METANODOTTO
INTERCONNESSIONE TAP DN 1400(56"), DP 75 bar
PUNTO DI INTERCETTAZIONE LINEA PIL N°3

EDIFICIO B4

RELAZIONE DI CALCOLO STRUTTURALE

Rev.	Descrizione	Elaborato	Verificato	Approvato Autorizzato	Data
0	Emissione per appalto	M.PIGLIAPOCO	M.BEGINI	H.D.AIUDI F. FERRINI	11/08/2017

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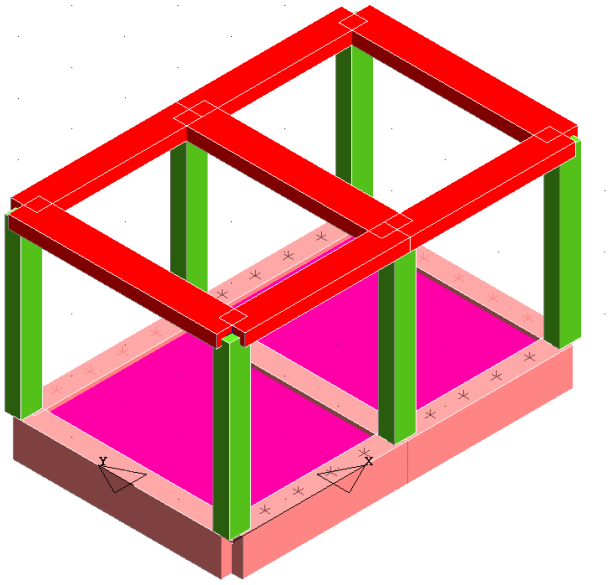
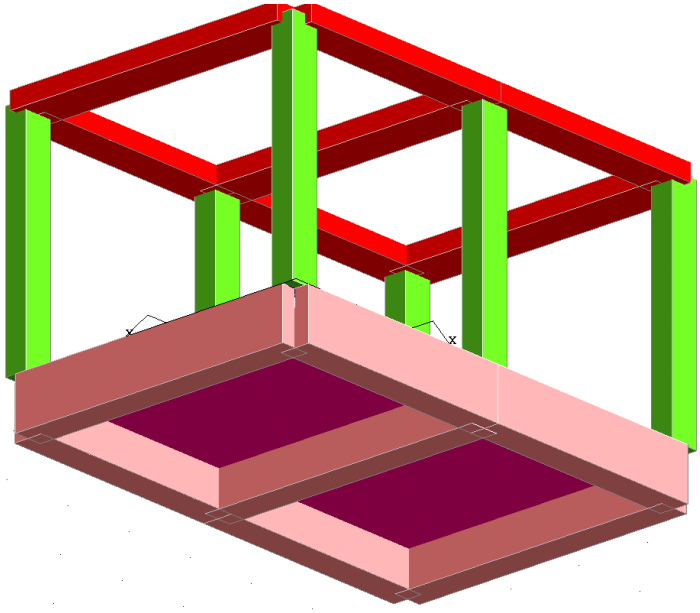
1 RELAZIONE DI CALCOLO DELLE STRUTTURE

1.1 Premessa

La presente relazione, redatta su incarico di Snam Rete Gas S.p.A., ha come oggetto la realizzazione dell'edificio B4 in c.a. con tetto piano, ubicato all'interno dell'impianto PIL n.3.
Il fabbricato presenta dimensione in pianta B x A pari a 6,60m x 4,20m misurata rispetto agli spigoli esterni dei pilastri (spessore delle finiture esterne escluso).
La struttura portante in elevazione è in c.a. ed costituita da 6 pilastri di dimensioni 30x40cm disposti su due file da 3 (in direzione X) e da due travi in spessore di dimensioni 24x49cm colleganti ognuna 3 pilastri (in direzione X) e ortogonalmente in direzione Y due travi laterali da 24x58cm e una a metà edificio in direzione Y da 24x60cm.
La copertura (orizzontale) è realizzata mediante solaio in latero cemento gettato in opera, di spessore pari a 28cm, impiegando pignatte di altezza 24cm completate con getto di soletta spessa 4cm. Il solaio è ordito secondo la direzione Y dell'edificio e a metà campo di solaio è realizzata una trave a spessore rompitratta di dimensioni 60x28cm. In corrispondenza dei due bordi laterali direzione X è previsto l'impiego di pigatte ribassate h=16cm al fine di bilanciare il momento torcente dello sbalzo laterale sulle travi di bordo.
Ai bordi della copertura il cornicione con sbalzo di 48cm è realizzato con una soletta piena in c.a. di spessore pari a 15cm.
La fondazione è costituita da graticcio di travi a sezione rettangolare di dimensioni BxH pari a 60x90cm.
Le tamponature esterne sono realizzate in blocchi in laterizio termoisolanti e gravano direttamente sulla fondazione.
Il solaio di base è ancorato direttamente alle travi di fondazione ed è costituito da una soletta piena di spessore 15cm.
La quota di estradosso delle fondazioni è +0,15m mentre la quota di estradosso del solaio di copertura è +3,46m
Le seguenti immagini mostrano le viste del modello di calcolo 3D.



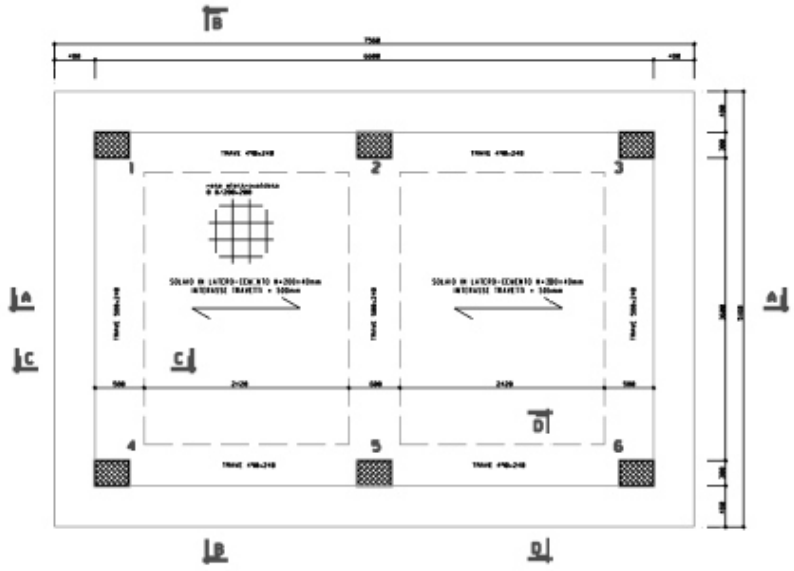
Vista dall'alto (copertura)



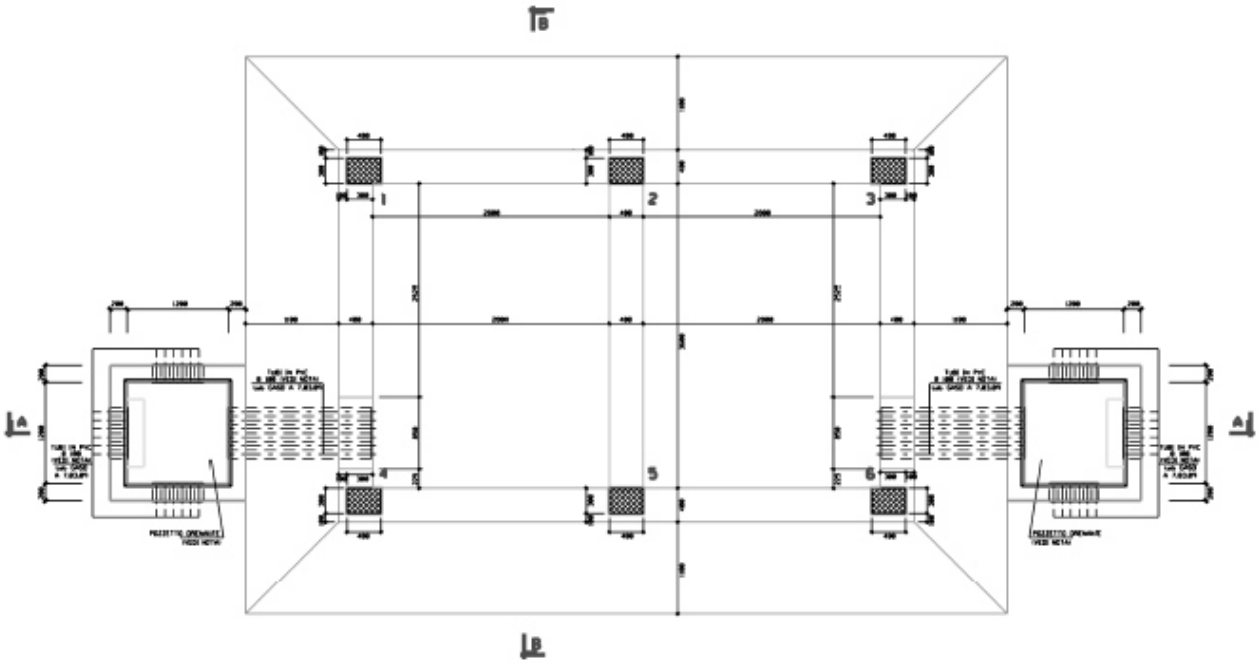
Vista dal basso (fondazioni)

Le seguenti immagini mostrano stralci delle tavole di progetto. Per i dettagli si rimanda agli elaborati grafici strutturali allegati.

PIANTA COPERTURA



PIANTA FONDAZIONI



1.2 Documenti di riferimento

PUNTO DI INTERCETTAZIONE LINEA PIL N°3

- REL. RE-GFN-306

EDIFICIO USO TELECOMANDO E TELEMISURE TIPO B.4 - RELAZIONE GEOTECNICA E SULLE FONDAZIONI

- REL. RE-GSIS-306

RELAZIONE GEOLOGICA E DI PERICOLOSITA' SISMICA

- REL. RE-MAT-306

RELAZIONE SUI MATERIALI

Elaborati grafici di riferimento

PUNTO DI INTERCETTAZIONE LINEA PIL N°3

- DIS. CIV-302

PLANIMETRIA FONDAZIONI E SISTEMAZIONI AREE ESTERNE

- DIS. CIV-305

EDIFICIO USO TELECOMANDO E TELEMISURE TIPO B.4 – ARCHITETTONICO

- DIS. CIV-306

EDIFICIO USO TELECOMANDO E TELEMISURE TIPO B.4 - CASSERI ED ARMATURE

1.3 Normativa di riferimento

- Legge 5/11/1971 n.1086 – Norme per la disciplina delle opere in conglomerato cementizio armato, normale e precompresso, e a struttura metallica;
- Legge 2/02/1974 n. 64 – Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche;
- Decreto del Presidente della Repubblica 6/06/2001 n.380 – Testo unico delle disposizioni legislative e regolamentari in materia edilizia e s.m.e i.;
- Decreto Ministero delle Infrastrutture e dei Trasporti 14/01/2008 – Norme Tecniche per le Costruzioni;
- Circolare 2/02/2009 n. 617 -Istruzioni per l'applicazione delle 'Nuove norme tecniche per le costruzioni' di cui al D.M. 14/01/08.

1.4 Analisi dei carichi

Carichi permanenti, permanenti portati e variabili

La copertura è costituita da un solaio in latero cemento di spessore 24+4cm. Sulla copertura è prevista l'applicazione dell'impermeabilizzazione sopra di un massetto isolante e per pendenze minime del 2% atte a garantire lo smaltimento delle acque piovane.
Il solaio latero-cementizio è costituito da travetti di larghezza 12 cm, posti ad interasse di 50 cm. I blocchi in laterizio interposti tra i travetti hanno dimensioni di 38 x 24 x 25 cm.
La soletta in c.a. armata con rete elettrosaldata ha spessore pari a 4 cm.
All'intradosso sarà realizzato uno strato di intonaco di spessore 2 cm.
Il peso della copertura sul solaio laterocementizio è considerato alla stregua di un permanente portato (G2k).
Gli sbalzi in c.a. sui quattro lati dell'edificio presentano lo stesso strato di finitura del solaio.
Le tamponature esterne di altezza pari a 3,07m sono costituite da blocchi tipo Poroton 800 TS di dimensioni 38x25x19cm e sono rivestiti su ambo i lati con finitura ad intonaco civile. Il peso del singolo mattone forato è pari a 15Kg. Il peso complessivo della tamponatura è pari a 450Kg/m2. Il peso a metro lineare della tamponatura agente sulla trave di fondazione è pari a 1375Kg/m, ovvero 13,50kN/m.
Sulla soletta di base sono previsti i seguenti carichi: peso proprio del pavimento sopraelevato pari a 1.00 kN/mq e sovraccarico variabile per ambienti ad uso industriale (cat. E) pari a 6 kN/mq.

Tabella 2 Analisi dei carichi permanenti, permanenti portati e variabili (valori caratteristici)

◆ **Solaio a quota m +3.46**

PERMANENTI (G_{1k})			
Peso solaio	H	28	cm
soletta in c.a. di spessore 4 cm		1.00	kN/mq
travetti di dim. 12x24(H) cm ad interasse 0.5m		1.44	kN/mq
pignatte di dim. 38x25x24(H) cm		1.21	kN/mq
Incidenza varie arrotondamento		0.05	kN/mq
		3.70	**kN/mq**
PERMANENTI PORTATI (G_{2k})			
Peso copertura			
Manto di copertura impermeabilizzante		0.30	kN/mq
Malta di pendenza		1.70	kN/mq
intonaco spessore 20mm		0.30	kN/mq
		2.30	**kN/mq**
SOVRACCARICHI VARIABILI (Q_k)			
portata prevista (cat. H1 – carico manutenzione)		**0.50**	**kN/mq**

◆ Sbalzi laterali a quota m +3.46 (carichi lineari applicate alle travi di bordo)

PERMANENTI (G_{1k})

Peso soletta a sbalzo

Soletta piena spessore h=15cm e sbalzo L=40cm	**1.80**	**kN/m**
Momento torcente corrispondente sulla trave di bordo	**0.432**	**kN*m/m**

PERMANENTI PORTATI (G_{2k})

Peso copertura sullo sbalzo laterale

Manto di copertura impermeabilizzante	0.12	kN/m
Malta di pendenza	0.68	kN/m
intonaco spessore 20mm	0.12	kN/m
	0.92	**kN/m**
Momento torcente corrispondente sulla trave di bordo	**0.221**	**kN*m/m**

SOVRACCARICHI VARIABILI (Q_k)

portata prevista (cat. H1 – carico manutenzione)	**0.24**	**kN/m**
Momento torcente corrispondente sulla trave di bordo	**0.058**	**kN*m/m**

◆ Platea di base a quota m -0.08

PERMANENTI (G_{1k})

Peso soletta piena

soletta di spessore 20 cm	**5.00**	**kN/mq**

PERMANENTI PORTATI (G_{2k})

peso pavimento galleggiante	**1.00**	**kN/mq**

SOVRACCARICHI VARIABILI (Q_k)

portata prevista (cat.E2)	**6.00**	**kN/mq**

◆ Carichi lineari su travi di fondazione

PERMANENTI PORTATI (G_{2k})

Peso proprio tamponature di chiusura perimetrali	**13.50**	**kN/m**
Peso proprio marciapiede spessore 0.2m	**5.50**	**kN/m**

Azione della neve

Il carico della neve agisce sulla copertura del pozzetto.

Il carico di neve al suolo q_{sk} è valutato in conformità al DM 14-01-08 con la seguente espressione:

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

con q_{sk} valore caratteristico di riferimento del carico di neve al suolo per un periodo di ritorno di 50 anni dipendente dalla zona climatica del sito in oggetto e dall'altitudine as sul livello del mare:

-Zona I Alpina: q_{sk}=1.50 kN/mq per $a_s \leq$200 m s.l.m.

q_{sk}=1.39 $(1+(a_s/728)^2)$ kN/mq per as>200 m s.l.m.;

-Zona I Mediterranea: q_{sk}=1.50 kN/mq per $a_s \leq$200 m s.l.m.;

q_{sk}=1.35 $(1+(a_s/602)^2)$ kN/mq per a_s>200 m s.l.m.;

-Zona II: q_{sk}=1.00 kN/mq per $a_s \leq$200 m s.l.m.;

q_{sk}=0.85 $(1+(a_s/481)^2)$ kN/mq per a_s>200 m s.l.m.;

-Zona III: q_{sk} =0.60 kN/mq per $a_s \leq$200 m s.l.m.;

q_{sk} =0.51$(1+(a_s/481)^2)$ kN/mq per a_s>200 m s.l.m.;

μ_i coefficiente di forma dipendente dall'angolo α di inclinazione della superficie esposta rispetto all'orizzontale:

- se la neve non risulta impedita di scivolare $0° \leq \alpha \leq 30°$ μ_i=0.8, per $30° < \alpha < 60°$ μ_i=0.8(60α)/30, per α>60° μi=0;
- se l'estremità della superficie termina con un parapetto o altra ostruzione μ_i =0.8 indipendentemente dal valore dell'angolo α;

C_e coefficiente di esposizione valutato in funzione delle diverse classi di topografia:

- per area "battuta dai venti" C_e=0.9;
- per area "normale" C_e=1.0;
- per area "riparata" C_e=1.1;

C_t coefficiente termico che si pone pari a 1.

L'altitudine a_s del sito in esame è pari a 5 m s.l.m e la zona climatica di appartenenza è la Zona III; il carico della neve corrispondente ai parametri reali del sito risulta q_{sk}=0,60 kN/mq per a_s<200 m s.l.m.;.

E' stato considerato il carico della neve agente sulla copertura delle cappe di insonorizzazione il cui angolo di inclinazione è α=0°.

Calcolo del carico della neve: $q_s = \mu_i \cdot q_{sk} \cdot C_e \cdot C_t = 0{,}8 \cdot 0{,}60 \cdot 1 \cdot 1 = 0{,}48$ kN/m^2

Per il dettaglio sui carichi, sulle modalità e combinazioni di carico, si rimanda alla relazione di calcolo in appendice.

Azione del vento

L'azione del vento non viene presa in considerazione in quanto l'azione sismica produce sollecitazioni maggiori sugli elementi strutturali. Si ricorda che il DM 14/01/2008 non prevede combinazione degli effetti per le azioni dovute al vento e al sisma.

Azione del sisma

Il calcolo dell'azione sismica di progetto è effettuato, in conformità al DM 14/01/2008, dal programma di calcolo.

Il calcolo sismico è stato condotto mediante analisi dinamica lineare con spettro di risposta e utilizzo del fattore di struttura q.
E' stato rispettato il criterio di gerarchia delle resistenze, anche per le opere di fondazione rispetto alla sovrastruttura. A tal proposito è stata condotta una doppia modellazione, una per la verifica degli elementi travi e pilastri della sovrastruttura (dove si è fatto uso del fattore di struttura maggiore di 1 e proprio degli edifici in c.a. intelaiati ad un piano) e l'altra per la verifica degli elementi di fondazione (dove invece si è fatto uso del fattore di struttura pari ad 1, che determina le massime sollecitazioni possibili per tali elemeni di fondazione, garantendo il soddisfacimento della sovraresistenza della fondazione rispetto ai pilastri della sovrastruttura).

2 APPENDICE

Nella presente appendice è contenuto l'output del programma di calcolo CDS.

Nota sulle verifiche degli elementi strutturali presenti nel modello (piastre, pareti, travi, pilastri)
Nelle pagine seguenti sono riportati i quantitativi minimi di armatura richiesti dal programma di calcolo. Per questioni pratiche legate ad esigenze costruttive, potrà accadere che detti quantitativi non corrispondano esattamente a quanto riportato negli elaborati grafici di progetto. In ogni caso, i quantitativi prescritti negli elaborati grafici risulteranno sempre non inferiori a quelli minimi ottenuti dai calcoli di verifica.

RELAZIONE DI CALCOLO

Sono illustrati con la presente i risultati dei calcoli che riguardano il progetto delle armature, la verifica delle tensioni di lavoro dei materiali e del terreno.

• NORMATIVA DI RIFERIMENTO

I calcoli sono condotti nel pieno rispetto della normativa vigente e, in particolare, la normativa cui viene fatto riferimento nelle fasi di calcolo, verifica e progettazione è costituita dalle *Norme Tecniche per le Costruzioni*, emanate con il D.M. 14/01/2008 pubblicato nel suppl. 30 G.U. 29 del 4/02/2008, nonché la Circolare del Ministero Infrastrutture e Trasporti del 2 Febbraio 2009, n. 617 "*Istruzioni per l'applicazione delle nuove norme tecniche per le costruzioni*".

• METODI DI CALCOLO

I metodi di calcolo adottati per il calcolo sono i seguenti:

1) Per i carichi statici: *METODO DELLE DEFORMAZIONI*;

2) Per i carichi sismici: metodo dell'*ANALISI MODALE* o dell'*ANALISI SISMICA STATICA EQUIVALENTE*.

Per lo svolgimento del calcolo si è accettata l'ipotesi che, in corrispondenza dei piani sismici, i solai siano infinitamente rigidi nel loro
piano e che le masse ai fini del calcolo delle forze di piano siano concentrate alle loro quote.

• CALCOLO SPOSTAMENTI E CARATTERISTICHE

Il calcolo degli spostamenti e delle caratteristiche viene effettuato con il metodo degli elementi finiti (**F.E.M.**).

Possono essere inseriti due tipi di elementi:

1) Elemento monodimensionale asta (*beam*) che unisce due nodi aventi ciascuno 6 gradi di libertà. Per maggiore precisione di calcolo, viene tenuta in conto anche la deformabilità a taglio e quella assiale di questi elementi. Queste aste, inoltre, non sono considerate flessibili da nodo a nodo ma hanno sulla parte iniziale e finale due tratti infinitamente rigidi formati dalla parte di trave inglobata nello spessore del pilastro; questi tratti rigidi forniscono al nodo una dimensione reale.

2) L'elemento bidimensionale shell (*quad*) che unisce quattro nodi nello spazio. Il suo comportamento è duplice, funziona da lastra per i carichi agenti sul suo piano, da piastra per i carichi ortogonali.

Assemblate tutte le matrici di rigidezza degli elementi in quella della struttura spaziale, la risoluzione del sistema viene perseguita tramite il *metodo di Cholesky*.

Ai fini della risoluzione della struttura, gli spostamenti X e Y e le rotazioni attorno l'asse verticale Z di tutti i nodi che giacciono su di un impalcato dichiarato rigido sono mutuamente vincolati.

• RELAZIONE SUI MATERIALI

Le caratteristiche meccaniche dei materiali sono descritti nei tabulati riportati nel seguito per ciascuna tipologia di materiale utilizzato.

- **ANALISI SISMICA DINAMICA**

L'analisi sismica dinamica è stata svolta con il metodo dell'analisi modale; la ricerca dei modi e delle relative frequenze è stata perseguita con il *metodo di Jacobi*.

I modi di vibrazione considerati sono in numero tale da assicurare l'eccitazione di più dell'85% della massa totale della struttura.

Per ciascuna direzione di ingresso del sisma si sono valutate le forze applicate spazialmente agli impalcati di ogni piano (forza in X, forza in Y e momento).

Le forze orizzontali così calcolate vengono ripartite fra gli elementi irrigidenti (pilastri e pareti di taglio), ipotizzando i solai dei piani sismici infinitamente rigidi assialmente.

Per la verifica della struttura si è fatto riferimento all'analisi modale, pertanto sono prima calcolate le sollecitazioni e gli spostamenti modali e poi viene calcolato il loro valore efficace.

I valori stampati nei tabulati finali allegati sono proprio i suddetti valori efficaci e pertanto l'equilibrio ai nodi perde di significato. I valori delle sollecitazioni sismiche sono combinate linearmente (in somma e in differenza) con quelle per carichi statici per ottenere le sollecitazioni per sisma nelle due direzioni di calcolo.

Gli angoli delle direzioni di ingresso dei sismi sono valutati rispetto all'asse X del sistema di riferimento globale.

- **VERIFICHE**

Le verifiche, svolte secondo il metodo degli stati limite ultimi e di esercizio, si ottengono inviluppando tutte le condizioni di carico prese in considerazione.

In fase di verifica è stato differenziato l'elemento trave dall'elemento pilastro. Nell'elemento trave le armature sono disposte in modo
asimmetrico, mentre nei pilastri sono sempre disposte simmetricamente.

Per l'elemento trave, l'armatura si determina suddividendola in cinque conci in cui l'armatura si mantiene costante, valutando per tali conci le massime aree di armatura superiore ed inferiore richieste in base ai momenti massimi riscontrati nelle varie combinazioni di carico esaminate. Lo stesso criterio è stato adottato per il calcolo delle staffe.

Anche l'elemento pilastro viene scomposto in cinque conci in cui l'armatura si mantiene costante. Vengono però riportate le armature massime richieste nella metà superiore (testa) e inferiore (piede).

La fondazione su travi rovesce è risolta contemporaneamente alla sovrastruttura tenendo in conto sia la rigidezza flettente che quella torcente, utilizzando per l'analisi agli elementi finiti l'elemento asta su suolo elastico alla *Winkler*.

Le travate possono incrociarsi con angoli qualsiasi e avere dei disassamenti rispetto ai pilastri su cui si appoggiano.

La ripartizione dei carichi, data la natura matriciale del calcolo, tiene automaticamente conto della rigidezza relativa delle varie travate
convergenti su ogni nodo.

Le verifiche per gli elementi bidimensionali (setti) vengono effettuate sovrapponendo lo stato tensionale del comportamento a lastra e di quello a piastra. Vengono calcolate le armature delle due facce dell'elemento bidimensionale disponendo i ferri in due direzioni ortogonali.

- **DIMENSIONAMENTO MINIMO DELLE ARMATURE.**

Per il calcolo delle armature sono stati rispettati i minimi di legge di seguito riportati:

TRAVI:

2. Area minima delle staffe pari a 1.5*b mmq/ml, essendo b lo spessore minimo dell'anima misurato in mm, con passo non maggiore di 0,8 dell'altezza utile e con un minimo di 3 staffe al metro. In prossimità degli appoggi o di carichi concentrati per una lunghezza pari all' altezza utile della sezione, il passo minimo sarà 12 volte il diametro minimo dell'armatura longitudinale.

3. Armatura longitudinale in zona tesa ≥ 0,15% della sezione di calcestruzzo. Alle estremità è disposta una armatura inferiore minima che possa assorbire, allo stato limite ultimo, uno sforzo di trazione uguale al taglio.

4. In zona sismica, nelle zone critiche il passo staffe è non superiore al minimo di:

- un quarto dell'altezza utile della sezione trasversale;
- 175 mm e 225 mm, rispettivamente per CDA e CDB;
- 6 volte e 8 volte il diametro minimo delle barre longitudinali considerate ai fini delle verifiche, rispettivamente per CDA e CDB;
- 24 volte il diametro delle armature trasversali.

Le zone critiche si estendono, per CDB e CDA, per una lunghezza pari rispettivamente a 1 e 1,5 volte l'altezza della sezione della trave, misurata a partire dalla faccia del nodo trave-pilastro. Nelle zone critiche della trave il rapporto fra l'armatura compressa e quella tesa è maggiore o uguale a 0,5.

PILASTRI:

- Armatura longitudinale compresa fra 0,3% e 4% della sezione effettiva e non minore di 0,10*Ned/fyd;
- Barre longitudinali con diametro ≥ 12 mm;
- Diametro staffe ≥ 6 mm e comunque ≥ 1/4 del diametro max delle barre longitudinali, con interasse non maggiore di 30 cm.

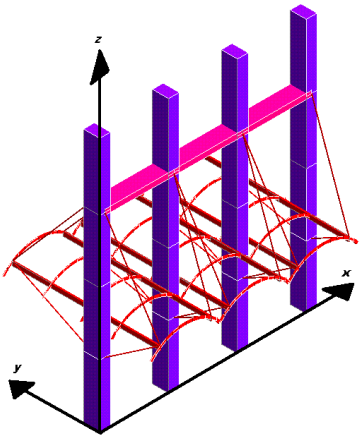
- In zona sismica l'armatura longitudinale è almeno pari all'1% della sezione effettiva; il passo delle staffe di contenimento è non superiore alla più piccola delle quantità seguenti:

  - 1/3 e 1/2 del lato minore della sezione trasversale, rispettivamente per CDA e CDB;
  - 125 mm e 175 mm, rispettivamente per CDA e CDB;
  - 6 e 8 volte il diametro delle barre longitudinali che collegano, rispettivamente per CDA e CDB.

- **SISTEMI DI RIFERIMENTO**

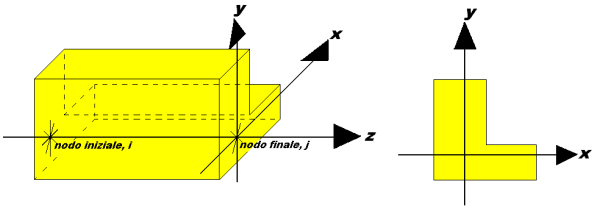
1) SISTEMA GLOBALE DELLA STRUTTURA SPAZIALE

Il sistema di riferimento globale è costituito da una terna destra di assi cartesiani ortogonali (O-XYZ) dove l'asse Z rappresenta l'asse verticale rivolto verso l'alto. Le rotazioni sono considerate positive se concordi con gli assi vettori:



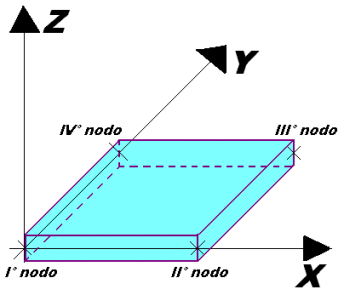
2) SISTEMA LOCALE DELLE ASTE

Il sistema di riferimento locale delle aste, inclinate o meno, è costituito da una terna destra di assi cartesiani ortogonali che ha l'asse Z coincidente con l'asse longitudinale dell'asta ed orientamento dal nodo iniziale al nodo finale, gli assi X ed Y sono orientati come nell'archivio delle sezioni:



3) SISTEMA LOCALE DELL'ELEMENTO SHELL

Il sistema di riferimento locale dell'elemento shell è costituito da una terna destra di assi cartesiani ortogonali che ha l'asse X coincidente con la direzione fra il primo ed il secondo nodo di input, l'asse Y giacente nel piano dello shell e l'asse Z in direzione dello spessore:



- **UNITÀ DI MISURA**

Si adottano le seguenti unità di misura:

[lunghezze]	= m
[forze]	= kgf / daN
[tempo]	= sec
[temperatura]	= °C

- **CONVENZIONI SUI SEGNI**

I carichi agenti sono:

1) Carichi e momenti distribuiti lungo gli assi coordinati;

2) Forze e coppie nodali concentrate sui nodi.

Le forze distribuite sono da ritenersi positive se concordi con il sistema di riferimento locale dell'asta, quelle concentrate sono positive se concordi con il sistema di riferimento globale.

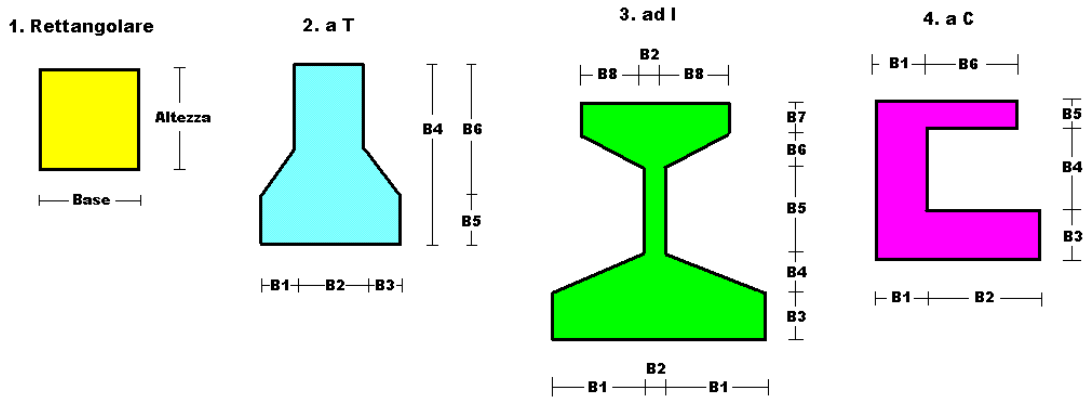
I gradi di libertà nodali sono gli omologhi agli enti forza, e quindi sono definiti positivi se concordi a questi ultimi.

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Le sezioni delle aste in c.a.o. riportate nel seguito sono state raggruppate per tipologia. Le tipologie disponibili sono le seguenti:

1) *RETTANGOLARE*
2) *a T*
3) *ad I*
4) *a C*
5) *CIRCOLARE*
6) *POLIGONALE*

Nelle tabelle sono usate alcune sigle il cui significato è spiegato dagli schemi riportati in appresso:



Per quanto attiene alla tipologia poligonale le diciture V1, V2, …, V10 individuano i vertici della sezione descritta per coordinate.

In coda alle presenti stampe viene riportata la tabellina riassuntiva delle caratteristiche statiche delle sezioni in parola in termini di area, momenti di inerzia baricentrici rispetto all'asse X ed Y (Ixg ed Iyg) e momento d'inerzia polare (Ip).

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta di seguito la spiegazione delle sigle usate nella tabella di stampa dell'archivio materiali.

Materiale N.ro : *Numero identificativo del materiale in esame*

Densità : *Peso specifico del materiale*

Ex * 1E3 : *Modulo elastico in direzione x moltiplicato per 10 al cubo*

Ni.x : *Coefficiente di Poisson in direzione x*

Alfa.x : *Coefficiente di dilatazione termica in direzione x*

Ey * 1E3 : *Modulo elastico in direzione y moltiplicato per 10 al cubo*

Ni.y : *Coefficiente di Poisson in direzione y*

Alfa.y : *Coefficiente di dilatazione termica in direzione y*

E11 * 1E3 : *Elemento della matrice elastica moltiplicato per 10 al cubo, 1a riga - 1a colonna*

E12 * 1E3 : *Elemento della matrice elastica moltiplicato per 10 al cubo, 1a riga - 2a colonna*

E13 * 1E3 : *Elemento della matrice elastica moltiplicato per 10 al cubo, 1a riga - 3a colonna*

E22 * 1E3 : *Elemento della matrice elastica moltiplicato per 10 al cubo, 2a riga - 2a colonna*

E23 * 1E3 : *Elemento della matrice elastica moltiplicato per 10 al cubo, 2a riga - 3a colonna*

E33 * 1E3 : *Elemento della matrice elastica moltiplicato per 10 al cubo, 3a riga - 3a colonna*

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta appresso la spiegazione delle sigle usate nelle tabelle riassuntive dei criteri di progetto per le aste in elevazione, per quelle di fondazione, per i pilastri e per i setti.

Crit.N.ro : *Numero indicativo del criterio di progetto*
Elem. : *Tipo di elemento strutturale*
%Rig.Tors. : *Percentuale di rigidezza torsionale*
Mod. E : *Modulo di elasticità normale*
Poisson : *Coefficiente di Poisson*
Sgmc : *Tensione massima di esercizio del calcestruzzo*
tauc0 : *Tensione tangenziale minima*
tauc1 : *Tensione tangenziale massima*
Sgmf : *Tensione massima di esercizio dell'acciaio*
Om. : *Coefficiente di omogeneizzazione*
Gamma : *Peso specifico del materiale*
Copristaffa : *Distanza tra il lembo esterno della staffa ed il lembo esterno della sezione in calcestruzzo*
Fi min. : *Diametro minimo utilizzabile per le armature longitudinali*
Fi st. : *Diametro delle staffe*
Lar. st. : *Larghezza massima delle staffe*
Psc : *Passo di scansione per i diagrammi delle caratteristiche*
Pos.pol. : *Numero di posizioni delle armature per la verifica di sezioni poligonali*
D arm. : *Passo di incremento dell'armatura per la verifica di sezioni poligonali*
Iteraz. : *Numero massimo di iterazioni per la verifica di sezioni poligonali*
Def. Tag. : *Deformabilità a taglio (si, no)*
%Scorr.Staf. : *Percentuale di scorrimento da far assorbire alle staffe*
P.max staffe : *Passo massimo delle staffe*
P.min.staffe : *Passo minimo delle staffe*
tMt min. : *Tensione di torsione minima al di sotto del quale non si arma a torsione*
Ferri parete : *Presenza di ferri di parete a taglio*
Ecc.lim. : *Eccentricità M/N limite oltre la quale la verifica viene effettuata a flessione pura*
Tipo ver. : *Tipo di verifica (0 = solo Mx; 1 = Mx e My separate; 2 = deviata)*
Fl.rett. : *Flessione retta forzata per sezioni dissimmetriche ma simmetrizzabili (0 = no; 1 = si)*
Den.X pos. : *Denominatore della quantità q*l*l per determinare il momento Mx minimo per la copertura del diagramma positivo*
Den.X neg. : *Denominatore della quantità q*l*l per determinare il momento Mx minimo per la copertura del diagramma negativo*
Den.Y pos. : *Denominatore della quantità q*l*l per determinare il momento My minimo per la copertura del diagramma positivo*
Den.Y neg. : *Denominatore della quantità q*l*l per determinare il momento My minimo per la copertura del diagramma negativo*
%Mag.car. : *Percentuale di maggiorazione dei carichi statici della prima combinazione di carico*
Linear. : *Coefficiente descrittivo del comportamento dell'asta:*
1 = comportamento lineare sia a trazione che a compressione
2 = comportamento non lineare sia a trazione che a compressione.
3 = comportamento lineare solo a trazione.
4 = comportamento non lineare solo a trazione.
5 = comportamento lineare solo a compressione.
6 = comportamento non lineare solo a compressione.

Appesi : *Flag di disposizione del carico sull'asta (1 = appeso, cioè applicato all'intradosso; 0 = non appeso, cioè applicato all'estradosso)*
Min. T/sigma : *Verifica minimo T/sigma (1 = si; 0 = no)*
Verif.Alette : *Verifica alette travi di fondazione (1 = si; 0 = no)*
Kwinkl. : *Costante di sottofondo del terreno*

Si riporta appresso la spiegazione delle sigle usate nelle tabelle riassuntive dei criteri di progetto per le verifiche agli stati limite.

Cri.Nro : *Numero identificativo del criterio di progetto*
Tipo Elem. : *Tipo di elemento: trave di elevazione, trave di fondazione, pilastro, setto, setto elastico ("SHela")*
fck : *Resistenza caratteristica del calcestruzzo*
fcd : *Resistenza di calcolo del calcestruzzo*
rcd : *Resistenza di calcolo a flessione del calcestruzzo (massimo del diagramma parabola rettangolo)*
fyk : *Resistenza caratteristica dell'acciaio*
fyd : *Resistenza di calcolo dell'acciaio*
Ey : *Modulo elastico dell'acciaio*
ec0 : *Deformazione limite del calcestruzzo in campo elastico*
ecu : *Deformazione ultima del calcestruzzo*
eyu : *Deformazione ultima dell'acciaio*
Ac/At : *Rapporto dell'incremento fra l'armatura compressa e quella tesa*
Mt/Mtu : *Rapporto fra il momento torcente di calcolo e il momento torcente resistente ultimo del calcestruzzo al di sotto del quale non si arma a torsione*
Wra : *Ampiezza limite della fessura per combinazioni rare*
Wfr : *Ampiezza limite della fessura per combinazioni frequenti*
Wpe : *Ampiezza limite della fessura per combinazioni permanenti*
σc **Rara** : *Sigma massima del calcestruzzo per combinazioni rare*
σc **Perm** : *Sigma massima del calcestruzzo per combinazioni permanenti*
σf **Rara** : *Sigma massima dell'acciaio per combinazioni rare*
SpRar : *Rapporto fra la lunghezza dell'elemento e lo spostamento massimo per combinazioni rare*
SpPer : *Rapporto fra la lunghezza dell'elemento e lo spostamento massimo per combinazioni permanenti*
Coef.Visc.: : *Coefficiente di viscosità*

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta appresso la spiegazione delle sigle usate nella tabella coordinate nodi.

Nodo3d : *Numero del nodo spaziale*

Coord.X : *Coordinata X del punto nel sistema di riferimento globale*

Coord.Y : *Coordinata Y del punto nel sistema di riferimento globale*

Coord.Z : *Coordinata Z del punto nel sistema di riferimento globale*

Filo : *Numero del filo per individuare le travate in c.a.*

Piano Sism. : *Numero del piano rigido di appartenenza del nodo*

Peso : *Peso sismico del nodo; ogni canale di carico è stato moltiplicato per il proprio coefficiente di riduzione del sovraccarico*

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta appresso la spiegazione delle sigle usate nella tabella dati di asta spaziale.

Asta3d	:	*Numero dell'asta spaziale*
Filo in.	:	*Numero del filo del nodo iniziale*
Filo fin.	:	*Numero del filo del nodo finale*
Q. iniz.	:	*Quota del nodo iniziale*
Q. fin.	:	*Quota del nodo finale*
Nod3d iniz.	:	*Numero del nodo iniziale*
Nod3d fin.	:	*Numero del nodo finale*
Cr. Pr.	:	*Numero del criterio di progetto per la verifica*
Sez. N.ro	:	*Numero in archivio della sezione*
Base x Alt	:	*Per le sezioni rettangolari base ed altezza; per le altre tipologie ingombro massimo della sezione*
Magr.	:	*Dimensione del magrone per sezioni di fondazione*
Rot.	:	*Angolo di rotazione della sezione*
dx	:	*Scostamento in direzione X globale dell'estremo iniziale dell'asta dal nodo iniziale*
dy	:	*Scostamento in direzione Y globale dell'estremo iniziale dell'asta dal nodo iniziale*
dz	:	*Scostamento in direzione Z globale dell'estremo iniziale dell'asta dal nodo iniziale*
dx	:	*Scostamento in direzione X globale dell'estremo finale dell'asta dal nodo finale*
dy	:	*Scostamento in direzione Y globale dell'estremo finale dell'asta dal nodo finale*
dz	:	*Scostamento in direzione Z globale dell'estremo finale dell'asta dal nodo finale*

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta appresso la spiegazione delle sigle usate nella tabella dati di shell spaziale.

Shell : *Numero dello shell spaziale*

Filo 1 : *Numero del filo del primo nodo*

Filo 2 : *Numero del filo del secondo nodo*

Filo 3 : *Numero del filo del terzo nodo*

Filo 4 : *Numero del filo del quarto nodo*

Quota 1 : *Quota del primo nodo*

Quota 2 : *Quota del secondo nodo*

Quota 3 : *Quota del terzo nodo*

Quota 4 : *Quota del quarto nodo*

Nod3d 1 : *Numero del primo nodo*

Nod3d 2 : *Numero del secondo nodo*

Nod3d 3 : *Numero del terzo nodo*

Nod3d 4 : *Numero del quarto nodo*

Sez. N.ro : *Numero in archivio della sezione*

Spess : *Spessore dello shell*

Kwinkl : *Costante di Winkler del terreno se l'elemento è di fondazione; 0 se è di elevazione*

Tipo Mat. : *Numero dell'archivio per il tipo di materiale*

Mesh X : *Numero di suddivisioni del macro elemento sull'asse X locale*

Mesh Y : *Numero di suddivisioni del macro elemento sull'asse Y locale*

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta appresso la spiegazione delle sigle usate nella tabella vincoli nodali esterni:

- **Nodo3d** : Numero del nodo spaziale
- **Codice** : Codice esplicito per la determinazione del vincolo:

I = incastro
C = cerniera completa
W = *Winkler*
E = esplicito
P = plinto
U = Vincolo unilatero

- **Tx** : Rigidezza traslante in direzione X sul sistema di riferimento locale del vincolo (-1 spostamento impedito)
- **Ty** : Rigidezza traslante in direzione Y sul sistema di riferimento locale del vincolo (-1 spostamento impedito)
- **Tz** : Rigidezza traslante in direzione Z sul sistema di riferimento locale del vincolo (-1 spostamento impedito)
- **Rx** : Rigidezza rotazionale in direzione X sul sistema di riferimento locale del vincolo (-1 spostamento impedito)
- **Ry** : Rigidezza rotazionale in direzione Y sul sistema di riferimento locale del vincolo (-1 spostamento impedito)
- **Rz** : Rigidezza rotazionale in direzione Z sul sistema di riferimento locale del vincolo (-1 spostamento impedito)

SCOSTAMENTO PER I VINCOLI ELASTICI

- **Tr. X** : Scostamento in direzione X globale del sistema di riferimento locale del vincolo
- **Tr. Y** : Scostamento in direzione Y globale del sistema di riferimento locale del vincolo
- **Tr. Z** : Scostamento in direzione Z globale del sistema di riferimento locale del vincolo
- **Azim** : Angolo formato fra la proiezione dell'asse Z locale sul piano XY e l'asse X globale (azimut)
- **CoZe** : Angolo formato fra l'asse Z locale e l'asse Z globale (complemento allo zenit)
- **Ass.** : Rotazione attorno dell'asse Z locale del sistema di riferimento locale

ATTRIBUTO DI VERSO PER I VINCOLI UNILATERI

- **Tr. X** : Attributo sul verso dello spostamento impedito dal vincolo unilatero lungo la direzione X
- **Tr. Y** : Attributo sul verso dello spostamento impedito dal vincolo unilatero lungo la direzione Y
- **Tr. Z** : Attributo sul verso dello spostamento impedito dal vincolo unilatero lungo la direzione Z
- **Rot.X** : Attributo sul verso della rotazione impedita dal vincolo unilatero lungo l'asse vettore X
- **Rot.Y** : Attributo sul verso della rotazione impedita dal vincolo unilatero lungo l'asse vettore Y
- **Rot.Z** : Attributo sul verso della rotazione impedita dal vincolo unilatero lungo l'asse vettore Z

Gli attributi sul verso degli spostamenti e delle rotazioni possono assumere i seguenti valori:

1 = Impedisce gli spostamenti sia positivi che negativi
3 = Impedisce solo gli spostamenti positivi
5 = Impedisce solo gli spostamenti negativi

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta appresso la spiegazione delle sigle usate nelle tabelle carichi termici aste, carichi distribuiti aste, carichi concentrati, carichi termici shell e carichi shell.

