



COMUNE DI LAVAGNO

PROVINCIA DI VERONA

AMPLIAMENTO DEL CIMITERO DI VAGO DI  
LAVAGNO

PROGETTO DEFINITIVO - ESECUTIVO

2.4

PRATICA CEMENTI ARMATI  
FASCICOLO DEI CALCOLI

Progettista

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Data

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# FASCICOLO DEI CALCOLI

Progetto di ampliamento del cimitero di Vago  
di Lavagno nel Comune di Lavagno (VR).

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Committente: **COMUNE DI LAVAGNO**

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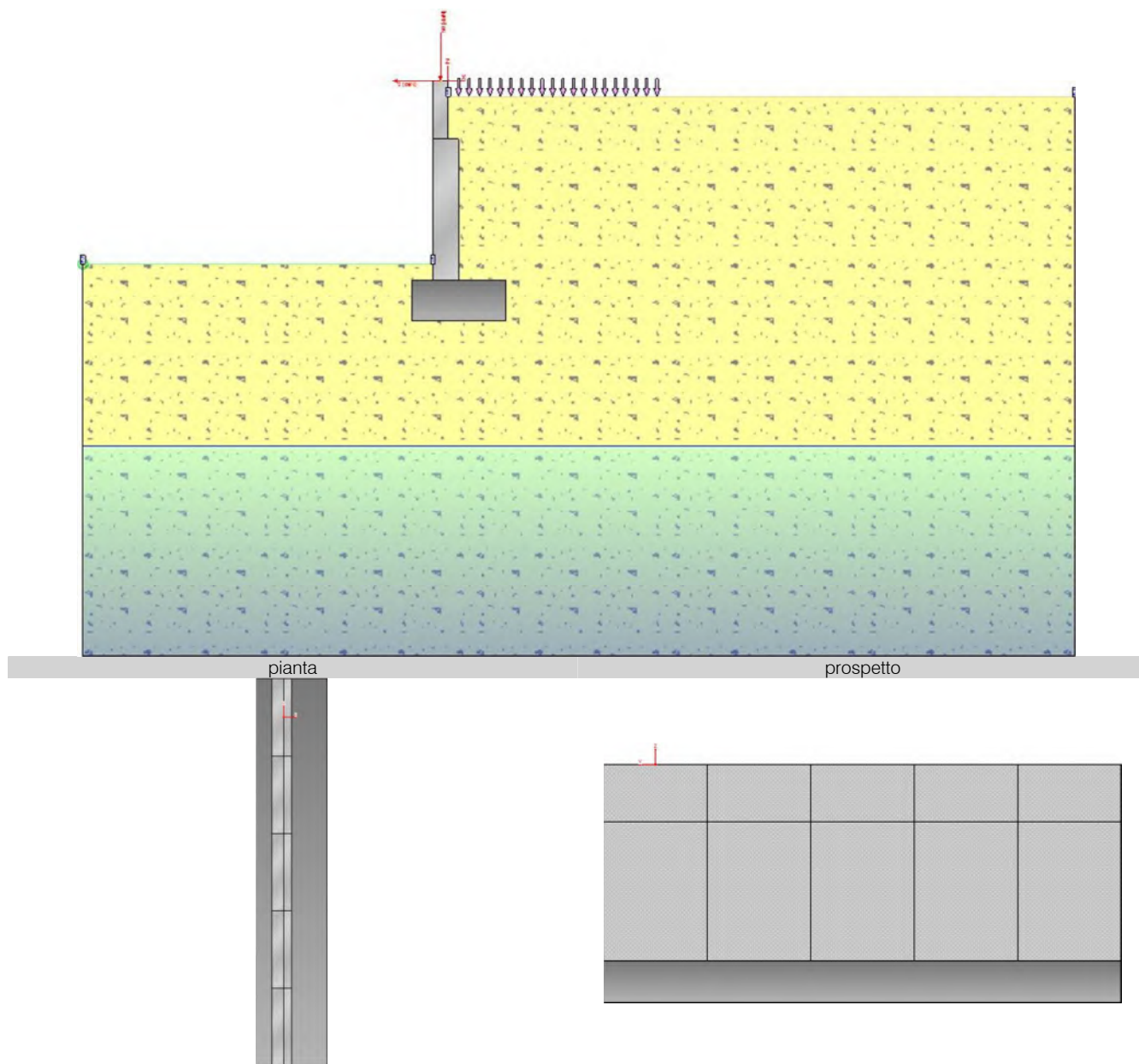
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# 1 VERIFICA MURETTO DI SOSTEGNO CONTRO TERRA



## 1.1 - RIASSUNTO VERIFICHE

Di seguito viene riportata la tabella riassuntiva con i fattori di sicurezza minimi ( $= \text{rapporto } R_d/E_d \text{ o } C_d/E_d$ ) calcolati per tutte le verifiche. La verifica si intende superata se il valore del rapporto è maggiore o uguale a 1.0. Le caselle con i trattini indicano che la verifica corrispondente non va svolta per il relativo Caso di Carico.

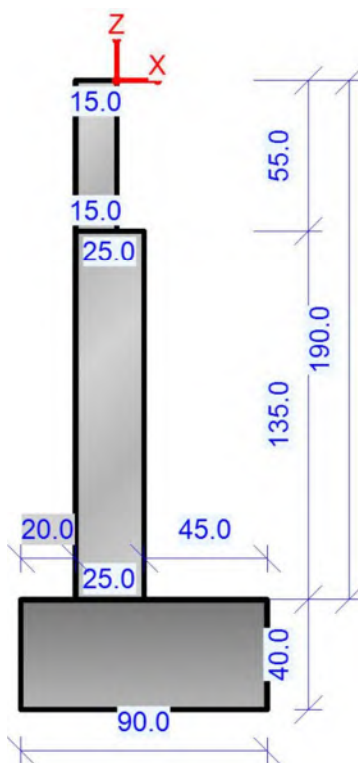
caso di carico	capacità portante	scorrime- nto	ribaltame- nto	stabilità globale	FS struttural e Fusto(pr esso- flessione )	FS struttural e Fusto(ta glio)	FS struttural e Fusto(te nsione cls)	FS struttural e Fusto(te nsione acciaio)	FS struttural e Fusto(ap ertura fessure)	FS struttural e Fondazio ne(flessi one)	FS struttural e Fondazio ne(taglio )	FS struttural e Fondazio ne(tensio ne cls)	FS struttural e Fondazio ne(tensio ne acciaio)	FS struttural e Fondazio ne(apert ura fessure)
<sup>1</sup> STR(SLU)	2.44	2.3	Stabile 1.93 (s.max. = 0.61 [cm])	---	4.32	10.4	---	---	---	9.4	7.93	---	---	---

2 SLV_SISMA _SU(SLV)	1.49	1.76	Stabile 1.55 (s.max. = 0.98 [cm])	---	3.51	9.76	---	---	---	8.75	7.22	---	---	---
3 SLV_SISMA _GIU(SLV)	1.44	1.82	Stabile 1.57 (s.max. = 1.03 [cm])	---	3.22	9.11	---	---	---	7.99	6.68	---	---	---
4 SLD_SISMA _SU(SLD)	2.29	1.87	---	---	---	---	---	---	---	---	---	---	---	---
5 SLD_SISMA _GIU(SLD)	2.19	1.89	---	---	---	---	---	---	---	---	---	---	---	---
6 RARA(RARA )	---	---	---	---	---	---	12.44	5.71	---	---	---	32.37	8.24	---
7 FREQ.(FRE QUENTE)	---	---	---	---	---	---	---	---	8.46	---	---	---	---	7
8 Q.PERM.(Q UASI_PERM )	---	---	---	---	---	---	9.33	---	6.34	---	---	24.28	---	5.25

Muro Verificato! [Verifiche Superate]

## 1.2 - ELEMENTI STRUTTURALI

### 1.2.1 - MURO E FONDAZIONE



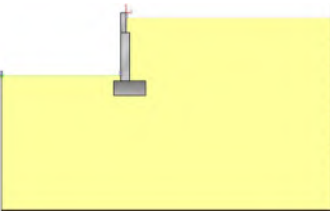
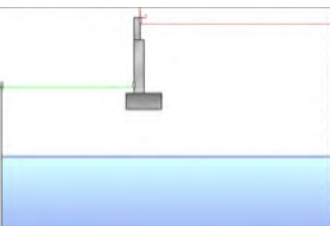
## 1.3 - TERRENO

### 1.3.1 - PROFILI DI MONTE E VALLE

MONTE				VALLE		
punto	x [cm]	z [cm]	-	punto	x [cm]	z [cm]
1	0	-15	-	1	-15	-175
2	600	-15	-	2	-350	-175

Coordinate vertici profilo di monte e di valle.

## 1.3.2 - STRATI

strato e terreno	dati inseriti	disegno strato	coord. (x;z)
- Strato 1 (strato 1) Terreno 2 (non coesivo) (Sabbia) $c' = 0$ [daN/cm <sup>2</sup> ] $\gamma = 0.00186$ [daN/cm <sup>3</sup> ] $\varphi = 34^\circ$	$h = -15$ $i = 0^\circ$		1 (600;-550)[cm] 2 (600;-15)[cm] 3 (0;-15)[cm] 4 (0;-55)[cm] 5 (10;-55)[cm] 6 (10;-190)[cm] 7 (55;-190)[cm] 8 (55;-230)[cm] 9 (-35;-230)[cm] 10 (-35;-190)[cm] 11 (-15;-190)[cm] 12 (-15;-175)[cm] 13 (-350;-175)[cm] 14 (-350;-550)[cm]
- falda	$hV = -350$ $hM = -350$ $hl = -350$		1 (600;-550) 2 (600;-350) 3 (55;-350) 4 (10;-350) 5 (-35;-350) 6 (-350;-350) 7 (-350;-550)

Stratigrafia.

## 1.4 - NORMATIVA, MATERIALI E MODELLO DI CALCOLO

- Norme Tecniche per le Costruzioni 17/01/2018

- Approccio 2

Coeff. sulle azioni	Coeff. proprietà terreno	Coeff. resistenze
- permanenti/favorevole = 1 - permanenti/sfavorevole = 1.3 - permanenti non strutturali/favorevole = 0.8 - permanenti non strutturali/sfavorevole = 1.5 - variabili/favorevole = 0 - variabili/sfavorevole = 1.5	- Coesione = 1 - Angolo di attrito = 1 - Resistenza al taglio non drenata = 1	- Capacità portante = 1.4 - Scorrimento = 1.1 - Resistenza terreno a valle = 1.4 - Ribaltamento = 1.15 - Capacità portante (sisma) = 1.2 - Scorrimento (sisma) = 1 - Resistenza terreno a valle (sisma) = 1.2 - Ribaltamento (sisma) = 1

- Dati di progetto dell'azione sismica:

L'analisi è stata eseguita in condizioni sismiche; parametri scelti :

- località = LAVAGNO
- vita nominale = 100 anni
- classe d'uso = II
- SLU = SLV
- SLE = SLD
- categoria di sottosuolo = cat C
- categoria topografica = categoria T1
- $ag$  (SLV) =  $1.9533 \text{ m/s}^2$
- $F_0$  (SLV) = 2.4685
- $ag$  (SLD) =  $0.762 \text{ m/s}^2$
- $F_0$  (SLD) = 2.4743
- $\beta_m$  (SLV) = 0.38
- $\beta_m$  (SLD) = 0.47
- $\beta_r$  (SLV) = 0.57
- >  $k_h$  (muro,SLV) = 0.1063
- >  $k_v$  (muro,SLV) = 0.0532
- >  $k_h$  (muro,SLD) = 0.0548
- >  $k_v$  (muro,SLD) = 0.0274

-->  $k_h$  (ribaltamento,SLV) = 0.1595

-->  $k_v$  (ribaltamento,SLV) = 0.0797

**- Caratteristiche dei materiali:**

Calcestruzzo	Acciaio
- Descrizione = C25/30	- Descrizione = B450C
- $f_{ck} = 249$ [daN/cm <sup>2</sup> ]	- $E = 2100000$ [daN/cm <sup>2</sup> ]
- $\gamma_c = 1.5$	- $f_{yk} = 4500$ [daN/cm <sup>2</sup> ]
- $f_{cd} = 141.1$ [daN/cm <sup>2</sup> ]	- $f_{tk} = 5175$ [daN/cm <sup>2</sup> ]
- $E_{cm} = 314471.61$ [daN/cm <sup>2</sup> ]	- $\epsilon_{yd} = 0.1863$ %
- $\alpha_{cc} = 0.85$	- $\epsilon_{ud} = 6.7500$ %
- $\epsilon_{c2} = 0.2000$ %	- $\gamma_s = 1.15$
- $\epsilon_{cu2} = 0.3500$ %	- $f_{yd} = 3913.04$ [daN/cm <sup>2</sup> ]
- $\gamma$ (p.vol.) = 0.0025 [daN/cm <sup>3</sup> ]	- $f_{ud} = 4439.81$ [daN/cm <sup>2</sup> ]

Condizioni ambientali (fusto, monte) = ordinario (X0, XC1, XC2, XC3).

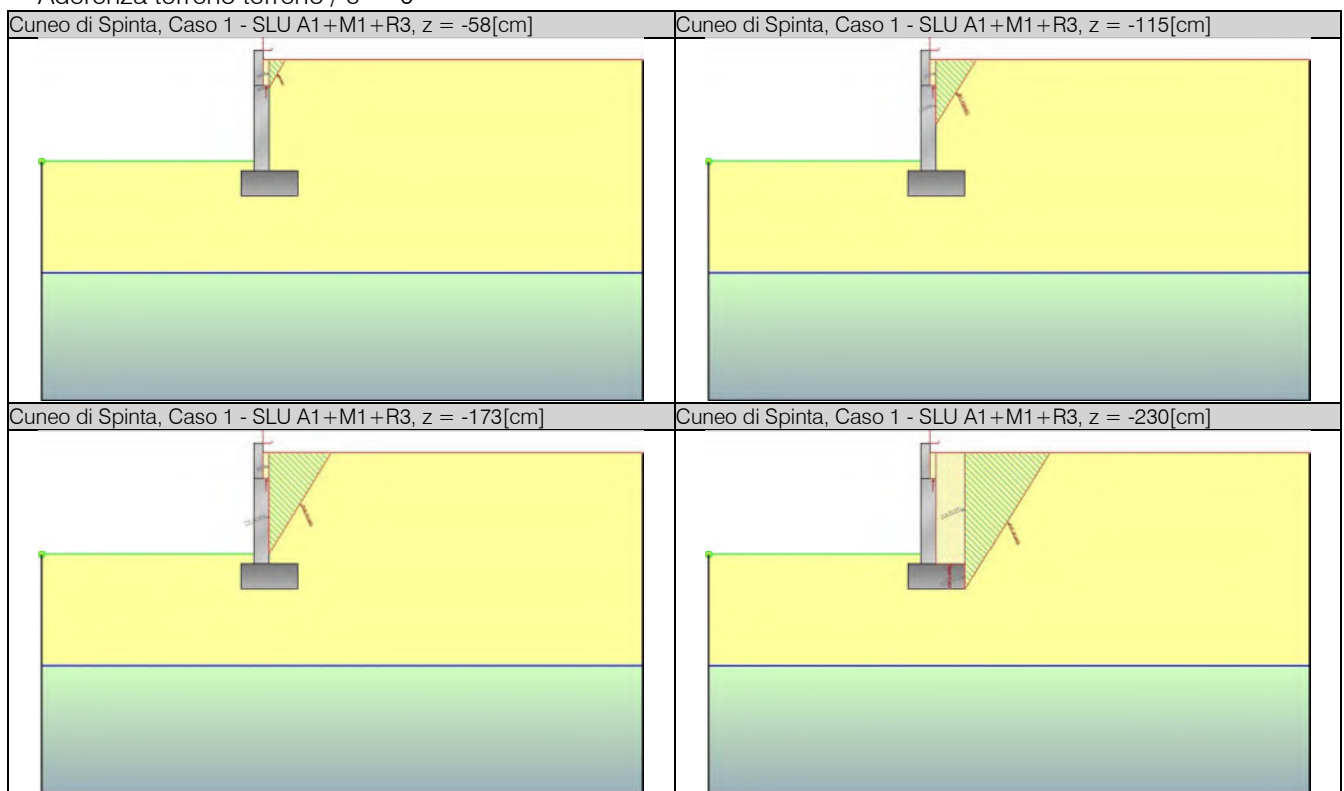
Condizioni ambientali (fusto, valle) = ordinario (X0, XC1, XC2, XC3).

Condizioni ambientali (fondazione) = ordinario (X0, XC1, XC2, XC3).

**- Opzioni di calcolo**

**Spinte calcolate con coefficiente di spinta attiva "ka"** (si considera il muro libero di traslare/ruotare al piede). Il calcolo della spinta è svolto secondo il metodo del cuneo di tentativo generalizzato (Rif.: Renato LANCELLOTTA "Geotecnica" (2004) - NAVFAC Design Manual 7.02 (1986)). Il metodo è iterativo e prevede la suddivisione del terreno a monte dell'opera in poligoni semplici definiti dal paramento, dalla successione stratigrafica e dalla superficie di scivolamento di tentativo. La procedura automatica vaglia numerose superfici di scivolamento ad ogni quota di calcolo lungo il paramento, determinando la configurazione che comporta la spinta massima sull'opera.

-	Attrito	muro	terreno	/	$\phi'$	=	0.67
-	Aderenza	muro	terreno	/	$c'$	=	0
-	Attrito	terreno	terreno	/	$\phi'$	=	0.67
-	Aderenza terreno terreno / $c' = 0$						

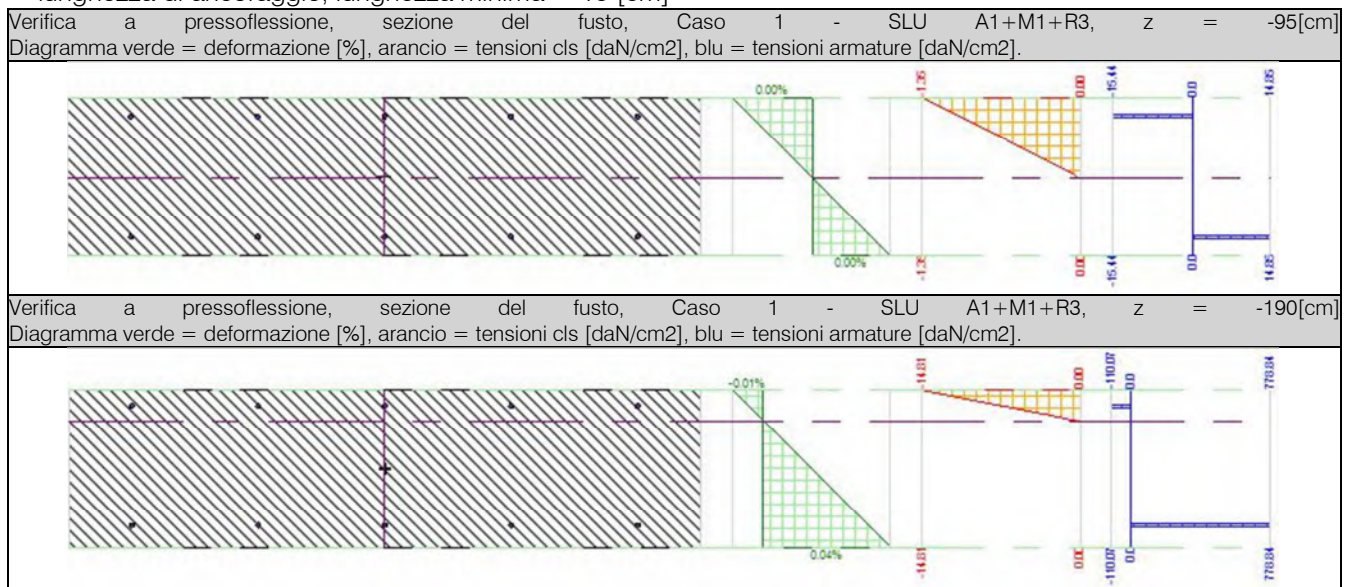


**La capacità portante della fondazione** nastriforme, su suolo omogeneo, viene calcolata con la formula di Brinch-Hansen (1970) considerando separatamente i contributi dovuti alla coesione, al sovraccarico laterale ed al peso del terreno, utilizzando i coefficienti di capacità portante suggeriti da vari Autori ed i coefficienti correttivi dovuti alla forma della fondazione (s), all'approfondimento (d), alla presenza di un'azione orizzontale (i), all'inclinazione del piano di posa (b) e del piano campagna (g). La resistenza a slittamento è valutata considerando l'attrito

sviluppato lungo la base della fondazione, e trascurando il contributo del terreno a lato.  
 - Attrito fond. terreno /  $\phi'$  o  $C_u$  = 1  
 - coeff. per calcolo della sottospinta idraulica = 0.1

**Il calcolo delle sollecitazioni e degli spostamenti** dell'opera viene svolto con il metodo degli elementi finiti (FEM). Gli elementi schematizzanti il muro hanno peso e caratteristiche meccaniche proprie dei materiali di cui è costituito. Il terreno spingente (a monte) è rappresentato per mezzo di azioni distribuite applicate sugli elementi. Il terreno di fondazione è rappresentato per mezzo di elementi finiti non-lineari (con parzializzazione), con opportuno coefficiente di reazione alla Winkler in compressione.  
 - lunghezze aste elevazione = 20 [cm]  
 - lunghezze aste fondazione = 10 [cm]  
 - coefficiente di reazione del terreno (Winkler) = 5 [daN/cm<sup>3</sup>]

**La verifica delle sezioni in cemento armato** viene eseguita a SLU e SLE. La pressoflessione è verificata a SLU con i diagrammi costitutivi parabola-rettangolo (cls) e bilatero (acciaio) [NTC18 4.1.2.1.2]. La resistenza nei confronti di sollecitazioni taglianti è verificata a SLU [NTC18 4.1.2.3.5]. A SLE si verifica lo stato limite di apertura delle fessure [NTC18 4.1.2.2.4], e la tensione massima nei materiali [NTC18 4.1.2.2.5].  
 - apertura delle fessure:  $k_t=0.40$ ,  $k_1=0.80$ ,  $k_2=0.50$ ,  $k_3=3.40$ ,  $k_4=0.43$ . interasse barre non limitato.  
 - lunghezza di ancoraggio, numero di diametri = 20  
 - lunghezza di ancoraggio, lunghezza minima = 15 [cm]



## 1.5 - CARICHI

### 1.5.1 - CARICHI SUL TERRENO

#### 1.5.1.1 - Carichi Nastriformi:

Carico 1:

- descrizione = carico nastriforme 1
- tipologia = nessuno
- estremi ( $x_i$ ;  $x_f$ ) = 10 [cm]; 200 [cm]
- tipo inserimento = sul profilo
- intensità = 0.02 [daN/cm<sup>2</sup>]

### 1.5.2 - CARICHI SULLA STRUTTURA

- Carichi in Testa muro:

In testa al muro è applicata la seguente terna di sollecitazione:

Carico 2:

- descrizione = carico testa muro
- tipologia = permanente non strutturale
- N = 50 [daN] a modulo

-  $M = 0$  [daN\*cm] a modulo

-  $T = 0$  [daN] a modulo

Considera come carico principale variabile (per coeff. psi [NTC18 2.5.3]) i casi di tipo: tutti

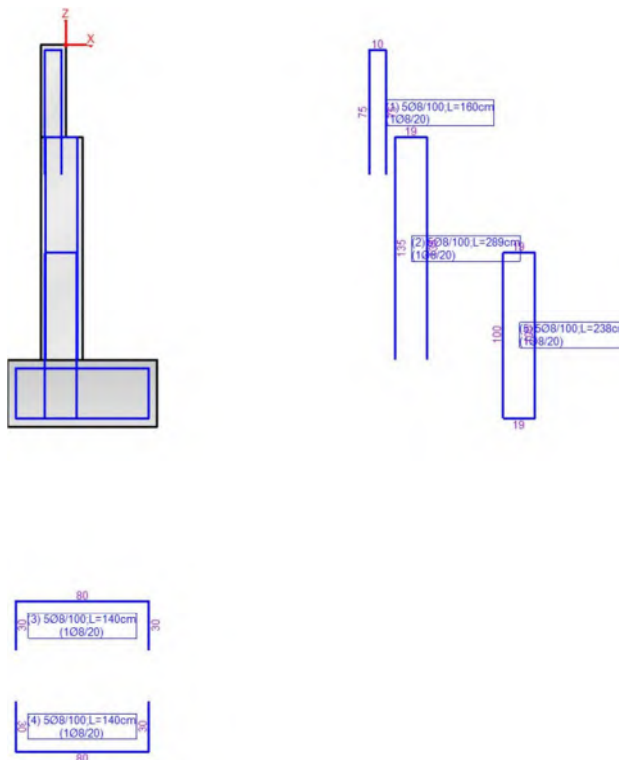
## 1.6 - CASI DI CARICO

caso		coefficienti per i carichi
STR (SLU)	Car.Nas.(ter) --- 1) carico nastriforme 1	[1.00; -]
descr. = SLU A1+M1+R3	Car.Pun.(mur) --- 1) carico testa muro	[1.50; -]
coeff. = 1.3(pp.), 1.3(ter.m.), 1.3(fld.m.)1.3(ter.cs.), 1.3(fld.cs.)		
SLV_SISMA_SU (SLV)	Car.Nas.(ter) --- 1) carico nastriforme 1	[1.00;0.30]
descr. = Sisma_1+1+R_Su	Car.Pun.(mur) --- 1) carico testa muro	[1.00;1.00]
coeff. = 1(pp.), 1(ter.m.), 1(fld.m.)1(ter.cs.), 1(fld.cs.)		
SLV_SISMA_GIU (SLV)	Car.Nas.(ter) --- 1) carico nastriforme 1	[1.00;0.30]
descr. = Sisma_1+1+R_Giu	Car.Pun.(mur) --- 1) carico testa muro	[1.00;1.00]
coeff. = 1(pp.), 1(ter.m.), 1(fld.m.)1(ter.cs.), 1(fld.cs.)		
SLD_SISMA_SU (SLD)	Car.Nas.(ter) --- 1) carico nastriforme 1	[1.00;0.30]
descr. = Sisma_1+1+R_Su	Car.Pun.(mur) --- 1) carico testa muro	[1.00;1.00]
coeff. = 1(pp.), 1(ter.m.), 1(fld.m.)1(ter.cs.), 1(fld.cs.)		
SLD_SISMA_GIU (SLD)	Car.Nas.(ter) --- 1) carico nastriforme 1	[1.00;0.30]
descr. = Sisma_1+1+R_Giu	Car.Pun.(mur) --- 1) carico testa muro	[1.00;1.00]
coeff. = 1(pp.), 1(ter.m.), 1(fld.m.)1(ter.cs.), 1(fld.cs.)		
RARA (Caratteristica)	Car.Nas.(ter) --- 1) carico nastriforme 1	[1.00; -]
descr. = SLE caratteristica (rara)	Car.Pun.(mur) --- 1) carico testa muro	[1.00; -]
coeff. = 1(pp.), 1(ter.m.), 1(fld.m.)1(ter.cs.), 1(fld.cs.)		
FREQ. (Frequente)	Car.Nas.(ter) --- 1) carico nastriforme 1	[1.00; -]
descr. = SLE frequente	Car.Pun.(mur) --- 1) carico testa muro	[1.00; -]
coeff. = 1(pp.), 1(ter.m.), 1(fld.m.)1(ter.cs.), 1(fld.cs.)		
Q.PERM. (Quasi_Perm)	Car.Nas.(ter) --- 1) carico nastriforme 1	[1.00; -]
descr. = SLE quasi permanente	Car.Pun.(mur) --- 1) carico testa muro	[1.00; -]
coeff. = 1(pp.), 1(ter.m.), 1(fld.m.)1(ter.cs.), 1(fld.cs.)		

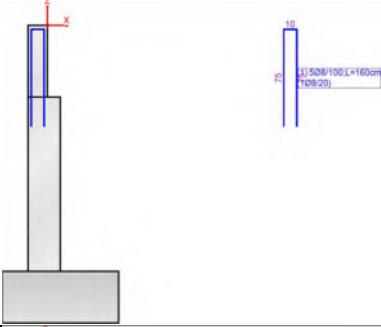
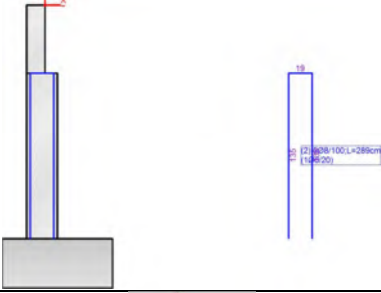
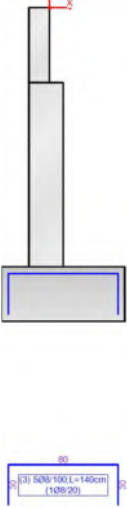
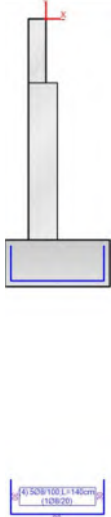
Casi di Carico

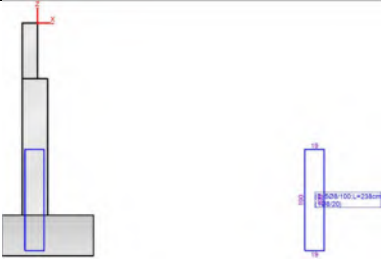
## 1.7 - ARMATURA

### 1.7.1 - MURO E FONDAZIONE CON ESPLOSI



## 1.7.2 - FERRI

Ferro (schema)	dati ferro	coordinate (x;z)
	<p>- 1 - gruppo = 1 num. ferri = 5 <math>\varnothing = 0.8</math> [cm] lunghezza = 160 [cm] descrizione = ferri-tronco a valle tipo = ferrimuro_xz</p>	<p>1 (-12.5;-78)[cm] 2 (-12.5;-3)[cm] 3 (-2.5;-3)[cm] 4 (-2.5;-78)[cm]</p>
	<p>- 2 - gruppo = 1 num. ferri = 5 <math>\varnothing = 0.8</math> [cm] lunghezza = 289 [cm] descrizione = ferri-ripresa a valle tipo = ferrimuro_xz</p>	<p>1 (7;-190)[cm] 2 (7;-55)[cm] 3 (-12;-55)[cm] 4 (-12;-190)[cm]</p>
	<p>- 3 - gruppo = 3 num. ferri = 5 <math>\varnothing = 0.8</math> [cm] lunghezza = 140 [cm] descrizione = ferri-fondazione superiore tipo = ferrifond_xz</p>	<p>1 (50;-225)[cm] 2 (50;-195)[cm] 3 (-30;-195)[cm] 4 (-30;-225)[cm]</p>
	<p>- 4 - gruppo = 4 num. ferri = 5 <math>\varnothing = 0.8</math> [cm] lunghezza = 140 [cm] descrizione = ferri-fondazione inferiore tipo = ferrifond_xz</p>	<p>1 (50;-195)[cm] 2 (50;-225)[cm] 3 (-30;-225)[cm] 4 (-30;-195)[cm]</p>

	<p>- 5 - gruppo = 1 num. ferri = 5 <math>\varnothing = 0.8</math> [cm] lunghezza = 238 [cm] descrizione = ferri-tronco a valle tipo = ferrimuro_xz</p>	<p>1 (-12.5;-225)[cm] 2 (-12.5;-125)[cm] 3 (6.5;-125)[cm] 4 (6.5;-225)[cm] 5 (-12.5;-225)[cm]</p>
---	--	---

- Ferri

## 1.8 - VERIFICHE GEOTECNICHE

caso di carico	capacità portante	scorrimento	equilibrio
1 - STR (SLU)	<p>- Drenata - q di progetto = 0.87 [daN/cm<sup>2</sup>] q limite = 2.12 [daN/cm<sup>2</sup>] --&gt; fs = 2.44 [Verificato]</p>	<p>- Drenata - v applicato = 1411.92 [daN] v limite = 3247.35 [daN] --&gt; fs = 2.3 [Verificato]</p>	<p>- Ribaltamento - Stabile --&gt; fs = 1.93 (spost.max.=0.61 [cm] ) [Verificato]  - Stab. globale - verifica non prevista</p>
2 - SLV_SISMA_SU (SLV)	<p>- Drenata - q di progetto = 0.98 [daN/cm<sup>2</sup>] q limite = 1.46 [daN/cm<sup>2</sup>] --&gt; fs = 1.49 [Verificato]</p>	<p>- Drenata - v applicato = 1533.49 [daN] v limite = 2695.52 [daN] --&gt; fs = 1.76 [Verificato]</p>	<p>- Ribaltamento - Stabile --&gt; fs = 1.55 (spost.max.=0.98 [cm] ) [Verificato]  - Stab. globale - verifica non prevista</p>
3 - SLV_SISMA_GIU (SLV)	<p>- Drenata - q di progetto = 1.06 [daN/cm<sup>2</sup>] q limite = 1.53 [daN/cm<sup>2</sup>] --&gt; fs = 1.44 [Verificato]</p>	<p>- Drenata - v applicato = 1642.24 [daN] v limite = 2982.07 [daN] --&gt; fs = 1.82 [Verificato]</p>	<p>- Ribaltamento - Stabile --&gt; fs = 1.57 (spost.max.=1.03 [cm] ) [Verificato]  - Stab. globale - verifica non prevista</p>
4 - SLD_SISMA_SU (SLD)	<p>- Drenata - q di progetto = 0.8 [daN/cm<sup>2</sup>] q limite = 1.83 [daN/cm<sup>2</sup>] --&gt; fs = 2.29 [Verificato]</p>	<p>- Drenata - v applicato = 1323.59 [daN] v limite = 2479.33 [daN] --&gt; fs = 1.87 [Verificato]</p>	<p>- Ribaltamento - verifica non prevista  - Stab. globale - verifica non prevista</p>
5 - SLD_SISMA_GIU (SLD)	<p>- Drenata - q di progetto = 0.84 [daN/cm<sup>2</sup>] q limite = 1.85 [daN/cm<sup>2</sup>] --&gt; fs = 2.19 [Verificato]</p>	<p>- Drenata - v applicato = 1380.19 [daN] v limite = 2613.68 [daN] --&gt; fs = 1.89 [Verificato]</p>	<p>- Ribaltamento - verifica non prevista  - Stab. globale - verifica non prevista</p>

Verifiche geotecniche della fondazione.

caso di carico	p. muro (stab) [daN*cm]	p. terreno (stab) [daN*cm]	azioni muro (stab) [daN*cm]	azioni muro (instab) [daN*cm]	attrito terreno (stab) [daN*cm]	spinta terreno (instab) [daN*cm]	momento stabilizzante [daN*cm]	momento ribaltante [daN*cm]	coeff. di sicurezza
1 STR SLU	95672	138611	2062	0	53364	130829	251921	130829	1.93
2 SLV_SISMA_SU SLV	69682	99788	1375	1296	54787	144416	225632	145712	1.55
3 SLV_SISMA_GIU	77505	116325	1448	1223	60702	161917	255981	163140	1.57

GIU SLV									
4 SLD_SISMA_ SU SLD	71579	108057	1375	667	41939	121207	222950	121875	1.83
5 SLD_SISMA_ GIU SLD	75609	108057	1413	630	41939	119837	227017	120467	1.88
6 RARA RARA	73594	108057	1375	0	41939	102055	224965	102055	2.2
7 FREQ. FREQUENTE	73594	108057	1375	0	41939	102055	224965	102055	2.2
8 Q.PERM. QUASI PERM	73594	108057	1375	0	41939	102055	224965	102055	2.2

Dettaglio della verifica di ribaltamento.

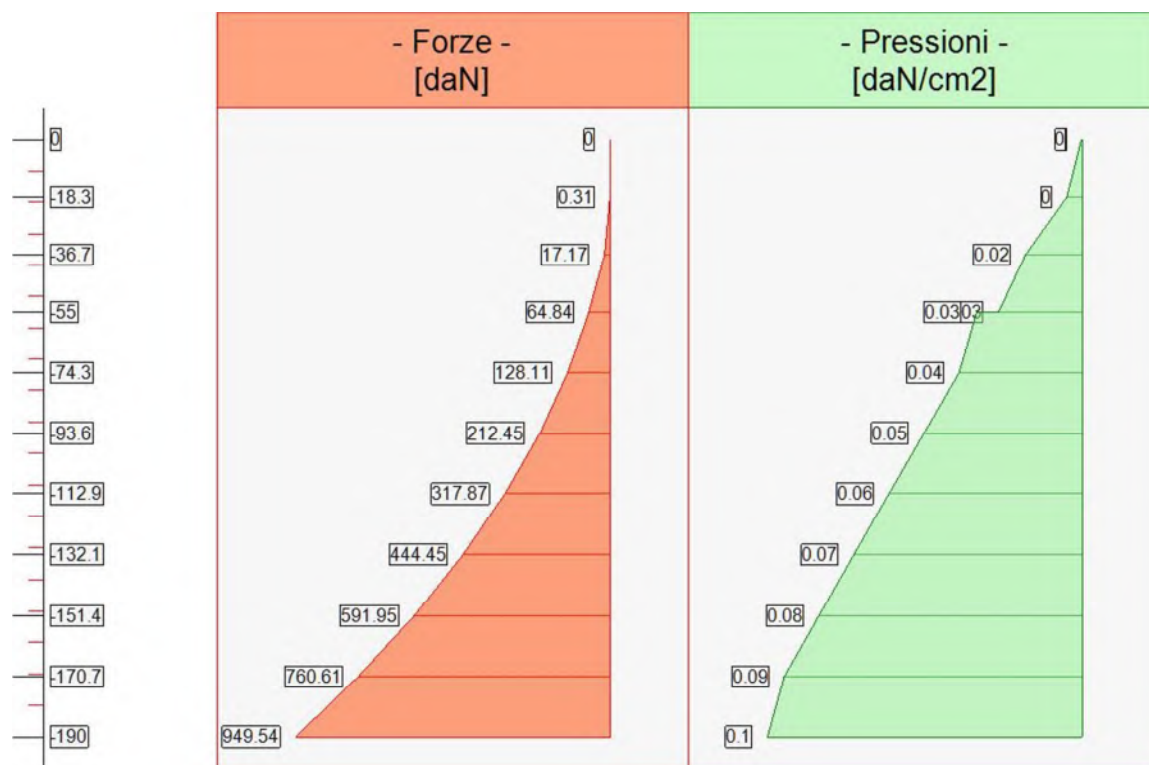
## 1.9 - VERIFICHE STRUTTURALI

### 1.9.1 - DIAGRAMMI DELLE SPINTE E PRESSIONI

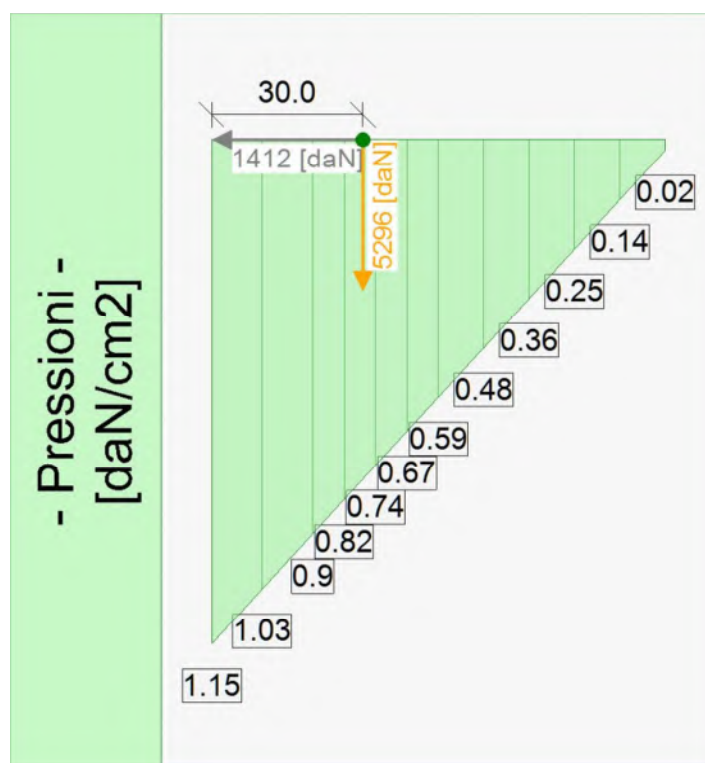
#### 1.9.1.1 - Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )

Elevazione			•	Fondazione		
quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Forze [daN]	•	quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Sottopressioni [daN/cm <sup>2</sup> ]
0	0	0	•	-35	1.15	0
0	0	0	•	-25	1.03	0
-18.33	0	0.31	•	-15	0.9	0
-36.67	0.02	17.17	•	-8.75	0.82	0
-55	0.03	64.84	•	-2.5	0.74	0
-55	0.03	64.84	•	-2.5	0.74	0
-74.29	0.04	128.11	•	3.75	0.67	0
-93.57	0.05	212.45	•	10	0.59	0
-112.86	0.06	317.87	•	19	0.48	0
-132.14	0.07	444.45	•	28	0.36	0
-151.43	0.08	591.95	•	37	0.25	0
-170.71	0.09	760.61	•	46	0.14	0
-190	0.1	949.54	•	55	0.02	0

Forze e Pressioni lungo il paramento verticale e fondazione, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )



Forze (totali) e Pressioni lungo il fusto, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )



Pressioni sul terreno, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )

Risultante delle spinte sul muro (valori da intendersi a modulo di calcolo (100 [cm])):

- attacco fusto - fondazione, forza orizzontale = 949.54 [daN]
- attacco fusto - fondazione, forza verticale = 398.76 [daN]
- altezza totale, forza orizzontale = 1411.91 [daN]
- altezza totale, forza verticale = 592.93 [daN]

Risultante delle pressioni sulla fondazione (valori da intendersi a modulo di calcolo (100 [cm])):

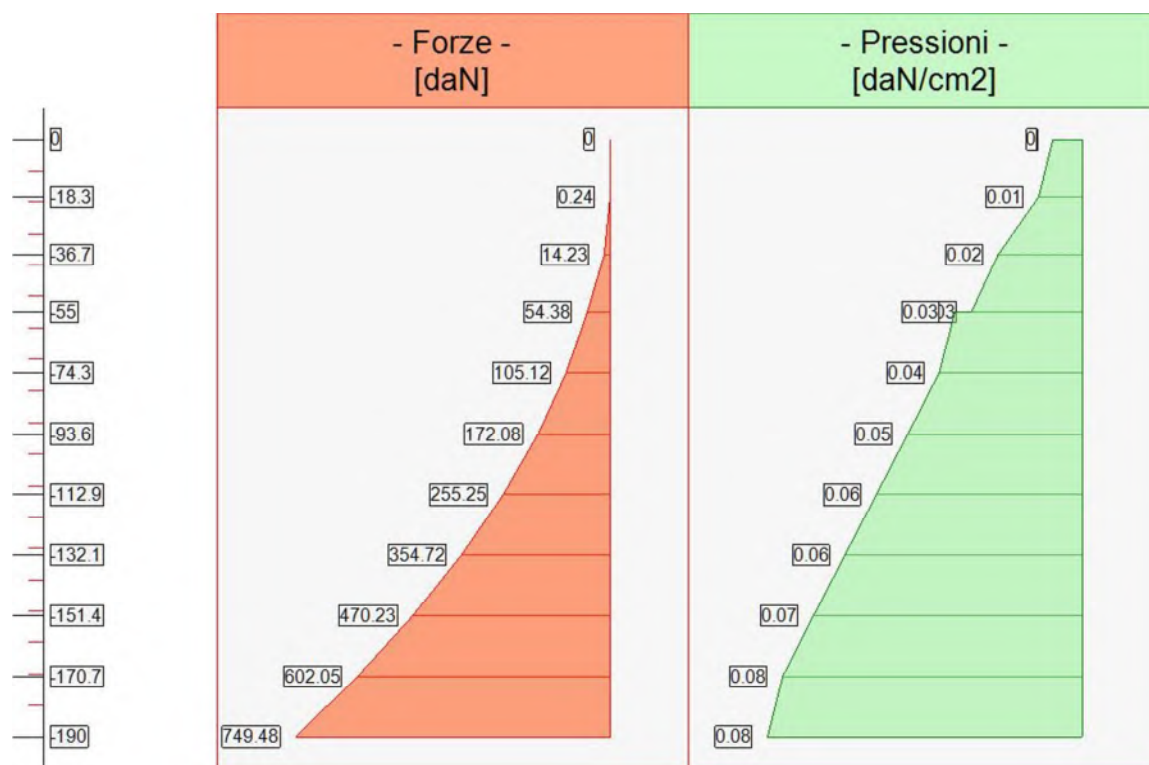
- distanza dal bordo fondazione lato valle = 30 [cm]

- forza orizzontale = 1412 [daN]
- forza verticale = 5296 [daN]

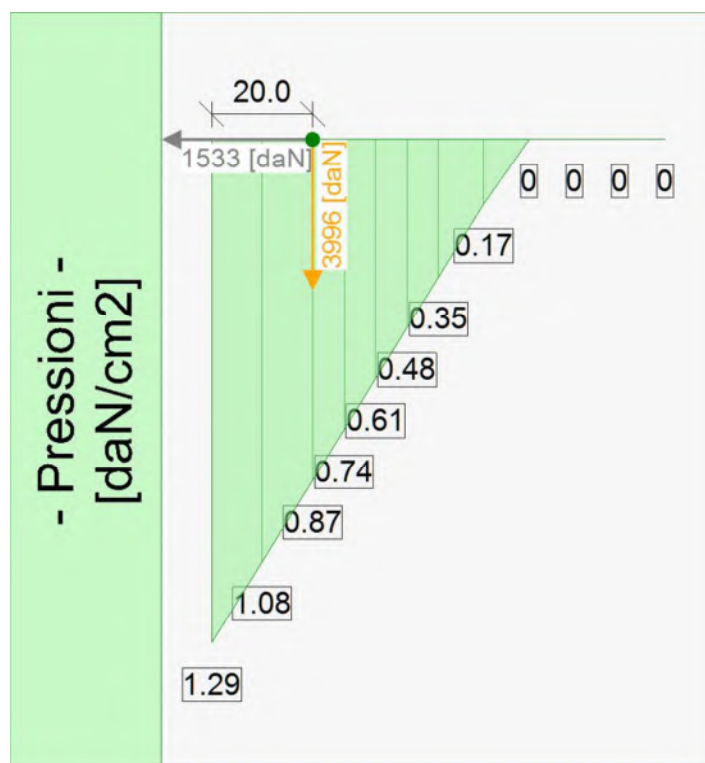
### 1.9.1.2 - Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )

Elevazione			•	Fondazione		
quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Forze [daN]	•	quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Sottopressioni [daN/cm <sup>2</sup> ]
0	0	0	•	-35	1.29	0
0	0	0	•	-25	1.08	0
-18.33	0.01	0.24	•	-15	0.87	0
-36.67	0.02	14.23	•	-8.75	0.74	0
-55	0.03	54.38	•	-2.5	0.61	0
-55	0.03	54.38	•	-2.5	0.61	0
-74.29	0.04	105.12	•	3.75	0.48	0
-93.57	0.05	172.08	•	10	0.35	0
-112.86	0.06	255.25	•	19	0.17	0
-132.14	0.06	354.72	•	28	0	0
-151.43	0.07	470.23	•	37	0	0
-170.71	0.08	602.05	•	46	0	0
-190	0.08	749.48	•	55	0	0

Forze e Pressioni lungo il paramento verticale e fondazione, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )



Forze (totali) e Pressioni lungo il fusto, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )



Pressioni sul terreno, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )

Risultante delle spinte sul muro (valori da intendersi a modulo di calcolo (100 [cm])):

- attacco fusto - fondazione, forza orizzontale = 895.67 [daN]
- attacco fusto - fondazione, forza verticale = 376.14 [daN]
- altezza totale, forza orizzontale = 1320.88 [daN]
- altezza totale, forza verticale = 554.7 [daN]

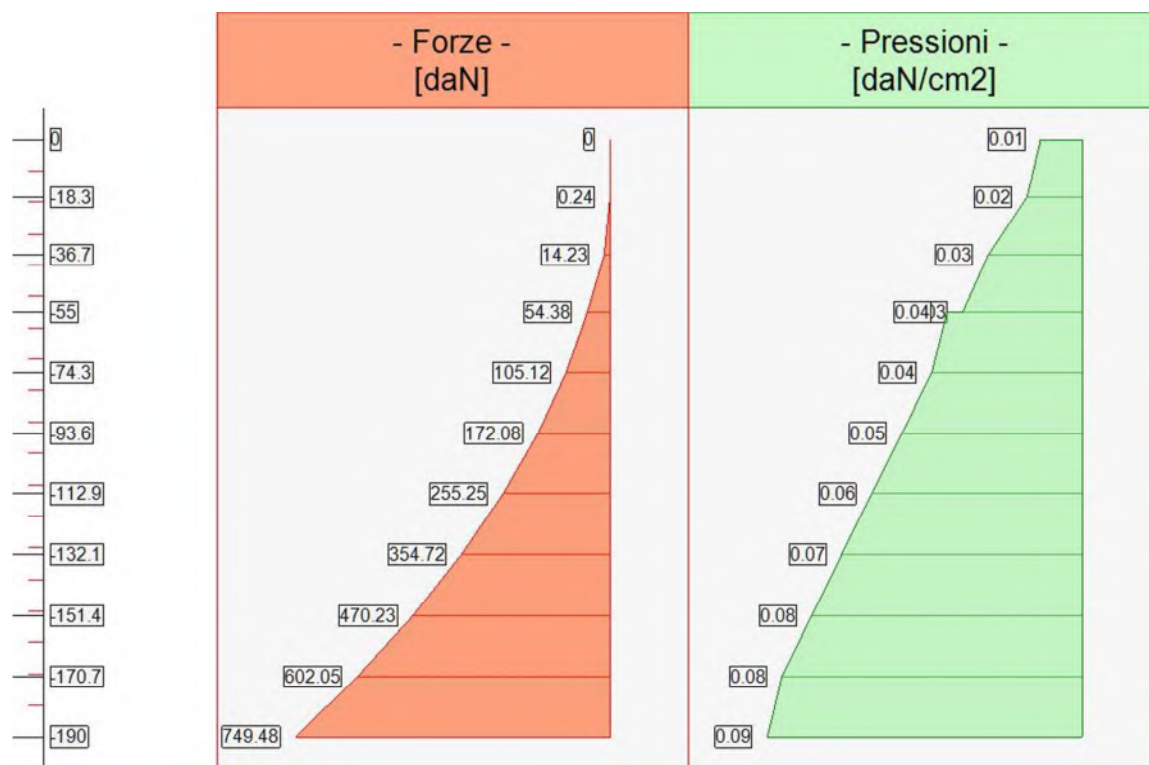
Risultante delle pressioni sulla fondazione (valori da intendersi a modulo di calcolo (100 [cm])):

- distanza dal bordo fondazione lato valle = 20 [cm]
- forza orizzontale = 1533 [daN]
- forza verticale = 3996 [daN]

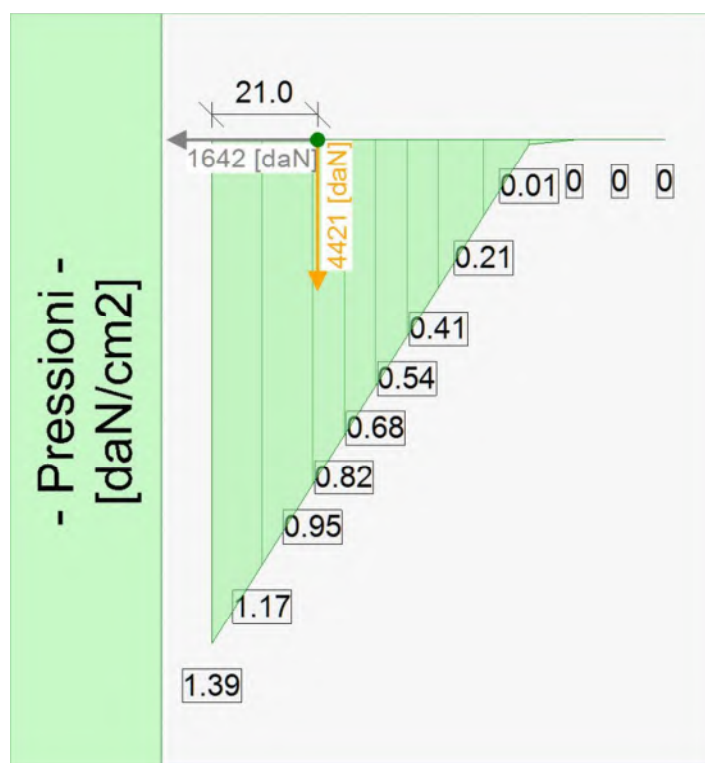
#### 1.9.1.3 - Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )

Elevazione			•	Fondazione		
quota [cm]	Pressioni [daN/cm²]	Forze [daN]		quota [cm]	Pressioni [daN/cm²]	Sottopressioni [daN/cm²]
0	0.01	0	•	-35	1.39	0
0	0.01	0	•	-25	1.17	0
-18.33	0.02	0.24	•	-15	0.95	0
-36.67	0.03	14.23	•	-8.75	0.82	0
-55	0.03	54.38	•	-2.5	0.68	0
-55	0.04	54.38	•	-2.5	0.68	0
-74.29	0.04	105.12	•	3.75	0.54	0
-93.57	0.05	172.08	•	10	0.41	0
-112.86	0.06	255.25	•	19	0.21	0
-132.14	0.07	354.72	•	28	0.01	0
-151.43	0.08	470.23	•	37	0	0
-170.71	0.08	602.05	•	46	0	0
-190	0.09	749.48	•	55	0	0

Forze e Pressioni lungo il paramento verticale e fondazione, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )



Forze (totali) e Pressioni lungo il fusto, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )



Pressioni sul terreno, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )

Risultante delle spinte sul muro (valori da intendersi a modulo di calcolo (100 [cm])):

- attacco fusto - fondazione, forza orizzontale = 967.03 [daN]
- attacco fusto - fondazione, forza verticale = 406.1 [daN]
- altezza totale, forza orizzontale = 1429.62 [daN]
- altezza totale, forza verticale = 600.37 [daN]

Risultante delle pressioni sulla fondazione (valori da intendersi a modulo di calcolo (100 [cm])):

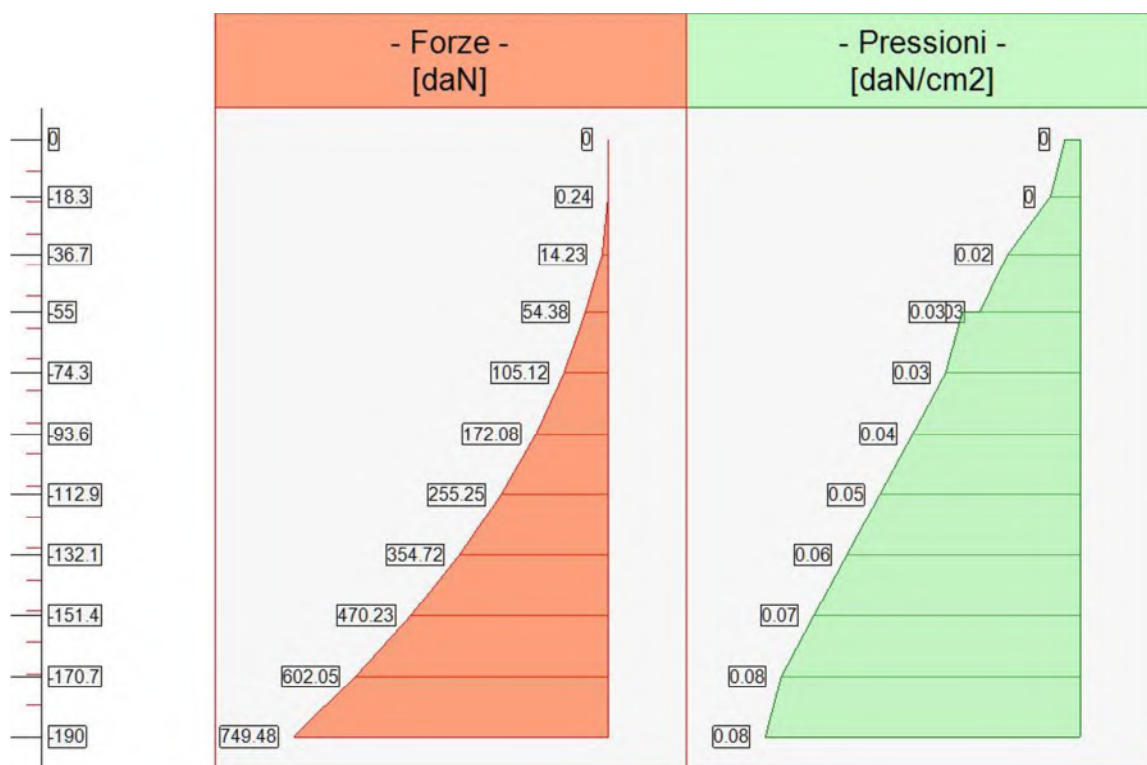
- distanza dal bordo fondazione lato valle = 21 [cm]

- forza orizzontale = 1642 [daN]
- forza verticale = 4421 [daN]

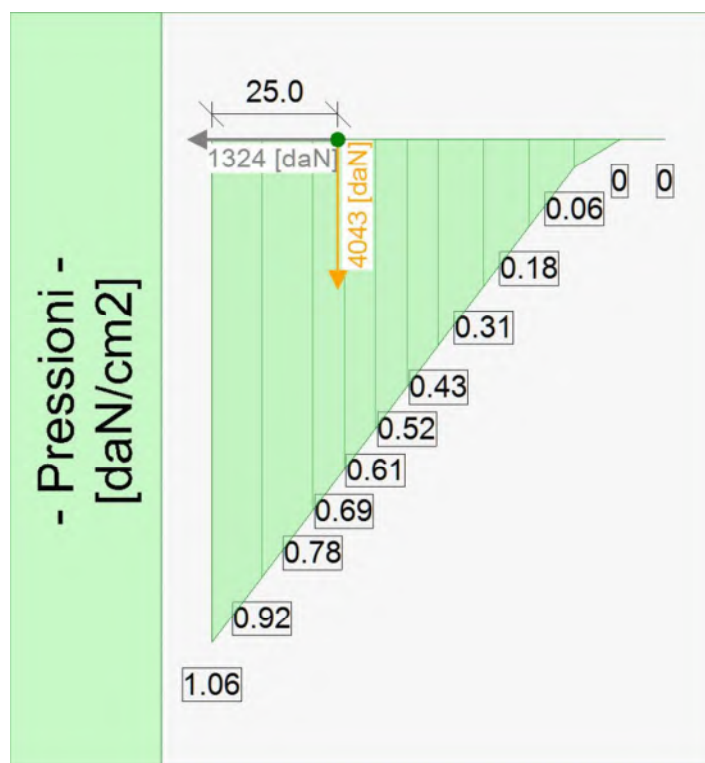
#### 1.9.1.4 - Caso 4 ( SLD\_SISMA\_SU [ SLD ] - Sisma\_1+1+R\_Su )

Elevazione			•	Fondazione		
quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Forze [daN]	•	quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Sottopressioni [daN/cm <sup>2</sup> ]
0	0	0	•	-35	1.06	0
0	0	0	•	-25	0.92	0
-18.33	0	0.24	•	-15	0.78	0
-36.67	0.02	14.23	•	-8.75	0.69	0
-55	0.03	54.38	•	-2.5	0.61	0
-55	0.03	54.38	•	-2.5	0.61	0
-74.29	0.03	105.12	•	3.75	0.52	0
-93.57	0.04	172.08	•	10	0.43	0
-112.86	0.05	255.25	•	19	0.31	0
-132.14	0.06	354.72	•	28	0.18	0
-151.43	0.07	470.23	•	37	0.06	0
-170.71	0.08	602.05	•	46	0	0
-190	0.08	749.48	•	55	0	0

Forze e Pressioni lungo il paramento verticale e fondazione, per il Caso 4 ( SLD\_SISMA\_SU [ SLD ] - Sisma\_1+1+R\_Su )



Forze (totali) e Pressioni lungo il fusto, per il Caso 4 ( SLD\_SISMA\_SU [ SLD ] - Sisma\_1+1+R\_Su )



Pressioni sul terreno, per il Caso 4 ( SLD\_SISMA\_SU [ SLD ] - Sisma\_1+1+R\_Su )

Risultante delle spinte sul muro (valori da intendersi a modulo di calcolo (100 [cm])):

- attacco fusto - fondazione, forza orizzontale = 819.33 [daN]
- attacco fusto - fondazione, forza verticale = 344.08 [daN]
- altezza totale, forza orizzontale = 1214.06 [daN]
- altezza totale, forza verticale = 509.85 [daN]

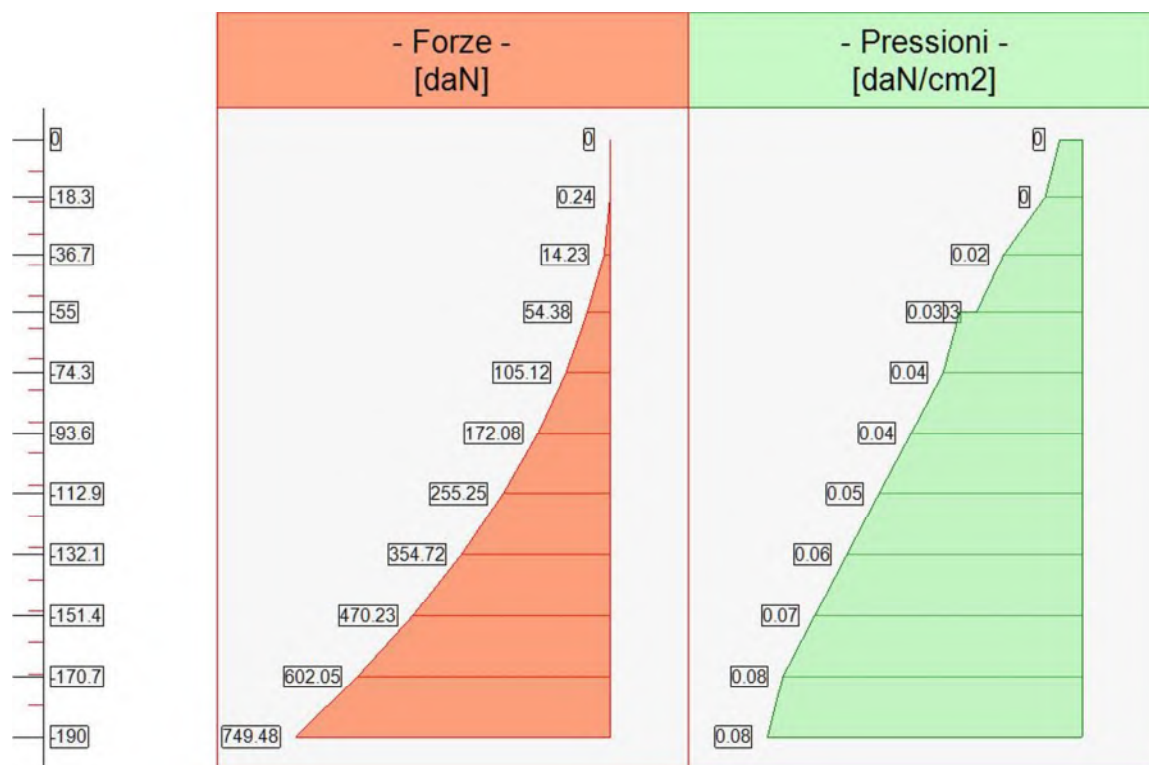
Risultante delle pressioni sulla fondazione (valori da intendersi a modulo di calcolo (100 [cm])):

- distanza dal bordo fondazione lato valle = 25 [cm]
- forza orizzontale = 1324 [daN]
- forza verticale = 4043 [daN]

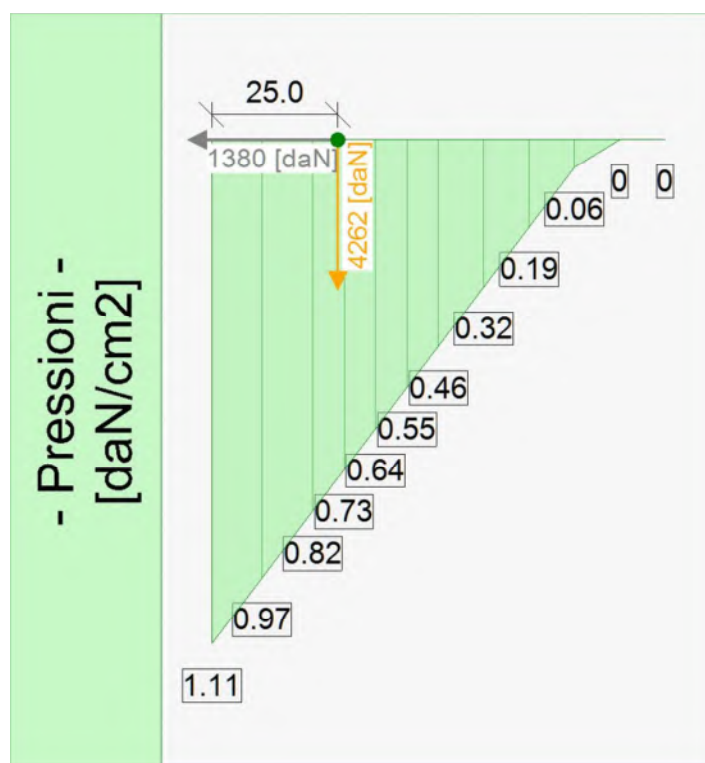
#### 1.9.1.5 - Caso 5 ( SLD\_SISMA\_GIU [ SLD ] - Sisma\_1+1+R\_Giu )

Elevazione			•	Fondazione		
quota [cm]	Pressioni [daN/cm²]	Forze [daN]	•	quota [cm]	Pressioni [daN/cm²]	Sottopressioni [daN/cm²]
0	0	0	•	-35	1.11	0
0	0	0	•	-25	0.97	0
-18.33	0	0.24	•	-15	0.82	0
-36.67	0.02	14.23	•	-8.75	0.73	0
-55	0.03	54.38	•	-2.5	0.64	0
-55	0.03	54.38	•	-2.5	0.64	0
-74.29	0.04	105.12	•	3.75	0.55	0
-93.57	0.04	172.08	•	10	0.46	0
-112.86	0.05	255.25	•	19	0.32	0
-132.14	0.06	354.72	•	28	0.19	0
-151.43	0.07	470.23	•	37	0.06	0
-170.71	0.08	602.05	•	46	0	0
-190	0.08	749.48	•	55	0	0

Forze e Pressioni lungo il paramento verticale e fondazione, per il Caso 5 ( SLD\_SISMA\_GIU [ SLD ] - Sisma\_1+1+R\_Giu )



Forze (totali) e Pressioni lungo il fusto, per il Caso 5 ( SLD\_SISMA\_GIU [ SLD ] - Sisma\_1+1+R\_Giu )



Pressioni sul terreno, per il Caso 5 ( SLD\_SISMA\_GIU [ SLD ] - Sisma\_1+1+R\_Giu )

Risultante delle spinte sul muro (valori da intendersi a modulo di calcolo (100 [cm])):

- attacco fusto - fondazione, forza orizzontale = 856.93 [daN]
- attacco fusto - fondazione, forza verticale = 359.87 [daN]
- altezza totale, forza orizzontale = 1270.66 [daN]
- altezza totale, forza verticale = 533.62 [daN]

Risultante delle pressioni sulla fondazione (valori da intendersi a modulo di calcolo (100 [cm])):

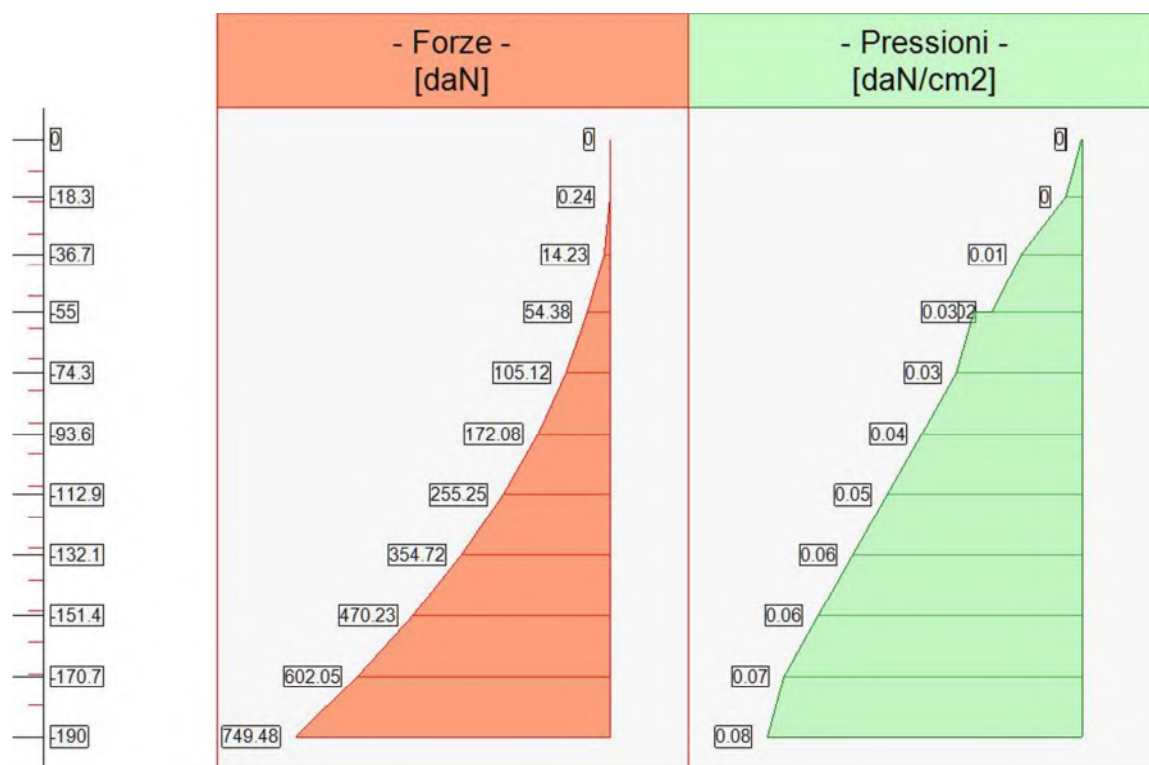
- distanza dal bordo fondazione lato valle = 25 [cm]

- forza orizzontale = 1380 [daN]
- forza verticale = 4262 [daN]

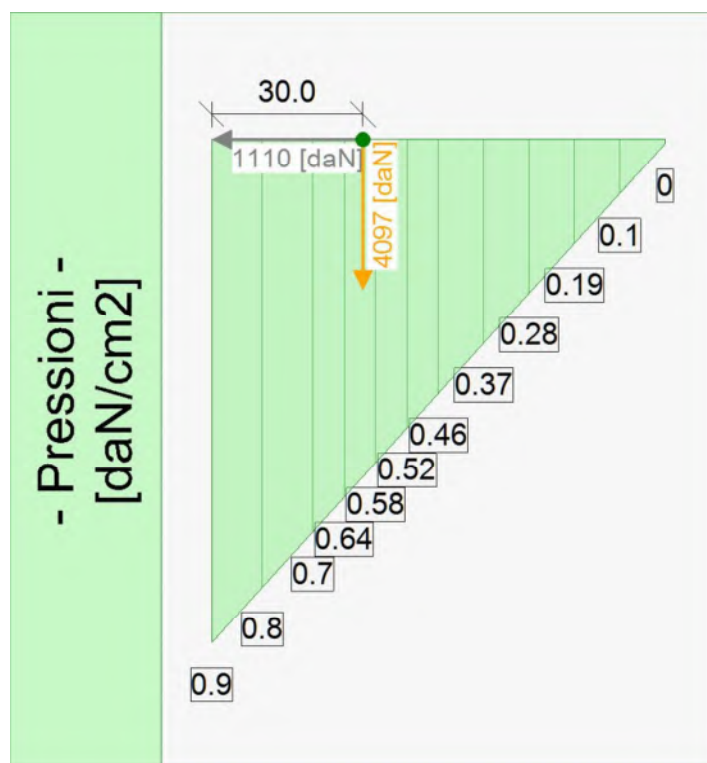
#### 1.9.1.6 - Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica (rara) )

Elevazione			•	Fondazione		
quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Forze [daN]	•	quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Sottopressioni [daN/cm <sup>2</sup> ]
0	0	0	•	-35	0.9	0
0	0	0	•	-25	0.8	0
-18.33	0	0.24	•	-15	0.7	0
-36.67	0.01	14.23	•	-8.75	0.64	0
-55	0.02	54.38	•	-2.5	0.58	0
-55	0.03	54.38	•	-2.5	0.58	0
-74.29	0.03	105.12	•	3.75	0.52	0
-93.57	0.04	172.08	•	10	0.46	0
-112.86	0.05	255.25	•	19	0.37	0
-132.14	0.06	354.72	•	28	0.28	0
-151.43	0.06	470.23	•	37	0.19	0
-170.71	0.07	602.05	•	46	0.1	0
-190	0.08	749.48	•	55	0	0

Forze e Pressioni lungo il paramento verticale e fondazione, per il Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica (rara) )



Forze (totali) e Pressioni lungo il fusto, per il Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica (rara) )



Pressioni sul terreno, per il Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica (rara) )

Risultante delle spinte sul muro (valori da intendersi a modulo di calcolo (100 [cm])):

- attacco fusto - fondazione, forza orizzontale = 749.48 [daN]
- attacco fusto - fondazione, forza verticale = 314.75 [daN]
- altezza totale, forza orizzontale = 1109.63 [daN]
- altezza totale, forza verticale = 465.99 [daN]

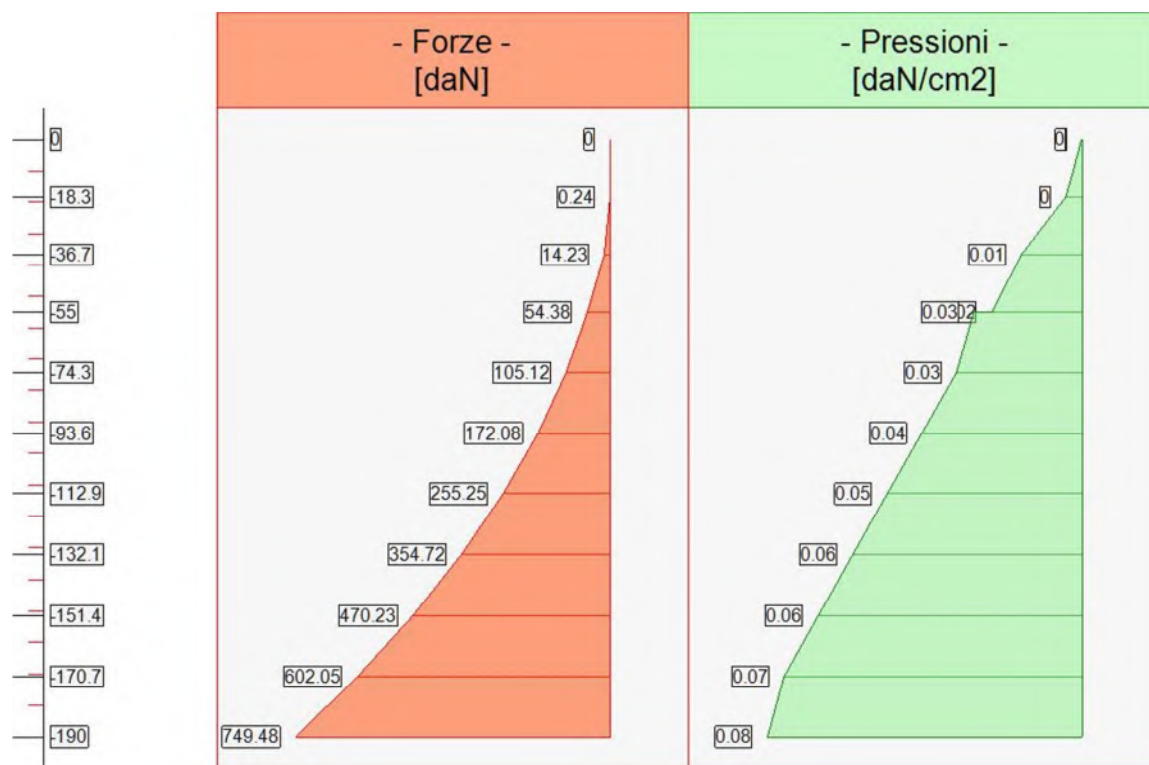
Risultante delle pressioni sulla fondazione (valori da intendersi a modulo di calcolo (100 [cm])):

- distanza dal bordo fondazione lato valle = 30 [cm]
- forza orizzontale = 1110 [daN]
- forza verticale = 4097 [daN]

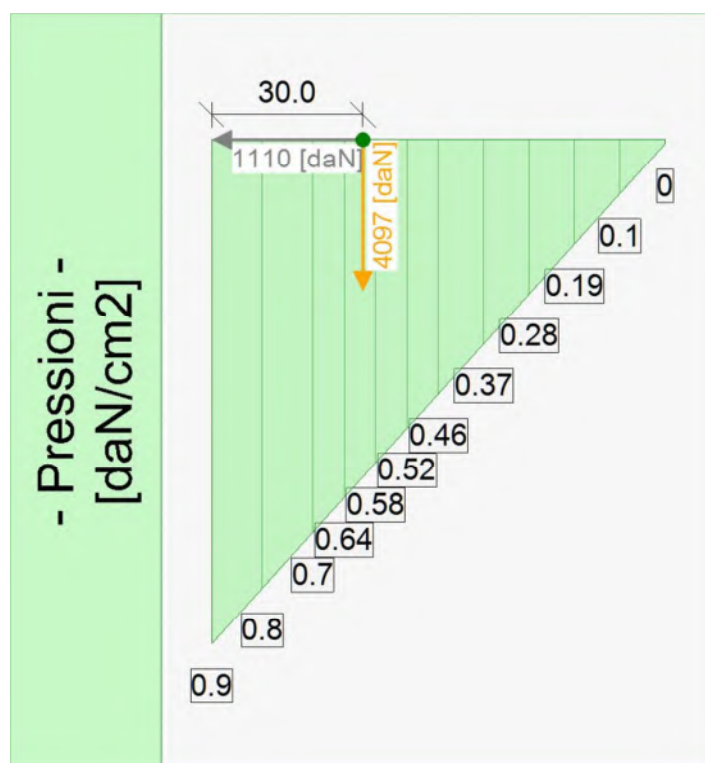
#### 1.9.1.7 - Caso 7 (FREQ. [Frequente] - SLE frequente )

Elevazione			•	Fondazione		
quota [cm]	Pressioni [daN/cm²]	Forze [daN]	•	quota [cm]	Pressioni [daN/cm²]	Sottopressioni [daN/cm²]
0	0	0	•	-35	0.9	0
0	0	0	•	-25	0.8	0
-18.33	0	0.24	•	-15	0.7	0
-36.67	0.01	14.23	•	-8.75	0.64	0
-55	0.02	54.38	•	-2.5	0.58	0
-55	0.03	54.38	•	-2.5	0.58	0
-74.29	0.03	105.12	•	3.75	0.52	0
-93.57	0.04	172.08	•	10	0.46	0
-112.86	0.05	255.25	•	19	0.37	0
-132.14	0.06	354.72	•	28	0.28	0
-151.43	0.06	470.23	•	37	0.19	0
-170.71	0.07	602.05	•	46	0.1	0
-190	0.08	749.48	•	55	0	0

Forze e Pressioni lungo il paramento verticale e fondazione, per il Caso 7 ( FREQ. [ Frequente ] - SLE frequente )



Forze (totali) e Pressioni lungo il fusto, per il Caso 7 ( FREQ. [ Frequente ] - SLE frequente )



Pressioni sul terreno, per il Caso 7 ( FREQ. [ Frequente ] - SLE frequente )

Risultante delle spinte sul muro (valori da intendersi a modulo di calcolo (100 [cm])):

- attacco fusto - fondazione, forza orizzontale = 749.48 [daN]
- attacco fusto - fondazione, forza verticale = 314.75 [daN]
- altezza totale, forza orizzontale = 1109.63 [daN]
- altezza totale, forza verticale = 465.99 [daN]

Risultante delle pressioni sulla fondazione (valori da intendersi a modulo di calcolo (100 [cm])):

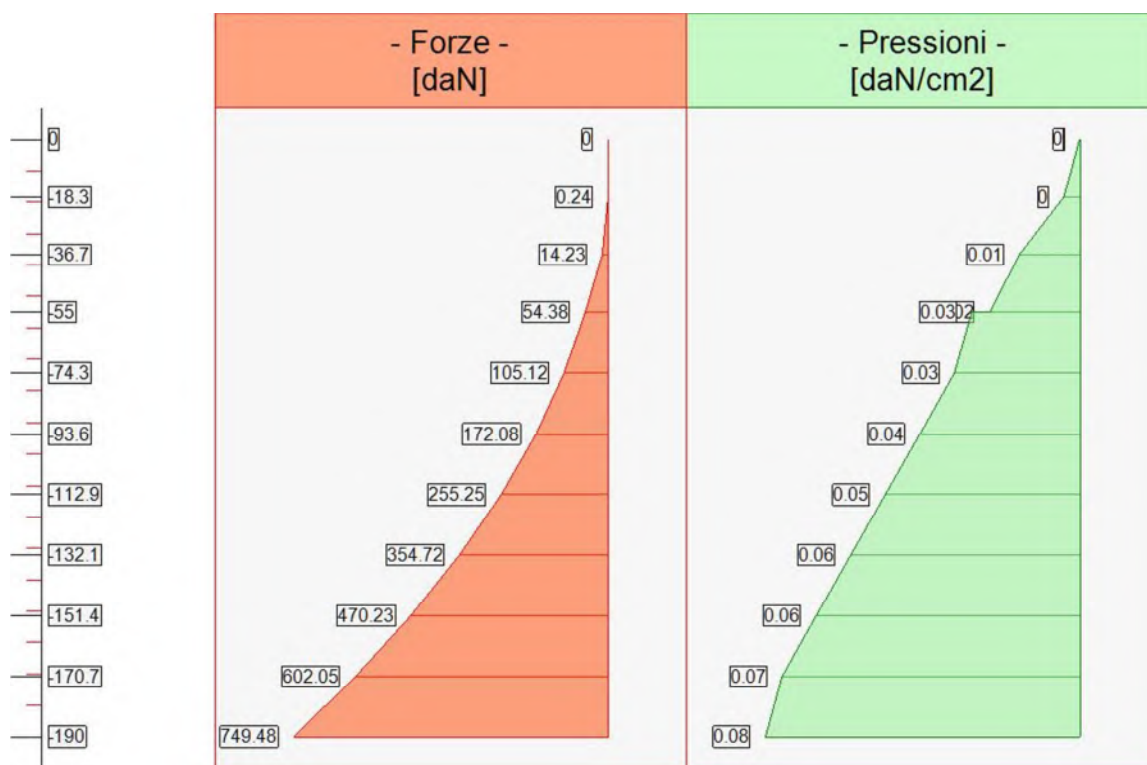
- distanza dal bordo fondazione lato valle = 30 [cm]

- forza orizzontale = 1110 [daN]
- forza verticale = 4097 [daN]

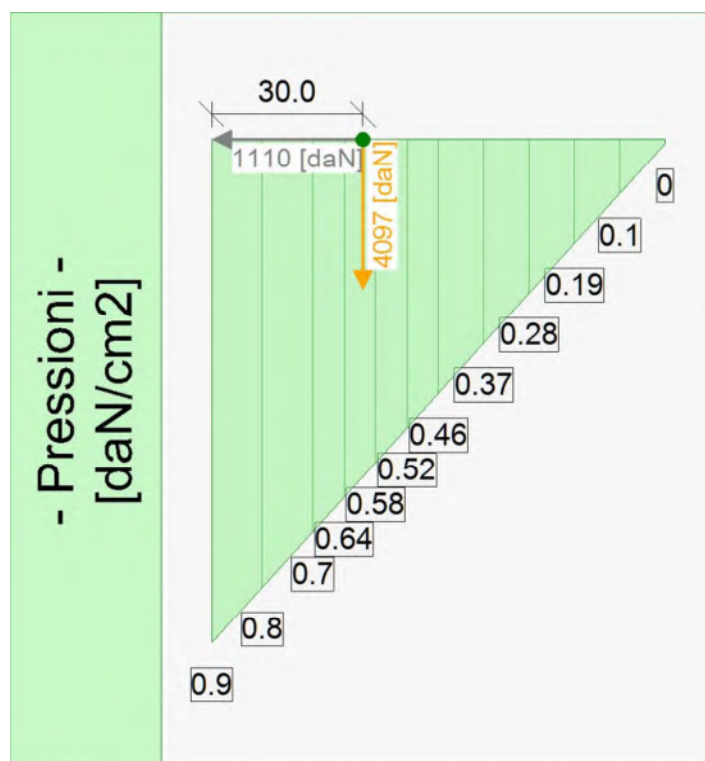
### 1.9.1.8 - Caso 8 ( Q.PERM. [ Quasi\_Perm ] - SLE quasi permanente )

Elevazione			•	Fondazione		
quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Forze [daN]	•	quota [cm]	Pressioni [daN/cm <sup>2</sup> ]	Sottopressioni [daN/cm <sup>2</sup> ]
0	0	0	•	-35	0.9	0
0	0	0	•	-25	0.8	0
-18.33	0	0.24	•	-15	0.7	0
-36.67	0.01	14.23	•	-8.75	0.64	0
-55	0.02	54.38	•	-2.5	0.58	0
-55	0.03	54.38	•	-2.5	0.58	0
-74.29	0.03	105.12	•	3.75	0.52	0
-93.57	0.04	172.08	•	10	0.46	0
-112.86	0.05	255.25	•	19	0.37	0
-132.14	0.06	354.72	•	28	0.28	0
-151.43	0.06	470.23	•	37	0.19	0
-170.71	0.07	602.05	•	46	0.1	0
-190	0.08	749.48	•	55	0	0

Forze e Pressioni lungo il paramento verticale e fondazione, per il Caso 8 ( Q.PERM. [ Quasi\_Perm ] - SLE quasi permanente )



Forze (totali) e Pressioni lungo il fusto, per il Caso 8 ( Q.PERM. [ Quasi\_Perm ] - SLE quasi permanente )



Pressioni sul terreno, per il Caso 8 ( Q.PER.M. [ Quasi\_Perm ] - SLE quasi permanente )

Risultante delle spinte sul muro (valori da intendersi a modulo di calcolo (100 [cm])):

- attacco fusto - fondazione, forza orizzontale = 749.48 [daN]
- attacco fusto - fondazione, forza verticale = 314.75 [daN]
- altezza totale, forza orizzontale = 1109.63 [daN]
- altezza totale, forza verticale = 465.99 [daN]

Risultante delle pressioni sulla fondazione (valori da intendersi a modulo di calcolo (100 [cm])):

- distanza dal bordo fondazione lato valle = 30 [cm]
- forza orizzontale = 1110 [daN]
- forza verticale = 4097 [daN]

### 1.9.2 - DIAGRAMMI DI SFORZO NORMALE / TAGLIO / MOMENTO

#### 1.9.2.1 - Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )

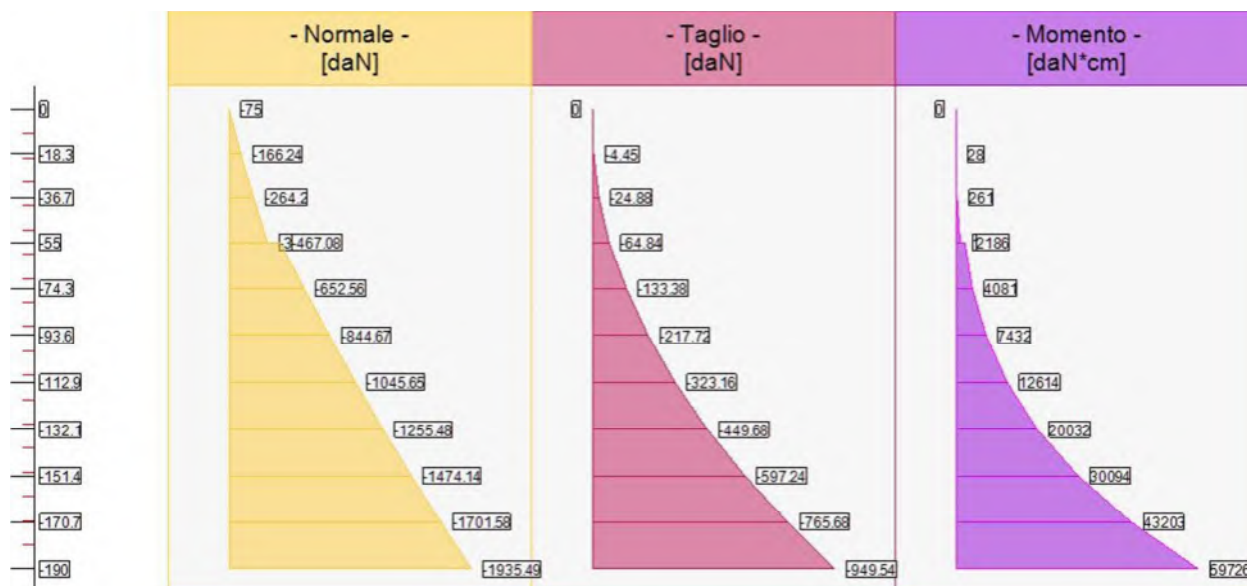
Elevazione, presso-flessione								
quota [cm]	Normale [daN]	Taglio [daN]	Momento [daN*cm]	•	Mom.Res.POS [daN*cm]	Mom.Res.NEG [daN*cm]	FS >1/<1	-
-18.33	-166.24	-4.45	28	•	138483	-138483	> 100	Verificato
-36.67	-264.2	-24.88	261	•	139004	-139004	> 100	Verificato
-55	-370.36	-64.85	1060	•	350294	-317638	> 100	Verificato
-55	-467.08	-64.84	2186	•	350755	-318161	> 100	Verificato
-74.29	-652.56	-133.38	4081	•	255679	-255679	62.66	Verificato
-93.57	-844.67	-217.72	7432	•	257617	-257617	34.66	Verificato
-112.86	-1045.65	-323.16	12614	•	259647	-259647	20.58	Verificato
-132.14	-1255.48	-449.68	20032	•	457440	-471735	22.84	Verificato
-151.43	-1474.14	-597.24	30094	•	459550	-473774	15.27	Verificato
-170.71	1701.58	-765.68	43203	•	461742	-475894	10.69	Verificato
-190	-1935.49	-949.54	59726	•	257734	-279268	4.32	Verificato

Sforzo Normale, Taglio e Momento lungo il paramento verticale, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )

Elevazione, taglio							
quota [cm]	Normale [daN]	Taglio [daN]	Momento [daN*cm]	•	Tag.Res. [daN]	FS >1/<1	-
-18.33	-166.24	-4.45	28	•	4939.84	> 100	Verificato
-36.67	-264.2	-24.88	261	•	4939.84	> 100	Verificato

-55	-370.36	-64.85	1060	•	4939.84	76.18	Verificato
-55	-467.08	-64.84	2186	•	4939.84	76.18	Verificato
-74.29	-652.56	-133.38	4081	•	9879.68	74.07	Verificato
-93.57	-844.67	-217.72	7432	•	9879.68	45.38	Verificato
-112.86	-1045.65	-323.16	12614	•	9879.68	30.57	Verificato
-132.14	-1255.48	-449.68	20032	•	9879.68	21.97	Verificato
-151.43	-1474.14	-597.24	30094	•	9879.68	16.54	Verificato
-170.71	-1701.58	-765.68	43203	•	9879.68	12.9	Verificato
-190	-1935.49	-949.54	59726	•	9879.68	10.4	Verificato

Sforzo Normale, Taglio e Momento lungo il paramento verticale, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )



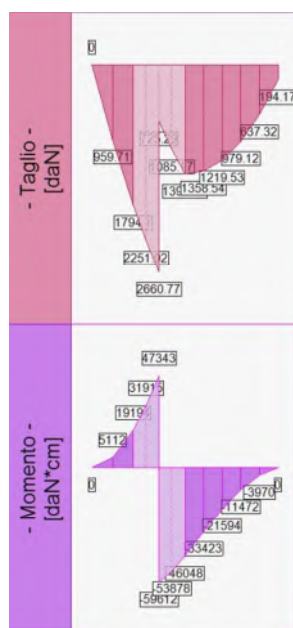
Sollecitazioni lungo il fusto, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )

Fondazione, flessione							
quota [cm]	Taglio [daN]	Momento [daN*cm]	•	Mom.Res.POS [daN*cm]	Mom.Res.NEG [daN*cm]	FS	-
-25	959.71	5112	•	425459.9	-425459.9	83.23	Verificato
-15	1794.1	19194	•	425459.9	-425459.9	22.17	Verificato
10	1396.08	-46048	•	432983.2	-432983.2	9.4	Verificato
19	1358.54	-33423	•	432983.2	-432983.2	12.95	Verificato
28	1219.53	-21594	•	432983.2	-432983.2	20.05	Verificato
37	979.12	-11472	•	432983.2	-432983.2	37.74	Verificato
46	637.32	-3970	•	432983.2	-432983.2	> 100	Verificato

Taglio e Momento lungo la mensola di fondazione, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )

Fondazione, taglio						
quota	Taglio	Momento	•	Tag.Res.	FS	-
[cm]	[daN]	[daN*cm]	•	[daN]	> 1/ < 1	-
-25	959.71	5112	•	14223.2	14.82	Verificato
-15	1794.1	19194	•	14223.2	7.93	Verificato
10	1396.08	-46048	•	14223.2	10.19	Verificato
19	1358.54	-33423	•	14223.2	10.47	Verificato
28	1219.53	-21594	•	14223.2	11.66	Verificato
37	979.12	-11472	•	14223.2	14.53	Verificato
46	637.32	-3970	•	14223.2	22.32	Verificato

Taglio e Momento lungo la mensola di fondazione, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )



Sollecitazioni in fondazione, per il Caso 1 ( STR [ SLU ] - SLU A1+M1+R3 )

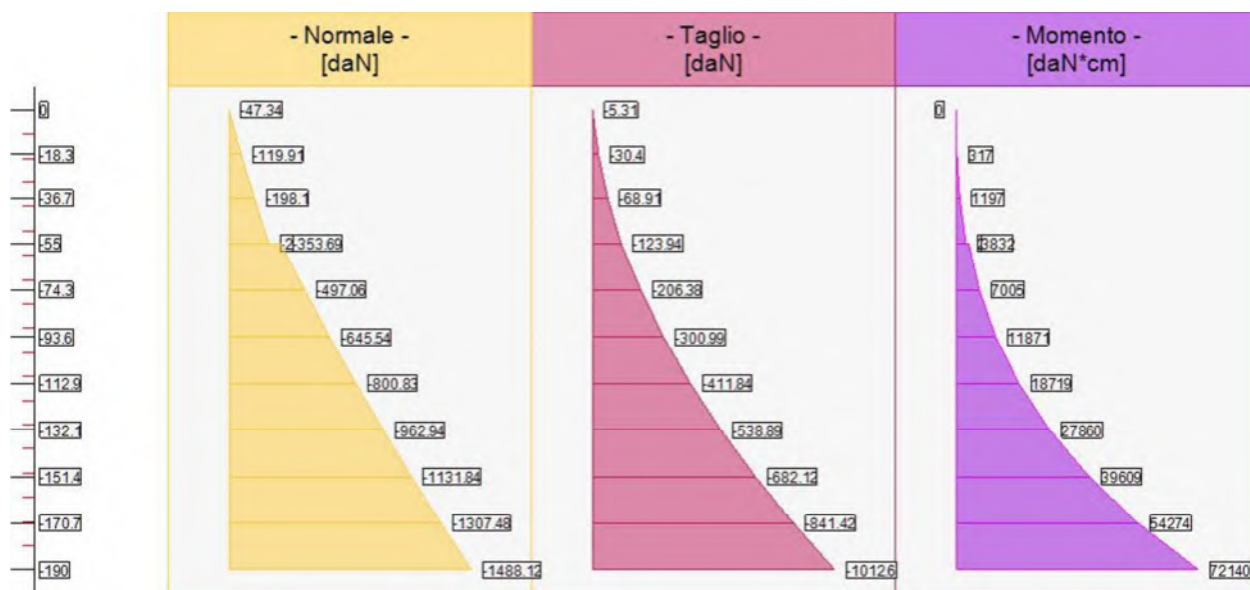
## 1.9.2.2 - Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )

Elevazione, presso-flessione								
quota [cm]	Normale [daN]	Taglio [daN]	Momento [daN*cm]	•	Mom.Res.POS [daN*cm]	Mom.Res.NEG [daN*cm]	FS >1/<1	-
-18.33	-119.91	-30.4	317	•	138236	-138236	> 100	Verificato
-36.67	-198.1	-68.91	1197	•	138652	-138652	> 100	Verificato
-55	-283.24	-123.94	2945	•	349877	-317165	> 100	Verificato
-55	-353.69	-123.94	3832	•	350214	-317547	91.38	Verificato
-74.29	-497.06	-206.38	7005	•	254110	-254110	36.28	Verificato
-93.57	-645.54	-300.99	11871	•	255608	-255608	21.53	Verificato
-112.86	-800.83	-411.84	18719	•	257175	-257175	13.74	Verificato
-132.14	-962.94	-538.89	27860	•	454618	-469008	16.32	Verificato
-151.43	-1131.84	-682.12	39609	•	456249	-470582	11.52	Verificato
-170.71	-1307.48	-841.42	54274	•	457941	-472220	8.44	Verificato
-190	-1488.12	-1012.6	72140	•	253236	-274770	3.51	Verificato

Sforzo Normale, Taglio e Momento lungo il paramento verticale, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )

Elevazione, taglio							
quota [cm]	Normale [daN]	Taglio [daN]	Momento [daN*cm]	• •	Tag.Res. [daN]	FS >1/<1	- -
-18.33	-119.91	-30.4	317	•	4939.84	> 100	Verificato
-36.67	-198.1	-68.91	1197	•	4939.84	71.68	Verificato
-55	-283.24	-123.94	2945	•	4939.84	39.86	Verificato
-55	-353.69	-123.94	3832	•	4939.84	39.86	Verificato
-74.29	-497.06	-206.38	7005	•	9879.68	47.87	Verificato
-93.57	-645.54	-300.99	11871	•	9879.68	32.82	Verificato
-112.86	-800.83	-411.84	18719	•	9879.68	23.99	Verificato
-132.14	-962.94	-538.89	27860	•	9879.68	18.33	Verificato
-151.43	-1131.84	-682.12	39609	•	9879.68	14.48	Verificato
-170.71	-1307.48	-841.42	54274	•	9879.68	11.74	Verificato
-190	-1488.12	-1012.6	72140	•	9879.68	9.76	Verificato

Sforzo Normale, Taglio e Momento lungo il paramento verticale, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )



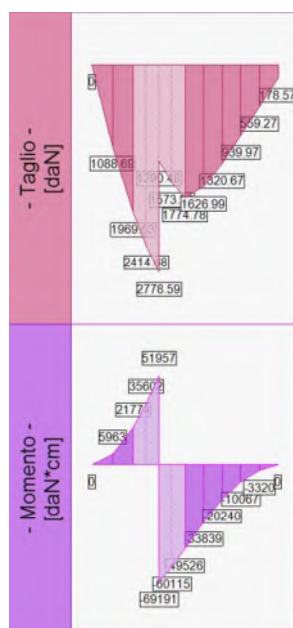
Sollecitazioni lungo il fusto, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )

Fondazione, flessione							
quota [cm]	Taglio [daN]	Momento [daN*cm]	•	Mom.Res.POS [daN*cm]	Mom.Res.NEG [daN*cm]	FS	-
-25	1088.69	5963	•	425286.9	-425286.9	71.32	Verificato
-15	1969.63	21774	•	425114	-425114	19.52	Verificato
10	1774.78	-49526	•	433157.5	-433157.5	8.75	Verificato
19	1626.99	-33839	•	433001.3	-433001.3	12.8	Verificato
28	1320.67	-20240	•	432845.1	-432845.1	21.39	Verificato
37	939.97	-10067	•	432689.1	-432689.1	42.98	Verificato
46	559.27	-3320	•	432533.3	-432533.3	> 100	Verificato

Taglio e Momento lungo la mensola di fondazione, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )

Fondazione, taglio						
quota [cm]	Taglio [daN]	Momento [daN*cm]	•	Tag.Res. [daN]	FS	-
-25	1088.69	5963	•	14223.2	13.06	Verificato
-15	1969.63	21774	•	14223.2	7.22	Verificato
10	1774.78	-49526	•	14223.2	8.01	Verificato
19	1626.99	-33839	•	14223.2	8.74	Verificato
28	1320.67	-20240	•	14223.2	10.77	Verificato
37	939.97	-10067	•	14223.2	15.13	Verificato
46	559.27	-3320	•	14223.2	25.43	Verificato

Taglio e Momento lungo la mensola di fondazione, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )



Sollecitazioni in fondazione, per il Caso 2 ( SLV\_SISMA\_SU [ SLV ] - Sisma\_1+1+R\_Su )

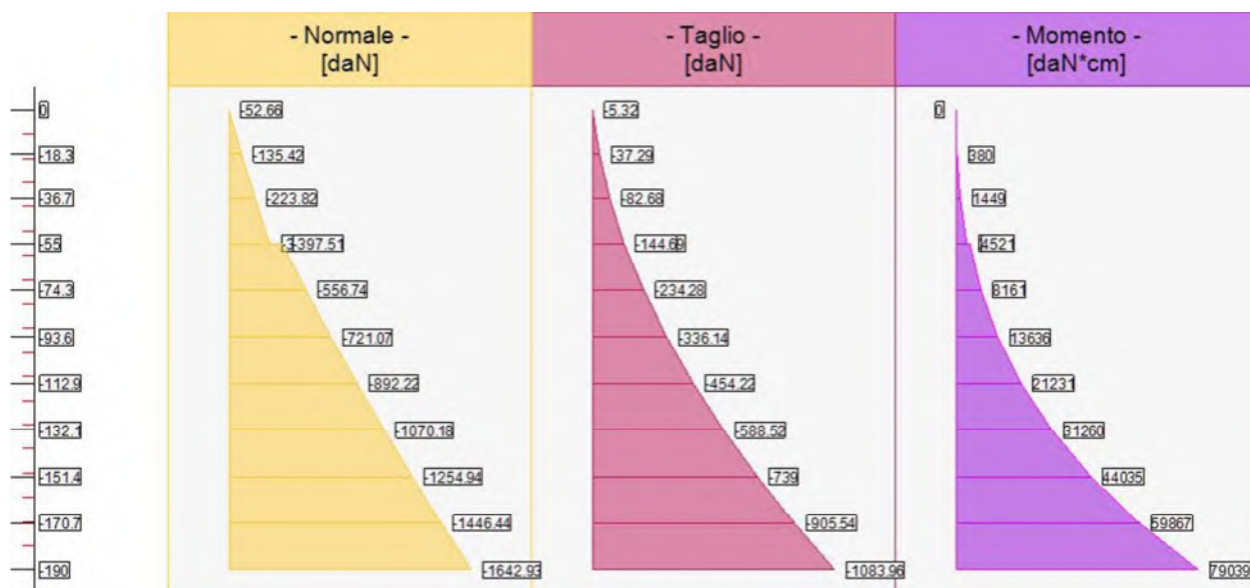
## 1.9.2.3 - Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )

Elevazione, presso-flessione								
quota [cm]	Normale [daN]	Taglio [daN]	Momento [daN*cm]	•	Mom.Res.POS [daN*cm]	Mom.Res.NEG [daN*cm]	FS >1/<1	-
-18.33	-135.42	-37.29	380	•	138318	-138318	> 100	Verificato
-36.67	-223.82	-82.68	1449	•	138789	-138789	95.76	Verificato
-55	-319.15	-144.59	3513	•	350048	-317360	99.65	Verificato
-55	-397.51	-144.6	4521	•	350422	-317784	77.51	Verificato
-74.29	-556.74	-234.28	8161	•	254712	-254712	31.21	Verificato
-93.57	-721.07	-336.14	13636	•	256370	-256370	18.8	Verificato
-112.86	-892.22	-454.22	21231	•	258098	-258098	12.16	Verificato
-132.14	-1070.18	-588.52	31260	•	455653	-470008	14.58	Verificato
-151.43	-1254.94	-739	44035	•	457435	-471729	10.39	Verificato
-170.71	-1446.44	-905.54	59867	•	459283	-473516	7.67	Verificato
-190	-1642.93	-1083.96	79039	•	254793	-276326	3.22	Verificato

Sforzo Normale, Taglio e Momento lungo il paramento verticale, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )

Elevazione, taglio							
quota [cm]	Normale [daN]	Taglio [daN]	Momento [daN*cm]	• •	Tag.Res. [daN]	FS >1/<1	- -
-18.33	-135.42	-37.29	380	•	4939.84	> 100	Verificato
-36.67	-223.82	-82.68	1449	•	4939.84	59.74	Verificato
-55	-319.15	-144.59	3513	•	4939.84	34.16	Verificato
-55	-397.51	-144.6	4521	•	4939.84	34.16	Verificato
-74.29	-556.74	-234.28	8161	•	9879.68	42.17	Verificato
-93.57	-721.07	-336.14	13636	•	9879.68	29.39	Verificato
-112.86	-892.22	-454.22	21231	•	9879.68	21.75	Verificato
-132.14	-1070.18	-588.52	31260	•	9879.68	16.79	Verificato
-151.43	-1254.94	-739	44035	•	9879.68	13.37	Verificato
-170.71	-1446.44	-905.54	59867	•	9879.68	10.91	Verificato
-190	-1642.93	-1083.96	79039	•	9879.68	9.11	Verificato

Sforzo Normale, Taglio e Momento lungo il paramento verticale, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )



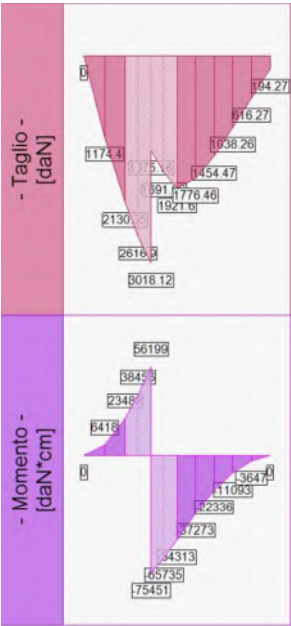
Sollecitazioni lungo il fusto, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )

Fondazione, flessione							
quota [cm]	Taglio [daN]	Momento [daN*cm]	•	Mom.Res.POS [daN*cm]	Mom.Res.NEG [daN*cm]	FS	-
-25	1174.4	6418	•	425286.9	-425286.9	66.26	Verificato
-15	2130.35	23488	•	425114	-425114	18.1	Verificato
10	1921.6	-54313	•	433765.8	-433765.8	7.99	Verificato
19	1776.46	-37273	•	433612	-433612	11.63	Verificato
28	1454.47	-22336	•	433455.4	-433455.4	19.41	Verificato
37	1038.26	-11093	•	433298.9	-433298.9	39.06	Verificato
46	616.27	-3647	•	433142.5	-433142.5	> 100	Verificato

Taglio e Momento lungo la mensola di fondazione, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )

Fondazione, taglio						
quota [cm]	Taglio [daN]	Momento [daN*cm]	•	Tag.Res. [daN]	FS	-
-25	1174.4	6418	•	14223.2	12.11	Verificato
-15	2130.35	23488	•	14223.2	6.68	Verificato
10	1921.6	-54313	•	14223.2	7.4	Verificato
19	1776.46	-37273	•	14223.2	8.01	Verificato
28	1454.47	-22336	•	14223.2	9.78	Verificato
37	1038.26	-11093	•	14223.2	13.7	Verificato
46	616.27	-3647	•	14223.2	23.08	Verificato

Taglio e Momento lungo la mensola di fondazione, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )

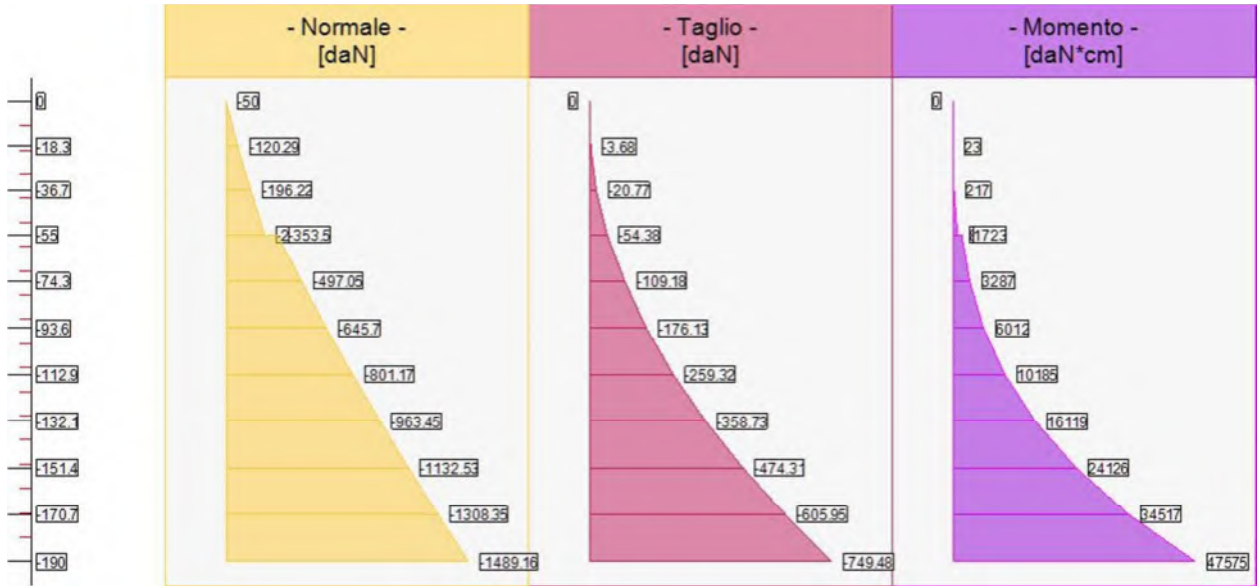


Sollecitazioni in fondazione, per il Caso 3 ( SLV\_SISMA\_GIU [ SLV ] - Sisma\_1+1+R\_Giu )

1.9.2.4 - Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica ( rara ) )

Elevazione, tensioni di esercizio cls, tensioni di esercizio acciaio, apertura fessure							
quota [cm]	Tensione Cls [daN/cm <sup>2</sup> ]	FS > 1/< 1	Tensione Acc [daN/cm <sup>2</sup> ]	FS > 1/< 1	Fessure [cm]	FS > 1/< 1	- -
-18.33	0.08	> 100	1.21	> 100	0	-	Verificato
-36.67	0.18	> 100	2.42	> 100	0	-	Verificato
-55	0.36	> 100	4.49	> 100	0	-	Verificato
-55	0.36	> 100	4.49	> 100	0	-	Verificato
-74.29	0.53	> 100	6.64	> 100	0	-	Verificato
-93.57	1.05	> 100	12.45	> 100	0	-	Verificato
-112.86	2.09	71.53	50.41	71.41	0	-	Verificato
-132.14	2.87	52.1	71.69	50.22	0	-	Verificato
-151.43	4.4	33.94	133.75	26.92	0	-	Verificato
-170.71	6.38	23.41	219.65	16.39	0	-	Verificato
-190	12.01	12.44	629.95	5.71	0	-	Verificato

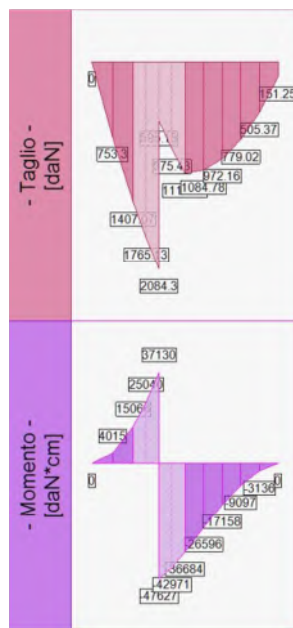
Tensione nei materiali lungo il paramento verticale, per il Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica ( rara ) )



Sollecitazioni lungo il fusto, per il Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica (rara) )

Fondazione, tensioni di esercizio cls, tensioni di esercizio acciaio, apertura fessure							
quota [cm]	Tensione Cls [daN/cm <sup>2</sup> ]	FS >1/<1	Tensione Acc [daN/cm <sup>2</sup> ]	FS >1/<1	Fessure [cm]	FS >1/<1	- -
-25	0.51	> 100	47.79	75.32	0	-	Verificato
-15	1.9	78.83	179.33	20.07	0	-	Verificato
10	4.61	32.37	436.65	8.24	0	-	Verificato
19	3.35	44.65	316.57	11.37	0	-	Verificato
28	2.16	69.22	204.23	17.63	0	-	Verificato
37	1.14	> 100	108.28	33.25	0	-	Verificato
46	0.39	> 100	37.32	96.45	0	-	Verificato

Tensione nei materiali lungo la fondazione, per il Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica (rara) )

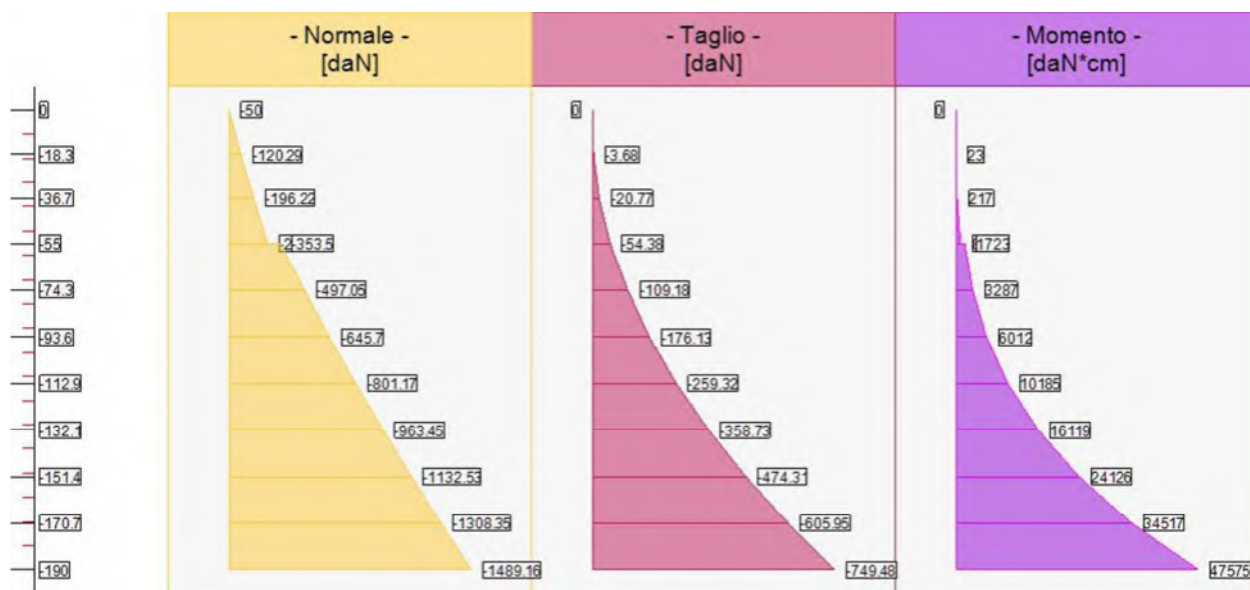


Sollecitazioni in fondazione, per il Caso 6 ( RARA [ Caratteristica ] - SLE caratteristica (rara) )

## 1.9.2.5 - Caso 7 ( FREQ. [ Frequente ] - SLE frequente )

Elevazione, tensioni di esercizio cls, tensioni di esercizio acciaio, apertura fessure							
quota [cm]	Tensione Cls [daN/cm <sup>2</sup> ]	FS >1/<1	Tensione Acc [daN/cm <sup>2</sup> ]	FS >1/<1	Fessure [cm]	FS >1/<1	- -
-18.33	0.08	-	1.21	-	0	> 100	Verificato
-36.67	0.18	-	2.42	-	0	> 100	Verificato
-55	0.36	-	4.49	-	0	> 100	Verificato
-55	0.36	-	4.49	-	0	> 100	Verificato
-74.29	0.53	-	6.64	-	0	> 100	Verificato
-93.57	1.05	-	12.45	-	0	> 100	Verificato
-112.86	2.09	-	50.41	-	0	> 100	Verificato
-132.14	2.87	-	71.69	-	0	91.34	Verificato
-151.43	4.4	-	133.75	-	0	46.2	Verificato
-170.71	6.38	-	219.65	-	0	27.2	Verificato
-190	12.01	-	629.95	-	0	8.46	Verificato

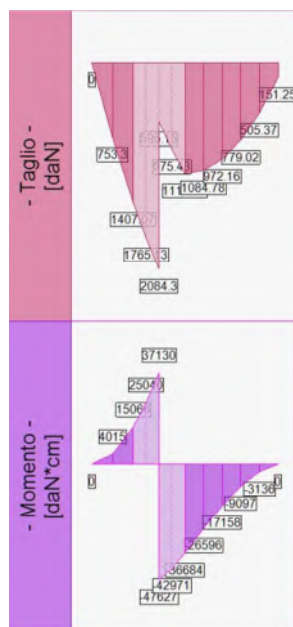
Tensione nei materiali lungo il paramento verticale, per il Caso 7 ( FREQ. [ Frequente ] - SLE frequente )



Sollecitazioni lungo il fusto, per il Caso 7 ( FREQ. [ Frequente ] - SLE frequente )

Fondazione, tensioni di esercizio cls, tensioni di esercizio acciaio, apertura fessure							
quota [cm]	Tensione Cls [daN/cm <sup>2</sup> ]	FS >1/<1	Tensione Acc [daN/cm <sup>2</sup> ]	FS >1/<1	Fessure [cm]	FS >1/<1	-
-25	0.51	-	47.79	-	0	63.99	Verificato
-15	1.9	-	179.33	-	0	17.06	Verificato
10	4.61	-	436.65	-	0	7	Verificato
19	3.35	-	316.57	-	0	9.66	Verificato
28	2.16	-	204.23	-	0	14.98	Verificato
37	1.14	-	108.28	-	0	28.25	Verificato
46	0.39	-	37.32	-	0	81.95	Verificato

Tensione nei materiali lungo la fondazione, per il Caso 7 ( FREQ. [ Frequente ] - SLE frequente )

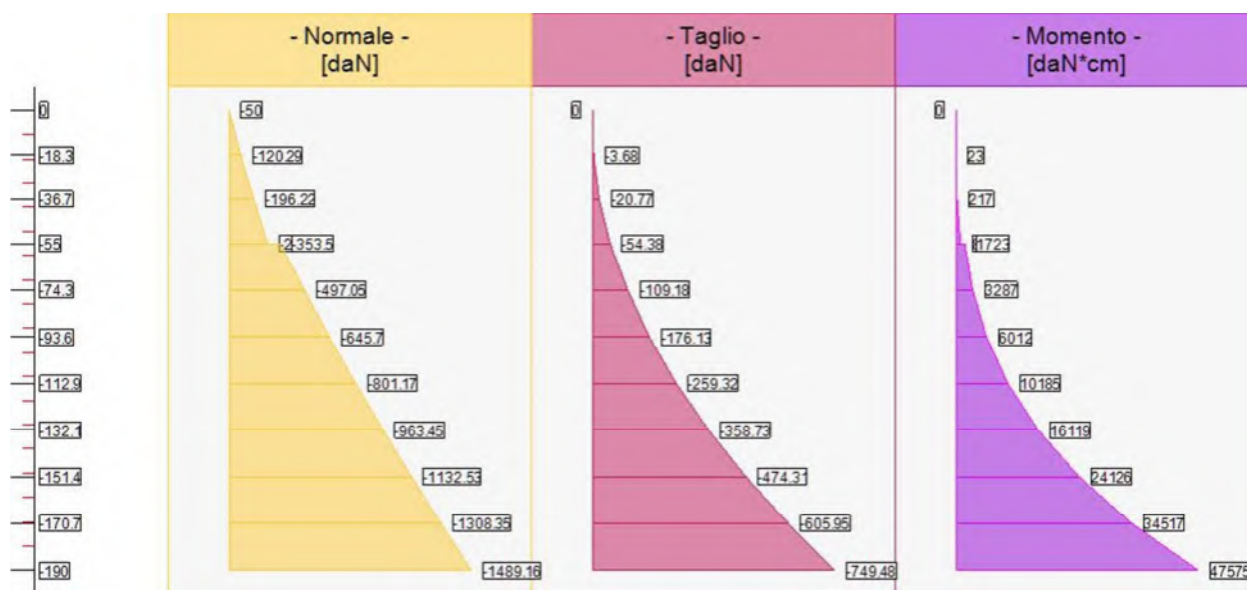


Sollecitazioni in fondazione, per il Caso 7 ( FREQ. [ Frequente ] - SLE frequente )

## 1.9.2.6 - Caso 8 ( Q.PERM. [ Quasi\_Perm ] - SLE quasi permanente )

Elevazione, tensioni di esercizio cls, tensioni di esercizio acciaio, apertura fessure							
quota [cm]	Tensione Cls [daN/cm <sup>2</sup> ]	FS >1/<1	Tensione Acc [daN/cm <sup>2</sup> ]	FS >1/<1	Fessure [cm]	FS >1/<1	-
-18.33	0.08	> 100	1.21	-	0	> 100	Verificato
-36.67	0.18	> 100	2.42	-	0	> 100	Verificato
-55	0.36	> 100	4.49	-	0	> 100	Verificato
-55	0.36	> 100	4.49	-	0	> 100	Verificato
-74.29	0.53	> 100	6.64	-	0	> 100	Verificato
-93.57	1.05	> 100	12.45	-	0	> 100	Verificato
-112.86	2.09	53.65	50.41	-	0	96.7	Verificato
-132.14	2.87	39.08	71.69	-	0	68.51	Verificato
-151.43	4.4	25.45	133.75	-	0	34.65	Verificato
-170.71	6.38	17.56	219.65	-	0	20.4	Verificato
-190	12.01	9.33	629.95	-	0	6.34	Verificato

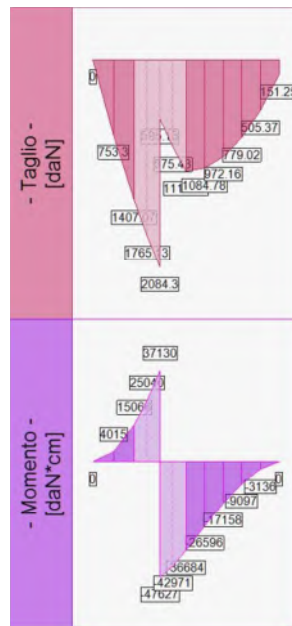
Tensione nei materiali lungo il paramento verticale, per il Caso 8 ( Q.PERM. [ Quasi\_Perm ] - SLE quasi permanente )



Sollecitazioni lungo il fusto, per il Caso 8 ( Q.PERM. [ Quasi\_Perm ] - SLE quasi permanente )

Fondazione, tensioni di esercizio cls, tensioni di esercizio acciaio, apertura fessure							
quota [cm]	Tensione Cls [daN/cm <sup>2</sup> ]	FS >1/<1	Tensione Acc [daN/cm <sup>2</sup> ]	FS >1/<1	Fessure [cm]	FS >1/<1	-
-25	0.51	> 100	47.79	-	0	47.99	Verificato
-15	1.9	59.12	179.33	-	0	12.79	Verificato
10	4.61	24.28	436.65	-	0	5.25	Verificato
19	3.35	33.49	316.57	-	0	7.25	Verificato
28	2.16	51.91	204.23	-	0	11.23	Verificato
37	1.14	97.92	108.28	-	0	21.18	Verificato
46	0.39	> 100	37.32	-	0	61.46	Verificato

Tensione nei materiali lungo la fondazione, per il Caso 8 ( Q.PERM. [ Quasi\_Perm ] - SLE quasi permanente )



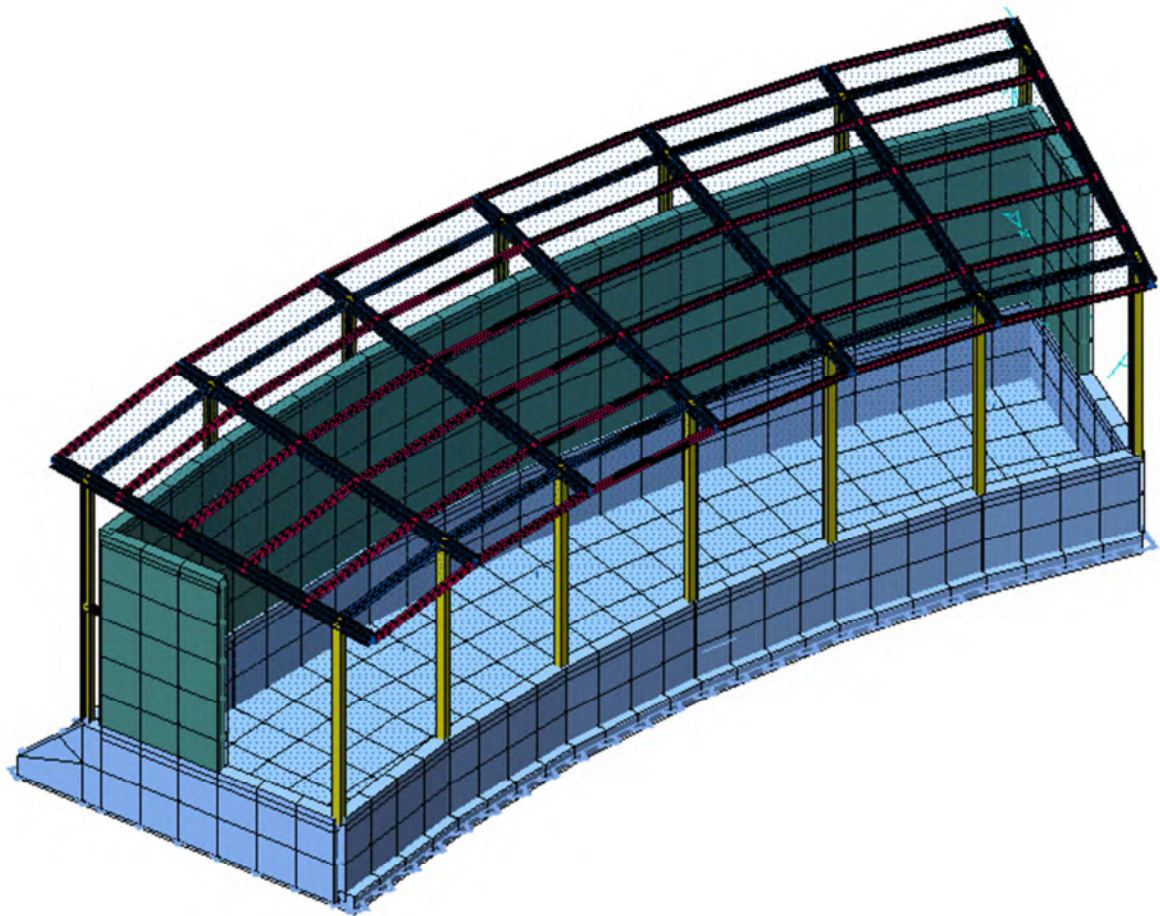
Sollecitazioni in fondazione, per il Caso 8 ( Q.PERM. [ Quasi\_Perm ] - SLE quasi permanente )

## 2 ANALISI E VERIFICHE SVOLTE CON L'AUSILIO DI CODICI DI CALCOLO PER STRUTTURA PRINCIPALE

### 2.1 MODELLO DI CALCOLO ELABORATO

I tabulati con i dati di input del modello di calcolo sono riportati in calce alla relazione nell'Appendice A: "DATI ANALISI MODELLO AGLI ELEMENTI FINITI".

MODELLO AGLI ELEMENTI FINITI



## 2.2 CONDIZIONI DI CARICO

Le condizioni di carico riportate nei tabulati relativi alla verifica di ciascun elemento sono di seguito riassunte.

NUM	DESCRIZIONE	
1	Peso proprio	
2	Permanente	
3	A:Var pubblico	
4	Neve (<1000m slm)	
5	vento y	
6	fondazioni	
7	terreno	
8	Sisma X	
9	Sisma Y	
10	Torcente add. X	
11	Torcente add. Y	
12	Autovett 001 (X)	
13	Autovett 001 (Y)	
14	Autovett 002 (X)	
15	Autovett 002 (Y)	
16	Autovett 003 (X)	
17	Autovett 003 (Y)	
18	Autovett 014 (X)	
19	Autovett 014 (Y)	
20	Autovett 026 (X)	
21	Autovett 026 (Y)	
22	Autovett 027 (X)	
23	Autovett 027 (Y)	

Si riporta di seguito il dettaglio dei carichi inseriti in ciascuna condizione.

### CARICHI NELLE CONDIZIONI

001) Peso proprio [ Peso proprio ]

```

107 pesi propri aste
151 pesi propri gusci
12 carichi di solaio
    6 peso_proprio      : globale -0.030 daN/cm2
    6 cappa_collaborante : globale -0.013 daN/cm2

002) Permanente          [ Permanente ]
    18 carichi di solaio
        6 SottofondoPav+_Pav : globale -0.015 daN/cm2
        6 peso_proprio_annel : globale -0.001 daN/cm2
        6 peso_controsoffitto : globale -0.001 daN/cm2

003) A:Var pubblico      [ A:Var abitazione ]
    6 carichi di solaio
        6 var_pubblico      : globale -0.085 daN/cm2

004) Neve (<1000m slm)   [ Neve (<1000m slm) ]
    6 carichi di solaio
        6 Neve              : proiezione -0.008 daN/cm2

005) vento y             [ Vento Y ]
    120 carichi su gusci
        120 vento           : Distribuito Y globale 0.006 daN/cm2
    6 carichi di solaio
        6 vento_y           : proiezione 0.003 daN/cm2

006) fondazioni          [ Peso proprio fondaz ]
    60 pesi propri aste
    371 pesi propri gusci

007) terreno             [ Permanente fondaz ]
    72 carichi su gusci
        72 terreno          : Linearm. variab. Z locale 0.160 -> 0.000 daN/cm2
                             per Zglob = -175.0 -> 0.0 cm

```

## 2.3 CASI DI CARICO

I casi di carico riportati nei tabulati relativi alla verifica di ciascun elemento sono di seguito riassunti.

