	0.0	0.0	0.0	0.0	0.0
566							0.0	0.0	0.0	0.0	0.0	0.0	0.0
567							0.0	0.0	0.0	0.0	0.0	0.0	0.0
568							0.0	0.0	0.0	0.0	0.0	0.0	0.0
571							0.0	0.0	0.0	0.0	0.0	0.0	0.0
572							0.0	0.0	0.0	0.0	0.0	0.0	0.0
573							0.0	0.0	0.0	0.0	0.0	0.0	0.0
574							0.0	0.0	0.0	0.0	0.0	0.0	0.0
575							0.0	0.0	0.0	0.0	0.0	0.0	0.0
576							0.0	0.0	0.0	0.0	0.0	0.0	0.0
577							0.0	0.0	0.0	0.0	0.0	0.0	0.0
578							0.0	0.0	0.0	0.0	0.0	0.0	0.0
579							0.0	0.0	0.0	0.0	0.0	0.0	0.0
580							0.0	0.0	0.0	0.0	0.0	0.0	0.0
581							0.0	0.0	0.0	0.0	0.0	0.0	0.0
582							0.0	0.0	0.0	0.0	0.0	0.0	0.0
583							0.0	0.0	0.0	0.0	0.0	0.0	0.0
584							0.0	0.0	0.0	0.0	0.0	0.0	0.0
587							0.0	0.0	0.0	0.0	0.0	0.0	0.0
588							0.0	0.0	0.0	0.0	0.0	0.0	0.0
589							0.0	0.0	0.0	0.0	0.0	0.0	0.0
590							0.0	0.0	0.0	0.0	0.0	0.0	0.0
591							0.0	0.0	0.0	0.0	0.0	0.0	0.0
592							0.0	0.0	0.0	0.0	0.0	0.0	0.0
593							0.0	0.0	0.0	0.0	0.0	0.0	0.0
594							0.0	0.0	0.0	0.0	0.0	0.0	0.0
595							0.0	0.0	0.0	0.0	0.0	0.0	0.0
596							0.0	0.0	0.0	0.0	0.0	0.0	0.0
597							0.0	0.0	0.0	0.0	0.0	0.0	0.0
598							0.0	0.0	0.0	0.0	0.0	0.0	0.0
599							0.0	0.0	0.0	0.0	0.0	0.0	0.0
600							0.0	0.0	0.0	0.0	0.0	0.0	0.0
603							0.0	0.0	0.0	0.0	0.0	0.0	0.0
604							0.0	0.0	0.0	0.0	0.0	0.0	0.0
605							0.0	0.0	0.0	0.0	0.0	0.0	0.0
606							0.0	0.0	0.0	0.0	0.0	0.0	0.0
607							0.0	0.0	0.0	0.0	0.0	0.0	0.0
608							0.0	0.0	0.0	0.0	0.0	0.0	0.0
609							0.0	0.0	0.0	0.0	0.0	0.0	0.0
610							0.0	0.0	0.0	0.0	0.0	0.0	0.0
611							0.0	0.0	0.0	0.0	0.0	0.0	0.0
612							0.0	0.0	0.0	0.0	0.0	0.0	0.0
613							0.0	0.0	0.0	0.0	0.0	0.0	0.0
614							0.0	0.0	0.0	0.0	0.0	0.0	0.0
615							0.0	0.0	0.0	0.0	0.0	0.0	0.0
616							0.0	0.0	0.0	0.0	0.0	0.0	0.0
619							0.0	0.0	0.0	0.0	0.0	0.0	0.0
620							0.0	0.0	0.0	0.0	0.0	0.0	0.0
621							0.0	0.0	0.0	0.0	0.0	0.0	0.0
622							0.0	0.0	0.0	0.0	0.0	0.0	0.0
623							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
624							0.0	0.0	0.0	0.0	0.0	0.0	0.0
625							0.0	0.0	0.0	0.0	0.0	0.0	0.0
626							0.0	0.0	0.0	0.0	0.0	0.0	0.0
627							0.0	0.0	0.0	0.0	0.0	0.0	0.0
628							0.0	0.0	0.0	0.0	0.0	0.0	0.0
629							0.0	0.0	0.0	0.0	0.0	0.0	0.0
630							0.0	0.0	0.0	0.0	0.0	0.0	0.0
631							0.0	0.0	0.0	0.0	0.0	0.0	0.0
632							0.0	0.0	0.0	0.0	0.0	0.0	0.0
635							0.0	0.0	0.0	0.0	0.0	0.0	0.0
636							0.0	0.0	0.0	0.0	0.0	0.0	0.0
637							0.0	0.0	0.0	0.0	0.0	0.0	0.0
638							0.0	0.0	0.0	0.0	0.0	0.0	0.0
639							0.0	0.0	0.0	0.0	0.0	0.0	0.0
640							0.0	0.0	0.0	0.0	0.0	0.0	0.0
641							0.0	0.0	0.0	0.0	0.0	0.0	0.0
642							0.0	0.0	0.0	0.0	0.0	0.0	0.0
643							0.0	0.0	0.0	0.0	0.0	0.0	0.0
644							0.0	0.0	0.0	0.0	0.0	0.0	0.0
645							0.0	0.0	0.0	0.0	0.0	0.0	0.0
646							0.0	0.0	0.0	0.0	0.0	0.0	0.0
647							0.0	0.0	0.0	0.0	0.0	0.0	0.0
648							0.0	0.0	0.0	0.0	0.0	0.0	0.0
651							0.0	0.0	0.0	0.0	0.0	0.0	0.0
652							0.0	0.0	0.0	0.0	0.0	0.0	0.0
653							0.0	0.0	0.0	0.0	0.0	0.0	0.0
654							0.0	0.0	0.0	0.0	0.0	0.0	0.0
655							0.0	0.0	0.0	0.0	0.0	0.0	0.0
656							0.0	0.0	0.0	0.0	0.0	0.0	0.0
657							0.0	0.0	0.0	0.0	0.0	0.0	0.0
658							0.0	0.0	0.0	0.0	0.0	0.0	0.0
659							0.0	0.0	0.0	0.0	0.0	0.0	0.0
660							0.0	0.0	0.0	0.0	0.0	0.0	0.0
661							0.0	0.0	0.0	0.0	0.0	0.0	0.0
662							0.0	0.0	0.0	0.0	0.0	0.0	0.0
663							0.0	0.0	0.0	0.0	0.0	0.0	0.0
664							0.0	0.0	0.0	0.0	0.0	0.0	0.0
667							0.0	0.0	0.0	0.0	0.0	0.0	0.0
668							0.0	0.0	0.0	0.0	0.0	0.0	0.0
669							0.0	0.0	0.0	0.0	0.0	0.0	0.0
670							0.0	0.0	0.0	0.0	0.0	0.0	0.0
671							0.0	0.0	0.0	0.0	0.0	0.0	0.0
672							0.0	0.0	0.0	0.0	0.0	0.0	0.0
673							0.0	0.0	0.0	0.0	0.0	0.0	0.0
674							0.0	0.0	0.0	0.0	0.0	0.0	0.0
675							0.0	0.0	0.0	0.0	0.0	0.0	0.0
676							0.0	0.0	0.0	0.0	0.0	0.0	0.0
677							0.0	0.0	0.0	0.0	0.0	0.0	0.0
678							0.0	0.0	0.0	0.0	0.0	0.0	0.0
679							0.0	0.0	0.0	0.0	0.0	0.0	0.0
680							0.0	0.0	0.0	0.0	0.0	0.0	0.0
683							0.0	0.0	0.0	0.0	0.0	0.0	0.0
684							0.0	0.0	0.0	0.0	0.0	0.0	0.0
685							0.0	0.0	0.0	0.0	0.0	0.0	0.0
686							0.0	0.0	0.0	0.0	0.0	0.0	0.0
687							0.0	0.0	0.0	0.0	0.0	0.0	0.0
688							0.0	0.0	0.0	0.0	0.0	0.0	0.0
689							0.0	0.0	0.0	0.0	0.0	0.0	0.0
690							0.0	0.0	0.0	0.0	0.0	0.0	0.0
691							0.0	0.0	0.0	0.0	0.0	0.0	0.0
692							0.0	0.0	0.0	0.0	0.0	0.0	0.0
693							0.0	0.0	0.0	0.0	0.0	0.0	0.0
694							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
695							0.0	0.0	0.0	0.0	0.0	0.0	0.0
696							0.0	0.0	0.0	0.0	0.0	0.0	0.0
699							0.0	0.0	0.0	0.0	0.0	0.0	0.0
700							0.0	0.0	0.0	0.0	0.0	0.0	0.0
701							0.0	0.0	0.0	0.0	0.0	0.0	0.0
702							0.0	0.0	0.0	0.0	0.0	0.0	0.0
703							0.0	0.0	0.0	0.0	0.0	0.0	0.0
704							0.0	0.0	0.0	0.0	0.0	0.0	0.0
705							0.0	0.0	0.0	0.0	0.0	0.0	0.0
706							0.0	0.0	0.0	0.0	0.0	0.0	0.0
707							0.0	0.0	0.0	0.0	0.0	0.0	0.0
708							0.0	0.0	0.0	0.0	0.0	0.0	0.0
709							0.0	0.0	0.0	0.0	0.0	0.0	0.0
710							0.0	0.0	0.0	0.0	0.0	0.0	0.0
711							0.0	0.0	0.0	0.0	0.0	0.0	0.0
712							0.0	0.0	0.0	0.0	0.0	0.0	0.0
715							0.0	0.0	0.0	0.0	0.0	0.0	0.0
716							0.0	0.0	0.0	0.0	0.0	0.0	0.0
717							0.0	0.0	0.0	0.0	0.0	0.0	0.0
718							0.0	0.0	0.0	0.0	0.0	0.0	0.0
719							0.0	0.0	0.0	0.0	0.0	0.0	0.0
720							0.0	0.0	0.0	0.0	0.0	0.0	0.0
721							0.0	0.0	0.0	0.0	0.0	0.0	0.0
722							0.0	0.0	0.0	0.0	0.0	0.0	0.0
723							0.0	0.0	0.0	0.0	0.0	0.0	0.0
724							0.0	0.0	0.0	0.0	0.0	0.0	0.0
725							0.0	0.0	0.0	0.0	0.0	0.0	0.0
726							0.0	0.0	0.0	0.0	0.0	0.0	0.0
727							0.0	0.0	0.0	0.0	0.0	0.0	0.0
728							0.0	0.0	0.0	0.0	0.0	0.0	0.0
731							0.0	0.0	0.0	0.0	0.0	0.0	0.0
732							0.0	0.0	0.0	0.0	0.0	0.0	0.0
733							0.0	0.0	0.0	0.0	0.0	0.0	0.0
734							0.0	0.0	0.0	0.0	0.0	0.0	0.0
735							0.0	0.0	0.0	0.0	0.0	0.0	0.0
736							0.0	0.0	0.0	0.0	0.0	0.0	0.0
737							0.0	0.0	0.0	0.0	0.0	0.0	0.0
738							0.0	0.0	0.0	0.0	0.0	0.0	0.0
739							0.0	0.0	0.0	0.0	0.0	0.0	0.0
740							0.0	0.0	0.0	0.0	0.0	0.0	0.0
741							0.0	0.0	0.0	0.0	0.0	0.0	0.0
742							0.0	0.0	0.0	0.0	0.0	0.0	0.0
743							0.0	0.0	0.0	0.0	0.0	0.0	0.0
744							0.0	0.0	0.0	0.0	0.0	0.0	0.0
747							0.0	0.0	0.0	0.0	0.0	0.0	0.0
748							0.0	0.0	0.0	0.0	0.0	0.0	0.0
749							0.0	0.0	0.0	0.0	0.0	0.0	0.0
750							0.0	0.0	0.0	0.0	0.0	0.0	0.0
751							0.0	0.0	0.0	0.0	0.0	0.0	0.0
752							0.0	0.0	0.0	0.0	0.0	0.0	0.0
753							0.0	0.0	0.0	0.0	0.0	0.0	0.0
754							0.0	0.0	0.0	0.0	0.0	0.0	0.0
755							0.0	0.0	0.0	0.0	0.0	0.0	0.0
756							0.0	0.0	0.0	0.0	0.0	0.0	0.0
757							0.0	0.0	0.0	0.0	0.0	0.0	0.0
758							0.0	0.0	0.0	0.0	0.0	0.0	0.0
759							0.0	0.0	0.0	0.0	0.0	0.0	0.0
760							0.0	0.0	0.0	0.0	0.0	0.0	0.0
763							0.0	0.0	0.0	0.0	0.0	0.0	0.0
764							0.0	0.0	0.0	0.0	0.0	0.0	0.0
765							0.0	0.0	0.0	0.0	0.0	0.0	0.0
766							0.0	0.0	0.0	0.0	0.0	0.0	0.0
767							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
768							0.0	0.0	0.0	0.0	0.0	0.0	0.0
769							0.0	0.0	0.0	0.0	0.0	0.0	0.0
770							0.0	0.0	0.0	0.0	0.0	0.0	0.0
771							0.0	0.0	0.0	0.0	0.0	0.0	0.0
772							0.0	0.0	0.0	0.0	0.0	0.0	0.0
773							0.0	0.0	0.0	0.0	0.0	0.0	0.0
774							0.0	0.0	0.0	0.0	0.0	0.0	0.0
775							0.0	0.0	0.0	0.0	0.0	0.0	0.0
776							0.0	0.0	0.0	0.0	0.0	0.0	0.0
779							0.0	0.0	0.0	0.0	0.0	0.0	0.0
780							0.0	0.0	0.0	0.0	0.0	0.0	0.0
781							0.0	0.0	0.0	0.0	0.0	0.0	0.0
782							0.0	0.0	0.0	0.0	0.0	0.0	0.0
783							0.0	0.0	0.0	0.0	0.0	0.0	0.0
784							0.0	0.0	0.0	0.0	0.0	0.0	0.0
785							0.0	0.0	0.0	0.0	0.0	0.0	0.0
786							0.0	0.0	0.0	0.0	0.0	0.0	0.0
787							0.0	0.0	0.0	0.0	0.0	0.0	0.0
788							0.0	0.0	0.0	0.0	0.0	0.0	0.0
789							0.0	0.0	0.0	0.0	0.0	0.0	0.0
790							0.0	0.0	0.0	0.0	0.0	0.0	0.0
791							0.0	0.0	0.0	0.0	0.0	0.0	0.0
792							0.0	0.0	0.0	0.0	0.0	0.0	0.0
795							0.0	0.0	0.0	0.0	0.0	0.0	0.0
796							0.0	0.0	0.0	0.0	0.0	0.0	0.0
797							0.0	0.0	0.0	0.0	0.0	0.0	0.0
798							0.0	0.0	0.0	0.0	0.0	0.0	0.0
799							0.0	0.0	0.0	0.0	0.0	0.0	0.0
800							0.0	0.0	0.0	0.0	0.0	0.0	0.0
801							0.0	0.0	0.0	0.0	0.0	0.0	0.0
802							0.0	0.0	0.0	0.0	0.0	0.0	0.0
803							0.0	0.0	0.0	0.0	0.0	0.0	0.0
804							0.0	0.0	0.0	0.0	0.0	0.0	0.0
805							0.0	0.0	0.0	0.0	0.0	0.0	0.0
806							0.0	0.0	0.0	0.0	0.0	0.0	0.0
807							0.0	0.0	0.0	0.0	0.0	0.0	0.0
808							0.0	0.0	0.0	0.0	0.0	0.0	0.0
811							0.0	0.0	0.0	0.0	0.0	0.0	0.0
812							0.0	0.0	0.0	0.0	0.0	0.0	0.0
813							0.0	0.0	0.0	0.0	0.0	0.0	0.0
814							0.0	0.0	0.0	0.0	0.0	0.0	0.0
815							0.0	0.0	0.0	0.0	0.0	0.0	0.0
816							0.0	0.0	0.0	0.0	0.0	0.0	0.0
817							0.0	0.0	0.0	0.0	0.0	0.0	0.0
818							0.0	0.0	0.0	0.0	0.0	0.0	0.0
819							0.0	0.0	0.0	0.0	0.0	0.0	0.0
820							0.0	0.0	0.0	0.0	0.0	0.0	0.0
821							0.0	0.0	0.0	0.0	0.0	0.0	0.0
822							0.0	0.0	0.0	0.0	0.0	0.0	0.0
823							0.0	0.0	0.0	0.0	0.0	0.0	0.0
824							0.0	0.0	0.0	0.0	0.0	0.0	0.0
827							0.0	0.0	0.0	0.0	0.0	0.0	0.0
828							0.0	0.0	0.0	0.0	0.0	0.0	0.0
829							0.0	0.0	0.0	0.0	0.0	0.0	0.0
830							0.0	0.0	0.0	0.0	0.0	0.0	0.0
831							0.0	0.0	0.0	0.0	0.0	0.0	0.0
832							0.0	0.0	0.0	0.0	0.0	0.0	0.0
833							0.0	0.0	0.0	0.0	0.0	0.0	0.0
834							0.0	0.0	0.0	0.0	0.0	0.0	0.0
835							0.0	0.0	0.0	0.0	0.0	0.0	0.0
836							0.0	0.0	0.0	0.0	0.0	0.0	0.0
837							0.0	0.0	0.0	0.0	0.0	0.0	0.0
838							0.0	0.0	0.0	0.0	0.0	0.0	0.0



Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
839							0.0	0.0	0.0	0.0	0.0	0.0	0.0
840							0.0	0.0	0.0	0.0	0.0	0.0	0.0
843							0.0	0.0	0.0	0.0	0.0	0.0	0.0
844							0.0	0.0	0.0	0.0	0.0	0.0	0.0
845							0.0	0.0	0.0	0.0	0.0	0.0	0.0
846							0.0	0.0	0.0	0.0	0.0	0.0	0.0
847							0.0	0.0	0.0	0.0	0.0	0.0	0.0
848							0.0	0.0	0.0	0.0	0.0	0.0	0.0
849							0.0	0.0	0.0	0.0	0.0	0.0	0.0
850							0.0	0.0	0.0	0.0	0.0	0.0	0.0
851							0.0	0.0	0.0	0.0	0.0	0.0	0.0
852							0.0	0.0	0.0	0.0	0.0	0.0	0.0
853							0.0	0.0	0.0	0.0	0.0	0.0	0.0
854							0.0	0.0	0.0	0.0	0.0	0.0	0.0
855							0.0	0.0	0.0	0.0	0.0	0.0	0.0
856							0.0	0.0	0.0	0.0	0.0	0.0	0.0
859							0.0	0.0	0.0	0.0	0.0	0.0	0.0
860							0.0	0.0	0.0	0.0	0.0	0.0	0.0
861							0.0	0.0	0.0	0.0	0.0	0.0	0.0
862							0.0	0.0	0.0	0.0	0.0	0.0	0.0
863							0.0	0.0	0.0	0.0	0.0	0.0	0.0
864							0.0	0.0	0.0	0.0	0.0	0.0	0.0
865							0.0	0.0	0.0	0.0	0.0	0.0	0.0
866							0.0	0.0	0.0	0.0	0.0	0.0	0.0
867							0.0	0.0	0.0	0.0	0.0	0.0	0.0
868							0.0	0.0	0.0	0.0	0.0	0.0	0.0
869							0.0	0.0	0.0	0.0	0.0	0.0	0.0
870							0.0	0.0	0.0	0.0	0.0	0.0	0.0
871							0.0	0.0	0.0	0.0	0.0	0.0	0.0
874							0.0	0.0	0.0	0.0	0.0	0.0	0.0
875							0.0	0.0	0.0	0.0	0.0	0.0	0.0
876							0.0	0.0	0.0	0.0	0.0	0.0	0.0
877							0.0	0.0	0.0	0.0	0.0	0.0	0.0
878							0.0	0.0	0.0	0.0	0.0	0.0	0.0
879							0.0	0.0	0.0	0.0	0.0	0.0	0.0
880							0.0	0.0	0.0	0.0	0.0	0.0	0.0
881							0.0	0.0	0.0	0.0	0.0	0.0	0.0
882							0.0	0.0	0.0	0.0	0.0	0.0	0.0
883							0.0	0.0	0.0	0.0	0.0	0.0	0.0
884							0.0	0.0	0.0	0.0	0.0	0.0	0.0
885							0.0	0.0	0.0	0.0	0.0	0.0	0.0
886							0.0	0.0	0.0	0.0	0.0	0.0	0.0
887							0.0	0.0	0.0	0.0	0.0	0.0	0.0
888							0.0	0.0	0.0	0.0	0.0	0.0	0.0
889							0.0	0.0	0.0	0.0	0.0	0.0	0.0
890							0.0	0.0	0.0	0.0	0.0	0.0	0.0
891							0.0	0.0	0.0	0.0	0.0	0.0	0.0
892							0.0	0.0	0.0	0.0	0.0	0.0	0.0
893							0.0	0.0	0.0	0.0	0.0	0.0	0.0
894							0.0	0.0	0.0	0.0	0.0	0.0	0.0
895							0.0	0.0	0.0	0.0	0.0	0.0	0.0
896							0.0	0.0	0.0	0.0	0.0	0.0	0.0
897							0.0	0.0	0.0	0.0	0.0	0.0	0.0
898							0.0	0.0	0.0	0.0	0.0	0.0	0.0
899							0.0	0.0	0.0	0.0	0.0	0.0	0.0
900							0.0	0.0	0.0	0.0	0.0	0.0	0.0
901							0.0	0.0	0.0	0.0	0.0	0.0	0.0
902							0.0	0.0	0.0	0.0	0.0	0.0	0.0
903							0.0	0.0	0.0	0.0	0.0	0.0	0.0
904							0.0	0.0	0.0	0.0	0.0	0.0	0.0
905							0.0	0.0	0.0	0.0	0.0	0.0	0.0
906							0.0	0.0	0.0	0.0	0.0	0.0	0.0
907							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
908							0.0	0.0	0.0	0.0	0.0	0.0	0.0
909							0.0	0.0	0.0	0.0	0.0	0.0	0.0
910							0.0	0.0	0.0	0.0	0.0	0.0	0.0
911							0.0	0.0	0.0	0.0	0.0	0.0	0.0
912							0.0	0.0	0.0	0.0	0.0	0.0	0.0
913							0.0	0.0	0.0	0.0	0.0	0.0	0.0
914							0.0	0.0	0.0	0.0	0.0	0.0	0.0
915							0.0	0.0	0.0	0.0	0.0	0.0	0.0
916							0.0	0.0	0.0	0.0	0.0	0.0	0.0
917							0.0	0.0	0.0	0.0	0.0	0.0	0.0
918							0.0	0.0	0.0	0.0	0.0	0.0	0.0
919							0.0	0.0	0.0	0.0	0.0	0.0	0.0
920							0.0	0.0	0.0	0.0	0.0	0.0	0.0
921							0.0	0.0	0.0	0.0	0.0	0.0	0.0
922							0.0	0.0	0.0	0.0	0.0	0.0	0.0
923							0.0	0.0	0.0	0.0	0.0	0.0	0.0
924							0.0	0.0	0.0	0.0	0.0	0.0	0.0
925							0.0	0.0	0.0	0.0	0.0	0.0	0.0
926							0.0	0.0	0.0	0.0	0.0	0.0	0.0
927							0.0	0.0	0.0	0.0	0.0	0.0	0.0
928							0.0	0.0	0.0	0.0	0.0	0.0	0.0
929							0.0	0.0	0.0	0.0	0.0	0.0	0.0
930							0.0	0.0	0.0	0.0	0.0	0.0	0.0
931							0.0	0.0	0.0	0.0	0.0	0.0	0.0
932							0.0	0.0	0.0	0.0	0.0	0.0	0.0
933							0.0	0.0	0.0	0.0	0.0	0.0	0.0
934							0.0	0.0	0.0	0.0	0.0	0.0	0.0
935							0.0	0.0	0.0	0.0	0.0	0.0	0.0
936							0.0	0.0	0.0	0.0	0.0	0.0	0.0
937							0.0	0.0	0.0	0.0	0.0	0.0	0.0
938							0.0	0.0	0.0	0.0	0.0	0.0	0.0
939							0.0	0.0	0.0	0.0	0.0	0.0	0.0
940							0.0	0.0	0.0	0.0	0.0	0.0	0.0
941							0.0	0.0	0.0	0.0	0.0	0.0	0.0
942							0.0	0.0	0.0	0.0	0.0	0.0	0.0
943							0.0	0.0	0.0	0.0	0.0	0.0	0.0
944							0.0	0.0	0.0	0.0	0.0	0.0	0.0
945							0.0	0.0	0.0	0.0	0.0	0.0	0.0
946							0.0	0.0	0.0	0.0	0.0	0.0	0.0
947							0.0	0.0	0.0	0.0	0.0	0.0	0.0
948							0.0	0.0	0.0	0.0	0.0	0.0	0.0
949							0.0	0.0	0.0	0.0	0.0	0.0	0.0
950							0.0	0.0	0.0	0.0	0.0	0.0	0.0
951							0.0	0.0	0.0	0.0	0.0	0.0	0.0
952							0.0	0.0	0.0	0.0	0.0	0.0	0.0
953							0.0	0.0	0.0	0.0	0.0	0.0	0.0
954							0.0	0.0	0.0	0.0	0.0	0.0	0.0
955							0.0	0.0	0.0	0.0	0.0	0.0	0.0
956							0.0	0.0	0.0	0.0	0.0	0.0	0.0
957							0.0	0.0	0.0	0.0	0.0	0.0	0.0
958							0.0	0.0	0.0	0.0	0.0	0.0	0.0
959							0.0	0.0	0.0	0.0	0.0	0.0	0.0
960							0.0	0.0	0.0	0.0	0.0	0.0	0.0
961							0.0	0.0	0.0	0.0	0.0	0.0	0.0
962							0.0	0.0	0.0	0.0	0.0	0.0	0.0
963							0.0	0.0	0.0	0.0	0.0	0.0	0.0
964							0.0	0.0	0.0	0.0	0.0	0.0	0.0
965							0.0	0.0	0.0	0.0	0.0	0.0	0.0
966							0.0	0.0	0.0	0.0	0.0	0.0	0.0
967							0.0	0.0	0.0	0.0	0.0	0.0	0.0
968							0.0	0.0	0.0	0.0	0.0	0.0	0.0
969							0.0	0.0	0.0	0.0	0.0	0.0	0.0
970							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
971							0.0	0.0	0.0	0.0	0.0	0.0	0.0
972							0.0	0.0	0.0	0.0	0.0	0.0	0.0
973							0.0	0.0	0.0	0.0	0.0	0.0	0.0
974							0.0	0.0	0.0	0.0	0.0	0.0	0.0
975							0.0	0.0	0.0	0.0	0.0	0.0	0.0
976							0.0	0.0	0.0	0.0	0.0	0.0	0.0
977							0.0	0.0	0.0	0.0	0.0	0.0	0.0
978							0.0	0.0	0.0	0.0	0.0	0.0	0.0
979							0.0	0.0	0.0	0.0	0.0	0.0	0.0
980							0.0	0.0	0.0	0.0	0.0	0.0	0.0
981							0.0	0.0	0.0	0.0	0.0	0.0	0.0
982							0.0	0.0	0.0	0.0	0.0	0.0	0.0
983							0.0	0.0	0.0	0.0	0.0	0.0	0.0
984							0.0	0.0	0.0	0.0	0.0	0.0	0.0
985							0.0	0.0	0.0	0.0	0.0	0.0	0.0
986							0.0	0.0	0.0	0.0	0.0	0.0	0.0
987							0.0	0.0	0.0	0.0	0.0	0.0	0.0
988							0.0	0.0	0.0	0.0	0.0	0.0	0.0
989							0.0	0.0	0.0	0.0	0.0	0.0	0.0
990							0.0	0.0	0.0	0.0	0.0	0.0	0.0
991							0.0	0.0	0.0	0.0	0.0	0.0	0.0
992							0.0	0.0	0.0	0.0	0.0	0.0	0.0
993							0.0	0.0	0.0	0.0	0.0	0.0	0.0
994							0.0	0.0	0.0	0.0	0.0	0.0	0.0
995							0.0	0.0	0.0	0.0	0.0	0.0	0.0
996							0.0	0.0	0.0	0.0	0.0	0.0	0.0
997							0.0	0.0	0.0	0.0	0.0	0.0	0.0
998							0.0	0.0	0.0	0.0	0.0	0.0	0.0
999							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1000							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1001							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1002							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1003							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1004							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1006							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1007							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1008							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1009							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1010							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1011							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1012							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1013							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1014							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1015							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1016							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1017							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1018							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1019							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1020							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1021							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1022							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1023							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1024							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1025							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1026							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1027							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1028							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1029							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1030							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1031							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1032							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1033							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1034							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1035							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1036							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1037							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1038							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1039							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1040							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1041							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1042							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1043							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1044							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1045							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1046							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1047							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1048							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1049							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1050							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1051							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1052							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1053							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1054							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1055							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1056							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1057							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1058							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1059							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1060							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1061							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1062							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1063							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1064							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1065							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1066							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1067							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1068							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1069							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1070							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1071							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1072							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1073							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1074							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1075							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1076							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1077							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1078							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1079							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1080							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1081							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1082							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1083							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1084							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1085							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1086							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1087							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1088							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1089							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1090							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1091							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1092							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1093							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1094							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1095							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1096							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1097							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1098							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1099							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1100							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1101							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1102							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1103							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1104							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1105							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1106							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1107							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1108							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1109							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1110							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1111							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1112							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1113							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1114							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1115							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1116							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1117							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1118							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1119							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1120							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1121							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1122							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1123							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1124							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1125							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1126							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1127							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1128							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1129							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1130							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1131							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1132							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1133							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1134							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1135							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1136							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1137							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1138							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1139							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1140							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1141							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1142							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1143							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1144							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1145							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1146							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1147							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1148							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1149							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1150							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1151							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1152							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1153							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1154							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1155							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1156							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1157							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1158							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1159							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1160							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1161							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1162							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1163							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1164							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1165							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1166							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1167							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1168							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1169							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1170							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1171							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1172							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1173							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1174							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1175							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1176							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1177							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1178							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1179							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1180							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1181							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1182							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1183							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1184							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1185							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1186							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1187							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1188							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1189							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1190							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1191							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1192							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1193							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1194							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1195							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1196							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1197							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1198							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1199							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1200							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1201							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1202							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1203							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1204							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1205							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1206							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1207							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1208							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1209							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1210							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1211							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1212							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1213							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1214							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1215							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1216							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1217							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1218							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1219							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1220							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1221							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1222							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1223							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1224							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1225							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1226							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1227							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1228							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1229							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1230							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1231							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1232							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1233							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1234							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1235							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1236							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1237							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1238							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1239							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1240							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1241							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1242							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1243							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1244							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1245							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1246							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1247							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1248							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1249							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1250							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1251							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1252							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1253							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1254							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1255							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1256							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1257							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1258							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1259							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1260							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1261							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1262							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1263							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1264							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1265							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1266							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1267							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1268							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1269							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1270							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1271							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1272							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1273							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1274							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1275							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1276							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1277							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1278							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1279							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1280							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1281							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1282							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1283							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1284							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1285							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1286							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1287							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1288							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1289							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1290							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1291							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1292							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1293							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1294							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1295							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1296							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1297							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1298							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1299							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1300							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1301							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1302							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1303							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1304							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1305							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1306							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1307							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1308							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1309							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1310							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1311							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1312							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1313							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1314							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1315							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1316							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1317							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1318							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1319							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1320							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1321							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1322							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1323							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1324							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1325							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1326							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1327							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1328							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1329							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1330							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1331							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1332							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1333							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1334							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1335							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1336							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1337							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1362							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1363							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1364							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1365							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1366							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1367							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1368							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1369							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1370							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1371							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1372							0.0	0.0	0.0	0.0	0.0	0.0	0.0



Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1373							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1374							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1375							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1376							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1377							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1378							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1379							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1380							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1381							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1382							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1383							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1384							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1385							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1386							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1387							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1388							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1389							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1390							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1391							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1392							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1393							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1394							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1395							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1396							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1397							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1398							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1399							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1400							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1401							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1402							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1403							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1404							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1405							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1406							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1407							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1408							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1409							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1410							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1411							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1412							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1413							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1414							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1415							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1416							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1417							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1418							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1419							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1420							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1421							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1422							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1423							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1424							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1425							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1426							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1427							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1428							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1429							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1430							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1431							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1432							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1433							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1434							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1435							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
1436							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1437							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1438							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1439							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1440							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1441							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1442							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1443							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1444							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1445							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1446							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1447							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1448							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1449							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1450							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1451							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1452							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1453							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1454							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1455							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1456							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1457							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1458							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1459							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1460							0.0	0.0	0.0	0.0	0.0	0.0	0.0
1461							0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trave	v.Omeg			V N/M	V stab		V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pilas.	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
15	ok	s=1,m=12	0.03	0.32	0.37	1	1.3	0.8	111.8	0.39	0.13	0.3	1.00	46,32,8,46
16	ok	s=1,m=12	0.03	0.31	0.30	1	1.3	0.8	111.8	0.39	0.11	0.3	1.00	47,32,8,46
17	ok	s=1,m=12	0.04	0.28	0.36	1	1.3	0.8	111.8	0.39	0.17	0.3	1.00	42,65,31,42
18	ok	s=1,m=12	0.04	0.27	0.28	1	1.3	0.8	111.8	0.39	0.14	0.3	1.00	43,59,31,42
19	ok	s=1,m=12	0.04	0.25	0.27	1	1.3	0.8	111.8	0.39	0.14	0.3	1.00	45,69,31,45
20	ok	s=1,m=12	0.03	0.24	0.22	1	1.3	0.8	111.8	0.39	0.12	0.3	1.00	44,57,31,41
21	ok	s=1,m=12	0.03	0.38	0.36	1	1.3	0.8	111.8	0.39	0.12	0.2	1.00	46,65,7,42
22	ok	s=1,m=12	0.03	0.37	0.29	1	1.3	0.8	111.8	0.39	0.10	0.2	1.00	48,61,7,48
23	ok	s=1,m=12	0.04	0.42	0.27	1	1.3	0.8	111.8	0.39	0.15	0.2	1.00	46,65,7,46
24	ok	s=1,m=12	0.03	0.39	0.21	1	1.3	0.8	111.8	0.39	0.12	0.2	1.00	47,59,7,47
25	ok	s=1,m=12	0.04	0.31	0.23	1	1.3	0.8	111.8	0.39	0.13	0.2	1.00	41,66,8,41
26	ok	s=1,m=12	0.03	0.30	0.22	1	1.3	0.8	111.8	0.39	0.10	0.2	1.00	47,58,42,47
27	ok	s=1,m=12	0.03	0.26	0.21	1	1.3	0.8	111.8	0.39	0.14	0.3	1.00	41,65,8,41
28	ok	s=1,m=12	0.03	0.26	0.18	1	1.3	0.8	111.8	0.39	0.11	0.3	1.00	43,59,8,42
29	ok	s=1,m=12	0.04	0.25	0.24	1	1.3	0.8	111.8	0.39	0.15	0.3	1.00	42,69,32,42
30	ok	s=1,m=12	0.03	0.25	0.20	1	1.3	0.8	111.8	0.39	0.12	0.3	1.00	43,63,8,41
31	ok	s=1,m=12	0.04	0.26	0.28	1	1.3	0.8	111.8	0.39	0.17	0.3	1.00	49,69,32,49
32	ok	s=1,m=12	0.04	0.25	0.22	1	1.3	0.8	111.8	0.39	0.14	0.3	1.00	51,63,32,50
33	ok	s=1,m=12	0.04	0.24	0.30	1	1.3	0.8	111.8	0.39	0.16	0.3	1.00	50,70,32,50
34	ok	s=1,m=12	0.03	0.24	0.25	1	1.3	0.8	111.8	0.39	0.13	0.3	1.00	51,63,32,50
35	ok	s=1,m=12	0.03	0.38	0.45	1	1.3	0.8	111.8	0.39	0.12	0.3	1.00	50,32,32,50
36	ok	s=1,m=12	0.02	0.38	0.34	1	1.3	0.8	111.8	0.39	0.10	0.3	1.00	51,32,8,50
57	ok	s=7,m=12	0.06	0.22	0.23	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.83	41,66,7,46
58	ok	s=7,m=12	0.06	0.22	0.19	1	1.9	7.84e-02	164.0	0.22	0.05	0.4	0.84	47,58,7,48
73	ok	s=7,m=12	0.06	0.23	0.16	1	1.9	7.84e-02	164.0	0.22	8.30e-03	0.4	0.85	68,68,8,42
74	ok	s=7,m=12	0.06	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	8.11e-03	0.5	0.80	58,58,8,43
89	ok	s=7,m=12	0.05	0.22	0.10	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.86	65,65,7,47
90	ok	s=7,m=12	0.05	0.21	0.10	1	1.9	7.84e-02	164.0	0.22	0.01	0.5	0.81	59,59,7,46
105	ok	s=7,m=12	0.06	0.25	0.19	1	1.9	7.84e-02	164.0	0.22	9.89e-03	0.4	0.85	67,67,7,41