CARICHI ASTE

- **Asta3d** : Numero dell'asta spaziale
- **Dt** : Delta termico costante
- **ALI.SISMICA** : Coefficiente di riduzione del sovraccarico per la condizione in stampa ai fini del calcolo della massa sismica
- **Riferimento** : Sistema di riferimento dei carichi (0 globale ; 1 locale)
- **Qx** : Carico distribuito in direzione X sul nodo iniziale
- **Qy** : Carico distribuito in direzione Y sul nodo iniziale
- **Qz** : Carico distribuito in direzione Z sul nodo iniziale
- **Qx** : Carico distribuito in direzione X sul nodo finale
- **Qy** : Carico distribuito in direzione Y sul nodo finale
- **Qz** : Carico distribuito in direzione Z sul nodo finale
- **Mt** : Momento torcente distribuito

CARICHI CONCENTRATI

- **Nodo3d** : Numero del nodo spaziale
- **Fx** : Forza in direzione X nel sistema di riferimento globale
- **Fy** : Forza in direzione Y nel sistema di riferimento globale
- **Fz** : Forza in direzione Z nel sistema di riferimento globale
- **Mx** : Momento in direzione X nel sistema di riferimento globale
- **My** : Momento in direzione Y nel sistema di riferimento globale
- **Mz** : Momento in direzione Z nel sistema di riferimento globale

CARICHI SHELL

- **Shell** : Numero dello shell spaziale
- **Dt** : Delta termico costante
- **Riferimento** : Sistema di riferimento delle pressioni e dei carichi distribuiti; verticale è la direzione dell'asse Z del sistema di riferimento globale, normale è la direzione ortogonale all'elemento per le pressioni e ortogonale al lato per i carichi distribuiti. Codici:

  0 = pressione verticale e carico normale
  1 = pressione normale e carico verticale
  2 = pressione normale e carico normale

3 = pressione verticale e carico verticale

- **P.a** : Pressione sul primo vertice dello shell
- **P.b** : Pressione sul secondo vertice dello shell
- **P.c** : Pressione sul terzo vertice dello shell
- **P.d** : Pressione sul quarto vertice dello shell
- **Q.ab** : Carico distribuito sul lato ab
- **Q.bc** : Carico distribuito sul lato bc
- **Q.cd** : Carico distribuito sul lato cd
- **Q.da** : Carico distribuito sul lato da

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta di seguito la spiegazione delle sigle usate nella tabella di stampa della composizione degli elementi bidimensionali e la numerazione dei vertici dei microelementi in cui questi vengono suddivisi.

Macro N.ro : *Numero identificativo del macroelemento definito in fase di input*

Col.1/2/3/4/5/6 : *Numero del microelemento in cui viene suddiviso il macroelemento in fase di calcolo*

Micro N.ro : *Numero identificativo del microelemento*

Macro N.ro : *Numero identificativo del macroelemento a cui appartiene il microelemento*

Vert.1 : *Numero del primo vertice del microelemento*

Vert.2 : *Numero del secondo vertice del microelemento*

Vert.3 : *Numero del terzo vertice del microelemento*

Vert.4 : *Numero del quarto vertice del microelemento*

ARCHIVIO SEZIONI ASTE IN C.A.O.

Tipologia Rettangolare					Tipologia Rettangolare			
Sez. N.ro	Base (cm)	Altezza (cm)	Magrone (cm)		Sez. N.ro	Base (cm)	Altezza (cm)	Magrone (cm)
1	49.0	24.0	0.0		2	30.0	40.0	0.0
4	58.0	24.0	0.0		5	40.0	70.0	60.0

ARCHIVIO SEZIONI ASTE IN C.A.O.

CARATTERISTICHE STATICHE DELLE SEZIONI IN C.A.O.				
Sez. N.ro	Area (cm2)	Ixg (cm4)	Iyg (cm4)	Ip (cm4)
1	1176	56448	235298	291746
2	1200	160000	90000	250000
4	1392	66816	390224	457040
5	2800	1143334	373333	1516667

ARCHIVIO MATERIALI PIASTRE: MATRICE ELASTICA

Materiale N.ro	Densita' N/mc	Ex*1E3 N/mmq	Ni.x	Alfa.x (*1E5)	Ey*1E3 N/mmq	Ni.y	Alfa.y (*1E5)	E11*1E3 N/mmq	E12*1E3 N/mmq	E13*1E3 N/mmq	E22*1E3 N/mmq	E23*1E3 N/mmq	E33*1E3 N/mmq
1	25000	33.3	0.20	1.00	33.3	0.20	1.00	34.7	6.9	0.0	34.7	0.0	13.9

CRITERI DI PROGETTO

IDEN	ASTE ELEVAZIONE														
Crit N.ro	Def Tag	%Scorr Staffe	P max. Staffe	P min. Staffe	τMtmin N/mmq	Ferri parete	Elim cm	Tipo verif.	Fl. rett	DenX pos.	DenX neg.	DenY pos.	DenY neg.	%Mag car.	%Rid Plas
1	si	100	30	0	0.3	no	200	Mx	1	0	0	0	0	0	100

CRITERI DI PROGETTO

IDEN	ASTE FONDAZIONE						
Crit N.ro	Min T/σ	Verif. Alette	%Scorr Staffe	P max. Staffe	P min. Staffe	τMtmin N/mmq	Ferri parete
2	no	no	100	33	0	0.3	no

CRITERI DI PROGETTO

IDEN	PILASTRI				IDEN	PILASTRI		
Crit N.ro	Def Tag	τMtmin N/mmq	Tipo verif.		Crit N.ro	Def Tag	τMtmin N/mmq	Tipo verif.
3	si	0.30	Mx/My					

CRITERI DI PROGETTO

IDENTIF.		CARATTERISTICHE DEL MATERIALE							DURABILITA'			CARATTER.COSTRUTTIVE					FLAG	
Crit N.ro	Elem.	% Rig Tors.	% Rig Fless	Classe CLS	Classe Acciaio	Mod. El N/mmq	Pois son	Gamma N/mc	Tipo Ambiente	Tipo Armatura	Toll. Copr.	Copr staf	Copr ferr	Fi min	Fi st	Lun sta	Li n.	App esi
1	ELEV.	10	100	C32/40	B450C	33345.7	0.20	25000	XC2/XC3	POCO SENS.	0.00	3.5	5.3	16	10	60	49	0
2	FOND.	10	100	C32/40	B450C	33345.7	0.20	25000	XC2/XC3	POCO SENS.	0.00	4.0	5.8	16	10	40	1	
3	PILAS	10	100	C32/40	B450C	33345.7	0.20	25000	XC2/XC3	POCO SENS.	0.00	3.5	5.3	16	10	50	0	

CRITERI DI PROGETTO

CRITERI PER IL CALCOLO AGLI STATI LIMITE ULTIMI E DI ESERCIZIO

Cri Nro	Tipo Elem	fck	fcd	rcd	fyk	ftk	fyd	Ey	ec0	ecu	eyu	At/ Ac	Mt/ Mtu	Wra mm	Wfr mm	Wpe mm	σcRar	σcPer	σfRar	Spo Rar	Spo Fre	Spo Per	Coe Vis	euk
		---------- N/mmq ----------															--- N/mmq ---							
1	ELEV.	32.00	18.10	18.10	450.0	450.0	391.3	210000.0	0.20	0.35	1.00	50	10		0.4	0.3	19.20	14.40	360.0				2.5	0.08
2	FOND.	32.00	18.10	18.10	450.0	450.0	391.3	210000.0	0.20	0.35	1.00	50	10		0.4	0.3	19.20	14.40	360.0				2.5	0.08
3	PILAS	32.00	18.10	18.10	450.0	450.0	391.3	210000.0	0.20	0.35	1.00	50	10		0.4	0.3	19.20	14.40	360.0				2.5	0.08

MATERIALI SHELL IN C.A.

IDENT	%	CARATTERISTICHE					DURABILITA'			COPRIFERRO	
Mat. N.ro	Rig Fls	Classe CLS	Classe Acciaio	Mod. E N/mmq	Pois- son	Gamma N/mc	Tipo Ambiente	Tipo Armatura	Toll. Copr.	Setti (cm)	Piastre (cm)
1	100	C32/40	B450C	33345.7	0.20	25000	XC2/XC3	POCO SENS.	0.00	3.5	3.5

MATERIALI SHELL IN C.A.

CRITERI PER IL CALCOLO AGLI STATI LIMITE ULTIMI E DI ESERCIZIO

Cri Nro	Tipo Elem	fck	fcd	rcd	fyk	ftk	fyd	Ey	ec0	ecu	eyu	At/ Ac	Mt/ Mtu	Wra mm	Wfr mm	Wpe mm	σcRar	σcPer	σfRar	Spo Rar	Spo Fre	Spo Per	Coe Vis	euk
		---------- N/mmq ----------															--- N/mmq ---							
1	SETTI	32.00	18.10	18.10	450.0	450.0	391.3	210000.0	0.20	0.35	1.00	50			0.4	0.3	19.20	14.40	360.0					

CRITERI DI PROGETTO GEOTECNICI - FONDAZIONI SUPERFICIALI E SU PALI

IDEN	COSTANTE WINKLER			IDEN	COSTANTE WINKLER			IDEN	COSTANTE WINKLER	
Crit N.ro	KwVert N/cmc	KwOriz. N/cmc		Crit N.ro	KwVert N/cmc	KwOriz. N/cmc		Crit N.ro	KwVert N/cmc	KwOriz. N/cmc
1	150.0	0.0		2	100.0	0.0		3	100.0	0.0

DATI GENERALI DI STRUTTURA

DATI GENERALI DI STRUTTURA			
Massima dimens. dir. X (m)	6.20	Altezza edificio (m)	3.19
Massima dimens. dir. Y (m)	3.90	Differenza temperatura(°C)	15
PARAMETRI SISMICI			
Vita Nominale (Anni)	100	Classe d' Uso	QUARTA
Longitudine Est (Grd)	18.13688	Latitudine Nord (Grd)	40.45746
Categoria Suolo	A	Coeff. Condiz. Topogr.	1.00000
Sistema Costruttivo Dir.1	C.A.	Sistema Costruttivo Dir.2	C.A.
Regolarita' in Altezza	SI (KR=1)	Regolarita' in Pianta	SI
Direzione Sisma (Grd)	0	Sisma Verticale	ASSENTE
Effetti P/Delta	NO	Quota di Zero Sismico (m)	0.00000
PARAMETRI SPETTRO ELASTICO - SISMA S.L.V.			
Probabilita' Pvr	0.10	Periodo di Ritorno Anni	1898.00
Accelerazione Ag/g	0.07	Periodo T'c (sec.)	0.58
Fo	2.57	Fv	0.92
Fattore Stratigrafia'Ss'	1.00	Periodo TB (sec.)	0.19
Periodo TC (sec.)	0.58	Periodo TD (sec.)	1.88
PARAMETRI SISTEMA COSTRUTTIVO C.A. - DIR. 1			
Classe Duttilita'	BASSA	Sotto-Sistema Strutturale	Telaio
AlfaU/Alfa1	1.10	Fattore riduttivo KW	1.00
Fattore di struttura 'q'	3.30		
PARAMETRI SISTEMA COSTRUTTIVO C.A. - DIR. 2			
Classe Duttilita'	BASSA	Sotto-Sistema Strutturale	Telaio
AlfaU/Alfa1	1.10	Fattore riduttivo KW	1.00
Fattore di struttura 'q'	3.30		
COEFFICIENTI DI SICUREZZA PARZIALI DEI MATERIALI			
Acciaio per CLS armato	1.15	Calcestruzzo CLS armato	1.50
Legno per comb. eccez.	1.00	Legno per comb. fondament.:	1.30
Livello conoscenza	LC2		
FRP Collasso Tipo 'A'	1.10	FRP Delaminazione Tipo 'A'	1.20
FRP Collasso Tipo 'B'	1.25	FRP Delaminazione Tipo 'B'	1.50
FRP Resist. Press/Fless	1.00	FRP Resist. Taglio/Torsione	1.20
FRP Resist. Confinamento	1.10		

ATTRIBUTI TAMPONATURE SU PIANI SISMICI

IDENTIFICATIV		ATTRIBUTI	
Piano N.ro	Quota (m)	Irregol Pianta	Piano Soffice
1	3.19	NO	NO

COORDINATE DEI NODI

IDENT.	POSIZIONE NODO			ATTRIBUTI		
Nodo3d N.ro	Coord.X (m)	Coord.Y (m)	Coord.Z (m)	Filo N.ro	Piano Sism.	Peso (kN)
1	0.00	0.00	0.00	3	0	0.0
2	6.20	0.00	0.00	5	0	0.0
3	0.00	3.90	0.00	10	0	0.0
4	6.20	3.90	0.00	12	0	0.0
5	0.00	0.00	3.19	3	1	44.7
6	6.20	0.00	3.19	5	1	44.7
7	0.00	3.90	3.19	10	1	44.7
8	6.20	3.90	3.19	12	1	44.7
9	3.10	3.90	3.19	4	0	66.2
10	3.10	0.00	3.19	6	0	66.2
11	3.10	3.90	0.00	4	0	0.0
12	3.10	0.00	0.00	6	0	0.0

DATI ASTE SPAZIALI

IDENTIFICAZIONE								GEOMETRIA				SCOST.INIZIALI			SCOST. FINALI				
Asta3d	Filo	Filo	Q.iniz	Q.fin.	Nod3d	Nod3d	Cr.	Sez.	Sigla Sezione	Magr.	Rot.	dx	dy	dz	dx	dy	dz	Cri	Tipo Elemento

N.ro	in.	fin.	(m)	(m)	iniz.	fin.	Pr.	N.ro		(cm)	Grd	(cm)	(cm)	(cm)	(cm)	(cm)	(cm)	Geo	ai fini sism.
1	10	3	0.00	0.00	3	1	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
2	5	12	0.00	0.00	2	4	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
3	3	3	3.19	0.00	5	1	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
4	5	5	3.19	0.00	6	2	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
5	10	10	3.19	0.00	7	3	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
6	12	12	3.19	0.00	8	4	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
7	4	12	3.19	3.19	9	8	1	1	Rett. 49 x 24	0	0	0	0	0	0	0	0		Trave telaio
8	6	5	3.19	3.19	10	6	1	1	Rett. 49 x 24	0	0	0	0	0	0	0	0		Trave telaio
9	3	10	3.19	3.19	5	7	1	4	Rett. 58 x 24	0	0	0	0	0	0	0	0		Trave telaio
10	5	12	3.19	3.19	6	8	1	4	Rett. 58 x 24	0	0	0	0	0	0	0	0		Trave telaio
11	10	4	3.19	3.19	7	9	1	1	Rett. 49 x 24	0	0	0	0	0	0	0	0		Trave telaio
12	3	6	3.19	3.19	5	10	1	1	Rett. 49 x 24	0	0	0	0	0	0	0	0		Trave telaio
13	6	4	3.19	3.19	10	9	1	4	Rett. 58 x 24	0	0	0	0	0	0	0	0		Trave telaio
14	10	4	0.00	0.00	3	11	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
15	4	12	0.00	0.00	11	4	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
16	3	6	0.00	0.00	1	12	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
17	6	5	0.00	0.00	12	2	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
18	6	6	3.19	0.00	10	12	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
19	4	4	3.19	0.00	9	11	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
20	6	4	0.00	0.00	12	11	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A

DATI SHELL SPAZIALI

IDENTIFICAZIONE													CARATTERISTICHE SEZIONE				SUDDIVIS.	
Shell N.ro	Filo 1	Filo 2	Filo 3	Filo 4	Quota1 (m)	Quota2 (m)	Quota3 (m)	Quota4 (m)	Nod3d 1	Nod3d 2	Nod3d 3	Nod3d 4	Sez. N.ro	Spess (cm)	Kwinkl N/cmc	Tipo Mat.	MeshX	MeshY
1	10	3	6	4	0.00	0.00	0.00	0.00	3	1	12	11	1	15.0	0.0	1	6	5
2	4	6	5	12	0.00	0.00	0.00	0.00	11	12	2	4	1	15.0	0.0	1	6	5

VINCOLI E CEDIMENTI NODALI

IDENTIFIC.		RIGIDEZZE TRASLANTI			RIGIDEZZE ROTAZIONALI			SCOSTAMENTI						VERSO SPOSTAMENTI UNILATERI					
Nodo3d N.ro	Cod ice	Tx kN/m	Ty kN/m	Tz kN/m	Rx kN*m	Ry kN*m	Rz kN*m	Tr.X cm	Tr.Y cm	Tr.Z cm	Azim Grd	CoZe Grd	Ass. Grd	Tr.X	Tr.Y	Tr.Z	RotX	RotY	RotZ
1	W	-10	-10	0	0	0	-10	0	0	0	0	0	0						
2	W	-10	-10	0	0	0	-10	0	0	0	0	0	0						
3	W	-10	-10	0	0	0	-10	0	0	0	0	0	0						
4	W	-10	-10	0	0	0	-10	0	0	0	0	0	0						

CARICHI TERMICI ASTE

CONDIZ TERMICA		CONDIZ TERMICA		CONDIZ TERMICA	
Asta3d N.ro	Dt Grd	Asta3d N.ro	Dt Grd	Asta3d N.ro	Dt Grd
3	15.00	4	15.00	5	15.00
6	15.00	7	15.00	8	15.00
9	15.00	10	15.00	11	15.00
12	15.00	13	15.00	18	15.00
19	15.00				

CARICHI DISTRIBUITI ASTE

CONDIZIONE DI CARICO N.ro: 1 ALIQUOTA SISMICA: 100

IDENT.		NODO INIZIALE			NODO FINALE				
Asta3d N.ro	Riferimento	Qx kN/m	Qy kN/m	Qz kN/m	Qx kN/m	Qy kN/m	Qz kN/m	Mt kN**m/m	Pretens kN
1	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
2	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
7	0	0.00	0.00	-3.24	0.00	0.00	-3.24	-0.43	0.0
8	0	0.00	0.00	-3.24	0.00	0.00	-3.24	0.43	0.0
9	0	0.00	0.00	-6.39	0.00	0.00	-6.39	-0.43	0.0
10	0	0.00	0.00	-6.39	0.00	0.00	-6.39	0.43	0.0
11	0	0.00	0.00	-3.24	0.00	0.00	-3.24	-0.43	0.0
12	0	0.00	0.00	-3.24	0.00	0.00	-3.24	0.43	0.0
13	0	0.00	0.00	-9.18	0.00	0.00	-9.18	0.00	0.0
14	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
15	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
16	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
17	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0

CARICHI DISTRIBUITI ASTE

CONDIZIONE DI CARICO N.ro: 2 ALIQUOTA SISMICA: 100

IDENT.		NODO INIZIALE			NODO FINALE				
Asta3d N.ro	Riferimento	Qx kN/m	Qy kN/m	Qz kN/m	Qx kN/m	Qy kN/m	Qz kN/m	Mt kN**m/m	Pretens kN
1	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
2	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0

CARICHI DISTRIBUITI ASTE

CONDIZIONE DI CARICO N.ro: 2 ALIQUOTA SISMICA: 100

IDENT.		NODO INIZIALE			NODO FINALE				
Asta3d N.ro	Riferimento	Qx kN/m	Qy kN/m	Qz kN/m	Qx kN/m	Qy kN/m	Qz kN/m	Mt kN**m/m	Pretens kN
7	0	0.00	0.00	-1.82	0.00	0.00	-1.82	-0.22	0.0
8	0	0.00	0.00	-1.82	0.00	0.00	-1.82	0.22	0.0
9	0	0.00	0.00	-3.77	0.00	0.00	-3.77	-0.22	0.0
10	0	0.00	0.00	-3.77	0.00	0.00	-3.77	0.22	0.0
11	0	0.00	0.00	-1.82	0.00	0.00	-1.82	-0.22	0.0
12	0	0.00	0.00	-1.82	0.00	0.00	-1.82	0.22	0.0
13	0	0.00	0.00	-5.70	0.00	0.00	-5.70	0.00	0.0
14	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
15	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
16	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
17	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0

CARICHI DISTRIBUITI ASTE

CONDIZIONE DI CARICO N.ro: 4 ALIQUOTA SISMICA: 0

IDENT.		NODO INIZIALE			NODO FINALE				
Asta3d N.ro	Riferimento	Qx kN/m	Qy kN/m	Qz kN/m	Qx kN/m	Qy kN/m	Qz kN/m	Mt kN**m/m	Pretens kN
7	0	0.00	0.00	-0.43	0.00	0.00	-0.43	-0.06	0.0
8	0	0.00	0.00	-0.43	0.00	0.00	-0.43	0.06	0.0
9	0	0.00	0.00	-0.86	0.00	0.00	-0.86	-0.06	0.0
10	0	0.00	0.00	-0.86	0.00	0.00	-0.86	0.06	0.0
11	0	0.00	0.00	-0.43	0.00	0.00	-0.43	-0.06	0.0
12	0	0.00	0.00	-0.43	0.00	0.00	-0.43	0.06	0.0
13	0	0.00	0.00	-1.24	0.00	0.00	-1.24	0.00	0.0

CARICHI SUGLI SHELL

CONDIZIONE DI CARICO N.ro: 2 ALIQUOTA SISMICA: 100

IDENT.		PRESSIONI				CARICHI PERIMETRALI			
Shell N.ro	Riferimento	P.a kN/mq	P.b kN/mq	P.c kN/mq	P.d kN/mq	Q.ab kN/m	Q.bc kN/m	Q.cd kN/m	Q.da kN/m
1	0	-1.0	-1.0	-1.0	-1.0	0.0	0.0	0.0	0.0
2	0	-1.0	-1.0	-1.0	-1.0	0.0	0.0	0.0	0.0

CARICHI SUGLI SHELL

CONDIZIONE DI CARICO N.ro: 3 ALIQUOTA SISMICA: 80

IDENT.		PRESSIONI				CARICHI PERIMETRALI			
Shell N.ro	Riferimento	P.a kN/mq	P.b kN/mq	P.c kN/mq	P.d kN/mq	Q.ab kN/m	Q.bc kN/m	Q.cd kN/m	Q.da kN/m
1	0	-6.0	-6.0	-6.0	-6.0	0.0	0.0	0.0	0.0
2	0	-6.0	-6.0	-6.0	-6.0	0.0	0.0	0.0	0.0

COMPOSIZIONE SHELL

Macro Nro	Col.1	Col.2	Col.3	Col.4	Col.5	Col.6		Macro Nro	Col.1	Col.2	Col.3	Col.4	Col.5	Col.6
1	1	3	4	5	6	7		2	2	32	33	34	35	36
	8	9	10	11	12	13			37	38	39	40	41	42
	14	15	16	17	18	19			43	44	45	46	47	48
	20	21	22	23	24	25			49	50	51	52	53	54
	26	27	28	29	30	31			55	56	57	58	59	60

VERTICI MICRO SHELL

Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4		Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4		Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4
1	1	3	13	19	18		2	2	11	46	52	51		3	3	13	14	20	19
4	4	14	15	21	20		5	5	15	16	22	21		6	6	16	17	23	22
7	7	17	1	24	23		8	8	18	19	26	25		9	9	19	20	27	26
10	10	20	21	28	27		11	11	21	22	29	28		12	12	22	23	30	29
13	13	23	24	31	30		14	14	25	26	33	32		15	15	26	27	34	33
16	16	27	28	35	34		17	17	28	29	36	35		18	18	29	30	37	36
19	19	30	31	38	37		20	20	32	33	40	39		21	21	33	34	41	40
22	22	34	35	42	41		23	23	35	36	43	42		24	24	36	37	44	43
25	25	37	38	45	44		26	26	39	40	46	11		27	27	40	41	47	46

VERTICI MICRO SHELL

Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4	Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4	Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4
28	28	41	42	48	47	29	29	42	43	49	48	30	30	43	44	50	49
31	31	44	45	12	50	32	32	46	47	53	52	33	33	47	48	54	53
34	34	48	49	55	54	35	35	49	50	56	55	36	36	50	12	57	56
37	37	51	52	59	58	38	38	52	53	60	59	39	39	53	54	61	60
40	40	54	55	62	61	41	41	55	56	63	62	42	42	56	57	64	63
43	43	58	59	66	65	44	44	59	60	67	66	45	45	60	61	68	67
46	46	61	62	69	68	47	47	62	63	70	69	48	48	63	64	71	70
49	49	65	66	73	72	50	50	66	67	74	73	51	51	67	68	75	74
52	52	68	69	76	75	53	53	69	70	77	76	54	54	70	71	78	77
55	55	72	73	79	4	56	56	73	74	80	79	57	57	74	75	81	80
58	58	75	76	82	81	59	59	76	77	83	82	60	60	77	78	2	83

COMPOSIZIONE ASTE

Macro Asta Input Numero	Micro-Asta 1			Micro-Asta 2			Micro-Asta 3			Micro-Asta 4			Micro-Asta 5			Micro-Asta 6		
	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.
1	1	3	13	21	13	14	22	14	15	23	15	16	24	16	17	25	17	1
2	2	2	83	26	83	82	27	82	81	28	81	80	29	80	79	30	79	4
14	14	3	18	31	18	25	32	25	32	33	32	39	34	39	11			
15	15	11	51	35	51	58	36	58	65	37	65	72	38	72	4			
16	16	1	24	39	24	31	40	31	38	41	38	45	42	45	12			
17	17	12	57	43	57	64	44	64	71	45	71	78	46	78	2			
20	20	12	50	47	50	49	48	49	48	49	48	47	50	47	46	51	46	11

COMBINAZIONI CARICHI - S.L.V. - A1 / S.L.D.

DESCRIZIONI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Peso Strutturale	1.30	1.30	1.30	1.30	1.30	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Perm.Non Strutturale	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Var. Cat. E2	1.50	1.50	1.50	1.50	1.50	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
H1 car. manutenzione	1.50	1.50	0.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corr. Tors. dir. 0	0.00	0.00	0.00	0.00	0.00	1.00	-1.00	1.00	-1.00	1.00	-1.00	1.00	-1.00	-1.00	1.00
Corr. Tors. dir. 90	0.00	0.00	0.00	0.00	0.00	0.30	0.30	-0.30	-0.30	-0.30	-0.30	0.30	0.30	0.30	0.30
Carico termico	0.00	0.90	1.50	-0.90	-1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma direz. grd 0	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-1.00	-1.00
Sisma direz. grd 90	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.30	-0.30	-0.30	-0.30	-0.30	0.30	0.30

COMBINAZIONI CARICHI - S.L.V. - A1 / S.L.D.

DESCRIZIONI	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Peso Strutturale	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Perm.Non Strutturale	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Var. Cat. E2	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
H1 car. manutenzione	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corr. Tors. dir. 0	-1.00	1.00	-1.00	1.00	-1.00	1.00	0.30	-0.30	0.30	-0.30	0.30	-0.30	0.30	-0.30	-0.30
Corr. Tors. dir. 90	-0.30	-0.30	-0.30	-0.30	0.30	0.30	1.00	1.00	-1.00	-1.00	-1.00	-1.00	1.00	1.00	1.00
Carico termico	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma direz. grd 0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	-0.30
Sisma direz. grd 90	0.30	0.30	-0.30	-0.30	-0.30	-0.30	1.00	1.00	1.00	1.00	-1.00	-1.00	-1.00	-1.00	1.00

COMBINAZIONI CARICHI - S.L.V. - A1 / S.L.D.

DESCRIZIONI	31	32	33	34	35	36	37
Peso Strutturale	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Perm.Non Strutturale	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Var. Cat. E2	0.80	0.80	0.80	0.80	0.80	0.80	0.80
H1 car. manutenzione	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corr. Tors. dir. 0	0.30	-0.30	0.30	-0.30	0.30	-0.30	0.30
Corr. Tors. dir. 90	1.00	-1.00	-1.00	-1.00	-1.00	1.00	1.00
Carico termico	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma direz. grd 0	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Sisma direz. grd 90	1.00	1.00	1.00	-1.00	-1.00	-1.00	-1.00

COMBINAZIONI RARE - S.L.E.

DESCRIZIONI	1	2	3	4	5
Peso Strutturale	1.00	1.00	1.00	1.00	1.00
Perm.Non Strutturale	1.00	1.00	1.00	1.00	1.00
Var. Cat. E2	1.00	1.00	1.00	1.00	1.00
H1 car. manutenzione	1.00	1.00	0.00	1.00	0.00
Corr. Tors. dir. 0	0.00	0.00	0.00	0.00	0.00
Corr. Tors. dir. 90	0.00	0.00	0.00	0.00	0.00
Carico termico	0.00	0.60	1.00	-0.60	-1.00
Sisma direz. grd 0	0.00	0.00	0.00	0.00	0.00
Sisma direz. grd 90	0.00	0.00	0.00	0.00	0.00

COMBINAZIONI FREQUENTI - S.L.E.

DESCRIZIONI	1	2	3
Peso Strutturale	1.00	1.00	1.00
Perm.Non Strutturale	1.00	1.00	1.00
Var. Cat. E2	0.90	0.80	0.80

COMBINAZIONI FREQUENTI - S.L.E.

DESCRIZIONI	1	2	3
H1 car. manutenzione	0.00	0.00	0.00
Corr. Tors. dir. 0	0.00	0.00	0.00
Corr. Tors. dir. 90	0.00	0.00	0.00
Carico termico	0.00	0.50	-0.50
Sisma direz. grd 0	0.00	0.00	0.00
Sisma direz. grd 90	0.00	0.00	0.00

COMBINAZIONI PERMANENTI - S.L.E.

DESCRIZIONI	1
Peso Strutturale	1.00
Perm.Non Strutturale	1.00
Var. Cat. E2	0.80
H1 car. manutenzione	0.00
Corr. Tors. dir. 0	0.00
Corr. Tors. dir. 90	0.00
Carico termico	0.00
Sisma direz. grd 0	0.00
Sisma direz. grd 90	0.00

- **SPECIFICHE CAMPI TABELLE DI STAMPA TRAVI**

Tratto : *Le aste adiacenti a setti e piastre vengono suddivise in sottoelementi per garantire la congruenza. Il numero di "TRATTO" identifica la posizione sequenziale del sottoelemento attuale a partire dall'estremo iniziale*
Filo in. : *Filo iniziale*
Filo fin. : *Filo finale*

Le altre grandezze descritte di seguito si riferiscono a ciascun estremo dell'asta:

Alt. : *Altezza dell'estremità dell'asta dallo spiccato di fondazione*
Tx : *Taglio lungo la direzione dell'asse 'X' del sistema di riferimento locale di asta (principale d'inerzia)*
Ty : *Taglio lungo la direzione dell'asse 'Y' del sistema di riferimento locale di asta*
N : *Sforzo assiale*
Mx : *Momento agente con asse vettore parallelo all'asse 'X' del sistema di riferimento locale di asta*
My : *Momento agente con asse vettore parallelo all'asse 'Y' del sistema di riferimento locale di asta*
Mt : *Momento torcente dell'asta (agente con asse vettore parallelo all'asse 'Z' locale)*

- **SPECIFICHE CAMPI TABELLE DI STAMPA SHELL**

SISTEMA DI RIFERIMENTO LOCALE (s.r.l.): Il sistema di riferimento locale dell'elemento shell è così definito:

Origine : *I° punto di inserimento dello shell*
Asse 1 : *Asse X nel s.r.l., definito dal punto origine e dal II° punto di inserimento, nel verso di quest'ultimo*
Piano12 : *Piano XY nel s.r.l., definito dai punti origine, II° e III° di inserimento*
Asse 2 : *Asse Y nel s.r.l., ottenuto nel piano 12 con una rotazione antioraria di 90° dell'asse X intorno al punto origine, in modo che l'asse I-II si sovrapponga all'asse I-III con un angolo<180°*
Asse 3 *Asse Z nel s.r.l., ortogonale al piano 12, in modo da formare una terna destra con gli assi 1 e 2*

Le tensioni di lastra (S) sono costanti lungo lo spessore. Le tensioni di piastra (M) variano linearmente lungo lo spessore, annullandosi in corrispondenza del piano medio (diagramma emisimmetrico o "a farfalla"). I valori del tensore degli sforzi sono riferiti alla faccia positiva (superiore nel s.r.l.) di normale 3 (esempio: Xij tensione X agente sulla faccia di normale i e diretta lungo j).
Le altre grandezze descritte di seguito si riferiscono a ciascun nodo dell'elemento bidimensionale:

Shell Nro : *numero dell'elemento bidimensionale*
nodo N.ro : *numero del nodo dell'elemento bidimensionale a cui sono riferite le tensioni S di lastra e M piastra*
S11 : *tensione normale di lastra*
S22 : *tensione normale di lastra*
S12 *tensione tangenziale di lastra (S12 = S21)*
M11 *tensione normale di piastra sulla faccia positiva*
M22 *tensione normale di piastra sulla faccia positiva*
M12 *tensione tangenziale di piastra sulla faccia positiva*

Tabulato di stampa dei carichi nodali equivalenti applicati nei nodi degli shell.

Shell Nro : *numero dell'elemento bidimensionale*

nodo N.ro : *numero del nodo dell'elemento bidimensionale a cui sono i carichi nodali degli shell*

Tx : *Forza nodale in direzione X del sistema di riferimento locale*

Ty : *Forza nodale in direzione Y del sistema di riferimento locale*

Tz : *Forza nodale in direzione X del sistema di riferimento locale*

Mx : *Momento nodale con asse vettore parallelo all'asse X del sistema di riferimento locale*

My : *Momento nodale con asse vettore parallelo all'asse Y del sistema di riferimento locale*

Mz : *Momento nodale con asse vettore parallelo all'asse Z del sistema di riferimento locale*

- **SPECIFICHE CAMPI TABELLE DI STAMPA TRAVI**

Tratto : *Le aste adiacenti a setti e piastre vengono suddivise in sottoelementi per garantire la congruenza. Il numero di "TRATTO" identifica la posizione sequenziale del sottoelemento attuale a partire dall'estremo iniziale*
Filo in. : *Filo iniziale*
Filo fin. : *Filo finale*

Le altre grandezze descritte di seguito si riferiscono a ciascun estremo dell'asta:
Alt. : *Altezza dell'estremità dell'asta dallo spiccato di fondazione*
Tx : *Taglio lungo la direzione dell'asse 'X' del sistema di riferimento locale di asta (principale d'inerzia)*
Ty : *Taglio lungo la direzione dell'asse 'Y' del sistema di riferimento locale di asta*
N : *Sforzo assiale*
Mx : *Momento agente con asse vettore parallelo all'asse 'X' del sistema di riferimento locale di asta*
My : *Momento agente con asse vettore parallelo all'asse 'Y' del sistema di riferimento locale di asta*
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Le tensioni di lastra (S) sono costanti lungo lo spessore. Le tensioni di piastra (M) variano linearmente lungo lo spessore, annullandosi in corrispondenza del piano medio (diagramma emisimmetrico o "a farfalla"). I valori del tensore degli sforzi sono riferiti alla faccia positiva (superiore nel s.r.l.) di normale 3 (esempio: Xij tensione X agente sulla faccia di normale i e diretta lungo j).
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Shell Nro : *numero dell'elemento bidimensionale*
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S11 : *tensione normale di lastra*
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Tabulato di stampa dei carichi nodali equivalenti applicati nei nodi degli shell.

Shell Nro : *numero dell'elemento bidimensionale*

nodo N.ro : *numero del nodo dell'elemento bidimensionale a cui sono i carichi nodali degli shell*

Tx : *Forza nodale in direzione X del sistema di riferimento locale*

Ty : *Forza nodale in direzione Y del sistema di riferimento locale*

Tz : *Forza nodale in direzione X del sistema di riferimento locale*

Mx : *Momento nodale con asse vettore parallelo all'asse X del sistema di riferimento locale*

My : *Momento nodale con asse vettore parallelo all'asse Y del sistema di riferimento locale*

Mz : *Momento nodale con asse vettore parallelo all'asse Z del sistema di riferimento locale*

- **SPECIFICHE CAMPI TABELLE DI STAMPA TRAVI**

Tratto : *Le aste adiacenti a setti e piastre vengono suddivise in sottoelementi per garantire la congruenza. Il numero di "TRATTO" identifica la posizione sequenziale del sottoelemento attuale a partire dall'estremo iniziale*
Filo in. : *Filo iniziale*
Filo fin. : *Filo finale*

Le altre grandezze descritte di seguito si riferiscono a ciascun estremo dell'asta:

Alt. : *Altezza dell'estremità dell'asta dallo spiccato di fondazione*
Sx : *Spostamento lungo la direzione dell'asse 'X' del sistema di riferimento locale di asta*
Sy : *Spostamento lungo la direzione dell'asse 'Y' del sistema di riferimento locale di asta*
Sz : *Spostamento assiale*
Rx : *Rotazione agente con asse vettore parallelo all'asse 'X' del sistema di riferimento locale di asta*
Ry : *Rotazione agente con asse vettore parallelo all'asse 'Y' del sistema di riferimento locale di asta*
Rz : *Rotazione torcente dell'asta (agente con asse vettore parallelo all'asse 'Z' locale)*

- **SPECIFICHE CAMPI TABELLE DI STAMPA SHELL**

SISTEMA DI RIFERIMENTO LOCALE (s.r.l.): Il sistema di riferimento locale dell'elemento shell è così definito:
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Asse 3 : *Asse Z nel s.r.l., ortogonale al piano 12, in modo da formare una terna destra con gli assi 1 e 2*
Shell Nro : *numero dell'elemento bidimensionale*
nodo N.ro : *numero del nodo dell'elemento bidimensionale a cui sono riferite le tensioni S di lastra e M piastra*

Per ogni nodo dell'elemento bidimensionale:

Si : *spostamento in direzione i, s.r.l*
Ri : *rotazione con asse vettore i, s.r.l*

· *SPECIFICHE CAMPI TABELLA DI STAMPA*

Filo N.ro : *Numero del filo del nodo inferiore o superiore*

Quota inf/sup : *quota del nodo inferiore e del nodo superiore*

Nodo inf/sup : *numero dei nodi inferiore e superiore per la determinazione degli spostamenti sismici relativi*

Sisma N.ro : *numero del sisma per cui è massimo il valore dello spostamento totale calcolato per lo s.l.d.*

Spostam. Calcolo : *valore dello spostamento totale calcolato per lo s.l.d.*

Spostam. Limite : *valore dello spostamento limite per lo s.l.d.*

Sisma N.ro : *numero del sisma per cui è massimo il valore dello spostamento totale calcolato per lo s.l.o.*

Spostam. Calcolo : *valore dello spostamento totale calcolato per lo s.l.o.*

Spostam. Limite : *valore dello spostamento limite per lo s.l.o.*

SPECIFICHE CAMPI TABELLA DI STAMPA

Si riporta appresso la spiegazione delle sigle usate nel le tabelle di verifica aste in calcestruzzo per gli stati limite ultimi.

Filo Iniz./Fin. : *Sulla prima riga numero del filo del nodo iniziale, sulla seconda quello del nodo finale*

Cotg Θ : *Cotangente Angolo del puntone compresso*

Quota : *Sulla prima riga quota del nodo iniziale, sulla seconda quota del nodo finale*

SgmT : *Solo per le travi di fondazione:*
Pressione di contatto sul terreno in Kg/cmq calcolata con i valori caratteristici delle azioni assumendo i coefficienti gamma pari ad uno.

AmpC : *Solo per le travi di elevazione:*
Coefficiente di amplificazione dei carichi statici per tenere in conto della verifica locale dell'asta a sisma verticale.

N/Nc : *Solo per i pilastri:*
Percentuale della resistenza massima a compressione della sezione di solo calcestruzzo.

Tratto : *Se una trave è suddivisa in più tratti sulla prima riga è riportato il numero del tratto, sulla terza il numero di suddivisioni della trave*

Sez B/H : *Sulla prima riga numero della sezione nell'archivio, sulla seconda base della sezione, sulla terza altezza. Per sezioni a T è riportato l'ingombro massimo della sezione*

Concio : *Numero del concio*

Co Nr : *Numero della combinazione e in sequenza sollecitazioni ultime di calcolo che forniscono la massima deformazione nell'acciaio e nel calcestruzzo per la verifica a flessione*

GamRd : *Solo per le travi di fondazione: Coefficiente di sovraresistenza.*

M Exd : *Momento ultimo di calcolo asse vettore X (per le travi incrementato dalla traslazione del diagramma del momento flettente)*

M Eyd : *Momento ultimo di calcolo asse vettore Y*

N Ed : *Sforzo normale ultimo di calcolo*

x / d : *Rapporto fra la posizione dell'asse neutro e l'altezza utile della sezione moltiplicato per 100*

ef% ec% (*100) : *deformazioni massime nell'acciaio e nel calcestruzzo moltiplicate per 10.000. Valore limite per l'acciaio 100 (1%), valore limite nel calcestruzzo 35 (0,35%)*

Area : *Area del ferro in centimetri quadri; per le travi rispettivamente superiore ed inferiore, per i pilastri armature lungo la base e l'altezza della sezione*

Co Nr : *Numero della combinazione e in sequenza sollecitazioni ultime di calcolo che forniscono la minore sicurezza per le azioni taglianti e torcenti*

V Exd : *Taglio ultimo di calcolo in direzione X*

V Eyd : *Taglio ultimo di calcolo in direzione Y*

T sdu : *Momento torcente ultimo di calcolo*

V Rxd : *Taglio resistente ultimo delle staffe in direzione X*

V Ryd : *Taglio resistente ultimo delle staffe in direzione Y*

T Rd : *Momento torcente resistente ultimo delle staffe*

T Rld : *Momento torcente resistente ultimo dell'armatura longitudinale*

Coe Cls : *Coefficiente per il controllo di sicurezza del calcestruzzo alle azioni taglianti e torcenti moltiplicato per 100; la sezione è verificata se detto valore e minore o uguale a 100*

Coe Staf : *Coefficiente per il controllo di sicurezza delle staffe alle azioni taglianti e torcenti*

moltiplicato per 100; la sezione è verificata se detto valore e minore o uguale a 100

Alon : *Armatura longitudinale a torsione (nelle travi rettangolari per le quali è stata effettuata la verifica a momento My in questo dato viene stampata anche l'armatura flessionale dei lati verticali)*

Staffe : *Passo staffe e lunghezza del tratto da armare*

Moltipl Ultimo : *Solo per le stampe di riverifica:*
Moltiplicatore dei carichi che porta a collasso la sezione. Il percorso dei carichi seguito e' a sforzo normale costante. Le deformazioni riportate sono determinate dalle sollecitazioni di calcolo amplificate del moltiplicatore in parola.

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta appresso la spiegazione delle sigle usate nelle tabelle di verifica aste in cls per gli stati limiti di esercizio.

Filo : *Sulla prima riga numero del filo del nodo iniziale, sulla seconda quello del nodo finale*
Quota : *Sulla prima riga quota del nodo iniziale, sulla seconda quota del nodo finale*
Tratto : *Se una trave è suddivisa in più tratti sulla prima riga è riportato il numero del tratto, sulla terza il numero di suddivisioni della trave*
Com Cari : *Indicatore della matrice di combinazione; la prima riga individua la matrice delle combinazioni rare, la seconda la matrice delle combinazioni frequenti, la terza quella permanenti. Questo indicatore vale sia per la verifica a fessurazione che per il calcolo delle frecce*
Fessu : *Fessura limite e fessura di calcolo espressa in mm; se la trave non risulta fessurata l'ampiezza di calcolo sarà nulla*
Dist mm : *Distanza fra le fessure*
Concio : *Numero del concio in cui si è avuta la massima fessura*
Combin : *Numero della combinazione ed in sequenza sollecitazioni per cui si è avuta la massima fessura*
Mf X : *Momento flettente asse vettore X*
Mf Y : *Momento flettente asse vettore Y*
N : *Sforzo normale*
Frecce : *Freccia limite e freccia massima di calcolo*
Combin : *Numero della combinazione che ha prodotto la freccia massima*
Com Cari : *Indicatore della matrice di combinazione; la prima riga individua la matrice delle combinazioni rare per la verifica della tensione sul calcestruzzo, la seconda la matrice delle combinazioni rare per la verifica della tensione sull'acciaio, la terza la matrice delle combinazioni permanenti per la verifica della tensione sul calcestruzzo*
σ_{lim} : *Valore della tensione limite in Kg/cmq*
σ_{cal} : *Valore della tensione di calcolo in Kg/cmq*
Concio : *Numero del concio in cui si è avuta la massima tensione*
Combin : *Numero della combinazione ed in sequenza sollecitazioni per cui si è avuta la massima tensione*
Mf X : *Momento flettente asse vettore X*
Mf Y : *Momento flettente asse vettore Y*
N : *Sforzo normale*

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta di seguito la spiegazione delle sigle usate nella tabella di stampa della verifica degli elementi bidimensionali allo stato limite ultimo.

Quota N.ro: : *Quota a cui si trova l'elemento*
Perim. N.ro : *Numero identificativo del macroelemento il cui perimetro è stato definito prima di eseguire la verifica*
Nodo 3d N.ro : *Numero del nodo relativo alla suddivisione del macroelemento in microelementi*
Nx : *Sforzo sul piano dell'elemento bidimensionale diretto come l'asse x del sistema locale (il sistema di riferimento locale è quello delle armature)*
Ny : *Sforzo sul piano dell'elemento bidimensionale diretto come l'asse y del sistema locale*
Txy : *Sforzo tagliante sul piano dell'elemento con direzione y e agente sulla faccia di normale x del sistema locale (ovvero anche, per la simmetria delle tensioni tangenziali, sforzo tagliante sul piano dell'elemento con direzione x e agente sulla faccia di normale y del sistema locale)*
Mx : *Momento flettente agente sulla sezione di normale x del sistema locale. Per le verifiche è accoppiato allo sforzo normale Nx. Questo momento è incrementato per tenere in conto il valore del momento torcente Mxy*
My : *Momento flettente agente sulla sezione di normale y del sistema locale. Per le verifiche è accoppiato allo sforzo normale Ny. Questo momento è incrementato per tenere in conto il valore del momento torcente Mxy*
Mxy : *Momento torcente con asse vettore x e agente sulla sezione di normale x (ovvero anche, per la simmetria delle tensioni tangenziali momento torcente con asse vettore y e agente sulla sezione di normale y)*
εcx *10000 : *Deformazione del calcestruzzo nella faccia di normale x *10000 (Es. 0.35% = 35)*
εcy *10000 : *Deformazione del calcestruzzo nella faccia di normale y *10000 (Es. 0.35% = 35)*
εfx *10000 : *Deformazione dell'acciaio nella faccia di normale x *10000 (Es. 1% = 100)*
εfy *10000 : *Deformazione dell'acciaio nella faccia di normale y *10000 (Es. 1% = 100)*
Ax superiore : *Area totale armatura superiore diretta lungo x. Area totale è l'area della presso-flessione più l'area per il taglio riportata dopo)*
Ay superiore : *Area totale armatura superiore diretta lungo y*
Ax inferiore : *Area totale armatura inferiore diretta lungo x*
Ay inferiore : *Area totale armatura inferiore diretta lungo y*
Atag : *Area per il taglio su ciascuna faccia per le due direzioni*
σt : *Tensione massima di contatto con il terreno*
Eta : *Abbassamento verticale del nodo in esame*
Fpunz : *Forza di punzonamento determinata amplificando il massimo valore della forza punzonante (ottenuta dall'inviluppo fra le varie combinazioni di carico agenti) per un coefficiente beta raccomandato nell'eurocodice 2 (figura 6.21). Per le piastre di fondazione la forza di punzonamento è stata ridotta dell'effetto favorevole della pressione del suolo*
FpunzLi : *Resistenza al punzonamento ottenuta dall'applicazione dalla formula (6.47) dell'erurocodice 2, utilizzando il perimetro di base definito nelle figure 6.13 e 6.15*
Apunz : *Armatura di punzonamento calcolata dalla formula (6.51) dell' eurocodice 2*

Nel caso di stampa di riverifiche degli elementi con le armature effettivamente disposte sul disegno ferri le colonne delle ε vengono sostituite con:

Molt. : *Moltiplicatore delle sollecitazioni che porta a rottura la sezione, rispettivamente nelle direzioni X e Y*
x/d : *Posizione adimensionalizzata dell'asse neutro rispettivamente nelle direzioni X e Y*

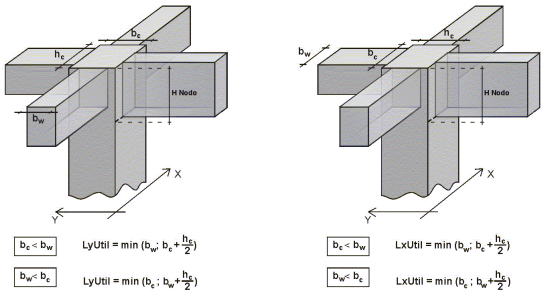
- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta di seguito la spiegazione delle sigle usate nella tabella di stampa delle verifiche agli stati limite di esercizio degli elementi bidimensionali.