NOM	DESCRIZIONE	VERIF.	TIPO	CONDIZIONI INSERITE			CASI INS.		
				Nro	Descrizione	Coef.	Somma	Nom	Coef.
1	SLU	SLU	somma	1	Peso proprio	1.300	+		
				2	Permanente	1.500	+		
				3	A:Var pubblico	1.500	+		
				4	Neve (<1000m slm)	1.500	+		
				6	fondazioni	1.300	+		
				7	terreno	1.500	+		
2	SLU VENTOY	SLU	somma	1	Peso proprio	1.300	+		
				2	Permanente	1.500	+		
				3	A:Var pubblico	1.500	+		
				4	Neve (<1000m slm)	1.500	+		
				5	vento_y	1.500	+/-		
				6	fondazioni	1.300	+		
				7	terreno	1.500	+		
3	SISMAX SLU	NONUT	somma	8	Sisma_X	1.000	quad		
				10	Torcente_add_X	1.000	quad		
				12	Autovett_001_X	1.000	quad		
				14	Autovett_002_X	1.000	quad		
				18	Autovett_014_X	1.000	+/-		
4	SISMAY SLU	NONUT	somma	9	Sisma_Y	1.000	quad		
				11	Torcente_add_Y	1.000	quad		
				13	Autovett_001_Y	1.000	quad		
				15	Autovett_002_Y	1.000	quad		
				19	Autovett_014_Y	1.000	+/-		
5	SLU con SISMAX PRINC	SLU	somma	1	Peso proprio	1.000	+	3	1.000
				2	Permanente	1.000	+	4	.300
				3	A:Var pubblico	.300	+		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		
6	SLU con SISMAY PRINC	SLU	somma	1	Peso proprio	1.000	+	4	1.000
				2	Permanente	1.000	+	3	.300
				3	A:Var pubblico	.300	+		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		
7	SLD con SISMAX PRINC	SLD	somma	1	Peso proprio	1.000	+	3	.626

				2	Permanente	1.000	+	4	.188
				3	A:Var_pubblico	.300	+		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		
8	SLD con SISMAY PRINC	SLD	somma	1	Peso_proprio	1.000	+	4	.626
				2	Permanente	1.000	+	3	.188
				3	A:Var_pubblico	.300	+		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		
9	Rara	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				3	A:Var_pubblico	1.000	+		
				4	Neve_(<1000m_slm)	1.000	+		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		
10	Rara VentoY	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				3	A:Var_pubblico	1.000	+		
				4	Neve_(<1000m_slm)	1.000	+		
				5	vento_y	1.000	+/-		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		
11	Frequente	FREQ	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				3	A:Var_pubblico	.500	+		
				4	Neve_(<1000m_slm)	.200	+		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		
12	Frequente VentoY	FREQ	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				3	A:Var_pubblico	.500	+		
				4	Neve_(<1000m_slm)	.200	+		
				5	vento_y	.200	+/-		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		
13	Quasi Perm	QPERM	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				3	A:Var_pubblico	.300	+		
				6	fondazioni	1.000	+		
				7	terreno	1.000	+		

## 2.4 ANALISI SISMICA

### 2.4.1 ANALISI SISMICA DINAMICA MODALE DI PROGETTO

Per quanto riguarda la pericolosità sismica di base del sito di edificazione, si è utilizzata la definizione recentemente prodotta e messa in rete dall'Istituto Nazionale di Geofisica e Vulcanologia, che consente di tarare l'azione sismica sito per sito. Di seguito i valori di legge dei parametri da utilizzare nelle verifiche, il calcolo dell'azione sismica e la verifica delle murature, dei pilastri, dei setti e dello stato tensionale sul piano di posa delle fondazioni.

### 2.4.2 DATI ANALISI SISMICA DINAMICA:

Si riportano di seguito i valori dei parametri fondamentali per l'analisi dinamica.

#### PARAMETRI DI CALCOLO:

Modello generale

Assi di vibrazione: X Y

Combinazione quadratica completa (CQC)

#### DATI PROGETTO

Edificio sito in località LAVAGNO ( long. 11.132 lat. 45.440300 )

Categoria del suolo di fondazione = C

Coeff. di amplificazione stratigrafica  $S_s = 1.474$

Coeff. di amplificazione topografica  $ST = 1.000$

$S = 1.474$

Vita nominale dell'opera VN = 50 anni  
 Coefficiente d'uso CU = 1.0  
 Periodo di riferimento VR = 50.0  
 PVR : probabilit? di superamento in VR = 10 %  
 Tempo di ritorno = 474  
 Coeff. di smorzamento viscoso = 5.0

Valori risultanti per :  
 ag 1.549 [g/10]  
 Fo 2.430  
 TC\* 0.280

Fattore di comportamento q = 1.500  
 Rapporto spettro di esercizio / spettro di progetto = 0.555

CONDIZIONI DI RIFERIMENTO	COEFFICIENTE	PESO RISULTANTE [daN]
1.	1.000	129996.2
2.	1.000	18947.0
3.	0.300	27423.7

\*\*\* TABELLA AUTOVETTORI \*\*\*

n	PERIODO [sec]	MASSA ATTIVATA			COEFFICIENTI DI CORRELAZIONE						
		%X	%Y	%Z	n+1	n+2	n+3	n+4	n+5	n+6	n+7
1	0.836479	15.093	1.413	0.000	0.015	0.014	0.000	0.000	0.000		
2	0.392644	0.033	6.763	0.000	0.933	0.001	0.000	0.000			
3	0.382268	2.825	8.605	0.000	0.001	0.000	0.000				
14	0.032122	6.839	71.572	0.000	0.012	0.009					
26	0.013695	0.078	1.539	0.000	0.412						
27	0.012157	72.566	6.896	0.000							
MASSA TOTALE		97.434	96.789	0.000							

### 2.4.3 DATI ANALISI SISMICA STATICA LINEARE:

#### DATI PROGETTO

Edificio sito in località LAVAGNO ( long. 11.132 lat. 45.440300 )

Categoria del suolo di fondazione = C

Coeff. di amplificazione stratigrafica Ss = 1.474

Coeff. di amplificazione topografica ST = 1.000

S = 1.474

Vita nominale dell'opera VN = 50 anni

Coefficiente d'uso CU = 1.0

Periodo di riferimento VR = 50.0

PVR : probabilit? di superamento in VR = 10 %

Tempo di ritorno = 474

Coeff. di smorzamento viscoso = 5.0

Valori risultanti per :  
 ag 1.549 [g/10]  
 Fo 2.430  
 TC\* 0.280

Fattore di comportamento q = 1.500

Rapporto spettro di esercizio / spettro di progetto = 0.555

Coeff. lambda = 1.0000  
 Sd = 0.198 per T1 = 0.836

Numero condizioni generanti carichi sismici : 3

Cond. 001 : Peso\_proprio\_\_\_\_\_ con coeff. 1.000  
 Cond. 002 : Permanente\_\_\_\_\_ con coeff. 1.000  
 Cond. 003 : A:Var\_pubblico con coeff. 0.300

Massa sismica totale 176371 daN

Condizioni di carico sismico generate:

Cond. 008 : Sisma X  
 Cond. 009 : Sisma Y  
 Cond. 010 : Torcente add. X  
 Cond. 011 : Torcente add. Y

Carichi sismici :

Piani	Pesi	C. distr.	Forze piano	Torc. piano X	Torc. piano Y	Bar. X	Bar. Y
cm	daN		daN	daNcm	daNcm	cm	cm
175.0	97749	0.1176	11498	640814	1210505	1037.7	620.5
262.0	15444	0.1761	2720	116678	283269	1088.6	455.3
349.0	15694	0.2346	3682	157944	383452	1095.3	456.0
436.0	16434	0.2931	4816	216255	507051	1095.9	452.8
523.0	15444	0.3515	5429	232911	565457	1088.6	455.3
610.0	9141	0.4100	3748	213006	390363	1065.2	531.1
667.2	3638	0.4485	1631	68834	162102	1008.3	712.1
725.0	2828	0.4873	1378	53833	147984	1109.1	383.4
-----							
176371			34903				

## 2.4.4 CONTROLLO RIGIDEZZE

### CONTROLLO RIGIDEZZE STRUTTURALI

Quota del piano	-25.0	537.0	[cm]
Rigidezza KX (/1000)	15538.286	0.969	[daN/cm]
Rigidezza KY (/1000)	3395.788	2.449	[daN/cm]
Rigidezza ktors (/1e6)	9857017	1234	[daNcm]
Xk (centro rigidezza)	749.1	1533.8	[cm]
Yk (centro rigidezza)	220.7	760.1	[cm]
Xg (baricentro)	1050.8	1081.7	[cm]
Yg (baricentro)	580.7	484.4	[cm]
dimensione X	2106	2087	[cm]
dimensione Y	1115	920	[cm]
raggio rigidezza (rx)	1704	710	[cm]
raggio rigidezza (ry)	796	1129	[cm]
raggio giratorio (ls)	604	623	[cm]
MIN(rx , ry) / ls	1.3191	1.1406	ok (> 1)
(Xg - Xk) / rx	0.1771	0.6367	> 0.3 !!!!
(Yg - Yk) / ry	0.4520	0.2442	> 0.3 !!!!
2° ordine (theta X)	0.01	0.80	[%] ok (< 10%)
2° ordine (theta Y)	0.04	0.31	[%] ok (< 10%)
Percentuale dinamica X	0.43	99.57	[%]
Percentuale dinamica Y	4.64	95.36	[%]

## 2.4.5 VERIFICA SPOSTAMENTI SISMICI

### 2.4.5.1 SPOSTAMENTI ALLO STATO LIMITE D'ESERCIZIO (SLD)

Per le costruzioni ricadenti in classe d'uso I o II si deve verificare che l'azione sismica di progetto non produca agli elementi costruttivi senza funzione strutturale danni tali da rendere la costruzione temporaneamente inagibile.

Nel caso delle costruzioni civili e industriali, qualora la temporanea inagibilità sia dovuta a spostamenti eccessivi di interpiano, questa condizione si può ritenere soddisfatta quando gli spostamenti interpiano ottenuti dall'analisi in presenza dell'azione sismica di progetto relativa allo SLD siano inferiori ai limiti indicati al par. 7.3.7.2 del *D.M. 17 gennaio 2018 - Nuove Norme Tecniche per le Costruzioni*.

Per le costruzioni ricadenti in classe d'uso III e IV si deve inoltre verificare che l'azione sismica di progetto non produca danni agli elementi costruttivi senza funzione strutturale tali da rendere temporaneamente non operativa la costruzione.

### 2.4.5.2 SPOSTAMENTI ALLO STATO LIMITE ULTIMO (SLV)

Gli spostamenti  $d_E$  della struttura sotto l'azione sismica di progetto allo SLV si ottengono moltiplicando per il fattore  $\eta_d$  ottenuti i valori  $d_{Ee}$  ottenuti dall'analisi lineare, dinamica o statica, secondo l'espressione 7.3.8 del *D.M. 17 gennaio 2018 - Nuove Norme Tecniche per le Costruzioni*.

### 2.4.5.3 RISULTATI DELLE VERIFICHE

#### VERIFICA SPOSTAMENTI SISMICI DI ESERCIZIO (NTC 7.3.6.1)

spostamento limite interpiano = 0.5% dell'altezza

CASO n. 7 - SLD con SISMAX PRINC:

Zinf [cm]	Zsup [cm]	h [cm]	spost.max [cm]	%h	nodo	sest.	ver.
-200.00	-25.00	175.00	0.011346	0.006	1537	13	SI
-25.00	525.00	550.00	2.359607	0.429	1299	16	SI

CASO n. 8 - SLD con SISMAY PRINC:

Zinf [cm]	Zsup [cm]	h [cm]	spost.max [cm]	%h	nodo	sest.	ver.
-200.00	-25.00	175.00	0.017105	0.010	1537	4	SI
-25.00	525.00	550.00	1.487551	0.270	1299	6	SI

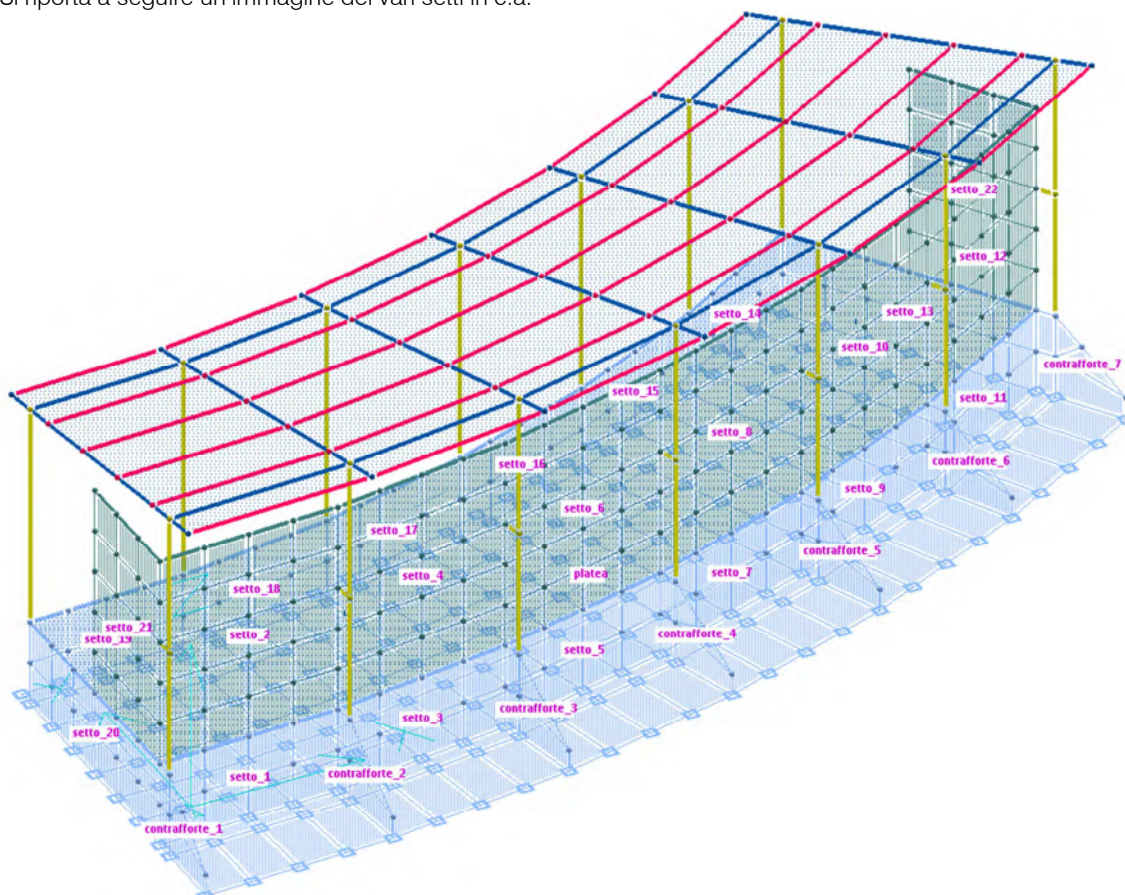
#### VERIFICA SPOSTAMENTI SISMICI DI S.L.V. (NTC 7.3.3.3)

Fattore Mud = 1.500

Quota [cm]	DX max [cm]	nodo	DY max [cm]	nodo
-25.00	0.009967	1067	0.034374	1537
537.40	5.970039	1394	3.341246	1544

## 2.5 VERIFICA SETTI IN C.A.

Si riporta a seguire un'immagine dei vari setti in c.a.



### 2.5.1 PLATEA DI FONDAZIONE

MACROGUSCIO platea

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAY PRINC

## DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.96 per mille  
 deformazione ultima cls : 3.5 per mille  
 rapporto rottura/snervamento (k): 1  
 resistenza cilindrica cls (fck): 249 daN/cm2  
 coefficiente sicurezza cls : 1.5  
 coefficiente riduttivo (alfa): 0.85  
 copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm  
 moltiplicatore sollecitazioni : 1

## LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm  
 Af = area disposta al lembo teso, in cm2 al metro  
 Afc = area disposta al lembo compresso, in cm2 al metro  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 epsC = deformazione cls [per mille]  
 epsF = deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.96 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
453	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
454	40	5.65	5.65	455.	0.	0.03	0.12	5.65	5.65	326.	0.	0.02	0.09	6
455	40	5.65	5.65	1617.	0.	0.09	0.42	5.65	5.65	0.	0.	0.00	0.00	21
456	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
457	40	5.65	5.65	199.	0.	0.01	0.05	5.65	5.65	0.	0.	0.00	0.00	3
458	40	5.65	5.65	1922.	0.	0.11	0.50	5.65	5.65	619.	0.	0.04	0.16	25
459	40	5.65	5.65	1791.	0.	0.10	0.47	5.65	5.65	48.	0.	0.00	0.01	23
460	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
461	40	5.65	5.65	591.	0.	0.03	0.16	5.65	5.65	2424.	0.	0.14	0.64	31
462	40	5.65	5.65	794.	0.	0.05	0.21	5.65	5.65	2099.	0.	0.12	0.55	27
463	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
464	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
465	40	5.65	5.65	167.	0.	0.01	0.04	5.65	5.65	0.	0.	0.00	0.00	2
466	40	5.65	5.65	1580.	0.	0.09	0.41	5.65	5.65	1824.	0.	0.11	0.48	23
467	40	5.65	5.65	1735.	0.	0.10	0.46	5.65	5.65	1009.	0.	0.06	0.26	22
468	40	5.65	5.65	511.	0.	0.03	0.13	5.65	5.65	938.	0.	0.05	0.25	12
469	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
470	40	5.65	5.65	547.	0.	0.03	0.14	5.65	5.65	2415.	0.	0.14	0.63	31
471	40	5.65	5.65	228.	0.	0.01	0.06	5.65	5.65	717.	0.	0.04	0.19	9
472	40	5.65	5.65	1158.	0.	0.07	0.30	5.65	5.65	2282.	0.	0.13	0.60	29
473	40	5.65	5.65	589.	0.	0.03	0.15	5.65	5.65	3075.	0.	0.18	0.81	39
474	40	5.65	5.65	58.	0.	0.00	0.02	5.65	5.65	347.	0.	0.02	0.09	4
475	40	5.65	5.65	467.	0.	0.03	0.12	5.65	5.65	3815.	0.	0.22	1.00	49
476	40	5.65	5.65	372.	0.	0.02	0.10	5.65	5.65	3978.	0.	0.23	1.04	51
477	40	5.65	5.65	363.	0.	0.02	0.10	5.65	5.65	1769.	0.	0.10	0.46	23
478	40	5.65	5.65	461.	0.	0.03	0.12	5.65	5.65	2674.	0.	0.16	0.70	34
479	40	5.65	5.65	468.	0.	0.03	0.12	5.65	5.65	3186.	0.	0.19	0.84	41
480	40	5.65	5.65	529.	0.	0.03	0.14	5.65	5.65	3115.	0.	0.18	0.82	40
481	40	5.65	5.65	495.	0.	0.03	0.13	5.65	5.65	648.	0.	0.04	0.17	8
482	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	608.	0.	0.04	0.16	8
483	40	5.65	5.65	245.	0.	0.01	0.06	5.65	5.65	881.	0.	0.05	0.23	11
484	40	5.65	5.65	901.	0.	0.05	0.24	5.65	5.65	822.	0.	0.05	0.22	12
485	40	5.65	5.65	243.	0.	0.01	0.06	5.65	5.65	1712.	0.	0.10	0.45	22
486	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
487	40	5.65	5.65	287.	0.	0.02	0.08	5.65	5.65	1674.	0.	0.10	0.44	21
488	40	5.65	5.65	10.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
489	40	5.65	5.65	259.	0.	0.02	0.07	5.65	5.65	2056.	0.	0.12	0.54	26
490	40	5.65	5.65	50.	0.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	1
491	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
492	40	5.65	5.65	381.	0.	0.02	0.10	5.65	5.65	1427.	0.	0.08	0.37	18
493	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
494	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
495	40	5.65	5.65	84.	0.	0.00	0.02	5.65	5.65	0.	0.	0.00	0.00	1
496	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
497	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
498	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
499	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
500	40	5.65	5.65	241.	0.	0.01	0.06	5.65	5.65	251.	0.	0.01	0.07	3
501	40	5.65	5.65	258.	0.	0.02	0.07	5.65	5.65	282.	0.	0.02	0.07	4
502	40	5.65	5.65	278.	0.	0.02	0.07	5.65	5.65	339.	0.	0.02	0.09	4
503	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
504	40	5.65	5.65	686.	0.	0.04	0.18	5.65	5.65	4395.	0.	0.26	1.15	56
505	40	5.65	5.65	736.	0.	0.04	0.19	5.65	5.65	4362.	0.	0.26	1.15	56
506	40	5.65	5.65	781.	0.	0.05	0.20	5.65	5.65	4401.	0.	0.26	1.16	56
507	40	5.65	5.65	303.	0.	0.02	0.08	5.65	5.65	361.	0.	0.02	0.09	5
508	40	5.65	5.65	759.	0.	0.04	0.20	5.65	5.65	3850.	0.	0.23	1.01	49
509	40	5.65	5.65	772.	0.	0.05	0.20	5.65	5.65	3972.	0.	0.23	1.04	51
510	40	5.65	5.65	821.	0.	0.05	0.22	5.65	5.65	3882.	0.	0.23	1.02	50
511	40	5.65	5.65	790.	0.	0.05	0.21	5.65	5.65	4012.	0.	0.23	1.05	51
512	40	5.65	5.65	784.	0.	0.05	0.21	5.65	5.65	3504.	0.	0.21	0.92	45
513	40	5.65	5.65	873.	0.	0.05	0.23	5.65	5.65	875.	0.	0.05	0.23	11
514	40	5.65	5.65	656.	0.	0.04	0.17	5.65	5.65	1052.	0.	0.06	0.28	13
515	40	5.65	5.65	697.	0.	0.04	0.18	5.65	5.65	1010.	0.	0.06	0.27	13
516	40	5.65	5.65	896.	0.	0.05	0.24	5.65	5.65	737.	0.	0.04	0.19	11

517	40	5.65	5.65	761.	0.	0.04	0.20	5.65	5.65	1000.	0.	0.06	0.26	13
518	40	5.65	5.65	710.	0.	0.04	0.19	5.65	5.65	784.	0.	0.05	0.21	10
519	40	5.65	5.65	984.	0.	0.06	0.26	5.65	5.65	945.	0.	0.06	0.25	13
520	40	5.65	5.65	1273.	0.	0.07	0.33	5.65	5.65	770.	0.	0.05	0.20	16
521	40	5.65	5.65	582.	0.	0.03	0.15	5.65	5.65	742.	0.	0.04	0.19	9
522	40	5.65	5.65	398.	0.	0.02	0.10	5.65	5.65	970.	0.	0.06	0.25	12
523	40	5.65	5.65	350.	0.	0.02	0.09	5.65	5.65	956.	0.	0.06	0.25	12
524	40	5.65	5.65	426.	0.	0.02	0.11	5.65	5.65	996.	0.	0.06	0.26	13
585	40	5.65	5.65	219.	0.	0.01	0.06	5.65	5.65	2097.	0.	0.12	0.55	27
586	40	5.65	5.65	334.	0.	0.02	0.09	5.65	5.65	2058.	0.	0.12	0.54	26
587	40	5.65	5.65	233.	0.	0.01	0.06	5.65	5.65	2153.	0.	0.13	0.57	28
588	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
589	40	5.65	5.65	71.	0.	0.00	0.02	5.65	5.65	0.	0.	0.00	0.00	1
590	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
591	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
592	40	5.65	5.65	405.	0.	0.02	0.11	5.65	5.65	2278.	0.	0.13	0.60	29
593	40	5.65	5.65	89.	0.	0.01	0.02	5.65	5.65	0.	0.	0.00	0.00	1
594	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
595	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
596	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
597	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
598	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
599	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
600	40	5.65	5.65	205.	0.	0.01	0.05	5.65	5.65	238.	0.	0.01	0.06	3
601	40	5.65	5.65	222.	0.	0.01	0.06	5.65	5.65	233.	0.	0.01	0.06	3
602	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	151.	0.	0.01	0.04	2
603	40	5.65	5.65	83.	0.	0.00	0.02	5.65	5.65	165.	0.	0.01	0.04	2
604	40	5.65	5.65	566.	0.	0.03	0.15	5.65	5.65	4453.	0.	0.26	1.17	57
605	40	5.65	5.65	324.	0.	0.02	0.09	5.65	5.65	4167.	0.	0.24	1.09	53
606	40	5.65	5.65	434.	0.	0.03	0.11	5.65	5.65	4360.	0.	0.26	1.15	56
607	40	5.65	5.65	600.	0.	0.04	0.16	5.65	5.65	3723.	0.	0.22	0.98	48
608	40	5.65	5.65	512.	0.	0.03	0.13	5.65	5.65	3684.	0.	0.22	0.97	47
609	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
610	40	5.65	5.65	547.	0.	0.03	0.14	5.65	5.65	959.	0.	0.06	0.25	12
611	40	5.65	5.65	522.	0.	0.03	0.14	5.65	5.65	3199.	0.	0.19	0.84	41
612	40	5.65	5.65	511.	0.	0.03	0.13	5.65	5.65	4488.	0.	0.26	1.18	57
613	40	5.65	5.65	560.	0.	0.03	0.15	5.65	5.65	3557.	0.	0.21	0.93	45
614	40	5.65	5.65	485.	0.	0.03	0.13	5.65	5.65	1025.	0.	0.06	0.27	13
615	40	5.65	5.65	837.	0.	0.05	0.22	5.65	5.65	737.	0.	0.04	0.19	11
616	40	5.65	5.65	808.	0.	0.05	0.21	5.65	5.65	800.	0.	0.05	0.21	10
617	40	5.65	5.65	435.	0.	0.03	0.11	5.65	5.65	838.	0.	0.05	0.22	11
618	40	5.65	5.65	290.	0.	0.02	0.08	5.65	5.65	743.	0.	0.04	0.20	10
619	40	5.65	5.65	321.	0.	0.02	0.08	5.65	5.65	802.	0.	0.05	0.21	10
620	40	5.65	5.65	595.	0.	0.03	0.16	5.65	5.65	984.	0.	0.06	0.26	13
1171	40	5.65	5.65	2100.	0.	0.12	0.55	5.65	5.65	2548.	0.	0.15	0.67	33
1172	40	5.65	5.65	1717.	0.	0.10	0.45	5.65	5.65	3899.	0.	0.23	1.02	50
1173	40	5.65	5.65	2031.	0.	0.12	0.53	5.65	5.65	3497.	0.	0.20	0.92	45
1174	40	5.65	5.65	1708.	0.	0.10	0.45	5.65	5.65	178.	0.	0.01	0.05	22
1175	40	5.65	5.65	783.	0.	0.05	0.21	5.65	5.65	566.	0.	0.03	0.15	10
1176	40	5.65	5.65	1161.	0.	0.07	0.30	5.65	5.65	453.	0.	0.03	0.12	15
1177	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1178	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1179	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1180	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1181	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1182	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1183	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	445.	0.	0.03	0.12	6
1184	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1185	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	48.	0.	0.00	0.01	1
1186	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	1680.	0.	0.10	0.44	21
1187	40	5.65	5.65	52.	0.	0.00	0.01	5.65	5.65	980.	0.	0.06	0.26	13
1188	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	1217.	0.	0.07	0.32	16
1189	40	5.65	5.65	1022.	0.	0.06	0.27	5.65	5.65	4337.	0.	0.25	1.14	55
1190	40	5.65	5.65	1075.	0.	0.06	0.28	5.65	5.65	4402.	0.	0.26	1.16	56
1191	40	5.65	5.65	986.	0.	0.06	0.26	5.65	5.65	4293.	0.	0.25	1.13	55
1192	40	5.65	5.65	907.	0.	0.05	0.24	5.65	5.65	4031.	0.	0.24	1.06	52
1193	40	5.65	5.65	334.	0.	0.02	0.09	5.65	5.65	396.	0.	0.02	0.10	5
1194	40	5.65	5.65	331.	0.	0.02	0.09	5.65	5.65	355.	0.	0.02	0.09	5
1195	40	5.65	5.65	310.	0.	0.02	0.08	5.65	5.65	342.	0.	0.02	0.09	4
1196	40	5.65	5.65	313.	0.	0.02	0.08	5.65	5.65	670.	0.	0.04	0.18	9
1197	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1198	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1199	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1200	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1201	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1202	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1203	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1204	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1205	40	5.65	5.65	224.	0.	0.01	0.06	5.65	5.65	1098.	0.	0.06	0.29	14
1206	40	5.65	5.65	357.	0.	0.02	0.09	5.65	5.65	1046.	0.	0.06	0.27	13
1207	40	5.65	5.65	68.	0.	0.00	0.02	5.65	5.65	0.	0.	0.00	0.00	1
1208	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1209	40	5.65	5.65	225.	0.	0.01	0.06	5.65	5.65	1128.	0.	0.07	0.30	14
1210	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1211	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	1451.	0.	0.08	0.38	19
1212	40	5.65	5.65	173.	0.	0.01	0.05	5.65	5.65	1233.	0.	0.07	0.32	16
1213	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	1516.	0.	0.09	0.40	19
1214	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	1214.	0.	0.07	0.32	16
1215	40	5.65	5.65	640.	0.	0.04	0.17	5.65	5.65	872.	0.	0.05	0.23	11
1216	40	5.65	5.65	529.	0.	0.03	0.14	5.65	5.65	885.	0.	0.05	0.23	11
1217	40	5.65	5.65	407.	0.	0.02	0.11	5.65	5.65	899.	0.	0.05	0.24	12
1218	40	5.65	5.65	435.	0.	0.03	0.11	5.65	5.65	882.	0.	0.05	0.23	11
1219	40	5.65	5.65	1484.	0.	0.09	0.39	5.65	5.65	3979.	0.	0.23	1.04	51
1220	40	5.65	5.65	1346.	0.	0.08	0.35	5.65	5.65	4116.	0.	0.24	1.08	53
1221	40	5.65	5.65	1288.	0.	0.08	0.34	5.65	5.65	4177.	0.	0.24	1.10	53

1222	40	5.65	5.65	1173.	0.	0.07	0.31	5.65	5.65	4179.	0.	0.24	1.10	53
1223	40	5.65	5.65	590.	0.	0.03	0.15	5.65	5.65	645.	0.	0.04	0.17	8
1224	40	5.65	5.65	498.	0.	0.03	0.13	5.65	5.65	620.	0.	0.04	0.16	8
1225	40	5.65	5.65	352.	0.	0.02	0.09	5.65	5.65	428.	0.	0.03	0.11	5
1226	40	5.65	5.65	412.	0.	0.02	0.11	5.65	5.65	483.	0.	0.03	0.13	6
1227	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1228	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1229	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1230	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1231	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1232	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1233	40	5.65	5.65	174.	0.	0.01	0.05	5.65	5.65	933.	0.	0.05	0.25	12
1234	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1235	40	5.65	5.65	342.	0.	0.02	0.09	5.65	5.65	905.	0.	0.05	0.24	12
1236	40	5.65	5.65	3.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1237	40	5.65	5.65	211.	0.	0.01	0.06	5.65	5.65	876.	0.	0.05	0.23	11
1238	40	5.65	5.65	246.	0.	0.01	0.06	5.65	5.65	872.	0.	0.05	0.23	11
1239	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1240	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1241	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1242	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1243	40	5.65	5.65	546.	0.	0.03	0.14	5.65	5.65	869.	0.	0.05	0.23	11
1244	40	5.65	5.65	321.	0.	0.02	0.08	5.65	5.65	987.	0.	0.06	0.26	13
1245	40	5.65	5.65	364.	0.	0.02	0.10	5.65	5.65	988.	0.	0.06	0.26	13
1246	40	5.65	5.65	413.	0.	0.02	0.11	5.65	5.65	922.	0.	0.05	0.24	12
1247	40	5.65	5.65	434.	0.	0.03	0.11	5.65	5.65	1134.	0.	0.07	0.30	14
1248	40	5.65	5.65	23.	0.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	0
1249	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	1814.	0.	0.11	0.48	23
1250	40	5.65	5.65	564.	0.	0.03	0.15	5.65	5.65	1746.	0.	0.10	0.46	22
1251	40	5.65	5.65	1000.	0.	0.06	0.26	5.65	5.65	754.	0.	0.04	0.20	13
1252	40	5.65	5.65	1261.	0.	0.07	0.33	5.65	5.65	0.	0.	0.00	0.00	16
1253	40	5.65	5.65	2037.	0.	0.12	0.53	5.65	5.65	1213.	0.	0.07	0.32	26
1254	40	5.65	5.65	2053.	0.	0.12	0.54	5.65	5.65	0.	0.	0.00	0.00	26
1255	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	945.	0.	0.06	0.25	12
1256	40	5.65	5.65	836.	0.	0.05	0.22	5.65	5.65	1945.	0.	0.11	0.51	25
1257	40	5.65	5.65	892.	0.	0.05	0.23	5.65	5.65	1345.	0.	0.08	0.35	17
1258	40	5.65	5.65	1644.	0.	0.10	0.43	5.65	5.65	2751.	0.	0.16	0.72	35
1259	40	5.65	5.65	1227.	0.	0.07	0.32	5.65	5.65	1240.	0.	0.07	0.33	16
1260	40	5.65	5.65	1826.	0.	0.11	0.48	5.65	5.65	3551.	0.	0.21	0.93	45
1261	40	5.65	5.65	1362.	0.	0.08	0.36	5.65	5.65	1476.	0.	0.09	0.39	19
1262	40	5.65	5.65	1977.	0.	0.12	0.52	5.65	5.65	3191.	0.	0.19	0.84	41
1263	40	5.65	5.65	1555.	0.	0.09	0.41	5.65	5.65	3605.	0.	0.21	0.95	46
1264	40	5.65	5.65	898.	0.	0.05	0.24	5.65	5.65	938.	0.	0.05	0.25	12
1265	40	5.65	5.65	1439.	0.	0.08	0.38	5.65	5.65	3811.	0.	0.22	1.00	49
1266	40	5.65	5.65	992.	0.	0.06	0.26	5.65	5.65	1288.	0.	0.08	0.34	16
1267	40	5.65	5.65	915.	0.	0.05	0.24	5.65	5.65	993.	0.	0.06	0.26	13
1268	40	5.65	5.65	1250.	0.	0.07	0.33	5.65	5.65	3936.	0.	0.23	1.03	50
1269	40	5.65	5.65	1392.	0.	0.08	0.37	5.65	5.65	3967.	0.	0.23	1.04	51
1270	40	5.65	5.65	1068.	0.	0.06	0.28	5.65	5.65	1211.	0.	0.07	0.32	15
1271	40	5.65	5.65	823.	0.	0.05	0.22	5.65	5.65	952.	0.	0.06	0.25	12
1272	40	5.65	5.65	1116.	0.	0.07	0.29	5.65	5.65	3823.	0.	0.22	1.00	49
1273	40	5.65	5.65	1075.	0.	0.06	0.28	5.65	5.65	3924.	0.	0.23	1.03	50
1274	40	5.65	5.65	812.	0.	0.05	0.21	5.65	5.65	1147.	0.	0.07	0.30	15
1275	40	5.65	5.65	978.	0.	0.06	0.26	5.65	5.65	3509.	0.	0.21	0.92	45
1276	40	5.65	5.65	879.	0.	0.05	0.23	5.65	5.65	799.	0.	0.05	0.21	11
1277	40	5.65	5.65	1046.	0.	0.06	0.27	5.65	5.65	4028.	0.	0.24	1.06	52
1278	40	5.65	5.65	859.	0.	0.05	0.23	5.65	5.65	1123.	0.	0.07	0.29	14

SUPERIORE ORIZZONTALE										SUPERIORE VERTICALE										COEF.	
GUSCI	spess	Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	MAX	%						
453	40	5.65	5.65	1514.	0.	0.09	0.40	5.65	5.65	2127.	0.	0.12	0.56	27							
454	40	5.65	5.65	1728.	0.	0.10	0.45	5.65	5.65	2396.	0.	0.14	0.63	31							
455	40	5.65	5.65	456.	0.	0.03	0.12	5.65	5.65	1292.	0.	0.08	0.34	17							
456	40	5.65	5.65	1584.	0.	0.09	0.42	5.65	5.65	2760.	0.	0.16	0.72	35							
457	40	5.65	5.65	1619.	0.	0.09	0.43	5.65	5.65	2610.	0.	0.15	0.69	33							
458	40	5.65	5.65	1123.	0.	0.07	0.30	5.65	5.65	1893.	0.	0.11	0.50	24							
459	40	5.65	5.65	724.	0.	0.04	0.19	5.65	5.65	1601.	0.	0.09	0.42	20							
460	40	5.65	5.65	1659.	0.	0.10	0.44	5.65	5.65	2304.	0.	0.13	0.61	29							
461	40	5.65	5.65	1222.	0.	0.07	0.32	5.65	5.65	1335.	0.	0.08	0.35	17							
462	40	5.65	5.65	1641.	0.	0.10	0.43	5.65	5.65	1509.	0.	0.09	0.40	21							
463	40	5.65	5.65	1626.	0.	0.10	0.43	5.65	5.65	2727.	0.	0.16	0.72	35							
464	40	5.65	5.65	1292.	0.	0.08	0.34	5.65	5.65	3195.	0.	0.19	0.84	41							
465	40	5.65	5.65	1112.	0.	0.07	0.29	5.65	5.65	2731.	0.	0.16	0.72	35							
466	40	5.65	5.65	1341.	0.	0.08	0.35	5.65	5.65	1576.	0.	0.09	0.41	20							
467	40	5.65	5.65	1003.	0.	0.06	0.26	5.65	5.65	1547.	0.	0.09	0.41	20							
468	40	5.65	5.65	1642.	0.	0.10	0.43	5.65	5.65	1770.	0.	0.10	0.46	23							
469	40	5.65	5.65	1339.	0.	0.08	0.35	5.65	5.65	2908.	0.	0.17	0.76	37							
470	40	5.65	5.65	677.	0.	0.04	0.18	5.65	5.65	980.	0.	0.06	0.26	13							
471	40	5.65	5.65	1499.	0.	0.09	0.39	5.65	5.65	1844.	0.	0.11	0.48	24							
472	40	5.65	5.65	642.	0.	0.04	0.17	5.65	5.65	472.	0.	0.03	0.12	8							
473	40	5.65	5.65	1018.	0.	0.06	0.27	5.65	5.65	141.	0.	0.01	0.04	13							
474	40	5.65	5.65	1074.	0.	0.06	0.28	5.65	5.65	1718.	0.	0.10	0.45	22							
475	40	5.65	5.65	686.	0.	0.04	0.18	5.65	5.65	0.	0.	0.00	0.00	9							
476	40	5.65	5.65	300.	0.	0.02	0.08	5.65	5.65	0.	0.	0.00	0.00	4							
477	40	5.65	5.65	86.	0.	0.01	0.02	5.65	5.65	0.	0.	0.00	0.00	1							
478	40	5.65	5.65	321.	0.	0.02	0.08	5.65	5.65	0.	0.	0.00	0.00	4							
479	40	5.65	5.65	176.	0.																

488	40	5.65	5.65	829.	0.	0.05	0.22	5.65	5.65	3100.	0.	0.18	0.81	40
489	40	5.65	5.65	190.	0.	0.01	0.05	5.65	5.65	601.	0.	0.04	0.16	8
490	40	5.65	5.65	737.	0.	0.04	0.19	5.65	5.65	3058.	0.	0.18	0.80	39
491	40	5.65	5.65	975.	0.	0.06	0.26	5.65	5.65	3713.	0.	0.22	0.98	47
492	40	5.65	5.65	132.	0.	0.01	0.03	5.65	5.65	664.	0.	0.04	0.17	8
493	40	5.65	5.65	904.	0.	0.05	0.24	5.65	5.65	3697.	0.	0.22	0.97	47
494	40	5.65	5.65	1027.	0.	0.06	0.27	5.65	5.65	3744.	0.	0.22	0.98	48
495	40	5.65	5.65	866.	0.	0.05	0.23	5.65	5.65	2803.	0.	0.16	0.74	36
496	40	5.65	5.65	922.	0.	0.05	0.24	5.65	5.65	3252.	0.	0.19	0.85	42
497	40	5.65	5.65	858.	0.	0.05	0.23	5.65	5.65	3220.	0.	0.19	0.85	41
498	40	5.65	5.65	976.	0.	0.06	0.26	5.65	5.65	3276.	0.	0.19	0.86	42
499	40	5.65	5.65	1100.	0.	0.06	0.29	5.65	5.65	3556.	0.	0.21	0.93	45
500	40	5.65	5.65	492.	0.	0.03	0.13	5.65	5.65	1545.	0.	0.09	0.41	20
501	40	5.65	5.65	492.	0.	0.03	0.13	5.65	5.65	1565.	0.	0.09	0.41	20
502	40	5.65	5.65	518.	0.	0.03	0.14	5.65	5.65	1564.	0.	0.09	0.41	20
503	40	5.65	5.65	1046.	0.	0.06	0.27	5.65	5.65	2953.	0.	0.17	0.78	38
504	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
505	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
506	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
507	40	5.65	5.65	579.	0.	0.03	0.15	5.65	5.65	1419.	0.	0.08	0.37	18
508	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
509	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
510	40	5.65	5.65	5.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
511	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
512	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
513	40	5.65	5.65	174.	0.	0.01	0.05	5.65	5.65	262.	0.	0.02	0.07	3
514	40	5.65	5.65	570.	0.	0.03	0.15	5.65	5.65	349.	0.	0.02	0.09	7
515	40	5.65	5.65	515.	0.	0.03	0.14	5.65	5.65	132.	0.	0.01	0.03	7
516	40	5.65	5.65	241.	0.	0.01	0.06	5.65	5.65	398.	0.	0.02	0.10	5
517	40	5.65	5.65	996.	0.	0.06	0.26	5.65	5.65	565.	0.	0.03	0.15	13
518	40	5.65	5.65	510.	0.	0.03	0.13	5.65	5.65	314.	0.	0.02	0.08	7
519	40	5.65	5.65	1483.	0.	0.09	0.39	5.65	5.65	783.	0.	0.05	0.21	19
520	40	5.65	5.65	1289.	0.	0.08	0.34	5.65	5.65	922.	0.	0.05	0.24	16
521	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
522	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	111.	0.	0.01	0.03	1
523	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	79.	0.	0.00	0.02	1
524	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
585	40	5.65	5.65	230.	0.	0.01	0.06	5.65	5.65	503.	0.	0.03	0.13	6
586	40	5.65	5.65	139.	0.	0.01	0.04	5.65	5.65	583.	0.	0.03	0.15	7
587	40	5.65	5.65	247.	0.	0.01	0.06	5.65	5.65	520.	0.	0.03	0.14	7
588	40	5.65	5.65	760.	0.	0.04	0.20	5.65	5.65	2876.	0.	0.17	0.76	37
589	40	5.65	5.65	672.	0.	0.04	0.18	5.65	5.65	3022.	0.	0.18	0.79	39
590	40	5.65	5.65	855.	0.	0.05	0.22	5.65	5.65	3614.	0.	0.21	0.95	46
591	40	5.65	5.65	844.	0.	0.05	0.22	5.65	5.65	3669.	0.	0.21	0.96	47
592	40	5.65	5.65	285.	0.	0.02	0.07	5.65	5.65	683.	0.	0.04	0.18	9
593	40	5.65	5.65	768.	0.	0.04	0.20	5.65	5.65	2683.	0.	0.16	0.70	34
594	40	5.65	5.65	943.	0.	0.06	0.25	5.65	5.65	3553.	0.	0.21	0.93	45
595	40	5.65	5.65	1074.	0.	0.06	0.28	5.65	5.65	3447.	0.	0.20	0.91	44
596	40	5.65	5.65	811.	0.	0.05	0.21	5.65	5.65	3143.	0.	0.18	0.83	40
597	40	5.65	5.65	803.	0.	0.05	0.21	5.65	5.65	3189.	0.	0.19	0.84	41
598	40	5.65	5.65	1071.	0.	0.06	0.28	5.65	5.65	3024.	0.	0.18	0.79	39
599	40	5.65	5.65	907.	0.	0.05	0.24	5.65	5.65	3094.	0.	0.18	0.81	40
600	40	5.65	5.65	445.	0.	0.03	0.12	5.65	5.65	1470.	0.	0.09	0.39	19
601	40	5.65	5.65	470.	0.	0.03	0.12	5.65	5.65	1518.	0.	0.09	0.40	19
602	40	5.65	5.65	746.	0.	0.04	0.20	5.65	5.65	1582.	0.	0.09	0.42	20
603	40	5.65	5.65	548.	0.	0.03	0.14	5.65	5.65	1481.	0.	0.09	0.39	19
604	40	5.65	5.65	3.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
605	40	5.65	5.65	63.	0.	0.00	0.02	5.65	5.65	0.	0.	0.00	0.00	1
606	40	5.65	5.65	35.	0.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	0
607	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
608	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
609	40	5.65	5.65	705.	0.	0.04	0.19	5.65	5.65	2952.	0.	0.17	0.78	38
610	40	5.65	5.65	568.	0.	0.03	0.15	5.65	5.65	186.	0.	0.01	0.05	7
611	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
612	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
613	40	5.65	5.65	41.	0.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	1
614	40	5.65	5.65	541.	0.	0.03	0.14	5.65	5.65	272.	0.	0.02	0.07	7
615	40	5.65	5.65	9.	0.	0.00	0.00	5.65	5.65	227.	0.	0.01	0.06	3
616	40	5.65	5.65	310.	0.	0.02	0.08	5.65	5.65	250.	0.	0.01	0.07	4
617	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
618	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	63.	0.	0.00	0.02	1
619	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	87.	0.	0.01	0.02	1
620	40	5.65	5.65	13.	0.	0.00	0.00	5.65	5.65	163.	0.	0.01	0.04	2
1171	40	5.65	5.65	241.	0.	0.01	0.06	5.65	5.65	1322.	0.	0.08	0.35	17
1172	40	5.65	5.65	252.	0.	0.01	0.07	5.65	5.65	104.	0.	0.01	0.03	3
1173	40	5.65	5.65	264.	0.	0.02	0.07	5.65	5.65	513.	0.	0.03	0.13	7
1174	40	5.65	5.65	521.	0.	0.03	0.14	5.65	5.65	2329.	0.	0.14	0.61	30
1175	40	5.65	5.65	613.	0.	0.04	0.16	5.65	5.65	1632.	0.	0.10	0.43	21
1176	40	5.65	5.65	709.	0.	0.04	0.19	5.65	5.65	2061.	0.	0.12	0.54	26
1177	40	5.65	5.65	969.	0.	0.06	0.25	5.65	5.65	2319.	0.	0.14	0.61	30
1178	40	5.65	5.65	1802.	0.	0.11	0.47	5.65	5.65	3131.	0.	0.18	0.82	40
1179	40	5.65	5.65	1548.	0.	0.09	0.41	5.65	5.65	2667.	0.	0.16	0.70	34
1180	40	5.65	5.65	2182.	0.	0.13	0.57	5.65	5.65	2185.	0.	0.13	0.57	28
1181	40	5.65	5.65	2331.	0.	0.14	0.61	5.65	5.65	3554.	0.	0.21	0.93	45
1182	40	5.65	5.65	2467.	0.	0.14	0.65	5.65	5.65	3015.	0.	0.18	0.79	39
1183	40	5.65	5.65	2653.	0.	0.16	0.70	5.65	5.65	1483.	0.	0.09	0.39	34
1184	40	5.65	5.65	2240.	0.	0.13	0.59	5.65	5.65	2960.	0.	0.17	0.78	38
1185	40	5.65	5.65	2618.	0.	0.15	0.69	5.65	5.65	2358.	0.	0.14	0.62	33
1186	40	5.65	5.65	2526.	0.	0.15	0.66	5.65	5.65	114.	0.	0.01	0.03	32
1187	40	5.65	5.65	1379.	0.	0.08	0.36	5.65	5.65	717.	0.	0.04	0.19	18
1188	40	5.65	5.65	2017.	0.	0.12	0.53	5.65	5.65	451.	0.	0.03	0.12	26
1189	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1190	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1191	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1192	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0

1193	40	5.65	5.65	724.	0.	0.04	0.19	5.65	5.65	1627.	0.	0.10	0.43	21
1194	40	5.65	5.65	672.	0.	0.04	0.18	5.65	5.65	1617.	0.	0.09	0.42	21
1195	40	5.65	5.65	635.	0.	0.04	0.17	5.65	5.65	1598.	0.	0.09	0.42	20
1196	40	5.65	5.65	618.	0.	0.04	0.16	5.65	5.65	1370.	0.	0.08	0.36	18
1197	40	5.65	5.65	1292.	0.	0.08	0.34	5.65	5.65	3406.	0.	0.20	0.89	44
1198	40	5.65	5.65	1380.	0.	0.08	0.36	5.65	5.65	3436.	0.	0.20	0.90	44
1199	40	5.65	5.65	1227.	0.	0.07	0.32	5.65	5.65	3373.	0.	0.20	0.89	43
1200	40	5.65	5.65	1146.	0.	0.07	0.30	5.65	5.65	3014.	0.	0.18	0.79	39
1201	40	5.65	5.65	1457.	0.	0.09	0.38	5.65	5.65	3900.	0.	0.23	1.02	50
1202	40	5.65	5.65	1367.	0.	0.08	0.36	5.65	5.65	3856.	0.	0.23	1.01	49
1203	40	5.65	5.65	1211.	0.	0.07	0.32	5.65	5.65	3607.	0.	0.21	0.95	46
1204	40	5.65	5.65	1302.	0.	0.08	0.34	5.65	5.65	3821.	0.	0.22	1.00	49
1205	40	5.65	5.65	337.	0.	0.02	0.09	5.65	5.65	1093.	0.	0.06	0.29	14
1206	40	5.65	5.65	303.	0.	0.02	0.08	5.65	5.65	1184.	0.	0.07	0.31	15
1207	40	5.65	5.65	1151.	0.	0.07	0.30	5.65	5.65	3373.	0.	0.20	0.89	43
1208	40	5.65	5.65	1106.	0.	0.06	0.29	5.65	5.65	3297.	0.	0.19	0.87	42
1209	40	5.65	5.65	337.	0.	0.02	0.09	5.65	5.65	1035.	0.	0.06	0.27	13
1210	40	5.65	5.65	1082.	0.	0.06	0.28	5.65	5.65	3261.	0.	0.19	0.86	42
1211	40	5.65	5.65	632.	0.	0.04	0.17	5.65	5.65	0.	0.	0.00	0.00	8
1212	40	5.65	5.65	188.	0.	0.01	0.05	5.65	5.65	0.	0.	0.00	0.00	2
1213	40	5.65	5.65	1234.	0.	0.07	0.32	5.65	5.65	0.	0.	0.00	0.00	16
1214	40	5.65	5.65	1833.	0.	0.11	0.48	5.65	5.65	350.	0.	0.02	0.09	23
1215	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	49.	0.	0.00	0.01	1
1216	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1217	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	11.	0.	0.00	0.00	0
1218	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	48.	0.	0.00	0.01	1
1219	40	5.65	5.65	114.	0.	0.01	0.03	5.65	5.65	0.	0.	0.00	0.00	1
1220	40	5.65	5.65	9.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1221	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1222	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1223	40	5.65	5.65	792.	0.	0.05	0.21	5.65	5.65	1638.	0.	0.10	0.43	21
1224	40	5.65	5.65	781.	0.	0.05	0.21	5.65	5.65	1617.	0.	0.09	0.42	21
1225	40	5.65	5.65	765.	0.	0.04	0.20	5.65	5.65	1621.	0.	0.09	0.43	21
1226	40	5.65	5.65	767.	0.	0.04	0.20	5.65	5.65	1572.	0.	0.09	0.41	20
1227	40	5.65	5.65	1805.	0.	0.11	0.47	5.65	5.65	3357.	0.	0.20	0.88	43
1228	40	5.65	5.65	1688.	0.	0.10	0.44	5.65	5.65	3429.	0.	0.20	0.90	44
1229	40	5.65	5.65	1497.	0.	0.09	0.39	5.65	5.65	3451.	0.	0.20	0.91	44
1230	40	5.65	5.65	1585.	0.	0.09	0.42	5.65	5.65	3422.	0.	0.20	0.90	44
1231	40	5.65	5.65	1618.	0.	0.09	0.42	5.65	5.65	3917.	0.	0.23	1.03	50
1232	40	5.65	5.65	2150.	0.	0.13	0.56	5.65	5.65	3803.	0.	0.22	1.00	49
1233	40	5.65	5.65	809.	0.	0.05	0.21	5.65	5.65	1030.	0.	0.06	0.27	13
1234	40	5.65	5.65	1861.	0.	0.11	0.49	5.65	5.65	3274.	0.	0.19	0.86	42
1235	40	5.65	5.65	454.	0.	0.03	0.12	5.65	5.65	1193.	0.	0.07	0.31	15
1236	40	5.65	5.65	1322.	0.	0.08	0.35	5.65	5.65	3442.	0.	0.20	0.90	44
1237	40	5.65	5.65	655.	0.	0.04	0.17	5.65	5.65	1078.	0.	0.06	0.28	14
1238	40	5.65	5.65	566.	0.	0.03	0.15	5.65	5.65	1137.	0.	0.07	0.30	15
1239	40	5.65	5.65	1758.	0.	0.10	0.46	5.65	5.65	3915.	0.	0.23	1.03	50
1240	40	5.65	5.65	1917.	0.	0.11	0.50	5.65	5.65	3877.	0.	0.23	1.02	50
1241	40	5.65	5.65	1609.	0.	0.09	0.42	5.65	5.65	3358.	0.	0.20	0.88	43
1242	40	5.65	5.65	1471.	0.	0.09	0.39	5.65	5.65	3429.	0.	0.20	0.90	44
1243	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1244	40	5.65	5.65	2.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1245	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1246	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1247	40	5.65	5.65	242.	0.	0.01	0.06	5.65	5.65	945.	0.	0.06	0.25	12
1248	40	5.65	5.65	990.	0.	0.06	0.26	5.65	5.65	2921.	0.	0.17	0.77	37
1249	40	5.65	5.65	2333.	0.	0.14	0.61	5.65	5.65	0.	0.	0.00	0.00	30
1250	40	5.65	5.65	2273.	0.	0.13	0.60	5.65	5.65	585.	0.	0.03	0.15	29
1251	40	5.65	5.65	1028.	0.	0.06	0.27	5.65	5.65	1203.	0.	0.07	0.32	15
1252	40	5.65	5.65	146.	0.	0.01	0.04	5.65	5.65	1749.	0.	0.10	0.46	22
1253	40	5.65	5.65	110.	0.	0.01	0.03	5.65	5.65	1585.	0.	0.09	0.42	20
1254	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	2181.	0.	0.13	0.57	28
1255	40	5.65	5.65	980.	0.	0.06	0.26	5.65	5.65	0.	0.	0.00	0.00	13
1256	40	5.65	5.65	259.	0.	0.02	0.07	5.65	5.65	448.	0.	0.03	0.12	6
1257	40	5.65	5.65	819.	0.	0.05	0.21	5.65	5.65	300.	0.	0.02	0.08	10
1258	40	5.65	5.65	303.	0.	0.02	0.08	5.65	5.65	0.	0.	0.00	0.00	4
1259	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	293.	0.	0.02	0.08	4
1260	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1261	40	5.65	5.65	480.	0.	0.03	0.13	5.65	5.65	580.	0.	0.03	0.15	7
1262	40	5.65	5.65	140.	0.	0.01	0.04	5.65	5.65	0.	0.	0.00	0.00	2
1263	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1264	40	5.65	5.65	165.	0.	0.01	0.04	5.65	5.65	101.	0.	0.01	0.03	2
1265	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1266	40	5.65	5.65	402.	0.	0.02	0.11	5.65	5.65	0.	0.	0.00	0.00	5
1267	40	5.65	5.65	202.	0.	0.01	0.05	5.65	5.65	256.	0.	0.02	0.07	3
1268	40	5.65	5.65	41.	0.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	1
1269	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1270	40	5.65	5.65	466.	0.	0.03	0.12	5.65	5.65	482.	0.	0.03	0.13	6
1271	40	5.65	5.65	323.	0.	0.02	0.08	5.65	5.65	220.	0.	0.01	0.06	4
1272	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1273	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1274	40	5.65	5.65	508.	0.	0.03	0.13	5.65	5.65	27.	0.	0.00	0.01	7
1275	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1276	40	5.65	5.65	203.	0.	0.01	0.05	5.65	5.65	403.	0.	0.02	0.11	5
1277	40	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
1278	40	5.65	5.65	552.	0.	0.03	0.15	5.65	5.65	424.	0.	0.02	0.11	7

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd > Ed)

Norm	beta	sigT	Pcrit	Ro	Acrit	VRd,c	VED	A staffe	VRd,cs
[daN]		[daN/cm2]	[cm]	[%]	[cm2]	[daN]	[daN]	[cm2]	[daN]

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vr<sub>cd</sub> = compressione cls d'anima  
 vr<sub>sd</sub> = trazione armatura trasversale  
 vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vr <sub>cd</sub> [daN]	Vr <sub>sd</sub> [daN]	alfas	Vr <sub>d,s</sub> [daN]
19.3	23450	66.30	66.30	0.	661764	207557	-	-
59.3	35025	99.03	99.03	0.	988404	310006	-	-
99.3	42871	121.21	121.21	0.	1209815	379450	-	-
139.3	49028	138.62	138.62	0.	1383569	433946	-	-
179.3	54141	153.08	153.08	0.	1527847	479198	-	-
219.3	59256	167.54	167.54	0.	1672198	524473	-	-
259.3	63293	178.96	178.96	0.	1786129	560206	-	-
299.3	67017	189.49	189.49	0.	1891224	593169	-	-
339.3	70737	200.00	200.00	0.	1996188	626090	-	-
379.3	74443	210.48	210.48	0.	2100778	658894	-	-
419.3	77305	218.58	218.58	0.	2181554	684228	-	-
459.3	80173	226.68	226.68	0.	2262481	709611	-	-
499.3	83040	234.79	234.79	0.	2343384	734985	-	-
539.3	85904	242.89	242.89	0.	2424208	760335	-	-
579.3	87198	246.55	246.55	0.	2460720	771787	-	-
619.3	86142	243.56	243.56	0.	2430918	762440	-	-
659.3	85086	240.57	240.57	0.	2401116	753093	-	-
699.3	84030	237.59	237.59	0.	2371326	743749	-	-
739.3	82975	234.61	234.61	0.	2341560	734413	-	-
779.3	56131	158.71	158.71	0.	1584017	496815	-	-
819.3	47225	133.53	133.53	0.	1332687	417988	-	-
859.3	39865	112.72	112.72	0.	1124992	352846	-	-
899.3	33693	95.26	95.26	0.	950814	298216	-	-
939.3	27884	78.84	78.84	0.	786879	246799	-	-
979.3	23106	65.33	65.33	0.	652046	204510	-	-
1019.3	18328	51.82	51.82	0.	517204	162217	-	-
1059.3	13746	38.87	38.87	0.	387919	121668	-	-
1099.3	9827	27.78	27.78	0.	277305	86975	-	-
1139.3	5909	16.71	16.71	0.	166765	52305	-	-
1179.3	1988	5.62	5.62	0.	56094	17594	-	-
1199.4	14	0.04	0.04	0.	386	121	-	-

**VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)**

CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)

Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm2]

valore max per combinazione rara = 149.4 daN/cm2  
 quasi permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]

valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

&lt;-

**ARMATURA INFERIORE ORIZZONTALE**

GUSCI	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	wkF	Mom	Nor	sigC	wkP
453	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
454	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
455	5.65	5.65	995	0.	8.00	524.	846	434	0.	3.49	0.026
456	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
457	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
458	5.65	5.65	1321	0.	10.62	695.	1104	755	0.	6.08	0.045
459	5.65	5.65	1068	0.	8.59	562.	892	636	0.	5.11	0.038
460	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
461	5.65	5.65	362	0.	2.91	191.	300	220	0.	1.77	0.013
462	5.65	5.65	371	0.	2.99	196.	320	372	0.	2.99	0.022
463	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
464	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
465	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
466	5.65	5.65	1178	0.	9.48	620.	978	702	0.	5.65	0.042
467	5.65	5.65	1205	0.	9.69	634.	1005	793	0.	6.38	0.047
468	5.65	5.65	83	0.	0.67	44.	73	184	0.	1.48	0.011
469	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
470	5.65	5.65	349	0.	2.81	184.	287	173	0.	1.39	0.010
471	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
472	5.65	5.65	823	0.	6.62	433.	682	478	0.	3.84	0.028
473	5.65	5.65	364	0.	2.93	192.	300	301	0.	2.42	0.018
474	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.	0.00	0.000
475	5.65	5.65	226	0.	1.82	119.	193	233	0.	1.87	0.014
476	5.65	5.65	117	0.	0.94	61.	104	141	0.	1.13	0.008
477	5.65	5.65	282	0.	2.27	148.	222	95	0.	0.76	0.006
478	5.65	5.65	258	0.	2.07	136.	203	145	0.	1.16	0.009

479	5.65	5.65	361	0.	2.90	190.	309	0.	0.018	250	0.	2.01	0.015
480	5.65	5.65	319	0.	2.57	168.	276	0.	0.016	244	0.	1.96	0.014
481	5.65	5.65	156	0.	1.25	82.	156	0.	0.009	174	0.	1.40	0.010
482	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
483	5.65	5.65	211	0.	1.69	111.	176	0.	0.010	12	0.	0.10	0.001
484	5.65	5.65	477	0.	3.83	251.	429	0.	0.025	408	0.	3.28	0.024
485	5.65	5.65	115	0.	0.93	61.	99	0.	0.006	1	0.	0.01	0.000
486	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
487	5.65	5.65	144	0.	1.16	76.	125	0.	0.007	9	0.	0.07	0.001
488	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
489	5.65	5.65	186	0.	1.49	98.	145	0.	0.009	72	0.	0.58	0.004
490	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
491	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
492	5.65	5.65	239	0.	1.92	126.	203	0.	0.012	84	0.	0.67	0.005
493	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
494	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
495	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
496	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
497	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
498	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
499	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
500	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
501	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
502	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
503	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
504	5.65	5.65	408	0.	3.28	215.	350	0.	0.021	311	0.	2.50	0.018
505	5.65	5.65	448	0.	3.60	236.	393	0.	0.023	360	0.	2.89	0.021
506	5.65	5.65	493	0.	3.97	260.	419	0.	0.025	378	0.	3.04	0.022
507	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
508	5.65	5.65	608	0.	4.89	320.	522	0.	0.031	391	0.	3.15	0.023
509	5.65	5.65	659	0.	5.30	347.	569	0.	0.034	447	0.	3.59	0.026
510	5.65	5.65	682	0.	5.48	359.	575	0.	0.034	430	0.	3.46	0.025
511	5.65	5.65	543	0.	4.37	286.	456	0.	0.027	398	0.	3.20	0.024
512	5.65	5.65	689	0.	5.54	362.	576	0.	0.034	412	0.	3.31	0.024
513	5.65	5.65	296	0.	2.38	156.	390	0.	0.023	358	0.	2.88	0.021
514	5.65	5.65	383	0.	3.08	201.	334	0.	0.020	182	0.	1.46	0.011
515	5.65	5.65	330	0.	2.66	174.	265	0.	0.016	33	0.	0.27	0.002
516	5.65	5.65	226	0.	1.81	119.	174	0.	0.010	104	0.	0.84	0.006
517	5.65	5.65	646	0.	5.20	340.	529	0.	0.031	374	0.	3.01	0.022
518	5.65	5.65	607	0.	4.88	319.	495	0.	0.029	334	0.	2.68	0.020
519	5.65	5.65	627	0.	5.04	330.	528	0.	0.031	485	0.	3.90	0.029
520	5.65	5.65	1004	0.	8.07	528.	835	0.	0.049	658	0.	5.29	0.039
521	5.65	5.65	504	0.	4.05	265.	416	0.	0.025	268	0.	2.15	0.016
522	5.65	5.65	356	0.	2.87	188.	295	0.	0.017	171	0.	1.38	0.010
523	5.65	5.65	293	0.	2.36	154.	240	0.	0.014	131	0.	1.05	0.008
524	5.65	5.65	391	0.	3.15	206.	314	0.	0.019	171	0.	1.38	0.010
585	5.65	5.65	78	0.	0.62	41.	68	0.	0.004	0.	0.	0.00	0.000
586	5.65	5.65	185	0.	1.49	97.	152	0.	0.009	62	0.	0.50	0.004
587	5.65	5.65	108	0.	0.87	57.	90	0.	0.005	0.	0.	0.00	0.000
588	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
589	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
590	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
591	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
592	5.65	5.65	238	0.	1.91	125.	194	0.	0.011	75	0.	0.60	0.004
593	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
594	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
595	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
596	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
597	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
598	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
599	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
600	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
601	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
602	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
603	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
604	5.65	5.65	304	0.	2.45	160.	257	0.	0.015	248	0.	2.00	0.015
605	5.65	5.65	78	0.	0.63	41.	77	0.	0.005	88	0.	0.70	0.005
606	5.65	5.65	234	0.	1.89	123.	203	0.	0.012	199	0.	1.60	0.012
607	5.65	5.65	428	0.	3.45	225.	360	0.	0.021	282	0.	2.27	0.017
608	5.65	5.65	437	0.	3.51	230.	376	0.	0.022	296	0.	2.38	0.017
609	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
610	5.65	5.65	215	0.	1.73	113.	165	0.	0.010	0.	0.	0.00	0.000
611	5.65	5.65	340	0.	2.74	179.	303	0.	0.018	231	0.	1.86	0.014
612	5.65	5.65	375	0.	3.01	197.	309	0.	0.018	273	0.	2.20	0.016
613	5.65	5.65	468	0.	3.76	246.	385	0.	0.023	273	0.	2.19	0.016
614	5.65	5.65	268	0.	2.16	141.	232	0.	0.014	121	0.	0.97	0.007
615	5.65	5.65	437	0.	3.52	230.	406	0.	0.024	386	0.	3.11	0.023
616	5.65	5.65	135	0.	1.08	71.	97	0.	0.006	164	0.	1.32	0.010
617	5.65	5.65	382	0.	3.07	201.	308	0.	0.018	170	0.	1.37	0.010
618	5.65	5.65	240	0.	1.93	126.	194	0.	0.011	92	0.	0.74	0.005
619	5.65	5.65	286	0.	2.30	150.	233	0.	0.014	111	0.	0.89	0.007
620	5.65	5.65	496	0.	3.99	261.	404	0.	0.024	231	0.	1.86	0.014
1171	5.65	5.65	1563	0.	12.58	823.	1324	0.	0.078	1140	0.	9.17	0.067
1172	5.65	5.65	1311	0.	10.55	690.	1116	0.	0.066	892	0.	7.18	0.053
1173	5.65	5.65	1493	0.	12.01	786.	1274	0.	0.075	1075	0.	8.65	0.064
1174	5.65	5.65	595	0.	4.79	313.	514	0.	0.030	551	0.	4.43	0.033
1175	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1176	5.65	5.65	26	0.	0.21	14.	35	0.	0.002	213	0.	1.71	0.013
1177	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1178	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1179	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1180	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1181	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1182	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1183	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000

1184	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1185	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1186	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1187	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1188	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1189	5.65	5.65	727	0.	5.85	383.	618	0.0037	502	0.	4.04	0.030
1190	5.65	5.65	808	0.	6.50	425.	684	0.0040	536	0.	4.31	0.032
1191	5.65	5.65	661	0.	5.32	348.	573	0.0034	475	0.	3.82	0.028
1192	5.65	5.65	613	0.	4.93	323.	522	0.0031	428	0.	3.44	0.025
1193	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1194	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1195	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1196	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1197	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1198	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1199	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1200	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1201	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1202	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1203	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1204	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1205	5.65	5.65	86	0.	0.69	45.	63	0.0004	0.	0.	0.00	0.000
1206	5.65	5.65	169	0.	1.36	89.	128	0.0008	71	0.	0.57	0.004
1207	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1208	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1209	5.65	5.65	89	0.	0.72	47.	70	0.0004	0.	0.	0.00	0.000
1210	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1211	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1212	5.65	5.65	242	0.	1.94	127.	170	0.0010	33	0.	0.27	0.002
1213	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1214	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1215	5.65	5.65	617	0.	4.96	325.	497	0.0029	280	0.	2.25	0.017
1216	5.65	5.65	637	0.	5.12	335.	498	0.0029	266	0.	2.14	0.016
1217	5.65	5.65	495	0.	3.98	261.	387	0.0023	193	0.	1.55	0.011
1218	5.65	5.65	493	0.	3.97	259.	391	0.0023	195	0.	1.57	0.012
1219	5.65	5.65	1126	0.	9.06	593.	937	0.0055	752	0.	6.05	0.044
1220	5.65	5.65	979	0.	7.88	516.	832	0.0049	675	0.	5.43	0.040
1221	5.65	5.65	902	0.	7.25	475.	773	0.0046	629	0.	5.06	0.037
1222	5.65	5.65	848	0.	6.82	446.	722	0.0043	558	0.	4.49	0.033
1223	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1224	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1225	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1226	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1227	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1228	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1229	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1230	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1231	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1232	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1233	5.65	5.65	9	0.	0.07	5.	0.	0.0000	16	0.	0.13	0.001
1234	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1235	5.65	5.65	173	0.	1.39	91.	127	0.0008	50	0.	0.40	0.003
1236	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1237	5.65	5.65	43	0.	0.35	23.	21	0.0001	0.	0.	0.00	0.000
1238	5.65	5.65	91	0.	0.73	48.	64	0.0004	0.	0.	0.00	0.000
1239	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1240	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1241	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1242	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1243	5.65	5.65	654	0.	5.26	344.	508	0.0030	268	0.	2.15	0.016
1244	5.65	5.65	517	0.	4.16	272.	401	0.0024	133	0.	1.07	0.008
1245	5.65	5.65	525	0.	4.22	276.	410	0.0024	160	0.	1.28	0.009
1246	5.65	5.65	554	0.	4.46	292.	430	0.0025	187	0.	1.50	0.011
1247	5.65	5.65	185	0.	1.49	98.	152	0.0009	62	0.	0.50	0.004
1248	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1249	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1250	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1251	5.65	5.65	514	0.	4.13	271.	372	0.0022	196	0.	1.58	0.012
1252	5.65	5.65	747	0.	6.01	393.	592	0.0035	429	0.	3.45	0.025
1253	5.65	5.65	1390	0.	11.18	732.	1173	0.0069	995	0.	8.01	0.059
1254	5.65	5.65	1229	0.	9.89	647.	1040	0.0061	909	0.	7.31	0.054
1255	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1256	5.65	5.65	544	0.	4.38	286.	446	0.0026	286	0.	2.30	0.017
1257	5.65	5.65	23	0.	0.19	12.	0.	0.0000	0.	0.	0.00	0.000
1258	5.65	5.65	1119	0.	9.00	589.	944	0.0056	823	0.	6.62	0.049
1259	5.65	5.65	741	0.	5.96	390.	618	0.0037	573	0.	4.61	0.034
1260	5.65	5.65	1351	0.	10.87	711.	1152	0.0068	990	0.	7.97	0.059
1261	5.65	5.65	793	0.	6.38	418.	681	0.0040	367	0.	2.95	0.022
1262	5.65	5.65	1496	0.	12.04	788.	1278	0.0076	1072	0.	8.63	0.063
1263	5.65	5.65	1129	0.	9.08	594.	945	0.0056	782	0.	6.29	0.046
1264	5.65	5.65	420	0.	3.38	221.	338	0.0020	134	0.	1.08	0.008
1265	5.65	5.65	1111	0.	8.94	585.	938	0.0055	777	0.	6.25	0.046
1266	5.65	5.65	555	0.	4.47	292.	456	0.0027	131	0.	1.05	0.008
1267	5.65	5.65	463	0.	3.73	244.	410	0.0024	389	0.	3.13	0.023
1268	5.65	5.65	947	0.	7.62	498.	805	0.0048	658	0.	5.30	0.039
1269	5.65	5.65	1078	0.	8.67	567.	915	0.0054	782	0.	6.29	0.046
1270	5.65	5.65	610	0.	4.91	321.	525	0.0031	280	0.	2.25	0.017
1271	5.65	5.65	302	0.	2.43	159.	241	0.0014	71	0.	0.57	0.004
1272	5.65	5.65	852	0.	6.85	448.	713	0.0042	581	0.	4.68	0.034
1273	5.65	5.65	845	0.	6.79	445.	714	0.0042	593	0.	4.77	0.035
1274	5.65	5.65	440	0.	3.54	231.	359	0.0021	91	0.	0.73	0.005
1275	5.65	5.65	733	0.	5.90	386.	626	0.0037	497	0.	4.00	0.029
1276	5.65	5.65	378	0.	3.04	199.	344	0.0020	369	0.	2.97	0.022
1277	5.65	5.65	822	0.	6.61	433.	702	0.0042	597	0.	4.80	0.035
1278	5.65	5.65	492	0.	3.96	259.	426	0.0025	234	0.	1.88	0.014

## ARMATURA INFERIORE VERTICALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	AfC	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
453	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
454	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
455	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
456	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
457	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
458	5.65	5.65	39	0.	0.32	21.	54	0.	0.003	224	0.	1.80	0.013
459	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
460	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
461	5.65	5.65	1499	0.	12.05	789.	1220	0.	0.072	786	0.	6.33	0.046
462	5.65	5.65	1366	0.	10.99	719.	1090	0.	0.064	856	0.	6.88	0.051
463	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
464	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
465	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
466	5.65	5.65	1221	0.	9.82	643.	960	0.	0.057	850	0.	6.83	0.050
467	5.65	5.65	474	0.	3.81	249.	401	0.	0.024	436	0.	3.51	0.026
468	5.65	5.65	220	0.	1.77	116.	189	0.	0.011	288	0.	2.32	0.017
469	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
470	5.65	5.65	1489	0.	11.98	784.	1209	0.	0.071	644	0.	5.18	0.038
471	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	48	0.	0.38	0.003
472	5.65	5.65	1924	0.	15.48	1013.	1619	0.	0.096	1088	0.	8.75	0.064
473	5.65	5.65	2228	0.	17.92	1173.	1873	0.	0.111	1483	0.	11.93	0.088
474	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
475	5.65	5.65	2609	0.	20.98	1373.	2191	0.	0.129	1747	0.	14.05	0.103
476	5.65	5.65	2716	0.	21.84	1429.	2275	0.	0.134	1747	0.	14.06	0.103
477	5.65	5.65	1683	0.	13.54	886.	1452	0.	0.086	862	0.	6.93	0.051
478	5.65	5.65	2000	0.	16.09	1053.	1722	0.	0.102	1439	0.	11.57	0.085
479	5.65	5.65	2305	0.	18.54	1213.	1978	0.	0.117	1771	0.	14.24	0.105
480	5.65	5.65	2313	0.	18.61	1218.	1973	0.	0.117	1608	0.	12.94	0.095
481	5.65	5.65	356	0.	2.86	187.	304	0.	0.018	267	0.	2.15	0.016
482	5.65	5.65	139	0.	1.12	73.	89	0.	0.005	164	0.	1.32	0.010
483	5.65	5.65	295	0.	2.37	155.	297	0.	0.018	295	0.	2.38	0.017
484	5.65	5.65	426	0.	3.43	224.	356	0.	0.021	245	0.	1.97	0.014
485	5.65	5.65	1391	0.	11.19	732.	1106	0.	0.065	408	0.	3.28	0.024
486	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
487	5.65	5.65	1368	0.	11.01	720.	1080	0.	0.064	387	0.	3.12	0.023
488	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
489	5.65	5.65	1365	0.	10.98	719.	1087	0.	0.064	374	0.	3.01	0.022
490	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
491	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
492	5.65	5.65	1301	0.	10.46	685.	1008	0.	0.060	362	0.	2.92	0.021
493	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
494	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
495	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
496	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
497	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
498	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
499	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
500	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
501	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
502	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
503	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
504	5.65	5.65	3106	0.	24.99	1635.	2613	0.	0.154	1924	0.	15.47	0.114
505	5.65	5.65	3112	0.	25.03	1638.	2617	0.	0.155	1922	0.	15.46	0.114
506	5.65	5.65	3147	0.	25.32	1656.	2656	0.	0.157	1950	0.	15.69	0.115
507	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
508	5.65	5.65	2597	0.	20.89	1367.	2221	0.	0.131	1775	0.	14.28	0.105
509	5.65	5.65	2656	0.	21.36	1398.	2274	0.	0.134	1917	0.	15.42	0.113
510	5.65	5.65	2682	0.	21.58	1412.	2295	0.	0.136	1889	0.	15.20	0.112
511	5.65	5.65	3015	0.	24.26	1587.	2548	0.	0.151	1777	0.	14.30	0.105
512	5.65	5.65	2312	0.	18.60	1217.	1973	0.	0.117	1613	0.	12.98	0.095
513	5.65	5.65	425	0.	3.42	224.	354	0.	0.021	203	0.	1.63	0.012
514	5.65	5.65	562	0.	4.52	296.	471	0.	0.028	329	0.	2.65	0.019
515	5.65	5.65	709	0.	5.70	373.	595	0.	0.035	282	0.	2.27	0.017
516	5.65	5.65	628	0.	5.05	331.	523	0.	0.031	226	0.	1.82	0.013
517	5.65	5.65	678	0.	5.45	357.	563	0.	0.033	478	0.	3.85	0.028
518	5.65	5.65	538	0.	4.33	283.	442	0.	0.026	376	0.	3.03	0.022
519	5.65	5.65	594	0.	4.78	312.	500	0.	0.030	438	0.	3.52	0.026
520	5.65	5.65	409	0.	3.29	215.	355	0.	0.021	325	0.	2.61	0.019
521	5.65	5.65	287	0.	2.31	151.	204	0.	0.012	154	0.	1.24	0.009
522	5.65	5.65	241	0.	1.94	127.	195	0.	0.012	150	0.	1.20	0.009
523	5.65	5.65	225	0.	1.81	119.	187	0.	0.011	137	0.	1.10	0.008
524	5.65	5.65	219	0.	1.76	115.	178	0.	0.011	137	0.	1.10	0.008
585	5.65	5.65	1307	0.	10.51	688.	1045	0.	0.062	409	0.	3.29	0.024
586	5.65	5.65	1327	0.	10.67	698.	1057	0.	0.062	365	0.	2.94	0.022
587	5.65	5.65	1350	0.	10.86	711.	1085	0.	0.064	449	0.	3.62	0.027
588	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
589	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
590	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
591	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
592	5.65	5.65	1425	0.	11.46	750.	1152	0.	0.068	520	0.	4.18	0.031
593	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
594	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
595	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
596	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
597	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
598	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
599	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
600	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
601	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
602	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000

603	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
604	5.65	5.65	3035	0.	24.41	1597.	2552	0.0.151	1898	0.	15.27	0.112
605	5.65	5.65	2848	0.	22.91	1499.	2388	0.0.141	1752	0.	14.09	0.104
606	5.65	5.65	2982	0.	23.99	1570.	2502	0.0.148	1852	0.	14.90	0.110
607	5.65	5.65	2584	0.	20.78	1360.	2213	0.0.131	1881	0.	15.13	0.111
608	5.65	5.65	2538	0.	20.41	1336.	2174	0.0.129	1868	0.	15.03	0.110
609	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
610	5.65	5.65	626	0.	5.04	330.	516	0.0.031	297	0.	2.39	0.018
611	5.65	5.65	2395	0.	19.26	1260.	2047	0.0.121	1635	0.	13.15	0.097
612	5.65	5.65	3072	0.	24.71	1617.	2588	0.0.153	1917	0.	15.42	0.113
613	5.65	5.65	2562	0.	20.61	1349.	2194	0.0.130	1729	0.	13.91	0.102
614	5.65	5.65	498	0.	4.00	262.	419	0.0.025	337	0.	2.71	0.020
615	5.65	5.65	166	0.	1.33	87.	133	0.0.008	142	0.	1.15	0.008
616	5.65	5.65	573	0.	4.61	301.	443	0.0.026	188	0.	1.51	0.011
617	5.65	5.65	133	0.	1.07	70.	106	0.0.006	77	0.	0.62	0.005
618	5.65	5.65	176	0.	1.41	92.	141	0.0.008	92	0.	0.74	0.005
619	5.65	5.65	248	0.	2.00	131.	201	0.0.012	133	0.	1.07	0.008
620	5.65	5.65	365	0.	2.93	192.	298	0.0.018	243	0.	1.95	0.014
1171	5.65	5.65	1612	0.	12.97	849.	1384	0.0.082	980	0.	7.89	0.058
1172	5.65	5.65	3115	0.	25.05	1639.	2654	0.0.157	1942	0.	15.62	0.115
1173	5.65	5.65	2628	0.	21.14	1383.	2242	0.0.133	1619	0.	13.02	0.096
1174	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1175	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1176	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1177	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1178	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1179	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1180	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1181	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1182	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1183	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1184	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1185	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1186	5.65	5.65	980	0.	7.88	516.	800	0.0.047	832	0.	6.70	0.049
1187	5.65	5.65	1292	0.	10.39	680.	531	0.0.031	393	0.	3.16	0.023
1188	5.65	5.65	858	0.	6.90	452.	431	0.0.026	556	0.	4.47	0.033
1189	5.65	5.65	3284	0.	26.42	1728.	2777	0.0.164	2050	0.	16.49	0.121
1190	5.65	5.65	3353	0.	26.97	1765.	2839	0.0.168	2097	0.	16.86	0.124
1191	5.65	5.65	3260	0.	26.23	1716.	2752	0.0.163	2023	0.	16.27	0.120
1192	5.65	5.65	3116	0.	25.07	1640.	2631	0.0.156	1906	0.	15.33	0.113
1193	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1194	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1195	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1196	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1197	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1198	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1199	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1200	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1201	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1202	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1203	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1204	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1205	5.65	5.65	1191	0.	9.58	627.	897	0.0.053	166	0.	1.33	0.010
1206	5.65	5.65	1202	0.	9.67	633.	904	0.0.053	141	0.	1.13	0.008
1207	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1208	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1209	5.65	5.65	1223	0.	9.83	644.	927	0.0.055	218	0.	1.75	0.013
1210	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1211	5.65	5.65	885	0.	7.12	466.	727	0.0.043	768	0.	6.18	0.045
1212	5.65	5.65	953	0.	7.67	502.	709	0.0.042	654	0.	5.26	0.039
1213	5.65	5.65	1087	0.	8.74	572.	896	0.0.053	760	0.	6.12	0.045
1214	5.65	5.65	740	0.	5.95	389.	615	0.0.036	469	0.	3.77	0.028
1215	5.65	5.65	481	0.	3.87	253.	360	0.0.021	310	0.	2.49	0.018
1216	5.65	5.65	558	0.	4.49	294.	437	0.0.026	374	0.	3.01	0.022
1217	5.65	5.65	515	0.	4.15	271.	403	0.0.024	342	0.	2.75	0.020
1218	5.65	5.65	503	0.	4.05	265.	396	0.0.023	332	0.	2.67	0.020
1219	5.65	5.65	3362	0.	27.05	1770.	2848	0.0.168	2102	0.	16.91	0.124
1220	5.65	5.65	3409	0.	27.42	1794.	2887	0.0.171	2154	0.	17.32	0.127
1221	5.65	5.65	3399	0.	27.34	1789.	2876	0.0.170	2144	0.	17.24	0.127
1222	5.65	5.65	3381	0.	27.20	1780.	2864	0.0.169	2127	0.	17.11	0.126
1223	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1224	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1225	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1226	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1227	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1228	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1229	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1230	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1231	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1232	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1233	5.65	5.65	1328	0.	10.69	699.	1029	0.0.061	230	0.	1.85	0.014
1234	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1235	5.65	5.65	1224	0.	9.85	644.	925	0.0.055	158	0.	1.27	0.009
1236	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1237	5.65	5.65	1276	0.	10.27	672.	982	0.0.058	183	0.	1.47	0.011
1238	5.65	5.65	1235	0.	9.93	650.	942	0.0.056	172	0.	1.38	0.010
1239	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1240	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1241	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1242	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1243	5.65	5.65	670	0.	5.39	353.	525	0.0.031	473	0.	3.81	0.028
1244	5.65	5.65	830	0.	6.67	437.	661	0.0.039	570	0.	4.59	0.034
1245	5.65	5.65	778	0.	6.26	409.	615	0.0.036	532	0.	4.28	0.031
1246	5.65	5.65	733	0.	5.90	386.	566	0.0.033	492	0.	3.96	0.029
1247	5.65	5.65	1249	0.	10.04	657.	951	0.0.056	255	0.	2.05	0.015

1248	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1249	5.65	5.65	1228	0.	9.88	646.	1013	0.0.060	1016	0.	8.17	0.060
1250	5.65	5.65	285	0.	2.29	150.	243	0.0.014	582	0.	4.69	0.034
1251	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000
1252	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000
1253	5.65	5.65	907	0.	7.29	477.	782	0.0.046	378	0.	3.04	0.022
1254	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000
1255	5.65	5.65	279	0.	2.24	147.	247	0.0.015	234	0.	1.89	0.014
1256	5.65	5.65	1417	0.	11.40	746.	1221	0.0.072	931	0.	7.49	0.055
1257	5.65	5.65	124	0.	1.00	65.	100	0.0.006	197	0.	1.58	0.012
1258	5.65	5.65	1882	0.	15.14	990.	1614	0.0.095	1356	0.	10.91	0.080
1259	5.65	5.65	299	0.	2.41	158.	246	0.0.015	105	0.	0.85	0.006
1260	5.65	5.65	2518	0.	20.26	1326.	2138	0.0.126	1721	0.	13.85	0.102
1261	5.65	5.65	382	0.	3.07	201.	318	0.0.019	216	0.	1.74	0.013
1262	5.65	5.65	2366	0.	19.03	1245.	2024	0.0.120	1681	0.	13.52	0.099
1263	5.65	5.65	2533	0.	20.37	1333.	2161	0.0.128	1903	0.	15.31	0.112
1264	5.65	5.65	470	0.	3.78	247.	311	0.0.018	189	0.	1.52	0.011
1265	5.65	5.65	2621	0.	21.09	1380.	2242	0.0.133	2041	0.	16.42	0.121
1266	5.65	5.65	746	0.	6.00	393.	629	0.0.037	330	0.	2.65	0.020
1267	5.65	5.65	666	0.	5.36	350.	560	0.0.033	182	0.	1.47	0.011
1268	5.65	5.65	2639	0.	21.23	1389.	2250	0.0.133	1977	0.	15.90	0.117
1269	5.65	5.65	2710	0.	21.80	1427.	2317	0.0.137	2110	0.	16.98	0.125
1270	5.65	5.65	785	0.	6.31	413.	662	0.0.039	314	0.	2.52	0.019
1271	5.65	5.65	609	0.	4.90	321.	510	0.0.030	220	0.	1.77	0.013
1272	5.65	5.65	2558	0.	20.58	1347.	2182	0.0.129	1861	0.	14.97	0.110
1273	5.65	5.65	2617	0.	21.05	1378.	2233	0.0.132	1967	0.	15.82	0.116
1274	5.65	5.65	715	0.	5.75	376.	600	0.0.035	305	0.	2.45	0.018
1275	5.65	5.65	2237	0.	17.99	1177.	1907	0.0.113	1608	0.	12.94	0.095
1276	5.65	5.65	685	0.	5.51	361.	576	0.0.034	195	0.	1.57	0.012
1277	5.65	5.65	2650	0.	21.32	1395.	2261	0.0.134	2011	0.	16.17	0.119
1278	5.65	5.65	765	0.	6.16	403.	643	0.0.038	314	0.	2.53	0.019

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE				COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP	
453	5.65	5.65	1008	0.	8.11	531.	823	0.	0.049	709	0.	5.70	0.042	
454	5.65	5.65	1290	0.	10.38	679.	1051	0.	0.062	958	0.	7.71	0.057	
455	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
456	5.65	5.65	1071	0.	8.61	564.	880	0.	0.052	815	0.	6.56	0.048	
457	5.65	5.65	919	0.	7.39	484.	754	0.	0.045	862	0.	6.94	0.051	
458	5.65	5.65	101	0.	0.81	53.	66	0.	0.004	294	0.	2.37	0.017	
459	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
460	5.65	5.65	1111	0.	8.94	585.	905	0.	0.054	870	0.	7.00	0.051	
461	5.65	5.65	639	0.	5.14	336.	527	0.	0.031	619	0.	4.98	0.037	
462	5.65	5.65	1140	0.	9.17	600.	917	0.	0.054	843	0.	6.79	0.050	
463	5.65	5.65	1171	0.	9.42	616.	964	0.	0.057	921	0.	7.41	0.054	
464	5.65	5.65	847	0.	6.81	446.	696	0.	0.041	644	0.	5.18	0.038	
465	5.65	5.65	573	0.	4.61	302.	474	0.	0.028	555	0.	4.47	0.033	
466	5.65	5.65	530	0.	4.27	279.	415	0.	0.025	564	0.	4.54	0.033	
467	5.65	5.65	194	0.	1.56	102.	140	0.	0.008	275	0.	2.21	0.016	
468	5.65	5.65	1044	0.	8.40	549.	858	0.	0.051	840	0.	6.76	0.050	
469	5.65	5.65	1007	0.	8.10	530.	835	0.	0.049	739	0.	5.95	0.044	
470	5.65	5.65	258	0.	2.07	136.	217	0.	0.013	316	0.	2.54	0.019	
471	5.65	5.65	954	0.	7.68	502.	792	0.	0.047	714	0.	5.74	0.042	
472	5.65	5.65	300	0.	2.41	158.	231	0.	0.014	232	0.	1.86	0.014	
473	5.65	5.65	294	0.	2.36	154.	235	0.	0.014	287	0.	2.31	0.017	
474	5.65	5.65	673	0.	5.41	354.	563	0.	0.033	493	0.	3.96	0.029	
475	5.65	5.65	155	0.	1.25	82.	130	0.	0.008	109	0.	0.88	0.006	
476	5.65	5.65	16	0.	0.12	8.	15	0.	0.001	0.	0.	0.00	0.000	
477	5.65	5.65	36	0.	0.29	19.	13	0.	0.001	6	0.	0.05	0.000	
478	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	75	0.	0.60	0.004		
479	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
480	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
481	5.65	5.65	448	0.	3.61	236.	407	0.	0.024	432	0.	3.48	0.026	
482	5.65	5.65	290	0.	2.34	153.	270	0.	0.016	288	0.	2.32	0.017	
483	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	184	0.	1.48	0.011		
484	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	13	0.	0.11	0.001		
485	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	21	0.	0.17	0.001		
486	5.65	5.65	311	0.	2.51	164.	253	0.	0.015	324	0.	2.60	0.019	
487	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
488	5.65	5.65	326	0.	2.62	172.	266	0.	0.016	321	0.	2.58	0.019	
489	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
490	5.65	5.65	250	0.	2.01	131.	205	0.	0.012	290	0.	2.34	0.017	
491	5.65	5.65	709	0.	5.70	373.	583	0.	0.034	520	0.	4.18	0.031	
492	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
493	5.65	5.65	653	0.	5.25	344.	538	0.	0.032	481	0.	3.87	0.028	
494	5.65	5.65	750	0.	6.04	395.	618	0.	0.037	547	0.	4.40	0.032	
495	5.65	5.65	330	0.	2.65	173.	271	0.	0.016	321	0.	2.58	0.019	
496	5.65	5.65	630	0.	5.07	332.	522	0.	0.031	446	0.	3.59	0.026	
497	5.65	5.65	592	0.	4.77	312.	491	0.	0.029	416	0.	3.35	0.025	
498	5.65	5.65	666	0.	5.36	351.	540	0.	0.032	471	0.	3.79	0.028	
499	5.65	5.65	810	0.	6.52	427.	669	0.	0.040	588	0.	4.73	0.035	
500	5.65	5.65	183	0.	1.47	96.	155	0.	0.009	94	0.	0.76	0.006	
501	5.65	5.65	202	0.	1.62	106.	162	0.	0.010	96	0.	0.77	0.006	
502	5.65	5.65	202	0.	1.63	106.	167	0.	0.010	95	0.	0.76	0.006	
503	5.65	5.65	701	0.	5.64	369.	581	0.	0.034	504	0.	4.06	0.030	
504	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
505	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
506	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
507	5.65	5.65	190	0.	1.53	100.	160	0.	0.009	98	0.	0.79	0.006	
508	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
509	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
510	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		
511	5.65	5.65	0.	0.	0.00	0.	0.	0.0.000	0.	0.	0.00	0.000		

512	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
513	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
514	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	48	0.	0.38	0.003
515	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	37	0.	0.30	0.002
516	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
517	5.65	5.65	192	0.	1.54	101.	163	0.0010	482	0.	3.88	0.029
518	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	127	0.	1.02	0.008
519	5.65	5.65	982	0.	7.90	517.	783	0.0046	731	0.	5.88	0.043
520	5.65	5.65	767	0.	6.17	404.	599	0.0035	598	0.	4.81	0.035
521	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
522	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
523	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
524	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
585	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	28	0.	0.23	0.002
586	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
587	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	75	0.	0.60	0.004
588	5.65	5.65	271	0.	2.18	143.	219	0.0013	311	0.	2.50	0.018
589	5.65	5.65	215	0.	1.73	113.	176	0.0010	240	0.	1.93	0.014
590	5.65	5.65	602	0.	4.84	317.	496	0.0029	459	0.	3.69	0.027
591	5.65	5.65	600	0.	4.83	316.	495	0.0029	445	0.	3.58	0.026
592	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	110	0.	0.88	0.006
593	5.65	5.65	242	0.	1.95	127.	203	0.0012	308	0.	2.48	0.018
594	5.65	5.65	656	0.	5.28	346.	542	0.0032	505	0.	4.06	0.030
595	5.65	5.65	730	0.	5.87	384.	604	0.0036	557	0.	4.48	0.033
596	5.65	5.65	571	0.	4.59	300.	474	0.0028	397	0.	3.19	0.023
597	5.65	5.65	558	0.	4.49	294.	463	0.0027	391	0.	3.14	0.023
598	5.65	5.65	786	0.	6.32	413.	656	0.0039	575	0.	4.62	0.034
599	5.65	5.65	650	0.	5.22	342.	542	0.0032	462	0.	3.72	0.027
600	5.65	5.65	205	0.	1.65	108.	171	0.0010	99	0.	0.79	0.006
601	5.65	5.65	177	0.	1.42	93.	150	0.0009	94	0.	0.76	0.006
602	5.65	5.65	444	0.	3.57	234.	369	0.0022	302	0.	2.43	0.018
603	5.65	5.65	274	0.	2.21	144.	230	0.0014	168	0.	1.36	0.010
604	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
605	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
606	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
607	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
608	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
609	5.65	5.65	258	0.	2.08	136.	206	0.0012	283	0.	2.27	0.017
610	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	49	0.	0.39	0.003
611	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
612	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
613	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
614	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	49	0.	0.39	0.003
615	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
616	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
617	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
618	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
619	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
620	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1171	5.65	5.65	92	0.	0.74	49.	83	0.0005	81	0.	0.65	0.005
1172	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1173	5.65	5.65	94	0.	0.76	50.	75	0.0004	122	0.	0.98	0.007
1174	5.65	5.65	279	0.	2.24	147.	236	0.0014	219	0.	1.76	0.013
1175	5.65	5.65	400	0.	3.22	210.	341	0.0020	309	0.	2.48	0.018
1176	5.65	5.65	518	0.	4.17	273.	437	0.0026	352	0.	2.83	0.021
1177	5.65	5.65	688	0.	5.54	362.	577	0.0034	480	0.	3.86	0.028
1178	5.65	5.65	1267	0.	10.20	667.	1050	0.0062	796	0.	6.40	0.047
1179	5.65	5.65	1083	0.	8.71	570.	896	0.0053	603	0.	4.85	0.036
1180	5.65	5.65	1408	0.	11.33	741.	1162	0.0069	926	0.	7.45	0.055
1181	5.65	5.65	1621	0.	13.04	853.	1337	0.0079	1203	0.	9.68	0.071
1182	5.65	5.65	1682	0.	13.53	885.	1387	0.0082	1188	0.	9.55	0.070
1183	5.65	5.65	1831	0.	14.73	964.	1511	0.0089	1340	0.	10.78	0.079
1184	5.65	5.65	1272	0.	10.23	669.	1111	0.0066	1052	0.	8.47	0.062
1185	5.65	5.65	1662	0.	13.37	875.	1459	0.0086	1271	0.	10.23	0.075
1186	5.65	5.65	1710	0.	13.75	900.	1417	0.0084	1096	0.	8.81	0.065
1187	5.65	5.65	186	0.	1.50	98.	170	0.0010	467	0.	3.76	0.028
1188	5.65	5.65	505	0.	4.06	266.	858	0.0051	787	0.	6.33	0.047
1189	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1190	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1191	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1192	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1193	5.65	5.65	182	0.	1.46	96.	147	0.0009	135	0.	1.09	0.008
1194	5.65	5.65	169	0.	1.36	89.	138	0.0008	125	0.	1.00	0.007
1195	5.65	5.65	163	0.	1.31	86.	130	0.0008	121	0.	0.97	0.007
1196	5.65	5.65	145	0.	1.17	76.	123	0.0007	108	0.	0.87	0.006
1197	5.65	5.65	923	0.	7.43	486.	763	0.0045	623	0.	5.01	0.037
1198	5.65	5.65	988	0.	7.95	520.	817	0.0048	667	0.	5.36	0.039
1199	5.65	5.65	871	0.	7.01	458.	721	0.0043	589	0.	4.74	0.035
1200	5.65	5.65	812	0.	6.53	427.	673	0.0040	549	0.	4.42	0.032
1201	5.65	5.65	1068	0.	8.59	562.	881	0.0052	780	0.	6.27	0.046
1202	5.65	5.65	998	0.	8.03	525.	823	0.0049	733	0.	5.89	0.043
1203	5.65	5.65	885	0.	7.12	466.	731	0.0043	652	0.	5.25	0.039
1204	5.65	5.65	950	0.	7.65	500.	784	0.0046	700	0.	5.63	0.041
1205	5.65	5.65	15	0.	0.12	8.	18	0.0001	53	0.	0.42	0.003
1206	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	7	0.	0.06	0.000
1207	5.65	5.65	582	0.	4.68	306.	469	0.0028	464	0.	3.73	0.027
1208	5.65	5.65	567	0.	4.56	298.	456	0.0027	461	0.	3.71	0.027
1209	5.65	5.65	16	0.	0.12	8.	19	0.0001	52	0.	0.41	0.003
1210	5.65	5.65	546	0.	4.39	287.	437	0.0026	457	0.	3.67	0.027
1211	5.65	5.65	252	0.	2.02	132.	569	0.0034	307	0.	2.47	0.018
1212	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	8	0.	0.06	0.000
1213	5.65	5.65	1319	0.	10.61	694.	1120	0.0066	656	0.	5.28	0.039
1214	5.65	5.65	1277	0.	10.28	672.	1080	0.0064	996	0.	8.02	0.059
1215	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1216	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000

1217	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1218	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1219	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1220	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1221	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1222	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1223	5.65	5.65	279	0.	2.24	147.	238	0.0014	226	0.	1.82	0.013
1224	5.65	5.65	184	0.	1.48	97.	148	0.0009	142	0.	1.14	0.008
1225	5.65	5.65	192	0.	1.55	101.	158	0.0009	139	0.	1.12	0.008
1226	5.65	5.65	183	0.	1.48	97.	148	0.0009	127	0.	1.02	0.008
1227	5.65	5.65	1274	0.	10.25	671.	1043	0.0062	830	0.	6.67	0.049
1228	5.65	5.65	1212	0.	9.75	638.	1003	0.0059	795	0.	6.39	0.047
1229	5.65	5.65	1071	0.	8.61	563.	886	0.0052	721	0.	5.80	0.043
1230	5.65	5.65	1139	0.	9.16	599.	944	0.0056	762	0.	6.13	0.045
1231	5.65	5.65	1180	0.	9.49	621.	972	0.0057	860	0.	6.92	0.051
1232	5.65	5.65	1507	0.	12.12	793.	1226	0.0072	1106	0.	8.89	0.065
1233	5.65	5.65	1	0.	0.00	0.	13	0.0001	226	0.	1.82	0.013
1234	5.65	5.65	1030	0.	8.29	542.	848	0.0050	813	0.	6.54	0.048
1235	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	64	0.	0.51	0.004
1236	5.65	5.65	663	0.	5.33	349.	553	0.0033	564	0.	4.54	0.033
1237	5.65	5.65	43	0.	0.35	23.	46	0.0003	161	0.	1.29	0.010
1238	5.65	5.65	28	0.	0.23	15.	30	0.0002	124	0.	0.99	0.007
1239	5.65	5.65	1275	0.	10.26	671.	1051	0.0062	934	0.	7.51	0.055
1240	5.65	5.65	1376	0.	11.07	724.	1134	0.0067	1005	0.	8.08	0.059
1241	5.65	5.65	881	0.	7.08	463.	730	0.0043	695	0.	5.59	0.041
1242	5.65	5.65	780	0.	6.27	410.	647	0.0038	633	0.	5.10	0.037
1243	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1244	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1245	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1246	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1247	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1248	5.65	5.65	461	0.	3.71	242.	380	0.0022	408	0.	3.28	0.024
1249	5.65	5.65	1523	0.	12.25	802.	1271	0.0075	1159	0.	9.33	0.069
1250	5.65	5.65	1347	0.	10.84	709.	1118	0.0066	906	0.	7.29	0.054
1251	5.65	5.65	115	0.	0.92	60.	230	0.0014	212	0.	1.70	0.013
1252	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1253	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1254	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1255	5.65	5.65	594	0.	4.78	313.	555	0.0033	404	0.	3.25	0.024
1256	5.65	5.65	28	0.	0.22	14.	26	0.0002	120	0.	0.96	0.007
1257	5.65	5.65	431	0.	3.47	227.	393	0.0023	399	0.	3.21	0.024
1258	5.65	5.65	113	0.	0.91	59.	100	0.0006	155	0.	1.25	0.009
1259	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1260	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1261	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	181	0.	1.46	0.011
1262	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1263	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1264	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1265	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1266	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	33	0.	0.26	0.002
1267	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1268	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1269	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1270	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	51	0.	0.41	0.003
1271	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1272	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1273	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1274	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	32	0.	0.26	0.002
1275	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1276	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1277	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1278	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	41	0.	0.33	0.002

## ARMATURA SUPERIORE VERTICALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE				
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP	
453	5.65	5.65	1543	0.	12.41	812.	1261	0.	0.075	972	0.	7.82	0.057	
454	5.65	5.65	1696	0.	13.65	893.	1381	0.	0.082	1165	0.	9.37	0.069	
455	5.65	5.65	993	0.	7.99	523.	808	0.	0.048	584	0.	4.70	0.035	
456	5.65	5.65	2013	0.	16.19	1059.	1648	0.	0.097	1398	0.	11.25	0.083	
457	5.65	5.65	1916	0.	15.41	1008.	1561	0.	0.092	1368	0.	11.00	0.081	
458	5.65	5.65	1389	0.	11.17	731.	1127	0.	0.067	931	0.	7.49	0.055	
459	5.65	5.65	1191	0.	9.58	627.	967	0.	0.057	751	0.	6.04	0.044	
460	5.65	5.65	1661	0.	13.36	874.	1362	0.	0.081	1125	0.	9.05	0.067	
461	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	192	0.	1.55	0.011	
462	5.65	5.65	399	0.	3.21	210.	346	0.	0.020	492	0.	3.96	0.029	
463	5.65	5.65	1986	0.	15.98	1045.	1634	0.	0.097	1435	0.	11.55	0.085	
464	5.65	5.65	2275	0.	18.30	1197.	1862	0.	0.110	1648	0.	13.26	0.097	
465	5.65	5.65	1903	0.	15.31	1002.	1550	0.	0.092	1364	0.	10.97	0.081	
466	5.65	5.65	792	0.	6.38	417.	669	0.	0.040	675	0.	5.43	0.040	
467	5.65	5.65	1113	0.	8.95	586.	912	0.	0.054	830	0.	6.68	0.049	
468	5.65	5.65	1236	0.	9.94	651.	1018	0.	0.060	874	0.	7.03	0.052	
469	5.65	5.65	2085	0.	16.78	1098.	1714	0.	0.101	1566	0.	12.60	0.093	
470	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	
471	5.65	5.65	1262	0.	10.15	664.	1041	0.	0.062	765	0.	6.15	0.045	
472	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	
473	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	
474	5.65	5.65	1165	0.	9.37	613.	960	0.	0.057	638	0.	5.13	0.038	
475	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	
476	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	
477	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	
478	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	
479	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	
480	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000	

481	5.65	5.65	359	0.	2.89	189.	329	0.	0.019	244	0.	1.96	0.014
482	5.65	5.65	199	0.	1.60	105.	156	0.	0.009	0.	0.	0.00	0.000
483	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
484	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
485	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
486	5.65	5.65	2143	0.	17.24	1128.	1742	0.	0.103	1419	0.	11.42	0.084
487	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
488	5.65	5.65	2171	0.	17.47	1143.	1770	0.	0.105	1436	0.	11.55	0.085
489	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
490	5.65	5.65	2132	0.	17.15	1122.	1727	0.	0.102	1424	0.	11.45	0.084
491	5.65	5.65	2621	0.	21.09	1380.	2138	0.	0.126	1981	0.	15.93	0.117
492	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
493	5.65	5.65	2605	0.	20.96	1371.	2125	0.	0.126	1971	0.	15.86	0.117
494	5.65	5.65	2642	0.	21.26	1391.	2195	0.	0.130	1996	0.	16.06	0.118
495	5.65	5.65	2000	0.	16.08	1052.	1633	0.	0.097	1291	0.	10.39	0.076
496	5.65	5.65	2323	0.	18.69	1223.	1896	0.	0.112	1641	0.	13.20	0.097
497	5.65	5.65	2309	0.	18.57	1215.	1886	0.	0.111	1636	0.	13.16	0.097
498	5.65	5.65	2333	0.	18.77	1228.	1904	0.	0.113	1641	0.	13.20	0.097
499	5.65	5.65	2418	0.	19.45	1273.	2003	0.	0.118	1808	0.	14.54	0.107
500	5.65	5.65	1035	0.	8.33	545.	839	0.	0.050	435	0.	3.50	0.026
501	5.65	5.65	1041	0.	8.37	548.	843	0.	0.050	433	0.	3.48	0.026
502	5.65	5.65	1033	0.	8.31	544.	835	0.	0.049	415	0.	3.34	0.025
503	5.65	5.65	2122	0.	17.07	1117.	1730	0.	0.102	1490	0.	11.99	0.088
504	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
505	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
506	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
507	5.65	5.65	993	0.	7.99	523.	801	0.	0.047	380	0.	3.06	0.022
508	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
509	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
510	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
511	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
512	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
513	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
514	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
515	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
516	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
517	5.65	5.65	320	0.	2.58	169.	256	0.	0.015	261	0.	2.10	0.015
518	5.65	5.65	123	0.	0.99	65.	107	0.	0.006	128	0.	1.03	0.008
519	5.65	5.65	570	0.	4.58	300.	446	0.	0.026	389	0.	3.13	0.023
520	5.65	5.65	711	0.	5.72	374.	547	0.	0.032	476	0.	3.83	0.028
521	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
522	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
523	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
524	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
585	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
586	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
587	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
588	5.65	5.65	1994	0.	16.04	1049.	1620	0.	0.096	1347	0.	10.84	0.080
589	5.65	5.65	2101	0.	16.90	1106.	1707	0.	0.101	1422	0.	11.44	0.084
590	5.65	5.65	2540	0.	20.43	1337.	2075	0.	0.123	1934	0.	15.56	0.114
591	5.65	5.65	2576	0.	20.72	1356.	2102	0.	0.124	1959	0.	15.76	0.116
592	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
593	5.65	5.65	1851	0.	14.89	974.	1505	0.	0.089	1279	0.	10.29	0.076
594	5.65	5.65	2488	0.	20.01	1309.	2036	0.	0.120	1903	0.	15.31	0.112
595	5.65	5.65	2399	0.	19.30	1262.	1964	0.	0.116	1828	0.	14.70	0.108
596	5.65	5.65	2270	0.	18.26	1195.	1859	0.	0.110	1604	0.	12.90	0.095
597	5.65	5.65	2292	0.	18.44	1206.	1874	0.	0.111	1626	0.	13.08	0.096
598	5.65	5.65	2170	0.	17.45	1142.	1782	0.	0.105	1614	0.	12.99	0.095
599	5.65	5.65	2228	0.	17.92	1173.	1828	0.	0.108	1598	0.	12.85	0.094
600	5.65	5.65	1010	0.	8.13	532.	823	0.	0.049	410	0.	3.30	0.024
601	5.65	5.65	1020	0.	8.21	537.	828	0.	0.049	430	0.	3.46	0.025
602	5.65	5.65	1059	0.	8.52	557.	869	0.	0.051	518	0.	4.17	0.031
603	5.65	5.65	1004	0.	8.08	529.	822	0.	0.049	416	0.	3.35	0.025
604	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
605	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
606	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
607	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
608	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
609	5.65	5.65	2050	0.	16.49	1079.	1664	0.	0.098	1389	0.	11.17	0.082
610	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
611	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
612	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
613	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
614	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
615	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
616	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
617	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
618	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
619	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
620	5.65	5.65	5	0.	0.04	2.	9	0.	0.001	40	0.	0.32	0.002
1171	5.65	5.65	133	0.	1.07	70.	102	0.	0.006	294	0.	2.37	0.017
1172	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1173	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
1174	5.65	5.65	1548	0.	12.45	815.	1301	0.	0.077	1181	0.	9.50	0.070
1175	5.65	5.65	1135	0.	9.13	597.	949	0.	0.056	662	0.	5.33	0.039
1176	5.65	5.65	1403	0.	11.29	738.	1177	0.	0.070	965	0.	7.76	0.057
1177	5.65	5.65	1573	0.	12.65	828.	1319	0.	0.078	1150	0.	9.25	0.068
1178	5.65	5.65	2213	0.	17.80	1165.	1834	0.	0.108	1611	0.	12.96	0.095
1179	5.65	5.65	1899	0.	15.27	999.	1575	0.	0.093	1398	0.	11.25	0.083
1180	5.65	5.65	1640	0.	13.19	863.	1336	0.	0.079	1011	0.	8.14	0.060
1181	5.65	5.65	2629	0.	21.15	1384.	2196	0.	0.130	1904	0.	15.31	0.113
1182	5.65	5.65	2299	0.	18.49	1210.	1899	0.	0.112	1556	0.	12.51	0.092
1183	5.65	5.65	1028	0.	8.27	541.	907	0.	0.054	622	0.	5.00	0.037
1184	5.65	5.65	2071	0.	16.66	1090.	1711	0.	0.101	1425	0.	11.46	0.084
1185	5.65	5.65	1741	0.	14.00	916.	1439	0.	0.085	1108	0.	8.91	0.065

1186	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1187	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1188	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1189	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1190	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1191	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1192	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1193	5.65	5.65	1088	0.	8.75	573.	883	0.0052	423	0.	3.40	0.025
1194	5.65	5.65	1078	0.	8.67	568.	874	0.0052	419	0.	3.37	0.025
1195	5.65	5.65	1061	0.	8.53	558.	858	0.0051	411	0.	3.31	0.024
1196	5.65	5.65	1011	0.	8.14	532.	818	0.0048	318	0.	2.56	0.019
1197	5.65	5.65	2425	0.	19.51	1276.	1986	0.0117	1701	0.	13.68	0.101
1198	5.65	5.65	2452	0.	19.72	1290.	2011	0.0119	1724	0.	13.87	0.102
1199	5.65	5.65	2397	0.	19.28	1262.	1960	0.0116	1678	0.	13.50	0.099
1200	5.65	5.65	2168	0.	17.44	1141.	1770	0.0105	1481	0.	11.91	0.088
1201	5.65	5.65	2819	0.	22.68	1484.	2357	0.0139	2128	0.	17.12	0.126
1202	5.65	5.65	2751	0.	22.13	1448.	2316	0.0137	2092	0.	16.83	0.124
1203	5.65	5.65	2390	0.	19.23	1258.	1976	0.0117	1844	0.	14.83	0.109
1204	5.65	5.65	2719	0.	21.87	1431.	2287	0.0135	2066	0.	16.62	0.122
1205	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1206	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1207	5.65	5.65	2378	0.	19.13	1252.	1955	0.0116	1628	0.	13.10	0.096
1208	5.65	5.65	2317	0.	18.64	1219.	1902	0.0112	1579	0.	12.70	0.093
1209	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1210	5.65	5.65	2273	0.	18.29	1196.	1863	0.0110	1543	0.	12.41	0.091
1211	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1212	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1213	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1214	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	12	0.	0.10	0.001
1215	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1216	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1217	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1218	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1219	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1220	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1221	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1222	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1223	5.65	5.65	1076	0.	8.65	566.	888	0.0052	437	0.	3.51	0.026
1224	5.65	5.65	1066	0.	8.57	561.	876	0.0052	389	0.	3.13	0.023
1225	5.65	5.65	1084	0.	8.72	571.	882	0.0052	415	0.	3.34	0.025
1226	5.65	5.65	1071	0.	8.62	564.	875	0.0052	388	0.	3.12	0.023
1227	5.65	5.65	2367	0.	19.04	1246.	1960	0.0116	1716	0.	13.81	0.101
1228	5.65	5.65	2445	0.	19.67	1287.	2020	0.0119	1737	0.	13.98	0.103
1229	5.65	5.65	2469	0.	19.86	1299.	2030	0.0120	1738	0.	13.98	0.103
1230	5.65	5.65	2465	0.	19.83	1297.	2032	0.0120	1736	0.	13.97	0.103
1231	5.65	5.65	2899	0.	23.32	1526.	2388	0.0141	2157	0.	17.35	0.127
1232	5.65	5.65	2799	0.	22.52	1473.	2332	0.0138	2091	0.	16.82	0.124
1233	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1234	5.65	5.65	2291	0.	18.43	1206.	1888	0.0112	1594	0.	12.83	0.094
1235	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1236	5.65	5.65	2409	0.	19.38	1268.	1982	0.0117	1660	0.	13.36	0.098
1237	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1238	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1239	5.65	5.65	2904	0.	23.36	1528.	2392	0.0141	2163	0.	17.40	0.128
1240	5.65	5.65	2879	0.	23.16	1515.	2378	0.0141	2155	0.	17.34	0.127
1241	5.65	5.65	2382	0.	19.17	1254.	1963	0.0116	1653	0.	13.30	0.098
1242	5.65	5.65	2402	0.	19.32	1264.	1978	0.0117	1662	0.	13.37	0.098
1243	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1244	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1245	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1246	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1247	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1248	5.65	5.65	2066	0.	16.62	1087.	1690	0.0100	1391	0.	11.19	0.082
1249	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1250	5.65	5.65	581	0.	4.67	306.	475	0.0028	228	0.	1.84	0.013
1251	5.65	5.65	888	0.	7.14	467.	722	0.0043	524	0.	4.22	0.031
1252	5.65	5.65	819	0.	6.59	431.	675	0.0040	676	0.	5.44	0.040
1253	5.65	5.65	509	0.	4.09	268.	417	0.0025	601	0.	4.84	0.036
1254	5.65	5.65	1650	0.	13.27	868.	1387	0.0082	984	0.	7.92	0.058
1255	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1256	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1257	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1258	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1259	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	4	0.	0.04	0.000
1260	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1261	5.65	5.65	115	0.	0.92	60.	108	0.0006	123	0.	0.99	0.007
1262	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1263	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1264	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1265	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1266	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1267	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1268	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1269	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1270	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1271	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1272	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1273	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1274	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1275	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1276	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1277	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000
1278	5.65	5.65	0.	0.	0.00	0.	0.	0.0000	0.	0.	0.00	0.000

## 2.5.2 SETTO 1

MACROGUSCIO setto\_1

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.96	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm  
 Af = area disposta al lembo teso, in cm2 al metro  
 Afc = area disposta al lembo compresso, in cm2 al metro  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 epsC = deformazione cls [per mille]  
 epsF = deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.96 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF.	
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	MAX	%
820	32	3.93	3.93	13.	56.	0.00	0.36	3.93	3.93	71.	7.	0.00	0.08	19	
821	32	3.93	3.93	25.	33.	0.00	0.22	3.93	3.93	0.	-51.	0.01	-0.01	11	
822	32	3.93	3.93	0.	19.	0.00	0.12	3.93	3.93	0.	-59.	0.01	-0.01	6	
823	32	3.93	3.93	77.	10.	0.00	0.10	3.93	3.93	0.	-54.	0.01	-0.01	5	
824	32	3.93	3.93	41.	55.	0.00	0.37	3.93	3.93	132.	23.	0.00	0.24	19	
825	32	3.93	3.93	24.	42.	0.00	0.29	3.93	3.93	190.	-25.	0.02	0.13	15	
826	32	3.93	3.93	0.	24.	0.00	0.15	3.93	3.93	214.	-40.	0.03	0.08	8	
827	32	3.93	3.93	96.	20.	0.00	0.17	3.93	3.93	28.	-41.	0.01	-0.01	9	

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF.	
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	MAX	%
820	32	3.93	3.93	25.	52.	0.00	0.36	3.93	3.93	0.	-13.	0.00	0.04	18	
821	32	3.93	3.93	55.	31.	0.00	0.23	3.93	3.93	29.	-51.	0.01	0.01	12	
822	32	3.93	3.93	128.	18.	0.00	0.18	3.93	3.93	240.	-57.	0.04	0.09	9	
823	32	3.93	3.93	89.	9.	0.00	0.10	3.93	3.93	493.	-54.	0.06	0.19	10	
824	32	3.93	3.93	59.	54.	0.00	0.37	3.93	3.93	0.	32.	0.00	0.21	19	
825	32	3.93	3.93	38.	42.	0.00	0.29	3.93	3.93	0.	-25.	0.01	0.06	15	
826	32	3.93	3.93	138.	24.	0.00	0.22	3.93	3.93	203.	-30.	0.03	0.08	11	
827	32	3.93	3.93	73.	17.	0.00	0.15	3.93	3.93	356.	-23.	0.04	0.16	8	

L'ARMATURA È OVUNQUE &gt; DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd &gt; Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vrzd = compressione cls d'anima  
 vrzd = trazione armatura trasversale  
 Vrd,s = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vrzd [daN]	Vrzd [daN]	alfas	Vrd,s [daN]
-180.0	11794	28.95	28.95	19133	336450	90613	-	-
-140.0	11794	28.95	28.95	19313	336193	90613	-	-
-100.0	11794	28.95	28.95	19313	336193	90613	-	-
-60.0	11794	28.95	28.95	19493	335936	90613	-	-
-32.5	11794	28.95	28.95	19493	335936	90613	-	-

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm

Af = area effettiva tesa (cm<sup>2</sup> al metro)  
 Afc = area effettiva compressa (cm<sup>2</sup> al metro)  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 sigC = tensione calcestruzzo [daN/cm<sup>2</sup>]  
       valore max per combinazione rara = 149.4 daN/cm<sup>2</sup>  
       quasi permanente = 112 daN/cm<sup>2</sup>  
 sigF = tensione acciaio [daN/cm<sup>2</sup>]  
       valore max per combinazione rara = 3600 daN/cm<sup>2</sup>  
 wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
 wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

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## ARMATURA INFERIORE ORIZZONTALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
820	3.93	3.93	0.	9	0.00	115.	2	12	0.041	17	17	0.00	0.060
821	3.93	3.93	0.	2	0.00	22.	0.	4	0.012	0.	5	0.00	0.017
822	3.93	3.93	0.	-7	0.21	-3.	0.	-5	0.000	0.	-2	0.07	0.000
823	3.93	3.93	0.	-4	0.13	-2.	0.	-8	0.000	0.	-7	0.20	0.000
824	3.93	3.93	23	7	0.00	111.	14	7	0.026	33	12	0.00	0.045
825	3.93	3.93	0.	6	0.00	82.	0.	8	0.026	0.	7	0.00	0.025
826	3.93	3.93	0.	-3	0.08	-1.	0.	-1	0.000	0.	0.	0.01	0.000
827	3.93	3.93	0.	-7	0.20	-3.	16	-6	0.000	14	-5	0.21	0.000

## ARMATURA INFERIORE VERTICALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
820	3.93	3.93	0.	-60	1.80	-27.	0.	-45	0.000	0.	-16	0.47	0.000
821	3.93	3.93	0.	-71	2.15	-32.	0.	-53	0.000	0.	-46	1.39	0.000
822	3.93	3.93	0.	-83	2.50	-38.	0.	-62	0.000	0.	-58	1.73	0.000
823	3.93	3.93	0.	-87	2.62	-39.	0.	-66	0.000	0.	-55	1.67	0.000
824	3.93	3.93	66	-40	1.56	-14.	39	-30	0.000	33	-17	0.69	0.000
825	3.93	3.93	94	-50	2.03	-17.	0.	-36	0.000	16	-31	1.03	0.000
826	3.93	3.93	147	-64	2.73	-20.	0.	-44	0.000	0.	-42	1.27	0.000
827	3.93	3.93	163	-67	2.91	-20.	14	-43	0.000	0.	-41	1.24	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
820	3.93	3.93	34	9	0.00	151.	27	12	0.044	1	17	0.00	0.058
821	3.93	3.93	93	2	1.31	114.	68	4	0.020	44	5	0.00	0.023
822	3.93	3.93	120	-7	1.46	36.	94	-5	0.004	84	-2	1.16	0.006
823	3.93	3.93	84	-4	1.07	31.	60	-8	0.000	35	-7	0.01	0.000
824	3.93	3.93	5	7	0.00	92.	16	7	0.026	2	12	0.00	0.042
825	3.93	3.93	64	6	0.32	150.	46	8	0.032	32	7	0.00	0.029
826	3.93	3.93	111	-3	1.54	72.	88	-1	0.009	66	0.	0.95	0.007
827	3.93	3.93	60	-7	0.58	2.	0.	-6	0.000	1	-5	0.13	0.000

## ARMATURA SUPERIORE VERTICALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
820	3.93	3.93	212	-60	0.64	-40.	166	-45	0.000	67	-16	0.10	0.000
821	3.93	3.93	361	-71	0.16	-55.	285	-53	0.000	188	-46	0.35	0.000
822	3.93	3.93	522	-83	0.37	-70.	411	-62	0.000	326	-58	0.06	0.000
823	3.93	3.93	683	-87	6.67	11.	548	-66	0.000	412	-55	4.06	0.000
824	3.93	3.93	9	-40	1.15	-18.	27	-30	0.000	24	-17	0.38	0.000
825	3.93	3.93	0.	-50	1.51	-23.	55	-36	0.000	48	-31	0.68	0.000
826	3.93	3.93	0.	-64	1.92	-29.	58	-44	0.000	38	-42	1.06	0.000
827	3.93	3.93	0.	-67	2.01	-30.	5	-43	0.000	9	-41	1.20	0.000

## 2.5.3 SETTO 2

MACROGUSCIO setto\_2

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAY PRINC

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm<sup>2</sup>  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.96 per mille  
 deformazione ultima cls : 3.5 per mille  
 rapporto rottura/snervamento (k): 1  
 resistenza cilindrica cls (fck): 249 daN/cm<sup>2</sup>  
 coefficiente sicurezza cls : 1.5  
 coefficiente riduttivo (alfa): 0.85  
 copri ferro inferiore (asse armatura): 4 cm  
 copri ferro superiore (asse armatura): 4 cm  
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm  
 Af = area disposta al lembo teso, in cm<sup>2</sup> al metro  
 Afc = area disposta al lembo compresso, in cm<sup>2</sup> al metro

Mom = momento flettente [daNm/cm]  
 Nor = sforzo normale [daN]  
 epsC = deformazione cls [per mille]  
 epsF = deformazione acciaio [per mille]

<-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.96 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
918	25	3.93	3.93	148.	37.	0.00	0.33	3.93	3.93	199.	39.	0.00	0.38	19
919	25	3.93	3.93	135.	42.	0.00	0.36	3.93	3.93	382.	21.	0.00	0.39	19
920	25	3.93	3.93	127.	42.	0.00	0.35	3.93	3.93	515.	13.	0.03	0.42	20
921	25	3.93	3.93	120.	35.	0.00	0.32	3.93	3.93	454.	-5.	0.08	0.29	16
922	25	3.93	3.93	219.	34.	0.00	0.36	3.93	3.93	201.	37.	0.00	0.37	18
923	25	3.93	3.93	170.	44.	0.00	0.39	3.93	3.93	242.	32.	0.00	0.36	20
924	25	3.93	3.93	101.	50.	0.00	0.38	3.93	3.93	301.	21.	0.00	0.33	19
925	25	3.93	3.93	71.	44.	0.00	0.34	3.93	3.93	251.	3.	0.03	0.18	17
926	25	3.93	3.93	288.	29.	0.00	0.37	3.93	3.93	162.	39.	0.00	0.36	18
927	25	3.93	3.93	156.	45.	0.00	0.39	3.93	3.93	170.	27.	0.00	0.28	19
928	25	3.93	3.93	64.	53.	0.00	0.38	3.93	3.93	137.	4.	0.00	0.11	19
929	25	3.93	3.93	0.	61.	0.00	0.39	3.93	3.93	218.	6.	0.00	0.18	20
930	25	3.93	3.93	393.	22.	0.00	0.40	3.93	3.93	121.	11.	0.00	0.15	19
931	25	3.93	3.93	163.	34.	0.00	0.32	3.93	3.93	131.	2.	0.01	0.10	16
932	25	3.93	3.93	0.	54.	0.00	0.34	3.93	3.93	262.	11.	0.00	0.25	17
933	25	3.93	3.93	0.	64.	0.00	0.41	3.93	3.93	289.	13.	0.00	0.27	21
934	25	3.93	3.93	458.	17.	0.00	0.41	3.93	3.93	179.	8.	0.00	0.17	20
935	25	3.93	3.93	161.	29.	0.00	0.29	3.93	3.93	113.	7.	0.01	0.12	14
936	25	3.93	3.93	0.	48.	0.00	0.30	3.93	3.93	157.	1.	0.02	0.11	16
937	25	3.93	3.93	0.	61.	0.00	0.39	3.93	3.93	180.	1.	0.03	0.13	20

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
918	25	3.93	3.93	117.	35.	0.00	0.30	3.93	3.93	72.	43.	0.00	0.32	16
919	25	3.93	3.93	113.	40.	0.00	0.33	3.93	3.93	215.	21.	0.00	0.28	16
920	25	3.93	3.93	91.	42.	0.00	0.33	3.93	3.93	450.	13.	0.02	0.38	18
921	25	3.93	3.93	129.	35.	0.00	0.31	3.93	3.93	514.	-5.	0.09	0.33	16
922	25	3.93	3.93	152.	35.	0.00	0.32	3.93	3.93	152.	39.	0.00	0.35	17
923	25	3.93	3.93	193.	45.	0.00	0.41	3.93	3.93	156.	30.	0.00	0.30	21
924	25	3.93	3.93	208.	51.	0.00	0.46	3.93	3.93	153.	21.	0.00	0.24	23
925	25	3.93	3.93	186.	51.	0.00	0.45	3.93	3.93	333.	3.	0.05	0.23	22
926	25	3.93	3.93	216.	29.	0.00	0.33	3.93	3.93	208.	35.	0.00	0.36	18
927	25	3.93	3.93	247.	44.	0.00	0.44	3.93	3.93	235.	25.	0.00	0.31	22
928	25	3.93	3.93	267.	53.	0.00	0.51	3.93	3.93	245.	4.	0.02	0.19	26
929	25	3.93	3.93	274.	61.	0.00	0.57	3.93	3.93	280.	6.	0.02	0.22	28
930	25	3.93	3.93	441.	22.	0.00	0.43	3.93	3.93	163.	12.	0.01	0.19	21
931	25	3.93	3.93	270.	36.	0.00	0.42	3.93	3.93	223.	7.	0.02	0.19	21
932	25	3.93	3.93	282.	54.	0.00	0.53	3.93	3.93	237.	13.	0.00	0.24	26
933	25	3.93	3.93	284.	64.	0.00	0.59	3.93	3.93	266.	13.	0.00	0.26	30
934	25	3.93	3.93	537.	17.	0.00	0.46	3.93	3.93	210.	7.	0.00	0.18	22
935	25	3.93	3.93	276.	30.	0.00	0.37	3.93	3.93	185.	2.	0.02	0.13	18
936	25	3.93	3.93	326.	45.	0.00	0.51	3.93	3.93	182.	1.	0.03	0.13	25
937	25	3.93	3.93	273.	61.	0.00	0.57	3.93	3.93	156.	1.	0.02	0.11	28

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd > Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vr<sub>cd</sub> = compressione cls d'anima  
 vr<sub>sd</sub> = trazione armatura trasversale  
 vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	vr <sub>cd</sub> [daN]	vr <sub>sd</sub> [daN]	alfas	vr <sub>d,s</sub> [daN]
-5.0	9214	28.95	28.95	21234	261183	90613	-	-
35.0	9214	28.95	28.95	21023	261051	90613	-	-
75.0	9214	28.95	28.95	21023	261051	90613	-	-
115.0	9214	28.95	28.95	19545	260640	90613	-	-
155.0	9214	28.95	28.95	19545	260640	90613	-	-
195.0	9214	28.95	28.95	19545	260640	90613	-	-
235.0	9214	28.95	28.95	15742	260450	90613	-	-
275.0	9214	28.95	28.95	15742	260450	90613	-	-
315.0	9214	28.95	28.95	10617	260354	90613	-	-
355.0	9214	28.95	28.95	10617	260354	90613	-	-
392.5	9214	28.95	28.95	10617	260199	90613	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)  
 Afc = area effettiva compressa (cm2 al metro)  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 sigC = tensione calcestruzzo [daN/cm2]  
       valore max per combinazione rara = 149.4 daN/cm2  
       quasi permanente = 112 daN/cm2  
 sigF = tensione acciaio [daN/cm2]  
       valore max per combinazione rara = 3600 daN/cm2  
 wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
 wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

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## ARMATURA INFERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
918	3.93	3.93	11	-1	0.20	4.	16	-1	0.001	0.	-3	0.10	0.000
919	3.93	3.93	46	-3	0.92	23.	23	0.	0.003	19	-3	0.31	0.000
920	3.93	3.93	12	-2	0.20	0.	17	0.	0.001	11	-2	0.18	0.000
921	3.93	3.93	0.	-2	0.09	-1.	9	-3	0.000	8	-2	0.16	0.000
922	3.93	3.93	0.	-1	0.04	-1.	0.	-1	0.000	0.	-1	0.05	0.000
923	3.93	3.93	62	0.	1.41	76.	18	-1	0.001	9	-2	0.15	0.000
924	3.93	3.93	58	0.	1.33	76.	23	0.	0.002	13	-1	0.26	0.000
925	3.93	3.93	27	-2	0.51	9.	11	-1	0.000	9	-1	0.19	0.000
926	3.93	3.93	0.	-1	0.03	-1.	0.	-1	0.000	0.	0.	0.01	0.000
927	3.93	3.93	59	-2	1.32	53.	7	0.	0.000	0.	0.	0.01	0.000
928	3.93	3.93	72	0.	1.64	91.	14	0.	0.002	10	0.	0.22	0.002
929	3.93	3.93	50	-1	1.12	53.	9	0.	0.003	9	1	0.16	0.004
930	3.93	3.93	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.00	0.001
931	3.93	3.93	55	-1	1.23	53.	0.	0.	0.000	0.	1	0.00	0.002
932	3.93	3.93	75	-1	1.71	86.	6	2	0.005	7	1	0.00	0.005
933	3.93	3.93	67	-3	1.46	55.	16	1	0.006	12	2	0.04	0.008
934	3.93	3.93	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.001
935	3.93	3.93	35	0.	0.79	39.	0.	0.	0.001	0.	1	0.00	0.004
936	3.93	3.93	76	-2	1.72	77.	9	2	0.006	6	2	0.00	0.007
937	3.93	3.93	71	-4	1.47	41.	27	1	0.006	16	3	0.00	0.011