Pilas.	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
106	ok	s=7,m=12	0.06	0.25	0.16	1	1.9	7.84e-02	164.0	0.22	9.53e-03	0.4	0.85	57,57,7,44
121	ok	s=7,m=12	0.05	0.23	0.18	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.84	67,65,7,46
122	ok	s=7,m=12	0.05	0.23	0.16	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.83	57,57,7,47
137	ok	s=7,m=12	0.05	0.21	0.15	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.83	68,66,8,42
138	ok	s=7,m=12	0.05	0.21	0.13	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.83	58,58,7,43
153	ok	s=7,m=12	0.05	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	9.11e-03	0.4	0.85	72,72,8,45
154	ok	s=7,m=12	0.05	0.22	0.13	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.86	58,62,8,48
169	ok	s=7,m=12	0.05	0.21	0.07	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.87	67,67,7,43
170	ok	s=7,m=12	0.05	0.20	0.08	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.84	57,57,7,42
185	ok	s=7,m=12	0.05	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	8.09e-03	0.4	0.86	67,67,7,41
186	ok	s=7,m=12	0.06	0.23	0.14	1	1.9	7.84e-02	164.0	0.22	9.13e-03	0.4	0.84	57,57,7,44
201	ok	s=7,m=12	0.05	0.21	0.15	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.82	67,69,7,41
202	ok	s=7,m=12	0.05	0.21	0.13	1	1.9	7.84e-02	164.0	0.22	0.05	0.4	0.84	57,57,7,44
217	ok	s=7,m=12	0.05	0.22	0.16	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.84	66,66,7,45
218	ok	s=7,m=12	0.05	0.22	0.14	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.82	60,60,7,48
233	ok	s=7,m=12	0.06	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	8.15e-03	0.4	0.82	66,66,8,45
234	ok	s=7,m=12	0.06	0.23	0.13	1	1.9	7.84e-02	164.0	0.22	8.16e-03	0.4	0.86	60,60,8,48
249	ok	s=7,m=12	0.05	0.21	0.07	1	1.9	7.84e-02	164.0	0.22	8.07e-03	0.4	0.86	67,67,7,56
250	ok	s=7,m=12	0.05	0.22	0.08	1	1.9	7.84e-02	164.0	0.22	9.53e-03	0.4	0.87	57,57,7,54
265	ok	s=7,m=12	0.06	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.83	67,67,7,46
266	ok	s=7,m=12	0.06	0.24	0.14	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.86	57,57,7,44
281	ok	s=7,m=12	0.05	0.20	0.16	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.85	42,69,7,54
282	ok	s=7,m=12	0.05	0.21	0.14	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.84	57,57,7,56
297	ok	s=7,m=12	0.05	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.83	68,70,8,46
298	ok	s=7,m=12	0.05	0.21	0.13	1	1.9	7.84e-02	164.0	0.22	0.05	0.4	0.85	58,58,8,48
313	ok	s=7,m=12	0.05	0.22	0.13	1	1.9	7.84e-02	164.0	0.22	9.79e-03	0.4	0.87	68,68,8,50
314	ok	s=7,m=12	0.05	0.22	0.12	1	1.9	7.84e-02	164.0	0.22	0.01	0.5	0.81	58,58,8,56
329	ok	s=7,m=12	0.05	0.21	0.09	1	1.9	7.84e-02	164.0	0.22	7.00e-03	0.4	0.88	67,67,7,48
330	ok	s=7,m=12	0.05	0.22	0.09	1	1.9	7.84e-02	164.0	0.22	9.25e-03	0.4	0.82	57,57,7,46
345	ok	s=7,m=12	0.06	0.23	0.16	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.87	67,67,7,46
346	ok	s=7,m=12	0.06	0.24	0.14	1	1.9	7.84e-02	164.0	0.22	0.01	0.5	0.81	57,57,7,44
361	ok	s=7,m=12	0.04	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.08	0.4	0.83	67,65,8,46
362	ok	s=7,m=12	0.04	0.21	0.14	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.85	57,57,7,47
377	ok	s=7,m=12	0.04	0.21	0.17	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.84	72,66,7,45
378	ok	s=7,m=12	0.05	0.21	0.14	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.83	62,58,7,48
393	ok	s=7,m=12	0.06	0.23	0.16	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.83	72,68,8,45
394	ok	s=7,m=12	0.06	0.23	0.14	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.86	62,58,8,48
409	ok	s=7,m=12	0.05	0.21	0.08	1	1.9	7.84e-02	164.0	0.22	7.44e-03	0.4	0.85	72,72,8,47
410	ok	s=7,m=12	0.05	0.21	0.08	1	1.9	7.84e-02	164.0	0.22	8.78e-03	0.4	0.87	62,62,8,41
425	ok	s=7,m=12	0.05	0.22	0.14	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.83	71,71,7,41
426	ok	s=7,m=12	0.05	0.22	0.12	1	1.9	7.84e-02	164.0	0.22	9.56e-03	0.4	0.86	61,61,7,47
441	ok	s=7,m=12	0.04	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.85	71,65,8,41
442	ok	s=7,m=12	0.05	0.21	0.13	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.83	61,57,8,47
457	ok	s=7,m=12	0.05	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.83	72,66,7,45
458	ok	s=7,m=12	0.05	0.21	0.14	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.85	62,58,7,43
473	ok	s=7,m=12	0.05	0.23	0.14	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.87	68,68,7,45
474	ok	s=7,m=12	0.06	0.23	0.13	1	1.9	7.84e-02	164.0	0.22	0.01	0.5	0.81	58,58,7,43
489	ok	s=7,m=12	0.05	0.21	0.07	1	1.9	7.84e-02	164.0	0.22	7.27e-03	0.4	0.89	65,65,8,43
490	ok	s=7,m=12	0.05	0.21	0.07	1	1.9	7.84e-02	164.0	0.22	9.53e-03	0.4	0.82	59,58,8,53
505	ok	s=7,m=12	0.06	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	7.11e-03	0.4	0.88	67,69,7,46
506	ok	s=7,m=12	0.06	0.24	0.13	1	1.9	7.84e-02	164.0	0.22	8.58e-03	0.5	0.80	57,63,7,8
521	ok	s=7,m=12	0.05	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.06	0.5	0.81	67,65,7,41
522	ok	s=7,m=12	0.05	0.21	0.14	1	1.9	7.84e-02	164.0	0.22	0.05	0.4	0.84	57,57,7,44
537	ok	s=7,m=12	0.05	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.84	68,66,7,45
538	ok	s=7,m=12	0.05	0.21	0.14	1	1.9	7.84e-02	164.0	0.22	0.05	0.4	0.82	58,58,7,43
553	ok	s=7,m=12	0.05	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	7.96e-03	0.4	0.82	68,68,7,53
554	ok	s=7,m=12	0.06	0.23	0.13	1	1.9	7.84e-02	164.0	0.22	7.93e-03	0.4	0.86	58,58,7,7
569	ok	s=7,m=12	0.05	0.20	0.07	1	1.9	7.84e-02	164.0	0.22	9.93e-03	0.4	0.87	69,67,8,47
570	ok	s=7,m=12	0.05	0.20	0.08	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.87	63,57,8,41
585	ok	s=7,m=12	0.05	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	9.32e-03	0.4	0.83	71,71,8,54
586	ok	s=7,m=12	0.06	0.23	0.13	1	1.9	7.84e-02	164.0	0.22	8.90e-03	0.4	0.86	61,61,8,55
601	ok	s=7,m=12	0.05	0.21	0.15	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.84	71,65,7,41
602	ok	s=7,m=12	0.05	0.21	0.13	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.82	61,57,7,44

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 187 di 220

Pilas.	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
617	ok	s=7,m=12	0.05	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.07	0.5	0.81	72,66,7,45
618	ok	s=7,m=12	0.05	0.21	0.14	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.85	62,62,7,43
633	ok	s=7,m=12	0.05	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	8.87e-03	0.4	0.88	72,72,7,53
634	ok	s=7,m=12	0.06	0.23	0.13	1	1.9	7.84e-02	164.0	0.22	9.61e-03	0.5	0.80	62,62,7,56
649	ok	s=7,m=12	0.05	0.20	0.07	1	1.9	7.84e-02	164.0	0.22	9.24e-03	0.3	0.89	69,67,8,52
650	ok	s=7,m=12	0.05	0.20	0.08	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.83	63,57,8,53
665	ok	s=7,m=12	0.05	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	9.48e-03	0.4	0.88	67,67,8,54
666	ok	s=7,m=12	0.06	0.23	0.13	1	1.9	7.84e-02	164.0	0.22	0.01	0.5	0.80	57,57,8,55
681	ok	s=7,m=12	0.05	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.08	0.5	0.81	67,69,7,49
682	ok	s=7,m=12	0.05	0.21	0.13	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.84	57,61,7,52
697	ok	s=7,m=12	0.05	0.21	0.16	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.84	72,70,7,50
698	ok	s=7,m=12	0.05	0.21	0.14	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.82	62,62,7,51
713	ok	s=7,m=12	0.05	0.22	0.15	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.82	72,72,7,53
714	ok	s=7,m=12	0.05	0.22	0.13	1	1.9	7.84e-02	164.0	0.22	9.81e-03	0.4	0.86	62,62,7,56
729	ok	s=7,m=12	0.05	0.20	0.08	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.87	69,67,8,55
730	ok	s=7,m=12	0.05	0.20	0.08	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.87	63,57,8,54
745	ok	s=7,m=12	0.05	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	9.94e-03	0.4	0.83	71,71,8,54
746	ok	s=7,m=12	0.06	0.23	0.13	1	1.9	7.84e-02	164.0	0.22	9.43e-03	0.4	0.86	61,61,8,55
761	ok	s=7,m=12	0.05	0.20	0.14	1	1.9	7.84e-02	164.0	0.22	0.07	0.4	0.84	71,69,7,49
762	ok	s=7,m=12	0.05	0.21	0.13	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.82	61,61,8,52
777	ok	s=7,m=12	0.05	0.22	0.19	1	1.9	7.84e-02	164.0	0.22	0.07	0.5	0.81	72,70,7,50
778	ok	s=7,m=12	0.05	0.23	0.16	1	1.9	7.84e-02	164.0	0.22	0.06	0.4	0.85	62,62,7,51
793	ok	s=7,m=12	0.06	0.24	0.19	1	1.9	7.84e-02	164.0	0.22	8.89e-03	0.4	0.88	72,72,7,53
794	ok	s=7,m=12	0.06	0.25	0.16	1	1.9	7.84e-02	164.0	0.22	9.65e-03	0.5	0.81	62,62,7,56
809	ok	s=7,m=12	0.05	0.21	0.09	1	1.9	7.84e-02	164.0	0.22	9.09e-03	0.3	0.90	70,70,7,56
810	ok	s=7,m=12	0.05	0.21	0.09	1	1.9	7.84e-02	164.0	0.22	0.01	0.4	0.82	64,58,7,50
825	ok	s=7,m=12	0.05	0.23	0.16	1	1.9	7.84e-02	164.0	0.22	7.52e-03	0.4	0.87	71,71,8,54
826	ok	s=7,m=12	0.06	0.23	0.15	1	1.9	7.84e-02	164.0	0.22	8.21e-03	0.4	0.83	61,61,8,55
841	ok	s=7,m=12	0.06	0.21	0.22	1	1.9	7.84e-02	164.0	0.22	0.05	0.4	0.82	50,69,7,50
842	ok	s=7,m=12	0.06	0.21	0.19	1	1.9	7.84e-02	164.0	0.22	0.05	0.4	0.84	56,61,7,51
857	ok	s=7,m=12	0.05	0.17		1					0.07	0.4	0.84	50,69,0,53
858	ok	s=7,m=12	0.05	0.16		1					0.06	0.4	0.84	53,63,0,51
872	ok	s=7,m=12	0.05	0.18		1					0.07	0.4	0.83	41,66,0,46
873	ok	s=7,m=12	0.05	0.17		1					0.06	0.4	0.84	46,66,0,44
<b>Pilas.</b>			<b>V V/T</b>	<b>V N/M</b>	<b>V stab</b>		<b>LamS 22</b>	<b>LamS 33</b>	<b>Snell.</b>	<b>Chi mn</b>	<b>V flst</b>	<b>LamS LT</b>	<b>Chi LT</b>	
			0.06	0.42	0.45		1.89	0.75	164.03	0.22	0.17	0.47	0.80	

Pilas.	f.Om. N	f.Om. T	Stato	V V/T	V N/M	V stab	V flst	Rif. cmb	V[7.5.10]	V Ed	sovr. Xi	sovr. Xf	sovr. Yi	sovr. Yf
15	0.0	0.0	ok	0.0	0.0			0,0,0,0		kN				
16	0.0	0.0	ok	0.0	0.0			0,0,0,0						
17	0.0	0.0	ok	0.0	0.0			0,0,0,0						
18	0.0	0.0	ok	0.0	0.0			0,0,0,0						
19	0.0	0.0	ok	0.0	0.0			0,0,0,0						
20	0.0	0.0	ok	0.0	0.0			0,0,0,0						
21	0.0	0.0	ok	0.0	0.0			0,0,0,0						
22	0.0	0.0	ok	0.0	0.0			0,0,0,0						
23	0.0	0.0	ok	0.0	0.0			0,0,0,0						
24	0.0	0.0	ok	0.0	0.0			0,0,0,0						
25	0.0	0.0	ok	0.0	0.0			0,0,0,0						
26	0.0	0.0	ok	0.0	0.0			0,0,0,0						
27	0.0	0.0	ok	0.0	0.0			0,0,0,0						
28	0.0	0.0	ok	0.0	0.0			0,0,0,0						
29	0.0	0.0	ok	0.0	0.0			0,0,0,0						
30	0.0	0.0	ok	0.0	0.0			0,0,0,0						
31	0.0	0.0	ok	0.0	0.0			0,0,0,0						
32	0.0	0.0	ok	0.0	0.0			0,0,0,0						
33	0.0	0.0	ok	0.0	0.0			0,0,0,0						
34	0.0	0.0	ok	0.0	0.0			0,0,0,0						
35	0.0	0.0	ok	0.0	0.0			0,0,0,0						

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 188 di 220

Pilas.	f.Om. N	f.Om. T	Stato	V V/T	V N/M	V stab	V flst	Rif. cmb	V[7.5.10]	V Ed	sovr. Xi	sovr. Xf	sovr. Yi	sovr. Yf
36	0.0	0.0	ok	0.0	0.0			0,0,0,0						
57	0.0	0.0	ok	0.0	0.0			0,0,0,0						
58	0.0	0.0	ok	0.0	0.0			0,0,0,0						
73	0.0	0.0	ok	0.0	0.0			0,0,0,0						
74	0.0	0.0	ok	0.0	0.0			0,0,0,0						
89	0.0	0.0	ok	0.0	0.0			0,0,0,0						
90	0.0	0.0	ok	0.0	0.0			0,0,0,0						
105	0.0	0.0	ok	0.0	0.0			0,0,0,0						
106	0.0	0.0	ok	0.0	0.0			0,0,0,0						
121	0.0	0.0	ok	0.0	0.0			0,0,0,0						
122	0.0	0.0	ok	0.0	0.0			0,0,0,0						
137	0.0	0.0	ok	0.0	0.0			0,0,0,0						
138	0.0	0.0	ok	0.0	0.0			0,0,0,0						
153	0.0	0.0	ok	0.0	0.0			0,0,0,0						
154	0.0	0.0	ok	0.0	0.0			0,0,0,0						
169	0.0	0.0	ok	0.0	0.0			0,0,0,0						
170	0.0	0.0	ok	0.0	0.0			0,0,0,0						
185	0.0	0.0	ok	0.0	0.0			0,0,0,0						
186	0.0	0.0	ok	0.0	0.0			0,0,0,0						
201	0.0	0.0	ok	0.0	0.0			0,0,0,0						
202	0.0	0.0	ok	0.0	0.0			0,0,0,0						
217	0.0	0.0	ok	0.0	0.0			0,0,0,0						
218	0.0	0.0	ok	0.0	0.0			0,0,0,0						
233	0.0	0.0	ok	0.0	0.0			0,0,0,0						
234	0.0	0.0	ok	0.0	0.0			0,0,0,0						
249	0.0	0.0	ok	0.0	0.0			0,0,0,0						
250	0.0	0.0	ok	0.0	0.0			0,0,0,0						
265	0.0	0.0	ok	0.0	0.0			0,0,0,0						
266	0.0	0.0	ok	0.0	0.0			0,0,0,0						
281	0.0	0.0	ok	0.0	0.0			0,0,0,0						
282	0.0	0.0	ok	0.0	0.0			0,0,0,0						
297	0.0	0.0	ok	0.0	0.0			0,0,0,0						
298	0.0	0.0	ok	0.0	0.0			0,0,0,0						
313	0.0	0.0	ok	0.0	0.0			0,0,0,0						
314	0.0	0.0	ok	0.0	0.0			0,0,0,0						
329	0.0	0.0	ok	0.0	0.0			0,0,0,0						
330	0.0	0.0	ok	0.0	0.0			0,0,0,0						
345	0.0	0.0	ok	0.0	0.0			0,0,0,0						
346	0.0	0.0	ok	0.0	0.0			0,0,0,0						
361	0.0	0.0	ok	0.0	0.0			0,0,0,0						
362	0.0	0.0	ok	0.0	0.0			0,0,0,0						
377	0.0	0.0	ok	0.0	0.0			0,0,0,0						
378	0.0	0.0	ok	0.0	0.0			0,0,0,0						
393	0.0	0.0	ok	0.0	0.0			0,0,0,0						
394	0.0	0.0	ok	0.0	0.0			0,0,0,0						
409	0.0	0.0	ok	0.0	0.0			0,0,0,0						
410	0.0	0.0	ok	0.0	0.0			0,0,0,0						
425	0.0	0.0	ok	0.0	0.0			0,0,0,0						
426	0.0	0.0	ok	0.0	0.0			0,0,0,0						
441	0.0	0.0	ok	0.0	0.0			0,0,0,0						
442	0.0	0.0	ok	0.0	0.0			0,0,0,0						
457	0.0	0.0	ok	0.0	0.0			0,0,0,0						
458	0.0	0.0	ok	0.0	0.0			0,0,0,0						
473	0.0	0.0	ok	0.0	0.0			0,0,0,0						
474	0.0	0.0	ok	0.0	0.0			0,0,0,0						
489	0.0	0.0	ok	0.0	0.0			0,0,0,0						
490	0.0	0.0	ok	0.0	0.0			0,0,0,0						
505	0.0	0.0	ok	0.0	0.0			0,0,0,0						
506	0.0	0.0	ok	0.0	0.0			0,0,0,0						
521	0.0	0.0	ok	0.0	0.0			0,0,0,0						
522	0.0	0.0	ok	0.0	0.0			0,0,0,0						
537	0.0	0.0	ok	0.0	0.0			0,0,0,0						
538	0.0	0.0	ok	0.0	0.0			0,0,0,0						