Quota : *Quota a cui si trova l'elemento*
Perim. : *Numero identificativo del macro-elemento il cui perimetro è stato definito prima di eseguire la verifica*
Nodo : *Numero del nodo relativo alla suddivisione del macro-elemento in microelementi*
Comb Cari : *Indicatore della matrice di combinazione; la prima riga individua la matrice delle combinazioni rare, la seconda la matrice delle combinazioni frequenti, la terza quella permanenti*
Fes lim : *Fessura limite espressa in mm*
Fess. : *Fessura di calcolo espressa in mm; se sull'elemento non si aprono fessure tutta la riga sarà nulla*
Dist mm : *Distanza fra le fessure*
Combin : *Numero della combinazione ed in sequenza sollecitazioni per cui si è avuta la massima fessura*
Mf X : *Momento flettente agente sulla sezione di normale x del sistema locale. (Il sistema di riferimento locale è quello delle armature)*
N X : *Sforzo sul piano dell'elemento bidimensionale diretto come l'asse x del sistema locale*
Mf Y : *Momento flettente agente sulla sezione di normale y del sistema locale. (Il sistema di riferimento locale è quello delle armature)*
N Y : *Sforzo sul piano dell'elemento bidimensionale diretto come l'asse y del sistema locale*
Cos teta : *Coseno dell'angolo teta tra l'armatura in direzione X e la direzione della tensione principale di trazione*
Sin teta : *Seno dell'angolo teta*
Combina Carico : *Indicatore della matrice di combinazione; la prima riga individua la matrice delle combinazioni rare per la verifica della tensione sul cls, la seconda la matrice delle combinazioni rare per la verifica della tensione sull'acciaio, la terza la matrice delle combinazioni permanenti per la verifica della tensione sul cls*
s lim : *Valore della tensione limite in Kg/cmq*
s cal : *Valore della tensione di calcolo in Kg/cmq sulla faccia di normale x*
Conbin : *Numero della combinazione ed in sequenza sollecitazioni per cui si è avuta la massima tensione*
Mf X : *Momento flettente agente sulla sezione di normale x del sistema locale. (Il sistema di riferimento locale è quello delle armature)*
N X : *Sforzo sul piano dell'elemento bidimensionale diretto come l'asse x del sistema locale*
s cal : *Valore della tensione di calcolo in Kg/cmq sulla faccia di normale y*
Combin : *Numero della combinazione ed in sequenza sollecitazioni per cui si è avuta la massima tensione*
Mf Y : *Momento flettente agente sulla sezione di normale y del sistema locale*
N Y : *Sforzo sul piano dell'elemento bidimensionale diretto come l'asse y del sistema locale*

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta di seguito la spiegazione delle sigle usate nella tabella di stampa delle verifiche dei nodi trave-pilastro in calcestruzzo armato non confinati.



Filo N.ro : *Numero del filo fisso del pilastro a cui appartiene il nodo*

Quota (m) : *Quota in metri del nodo verificato*

Nodo3d N.ro : *Numerazione spaziale del nodo verificato*

Posiz. Pilastro : *Posizione del pilastro rispetto al nodo;* ***SUP*** *indica che il nodo verificato e' l'estremo inferiore di un pilastro;* ***INF*** *indica che il nodo verificato e l'estremo superiore del pilastro*

Sez. : *Numero di archivio della sezione del pilastro a cui appartiene il nodo*

Rotaz : *Rotazione di input del pilastro a cui appartiene il nodo*

HNodo : *Altezza del nodo in calcestruzzo su cui sono state effettuate le verifiche calcolata in funzione dell'intersezione tra il pilastro e le travi convergenti*

fck : *Resistenza caratteristica cilindrica del calcestruzzo*

fy : *Resistenza caratteristica allo snervamento dell'acciaio delle armature*

LyUtil : *Larghezza utile del nodo lungo la direzione Y locale del pilastro*

AfX : *Area complessiva dei bracci in direzione X locale del pilastro*

LxUtil : *Larghezza utile del nodo lungo la direzione X locale del pilastro*

AfY : *Area complessiva dei bracci in direzione Y locale del pilastro*

Vjbd (X/Y) : *Taglio agente sul nodo nella direzione X/Y locale del pilastro. Dato presente solo per le verifiche in alta duttilità.*

VjbR (X/Y) : *Resistenza biella compressa del nodo nella direzione X/Y locale del pilastro. Dato presente solo per le verifiche in alta duttilità.*

STATUS : *Esito della verifica del nodo.*
- *NON VER: si supera la resistenza della biella compressa*
- *ELASTICO: il nodo rimane in campo non fessurato*

- FESSURATO: il nodo verifica ma risulta fessurato
Dato presente solo per le verifiche in alta duttilità.

PULSAZIONI E MODI DI VIBRAZIONE

Modo N.ro	Pulsazione (rad/sec)	Periodo (sec)	Smorz Mod(%)	Sd/g SLO	Sd/g SLD	Sd/g SLV X	Sd/g SLV Y	Sd/g SLC X	Sd/g SLC Y	Piano N.ro	X (m)	Y (m)	Rot (rad)
1	42.627	0.14740	5.0		0.076	0.058	0.058			1	0.000000	0.236459	0.000000
2	44.558	0.14101	5.0		0.076	0.059	0.059			1	0.125903	-.200154	0.064566
3	54.701	0.11486	5.0		0.074	0.061	0.061			1	0.236460	0.000000	0.000000

FATTORI E FORZE DI PIANO MODALI S.L.V.

SISMA DIREZIONE: 0°

Massaeccitata (kN) :178.8Massatotale(t):178.8Rapporto:1

Modo N.ro	Fattore Modale	Fmod/Fmax (%)	Massa Mod Eff.(kN)	Mmod/Mtot %	Piano N.ro	FX (kN)	FY (kN)	Mt (kN*m)	Mom.Ecc. 5% (kN*m)
1	0.000	0.00	0.0	0.00	1	0.0	0.0	0.0	2.0
2	0.000	0.00	0.0	0.00	1	0.0	0.0	0.0	
3	4.229	100.00	178.8	100.03	1	10.9	0.0	0.0	

FATTORI E FORZE DI PIANO MODALI S.L.V.

SISMA DIREZIONE: 90°

Massaeccitata (kN) :178.8Massatotale(t):178.8Rapporto:1

Modo N.ro	Fattore Modale	Fmod/Fmax (%)	Massa Mod Eff.(kN)	Mmod/Mtot %	Piano N.ro	FX (kN)	FY (kN)	Mt (kN*m)	Mom.Ecc. 5% (kN*m)
1	4.229	100.00	178.8	100.03	1	0.0	10.4	0.0	3.2
2	0.000	0.00	0.0	0.00	1	0.0	0.0	0.0	
3	0.000	0.00	0.0	0.00	1	0.0	0.0	0.0	

CARATT.: SISMA 0°°: MODO3: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	1.9	0.0	-0.3	0.0	-0.1	3	0.00	0.0	-1.2	0.0	-0.7	0.0	0.1
1	5	0.00	0.0	-1.9	0.0	0.3	0.0	0.1	12	0.00	0.0	1.2	0.0	0.7	0.0	-0.1
	3	3.19	0.0	-1.6	-1.0	1.7	0.0	0.0	3	0.00	0.0	1.6	1.0	3.3	0.1	0.0
	5	3.19	0.0	-1.6	1.0	1.7	0.0	0.0	5	0.00	0.0	1.6	-1.0	3.3	-0.1	0.0
	10	3.19	0.0	-1.6	-1.0	1.7	0.0	0.0	10	0.00	0.0	1.6	1.0	3.3	-0.1	0.0
	12	3.19	0.0	-1.6	1.0	1.7	0.0	0.0	12	0.00	0.0	1.6	-1.0	3.3	0.1	0.0
	4	3.19	0.0	-1.0	-1.1	1.5	0.0	0.0	12	3.19	0.0	1.0	1.1	1.7	0.0	0.0
	6	3.19	0.0	-1.0	-1.1	1.5	0.0	0.0	5	3.19	0.0	1.0	1.1	1.7	0.0	0.0
	3	3.19	0.0	0.0	0.0	0.0	0.0	0.0	10	3.19	0.0	0.0	0.0	0.0	0.0	0.0
	5	3.19	0.0	0.0	0.0	0.0	0.0	0.0	12	3.19	0.0	0.0	0.0	0.0	0.0	0.0
	10	3.19	0.0	-1.0	1.1	1.7	0.0	0.0	4	3.19	0.0	1.0	-1.1	1.5	0.0	0.0
	3	3.19	0.0	-1.0	1.1	1.7	0.0	0.0	6	3.19	0.0	1.0	-1.1	1.5	0.0	0.0
	6	3.19	0.0	0.0	0.0	0.0	0.0	0.0	4	3.19	0.0	0.0	0.0	0.0	0.0	0.0
1	10	0.00	0.0	-0.8	0.0	2.9	0.0	0.0	4	0.00	0.0	1.4	0.0	-2.2	0.0	0.0
1	4	0.00	0.0	-2.1	0.0	2.0	0.0	0.0	12	0.00	0.0	2.1	0.0	-0.7	0.0	0.0
1	3	0.00	0.0	-0.8	0.0	2.9	0.0	0.0	6	0.00	0.0	1.4	0.0	-2.2	0.0	0.0
1	6	0.00	0.0	-2.1	0.0	2.0	0.0	0.0	5	0.00	0.0	2.1	0.0	-0.7	0.0	0.0
	6	3.19	0.0	-2.3	0.0	3.0	0.0	0.0	6	0.00	0.0	2.3	0.0	4.2	0.0	0.0
	4	3.19	0.0	-2.3	0.0	3.0	0.0	0.0	4	0.00	0.0	2.3	0.0	4.2	0.0	0.0
1	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
2	10	0.00	0.0	1.1	0.0	0.5	0.0	0.0	3	0.00	0.0	-0.5	0.0	-1.0	0.0	0.0
3	10	0.00	0.0	0.5	0.0	1.0	0.0	0.0	3	0.00	0.0	0.0	0.0	-1.1	0.0	0.0
4	10	0.00	0.0	0.0	0.0	1.1	0.0	0.0	3	0.00	0.0	0.5	0.0	-1.0	0.0	0.0
5	10	0.00	0.0	-0.5	0.0	1.0	0.0	0.0	3	0.00	0.0	1.1	0.0	-0.5	0.0	0.0
6	10	0.00	0.0	-1.2	0.0	0.7	0.0	0.1	3	0.00	0.0	1.9	0.0	0.3	0.0	-0.1
2	5	0.00	0.0	-1.1	0.0	-0.5	0.0	0.0	12	0.00	0.0	0.5	0.0	1.0	0.0	0.0
3	5	0.00	0.0	-0.5	0.0	-1.0	0.0	0.0	12	0.00	0.0	0.0	0.0	1.1	0.0	0.0
4	5	0.00	0.0	0.0	0.0	-1.1	0.0	0.0	12	0.00	0.0	-0.5	0.0	1.0	0.0	0.0
5	5	0.00	0.0	0.5	0.0	-1.0	0.0	0.0	12	0.00	0.0	-1.1	0.0	0.5	0.0	0.0
6	5	0.00	0.0	1.2	0.0	-0.7	0.0	-0.1	12	0.00	0.0	-1.9	0.0	-0.3	0.0	0.1
2	10	0.00	0.0	-1.3	0.0	2.2	0.0	0.0	4	0.00	0.0	1.6	0.0	-1.3	0.0	0.0
3	10	0.00	0.0	-1.6	0.0	1.3	0.0	0.0	4	0.00	0.0	1.8	0.0	-0.3	0.0	0.0
4	10	0.00	0.0	-1.8	0.0	0.4	0.0	0.0	4	0.00	0.0	2.0	0.0	0.8	0.0	0.0
5	10	0.00	0.0	-2.1	0.0	-0.7	0.0	0.0	4	0.00	0.0	2.1	0.0	2.0	0.0	0.0
2	4	0.00	0.0	-2.0	0.0	0.8	0.0	0.0	12	0.00	0.0	1.8	0.0	0.4	0.0	0.0
3	4	0.00	0.0	-1.8	0.0	-0.3	0.0	0.0	12	0.00	0.0	1.6	0.0	1.3	0.0	0.0
4	4	0.00	0.0	-1.6	0.0	-1.3	0.0	0.0	12	0.00	0.0	1.3	0.0	2.2	0.0	0.0
5	4	0.00	0.0	-1.4	0.0	-2.2	0.0	0.0	12	0.00	0.0	0.8	0.0	2.9	0.0	0.0
2	3	0.00	0.0	-1.3	0.0	2.2	0.0	0.0	6	0.00	0.0	1.6	0.0	-1.3	0.0	0.0
3	3	0.00	0.0	-1.6	0.0	1.3	0.0	0.0	6	0.00	0.0	1.8	0.0	-0.3	0.0	0.0
4	3	0.00	0.0	-1.8	0.0	0.4	0.0	0.0	6	0.00	0.0	2.0	0.0	0.8	0.0	0.0
5	3	0.00	0.0	-2.1	0.0	-0.7	0.0	0.0	6	0.00	0.0	2.1	0.0	2.0	0.0	0.0
2	6	0.00	0.0	-2.0	0.0	0.8	0.0	0.0	5	0.00	0.0	1.8	0.0	0.4	0.0	0.0
3	6	0.00	0.0	-1.8	0.0	-0.3	0.0	0.0	5	0.00	0.0	1.6	0.0	1.3	0.0	0.0
4	6	0.00	0.0	-1.6	0.0	-1.3	0.0	0.0	5	0.00	0.0	1.3	0.0	2.2	0.0	0.0
5	6	0.00	0.0	-1.4	0.0	-2.2	0.0	0.0	5	0.00	0.0	0.8	0.0	2.9	0.0	0.0
2	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
3	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
4	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
5	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
6	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0

FORZE: SISMA 0°°: MODO3: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	0.4	0.7	-0.1	0.0	0.0	0.1	19	0.7	1.1	0.0	0.0	0.0	0.0
	3	-0.8	-1.8	0.0	0.0	0.0	-0.1	13	-0.3	0.0	0.0	0.0	0.0	0.0
2	51	-0.1	0.6	0.0	0.0	0.0	0.1	52	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	-0.5	0.0	0.0	0.0	-0.1	46	0.1	-0.1	0.0	0.0	0.0	0.0
3	19	-0.2	-0.1	0.0	0.0	0.0	0.0	20	0.7	0.3	0.0	0.0	0.0	0.0
	13	-0.7	-0.4	0.0	0.0	0.0	0.0	14	0.2	0.2	0.0	0.0	0.0	0.0
4	20	-0.4	-0.1	0.0	0.0	0.0	-0.1	21	0.6	0.0	0.0	0.0	0.0	0.1
	14	-0.7	-0.1	0.0	0.0	0.0	0.1	15	0.5	0.1	0.0	0.0	0.0	-0.1
5	21	-0.6	0.0	0.0	0.0	0.0	-0.1	22	0.4	-0.1	0.0	0.0	0.0	0.1
	15	-0.5	0.1	0.0	0.0	0.0	0.1	16	0.7	-0.1	0.0	0.0	0.0	-0.1
6	22	-0.7	0.3	0.0	0.0	0.0	0.0	23	0.2	-0.1	0.0	0.0	0.0	0.0
	16	-0.2	0.2	0.0	0.0	0.0	0.0	17	0.7	-0.4	0.0	0.0	0.0	0.0
7	23	-0.7	1.1	0.0	0.0	0.0	0.0	24	-0.4	0.7	-0.1	0.0	0.0	-0.1
	17	0.3	0.0	0.0	0.0	0.0	0.0	1	0.8	-1.8	0.0	0.0	0.0	0.1
8	25	0.0	0.8	0.0	0.0	0.0	0.1	26	0.2	0.6	0.1	0.0	0.0	0.0
	18	-0.1	-1.0	-0.1	0.0	0.0	-0.1	19	0.0	-0.5	0.0	0.0	0.0	0.1
9	26	-0.1	0.2	0.0	0.0	0.0	0.0	27	0.4	0.3	0.0	0.0	0.0	0.0
	19	-0.5	-0.5	0.0	0.0	0.0	0.0	20	0.2	0.0	0.0	0.0	0.0	0.0
10	27	-0.3	0.1	0.0	0.0	0.0	0.0	28	0.4	0.1	0.0	0.0	0.0	0.0
	20	-0.5	-0.2	0.0	0.0	0.0	0.0	21	0.4	0.0	0.0	0.0	0.0	0.0
11	28	-0.4	0.1	0.0	0.0	0.0	0.0	29	0.3	0.1	0.0	0.0	0.0	0.0
	21	-0.4	0.0	0.0	0.0	0.0	0.0	22	0.5	-0.2	0.0	0.0	0.0	0.0
12	29	-0.4	0.3	0.0	0.0	0.0	0.0	30	0.1	0.2	0.0	0.0	0.0	0.0
	22	-0.2	0.0	0.0	0.0	0.0	0.0	23	0.5	-0.5	0.0	0.0	0.0	0.0
13	30	-0.2	0.6	0.1	0.0	0.0	0.0	31	0.0	0.8	0.0	0.0	0.0	-0.1
	23	0.0	-0.5	0.0	0.0	0.0	-0.1	24	0.1	-1.0	-0.1	0.0	0.0	0.1
14	32	-0.2	0.6	0.0	0.0	0.0	0.0	33	-0.1	0.2	0.0	0.0	0.0	0.0
	25	0.2	-0.3	0.0	0.0	0.0	-0.1	26	0.2	-0.5	0.0	0.0	0.0	0.0
15	33	-0.1	0.2	0.0	0.0	0.0	0.0	34	0.2	0.3	0.0	0.0	0.0	0.0
	26	-0.2	-0.3	0.0	0.0	0.0	0.0	27	0.1	-0.2	0.0	0.0	0.0	0.0
16	34	-0.1	0.1	0.0	0.0	0.0	0.0	35	0.2	0.2	0.0	0.0	0.0	0.0
	27	-0.3	-0.2	0.0	0.0	0.0	0.0	28	0.2	-0.1	0.0	0.0	0.0	0.0
17	35	-0.2	0.2	0.0	0.0	0.0	0.0	36	0.1	0.1	0.0	0.0	0.0	0.0
	28	-0.2	-0.1	0.0	0.0	0.0	0.0	29	0.3	-0.2	0.0	0.0	0.0	0.0
18	36	-0.2	0.3	0.0	0.0	0.0	0.0	37	0.1	0.2	0.0	0.0	0.0	0.0
	29	-0.1	-0.2	0.0	0.0	0.0	0.0	30	0.2	-0.3	0.0	0.0	0.0	0.0
19	37	0.1	0.2	0.0	0.0	0.0	0.0	38	0.2	0.6	0.0	0.0	0.0	0.0
	30	-0.2	-0.5	0.0	0.0	0.0	0.0	31	-0.2	-0.3	0.0	0.0	0.0	0.1
20	39	-0.3	0.1	0.0	0.0	0.0	0.0	40	-0.1	-0.1	0.0	0.0	0.0	0.0
	32	0.2	0.2	0.0	0.0	0.0	0.0	33	0.2	-0.3	0.0	0.0	0.0	0.0
21	40	0.0	0.1	0.0	0.0	0.0	0.0	41	0.0	0.2	0.0	0.0	0.0	0.0
	33	-0.1	-0.1	0.0	0.0	0.0	0.0	34	0.1	-0.2	0.0	0.0	0.0	0.0
22	41	0.0	0.2	0.0	0.0	0.0	0.0	42	0.0	0.2	0.0	0.0	0.0	0.0
	34	-0.1	-0.2	0.0	0.0	0.0	0.0	35	0.1	-0.2	0.0	0.0	0.0	0.0
23	42	0.0	0.2	0.0	0.0	0.0	0.0	43	0.0	0.2	0.0	0.0	0.0	0.0
	35	-0.1	-0.2	0.0	0.0	0.0	0.0	36	0.1	-0.2	0.0	0.0	0.0	0.0
24	43	0.0	0.2	0.0	0.0	0.0	0.0	44	0.0	0.1	0.0	0.0	0.0	0.0
	36	-0.1	-0.2	0.0	0.0	0.0	0.0	37	0.1	-0.1	0.0	0.0	0.0	0.0
25	44	0.1	-0.1	0.0	0.0	0.0	0.0	45	0.3	0.1	0.0	0.0	0.0	0.0
	37	-0.2	-0.3	0.0	0.0	0.0	0.0	38	-0.2	0.2	0.0	0.0	0.0	0.0
26	11	0.0	-0.5	0.0	0.0	0.0	-0.1	46	-0.1	-0.1	0.0	0.0	0.0	0.0
	39	0.1	0.6	0.0	0.0	0.0	0.1	40	0.0	0.0	0.0	0.0	0.0	0.0
27	46	-0.1	0.2	0.0	0.0	0.0	0.0	47	-0.1	0.1	0.0	0.0	0.0	0.0
	40	0.1	-0.1	0.0	0.0	0.0	0.0	41	0.1	-0.2	0.0	0.0	0.0	0.0
28	47	-0.1	0.2	0.0	0.0	0.0	0.0	48	0.0	0.2	0.0	0.0	0.0	0.0
	41	0.0	-0.2	0.0	0.0	0.0	0.0	42	0.1	-0.2	0.0	0.0	0.0	0.0
29	48	0.0	0.2	0.0	0.0	0.0	0.0	49	0.1	0.2	0.0	0.0	0.0	0.0
	42	-0.1	-0.2	0.0	0.0	0.0	0.0	43	0.0	-0.2	0.0	0.0	0.0	0.0
30	49	0.1	0.1	0.0	0.0	0.0	0.0	50	0.1	0.2	0.0	0.0	0.0	0.0
	43	-0.1	-0.2	0.0	0.0	0.0	0.0	44	-0.1	-0.1	0.0	0.0	0.0	0.0
31	50	0.1	-0.1	0.0	0.0	0.0	0.0	12	0.0	-0.5	0.0	0.0	0.0	0.1
	44	0.0	0.0	0.0	0.0	0.0	0.0	45	-0.1	0.6	0.0	0.0	0.0	-0.1
32	52	-0.1	-0.1	0.0	0.0	0.0	0.0	53	-0.1	-0.2	0.0	0.0	0.0	0.0
	46	0.1	0.2	0.0	0.0	0.0	0.0	47	0.1	0.1	0.0	0.0	0.0	0.0
33	53	0.0	-0.2	0.0	0.0	0.0	0.0	54	-0.1	-0.2	0.0	0.0	0.0	0.0
	47	0.1	0.2	0.0	0.0	0.0	0.0	48	0.0	0.2	0.0	0.0	0.0	0.0
34	54	0.1	-0.2	0.0	0.0	0.0	0.0	55	0.0	-0.2	0.0	0.0	0.0	0.0
	48	0.0	0.2	0.0	0.0	0.0	0.0	49	-0.1	0.2	0.0	0.0	0.0	0.0
35	55	0.1	-0.2	0.0	0.0	0.0	0.0	56	0.1	-0.1	0.0	0.0	0.0	0.0
	49	-0.1	0.1	0.0	0.0	0.0	0.0	50	-0.1	0.2	0.0	0.0	0.0	0.0
36	56	0.0	0.0	0.0	0.0	0.0	0.0	57	0.1	0.6	0.0	0.0	0.0	-0.1
	50	-0.1	-0.1	0.0	0.0	0.0	0.0	12	0.0	-0.5	0.0	0.0	0.0	0.1
37	58	-0.2	0.2	0.0	0.0	0.0	0.0	59	-0.2	-0.3	0.0	0.0	0.0	0.0
	51	0.3	0.1	0.0	0.0	0.0	0.0	52	0.1	-0.1	0.0	0.0	0.0	0.0
38	59	0.1	-0.1	0.0	0.0	0.0	0.0	60	-0.1	-0.2	0.0	0.0	0.0	0.0
	52	0.0	0.1	0.0	0.0	0.0	0.0	53	0.0	0.2	0.0	0.0	0.0	0.0
39	60	0.1	-0.2	0.0	0.0	0.0	0.0	61	-0.1	-0.2	0.0	0.0	0.0	0.0
	53	0.0	0.2	0.0	0.0	0.0	0.0	54	0.0	0.2	0.0	0.0	0.0	0.0
40	61	0.1	-0.2	0.0	0.0	0.0	0.0	62	-0.1	-0.2	0.0	0.0	0.0	0.0
	54	0.0	0.2	0.0	0.0	0.0	0.0	55	0.0	0.2	0.0	0.0	0.0	0.0
41	62	0.1	-0.2	0.0	0.0	0.0	0.0	63	-0.1	-0.1	0.0	0.0	0.0	0.0

FORZE: SISMA 0°°: MODO3: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
	55	0.0	0.2	0.0	0.0	0.0	0.0	56	0.0	0.1	0.0	0.0	0.0	0.0
42	63	0.2	-0.3	0.0	0.0	0.0	0.0	64	0.2	0.2	0.0	0.0	0.0	0.0
	56	-0.1	-0.1	0.0	0.0	0.0	0.0	57	-0.3	0.1	0.0	0.0	0.0	0.0
43	65	-0.2	-0.3	0.0	0.0	0.0	-0.1	66	-0.2	-0.5	0.0	0.0	0.0	0.0
	58	0.2	0.6	0.0	0.0	0.0	0.0	59	0.1	0.2	0.0	0.0	0.0	0.0
44	66	0.2	-0.3	0.0	0.0	0.0	0.0	67	-0.1	-0.2	0.0	0.0	0.0	0.0
	59	0.1	0.2	0.0	0.0	0.0	0.0	60	-0.2	0.3	0.0	0.0	0.0	0.0
45	67	0.3	-0.2	0.0	0.0	0.0	0.0	68	-0.2	-0.1	0.0	0.0	0.0	0.0
	60	0.1	0.1	0.0	0.0	0.0	0.0	61	-0.2	0.2	0.0	0.0	0.0	0.0
46	68	0.2	-0.1	0.0	0.0	0.0	0.0	69	-0.3	-0.2	0.0	0.0	0.0	0.0
	61	0.2	0.2	0.0	0.0	0.0	0.0	62	-0.1	0.1	0.0	0.0	0.0	0.0
47	69	0.1	-0.2	0.0	0.0	0.0	0.0	70	-0.2	-0.3	0.0	0.0	0.0	0.0
	62	0.2	0.3	0.0	0.0	0.0	0.0	63	-0.1	0.2	0.0	0.0	0.0	0.0
48	70	0.2	-0.5	0.0	0.0	0.0	0.0	71	0.2	-0.3	0.0	0.0	0.0	0.1
	63	-0.1	0.2	0.0	0.0	0.0	0.0	64	-0.2	0.6	0.0	0.0	0.0	0.0
49	72	0.1	-1.0	0.1	0.0	0.0	-0.1	73	0.0	-0.5	0.0	0.0	0.0	0.1
	65	0.0	0.8	0.0	0.0	0.0	0.1	66	-0.2	0.6	-0.1	0.0	0.0	0.0
50	73	0.5	-0.5	0.0	0.0	0.0	0.0	74	-0.2	0.0	0.0	0.0	0.0	0.0
	66	0.1	0.2	0.0	0.0	0.0	0.0	67	-0.4	0.3	0.0	0.0	0.0	0.0
51	74	0.5	-0.2	0.0	0.0	0.0	0.0	75	-0.4	0.0	0.0	0.0	0.0	0.0
	67	0.3	0.1	0.0	0.0	0.0	0.0	68	-0.4	0.1	0.0	0.0	0.0	0.0
52	75	0.4	0.0	0.0	0.0	0.0	0.0	76	-0.5	-0.2	0.0	0.0	0.0	0.0
	68	0.4	0.1	0.0	0.0	0.0	0.0	69	-0.3	0.1	0.0	0.0	0.0	0.0
53	76	0.2	0.0	0.0	0.0	0.0	0.0	77	-0.5	-0.5	0.0	0.0	0.0	0.0
	69	0.4	0.3	0.0	0.0	0.0	0.0	70	-0.1	0.2	0.0	0.0	0.0	0.0
54	77	0.0	-0.5	0.0	0.0	0.0	-0.1	78	-0.1	-1.0	0.1	0.0	0.0	0.1
	70	0.2	0.6	-0.1	0.0	0.0	0.0	71	0.0	0.8	0.0	0.0	0.0	-0.1
55	4	0.8	-1.8	0.0	0.0	0.0	-0.1	79	0.3	0.0	0.0	0.0	0.0	0.0
	72	-0.4	0.7	0.1	0.0	0.0	0.1	73	-0.7	1.1	0.0	0.0	0.0	0.0
56	79	0.7	-0.4	0.0	0.0	0.0	0.0	80	-0.2	0.2	0.0	0.0	0.0	0.0
	73	0.2	-0.1	0.0	0.0	0.0	0.0	74	-0.7	0.3	0.0	0.0	0.0	0.0
57	80	0.7	-0.1	0.0	0.0	0.0	0.1	81	-0.5	0.1	0.0	0.0	0.0	-0.1
	74	0.4	-0.1	0.0	0.0	0.0	-0.1	75	-0.6	0.0	0.0	0.0	0.0	0.1
58	81	0.5	0.1	0.0	0.0	0.0	0.1	82	-0.7	-0.1	0.0	0.0	0.0	-0.1
	75	0.6	0.0	0.0	0.0	0.0	-0.1	76	-0.4	-0.1	0.0	0.0	0.0	0.1
59	82	0.2	0.2	0.0	0.0	0.0	0.0	83	-0.7	-0.4	0.0	0.0	0.0	0.0
	76	0.7	0.3	0.0	0.0	0.0	0.0	77	-0.2	-0.1	0.0	0.0	0.0	0.0
60	83	-0.3	0.0	0.0	0.0	0.0	0.0	2	-0.8	-1.8	0.0	0.0	0.0	0.1
	77	0.7	1.1	0.0	0.0	0.0	0.0	78	0.4	0.7	0.1	0.0	0.0	-0.1

CARATT.: SISMA 90°°: MODO1: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	0.9	0.0	-3.0	0.0	0.0	3	0.00	0.0	-1.6	0.0	2.2	0.0	0.0
1	5	0.00	0.0	-0.9	0.0	3.0	0.0	0.0	12	0.00	0.0	1.6	0.0	-2.2	0.0	0.0
	3	3.19	-1.8	0.1	-1.1	-0.1	-2.2	0.0	3	0.00	1.8	-0.1	1.1	-0.3	-3.4	0.0
	5	3.19	-1.8	-0.1	-1.1	0.1	-2.2	0.0	5	0.00	1.8	0.1	1.1	0.3	-3.4	0.0
	10	3.19	-1.8	-0.1	1.1	0.1	-2.2	0.0	10	0.00	1.8	0.1	-1.1	0.3	-3.4	0.0
	12	3.19	-1.8	0.1	1.1	-0.1	-2.2	0.0	12	0.00	1.8	-0.1	-1.1	-0.3	-3.4	0.0
	4	3.19	-0.8	0.1	0.0	-0.1	-1.3	0.0	12	3.19	0.8	-0.1	0.0	-0.1	-1.3	0.0
	6	3.19	-0.8	-0.1	0.0	0.1	-1.3	0.0	5	3.19	0.8	0.1	0.0	0.1	-1.3	0.0
	3	3.19	0.0	-1.1	0.0	2.2	0.0	0.0	10	3.19	0.0	1.1	0.0	2.2	0.0	0.0
	5	3.19	0.0	-1.1	0.0	2.2	0.0	0.0	12	3.19	0.0	1.1	0.0	2.2	0.0	0.0
	10	3.19	0.8	-0.1	0.0	0.1	1.3	0.0	4	3.19	-0.8	0.1	0.0	0.1	1.3	0.0
	3	3.19	0.8	0.1	0.0	-0.1	1.3	0.0	6	3.19	-0.8	-0.1	0.0	-0.1	1.3	0.0
	6	3.19	0.0	-1.1	0.0	2.1	0.0	0.0	4	3.19	0.0	1.1	0.0	2.1	0.0	0.0
1	10	0.00	0.0	-2.0	0.0	0.4	0.0	-0.1	4	0.00	0.0	1.2	0.0	0.6	0.0	0.1
1	4	0.00	0.0	-1.3	0.0	0.1	0.0	-0.1	12	0.00	0.0	0.8	0.0	0.6	0.0	0.0
1	3	0.00	0.0	2.0	0.0	-0.4	0.0	-0.1	6	0.00	0.0	-1.2	0.0	-0.6	0.0	0.1
1	6	0.00	0.0	1.3	0.0	-0.1	0.0	-0.1	5	0.00	0.0	-0.8	0.0	-0.6	0.0	0.0
	6	3.19	-1.7	0.0	-1.2	0.0	-2.1	0.0	6	0.00	1.7	0.0	1.2	0.0	-3.2	0.0
	4	3.19	-1.7	0.0	1.2	0.0	-2.1	0.0	4	0.00	1.7	0.0	-1.2	0.0	-3.2	0.0
1	6	0.00	0.0	-1.4	0.0	2.7	0.0	0.0	4	0.00	0.0	1.9	0.0	-1.6	0.0	0.0
2	10	0.00	0.0	1.4	0.0	-2.1	0.0	0.0	3	0.00	0.0	-1.8	0.0	1.0	0.0	0.0
3	10	0.00	0.0	1.7	0.0	-1.1	0.0	0.0	3	0.00	0.0	-1.8	0.0	-0.1	0.0	0.0
4	10	0.00	0.0	1.8	0.0	-0.1	0.0	0.0	3	0.00	0.0	-1.7	0.0	-1.1	0.0	0.0
5	10	0.00	0.0	1.8	0.0	1.0	0.0	0.0	3	0.00	0.0	-1.4	0.0	-2.1	0.0	0.0
6	10	0.00	0.0	1.6	0.0	2.2	0.0	0.0	3	0.00	0.0	-0.9	0.0	-3.0	0.0	0.0
2	5	0.00	0.0	-1.4	0.0	2.1	0.0	0.0	12	0.00	0.0	1.8	0.0	-1.0	0.0	0.0
3	5	0.00	0.0	-1.7	0.0	1.1	0.0	0.0	12	0.00	0.0	1.8	0.0	0.1	0.0	0.0
4	5	0.00	0.0	-1.8	0.0	0.1	0.0	0.0	12	0.00	0.0	1.7	0.0	1.1	0.0	0.0
5	5	0.00	0.0	-1.8	0.0	-1.0	0.0	0.0	12	0.00	0.0	1.4	0.0	2.1	0.0	0.0
6	5	0.00	0.0	-1.6	0.0	-2.2	0.0	0.0	12	0.00	0.0	0.9	0.0	3.0	0.0	0.0
2	10	0.00	0.0	-1.1	0.0	-0.4	0.0	0.0	4	0.00	0.0	0.4	0.0	0.9	0.0	0.0
3	10	0.00	0.0	-0.5	0.0	-0.8	0.0	0.0	4	0.00	0.0	-0.1	0.0	0.9	0.0	0.0
4	10	0.00	0.0	0.1	0.0	-0.8	0.0	0.0	4	0.00	0.0	-0.7	0.0	0.5	0.0	0.0
5	10	0.00	0.0	0.8	0.0	-0.6	0.0	0.0	4	0.00	0.0	-1.3	0.0	-0.1	0.0	-0.1
2	4	0.00	0.0	-0.7	0.0	-0.5	0.0	0.0	12	0.00	0.0	0.1	0.0	0.8	0.0	0.0
3	4	0.00	0.0	-0.1	0.0	-0.9	0.0	0.0	12	0.00	0.0	-0.5	0.0	0.8	0.0	0.0
4	4	0.00	0.0	0.4	0.0	-0.9	0.0	0.0	12	0.00	0.0	-1.1	0.0	0.4	0.0	0.0
5	4	0.00	0.0	1.2	0.0	-0.6	0.0	0.1	12	0.00	0.0	-2.0	0.0	-0.4	0.0	-0.1
2	3	0.00	0.0	1.1	0.0	0.4	0.0	0.0	6	0.00	0.0	-0.4	0.0	-0.9	0.0	0.0

CARATT.: SISMA 90°°: MODO1: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
3	3	0.00	0.0	0.5	0.0	0.8	0.0	0.0	6	0.00	0.0	0.1	0.0	-0.9	0.0	0.0
4	3	0.00	0.0	-0.1	0.0	0.8	0.0	0.0	6	0.00	0.0	0.7	0.0	-0.5	0.0	0.0
5	3	0.00	0.0	-0.8	0.0	0.6	0.0	0.0	6	0.00	0.0	1.3	0.0	0.1	0.0	-0.1
2	6	0.00	0.0	0.7	0.0	0.5	0.0	0.0	5	0.00	0.0	-0.1	0.0	-0.8	0.0	0.0
3	6	0.00	0.0	0.1	0.0	0.9	0.0	0.0	5	0.00	0.0	0.5	0.0	-0.8	0.0	0.0
4	6	0.00	0.0	-0.4	0.0	0.9	0.0	0.0	5	0.00	0.0	1.1	0.0	-0.4	0.0	0.0
5	6	0.00	0.0	-1.2	0.0	0.6	0.0	0.1	5	0.00	0.0	2.0	0.0	0.4	0.0	-0.1
2	6	0.00	0.0	-1.7	0.0	1.8	0.0	0.0	4	0.00	0.0	1.9	0.0	-0.6	0.0	0.0
3	6	0.00	0.0	-1.8	0.0	1.0	0.0	0.0	4	0.00	0.0	1.9	0.0	0.2	0.0	0.0
4	6	0.00	0.0	-1.9	0.0	0.2	0.0	0.0	4	0.00	0.0	1.8	0.0	1.0	0.0	0.0
5	6	0.00	0.0	-1.9	0.0	-0.6	0.0	0.0	4	0.00	0.0	1.7	0.0	1.8	0.0	0.0
6	6	0.00	0.0	-1.9	0.0	-1.6	0.0	0.0	4	0.00	0.0	1.4	0.0	2.7	0.0	0.0

FORZE: SISMA 90°°: MODO1: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-0.1	0.4	-0.1	0.0	0.0	0.0	19	-1.1	-0.7	0.0	0.0	0.0	0.0
	3	1.8	0.8	0.0	0.0	0.0	-0.1	13	-0.6	-0.4	0.1	0.0	0.0	0.1
2	51	0.3	-0.2	0.0	0.0	0.0	0.0	52	-0.4	-0.3	0.0	0.0	0.0	0.0
	11	1.1	0.3	0.0	0.0	0.0	-0.1	46	-1.0	0.2	0.0	0.0	0.0	0.1
3	19	0.3	0.1	0.0	0.0	0.0	0.0	20	-0.6	-0.2	-0.1	0.0	0.0	0.0
	13	0.9	0.1	0.1	0.0	0.0	-0.1	14	-0.7	0.0	0.0	0.0	0.0	0.1
4	20	0.3	-0.1	0.0	0.0	0.0	0.0	21	-0.1	0.1	0.0	0.0	0.0	0.0
	14	0.2	-0.1	0.0	0.0	0.0	0.0	15	-0.4	0.2	0.0	0.0	0.0	0.0
5	21	-0.1	-0.1	0.0	0.0	0.0	0.0	22	0.3	0.1	0.0	0.0	0.0	0.0
	15	-0.4	-0.2	0.0	0.0	0.0	0.0	16	0.2	0.1	0.0	0.0	0.0	0.0
6	22	-0.6	0.2	0.1	0.0	0.0	0.0	23	0.3	-0.1	0.0	0.0	0.0	0.0
	16	-0.7	0.0	0.0	0.0	0.0	0.1	17	0.9	-0.1	-0.1	0.0	0.0	-0.1
7	23	-1.1	0.7	0.0	0.0	0.0	0.0	24	-0.1	-0.4	0.1	0.0	0.0	0.0
	17	-0.6	0.4	-0.1	0.0	0.0	0.1	1	1.8	-0.8	0.0	0.0	0.0	-0.1
8	25	-0.3	-0.1	0.0	0.0	0.0	0.0	26	-0.3	-0.7	0.0	0.0	0.0	0.0
	18	0.5	0.7	0.0	0.0	0.0	0.0	19	0.2	0.0	0.0	0.0	0.0	0.0
9	26	-0.2	-0.1	0.0	0.0	0.0	0.0	27	-0.3	-0.5	0.0	0.0	0.0	0.0
	19	0.5	0.6	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
10	27	-0.1	0.0	0.0	0.0	0.0	0.0	28	-0.2	-0.2	0.0	0.0	0.0	0.0
	20	0.3	0.3	0.0	0.0	0.0	0.0	21	0.1	-0.1	0.0	0.0	0.0	0.0
11	28	-0.2	0.2	0.0	0.0	0.0	0.0	29	-0.1	0.0	0.0	0.0	0.0	0.0
	21	0.1	0.1	0.0	0.0	0.0	0.0	22	0.3	-0.3	0.0	0.0	0.0	0.0
12	29	-0.3	0.5	0.0	0.0	0.0	0.0	30	-0.2	0.1	0.0	0.0	0.0	0.0
	22	0.0	0.0	0.0	0.0	0.0	0.0	23	0.5	-0.6	0.0	0.0	0.0	0.0
13	30	-0.3	0.7	0.0	0.0	0.0	0.0	31	-0.3	0.1	0.0	0.0	0.0	0.0
	23	0.2	0.0	0.0	0.0	0.0	0.0	24	0.5	-0.7	0.0	0.0	0.0	0.0
14	32	-0.3	-0.3	0.0	0.0	0.0	-0.1	33	-0.2	-0.7	0.0	0.0	0.0	0.1
	25	0.2	0.7	0.0	0.0	0.0	0.1	26	0.3	0.2	0.0	0.0	0.0	0.0
15	33	-0.2	-0.1	0.0	0.0	0.0	0.0	34	-0.2	-0.5	0.0	0.0	0.0	0.0
	26	0.3	0.6	0.0	0.0	0.0	0.0	27	0.2	0.0	0.0	0.0	0.0	0.0
16	34	-0.2	0.0	0.0	0.0	0.0	0.0	35	-0.2	-0.3	0.0	0.0	0.0	0.0
	27	0.3	0.4	0.0	0.0	0.0	0.0	28	0.2	-0.2	0.0	0.0	0.0	0.0
17	35	-0.2	0.3	0.0	0.0	0.0	0.0	36	-0.2	0.0	0.0	0.0	0.0	0.0
	28	0.2	0.2	0.0	0.0	0.0	0.0	29	0.3	-0.4	0.0	0.0	0.0	0.0
18	36	-0.2	0.5	0.0	0.0	0.0	0.0	37	-0.2	0.1	0.0	0.0	0.0	0.0
	29	0.2	0.0	0.0	0.0	0.0	0.0	30	0.3	-0.6	0.0	0.0	0.0	0.0
19	37	-0.2	0.7	0.0	0.0	0.0	0.1	38	-0.3	0.3	0.0	0.0	0.0	-0.1
	30	0.3	-0.2	0.0	0.0	0.0	0.0	31	0.2	-0.7	0.0	0.0	0.0	0.1
20	39	-0.1	-0.3	0.0	0.0	0.0	0.0	40	-0.2	-0.5	0.0	0.0	0.0	0.0
	32	0.1	0.6	0.0	0.0	0.0	0.0	33	0.2	0.2	0.0	0.0	0.0	0.0
21	40	0.0	-0.2	0.0	0.0	0.0	0.0	41	-0.4	-0.4	0.0	0.0	0.0	0.0
	33	0.3	0.6	0.0	0.0	0.0	0.0	34	0.1	0.0	0.0	0.0	0.0	0.0
22	41	-0.2	0.1	0.0	0.0	0.0	0.0	42	-0.4	-0.3	0.0	0.0	0.0	0.0
	34	0.3	0.4	0.0	0.0	0.0	0.0	35	0.2	-0.2	0.0	0.0	0.0	0.0
23	42	-0.4	0.3	0.0	0.0	0.0	0.0	43	-0.2	-0.1	0.0	0.0	0.0	0.0
	35	0.2	0.2	0.0	0.0	0.0	0.0	36	0.3	-0.4	0.0	0.0	0.0	0.0
24	43	-0.4	0.4	0.0	0.0	0.0	0.0	44	0.0	0.2	0.0	0.0	0.0	0.0
	36	0.1	0.0	0.0	0.0	0.0	0.0	37	0.3	-0.6	0.0	0.0	0.0	0.0
25	44	-0.2	0.5	0.0	0.0	0.0	0.0	45	-0.1	0.3	0.0	0.0	0.0	0.0
	37	0.2	-0.2	0.0	0.0	0.0	0.0	38	0.1	-0.6	0.0	0.0	0.0	0.0
26	11	1.1	-0.3	0.0	0.0	0.0	0.1	46	-1.0	-0.2	0.0	0.0	0.0	-0.1
	39	0.3	0.2	0.0	0.0	0.0	0.0	40	-0.4	0.3	0.0	0.0	0.0	0.0
27	46	0.3	0.2	0.1	0.0	0.0	0.1	47	-1.0	-0.4	0.0	0.0	0.0	0.0
	40	0.7	0.4	0.0	0.0	0.0	0.0	41	0.0	-0.2	-0.1	0.0	0.0	0.0
28	47	-0.3	0.4	0.0	0.0	0.0	0.0	48	-0.7	-0.5	0.0	0.0	0.0	0.0
	41	0.6	0.5	0.0	0.0	0.0	0.0	42	0.4	-0.4	0.0	0.0	0.0	0.0
29	48	-0.7	0.5	0.0	0.0	0.0	0.0	49	-0.3	-0.4	0.0	0.0	0.0	0.0
	42	0.4	0.4	0.0	0.0	0.0	0.0	43	0.6	-0.5	0.0	0.0	0.0	0.0
30	49	-1.0	0.4	0.0	0.0	0.0	0.0	50	0.3	-0.2	-0.1	0.0	0.0	0.1
	43	0.0	0.2	0.1	0.0	0.0	0.0	44	0.7	-0.4	0.0	0.0	0.0	0.0
31	50	-1.0	0.2	0.0	0.0	0.0	-0.1	12	1.1	0.3	0.0	0.0	0.0	0.1
	44	-0.4	-0.3	0.0	0.0	0.0	0.0	45	0.3	-0.2	0.0	0.0	0.0	0.0
32	52	0.7	-0.4	0.0	0.0	0.0	0.0	53	0.0	0.2	-0.1	0.0	0.0	0.0
	46	0.3	-0.2	0.1	0.0	0.0	-0.1	47	-1.0	0.4	0.0	0.0	0.0	0.0