## ARMATURA INFERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
918	3.93	3.93	97	-9	1.74	24.	56	-20	0.000	32	-22	1.15	0.000
919	3.93	3.93	140	-10	2.79	67.	67	-18	0.000	45	-19	1.11	0.000
920	3.93	3.93	180	-14	3.44	69.	65	-20	0.000	37	-22	1.17	0.000
921	3.93	3.93	198	-18	3.60	55.	56	-22	0.000	23	-24	1.13	0.000
922	3.93	3.93	23	-11	0.62	-4.	0.	-16	0.000	0.	-17	0.64	0.000
923	3.93	3.93	70	-6	1.30	23.	9	-15	0.000	10	-16	0.69	0.000
924	3.93	3.93	82	-9	1.41	15.	21	-16	0.000	19	-17	0.80	0.000
925	3.93	3.93	88	-13	1.39	4.	26	-17	0.000	18	-18	0.87	0.000
926	3.93	3.93	41	-3	0.78	15.	0.	-10	0.000	0.	-11	0.42	0.000
927	3.93	3.93	29	-3	0.46	3.	0.	-10	0.000	1	-11	0.44	0.000
928	3.93	3.93	9	-5	0.27	-2.	0.	-11	0.000	7	-12	0.52	0.000
929	3.93	3.93	0.	-7	0.26	-4.	0.	-12	0.000	7	-13	0.54	0.000
930	3.93	3.93	36	-1	0.82	37.	0.	-6	0.000	0.	-6	0.24	0.000
931	3.93	3.93	19	-1	0.40	14.	0.	-6	0.000	1	-6	0.25	0.000
932	3.93	3.93	0.	-2	0.06	-1.	0.	-6	0.000	8	-7	0.33	0.000
933	3.93	3.93	0.	-2	0.08	-1.	0.	-6	0.000	8	-7	0.35	0.000
934	3.93	3.93	37	1	0.84	58.	0.	-2	0.000	0.	-2	0.08	0.000
935	3.93	3.93	24	1	0.54	42.	0.	-2	0.000	4	-2	0.11	0.000
936	3.93	3.93	0.	1	0.00	9.	0.	-1	0.000	12	-2	0.19	0.000
937	3.93	3.93	0.	0.	0.00	6.	0.	-2	0.000	14	-2	0.22	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
918	3.93	3.93	47	-1	1.07	50.	11	-1	0.000	14	-3	0.03	0.000
919	3.93	3.93	28	-3	0.46	4.	10	0.	0.001	7	-3	0.04	0.000
920	3.93	3.93	40	-2	0.82	23.	9	0.	0.001	10	-2	0.01	0.000
921	3.93	3.93	31	-2	0.59	12.	10	-3	0.000	7	-2	0.02	0.000
922	3.93	3.93	100	-1	2.27	115.	46	-1	0.004	30	-1	0.66	0.002
923	3.93	3.93	39	0.	0.89	47.	21	-1	0.001	16	-2	0.26	0.000
924	3.93	3.93	30	0.	0.68	38.	18	0.	0.002	16	-1	0.32	0.001
925	3.93	3.93	38	-2	0.78	22.	21	-1	0.001	18	-1	0.40	0.001
926	3.93	3.93	122	-1	2.79	148.	56	-1	0.006	35	0.	0.80	0.004
927	3.93	3.93	37	-2	0.77	23.	28	0.	0.003	22	0.	0.50	0.002
928	3.93	3.93	21	0.	0.48	24.	18	0.	0.002	19	0.	0.43	0.003
929	3.93	3.93	25	-1	0.54	21.	22	0.	0.004	20	1	0.44	0.005
930	3.93	3.93	135	-1	3.08	167.	61	0.	0.007	39	0.	0.90	0.005
931	3.93	3.93	37	-1	0.81	30.	34	0.	0.004	28	1	0.63	0.006
932	3.93	3.93	16	-1	0.33	9.	20	2	0.007	22	1	0.47	0.007
933	3.93	3.93	16	-3	0.25	0.	20	1	0.006	20	2	0.34	0.008
934	3.93	3.93	146	0.	3.34	192.	65	0.	0.008	43	0.	0.98	0.006
935	3.93	3.93	53	0.	1.22	63.	39	0.	0.006	32	1	0.72	0.008
936	3.93	3.93	12	-2	0.19	0.	24	2	0.008	25	2	0.47	0.009
937	3.93	3.93	9	-4	0.08	-3.	13	1	0.005	16	3	0.00	0.011

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
918	3.93	3.93	0.	-9	0.35	-5.	0.	-20	0.000	0.	-22	0.86	0.000
919	3.93	3.93	0.	-10	0.36	-5.	0.	-18	0.000	0.	-19	0.71	0.000
920	3.93	3.93	0.	-14	0.53	-8.	0.	-20	0.000	0.	-22	0.84	0.000

921	3.93	3.93	0.	-18	0.68	-10.	0.	-22	0.000	0.	-24	0.92	0.000
922	3.93	3.93	32	-11	0.13	-9.	10	-16	0.000	11	-17	0.53	0.000
923	3.93	3.93	13	-6	0.11	-5.	4	-15	0.000	11	-16	0.50	0.000
924	3.93	3.93	0.	-9	0.33	-5.	0.	-16	0.000	11	-17	0.54	0.000
925	3.93	3.93	0.	-13	0.50	-7.	0.	-17	0.000	11	-18	0.60	0.000
926	3.93	3.93	57	-3	1.18	33.	9	-10	0.000	14	-11	0.29	0.000
927	3.93	3.93	67	-3	1.40	43.	12	-10	0.000	17	-11	0.28	0.000
928	3.93	3.93	68	-5	1.33	29.	14	-11	0.000	20	-12	0.28	0.000
929	3.93	3.93	71	-7	1.25	17.	20	-12	0.000	21	-13	0.30	0.000
930	3.93	3.93	37	-1	0.84	38.	14	-6	0.000	15	-6	0.10	0.000
931	3.93	3.93	62	-1	1.40	69.	17	-6	0.000	18	-6	0.08	0.000
932	3.93	3.93	63	-2	1.42	62.	19	-6	0.000	22	-7	0.07	0.000
933	3.93	3.93	69	-2	1.55	65.	25	-6	0.000	24	-7	0.06	0.000
934	3.93	3.93	20	1	0.46	36.	13	-2	0.000	14	-2	0.23	0.000
935	3.93	3.93	44	1	1.00	68.	14	-2	0.000	16	-2	0.26	0.000
936	3.93	3.93	43	1	0.98	66.	12	-1	0.000	18	-2	0.30	0.000
937	3.93	3.93	38	0.	0.87	56.	13	-2	0.000	17	-2	0.26	0.000

## 2.5.4 SETTO 3

MACROGUSCIO setto\_3

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.86	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento	(k): 1	
resistenza cilindrica cls	(fck): 249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo	(alfa): 0.85	
copri ferro inferiore (asse armatura):	4	cm
copri ferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

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L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
812	32	3.93	3.93	0.	13.	0.00	0.08	3.93	3.93	0.	-41.	0.01	-0.01	4
813	32	3.93	3.93	5.	5.	0.00	0.03	3.93	3.93	0.	-57.	0.01	-0.01	2
814	32	3.93	3.93	0.	-5.	0.00	0.00	3.93	3.93	0.	-58.	0.01	-0.01	1
815	32	3.93	3.93	119.	-5.	0.01	0.05	3.93	3.93	0.	-53.	0.01	-0.01	3
816	32	3.93	3.93	35.	11.	0.00	0.08	3.93	3.93	195.	-35.	0.03	0.07	4
817	32	3.93	3.93	50.	8.	0.00	0.07	3.93	3.93	0.	-54.	0.01	-0.01	4
818	32	3.93	3.93	23.	2.	0.00	0.03	3.93	3.93	0.	-54.	0.01	-0.01	1
819	32	3.93	3.93	147.	-5.	0.02	0.07	3.93	3.93	0.	-47.	0.01	-0.01	3

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
812	32	3.93	3.93	98.	12.	0.00	0.12	3.93	3.93	755.	-41.	0.08	0.30	16
813	32	3.93	3.93	189.	4.	0.00	0.11	3.93	3.93	897.	-57.	0.10	0.34	18
814	32	3.93	3.93	256.	-5.	0.03	0.12	3.93	3.93	995.	-58.	0.11	0.38	20
815	32	3.93	3.93	160.	-4.	0.02	0.07	3.93	3.93	1075.	-53.	0.12	0.41	22
816	32	3.93	3.93	180.	10.	0.00	0.14	3.93	3.93	287.	-35.	0.04	0.11	7
817	32	3.93	3.93	226.	7.	0.00	0.14	3.93	3.93	0.	-54.	0.01	-0.01	7
818	32	3.93	3.93	184.	-1.	0.02	0.08	3.93	3.93	0.	-54.	0.01	-0.01	4
819	32	3.93	3.93	117.	0.	0.01	0.05	3.93	3.93	250.	-44.	0.03	0.09	5

L'ARMATURA È OVUNQUE &gt; DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd &gt; Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vr<sub>cd</sub> = compressione cls d'anima  
vr<sub>sd</sub> = trazione armatura trasversale  
vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	vr <sub>cd</sub> [daN]	vr <sub>sd</sub> [daN]	alfas	vr <sub>d,s</sub> [daN]
-180.0	11792	28.94	28.94	15513	337265	90603	-	-

-140.0	11792	28.94	28.94	15691	336802	90603	-	-
-100.0	11792	28.94	28.94	15691	336802	90603	-	-
-60.0	11792	28.94	28.94	15870	336288	90603	-	-
-32.5	11792	28.94	28.94	15870	336288	90603	-	-

**VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)**

CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)

Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm2]

valore max per combinazione rara = 149.4 daN/cm2  
 valore max per combinazione permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]

valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione permanente (mm) - valore max = 0.3 mm

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**ARMATURA INFERIORE ORIZZONTALE**

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
812	3.93	3.93	0.	-8	0.25	-4.	0.	-6	0.000	0.	-6	0.17	0.000
813	3.93	3.93	0.	-4	0.12	-2.	0.	0.	0.000	0.	-6	0.19	0.000
814	3.93	3.93	0.	-7	0.21	-3.	0.	-3	0.000	0.	-1	0.04	0.000
815	3.93	3.93	0.	-10	0.29	-4.	0.	-6	0.000	0.	-6	0.17	0.000
816	3.93	3.93	0.	-7	0.21	-3.	0.	-5	0.000	63	-5	0.65	0.000
817	3.93	3.93	0.	-1	0.04	-1.	0.	-6	0.000	0.	-5	0.15	0.000
818	3.93	3.93	0.	-4	0.13	-2.	0.	-2	0.000	0.	0.	0.00	0.000
819	3.93	3.93	0.	-6	0.18	-3.	0.	-3	0.000	35	-3	0.38	0.000

**ARMATURA INFERIORE VERTICALE**

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
812	3.93	3.93	0.	-76	2.28	-34.	0.	-59	0.000	0.	-51	1.54	0.000
813	3.93	3.93	0.	-80	2.42	-36.	0.	-63	0.000	0.	-59	1.77	0.000
814	3.93	3.93	0.	-86	2.60	-39.	0.	-68	0.000	0.	-62	1.87	0.000
815	3.93	3.93	0.	-80	2.42	-36.	0.	-69	0.000	0.	-60	1.81	0.000
816	3.93	3.93	165	-64	2.85	-19.	44	-49	0.000	31	-43	1.48	0.000
817	3.93	3.93	128	-71	2.83	-24.	0.	-55	0.000	0.	-49	1.49	0.000
818	3.93	3.93	144	-73	2.99	-24.	0.	-56	0.000	0.	-52	1.57	0.000
819	3.93	3.93	205	-68	3.17	-18.	0.	-49	0.000	0.	-48	1.44	0.000

**ARMATURA SUPERIORE ORIZZONTALE**

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
812	3.93	3.93	119	-8	1.33	22.	92	-6	0.002	25	-6	0.04	0.000
813	3.93	3.93	148	-4	2.07	95.	114	0.	0.012	117	-6	1.45	0.004
814	3.93	3.93	173	-7	2.29	81.	139	-3	0.010	127	-1	1.81	0.012
815	3.93	3.93	127	-10	1.38	20.	99	-6	0.002	40	-6	0.40	0.000
816	3.93	3.93	140	-7	1.79	54.	105	-5	0.004	48	-5	0.47	0.000
817	3.93	3.93	142	-1	2.03	122.	109	-6	0.003	103	-5	1.32	0.004
818	3.93	3.93	120	-4	1.62	64.	92	-2	0.008	63	0.	0.90	0.007
819	3.93	3.93	83	-6	0.94	16.	56	-3	0.002	0.	-3	0.08	0.000

**ARMATURA SUPERIORE VERTICALE**

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
812	3.93	3.93	838	-76	8.48	75.	687	-59	0.005	492	-51	4.81	0.001
813	3.93	3.93	834	-80	8.28	59.	673	-63	0.003	523	-59	5.07	0.001
814	3.93	3.93	839	-86	8.20	45.	686	-68	0.002	560	-62	5.44	0.001
815	3.93	3.93	934	-80	9.61	99.	771	-69	0.005	547	-60	5.31	0.001
816	3.93	3.93	0.	-64	1.94	-29.	89	-49	0.000	97	-43	0.77	0.000
817	3.93	3.93	0.	-71	2.13	-32.	144	-55	0.000	122	-49	0.82	0.000
818	3.93	3.93	0.	-73	2.20	-33.	130	-56	0.000	82	-52	1.11	0.000
819	3.93	3.93	0.	-68	2.04	-31.	46	-49	0.000	47	-48	1.18	0.000

**2.5.5 SETTO 4**

MACROGUSCIO setto\_4

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTOY
5	SLU con SISMAX PRINC

## 6 SLU con SISMAY PRINC

## DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.86 per mille  
 deformazione ultima cls : 3.5 per mille  
 rapporto rottura/snervamento (k): 1  
 resistenza cilindrica cls (fck): 249 daN/cm2  
 coefficiente sicurezza cls : 1.5  
 coefficiente riduttivo (alfa): 0.85  
 copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm  
 moltiplicatore sollecitazioni : 1

## LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm  
 Af = area disposta al lembo teso, in cm2 al metro  
 Afc = area disposta al lembo compresso, in cm2 al metro  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 epsC = deformazione cls [per mille]  
 epsF = deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
938	25	3.93	3.93	10.	10.	0.00	0.07	3.93	3.93	515.	-17.	0.09	0.30	15
939	25	3.93	3.93	67.	23.	0.00	0.18	3.93	3.93	682.	-5.	0.11	0.42	21
940	25	3.93	3.93	33.	14.	0.00	0.10	3.93	3.93	699.	-7.	0.12	0.42	22
941	25	3.93	3.93	61.	12.	0.00	0.11	3.93	3.93	524.	-16.	0.09	0.31	16
942	25	3.93	3.93	0.	40.	0.00	0.24	3.93	3.93	252.	-9.	0.04	0.15	13
943	25	3.93	3.93	51.	29.	0.00	0.24	3.93	3.93	306.	0.	0.05	0.19	13
944	25	3.93	3.93	35.	39.	0.00	0.27	3.93	3.93	337.	2.	0.05	0.22	14
945	25	3.93	3.93	64.	39.	0.00	0.28	3.93	3.93	261.	-7.	0.04	0.16	15
946	25	3.93	3.93	0.	55.	0.00	0.34	3.93	3.93	169.	0.	0.03	0.11	18
947	25	3.93	3.93	0.	56.	0.00	0.34	3.93	3.93	115.	3.	0.01	0.09	18
948	25	3.93	3.93	0.	59.	0.00	0.36	3.93	3.93	53.	-12.	0.01	0.05	19
949	25	3.93	3.93	27.	63.	0.00	0.40	3.93	3.93	60.	-3.	0.01	0.04	21
950	25	3.93	3.93	0.	65.	0.00	0.39	3.93	3.93	283.	2.	0.04	0.19	21
951	25	3.93	3.93	0.	69.	0.00	0.42	3.93	3.93	218.	-1.	0.04	0.13	23
952	25	3.93	3.93	0.	74.	0.00	0.45	3.93	3.93	88.	-3.	0.02	0.05	24
953	25	3.93	3.93	82.	79.	0.00	0.53	3.93	3.93	142.	-3.	0.02	0.09	28
954	25	3.93	3.93	0.	71.	0.00	0.43	3.93	3.93	169.	-1.	0.03	0.10	23
955	25	3.93	3.93	0.	79.	0.00	0.48	3.93	3.93	94.	-2.	0.02	0.06	26
956	25	3.93	3.93	0.	87.	0.00	0.53	3.93	3.93	0.	5.	0.00	0.03	28
957	25	3.93	3.93	149.	92.	0.00	0.65	3.93	3.93	19.	1.	0.00	0.03	35

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
938	25	3.93	3.93	130.	10.	0.00	0.14	3.93	3.93	699.	-17.	0.12	0.41	21
939	25	3.93	3.93	106.	19.	0.00	0.19	3.93	3.93	652.	-5.	0.11	0.40	20
940	25	3.93	3.93	55.	14.	0.00	0.12	3.93	3.93	631.	-7.	0.10	0.38	20
941	25	3.93	3.93	105.	7.	0.00	0.12	3.93	3.93	662.	-16.	0.11	0.39	20
942	25	3.93	3.93	102.	40.	0.00	0.31	3.93	3.93	340.	-9.	0.06	0.20	16
943	25	3.93	3.93	50.	39.	0.00	0.27	3.93	3.93	266.	-2.	0.04	0.17	14
944	25	3.93	3.93	48.	42.	0.00	0.29	3.93	3.93	302.	2.	0.04	0.20	15
945	25	3.93	3.93	33.	39.	0.00	0.26	3.93	3.93	317.	-7.	0.05	0.19	14
946	25	3.93	3.93	239.	55.	0.00	0.49	3.93	3.93	222.	0.	0.03	0.14	25
947	25	3.93	3.93	141.	56.	0.00	0.43	3.93	3.93	103.	-13.	0.02	0.09	23
948	25	3.93	3.93	126.	59.	0.00	0.44	3.93	3.93	100.	4.	0.01	0.09	23
949	25	3.93	3.93	68.	63.	0.00	0.43	3.93	3.93	112.	-2.	0.02	0.07	23
950	25	3.93	3.93	278.	65.	0.00	0.57	3.93	3.93	267.	2.	0.04	0.18	30
951	25	3.93	3.93	215.	69.	0.00	0.56	3.93	3.93	209.	-1.	0.03	0.13	29
952	25	3.93	3.93	172.	74.	0.00	0.56	3.93	3.93	167.	-1.	0.03	0.10	30
953	25	3.93	3.93	82.	74.	0.00	0.51	3.93	3.93	189.	-3.	0.03	0.12	27
954	25	3.93	3.93	278.	71.	0.00	0.61	3.93	3.93	155.	1.	0.02	0.10	32
955	25	3.93	3.93	263.	79.	0.00	0.65	3.93	3.93	129.	-2.	0.02	0.09	34
956	25	3.93	3.93	203.	87.	0.00	0.66	3.93	3.93	88.	5.	0.00	0.08	35
957	25	3.93	3.93	78.	88.	0.00	0.58	3.93	3.93	99.	4.	0.01	0.08	31

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd > Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vrzd = compressione cls d'anima  
 Vrsd = trazione armatura trasversale  
 Vrd,s = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vrzd [daN]	Vrsd [daN]	alfas	Vrd,s [daN]
-5.0	9213	28.94	28.94	13100	261169	90603	-	-
35.0	9213	28.94	28.94	12801	261077	90603	-	-
75.0	9213	28.94	28.94	12801	261077	90603	-	-
115.0	9213	28.94	28.94	11774	260947	90603	-	-
155.0	9213	28.94	28.94	11774	260947	90603	-	-
195.0	9213	28.94	28.94	11774	260947	90603	-	-
235.0	9213	28.94	28.94	9727	260656	90603	-	-

275.0	9213	28.94	28.94	9727	260656	90603	-	-
315.0	9213	28.94	28.94	6550	260267	90603	-	-
355.0	9213	28.94	28.94	6550	260267	90603	-	-
392.5	9213	28.94	28.94	6550	260142	90603	-	-

**VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)**

CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)

Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm2]

valore max per combinazione rara = 149.4 daN/cm2  
 valore max per combinazione permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]

valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione permanente (mm) - valore max = 0.3 mm

&lt;-

**ARMATURA INFERIORE ORIZZONTALE**

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
938	3.93	3.93	0.	-2	0.07	-1.	18	-2	0.000	16	-2	0.26	0.000
939	3.93	3.93	0.	-2	0.06	-1.	19	-2	0.000	13	-2	0.21	0.000
940	3.93	3.93	24	-2	0.45	9.	19	-1	0.001	17	-1	0.33	0.001
941	3.93	3.93	0.	-2	0.06	-1.	3	-2	0.000	9	-2	0.15	0.000
942	3.93	3.93	26	-2	0.46	6.	12	-1	0.000	11	-1	0.22	0.000
943	3.93	3.93	29	-1	0.65	30.	21	-1	0.001	15	-1	0.33	0.001
944	3.93	3.93	34	-1	0.76	29.	25	0.	0.003	22	0.	0.50	0.002
945	3.93	3.93	0.	-2	0.06	-1.	5	-1	0.000	12	0.	0.26	0.001
946	3.93	3.93	47	-2	1.05	41.	13	0.	0.002	10	1	0.19	0.004
947	3.93	3.93	57	-2	1.25	46.	26	0.	0.002	17	1	0.36	0.004
948	3.93	3.93	48	-3	0.97	26.	23	0.	0.003	20	1	0.44	0.005
949	3.93	3.93	0.	-2	0.09	-1.	6	0.	0.000	12	1	0.25	0.004
950	3.93	3.93	59	-4	1.19	31.	15	1	0.005	11	2	0.00	0.008
951	3.93	3.93	68	-5	1.32	29.	27	0.	0.004	16	2	0.18	0.009
952	3.93	3.93	57	-6	0.97	10.	26	0.	0.004	20	2	0.30	0.009
953	3.93	3.93	0.	-1	0.02	0.	15	1	0.003	17	2	0.19	0.009
954	3.93	3.93	67	-6	1.25	21.	26	1	0.006	15	3	0.00	0.012
955	3.93	3.93	74	-8	1.26	13.	28	1	0.006	16	4	0.00	0.012
956	3.93	3.93	62	-8	0.98	4.	27	1	0.005	19	4	0.00	0.013
957	3.93	3.93	13	-4	0.27	-1.	21	2	0.007	21	3	0.14	0.012

**ARMATURA INFERIORE VERTICALE**

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
938	3.93	3.93	235	-25	3.99	40.	77	-27	0.000	27	-27	1.29	0.000
939	3.93	3.93	257	-24	4.62	67.	88	-26	0.000	37	-26	1.33	0.000
940	3.93	3.93	256	-24	4.57	64.	85	-26	0.000	34	-25	1.26	0.000
941	3.93	3.93	235	-24	4.05	45.	64	-25	0.000	15	-24	1.06	0.000
942	3.93	3.93	85	-20	1.53	-4.	30	-21	0.000	18	-21	0.95	0.000
943	3.93	3.93	91	-17	1.46	-1.	33	-20	0.000	16	-20	0.93	0.000
944	3.93	3.93	101	-16	1.61	2.	35	-20	0.000	16	-19	0.88	0.000
945	3.93	3.93	104	-18	1.67	1.	33	-19	0.000	13	-19	0.84	0.000
946	3.93	3.93	0.	-12	0.45	-7.	0.	-14	0.000	7	-14	0.61	0.000
947	3.93	3.93	0.	-12	0.47	-7.	5	-14	0.000	7	-15	0.62	0.000
948	3.93	3.93	0.	-12	0.44	-7.	3	-14	0.000	6	-14	0.59	0.000
949	3.93	3.93	0.	-12	0.47	-7.	0.	-14	0.000	4	-13	0.54	0.000
950	3.93	3.93	0.	-4	0.15	-2.	0.	-7	0.000	4	-8	0.34	0.000
951	3.93	3.93	0.	-6	0.24	-4.	0.	-8	0.000	5	-9	0.37	0.000
952	3.93	3.93	0.	-7	0.28	-4.	3	-8	0.000	7	-8	0.37	0.000
953	3.93	3.93	0.	-7	0.28	-4.	0.	-8	0.000	5	-8	0.34	0.000
954	3.93	3.93	0.	0.	0.00	3.	0.	-2	0.000	11	-2	0.19	0.000
955	3.93	3.93	0.	-1	0.03	0.	1	-2	0.000	9	-3	0.19	0.000
956	3.93	3.93	0.	-1	0.05	-1.	6	-3	0.000	10	-3	0.19	0.000
957	3.93	3.93	0.	-1	0.04	-1.	10	-3	0.000	10	-2	0.19	0.000

**ARMATURA SUPERIORE ORIZZONTALE**

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
938	3.93	3.93	47	-2	1.02	38.	24	-2	0.000	23	-2	0.42	0.000
939	3.93	3.93	38	-2	0.83	29.	0.	-2	0.000	4	-2	0.02	0.000
940	3.93	3.93	0.	-2	0.07	-1.	0.	-1	0.000	0.	-1	0.05	0.000
941	3.93	3.93	12	-2	0.20	1.	4	-2	0.000	0.	-2	0.07	0.000
942	3.93	3.93	37	-2	0.74	18.	22	-1	0.001	19	-1	0.42	0.001
943	3.93	3.93	0.	-1	0.02	0.	0.	-1	0.000	3	-1	0.00	0.000
944	3.93	3.93	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
945	3.93	3.93	18	-2	0.34	6.	14	-1	0.001	9	0.	0.20	0.001
946	3.93	3.93	14	-2	0.23	2.	20	0.	0.002	15	1	0.33	0.004
947	3.93	3.93	0.	-2	0.09	-1.	0.	0.	0.000	4	1	0.00	0.003

948	3.93	3.93	0.	-3	0.11	-2.	0.	0.000	2	1	0.00	0.003
949	3.93	3.93	23	-2	0.41	5.	13	0.001	9	1	0.16	0.003
950	3.93	3.93	0.	-4	0.14	-2.	9	1 0.004	11	2	0.00	0.008
951	3.93	3.93	0.	-5	0.19	-3.	0.	0.001	4	2	0.00	0.007
952	3.93	3.93	0.	-6	0.23	-3.	0.	0.001	4	2	0.00	0.007
953	3.93	3.93	25	-1	0.56	25.	7	1 0.003	7	2	0.00	0.007
954	3.93	3.93	0.	-6	0.22	-3.	4	1 0.004	6	3	0.00	0.010
955	3.93	3.93	0.	-8	0.30	-4.	0.	1 0.003	5	4	0.00	0.011
956	3.93	3.93	0.	-8	0.32	-5.	0.	1 0.002	5	4	0.00	0.010
957	3.93	3.93	5	-4	0.10	-3.	0.	2 0.005	2	3	0.00	0.009

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkF
938	3.93	3.93	0.	-25	0.96	-14.	0.	-27	0.000	8	-27	0.97	0.000
939	3.93	3.93	0.	-24	0.90	-14.	0.	-26	0.000	0.	-26	1.00	0.000
940	3.93	3.93	0.	-24	0.92	-14.	0.	-26	0.000	0.	-25	0.95	0.000
941	3.93	3.93	0.	-24	0.92	-14.	0.	-25	0.000	0.	-24	0.93	0.000
942	3.93	3.93	0.	-20	0.76	-11.	0.	-21	0.000	8	-21	0.72	0.000
943	3.93	3.93	0.	-17	0.64	-10.	0.	-20	0.000	3	-20	0.75	0.000
944	3.93	3.93	0.	-16	0.63	-9.	0.	-20	0.000	4	-19	0.70	0.000
945	3.93	3.93	0.	-18	0.67	-10.	0.	-19	0.000	9	-19	0.64	0.000
946	3.93	3.93	54	-12	0.03	-12.	21	-14	0.000	19	-14	0.37	0.000
947	3.93	3.93	34	-12	0.16	-10.	15	-14	0.000	15	-15	0.42	0.000
948	3.93	3.93	32	-12	0.16	-10.	17	-14	0.000	15	-14	0.39	0.000
949	3.93	3.93	42	-12	0.10	-11.	22	-14	0.000	16	-13	0.36	0.000
950	3.93	3.93	75	-4	1.59	49.	21	-7	0.000	17	-8	0.15	0.000
951	3.93	3.93	54	-6	0.89	7.	19	-8	0.000	16	-9	0.19	0.000
952	3.93	3.93	43	-7	0.69	0.	22	-8	0.000	17	-8	0.16	0.000
953	3.93	3.93	59	-7	0.95	6.	27	-8	0.000	18	-8	0.13	0.000
954	3.93	3.93	40	0.	0.92	56.	10	-2	0.000	12	-2	0.01	0.000
955	3.93	3.93	35	-1	0.78	35.	13	-2	0.000	12	-3	0.00	0.000
956	3.93	3.93	24	-1	0.50	14.	13	-3	0.000	13	-3	0.01	0.000
957	3.93	3.93	28	-1	0.61	22.	10	-3	0.000	11	-2	0.00	0.000

## 2.5.6 SETTO 5

MACROGUSCIO setto\_5

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.86 per mille  
 deformazione ultima cls : 3.5 per mille  
 rapporto rottura/snervamento (k): 1  
 resistenza cilindrica cls (fck): 249 daN/cm2  
 coefficiente sicurezza cls : 1.5  
 coefficiente riduttivo (alfa): 0.85  
 copri ferro inferiore (asse armatura): 4 cm  
 copri ferro superiore (asse armatura): 4 cm  
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm  
 Af = area disposta al lembo teso, in cm2 al metro  
 Afc = area disposta al lembo compresso, in cm2 al metro  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 epsC = deformazione cls [per mille]  
 epsF = deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	Af	Afc	INFERIORE ORIZZONTALE				INFERIORE VERTICALE				COEF.	
				Mom	Nor	epsC	epsF	Mom	Nor	epsC	epsF	MAX	%
804	32	3.93	3.93	59.	-6.	0.01	0.05	3.93	3.93	0.	-52.	0.01	-0.01
805	32	3.93	3.93	0.	-3.	0.00	0.01	3.93	3.93	0.	-74.	0.02	-0.02
806	32	3.93	3.93	0.	-4.	0.00	0.00	3.93	3.93	0.	-74.	0.02	-0.02
807	32	3.93	3.93	76.	-3.	0.01	0.03	3.93	3.93	0.	-53.	0.01	-0.01
808	32	3.93	3.93	15.	9.	0.00	0.06	3.93	3.93	178.	-46.	0.03	0.06
809	32	3.93	3.93	5.	6.	0.00	0.04	3.93	3.93	228.	-60.	0.04	0.08
810	32	3.93	3.93	0.	4.	0.00	0.02	3.93	3.93	239.	-59.	0.04	0.08
811	32	3.93	3.93	109.	-2.	0.01	0.05	3.93	3.93	90.	-44.	0.02	0.03

GUSCI	spess	Af	Afc	SUPERIORE ORIZZONTALE				SUPERIORE VERTICALE				COEF.	
				Mom	Nor	epsC	epsF	Mom	Nor	epsC	epsF	MAX	%
804	32	3.93	3.93	158.	8.	0.01	0.12	3.93	3.93	1016.	-48.	0.11	0.40
805	32	3.93	3.93	171.	-3.	0.02	0.08	3.93	3.93	951.	-66.	0.11	0.35
806	32	3.93	3.93	218.	-4.	0.02	0.10	3.93	3.93	977.	-65.	0.11	0.36

807	32	3.93	3.93	167.	0.	0.02	0.08	3.93	3.93	1037.	-48.	0.11	0.41	21
808	32	3.93	3.93	175.	9.	0.00	0.14	3.93	3.93	344.	-46.	0.04	0.13	7
809	32	3.93	3.93	216.	6.	0.01	0.14	3.93	3.93	0.	-60.	0.01	-0.01	7
810	32	3.93	3.93	138.	4.	0.02	0.09	3.93	3.93	0.	-59.	0.01	-0.01	4
811	32	3.93	3.93	115.	0.	0.01	0.05	3.93	3.93	237.	-44.	0.03	0.09	5

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ( $R_d > E_d$ )

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vrcd = compressione cls d'anima  
vrsd = trazione armatura trasversale  
vrd,s = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm <sup>2</sup> ]	Af long. [cm <sup>2</sup> ]	Af trasv. [cm <sup>2</sup> ]	Taglio [daN]	vrcd [daN]	vrsd [daN]	alfas	vrd,s [daN]
-180.0	11797	28.95	28.95	11302	337251	90638	-	-
-140.0	11797	28.95	28.95	11922	336806	90638	-	-
-100.0	11797	28.95	28.95	11922	336806	90638	-	-
-60.0	11797	28.95	28.95	12543	336343	90638	-	-
-32.5	11797	28.95	28.95	12543	336343	90638	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm<sup>2</sup> al metro)  
Afc = area effettiva compressa (cm<sup>2</sup> al metro)  
Mom = momento flettente [daNcm/cm]  
Nor = sforzo normale [daN]  
sigC = tensione calcestruzzo [daN/cm<sup>2</sup>]

valore max per combinazione rara = 149.4 daN/cm<sup>2</sup>  
quasi permanente = 112 daN/cm<sup>2</sup>

sigF = tensione acciaio [daN/cm<sup>2</sup>]  
valore max per combinazione rara = 3600 daN/cm<sup>2</sup>

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

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#### ARMATURA INFERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA		COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF
804	3.93	3.93	0.	-2	0.07	-1.	0.	0.	0.000
805	3.93	3.93	0.	-6	0.18	-3.	0.	-4	0.000
806	3.93	3.93	0.	-8	0.24	-4.	0.	-6	0.000
807	3.93	3.93	0.	-10	0.29	-4.	0.	-8	0.000
808	3.93	3.93	0.	-1	0.02	0.	0.	-6	0.000
809	3.93	3.93	0.	-4	0.12	-2.	0.	-2	0.000
810	3.93	3.93	0.	-6	0.17	-3.	0.	-4	0.000
811	3.93	3.93	0.	-7	0.20	-3.	0.	-5	0.000

#### ARMATURA INFERIORE VERTICALE

GUSCI	COMBINAZIONE RARA		COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF
804	3.93	3.93	0.	-74	2.23	-34.	0.	-55	1.64 0.000
805	3.93	3.93	0.	-78	2.36	-35.	0.	-60	1.82 0.000
806	3.93	3.93	0.	-83	2.51	-38.	0.	-63	1.90 0.000
807	3.93	3.93	0.	-79	2.38	-36.	0.	-62	1.87 0.000
808	3.93	3.93	136	-62	2.61	-19.	9	-54	0.000
809	3.93	3.93	114	-68	2.68	-24.	0.	-56	0.000
810	3.93	3.93	128	-70	2.83	-24.	0.	-59	0.000
811	3.93	3.93	192	-66	3.04	-18.	0.	-55	0.000

#### ARMATURA SUPERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA		COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF
804	3.93	3.93	119	-2	1.68	88.	92	0.	0.010
805	3.93	3.93	147	-6	1.95	69.	114	-4	0.007
806	3.93	3.93	169	-8	2.18	69.	137	-6	0.006
807	3.93	3.93	123	-10	1.31	17.	97	-8	0.001
808	3.93	3.93	127	-1	1.82	116.	98	-6	0.003
809	3.93	3.93	127	-4	1.74	74.	100	-2	0.008
810	3.93	3.93	117	-6	1.50	45.	93	-4	0.004
811	3.93	3.93	88	-7	0.95	13.	61	-5	0.000

#### ARMATURA SUPERIORE VERTICALE

GUSCI	COMBINAZIONE RARA		COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF
804	3.93	3.93	847	-74	8.66	84.	703	-60	0.005
805	3.93	3.93	838	-78	8.38	66.	685	-64	0.003
806	3.93	3.93	840	-83	8.28	53.	692	-68	0.003

807	3.93	3.93	936	-79	9.71	106.	778	-68	0.005	527	-62	5.11	0.001
808	3.93	3.93	0.	-62	1.86	-28.	131	-54	0.000	100	-45	0.80	0.000
809	3.93	3.93	0.	-68	2.05	-31.	153	-56	0.000	130	-51	0.82	0.000
810	3.93	3.93	0.	-70	2.12	-32.	138	-59	0.000	90	-54	1.12	0.000
811	3.93	3.93	0.	-66	1.99	-30.	99	-55	0.000	76	-50	1.08	0.000

## 2.5.7 SETTO 6

MACROGUSCIO setto\_6

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAY PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.96	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.96 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
958	25	3.93	3.93	0.	16.	0.00	0.10	3.93	3.93	514.	-24.	0.09	0.30	15
959	25	3.93	3.93	58.	10.	0.00	0.10	3.93	3.93	654.	-15.	0.11	0.40	20
960	25	3.93	3.93	42.	6.	0.00	0.07	3.93	3.93	620.	-18.	0.11	0.38	19
961	25	3.93	3.93	49.	8.	0.00	0.08	3.93	3.93	464.	-25.	0.08	0.27	14
962	25	3.93	3.93	79.	28.	0.00	0.23	3.93	3.93	253.	-18.	0.05	0.15	11
963	25	3.93	3.93	42.	29.	0.00	0.21	3.93	3.93	325.	-12.	0.06	0.20	11
964	25	3.93	3.93	53.	30.	0.00	0.23	3.93	3.93	319.	-10.	0.06	0.20	11
965	25	3.93	3.93	60.	30.	0.00	0.23	3.93	3.93	259.	-17.	0.05	0.15	11
966	25	3.93	3.93	57.	48.	0.00	0.36	3.93	3.93	77.	-10.	0.02	0.05	18
967	25	3.93	3.93	8.	54.	0.00	0.35	3.93	3.93	14.	-17.	0.01	0.00	18
968	25	3.93	3.93	30.	55.	0.00	0.37	3.93	3.93	66.	-9.	0.01	0.04	19
969	25	3.93	3.93	63.	57.	0.00	0.40	3.93	3.93	41.	-5.	0.01	0.02	20
970	25	3.93	3.93	31.	78.	0.00	0.52	3.93	3.93	73.	-4.	0.01	0.05	26
971	25	3.93	3.93	0.	79.	0.00	0.50	3.93	3.93	68.	-6.	0.01	0.04	26
972	25	3.93	3.93	36.	75.	0.00	0.51	3.93	3.93	0.	-9.	0.00	0.00	26
973	25	3.93	3.93	146.	82.	0.00	0.62	3.93	3.93	13.	-11.	0.01	0.02	31
974	25	3.93	3.93	91.	97.	0.00	0.68	3.93	3.93	0.	-3.	0.00	0.01	34
975	25	3.93	3.93	0.	98.	0.00	0.62	3.93	3.93	0.	-3.	0.00	0.01	32
976	25	3.93	3.93	24.	98.	0.00	0.64	3.93	3.93	2.	-3.	0.00	0.01	33
977	25	3.93	3.93	190.	101.	0.00	0.77	3.93	3.93	4.	2.	0.00	0.02	39

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
958	25	3.93	3.93	108.	16.	0.00	0.17	3.93	3.93	645.	-24.	0.11	0.39	19
959	25	3.93	3.93	34.	8.	0.00	0.07	3.93	3.93	595.	-15.	0.10	0.37	18
960	25	3.93	3.93	8.	6.	0.00	0.05	3.93	3.93	565.	-18.	0.10	0.34	17
961	25	3.93	3.93	74.	7.	0.00	0.09	3.93	3.93	580.	-25.	0.10	0.34	17
962	25	3.93	3.93	36.	28.	0.00	0.20	3.93	3.93	314.	-18.	0.06	0.19	10
963	25	3.93	3.93	22.	29.	0.00	0.20	3.93	3.93	307.	-12.	0.05	0.19	10
964	25	3.93	3.93	6.	30.	0.00	0.20	3.93	3.93	301.	-10.	0.05	0.19	10
965	25	3.93	3.93	0.	30.	0.00	0.19	3.93	3.93	289.	-17.	0.05	0.17	10
966	25	3.93	3.93	49.	54.	0.00	0.38	3.93	3.93	36.	-11.	0.01	0.02	19
967	25	3.93	3.93	76.	54.	0.00	0.39	3.93	3.93	46.	-15.	0.01	0.02	20
968	25	3.93	3.93	65.	55.	0.00	0.39	3.93	3.93	45.	-14.	0.01	0.02	20
969	25	3.93	3.93	0.	57.	0.00	0.36	3.93	3.93	37.	-10.	0.01	0.02	18
970	25	3.93	3.93	0.	78.	0.00	0.50	3.93	3.93	82.	-2.	0.01	0.05	26
971	25	3.93	3.93	73.	79.	0.00	0.55	3.93	3.93	65.	-4.	0.01	0.04	28
972	25	3.93	3.93	92.	80.	0.00	0.57	3.93	3.93	66.	-3.	0.01	0.04	29
973	25	3.93	3.93	0.	82.	0.00	0.52	3.93	3.93	78.	-7.	0.01	0.05	27
974	25	3.93	3.93	12.	95.	0.00	0.62	3.93	3.93	18.	1.	0.00	0.02	31
975	25	3.93	3.93	104.	98.	0.00	0.69	3.93	3.93	54.	-3.	0.01	0.03	35
976	25	3.93	3.93	103.	100.	0.00	0.70	3.93	3.93	74.	1.	0.01	0.06	36
977	25	3.93	3.93	0.	101.	0.00	0.64	3.93	3.93	43.	2.	0.00	0.04	33

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ( $R_d > E_d$ )

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vr<sub>cd</sub> = compressione cls d'anima  
 Vr<sub>sd</sub> = trazione armatura trasversale  
 Vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm <sup>2</sup> ]	Af long. [cm <sup>2</sup> ]	Af trasv. [cm <sup>2</sup> ]	Taglio [daN]	Vr <sub>cd</sub> [daN]	Vr <sub>sd</sub> [daN]	alfas	Vr <sub>d,s</sub> [daN]
-5.0	9216	28.95	28.95	8525	261195	90638	-	-
35.0	9216	28.95	28.95	8128	261129	90638	-	-
75.0	9216	28.95	28.95	8128	261129	90638	-	-
115.0	9216	28.95	28.95	7086	261019	90638	-	-
155.0	9216	28.95	28.95	7086	261019	90638	-	-
195.0	9216	28.95	28.95	7086	261019	90638	-	-
235.0	9216	28.95	28.95	5473	260743	90638	-	-
275.0	9216	28.95	28.95	5473	260743	90638	-	-
315.0	9216	28.95	28.95	4263	260379	90638	-	-
355.0	9216	28.95	28.95	4263	260379	90638	-	-
392.5	9216	28.95	28.95	4263	260246	90638	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm<sup>2</sup> al metro)  
 Afc = area effettiva compressa (cm<sup>2</sup> al metro)  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm<sup>2</sup>]  
 valore max per combinazione rara = 149.4 daN/cm<sup>2</sup>  
 quasi permanente = 112 daN/cm<sup>2</sup>

sigF = tensione acciaio [daN/cm<sup>2</sup>]  
 valore max per combinazione rara = 3600 daN/cm<sup>2</sup>

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
 wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

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#### ARMATURA INFERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	wkF	Mom	Nor	sigC	wkP
958	3.93	3.93	0.	-1	0.04	-1.	0.	8	-1	0.12	0.000
959	3.93	3.93	6	-2	0.15	-1.	14	8	-2	0.13	0.000
960	3.93	3.93	23	-2	0.44	10.	14	12	-1	0.23	0.000
961	3.93	3.93	0.	-2	0.07	-1.	0.	4	-2	0.11	0.000
962	3.93	3.93	0.	-3	0.11	-2.	0.	4	0.	0.08	0.000
963	3.93	3.93	14	-3	0.24	0.	13	9	0.	0.20	0.001
964	3.93	3.93	22	-4	0.35	0.	16	14	0.	0.32	0.001
965	3.93	3.93	0.	-5	0.17	-3.	0.	4	-1	0.07	0.000
966	3.93	3.93	0.	-5	0.17	-3.	1	7	1	0.10	0.003
967	3.93	3.93	25	-7	0.49	-2.	12	10	1	0.20	0.003
968	3.93	3.93	23	-6	0.43	-1.	12	12	1	0.25	0.003
969	3.93	3.93	0.	-6	0.24	-4.	0.	3	1	0.00	0.002
970	3.93	3.93	0.	-5	0.18	-3.	2	9	2	0.00	0.008
971	3.93	3.93	29	-10	0.65	-3.	13	10	2	0.00	0.008
972	3.93	3.93	23	-6	0.44	-1.	12	12	2	0.07	0.007
973	3.93	3.93	0.	-7	0.26	-4.	0.	7	2	0.00	0.007
974	3.93	3.93	0.	-12	0.46	-7.	13	15	3	0.00	0.011
975	3.93	3.93	30	-12	0.74	-4.	15	11	3	0.00	0.010
976	3.93	3.93	28	-14	0.78	-5.	13	12	3	0.00	0.010
977	3.93	3.93	0.	-16	0.61	-9.	9	12	3	0.00	0.010

#### ARMATURA INFERIORE VERTICALE

GUSCI	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	wkF	Mom	Nor	sigC	wkP
958	3.93	3.93	228	-26	3.76	30.	62	10	-24	1.00	0.000
959	3.93	3.93	242	-25	4.16	46.	75	24	-24	1.14	0.000
960	3.93	3.93	238	-24	4.11	47.	74	25	-23	1.12	0.000
961	3.93	3.93	216	-26	3.54	25.	61	9	-23	0.97	0.000
962	3.93	3.93	96	-23	1.73	-4.	29	9	-18	0.79	0.000
963	3.93	3.93	98	-19	1.61	-2.	28	7	-18	0.77	0.000
964	3.93	3.93	99	-19	1.61	-2.	28	7	-18	0.76	0.000
965	3.93	3.93	98	-19	1.62	-2.	27	6	-18	0.75	0.000
966	3.93	3.93	0.	-15	0.57	-9.	0.	2	-13	0.51	0.000
967	3.93	3.93	0.	-14	0.54	-8.	0.	0.	-13	0.50	0.000
968	3.93	3.93	0.	-14	0.54	-8.	0.	0.	-13	0.50	0.000
969	3.93	3.93	0.	-15	0.57	-9.	0.	0.	-13	0.50	0.000
970	3.93	3.93	0.	-7	0.28	-4.	0.	0.	-8	0.29	0.000
971	3.93	3.93	0.	-8	0.30	-5.	0.	0.	-8	0.30	0.000
972	3.93	3.93	0.	-8	0.32	-5.	0.	0.	-8	0.30	0.000
973	3.93	3.93	0.	-8	0.30	-4.	0.	0.	-8	0.30	0.000
974	3.93	3.93	0.	-3	0.10	-1.	4	6	-2	0.15	0.000

975	3.93	3.93	0.	-2	0.08	-1.	1	-3	0.000	3	-3	0.13	0.000
976	3.93	3.93	0.	-2	0.08	-1.	2	-3	0.000	4	-3	0.13	0.000
977	3.93	3.93	7	-3	0.17	-1.	4	-3	0.000	3	-3	0.13	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
958	3.93	3.93	35	-1	0.78	32.	22	-1	0.001	19	-1	0.36	0.001
959	3.93	3.93	15	-2	0.24	0.	0.	-2	0.000	2	-2	0.04	0.000
960	3.93	3.93	0.	-2	0.06	-1.	0.	-1	0.000	0.	-1	0.03	0.000
961	3.93	3.93	16	-2	0.26	2.	1	-2	0.000	0.	-2	0.07	0.000
962	3.93	3.93	27	-3	0.44	4.	16	-1	0.001	13	0.	0.30	0.001
963	3.93	3.93	0.	-3	0.11	-2.	0.	-1	0.000	0.	0.	0.01	0.000
964	3.93	3.93	0.	-4	0.14	-2.	0.	-1	0.000	0.	0.	0.01	0.000
965	3.93	3.93	16	-5	0.03	-4.	9	-2	0.000	4	-1	0.01	0.000
966	3.93	3.93	25	-5	0.05	-5.	12	-1	0.001	8	1	0.13	0.003
967	3.93	3.93	0.	-7	0.27	-4.	0.	0.	0.000	0.	1	0.00	0.002
968	3.93	3.93	0.	-6	0.22	-3.	0.	0.	0.000	0.	1	0.00	0.002
969	3.93	3.93	26	-6	0.01	-6.	9	-1	0.000	3	1	0.00	0.002
970	3.93	3.93	21	-5	0.01	-5.	7	0.	0.002	1	2	0.00	0.006
971	3.93	3.93	0.	-10	0.39	-6.	0.	0.	0.001	0.	2	0.00	0.006
972	3.93	3.93	0.	-6	0.23	-4.	0.	2	0.006	0.	2	0.00	0.005
973	3.93	3.93	30	-7	0.01	-7.	8	1	0.003	1	2	0.00	0.005
974	3.93	3.93	18	-12	0.30	-9.	0.	1	0.004	0.	3	0.00	0.009
975	3.93	3.93	0.	-12	0.47	-7.	0.	0.	0.000	0.	3	0.00	0.008
976	3.93	3.93	0.	-14	0.53	-8.	0.	1	0.004	0.	3	0.00	0.008
977	3.93	3.93	35	-16	0.29	-12.	0.	2	0.007	0.	3	0.00	0.007

## ARMATURA SUPERIORE VERTICALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
958	3.93	3.93	0.	-26	1.00	-15.	0.	-25	0.000	11	-24	0.81	0.000
959	3.93	3.93	0.	-25	0.95	-14.	0.	-25	0.000	0.	-24	0.92	0.000
960	3.93	3.93	0.	-24	0.93	-14.	0.	-24	0.000	0.	-23	0.89	0.000
961	3.93	3.93	0.	-26	0.98	-15.	0.	-24	0.000	0.	-23	0.89	0.000
962	3.93	3.93	0.	-23	0.86	-13.	0.	-19	0.000	5	-18	0.66	0.000
963	3.93	3.93	0.	-19	0.72	-11.	0.	-19	0.000	0.	-18	0.70	0.000
964	3.93	3.93	0.	-19	0.71	-11.	0.	-18	0.000	0.	-18	0.70	0.000
965	3.93	3.93	0.	-19	0.74	-11.	0.	-19	0.000	2	-18	0.68	0.000
966	3.93	3.93	29	-15	0.31	-11.	17	-13	0.000	13	-13	0.38	0.000
967	3.93	3.93	23	-14	0.33	-10.	10	-14	0.000	7	-13	0.43	0.000
968	3.93	3.93	26	-14	0.30	-10.	9	-13	0.000	6	-13	0.44	0.000
969	3.93	3.93	31	-15	0.29	-11.	15	-14	0.000	9	-13	0.42	0.000
970	3.93	3.93	41	-7	0.66	0.	19	-8	0.000	11	-8	0.20	0.000
971	3.93	3.93	35	-8	0.01	-8.	15	-8	0.000	7	-8	0.24	0.000
972	3.93	3.93	41	-8	0.05	-9.	16	-8	0.000	8	-8	0.23	0.000
973	3.93	3.93	49	-8	0.77	1.	20	-8	0.000	11	-8	0.20	0.000
974	3.93	3.93	7	-3	0.04	-2.	2	-3	0.000	3	-2	0.07	0.000
975	3.93	3.93	18	-2	0.30	2.	5	-3	0.000	3	-3	0.07	0.000
976	3.93	3.93	24	-2	0.44	7.	9	-3	0.000	4	-3	0.06	0.000
977	3.93	3.93	9	-3	0.02	-2.	3	-3	0.000	2	-3	0.08	0.000

## 2.5.8 SETTO 7

MACROGUSCIO setto\_7

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	1.15	
deformazione ultima acciaio	1.86	per mille
deformazione ultima cls	3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella



GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE				COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF		Mom	Nor	sigC	wkP
1279	3.93	3.93	124	-9	1.35	20.	97	-6	0.002		19	-5	0.04	0.000
1280	3.93	3.93	159	-7	2.05	64.	127	-8	0.003		113	-7	1.31	0.002
1281	3.93	3.93	155	-6	2.09	81.	123	-6	0.005		111	-5	1.46	0.005
1282	3.93	3.93	121	-3	1.70	84.	95	-3	0.006		60	-2	0.82	0.004
1283	3.93	3.93	109	-7	1.25	24.	79	-5	0.002		28	-5	0.01	0.000
1284	3.93	3.93	104	-6	1.29	35.	76	-6	0.001		69	-6	0.69	0.000
1285	3.93	3.93	109	-4	1.49	61.	86	-4	0.004		80	-4	1.03	0.003
1286	3.93	3.93	114	-1	1.63	97.	88	-2	0.007		0.	-2	0.06	0.000

## ARMATURA SUPERIORE VERTICALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE				COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF		Mom	Nor	sigC	wkP
1279	3.93	3.93	897	-80	9.10	82.	752	-67	0.004		537	-62	5.20	0.001
1280	3.93	3.93	883	-83	8.83	68.	729	-70	0.003		580	-66	5.62	0.001
1281	3.93	3.93	845	-79	8.44	65.	698	-67	0.003		567	-63	5.50	0.001
1282	3.93	3.93	934	-74	9.95	129.	776	-63	0.007		546	-58	5.32	0.001
1283	3.93	3.93	0.	-67	2.02	-30.	76	-56	0.000		86	-51	1.07	0.000
1284	3.93	3.93	0.	-72	2.16	-32.	135	-61	0.000		107	-57	1.12	0.000
1285	3.93	3.93	0.	-67	2.01	-30.	167	-59	0.000		117	-54	0.98	0.000
1286	3.93	3.93	0.	-61	1.84	-28.	104	-51	0.000		78	-47	1.00	0.000

## 2.5.9 SETTO 8

MACROGUSCIO setto\_8

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAY PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.86	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1136	25	3.93	3.93	35.	9.	0.00	0.07	3.93	3.93	514.	-25.	0.09	0.29	15
1137	25	3.93	3.93	31.	7.	0.00	0.06	3.93	3.93	668.	-16.	0.11	0.39	20
1138	25	3.93	3.93	39.	6.	0.00	0.06	3.93	3.93	630.	-18.	0.11	0.37	19
1139	25	3.93	3.93	44.	9.	0.00	0.08	3.93	3.93	469.	-25.	0.08	0.26	14
1140	25	3.93	3.93	57.	27.	0.00	0.20	3.93	3.93	207.	-14.	0.04	0.12	11
1141	25	3.93	3.93	33.	28.	0.00	0.19	3.93	3.93	298.	-9.	0.05	0.18	10
1142	25	3.93	3.93	41.	30.	0.00	0.21	3.93	3.93	304.	-8.	0.05	0.18	11
1143	25	3.93	3.93	77.	30.	0.00	0.23	3.93	3.93	206.	-12.	0.04	0.12	12
1144	25	3.93	3.93	13.	57.	0.00	0.35	3.93	3.93	44.	-5.	0.01	0.03	19
1145	25	3.93	3.93	0.	54.	0.00	0.33	3.93	3.93	0.	-13.	0.00	0.00	18
1146	25	3.93	3.93	24.	55.	0.00	0.35	3.93	3.93	34.	-10.	0.01	0.03	19
1147	25	3.93	3.93	85.	56.	0.00	0.40	3.93	3.93	54.	-7.	0.01	0.03	21
1148	25	3.93	3.93	33.	81.	0.00	0.51	3.93	3.93	46.	-5.	0.01	0.03	27
1149	25	3.93	3.93	0.	80.	0.00	0.48	3.93	3.93	9.	-2.	0.00	0.00	26
1150	25	3.93	3.93	24.	75.	0.00	0.48	3.93	3.93	0.	-4.	0.00	0.00	26
1151	25	3.93	3.93	139.	81.	0.00	0.58	3.93	3.93	35.	-8.	0.01	0.02	31
1152	25	3.93	3.93	106.	89.	0.00	0.61	3.93	3.93	2.	-4.	0.00	0.01	33
1153	25	3.93	3.93	0.	98.	0.00	0.59	3.93	3.93	0.	-3.	0.00	0.01	32
1154	25	3.93	3.93	12.	98.	0.00	0.60	3.93	3.93	6.	-3.	0.00	0.01	32
1155	25	3.93	3.93	219.	98.	0.00	0.73	3.93	3.93	13.	-3.	0.00	0.01	39

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1136	25	3.93	3.93	78.	6.	0.00	0.09	3.93	3.93	640.	-25.	0.11	0.36	19
1137	25	3.93	3.93	43.	7.	0.00	0.07	3.93	3.93	591.	-16.	0.10	0.34	18
1138	25	3.93	3.93	19.	7.	0.00	0.06	3.93	3.93	582.	-18.	0.10	0.34	17

1139	25	3.93	3.93	55.	9.	0.00	0.09	3.93	3.93	609.	-25.	0.10	0.35	18
1140	25	3.93	3.93	13.	27.	0.00	0.17	3.93	3.93	289.	-14.	0.05	0.17	9
1141	25	3.93	3.93	8.	28.	0.00	0.17	3.93	3.93	253.	-9.	0.04	0.15	9
1142	25	3.93	3.93	10.	30.	0.00	0.19	3.93	3.93	251.	-8.	0.04	0.15	10
1143	25	3.93	3.93	0.	30.	0.00	0.18	3.93	3.93	292.	-12.	0.05	0.17	10
1144	25	3.93	3.93	33.	57.	0.00	0.37	3.93	3.93	33.	-10.	0.01	0.02	20
1145	25	3.93	3.93	63.	54.	0.00	0.37	3.93	3.93	7.	-13.	0.00	0.00	20
1146	25	3.93	3.93	62.	55.	0.00	0.37	3.93	3.93	3.	-12.	0.00	0.00	20
1147	25	3.93	3.93	0.	56.	0.00	0.34	3.93	3.93	41.	-2.	0.01	0.03	18
1148	25	3.93	3.93	0.	81.	0.00	0.49	3.93	3.93	82.	-1.	0.01	0.05	26
1149	25	3.93	3.93	89.	80.	0.00	0.54	3.93	3.93	36.	-1.	0.01	0.02	29
1150	25	3.93	3.93	88.	80.	0.00	0.54	3.93	3.93	50.	0.	0.01	0.03	29
1151	25	3.93	3.93	0.	81.	0.00	0.49	3.93	3.93	77.	-8.	0.01	0.04	26
1152	25	3.93	3.93	0.	94.	0.00	0.57	3.93	3.93	23.	1.	0.00	0.02	31
1153	25	3.93	3.93	108.	98.	0.00	0.66	3.93	3.93	33.	1.	0.00	0.03	35
1154	25	3.93	3.93	103.	99.	0.00	0.67	3.93	3.93	53.	1.	0.00	0.04	36
1155	25	3.93	3.93	0.	100.	0.00	0.61	3.93	3.93	22.	-3.	0.00	0.02	33

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ( $R_d > E_d$ )

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vrcd = compressione cls d'anima  
vrsd = trazione armatura trasversale  
vrd,s = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	vrcd [daN]	vrsd [daN]	alfas	vrd,s [daN]
-5.0	9213	28.94	28.94	7759	261113	90609	-	-
35.0	9213	28.94	28.94	7375	261041	90609	-	-
75.0	9213	28.94	28.94	7375	261041	90609	-	-
115.0	9213	28.94	28.94	6325	260898	90609	-	-
155.0	9213	28.94	28.94	6325	260898	90609	-	-
195.0	9213	28.94	28.94	6325	260898	90609	-	-
235.0	9213	28.94	28.94	5182	260634	90609	-	-
275.0	9213	28.94	28.94	5182	260634	90609	-	-
315.0	9213	28.94	28.94	3880	260305	90609	-	-
355.0	9213	28.94	28.94	3880	260305	90609	-	-
392.5	9213	28.94	28.94	3880	260168	90609	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)  
Afc = area effettiva compressa (cm2 al metro)  
Mom = momento flettente [daNcm/cm]  
Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm2]  
valore max per combinazione rara = 149.4 daN/cm2  
quasi permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]  
valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

#### ARMATURA INFERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1136	3.93	3.93	0.	0.	0.02	0.	18	-2	0.000	10	-2	0.17	0.000
1137	3.93	3.93	28	-3	0.48	6.	19	-2	0.000	15	-2	0.24	0.000
1138	3.93	3.93	24	-2	0.42	6.	17	-1	0.000	11	-2	0.18	0.000
1139	3.93	3.93	0.	-1	0.02	0.	4	-2	0.000	7	-2	0.13	0.000
1140	3.93	3.93	0.	-3	0.12	-2.	7	-2	0.000	4	-1	0.07	0.000
1141	3.93	3.93	24	-3	0.41	4.	17	-1	0.001	14	-1	0.29	0.001
1142	3.93	3.93	20	-3	0.33	2.	16	-1	0.001	11	0.	0.25	0.001
1143	3.93	3.93	0.	-4	0.14	-2.	0.	-2	0.000	0.	-1	0.04	0.000
1144	3.93	3.93	0.	-5	0.17	-3.	3	0.	0.001	7	1	0.13	0.002
1145	3.93	3.93	28	-6	0.48	-1.	14	0.	0.001	11	1	0.24	0.003
1146	3.93	3.93	26	-7	0.49	-2.	12	0.	0.001	10	1	0.22	0.003
1147	3.93	3.93	0.	-5	0.20	-3.	0.	-1	0.000	1	1	0.00	0.002
1148	3.93	3.93	0.	-2	0.07	-1.	7	1	0.002	8	2	0.00	0.007
1149	3.93	3.93	31	-9	0.63	-2.	14	0.	0.001	11	2	0.00	0.007
1150	3.93	3.93	28	-11	0.66	-4.	12	1	0.004	10	2	0.00	0.007
1151	3.93	3.93	0.	-6	0.24	-4.	0.	1	0.002	4	2	0.00	0.006
1152	3.93	3.93	0.	-5	0.17	-3.	15	1	0.005	15	3	0.00	0.011
1153	3.93	3.93	31	-11	0.72	-4.	15	0.	0.002	11	3	0.00	0.009
1154	3.93	3.93	29	-13	0.76	-5.	13	1	0.003	10	3	0.00	0.009
1155	3.93	3.93	0.	-15	0.58	-9.	6	2	0.007	10	3	0.00	0.009

#### ARMATURA INFERIORE VERTICALE

| COMBINAZIONE RARA | COMB. FREQUENTE | COMB. QUASI PERMANENTE |

GUSCI	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1136	3.93	3.93	226	-24	3.82	38.	69	-25	0.000	16	-25	1.10	0.000
1137	3.93	3.93	242	-23	4.31	59.	82	-25	0.000	33	-25	1.24	0.000
1138	3.93	3.93	236	-23	4.12	51.	79	-24	0.000	30	-24	1.17	0.000
1139	3.93	3.93	219	-23	3.72	37.	64	-23	0.000	11	-23	0.99	0.000
1140	3.93	3.93	89	-18	1.50	-2.	27	-19	0.000	10	-20	0.84	0.000
1141	3.93	3.93	94	-17	1.50	-1.	29	-19	0.000	9	-19	0.79	0.000
1142	3.93	3.93	94	-17	1.50	-1.	27	-19	0.000	8	-18	0.78	0.000
1143	3.93	3.93	91	-18	1.49	-2.	25	-18	0.000	5	-18	0.75	0.000
1144	3.93	3.93	0.	-12	0.47	-7.	0.	-13	0.000	0.	-12	0.45	0.000
1145	3.93	3.93	0.	-14	0.54	-8.	0.	-14	0.000	0.	-13	0.51	0.000
1146	3.93	3.93	0.	-14	0.52	-8.	0.	-14	0.000	0.	-13	0.51	0.000
1147	3.93	3.93	0.	-13	0.50	-8.	0.	-13	0.000	0.	-13	0.50	0.000
1148	3.93	3.93	0.	-6	0.23	-3.	0.	-8	0.000	0.	-7	0.28	0.000
1149	3.93	3.93	0.	-7	0.29	-4.	0.	-8	0.000	0.	-8	0.30	0.000
1150	3.93	3.93	0.	-8	0.29	-4.	0.	-8	0.000	0.	-8	0.30	0.000
1151	3.93	3.93	0.	-7	0.26	-4.	0.	-8	0.000	0.	-8	0.30	0.000
1152	3.93	3.93	0.	-2	0.09	-1.	0.	-3	0.000	3	-2	0.11	0.000
1153	3.93	3.93	0.	-2	0.06	-1.	0.	-3	0.000	0.	-2	0.10	0.000
1154	3.93	3.93	0.	-2	0.08	-1.	0.	-3	0.000	1	-3	0.10	0.000
1155	3.93	3.93	0.	-2	0.09	-1.	0.	-3	0.000	0.	-3	0.10	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1136	3.93	3.93	22	0.	0.49	22.	0.	-2	0.000	3	-2	0.06	0.000
1137	3.93	3.93	0.	-3	0.11	-2.	0.	-2	0.000	0.	-2	0.08	0.000
1138	3.93	3.93	0.	-2	0.09	-1.	0.	-1	0.000	0.	-2	0.06	0.000
1139	3.93	3.93	26	-1	0.59	27.	14	-2	0.000	10	-2	0.02	0.000
1140	3.93	3.93	14	-3	0.01	-3.	0.	-2	0.000	0.	-1	0.04	0.000
1141	3.93	3.93	0.	-3	0.10	-2.	0.	-1	0.000	0.	-1	0.02	0.000
1142	3.93	3.93	0.	-3	0.10	-1.	0.	-1	0.000	0.	0.	0.02	0.000
1143	3.93	3.93	20	-4	0.04	-4.	10	-2	0.000	4	-1	0.00	0.000
1144	3.93	3.93	20	-5	0.01	-4.	1	0.	0.000	0.	1	0.00	0.002
1145	3.93	3.93	0.	-6	0.23	-3.	0.	0.	0.000	0.	1	0.00	0.002
1146	3.93	3.93	0.	-7	0.26	-4.	0.	0.	0.000	0.	1	0.00	0.002
1147	3.93	3.93	28	-5	0.05	-6.	8	-1	0.000	0.	1	0.00	0.002
1148	3.93	3.93	17	-2	0.28	2.	0.	1	0.001	0.	2	0.00	0.005
1149	3.93	3.93	0.	-9	0.35	-5.	0.	0.	0.000	0.	2	0.00	0.005
1150	3.93	3.93	0.	-11	0.41	-6.	0.	1	0.003	0.	2	0.00	0.005
1151	3.93	3.93	28	-6	0.01	-6.	4	1	0.002	0.	2	0.00	0.005
1152	3.93	3.93	11	-5	0.07	-4.	0.	1	0.004	0.	3	0.00	0.008
1153	3.93	3.93	0.	-11	0.44	-7.	0.	0.	0.000	0.	3	0.00	0.007
1154	3.93	3.93	0.	-13	0.50	-8.	0.	1	0.002	0.	3	0.00	0.007
1155	3.93	3.93	36	-15	0.26	-12.	0.	2	0.006	0.	3	0.00	0.007

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1136	3.93	3.93	0.	-24	0.92	-14.	0.	-25	0.000	0.	-25	0.95	0.000
1137	3.93	3.93	0.	-23	0.88	-13.	0.	-25	0.000	0.	-25	0.95	0.000
1138	3.93	3.93	0.	-23	0.89	-13.	0.	-24	0.000	0.	-24	0.90	0.000
1139	3.93	3.93	0.	-23	0.89	-13.	0.	-23	0.000	1	-23	0.89	0.000
1140	3.93	3.93	0.	-18	0.69	-10.	0.	-19	0.000	0.	-20	0.75	0.000
1141	3.93	3.93	0.	-17	0.66	-10.	0.	-19	0.000	0.	-19	0.71	0.000
1142	3.93	3.93	0.	-17	0.65	-10.	0.	-19	0.000	0.	-18	0.70	0.000
1143	3.93	3.93	0.	-18	0.68	-10.	0.	-18	0.000	0.	-18	0.70	0.000
1144	3.93	3.93	18	-12	0.30	-9.	8	-13	0.000	6	-12	0.39	0.000
1145	3.93	3.93	13	-14	0.42	-9.	6	-14	0.000	3	-13	0.48	0.000
1146	3.93	3.93	12	-14	0.41	-9.	6	-14	0.000	3	-13	0.48	0.000
1147	3.93	3.93	22	-13	0.31	-10.	9	-13	0.000	6	-13	0.45	0.000
1148	3.93	3.93	39	-6	0.62	1.	12	-8	0.000	6	-7	0.23	0.000
1149	3.93	3.93	32	-7	0.00	-7.	10	-8	0.000	4	-8	0.26	0.000
1150	3.93	3.93	31	-8	0.01	-7.	10	-8	0.000	5	-8	0.26	0.000
1151	3.93	3.93	34	-7	0.05	-7.	15	-8	0.000	6	-8	0.24	0.000
1152	3.93	3.93	7	-2	0.03	-2.	1	-3	0.000	0.	-2	0.09	0.000
1153	3.93	3.93	16	-2	0.27	3.	3	-3	0.000	1	-2	0.09	0.000
1154	3.93	3.93	17	-2	0.28	2.	4	-3	0.000	1	-3	0.09	0.000
1155	3.93	3.93	6	-2	0.04	-2.	1	-3	0.000	0.	-3	0.10	0.000

## 2.5.10 SETTO 9

MACROGUSCIO setto\_9

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAY PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.86	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo (alfa):	0.85	



1293	3.93	3.93	0.	-4	0.13	-2.	0.	-6	0.000	0.	-6	0.17	0.000
1294	3.93	3.93	0.	-1	0.02	0.	0.	-3	0.000	24	-4	0.25	0.000

## ARMATURA INFERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1287	3.93	3.93	0.	-83	2.52	-38.	0.	-67	0.000	0.	-60	1.81	0.000
1288	3.93	3.93	0.	-85	2.56	-38.	0.	-71	0.000	0.	-67	2.02	0.000
1289	3.93	3.93	0.	-81	2.44	-37.	0.	-71	0.000	0.	-69	2.07	0.000
1290	3.93	3.93	0.	-75	2.27	-34.	0.	-66	0.000	0.	-62	1.87	0.000
1291	3.93	3.93	160	-70	3.00	-22.	45	-57	0.000	33	-51	1.72	0.000
1292	3.93	3.93	124	-73	2.90	-26.	0.	-63	0.000	0.	-57	1.73	0.000
1293	3.93	3.93	134	-68	2.80	-23.	0.	-63	0.000	0.	-59	1.77	0.000
1294	3.93	3.93	209	-62	3.02	-15.	0.	-55	0.000	0.	-52	1.56	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1287	3.93	3.93	125	-7	1.53	39.	98	-4	0.005	22	-2	0.21	0.000
1288	3.93	3.93	162	-10	1.96	47.	128	-8	0.003	115	-6	1.47	0.004
1289	3.93	3.93	172	-6	2.32	90.	138	-8	0.004	126	-7	1.52	0.003
1290	3.93	3.93	130	-2	1.84	95.	102	-4	0.005	62	-4	0.72	0.001
1291	3.93	3.93	135	-7	1.72	51.	101	-4	0.005	43	-3	0.48	0.001
1292	3.93	3.93	131	-8	1.54	33.	100	-6	0.002	93	-5	1.17	0.003
1293	3.93	3.93	111	-4	1.49	55.	72	-6	0.001	62	-6	0.62	0.000
1294	3.93	3.93	98	-1	1.41	87.	74	-3	0.004	0.	-4	0.12	0.000

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1287	3.93	3.93	901	-83	9.04	73.	751	-67	0.004	559	-60	5.43	0.001
1288	3.93	3.93	899	-85	8.97	68.	738	-71	0.003	582	-67	5.64	0.001
1289	3.93	3.93	883	-81	8.89	75.	731	-71	0.003	599	-69	5.80	0.001
1290	3.93	3.93	976	-75	10.53	146.	814	-66	0.007	578	-62	5.62	0.001
1291	3.93	3.93	0.	-70	2.12	-32.	85	-57	0.000	91	-51	1.04	0.000
1292	3.93	3.93	0.	-73	2.21	-33.	143	-63	0.000	115	-57	1.10	0.000
1293	3.93	3.93	0.	-68	2.06	-31.	151	-63	0.000	96	-59	1.24	0.000
1294	3.93	3.93	0.	-62	1.87	-28.	95	-55	0.000	66	-52	1.20	0.000

## 2.5.11 SETTO 10

MACROGUSCIO setto\_10

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.86	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento	(k): 1	
resistenza cilindrica cls	(fck): 249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo	(alfa): 0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1116	25	3.93	3.93	51.	12.	0.00	0.10	3.93	3.93	508.	-19.	0.09	0.29	15
1117	25	3.93	3.93	72.	24.	0.00	0.20	3.93	3.93	690.	-7.	0.11	0.42	21
1118	25	3.93	3.93	16.	8.	0.00	0.06	3.93	3.93	697.	-9.	0.12	0.42	21
1119	25	3.93	3.93	40.	12.	0.00	0.10	3.93	3.93	527.	-18.	0.09	0.30	16
1120	25	3.93	3.93	23.	40.	0.00	0.26	3.93	3.93	254.	-10.	0.04	0.15	14
1121	25	3.93	3.93	0.	41.	0.00	0.25	3.93	3.93	314.	-1.	0.05	0.19	13
1122	25	3.93	3.93	0.	44.	0.00	0.27	3.93	3.93	312.	1.	0.04	0.20	14
1123	25	3.93	3.93	55.	23.	0.00	0.19	3.93	3.93	254.	-10.	0.04	0.15	10

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1122	3.93	3.93	32	-1	0.69	26.	27	-2	0.001	23	-1	0.49	0.001
1123	3.93	3.93	0.	-1	0.03	0.	9	-1	0.000	8	-1	0.12	0.000
1124	3.93	3.93	47	-1	1.07	55.	22	0.	0.002	15	1	0.32	0.004
1125	3.93	3.93	56	-1	1.27	59.	30	0.	0.003	22	1	0.48	0.005
1126	3.93	3.93	47	-2	1.04	39.	29	0.	0.003	23	1	0.52	0.005
1127	3.93	3.93	0.	-1	0.04	-1.	9	0.	0.001	10	0.	0.23	0.002
1128	3.93	3.93	57	-2	1.24	45.	24	1	0.005	15	2	0.10	0.009
1129	3.93	3.93	66	-3	1.41	49.	30	1	0.005	21	2	0.32	0.009
1130	3.93	3.93	57	-4	1.08	21.	30	0.	0.004	23	2	0.42	0.009
1131	3.93	3.93	0.	0.	0.00	0.	16	0.	0.003	16	2	0.27	0.007
1132	3.93	3.93	64	-4	1.30	34.	28	2	0.008	19	4	0.00	0.013
1133	3.93	3.93	68	-5	1.34	29.	30	1	0.007	20	4	0.00	0.013
1134	3.93	3.93	60	-7	1.00	8.	30	1	0.006	22	4	0.13	0.013
1135	3.93	3.93	16	-3	0.26	0.	23	2	0.008	22	3	0.20	0.012

## ARMATURA INFERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1116	3.93	3.93	233	-24	4.01	46.	87	-27	0.000	40	-28	1.43	0.000
1117	3.93	3.93	255	-23	4.65	73.	99	-27	0.000	51	-27	1.49	0.000
1118	3.93	3.93	251	-24	4.48	63.	91	-27	0.000	43	-26	1.36	0.000
1119	3.93	3.93	235	-24	4.05	46.	74	-26	0.000	17	-25	1.12	0.000
1120	3.93	3.93	89	-19	1.52	-3.	37	-20	0.000	24	-21	1.03	0.000
1121	3.93	3.93	94	-16	1.51	1.	39	-20	0.000	23	-20	0.99	0.000
1122	3.93	3.93	98	-16	1.57	1.	39	-21	0.000	20	-20	0.94	0.000
1123	3.93	3.93	101	-18	1.61	-1.	36	-21	0.000	16	-21	0.94	0.000
1124	3.93	3.93	0.	-11	0.44	-7.	0.	-14	0.000	9	-15	0.64	0.000
1125	3.93	3.93	0.	-12	0.47	-7.	7	-15	0.000	10	-15	0.65	0.000
1126	3.93	3.93	0.	-12	0.45	-7.	6	-13	0.000	8	-12	0.51	0.000
1127	3.93	3.93	0.	-9	0.34	-5.	1	-10	0.000	4	-9	0.39	0.000
1128	3.93	3.93	0.	-4	0.15	-2.	0.	-8	0.000	3	-8	0.35	0.000
1129	3.93	3.93	0.	-6	0.22	-3.	0.	-8	0.000	5	-8	0.37	0.000
1130	3.93	3.93	0.	-6	0.24	-4.	3	-8	0.000	7	-8	0.36	0.000
1131	3.93	3.93	0.	-5	0.20	-3.	0.	-8	0.000	3	-8	0.33	0.000
1132	3.93	3.93	0.	0.	0.00	3.	7	-3	0.000	9	-3	0.18	0.000
1133	3.93	3.93	0.	-1	0.03	0.	5	-3	0.000	8	-3	0.18	0.000
1134	3.93	3.93	0.	-1	0.04	-1.	7	-3	0.000	9	-3	0.18	0.000
1135	3.93	3.93	0.	-1	0.04	-1.	7	-3	0.000	9	-2	0.17	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1116	3.93	3.93	23	-2	0.46	11.	10	-3	0.000	14	-2	0.23	0.000
1117	3.93	3.93	0.	-3	0.12	-2.	0.	-3	0.000	0.	-3	0.10	0.000
1118	3.93	3.93	0.	-2	0.06	-1.	0.	0.	0.000	0.	-1	0.04	0.000
1119	3.93	3.93	16	-1	0.31	7.	0.	-1	0.000	0.	-2	0.06	0.000
1120	3.93	3.93	25	-1	0.55	23.	11	-2	0.000	12	0.	0.26	0.001
1121	3.93	3.93	0.	-2	0.07	-1.	0.	-1	0.000	0.	-1	0.03	0.000
1122	3.93	3.93	0.	-1	0.05	-1.	0.	-2	0.000	0.	-1	0.04	0.000
1123	3.93	3.93	12	-1	0.25	7.	0.	-1	0.000	2	-1	0.01	0.000
1124	3.93	3.93	10	-1	0.21	6.	6	0.	0.000	8	1	0.14	0.003
1125	3.93	3.93	0.	-1	0.04	-1.	0.	0.	0.000	0.	1	0.00	0.002
1126	3.93	3.93	0.	-2	0.07	-1.	0.	0.	0.000	0.	1	0.00	0.002
1127	3.93	3.93	12	-1	0.23	4.	2	0.	0.000	2	0.	0.05	0.001
1128	3.93	3.93	0.	-2	0.09	-1.	0.	1	0.002	3	2	0.00	0.007
1129	3.93	3.93	0.	-3	0.11	-2.	0.	1	0.002	0.	2	0.00	0.007
1130	3.93	3.93	0.	-4	0.17	-3.	0.	0.	0.001	0.	2	0.00	0.006
1131	3.93	3.93	18	0.	0.40	22.	0.	0.	0.001	1	2	0.00	0.005
1132	3.93	3.93	0.	-4	0.15	-2.	0.	2	0.005	0.	4	0.00	0.010
1133	3.93	3.93	0.	-5	0.19	-3.	0.	1	0.004	0.	4	0.00	0.010
1134	3.93	3.93	0.	-7	0.26	-4.	0.	1	0.002	0.	4	0.00	0.010
1135	3.93	3.93	1	-3	0.10	-2.	0.	2	0.005	0.	3	0.00	0.009

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1116	3.93	3.93	0.	-24	0.90	-14.	0.	-27	0.000	0.	-28	1.07	0.000
1117	3.93	3.93	0.	-23	0.87	-13.	0.	-27	0.000	0.	-27	1.03	0.000
1118	3.93	3.93	0.	-24	0.90	-14.	0.	-27	0.000	0.	-26	0.98	0.000
1119	3.93	3.93	0.	-24	0.92	-14.	0.	-26	0.000	0.	-25	0.97	0.000
1120	3.93	3.93	0.	-19	0.72	-11.	0.	-20	0.000	0.	-21	0.81	0.000
1121	3.93	3.93	0.	-16	0.60	-9.	0.	-20	0.000	0.	-20	0.78	0.000
1122	3.93	3.93	0.	-16	0.63	-9.	0.	-21	0.000	0.	-20	0.76	0.000
1123	3.93	3.93	0.	-18	0.70	-10.	0.	-21	0.000	0.	-21	0.79	0.000
1124	3.93	3.93	49	-11	0.00	-11.	17	-14	0.000	14	-15	0.43	0.000
1125	3.93	3.93	29	-12	0.21	-10.	8	-15	0.000	8	-15	0.49	0.000
1126	3.93	3.93	17	-12	0.29	-8.	7	-13	0.000	6	-12	0.38	0.000
1127	3.93	3.93	19	-9	0.17	-7.	11	-10	0.000	8	-9	0.28	0.000
1128	3.93	3.93	71	-4	1.48	44.	17	-8	0.000	14	-8	0.19	0.000
1129	3.93	3.93	51	-6	0.85	7.	12	-8	0.000	9	-8	0.24	0.000
1130	3.93	3.93	33	-6	0.07	-7.	16	-8	0.000	11	-8	0.21	0.000
1131	3.93	3.93	49	-5	0.82	8.	23	-8	0.000	15	-8	0.16	0.000
1132	3.93	3.93	39	0.	0.89	53.	7	-3	0.000	9	-3	0.02	0.000
1133	3.93	3.93	34	-1	0.77	36.	7	-3	0.000	8	-3	0.04	0.000
1134	3.93	3.93	19	-1	0.39	12.	7	-3	0.000	8	-3	0.03	0.000
1135	3.93	3.93	16	-1	0.33	8.	4	-3	0.000	5	-2	0.05	0.000

## 2.5.12 SETTO 11

MACROGUSCIO setto\_11

## VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

## CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAY PRINC

## DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.86 per mille  
 deformazione ultima cls : 3.5 per mille  
 rapporto rottura/snervamento (k): 1  
 resistenza cilindrica cls (fck): 249 daN/cm2  
 coefficiente sicurezza cls : 1.5  
 coefficiente riduttivo (alfa): 0.85  
 copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm  
 moltiplicatore sollecitazioni : 1

## LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm  
 Af = area disposta al lembo teso, in cm2 al metro  
 Afc = area disposta al lembo compresso, in cm2 al metro  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 epsC = deformazione cls [per mille]  
 epsF = deformazione acciaio [per mille]

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L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1295	32	3.93	3.93	39.	46.	0.00	0.30	3.93	3.93	76.	11.	0.01	0.10	16
1296	32	3.93	3.93	0.	21.	0.00	0.13	3.93	3.93	0.	-43.	0.01	-0.01	7
1297	32	3.93	3.93	0.	12.	0.00	0.07	3.93	3.93	0.	-49.	0.01	-0.01	4
1298	32	3.93	3.93	67.	2.	0.00	0.04	3.93	3.93	0.	-45.	0.01	-0.01	2
1299	32	3.93	3.93	16.	52.	0.00	0.32	3.93	3.93	95.	17.	0.00	0.18	17
1300	32	3.93	3.93	32.	26.	0.00	0.18	3.93	3.93	130.	-38.	0.02	0.05	9
1301	32	3.93	3.93	0.	17.	0.00	0.10	3.93	3.93	30.	-42.	0.01	-0.01	5
1302	32	3.93	3.93	83.	7.	0.00	0.08	3.93	3.93	0.	-28.	0.01	-0.01	4

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1295	32	3.93	3.93	0.	47.	0.00	0.29	3.93	3.93	0.	11.	0.00	0.07	15
1296	32	3.93	3.93	116.	16.	0.00	0.16	3.93	3.93	180.	-30.	0.02	0.07	9
1297	32	3.93	3.93	143.	11.	0.00	0.13	3.93	3.93	557.	-47.	0.07	0.21	11
1298	32	3.93	3.93	126.	3.	0.00	0.08	3.93	3.93	680.	-45.	0.08	0.27	14
1299	32	3.93	3.93	25.	52.	0.00	0.33	3.93	3.93	0.	27.	0.00	0.16	18
1300	32	3.93	3.93	109.	26.	0.00	0.21	3.93	3.93	0.	-38.	0.01	-0.01	11
1301	32	3.93	3.93	157.	17.	0.00	0.17	3.93	3.93	0.	-42.	0.01	-0.01	9
1302	32	3.93	3.93	84.	9.	0.00	0.09	3.93	3.93	207.	-19.	0.03	0.09	5

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd > Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vrcd = compressione cls d'anima  
 vrds = trazione armatura trasversale  
 vrd,s = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vrds [daN]	Vrds [daN]	alfas	Vrd,s [daN]
-180.0	11792	28.94	28.94	16511	336569	90602	-	-
-140.0	11792	28.94	28.94	17820	336285	90602	-	-
-100.0	11792	28.94	28.94	17820	336285	90602	-	-
-60.0	11792	28.94	28.94	19129	336001	90602	-	-
-32.5	11792	28.94	28.94	19129	336001	90602	-	-

## VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

## CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

## DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)  
 Afc = area effettiva compressa (cm2 al metro)  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]

$\sigma_c$  = tensione calcestruzzo [daN/cm<sup>2</sup>]  
 valore max per combinazione rara = 149.4 daN/cm<sup>2</sup>  
 quasi permanente = 112 daN/cm<sup>2</sup>  
 $\sigma_f$  = tensione acciaio [daN/cm<sup>2</sup>]  
 valore max per combinazione rara = 3600 daN/cm<sup>2</sup>  
 $w_{kf}$  = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
 $w_{kp}$  = apertura caratteristica per combinazione quasi permanente (mm) - " " = 0.3 mm

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## ARMATURA INFERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE				
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkp	
1295	3.93	3.93	28	14	0.00	203.	22	15	0.051	48	15	0.00	0.054	
1296	3.93	3.93	0.	-1	0.03	0.	0.	0.	0.002	0.	3	0.00	0.008	
1297	3.93	3.93	0.	-4	0.12	-2.	0.	0.	0.000	0.	-5	0.14	0.000	
1298	3.93	3.93	0.	-9	0.29	-4.	0.	-8	0.000	0.	-6	0.18	0.000	
1299	3.93	3.93	53	16	0.00	265.	42	18	0.063	68	14	0.00	0.053	
1300	3.93	3.93	0.	5	0.00	59.	0.	6	0.019	0.	5	0.00	0.016	
1301	3.93	3.93	0.	-5	0.14	-2.	0.	-3	0.000	0.	-3	0.08	0.000	
1302	3.93	3.93	12	-9	0.33	-3.	26	-6	0.000	17	-3	0.17	0.000	

## ARMATURA INFERIORE VERTICALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE				
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkf	Mom	Nor	sigC	wkp	
1295	3.93	3.93	0.	-69	2.09	-31.	0.	-55	0.000		0.	-26	0.78	0.000
1296	3.93	3.93	0.	-81	2.43	-36.	0.	-63	0.000		0.	-57	1.73	0.000
1297	3.93	3.93	0.	-88	2.64	-40.	0.	-72	0.000		0.	-68	2.04	0.000
1298	3.93	3.93	0.	-81	2.45	-37.	0.	-75	0.000		0.	-66	1.98	0.000
1299	3.93	3.93	64	-23	1.05	-6.	31	-20	0.000		47	-20	0.86	0.000
1300	3.93	3.93	115	-50	2.14	-16.	53	-42	0.000		34	-39	1.36	0.000
1301	3.93	3.93	153	-71	2.97	-22.	16	-53	0.000		0.	-51	1.54	0.000
1302	3.93	3.93	159	-68	2.93	-21.	11	-52	0.000		0.	-51	1.53	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkp
1295	3.93	3.93	24	14	0.00	199.	15	15	0.050	0.	15	0.00	0.048
1296	3.93	3.93	109	-1	1.56	93.	83	0.	0.011	59	3	0.75	0.015
1297	3.93	3.93	125	-4	1.71	70.	99	0.	0.010	90	-5	1.14	0.003
1298	3.93	3.93	93	-9	0.92	5.	72	-8	0.000	44	-6	0.43	0.000
1299	3.93	3.93	0.	16	0.00	208.	0.	18	0.059	0.	14	0.00	0.045
1300	3.93	3.93	76	5	0.87	137.	58	6	0.026	44	5	0.00	0.022
1301	3.93	3.93	123	-5	1.65	62.	96	-3	0.006	72	-3	0.97	0.004
1302	3.93	3.93	4	-9	0.24	-4.	3	-6	0.000	1	-3	0.07	0.000

## ARMATURA SUPERIORE VERTICALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkp
1295	3.93	3.93	247	-69	0.73	-47.	205	-55	0.000	82	-26	0.32	0.000
1296	3.93	3.93	418	-81	0.12	-62.	342	-63	0.000	239	-57	0.41	0.000
1297	3.93	3.93	584	-88	0.58	-76.	475	-72	0.000	380	-68	0.06	0.000
1298	3.93	3.93	740	-81	7.18	29.	608	-75	0.000	448	-66	0.49	0.000
1299	3.93	3.93	0.	-23	0.70	-10.	0.	-20	0.000	4	-20	0.58	0.000
1300	3.93	3.93	0.	-50	1.51	-23.	23	-42	0.000	46	-39	0.91	0.000
1301	3.93	3.93	0.	-71	2.13	-32.	35	-53	0.000	37	-51	1.33	0.000
1302	3.93	3.93	0.	-68	2.05	-31.	7	-52	0.000	3	-51	1.51	0.000

## 2.5.13 SETTO 12

MACROGUSCIO setto\_12

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio ( $f_{yk}$ ): 4500 daN/cm<sup>2</sup>  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.86 per mille  
 deformazione ultima cls : 3.5 per mille  
 rapporto rottura/snervamento ( $k$ ): 1  
 resistenza cilindrica cls ( $f_{ck}$ ): 249 daN/cm<sup>2</sup>  
 coefficiente sicurezza cls : 1.5  
 coefficiente riduttivo ( $\alpha$ ): 0.85  
 copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm  
 moltiplicatore sollecitazioni : 1

LEGENDA:

$s_{pess}$  = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm  
 Af = area disposta al lembo teso, in cm<sup>2</sup> al metro  
 Afc = area disposta al lembo compresso, in cm<sup>2</sup> al metro  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 epsC = deformazione cls [per mille]  
 epsF = deformazione acciaio [per mille]

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L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1096	25	3.93	3.93	130.	36.	0.00	0.30	3.93	3.93	203.	37.	0.00	0.35	18
1097	25	3.93	3.93	142.	43.	0.00	0.35	3.93	3.93	336.	24.	0.00	0.37	19
1098	25	3.93	3.93	112.	42.	0.00	0.32	3.93	3.93	490.	12.	0.04	0.38	19
1099	25	3.93	3.93	105.	40.	0.00	0.31	3.93	3.93	442.	-7.	0.07	0.27	16
1100	25	3.93	3.93	196.	32.	0.00	0.32	3.93	3.93	199.	33.	0.00	0.33	17
1101	25	3.93	3.93	137.	44.	0.00	0.35	3.93	3.93	233.	30.	0.00	0.32	18
1102	25	3.93	3.93	94.	49.	0.00	0.35	3.93	3.93	290.	19.	0.00	0.30	19
1103	25	3.93	3.93	72.	49.	0.00	0.34	3.93	3.93	243.	2.	0.03	0.16	18
1104	25	3.93	3.93	253.	29.	0.00	0.33	3.93	3.93	170.	28.	0.00	0.28	17
1105	25	3.93	3.93	141.	41.	0.00	0.34	3.93	3.93	168.	25.	0.00	0.26	18
1106	25	3.93	3.93	63.	52.	0.00	0.35	3.93	3.93	97.	6.	0.00	0.10	19
1107	25	3.93	3.93	32.	55.	0.00	0.36	3.93	3.93	215.	20.	0.01	0.25	19
1108	25	3.93	3.93	321.	23.	0.00	0.34	3.93	3.93	171.	15.	0.00	0.20	17
1109	25	3.93	3.93	127.	36.	0.00	0.30	3.93	3.93	122.	2.	0.01	0.09	16
1110	25	3.93	3.93	0.	52.	0.00	0.32	3.93	3.93	236.	13.	0.00	0.22	17
1111	25	3.93	3.93	0.	62.	0.00	0.37	3.93	3.93	230.	12.	0.00	0.22	20
1112	25	3.93	3.93	377.	16.	0.00	0.33	3.93	3.93	179.	9.	0.00	0.17	17
1113	25	3.93	3.93	114.	29.	0.00	0.25	3.93	3.93	117.	7.	0.01	0.11	13
1114	25	3.93	3.93	0.	47.	0.00	0.29	3.93	3.93	50.	1.	0.00	0.04	15
1115	25	3.93	3.93	0.	60.	0.00	0.36	3.93	3.93	27.	8.	0.00	0.07	19

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1096	25	3.93	3.93	157.	34.	0.00	0.30	3.93	3.93	66.	42.	0.00	0.29	16
1097	25	3.93	3.93	109.	40.	0.00	0.31	3.93	3.93	217.	24.	0.00	0.28	17
1098	25	3.93	3.93	75.	42.	0.00	0.30	3.93	3.93	453.	8.	0.03	0.35	18
1099	25	3.93	3.93	116.	34.	0.00	0.28	3.93	3.93	497.	-6.	0.08	0.30	16
1100	25	3.93	3.93	166.	34.	0.00	0.31	3.93	3.93	164.	33.	0.00	0.31	16
1101	25	3.93	3.93	210.	43.	0.00	0.39	3.93	3.93	140.	30.	0.00	0.27	20
1102	25	3.93	3.93	188.	49.	0.00	0.42	3.93	3.93	162.	19.	0.00	0.22	22
1103	25	3.93	3.93	138.	51.	0.00	0.39	3.93	3.93	313.	2.	0.05	0.21	21
1104	25	3.93	3.93	357.	27.	0.00	0.39	3.93	3.93	196.	27.	0.00	0.29	20
1105	25	3.93	3.93	249.	43.	0.00	0.42	3.93	3.93	219.	23.	0.00	0.28	22
1106	25	3.93	3.93	254.	51.	0.00	0.47	3.93	3.93	106.	5.	0.00	0.10	25
1107	25	3.93	3.93	211.	59.	0.00	0.49	3.93	3.93	94.	20.	0.01	0.18	26
1108	25	3.93	3.93	429.	23.	0.00	0.40	3.93	3.93	194.	16.	0.00	0.22	21
1109	25	3.93	3.93	269.	37.	0.00	0.40	3.93	3.93	225.	6.	0.03	0.18	21
1110	25	3.93	3.93	273.	52.	0.00	0.49	3.93	3.93	230.	13.	0.00	0.22	25
1111	25	3.93	3.93	222.	62.	0.00	0.51	3.93	3.93	219.	12.	0.00	0.21	27
1112	25	3.93	3.93	473.	16.	0.00	0.39	3.93	3.93	204.	8.	0.00	0.18	20
1113	25	3.93	3.93	283.	28.	0.00	0.35	3.93	3.93	185.	2.	0.02	0.13	18
1114	25	3.93	3.93	319.	44.	0.00	0.48	3.93	3.93	178.	4.	0.02	0.14	25
1115	25	3.93	3.93	261.	58.	0.00	0.52	3.93	3.93	144.	8.	0.02	0.14	27

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ( $R_d > E_d$ )

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vr<sub>cd</sub> = compressione cls d'anima  
 Vr<sub>sd</sub> = trazione armatura trasversale  
 Vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vr <sub>cd</sub> [daN]	Vr <sub>sd</sub> [daN]	alfas	Vr <sub>d,s</sub> [daN]
-5.0	9213	28.94	28.94	21320	261216	90602	-	-
35.0	9213	28.94	28.94	21027	261092	90602	-	-
75.0	9213	28.94	28.94	21027	261092	90602	-	-
115.0	9213	28.94	28.94	19410	260822	90602	-	-
155.0	9213	28.94	28.94	19410	260822	90602	-	-
195.0	9213	28.94	28.94	19410	260822	90602	-	-
235.0	9213	28.94	28.94	15587	260585	90602	-	-
275.0	9213	28.94	28.94	15587	260585	90602	-	-
315.0	9213	28.94	28.94	10660	260335	90602	-	-
355.0	9213	28.94	28.94	10660	260335	90602	-	-
392.5	9213	28.94	28.94	10660	260171	90602	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)  
 Afc = area effettiva compressa (cm2 al metro)  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]

$\sigma_c$  = tensione calcestruzzo [daN/cm<sup>2</sup>]  
 valore max per combinazione rara = 149.4 daN/cm<sup>2</sup>  
 quasi permanente = 112 daN/cm<sup>2</sup>  
 $\sigma_f$  = tensione acciaio [daN/cm<sup>2</sup>]  
 valore max per combinazione rara = 3600 daN/cm<sup>2</sup>  
 $w_{kF}$  = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
 $w_{kP}$  = apertura caratteristica per combinazione quasi permanente (mm) - " " = 0.3 mm

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## ARMATURA INFERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	$\sigma_c$	$\sigma_f$	Mom	Nor	$w_{kF}$	Mom	Nor	$\sigma_c$	$w_{kP}$
1096	3.93	3.93	0.	-1	0.05	-1.	14	-2	0.000	0.	-3	0.13	0.000
1097	3.93	3.93	45	-3	0.93	26.	25	-2	0.001	21	-2	0.36	0.000
1098	3.93	3.93	27	-1	0.60	27.	20	0.	0.002	16	-2	0.27	0.000
1099	3.93	3.93	12	-3	0.22	-1.	19	-1	0.001	14	0.	0.31	0.001
1100	3.93	3.93	0.	-2	0.06	-1.	0.	-2	0.000	0.	-2	0.06	0.000
1101	3.93	3.93	51	-1	1.16	57.	14	-1	0.001	6	-2	0.12	0.000
1102	3.93	3.93	55	-1	1.23	58.	25	0.	0.003	17	-1	0.34	0.001
1103	3.93	3.93	27	-2	0.54	14.	20	0.	0.002	15	-1	0.31	0.001
1104	3.93	3.93	0.	-1	0.04	-1.	0.	-1	0.000	0.	0.	0.02	0.000
1105	3.93	3.93	29	-2	0.56	13.	0.	0.	0.000	0.	0.	0.01	0.000
1106	3.93	3.93	61	-3	1.32	46.	21	-1	0.002	10	0.	0.23	0.002
1107	3.93	3.93	49	0.	1.12	60.	13	0.	0.003	13	1	0.27	0.004
1108	3.93	3.93	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.00	0.000
1109	3.93	3.93	17	-1	0.30	5.	0.	0.	0.000	0.	1	0.00	0.002
1110	3.93	3.93	63	0.	1.45	77.	10	1	0.004	6	2	0.00	0.005
1111	3.93	3.93	60	-2	1.36	59.	17	1	0.006	15	2	0.15	0.008
1112	3.93	3.93	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.001
1113	3.93	3.93	11	0.	0.25	13.	0.	1	0.002	0.	2	0.00	0.004
1114	3.93	3.93	64	-1	1.46	70.	5	2	0.006	3	2	0.00	0.007
1115	3.93	3.93	63	-3	1.37	48.	27	2	0.008	18	3	0.00	0.012

## ARMATURA INFERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	$\sigma_c$	$\sigma_f$	Mom	Nor	$w_{kF}$	Mom	Nor	$\sigma_c$	$w_{kP}$
1096	3.93	3.93	100	-7	1.98	46.	49	-21	0.000	34	-21	1.11	0.000
1097	3.93	3.93	143	-8	2.97	86.	84	-17	0.000	59	-18	1.22	0.000
1098	3.93	3.93	180	-13	3.51	77.	82	-20	0.000	54	-23	1.35	0.000
1099	3.93	3.93	196	-17	3.59	57.	70	-23	0.000	40	-25	1.32	0.000
1100	3.93	3.93	11	-10	0.48	-5.	0.	-16	0.000	0.	-16	0.62	0.000
1101	3.93	3.93	66	-5	1.29	28.	7	-15	0.000	10	-15	0.67	0.000
1102	3.93	3.93	81	-8	1.43	18.	27	-16	0.000	23	-17	0.85	0.000
1103	3.93	3.93	89	-12	1.42	5.	33	-18	0.000	25	-19	0.95	0.000
1104	3.93	3.93	37	-3	0.74	17.	0.	-9	0.000	0.	-11	0.40	0.000
1105	3.93	3.93	29	-3	0.52	8.	0.	-9	0.000	0.	-11	0.42	0.000
1106	3.93	3.93	14	-4	0.26	-1.	0.	-11	0.000	5	-12	0.50	0.000
1107	3.93	3.93	0.	-6	0.24	-4.	0.	-12	0.000	8	-13	0.56	0.000
1108	3.93	3.93	31	-1	0.71	31.	0.	-5	0.000	0.	-6	0.23	0.000
1109	3.93	3.93	17	-1	0.37	14.	0.	-6	0.000	0.	-6	0.24	0.000
1110	3.93	3.93	0.	-1	0.05	-1.	0.	-6	0.000	4	-7	0.30	0.000
1111	3.93	3.93	0.	-2	0.07	-1.	0.	-6	0.000	7	-7	0.34	0.000
1112	3.93	3.93	34	1	0.78	52.	0.	-2	0.000	0.	-2	0.07	0.000
1113	3.93	3.93	24	1	0.54	43.	0.	-2	0.000	0.	-2	0.07	0.000
1114	3.93	3.93	4	1	0.00	18.	0.	-1	0.000	9	-2	0.16	0.000
1115	3.93	3.93	0.	0.	0.00	6.	5	-2	0.000	12	-2	0.19	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	$\sigma_c$	$\sigma_f$	Mom	Nor	$w_{kF}$	Mom	Nor	$\sigma_c$	$w_{kP}$
1096	3.93	3.93	41	-1	0.90	36.	9	-2	0.000	21	-3	0.33	0.000
1097	3.93	3.93	21	-3	0.35	2.	7	-2	0.000	7	-2	0.03	0.000
1098	3.93	3.93	0.	-1	0.02	0.	3	0.	0.000	2	-2	0.06	0.000
1099	3.93	3.93	9	-3	0.04	-3.	0.	-1	0.000	0.	0.	0.00	0.000
1100	3.93	3.93	108	-2	2.46	120.	59	-2	0.004	44	-2	0.98	0.003
1101	3.93	3.93	38	-1	0.87	40.	22	-1	0.001	17	-2	0.29	0.000
1102	3.93	3.93	19	-1	0.39	12.	15	0.	0.001	11	-1	0.20	0.000
1103	3.93	3.93	22	-2	0.43	9.	13	0.	0.001	14	-1	0.28	0.001
1104	3.93	3.93	129	-1	2.94	153.	70	-1	0.007	49	0.	1.11	0.005
1105	3.93	3.93	48	-2	1.04	37.	30	0.	0.003	24	0.	0.54	0.002
1106	3.93	3.93	18	-3	0.28	1.	15	-1	0.001	15	0.	0.35	0.002
1107	3.93	3.93	20	0.	0.46	22.	16	0.	0.003	15	1	0.32	0.004
1108	3.93	3.93	137	-1	3.13	169.	71	0.	0.008	51	0.	1.17	0.006
1109	3.93	3.93	57	-1	1.27	55.	38	0.	0.004	30	1	0.69	0.006
1110	3.93	3.93	16	0.	0.35	15.	19	1	0.005	20	2	0.39	0.007
1111	3.93	3.93	15	-2	0.25	3.	15	1	0.006	14	2	0.12	0.008
1112	3.93	3.93	144	0.	3.29	189.	72	0.	0.009	51	0.	1.18	0.007
1113	3.93	3.93	63	0.	1.43	81.	42	1	0.007	35	2	0.78	0.008
1114	3.93	3.93	14	-1	0.26	5.	22	2	0.008	23	2	0.39	0.010
1115	3.93	3.93	9	-3	0.02	-2.	8	2	0.006	11	3	0.00	0.010

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	$\sigma_c$	$\sigma_f$	Mom	Nor	$w_{kF}$	Mom	Nor	$\sigma_c$	$w_{kP}$
1096	3.93	3.93	0.	-7	0.26	-4.	0.	-21	0.000	0.	-21	0.80	0.000
1097	3.93	3.93	0.	-8	0.30	-5.	0.	-17	0.000	0.	-18	0.69	0.000
1098	3.93	3.93	0.	-13	0.50	-7.	0.	-20	0.000	0.	-23	0.86	0.000
1099	3.93	3.93	0.	-17	0.66	-10.	0.	-23	0.000	0.	-25	0.96	0.000
1100	3.93	3.93	35	-10	0.07	-9.	18	-16	0.000	13	-16	0.50	0.000
1101	3.93	3.93	8	-5	0.11	-4.	1	-15	0.000	9	-15	0.51	0.000
1102	3.93	3.93	0.	-8	0.30	-5.	0.	-16	0.000	6	-17	0.59	0.000
1103	3.93	3.93	0.	-12	0.47	-7.	0.	-18	0.000	5	-19	0.67	0.000

1104	3.93	3.93	60	-3	1.30	45.	14	-9	0.000	14	-11	0.28	0.000
1105	3.93	3.93	65	-3	1.40	51.	15	-9	0.000	16	-11	0.28	0.000
1106	3.93	3.93	64	-4	1.32	38.	14	-11	0.000	17	-12	0.29	0.000
1107	3.93	3.93	65	-6	1.13	14.	17	-12	0.000	18	-13	0.33	0.000
1108	3.93	3.93	38	-1	0.85	39.	9	-5	0.000	16	-6	0.09	0.000
1109	3.93	3.93	60	-1	1.37	70.	10	-6	0.000	17	-6	0.09	0.000
1110	3.93	3.93	60	-1	1.34	60.	16	-6	0.000	20	-7	0.08	0.000
1111	3.93	3.93	65	-2	1.44	60.	23	-6	0.000	22	-7	0.09	0.000
1112	3.93	3.93	28	1	0.64	45.	12	-2	0.000	13	-2	0.21	0.000
1113	3.93	3.93	43	1	0.97	67.	12	-2	0.000	14	-2	0.23	0.000
1114	3.93	3.93	42	1	0.96	68.	11	-1	0.000	16	-2	0.26	0.000
1115	3.93	3.93	35	0.	0.81	53.	11	-2	0.000	15	-2	0.23	0.000

## 2.5.14 SETTO 13

MACROGUSCIO setto\_13

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	1.15	
deformazione ultima acciaio	1.86	per mille
deformazione ultima cls	3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

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L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1308	30	3.93	3.93	285.	72.	0.00	0.58	3.93	3.93	327.	52.	0.00	0.48	31
1309	30	3.93	3.93	0.	85.	0.00	0.52	3.93	3.93	84.	65.	0.00	0.44	28
1310	30	3.93	3.93	0.	107.	0.00	0.65	3.93	3.93	179.	64.	0.00	0.48	35
1311	30	3.93	3.93	12.	101.	0.00	0.62	3.93	3.93	400.	48.	0.00	0.49	33
1312	30	3.93	3.93	53.	84.	0.00	0.53	3.93	3.93	357.	38.	0.00	0.41	29
1313	30	3.93	3.93	97.	60.	0.00	0.41	3.93	3.93	198.	21.	0.01	0.23	22
1314	30	3.93	3.93	131.	57.	0.00	0.41	3.93	3.93	0.	51.	0.00	0.31	22
1315	30	3.93	3.93	0.	87.	0.00	0.53	3.93	3.93	0.	53.	0.00	0.32	28
1316	30	3.93	3.93	0.	99.	0.00	0.60	3.93	3.93	0.	51.	0.00	0.31	32
1317	30	3.93	3.93	0.	102.	0.00	0.62	3.93	3.93	0.	50.	0.00	0.31	33
1318	30	3.93	3.93	0.	89.	0.00	0.54	3.93	3.93	0.	49.	0.00	0.30	29
1319	30	3.93	3.93	235.	73.	0.00	0.56	3.93	3.93	0.	62.	0.00	0.37	30

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1308	30	3.93	3.93	117.	77.	0.00	0.53	3.93	3.93	448.	52.	0.00	0.55	28
1309	30	3.93	3.93	202.	85.	0.00	0.62	3.93	3.93	433.	64.	0.00	0.61	33
1310	30	3.93	3.93	187.	103.	0.00	0.72	3.93	3.93	422.	61.	0.00	0.59	38
1311	30	3.93	3.93	174.	101.	0.00	0.70	3.93	3.93	385.	48.	0.00	0.48	37
1312	30	3.93	3.93	96.	86.	0.00	0.57	3.93	3.93	374.	29.	0.00	0.41	30
1313	30	3.93	3.93	24.	59.	0.00	0.37	3.93	3.93	311.	21.	0.03	0.28	20
1314	30	3.93	3.93	52.	60.	0.00	0.39	3.93	3.93	589.	51.	0.00	0.61	31
1315	30	3.93	3.93	213.	85.	0.00	0.62	3.93	3.93	862.	53.	0.00	0.75	39
1316	30	3.93	3.93	265.	97.	0.00	0.72	3.93	3.93	1180.	51.	0.00	0.90	47
1317	30	3.93	3.93	256.	100.	0.00	0.74	3.93	3.93	1235.	50.	0.00	0.93	48
1318	30	3.93	3.93	332.	89.	0.00	0.71	3.93	3.93	1199.	48.	0.00	0.89	46
1319	30	3.93	3.93	120.	80.	0.00	0.55	3.93	3.93	948.	56.	0.00	0.82	42

L'ARMATURA È OVUNQUE &gt; DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd &gt; Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vr<sub>cd</sub> = compressione cls d'anima  
vr<sub>sd</sub> = trazione armatura trasversale  
vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vrzd [daN]	Vrzd [daN]	alfas	Vrd,s [daN]
-180.0	15718	41.15	41.15	66524	444848	128816	-	-
-140.0	15718	41.15	41.15	65558	444487	128816	-	-
-100.0	15718	41.15	41.15	65558	444487	128816	-	-
-60.0	15718	41.15	41.15	64593	444125	128816	-	-
-32.5	15718	41.15	41.15	64593	444125	128816	-	-

**VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)**

CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)

Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm2]

valore max per combinazione rara = 149.4 daN/cm2  
 valore max per combinazione quasi permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]

valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

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**ARMATURA INFERIORE ORIZZONTALE**

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1308	3.93	3.93	35	17	0.00	254.	29	18	0.062	172	23	0.00	0.096
1309	3.93	3.93	0.	19	0.00	240.	0.	21	0.068	0.	23	0.00	0.074
1310	3.93	3.93	0.	36	0.00	456.	0.	33	0.107	0.	35	0.00	0.111
1311	3.93	3.93	0.	46	0.00	585.	0.	38	0.123	0.	36	0.00	0.115
1312	3.93	3.93	0.	42	0.00	538.	0.	33	0.105	0.	28	0.00	0.088
1313	3.93	3.93	40	23	0.00	341.	30	14	0.049	70	10	0.00	0.042
1314	3.93	3.93	38	28	0.00	395.	36	19	0.066	75	14	0.00	0.055
1315	3.93	3.93	0.	44	0.00	565.	0.	34	0.110	0.	30	0.00	0.094
1316	3.93	3.93	0.	44	0.00	557.	0.	36	0.116	0.	34	0.00	0.110
1317	3.93	3.93	0.	30	0.00	386.	0.	30	0.096	0.	32	0.00	0.104
1318	3.93	3.93	0.	14	0.00	174.	0.	17	0.053	0.	22	0.00	0.071
1319	3.93	3.93	12	13	0.00	176.	12	15	0.051	93	25	0.00	0.092

**ARMATURA INFERIORE VERTICALE**

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1308	3.93	3.93	0.	-5	0.17	-3.	0.	-5	0.000	0.	3	0.00	0.009
1309	3.93	3.93	0.	-14	0.44	-7.	0.	0.	0.000	0.	7	0.00	0.021
1310	3.93	3.93	0.	-3	0.10	-1.	0.	7	0.023	0.	9	0.00	0.028
1311	3.93	3.93	0.	2	0.00	31.	0.	6	0.020	0.	3	0.00	0.009
1312	3.93	3.93	0.	2	0.00	19.	0.	1	0.003	0.	1	0.00	0.005
1313	3.93	3.93	0.	0.	0.00	1.	0.	-3	0.000	15	-2	0.17	0.000
1314	3.93	3.93	0.	5	0.00	63.	0.	3	0.010	0.	13	0.00	0.043
1315	3.93	3.93	0.	-1	0.04	-1.	0.	0.	0.001	0.	6	0.00	0.019
1316	3.93	3.93	0.	-9	0.29	-4.	0.	-3	0.000	0.	-1	0.03	0.000
1317	3.93	3.93	0.	-19	0.60	-9.	0.	-7	0.000	0.	-4	0.12	0.000
1318	3.93	3.93	0.	-29	0.94	-14.	0.	-13	0.000	0.	-7	0.22	0.000
1319	3.93	3.93	0.	-23	0.74	-11.	0.	-10	0.000	0.	9	0.00	0.027

**ARMATURA SUPERIORE ORIZZONTALE**

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1308	3.93	3.93	68	17	0.00	292.	60	18	0.066	0.	23	0.00	0.072
1309	3.93	3.93	207	19	2.02	474.	176	21	0.092	185	23	0.00	0.100
1310	3.93	3.93	179	36	0.00	664.	151	33	0.127	126	35	0.00	0.128
1311	3.93	3.93	172	46	0.00	784.	148	38	0.143	143	36	0.00	0.135
1312	3.93	3.93	139	42	0.00	698.	121	33	0.122	106	28	0.00	0.103
1313	3.93	3.93	10	23	0.00	306.	10	14	0.046	0.	10	0.00	0.032
1314	3.93	3.93	93	28	0.00	459.	82	19	0.072	0.	14	0.00	0.045
1315	3.93	3.93	247	44	0.00	851.	212	34	0.139	162	30	0.00	0.117
1316	3.93	3.93	244	44	0.00	839.	205	36	0.144	194	34	0.00	0.137
1317	3.93	3.93	206	30	0.00	624.	176	30	0.120	201	32	0.00	0.132
1318	3.93	3.93	309	14	4.56	508.	261	17	0.081	219	22	1.75	0.097
1319	3.93	3.93	156	13	1.75	336.	131	15	0.066	0.	25	0.00	0.080

**ARMATURA SUPERIORE VERTICALE**

		COMBINAZIONE RARA					COMB. FREQUENTE			COMB. QUASI PERMANENTE			
GUSCI	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1308	3.93	3.93	364	-5	5.84	312.	324	-5	0.028	219	3	3.51	0.032
1309	3.93	3.93	504	-14	7.91	354.	444	0.	0.049	325	7	5.16	0.056
1310	3.93	3.93	502	-3	8.10	487.	437	7	0.069	273	9	4.22	0.056
1311	3.93	3.93	445	2	7.18	499.	384	6	0.061	260	3	4.18	0.037
1312	3.93	3.93	346	2	5.59	383.	289	1	0.035	216	1	3.48	0.028
1313	3.93	3.93	246	0.	3.98	260.	196	-3	0.017	144	-2	2.32	0.013

1314	3.93	3.93	618	5	9.95	714.	541	3	0.069	319	13	4.76	0.076
1315	3.93	3.93	893	-1	14.43	920.	773	0.	0.088	596	6	9.59	0.083
1316	3.93	3.93	1135	-9	18.32	1073.	976	-3	0.105	846	-1	13.68	0.094
1317	3.93	3.93	1162	-19	18.62	980.	994	-7	0.100	908	-4	14.67	0.096
1318	3.93	3.93	1131	-29	17.81	811.	971	-13	0.088	793	-7	12.79	0.078
1319	3.93	3.93	928	-23	14.65	680.	810	-10	0.076	467	9	7.43	0.077

## 2.5.15 SETTO 14

MACROGUSCIO setto\_14

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTYO
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.86	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento	(k): 1	
resistenza cilindrica cls	(fck): 249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo	(alfa): 0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

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L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSC	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1335	30	3.93	3.93	46.	43.	0.00	0.29	3.93	3.93	0.	28.	0.00	0.17	15
1336	30	3.93	3.93	0.	42.	0.00	0.25	3.93	3.93	0.	-36.	0.01	-0.01	14
1337	30	3.93	3.93	0.	60.	0.00	0.36	3.93	3.93	0.	-11.	0.00	0.07	19
1338	30	3.93	3.93	0.	62.	0.00	0.38	3.93	3.93	0.	47.	0.00	0.29	20
1339	30	3.93	3.93	0.	91.	0.00	0.55	3.93	3.93	76.	59.	0.00	0.40	30
1340	30	3.93	3.93	0.	84.	0.00	0.51	3.93	3.93	0.	39.	0.00	0.24	27
1341	30	3.93	3.93	265.	92.	0.00	0.69	3.93	3.93	0.	67.	0.00	0.41	37
1342	30	3.93	3.93	249.	97.	0.00	0.72	3.93	3.93	158.	73.	0.00	0.52	38

GUSC	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1335	30	3.93	3.93	79.	41.	0.00	0.29	3.93	3.93	498.	25.	0.00	0.40	21
1336	30	3.93	3.93	200.	34.	0.00	0.32	3.93	3.93	1142.	-26.	0.14	0.52	27
1337	30	3.93	3.93	283.	56.	0.00	0.48	3.93	3.93	984.	-11.	0.12	0.50	25
1338	30	3.93	3.93	190.	62.	0.00	0.47	3.93	3.93	463.	39.	0.00	0.47	25
1339	30	3.93	3.93	204.	91.	0.00	0.65	3.93	3.93	330.	57.	0.00	0.51	35
1340	30	3.93	3.93	303.	77.	0.00	0.62	3.93	3.93	777.	32.	0.00	0.58	33
1341	30	3.93	3.93	81.	104.	0.00	0.67	3.93	3.93	560.	65.	0.00	0.68	36
1342	30	3.93	3.93	35.	101.	0.00	0.63	3.93	3.93	127.	70.	0.00	0.50	34

L'ARMATURA È OVUNQUE &gt; DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd &gt; Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vr<sub>cd</sub> = compressione cls d'anima  
Vr<sub>sd</sub> = trazione armatura trasversale  
Vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vr <sub>cd</sub> [daN]	Vr <sub>sd</sub> [daN]	alfas	Vr <sub>d,s</sub> [daN]
-180.0	9493	24.85	24.85	33507	269346	77800	-	-
-140.0	9493	24.85	24.85	36297	269340	77800	-	-
-100.0	9493	24.85	24.85	36297	269340	77800	-	-
-60.0	9493	24.85	24.85	39088	269333	77800	-	-
-32.5	9493	24.85	24.85	39088	269333	77800	-	-

## VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)

- 11 Frequente (FREQUENTE)  
 12 Frequente VentoY (FREQUENTE)  
 13 Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)  
 Afc = area effettiva compressa (cm2 al metro)  
 Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm2]  
 valore max per combinazione rara = 149.4 daN/cm2  
 quasi permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]  
 valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
 wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

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## ARMATURA INFERIORE ORIZZONTALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1335	3.93	3.93	0.	-8	0.26	-4.	0.	0.	0.000	0.	2	0.00	0.008
1336	3.93	3.93	0.	-8	0.27	-4.	0.	-2	0.000	0.	-2	0.06	0.000
1337	3.93	3.93	0.	-1	0.03	0.	0.	7	0.023	0.	12	0.00	0.037
1338	3.93	3.93	0.	9	0.00	116.	0.	19	0.061	0.	24	0.00	0.078
1339	3.93	3.93	0.	33	0.00	415.	0.	41	0.130	0.	41	0.00	0.131
1340	3.93	3.93	0.	15	0.00	194.	0.	24	0.078	0.	31	0.00	0.098
1341	3.93	3.93	74	49	0.00	711.	69	48	0.162	135	44	0.00	0.161
1342	3.93	3.93	45	57	0.00	774.	38	54	0.176	165	44	0.00	0.163

## ARMATURA INFERIORE VERTICALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1335	3.93	3.93	0.	-31	0.99	-15.	0.	-9	0.000	0.	-5	0.16	0.000
1336	3.93	3.93	0.	-60	1.93	-29.	0.	-37	0.000	0.	-26	0.82	0.000
1337	3.93	3.93	0.	-51	1.63	-24.	0.	-29	0.000	0.	-18	0.59	0.000
1338	3.93	3.93	0.	-21	0.69	-10.	0.	-2	0.000	0.	4	0.00	0.014
1339	3.93	3.93	0.	-15	0.48	-7.	0.	3	0.009	0.	10	0.00	0.031
1340	3.93	3.93	0.	-35	1.12	-17.	0.	-16	0.000	0.	-11	0.35	0.000
1341	3.93	3.93	0.	-28	0.90	-14.	0.	-10	0.000	0.	13	0.00	0.042
1342	3.93	3.93	24	-3	0.26	1.	0.	2	0.007	5	21	0.00	0.068

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1335	3.93	3.93	122	-8	1.62	34.	105	0.	0.011	90	2	1.41	0.017
1336	3.93	3.93	214	-8	3.24	119.	178	-2	0.016	175	-2	2.83	0.017
1337	3.93	3.93	274	-1	4.43	277.	228	7	0.047	243	12	3.54	0.062
1338	3.93	3.93	154	9	2.11	284.	128	19	0.079	145	24	0.00	0.098
1339	3.93	3.93	179	33	0.00	621.	153	41	0.151	137	41	0.00	0.149
1340	3.93	3.93	256	15	3.48	474.	216	24	0.106	213	31	0.00	0.127
1341	3.93	3.93	138	49	0.00	786.	121	48	0.169	0.	44	0.00	0.142
1342	3.93	3.93	0.	57	0.00	721.	0.	54	0.171	0.	44	0.00	0.141

## ARMATURA SUPERIORE VERTICALE

		COMBINAZIONE RARA					COMB. FREQUENTE			COMB. QUASI PERMANENTE			
GUSCI	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1335	3.93	3.93	624	-31	9.09	278.	561	-9	0.048	405	-5	6.52	0.038
1336	3.93	3.93	1431	-60	21.48	753.	1148	-37	0.073	1000	-26	15.76	0.073
1337	3.93	3.93	1279	-51	19.36	707.	1036	-29	0.073	840	-18	13.33	0.066
1338	3.93	3.93	524	-21	7.90	283.	472	-2	0.050	386	4	6.20	0.056
1339	3.93	3.93	444	-15	6.86	277.	397	3	0.052	317	10	4.90	0.064
1340	3.93	3.93	961	-35	14.72	571.	782	-16	0.064	621	-11	9.92	0.053
1341	3.93	3.93	730	-28	11.09	414.	595	-10	0.051	403	13	6.21	0.084
1342	3.93	3.93	201	-3	3.22	175.	322	2	0.043	180	21	0.67	0.091

## 2.5.16 SETTO 15

MACROGUSCIO setto\_15

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

- Nome Descrizione  
 1 SLU  
 2 SLU VENTOY  
 5 SLU con SISMAX PRINC  
 6 SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.86 per mille  
 deformazione ultima cls : 3.5 per mille  
 rapporto rottura/snervamento (k): 1  
 resistenza cilindrica cls (fck): 249 daN/cm2  
 coefficiente sicurezza cls : 1.5  
 coefficiente riduttivo (alfa): 0.85



1349	3.93	3.93	0.	-3	0.10	-2.	0.	-9	0.000	0.	-6	0.20	0.000
1350	3.93	3.93	0.	-5	0.18	-3.	0.	-1	0.000	0.	-4	0.13	0.000

## ARMATURA INFERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1343	3.93	3.93	0.	-39	1.25	-19.	0.	-22	0.000	0.	-19	0.62	0.000
1344	3.93	3.93	0.	-54	1.74	-26.	0.	-37	0.000	0.	-34	1.11	0.000
1345	3.93	3.93	0.	-49	1.57	-24.	0.	-32	0.000	0.	-25	0.81	0.000
1346	3.93	3.93	0.	-35	1.11	-17.	0.	-19	0.000	0.	-13	0.42	0.000
1347	3.93	3.93	0.	-38	1.22	-18.	0.	-21	0.000	0.	-13	0.40	0.000
1348	3.93	3.93	0.	-49	1.58	-24.	0.	-31	0.000	0.	-21	0.67	0.000
1349	3.93	3.93	0.	-49	1.57	-24.	0.	-30	0.000	0.	-25	0.79	0.000
1350	3.93	3.93	0.	-39	1.25	-19.	0.	-21	0.000	0.	-19	0.59	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1343	3.93	3.93	103	-12	1.13	4.	86	-7	0.001	99	-4	1.50	0.005
1344	3.93	3.93	170	-10	2.39	61.	140	-5	0.009	148	-6	2.25	0.008
1345	3.93	3.93	185	-6	2.88	122.	150	-8	0.006	164	-7	2.44	0.008
1346	3.93	3.93	125	-5	1.87	64.	103	-8	0.002	112	-4	1.70	0.006
1347	3.93	3.93	142	-2	2.28	128.	115	-5	0.005	123	-2	1.96	0.010
1348	3.93	3.93	212	-9	3.16	107.	170	-4	0.013	180	-4	2.86	0.015
1349	3.93	3.93	213	-3	3.42	183.	176	-9	0.007	182	-6	2.82	0.011
1350	3.93	3.93	134	-5	2.02	72.	112	-1	0.011	96	-4	1.44	0.005

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1343	3.93	3.93	749	-39	10.80	314.	659	-22	0.041	416	-19	6.14	0.019
1344	3.93	3.93	1569	-54	24.16	963.	1231	-37	0.082	1066	-34	16.52	0.068
1345	3.93	3.93	1524	-49	23.63	980.	1209	-32	0.087	1064	-25	16.84	0.081
1346	3.93	3.93	715	-35	10.46	327.	623	-19	0.041	443	-13	6.91	0.030
1347	3.93	3.93	704	-38	10.03	279.	616	-21	0.038	436	-13	6.82	0.030
1348	3.93	3.93	1535	-49	23.81	989.	1228	-31	0.090	1084	-21	17.28	0.089
1349	3.93	3.93	1538	-49	23.86	994.	1235	-30	0.092	1093	-25	17.33	0.085
1350	3.93	3.93	627	-39	8.59	201.	553	-21	0.031	400	-19	5.90	0.018

## 2.5.17 SETTO 16

MACROGUSCIO setto\_16

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.86	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento	(k): 1	
resistenza cilindrica cls	(fck): 249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo	(alfa): 0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1351	30	3.93	3.93	0.	-3.	0.00	0.00	3.93	3.93	0.	-27.	0.01	-0.01	1
1352	30	3.93	3.93	0.	-5.	0.00	0.00	3.93	3.93	0.	-13.	0.00	0.00	0
1353	30	3.93	3.93	0.	15.	0.00	0.09	3.93	3.93	0.	-8.	0.00	0.00	5
1354	30	3.93	3.93	0.	-3.	0.00	0.02	3.93	3.93	0.	-20.	0.00	0.00	1
1355	30	3.93	3.93	0.	7.	0.00	0.04	3.93	3.93	0.	-19.	0.00	0.00	2
1356	30	3.93	3.93	0.	8.	0.00	0.05	3.93	3.93	0.	-25.	0.01	-0.01	2
1357	30	3.93	3.93	0.	-9.	0.00	0.00	3.93	3.93	0.	-34.	0.01	-0.01	1
1358	30	3.93	3.93	0.	-8.	0.00	0.00	3.93	3.93	0.	-28.	0.01	-0.01	1

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1351	30	3.93	3.93	320.	-1.	0.04	0.16	3.93	3.93	2125.	-24.	0.25	0.98	50
1352	30	3.93	3.93	169.	-5.	0.02	0.08	3.93	3.93	674.	-7.	0.08	0.33	17
1353	30	3.93	3.93	121.	15.	0.00	0.15	3.93	3.93	680.	-4.	0.08	0.33	17
1354	30	3.93	3.93	202.	-3.	0.02	0.10	3.93	3.93	2137.	-18.	0.25	1.01	51
1355	30	3.93	3.93	271.	7.	0.01	0.18	3.93	3.93	2102.	-19.	0.24	0.99	51
1356	30	3.93	3.93	153.	6.	0.01	0.12	3.93	3.93	697.	-16.	0.08	0.33	17
1357	30	3.93	3.93	113.	-9.	0.02	0.06	3.93	3.93	730.	-30.	0.09	0.33	17
1358	30	3.93	3.93	231.	-8.	0.03	0.11	3.93	3.93	2138.	-27.	0.25	0.98	50

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ( $R_d > E_d$ )

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vr<sub>cd</sub> = compressione cls d'anima  
Vr<sub>sd</sub> = trazione armatura trasversale  
Vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vr <sub>cd</sub> [daN]	Vr <sub>sd</sub> [daN]	alfas	Vr <sub>d,s</sub> [daN]
-180.0	9492	24.85	24.85	9212	270009	77791	-	-
-140.0	9492	24.85	24.85	9055	269841	77791	-	-
-100.0	9492	24.85	24.85	9055	269841	77791	-	-
-60.0	9492	24.85	24.85	8898	269673	77791	-	-
-32.5	9492	24.85	24.85	8898	269673	77791	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)  
Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm2]

valore max per combinazione rara = 149.4 daN/cm2  
quasi permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]

valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

#### ARMATURA INFERIORE ORIZZONTALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1351	3.93	3.93	0.	-13	0.42	-6.	0.	-9	0.000	0.	-10	0.33	0.000
1352	3.93	3.93	0.	-16	0.52	-8.	0.	-11	0.000	0.	-9	0.29	0.000
1353	3.93	3.93	0.	-12	0.39	-6.	0.	-8	0.000	0.	-5	0.15	0.000
1354	3.93	3.93	0.	-12	0.37	-6.	0.	-7	0.000	0.	-7	0.23	0.000
1355	3.93	3.93	0.	-7	0.24	-4.	0.	-4	0.000	0.	-4	0.14	0.000
1356	3.93	3.93	0.	-12	0.38	-6.	0.	-7	0.000	0.	-6	0.18	0.000
1357	3.93	3.93	0.	-16	0.53	-8.	0.	-12	0.000	0.	-8	0.25	0.000
1358	3.93	3.93	0.	-11	0.34	-5.	0.	-6	0.000	0.	-7	0.23	0.000

#### ARMATURA INFERIORE VERTICALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1351	3.93	3.93	0.	-54	1.75	-26.	0.	-41	0.000	0.	-39	1.26	0.000
1352	3.93	3.93	0.	-43	1.38	-21.	0.	-29	0.000	0.	-27	0.88	0.000
1353	3.93	3.93	0.	-39	1.25	-19.	0.	-27	0.000	0.	-22	0.71	0.000
1354	3.93	3.93	0.	-50	1.60	-24.	0.	-37	0.000	0.	-31	1.01	0.000
1355	3.93	3.93	0.	-50	1.61	-24.	0.	-36	0.000	0.	-28	0.89	0.000
1356	3.93	3.93	0.	-43	1.38	-21.	0.	-29	0.000	0.	-22	0.72	0.000
1357	3.93	3.93	0.	-45	1.45	-22.	0.	-31	0.000	0.	-29	0.93	0.000
1358	3.93	3.93	0.	-51	1.63	-24.	0.	-42	0.000	0.	-32	1.02	0.000

#### ARMATURA SUPERIORE ORIZZONTALE

		COMBINAZIONE RARA					COMB. FREQUENTE			COMB. QUASI PERMANENTE			
GUSCI	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1351	3.93	3.93	215	-13	2.96	71.	184	-9	0.007	185	-10	2.62	0.006
1352	3.93	3.93	119	-16	1.32	2.	106	-11	0.000	107	-9	1.29	0.001
1353	3.93	3.93	139	-12	1.66	19.	117	-8	0.003	130	-5	1.98	0.007
1354	3.93	3.93	216	-12	3.09	87.	179	-7	0.009	186	-7	2.83	0.010
1355	3.93	3.93	182	-7	2.75	99.	150	-4	0.011	167	-4	2.62	0.012
1356	3.93	3.93	131	-12	1.54	17.	108	-7	0.002	115	-6	1.69	0.005
1357	3.93	3.93	99	-16	0.09	-15.	83	-12	0.000	96	-8	1.19	0.001
1358	3.93	3.93	164	-11	2.21	48.	137	-6	0.006	150	-7	2.19	0.006

#### ARMATURA SUPERIORE VERTICALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1351	3.93	3.93	1580	-54	24.33	972.	1226	-41	0.076	1044	-39	15.92	0.058
1352	3.93	3.93	684	-43	9.32	213.	588	-29	0.024	367	-27	4.69	0.006
1353	3.93	3.93	704	-39	9.97	270.	605	-27	0.029	425	-22	6.12	0.016
1354	3.93	3.93	1509	-50	23.34	955.	1176	-37	0.076	1034	-31	16.12	0.069
1355	3.93	3.93	1504	-50	23.23	944.	1177	-36	0.077	1024	-28	16.08	0.073
1356	3.93	3.93	715	-43	9.87	240.	616	-29	0.026	436	-22	6.29	0.017
1357	3.93	3.93	639	-45	8.34	157.	555	-31	0.019	410	-29	5.35	0.008
1358	3.93	3.93	1503	-51	23.19	937.	1181	-42	0.070	1045	-32	16.27	0.069

## 2.5.18 SETTO 17

MACROGUSCIO setto\_17

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.86	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
756	30	3.93	3.93	0.	-8.	0.00	0.00	3.93	3.93	0.	-25.	0.01	-0.01	1
757	30	3.93	3.93	0.	-9.	0.00	0.00	3.93	3.93	0.	-19.	0.00	0.00	0
758	30	3.93	3.93	0.	8.	0.00	0.05	3.93	3.93	0.	-20.	0.00	0.00	2
759	30	3.93	3.93	0.	6.	0.00	0.04	3.93	3.93	0.	-27.	0.01	-0.01	2
760	30	3.93	3.93	0.	-10.	0.00	0.00	3.93	3.93	0.	-31.	0.01	-0.01	1
761	30	3.93	3.93	0.	15.	0.00	0.09	3.93	3.93	0.	-25.	0.01	-0.01	5
762	30	3.93	3.93	0.	14.	0.00	0.08	3.93	3.93	0.	-20.	0.00	0.00	4
763	30	3.93	3.93	102.	6.	0.00	0.09	3.93	3.93	48.	-29.	0.01	0.02	5
GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
756	30	3.93	3.93	251.	-8.	0.03	0.12	3.93	3.93	2073.	-25.	0.24	0.95	49
757	30	3.93	3.93	250.	-2.	0.03	0.12	3.93	3.93	2042.	-19.	0.24	0.96	49
758	30	3.93	3.93	235.	5.	0.00	0.15	3.93	3.93	2098.	-19.	0.24	0.98	50
759	30	3.93	3.93	238.	5.	0.00	0.15	3.93	3.93	2144.	-24.	0.25	0.99	51
760	30	3.93	3.93	88.	-8.	0.01	0.04	3.93	3.93	384.	-28.	0.05	0.17	9
761	30	3.93	3.93	37.	15.	0.01	0.11	3.93	3.93	374.	-21.	0.05	0.17	9
762	30	3.93	3.93	108.	10.	0.00	0.11	3.93	3.93	391.	-12.	0.05	0.19	10
763	30	3.93	3.93	78.	9.	0.00	0.09	3.93	3.93	433.	-10.	0.05	0.21	11