 <p><b>ITALFERR</b> GRUPPO FERROVIE DELLO STATO ITALIANE</p>	<p><b>RADDOPPIO LINEA GENOVA - VENTIMIGLIA</b> <b>TRATTA FINALE LIGURE - ANDORA</b></p>					
<p><b>PROGETTO DEFINITIVO</b> <b>FV01 – Fermata Finale Ligure</b> <b>RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO</b></p>	<p>COMMESSA IV01</p>	<p>LOTTO 00</p>	<p>CODIFICA D 26 CL</p>	<p>DOCUMENTO FV0100 004</p>	<p>REV. A</p>	<p>FOGLIO 190 di 220</p>

STATI LIMITE D' ESERCIZIO ACCIAIO

LEGENDA TABELLA STATI LIMITE D' ESERCIZIO ACCIAIO

*In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.*

*In particolare vengono riportati, per gli elementi trave, i risultati relativi alle combinazioni considerate (rare o caratteristiche).*

*I valori di interesse sono i seguenti:*

<b><i>f*1000/L</i></b>	<i>massima deformazione normalizzata in combinazioni rare</i>
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*Si precisa che i valori di massima deformazione per travi sono riferiti ai due piani locali (1-2 con momenti flettenti 3-3 e 1-3 con momenti flettenti 2-2). Il valore riportato (massimo) è espresso in 1000/L per rendere agevole il confronto di più valori e in particolare di più range di valori ( ad esempio 2 rappresenta L/500, 4 L/250 e così via ).*

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
1	1.9	2	1.7	3	1.3	4	1.1	5	0.5	6	0.9	7	0.5
8	0.3	9	0.7	10	0.4	11	0.8	12	0.6	13	0.6	14	0.4
37	3.9	38	1.0	39	1.3	40	1.2	41	1.3	42	1.0	43	1.1
44	1.2	45	1.2	46	1.7	47	4.0	48	1.0	49	1.3	50	1.2
51	1.4	52	1.1	53	1.2	54	1.2	55	1.2	56	1.7	59	2.2
60	2.0	61	1.6	62	1.4	63	0.4	64	1.1	65	0.4	66	0.3
67	0.8	68	0.5	69	0.9	70	0.8	71	0.6	72	0.4	75	2.2
76	2.0	77	1.7	78	1.5	79	0.3	80	1.2	81	0.3	82	0.3
83	0.8	84	0.5	85	1.0	86	0.8	87	0.7	88	0.4	91	2.2
92	2.0	93	1.6	94	1.4	95	0.5	96	1.1	97	0.4	98	0.3
99	0.7	100	0.5	101	0.9	102	0.8	103	0.6	104	0.4	107	2.0
108	1.7	109	1.4	110	1.2	111	0.4	112	0.9	113	0.4	114	0.3
115	0.7	116	0.4	117	0.8	118	0.6	119	0.6	120	0.4	123	2.0
124	1.7	125	1.4	126	1.2	127	0.3	128	0.9	129	0.3	130	0.3
131	0.7	132	0.4	133	0.8	134	0.6	135	0.6	136	0.4	139	2.2
140	1.9	141	1.6	142	1.4	143	0.3	144	1.1	145	0.4	146	0.3
147	0.8	148	0.5	149	0.9	150	0.8	151	0.6	152	0.4	155	2.2
156	2.0	157	1.7	158	1.4	159	0.3	160	1.2	161	0.2	162	0.3
163	0.8	164	0.5	165	1.0	166	0.8	167	0.7	168	0.4	171	2.1
172	1.9	173	1.6	174	1.4	175	0.3	176	1.1	177	0.4	178	0.3
179	0.8	180	0.5	181	0.9	182	0.7	183	0.6	184	0.4	187	1.9
188	1.7	189	1.4	190	1.1	191	0.3	192	0.9	193	0.3	194	0.3
195	0.7	196	0.4	197	0.8	198	0.6	199	0.6	200	0.4	203	1.9
204	1.7	205	1.3	206	1.1	207	0.3	208	0.9	209	0.3	210	0.3
211	0.7	212	0.4	213	0.8	214	0.6	215	0.6	216	0.4	219	2.1
220	1.9	221	1.5	222	1.3	223	0.3	224	1.0	225	0.3	226	0.2
227	0.8	228	0.4	229	0.9	230	0.7	231	0.7	232	0.4	235	2.1
236	1.9	237	1.5	238	1.3	239	0.3	240	1.1	241	0.2	242	0.2
243	0.9	244	0.4	245	0.9	246	0.7	247	0.8	248	0.5	251	1.9
252	1.7	253	1.4	254	1.2	255	0.3	256	0.9	257	0.3	258	0.2
259	0.9	260	0.3	261	0.7	262	0.5	263	0.8	264	0.5	267	1.7
268	1.5	269	1.1	270	0.9	271	0.3	272	0.7	273	0.3	274	0.1
275	0.9	276	0.2	277	0.5	278	0.4	279	0.7	280	0.4	283	1.6
284	1.4	285	1.1	286	0.8	287	0.3	288	0.6	289	0.2	290	0.1
291	0.9	292	0.2	293	0.5	294	0.3	295	0.7	296	0.4	299	1.8
300	1.6	301	1.3	302	1.1	303	0.4	304	0.8	305	0.2	306	9.01e-02
307	1.0	308	0.2	309	0.6	310	0.5	311	0.9	312	0.6	315	1.9
316	1.7	317	1.4	318	1.1	319	0.4	320	0.9	321	0.2	322	0.1
323	1.1	324	0.2	325	0.7	326	0.5	327	0.9	328	0.6	331	1.8
332	1.6	333	1.2	334	1.0	335	0.4	336	0.8	337	0.3	338	0.1
339	1.1	340	0.2	341	0.6	342	0.4	343	0.9	344	0.6	347	1.6
348	1.3	349	1.0	350	0.8	351	0.3	352	0.5	353	0.2	354	9.38e-02
355	1.0	356	8.58e-02	357	0.4	358	0.2	359	0.8	360	0.5	363	1.6
364	1.3	365	1.0	366	0.8	367	0.3	368	0.5	369	0.2	370	9.38e-02
371	1.0	372	8.34e-02	373	0.4	374	0.2	375	0.8	376	0.5	379	1.8
380	1.6	381	1.2	382	1.0	383	0.4	384	0.8	385	0.2	386	0.1
387	1.1	388	0.2	389	0.6	390	0.4	391	0.9	392	0.6	395	1.9
396	1.7	397	1.4	398	1.1	399	0.4	400	0.9	401	0.2	402	0.1
403	1.1	404	0.2	405	0.7	406	0.5	407	0.9	408	0.6	411	1.8
412	1.6	413	1.3	414	1.1	415	0.4	416	0.8	417	0.2	418	9.11e-02
419	1.0	420	0.2	421	0.6	422	0.5	423	0.9	424	0.6	427	1.6
428	1.4	429	1.1	430	0.8	431	0.3	432	0.6	433	0.1	434	9.66e-02
435	0.9	436	0.2	437	0.5	438	0.3	439	0.7	440	0.4	443	1.7
444	1.5	445	1.1	446	0.9	447	0.3	448	0.7	449	0.2	450	0.1
451	0.9	452	0.2	453	0.5	454	0.4	455	0.7	456	0.4	459	1.9
460	1.7	461	1.4	462	1.2	463	0.3	464	0.9	465	0.2	466	0.2
467	0.9	468	0.3	469	0.7	470	0.5	471	0.8	472	0.5	475	2.1
476	1.9	477	1.5	478	1.3	479	0.3	480	1.1	481	0.2	482	0.2
483	0.9	484	0.4	485	0.9	486	0.7	487	0.8	488	0.5	491	2.1
492	1.9	493	1.5	494	1.3	495	0.3	496	1.0	497	0.2	498	0.2



**PROGETTO DEFINITIVO  
 FV01 – Fermata Finale Ligure  
 RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01    LOTTO 00    CODIFICA D 26 CL    DOCUMENTO FV0100 004    REV. A    FOGLIO 192 di 220

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
499	0.8	500	0.4	501	0.9	502	0.7	503	0.7	504	0.4	507	1.9
508	1.7	509	1.3	510	1.1	511	0.2	512	0.9	513	0.2	514	0.3
515	0.7	516	0.4	517	0.7	518	0.6	519	0.6	520	0.4	523	1.9
524	1.7	525	1.4	526	1.1	527	0.3	528	0.9	529	0.2	530	0.3
531	0.7	532	0.4	533	0.8	534	0.6	535	0.6	536	0.4	539	2.1
540	1.9	541	1.6	542	1.4	543	0.3	544	1.1	545	0.2	546	0.3
547	0.7	548	0.5	549	0.9	550	0.7	551	0.6	552	0.4	555	2.2
556	2.0	557	1.7	558	1.4	559	0.3	560	1.2	561	0.2	562	0.3
563	0.8	564	0.5	565	1.0	566	0.8	567	0.7	568	0.4	571	2.2
572	1.9	573	1.6	574	1.4	575	0.3	576	1.1	577	0.3	578	0.3
579	0.7	580	0.5	581	0.9	582	0.8	583	0.6	584	0.4	587	2.0
588	1.7	589	1.4	590	1.2	591	0.2	592	0.9	593	0.2	594	0.3
595	0.7	596	0.4	597	0.8	598	0.6	599	0.6	600	0.4	603	2.0
604	1.7	605	1.4	606	1.2	607	0.3	608	0.9	609	0.3	610	0.3
611	0.7	612	0.5	613	0.8	614	0.6	615	0.6	616	0.4	619	2.2
620	1.9	621	1.6	622	1.4	623	0.3	624	1.1	625	0.3	626	0.3
627	0.7	628	0.5	629	1.0	630	0.8	631	0.6	632	0.4	635	2.2
636	2.0	637	1.7	638	1.5	639	0.3	640	1.2	641	0.2	642	0.3
643	0.8	644	0.5	645	1.0	646	0.8	647	0.6	648	0.4	651	2.2
652	2.0	653	1.6	654	1.4	655	0.3	656	1.1	657	0.3	658	0.3
659	0.7	660	0.5	661	1.0	662	0.8	663	0.6	664	0.4	667	2.0
668	1.8	669	1.4	670	1.2	671	0.3	672	1.0	673	0.3	674	0.3
675	0.7	676	0.5	677	0.8	678	0.6	679	0.6	680	0.4	683	2.0
684	1.7	685	1.4	686	1.2	687	0.3	688	0.9	689	0.3	690	0.3
691	0.7	692	0.5	693	0.8	694	0.6	695	0.6	696	0.4	699	2.2
700	2.0	701	1.6	702	1.4	703	0.3	704	1.1	705	0.3	706	0.3
707	0.7	708	0.5	709	1.0	710	0.8	711	0.6	712	0.4	715	2.2
716	2.0	717	1.7	718	1.5	719	0.3	720	1.2	721	0.2	722	0.3
723	0.8	724	0.5	725	1.0	726	0.8	727	0.6	728	0.4	731	2.2
732	2.0	733	1.6	734	1.4	735	0.4	736	1.1	737	0.4	738	0.3
739	0.7	740	0.5	741	1.0	742	0.8	743	0.6	744	0.4	747	2.0
748	1.7	749	1.4	750	1.2	751	0.3	752	0.9	753	0.3	754	0.3
755	0.7	756	0.5	757	0.8	758	0.6	759	0.6	760	0.4	763	2.0
764	1.7	765	1.4	766	1.2	767	0.4	768	0.9	769	0.4	770	0.3
771	0.7	772	0.5	773	0.8	774	0.6	775	0.6	776	0.4	779	2.2
780	2.0	781	1.6	782	1.4	783	0.5	784	1.1	785	0.5	786	0.3
787	0.7	788	0.5	789	1.0	790	0.8	791	0.6	792	0.4	795	2.2
796	2.0	797	1.7	798	1.5	799	0.3	800	1.2	801	0.3	802	0.3
803	0.8	804	0.5	805	1.0	806	0.8	807	0.6	808	0.4	811	2.2
812	1.9	813	1.6	814	1.4	815	0.4	816	1.1	817	0.5	818	0.3
819	0.8	820	0.5	821	0.9	822	0.8	823	0.7	824	0.4	827	1.9
828	1.7	829	1.3	830	1.1	831	0.5	832	0.9	833	0.5	834	0.3
835	0.7	836	0.4	837	0.8	838	0.6	839	0.6	840	0.4	843	1.4
844	1.3	845	1.0	846	0.9	847	0.3	848	0.7	849	0.3	850	0.3
851	0.4	852	0.4	853	0.6	854	0.5	855	0.3	856	0.3	859	1.4
860	1.3	861	1.0	862	0.9	863	0.6	864	0.7	865	0.5	866	0.3
867	0.3	868	0.4	869	0.4	870	0.4	871	0.3	874	0.4	875	3.5
876	3.6	877	3.1	878	3.2	879	4.0	880	4.4	881	3.6	882	3.6
883	3.7	884	3.7	885	3.9	886	4.2	887	3.9	888	3.5	889	4.0
890	3.3	891	3.3	892	3.4	893	3.4	894	3.4	895	3.9	896	3.6
897	1.2	898	1.4	899	1.2	900	1.2	901	1.2	902	1.2	903	1.2
904	1.4	905	1.3	906	2.0	907	2.1	908	1.9	909	1.9	910	1.9
911	1.9	912	1.9	913	2.1	914	2.0	915	3.0	916	3.3	917	2.8
918	2.8	919	2.9	920	2.9	921	2.9	922	3.2	923	3.0	924	0.5
925	0.5	926	0.5	927	0.5	928	0.5	929	0.5	930	0.5	931	0.5
932	0.5	933	2.1	934	2.4	935	1.9	936	1.9	937	2.0	938	2.0
939	2.1	940	2.3	941	2.1	942	1.1	943	1.3	944	1.1	945	1.1
946	1.1	947	1.1	948	1.1	949	1.3	950	1.2	951	1.2	952	1.4
953	1.1	954	1.1	955	1.2	956	1.1	957	1.2	958	1.3	959	1.2
960	2.1	961	2.5	962	1.9	963	2.0	964	2.0	965	2.0	966	2.1
967	2.4	968	2.2	969	0.5	970	0.4	971	0.4	972	0.4	973	0.4
974	0.5	975	0.5	976	0.4	977	0.4	978	2.4	979	2.5	980	2.1
981	2.1	982	2.1	983	2.2	984	2.3	985	2.4	986	2.2	987	1.2