FORZE: SISMA 90°°: MODO1: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
33	53	0.6	-0.5	0.0	0.0	0.0	0.0	54	0.4	0.4	0.0	0.0	0.0	0.0
	47	-0.3	-0.4	0.0	0.0	0.0	0.0	48	-0.7	0.5	0.0	0.0	0.0	0.0
34	54	0.4	-0.4	0.0	0.0	0.0	0.0	55	0.6	0.5	0.0	0.0	0.0	0.0
	48	-0.7	-0.5	0.0	0.0	0.0	0.0	49	-0.3	0.4	0.0	0.0	0.0	0.0
35	55	0.0	-0.2	0.1	0.0	0.0	0.0	56	0.7	0.4	0.0	0.0	0.0	0.0
	49	-1.0	-0.4	0.0	0.0	0.0	0.0	50	0.3	0.2	-0.1	0.0	0.0	-0.1
36	56	-0.4	0.3	0.0	0.0	0.0	0.0	57	0.3	0.2	0.0	0.0	0.0	0.0
	50	-1.0	-0.2	0.0	0.0	0.0	0.1	12	1.1	-0.3	0.0	0.0	0.0	-0.1
37	58	0.1	-0.6	0.0	0.0	0.0	0.0	59	0.2	-0.2	0.0	0.0	0.0	0.0
	51	-0.1	0.3	0.0	0.0	0.0	0.0	52	-0.2	0.5	0.0	0.0	0.0	0.0
38	59	0.3	-0.6	0.0	0.0	0.0	0.0	60	0.1	0.0	0.0	0.0	0.0	0.0
	52	0.0	0.2	0.0	0.0	0.0	0.0	53	-0.4	0.4	0.0	0.0	0.0	0.0
39	60	0.3	-0.4	0.0	0.0	0.0	0.0	61	0.2	0.2	0.0	0.0	0.0	0.0
	53	-0.2	-0.1	0.0	0.0	0.0	0.0	54	-0.4	0.3	0.0	0.0	0.0	0.0
40	61	0.2	-0.2	0.0	0.0	0.0	0.0	62	0.3	0.4	0.0	0.0	0.0	0.0
	54	-0.4	-0.3	0.0	0.0	0.0	0.0	55	-0.2	0.1	0.0	0.0	0.0	0.0
41	62	0.1	0.0	0.0	0.0	0.0	0.0	63	0.3	0.6	0.0	0.0	0.0	0.0
	55	-0.4	-0.4	0.0	0.0	0.0	0.0	56	0.0	-0.2	0.0	0.0	0.0	0.0
42	63	0.2	0.2	0.0	0.0	0.0	0.0	64	0.1	0.6	0.0	0.0	0.0	0.0
	56	-0.2	-0.5	0.0	0.0	0.0	0.0	57	-0.1	-0.3	0.0	0.0	0.0	0.0
43	65	0.2	-0.7	0.0	0.0	0.0	-0.1	66	0.3	-0.2	0.0	0.0	0.0	0.0
	58	-0.3	0.3	0.0	0.0	0.0	0.1	59	-0.2	0.7	0.0	0.0	0.0	-0.1
44	66	0.3	-0.6	0.0	0.0	0.0	0.0	67	0.2	0.0	0.0	0.0	0.0	0.0
	59	-0.2	0.1	0.0	0.0	0.0	0.0	60	-0.2	0.5	0.0	0.0	0.0	0.0
45	67	0.3	-0.4	0.0	0.0	0.0	0.0	68	0.2	0.2	0.0	0.0	0.0	0.0
	60	-0.2	0.0	0.0	0.0	0.0	0.0	61	-0.2	0.3	0.0	0.0	0.0	0.0
46	68	0.2	-0.2	0.0	0.0	0.0	0.0	69	0.3	0.4	0.0	0.0	0.0	0.0
	61	-0.2	-0.3	0.0	0.0	0.0	0.0	62	-0.2	0.0	0.0	0.0	0.0	0.0
47	69	0.2	0.0	0.0	0.0	0.0	0.0	70	0.3	0.6	0.0	0.0	0.0	0.0
	62	-0.2	-0.5	0.0	0.0	0.0	0.0	63	-0.2	-0.1	0.0	0.0	0.0	0.0
48	70	0.3	0.2	0.0	0.0	0.0	0.0	71	0.2	0.7	0.0	0.0	0.0	-0.1
	63	-0.2	-0.7	0.0	0.0	0.0	-0.1	64	-0.3	-0.3	0.0	0.0	0.0	0.1
49	72	0.5	-0.7	0.0	0.0	0.0	0.0	73	0.2	0.0	0.0	0.0	0.0	0.0
	65	-0.3	0.1	0.0	0.0	0.0	0.0	66	-0.3	0.7	0.0	0.0	0.0	0.0
50	73	0.5	-0.6	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
	66	-0.2	0.1	0.0	0.0	0.0	0.0	67	-0.3	0.5	0.0	0.0	0.0	0.0
51	74	0.3	-0.3	0.0	0.0	0.0	0.0	75	0.1	0.1	0.0	0.0	0.0	0.0
	67	-0.1	0.0	0.0	0.0	0.0	0.0	68	-0.2	0.2	0.0	0.0	0.0	0.0
52	75	0.1	-0.1	0.0	0.0	0.0	0.0	76	0.3	0.3	0.0	0.0	0.0	0.0
	68	-0.2	-0.2	0.0	0.0	0.0	0.0	69	-0.1	0.0	0.0	0.0	0.0	0.0
53	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.5	0.6	0.0	0.0	0.0	0.0
	69	-0.3	-0.5	0.0	0.0	0.0	0.0	70	-0.2	-0.1	0.0	0.0	0.0	0.0
54	77	0.2	0.0	0.0	0.0	0.0	0.0	78	0.5	0.7	0.0	0.0	0.0	0.0
	70	-0.3	-0.7	0.0	0.0	0.0	0.0	71	-0.3	-0.1	0.0	0.0	0.0	0.0
55	4	1.8	-0.8	0.0	0.0	0.0	0.1	79	-0.6	0.4	0.1	0.0	0.0	-0.1
	72	-0.1	-0.4	-0.1	0.0	0.0	0.0	73	-1.1	0.7	0.0	0.0	0.0	0.0
56	79	0.9	-0.1	0.1	0.0	0.0	0.1	80	-0.7	0.0	0.0	0.0	0.0	-0.1
	73	0.3	-0.1	0.0	0.0	0.0	0.0	74	-0.6	0.2	-0.1	0.0	0.0	0.0
57	80	0.2	0.1	0.0	0.0	0.0	0.0	81	-0.4	-0.2	0.0	0.0	0.0	0.0
	74	0.3	0.1	0.0	0.0	0.0	0.0	75	-0.1	-0.1	0.0	0.0	0.0	0.0
58	81	-0.4	0.2	0.0	0.0	0.0	0.0	82	0.2	-0.1	0.0	0.0	0.0	0.0
	75	-0.1	0.1	0.0	0.0	0.0	0.0	76	0.3	-0.1	0.0	0.0	0.0	0.0
59	82	-0.7	0.0	0.0	0.0	0.0	-0.1	83	0.9	0.1	-0.1	0.0	0.0	0.1
	76	-0.6	-0.2	0.1	0.0	0.0	0.0	77	0.3	0.1	0.0	0.0	0.0	0.0
60	83	-0.6	-0.4	-0.1	0.0	0.0	-0.1	2	1.8	0.8	0.0	0.0	0.0	0.1
	77	-1.1	-0.7	0.0	0.0	0.0	0.0	78	-0.1	0.4	0.1	0.0	0.0	0.0

SPOST.: SISMA 0°: MODO3: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
1	5	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.20	-0.02	-.00006	0.00000	0.0000	3	0.00	0.00	0.00	-0.02	-.00001	0.00000	0.0000
	5	3.19	0.00	-0.20	0.02	-.00006	0.00000	0.0000	5	0.00	0.00	0.00	0.02	-.00001	0.00000	0.0000
	10	3.19	0.00	-0.20	-0.02	-.00006	0.00000	0.0000	10	0.00	0.00	0.00	-0.02	-.00001	0.00000	0.0000
	12	3.19	0.00	-0.20	0.02	-.00006	0.00000	0.0000	12	0.00	0.00	0.00	0.02	-.00001	0.00000	0.0000
	4	3.19	0.00	0.00	0.20	0.00004	0.00000	0.0000	12	3.19	0.00	-0.02	0.20	0.00006	0.00000	0.0000
	6	3.19	0.00	0.00	0.20	0.00004	0.00000	0.0000	5	3.19	0.00	-0.02	0.20	0.00006	0.00000	0.0000
	3	3.19	-0.20	0.02	0.00	0.00000	0.00000	0.0001	10	3.19	-0.20	0.02	0.00	0.00000	0.00000	0.0001
	5	3.19	-0.20	-0.02	0.00	0.00000	0.00000	0.0001	12	3.19	-0.20	-0.02	0.00	0.00000	0.00000	0.0001
	10	3.19	0.00	0.02	0.20	0.00006	0.00000	0.0000	4	3.19	0.00	0.00	0.20	0.00004	0.00000	0.0000
	3	3.19	0.00	0.02	0.20	0.00006	0.00000	0.0000	6	3.19	0.00	0.00	0.20	0.00004	0.00000	0.0000
	6	3.19	-0.20	0.00	0.00	0.00000	0.00000	0.0000	4	3.19	-0.20	0.00	0.00	0.00000	0.00000	0.0000
1	10	0.00	0.00	0.02	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
1	4	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	0.02	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.20	0.00	-.00004	0.00000	0.0000	6	0.00	0.00	0.00	0.00	-.00001	0.00000	0.0000
	4	3.19	0.00	-0.20	0.00	-.00004	0.00000	0.0000	4	0.00	0.00	0.00	0.00	-.00001	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000

SPOST.: SISMA 0°: MODO3: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
3	10	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
6	10	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
2	5	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
6	5	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
3	10	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
2	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
4	4	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
5	4	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00001	0.00000	0.0000
2	3	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
3	3	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
4	6	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
5	6	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.02	0.00	0.00001	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000

SPOST.: SISMA 0°: MODO3: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	0.01	-.00001	0.00000	0.00000	19	0.00	0.00	0.01	-.00001	0.00000	0.00000
	3	0.00	0.00	0.02	-.00001	0.00000	0.00000	13	0.00	0.00	0.02	-.00001	0.00000	0.00000
2	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
	11	0.00	0.00	0.00	-.00001	0.00000	0.00000	46	0.00	0.00	0.00	-.00001	0.00000	0.00000
3	19	0.00	0.00	0.01	-.00001	0.00000	0.00000	20	0.00	0.00	0.01	-.00001	0.00000	0.00000
	13	0.00	0.00	0.02	-.00001	0.00000	0.00000	14	0.00	0.00	0.01	-.00001	0.00000	0.00000
4	20	0.00	0.00	0.01	-.00001	0.00000	0.00000	21	0.00	0.00	0.01	0.00000	0.00000	0.00000
	14	0.00	0.00	0.01	-.00001	0.00000	0.00000	15	0.00	0.00	0.01	-.00001	0.00000	0.00000
5	21	0.00	0.00	0.01	0.00000	0.00000	0.00000	22	0.00	0.00	0.01	-.00001	0.00000	0.00000
	15	0.00	0.00	0.01	-.00001	0.00000	0.00000	16	0.00	0.00	0.01	-.00001	0.00000	0.00000
6	22	0.00	0.00	0.01	-.00001	0.00000	0.00000	23	0.00	0.00	0.01	-.00001	0.00000	0.00000
	16	0.00	0.00	0.01	-.00001	0.00000	0.00000	17	0.00	0.00	0.02	-.00001	0.00000	0.00000
7	23	0.00	0.00	0.01	-.00001	0.00000	0.00000	24	0.00	0.00	0.01	-.00001	0.00000	0.00000
	17	0.00	0.00	0.02	-.00001	0.00000	0.00000	1	0.00	0.00	0.02	-.00001	0.00000	0.00000
8	25	0.00	0.00	0.01	-.00001	0.00000	0.00000	26	0.00	0.00	0.01	0.00000	0.00000	0.00000
	18	0.00	0.00	0.01	-.00001	0.00000	0.00000	19	0.00	0.00	0.01	-.00001	0.00000	0.00000
9	26	0.00	0.00	0.01	0.00000	0.00000	0.00000	27	0.00	0.00	0.01	0.00000	0.00000	0.00000
	19	0.00	0.00	0.01	-.00001	0.00000	0.00000	20	0.00	0.00	0.01	-.00001	0.00000	0.00000
10	27	0.00	0.00	0.01	0.00000	0.00000	0.00000	28	0.00	0.00	0.01	0.00000	0.00000	0.00000
	20	0.00	0.00	0.01	-.00001	0.00000	0.00000	21	0.00	0.00	0.01	0.00000	0.00000	0.00000
11	28	0.00	0.00	0.01	0.00000	0.00000	0.00000	29	0.00	0.00	0.01	0.00000	0.00000	0.00000
	21	0.00	0.00	0.01	0.00000	0.00000	0.00000	22	0.00	0.00	0.01	-.00001	0.00000	0.00000
12	29	0.00	0.00	0.01	0.00000	0.00000	0.00000	30	0.00	0.00	0.01	0.00000	0.00000	0.00000
	22	0.00	0.00	0.01	-.00001	0.00000	0.00000	23	0.00	0.00	0.01	-.00001	0.00000	0.00000
13	30	0.00	0.00	0.01	0.00000	0.00000	0.00000	31	0.00	0.00	0.01	-.00001	0.00000	0.00000
	23	0.00	0.00	0.01	-.00001	0.00000	0.00000	24	0.00	0.00	0.01	-.00001	0.00000	0.00000
14	32	0.00	0.00	0.01	0.00000	0.00000	0.00000	33	0.00	0.00	0.01	0.00000	0.00000	0.00000
	25	0.00	0.00	0.01	-.00001	0.00000	0.00000	26	0.00	0.00	0.01	0.00000	0.00000	0.00000
15	33	0.00	0.00	0.01	0.00000	0.00000	0.00000	34	0.00	0.00	0.01	0.00000	0.00000	0.00000
	26	0.00	0.00	0.01	0.00000	0.00000	0.00000	27	0.00	0.00	0.01	0.00000	0.00000	0.00000
16	34	0.00	0.00	0.01	0.00000	0.00000	0.00000	35	0.00	0.00	0.01	0.00000	0.00000	0.00000
	27	0.00	0.00	0.01	0.00000	0.00000	0.00000	28	0.00	0.00	0.01	0.00000	0.00000	0.00000
17	35	0.00	0.00	0.01	0.00000	0.00000	0.00000	36	0.00	0.00	0.01	0.00000	0.00000	0.00000
	28	0.00	0.00	0.01	0.00000	0.00000	0.00000	29	0.00	0.00	0.01	0.00000	0.00000	0.00000
18	36	0.00	0.00	0.01	0.00000	0.00000	0.00000	37	0.00	0.00	0.01	0.00000	0.00000	0.00000
	29	0.00	0.00	0.01	0.00000	0.00000	0.00000	30	0.00	0.00	0.01	0.00000	0.00000	0.00000
19	37	0.00	0.00	0.01	0.00000	0.00000	0.00000	38	0.00	0.00	0.01	0.00000	0.00000	0.00000
	30	0.00	0.00	0.01	0.00000	0.00000	0.00000	31	0.00	0.00	0.01	-.00001	0.00000	0.00000
20	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
	32	0.00	0.00	0.01	0.00000	0.00000	0.00000	33	0.00	0.00	0.01	0.00000	0.00000	0.00000
21	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
	33	0.00	0.00	0.01	0.00000	0.00000	0.00000	34	0.00	0.00	0.01	0.00000	0.00000	0.00000
22	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
	34	0.00	0.00	0.01	0.00000	0.00000	0.00000	35	0.00	0.00	0.01	0.00000	0.00000	0.00000
23	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
	35	0.00	0.00	0.01	0.00000	0.00000	0.00000	36	0.00	0.00	0.01	0.00000	0.00000	0.00000
24	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
	36	0.00	0.00	0.01	0.00000	0.00000	0.00000	37	0.00	0.00	0.01	0.00000	0.00000	0.00000

SPOST.: SISMA 0°: MODO3: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
25	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
	37	0.00	0.00	0.01	0.00000	0.00000	0.00000	38	0.00	0.00	0.01	0.00000	0.00000	0.00000
26	11	0.00	0.00	0.00	-.00001	0.00000	0.00000	46	0.00	0.00	0.00	-.00001	0.00000	0.00000
	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
27	46	0.00	0.00	0.00	-.00001	0.00000	0.00000	47	0.00	0.00	0.00	-.00001	0.00000	0.00000
	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
28	47	0.00	0.00	0.00	-.00001	0.00000	0.00000	48	0.00	0.00	0.00	-.00001	0.00000	0.00000
	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
29	48	0.00	0.00	0.00	-.00001	0.00000	0.00000	49	0.00	0.00	0.00	-.00001	0.00000	0.00000
	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
30	49	0.00	0.00	0.00	-.00001	0.00000	0.00000	50	0.00	0.00	0.00	-.00001	0.00000	0.00000
	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
31	50	0.00	0.00	0.00	-.00001	0.00000	0.00000	12	0.00	0.00	0.00	-.00001	0.00000	0.00000
	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
32	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
	46	0.00	0.00	0.00	-.00001	0.00000	0.00000	47	0.00	0.00	0.00	-.00001	0.00000	0.00000
33	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
	47	0.00	0.00	0.00	-.00001	0.00000	0.00000	48	0.00	0.00	0.00	-.00001	0.00000	0.00000
34	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000
	48	0.00	0.00	0.00	-.00001	0.00000	0.00000	49	0.00	0.00	0.00	-.00001	0.00000	0.00000
35	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
	49	0.00	0.00	0.00	-.00001	0.00000	0.00000	50	0.00	0.00	0.00	-.00001	0.00000	0.00000
36	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
	50	0.00	0.00	0.00	-.00001	0.00000	0.00000	12	0.00	0.00	0.00	-.00001	0.00000	0.00000
37	58	0.00	0.00	-0.01	0.00000	0.00000	0.00000	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
38	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
39	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
40	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000
41	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
42	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000	64	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
43	65	0.00	0.00	-0.01	-.00001	0.00000	0.00000	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	58	0.00	0.00	-0.01	0.00000	0.00000	0.00000	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000
44	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000
45	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000
46	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000
47	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000
48	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000	71	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000	64	0.00	0.00	-0.01	0.00000	0.00000	0.00000
49	72	0.00	0.00	-0.01	-.00001	0.00000	0.00000	73	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	65	0.00	0.00	-0.01	-.00001	0.00000	0.00000	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000
50	73	0.00	0.00	-0.01	-.00001	0.00000	0.00000	74	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000
51	74	0.00	0.00	-0.01	-.00001	0.00000	0.00000	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000
52	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000	76	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000
53	76	0.00	0.00	-0.01	-.00001	0.00000	0.00000	77	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000
54	77	0.00	0.00	-0.01	-.00001	0.00000	0.00000	78	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000	71	0.00	0.00	-0.01	-.00001	0.00000	0.00000
55	4	0.00	0.00	-0.02	-.00001	0.00000	0.00000	79	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	72	0.00	0.00	-0.01	-.00001	0.00000	0.00000	73	0.00	0.00	-0.01	-.00001	0.00000	0.00000
56	79	0.00	0.00	-0.02	-.00001	0.00000	0.00000	80	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	73	0.00	0.00	-0.01	-.00001	0.00000	0.00000	74	0.00	0.00	-0.01	-.00001	0.00000	0.00000
57	80	0.00	0.00	-0.01	-.00001	0.00000	0.00000	81	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	74	0.00	0.00	-0.01	-.00001	0.00000	0.00000	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000
58	81	0.00	0.00	-0.01	-.00001	0.00000	0.00000	82	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000	76	0.00	0.00	-0.01	-.00001	0.00000	0.00000
59	82	0.00	0.00	-0.01	-.00001	0.00000	0.00000	83	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	76	0.00	0.00	-0.01	-.00001	0.00000	0.00000	77	0.00	0.00	-0.01	-.00001	0.00000	0.00000
60	83	0.00	0.00	-0.02	-.00001	0.00000	0.00000	2	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	77	0.00	0.00	-0.01	-.00001	0.00000	0.00000	78	0.00	0.00	-0.01	-.00001	0.00000	0.00000

SPOST.: SISMA 90°: MODO1: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.02	0.00	-.00002	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	-.00001	0.00000	0.0000
1	5	0.00	0.00	0.02	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
	3	3.19	-0.31	0.00	-0.02	0.00000	0.00008	0.0000	3	0.00	0.00	0.00	-0.02	0.00000	0.00002	0.0000
	5	3.19	-0.31	0.00	-0.02	0.00000	0.00008	0.0000	5	0.00	0.00	0.00	-0.02	0.00000	0.00002	0.0000

SPOST.: SISMA 90°: MODO1: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
	10	3.19	-0.31	0.00	0.02	0.00000	0.00008	0.0000	10	0.00	0.00	0.00	0.02	0.00000	0.00002	0.0000
	12	3.19	-0.31	0.00	0.02	0.00000	0.00008	0.0000	12	0.00	0.00	0.00	0.02	0.00000	0.00002	0.0000
	4	3.19	0.29	-0.02	0.00	0.00000	0.00000	-.0001	12	3.19	0.31	-0.02	0.00	0.00000	0.00000	-.0001
	6	3.19	0.29	0.02	0.00	0.00000	0.00000	-.0001	5	3.19	0.31	0.02	0.00	0.00000	0.00000	-.0001
	3	3.19	0.00	0.02	0.31	0.00008	0.00000	0.0000	10	3.19	0.00	-0.02	0.31	0.00008	0.00000	0.0000
	5	3.19	0.00	0.02	0.31	0.00008	0.00000	0.0000	12	3.19	0.00	-0.02	0.31	0.00008	0.00000	0.0000
	10	3.19	0.31	-0.02	0.00	0.00000	0.00000	-.0001	4	3.19	0.29	-0.02	0.00	0.00000	0.00000	-.0001
	3	3.19	0.31	0.02	0.00	0.00000	0.00000	-.0001	6	3.19	0.29	0.02	0.00	0.00000	0.00000	-.0001
	6	3.19	0.00	0.02	0.29	0.00007	0.00000	0.0000	4	3.19	0.00	-0.02	0.29	0.00007	0.00000	0.0000
1	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
1	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
	6	3.19	-0.29	0.00	-0.02	0.00000	0.00007	0.0000	6	0.00	0.00	0.00	-0.02	0.00000	0.00001	0.0000
	4	3.19	-0.29	0.00	0.02	0.00000	0.00007	0.0000	4	0.00	0.00	0.00	0.02	0.00000	0.00001	0.0000
1	6	0.00	0.00	0.02	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
2	10	0.00	0.00	-0.01	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	-.00001	0.00000	0.0000
3	10	0.00	0.00	-0.01	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	0.00	0.00	-.00001	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	0.01	0.00	-.00001	0.00000	0.0000
5	10	0.00	0.00	0.01	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	0.01	0.00	-.00001	0.00000	0.0000
6	10	0.00	0.00	0.01	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	0.02	0.00	-.00002	0.00000	0.0000
2	5	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
3	5	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
4	5	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
5	5	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
6	5	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00002	0.00000	0.0000
2	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
4	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
5	4	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	3	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
3	3	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.02	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
6	6	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.02	0.00	0.00001	0.00000	0.0000

SPOST.: SISMA 90°: MODO1: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.02	0.00000	-.00001	0.00000	19	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	3	0.00	0.00	-0.02	0.00000	-.00002	0.00000	13	0.00	0.00	-0.01	0.00000	-.00001	0.00000
2	51	0.00	0.00	-0.02	0.00000	-.00001	0.00000	52	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	11	0.00	0.00	-0.02	0.00000	-.00001	0.00000	46	0.00	0.00	-0.01	0.00000	-.00001	0.00000
3	19	0.00	0.00	-0.01	0.00000	-.00001	0.00000	20	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	13	0.00	0.00	-0.01	0.00000	-.00001	0.00000	14	0.00	0.00	-0.01	0.00000	-.00001	0.00000
4	20	0.00	0.00	-0.01	0.00000	-.00001	0.00000	21	0.00	0.00	0.00	0.00000	-.00001	0.00000
	14	0.00	0.00	-0.01	0.00000	-.00001	0.00000	15	0.00	0.00	0.00	0.00000	-.00001	0.00000
5	21	0.00	0.00	0.00	0.00000	-.00001	0.00000	22	0.00	0.00	0.01	0.00000	-.00001	0.00000
	15	0.00	0.00	0.00	0.00000	-.00001	0.00000	16	0.00	0.00	0.01	0.00000	-.00001	0.00000
6	22	0.00	0.00	0.01	0.00000	-.00001	0.00000	23	0.00	0.00	0.01	0.00000	-.00001	0.00000
	16	0.00	0.00	0.01	0.00000	-.00001	0.00000	17	0.00	0.00	0.01	0.00000	-.00001	0.00000
7	23	0.00	0.00	0.01	0.00000	-.00001	0.00000	24	0.00	0.00	0.02	0.00000	-.00001	0.00000
	17	0.00	0.00	0.01	0.00000	-.00001	0.00000	1	0.00	0.00	0.02	0.00000	-.00002	0.00000
8	25	0.00	0.00	-0.02	0.00000	-.00001	0.00000	26	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	18	0.00	0.00	-0.02	0.00000	-.00001	0.00000	19	0.00	0.00	-0.01	0.00000	-.00001	0.00000
9	26	0.00	0.00	-0.01	0.00000	-.00001	0.00000	27	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	19	0.00	0.00	-0.01	0.00000	-.00001	0.00000	20	0.00	0.00	-0.01	0.00000	-.00001	0.00000
10	27	0.00	0.00	-0.01	0.00000	-.00001	0.00000	28	0.00	0.00	0.00	0.00000	-.00001	0.00000
	20	0.00	0.00	-0.01	0.00000	-.00001	0.00000	21	0.00	0.00	0.00	0.00000	-.00001	0.00000
11	28	0.00	0.00	0.00	0.00000	-.00001	0.00000	29	0.00	0.00	0.01	0.00000	-.00001	0.00000
	21	0.00	0.00	0.00	0.00000	-.00001	0.00000	22	0.00	0.00	0.01	0.00000	-.00001	0.00000
12	29	0.00	0.00	0.01	0.00000	-.00001	0.00000	30	0.00	0.00	0.01	0.00000	-.00001	0.00000
	22	0.00	0.00	0.01	0.00000	-.00001	0.00000	23	0.00	0.00	0.01	0.00000	-.00001	0.00000
13	30	0.00	0.00	0.01	0.00000	-.00001	0.00000	31	0.00	0.00	0.02	0.00000	-.00001	0.00000
	23	0.00	0.00	0.01	0.00000	-.00001	0.00000	24	0.00	0.00	0.02	0.00000	-.00001	0.00000
14	32	0.00	0.00	-0.02	0.00000	-.00001	0.00000	33	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	25	0.00	0.00	-0.02	0.00000	-.00001	0.00000	26	0.00	0.00	-0.01	0.00000	-.00001	0.00000
15	33	0.00	0.00	-0.01	0.00000	-.00001	0.00000	34	0.00	0.00	0.00	0.00000	-.00001	0.00000
	26	0.00	0.00	-0.01	0.00000	-.00001	0.00000	27	0.00	0.00	-0.01	0.00000	-.00001	0.00000
16	34	0.00	0.00	0.00	0.00000	-.00001	0.00000	35	0.00	0.00	0.00	0.00000	-.00001	0.00000
	27	0.00	0.00	-0.01	0.00000	-.00001	0.00000	28	0.00	0.00	0.00	0.00000	-.00001	0.00000

SPOST.: SISMA 90°: MODO1: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
17	35	0.00	0.00	0.00	0.00000	-.00001	0.00000	36	0.00	0.00	0.00	0.00000	-.00001	0.00000
	28	0.00	0.00	0.00	0.00000	-.00001	0.00000	29	0.00	0.00	0.01	0.00000	-.00001	0.00000
18	36	0.00	0.00	0.00	0.00000	-.00001	0.00000	37	0.00	0.00	0.01	0.00000	-.00001	0.00000
	29	0.00	0.00	0.01	0.00000	-.00001	0.00000	30	0.00	0.00	0.01	0.00000	-.00001	0.00000
19	37	0.00	0.00	0.01	0.00000	-.00001	0.00000	38	0.00	0.00	0.02	0.00000	-.00001	0.00000
	30	0.00	0.00	0.01	0.00000	-.00001	0.00000	31	0.00	0.00	0.02	0.00000	-.00001	0.00000
20	39	0.00	0.00	-0.02	0.00000	-.00001	0.00000	40	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	32	0.00	0.00	-0.02	0.00000	-.00001	0.00000	33	0.00	0.00	-0.01	0.00000	-.00001	0.00000
21	40	0.00	0.00	-0.01	0.00000	-.00001	0.00000	41	0.00	0.00	0.00	0.00000	-.00001	0.00000
	33	0.00	0.00	-0.01	0.00000	-.00001	0.00000	34	0.00	0.00	0.00	0.00000	-.00001	0.00000
22	41	0.00	0.00	0.00	0.00000	-.00001	0.00000	42	0.00	0.00	0.00	0.00000	-.00001	0.00000
	34	0.00	0.00	0.00	0.00000	-.00001	0.00000	35	0.00	0.00	0.00	0.00000	-.00001	0.00000
23	42	0.00	0.00	0.00	0.00000	-.00001	0.00000	43	0.00	0.00	0.00	0.00000	-.00001	0.00000
	35	0.00	0.00	0.00	0.00000	-.00001	0.00000	36	0.00	0.00	0.00	0.00000	-.00001	0.00000
24	43	0.00	0.00	0.00	0.00000	-.00001	0.00000	44	0.00	0.00	0.01	0.00000	-.00001	0.00000
	36	0.00	0.00	0.00	0.00000	-.00001	0.00000	37	0.00	0.00	0.01	0.00000	-.00001	0.00000
25	44	0.00	0.00	0.01	0.00000	-.00001	0.00000	45	0.00	0.00	0.02	0.00000	-.00001	0.00000
	37	0.00	0.00	0.01	0.00000	-.00001	0.00000	38	0.00	0.00	0.02	0.00000	-.00001	0.00000
26	11	0.00	0.00	-0.02	0.00000	-.00001	0.00000	46	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	39	0.00	0.00	-0.02	0.00000	-.00001	0.00000	40	0.00	0.00	-0.01	0.00000	-.00001	0.00000
27	46	0.00	0.00	-0.01	0.00000	-.00001	0.00000	47	0.00	0.00	0.00	0.00000	-.00001	0.00000
	40	0.00	0.00	-0.01	0.00000	-.00001	0.00000	41	0.00	0.00	0.00	0.00000	-.00001	0.00000
28	47	0.00	0.00	0.00	0.00000	-.00001	0.00000	48	0.00	0.00	0.00	0.00000	-.00001	0.00000
	41	0.00	0.00	0.00	0.00000	-.00001	0.00000	42	0.00	0.00	0.00	0.00000	-.00001	0.00000
29	48	0.00	0.00	0.00	0.00000	-.00001	0.00000	49	0.00	0.00	0.00	0.00000	-.00001	0.00000
	42	0.00	0.00	0.00	0.00000	-.00001	0.00000	43	0.00	0.00	0.00	0.00000	-.00001	0.00000
30	49	0.00	0.00	0.00	0.00000	-.00001	0.00000	50	0.00	0.00	0.01	0.00000	-.00001	0.00000
	43	0.00	0.00	0.00	0.00000	-.00001	0.00000	44	0.00	0.00	0.01	0.00000	-.00001	0.00000
31	50	0.00	0.00	0.01	0.00000	-.00001	0.00000	12	0.00	0.00	0.02	0.00000	-.00001	0.00000
	44	0.00	0.00	0.01	0.00000	-.00001	0.00000	45	0.00	0.00	0.02	0.00000	-.00001	0.00000
32	52	0.00	0.00	-0.01	0.00000	-.00001	0.00000	53	0.00	0.00	0.00	0.00000	-.00001	0.00000
	46	0.00	0.00	-0.01	0.00000	-.00001	0.00000	47	0.00	0.00	0.00	0.00000	-.00001	0.00000
33	53	0.00	0.00	0.00	0.00000	-.00001	0.00000	54	0.00	0.00	0.00	0.00000	-.00001	0.00000
	47	0.00	0.00	0.00	0.00000	-.00001	0.00000	48	0.00	0.00	0.00	0.00000	-.00001	0.00000
34	54	0.00	0.00	0.00	0.00000	-.00001	0.00000	55	0.00	0.00	0.00	0.00000	-.00001	0.00000
	48	0.00	0.00	0.00	0.00000	-.00001	0.00000	49	0.00	0.00	0.00	0.00000	-.00001	0.00000
35	55	0.00	0.00	0.00	0.00000	-.00001	0.00000	56	0.00	0.00	0.01	0.00000	-.00001	0.00000
	49	0.00	0.00	0.00	0.00000	-.00001	0.00000	50	0.00	0.00	0.01	0.00000	-.00001	0.00000
36	56	0.00	0.00	0.01	0.00000	-.00001	0.00000	57	0.00	0.00	0.02	0.00000	-.00001	0.00000
	50	0.00	0.00	0.01	0.00000	-.00001	0.00000	12	0.00	0.00	0.02	0.00000	-.00001	0.00000
37	58	0.00	0.00	-0.02	0.00000	-.00001	0.00000	59	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	51	0.00	0.00	-0.02	0.00000	-.00001	0.00000	52	0.00	0.00	-0.01	0.00000	-.00001	0.00000
38	59	0.00	0.00	-0.01	0.00000	-.00001	0.00000	60	0.00	0.00	0.00	0.00000	-.00001	0.00000
	52	0.00	0.00	-0.01	0.00000	-.00001	0.00000	53	0.00	0.00	0.00	0.00000	-.00001	0.00000
39	60	0.00	0.00	0.00	0.00000	-.00001	0.00000	61	0.00	0.00	0.00	0.00000	-.00001	0.00000
	53	0.00	0.00	0.00	0.00000	-.00001	0.00000	54	0.00	0.00	0.00	0.00000	-.00001	0.00000
40	61	0.00	0.00	0.00	0.00000	-.00001	0.00000	62	0.00	0.00	0.00	0.00000	-.00001	0.00000
	54	0.00	0.00	0.00	0.00000	-.00001	0.00000	55	0.00	0.00	0.00	0.00000	-.00001	0.00000
41	62	0.00	0.00	0.00	0.00000	-.00001	0.00000	63	0.00	0.00	0.01	0.00000	-.00001	0.00000
	55	0.00	0.00	0.00	0.00000	-.00001	0.00000	56	0.00	0.00	0.01	0.00000	-.00001	0.00000
42	63	0.00	0.00	0.01	0.00000	-.00001	0.00000	64	0.00	0.00	0.02	0.00000	-.00001	0.00000
	56	0.00	0.00	0.01	0.00000	-.00001	0.00000	57	0.00	0.00	0.02	0.00000	-.00001	0.00000
43	65	0.00	0.00	-0.02	0.00000	-.00001	0.00000	66	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	58	0.00	0.00	-0.02	0.00000	-.00001	0.00000	59	0.00	0.00	-0.01	0.00000	-.00001	0.00000
44	66	0.00	0.00	-0.01	0.00000	-.00001	0.00000	67	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	59	0.00	0.00	-0.01	0.00000	-.00001	0.00000	60	0.00	0.00	0.00	0.00000	-.00001	0.00000
45	67	0.00	0.00	-0.01	0.00000	-.00001	0.00000	68	0.00	0.00	0.00	0.00000	-.00001	0.00000
	60	0.00	0.00	0.00	0.00000	-.00001	0.00000	61	0.00	0.00	0.00	0.00000	-.00001	0.00000
46	68	0.00	0.00	0.00	0.00000	-.00001	0.00000	69	0.00	0.00	0.01	0.00000	-.00001	0.00000
	61	0.00	0.00	0.00	0.00000	-.00001	0.00000	62	0.00	0.00	0.00	0.00000	-.00001	0.00000
47	69	0.00	0.00	0.01	0.00000	-.00001	0.00000	70	0.00	0.00	0.01	0.00000	-.00001	0.00000
	62	0.00	0.00	0.00	0.00000	-.00001	0.00000	63	0.00	0.00	0.01	0.00000	-.00001	0.00000
48	70	0.00	0.00	0.01	0.00000	-.00001	0.00000	71	0.00	0.00	0.02	0.00000	-.00001	0.00000
	63	0.00	0.00	0.01	0.00000	-.00001	0.00000	64	0.00	0.00	0.02	0.00000	-.00001	0.00000
49	72	0.00	0.00	-0.02	0.00000	-.00001	0.00000	73	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	65	0.00	0.00	-0.02	0.00000	-.00001	0.00000	66	0.00	0.00	-0.01	0.00000	-.00001	0.00000
50	73	0.00	0.00	-0.01	0.00000	-.00001	0.00000	74	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	66	0.00	0.00	-0.01	0.00000	-.00001	0.00000	67	0.00	0.00	-0.01	0.00000	-.00001	0.00000
51	74	0.00	0.00	-0.01	0.00000	-.00001	0.00000	75	0.00	0.00	0.00	0.00000	-.00001	0.00000
	67	0.00	0.00	-0.01	0.00000	-.00001	0.00000	68	0.00	0.00	0.00	0.00000	-.00001	0.00000
52	75	0.00	0.00	0.00	0.00000	-.00001	0.00000	76	0.00	0.00	0.01	0.00000	-.00001	0.00000
	68	0.00	0.00	0.00	0.00000	-.00001	0.00000	69	0.00	0.00	0.01	0.00000	-.00001	0.00000
53	76	0.00	0.00	0.01	0.00000	-.00001	0.00000	77	0.00	0.00	0.01	0.00000	-.00001	0.00000
	69	0.00	0.00	0.01	0.00000	-.00001	0.00000	70	0.00	0.00	0.01	0.00000	-.00001	0.00000
54	77	0.00	0.00	0.01	0.00000	-.00001	0.00000	78	0.00	0.00	0.02	0.00000	-.00001	0.00000
	70	0.00	0.00	0.01	0.00000	-.00001	0.00000	71	0.00	0.00	0.02	0.00000	-.00001	0.00000
55	4	0.00	0.00	-0.02	0.00000	-.00002	0.00000	79	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	72	0.00	0.00	-0.02	0.00000	-.00001	0.00000	73	0.00	0.00	-0.01	0.00000	-.00001	0.00000
56	79	0.00	0.00	-0.01	0.00000	-.00001	0.00000	80	0.00	0.00	-0.01	0.00000	-.00001	0.00000
	73	0.00	0.00	-0.01	0.00000	-.00001	0.00000	74	0.00	0.00	-0.01	0.00000	-.00001	0.00000

SPOST.: SISMA 90°: MODO1: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
57	80	0.00	0.00	-0.01	0.00000	-.00001	0.00000	81	0.00	0.00	0.00	0.00000	-.00001	0.00000
	74	0.00	0.00	-0.01	0.00000	-.00001	0.00000	75	0.00	0.00	0.00	0.00000	-.00001	0.00000
58	81	0.00	0.00	0.00	0.00000	-.00001	0.00000	82	0.00	0.00	0.01	0.00000	-.00001	0.00000
	75	0.00	0.00	0.00	0.00000	-.00001	0.00000	76	0.00	0.00	0.01	0.00000	-.00001	0.00000
59	82	0.00	0.00	0.01	0.00000	-.00001	0.00000	83	0.00	0.00	0.01	0.00000	-.00001	0.00000
	76	0.00	0.00	0.01	0.00000	-.00001	0.00000	77	0.00	0.00	0.01	0.00000	-.00001	0.00000
60	83	0.00	0.00	0.01	0.00000	-.00001	0.00000	2	0.00	0.00	0.02	0.00000	-.00002	0.00000
	77	0.00	0.00	0.01	0.00000	-.00001	0.00000	78	0.00	0.00	0.02	0.00000	-.00001	0.00000

CARATT. PESO PROPRIO: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-19.6	0.0	-0.6	0.0	0.5	3	0.00	0.0	9.8	0.0	10.2	0.0	-0.5
1	5	0.00	0.0	-19.6	0.0	-0.6	0.0	0.5	12	0.00	0.0	9.8	0.0	10.2	0.0	-0.5
	3	3.19	3.7	0.7	28.0	-2.5	8.9	0.0	3	0.00	-3.7	-0.7	-37.6	0.3	2.9	0.0
	5	3.19	3.7	-0.7	28.0	2.5	8.9	0.0	5	0.00	-3.7	0.7	-37.6	-0.3	2.9	0.0
	10	3.19	-3.7	0.7	28.0	-2.5	-8.9	0.0	10	0.00	3.7	-0.7	-37.6	0.3	-2.9	0.0
	12	3.19	-3.7	-0.7	28.0	2.5	-8.9	0.0	12	0.00	3.7	0.7	-37.6	-0.3	-2.9	0.0
	4	3.19	-0.1	10.4	0.0	-5.9	-0.1	0.7	12	3.19	0.1	8.8	0.0	3.4	-0.1	0.6
	6	3.19	0.1	10.4	0.0	-5.9	0.1	-0.7	5	3.19	-0.1	8.8	0.0	3.4	0.1	-0.6
	3	3.19	0.0	19.2	0.0	-9.5	0.0	0.8	10	3.19	0.0	19.2	0.0	9.5	0.0	0.8
	5	3.19	0.0	19.2	0.0	-9.5	0.0	-0.8	12	3.19	0.0	19.2	0.0	9.5	0.0	-0.8
	10	3.19	0.1	8.8	0.0	-3.4	0.1	0.6	4	3.19	-0.1	10.4	0.0	5.9	0.1	0.7
	3	3.19	-0.1	8.8	0.0	-3.4	-0.1	-0.6	6	3.19	0.1	10.4	0.0	5.9	-0.1	-0.7
	6	3.19	0.0	24.7	4.7	-12.4	0.0	0.0	4	3.19	0.0	24.7	-4.7	12.4	0.0	0.0
1	10	0.00	0.0	-18.4	0.0	2.2	0.0	-0.6	4	0.00	0.0	8.8	0.0	6.2	0.0	0.6
1	4	0.00	0.0	-19.5	0.0	6.3	0.0	-0.5	12	0.00	0.0	11.0	0.0	3.2	0.0	0.5
1	3	0.00	0.0	-18.4	0.0	2.2	0.0	0.6	6	0.00	0.0	8.8	0.0	6.2	0.0	-0.6
1	6	0.00	0.0	-19.5	0.0	6.3	0.0	0.5	5	0.00	0.0	11.0	0.0	3.2	0.0	-0.5
	6	3.19	4.8	0.0	45.5	0.0	11.0	0.0	6	0.00	-4.8	0.0	-55.0	0.0	4.3	0.0
	4	3.19	-4.8	0.0	45.5	0.0	-11.0	0.0	4	0.00	4.8	0.0	-55.0	0.0	-4.3	0.0
1	6	0.00	0.0	-16.9	0.0	-1.4	0.0	0.0	4	0.00	0.0	4.9	0.0	8.4	0.0	0.0
2	10	0.00	0.0	-11.8	0.0	-7.9	0.0	0.3	3	0.00	0.0	3.0	0.0	12.7	0.0	-0.3
3	10	0.00	0.0	-6.4	0.0	-11.6	0.0	0.1	3	0.00	0.0	-1.9	0.0	13.1	0.0	-0.1
4	10	0.00	0.0	-1.9	0.0	-13.1	0.0	-0.1	3	0.00	0.0	-6.4	0.0	11.6	0.0	0.1
5	10	0.00	0.0	3.0	0.0	-12.7	0.0	-0.3	3	0.00	0.0	-11.8	0.0	7.9	0.0	0.3
6	10	0.00	0.0	9.8	0.0	-10.1	0.0	-0.5	3	0.00	0.0	-19.6	0.0	0.6	0.0	0.5
2	5	0.00	0.0	-11.8	0.0	-7.9	0.0	0.3	12	0.00	0.0	3.0	0.0	12.7	0.0	-0.3
3	5	0.00	0.0	-6.4	0.0	-11.6	0.0	0.1	12	0.00	0.0	-1.9	0.0	13.1	0.0	-0.1
4	5	0.00	0.0	-1.9	0.0	-13.1	0.0	-0.1	12	0.00	0.0	-6.4	0.0	11.6	0.0	0.1
5	5	0.00	0.0	3.0	0.0	-12.7	0.0	-0.3	12	0.00	0.0	-11.8	0.0	7.9	0.0	0.3
6	5	0.00	0.0	9.8	0.0	-10.2	0.0	-0.5	12	0.00	0.0	-19.6	0.0	0.6	0.0	0.5
2	10	0.00	0.0	-9.9	0.0	-4.2	0.0	-0.3	4	0.00	0.0	1.0	0.0	7.5	0.0	0.3
3	10	0.00	0.0	-3.4	0.0	-6.7	0.0	0.0	4	0.00	0.0	-5.1	0.0	6.1	0.0	0.0
4	10	0.00	0.0	3.0	0.0	-6.4	0.0	0.2	4	0.00	0.0	-11.4	0.0	1.9	0.0	-0.2
5	10	0.00	0.0	11.0	0.0	-3.2	0.0	0.5	4	0.00	0.0	-19.5	0.0	-6.3	0.0	-0.5
2	4	0.00	0.0	-11.4	0.0	-1.9	0.0	-0.2	12	0.00	0.0	3.0	0.0	6.4	0.0	0.2
3	4	0.00	0.0	-5.1	0.0	-6.1	0.0	0.0	12	0.00	0.0	-3.4	0.0	6.7	0.0	0.0
4	4	0.00	0.0	1.0	0.0	-7.5	0.0	0.3	12	0.00	0.0	-9.9	0.0	4.2	0.0	-0.3
5	4	0.00	0.0	8.8	0.0	-6.2	0.0	0.6	12	0.00	0.0	-18.4	0.0	-2.2	0.0	-0.6
2	3	0.00	0.0	-9.9	0.0	-4.2	0.0	0.3	6	0.00	0.0	1.0	0.0	7.5	0.0	-0.3
3	3	0.00	0.0	-3.4	0.0	-6.7	0.0	0.0	6	0.00	0.0	-5.1	0.0	6.1	0.0	0.0
4	3	0.00	0.0	3.0	0.0	-6.4	0.0	-0.2	6	0.00	0.0	-11.4	0.0	1.9	0.0	0.2
5	3	0.00	0.0	11.0	0.0	-3.2	0.0	-0.5	6	0.00	0.0	-19.5	0.0	-6.3	0.0	0.5
2	6	0.00	0.0	-11.4	0.0	-1.9	0.0	0.2	5	0.00	0.0	3.0	0.0	6.4	0.0	-0.2
3	6	0.00	0.0	-5.1	0.0	-6.1	0.0	0.0	5	0.00	0.0	-3.4	0.0	6.7	0.0	0.0
4	6	0.00	0.0	1.0	0.0	-7.5	0.0	-0.3	5	0.00	0.0	-9.9	0.0	4.2	0.0	0.3
5	6	0.00	0.0	8.8	0.0	-6.2	0.0	-0.6	5	0.00	0.0	-18.4	0.0	-2.2	0.0	0.6
2	6	0.00	0.0	-10.3	0.0	-6.3	0.0	0.0	4	0.00	0.0	-1.0	0.0	9.3	0.0	0.0
3	6	0.00	0.0	-6.7	0.0	-8.4	0.0	0.0	4	0.00	0.0	-4.1	0.0	9.2	0.0	0.0
4	6	0.00	0.0	-4.1	0.0	-9.2	0.0	0.0	4	0.00	0.0	-6.7	0.0	8.4	0.0	0.0
5	6	0.00	0.0	-1.0	0.0	-9.3	0.0	0.0	4	0.00	0.0	-10.3	0.0	6.3	0.0	0.0
6	6	0.00	0.0	4.9	0.0	-8.4	0.0	0.0	4	0.00	0.0	-16.9	0.0	1.4	0.0	0.0