L'ARMATURA È OVUNQUE &gt; DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd &gt; Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vr<sub>cd</sub> = compressione cls d'anima  
Vr<sub>sd</sub> = trazione armatura trasversale  
Vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	Vr <sub>cd</sub> [daN]	Vr <sub>sd</sub> [daN]	alfas	Vr <sub>d,s</sub> [daN]
-180.0	9494	24.85	24.85	8733	270099	77806	-	-
-140.0	9494	24.85	24.85	8984	269917	77806	-	-
-100.0	9494	24.85	24.85	8984	269917	77806	-	-
-60.0	9494	24.85	24.85	9235	269735	77806	-	-
-32.5	9494	24.85	24.85	9235	269735	77806	-	-

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

## CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

## DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)  
 Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm2]  
 valore max per combinazione rara = 149.4 daN/cm2  
 quasi permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]  
 valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

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## ARMATURA INFERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
756	3.93	3.93	0.	-14	0.44	-7.	0.	-11	0.000	0.	-12	0.39	0.000
757	3.93	3.93	0.	-11	0.35	-5.	0.	-9	0.000	0.	-9	0.28	0.000
758	3.93	3.93	0.	-8	0.26	-4.	0.	-5	0.000	0.	-5	0.15	0.000
759	3.93	3.93	0.	-10	0.31	-5.	0.	-5	0.000	0.	-5	0.16	0.000
760	3.93	3.93	0.	-17	0.55	-8.	0.	-10	0.000	0.	-11	0.37	0.000
761	3.93	3.93	0.	-11	0.36	-5.	0.	-7	0.000	0.	-5	0.17	0.000
762	3.93	3.93	0.	-10	0.31	-5.	0.	-6	0.000	0.	-4	0.12	0.000
763	3.93	3.93	0.	-12	0.38	-6.	0.	-7	0.000	0.	-4	0.12	0.000

## ARMATURA INFERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
756	3.93	3.93	0.	-61	1.95	-29.	0.	-48	0.000	0.	-39	1.25	0.000
757	3.93	3.93	0.	-54	1.73	-26.	0.	-43	0.000	0.	-35	1.12	0.000
758	3.93	3.93	0.	-55	1.75	-26.	0.	-40	0.000	0.	-32	1.01	0.000
759	3.93	3.93	0.	-62	1.98	-30.	0.	-44	0.000	0.	-35	1.11	0.000
760	3.93	3.93	0.	-46	1.49	-22.	0.	-36	0.000	0.	-29	0.94	0.000
761	3.93	3.93	0.	-41	1.30	-20.	0.	-32	0.000	0.	-24	0.76	0.000
762	3.93	3.93	0.	-44	1.40	-21.	0.	-30	0.000	0.	-24	0.76	0.000
763	3.93	3.93	0.	-46	1.48	-22.	0.	-31	0.000	0.	-28	0.91	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
756	3.93	3.93	182	-14	2.31	39.	160	-11	0.003	148	-12	1.81	0.002
757	3.93	3.93	163	-11	2.16	45.	131	-9	0.003	123	-9	1.59	0.002
758	3.93	3.93	173	-8	2.56	83.	136	-5	0.008	129	-5	1.98	0.007
759	3.93	3.93	157	-10	2.16	52.	131	-5	0.007	130	-5	1.98	0.007
760	3.93	3.93	49	-17	0.24	-12.	42	-10	0.000	43	-11	0.10	0.000
761	3.93	3.93	50	-11	0.04	-9.	32	-7	0.000	40	-5	0.44	0.000
762	3.93	3.93	82	-10	0.90	3.	59	-6	0.000	62	-4	0.86	0.002
763	3.93	3.93	82	-12	0.91	1.	69	-7	0.000	56	-4	0.76	0.001

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
756	3.93	3.93	1670	-61	25.57	989.	1320	-48	0.077	1010	-39	15.35	0.055
757	3.93	3.93	1593	-54	24.57	990.	1267	-43	0.077	970	-35	14.87	0.057
758	3.93	3.93	1583	-55	24.39	974.	1247	-40	0.080	952	-32	14.72	0.059
759	3.93	3.93	1531	-62	23.13	837.	1201	-44	0.069	963	-35	14.76	0.056
760	3.93	3.93	484	-46	5.57	48.	379	-36	0.002	260	-29	2.88	0.001
761	3.93	3.93	413	-41	4.70	37.	320	-32	0.002	225	-24	2.53	0.001
762	3.93	3.93	387	-44	4.28	20.	289	-30	0.001	183	-24	2.02	0.000
763	3.93	3.93	340	-46	3.78	6.	259	-31	0.000	170	-28	0.15	0.000

## 2.5.19 SETTO 18

MACROGUSCIO setto\_18

## VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

## CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

## DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.86 per mille



765	3.93	3.93	0.	-5	0.16	-2.	0.	-7	0.000	0.	-6	0.19	0.000
766	3.93	3.93	0.	-9	0.29	-4.	0.	-4	0.000	0.	-3	0.10	0.000
767	3.93	3.93	0.	-1	0.03	-1.	0.	-6	0.000	0.	-4	0.11	0.000
768	3.93	3.93	0.	-9	0.28	-4.	0.	-4	0.000	0.	-2	0.05	0.000
769	3.93	3.93	0.	-4	0.14	-2.	0.	-7	0.000	0.	-4	0.12	0.000
770	3.93	3.93	0.	-1	0.03	0.	0.	-4	0.000	0.	-1	0.04	0.000
771	3.93	3.93	0.	-1	0.02	0.	0.	-6	0.000	0.	-1	0.03	0.000

## ARMATURA INFERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
764	3.93	3.93	0.	-55	1.77	-26.	0.	-43	0.000	0.	-34	1.07	0.000
765	3.93	3.93	0.	-51	1.64	-25.	0.	-37	0.000	0.	-27	0.85	0.000
766	3.93	3.93	0.	-52	1.66	-25.	0.	-33	0.000	0.	-24	0.76	0.000
767	3.93	3.93	0.	-52	1.66	-25.	0.	-32	0.000	0.	-27	0.85	0.000
768	3.93	3.93	0.	-44	1.41	-21.	0.	-25	0.000	0.	-22	0.70	0.000
769	3.93	3.93	0.	-39	1.24	-19.	0.	-22	0.000	0.	-16	0.51	0.000
770	3.93	3.93	0.	-40	1.28	-19.	0.	-22	0.000	0.	-14	0.45	0.000
771	3.93	3.93	0.	-40	1.28	-19.	0.	-21	0.000	0.	-18	0.57	0.000

## ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
764	3.93	3.93	150	-7	2.23	74.	126	-2	0.011	129	-2	2.06	0.011
765	3.93	3.93	173	-5	2.70	119.	138	-7	0.006	138	-6	2.07	0.007
766	3.93	3.93	203	-9	3.02	102.	162	-4	0.012	159	-3	2.54	0.013
767	3.93	3.93	207	-1	3.35	203.	170	-6	0.010	166	-4	2.64	0.013
768	3.93	3.93	72	-9	0.79	2.	56	-4	0.001	62	-2	0.98	0.005
769	3.93	3.93	94	-4	1.39	46.	72	-7	0.001	65	-4	0.90	0.002
770	3.93	3.93	114	-1	1.84	109.	89	-4	0.004	86	-1	1.38	0.008
771	3.93	3.93	113	-1	1.82	110.	91	-6	0.002	66	-1	1.06	0.006

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
764	3.93	3.93	1654	-55	25.57	1041.	1317	-43	0.083	965	-34	14.85	0.058
765	3.93	3.93	1562	-51	24.18	994.	1251	-37	0.084	966	-27	15.15	0.068
766	3.93	3.93	1579	-52	24.44	1004.	1265	-33	0.092	978	-24	15.46	0.074
767	3.93	3.93	1536	-52	23.71	959.	1223	-32	0.088	986	-27	15.49	0.070
768	3.93	3.93	407	-44	4.54	26.	317	-25	0.004	179	-22	1.97	0.000
769	3.93	3.93	392	-39	4.47	35.	301	-22	0.005	199	-16	2.47	0.003
770	3.93	3.93	379	-40	4.24	26.	290	-22	0.005	188	-14	2.38	0.003
771	3.93	3.93	325	-40	3.58	11.	251	-21	0.003	150	-18	1.65	0.000

## 2.5.20 SETTO 19

MACROGUSCIO setto\_19

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	1.15	
deformazione ultima acciaio	1.96	per mille
deformazione ultima cls	3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.96 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
772	30	3.93	3.93	0.	52.	0.00	0.33	3.93	3.93	0.	-23.	0.01	-0.01	17
773	30	3.93	3.93	0.	63.	0.00	0.40	3.93	3.93	0.	21.	0.00	0.13	21
774	30	3.93	3.93	0.	80.	0.00	0.51	3.93	3.93	0.	43.	0.00	0.28	26

775	30	3.93	3.93	208.	86.	0.00	0.67	3.93	3.93	0.	66.	0.00	0.42	34
776	30	3.93	3.93	187.	51.	0.00	0.43	3.93	3.93	330.	27.	0.00	0.34	21
777	30	3.93	3.93	30.	63.	0.00	0.42	3.93	3.93	134.	42.	0.00	0.34	21
778	30	3.93	3.93	4.	80.	0.00	0.51	3.93	3.93	342.	56.	0.00	0.54	27
779	30	3.93	3.93	321.	88.	0.00	0.73	3.93	3.93	760.	62.	0.00	0.80	39

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
772	30	3.93	3.93	165.	52.	0.00	0.42	3.93	3.93	1663.	-1.	0.20	0.87	42
773	30	3.93	3.93	194.	61.	0.00	0.49	3.93	3.93	1207.	16.	0.09	0.73	36
774	30	3.93	3.93	190.	77.	0.00	0.59	3.93	3.93	786.	37.	0.00	0.65	32
775	30	3.93	3.93	21.	94.	0.00	0.61	3.93	3.93	514.	64.	0.00	0.68	34
776	30	3.93	3.93	52.	51.	0.00	0.35	3.93	3.93	216.	27.	0.00	0.28	18
777	30	3.93	3.93	109.	63.	0.00	0.46	3.93	3.93	89.	42.	0.00	0.32	23
778	30	3.93	3.93	133.	80.	0.00	0.58	3.93	3.93	129.	59.	0.00	0.44	29
779	30	3.93	3.93	59.	89.	0.00	0.60	3.93	3.93	487.	62.	0.00	0.65	32

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ( $R_d > E_d$ )

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vrcd = compressione cls d'anima  
vrds = trazione armatura trasversale  
vrd,s = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm2]	Af long. [cm2]	Af trasv. [cm2]	Taglio [daN]	vrcd [daN]	vrds [daN]	alfas	vrd,s [daN]
-180.0	9492	24.85	24.85	35747	269209	77789	-	-
-140.0	9492	24.85	24.85	36862	269194	77789	-	-
-100.0	9492	24.85	24.85	36862	269194	77789	-	-
-60.0	9492	24.85	24.85	37980	269178	77789	-	-
-32.5	9492	24.85	24.85	37980	269178	77789	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm2 al metro)  
Afc = area effettiva compressa (cm2 al metro)  
Mom = momento flettente [daNcm/cm]  
Nor = sforzo normale [daN]  
sigC = tensione calcestruzzo [daN/cm2]

valore max per combinazione rara = 149.4 daN/cm2  
quasi permanente = 112 daN/cm2

sigF = tensione acciaio [daN/cm2]  
valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

#### ARMATURA INFERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA		COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF
772	3.93	3.93	0.	-6	0.19	-3.	0.	0.	0.000
773	3.93	3.93	0.	-1	0.04	-1.	0.	7	0.022
774	3.93	3.93	0.	12	0.00	158.	0.	20	0.068
775	3.93	3.93	34	36	0.00	492.	26	36	0.123
776	3.93	3.93	0.	-6	0.18	-3.	0.	1	0.004
777	3.93	3.93	0.	6	0.00	72.	0.	14	0.046
778	3.93	3.93	0.	22	0.00	282.	0.	29	0.098
779	3.93	3.93	99	35	0.00	565.	73	34	0.125

#### ARMATURA INFERIORE VERTICALE

GUSCI	COMBINAZIONE RARA		COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF
772	3.93	3.93	0.	-58	1.86	-28.	0.	-24	0.000
773	3.93	3.93	0.	-50	1.59	-24.	0.	-17	0.000
774	3.93	3.93	0.	-28	0.91	-14.	0.	-9	0.000
775	3.93	3.93	0.	-19	0.60	-9.	0.	12	0.000
776	3.93	3.93	0.	-35	1.13	-17.	0.	-8	0.000
777	3.93	3.93	0.	-25	0.81	-12.	0.	0.	0.000
778	3.93	3.93	19	-18	0.71	-8.	0.	0.	0.000
779	3.93	3.93	140	-11	1.75	26.	42	8	0.034

#### ARMATURA SUPERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA		COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF
772	3.93	3.93	217	-6	3.40	151.	179	0.	0.021
773	3.93	3.93	218	-1	3.53	215.	174	7	0.041
774	3.93	3.93	221	12	3.07	399.	173	20	0.092
775	3.93	3.93	80	36	0.00	546.	64	36	0.129
776	3.93	3.93	64	-6	0.76	9.	47	1	0.009

777	3.93	3.93	103	6	1.44	183.	77	14	0.058	84	18	0.00	0.073
778	3.93	3.93	109	22	0.00	408.	80	29	0.109	72	31	0.00	0.114
779	3.93	3.93	0.	35	0.00	450.	0.	34	0.114	0.	29	0.00	0.098

## ARMATURA SUPERIORE VERTICALE

GUSCI			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
772	3.93	3.93	1544	-58	23.55	893.	1249	-34	0.093	892	-24	14.02	0.067
773	3.93	3.93	1309	-50	19.94	753.	1057	-27	0.082	759	-17	12.03	0.062
774	3.93	3.93	1009	-28	15.81	697.	803	-9	0.080	525	-9	8.39	0.047
775	3.93	3.93	727	-19	11.46	526.	561	-1	0.065	266	12	3.91	0.069
776	3.93	3.93	289	-35	3.18	10.	217	-13	0.007	144	-8	2.02	0.005
777	3.93	3.93	250	-25	2.83	20.	192	-7	0.012	149	0.	2.41	0.017
778	3.93	3.93	191	-18	2.19	19.	131	0.	0.015	105	5	1.54	0.028
779	3.93	3.93	28	-11	0.18	-7.	0.	8	0.028	29	12	0.00	0.043

## 2.5.21 SETTO 20

MACROGUSCIO setto\_20

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.86	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.86 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
840	30	3.93	3.93	85.	57.	0.00	0.39	3.93	3.93	0.	46.	0.00	0.28	21
841	30	3.93	3.93	0.	78.	0.00	0.47	3.93	3.93	0.	45.	0.00	0.27	25
842	30	3.93	3.93	0.	96.	0.00	0.58	3.93	3.93	0.	46.	0.00	0.28	31
843	30	3.93	3.93	0.	91.	0.00	0.55	3.93	3.93	0.	44.	0.00	0.27	30
844	30	3.93	3.93	23.	74.	0.00	0.47	3.93	3.93	0.	43.	0.00	0.26	25
845	30	3.93	3.93	70.	51.	0.00	0.34	3.93	3.93	0.	41.	0.00	0.25	18
846	30	3.93	3.93	207.	39.	0.00	0.34	3.93	3.93	205.	48.	0.00	0.40	21
847	30	3.93	3.93	56.	77.	0.00	0.49	3.93	3.93	98.	73.	0.00	0.49	26
848	30	3.93	3.93	80.	99.	0.00	0.64	3.93	3.93	221.	62.	0.00	0.49	34
849	30	3.93	3.93	19.	90.	0.00	0.56	3.93	3.93	343.	37.	0.00	0.39	30
850	30	3.93	3.93	47.	73.	0.00	0.47	3.93	3.93	223.	30.	0.00	0.29	25
851	30	3.93	3.93	68.	52.	0.00	0.35	3.93	3.93	0.	32.	0.01	0.19	19

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
840	30	3.93	3.93	86.	62.	0.00	0.42	3.93	3.93	888.	6.	0.08	0.55	29
841	30	3.93	3.93	257.	77.	0.00	0.60	3.93	3.93	1163.	25.	0.06	0.75	39
842	30	3.93	3.93	226.	93.	0.00	0.68	3.93	3.93	1239.	46.	0.00	0.90	46
843	30	3.93	3.93	219.	90.	0.00	0.65	3.93	3.93	1205.	44.	0.00	0.87	45
844	30	3.93	3.93	164.	76.	0.00	0.54	3.93	3.93	983.	43.	0.00	0.75	39
845	30	3.93	3.93	17.	52.	0.00	0.33	3.93	3.93	510.	41.	0.00	0.51	26
846	30	3.93	3.93	75.	47.	0.00	0.32	3.93	3.93	195.	48.	0.00	0.39	21
847	30	3.93	3.93	113.	77.	0.00	0.52	3.93	3.93	171.	71.	0.00	0.52	28
848	30	3.93	3.93	154.	97.	0.00	0.67	3.93	3.93	150.	67.	0.00	0.48	36
849	30	3.93	3.93	160.	91.	0.00	0.63	3.93	3.93	206.	42.	0.00	0.36	34
850	30	3.93	3.93	68.	75.	0.00	0.49	3.93	3.93	214.	30.	0.01	0.29	26
851	30	3.93	3.93	0.	52.	0.00	0.32	3.93	3.93	109.	32.	0.02	0.25	17

L'ARMATURA È OVUNQUE &gt; DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd &gt; Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vr<sub>cd</sub> = compressione cls d'anima  
 Vr<sub>sd</sub> = trazione armatura trasversale  
 Vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm <sup>2</sup> ]	Af long. [cm <sup>2</sup> ]	Af trasv. [cm <sup>2</sup> ]	Taglio [daN]	Vr <sub>cd</sub> [daN]	Vr <sub>sd</sub> [daN]	alfas	Vr <sub>d,s</sub> [daN]
-180.0	15720	41.15	41.15	61613	444820	128831	-	-
-140.0	15720	41.15	41.15	61880	444440	128831	-	-
-100.0	15720	41.15	41.15	61880	444440	128831	-	-
-60.0	15720	41.15	41.15	62147	444061	128831	-	-
-32.5	15720	41.15	41.15	62147	444061	128831	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm<sup>2</sup> al metro)

Afc = area effettiva compressa (cm<sup>2</sup> al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm<sup>2</sup>]

valore max per combinazione rara = 149.4 daN/cm<sup>2</sup>

quasi permanente = 112 daN/cm<sup>2</sup>

sigF = tensione acciaio [daN/cm<sup>2</sup>]

valore max per combinazione rara = 3600 daN/cm<sup>2</sup>

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

#### ARMATURA INFERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
840	3.93	3.93	0.	5	0.00	57.	0.	4	0.014	47	10	0.00	0.039
841	3.93	3.93	0.	5	0.00	64.	0.	7	0.022	0.	10	0.00	0.032
842	3.93	3.93	0.	19	0.00	243.	0.	18	0.058	0.	20	0.00	0.065
843	3.93	3.93	0.	33	0.00	423.	0.	25	0.078	0.	22	0.00	0.072
844	3.93	3.93	0.	36	0.00	465.	0.	27	0.085	0.	22	0.00	0.072
845	3.93	3.93	12	22	0.00	292.	9	12	0.041	39	8	0.00	0.030
846	3.93	3.93	36	5	0.00	109.	29	6	0.024	79	11	0.00	0.045
847	3.93	3.93	0.	10	0.00	125.	0.	11	0.036	0.	15	0.00	0.048
848	3.93	3.93	0.	28	0.00	356.	0.	25	0.082	0.	27	0.00	0.086
849	3.93	3.93	0.	37	0.00	477.	0.	27	0.086	0.	25	0.00	0.079
850	3.93	3.93	0.	31	0.00	396.	0.	21	0.068	27	18	0.00	0.060
851	3.93	3.93	72	14	0.00	266.	60	4	0.018	75	0.	1.20	0.009

#### ARMATURA INFERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
840	3.93	3.93	0.	-15	0.49	-7.	0.	-16	0.000	0.	0.	0.00	0.001
841	3.93	3.93	0.	-34	1.10	-16.	0.	-18	0.000	0.	-11	0.35	0.000
842	3.93	3.93	0.	-24	0.78	-12.	0.	-13	0.000	0.	-9	0.30	0.000
843	3.93	3.93	0.	-13	0.43	-6.	0.	-7	0.000	0.	-7	0.23	0.000
844	3.93	3.93	0.	-3	0.09	-1.	0.	-1	0.000	0.	-1	0.05	0.000
845	3.93	3.93	0.	3	0.00	32.	0.	0.	0.001	0.	6	0.00	0.019
846	3.93	3.93	20	-3	0.23	0.	28	-5	0.000	35	1	0.53	0.008
847	3.93	3.93	0.	-14	0.45	-7.	0.	-2	0.000	0.	6	0.00	0.018
848	3.93	3.93	0.	-7	0.23	-3.	0.	3	0.009	0.	4	0.00	0.013
849	3.93	3.93	0.	-2	0.08	-1.	0.	1	0.002	13	-3	0.19	0.000
850	3.93	3.93	0.	-4	0.13	-2.	18	-6	0.000	55	-5	0.65	0.000
851	3.93	3.93	40	-6	0.45	0.	63	-10	0.000	23	-9	0.45	0.000

#### ARMATURA SUPERIORE ORIZZONTALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
840	3.93	3.93	122	5	1.84	188.	97	4	0.024	20	10	0.00	0.035
841	3.93	3.93	238	5	3.77	316.	192	7	0.042	139	10	1.73	0.046
842	3.93	3.93	183	19	1.34	452.	153	18	0.079	160	20	0.00	0.087
843	3.93	3.93	206	33	0.00	661.	167	25	0.102	146	22	0.00	0.092
844	3.93	3.93	186	36	0.00	681.	153	27	0.107	94	22	0.00	0.084
845	3.93	3.93	36	22	0.00	320.	25	12	0.043	0.	8	0.00	0.025
846	3.93	3.93	35	5	0.00	108.	26	6	0.023	0.	11	0.00	0.034
847	3.93	3.93	129	10	1.53	269.	101	11	0.049	93	15	0.00	0.061
848	3.93	3.93	119	28	0.00	493.	92	25	0.094	82	27	0.00	0.097
849	3.93	3.93	137	37	0.00	636.	104	27	0.100	99	25	0.00	0.093
850	3.93	3.93	88	31	0.00	499.	71	21	0.078	56	18	0.00	0.064
851	3.93	3.93	0.	14	0.00	183.	0.	4	0.011	0.	0.	0.00	0.001

#### ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
840	3.93	3.93	851	-15	13.60	698.	731	-16	0.058	378	0.	6.11	0.043
841	3.93	3.93	1090	-34	16.94	711.	928	-18	0.076	641	-11	10.26	0.055

842	3.93	3.93	1156	-24	18.37	900.	983	-13	0.090	773	-9	12.43	0.072
843	3.93	3.93	1114	-13	17.93	996.	950	-7	0.096	714	-7	11.50	0.069
844	3.93	3.93	839	-3	13.57	845.	720	-1	0.079	481	-1	7.77	0.052
845	3.93	3.93	527	3	8.51	586.	452	0.	0.052	227	6	3.56	0.043
846	3.93	3.93	148	-3	2.35	116.	108	-5	0.005	84	1	1.34	0.013
847	3.93	3.93	227	-14	3.10	72.	165	-2	0.016	110	6	1.57	0.029
848	3.93	3.93	217	-7	3.36	138.	148	3	0.024	67	4	0.90	0.020
849	3.93	3.93	195	-2	3.14	172.	132	1	0.017	76	-3	1.14	0.004
850	3.93	3.93	155	-4	2.45	112.	95	-6	0.003	54	-5	0.62	0.000
851	3.93	3.93	109	-6	1.56	43.	56	-10	0.000	9	-9	0.25	0.000

## 2.5.22 SETTO 21

MACROGUSCIO setto\_21

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAY PRINC

DATI:

tensione di snervamento acciaio (fyk):	4500	daN/cm2
coefficiente sicurezza acciaio	: 1.15	
deformazione ultima acciaio	: 1.96	per mille
deformazione ultima cls	: 3.5	per mille
rapporto rottura/snervamento (k):	1	
resistenza cilindrica cls (fck):	249	daN/cm2
coefficiente sicurezza cls	: 1.5	
coefficiente riduttivo (alfa):	0.85	
copriferro inferiore (asse armatura):	4	cm
copriferro superiore (asse armatura):	4	cm
moltiplicatore sollecitazioni	: 1	

LEGENDA:

spess	= spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af	= area disposta al lembo teso, in cm2 al metro
Afc	= area disposta al lembo compresso, in cm2 al metro
Mom	= momento flettente [daNcm/cm]
Nor	= sforzo normale [daN]
epsC	= deformazione cls [per mille]
epsF	= deformazione acciaio [per mille]

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L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.96 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1081	30	3.93	3.93	148.	17.	0.00	0.19	3.93	3.93	247.	-1.	0.03	0.13	9
1082	30	3.93	3.93	164.	22.	0.00	0.23	3.93	3.93	52.	17.	0.00	0.16	11
1083	30	3.93	3.93	230.	24.	0.00	0.27	3.93	3.93	114.	33.	0.00	0.27	13
1084	30	3.93	3.93	195.	11.	0.00	0.17	3.93	3.93	137.	13.	0.00	0.15	8
1085	30	3.93	3.93	236.	24.	0.00	0.27	3.93	3.93	161.	27.	0.00	0.26	14
1086	30	3.93	3.93	310.	31.	0.00	0.36	3.93	3.93	209.	35.	0.00	0.33	18
1087	30	3.93	3.93	212.	5.	0.02	0.15	3.93	3.93	211.	6.	0.02	0.15	7
1088	30	3.93	3.93	278.	21.	0.00	0.28	3.93	3.93	233.	24.	0.00	0.27	14
1089	30	3.93	3.93	391.	39.	0.00	0.45	3.93	3.93	260.	43.	0.00	0.41	22
1090	30	3.93	3.93	219.	0.	0.02	0.12	3.93	3.93	292.	-5.	0.04	0.15	7
1091	30	3.93	3.93	312.	13.	0.00	0.26	3.93	3.93	240.	6.	0.01	0.16	13
1092	30	3.93	3.93	465.	29.	0.00	0.45	3.93	3.93	185.	7.	0.00	0.14	22
1093	30	3.93	3.93	214.	0.	0.03	0.11	3.93	3.93	220.	-3.	0.03	0.11	6
1094	30	3.93	3.93	342.	5.	0.02	0.21	3.93	3.93	204.	5.	0.02	0.14	10
1095	30	3.93	3.93	541.	15.	0.00	0.38	3.93	3.93	243.	6.	0.00	0.17	19

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1081	30	3.93	3.93	122.	21.	0.00	0.20	3.93	3.93	414.	20.	0.05	0.34	17
1082	30	3.93	3.93	154.	22.	0.00	0.22	3.93	3.93	325.	17.	0.02	0.30	15
1083	30	3.93	3.93	162.	26.	0.00	0.25	3.93	3.93	232.	31.	0.00	0.32	16
1084	30	3.93	3.93	141.	14.	0.00	0.16	3.93	3.93	265.	14.	0.00	0.23	11
1085	30	3.93	3.93	144.	24.	0.00	0.23	3.93	3.93	235.	27.	0.00	0.30	15
1086	30	3.93	3.93	155.	28.	0.00	0.27	3.93	3.93	231.	35.	0.00	0.35	17
1087	30	3.93	3.93	248.	1.	0.02	0.14	3.93	3.93	119.	5.	0.00	0.09	7
1088	30	3.93	3.93	105.	24.	0.00	0.21	3.93	3.93	156.	24.	0.00	0.23	11
1089	30	3.93	3.93	107.	38.	0.00	0.29	3.93	3.93	190.	43.	0.00	0.37	19
1090	30	3.93	3.93	254.	0.	0.03	0.14	3.93	3.93	344.	-6.	0.04	0.17	9
1091	30	3.93	3.93	177.	13.	0.00	0.17	3.93	3.93	157.	2.	0.00	0.10	9
1092	30	3.93	3.93	283.	29.	0.00	0.33	3.93	3.93	108.	8.	0.00	0.11	16
1093	30	3.93	3.93	236.	0.	0.03	0.12	3.93	3.93	246.	-3.	0.03	0.13	6
1094	30	3.93	3.93	396.	5.	0.03	0.24	3.93	3.93	235.	5.	0.02	0.15	12
1095	30	3.93	3.93	639.	15.	0.00	0.43	3.93	3.93	269.	6.	0.00	0.18	21

L'ARMATURA È OVUNQUE &gt; DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO (Rd &gt; Ed)

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

Vr<sub>cd</sub> = compressione cls d'anima  
 Vr<sub>sd</sub> = trazione armatura trasversale  
 Vr<sub>d,s</sub> = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm <sup>2</sup> ]	Af long. [cm <sup>2</sup> ]	Af trasv. [cm <sup>2</sup> ]	Taglio [daN]	Vr <sub>cd</sub> [daN]	Vr <sub>sd</sub> [daN]	alfas	Vr <sub>d,s</sub> [daN]
-5.0	7860	20.58	20.58	7852	221853	64416	-	-
35.0	7860	20.58	20.58	7593	221838	64416	-	-
75.0	7860	20.58	20.58	7593	221838	64416	-	-
115.0	7860	20.58	20.58	7012	221829	64416	-	-
155.0	7860	20.58	20.58	7012	221829	64416	-	-
195.0	7860	20.58	20.58	7012	221829	64416	-	-
235.0	7860	20.58	20.58	4953	221859	64416	-	-
275.0	7860	20.58	20.58	4953	221859	64416	-	-
315.0	7860	20.58	20.58	3926	221976	64416	-	-
355.0	7860	20.58	20.58	3926	221976	64416	-	-
392.5	7860	20.58	20.58	3926	221908	64416	-	-

**VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)**

CASI DI CARICO: -&gt;

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm<sup>2</sup> al metro)Afc = area effettiva compressa (cm<sup>2</sup> al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

sigC = tensione calcestruzzo [daN/cm<sup>2</sup>]valore max per combinazione rara = 149.4 daN/cm<sup>2</sup>quasi permanente = 112 daN/cm<sup>2</sup>sigF = tensione acciaio [daN/cm<sup>2</sup>]valore max per combinazione rara = 3600 daN/cm<sup>2</sup>

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

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**ARMATURA INFERIORE ORIZZONTALE**

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1081	3.93	3.93	35	1	0.56	47.	28	0. 0.004		21	-1	0.30	0.001
1082	3.93	3.93	30	0.	0.48	30.	31	-1 0.001		24	-2	0.28	0.000
1083	3.93	3.93	0.	-3	0.10	-2.	0.	-2 0.000		4	-2	0.10	0.000
1084	3.93	3.93	19	0.	0.31	18.	5	0. 0.000		6	-1	0.07	0.000
1085	3.93	3.93	0.	-1	0.03	0.	0.	-2 0.000		1	-2	0.07	0.000
1086	3.93	3.93	0.	-2	0.06	-1.	0.	-1 0.000		0.	-1	0.05	0.000
1087	3.93	3.93	19	0.	0.30	15.	7	0. 0.000		4	0.	0.06	0.000
1088	3.93	3.93	0.	0.	0.00	0.	0.	-1 0.000		0.	0.	0.01	0.000
1089	3.93	3.93	0.	-1	0.03	-1.	0.	0. 0.000		0.	0.	0.01	0.000
1090	3.93	3.93	10	0.	0.17	9.	5	0. 0.000		3	0.	0.05	0.000
1091	3.93	3.93	0.	-1	0.02	0.	0.	0. 0.000		0.	0.	0.00	0.000
1092	3.93	3.93	0.	-1	0.03	0.	0.	0. 0.000		0.	0.	0.00	0.000
1093	3.93	3.93	2	0.	0.01	4.	0.	0. 0.001		0.	0.	0.00	0.000
1094	3.93	3.93	0.	0.	0.01	0.	0.	0. 0.000		0.	0.	0.01	0.000
1095	3.93	3.93	0.	-1	0.03	0.	0.	0. 0.000		0.	0.	0.01	0.000

**ARMATURA INFERIORE VERTICALE**

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1081	3.93	3.93	157	-28	1.87	-2.	152	-30 0.000		125	-27	1.66	0.000
1082	3.93	3.93	125	-24	1.54	-3.	124	-26 0.000		94	-22	1.31	0.000
1083	3.93	3.93	119	-23	1.48	-3.	110	-23 0.000		82	-23	1.25	0.000
1084	3.93	3.93	65	-21	1.09	-6.	54	-23 0.000		41	-22	0.97	0.000
1085	3.93	3.93	54	-16	0.86	-4.	38	-21 0.000		23	-21	0.81	0.000
1086	3.93	3.93	43	-11	0.64	-3.	0.	-19 0.000		0.	-19	0.61	0.000
1087	3.93	3.93	47	-14	0.73	-3.	17	-17 0.000		17	-16	0.63	0.000
1088	3.93	3.93	48	-11	0.66	-2.	7	-15 0.000		10	-16	0.57	0.000
1089	3.93	3.93	54	-8	0.61	0.	0.	-14 0.000		1	-14	0.47	0.000
1090	3.93	3.93	41	-9	0.54	-1.	6	-10 0.000		6	-10	0.35	0.000
1091	3.93	3.93	45	-7	0.51	0.	3	-9 0.000		3	-9	0.32	0.000
1092	3.93	3.93	53	-5	0.60	5.	0.	-9 0.000		1	-9	0.29	0.000
1093	3.93	3.93	29	-3	0.33	3.	1	-3 0.000		1	-3	0.11	0.000
1094	3.93	3.93	35	-2	0.46	10.	0.	-3 0.000		0.	-3	0.10	0.000
1095	3.93	3.93	40	-1	0.62	26.	1	-3 0.000		1	-3	0.10	0.000

**ARMATURA SUPERIORE ORIZZONTALE**

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1081	3.93	3.93	0.	1	0.00	9.	0.	0. 0.001		2	-1	0.03	0.000
1082	3.93	3.93	2	0.	0.03	1.	9	-1 0.000		14	-2	0.01	0.000
1083	3.93	3.93	18	-3	0.01	-3.	8	-2 0.000		12	-2	0.00	0.000
1084	3.93	3.93	0.	0.	0.01	0.	0.	0. 0.000		0.	-1	0.03	0.000
1085	3.93	3.93	13	-1	0.17	3.	6	-2 0.000		8	-2	0.02	0.000
1086	3.93	3.93	103	-2	1.64	85.	43	-1 0.003		28	-1	0.41	0.001
1087	3.93	3.93	32	0.	0.52	29.	4	0. 0.000		1	0.	0.00	0.000

1088	3.93	3.93	70	0.	1.14	74.	28	-1	0.002	15	0.	0.24	0.001
1089	3.93	3.93	149	-1	2.41	143.	66	0.	0.007	39	0.	0.63	0.004
1090	3.93	3.93	40	0.	0.65	40.	15	0.	0.002	8	0.	0.14	0.001
1091	3.93	3.93	92	-1	1.49	89.	39	0.	0.004	22	0.	0.36	0.002
1092	3.93	3.93	165	-1	2.66	160.	70	0.	0.008	42	0.	0.68	0.005
1093	3.93	3.93	43	0.	0.70	48.	17	0.	0.003	9	0.	0.15	0.001
1094	3.93	3.93	101	0.	1.64	101.	42	0.	0.004	24	0.	0.39	0.003
1095	3.93	3.93	180	-1	2.91	176.	75	0.	0.009	45	0.	0.73	0.005

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	WkF	Mom	Nor	sigC	WkP
1081	3.93	3.93	0.	-28	0.88	-13.	0.	-30	0.000	0.	-27	0.88	0.000
1082	3.93	3.93	0.	-24	0.76	-11.	0.	-26	0.000	0.	-22	0.72	0.000
1083	3.93	3.93	0.	-23	0.73	-11.	0.	-23	0.000	0.	-23	0.73	0.000
1084	3.93	3.93	8	-21	0.63	-11.	0.	-23	0.000	0.	-22	0.72	0.000
1085	3.93	3.93	29	-16	0.34	-10.	0.	-21	0.000	0.	-21	0.66	0.000
1086	3.93	3.93	58	-11	0.01	-9.	13	-19	0.000	0.	-19	0.61	0.000
1087	3.93	3.93	13	-14	0.36	-7.	0.	-17	0.000	0.	-16	0.53	0.000
1088	3.93	3.93	22	-11	0.22	-7.	0.	-15	0.000	3	-16	0.49	0.000
1089	3.93	3.93	32	-8	0.06	-6.	7	-14	0.000	12	-14	0.39	0.000
1090	3.93	3.93	6	-9	0.25	-5.	7	-10	0.000	8	-10	0.27	0.000
1091	3.93	3.93	9	-7	0.17	-4.	9	-9	0.000	11	-9	0.24	0.000
1092	3.93	3.93	9	-5	0.11	-3.	13	-9	0.000	14	-9	0.20	0.000
1093	3.93	3.93	2	-3	0.08	-2.	7	-3	0.000	8	-3	0.06	0.000
1094	3.93	3.93	5	-2	0.04	-1.	8	-3	0.000	9	-3	0.04	0.000
1095	3.93	3.93	9	-1	0.10	0.	11	-3	0.000	12	-3	0.02	0.000

## 2.5.23 SETTO 22

MACROGUSCIO setto\_22

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: -&gt;

Nome	Descrizione
1	SLU
2	SLU VENTTOY
5	SLU con SISMAX PRINC
6	SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2  
 coefficiente sicurezza acciaio : 1.15  
 deformazione ultima acciaio : 1.96 per mille  
 deformazione ultima cls : 3.5 per mille  
 rapporto rottura/snervamento (k): 1  
 resistenza cilindrica cls (fck): 249 daN/cm2  
 coefficiente sicurezza cls : 1.5  
 coefficiente riduttivo (alfa): 0.85  
 copriferro inferiore (asse armatura): 4 cm  
 copriferro superiore (asse armatura): 4 cm  
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm  
 Af = area disposta al lembo teso, in cm2 al metro  
 Afc = area disposta al lembo compresso, in cm2 al metro  
 Mom = momento flettente [daNcm/cm]  
 Nor = sforzo normale [daN]  
 epsC = deformazione cls [per mille]  
 epsF = deformazione acciaio [per mille]

&lt;-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi non dissipativi la permanenza in campo elastico è ottenuta limitando la deformazione dell'acciaio alla deformazione di snervamento (1.96 per mille) e quella del calcestruzzo al 2 per mille.

GUSCI	spess	INFERIORE ORIZZONTALE						INFERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1359	30	3.93	3.93	146.	14.	0.00	0.16	3.93	3.93	709.	-29.	0.09	0.33	16
1360	30	3.93	3.93	184.	17.	0.00	0.20	3.93	3.93	364.	-21.	0.05	0.17	10
1361	30	3.93	3.93	223.	22.	0.00	0.26	3.93	3.93	149.	30.	0.00	0.27	13
1362	30	3.93	3.93	200.	8.	0.00	0.15	3.93	3.93	151.	7.	0.02	0.12	7
1363	30	3.93	3.93	231.	17.	0.00	0.23	3.93	3.93	178.	20.	0.00	0.22	11
1364	30	3.93	3.93	292.	24.	0.00	0.31	3.93	3.93	216.	27.	0.00	0.29	15
1365	30	3.93	3.93	252.	1.	0.03	0.14	3.93	3.93	333.	-7.	0.04	0.17	8
1366	30	3.93	3.93	270.	14.	0.00	0.23	3.93	3.93	239.	15.	0.01	0.22	11
1367	30	3.93	3.93	363.	24.	0.00	0.34	3.93	3.93	258.	24.	0.00	0.29	17
1368	30	3.93	3.93	245.	0.	0.03	0.13	3.93	3.93	333.	-6.	0.04	0.17	8
1369	30	3.93	3.93	299.	9.	0.00	0.22	3.93	3.93	314.	-1.	0.04	0.19	11
1370	30	3.93	3.93	430.	19.	0.00	0.35	3.93	3.93	273.	10.	0.00	0.21	17
1371	30	3.93	3.93	228.	-1.	0.03	0.12	3.93	3.93	238.	-3.	0.03	0.12	6
1372	30	3.93	3.93	329.	5.	0.02	0.20	3.93	3.93	224.	4.	0.03	0.14	10
1373	30	3.93	3.93	496.	14.	0.00	0.35	3.93	3.93	236.	7.	0.00	0.17	17

GUSCI	spess	SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF. MAX %
		Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	
1359	30	3.93	3.93	134.	14.	0.00	0.16	3.93	3.93	333.	-29.	0.05	0.18	9
1360	30	3.93	3.93	169.	17.	0.00	0.20	3.93	3.93	305.	-21.	0.04	0.16	10
1361	30	3.93	3.93	197.	22.	0.00	0.24	3.93	3.93	222.	30.	0.00	0.31	15

1362	30	3.93	3.93	142.	10.	0.00	0.14	3.93	3.93	215.	8.	0.03	0.17	8
1363	30	3.93	3.93	153.	18.	0.00	0.19	3.93	3.93	219.	20.	0.00	0.24	12
1364	30	3.93	3.93	213.	23.	0.00	0.26	3.93	3.93	230.	27.	0.00	0.29	15
1365	30	3.93	3.93	244.	0.	0.03	0.13	3.93	3.93	99.	-4.	0.01	0.05	6
1366	30	3.93	3.93	182.	14.	0.00	0.18	3.93	3.93	148.	15.	0.00	0.17	9
1367	30	3.93	3.93	255.	24.	0.00	0.29	3.93	3.93	181.	24.	0.00	0.25	14
1368	30	3.93	3.93	261.	0.	0.03	0.14	3.93	3.93	305.	-6.	0.04	0.15	8
1369	30	3.93	3.93	376.	9.	0.00	0.26	3.93	3.93	138.	-1.	0.02	0.07	12
1370	30	3.93	3.93	530.	16.	0.00	0.38	3.93	3.93	106.	8.	0.00	0.11	19
1371	30	3.93	3.93	251.	-1.	0.03	0.13	3.93	3.93	253.	-3.	0.03	0.13	6
1372	30	3.93	3.93	398.	5.	0.03	0.24	3.93	3.93	256.	4.	0.03	0.16	12
1373	30	3.93	3.93	618.	14.	0.00	0.42	3.93	3.93	277.	7.	0.00	0.19	20

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ( $R_d > E_d$ )

\*\*\* VERIFICHE A TAGLIO SECONDO NTC2018 (cap. 7.4.4.5.1) \*\*\*

vrcd = compressione cls d'anima  
vrsd = trazione armatura trasversale  
vrd,s = scorrimento in zona dissipativa

Quota [cm]	Sezione [cm <sup>2</sup> ]	Af long. [cm <sup>2</sup> ]	Af trasv. [cm <sup>2</sup> ]	Taglio [daN]	vrcd [daN]	vrsd [daN]	alfas	vrd,s [daN]
-5.0	7858	20.57	20.57	6777	221878	64401	-	-
35.0	7858	20.57	20.57	6399	221815	64401	-	-
75.0	7858	20.57	20.57	6399	221815	64401	-	-
115.0	7858	20.57	20.57	5548	221794	64401	-	-
155.0	7858	20.57	20.57	5548	221794	64401	-	-
195.0	7858	20.57	20.57	5548	221794	64401	-	-
235.0	7858	20.57	20.57	4150	221904	64401	-	-
275.0	7858	20.57	20.57	4150	221904	64401	-	-
315.0	7858	20.57	20.57	3388	221896	64401	-	-
355.0	7858	20.57	20.57	3388	221896	64401	-	-
392.5	7858	20.57	20.57	3388	221839	64401	-	-

#### VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

Nome	Descrizione
9	Rara (RARA)
10	Rara VentoY (RARA)
11	Frequente (FREQUENTE)
12	Frequente VentoY (FREQUENTE)
13	Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 4 cm  
copriferro superiore (asse armatura): 4 cm

Af = area effettiva tesa (cm<sup>2</sup> al metro)  
Afc = area effettiva compressa (cm<sup>2</sup> al metro)  
Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]  
sigC = tensione calcestruzzo [daN/cm<sup>2</sup>]  
valore max per combinazione rara = 149.4 daN/cm<sup>2</sup>  
quasi permanente = 112 daN/cm<sup>2</sup>

sigF = tensione acciaio [daN/cm<sup>2</sup>]  
valore max per combinazione rara = 3600 daN/cm<sup>2</sup>

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm  
wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

#### ARMATURA INFERIORE ORIZZONTALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1359	3.93	3.93	80	2	1.25	109.	70	1	0.012	59	0.	0.96	0.006
1360	3.93	3.93	77	-2	1.23	60.	76	-1	0.008	63	-2	1.00	0.005
1361	3.93	3.93	20	-3	0.22	0.	39	0.	0.004	28	-2	0.33	0.000
1362	3.93	3.93	22	0.	0.35	23.	30	0.	0.004	28	-1	0.42	0.002
1363	3.93	3.93	10	-1	0.11	1.	31	-2	0.001	21	-2	0.24	0.000
1364	3.93	3.93	0.	-2	0.07	-1.	0.	0.	0.000	0.	-2	0.05	0.000
1365	3.93	3.93	16	0.	0.25	11.	2	0.	0.000	5	0.	0.06	0.000
1366	3.93	3.93	0.	0.	0.01	0.	0.	-1	0.000	0.	0.	0.02	0.000
1367	3.93	3.93	0.	-1	0.03	-1.	0.	0.	0.000	0.	0.	0.01	0.000
1368	3.93	3.93	11	0.	0.17	9.	4	0.	0.000	3	0.	0.04	0.000
1369	3.93	3.93	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
1370	3.93	3.93	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.00	0.000
1371	3.93	3.93	2	0.	0.01	4.	0.	0.	0.001	0.	0.	0.00	0.000
1372	3.93	3.93	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
1373	3.93	3.93	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000

#### ARMATURA INFERIORE VERTICALE

GUSCI	COMBINAZIONE RARA						COMB. FREQUENTE			COMB. QUASI PERMANENTE			
	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1359	3.93	3.93	275	-29	3.07	18.	277	-30	0.001	240	-28	2.66	0.001
1360	3.93	3.93	225	-24	2.52	15.	233	-24	0.001	192	-22	2.13	0.000
1361	3.93	3.93	197	-17	2.35	27.	200	-20	0.001	150	-22	1.69	0.000
1362	3.93	3.93	119	-22	1.46	-2.	111	-23	0.000	91	-22	1.29	0.000
1363	3.93	3.93	94	-17	1.13	-2.	78	-21	0.000	59	-20	1.02	0.000
1364	3.93	3.93	36	-15	0.69	-5.	4	-19	0.000	9	-19	0.65	0.000
1365	3.93	3.93	65	-16	0.91	-3.	37	-17	0.000	26	-16	0.69	0.000
1366	3.93	3.93	57	-13	0.76	-2.	14	-15	0.000	15	-16	0.59	0.000
1367	3.93	3.93	50	-9	0.60	-1.	0.	-13	0.000	0.	-14	0.46	0.000

1368	3.93	3.93	39	-9	0.53	-2.	8	-10	0.000	8	-10	0.37	0.000
1369	3.93	3.93	40	-7	0.49	-1.	3	-9	0.000	4	-9	0.33	0.000
1370	3.93	3.93	45	-5	0.50	2.	0.	-9	0.000	0.	-9	0.29	0.000
1371	3.93	3.93	25	-3	0.28	1.	1	-3	0.000	1	-3	0.11	0.000
1372	3.93	3.93	30	-2	0.37	5.	0.	-3	0.000	0.	-3	0.10	0.000
1373	3.93	3.93	34	-1	0.52	19.	0.	-3	0.000	0.	-3	0.10	0.000

## ARMATURA SUPERIORE ORIZZONTALE

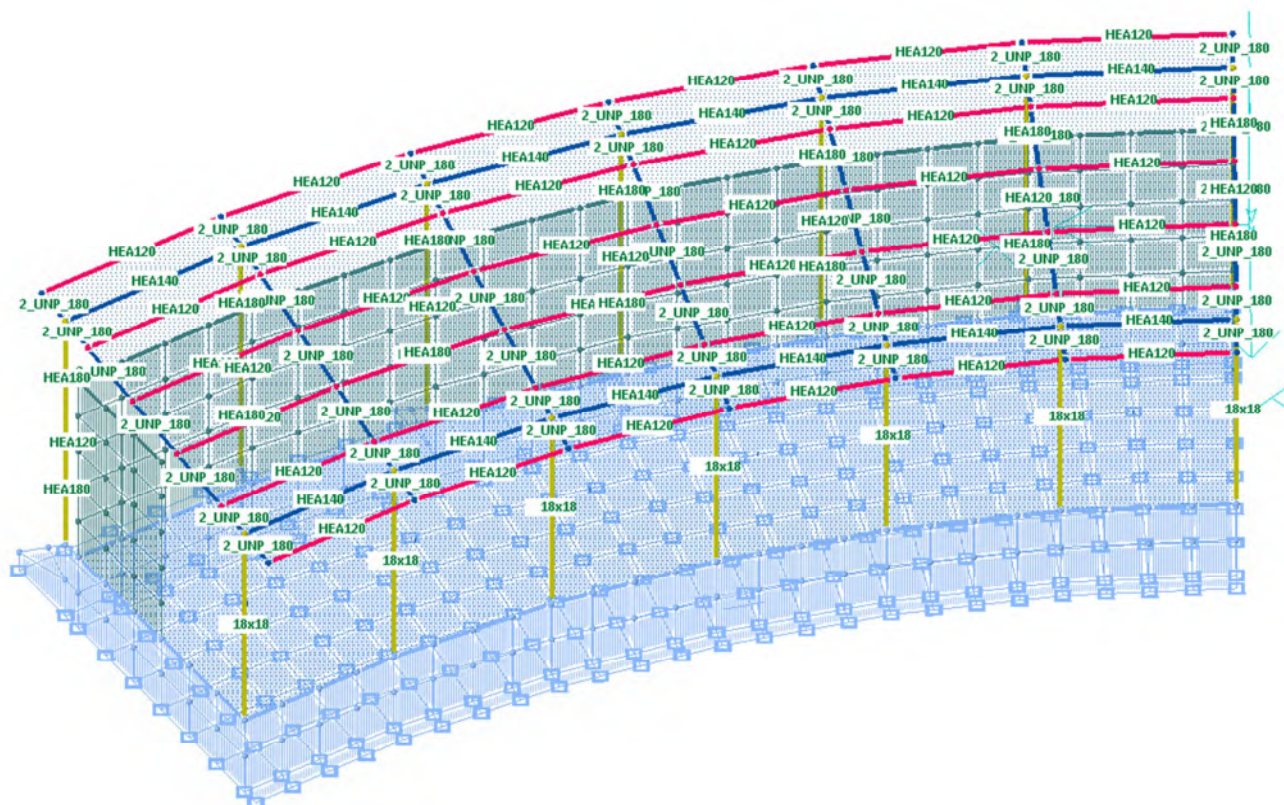
GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE				COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF		Mom	Nor	sigC	wkP
1359	3.93	3.93	0.	2	0.00	24.	0.	1	0.004		0.	0.	0.02	0.000
1360	3.93	3.93	0.	-2	0.05	-1.	10	-1	0.000		16	-2	0.18	0.000
1361	3.93	3.93	14	-3	0.01	-2.	15	0.	0.002		35	-2	0.46	0.001
1362	3.93	3.93	0.	0.	0.00	0.	0.	0.	0.000		0.	-1	0.04	0.000
1363	3.93	3.93	2	-1	0.02	-1.	0.	-2	0.000		5	-2	0.04	0.000
1364	3.93	3.93	91	-2	1.44	69.	50	0.	0.005		51	-2	0.79	0.003
1365	3.93	3.93	6	0.	0.08	2.	0.	0.	0.000		0.	0.	0.01	0.000
1366	3.93	3.93	60	0.	0.96	60.	14	-1	0.001		9	0.	0.12	0.000
1367	3.93	3.93	153	-1	2.47	147.	80	0.	0.009		52	0.	0.84	0.006
1368	3.93	3.93	32	0.	0.52	31.	12	0.	0.001		6	0.	0.09	0.001
1369	3.93	3.93	88	-1	1.42	84.	41	0.	0.005		25	0.	0.40	0.003
1370	3.93	3.93	165	-1	2.66	161.	81	0.	0.009		56	0.	0.90	0.007
1371	3.93	3.93	39	0.	0.63	43.	17	0.	0.002		9	0.	0.15	0.001
1372	3.93	3.93	98	0.	1.58	98.	46	0.	0.005		29	0.	0.47	0.003
1373	3.93	3.93	177	-1	2.85	173.	85	0.	0.010		56	0.	0.91	0.006

## ARMATURA SUPERIORE VERTICALE

GUSCI	Af	Afc	COMBINAZIONE RARA				COMB. FREQUENTE				COMB. QUASI PERMANENTE			
			Mom	Nor	sigC	sigF	Mom	Nor	wkF		Mom	Nor	sigC	wkP
1359	3.93	3.93	0.	-29	0.94	-14.	0.	-30	0.000		0.	-28	0.89	0.000
1360	3.93	3.93	0.	-24	0.77	-12.	0.	-24	0.000		0.	-22	0.70	0.000
1361	3.93	3.93	0.	-17	0.55	-8.	0.	-20	0.000		0.	-22	0.72	0.000
1362	3.93	3.93	0.	-22	0.71	-11.	0.	-23	0.000		0.	-22	0.71	0.000
1363	3.93	3.93	12	-17	0.46	-9.	0.	-21	0.000		0.	-20	0.65	0.000
1364	3.93	3.93	46	-15	0.18	-10.	17	-19	0.000		0.	-19	0.59	0.000
1365	3.93	3.93	0.	-16	0.51	-8.	0.	-17	0.000		0.	-16	0.53	0.000
1366	3.93	3.93	6	-13	0.37	-6.	0.	-15	0.000		0.	-16	0.50	0.000
1367	3.93	3.93	19	-9	0.17	-6.	8	-13	0.000		10	-14	0.39	0.000
1368	3.93	3.93	1	-9	0.28	-4.	0.	-10	0.000		4	-10	0.29	0.000
1369	3.93	3.93	10	-7	0.17	-4.	5	-9	0.000		10	-9	0.24	0.000
1370	3.93	3.93	15	-5	0.08	-4.	15	-9	0.000		17	-9	0.18	0.000
1371	3.93	3.93	2	-3	0.08	-2.	7	-3	0.000		8	-3	0.05	0.000
1372	3.93	3.93	6	-2	0.04	-2.	10	-3	0.000		11	-3	0.03	0.000
1373	3.93	3.93	10	-1	0.11	0.	13	-3	0.000		14	-3	0.01	0.000

## 2.6 VERIFICA STRUTTURE IN ACCIAIO

## ASSONOMETRIA GENERALE CON SEZIONE PROFILI

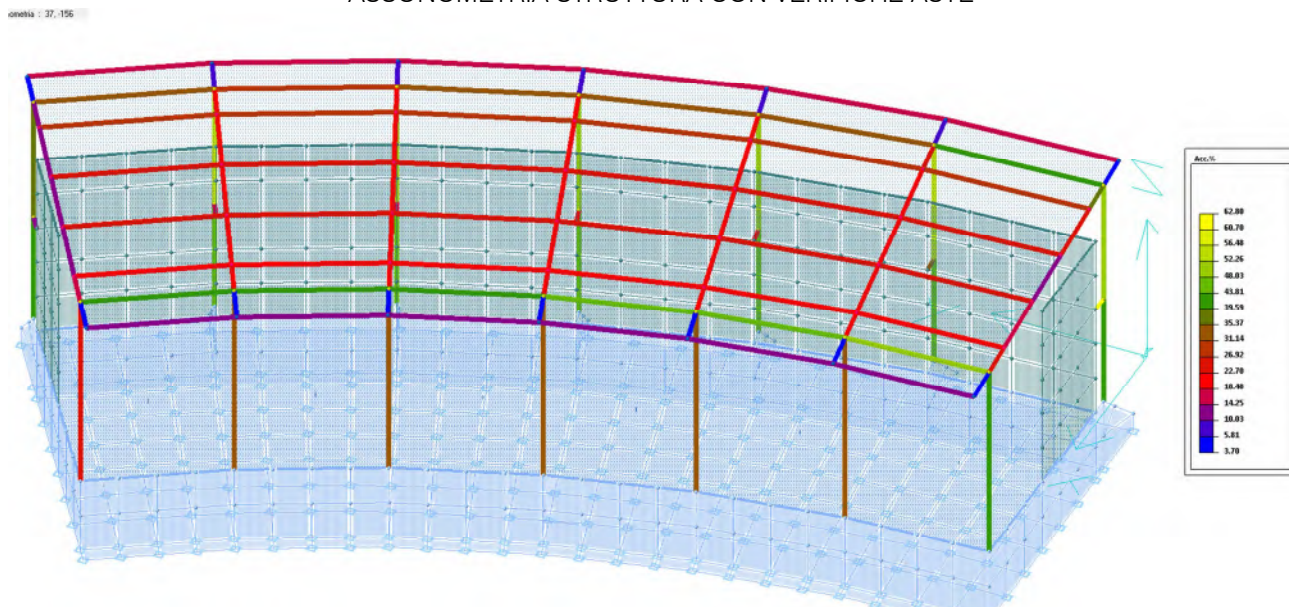


### 2.6.1 VERIFICA GRAFICA ASTE ACCIAIO

Si riporta a seguire una rappresentazione grafica della percentuale di utilizzo del materiale relativo ad ogni singola asta costituente la struttura.

Come si vede tutte le varie aste presentano una "percentuale di utilizzo" ampiamente al di sotto del 100% (limite massimo); il valore massimo è di circa il 62,80%.

ASSONOMETRIA STRUTTURA CON VERIFICHE ASTE



### 2.6.2 VERIFICA NUMERICA SINTETICA ASTE ACCIAIO

Si riporta a seguire un riepilogo sintetico delle verifiche su ogni singola asta.

VERIFICA ASTE IN ACCIAIO  
RIASSUNTO DELLE ASTE VERIFICATE CON L'ULTIMO CALCOLO EFFETTUATO

Rapporti di tensioni:

asta	sez	profilo	Tau %	Sx %	Si %	Ss %	Caso	Max %	
75	1	CASSONE_S001	6	42	42	33	6- 6	42	Si
76	1	CASSONE_S001	6	34	35	27	5-10	35	Si
77	1	CASSONE_S001	6	32	32	25	5-10	32	Si
78	1	CASSONE_S001	6	32	32	25	5-10	32	Si
387	1	CASSONE_S001	5	25	25	19	5-11	25	Si
388	1	CASSONE_S001	6	32	32	25	5-10	32	Si
389	1	CASSONE_S001	6	32	32	25	5-10	32	Si
309	2	P_HEA180_S002	11	53	53	41	5- 3	53	Si
312	2	P_HEA180_S002	11	49	49	38	5- 7	49	Si
316	2	P_HEA180_S002	11	50	50	38	5- 3	50	Si
377	2	P_HEA180_S002	16	48	48	42	6-11	48	Si
477	2	P_HEA180_S002	10	39	39	30	5- 6	39	Si
480	2	P_HEA180_S002	11	52	52	40	5- 1	52	Si
485	2	P_HEA180_S002	11	50	50	38	5- 1	50	Si
592	2	P_HEA180_S002	12	47	47	37	5- 1	47	Si
594	2	P_HEA180_S002	13	48	48	38	5- 1	48	Si
596	2	P_HEA180_S002	11	43	43	35	5- 6	43	Si
598	2	P_HEA180_S002	12	47	47	37	5- 1	47	Si
600	2	P_HEA180_S002	12	47	47	36	5-15	47	Si
602	2	P_HEA180_S002	13	48	48	39	5-16	48	Si
604	2	P_HEA180_S002	12	44	44	39	5-12	44	Si
135	7	U_2_UNP_180	0	4	4	3	5- 8	4	Si
136	7	U_2_UNP_180	0	4	4	3	2- 2	4	Si
137	7	U_2_UNP_180	0	7	7	5	2- 2	7	Si
138	7	U_2_UNP_180	0	6	6	4	2- 2	6	Si
139	7	U_2_UNP_180	0	7	7	5	2- 2	7	Si
140	7	U_2_UNP_180	0	6	6	2	2- 2	6	Si
141	7	U_2_UNP_180	0	7	7	5	2- 2	7	Si
142	7	U_2_UNP_180	0	6	6	3	2- 2	6	Si
206	7	U_2_UNP_180	0	20	20	18	2- 2	20	Si
207	7	U_2_UNP_180	0	19	19	14	2- 2	19	Si
209	7	U_2_UNP_180	0	20	20	20	2- 2	20	Ss
211	7	U_2_UNP_180	0	20	20	15	2- 2	20	Si
213	7	U_2_UNP_180	0	21	21	20	5-14	21	Si
236	7	U_2_UNP_180	0	21	21	17	2- 2	21	Si
237	7	U_2_UNP_180	0	20	20	15	2- 2	20	Si
239	7	U_2_UNP_180	0	20	20	20	2- 2	20	Ss
241	7	U_2_UNP_180	0	20	20	15	2- 2	20	Si
243	7	U_2_UNP_180	0	21	21	20	5-14	21	Si
244	7	U_2_UNP_180	0	24	24	24	6-12	24	Ss

245	7	U_2_UNP_180	0	20	20	15	2- 2	20	Si
247	7	U_2_UNP_180	0	21	21	21	2- 2	21	ss
249	7	U_2_UNP_180	0	21	21	16	2- 2	21	Si
251	7	U_2_UNP_180	0	22	22	21	6- 5	22	Si
263	7	U_2_UNP_180	0	38	38	38	6- 9	38	Si
264	7	U_2_UNP_180	0	27	27	22	6-11	27	Si
266	7	U_2_UNP_180	0	13	13	12	6- 5	13	Si
268	7	U_2_UNP_180	0	18	18	14	6- 5	18	Si
270	7	U_2_UNP_180	0	27	27	27	6- 5	27	ss
421	7	U_2_UNP_180	0	6	6	3	2- 2	6	Si
422	7	U_2_UNP_180	0	21	21	20	5-14	21	Si
423	7	U_2_UNP_180	0	21	21	19	2- 2	21	Si
424	7	U_2_UNP_180	0	7	7	5	2- 2	7	Si
425	7	U_2_UNP_180	0	4	4	3	2- 2	4	Si
426	7	U_2_UNP_180	0	11	11	14	5- 8	14	ss
427	7	U_2_UNP_180	0	15	15	14	5- 9	15	Si
428	7	U_2_UNP_180	0	4	4	3	5-16	4	Si
429	7	U_2_UNP_180	0	6	6	3	2- 2	6	Si
430	7	U_2_UNP_180	0	22	22	21	5-14	22	Si
431	7	U_2_UNP_180	0	20	20	18	2- 2	20	Si
432	7	U_2_UNP_180	0	7	7	5	2- 2	7	Si
437	7	U_2_UNP_180	0	12	12	10	2- 2	12	Si
438	7	U_2_UNP_180	0	12	12	12	2- 2	12	ss
439	7	U_2_UNP_180	0	12	12	9	2- 2	12	Si
440	7	U_2_UNP_180	0	20	20	15	2- 2	20	Si
441	7	U_2_UNP_180	0	20	20	20	2- 2	20	ss
442	7	U_2_UNP_180	0	20	20	16	2- 2	20	Si
443	7	U_2_UNP_180	0	19	19	15	2- 2	19	Si
444	7	U_2_UNP_180	0	20	20	20	2- 2	20	ss
445	7	U_2_UNP_180	0	20	20	15	2- 2	20	Si
354	8	P_HEA140_S008	4	44	44	33	5-16	44	Si
355	8	P_HEA140_S008	4	44	44	33	5- 1	44	Si
356	8	P_HEA140_S008	4	32	32	24	5-16	32	Si
360	8	P_HEA140_S008	4	32	32	24	5-16	32	Si
361	8	P_HEA140_S008	5	40	40	30	5-16	40	Si
362	8	P_HEA140_S008	5	51	51	38	5-12	51	Si
467	8	P_HEA140_S008	4	32	32	24	5- 1	32	Si
468	8	P_HEA140_S008	4	31	31	24	5- 1	31	Si
469	8	P_HEA140_S008	5	35	35	27	5- 6	35	Si
470	8	P_HEA140_S008	4	44	44	33	5-16	44	Si
471	8	P_HEA140_S008	4	43	43	32	5-16	43	Si
472	8	P_HEA140_S008	5	43	43	33	5- 6	43	Si
214	10	P_HEA120_S010	5	17	17	15	2- 2	17	Si
216	10	P_HEA120_S010	4	12	12	4	2- 2	12	Si
218	10	P_HEA120_S010	8	28	28	24	2- 2	28	Si
222	10	P_HEA120_S010	7	24	24	4	2- 2	24	Si
224	10	P_HEA120_S010	7	22	22	20	2- 2	22	Si
225	10	P_HEA120_S010	5	17	17	15	2- 2	17	Si
228	10	P_HEA120_S010	4	12	12	4	2- 2	12	Si
229	10	P_HEA120_S010	8	28	28	24	2- 2	28	Si
233	10	P_HEA120_S010	7	24	24	4	2- 2	24	Si
235	10	P_HEA120_S010	7	22	22	20	2- 2	22	Si
252	10	P_HEA120_S010	4	12	12	3	2- 2	12	Si
254	10	P_HEA120_S010	5	17	17	9	2- 2	17	Si
256	10	P_HEA120_S010	8	28	28	24	2- 2	28	Si
260	10	P_HEA120_S010	7	24	24	4	2- 2	24	Si
262	10	P_HEA120_S010	7	22	22	20	2- 2	22	Si
345	10	P_HEA120_S010	7	24	24	4	2- 2	24	Si
346	10	P_HEA120_S010	7	24	24	3	2- 2	24	Si
347	10	P_HEA120_S010	7	24	24	3	2- 2	24	Si
449	10	P_HEA120_S010	5	16	16	14	2- 2	16	Si
450	10	P_HEA120_S010	4	12	12	4	2- 2	12	Si
451	10	P_HEA120_S010	8	28	28	24	2- 2	28	Si
452	10	P_HEA120_S010	7	23	23	4	2- 2	23	Si
453	10	P_HEA120_S010	7	22	22	20	2- 2	22	Si
454	10	P_HEA120_S010	5	16	16	14	2- 2	16	Si
455	10	P_HEA120_S010	4	12	12	3	2- 2	12	Si
456	10	P_HEA120_S010	8	28	28	24	2- 2	28	Si
457	10	P_HEA120_S010	7	23	23	4	2- 2	23	Si
458	10	P_HEA120_S010	7	22	22	20	2- 2	22	Si
459	10	P_HEA120_S010	4	12	12	3	2- 2	12	Si
460	10	P_HEA120_S010	5	16	16	9	2- 2	16	Si
461	10	P_HEA120_S010	8	28	28	24	2- 2	28	Si
462	10	P_HEA120_S010	7	23	23	4	2- 2	23	Si
463	10	P_HEA120_S010	7	22	22	20	2- 2	22	Si
464	10	P_HEA120_S010	7	23	23	3	2- 2	23	Si
465	10	P_HEA120_S010	7	23	23	3	2- 2	23	Si
466	10	P_HEA120_S010	7	23	23	3	2- 2	23	Si
585	10	P_HEA120_S010	51	61	63	47	6- 9	63	Si
586	10	P_HEA120_S010	27	33	34	25	6-10	34	Si
587	10	P_HEA120_S010	17	21	21	16	6-10	21	Si
588	10	P_HEA120_S010	15	18	19	14	6-10	19	Si
589	10	P_HEA120_S010	15	18	18	13	6- 9	18	Si
590	10	P_HEA120_S010	14	17	17	13	6- 9	17	Si
591	10	P_HEA120_S010	10	13	13	10	6-14	13	Si

### 2.6.3 VERIFICA NUMERICA ESTESA ASTE ACCIAIO

Si riporta a seguire un listato di calcolo relativo alle verifiche effettuate su ogni singola asta.

VERIFICA ELEMENTI IN ACCIAIO  
 lavoro : CIMIT1  
 data : 2021\_12\_13\_09\_21

Unità di misura:  
 Lunghezze: cm  
 Prop.Sez.: cm  
 Forze: daN  
 Momenti: daNcm  
 Tensioni: daN/cm<sup>2</sup>

## MATERIALI

S275 (EN 10025-2): Mod.EI.= 2100000.0; gM = 1.050;  
 fyk = 2750.0(2550.0 per sp>40 mm); fyd = 2619.0(2428.6 per sp>40 mm).

## CASI DI CARICO

N	Descrizione	Soll.
1	SLU	1
2	SLU VENTOY	2
5	SLU con SISMAX PRINC	16
6	SLU con SISMAY PRINC	16

## CARATTERISTICHE GEOMETRICHE

CASSONE\_S001 ( 1 ) :

A = 35.0000E+00 Jz= 1.7879E+03 Jy= 1.7879E+03 Jt= 2.6797E+03  
 base= 18. ; alt= 18. ; spsup= 0. ; spsx= 0. ; spdx= 0. ; spinf= 0.

P\_HEA180\_S002 ( 2 ) :

A = 45.3671E+00 Jz= 2.5161E+03 Jy=924.7126E+00 Jt= 11.0401E+00

U\_2\_UNP\_180 ( 7 ) :

A = 55.9714E+00 Jz= 2.7098E+03 Jy= 2.9121E+03 Jt= 17.7422E+00

P\_HEA140\_S008 ( 8 ) :

A = 31.4902E+00 Jz= 1.0353E+03 Jy=389.3688E+00 Jt= 6.1554E+00

P\_HEA120\_S010 ( 10 ) :

A = 25.4102E+00 Jz=607.6354E+00 Jy=230.9414E+00 Jt= 4.3320E+00

CASSONE\_S001 ( 1 ) stato limite ultimo - ASTA ( 972- 1292) 75  
 ----- PROGR. 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 6	-46317.7	165845.0	-564.4	-958.0	683.1	169.0
5-14	107179.2	78198.6	14926.4	-1202.4	329.8	-387.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	3	Sx	-1095.4	0.0	1.8	1.8	1095.4
5-14	si	13	Tz	-202.1	79.4	0.0	79.4	244.4
5-14	si	9	Ty	-150.3	0.0	79.5	79.5	203.8

----- PROGR. 57.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 6	-36665.4	126825.7	-564.4	-942.3	683.1	169.0
5-14	85048.1	59361.1	14926.4	-1186.8	329.8	-387.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	3	Sx	-849.9	0.0	1.8	1.8	849.9
5-14	si	13	Tz	-179.8	79.4	0.0	79.4	226.4
5-14	si	9	Ty	-139.4	0.0	79.5	79.5	196.0

----- PROGR. 114.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 6	-27013.3	87806.4	-564.4	-926.7	683.1	169.0
5-14	62917.1	40523.9	14926.4	-1171.1	329.8	-387.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	3	Sx	-604.5	0.0	1.8	1.8	604.5
5-14	si	13	Tz	-157.5	79.4	0.0	79.4	209.1
5-14	si	9	Ty	-128.6	0.0	79.5	79.5	188.4

----- PROGR. 171.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 6	-17361.9	48787.3	-564.4	-911.0	683.1	169.0
5-14	40786.6	21687.3	14926.4	-1155.4	329.8	-387.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	3	Sx	-359.0	0.0	1.8	1.8	359.0
5-14	si	13	Tz	-135.2	79.4	0.0	79.4	192.8
5-14	si	9	Ty	-117.7	0.0	79.5	79.5	181.2

----- PROGR. 228.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-11	20056.3	-4997.3	12615.5	-767.3	-67.6	-421.3
5-14	18657.9	2857.4	14926.4	-1139.7	329.8	-387.4
5- 9	18848.0	2719.3	14796.0	-1142.7	324.8	-391.9

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	1	Sx	-148.0	0.0	41.2	41.2	164.3
5-14	si	13	Tz	-112.9	79.4	0.0	79.4	177.9
5-14	si	9	Ty	-106.9	0.0	79.5	79.5	174.3
5- 9	si	13	Si	-114.6	78.9	0.0	78.9	178.4

----- PROGR. 286.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 7	-306.9	-31091.4	7758.3	-1195.1	733.1	-72.5
5-14	-3509.4	-15996.7	14926.4	-1124.0	329.8	-387.4

6- 8			-293.6	-31103.1	7779.7	-1194.4	733.3	-71.6
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 7	si	4	Sx	-192.2	0.0	25.3	25.3	197.1
5-14	si	13	Tz	-90.5	79.4	0.0	79.4	164.6
5-14	si	9	Ty	-96.0	0.0	79.5	79.5	167.9
6- 8	si	9	Si	-189.3	0.0	59.1	59.1	215.2
----- PROGR.								343.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6- 6			11604.0	-68271.5	-564.4	-863.9	683.1	169.0
5-14			-25614.0	-34830.9	14926.4	-1108.3	329.8	-387.4
6- 7			-4449.7	-72965.9	7758.3	-1179.4	733.1	-72.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	1	Sx	-426.8	0.0	1.8	1.8	426.8
5-14	si	13	Tz	-68.3	79.4	0.0	79.4	153.5
5-14	si	9	Ty	-85.2	0.0	79.5	79.5	162.0
6- 7	si	11	Si	-422.1	0.0	-52.6	52.6	431.9
----- PROGR.								400.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6- 6			21254.6	-107290.8	-564.4	-848.2	683.1	169.0
5-14			-47743.5	-53667.7	14926.4	-1092.6	329.8	-387.4
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	1	Sx	-671.3	0.0	1.8	1.8	671.3
5-14	si	13	Tz	-46.0	79.4	0.0	79.4	145.0
5-14	si	9	Ty	-74.4	0.0	79.5	79.5	156.5
----- PROGR.								457.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6- 6			30906.4	-146310.1	-564.4	-832.5	683.1	169.0
5-14			-69874.2	-72505.0	14926.4	-1076.9	329.8	-387.4
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	1	Sx	-915.9	0.0	1.8	1.8	915.9
5-14	si	13	Tz	-23.7	79.4	0.0	79.4	139.5
5-14	si	9	Ty	-63.6	0.0	79.5	79.5	151.7

## VERIFICA STABILITA` :

L0 = 457.  
 Z | Lc = 457. | Ro = 7.15 | lm = 63.9 | Ncr = 177432.8 | alfa(a )=0.2100 | ki=0.8299 |  
 Y | Lc = 457. | Ro = 7.15 | lm = 63.9 | Ncr = 177432.8 | alfa(a )=0.2100 | ki=0.8299 |  
 Caso 6- 6 - Nodo 3 - Asse Z  
 Ned = -958.0 | Mzeq = -34738.3 | Myeq = 124383.8 | Ss = -838.3 ( 0.320)

CASSONE\_S001 ( 1) stato limite ultimo - ASTA ( 961- 1293) 76  
 ----- PROGR. 0.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
5-10			120653.0	51396.9	15314.3	-711.5	229.3	-486.1
5-14			119747.2	51388.4	15378.0	-712.1	229.2	-482.4
5- 8			-120463.6	-25853.1	-15413.5	-666.6	-84.8	485.3
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	2	Sx	-886.4	0.0	50.0	50.0	890.6
5-14	si	13	Tz	-378.8	80.4	0.0	80.4	403.6
5- 8	si	5	Ty	-149.2	0.0	-81.5	81.5	205.4
----- PROGR.								57.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
5-10			92880.6	38298.1	15314.3	-695.8	229.3	-486.1
5-14			92186.5	38293.1	15378.0	-696.4	229.2	-482.4
5- 8			-92741.2	-21006.5	-15413.5	-650.9	-84.8	485.3
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	2	Sx	-680.2	0.0	50.0	50.0	685.7
5-14	si	13	Tz	-301.9	80.4	0.0	80.4	332.4
5- 8	si	5	Ty	-124.3	0.0	-81.5	81.5	188.1
----- PROGR.								114.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
5-10			65106.8	25199.3	15314.3	-680.1	229.3	-486.1
5-14			64624.4	25197.8	15378.0	-680.7	229.2	-482.4
5- 8			-65017.4	-16159.9	-15413.5	-635.2	-84.8	485.3
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	2	Sx	-474.0	0.0	50.0	50.0	481.9
5-14	si	13	Tz	-225.0	80.4	0.0	80.4	264.6
5- 8	si	5	Ty	-99.5	0.0	-81.5	81.5	172.7
----- PROGR.								171.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
5-10			37328.7	12100.8	15314.3	-664.4	229.3	-486.1
5-14			37057.9	12102.7	15378.0	-665.0	229.2	-482.4
5- 8			-37289.3	-11313.5	-15413.5	-619.5	-84.8	485.3
5- 7			-37123.6	-11697.2	-15457.7	-618.3	-89.0	483.0
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	2	Sx	-267.8	0.0	50.0	50.0	281.5
5-14	si	13	Tz	-148.0	80.4	0.0	80.4	203.2
5- 8	si	5	Ty	-74.7	0.0	-81.5	81.5	159.7

5- 7 si 14	Si	-260.1	66.6	0.0	66.6	284.6
						228.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	191.6	-22601.5	-508.6	-2832.3	383.5	-13.3
5-14	9458.1	-990.6	15378.0	-649.3	229.2	-482.4
5- 8	-9527.8	-6468.9	-15413.5	-603.8	-84.8	485.3

## TENSIONI (Sz= 0.00) :

Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 1 Sx	-195.7	0.0	1.7	1.7	195.7
5-14	si 13 Tz	-70.9	80.4	0.0	80.4	156.2
5- 8	si 5 Ty	-49.8	0.0	-81.5	81.5	149.7
2- 2	si 9 Si	-195.6	0.0	18.2	18.2	198.1

PROGR. 286.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	-567.5	-44506.2	-508.6	-2811.9	383.5	-13.3
5-14	-18000.8	-14089.8	15378.0	-633.6	229.2	-482.4
5- 8	18092.8	-1618.4	-15413.5	-588.1	-84.8	485.3

## TENSIONI (Sz= 0.00) :

Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 4 Sx	-307.2	0.0	1.7	1.7	307.2
5-14	si 13 Tz	5.5	80.4	0.0	80.4	139.3
5- 8	si 5 Ty	-25.0	0.0	-81.5	81.5	143.4
2- 2	si 11 Si	-307.1	0.0	-17.0	17.0	308.5

PROGR. 343.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	-1326.7	-66410.8	-508.6	-2791.5	383.5	-13.3
5-14	-45585.1	-27184.5	15378.0	-617.9	229.2	-482.4
5- 8	45838.8	3227.6	-15413.5	-572.4	-84.8	485.3

## TENSIONI (Sz= 0.00) :

Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 4 Sx	-420.7	0.0	1.7	1.7	420.7
5-14	si 13 Tz	82.6	80.4	0.0	80.4	161.9
5- 8	si 5 Ty	-0.1	0.0	-81.5	81.5	141.2
2- 2	si 11 Si	-420.4	0.0	-17.0	17.0	421.4

PROGR. 400.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-73726.1	-40295.6	15314.3	-601.6	229.3	-486.1
5-14	-73150.2	-40279.7	15378.0	-602.2	229.2	-482.4
5- 8	73565.5	8074.1	-15413.5	-556.7	-84.8	485.3

## TENSIONI (Sz= 0.00) :

Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si 4 Sx	-591.2	0.0	50.0	50.0	597.5
5-14	si 13 Tz	159.5	80.4	0.0	80.4	211.7
5- 8	si 5 Ty	24.7	0.0	-81.5	81.5	143.3

PROGR. 457.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-101499.5	-53394.3	15314.3	-585.9	229.3	-486.1
5-14	-100711.9	-53375.0	15378.0	-586.5	229.2	-482.4
5- 8	101288.9	12920.7	-15413.5	-541.0	-84.8	485.3

## TENSIONI (Sz= 0.00) :

Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si 4 Sx	-796.4	0.0	50.0	50.0	801.1
5-14	si 13 Tz	236.5	80.4	0.0	80.4	274.4
5- 8	si 5 Ty	49.6	0.0	-81.5	81.5	149.6

## VERIFICA STABILITA` :

$L0 = 457.$   
 $Z \quad LC = 457. \quad Ro = 7.15 \quad lm = 63.9 \quad Ncr = 177432.8 \quad \alpha(a) = 0.2100 \quad ki = 0.8299$   
 $Y \quad LC = 457. \quad Ro = 7.15 \quad lm = 63.9 \quad Ncr = 177432.8 \quad \alpha(a) = 0.2100 \quad ki = 0.8299$   
 Caso 5-10 - Nodo 1 - Asse Z  
 $Ned = -711.5 \quad Mzeq = 90489.8 \quad Myeq = -40045.7 \quad Ss = -684.2 \quad (0.261)$

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 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	114851.3	42294.8	14944.7	-809.9	192.0	-455.6
5-14	113973.1	42177.4	15007.0	-809.3	191.5	-452.0
5- 8	-115128.6	-16278.5	-14952.4	-570.8	-45.9	456.7

## TENSIONI (Sz= 0.00) :

Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si 2 Sx	-814.2	0.0	48.8	48.8	818.6
5-14	si 13 Tz	-396.3	76.2	0.0	76.2	417.7
5- 8	si 5 Ty	-98.2	0.0	-78.2	78.2	167.3

PROGR. 57.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	88826.4	31326.8	14944.7	-794.2	192.0	-455.6
5-14	88151.5	31236.4	15007.0	-793.6	191.5	-452.0
5- 8	-89038.6	-13656.3	-14952.4	-555.1	-45.9	456.7

## TENSIONI (Sz= 0.00) :

Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si 2 Sx	-627.5	0.0	48.8	48.8	633.2
5-14	si 13 Tz	-317.9	76.2	0.0	76.2	344.2
5- 8	si 5 Ty	-84.6	0.0	-78.2	78.2	159.7

PROGR. 114.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
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5-10	62801.9	20358.9	14944.7	-778.6	192.0	-455.6		
5-14	62330.1	20295.4	15007.0	-777.9	191.5	-452.0		
5- 8	-62948.9	-11034.2	-14952.4	-539.4	-45.9	456.7		
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	2	Sx	-440.9	0.0	48.8	48.8	448.9
5-14	si	13	Tz	-239.5	76.2	0.0	76.2	273.5
5- 8	si	5	Ty	-71.0	0.0	-78.2	78.2	152.9
							PROGR.	171.

SOLLECITAZIONI :										PROGR.	171.7		
Caso			MZ		MY		MT		N		TZ		TY
5-10			36778.1		9391.1		14944.7		-762.9		192.0		-455.6
5-14			36509.5		9354.5		15007.0		-762.2		191.5		-452.0
5- 8			-36859.9		-8412.1		-14952.4		-523.7		-45.9		456.7
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
5-10	si	2	Sx		-254.2		0.0		48.8		48.8		267.9
5-14	si	13	Tz		-161.1		76.2		0.0		76.2		208.3
5- 8	si	5	Ty		-57.3		0.0		-78.2		78.2		147.0
5-10	si	15	Si		-251.6		-59.3		0.0		59.3		271.7
										-----		PROGR.	228.7

SOLLECITAZIONI :										PROGR.		286.			
Caso			MZ		MY		MT		N		TZ		TY		
2- 2			116.1		-22465.0		-233.2		-2838.2		387.4		-6.8		
5-14			10695.4		-1585.7		15007.0		-746.5		191.5		-452.0		
5- 8			-10777.5		-5790.7		-14952.4		-508.0		-45.9		456.7		
TENSIONI (Sz= 0.00) :															
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si		
2- 2	si	1	Sx		-194.8		0.0		0.8		0.8		194.8		
5-14	si	13	Tz		-82.7		76.2		0.0		76.2		155.8		
5- 8	si	5	Ty		-43.7		0.0		-78.2		78.2		142.3		
2- 2	si	9	Si		-194.7		0.0		17.2		17.2		197.0		
										----- PROGR.				286.	

SOLLECITAZIONI :										PROGR.		2004	
Caso	MZ			MY		MT		N		TZ		TY	
2- 2	-272.7			-44597.7		-233.2		-2817.8		387.4		-6.8	
5-14	-15145.4			-12528.2		15007.0		-730.8		191.5		-452.0	
5- 8	15331.7			-3167.0		-14952.4		-492.3		-45.9		456.7	
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si	
2- 2	si	4	Sx	-306.4		0.0		0.8		0.8		306.4	
5-14	si	13	Tz	-4.2		76.2		0.0		76.2		132.1	
5- 8	si	5	Ty	-30.0		0.0		-78.2		78.2		138.7	
2- 2	si	11	Si	-306.3		0.0		-16.6		16.6		307.6	
-----										PROGR.		343.	

SOLLECITAZIONI :										PROGR.		343.5		
Caso			MZ		MY		MT		N		TZ		TY	
2- 2			-661.5		-66730.4		-233.2		-2797.4		387.4		-6.8	
5-14			-40962.5		-23468.9		15007.0		-715.1		191.5		-452.0	
5- 8			41417.1		-545.0		-14952.4		-476.6		-45.9		456.7	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si	
2- 2	si	4	Sx		-419.2		0.0		0.8		0.8		419.2	
5-14	si	13	Tz		74.2		76.2		0.0		76.2		151.5	
5- 8	si	5	Ty		-16.4		0.0		-78.2		78.2		136.4	
2- 2	si	11	Si		-419.0		0.0		-16.6		16.6		420.0	
											----- PROGR.		400.	

SOLLECITAZIONI :										PROGR.		456.7								
Caso	MZ			MY			MT			N			TZ			TY				
5-10	-67327.4			-34481.1			14944.7			-700.1			192.0			-455.6				
5-14	-66783.3			-34409.8			15007.0			-699.4			191.5			-452.0				
5- 8	67506.3			2077.1			-14952.4			-460.9			-45.9			456.7				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
5-10	si	4	Sx			-532.5			0.0			48.8			48.8			539.2		
5-14	si	13	Tz			152.6			76.2			0.0			76.2			201.8		
5- 8	si	5	Ty			-2.7			0.0			-78.2			78.2			135.4		
										-----						PROGR.		457.		

SOLLECITAZIONI :				PRODOTTO			191.1	
Caso	MZ	MY	MT	N	TZ	TY		
5-10	-93352.1	-45449.0	14944.7	-684.4	192.0	-455.6		
5-14	-92604.8	-45350.8	15007.0	-683.7	191.5	-452.0		
5- 8	93596.1	4699.3	-14952.4	-445.2	-45.9	456.7		
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	4	Sx	-718.2	0.0	48.8	48.8	723.2
5-14	si	13	Tz	231.0	76.2	0.0	76.2	266.1
5- 8	si	5	Ty	10.9	0.0	-78.2	78.2	135.8

## VERIFICA STABILITA` :

z | L0 = 457. |  
 | Lc = 457. | Ro = 7.15 | lm = 63.9 | Ncr= 177432.8 | alfa(a )=0.2100 | ki=0.8299 |  
 y | Lc = 457. | Ro = 7.15 | lm = 63.9 | Ncr= 177432.8 | alfa(a )=0.2100 | ki=0.8299 |  
 Caso 5-10 - Nodo 1 - Asse Z  
 Ned = -809.9 | Mzeq = 86138.4 | Myeq = -34086.8 | Ss = -635.8 ( 0.243 )

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 ----- PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-10	112057.9	45520.6	14886.4	-800.8	204.6	-445.2
5-14	111184.4	45476.6	14946.1	-800.7	204.4	-441.7
5- 9	112913.7	44174.7	14830.1	-799.1	199.7	-448.7

TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-10	si	2	Sx Si	-816.1	0.0	48.6	48.6
5-14	si	13	Tz	-366.4	76.2	0.0	76.2
5-9	si	5	Ty	199.5	0.0	77.3	77.3
							PROGR. 57.
SOLLECITAZIONI :							
Caso			MZ	MY	MT	N	TZ
5-10			86624.2	33833.2	14886.4	-785.1	204.6
5-14			85953.9	33797.5	14946.1	-785.0	204.4
5-9			87281.1	32765.8	14830.1	-783.4	199.7
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-10	si	2	Sx Si	-628.8	0.0	48.6	48.6
5-14	si	13	Tz	-294.4	76.2	0.0	76.2
5-9	si	5	Ty	142.6	0.0	77.3	77.3
							PROGR. 114.
SOLLECITAZIONI :							
Caso			MZ	MY	MT	N	TZ
5-10			61190.8	22145.8	14886.4	-769.4	204.6
5-14			60723.5	22118.3	14946.1	-769.3	204.4
5-9			61648.6	21356.8	14830.1	-767.7	199.7
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-10	si	2	Sx Si	-441.5	0.0	48.6	48.6
5-14	si	13	Tz	-222.5	76.2	0.0	76.2
5-9	si	5	Ty	85.6	0.0	77.3	77.3
							PROGR. 171.
SOLLECITAZIONI :							
Caso			MZ	MY	MT	N	TZ
5-10			35758.0	10458.4	14886.4	-753.7	204.6
5-14			35493.9	10439.2	14946.1	-753.6	204.4
5-9			36016.9	9947.8	14830.1	-752.0	199.7
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-10	si	2	Sx Si	-254.2	0.0	48.6	48.6
5-14	si	13	Tz	-150.6	76.2	0.0	76.2
5-9	si	5	Ty	28.6	0.0	77.3	77.3
5-10	si	15	Si	-251.3	-58.1	0.0	58.1
							PROGR. 228.
SOLLECITAZIONI :							
Caso			MZ	MY	MT	N	TZ
2-2			22.3	-21908.0	27.2	-2817.7	384.3
5-14			10270.1	-1239.6	14946.1	-737.9	204.4
5-9			10391.1	-1460.8	14830.1	-736.3	199.7
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2-2	si	1	Sx	-190.9	0.0	0.1	0.1
5-14	si	13	Tz	-78.7	76.2	0.0	76.2
5-9	si	5	Ty	-28.4	0.0	77.3	77.3
2-2	si	9	Si	-190.9	0.0	16.1	16.1
							PROGR. 286.
SOLLECITAZIONI :							
Caso			MZ	MY	MT	N	TZ
2-2			14.7	-43862.2	27.2	-2797.3	384.3
5-14			-14977.5	-12919.4	14946.1	-722.2	204.4
5-9			-15258.6	-12870.4	14830.1	-720.6	199.7
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2-2	si	1	Sx	-300.8	0.0	0.1	0.1
5-14	si	13	Tz	-6.7	76.2	0.0	76.2
5-9	si	5	Ty	-85.4	0.0	77.3	77.3
2-2	si	9	Si	-300.8	0.0	16.1	16.1
							PROGR. 343.
SOLLECITAZIONI :							
Caso			MZ	MY	MT	N	TZ
2-2			7.0	-65816.3	27.2	-2776.8	384.3
5-14			-40204.1	-24598.4	14946.1	-706.5	204.4
5-9			-40887.2	-24279.3	14830.1	-704.9	199.7
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2-2	si	1	Sx	-410.7	0.0	0.1	0.1
5-14	si	13	Tz	65.2	76.2	0.0	76.2
5-9	si	5	Ty	-142.4	0.0	77.3	77.3
2-2	si	9	Si	-410.7	0.0	16.1	16.1
							PROGR. 400.
SOLLECITAZIONI :							
Caso			MZ	MY	MT	N	TZ
5-10			-65982.4	-36291.3	14886.4	-690.9	204.6
5-14			-65433.9	-36277.5	14946.1	-690.8	204.4
5-9			-66519.1	-35688.3	14830.1	-689.2	199.7
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-10	si	4	Sx Si	-534.6	0.0	48.6	48.6
5-14	si	13	Tz	137.2	76.2	0.0	76.2
5-9	si	5	Ty	-199.3	0.0	77.3	77.3
							PROGR. 457.
SOLLECITAZIONI :							
Caso			MZ	MY	MT	N	TZ
5-10			-91415.9	-47978.7	14886.4	-675.2	204.6
5-14			-90664.3	-47956.7	14946.1	-675.1	204.4
5-9			-92151.6	-47097.2	14830.1	-673.5	199.7
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-10	si	4	Sx Si	-721.0	0.0	48.6	48.6
							Si 725.9

5-14	si	13	Tz	209.1	76.2	0.0	76.2	247.3
5-9	si	5	Ty	-256.3	0.0	77.3	77.3	289.1

## VERIFICA STABILITA' :

L0 = 457.  
 Z LC = 457. Ro = 7.15 lm = 63.9 Ncr = 177432.8 alfa(a) = 0.2100 ki = 0.8299  
 Y LC = 457. Ro = 7.15 lm = 63.9 Ncr = 177432.8 alfa(a) = 0.2100 ki = 0.8299  
 Caso 5-10 - Nodo 1 - Asse Z  
 Ned = -800.8 Mzeq = 84043.5 Myeq = -35984.0 Ss = -634.5 ( 0.242)

CASSONE\_S001 ( 1) stato limite ultimo - ASTA ( 1504- 1505) 387  
PROGR. 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-11	-13242.0	111481.5	13268.2	-54.4	404.3	69.2
5-14	-30102.1	89647.3	15079.8	-186.5	325.0	137.7
5-10	-31261.3	90387.5	14997.3	-187.0	327.7	142.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	3	Sx	-629.4	0.0	43.3	43.3	633.8
5-14	si	7	Tz	146.2	70.1	0.0	70.1	190.1
5-10	si	10	Ty	-311.7	0.0	-68.9	68.9	333.8

PROGR. 57.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-11	-9290.4	88384.3	13268.2	-38.7	404.3	69.2
5-14	-22238.8	71079.5	15079.8	-170.8	325.0	137.7
5-10	-23137.4	71666.6	14997.3	-171.3	327.7	142.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	3	Sx	-492.8	0.0	43.3	43.3	498.5
5-14	si	7	Tz	107.1	70.1	0.0	70.1	161.9
5-10	si	10	Ty	-255.7	0.0	-68.9	68.9	282.1
5-11	si	12	Si	-490.2	0.0	57.1	57.1	500.1

PROGR. 114.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-2	-589.1	-66029.8	-13114.4	-897.0	-408.1	29.9
5-14	-14375.8	52512.0	15079.8	-155.1	325.0	137.7
5-10	-15013.8	52945.7	14997.3	-155.7	327.7	142.2
5-6	48.9	-66463.6	-13031.9	-896.4	-410.8	25.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-2	si	4	Sx	-361.0	0.0	42.8	42.8	368.5
5-14	si	7	Tz	67.9	70.1	0.0	70.1	139.2
5-10	si	10	Ty	-199.6	0.0	-68.9	68.9	232.5
5-6	si	9	Si	-360.4	0.0	-60.8	60.8	375.5

PROGR. 171.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-6	1498.0	-42996.7	-13031.9	-880.7	-410.8	25.3
5-14	-6513.7	33944.8	15079.8	-139.4	325.0	137.7
5-10	-6891.2	34225.3	14997.3	-140.0	327.7	142.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-6	si	1	Sx	-249.1	0.0	42.6	42.6	259.8
5-14	si	7	Tz	28.8	70.1	0.0	70.1	124.8
5-10	si	10	Ty	-143.5	0.0	-68.9	68.9	186.6
5-6	si	9	Si	-248.7	0.0	-60.8	60.8	270.1

PROGR. 228.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-6	2958.2	-19534.5	-13031.9	-865.0	-410.8	25.3
5-14	1336.6	15379.3	15079.8	-123.7	325.0	137.7
5-10	1219.8	15506.6	14997.3	-124.3	327.7	142.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-6	si	1	Sx	-137.9	0.0	42.6	42.6	156.4
5-14	si	7	Tz	-10.3	70.1	0.0	70.1	121.9
5-10	si	10	Ty	-87.4	0.0	-68.9	68.9	147.9
5-6	si	9	Si	-137.1	0.0	-60.8	60.8	172.8

PROGR. 286.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2-2	24634.4	229.8	715.6	-1563.7	-17.8	215.2
5-14	9222.3	-3216.8	15079.8	-108.0	325.0	137.7
5-10	9366.1	-3242.7	14997.3	-108.6	327.7	142.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx	-169.8	0.0	2.3	2.3	169.9
5-14	si	7	Tz	-49.5	70.1	0.0	70.1	131.2
5-10	si	10	Ty	-31.3	0.0	-68.9	68.9	123.3
2-2	si	15	Si	-169.8	10.5	0.0	10.5	170.7

PROGR. 343.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2-2	36928.0	1249.3	715.6	-1543.2	-17.8	215.2
5-14	17082.7	-21764.4	15079.8	-92.3	325.0	137.7
5-10	17487.0	-21943.6	14997.3	-92.9	327.7	142.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx	-236.3	0.0	2.3	2.3	236.3
5-14	si	7	Tz	-88.6	70.1	0.0	70.1	150.4

5-10	si	10	Ty	24.7	0.0	-68.9	68.9	121.8
2- 2	si	15	Si	-235.9	10.5	0.0	10.5	236.6
-----								400.
PROGR.								

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 9	25790.4	-41155.9	14913.2	-76.0	331.6	143.3
5-14	24945.4	-40330.9	15079.8	-76.6	325.0	137.7
5-10	25610.3	-40663.2	14997.3	-77.2	327.7	142.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 9	si	1	Sx	Si	-339.2	0.0	48.7	48.7
5-14	si	7	Tz		-127.8	70.1	0.0	70.1
5-10	si	10	Ty		80.7	0.0	-68.9	68.9
								457.
PROGR.								

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 9	33975.3	-60098.8	14913.2	-60.3	331.6	143.3
5-14	32808.5	-58898.2	15079.8	-60.9	325.0	137.7
5-10	33734.1	-59383.8	14997.3	-61.5	327.7	142.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 9	si	1	Sx Si	-475.3	0.0	48.7	48.7	482.7
5-14	si	7	Tz	-166.9	70.1	0.0	70.1	206.4
5-10	si	10	Ty	136.8	0.0	-68.9	68.9	181.5

## VERIFICA STABILITA` :

L0 = 457.  
 Z | Lc = 457. | Ro = 7.15 | lm = 63.9 | Ncr = 177432.8 | alfa(a )=0.2100 | ki=0.8299 |  
 Y | Lc = 457. | Ro = 7.15 | lm = 63.9 | Ncr = 177432.8 | alfa(a )=0.2100 | ki=0.8299 |  
 Caso 5- 2 - Nodo 1 - Asse Z  
 Ned = -928.4 | Mzeq = 7243.5 | Myeq = -84494.6 | Ss = -496.2 ( 0.189)

CASSONE\_S001 ( 1) stato limite ultimo - ASTA ( 1506- 1507) 388  
 ----- PROGR. 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-50020.8	106969.2	15205.5	-909.2	430.0	222.3
5-14	-50230.9	106077.2	15276.6	-910.1	426.3	223.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	3	Sx Si	-816.2	0.0	49.7	49.7	820.8
5-14	si	14	Tz	225.4	77.9	0.0	77.9	262.8
5-14	si	10	Ty	-321.2	0.0	-77.4	77.4	348.1
-----								57.
PROGR.								

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-37322.7	82408.4	15205.5	-893.5	430.0	222.3
5-14	-37482.3	81722.7	15276.6	-894.4	426.3	223.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-10	si	3	Sx	Si	-628.2	0.0	49.7	49.7	634.1
5-14	si	14	Tz		174.3	77.9	0.0	77.9	220.5
5-14	si	10	Ty		-258.7	0.0	-77.4	77.4	291.4
-----								114.	
PROGR.									

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-24624.6	57847.8	15205.5	-877.8	430.0	222.3
5-14	-24733.8	57368.3	15276.6	-878.8	426.3	223.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	3	Sx Si	-440.2	0.0	49.7	49.7	448.6
5-14	si	14	Tz	123.1	77.9	0.0	77.9	182.7
5-14	si	10	Ty	-196.3	0.0	-77.4	77.4	237.8
-----								171.
PROGR.								

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-11926.7	33287.9	15205.5	-862.1	430.0	222.3
5-14	-11985.5	33014.6	15276.6	-863.1	426.3	223.2
5-12	-5284.6	39851.9	13544.3	-812.2	517.1	134.9

## TENSIONI (Sz= 0.00) :

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-10	si	3	Sx	-252.2	0.0	49.7	49.7	266.5	
5-14	si	14	Tz	72.0	77.9	0.0	77.9	153.0	

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	21851.6	-183.7	503.8	-2813.1	-12.3	380.5
5-14	761.3	8667.3	15276.6	-847.4	426.3	223.2

## TENSIONI (Sz= 0.00) :

5-14	219.1	129.7	199.8	2847.1	12.7	58.3		
2-2	761.3	8667.3	15276.6	-847.4	426.3	223.2		
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	1	Sx	-191.3	0.0	1.6	1.6	191.3
-----								
PROGR.								

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	43590.2	521.4	503.8	-2792.7	-12.3	380.5
5-14	13513.4	-15703.3	15276.6	-831.7	426.3	223.2

## TENSIONI (Sz= 0.00) :

Caso	M2	M1	M1	N	T2	T1		
2- 2	43590.2	521.4	503.8	-2792.7	-12.3	380.5		
5-14	13513.4	-15703.3	15276.6	-831.7	426.3	223.2		
TENSIONI (Sz=0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si

2-2	si	2	Sx	-301.8	0.0	1.6	1.6	301.9
5-14	si	14	Tz	-30.4	77.9	0.0	77.9	138.4
5-14	si	10	Ty	-9.0	0.0	-77.4	77.4	134.4
2-2	si	15	Si	-301.7	16.9	0.0	16.9	303.1
-----								PROGR. 343.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2-2	65328.8	1226.4	503.8	-2772.3	-12.3	380.5
5-14	26261.3	-40054.7	15276.6	-816.0	426.3	223.2

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx	-414.2	0.0	1.6	1.6	414.2
5-14	si	14	Tz	-81.5	77.9	0.0	77.9	157.7
5-14	si	10	Ty	53.5	0.0	-77.4	77.4	144.4
2-2	si	15	Si	-413.9	16.9	0.0	16.9	414.9
-----								PROGR. 400.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-9	38163.2	-65707.6	15126.7	-798.0	434.8	217.4
5-14	39009.8	-64408.7	15276.6	-800.3	426.3	223.2

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-9	si	1	Sx	-545.7	0.0	49.4	49.4	552.3
5-14	si	14	Tz	-132.7	77.9	0.0	77.9	189.3
5-14	si	10	Ty	115.9	0.0	-77.4	77.4	177.3
-----								PROGR. 457.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-9	50579.5	-90546.6	15126.7	-782.3	434.8	217.4
5-14	51758.3	-88763.1	15276.6	-784.6	426.3	223.2

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-9	si	1	Sx	-732.8	0.0	49.4	49.4	737.7
5-14	si	14	Tz	-183.9	77.9	0.0	77.9	228.1
5-14	si	10	Ty	178.3	0.0	-77.4	77.4	223.2

## VERIFICA STABILITA` :

Z L0 = 457. | Ro = 7.15 | lm = 63.9 | Ncr = 177432.8 | alfa(a) = 0.2100 | ki = 0.8299  
 Y Lc = 457. | Ro = 7.15 | lm = 63.9 | Ncr = 177432.8 | alfa(a) = 0.2100 | ki = 0.8299  
 Caso 5-11 - Nodo 2 - Asse Z  
 Ned = -857.9 | Mzeq = 24196.6 | Myeq = 97252.0 | Ss = -643.9 ( 0.246)

CASSONE\_S001 ( 1) stato limite ultimo - ASTA ( 1508- 1509) 389  
 ----- PROGR. 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-49312.7	108261.6	14901.0	-798.2	429.1	219.6
5-14	-49494.3	107382.8	14961.1	-799.1	425.5	220.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	3	Sx	-816.0	0.0	48.7	48.7	820.3
5-14	si	14	Tz	238.5	76.8	0.0	76.8	273.1
5-14	si	10	Ty	-328.1	0.0	-76.3	76.3	353.7
-----								PROGR. 57.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-36765.3	83748.6	14901.0	-782.5	429.1	219.6
5-14	-36901.7	83074.1	14961.1	-783.4	425.5	220.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	3	Sx	-629.0	0.0	48.7	48.7	634.6
5-14	si	14	Tz	186.8	76.8	0.0	76.8	229.3
5-14	si	10	Ty	-265.1	0.0	-76.3	76.3	296.2
-----								PROGR. 114.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-24217.9	59235.8	14901.0	-766.8	429.1	219.6
5-14	-24309.2	58765.6	14961.1	-767.8	425.5	220.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	3	Sx	-442.0	0.0	48.7	48.7	450.0
5-14	si	14	Tz	135.1	76.8	0.0	76.8	189.5
5-14	si	10	Ty	-202.2	0.0	-76.3	76.3	241.5
-----								PROGR. 171.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-10	-11670.5	34723.7	14901.0	-751.1	429.1	219.6
5-14	-11716.8	34457.7	14961.1	-752.1	425.5	220.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	3	Sx	-255.0	0.0	48.7	48.7	268.6
5-14	si	14	Tz	83.3	76.8	0.0	76.8	156.9
5-14	si	10	Ty	-139.2	0.0	-76.3	76.3	191.9
5-10	si	12	Si	-251.7	0.0	56.8	56.8	270.3
-----								PROGR. 228.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2-2	21742.6	-118.1	255.4	-2818.2	-6.0	384.6
5-14	874.7	10155.3	14961.1	-736.4	425.5	220.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	1	Sx	-190.6	0.0	0.8	0.8	190.6

5-14	si	14	Tz	31.6	76.8	0.0	76.8	136.7
5-14	si	10	Ty	-76.3	0.0	-76.3	76.3	152.6
2-2	si	13	Si	-190.5	-17.1	0.0	17.1	192.8
----- PROGR.								286.

## SOLLECITAZIONI :

Caso			MZ	MY	MT	N	TZ	TY
2-2			43713.5	227.5	255.4	-2797.8	-6.0	384.6
5-14			13469.4	-14169.9	14961.1	-720.7	425.5	220.4

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx	-301.1	0.0	0.8	0.8	301.1
5-14	si	14	Tz	-20.2	76.8	0.0	76.8	134.5
5-14	si	10	Ty	-13.3	0.0	-76.3	76.3	132.8
2-2	si	15	Si	-301.1	16.6	0.0	16.6	302.4
----- PROGR.								343.

## SOLLECITAZIONI :

Caso			MZ	MY	MT	N	TZ	TY
2-2			65684.3	573.0	255.4	-2777.4	-6.0	384.6
5-14			26061.6	-38474.6	14961.1	-705.0	425.5	220.4

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx	-412.9	0.0	0.8	0.8	412.9
5-14	si	14	Tz	-71.9	76.8	0.0	76.8	151.1
5-14	si	10	Ty	49.6	0.0	-76.3	76.3	141.1
2-2	si	15	Si	-412.7	16.6	0.0	16.6	413.7
----- PROGR.								400.

## SOLLECITAZIONI :

Caso			MZ	MY	MT	N	TZ	TY
5-10			38519.9	-63333.6	14901.0	-688.3	429.1	219.6
5-14			38654.1	-62782.6	14961.1	-689.3	425.5	220.4

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	1	Sx	-532.4	0.0	48.7	48.7	539.0
5-14	si	14	Tz	-123.6	76.8	0.0	76.8	181.5
5-14	si	10	Ty	112.6	0.0	-76.3	76.3	173.6
----- PROGR.								457.

## SOLLECITAZIONI :

Caso			MZ	MY	MT	N	TZ	TY
5-10			51067.3	-87846.4	14901.0	-672.6	429.1	219.6
5-14			51246.6	-87091.2	14961.1	-673.6	425.5	220.4

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	1	Sx	-718.5	0.0	48.7	48.7	723.4
5-14	si	14	Tz	-175.3	76.8	0.0	76.8	220.0
5-14	si	10	Ty	175.5	0.0	-76.3	76.3	219.7

## VERIFICA STABILITA` :

Z | L0 = 457. |  
 Y | Lc = 457. | Ro = 7.15 | lm = 63.9 | Ncr = 177432.8 | alfa(a )=0.2100 | ki=0.8299 |  
 Caso 5-10 - Nodo 2 - Asse Z  
 Ned = -798.2 | Mzeq = 38300.5 | Myeq = 81196.2 | Ss = -631.7 ( 0.241)

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 ----- PROGR. 0.

## SOLLECITAZIONI :

Caso			MZ	MY	MT	N	TZ	TY
6-10			162695.8	-2895.6	262.7	-1068.1	-79.0	-1052.7
5-11			26362.5	16664.2	-1613.0	-583.0	492.0	-219.7
6-11			149615.2	6747.8	-668.3	-954.9	204.7	-972.0

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	-604.6	0.0	0.0	0.0	604.6
5-11	si	6	Tz	-134.9	164.8	0.0	164.8	315.7
6-11	si	9	Ty	-18.9	0.0	141.2	141.2	245.3
----- PROGR.								36.

## SOLLECITAZIONI :

Caso			MZ	MY	MT	N	TZ	TY
6-10			124669.1	1050.2	262.7	-1055.3	-79.0	-1052.7
5-11			18425.2	-1689.4	-1613.0	-570.2	492.0	-219.7
6-11			114502.3	-53.2	-668.3	-942.0	204.7	-972.0

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	2	Sx	-457.1	0.0	0.0	0.0	457.1
5-11	si	6	Tz	-71.9	164.8	0.0	164.8	294.3
6-11	si	9	Ty	-20.8	0.0	141.2	141.2	245.5
----- PROGR.								72.

## SOLLECITAZIONI :

Caso			MZ	MY	MT	N	TZ	TY
6-5			-86048.0	8091.9	666.5	-357.3	-203.6	827.8
5-11			10487.7	-19027.9	-1613.0	-557.3	492.0	-219.7
6-11			79389.7	-8131.7	-668.3	-929.2	204.7	-972.0

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-5	si	3	Sx	-379.0	0.0	0.0	0.0	379.0
5-11	si	6	Tz	-10.9	164.8	0.0	164.8	285.6
6-11	si	9	Ty	-23.1	0.0	141.2	141.2	245.7
----- PROGR.								108.

## SOLLECITAZIONI :

Caso			MZ	MY	MT	N	TZ	TY
5-10			-28877.5	-33835.0	-1491.8	-338.9	454.6	344.4
5-11			2549.7	-36768.2	-1613.0	-544.5	492.0	-219.7
6-11			44278.1	-15507.0	-668.3	-916.3	204.7	-972.0

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-10	si	4	Sx Si	-434.9	0.0	0.0
5-11	si	6	Tz	50.9	164.8	0.0
6-11	si	9	Ty	-25.2	0.0	141.2
						Tau tot. 0.0
						Si 434.9
						289.9
						245.9
						144.0

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 2	-11697.0	54409.8	1610.9	-703.3	-490.9	75.5
5-11	-5391.8	-54529.7	-1613.0	-531.6	492.0	-219.7
6-11	9172.3	-22894.4	-668.3	-903.5	204.7	-972.0

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 2	si	4	Sx Si	-584.8	0.0	0.0
5-11	si	6	Tz	112.7	164.8	0.0
6-11	si	9	Ty	-27.3	0.0	141.2
						Tau tot. 0.0
						Si 584.8
						306.9
						246.1
						181.0

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-11	-13317.8	-72296.9	-1613.0	-518.8	492.0	-219.7
6-11	-25967.1	-30285.1	-668.3	-890.7	204.7	-972.0

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-11	si	4	Sx Si	-760.3	0.0	0.0
5-11	si	6	Tz	174.6	164.8	0.0
6-11	si	9	Ty	-29.5	0.0	141.2
						Tau tot. 0.0
						Si 760.3
						334.6
						246.3
						217.0

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-11	-21258.1	-90066.3	-1613.0	-505.9	492.0	-219.7
6-11	-61070.5	-37677.1	-668.3	-877.8	204.7	-972.0

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-11	si	4	Sx Si	-960.0	0.0	0.0
5-11	si	6	Tz	236.4	164.8	0.0
6-11	si	9	Ty	-31.6	0.0	141.2
						Tau tot. 0.0
						Si 960.0
						370.6
						246.6
						253.0

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	-53618.4	99266.4	1489.7	-870.2	-453.5	-488.6
5-11	-29195.9	-107836.9	-1613.0	-493.1	492.0	-219.7
6-11	-96182.0	-45069.9	-668.3	-865.0	204.7	-972.0

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	3	Sx Si	-1167.5	0.0	0.0
5-11	si	6	Tz	298.3	164.8	0.0
6-11	si	9	Ty	-33.7	0.0	141.2
						Tau tot. 0.0
						Si 1167.5
						412.8
						246.9
						289.0

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	-71269.6	115647.6	1489.7	-857.4	-453.5	-488.6
5-11	-37133.4	-125608.2	-1613.0	-480.2	492.0	-219.7
6-11	-131294.5	-52463.0	-668.3	-852.1	204.7	-972.0

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	3	Sx Si	-1386.7	0.0	0.0
5-11	si	6	Tz	360.1	164.8	0.0
6-11	si	9	Ty	-35.8	0.0	141.2
						Tau tot. 0.0
						Si 1386.7
						459.5
						247.2

## VERIFICA STABILITA` :

L0 = 289. |  
 Z | Lc = 289. | Ro = 7.45 | lm = 38.8 | Ncr = 624374.4 | alfa(b ) = 0.3400 | ki = 0.9070 |  
 Y | Lc = 289. | Ro = 4.51 | lm = 64.0 | Ncr = 229472.2 | alfa(c ) = 0.4900 | ki = 0.7015 |  
 Caso 5- 3 - Nodo 3 - Asse Y  
 Ned = -960.2 | Mzeq = -53452.2 | Myeq = 86735.7 | Ss = -1059.8 ( 0.405)

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 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	97837.3	-3158.9	240.8	-860.3	-75.4	-658.5
5-11	3590.5	17725.8	-1585.8	-696.7	473.8	-83.3
5- 7	53478.4	-16527.1	1456.6	-752.7	-437.0	-385.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx Si	-382.2	0.0	0.0
5-11	si	6	Tz	-62.1	158.5	0.0
5- 7	si	9	Ty	-22.0	0.0	120.9
						Tau tot. 0.0
						Si 382.2
						281.5
						210.5
						36.0

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	74050.7	-755.9	240.8	-847.4	-75.4	-658.5
5-11	581.5	1487.3	-1585.8	-683.8	473.8	-83.3
5- 7	39540.1	-1649.1	1456.6	-739.9	-437.0	-385.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx Si	-277.7	0.0	0.0
5-11	si	6	Tz	-19.9	158.5	0.0
5- 7	si	9	Ty	-16.8	0.0	120.9
5- 7	si	5	Si	-153.9	-152.8	0.0
						Tau tot. 0.0
						Si 277.7
						275.3
						210.0
						306.2
						72.0

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY

5-10	-31975.8	-15159.1	-1456.4	-562.0	437.1	241.2
5-11	-2427.5	-16635.6	-1585.8	-671.0	473.8	-83.3
5-7	25602.2	15170.0	1456.6	-727.0	-437.0	-385.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-10	si	4	Sx	-268.6	0.0	0.0
5-11	si	6	Tz	25.8	158.5	0.0
5-7	si	9	Ty	-11.1	0.0	120.9
5-10	si	7	Si	-150.6	138.3	0.0
----- PROGR.						108.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-10	-23266.2	-30915.9	-1456.4	-549.1	437.1	241.2
5-11	-5436.4	-33717.3	-1585.8	-658.1	473.8	-83.3
5-7	11665.7	30924.3	1456.6	-714.2	-437.0	-385.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-10	si	4	Sx	-392.1	0.0	0.0
5-11	si	6	Tz	69.6	158.5	0.0
5-7	si	9	Ty	-5.7	0.0	120.9
----- PROGR.						144.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-12	-8711.8	-50830.8	-1585.7	-643.8	473.9	-74.0
5-11	-8444.5	-50822.0	-1585.8	-645.3	473.8	-83.3
5-7	-2262.6	46700.7	1456.6	-701.3	-437.0	-385.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-12	si	4	Sx	-538.5	0.0	0.0
5-11	si	6	Tz	113.4	158.5	0.0
5-7	si	9	Ty	-0.3	0.0	120.9
----- PROGR.						181.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-15	-11447.4	-67933.0	-1585.4	-633.1	473.8	-84.2
5-11	-11453.8	-67932.3	-1585.8	-632.4	473.8	-83.3
5-7	-16236.6	62482.4	1456.6	-688.5	-437.0	-385.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-15	si	4	Sx	-714.0	0.0	0.0
5-11	si	6	Tz	157.2	158.5	0.0
5-7	si	9	Ty	5.1	0.0	120.9
----- PROGR.						217.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-15	-14490.4	-85045.9	-1585.4	-620.3	473.8	-84.2
5-11	-14463.5	-85044.8	-1585.8	-619.6	473.8	-83.3
5-7	-30162.5	78266.2	1456.6	-675.6	-437.0	-385.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-15	si	4	Sx	-890.6	0.0	0.0
5-11	si	6	Tz	201.0	158.5	0.0
5-7	si	9	Ty	10.5	0.0	120.9
----- PROGR.						253.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-7	-44098.9	94051.0	1456.6	-662.8	-437.0	-385.8
5-11	-17472.5	-102158.4	-1585.8	-606.7	473.8	-83.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-7	si	3	Sx	-1079.8	0.0	0.0
5-11	si	6	Tz	244.9	158.5	0.0
5-7	si	9	Ty	15.9	0.0	120.9
----- PROGR.						289.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-7	-58036.7	109836.5	1456.6	-650.0	-437.0	-385.8
5-11	-20481.5	-119272.6	-1585.8	-593.9	473.8	-83.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-7	si	3	Sx	-1280.6	0.0	0.0
5-11	si	6	Tz	288.7	158.5	0.0
5-7	si	9	Ty	21.3	0.0	120.9

## VERIFICA STABILITA` :

L0 = 289.  
 Z | Lc = 289. | Ro = 7.45 | lm = 38.8 | Ncr = 624374.4 | alfa(b ) = 0.3400 | ki = 0.9070 |  
 Y | Lc = 289. | Ro = 4.51 | lm = 64.0 | Ncr = 229472.2 | alfa(c ) = 0.4900 | ki = 0.7015 |  
 Caso 5- 7 - Nodo 3 - Asse Y  
 Ned = -752.7 | Mzeq = -43527.5 | Myeq = 82377.4 | Ss = -976.1 ( 0.373 )

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 ----- PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-3	57469.9	-16111.1	1450.7	-788.7	-436.3	-412.6
5-5	15320.8	-17396.1	1592.1	-698.9	-476.3	-153.2
5-7	57464.6	-16108.3	1451.0	-788.9	-436.2	-412.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-3	si	1	Sx	-369.5	0.0	0.0
5-5	si	5	Tz	-101.3	-160.8	0.0
5-7	si	9	Ty	-22.6	0.0	123.4

-----							PROGR.	36.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-10		64352.2		142.6	221.3	-828.4	-70.2	-583.5
5- 5		9787.7		1527.6	1592.1	-686.0	-476.3	-153.2
5- 7		42564.6		1350.2	1451.0	-776.0	-436.2	-412.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	2	Sx	-238.3	0.0	0.0	0.0	238.3
5- 5	si	5	Tz	-45.4	-160.8	0.0	160.8	282.2
5- 7	si	9	Ty	-16.7	0.0	123.4	123.4	214.5
5- 7	si	5	Si	-159.1	-152.9	0.0	152.9	309.0
-----							PROGR.	72.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
5-10		-33716.7		-15501.6	-1449.5	-513.4	436.1	267.4
5- 5		4254.5		17136.1	1592.1	-673.2	-476.3	-153.2
5- 7		27664.7		15528.4	1451.0	-763.2	-436.2	-412.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	4	Sx	-276.8	0.0	0.0	0.0	276.8
5- 5	si	5	Tz	4.1	-160.8	0.0	160.8	278.5
5- 7	si	9	Ty	-11.8	0.0	123.4	123.4	214.1
5-10	si	7	Si	-156.1	137.1	0.0	137.1	284.1
-----							PROGR.	108.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
5-10		-24056.5		-31224.3	-1449.5	-500.6	436.1	267.4
5- 5		-1278.7		34309.8	1592.1	-660.3	-476.3	-153.2
5- 7		12765.2		31257.2	1451.0	-750.4	-436.2	-412.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si	4	Sx	-396.7	0.0	0.0	0.0	396.7
5- 5	si	5	Tz	56.6	-160.8	0.0	160.8	284.2
5- 7	si	9	Ty	-6.4	0.0	123.4	123.4	213.9
-----							PROGR.	144.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
5-12		-9718.5		-51465.2	-1590.6	-577.7	476.1	8.1
5- 5		-6812.2		51504.3	1592.1	-647.5	-476.3	-153.2
5- 7		-2132.0		47006.3	1451.0	-737.5	-436.2	-412.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-12	si	4	Sx	-546.7	0.0	0.0	0.0	546.7
5- 5	si	5	Tz	109.1	-160.8	0.0	160.8	299.1
5- 7	si	9	Ty	-1.0	0.0	123.4	123.4	213.8
-----							PROGR.	181.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
5- 1		-12367.3		68705.4	1591.7	-634.4	-476.3	-153.3
5- 5		-12344.0		68703.9	1592.1	-634.6	-476.3	-153.2
5- 7		-17040.9		62760.4	1451.0	-724.7	-436.2	-412.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	3	Sx	-724.7	0.0	0.0	0.0	724.7
5- 5	si	5	Tz	161.7	-160.8	0.0	160.8	322.0
5- 7	si	9	Ty	4.4	0.0	123.4	123.4	213.9
-----							PROGR.	217.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
5- 1		-17906.6		85908.0	1591.7	-621.6	-476.3	-153.3
5- 5		-17877.6		85905.6	1592.1	-621.8	-476.3	-153.2
5- 7		-31938.2		78516.5	1451.0	-711.8	-436.2	-412.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	3	Sx	-910.7	0.0	0.0	0.0	910.7
5- 5	si	5	Tz	214.3	-160.8	0.0	160.8	351.4
5- 7	si	9	Ty	9.8	0.0	123.4	123.4	214.0
-----							PROGR.	253.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
5- 1		-23445.6		103111.6	1591.7	-608.7	-476.3	-153.3
5- 5		-23410.8		103108.4	1592.1	-608.9	-476.3	-153.2
5- 7		-46837.7		94273.6	1451.0	-699.0	-436.2	-412.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	3	Sx	-1096.6	0.0	0.0	0.0	1096.6
5- 5	si	5	Tz	266.8	-160.8	0.0	160.8	385.7
5- 7	si	9	Ty	15.2	0.0	123.4	123.4	214.3
-----							PROGR.	289.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
5- 3		-61778.1		110035.3	1450.7	-685.9	-436.3	-412.6
5- 5		-28943.9		120311.7	1592.1	-596.1	-476.3	-153.2
5- 7		-61737.6		110031.2	1451.0	-686.1	-436.2	-412.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 3	si	3	Sx	-1296.0	0.0	0.0	0.0	1296.0
5- 5	si	5	Tz	319.4	-160.8	0.0	160.8	423.8
5- 7	si	9	Ty	20.6	0.0	123.4	123.4	214.8

VERIFICA STABILITA` :

|L0 = 289. |

Z | Lc = 289. | Ro = 7.45 | lm = 38.8 | Ncr = 624374.4 | alfa(b) = 0.3400 | ki = 0.9070 |  
Y | Lc = 289. | Ro = 4.51 | lm = 64.0 | Ncr = 229472.2 | alfa(c) = 0.4900 | ki = 0.7015 |  
Caso 5- 3 - Nodo 3 - Asse Y  
Ned = -788.7 | Mzeq = -46333.6 | Myeq = 82526.5 | Ss = -988.4 ( 0.377 )

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PROGR. 0.

SOLLECITAZIONI :								
Caso		MZ	MY	MT	N	TZ	TY	
6- 9		318512.6	-3441.9	242.7	-999.0	-63.1	-1999.5	
5-11		54481.0	22634.8	-1489.7	-1038.0	412.5	-391.8	
6-11		295667.0	9547.8	-617.1	-1226.0	174.1	-1867.1	
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	Si	-1137.9	0.0	0.0	1137.9
5-11	si	6	Tz		-252.1	154.8	0.0	368.0
6-11	si	9	Ty		-23.9	0.0	235.0	407.7
							PROGR.	36.

SOLLECITAZIONI :									
Caso			MZ	MY	MT	N	TZ	TY	
6- 9			246282.6	-1183.3	242.7	-986.1	-63.1	-1999.5	
5-11			40328.5	7819.0	-1489.7	-1025.1	412.5	-391.8	
6-11			228218.7	3289.4	-617.1	-1213.1	174.1	-1867.1	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
6- 9	si	1	Sx Si	-870.2	0.0	0.0	0.0	870.2	
5-11	si	6	Tz	-174.9	154.8	0.0	154.8	320.1	
6-11	si	9	Ty	-25.7	0.0	235.0	235.0	407.8	
							PROGR.		

SOLLECITAZIONI :									
Caso			MZ	MY	MT	N		TZ	TY
6- 9			174052.8	1161.6	242.7	-973.3		-63.1	-1999.5
5-11			26176.0	-7355.8	-1489.7	-1012.3		412.5	-391.8
6-11			160770.6	-3094.5	-617.1	-1200.3		174.1	-1867.1
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty		Tau tot.	Si
6- 9	si	2	Sx	-624.2	0.0	0.0		0.0	624.2
5-11	si	6	Tz	-96.9	154.8	0.0		154.8	285.1
6-11	si	9	Ty	-27.5	0.0	235.0		235.0	407.9
6- 9	si	6	Si	-615.2	64.5	0.0		64.5	625.2
								PROGR.	108.

SOLLECITAZIONI :										PROGR.	100.0		
Caso			MZ		MY		MT		N		TZ		TY
6- 6			-102302.2		9371.3		616.5		334.1		-172.4		1777.7
5-11			12023.6		-22165.6		-1489.7		-999.4		412.5		-391.8
6-11			93323.1		-9350.9		-617.1		-1187.4		174.1		-1867.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
6- 6	si	1	Sx		446.2		0.0		0.0		0.0		446.2
5-11	si	6	Tz		-19.7		154.8		0.0		154.8		268.8
6-11	si	9	Ty		-29.2		0.0		235.0		235.0		408.0
6-11	si	11	Si		-255.5		0.0		221.2		221.2		460.4
										-----		PROGR.	144.0

SOLLECITAZIONI :									
Caso	MZ		MY		MT	N	TZ		TY
5-14	-22478.2		-34079.2		-1377.1	-597.7	379.7		743.6
5-11	-2128.3		-37050.2		-1489.7	-986.6	412.5		-391.8
6-11	25879.1		-15633.5		-617.1	-1174.6	174.1		-1867.1
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	4	Sx	Si	-421.2	0.0	0.0	0.0	421.2
5-11	si	6	Tz		57.6	154.8	0.0	154.8	274.2
6-11	si	9	Ty		-31.0	0.0	235.0	235.0	408.2
-----									PROGR. 181.

SOLLECITAZIONI :									
Caso	MZ			MY	MT	N	TZ	TY	
5-11	-16278.6			-51945.3	-1489.7	-973.7	412.5	-391.8	
6-11	-41581.5			-21919.7	-617.1	-1161.7	174.1	-1867.1	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-11	si	4	Sx	Si	-582.4	0.0	0.0	582.4	
5-11	si	6	Tz	Si	135.0	0.0	154.8	300.2	
6-11	si	9	Ty	Si	-32.7	0.0	235.0	408.3	
							PROGR.	217.	

SOLLECITAZIONI :										PROGR.		217.4		
Caso		MZ		MY		MT		N		TZ		TY		
5-11		-30433.8		-66844.0		-1489.7		-960.9		412.5		-391.8		
6-11		-109026.5		-28207.1		-617.1		-1148.9		174.1		-1867.1		
TENSIONI (Sz= 0.00) :														
Caso		Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
5-11		si	4	Sx	Si	-775.2		0.0		0.0		0.0		775.2
5-11		si	6	Tz		212.4		154.8		0.0		154.8		342.0
6-11		si	9	Ty		-34.5		0.0		235.0		235.0		408.4
										-----		PROGR.		253.4

SOLLECITAZIONI :										PROGR.		235.0	
Caso	MZ			MY	MT	N	TZ	TY					
5- 3	-80010.7			75000.5	1376.5	-191.4	-378.1	-833.0					
5-11	-44586.4			-81744.3	-1489.7	-948.0	412.5	-391.8					
6-11	-176474.2			-34495.1	-617.1	-1136.0	174.1	-1867.1					
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau	tot.	Si				
5- 3	si	3	Sx	Si	-1006.1	0.0	0.0	0.0	1006.1				
5-11	si	6	Tz	Si	289.7	154.8	0.0	154.8	394.8				
6-11	si	9	Ty	Si	-36.2	0.0	235.0	235.0	408.6				
-----										PROGR.		289.0	

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-11	-243922.3	-40783.4	-617.1	-1123.2	174.1	-1867.1
5-11	-58739.0	-96645.4	-1489.7	-935.2	412.5	-391.8

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	4	Sx	-1250.6	0.0	0.0	0.0	1250.6
5-11	si	6	Tz	367.1	154.8	0.0	154.8	454.6
6-11	si	9	Ty	-38.0	0.0	235.0	235.0	408.7

## VERIFICA STABILITA' :

z L0 = 289. | Ro = 7.45 | lm = 38.8 | Ncr = 624374.4 | alfa(b) = 0.3400 | ki = 0.9070  
 y Lc = 289. | Ro = 4.51 | lm = 64.0 | Ncr = 229472.2 | alfa(c) = 0.4900 | ki = 0.7015  
 Caso 6-11 - Nodo 1 - Asse Y  
 Ned = -1226.0 | Mzeq = 221750.2 | Myeq = -30587.5 | Ss = -1092.9 ( 0.417)

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PROGR. 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 8	43098.9	-20185.5	1303.0	-940.3	-365.2	-314.4
5- 6	10000.6	-21977.4	1464.2	-966.1	-404.3	-114.1

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 8	si	1	Sx	-363.6	0.0	0.0	0.0	363.6
5- 6	si	5	Tz	-98.1	-145.8	0.0	145.8	271.0
5- 8	si	9	Ty	-27.3	0.0	104.8	104.8	183.6

PROGR. 36.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 8	31755.7	-7046.5	1303.0	-927.4	-365.2	-314.4
5- 6	5890.6	-7452.7	1464.2	-953.2	-404.3	-114.1

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 8	si	1	Sx	-196.9	0.0	0.0	0.0	196.9
5- 6	si	5	Tz	-55.5	-145.8	0.0	145.8	258.6
5- 8	si	9	Ty	-22.7	0.0	104.8	104.8	182.9
5- 8	si	5	Si	-142.1	-134.9	0.0	134.9	273.5

PROGR. 72.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 1	-30583.8	3798.1	682.4	-621.0	-180.8	249.2
5- 6	1792.0	7380.4	1464.2	-940.4	-404.3	-114.1
5- 8	20423.9	6332.5	1303.0	-914.6	-365.2	-314.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 1	si	3	Sx	-154.6	0.0	0.0	0.0	154.6
5- 6	si	5	Tz	-12.5	-145.8	0.0	145.8	252.9
5- 8	si	9	Ty	-18.1	0.0	104.8	104.8	182.4
5- 6	si	8	Si	-29.0	-145.8	0.0	145.8	254.2

PROGR. 108.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 9	-18017.8	-19457.7	-1300.4	48.2	363.2	223.8
5- 6	-2269.0	21910.5	1464.2	-927.6	-404.3	-114.1
5- 8	9130.1	19458.9	1303.0	-901.7	-365.2	-314.4
5- 2	-2998.0	21920.3	1464.0	-923.7	-404.4	-99.9

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 9	si	2	Sx	251.7	0.0	0.0	0.0	251.7
5- 6	si	5	Tz	29.9	-145.8	0.0	145.8	254.4
5- 8	si	9	Ty	-13.6	0.0	104.8	104.8	182.0
5- 2	si	8	Si	-73.2	-145.5	0.0	145.5	262.4

PROGR. 144.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 2	-6173.0	36513.3	1464.0	-910.8	-404.4	-99.9
5- 6	-5957.0	36499.7	1464.2	-914.7	-404.3	-114.1
5- 8	-1789.2	32639.3	1303.0	-888.9	-365.2	-314.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 2	si	3	Sx	-396.4	0.0	0.0	0.0	396.4
5- 6	si	5	Tz	71.1	-145.8	0.0	145.8	262.4
5- 8	si	9	Ty	-9.0	0.0	104.8	104.8	181.8

PROGR. 181.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-10892.8	51097.4	1464.2	-901.9	-404.3	-114.1
5- 8	-13966.4	45827.4	1303.0	-876.0	-365.2	-314.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6	si	3	Sx	-554.2	0.0	0.0	0.0	554.2
5- 6	si	5	Tz	116.6	-145.8	0.0	145.8	278.2
5- 8	si	9	Ty	-4.4	0.0	104.8	104.8	181.6

PROGR. 217.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-14882.0	65697.9	1464.2	-889.0	-404.3	-114.1
5- 8	-25185.7	59017.9	1303.0	-863.2	-365.2	-314.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6	si	3	Sx	-709.6	0.0	0.0	0.0	709.6

5- 6   si   5	Tz	158.9	-145.8	0.0	145.8	298.4
5- 8   si   9	Ty	0.1	0.0	104.8	104.8	181.5
-----						PROGR. 253.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-18967.5	80299.8	1464.2	-876.2	-404.3	-114.1
5- 8	-36503.9	72209.5	1303.0	-850.3	-365.2	-314.4

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6   si   3	Sx	Si		-865.3	0.0	0.0	0.0	865.3
5- 6   si   5	Tz			201.4	-145.8	0.0	145.8	323.1
5- 8   si   9	Ty			4.7	0.0	104.8	104.8	181.6
-----						PROGR. 289.		