**RADDOPPIO LINEA GENOVA - VENTIMIGLIA  
TRATTA FINALE LIGURE - ANDORA**

PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO

COMMESSA IV01      LOTTO 00      CODIFICA D 26 CL      DOCUMENTO FV0100 004      REV. A      FOGLIO 193 di 220

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
988	1.1	989	1.0	990	1.0	991	1.0	992	1.1	993	1.2	994	1.1
995	1.1	996	1.1	997	1.6	998	1.2	999	1.2	1000	1.2	1001	1.1
1002	1.1	1003	1.5	1004	1.4	1005	2.1	1006	2.7	1007	2.0	1008	2.0
1009	2.0	1010	2.0	1011	2.1	1012	2.5	1013	2.3	1014	0.3	1015	0.2
1016	0.3	1017	0.3	1018	0.3	1019	0.3	1020	0.3	1021	0.2	1022	0.2
1023	2.1	1024	2.3	1025	1.8	1026	1.8	1027	1.8	1028	1.9	1029	2.0
1030	2.2	1031	2.0	1032	0.7	1033	0.8	1034	0.6	1035	0.6	1036	0.6
1037	0.6	1038	0.7	1039	0.7	1040	0.7	1041	1.6	1042	1.9	1043	1.5
1044	1.6	1045	1.6	1046	1.5	1047	1.6	1048	1.8	1049	1.7	1050	2.5
1051	2.9	1052	2.3	1053	2.3	1054	2.3	1055	2.3	1056	2.4	1057	2.8
1058	2.6	1059	0.3	1060	0.3	1061	0.3	1062	0.3	1063	0.3	1064	0.3
1065	0.3	1066	0.3	1067	0.3	1068	2.6	1069	3.0	1070	2.4	1071	2.4
1072	2.4	1073	2.4	1074	2.5	1075	2.9	1076	2.7	1077	1.4	1078	1.8
1079	1.4	1080	1.5	1081	1.5	1082	1.4	1083	1.4	1084	1.7	1085	1.6
1086	0.8	1087	0.9	1088	0.7	1089	0.7	1090	0.7	1091	0.8	1092	0.8
1093	0.9	1094	0.8	1095	2.1	1096	2.3	1097	1.8	1098	1.8	1099	1.8
1100	1.9	1101	2.0	1102	2.2	1103	2.0	1104	0.2	1105	0.3	1106	0.2
1107	0.2	1108	0.2	1109	0.2	1110	0.2	1111	0.3	1112	0.3	1113	2.1
1114	2.7	1115	2.0	1116	2.0	1117	2.1	1118	2.0	1119	2.1	1120	2.6
1121	2.3	1122	0.8	1123	1.3	1124	0.9	1125	0.9	1126	1.0	1127	0.9
1128	0.9	1129	1.2	1130	1.1	1131	1.4	1132	1.2	1133	1.2	1134	1.2
1135	1.2	1136	1.3	1137	1.3	1138	1.2	1139	1.2	1140	2.4	1141	2.5
1142	2.1	1143	2.1	1144	2.2	1145	2.2	1146	2.4	1147	2.4	1148	2.3
1149	0.2	1150	0.3	1151	0.2	1152	0.2	1153	0.2	1154	0.2	1155	0.2
1156	0.3	1157	0.3	1158	2.2	1159	2.6	1160	2.0	1161	2.0	1162	2.1
1163	2.1	1164	2.1	1165	2.5	1166	2.3	1167	1.1	1168	1.3	1169	1.0
1170	1.1	1171	1.1	1172	1.1	1173	1.1	1174	1.2	1175	1.2	1176	1.2
1177	1.4	1178	1.1	1179	1.2	1180	1.2	1181	1.2	1182	1.2	1183	1.3
1184	1.2	1185	2.2	1186	2.5	1187	2.0	1188	2.0	1189	2.1	1190	2.1
1191	2.2	1192	2.4	1193	2.3	1194	0.3	1195	0.3	1196	0.3	1197	0.3
1198	0.3	1199	0.3	1200	0.3	1201	0.3	1202	0.3	1203	2.2	1204	2.6
1205	2.1	1206	2.1	1207	2.1	1208	2.1	1209	2.2	1210	2.5	1211	2.3
1212	1.1	1213	1.3	1214	1.1	1215	1.1	1216	1.1	1217	1.1	1218	1.1
1219	1.3	1220	1.2	1221	1.2	1222	1.4	1223	1.2	1224	1.2	1225	1.2
1226	1.2	1227	1.2	1228	1.4	1229	1.3	1230	2.2	1231	2.6	1232	2.1
1233	2.1	1234	2.1	1235	2.1	1236	2.2	1237	2.5	1238	2.3	1239	0.4
1240	0.4	1241	0.4	1242	0.4	1243	0.4	1244	0.4	1245	0.4	1246	0.4
1247	0.4	1248	2.1	1249	2.5	1250	1.9	1251	2.0	1252	2.0	1253	2.0
1254	2.1	1255	2.4	1256	2.2	1257	1.1	1258	1.3	1259	1.0	1260	1.0
1261	1.1	1262	1.1	1263	1.1	1264	1.2	1265	1.1	1266	1.3	1267	1.4
1268	1.2	1269	1.2	1270	1.2	1271	1.2	1272	1.2	1273	1.4	1274	1.3
1275	2.1	1276	2.4	1277	1.9	1278	1.9	1279	1.9	1280	1.9	1281	2.0
1282	2.3	1283	2.1	1284	0.7	1285	0.7	1286	0.7	1287	0.7	1288	0.7
1289	0.7	1290	0.7	1291	0.7	1292	0.7	1293	2.9	1294	3.3	1295	2.8
1296	2.8	1297	2.8	1298	2.8	1299	2.9	1300	3.2	1301	3.0	1302	1.8
1303	2.0	1304	1.8	1305	1.8	1306	1.8	1307	1.8	1308	1.8	1309	1.9
1310	1.9	1311	1.3	1312	1.5	1313	1.3	1314	1.3	1315	1.3	1316	1.3
1317	1.3	1318	1.5	1319	1.4	1320	3.4	1321	3.9	1322	3.2	1323	3.3
1324	3.3	1325	3.3	1326	3.4	1327	3.8	1328	3.5	1329	3.6	1330	4.1
1331	3.3	1332	3.3	1333	3.3	1334	3.3	1335	3.5	1336	3.8	1337	3.5
1362	3.3	1363	1.9	1364	2.1	1365	1.9	1366	2.4	1367	2.0	1368	2.0
1369	2.1	1370	2.0	1371	2.8	1372	3.5	1373	2.1	1374	2.2	1375	2.0
1376	2.6	1377	2.2	1378	2.2	1379	2.2	1380	2.1	1381	2.9	1382	1.2
1383	1.1	1384	1.1	1385	0.6	1386	1.4	1387	0.9	1388	1.0	1389	1.1
1390	1.0	1391	1.8	1392	1.3	1393	1.2	1394	1.0	1395	0.6	1396	1.6
1397	1.1	1398	1.1	1399	1.2	1400	1.1	1401	1.8	1402	1.9	1403	1.1
1404	1.1	1405	1.5	1406	0.7	1407	1.2	1408	1.2	1409	1.2	1410	1.2
1411	1.3	1412	2.0	1413	1.2	1414	1.3	1415	1.7	1416	0.8	1417	1.2
1418	1.2	1419	1.3	1420	1.3	1421	1.4	1422	2.8	1423	2.0	1424	2.0
1425	2.3	1426	1.8	1427	2.2	1428	2.1	1429	2.1	1430	1.9	1431	3.3
1432	3.0	1433	2.1	1434	2.2	1435	2.5	1436	1.9	1437	2.2	1438	2.2
1439	2.2	1440	2.1	1441	3.5	1442	1.5	1443	1.0	1444	0.7	1445	0.9
1446	0.9	1447	1.0	1448	1.0	1449	1.1	1450	0.8	1451	3.5	1452	1.6

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
1453	1.1	1454	0.8	1455	1.0	1456	0.9	1457	1.0	1458	1.0	1459	1.2
1460	0.9	1461	3.7										

#### 10.4 VERIFICA ELEMENTI IN C.A.

VERIFICHE ELEMENTI TRAVE E/O PILASTRO IN C.A.

LEGENDA TABELLA VERIFICHE ELEMENTI TRAVE E/O PILASTRO IN C.A.

*In tabella vengono riportati per ogni elemento il numero identificativo ed il codice di verifica con le sigle **Ok** o **NV**.*

*Nel caso in cui si sia proceduto alla progettazione con il metodo degli stati limite (S.L.) vengono riportati: il rapporto  $x/d$ , le verifiche per sollecitazioni proporzionali e la verifica per compressione media con l'indicazione delle combinazioni in cui si sono attinti i rispettivi valori.*

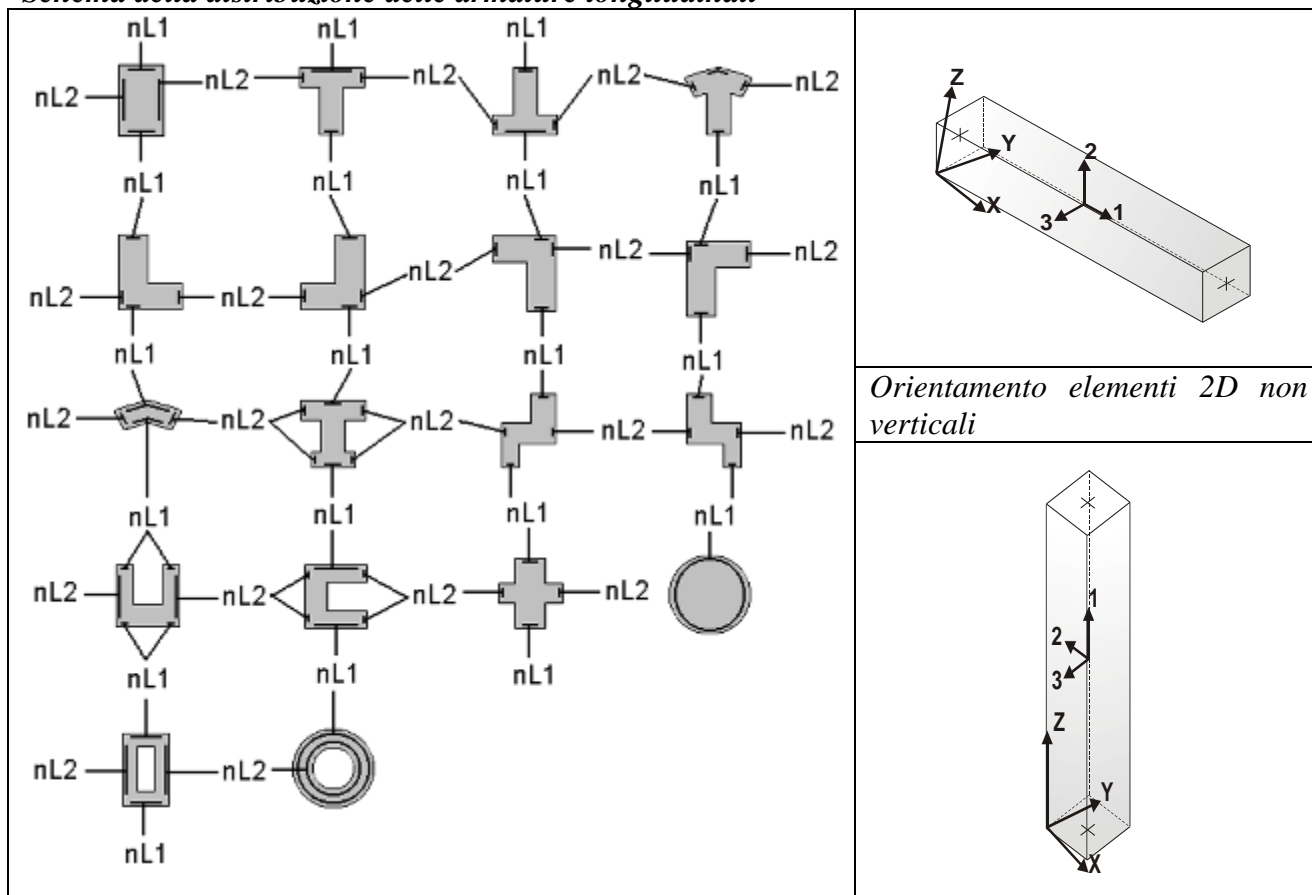
*Nel caso in cui si sia proceduto alla progettazione con le tensioni ammissibili (T.A.) vengono riportate le massime tensioni nell'elemento (massima compressione nel calcestruzzo, massima compressione media nel calcestruzzo, massima tensione nell'acciaio, massima tensione tangenziale) con l'indicazione delle combinazioni in cui si sono attinti i rispettivi valori.*

*Nel caso in cui la struttura abbia comportamento dissipativo e sia prevista la progettazione con il criterio della gerarchia delle resistenze (G.R.) vengono riportate le verifiche di sovraresistenza e del nodo.*

*Per gli elementi tipo pilastro sono riportati numero e diametro dei ferri di vertice, numero e diametro di ferri disposti lungo i lati L1 (paralleli alla base della sezione) e lungo i lati L2 (paralleli all'altezza della sezione).*

*Per gli elementi tipo trave sono riportati infine le quantità di armatura inferiore e superiore.*

**Schema della distribuzione delle armature longitudinali**



*Orientamento elementi 2D non verticali*



**RADDOPPIO LINEA GENOVA - VENTIMIGLIA  
TRATTA FINALE LIGURE - ANDORA**

**PROGETTO DEFINITIVO  
FV01 – Fermata Finale Ligure  
RELAZIONE DI CALCOLO – PENSILINA IN ACCIAIO**

COMMESSA IV01	LOTTO 00	CODIFICA D 26 CL	DOCUMENTO FV0100 004	REV. A	FOGLIO 196 di 220
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*Orientamento elementi 2D  
verticali*

## PROGETTAZIONE DELLE FONDAZIONI

Il D.M.17/01/2018 - par: 7.2.5 prevede:

“Sia per CD“*A*” sia per CD“*B*” il dimensionamento delle strutture di fondazione e la verifica di sicurezza del complesso fondazione-terreno devono essere eseguiti assumendo come azione in fondazione, trasmessa dagli elementi soprastanti, una tra le seguenti:

- quella derivante dall’analisi strutturale eseguita ipotizzando comportamento strutturale non dissipativo;
- [...];
- quella trasferita dagli elementi soprastanti nell’ipotesi di comportamento strutturale dissipativo, amplificata di un coefficiente pari a 1,30 in CD“*A*” e 1,10 in CD“*B*”;

Nel contesto visualizzazione risultati e nella stampa della relazione sulle fondazioni PRO\_SAP mostra le sollecitazioni che derivano dall’analisi non incrementate sia in termini di pressioni sul terreno che in termini di sollecitazioni.

La progettazione degli elementi strutturali con proprietà fondazione è effettuata da PRO\_SAP (per travi e platee) o da PRO\_CAD Plinti (per plinti e pali di fondazione) incrementando le sollecitazioni delle combinazioni con sisma di un coefficiente pari 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

Per i bicchieri dei plinti di fondazione prefabbricati l’incremento delle sollecitazioni ha un fattore pari a 1.2 in CDB e 1.35 in CDA.

N.B.: nel caso di comportamento strutturale non dissipativo la progettazione viene effettuata senza nessun incremento.

Le verifiche geotecniche vengono effettuate dal modulo geotecnico incrementando automaticamente le sollecitazioni del fattore 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

N.B.: nel caso di comportamento strutturale non dissipativo le verifiche geotecniche vengono effettuate senza nessun incremento.

### Simbologia adottata nelle tabelle di verifica

Per le verifiche agli S.L. dei pilastri è presente una tabella con i simboli di seguito descritti:

$M_P$	$X$	$Y$	Numero della pilastrata ( <i>P</i> ) e posizione in pianta ( <i>X</i> , <i>Y</i> )
<i>Pilas.</i>	numero identificativo dell’elemento <i>D2</i>		
<i>Note</i>	Codici identificativi delle sezione ( <i>s</i> ) e materiale ( <i>m</i> ) pilastro		
<i>Stato</i>	Codici relativi all’esito delle verifiche effettuate appresso descritte		
<i>Quota</i>	Quota sezione di verifica		
$\%A_f$	Percentuale di area di armatura rispetto a quella di calcestruzzo		
<i>r. snell.</i>	Rapporto di snellezza $\lambda$ su $\lambda^*$ : valore superiore a 1 per elementi snelli nel caso in cui viene effettuata la verifica con il metodo diretto dello stato di equilibrio		
<i>Armat. long.</i>	Numero e diametro ( <i>d</i> ) dei ferri di armatura longitudinale distinti in ferri di vertice + ferri di lato nelle posizioni <i>nL1</i> e <i>nL2</i> , come da schemi in figura precedente		

<i>V N/M</i>	<i>Verifica a pressoflessione con rapporto Ed/Rd: valore minore o uguale a 1 per verifica positiva</i>
<i>V N sis</i>	<i>Verifica a compressione solo calcestruzzo con rapporto Nsd/Nrd ed Nrd calcolato come al punto 7.4.4.2.1: valore minore o uguale a 1 per verifica positiva</i>
<i>Staffe</i>	<i>Dati tratto di staffatura oggetto di verifica, nello specifico: numero delle braccia, diametro, passo, lunghezza L tratto</i>
<i>V V/T cls</i>	<i>Verifica a taglio/torsione con rapporto Ved/Vrd: valore minore o uguale a 1 per verifica positiva</i>
<i>Rif. cmb.</i>	<i>Riferimento combinazioni da cui si generano le verifiche più gravose per il pilastro</i>

*Per le verifiche alla G.R. dei pilastri è presente una tabella con i simboli di seguito descritti:*

<i>Pilas.</i>	<i>numero identificativo dell'elemento D2 pilastro</i>
<i>sovr. Xi (Xf)</i>	<i>Verifica sovreresistenza come da formula 7.4.4 in direzione X, alla base (i) ed alla sommità (f): rapporto tra i momenti resistenti dei pilastri e delle travi. La verifica è positiva se maggiore del <math>\gamma_{Ra}</math> adottato</i>
<i>sovr. Yi (Yf)</i>	<i>Verifica sovreresistenza come da formula 7.4.4 in direzione Y, alla base (i) ed alla sommità (f): rapporto tra i momenti resistenti dei pilastri e delle travi. La verifica è positiva se maggiore del <math>\gamma_{Ra}</math> adottato</i>
<i>M 2-2 i (f)</i>	<i>Valore del momento resistente 2-2 alla base (i) ed alla sommità (f) con massimo momento in presenza dello sforzo normale di calcolo</i>
<i>M 3-3 i (f)</i>	<i>Valore del momento resistente 3-3 alla base (i) ed alla sommità (f) con massimo momento in presenza dello sforzo normale di calcolo</i>
<i>Luce per V</i>	<i>Luce di calcolo per la definizione del taglio (generato dai momenti resistenti)</i>
<i>V (M2-2) (M3-3)</i>	<i>Valore del taglio generato dai momenti resistenti 2-2 (3-3)</i>

*Per le verifiche dei dettagli costruttivi per la duttilità è presente una tabella con i simboli di seguito descritti:*

*(Non presente nel caso di comportamento strutturale non dissipativo)*

<i>Pilas</i>	<i>Numero identificativo D2 pilastro</i>
<i>ni</i>	<i>Sforzo assiale adimensionalizzato di progetto relativo alla combinazione sismica SLV</i>
<i>alfaomega</i>	<i>Prodotto tra il coefficiente di efficacia del confinamento e il rapporto meccanico dell'armatura trasversale di confinamento all'interno del nodo</i>
<i>V.7.4.29 2-2 (3-3)</i>	<i>Rapporto tra la domanda di staffe minima nel nodo e il rapporto meccanico dell'armatura trasversale di confinamento inserito all'interno del nodo in direzione 2 (3)</i>
<i>V. 7.4.29 Stato</i>	<i>Codici relativi all'esito della verifica 7.4.29</i>
<i>dmu_fi (3-3)</i>	<i>2-2 Domanda in duttilità di curvatura in direzione 2 (3)</i>
<i>cmu_fi (3-3)</i>	<i>2-2 Capacità in duttilità di curvatura in direzione 2 (3)</i>
<i>V. dutt. 2-2 (3-3)</i>	<i>Rapporto tra la domanda in duttilità di curvatura e la capacità in duttilità di curvatura in direzione 2 (3)</i>