FORZE PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-5.3	5.2	0.2	0.1	0.0	0.0	19	-8.2	-6.4	0.2	-0.1	0.2	-0.2
	3	9.8	7.8	0.4	0.2	-0.2	-0.2	13	3.8	-6.6	0.7	0.1	0.0	0.3
2	51	-1.7	3.0	-0.2	0.1	0.1	0.2	52	-4.6	-3.5	0.2	-0.1	0.2	-0.1
	11	5.9	3.0	0.4	0.2	-0.1	-0.3	46	0.4	-2.6	1.1	0.3	0.1	0.2
3	19	-0.4	4.8	-0.8	0.2	0.0	0.5	20	-8.0	-2.3	-0.6	0.0	0.2	-0.6
	13	9.7	3.3	1.3	0.6	-0.2	-0.7	14	-1.3	-5.8	1.6	0.5	0.1	0.7
4	20	3.5	3.6	-1.1	0.2	-0.1	0.8	21	-6.3	1.2	-1.0	0.1	0.2	-0.8
	14	8.0	-0.8	1.8	0.7	-0.2	-0.9	15	-5.1	-3.9	1.9	0.7	0.2	0.9
5	21	6.3	1.2	-1.0	0.1	-0.2	0.8	22	-3.5	3.6	-1.1	0.2	0.1	-0.8
	15	5.1	-3.9	1.9	0.7	-0.2	-0.9	16	-8.0	-0.8	1.8	0.7	0.2	0.9
6	22	8.0	-2.3	-0.6	0.0	-0.2	0.6	23	0.4	4.8	-0.8	0.2	0.0	-0.5
	16	1.3	-5.8	1.6	0.5	-0.1	-0.7	17	-9.7	3.3	1.3	0.6	0.2	0.7
7	23	8.2	-6.4	0.2	-0.1	-0.2	0.2	24	5.3	5.2	0.2	0.1	0.0	0.0
	17	-3.8	-6.6	0.7	0.1	0.0	-0.3	1	-9.8	7.8	0.4	0.2	0.2	0.2
8	25	-4.0	0.4	1.1	0.0	-0.3	-0.3	26	-3.8	-5.5	-0.3	-0.1	0.0	0.2
	18	4.5	7.0	0.9	0.1	-0.4	0.3	19	3.3	-1.9	-0.2	-0.1	-0.1	-0.2

FORZE PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
9	26	-0.4	1.3	0.2	0.3	0.1	0.1	27	-4.6	-2.7	-0.1	0.3	0.0	-0.2
	19	5.4	3.5	0.8	0.0	-0.1	-0.2	20	-0.4	-2.1	0.6	-0.2	-0.1	0.3
10	27	2.2	0.9	-0.3	0.5	0.1	0.3	28	-4.0	-0.5	-0.3	0.5	0.0	-0.4
	20	5.0	0.8	1.0	-0.1	0.0	-0.4	21	-3.2	-1.2	1.0	-0.1	0.0	0.5
11	28	4.0	-0.5	-0.3	0.5	0.0	0.4	29	-2.2	0.9	-0.3	0.5	-0.1	-0.3
	21	3.2	-1.2	1.0	-0.1	0.0	-0.5	22	-5.0	0.8	1.0	-0.1	0.0	0.4
12	29	4.6	-2.7	-0.1	0.3	0.0	0.2	30	0.4	1.3	0.2	0.3	-0.1	-0.1
	22	0.4	-2.1	0.6	-0.2	0.1	-0.3	23	-5.4	3.5	0.8	0.0	0.1	0.2
13	30	3.8	-5.5	-0.3	-0.1	0.0	-0.2	31	4.0	0.4	1.1	0.0	0.3	0.3
	23	-3.3	-1.9	-0.2	-0.1	0.1	0.2	24	-4.5	7.0	0.9	0.1	0.4	-0.3
14	32	-1.3	-2.6	1.3	0.0	-0.5	-0.4	33	-0.8	-3.4	-0.6	0.1	-0.1	0.3
	25	0.6	4.6	1.4	0.1	-0.5	0.4	26	1.5	1.4	-0.6	0.0	-0.1	-0.3
15	33	0.7	-1.0	0.6	0.2	0.0	0.0	34	-2.6	-2.2	0.2	0.3	-0.2	0.0
	26	2.7	2.8	0.6	-0.2	0.0	0.0	27	-0.8	0.4	0.1	-0.3	-0.2	0.0
16	34	2.1	-0.7	0.5	0.4	0.1	0.1	35	-2.9	-1.2	0.5	0.4	-0.1	-0.2
	27	3.2	1.4	0.3	-0.4	0.1	-0.2	28	-2.4	0.5	0.3	-0.5	-0.1	0.2
17	35	2.9	-1.2	0.5	0.4	0.1	0.2	36	-2.1	-0.7	0.5	0.4	-0.1	-0.1
	28	2.4	0.5	0.3	-0.5	0.1	-0.2	29	-3.2	1.4	0.3	-0.4	-0.1	0.2
18	36	2.6	-2.2	0.2	0.3	0.2	0.0	37	-0.7	-1.0	0.6	0.2	0.0	0.0
	29	0.8	0.4	0.1	-0.3	0.2	0.0	30	-2.7	2.8	0.6	-0.2	0.0	0.0
19	37	0.8	-3.4	-0.6	0.1	0.1	-0.3	38	1.3	-2.6	1.3	0.0	0.5	0.4
	30	-1.5	1.4	-0.6	0.0	0.1	0.3	31	-0.6	4.6	1.4	0.1	0.5	-0.4
20	39	2.3	-3.9	0.6	-0.1	-0.2	-0.2	40	0.4	-0.6	0.1	0.1	-0.1	0.1
	32	-1.4	1.3	0.8	0.0	-0.2	0.3	33	-1.3	3.2	0.0	0.1	0.1	-0.2
21	40	2.7	-2.0	0.8	-0.1	-0.1	0.1	41	-1.9	-1.0	0.9	0.1	-0.1	-0.1
	33	1.4	1.3	0.0	-0.3	0.1	0.0	34	-2.2	1.7	-0.2	-0.2	0.0	0.0
22	41	3.3	-1.4	1.2	-0.1	0.0	0.2	42	-3.1	-1.0	1.2	-0.1	0.0	-0.2
	34	2.7	1.2	-0.5	-0.5	0.1	-0.2	35	-2.9	1.2	-0.5	-0.4	0.0	0.2
23	42	3.1	-1.0	1.2	-0.1	0.0	0.2	43	-3.3	-1.4	1.2	-0.1	0.0	-0.2
	35	2.9	1.2	-0.5	-0.4	0.0	-0.2	36	-2.7	1.2	-0.5	-0.5	-0.1	0.2
24	43	1.9	-1.0	0.9	0.1	0.1	0.1	44	-2.7	-2.0	0.8	-0.1	0.1	-0.1
	36	2.2	1.7	-0.2	-0.2	0.0	0.0	37	-1.4	1.3	0.0	-0.3	-0.1	0.0
25	44	-0.4	-0.6	0.1	0.1	0.1	-0.1	45	-2.3	-3.9	0.6	-0.1	0.2	0.2
	37	1.3	3.2	0.0	0.1	-0.1	0.2	38	1.4	1.3	0.8	0.0	0.2	-0.3
26	11	5.9	-3.0	0.4	-0.2	-0.1	0.3	46	0.4	2.6	1.1	-0.3	0.1	-0.2
	39	-1.7	-3.0	-0.2	-0.1	0.1	-0.2	40	-4.6	3.5	0.2	0.1	0.2	0.1
27	46	6.3	-2.4	1.6	-0.8	-0.1	0.4	47	-2.9	1.0	1.9	-0.8	0.2	-0.4
	40	1.5	-0.9	-1.1	-0.1	0.0	-0.3	41	-4.9	2.3	-0.8	0.1	0.2	0.3
28	47	5.8	-1.1	2.0	-1.0	-0.2	0.5	48	-4.7	0.0	2.0	-1.0	0.2	-0.5
	41	3.5	0.1	-1.3	0.0	-0.1	-0.4	42	-4.6	1.0	-1.2	0.1	0.2	0.4
29	48	4.7	0.0	2.0	-1.0	-0.2	0.5	49	-5.8	-1.1	2.0	-1.0	0.2	-0.5
	42	4.6	1.0	-1.2	0.1	-0.2	-0.4	43	-3.5	0.1	-1.3	0.0	0.1	0.4
30	49	2.9	1.0	1.9	-0.8	-0.2	0.4	50	-6.3	-2.4	1.6	-0.8	0.1	-0.4
	43	4.9	2.3	-0.8	0.1	-0.2	-0.3	44	-1.5	-0.9	-1.1	-0.1	0.0	0.3
31	50	-0.4	2.6	1.1	-0.3	-0.1	0.2	12	-5.9	-3.0	0.4	-0.2	0.1	-0.3
	44	4.6	3.5	0.2	0.1	-0.2	-0.1	45	1.7	-3.0	-0.2	-0.1	-0.1	0.2
32	52	1.5	0.9	-1.1	0.1	0.0	0.3	53	-4.9	-2.3	-0.8	-0.1	0.2	-0.3
	46	6.3	2.4	1.6	0.8	-0.1	-0.4	47	-2.9	-1.0	1.9	0.8	0.2	0.4
33	53	3.5	-0.1	-1.3	0.0	-0.1	0.4	54	-4.6	-1.0	-1.2	-0.1	0.2	-0.4
	47	5.8	1.1	2.0	1.0	-0.2	-0.5	48	-4.7	0.0	2.0	1.0	0.2	0.5
34	54	4.6	-1.0	-1.2	-0.1	-0.2	0.4	55	-3.5	-0.1	-1.3	0.0	0.1	-0.4
	48	4.7	0.0	2.0	1.0	-0.2	-0.5	49	-5.8	1.1	2.0	1.0	0.2	0.5
35	55	4.9	-2.3	-0.8	-0.1	-0.2	0.3	56	-1.5	0.9	-1.1	0.1	0.0	-0.3
	49	2.9	-1.0	1.9	0.8	-0.2	-0.4	50	-6.3	2.4	1.6	0.8	0.1	0.4
36	56	4.6	-3.5	0.2	-0.1	-0.2	0.1	57	1.7	3.0	-0.2	0.1	-0.1	-0.2
	50	-0.4	-2.6	1.1	0.3	-0.1	-0.2	12	-5.9	3.0	0.4	0.2	0.1	0.3
37	58	-1.4	-1.3	0.8	0.0	-0.2	-0.3	59	-1.3	-3.2	0.0	-0.1	0.1	0.2
	51	2.3	3.9	0.6	0.1	-0.2	0.2	52	0.4	0.6	0.1	-0.1	-0.1	-0.1
38	59	1.4	-1.3	0.0	0.3	0.1	0.0	60	-2.2	-1.7	-0.2	0.2	0.0	0.0
	52	2.7	2.0	0.8	0.1	-0.1	-0.1	53	-1.9	1.0	0.9	-0.1	-0.1	0.1
39	60	2.7	-1.2	-0.5	0.5	0.1	0.2	61	-2.9	-1.2	-0.5	0.4	0.0	-0.2
	53	3.3	1.4	1.2	0.1	0.0	-0.2	54	-3.1	1.0	1.2	0.1	0.0	0.2
40	61	2.9	-1.2	-0.5	0.4	0.0	0.2	62	-2.7	-1.2	-0.5	0.5	-0.1	-0.2
	54	3.1	1.0	1.2	0.1	0.0	-0.2	55	-3.3	1.4	1.2	0.1	0.0	0.2
41	62	2.2	-1.7	-0.2	0.2	0.0	0.0	63	-1.4	-1.3	0.0	0.3	-0.1	0.0
	55	1.9	1.0	0.9	-0.1	0.1	-0.1	56	-2.7	2.0	0.8	0.1	0.1	0.1
42	63	1.3	-3.2	0.0	-0.1	-0.1	-0.2	64	1.4	-1.3	0.8	0.0	0.2	0.3
	56	-0.4	0.6	0.1	-0.1	0.1	0.1	57	-2.3	3.9	0.6	0.1	0.2	-0.2
43	65	0.6	-4.6	1.4	-0.1	-0.5	-0.4	66	1.5	-1.4	-0.6	0.0	-0.1	0.3
	58	-1.3	2.6	1.3	0.0	-0.5	0.4	59	-0.8	3.4	-0.6	-0.1	-0.1	-0.3
44	66	2.7	-2.8	0.6	0.2	0.0	0.0	67	-0.8	-0.4	0.1	0.3	-0.2	0.0
	59	0.7	1.0	0.6	-0.2	0.0	0.0	60	-2.6	2.2	0.2	-0.3	-0.2	0.0
45	67	3.2	-1.4	0.3	0.4	0.1	0.2	68	-2.4	-0.5	0.3	0.5	-0.1	-0.2
	60	2.1	0.7	0.5	-0.4	0.1	-0.1	61	-2.9	1.2	0.5	-0.4	-0.1	0.2
46	68	2.4	-0.5	0.3	0.5	0.1	0.2	69	-3.2	-1.4	0.3	0.4	-0.1	-0.2
	61	2.9	1.2	0.5	-0.4	0.1	-0.2	62	-2.1	0.7	0.5	-0.4	-0.1	0.1
47	69	0.8	-0.4	0.1	0.3	0.2	0.0	70	-2.7	-2.8	0.6	0.2	0.0	0.0
	62	2.6	2.2	0.2	-0.3	0.2	0.0	63	-0.7	1.0	0.6	-0.2	0.0	0.0
48	70	-1.5	-1.4	-0.6	0.0	0.1	-0.3	71	-0.6	-4.6	1.4	-0.1	0.5	0.4
	63	0.8	3.4	-0.6	-0.1	0.1	0.3	64	1.3	2.6	1.3	0.0	0.5	-0.4

FORZE PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
49	72	4.5	-7.0	0.9	-0.1	-0.4	-0.3	73	3.3	1.9	-0.2	0.1	-0.1	0.2
	65	-4.0	-0.4	1.1	0.0	-0.3	0.3	66	-3.8	5.5	-0.3	0.1	0.0	-0.2
50	73	5.4	-3.5	0.8	0.0	-0.1	0.2	74	-0.4	2.1	0.6	0.2	-0.1	-0.3
	66	-0.4	-1.3	0.2	-0.3	0.1	-0.1	67	-4.6	2.7	-0.1	-0.3	0.0	0.2
51	74	5.0	-0.8	1.0	0.1	0.0	0.4	75	-3.2	1.2	1.0	0.1	0.0	-0.5
	67	2.2	-0.9	-0.3	-0.5	0.1	-0.3	68	-4.0	0.5	-0.3	-0.5	0.0	0.4
52	75	3.2	1.2	1.0	0.1	0.0	0.5	76	-5.0	-0.8	1.0	0.1	0.0	-0.4
	68	4.0	0.5	-0.3	-0.5	0.0	-0.4	69	-2.2	-0.9	-0.3	-0.5	-0.1	0.3
53	76	0.4	2.1	0.6	0.2	0.1	0.3	77	-5.4	-3.5	0.8	0.0	0.1	-0.2
	69	4.6	2.7	-0.1	-0.3	0.0	-0.2	70	0.4	-1.3	0.2	-0.3	-0.1	0.1
54	77	-3.3	1.9	-0.2	0.1	0.1	-0.2	78	-4.5	-7.0	0.9	-0.1	0.4	0.3
	70	3.8	5.5	-0.3	0.1	0.0	0.2	71	4.0	-0.4	1.1	0.0	0.3	-0.3
55	4	9.8	-7.8	0.4	-0.2	-0.2	0.2	79	3.8	6.6	0.7	-0.1	0.0	-0.3
	72	-5.3	-5.2	0.2	-0.1	0.0	0.0	73	-8.2	6.4	0.2	0.1	0.2	0.2
56	79	9.7	-3.3	1.3	-0.6	-0.2	0.7	80	-1.3	5.8	1.6	-0.5	0.1	-0.7
	73	-0.4	-4.8	-0.8	-0.2	0.0	-0.5	74	-8.0	2.3	-0.6	0.0	0.2	0.6
57	80	8.0	0.8	1.8	-0.7	-0.2	0.9	81	-5.1	3.9	1.9	-0.7	0.2	-0.9
	74	3.5	-3.6	-1.1	-0.2	-0.1	-0.8	75	-6.3	-1.2	-1.0	-0.1	0.2	0.8
58	81	5.1	3.9	1.9	-0.7	-0.2	0.9	82	-8.0	0.8	1.8	-0.7	0.2	-0.9
	75	6.3	-1.2	-1.0	-0.1	-0.2	-0.8	76	-3.5	-3.6	-1.1	-0.2	0.1	0.8
59	82	1.3	5.8	1.6	-0.5	-0.1	0.7	83	-9.7	-3.3	1.3	-0.6	0.2	-0.7
	76	8.0	2.3	-0.6	0.0	-0.2	-0.6	77	0.4	-4.8	-0.8	-0.2	0.0	0.5
60	83	-3.8	6.6	0.7	-0.1	0.0	0.3	2	-9.8	-7.8	0.4	-0.2	0.2	-0.2
	77	8.2	6.4	0.2	0.1	-0.2	-0.2	78	5.3	-5.2	0.2	-0.1	0.0	0.0

CARATT. SOVRACCARICO PERMAN.: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-4.9	0.0	-0.5	0.0	0.2	3	0.00	0.0	2.5	0.0	2.9	0.0	-0.2
1	5	0.00	0.0	-4.9	0.0	-0.5	0.0	0.2	12	0.00	0.0	2.5	0.0	2.9	0.0	-0.2
	3	3.19	1.4	-0.3	10.6	-0.2	3.4	0.0	3	0.00	-1.4	0.3	-10.6	1.1	1.3	0.0
	5	3.19	1.4	0.3	10.6	0.2	3.4	0.0	5	0.00	-1.4	-0.3	-10.6	-1.1	1.3	0.0
	10	3.19	-1.4	-0.3	10.6	-0.2	-3.4	0.0	10	0.00	1.4	0.3	-10.6	1.1	-1.3	0.0
	12	3.19	-1.4	0.3	10.6	0.2	-3.4	0.0	12	0.00	1.4	-0.3	-10.6	-1.1	-1.3	0.0
	4	3.19	0.0	3.3	0.0	-2.1	0.0	0.4	12	3.19	0.0	2.3	0.0	0.6	0.0	0.3
	6	3.19	0.0	3.3	0.0	-2.1	0.0	-0.4	5	3.19	0.0	2.3	0.0	0.6	0.0	-0.3
	3	3.19	0.0	7.4	0.0	-3.7	0.0	0.4	10	3.19	0.0	7.4	0.0	3.7	0.0	0.4
	5	3.19	0.0	7.4	0.0	-3.7	0.0	-0.4	12	3.19	0.0	7.4	0.0	3.7	0.0	-0.4
	10	3.19	0.0	2.3	0.0	-0.6	0.0	0.3	4	3.19	0.0	3.3	0.0	2.1	0.0	0.4
	3	3.19	0.0	2.3	0.0	-0.6	0.0	-0.3	6	3.19	0.0	3.3	0.0	2.1	0.0	-0.4
	6	3.19	0.0	11.1	1.8	-5.5	0.0	0.0	4	3.19	0.0	11.1	-1.8	5.5	0.0	0.0
1	10	0.00	0.0	-5.9	0.0	1.6	0.0	-0.2	4	0.00	0.0	3.8	0.0	1.3	0.0	0.1
1	4	0.00	0.0	0.0	0.0	-5.4	0.0	-0.4	12	0.00	0.0	-0.6	0.0	5.2	0.0	0.4
1	3	0.00	0.0	-5.9	0.0	1.6	0.0	0.2	6	0.00	0.0	3.8	0.0	1.3	0.0	-0.1
1	6	0.00	0.0	0.0	0.0	-5.4	0.0	0.4	5	0.00	0.0	-0.6	0.0	5.2	0.0	-0.4
	6	3.19	1.9	0.0	18.6	0.0	4.8	0.0	6	0.00	-1.9	0.0	-18.6	0.0	1.2	0.0
	4	3.19	-1.9	0.0	18.6	0.0	-4.8	0.0	4	0.00	1.9	0.0	-18.6	0.0	-1.2	0.0
1	6	0.00	0.0	-18.6	0.0	1.0	0.0	0.0	4	0.00	0.0	8.9	0.0	7.9	0.0	0.0
2	10	0.00	0.0	-2.9	0.0	-2.2	0.0	0.1	3	0.00	0.0	0.9	0.0	3.4	0.0	-0.1
3	10	0.00	0.0	-1.5	0.0	-3.1	0.0	0.0	3	0.00	0.0	-0.4	0.0	3.5	0.0	0.0
4	10	0.00	0.0	-0.4	0.0	-3.5	0.0	0.0	3	0.00	0.0	-1.5	0.0	3.1	0.0	0.0
5	10	0.00	0.0	0.9	0.0	-3.4	0.0	-0.1	3	0.00	0.0	-2.9	0.0	2.2	0.0	0.1
6	10	0.00	0.0	2.5	0.0	-2.9	0.0	-0.2	3	0.00	0.0	-4.9	0.0	0.5	0.0	0.2
2	5	0.00	0.0	-2.9	0.0	-2.2	0.0	0.1	12	0.00	0.0	0.9	0.0	3.4	0.0	-0.1
3	5	0.00	0.0	-1.5	0.0	-3.1	0.0	0.0	12	0.00	0.0	-0.4	0.0	3.5	0.0	0.0
4	5	0.00	0.0	-0.4	0.0	-3.5	0.0	0.0	12	0.00	0.0	-1.5	0.0	3.1	0.0	0.0
5	5	0.00	0.0	0.9	0.0	-3.4	0.0	-0.1	12	0.00	0.0	-2.9	0.0	2.2	0.0	0.1
6	5	0.00	0.0	2.5	0.0	-2.9	0.0	-0.2	12	0.00	0.0	-4.9	0.0	0.5	0.0	0.2
2	10	0.00	0.0	-4.1	0.0	-0.6	0.0	0.0	4	0.00	0.0	2.5	0.0	2.6	0.0	0.0
3	10	0.00	0.0	-3.1	0.0	-2.2	0.0	0.1	4	0.00	0.0	2.0	0.0	3.7	0.0	-0.1
4	10	0.00	0.0	-2.1	0.0	-3.7	0.0	0.2	4	0.00	0.0	1.3	0.0	4.7	0.0	-0.3
5	10	0.00	0.0	-0.6	0.0	-5.2	0.0	0.4	4	0.00	0.0	0.0	0.0	5.4	0.0	-0.4
2	4	0.00	0.0	1.3	0.0	-4.7	0.0	-0.3	12	0.00	0.0	-2.1	0.0	3.7	0.0	0.2
3	4	0.00	0.0	2.0	0.0	-3.7	0.0	-0.1	12	0.00	0.0	-3.1	0.0	2.2	0.0	0.1
4	4	0.00	0.0	2.5	0.0	-2.6	0.0	0.0	12	0.00	0.0	-4.1	0.0	0.6	0.0	0.0
5	4	0.00	0.0	3.8	0.0	-1.3	0.0	0.1	12	0.00	0.0	-5.9	0.0	-1.6	0.0	-0.2
2	3	0.00	0.0	-4.1	0.0	-0.6	0.0	0.0	6	0.00	0.0	2.5	0.0	2.6	0.0	0.0
3	3	0.00	0.0	-3.1	0.0	-2.2	0.0	-0.1	6	0.00	0.0	2.0	0.0	3.7	0.0	0.1
4	3	0.00	0.0	-2.1	0.0	-3.7	0.0	-0.2	6	0.00	0.0	1.3	0.0	4.7	0.0	0.3
5	3	0.00	0.0	-0.6	0.0	-5.2	0.0	-0.4	6	0.00	0.0	0.0	0.0	5.4	0.0	0.4
2	6	0.00	0.0	1.3	0.0	-4.7	0.0	0.3	5	0.00	0.0	-2.1	0.0	3.7	0.0	-0.2
3	6	0.00	0.0	2.0	0.0	-3.7	0.0	0.1	5	0.00	0.0	-3.1	0.0	2.2	0.0	-0.1
4	6	0.00	0.0	2.5	0.0	-2.6	0.0	0.0	5	0.00	0.0	-4.1	0.0	0.6	0.0	0.0
5	6	0.00	0.0	3.8	0.0	-1.3	0.0	-0.1	5	0.00	0.0	-5.9	0.0	-1.6	0.0	0.2
2	6	0.00	0.0	-12.1	0.0	-6.0	0.0	0.0	4	0.00	0.0	3.2	0.0	11.0	0.0	0.0
3	6	0.00	0.0	-6.8	0.0	-10.0	0.0	0.0	4	0.00	0.0	-1.7	0.0	11.6	0.0	0.0
4	6	0.00	0.0	-1.7	0.0	-11.6	0.0	0.0	4	0.00	0.0	-6.8	0.0	10.0	0.0	0.0
5	6	0.00	0.0	3.2	0.0	-11.0	0.0	0.0	4	0.00	0.0	-12.1	0.0	6.0	0.0	0.0
6	6	0.00	0.0	8.9	0.0	-7.9	0.0	0.0	4	0.00	0.0	-18.6	0.0	-1.0	0.0	0.0

FORZE SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)

FORZE SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-1.8	2.0	0.1	0.0	0.0	0.0	19	-2.9	-2.7	0.0	0.0	0.0	0.0
	3	3.3	2.5	0.1	0.0	-0.1	-0.1	13	1.3	-1.8	0.1	0.0	0.0	0.1
2	51	0.2	-1.2	-0.7	0.0	0.2	-0.1	52	-4.6	-4.1	0.1	-0.1	0.2	0.0
	11	4.9	5.3	0.0	0.3	0.1	0.1	46	-0.5	0.0	1.0	0.3	0.1	0.0
3	19	-0.2	0.7	-0.1	0.1	0.0	0.1	20	-2.7	-2.0	-0.1	0.1	0.0	-0.1
	13	3.1	2.0	0.3	0.0	0.0	-0.1	14	-0.3	-0.8	0.3	0.0	0.0	0.1
4	20	1.2	-0.2	-0.2	0.1	0.0	0.1	21	-2.1	-1.1	-0.2	0.1	0.0	-0.1
	14	2.5	1.1	0.4	0.0	0.0	-0.1	15	-1.5	0.2	0.4	0.0	0.0	0.1
5	21	2.1	-1.1	-0.2	0.1	0.0	0.1	22	-1.2	-0.2	-0.2	0.1	0.0	-0.1
	15	1.5	0.2	0.4	0.0	0.0	-0.1	16	-2.5	1.1	0.4	0.0	0.0	0.1
6	22	2.7	-2.0	-0.1	0.1	0.0	0.1	23	0.2	0.7	-0.1	0.1	0.0	-0.1
	16	0.3	-0.8	0.3	0.0	0.0	-0.1	17	-3.1	2.0	0.3	0.0	0.0	0.1
7	23	2.9	-2.7	0.0	0.0	0.0	0.0	24	1.8	2.0	0.1	0.0	0.0	0.0
	17	-1.3	-1.8	0.1	0.0	0.0	-0.1	1	-3.3	2.5	0.1	0.0	0.1	0.1
8	25	-1.2	0.3	0.3	0.0	-0.1	-0.1	26	-2.0	-2.8	0.0	0.0	0.0	0.1
	18	2.1	2.7	0.2	0.0	-0.1	0.1	19	1.0	-0.2	-0.1	0.0	0.0	-0.1
9	26	0.3	-0.6	0.1	0.1	0.0	0.0	27	-2.0	-2.2	0.0	0.1	0.0	0.0
	19	2.0	2.2	0.2	-0.1	0.0	0.0	20	-0.3	0.5	0.1	-0.1	0.0	0.0
10	27	1.3	-1.1	0.0	0.2	0.0	0.0	28	-1.9	-1.6	0.1	0.2	0.0	0.0
	20	1.9	1.6	0.1	-0.1	0.0	0.0	21	-1.3	1.1	0.2	-0.1	0.0	0.0
11	28	1.9	-1.6	0.1	0.2	0.0	0.0	29	-1.3	-1.1	0.0	0.2	0.0	0.0
	21	1.3	1.1	0.2	-0.1	0.0	0.0	22	-1.9	1.6	0.1	-0.1	0.0	0.0
12	29	2.0	-2.2	0.0	0.1	0.0	0.0	30	-0.3	-0.6	0.1	0.1	0.0	0.0
	22	0.3	0.5	0.1	-0.1	0.0	0.0	23	-2.0	2.2	0.2	-0.1	0.0	0.0
13	30	2.0	-2.8	0.0	0.0	0.0	-0.1	31	1.2	0.3	0.3	0.0	0.1	0.1
	23	-1.0	-0.2	-0.1	0.0	0.0	0.1	24	-2.1	2.7	0.2	0.0	0.1	-0.1
14	32	0.2	-1.4	0.3	-0.1	-0.1	-0.1	33	-1.5	-2.5	0.0	0.0	-0.1	0.1
	25	1.3	2.7	0.2	0.0	0.0	0.1	26	0.0	1.3	-0.1	0.0	0.0	-0.1
15	33	1.6	-1.6	0.1	0.0	0.0	0.0	34	-2.0	-2.0	0.2	0.1	0.0	0.0
	26	1.7	2.1	0.0	-0.1	0.0	0.0	27	-1.2	1.5	0.0	-0.1	0.0	0.0
16	34	2.2	-1.6	0.3	0.0	-0.1	0.1	35	-2.4	-1.7	0.3	0.1	0.1	-0.1
	27	1.9	1.7	-0.1	-0.2	0.0	0.0	28	-1.8	1.6	-0.1	-0.2	0.1	0.0
17	35	2.4	-1.7	0.3	0.1	-0.1	0.1	36	-2.2	-1.6	0.3	0.0	0.1	-0.1
	28	1.8	1.6	-0.1	-0.2	-0.1	0.0	29	-1.9	1.7	-0.1	-0.2	0.0	0.0
18	36	2.0	-2.0	0.2	0.1	0.0	0.0	37	-1.6	-1.6	0.1	0.0	0.0	0.0
	29	1.2	1.5	0.0	-0.1	0.0	0.0	30	-1.7	2.1	0.0	-0.1	0.0	0.0
19	37	1.5	-2.5	0.0	0.0	0.1	-0.1	38	-0.2	-1.4	0.3	-0.1	0.1	0.1
	30	0.0	1.3	-0.1	0.0	0.0	0.1	31	-1.3	2.7	0.2	0.0	0.0	-0.1
20	39	2.2	-3.2	0.0	-0.1	0.0	-0.1	40	-1.3	-1.8	0.4	0.0	0.0	0.1
	32	0.9	2.3	-0.2	0.0	0.1	0.1	33	-1.9	2.7	0.2	0.1	0.1	-0.1
21	40	3.6	-2.5	0.3	-0.2	-0.1	0.1	41	-2.5	-1.2	0.5	-0.1	0.1	-0.1
	33	1.8	1.5	-0.3	-0.1	0.0	0.0	34	-2.8	2.2	-0.1	0.0	0.1	0.1
22	41	4.0	-1.8	0.5	-0.2	-0.1	0.2	42	-3.6	-1.3	0.6	-0.2	0.1	-0.2
	34	2.6	1.4	-0.4	-0.1	-0.1	-0.1	35	-3.1	1.7	-0.3	-0.1	0.1	0.1
23	42	3.6	-1.3	0.6	-0.2	-0.1	0.2	43	-4.0	-1.8	0.5	-0.2	0.1	-0.2
	35	3.1	1.7	-0.3	-0.1	-0.1	-0.1	36	-2.6	1.4	-0.4	-0.1	0.1	0.1
24	43	2.5	-1.2	0.5	-0.1	-0.1	0.1	44	-3.6	-2.5	0.3	-0.2	0.1	-0.1
	36	2.8	2.2	-0.1	0.0	-0.1	-0.1	37	-1.8	1.5	-0.3	-0.1	0.0	0.0
25	44	1.3	-1.8	0.4	0.0	0.0	-0.1	45	-2.2	-3.2	0.0	-0.1	0.0	0.1
	37	1.9	2.7	0.2	0.1	-0.1	0.1	38	-0.9	2.3	-0.2	0.0	-0.1	-0.1
26	11	4.9	-5.3	0.0	-0.3	0.1	-0.1	46	-0.5	0.0	1.0	-0.3	0.1	0.0
	39	0.2	1.2	-0.7	0.0	0.2	0.1	40	-4.6	4.1	0.1	0.1	0.2	0.0
27	46	6.8	-3.3	0.7	-0.5	-0.1	0.3	47	-3.4	0.6	1.0	-0.5	0.2	-0.4
	40	2.2	0.1	-0.8	0.1	-0.1	-0.2	41	-5.6	2.6	-0.4	0.1	0.2	0.3
28	47	6.9	-1.5	0.8	-0.6	-0.2	0.5	48	-5.6	-0.1	0.8	-0.6	0.2	-0.6
	41	4.1	0.3	-0.6	0.2	-0.2	-0.4	42	-5.3	1.3	-0.6	0.2	0.2	0.4
29	48	5.6	-0.1	0.8	-0.6	-0.2	0.6	49	-6.9	-1.5	0.8	-0.6	0.2	-0.5
	42	5.3	1.3	-0.6	0.2	-0.2	-0.4	43	-4.1	0.3	-0.6	0.2	0.2	0.4
30	49	3.4	0.6	1.0	-0.5	-0.2	0.4	50	-6.8	-3.3	0.7	-0.5	0.1	-0.3
	43	5.6	2.6	-0.4	0.1	-0.2	-0.3	44	-2.2	0.1	-0.8	0.1	0.1	0.2
31	50	0.5	0.0	1.0	-0.3	-0.1	0.0	12	-4.9	-5.3	0.0	-0.3	-0.1	0.1
	44	4.6	4.1	0.1	0.1	-0.2	0.0	45	-0.2	1.2	-0.7	0.0	-0.2	-0.1
32	52	2.2	-0.1	-0.8	-0.1	-0.1	0.2	53	-5.6	-2.6	-0.4	-0.1	0.2	-0.3
	46	6.8	3.3	0.7	0.5	-0.1	-0.3	47	-3.4	-0.6	1.0	0.5	0.2	0.4
33	53	4.1	-0.3	-0.6	-0.2	-0.2	0.4	54	-5.3	-1.3	-0.6	-0.2	0.2	-0.4
	47	6.9	1.5	0.8	0.6	-0.2	-0.5	48	-5.6	0.1	0.8	0.6	0.2	0.6
34	54	5.3	-1.3	-0.6	-0.2	-0.2	0.4	55	-4.1	-0.3	-0.6	-0.2	0.2	-0.4
	48	5.6	0.1	0.8	0.6	-0.2	-0.6	49	-6.9	1.5	0.8	0.6	0.2	0.5
35	55	5.6	-2.6	-0.4	-0.1	-0.2	0.3	56	-2.2	-0.1	-0.8	-0.1	0.1	-0.2
	49	3.4	-0.6	1.0	0.5	-0.2	-0.4	50	-6.8	3.3	0.7	0.5	0.1	0.3
36	56	4.6	-4.1	0.1	-0.1	-0.2	0.0	57	-0.2	-1.2	-0.7	0.0	-0.2	0.1
	50	0.5	0.0	1.0	0.3	-0.1	0.0	12	-4.9	5.3	0.0	0.3	-0.1	-0.1
37	58	0.9	-2.3	-0.2	0.0	0.1	-0.1	59	-1.9	-2.7	0.2	-0.1	0.1	0.1
	51	2.2	3.2	0.0	0.1	0.0	0.1	52	-1.3	1.8	0.4	0.0	0.0	-0.1
38	59	1.8	-1.5	-0.3	0.1	0.0	0.0	60	-2.8	-2.2	-0.1	0.0	0.1	-0.1
	52	3.6	2.5	0.3	0.2	-0.1	-0.1	53	-2.5	1.2	0.5	0.1	0.1	0.1
39	60	2.6	-1.4	-0.4	0.1	-0.1	0.1	61	-3.1	-1.7	-0.3	0.1	0.1	-0.1
	53	4.0	1.8	0.5	0.2	-0.1	-0.2	54	-3.6	1.3	0.6	0.2	0.1	0.2
40	61	3.1	-1.7	-0.3	0.1	-0.1	0.1	62	-2.6	-1.4	-0.4	0.1	0.1	-0.1
	54	3.6	1.3	0.6	0.2	-0.1	-0.2	55	-4.0	1.8	0.5	0.2	0.1	0.2

FORZE SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
41	62	2.8	-2.2	-0.1	0.0	-0.1	0.1	63	-1.8	-1.5	-0.3	0.1	0.0	0.0
	55	2.5	1.2	0.5	0.1	-0.1	-0.1	56	-3.6	2.5	0.3	0.2	0.1	0.1
42	63	1.9	-2.7	0.2	-0.1	-0.1	-0.1	64	-0.9	-2.3	-0.2	0.0	-0.1	0.1
	56	1.3	1.8	0.4	0.0	0.0	0.1	57	-2.2	3.2	0.0	0.1	0.0	-0.1
43	65	1.3	-2.7	0.2	0.0	0.0	-0.1	66	0.0	-1.3	-0.1	0.0	0.0	0.1
	58	0.2	1.4	0.3	0.1	-0.1	0.1	59	-1.5	2.5	0.0	0.0	-0.1	-0.1
44	66	1.7	-2.1	0.0	0.1	0.0	0.0	67	-1.2	-1.5	0.0	0.1	0.0	0.0
	59	1.6	1.6	0.1	0.0	0.0	0.0	60	-2.0	2.0	0.2	-0.1	0.0	0.0
45	67	1.9	-1.7	-0.1	0.2	0.0	0.0	68	-1.8	-1.6	-0.1	0.2	0.1	0.0
	60	2.2	1.6	0.3	0.0	-0.1	-0.1	61	-2.4	1.7	0.3	-0.1	0.1	0.1
46	68	1.8	-1.6	-0.1	0.2	-0.1	0.0	69	-1.9	-1.7	-0.1	0.2	0.0	0.0
	61	2.4	1.7	0.3	-0.1	-0.1	-0.1	62	-2.2	1.6	0.3	0.0	0.1	0.1
47	69	1.2	-1.5	0.0	0.1	0.0	0.0	70	-1.7	-2.1	0.0	0.1	0.0	0.0
	62	2.0	2.0	0.2	-0.1	0.0	0.0	63	-1.6	1.6	0.1	0.0	0.0	0.0
48	70	0.0	-1.3	-0.1	0.0	0.0	-0.1	71	-1.3	-2.7	0.2	0.0	0.0	0.1
	63	1.5	2.5	0.0	0.0	0.1	0.1	64	-0.2	1.4	0.3	0.1	0.1	-0.1
49	72	2.1	-2.7	0.2	0.0	-0.1	-0.1	73	1.0	0.2	-0.1	0.0	0.0	0.1
	65	-1.2	-0.3	0.3	0.0	-0.1	0.1	66	-2.0	2.8	0.0	0.0	0.0	-0.1
50	73	2.0	-2.2	0.2	0.1	0.0	0.0	74	-0.3	-0.5	0.1	0.1	0.0	0.0
	66	0.3	0.6	0.1	-0.1	0.0	0.0	67	-2.0	2.2	0.0	-0.1	0.0	0.0
51	74	1.9	-1.6	0.1	0.1	0.0	0.0	75	-1.3	-1.1	0.2	0.1	0.0	0.0
	67	1.3	1.1	0.0	-0.2	0.0	0.0	68	-1.9	1.6	0.1	-0.2	0.0	0.0
52	75	1.3	-1.1	0.2	0.1	0.0	0.0	76	-1.9	-1.6	0.1	0.1	0.0	0.0
	68	1.9	1.6	0.1	-0.2	0.0	0.0	69	-1.3	1.1	0.0	-0.2	0.0	0.0
53	76	0.3	-0.5	0.1	0.1	0.0	0.0	77	-2.0	-2.2	0.2	0.1	0.0	0.0
	69	2.0	2.2	0.0	-0.1	0.0	0.0	70	-0.3	0.6	0.1	-0.1	0.0	0.0
54	77	-1.0	0.2	-0.1	0.0	0.0	-0.1	78	-2.1	-2.7	0.2	0.0	0.1	0.1
	70	2.0	2.8	0.0	0.0	0.0	0.1	71	1.2	-0.3	0.3	0.0	0.1	-0.1
55	4	3.3	-2.5	0.1	0.0	-0.1	0.1	79	1.3	1.8	0.1	0.0	0.0	-0.1
	72	-1.8	-2.0	0.1	0.0	0.0	0.0	73	-2.9	2.7	0.0	0.0	0.0	0.0
56	79	3.1	-2.0	0.3	0.0	0.0	0.1	80	-0.3	0.8	0.3	0.0	0.0	-0.1
	73	-0.2	-0.7	-0.1	-0.1	0.0	-0.1	74	-2.7	2.0	-0.1	-0.1	0.0	0.1
57	80	2.5	-1.1	0.4	0.0	0.0	0.1	81	-1.5	-0.2	0.4	0.0	0.0	-0.1
	74	1.2	0.2	-0.2	-0.1	0.0	-0.1	75	-2.1	1.1	-0.2	-0.1	0.0	0.1
58	81	1.5	-0.2	0.4	0.0	0.0	0.1	82	-2.5	-1.1	0.4	0.0	0.0	-0.1
	75	2.1	1.1	-0.2	-0.1	0.0	-0.1	76	-1.2	0.2	-0.2	-0.1	0.0	0.1
59	82	0.3	0.8	0.3	0.0	0.0	0.1	83	-3.1	-2.0	0.3	0.0	0.0	-0.1
	76	2.7	2.0	-0.1	-0.1	0.0	-0.1	77	0.2	-0.7	-0.1	-0.1	0.0	0.1
60	83	-1.3	1.8	0.1	0.0	0.0	0.1	2	-3.3	-2.5	0.1	0.0	0.1	-0.1
	77	2.9	2.7	0.0	0.0	0.0	0.0	78	1.8	-2.0	0.1	0.0	0.0	0.0

CARATT. Var. Cat. E2: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-0.5	0.0	0.3	0.0	0.2	3	0.00	0.0	-2.8	0.0	-1.0	0.0	-0.3
1	5	0.00	0.0	-0.5	0.0	0.3	0.0	0.2	12	0.00	0.0	-2.8	0.0	-1.0	0.0	-0.3
	3	3.19	0.1	0.3	0.2	-0.3	0.0	0.0	3	0.00	-0.1	-0.3	-0.2	-0.8	0.3	0.0
	5	3.19	0.1	-0.3	0.2	0.3	0.0	0.0	5	0.00	-0.1	0.3	-0.2	0.8	0.3	0.0
	10	3.19	-0.1	0.3	0.2	-0.3	0.0	0.0	10	0.00	0.1	-0.3	-0.2	-0.8	-0.3	0.0
	12	3.19	-0.1	-0.3	0.2	0.3	0.0	0.0	12	0.00	0.1	0.3	-0.2	0.8	-0.3	0.0
	4	3.19	0.0	-0.2	0.0	0.3	0.0	0.0	12	3.19	0.0	0.2	0.0	0.3	0.0	0.0
	6	3.19	0.0	-0.2	0.0	0.3	0.0	0.0	5	3.19	0.0	0.2	0.0	0.3	0.0	0.0
	3	3.19	0.0	0.0	0.0	0.0	0.0	0.0	10	3.19	0.0	0.0	0.0	0.0	0.0	0.0
	5	3.19	0.0	0.0	0.0	0.0	0.0	0.0	12	3.19	0.0	0.0	0.0	0.0	0.0	0.0
	10	3.19	0.0	0.2	0.0	-0.3	0.0	0.0	4	3.19	0.0	-0.2	0.0	-0.3	0.0	0.0
	3	3.19	0.0	0.2	0.0	-0.3	0.0	0.0	6	3.19	0.0	-0.2	0.0	-0.3	0.0	0.0
	6	3.19	0.0	0.0	0.3	-0.1	0.0	0.0	4	3.19	0.0	0.0	-0.3	0.1	0.0	0.0
1	10	0.00	0.0	-1.0	0.0	-0.2	0.0	-0.2	4	0.00	0.0	-2.2	0.0	-0.2	0.0	0.2
1	4	0.00	0.0	-3.7	0.0	3.5	0.0	0.0	12	0.00	0.0	-0.3	0.0	-2.4	0.0	0.0
1	3	0.00	0.0	-1.0	0.0	-0.2	0.0	0.2	6	0.00	0.0	-2.2	0.0	-0.2	0.0	-0.2
1	6	0.00	0.0	-3.7	0.0	3.5	0.0	0.0	5	0.00	0.0	-0.3	0.0	-2.4	0.0	0.0
	6	3.19	0.3	0.0	-0.4	0.0	0.1	0.0	6	0.00	-0.3	0.0	0.4	0.0	0.7	0.0
	4	3.19	-0.3	0.0	-0.4	0.0	-0.1	0.0	4	0.00	0.3	0.0	0.4	0.0	-0.7	0.0
1	6	0.00	0.0	5.1	0.0	-0.9	0.0	0.0	4	0.00	0.0	-9.6	0.0	-3.9	0.0	0.0
2	10	0.00	0.0	0.2	0.0	1.6	0.0	0.3	3	0.00	0.0	-3.7	0.0	-2.8	0.0	-0.3
3	10	0.00	0.0	-1.0	0.0	3.2	0.0	0.1	3	0.00	0.0	-2.7	0.0	-3.7	0.0	-0.1
4	10	0.00	0.0	-2.7	0.0	3.7	0.0	-0.1	3	0.00	0.0	-1.0	0.0	-3.2	0.0	0.1
5	10	0.00	0.0	-3.7	0.0	2.8	0.0	-0.3	3	0.00	0.0	0.2	0.0	-1.6	0.0	0.3
6	10	0.00	0.0	-2.8	0.0	1.0	0.0	-0.3	3	0.00	0.0	-0.5	0.0	-0.3	0.0	0.2
2	5	0.00	0.0	0.2	0.0	1.6	0.0	0.3	12	0.00	0.0	-3.7	0.0	-2.8	0.0	-0.3
3	5	0.00	0.0	-1.0	0.0	3.2	0.0	0.1	12	0.00	0.0	-2.7	0.0	-3.7	0.0	-0.1
4	5	0.00	0.0	-2.7	0.0	3.7	0.0	-0.1	12	0.00	0.0	-1.0	0.0	-3.2	0.0	0.1
5	5	0.00	0.0	-3.7	0.0	2.8	0.0	-0.3	12	0.00	0.0	0.2	0.0	-1.6	0.0	0.3
6	5	0.00	0.0	-2.8	0.0	1.0	0.0	-0.3	12	0.00	0.0	-0.5	0.0	-0.3	0.0	0.2
2	10	0.00	0.0	-0.4	0.0	0.8	0.0	-0.2	4	0.00	0.0	-3.0	0.0	-1.6	0.0	0.2
3	10	0.00	0.0	-1.2	0.0	1.9	0.0	0.0	4	0.00	0.0	-2.5	0.0	-2.3	0.0	0.1
4	10	0.00	0.0	-1.7	0.0	2.3	0.0	0.1	4	0.00	0.0	-2.2	0.0	-2.5	0.0	-0.1
5	10	0.00	0.0	-0.3	0.0	2.4	0.0	0.0	4	0.00	0.0	-3.7	0.0	-3.5	0.0	0.0
2	4	0.00	0.0	-2.2	0.0	2.5	0.0	-0.1	12	0.00	0.0	-1.7	0.0	-2.3	0.0	0.1
3	4	0.00	0.0	-2.5	0.0	2.3	0.0	0.1	12	0.00	0.0	-1.2	0.0	-1.9	0.0	0.0
4	4	0.00	0.0	-3.0	0.0	1.6	0.0	0.2	12	0.00	0.0	-0.4	0.0	-0.8	0.0	-0.2
5	4	0.00	0.0	-2.2	0.0	0.2	0.0	0.2	12	0.00	0.0	-1.0	0.0	0.2	0.0	-0.2