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-23072.9	94902.4	1464.2	-863.3	-404.3	-114.1
5- 8	-47842.4	85401.8	1303.0	-837.5	-365.2	-314.4

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6   si   3	Sx	Si		-1021.1	0.0	0.0	0.0	1021.1
5- 6   si   5	Tz			244.1	-145.8	0.0	145.8	351.3
5- 8   si   9	Ty			9.2	0.0	104.8	104.8	181.8

## VERIFICA STABILITA' :

Z | L0 = 289. |  
 | Lc = 289. | Ro = 7.45 | lm = 38.8 | Ncr = 624374.4 | alfa(b) = 0.3400 | ki = 0.9070 |  
 Y | Lc = 289. | Ro = 4.51 | lm = 64.0 | Ncr = 229472.2 | alfa(c) = 0.4900 | ki = 0.7015 |  
 Caso 5- 6 - Nodo 3 - Asse Y  
 Ned = -966.1 | Mzeq = -17304.6 | Myeq = 71176.8 | Ss = -784.9 ( 0.300)

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 ----- PROGR. 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 3	66953.4	-15265.3	1432.0	-683.0	-440.2	-469.3
5- 1	32042.8	-16426.1	1597.9	-591.8	-486.0	-253.6

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 3   si   1	Sx	Si		-391.1	0.0	0.0	0.0	391.1
5- 1   si   5	Tz			-153.9	-164.0	0.0	164.0	323.1
5- 3   si   9	Ty			-20.0	0.0	128.5	128.5	223.5
-----						PROGR. 36.		

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 9	58310.6	-367.5	177.4	-800.0	-62.9	-537.8
5- 1	22880.7	1873.3	1597.9	-578.9	-486.0	-253.6
5- 3	50000.5	1357.3	1432.0	-670.1	-440.2	-469.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9   si   1	Sx			-219.4	0.0	0.0	0.0	219.4
5- 1   si   5	Tz			-86.9	-164.0	0.0	164.0	297.1
5- 3   si   9	Ty			-14.3	0.0	128.5	128.5	223.1
5- 3   si   5	Si			-182.0	-152.8	0.0	152.8	321.2
-----						PROGR. 72.		

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-14	-39198.8	-16567.2	-1428.2	-617.3	438.4	323.2
5- 1	13718.7	18793.7	1597.9	-566.1	-486.0	-253.6
5- 3	33047.7	16636.9	1432.0	-657.3	-440.2	-469.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-14   si   4	Sx	Si		-308.1	0.0	0.0	0.0	308.1
5- 1   si   5	Tz			-22.5	-164.0	0.0	164.0	285.0
5- 3   si   9	Ty			-9.1	0.0	128.5	128.5	222.8
-----						PROGR. 108.		

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-14	-27524.0	-32381.8	-1428.2	-604.4	438.4	323.2
5- 1	4556.7	36324.7	1597.9	-553.2	-486.0	-253.6
5- 3	16094.9	32516.2	1432.0	-644.4	-440.2	-469.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-14   si   4	Sx	Si		-422.0	0.0	0.0	0.0	422.0
5- 1   si   5	Tz			43.0	-164.0	0.0	164.0	287.3
5- 3   si   9	Ty			-3.7	0.0	128.5	128.5	222.7
-----						PROGR. 144.		

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-16	-12101.8	-53672.4	-1594.1	-682.8	484.2	107.5
5- 1	-4605.4	53871.7	1597.9	-540.4	-486.0	-253.6
5- 3	-857.4	48410.6	1432.0	-631.6	-440.2	-469.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16   si   4	Sx	Si		-578.6	0.0	0.0	0.0	578.6
5- 1   si   5	Tz			108.6	-164.0	0.0	164.0	304.1
5- 3   si   9	Ty			1.8	0.0	128.5	128.5	222.6
-----						PROGR. 181.		

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 1	-13767.6	71422.8	1597.9	-527.6	-486.0	-253.6
5- 3	-17812.2	64308.9	1432.0	-618.8	-440.2	-469.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
------	----	----	---------	----	----	----	----------	----

5- 1	si	3	Sx	Si	-753.6	0.0	0.0	0.0	753.6
5- 1	si	5	Tz		174.2	-164.0	0.0	164.0	333.2
5- 3	si	9	Ty		7.2	0.0	128.5	128.5	222.7
-----									217.
PROGR.									

## SOLLECITAZIONI :

Caso		MZ		MY		MT		N		TZ		TY
5- 1		-22929.5		88975.7		1597.9		-514.7		-486.0		-253.6
5- 3		-34764.5		80208.7		1432.0		-605.9		-440.2		-469.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	3	Sx	Si	-955.2	0.0	0.0	955.2
5- 1	si	5	Tz		239.8	-164.0	0.0	371.7
5- 3	si	9	Ty		12.7	0.0	128.5	223.0
-----								
PROGR.								

## SOLLECITAZIONI :

Caso		MZ		MY		MT		N		TZ		TY
5- 1		-32091.6		106529.5		1597.9		-501.9		-486.0		-253.6
5- 3		-51717.3		96109.3		1432.0		-593.1		-440.2		-469.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	3	Sx	Si	-1156.9	0.0	0.0	1156.9
5- 1	si	5	Tz		305.4	-164.0	0.0	417.1
5- 3	si	9	Ty		18.1	0.0	128.5	223.4
-----								
PROGR								
289.								

## SOLLECITAZIONI :

Caso		MZ		MY		MT		N		TZ		TY
5- 1		-41253.6		124083.7		1597.9		-489.0		-486.0		-253.6
5- 3		-68670.1		112010.4		1432.0		-580.2		-440.2		-469.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	3	Sx	Si	-1358.6	0.0	0.0	1358.6
5- 1	si	5	Tz		370.9	-164.0	0.0	467.2
5- 3	si	9	Ty		23.5	0.0	128.5	223.9
-----								

## VERIFICA STABILITA` :

Z | L0 = 289. |  
 | Lc = 289. | Ro = 7.45 | lm = 38.8 | Ncr = 624374.4 | alfa(b ) = 0.3400 | ki = 0.9070 |  
 Y | Lc = 289. | Ro = 4.51 | lm = 64.0 | Ncr = 229472.2 | alfa(c ) = 0.4900 | ki = 0.7015 |  
 Caso 5- 1 - Nodo 3 - Asse Y  
 Ned = -591.8 | Mzeq = -30940.2 | Myeq = 93062.8 | Ss = -1031.9 ( 0.394 )

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 -----  
 PROGR. 0.

## SOLLECITAZIONI :

Caso		MZ		MY		MT		N		TZ		TY
5- 3		64445.5		-16356.7		1429.1		-828.5		-429.8		-454.7
5- 1		26803.6		-17617.6		1581.9		-750.5		-471.7		-222.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 3	si	1	Sx	Si	-396.5	0.0	0.0	396.5
5- 1	si	5	Tz		-141.9	-161.3	0.0	313.4
5- 3	si	9	Ty		-23.6	0.0	126.8	220.9
-----								
PROGR.								

## SOLLECITAZIONI :

Caso		MZ		MY		MT		N		TZ		TY
6- 9		61120.6		-924.2		196.5		-823.9		-65.6		-559.5
5- 1		18775.9		-1361.4		1581.9		-737.7		-471.7		-222.2
5- 3		48019.8		-1639.7		1429.1		-815.6		-429.8		-454.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	-234.9	0.0	0.0	0.0	234.9
5- 1	si	5	Tz	-82.7	-161.3	0.0	161.3	291.4
5- 3	si	9	Ty	-18.5	0.0	126.8	126.8	220.4
5- 3	si	5	Si	-184.3	-151.7	0.0	151.7	321.0
-----								72.
PROGR.								

## SOLLECITAZIONI :

Caso		MZ		MY		MT		N		TZ		TY
5-14		-37501.2		-14789.1		-1426.9		-474.7		428.9		308.3
5- 1		10748.3		16575.6		1581.9		-724.9		-471.7		-222.2
5- 3		31594.2		14804.5		1429.1		-802.8		-429.8		-454.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si	4	Sx	-281.8	0.0	0.0	0.0	281.8
5- 1	si	5	Tz	-20.2	-161.3	0.0	161.3	280.1
5- 3	si	9	Ty	-12.9	0.0	126.8	126.8	220.0
5-14	si	7	Si	-166.7	133.9	0.0	133.9	285.6
-----								PROGR. 108.

## SOLLECITAZIONI :

Caso		MZ		MY		MT		N		TZ		TY
5-14		-26365.7		-30255.8		-1426.9		-461.9		428.9		308.3
5- 1		2720.7		33584.3		1581.9		-712.0		-471.7		-222.2
5- 3		15168.9		30302.9		1429.1		-789.9		-429.8		-454.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si	4	Sx	Si	-394.2	0.0	0.0	394.2
5- 1	si	5	Tz		40.4	-161.3	0.0	282.3
5- 3	si	9	Ty		-7.6	0.0	126.8	219.8
-----								144.
PROGR.								

## SOLLECITAZIONI :

Caso		MZ		MY		MT		N		TZ		TY
5-16		-11180.6		-50534.6		-1579.7		-526.9		470.8		75.8
5- 1		-5306.0		50613.5		1581.9		-699.2		-471.7		-222.2
5- 3		-1254.0		45820.7		1429.1		-777.1		-429.8		-454.7

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	4	Sx Si	-541.4	0.0	0.0
5-1	si	5	Tz	101.1	-161.3	0.0
5-3	si	9	Ty	-2.3	0.0	126.8
						Tau tot.
						0.0
						161.3
						126.8
						Si
						541.4
						297.1
						219.6
						181.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-1	-13337.2	67647.5	1581.9	-686.3	-471.7	-222.2
5-3	-17689.0	61343.1	1429.1	-764.2	-429.8	-454.7

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-1	si	3	Sx Si	-718.8	0.0	0.0
5-1	si	5	Tz	161.9	-161.3	0.0
5-3	si	9	Ty	3.1	0.0	126.8
						Tau tot.
						0.0
						161.3
						126.8
						Si
						718.8
						322.9
						219.7
						217.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-1	-21363.6	84683.6	1581.9	-673.5	-471.7	-222.2
5-3	-34111.8	76867.4	1429.1	-751.4	-429.8	-454.7

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-1	si	3	Sx Si	-911.6	0.0	0.0
5-1	si	5	Tz	222.6	-161.3	0.0
5-3	si	9	Ty	8.4	0.0	126.8
						Tau tot.
						0.0
						161.3
						126.8
						Si
						911.6
						357.2
						219.8
						253.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-1	-29391.1	101720.6	1581.9	-660.6	-471.7	-222.2
5-3	-50537.0	92392.7	1429.1	-738.5	-429.8	-454.7

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-1	si	3	Sx Si	-1104.5	0.0	0.0
5-1	si	5	Tz	283.3	-161.3	0.0
5-3	si	9	Ty	13.7	0.0	126.8
						Tau tot.
						0.0
						161.3
						126.8
						Si
						1104.5
						397.9
						220.1
						289.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-1	-37418.8	118758.2	1581.9	-647.8	-471.7	-222.2
5-3	-66962.6	107918.4	1429.1	-725.7	-429.8	-454.7

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-1	si	3	Sx Si	-1297.3	0.0	0.0
5-1	si	5	Tz	344.0	-161.3	0.0
5-3	si	9	Ty	19.0	0.0	126.8
						Tau tot.
						0.0
						161.3
						126.8
						Si
						1297.3
						443.2
						220.5

## VERIFICA STABILITA` :

Z | L0 = 289. |  
 Y | Lc = 289. | Ro = 7.45 | lm = 38.8 | Ncr = 624374.4 | alfa(b ) = 0.3400 | ki = 0.9070 |  
 Y | Lc = 289. | Ro = 4.51 | lm = 64.0 | Ncr = 229472.2 | alfa(c ) = 0.4900 | ki = 0.7015 |  
 Caso 5- 1 - Nodo 3 - Asse Y  
 Ned = -750.5 | Mzeq = -28064.1 | Myeq = 89068.6 | Ss = -988.8 ( 0.378 )

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 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-1	-71.0	-122199.3	-1872.3	-1152.9	-401.3	56.3

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-1	si	4	Sx Si	-1215.0	0.0	0.0
5-1	si	6	Tz	212.7	-179.5	0.0
5-1	si	9	Ty	-65.1	0.0	-107.9
						Tau tot.
						0.0
						179.5
						107.9
						Si
						1215.0
						376.8
						198.0
						33.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-1	1765.3	-109110.9	-1872.3	-1141.3	-401.3	56.3

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-1	si	1	Sx Si	-1093.1	0.0	0.0
5-1	si	6	Tz	181.2	-179.5	0.0
5-1	si	9	Ty	-60.6	0.0	-107.9
						Tau tot.
						0.0
						179.5
						107.9
						Si
						1093.1
						359.9
						196.5
						65.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-1	3601.2	-96023.2	-1872.3	-1129.7	-401.3	56.3

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-1	si	1	Sx Si	-971.7	0.0	0.0
5-1	si	6	Tz	149.8	-179.5	0.0
5-1	si	9	Ty	-56.1	0.0	-107.9
						Tau tot.
						0.0
						179.5
						107.9
						Si
						971.7
						345.2
						195.2
						98.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-1	5437.1	-82936.7	-1872.3	-1118.1	-401.3	56.3

5- 1	7273.0	-69851.9	-1872.3	-1106.5	-401.3	56.3
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 1 si 1 Sx	Si	-729.0	0.0	0.0	0.0	729.0
5- 1 si 6 Tz		86.9	-179.5	0.0	179.5	322.9
5- 1 si 9 Ty		-47.1	0.0	-107.9	107.9	192.8
-----						PROGR. 163.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 1	9108.9	-56770.1	-1872.3	-1094.9	-401.3	56.3
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 1 si 1 Sx	Si	-607.6	0.0	0.0	0.0	607.6
5- 1 si 6 Tz		55.4	-179.5	0.0	179.5	315.9
5- 1 si 9 Ty		-42.6	0.0	-107.9	107.9	191.7
-----						PROGR. 196.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 3	23352.5	-39783.9	-1694.5	-1690.3	-360.8	119.6
5- 1	10944.9	-43694.0	-1872.3	-1083.3	-401.3	56.3
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 3 si 1 Sx	Si	-503.8	0.0	0.0	0.0	503.8
5- 1 si 6 Tz		24.0	-179.5	0.0	179.5	311.9
5- 1 si 9 Ty		-38.1	0.0	-107.9	107.9	190.8
-----						PROGR. 228.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 3	27255.3	-28040.0	-1694.5	-1678.7	-360.8	119.6
5- 1	12780.8	-30630.9	-1872.3	-1071.7	-401.3	56.3
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 3 si 1 Sx	Si	-402.5	0.0	0.0	0.0	402.5
5- 1 si 6 Tz		-7.4	-179.5	0.0	179.5	311.1
5- 1 si 9 Ty		-33.6	0.0	-107.9	107.9	190.0
-----						PROGR. 261.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 3	31158.0	-16334.2	-1694.5	-1667.1	-360.8	119.6
5- 1	14616.7	-17609.4	-1872.3	-1060.1	-401.3	56.3
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 3 si 1 Sx	Si	-301.6	0.0	0.0	0.0	301.6
5- 1 si 6 Tz		-38.8	-179.5	0.0	179.5	313.4
5- 1 si 9 Ty		-29.1	0.0	-107.9	107.9	189.2
5- 3 si 5 Si		-174.4	-158.4	0.0	158.4	325.2

## VERIFICA STABILITA` :

L0 = 261. |  
 Z | Lc = 261. | Ro = 7.45 | lm = 35.0 | Ncr = 765525.7 | alfa(b ) = 0.3400 | ki = 0.9246 |  
 Y | Lc = 261. | Ro = 4.51 | lm = 57.8 | Ncr = 281348.6 | alfa(c ) = 0.4900 | ki = 0.7457 |  
 Caso 5- 1 - Nodo 1 - Asse Y  
 Ned = -1152.9 | Mzeq = 10962.5 | Myeq = -91649.5 | Ss = -967.1 ( 0.369 )

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 ----- PROGR. 0.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-62.5	-124516.0	-1894.8	-1080.1	-414.7	64.4
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 1 si 4 Sx	Si	-1235.9	0.0	0.0	0.0	1235.9
5- 1 si 6 Tz		218.8	-182.2	0.0	182.2	384.0
5- 1 si 9 Ty		-64.2	0.0	-110.0	110.0	201.1
-----						PROGR. 33.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 1	2038.2	-110988.7	-1894.8	-1068.5	-414.7	64.4
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 1 si 1 Sx	Si	-1110.7	0.0	0.0	0.0	1110.7
5- 1 si 6 Tz		185.6	-182.2	0.0	182.2	366.1
5- 1 si 9 Ty		-59.6	0.0	-110.0	110.0	199.7
-----						PROGR. 65.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 1	4138.1	-97462.2	-1894.8	-1056.9	-414.7	64.4
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 1 si 1 Sx	Si	-985.9	0.0	0.0	0.0	985.9
5- 1 si 6 Tz		152.4	-182.2	0.0	182.2	350.5
5- 1 si 9 Ty		-54.9	0.0	-110.0	110.0	198.4
-----						PROGR. 98.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 1	6238.0	-83936.7	-1894.8	-1045.3	-414.7	64.4
TENSIONI (Sz=	0.00)	:				
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 1 si 1 Sx	Si	-861.2	0.0	0.0	0.0	861.2
5- 1 si 6 Tz		119.1	-182.2	0.0	182.2	337.4
5- 1 si 9 Ty		-50.3	0.0	-110.0	110.0	197.1
-----						PROGR. 130.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY		
5- 1	8338.0	-70412.7	-1894.8	-1033.7	-414.7	64.4		
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	1	Sx	Si	-736.4	0.0	0.0	736.4
5- 1	si	6	Tz		85.9	-182.2	0.0	327.1
5- 1	si	9	Ty		-45.6	0.0	-110.0	196.0
							PROGR.	163.

SOLLECITAZIONI :										PROGR.		103.
Caso					MZ	MY	MT	N	TZ		TY	
5- 1					10437.9	-56891.6	-1894.8	-1022.1	-414.7		64.4	
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi			Sx	Tz	Ty	Tau tot.		Si	
5- 1	si	1	Sx	Si		-611.7	0.0	0.0	0.0		611.7	
5- 1	si	6	Tz			52.7	-182.2	0.0	182.2		320.0	
5- 1	si	9	Ty			-41.0	0.0	-110.0	110.0		195.0	
										PROGR.		196.

SOLLECITAZIONI :										PROGR.		190.	
Caso			MZ		MY		MT		N		TZ		TY
5- 3			24099.6		-39246.2		-1702.3		-1590.0		-369.3		123.4
5- 1			12537.9		-43375.7		-1894.8		-1010.5		-414.7		64.4
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
5- 3	si	1	Sx	Si	-498.9		0.0		0.0		0.0		498.9
5- 1	si	6		Tz	19.6		-182.2		0.0		182.2		316.2
5- 1	si	9		Ty	-36.3		0.0		-110.0		110.0		194.0
										PROGR.		228.	

SOLLECITAZIONI :										PROGR.		226.	
Caso			MZ		MY		MT		N		TZ		TY
5- 3			28125.4		-27221.3		-1702.3		-1578.4		-369.3		123.4
5- 1			14637.8		-29872.4		-1894.8		-998.9		-414.7		64.4
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
5- 3	si	1	Sx	Si	-395.3		0.0		0.0		0.0		395.3
5- 1	si	6		Tz	-13.6		-182.2		0.0		182.2		315.9
5- 1	si	9		Ty	-31.7		0.0		-110.0		110.0		193.2
										PROGR.		261.	

SOLLECITAZIONI				PROGR.				201.
Caso		MZ	MY	MT	N	TZ		TY
5- 3		32151.2	-15234.3	-1702.3	-1566.8	-369.3		123.4
5- 1		16737.7	-16412.9	-1894.8	-987.3	-414.7		64.4
TENSIONI (Sz= 0.00)				:				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 3	si	1	Sx	-292.1	0.0	0.0	0.0	292.1
5- 1	si	6	Tz	-46.7	-182.2	0.0	182.2	319.1
5- 1	si	9	Ty	-27.1	0.0	-110.0	110.0	192.5
5- 1	si	5	Si	-110.6	-179.3	0.0	179.3	329.6

## VERIFICA STABILITA` :

$L_0 = 261.$   
 $Z \quad L_c = 261. \quad R_o = 7.45 \quad l_m = 35.0 \quad N_{cr} = 765525.7 \quad \alpha_f(b) = 0.3400 \quad k_i = 0.9246$   
 $Y \quad L_c = 261. \quad R_o = 4.51 \quad l_m = 57.8 \quad N_{cr} = 281348.6 \quad \alpha_f(c) = 0.4900 \quad k_i = 0.7457$   
 Caso 5- 1 - Nodo 1 - Asse Y  
 $N_{ed} = -1080.1 \quad M_{zeq} = 12553.3 \quad M_{yeq} = -93387.0 \quad S_s = -987.1 \quad (0.377)$

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 ----- PROGR. 0.

SOLLECITAZIONI :										PROGR.		0.	
Caso		MZ		MY		MT		N		TZ		TY	
5- 6		-18.1		-110814.5		-1732.8		-1108.3		-340.9		23.0	
TENSIONI (Sz= 0.00) :													
Caso		Ve	No	massimi		Sx		Tz		Ty		Tau tot.	
5- 6		si	4	Sx		Si		-1103.0		0.0		1103.0	
5- 6		si	6	Tz				191.3		-164.2		0.0	
5- 6		si	9	Ty				-60.4		0.0		-96.8	
										PROGR.		33.	

SOLLECITAZIONI :										PROGR.		55.	
Caso			MZ		MY		MT		N		TZ		TY
5- 6			735.2		-99696.9		-1732.8		-1096.7		-340.9		23.0
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
5- 6	si	1	Sx	Si	-997.0		0.0		0.0		0.0		997.0
5- 6	si	6	Tz		167.4		-164.2		0.0		164.2		330.0
5- 6	si	9	Ty		-56.5		0.0		-96.8		96.8		176.9
										-----		PROGR.	65.

SOLLECITAZIONI :										PROGR.		98.	
Caso			MZ	MY		MT	N	TZ	TY		23.0		
5- 6			1486.3	-88580.2		-1732.8	-1085.1	-340.9					
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx		Tz	Ty	Tau tot.	Si				
5- 6	si	1	Sx	Si	-891.1	0.0	0.0	0.0	891.1				
5- 6	si	6	Tz	143.5		-164.2	0.0	164.2	318.6				
5- 6	si	9	Ty	-52.7		0.0	-96.8	96.8	175.7				
										PROGR.		98.	

SOLLECITAZIONI :										PROGR.		30.							
Caso			MZ			MY			MT			N			TZ			TY	
5- 6			2237.4			-77464.8			-1732.8			-1073.5			-340.9			23.0	
TENSIONI (Sz= 0.00) :																			
Caso	Ve	No	massimi		Sx				Tz			Ty			Tau tot.			Si	
5- 6	si	1	Sx	Si	-785.2				0.0			0.0			0.0			785.2	
5- 6	si	6	Tz		119.5				-164.2			0.0			164.2			308.5	
5- 6	si	9	Ty		-48.8				0.0			-96.8			96.8			174.6	
																		PROGR.	130.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 6		2988.5		-66351.4		-1732.8	
						N	
						-1061.9	
						TZ	
						-340.9	
						TY	
						23.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 6	si	1	Sx	Si	-679.3	0.0	0.0
5- 6	si	6	Tz		95.6	0.0	164.2
5- 6	si	9	Ty		-44.9	0.0	96.8
							173.5
							163.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 6		3739.6		-55241.1		-1732.8	
						N	
						-1050.3	
						TZ	
						-340.9	
						TY	
						23.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 6	si	1	Sx	Si	-573.5	0.0	0.0
5- 6	si	6	Tz		71.7	0.0	164.2
5- 6	si	9	Ty		-41.1	0.0	96.8
							172.6
							196.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 8		17415.6		-39728.0		-1546.7	
5- 6		4490.7		-44136.3		-1732.8	
						N	
						-1038.7	
						TZ	
						-340.9	
						TY	
						89.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 8	si	1	Sx	Si	-477.9	0.0	0.0
5- 6	si	6	Tz		47.8	0.0	164.2
5- 6	si	9	Ty		-37.2	0.0	96.8
							171.7
							228.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 8		20320.6		-29944.5		-1546.7	
5- 6		5241.8		-33042.6		-1732.8	
						N	
						-1027.1	
						TZ	
						-340.9	
						TY	
						89.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 8	si	1	Sx	Si	-392.3	0.0	0.0
5- 6	si	6	Tz		23.9	0.0	164.2
5- 6	si	9	Ty		-33.4	0.0	96.8
							170.9
							261.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 8		23225.5		-20183.6		-1546.7	
5- 6		5992.9		-21977.2		-1732.8	
						N	
						-1015.5	
						TZ	
						-340.9	
						TY	
						89.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 8	si	1	Sx	Si	-306.9	0.0	0.0
5- 6	si	6	Tz		0.0	0.0	164.2
5- 6	si	9	Ty		-29.5	0.0	96.8
							170.2

## VERIFICA STABILITA` :

$L_0 = 261.$   
 $Z \quad L_c = 261. \quad R_o = 7.45 \quad l_m = 35.0 \quad N_{cr} = 765525.7 \quad \alpha_f(b) = 0.3400 \quad k_i = 0.9246$   
 $Y \quad L_c = 261. \quad R_o = 4.51 \quad l_m = 57.8 \quad N_{cr} = 281348.6 \quad \alpha_f(c) = 0.4900 \quad k_i = 0.7457$   
 Caso 5- 6 - Nodo 1 - Asse Y  
 $N_{ed} = -1108.3 \quad M_{zeq} = 4494.7 \quad M_{yeq} = -86271.7 \quad S_s = -891.0 \quad (0.340)$

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 ----- PROGR. 0.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 1		70.3		-123101.5		-1883.4	
						N	
						-953.2	
						TZ	
						-405.5	
						TY	
						34.4	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 1	si	1	Sx	Si	-1219.4	0.0	0.0
5- 1	si	6	Tz		218.4	0.0	180.2
5- 1	si	9	Ty		-60.9	0.0	106.2
							193.8
							33.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 1		1190.7		-109874.0		-1883.4	
						N	
						-941.6	
						TZ	
						-405.5	
						TY	
						34.4	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 1	si	1	Sx	Si	-1094.2	0.0	0.0
5- 1	si	6	Tz		189.1	0.0	180.2
5- 1	si	9	Ty		-56.4	0.0	106.2
							192.4
							65.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 1		2311.6		-96647.3		-1883.4	
						N	
						-930.0	
						TZ	
						-405.5	
						TY	
						34.4	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 1	si	1	Sx	Si	-969.0	0.0	0.0
5- 1	si	6	Tz		159.8	0.0	180.2
5- 1	si	9	Ty		-51.9	0.0	106.2
							191.1
							98.

SOLLECITAZIONI :							
Caso		MZ		MY		MT	
5- 1		3432.6		-83421.8		-1883.4	
						N	
						-918.4	
						TZ	
						-405.5	
						TY	
						34.4	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 1	si	1	Sx	Si	-843.8	0.0	0.0
5- 1	si	6	Tz		130.5	0.0	180.2
5- 1	si	9	Ty		-47.3	0.0	106.2
							189.9
							130.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	4553.6	-70198.2	-1883.4	-906.8	-405.5	34.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	1	Sx	Si	-718.7	0.0
5- 1	si	6	Tz		101.2	0.0
5- 1	si	9	Ty		-42.8	0.0
						163.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	17690.5	-52098.6	-1718.3	-1559.8	-368.5	108.1
5- 1	5674.6	-56977.7	-1883.4	-895.2	-405.5	34.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	1	Sx	Si	-601.6	0.0
5- 1	si	6	Tz		71.9	0.0
5- 1	si	9	Ty		-38.2	0.0
						196.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	21215.8	-40090.7	-1718.3	-1548.2	-368.5	108.1
5- 1	6795.5	-43763.3	-1883.4	-883.6	-405.5	34.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	1	Sx	Si	-496.4	0.0
5- 1	si	6	Tz		42.6	0.0
5- 1	si	9	Ty		-33.7	0.0
						228.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	24741.0	-28096.1	-1718.3	-1536.6	-368.5	108.1
5- 1	7916.5	-30562.7	-1883.4	-872.0	-405.5	34.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	1	Sx	Si	-391.4	0.0
5- 1	si	6	Tz		13.4	0.0
5- 1	si	9	Ty		-29.1	0.0
						261.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	28266.3	-16144.8	-1718.3	-1525.0	-368.5	108.1
5- 1	9037.5	-17407.4	-1883.4	-860.4	-405.5	34.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	1	Sx	Si	-286.8	0.0
5- 1	si	6	Tz		-15.8	0.0
5- 1	si	9	Ty		-24.6	0.0
5- 3	si	5	Si		-161.1	0.0
						322.2

## VERIFICA STABILITA` :

Z L0 = 261. | Ro = 7.45 | lm = 35.0 | Ncr = 765525.7 | alfa(b )=0.3400 | ki=0.9246 |  
 Y Lc = 261. | Ro = 4.51 | lm = 57.8 | Ncr = 281348.6 | alfa(c )=0.4900 | ki=0.7457 |  
 Caso 5- 1 - Nodo 1 - Asse Y  
 Ned = -953.2 | Mzeq = 6778.1 | Myeq = -92326.1 | Ss = -952.9 ( 0.364 )

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 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-15	163.9	122709.2	1876.1	-821.2	402.9	9.6
5-16	163.6	122738.8	1876.6	-791.7	403.0	7.8
5- 7	-150.9	-112565.1	-1723.2	-1540.5	-368.7	99.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-15	si	2	Sx	Si	-1213.0	0.0
5-16	si	5	Tz		220.9	0.0
5- 7	si	9	Ty		-70.5	0.0
						33.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-15	474.8	109568.9	1876.1	-809.6	402.9	9.6
5-16	413.2	109595.5	1876.6	-780.1	403.0	7.8
5- 7	3105.2	-100537.8	-1723.2	-1528.9	-368.7	99.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-15	si	2	Sx	Si	-1085.9	0.0
5-16	si	5	Tz		194.7	0.0
5- 7	si	9	Ty		-66.3	0.0
						65.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-15	789.3	96429.4	1876.1	-798.0	402.9	9.6
5-16	666.4	96453.2	1876.6	-768.5	403.0	7.8
5- 7	6363.7	-88511.4	-1723.2	-1517.3	-368.7	99.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-15	si	2	Sx	Si	-958.8	0.0
5-16	si	5	Tz		168.5	0.0
5- 7	si	9	Ty		-62.2	0.0
						98.

## SOLLECITAZIONI :

-----	PROGR.	150.
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----- PROGR. 105.

PROGR.	190.
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-----	PROGR.	ZZ8.
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-----	PRGR.	261.
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5	-7	31	5	31	-152.0	-101.7	0.0	101.7	518.7
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VERIFICA STABILITÀ .

$$|EC| = 20 \pm 1, |RO| = 4.5 \pm 1, |III| = 57.0, |NCl| = 20 \pm 5, \alpha(C) = 0.4500, |K| = 0.7457,$$
$$\text{Neu} = 1540.5 \mid \text{Mzeq} = 15450.5 \mid \text{Myeq} = 84425.8 \mid \text{SS} = 557.5 \quad (0.558)$$

PROGR.		U.	
1	2	3	4

.....	PROGR.	33.
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----- PROGR. 05.

Caso	MZ	MY	MT	N	TZ	TY		
5-15	3460.0	98453.4	1912.2	-973.6	418.7	52.2		
5-16	3294.2	98505.4	1913.0	-947.4	418.9	49.6		
5-3	8762.5	-90736.8	-1762.6	-1904.1	-385.3	135.2		
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-15	si	2	Sx	Si	-991.4	0.0	0.0	991.4
5-16	si	5	Tz		159.7	183.6	0.0	355.9
5-3	si	9	Ty		-71.4	0.0	-110.5	204.3

SOLLECITAZIONI :										PROGR.		30.						
Caso			MZ			MY			MT			N			TZ			TY
5-15			5161.8			84799.2			1912.2			-962.0			418.7			52.2
5-16			4913.2			84844.3			1913.0			-935.8			418.9			49.6
5-3			13171.9			-78172.3			-1762.6			-1892.5			-385.3			135.2
TENSIONI (Sz= 0.00) :																		
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si					
5-15	si	2	Sx	Si	-864.1		0.0		0.0		0.0		864.1					
5-16	si	5	Tz		127.8		183.6		0.0		183.6		342.8					
5-3	si	9	Ty		-67.1		0.0		-110.5		110.5		202.8					
-----										PROGR.		130.						

SOLLECITAZIONI :										PROGR.		150.						
Caso			MZ			MY			MT			N			TZ			TY
5- 7			17583.3			-65608.3			-1762.4			-1881.4			-385.3			135.2
5-16			6532.2			71185.2			1913.0			-924.2			418.9			49.6
5- 3			17581.3			-65609.7			-1762.6			-1880.9			-385.3			135.2
TENSIONI (Sz= 0.00) :																		
Caso	Ve	No	massimi		Sx				Tz			Ty			Tau tot.			Si
5- 7	si	1	Sx	Si	-739.8				0.0			0.0			0.0			739.8
5-16	si	5	Tz		96.0				183.6			0.0			183.6			332.2
5- 3	si	9	Ty		-62.7				0.0			-110.5			110.5			201.4
												PROGR.						163.

SOLLECITAZIONI :										PROGR.		165.	
Caso			MZ		MY		MT		N		TZ		TY
5-7			21993.2		-53049.1		-1762.4		-1869.8		-385.3		135.2
5-16			8151.2		57529.8		1913.0		-912.6		418.9		49.6
5-3			21990.7		-53050.3		-1762.6		-1869.3		-385.3		135.2
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
5-7	si	1	Sx	Si	-632.3		0.0		0.0		0.0		632.3
5-16	si	5		Tz	64.2		183.6		0.0		183.6		324.5
5-3	si	9		Ty	-58.4		0.0		-110.5		110.5		200.1
										PROGR.		196.	

SOLLECITAZIONI										PROGR.		190.							
:																			
Caso			MZ			MY			MT			N			TZ			TY	
5-7			26403.1			-40496.1			-1762.4			-1858.2			-385.3			135.2	
5-16			9770.2			43881.2			1913.0			-901.0			418.9			49.6	
5-3			26400.1			-40497.0			-1762.6			-1857.7			-385.3			135.2	
TENSIONI (Sz= 0.00)										:									
Caso	Ve	No	massimi				Sx			Tz			Ty			Tau tot.			Si
5-7	si	1	Sx	Si			-524.8			0.0			0.0			0.0			524.8
5-16	si	5	Tz				32.4			183.6			0.0			183.6			319.7
5-3	si	9	Ty				-54.1			0.0			-110.5			110.5			198.9
												PROGR						228.	

SOLLECITAZIONI										:	PROGR.				220.
Caso	MZ			MY		MT		N		TZ		TY			
5-7	30813.0			-27957.5		-1762.4		-1846.6		-385.3		135.2			
5-16	11389.2			30248.8		1913.0		-889.4		418.9		49.6			
5-3	30809.5			-27958.2		-1762.6		-1846.1		-385.3		135.2			
TENSIONI (Sz= 0.00)										:					
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si		
5-7	si	1	Sx	Si	-417.5		0.0		0.0		0.0		417.5		
5-16	si	5	Tz		0.6		183.6		0.0		183.6		318.1		
5-3	si	9	Ty		-49.8		0.0		-110.5		110.5		197.7		
										:	PROGR				261.

SOLLECITAZIONI						:	PROGR.		261.
Caso	MZ	MY	MT	N	TZ	TY			
6-12	74158.1	6761.2	796.8	-2847.0	175.0	284.1			
5-16	13008.2	16672.7	1913.0	-877.8	418.9	49.6			
5-3	35219.0	-15468.7	-1762.6	-1834.5	-385.3	135.2			
TENSIONI (Sz= 0.00)						:			
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
6-12	si	2	Sx	Si	-380.6	0.0	0.0	380.6	
5-16	si	5	Tz		-31.1	183.6	0.0	319.6	
5-3	si	9	Ty		-45.5	0.0	-110.5	196.7	

## VERIFICA STABILITA` :

Z | L0 = 261. |  
 | Lc = 261. | Ro = 7.45 | lm = 35.0 | Ncr= 765525.7 | alfa(b )=0.3400 | ki=0.9246 |  
 Y | Lc = 261. | Ro = 4.51 | lm = 57.8 | Ncr= 281348.6 | alfa(c )=0.4900 | ki=0.7457 |  
 Caso 5- 7 - Nodo 1 - Asse Y  
 Ned = -1927.8 | Mzeq = 26417.2 | Myeq = -86899.7 | Ss = -998.6 ( 0.381)

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 0.

SOLLECITAZIONI										PROGR.		0.					
Caso		MZ		MY		MT		N		TZ		TY					
5-12		0.0		112727.6		1764.7		-1712.2		345.7		107.5					
5-3		0.0		-103321.2		-1623.1		-2014.3		-317.3		254.8					
TENSIONI (Sz= 0.00) :																	
Caso		Ve		No		massimi		Sx		Tz		Ty		Tau tot.		Si	
5-12		Si		2		Sx		Si		-1134.9		0.0		0.0		1134.9	
5-12		Si		5		Tz				181.7		169.1		0.0		344.7	

5-3	si	9	Ty	-77.9	0.0	-115.8	115.8	215.2
-----								33.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-11	3616.7	101364.4	1763.7	-1728.5	345.4	110.9
5-12	3506.9	101453.3	1764.7	-1700.6	345.7	107.5
5-3	8311.4	-92973.1	-1623.1	-2002.7	-317.3	254.8

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	2	Sx	Si	-1036.9	0.0	0.0	1036.9
5-12	si	5	Tz		148.1	169.1	0.0	328.2
5-3	si	9	Ty		-74.3	0.0	-115.8	213.9
-----								65.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-11	7233.4	90100.1	1763.7	-1716.9	345.4	110.9
5-12	7013.9	90180.2	1764.7	-1689.0	345.7	107.5
5-3	16622.8	-82626.1	-1623.1	-1991.1	-317.3	254.8

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	2	Sx	Si	-939.3	0.0	0.0	939.3
5-12	si	5	Tz		114.5	169.1	0.0	314.5
5-3	si	9	Ty		-70.7	0.0	-115.8	212.7
-----								98.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-11	10850.1	78837.4	1763.7	-1705.3	345.4	110.9
5-12	10520.8	78908.6	1764.7	-1677.4	345.7	107.5
5-3	24934.2	-72280.7	-1623.1	-1979.5	-317.3	254.8

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	2	Sx	Si	-841.8	0.0	0.0	841.8
5-12	si	5	Tz		80.9	169.1	0.0	303.9
5-3	si	9	Ty		-67.1	0.0	-115.8	211.5
-----								130.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-3	33245.7	-61937.8	-1623.1	-1967.9	-317.3	254.8
5-12	14027.8	67639.6	1764.7	-1665.8	345.7	107.5

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-3	si	1	Sx	Si	-759.2	0.0	0.0	759.2
5-12	si	5	Tz		47.3	169.1	0.0	296.7
5-3	si	9	Ty		-63.5	0.0	-115.8	210.4
-----								163.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-3	41557.1	-51598.9	-1623.1	-1956.3	-317.3	254.8
5-12	17534.7	56374.5	1764.7	-1654.2	345.7	107.5

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-3	si	1	Sx	Si	-686.5	0.0	0.0	686.5
5-12	si	5	Tz		13.7	169.1	0.0	293.2
5-3	si	9	Ty		-59.9	0.0	-115.8	209.3
-----								196.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-11	113924.1	18941.1	740.1	-4836.3	144.4	582.0
5-12	21041.7	45116.3	1764.7	-1642.6	345.7	107.5
5-3	49868.5	-41266.8	-1623.1	-1944.7	-317.3	254.8

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	2	Sx	Si	-678.1	0.0	0.0	678.1
5-12	si	5	Tz		-19.9	169.1	0.0	293.6
5-3	si	9	Ty		-56.3	0.0	-115.8	208.3
-----								228.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-11	132911.4	14239.1	740.1	-4824.7	144.4	582.0
5-12	24548.6	33871.9	1764.7	-1631.0	345.7	107.5
5-3	58179.9	-30948.4	-1623.1	-1933.1	-317.3	254.8

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	2	Sx	Si	-696.6	0.0	0.0	696.6
5-12	si	5	Tz		-53.4	169.1	0.0	297.8
5-3	si	9	Ty		-52.6	0.0	-115.8	207.4
-----								261.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-11	151898.8	9547.8	740.1	-4813.1	144.4	582.0
5-12	28055.6	22661.9	1764.7	-1619.4	345.7	107.5
5-3	66491.3	-20664.2	-1623.1	-1921.5	-317.3	254.8

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	2	Sx	Si	-715.2	0.0	0.0	715.2
5-12	si	5	Tz		-86.9	169.1	0.0	305.5
5-3	si	9	Ty		-49.1	0.0	-115.8	206.5

## VERIFICA STABILITA` :

Z	L0 = 261.	Ro = 7.45	lm = 35.0	Ncr= 765525.7	alfa(b )=0.3400	ki=0.9246
Y	Lc = 261.	Ro = 4.51	lm = 57.8	Ncr= 281348.6	alfa(c )=0.4900	ki=0.7457

Caso 5-3 - Nodo 1 - Asse Y

Ned = -2014.3 | Mzeq = 49868.5 | Myeq = -80537.8 | Ss = -1019.0 ( 0.389)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1292- 1393) 135  
PROGR. 0.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
5- 8 | -5211.9 | -20031.5 | 0.0 | 13.2 | -263.5 | 85.0 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
5- 8 | si | 15 | Sx | Si | 100.1 | 0.0 | 0.0 | 100.1 |  
PROGR. 10.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
5- 8 | -4423.4 | -17527.5 | 0.0 | 12.6 | -263.5 | 80.9 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
5- 8 | si | 15 | Sx | Si | 87.1 | 0.0 | 0.0 | 87.1 |  
PROGR. 19.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
5- 8 | -3674.1 | -15023.6 | 0.0 | 11.9 | -263.5 | 76.8 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
5- 8 | si | 15 | Sx | Si | 74.3 | 0.0 | 0.0 | 74.3 |  
PROGR. 29.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
5- 8 | -2963.9 | -12519.7 | 0.0 | 11.2 | -263.5 | 72.7 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
5- 8 | si | 15 | Sx | Si | 61.6 | 0.0 | 0.0 | 61.6 |  
PROGR. 38.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
5- 8 | -2292.8 | -10015.7 | 0.0 | 10.5 | -263.5 | 68.6 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
5- 8 | si | 15 | Sx | Si | 49.1 | 0.0 | 0.0 | 49.1 |  
PROGR. 48.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
5- 8 | -1660.9 | -7511.8 | 0.0 | 9.8 | -263.5 | 64.4 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
5- 8 | si | 15 | Sx | Si | 36.6 | 0.0 | 0.0 | 36.6 |  
PROGR. 57.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
5- 8 | -1068.1 | -5007.9 | 0.0 | 9.2 | -263.5 | 60.3 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
5- 8 | si | 15 | Sx | Si | 24.3 | 0.0 | 0.0 | 24.3 |  
PROGR. 67.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
5- 8 | -514.5 | -2503.9 | 0.0 | 8.5 | -263.5 | 56.2 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
5- 8 | si | 15 | Sx | Si | 12.2 | 0.0 | 0.0 | 12.2 |  
PROGR. 76.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
6- 5 | 0.0 | 0.0 | 0.0 | 56.6 | 80.2 | 44.0 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
6- 5 | si | 15 | Sx | Si | 1.0 | 0.0 | 0.0 | 1.0 |

VERIFICA STABILITA` :

Z | L0 = 76. |  
Y | Lc = 76. | Ro = 6.96 | lm = 10.9 | Ncr= 9720268.9 | alfa(c )=0.4900 | ki=1.0000 |  
Caso 6-10 - Nodo 1 - Asse Z  
Ned = -33.3 | Mzeq = -4295.9 | Myeq = -12242.9 | Ss = -65.3 ( 0.025)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1394- 1299) 136  
PROGR. 0.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
6- 3 | 0.0 | 0.0 | 0.0 | -70.0 | 104.3 | -53.6 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
6- 3 | si | 10 | Sx | Si | -1.2 | 0.0 | 0.0 | 1.2 |  
PROGR. 10.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
2- 2 | -2989.3 | -18.6 | 0.0 | -52.6 | 2.0 | -317.3 |  
TENSIONI (Sz= 0.00) :  
Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
2- 2 | si | 1 | Sx | Si | -10.9 | 0.0 | 0.0 | 10.9 |  
PROGR. 19.

SOLLECITAZIONI :  
Caso | MZ | MY | MT | N | TZ | TY |  
2- 2 | -6029.5 | -37.3 | 0.0 | -53.4 | 2.0 | -322.6 |

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	1	Sx	-21.1	0.0	0.0	0.0	21.1	
								29.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-9120.6	-55.9	0.0	-54.3	2.0	-328.0		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	1	Sx	-31.5	0.0	0.0	0.0	31.5	
								38.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-12262.5	-74.5	0.0	-55.2	2.0	-333.3		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	1	Sx	-42.0	0.0	0.0	0.0	42.0	
								48.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-15455.3	-93.2	0.0	-56.1	2.0	-338.7		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	1	Sx	-52.7	0.0	0.0	0.0	52.7	
								57.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-18699.1	-111.8	0.0	-57.0	2.0	-344.0		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	1	Sx	-63.6	0.0	0.0	0.0	63.6	
								67.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-21993.7	-130.4	0.0	-57.9	2.0	-349.4		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	1	Sx	-74.6	0.0	0.0	0.0	74.6	
								76.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-25339.2	-149.1	0.0	-58.8	2.0	-354.7		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	1	Sx	-85.8	0.0	0.0	0.0	85.8	
VERIFICA STABILITA` :									
Z	L0 =	76.	Ro =	6.96	lm =	10.9	Ncr=	9720268.9	alfa(c )=0.4900 ki=1.0000
Y	Lc =	76.	Ro =	7.21	lm =	10.5	Ncr=	10445932.0	alfa(c )=0.4900 ki=1.0000
Caso 2- 2 - Nodo 1 - Asse Z									
Ned =	-58.8	Mzeq =	-19004.4	Myeq =	-111.8	Ss =	-64.6	( 0.025)	
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1395- 1300) 137									
								0.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
6- 7		0.0	0.0	0.0	-109.3	132.7	-112.2		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
6- 7	si	15	Sx	-2.0	0.0	0.0	0.0	2.0	
								10.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-5949.6	127.8	0.0	-103.6	-13.5	-629.1		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	24	Sx	-22.1	0.0	0.0	0.0	22.1	
								19.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-11950.1	255.6	0.0	-104.4	-13.5	-634.4		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	24	Sx	-42.6	0.0	0.0	0.0	42.6	
								29.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-18001.4	383.4	0.0	-105.3	-13.5	-639.8		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	24	Sx	-63.3	0.0	0.0	0.0	63.3	
								38.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-24103.6	511.2	0.0	-106.2	-13.5	-645.1		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	24	Sx	-84.1	0.0	0.0	0.0	84.1	
								48.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-30256.6	639.0	0.0	-107.1	-13.5	-650.5		

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	24	Sx	-105.0	0.0	0.0	0.0	105.0	
								57.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-36460.4	766.8	0.0	-108.0	-13.5	-655.8		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	24	Sx	-126.2	0.0	0.0	0.0	126.2	
								67.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-42715.1	894.6	0.0	-108.9	-13.5	-661.2		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	24	Sx	-147.5	0.0	0.0	0.0	147.5	
								76.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-49020.6	1022.4	0.0	-109.8	-13.5	-666.5		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	24	Sx	-169.0	0.0	0.0	0.0	169.0	
VERIFICA STABILITA` :									
Z	L0 =	76.	Ro =	6.96	lm =	10.9	Ncr=	9720268.9	alfa(c )=0.4900
Y	Lc =	76.	Ro =	7.21	lm =	10.5	Ncr=	10445932.0	alfa(c )=0.4900
Caso 2- 2 - Nodo 24 - Asse Z									
Ned = -109.8   Mzeq = -36765.4   Myeq = 766.8   Ss = -127.2 ( 0.049)									
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1293- 1396) 138									
								0.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-40791.3	-254.4	0.0	93.8	-3.3	558.2		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	15	Sx	138.2	0.0	0.0	0.0	138.2	
								10.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-35514.4	-222.6	0.0	92.9	-3.3	552.8		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	15	Sx	120.5	0.0	0.0	0.0	120.5	
								19.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-30288.4	-190.8	0.0	92.0	-3.3	547.5		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	15	Sx	103.0	0.0	0.0	0.0	103.0	
								29.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-25113.2	-159.0	0.0	91.1	-3.3	542.1		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	15	Sx	85.7	0.0	0.0	0.0	85.7	
								38.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-19988.8	-127.2	0.0	90.3	-3.3	536.8		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	15	Sx	68.5	0.0	0.0	0.0	68.5	
								48.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-14915.4	-95.4	0.0	89.4	-3.3	531.4		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	15	Sx	51.5	0.0	0.0	0.0	51.5	
								57.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-9892.7	-63.6	0.0	88.5	-3.3	526.1		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	15	Sx	34.7	0.0	0.0	0.0	34.7	
								67.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
2- 2		-4920.9	-31.8	0.0	87.6	-3.3	520.7		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	15	Sx	18.0	0.0	0.0	0.0	18.0	
								76.	
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
6- 5		0.0	0.0	0.0	87.1	256.1	92.4		

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 15 | Sx | Si | 1.6 | 0.0 | 0.0 | 0.0 | 1.6 |

## VERIFICA STABILITA` :

Z | L0 = 76. |  
 Y | Lc = 76. | Ro = 6.96 | lm = 10.9 | Ncr= 9720268.9 | alfa(c )=0.4900 | ki=1.0000 |  
 Y | Lc = 76. | Ro = 7.21 | lm = 10.5 | Ncr= 10445932.0 | alfa(c )=0.4900 | ki=1.0000 |  
 Caso 6-16 - Nodo 1 - Asse Z  
 Ned = -36.5 | Mzeq = -7368.5 | Myeq = -15037.6 | Ss = -87.1 ( 0.033 )

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 PROGR. 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | 0.0 | 0.0 | 0.0 | -101.9 | -3.4 | -623.9 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -1.8 | 0.0 | 0.0 | 0.0 | 1.8 |  
 PROGR. 10.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -5951.9 | 32.6 | 0.0 | -102.7 | -3.4 | -629.2 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -21.7 | 0.0 | 0.0 | 0.0 | 21.7 |  
 PROGR. 19.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -11954.7 | 65.3 | 0.0 | -103.6 | -3.4 | -634.6 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -41.8 | 0.0 | 0.0 | 0.0 | 41.8 |  
 PROGR. 29.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -18008.4 | 97.9 | 0.0 | -104.5 | -3.4 | -640.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -62.1 | 0.0 | 0.0 | 0.0 | 62.1 |  
 PROGR. 38.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -24112.9 | 130.6 | 0.0 | -105.4 | -3.4 | -645.3 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -82.5 | 0.0 | 0.0 | 0.0 | 82.5 |  
 PROGR. 48.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -30268.2 | 163.2 | 0.0 | -106.3 | -3.4 | -650.7 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -103.1 | 0.0 | 0.0 | 0.0 | 103.1 |  
 PROGR. 57.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -36474.4 | 195.9 | 0.0 | -107.2 | -3.4 | -656.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -123.9 | 0.0 | 0.0 | 0.0 | 123.9 |  
 PROGR. 67.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -42731.5 | 228.5 | 0.0 | -108.0 | -3.4 | -661.4 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -144.8 | 0.0 | 0.0 | 0.0 | 144.8 |  
 PROGR. 76.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -49039.4 | 261.2 | 0.0 | -108.9 | -3.4 | -666.7 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 24 | Sx | Si | -165.9 | 0.0 | 0.0 | 0.0 | 165.9 |

## VERIFICA STABILITA` :

Z | L0 = 76. |  
 Y | Lc = 76. | Ro = 6.96 | lm = 10.9 | Ncr= 9720268.9 | alfa(c )=0.4900 | ki=1.0000 |  
 Y | Lc = 76. | Ro = 7.21 | lm = 10.5 | Ncr= 10445932.0 | alfa(c )=0.4900 | ki=1.0000 |  
 Caso 2- 2 - Nodo 24 - Asse Z  
 Ned = -108.9 | Mzeq = -36779.5 | Myeq = 195.9 | Ss = -124.9 ( 0.048 )

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 PROGR. 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -40849.7 | 381.3 | 0.0 | 93.6 | 5.0 | 558.3 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 10 | Sx | Si | 138.9 | 0.0 | 0.0 | 0.0 | 138.9 |

-----										PROGR.	10.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-35565.0	333.7	0.0	92.7	5.0	552.9					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	10	Sx	Si	0.0	0.0	0.0	121.2			
-----										PROGR.	19.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-30331.4	286.0	0.0	91.8	5.0	547.6					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	10	Sx	Si	0.0	0.0	0.0	103.6			
-----										PROGR.	29.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-25148.7	238.3	0.0	91.0	5.0	542.2					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	10	Sx	Si	0.0	0.0	0.0	86.1			
-----										PROGR.	38.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-20017.0	190.7	0.0	90.1	5.0	536.9					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	10	Sx	Si	0.0	0.0	0.0	68.9			
-----										PROGR.	48.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-14936.3	143.0	0.0	89.2	5.0	531.5					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	10	Sx	Si	0.0	0.0	0.0	51.8			
-----										PROGR.	57.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-9906.5	95.3	0.0	88.3	5.0	526.1					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	10	Sx	Si	0.0	0.0	0.0	34.9			
-----										PROGR.	67.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-4927.8	47.7	0.0	87.4	5.0	520.8					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	10	Sx	Si	0.0	0.0	0.0	18.1			
-----										PROGR.	76.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
6- 7	0.0	0.0	0.0	90.2	-9.5	91.9					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
6- 7	si	24	Sx	Si	0.0	0.0	0.0	1.6			
-----											
VERIFICA STABILITA` :											
Z	L0 = 76.										
Y	Lc = 76.	Ro = 6.96	lm = 10.9	Ncr= 9720268.9	alfa(c )=0.4900	ki=1.0000					
		Ro = 7.21	lm = 10.5	Ncr= 10445932.0	alfa(c )=0.4900	ki=1.0000					
Caso 5- 3 - Nodo 24 - Asse Z											
Ned =		-14.0	Mzeq =	-7167.0	Myeq =	4433.4	Ss =	-42.3	( 0.016)		
-----											
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1399- 1302)										141	
-----										PROGR.	0.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	0.0	0.0	0.0	-98.3	0.0	-604.1					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	10	Sx	Si	0.0	0.0	0.0	1.8			
-----										PROGR.	10.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-5768.3	0.2	0.0	-99.2	0.0	-609.5					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	24	Sx	Si	0.0	0.0	0.0	20.9			
-----										PROGR.	19.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-11587.6	0.3	0.0	-100.1	0.0	-614.9					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	24	Sx	Si	0.0	0.0	0.0	40.3			
-----										PROGR.	29.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-17457.8	0.5	0.0	-101.0	0.0	-620.2					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	24	Sx	Si	0.0	0.0	0.0	59.8			

-----										PROGR.	38.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-23378.9			0.6		0.0		-101.9		0.0		-625.6
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	24	Sx	Si	-79.5		0.0		0.0	0.0		79.5
-----										PROGR.	48.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-29350.9			0.8		0.0		-102.8		0.0		-630.9
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	24	Sx	Si	-99.3		0.0		0.0	0.0		99.3
-----										PROGR.	57.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-35373.8			1.0		0.0		-103.7		0.0		-636.3
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	24	Sx	Si	-119.3		0.0		0.0	0.0		119.3
-----										PROGR.	67.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-41447.7			1.1		0.0		-104.5		0.0		-641.6
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	24	Sx	Si	-139.5		0.0		0.0	0.0		139.5
-----										PROGR.	76.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-47572.5			1.3		0.0		-105.4		0.0		-647.0
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	24	Sx	Si	-159.9		0.0		0.0	0.0		159.9
-----												
VERIFICA STABILITA` :												
Z	L0 = 76.			Ro = 6.96	lm = 10.9	Ncr= 9720269.0	alfa(c)=0.4900	ki=1.0000				
Y	Lc = 76.			Ro = 7.21	lm = 10.5	Ncr= 10445932.1	alfa(c)=0.4900	ki=1.0000				
Caso 2- 2 - Nodo 24 - Asse Z												
Ned = -105.4 Mzeq = -35679.4 Myeq = 1.0 Ss = -120.4 ( 0.046)												
-----												
U_2_UNP_180 ( 7)										stato limite ultimo - ASTA ( 1295- 1400)		142
-----										PROGR.	0.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-40822.7			-10.2		0.0		93.4		-0.1		558.2
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	15	Sx	Si	137.3		0.0		0.0	0.0		137.3
-----										PROGR.	10.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-35541.7			-8.9		0.0		92.5		-0.1		552.9
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	15	Sx	Si	119.7		0.0		0.0	0.0		119.7
-----										PROGR.	19.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-30311.5			-7.6		0.0		91.6		-0.1		547.5
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	15	Sx	Si	102.3		0.0		0.0	0.0		102.3
-----										PROGR.	29.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-25132.3			-6.4		0.0		90.8		-0.1		542.2
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	15	Sx	Si	85.1		0.0		0.0	0.0		85.1
-----										PROGR.	38.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-20004.0			-5.1		0.0		89.9		-0.1		536.8
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	15	Sx	Si	68.1		0.0		0.0	0.0		68.1
-----										PROGR.	48.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-14926.6			-3.8		0.0		89.0		-0.1		531.5
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	15	Sx	Si	51.2		0.0		0.0	0.0		51.2
-----										PROGR.	57.	
SOLLECITAZIONI :												
Caso	MZ			MY		MT		N		TZ		TY
2- 2	-9900.1			-2.5		0.0		88.1		-0.1		526.1
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	15	Sx	Si	34.5		0.0		0.0	0.0		34.5

----- PROGR. 67.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -4924.6 | -1.3 | 0.0 | 87.2 | -0.1 | 520.7 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 17.9 | 0.0 | 0.0 | 17.9 |  
 ----- PROGR. 76.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 7 | 0.0 | 0.0 | 0.0 | 90.6 | -128.9 | 91.8 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 7 | si | 1 | Sx | Si | 1.6 | 0.0 | 0.0 | 0.0 | 1.6 |

-----  
 VERIFICA STABILITA` :

Z | L0 = 76. |  
 Y | Lc = 76. | Ro = 6.96 | lm = 10.9 | Ncr= 9720269.0 | alfa(c )=0.4900 | ki=1.0000 |  
 Y | Lc = 76. | Ro = 7.21 | lm = 10.5 | Ncr= 10445932.1 | alfa(c )=0.4900 | ki=1.0000 |  
 Caso 6- 9 - Nodo 24 - Asse Z  
 Ned = -55.4 | Mzeq = -7551.7 | Myeq = 7414.2 | Ss = -56.6 ( 0.022 )

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 ----- PROGR. 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -155506.5 | -43.6 | -5.9 | -19.1 | -0.1 | 2179.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 1 | Sx | Si | -517.0 | 0.0 | 0.0 | 0.0 | 517.0 |  
 ----- PROGR. 9.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -136172.0 | -42.4 | -5.9 | -19.9 | -0.1 | 2174.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 1 | Sx | Si | -452.8 | 0.0 | 0.0 | 0.0 | 452.8 |  
 ----- PROGR. 18.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -116881.9 | -41.1 | -5.9 | -20.8 | -0.1 | 2169.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 1 | Sx | Si | -388.7 | 0.0 | 0.0 | 0.0 | 388.7 |  
 ----- PROGR. 27.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | -57889.7 | 39831.1 | 62.6 | -259.1 | -292.0 | 561.2 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | -361.0 | 0.0 | 0.0 | 0.0 | 361.0 |  
 ----- PROGR. 36.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | -52928.3 | 42426.5 | 62.6 | -259.8 | -292.0 | 557.3 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | -355.3 | 0.0 | 0.0 | 0.0 | 355.3 |  
 ----- PROGR. 44.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | -48001.4 | 45021.1 | 62.6 | -260.4 | -292.0 | 553.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | -349.6 | 0.0 | 0.0 | 0.0 | 349.6 |  
 ----- PROGR. 53.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | -43109.2 | 47615.3 | 62.6 | -261.0 | -292.0 | 549.6 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | -344.1 | 0.0 | 0.0 | 0.0 | 344.1 |  
 ----- PROGR. 62.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | -38251.8 | 50209.1 | 62.6 | -261.7 | -292.0 | 545.8 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | -338.6 | 0.0 | 0.0 | 0.0 | 338.6 |  
 ----- PROGR. 71.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | -33429.2 | 52802.7 | 62.6 | -262.3 | -292.0 | 541.9 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | -333.3 | 0.0 | 0.0 | 0.0 | 333.3 |

-----  
 VERIFICA STABILITA` :

Z | L0 = 71. |  
 Y | Lc = 71. | Ro = 6.96 | lm = 10.2 | Ncr= 11114400.0 | alfa(c )=0.4900 | ki=1.0000 |  
 Y | Lc = 71. | Ro = 7.21 | lm = 9.9 | Ncr= 11944141.4 | alfa(c )=0.4900 | ki=1.0000 |

Caso 5- 3 - Nodo 24 - Asse Z  
Ned = -262.3|Mzeq = -68926.8|Myeq = 52802.7|Ss = -451.2 ( 0.172)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1428- 1430) 207  
PROGR. 0.

SOLLECITAZIONI :  
Caso 5- 3 MZ -33425.5 MY 52804.9 MT -3.9 N -157.3 TZ 166.3 TY 337.7  
TENSIONI (Sz= 0.00) :  
Caso 5- 3 Ve|No|massimi Si Sx -331.4 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 331.4  
PROGR. 18.

SOLLECITAZIONI :  
Caso 5-14 MZ 31466.0 MY -49969.4 MT 1.7 N 83.3 TZ -166.5 TY 70.7  
TENSIONI (Sz= 0.00) :  
Caso 5-14 Ve|No|massimi Si Sx 311.9 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 311.9  
PROGR. 36.

SOLLECITAZIONI :  
Caso 5-14 MZ 32656.1 MY -47089.5 MT 1.7 N 82.0 TZ -166.5 TY 63.0  
TENSIONI (Sz= 0.00) :  
Caso 5-14 Ve|No|massimi Si Sx 304.0 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 304.0  
PROGR. 53.

SOLLECITAZIONI :  
Caso 5-14 MZ 33709.4 MY -44219.5 MT 1.7 N 80.7 TZ -166.5 TY 55.3  
TENSIONI (Sz= 0.00) :  
Caso 5-14 Ve|No|massimi Si Sx 295.6 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 295.6  
PROGR. 71.

SOLLECITAZIONI :  
Caso 5-14 MZ 34626.0 MY -41361.2 MT 1.7 N 79.5 TZ -166.5 TY 47.6  
TENSIONI (Sz= 0.00) :  
Caso 5-14 Ve|No|massimi Si Sx 286.9 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 286.9  
PROGR. 89.

SOLLECITAZIONI :  
Caso 2- 2 MZ 90604.2 MY -40.6 MT -6.9 N -211.1 TZ 0.1 TY 1017.7  
TENSIONI (Sz= 0.00) :  
Caso 2- 2 Ve|No|massimi Si Sx -304.9 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 304.9  
PROGR. 107.

SOLLECITAZIONI :  
Caso 2- 2 MZ 108605.8 MY -42.1 MT -6.9 N -212.7 TZ 0.1 TY 1007.7  
TENSIONI (Sz= 0.00) :  
Caso 2- 2 Ve|No|massimi Si Sx -364.7 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 364.7  
PROGR. 124.

SOLLECITAZIONI :  
Caso 2- 2 MZ 126429.4 MY -43.5 MT -6.9 N -214.4 TZ 0.1 TY 997.7  
TENSIONI (Sz= 0.00) :  
Caso 2- 2 Ve|No|massimi Si Sx -423.9 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 423.9  
PROGR. 142.

SOLLECITAZIONI :  
Caso 2- 2 MZ 144074.8 MY -44.9 MT -6.9 N -216.0 TZ 0.1 TY 987.7  
TENSIONI (Sz= 0.00) :  
Caso 2- 2 Ve|No|massimi Si Sx -482.6 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 482.6

VERIFICA STABILITA` :

Z L0 = 142. | Ro = 6.96 | lm = 20.4 | Ncr= 2778600.0 | alfa(c )=0.4900 | ki=0.9820 |  
Y Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr= 2986035.4 | alfa(c )=0.4900 | ki=0.9862 |  
Caso 2- 2 - Nodo 10 - Asse Z  
Ned = -216.0|Mzeq = 108056.1|Myeq = -44.9|Ss = -363.0 ( 0.139)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1430- 1432) 209  
PROGR. 0.

SOLLECITAZIONI :  
Caso 2- 2 MZ 144074.8 MY -49.9 MT 22.9 N -378.0 TZ -0.3 TY 65.3  
TENSIONI (Sz= 0.00) :  
Caso 2- 2 Ve|No|massimi Si Sx -485.5 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 485.5  
PROGR. 18.

SOLLECITAZIONI :  
Caso 2- 2 MZ 145146.1 MY -44.4 MT 22.9 N -379.7 TZ -0.3 TY 55.3  
TENSIONI (Sz= 0.00) :  
Caso 2- 2 Ve|No|massimi Si Sx -489.0 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 489.0  
PROGR. 36.

SOLLECITAZIONI :  
Caso MZ MY MT N TZ TY

2- 2	146039.4	-38.9	22.9	-381.3	-0.3	45.3
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	10	Sx	Si	Tau tot.	Si
				-492.0	0.0	492.0
					PROGR.	53.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	146755.0	-33.4	22.9	-383.0	-0.3	35.3
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	10	Sx	Si	Tau tot.	Si
				-494.4	0.0	494.4
					PROGR.	71.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	147292.7	-27.9	22.9	-384.6	-0.3	25.3
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	10	Sx	Si	Tau tot.	Si
				-496.2	0.0	496.2
					PROGR.	89.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	147652.5	-22.5	22.9	-386.3	-0.3	15.3
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	10	Sx	Si	Tau tot.	Si
				-497.4	0.0	497.4
					PROGR.	107.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	147834.5	-17.0	22.9	-387.9	-0.3	5.2
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	10	Sx	Si	Tau tot.	Si
				-498.0	0.0	498.0
					PROGR.	124.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	147838.7	-11.5	22.9	-389.6	-0.3	-4.8
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	10	Sx	Si	Tau tot.	Si
				-498.0	0.0	498.0
					PROGR.	142.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	147665.0	-6.0	22.9	-391.2	-0.3	-14.8
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	10	Sx	Si	Tau tot.	Si
				-497.5	0.0	497.5

## VERIFICA STABILITA` :

Z | L0 = 142. | Ro = 6.96 | lm = 20.4 | Ncr = 2778600.0 | alfa(c ) = 0.4900 | ki = 0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr = 2986035.4 | alfa(c ) = 0.4900 | ki = 0.9862 |  
 Caso 2- 2 - Nodo 10 - Asse Z  
 Ned = -391.2 | Mzeq = 147838.7 | Myeq = -37.4 | Ss = -498.4 ( 0.190)

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 0.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	147665.0	-1.0	-7.6	-561.4	-0.3	-985.5
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	10	Sx	Si	Tau tot.	Si
				-500.5	0.0	500.5
					PROGR.	18.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	130056.5	3.8	-7.6	-563.0	-0.3	-995.5
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	15	Sx	Si	Tau tot.	Si
				-442.0	0.0	442.0
					PROGR.	36.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	112269.9	8.5	-7.6	-564.7	-0.3	-1005.5
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	15	Sx	Si	Tau tot.	Si
				-383.0	0.0	383.0
					PROGR.	53.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	94305.2	13.2	-7.6	-566.3	-0.3	-1015.5
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	15	Sx	Si	Tau tot.	Si
				-323.4	0.0	323.4
					PROGR.	71.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
2- 2	76162.4	18.0	-7.6	-568.0	-0.3	-1025.6
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	15	Sx	Si	Tau tot.	Si
				-263.2	0.0	263.2
					PROGR.	89.
SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY

5-3	24939.2	-33047.1	-1.9	-25.6	325.5	-86.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-3	si	10	Sx	Si	-219.5	0.0
					Tau tot.	Si
					0.0	219.5
					PROGR. 107.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-3	23325.5	-38748.1	-1.9	-26.8	325.5	-94.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-3	si	10	Sx	Si	-237.6	0.0
					Tau tot.	Si
					0.0	237.6
					PROGR. 124.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-3	21575.2	-44471.6	-1.9	-28.1	325.5	-102.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-3	si	10	Sx	Si	-255.4	0.0
					Tau tot.	Si
					0.0	255.4
					PROGR. 142.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-20133.5	50264.9	-1.7	-192.6	-325.7	-334.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-277.4	0.0
					Tau tot.	Si
					0.0	277.4

## VERIFICA STABILITA` :

Z L0 = 142. | Ro = 6.96 | lm = 20.4 | Ncr = 2778600.0 | alfa(c) = 0.4900 | ki = 0.9820  
 Y Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr = 2986035.4 | alfa(c) = 0.4900 | ki = 0.9862  
 Caso 2-2 - Nodo 15 - Asse Z  
 Ned = -574.6 | Mzeq = 110748.8 | Myeq = 27.7 | Ss = -378.5 ( 0.145)

U_2_UNP_180 ( 7)	stato limite ultimo - ASTA ( 1434- 1295)	213
		PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-20143.1	50261.2	-27.7	-247.8	-462.0	-479.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-278.4	0.0
					Tau tot.	Si
					0.0	278.4
					PROGR. 9.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-24592.9	54601.5	-27.7	-248.4	-462.0	-483.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-311.1	0.0
					Tau tot.	Si
					0.0	311.1
					PROGR. 19.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-29079.9	58937.3	-27.7	-249.1	-462.0	-487.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-343.9	0.0
					Tau tot.	Si
					0.0	343.9
					PROGR. 28.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-33604.2	63265.9	-27.7	-249.7	-462.0	-491.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-376.8	0.0
					Tau tot.	Si
					0.0	376.8
					PROGR. 37.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-38165.7	67586.1	-27.7	-250.4	-462.0	-495.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-409.7	0.0
					Tau tot.	Si
					0.0	409.7
					PROGR. 46.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-42764.4	71898.2	-27.7	-251.1	-462.0	-499.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-442.8	0.0
					Tau tot.	Si
					0.0	442.8
					PROGR. 56.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-47400.4	76202.8	-27.7	-251.7	-462.0	-503.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-475.9	0.0
					Tau tot.	Si
					0.0	475.9
					PROGR. 65.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-52073.5	80500.8	-27.7	-252.4	-462.0	-507.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-509.2	0.0
					Tau tot.	Si
					0.0	509.2
					PROGR. 74.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY

5-14	-56783.8	84793.3	-27.7	-253.0	-462.0	-511.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	si	-542.5	0.0	0.0
				Tau tot.	Si	
				0.0	542.5	

## VERIFICA STABILITA` :

L0 = 74.  
 Z | Lc = 74. | Ro = 6.96 | lm = 10.6 | Ncr= 10251905.2 | alfa(c )=0.4900 | ki=1.0000  
 Y | Lc = 74. | Ro = 7.21 | lm = 10.3 | Ncr= 11017257.4 | alfa(c )=0.4900 | ki=1.0000  
 Caso 5-14 - Nodo 24 - Asse Z  
 Ned = -253.0 | Mzeq = -49744.4 | Myeq = 84793.3 | Ss = -519.2 ( 0.198)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1301- 1435) 236  
PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	-158529.1	-1217.0	31.5	-17.8	-13.7	2217.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	1	si	-531.9	0.0	0.0
				Tau tot.	Si	
				0.0	531.9	
PROGR. 9.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	-138860.2	-1095.5	31.5	-18.6	-13.7	2212.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	1	si	-466.0	0.0	0.0
				Tau tot.	Si	
				0.0	466.0	
PROGR. 18.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	-119235.7	-974.0	31.5	-19.4	-13.7	2207.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	1	si	-400.4	0.0	0.0
				Tau tot.	Si	
				0.0	400.4	
PROGR. 27.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-12	-76148.1	-21829.5	-26.2	-334.8	126.3	622.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-12	si	1	si	-348.8	0.0	0.0
				Tau tot.	Si	
				0.0	348.8	
PROGR. 36.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	-50006.3	40379.0	45.0	-220.0	-300.8	541.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	24	si	-336.4	0.0	0.0
				Tau tot.	Si	
				0.0	336.4	
PROGR. 44.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	-45220.0	43148.0	45.0	-220.6	-300.8	537.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	24	si	-331.9	0.0	0.0
				Tau tot.	Si	
				0.0	331.9	
PROGR. 53.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	-40468.1	45914.8	45.0	-221.3	-300.8	533.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	24	si	-327.6	0.0	0.0
				Tau tot.	Si	
				0.0	327.6	
PROGR. 62.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	-35750.5	48679.3	45.0	-221.9	-300.8	529.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 3	si	24	si	-323.3	0.0	0.0
				Tau tot.	Si	
				0.0	323.3	
PROGR. 71.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 7	-31131.4	51422.1	44.7	-221.6	-304.7	526.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 7	si	24	si	-319.3	0.0	0.0
				Tau tot.	Si	
				0.0	319.3	

## VERIFICA STABILITA` :

L0 = 71.  
 Z | Lc = 71. | Ro = 6.96 | lm = 10.2 | Ncr= 11114414.1 | alfa(c )=0.4900 | ki=1.0000  
 Y | Lc = 71. | Ro = 7.21 | lm = 9.9 | Ncr= 11944156.6 | alfa(c )=0.4900 | ki=1.0000  
 Caso 5- 7 - Nodo 24 - Asse Z  
 Ned = -221.6 | Mzeq = -65232.9 | Myeq = 51422.1 | Ss = -432.5 ( 0.165)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1435- 1437) 237  
PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 7	-31132.5	51421.5	-4.2	-122.4	151.6	329.6
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
				Tau tot.	Si	

5- 7 si 24 Sx	Si	-317.5	0.0	0.0	0.0	317.5
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	29333.4	-48887.6	13.1	53.8	-156.2	82.7
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si 24 Sx	Si	0.0	0.0	0.0	299.8
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	30736.5	-46179.9	13.1	52.5	-156.2	75.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si 24 Sx	Si	0.0	0.0	0.0	293.3
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	32003.0	-43478.1	13.1	51.3	-156.2	67.3
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si 24 Sx	Si	0.0	0.0	0.0	286.4
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	33132.7	-40782.6	13.1	50.0	-156.2	59.6
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si 24 Sx	Si	0.0	0.0	0.0	279.0
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	91952.0	1308.8	32.0	-213.0	-17.5	1037.1
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 15 Sx	Si	0.0	0.0	0.0	314.6
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	110292.9	1619.6	32.0	-214.6	-17.5	1027.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 15 Sx	Si	0.0	0.0	0.0	376.8
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	128455.7	1930.4	32.0	-216.3	-17.5	1017.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 15 Sx	Si	0.0	0.0	0.0	438.5
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	146440.6	2241.2	32.0	-217.9	-17.5	1007.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 15 Sx	Si	0.0	0.0	0.0	499.5
-----						
-----						
VERIFICA STABILITA` :						
-----						
Z	L0 = 142.	Ro = 6.96	lm = 20.4	Ncr= 2778603.6	alfa(c )=0.4900	ki=0.9820
Y	Lc = 142.	Ro = 7.21	lm = 19.7	Ncr= 2986039.2	alfa(c )=0.4900	ki=0.9862
Caso 2- 2 - Nodo 15 - Asse Z						
Ned = -217.9 Mzeq = 109830.4 Myeq = 1680.9 Ss = -375.7 ( 0.143)						
-----						
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-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	146440.3	2257.8	-68.9	-382.2	-0.3	66.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 15 Sx	Si	0.0	0.0	0.0	502.5
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	147524.5	2263.2	-68.9	-383.9	-0.3	56.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 15 Sx	Si	0.0	0.0	0.0	506.2
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	148430.7	2268.6	-68.9	-385.5	-0.3	46.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 15 Sx	Si	0.0	0.0	0.0	509.2
-----						
PROGR.						
-----						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	149158.9	2274.0	-68.9	-387.2	-0.3	36.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
-----						

2- 2 si 15 Sx	Si	-511.7	0.0	0.0	0.0	511.7
-----						
PROGR.						
71.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	149709.2	2279.4	-68.9	-388.8	-0.3	26.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-513.6	0.0	0.0	0.0	513.6
-----						
PROGR.						
89.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	150081.6	2284.8	-68.9	-390.4	-0.3	15.9
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-514.9	0.0	0.0	0.0	514.9
-----						
PROGR.						
107.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	150276.0	2290.2	-68.9	-392.1	-0.3	5.9
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-515.6	0.0	0.0	0.0	515.6
-----						
PROGR.						
124.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	150292.4	2295.6	-68.9	-393.7	-0.3	-4.1
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-515.7	0.0	0.0	0.0	515.7
-----						
PROGR.						
142.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	150130.9	2300.9	-68.9	-395.4	-0.3	-14.1
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-515.2	0.0	0.0	0.0	515.2
-----						
PROGR.						
VERIFICA STABILITA` :						
L0 = 142.						
Z	Lc = 142.	Ro = 6.96	lm = 20.4	Ncr= 2778603.6	alfa(c )=0.4900	ki=0.9820
Y	Lc = 142.	Ro = 7.21	lm = 19.7	Ncr= 2986039.2	alfa(c )=0.4900	ki=0.9862
Caso 2- 2 - Nodo 15 - Asse Z						
Ned = -395.4 Mzeq = 150292.4 Myeq = 2300.9 Ss = -515.9 ( 0.197)						
-----						
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1439- 1441)						
-----						
PROGR.						
0.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	150131.2	2287.3	15.0	-567.8	15.1	-1003.3
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-518.2	0.0	0.0	0.0	518.2
-----						
PROGR.						
18.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	132197.3	2018.5	15.0	-569.5	15.1	-1013.4
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-457.6	0.0	0.0	0.0	457.6
-----						
PROGR.						
36.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	114085.2	1749.6	15.0	-571.1	15.1	-1023.4
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-396.3	0.0	0.0	0.0	396.3
-----						
PROGR.						
53.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	95794.8	1480.8	15.0	-572.8	15.1	-1033.4
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-334.5	0.0	0.0	0.0	334.5
-----						
PROGR.						
71.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	77326.2	1211.9	15.0	-574.4	15.1	-1043.4
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si 15 Sx	Si	-272.1	0.0	0.0	0.0	272.1
-----						
PROGR.						
89.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	23892.7	-32278.0	13.9	-64.8	318.0	-97.2
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 3 si 10 Sx	Si	-213.5	0.0	0.0	0.0	213.5
-----						
PROGR.						
107.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	22092.7	-37827.2	13.9	-66.1	318.0	-104.9
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 3						

5-3	si	10	Sx	Si	-230.4	0.0	0.0	0.0	230.4
					-----				124.
SOLLECITAZIONI :					-----				PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-3			20156.2		-43403.8	13.9	-67.4	318.0	-112.6
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-3	si	10	Sx	Si	-247.0	0.0	0.0	0.0	247.0
					-----				142.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-18457.7		49083.9	-7.1	-153.0	-312.7	-327.6
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-266.3	0.0	0.0	0.0	266.3

## VERIFICA STABILITA` :

L0 = 142.  
 Z | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr= 2778603.6 | alfa(c )=0.4900 | ki=0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr= 2986039.2 | alfa(c )=0.4900 | ki=0.9862 |  
 Caso 2- 2 - Nodo 15 - Asse Z  
 Ned = -581.1 | Mzeq = 112598.4 | Myeq = 1715.5 | Ss = -391.7 ( 0.150)

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 -----  
 PROGR. 0.

SOLLECITAZIONI :									
Caso			MZ		MY	MT	N	TZ	TY
5-14			-18462.2		49082.2	-31.2	-221.2	-470.2	-471.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-267.5	0.0	0.0	0.0	267.5
					-----				9.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-22835.1		53281.8	-31.2	-221.8	-470.2	-475.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-299.4	0.0	0.0	0.0	299.4
					-----				19.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-27245.2		57503.3	-31.2	-222.5	-470.2	-479.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-331.4	0.0	0.0	0.0	331.4
					-----				28.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-31692.4		61742.3	-31.2	-223.2	-470.2	-483.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-363.7	0.0	0.0	0.0	363.7
					-----				37.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-36176.8		65995.1	-31.2	-223.8	-470.2	-487.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-396.1	0.0	0.0	0.0	396.1
					-----				46.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-40698.2		70259.4	-31.2	-224.5	-470.2	-491.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-428.7	0.0	0.0	0.0	428.7
					-----				56.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-45256.8		74533.1	-31.2	-225.1	-470.2	-495.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-461.5	0.0	0.0	0.0	461.5
					-----				65.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-49852.5		78814.6	-31.2	-225.8	-470.2	-499.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-494.4	0.0	0.0	0.0	494.4
					-----				74.
SOLLECITAZIONI :									PROGR.
Caso			MZ		MY	MT	N	TZ	TY
5-14			-54485.3		83102.8	-31.2	-226.5	-470.2	-503.5
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-527.5	0.0	0.0	0.0	527.5

## VERIFICA STABILITA` :

L0 = 74.  
 Z | Lc = 74. | Ro = 6.96 | lm = 10.6 | Ncr= 10251817.3 | alfa(c )=0.4900 | ki=1.0000 |

Y |Lc = 74. |Ro = 7.21|lm = 10.3|Ncr= 11017163.0|alfa(c )=0.4900|ki=1.0000|  
 Caso 5-14 - Nodo 24 - Asse Z  
 Ned = -226.5|Mzeq = -47158.5|Myeq = 83102.8|Ss = -503.1 ( 0.192)

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 PROGR. 0.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-12	-143143.2	-32532.1	-24.4	-682.3	-96.4	844.0

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	Si	-621.7	0.0	0.0	621.7

 PROGR. 9.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-12	-135661.9	-31757.6	-24.4	-682.9	-96.4	840.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	Si	-593.6	0.0	0.0	593.6

 PROGR. 18.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-12	-128214.9	-30998.2	-24.4	-683.6	-96.4	836.3

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	Si	-565.8	0.0	0.0	565.8

 PROGR. 27.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-12	-120802.5	-30257.4	-24.4	-684.2	-96.4	832.4

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	Si	-538.1	0.0	0.0	538.1

 PROGR. 36.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-11	-113432.0	-29539.7	-24.4	-685.2	-94.4	828.6

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	Si	-510.7	0.0	0.0	510.7

 PROGR. 44.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-11	-106088.7	-28870.9	-24.4	-685.8	-94.4	824.7

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	Si	-483.6	0.0	0.0	483.6

 PROGR. 53.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-11	-98779.9	-28242.7	-24.4	-686.5	-94.4	820.9

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	Si	-456.7	0.0	0.0	456.7

 PROGR. 62.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-11	-91505.8	-27669.1	-24.4	-687.1	-94.4	817.0

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	Si	-430.2	0.0	0.0	430.2

 PROGR. 71.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-11	-84266.3	-27171.5	-24.4	-687.8	-94.4	813.2

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	Si	-404.1	0.0	0.0	404.1

VERIFICA STABILITA` :

L0 = 71. |  
 Z |Lc = 71. |Ro = 6.96|lm = 10.2|Ncr= 11114394.2|alfa(c )=0.4900|ki=1.0000|  
 Y |Lc = 71. |Ro = 7.21|lm = 9.9|Ncr= 11944135.2|alfa(c )=0.4900|ki=1.0000|  
 Caso 6-12 - Nodo 1 - Asse Z  
 Ned = -687.4|Mzeq = -143143.2|Myeq = -32532.1|Ss = -621.8 ( 0.237)

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 PROGR. 0.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-11	-84266.3	-27171.5	-4.2	-224.0	-110.3	535.0

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	Si	-395.8	0.0	0.0	395.8

 PROGR. 18.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 6	78835.3	25331.9	25.1	151.0	97.5	-121.6

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	1	Sx	Si	368.9	0.0	0.0	368.9

 PROGR. 36.

SOLLECITAZIONI :

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Caso	2- 2	MZ	150076.1	MY	4675.6	MT	-38.1	N	-394.9	TZ	-0.9	TY	20.0
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-524.8	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	524.8
		si 15 Sx	Si										107.
SOLLECITAZIONI													
Caso	2- 2	MZ	150343.2	MY	4691.4	MT	-38.1	N	-396.6	TZ	-0.9	TY	10.0
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-525.8	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	525.8
		si 15 Sx	Si										124.
SOLLECITAZIONI													
Caso	2- 2	MZ	150432.3	MY	4707.3	MT	-38.1	N	-398.2	TZ	-0.9	TY	0.0
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-526.1	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	526.1
		si 15 Sx	Si										142.
SOLLECITAZIONI													
Caso	2- 2	MZ	150343.4	MY	4723.1	MT	-38.1	N	-399.9	TZ	-0.9	TY	-10.0
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-525.9	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	525.9
		si 15 Sx	Si										
VERIFICA STABILITA`													
Z		L0 =	142.	Ro =	6.96	lm =	20.4	Ncr=	2778598.5	alfa(c )=	0.4900	ki=	0.9820
Y		Lc =	142.	Ro =	7.21	lm =	19.7	Ncr=	2986033.8	alfa(c )=	0.4900	ki=	0.9862
Caso	2- 2	- Nodo 15 - Asse Z											
Ned =		-399.9	Mzeq =	150432.3	Myeq =	4723.1	ss =	-526.4	( 0.201)				
U_2_UNP_180 ( 7)													
SOLLECITAZIONI													
Caso	2- 2	MZ	150343.4	MY	4723.2	MT	-34.9	N	-570.0	TZ	32.6	TY	-999.6
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-529.0	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	529.0
		si 15 Sx	Si										18.
SOLLECITAZIONI													
Caso	2- 2	MZ	132487.4	MY	4144.5	MT	-34.9	N	-571.6	TZ	32.6	TY	-1009.6
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-467.3	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	467.3
		si 15 Sx	Si										36.
SOLLECITAZIONI													
Caso	2- 2	MZ	114453.4	MY	3565.8	MT	-34.9	N	-573.3	TZ	32.6	TY	-1019.6
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-405.1	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	405.1
		si 15 Sx	Si										53.
SOLLECITAZIONI													
Caso	2- 2	MZ	96241.4	MY	2987.1	MT	-34.9	N	-574.9	TZ	32.6	TY	-1029.6
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-342.2	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	342.2
		si 15 Sx	Si										71.
SOLLECITAZIONI													
Caso	2- 2	MZ	77851.3	MY	2408.5	MT	-34.9	N	-576.6	TZ	32.6	TY	-1039.6
TENSIONI (Sz=			0.00)										
Caso	2- 2	Ve No massimi		Sx	-278.8	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	278.8
		si 15 Sx	Si										89.
SOLLECITAZIONI													
Caso	6-12	MZ	46271.2	MY	17284.5	MT	6.1	N	19.3	TZ	-161.1	TY	99.1
TENSIONI (Sz=			0.00)										
Caso	6-12	Ve No massimi		Sx	225.3	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	225.3
		si 1 Sx	Si										107.
SOLLECITAZIONI													
Caso	6-12	MZ	47956.7	MY	20072.2	MT	6.1	N	18.0	TZ	-161.1	TY	91.4
TENSIONI (Sz=			0.00)										
Caso	6-12	Ve No massimi		Sx	242.3	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	242.3
		si 1 Sx	Si										124.
SOLLECITAZIONI													
Caso	5- 3	MZ	24958.8	MY	-42804.8	MT	-8.7	N	-49.8	TZ	313.2	TY	-78.8
TENSIONI (Sz=			0.00)										
Caso	5- 3	Ve No massimi		Sx	-260.2	Tz	0.0	Ty	0.0	Tau tot.	0.0	Si	260.2
		si 10 Sx	Si										142.
SOLLECITAZIONI													

Caso	MZ	MY	MT	N	TZ	TY
5-14	-23502.6	48380.7	-2.6	-168.7	-301.6	-360.6
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-280.4	0.0
				Ty	0.0	Tau tot.
				0.0		Si
				0.0		280.4

VERIFICA STABILITA` :

Z | L0 = 142. |  
 Y | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr= 2778598.5 | alfa(c )=0.4900 | ki=0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr= 2986033.8 | alfa(c )=0.4900 | ki=0.9862 |  
 Caso 2- 2 - Nodo 15 - Asse Z  
 Ned = -583.2 | Mzeq = 112757.5 | Myeq = 3542.4 | Ss = -399.8 ( 0.153)

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 ----- PROGR. 0.

SOLLECITAZIONI :										PROGR.		9.
Caso	MZ			MY	MT	N	TZ	TY				
5-14	-23496.2			48383.8	-75.7	-240.0	-360.7	-504.2				
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-281.7	0.0	0.0	0.0	281.7			
							-----		PROGR.		9.	

SOLLECITAZIONI :										PROGR.		9.			
Caso				MZ		MY		MT		N		TZ		TY	
6- 5				-57056.1		-29127.8		-30.9		-352.2		400.5		-663.6	
TENSIONI (Sz= 0.00) :															
Caso	Ve	No	massimi			Sx		Tz		Ty		Tau tot.		Si	
6- 5	si	1	Sx		Si	-315.8		0.0		0.0		0.0		315.8	
												-----		PROGR.	19.

SOLLECITAZIONI :										PROGR.		27.					
Caso	MZ			MY			MT		N		TZ		TY				
6- 5	-63211.2			-32690.8			-30.9		-352.9		400.5		-667.6				
TENSIONI (Sz= 0.00) :																	
Caso	Ve	No	massimi			Sx			Tz		Ty		Tau tot.		Si		
6- 5	si	1	Sx	Si			-351.0			0.0		0.0		0.0		351.0	
-----															PROGR.		28.

SOLLECITAZIONI :										PROGR.		37.	
Caso		MZ		MY		MT		N		TZ		TY	
6- 5		-69403.9		-36286.2		-30.9		-353.5		400.5		-671.6	
TENSIONI (Sz= 0.00) :													
Caso		Ve		No		massimi		Sx		Tz		Ty	
6- 5		si		1		Sx		Si		-386.4		0.0	
								Tz		0.0		Ty	
										Tau tot.		0.0	
												Si	
												386.4	
												37.	

SOLLECITAZIONI :										PROGR.		57.		
Caso				MZ		MY		MT		N		TZ		TY
6- 5				-75634.2		-39903.6		-30.9		-354.2		400.5		-675.6
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.			Si
6- 5	si	1	Sx	Si	-422.0		0.0		0.0		0.0			422.0
											-----		PROGR.	46.

SOLLECITAZIONI :														
Caso	MZ		MY		MT		N		TZ		TY			
6- 5	-81902.0		-43536.5		-30.9		-354.8		400.5		-679.6			
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si	
6- 5	si	1	Sx		Si		-457.8		0.0		0.0		457.8	
										0.0		0.0		56.

SOLLECITAZIONI :										PROGR.		50.					
Caso	MZ			MY			MT		N		TZ		TY				
6- 5	-88207.2			-47181.1			-30.9		-355.5		400.5		-683.6				
TENSIONI (Sz= 0.00) :																	
Caso	Ve	No	massimi			Sx			Tz		Ty		Tau tot.		Si		
6- 5	si	1	Sx	Si			-493.7			0.0		0.0		0.0		493.7	
-----															PROGR.		65.

SOLLECITAZIONI :										PROD.		59.	
Caso			MZ		MY		MT		N		TZ		TY
6- 5			-94549.9		-50834.7		-30.9		-356.1		400.5		-687.7
TENSIONI (Sz= 0.00) :													
Caso	ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
6- 5	si	1	Sx	Si	-529.9		0.0		0.0		0.0		529.9
-----										PROGR.			74.

SOLLECITAZIONI :										PRODUTTORE		VALORI	
Caso			MZ		MY		MT		N		TZ		TY
6- 5			-100929.9		-54495.3		-30.9		-356.8		400.5		-691.7
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
6- 5	si	1	Sx	Si	-566.2		0.0		0.0		0.0		566.2

VERIFICA STABILITA` :

Z | L0 = 74. |  
 Y | Lc = 74. | Ro = 6.96 | lm = 10.6 | Ncr= 10251941.9 | alfa(c )=0.4900 | ki=1.0000 |  
 Y | Lc = 74. | Ro = 7.21 | lm = 10.3 | Ncr= 11017296.9 | alfa(c )=0.4900 | ki=1.0000 |  
 Caso 6- 5 - Nodo 1 - Asse Z  
 Ned = -356.8 | Mzeq = -98454.5 | Myeq = -51935.2 | Ss = -547.4 ( 0.209)

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 ----- PROGR. 0.

SOLLECITAZIONI :							PROGR.	U.
Caso	MZ	MY	MT	N	TZ	TY		
6- 9	-267389.1	-15018.3	11.4	-1836.7	-259.5	1251.1		
TENSIONI (Sz= 0.00) :								

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-9	si	1	Sx	-982.8	0.0	0.0	0.0	982.8
PROGR.								9.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-9		-256282.2		-12901.2	11.4	-1837.4	-259.5	1247.2
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-9	si	1	Sx	-937.2	0.0	0.0	0.0	937.2
PROGR.								18.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-11		-227955.1		-27074.6	-20.8	-1766.4	20.3	1188.6
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	-900.2	0.0	0.0	0.0	900.2
PROGR.								27.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-11		-217404.1		-27460.4	-20.8	-1767.0	20.3	1184.8
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	-866.8	0.0	0.0	0.0	866.8
PROGR.								36.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-11		-206887.6		-27870.6	-20.8	-1767.7	20.3	1180.9
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	-833.6	0.0	0.0	0.0	833.6
PROGR.								44.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-11		-196405.8		-28307.8	-20.8	-1768.3	20.3	1177.1
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	-800.6	0.0	0.0	0.0	800.6
PROGR.								53.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-11		-185958.6		-28775.3	-20.8	-1768.9	20.3	1173.2
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	-767.8	0.0	0.0	0.0	767.8
PROGR.								62.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-11		-175546.2		-29277.1	-20.8	-1769.6	20.3	1169.4
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	-735.3	0.0	0.0	0.0	735.3
PROGR.								71.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-11		-165168.5		-29817.9	-20.8	-1770.2	20.3	1165.5
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	-703.1	0.0	0.0	0.0	703.1

## VERIFICA STABILITA` :

L0 = 71. |  
 Z | Lc = 71. | Ro = 6.96 | lm = 10.2 | Ncr= 11114433.4 | alfa(c )=0.4900 | ki=1.0000 |  
 Y | Lc = 71. | Ro = 7.21 | lm = 9.9 | Ncr= 11944177.3 | alfa(c )=0.4900 | ki=1.0000 |  
 Caso 6-11 - Nodo 1 - Asse Z  
 Ned = -1770.2 | Mzeq = -249160.8 | Myeq = -29817.9 | Ss = -982.2 ( 0.375)

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PROGR. 0.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-11		-165168.5		-29817.9	-1.0	-712.4	-123.8	902.7
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-11	si	1	Sx	-684.2	0.0	0.0	0.0	684.2
PROGR.								18.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-6		152968.4		27724.9	0.9	665.8	105.4	-609.0
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-6	si	1	Sx	634.2	0.0	0.0	0.0	634.2
PROGR.								36.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-6		142087.0		26020.0	0.9	664.5	105.4	-616.7
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-6	si	1	Sx	591.0	0.0	0.0	0.0	591.0
PROGR.								53.
SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-6		131069.5		24349.9	0.9	663.2	105.4	-624.4
TENSIONI (Sz= 0.00) :								

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6	si	1	Sx	547.5	0.0	0.0	0.0	547.5
PROGR.								71.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 5	119869.2	22778.4	1.0	661.3	102.9	-631.8
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 5	si	1	Sx	503.8	0.0	0.0	0.0	503.8
PROGR.								89.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 5	108585.9	21264.0	1.0	660.0	102.9	-639.5
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 5	si	1	Sx	460.1	0.0	0.0	0.0	460.1
PROGR.								107.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 5	97167.8	19840.4	1.0	658.8	102.9	-647.2
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 5	si	1	Sx	416.3	0.0	0.0	0.0	416.3
PROGR.								124.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 5	85615.9	18546.3	1.0	657.5	102.9	-654.9
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 5	si	1	Sx	372.5	0.0	0.0	0.0	372.5
PROGR.								142.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 5	73932.1	17436.2	1.0	656.2	102.9	-662.6
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 5	si	1	Sx	329.1	0.0	0.0	0.0	329.1

## VERIFICA STABILITA` :

Z | L0 = 142. |  
 Y | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr= 2778608.4 | alfa(c )=0.4900 | ki=0.9820 |  
 Caso 6-12 - Nodo 1 - Asse Z | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr= 2986044.4 | alfa(c )=0.4900 | ki=0.9862 |  
 Ned = -721.9 | Mzeq = -133204.3 | Myeq = -28626.1 | Ss = -573.7 ( 0.219)

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PROGR. 0.

Caso	MZ	MY	MT	N	TZ	TY
6- 5	73932.1	17436.2	-0.3	-467.5	128.0	-529.5
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 5	si	15	Sx	-325.8	0.0	0.0	0.0	325.8
PROGR.								18.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	80192.2	6475.7	-0.5	-210.7	-0.8	37.1
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-296.8	0.0	0.0	0.0	296.8
PROGR.								36.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	80762.3	6489.8	-0.5	-212.4	-0.8	27.1
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-298.8	0.0	0.0	0.0	298.8
PROGR.								53.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	81154.4	6503.8	-0.5	-214.0	-0.8	17.1
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-300.2	0.0	0.0	0.0	300.2
PROGR.								71.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	81368.4	6517.8	-0.5	-215.7	-0.8	7.0
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-301.0	0.0	0.0	0.0	301.0
PROGR.								89.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	81404.4	6531.9	-0.5	-217.3	-0.8	-3.0
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-301.2	0.0	0.0	0.0	301.2
PROGR.								107.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	81262.4	6545.9	-0.5	-219.0	-0.8	-13.0
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-300.8	0.0	0.0	0.0	300.8
PROGR.								124.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	80942.3	6560.0	-0.5	-220.6	-0.8	-23.0

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-299.8	0.0	0.0	0.0	299.8
PROGR.								142.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	80444.2	6574.0	-0.5	-222.3	-0.8	-33.0

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-298.2	0.0	0.0	0.0	298.2

VERIFICA STABILITA` :

Z | L0 = 142. |  
 Y | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr= 2778608.3 | alfa(c )=0.4900 | ki=0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr= 2986044.3 | alfa(c )=0.4900 | ki=0.9862 |  
 Caso 2- 2 - Nodo 15 - Asse Z  
 Ned = -222.3 | Mzeq = 81404.4 | Myeq = 6574.0 | Ss = -301.5 ( 0.115)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1453- 1455) 268  
PROGR. 0.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	80444.2	6574.0	4.0	-306.5	45.9	-528.0

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-299.7	0.0	0.0	0.0	299.7
PROGR.								18.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	70968.9	5758.9	4.0	-308.2	45.9	-538.1

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	15	Sx	-264.9	0.0	0.0	0.0	264.9
PROGR.								36.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-12	55714.5	10580.0	3.4	784.6	-174.1	387.0

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	242.7	0.0	0.0	0.0	242.7
PROGR.								53.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-12	62520.7	13463.6	3.4	783.4	-174.1	379.3

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	277.1	0.0	0.0	0.0	277.1
PROGR.								71.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-12	69191.2	16430.0	3.4	782.1	-174.1	371.6

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	311.5	0.0	0.0	0.0	311.5
PROGR.								89.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-12	75725.3	19438.9	3.4	780.8	-174.1	363.8

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	345.6	0.0	0.0	0.0	345.6
PROGR.								107.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-12	82122.9	22472.3	3.4	779.5	-174.1	356.1

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	379.3	0.0	0.0	0.0	379.3
PROGR.								124.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-12	88383.9	25521.2	3.4	778.3	-174.1	348.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-12	si	1	Sx	412.6	0.0	0.0	0.0	412.6
PROGR.								142.

SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 5	-95000.2	-28520.6	-2.1	-926.3	191.1	-658.4

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 5	si	1	Sx	-449.6	0.0	0.0	0.0	449.6

VERIFICA STABILITA` :

| L0 = 142. |

Z | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr = 2778608.4 | alfa(c) = 0.4900 | ki = 0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr = 2986044.4 | alfa(c) = 0.4900 | ki = 0.9862 |  
 Caso 6- 5 - Nodo 1 - Asse Z  
 Ned = -926.3 | Mzeq = -71250.2 | Myeq = -21390.5 | Ss = -341.7 ( 0.130 )

U\_2\_UNP\_180 ( 7 ) stato limite ultimo - ASTA ( 1455- 1292 ) 270  
 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -95000.2 | -28520.6 | 29.9 | -1005.6 | 199.3 | -722.9 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -451.0 | 0.0 | 0.0 | 0.0 | 451.0 |  
 9.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -101704.0 | -30197.9 | 29.9 | -1006.2 | 199.3 | -726.9 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -480.2 | 0.0 | 0.0 | 0.0 | 480.2 |  
 19.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -108444.9 | -31893.6 | 29.9 | -1006.9 | 199.3 | -730.9 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -509.6 | 0.0 | 0.0 | 0.0 | 509.6 |  
 28.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -115222.8 | -33604.1 | 29.9 | -1007.5 | 199.3 | -735.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -539.2 | 0.0 | 0.0 | 0.0 | 539.2 |  
 37.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -122037.8 | -35327.2 | 29.9 | -1008.2 | 199.3 | -739.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -568.9 | 0.0 | 0.0 | 0.0 | 568.9 |  
 46.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -128889.9 | -37060.9 | 29.9 | -1008.8 | 199.3 | -743.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -598.8 | 0.0 | 0.0 | 0.0 | 598.8 |  
 56.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -135779.1 | -38803.5 | 29.9 | -1009.5 | 199.3 | -747.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -628.9 | 0.0 | 0.0 | 0.0 | 628.9 |  
 65.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -142705.4 | -40554.0 | 29.9 | -1010.2 | 199.3 | -751.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -659.1 | 0.0 | 0.0 | 0.0 | 659.1 |  
 74.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 5 | -149668.7 | -42311.2 | 29.9 | -1010.8 | 199.3 | -755.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 5 | si | 1 | Sx | Si | -689.5 | 0.0 | 0.0 | 0.0 | 689.5 |

VERIFICA STABILITA` :

Z | L0 = 74. |  
 Y | Lc = 74. | Ro = 6.96 | lm = 10.6 | Ncr = 10251697.1 | alfa(c) = 0.4900 | ki = 1.0000 |  
 Caso 6- 5 - Nodo 1 - Asse Z  
 Ned = -1010.8 | Mzeq = -149668.7 | Myeq = -42311.2 | Ss = -689.6 ( 0.263 )

U\_2\_UNP\_180 ( 7 ) stato limite ultimo - ASTA ( 1507- 1539 ) 421  
 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -40799.3 | 247.0 | 0.0 | 93.8 | 3.2 | 558.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 10 | Sx | Si | 138.2 | 0.0 | 0.0 | 0.0 | 138.2 |  
 10.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -35521.3 | 216.1 | 0.0 | 92.9 | 3.2 | 552.8 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 10 | Sx | Si | 120.5 | 0.0 | 0.0 | 0.0 | 120.5 |  
 19.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	-30294.2	185.2	0.0	92.0	3.2	547.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	103.0	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	-25117.9	154.4	0.0	91.2	3.2	542.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	85.7	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	-19992.6	123.5	0.0	90.3	3.2	536.7
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	68.5	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	-14918.1	92.6	0.0	89.4	3.2	531.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	51.5	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	-9894.5	61.7	0.0	88.5	3.2	526.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	34.7	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	-4921.8	30.9	0.0	87.6	3.2	520.7
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	18.0	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	0.0	0.0	0.0	86.7	3.2	515.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	1	Sx	Si	1.5	0.0

## VERIFICA STABILITA` :

Z | L0 = 76. |  
 Y | Lc = 76. | Ro = 6.96 | lm = 10.9 | Ncr = 9720268.9 | alfa(c) = 0.4900 | ki = 1.0000  
 Y | Lc = 76. | Ro = 7.21 | lm = 10.5 | Ncr = 10445932.0 | alfa(c) = 0.4900 | ki = 1.0000  
 Caso 6-14 - Nodo 24 - Asse Z  
 Ned = -34.2 | Mzeq = -7349.0 | Myeq = 7646.1 | Ss = -56.5 ( 0.022)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1540- 1507) 422  
 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-22743.0	50217.8	-50.3	-301.3	-381.9	-496.6
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-287.9	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-27352.2	53821.0	-50.3	-302.0	-381.9	-500.6
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-318.0	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-31999.0	57391.6	-50.3	-302.6	-381.9	-504.6
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-348.2	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-36683.4	60939.8	-50.3	-303.3	-381.9	-508.6
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-378.4	0.0
PROGR.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	-41405.4	64473.4	-50.3	-304.0	-381.9	-512.6
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	24	Sx	Si	-408.6	0.0
PROGR.						

SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-46164.9	67998.0	-50.3	-304.6	-381.9	-516.6						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-439.0	0.0	0.0	439.0				
								PROGR.	56.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-50961.9	71517.1	-50.3	-305.3	-381.9	-520.6						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-469.4	0.0	0.0	469.4				
								PROGR.	65.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-55796.3	75032.9	-50.3	-305.9	-381.9	-524.6						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-500.0	0.0	0.0	500.0				
								PROGR.	74.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-60668.1	78547.1	-50.3	-306.6	-381.9	-528.7						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-530.7	0.0	0.0	530.7				
VERIFICA STABILITA' :												
Z	L0 = 74.	Ro = 6.96	lm = 10.6	Ncr= 10251941.9	alfa(c )=0.4900	ki=1.0000						
Y	Lc = 74.	Ro = 7.21	lm = 10.3	Ncr= 11017296.9	alfa(c )=0.4900	ki=1.0000						
Caso 5-14 - Nodo 24 - Asse Z												
Ned = -306.6 Mzeq = -53957.1 Myeq = 78547.1 Ss = -508.4 ( 0.194)												
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1541- 1542) 423												
								PROGR.	0.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
2- 2	-157121.5	3116.2	11.1	-28.4	39.3	2184.2						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
2- 2	si	24	Sx	Si	-535.2	0.0	0.0	535.2				
								PROGR.	9.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
2- 2	-137738.8	2766.6	11.1	-29.2	39.3	2179.2						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
2- 2	si	24	Sx	Si	-469.4	0.0	0.0	469.4				
								PROGR.	18.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
2- 2	-118400.6	2417.0	11.1	-30.0	39.3	2174.2						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
2- 2	si	24	Sx	Si	-403.7	0.0	0.0	403.7				
								PROGR.	27.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5- 3	-64409.3	37861.4	36.9	-349.0	-319.2	603.1						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5- 3	si	24	Sx	Si	-376.2	0.0	0.0	376.2				
								PROGR.	36.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5- 3	-59081.6	40728.1	36.9	-349.6	-319.2	599.2						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5- 3	si	24	Sx	Si	-370.3	0.0	0.0	370.3				
								PROGR.	44.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5- 3	-53789.4	43587.8	36.9	-350.3	-319.2	595.4						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5- 3	si	24	Sx	Si	-364.5	0.0	0.0	364.5				
								PROGR.	53.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5- 3	-48532.7	46442.1	36.9	-350.9	-319.2	591.5						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5- 3	si	24	Sx	Si	-358.8	0.0	0.0	358.8				
								PROGR.	62.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5- 3	-43311.9	49292.3	36.9	-351.6	-319.2	587.7						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5- 3	si	24	Sx	Si	-353.3	0.0	0.0	353.3				
								PROGR.	71.			

SOLLECITAZIONI :  
 Caso 5-3 MZ -38127.0 MY 52139.3 MT 36.9 N -352.2 TZ -319.2 TY 583.8  
 TENSIONI (Sz= 0.00) :  
 Caso 5-3 Ve|No|massimi Sx Sx -347.8 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 347.8  
 Caso 5-3 si|24|Sx Si

## VERIFICA STABILITA` :

Z L0 = 71. |  
 Y Lc = 71. | Ro = 6.96 | lm = 10.2 | Ncr= 11114394.1 | alfa(c )=0.4900 | ki=1.0000  
 Y Lc = 71. | Ro = 7.21 | lm = 9.9 | Ncr= 11944135.1 | alfa(c )=0.4900 | ki=1.0000  
 Caso 5-3 - Nodo 24 - Asse Z  
 Ned = -352.2 | Mzeq = -76928.9 | Myeq = 52139.3 | Ss = -476.7 ( 0.182)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1543- 1541) 424  
 0. PROGR.

SOLLECITAZIONI :  
 Caso 2-2 MZ 0.0 MY 0.0 MT 0.0 N -99.3 TZ 13.3 TY -603.7  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -1.8 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 1.8  
 Caso 2-2 si|24|Sx Si PROGR. 10.

SOLLECITAZIONI :  
 Caso 2-2 MZ -5761.7 MY -126.1 MT 0.0 N -100.2 TZ 13.3 TY -609.1  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -21.4 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 21.4  
 Caso 2-2 si|1|Sx Si PROGR. 19.

SOLLECITAZIONI :  
 Caso 2-2 MZ -11574.3 MY -252.2 MT 0.0 N -101.1 TZ 13.3 TY -614.4  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -41.3 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 41.3  
 Caso 2-2 si|1|Sx Si PROGR. 29.

SOLLECITAZIONI :  
 Caso 2-2 MZ -17437.7 MY -378.4 MT 0.0 N -102.0 TZ 13.3 TY -619.8  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -61.3 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 61.3  
 Caso 2-2 si|1|Sx Si PROGR. 38.

SOLLECITAZIONI :  
 Caso 2-2 MZ -23352.0 MY -504.5 MT 0.0 N -102.8 TZ 13.3 TY -625.1  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -81.5 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 81.5  
 Caso 2-2 si|1|Sx Si PROGR. 48.

SOLLECITAZIONI :  
 Caso 2-2 MZ -29317.2 MY -630.6 MT 0.0 N -103.7 TZ 13.3 TY -630.5  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -101.8 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 101.8  
 Caso 2-2 si|1|Sx Si PROGR. 57.

SOLLECITAZIONI :  
 Caso 2-2 MZ -35333.3 MY -756.7 MT 0.0 N -104.6 TZ 13.3 TY -635.8  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -122.3 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 122.3  
 Caso 2-2 si|1|Sx Si PROGR. 67.

SOLLECITAZIONI :  
 Caso 2-2 MZ -41400.3 MY -882.8 MT 0.0 N -105.5 TZ 13.3 TY -641.2  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -143.0 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 143.0  
 Caso 2-2 si|1|Sx Si PROGR. 76.

SOLLECITAZIONI :  
 Caso 2-2 MZ -47518.1 MY -1009.0 MT 0.0 N -106.4 TZ 13.3 TY -646.5  
 TENSIONI (Sz= 0.00) :  
 Caso 2-2 Ve|No|massimi Sx Sx -163.9 Tz 0.0 Ty 0.0 Tau tot. 0.0 Si 163.9  
 Caso 2-2 si|1|Sx Si

## VERIFICA STABILITA` :

Z L0 = 76. |  
 Y Lc = 76. | Ro = 6.96 | lm = 10.9 | Ncr= 9720268.8 | alfa(c )=0.4900 | ki=1.0000  
 Y Lc = 76. | Ro = 7.21 | lm = 10.5 | Ncr= 10445931.9 | alfa(c )=0.4900 | ki=1.0000  
 Caso 2-2 - Nodo 1 - Asse Z  
 Ned = -106.4 | Mzeq = -35638.6 | Myeq = -756.7 | Ss = -123.4 ( 0.047)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1544- 1545) 425  
 0. PROGR.

SOLLECITAZIONI :  
 Caso 2-2 MZ 0.0 MY 0.0 MT 0.0 N -51.6 TZ -1.5 TY -311.4

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-0.9	0.0	0.0	0.0	0.9
									10.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-2984.3		14.2	0.0	-52.4	-1.5	-316.7	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-10.9	0.0	0.0	0.0	10.9
									19.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-6019.5		28.3	0.0	-53.3	-1.5	-322.1	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-21.1	0.0	0.0	0.0	21.1
									29.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-9105.5		42.5	0.0	-54.2	-1.5	-327.5	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-31.4	0.0	0.0	0.0	31.4
									38.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-12242.5		56.6	0.0	-55.1	-1.5	-332.8	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-41.9	0.0	0.0	0.0	41.9
									48.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-15430.3		70.8	0.0	-56.0	-1.5	-338.2	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-52.5	0.0	0.0	0.0	52.5
									57.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-18669.0		84.9	0.0	-56.9	-1.5	-343.5	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-63.4	0.0	0.0	0.0	63.4
									67.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-21958.6		99.1	0.0	-57.8	-1.5	-348.9	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-74.4	0.0	0.0	0.0	74.4
									76.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-25299.1		113.2	0.0	-58.6	-1.5	-354.2	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-85.5	0.0	0.0	0.0	85.5
VERIFICA STABILITA` :									
Z	L0 =	76.	Ro =	6.96	lm =	10.9	Ncr=	9720268.9	alfa(c)=0.4900
Y	Lc =	76.	Ro =	7.21	lm =	10.5	Ncr=	10445931.9	alfa(c)=0.4900
Caso 2- 2 - Nodo 24 - Asse Z									
Ned = -58.6   Mzeq = -18974.3   Myeq = 84.9   Ss = -64.4 ( 0.025)									
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1545- 1546) 426									
									0.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		-82613.4		3185.4	0.7	-19.7	37.3	1182.6	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	24	Sx	Si	-287.9	0.0	0.0	0.0	287.9
									9.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5- 8		-47019.8		23991.6	72.5	-255.4	-398.6	396.0	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5- 8	si	24	Sx	Si	-259.6	0.0	0.0	0.0	259.6
									18.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5- 8		-43554.1		27466.8	72.5	-256.1	-398.6	392.1	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
5- 8	si	24	Sx	Si	-262.4	0.0	0.0	0.0	262.4
									27.
SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5- 8		-40125.8		30957.9	72.5	-256.7	-398.6	388.3	

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 8	si	24	Sx	-265.4	0.0	0.0	0.0	265.4	
									36.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 8		-36735.3	34459.8	72.5	-257.3	-398.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 8	si	24	Sx	-268.6	0.0	0.0	0.0	268.6	
									44.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 8		-33383.2	37969.3	72.5	-258.0	-398.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 8	si	24	Sx	-271.9	0.0	0.0	0.0	271.9	
									53.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 8		-30070.1	41484.5	72.5	-258.6	-398.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 8	si	24	Sx	-275.4	0.0	0.0	0.0	275.4	
									62.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 8		-26796.9	45003.9	72.5	-259.2	-398.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 8	si	24	Sx	-279.1	0.0	0.0	0.0	279.1	
									71.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 8		-23564.3	48526.6	72.5	-259.9	-398.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 8	si	24	Sx	-282.9	0.0	0.0	0.0	282.9	
VERIFICA STABILITA` :									
Z	L0 =	71.	Ro =	6.96	lm =	10.2	Ncr=	11114433.4	alfa(c )=0.4900
Y	Lc =	71.	Ro =	7.21	lm =	9.9	Ncr=	11944177.3	alfa(c )=0.4900
Caso 5- 8 - Nodo 24 - Asse Z									
Ned = -259.9 Mzeq = -47889.2 Myeq = 44827.3 Ss = -348.4 ( 0.133)									
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1547- 1505) 427									
									0.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-10		-12707.5	50643.6	-76.3	-315.3	-133.9			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-10	si	24	Sx	-256.5	0.0	0.0	0.0	256.5	
									9.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-10		-15453.8	51794.0	-76.3	-315.9	-133.9			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-10	si	24	Sx	-270.4	0.0	0.0	0.0	270.4	
									19.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 9		-18376.9	52789.3	-76.0	-326.7	-139.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 9	si	24	Sx	-284.4	0.0	0.0	0.0	284.4	
									28.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 9		-21213.4	53973.7	-76.0	-327.4	-139.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 9	si	24	Sx	-298.7	0.0	0.0	0.0	298.7	
									37.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 9		-24087.2	55153.3	-76.0	-328.0	-139.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 9	si	24	Sx	-313.1	0.0	0.0	0.0	313.1	
									46.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 9		-26998.3	56330.3	-76.0	-328.7	-139.6			
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 9	si	24	Sx	-327.7	0.0	0.0	0.0	327.7	
									56.
SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 9		-29946.7	57506.4	-76.0	-329.3	-139.6			

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 9 | si | 24 | Sx | Si | -342.3 | 0.0 | 0.0 | 0.0 | 342.3 |  
 ----- PROGR. 65.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 9 | -32932.3 | 58682.9 | -76.0 | -330.0 | -139.6 | -325.3 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 9 | si | 24 | Sx | Si | -357.1 | 0.0 | 0.0 | 0.0 | 357.1 |  
 ----- PROGR. 74.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 9 | -35955.1 | 59860.7 | -76.0 | -330.7 | -139.6 | -329.3 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 9 | si | 24 | Sx | Si | -372.0 | 0.0 | 0.0 | 0.0 | 372.0 |

#### VERIFICA STABILITA` :

Z | L0 = 74. |  
 Lc = 74. | Ro = 6.96 | lm = 10.6 | Ncr= 10251697.0 | alfa(c )=0.4900 | ki=1.0000 |  
 Y | Lc = 74. | Ro = 7.21 | lm = 10.3 | Ncr= 11017033.7 | alfa(c )=0.4900 | ki=1.0000 |  
 Caso 5- 9 - Nodo 24 - Asse Z  
 Ned = -330.7 | Mzeq = -31442.7 | Myeq = 59860.7 | Ss = -357.0 ( 0.136 )

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1505- 1548) 428  
 ----- PROGR. 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-16 | -4980.1 | 20037.7 | 0.0 | 32.4 | 263.3 | 81.9 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-16 | si | 10 | Sx | Si | 99.7 | 0.0 | 0.0 | 0.0 | 99.7 |  
 ----- PROGR. 10.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-16 | -4220.3 | 17533.0 | 0.0 | 31.7 | 263.3 | 77.8 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-16 | si | 10 | Sx | Si | 86.8 | 0.0 | 0.0 | 0.0 | 86.8 |  
 ----- PROGR. 19.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-16 | -3499.7 | 15028.3 | 0.0 | 31.0 | 263.3 | 73.7 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-16 | si | 10 | Sx | Si | 74.1 | 0.0 | 0.0 | 0.0 | 74.1 |  
 ----- PROGR. 29.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-16 | -2818.4 | 12523.6 | 0.0 | 30.3 | 263.3 | 69.6 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-16 | si | 10 | Sx | Si | 61.5 | 0.0 | 0.0 | 0.0 | 61.5 |  
 ----- PROGR. 38.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-16 | -2176.2 | 10018.8 | 0.0 | 29.6 | 263.3 | 65.4 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-16 | si | 10 | Sx | Si | 49.0 | 0.0 | 0.0 | 0.0 | 49.0 |  
 ----- PROGR. 48.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-16 | -1573.3 | 7514.1 | 0.0 | 28.9 | 263.3 | 61.3 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-16 | si | 10 | Sx | Si | 36.7 | 0.0 | 0.0 | 0.0 | 36.7 |  
 ----- PROGR. 57.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-16 | -1009.7 | 5009.4 | 0.0 | 28.3 | 263.3 | 57.2 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-16 | si | 10 | Sx | Si | 24.5 | 0.0 | 0.0 | 0.0 | 24.5 |  
 ----- PROGR. 67.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-16 | -485.2 | 2504.7 | 0.0 | 27.6 | 263.3 | 53.1 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-16 | si | 10 | Sx | Si | 12.4 | 0.0 | 0.0 | 0.0 | 12.4 |  
 ----- PROGR. 76.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 7 | 0.0 | 0.0 | 0.0 | 44.3 | -8.6 | 46.1 |

TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 7 | si | 10 | Sx | Si | 0.8 | 0.0 | 0.0 | 0.0 | 0.8 |

#### VERIFICA STABILITA` :

Z | L0 = 76. |  
 Y | Lc = 76. | Ro = 6.96 | lm = 10.9 | Ncr = 9720269.0 | alfa(c) = 0.4900 | ki = 1.0000 |  
 Y | Lc = 76. | Ro = 7.21 | lm = 10.5 | Ncr = 10445932.1 | alfa(c) = 0.4900 | ki = 1.0000 |  
 Caso 5- 1 - Nodo 1 - Asse Z  
 Ned = -9.5 | Mzeq = -4078.1 | Myeq = -14732.0 | Ss = -74.4 ( 0.028)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1509- 1549) 429  
PROGR. 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -40840.2 | -401.4 | 0.0 | 93.6 | -5.3 | 558.2 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 139.0 | 0.0 | 0.0 | 139.0 |  
 PROGR. 10.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -35556.8 | -351.2 | 0.0 | 92.7 | -5.3 | 552.8 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 121.2 | 0.0 | 0.0 | 121.2 |  
 PROGR. 19.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -30324.3 | -301.1 | 0.0 | 91.9 | -5.3 | 547.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 103.6 | 0.0 | 0.0 | 103.6 |  
 PROGR. 29.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -25142.8 | -250.9 | 0.0 | 91.0 | -5.3 | 542.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 86.2 | 0.0 | 0.0 | 86.2 |  
 PROGR. 38.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -20012.3 | -200.7 | 0.0 | 90.1 | -5.3 | 536.8 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 68.9 | 0.0 | 0.0 | 68.9 |  
 PROGR. 48.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -14932.8 | -150.5 | 0.0 | 89.2 | -5.3 | 531.4 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 51.8 | 0.0 | 0.0 | 51.8 |  
 PROGR. 57.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -9904.2 | -100.4 | 0.0 | 88.3 | -5.3 | 526.0 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 34.9 | 0.0 | 0.0 | 34.9 |  
 PROGR. 67.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | -4926.6 | -50.2 | 0.0 | 87.4 | -5.3 | 520.7 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 15 | Sx | Si | 18.1 | 0.0 | 0.0 | 18.1 |  
 PROGR. 76.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 6- 7 | 0.0 | 0.0 | 0.0 | 88.6 | -145.9 | 92.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 6- 7 | si | 15 | Sx | Si | 1.6 | 0.0 | 0.0 | 1.6 |

#### VERIFICA STABILITA` :

Z | L0 = 76. |  
 Y | Lc = 76. | Ro = 6.96 | lm = 10.9 | Ncr = 9720268.7 | alfa(c) = 0.4900 | ki = 1.0000 |  
 Y | Lc = 76. | Ro = 7.21 | lm = 10.5 | Ncr = 10445931.8 | alfa(c) = 0.4900 | ki = 1.0000 |  
 Caso 6- 9 - Nodo 24 - Asse Z  
 Ned = -53.5 | Mzeq = -7538.0 | Myeq = 8417.7 | Ss = -60.7 ( 0.023)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1550- 1509) 430  
PROGR. 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-14 | -22192.8 | 50367.3 | -49.4 | -253.3 | -453.7 | -492.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-14 | si | 24 | Sx | Si | -285.8 | 0.0 | 0.0 | 285.8 |  
 PROGR. 9.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-14 | -26762.4 | 54641.4 | -49.4 | -253.9 | -453.7 | -496.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-14 | si | 24 | Sx | Si | -318.6 | 0.0 | 0.0 | 318.6 |

-----												
SOLLECITAZIONI :									PROGR. 19.			
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-31369.5	58896.9	-49.4	-254.6	-453.7	-500.5						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-351.4	0.0	0.0	351.4				
-----									PROGR. 28.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-36013.9	63135.2	-49.4	-255.2	-453.7	-504.5						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-384.3	0.0	0.0	384.3				
-----									PROGR. 37.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-40695.7	67359.2	-49.4	-255.9	-453.7	-508.5						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-417.3	0.0	0.0	417.3				
-----									PROGR. 46.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-45414.8	71572.1	-49.4	-256.6	-453.7	-512.5						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-450.4	0.0	0.0	450.4				
-----									PROGR. 56.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-50171.2	75776.6	-49.4	-257.2	-453.7	-516.6						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-483.5	0.0	0.0	483.5				
-----									PROGR. 65.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-54964.9	79975.0	-49.4	-257.9	-453.7	-520.6						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-516.7	0.0	0.0	516.7				
-----									PROGR. 74.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5-14	-59795.8	84169.0	-49.4	-258.5	-453.7	-524.6						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5-14	si	24	Sx	Si	-550.1	0.0	0.0	550.1				
-----												
VERIFICA STABILITA` :												
Z	L0 = 74.	Ro = 6.96	lm = 10.6	Ncr= 10251817.5	alfa(c )=0.4900	ki=1.0000						
Y	Lc = 74.	Ro = 7.21	lm = 10.3	Ncr= 11017163.2	alfa(c )=0.4900	ki=1.0000						
Caso 5-14 - Nodo 24 - Asse Z												
Ned = -258.5   Mzeq = -53033.8   Myeq = 84169.0   Ss = -527.6 ( 0.201)												
-----												
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1551- 1552)									431			
-----									PROGR. 0.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
2- 2	-155711.9	1120.2	-0.3	-21.0	13.4	2179.7						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
2- 2	si	24	Sx	Si	-522.2	0.0	0.0	522.2				
-----									PROGR. 9.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
2- 2	-136376.6	1001.2	-0.3	-21.8	13.4	2174.7						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
2- 2	si	24	Sx	Si	-457.5	0.0	0.0	457.5				
-----									PROGR. 18.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
2- 2	-117085.8	882.1	-0.3	-22.6	13.4	2169.7						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
2- 2	si	24	Sx	Si	-392.9	0.0	0.0	392.9				
-----									PROGR. 27.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5- 3	-62343.4	40165.8	40.9	-299.1	-286.2	581.9						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5- 3	si	24	Sx	Si	-377.9	0.0	0.0	377.9				
-----									PROGR. 36.			
SOLLECITAZIONI :												
Caso	MZ	MY	MT	N	TZ	TY						
5- 3	-57198.7	42723.5	40.9	-299.8	-286.2	578.1						
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si				
5- 3	si	24	Sx	Si	-371.4	0.0	0.0	371.4				

-----										PROGR.	44.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
5- 3	-52088.7	45276.7	40.9	-300.4	-286.2	574.2					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
5- 3	si	24	Sx	Si	-364.9	0.0	0.0	364.9			
-----										PROGR.	53.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
5- 3	-47013.5	47826.8	40.9	-301.0	-286.2	570.4					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
5- 3	si	24	Sx	Si	-358.6	0.0	0.0	358.6			
-----										PROGR.	62.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
5- 3	-41973.1	50374.9	40.9	-301.7	-286.2	566.5					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
5- 3	si	24	Sx	Si	-352.4	0.0	0.0	352.4			
-----										PROGR.	71.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
5- 3	-36967.8	52921.4	40.9	-302.3	-286.2	562.7					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
5- 3	si	24	Sx	Si	-346.3	0.0	0.0	346.3			
-----											
VERIFICA STABILITA` :											
Z	L0 = 71.										
Y	Lc = 71.	Ro = 6.96	lm = 10.2	Ncr= 11114414.3	alfa(c )=0.4900	ki=1.0000					
	Lc = 71.	Ro = 7.21	lm = 9.9	Ncr= 11944156.8	alfa(c )=0.4900	ki=1.0000					
Caso 5- 3 - Nodo 24 - Asse Z											
Ned = -302.3   Mzeq = -74478.7   Myeq = 52921.4   Ss = -470.9 ( 0.180)											
-----											
U_2_UNP_180 ( 7) stato limite ultimo - ASTA ( 1553- 1551)										432	
-----										PROGR.	0.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	0.0	0.0	0.0	-98.4	3.2	-603.9					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	1	Sx	Si	-1.8	0.0	0.0	1.8			
-----										PROGR.	10.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-5769.1	-30.1	0.0	-99.3	3.2	-609.3					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	1	Sx	Si	-21.1	0.0	0.0	21.1			
-----										PROGR.	19.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-11589.2	-60.2	0.0	-100.2	3.2	-614.6					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	1	Sx	Si	-40.5	0.0	0.0	40.5			
-----										PROGR.	29.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-17460.3	-90.3	0.0	-101.1	3.2	-620.0					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	1	Sx	Si	-60.2	0.0	0.0	60.2			
-----										PROGR.	38.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-23382.3	-120.4	0.0	-101.9	3.2	-625.3					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	1	Sx	Si	-80.0	0.0	0.0	80.0			
-----										PROGR.	48.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-29355.3	-150.5	0.0	-102.8	3.2	-630.7					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	1	Sx	Si	-100.0	0.0	0.0	100.0			
-----										PROGR.	57.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-35379.3	-180.6	0.0	-103.7	3.2	-636.1					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	1	Sx	Si	-120.1	0.0	0.0	120.1			
-----										PROGR.	67.
SOLLECITAZIONI :											
Caso	MZ	MY	MT	N	TZ	TY					
2- 2	-41454.3	-210.8	0.0	-104.6	3.2	-641.4					
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	1	Sx	Si	-140.4	0.0	0.0	140.4			

```

-----
SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
2- 2 -47580.2 -240.9 0.0 -105.5 3.2 -646.8
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
2- 2 |si| 1|Sx Si -160.9 0.0 0.0 0.0 160.9
-----

```

VERIFICA STABILITA` :

```

L0 = 76.
Z |Lc = 76. |Ro = 6.96|lm = 10.9|Ncr= 9720268.7|alfa(c )=0.4900|ki=1.0000|
Y |Lc = 76. |Ro = 7.21|lm = 10.5|Ncr= 10445931.8|alfa(c )=0.4900|ki=1.0000|
Caso 2- 2 - Nodo 1 - Asse Z
Ned = -105.5|Mzeq = -35685.2|Myeq = -180.6|Ss = -121.2 ( 0.046)

```

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1546- 1559) 437  
-----  
PROGR. 0.

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
5- 8 -23561.4 48527.8 29.5 -119.7 119.3 255.5
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
5- 8 |si|24|Sx Si -280.4 0.0 0.0 0.0 280.4
-----
PROGR. 18.

```

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
5-10 22520.5 -46777.2 -29.8 77.0 -100.6 41.1
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
5-10 |si|24|Sx Si 268.9 0.0 0.0 0.0 268.9
-----
PROGR. 36.

```

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
5-10 23224.8 -45106.5 -29.8 75.7 -100.6 33.4
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
5-10 |si|24|Sx Si 264.4 0.0 0.0 0.0 264.4
-----
PROGR. 53.

```

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
5-10 23801.6 -43446.9 -29.8 74.4 -100.6 25.7
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
5-10 |si|24|Sx Si 259.4 0.0 0.0 0.0 259.4
-----
PROGR. 71.

```

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
5-10 24254.4 -41799.9 -29.8 73.2 -100.6 18.0
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
5-10 |si|24|Sx Si 254.1 0.0 0.0 0.0 254.1
-----
PROGR. 89.

```

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
5-10 24588.5 -40167.5 -29.8 71.9 -100.6 10.3
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
5-10 |si|24|Sx Si 248.5 0.0 0.0 0.0 248.5
-----
PROGR. 107.