Per le verifiche nodi trave-pilastro di elementi nuovi è presente una tabella con i simboli di seguito descritti:

<i>Nodo</i>	<i>Numero identificativo del nodo trave-pilastro</i>
<i>Stato</i>	<i>Esito delle verifiche</i>
<i>Pilastro</i>	<i>Numero identificativo D2 pilastro</i>
<i>Diam st</i>	<i>Diametro staffe nodo</i>
<i>Passo</i>	<i>Passo staffe nodo</i>
<i>n. br. 2 (3)</i>	<i>Numero braccia staffe per il taglio in direzione 2 (3)</i>
<i>Bj2 (3)</i>	<i>Larghezza effettiva del nodo per il taglio in direzione 2 (3)</i>
<i>Hjc2 (3)</i>	<i>Distanza tra le giaciture più esterne delle armature del pilastro per il taglio in direzione 2 (3)</i>
<i>V. 7.4.8</i>	<i>Rapporto tra il taglio Vjbd e il taglio resistente come da formula 7.4.8</i>
<i>V. Ash</i>	<i>Rapporto tra il passo staffe calcolato secondo il capitolo 7.4.4.3.1. e il passo staffe effettivamente inserita nel nodo. Nel caso di valore indica passo staffe utilizzato deriva dalle formule presenti nel paragrafo 7.4.4.3.1. Nel caso di valore minore di 1 il passo staffe utilizzato deriva del pilastro superiore o inferiore al nodo</i>
<i>7.4.10</i>	<i>Check passo staffe valutato in funzione della formula 7.4.10:</i> <ul style="list-style-type: none"> <li>• <i>SI il passo staffe è calcolato utilizzando la formula 7.4.10;</i></li> <li>• <i>NO il passo staffe è calcolato utilizzando le formule 7.4.11 e/o 7.4.12;</i></li> <li>• <i>NR calcolo passo staffe non richiesto;</i></li> </ul>
<i>Rif. comb.</i>	<i>Riferimento combinazioni da cui si generano le verifiche più gravose per il nodo</i>

Per le verifiche nodi trave-pilastro di elementi esistenti è presente una tabella con i simboli di seguito descritti:

<i>Pilastro I</i>	<i>Numero identificativo D2 del pilastro inferiore.</i>
<i>Pilastro S</i>	<i>Numero identificativo D2 del pilastro superiore.</i>
<i>Nodo</i>	<i>Numero identificativo del nodo trave-pilastro.</i>
<i>SL cod</i>	<i>Stato limite di riferimento e relativo esito delle verifiche.</i>
<i>ver. (+)</i>	<i>Fattore di sicurezza nei riguardi della verifica di resistenza a compressione (verificato se &lt; 1.00).</i>
<i>V +</i>	<i>Azione di Taglio presente al di sopra del nodo nella verifica di resistenza a compressione.</i>
<i>V + af s</i>	<i>Sollecitazione di trazione presente nell' armatura longitudinale superiore della trave nella verifica di resistenza a compressione.</i>
<i>N +</i>	<i>Azione Assiale presente al di sopra del nodo nella verifica di resistenza a compressione.</i>
<i>ver. (-)</i>	<i>Fattore di sicurezza nei riguardi della verifica di resistenza a trazione (verificato se &lt; 1.00).</i>
<i>V -</i>	<i>Azione di Taglio presente al di sopra del nodo nella verifica di resistenza a trazione.</i>
<i>V - af s</i>	<i>Sollecitazione di trazione presente nell' armatura longitudinale superiore della trave nella verifica di resistenza a trazione.</i>
<i>N -</i>	<i>Azione Assiale presente al di sopra del nodo nella verifica di resistenza a trazione.</i>
<i>AreaV2</i>	<i>Area resistente del nodo in direzione 2 (<math>A_{j2}=b_{j2}*h_{jc2}</math>).</i>



<i>AreaV3</i>	<i>Area resistente del nodo in direzione 3 (<math>A_{j3}=b_{j3}*h_{jc3}</math>).</i>
<i>Rif. comb.</i>	<i>Combinazione (direzione) di riferimento nella verifica di trazione.</i>

*Per le verifiche agli S.L. delle travi è presente una tabella con i simboli di seguito descritti:*

<i>M_T</i>	<i>Z</i>	<i>P</i>	<i>Numero della travata (T), quota media (Z), n° pilastrata iniziale (P) e finale (P)</i>
<i>P</i>	<i>(nodo in assenza di pilastrata)</i>		
<i>Trave</i>	<i>numero identificativo dell'elemento D2</i>		
<i>Note</i>	<i>Codici identificativi sezione (s) e materiale (m) trave; sono inoltre presenti le sigle relative all'esito delle verifiche effettuate appresso descritte</i>		
<i>%Af</i>	<i>Percentuale di area di armatura rispetto a quella di calcestruzzo</i>		
<i>Af inf.</i>	<i>Area di armatura longitudinale posta all'intradosso</i>		
<i>Af sup</i>	<i>Area di armatura longitudinale posta all'estradosso</i>		
<i>Af long.</i>	<i>Area complessiva armatura longitudinale</i>		
<i>x/d</i>	<i>rapporto tra posizione dell'asse neutro e altezza utile</i>		
<i>V N/M</i>	<i>Verifica a pressoflessione rapporto Ed/Rd: valore minore o uguale a 1 per verifica positiva</i>		
<i>Staffe</i>	<i>Dati tratto di staffatura oggetto di verifica, nello specifico: numero delle braccia, diametro, passo, lunghezza L tratto</i>		
<i>V V/T cls</i>	<i>Verifica a taglio/torsione con rapporto Ved/Vrd: valore minore o uguale a 1 per verifica positiva</i>		
<i>Rif. cmb.</i>	<i>Riferimento combinazioni da cui si generano le verifiche più gravose per la trave</i>		

*Per le verifiche alla G.R. delle travi è presente una tabella con i simboli di seguito descritti:*

<i>Trave</i>	<i>numero identificativo dell'elemento D2 trave</i>
<i>M negativo i</i>	<i>Valore del momento resistente negativo all'estremità iniziale i (finale f) della trave</i>
<i>M positivo i</i>	<i>Valore del momento resistente positivo all'estremità iniziale i (finale f) della trave</i>
<i>Luce per V</i>	<i>Luce di calcolo per la definizione del taglio (generato dai momenti resistenti)</i>
<i>V M-i M+f</i>	<i>Taglio generato dai momenti resistenti negativo i e positivo f</i>
<i>V M+i M-f</i>	<i>Taglio generato dai momenti resistenti positivo i e negativo f</i>
<i>VEd, min</i>	<i>Valore di taglio minimo per verifica condizioni p.to 7.4.4.1.1 armatura diagonale (solo per CD "A")</i>
<i>VEd, max</i>	<i>Valore di taglio massimo per verifica condizioni p.to 7.4.4.1.1 armatura diagonale (solo per CD "A")</i>
<i>Vr1</i>	<i>Valore di taglio come da formula 7.4.1 per armatura diagonale (solo per CD "A")</i>
<i>As</i>	<i>Area singolo ordine armature diagonali come da formula 7.4.2 (solo per CD "A")</i>

*Per le verifiche a taglio ciclico di travi e pilastri esistenti è presente una tabella con i simboli di seguito descritti:*

<i>Trave/Pilastro</i>	<i>Numero identificativo dell'elemento D2 trave/pilastro</i>
<i>V. SLV</i>	<i>Codice relativo all'esito delle verifiche</i>
<i>Nodo</i>	<i>Numero identificativo del nodo di verifica</i>
<i>Ver. VC</i>	<i>Fattore di sicurezza nei confronti della verifica a taglio ciclico (verificato se &lt; 1.00)</i>

<i>Direz.</i>	<i>Direzione di verifica</i>
<i>N fr</i>	<i>Valore di sforzo normale calcolato con fattore di comportamento fragile</i>
<i>V fr</i>	<i>Valore di taglio calcolato con fattore di comportamento fragile</i>
<i>M fr</i>	<i>Valore di momento calcolato con fattore di comportamento fragile</i>
<i>N dutt</i>	<i>Valore di sforzo normale calcolato con fattore di comportamento duttile</i>
<i>LV</i>	<i>Lunghezza di taglio</i>
<i>Mud,pl</i>	<i>Parte plastica della domanda di duttilità</i>
<i>V cic</i>	<i>Resistenza a taglio in condizioni cicliche (C8.7.2.8)</i>
<i>Cmb</i>	<i>Riferimento combinazioni da cui si generano le verifiche più gravose</i>

Per le verifiche alle T.A. di pilastri e travi è presente una tabella con i simboli di seguito descritti:

<i>M_P X Y</i>	<i>Numero della pilastrata (P) e posizione in pianta (X,Y)</i>
<i>M_T Z P P</i>	<i>Numero della travata, quota media pilastrata iniziale e finale (nodo in assenza di pilastrata)</i>
<i>Pilas. Trave</i>	<i>o numero identificativo dell'elemento D2</i>
<i>Note</i>	<i>Viene riportato il codice relativo alla sezione(s) e relativo al materiale(m); nella terza riga viene riportato il valore delle snellezze in direzione 2-2 e 3-3</i>
<i>Stato</i>	<i>Codici di verifica relativi alle tensioni normali e alle tensioni tangenziali</i>
<i>Quota</i>	<i>Ascissa del punto di verifica</i>
<i>%Af</i>	<i>Percentuale di area di armatura rispetto a quella di calcestruzzo</i>
<i>Armat. long.</i>	<i>Numero e diametro dei ferri di armatura longitudinale: ferri di vertice + ferri di lato (come da fig. precedente)</i>
<i>Af inf.</i>	<i>Area di armatura longitudinale posta all'intradosso della trave</i>
<i>Af sup</i>	<i>Area di armatura longitudinale posta all'estradosso della trave</i>
<i>Sc max</i>	<i>Massima tensione di compressione del calcestruzzo</i>
<i>Sc med</i>	<i>Massima tensione media di compressione del calcestruzzo</i>
<i>Sf max</i>	<i>Tensione massima nell'acciaio</i>
<i>staffe</i>	<i>Vengono riportati i dati del tratto di staffatura in cui cade la sezione di verifica; in particolare: numero dei bracci, diametro, passo, lunghezza tratto</i>
<i>Tau max</i>	<i>Tensione massima tangenziale nel cls</i>
<i>Rif. comb</i>	<i>Combinazioni in cui si generano i seguenti valori di tensione: Sc max, Sc med, Sf max, Tau max</i>
<i>AfV</i>	<i>area dell'armatura atta ad assorbire le azioni di taglio</i>
<i>AfT</i>	<i>area dell'armatura atta ad assorbire le azioni di torsione</i>
<i>Scorr. P</i>	<i>Scorrimento dei piegati</i>
<i>Af long.</i>	<i>Area del ferro longitudinale aggiuntivo per assorbire la torsione</i>

			<b>M_T= 376</b>	<b>Z=2.83e-05</b>	<b>P=3</b>	<b>P=4</b>		
Trave	Note	Pos. cm	x/d	V N/M	V V/T cls	V V/T acc	Rif. cmb	
1338	ok,ok	0.0	0.07	0.10	0.10	0.10	41,32,8	

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	s=10,m=1	142.6	0.07	0.12	0.05	0.07	8,44,44	
		285.2	0.07	0.08	0.11	0.11	44,32,8	
			<b>M_T= 377</b>	<b>Z=2.83e-05</b>	<b>P=15</b>	<b>P=16</b>		
Trave	Note	Pos.	x/d	V N/M	V V/T cls	V V/T acc	Rif. cmb	
1339	ok,ok	0.0	0.07	0.13	0.15	0.17	41,7,7	
	s=10,m=1	142.6	0.07	0.20	0.07	0.09	7,44,44	
		285.2	0.07	0.11	0.16	0.18	44,7,7	
			<b>M_T= 378</b>	<b>Z=2.83e-05</b>	<b>P=27</b>	<b>P=28</b>		
Trave	Note	Pos.	x/d	V N/M	V V/T cls	V V/T acc	Rif. cmb	
1340	ok,ok	0.0	0.07	0.11	0.13	0.16	41,7,7	
	s=10,m=1	142.6	0.07	0.18	0.06	0.08	7,44,44	
		285.2	0.07	0.09	0.14	0.17	44,7,7	
			<b>M_T= 379</b>	<b>Z=2.83e-05</b>	<b>P=123</b>	<b>P=124</b>		
Trave	Note	Pos.	x/d	V N/M	V V/T cls	V V/T acc	Rif. cmb	
1341	ok,ok	0.0	0.07	0.09	0.13	0.10	49,32,8	
	s=10,m=1	142.6	0.07	0.12	0.05	0.06	8,52,52	
		285.2	0.07	0.08	0.14	0.11	52,32,8	
			<b>M_T= 380</b>	<b>Z=2.83e-05</b>	<b>P=111</b>	<b>P=112</b>		
Trave	Note	Pos.	x/d	V N/M	V V/T cls	V V/T acc	Rif. cmb	
1342	ok,ok	0.0	0.07	0.13	0.14	0.17	49,8,7	
	s=10,m=1	142.6	0.07	0.20	0.06	0.08	7,52,52	
		285.2	0.07	0.11	0.15	0.18	52,8,7	
			<b>M_T= 381</b>	<b>Z=2.83e-05</b>	<b>P=99</b>	<b>P=100</b>		
Trave	Note	Pos.	x/d	V N/M	V V/T cls	V V/T acc	Rif. cmb	
1343	ok,ok	0.0	0.07	0.13	0.14	0.16	49,8,7	
	s=10,m=1	142.6	0.07	0.19	0.07	0.09	7,52,52	
		285.2	0.07	0.11	0.15	0.17	52,8,7	
			<b>M_T= 382</b>	<b>Z=2.83e-05</b>	<b>P=87</b>	<b>P=88</b>		
Trave	Note	Pos.	x/d	V N/M	V V/T cls	V V/T acc	Rif. cmb	
1344	ok,ok	0.0	0.07	0.12	0.13	0.16	41,8,7	
	s=10,m=1	142.6	0.07	0.19	0.06	0.08	7,52,44	
		285.2	0.07	0.10	0.14	0.17	44,8,7	
			<b>M_T= 383</b>	<b>Z=2.83e-05</b>	<b>P=75</b>	<b>P=76</b>		
Trave	Note	Pos.	x/d	V N/M	V V/T cls	V V/T acc	Rif. cmb	
1345	ok,ok	0.0	0.07	0.11	0.13	0.16	41,8,7	
	s=10,m=1	142.6	0.07	0.19	0.05	0.07	7,44,44	
		285.2	0.07	0.09	0.13	0.17	44,8,7	
<b>Trave</b>			<b>x/d</b>	<b>V N/M</b>	<b>V V/T cls</b>	<b>V V/T acc</b>		
			0.07	0.20	0.16	0.18		

**STATI LIMITE D' ESERCIZIO**
**LEGENDA TABELLA STATI LIMITE D' ESERCIZIO**

*In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.*

*In particolare vengono riportati, in relazione al tipo di elemento strutturale, i risultati relativi alle tre categorie di combinazione considerate:*

- *Combinazioni rare*
- *Combinazioni frequenti*
- *Combinazioni quasi permanenti.*

*I valori di interesse sono i seguenti:*

<b>rRfck</b>	<i>rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni rare</i>	<i>[normalizzato a 1]</i>
<b>rRfyk</b>	<i>rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare</i>	<i>[normalizzato a 1]</i>
<b>rPfck</b>	<i>rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni quasi permanenti</i>	<i>[normalizzato a 1]</i>
<b>wR</b>	<i>apertura caratteristica delle fessure in combinazioni rare</i>	<i>[mm]</i>
<b>wF</b>	<i>apertura caratteristica delle fessure in combinazioni frequenti</i>	<i>[mm]</i>
<b>wP</b>	<i>apertura caratteristica delle fessure in combinazioni quasi permanenti</i>	<i>[mm]</i>
<b>dR</b>	<i>massima deformazione in combinazioni rare</i>	
<b>dF</b>	<i>massima deformazione in combinazioni frequenti</i>	
<b>dP</b>	<i>massima deformazione in combinazioni quasi permanenti</i>	

*Per ognuno dei nove valori soprariportati viene indicata (Rif.cmb) la combinazione in cui si è verificato.*

*In relazione al tipo di elemento strutturale i valori sono selezionati nel modo seguente:*

<i>pilastr</i>	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>	<i>per sezioni significative</i>
<i>travi</i>	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>	<i>per sezioni significative</i>
	<b>wR</b>	<b>wF</b>	<b>wP</b>	<i>per sezioni significative</i>
	<b>dR</b>	<b>dF</b>	<b>dP</b>	<i>massimi in campata</i>
	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>	<i>massimi nei nodi dell'elemento</i>
<i>setti e gusci</i>	<b>wR</b>	<b>wF</b>	<b>wP</b>	<i>massimi nei nodi dell'elemento</i>

*Si precisa che i valori di massima deformazione per travi sono riferiti al piano verticale (piano locale 1-2 con momenti flettenti 3-3).*