CARATT. Var. Cat. E2: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
2	3	0.00	0.0	-0.4	0.0	0.8	0.0	0.2	6	0.00	0.0	-3.0	0.0	-1.6	0.0	-0.2
3	3	0.00	0.0	-1.2	0.0	1.9	0.0	0.0	6	0.00	0.0	-2.5	0.0	-2.3	0.0	-0.1
4	3	0.00	0.0	-1.7	0.0	2.3	0.0	-0.1	6	0.00	0.0	-2.2	0.0	-2.5	0.0	0.1
5	3	0.00	0.0	-0.3	0.0	2.4	0.0	0.0	6	0.00	0.0	-3.7	0.0	-3.5	0.0	0.0
2	6	0.00	0.0	-2.2	0.0	2.5	0.0	0.1	5	0.00	0.0	-1.7	0.0	-2.3	0.0	-0.1
3	6	0.00	0.0	-2.5	0.0	2.3	0.0	-0.1	5	0.00	0.0	-1.2	0.0	-1.9	0.0	0.0
4	6	0.00	0.0	-3.0	0.0	1.6	0.0	-0.2	5	0.00	0.0	-0.4	0.0	-0.8	0.0	0.2
5	6	0.00	0.0	-2.2	0.0	0.2	0.0	-0.2	5	0.00	0.0	-1.0	0.0	0.2	0.0	0.2
2	6	0.00	0.0	4.5	0.0	3.3	0.0	0.0	4	0.00	0.0	-9.6	0.0	-7.8	0.0	0.0
3	6	0.00	0.0	0.1	0.0	7.3	0.0	0.0	4	0.00	0.0	-5.5	0.0	-9.2	0.0	0.0
4	6	0.00	0.0	-5.5	0.0	9.2	0.0	0.0	4	0.00	0.0	0.1	0.0	-7.3	0.0	0.0
5	6	0.00	0.0	-9.6	0.0	7.8	0.0	0.0	4	0.00	0.0	4.5	0.0	-3.3	0.0	0.0
6	6	0.00	0.0	-9.6	0.0	3.9	0.0	0.0	4	0.00	0.0	5.1	0.0	0.9	0.0	0.0

FORZE Var. Cat. E2: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-4.5	2.9	0.7	0.1	-0.2	-0.1	19	0.4	0.3	-0.2	-0.1	0.1	0.0
	3	0.8	0.9	1.3	0.3	-0.3	0.0	13	3.2	-4.2	0.6	0.2	-0.1	0.1
2	51	-2.5	2.0	0.8	0.1	-0.2	0.0	52	3.3	2.8	-0.2	-0.1	0.0	0.0
	11	-2.1	-2.7	1.3	0.2	-0.2	-0.1	46	1.4	-2.1	0.5	0.2	-0.1	0.1
3	19	-4.1	5.0	-0.6	0.3	0.2	0.1	20	1.0	2.8	-0.9	0.0	0.0	-0.2
	13	-0.6	-2.0	2.0	0.7	-0.1	-0.2	14	3.7	-5.8	2.0	0.7	-0.2	0.2
4	20	-3.3	5.7	-1.5	0.3	0.2	0.3	21	2.1	4.9	-1.5	0.2	-0.1	-0.3
	14	-2.3	-4.5	2.7	1.1	0.0	-0.3	15	3.5	-6.0	2.7	1.0	-0.1	0.3
5	21	-2.1	4.9	-1.5	0.2	0.1	0.3	22	3.3	5.7	-1.5	0.3	-0.2	-0.3
	15	-3.5	-6.0	2.7	1.0	0.1	-0.3	16	2.3	-4.5	2.7	1.1	0.0	0.3
6	22	-1.0	2.8	-0.9	0.0	0.0	0.2	23	4.1	5.0	-0.6	0.3	-0.2	-0.1
	16	-3.7	-5.8	2.0	0.7	0.2	-0.2	17	0.6	-2.0	2.0	0.7	0.1	0.2
7	23	-0.4	0.3	-0.2	-0.1	-0.1	0.0	24	4.5	2.9	0.7	0.1	0.2	0.1
	17	-3.2	-4.2	0.6	0.2	0.1	-0.1	1	-0.8	0.9	1.3	0.3	0.3	0.0
8	25	-5.8	3.3	1.9	0.1	-0.7	-0.2	26	2.5	0.7	-0.8	0.0	0.0	0.2
	18	-1.9	-0.2	1.9	0.1	-0.7	0.2	19	5.1	-3.9	-0.6	-0.2	-0.2	-0.1
9	26	-4.8	4.2	0.6	0.5	0.2	0.0	27	2.0	2.2	-0.4	0.4	-0.3	0.0
	19	-1.4	-1.4	1.4	0.0	0.0	0.0	20	4.3	-5.0	0.8	-0.2	-0.4	0.1
10	27	-3.5	4.6	-0.2	0.7	0.4	0.1	28	2.4	3.9	-0.4	0.7	-0.4	-0.2
	20	-2.0	-3.5	1.6	-0.1	0.3	-0.2	21	3.1	-4.9	1.5	-0.2	-0.4	0.2
11	28	-2.4	3.9	-0.4	0.7	0.4	0.2	29	3.5	4.6	-0.2	0.7	-0.4	-0.1
	21	-3.1	-4.9	1.5	-0.2	0.4	-0.2	22	2.0	-3.5	1.6	-0.1	-0.3	0.2
12	29	-2.0	2.2	-0.4	0.4	0.3	0.0	30	4.8	4.2	0.6	0.5	-0.2	0.0
	22	-4.3	-5.0	0.8	-0.2	0.4	-0.1	23	1.4	-1.4	1.4	0.0	0.0	0.0
13	30	-2.5	0.7	-0.8	0.0	0.0	-0.2	31	5.8	3.3	1.9	0.1	0.7	0.2
	23	-5.1	-3.9	-0.6	-0.2	0.2	0.1	24	1.9	-0.2	1.9	0.1	0.7	-0.2
14	32	-5.2	2.9	2.3	0.1	-0.9	-0.2	33	3.8	1.7	-1.2	0.1	-0.2	0.2
	25	-3.9	-1.6	2.4	0.0	-0.9	0.2	26	5.3	-3.0	-1.1	-0.2	-0.2	-0.2
15	33	-4.5	3.2	1.4	0.4	0.0	-0.1	34	3.1	2.4	-0.1	0.5	-0.5	0.1
	26	-3.0	-1.8	1.3	-0.4	0.0	0.1	27	4.3	-3.7	-0.1	-0.5	-0.5	0.0
16	34	-3.7	3.6	0.8	0.6	0.4	0.0	35	3.1	3.3	0.4	0.7	-0.5	0.0
	27	-2.8	-3.1	0.8	-0.6	0.4	-0.1	28	3.3	-3.9	0.4	-0.7	-0.5	0.1
17	35	-3.1	3.3	0.4	0.7	0.5	0.0	36	3.7	3.6	0.8	0.6	-0.4	0.0
	28	-3.3	-3.9	0.4	-0.7	0.5	-0.1	29	2.8	-3.1	0.8	-0.6	-0.4	0.1
18	36	-3.1	2.4	-0.1	0.5	0.5	-0.1	37	4.5	3.2	1.4	0.4	0.0	0.1
	29	-4.3	-3.7	-0.1	-0.5	0.5	0.0	30	3.0	-1.8	1.3	-0.4	0.0	-0.1
19	37	-3.8	1.7	-1.2	0.1	0.2	-0.2	38	5.2	2.9	2.3	0.1	0.9	0.2
	30	-5.3	-3.0	-1.1	-0.2	0.2	0.2	31	3.9	-1.6	2.4	0.0	0.9	-0.2
20	39	-3.6	2.3	1.8	0.0	-0.7	-0.1	40	3.6	2.4	-0.5	0.1	-0.2	0.1
	32	-4.3	-2.3	1.8	-0.1	-0.7	0.2	33	4.3	-2.4	-0.7	-0.1	0.0	-0.2
21	40	-3.8	2.7	1.4	0.0	0.0	-0.1	41	3.5	2.7	0.8	0.2	-0.4	0.1
	33	-3.7	-2.4	0.5	-0.5	0.2	0.1	34	4.0	-3.0	-0.4	-0.4	-0.3	-0.1
22	41	-4.0	3.2	1.6	0.0	0.3	-0.1	42	3.8	3.1	1.6	0.1	-0.4	0.1
	34	-3.4	-3.0	-0.3	-0.7	0.4	0.0	35	3.6	-3.3	-0.4	-0.7	-0.4	0.0
23	42	-3.8	3.1	1.6	0.1	0.4	-0.1	43	4.0	3.2	1.6	0.0	-0.3	0.1
	35	-3.6	-3.3	-0.4	-0.7	0.4	0.0	36	3.4	-3.0	-0.3	-0.7	-0.4	0.0
24	43	-3.5	2.7	0.8	0.2	0.4	-0.1	44	3.8	2.7	1.4	0.0	0.0	0.1
	36	-4.0	-3.0	-0.4	-0.4	0.3	0.1	37	3.7	-2.4	0.5	-0.5	-0.2	-0.1
25	44	-3.6	2.4	-0.5	0.1	0.2	-0.1	45	3.6	2.3	1.8	0.0	0.7	0.1
	37	-4.3	-2.4	-0.7	-0.1	0.0	0.2	38	4.3	-2.3	1.8	-0.1	0.7	-0.2
26	11	-2.1	2.7	1.3	-0.2	-0.2	0.1	46	1.4	2.1	0.5	-0.2	-0.1	-0.1
	39	-2.5	-2.0	0.8	-0.1	-0.2	0.0	40	3.3	-2.8	-0.2	0.1	0.0	0.0
27	46	-4.4	3.6	2.0	-0.7	0.0	-0.1	47	3.1	2.0	2.0	-0.8	-0.2	0.1
	40	-3.0	-2.3	-0.7	-0.2	0.2	0.0	41	4.3	-3.3	-0.9	0.0	-0.1	-0.1
28	47	-5.3	3.2	2.8	-1.2	0.1	-0.2	48	4.7	2.5	2.8	-1.2	-0.1	0.2
	41	-3.8	-2.6	-1.6	-0.2	0.2	0.1	42	4.5	-3.1	-1.6	-0.1	-0.1	-0.1
29	48	-4.7	2.5	2.8	-1.2	0.1	-0.2	49	5.3	3.2	2.8	-1.2	-0.1	0.2
	42	-4.5	-3.1	-1.6	-0.1	0.1	0.1	43	3.8	-2.6	-1.6	-0.2	-0.2	-0.1
30	49	-3.1	2.0	2.0	-0.8	0.2	-0.1	50	4.4	3.6	2.0	-0.7	0.0	0.1
	43	-4.3	-3.3	-0.9	0.0	0.1	0.1	44	3.0	-2.3	-0.7	-0.2	-0.2	0.0
31	50	-1.4	2.1	0.5	-0.2	0.1	0.1	12	2.1	2.7	1.3	-0.2	0.2	-0.1
	44	-3.3	-2.8	-0.2	0.1	0.0	0.0	45	2.5	-2.0	0.8	-0.1	0.2	0.0
32	52	-3.0	2.3	-0.7	0.2	0.2	0.0	53	4.3	3.3	-0.9	0.0	-0.1	0.1

FORZE Var. Cat. E2: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
	46	-4.4	-3.6	2.0	0.7	0.0	0.1	47	3.1	-2.0	2.0	0.8	-0.2	-0.1
33	53	-3.8	2.6	-1.6	0.2	0.2	-0.1	54	4.5	3.1	-1.6	0.1	-0.1	0.1
	47	-5.3	-3.2	2.8	1.2	0.1	0.2	48	4.7	-2.5	2.8	1.2	-0.1	-0.2
34	54	-4.5	3.1	-1.6	0.1	0.1	-0.1	55	3.8	2.6	-1.6	0.2	-0.2	0.1
	48	-4.7	-2.5	2.8	1.2	0.1	0.2	49	5.3	-3.2	2.8	1.2	-0.1	-0.2
35	55	-4.3	3.3	-0.9	0.0	0.1	-0.1	56	3.0	2.3	-0.7	0.2	-0.2	0.0
	49	-3.1	-2.0	2.0	0.8	0.2	0.1	50	4.4	-3.6	2.0	0.7	0.0	-0.1
36	56	-3.3	2.8	-0.2	-0.1	0.0	0.0	57	2.5	2.0	0.8	0.1	0.2	0.0
	50	-1.4	-2.1	0.5	0.2	0.1	-0.1	12	2.1	-2.7	1.3	0.2	0.2	0.1
37	58	-4.3	2.3	1.8	0.1	-0.7	-0.2	59	4.3	2.4	-0.7	0.1	0.0	0.2
	51	-3.6	-2.3	1.8	0.0	-0.7	0.1	52	3.6	-2.4	-0.5	-0.1	-0.2	-0.1
38	59	-3.7	2.4	0.5	0.5	0.2	-0.1	60	4.0	3.0	-0.4	0.4	-0.3	0.1
	52	-3.8	-2.7	1.4	0.0	0.0	0.1	53	3.5	-2.7	0.8	-0.2	-0.4	-0.1
39	60	-3.4	3.0	-0.3	0.7	0.4	0.0	61	3.6	3.3	-0.4	0.7	-0.4	0.0
	53	-4.0	-3.2	1.6	0.0	0.3	0.1	54	3.8	-3.1	1.6	-0.1	-0.4	-0.1
40	61	-3.6	3.3	-0.4	0.7	0.4	0.0	62	3.4	3.0	-0.3	0.7	-0.4	0.0
	54	-3.8	-3.1	1.6	-0.1	0.4	0.1	55	4.0	-3.2	1.6	0.0	-0.3	-0.1
41	62	-4.0	3.0	-0.4	0.4	0.3	-0.1	63	3.7	2.4	0.5	0.5	-0.2	0.1
	55	-3.5	-2.7	0.8	-0.2	0.4	0.1	56	3.8	-2.7	1.4	0.0	0.0	-0.1
42	63	-4.3	2.4	-0.7	0.1	0.0	-0.2	64	4.3	2.3	1.8	0.1	0.7	0.2
	56	-3.6	-2.4	-0.5	-0.1	0.2	0.1	57	3.6	-2.3	1.8	0.0	0.7	-0.1
43	65	-3.9	1.6	2.4	0.0	-0.9	-0.2	66	5.3	3.0	-1.1	0.2	-0.2	0.2
	58	-5.2	-2.9	2.3	-0.1	-0.9	0.2	59	3.8	-1.7	-1.2	-0.1	-0.2	-0.2
44	66	-3.0	1.8	1.3	0.4	0.0	-0.1	67	4.3	3.7	-0.1	0.5	-0.5	0.0
	59	-4.5	-3.2	1.4	-0.4	0.0	0.1	60	3.1	-2.4	-0.1	-0.5	-0.5	-0.1
45	67	-2.8	3.1	0.8	0.6	0.4	0.1	68	3.3	3.9	0.4	0.7	-0.5	-0.1
	60	-3.7	-3.6	0.8	-0.6	0.4	0.0	61	3.1	-3.3	0.4	-0.7	-0.5	0.0
46	68	-3.3	3.9	0.4	0.7	0.5	0.1	69	2.8	3.1	0.8	0.6	-0.4	-0.1
	61	-3.1	-3.3	0.4	-0.7	0.5	0.0	62	3.7	-3.6	0.8	-0.6	-0.4	0.0
47	69	-4.3	3.7	-0.1	0.5	0.5	0.0	70	3.0	1.8	1.3	0.4	0.0	0.1
	62	-3.1	-2.4	-0.1	-0.5	0.5	0.1	63	4.5	-3.2	1.4	-0.4	0.0	-0.1
48	70	-5.3	3.0	-1.1	0.2	0.2	-0.2	71	3.9	1.6	2.4	0.0	0.9	0.2
	63	-3.8	-1.7	-1.2	-0.1	0.2	0.2	64	5.2	-2.9	2.3	-0.1	0.9	-0.2
49	72	-1.9	0.2	1.9	-0.1	-0.7	-0.2	73	5.1	3.9	-0.6	0.2	-0.2	0.1
	65	-5.8	-3.3	1.9	-0.1	-0.7	0.2	66	2.5	-0.7	-0.8	0.0	0.0	-0.2
50	73	-1.4	1.4	1.4	0.0	0.0	0.0	74	4.3	5.0	0.8	0.2	-0.4	-0.1
	66	-4.8	-4.2	0.6	-0.5	0.2	0.0	67	2.0	-2.2	-0.4	-0.4	-0.3	0.0
51	74	-2.0	3.5	1.6	0.1	0.3	0.2	75	3.1	4.9	1.5	0.2	-0.4	-0.2
	67	-3.5	-4.6	-0.2	-0.7	0.4	-0.1	68	2.4	-3.9	-0.4	-0.7	-0.4	0.2
52	75	-3.1	4.9	1.5	0.2	0.4	0.2	76	2.0	3.5	1.6	0.1	-0.3	-0.2
	68	-2.4	-3.9	-0.4	-0.7	0.4	-0.2	69	3.5	-4.6	-0.2	-0.7	-0.4	0.1
53	76	-4.3	5.0	0.8	0.2	0.4	0.1	77	1.4	1.4	1.4	0.0	0.0	0.0
	69	-2.0	-2.2	-0.4	-0.4	0.3	0.0	70	4.8	-4.2	0.6	-0.5	-0.2	0.0
54	77	-5.1	3.9	-0.6	0.2	0.2	-0.1	78	1.9	0.2	1.9	-0.1	0.7	0.2
	70	-2.5	-0.7	-0.8	0.0	0.0	0.2	71	5.8	-3.3	1.9	-0.1	0.7	-0.2
55	4	0.8	-0.9	1.3	-0.3	-0.3	0.0	79	3.2	4.2	0.6	-0.2	-0.1	-0.1
	72	-4.5	-2.9	0.7	-0.1	-0.2	0.1	73	0.4	-0.3	-0.2	0.1	0.1	0.0
56	79	-0.6	2.0	2.0	-0.7	-0.1	0.2	80	3.7	5.8	2.0	-0.7	-0.2	-0.2
	73	-4.1	-5.0	-0.6	-0.3	0.2	-0.1	74	1.0	-2.8	-0.9	0.0	0.0	0.2
57	80	-2.3	4.5	2.7	-1.1	0.0	0.3	81	3.5	6.0	2.7	-1.0	-0.1	-0.3
	74	-3.3	-5.7	-1.5	-0.3	0.2	-0.3	75	2.1	-4.9	-1.5	-0.2	-0.1	0.3
58	81	-3.5	6.0	2.7	-1.0	0.1	0.3	82	2.3	4.5	2.7	-1.1	0.0	-0.3
	75	-2.1	-4.9	-1.5	-0.2	0.1	-0.3	76	3.3	-5.7	-1.5	-0.3	-0.2	0.3
59	82	-3.7	5.8	2.0	-0.7	0.2	0.2	83	0.6	2.0	2.0	-0.7	0.1	-0.2
	76	-1.0	-2.8	-0.9	0.0	0.0	-0.2	77	4.1	-5.0	-0.6	-0.3	-0.2	0.1
60	83	-3.2	4.2	0.6	-0.2	0.1	0.1	2	-0.8	-0.9	1.3	-0.3	0.3	0.0
	77	-0.4	-0.3	-0.2	0.1	-0.1	0.0	78	4.5	-2.9	0.7	-0.1	0.2	-0.1

CARATT. H1 car. manutenzione: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-1.3	0.0	-0.1	0.0	0.0	3	0.00	0.0	0.8	0.0	0.8	0.0	0.0
1	5	0.00	0.0	-1.3	0.0	-0.1	0.0	0.0	12	0.00	0.0	0.8	0.0	0.8	0.0	0.0
	3	3.19	0.3	0.0	2.5	-0.2	0.8	0.0	3	0.00	-0.3	0.0	-2.5	0.0	0.3	0.0
	5	3.19	0.3	0.0	2.5	0.2	0.8	0.0	5	0.00	-0.3	0.0	-2.5	0.0	0.3	0.0
	10	3.19	-0.3	0.0	2.5	-0.2	-0.8	0.0	10	0.00	0.3	0.0	-2.5	0.0	-0.3	0.0
	12	3.19	-0.3	0.0	2.5	0.2	-0.8	0.0	12	0.00	0.3	0.0	-2.5	0.0	-0.3	0.0
	4	3.19	0.0	0.7	0.0	-0.4	0.0	0.1	12	3.19	0.0	0.6	0.0	0.3	0.0	0.1
	6	3.19	0.0	0.7	0.0	-0.4	0.0	-0.1	5	3.19	0.0	0.6	0.0	0.3	0.0	-0.1
	3	3.19	0.0	1.7	0.0	-0.8	0.0	0.1	10	3.19	0.0	1.7	0.0	0.8	0.0	0.1
	5	3.19	0.0	1.7	0.0	-0.8	0.0	-0.1	12	3.19	0.0	1.7	0.0	0.8	0.0	-0.1
	10	3.19	0.0	0.6	0.0	-0.3	0.0	0.1	4	3.19	0.0	0.7	0.0	0.4	0.0	0.1
	3	3.19	0.0	0.6	0.0	-0.3	0.0	-0.1	6	3.19	0.0	0.7	0.0	0.4	0.0	-0.1
	6	3.19	0.0	2.4	0.4	-1.2	0.0	0.0	4	3.19	0.0	2.4	-0.4	1.2	0.0	0.0
1	10	0.00	0.0	-1.2	0.0	0.1	0.0	0.0	4	0.00	0.0	0.6	0.0	0.4	0.0	0.0
1	4	0.00	0.0	-1.5	0.0	0.6	0.0	0.0	12	0.00	0.0	1.0	0.0	0.1	0.0	0.0
1	3	0.00	0.0	-1.2	0.0	0.1	0.0	0.0	6	0.00	0.0	0.6	0.0	0.4	0.0	0.0
1	6	0.00	0.0	-1.5	0.0	0.6	0.0	0.0	5	0.00	0.0	1.0	0.0	0.1	0.0	0.0
	6	3.19	0.5	0.0	4.0	0.0	1.0	0.0	6	0.00	-0.5	0.0	-4.0	0.0	0.4	0.0
	4	3.19	-0.5	0.0	4.0	0.0	-1.0	0.0	4	0.00	0.5	0.0	-4.0	0.0	-0.4	0.0
1	6	0.00	0.0	-1.0	0.0	-0.2	0.0	0.0	4	0.00	0.0	0.5	0.0	0.7	0.0	0.0

CARATT. H1 car. manutenzione: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
2	10	0.00	0.0	-0.8	0.0	-0.7	0.0	0.0	3	0.00	0.0	0.4	0.0	1.0	0.0	0.0
3	10	0.00	0.0	-0.4	0.0	-1.0	0.0	0.0	3	0.00	0.0	0.0	0.0	1.1	0.0	0.0
4	10	0.00	0.0	0.0	0.0	-1.1	0.0	0.0	3	0.00	0.0	-0.4	0.0	1.0	0.0	0.0
5	10	0.00	0.0	0.4	0.0	-1.0	0.0	0.0	3	0.00	0.0	-0.8	0.0	0.7	0.0	0.0
6	10	0.00	0.0	0.8	0.0	-0.8	0.0	0.0	3	0.00	0.0	-1.3	0.0	0.1	0.0	0.0
2	5	0.00	0.0	-0.8	0.0	-0.7	0.0	0.0	12	0.00	0.0	0.4	0.0	1.0	0.0	0.0
3	5	0.00	0.0	-0.4	0.0	-1.0	0.0	0.0	12	0.00	0.0	0.0	0.0	1.1	0.0	0.0
4	5	0.00	0.0	0.0	0.0	-1.1	0.0	0.0	12	0.00	0.0	-0.4	0.0	1.0	0.0	0.0
5	5	0.00	0.0	0.4	0.0	-1.0	0.0	0.0	12	0.00	0.0	-0.8	0.0	0.7	0.0	0.0
6	5	0.00	0.0	0.8	0.0	-0.8	0.0	0.0	12	0.00	0.0	-1.3	0.0	0.1	0.0	0.0
2	10	0.00	0.0	-0.6	0.0	-0.3	0.0	0.0	4	0.00	0.0	0.1	0.0	0.5	0.0	0.0
3	10	0.00	0.0	-0.1	0.0	-0.5	0.0	0.0	4	0.00	0.0	-0.4	0.0	0.4	0.0	0.0
4	10	0.00	0.0	0.4	0.0	-0.4	0.0	0.0	4	0.00	0.0	-0.9	0.0	0.0	0.0	0.0
5	10	0.00	0.0	1.0	0.0	-0.1	0.0	0.0	4	0.00	0.0	-1.5	0.0	-0.6	0.0	0.0
2	4	0.00	0.0	-0.9	0.0	0.0	0.0	0.0	12	0.00	0.0	0.4	0.0	0.4	0.0	0.0
3	4	0.00	0.0	-0.4	0.0	-0.4	0.0	0.0	12	0.00	0.0	-0.1	0.0	0.5	0.0	0.0
4	4	0.00	0.0	0.1	0.0	-0.5	0.0	0.0	12	0.00	0.0	-0.6	0.0	0.3	0.0	0.0
5	4	0.00	0.0	0.6	0.0	-0.4	0.0	0.0	12	0.00	0.0	-1.2	0.0	-0.1	0.0	0.0
2	3	0.00	0.0	-0.6	0.0	-0.3	0.0	0.0	6	0.00	0.0	0.1	0.0	0.5	0.0	0.0
3	3	0.00	0.0	-0.1	0.0	-0.5	0.0	0.0	6	0.00	0.0	-0.4	0.0	0.4	0.0	0.0
4	3	0.00	0.0	0.4	0.0	-0.4	0.0	0.0	6	0.00	0.0	-0.9	0.0	0.0	0.0	0.0
5	3	0.00	0.0	1.0	0.0	-0.1	0.0	0.0	6	0.00	0.0	-1.5	0.0	-0.6	0.0	0.0
2	6	0.00	0.0	-0.9	0.0	0.0	0.0	0.0	5	0.00	0.0	0.4	0.0	0.4	0.0	0.0
3	6	0.00	0.0	-0.4	0.0	-0.4	0.0	0.0	5	0.00	0.0	-0.1	0.0	0.5	0.0	0.0
4	6	0.00	0.0	0.1	0.0	-0.5	0.0	0.0	5	0.00	0.0	-0.6	0.0	0.3	0.0	0.0
5	6	0.00	0.0	0.6	0.0	-0.4	0.0	0.0	5	0.00	0.0	-1.2	0.0	-0.1	0.0	0.0
2	6	0.00	0.0	-0.7	0.0	-0.6	0.0	0.0	4	0.00	0.0	0.3	0.0	0.9	0.0	0.0
3	6	0.00	0.0	-0.3	0.0	-0.8	0.0	0.0	4	0.00	0.0	0.0	0.0	0.9	0.0	0.0
4	6	0.00	0.0	0.0	0.0	-0.9	0.0	0.0	4	0.00	0.0	-0.3	0.0	0.8	0.0	0.0
5	6	0.00	0.0	0.3	0.0	-0.9	0.0	0.0	4	0.00	0.0	-0.7	0.0	0.6	0.0	0.0
6	6	0.00	0.0	0.5	0.0	-0.7	0.0	0.0	4	0.00	0.0	-1.0	0.0	0.2	0.0	0.0

FORZE H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-0.1	0.2	0.0	0.0	0.0	0.0	19	-0.6	-0.4	0.0	0.0	0.0	0.0
	3	0.6	0.5	0.0	0.0	0.0	0.0	13	0.1	-0.3	0.0	0.0	0.0	0.0
2	51	0.0	0.3	0.0	0.0	0.0	0.0	52	-0.4	-0.3	0.0	0.0	0.0	0.0
	11	0.5	0.2	0.0	0.0	0.0	0.0	46	0.0	-0.2	0.0	0.0	0.0	0.0
3	19	0.2	0.1	0.0	0.0	0.0	0.0	20	-0.6	-0.2	0.0	0.0	0.0	0.0
	13	0.7	0.3	0.0	0.0	0.0	0.0	14	-0.3	-0.2	0.0	0.0	0.0	0.0
4	20	0.4	0.0	0.0	0.0	0.0	0.0	21	-0.5	-0.1	0.0	0.0	0.0	0.0
	14	0.7	0.1	0.0	0.0	0.0	-0.1	15	-0.5	0.0	0.0	0.0	0.0	0.1
5	21	0.5	-0.1	0.0	0.0	0.0	0.0	22	-0.4	0.0	0.0	0.0	0.0	0.0
	15	0.5	0.0	0.0	0.0	0.0	-0.1	16	-0.7	0.1	0.0	0.0	0.0	0.1
6	22	0.6	-0.2	0.0	0.0	0.0	0.0	23	-0.2	0.1	0.0	0.0	0.0	0.0
	16	0.3	-0.2	0.0	0.0	0.0	0.0	17	-0.7	0.3	0.0	0.0	0.0	0.0
7	23	0.6	-0.4	0.0	0.0	0.0	0.0	24	0.1	0.2	0.0	0.0	0.0	0.0
	17	-0.1	-0.3	0.0	0.0	0.0	0.0	1	-0.6	0.5	0.0	0.0	0.0	0.0
8	25	0.0	-0.1	0.0	0.0	0.0	0.0	26	-0.3	-0.4	0.0	0.0	0.0	0.0
	18	0.4	0.4	0.0	0.0	0.0	0.0	19	0.0	0.0	0.0	0.0	0.0	0.0
9	26	0.2	-0.1	0.0	0.0	0.0	0.0	27	-0.4	-0.2	0.0	0.0	0.0	0.0
	19	0.4	0.3	0.0	0.0	0.0	0.0	20	-0.2	0.0	0.0	0.0	0.0	0.0
10	27	0.3	-0.1	0.0	0.0	0.0	0.0	28	-0.4	-0.2	0.0	0.0	0.0	0.0
	20	0.4	0.2	0.0	0.0	0.0	0.0	21	-0.4	0.1	0.0	0.0	0.0	0.0
11	28	0.4	-0.2	0.0	0.0	0.0	0.0	29	-0.3	-0.1	0.0	0.0	0.0	0.0
	21	0.4	0.1	0.0	0.0	0.0	0.0	22	-0.4	0.2	0.0	0.0	0.0	0.0
12	29	0.4	-0.2	0.0	0.0	0.0	0.0	30	-0.2	-0.1	0.0	0.0	0.0	0.0
	22	0.2	0.0	0.0	0.0	0.0	0.0	23	-0.4	0.3	0.0	0.0	0.0	0.0
13	30	0.3	-0.4	0.0	0.0	0.0	0.0	31	0.0	-0.1	0.0	0.0	0.0	0.0
	23	0.0	0.0	0.0	0.0	0.0	0.0	24	-0.4	0.4	0.0	0.0	0.0	0.0
14	32	0.2	-0.3	0.0	0.0	0.0	0.0	33	-0.2	-0.2	0.0	0.0	0.0	0.0
	25	0.2	0.3	0.0	0.0	0.0	0.0	26	-0.1	0.2	0.0	0.0	0.0	0.0
15	33	0.2	-0.2	0.0	0.0	0.0	0.0	34	-0.3	-0.2	0.0	0.0	0.0	0.0
	26	0.3	0.2	0.0	0.0	0.0	0.0	27	-0.2	0.1	0.0	0.0	0.0	0.0
16	34	0.3	-0.2	0.0	0.0	0.0	0.0	35	-0.3	-0.2	0.0	0.0	0.0	0.0
	27	0.3	0.2	0.0	0.0	0.0	0.0	28	-0.3	0.2	0.0	0.0	0.0	0.0
17	35	0.3	-0.2	0.0	0.0	0.0	0.0	36	-0.3	-0.2	0.0	0.0	0.0	0.0
	28	0.3	0.2	0.0	0.0	0.0	0.0	29	-0.3	0.2	0.0	0.0	0.0	0.0
18	36	0.3	-0.2	0.0	0.0	0.0	0.0	37	-0.2	-0.2	0.0	0.0	0.0	0.0
	29	0.2	0.1	0.0	0.0	0.0	0.0	30	-0.3	0.2	0.0	0.0	0.0	0.0
19	37	0.2	-0.2	0.0	0.0	0.0	0.0	38	-0.2	-0.3	0.0	0.0	0.0	0.0
	30	0.1	0.2	0.0	0.0	0.0	0.0	31	-0.2	0.3	0.0	0.0	0.0	0.0
20	39	0.3	-0.3	0.0	0.0	0.0	0.0	40	-0.1	0.0	0.0	0.0	0.0	0.0
	32	0.0	0.1	0.0	0.0	0.0	0.0	33	-0.3	0.3	0.0	0.0	0.0	0.0
21	40	0.3	-0.2	0.0	0.0	0.0	0.0	41	-0.2	-0.1	0.0	0.0	0.0	0.0
	33	0.2	0.1	0.0	0.0	0.0	0.0	34	-0.3	0.2	0.0	0.0	0.0	0.0
22	41	0.4	-0.2	0.0	0.0	0.0	0.0	42	-0.3	-0.2	0.0	0.0	0.0	0.0
	34	0.3	0.2	0.0	0.0	0.0	0.0	35	-0.3	0.2	0.0	0.0	0.0	0.0
23	42	0.3	-0.2	0.0	0.0	0.0	0.0	43	-0.4	-0.2	0.0	0.0	0.0	0.0
	35	0.3	0.2	0.0	0.0	0.0	0.0	36	-0.3	0.2	0.0	0.0	0.0	0.0
24	43	0.2	-0.1	0.0	0.0	0.0	0.0	44	-0.3	-0.2	0.0	0.0	0.0	0.0

FORZE H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
	36	0.3	0.2	0.0	0.0	0.0	0.0	37	-0.2	0.1	0.0	0.0	0.0	0.0
25	44	0.1	0.0	0.0	0.0	0.0	0.0	45	-0.3	-0.3	0.0	0.0	0.0	0.0
	37	0.3	0.3	0.0	0.0	0.0	0.0	38	0.0	0.1	0.0	0.0	0.0	0.0
26	11	0.5	-0.2	0.0	0.0	0.0	0.0	46	0.0	0.2	0.0	0.0	0.0	0.0
	39	0.0	-0.3	0.0	0.0	0.0	0.0	40	-0.4	0.3	0.0	0.0	0.0	0.0
27	46	0.5	-0.2	0.0	0.0	0.0	0.0	47	-0.3	0.0	0.0	0.0	0.0	0.0
	40	0.2	0.0	0.0	0.0	0.0	0.0	41	-0.5	0.2	0.0	0.0	0.0	0.0
28	47	0.5	-0.2	0.0	0.0	0.0	0.0	48	-0.5	-0.1	0.0	0.0	0.0	0.0
	41	0.4	0.1	0.0	0.0	0.0	0.0	42	-0.4	0.2	0.0	0.0	0.0	0.0
29	48	0.5	-0.1	0.0	0.0	0.0	0.0	49	-0.5	-0.2	0.0	0.0	0.0	0.0
	42	0.4	0.2	0.0	0.0	0.0	0.0	43	-0.4	0.1	0.0	0.0	0.0	0.0
30	49	0.3	0.0	0.0	0.0	0.0	0.0	50	-0.5	-0.2	0.0	0.0	0.0	0.0
	43	0.5	0.2	0.0	0.0	0.0	0.0	44	-0.2	0.0	0.0	0.0	0.0	0.0
31	50	0.0	0.2	0.0	0.0	0.0	0.0	12	-0.5	-0.2	0.0	0.0	0.0	0.0
	44	0.4	0.3	0.0	0.0	0.0	0.0	45	0.0	-0.3	0.0	0.0	0.0	0.0
32	52	0.2	0.0	0.0	0.0	0.0	0.0	53	-0.5	-0.2	0.0	0.0	0.0	0.0
	46	0.5	0.2	0.0	0.0	0.0	0.0	47	-0.3	0.0	0.0	0.0	0.0	0.0
33	53	0.4	-0.1	0.0	0.0	0.0	0.0	54	-0.4	-0.2	0.0	0.0	0.0	0.0
	47	0.5	0.2	0.0	0.0	0.0	0.0	48	-0.5	0.1	0.0	0.0	0.0	0.0
34	54	0.4	-0.2	0.0	0.0	0.0	0.0	55	-0.4	-0.1	0.0	0.0	0.0	0.0
	48	0.5	0.1	0.0	0.0	0.0	0.0	49	-0.5	0.2	0.0	0.0	0.0	0.0
35	55	0.5	-0.2	0.0	0.0	0.0	0.0	56	-0.2	0.0	0.0	0.0	0.0	0.0
	49	0.3	0.0	0.0	0.0	0.0	0.0	50	-0.5	0.2	0.0	0.0	0.0	0.0
36	56	0.4	-0.3	0.0	0.0	0.0	0.0	57	0.0	0.3	0.0	0.0	0.0	0.0
	50	0.0	-0.2	0.0	0.0	0.0	0.0	12	-0.5	0.2	0.0	0.0	0.0	0.0
37	58	0.0	-0.1	0.0	0.0	0.0	0.0	59	-0.3	-0.3	0.0	0.0	0.0	0.0
	51	0.3	0.3	0.0	0.0	0.0	0.0	52	-0.1	0.0	0.0	0.0	0.0	0.0
38	59	0.2	-0.1	0.0	0.0	0.0	0.0	60	-0.3	-0.2	0.0	0.0	0.0	0.0
	52	0.3	0.2	0.0	0.0	0.0	0.0	53	-0.2	0.1	0.0	0.0	0.0	0.0
39	60	0.3	-0.2	0.0	0.0	0.0	0.0	61	-0.3	-0.2	0.0	0.0	0.0	0.0
	53	0.4	0.2	0.0	0.0	0.0	0.0	54	-0.3	0.2	0.0	0.0	0.0	0.0
40	61	0.3	-0.2	0.0	0.0	0.0	0.0	62	-0.3	-0.2	0.0	0.0	0.0	0.0
	54	0.3	0.2	0.0	0.0	0.0	0.0	55	-0.4	0.2	0.0	0.0	0.0	0.0
41	62	0.3	-0.2	0.0	0.0	0.0	0.0	63	-0.2	-0.1	0.0	0.0	0.0	0.0
	55	0.2	0.1	0.0	0.0	0.0	0.0	56	-0.3	0.2	0.0	0.0	0.0	0.0
42	63	0.3	-0.3	0.0	0.0	0.0	0.0	64	0.0	-0.1	0.0	0.0	0.0	0.0
	56	0.1	0.0	0.0	0.0	0.0	0.0	57	-0.3	0.3	0.0	0.0	0.0	0.0
43	65	0.2	-0.3	0.0	0.0	0.0	0.0	66	-0.1	-0.2	0.0	0.0	0.0	0.0
	58	0.2	0.3	0.0	0.0	0.0	0.0	59	-0.2	0.2	0.0	0.0	0.0	0.0
44	66	0.3	-0.2	0.0	0.0	0.0	0.0	67	-0.2	-0.1	0.0	0.0	0.0	0.0
	59	0.2	0.2	0.0	0.0	0.0	0.0	60	-0.3	0.2	0.0	0.0	0.0	0.0
45	67	0.3	-0.2	0.0	0.0	0.0	0.0	68	-0.3	-0.2	0.0	0.0	0.0	0.0
	60	0.3	0.2	0.0	0.0	0.0	0.0	61	-0.3	0.2	0.0	0.0	0.0	0.0
46	68	0.3	-0.2	0.0	0.0	0.0	0.0	69	-0.3	-0.2	0.0	0.0	0.0	0.0
	61	0.3	0.2	0.0	0.0	0.0	0.0	62	-0.3	0.2	0.0	0.0	0.0	0.0
47	69	0.2	-0.1	0.0	0.0	0.0	0.0	70	-0.3	-0.2	0.0	0.0	0.0	0.0
	62	0.3	0.2	0.0	0.0	0.0	0.0	63	-0.2	0.2	0.0	0.0	0.0	0.0
48	70	0.1	-0.2	0.0	0.0	0.0	0.0	71	-0.2	-0.3	0.0	0.0	0.0	0.0
	63	0.2	0.2	0.0	0.0	0.0	0.0	64	-0.2	0.3	0.0	0.0	0.0	0.0
49	72	0.4	-0.4	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0	0.0	0.0
	65	0.0	0.1	0.0	0.0	0.0	0.0	66	-0.3	0.4	0.0	0.0	0.0	0.0
50	73	0.4	-0.3	0.0	0.0	0.0	0.0	74	-0.2	0.0	0.0	0.0	0.0	0.0
	66	0.2	0.1	0.0	0.0	0.0	0.0	67	-0.4	0.2	0.0	0.0	0.0	0.0
51	74	0.4	-0.2	0.0	0.0	0.0	0.0	75	-0.4	-0.1	0.0	0.0	0.0	0.0
	67	0.3	0.1	0.0	0.0	0.0	0.0	68	-0.4	0.2	0.0	0.0	0.0	0.0
52	75	0.4	-0.1	0.0	0.0	0.0	0.0	76	-0.4	-0.2	0.0	0.0	0.0	0.0
	68	0.4	0.2	0.0	0.0	0.0	0.0	69	-0.3	0.1	0.0	0.0	0.0	0.0
53	76	0.2	0.0	0.0	0.0	0.0	0.0	77	-0.4	-0.3	0.0	0.0	0.0	0.0
	69	0.4	0.2	0.0	0.0	0.0	0.0	70	-0.2	0.1	0.0	0.0	0.0	0.0
54	77	0.0	0.0	0.0	0.0	0.0	0.0	78	-0.4	-0.4	0.0	0.0	0.0	0.0
	70	0.3	0.4	0.0	0.0	0.0	0.0	71	0.0	0.1	0.0	0.0	0.0	0.0
55	4	0.6	-0.5	0.0	0.0	0.0	0.0	79	0.1	0.3	0.0	0.0	0.0	0.0
	72	-0.1	-0.2	0.0	0.0	0.0	0.0	73	-0.6	0.4	0.0	0.0	0.0	0.0
56	79	0.7	-0.3	0.0	0.0	0.0	0.0	80	-0.3	0.2	0.0	0.0	0.0	0.0
	73	0.2	-0.1	0.0	0.0	0.0	0.0	74	-0.6	0.2	0.0	0.0	0.0	0.0
57	80	0.7	-0.1	0.0	0.0	0.0	0.1	81	-0.5	0.0	0.0	0.0	0.0	-0.1
	74	0.4	0.0	0.0	0.0	0.0	0.0	75	-0.5	0.1	0.0	0.0	0.0	0.0
58	81	0.5	0.0	0.0	0.0	0.0	0.1	82	-0.7	-0.1	0.0	0.0	0.0	-0.1
	75	0.5	0.1	0.0	0.0	0.0	0.0	76	-0.4	0.0	0.0	0.0	0.0	0.0
59	82	0.3	0.2	0.0	0.0	0.0	0.0	83	-0.7	-0.3	0.0	0.0	0.0	0.0
	76	0.6	0.2	0.0	0.0	0.0	0.0	77	-0.2	-0.1	0.0	0.0	0.0	0.0
60	83	-0.1	0.3	0.0	0.0	0.0	0.0	2	-0.6	-0.5	0.0	0.0	0.0	0.0
	77	0.6	0.4	0.0	0.0	0.0	0.0	78	0.1	-0.2	0.0	0.0	0.0	0.0

CARATT. Corr. Tors. dir. 0: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	3	0.00	0.0	0.1	0.0	-0.1	0.0	0.0
1	5	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	12	0.00	0.0	0.1	0.0	-0.1	0.0	0.0