```

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
5-10 24812.3 -38551.9 -29.8 70.6 -100.6 2.6
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
5-10 |si|24|Sx Si 242.5 0.0 0.0 0.0 242.5
-----
PROGR. 124.

```

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
2- 2 70031.8 -5572.1 0.3 -127.8 49.1 527.8
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
2- 2 |si|10|Sx Si -257.8 0.0 0.0 0.0 257.8
-----
PROGR. 142.

```

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY
2- 2 79322.5 -6444.2 0.3 -129.5 49.1 517.8
TENSIONI (Sz= 0.00) :
Caso Ve|No|massimi : Sx Tz Ty Tau tot. Si
2- 2 |si|10|Sx Si -292.3 0.0 0.0 0.0 292.3
-----

```

VERIFICA STABILITA` :

```

L0 = 142.
Z |Lc = 142. |Ro = 6.96|lm = 20.4|Ncr= 2778608.4|alfa(c )=0.4900|ki=0.9820|
Y |Lc = 142. |Ro = 7.21|lm = 19.7|Ncr= 2986044.4|alfa(c )=0.4900|ki=0.9862|
Caso 5- 7 - Nodo 24 - Asse Z
Ned = -134.4|Mzeq = -17461.4|Myeq = 48712.9|Ss = -261.2 ( 0.100)

```

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1559- 1560) 438  
-----  
PROGR. 0.