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Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	cm					mm	mm	mm		cm	cm	cm	
1338	0.0	0.01	0.03	0.01	125,124,108	0.0	0.0	0.0	0,0,0	-0.38	0.31	0.28	125,113,108
	142.6	0.04	0.09	0.03	125,125,108	0.0	0.0	0.0	0,0,0				
	285.2	3.60e-03	9.99e-03	2.69e-03	133,122,108	0.0	0.0	0.0	0,0,0				
1339	0.0	0.01	0.04	0.01	125,124,108	0.0	0.0	0.0	0,0,0	0.43	-0.33	-0.30	124,113,108
	142.6	0.06	0.15	0.05	125,124,108	0.0	0.0	0.0	0,0,0				
	285.2	5.02e-03	0.01	3.05e-03	123,122,107	0.0	0.0	0.0	0,0,0				
1340	0.0	0.01	0.04	0.01	125,124,108	0.0	0.0	0.0	0,0,0	-0.41	0.32	0.29	124,113,108
	142.6	0.06	0.14	0.04	125,124,108	0.0	0.0	0.0	0,0,0				
	285.2	4.96e-03	0.01	3.02e-03	123,122,107	0.0	0.0	0.0	0,0,0				
1341	0.0	0.01	0.03	0.01	125,124,108	0.0	0.0	0.0	0,0,0	-0.38	0.31	0.28	124,113,108
	142.6	0.04	0.09	0.03	125,125,108	0.0	0.0	0.0	0,0,0				
	285.2	3.53e-03	9.93e-03	2.66e-03	133,122,108	0.0	0.0	0.0	0,0,0				
1342	0.0	0.01	0.04	0.01	125,124,108	0.0	0.0	0.0	0,0,0	-0.43	-0.34	-0.30	125,113,108
	142.6	0.06	0.15	0.05	124,124,108	0.0	0.0	0.0	0,0,0				
	285.2	4.98e-03	0.01	3.05e-03	123,122,107	0.0	0.0	0.0	0,0,0				
1343	0.0	0.01	0.04	0.01	125,124,108	0.0	0.0	0.0	0,0,0	-0.43	-0.34	-0.30	125,113,108
	142.6	0.06	0.15	0.05	125,124,108	0.0	0.0	0.0	0,0,0				
	285.2	4.87e-03	0.01	2.99e-03	123,122,107	0.0	0.0	0.0	0,0,0				
1344	0.0	0.01	0.04	0.01	125,124,108	0.0	0.0	0.0	0,0,0	0.43	0.34	0.30	125,113,108
	142.6	0.06	0.15	0.05	125,124,108	0.0	0.0	0.0	0,0,0				
	285.2	4.88e-03	0.01	3.00e-03	123,122,107	0.0	0.0	0.0	0,0,0				
1345	0.0	0.01	0.04	0.01	125,124,108	0.0	0.0	0.0	0,0,0	0.41	-0.32	-0.29	125,113,108
	142.6	0.06	0.15	0.05	125,124,108	0.0	0.0	0.0	0,0,0				
	285.2	4.98e-03	0.01	3.04e-03	123,122,107	0.0	0.0	0.0	0,0,0				
<b>Trave</b>		<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>		<b>wR</b>	<b>wF</b>	<b>wP</b>		<b>dR</b>	<b>dF</b>	<b>dP</b>	
										-0.43	-0.34	-0.30	
		0.06	0.15	0.05		0.0	0.0	0.0		0.43	0.34	0.30	

## 10.5 VERIFICA CAPACITA' PORTANTE DELLE FONDAZIONI

Di seguito si riporta il calcolo della capacità portante limite del terreno di fondazione sottostante il fabbricato previsto da progetto.

**Fondazioni Dirette  
Verifica in tensioni efficaci**

$$q_{lim} = c' \cdot N_c \cdot s_c \cdot d_c \cdot i_c \cdot b_c \cdot q_c + q \cdot N_q \cdot s_q \cdot d_q \cdot i_q \cdot b_q \cdot q_q + 0,5 \cdot \gamma \cdot B \cdot N_\gamma \cdot s_\gamma \cdot d_\gamma \cdot i_\gamma \cdot b_\gamma \cdot q_\gamma$$

D = Profondità del piano di appoggio

$e_B$  = Eccentricità in direzione B ( $e_B = M_b/N$ )

$e_L$  = Eccentricità in direzione L ( $e_L = M_L/N$ )      (per fondazione nastriforme  $e_L = 0$ ;  $L^* = L$ )

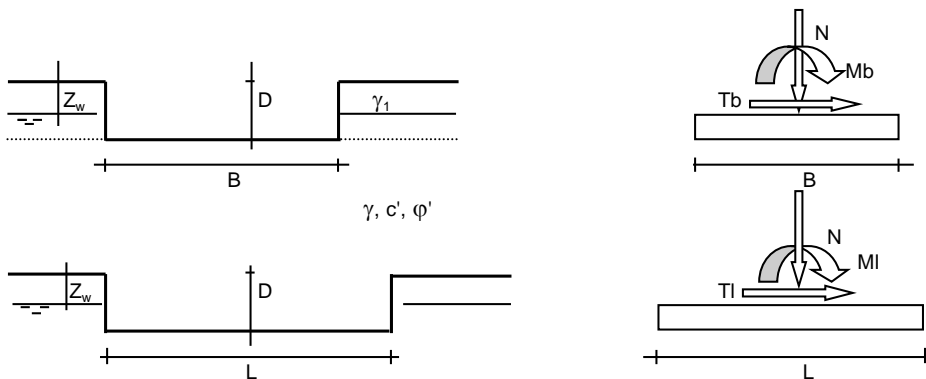
$B^*$  = Larghezza fittizia della fondazione ( $B^* = B - 2 \cdot e_B$ )

$L^*$  = Lunghezza fittizia della fondazione ( $L^* = L - 2 \cdot e_L$ )

(per fondazione nastriforme le sollecitazioni agenti sono riferite all'unità di lunghezza)

**coefficienti parziali**

Metodo di calcolo	azioni		proprietà del terreno		resistenze		
	permanenti	temporanee variabili	$\tan \phi'$	$c'$	$q_{lim}$	scorr	
Stato Limite Ultimo	A1+M1+R1	○	1,30	1,50	1,00	1,00	1,00
	A2+M2+R2	○	1,00	1,30	1,25	1,25	1,80
	SISMA	○	1,00	1,00	1,25	1,25	1,80
	A1+M1+R3	●	1,30	1,50	1,00	1,00	2,30
	SISMA	○	1,00	1,00	1,00	1,00	2,30
Tensioni Ammissibili	○	1,00	1,00	1,00	1,00	3,00	3,00
Definiti dal Progettista	○	1,35	1,50	1,00	1,00	1,40	1,00



(Per fondazione nastriforme  $L = 100$  m)

B = 4,00 (m)  
L = 1,20 (m)  
D = 0,70 (m)



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TRATTA FINALE LIGURE - ANDORA**

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*Peso unità di volume del terreno*

$$\begin{aligned}\gamma_1 &= 18,00 \quad (\text{kN/mc}) \\ \gamma &= 18,00 \quad (\text{kN/mc})\end{aligned}$$

*Valori caratteristici di resistenza del terreno*

$$\begin{aligned}c' &= 0,00 \quad (\text{kN/mq}) \\ \varphi' &= 27,00 \quad (^\circ)\end{aligned}$$

*Valori di progetto*

$$\begin{aligned}c' &= 0,00 \quad (\text{kN/mq}) \\ \varphi' &= 27,00 \quad (^\circ)\end{aligned}$$

*Profondità della falda*

$$Z_w = 5,20 \quad (\text{m})$$

$$\begin{aligned}e_B &= 0,00 \quad (\text{m}) \\ e_L &= 0,00 \quad (\text{m})\end{aligned}$$

$$\begin{aligned}B^* &= 4,00 \quad (\text{m}) \\ L^* &= 1,20 \quad (\text{m})\end{aligned}$$

**q : sovraccarico alla profondità D**

$$q = 12,60 \quad (\text{kN/mq})$$

**$\gamma$  : peso di volume del terreno di fondazione**

$$\gamma = 18,00 \quad (\text{kN/mc})$$

**Nc, Nq, Ny : coefficienti di capacità portante**

$$N_q = \tan^2(45 + \varphi'/2) \cdot e^{(\pi \cdot \gamma \cdot D \cdot \tan \varphi')}$$

$$N_q = 13,20$$

$$N_c = (N_q - 1) / \tan \varphi'$$

$$N_c = 23,94$$

$$N_y = 2 \cdot (N_q + 1) \cdot \tan \varphi'$$

$$N_y = 14,47$$

**s<sub>c</sub>, s<sub>q</sub>, s<sub>y</sub> : fattori di forma**

$$s_c = 1 + B^* N_q / (L^* N_c)$$

$$s_c = 1,17$$

$$s_q = 1 + B^* \tan \varphi' / L^*$$

$$s_q = 1,15$$

$$s_y = 1 - 0,4 \cdot B^* / L^*$$

$$s_y = 0,88$$

**i<sub>c</sub>, i<sub>q</sub>, i<sub>y</sub> : fattori di inclinazione del carico**

$$m_b = (2 + B^* / L^*) / (1 + B^* / L^*) = 1,77$$

$$\theta = \arctg(T_b/T_l) = 90,00 \quad (^\circ)$$

$$m_l = (2 + L^* / B^*) / (1 + L^* / B^*) = 1,23$$

$$m = 1,77 \quad (-)$$

(m=2 nel caso di fondazione nastriforme e  
m=(m<sub>b</sub>sin<sup>2</sup>θ+m<sub>l</sub>cos<sup>2</sup>θ) in tutti gli altri casi)

$$i_q = (1 - H / (N + B^* L^* c' \cotg \varphi'))^m$$

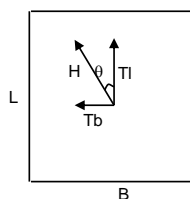
$$i_q = 1,00$$

$$i_c = i_q - (1 - i_q) / (N_q - 1)$$

$$i_c = 1,00$$

$$i_y = (1 - H / (N + B^* L^* c' \cotg \varphi'))^{(m+1)}$$

$$i_y = 1,00$$



**d<sub>c</sub>, d<sub>q</sub>, d<sub>y</sub> : fattori di profondità del piano di appoggio**

$$\text{per } D/B^* \leq 1; d_q = 1 + 2 D \tan \varphi' (1 - \sin \varphi')^2 / B^*$$

$$\text{per } D/B^* > 1; d_q = 1 + (2 \tan \varphi' (1 - \sin \varphi')^2) \cdot \arctan(D / B^*)$$

$$d_q = 1,18$$

$$d_c = d_q - (1 - d_q) / (N_c \tan \varphi')$$

$$d_c = 1,19$$

**b<sub>c</sub>, b<sub>q</sub>, b<sub>γ</sub> : fattori di inclinazione base della fondazione**

$$b_q = (1 - \beta_f \tan \varphi')^2 \qquad \beta_f + \beta_p = 0,00 \qquad \beta_f + \beta_p < 45$$

$$b_q = 1,00$$

$$b_c = b_q - (1 - b_q) / (N_c \tan \varphi')$$

$$b_c = 1,00$$

$$b_\gamma = b_q$$

$$b_\gamma = 1,00$$

**g<sub>c</sub>, g<sub>q</sub>, g<sub>γ</sub> : fattori di inclinazione piano di campagna**

$$g_q = (1 - \tan \beta_p)^2 \qquad \beta_f + \beta_p = 0,00 \qquad \beta_f + \beta_p < 45$$

$$g_q = 1,00$$

$$g_c = g_q - (1 - g_q) / (N_c \tan \varphi')$$

$$g_c = 1,00$$

$$g_\gamma = g_q$$

$$g_\gamma = 1,00$$

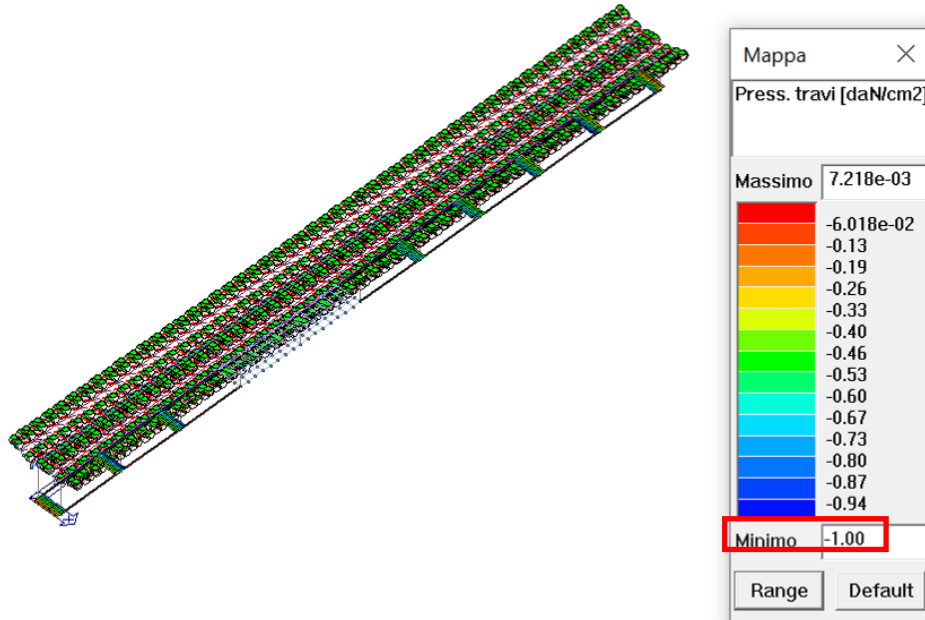
**Carico limite unitario**

$$q_{lim} = 363,23 \quad (\text{kN/m}^2)$$

**Verifica di sicurezza capacità portante**

$$q_{lim} / \gamma_R = 157,93$$

Di seguito si riportano le tensioni trasmesse dalle travi di fondazione sul terreno sottostante. Tali tensioni sono state calcolate secondo i criteri riportati al punto 7.2.5. del D.M. 17 gennaio del 2018.



Output del software di calcolo Prosap – tensioni trasmesse dalla struttura sul terreno sottostante (Kg/cm<sup>2</sup>)

Come si evince dai grafici sopra riportati la massima tensione trasmessa dalle fondazioni al terreno sottostante è pari a  $q_E = 1.00 \text{ kg/cm}^2$

$$q_E = 1.00 \text{ kg/cm}^2 < q_{U,E} = 1.57 \text{ kg/cm}^2$$

Dove:

$q_E$  = massima tensione trasmessa dalla struttura in elevazione alla struttura sottostante.

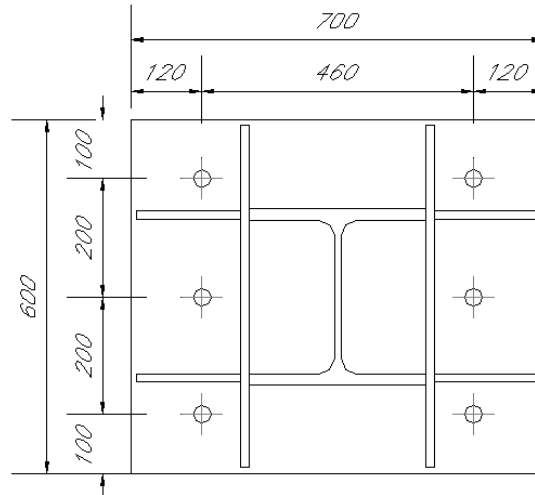
$q_{U,E} = q_{lim} / R3 = 3.63 / 2.30 = 1.57 \text{ kg/cm}^2$  (capacità portante di progetto del terreno di fondazione)

## 10.6 VERIFICA DELLE UNIONI

- Giunto al piede delle colonne

L'unione tra la colonna e la fondazione è assicurata da una piastra in acciaio di dimensioni 700x600x30 mm saldata al piede della colonna opportunamente irrigidita da nervature, essa è ancorata al getto di calcestruzzo da 6 tirafondi M27 Classe 8.8.

Di seguito un immagine del giunto di base:



La colonna in acciaio trasmette alla fondazione le caratteristiche di sollecitazione di sforzo normale, taglio e momento flettente.