CARATT. Corr. Tors. dir. 0: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
	3	3.19	0.1	-0.1	0.0	0.1	0.1	0.0	3	0.00	-0.1	0.1	0.0	0.2	0.2	0.0
	5	3.19	-0.1	-0.1	0.0	0.1	-0.1	0.0	5	0.00	0.1	0.1	0.0	0.2	-0.2	0.0
	10	3.19	0.1	0.1	0.0	-0.1	0.1	0.0	10	0.00	-0.1	-0.1	0.0	-0.2	0.2	0.0
	12	3.19	-0.1	0.1	0.0	-0.1	-0.1	0.0	12	0.00	0.1	-0.1	0.0	-0.2	-0.2	0.0
	4	3.19	0.0	0.0	0.1	-0.1	0.0	0.0	12	3.19	0.0	0.0	-0.1	-0.1	0.0	0.0
	6	3.19	0.0	0.0	-0.1	0.1	0.0	0.0	5	3.19	0.0	0.0	0.1	0.1	0.0	0.0
	3	3.19	0.0	0.1	0.0	-0.1	0.0	0.0	10	3.19	0.0	-0.1	0.0	-0.1	0.0	0.0
	5	3.19	0.0	-0.1	0.0	0.1	0.0	0.0	12	3.19	0.0	0.1	0.0	0.1	0.0	0.0
	10	3.19	0.0	0.0	-0.1	-0.1	0.0	0.0	4	3.19	0.0	0.0	0.1	-0.1	0.0	0.0
	3	3.19	0.0	0.0	0.1	0.1	0.0	0.0	6	3.19	0.0	0.0	-0.1	0.1	0.0	0.0
	6	3.19	0.0	0.0	0.0	0.0	0.0	0.0	4	3.19	0.0	0.0	0.0	0.0	0.0	0.0
1	10	0.00	0.0	0.1	0.0	-0.1	0.0	0.0	4	0.00	0.0	-0.1	0.0	0.1	0.0	0.0
1	4	0.00	0.0	0.1	0.0	-0.1	0.0	0.0	12	0.00	0.0	-0.1	0.0	0.0	0.0	0.0
1	3	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	6	0.00	0.0	0.1	0.0	-0.1	0.0	0.0
1	6	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	5	0.00	0.0	0.1	0.0	0.0	0.0	0.0
	6	3.19	0.0	-0.1	0.0	0.1	0.0	0.0	6	0.00	0.0	0.1	0.0	0.2	0.0	0.0
	4	3.19	0.0	0.1	0.0	-0.1	0.0	0.0	4	0.00	0.0	-0.1	0.0	-0.2	0.0	0.0
1	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
2	10	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	3	0.00	0.0	0.1	0.0	0.0	0.0	0.0
3	10	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	3	0.00	0.0	0.1	0.0	0.0	0.0	0.0
4	10	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	3	0.00	0.0	0.1	0.0	0.0	0.0	0.0
5	10	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	3	0.00	0.0	0.1	0.0	0.1	0.0	0.0
6	10	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0	3	0.00	0.0	0.1	0.0	0.1	0.0	0.0
2	5	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	12	0.00	0.0	0.1	0.0	0.0	0.0	0.0
3	5	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	12	0.00	0.0	0.1	0.0	0.0	0.0	0.0
4	5	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	12	0.00	0.0	0.1	0.0	0.0	0.0	0.0
5	5	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	12	0.00	0.0	0.1	0.0	0.1	0.0	0.0
6	5	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0	12	0.00	0.0	0.1	0.0	0.1	0.0	0.0
2	10	0.00	0.0	0.1	0.0	-0.1	0.0	0.0	4	0.00	0.0	-0.1	0.0	0.0	0.0	0.0
3	10	0.00	0.0	0.1	0.0	0.0	0.0	0.0	4	0.00	0.0	-0.1	0.0	0.0	0.0	0.0
4	10	0.00	0.0	0.1	0.0	0.0	0.0	0.0	4	0.00	0.0	-0.1	0.0	0.0	0.0	0.0
5	10	0.00	0.0	0.1	0.0	0.0	0.0	0.0	4	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0
2	4	0.00	0.0	0.1	0.0	0.0	0.0	0.0	12	0.00	0.0	-0.1	0.0	0.0	0.0	0.0
3	4	0.00	0.0	0.1	0.0	0.0	0.0	0.0	12	0.00	0.0	-0.1	0.0	0.0	0.0	0.0
4	4	0.00	0.0	0.1	0.0	0.0	0.0	0.0	12	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0
5	4	0.00	0.0	0.1	0.0	0.1	0.0	0.0	12	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0
2	3	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	6	0.00	0.0	0.1	0.0	0.0	0.0	0.0
3	3	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	6	0.00	0.0	0.1	0.0	0.0	0.0	0.0
4	3	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	6	0.00	0.0	0.1	0.0	0.0	0.0	0.0
5	3	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	6	0.00	0.0	0.1	0.0	0.1	0.0	0.0
2	6	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	5	0.00	0.0	0.1	0.0	0.0	0.0	0.0
3	6	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	5	0.00	0.0	0.1	0.0	0.0	0.0	0.0
4	6	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	5	0.00	0.0	0.1	0.0	0.1	0.0	0.0
5	6	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0	5	0.00	0.0	0.1	0.0	0.1	0.0	0.0
2	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
3	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
4	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
5	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
6	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	0.0	-0.1	0.0	0.0	0.0	0.0	19	0.0	0.0	0.0	0.0	0.0	0.0
	3	-0.1	0.0	0.0	0.0	0.0	0.0	13	0.0	0.0	0.0	0.0	0.0	0.0
2	51	0.0	0.0	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0	46	0.0	0.0	0.0	0.0	0.0	0.0
3	19	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0	14	0.0	0.0	0.0	0.0	0.0	0.0
4	20	0.0	0.0	0.0	0.0	0.0	0.0	21	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0	15	0.0	0.0	0.0	0.0	0.0	0.0
5	21	0.0	0.0	0.0	0.0	0.0	0.0	22	0.0	0.0	0.0	0.0	0.0	0.0
	15	0.0	0.0	0.0	0.0	0.0	0.0	16	0.0	0.0	0.0	0.0	0.0	0.0
6	22	0.0	0.0	0.0	0.0	0.0	0.0	23	0.0	0.0	0.0	0.0	0.0	0.0
	16	0.0	0.0	0.0	0.0	0.0	0.0	17	0.0	0.0	0.0	0.0	0.0	0.0
7	23	0.0	0.0	0.0	0.0	0.0	0.0	24	0.0	0.1	0.0	0.0	0.0	0.0
	17	0.0	0.0	0.0	0.0	0.0	0.0	1	-0.1	0.0	0.0	0.0	0.0	0.0
8	25	0.0	0.0	0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0
	18	0.0	0.0	0.0	0.0	0.0	0.0	19	0.0	0.0	0.0	0.0	0.0	0.0
9	26	0.0	0.0	0.0	0.0	0.0	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0
	19	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
10	27	0.0	0.0	0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0
	20	0.0	0.0	0.0	0.0	0.0	0.0	21	0.0	0.0	0.0	0.0	0.0	0.0
11	28	0.0	0.0	0.0	0.0	0.0	0.0	29	0.0	0.0	0.0	0.0	0.0	0.0
	21	0.0	0.0	0.0	0.0	0.0	0.0	22	0.0	0.0	0.0	0.0	0.0	0.0
12	29	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0
	22	0.0	0.0	0.0	0.0	0.0	0.0	23	0.0	0.0	0.0	0.0	0.0	0.0
13	30	0.0	0.0	0.0	0.0	0.0	0.0	31	0.0	0.0	0.0	0.0	0.0	0.0
	23	0.0	0.0	0.0	0.0	0.0	0.0	24	0.0	0.0	0.0	0.0	0.0	0.0
14	32	0.0	0.0	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0
	25	0.0	0.0	0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0
15	33	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	0.0	0.0	0.0	0.0
	26	0.0	0.0	0.0	0.0	0.0	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
16	34	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0
	27	0.0	0.0	0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0
17	35	0.0	0.0	0.0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0
	28	0.0	0.0	0.0	0.0	0.0	0.0	29	0.0	0.0	0.0	0.0	0.0	0.0
18	36	0.0	0.0	0.0	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0
	29	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0
19	37	0.0	0.0	0.0	0.0	0.0	0.0	38	0.0	0.0	0.0	0.0	0.0	0.0
	30	0.0	0.0	0.0	0.0	0.0	0.0	31	0.0	0.0	0.0	0.0	0.0	0.0
20	39	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	0.0	0.0	0.0	0.0	0.0
	32	0.0	0.0	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0
21	40	0.0	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
	33	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	0.0	0.0	0.0	0.0
22	41	0.0	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0
	34	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0
23	42	0.0	0.0	0.0	0.0	0.0	0.0	43	0.0	0.0	0.0	0.0	0.0	0.0
	35	0.0	0.0	0.0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0
24	43	0.0	0.0	0.0	0.0	0.0	0.0	44	0.0	0.0	0.0	0.0	0.0	0.0
	36	0.0	0.0	0.0	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0
25	44	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	0.0	0.0	0.0	0.0	0.0
	37	0.0	0.0	0.0	0.0	0.0	0.0	38	0.0	0.0	0.0	0.0	0.0	0.0
26	11	0.0	0.0	0.0	0.0	0.0	0.0	46	0.0	0.0	0.0	0.0	0.0	0.0
	39	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	0.0	0.0	0.0	0.0	0.0
27	46	0.0	0.0	0.0	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0
	40	0.0	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
28	47	0.0	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
	41	0.0	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0
29	48	0.0	0.0	0.0	0.0	0.0	0.0	49	0.0	0.0	0.0	0.0	0.0	0.0
	42	0.0	0.0	0.0	0.0	0.0	0.0	43	0.0	0.0	0.0	0.0	0.0	0.0
30	49	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0
	43	0.0	0.0	0.0	0.0	0.0	0.0	44	0.0	0.0	0.0	0.0	0.0	0.0
31	50	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	0.0	0.0	0.0	0.0	0.0
	44	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	0.0	0.0	0.0	0.0	0.0
32	52	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0	0.0	0.0
	46	0.0	0.0	0.0	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0
33	53	0.0	0.0	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0	0.0	0.0
	47	0.0	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
34	54	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0	0.0	0.0
	48	0.0	0.0	0.0	0.0	0.0	0.0	49	0.0	0.0	0.0	0.0	0.0	0.0
35	55	0.0	0.0	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0	0.0	0.0
	49	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0
36	56	0.0	0.0	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0	0.0	0.0
	50	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	0.0	0.0	0.0	0.0	0.0
37	58	0.0	0.0	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0	0.0	0.0
	51	0.0	0.0	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0	0.0	0.0
38	59	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0
	52	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0	0.0	0.0
39	60	0.0	0.0	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0	0.0	0.0
	53	0.0	0.0	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0	0.0	0.0
40	61	0.0	0.0	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
	54	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0	0.0	0.0
41	62	0.0	0.0	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0	0.0	0.0
	55	0.0	0.0	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0	0.0	0.0
42	63	0.0	0.0	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0	0.0	0.0
	56	0.0	0.0	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0	0.0	0.0
43	65	0.0	0.0	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0	0.0	0.0
	58	0.0	0.0	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0	0.0	0.0
44	66	0.0	0.0	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0	0.0	0.0
	59	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0
45	67	0.0	0.0	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0	0.0	0.0
	60	0.0	0.0	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0	0.0	0.0
46	68	0.0	0.0	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
	61	0.0	0.0	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
47	69	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0	0.0	0.0
	62	0.0	0.0	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0	0.0	0.0
48	70	0.0	0.0	0.0	0.0	0.0	0.0	71	0.0	0.0	0.0	0.0	0.0	0.0
	63	0.0	0.0	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0	0.0	0.0
49	72	0.0	0.0	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0	0.0	0.0
	65	0.0	0.0	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0	0.0	0.0
50	73	0.0	0.0	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
	66	0.0	0.0	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0	0.0	0.0
51	74	0.0	0.0	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0	0.0	0.0
	67	0.0	0.0	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0	0.0	0.0
52	75	0.0	0.0	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0	0.0	0.0
	68	0.0	0.0	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
53	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0	0.0	0.0
	69	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0	0.0	0.0
54	77	0.0	0.0	0.0	0.0	0.0	0.0	78	0.0	0.0	0.0	0.0	0.0	0.0
	70	0.0	0.0	0.0	0.0	0.0	0.0	71	0.0	0.0	0.0	0.0	0.0	0.0
55	4	0.1	0.0	0.0	0.0	0.0	0.0	79	0.0	0.0	0.0	0.0	0.0	0.0
	72	0.0	-0.1	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
56	79	0.0	0.0	0.0	0.0	0.0	0.0	80	0.0	0.0	0.0	0.0	0.0	0.0
	73	0.0	0.0	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
57	80	0.0	0.0	0.0	0.0	0.0	0.0	81	0.0	0.0	0.0	0.0	0.0	0.0
	74	0.0	0.0	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0	0.0	0.0
58	81	0.0	0.0	0.0	0.0	0.0	0.0	82	0.0	0.0	0.0	0.0	0.0	0.0
	75	0.0	0.0	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0	0.0	0.0
59	82	0.0	0.0	0.0	0.0	0.0	0.0	83	0.0	0.0	0.0	0.0	0.0	0.0
	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0	0.0	0.0
60	83	0.0	0.0	0.0	0.0	0.0	0.0	2	0.1	0.0	0.0	0.0	0.0	0.0
	77	0.0	0.0	0.0	0.0	0.0	0.0	78	0.0	0.1	0.0	0.0	0.0	0.0

CARATT. Corr. Tors. dir. 90: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-0.2	0.0	0.2	0.0	0.0	3	0.00	0.0	0.2	0.0	-0.1	0.0	0.0
1	5	0.00	0.0	-0.2	0.0	0.2	0.0	0.0	12	0.00	0.0	0.2	0.0	-0.1	0.0	0.0
	3	3.19	0.1	-0.1	0.0	0.1	0.2	0.0	3	0.00	-0.1	0.1	0.0	0.2	0.3	0.0
	5	3.19	-0.1	-0.1	0.0	0.1	-0.2	0.0	5	0.00	0.1	0.1	0.0	0.2	-0.3	0.0
	10	3.19	0.1	0.1	0.0	-0.1	0.2	0.0	10	0.00	-0.1	-0.1	0.0	-0.2	0.3	0.0
	12	3.19	-0.1	0.1	0.0	-0.1	-0.2	0.0	12	0.00	0.1	-0.1	0.0	-0.2	-0.3	0.0
	4	3.19	0.0	0.1	0.1	-0.1	0.0	0.0	12	3.19	0.0	-0.1	-0.1	-0.1	0.0	0.0
	6	3.19	0.0	-0.1	-0.1	0.1	0.0	0.0	5	3.19	0.0	0.1	0.1	0.1	0.0	0.0
	3	3.19	0.0	0.1	0.0	-0.2	0.0	0.0	10	3.19	0.0	-0.1	0.0	-0.2	0.0	0.0
	5	3.19	0.0	-0.1	0.0	0.2	0.0	0.0	12	3.19	0.0	0.1	0.0	0.2	0.0	0.0
	10	3.19	0.0	0.1	-0.1	-0.1	0.0	0.0	4	3.19	0.0	-0.1	0.1	-0.1	0.0	0.0
	3	3.19	0.0	-0.1	0.1	0.1	0.0	0.0	6	3.19	0.0	0.1	-0.1	0.1	0.0	0.0
	6	3.19	0.0	0.0	0.0	0.0	0.0	0.0	4	3.19	0.0	0.0	0.0	0.0	0.0	0.0
1	10	0.00	0.0	0.2	0.0	-0.2	0.0	0.0	4	0.00	0.0	-0.2	0.0	0.1	0.0	0.0
1	4	0.00	0.0	0.1	0.0	-0.1	0.0	0.0	12	0.00	0.0	-0.1	0.0	0.1	0.0	0.0
1	3	0.00	0.0	-0.2	0.0	0.2	0.0	0.0	6	0.00	0.0	0.2	0.0	-0.1	0.0	0.0
1	6	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	5	0.00	0.0	0.1	0.0	-0.1	0.0	0.0
	6	3.19	0.0	-0.2	0.0	0.2	0.0	0.0	6	0.00	0.0	0.2	0.0	0.3	0.0	0.0
	4	3.19	0.0	0.2	0.0	-0.2	0.0	0.0	4	0.00	0.0	-0.2	0.0	-0.3	0.0	0.0
1	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
2	10	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	3	0.00	0.0	0.1	0.0	-0.1	0.0	0.0
3	10	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	3	0.00	0.0	0.1	0.0	0.0	0.0	0.0
4	10	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	3	0.00	0.0	0.1	0.0	0.1	0.0	0.0
5	10	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0	3	0.00	0.0	0.1	0.0	0.1	0.0	0.0
6	10	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0	3	0.00	0.0	0.2	0.0	0.2	0.0	0.0
2	5	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	12	0.00	0.0	0.1	0.0	-0.1	0.0	0.0
3	5	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	12	0.00	0.0	0.1	0.0	0.0	0.0	0.0
4	5	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	12	0.00	0.0	0.1	0.0	0.1	0.0	0.0
5	5	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0	12	0.00	0.0	0.1	0.0	0.1	0.0	0.0
6	5	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0	12	0.00	0.0	0.2	0.0	0.2	0.0	0.0
2	10	0.00	0.0	0.1	0.0	-0.1	0.0	0.0	4	0.00	0.0	-0.1	0.0	0.1	0.0	0.0
3	10	0.00	0.0	0.1	0.0	-0.1	0.0	0.0	4	0.00	0.0	-0.1	0.0	0.0	0.0	0.0
4	10	0.00	0.0	0.1	0.0	0.0	0.0	0.0	4	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0
5	10	0.00	0.0	0.1	0.0	0.1	0.0	0.0	4	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0
2	4	0.00	0.0	0.1	0.0	-0.1	0.0	0.0	12	0.00	0.0	-0.1	0.0	0.0	0.0	0.0
3	4	0.00	0.0	0.1	0.0	0.0	0.0	0.0	12	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0
4	4	0.00	0.0	0.1	0.0	0.1	0.0	0.0	12	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0
5	4	0.00	0.0	0.2	0.0	0.1	0.0	0.0	12	0.00	0.0	-0.2	0.0	-0.2	0.0	0.0
2	3	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	6	0.00	0.0	0.1	0.0	-0.1	0.0	0.0
3	3	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	6	0.00	0.0	0.1	0.0	0.0	0.0	0.0
4	3	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	6	0.00	0.0	0.1	0.0	0.1	0.0	0.0
5	3	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0	6	0.00	0.0	0.1	0.0	0.1	0.0	0.0
2	6	0.00	0.0	-0.1	0.0	0.1	0.0	0.0	5	0.00	0.0	0.1	0.0	0.0	0.0	0.0
3	6	0.00	0.0	-0.1	0.0	0.0	0.0	0.0	5	0.00	0.0	0.1	0.0	0.1	0.0	0.0
4	6	0.00	0.0	-0.1	0.0	-0.1	0.0	0.0	5	0.00	0.0	0.1	0.0	0.1	0.0	0.0
5	6	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0	5	0.00	0.0	0.2	0.0	0.2	0.0	0.0
2	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
3	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
4	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
5	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
6	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	0.0	-0.1	0.0	0.0	0.0	0.0	19	0.0	0.0	0.0	0.0	0.0	0.0
	3	-0.1	0.1	0.0	0.0	0.0	0.0	13	0.1	0.0	0.0	0.0	0.0	0.0
2	51	0.0	0.0	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0	46	0.0	0.0	0.0	0.0	0.0	0.0
3	19	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0	14	0.1	0.0	0.0	0.0	0.0	0.0
4	20	0.0	0.0	0.0	0.0	0.0	0.0	21	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0	15	0.0	0.0	0.0	0.0	0.0	0.0
5	21	0.0	0.0	0.0	0.0	0.0	0.0	22	0.0	0.0	0.0	0.0	0.0	0.0
	15	0.0	0.0	0.0	0.0	0.0	0.0	16	0.0	0.0	0.0	0.0	0.0	0.0
6	22	0.0	0.0	0.0	0.0	0.0	0.0	23	0.0	0.0	0.0	0.0	0.0	0.0
	16	0.1	0.0	0.0	0.0	0.0	0.0	17	0.0	0.0	0.0	0.0	0.0	0.0
7	23	0.0	0.0	0.0	0.0	0.0	0.0	24	0.0	0.1	0.0	0.0	0.0	0.0
	17	0.1	0.0	0.0	0.0	0.0	0.0	1	-0.1	-0.1	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
8	25	0.0	-0.1	0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0
	18	0.0	0.0	0.0	0.0	0.0	0.0	19	0.0	0.0	0.0	0.0	0.0	0.0
9	26	0.0	0.0	0.0	0.0	0.0	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0
	19	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
10	27	0.0	0.0	0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0
	20	0.0	0.0	0.0	0.0	0.0	0.0	21	0.0	0.0	0.0	0.0	0.0	0.0
11	28	0.0	0.0	0.0	0.0	0.0	0.0	29	0.0	0.0	0.0	0.0	0.0	0.0
	21	0.0	0.0	0.0	0.0	0.0	0.0	22	0.0	0.0	0.0	0.0	0.0	0.0
12	29	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0
	22	0.0	0.0	0.0	0.0	0.0	0.0	23	0.0	0.0	0.0	0.0	0.0	0.0
13	30	0.0	0.0	0.0	0.0	0.0	0.0	31	0.0	0.1	0.0	0.0	0.0	0.0
	23	0.0	0.0	0.0	0.0	0.0	0.0	24	0.0	0.0	0.0	0.0	0.0	0.0
14	32	0.0	0.0	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0
	25	0.0	0.0	0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0
15	33	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	0.0	0.0	0.0	0.0
	26	0.0	0.0	0.0	0.0	0.0	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0
16	34	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0
	27	0.0	0.0	0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0
17	35	0.0	0.0	0.0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0
	28	0.0	0.0	0.0	0.0	0.0	0.0	29	0.0	0.0	0.0	0.0	0.0	0.0
18	36	0.0	0.0	0.0	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0
	29	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0
19	37	0.0	0.0	0.0	0.0	0.0	0.0	38	0.0	0.0	0.0	0.0	0.0	0.0
	30	0.0	0.0	0.0	0.0	0.0	0.0	31	0.0	0.0	0.0	0.0	0.0	0.0
20	39	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	0.0	0.0	0.0	0.0	0.0
	32	0.0	0.0	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0
21	40	0.0	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
	33	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	0.0	0.0	0.0	0.0
22	41	0.0	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0
	34	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0
23	42	0.0	0.0	0.0	0.0	0.0	0.0	43	0.0	0.0	0.0	0.0	0.0	0.0
	35	0.0	0.0	0.0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0
24	43	0.0	0.0	0.0	0.0	0.0	0.0	44	0.0	0.0	0.0	0.0	0.0	0.0
	36	0.0	0.0	0.0	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0
25	44	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	0.0	0.0	0.0	0.0	0.0
	37	0.0	0.0	0.0	0.0	0.0	0.0	38	0.0	0.0	0.0	0.0	0.0	0.0
26	11	0.0	0.0	0.0	0.0	0.0	0.0	46	0.0	0.0	0.0	0.0	0.0	0.0
	39	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	0.0	0.0	0.0	0.0	0.0
27	46	0.0	0.0	0.0	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0
	40	0.0	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
28	47	0.0	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
	41	0.0	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0
29	48	0.0	0.0	0.0	0.0	0.0	0.0	49	0.0	0.0	0.0	0.0	0.0	0.0
	42	0.0	0.0	0.0	0.0	0.0	0.0	43	0.0	0.0	0.0	0.0	0.0	0.0
30	49	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0
	43	0.0	0.0	0.0	0.0	0.0	0.0	44	0.0	0.0	0.0	0.0	0.0	0.0
31	50	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	0.0	0.0	0.0	0.0	0.0
	44	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	0.0	0.0	0.0	0.0	0.0
32	52	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0	0.0	0.0
	46	0.0	0.0	0.0	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0
33	53	0.0	0.0	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0	0.0	0.0
	47	0.0	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
34	54	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0	0.0	0.0
	48	0.0	0.0	0.0	0.0	0.0	0.0	49	0.0	0.0	0.0	0.0	0.0	0.0
35	55	0.0	0.0	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0	0.0	0.0
	49	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0
36	56	0.0	0.0	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0	0.0	0.0
	50	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	0.0	0.0	0.0	0.0	0.0
37	58	0.0	0.0	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0	0.0	0.0
	51	0.0	0.0	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0	0.0	0.0
38	59	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0
	52	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0	0.0	0.0
39	60	0.0	0.0	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0	0.0	0.0
	53	0.0	0.0	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0	0.0	0.0
40	61	0.0	0.0	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
	54	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0	0.0	0.0
41	62	0.0	0.0	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0	0.0	0.0
	55	0.0	0.0	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0	0.0	0.0
42	63	0.0	0.0	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0	0.0	0.0
	56	0.0	0.0	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0	0.0	0.0
43	65	0.0	0.0	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0	0.0	0.0
	58	0.0	0.0	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0	0.0	0.0
44	66	0.0	0.0	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0	0.0	0.0
	59	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0
45	67	0.0	0.0	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0	0.0	0.0
	60	0.0	0.0	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0	0.0	0.0
46	68	0.0	0.0	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
	61	0.0	0.0	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
47	69	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0	0.0	0.0
	62	0.0	0.0	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
48	70	0.0	0.0	0.0	0.0	0.0	0.0	71	0.0	0.0	0.0	0.0	0.0	0.0
	63	0.0	0.0	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0	0.0	0.0
49	72	0.0	0.0	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0	0.0	0.0
	65	0.0	-0.1	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0	0.0	0.0
50	73	0.0	0.0	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
	66	0.0	0.0	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0	0.0	0.0
51	74	0.0	0.0	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0	0.0	0.0
	67	0.0	0.0	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0	0.0	0.0
52	75	0.0	0.0	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0	0.0	0.0
	68	0.0	0.0	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
53	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0	0.0	0.0
	69	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0	0.0	0.0
54	77	0.0	0.0	0.0	0.0	0.0	0.0	78	0.0	0.0	0.0	0.0	0.0	0.0
	70	0.0	0.0	0.0	0.0	0.0	0.0	71	0.0	0.1	0.0	0.0	0.0	0.0
55	4	0.1	0.1	0.0	0.0	0.0	0.0	79	-0.1	0.0	0.0	0.0	0.0	0.0
	72	0.0	-0.1	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0	0.0	0.0
56	79	0.0	0.0	0.0	0.0	0.0	0.0	80	-0.1	0.0	0.0	0.0	0.0	0.0
	73	0.0	0.0	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
57	80	0.0	0.0	0.0	0.0	0.0	0.0	81	0.0	0.0	0.0	0.0	0.0	0.0
	74	0.0	0.0	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0	0.0	0.0
58	81	0.0	0.0	0.0	0.0	0.0	0.0	82	0.0	0.0	0.0	0.0	0.0	0.0
	75	0.0	0.0	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0	0.0	0.0
59	82	-0.1	0.0	0.0	0.0	0.0	0.0	83	0.0	0.0	0.0	0.0	0.0	0.0
	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0	0.0	0.0
60	83	-0.1	0.0	0.0	0.0	0.0	0.0	2	0.1	-0.1	0.0	0.0	0.0	0.0
	77	0.0	0.0	0.0	0.0	0.0	0.0	78	0.0	0.1	0.0	0.0	0.0	0.0

SPOST. PESO PROPRIO: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.48	0.00	-.00005	0.00000	0.0000	3	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000
1	5	0.00	0.00	-0.48	0.00	-.00005	0.00000	0.0000	12	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000
	3	3.19	0.00	0.00	0.50	-.00005	0.00026	0.0000	3	0.00	0.00	0.00	0.48	0.00003	-.00005	0.0000
	5	3.19	0.00	0.00	0.50	0.00005	0.00026	0.0000	5	0.00	0.00	0.00	0.48	-.00003	-.00005	0.0000
	10	3.19	0.00	0.00	0.50	-.00005	-.00026	0.0000	10	0.00	0.00	0.00	0.48	0.00003	0.00005	0.0000
	12	3.19	0.00	0.00	0.50	0.00005	-.00026	0.0000	12	0.00	0.00	0.00	0.48	-.00003	0.00005	0.0000
	4	3.19	0.00	-0.48	0.00	0.00000	0.00000	0.0003	12	3.19	0.00	-0.50	0.00	-.00005	0.00000	0.0003
	6	3.19	0.00	-0.48	0.00	0.00000	0.00000	-.0003	5	3.19	0.00	-0.50	0.00	-.00005	0.00000	-.0003
	3	3.19	0.00	-0.50	0.00	0.00026	0.00000	0.0001	10	3.19	0.00	-0.50	0.00	-.00026	0.00000	0.0001
	5	3.19	0.00	-0.50	0.00	0.00026	0.00000	-.0001	12	3.19	0.00	-0.50	0.00	-.00026	0.00000	-.0001
	10	3.19	0.00	-0.50	0.00	0.00005	0.00000	0.0003	4	3.19	0.00	-0.48	0.00	0.00000	0.00000	0.0003
	3	3.19	0.00	-0.50	0.00	0.00005	0.00000	-.0003	6	3.19	0.00	-0.48	0.00	0.00000	0.00000	-.0003
	6	3.19	0.00	-0.48	0.00	0.00032	0.00000	0.0000	4	3.19	0.00	-0.48	0.00	-.00032	0.00000	0.0000
1	10	0.00	0.00	-0.48	0.00	-.00003	0.00000	-.0001	4	0.00	0.00	-0.46	0.00	-.00003	0.00000	0.0000
1	4	0.00	0.00	-0.44	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	-0.48	0.00	-.00003	0.00000	0.0001	6	0.00	0.00	-0.46	0.00	-.00003	0.00000	0.0000
1	6	0.00	0.00	-0.44	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	0.00	0.48	0.00000	0.00032	0.0000	6	0.00	0.00	0.00	0.44	0.00000	-.00004	0.0000
	4	3.19	0.00	0.00	0.48	0.00000	-.00032	0.0000	4	0.00	0.00	0.00	0.44	0.00000	0.00004	0.0000
1	6	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000	4	0.00	0.00	-0.41	0.00	-.00003	0.00000	0.0000
2	10	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000	3	0.00	0.00	-0.42	0.00	-.00002	0.00000	0.0000
3	10	0.00	0.00	-0.42	0.00	-.00002	0.00000	0.0000	3	0.00	0.00	-0.42	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.42	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.42	0.00	0.00002	0.00000	0.0000
5	10	0.00	0.00	-0.42	0.00	0.00002	0.00000	0.0000	3	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000
6	10	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000	3	0.00	0.00	-0.48	0.00	0.00005	0.00000	0.0000
2	5	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000	12	0.00	0.00	-0.42	0.00	-.00002	0.00000	0.0000
3	5	0.00	0.00	-0.42	0.00	-.00002	0.00000	0.0000	12	0.00	0.00	-0.42	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.42	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.42	0.00	0.00002	0.00000	0.0000
5	5	0.00	0.00	-0.42	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000
6	5	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000	12	0.00	0.00	-0.48	0.00	0.00005	0.00000	0.0000
2	10	0.00	0.00	-0.46	0.00	-.00003	0.00000	0.0000	4	0.00	0.00	-0.44	0.00	-.00002	0.00000	0.0000
3	10	0.00	0.00	-0.44	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.44	0.00	-.00001	0.00000	0.0000
4	10	0.00	0.00	-0.44	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.44	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.44	0.00	0.00001	0.00000	0.0000
3	4	0.00	0.00	-0.44	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.44	0.00	0.00002	0.00000	0.0000
4	4	0.00	0.00	-0.44	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.46	0.00	0.00003	0.00000	0.0000
5	4	0.00	0.00	-0.46	0.00	0.00003	0.00000	0.0000	12	0.00	0.00	-0.48	0.00	0.00003	0.00000	-.0001
2	3	0.00	0.00	-0.46	0.00	-.00003	0.00000	0.0000	6	0.00	0.00	-0.44	0.00	-.00002	0.00000	0.0000
3	3	0.00	0.00	-0.44	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.44	0.00	-.00001	0.00000	0.0000
4	3	0.00	0.00	-0.44	0.00	-.00001	0.00000	0.0000	6	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.44	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.44	0.00	0.00001	0.00000	0.0000
3	6	0.00	0.00	-0.44	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.44	0.00	0.00002	0.00000	0.0000
4	6	0.00	0.00	-0.44	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.46	0.00	0.00003	0.00000	0.0000
5	6	0.00	0.00	-0.46	0.00	0.00003	0.00000	0.0000	5	0.00	0.00	-0.48	0.00	0.00003	0.00000	0.0001
2	6	0.00	0.00	-0.41	0.00	-.00003	0.00000	0.0000	4	0.00	0.00	-0.40	0.00	-.00002	0.00000	0.0000
3	6	0.00	0.00	-0.40	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.39	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.39	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.40	0.00	0.00002	0.00000	0.0000
5	6	0.00	0.00	-0.40	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.41	0.00	0.00003	0.00000	0.0000
6	6	0.00	0.00	-0.41	0.00	0.00003	0.00000	0.0000	4	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000

SPOST. PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.46	0.00003	-.00002	0.00000	19	0.00	0.00	-0.45	-.00001	-.00001	0.00000
	3	0.01	0.00	-0.48	0.00003	-.00005	0.00000	13	0.01	0.00	-0.44	0.00001	-.00004	0.00000
2	51	0.00	0.00	-0.43	0.00000	-.00002	0.00000	52	0.00	0.00	-0.42	-.00003	-.00001	0.00000
	11	0.01	0.00	-0.44	0.00000	-.00004	0.00000	46	0.00	0.00	-0.41	0.00000	-.00003	0.00000
3	19	0.00	0.00	-0.45	-.00001	-.00001	0.00000	20	0.00	0.00	-0.44	-.00003	-.00001	0.00000
	13	0.01	0.00	-0.44	0.00001	-.00004	0.00000	14	0.00	0.00	-0.42	-.00001	-.00002	0.00000
4	20	0.00	0.00	-0.44	-.00003	-.00001	0.00000	21	0.00	0.00	-0.44	-.00004	0.00000	0.00000
	14	0.00	0.00	-0.42	-.00001	-.00002	0.00000	15	0.00	0.00	-0.42	-.00001	0.00000	0.00000
5	21	0.00	0.00	-0.44	-.00004	0.00000	0.00000	22	0.00	0.00	-0.44	-.00003	0.00001	0.00000
	15	0.00	0.00	-0.42	-.00001	0.00000	0.00000	16	0.00	0.00	-0.42	-.00001	0.00002	0.00000
6	22	0.00	0.00	-0.44	-.00003	0.00001	0.00000	23	0.00	0.00	-0.45	-.00001	0.00001	0.00000
	16	0.00	0.00	-0.42	-.00001	0.00002	0.00000	17	-0.01	0.00	-0.44	0.00001	0.00004	0.00000
7	23	0.00	0.00	-0.45	-.00001	0.00001	0.00000	24	0.00	0.00	-0.46	0.00003	0.00002	0.00000
	17	-0.01	0.00	-0.44	0.00001	0.00004	0.00000	1	-0.01	0.00	-0.48	0.00003	0.00005	0.00000
8	25	0.00	0.00	-0.44	0.00002	-.00001	0.00000	26	0.00	0.00	-0.45	0.00000	0.00001	0.00000
	18	0.00	0.00	-0.46	0.00003	-.00002	0.00000	19	0.00	0.00	-0.45	-.00001	-.00001	0.00000
9	26	0.00	0.00	-0.45	0.00000	0.00001	0.00000	27	0.00	0.00	-0.45	-.00001	0.00001	0.00000
	19	0.00	0.00	-0.45	-.00001	-.00001	0.00000	20	0.00	0.00	-0.44	-.00003	-.00001	0.00000
10	27	0.00	0.00	-0.45	-.00001	0.00001	0.00000	28	0.00	0.00	-0.45	-.00001	0.00000	0.00000
	20	0.00	0.00	-0.44	-.00003	-.00001	0.00000	21	0.00	0.00	-0.44	-.00004	0.00000	0.00000
11	28	0.00	0.00	-0.45	-.00001	0.00000	0.00000	29	0.00	0.00	-0.45	-.00001	-.00001	0.00000
	21	0.00	0.00	-0.44	-.00004	0.00000	0.00000	22	0.00	0.00	-0.44	-.00003	0.00001	0.00000
12	29	0.00	0.00	-0.45	-.00001	-.00001	0.00000	30	0.00	0.00	-0.45	0.00000	-.00001	0.00000
	22	0.00	0.00	-0.44	-.00003	0.00001	0.00000	23	0.00	0.00	-0.45	-.00001	0.00001	0.00000
13	30	0.00	0.00	-0.45	0.00000	-.00001	0.00000	31	0.00	0.00	-0.44	0.00002	0.00001	0.00000
	23	0.00	0.00	-0.45	-.00001	0.00001	0.00000	24	0.00	0.00	-0.46	0.00003	0.00002	0.00000
14	32	0.00	0.00	-0.44	0.00001	-.00001	0.00000	33	0.00	0.00	-0.44	0.00002	0.00001	0.00000
	25	0.00	0.00	-0.44	0.00002	-.00001	0.00000	26	0.00	0.00	-0.45	0.00000	0.00001	0.00000
15	33	0.00	0.00	-0.44	0.00002	0.00001	0.00000	34	0.00	0.00	-0.44	0.00003	0.00000	0.00000
	26	0.00	0.00	-0.45	0.00000	0.00001	0.00000	27	0.00	0.00	-0.45	-.00001	0.00001	0.00000
16	34	0.00	0.00	-0.44	0.00003	0.00000	0.00000	35	0.00	0.00	-0.45	0.00004	0.00000	0.00000
	27	0.00	0.00	-0.45	-.00001	0.00001	0.00000	28	0.00	0.00	-0.45	-.00001	0.00000	0.00000
17	35	0.00	0.00	-0.45	0.00004	0.00000	0.00000	36	0.00	0.00	-0.44	0.00003	0.00000	0.00000
	28	0.00	0.00	-0.45	-.00001	0.00000	0.00000	29	0.00	0.00	-0.45	-.00001	-.00001	0.00000
18	36	0.00	0.00	-0.44	0.00003	0.00000	0.00000	37	0.00	0.00	-0.44	0.00002	-.00001	0.00000
	29	0.00	0.00	-0.45	-.00001	-.00001	0.00000	30	0.00	0.00	-0.45	0.00000	-.00001	0.00000
19	37	0.00	0.00	-0.44	0.00002	-.00001	0.00000	38	0.00	0.00	-0.44	0.00001	0.00001	0.00000
	30	0.00	0.00	-0.45	0.00000	-.00001	0.00000	31	0.00	0.00	-0.44	0.00002	0.00001	0.00000
20	39	0.00	0.00	-0.43	0.00000	-.00002	0.00000	40	0.00	0.00	-0.42	0.00003	-.00001	0.00000
	32	0.00	0.00	-0.44	0.00001	-.00001	0.00000	33	0.00	0.00	-0.44	0.00002	0.00001	0.00000
21	40	0.00	0.00	-0.42	0.00003	-.00001	0.00000	41	0.00	0.00	-0.42	0.00005	-.00001	0.00000
	33	0.00	0.00	-0.44	0.00002	0.00001	0.00000	34	0.00	0.00	-0.44	0.00003	0.00000	0.00000
22	41	0.00	0.00	-0.42	0.00005	-.00001	0.00000	42	0.00	0.00	-0.41	0.00006	0.00000	0.00000
	34	0.00	0.00	-0.44	0.00003	0.00000	0.00000	35	0.00	0.00	-0.45	0.00004	0.00000	0.00000
23	42	0.00	0.00	-0.41	0.00006	0.00000	0.00000	43	0.00	0.00	-0.42	0.00005	0.00001	0.00000
	35	0.00	0.00	-0.45	0.00004	0.00000	0.00000	36	0.00	0.00	-0.44	0.00003	0.00000	0.00000
24	43	0.00	0.00	-0.42	0.00005	0.00001	0.00000	44	0.00	0.00	-0.42	0.00003	0.00001	0.00000
	36	0.00	0.00	-0.44	0.00003	0.00000	0.00000	37	0.00	0.00	-0.44	0.00002	-.00001	0.00000
25	44	0.00	0.00	-0.42	0.00003	0.00001	0.00000	45	0.00	0.00	-0.43	0.00000	0.00002	0.00000
	37	0.00	0.00	-0.44	0.00002	-.00001	0.00000	38	0.00	0.00	-0.44	0.00001	0.00001	0.00000
26	11	0.01	0.00	-0.44	0.00000	-.00004	0.00000	46	0.00	0.00	-0.41	0.00000	-.00003	0.00000
	39	0.00	0.00	-0.43	0.00000	-.00002	0.00000	40	0.00	0.00	-0.42	0.00003	-.00001	0.00000
27	46	0.00	0.00	-0.41	0.00000	-.00003	0.00000	47	0.00	0.00	-0.40	0.00000	-.00002	0.00000
	40	0.00	0.00	-0.42	0.00003	-.00001	0.00000	41	0.00	0.00	-0.42	0.00005	-.00001	0.00000
28	47	0.00	0.00	-0.40	0.00000	-.00002	0.00000	48	0.00	0.00	-0.39	0.00000	0.00000	0.00000
	41	0.00	0.00	-0.42	0.00005	-.00001	0.00000	42	0.00	0.00	-0.41	0.00006	0.00000	0.00000
29	48	0.00	0.00	-0.39	0.00000	0.00000	0.00000	49	0.00	0.00	-0.40	0.00000	0.00002	0.00000
	42	0.00	0.00	-0.41	0.00006	0.00000	0.00000	43	0.00	0.00	-0.42	0.00005	0.00001	0.00000
30	49	0.00	0.00	-0.40	0.00000	0.00002	0.00000	50	0.00	0.00	-0.41	0.00000	0.00003	0.00000
	43	0.00	0.00	-0.42	0.00005	0.00001	0.00000	44	0.00	0.00	-0.42	0.00003	0.00001	0.00000
31	50	0.00	0.00	-0.41	0.00000	0.00003	0.00000	12	-0.01	0.00	-0.44	0.00000	0.00004	0.00000
	44	0.00	0.00	-0.42	0.00003	0.00001	0.00000	45	0.00	0.00	-0.43	0.00000	0.00002	0.00000
32	52	0.00	0.00	-0.42	-.00003	-.00001	0.00000	53	0.00	0.00	-0.42	-.00005	-.00001	0.00000
	46	0.00	0.00	-0.41	0.00000	-.00003	0.00000	47	0.00	0.00	-0.40	0.00000	-.00002	0.00000
33	53	0.00	0.00	-0.42	-.00005	-.00001	0.00000	54	0.00	0.00	-0.41	-.00006	0.00000	0.00000
	47	0.00	0.00	-0.40	0.00000	-.00002	0.00000	48	0.00	0.00	-0.39	0.00000	0.00000	0.00000
34	54	0.00	0.00	-0.41	-.00006	0.00000	0.00000	55	0.00	0.00	-0.42	-.00005	0.00001	0.00000
	48	0.00	0.00	-0.39	0.00000	0.00000	0.00000	49	0.00	0.00	-0.40	0.00000	0.00002	0.00000
35	55	0.00	0.00	-0.42	-.00005	0.00001	0.00000	56	0.00	0.00	-0.42	-.00003	0.00001	0.00000
	49	0.00	0.00	-0.40	0.00000	0.00002	0.00000	50	0.00	0.00	-0.41	0.00000	0.00003	0.00000
36	56	0.00	0.00	-0.42	-.00003	0.00001	0.00000	57	0.00	0.00	-0.43	0.00000	0.00002	0.00000
	50	0.00	0.00	-0.41	0.00000	0.00003	0.00000	12	-0.01	0.00	-0.44	0.00000	0.00004	0.00000
37	58	0.00	0.00	-0.44	-.00001	-.00001	0.00000	59	0.00	0.00	-0.44	-.00002	0.00001	0.00000
	51	0.00	0.00	-0.43	0.00000	-.00002	0.00000	52	0.00	0.00	-0.42	-.00003	-.00001	0.00000
38	59	0.00	0.00	-0.44	-.00002	0.00001	0.00000	60	0.00	0.00	-0.44	-.00003	0.00000	0.00000
	52	0.00	0.00	-0.42	-.00003	-.00001	0.00000	53	0.00	0.00	-0.42	-.00005	-.00001	0.00000
39	60	0.00	0.00	-0.44	-.00003	0.00000	0.00000	61	0.00	0.00	-0.45	-.00004	0.00000	0.00000
	53	0.00	0.00	-0.42	-.00005	-.00001	0.00000	54	0.00	0.00	-0.41	-.00006	0.00000	0.00000
40	61	0.00	0.00	-0.45	-.00004	0.00000	0.00000	62	0.00	0.00	-0.44	-.00003	0.00000	0.00000
	54	0.00	0.00	-0.41	-.00006	0.00000	0.00000	55	0.00	0.00	-0.42	-.00005	0.00001	0.00000
41	62	0.00	0.00	-0.44	-.00003	0.00000	0.00000	63	0.00	0.00	-0.44	-.00002	-.00001	0.00000

SPOST. PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
	55	0.00	0.00	-0.42	-.00005	0.00001	0.00000	56	0.00	0.00	-0.42	-.00003	0.00001	0.00000
42	63	0.00	0.00	-0.44	-.00002	-.00001	0.00000	64	0.00	0.00	-0.44	-.00001	0.00001	0.00000
	56	0.00	0.00	-0.42	-.00003	0.00001	0.00000	57	0.00	0.00	-0.43	0.00000	0.00002	0.00000
43	65	0.00	0.00	-0.44	-.00002	-.00001	0.00000	66	0.00	0.00	-0.45	0.00000	0.00001	0.00000
	58	0.00	0.00	-0.44	-.00001	-.00001	0.00000	59	0.00	0.00	-0.44	-.00002	0.00001	0.00000
44	66	0.00	0.00	-0.45	0.00000	0.00001	0.00000	67	0.00	0.00	-0.45	0.00001	0.00001	0.00000
	59	0.00	0.00	-0.44	-.00002	0.00001	0.00000	60	0.00	0.00	-0.44	-.00003	0.00000	0.00000
45	67	0.00	0.00	-0.45	0.00001	0.00001	0.00000	68	0.00	0.00	-0.45	0.00001	0.00000	0.00000
	60	0.00	0.00	-0.44	-.00003	0.00000	0.00000	61	0.00	0.00	-0.45	-.00004	0.00000	0.00000
46	68	0.00	0.00	-0.45	0.00001	0.00000	0.00000	69	0.00	0.00	-0.45	0.00001	-.00001	0.00000
	61	0.00	0.00	-0.45	-.00004	0.00000	0.00000	62	0.00	0.00	-0.44	-.00003	0.00000	0.00000
47	69	0.00	0.00	-0.45	0.00001	-.00001	0.00000	70	0.00	0.00	-0.45	0.00000	-.00001	0.00000
	62	0.00	0.00	-0.44	-.00003	0.00000	0.00000	63	0.00	0.00	-0.44	-.00002	-.00001	0.00000
48	70	0.00	0.00	-0.45	0.00000	-.00001	0.00000	71	0.00	0.00	-0.44	-.00002	0.00001	0.00000
	63	0.00	0.00	-0.44	-.00002	-.00001	0.00000	64	0.00	0.00	-0.44	-.00001	0.00001	0.00000
49	72	0.00	0.00	-0.46	-.00003	-.00002	0.00000	73	0.00	0.00	-0.45	0.00001	-.00001	0.00000
	65	0.00	0.00	-0.44	-.00002	-.00001	0.00000	66	0.00	0.00	-0.45	0.00000	0.00001	0.00000
50	73	0.00	0.00	-0.45	0.00001	-.00001	0.00000	74	0.00	0.00	-0.44	0.00003	-.00001	0.00000
	66	0.00	0.00	-0.45	0.00000	0.00001	0.00000	67	0.00	0.00	-0.45	0.00001	0.00001	0.00000
51	74	0.00	0.00	-0.44	0.00003	-.00001	0.00000	75	0.00	0.00	-0.44	0.00004	0.00000	0.00000
	67	0.00	0.00	-0.45	0.00001	0.00001	0.00000	68	0.00	0.00	-0.45	0.00001	0.00000	0.00000
52	75	0.00	0.00	-0.44	0.00004	0.00000	0.00000	76	0.00	0.00	-0.44	0.00003	0.00001	0.00000
	68	0.00	0.00	-0.45	0.00001	0.00000	0.00000	69	0.00	0.00	-0.45	0.00001	-.00001	0.00000
53	76	0.00	0.00	-0.44	0.00003	0.00001	0.00000	77	0.00	0.00	-0.45	0.00001	0.00001	0.00000
	69	0.00	0.00	-0.45	0.00001	-.00001	0.00000	70	0.00	0.00	-0.45	0.00000	-.00001	0.00000
54	77	0.00	0.00	-0.45	0.00001	0.00001	0.00000	78	0.00	0.00	-0.46	-.00003	0.00002	0.00000
	70	0.00	0.00	-0.45	0.00000	-.00001	0.00000	71	0.00	0.00	-0.44	-.00002	0.00001	0.00000
55	4	0.01	0.00	-0.48	-.00003	-.00005	0.00000	79	0.01	0.00	-0.44	-.00001	-.00004	0.00000
	72	0.00	0.00	-0.46	-.00003	-.00002	0.00000	73	0.00	0.00	-0.45	0.00001	-.00001	0.00000
56	79	0.01	0.00	-0.44	-.00001	-.00004	0.00000	80	0.00	0.00	-0.42	0.00001	-.00002	0.00000
	73	0.00	0.00	-0.45	0.00001	-.00001	0.00000	74	0.00	0.00	-0.44	0.00003	-.00001	0.00000
57	80	0.00	0.00	-0.42	0.00001	-.00002	0.00000	81	0.00	0.00	-0.42	0.00001	0.00000	0.00000
	74	0.00	0.00	-0.44	0.00003	-.00001	0.00000	75	0.00	0.00	-0.44	0.00004	0.00000	0.00000
58	81	0.00	0.00	-0.42	0.00001	0.00000	0.00000	82	0.00	0.00	-0.42	0.00001	0.00002	0.00000
	75	0.00	0.00	-0.44	0.00004	0.00000	0.00000	76	0.00	0.00	-0.44	0.00003	0.00001	0.00000
59	82	0.00	0.00	-0.42	0.00001	0.00002	0.00000	83	-0.01	0.00	-0.44	-.00001	0.00004	0.00000
	76	0.00	0.00	-0.44	0.00003	0.00001	0.00000	77	0.00	0.00	-0.45	0.00001	0.00001	0.00000
60	83	-0.01	0.00	-0.44	-.00001	0.00004	0.00000	2	-0.01	0.00	-0.48	-.00003	0.00005	0.00000
	77	0.00	0.00	-0.45	0.00001	0.00001	0.00000	78	0.00	0.00	-0.46	-.00003	0.00002	0.00000