```

SOLLECITAZIONI :
Caso MZ MY MT N TZ TY

```

2-2	79322.5	-6444.2	0.3	-209.4	0.4	47.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-293.8	0.0
						Tau tot.
						0.0
						PROGR.
						18.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	80073.6	-6451.4	0.3	-211.0	0.4	37.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-296.3	0.0
						Tau tot.
						0.0
						PROGR.
						36.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	80646.7	-6458.6	0.3	-212.7	0.4	27.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-298.3	0.0
						Tau tot.
						0.0
						PROGR.
						53.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	81041.8	-6465.8	0.3	-214.3	0.4	17.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-299.6	0.0
						Tau tot.
						0.0
						PROGR.
						71.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	81258.8	-6473.0	0.3	-216.0	0.4	7.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-300.4	0.0
						Tau tot.
						0.0
						PROGR.
						89.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	81297.9	-6480.2	0.3	-217.6	0.4	-2.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-300.6	0.0
						Tau tot.
						0.0
						PROGR.
						107.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	81158.9	-6487.5	0.3	-219.3	0.4	-12.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-300.2	0.0
						Tau tot.
						0.0
						PROGR.
						124.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	80841.9	-6494.7	0.3	-220.9	0.4	-22.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-299.2	0.0
						Tau tot.
						0.0
						PROGR.
						142.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	80347.0	-6501.9	0.3	-222.6	0.4	-32.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-297.6	0.0
						Tau tot.
						0.0
						PROGR.
						297.6

VERIFICA STABILITA` :

$L_0 = 142.$   
 $Z \quad L_c = 142. \quad R_o = 6.96 \quad l_m = 20.4 \quad N_{cr} = 2778608.3 \quad \alpha(c) = 0.4900 \quad k_i = 0.9820$   
 $Y \quad L_c = 142. \quad R_o = 7.21 \quad l_m = 19.7 \quad N_{cr} = 2986044.3 \quad \alpha(c) = 0.4900 \quad k_i = 0.9862$   
 Caso 2-2 - Nodo 10 - Asse Z  
 $N_{ed} = -222.6 \quad M_{zeq} = 81297.9 \quad M_{yeq} = -6501.9 \quad S_s = -300.9 \quad (0.115)$

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1560- 1547) 439  
 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	80347.0	-6501.9	-4.3	-306.8	-46.1	-527.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-299.1	0.0
						Tau tot.
						0.0
						PROGR.
						18.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	70883.2	-5682.0	-4.3	-308.4	-46.1	-537.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-264.4	0.0
						Tau tot.
						0.0
						PROGR.
						36.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	61241.4	-4862.1	-4.3	-310.1	-46.1	-547.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-229.0	0.0
						Tau tot.
						0.0
						PROGR.
						53.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY

2- 2	51421.6	-4042.3	-4.3	-311.7	-46.1	-557.5
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 10 Sx Si	-193.0	0.0	0.0	0.0	193.0
						PROGR. 71.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 7	17705.5	-29089.8	24.3	124.9	304.5	-59.9
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 7	si 24 Sx Si	180.9	0.0	0.0	0.0	180.9
						PROGR. 89.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 7	16533.0	-34443.2	24.3	123.7	304.5	-67.6
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 7	si 24 Sx Si	199.1	0.0	0.0	0.0	199.1
						PROGR. 107.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 7	15232.1	-39811.7	24.3	122.4	304.5	-75.4
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 7	si 24 Sx Si	216.8	0.0	0.0	0.0	216.8
						PROGR. 124.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 7	13800.4	-45188.6	24.3	121.1	304.5	-83.1
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 7	si 24 Sx Si	234.2	0.0	0.0	0.0	234.2
						PROGR. 142.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-10	-12712.3	50642.5	-25.9	-269.8	-322.0	-226.5
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-10	si 24 Sx Si	-255.7	0.0	0.0	0.0	255.7

VERIFICA STABILITA` :

L0 = 142. |  
 Z | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr = 2778608.4 | alfa(c) = 0.4900 | ki = 0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr = 2986044.4 | alfa(c) = 0.4900 | ki = 0.9862 |  
 Caso 2- 2 - Nodo 10 - Asse Z  
 Ned = -320.0 | Mzeq = 60260.2 | Myeq = -4876.4 | Ss = -226.1 ( 0.086)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1542- 1561) 440  
PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 3	-38127.0	52139.3	-4.7	59.3	160.2	356.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 3	si 10 Sx Si	342.5	0.0	0.0	0.0	342.5
						PROGR. 18.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	35635.9	-49457.4	7.6	-134.9	-147.9	53.7
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si 10 Sx Si	-324.6	0.0	0.0	0.0	324.6
						PROGR. 36.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	36524.0	-46938.4	7.6	-136.1	-147.9	46.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si 10 Sx Si	-317.2	0.0	0.0	0.0	317.2
						PROGR. 53.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	37275.7	-44432.9	7.6	-137.4	-147.9	38.3
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si 10 Sx Si	-309.4	0.0	0.0	0.0	309.4
						PROGR. 71.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	37891.0	-41943.4	7.6	-138.7	-147.9	30.6
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si 10 Sx Si	-301.2	0.0	0.0	0.0	301.2
						PROGR. 89.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	89765.6	-2767.2	10.9	-220.3	34.7	1022.7
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si 10 Sx Si	-313.5	0.0	0.0	0.0	313.5
						PROGR. 107.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY

2-2	107846.2	-3384.5	10.9	-221.9	34.7	1012.7
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-376.1	0.0
				Ty	0.0	Tau tot.
						Si
						376.1
						124.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	125748.8	-4001.9	10.9	-223.6	34.7	1002.7
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-438.1	0.0
				Ty	0.0	Tau tot.
						Si
						438.1
						142.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	143473.6	-4619.2	10.9	-225.2	34.7	992.7
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-499.6	0.0
				Ty	0.0	Tau tot.
						Si
						499.6

VERIFICA STABILITA` :

L0 = 142. |  
 Z | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr = 2778598.6 | alfa(c) = 0.4900 | ki = 0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr = 2986033.8 | alfa(c) = 0.4900 | ki = 0.9862 |  
 Caso 2-2 - Nodo 10 - Asse Z  
 Ned = -225.2 | Mzeq = 107605.2 | Myeq = -3464.4 | Ss = -375.8 ( 0.143)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1561- 1562) 441  
 ----- PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	143473.9	-4611.3	-36.8	-383.9	0.2	70.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-502.4	0.0
				Ty	0.0	Tau tot.
						Si
						502.4
						18.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	144628.7	-4615.4	-36.8	-385.5	0.2	60.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-506.3	0.0
				Ty	0.0	Tau tot.
						Si
						506.3
						36.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	145605.4	-4619.5	-36.8	-387.2	0.2	49.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-509.6	0.0
				Ty	0.0	Tau tot.
						Si
						509.6
						53.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	146403.9	-4623.7	-36.8	-388.8	0.2	39.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-512.3	0.0
				Ty	0.0	Tau tot.
						Si
						512.3
						71.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	147024.4	-4627.8	-36.8	-390.5	0.2	29.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-514.4	0.0
				Ty	0.0	Tau tot.
						Si
						514.4
						89.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	147466.8	-4631.9	-36.8	-392.1	0.2	19.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-515.9	0.0
				Ty	0.0	Tau tot.
						Si
						515.9
						107.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	147731.0	-4636.0	-36.8	-393.8	0.2	9.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-516.8	0.0
				Ty	0.0	Tau tot.
						Si
						516.8
						124.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	147817.1	-4640.2	-36.8	-395.4	0.2	-0.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-517.1	0.0
				Ty	0.0	Tau tot.
						Si
						517.1
						142.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	147725.2	-4644.3	-36.8	-397.1	0.2	-10.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	10	Sx	Si	-516.9	0.0
				Ty	0.0	Tau tot.
						Si
						516.9

VERIFICA STABILITA` :

Z | L0 = 142. |  
 Y | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr = 2778598.5 | alfa(c) = 0.4900 | ki = 0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr = 2986033.8 | alfa(c) = 0.4900 | ki = 0.9862 |  
 Caso 2- 2 - Nodo 10 - Asse Z  
 Ned = -397.1 | Mzeq = 147817.1 | Myeq = -4644.3 | Ss = -517.4 ( 0.198)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1562- 1540) 442  
 ----- PROGR. 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | 147724.9 | -4652.5 | 9.1 | -564.1 | -32.7 | -981.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 10 | Sx | Si | -519.9 | 0.0 | 0.0 | 519.9 |  
 ----- PROGR. 18.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | 130204.2 | -4071.1 | 9.1 | -565.8 | -32.7 | -991.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 10 | Sx | Si | -459.3 | 0.0 | 0.0 | 459.3 |  
 ----- PROGR. 36.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | 112505.7 | -3489.8 | 9.1 | -567.4 | -32.7 | -1001.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 10 | Sx | Si | -398.2 | 0.0 | 0.0 | 398.2 |  
 ----- PROGR. 53.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | 94629.2 | -2908.4 | 9.1 | -569.1 | -32.7 | -1011.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 10 | Sx | Si | -336.4 | 0.0 | 0.0 | 336.4 |  
 ----- PROGR. 71.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 2- 2 | 76574.8 | -2327.1 | 9.1 | -570.7 | -32.7 | -1021.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 2- 2 | si | 10 | Sx | Si | -274.1 | 0.0 | 0.0 | 274.1 |  
 ----- PROGR. 89.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | 26913.8 | -33643.2 | -0.8 | 41.1 | 312.2 | -69.8 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | 228.8 | 0.0 | 0.0 | 228.8 |  
 ----- PROGR. 107.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | 25601.7 | -39144.3 | -0.8 | 39.9 | 312.2 | -77.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | 247.0 | 0.0 | 0.0 | 247.0 |  
 ----- PROGR. 124.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | 24153.7 | -44656.0 | -0.8 | 38.6 | 312.2 | -85.2 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | 264.9 | 0.0 | 0.0 | 264.9 |  
 ----- PROGR. 142.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-14 | -22741.8 | 50218.3 | 4.9 | -258.6 | -324.2 | -350.4 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5-14 | si | 24 | Sx | Si | -287.1 | 0.0 | 0.0 | 287.1 |

-----  
 VERIFICA STABILITA` :

Z | L0 = 142. |  
 Y | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr = 2778598.5 | alfa(c) = 0.4900 | ki = 0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr = 2986033.8 | alfa(c) = 0.4900 | ki = 0.9862 |  
 Caso 2- 2 - Nodo 10 - Asse Z  
 Ned = -577.4 | Mzeq = 110793.7 | Myeq = -3489.4 | Ss = -392.9 ( 0.150)

U\_2\_UNP\_180 ( 7) stato limite ultimo - ASTA ( 1552- 1563) 443  
 ----- PROGR. 0.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5- 3 | -36969.9 | 52920.1 | 9.7 | -175.3 | 169.3 | 351.1 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |  
 5- 3 | si | 24 | Sx | Si | -344.0 | 0.0 | 0.0 | 344.0 |  
 ----- PROGR. 18.

SOLLECITAZIONI :  
 Caso | MZ | MY | MT | N | TZ | TY |  
 5-14 | 34626.3 | -50048.1 | -9.6 | 99.7 | -163.3 | 57.5 |  
 TENSIONI (Sz= 0.00) :  
 Caso | Ve | No | massimi | Sx | Tz | Ty | Tau tot. | Si |

5-14 si 24 Sx										Si	323.0	0.0	0.0	0.0	323.0
										PROGR.				36.	
SOLLECITAZIONI										:					
Caso	5-14	MZ		MY	MT	N	TZ	TY							
		35581.9		-47242.0	-9.6	98.4	-163.3	49.8							
TENSIONI (Sz= 0.00) :															
Caso	5-14	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	24	Sx	Si	0.0	0.0	0.0	314.6						
										PROGR.					
SOLLECITAZIONI										:					
Caso	5-14	MZ		MY	MT	N	TZ	TY							
		36400.9		-44448.6	-9.6	97.2	-163.3	42.1							
TENSIONI (Sz= 0.00) :															
Caso	5-14	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	24	Sx	Si	0.0	0.0	0.0	305.8						
										PROGR.					
SOLLECITAZIONI										:					
Caso	5-14	MZ		MY	MT	N	TZ	TY							
		37083.3		-41670.4	-9.6	95.9	-163.3	34.4							
TENSIONI (Sz= 0.00) :															
Caso	5-14	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	24	Sx	Si	0.0	0.0	0.0	296.6						
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		90418.4		-1378.7	0.2	-213.1	17.4	1018.2							
TENSIONI (Sz= 0.00) :															
Caso	2- 2	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	10	Sx	Si	0.0	0.0	0.0	309.8						
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		108423.0		-1688.0	0.2	-214.7	17.4	1008.1							
TENSIONI (Sz= 0.00) :															
Caso	2- 2	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	10	Sx	Si	0.0	0.0	0.0	370.9						
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		126249.5		-1997.2	0.2	-216.4	17.4	998.1							
TENSIONI (Sz= 0.00) :															
Caso	2- 2	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	10	Sx	Si	0.0	0.0	0.0	431.4						
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		143898.1		-2306.5	0.2	-218.0	17.4	988.1							
TENSIONI (Sz= 0.00) :															
Caso	2- 2	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	10	Sx	Si	0.0	0.0	0.0	491.3						
VERIFICA STABILITA` :															
Z	L0 =	142.													
Y	Lc =	142.	Ro =	6.96	lm =	20.4	Ncr=	2778603.5	alfa(c )=0.4900						
									ki=0.9820						
									ki=0.9862						
Caso 2- 2 - Nodo 10 - Asse Z															
Ned = -218.0															
Mzeq = 107923.6															
Myeq = -1729.8															
Ss = -369.6 ( 0.141)															
U_2_UNP_180 ( 7)										stato limite ultimo - ASTA ( 1563- 1564) 444					
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		143898.1		-2306.5	0.2	-379.2	-0.1	65.9							
TENSIONI (Sz= 0.00) :															
Caso	2- 2	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	10	Sx	Si	0.0	0.0	0.0	494.2						
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		144980.3		-2304.8	0.2	-380.8	-0.1	55.9							
TENSIONI (Sz= 0.00) :															
Caso	2- 2	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	10	Sx	Si	0.0	0.0	0.0	497.8						
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		145884.4		-2303.1	0.2	-382.5	-0.1	45.9							
TENSIONI (Sz= 0.00) :															
Caso	2- 2	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	10	Sx	Si	0.0	0.0	0.0	500.9						
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		146610.6		-2301.4	0.2	-384.1	-0.1	35.9							
TENSIONI (Sz= 0.00) :															
Caso	2- 2	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						
		si	10	Sx	Si	0.0	0.0	0.0	503.3						
										PROGR.					
SOLLECITAZIONI										:					
Caso	2- 2	MZ		MY	MT	N	TZ	TY							
		147158.7		-2299.7	0.2	-385.8	-0.1	25.8							
TENSIONI (Sz= 0.00) :															
Caso		Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si						

2- 2	si	10	Sx	Si	-505.1	0.0	0.0	0.0	505.1
					-----				89.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		147528.9		-2298.0	0.2	-387.4	-0.1	15.8	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	506.4	
					-----				107.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		147721.1		-2296.3	0.2	-389.1	-0.1	5.8	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	507.0	
					-----				124.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		147735.3		-2294.6	0.2	-390.7	-0.1	-4.2	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	507.1	
					-----				142.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		147571.6		-2292.9	0.2	-392.4	-0.1	-14.2	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	506.6	
-----									
VERIFICA STABILITA` :									
Z	L0 =	142.							
Y	Lc =	142.	Ro =	6.96	lm =	20.4	Ncr=	2778603.5	alfa(c )=0.4900
									ki=0.9820
	Lc =	142.	Ro =	7.21	lm =	19.7	Ncr=	2986039.2	alfa(c )=0.4900
									ki=0.9862
Caso 2- 2 - Nodo 10 - Asse Z									
Ned = -392.4   Mzeq = 147735.3   Myeq = -2306.5   Ss = -507.4 ( 0.194)									
-----									
U_2_UNP_180 ( 7)					-----				445
					-----				0.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		147571.6		-2292.9	-1.4	-561.8	-15.9	-984.8	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	509.6	
					-----				18.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		129980.1		-2010.4	-1.4	-563.4	-15.9	-994.8	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	450.1	
					-----				36.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		112210.7		-1727.8	-1.4	-565.1	-15.9	-1004.8	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	389.9	
					-----				53.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		94263.2		-1445.2	-1.4	-566.8	-15.9	-1014.8	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	329.2	
					-----				71.
SOLLECITAZIONI :					-----				PROGR.
Caso	2- 2	MZ		MY	MT	N	TZ	TY	
		76137.8		-1162.6	-1.4	-568.4	-15.9	-1024.8	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	10	Sx	Si	0.0	0.0	0.0	267.8	
					-----				89.
SOLLECITAZIONI :					-----				PROGR.
Caso	5- 3	MZ		MY	MT	N	TZ	TY	
		26286.2		-33351.4	4.2	-14.8	321.1	-74.2	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 3	si	10	Sx	Si	0.0	0.0	0.0	225.0	
					-----				107.
SOLLECITAZIONI :					-----				PROGR.
Caso	5- 3	MZ		MY	MT	N	TZ	TY	
		24895.4		-38997.1	4.2	-16.0	321.1	-81.9	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 3	si	10	Sx	Si	0.0	0.0	0.0	243.7	
					-----				124.
SOLLECITAZIONI :					-----				PROGR.
Caso	5- 3	MZ		MY	MT	N	TZ	TY	
		23368.5		-44658.8	4.2	-17.3	321.1	-89.6	
TENSIONI (Sz= 0.00) :					-----				
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	

5- 3	si	10	Sx	Si	-262.0	0.0	0.0	0.0	262.0
					PROGR. 142.				

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-14	-22191.4	50367.9	-4.7	-204.4	-327.1	-346.8

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-14	si	24	Sx	Si	-284.9	0.0	0.0	284.9

## VERIFICA STABILITA` :

Z | L0 = 142. |  
 Y | Lc = 142. | Ro = 6.96 | lm = 20.4 | Ncr = 2778603.6 | alfa(c )=0.4900 | ki=0.9820 |  
 Y | Lc = 142. | Ro = 7.21 | lm = 19.7 | Ncr = 2986039.2 | alfa(c )=0.4900 | ki=0.9862 |  
 Caso 2- 2 - Nodo 10 - Asse Z  
 Ned = -575.0 | Mzeq = 110678.7 | Myeq = -1719.7 | Ss = -385.2 ( 0.147)

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 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-16	-60965.3	41488.3	-0.8	-25.3	262.3	381.8
5- 1	60092.0	-41545.6	1.1	-12.6	-262.3	-380.8
5-11	-61590.6	40940.2	-0.8	-25.3	258.8	385.6

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	3	Sx	Si	-1138.3	0.0	0.0	1138.3
5- 1	si	5	Tz		-543.8	-28.6	0.0	546.0
5-11	si	9	Ty		28.1	0.0	-59.0	105.9

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-16	-45863.0	31113.8	-0.8	-25.3	262.3	381.8
5- 1	45027.8	-31169.1	1.1	-12.6	-262.3	-380.8
5-11	-46335.4	30702.1	-0.8	-25.3	258.8	385.6

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	3	Sx	Si	-854.8	0.0	0.0	854.8
5- 1	si	5	Tz		-407.7	-28.6	0.0	410.7
5-11	si	9	Ty		20.9	0.0	-59.0	104.2

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-16	-30760.8	20739.7	-0.8	-25.3	262.3	381.8
5- 1	29963.6	-20793.1	1.1	-12.6	-262.3	-380.8
5-11	-31080.2	20464.4	-0.8	-25.3	258.8	385.6

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	3	Sx	Si	-571.2	0.0	0.0	571.2
5- 1	si	5	Tz		-271.6	-28.6	0.0	276.1
5-11	si	9	Ty		13.6	0.0	-59.0	103.0

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-16	-15658.8	10366.9	-0.8	-25.3	262.3	381.8
5- 1	14899.7	-10418.4	1.1	-12.6	-262.3	-380.8
5-11	-15825.3	10228.1	-0.8	-25.3	258.8	385.6

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	3	Sx	Si	-287.8	0.0	0.0	287.8
5- 1	si	5	Tz		-135.6	-28.6	0.0	144.3
5-11	si	9	Ty		6.4	0.0	-59.0	102.3

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	-1973.3	-129.8	1.1	-103.6	-2.0	2.7
5- 1	-141.2	13.8	1.1	-12.6	-262.3	-380.8
5-11	-593.5	-65.7	-0.8	-25.3	258.8	385.6

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx		-18.3	0.0	0.0	18.3
5- 1	si	5	Tz		0.6	-28.6	0.0	49.5
5-11	si	9	Ty		-0.9	0.0	-59.0	102.1

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 1	-15230.2	10343.8	1.1	-12.6	-262.3	-380.8
5-11	14686.6	-10257.3	-0.8	-25.3	258.8	385.6

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	3	Sx	Si	-284.2	0.0	0.0	284.2
5- 1	si	5	Tz		136.6	-28.6	0.0	145.3
5-11	si	9	Ty		-8.0	0.0	-59.0	102.4

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5- 1	-30294.2	20718.4	1.1	-12.6	-262.3	-380.8
5-11	29941.5	-20493.6	-0.8	-25.3	258.8	385.6

TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	3	Sx	Si	-567.5	0.0	0.0	567.5
5- 1	si	5	Tz		272.7	-28.6	0.0	277.1
5-11	si	9	Ty		-15.3	0.0	-59.0	103.3

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
5- 1	-45358.3	31094.4	1.1	-12.6	-262.3	-380.8	
5-11	45196.6	-30731.2	-0.8	-25.3	258.8	385.6	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 1	si	3	Sx	Si	-850.8	0.0	0.0
5- 1	si	5	Tz		408.7	-28.6	0.0
5-11	si	9	Ty		-22.5	0.0	-59.0
							Si
							850.8
							411.7
							104.6
							316.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
5- 1	-60422.5	41470.8	1.1	-12.6	-262.3	-380.8	
5-11	60451.8	-40969.3	-0.8	-25.3	258.8	385.6	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 1	si	3	Sx	Si	-1134.1	0.0	0.0
5- 1	si	5	Tz		544.8	-28.6	0.0
5-11	si	9	Ty		-29.7	0.0	-59.0
							Si
							1134.1
							547.1
							106.4

## VERIFICA STABILITA' :

Z | L0 = 316. |  
 Y | Lc = 316. | Ro = 5.73 | lm = 55.2 | Ncr = 214316.6 | alfa(b) = 0.3400 | ki = 0.8188 |  
 Y | Lc = 316. | Ro = 3.52 | lm = 90.0 | Ncr = 80605.4 | alfa(c) = 0.4900 | ki = 0.5191 |  
 Caso 5-16 - Nodo 4 - Asse Y  
 Ned = -25.3 | Mzeq = -45724.0 | Myeq = -31134.6 | Ss = -855.2 ( 0.327 )

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 0.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
5-16	-57079.9	42549.8	0.0	-19.0	268.8	365.6	
5- 1	56194.6	-42641.8	0.2	-13.5	-269.1	-364.5	
5-11	-57626.3	42166.6	0.0	-18.7	266.4	369.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-16	si	3	Sx	Si	-1132.2	0.0	0.0
5- 1	si	5	Tz		-522.9	-28.3	0.0
5-11	si	9	Ty		29.2	0.0	-56.4
							Si
							1132.2
							525.2
							101.9
							40.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
5-16	-42622.0	31918.9	0.0	-19.0	268.8	365.6	
5- 1	41779.8	-32000.3	0.2	-13.5	-269.1	-364.5	
5-11	-43031.6	31631.1	0.0	-18.7	266.4	369.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-16	si	3	Sx	Si	-848.2	0.0	0.0
5- 1	si	5	Tz		-390.0	-28.3	0.0
5-11	si	9	Ty		21.7	0.0	-56.4
							Si
							848.2
							393.1
							100.0
							79.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
5-16	-28165.3	21288.0	0.0	-19.0	268.8	365.6	
5- 1	27366.1	-21358.9	0.2	-13.5	-269.1	-364.5	
5-11	-28438.0	21095.6	0.0	-18.7	266.4	369.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-16	si	3	Sx	Si	-564.2	0.0	0.0
5- 1	si	5	Tz		-257.1	-28.3	0.0
5-11	si	9	Ty		14.3	0.0	-56.4
							Si
							564.2
							261.8
							98.6
							119.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
5-16	-13712.7	10657.4	0.0	-19.0	268.8	365.6	
5- 1	12956.6	-10717.7	0.2	-13.5	-269.1	-364.5	
5-11	-13848.5	10560.3	0.0	-18.7	266.4	369.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5-16	si	3	Sx	Si	-280.3	0.0	0.0
5- 1	si	5	Tz		-124.3	-28.3	0.0
5-11	si	9	Ty		6.9	0.0	-56.4
							Si
							280.3
							133.6
							97.8
							158.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
2- 2	-1986.4	-141.1	0.2	-86.6	-4.9	5.1	
5- 1	-1360.3	-69.2	0.2	-13.5	-269.1	-364.5	
5-11	648.2	17.8	0.0	-18.7	266.4	369.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2- 2	si	4	Sx	Si	-18.0	0.0	0.0
5- 1	si	5	Tz		8.0	-28.3	0.0
5-11	si	9	Ty		-0.6	0.0	-56.4
5-11	si	10	Si		-0.6	0.0	-56.4
							Si
							18.0
							49.7
							97.6
							97.6
							198.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
5- 1	-15902.5	10566.7	0.2	-13.5	-269.1	-364.5	
5-11	15370.4	-10512.2	0.0	-18.7	266.4	369.0	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 1	si	3	Sx	Si	-292.5	0.0	0.0
5- 1	si	5	Tz		141.7	-28.3	0.0
							Si
							292.5
							150.0

5-11	si	9	Ty	-8.0	0.0	-56.4	56.4	97.9
								237.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
5-1		-30311.1	21207.9	0.2	-13.5	-269.1	-364.5
5-11		29958.8	-21047.5	0.0	-18.7	266.4	369.0

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-1	si	3	Sx	Si	-576.4	0.0	0.0	576.4
5-1	si	5	Tz		274.6	-28.3	0.0	279.0
5-11	si	9	Ty		-15.5	0.0	-56.4	98.8

PROGR.

277.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
5-1		-44724.6	31849.4	0.2	-13.5	-269.1	-364.5
5-11		44552.2	-31583.0	0.0	-18.7	266.4	369.0

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-1	si	3	Sx	Si	-860.3	0.0	0.0	860.3
5-1	si	5	Tz		407.5	-28.3	0.0	410.4
5-11	si	9	Ty		-22.9	0.0	-56.4	100.3

PROGR.

316.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
5-1		-59139.3	42490.9	0.2	-13.5	-269.1	-364.5
5-11		59146.8	-42118.5	0.0	-18.7	266.4	369.0

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-1	si	3	Sx	Si	-1144.2	0.0	0.0	1144.2
5-1	si	5	Tz		540.4	-28.3	0.0	542.6
5-11	si	9	Ty		-30.3	0.0	-56.4	102.2

## VERIFICA STABILITA` :

$L_0 = 316.$   
 $Z \quad L_c = 316. \quad R_o = 5.73 \quad l_m = 55.2 \quad N_{cr} = 214316.5 \quad \alpha(b) = 0.3400 \quad k_i = 0.8188$   
 $Y \quad L_c = 316. \quad R_o = 3.52 \quad l_m = 90.0 \quad N_{cr} = 80605.4 \quad \alpha(c) = 0.4900 \quad k_i = 0.5191$   
 Caso 5- 1 - Nodo 4 - Asse Y  
 $N_{ed} = -13.5 \quad M_{zeq} = -44354.5 \quad M_{yeq} = -31981.3 \quad S_s = -860.8 \quad (0.329)$

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 PROGR. 0.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
5-16		-64500.8	22290.7	1.4	15.5	119.7	345.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	1	Sx	Si	815.5	0.0	0.0	815.5
5-16	si	5	Tz		499.3	18.9	0.0	500.3
5-16	si	9	Ty		16.2	0.0	-52.8	93.0

PROGR.

47.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
5-1		48845.0	-16547.9	-1.6	-47.5	-118.7	-345.0
5-16		-48427.3	16717.8	1.4	15.5	119.7	345.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-1	si	1	Sx	Si	-612.8	0.0	0.0	612.8
5-16	si	5	Tz		374.9	18.9	0.0	376.3
5-16	si	9	Ty		12.3	0.0	-52.8	92.3

PROGR.

93.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
5-1		32782.5	-11022.8	-1.6	-47.5	-118.7	-345.0
5-16		-32354.6	11145.2	1.4	15.5	119.7	345.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-1	si	1	Sx	Si	-410.3	0.0	0.0	410.3
5-16	si	5	Tz		250.5	18.9	0.0	252.7
5-16	si	9	Ty		8.4	0.0	-52.8	91.9

PROGR.

140.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
5-1		16722.6	-5499.4	-1.6	-47.5	-118.7	-345.0
5-16		-16284.3	5574.4	1.4	15.5	119.7	345.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-1	si	1	Sx	Si	-207.8	0.0	0.0	207.8
5-16	si	5	Tz		126.2	18.9	0.0	130.4
5-16	si	9	Ty		4.4	0.0	-52.8	91.6

PROGR.

186.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
2-2		1460.2	91.7	-0.7	-86.9	1.8	1.1
5-16		-246.1	-40.3	1.4	15.5	119.7	345.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx		-13.8	0.0	0.0	13.8
5-16	si	5	Tz		1.9	18.9	0.0	32.7
5-16	si	9	Ty		0.5	0.0	-52.8	91.5
5-16	si	10	Si		0.5	0.0	-52.8	91.5

PROGR.

233.

## SOLLECITAZIONI :

Caso		MZ	MY	MT	N	TZ	TY
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5-16	15887.3	-5582.0	1.4	15.5	119.7	345.2
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	3	Sx	Si	0.0	0.0
5-16	si	5	Tz	-122.7	18.9	0.0
5-16	si	9	Ty	-3.5	0.0	-52.8
						52.8
						91.6
						279.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5-16	31953.8	-11153.1	1.4	15.5	119.7	345.2
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	3	Sx	Si	0.0	0.0
5-16	si	5	Tz	-247.0	18.9	0.0
5-16	si	9	Ty	-7.4	0.0	-52.8
						52.8
						91.8
						326.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5-16	48025.8	-16725.6	1.4	15.5	119.7	345.2
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	3	Sx	Si	0.0	0.0
5-16	si	5	Tz	-371.4	18.9	0.0
5-16	si	9	Ty	-11.3	0.0	-52.8
						52.8
						92.2
						373.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5-16	64099.1	-22298.6	1.4	15.5	119.7	345.2
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	3	Sx	Si	0.0	0.0
5-16	si	5	Tz	-495.7	18.9	0.0
5-16	si	9	Ty	-15.3	0.0	-52.8
						52.8
						92.8

## VERIFICA STABILITA`:

Z L0 = 373. | Ro = 5.73 | lm = 65.0 | Ncr = 154598.9 | alfa(b ) = 0.3400 | ki = 0.7557 |  
 Y Lc = 373. | Ro = 3.52 | lm = 105.9 | Ncr = 58145.3 | alfa(c ) = 0.4900 | ki = 0.4242 |  
 Caso 5- 1 - Nodo 2 - Asse Y  
 Ned = -47.5 | Mzeq = 48681.2 | Myeq = 16602.4 | Ss = -615.1 ( 0.235 )

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 0.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5-16	-56411.0	23747.0	4.4	14.0	126.8	316.7
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	1	Sx	Si	0.0	0.0
5-16	si	5	Tz	452.8	18.8	0.0
5-16	si	9	Ty	17.2	0.0	-48.8
						48.8
						86.2
						47.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5-16	-41674.0	17841.5	4.4	14.0	126.8	316.7
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	1	Sx	Si	0.0	0.0
5-16	si	5	Tz	335.7	18.8	0.0
5-16	si	9	Ty	13.0	0.0	-48.8
						48.8
						85.4
						93.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5-16	-26945.7	11936.1	4.4	14.0	126.8	316.7
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	1	Sx	Si	0.0	0.0
5-16	si	5	Tz	218.7	18.8	0.0
5-16	si	9	Ty	8.9	0.0	-48.8
						48.8
						84.9
						140.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5- 1	12748.8	-5860.9	-4.5	-41.8	-123.8	-316.3
5-16	-12244.3	6030.7	4.4	14.0	126.8	316.7
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	1	Sx	Si	0.0	0.0
5-16	si	5	Tz	-188.6	18.8	0.0
5-16	si	9	Ty	101.9	18.8	0.0
						48.8
						84.6
						186.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5-10	3125.0	271.3	-9.6	52.1	91.9	293.0
5-16	2313.5	124.7	4.4	14.0	126.8	316.7
TENSIONI (Sz=	0.00)	:				
Caso	Ve	No	massimi	Sx	Tz	Ty
5-10	si	4	Sx	Si	0.0	0.0
5-16	si	5	Tz	-26.6	18.8	0.0
5-16	si	9	Ty	-13.9	18.8	0.0
						48.8
						84.4
						233.

SOLLECITAZIONI	:					
Caso	MZ	MY	MT	N	TZ	TY
5-16	17505.6	-5780.8	4.4	14.0	126.8	316.7

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	216.8	0.0	0.0	0.0	216.8	
5-16	si	5	Tz	-133.9	18.8	0.0	18.8	137.8	
5-16	si	9	Ty	-3.6	0.0	-48.8	48.8	84.5	
									PROGR. 279.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		32178.5		-11686.2	4.4	14.0	126.8	316.7	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	417.2	0.0	0.0	0.0	417.2	
5-16	si	5	Tz	-250.5	18.8	0.0	18.8	252.6	
5-16	si	9	Ty	-7.8	0.0	-48.8	48.8	84.8	
									PROGR. 326.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		46900.0		-17591.6	4.4	14.0	126.8	316.7	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	618.0	0.0	0.0	0.0	618.0	
5-16	si	5	Tz	-367.5	18.8	0.0	18.8	368.9	
5-16	si	9	Ty	-12.0	0.0	-48.8	48.8	85.3	
									PROGR. 373.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		61634.4		-23497.1	4.4	14.0	126.8	316.7	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	818.8	0.0	0.0	0.0	818.8	
5-16	si	5	Tz	-484.5	18.8	0.0	18.8	485.6	
5-16	si	9	Ty	-16.2	0.0	-48.8	48.8	86.0	

## VERIFICA STABILITA` :

Z | L0 = 373. |  
 Y | Lc = 373. | Ro = 5.73 | lm = 65.0 | Ncr = 154598.2 | alfa(b )=0.3400 | ki=0.7557 |  
 Case 5- 1 - Nodo 4 - Asse Y | Lc = 373. | Ro = 3.52 | lm = 105.9 | Ncr = 58145.1 | alfa(c )=0.4900 | ki=0.4242 |  
 Ned = -41.8 | Mzeq = -45784.4 | Myeq = -17372.2 | Ss = -609.8 ( 0.233 )

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PROGR. 0.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		-98462.3		22830.1	4.4	23.3	125.5	465.8	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	1	Sx	1043.6	0.0	0.0	0.0	1043.6	
5-16	si	5	Tz	719.7	23.6	0.0	23.6	720.9	
5-16	si	9	Ty	16.9	0.0	-71.5	71.5	125.0	
									PROGR. 47.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		-76772.0		16986.8	4.4	23.3	125.5	465.8	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	1	Sx	799.3	0.0	0.0	0.0	799.3	
5-16	si	5	Tz	558.2	23.6	0.0	23.6	559.7	
5-16	si	9	Ty	12.7	0.0	-71.5	71.5	124.5	
									PROGR. 93.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		-55082.3		11143.7	4.4	23.3	125.5	465.8	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	1	Sx	554.9	0.0	0.0	0.0	554.9	
5-16	si	5	Tz	396.8	23.6	0.0	23.6	398.9	
5-16	si	9	Ty	8.6	0.0	-71.5	71.5	124.2	
									PROGR. 140.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		-33394.2		5301.7	4.4	23.3	125.5	465.8	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	1	Sx	310.6	0.0	0.0	0.0	310.6	
5-16	si	5	Tz	235.3	23.6	0.0	23.6	238.9	
5-16	si	9	Ty	4.5	0.0	-71.5	71.5	123.9	
									PROGR. 186.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5- 6		12015.9		628.1	0.1	-47.9	-118.8	-461.2	
5-16		-11715.4		-601.4	4.4	23.3	125.5	465.8	
5-12		-11715.6		-602.7	4.5	30.8	124.8	465.7	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 6	si	2	Sx	-90.0	0.0	0.0	0.0	90.0	
5-16	si	5	Tz	73.7	23.6	0.0	23.6	84.3	
5-16	si	9	Ty	0.3	0.0	-71.5	71.5	123.9	
5-12	si	12	Si	53.5	0.0	-66.7	66.7	127.4	
									PROGR. 233.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		10031.3		-6389.9	4.4	23.3	125.5	465.8	

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	180.1	0.0	0.0	0.0	180.1	
5-16	si	5	Tz	-87.9	23.6	0.0	23.6	97.0	
5-16	si	9	Ty	-3.8	0.0	-71.5	71.5	123.9	
									PROGR. 279.

SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-16		31697.1	-12232.4	4.4	23.3	125.5	465.8		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	424.3	0.0	0.0	0.0	424.3	
5-16	si	5	Tz	-249.2	23.6	0.0	23.6	252.5	
5-16	si	9	Ty	-7.9	0.0	-71.5	71.5	124.1	
									PROGR. 326.

SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-16		53384.0	-18075.5	4.4	23.3	125.5	465.8		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	668.6	0.0	0.0	0.0	668.6	
5-16	si	5	Tz	-410.6	23.6	0.0	23.6	412.7	
5-16	si	9	Ty	-12.0	0.0	-71.5	71.5	124.4	
									PROGR. 373.

SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-16		75073.4	-23918.8	4.4	23.3	125.5	465.8		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	913.0	0.0	0.0	0.0	913.0	
5-16	si	5	Tz	-572.1	23.6	0.0	23.6	573.6	
5-16	si	9	Ty	-16.2	0.0	-71.5	71.5	124.9	

## VERIFICA STABILITA` :

Z | L0 = 373. |  
 Y | Lc = 373. | Ro = 5.73 | lm = 65.0 | Ncr = 154604.5 | alfa(b) = 0.3400 | ki = 0.7557 |  
 Y | Lc = 373. | Ro = 3.52 | lm = 105.9 | Ncr = 58147.4 | alfa(c) = 0.4900 | ki = 0.4242 |  
 Caso 5- 1 - Nodo 2 - Asse Y  
 Ned = -40.1 | Mzeq = 73511.7 | Myeq = 17215.5 | Ss = -785.0 ( 0.300)

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 0.

SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-12		-83178.6	43108.3	-3.3	30.0	273.4	476.5		
5-11		-83432.0	42962.6	-3.2	29.6	272.5	477.9		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-12	si	1	Sx	1310.2	0.0	0.0	0.0	1310.2	
5-12	si	5	Tz	698.5	32.7	0.0	32.7	700.8	
5-11	si	9	Ty	31.3	0.0	-73.3	73.3	130.7	
									PROGR. 40.

SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-12		-64338.2	32293.8	-3.3	30.0	273.4	476.5		
5-11		-64535.7	32183.8	-3.2	29.6	272.5	477.9		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-12	si	1	Sx	994.8	0.0	0.0	0.0	994.8	
5-12	si	5	Tz	536.6	32.7	0.0	32.7	539.5	
5-11	si	9	Ty	23.7	0.0	-73.3	73.3	129.1	
									PROGR. 79.

SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-12		-45502.3	21479.4	-3.3	30.0	273.4	476.5		
5-11		-45644.0	21405.1	-3.2	29.6	272.5	477.9		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-12	si	1	Sx	679.4	0.0	0.0	0.0	679.4	
5-12	si	5	Tz	374.6	32.7	0.0	32.7	378.9	
5-11	si	9	Ty	16.1	0.0	-73.3	73.3	127.9	
									PROGR. 119.

SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5-12		-26682.1	10665.5	-3.3	30.0	273.4	476.5		
5-11		-26767.9	10626.9	-3.2	29.6	272.5	477.9		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-12	si	1	Sx	364.1	0.0	0.0	0.0	364.1	
5-12	si	5	Tz	212.7	32.7	0.0	32.7	220.2	
5-11	si	9	Ty	8.4	0.0	-73.3	73.3	127.2	
									PROGR. 158.

SOLLECITAZIONI :									
Caso		MZ	MY	MT	N	TZ	TY		
5- 9		-8019.3	-285.5	-15.7	9.5	137.7	444.9		
5-12		-7355.7	-211.3	-3.3	30.0	273.4	476.5		
5-11		-7385.6	-214.3	-3.2	29.6	272.5	477.9		
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 9	si	2	Sx	56.9	0.0	0.0	0.0	56.9	
5-12	si	5	Tz	47.4	32.7	0.0	32.7	73.9	
5-11	si	9	Ty	0.8	0.0	-73.3	73.3	126.9	
5-11	si	10	Si	1.1	0.0	-73.3	73.3	126.9	

----- PROGR. 198.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-11644.6	10943.7	-3.4	-50.1	-274.1	-470.8
5-12	11142.8	-10966.6	-3.3	30.0	273.4	476.5
5-11	11168.7	-10933.9	-3.2	29.6	272.5	477.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	3	Sx	Si	-273.1	0.0
5-12	si	5	Tz		32.7	0.0
5-11	si	9	Ty		-6.8	0.0
----- PROGR. 237.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-30222.8	21784.8	-3.4	-50.1	-274.1	-470.8
5-12	29947.9	-21780.5	-3.3	30.0	273.4	476.5
5-11	30029.7	-21712.1	-3.2	29.6	272.5	477.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	3	Sx	Si	-587.4	0.0
5-12	si	5	Tz		-273.9	32.7
5-11	si	9	Ty		-14.4	0.0
----- PROGR. 277.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 5	-49119.6	32524.0	-3.3	-50.8	-273.2	-473.6
5-12	48780.6	-32594.9	-3.3	30.0	273.4	476.5
5-11	48918.2	-32490.8	-3.2	29.6	272.5	477.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 5	si	3	Sx	Si	-901.8	0.0
5-12	si	5	Tz		-435.9	32.7
5-11	si	9	Ty		-22.0	0.0
----- PROGR. 316.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 5	-67845.9	43330.1	-3.3	-50.8	-273.2	-473.6
5-12	67619.9	-43409.4	-3.3	30.0	273.4	476.5
5-11	67813.4	-43269.6	-3.2	29.6	272.5	477.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 5	si	3	Sx	Si	-1216.4	0.0
5-12	si	5	Tz		-597.8	32.7
5-11	si	9	Ty		-29.6	0.0
-----						
VERIFICA STABILITA` :						
L0 = 316.						
Z	Lc = 316.	Ro = 5.73	lm = 55.2	Ncr= 214316.6	alfa(b )=0.3400	ki=0.8188
Y	Lc = 316.	Ro = 3.52	lm = 90.0	Ncr= 80605.4	alfa(c )=0.4900	ki=0.5191
Caso 5- 5 - Nodo 2 - Asse Y						
Ned = -50.8   Mzeq = 61536.5   Myeq = 32497.6   Ss = -983.1 ( 0.375)						
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----- PROGR. 0.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-64604.3	-22084.5	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	4	Sx	Si	-813.9	0.0
5- 1	si	6	Tz		496.7	-18.6
5- 1	si	9	Ty		-17.5	0.0
----- PROGR. 47.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-48559.2	-16559.1	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	4	Sx	Si	-611.5	0.0
5- 1	si	6	Tz		372.7	-18.6
5- 1	si	9	Ty		-13.6	0.0
----- PROGR. 93.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-32514.3	-11033.7	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	4	Sx	Si	-409.1	0.0
5- 1	si	6	Tz		248.7	-18.6
5- 1	si	9	Ty		-9.7	0.0
----- PROGR. 140.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-16	16889.1	5448.3	0.2	28.5	117.9	-343.9
5- 1	-16470.8	-5508.4	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	4	Sx	Si	207.3	0.0
5- 1	si	6	Tz		124.7	-18.6
5- 1	si	9	Ty		-5.8	0.0
----- PROGR. 186.						
SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY

2- 2	1464.4	-92.2	-0.1	-87.0	-1.5	1.5
5- 1	-405.9	-13.3	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	1	Sx	-13.8	0.0	0.0
5- 1	si	6	Tz	0.7	-18.6	0.0
5- 1	si	9	Ty	-1.9	0.0	-52.6
						Tau tot.
						0.0
						18.6
						52.6
						Si
						13.8
						32.2
						91.2
						233.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	15626.1	5543.6	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	-202.0	0.0	0.0
5- 1	si	6	Tz	-123.3	-18.6	0.0
5- 1	si	9	Ty	2.0	0.0	-52.6
						Tau tot.
						0.0
						18.6
						52.6
						Si
						202.0
						127.4
						91.2
						279.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	31670.3	11068.8	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	-404.4	0.0	0.0
5- 1	si	6	Tz	-247.3	-18.6	0.0
5- 1	si	9	Ty	5.9	0.0	-52.6
						Tau tot.
						0.0
						18.6
						52.6
						Si
						404.4
						249.4
						91.3
						326.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	47715.3	16594.3	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	-606.7	0.0	0.0
5- 1	si	6	Tz	-371.3	-18.6	0.0
5- 1	si	9	Ty	9.8	0.0	-52.6
						Tau tot.
						0.0
						18.6
						52.6
						Si
						606.7
						372.7
						91.7
						373.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	63760.5	22119.7	-0.2	-60.6	-118.6	344.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	-809.2	0.0	0.0
5- 1	si	6	Tz	-495.3	-18.6	0.0
5- 1	si	9	Ty	13.7	0.0	-52.6
						Tau tot.
						0.0
						18.6
						52.6
						Si
						809.2
						496.3
						92.2

## VERIFICA STABILITA` :

Z | L0 = 373. |  
 Y | Lc = 373. | Ro = 5.73 | lm = 65.0 | Ncr= 154597.7 | alfa(b )=0.3400 | ki=0.7557 |  
 Caso 5- 1 - Nodo 3 - Asse Y | Lc = 373. | Ro = 3.52 | lm = 105.9 | Ncr= 58144.9 | alfa(c )=0.4900 | ki=0.4242 |  
 Ned = -60.6 | Mzeq = -48453.2 | Myeq = 16589.8 | Ss = -614.5 ( 0.235 )

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 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-56289.1	-22281.9	1.2	-96.4	-118.5	315.0
5- 2	-56289.0	-22099.6	1.2	-97.2	-117.5	315.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	4	Sx	-765.2	0.0	0.0
5- 1	si	6	Tz	442.9	-17.8	0.0
5- 2	si	9	Ty	-18.7	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						765.2
						444.0
						85.6
						47.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-41618.1	-16763.0	1.2	-96.4	-118.5	315.0
5- 2	-41616.2	-16625.3	1.2	-97.2	-117.5	315.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	4	Sx	-571.8	0.0	0.0
5- 1	si	6	Tz	327.8	-17.8	0.0
5- 2	si	9	Ty	-14.8	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						571.8
						329.2
						84.8
						93.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-26947.1	-11244.0	1.2	-96.4	-118.5	315.0
5- 2	-26943.6	-11151.1	1.2	-97.2	-117.5	315.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	4	Sx	-378.3	0.0	0.0
5- 1	si	6	Tz	212.6	-17.8	0.0
5- 2	si	9	Ty	-11.0	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						378.3
						214.8
						84.2
						140.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-12276.2	-5725.2	1.2	-96.4	-118.5	315.0
5- 2	-12271.0	-5676.9	1.2	-97.2	-117.5	315.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	4	Sx	-184.8	0.0	0.0
5- 1	si	6	Tz	97.5	-17.8	0.0
5- 2	si	9	Ty	-7.1	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						184.8
						102.2
						83.8
						186.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	2396.7	-213.0	1.2	-109.6	-116.6	315.0
5- 1	2396.3	-220.0	1.2	-96.4	-118.5	315.0
5- 2	2403.1	-216.4	1.2	-97.2	-117.5	315.1

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	1	Sx	-22.7	0.0	0.0
5- 1	si	6	Tz	-17.6	-17.8	0.0
5- 2	si	9	Ty	-3.2	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						22.7
						35.4
						83.6
						PROGR.
						233.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	17066.5	5313.4	1.2	-96.4	-118.5	315.0
5- 2	17075.0	5272.3	1.2	-97.2	-117.5	315.1

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	-208.2	0.0	0.0
5- 1	si	6	Tz	-132.8	-17.8	0.0
5- 2	si	9	Ty	0.6	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						208.2
						136.3
						83.5
						PROGR.
						279.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	31737.5	10832.2	1.2	-96.4	-118.5	315.0
5- 2	31747.7	10746.4	1.2	-97.2	-117.5	315.1

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	-401.7	0.0	0.0
5- 1	si	6	Tz	-248.0	-17.8	0.0
5- 2	si	9	Ty	4.5	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						401.7
						249.9
						83.6
						PROGR.
						326.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	46408.5	16351.1	1.2	-96.4	-118.5	315.0
5- 2	46420.4	16220.7	1.2	-97.2	-117.5	315.1

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	-595.1	0.0	0.0
5- 1	si	6	Tz	-363.1	-17.8	0.0
5- 2	si	9	Ty	8.4	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						595.1
						364.4
						83.9
						PROGR.
						373.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	61079.6	21870.1	1.2	-96.4	-118.5	315.0
5- 2	61093.1	21695.0	1.2	-97.2	-117.5	315.1

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	-788.6	0.0	0.0
5- 1	si	6	Tz	-478.3	-17.8	0.0
5- 2	si	9	Ty	12.2	0.0	-48.2
						Tau tot.
						0.0
						17.8
						48.2
						Si
						788.6
						479.2
						84.4

## VERIFICA STABILITA` :

L0 = 373. |  
 Z | Lc = 373. | Ro = 5.73 | lm = 65.0 | Ncr = 154598.2 | alfa(b ) = 0.3400 | ki = 0.7557 |  
 Y | Lc = 373. | Ro = 3.52 | lm = 105.9 | Ncr = 58145.1 | alfa(c ) = 0.4900 | ki = 0.4242 |  
 Caso 5- 1 - Nodo 1 - Asse Y  
 Ned = -96.4 | Mzeq = 45809.7 | Myeq = -16711.4 | Ss = -602.6 ( 0.230 )

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 PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	-97154.5	-15403.8	8.6	-67.6	-85.6	459.0
5-11	96630.2	14486.7	-12.8	50.9	80.8	-454.8
5- 2	-97122.0	-15037.0	9.3	-61.6	-83.6	458.9

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	4	Sx	-903.1	0.0	0.0
5-11	si	6	Tz	-674.0	21.7	0.0
5- 2	si	9	Ty	-12.6	0.0	-70.9
						Tau tot.
						0.0
						21.7
						70.9
						Si
						903.1
						675.0
						123.4
						PROGR.
						47.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	-75782.9	-11420.7	8.6	-67.6	-85.6	459.0
5-11	75456.5	10727.3	-12.8	50.9	80.8	-454.8
5- 2	-75757.5	-11146.1	9.3	-61.6	-83.6	458.9

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	4	Sx	-694.3	0.0	0.0
5-11	si	6	Tz	-523.7	21.7	0.0
5- 2	si	9	Ty	-9.8	0.0	-70.9
						Tau tot.
						0.0
						21.7
						70.9
						Si
						694.3
						525.1
						123.2
						PROGR.
						93.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	-54411.3	-7438.1	8.6	-67.6	-85.6	459.0
5-11	54282.8	6968.5	-12.8	50.9	80.8	-454.8
5- 2	-54393.1	-7255.7	9.3	-61.6	-83.6	458.9

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	4	Sx	-485.4	0.0	0.0
5-11	si	6	Tz	-373.5	21.7	0.0
5- 2	si	9	Ty	-7.1	0.0	-70.9
						Tau tot.
						0.0
						21.7
						70.9
						Si
						485.4
						375.4
						123.0
						PROGR.
						140.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	-33039.7	-3457.9	8.6	-67.6	-85.6	459.0
5-11	33109.3	3212.0	-12.8	50.9	80.8	-454.8
5- 2	-33028.8	-3367.6	9.3	-61.6	-83.6	458.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	4	Sx	Si	-276.5	0.0
5-11	si	6	Tz		-223.2	21.7
5- 2	si	9	Ty		-4.3	0.0
						PROGR. 186.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-11	11936.4	-590.1	-12.8	50.9	80.8	-454.8
5- 2	-11665.1	566.0	9.3	-61.6	-83.6	458.9
5- 6	-11668.8	568.0	8.6	-67.6	-85.6	459.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-11	si	3	Sx	Si	88.9	0.0
5-11	si	6	Tz		-72.8	21.7
5- 2	si	9	Ty		-1.6	0.0
5- 6	si	14	Si		-54.4	0.0
						PROGR. 233.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	9705.5	4520.3	8.6	-67.6	-85.6	459.0
5-11	-9240.0	-4318.7	-12.8	50.9	80.8	-454.8
5- 2	9702.1	4426.2	9.3	-61.6	-83.6	458.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	2	Sx	Si	-145.8	0.0
5-11	si	6	Tz		77.3	21.7
5- 2	si	9	Ty		1.2	0.0
						PROGR. 279.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	31076.2	8501.8	8.6	-67.6	-85.6	459.0
5-11	-30412.7	-8076.4	-12.8	50.9	80.8	-454.8
5- 2	31065.6	8315.5	9.3	-61.6	-83.6	458.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	2	Sx	Si	-354.6	0.0
5-11	si	6	Tz		227.6	21.7
5- 2	si	9	Ty		3.9	0.0
						PROGR. 326.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	52447.8	12484.6	8.6	-67.6	-85.6	459.0
5-11	-51586.3	-11835.4	-12.8	50.9	80.8	-454.8
5- 2	52430.0	12206.1	9.3	-61.6	-83.6	458.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	2	Sx	Si	-563.5	0.0
5-11	si	6	Tz		377.8	21.7
5- 2	si	9	Ty		6.7	0.0
						PROGR. 373.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	73819.4	16467.8	8.6	-67.6	-85.6	459.0
5-11	-72759.9	-15594.9	-12.8	50.9	80.8	-454.8
5- 2	73794.4	16097.1	9.3	-61.6	-83.6	458.9
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 6	si	2	Sx	Si	-772.4	0.0
5-11	si	6	Tz		528.1	21.7
5- 2	si	9	Ty		9.4	0.0
						PROGR. 123.2

## VERIFICA STABILITA` :

L0 = 373. |  
 Z | Lc = 373. | Ro = 5.73 | lm = 65.0 | Ncr = 154604.5 | alfa(b) = 0.3400 | ki = 0.7557 |  
 Y | Lc = 373. | Ro = 3.52 | lm = 105.9 | Ncr = 58147.4 | alfa(c) = 0.4900 | ki = 0.4242 |  
 Caso 5- 6 - Nodo 3 - Asse Y  
 Ned = -67.6 | Mzeq = -72865.9 | Myeq = 12350.8 | Ss = -695.6 ( 0.266 )

P\_HEA140\_S008 ( 8 ) stato limite ultimo - ASTA ( 1509- 1295 ) 470  
 ----- PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-60497.4	-41186.1	1.8	1.8	-260.5	379.0
5-16	59745.0	41313.0	-1.6	-39.8	261.0	-378.9
5- 6	-61151.7	-40497.1	1.9	2.1	-256.2	383.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	Si	1129.1	0.0
5-16	si	6	Tz		-541.5	28.5
5- 6	si	9	Ty		-28.5	0.0
						PROGR. 105.6

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-45506.3	-30882.7	1.8	1.8	-260.5	379.0
5-16	44759.6	30990.4	-1.6	-39.8	261.0	-378.9
5- 6	-45995.3	-30365.7	1.9	2.1	-256.2	383.2
TENSIONI (Sz= 0.00) :						

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 1	si	2	Sx Si	847.6	0.0	0.0	0.0	847.6
5-16	si	6	Tz	-406.2	28.5	0.0	28.5	409.2
5- 6	si	9	Ty	-21.4	0.0	-58.7	58.7	103.9
-----								79.

SOLLECITAZIONI	MZ	MY	MT	N	TZ	TY
5- 1	-30515.2	-20579.3	1.8	1.8	-260.5	379.0
5-16	29774.2	20667.9	-1.6	-39.8	261.0	-378.9
5- 6	-30838.9	-20234.2	1.9	2.1	-256.2	383.2

TENSIONI (Sz= 0.00)	Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
	5- 1	si	2	Sx Si	566.0	0.0	0.0	0.0	566.0
	5-16	si	6	Tz	-270.8	28.5	0.0	28.5	275.3
	5- 6	si	9	Ty	-14.2	0.0	-58.7	58.7	102.6
-----								PROGR.	119.

SOLLECITAZIONI	MZ	MY	MT	N	TZ	TY
5- 1	-15524.2	-10276.1	1.8	1.8	-260.5	379.0
5-16	14788.7	10345.5	-1.6	-39.8	261.0	-378.9
5- 6	-15682.5	-10102.9	1.9	2.1	-256.2	383.2

TENSIONI (Sz= 0.00)	Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
	5- 1	si	2	Sx Si	284.5	0.0	0.0	0.0	284.5
	5-16	si	6	Tz	-135.4	28.5	0.0	28.5	144.2
	5- 6	si	9	Ty	-7.1	0.0	-58.7	58.7	101.9
-----								PROGR.	158.

SOLLECITAZIONI	MZ	MY	MT	N	TZ	TY
2- 2	-1989.4	130.9	0.1	-103.6	2.4	1.5
5-16	-193.1	68.1	-1.6	-39.8	261.0	-378.9
5- 6	-529.7	-16.6	1.9	2.1	-256.2	383.2

TENSIONI (Sz= 0.00)	Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
	2- 2	si	3	Sx	-18.4	0.0	0.0	0.0	18.4
	5-16	si	6	Tz	-0.3	28.5	0.0	28.5	49.4
	5- 6	si	9	Ty	0.1	0.0	-58.7	58.7	101.6
	5- 6	si	10	Si	0.1	0.0	-58.7	58.7	101.6
-----								PROGR.	198.

SOLLECITAZIONI	MZ	MY	MT	N	TZ	TY
5-16	-15182.3	-10300.2	-1.6	-39.8	261.0	-378.9
5- 6	14630.5	10160.7	1.9	2.1	-256.2	383.2

TENSIONI (Sz= 0.00)	Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
	5-16	si	4	Sx Si	-284.0	0.0	0.0	0.0	284.0
	5-16	si	6	Tz	135.3	28.5	0.0	28.5	144.0
	5- 6	si	9	Ty	7.2	0.0	-58.7	58.7	101.9
-----								PROGR.	237.

SOLLECITAZIONI	MZ	MY	MT	N	TZ	TY
5-16	-30167.7	-20622.7	-1.6	-39.8	261.0	-378.9
5- 6	29786.9	20292.1	1.9	2.1	-256.2	383.2

TENSIONI (Sz= 0.00)	Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
	5-16	si	4	Sx Si	-565.8	0.0	0.0	0.0	565.8
	5-16	si	6	Tz	270.6	28.5	0.0	28.5	275.1
	5- 6	si	9	Ty	14.4	0.0	-58.7	58.7	102.7
-----								PROGR.	277.

SOLLECITAZIONI	MZ	MY	MT	N	TZ	TY
5-16	-45153.2	-30945.2	-1.6	-39.8	261.0	-378.9
5- 6	44943.3	30423.5	1.9	2.1	-256.2	383.2

TENSIONI (Sz= 0.00)	Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
	5-16	si	4	Sx Si	-847.6	0.0	0.0	0.0	847.6
	5-16	si	6	Tz	406.0	28.5	0.0	28.5	409.0
	5- 6	si	9	Ty	21.6	0.0	-58.7	58.7	103.9
-----								PROGR.	316.

SOLLECITAZIONI	MZ	MY	MT	N	TZ	TY
5-16	-60138.6	-41267.7	-1.6	-39.8	261.0	-378.9
5- 6	60099.7	40555.0	1.9	2.1	-256.2	383.2

TENSIONI (Sz= 0.00)	Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
	5-16	si	4	Sx Si	-1129.5	0.0	0.0	0.0	1129.5
	5-16	si	6	Tz	541.4	28.5	0.0	28.5	543.6
	5- 6	si	9	Ty	28.7	0.0	-58.7	58.7	105.6

## VERIFICA STABILITA` :

z | L0 = 316. |  
 | Lc = 316. | Ro = 5.73 | lm = 55.2 | Ncr= 214317.2 | alfa(b )=0.3400 | ki=0.8188 |  
 y | Lc = 316. | Ro = 3.52 | lm = 90.0 | Ncr= 80605.7 | alfa(c )=0.4900 | ki=0.5191 |  
 Caso 5-16 - Nodo 3 - Asse Y  
 Ned = -39.8 | Mzeq = -45104.0 | Myeq = 30984.7 | Ss = -849.5 ( 0.324 )

P\_HEA140\_S008 ( 8 ) stato limite ultimo - ASTA ( 1507- 1509 ) 471  
 -----  
 PROGR. 0.

SOLLECITAZIONI	MZ	MY	MT	N	TZ	TY
5- 1	-55795.9	-40761.0	2.0	6.3	-256.9	358.1
5-16	55008.0	40951.5	-2.1	-38.9	257.8	-357.5
5- 6	-56546.7	-40249.7	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	Si	1091.4	0.0
5-16	si	6	Tz		-509.7	27.7
5- 6	si	9	Ty		-28.2	0.0
						Tau tot.
						0.0
						512.0
						100.3
						40.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-41636.9	-30600.9	2.0	6.3	-256.9	358.1
5-16	40871.7	30756.0	-2.1	-38.9	257.8	-357.5
5- 6	-42198.8	-30214.5	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	Si	817.8	0.0
5-16	si	6	Tz		-380.3	27.7
5- 6	si	9	Ty		-21.1	0.0
						Tau tot.
						0.0
						817.8
						383.3
						98.6
						79.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-27477.9	-20440.9	2.0	6.3	-256.9	358.1
5-16	26735.4	20560.5	-2.1	-38.9	257.8	-357.5
5- 6	-27850.9	-20179.4	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	Si	544.2	0.0
5-16	si	6	Tz		-250.9	27.7
5- 6	si	9	Ty		-14.0	0.0
						Tau tot.
						0.0
						544.2
						255.4
						97.3
						119.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 1	-13318.9	-10280.9	2.0	6.3	-256.9	358.1
5-16	12599.1	10365.0	-2.1	-38.9	257.8	-357.5
5- 6	-13503.0	-10144.3	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5- 1	si	2	Sx	Si	270.6	0.0
5-16	si	6	Tz		-121.4	27.7
5- 6	si	9	Ty		-6.9	0.0
						Tau tot.
						0.0
						270.6
						130.5
						96.5
						158.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	-1948.5	138.9	-0.1	-86.9	5.5	4.8
5-16	-1537.7	198.5	-2.1	-38.9	257.8	-357.5
5- 6	845.4	-138.1	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	3	Sx	Si	-17.8	0.0
5-16	si	6	Tz		7.9	27.7
5- 6	si	9	Ty		0.1	0.0
5- 6	si	10	Si		0.3	0.0
						Tau tot.
						0.0
						17.8
						48.6
						96.3
						96.3
						198.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-16	-15673.6	-10026.4	-2.1	-38.9	257.8	-357.5
5- 6	15192.8	9926.4	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	4	Sx	Si	-282.2	0.0
5-16	si	6	Tz		137.4	27.7
5- 6	si	9	Ty		7.3	0.0
						Tau tot.
						0.0
						282.2
						145.5
						96.5
						237.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-16	-29809.9	-20221.8	-2.1	-38.9	257.8	-357.5
5- 6	29540.7	19961.5	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	4	Sx	Si	-556.3	0.0
5-16	si	6	Tz		266.8	27.7
5- 6	si	9	Ty		14.3	0.0
						Tau tot.
						0.0
						556.3
						271.1
						97.3
						277.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-16	-43946.2	-30417.3	-2.1	-38.9	257.8	-357.5
5- 6	43888.6	29996.6	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	4	Sx	Si	-830.4	0.0
5-16	si	6	Tz		396.3	27.7
5- 6	si	9	Ty		21.4	0.0
						Tau tot.
						0.0
						830.4
						399.2
						98.6
						316.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-16	-58082.5	-40612.9	-2.1	-38.9	257.8	-357.5
5- 6	58236.5	40031.8	2.0	7.6	-253.8	362.8

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	4	Sx	Si	-1104.5	0.0
5-16	si	6	Tz		525.7	27.7
5- 6	si	9	Ty		28.5	0.0
						Tau tot.
						0.0
						1104.5
						527.9
						100.4

VERIFICA STABILITA` :

|L0 = 316. |

Z | Lc = 316. | Ro = 5.73 | lm = 55.2 | Ncr = 214316.5 | alfa(b) = 0.3400 | ki = 0.8188 |  
 Y | Lc = 316. | Ro = 3.52 | lm = 90.0 | Ncr = 80605.4 | alfa(c) = 0.4900 | ki = 0.5191 |  
 Caso 5-16 - Nodo 3 - Asse Y  
 Ned = -38.9 | Mzeq = -43561.9 | Myeq = 30713.7 | Ss = -834.7 ( 0.319 )

P\_HEA140\_S008 ( 8 ) stato limite ultimo - ASTA ( 1505 - 1507 ) 472  
 ----- PROGR. 0.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-81582.2	-33140.8	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6	si	2	Sx	Si	1121.2	0.0	0.0	1121.2
5- 6	si	6	Tz		650.9	-29.4	0.0	652.9
5- 6	si	9	Ty		-22.1	0.0	-72.2	126.9

 ----- PROGR. 40.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-63099.0	-24818.3	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6	si	2	Sx	Si	852.8	0.0	0.0	852.8
5- 6	si	6	Tz		500.6	-29.4	0.0	503.2
5- 6	si	9	Ty		-16.2	0.0	-72.2	126.1

 ----- PROGR. 79.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-44615.8	-16496.0	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6	si	2	Sx	Si	584.5	0.0	0.0	584.5
5- 6	si	6	Tz		350.4	-29.4	0.0	354.1
5- 6	si	9	Ty		-10.3	0.0	-72.2	125.4

 ----- PROGR. 119.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-26132.9	-8174.4	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6	si	2	Sx	Si	316.1	0.0	0.0	316.1
5- 6	si	6	Tz		200.1	-29.4	0.0	206.5
5- 6	si	9	Ty		-4.5	0.0	-72.2	125.1

 ----- PROGR. 158.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5- 6	-7651.8	242.4	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6	si	1	Sx		54.8	0.0	0.0	54.8
5- 6	si	6	Tz		49.5	-29.4	0.0	71.1
5- 6	si	9	Ty	Si	1.5	0.0	-72.2	125.0

 ----- PROGR. 198.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5-11	-11429.0	-8446.4	-2.9	-62.5	210.9	-465.0
5- 6	10836.7	8475.0	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	4	Sx	Si	-227.2	0.0	0.0	227.2
5- 6	si	6	Tz		-100.4	-29.4	0.0	112.6
5- 6	si	9	Ty		7.3	0.0	-72.2	125.2

 ----- PROGR. 237.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5-11	-29821.0	-16786.2	-2.9	-62.5	210.9	-465.0
5- 6	29318.7	16796.7	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	4	Sx	Si	-495.3	0.0	0.0	495.3
5- 6	si	6	Tz		-250.6	-29.4	0.0	255.8
5- 6	si	9	Ty		13.2	0.0	-72.2	125.7

 ----- PROGR. 277.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5-11	-48214.0	-25126.8	-2.9	-62.5	210.9	-465.0
5- 6	47801.7	25119.0	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	4	Sx	Si	-763.4	0.0	0.0	763.4
5- 6	si	6	Tz		-400.9	-29.4	0.0	404.1
5- 6	si	9	Ty		19.1	0.0	-72.2	126.5

 ----- PROGR. 316.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
5-11	-66607.2	-33467.4	-2.9	-62.5	210.9	-465.0
5- 6	66284.9	33441.5	9.2	41.4	-210.4	467.3

  
 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-11	si	4	Sx	Si	-1031.5	0.0	0.0	1031.5
5- 6	si	6	Tz		-551.1	-29.4	0.0	553.5
5- 6	si	9	Ty		24.9	0.0	-72.2	127.5

 -----

VERIFICA STABILITA` :

Z | L0 = 316. |  
 Y | Lc = 316. | Ro = 5.73 | lm = 55.2 | Ncr = 214316.6 | alfa(b) = 0.3400 | ki = 0.8188 |  
 Y | Lc = 316. | Ro = 3.52 | lm = 90.0 | Ncr = 80605.4 | alfa(c) = 0.4900 | ki = 0.5191 |  
 Caso 5-11 - Nodo 1 - Asse Y  
 Ned = -62.5 | Mzeq = 60404.9 | Myeq = -25100.6 | Ss = -843.5 ( 0.322 )

P\_HEA120\_S010 ( 10 ) stato limite ultimo - ASTA ( 1397- 1399 ) 214  
 PROGR. 0.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-14	0.0	0.0	0.0	-262.5	-12.7	63.0
2- 2	0.0	0.0	0.0	-15.0	-62.5	310.0

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-14	si	1	Sx	-10.3	0.0	0.0	0.0	10.3
2- 2	si	6	Tz	-0.6	-16.9	0.0	16.9	29.3
2- 2	si	9	TySi	-0.6	0.0	-61.1	61.1	105.9

 PROGR. 48.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	12881.4	2597.4	0.0	-15.0	-46.9	232.4

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-188.9	0.0	0.0	0.0	188.9
2- 2	si	6	Tz	-137.7	-12.7	0.0	12.7	139.5
2- 2	si	9	Ty	2.2	0.0	-45.8	45.8	79.4

 PROGR. 95.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	22080.2	4452.1	0.0	-15.0	-31.2	154.9

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-323.4	0.0	0.0	0.0	323.4
2- 2	si	6	Tz	-235.7	-8.4	0.0	8.4	236.1
2- 2	si	9	Ty	4.2	0.0	-30.5	30.5	53.1

 PROGR. 143.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	27597.4	5564.6	0.0	-15.0	-15.6	77.4

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-404.0	0.0	0.0	0.0	404.0
2- 2	si	6	Tz	-294.4	-4.2	0.0	4.2	294.5
2- 2	si	9	Ty	5.4	0.0	-15.3	15.3	27.0

 PROGR. 190.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	29434.3	5935.0	0.0	-15.0	0.0	-0.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-430.9	0.0	0.0	0.0	430.9
2- 2	si	6	Tz	-314.0	0.0	0.0	0.0	314.0
2- 2	si	9	Ty	5.8	0.0	0.0	0.0	5.8

 PROGR. 238.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	27591.8	5563.5	0.0	-15.0	15.6	-77.5

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-404.0	0.0	0.0	0.0	404.0
2- 2	si	6	Tz	-294.3	4.2	0.0	4.2	294.4
2- 2	si	9	Ty	5.4	0.0	15.3	15.3	27.0

 PROGR. 285.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	22071.2	4450.3	0.0	-15.0	31.2	-154.9

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-323.3	0.0	0.0	0.0	323.3
2- 2	si	6	Tz	-235.6	8.4	0.0	8.4	236.0
2- 2	si	9	Ty	4.2	0.0	30.6	30.6	53.1

 PROGR. 333.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	12873.6	2595.8	0.0	-15.0	46.8	-232.3

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-188.8	0.0	0.0	0.0	188.8
2- 2	si	6	Tz	-137.6	12.7	0.0	12.7	139.4
2- 2	si	9	Ty	2.2	0.0	45.8	45.8	79.4

 PROGR. 380.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6-14	0.0	0.0	0.0	-262.5	12.7	-63.0
2- 2	0.0	0.0	0.0	-15.0	62.4	-309.7

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-14	si	2	Sx	-10.3	0.0	0.0	0.0	10.3
2- 2	si	6	Tz	-0.6	16.9	0.0	16.9	29.2
2- 2	si	9	TySi	-0.6	0.0	61.1	61.1	105.8

VERIFICA STABILITA` :

| L0 = 380. |

Z | Lc = 380. | Ro = 4.89 | lm = 77.7 | Ncr = 87209.8 | alfa(b) = 0.3400 | ki = 0.6643 |  
 Y | Lc = 380. | Ro = 3.01 | lm = 126.1 | Ncr = 33145.5 | alfa(c) = 0.4900 | ki = 0.3306 |  
 Caso 2- 2 - Nodo 2 - Asse Y  
 Ned = -15.0 | Mzeq = 25509.7 | Myeq = 5143.7 | Ss = -374.8 ( 0.143 )

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 0. PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	0.0	0.0	0.0	432.8	-10.4	51.6
2- 2	0.0	0.0	0.0	11.4	-51.6	256.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx	17.0	0.0	0.0
2- 2	si	6	Tz	0.4	-14.0	0.0
2- 2	si	9	Ty	0.4	0.0	-50.5
						50.5
						87.5
						39.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	8653.4	1744.8	0.0	11.4	-38.7	192.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	127.0	0.0	0.0
2- 2	si	6	Tz	-91.7	-10.5	0.0
2- 2	si	9	Ty	2.3	0.0	-37.9
						37.9
						65.6
						77.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	14834.4	2991.1	0.0	11.4	-25.8	128.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	217.3	0.0	0.0
2- 2	si	6	Tz	-157.5	-7.0	0.0
2- 2	si	9	Ty	3.7	0.0	-25.3
						25.3
						43.9
						116.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18543.0	3738.9	0.0	11.4	-12.9	64.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	271.5	0.0	0.0
2- 2	si	6	Tz	-197.0	-3.5	0.0
2- 2	si	9	Ty	4.5	0.0	-12.6
						12.6
						22.3
						154.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	19779.2	3988.2	0.0	11.4	0.0	0.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	289.6	0.0	0.0
2- 2	si	6	Tz	-210.1	0.0	0.0
2- 2	si	9	Ty	4.8	0.0	0.0
						0.0
						4.8
						193.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18543.0	3738.9	0.0	11.4	12.9	-64.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	271.5	0.0	0.0
2- 2	si	6	Tz	-197.0	3.5	0.0
2- 2	si	9	Ty	4.5	0.0	12.6
						12.6
						22.3
						232.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	14834.4	2991.1	0.0	11.4	25.8	-128.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	217.3	0.0	0.0
2- 2	si	6	Tz	-157.5	7.0	0.0
2- 2	si	9	Ty	3.7	0.0	25.3
						25.3
						43.9
						270.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	8653.4	1744.8	0.0	11.4	38.7	-192.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	127.0	0.0	0.0
2- 2	si	6	Tz	-91.7	10.5	0.0
2- 2	si	9	Ty	2.3	0.0	37.9
						37.9
						65.6
						309.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	0.0	0.0	0.0	432.8	10.4	-51.6
2- 2	0.0	0.0	0.0	11.4	51.6	-256.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	2	Sx	17.0	0.0	0.0
2- 2	si	6	Tz	0.4	14.0	0.0
2- 2	si	9	Ty	0.4	0.0	50.5
2- 2	si	10	Si	0.4	0.0	50.5
						50.5
						87.5
						87.5

VERIFICA STABILITA` :

|L0 = 309. |

Z | Lc = 309. | Ro = 4.89 | lm = 63.2 | Ncr = 131941.8 | alfa(b) = 0.3400 | ki = 0.7678 |  
 Y | Lc = 309. | Ro = 3.01 | lm = 102.5 | Ncr = 50146.5 | alfa(c) = 0.4900 | ki = 0.4432 |  
 Caso 6- 3 - Nodo 2 - Asse Y  
 Ned = -425.0 | Mzeq = 3455.4 | Myeq = 696.7 | Ss = -88.5 ( 0.034 )

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 ----- PROGR. 0.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 4	0.0	0.0	0.0	-279.2	-17.1	84.8
2- 2	0.0	0.0	0.0	-11.2	-109.2	541.5

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 4	si	1	Sx	-11.0	0.0	0.0	0.0	11.0
2- 2	si	6	Tz	-0.4	-29.5	0.0	29.5	51.1
2- 2	si	9	TySi	-0.4	0.0	-106.8	106.8	185.0

 ----- PROGR. 46.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	21652.6	4365.9	0.0	-11.2	-81.9	406.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-317.0	0.0	0.0	0.0	317.0
2- 2	si	6	Tz	-231.0	-22.1	0.0	22.1	234.1
2- 2	si	9	Ty	4.3	0.0	-80.1	80.1	138.8

 ----- PROGR. 91.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	37116.7	7484.0	0.0	-11.2	-54.6	270.7

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-543.1	0.0	0.0	0.0	543.1
2- 2	si	6	Tz	-395.6	-14.7	0.0	14.7	396.4
2- 2	si	9	Ty	7.7	0.0	-53.4	53.4	92.8

 ----- PROGR. 137.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	46393.3	9354.5	0.0	-11.2	-27.3	135.3

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-678.7	0.0	0.0	0.0	678.7
2- 2	si	6	Tz	-494.4	-7.4	0.0	7.4	494.5
2- 2	si	9	Ty	9.7	0.0	-26.7	26.7	47.2

 ----- PROGR. 183.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	49483.5	9977.6	0.0	-11.2	0.0	-0.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-723.8	0.0	0.0	0.0	723.8
2- 2	si	6	Tz	-527.3	0.0	0.0	0.0	527.3
2- 2	si	9	Ty	10.4	0.0	0.0	0.0	10.4

 ----- PROGR. 228.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	46388.2	9353.5	0.0	-11.2	27.3	-135.4

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-678.6	0.0	0.0	0.0	678.6
2- 2	si	6	Tz	-494.3	7.4	0.0	7.4	494.5
2- 2	si	9	Ty	9.7	0.0	26.7	26.7	47.3

 ----- PROGR. 274.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	37108.5	7482.4	0.0	-11.2	54.6	-270.7

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-542.9	0.0	0.0	0.0	542.9
2- 2	si	6	Tz	-395.5	14.8	0.0	14.8	396.3
2- 2	si	9	Ty	7.7	0.0	53.4	53.4	92.8

 ----- PROGR. 320.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
2- 2	21645.5	4364.5	0.0	-11.2	81.9	-406.0

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx Si	-316.9	0.0	0.0	0.0	316.9
2- 2	si	6	Tz	-230.9	22.1	0.0	22.1	234.0
2- 2	si	9	Ty	4.3	0.0	80.1	80.1	138.7

 ----- PROGR. 366.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 4	0.0	0.0	0.0	-279.2	17.1	-84.8
2- 2	0.0	0.0	0.0	-11.2	109.1	-541.3

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 4	si	2	Sx	-11.0	0.0	0.0	0.0	11.0
2- 2	si	6	Tz	-0.4	29.5	0.0	29.5	51.1
2- 2	si	9	TySi	-0.4	0.0	106.7	106.7	184.9

 -----

VERIFICA STABILITA` :

Z | L0 = 366. |  
 Z | Lc = 366. | Ro = 4.89 | lm = 74.8 | Ncr = 94238.1 | alfa(b) = 0.3400 | ki = 0.6861 |

Y | Lc = 366. | Ro = 3.01 | lm = 121.3 | Ncr = 35816.7 | alfa(c) = 0.4900 | ki = 0.3504 |  
 Caso 2- 2 - Nodo 2 - Asse Y  
 Ned = -11.2 | Mzeq = 42885.7 | Myeq = 8647.3 | Ss = -628.3 ( 0.240)

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 ----- PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6- 8	0.0	0.0	0.0	122.1	-15.6	77.5
2- 2	0.0	0.0	0.0	95.4	-99.3	492.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6- 8	si	1	Sx	4.8	0.0	0.0
2- 2	si	6	Tz	3.8	-26.8	0.0
2- 2	si	9	Ty	3.8	0.0	-97.1
						Si
						4.8
						46.6
						168.2
						42.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18179.6	3665.6	0.0	95.4	-74.4	369.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	269.5	0.0	0.0
2- 2	si	6	Tz	-189.8	-20.1	0.0
2- 2	si	9	Ty	7.7	0.0	-72.8
						Si
						269.5
						193.0
						126.3
						84.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	31163.0	6283.6	0.0	95.4	-49.6	246.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	459.3	0.0	0.0
2- 2	si	6	Tz	-328.0	-13.4	0.0
2- 2	si	9	Ty	10.6	0.0	-48.5
						Si
						459.3
						328.8
						84.7
						127.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	38951.2	7853.9	0.0	95.4	-24.8	123.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	573.2	0.0	0.0
2- 2	si	6	Tz	-410.9	-6.7	0.0
2- 2	si	9	Ty	12.3	0.0	-24.3
						Si
						573.2
						411.1
						43.8
						169.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	41545.2	8377.0	0.0	95.4	0.0	-0.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	611.1	0.0	0.0
2- 2	si	6	Tz	-438.6	0.0	0.0
2- 2	si	9	Ty	12.8	0.0	0.0
						Si
						611.1
						438.6
						12.8
						211.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	38946.1	7852.9	0.0	95.4	24.8	-123.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	573.1	0.0	0.0
2- 2	si	6	Tz	-410.9	6.7	0.0
2- 2	si	9	Ty	12.3	0.0	24.3
						Si
						573.1
						411.1
						43.8
						253.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	31154.9	6281.9	0.0	95.4	49.6	-246.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	459.2	0.0	0.0
2- 2	si	6	Tz	-327.9	13.4	0.0
2- 2	si	9	Ty	10.6	0.0	48.5
						Si
						459.2
						328.8
						84.7
						295.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18172.5	3664.2	0.0	95.4	74.4	-369.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	269.4	0.0	0.0
2- 2	si	6	Tz	-189.7	20.1	0.0
2- 2	si	9	Ty	7.7	0.0	72.8
						Si
						269.4
						192.9
						126.3
						338.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6- 8	0.0	0.0	0.0	122.1	15.6	-77.5
2- 2	0.0	0.0	0.0	95.4	99.2	-492.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6- 8	si	3	Sx	4.8	0.0	0.0
2- 2	si	6	Tz	3.8	26.8	0.0
2- 2	si	9	Ty	3.8	0.0	97.0
						Si
						4.8
						46.6
						168.1

VERIFICA STABILITA` :

Z | L0 = 338. |  
 Lc = 338. | Ro = 4.89 | lm = 69.0 | Ncr = 110469.1 | alfa(b) = 0.3400 | ki = 0.7273 |  
 Y | Lc = 338. | Ro = 3.01 | lm = 112.0 | Ncr = 41985.5 | alfa(c) = 0.4900 | ki = 0.3930 |

Caso 6- 9 - Nodo 2 - Asse Y

Ned = -84.9 | Mzeq = 5669.8 | Myeq = 1143.2 | Ss = -91.5 ( 0.035)

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PROGR. 0.

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N		TZ		TY
6- 9			0.0		0.0		0.0		-289.6		-15.2		75.5
2- 2			0.0		0.0		0.0		-40.2		-97.6		484.0
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
6- 9	si	1	Sx		-11.4		0.0		0.0		0.0		11.4
2- 2	si	6	Tz		-1.6		-26.4		0.0		26.4		45.7
2- 2	si	9	TySi		-1.6		0.0		-95.4		95.4		165.3
												PROGR.	40.

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N		TZ		TY
2- 2			17131.1		3454.2		0.0		-40.2		-73.2		362.9
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-252.0		0.0		0.0		0.0		252.0
2- 2	si	6	Tz		-184.0		-19.8		0.0		19.8		187.1
2- 2	si	9	Ty		2.2		0.0		-71.6		71.6		124.0
-----											PROGR.	81.	

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N		TZ		TY
2- 2			29365.2		5921.1		0.0		-40.2		-48.8		241.9
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-430.9		0.0		0.0		0.0		430.9
2- 2	si	6	Tz		-314.2		-13.2		0.0		13.2		315.0
2- 2	si	9	Ty		4.8		0.0		-47.7		47.7		82.8
-----											PROGR.	121.	

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N		TZ		TY
2- 2			36703.5		7400.7		0.0		-40.2		-24.4		120.9
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-538.2		0.0		0.0		0.0		538.2
2- 2	si	6	Tz		-392.3		-6.6		0.0		6.6		392.5
2- 2	si	9	Ty		6.4		0.0		-23.8		23.8		41.8
										----- PROGR.			162.

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N		TZ		TY
2- 2			39147.2		7893.5		0.0		-40.2		0.0		-0.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-573.9		0.0		0.0		0.0		573.9
2- 2	si	6	Tz		-418.4		0.0		0.0		0.0		418.4
2- 2	si	9	Ty		7.0		0.0		0.0		0.0		7.0
-----											PROGR.	202.	

SOLLECITAZIONI :														
Caso			MZ		MY		MT		N		TZ		TY	
2- 2			36697.5		7399.5		0.0		-40.2		24.4		-121.0	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si	
2- 2	si	2	Sx	Si	-538.1		0.0		0.0		0.0		538.1	
2- 2	si	6	Tz		-392.3		6.6		0.0		6.6		392.5	
2- 2	si	9	Ty		6.4		0.0		23.9		23.9		41.8	
-----										PROGR.				243.

SOLLECITAZIONI :										PROGR.		219.5		
Caso			MZ		MY		MT		N		TZ		TY	
2- 2			29355.6		5919.1		0.0		-40.2		48.8		-241.9	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si	
2- 2	si	2	Sx	Si	-430.7		0.0		0.0		0.0		430.7	
2- 2	si	6	Tz		-314.1		13.2		0.0		13.2		314.9	
2- 2	si	9	Ty		4.8		0.0		47.7		47.7		82.8	
-----										PROGR.				283.

SOLLECITAZIONI :										PROGR.		258.1	
Caso			MZ		MY		MT		N		TZ		TY
2- 2			17122.7		3452.5		0.0		-40.2		73.2		-362.8
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-251.9		0.0		0.0		0.0		251.9
2- 2	si	6	Tz		-183.9		19.8		0.0		19.8		187.0
2- 2	si	9	Ty		2.2		0.0		71.5		71.5		123.9
-----										PROGR.		324.	

SOLLECITAZIONI :				TENSIONI (Sz= 0.00) :				
Caso		MZ	MY	MT	N	TZ	TY	
6- 9		0.0	0.0	0.0	-289.6	15.2	-75.5	
2- 2		0.0	0.0	0.0	-40.2	97.5	-483.6	
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	3	Sx	-11.4	0.0	0.0	0.0	11.4
2- 2	si	6	Tz	-1.6	26.4	0.0	26.4	45.7
2- 2	si	9	TySi	-1.6	0.0	95.4	95.4	165.2

VERIFICA STABILITA` :

Z | L0 = 324. |  
 | LC = 324. | Ro = 4.89 | lm = 66.2 | Ncr= 120204.2 | alfa(b )=0.3400 | ki=0.7473 |  
 Y | LC = 324. | Ro = 3.01 | lm = 107.4 | Ncr= 45685.5 | alfa(c )=0.4900 | ki=0.4166 |  
 Caso 2- 2 - Nodo 2 - Asse Y

Ned = -40.2 | Mzeq = 33927.6 | Myeq = 6841.0 | Ss = -500.1 ( 0.191)

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PROGR. 0.

SOLLECITAZIONI :										PROGR.	0.
Caso	MZ			MY	MT	N	TZ	TY			
6-14	0.0			0.0	0.0	-262.1	-12.7	63.0			
2- 2	0.0			0.0	0.0	-11.5	-62.5	310.0			
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
6-14	si	1	Sx	-10.3	0.0	0.0	0.0	10.3			
2- 2	si	6	Tz	-0.5	-16.9	0.0	16.9	29.3			
2- 2	si	9	TySi	-0.5	0.0	-61.1	61.1	105.9			
										PROGR.	48

PROGR. 48.

SOLLECITAZIONI :										PROGR.	48.		
Caso			MZ		MY		MT		N		TZ		TY
2- 2			12883.5		2597.8		0.0		-11.5		-46.9		232.4
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-188.8		0.0		0.0		0.0		188.8
2- 2	si	6	Tz		-137.6		-12.7		0.0		12.7		139.4
2- 2	si	9	Ty		2.4		0.0		-45.8		45.8		79.4
-----										PROGR.	95.		

PROGR. 95.

SOLLECITAZIONI :										PROGR.	55.		
Caso			MZ		MY		MT		N		TZ		TY
2- 2			22083.8		4452.9		0.0		-11.5		-31.2		154.9
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-323.3		0.0		0.0		0.0		323.3
2- 2	si	6	Tz		-235.6		-8.4		0.0		8.4		236.0
2- 2	si	9	Ty		4.4		0.0		-30.5		30.5		53.1
										-----		PROGR.	14.

PROGR. 143.

SOLLECITAZIONI :										PROGR.	143.		
Caso			MZ		MY		MT		N		TZ		TY
2- 2			27601.9		5565.5		0.0		-11.5		-15.6		77.4
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-404.0		0.0		0.0		0.0		404.0
2- 2	si	6	Tz		-294.3		-4.2		0.0		4.2		294.4
2- 2	si	9	Ty		5.6		0.0		-15.3		15.3		27.0
										PROGR.	190.		

PROGR. 190.

SOLLECITAZIONI :										PROGR.	190.		
Caso			MZ		MY		MT		N		TZ		TY
2- 2			29439.0		5935.9		0.0		-11.5		0.0		-0.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-430.8		0.0		0.0		0.0		430.8
2- 2	si	6	Tz		-313.9		0.0		0.0		0.0		313.9
2- 2	si	9	Ty		6.0		0.0		0.0		0.0		6.0
										PROGR.	230.		

PROGR. 238.

SOLLECITAZIONI :										PROGR.	258.		
Caso			MZ		MY		MT		N		TZ		TY
2- 2			27596.3		5564.4		0.0		-11.5		15.6		-77.5
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx Si		-403.9		0.0		0.0		0.0		403.9
2- 2	si	6	Tz		-294.3		4.2		0.0		4.2		294.4
2- 2	si	9	Ty		5.6		0.0		15.3		15.3		27.1
										PROGR.	288.		

PROGR. 285.

SOLLECITAZIONI :										PROGR.		283.	
Caso			MZ		MY		MT		N		TZ		TY
2- 2			22074.8		4451.1		0.0		-11.5		31.2		-154.9
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-323.2		0.0		0.0		0.0		323.2
2- 2	si	6	Tz		-235.5		8.4		0.0		8.4		235.9
2- 2	si	9	Ty		4.4		0.0		30.6		30.6		53.1
										PROGR.		333.	

PROGR. 333.

SOLLECITAZIONI :										PROGR.	353.
Caso			MZ	MY	MT	N	TZ	TY			
2- 2			12875.6	2596.2	0.0	-11.5	46.8				-232.3
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
2- 2	si	2	Sx Si	-188.7	0.0	0.0	0.0				188.7
2- 2	si	6	Tz	-137.5	12.7	0.0	12.7				139.3
2- 2	si	9	Ty	2.4	0.0	45.8	45.8				79.4
										PROGR.	380.

PROGR. 380.

SOLLECITAZIONI :							PROGR.	580.
Caso		MZ	MY	MT	N	TZ	TY	
6-14		0.0	0.0	0.0	-262.1	12.7		-63.0
2- 2		0.0	0.0	0.0	-11.5	62.5		-309.7
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-14	si	4	Sx	-10.3	0.0	0.0	0.0	10.3
2- 2	si	6	Tz	-0.5	16.9	0.0	16.9	29.2
2- 2	si	9	TySi	-0.5	0.0	61.1	61.1	105.8

VERIFICA STABILITA` :

Z | L0 = 380. |  
 Lc = 380. | Ro = 4.89 | lm = 77.7 | Ncr = 87209.4 | alfa(b ) = 0.3400 | ki = 0.6643 |  
 Y | Lc = 380. | Ro = 3.01 | lm = 126.1 | Ncr = 33145.3 | alfa(c ) = 0.4900 | ki = 0.3306 |  
 Caso 2- 2 - Nodo 2 - Asse Y  
 Ned = -11.5 | Mzeq = 25513.8 | Myeq = 5144.5 | Ss = -374.4 ( 0.143)

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 ----- PROGR. 0.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 6-13 0.0 0.0 0.0 438.4 -10.4 51.6  
 2- 2 0.0 0.0 0.0 16.4 -51.7 256.2

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 6-13 si 1 Sx 17.3 0.0 0.0 0.0 17.3  
 2- 2 si 6 Tz 0.6 -14.0 0.0 14.0 24.2  
 2- 2 si 9 TySi 0.6 0.0 -50.5 50.5 87.5  
 ----- PROGR. 39.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 2- 2 8660.2 1746.2 0.0 16.4 -38.7 192.2

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 2- 2 si 4 Sx Si 127.3 0.0 0.0 0.0 127.3  
 2- 2 si 6 Tz -91.6 -10.5 0.0 10.5 93.3  
 2- 2 si 9 Ty 2.5 0.0 -37.9 37.9 65.7  
 ----- PROGR. 77.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 2- 2 14846.1 2993.5 0.0 16.4 -25.8 128.1

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 2- 2 si 4 Sx Si 217.7 0.0 0.0 0.0 217.7  
 2- 2 si 6 Tz -157.4 -7.0 0.0 7.0 157.9  
 2- 2 si 9 Ty 3.9 0.0 -25.3 25.3 43.9  
 ----- PROGR. 116.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 2- 2 18557.7 3741.9 0.0 16.4 -12.9 64.1

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 2- 2 si 4 Sx Si 271.9 0.0 0.0 0.0 271.9  
 2- 2 si 6 Tz -196.9 -3.5 0.0 3.5 197.0  
 2- 2 si 9 Ty 4.7 0.0 -12.6 12.6 22.4  
 ----- PROGR. 154.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 2- 2 19794.9 3991.3 0.0 16.4 0.0 0.0

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 2- 2 si 4 Sx Si 290.0 0.0 0.0 0.0 290.0  
 2- 2 si 6 Tz -210.1 0.0 0.0 0.0 210.1  
 2- 2 si 9 Ty 5.0 0.0 0.0 0.0 5.0  
 ----- PROGR. 193.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 2- 2 18557.7 3741.9 0.0 16.4 12.9 -64.1

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 2- 2 si 4 Sx Si 271.9 0.0 0.0 0.0 271.9  
 2- 2 si 6 Tz -196.9 3.5 0.0 3.5 197.0  
 2- 2 si 9 Ty 4.7 0.0 12.6 12.6 22.4  
 ----- PROGR. 232.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 2- 2 14846.1 2993.5 0.0 16.4 25.8 -128.1

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 2- 2 si 4 Sx Si 217.7 0.0 0.0 0.0 217.7  
 2- 2 si 6 Tz -157.4 7.0 0.0 7.0 157.9  
 2- 2 si 9 Ty 3.9 0.0 25.3 25.3 43.9  
 ----- PROGR. 270.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 2- 2 8660.3 1746.2 0.0 16.4 38.7 -192.2

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 2- 2 si 4 Sx Si 127.3 0.0 0.0 0.0 127.3  
 2- 2 si 6 Tz -91.6 10.5 0.0 10.5 93.3  
 2- 2 si 9 Ty 2.5 0.0 37.9 37.9 65.7  
 ----- PROGR. 309.

SOLLECITAZIONI :  
 Caso MZ MY MT N TZ TY  
 6-13 0.0 0.0 0.0 438.4 10.4 51.6  
 2- 2 0.0 0.0 0.0 16.4 51.7 -256.2

TENSIONI (Sz= 0.00) :  
 Caso Ve|No|massimi Sx Tz Ty Tau tot. Si  
 6-13 si 2 Sx 17.3 0.0 0.0 0.0 17.3  
 2- 2 si 6 Tz 0.6 14.0 0.0 14.0 24.2  
 2- 2 si 9 Ty 0.6 0.0 50.5 50.5 87.5  
 2- 2 si 10 Si 0.6 0.0 50.5 50.5 87.5

VERIFICA STABILITA` :

L0 = 309.  
 z | Lc = 309. | Ro = 4.89 | lm = 63.2 | Ncr = 131941.8 | alfa(b )=0.3400 | ki=0.7678 |  
 y | Lc = 309. | Ro = 3.01 | lm = 102.5 | Ncr = 50146.5 | alfa(c )=0.4900 | ki=0.4432 |  
 Caso 6- 4 - Nodo 2 - Asse Y  
 Ned = -431.1 | Mzeq = 3458.2 | Myeq = 697.3 | Ss = -89.1 ( 0.034)

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 ----- PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6- 8	0.0	0.0	0.0	-261.5	-17.1	84.8
2- 2	0.0	0.0	0.0	-7.4	-109.2	541.5

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6- 8	si	1	Sx	-10.3	0.0	0.0
2- 2	si	6	Tz	-0.3	-29.5	0.0
2- 2	si	9	Ty	-0.3	0.0	-106.8
						Tau tot.
						0.0
						29.5
						106.8
						185.0
						46.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	21651.8	4365.8	0.0	-7.4	-81.9	406.1

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	2	Sx	-316.8	0.0	0.0
2- 2	si	6	Tz	-230.8	-22.1	0.0
2- 2	si	9	Ty	4.4	0.0	-80.1
						Tau tot.
						0.0
						22.1
						80.1
						138.8
						91.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	37115.3	7483.8	0.0	-7.4	-54.6	270.7

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	2	Sx	-542.9	0.0	0.0
2- 2	si	6	Tz	-395.4	-14.7	0.0
2- 2	si	9	Ty	7.8	0.0	-53.4
						Tau tot.
						0.0
						14.7
						53.4
						92.8
						137.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	46391.6	9354.2	0.0	-7.4	-27.3	135.3

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	2	Sx	-678.5	0.0	0.0
2- 2	si	6	Tz	-494.2	-7.4	0.0
2- 2	si	9	Ty	9.8	0.0	-26.7
						Tau tot.
						0.0
						7.4
						26.7
						47.2
						183.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	49481.6	9977.3	0.0	-7.4	0.0	-0.1

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	2	Sx	-723.7	0.0	0.0
2- 2	si	6	Tz	-527.1	0.0	0.0
2- 2	si	9	Ty	10.5	0.0	0.0
						Tau tot.
						0.0
						0.0
						0.0
						10.5
						228.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	46386.5	9353.2	0.0	-7.4	27.3	-135.4

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	2	Sx	-678.4	0.0	0.0
2- 2	si	6	Tz	-494.2	7.4	0.0
2- 2	si	9	Ty	9.8	0.0	26.7
						Tau tot.
						0.0
						7.4
						26.7
						47.3
						274.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	37107.2	7482.1	0.0	-7.4	54.6	-270.7

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	2	Sx	-542.8	0.0	0.0
2- 2	si	6	Tz	-395.4	14.8	0.0
2- 2	si	9	Ty	7.8	0.0	53.4
						Tau tot.
						0.0
						14.8
						53.4
						92.8
						320.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	21644.7	4364.3	0.0	-7.4	81.9	-406.0

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	2	Sx	-316.7	0.0	0.0
2- 2	si	6	Tz	-230.7	22.1	0.0
2- 2	si	9	Ty	4.4	0.0	80.1
						Tau tot.
						0.0
						22.1
						80.1
						138.7
						366.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6- 8	0.0	0.0	0.0	-261.5	17.1	-84.8
2- 2	0.0	0.0	0.0	-7.4	109.1	-541.3

TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6- 8	si	2	Sx	-10.3	0.0	0.0
2- 2	si	6	Tz	-0.3	29.5	0.0
2- 2	si	9	Ty	-0.3	0.0	106.7
						Tau tot.
						0.0
						29.5
						106.7
						184.9

-----  
 VERIFICA STABILITA` :

L0 = 366.  
 Z | Lc = 366. | Ro = 4.89 | lm = 74.8 | Ncr = 94237.7 | alfa(b ) = 0.3400 | ki = 0.6861 |  
 Y | Lc = 366. | Ro = 3.01 | lm = 121.3 | Ncr = 35816.5 | alfa(c ) = 0.4900 | ki = 0.3504 |  
 Caso 2- 2 - Nodo 2 - Asse Y  
 Ned = -7.4 | Mzeq = 42884.1 | Myeq = 8647.0 | Ss = -627.8 ( 0.240)

P_HEA120_S010 ( 10)										stato limite ultimo - ASTA ( 1446- 1439)										233
										-----										0.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
5-14	0.0			0.0			0.0			128.6			-15.6			77.5				
2- 2	0.0			0.0			0.0			80.2			-99.3			492.4				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
5-14	si	1	Sx			5.1			0.0			0.0			0.0			5.1		
2- 2	si	6	Tz			3.2			-26.8			0.0			26.8			46.6		
2- 2	si	9	TySi			3.2			0.0			-97.1			97.1			168.2		
										-----										42.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
2- 2	18183.9			3666.5			0.0			80.2			-74.5			369.3				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
2- 2	si	4	Sx			269.0			0.0			0.0			0.0			269.0		
2- 2	si	6	Tz			-190.4			-20.1			0.0			20.1			193.6		
2- 2	si	9	Ty			7.1			0.0			-72.8			72.8			126.3		
										-----										84.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
2- 2	31170.4			6285.1			0.0			80.2			-49.6			246.1				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
2- 2	si	4	Sx			458.8			0.0			0.0			0.0			458.8		
2- 2	si	6	Tz			-328.7			-13.4			0.0			13.4			329.5		
2- 2	si	9	Ty			10.0			0.0			-48.5			48.5			84.7		
										-----										127.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
2- 2	38960.5			7855.8			0.0			80.2			-24.8			123.0				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
2- 2	si	4	Sx			572.7			0.0			0.0			0.0			572.7		
2- 2	si	6	Tz			-411.6			-6.7			0.0			6.7			411.8		
2- 2	si	9	Ty			11.7			0.0			-24.3			24.3			43.6		
										-----										169.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
2- 2	41555.1			8379.0			0.0			80.2			0.0			-0.1				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
2- 2	si	4	Sx			610.7			0.0			0.0			0.0			610.7		
2- 2	si	6	Tz			-439.3			0.0			0.0			0.0			439.3		
2- 2	si	9	Ty			12.2			0.0			0.0			0.0			12.2		
										-----										211.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
2- 2	38955.4			7854.8			0.0			80.2			24.8			-123.1				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
2- 2	si	4	Sx			572.7			0.0			0.0			0.0			572.7		
2- 2	si	6	Tz			-411.6			6.7			0.0			6.7			411.8		
2- 2	si	9	Ty			11.7			0.0			24.3			24.3			43.6		
										-----										253.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
2- 2	31162.3			6283.4			0.0			80.2			49.6			-246.2				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
2- 2	si	4	Sx			458.7			0.0			0.0			0.0			458.7		
2- 2	si	6	Tz			-328.6			13.4			0.0			13.4			329.4		
2- 2	si	9	Ty			10.0			0.0			48.5			48.5			84.7		
										-----										295.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
2- 2	18176.8			3665.1			0.0			80.2			74.4			-369.2				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
2- 2	si	4	Sx			268.9			0.0			0.0			0.0			268.9		
2- 2	si	6	Tz			-190.4			20.1			0.0			20.1			193.5		
2- 2	si	9	Ty			7.1			0.0			72.8			72.8			126.3		
										-----										338.
SOLLECITAZIONI :										PROGR.										
Caso	MZ			MY			MT			N			TZ			TY				
5-14	0.0			0.0			0.0			128.6			15.6			-77.5				
2- 2	0.0			0.0			0.0			80.2			99.2			-492.2				
TENSIONI (Sz= 0.00) :																				
Caso	Ve	No	massimi			Sx			Tz			Ty			Tau tot.			Si		
5-14	si	3	Sx			5.1			0.0			0.0			0.0			5.1		
2- 2	si	6	Tz			3.2			26.8			0.0			26.8			46.6		
2- 2	si	9	TySi			3.2			0.0			97.0			97.0			168.1		
										-----										
VERIFICA STABILITA` :																				
L0 = 338.																				
Z	Lc = 338.	Ro = 4.89	lm = 69.0	Ncr= 110468.8	alfa(b )=0.3400	ki=0.7273														
Y	Lc = 338.	Ro = 3.01	lm = 112.0	Ncr= 41985.4	alfa(c )=0.4900	ki=0.3930														
Caso 5- 3 - Nodo 2 - Asse Y																				
Ned = -97.3   Mzeq = 5671.1   Myeq = 1143.5   Ss = -92.8 ( 0.035)																				
P_HEA120_S010 ( 10)										stato limite ultimo - ASTA ( 1448- 1441)										235

----- PROGR. 0.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
6- 9			0.0		0.0		0.0		-325.3	-15.2		75.5
2- 2			0.0		0.0		0.0		-40.0	-97.6		483.9
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
6- 9	si	1	Sx		-12.8		0.0		0.0	0.0		12.8
2- 2	si	6	Tz		-1.6		-26.4		0.0	26.4		45.7
2- 2	si	9	TySi		-1.6		0.0		-95.4	95.4		165.3
----- PROGR. 40.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
2- 2			17125.1		3453.0		0.0		-40.0	-73.2		362.8
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	2	Sx		-251.9		0.0		0.0	0.0		251.9
2- 2	si	6	Tz		-183.9		-19.8		0.0	19.8		187.1
2- 2	si	9	Ty		2.2		0.0		-71.5	71.5		123.9
----- PROGR. 81.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
2- 2			29355.0		5919.0		0.0		-40.0	-48.8		241.8
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	2	Sx		-430.7		0.0		0.0	0.0		430.7
2- 2	si	6	Tz		-314.1		-13.2		0.0	13.2		314.9
2- 2	si	9	Ty		4.8		0.0		-47.7	47.7		82.7
----- PROGR. 121.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
2- 2			36690.8		7398.2		0.0		-40.0	-24.4		120.9
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	2	Sx		-538.0		0.0		0.0	0.0		538.0
2- 2	si	6	Tz		-392.2		-6.6		0.0	6.6		392.4
2- 2	si	9	Ty		6.4		0.0		-23.8	23.8		41.8
----- PROGR. 162.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
2- 2			39133.6		7890.7		0.0		-40.0	0.0		-0.1
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	2	Sx		-573.7		0.0		0.0	0.0		573.7
2- 2	si	6	Tz		-418.2		0.0		0.0	0.0		418.2
2- 2	si	9	Ty		7.0		0.0		0.0	0.0		7.0
----- PROGR. 202.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
2- 2			36684.8		7397.0		0.0		-40.0	24.4		-121.0
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	2	Sx		-537.9		0.0		0.0	0.0		537.9
2- 2	si	6	Tz		-392.1		6.6		0.0	6.6		392.3
2- 2	si	9	Ty		6.4		0.0		23.9	23.9		41.8
----- PROGR. 243.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
2- 2			29345.5		5917.1		0.0		-40.0	48.8		-241.9
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	2	Sx		-430.6		0.0		0.0	0.0		430.6
2- 2	si	6	Tz		-314.0		13.2		0.0	13.2		314.8
2- 2	si	9	Ty		4.8		0.0		47.7	47.7		82.8
----- PROGR. 283.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
2- 2			17116.8		3451.4		0.0		-40.0	73.1		-362.7
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	2	Sx		-251.8		0.0		0.0	0.0		251.8
2- 2	si	6	Tz		-183.8		19.8		0.0	19.8		187.0
2- 2	si	9	Ty		2.2		0.0		71.5	71.5		123.9
----- PROGR. 324.												
SOLLECITAZIONI :												
Caso			MZ		MY		MT		N	TZ		TY
6- 9			0.0		0.0		0.0		-325.3	15.2		-75.5
2- 2			0.0		0.0		0.0		-40.0	97.5		-483.6
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
6- 9	si	4	Sx		-12.8		0.0		0.0	0.0		12.8
2- 2	si	6	Tz		-1.6		26.3		0.0	26.3		45.7
2- 2	si	9	TySi		-1.6		0.0		95.4	95.4		165.2
-----												
VERIFICA STABILITA` :												
Z	L0 = 324.											
Y	Lc = 324.   Ro = 4.89   lm = 66.2   Ncr= 120204.0   alfa(b )=0.3400   ki=0.7473											
	Ro = 3.01   lm = 107.4   Ncr= 45685.4   alfa(c )=0.4900   ki=0.4166											
Caso 2- 2 - Nodo 2 - Asse Y												
Ned = -40.0   Mzeq = 33915.8   Myeq = 6838.6   Ss = -499.9 ( 0.191)												
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----- PROGR. 0.												



SOLLECITAZIONI :										
Caso		MZ		MY		MT		N	TZ	TY
5-10		0.0		0.0		0.0		125.1	-12.7	63.0
2- 2		0.0		0.0		0.0		2.0	-62.5	309.9
TENSIONI (Sz= 0.00) :										
Caso	ve	No	massimi		Sx		Tz	Ty	Tau tot.	Si
5-10	si	1	Sx		4.9		0.0	0.0	0.0	4.9
2- 2	si	6	Tz		0.1		-16.9	0.0	16.9	29.2
2- 2	si	9	TySi		0.1		0.0	-61.1	61.1	105.9
----- PROGR. -----										48.

SOLLECITAZIONI :										PROGR.	48.
Caso			MZ		MY		MT		N	TZ	TY
2- 2			12878.9		2596.8		0.0		2.0	-46.9	232.4
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	188.4		0.0		0.0	0.0	188.4
2- 2	si	6	Tz		-137.0		-12.7		0.0	12.7	138.8
2- 2	si	9	Ty		2.9		0.0		-45.8	45.8	79.4
-----										PROGR.	95.

SOLLECITAZIONI :										PROGR.	55.1
Caso			MZ		MY		MT		N	TZ	TY
2- 2			22075.8		4451.3		0.0		2.0	-31.2	154.9
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	322.8		0.0		0.0	0.0	322.8
2- 2	si	6	Tz		-235.0		-8.4		0.0	8.4	235.4
2- 2	si	9	Ty		4.9		0.0		-30.5	30.5	53.1
-----										PROGR.	143.3

SOLLECITAZIONI :										PROGR.	145
Caso			MZ		MY		MT		N	TZ	TY
2- 2			27592.0		5563.5		0.0		2.0	-15.6	77.4
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	403.5		0.0		0.0	0.0	403.5
2- 2	si	6	Tz		-293.7		-4.2		0.0	4.2	293.8
2- 2	si	9	Ty		6.1		0.0		-15.3	15.3	27.1
-----										PROGR.	190

SOLLECITAZIONI :										PROGR.	190.1
Caso			MZ		MY		MT		N	TZ	TY
2- 2			29428.5		5933.8		0.0		2.0	0.0	-0.1
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	430.3		0.0		0.0	0.0	430.3
2- 2	si	6	Tz		-313.2		0.0		0.0	0.0	313.2
2- 2	si	9	Ty		6.5		0.0		0.0	0.0	6.5
-----										PROGR.	238.8

SOLLECITAZIONI :										PROGR.	258.5
Caso			MZ		MY		MT		N	TZ	TY
2- 2			27586.4		5562.4		0.0		2.0	15.6	-77.5
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	403.4		0.0		0.0	0.0	403.4
2- 2	si	6	Tz		-293.6		4.2		0.0	4.2	293.7
2- 2	si	9	Ty		6.1		0.0		15.3	15.3	27.2
-----										PROGR.	285.5

SOLLECITAZIONI :										PROGR.	283.5	
Caso			MZ		MY		MT		N	TZ		TY
2- 2			22066.9		4449.5		0.0		2.0	31.2		-154.9
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si
2- 2	si	4	Sx	Si	322.7		0.0		0.0	0.0		322.7
2- 2	si	6	Tz		-234.9		8.4		0.0	8.4		235.3
2- 2	si	9	Ty		4.9		0.0		30.5	30.5		53.1
-----										PROGR.	333.5	

SOLLECITAZIONI :										PROGR.	353.3
Caso			MZ		MY		MT		N	TZ	TY
2- 2			12871.0		2595.3		0.0		2.0	46.8	-232.3
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	188.2		0.0		0.0	0.0	188.2
2- 2	si	6	Tz		-137.0		12.7		0.0	12.7	138.7
2- 2	si	9	Ty		2.9		0.0		45.8	45.8	79.4
-----										PROGR.	380.3

SOLLECITAZIONI :										PROGR.	588.		
Caso			MZ		MY		MT		N		TZ		TY
5-10			0.0		0.0		0.0		125.1		12.7		-63.0
2- 2			0.0		0.0		0.0		2.0		62.4		-309.7
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
5-10	si	1	Sx		4.9		0.0		0.0		0.0		4.9
2- 2	si	6	Tz		0.1		16.9		0.0		16.9		29.2
2- 2	si	9	TySi		0.1		0.0		61.1		61.1		105.8

## VERIFICA STABILITA` :

z | L0 = 380. |  
 y | Lc = 380. | Ro = 4.89 | lm = 77.7 | Ncr = 87213.4 | alfa(b ) = 0.3400 | ki = 0.6643 |  
 y | Lc = 380. | Ro = 3.01 | lm = 126.0 | Ncr = 33146.8 | alfa(c ) = 0.4900 | ki = 0.3306 |  
 Caso 2- 1 - Nodo 2 - Asse Y  
 Ned = -0.1 | Mzeq = 15503.2 | Myeq = 3126.0 | Ss = -226.7 ( 0.087 )

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 ----- PROGR. ----- 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
5-16	0.0	0.0	0.0	-136.6	-17.1	84.8
2-2	0.0	0.0	0.0	-12.4	-109.2	541.5
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	1	Sx	-5.4	0.0	0.0
2-2	si	6	Tz	-0.5	-29.5	0.0
2-2	si	9	Ty	-0.5	0.0	-106.8
						Tau tot.
						0.0
						29.5
						106.8
						Si
						5.4
						51.1
						184.9
						46.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	21649.2	4365.2	0.0	-12.4	-81.9	406.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-317.0	0.0	0.0
2-2	si	6	Tz	-231.0	-22.1	0.0
2-2	si	9	Ty	4.2	0.0	-80.1
						Tau tot.
						0.0
						22.1
						80.1
						Si
						317.0
						234.1
						138.8
						91.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	37110.9	7482.9	0.0	-12.4	-54.6	270.7
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-543.0	0.0	0.0
2-2	si	6	Tz	-395.6	-14.7	0.0
2-2	si	9	Ty	7.6	0.0	-53.4
						Tau tot.
						0.0
						14.7
						53.4
						Si
						543.0
						396.4
						92.8
						137.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	46386.0	9353.1	0.0	-12.4	-27.3	135.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-678.6	0.0	0.0
2-2	si	6	Tz	-494.3	-7.4	0.0
2-2	si	9	Ty	9.6	0.0	-26.7
						Tau tot.
						0.0
						7.4
						26.7
						Si
						678.6
						494.5
						47.2
						183.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	49475.7	9976.1	0.0	-12.4	0.0	-0.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-723.8	0.0	0.0
2-2	si	6	Tz	-527.2	0.0	0.0
2-2	si	9	Ty	10.3	0.0	0.0
						Tau tot.
						0.0
						0.0
						0.0
						Si
						723.8
						527.2
						10.3
						228.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	46381.0	9352.0	0.0	-12.4	27.3	-135.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-678.5	0.0	0.0
2-2	si	6	Tz	-494.3	7.4	0.0
2-2	si	9	Ty	9.6	0.0	26.7
						Tau tot.
						0.0
						7.4
						26.7
						Si
						678.5
						494.5
						47.2
						274.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	37102.7	7481.2	0.0	-12.4	54.6	-270.7
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-542.9	0.0	0.0
2-2	si	6	Tz	-395.5	14.7	0.0
2-2	si	9	Ty	7.6	0.0	53.4
						Tau tot.
						0.0
						14.7
						53.4
						Si
						542.9
						396.3
						92.8
						320.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	21642.1	4363.8	0.0	-12.4	81.9	-406.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-316.9	0.0	0.0
2-2	si	6	Tz	-230.9	22.1	0.0
2-2	si	9	Ty	4.2	0.0	80.1
						Tau tot.
						0.0
						22.1
						80.1
						Si
						316.9
						234.1
						138.7
						366.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-16	0.0	0.0	0.0	-136.6	17.1	-84.7
2-2	0.0	0.0	0.0	-12.4	109.1	-541.3
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-16	si	3	Sx	-5.4	0.0	0.0
2-2	si	6	Tz	-0.5	29.5	0.0
2-2	si	9	Ty	-0.5	0.0	106.7
						Tau tot.
						0.0
						29.5
						106.7
						Si
						5.4
						51.1
						184.9

VERIFICA STABILITA` :

L0 = 366.  
 Z | Lc = 366. | Ro = 4.89 | lm = 74.8 | Ncr = 94241.1 | alfa(b) = 0.3400 | ki = 0.6861 |  
 Y | Lc = 366. | Ro = 3.01 | lm = 121.3 | Ncr = 35817.8 | alfa(c) = 0.4900 | ki = 0.3504 |  
 Caso 2-2 - Nodo 2 - Asse Y  
 Ned = -12.4 | Mzeq = 42879.0 | Myeq = 8645.9 | Ss = -628.4 ( 0.240 )

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 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY

5-14	0.0	0.0	0.0	123.6	-15.6	77.5
2- 2	0.0	0.0	0.0	46.7	-99.3	492.4
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	1	Sx	4.9	0.0	0.0
2- 2	si	6	Tz	1.8	-26.8	0.0
2- 2	si	9	TySi	1.8	0.0	-97.1
						Tau tot.
						0.0
						26.8
						97.1
						168.2
						42.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18180.2	3665.8	0.0	46.7	-74.4	369.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	267.6	0.0	0.0
2- 2	si	6	Tz	-191.7	-20.1	0.0
2- 2	si	9	Ty	5.8	0.0	-72.8
						Tau tot.
						0.0
						20.1
						72.8
						126.2
						84.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	31164.1	6283.8	0.0	46.7	-49.6	246.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	457.4	0.0	0.0
2- 2	si	6	Tz	-330.0	-13.4	0.0
2- 2	si	9	Ty	8.6	0.0	-48.5
						Tau tot.
						0.0
						13.4
						48.5
						84.5
						127.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	38952.5	7854.2	0.0	46.7	-24.8	123.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	571.3	0.0	0.0
2- 2	si	6	Tz	-412.9	-6.7	0.0
2- 2	si	9	Ty	10.3	0.0	-24.3
						Tau tot.
						0.0
						6.7
						24.3
						43.3
						169.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	41546.7	8377.3	0.0	46.7	0.0	-0.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	609.2	0.0	0.0
2- 2	si	6	Tz	-440.5	0.0	0.0
2- 2	si	9	Ty	10.9	0.0	0.0
						Tau tot.
						0.0
						0.0
						0.0
						10.9
						211.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	38947.5	7853.2	0.0	46.7	24.8	-123.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	571.2	0.0	0.0
2- 2	si	6	Tz	-412.8	6.7	0.0
2- 2	si	9	Ty	10.3	0.0	24.3
						Tau tot.
						0.0
						6.7
						24.3
						43.3
						253.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	31155.9	6282.1	0.0	46.7	49.6	-246.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	457.3	0.0	0.0
2- 2	si	6	Tz	-329.9	13.4	0.0
2- 2	si	9	Ty	8.6	0.0	48.5
						Tau tot.
						0.0
						13.4
						48.5
						84.5
						295.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18173.1	3664.3	0.0	46.7	74.4	-369.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2- 2	si	4	Sx	267.5	0.0	0.0
2- 2	si	6	Tz	-191.6	20.1	0.0
2- 2	si	9	Ty	5.8	0.0	72.8
						Tau tot.
						0.0
						20.1
						72.8
						126.2
						338.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-14	0.0	0.0	0.0	123.6	15.6	-77.5
2- 2	0.0	0.0	0.0	46.7	99.2	-492.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-14	si	4	Sx	4.9	0.0	0.0
2- 2	si	6	Tz	1.8	26.8	0.0
2- 2	si	9	TySi	1.8	0.0	97.0
						Tau tot.
						0.0
						26.8
						97.0
						168.1

## VERIFICA STABILITA` :

Z | L0 = 338. |  
 Y | Lc = 338. | Ro = 4.89 | lm = 69.0 | Ncr = 110470.7 | alfa(b) = 0.3400 | ki = 0.7273 |  
 Y | Lc = 338. | Ro = 3.01 | lm = 112.0 | Ncr = 41986.1 | alfa(c) = 0.4900 | ki = 0.3930 |  
 Caso 5- 3 - Nodo 2 - Asse Y  
 Ned = -105.1 | Mzeq = 5670.0 | Myeq = 1143.3 | Ss = -93.5 ( 0.036)

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 SOLLECITAZIONI : 0.

Caso	MZ	MY	MT	N	TZ	TY
5- 3	0.0	0.0	0.0	-222.4	-15.2	75.5

2-2	0.0	0.0	0.0	-24.7	-97.6	484.0
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-3	si	1	Sx	-8.8	0.0	0.0
2-2	si	6	Tz	-1.0	-26.4	0.0
2-2	si	9	TySi	-1.0	0.0	-95.4
						95.4
						165.3
						40.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	17134.8	3455.0	0.0	-24.7	-73.2	362.9
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-251.5	0.0	0.0
2-2	si	6	Tz	-183.4	-19.8	0.0
2-2	si	9	Ty	2.8	0.0	-71.6
						71.6
						124.0
						81.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	29371.5	5922.3	0.0	-24.7	-48.8	241.9
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-430.4	0.0	0.0
2-2	si	6	Tz	-313.7	-13.2	0.0
2-2	si	9	Ty	5.4	0.0	-47.7
						47.7
						82.8
						121.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	36711.4	7402.3	0.0	-24.7	-24.4	120.9
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-537.7	0.0	0.0
2-2	si	6	Tz	-391.8	-6.6	0.0
2-2	si	9	Ty	7.0	0.0	-23.8
						23.8
						41.9
						162.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	39155.6	7895.2	0.0	-24.7	0.0	-0.1
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-573.4	0.0	0.0
2-2	si	6	Tz	-417.8	0.0	0.0
2-2	si	9	Ty	7.6	0.0	0.0
						0.0
						7.6
						202.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	36705.4	7401.1	0.0	-24.7	24.4	-121.0
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-537.6	0.0	0.0
2-2	si	6	Tz	-391.8	6.6	0.0
2-2	si	9	Ty	7.0	0.0	23.9
						23.9
						41.9
						243.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	29361.9	5920.4	0.0	-24.7	48.8	-241.9
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-430.2	0.0	0.0
2-2	si	6	Tz	-313.6	13.2	0.0
2-2	si	9	Ty	5.4	0.0	47.7
						47.7
						82.8
						283.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2-2	17126.4	3453.3	0.0	-24.7	73.2	-362.8
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
2-2	si	2	Sx	-251.3	0.0	0.0
2-2	si	6	Tz	-183.3	19.8	0.0
2-2	si	9	Ty	2.8	0.0	71.5
						71.5
						124.0
						324.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-3	0.0	0.0	0.0	-222.4	15.2	-75.5
2-2	0.0	0.0	0.0	-24.7	97.5	-483.7
TENSIONI (Sz=0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
5-3	si	1	Sx	-8.8	0.0	0.0
2-2	si	6	Tz	-1.0	26.4	0.0
2-2	si	9	TySi	-1.0	0.0	95.4
						95.4
						165.2

## VERIFICA STABILITA` :

$L_0 = 324.$   
 $Z \quad LC = 324. \quad Ro = 4.89 \quad lm = 66.2 \quad Ncr = 120204.8 \quad \alpha(b) = 0.3400 \quad ki = 0.7473$   
 $Y \quad LC = 324. \quad Ro = 3.01 \quad lm = 107.4 \quad Ncr = 45685.7 \quad \alpha(c) = 0.4900 \quad ki = 0.4166$   
 Caso 2-2 - Nodo 2 - Asse Y  
 $Ned = -24.7 \quad M_{zeq} = 33934.9 \quad M_{yeq} = 6842.5 \quad Ss = -498.6 \quad (0.190)$

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 ----- PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5-15	0.0	0.0	0.0	286.7	-9.4	46.5
2-2	0.0	0.0	0.0	49.2	-94.4	468.2



Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-15	si	1	Sx	8.9	0.0	0.0	0.0	8.9
2-2	si	6	Tz	3.3	-25.5	0.0	25.5	44.3
2-2	si	9	Tysi	3.3	0.0	-92.3	92.3	160.0
PROGR.								44.

SOLLECITAZIONI :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2		MZ		MY	MT	N	TZ	TY
2-2		18007.0		3630.8	0.0	83.7	-70.8	351.1
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	4	Sx Si	266.5	0.0	0.0	0.0	266.5
2-2	si	6	Tz	-188.4	-19.1	0.0	19.1	191.3
2-2	si	9	Ty	7.2	0.0	-69.2	69.2	120.2
PROGR.								88.

SOLLECITAZIONI :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2		MZ		MY	MT	N	TZ	TY
2-2		30867.1		6223.9	0.0	83.7	-47.2	234.1
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	4	Sx Si	454.5	0.0	0.0	0.0	454.5
2-2	si	6	Tz	-325.3	-12.8	0.0	12.8	326.1
2-2	si	9	Ty	10.0	0.0	-46.2	46.2	80.6
PROGR.								132.

SOLLECITAZIONI :										PROGR.	152.7
Caso	2- 2		MZ		MY	MT	N	TZ	TY		
			38581.3		7779.4	0.0	83.7	-23.6	117.0		
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si		
2- 2	si	4	Sx	Si	567.3	0.0	0.0	0.0	567.3		
2- 2	si	6	Tz		-407.5	-6.4	0.0	6.4	407.6		
2- 2	si	9	Ty		11.7	0.0	-23.1	23.1	41.6		
-----										PROGR.	176.7

SOLLECITAZIONI :										PROGR.	170.
Caso			MZ		MY	MT		N	TZ		TY
2- 2			41150.7		8297.4	0.0		83.7	0.0		-0.1
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz	Ty	Tau tot.		Si
2- 2	si	4	Sx	Si	604.9	0.0		0.0	0.0		604.9
2- 2	si	6	Tz		-434.8	0.0		0.0	0.0		434.8
2- 2	si	9	Ty		12.3	0.0		0.0	0.0		12.3
-----										PROGR.	220.

SOLLECITAZIONI :										PROGR.	220.		
Caso			MZ		MY		MT		N		TZ		TY
2- 2			38576.3		7778.3		0.0		83.7		23.6		-117.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	4	Sx	Si	567.2		0.0		0.0		0.0		567.2
2- 2	si	6	Tz		-407.4		6.4		0.0		6.4		407.6
2- 2	si	9	Ty		11.7		0.0		23.1		23.1		41.7
										PROGR.	264.		

SOLLECITAZIONI :										PROGR.	204.
Caso			MZ		MY	MT		N	TZ		TY
2- 2			30859.0		6222.3	0.0		83.7	47.2		-234.1
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	454.4		0.0		0.0	0.0	454.4
2- 2	si	6	Tz		-325.3		12.8		0.0	12.8	326.0
2- 2	si	9	Ty		10.0		0.0		46.2	46.2	80.6
										PROGR.	308.

SOLLECITAZIONI :										PROGR.	308.
Caso			MZ		MY	MT	N		TZ		TY
2-2			17999.9		3629.4	0.0	83.7		70.8		-351.1
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.	Si
2-2	si	4	Sx	Si	266.4	0.0	0.0		0.0	0.0	266.4
2-2	si	6	Tz		-188.3	19.1	0.0		0.0	19.1	191.2
2-2	si	9	Ty		7.2	0.0	69.2		69.2	69.2	120.1
-----										PROGR.	352.

SOLLECITAZIONI :										PROGR.	552.7		
Caso			MZ		MY		MT		N		TZ		TY
5-15			0.0		0.0		0.0		226.1		9.4		-46.5
2- 2			0.0		0.0		0.0		83.7		94.4		-468.0
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
5-15	si	3	Sx		8.9		0.0		0.0		0.0		8.9
2- 2	si	6	Tz		3.3		25.5		0.0		25.5		44.3
2- 2	si	9	Tysi		3.3		0.0		92.3		92.3		159.9

## VERIFICA STABILITA` :

Z | L0 = 352. |  
 Y | Lc = 352. | Ro = 4.89 | lm = 71.9 | Ncr = 101870.1 | alfa(b )=0.3400 | ki=0.7069 |  
 Y | Lc = 352. | Ro = 3.01 | lm = 116.6 | Ncr = 38717.3 | alfa(c )=0.4900 | ki=0.3710 |  
 Caso 5- 2 - Nodo 2 - Asse Y  
 Ned = -197.5 | Mzeq = 3542.2 | Myeq = 714.2 | Ss = -72.9 ( 0.028)

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 PROGR. 0.

SOLLECITAZIONI :										PROGR.	0.	
Caso		MZ		MY		MT		N		TZ		TY
5-15		0.0		0.0		0.0		180.6		-9.4		46.5
2- 2		0.0		0.0		0.0		101.1		-94.4		468.3
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si



2-2	si	6	Tz	-0.6	-16.9	0.0	16.9	29.2
2-2	si	9	TySi	-0.6	0.0	-61.0	61.0	105.7
								48.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
2-2		12763.0		2573.5	0.0	-15.0	-46.0	228.2
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx Si	-187.2	0.0	0.0	0.0	187.2
2-2	si	6	Tz	-136.5	-12.4	0.0	12.4	138.2
2-2	si	9	Ty	2.2	0.0	-45.0	45.0	78.0
								95.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
2-2		21709.0		4377.3	0.0	-15.0	-30.0	148.7
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx Si	-318.0	0.0	0.0	0.0	318.0
2-2	si	6	Tz	-231.7	-8.1	0.0	8.1	232.1
2-2	si	9	Ty	4.1	0.0	-29.3	29.3	51.0
								143.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
2-2		26923.1		5428.6	0.0	-15.0	-14.3	71.1
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx Si	-394.2	0.0	0.0	0.0	394.2
2-2	si	6	Tz	-287.2	-3.9	0.0	3.9	287.3
2-2	si	9	Ty	5.3	0.0	-14.0	14.0	24.8
								190.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
2-2		28490.6		5744.7	0.0	-15.0	1.0	-4.8
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx Si	-417.1	0.0	0.0	0.0	417.1
2-2	si	6	Tz	-303.9	0.3	0.0	0.3	303.9
2-2	si	9	Ty	5.6	0.0	0.9	0.9	5.9
								238.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
2-2		26496.8		5342.7	0.0	-15.0	15.9	-78.9
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx Si	-388.0	0.0	0.0	0.0	388.0
2-2	si	6	Tz	-282.7	4.3	0.0	4.3	282.8
2-2	si	9	Ty	5.2	0.0	15.6	15.6	27.4
								285.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
2-2		21027.0		4239.8	0.0	-15.0	30.5	-151.1
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx Si	-308.0	0.0	0.0	0.0	308.0
2-2	si	6	Tz	-224.5	8.2	0.0	8.2	224.9
2-2	si	9	Ty	4.0	0.0	29.8	29.8	51.8
								333.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
2-2		12166.3		2453.2	0.0	-15.0	44.7	-221.6
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	2	Sx Si	-178.5	0.0	0.0	0.0	178.5
2-2	si	6	Tz	-130.1	12.1	0.0	12.1	131.8
2-2	si	9	Ty	2.1	0.0	43.7	43.7	75.7
								380.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-16		0.0		0.0	0.0	-217.2	12.3	-61.1
2-2		0.0		0.0	0.0	-15.0	58.5	-290.3
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-16	si	4	Sx	-8.5	0.0	0.0	0.0	8.5
2-2	si	6	Tz	-0.6	15.8	0.0	15.8	27.4
2-2	si	9	TySi	-0.6	0.0	57.2	57.2	99.2

## VERIFICA STABILITA` :

Z | L0 = 380. |  
 | Lc = 380. | Ro = 4.89 | lm = 77.7 | Ncr= 87209.0 | alfa(b )=0.3400 | ki=0.6643 |  
 Y | Lc = 380. | Ro = 3.01 | lm = 126.1 | Ncr= 33145.2 | alfa(c )=0.4900 | ki=0.3306 |  
 Caso 2- 2 - Nodo 2 - Asse Y  
 Ned = -15.0 | Mzeq = 24691.9 | Myeq = 4978.8 | Ss = -362.9 ( 0.139)

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 0.

SOLLECITAZIONI :								
Caso		MZ		MY	MT	N	TZ	TY
6-16		0.0		0.0	0.0	352.7	-10.4	51.6
2-2		0.0		0.0	0.0	11.5	-51.6	256.1
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-16	si	1	Sx	13.9	0.0	0.0	0.0	13.9
2-2	si	6	Tz	0.5	-14.0	0.0	14.0	24.2

2-2 si 9	Ty	Si	0.5	0.0	-50.5	50.5	87.5
							39.

SOLLECITAZIONI :													
Caso	2-2	MZ	8656.2	MY	1745.4	MT	0.0	N	11.5	TZ	-38.7	TY	192.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2-2 si 4	Sx	Si		127.0	0.0	0.0	0.0	127.0					
2-2 si 6	Tz			-91.7	-10.5	0.0	10.5	93.5					
2-2 si 9	Ty			2.3	0.0	-37.9	37.9	65.7					
							PROGR.		77.				

SOLLECITAZIONI :													
Caso	2-2	MZ	14839.2	MY	2992.1	MT	0.0	N	11.5	TZ	-25.8	TY	128.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2-2 si 4	Sx	Si		217.4	0.0	0.0	0.0	217.4					
2-2 si 6	Tz			-157.5	-7.0	0.0	7.0	158.0					
2-2 si 9	Ty			3.7	0.0	-25.3	25.3	43.9					
							PROGR.		116.				

SOLLECITAZIONI :													
Caso	2-2	MZ	18548.9	MY	3740.1	MT	0.0	N	11.5	TZ	-12.9	TY	64.0
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2-2 si 4	Sx	Si		271.6	0.0	0.0	0.0	271.6					
2-2 si 6	Tz			-197.0	-3.5	0.0	3.5	197.1					
2-2 si 9	Ty			4.5	0.0	-12.6	12.6	22.3					
							PROGR.		154.				

SOLLECITAZIONI :													
Caso	2-2	MZ	19785.5	MY	3989.5	MT	0.0	N	11.5	TZ	0.0	TY	0.0
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2-2 si 4	Sx	Si		289.7	0.0	0.0	0.0	289.7					
2-2 si 6	Tz			-210.2	0.0	0.0	0.0	210.2					
2-2 si 9	Ty			4.8	0.0	0.0	0.0	4.8					
							PROGR.		193.				

SOLLECITAZIONI :													
Caso	2-2	MZ	18548.9	MY	3740.1	MT	0.0	N	11.5	TZ	12.9	TY	-64.0
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2-2 si 4	Sx	Si		271.6	0.0	0.0	0.0	271.6					
2-2 si 6	Tz			-197.0	3.5	0.0	3.5	197.1					
2-2 si 9	Ty			4.5	0.0	12.6	12.6	22.3					
							PROGR.		232.				

SOLLECITAZIONI :													
Caso	2-2	MZ	14839.2	MY	2992.1	MT	0.0	N	11.5	TZ	25.8	TY	-128.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2-2 si 4	Sx	Si		217.4	0.0	0.0	0.0	217.4					
2-2 si 6	Tz			-157.5	7.0	0.0	7.0	158.0					
2-2 si 9	Ty			3.7	0.0	25.3	25.3	43.9					
							PROGR.		270.				

SOLLECITAZIONI :													
Caso	2-2	MZ	8656.2	MY	1745.4	MT	0.0	N	11.5	TZ	38.7	TY	-192.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2-2 si 4	Sx	Si		127.0	0.0	0.0	0.0	127.0					
2-2 si 6	Tz			-91.7	10.5	0.0	10.5	93.5					
2-2 si 9	Ty			2.3	0.0	37.9	37.9	65.7					
							PROGR.		309.				

SOLLECITAZIONI :													
Caso	6-16	MZ	0.0	MY	0.0	MT	0.0	N	352.7	TZ	10.4	TY	-51.6
2-2			0.0		0.0		0.0		11.5		51.6		-256.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
6-16 si 3	Sx			13.9	0.0	0.0	0.0	13.9					
2-2 si 6	Tz			0.5	14.0	0.0	14.0	24.2					
2-2 si 9	Ty			0.5	0.0	50.5	50.5	87.5					
2-2 si 10	Si			0.5	0.0	50.5	50.5	87.5					

## VERIFICA STABILITA` :

Z | L0 = 309. |  
 Y | Lc = 309. | Ro = 4.89 | lm = 63.2 | Ncr = 131942.4 | alfa(b) = 0.3400 | ki = 0.7678 |  
 Caso 6- 1 - Nodo 2 - Asse Y  
 Ned = -344.7 | Mzeq = 3456.6 | Myeq = 697.0 | Ss = -81.4 ( 0.031)

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 0.

SOLLECITAZIONI :													
Caso	6-2	MZ	0.0	MY	0.0	MT	0.0	N	-265.8	TZ	-17.1	TY	84.7
2-2			0.0		0.0		0.0		-11.1		-109.1		541.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
6-2 si 1	Sx			-10.5	0.0	0.0	0.0	10.5					
2-2 si 6	Tz			-0.4	-29.5	0.0	29.5	51.1					

2- 2 si  9	TySi	-0.4	0.0	-106.7	106.7	184.8
-----						46.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	21543.7	4344.0	0.0	-11.1	-81.1	402.2
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-315.4	0.0	0.0	0.0	315.4
2- 2 si  6	Tz	-229.8	-21.9	0.0	21.9	232.9
2- 2 si  9	Ty	4.3	0.0	-79.3	79.3	137.4
-----						91.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	36778.9	7415.9	0.0	-11.1	-53.4	264.9
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-538.1	0.0	0.0	0.0	538.1
2- 2 si  6	Tz	-392.0	-14.4	0.0	14.4	392.8
2- 2 si  9	Ty	7.6	0.0	-52.2	52.2	90.8
-----						137.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	45782.2	9231.3	0.0	-11.1	-26.1	129.4
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-669.7	0.0	0.0	0.0	669.7
2- 2 si  6	Tz	-487.9	-7.1	0.0	7.1	488.0
2- 2 si  9	Ty	9.6	0.0	-25.5	25.5	45.2
-----						183.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	48630.1	9805.6	0.0	-11.1	0.9	-4.5
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-711.4	0.0	0.0	0.0	711.4
2- 2 si  6	Tz	-518.2	0.2	0.0	0.2	518.2
2- 2 si  9	Ty	10.2	0.0	0.9	0.9	10.3
-----						228.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	45399.3	9154.1	0.0	-11.1	27.6	-136.7
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-664.1	0.0	0.0	0.0	664.1
2- 2 si  6	Tz	-483.8	7.4	0.0	7.4	484.0
2- 2 si  9	Ty	9.5	0.0	26.9	26.9	47.6
-----						274.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	36166.2	7292.4	0.0	-11.1	53.9	-267.2
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-529.2	0.0	0.0	0.0	529.2
2- 2 si  6	Tz	-385.5	14.6	0.0	14.6	386.3
2- 2 si  9	Ty	7.5	0.0	52.7	52.7	91.6
-----						320.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
2- 2	21007.6	4235.9	0.0	-11.1	79.8	-396.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-307.6	0.0	0.0	0.0	307.6
2- 2 si  6	Tz	-224.1	21.6	0.0	21.6	227.2
2- 2 si  9	Ty	4.1	0.0	78.1	78.1	135.3
-----						366.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 2	0.0	0.0	0.0	-265.8	16.7	-83.0
2- 2	0.0	0.0	0.0	-11.1	105.5	-523.2
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
6- 2 si  4	Sx	-10.5	0.0	0.0	0.0	10.5
2- 2 si  6	Tz	-0.4	28.5	0.0	28.5	49.4
2- 2 si  9	TySi	-0.4	0.0	103.2	103.2	178.7

## VERIFICA STABILITA` :

z | L0 = 366. |  
 Y | Lc = 366. | Ro = 4.89 | lm = 74.8 | Ncr = 94237.4 | alfa(b ) = 0.3400 | ki = 0.6861 |  
 Case 2- 2 - Nodo 2 - Asse Y | Lc = 366. | Ro = 3.01 | lm = 121.3 | Ncr = 35816.4 | alfa(c ) = 0.4900 | ki = 0.3504 |  
 Ned = -11.1 | Mzeq = 42146.1 | Myeq = 8498.1 | Ss = -617.5 ( 0.236 )

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 ----- PROGR. 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 6	0.0	0.0	0.0	106.6	-15.6	77.5
2- 2	0.0	0.0	0.0	95.5	-99.2	492.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
6- 6 si  1	Sx	4.2	0.0	0.0	0.0	4.2
2- 2 si  6	Tz	3.8	-26.8	0.0	26.8	46.6
2- 2 si  9	TySi	3.8	0.0	-97.0	97.0	168.1

-----										PROGR.	42.		
SOLLECITAZIONI :													
Caso	2- 2		MZ		MY		MT		N		TZ		TY
			18088.3		3647.2		0.0		95.5		-73.7		365.3
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	4	Sx	Si	268.2		0.0		0.0		0.0		268.2
2- 2	si	6		Tz	-188.8		-19.9		0.0		19.9		191.9
2- 2	si	9		Ty	7.7		0.0		-72.0		72.0		125.0
-----										PROGR.	84.		
SOLLECITAZIONI :													
Caso	2- 2		MZ		MY		MT		N		TZ		TY
			30867.4		6224.0		0.0		95.5		-48.5		240.4
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	4	Sx	Si	455.0		0.0		0.0		0.0		455.0
2- 2	si	6		Tz	-324.9		-13.1		0.0		13.1		325.7
2- 2	si	9		Ty	10.5		0.0		-47.4		47.4		82.8
-----										PROGR.	127.		
SOLLECITAZIONI :													
Caso	2- 2		MZ		MY		MT		N		TZ		TY
			38407.9		7744.4		0.0		95.5		-23.6		117.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	4	Sx	Si	565.3		0.0		0.0		0.0		565.3
2- 2	si	6		Tz	-405.2		-6.4		0.0		6.4		405.3
2- 2	si	9		Ty	12.1		0.0		-23.1		23.1		41.8
-----										PROGR.	169.		
SOLLECITAZIONI :													
Caso	2- 2		MZ		MY		MT		N		TZ		TY
			40780.4		8222.8		0.0		95.5		0.9		-4.5
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	4	Sx	Si	599.9		0.0		0.0		0.0		599.9
2- 2	si	6		Tz	-430.4		0.2		0.0		0.2		430.4
2- 2	si	9		Ty	12.7		0.0		0.9		0.9		12.8
-----										PROGR.	211.		
SOLLECITAZIONI :													
Caso	2- 2		MZ		MY		MT		N		TZ		TY
			38055.3		7673.3		0.0		95.5		25.1		-124.4
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	4	Sx	Si	560.1		0.0		0.0		0.0		560.1
2- 2	si	6		Tz	-401.4		6.8		0.0		6.8		401.6
2- 2	si	9		Ty	12.1		0.0		24.5		24.5		44.2
-----										PROGR.	253.		
SOLLECITAZIONI :													
Caso	2- 2		MZ		MY		MT		N		TZ		TY
			30303.2		6110.2		0.0		95.5		48.9		-242.6
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	4	Sx	Si	446.8		0.0		0.0		0.0		446.8
2- 2	si	6		Tz	-318.9		13.2		0.0		13.2		319.7
2- 2	si	9		Ty	10.4		0.0		47.8		47.8		83.5
-----										PROGR.	295.		
SOLLECITAZIONI :													
Caso	2- 2		MZ		MY		MT		N		TZ		TY
			17594.6		3547.7		0.0		95.5		72.4		-359.2
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	4	Sx	Si	261.0		0.0		0.0		0.0		261.0
2- 2	si	6		Tz	-183.6		19.6		0.0		19.6		186.7
2- 2	si	9		Ty	7.6		0.0		70.8		70.8		122.9
-----										PROGR.	338.		
SOLLECITAZIONI :													
Caso	6- 6		MZ		MY		MT		N		TZ		TY
			0.0		0.0		0.0		106.6		15.3		-75.7
2- 2	si	2			0.0		0.0		95.5		95.6		-474.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
6- 6	si	2	Sx		4.2		0.0		0.0		0.0		4.2
2- 2	si	6		Tz	3.8		25.8		0.0		25.8		44.9
2- 2	si	9		TySi	3.8		0.0		93.5		93.5		162.0
-----										PROGR.	0.		
VERIFICA STABILITA` :													
L0 =	338.												
Z	Lc = 338.	Ro = 4.89	lm = 69.0	Ncr=	110468.9	alfa(b) = 0.3400	ki= 0.7273						
Y	Lc = 338.	Ro = 3.01	lm = 112.0	Ncr=	41985.4	alfa(c) = 0.4900	ki= 0.3930						
Caso 6-11 - Nodo 2 - Asse Y													
Ned = -69.4   Mzeq = 5605.0   Myeq = 1130.2   Ss = -89.0 ( 0.034)													
P_HEA120_S010 ( 10) stato limite ultimo - ASTA ( 1550- 1434)													
-----										PROGR.	0.		
SOLLECITAZIONI :													
Caso	6-16		MZ		MY		MT		N		TZ		TY
			0.0		0.0		0.0		-218.4		-15.2		75.5
2- 2	si	2			0.0		0.0		-40.0		-97.6		484.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
6-16	si	1	Sx		-8.6		0.0		0.0		0.0		8.6
2- 2	si	6		Tz	-1.6		-26.4		0.0		26.4		45.7
2- 2	si	9		TySi	-1.6		0.0		-95.5		95.5		165.3
-----										PROGR.	40.		

SOLLECITAZIONI :									
Caso	2- 2	MZ	17139.1	MY	3455.8	MT	0.0	N	-40.0
TENSIONI (Sz=			0.00)				TZ	-73.2	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	2	Sx	-252.1	0.0	0.0	0.0	252.1	
2- 2	si	6	Tz	-184.0	-19.8	0.0	19.8	187.2	
2- 2	si	9	Ty	2.2	0.0	-71.6	71.6	124.0	
									PROGR. 81.
SOLLECITAZIONI :									
Caso	2- 2	MZ	29378.9	MY	5923.8	MT	0.0	N	-40.0
TENSIONI (Sz=			0.00)				TZ	-48.8	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	2	Sx	-431.1	0.0	0.0	0.0	431.1	
2- 2	si	6	Tz	-314.4	-13.2	0.0	13.2	315.2	
2- 2	si	9	Ty	4.8	0.0	-47.7	47.7	82.8	
									PROGR. 121.
SOLLECITAZIONI :									
Caso	2- 2	MZ	36720.6	MY	7404.2	MT	0.0	N	-40.0
TENSIONI (Sz=			0.00)				TZ	-24.4	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	2	Sx	-538.4	0.0	0.0	0.0	538.4	
2- 2	si	6	Tz	-392.5	-6.6	0.0	6.6	392.7	
2- 2	si	9	Ty	6.4	0.0	-23.8	23.8	41.8	
									PROGR. 162.
SOLLECITAZIONI :									
Caso	2- 2	MZ	39165.5	MY	7897.1	MT	0.0	N	-40.0
TENSIONI (Sz=			0.00)				TZ	0.0	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	2	Sx	-574.1	0.0	0.0	0.0	574.1	
2- 2	si	6	Tz	-418.6	0.0	0.0	0.0	418.6	
2- 2	si	9	Ty	7.0	0.0	0.0	0.0	7.0	
									PROGR. 202.
SOLLECITAZIONI :									
Caso	2- 2	MZ	36714.7	MY	7403.0	MT	0.0	N	-40.0
TENSIONI (Sz=			0.00)				TZ	24.4	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	2	Sx	-538.3	0.0	0.0	0.0	538.3	
2- 2	si	6	Tz	-392.5	6.6	0.0	6.6	392.6	
2- 2	si	9	Ty	6.4	0.0	23.9	23.9	41.8	
									PROGR. 243.
SOLLECITAZIONI :									
Caso	2- 2	MZ	29369.4	MY	5921.9	MT	0.0	N	-40.0
TENSIONI (Sz=			0.00)				TZ	48.8	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	2	Sx	-430.9	0.0	0.0	0.0	430.9	
2- 2	si	6	Tz	-314.3	13.2	0.0	13.2	315.1	
2- 2	si	9	Ty	4.8	0.0	47.7	47.7	82.8	
									PROGR. 283.
SOLLECITAZIONI :									
Caso	2- 2	MZ	17130.7	MY	3454.2	MT	0.0	N	-40.0
TENSIONI (Sz=			0.00)				TZ	73.2	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	2	Sx	-252.0	0.0	0.0	0.0	252.0	
2- 2	si	6	Tz	-184.0	19.8	0.0	19.8	187.1	
2- 2	si	9	Ty	2.2	0.0	71.6	71.6	124.0	
									PROGR. 324.
SOLLECITAZIONI :									
Caso	6-16	MZ	0.0	MY	0.0	MT	0.0	N	-218.4
TENSIONI (Sz=			0.00)				TZ	15.2	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
6-16	si	3	Sx	-8.6	0.0	0.0	0.0	8.6	
2- 2	si	6	Tz	-1.6	26.4	0.0	26.4	45.7	
2- 2	si	9	Ty	-1.6	0.0	95.4	95.4	165.2	
-----									
VERIFICA STABILITA` :									
Z	L0 =	324.							
Y	Lc =	324.	Ro =	4.89	lm =	66.2	Ncr=	120204.3	alfa(b )=0.3400
									ki=0.7473
			Ro =	3.01	lm =	107.4	Ncr=	45685.5	alfa(c )=0.4900
									ki=0.4166
Caso 2- 2 - Nodo 2 - Asse Y									
Ned =	-40.0	Mzeq =	33943.4	Myeq =	6844.2	Ss =	-500.3	( 0.191)	
-----									
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----- PROGR. 0.									
SOLLECITAZIONI :									
Caso	6-16	MZ	0.0	MY	0.0	MT	0.0	N	-166.5
TENSIONI (Sz=			0.00)				TZ	-12.7	TY
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
6-16	si	1	Sx	-6.6	0.0	0.0	0.0	6.6	
2- 2	si	6	Tz	-0.5	-16.9	0.0	16.9	29.2	
2- 2	si	9	Ty	-0.5	0.0	-61.0	61.0	105.7	
									PROGR. 48.
SOLLECITAZIONI :									

Caso	2- 2	MZ	MY	MT	N	TZ	TY
2- 2	12764.7	2573.8	0.0	-11.8	-46.0	228.2	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si 2	Sx Si	-187.1	0.0	0.0	187.1	
2- 2	si 6	Tz	-136.4	-12.4	0.0	138.1	
2- 2	si 9	Ty	2.3	0.0	-45.0	78.0	
					PROGR.	95.	

SOLLECITAZIONI	:						
Caso	2- 2	MZ	MY	MT	N	TZ	TY
2- 2	21711.8	4377.9	0.0	-11.8	-30.0	148.8	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si 2	Sx Si	-317.9	0.0	0.0	317.9	
2- 2	si 6	Tz	-231.6	-8.1	0.0	232.0	
2- 2	si 9	Ty	4.3	0.0	-29.3	51.0	
					PROGR.	143.	

SOLLECITAZIONI	:						
Caso	2- 2	MZ	MY	MT	N	TZ	TY
2- 2	26926.5	5429.3	0.0	-11.8	-14.3	71.1	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si 2	Sx Si	-394.1	0.0	0.0	394.1	
2- 2	si 6	Tz	-287.1	-3.9	0.0	287.2	
2- 2	si 9	Ty	5.4	0.0	-14.0	24.9	
					PROGR.	190.	

SOLLECITAZIONI	:						
Caso	2- 2	MZ	MY	MT	N	TZ	TY
2- 2	28494.3	5745.5	0.0	-11.8	1.0	-4.8	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si 2	Sx Si	-417.0	0.0	0.0	417.0	
2- 2	si 6	Tz	-303.8	0.3	0.0	303.8	
2- 2	si 9	Ty	5.8	0.0	0.9	6.0	
					PROGR.	238.	

SOLLECITAZIONI	:						
Caso	2- 2	MZ	MY	MT	N	TZ	TY
2- 2	26500.2	5343.4	0.0	-11.8	15.9	-78.9	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si 2	Sx Si	-387.9	0.0	0.0	387.9	
2- 2	si 6	Tz	-282.6	4.3	0.0	282.7	
2- 2	si 9	Ty	5.3	0.0	15.6	27.5	
					PROGR.	285.	

SOLLECITAZIONI	:						
Caso	2- 2	MZ	MY	MT	N	TZ	TY
2- 2	21029.7	4240.3	0.0	-11.8	30.5	-151.1	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si 2	Sx Si	-307.9	0.0	0.0	307.9	
2- 2	si 6	Tz	-224.4	8.2	0.0	224.8	
2- 2	si 9	Ty	4.1	0.0	29.8	51.8	
					PROGR.	333.	

SOLLECITAZIONI	:						
Caso	2- 2	MZ	MY	MT	N	TZ	TY
2- 2	12167.8	2453.5	0.0	-11.8	44.7	-221.6	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si 2	Sx Si	-178.3	0.0	0.0	178.3	
2- 2	si 6	Tz	-130.0	12.1	0.0	131.7	
2- 2	si 9	Ty	2.2	0.0	43.7	75.7	
					PROGR.	380.	

SOLLECITAZIONI	:						
Caso	6-16	MZ	MY	MT	N	TZ	TY
2- 2	0.0	0.0	0.0	-166.5	12.3	-61.1	
2- 2	0.0	0.0	0.0	-11.8	58.5	-290.3	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-16	si 4	Sx	-6.6	0.0	0.0	6.6	
2- 2	si 6	Tz	-0.5	15.8	0.0	27.4	
2- 2	si 9	TySi	-0.5	0.0	57.3	99.2	

VERIFICA STABILITA` :

L0 = 380.  
 Z | Lc = 380. | Ro = 4.89 | lm = 77.7 | Ncr = 87209.4 | alfa(b )=0.3400 | ki=0.6643 |  
 Y | Lc = 380. | Ro = 3.01 | lm = 126.1 | Ncr = 33145.3 | alfa(c )=0.4900 | ki=0.3306 |  
 Caso 2- 2 - Nodo 2 - Asse Y  
 Ned = -11.8 | Mzeq = 24695.0 | Myeq = 4979.4 | Ss = -362.5 ( 0.138)

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 ----- PROGR. 0.

SOLLECITAZIONI	:						
Caso	6-16	MZ	MY	MT	N	TZ	TY
2- 2	0.0	0.0	0.0	270.9	-10.4	51.6	
2- 2	0.0	0.0	0.0	16.8	-51.6	256.1	
TENSIONI (Sz=	0.00)						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-16	si 1	Sx	10.7	0.0	0.0	10.7	
2- 2	si 6	Tz	0.7	-14.0	0.0	24.2	
2- 2	si 9	TySi	0.7	0.0	-50.5	87.5	
					PROGR.	39.	

SOLLECITAZIONI	:						
Caso		MZ	MY	MT	N	TZ	TY

2- 2	8651.3	1744.4	0.0	16.8	-38.7	192.1
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	127.1	0.0	0.0	0.0	127.1	
2- 2 si  6 Tz	-91.4	-10.5	0.0	10.5	93.2	
2- 2 si  9 Ty	2.5	0.0	-37.9	37.9	65.6	
					77.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	14830.8	2990.4	0.0	16.8	-25.8	128.0
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	217.5	0.0	0.0	0.0	217.5	
2- 2 si  6 Tz	-157.2	-7.0	0.0	7.0	157.7	
2- 2 si  9 Ty	3.9	0.0	-25.2	25.2	43.9	
					116.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18538.6	3738.0	0.0	16.8	-12.9	64.0
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	271.7	0.0	0.0	0.0	271.7	
2- 2 si  6 Tz	-196.7	-3.5	0.0	3.5	196.8	
2- 2 si  9 Ty	4.7	0.0	-12.6	12.6	22.4	
					154.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	19774.5	3987.2	0.0	16.8	0.0	0.0
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	289.7	0.0	0.0	0.0	289.7	
2- 2 si  6 Tz	-209.9	0.0	0.0	0.0	209.9	
2- 2 si  9 Ty	5.0	0.0	0.0	0.0	5.0	
					193.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18538.6	3738.0	0.0	16.8	12.9	-64.0
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	271.7	0.0	0.0	0.0	271.7	
2- 2 si  6 Tz	-196.7	3.5	0.0	3.5	196.8	
2- 2 si  9 Ty	4.7	0.0	12.6	12.6	22.4	
					232.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	14830.9	2990.4	0.0	16.8	25.8	-128.0
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	217.5	0.0	0.0	0.0	217.5	
2- 2 si  6 Tz	-157.2	7.0	0.0	7.0	157.7	
2- 2 si  9 Ty	3.9	0.0	25.2	25.2	43.9	
					270.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	8651.3	1744.4	0.0	16.8	38.7	-192.1
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	127.1	0.0	0.0	0.0	127.1	
2- 2 si  6 Tz	-91.4	10.5	0.0	10.5	93.2	
2- 2 si  9 Ty	2.5	0.0	37.9	37.9	65.6	
					309.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-16	0.0	0.0	0.0	270.9	10.4	-51.6
2- 2	0.0	0.0	0.0	16.8	51.6	-256.1
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-16 si  2 Sx	10.7	0.0	0.0	0.0	10.7	
2- 2 si  6 Tz	0.7	14.0	0.0	14.0	24.2	
2- 2 si  9 Ty	0.7	0.0	50.5	50.5	87.5	
2- 2 si 10 Si	0.7	0.0	50.5	50.5	87.5	

VERIFICA STABILITA` :

L0 = 309.  
 Z | Lc = 309. | Ro = 4.89 | lm = 63.2 | Ncr = 131941.8 | alfa(b )=0.3400 | ki=0.7678 |  
 Y | Lc = 309. | Ro = 3.01 | lm = 102.5 | Ncr = 50146.5 | alfa(c )=0.4900 | ki=0.4432 |  
 Caso 6- 1 - Nodo 2 - Asse Y  
 Ned = -263.3 | Mzeq = 3454.6 | Myeq = 696.6 | Ss = -74.0 ( 0.028)

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 ----- PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 5	0.0	0.0	0.0	-257.7	-17.1	84.7
2- 2	0.0	0.0	0.0	-7.0	-109.1	541.1
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 5 si  1 Sx	-10.1	0.0	0.0	0.0	10.1	
2- 2 si  6 Tz	-0.3	-29.5	0.0	29.5	51.1	
2- 2 si  9 TySi	-0.3	0.0	-106.7	106.7	184.8	
					46.	

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY

2- 2	21547.7	4344.8	0.0	-7.0	-81.1	402.2
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si 2 Sx	-315.3	0.0	0.0	0.0	315.3	
2- 2 si 6 Tz	-229.7	-21.9	0.0	21.9	232.8	
2- 2 si 9 Ty	4.4	0.0	-79.3	79.3	137.4	

PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	36785.8	7417.3	0.0	-7.0	-53.4	265.0
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si 2 Sx	-538.1	0.0	0.0	0.0	538.1	
2- 2 si 6 Tz	-391.9	-14.4	0.0	14.4	392.7	
2- 2 si 9 Ty	7.8	0.0	-52.2	52.2	90.8	

PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	45790.7	9233.0	0.0	-7.0	-26.1	129.4
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si 2 Sx	-669.7	0.0	0.0	0.0	669.7	
2- 2 si 6 Tz	-487.8	-7.1	0.0	7.1	487.9	
2- 2 si 9 Ty	9.7	0.0	-25.5	25.5	45.3	

PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	48639.2	9807.4	0.0	-7.0	0.9	-4.5
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si 2 Sx	-711.3	0.0	0.0	0.0	711.3	
2- 2 si 6 Tz	-518.1	0.2	0.0	0.2	518.1	
2- 2 si 9 Ty	10.3	0.0	0.9	0.9	10.5	

PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	45407.7	9155.8	0.0	-7.0	27.6	-136.7
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si 2 Sx	-664.1	0.0	0.0	0.0	664.1	
2- 2 si 6 Tz	-483.7	7.4	0.0	7.4	483.9	
2- 2 si 9 Ty	9.6	0.0	27.0	27.0	47.7	

PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	36173.0	7293.7	0.0	-7.0	53.9	-267.2
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si 2 Sx	-529.1	0.0	0.0	0.0	529.1	
2- 2 si 6 Tz	-385.4	14.6	0.0	14.6	386.2	
2- 2 si 9 Ty	7.6	0.0	52.7	52.7	91.6	

PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	21011.5	4236.7	0.0	-7.0	79.9	-396.0
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si 2 Sx	-307.4	0.0	0.0	0.0	307.4	
2- 2 si 6 Tz	-224.0	21.6	0.0	21.6	227.1	
2- 2 si 9 Ty	4.3	0.0	78.1	78.1	135.3	

PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 5	0.0	0.0	0.0	-257.7	16.7	-83.0
2- 2	0.0	0.0	0.0	-7.0	105.5	-523.2
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
5- 5 si 4 Sx	-10.1	0.0	0.0	0.0	10.1	
2- 2 si 6 Tz	-0.3	28.5	0.0	28.5	49.4	
2- 2 si 9 Ty	-0.3	0.0	103.2	103.2	178.7	

## VERIFICA STABILITA` :

Z |L0 = 366. |  
 Y |Lc = 366. |Ro = 4.89|lm = 74.8|Ncr= 94237.7|alfa(b )=0.3400|ki=0.6861|  
 Y |Lc = 366. |Ro = 3.01|lm = 121.3|Ncr= 35816.5|alfa(c )=0.4900|ki=0.3504|  
 Caso 2- 2 - Nodo 2 - Asse Y  
 Ned = -7.0|Mzeq = 42153.9|Myeq = 8499.7|Ss = -617.1 ( 0.236)

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 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6- 6	0.0	0.0	0.0	83.0	-15.6	77.5
2- 2	0.0	0.0	0.0	79.7	-99.2	491.9
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6- 6 si 1 Sx	3.3	0.0	0.0	0.0	3.3	
2- 2 si 6 Tz	3.1	-26.8	0.0	26.8	46.5	
2- 2 si 9 Ty	3.1	0.0	-97.0	97.0	168.0	

PROGR.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18082.8	3646.1	0.0	79.7	-73.7	365.3

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	4	Sx Si	267.5	0.0	0.0	0.0	267.5	
2- 2	si	6	Tz	-189.4	-19.9	0.0	19.9	192.5	
2- 2	si	9	Ty	7.1	0.0	-72.0	72.0	125.0	
									PROGR. 84.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		30858.0		6222.1	0.0	79.7	-48.5	240.4	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	4	Sx Si	454.3	0.0	0.0	0.0	454.3	
2- 2	si	6	Tz	-325.4	-13.1	0.0	13.1	326.2	
2- 2	si	9	Ty	9.9	0.0	-47.4	47.4	82.7	
									PROGR. 127.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		38396.3		7742.0	0.0	79.7	-23.6	117.1	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	4	Sx Si	564.5	0.0	0.0	0.0	564.5	
2- 2	si	6	Tz	-405.7	-6.4	0.0	6.4	405.8	
2- 2	si	9	Ty	11.5	0.0	-23.1	23.1	41.6	
									PROGR. 169.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		40768.0		8220.3	0.0	79.7	0.9	-4.5	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	4	Sx Si	599.1	0.0	0.0	0.0	599.1	
2- 2	si	6	Tz	-430.9	0.2	0.0	0.2	430.9	
2- 2	si	9	Ty	12.0	0.0	0.9	0.9	12.1	
									PROGR. 211.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		38043.7		7671.0	0.0	79.7	25.1	-124.4	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	4	Sx Si	559.3	0.0	0.0	0.0	559.3	
2- 2	si	6	Tz	-401.9	6.8	0.0	6.8	402.1	
2- 2	si	9	Ty	11.4	0.0	24.5	24.5	44.0	
									PROGR. 253.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		30294.0		6108.3	0.0	79.7	48.9	-242.6	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	4	Sx Si	446.0	0.0	0.0	0.0	446.0	
2- 2	si	6	Tz	-319.4	13.2	0.0	13.2	320.2	
2- 2	si	9	Ty	9.7	0.0	47.8	47.8	83.4	
									PROGR. 295.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		17589.2		3546.6	0.0	79.7	72.4	-359.2	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2	si	4	Sx Si	260.3	0.0	0.0	0.0	260.3	
2- 2	si	6	Tz	-184.1	19.6	0.0	19.6	187.2	
2- 2	si	9	Ty	7.0	0.0	70.8	70.8	122.9	
									PROGR. 338.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
6- 6		0.0		0.0	0.0	83.0	15.3	-75.7	
2- 2		0.0		0.0	0.0	79.7	95.6	-474.1	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
6- 6	si	1	Sx	3.3	0.0	0.0	0.0	3.3	
2- 2	si	6	Tz	3.1	25.8	0.0	25.8	44.8	
2- 2	si	9	TySi	3.1	0.0	93.5	93.5	161.9	

## VERIFICA STABILITA` :

Z | L0 = 338. |  
 Y | Lc = 338. | Ro = 4.89 | lm = 69.0 | Ncr = 110468.8 | alfa(b) = 0.3400 | ki = 0.7273 |  
 Y | Lc = 338. | Ro = 3.01 | lm = 112.0 | Ncr = 41985.4 | alfa(c) = 0.4900 | ki = 0.3930 |  
 Caso 6-11 - Nodo 2 - Asse Y  
 Ned = -51.8 | Mzeq = 5603.3 | Myeq = 1129.8 | Ss = -87.2 ( 0.033 )

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 0.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
5-16		0.0		0.0	0.0	-209.0	-15.2	75.5	
2- 2		0.0		0.0	0.0	-39.5	-97.6	483.9	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	1	Sx	-8.2	0.0	0.0	0.0	8.2	
2- 2	si	6	Tz	-1.6	-26.4	0.0	26.4	45.7	
2- 2	si	9	TySi	-1.6	0.0	-95.4	95.4	165.3	
									PROGR. 40.

SOLLECITAZIONI :									
Caso		MZ		MY	MT	N	TZ	TY	
2- 2		17128.7		3453.7	0.0	-39.5	-73.2	362.9	
TENSIONI (Sz= 0.00) :									

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx	-252.0	0.0	0.0	0.0	252.0
2- 2	si	6	Tz	-183.9	-19.8	0.0	19.8	187.1
2- 2	si	9	Ty	2.2	0.0	-71.6	71.6	124.0
-----								PROGR. 81.

SOLLECITAZIONI :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2		MZ		MY	MT	N	TZ	TY
2- 2		29361.1		5920.2	0.0	-39.5	-48.8	241.9
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx	-430.8	0.0	0.0	0.0	430.8
2- 2	si	6	Tz	-314.2	-13.2	0.0	13.2	315.0
2- 2	si	9	Ty	4.9	0.0	-47.7	47.7	82.7
-----								PROGR. 121.

SOLLECITAZIONI :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2		MZ		MY	MT	N	TZ	TY
2- 2		36698.4		7399.7	0.0	-39.5	-24.4	120.9
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx	-538.1	0.0	0.0	0.0	538.1
2- 2	si	6	Tz	-392.3	-6.6	0.0	6.6	392.4
2- 2	si	9	Ty	6.5	0.0	-23.8	23.8	41.8
-----								PROGR. 162.

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N		TZ		TY
2- 2			39141.7		7892.4		0.0		-39.5		0.0		-0.1
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-573.8		0.0		0.0		0.0		573.8
2- 2	si	6	Tz		-418.3		0.0		0.0		0.0		418.3
2- 2	si	9	Ty		7.0		0.0		0.0		0.0		7.0
-----											PROGR.	202.	

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N		TZ		TY
2- 2			36692.4		7398.5		0.0		-39.5		24.4		-121.0
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-538.0		0.0		0.0		0.0		538.0
2- 2	si	6	Tz		-392.2		6.6		0.0		6.6		392.4
2- 2	si	9	Ty		6.5		0.0		23.9		23.9		41.8
-----											PROGR.	243.	

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N		TZ		TY
2- 2			29351.6		5918.3		0.0		-39.5		48.8		-241.9
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
2- 2	si	2	Sx	Si	-430.7		0.0		0.0		0.0		430.7
2- 2	si	6	Tz		-314.0		13.2		0.0		13.2		314.9
2- 2	si	9	Ty		4.9		0.0		47.7		47.7		82.8
-----										PROGR. 283.			

SOLLECITAZIONI :										PROGR.		259.		
Caso			MZ		MY		MT		N		TZ		TY	
2- 2			17120.4		3452.1		0.0		-39.5		73.1		-362.8	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si	
2- 2	si	2	Sx	Si	-251.8		0.0		0.0		0.0		251.8	
2- 2	si	6	Tz		-183.8		19.8		0.0		19.8		187.0	
2- 2	si	9	Ty		2.2		0.0		71.5		71.5		123.9	
-----											PROGR.		324.	

SOLLECITAZIONI :									
Caso	MZ			MY	MT	N	TZ	TY	
5-16			0.0	0.0	0.0	-209.0	15.2	-75.5	
2- 2			0.0	0.0	0.0	-39.5	97.5	-483.6	
TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
5-16	si	3	Sx	-8.2	0.0	0.0	0.0	8.2	
2- 2	si	6	Tz	-1.6	26.3	0.0	26.3	45.7	
2- 2	si	9	Tysi	-1.6	0.0	95.4	95.4	165.2	

## VERIFICA STABILITA` :

$L_0 = 324.$   
 $Z \quad L_c = 324. \quad R_o = 4.89 \quad l_m = 66.2 \quad N_{cr} = 120204.0 \quad \alpha(b) = 0.3400 \quad k_i = 0.7473$   
 $Y \quad L_c = 324. \quad R_o = 3.01 \quad l_m = 107.4 \quad N_{cr} = 45685.4 \quad \alpha(c) = 0.4900 \quad k_i = 0.4166$   
 Caso 2- 2 - Nodo 2 - Asse Y  
 $N_{ed} = -39.5 \quad M_{zeq} = 33922.8 \quad M_{yeq} = 6840.0 \quad S_s = -499.9 \quad (0.191)$

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 -----                      PROGR.                      0.

SOLLECITAZIONI :													
Caso			MZ		MY		MT		N	TZ		TY	
5-16			0.0		0.0		0.0		251.9	-10.4		51.6	
2- 2			0.0		0.0		0.0		13.5	-51.7		256.2	
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty	Tau tot.		Si	
5-16	si	1	Sx		9.9		0.0		0.0	0.0		9.9	
2- 2	si	6	Tz		0.5		-14.0		0.0	14.0		24.2	
2- 2	si	9	Ty		0.5		0.0		-50.5	50.5		87.5	
-----										PROGR.			39.

SOLLECITAZIONI :												
Caso		MZ		MY		MT		N		TZ		TY
2- 2		8657.7		1745.7		0.0		13.5		-38.7		192.1
TENSIONI (Sz= 0.00) :												
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si

2-2	si	4	Sx	Si	127.1	0.0	0.0	0.0	127.1
2-2	si	6	Tz		-91.6	-10.5	0.0	10.5	93.4
2-2	si	9	Ty		2.4	0.0	-37.9	37.9	65.7
-----									77.

## SOLLECITAZIONI :

Caso	2-2	MZ	MY	MT	N	TZ	TY
		14841.8	2992.6	0.0	13.5	-25.8	128.1

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	4	Sx	Si	217.5	0.0	0.0	217.5
2-2	si	6	Tz		-157.5	-7.0	7.0	157.9
2-2	si	9	Ty		3.8	0.0	-25.3	43.9
<hr/>								

## SOLLECITAZIONI :

Caso	2-2	MZ	MY	MT	N	TZ	TY
		18552.2	3740.8	0.0	13.5	-12.9	64.0

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	4	Sx	Si	271.8	0.0	0.0	271.8
2-2	si	6	Tz		-197.0	-3.5	3.5	197.1
2-2	si	9	Ty		4.6	0.0	-12.6	22.3
-----								

## SOLLECITAZIONI :

Caso	2-2	MZ	MY	MT	N	TZ	TY
		19789.1	3990.2	0.0	13.5	0.0	0.0

## TENSIONI (Sz= 0.00) :

TENSIONI (S2= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	4	Sx	Si	289.8	0.0	0.0	289.8
2-2	si	6	Tz		-210.2	0.0	0.0	210.2
2-2	si	9	Ty		4.9	0.0	0.0	4.9
-----								

## SOLLECITAZIONI :

Caso	2-2	MZ	MY	MT	N	TZ	TY
		18552.2	3740.8	0.0	13.5	12.9	-64.0

## TENSIONI (Sz= 0.00) :

TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	0.0	0.0	0.0	271.8
2- 2	si	6	Tz		3.5	0.0	3.5	197.1
2- 2	si	9	Ty		12.6	0.0	12.6	22.3
-----								
								232.

## SOLLECITAZIONI :

Caso	2-2	MZ	MY	MT	N	TZ	TY
		14841.8	2992.6	0.0	13.5	25.8	-128.1

## TENSIONI (Sz= 0.00) :

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si	
2-2	si	4	Sx	Si	217.5	0.0	0.0	217.5	
2-2	si	6	Tz		-157.5	7.0	0.0	157.9	

## SOLLECITAZIONI :

Caso	2-2	MZ	MY	MT	N	TZ	TY
		8657.7	1745.7	0.0	13.5	38.7	-192.1

## TENSIONI (Sz= 0.00) :

2-2		8657.7		1745.7		0.0		13.5		38.7		-192.1			
TENSIONI (Sz= 0.00) :															
Caso		Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si	
2-2		si	4	Sx		Si		127.1		0.0		0.0		127.1	
2-2		si	6	Tz				-91.6		10.5		10.5		93.4	
2-2		si	9	Ty				2.4		0.0		37.9		65.7	
-----														309.	

## SOLLECITAZIONI :

Caso	5-16	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	251.9	10.4	-51.6
2-2	si	0.0	0.0	0.0	13.5	51.7	-256.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	2	Sx		9.9	0.0	0.0	9.9
2-2	si	6	Tz		0.5	14.0	14.0	24.2
2-2	si	9	Ty		0.5	0.0	50.5	87.5
2-2	si	10	Si		0.5	0.0	50.5	87.5

## SOLLECITAZIONI :

Caso	5-16	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	251.9	10.4	-51.6
2-2	si	0.0	0.0	0.0	13.5	51.7	-256.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	2	Sx		9.9	0.0	0.0	9.9
2-2	si	6	Tz		0.5	14.0	14.0	24.2
2-2	si	9	Ty		0.5	0.0	50.5	87.5
2-2	si	10	Si		0.5	0.0	50.5	87.5

## SOLLECITAZIONI :

Caso	5-16	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	251.9	10.4	-51.6
2-2	si	0.0	0.0	0.0	13.5	51.7	-256.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	2	Sx		9.9	0.0	0.0	9.9
2-2	si	6	Tz		0.5	14.0	14.0	24.2
2-2	si	9	Ty		0.5	0.0	50.5	87.5
2-2	si	10	Si		0.5	0.0	50.5	87.5

## SOLLECITAZIONI :

Caso	5-16	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	251.9	10.4	-51.6
2-2	si	0.0	0.0	0.0	13.5	51.7	-256.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5-16	si	2	Sx		9.9	0.0	0.0	9.9
2-2	si	6	Tz		0.5	14.0	14.0	24.2
2-2	si	9	Ty		0.5	0.0	50.5	87.5
2-2	si	10	Si		0.5	0.0	50.5	87.5

## SOLLECITAZIONI :

Caso	2-2	MZ	MY	MT	N	TZ	TY
		12758.3	2572.5	0.0	1.5	-46.0	228.2

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	4	Sx	Si	217.5	0.0	0.0	217.5
2-2	si	6	Tz		-157.5	-7.0	7.0	157.9
2-2	si	9	Ty		3.8	0.0	-25.3	43.9

## SOLLECITAZIONI :

Caso	2-2	MZ	MY	MT	N	TZ	TY
		14841.8	2992.6	0.0	13.5	-25.8	128.1

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2-2	si	4	Sx	Si	217.5	0.0	0.0	217.5
2-2	si	6	Tz		-157.5	-7.0	7.0	157.9
2-2	si	9	Ty		3.8	0.0	-25.3	43.9

2- 2	si	4	Sx	Si	186.6	0.0	0.0	0.0	186.6
2- 2	si	6	Tz		-135.8	-12.4	0.0	12.4	137.5
2- 2	si	9	Ty		2.8	0.0	-45.0	45.0	78.0
-----									95.

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		21701.0	4375.7	0.0	1.5	-30.0	148.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	317.3	0.0	0.0	317.3
2- 2	si	6	Tz		-231.0	-8.1	0.0	231.4
2- 2	si	9	Ty		4.8	0.0	-29.3	51.0
-----								
								143.

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		26913.2	5426.6	0.0	1.5	-14.3	71.1

## TENSIONI (Sz= 0.00) :

VERSIONI (S2=0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx Si	393.5	0.0	0.0	0.0	393.5
2- 2	si	6	Tz	-286.5	-3.9	0.0	3.9	286.6
2- 2	si	9	Ty	5.9	0.0	-14.0	14.0	25.0
-----								

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		28480.2	5742.6	0.0	1.5	1.0	-4.8

## TENSIONI (Sz= 0.00) :

TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	416.4	0.0	0.0	416.4
2- 2	si	6	Tz		-303.2	0.3	0.0	303.2
2- 2	si	9	Ty		6.3	0.0	0.9	6.5
-----								

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		26487.1	5340.7	0.0	1.5	15.9	-78.8

## TENSIONI (Sz= 0.00) :

TENSIONI (Sz= 0.00) :									
Caso	Ve	No	massimi		Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	387.3	0.0	0.0	0.0	387.3
2- 2	si	6	Tz		-281.9	4.3	0.0	4.3	282.0

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		21019.3	4238.2	0.0	1.5	30.5	-151.1

## TENSIONI (Sz= 0.00) :

2- 2		21019.3		4238.2		0.0		1.5		30.5		-151.1	
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2- 2	si	4	Sx	Si	307.3	0.0	0.0	0.0	307.3				
2- 2	si	6	Tz		-223.7	8.2	0.0	8.2	224.2				
-----													

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		12161.8	2452.3	0.0	1.5	44.7	-221.6

## TENSIONI (Sz= 0.00) :

2- 2			12161.8		2452.3		0.0		1.5		44.7		-221.6
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si	
2- 2	si	4	Sx	Si	177.9	0.0		0.0		0.0		177.9	

## SOLLECITAZIONI :

Caso	5- 1	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	151.6	12.3	-61.0

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	0.0	0.0	0.0	0.0
2- 2	si	6	Tz		0.1	15.8	0.0	27.4
2- 2	si	9	TySi		0.1	0.0	57.2	99.1

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	1.5	58.5	-290.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	6.0	0.0	0.0	6.0
2- 2	si	6	Tz		0.1	15.8	0.0	27.4
2- 2	si	9	TySi		0.1	0.0	57.2	99.1

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	1.5	58.5	-290.3

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	4	Sx	Si	6.0	0.0	0.0	6.0
2- 2	si	6	Tz		0.1	15.8	0.0	27.4
2- 2	si	9	TySi		0.1	0.0	57.2	99.1

## SOLLECITAZIONI :

Caso	5- 2	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	-340.3	-17.1	84.7

## TENSIONI (Sz= 0.00) :

5- 2	si	1	Sx	-13.4	0.0	0.0	0.0	13.4
2- 2	si	6	Tz	-0.5	-29.5	0.0	29.5	51.1
2- 2	si	9	TySi	-0.5	0.0	-106.7	106.7	184.8
-----								46.
COLLETTAZIONE								PROGR.

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		21541.3	4343.5	0.0	-11.6	-81.1	402.1

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx	Si	-315.4	0.0	0.0	315.4

## VERIFICA STABILITA` :

Z | L0 = 380. | Ro = 4.89 | lm = 77.7 | Ncr = 87213.4 | alfa(b) = 0.3400 | ki = 0.6643 |  
 Y | Lc = 380. | Ro = 3.01 | lm = 126.0 | Ncr = 33146.8 | alfa(c) = 0.4900 | ki = 0.3306 |  
 Caso 2- 1 - Nodo 2 - Asse Y  
 Ned = -0.1 | Mzeq = 15062.6 | Myeq = 3037.2 | Ss = -220.2 ( 0.084 )

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 0.

## SOLLECITAZIONI :

Caso	5- 2	MZ	MY	MT	N	TZ	TY
		0.0	0.0	0.0	-340.3	-17.1	84.7

## TENSIONI (Sz= 0.00) :

TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
5- 2	si	1	Sx	-13.4	0.0	0.0	0.0	13.4
2- 2	si	6	Tz	-0.5	-29.5	0.0	29.5	51.1
2- 2	si	9	TySi	-0.5	0.0	-106.7	106.7	184.8
-----								

## SOLLECITAZIONI :

Caso	2- 2	MZ	MY	MT	N	TZ	TY
		21541.3	4343.5	0.0	-11.6	-81.1	402.1

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2	si	2	Sx	Si	-315.4	0.0	0.0	315.4

2- 2 si  6	Tz	-229.8	-21.9	0.0	21.9	232.9
2- 2 si  9	Ty	4.2	0.0	-79.3	79.3	137.4
-----						91.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	36774.8	7415.1	0.0	-11.6	-53.4	264.9
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-538.1	0.0	0.0	0.0	538.1
2- 2 si  6	Tz	-392.0	-14.4	0.0	14.4	392.8
2- 2 si  9	Ty	7.6	0.0	-52.2	52.2	90.8
-----						137.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	45777.0	9230.3	0.0	-11.6	-26.1	129.4
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-669.7	0.0	0.0	0.0	669.7
2- 2 si  6	Tz	-487.8	-7.0	0.0	7.0	488.0
2- 2 si  9	Ty	9.5	0.0	-25.5	25.5	45.2
-----						183.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	48624.6	9804.4	0.0	-11.6	0.9	-4.5
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-711.3	0.0	0.0	0.0	711.3
2- 2 si  6	Tz	-518.1	0.2	0.0	0.2	518.1
2- 2 si  9	Ty	10.2	0.0	0.9	0.9	10.3
-----						228.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	45394.2	9153.1	0.0	-11.6	27.6	-136.7
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-664.1	0.0	0.0	0.0	664.1
2- 2 si  6	Tz	-483.8	7.4	0.0	7.4	483.9
2- 2 si  9	Ty	9.5	0.0	26.9	26.9	47.6
-----						274.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	36162.2	7291.6	0.0	-11.6	53.9	-267.2
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-529.1	0.0	0.0	0.0	529.1
2- 2 si  6	Tz	-385.5	14.6	0.0	14.6	386.3
2- 2 si  9	Ty	7.4	0.0	52.7	52.7	91.5
-----						320.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	21005.3	4235.4	0.0	-11.6	79.8	-396.0
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  2	Sx Si	-307.5	0.0	0.0	0.0	307.5
2- 2 si  6	Tz	-224.1	21.6	0.0	21.6	227.2
2- 2 si  9	Ty	4.1	0.0	78.1	78.1	135.3
-----						366.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 2	0.0	0.0	0.0	-340.3	16.7	-82.9
2- 2	0.0	0.0	0.0	-11.6	105.5	-523.1
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 2 si  2	Sx Si	-13.4	0.0	0.0	0.0	13.4
2- 2 si  6	Tz	-0.5	28.5	0.0	28.5	49.4
2- 2 si  9	TySi	-0.5	0.0	103.2	103.2	178.7

## VERIFICA STABILITA` :

Z	L0 = 366.	Ro = 4.89	lm = 74.8	Ncr= 94241.1	alfa(b )=0.3400	ki=0.6861
Y	Lc = 366.	Ro = 3.01	lm = 121.3	Ncr= 35817.8	alfa(c )=0.4900	ki=0.3504
Caso 2- 2 - Nodo 2 - Asse Y						
Ned = -11.6 Mzeq = 42141.4 Myeq = 8497.2 Ss = -617.5 ( 0.236)						

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SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
5- 6	0.0	0.0	0.0	82.0	-15.6	77.5
2- 2	0.0	0.0	0.0	46.6	-99.2	491.9
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
5- 6 si  1	Sx Si	3.2	0.0	0.0	0.0	3.2
2- 2 si  6	Tz	1.8	-26.8	0.0	26.8	46.5
2- 2 si  9	TySi	1.8	0.0	-97.0	97.0	168.0
-----						42.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	18086.0	3646.8	0.0	46.6	-73.7	365.3
TENSIONI (Sz= 0.00) :						
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si
2- 2 si  4	Sx Si	266.2	0.0	0.0	0.0	266.2
2- 2 si  6	Tz	-190.7	-19.9	0.0	19.9	193.8

2-2	si	9	Ty	5.8	0.0	-72.0	72.0	124.9
				PROGR.				
				84.				

## SOLLECITAZIONI :

Caso	2-2	MZ	30863.5	MY	6223.2	MT	0.0	N	46.6	TZ	-48.5	TY	240.4
				PROGR.									
				127.									

## SOLLECITAZIONI :

Caso	2-2	MZ	38403.1	MY	7743.4	MT	0.0	N	46.6	TZ	-23.6	TY	117.1
				PROGR.									
				169.									

## SOLLECITAZIONI :

Caso	2-2	MZ	40775.3	MY	8221.7	MT	0.0	N	46.6	TZ	0.9	TY	-4.5
				PROGR.									
				211.									

## SOLLECITAZIONI :

Caso	2-2	MZ	38050.5	MY	7672.3	MT	0.0	N	46.6	TZ	25.1	TY	-124.4
				PROGR.									
				253.									

## SOLLECITAZIONI :

Caso	2-2	MZ	30299.4	MY	6109.4	MT	0.0	N	46.6	TZ	48.9	TY	-242.6
				PROGR.									
				295.									

## SOLLECITAZIONI :

Caso	2-2	MZ	17592.4	MY	3547.2	MT	0.0	N	46.6	TZ	72.4	TY	-359.2
				PROGR.									
				338.									

## SOLLECITAZIONI :

Caso	5-6	MZ	0.0	MY	0.0	MT	0.0	N	82.0	TZ	15.3	TY	-75.7
				PROGR.									
				463									

## VERIFICA STABILITA' :

$L_0 = 338$  |  $R_0 = 4.89$  |  $l_m = 69.0$  |  $N_{cr} = 110470.7$  |  $\alpha_{fa}(b) = 0.3400$  |  $k_i = 0.7273$   
 $Z$  |  $L_c = 338$  |  $R_0 = 3.01$  |  $l_m = 112.0$  |  $N_{cr} = 41986.1$  |  $\alpha_{fa}(c) = 0.4900$  |  $k_i = 0.3930$   