Dalle analisi svolte è emerso che al piede della colonna si hanno le seguenti massime sollecitazioni:

$$N_u = 216.0 \text{ kN}$$

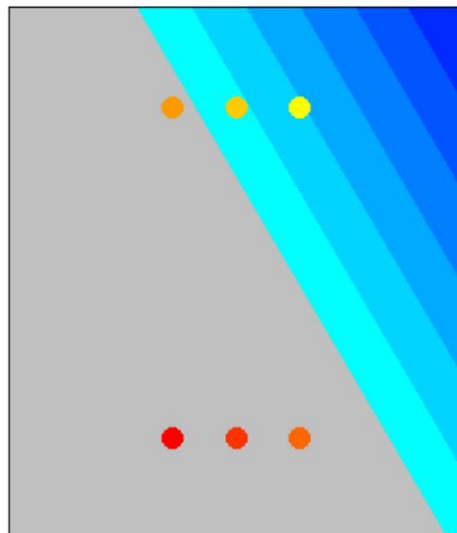
$$M_{ux} = 60.00 \text{ kNm}$$

$$M_{uy} = 48.00 \text{ kNm}$$

$$V_{ux} = 29.00 \text{ kN}$$

$$V_{uy} = 21.00 \text{ kN}$$

E' stato adottato il programma PRO\_VLIM per definire le sollecitazioni trasmesse sotto piastra:



Cmb n. 1 SLE c.c.rare

N = 216,0 kN

Mx = 60,0 kN m

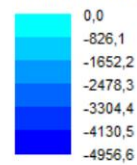
My = 53,0 kN m

Valori limite:

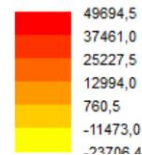
Tens. Lim. CLS = 12480,0 kN/mq

Tens. Lim. Acciaio = 360000,0 kN/mq

Tensioni calcestruzzo [kN/mq]



Tensioni acciaio [kN/mq]



L'Azione di trazione agente sul singolo bullone è pari a:

$$F_{Bbd} = A_{res} \cdot \alpha_s = 459 \cdot 0,49 = 225 \text{ kN}$$

L'azione di taglio sarà pari a:

$$F_{vd} = \sqrt{(V_{ux}^2 + V_{uy}^2)}/6 = \sqrt{(29.00^2 + 21.00^2)}/6 = 6.00 \text{ KN}$$

VERIFICA A TAGLIO E TRAZIONE BULLONI			
<b>CALCOLO DELLA RESISTENZA A TAGLIO</b>			
$F_v, Rd = (0,6 * f_{tb} * A_{res}) / \gamma_{M2}$	<b>176,26</b> kN	resistenza a taglio nel piano del gambo per bulloni di classe 4.6, 5.6 e 8.8	
dove:			
$f_{tb}$	800 N/mm <sup>2</sup>	resistenza a rottura dell'acciaio del bullone	
$A$	572 mm <sup>2</sup>	area nominale del gambo della vite	
$A_{res}$	459 mm <sup>2</sup>	area resistente della vite	
$\gamma_{M2}$	1,25 adim.	coefficiente di sicurezza delle unioni	
$F_v, Rd = (0,6 * f_{tb} * A) / \gamma_{M2}$	<b>219,65</b> kN	resistenza a taglio nel piano del gambo non filettato per bulloni di tutte le classi	
$F_b, Rd = (K * \alpha * f_{tk} * d * t) / \gamma_{M2}$	<b>464,40</b> kN	Resistenza a rifollamento del piatto dell'unione	
dove:			
$\alpha_{min}$	1 adim.	per bulloni di bordo nella direzione del carico applicato	
$\alpha_{b1} = e_1 / (3 * d_0)$	1,149425 adim.	coeff.	
$\alpha_{b2} = f_{tb} / f_{tk}$	1,860465 adim.	coeff.	
$\alpha_{b3}$	1 adim.	coeff.	
$K_{min}$	2,5 adim.	per bulloni di bordo nella direzione perpendicolare al carico applicato	
$K_{b1} = ((2,8 * e_2) / d_0) - 1,70$	7,955172 adim.	coeff.	
$K_{b2}$	2,5 adim.	coeff.	
$e_1$	100 mm	distanza del bullone dal bordo esterno in direzione parallela all'azione	
$e_2$	100 mm	distanza del bullone dal bordo esterno in direzione perpendicolare all'azione	
$f_{tk}$	430 N/mm <sup>2</sup>	tensione di rottura acciaio della piastra di collegamento	
$d_0$	29 mm	diametro del foro	
$d$	27 mm	diametro nominale gambi del bullone	
$t$	20 mm	spessore piastra di collegamento	
<b><math>F_v, Rd, min</math></b>	<b>176,256</b> kN	Resistenza minima a taglio per classe di resistenza 4.6 5.6 e 8.8	
<b>CALCOLO DELLA RESISTENZA A TRAZIONE</b>			
$F_t, Rd = 0,9 * f_{tb} * A_{res} / \gamma_{M2}$	<b>264,384</b> kN	resistenza a trazione dei bulloni	
$B_p, Rd = (0,6 * t_p * d_m * f_{tk}) / \gamma_{M2}$	<b>349,9718</b> kN	resistenza a punzonamento piatto collegato	
dove:			
$d_m$	27 mm	minore diametro dado, diametro testa del bullone	
$t_p$	20 mm	spessore del piatto collegato	
$f_{tk}$	430 N/mm <sup>2</sup>	tensione di rottura acciaio piatto collegato	
<b><math>F_t, R_{dmin}</math></b>	<b>264,384</b> kN	resistenza di calcolo a trazione (minore tra $F_t, Rd$ e $B_p, Rd$ )	
<b>CALCOLO DELLE SOLLECITAZIONI AGENTI SUL SINGOLO BULLONE</b>			
$T_b = T_e / n$	6 kN	taglio agente sul singolo bullone	
dove:			
$n$	6 adim.	numero bulloni	
$T_e$	36 kN	taglio agente sulla sezione	
<b><math>F_v, ed</math></b>	6,0 kN	taglio totale agente sul singolo bullone	
<b><math>F_t, Ed</math></b>	225 kN	sfrozo di trazione sul singolo bullone	
<b>VERIFICA A TAGLIO E TRAZIONE DEL BULLONE</b>			
$(F_v, ed / F_v, Rd, min) + (F_t, Ed / (1,4 * F_t, Rd)) < 1$	<b>0,89</b> Verificato	per bulloni di classe 4.6 5.6 e 8.8	

Sono presenti 2 cordoni di saldatura ad angolo, la verifica verrà condotta sulla sezione di gola in posizione ribaltata sulle facce dei fazzoletti, seguendo quindi le istruzioni delle NTC 2018:

Considerando la sezione di gola in posizione ribaltata, si indicano con  $n_{\perp}$  e con  $t_{\perp}$  la tensione normale e la tensione tangenziale perpendicolari all'asse del cordone.

La verifica dei cordoni d'angolo si effettua controllando che siano soddisfatte simultaneamente le due condizioni

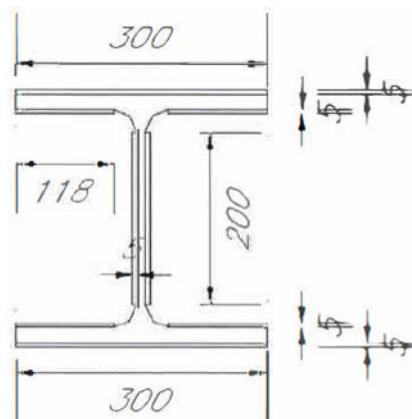
$$\sqrt{n_{\perp}^2 + t_{\perp}^2} \leq \beta_1 \cdot f_{yk} \quad [4.2.84]$$

$$|n_{\perp}| + |t_{\perp}| \leq \beta_2 \cdot f_{yk} \quad [4.2.85]$$

dove  $f_{yk}$  è la tensione di snervamento caratteristica ed i coefficienti  $\beta_1$  e  $\beta_2$  sono dati, in funzione del grado di acciaio, in Tab. 4.2.XIX.

Tab. 4.2.XIX - Valori dei coefficienti  $\beta_1$  e  $\beta_2$

	S235	S275 - S355	S420 - S460
$\beta_1$	0,85	0,70	0,62
$\beta_2$	1,0	0,85	0,75



Sezione e saldature previste da progetto

La verifica verrà condotta assegnando ai cordoni di saldatura che affiancano l'anima le 2 forze di taglio, mentre a quelli delle ali i 2 momenti e lo sforzo normale

La lunghezza dei cordoni è pari a 200 mm, lo spessore di 6 mm, l'area totale è pari a 2400 mm<sup>2</sup>, con lo stato di sollecitazione agente, risulta sulle sezioni di gola ribaltate, che:

Nel nostro caso  $f_{yk} = 275 \text{ N/mm}^2$  ( $\beta_1 = 0.70$  ( $\beta_2 = 0.85$ ))

- Verifica saldature anima

$$n_{\perp} = (Vdy)/A = 21000/2400 = 8.75 \text{ N/mm}^2$$

$$t_{//} = (Vdx)/A = 29000/2400 = 12.08 \text{ N/mm}^2$$

$$\sqrt{(n_{-}^2 + t_{//}^2)} = \sqrt{(8,75^2 + 12.08^2)} = 15.00 \text{ N/mm}^2 < 233,75 \text{ N/mm}^2 \text{ VERIFICA OK}$$

$$n_{+t_{//}} = 8.75 + 11.25 = 20.83 \text{ N/mm}^2 < 192,50 \text{ N/mm}^2 \text{ VERIFICA OK}$$

- Verifica saldature ali

Le azioni agenti sono pari a :

$$N_u = 216.0 \text{ kN}$$

$$M_{ux} = 60.00 \text{ kNm}$$

$$M_{uy} = 48.00 \text{ kNm}$$

Le caratteristiche geometriche della sezione sono le seguenti:

$$A = 64.32 \text{ cm}^2$$

$$J_x = 14531.50 \text{ cm}^4$$

$$W_x = 891.50 \text{ cm}^3$$

$$J_y = 8346.67 \text{ cm}^4$$

$$W_y = 556.44 \text{ cm}^3$$

Nel nostro caso  $f_{yk} = 275 \text{ N/mm}^2$  ( $\beta_1 = 0.70$  ( $\beta_2 = 0.85$ ))

$$n_{-} = N_d/A + M_{dx}/W_x + M_{dy}/W_y = (216000/6432) + (60000000/891500) + (48000000/556440) = 187.0 \text{ N/mm}^2$$

$$\sqrt{(n_{-}^2 + t_{//}^2)} = \sqrt{(187.00^2)} = 187.00 \text{ N/mm}^2 < 233,75 \text{ N/mm}^2 \text{ VERIFICA OK}$$

$$n_{+t_{//}} = 187.00 \text{ N/mm}^2 < 192,50 \text{ N/mm}^2 \text{ VERIFICA OK}$$

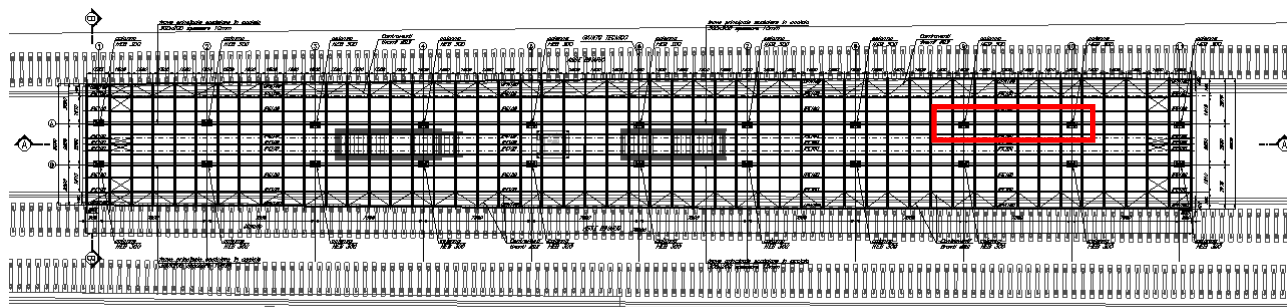


## 10.7 VERIFICA DI ACCETTABILITÀ DEI RISULTATI

Di seguito si riportano alcuni controlli effettuati per verificare l'attendibilità dei risultati forniti dal software impiegato. Nel punto 10.2 delle NTC 17-01-2018, è specificato che spetta al progettista il compito di sottoporre i risultati a controlli che ne comprovino l'attendibilità.

Di seguito, vengono elencati e sinteticamente illustrati i controlli svolti, specificando di volta in volta i metodi e gli schemi semplificati utilizzati.

### ➤ Verifica delle sollecitazioni agenti sulla trave principale (200x300x10 mm)



In evidenza la trave 200x300x10 mm, oggetto della presente verifica

Analisi dei carichi agenti sulla trave:

- $G_{k1}$  = Carichi permanenti strutturali ( peso proprio) = 0.10 kN/m<sup>2</sup>
- $G_{k2}$  = Carichi permanenti non strutturali (finiture) = 0.40 kN/m<sup>2</sup>
- $Q_k$  = Carichi Variabili (Neve) = 2.13 kN/m<sup>2</sup>

$$q_{SLU} \text{ (carico agente sulla trave)} = (0.80 * 1.3) + (0.40 * 1.5) + (2.13 * 1.50) = 5.00 \text{ kN/m}^2$$

$$q_{SLU}/m = q_{SLU} * l_i = 5.00 * 2.850 = 15.00 \text{ kN/m}$$

Dove:

$l_i$  = lunghezza di influenza

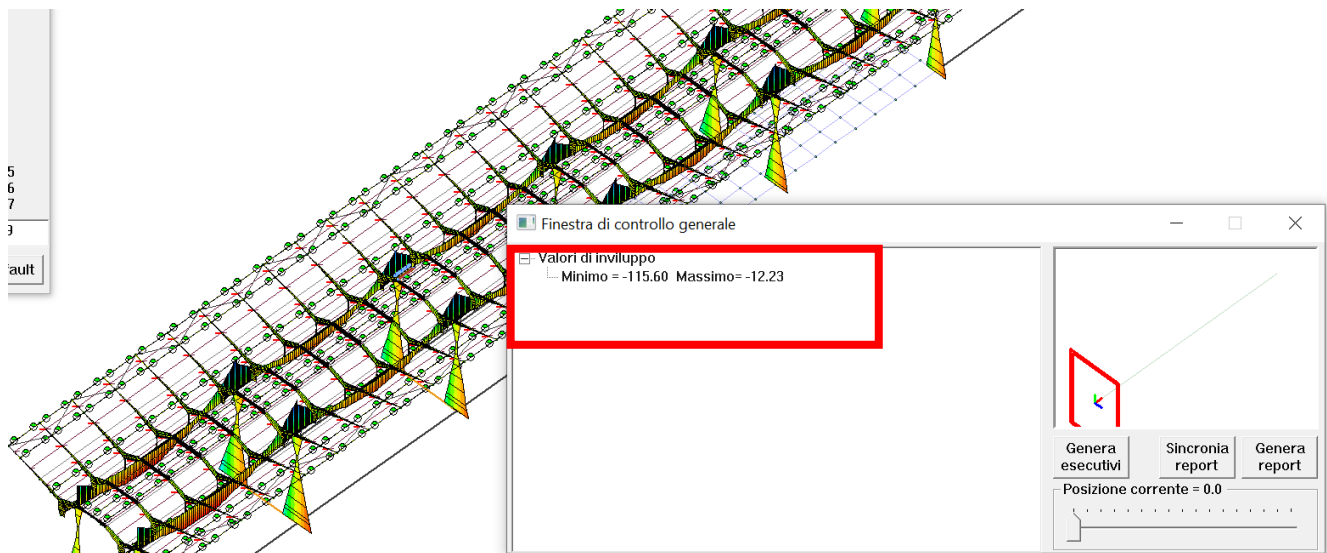
Il massimo momento flettente agente sulla trave sarà pari a :

$$M_{max} = (Q_{slu}/m * l^2)/12 = (15.00 * 7.50^2)/10 = 106.00 \text{ kN*m}$$

$$T_{max} = (Q_{slu}/m * l)/2 = (15.00 * 7.50)/2 = 57.00 \text{ kN}$$

Le sollecitazioni massime alle combinazioni allo SLU ottenute tramite il software utilizzato nell'esecuzione dei calcoli di verifica per la trave scatolare 200x300x10 della copertura:

- $M_{max} = 115.60 \text{ kN*m}$
- $V_{max} = 78.00 \text{ kN}$



Come si può notare le sollecitazioni agenti sulla trave 200x300x10 mm della copertura della pensilina calcolate manualmente sono perfettamente in linea con quelle calcolate dal software utilizzato. Pertanto ne è verificata l'affidabilità dei risultati.

## 11. MANUALE DI VALIDAZIONE DEL SOFTWARE DI CALCOLO

Di seguito si riporta la documentazione relativa l'affidabilità del software di calcolo impiegato nelle analisi e verifiche effettuate sulla struttura oggetto dell'intervento.

## DICHIARAZIONE DI AFFIDABILITÀ

Dichiarazione del produttore-distributore di PRO\_SAP Professional SAP riguardante l'affidabilità del codice (NTC 2018 - Paragrafo 10.2)

### Origine e caratteristiche dei codici di calcolo

**Titolo:** PRO\_SAP Professional Structural Analysis Program

**Autore-Produttore:** 2S.I. Software e Servizi per l'Ingegneria s.r.l., Ferrara

### Affidabilità dei codici

#### - Inquadramento teorico della metodologia

L'analisi strutturale viene effettuata con il metodo degli elementi finiti. Il metodo si basa sulla schematizzazione della struttura in elementi connessi in corrispondenza di un numero prefissato di punti denominati nodi. I nodi sono definiti dalle tre coordinate cartesiane in un sistema di riferimento globale. L'analisi strutturale è condotta con il metodo degli spostamenti per la valutazione dello stato tensiodeformativo indotto da carichi statici.

L'analisi strutturale è condotta con il metodo dell'analisi modale e dello spettro di risposta in termini di accelerazione per la valutazione dello stato tensiodeformativo indotto da carichi dinamici (tra i quali quelli di tipo sismico).

Gli elementi, lineari e non lineari, utilizzati per la modellazione dello schema statico della struttura sono i seguenti:

**Elemento TRUSS (asta)**

**Elemento BEAM (trave)**

**Elemento MEMBRANE (membrana)**

**Elemento PLATE (piastra-guscio)**

**Elemento BRICK (solido)**

**Elemento CINGHIA**

**Elemento BOUNDARY (molla)**

**Elemento STIFFNESS**

**(matrice di rigidità)**

#### - Casi prova che consentano un riscontro dell'affidabilità

2S.I. ha verificato, in collaborazione con il DISTART dell'Università di Bologna e con il Dipartimento di Ingegneria dell'Università di Ferrara, l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche.

E' possibile reperire la documentazione contenente alcuni dei più significativi casi trattati al seguente link: <http://www.2si.it/affidabilita.php>

#### - Filtri di autodiagnostica

Il programma prevede una serie di controlli automatici (check) che consentono l'individuazione di errori di modellazione.

Al termine dell'analisi un controllo automatico identifica la presenza di spostamenti o rotazioni abnormi.

#### Garanzia di qualità

Dal 1 dicembre 1999 2S.I. ha prodotto un manuale di qualità in funzione dei requisiti della norma di riferimento UNI EN ISO 9001.

Tutte le attività dell'azienda sono regolate dalla documentazione e dalle procedure in esso contenute.

In relazione alla attività di validazione dei prodotti software si dichiara inoltre quanto segue:

- la fase di progetto degli algoritmi è preceduta dalla ricerca di risultati di confronto reperibili in bibliografia o riproducibili con calcoli manuali;

- la fase di implementazione degli algoritmi è continuamente validata con strumenti automatici (tools di sviluppo) e attraverso confronti;

- il software che implementa gli algoritmi è testato, confrontato e controllato anche da tecnici qualificati che non sono intervenuti nelle precedenti fasi.

Nella produzione del solutore FEM 2S.I. implementa componenti sviluppati da CM2 - Computing Objects SARL spin-off dell'École Centrale Paris, France. E' disponibile la documentazione di affidabilità di tali componenti all'indirizzo web:

[http://www.2si.it/software/download/manuali/pro\\_sap\\_quaderni/Affidabilita/benchmarks\\_e\\_sap.zip](http://www.2si.it/software/download/manuali/pro_sap_quaderni/Affidabilita/benchmarks_e_sap.zip)