 $Y$  |  $L_c = 338$  |  $R_0 = 3.01$  |  $l_m = 112.0$  |  $N_{cr} = 41986.1$  |  $\alpha_{fa}(c) = 0.4900$  |  $k_i = 0.3930$   
 Caso 5-11 - Nodo 2 - Asse Y  
 $N_{ed} = -63.5$  |  $M_{zeq} = 5604.3$  |  $M_{yeq} = 1130.0$  |  $S_s = -88.4$  ( 0.034)

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 0.

## SOLLECITAZIONI :

Caso	5-16	MZ	0.0	MY	0.0	MT	0.0	N	-227.5	TZ	-15.2	TY	75.5
				PROGR.									
				40.									

## SOLLECITAZIONI :

Caso	2-2	MZ	17141.4	MY	3456.3	MT	0.0	N	-25.2	TZ	-73.2	TY	363.0
				PROGR.									
				124.0									

-----													PROGR.	81.
SOLLECITAZIONI :														
Caso	2- 2	MZ	29382.9	MY	5924.6	MT	0.0	N	-25.2	TZ	-48.8	TY	242.0	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
2- 2	si	2	Sx	Si	-430.5	0.0		0.0		0.0		430.5		
2- 2	si	6	Tz		-313.8	-13.2		0.0		13.2		314.6		
2- 2	si	9	Ty		5.4	0.0		-47.7		47.7		82.8		
-----													PROGR.	121.
SOLLECITAZIONI :														
Caso	2- 2	MZ	36725.7	MY	7405.2	MT	0.0	N	-25.2	TZ	-24.4	TY	120.9	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
2- 2	si	2	Sx	Si	-537.9	0.0		0.0		0.0		537.9		
2- 2	si	6	Tz		-392.0	-6.6		0.0		6.6		392.2		
2- 2	si	9	Ty		7.0	0.0		-23.8		23.8		41.9		
-----													PROGR.	162.
SOLLECITAZIONI :														
Caso	2- 2	MZ	39170.9	MY	7898.2	MT	0.0	N	-25.2	TZ	0.0	TY	-0.1	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
2- 2	si	2	Sx	Si	-573.6	0.0		0.0		0.0		573.6		
2- 2	si	6	Tz		-418.0	0.0		0.0		0.0		418.0		
2- 2	si	9	Ty		7.6	0.0		0.0		0.0		7.6		
-----													PROGR.	202.
SOLLECITAZIONI :														
Caso	2- 2	MZ	36719.7	MY	7404.0	MT	0.0	N	-25.2	TZ	24.4	TY	-121.1	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
2- 2	si	2	Sx	Si	-537.8	0.0		0.0		0.0		537.8		
2- 2	si	6	Tz		-391.9	6.6		0.0		6.6		392.1		
2- 2	si	9	Ty		7.0	0.0		23.9		23.9		41.9		
-----													PROGR.	243.
SOLLECITAZIONI :														
Caso	2- 2	MZ	29373.4	MY	5922.7	MT	0.0	N	-25.2	TZ	48.8	TY	-242.0	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
2- 2	si	2	Sx	Si	-430.4	0.0		0.0		0.0		430.4		
2- 2	si	6	Tz		-313.7	13.2		0.0		13.2		314.5		
2- 2	si	9	Ty		5.4	0.0		47.7		47.7		82.8		
-----													PROGR.	283.
SOLLECITAZIONI :														
Caso	2- 2	MZ	17133.1	MY	3454.6	MT	0.0	N	-25.2	TZ	73.2	TY	-362.9	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
2- 2	si	2	Sx	Si	-251.5	0.0		0.0		0.0		251.5		
2- 2	si	6	Tz		-183.4	19.8		0.0		19.8		186.6		
2- 2	si	9	Ty		2.7	0.0		71.6		71.6		124.0		
-----													PROGR.	324.
SOLLECITAZIONI :														
Caso	5-16	MZ	0.0	MY	0.0	MT	0.0	N	-227.5	TZ	15.2	TY	-75.5	
2- 2			0.0		0.0		0.0		-25.2		97.5		-483.8	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
5-16	si	3	Sx		-9.0	0.0		0.0		0.0		9.0		
2- 2	si	6	Tz		-1.0	26.4		0.0		26.4		45.7		
2- 2	si	9	TySi		-1.0	0.0		95.4		95.4		165.2		
-----														
VERIFICA STABILITA` :														
Z	L0 = 324.   Ro = 4.89   lm = 66.2   Ncr= 120204.8   alfa(b )=0.3400   ki=0.7473													
Y	Lc = 324.   Ro = 3.01   lm = 107.4   Ncr= 45685.7   alfa(c )=0.4900   ki=0.4166													
Caso 2- 2 - Nodo 2 - Asse Y														
Ned = -25.2   Mzeq = 33948.1   Myeq = 6845.1   Ss = -498.8 ( 0.190)														
P_HEA120_S010 ( 10) stato limite ultimo - ASTA ( 1559- 1561) 464														
-----													PROGR.	0.
SOLLECITAZIONI :														
Caso	5- 7	MZ	0.0	MY	0.0	MT	0.0	N	140.3	TZ	-9.4	TY	46.5	
2- 2			0.0		0.0		0.0		48.7		-94.3		467.8	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
5- 7	si	1	Sx		5.5	0.0		0.0		0.0		5.5		
2- 2	si	6	Tz		1.9	-25.5		0.0		25.5		44.2		
2- 2	si	9	TySi		1.9	0.0		-92.2		92.2		159.8		
-----													PROGR.	44.
SOLLECITAZIONI :														
Caso	2- 2	MZ	17905.6	MY	3610.4	MT	0.0	N	48.7	TZ	-70.0	TY	347.2	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi	Sx		Tz		Ty		Tau tot.		Si		
2- 2	si	4	Sx	Si	263.7	0.0		0.0		0.0		263.7		
2- 2	si	6	Tz		-188.7	-18.9		0.0		18.9		191.5		
2- 2	si	9	Ty		5.8	0.0		-68.5		68.5		118.7		
-----													PROGR.	88.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
2- 2	30548.3	6159.6	0.0	48.7	-46.0	228.3	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2- 2	si	4	Sx Si	448.5	0.0	0.0	448.5
2- 2	si	6	Tz	-323.3	-12.4	0.0	12.4
2- 2	si	9	Ty	8.6	0.0	-45.0	45.0
							PROGR. 132.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
2- 2	38001.5	7662.4	0.0	48.7	-22.4	111.1	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2- 2	si	4	Sx Si	557.5	0.0	0.0	557.5
2- 2	si	6	Tz	-402.7	-6.1	0.0	6.1
2- 2	si	9	Ty	10.2	0.0	-21.9	21.9
							PROGR. 176.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
2- 2	40338.7	8133.7	0.0	48.7	0.9	-4.5	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2- 2	si	4	Sx Si	591.6	0.0	0.0	591.6
2- 2	si	6	Tz	-427.6	0.2	0.0	0.2
2- 2	si	9	Ty	10.7	0.0	0.9	0.9
							PROGR. 220.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
2- 2	37633.7	7588.3	0.0	48.7	23.9	-118.3	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2- 2	si	4	Sx Si	552.1	0.0	0.0	552.1
2- 2	si	6	Tz	-398.8	6.4	0.0	6.4
2- 2	si	9	Ty	10.1	0.0	23.3	23.3
							PROGR. 264.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
2- 2	29959.8	6041.0	0.0	48.7	46.5	-230.6	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2- 2	si	4	Sx Si	439.9	0.0	0.0	439.9
2- 2	si	6	Tz	-317.1	12.6	0.0	12.6
2- 2	si	9	Ty	8.5	0.0	45.5	45.5
							PROGR. 308.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
2- 2	17390.8	3506.6	0.0	48.7	68.8	-341.1	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2- 2	si	4	Sx Si	256.2	0.0	0.0	256.2
2- 2	si	6	Tz	-183.2	18.6	0.0	18.6
2- 2	si	9	Ty	5.7	0.0	67.3	67.3
							PROGR. 352.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
5- 7	0.0	0.0	0.0	140.3	9.0	-44.7	
2- 2	0.0	0.0	0.0	48.7	90.7	-449.9	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
5- 7	si	1	Sx	5.5	0.0	0.0	5.5
2- 2	si	6	Tz	1.9	24.5	0.0	24.5
2- 2	si	9	TySi	1.9	0.0	88.7	88.7
							153.7

## VERIFICA STABILITA` :

$L_0 = 352.$   
 $Z \quad L_c = 352. \quad R_o = 4.89 \quad l_m = 71.9 \quad N_{cr} = 101872.9 \quad \alpha_f(b) = 0.3400 \quad k_i = 0.7069$   
 $Y \quad L_c = 352. \quad R_o = 3.01 \quad l_m = 116.6 \quad N_{cr} = 38718.4 \quad \alpha_f(c) = 0.4900 \quad k_i = 0.3710$   
 Caso 5-10 - Nodo 2 - Asse Y  
 $N_{ed} = -123.4 \quad M_{zeq} = 3472.3 \quad M_{yeq} = 700.1 \quad S_s = -64.0 \quad (0.024)$

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 ----- PROGR. 0.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
6-10	0.0	0.0	0.0	145.2	-9.4	46.5	
2- 2	0.0	0.0	0.0	83.1	-94.3	467.8	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
6-10	si	1	Sx	5.7	0.0	0.0	5.7
2- 2	si	6	Tz	3.3	-25.5	0.0	25.5
2- 2	si	9	TySi	3.3	0.0	-92.2	92.2
							PROGR. 44.

SOLLECITAZIONI :							
Caso	MZ	MY	MT	N	TZ	TY	
2- 2	17902.0	3609.7	0.0	83.1	-70.0	347.2	
TENSIONI (Sz= 0.00) :							
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.
2- 2	si	4	Sx Si	265.0	0.0	0.0	265.0
2- 2	si	6	Tz	-187.3	-18.9	0.0	18.9
2- 2	si	9	Ty	7.2	0.0	-68.5	68.5
							PROGR. 88.

## SOLLECITAZIONI :

Caso	2- 2	MZ	30542.1	MY	6158.4	MT	0.0	N	83.1	TZ	-46.0	TY	228.3
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2- 2	si	4	Sx	Si	449.8	0.0	0.0	449.8					
2- 2	si	6	Tz		-321.9	-12.4	0.0	322.6					
2- 2	si	9	Ty		9.9	0.0	-45.0	78.6					
PROGR.													132.
SOLLECITAZIONI	:												
Caso	2- 2	MZ	37993.7	MY	7660.9	MT	0.0	N	83.1	TZ	-22.4	TY	111.1
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2- 2	si	4	Sx	Si	558.7	0.0	0.0	558.7					
2- 2	si	6	Tz		-401.2	-6.1	0.0	401.4					
2- 2	si	9	Ty		11.6	0.0	-21.9	39.7					
PROGR.													176.
SOLLECITAZIONI	:												
Caso	2- 2	MZ	40330.5	MY	8132.1	MT	0.0	N	83.1	TZ	0.9	TY	-4.5
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2- 2	si	4	Sx	Si	592.9	0.0	0.0	592.9					
2- 2	si	6	Tz		-426.1	0.2	0.0	426.1					
2- 2	si	9	Ty		12.1	0.0	0.9	12.2					
PROGR.													220.
SOLLECITAZIONI	:												
Caso	2- 2	MZ	37626.0	MY	7586.7	MT	0.0	N	83.1	TZ	23.9	TY	-118.3
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2- 2	si	4	Sx	Si	553.3	0.0	0.0	553.3					
2- 2	si	6	Tz		-397.3	6.4	0.0	397.5					
2- 2	si	9	Ty		11.5	0.0	23.3	42.0					
PROGR.													264.
SOLLECITAZIONI	:												
Caso	2- 2	MZ	29953.7	MY	6039.7	MT	0.0	N	83.1	TZ	46.5	TY	-230.5
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2- 2	si	4	Sx	Si	441.2	0.0	0.0	441.2					
2- 2	si	6	Tz		-315.6	12.6	0.0	316.4					
2- 2	si	9	Ty		9.8	0.0	45.5	79.3					
PROGR.													308.
SOLLECITAZIONI	:												
Caso	2- 2	MZ	17387.2	MY	3505.9	MT	0.0	N	83.1	TZ	68.8	TY	-341.1
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2- 2	si	4	Sx	Si	257.5	0.0	0.0	257.5					
2- 2	si	6	Tz		-181.8	18.6	0.0	184.7					
2- 2	si	9	Ty		7.1	0.0	67.3	116.7					
PROGR.													352.
SOLLECITAZIONI	:												
Caso	6-10	MZ	0.0	MY	0.0	MT	0.0	N	145.2	TZ	9.0	TY	-44.7
2- 2			0.0		0.0		0.0		83.1		90.7		-449.9
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
6-10	si	4	Sx		5.7	0.0	0.0	5.7					
2- 2	si	6	Tz		3.3	24.5	0.0	42.6					
2- 2	si	9	Ty		3.3	0.0	88.7	153.7					
PROGR.													
VERIFICA STABILITA` :													
Z	L0 =	352.	Ro =	4.89	lm =	71.9	Ncr =	101870.1	alfa(b) =	0.3400	ki =	0.7069	
Y	Lc =	352.	Ro =	3.01	lm =	116.6	Ncr =	38717.3	alfa(c) =	0.4900	ki =	0.3710	
Caso 6- 7 - Nodo 2 - Asse Y													
Ned = -116.7   Mzeq = 3471.6   Myeq = 700.0   Ss = -63.2 ( 0.024)													
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PROGR.													
SOLLECITAZIONI	:												
Caso	6-12	MZ	0.0	MY	0.0	MT	0.0	N	170.9	TZ	-9.4	TY	46.5
2- 2			0.0		0.0		0.0		100.7		-94.3		467.8
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
6-12	si	1	Sx		6.7	0.0	0.0	6.7					
2- 2	si	6	Tz		4.0	-25.5	0.0	44.3					
2- 2	si	9	Ty		4.0	0.0	-92.2	159.8					
PROGR.													44.
SOLLECITAZIONI	:												
Caso	2- 2	MZ	17903.4	MY	3610.0	MT	0.0	N	100.7	TZ	-70.0	TY	347.2
TENSIONI (Sz=	0.00)	:											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si					
2- 2	si	4	Sx	Si	265.7	0.0	0.0	265.7					
2- 2	si	6	Tz		-186.6	-18.9	0.0	189.5					
2- 2	si	9	Ty		7.9	0.0	-68.5	118.8					
PROGR.													88.
SOLLECITAZIONI	:												
Caso		MZ		MY		MT		N		TZ		TY	

2- 2	30544.4	6158.8	0.0	100.7	-46.0	228.3
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	450.5	0.0	0.0	0.0	450.5	
2- 2 si  6 Tz	-321.2	-12.4	0.0	12.4	322.0	
2- 2 si  9 Ty	10.6	0.0	-45.0	45.0	78.7	
-----						PROGR. 132.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	37996.6	7661.5	0.0	100.7	-22.4	111.1
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	559.4	0.0	0.0	0.0	559.4	
2- 2 si  6 Tz	-400.6	-6.1	0.0	6.1	400.7	
2- 2 si  9 Ty	12.3	0.0	-21.9	21.9	39.9	
-----						PROGR. 176.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	40333.6	8132.7	0.0	100.7	0.9	-4.5
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	593.6	0.0	0.0	0.0	593.6	
2- 2 si  6 Tz	-425.5	0.2	0.0	0.2	425.5	
2- 2 si  9 Ty	12.8	0.0	0.9	0.9	12.9	
-----						PROGR. 220.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	37628.8	7587.3	0.0	100.7	23.9	-118.3
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	554.1	0.0	0.0	0.0	554.1	
2- 2 si  6 Tz	-396.7	6.4	0.0	6.4	396.8	
2- 2 si  9 Ty	12.2	0.0	23.3	23.3	42.2	
-----						PROGR. 264.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	29956.0	6040.2	0.0	100.7	46.5	-230.5
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	441.9	0.0	0.0	0.0	441.9	
2- 2 si  6 Tz	-315.0	12.6	0.0	12.6	315.7	
2- 2 si  9 Ty	10.5	0.0	45.5	45.5	79.4	
-----						PROGR. 308.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
2- 2	17388.5	3506.1	0.0	100.7	68.8	-341.1
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
2- 2 si  4 Sx	258.2	0.0	0.0	0.0	258.2	
2- 2 si  6 Tz	-181.2	18.6	0.0	18.6	184.0	
2- 2 si  9 Ty	7.8	0.0	67.3	67.3	116.7	
-----						PROGR. 352.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-12	0.0	0.0	0.0	170.9	9.0	-44.7
2- 2	0.0	0.0	0.0	100.7	90.7	-449.9
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-12 si  4 Sx	6.7	0.0	0.0	0.0	6.7	
2- 2 si  6 Tz	4.0	24.5	0.0	24.5	42.6	
2- 2 si  9 Ty	4.0	0.0	88.7	88.7	153.7	

## VERIFICA STABILITA` :

Z |L0 = 352. |  
 Y |Lc = 352. |Ro = 4.89|lm = 71.9|Ncr= 101870.0|alfa(b )=0.3400|ki=0.7069|  
 Y |Lc = 352. |Ro = 3.01|lm = 116.6|Ncr= 38717.3|alfa(c )=0.4900|ki=0.3710|  
 Caso 6- 5 - Nodo 2 - Asse Y  
 Ned = -136.4|Mzeq = 3471.9|Myeq = 700.1|Ss = -65.3 ( 0.025)

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 -----  
 PROGR. 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6- 9	-155351.5	519.1	0.0	2629.8	13.0	3887.8
6- 8	155668.9	-521.9	0.0	-2536.5	-13.0	-3887.8
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6- 9 si  1 Sx	1574.3	0.0	0.0	0.0	1574.3	
6- 8 si  5 Tz	-1563.4	-155.2	0.0	155.2	1586.3	
6- 9 si  9 Ty	104.1	0.0	-766.6	766.6	1331.9	
6- 9 si 11 Si	1050.0	0.0	-722.8	722.8	1634.0	
-----						PROGR. 5.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6- 9	-135915.2	454.2	0.0	2629.8	13.0	3886.8
6- 8	136227.7	-456.6	0.0	-2536.5	-13.0	-3888.7
TENSIONI (Sz=	0.00) :					
Caso  Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6- 9 si  1 Sx	1390.3	0.0	0.0	0.0	1390.3	
6- 8 si  5 Tz	-1380.6	-155.3	0.0	155.3	1406.5	
6- 8 si  9 Ty	-100.3	0.0	766.8	766.8	1332.0	
6- 9 si 11 Si	931.6	0.0	-722.7	722.7	1560.3	
-----						PROGR. 10.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-116483.8	389.3	0.0	2629.8	13.0	3885.8
6- 8	116781.5	-391.4	0.0	-2536.5	-13.0	-3889.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	1206.3	0.0	0.0	0.0	1206.3
6- 8	si	5	Tz	-1197.8	-155.3	0.0	155.3	1227.6
6- 8	si	9	Ty	-100.2	0.0	767.0	767.0	1332.3
6- 8	si	11	Si	-811.3	0.0	723.2	723.2	1492.4

----- PROGR. 15.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-97057.5	324.4	0.0	2629.8	13.0	3884.8
6- 8	97330.3	-326.2	0.0	-2536.5	-13.0	-3890.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	1022.4	0.0	0.0	0.0	1022.4
6- 8	si	5	Tz	-1014.9	-155.4	0.0	155.4	1050.0
6- 8	si	9	Ty	-100.2	0.0	767.2	767.2	1332.6
6- 8	si	11	Si	-692.8	0.0	723.4	723.4	1431.8

----- PROGR. 20.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-77636.0	259.5	0.0	2629.8	13.0	3883.8
6- 8	77874.2	-260.9	0.0	-2536.5	-13.0	-3891.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	838.5	0.0	0.0	0.0	838.5
6- 8	si	5	Tz	-832.0	-155.4	0.0	155.4	874.4
6- 8	si	9	Ty	-100.1	0.0	767.4	767.4	1333.0
6- 8	si	11	Si	-574.3	0.0	723.6	723.6	1378.6

----- PROGR. 25.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-58219.6	194.7	0.0	2629.8	13.0	3882.8
6- 8	58413.1	-195.7	0.0	-2536.5	-13.0	-3892.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	654.7	0.0	0.0	0.0	654.7
6- 8	si	5	Tz	-649.0	-155.4	0.0	155.4	702.6
6- 8	si	9	Ty	-100.0	0.0	767.6	767.6	1333.3
6- 8	si	11	Si	-455.7	0.0	723.8	723.8	1333.9

----- PROGR. 30.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-38808.1	129.8	0.0	2629.8	13.0	3881.8
6- 8	38947.0	-130.5	0.0	-2536.5	-13.0	-3893.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	470.9	0.0	0.0	0.0	470.9
6- 8	si	5	Tz	-466.0	-155.5	0.0	155.5	538.2
6- 8	si	9	TySi	-100.0	0.0	767.8	767.8	1333.6

----- PROGR. 35.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-19401.6	64.9	0.0	2629.8	13.0	3880.8
6- 8	19476.0	-65.2	0.0	-2536.5	-13.0	-3894.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	287.2	0.0	0.0	0.0	287.2
6- 8	si	5	Tz	-282.9	-155.5	0.0	155.5	390.7
6- 8	si	9	TySi	-99.9	0.0	768.0	768.0	1334.0

----- PROGR. 40.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6- 9	0.0	0.0	0.0	2629.8	13.0	3879.8
6- 8	0.0	0.0	0.0	-2536.5	-13.0	-3895.7

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	2	Sx	103.5	0.0	0.0	0.0	103.5
6- 8	si	5	Tz	-99.8	-155.6	0.0	155.6	287.3
6- 8	si	9	TySi	-99.8	0.0	768.2	768.2	1334.3

## VERIFICA STABILITA` :

L0 = 40.  
 Z | Lc = 40. | Ro = 4.89 | lm = 8.2 | Ncr = 7871221.1 | alfa(b ) = 0.3400 | ki = 1.0000  
 Y | Lc = 40. | Ro = 3.01 | lm = 13.3 | Ncr = 2991581.1 | alfa(c ) = 0.4900 | ki = 1.0000  
 Caso 6- 8 - Nodo 1 - Asse Y  
 Ned = -2536.5 | Mzeq = 116751.7 | Myeq = -391.4 | Ss = -1205.6 ( 0.460)

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 ----- PROGR. 0.

## SOLLECITAZIONI :

Caso	MZ	MY	MT	N	TZ	TY
6-10	-82247.0	568.9	0.0	1374.1	14.2	2060.1

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	840.4	0.0	0.0	0.0	840.4
6-10	si	5	Tz	829.2	82.8	0.0	82.8	841.5
6-10	si	9	Ty	54.7	0.0	-406.2	406.2	705.8
6-10	si	11	Si	555.5	0.0	-383.0	383.0	865.3

----- PROGR. 5.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	-71948.8	497.8	0.0	1374.1	14.2	2059.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx	741.9	0.0	0.0
6-10	si	5	Tz	732.1	82.8	0.0
6-10	si	9	Ty	54.6	0.0	-406.0
6-10	si	11	Si	492.7	0.0	-382.8
						382.8
						826.1
						10.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	-61655.5	426.7	0.0	1374.1	14.2	2058.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx	643.5	0.0	0.0
6-10	si	5	Tz	635.1	82.7	0.0
6-10	si	9	Ty	54.5	0.0	-405.8
6-10	si	11	Si	430.0	0.0	-382.7
						382.7
						790.0
						15.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	-51367.1	355.6	0.0	1374.1	14.2	2057.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx	545.2	0.0	0.0
6-10	si	5	Tz	538.2	82.7	0.0
6-10	si	9	Ty	54.5	0.0	-405.7
6-10	si	11	Si	367.2	0.0	-382.5
						382.5
						757.5
						20.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	-41083.8	284.5	0.0	1374.1	14.2	2056.1
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx	446.9	0.0	0.0
6-10	si	5	Tz	441.3	82.6	0.0
6-10	si	9	Ty	54.4	0.0	-405.5
6-10	si	11	Si	304.6	0.0	-382.3
						382.3
						728.8
						25.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	-30805.4	213.4	0.0	1374.1	14.2	2055.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx	348.6	0.0	0.0
6-10	si	5	Tz	344.4	82.6	0.0
6-10	si	9	Ty	54.3	0.0	-405.3
6-10	si	11	Si	241.9	0.0	-382.1
						382.1
						704.7
						30.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	-20532.0	142.2	0.0	1374.1	14.2	2054.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx	250.4	0.0	0.0
6-10	si	5	Tz	247.6	82.6	0.0
6-10	si	9	Ty	54.2	0.0	-405.1
						405.1
						703.7
						35.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	-10263.5	71.1	0.0	1374.1	14.2	2053.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx	152.2	0.0	0.0
6-10	si	5	Tz	150.8	82.5	0.0
6-10	si	9	Ty	54.2	0.0	-404.9
						404.9
						703.3
						40.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6- 9	0.0	0.0	0.0	1374.1	14.2	2052.1
6- 7	0.0	0.0	0.0	-1216.5	-14.3	-2053.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6- 9	si	2	Sx	54.1	0.0	0.0
6- 7	si	5	Tz	-47.9	-82.6	0.0
6- 7	si	9	Ty	-47.9	0.0	405.0
						405.0
						703.1

## VERIFICA STABILITA` :

L0 = 40. |  
 Z | Lc = 40. | Ro = 4.89 | lm = 8.2 | Ncr = 7871220.8 | alfa(b ) = 0.3400 | ki = 1.0000 |  
 Y | Lc = 40. | Ro = 3.01 | lm = 13.3 | Ncr = 2991581.0 | alfa(c ) = 0.4900 | ki = 1.0000 |  
 Caso 6- 7 - Nodo 1 - Asse Y  
 Ned = -1216.5 | Mzeq = 61494.7 | Myeq = -430.3 | Ss = -636.0 ( 0.243 )

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 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-10	-51843.0	527.3	0.0	858.4	13.2	1299.8
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-10	si	1	Sx	533.8	0.0	0.0
						533.8

6-10	si	5	Tz	523.4	52.6	0.0	52.6	531.3
6-10	si	9	Ty	34.4	0.0	-256.3	256.3	445.3
6-10	si	11	Si	350.0	0.0	-241.7	241.7	545.6
-----								5.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6-10			-45345.3	461.4	0.0	858.4	13.2	1298.8
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	471.1	0.0	0.0	0.0	471.1
6-10	si	5	Tz	462.0	52.5	0.0	52.5	470.9
6-10	si	9	Ty	34.3	0.0	-256.1	256.1	444.9
6-10	si	11	Si	310.4	0.0	-241.5	241.5	520.9
-----								10.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6-10			-38852.5	395.5	0.0	858.4	13.2	1297.8
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	408.5	0.0	0.0	0.0	408.5
6-10	si	5	Tz	400.7	52.5	0.0	52.5	410.9
6-10	si	9	Ty	34.2	0.0	-255.9	255.9	444.6
6-10	si	11	Si	270.8	0.0	-241.3	241.3	498.0
-----								15.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6-10			-32364.6	329.5	0.0	858.4	13.2	1296.8
6-7			32503.0	-329.7	0.0	-697.7	-13.2	-1297.4
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	345.9	0.0	0.0	0.0	345.9
6-7	si	5	Tz	-334.4	-52.5	0.0	52.5	346.5
6-7	si	9	Ty	-27.8	0.0	255.8	255.8	444.0
6-10	si	11	Si	231.2	0.0	-241.1	241.1	477.4
-----								20.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6-10			-25881.8	263.6	0.0	858.4	13.2	1295.8
6-7			26012.3	-263.7	0.0	-697.7	-13.2	-1298.4
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	283.4	0.0	0.0	0.0	283.4
6-7	si	5	Tz	-273.1	-52.5	0.0	52.5	287.9
6-7	si	9	Ty	-27.7	0.0	256.0	256.0	444.3
6-10	si	11	Si	191.7	0.0	-240.9	240.9	459.2
-----								25.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6-10			-19403.9	197.7	0.0	858.4	13.2	1294.8
6-7			19516.7	-197.8	0.0	-697.7	-13.2	-1299.4
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	220.9	0.0	0.0	0.0	220.9
6-7	si	5	Tz	-211.8	-52.5	0.0	52.5	230.5
6-7	si	9	TySi	-27.7	0.0	256.2	256.2	444.7
-----								30.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6-10			-12931.0	131.8	0.0	858.4	13.2	1293.8
6-7			13016.1	-131.9	0.0	-697.7	-13.2	-1300.4
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	158.5	0.0	0.0	0.0	158.5
6-7	si	5	Tz	-150.4	-52.6	0.0	52.6	175.8
6-7	si	9	TySi	-27.6	0.0	256.4	256.4	445.0
-----								35.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6-10			-6463.0	65.9	0.0	858.4	13.2	1292.8
6-7			6510.5	-65.9	0.0	-697.7	-13.2	-1301.3
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	96.1	0.0	0.0	0.0	96.1
6-7	si	5	Tz	-88.9	-52.6	0.0	52.6	127.3
6-7	si	9	TySi	-27.5	0.0	256.6	256.6	445.3
-----								40.

SOLLECITAZIONI :								
Caso			MZ	MY	MT	N	TZ	TY
6-10			0.0	0.0	0.0	858.4	13.2	1291.8
6-7			0.0	0.0	0.0	-697.7	-13.2	-1302.3
TENSIONI (Sz= 0.00) :								
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-10	si	1	Sx	33.8	0.0	0.0	0.0	33.8
6-7	si	5	Tz	-27.5	-52.7	0.0	52.7	95.2
6-7	si	9	TySi	-27.5	0.0	256.8	256.8	445.7

## VERIFICA STABILITA` :

L0 = 40. |  
 Z | Lc = 40. | Ro = 4.89 | lm = 8.2 | Ncr = 7871220.8 | alfa(b ) = 0.3400 | ki = 1.0000 |  
 Y | Lc = 40. | Ro = 3.01 | lm = 13.3 | Ncr = 2991581.0 | alfa(c ) = 0.4900 | ki = 1.0000 |  
 Caso 6- 7 - Nodo 1 - Asse Y  
 Ned = -697.7 | Mzeq = 38958.9 | Myeq = -395.6 | Ss = -403.2 ( 0.154 )

P_HEA120_S010 ( 10)		stato limite ultimo - ASTA ( 1919- 1220)					588
		-----					0.
SOLLECITAZIONI :		-----					PROGR.
Caso	MZ	MY	MT	N	TZ	TY	
6-10	-45516.7	487.7	0.0	764.2	12.2	1143.3	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-10	si 1 Sx	469.7	0.0	0.0	0.0	469.7	
6-10	si 5 Tz	460.1	46.3	0.0	46.3	467.0	
6-10	si 9 Ty	30.6	0.0	-225.4	225.4	391.7	
6-10	si 11 Si	307.8	0.0	-212.6	212.6	479.9	
		-----					PROGR.
SOLLECITAZIONI :		-----					5.
Caso	MZ	MY	MT	N	TZ	TY	
6-10	-39809.8	426.8	0.0	764.2	12.2	1142.3	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-10	si 1 Sx	414.6	0.0	0.0	0.0	414.6	
6-10	si 5 Tz	406.2	46.2	0.0	46.2	414.0	
6-10	si 9 Ty	30.5	0.0	-225.2	225.2	391.3	
6-10	si 11 Si	272.9	0.0	-212.4	212.4	458.1	
		-----					PROGR.
SOLLECITAZIONI :		-----					10.
Caso	MZ	MY	MT	N	TZ	TY	
6-10	-34107.8	365.8	0.0	764.2	12.2	1141.3	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-10	si 1 Sx	359.5	0.0	0.0	0.0	359.5	
6-10	si 5 Tz	352.3	46.2	0.0	46.2	361.3	
6-10	si 9 Ty	30.5	0.0	-225.1	225.1	391.0	
6-10	si 11 Si	238.2	0.0	-212.2	212.2	438.0	
		-----					PROGR.
SOLLECITAZIONI :		-----					15.
Caso	MZ	MY	MT	N	TZ	TY	
6-10	-28410.8	304.8	0.0	764.2	12.2	1140.3	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-10	si 1 Sx	304.5	0.0	0.0	0.0	304.5	
6-10	si 5 Tz	298.5	46.2	0.0	46.2	309.0	
6-10	si 9 Ty	30.4	0.0	-224.9	224.9	390.6	
6-10	si 11 Si	203.4	0.0	-212.0	212.0	419.8	
		-----					PROGR.
SOLLECITAZIONI :		-----					20.
Caso	MZ	MY	MT	N	TZ	TY	
6-10	-22718.7	243.9	0.0	764.2	12.2	1139.3	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-10	si 1 Sx	249.5	0.0	0.0	0.0	249.5	
6-10	si 5 Tz	244.7	46.1	0.0	46.1	257.4	
6-10	si 9 Ty	30.3	0.0	-224.7	224.7	390.3	
6-10	si 11 Si	168.7	0.0	-211.8	211.8	403.8	
		-----					PROGR.
SOLLECITAZIONI :		-----					25.
Caso	MZ	MY	MT	N	TZ	TY	
6-10	-17031.6	182.9	0.0	764.2	12.2	1138.3	
6- 7	17089.1	-181.7	0.0	-602.4	-12.1	-1139.2	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-10	si 1 Sx	194.6	0.0	0.0	0.0	194.6	
6- 7	si 5 Tz	-185.2	-46.1	0.0	46.1	201.6	
6- 7	si 9 Ty	-23.9	0.0	224.6	224.6	389.8	
6-10	si 11 Si	134.0	0.0	-211.6	211.6	390.3	
		-----					PROGR.
SOLLECITAZIONI :		-----					30.
Caso	MZ	MY	MT	N	TZ	TY	
6-10	-11349.5	121.9	0.0	764.2	12.2	1137.3	
6- 7	11397.7	-121.1	0.0	-602.4	-12.1	-1140.2	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-10	si 1 Sx	139.7	0.0	0.0	0.0	139.7	
6- 7	si 5 Tz	-131.4	-46.1	0.0	46.1	153.8	
6- 7	si 9 TySi	-23.8	0.0	224.8	224.8	390.1	
		-----					PROGR.
SOLLECITAZIONI :		-----					35.
Caso	MZ	MY	MT	N	TZ	TY	
6-10	-5672.3	61.0	0.0	764.2	12.2	1136.3	
6- 7	5701.3	-60.6	0.0	-602.4	-12.1	-1141.2	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6-10	si 1 Sx	84.9	0.0	0.0	0.0	84.9	
6- 7	si 5 Tz	-77.6	-46.2	0.0	46.2	111.4	
6- 7	si 9 TySi	-23.8	0.0	225.0	225.0	390.5	
		-----					PROGR.
SOLLECITAZIONI :		-----					40.
Caso	MZ	MY	MT	N	TZ	TY	
6- 9	0.0	0.0	0.0	764.3	12.2	1135.1	
6- 7	0.0	0.0	0.0	-602.4	-12.1	-1142.1	
TENSIONI (Sz= 0.00) :		-----					
Caso	Ve No massimi	Sx	Tz	Ty	Tau tot.	Si	
6- 9	si 3 Sx	30.1	0.0	0.0	0.0	30.1	
6- 7	si 5 Tz	-23.7	-46.2	0.0	46.2	83.5	
6- 7	si 9 TySi	-23.7	0.0	225.2	225.2	390.8	

VERIFICA STABILITA` :

z | L0 = 40. |  
 z | Lc = 40. | Ro = 4.89 | lm = 8.2 | Ncr = 7871221.0 | alfa(b) = 0.3400 | ki = 1.0000 |  
 y | Lc = 40. | Ro = 3.01 | lm = 13.3 | Ncr = 2991581.1 | alfa(c) = 0.4900 | ki = 1.0000 |  
 Caso 6- 7 - Nodo 1 - Asse Y  
 Ned = -602.4 | Mzeq = 34104.0 | Myeq = -363.4 | Ss = -353.1 ( 0.135)

P\_HEA120\_S010 ( 10) stato limite ultimo - ASTA ( 1918- 1618) 589  
 ----- PROGR. 0.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-44247.8	436.3	0.0	730.5	10.9	1112.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	455.2	0.0	0.0	0.0	455.2
6- 9	si	5	Tz	446.6	44.9	0.0	44.9	453.3
6- 9	si	9	Ty	29.2	0.0	-219.3	219.3	380.9
6- 9	si	11	Si	298.7	0.0	-206.8	206.8	466.3

 ----- PROGR. 5.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-38699.5	381.7	0.0	730.5	10.9	1111.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	401.7	0.0	0.0	0.0	401.7
6- 9	si	5	Tz	394.2	44.9	0.0	44.9	401.8
6- 9	si	9	Ty	29.2	0.0	-219.1	219.1	380.6
6- 9	si	11	Si	264.8	0.0	-206.6	206.6	445.1

 ----- PROGR. 10.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-33156.2	327.2	0.0	730.5	10.9	1110.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	348.3	0.0	0.0	0.0	348.3
6- 9	si	5	Tz	341.8	44.9	0.0	44.9	350.5
6- 9	si	9	Ty	29.1	0.0	-218.9	218.9	380.3
6- 9	si	11	Si	231.0	0.0	-206.4	206.4	425.6

 ----- PROGR. 15.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-27617.8	272.7	0.0	730.5	10.9	1109.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	294.9	0.0	0.0	0.0	294.9
6- 9	si	5	Tz	289.5	44.8	0.0	44.8	299.8
6- 9	si	9	Ty	29.0	0.0	-218.7	218.7	379.9
6- 9	si	11	Si	197.2	0.0	-206.2	206.2	408.0

 ----- PROGR. 20.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-22084.3	218.1	0.0	730.5	10.9	1108.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	241.6	0.0	0.0	0.0	241.6
6- 9	si	5	Tz	237.3	44.8	0.0	44.8	249.6
6- 9	si	9	Ty	29.0	0.0	-218.5	218.5	379.6
6- 9	si	11	Si	163.5	0.0	-206.0	206.0	392.5

 ----- PROGR. 25.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-16555.8	163.6	0.0	730.5	10.9	1107.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	188.3	0.0	0.0	0.0	188.3
6- 9	si	5	Tz	185.1	44.7	0.0	44.7	200.6
6- 9	si	9	Ty	28.9	0.0	-218.3	218.3	379.2
6- 9	si	11	Si	129.7	0.0	-205.8	205.8	379.4

 ----- PROGR. 30.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-11032.3	109.1	0.0	730.5	10.9	1106.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	135.1	0.0	0.0	0.0	135.1
6- 9	si	5	Tz	132.9	44.7	0.0	44.7	153.8
6- 9	si	9	TySi	28.9	0.0	-218.1	218.1	378.9

 ----- PROGR. 35.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	-5513.7	54.5	0.0	730.5	10.9	1105.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	81.9	0.0	0.0	0.0	81.9
6- 9	si	5	Tz	80.8	44.7	0.0	44.7	111.9
6- 9	si	9	TySi	28.8	0.0	-217.9	217.9	378.6

 ----- PROGR. 40.

SOLLECITAZIONI :  

Caso	MZ	MY	MT	N	TZ	TY
6- 9	0.0	0.0	0.0	730.5	10.9	1104.1

 TENSIONI (Sz= 0.00) :  

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6- 9	si	1	Sx	28.7	0.0	0.0	0.0	28.7
6- 9	si	5	Tz	28.7	44.6	0.0	44.6	82.5
6- 9	si	9	TySi	28.7	0.0	-217.7	217.7	378.2

## VERIFICA STABILITA' :

Z | L0 = 40. |  
 Y | Lc = 40. | Ro = 4.89 | lm = 8.2 | Ncr = 7871220.9 | alfa(b) = 0.3400 | ki = 1.0000 |  
 Y | Lc = 40. | Ro = 3.01 | lm = 13.3 | Ncr = 2991581.1 | alfa(c) = 0.4900 | ki = 1.0000 |  
 Caso 6- 8 - Nodo 1 - Asse Y  
 Ned = -567.4 | Mzeq = 32947.0 | Myeq = -323.2 | Ss = -339.8 ( 0.130)

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PROGR. 0.

SOLLECITAZIONI :										PROGR.	0.			
Caso			MZ		MY		MT		N		TZ		TY	
6- 9			-42118.4		397.4		0.0		702.6		9.9		1058.0	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si	
6- 9	si	1	Sx		433.1		0.0		0.0		0.0		433.1	
6- 9	si	5	Tz		425.2		42.7		0.0		42.7		431.6	
6- 9	si	9	Ty		28.1		0.0		-208.6		208.6		362.4	
6- 9	si	11	Si		284.5		0.0		-196.7		196.7		443.9	
										PROGR.				5.

SOLLECITAZIONI :										PROGR.	3.			
Caso			MZ		MY		MT		N		TZ		TY	
6- 9			-36836.2		347.8		0.0		702.6		9.9		1057.0	
TENSIONI (Sz= 0.00) :														
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si	
6- 9	si	1	Sx		382.2		0.0		0.0		0.0		382.2	
6- 9	si	5	Tz		375.4		42.7		0.0		42.7		382.6	
6- 9	si	9	Ty		28.0		0.0		-208.4		208.4		362.1	
6- 9	si	11	Si		252.3		0.0		-196.5		196.5		423.7	
										PROGR.				10.

SOLLECITAZIONI :										PROGR.		10.	
Caso			MZ		MY		MT		N		TZ		TY
6- 9			-31559.1		298.1		0.0		702.6		9.9		1056.0
TENSIONI (Sz= 0.00) :													
Caso	Ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
6- 9	si	1	Sx		331.4		0.0		0.0		0.0		331.4
6- 9	si	5	Tz		325.6		42.6		0.0		42.6		333.8
6- 9	si	9	Ty		28.0		0.0		-208.2		208.2		361.8
6- 9	si	11	Si		220.1		0.0		-196.3		196.3		405.1
										PROGR.		15.	

SOLLECITAZIONI :										PROGR.		13.
Caso			MZ		MY	MT		N	TZ		TY	
6- 9			-26286.8		248.4	0.0		702.6	9.9		1055.0	
TENSIONI (Sz= 0.00) :												
Caso	ve	No	massimi		Sx	Tz		Ty	Tau tot.		Si	
6- 9	si	1	Sx		280.7	0.0		0.0	0.0		280.7	
6- 9	si	5	Tz		275.8	42.6		0.0	42.6		285.5	
6- 9	si	9	Ty		27.9	0.0		-208.0	208.0		361.4	
6- 9	si	11	Si		188.0	0.0		-196.2	196.2		388.3	
										PROGR.		20.

SOLLECITAZIONI :										PROGR.	20.
Caso			MZ	MY	MT	N	TZ	TY			
6- 9			-21019.5	198.7	0.0	702.6	9.9	1054.0			
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
6- 9	si	1	Sx	230.0	0.0	0.0	0.0	230.0			
6- 9	si	5	Tz	226.1	42.6	0.0	42.6	237.8			
6- 9	si	9	Ty	27.9	0.0	-207.8	207.8	361.1			
6- 9	si	11	Si	155.9	0.0	-196.0	196.0	373.5			
										PROGR.	25.

SOLLECITAZIONI :										PROGR.		23.	
Caso			MZ		MY		MT		N		TZ		TY
6- 9			-15757.2		149.0		0.0		702.6		9.9		1053.0
TENSIONI (Sz= 0.00) :													
Caso	ve	No	massimi		Sx		Tz		Ty		Tau tot.		Si
6- 9	si	1	Sx		179.3		0.0		0.0		0.0		179.3
6- 9	si	5	Tz		176.4		42.5		0.0		42.5		191.2
6- 9	si	9	Ty		27.8		0.0		-207.6		207.6		360.7
6- 9	si	11	Si		123.8		0.0		-195.8		195.8		361.0
										PROGR.		30.	

SOLLECITAZIONI :										PROGR.	30.
Caso	MZ		MY	MT	N	TZ	TY				
6- 9	-10499.9		99.4	0.0	702.6	9.9	1052.0				
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si			
6- 9	si	1	Sx	128.7	0.0	0.0	0.0	128.7			
6- 9	si	5	Tz	126.8	42.5	0.0	42.5	146.6			
6- 9	si	9	TySi	27.8	0.0	-207.5	207.5	360.4			
-----										PROGR.	35.

SOLLECITAZIONI :										PROGR.	53.
Caso			MZ	MY	MT	N	TZ		TY		
6- 9			-5247.5	49.7	0.0	702.6	9.9		1051.0		
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.		Si		
6- 9	si	1	Sx	78.2	0.0	0.0	0.0		78.2		
6- 9	si	5	Tz	77.2	42.4	0.0	42.4		106.6		
6- 9	si	9	TySi	27.7	0.0	-207.3	207.3		360.0		
										PROGR.	40.

SOLLECITAZIONI :										PROGR.	40.
Caso	MZ			MY	MT	N	TZ		TY		
6- 9	0.0			0.0	0.0	702.6	9.9		1050.0		
TENSIONI (Sz= 0.00) :											
Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.		Si		

6- 9 si  4 Sx	27.7	0.0	0.0	0.0	27.7
6- 9 si  5  Tz	27.7	42.4	0.0	42.4	78.5
6- 9 si  9  TySi	27.7	0.0	-207.1	207.1	359.7

## VERIFICA STABILITA' :

Z | L0 = 40. |  
 Y | Lc = 40. | Ro = 4.89 | lm = 8.2 | Ncr= 7871221.1 | alfa(b )=0.3400 | ki=1.0000 |  
 Y | Lc = 40. | Ro = 3.01 | lm = 13.3 | Ncr= 2991581.1 | alfa(c )=0.4900 | ki=1.0000 |  
 Caso 6- 8 - Nodo 1 - Asse Y  
 Ned = -542.6 | Mzeq = 31010.4 | Myeq = -290.9 | Ss = -319.8 ( 0.122)

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 0.

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	-30225.6	333.6	0.0	592.7	8.3	759.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx	315.5	0.0	0.0
6-14	si	5	Tz	309.0	30.7	0.0
6-14	si	9	Ty	23.7	0.0	-149.7
6-14	si	11	Si	207.7	0.0	-141.2
PROGR. 5.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	-26430.0	291.9	0.0	592.7	8.3	758.2
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx	278.8	0.0	0.0
6-14	si	5	Tz	273.1	30.7	0.0
6-14	si	9	Ty	23.6	0.0	-149.5
6-14	si	11	Si	184.6	0.0	-141.0
PROGR. 10.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	-22639.4	250.2	0.0	592.7	8.3	757.2
6- 3	22842.3	-244.8	0.0	-497.8	-8.2	-758.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx	242.2	0.0	0.0
6- 3	si	5	Tz	-235.4	-30.7	0.0
6- 3	si	9	Ty	-19.9	0.0	149.5
6-14	si	11	Si	161.4	0.0	-140.8
PROGR. 15.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	-18853.7	208.5	0.0	592.7	8.3	756.2
6- 3	19047.7	-204.0	0.0	-497.8	-8.2	-759.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx	205.6	0.0	0.0
6- 3	si	5	Tz	-199.5	-30.7	0.0
6- 3	si	9	Ty	-19.8	0.0	149.7
6-14	si	11	Si	138.4	0.0	-140.6
PROGR. 20.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	-15073.0	166.8	0.0	592.7	8.3	755.2
6- 3	15248.1	-163.2	0.0	-497.8	-8.2	-760.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx	169.1	0.0	0.0
6- 3	si	5	Tz	-163.7	-30.8	0.0
6- 3	si	9	Ty	-19.8	0.0	149.9
6- 3	si	11	Si	-112.6	0.0	141.3
PROGR. 25.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	-11297.3	125.1	0.0	592.7	8.3	754.2
6- 3	11443.5	-122.4	0.0	-497.8	-8.2	-761.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx	132.5	0.0	0.0
6- 3	si	5	Tz	-127.7	-30.8	0.0
6- 3	si	9	Ty	-19.7	0.0	150.1
6- 3	si	11	Si	-89.4	0.0	141.5
PROGR. 30.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	-7526.6	83.4	0.0	592.7	8.3	753.2
6- 3	7634.0	-81.6	0.0	-497.8	-8.2	-762.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx	96.1	0.0	0.0
6- 3	si	5	Tz	-91.7	-30.8	0.0
6- 3	si	9	TySi	-19.7	0.0	150.3
PROGR. 35.						

SOLLECITAZIONI :						
Caso	MZ	MY	MT	N	TZ	TY
6-14	-3760.8	41.7	0.0	592.7	8.3	752.2
6- 3	3819.5	-40.8	0.0	-497.8	-8.2	-763.0
TENSIONI (Sz= 0.00) :						
Caso	Ve	No	massimi	Sx	Tz	Ty
6-14	si	1	Sx			
6- 3	si	5	Tz			
6- 3	si	9	TySi			

6-14	si	1	Sx	59.7	0.0	0.0	0.0	59.7
6-3	si	5	Tz	-55.7	-30.9	0.0	30.9	77.2
6-3	si	9	TySi	-19.6	0.0	150.4	150.4	261.3
								40.

## SOLLECITAZIONI

Caso	MZ	MY	MT	N	TZ	TY
6-14	0.0	0.0	0.0	592.7	8.3	751.2
6-3	0.0	0.0	0.0	-497.8	-8.2	-763.9

## TENSIONI (Sz= 0.00) :

Caso	Ve	No	massimi	Sx	Tz	Ty	Tau tot.	Si
6-14	si	3	Sx	23.3	0.0	0.0	0.0	23.3
6-3	si	5	Tz	-19.6	-30.9	0.0	30.9	57.0
6-3	si	9	TySi	-19.6	0.0	150.6	150.6	261.7

## VERIFICA STABILITA` :

Z	L0 = 40.	Ro = 4.89	lm = 8.2	Ncr = 7871221.2	alfa(b) = 0.3400	ki = 1.0000
Y	Lc = 40.	Ro = 3.01	lm = 13.3	Ncr = 2991581.2	alfa(c) = 0.4900	ki = 1.0000
Caso 6-3 - Nodo 1 - Asse Y						
Ned =	-497.8	Mzeq = 22812.5	Myeq = -244.8	Ss = -240.0	( 0.092)	

## 2.6.4 VERIFICA NODO 1576 - ATTACCO A TERRA HEA180

Si riporta a seguire il listato di calcolo relativo alle verifiche di un nodo tipico di attacco a terra colonne HEA180.

## VERIFICA TENSIONALE NODI: 1576 - METODO DEGLI STATI LIMITE (NTC 2018)

UNITA' DI MISURA: [daN] ; [daNcm] ; [daN/cm2] ; [mm]

## GEOMETRIA NODO

## Profili utilizzati

Tipo prof.	h	b	a	e	r
HEA180	171.	180.	6.	9.5	15.

## Piastra e fazzoletti

Num	Lz	Ly	Sp
1	280.	261.	20.
2(Y)	261.	150.	6.
3(Z)	44.	150.	6.

## TIRAFONDI

## Tirafondi (n° 4)

Num	X	Y	Fi	Area	Num	X	Y	Fi	Area
1	245.	35.	16.	157.	3	245.	226.	16.	157.
2	35.	35.	16.	157.	4	35.	226.	16.	157.

## Dimensioni

l	lft	ll	r
500.	150.	450.	70.

## SALDATURE (n° 8)

Nome	Lung	Lato	Nome	Lung	Lato
S1	122.	10.	S5	122.	10.
S2	72.	10.	S6	72.	10.
S3	180.	10.	S7	180.	10.
S4	72.	10.	S8	72.	10.

## MATERIALI

Acciaio S 275 (Fe 430)	Calcestruzzo C25/30
fd s<40mm	fd 40mm<s<80mm
2619.	2428.6
Acciaio tirafondi 8.8	141.1
fd	
5192.	

## SOLLECITAZIONI AGENTI E STATO TENSIONALE

## Combinazione di sollecitazioni agenti Caso 2 As. 594 Nd. 1576

N: -3059.2	Ty: 24.2	Tz: -4.6
Mt: -22	My: -1350	Mz: -1

## Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	5.9	6028.8	15288.9	-44.7	9043.2	31124.4	6643.	0.	0.	.01	SI'
2	6.5	6028.8	15288.9	-39.	9043.2	31124.4	6643.	0.	0.	.01	SI'
3	5.8	6028.8	15288.9	-44.7	9043.2	31124.4	6643.	0.	0.	.01	SI'
4	6.4	6028.8	15288.9	-39.	9043.2	31124.4	6643.	0.	0.	.01	SI'

## Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	Slim-1	Slim-2	Ver
S1	49.1	1.4	0.	49.2	49.2	1925.	2337.5	SI'

S2	57.3	.1	0.	57.3	57.4	1925.	2337.5	SI'
S3	57.3	.1	0.	57.3	57.4	1925.	2337.5	SI'
S4	46.7	.1	0.	46.7	46.8	1925.	2337.5	SI'
S5	47.9	1.4	0.	47.9	47.9	1925.	2337.5	SI'
S6	46.7	.1	0.	46.7	46.8	1925.	2337.5	SI'
S7	57.3	.1	0.	57.3	57.4	1925.	2337.5	SI'
S8	57.3	.1	0.	57.3	57.4	1925.	2337.5	SI'

Verifica piastra  
 $S_{max}$  |  $f_d$  | Ver |  
 151.1 | 2619. | SI'

Verifica pressione sul calcestruzzo  
 $S_{max}$  |  $f_{cd}$  | Ver |  
 4.4 | 141.1 | SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 2 As. 594 Nd. 1576

Combinazione di sollecitazioni agenti Caso 5 As. 594 Nd. 1576

N: -491.9 Ty: -47 Tz: 413.5  
 Mt: 1890 My: 124153 Mz: 62

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	126.4	6028.8	15288.9	2625.8	9043.2	31124.4	6643.	.23	.29	.4	SI'
2	130.9	6028.8	15288.9	-280.2	9043.2	31124.4	6643.	.02	.03	.04	SI'
3	82.	6028.8	15288.9	2624.8	9043.2	31124.4	6643.	.22	.29	.4	SI'
4	88.8	6028.8	15288.9	-281.3	9043.2	31124.4	6643.	.01	.03	.04	SI'

Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	51.2	2.6	2.5	51.4	53.7	1925.	2337.5	SI'
S2	803.7	6.1	3.6	803.7	807.2	1925.	2337.5	SI'
S3	819.	12.7	3.7	819.1	822.5	1925.	2337.5	SI'
S4	819.	8.3	3.	819.	822.	1925.	2337.5	SI'
S5	66.8	.2	.1	66.8	67.	1925.	2337.5	SI'
S6	819.3	8.3	3.	819.3	822.3	1925.	2337.5	SI'
S7	819.3	12.7	3.7	819.4	822.8	1925.	2337.5	SI'
S8	803.4	6.1	3.6	803.4	807.	1925.	2337.5	SI'

Verifica piastra  
 $S_{max}$  |  $f_d$  | Ver |  
 2533.2 | 2619. | SI'

Verifica pressione sul calcestruzzo  
 $S_{max}$  |  $f_{cd}$  | Ver |  
 73. | 141.1 | SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 594 Nd. 1576

Combinazione di sollecitazioni agenti Caso 5 As. 594 Nd. 1576

N: -1046.9 Ty: 60.9 Tz: -414.9  
 Mt: -1895 My: -124578 Mz: -62

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	126.5	6028.8	15288.9	-303.2	9043.2	31124.4	6643.	.02	.03	.05	SI'
2	132.3	6028.8	15288.9	2496.5	9043.2	31124.4	6643.	.22	.28	.38	SI'
3	81.8	6028.8	15288.9	-302.2	9043.2	31124.4	6643.	.01	.03	.05	SI'
4	90.5	6028.8	15288.9	2497.5	9043.2	31124.4	6643.	.21	.28	.38	SI'

Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	75.8	3.4	2.5	75.9	78.3	1925.	2337.5	SI'
S2	830.8	6.1	3.6	830.9	834.4	1925.	2337.5	SI'
S3	830.9	12.8	3.7	831.	834.6	1925.	2337.5	SI'
S4	797.4	8.4	3.	797.4	800.4	1925.	2337.5	SI'
S5	42.6	.1	.1	42.6	42.8	1925.	2337.5	SI'
S6	797.7	8.4	3.	797.7	800.7	1925.	2337.5	SI'
S7	830.5	12.8	3.7	830.6	834.3	1925.	2337.5	SI'
S8	830.6	6.1	3.6	830.6	834.2	1925.	2337.5	SI'

Verifica piastra  
 $S_{max}$  |  $f_d$  | Ver |  
 2547.2 | 2619. | SI'

Verifica pressione sul calcestruzzo  
 $S_{max}$  |  $f_{cd}$  | Ver |  
 73.4 | 141.1 | SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 594 Nd. 1576

Combinazione di sollecitazioni agenti Caso 6 As. 594 Nd. 1576

N: -1965.7 Ty: 136.7 Tz: -42.2

Mt: -220 My: -13772 Mz: -8

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	34.	6028.8	15288.9	-57.9	9043.2	31124.4	6643.	.01	.01	.01	SI'
2	39.3	6028.8	15288.9	7.9	9043.2	31124.4	6643.	.01	0.	0.	SI'
3	32.3	6028.8	15288.9	-57.9	9043.2	31124.4	6643.	.01	.01	.01	SI'
4	37.9	6028.8	15288.9	7.9	9043.2	31124.4	6643.	.01	0.	0.	SI'

Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	37.7	7.9	.3	38.5	38.	1925.	2337.5	SI'
S2	121.2	.6	.4	121.2	121.6	1925.	2337.5	SI'
S3	121.2	1.4	.4	121.2	121.6	1925.	2337.5	SI'
S4	58.8	.8	.4	58.8	59.2	1925.	2337.5	SI'
S5	24.6	7.6	0.	25.8	24.7	1925.	2337.5	SI'
S6	58.9	.8	.4	58.9	59.2	1925.	2337.5	SI'
S7	121.1	1.4	.4	121.2	121.6	1925.	2337.5	SI'
S8	121.1	.6	.4	121.1	121.6	1925.	2337.5	SI'

Verifica piastra

Smax	fd	Ver
227.9	2619.	SI'

Verifica pressione sul calcestruzzo

Smax	fcd	Ver
6.6	141.1	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 594 Nd. 1576

Combinazione di sollecitazioni agenti Cond 17 As. 594 Nd. 1576

N: 2637.3 Ty: -332.2 Tz: -187.8  
Mt: -865 My: -56724 Mz: -28

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	110.3	6028.8	15288.9	14.7	9043.2	31124.4	6643.	.02	0.	0.	SI'
2	91.8	6028.8	15288.9	1937.5	9043.2	31124.4	6643.	.17	.21	.29	SI'
3	101.2	6028.8	15288.9	15.3	9043.2	31124.4	6643.	.02	0.	0.	SI'
4	80.6	6028.8	15288.9	1938.1	9043.2	31124.4	6643.	.17	.21	.29	SI'

Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	14.9	19.3	1.1	24.4	16.1	1925.	2337.5	SI'
S2	328.9	2.8	1.6	329.	330.6	1925.	2337.5	SI'
S3	412.4	5.8	1.7	412.5	414.	1925.	2337.5	SI'
S4	412.4	3.8	1.4	412.5	413.8	1925.	2337.5	SI'
S5	68.8	20.4	.1	71.7	68.8	1925.	2337.5	SI'
S6	412.6	3.8	1.4	412.6	413.9	1925.	2337.5	SI'
S7	412.6	5.8	1.7	412.6	414.2	1925.	2337.5	SI'
S8	328.8	2.8	1.6	328.8	330.4	1925.	2337.5	SI'

Verifica piastra

Smax	fd	Ver
1011.8	2619.	SI'

Verifica pressione sul calcestruzzo

Smax	fcd	Ver
29.2	141.1	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Cond 17 As. 594 Nd. 1576

Combinazione di sollecitazioni agenti Caso 5 As. 594 Nd. 1576

N: -499.5 Ty: -45.9 Tz: 413.4  
Mt: 1889 My: 124143 Mz: 62

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	126.4	6028.8	15288.9	2623.7	9043.2	31124.4	6643.	.23	.29	.39	SI'
2	130.8	6028.8	15288.9	-280.5	9043.2	31124.4	6643.	.02	.03	.04	SI'
3	82.	6028.8	15288.9	2622.7	9043.2	31124.4	6643.	.22	.29	.39	SI'
4	88.6	6028.8	15288.9	-281.5	9043.2	31124.4	6643.	.01	.03	.04	SI'

Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	51.1	2.5	2.5	51.2	53.6	1925.	2337.5	SI'
S2	803.5	6.1	3.6	803.5	807.1	1925.	2337.5	SI'
S3	819.	12.7	3.7	819.1	822.5	1925.	2337.5	SI'
S4	819.1	8.3	3.	819.1	822.1	1925.	2337.5	SI'
S5	66.9	.2	.1	66.9	67.1	1925.	2337.5	SI'
S6	819.3	8.3	3.	819.4	822.3	1925.	2337.5	SI'

S7	819.4	12.7	3.7	819.5	822.9	1925.	2337.5	SI'
S8	803.2	6.1	3.6	803.2	806.8	1925.	2337.5	SI'

Verifica piastra  
 Smax | fd | Ver |  
 2533.1 | 2619. | SI' |

Verifica pressione sul calcestruzzo  
 Smax | fcd | Ver |  
 73. | 141.1 | SI' |

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 594 Nd. 1576

Combinazione di sollecitazioni agenti Caso 5 As. 594 Nd. 1576

N: -1080.1 Ty: 64.4 Tz: -414.7  
 Mt: -1895 My: -124516 Mz: -63

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	126.4	6028.8	15288.9	-304.3	9043.2	31124.4	6643.	.02	.03	.05	SI'
2	132.6	6028.8	15288.9	2486.9	9043.2	31124.4	6643.	.22	.28	.37	SI'
3	81.7	6028.8	15288.9	-303.3	9043.2	31124.4	6643.	.01	.03	.05	SI'
4	90.9	6028.8	15288.9	2488.	9043.2	31124.4	6643.	.21	.28	.37	SI'

Verifica saldature

SEq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

SEq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	SEq-1	SEq-2	SLim-1	SLim-2	Ver
S1	76.3	3.6	2.5	76.5	78.8	1925.	2337.5	SI'
S2	831.	6.1	3.6	831.	834.5	1925.	2337.5	SI'
S3	831.	12.8	3.7	831.1	834.7	1925.	2337.5	SI'
S4	796.4	8.4	3.	796.5	799.5	1925.	2337.5	SI'
S5	42.1	1.3	.1	42.1	42.2	1925.	2337.5	SI'
S6	796.7	8.4	3.	796.7	799.7	1925.	2337.5	SI'
S7	830.7	12.8	3.7	830.8	834.4	1925.	2337.5	SI'
S8	830.7	6.1	3.6	830.7	834.3	1925.	2337.5	SI'

Verifica piastra  
 Smax | fd | Ver |  
 2546.2 | 2619. | SI' |

Verifica pressione sul calcestruzzo  
 Smax | fcd | Ver |  
 73.4 | 141.1 | SI' |

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 594 Nd. 1576

## 2.6.5 VERIFICA NODO 1508 - - ATTACCO A TERRA SCATOLARE 180X180X5

Si riporta a seguire il listato di calcolo relativo alle verifiche di un nodo tipico di attacco a terra colonne in scatolare 180x180x5.

VERIFICA TENSIONALE NODI: 1508 - METODO DEGLI STATI LIMITE (NTC 2018)

UNITA' DI MISURA: [daN] ; [daNcm] ; [daN/cm2] ; [mm]

GEOMETRIA NODO

Profilo utilizzato

Tipo prof. | h | b | e |  
 SCATOLARE | 180. | 180. | 5. |

Piastra

Num | Lz | Ly | Sp |  
 1 | 310. | 290. | 20. |

TIRAFONDI

Tirafondi (n° 4)

Num	X	Y	Fi	Area	Num	X	Y	Fi	Area
1	270.	40.	16.	157.	3	270.	250.	16.	157.
2	40.	40.	16.	157.	4	40.	250.	16.	157.

Altre proprietà:

l | lft | ll | r |  
 370. | 130. | 320. | 40. |

SALDATURE

Saldature (n° 4)

Nome	Lungh.	Lato	Nome	Lungh.	Lato
S1	180.	10.	S3	180.	10.
S2	180.	10.	S4	180.	10.

MATERIALI

Acciaio prof. S 275 H (Fe 430)	Calcestruzzo C25/30
fd s<40mm	fcd
2619.	141.1
Acciaio pias. S 275 (Fe 430)	Acciaio tirafondi 8.8
fd s<40mm	fd

2619. | 2428.6 | 5192. |

## SOLLECITAZIONI AGENTI E STATO TENSIONALE

Combinazione di sollecitazioni agenti Caso 6 As. 417 Nd. 1508

N: 52.2 Ty: 1418.7 Tz: 3.9  
Mt: 2636 My: 363 Mz: -45463

## Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	387.1	6028.8	17473.	-48.	9043.2	31124.4	2117.	.06	.01	.02	SI'
2	324.8	6028.8	17473.	-53.	9043.2	31124.4	2117.	.05	.01	.03	SI'
3	386.9	6028.8	17473.	995.6	9043.2	31124.4	2117.	.14	.11	.47	SI'
4	324.6	6028.8	17473.	990.6	9043.2	31124.4	2117.	.13	.11	.47	SI'

## Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	154.6	5.6	0.	154.7	154.6	1925.	2337.5	SI'
S2	145.	50.	0.	153.3	145.	1925.	2337.5	SI'
S3	148.8	5.9	0.	148.9	148.8	1925.	2337.5	SI'
S4	150.8	61.5	0.	162.8	150.8	1925.	2337.5	SI'

## Verifica piastra

Smax | fd | Ver |  
1244.8 | 2619. | SI'

## Verifica pressione sul calcestruzzo

Smax | fcd | Ver |  
24.1 | 141.1 | SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Caso 6 As. 417 Nd. 1508

N: -17.3 Ty: 474.9 Tz: 30.4  
Mt: -325 My: 1020 Mz: 19216

## Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	114.9	6028.8	17473.	416.6	9043.2	31124.4	2117.	.05	.05	.2	SI'
2	122.6	6028.8	17473.	402.8	9043.2	31124.4	2117.	.05	.04	.19	SI'
3	115.4	6028.8	17473.	-16.	9043.2	31124.4	2117.	.02	0.	.01	SI'
4	123.1	6028.8	17473.	-29.8	9043.2	31124.4	2117.	.02	0.	.01	SI'

## Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	68.3	1.9	0.	68.3	68.3	1925.	2337.5	SI'
S2	64.	19.4	0.	66.9	64.	1925.	2337.5	SI'
S3	66.6	.5	0.	66.6	66.6	1925.	2337.5	SI'
S4	65.7	17.9	0.	68.1	65.7	1925.	2337.5	SI'

## Verifica piastra

Smax | fd | Ver |  
564.8 | 2619. | SI'

## Verifica pressione sul calcestruzzo

Smax | fcd | Ver |  
10.9 | 141.1 | SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Caso 5 As. 417 Nd. 1508

N: 12.3 Ty: 149.3 Tz: 69.9  
Mt: 3445 My: 3791 Mz: 41158

## Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	95.4	6028.8	17473.	916.7	9043.2	31124.4	2117.	.09	.1	.43	SI'
2	54.9	6028.8	17473.	864.9	9043.2	31124.4	2117.	.08	.1	.41	SI'
3	80.6	6028.8	17473.	-20.6	9043.2	31124.4	2117.	.01	0.	.01	SI'
4	20.1	6028.8	17473.	-72.4	9043.2	31124.4	2117.	0.	.01	.03	SI'

## Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	152.4	4.8	0.	152.5	152.4	1925.	2337.5	SI'
S2	141.4	1.7	0.	141.4	141.4	1925.	2337.5	SI'
S3	147.2	10.3	0.	147.5	147.2	1925.	2337.5	SI'
S4	146.7	13.4	0.	147.3	146.7	1925.	2337.5	SI'

Verifica piastra  
 $s_{max}$  |  $f_d$  | Ver |  
 1280.8 | 2619. | SI' |

Verifica pressione sul calcestruzzo  
 $s_{max}$  |  $f_{cd}$  | Ver |  
 24.8 | 141.1 | SI' |

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Cond 12 As. 417 Nd. 1508

N: 5.5 Ty: 663.1 Tz: -38.2  
 Mt: -924 My: -2468 Mz: -45163

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	156.1	6028.8	17473.	-68.7	9043.2	31124.4	2117.	.03	.01	.03	SI'
2	177.8	6028.8	17473.	-35.	9043.2	31124.4	2117.	.03	0.	.02	SI'
3	154.8	6028.8	17473.	958.1	9043.2	31124.4	2117.	.1	.11	.45	SI'
4	176.7	6028.8	17473.	991.7	9043.2	31124.4	2117.	.11	.11	.47	SI'

Verifica saldature

Seq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	161.4	.5	0.	161.4	161.4	1925.	2337.5	SI'
S2	150.	28.1	0.	152.6	150.	1925.	2337.5	SI'
S3	156.1	3.5	0.	156.2	156.1	1925.	2337.5	SI'
S4	155.3	24.	0.	157.1	155.3	1925.	2337.5	SI'

Verifica piastra  
 $s_{max}$  |  $f_d$  | Ver |  
 1331. | 2619. | SI' |

Verifica pressione sul calcestruzzo  
 $s_{max}$  |  $f_{cd}$  | Ver |  
 25.8 | 141.1 | SI' |

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Cond 12 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Caso 2 As. 417 Nd. 1508

N: 20 Ty: 2226.1 Tz: 32.5  
 Mt: 3405 My: 1259 Mz: -29934

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	598.6	6028.8	17473.	-25.1	9043.2	31124.4	2117.	.1	0.	.01	SI'
2	518.1	6028.8	17473.	-42.3	9043.2	31124.4	2117.	.09	0.	.02	SI'
3	597.6	6028.8	17473.	658.9	9043.2	31124.4	2117.	.15	.07	.31	SI'
4	517.	6028.8	17473.	641.7	9043.2	31124.4	2117.	.14	.07	.3	SI'

Verifica saldature

Seq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	105.4	6.2	0.	105.6	105.4	1925.	2337.5	SI'
S2	98.5	80.	0.	126.9	98.5	1925.	2337.5	SI'
S3	101.7	8.7	0.	102.1	101.7	1925.	2337.5	SI'
S4	102.2	94.9	0.	139.4	102.2	1925.	2337.5	SI'

Verifica piastra  
 $s_{max}$  |  $f_d$  | Ver |  
 865.5 | 2619. | SI' |

Verifica pressione sul calcestruzzo  
 $s_{max}$  |  $f_{cd}$  | Ver |  
 16.8 | 141.1 | SI' |

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 2 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Cond 4 As. 417 Nd. 1508

N: -2.3 Ty: -22.4 Tz: 8.2  
 Mt: 1815 My: 189 Mz: 1181

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	26.9	6028.8	17473.	26.2	9043.2	31124.4	2117.	.01	0.	.01	SI'
2	34.7	6028.8	17473.	23.6	9043.2	31124.4	2117.	.01	0.	.01	SI'
3	23.7	6028.8	17473.	-.1	9043.2	31124.4	2117.	0.	0.	0.	SI'
4	32.3	6028.8	17473.	-2.7	9043.2	31124.4	2117.	.01	0.	0.	SI'

Verifica saldature

Seq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	4.6	3.6	0.	5.9	4.6	1925.	2337.5	SI'

S2	4.4	4.8	0.	6.5	4.4	1925.	2337.5	SI'
S3	4.5	4.3	0.	6.2	4.5	1925.	2337.5	SI'
S4	4.4	3.1	0.	5.4	4.4	1925.	2337.5	SI'

Verifica piastra

Smax	fd	Ver
40.1	2619.	SI'

Verifica pressione sul calcestruzzo

Smax	fcd	Ver
.8	141.1	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Cond 4 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Caso 5 As. 417 Nd. 1508

N: 3.5	Ty: 2	Tz: 51.8
Mt: 1455	My: 3005	Mz: 51266

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	33.7	6028.8	17473.	1126.4	9043.2	31124.4	2117.	.09	.12	.53	SI'
2	33.2	6028.8	17473.	1085.5	9043.2	31124.4	2117.	.09	.12	.51	SI'
3	18.	6028.8	17473.	-38.4	9043.2	31124.4	2117.	0.	0.	.02	SI'
4	17.	6028.8	17473.	-79.4	9043.2	31124.4	2117.	0.	.01	.04	SI'

Verifica saldature

Seq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	184.	1.1	0.	184.	184.	1925.	2337.5	SI'
S2	170.7	3.1	0.	170.8	170.7	1925.	2337.5	SI'
S3	177.7	5.2	0.	177.8	177.7	1925.	2337.5	SI'
S4	177.1	3.3	0.	177.1	177.1	1925.	2337.5	SI'

Verifica piastra

Smax	fd	Ver
1519.8	2619.	SI'

Verifica pressione sul calcestruzzo

Smax	fcd	Ver
29.4	141.1	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Caso 5 As. 417 Nd. 1508

N: 31.3	Ty: 1893.5	Tz: -17.5
Mt: 861	My: -1618	Mz: -77640

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	483.6	6028.8	17473.	-99.6	9043.2	31124.4	2117.	.08	.01	.05	SI'
2	463.2	6028.8	17473.	-77.6	9043.2	31124.4	2117.	.08	.01	.04	SI'
3	483.8	6028.8	17473.	1670.1	9043.2	31124.4	2117.	.21	.18	.79	SI'
4	463.4	6028.8	17473.	1692.2	9043.2	31124.4	2117.	.21	.19	.8	SI'

Verifica saldature

Seq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
S1	268.4	2.6	0.	268.4	268.4	1925.	2337.5	SI'
S2	249.7	72.5	0.	260.	249.7	1925.	2337.5	SI'
S3	259.9	1.2	0.	259.9	259.9	1925.	2337.5	SI'
S4	258.2	76.3	0.	269.3	258.2	1925.	2337.5	SI'

Verifica piastra

Smax	fd	Ver
2171.1	2619.	SI'

Verifica pressione sul calcestruzzo

Smax	fcd	Ver
42.	141.1	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Caso 2 As. 417 Nd. 1508

N: 10.6	Ty: 2200.4	Tz: 38.9
Mt: 5674	My: 885	Mz: -28486

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	621.5	6028.8	17473.	-26.5	9043.2	31124.4	2117.	.1	0.	.01	SI'
2	488.	6028.8	17473.	-38.6	9043.2	31124.4	2117.	.08	0.	.02	SI'
3	619.5	6028.8	17473.	622.6	9043.2	31124.4	2117.	.15	.07	.29	SI'
4	485.6	6028.8	17473.	610.6	9043.2	31124.4	2117.	.13	.07	.29	SI'

Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	Slim-1	Slim-2	Ver
S1	99.5	10.9	0.	100.	99.5	1925.	2337.5	SI'
S2	92.6	74.1	0.	118.5	92.6	1925.	2337.5	SI'
S3	95.9	13.9	0.	96.9	95.9	1925.	2337.5	SI'
S4	96.1	98.8	0.	137.8	96.1	1925.	2337.5	SI'

Verifica piastra

Smax	fd	Ver
809.6	2619.	SI'

Verifica pressione sul calcestruzzo

Smax	fcd	Ver
15.7	141.1	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 2 As. 417 Nd. 1508

Combinazione di sollecitazioni agenti Caso 6 As. 417 Nd. 1508

N: 5.8 Ty: 973.3 Tz: -25.8  
 Mt: -2521 My: -1402 Mz: -14799

Verifica tirafondi

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Co-3: Ft,Ed / Tad,Rd

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Tad,Rd	Co-1	Co-2	Co-3	Ver
1	216.1	6028.8	17473.	-26.2	9043.2	31124.4	2117.	.04	0.	.01	SI'
2	275.3	6028.8	17473.	-7.	9043.2	31124.4	2117.	.05	0.	0.	SI'
3	214.5	6028.8	17473.	311.1	9043.2	31124.4	2117.	.06	.03	.15	SI'
4	274.	6028.8	17473.	330.2	9043.2	31124.4	2117.	.07	.04	.16	SI'

Verifica saldature

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	Slim-1	Slim-2	Ver
S1	54.7	4.5	0.	54.9	54.7	1925.	2337.5	SI'
S2	51.2	43.7	0.	67.3	51.2	1925.	2337.5	SI'
S3	53.2	6.5	0.	53.6	53.2	1925.	2337.5	SI'
S4	52.7	32.7	0.	62.	52.7	1925.	2337.5	SI'

Verifica piastra

Smax	fd	Ver
462.3	2619.	SI'

Verifica pressione sul calcestruzzo

Smax	fcd	Ver
8.9	141.1	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 417 Nd. 1508

## 2.6.6 VERIFICA COLLEGAMENTO TRAVE HEA140 CON COLONNA HEA180

Si riporta a seguire il listato di calcolo relativo alle verifiche del collegamento tra trave in HEA140 e colonna in HEA180.

VERIFICA TENSIONALE NODI: 1541 - METODO DEGLI STATI LIMITE (NTC 2018)

UNITA' DI MISURA: [daN] ; [daNcm] ; [daN/cm2] ; [mm]

GEOMETRIA NODO

Profili utilizzati

Tipo prof.	h	b	a	e	r
HEA180	171.	180.	6.	9.5	15.
HEA140	133.	140.	5.5	8.5	12.

Piastra (n°3)

Num	H1	H2	B	Sp
1	153.	153.	140.	15.
2	170.	170.	160.	10.
3	152.	152.	87.	10.

BULLONI

Num	X	Y	Fi	Area	Num	X	Y	Fi	Area
1	-40.	30.	12.	86.4	3	40.	30.	12.	86.4
2	-40.	100.	12.	86.4	4	40.	100.	12.	86.4

SALDATURE

Lato saldature su trave : 10

Lato saldature su colonna: 10

MATERIALI

Acciaio S 275 (Fe 430)		Classe viti 8.8
fd s<40mm	fd 40mm<s<80mm	fd
2619.	2428.6	6400.

SOLLECITAZIONI AGENTI E STATO TENSIONALE

Combinazione di sollecitazioni agenti Caso 5 As. 469 Nd. 1541

N = -67.6 Ty = -459 Tz = -85.6  
 Mt = 9 My = 16468 Mz = 73819

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	115.8	3317.6	7938.5	2905.2	4976.5	11671.6	.45	.58	SI'
2	116.1	3317.6	10320.	1047.9	4976.5	11671.6	.19	.21	SI'
3	117.4	3317.6	7938.5	2662.4	4976.5	11671.6	.42	.53	SI'
4	117.6	3317.6	10320.	805.1	4976.5	11671.6	.15	.16	SI'

## Compressione massima sulla piastra 2

Sig	fd	Ver
-801.2	2619.	SI'

## Tensione massima nella piastra 1 (mensole inf. e sup.)

Sig	fd	Ver
1890.4	2619.	SI'

## Saldature su trave

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	480.8	-51.3	0.	483.5	480.8	1925.	2337.5	SI'
s1'	547.1	-51.3	0.	549.5	547.1	1925.	2337.5	SI'
s2	560.2	-19.4	0.	560.5	560.2	1925.	2337.5	SI'
s2'	273.1	-19.4	0.	273.8	273.1	1925.	2337.5	SI'
s3	560.	-19.4	0.	560.3	560.	1925.	2337.5	SI'
s3'	847.1	-19.4	0.	847.3	847.1	1925.	2337.5	SI'
s4	674.5	-5.6	0.	674.5	674.5	1925.	2337.5	SI'
s4'	687.1	-5.6	0.	687.2	687.1	1925.	2337.5	SI'
s5	0.	262.7	0.	262.7	0.	1925.	2337.5	SI'
s5'	0.	270.4	0.	270.4	0.	1925.	2337.5	SI'
s6	0.	274.1	0.	274.1	0.	1925.	2337.5	SI'
s6'	0.	281.9	0.	281.9	0.	1925.	2337.5	SI'
s7	0.	-2.5	0.	2.5	0.	1925.	2337.5	SI'
s7'	0.	-2.5	0.	2.5	0.	1925.	2337.5	SI'
s8	274.9	-211.	0.	346.5	274.9	1925.	2337.5	SI'
s8'	748.	-211.	0.	777.2	748.	1925.	2337.5	SI'
s9	742.6	-211.	0.	772.	742.6	1925.	2337.5	SI'
s9'	269.4	-211.	0.	342.2	269.4	1925.	2337.5	SI'
s10	685.6	-19.4	0.	685.9	685.6	1925.	2337.5	SI'
s10'	0.	-19.4	0.	19.4	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 469 Nd. 1541

Combinazione di sollecitazioni agenti Caso 5 As. 469 Nd. 1541

N = 50.9	Ty = 454.8	Tz = 80.8
Mt = -13	My = -15595	Mz = -72760

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	114.5	3317.6	7938.5	508.8	4976.5	11671.6	.11	.1	SI'
2	114.7	3317.6	10320.	3566.8	4976.5	11671.6	.55	.72	SI'
3	116.2	3317.6	7938.5	774.7	4976.5	11671.6	.15	.16	SI'
4	116.5	3317.6	10320.	3832.7	4976.5	11671.6	.59	.77	SI'

## Compressione massima sulla piastra 2

Sig	fd	Ver
-1043.5	2619.	SI'

## Tensione massima nella piastra 1 (mensole inf. e sup.)

Sig	fd	Ver
0.	2619.	SI'

## Saldature su trave

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	475.8	49.6	0.	478.4	475.8	1925.	2337.5	SI'
s1'	538.6	49.6	0.	540.9	538.6	1925.	2337.5	SI'
s2	542.7	17.8	0.	543.	542.7	1925.	2337.5	SI'
s2'	270.9	17.8	0.	271.5	270.9	1925.	2337.5	SI'
s3	554.5	17.8	0.	554.8	554.5	1925.	2337.5	SI'
s3'	826.4	17.8	0.	826.6	826.4	1925.	2337.5	SI'
s4	655.	6.1	0.	655.	655.	1925.	2337.5	SI'
s4'	668.8	6.1	0.	668.8	668.8	1925.	2337.5	SI'
s5	0.	269.5	0.	269.5	0.	1925.	2337.5	SI'
s5'	0.	278.	0.	278.	0.	1925.	2337.5	SI'
s6	0.	258.7	0.	258.7	0.	1925.	2337.5	SI'
s6'	0.	267.2	0.	267.2	0.	1925.	2337.5	SI'
s7	0.	2.3	0.	2.3	0.	1925.	2337.5	SI'
s7'	0.	2.3	0.	2.3	0.	1925.	2337.5	SI'
s8	279.4	209.8	0.	349.4	279.4	1925.	2337.5	SI'
s8'	727.5	209.8	0.	757.1	727.5	1925.	2337.5	SI'
s9	723.5	209.8	0.	753.3	723.5	1925.	2337.5	SI'
s9'	275.4	209.8	0.	346.2	275.4	1925.	2337.5	SI'
s10	666.4	17.8	0.	666.7	666.4	1925.	2337.5	SI'
s10'	0.	17.8	0.	17.8	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 469 Nd. 1541

Combinazione di sollecitazioni agenti Cond 17 As. 469 Nd. 1541

N = 103	Ty = -218.3	Tz = 4.4
Mt = 18	My = -470	Mz = 35618

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	54.	3317.6	7938.5	1372.4	4976.5	11671.6	.21	.28	SI'
2	54.	3317.6	10320.	452.7	4976.5	11671.6	.08	.09	SI'
3	55.2	3317.6	7938.5	1379.3	4976.5	11671.6	.21	.28	SI'
4	55.2	3317.6	10320.	459.5	4976.5	11671.6	.08	.09	SI'

Compressione massima sulla piastra 2

Sig	fd	Ver
-285.1	2619.	SI'

Tensione massima nella piastra 1 (mensole inf. e sup.)

Sig	fd	Ver
942.9	2619.	SI'

Saldature su trave

SEq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

SEq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	SEq-1	SEq-2	SLim-1	SLim-2	Ver
s1	254.2	-19.6	0.	254.9	254.2	1925.	2337.5	SI'
s1'	252.3	-19.6	0.	253.	252.3	1925.	2337.5	SI'
s2	152.3	3.	0.	152.3	152.3	1925.	2337.5	SI'
s2'	160.5	3.	0.	160.5	160.5	1925.	2337.5	SI'
s3	306.9	3.	0.	307.	306.9	1925.	2337.5	SI'
s3'	298.7	3.	0.	298.8	298.7	1925.	2337.5	SI'
s4	212.4	3.4	0.	212.5	212.4	1925.	2337.5	SI'
s4'	230.	3.4	0.	230.	230.	1925.	2337.5	SI'
s5	.1	126.4	0.	126.4	.1	1925.	2337.5	SI'
s5'	.1	137.1	0.	137.1	.1	1925.	2337.5	SI'
s6	.1	125.8	0.	125.8	.1	1925.	2337.5	SI'
s6'	.1	136.5	0.	136.5	.1	1925.	2337.5	SI'
s7	0.	.1	0.	.1	0.	1925.	2337.5	SI'
s7'	0.	.1	0.	.1	0.	1925.	2337.5	SI'
s8	247.9	-102.8	0.	268.4	247.9	1925.	2337.5	SI'
s8'	234.4	-102.8	0.	256.	234.4	1925.	2337.5	SI'
s9	243.3	-102.8	0.	264.1	243.3	1925.	2337.5	SI'
s9'	256.8	-102.8	0.	276.6	256.8	1925.	2337.5	SI'
s10	221.4	3.	0.	221.5	221.4	1925.	2337.5	SI'
s10'	0.	3.	0.	3.	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Cond 17 As. 469 Nd. 1541

Combinazione di sollecitazioni agenti Caso 2 As. 469 Nd. 1541

N = -44.1                      Ty = -14.3                      Tz = -16  
 Mt = -21                      My = 2920                      Mz = 3491

Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	6.2	3317.6	7938.5	165.6	4976.5	11671.6	.03	.03	SI'
2	5.4	3317.6	10320.	99.1	4976.5	11671.6	.02	.02	SI'
3	5.4	3317.6	7938.5	87.6	4976.5	11671.6	.01	.02	SI'
4	4.5	3317.6	10320.	21.1	4976.5	11671.6	0.	0.	SI'

Compressione massima sulla piastra 2

Sig	fd	Ver
-67.8	2619.	SI'

Tensione massima nella piastra 1 (mensole inf. e sup.)

Sig	fd	Ver
62.1	2619.	SI'

Saldature su trave

SEq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

SEq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	SEq-1	SEq-2	SLim-1	SLim-2	Ver
s1	17.5	-6.6	0.	18.7	17.5	1925.	2337.5	SI'
s1'	28.6	-6.6	0.	29.4	28.6	1925.	2337.5	SI'
s2	58.	-6.1	0.	58.3	58.	1925.	2337.5	SI'
s2'	25.9	-6.1	0.	26.6	25.9	1925.	2337.5	SI'
s3	18.2	-6.1	0.	19.2	18.2	1925.	2337.5	SI'
s3'	69.1	-6.1	0.	69.4	69.1	1925.	2337.5	SI'
s4	64.3	-4.5	0.	64.5	64.3	1925.	2337.5	SI'
s4'	61.5	-4.5	0.	61.7	61.5	1925.	2337.5	SI'
s5	.1	12.7	0.	12.7	.1	1925.	2337.5	SI'
s5'	.1	10.9	0.	10.9	.1	1925.	2337.5	SI'
s6	.1	14.8	0.	14.8	.1	1925.	2337.5	SI'
s6'	.1	13.	0.	13.	.1	1925.	2337.5	SI'
s7	0.	-.5	0.	.5	0.	1925.	2337.5	SI'
s7'	0.	-.5	0.	.5	0.	1925.	2337.5	SI'
s8	18.7	-10.3	0.	21.4	18.7	1925.	2337.5	SI'
s8'	67.8	-10.3	0.	68.6	67.8	1925.	2337.5	SI'
s9	64.1	-10.3	0.	64.9	64.1	1925.	2337.5	SI'
s9'	21.6	-10.3	0.	23.9	21.6	1925.	2337.5	SI'
s10	63.8	-6.1	0.	64.1	63.8	1925.	2337.5	SI'
s10'	0.	-6.1	0.	6.1	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 2 As. 469 Nd. 1541

## 2.6.7 VERIFICA COLLEGAMENTO TRAVE 2 UNP180 CON COLONNA HEA180

Si riporta a seguire il listato di calcolo relativo alle verifiche del collegamento tra trave principale composta da 2 UNP180 e colonna in HEA180. La trave composta (2 UNP180) è stata assimilata ad una IPE 220 avente

caratteristiche di resistenza simili.

VERIFICA TENSIONALE NODI: 1541 - METODO DEGLI STATI LIMITE (NTC 2018)

UNITA' DI MISURA: [daN] ; [daNcm] ; [daN/cm2] ; [mm]

## GEOMETRIA NODO

Profili utilizzati

Tipo prof.	h	b	a	e	r
HEA180	171.	180.	6.	9.5	15.
IPE220	220.	110.	5.9	9.2	12.

Inclinazione trave: 11°

Piastre (n°2)

Num	H1	H2	B	Sp
1	185.	185.	240.	15.
4	203.4	203.4	52.	10.

## BULLONI

Num	X	Y	Fi	Area	Num	X	Y	Fi	Area
1	-30.	40.	12.	86.4	4	30.	145.	12.	86.4
2	-30.	145.	12.	86.4	5	-30.	92.	12.	86.4
3	30.	40.	12.	86.4	6	30.	92.	12.	86.4

## SALDATURE

Lato saldature su colonna: 10

Lato saldature su trave : 10

## MATERIALI

Acciaio S 275 (Fe 430)		Classe viti 8.8
fd s<40mm	fd 40mm<s<80mm	fd
2619.	2428.6	6400.

## SOLLECITAZIONI AGENTI E STATO TENSIONALE

Combinazione di sollecitazioni agenti Caso 6 As. 423 Nd. 1541

N = -354	Ty = 628.1	Tz = -42.7
Mt = 9	My = 6382	Mz = -89264

Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	97.	3317.6	9494.4	2325.6	4976.5	10737.9	.36	.47	SI'
2	102.7	3317.6	9494.4	321.3	4976.5	10737.9	.08	.06	SI'
3	140.2	3317.6	9494.4	2227.8	4976.5	10737.9	.36	.45	SI'
4	144.2	3317.6	9494.4	223.5	4976.5	10737.9	.08	.04	SI'
5	91.8	3317.6	9494.4	1333.	4976.5	10737.9	.22	.27	SI'
6	136.6	3317.6	9494.4	1235.2	4976.5	10737.9	.22	.25	SI'

Compressione massima sulla piastra

Sig	fd	Ver
-672.3	2619.	SI'

Tensione massima piastra (mensola sup. ed inf.)

Sig	fd	Ver
516.	2619.	SI'

Saldature su colonna

SEq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

SEq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	SEq-1	SEq-2	SLim-1	SLim-2	Ver
s1	432.	182.2	0.	468.9	432.	1925.	2337.5	SI'
s1'	413.7	182.2	0.	452.1	413.7	1925.	2337.5	SI'
s2	492.2	-152.5	0.	515.3	492.2	1925.	2337.5	SI'
s2'	590.3	-152.5	0.	609.6	590.3	1925.	2337.5	SI'
s3	615.1	-152.5	0.	633.7	615.1	1925.	2337.5	SI'
s3'	517.	-152.5	0.	539.	517.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 423 Nd. 1541

Combinazione di sollecitazioni agenti Caso 5 As. 423 Nd. 1541

N = 189.4	Ty = 300.7	Tz = 366.7
Mt = -36	My = -29942	Mz = -6474

Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	192.7	3317.6	9494.4	210.9	4976.5	10737.9	.09	.04	SI'
2	287.5	3317.6	9494.4	144.1	4976.5	10737.9	.11	.03	SI'
3	137.6	3317.6	9494.4	1241.7	4976.5	10737.9	.22	.25	SI'
4	253.8	3317.6	9494.4	1174.9	4976.5	10737.9	.25	.24	SI'
5	160.2	3317.6	9494.4	177.8	4976.5	10737.9	.07	.04	SI'
6	86.4	3317.6	9494.4	1208.6	4976.5	10737.9	.2	.24	SI'

Compressione massima sulla piastra

Sig	fd	Ver
-359.8	2619.	SI'

Tensione massima piastra (mensola sup. ed inf.)

Sig	fd	Ver
284.6	2619.	SI'

## Saldature su colonna

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	76.1	770.8	0.	774.5	76.1	1925.	2337.5	SI'
s1'	69.3	770.8	0.	773.9	69.3	1925.	2337.5	SI'
s2	424.7	769.6	0.	879.	424.7	1925.	2337.5	SI'
s2'	342.3	769.6	0.	842.3	342.3	1925.	2337.5	SI'
s3	349.2	769.6	0.	845.1	349.2	1925.	2337.5	SI'
s3'	417.9	769.6	0.	875.7	417.9	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 423 Nd. 1541

Combinazione di sollecitazioni agenti Caso 5 As. 423 Nd. 1541

N = -197.9      Ty = 516      Tz = -353.4  
 Mt = 39      My = 31042      Mz = -52899

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	133.	3317.6	9494.4	1800.2	4976.5	10737.9	.3	.36	SI'
2	251.4	3317.6	9494.4	777.9	4976.5	10737.9	.19	.16	SI'
3	239.4	3317.6	9494.4	1017.	4976.5	10737.9	.22	.2	SI'
4	320.7	3317.6	9494.4	-5.3	4976.5	10737.9	.1	0.	SI'
5	60.6	3317.6	9494.4	1293.9	4976.5	10737.9	.2	.26	SI'
6	208.1	3317.6	9494.4	510.7	4976.5	10737.9	.14	.1	SI'

## Compressione massima sulla piastra

Sig|      fd|Ver|  
 -834.7|      2619.|SI'

## Tensione massima piastra (mensola sup. ed inf.)

Sig|      fd|Ver|  
 440.9|      2619.|SI'

## Saldature su colonna

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	295.5	799.	0.	851.9	295.5	1925.	2337.5	SI'
s1'	280.	799.	0.	846.6	280.	1925.	2337.5	SI'
s2	221.4	-789.2	0.	819.6	221.4	1925.	2337.5	SI'
s2'	698.6	-789.2	0.	1053.9	698.6	1925.	2337.5	SI'
s3	714.1	-789.2	0.	1064.3	714.1	1925.	2337.5	SI'
s3'	237.	-789.2	0.	824.	237.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 423 Nd. 1541

Combinazione di sollecitazioni agenti Caso 2 As. 423 Nd. 1541

N = -28.4      Ty = 2184.2      Tz = 39.3  
 Mt = 11      My = 3116      Mz = -157121

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	348.2	3317.6	9494.4	4104.4	4976.5	10737.9	.69	.82	SI'
2	347.5	3317.6	9494.4	517.8	4976.5	10737.9	.18	.1	SI'
3	370.2	3317.6	9494.4	4056.3	4976.5	10737.9	.69	.82	SI'
4	369.5	3317.6	9494.4	469.7	4976.5	10737.9	.18	.09	SI'
5	347.3	3317.6	9494.4	2328.2	4976.5	10737.9	.44	.47	SI'
6	369.3	3317.6	9494.4	2280.1	4976.5	10737.9	.44	.46	SI'

## Compressione massima sulla piastra

Sig|      fd|Ver|  
 -1061.|      2619.|SI'

## Tensione massima piastra (mensola sup. ed inf.)

Sig|      fd|Ver|  
 916.5|      2619.|SI'

## Saldature su colonna

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	738.8	181.2	0.	760.6	738.8	1925.	2337.5	SI'
s1'	729.8	181.2	0.	752.	729.8	1925.	2337.5	SI'
s2	897.2	59.1	0.	899.1	897.2	1925.	2337.5	SI'
s2'	945.1	59.1	0.	946.9	945.1	1925.	2337.5	SI'
s3	968.7	59.1	0.	970.5	968.7	1925.	2337.5	SI'
s3'	920.8	59.1	0.	922.7	920.8	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 2 As. 423 Nd. 1541

Combinazione di sollecitazioni agenti Cond 17 As. 423 Nd. 1541

N = 904      Ty = -550.9      Tz = -315.5  
 Mt = 23      My = -2917      Mz = 132775

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	129.4	3317.6	9494.4	464.8	4976.5	10737.9	.11	.09	SI'
2	115.2	3317.6	9494.4	3730.	4976.5	10737.9	.57	.75	SI'
3	145.7	3317.6	9494.4	511.7	4976.5	10737.9	.12	.1	SI'
4	133.3	3317.6	9494.4	3776.9	4976.5	10737.9	.58	.76	SI'

5		121.5		3317.6		9494.4		2081.9		4976.5		10737.9		.34		.42		SI'	
6		138.7		3317.6		9494.4		2128.7		4976.5		10737.9		.35		.43		SI'	

Compressione massima sulla piastra

Sig	fd	Ver
-924.4	2619.	SI'

Tensione massima piastra (mensola sup. ed inf.)

Sig	fd	Ver
589.8	2619.	SI'

Saldature su colonna

SEq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

SEq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	SEq-1	SEq-2	SLim-1	SLim-2	Ver
s1	641.1	-49.9	0.	643.	641.1	1925.	2337.5	SI'
s1'	632.7	-49.9	0.	634.7	632.7	1925.	2337.5	SI'
s2	741.	-44.1	0.	742.4	741.	1925.	2337.5	SI'
s2'	785.8	-44.1	0.	787.	785.8	1925.	2337.5	SI'
s3	838.6	-44.1	0.	839.7	838.6	1925.	2337.5	SI'
s3'	793.8	-44.1	0.	795.	793.8	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Cond 17 As. 423 Nd. 1541

Combinazione di sollecitazioni agenti Caso 5 As. 423 Nd. 1541

N = 175.8	Ty = 306.2	Tz = 364.4
Mt = -36	My = -29918	Mz = -7980

Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	193.8	3317.6	9494.4	219.	4976.5	10737.9	.09	.04	SI'
2	287.7	3317.6	9494.4	136.3	4976.5	10737.9	.11	.03	SI'
3	137.1	3317.6	9494.4	1246.9	4976.5	10737.9	.22	.25	SI'
4	253.	3317.6	9494.4	1164.2	4976.5	10737.9	.24	.23	SI'
5	161.2	3317.6	9494.4	178.1	4976.5	10737.9	.07	.04	SI'
6	85.1	3317.6	9494.4	1206.	4976.5	10737.9	.2	.24	SI'

Compressione massima sulla piastra

Sig	fd	Ver
-374.4	2619.	SI'

Tensione massima piastra (mensola sup. ed inf.)

Sig	fd	Ver
289.	2619.	SI'

Saldature su colonna

SEq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

SEq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	SEq-1	SEq-2	SLim-1	SLim-2	Ver
s1	82.6	769.8	0.	774.2	82.6	1925.	2337.5	SI'
s1'	76.5	769.8	0.	773.6	76.5	1925.	2337.5	SI'
s2	432.8	768.3	0.	881.8	432.8	1925.	2337.5	SI'
s2'	333.6	768.3	0.	837.6	333.6	1925.	2337.5	SI'
s3	339.7	768.3	0.	840.	339.7	1925.	2337.5	SI'
s3'	426.7	768.3	0.	878.8	426.7	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 423 Nd. 1541

## 2.6.8 VERIFICA COLLEGAMENTO TRAVE HEA140 CON COLONNA IN SCATOLARE 180X180X5

Si riporta a seguire il listato di calcolo relativo alle verifiche del collegamento tra trave trasversale in HEA140 e colonna in scatolare 180x180x5. La colonna in scatolare 180x180x5, dovendo simulare la faccia di collegamento di spessore pari a 5 mm è stata assimilata ad una HEA 140.

VERIFICA TENSIONALE NODI: 1293 - METODO DEGLI STATI LIMITE (NTC 2018)

UNITA' DI MISURA: [daN] ; [daNcm] ; [daN/cm2] ; [mm]

GEOMETRIA NODO

Profili utilizzati

Tipo prof.	h	b	a	e	r
HEA140	133.	140.	5.5	8.5	12.
HEA140	133.	140.	5.5	8.5	12.

Piastre (n°1)

Num	H1	H2	B	Sp
1	153.	153.	140.	15.

BULLONI

Num	X	Y	Fi	Area	Num	X	Y	Fi	Area
1	-40.	30.	12.	86.4	3	40.	30.	12.	86.4
2	-40.	100.	12.	86.4	4	40.	100.	12.	86.4

SALDATURE

Lato saldature su trave : 10

Lato saldature su colonna: 10

MATERIALI

Acciaio S 275 (Fe 430)	Classe viti 8.8
fd s<40mm	fd 40mm<s<80mm

2619. | 2428.6 | 6400.

## VERIFICHE COLONNA

Verifica a resistenza dell'anima: SI' (81.4%)  
 Verifica a stabilità dell'anima: SI' (1.9)  
 Verifica a taglio dell'anima: SI' (76.9%)  
 Verifica dell'ala in zona tesa: SI' (25.9%)  
 Verifica dell'anima in zona tesa: SI' (76.9%)

## VERIFICHE SU COLONNA POSITIVE

## SOLLECITAZIONI AGENTI E STATO TENSIONALE

Combinazione di sollecitazioni agenti Caso 6 As. 362 Nd. 1293

N = 32.7 Ty = -191.9 Tz = 288  
 Mt = 16 My = -45503 Mz = 27555

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	86.4	3317.6	6747.7	543.	4976.5	9920.9	.1	.11	SI'
2	87.8	3317.6	8772.	253.6	4976.5	9920.9	.06	.05	SI'
3	85.3	3317.6	6747.7	2277.2	4976.5	9920.9	.35	.46	SI'
4	86.7	3317.6	8772.	1987.8	4976.5	9920.9	.31	.4	SI'

## Compressione massima sulla colonna

Sig| fd|Ver|  
 -712.9| 2619.|SI'

## Tensione massima piastra (mensola sup. ed inf.)

Sig| fd|Ver|  
 352.4| 2619.|SI'

## Saldature su trave

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	285.7	-73.8	0.	295.1	285.7	1925.	2337.5	SI'
s1'	175.2	-73.8	0.	190.1	175.2	1925.	2337.5	SI'
s2	533.5	70.3	0.	538.1	533.5	1925.	2337.5	SI'
s2'	773.1	70.3	0.	776.3	773.1	1925.	2337.5	SI'
s3	883.6	70.3	0.	886.4	883.6	1925.	2337.5	SI'
s3'	423.	70.3	0.	428.8	423.	1925.	2337.5	SI'
s10	820.1	70.3	0.	823.1	820.1	1925.	2337.5	SI'
s10'	0.	70.3	0.	70.3	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 362 Nd. 1293

Combinazione di sollecitazioni agenti Caso 6 As. 362 Nd. 1293

N = -53.6 Ty = 189 Tz = -287.7  
 Mt = -22 My = 45424 Mz = -27781

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	85.9	3317.6	6747.7	1816.8	4976.5	9920.9	.29	.37	SI'
2	87.	3317.6	8772.	2498.	4976.5	9920.9	.38	.5	SI'
3	85.1	3317.6	6747.7	105.6	4976.5	9920.9	.04	.02	SI'
4	86.2	3317.6	8772.	786.8	4976.5	9920.9	.14	.16	SI'

## Compressione massima sulla colonna

Sig| fd|Ver|  
 -958.4| 2619.|SI'

## Tensione massima piastra (mensola sup. ed inf.)

Sig| fd|Ver|  
 0.| 2619.|SI'

## Saldature su trave

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	288.	74.1	0.	297.4	288.	1925.	2337.5	SI'
s1'	175.3	74.1	0.	190.4	175.3	1925.	2337.5	SI'
s2	531.7	-70.9	0.	536.4	531.7	1925.	2337.5	SI'
s2'	772.6	-70.9	0.	775.8	772.6	1925.	2337.5	SI'
s3	885.2	-70.9	0.	888.	885.2	1925.	2337.5	SI'
s3'	419.1	-70.9	0.	425.1	419.1	1925.	2337.5	SI'
s10	820.	-70.9	0.	823.1	820.	1925.	2337.5	SI'
s10'	0.	-70.9	0.	70.9	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 362 Nd. 1293

Combinazione di sollecitazioni agenti Caso 6 As. 362 Nd. 1293

N = 32.5 Ty = -191 Tz = 288.2  
 Mt = 16 My = -45544 Mz = 27434

## Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	86.3	3317.6	6747.7	541.	4976.5	9920.9	.1	.11	SI'
2	87.7	3317.6	8772.	254.	4976.5	9920.9	.06	.05	SI'
3	85.2	3317.6	6747.7	2277.5	4976.5	9920.9	.35	.46	SI'
4	86.6	3317.6	8772.	1990.4	4976.5	9920.9	.31	.4	SI'

Compressione massima sulla colonna

Sig	fd	Ver
-711.3	2619.	SI'

Tensione massima piastra (mensola sup. ed inf.)

Sig	fd	Ver
350.6	2619.	SI'

Saldature su trave

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	285.	-73.7	0.	294.4	285.	1925.	2337.5	SI'
s1'	175.	-73.7	0.	189.9	175.	1925.	2337.5	SI'
s2	534.6	70.4	0.	539.2	534.6	1925.	2337.5	SI'
s2'	773.1	70.4	0.	776.3	773.1	1925.	2337.5	SI'
s3	883.2	70.4	0.	886.	883.2	1925.	2337.5	SI'
s3'	424.6	70.4	0.	430.4	424.6	1925.	2337.5	SI'
s10	819.9	70.4	0.	823.	819.9	1925.	2337.5	SI'
s10'	0.	70.4	0.	70.4	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 362 Nd. 1293

Combinazione di sollecitazioni agenti Caso 6 As. 362 Nd. 1293

N = -53.3	Ty = 188.2	Tz = -288
Mt = -22	My = 45465	Mz = -27660

Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	85.9	3317.6	6747.7	1821.2	4976.5	9920.9	.29	.37	SI'
2	87.	3317.6	8772.	2496.5	4976.5	9920.9	.38	.5	SI'
3	85.1	3317.6	6747.7	106.4	4976.5	9920.9	.04	.02	SI'
4	86.2	3317.6	8772.	781.7	4976.5	9920.9	.14	.16	SI'

Compressione massima sulla colonna

Sig	fd	Ver
-956.1	2619.	SI'

Tensione massima piastra (mensola sup. ed inf.)

Sig	fd	Ver
0.	2619.	SI'

Saldature su trave

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	287.2	74.1	0.	296.6	287.2	1925.	2337.5	SI'
s1'	175.1	74.1	0.	190.1	175.1	1925.	2337.5	SI'
s2	532.8	-71.	0.	537.5	532.8	1925.	2337.5	SI'
s2'	772.6	-71.	0.	775.9	772.6	1925.	2337.5	SI'
s3	884.8	-71.	0.	887.6	884.8	1925.	2337.5	SI'
s3'	420.7	-71.	0.	426.7	420.7	1925.	2337.5	SI'
s10	819.9	-71.	0.	822.9	819.9	1925.	2337.5	SI'
s10'	0.	-71.	0.	71.	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 362 Nd. 1293

Combinazione di sollecitazioni agenti Caso 5 As. 362 Nd. 1293

N = -50.5	Ty = 475.1	Tz = -272.3
Mt = -3	My = 43190	Mz = -68039

Verifica bulloni

Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	137.5	3317.6	6747.7	1178.7	4976.5	9920.9	.21	.24	SI'
2	138.6	3317.6	8772.	3956.3	4976.5	9920.9	.61	.8	SI'
3	135.2	3317.6	6747.7	274.	4976.5	9920.9	.08	.06	SI'
4	136.3	3317.6	8772.	3051.6	4976.5	9920.9	.48	.61	SI'

Compressione massima sulla colonna

Sig	fd	Ver
-1453.4	2619.	SI'

Tensione massima piastra (mensola sup. ed inf.)

Sig	fd	Ver
0.	2619.	SI'

Saldature su trave

Seq-1, Slim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, Slim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	565.1	91.	0.	572.4	565.1	1925.	2337.5	SI'
s1'	391.1	91.	0.	401.5	391.1	1925.	2337.5	SI'
s2	323.7	-65.2	0.	330.2	323.7	1925.	2337.5	SI'
s2'	916.4	-65.2	0.	918.8	916.4	1925.	2337.5	SI'
s3	1187.5	-65.2	0.	1189.3	1187.5	1925.	2337.5	SI'
s3'	434.6	-65.2	0.	439.4	434.6	1925.	2337.5	SI'
s10	1032.4	-65.2	0.	1034.5	1032.4	1925.	2337.5	SI'
s10'	0.	-65.2	0.	65.2	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 362 Nd. 1293

Combinazione di sollecitazioni agenti Caso 5 As. 362 Nd. 1293

N = 29.6                      Ty = -477.9                      Tz = 272.5  
 Mt = -3                      My = -43270                      Mz = 67813  
 Verifica bulloni  
 Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)  

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	138.2	3317.6	6747.7	2174.7	4976.5	9920.9	.35	.44	SI'
2	139.6	3317.6	8772.	563.1	4976.5	9920.9	.12	.11	SI'
3	135.5	3317.6	6747.7	3121.9	4976.5	9920.9	.49	.63	SI'
4	136.9	3317.6	8772.	1510.3	4976.5	9920.9	.26	.3	SI'

Compressione massima sulla colonna

Sig| fd|Ver|  
 -1171.6| 2619.|SI'|

Tensione massima piastra (mensola sup. ed inf.)

Sig| fd|Ver|  
 1395.2| 2619.|SI'|

Saldature su trave

Seq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	562.9	-90.6	0.	570.1	562.9	1925.	2337.5	SI'
s1'	388.5	-90.6	0.	399.	388.5	1925.	2337.5	SI'
s2	325.4	64.5	0.	331.8	325.4	1925.	2337.5	SI'
s2'	917.	64.5	0.	919.3	917.	1925.	2337.5	SI'
s3	1185.9	64.5	0.	1187.7	1185.9	1925.	2337.5	SI'
s3'	431.6	64.5	0.	436.4	431.6	1925.	2337.5	SI'
s10	1032.5	64.5	0.	1034.5	1032.5	1925.	2337.5	SI'
s10'	0.	64.5	0.	64.5	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 5 As. 362 Nd. 1293

Combinazione di sollecitazioni agenti Caso 6 As. 362 Nd. 1293

N = 13.7                      Ty = 78.1                      Tz = 161.4  
 Mt = 19                      My = -25393                      Mz = -10865  
 Verifica bulloni  
 Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)  

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	44.6	3317.6	6747.7	88.1	4976.5	9920.9	.03	.02	SI'
2	44.9	3317.6	8772.	301.3	4976.5	9920.9	.06	.06	SI'
3	44.8	3317.6	6747.7	1094.4	4976.5	9920.9	.17	.22	SI'
4	45.1	3317.6	8772.	1307.6	4976.5	9920.9	.2	.26	SI'

Compressione massima sulla colonna

Sig| fd|Ver|  
 -440.6| 2619.|SI'|

Tensione massima piastra (mensola sup. ed inf.)

Sig| fd|Ver|  
 0.| 2619.|SI'|

Saldature su trave

Seq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	84.7	40.2	0.	93.7	84.7	1925.	2337.5	SI'
s1'	126.7	40.2	0.	132.9	126.7	1925.	2337.5	SI'
s2	412.3	40.5	0.	414.3	412.3	1925.	2337.5	SI'
s2'	316.8	40.5	0.	319.4	316.8	1925.	2337.5	SI'
s3	274.8	40.5	0.	277.8	274.8	1925.	2337.5	SI'
s3'	454.3	40.5	0.	456.1	454.3	1925.	2337.5	SI'
s10	430.7	40.5	0.	432.6	430.7	1925.	2337.5	SI'
s10'	0.	40.5	0.	40.5	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 6 As. 362 Nd. 1293

Combinazione di sollecitazioni agenti Caso 2 As. 362 Nd. 1293

N = -52.4                      Ty = -10.2                      Tz = 2.2  
 Mt = -28                      My = -477                      Mz = -137  
 Verifica bulloni  
 Co-1, Co-2: NTC 2018, 4.2.8.1.1 formula (4.2.71)  

Num	Fv,Ed	Fv,Rd	Fb,Rd	Ft,Ed	Ft,Rd	Bp,Rd	Co-1	Co-2	Ver
1	3.6	3317.6	6747.7	-6	4976.5	9920.9	0.	0.	SI'
2	3.8	3317.6	8772.	.9	4976.5	9920.9	0.	0.	SI'
3	1.6	3317.6	6747.7	7.5	4976.5	9920.9	0.	0.	SI'
4	2.1	3317.6	8772.	9.1	4976.5	9920.9	0.	0.	SI'

Compressione massima sulla colonna

Sig| fd|Ver|  
 -5.1| 2619.|SI'|

Tensione massima piastra (mensola sup. ed inf.)

Sig| fd|Ver|  
 .3| 2619.|SI'|

Saldature su trave

Seq-1, SLim-1: NTC 2018, 4.2.8.2.4 formula (4.2.84)

Seq-2, SLim-2: NTC 2018, 4.2.8.2.4 formula (4.2.85)

Nome	S_prp	Tau_pa	Tau_pe	Seq-1	Seq-2	SLim-1	SLim-2	Ver
s1	2.	-3.4	0.	4.	2.	1925.	2337.5	SI'
s1'	3.9	-3.4	0.	5.2	3.9	1925.	2337.5	SI'
s2	6.5	2.7	0.	7.1	6.5	1925.	2337.5	SI'

s2'	7.2	2.7	0.	7.7	7.2	1925.	2337.5	SI'
s3	3.6	2.7	0.	4.5	3.6	1925.	2337.5	SI'
s3'	10.1	2.7	0.	10.5	10.1	1925.	2337.5	SI'
s10	6.9	2.7	0.	7.4	6.9	1925.	2337.5	SI'
s10'	0.	2.7	0.	2.7	0.	1925.	2337.5	SI'

NODO VERIFICATO IN BASE ALLA COMB. DI SOLLECITAZIONI AGENTI Caso 2 As. 362 Nd. 1293

### 3 APPENDICE "A": DATI ANALISI MODELLO AGLI ELEMENTI FINITI

\*\*\* DATI STRUTTURA

Unita` di misura :  
 LUNGHEZZE : cm  
 SUPERFICI : cm2  
 DATI SEZIONALI : cm  
 ANGOLI : gradi  
 FORZE : daN  
 MOMENTI : daNcm  
 CARICHI LINEARI : daN/cm  
 CARICHI SUPERFIC.: daN/cm2  
 TENSIONI : daN/cm2  
 PESI DI VOLUME : daN/cm3  
 COEFF. DI WINKLER: daN/cm3  
 RIGIDENZE VINCOL.: daN/cm - daNcm/rad

NODI--	-----	-----	-----	-----	num.=
Nome	Coord. X	Coord. Y	Coord. Z		
556	116.500	449.200	-200.000		
557	202.300	449.900	-200.000		
558	198.000	536.400	-200.000		
559	114.300	536.300	-200.000		
560	193.400	627.900	-200.000		
561	112.200	623.500	-200.000		
564	287.900	454.800	-200.000		
565	281.400	542.900	-200.000		
566	274.700	631.700	-200.000		
569	118.700	362.200	-200.000		
570	206.600	363.300	-200.000		
571	267.900	722.900	-200.000		
572	188.900	719.000	-200.000		
573	109.900	715.000	-200.000		
574	294.300	369.500	-200.000		
575	372.900	466.200	-200.000		
576	364.300	553.100	-200.000		
577	355.600	640.000	-200.000		
578	30.900	711.100	-200.000		
580	120.800	275.100	-200.000		
581	211.000	275.000	-200.000		
582	381.600	379.300	-200.000		
583	346.900	726.900	-200.000		

584	300.800	283.400	-200.000
585	30.900	187.100	-200.000
586	122.900	191.700	-200.000
587	214.900	196.300	-200.000
588	390.300	292.300	-200.000
589	307.000	200.900	-200.000
590	399.000	205.400	-200.000
592	123.900	151.700	-200.000
593	216.900	156.400	-200.000
594	309.900	161.000	-200.000
595	403.000	165.600	-200.000
596	30.900	0.900	-200.000
597	127.500	5.700	-200.000
598	224.200	10.500	-200.000
599	320.800	15.300	-200.000
600	417.500	20.100	-200.000
601	756.000	707.800	-200.000
602	834.500	729.000	-200.000
603	813.100	812.900	-200.000
604	736.500	793.400	-200.000
605	775.400	622.400	-200.000
606	856.500	642.200	-200.000
607	913.000	749.800	-200.000
608	889.800	832.400	-200.000
609	937.500	662.500	-200.000
610	676.900	689.100	-200.000
611	659.800	773.900	-200.000
612	694.000	604.200	-200.000
613	794.900	536.800	-200.000
614	878.100	557.400	-200.000
615	990.900	772.600	-200.000
616	966.500	851.900	-200.000
617	711.200	519.400	-200.000
618	961.000	578.800	-200.000
619	1017.900	685.000	-200.000
620	814.000	453.200	-200.000
621	899.400	473.500	-200.000
622	728.300	434.500	-200.000
623	984.600	494.700	-200.000
624	1043.600	601.500	-200.000
625	745.400	349.600	-200.000
626	833.200	368.600	-200.000
627	920.700	389.600	-200.000
628	1007.600	413.100	-200.000
629	1069.300	518.000	-200.000
630	763.400	260.300	-200.000
631	852.700	283.000	-200.000
632	942.100	305.700	-200.000
633	1031.400	328.400	-200.000
634	1095.000	434.600	-200.000
636	861.600	244.000	-200.000
637	951.900	267.000	-200.000
638	1042.200	289.900	-200.000
639	1120.700	351.100	-200.000
641	800.300	77.700	-200.000
642	894.100	101.600	-200.000
643	987.900	125.400	-200.000
644	1081.700	149.300	-200.000
645	1175.500	173.100	-200.000
646	265.300	757.800	-200.000
647	187.100	753.900	-200.000
648	343.400	761.700	-200.000
651	109.000	750.000	-200.000
653	30.900	746.200	-200.000
654	956.100	885.400	-200.000
655	880.300	866.100	-200.000
657	804.500	846.800	-200.000
659	728.700	827.600	-200.000
660	652.900	808.300	-200.000
712	516.800	661.000	-200.000
713	597.300	673.000	-200.000
714	581.600	762.200	-200.000
715	503.300	750.400	-200.000
716	436.500	648.000	-200.000
717	425.100	738.600	-200.000
718	447.300	561.300	-200.000
719	529.800	574.900	-200.000
720	612.300	587.500	-200.000
721	543.500	483.800	-200.000
722	627.500	501.400	-200.000
723	458.100	474.700	-200.000
724	556.400	398.100	-200.000
725	642.400	416.400	-200.000
726	469.000	388.000	-200.000
727	569.200	314.100	-200.000
728	657.300	331.900	-200.000
730	479.800	301.300	-200.000
731	581.200	232.900	-200.000
732	672.300	246.600	-200.000
734	490.100	219.200	-200.000
735	587.200	193.400	-200.000
736	679.300	207.200	-200.000
737	495.100	179.500	-200.000
739	704.600	63.300	-200.000
745	513.200	34.500	-200.000

746	608.900	48.900	-200.000
750	575.500	796.600	-200.000
752	498.100	785.000	-200.000
755	420.800	773.400	-200.000
939	966.500	851.900	-112.500
943	966.500	851.900	-25.000
945	889.800	832.400	-112.500
947	813.100	812.900	-112.500
948	736.500	793.400	-112.500
949	659.800	773.900	-112.500
950	889.800	832.400	-25.000
951	813.100	812.900	-25.000
952	736.500	793.400	-25.000
953	659.800	773.900	-25.000
954	581.600	762.200	-112.500
955	503.300	750.400	-112.500
956	425.100	738.600	-112.500
957	346.900	726.900	-112.500
958	581.600	762.200	-25.000
959	503.300	750.400	-25.000
960	425.100	738.600	-25.000
961	346.900	726.900	-25.000
963	267.900	722.900	-112.500
965	188.900	719.000	-112.500
967	109.900	715.000	-112.500
968	30.900	711.100	-112.500
969	267.900	722.900	-25.000
970	188.900	719.000	-25.000
971	109.900	715.000	-25.000
972	30.900	711.100	-25.000
1001	1120.700	351.100	-112.500
1007	1120.700	351.100	-25.000
1011	852.700	283.000	-112.500
1012	763.400	260.300	-112.500
1013	942.100	305.700	-112.500
1014	1031.400	328.400	-112.500
1015	852.700	283.000	-25.000
1016	763.400	260.300	-25.000
1017	942.100	305.700	-25.000
1018	1031.400	328.400	-25.000
1021	490.100	219.200	-112.500
1022	399.000	205.400	-112.500
1023	581.200	232.900	-112.500
1025	672.300	246.600	-112.500
1026	490.100	219.200	-25.000
1027	399.000	205.400	-25.000
1028	581.200	232.900	-25.000
1029	672.300	246.600	-25.000
1030	122.900	191.700	-112.500
1031	30.900	187.100	-112.500
1032	214.900	196.300	-112.500
1033	307.000	200.900	-112.500
1034	122.900	191.700	-25.000
1035	30.900	187.100	-25.000
1036	214.900	196.300	-25.000
1037	307.000	200.900	-25.000
1054	30.900	623.800	-200.000
1055	30.900	623.800	-112.500
1056	30.900	536.400	-200.000
1057	30.900	536.400	-112.500
1058	30.900	449.100	-200.000
1059	30.900	449.100	-112.500
1060	30.900	361.800	-200.000
1061	30.900	361.800	-112.500
1062	30.900	274.400	-200.000
1063	30.900	274.400	-112.500
1064	30.900	623.800	-25.000
1065	30.900	536.400	-25.000
1066	30.900	449.100	-25.000
1067	30.900	361.800	-25.000
1068	30.900	274.400	-25.000
1110	403.000	165.600	-112.200
1111	403.000	165.600	-25.000
1114	417.500	20.100	-155.000
1115	410.800	87.600	-94.700
1116	771.400	221.100	-112.200
1117	800.300	77.700	-155.000
1118	785.600	150.600	-89.000
1119	771.400	221.100	-200.000
1123	771.400	221.100	-25.000
1125	30.900	147.100	-112.200
1126	30.900	92.700	-73.400
1127	30.900	147.100	-25.000
1128	30.900	0.900	-155.000
1129	30.900	147.100	-200.000
1130	1132.400	312.900	-200.000
1132	1175.500	173.100	-155.000
1133	1132.400	312.900	-112.200
1136	1132.400	312.900	-25.000
1138	1153.600	244.100	-89.000
1164	122.900	191.700	62.000
1165	30.900	187.100	62.000
1166	214.900	196.300	62.000
1167	307.000	200.900	62.000
1168	399.000	205.400	62.000

1169	122.900	191.700	149.000
1170	30.900	187.100	149.000
1171	214.900	196.300	149.000
1172	307.000	200.900	149.000
1173	399.000	205.400	149.000
1174	122.900	191.700	236.000
1175	30.900	187.100	236.000
1176	214.900	196.300	236.000
1177	307.000	200.900	236.000
1178	399.000	205.400	236.000
1179	122.900	191.700	323.000
1180	30.900	187.100	323.000
1181	214.900	196.300	323.000
1182	307.000	200.900	323.000
1183	399.000	205.400	323.000
1184	122.900	191.700	410.000
1185	30.900	187.100	410.000
1186	214.900	196.300	410.000
1187	307.000	200.900	410.000
1188	399.000	205.400	410.000
1189	490.100	219.200	62.000
1190	581.200	232.900	62.000
1191	672.300	246.600	62.000
1192	763.400	260.300	62.000
1193	490.100	219.200	149.000
1194	581.200	232.900	149.000
1195	672.300	246.600	149.000
1196	763.400	260.300	149.000
1197	490.100	219.200	236.000
1198	581.200	232.900	236.000
1199	672.300	246.600	236.000
1200	763.400	260.300	236.000
1201	490.100	219.200	323.000
1202	581.200	232.900	323.000
1203	672.300	246.600	323.000
1204	763.400	260.300	323.000
1205	490.100	219.200	410.000
1206	581.200	232.900	410.000
1207	672.300	246.600	410.000
1208	763.400	260.300	410.000
1209	852.700	283.000	62.000
1210	942.100	305.700	62.000
1211	1031.400	328.400	62.000
1212	1120.700	351.100	62.000
1213	852.700	283.000	149.000
1214	942.100	305.700	149.000
1215	1031.400	328.400	149.000
1216	1120.700	351.100	149.000
1217	852.700	283.000	236.000
1218	942.100	305.700	236.000
1219	1031.400	328.400	236.000
1220	1120.700	351.100	236.000
1221	852.700	283.000	323.000
1222	942.100	305.700	323.000
1223	1031.400	328.400	323.000
1224	1120.700	351.100	323.000
1225	852.700	283.000	410.000
1226	942.100	305.700	410.000
1227	1031.400	328.400	410.000
1228	1120.700	351.100	410.000
1292	30.900	711.100	432.000
1293	346.900	726.900	432.000
1294	659.800	773.900	432.000
1295	966.500	851.900	432.000
1299	30.900	147.100	525.000
1300	403.000	165.600	525.000
1301	771.400	221.100	525.000
1302	1132.400	312.900	525.000
1393	30.900	786.100	419.600
1394	30.900	72.100	537.400
1395	410.400	91.000	537.400
1396	339.400	801.500	419.600
1397	786.200	147.600	537.400
1398	645.000	847.500	419.600
1399	1154.500	241.200	537.400
1400	944.400	923.600	419.600
1428	1111.800	379.900	513.400
1430	1070.500	514.000	490.300
1432	1029.200	648.000	467.200
1434	987.900	782.100	444.000
1435	757.500	289.800	513.400
1437	729.700	427.300	490.300
1439	702.000	564.800	467.200
1441	674.200	702.400	444.000
1442	396.000	235.400	513.400
1444	382.000	375.000	490.300
1446	368.100	514.600	467.200
1448	354.200	654.200	444.000
1449	30.900	217.300	513.400
1451	30.900	357.500	490.300
1453	30.900	497.800	467.200
1455	30.900	638.100	444.000
1456	30.900	361.800	62.000
1457	30.900	449.100	62.000
1458	30.900	274.400	62.000

1459	30.900	361.800	149.000
1460	30.900	449.100	149.000
1461	30.900	274.400	149.000
1462	30.900	361.800	236.000
1463	30.900	449.100	236.000
1464	30.900	274.400	236.000
1465	30.900	361.800	323.000
1466	30.900	449.100	323.000
1467	30.900	274.400	323.000
1468	30.900	361.800	410.000
1469	30.900	449.100	410.000
1470	30.900	274.400	410.000
1504	1819.200	1261.700	-25.000
1505	1819.200	1261.700	432.000
1506	1549.000	1097.000	-25.000
1507	1549.000	1097.000	432.000
1508	1263.900	959.900	-25.000
1509	1263.900	959.900	432.000
1512	1467.100	476.900	-25.000
1513	1380.500	445.500	-25.000
1514	1293.900	414.000	-25.000
1515	1207.300	382.600	-25.000
1517	1799.300	636.600	-25.000
1518	1716.200	596.700	-25.000
1519	1633.200	556.800	-25.000
1520	1550.100	516.900	-25.000
1521	2113.900	828.500	-25.000
1522	2035.300	780.500	-25.000
1523	1956.600	732.500	-25.000
1524	1877.900	684.600	-25.000
1525	2064.800	900.700	-25.000
1526	2015.700	972.900	-25.000
1527	1966.600	1045.100	-25.000
1528	1917.400	1117.300	-25.000
1529	1868.300	1189.500	-25.000
1530	1751.600	1220.600	-25.000
1531	1684.100	1179.400	-25.000
1532	1616.600	1138.200	-25.000
1533	1477.700	1062.700	-25.000
1534	1406.400	1028.500	-25.000
1535	1335.200	994.200	-25.000
1536	1189.500	932.900	-25.000
1537	1115.200	905.900	-25.000
1538	1040.800	878.900	-25.000
1539	1513.200	1162.900	419.600
1540	1583.900	1032.800	444.000
1541	1818.400	601.500	525.000
1542	1784.900	663.100	513.400
1543	1854.200	535.600	537.400
1544	2178.600	733.400	537.400
1545	2136.400	795.400	525.000
1546	2097.000	853.400	513.400
1547	1860.300	1201.400	444.000
1548	1777.000	1323.800	419.600
1549	1234.800	1029.100	419.600
1550	1292.200	892.600	444.000
1551	1482.600	440.100	525.000
1552	1455.400	504.700	513.400
1553	1511.700	370.900	537.400
1559	2018.100	969.400	490.300
1560	1939.200	1085.400	467.200
1561	1717.900	786.300	490.300
1562	1650.900	909.600	467.200
1563	1401.000	634.000	490.300
1564	1346.600	763.300	467.200
1568	2113.900	828.500	149.000
1569	2136.400	795.400	-25.000
1571	2113.900	828.500	323.000
1573	1799.300	636.600	323.000
1575	1799.300	636.600	149.000
1576	1818.400	601.500	-25.000
1578	1467.100	476.900	323.000
1580	1467.100	476.900	149.000
1581	1482.600	440.100	-25.000
1587	2035.300	780.500	62.000
1588	2113.900	828.500	62.000
1589	1956.600	732.500	62.000
1590	1877.900	684.600	62.000
1591	1799.300	636.600	62.000
1592	2035.300	780.500	149.000
1593	1956.600	732.500	149.000
1594	1877.900	684.600	149.000
1595	2035.300	780.500	236.000
1596	2113.900	828.500	236.000
1597	1956.600	732.500	236.000
1598	1877.900	684.600	236.000
1599	1799.300	636.600	236.000
1600	2035.300	780.500	323.000
1601	1956.600	732.500	323.000
1602	1877.900	684.600	323.000
1603	2035.300	780.500	410.000
1604	2113.900	828.500	410.000
1605	1956.600	732.500	410.000
1606	1877.900	684.600	410.000
1607	1799.300	636.600	410.000

1608	1716.200	596.700	62.000
1609	1633.200	556.800	62.000
1610	1550.100	516.900	62.000
1611	1467.100	476.900	62.000
1612	1716.200	596.700	149.000
1613	1633.200	556.800	149.000
1614	1550.100	516.900	149.000
1615	1716.200	596.700	236.000
1616	1633.200	556.800	236.000
1617	1550.100	516.900	236.000
1618	1467.100	476.900	236.000
1619	1716.200	596.700	323.000
1620	1633.200	556.800	323.000
1621	1550.100	516.900	323.000
1622	1716.200	596.700	410.000
1623	1633.200	556.800	410.000
1624	1550.100	516.900	410.000
1625	1467.100	476.900	410.000
1626	1380.500	445.500	62.000
1627	1293.900	414.000	62.000
1628	1207.300	382.600	62.000
1630	1380.500	445.500	149.000
1631	1293.900	414.000	149.000
1632	1207.300	382.600	149.000
1633	1380.500	445.500	236.000
1634	1293.900	414.000	236.000
1635	1207.300	382.600	236.000
1637	1380.500	445.500	323.000
1638	1293.900	414.000	323.000
1639	1207.300	382.600	323.000
1640	1380.500	445.500	410.000
1641	1293.900	414.000	410.000
1642	1207.300	382.600	410.000
1659	2035.300	780.500	-200.000
1660	1956.600	732.500	-200.000
1661	1915.500	799.900	-200.000
1662	1990.100	850.600	-200.000
1663	1877.900	684.600	-200.000
1664	1799.300	636.600	-200.000
1665	1757.600	713.300	-200.000
1666	1836.600	756.300	-200.000
1667	1869.500	875.300	-200.000
1668	1942.900	923.800	-200.000
1669	1715.900	790.100	-200.000
1670	1793.500	831.100	-200.000
1671	1824.400	949.400	-200.000
1672	1895.700	997.100	-200.000
1673	1674.200	866.800	-200.000
1674	1750.800	905.300	-200.000
1675	1779.300	1023.300	-200.000
1676	1848.500	1070.300	-200.000
1677	1632.400	943.500	-200.000
1678	1706.700	981.700	-200.000
1679	1731.600	1101.500	-200.000
1680	1801.300	1143.500	-200.000
1681	1590.700	1020.300	-200.000
1682	1662.200	1058.900	-200.000
1683	1684.100	1179.400	-200.000
1684	1751.700	1220.600	-200.000
1685	1549.000	1097.000	-200.000
1686	1616.600	1138.200	-200.000
1687	1380.500	445.500	-200.000
1688	1293.900	414.000	-200.000
1689	1264.300	495.400	-200.000
1690	1348.400	527.200	-200.000
1691	1467.100	476.900	-200.000
1692	1431.700	561.000	-200.000
1693	1207.300	382.600	-200.000
1694	1179.300	466.000	-200.000
1697	1316.800	608.000	-200.000
1698	1398.100	640.800	-200.000
1699	1234.700	576.700	-200.000
1700	1152.300	546.400	-200.000
1702	1205.200	658.100	-200.000
1703	1285.500	687.900	-200.000
1704	1364.600	720.500	-200.000
1705	1124.600	629.100	-200.000
1707	1253.500	769.600	-200.000
1708	1331.000	800.300	-200.000
1709	1175.300	740.400	-200.000
1711	1096.900	711.600	-200.000
1712	1221.500	851.200	-200.000
1713	1144.700	824.500	-200.000
1714	1115.200	905.900	-200.000
1715	1189.500	932.900	-200.000
1716	1297.400	880.100	-200.000
1717	1263.900	959.900	-200.000
1718	1068.100	797.600	-200.000
1719	1040.800	878.900	-200.000
1720	1599.100	1168.500	-200.000
1721	1665.900	1209.300	-200.000
1722	1532.300	1127.800	-200.000
1723	1732.700	1250.000	-200.000
1724	1819.200	1261.700	-200.000
1725	1799.500	1290.700	-200.000

1727	1029.700	912.100	-200.000
1728	1176.700	965.500	-200.000
1729	1250.300	992.200	-200.000
1730	1103.200	938.800	-200.000
1731	1716.200	596.700	-200.000
1732	1678.600	670.400	-200.000
1733	1633.200	556.800	-200.000
1734	1597.500	630.700	-200.000
1735	1550.100	516.900	-200.000
1736	1514.600	595.800	-200.000
1737	1638.700	748.100	-200.000
1738	1560.800	707.400	-200.000
1739	1479.300	674.100	-200.000
1740	1598.900	825.900	-200.000
1741	1523.200	785.500	-200.000
1742	1443.900	752.700	-200.000
1743	1408.000	832.500	-200.000
1744	1559.100	903.700	-200.000
1745	1519.300	981.500	-200.000
1746	1477.700	1062.700	-200.000
1747	1372.300	911.700	-200.000
1748	1335.200	994.200	-200.000
1749	1445.600	947.000	-200.000
1750	1406.400	1028.500	-200.000
1751	1483.300	868.500	-200.000
1752	1320.800	1026.100	-200.000
1753	1461.800	1093.900	-200.000
1754	1391.300	1060.000	-200.000
1756	1868.300	1189.500	-200.000
1757	1917.400	1117.300	-200.000
1758	1966.600	1045.100	-200.000
1759	2015.700	972.900	-200.000
1760	2113.900	828.500	-200.000
1761	2064.800	900.700	-200.000
1762	2218.700	674.500	-200.000
1763	2136.100	624.100	-200.000
1764	2056.900	746.900	-200.000
1765	2136.400	795.400	-200.000
1766	2053.400	573.700	-200.000
1767	1977.400	698.400	-200.000
1768	1970.800	523.400	-200.000
1769	1888.200	473.000	-200.000
1770	1818.400	601.500	-200.000
1771	1897.900	649.900	-200.000
1772	1734.400	561.100	-200.000
1773	1801.000	431.100	-200.000
1774	1650.500	520.800	-200.000
1775	1713.700	389.100	-200.000
1776	1626.500	347.200	-200.000
1777	1539.300	305.300	-200.000
1778	1482.600	440.100	-200.000
1779	1566.500	480.400	-200.000
1780	1448.300	272.200	-200.000
1781	1395.000	408.300	-200.000
1782	1307.500	376.500	-200.000
1783	1357.400	239.200	-200.000
1784	1220.000	344.700	-200.000
1786	1266.400	206.100	-200.000
1787	1380.500	445.500	-112.500
1788	1467.100	476.900	-112.500
1789	1293.900	414.000	-112.500
1790	1207.300	382.600	-112.500
1792	1716.200	596.700	-112.500
1793	1799.300	636.600	-112.500
1794	1633.200	556.800	-112.500
1795	1550.100	516.900	-112.500
1796	2035.300	780.500	-112.500
1797	2113.900	828.500	-112.500
1798	1956.600	732.500	-112.500
1799	1877.900	684.600	-112.500
1800	2136.400	795.400	-112.200
1801	2218.700	674.500	-155.000
1802	2167.000	750.400	-73.400
1803	1868.300	1189.500	-112.500
1804	1819.200	1261.700	-112.500
1805	1917.400	1117.300	-112.500
1806	1966.600	1045.100	-112.500
1807	2015.700	972.900	-112.500
1808	2064.800	900.700	-112.500
1809	1818.400	601.500	-112.200
1810	1888.200	473.000	-155.000
1811	1855.800	532.600	-94.700
1812	1482.600	440.100	-112.200
1813	1539.300	305.300	-155.000
1814	1510.500	373.800	-89.000
1818	1616.600	1138.200	-112.500
1819	1549.000	1097.000	-112.500
1820	1684.100	1179.400	-112.500
1821	1751.600	1220.600	-112.500
1822	1335.200	994.200	-112.500
1823	1263.900	959.900	-112.500
1824	1406.400	1028.500	-112.500
1825	1477.700	1062.700	-112.500
1827	1040.800	878.900	-112.500
1828	1115.200	905.900	-112.500

1829	1189.500	932.900	-112.500
1830	2015.700	972.900	62.000
1831	1966.600	1045.100	62.000
1832	2064.800	900.700	62.000
1833	2015.700	972.900	149.000
1834	1966.600	1045.100	149.000
1835	2064.800	900.700	149.000
1836	2015.700	972.900	236.000
1837	1966.600	1045.100	236.000
1838	2064.800	900.700	236.000
1839	2015.700	972.900	323.000
1840	1966.600	1045.100	323.000
1841	2064.800	900.700	323.000
1842	2015.700	972.900	410.000
1843	1966.600	1045.100	410.000
1844	2064.800	900.700	410.000
1916	1818.400	601.500	236.000
1917	2136.400	795.400	236.000
1918	1482.600	440.100	236.000
1919	1132.400	312.900	236.000
1920	771.400	221.100	236.000
1921	403.000	165.600	236.000
1922	30.900	147.100	236.000

ASTE--	-----	-----	-----	-----	-----	num.=	215
Nome	Proprieta'	Nodo iniz.	Nodo fin.	Rilasci in.	Rilasci fin.		Orient.
19	4	953	952				0.0
20	4	952	951				0.0
21	4	951	950				0.0
22	4	950	943				0.0
23	4	961	960				0.0
24	4	960	959				0.0
25	4	959	958				0.0
26	4	958	953				0.0
27	4	972	971				0.0
28	4	971	970				0.0
29	4	970	969				0.0
30	4	969	961				0.0
37	5	1035	1034				0.0
38	5	1034	1036				0.0
39	5	1036	1037				0.0
40	5	1037	1027				0.0
41	5	1027	1026				0.0
42	5	1026	1028				0.0
43	5	1028	1029				0.0
44	5	1029	1016				0.0
45	5	1016	1015				0.0
46	5	1015	1017				0.0
47	5	1017	1018				0.0
48	5	1018	1007				0.0
69	4	1035	1068				0.0
70	4	1068	1067				0.0
71	4	1067	1066				0.0
72	4	1066	1065				0.0
73	4	1065	1064				0.0
74	4	1064	972				0.0
75	1	972	1292				0.0
76	1	961	1293				5.7
77	1	953	1294				11.4
78	1	943	1295				17.1
135	7	1292	1393				0.0
136	7	1394	1299				0.0
137	7	1395	1300				0.0
138	7	1293	1396				0.0
139	7	1397	1301				0.0
140	7	1294	1398				0.0
141	7	1399	1302				0.0
142	7	1295	1400				0.0
206	7	1302	1428				0.0
207	7	1428	1430				0.0
209	7	1430	1432				0.0
211	7	1432	1434				0.0
213	7	1434	1295				0.0
214	10	1397	1399	RyRz	RxRyRz		11.4
216	10	1398	1400	RyRz	RxRyRz		11.4
218	10	1435	1428	RyRz	RxRyRz		11.4
222	10	1439	1432	RyRz	RxRyRz		11.4
224	10	1441	1434	RyRz	RxRyRz		11.4
225	10	1395	1397	RyRz	RxRyRz		11.4
228	10	1396	1398	RyRz	RxRyRz		11.4
229	10	1442	1435	RyRz	RxRyRz		11.4
233	10	1446	1439	RyRz	RxRyRz		11.4
235	10	1448	1441	RyRz	RxRyRz		11.4
236	7	1301	1435				0.0
237	7	1435	1437				0.0
239	7	1437	1439				0.0
241	7	1439	1441				0.0
243	7	1441	1294				0.0
244	7	1300	1442				0.0
245	7	1442	1444				0.0
247	7	1444	1446				0.0
249	7	1446	1448				0.0
251	7	1448	1293				0.0
252	10	1393	1396	RyRz	RxRyRz		11.4
254	10	1394	1395	RyRz	RxRyRz		11.4

256	10	1449	1442	RyRz	RxRyRz	11.4
260	10	1453	1446	RyRz	RxRyRz	11.4
262	10	1455	1448	RyRz	RxRyRz	11.4
263	7	1299	1449			0.0
264	7	1449	1451			0.0
266	7	1451	1453			0.0
268	7	1453	1455			0.0
270	7	1455	1292			0.0
309	2	1921	1300			95.7
312	2	1920	1301			101.4
316	2	1919	1302			107.1
345	10	1451	1444	RyRz	RxRyRz	11.4
346	10	1444	1437	RyRz	RxRyRz	11.4
347	10	1437	1430	RyRz	RxRyRz	11.4
354	8	1294	1295			0.0
355	8	1293	1294			0.0
356	8	1301	1302			0.0
360	8	1300	1301			0.0
361	8	1299	1300			0.0
362	8	1292	1293			0.0
377	2	1922	1299			90.0
387	1	1504	1505			124.2
388	1	1506	1507			118.5
389	1	1508	1509			112.8
391	5	1512	1513			0.0
392	5	1513	1514			0.0
393	5	1514	1515			0.0
394	5	1515	1007			0.0
395	5	1517	1518			0.0
396	5	1518	1519			0.0
397	5	1519	1520			0.0
398	5	1520	1512			0.0
399	5	1521	1522			0.0
400	5	1522	1523			0.0
401	5	1523	1524			0.0
402	5	1524	1517			0.0
403	4	1521	1525			0.0
404	4	1525	1526			0.0
405	4	1526	1527			0.0
406	4	1527	1528			0.0
407	4	1528	1529			0.0
408	4	1529	1504			0.0
409	4	1530	1531			0.0
410	4	1504	1530			0.0
411	4	1531	1532			0.0
412	4	1532	1506			0.0
413	4	1506	1533			0.0
414	4	1533	1534			0.0
415	4	1534	1535			0.0
416	4	1535	1508			0.0
417	4	1508	1536			0.0
418	4	1536	1537			0.0
419	4	1537	1538			0.0
420	4	1538	943			0.0
421	7	1507	1539			0.0
422	7	1540	1507			0.0
423	7	1541	1542			0.0
424	7	1543	1541			0.0
425	7	1544	1545			0.0
426	7	1545	1546			0.0
427	7	1547	1505			0.0
428	7	1505	1548			0.0
429	7	1509	1549			0.0
430	7	1550	1509			0.0
431	7	1551	1552			0.0
432	7	1553	1551			0.0
437	7	1546	1559			0.0
438	7	1559	1560			0.0
439	7	1560	1547			0.0
440	7	1542	1561			0.0
441	7	1561	1562			0.0
442	7	1562	1540			0.0
443	7	1552	1563			0.0
444	7	1563	1564			0.0
445	7	1564	1550			0.0
449	10	1553	1399	RyRz	RxRyRz	11.4
450	10	1549	1400	RyRz	RxRyRz	11.4
451	10	1552	1428	RyRz	RxRyRz	11.4
452	10	1564	1432	RyRz	RxRyRz	11.4
453	10	1550	1434	RyRz	RxRyRz	11.4
454	10	1543	1553	RyRz	RxRyRz	11.4
455	10	1539	1549	RyRz	RxRyRz	11.4
456	10	1542	1552	RyRz	RxRyRz	11.4
457	10	1562	1564	RyRz	RxRyRz	11.4
458	10	1540	1550	RyRz	RxRyRz	11.4
459	10	1548	1539	RyRz	RxRyRz	11.4
460	10	1544	1543	RyRz	RxRyRz	11.4
461	10	1546	1542	RyRz	RxRyRz	11.4
462	10	1560	1562	RyRz	RxRyRz	11.4
463	10	1547	1540	RyRz	RxRyRz	11.4
464	10	1559	1561	RyRz	RxRyRz	11.4
465	10	1561	1563	RyRz	RxRyRz	11.4
466	10	1563	1430	RyRz	RxRyRz	11.4
467	8	1551	1302			0.0
468	8	1541	1551			0.0

469	8	1545	1541	0.0
470	8	1509	1295	0.0
471	8	1507	1509	0.0
472	8	1505	1507	0.0
477	2	1917	1545	124.2
480	2	1916	1541	118.5
485	2	1918	1551	112.8
555	14	1607	1606	0.0
556	14	1606	1605	0.0
557	14	1605	1603	0.0
558	14	1603	1604	0.0
559	14	1625	1624	0.0
560	14	1624	1623	0.0
561	14	1623	1622	0.0
562	14	1622	1607	0.0
563	14	1228	1642	0.0
564	14	1642	1641	0.0
565	14	1641	1640	0.0
566	14	1640	1625	0.0
567	14	1208	1225	0.0
568	14	1225	1226	0.0
569	14	1226	1227	0.0
570	14	1227	1228	0.0
571	14	1188	1205	0.0
572	14	1205	1206	0.0
573	14	1206	1207	0.0
574	14	1207	1208	0.0
575	14	1185	1184	0.0
576	14	1184	1186	0.0
577	14	1186	1187	0.0
578	14	1187	1188	0.0
579	14	1185	1470	0.0
580	14	1470	1468	0.0
581	14	1468	1469	0.0
582	14	1604	1844	0.0
583	14	1844	1842	0.0
584	14	1842	1843	0.0
585	10	1922	1175	0.0
586	10	1921	1178	0.0
587	10	1920	1200	0.0
588	10	1919	1220	0.0
589	10	1918	1618	0.0
590	10	1916	1599	0.0
591	10	1917	1596	0.0
592	2	1581	1918	112.8
594	2	1576	1916	118.5
596	2	1569	1917	124.2
598	2	1136	1919	107.1
600	2	1123	1920	101.4
602	2	1111	1921	95.7
604	2	1127	1922	90.0

GUSCI TRIANGOLARI |-----|-----|-----|-----| num. = 14

Nome	Proprieta	Nodo 1	Nodo 2	Nodo 3
886	2	1110	1115	1111
887	2	1110	1114	1115
888	2	1116	1117	1118
892	2	1116	1118	1123
893	2	1125	1126	1127
894	2	1125	1128	1126
901	2	1133	1138	1136
902	2	1133	1132	1138
1306	2	1800	1802	1569
1307	2	1800	1801	1802
1321	2	1809	1810	1811
1322	2	1809	1811	1576
1328	2	1812	1814	1581
1329	2	1812	1813	1814

GUSCI RETTANGOLARI |-----|-----|-----|-----| num. = 508

Nome	Proprieta	Nodo 1	Nodo 2	Nodo 3	Nodo 4
453	1	556	557	558	559
454	1	559	558	560	561
455	1	1058	556	559	1056
456	1	557	564	565	558
457	1	558	565	566	560
458	1	1056	559	561	1054
459	1	1060	569	556	1058
460	1	569	570	557	556
461	1	560	566	571	572
462	1	561	560	572	573
463	1	570	574	564	557
464	1	564	575	576	565
465	1	565	576	577	566
466	1	1054	561	573	578
467	1	1062	580	569	1060
468	1	580	581	570	569
469	1	574	582	575	564
470	1	566	577	583	571
471	1	581	584	574	570
472	1	585	586	580	1062
473	1	586	587	581	580
474	1	584	588	582	574
475	1	587	589	584	581
476	1	589	590	588	584

477	1	1129	592	586	585
478	1	592	593	587	586
479	1	593	594	589	587
480	1	594	595	590	589
481	1	596	597	592	1129
482	1	597	598	593	592
483	1	598	599	594	593
484	1	599	600	595	594
485	1	601	602	603	604
486	1	605	606	602	601
487	1	602	607	608	603
488	1	606	609	607	602
489	1	610	601	604	611
490	1	612	605	601	610
491	1	613	614	606	605
492	1	607	615	616	608
493	1	617	613	605	612
494	1	614	618	609	606
495	1	609	619	615	607
496	1	620	621	614	613
497	1	622	620	613	617
498	1	621	623	618	614
499	1	618	624	619	609
500	1	625	626	620	622
501	1	626	627	621	620
502	1	627	628	623	621
503	1	623	629	624	618
504	1	630	631	626	625
505	1	631	632	627	626
506	1	632	633	628	627
507	1	628	634	629	623
508	1	1119	636	631	630
509	1	636	637	632	631
510	1	637	638	633	632
511	1	633	639	634	628
512	1	638	1130	639	633
513	1	641	642	636	1119
514	1	642	643	637	636
515	1	643	644	638	637
516	1	644	645	1130	638
517	1	572	571	646	647
518	1	571	583	648	646
519	1	573	572	647	651
520	1	578	573	651	653
521	1	608	616	654	655
522	1	603	608	655	657
523	1	604	603	657	659
524	1	611	604	659	660
585	1	712	713	714	715
586	1	713	610	611	714
587	1	716	712	715	717
588	1	718	719	712	716
589	1	720	612	610	713
590	1	721	722	720	719
591	1	722	617	612	720
592	1	577	716	717	583
593	1	576	718	716	577
594	1	723	721	719	718
595	1	575	723	718	576
596	1	724	725	722	721
597	1	725	622	617	722
598	1	582	726	723	575
599	1	726	724	721	723
600	1	727	728	725	724
601	1	728	625	622	725
602	1	588	730	726	582
603	1	730	727	724	726
604	1	731	732	728	727
605	1	590	734	730	588
606	1	734	731	727	730
607	1	735	736	732	731
608	1	737	735	731	734
609	1	719	720	713	712
610	1	746	739	736	735
611	1	595	737	734	590
612	1	732	630	625	728
613	1	736	1119	630	732
614	1	745	746	735	737
615	1	600	745	737	595
616	1	739	641	1119	736
617	1	714	611	660	750
618	1	715	714	750	752
619	1	717	715	752	755
620	1	583	717	755	648
756	2	608	616	939	945
757	2	603	608	945	947
758	2	604	603	947	948
759	2	611	604	948	949
760	2	945	939	943	950
761	2	947	945	950	951
762	2	948	947	951	952
763	2	949	948	952	953
764	2	714	611	949	954
765	2	715	714	954	955
766	2	717	715	955	956

767	2	583	717	956	957
768	2	954	949	953	958
769	2	955	954	958	959
770	2	956	955	959	960
771	2	957	956	960	961
772	2	571	583	957	963
773	2	572	571	963	965
774	2	573	572	965	967
775	2	578	573	967	968
776	2	963	957	961	969
777	2	965	963	969	970
778	2	967	965	970	971
779	2	968	967	971	972
804	3	630	631	1011	1012
805	3	631	632	1013	1011
806	3	632	633	1014	1013
807	3	633	639	1001	1014
808	3	1012	1011	1015	1016
809	3	1011	1013	1017	1015
810	3	1013	1014	1018	1017
811	3	1014	1001	1007	1018
812	3	590	734	1021	1022
813	3	734	731	1023	1021
814	3	731	732	1025	1023
815	3	732	630	1012	1025
816	3	1022	1021	1026	1027
817	3	1021	1023	1028	1026
818	3	1023	1025	1029	1028
819	3	1025	1012	1016	1029
820	3	585	586	1030	1031
821	3	586	587	1032	1030
822	3	587	589	1033	1032
823	3	589	590	1022	1033
824	3	1031	1030	1034	1035
825	3	1030	1032	1036	1034
826	3	1032	1033	1037	1036
827	3	1033	1022	1027	1037
840	2	1054	578	968	1055
841	2	1056	1054	1055	1057
842	2	1058	1056	1057	1059
843	2	1060	1058	1059	1061
844	2	1062	1060	1061	1063
845	2	585	1062	1063	1031
846	2	1055	968	972	1064
847	2	1057	1055	1064	1065
848	2	1059	1057	1065	1066
849	2	1061	1059	1066	1067
850	2	1063	1061	1067	1068
851	2	1031	1063	1068	1035
883	2	1022	1110	1111	1027
884	2	590	595	1110	1022
885	2	595	600	1114	1110
889	2	1119	641	1117	1116
890	2	630	1119	1116	1012
891	2	1012	1116	1123	1016
895	2	1129	596	1128	1125
896	2	1031	1125	1127	1035
897	2	585	1129	1125	1031
898	2	1130	645	1132	1133
899	2	639	1130	1133	1001
900	2	1001	1133	1136	1007
918	4	1035	1034	1164	1165
919	4	1034	1036	1166	1164
920	4	1036	1037	1167	1166
921	4	1037	1027	1168	1167
922	4	1165	1164	1169	1170
923	4	1164	1166	1171	1169
924	4	1166	1167	1172	1171
925	4	1167	1168	1173	1172
926	4	1170	1169	1174	1175
927	4	1169	1171	1176	1174
928	4	1171	1172	1177	1176
929	4	1172	1173	1178	1177
930	4	1175	1174	1179	1180
931	4	1174	1176	1181	1179
932	4	1176	1177	1182	1181
933	4	1177	1178	1183	1182
934	4	1180	1179	1184	1185
935	4	1179	1181	1186	1184
936	4	1181	1182	1187	1186
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938	4	1027	1026	1189	1168
939	4	1026	1028	1190	1189
940	4	1028	1029	1191	1190
941	4	1029	1016	1192	1191
942	4	1168	1189	1193	1173
943	4	1189	1190	1194	1193
944	4	1190	1191	1195	1194
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946	4	1173	1193	1197	1178
947	4	1193	1194	1198	1197
948	4	1194	1195	1199	1198
949	4	1195	1196	1200	1199
950	4	1178	1197	1201	1183
951	4	1197	1198	1202	1201

952	4	1198	1199	1203	1202
953	4	1199	1200	1204	1203
954	4	1183	1201	1205	1188
955	4	1201	1202	1206	1205
956	4	1202	1203	1207	1206
957	4	1203	1204	1208	1207
958	4	1016	1015	1209	1192
959	4	1015	1017	1210	1209
960	4	1017	1018	1211	1210
961	4	1018	1007	1212	1211
962	4	1192	1209	1213	1196
963	4	1209	1210	1214	1213
964	4	1210	1211	1215	1214
965	4	1211	1212	1216	1215
966	4	1196	1213	1217	1200
967	4	1213	1214	1218	1217
968	4	1214	1215	1219	1218
969	4	1215	1216	1220	1219
970	4	1200	1217	1221	1204
971	4	1217	1218	1222	1221
972	4	1218	1219	1223	1222
973	4	1219	1220	1224	1223
974	4	1204	1221	1225	1208
975	4	1221	1222	1226	1225
976	4	1222	1223	1227	1226
977	4	1223	1224	1228	1227
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1082	2	1067	1068	1458	1456
1083	2	1068	1035	1165	1458
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1097	4	1522	1523	1589	1587
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1099	4	1524	1517	1591	1590
1100	4	1588	1587	1592	1568
1101	4	1587	1589	1593	1592
1102	4	1589	1590	1594	1593
1103	4	1590	1591	1575	1594
1104	4	1568	1592	1595	1596
1105	4	1592	1593	1597	1595
1106	4	1593	1594	1598	1597
1107	4	1594	1575	1599	1598
1108	4	1596	1595	1600	1571
1109	4	1595	1597	1601	1600
1110	4	1597	1598	1602	1601
1111	4	1598	1599	1573	1602
1112	4	1571	1600	1603	1604
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1118	4	1519	1520	1610	1609
1119	4	1520	1512	1611	1610
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1123	4	1610	1611	1580	1614
1124	4	1575	1612	1615	1599
1125	4	1612	1613	1616	1615
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1138	4	1514	1515	1628	1627
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1175	1	1666	1665	1669	1670
1176	1	1661	1666	1670	1667
1177	1	1668	1667	1671	1672
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1181	1	1674	1673	1677	1678
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1183	1	1676	1675	1679	1680
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1189	1	1687	1688	1689	1690
1190	1	1691	1687	1690	1692
1191	1	1688	1693	1694	1689
1192	1	1693	639	634	1694
1193	1	1692	1690	1697	1698
1194	1	1690	1689	1699	1697
1195	1	1689	1694	1700	1699
1196	1	1694	634	629	1700
1197	1	1697	1699	1702	1703
1198	1	1698	1697	1703	1704
1199	1	1699	1700	1705	1702
1200	1	1700	629	624	1705
1201	1	1704	1703	1707	1708
1202	1	1703	1702	1709	1707
1203	1	1705	624	619	1711
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1212	1	1686	1685	1722	1720
1213	1	1684	1683	1721	1723
1214	1	1724	1684	1723	1725
1215	1	1719	616	654	1727
1216	1	1717	1715	1728	1729
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1244	1	1685	1746	1753	1722
1245	1	1746	1750	1754	1753
1246	1	1750	1748	1752	1754
1247	1	1718	615	616	1719
1248	1	1711	619	615	1718
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1251	1	1758	1672	1676	1757
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1259	1	1768	1769	1770	1771

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1265	1	1772	1774	1733	1731
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1274	1	1780	1783	1782	1781
1275	1	1784	1130	639	1693
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1281	3	1688	1693	1790	1789
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1283	3	1788	1787	1513	1512
1284	3	1787	1789	1514	1513
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1286	3	1790	1001	1007	1515
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1299	3	1797	1796	1522	1521
1300	3	1796	1798	1523	1522
1301	3	1798	1799	1524	1523
1302	3	1799	1793	1517	1524
1303	2	1797	1800	1569	1521
1304	2	1760	1765	1800	1797
1305	2	1765	1762	1801	1800
1308	2	1803	1804	1504	1529
1309	2	1805	1803	1529	1528
1310	2	1806	1805	1528	1527
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1313	2	1797	1808	1525	1521
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1315	2	1761	1759	1807	1808
1316	2	1759	1758	1806	1807
1317	2	1758	1757	1805	1806
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1319	2	1756	1724	1804	1803
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1357	2	1823	1829	1536	1508
1358	2	1717	1715	1829	1823
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1361	2	1525	1521	1588	1832
1362	2	1831	1830	1833	1834
1363	2	1830	1832	1835	1833
1364	2	1832	1588	1568	1835
1365	2	1834	1833	1836	1837

1366	2	1833	1835	1838	1836
1367	2	1835	1568	1596	1838
1368	2	1837	1836	1839	1840
1369	2	1836	1838	1841	1839
1370	2	1838	1596	1571	1841
1371	2	1840	1839	1842	1843
1372	2	1839	1841	1844	1842
1373	2	1841	1571	1604	1844
1374	4	1614	1580	1618	1617

PROPRIETA' ASTE---		Base	Altezza	Area	Area tag. Y	num.=
Nome	Materiale	Kw vertic.	Kw orizz.	J tors.	J fless. Y	J fless. Z
1	2	18.00	18.00	3.50000E+01	1.80000E+01	1.80000E+01
		0.000000	0.000000	2.67969E+03	1.78792E+03	1.78792E+03
2	2	18.00	17.10	4.53000E+01	1.02600E+01	3.42000E+01
		0.000000	0.000000	1.48000E+01	9.25000E+02	2.51000E+03
4	1	30.00	30.00	9.00000E+02	7.50000E+02	7.50000E+02
		0.000000	0.000000	1.14073E+05	6.75000E+04	6.75000E+04
5	1	32.00	30.00	9.60000E+02	8.00000E+02	8.00000E+02
		0.000000	0.000000	1.28848E+05	8.19200E+04	7.20000E+04
7	2	24.00	18.00	5.59714E+01	5.59714E+01	5.59714E+01
		0.000000	0.000000	1.77422E+01	2.91207E+03	2.70977E+03
8	2	14.00	13.30	3.14000E+01	7.31500E+00	2.38000E+01
		0.000000	0.000000	8.10000E+00	3.89000E+02	1.03300E+03
10	2	12.00	11.40	2.53000E+01	5.70000E+00	1.92000E+01
		0.000000	0.000000	6.00000E+00	2.31000E+02	6.06000E+02
14	1	25.00	25.00	6.25000E+02	5.20833E+02	5.20833E+02
		0.000000	0.000000	5.50122E+04	3.25521E+04	3.25521E+04

PROPRIETA' GUSCI---		Sp.membr.	Sp. piastra	Kw	num.=
Nome	Materiale				
1	1	40.00	40.00	5.000000	
2	1	30.00	30.00	0.000000	
3	1	32.00	32.00	0.000000	
4	1	25.00	25.00	0.000000	

MATERIALI-----		Coeff. nu	Mod. tang.	Peso spec.	Dil. te.	num.=
Nome	Mod. elast.					
1	3.00000E+05	1.50000E-01	1.30000E+05	2.50000E-03	1.00000E-05	
2	2.10000E+06	3.00000E-01	8.50000E+05	7.85000E-03	1.00000E-05	

VINCOLI-----		Rigid. X	Rigid. Y	Rigid. Z	Rigid. RX	Rigid. RY	num.=
Nodo							250
575	bloccato	bloccato	libero	libero	libero	libero	
576	bloccato	bloccato	libero	libero	libero	libero	
577	bloccato	bloccato	libero	libero	libero	libero	
582	bloccato	bloccato	libero	libero	libero	libero	
583	bloccato	bloccato	libero	libero	libero	libero	
588	bloccato	bloccato	libero	libero	libero	libero	
590	bloccato	bloccato	libero	libero	libero	libero	
596	bloccato	bloccato	libero	libero	libero	libero	
597	bloccato	bloccato	libero	libero	libero	libero	
598	bloccato	bloccato	libero	libero	libero	libero	
599	bloccato	bloccato	libero	libero	libero	libero	
600	bloccato	bloccato	libero	libero	libero	libero	
587	bloccato	bloccato	libero	libero	libero	libero	
581	bloccato	bloccato	libero	libero	libero	libero	
580	bloccato	bloccato	libero	libero	libero	libero	
584	bloccato	bloccato	libero	libero	libero	libero	
586	bloccato	bloccato	libero	libero	libero	libero	
589	bloccato	bloccato	libero	libero	libero	libero	
585	bloccato	bloccato	libero	libero	libero	libero	
569	bloccato	bloccato	libero	libero	libero	libero	
570	bloccato	bloccato	libero	libero	libero	libero	
574	bloccato	bloccato	libero	libero	libero	libero	
556	bloccato	bloccato	libero	libero	libero	libero	
557	bloccato	bloccato	libero	libero	libero	libero	
564	bloccato	bloccato	libero	libero	libero	libero	
559	bloccato	bloccato	libero	libero	libero	libero	
558	bloccato	bloccato	libero	libero	libero	libero	
565	bloccato	bloccato	libero	libero	libero	libero	
561	bloccato	bloccato	libero	libero	libero	libero	
560	bloccato	bloccato	libero	libero	libero	libero	
566	bloccato	bloccato	libero	libero	libero	libero	
578	bloccato	bloccato	libero	libero	libero	libero	
573	bloccato	bloccato	libero	libero	libero	libero	
572	bloccato	bloccato	libero	libero	libero	libero	
571	bloccato	bloccato	libero	libero	libero	libero	
602	bloccato	bloccato	libero	libero	libero	libero	
603	bloccato	bloccato	libero	libero	libero	libero	
604	bloccato	bloccato	libero	libero	libero	libero	
608	bloccato	bloccato	libero	libero	libero	libero	
610	bloccato	bloccato	libero	libero	libero	libero	
611	bloccato	bloccato	libero	libero	libero	libero	
612	bloccato	bloccato	libero	libero	libero	libero	
614	bloccato	bloccato	libero	libero	libero	libero	
616	bloccato	bloccato	libero	libero	libero	libero	
617	bloccato	bloccato	libero	libero	libero	libero	
619	bloccato	bloccato	libero	libero	libero	libero	
621	bloccato	bloccato	libero	libero	libero	libero	
622	bloccato	bloccato	libero	libero	libero	libero	
624	bloccato	bloccato	libero	libero	libero	libero	
625	bloccato	bloccato	libero	libero	libero	libero	
627	bloccato	bloccato	libero	libero	libero	libero	





1778	bloccato	bloccato	libero	libero	libero	libero
1779	bloccato	bloccato	libero	libero	libero	libero
1780	bloccato	bloccato	libero	libero	libero	libero
1781	bloccato	bloccato	libero	libero	libero	libero
1782	bloccato	bloccato	libero	libero	libero	libero
1783	bloccato	bloccato	libero	libero	libero	libero
1784	bloccato	bloccato	libero	libero	libero	libero
1786	bloccato	bloccato	libero	libero	libero	libero
1768	bloccato	bloccato	libero	libero	libero	libero

CARICHI NODI-----|-----|-----|-----|-----|num.= 2301

Nome Nodo Direzione Intensita`  
 1 - 1177 : Forze Dinamiche (Autovettori)  
 1178 - 1739 : Forze Sismiche (Analisi Semplificata)  
 1740 - 2301 : Momenti Torcenti Addizionali

CARICHI DI SOLAIO-----|-----|-----|-----|-----|num.= 48

Nome	Cos X	Cos Y	Cos Z	Cond.	Rifer.	Intens.	Quota
1	0.0000	1.0000	0.0000	1	glob	-0.03000	-25.00
2	-0.0994	0.9950	0.0000	1	glob	-0.03000	-25.00
3	-0.1978	0.9802	0.0000	1	glob	-0.03000	-25.00
4	0.0000	0.9867	-0.1627	4	glob	-0.00800	537.40
5	-0.0981	0.9818	-0.1627	4	glob	-0.00800	537.40
6	-0.1952	0.9672	-0.1627	4	glob	-0.00800	537.40
7	0.0000	1.0000	0.0000	2	glob	-0.01500	-25.00
8	-0.0994	0.9950	0.0000	2	glob	-0.01500	-25.00
9	-0.1978	0.9802	0.0000	2	glob	-0.01500	-25.00
10	0.0000	1.0000	0.0000	3	glob	-0.08500	-25.00
11	-0.0994	0.9950	0.0000	3	glob	-0.08500	-25.00
12	-0.1978	0.9802	0.0000	3	glob	-0.08500	-25.00
13	0.0000	1.0000	0.0000	1	glob	-0.01250	-25.00
14	-0.0994	0.9950	0.0000	1	glob	-0.01250	-25.00
15	-0.1978	0.9802	0.0000	1	glob	-0.01250	-25.00
16	0.0000	0.9867	-0.1627	5	glob	0.00300	537.40
17	-0.0981	0.9818	-0.1627	5	glob	0.00300	537.40
18	-0.1952	0.9672	-0.1627	5	glob	0.00300	537.40
19	0.0000	0.9867	-0.1627	2	glob	-0.00100	537.40
20	-0.0981	0.9818	-0.1627	2	glob	-0.00100	537.40
21	-0.1952	0.9672	-0.1627	2	glob	-0.00100	537.40
22	0.0000	0.9867	-0.1627	2	glob	-0.00090	537.40
23	-0.0981	0.9818	-0.1627	2	glob	-0.00090	537.40
24	-0.1952	0.9672	-0.1627	2	glob	-0.00090	537.40
25	-0.5625	0.8268	0.0000	1	glob	-0.03000	-25.00
26	-0.5625	0.8268	0.0000	2	glob	-0.01500	-25.00
27	-0.5625	0.8268	0.0000	3	glob	-0.08500	-25.00
28	-0.5625	0.8268	0.0000	1	glob	-0.01250	-25.00
29	-0.4775	0.8786	0.0000	1	glob	-0.03000	-25.00
30	-0.4775	0.8786	0.0000	2	glob	-0.01500	-25.00
31	-0.4775	0.8786	0.0000	3	glob	-0.08500	-25.00
32	-0.4775	0.8786	0.0000	1	glob	-0.01250	-25.00
33	-0.3878	0.9217	0.0000	1	glob	-0.03000	-25.00
34	-0.3878	0.9217	0.0000	2	glob	-0.01500	-25.00
35	-0.3878	0.9217	0.0000	3	glob	-0.08500	-25.00
36	-0.3878	0.9217	0.0000	1	glob	-0.01250	-25.00
37	-0.3826	0.9095	-0.1627	4	glob	-0.00800	537.40
38	-0.3826	0.9095	-0.1627	5	glob	0.00300	537.40
39	-0.3826	0.9095	-0.1627	2	glob	-0.00100	537.40
40	-0.3826	0.9095	-0.1627	2	glob	-0.00090	537.40
41	-0.4712	0.8669	-0.1627	4	glob	-0.00800	537.40
42	-0.4712	0.8669	-0.1627	5	glob	0.00300	537.40
43	-0.4712	0.8669	-0.1627	2	glob	-0.00100	537.40
44	-0.4712	0.8669	-0.1627	2	glob	-0.00090	537.40
45	-0.5550	0.8158	-0.1627	4	glob	-0.00800	537.40
46	-0.5550	0.8158	-0.1627	5	glob	0.00300	537.40
47	-0.5550	0.8158	-0.1627	2	glob	-0.00100	537.40
48	-0.5550	0.8158	-0.1627	2	glob	-0.00090	537.40

CARICHI ASTE-----|-----|-----|-----|-----|num.= 503

Nome	Asta	Dir	Tip	RIF	Parametro 1	Parametro 2	Parametro 3	Parametro 4
2302	S001-peso_proprio	37	Z	FT glo	-7.850	-7.850	0.000	0.000
2303	S001-peso_proprio	38	Z	FT glo	-7.850	-7.850	0.000	0.000
2304	S001-peso_proprio	39	Z	FT glo	-7.850	-7.850	0.000	0.000
2305	S001-peso_proprio	40	Z	FT glo	-10.364	-5.336	0.000	0.000
2306	S001-peso_proprio	28	Z	FT glo	-7.850	-7.850	0.000	0.000
2307	S001-peso_proprio	27	Z	FT glo	-7.850	-7.850	0.000	0.000
2308	S001-peso_proprio	29	Z	FT glo	-7.850	-7.850	0.000	0.000
2309	S001-peso_proprio	30	Z	FT glo	-7.850	-7.850	0.000	0.000
2310	S002-peso_proprio	41	Z	FT glo	-7.850	-7.850	0.000	0.000
2311	S002-peso_proprio	42	Z	FT glo	-7.850	-7.850	0.000	0.000
2312	S002-peso_proprio	43	Z	FT glo	-7.850	-7.850	0.000	0.000
2313	S002-peso_proprio	44	Z	FT glo	-10.365	-5.335	0.000	0.000
2314	S002-peso_proprio	23	Z	FT glo	-7.850	-7.850	0.000	0.000
2315	S002-peso_proprio	24	Z	FT glo	-7.850	-7.850	0.000	0.000
2316	S002-peso_proprio	25	Z	FT glo	-7.850	-7.850	0.000	0.000
2317	S002-peso_proprio	26	Z	FT glo	-7.850	-7.850	0.000	0.000
2318	S003-peso_proprio	45	Z	FT glo	-7.850	-7.850	0.000	0.000
2319	S003-peso_proprio	46	Z	FT glo	-7.850	-7.850	0.000	0.000
2320	S003-peso_proprio	47	Z	FT glo	-7.850	-7.850	0.000	0.000
2321	S003-peso_proprio	48	Z	FT glo	-10.365	-5.336	0.000	0.000
2322	S003-peso_proprio	19	Z	FT glo	-7.850	-7.850	0.000	0.000
2323	S003-peso_proprio	20	Z	FT glo	-7.850	-7.850	0.000	0.000
2324	S003-peso_proprio	21	Z	FT glo	-7.850	-7.850	0.000	0.000
2325	S003-peso_proprio	22	Z	FT glo	-7.850	-7.850	0.000	0.000
2326	S001-cappa_collabora	37	Z	FT glo	-3.271	-3.271	0.000	0.000
2327	S001-cappa_collabora	38	Z	FT glo	-3.271	-3.271	0.000	0.000

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2423	S007-peso_proprio_pa	254	Z	FT	glo	-0.074	-0.073	0.000	0.000
2424	S007-peso_proprio_pa	256	Z	FT	glo	-0.145	-0.144	0.000	0.000
2425	S007-peso_proprio_pa	260	Z	FT	glo	-0.142	-0.142	0.000	0.000
2426	S007-peso_proprio_pa	262	Z	FT	glo	-0.146	-0.146	0.000	0.000
2427	S007-peso_proprio_pa	345	Z	FT	glo	-0.142	-0.142	0.000	0.000
2428	S008-peso_proprio_pa	225	Z	FT	glo	-0.074	-0.073	0.000	0.000
2429	S008-peso_proprio_pa	228	Z	FT	glo	-0.075	-0.075	0.000	0.000
2430	S008-peso_proprio_pa	229	Z	FT	glo	-0.145	-0.144	0.000	0.000
2431	S008-peso_proprio_pa	233	Z	FT	glo	-0.142	-0.142	0.000	0.000
2432	S008-peso_proprio_pa	235	Z	FT	glo	-0.146	-0.146	0.000	0.000
2433	S008-peso_proprio_pa	346	Z	FT	glo	-0.142	-0.142	0.000	0.000
2434	S009-peso_proprio_pa	214	Z	FT	glo	-0.074	-0.073	0.000	0.000
2435	S009-peso_proprio_pa	216	Z	FT	glo	-0.075	-0.075	0.000	0.000
2436	S009-peso_proprio_pa	218	Z	FT	glo	-0.145	-0.144	0.000	0.000
2437	S009-peso_proprio_pa	222	Z	FT	glo	-0.142	-0.142	0.000	0.000
2438	S009-peso_proprio_pa	224	Z	FT	glo	-0.146	-0.146	0.000	0.000
2439	S009-peso_proprio_pa	347	Z	FT	glo	-0.142	-0.142	0.000	0.000
2440	S007-peso_controsoff	252	Z	FT	glo	-0.067	-0.067	0.000	0.000
2441	S007-peso_controsoff	254	Z	FT	glo	-0.066	-0.066	0.000	0.000
2442	S007-peso_controsoff	256	Z	FT	glo	-0.130	-0.130	0.000	0.000
2443	S007-peso_controsoff	260	Z	FT	glo	-0.128	-0.128	0.000	0.000
2444	S007-peso_controsoff	262	Z	FT	glo	-0.131	-0.131	0.000	0.000
2445	S007-peso_controsoff	345	Z	FT	glo	-0.128	-0.128	0.000	0.000
2446	S008-peso_controsoff	225	Z	FT	glo	-0.066	-0.066	0.000	0.000
2447	S008-peso_controsoff	228	Z	FT	glo	-0.067	-0.067	0.000	0.000
2448	S008-peso_controsoff	229	Z	FT	glo	-0.130	-0.130	0.000	0.000
2449	S008-peso_controsoff	233	Z	FT	glo	-0.128	-0.128	0.000	0.000
2450	S008-peso_controsoff	235	Z	FT	glo	-0.131	-0.131	0.000	0.000
2451	S008-peso_controsoff	346	Z	FT	glo	-0.128	-0.128	0.000	0.000
2452	S009-peso_controsoff	214	Z	FT	glo	-0.066	-0.066	0.000	0.000
2453	S009-peso_controsoff	216	Z	FT	glo	-0.067	-0.067	0.000	0.000
2454	S009-peso_controsoff	218	Z	FT	glo	-0.130	-0.130	0.000	0.000
2455	S009-peso_controsoff	222	Z	FT	glo	-0.128	-0.128	0.000	0.000
2456	S009-peso_controsoff	224	Z	FT	glo	-0.131	-0.131	0.000	0.000
2457	S009-peso_controsoff	347	Z	FT	glo	-0.128	-0.128	0.000	0.000
2458	S010-SottofondoPav_+	399	Z	FT	glo	-3.925	-3.925	0.000	0.000
2459	S010-SottofondoPav_+	400	Z	FT	glo	-3.925	-3.925	0.000	0.000
2460	S010-SottofondoPav_+	401	Z	FT	glo	-3.925	-3.925	0.000	0.000
2461	S010-SottofondoPav_+	402	Z	FT	glo	-5.182	-2.668	0.000	0.000
2462	S010-SottofondoPav_+	409	Z	FT	glo	-3.925	-3.925	0.000	0.000
2463	S010-SottofondoPav_+	410	Z	FT	glo	-3.925	-3.925	0.000	0.000
2464	S010-SottofondoPav_+	411	Z	FT	glo	-3.925	-3.925	0.000	0.000
2465	S010-SottofondoPav_+	412	Z	FT	glo	-3.925	-3.925	0.000	0.000
2466	S011-SottofondoPav_+	395	Z	FT	glo	-3.925	-3.925	0.000	0.000
2467	S011-SottofondoPav_+	396	Z	FT	glo	-3.925	-3.925	0.000	0.000
2468	S011-SottofondoPav_+	397	Z	FT	glo	-3.925	-3.925	0.000	0.000
2469	S011-SottofondoPav_+	398	Z	FT	glo	-5.183	-2.668	0.000	0.000
2470	S011-SottofondoPav_+	413	Z	FT	glo	-3.925	-3.925	0.000	0.000
2471	S011-SottofondoPav_+	414	Z	FT	glo	-3.925	-3.925	0.000	0.000
2472	S011-SottofondoPav_+	415	Z	FT	glo	-3.925	-3.925	0.000	0.000
2473	S011-SottofondoPav_+	416	Z	FT	glo	-3.925	-3.925	0.000	0.000
2474	S012-SottofondoPav_+	391	Z	FT	glo	-3.925	-3.925	0.000	0.000
2475	S012-SottofondoPav_+	392	Z	FT	glo	-3.925	-3.925	0.000	0.000
2476	S012-SottofondoPav_+	393	Z	FT	glo	-3.925	-3.925	0.000	0.000
2477	S012-SottofondoPav_+	394	Z	FT	glo	-5.183	-2.668	0.000	0.000
2478	S012-SottofondoPav_+	417	Z	FT	glo	-3.925	-3.925	0.000	0.000
2479	S012-SottofondoPav_+	418	Z	FT	glo	-3.925	-3.925	0.000	0.000
2480	S012-SottofondoPav_+	419	Z	FT	glo	-3.925	-3.925	0.000	0.000
2481	S012-SottofondoPav_+	420	Z	FT	glo	-3.925	-3.925	0.000	0.000
2482	S013-peso_proprio_pa	449	Z	FT	glo	-0.079	-0.063	0.000	0.000
2483	S013-peso_proprio_pa	450	Z	FT	glo	-0.075	-0.075	0.000	0.000
2484	S013-peso_proprio_pa	451	Z	FT	glo	-0.150	-0.134	0.000	0.000
2485	S013-peso_proprio_pa	452	Z	FT	glo	-0.148	-0.131	0.000	0.000
2486	S013-peso_proprio_pa	453	Z	FT	glo	-0.146	-0.146	0.000	0.000
2487	S013-peso_proprio_pa	466	Z	FT	glo	-0.147	-0.131	0.000	0.000
2488	S013-peso_controsoff	449	Z	FT	glo	-0.071	-0.056	0.000	0.000
2489	S013-peso_controsoff	450	Z	FT	glo	-0.067	-0.067	0.000	0.000
2490	S013-peso_controsoff	451	Z	FT	glo	-0.135	-0.121	0.000	0.000
2491	S013-peso_controsoff	452	Z	FT	glo	-0.133	-0.118	0.000	0.000
2492	S013-peso_controsoff	453	Z	FT	glo	-0.131	-0.131	0.000	0.000
2493	S013-peso_controsoff	466	Z	FT	glo	-0.133	-0.118	0.000	0.000
2494	S014-peso_proprio_pa	454	Z	FT	glo	-0.079	-0.063	0.000	0.000
2495	S014-peso_proprio_pa	455	Z	FT	glo	-0.075	-0.075	0.000	0.000
2496	S014-peso_proprio_pa	456	Z	FT	glo	-0.150	-0.134	0.000	0.000
2497	S014-peso_proprio_pa	457	Z	FT	glo	-0.148	-0.131	0.000	0.000
2498	S014-peso_proprio_pa	458	Z	FT	glo	-0.146	-0.146	0.000	0.000
2499	S014-peso_proprio_pa	465	Z	FT	glo	-0.147	-0.131	0.000	0.000
2500	S014-peso_controsoff	454	Z	FT	glo	-0.071	-0.056	0.000	0.000
2501	S014-peso_controsoff	455	Z	FT	glo	-0.067	-0.067	0.000	0.000
2502	S014-peso_controsoff	456	Z	FT	glo	-0.135	-0.121	0.000	0.000
2503	S014-peso_controsoff	457	Z	FT	glo	-0.133	-0.118	0.000	0.000
2504	S014-peso_controsoff	458	Z	FT	glo	-0.131	-0.131	0.000	0.000
2505	S014-peso_controsoff	465	Z	FT	glo	-0.133	-0.118	0.000	0.000
2506	S015-peso_proprio_pa	461	Z	FT	glo	-0.150	-0.134	0.000	0.000
2507	S015-peso_proprio_pa	459	Z	FT	glo	-0.075	-0.075	0.000	0.000
2508	S015-peso_proprio_pa	460	Z	FT	glo	-0.079	-0.063	0.000	0.000
2509	S015-peso_proprio_pa	462	Z	FT	glo	-0.148	-0.131	0.000	0.000
2510	S015-peso_proprio_pa	463	Z	FT	glo	-0.146	-0.146	0.000	0.000
2511	S015-peso_proprio_pa	464	Z	FT	glo	-0.147	-0.131	0.000	0.000
2512	S015-peso_controsoff	461	Z	FT	glo	-0.135	-0.121	0.000	0.000
2513	S015-peso_controsoff	459	Z	FT	glo	-0.067	-0.067	0.000	0.000
2514	S015-peso_controsoff	460	Z	FT	glo	-0.071	-0.056	0.000	0.000
2515	S015-peso_controsoff	462	Z	FT	glo	-0.133	-0.118	0.000	0.000
2516	S015-peso_controsoff	463	Z	FT	glo	-0.131	-0.131	0.000	0.000
2517	S015-peso_controsoff	464	Z	FT	glo	-0.133	-0.118	0.000	0.000

2518	S001-var_pubblico	37	Z	FT glo	-22.242	-22.242	0.000	0.000
2519	S001-var_pubblico	38	Z	FT glo	-22.242	-22.242	0.000	0.000
2520	S001-var_pubblico	39	Z	FT glo	-22.242	-22.242	0.000	0.000
2521	S001-var_pubblico	40	Z	FT glo	-29.366	-15.119	0.000	0.000
2522	S001-var_pubblico	28	Z	FT glo	-22.242	-22.242	0.000	0.000
2523	S001-var_pubblico	27	Z	FT glo	-22.242	-22.242	0.000	0.000
2524	S001-var_pubblico	29	Z	FT glo	-22.242	-22.242	0.000	0.000
2525	S001-var_pubblico	30	Z	FT glo	-22.242	-22.242	0.000	0.000
2526	S002-var_pubblico	41	Z	FT glo	-22.242	-22.242	0.000	0.000
2527	S002-var_pubblico	42	Z	FT glo	-22.242	-22.242	0.000	0.000
2528	S002-var_pubblico	43	Z	FT glo	-22.242	-22.242	0.000	0.000
2529	S002-var_pubblico	44	Z	FT glo	-29.369	-15.116	0.000	0.000
2530	S002-var_pubblico	23	Z	FT glo	-22.242	-22.242	0.000	0.000
2531	S002-var_pubblico	24	Z	FT glo	-22.242	-22.242	0.000	0.000
2532	S002-var_pubblico	25	Z	FT glo	-22.242	-22.242	0.000	0.000
2533	S002-var_pubblico	26	Z	FT glo	-22.242	-22.242	0.000	0.000
2534	S003-var_pubblico	45	Z	FT glo	-22.242	-22.242	0.000	0.000
2535	S003-var_pubblico	46	Z	FT glo	-22.242	-22.242	0.000	0.000
2536	S003-var_pubblico	47	Z	FT glo	-22.242	-22.242	0.000	0.000
2537	S003-var_pubblico	48	Z	FT glo	-29.367	-15.117	0.000	0.000
2538	S003-var_pubblico	19	Z	FT glo	-22.242	-22.242	0.000	0.000
2539	S003-var_pubblico	20	Z	FT glo	-22.242	-22.242	0.000	0.000
2540	S003-var_pubblico	21	Z	FT glo	-22.242	-22.242	0.000	0.000
2541	S003-var_pubblico	22	Z	FT glo	-22.242	-22.242	0.000	0.000
2542	S010-var_pubblico	399	Z	FT glo	-22.242	-22.242	0.000	0.000
2543	S010-var_pubblico	400	Z	FT glo	-22.242	-22.242	0.000	0.000
2544	S010-var_pubblico	401	Z	FT glo	-22.242	-22.242	0.000	0.000
2545	S010-var_pubblico	402	Z	FT glo	-29.366	-15.119	0.000	0.000
2546	S010-var_pubblico	409	Z	FT glo	-22.242	-22.242	0.000	0.000
2547	S010-var_pubblico	410	Z	FT glo	-22.242	-22.242	0.000	0.000
2548	S010-var_pubblico	411	Z	FT glo	-22.242	-22.242	0.000	0.000
2549	S010-var_pubblico	412	Z	FT glo	-22.242	-22.242	0.000	0.000
2550	S011-var_pubblico	395	Z	FT glo	-22.242	-22.242	0.000	0.000
2551	S011-var_pubblico	396	Z	FT glo	-22.242	-22.242	0.000	0.000
2552	S011-var_pubblico	397	Z	FT glo	-22.242	-22.242	0.000	0.000
2553	S011-var_pubblico	398	Z	FT glo	-29.369	-15.116	0.000	0.000
2554	S011-var_pubblico	413	Z	FT glo	-22.242	-22.242	0.000	0.000
2555	S011-var_pubblico	414	Z	FT glo	-22.242	-22.242	0.000	0.000
2556	S011-var_pubblico	415	Z	FT glo	-22.242	-22.242	0.000	0.000
2557	S011-var_pubblico	416	Z	FT glo	-22.242	-22.242	0.000	0.000
2558	S012-var_pubblico	391	Z	FT glo	-22.242	-22.242	0.000	0.000
2559	S012-var_pubblico	392	Z	FT glo	-22.242	-22.242	0.000	0.000
2560	S012-var_pubblico	393	Z	FT glo	-22.242	-22.242	0.000	0.000
2561	S012-var_pubblico	394	Z	FT glo	-29.368	-15.117	0.000	0.000
2562	S012-var_pubblico	417	Z	FT glo	-22.242	-22.242	0.000	0.000
2563	S012-var_pubblico	418	Z	FT glo	-22.242	-22.242	0.000	0.000
2564	S012-var_pubblico	419	Z	FT glo	-22.242	-22.242	0.000	0.000
2565	S012-var_pubblico	420	Z	FT glo	-22.242	-22.242	0.000	0.000
2566	S007-Neve	252	Z	FT glo	-0.591	-0.591	0.000	0.000
2567	S007-Neve	254	Z	FT glo	-0.581	-0.579	0.000	0.000
2568	S007-Neve	256	Z	FT glo	-1.141	-1.139	0.000	0.000
2569	S007-Neve	260	Z	FT glo	-1.122	-1.120	0.000	0.000
2570	S007-Neve	262	Z	FT glo	-1.153	-1.151	0.000	0.000
2571	S007-Neve	345	Z	FT glo	-1.122	-1.120	0.000	0.000
2572	S008-Neve	225	Z	FT glo	-0.581	-0.579	0.000	0.000
2573	S008-Neve	228	Z	FT glo	-0.591	-0.591	0.000	0.000
2574	S008-Neve	229	Z	FT glo	-1.141	-1.139	0.000	0.000
2575	S008-Neve	233	Z	FT glo	-1.122	-1.120	0.000	0.000
2576	S008-Neve	235	Z	FT glo	-1.153	-1.151	0.000	0.000
2577	S008-Neve	346	Z	FT glo	-1.122	-1.120	0.000	0.000
2578	S009-Neve	214	Z	FT glo	-0.581	-0.579	0.000	0.000
2579	S009-Neve	216	Z	FT glo	-0.591	-0.591	0.000	0.000
2580	S009-Neve	218	Z	FT glo	-1.141	-1.139	0.000	0.000
2581	S009-Neve	222	Z	FT glo	-1.122	-1.120	0.000	0.000
2582	S009-Neve	224	Z	FT glo	-1.153	-1.151	0.000	0.000
2583	S009-Neve	347	Z	FT glo	-1.122	-1.120	0.000	0.000
2584	S013-Neve	449	Z	FT glo	-0.621	-0.494	0.000	0.000
2585	S013-Neve	450	Z	FT glo	-0.591	-0.591	0.000	0.000
2586	S013-Neve	451	Z	FT glo	-1.181	-1.057	0.000	0.000
2587	S013-Neve	452	Z	FT glo	-1.164	-1.031	0.000	0.000
2588	S013-Neve	453	Z	FT glo	-1.153	-1.151	0.000	0.000
2589	S013-Neve	466	Z	FT glo	-1.163	-1.034	0.000	0.000
2590	S014-Neve	454	Z	FT glo	-0.621	-0.494	0.000	0.000
2591	S014-Neve	455	Z	FT glo	-0.591	-0.591	0.000	0.000
2592	S014-Neve	456	Z	FT glo	-1.181	-1.057	0.000	0.000
2593	S014-Neve	457	Z	FT glo	-1.164	-1.031	0.000	0.000
2594	S014-Neve	458	Z	FT glo	-1.153	-1.151	0.000	0.000
2595	S014-Neve	465	Z	FT glo	-1.163	-1.034	0.000	0.000
2596	S015-Neve	461	Z	FT glo	-1.181	-1.057	0.000	0.000
2597	S015-Neve	459	Z	FT glo	-0.591	-0.591	0.000	0.000
2598	S015-Neve	460	Z	FT glo	-0.621	-0.494	0.000	0.000
2599	S015-Neve	462	Z	FT glo	-1.164	-1.031	0.000	0.000
2600	S015-Neve	463	Z	FT glo	-1.153	-1.151	0.000	0.000
2601	S015-Neve	464	Z	FT glo	-1.163	-1.034	0.000	0.000
2602	S007-vento_y	252	Z	FT glo	0.222	0.222	0.000	0.000
2603	S007-vento_y	254	Z	FT glo	0.218	0.217	0.000	0.000
2604	S007-vento_y	256	Z	FT glo	0.428	0.427	0.000	0.000
2605	S007-vento_y	260	Z	FT glo	0.421	0.420	0.000	0.000
2606	S007-vento_y	262	Z	FT glo	0.432	0.431	0.000	0.000
2607	S007-vento_y	345	Z	FT glo	0.421	0.420	0.000	0.000
2608	S008-vento_y	225	Z	FT glo	0.218	0.217	0.000	0.000
2609	S008-vento_y	228	Z	FT glo	0.222	0.222	0.000	0.000
2610	S008-vento_y	229	Z	FT glo	0.428	0.427	0.000	0.000
2611	S008-vento_y	233	Z	FT glo	0.421	0.420	0.000	0.000
2612	S008-vento_y	235	Z	FT glo	0.432	0.431	0.000	0.000

2613	S008-vento_y	346	Z	FT	glo	0.421	0.420	0.000	0.000
2614	S009-vento_y	214	Z	FT	glo	0.218	0.217	0.000	0.000
2615	S009-vento_y	216	Z	FT	glo	0.222	0.222	0.000	0.000
2616	S009-vento_y	218	Z	FT	glo	0.428	0.427	0.000	0.000
2617	S009-vento_y	222	Z	FT	glo	0.421	0.420	0.000	0.000
2618	S009-vento_y	224	Z	FT	glo	0.432	0.431	0.000	0.000
2619	S009-vento_y	347	Z	FT	glo	0.421	0.420	0.000	0.000
2620	S013-vento_y	449	Z	FT	glo	0.233	0.185	0.000	0.000
2621	S013-vento_y	450	Z	FT	glo	0.222	0.222	0.000	0.000
2622	S013-vento_y	451	Z	FT	glo	0.443	0.396	0.000	0.000
2623	S013-vento_y	452	Z	FT	glo	0.437	0.387	0.000	0.000
2624	S013-vento_y	453	Z	FT	glo	0.432	0.431	0.000	0.000
2625	S013-vento_y	466	Z	FT	glo	0.436	0.388	0.000	0.000
2626	S014-vento_y	454	Z	FT	glo	0.233	0.185	0.000	0.000
2627	S014-vento_y	455	Z	FT	glo	0.222	0.222	0.000	0.000
2628	S014-vento_y	456	Z	FT	glo	0.443	0.396	0.000	0.000
2629	S014-vento_y	457	Z	FT	glo	0.437	0.387	0.000	0.000
2630	S014-vento_y	458	Z	FT	glo	0.432	0.431	0.000	0.000
2631	S014-vento_y	465	Z	FT	glo	0.436	0.388	0.000	0.000
2632	S015-vento_y	461	Z	FT	glo	0.443	0.396	0.000	0.000
2633	S015-vento_y	459	Z	FT	glo	0.222	0.222	0.000	0.000
2634	S015-vento_y	460	Z	FT	glo	0.233	0.185	0.000	0.000
2635	S015-vento_y	462	Z	FT	glo	0.437	0.387	0.000	0.000
2636	S015-vento_y	463	Z	FT	glo	0.432	0.431	0.000	0.000
2637	S015-vento_y	464	Z	FT	glo	0.436	0.388	0.000	0.000

PESI PROPRI ASTE--|-----|-----|-----|-----|-----|

Cond.	Nome Carichi	Aste
1	2638-2744	75-78, 135-142, 206-207, 209, 211, 213-214, 216, 218, 222, 224-225, 228-229, 233, 235-237, 239, 241, 243-245, 247, 249, 251-252, 254, 256, 260, 262-264, 266, 268, 270, 309, 312, 316, 377, 387-389, 421-432, 437-445, 449-463, 477, 480, 485, 585-592, 594, 596, 598, 600, 602, 604
6	2745-2804	19-30, 37-48, 69-74, 391-420

CARICHI DI LINEA |-----|-----|-----|-----|-----|num.= 0

Nome	numero	coordinata	Cond.	Direz.	Intensità	Descrizione
	inizio	fine				

CARICHI GUSCI-----|-----|-----|-----|-----|num.= 714

Nome	Guscio	Dir	Tip	RIF	Intensità
2805 vento	918	Y	FD	glo	0.00600
2806 vento	919	Y	FD	glo	0.00600
2807 vento	920	Y	FD	glo	0.00600
2808 vento	921	Y	FD	glo	0.00600
2809 vento	922	Y	FD	glo	0.00600
2810 vento	923	Y	FD	glo	0.00600
2811 vento	924	Y	FD	glo	0.00600
2812 vento	925	Y	FD	glo	0.00600
2813 vento	926	Y	FD	glo	0.00600
2814 vento	927	Y	FD	glo	0.00600
2815 vento	928	Y	FD	glo	0.00600
2816 vento	929	Y	FD	glo	0.00600
2817 vento	930	Y	FD	glo	0.00600
2818 vento	931	Y	FD	glo	0.00600
2819 vento	932	Y	FD	glo	0.00600
2820 vento	933	Y	FD	glo	0.00600
2821 vento	934	Y	FD	glo	0.00600
2822 vento	935	Y	FD	glo	0.00600
2823 vento	936	Y	FD	glo	0.00600
2824 vento	937	Y	FD	glo	0.00600
2825 vento	938	Y	FD	glo	0.00600
2826 vento	939	Y	FD	glo	0.00600
2827 vento	940	Y	FD	glo	0.00600
2828 vento	941	Y	FD	glo	0.00600
2829 vento	942	Y	FD	glo	0.00600
2830 vento	943	Y	FD	glo	0.00600
2831 vento	944	Y	FD	glo	0.00600
2832 vento	945	Y	FD	glo	0.00600
2833 vento	946	Y	FD	glo	0.00600
2834 vento	947	Y	FD	glo	0.00600
2835 vento	948	Y	FD	glo	0.00600
2836 vento	949	Y	FD	glo	0.00600
2837 vento	950	Y	FD	glo	0.00600
2838 vento	951	Y	FD	glo	0.00600
2839 vento	952	Y	FD	glo	0.00600
2840 vento	953	Y	FD	glo	0.00600
2841 vento	954	Y	FD	glo	0.00600
2842 vento	955	Y	FD	glo	0.00600
2843 vento	956	Y	FD	glo	0.00600
2844 vento	957	Y	FD	glo	0.00600
2845 vento	958	Y	FD	glo	0.00600
2846 vento	959	Y	FD	glo	0.00600
2847 vento	960	Y	FD	glo	0.00600
2848 vento	961	Y	FD	glo	0.00600
2849 vento	962	Y	FD	glo	0.00600
2850 vento	963	Y	FD	glo	0.00600
2851 vento	964	Y	FD	glo	0.00600
2852 vento	965	Y	FD	glo	0.00600
2853 vento	966	Y	FD	glo	0.00600
2854 vento	967	Y	FD	glo	0.00600
2855 vento	968	Y	FD	glo	0.00600
2856 vento	969	Y	FD	glo	0.00600

2857	vento	970	Y	FD glo	0.00600
2858	vento	971	Y	FD glo	0.00600
2859	vento	972	Y	FD glo	0.00600
2860	vento	973	Y	FD glo	0.00600
2861	vento	974	Y	FD glo	0.00600
2862	vento	975	Y	FD glo	0.00600
2863	vento	976	Y	FD glo	0.00600
2864	vento	977	Y	FD glo	0.00600
2865	vento	1096	Y	FD glo	0.00600
2866	vento	1097	Y	FD glo	0.00600
2867	vento	1098	Y	FD glo	0.00600
2868	vento	1099	Y	FD glo	0.00600
2869	vento	1100	Y	FD glo	0.00600
2870	vento	1101	Y	FD glo	0.00600
2871	vento	1102	Y	FD glo	0.00600
2872	vento	1103	Y	FD glo	0.00600
2873	vento	1104	Y	FD glo	0.00600
2874	vento	1105	Y	FD glo	0.00600
2875	vento	1106	Y	FD glo	0.00600
2876	vento	1107	Y	FD glo	0.00600
2877	vento	1108	Y	FD glo	0.00600
2878	vento	1109	Y	FD glo	0.00600
2879	vento	1110	Y	FD glo	0.00600
2880	vento	1111	Y	FD glo	0.00600
2881	vento	1112	Y	FD glo	0.00600
2882	vento	1113	Y	FD glo	0.00600
2883	vento	1114	Y	FD glo	0.00600
2884	vento	1115	Y	FD glo	0.00600
2885	vento	1116	Y	FD glo	0.00600
2886	vento	1117	Y	FD glo	0.00600
2887	vento	1118	Y	FD glo	0.00600
2888	vento	1119	Y	FD glo	0.00600
2889	vento	1120	Y	FD glo	0.00600
2890	vento	1121	Y	FD glo	0.00600
2891	vento	1122	Y	FD glo	0.00600
2892	vento	1123	Y	FD glo	0.00600
2893	vento	1124	Y	FD glo	0.00600
2894	vento	1125	Y	FD glo	0.00600
2895	vento	1126	Y	FD glo	0.00600
2896	vento	1127	Y	FD glo	0.00600
2897	vento	1128	Y	FD glo	0.00600
2898	vento	1129	Y	FD glo	0.00600
2899	vento	1130	Y	FD glo	0.00600
2900	vento	1131	Y	FD glo	0.00600
2901	vento	1132	Y	FD glo	0.00600
2902	vento	1133	Y	FD glo	0.00600
2903	vento	1134	Y	FD glo	0.00600
2904	vento	1135	Y	FD glo	0.00600
2905	vento	1136	Y	FD glo	0.00600
2906	vento	1137	Y	FD glo	0.00600
2907	vento	1138	Y	FD glo	0.00600
2908	vento	1139	Y	FD glo	0.00600
2909	vento	1140	Y	FD glo	0.00600
2910	vento	1141	Y	FD glo	0.00600
2911	vento	1142	Y	FD glo	0.00600
2912	vento	1143	Y	FD glo	0.00600
2913	vento	1144	Y	FD glo	0.00600
2914	vento	1145	Y	FD glo	0.00600
2915	vento	1146	Y	FD glo	0.00600
2916	vento	1147	Y	FD glo	0.00600
2917	vento	1148	Y	FD glo	0.00600
2918	vento	1149	Y	FD glo	0.00600
2919	vento	1150	Y	FD glo	0.00600
2920	vento	1151	Y	FD glo	0.00600
2921	vento	1152	Y	FD glo	0.00600
2922	vento	1153	Y	FD glo	0.00600
2923	vento	1154	Y	FD glo	0.00600
2924	vento	1155	Y	FD glo	0.00600
2925	terreno	1313	Z	FD loc	0.06286
2926	terreno	1314	Z	FD loc	0.09388
2927	terreno	1312	Z	FD loc	0.06286
2928	terreno	1315	Z	FD loc	0.09388
2929	terreno	1311	Z	FD loc	0.06286
2930	terreno	1316	Z	FD loc	0.09388
2931	terreno	1310	Z	FD loc	0.06286
2932	terreno	1317	Z	FD loc	0.09388
2933	terreno	1309	Z	FD loc	0.06286
2934	terreno	1318	Z	FD loc	0.09388
2935	terreno	1308	Z	FD loc	0.06286
2936	terreno	1319	Z	FD loc	0.09388
2937	terreno	846	Z	FD loc	0.06286
2938	terreno	847	Z	FD loc	0.06286
2939	terreno	848	Z	FD loc	0.06286
2940	terreno	849	Z	FD loc	0.06286
2941	terreno	850	Z	FD loc	0.06286
2942	terreno	851	Z	FD loc	0.06286
2943	terreno	845	Z	FD loc	0.09388
2944	terreno	844	Z	FD loc	0.09388
2945	terreno	843	Z	FD loc	0.09388
2946	terreno	842	Z	FD loc	0.09388
2947	terreno	841	Z	FD loc	0.09388
2948	terreno	840	Z	FD loc	0.09388
2949	terreno	1335	Z	FD loc	0.06286
2950	terreno	1336	Z	FD loc	0.14286
2951	terreno	1337	Z	FD loc	0.09388

2952	terreno	1338	Z	FD	loc	0.06286
2953	terreno	1339	Z	FD	loc	0.06286
2954	terreno	1340	Z	FD	loc	0.14286
2955	terreno	1341	Z	FD	loc	0.09388
2956	terreno	1342	Z	FD	loc	0.06286
2957	terreno	1343	Z	FD	loc	0.06286
2958	terreno	1344	Z	FD	loc	0.09388
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2960	terreno	1346	Z	FD	loc	0.06286
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2965	terreno	1351	Z	FD	loc	0.14286
2966	terreno	1352	Z	FD	loc	0.06286
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2968	terreno	1354	Z	FD	loc	0.09388
2969	terreno	1355	Z	FD	loc	0.14286
2970	terreno	1356	Z	FD	loc	0.06286
2971	terreno	1357	Z	FD	loc	0.06286
2972	terreno	1358	Z	FD	loc	0.09388
2973	terreno	756	Z	FD	loc	0.09388
2974	terreno	760	Z	FD	loc	0.06286
2975	terreno	761	Z	FD	loc	0.06286
2976	terreno	757	Z	FD	loc	0.14286
2977	terreno	758	Z	FD	loc	0.14286
2978	terreno	762	Z	FD	loc	0.06286
2979	terreno	763	Z	FD	loc	0.06286
2980	terreno	759	Z	FD	loc	0.09388
2981	terreno	768	Z	FD	loc	0.06286
2982	terreno	764	Z	FD	loc	0.14286
2983	terreno	765	Z	FD	loc	0.09388
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2985	terreno	770	Z	FD	loc	0.06286
2986	terreno	766	Z	FD	loc	0.09388
2987	terreno	767	Z	FD	loc	0.09388
2988	terreno	771	Z	FD	loc	0.06286
2989	terreno	776	Z	FD	loc	0.06286
2990	terreno	772	Z	FD	loc	0.09388
2991	terreno	773	Z	FD	loc	0.14286
2992	terreno	777	Z	FD	loc	0.06286
2993	terreno	778	Z	FD	loc	0.06286
2994	terreno	774	Z	FD	loc	0.09388
2995	terreno	775	Z	FD	loc	0.09388
2996	terreno	779	Z	FD	loc	0.06286

PESI PROPRI GUSCI-|-----|-----|-----|-----|-----|  
Cond. Nome Carichi Gusci  
1 2997-3147 918-977, 1081-1155, 1359-1374  
6 3148-3518 453-524, 585-620, 756-779, 804-827, 840-851,  
883-902, 1171-1329, 1335-1358

CONDIZIONI DI CARICO-----|-----|-----|-----|num.= 23

Nome	
1	Peso_proprio_____ N. carichi: 354 Lista carichi: 2302-2397, 2638-2744, 2997-3147
2	Permanente_____ N. carichi: 120 Lista carichi: 2398-2517
3	A:Var_pubblico N. carichi: 48 Lista carichi: 2518-2565
4	Neve_(<1000m_slm)___ N. carichi: 36 Lista carichi: 2566-2601
5	vento_y N. carichi: 156 Lista carichi: 2602-2637, 2805-2924
6	fondazioni N. carichi: 431 Lista carichi: 2745-2804, 3148-3518
7	terreno N. carichi: 72 Lista carichi: 2925-2996
8	Sisma_X N. carichi: 281 Lista carichi: 1178-1458
9	Sisma_Y N. carichi: 281 Lista carichi: 1459-1739
10	Torrente_add._X N. carichi: 281 Lista carichi: 1740-2020
11	Torrente_add._Y N. carichi: 281 Lista carichi: 2021-2301
12	Autovett_001_(X) N. carichi: 63 Lista carichi: 1-63
13	Autovett_001_(Y) N. carichi: 54 Lista carichi: 64-117
14	Autovett_002_(X) N. carichi: 47 Lista carichi: 118-164

- 15 Autovett\_002\_(Y) N. carichi: 114  
Lista carichi: 165-278
- 16 Autovett\_003\_(X) N. carichi: 110  
Lista carichi: 279-388
- 17 Autovett\_003\_(Y) N. carichi: 116  
Lista carichi: 389-504
- 18 Autovett\_014\_(X) N. carichi: 117  
Lista carichi: 505-621
- 19 Autovett\_014\_(Y) N. carichi: 119  
Lista carichi: 622-740
- 20 Autovett\_026\_(X) N. carichi: 91  
Lista carichi: 741-831
- 21 Autovett\_026\_(Y) N. carichi: 118  
Lista carichi: 832-949
- 22 Autovett\_027\_(X) N. carichi: 114  
Lista carichi: 950-1063
- 23 Autovett\_027\_(Y) N. carichi: 114  
Lista carichi: 1064-1177

## RISULTANTI DEI CARICHI (punto di applicazione nell'origine degli assi):

cond.	FX	FY	FZ	MX	MY	MZ
1	0.000000E+00	0.000000E+00	-1.299962E+05	-6.846387E+07	1.388688E+08	0.000000E+00
2	0.000000E+00	0.000000E+00	-1.894698E+04	-1.198126E+07	1.958347E+07	-9.560000E-02
3	0.000000E+00	0.000000E+00	-9.141236E+04	-5.797185E+07	9.447417E+07	0.000000E+00
4	0.000000E+00	0.000000E+00	-1.169592E+04	-7.273863E+06	1.209544E+07	0.000000E+00
5	0.000000E+00	5.771655E+03	4.385971E+03	1.616655E+06	-4.535789E+06	6.369816E+06
6	0.000000E+00	0.000000E+00	-2.500039E+05	-1.462738E+08	2.621559E+08	0.000000E+00
7	9.087696E+03	2.790106E+03	-3.860000E-01	3.335486E+05	-1.088066E+06	1.408345E+07
8	3.490259E+04	0.000000E+00	0.000000E+00	0.000000E+00	6.346296E+06	-1.838477E+07
9	0.000000E+00	3.490259E+04	0.000000E+00	-6.346296E+06	0.000000E+00	3.727949E+07
10	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	-1.124848E+03	-1.700248E+06
11	0.000000E+00	0.000000E+00	0.000000E+00	-8.370290E+01	0.000000E+00	3.650186E+06
12	5.298570E+03	0.000000E+00	0.000000E+00	0.000000E+00	2.678730E+06	-2.546612E+06
13	0.000000E+00	4.959600E+02	0.000000E+00	-2.507795E+05	0.000000E+00	8.466662E+05
14	2.278000E+01	0.000000E+00	0.000000E+00	0.000000E+00	1.063581E+04	-3.111017E+04
15	0.000000E+00	4.412320E+03	0.000000E+00	-2.154771E+06	0.000000E+00	8.523292E+05
16	1.842740E+03	0.000000E+00	0.000000E+00	0.000000E+00	9.016736E+05	-1.293318E+06
17	0.000000E+00	5.613990E+03	0.000000E+00	-2.741953E+06	0.000000E+00	9.243230E+06
18	3.122370E+03	0.000000E+00	0.000000E+00	0.000000E+00	-8.451371E+04	-1.733254E+06
19	0.000000E+00	3.267437E+04	0.000000E+00	8.854094E+05	0.000000E+00	3.450566E+07
20	3.388000E+01	0.000000E+00	0.000000E+00	0.000000E+00	-3.599670E+02	-6.825725E+04
21	0.000000E+00	6.552900E+02	0.000000E+00	1.306523E+04	0.000000E+00	4.859779E+05
22	3.070275E+04	0.000000E+00	0.000000E+00	0.000000E+00	-7.701962E+05	-1.647307E+07
23	0.000000E+00	2.917830E+03	0.000000E+00	7.313033E+04	0.000000E+00	3.745827E+06