SPOST. SOVRACCARICO PERMAN.: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000
1	5	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000
	3	3.19	0.00	0.00	0.32	-.00001	0.00010	0.0000	3	0.00	0.00	0.00	0.31	0.00002	-.00001	0.0000
	5	3.19	0.00	0.00	0.32	0.00001	0.00010	0.0000	5	0.00	0.00	0.00	0.31	-.00002	-.00001	0.0000
	10	3.19	0.00	0.00	0.32	-.00001	-.00010	0.0000	10	0.00	0.00	0.00	0.31	0.00002	0.00001	0.0000
	12	3.19	0.00	0.00	0.32	0.00001	-.00010	0.0000	12	0.00	0.00	0.00	0.31	-.00002	0.00001	0.0000
	4	3.19	0.00	-0.28	0.00	0.00000	0.00000	0.0001	12	3.19	0.00	-0.32	0.00	-.00001	0.00000	0.0001
	6	3.19	0.00	-0.28	0.00	0.00000	0.00000	-.0001	5	3.19	0.00	-0.32	0.00	-.00001	0.00000	-.0001
	3	3.19	0.00	-0.32	0.00	0.00010	0.00000	0.0000	10	3.19	0.00	-0.32	0.00	-.00010	0.00000	0.0000
	5	3.19	0.00	-0.32	0.00	0.00010	0.00000	0.0000	12	3.19	0.00	-0.32	0.00	-.00010	0.00000	0.0000
	10	3.19	0.00	-0.32	0.00	0.00001	0.00000	0.0001	4	3.19	0.00	-0.28	0.00	0.00000	0.00000	0.0001
	3	3.19	0.00	-0.32	0.00	0.00001	0.00000	-.0001	6	3.19	0.00	-0.28	0.00	0.00000	0.00000	-.0001
	6	3.19	0.00	-0.28	0.00	0.00015	0.00000	0.0000	4	3.19	0.00	-0.28	0.00	-.00015	0.00000	0.0000
1	10	0.00	0.00	-0.31	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.30	0.00	-.00002	0.00000	0.0000
1	4	0.00	0.00	-0.26	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.27	0.00	0.00001	0.00000	0.0000
1	3	0.00	0.00	-0.31	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.30	0.00	-.00002	0.00000	0.0000
1	6	0.00	0.00	-0.26	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.27	0.00	0.00001	0.00000	0.0000
	6	3.19	0.00	0.00	0.28	0.00000	0.00015	0.0000	6	0.00	0.00	0.00	0.26	0.00000	-.00004	0.0000
	4	3.19	0.00	0.00	0.28	0.00000	-.00015	0.0000	4	0.00	0.00	0.00	0.26	0.00000	0.00004	0.0000
1	6	0.00	0.00	-0.26	0.00	-.00004	0.00000	0.0000	4	0.00	0.00	-0.24	0.00	-.00003	0.00000	0.0000
2	10	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.30	0.00	-.00001	0.00000	0.0000
3	10	0.00	0.00	-0.30	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.30	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.30	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.30	0.00	0.00001	0.00000	0.0000
5	10	0.00	0.00	-0.30	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000
6	10	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000
2	5	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.30	0.00	-.00001	0.00000	0.0000
3	5	0.00	0.00	-0.30	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.30	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.30	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.30	0.00	0.00001	0.00000	0.0000
5	5	0.00	0.00	-0.30	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000
6	5	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000
2	10	0.00	0.00	-0.30	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.29	0.00	-.00002	0.00000	0.0000
3	10	0.00	0.00	-0.29	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.27	0.00	-.00002	0.00000	0.0000
4	10	0.00	0.00	-0.27	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.27	0.00	-.00001	0.00000	0.0000
5	10	0.00	0.00	-0.27	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.26	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.27	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.27	0.00	0.00002	0.00000	0.0000
3	4	0.00	0.00	-0.27	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.29	0.00	0.00002	0.00000	0.0000
4	4	0.00	0.00	-0.29	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.30	0.00	0.00002	0.00000	0.0000
5	4	0.00	0.00	-0.30	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.31	0.00	0.00002	0.00000	0.0000
2	3	0.00	0.00	-0.30	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.29	0.00	-.00002	0.00000	0.0000

SPOST. SOVRACCARICO PERMAN.: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
3	3	0.00	0.00	-0.29	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.27	0.00	-.00002	0.00000	0.0000
4	3	0.00	0.00	-0.27	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.27	0.00	-.00001	0.00000	0.0000
5	3	0.00	0.00	-0.27	0.00	-.00001	0.00000	0.0000	6	0.00	0.00	-0.26	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.27	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.27	0.00	0.00002	0.00000	0.0000
3	6	0.00	0.00	-0.27	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.29	0.00	0.00002	0.00000	0.0000
4	6	0.00	0.00	-0.29	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.30	0.00	0.00002	0.00000	0.0000
5	6	0.00	0.00	-0.30	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.31	0.00	0.00002	0.00000	0.0000
2	6	0.00	0.00	-0.24	0.00	-.00003	0.00000	0.0000	4	0.00	0.00	-0.22	0.00	-.00002	0.00000	0.0000
3	6	0.00	0.00	-0.22	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.21	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.21	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.22	0.00	0.00002	0.00000	0.0000
5	6	0.00	0.00	-0.22	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.24	0.00	0.00003	0.00000	0.0000
6	6	0.00	0.00	-0.24	0.00	0.00003	0.00000	0.0000	4	0.00	0.00	-0.26	0.00	0.00004	0.00000	0.0000

SPOST. SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.30	0.00002	-.00001	0.00000	19	0.00	0.00	-0.30	0.00002	0.00000	0.00000
	3	0.00	0.00	-0.31	0.00002	-.00001	0.00000	13	0.00	0.00	-0.31	0.00001	-.00001	0.00000
2	51	0.00	0.00	-0.27	-.00001	-.00002	0.00000	52	0.00	0.00	-0.25	-.00003	-.00003	0.00000
	11	0.01	0.00	-0.26	0.00000	-.00004	0.00000	46	0.01	0.00	-0.24	0.00000	-.00003	0.00000
3	19	0.00	0.00	-0.30	0.00002	0.00000	0.00000	20	0.00	0.00	-0.29	0.00001	0.00000	0.00000
	13	0.00	0.00	-0.31	0.00001	-.00001	0.00000	14	0.00	0.00	-0.30	0.00001	-.00001	0.00000
4	20	0.00	0.00	-0.29	0.00001	0.00000	0.00000	21	0.00	0.00	-0.29	0.00001	0.00000	0.00000
	14	0.00	0.00	-0.30	0.00001	-.00001	0.00000	15	0.00	0.00	-0.30	0.00001	0.00000	0.00000
5	21	0.00	0.00	-0.29	0.00001	0.00000	0.00000	22	0.00	0.00	-0.29	0.00001	0.00000	0.00000
	15	0.00	0.00	-0.30	0.00001	0.00000	0.00000	16	0.00	0.00	-0.30	0.00001	0.00001	0.00000
6	22	0.00	0.00	-0.29	0.00001	0.00000	0.00000	23	0.00	0.00	-0.30	0.00002	0.00000	0.00000
	16	0.00	0.00	-0.30	0.00001	0.00001	0.00000	17	0.00	0.00	-0.31	0.00001	0.00001	0.00000
7	23	0.00	0.00	-0.30	0.00002	0.00000	0.00000	24	0.00	0.00	-0.30	0.00002	0.00001	0.00000
	17	0.00	0.00	-0.31	0.00001	0.00001	0.00000	1	0.00	0.00	-0.31	0.00002	0.00001	0.00000
8	25	0.00	0.00	-0.29	0.00002	-.00001	0.00000	26	0.00	0.00	-0.28	0.00002	0.00000	0.00000
	18	0.00	0.00	-0.30	0.00002	-.00001	0.00000	19	0.00	0.00	-0.30	0.00002	0.00000	0.00000
9	26	0.00	0.00	-0.28	0.00002	0.00000	0.00000	27	0.00	0.00	-0.28	0.00003	0.00000	0.00000
	19	0.00	0.00	-0.30	0.00002	0.00000	0.00000	20	0.00	0.00	-0.29	0.00001	0.00000	0.00000
10	27	0.00	0.00	-0.28	0.00003	0.00000	0.00000	28	0.00	0.00	-0.28	0.00003	0.00000	0.00000
	20	0.00	0.00	-0.29	0.00001	0.00000	0.00000	21	0.00	0.00	-0.29	0.00001	0.00000	0.00000
11	28	0.00	0.00	-0.28	0.00003	0.00000	0.00000	29	0.00	0.00	-0.28	0.00003	0.00000	0.00000
	21	0.00	0.00	-0.29	0.00001	0.00000	0.00000	22	0.00	0.00	-0.29	0.00001	0.00000	0.00000
12	29	0.00	0.00	-0.28	0.00003	0.00000	0.00000	30	0.00	0.00	-0.28	0.00002	0.00000	0.00000
	22	0.00	0.00	-0.29	0.00001	0.00000	0.00000	23	0.00	0.00	-0.30	0.00002	0.00000	0.00000
13	30	0.00	0.00	-0.28	0.00002	0.00000	0.00000	31	0.00	0.00	-0.29	0.00002	0.00001	0.00000
	23	0.00	0.00	-0.30	0.00002	0.00000	0.00000	24	0.00	0.00	-0.30	0.00002	0.00001	0.00000
14	32	0.00	0.00	-0.27	0.00002	-.00001	0.00000	33	0.00	0.00	-0.27	0.00003	-.00001	0.00000
	25	0.00	0.00	-0.29	0.00002	-.00001	0.00000	26	0.00	0.00	-0.28	0.00002	0.00000	0.00000
15	33	0.00	0.00	-0.27	0.00003	-.00001	0.00000	34	0.00	0.00	-0.26	0.00004	-.00001	0.00000
	26	0.00	0.00	-0.28	0.00002	0.00000	0.00000	27	0.00	0.00	-0.28	0.00003	0.00000	0.00000
16	34	0.00	0.00	-0.26	0.00004	-.00001	0.00000	35	0.00	0.00	-0.26	0.00004	0.00000	0.00000
	27	0.00	0.00	-0.28	0.00003	0.00000	0.00000	28	0.00	0.00	-0.28	0.00003	0.00000	0.00000
17	35	0.00	0.00	-0.26	0.00004	0.00000	0.00000	36	0.00	0.00	-0.26	0.00004	0.00001	0.00000
	28	0.00	0.00	-0.28	0.00003	0.00000	0.00000	29	0.00	0.00	-0.28	0.00003	0.00000	0.00000
18	36	0.00	0.00	-0.26	0.00004	0.00001	0.00000	37	0.00	0.00	-0.27	0.00003	0.00001	0.00000
	29	0.00	0.00	-0.28	0.00003	0.00000	0.00000	30	0.00	0.00	-0.28	0.00002	0.00000	0.00000
19	37	0.00	0.00	-0.27	0.00003	0.00001	0.00000	38	0.00	0.00	-0.27	0.00002	0.00001	0.00000
	30	0.00	0.00	-0.28	0.00002	0.00000	0.00000	31	0.00	0.00	-0.29	0.00002	0.00001	0.00000
20	39	0.00	0.00	-0.27	0.00001	-.00002	0.00000	40	0.00	0.00	-0.25	0.00003	-.00003	0.00000
	32	0.00	0.00	-0.27	0.00002	-.00001	0.00000	33	0.00	0.00	-0.27	0.00003	-.00001	0.00000
21	40	0.00	0.00	-0.25	0.00003	-.00003	0.00000	41	0.00	0.00	-0.23	0.00004	-.00002	0.00000
	33	0.00	0.00	-0.27	0.00003	-.00001	0.00000	34	0.00	0.00	-0.26	0.00004	-.00001	0.00000
22	41	0.00	0.00	-0.23	0.00004	-.00002	0.00000	42	0.00	0.00	-0.23	0.00004	0.00000	0.00000
	34	0.00	0.00	-0.26	0.00004	-.00001	0.00000	35	0.00	0.00	-0.26	0.00004	0.00000	0.00000
23	42	0.00	0.00	-0.23	0.00004	0.00000	0.00000	43	0.00	0.00	-0.23	0.00004	0.00002	0.00000
	35	0.00	0.00	-0.26	0.00004	0.00000	0.00000	36	0.00	0.00	-0.26	0.00004	0.00001	0.00000
24	43	0.00	0.00	-0.23	0.00004	0.00002	0.00000	44	0.00	0.00	-0.25	0.00003	0.00003	0.00000
	36	0.00	0.00	-0.26	0.00004	0.00001	0.00000	37	0.00	0.00	-0.27	0.00003	0.00001	0.00000
25	44	0.00	0.00	-0.25	0.00003	0.00003	0.00000	45	0.00	0.00	-0.27	0.00001	0.00002	0.00000
	37	0.00	0.00	-0.27	0.00003	0.00001	0.00000	38	0.00	0.00	-0.27	0.00002	0.00001	0.00000
26	11	0.01	0.00	-0.26	0.00000	-.00004	0.00000	46	0.01	0.00	-0.24	0.00000	-.00003	0.00000
	39	0.00	0.00	-0.27	0.00001	-.00002	0.00000	40	0.00	0.00	-0.25	0.00003	-.00003	0.00000
27	46	0.01	0.00	-0.24	0.00000	-.00003	0.00000	47	0.00	0.00	-0.22	0.00000	-.00002	0.00000
	40	0.00	0.00	-0.25	0.00003	-.00003	0.00000	41	0.00	0.00	-0.23	0.00004	-.00002	0.00000
28	47	0.00	0.00	-0.22	0.00000	-.00002	0.00000	48	0.00	0.00	-0.21	0.00000	0.00000	0.00000
	41	0.00	0.00	-0.23	0.00004	-.00002	0.00000	42	0.00	0.00	-0.23	0.00004	0.00000	0.00000
29	48	0.00	0.00	-0.21	0.00000	0.00000	0.00000	49	0.00	0.00	-0.22	0.00000	0.00002	0.00000
	42	0.00	0.00	-0.23	0.00004	0.00000	0.00000	43	0.00	0.00	-0.23	0.00004	0.00002	0.00000
30	49	0.00	0.00	-0.22	0.00000	0.00002	0.00000	50	-0.01	0.00	-0.24	0.00000	0.00003	0.00000
	43	0.00	0.00	-0.23	0.00004	0.00002	0.00000	44	0.00	0.00	-0.25	0.00003	0.00003	0.00000
31	50	-0.01	0.00	-0.24	0.00000	0.00003	0.00000	12	-0.01	0.00	-0.26	0.00000	0.00004	0.00000
	44	0.00	0.00	-0.25	0.00003	0.00003	0.00000	45	0.00	0.00	-0.27	0.00001	0.00002	0.00000
32	52	0.00	0.00	-0.25	-.00003	-.00003	0.00000	53	0.00	0.00	-0.23	-.00004	-.00002	0.00000
	46	0.01	0.00	-0.24	0.00000	-.00003	0.00000	47	0.00	0.00	-0.22	0.00000	-.00002	0.00000

SPOST. SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
33	53	0.00	0.00	-0.23	-.00004	-.00002	0.00000	54	0.00	0.00	-0.23	-.00004	0.00000	0.00000
	47	0.00	0.00	-0.22	0.00000	-.00002	0.00000	48	0.00	0.00	-0.21	0.00000	0.00000	0.00000
34	54	0.00	0.00	-0.23	-.00004	0.00000	0.00000	55	0.00	0.00	-0.23	-.00004	0.00002	0.00000
	48	0.00	0.00	-0.21	0.00000	0.00000	0.00000	49	0.00	0.00	-0.22	0.00000	0.00002	0.00000
35	55	0.00	0.00	-0.23	-.00004	0.00002	0.00000	56	0.00	0.00	-0.25	-.00003	0.00003	0.00000
	49	0.00	0.00	-0.22	0.00000	0.00002	0.00000	50	-0.01	0.00	-0.24	0.00000	0.00003	0.00000
36	56	0.00	0.00	-0.25	-.00003	0.00003	0.00000	57	0.00	0.00	-0.27	-.00001	0.00002	0.00000
	50	-0.01	0.00	-0.24	0.00000	0.00003	0.00000	12	-0.01	0.00	-0.26	0.00000	0.00004	0.00000
37	58	0.00	0.00	-0.27	-.00002	-.00001	0.00000	59	0.00	0.00	-0.27	-.00003	-.00001	0.00000
	51	0.00	0.00	-0.27	-.00001	-.00002	0.00000	52	0.00	0.00	-0.25	-.00003	-.00003	0.00000
38	59	0.00	0.00	-0.27	-.00003	-.00001	0.00000	60	0.00	0.00	-0.26	-.00004	-.00001	0.00000
	52	0.00	0.00	-0.25	-.00003	-.00003	0.00000	53	0.00	0.00	-0.23	-.00004	-.00002	0.00000
39	60	0.00	0.00	-0.26	-.00004	-.00001	0.00000	61	0.00	0.00	-0.26	-.00004	0.00000	0.00000
	53	0.00	0.00	-0.23	-.00004	-.00002	0.00000	54	0.00	0.00	-0.23	-.00004	0.00000	0.00000
40	61	0.00	0.00	-0.26	-.00004	0.00000	0.00000	62	0.00	0.00	-0.26	-.00004	0.00001	0.00000
	54	0.00	0.00	-0.23	-.00004	0.00000	0.00000	55	0.00	0.00	-0.23	-.00004	0.00002	0.00000
41	62	0.00	0.00	-0.26	-.00004	0.00001	0.00000	63	0.00	0.00	-0.27	-.00003	0.00001	0.00000
	55	0.00	0.00	-0.23	-.00004	0.00002	0.00000	56	0.00	0.00	-0.25	-.00003	0.00003	0.00000
42	63	0.00	0.00	-0.27	-.00003	0.00001	0.00000	64	0.00	0.00	-0.27	-.00002	0.00001	0.00000
	56	0.00	0.00	-0.25	-.00003	0.00003	0.00000	57	0.00	0.00	-0.27	-.00001	0.00002	0.00000
43	65	0.00	0.00	-0.29	-.00002	-.00001	0.00000	66	0.00	0.00	-0.28	-.00002	0.00000	0.00000
	58	0.00	0.00	-0.27	-.00002	-.00001	0.00000	59	0.00	0.00	-0.27	-.00003	-.00001	0.00000
44	66	0.00	0.00	-0.28	-.00002	0.00000	0.00000	67	0.00	0.00	-0.28	-.00003	0.00000	0.00000
	59	0.00	0.00	-0.27	-.00003	-.00001	0.00000	60	0.00	0.00	-0.26	-.00004	-.00001	0.00000
45	67	0.00	0.00	-0.28	-.00003	0.00000	0.00000	68	0.00	0.00	-0.28	-.00003	0.00000	0.00000
	60	0.00	0.00	-0.26	-.00004	-.00001	0.00000	61	0.00	0.00	-0.26	-.00004	0.00000	0.00000
46	68	0.00	0.00	-0.28	-.00003	0.00000	0.00000	69	0.00	0.00	-0.28	-.00003	0.00000	0.00000
	61	0.00	0.00	-0.26	-.00004	0.00000	0.00000	62	0.00	0.00	-0.26	-.00004	0.00001	0.00000
47	69	0.00	0.00	-0.28	-.00003	0.00000	0.00000	70	0.00	0.00	-0.28	-.00002	0.00000	0.00000
	62	0.00	0.00	-0.26	-.00004	0.00001	0.00000	63	0.00	0.00	-0.27	-.00003	0.00001	0.00000
48	70	0.00	0.00	-0.28	-.00002	0.00000	0.00000	71	0.00	0.00	-0.29	-.00002	0.00001	0.00000
	63	0.00	0.00	-0.27	-.00003	0.00001	0.00000	64	0.00	0.00	-0.27	-.00002	0.00001	0.00000
49	72	0.00	0.00	-0.30	-.00002	-.00001	0.00000	73	0.00	0.00	-0.30	-.00002	0.00000	0.00000
	65	0.00	0.00	-0.29	-.00002	-.00001	0.00000	66	0.00	0.00	-0.28	-.00002	0.00000	0.00000
50	73	0.00	0.00	-0.30	-.00002	0.00000	0.00000	74	0.00	0.00	-0.29	-.00001	0.00000	0.00000
	66	0.00	0.00	-0.28	-.00002	0.00000	0.00000	67	0.00	0.00	-0.28	-.00003	0.00000	0.00000
51	74	0.00	0.00	-0.29	-.00001	0.00000	0.00000	75	0.00	0.00	-0.29	-.00001	0.00000	0.00000
	67	0.00	0.00	-0.28	-.00003	0.00000	0.00000	68	0.00	0.00	-0.28	-.00003	0.00000	0.00000
52	75	0.00	0.00	-0.29	-.00001	0.00000	0.00000	76	0.00	0.00	-0.29	-.00001	0.00000	0.00000
	68	0.00	0.00	-0.28	-.00003	0.00000	0.00000	69	0.00	0.00	-0.28	-.00003	0.00000	0.00000
53	76	0.00	0.00	-0.29	-.00001	0.00000	0.00000	77	0.00	0.00	-0.30	-.00002	0.00000	0.00000
	69	0.00	0.00	-0.28	-.00003	0.00000	0.00000	70	0.00	0.00	-0.28	-.00002	0.00000	0.00000
54	77	0.00	0.00	-0.30	-.00002	0.00000	0.00000	78	0.00	0.00	-0.30	-.00002	0.00001	0.00000
	70	0.00	0.00	-0.28	-.00002	0.00000	0.00000	71	0.00	0.00	-0.29	-.00002	0.00001	0.00000
55	4	0.00	0.00	-0.31	-.00002	-.00001	0.00000	79	0.00	0.00	-0.31	-.00001	-.00001	0.00000
	72	0.00	0.00	-0.30	-.00002	-.00001	0.00000	73	0.00	0.00	-0.30	-.00002	0.00000	0.00000
56	79	0.00	0.00	-0.31	-.00001	-.00001	0.00000	80	0.00	0.00	-0.30	-.00001	-.00001	0.00000
	73	0.00	0.00	-0.30	-.00002	0.00000	0.00000	74	0.00	0.00	-0.29	-.00001	0.00000	0.00000
57	80	0.00	0.00	-0.30	-.00001	-.00001	0.00000	81	0.00	0.00	-0.30	-.00001	0.00000	0.00000
	74	0.00	0.00	-0.29	-.00001	0.00000	0.00000	75	0.00	0.00	-0.29	-.00001	0.00000	0.00000
58	81	0.00	0.00	-0.30	-.00001	0.00000	0.00000	82	0.00	0.00	-0.30	-.00001	0.00001	0.00000
	75	0.00	0.00	-0.29	-.00001	0.00000	0.00000	76	0.00	0.00	-0.29	-.00001	0.00000	0.00000
59	82	0.00	0.00	-0.30	-.00001	0.00001	0.00000	83	0.00	0.00	-0.31	-.00001	0.00001	0.00000
	76	0.00	0.00	-0.29	-.00001	0.00000	0.00000	77	0.00	0.00	-0.30	-.00002	0.00000	0.00000
60	83	0.00	0.00	-0.31	-.00001	0.00001	0.00000	2	0.00	0.00	-0.31	-.00002	0.00001	0.00000
	77	0.00	0.00	-0.30	-.00002	0.00000	0.00000	78	0.00	0.00	-0.30	-.00002	0.00001	0.00000

SPOST. Var. Cat. E2: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.08	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
1	5	0.00	0.00	-0.08	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
	3	3.19	0.00	0.00	0.08	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.08	-.00001	0.00001	0.0000
	5	3.19	0.00	0.00	0.08	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.08	0.00001	0.00001	0.0000
	10	3.19	0.00	0.00	0.08	0.00000	0.00000	0.0000	10	0.00	0.00	0.00	0.08	-.00001	-.00001	0.0000
	12	3.19	0.00	0.00	0.08	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.08	0.00001	-.00001	0.0000
	4	3.19	0.00	-0.11	0.00	0.00000	0.00000	0.0000	12	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.11	0.00	0.00000	0.00000	0.0000	5	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000	10	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000
	5	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000	12	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000
	10	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000	4	3.19	0.00	-0.11	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000	6	3.19	0.00	-0.11	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.11	0.00	-.00001	0.00000	0.0000	4	3.19	0.00	-0.11	0.00	0.00001	0.00000	0.0000
1	10	0.00	0.00	-0.08	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
1	4	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	-0.08	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
1	6	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	0.00	0.11	0.00000	-.00001	0.0000	6	0.00	0.00	0.00	0.11	0.00000	0.00002	0.0000
	4	3.19	0.00	0.00	0.11	0.00000	0.00001	0.0000	4	0.00	0.00	0.00	0.11	0.00000	-.00002	0.0000
1	6	0.00	0.00	-0.11	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.12	0.00	0.00002	0.00000	0.0000
2	10	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000

SPOST. Var. Cat. E2: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
3	10	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.09	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
5	10	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
6	10	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.08	0.00	-.00001	0.00000	0.0000
2	5	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
3	5	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.09	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
5	5	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
6	5	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.08	0.00	-.00001	0.00000	0.0000
2	10	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000
3	10	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000
4	10	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000
3	4	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000
4	4	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
5	4	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.08	0.00	-.00001	0.00000	0.0000
2	3	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000
3	3	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000
4	3	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000
3	6	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000	5	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000
4	6	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000	5	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
5	6	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	5	0.00	0.00	-0.08	0.00	-.00001	0.00000	0.0000
2	6	0.00	0.00	-0.12	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.14	0.00	0.00001	0.00000	0.0000
3	6	0.00	0.00	-0.14	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.14	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.14	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.14	0.00	-.00001	0.00000	0.0000
5	6	0.00	0.00	-0.14	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.12	0.00	-.00002	0.00000	0.0000
6	6	0.00	0.00	-0.12	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.11	0.00	-.00002	0.00000	0.0000

SPOST. Var. Cat. E2: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.09	-.00001	0.00002	0.00000	19	0.00	0.00	-0.11	-.00004	0.00004	0.00000
	3	0.00	0.00	-0.08	-.00001	0.00001	0.00000	13	0.00	0.00	-0.09	-.00002	0.00001	0.00000
2	51	0.00	0.00	-0.11	0.00000	0.00003	0.00000	52	0.00	0.00	-0.13	-.00002	0.00005	0.00000
	11	0.00	0.00	-0.11	0.00000	0.00002	0.00000	46	0.00	0.00	-0.12	0.00000	0.00002	0.00000
3	19	0.00	0.00	-0.11	-.00004	0.00004	0.00000	20	0.00	0.00	-0.13	-.00008	0.00002	0.00000
	13	0.00	0.00	-0.09	-.00002	0.00001	0.00000	14	0.00	-0.01	-0.09	-.00004	0.00001	0.00000
4	20	0.00	0.00	-0.13	-.00008	0.00002	0.00000	21	0.00	0.00	-0.14	-.00009	0.00000	0.00000
	14	0.00	-0.01	-0.09	-.00004	0.00001	0.00000	15	0.00	-0.01	-0.09	-.00004	0.00000	0.00000
5	21	0.00	0.00	-0.14	-.00009	0.00000	0.00000	22	0.00	0.00	-0.13	-.00008	-.00002	0.00000
	15	0.00	-0.01	-0.09	-.00004	0.00000	0.00000	16	0.00	-0.01	-0.09	-.00004	-.00001	0.00000
6	22	0.00	0.00	-0.13	-.00008	-.00002	0.00000	23	0.00	0.00	-0.11	-.00004	-.00004	0.00000
	16	0.00	-0.01	-0.09	-.00004	-.00001	0.00000	17	0.00	0.00	-0.09	-.00002	-.00001	0.00000
7	23	0.00	0.00	-0.11	-.00004	-.00004	0.00000	24	0.00	0.00	-0.09	-.00001	-.00002	0.00000
	17	0.00	0.00	-0.09	-.00002	-.00001	0.00000	1	0.00	0.00	-0.08	-.00001	-.00001	0.00000
8	25	0.00	0.00	-0.10	-.00001	0.00003	0.00000	26	0.00	0.00	-0.13	-.00003	0.00007	0.00000
	18	0.00	0.00	-0.09	-.00001	0.00002	0.00000	19	0.00	0.00	-0.11	-.00004	0.00004	0.00000
9	26	0.00	0.00	-0.13	-.00003	0.00007	0.00000	27	0.00	0.00	-0.17	-.00004	0.00004	0.00000
	19	0.00	0.00	-0.11	-.00004	0.00004	0.00000	20	0.00	0.00	-0.13	-.00008	0.00002	0.00000
10	27	0.00	0.00	-0.17	-.00004	0.00004	0.00000	28	0.00	0.00	-0.18	-.00005	0.00000	0.00000
	20	0.00	0.00	-0.13	-.00008	0.00002	0.00000	21	0.00	0.00	-0.14	-.00009	0.00000	0.00000
11	28	0.00	0.00	-0.18	-.00005	0.00000	0.00000	29	0.00	0.00	-0.17	-.00004	-.00004	0.00000
	21	0.00	0.00	-0.14	-.00009	0.00000	0.00000	22	0.00	0.00	-0.13	-.00008	-.00002	0.00000
12	29	0.00	0.00	-0.17	-.00004	-.00004	0.00000	30	0.00	0.00	-0.13	-.00003	-.00007	0.00000
	22	0.00	0.00	-0.13	-.00008	-.00002	0.00000	23	0.00	0.00	-0.11	-.00004	-.00004	0.00000
13	30	0.00	0.00	-0.13	-.00003	-.00007	0.00000	31	0.00	0.00	-0.10	-.00001	-.00003	0.00000
	23	0.00	0.00	-0.11	-.00004	-.00004	0.00000	24	0.00	0.00	-0.09	-.00001	-.00002	0.00000
14	32	0.00	0.00	-0.10	-.00001	0.00003	0.00000	33	0.00	0.00	-0.14	0.00000	0.00007	0.00000
	25	0.00	0.00	-0.10	-.00001	0.00003	0.00000	26	0.00	0.00	-0.13	-.00003	0.00007	0.00000
15	33	0.00	0.00	-0.14	0.00000	0.00007	0.00000	34	0.00	0.00	-0.18	0.00002	0.00004	0.00000
	26	0.00	0.00	-0.13	-.00003	0.00007	0.00000	27	0.00	0.00	-0.17	-.00004	0.00004	0.00000
16	34	0.00	0.00	-0.18	0.00002	0.00004	0.00000	35	0.00	0.00	-0.19	0.00002	0.00000	0.00000
	27	0.00	0.00	-0.17	-.00004	0.00004	0.00000	28	0.00	0.00	-0.18	-.00005	0.00000	0.00000
17	35	0.00	0.00	-0.19	0.00002	0.00000	0.00000	36	0.00	0.00	-0.18	0.00002	-.00004	0.00000
	28	0.00	0.00	-0.18	-.00005	0.00000	0.00000	29	0.00	0.00	-0.17	-.00004	-.00004	0.00000
18	36	0.00	0.00	-0.18	0.00002	-.00004	0.00000	37	0.00	0.00	-0.14	0.00000	-.00007	0.00000
	29	0.00	0.00	-0.17	-.00004	-.00004	0.00000	30	0.00	0.00	-0.13	-.00003	-.00007	0.00000
19	37	0.00	0.00	-0.14	0.00000	-.00007	0.00000	38	0.00	0.00	-0.10	-.00001	-.00003	0.00000
	30	0.00	0.00	-0.13	-.00003	-.00007	0.00000	31	0.00	0.00	-0.10	-.00001	-.00003	0.00000
20	39	0.00	0.00	-0.11	0.00000	0.00003	0.00000	40	0.00	0.00	-0.13	0.00002	0.00005	0.00000
	32	0.00	0.00	-0.10	-.00001	0.00003	0.00000	33	0.00	0.00	-0.14	0.00000	0.00007	0.00000
21	40	0.00	0.00	-0.13	0.00002	0.00005	0.00000	41	0.00	0.00	-0.16	0.00005	0.00003	0.00000
	33	0.00	0.00	-0.14	0.00000	0.00007	0.00000	34	0.00	0.00	-0.18	0.00002	0.00004	0.00000
22	41	0.00	0.00	-0.16	0.00005	0.00003	0.00000	42	0.00	0.00	-0.16	0.00006	0.00000	0.00000
	34	0.00	0.00	-0.18	0.00002	0.00004	0.00000	35	0.00	0.00	-0.19	0.00002	0.00000	0.00000
23	42	0.00	0.00	-0.16	0.00006	0.00000	0.00000	43	0.00	0.00	-0.16	0.00005	-.00003	0.00000
	35	0.00	0.00	-0.19	0.00002	0.00000	0.00000	36	0.00	0.00	-0.18	0.00002	-.00004	0.00000
24	43	0.00	0.00	-0.16	0.00005	-.00003	0.00000	44	0.00	0.00	-0.13	0.00002	-.00005	0.00000
	36	0.00	0.00	-0.18	0.00002	-.00004	0.00000	37	0.00	0.00	-0.14	0.00000	-.00007	0.00000

SPOST. Var. Cat. E2: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
25	44	0.00	0.00	-0.13	0.00002	-.00005	0.00000	45	0.00	0.00	-0.11	0.00000	-.00003	0.00000
	37	0.00	0.00	-0.14	0.00000	-.00007	0.00000	38	0.00	0.00	-0.10	-.00001	-.00003	0.00000
26	11	0.00	0.00	-0.11	0.00000	0.00002	0.00000	46	0.00	0.00	-0.12	0.00000	0.00002	0.00000
	39	0.00	0.00	-0.11	0.00000	0.00003	0.00000	40	0.00	0.00	-0.13	0.00002	0.00005	0.00000
27	46	0.00	0.00	-0.12	0.00000	0.00002	0.00000	47	0.00	0.00	-0.14	0.00000	0.00001	0.00000
	40	0.00	0.00	-0.13	0.00002	0.00005	0.00000	41	0.00	0.00	-0.16	0.00005	0.00003	0.00000
28	47	0.00	0.00	-0.14	0.00000	0.00001	0.00000	48	0.00	0.00	-0.14	0.00000	0.00000	0.00000
	41	0.00	0.00	-0.16	0.00005	0.00003	0.00000	42	0.00	0.00	-0.16	0.00006	0.00000	0.00000
29	48	0.00	0.00	-0.14	0.00000	0.00000	0.00000	49	0.00	0.00	-0.14	0.00000	-.00001	0.00000
	42	0.00	0.00	-0.16	0.00006	0.00000	0.00000	43	0.00	0.00	-0.16	0.00005	-.00003	0.00000
30	49	0.00	0.00	-0.14	0.00000	-.00001	0.00000	50	0.00	0.00	-0.12	0.00000	-.00002	0.00000
	43	0.00	0.00	-0.16	0.00005	-.00003	0.00000	44	0.00	0.00	-0.13	0.00002	-.00005	0.00000
31	50	0.00	0.00	-0.12	0.00000	-.00002	0.00000	12	0.00	0.00	-0.11	0.00000	-.00002	0.00000
	44	0.00	0.00	-0.13	0.00002	-.00005	0.00000	45	0.00	0.00	-0.11	0.00000	-.00003	0.00000
32	52	0.00	0.00	-0.13	-.00002	0.00005	0.00000	53	0.00	0.00	-0.16	-.00005	0.00003	0.00000
	46	0.00	0.00	-0.12	0.00000	0.00002	0.00000	47	0.00	0.00	-0.14	0.00000	0.00001	0.00000
33	53	0.00	0.00	-0.16	-.00005	0.00003	0.00000	54	0.00	0.00	-0.16	-.00006	0.00000	0.00000
	47	0.00	0.00	-0.14	0.00000	0.00001	0.00000	48	0.00	0.00	-0.14	0.00000	0.00000	0.00000
34	54	0.00	0.00	-0.16	-.00006	0.00000	0.00000	55	0.00	0.00	-0.16	-.00005	-.00003	0.00000
	48	0.00	0.00	-0.14	0.00000	0.00000	0.00000	49	0.00	0.00	-0.14	0.00000	-.00001	0.00000
35	55	0.00	0.00	-0.16	-.00005	-.00003	0.00000	56	0.00	0.00	-0.13	-.00002	-.00005	0.00000
	49	0.00	0.00	-0.14	0.00000	-.00001	0.00000	50	0.00	0.00	-0.12	0.00000	-.00002	0.00000
36	56	0.00	0.00	-0.13	-.00002	-.00005	0.00000	57	0.00	0.00	-0.11	0.00000	-.00003	0.00000
	50	0.00	0.00	-0.12	0.00000	-.00002	0.00000	12	0.00	0.00	-0.11	0.00000	-.00002	0.00000
37	58	0.00	0.00	-0.10	0.00001	0.00003	0.00000	59	0.00	0.00	-0.14	0.00000	0.00007	0.00000
	51	0.00	0.00	-0.11	0.00000	0.00003	0.00000	52	0.00	0.00	-0.13	-.00002	0.00005	0.00000
38	59	0.00	0.00	-0.14	0.00000	0.00007	0.00000	60	0.00	0.00	-0.18	-.00002	0.00004	0.00000
	52	0.00	0.00	-0.13	-.00002	0.00005	0.00000	53	0.00	0.00	-0.16	-.00005	0.00003	0.00000
39	60	0.00	0.00	-0.18	-.00002	0.00004	0.00000	61	0.00	0.00	-0.19	-.00002	0.00000	0.00000
	53	0.00	0.00	-0.16	-.00005	0.00003	0.00000	54	0.00	0.00	-0.16	-.00006	0.00000	0.00000
40	61	0.00	0.00	-0.19	-.00002	0.00000	0.00000	62	0.00	0.00	-0.18	-.00002	-.00004	0.00000
	54	0.00	0.00	-0.16	-.00006	0.00000	0.00000	55	0.00	0.00	-0.16	-.00005	-.00003	0.00000
41	62	0.00	0.00	-0.18	-.00002	-.00004	0.00000	63	0.00	0.00	-0.14	0.00000	-.00007	0.00000
	55	0.00	0.00	-0.16	-.00005	-.00003	0.00000	56	0.00	0.00	-0.13	-.00002	-.00005	0.00000
42	63	0.00	0.00	-0.14	0.00000	-.00007	0.00000	64	0.00	0.00	-0.10	0.00001	-.00003	0.00000
	56	0.00	0.00	-0.13	-.00002	-.00005	0.00000	57	0.00	0.00	-0.11	0.00000	-.00003	0.00000
43	65	0.00	0.00	-0.10	0.00001	0.00003	0.00000	66	0.00	0.00	-0.13	0.00003	0.00007	0.00000
	58	0.00	0.00	-0.10	0.00001	0.00003	0.00000	59	0.00	0.00	-0.14	0.00000	0.00007	0.00000
44	66	0.00	0.00	-0.13	0.00003	0.00007	0.00000	67	0.00	0.00	-0.17	0.00004	0.00004	0.00000
	59	0.00	0.00	-0.14	0.00000	0.00007	0.00000	60	0.00	0.00	-0.18	-.00002	0.00004	0.00000
45	67	0.00	0.00	-0.17	0.00004	0.00004	0.00000	68	0.00	0.00	-0.18	0.00005	0.00000	0.00000
	60	0.00	0.00	-0.18	-.00002	0.00004	0.00000	61	0.00	0.00	-0.19	-.00002	0.00000	0.00000
46	68	0.00	0.00	-0.18	0.00005	0.00000	0.00000	69	0.00	0.00	-0.17	0.00004	-.00004	0.00000
	61	0.00	0.00	-0.19	-.00002	0.00000	0.00000	62	0.00	0.00	-0.18	-.00002	-.00004	0.00000
47	69	0.00	0.00	-0.17	0.00004	-.00004	0.00000	70	0.00	0.00	-0.13	0.00003	-.00007	0.00000
	62	0.00	0.00	-0.18	-.00002	-.00004	0.00000	63	0.00	0.00	-0.14	0.00000	-.00007	0.00000
48	70	0.00	0.00	-0.13	0.00003	-.00007	0.00000	71	0.00	0.00	-0.10	0.00001	-.00003	0.00000
	63	0.00	0.00	-0.14	0.00000	-.00007	0.00000	64	0.00	0.00	-0.10	0.00001	-.00003	0.00000
49	72	0.00	0.00	-0.09	0.00001	0.00002	0.00000	73	0.00	0.00	-0.11	0.00004	0.00004	0.00000
	65	0.00	0.00	-0.10	0.00001	0.00003	0.00000	66	0.00	0.00	-0.13	0.00003	0.00007	0.00000
50	73	0.00	0.00	-0.11	0.00004	0.00004	0.00000	74	0.00	0.00	-0.13	0.00008	0.00002	0.00000
	66	0.00	0.00	-0.13	0.00003	0.00007	0.00000	67	0.00	0.00	-0.17	0.00004	0.00004	0.00000
51	74	0.00	0.00	-0.13	0.00008	0.00002	0.00000	75	0.00	0.00	-0.14	0.00009	0.00000	0.00000
	67	0.00	0.00	-0.17	0.00004	0.00004	0.00000	68	0.00	0.00	-0.18	0.00005	0.00000	0.00000
52	75	0.00	0.00	-0.14	0.00009	0.00000	0.00000	76	0.00	0.00	-0.13	0.00008	-.00002	0.00000
	68	0.00	0.00	-0.18	0.00005	0.00000	0.00000	69	0.00	0.00	-0.17	0.00004	-.00004	0.00000
53	76	0.00	0.00	-0.13	0.00008	-.00002	0.00000	77	0.00	0.00	-0.11	0.00004	-.00004	0.00000
	69	0.00	0.00	-0.17	0.00004	-.00004	0.00000	70	0.00	0.00	-0.13	0.00003	-.00007	0.00000
54	77	0.00	0.00	-0.11	0.00004	-.00004	0.00000	78	0.00	0.00	-0.09	0.00001	-.00002	0.00000
	70	0.00	0.00	-0.13	0.00003	-.00007	0.00000	71	0.00	0.00	-0.10	0.00001	-.00003	0.00000
55	4	0.00	0.00	-0.08	0.00001	0.00001	0.00000	79	0.00	0.00	-0.09	0.00002	0.00001	0.00000
	72	0.00	0.00	-0.09	0.00001	0.00002	0.00000	73	0.00	0.00	-0.11	0.00004	0.00004	0.00000
56	79	0.00	0.00	-0.09	0.00002	0.00001	0.00000	80	0.00	0.01	-0.09	0.00004	0.00001	0.00000
	73	0.00	0.00	-0.11	0.00004	0.00004	0.00000	74	0.00	0.00	-0.13	0.00008	0.00002	0.00000
57	80	0.00	0.01	-0.09	0.00004	0.00001	0.00000	81	0.00	0.01	-0.09	0.00004	0.00000	0.00000
	74	0.00	0.00	-0.13	0.00008	0.00002	0.00000	75	0.00	0.00	-0.14	0.00009	0.00000	0.00000
58	81	0.00	0.01	-0.09	0.00004	0.00000	0.00000	82	0.00	0.01	-0.09	0.00004	-.00001	0.00000
	75	0.00	0.00	-0.14	0.00009	0.00000	0.00000	76	0.00	0.00	-0.13	0.00008	-.00002	0.00000
59	82	0.00	0.01	-0.09	0.00004	-.00001	0.00000	83	0.00	0.00	-0.09	0.00002	-.00001	0.00000
	76	0.00	0.00	-0.13	0.00008	-.00002	0.00000	77	0.00	0.00	-0.11	0.00004	-.00004	0.00000
60	83	0.00	0.00	-0.09	0.00002	-.00001	0.00000	2	0.00	0.00	-0.08	0.00001	-.00001	0.00000
	77	0.00	0.00	-0.11	0.00004	-.00004	0.00000	78	0.00	0.00	-0.09	0.00001	-.00002	0.00000

SPOST. H1 car. manutenzione: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
1	5	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	0.00	0.02	0.00000	0.00002	0.0000	3	0.00	0.00	0.00	0.02	0.00000	0.00000	0.0000
	5	3.19	0.00	0.00	0.02	0.00000	0.00002	0.0000	5	0.00	0.00	0.00	0.02	0.00000	0.00000	0.0000

SPOST. H1 car. manutenzione: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
	10	3.19	0.00	0.00	0.02	0.00000	-.00002	0.0000	10	0.00	0.00	0.00	0.02	0.00000	0.00000	0.0000
	12	3.19	0.00	0.00	0.02	0.00000	-.00002	0.0000	12	0.00	0.00	0.00	0.02	0.00000	0.00000	0.0000
	4	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	5	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.02	0.00	0.00002	0.00000	0.0000	10	3.19	0.00	-0.02	0.00	-.00002	0.00000	0.0000
	5	3.19	0.00	-0.02	0.00	0.00002	0.00000	0.0000	12	3.19	0.00	-0.02	0.00	-.00002	0.00000	0.0000
	10	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	6	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.02	0.00	0.00003	0.00000	0.0000	4	3.19	0.00	-0.02	0.00	-.00003	0.00000	0.0000
1	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
1	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	0.00	0.02	0.00000	0.00003	0.0000	6	0.00	0.00	0.00	0.01	0.00000	0.00000	0.0000
	4	3.19	0.00	0.00	0.02	0.00000	-.00003	0.0000	4	0.00	0.00	0.00	0.01	0.00000	0.00000	0.0000
1	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
6	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
6	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
6	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000

SPOST. H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.01	0.00000	0.00000	0.00000	19	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	3	0.00	0.00	-0.02	0.00000	0.00000	0.00000	13	0.00	0.00	-0.01	0.00000	0.00000	0.00000
2	51	0.00	0.00	-0.01	0.00000	0.00000	0.00000	52	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	11	0.00	0.00	-0.01	0.00000	0.00000	0.00000	46	0.00	0.00	-0.01	0.00000	0.00000	0.00000
3	19	0.00	0.00	-0.01	0.00000	0.00000	0.00000	20	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	13	0.00	0.00	-0.01	0.00000	0.00000	0.00000	14	0.00	0.00	-0.01	0.00000	0.00000	0.00000
4	20	0.00	0.00	-0.01	0.00000	0.00000	0.00000	21	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	14	0.00	0.00	-0.01	0.00000	0.00000	0.00000	15	0.00	0.00	-0.01	0.00000	0.00000	0.00000
5	21	0.00	0.00	-0.01	0.00000	0.00000	0.00000	22	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	15	0.00	0.00	-0.01	0.00000	0.00000	0.00000	16	0.00	0.00	-0.01	0.00000	0.00000	0.00000
6	22	0.00	0.00	-0.01	0.00000	0.00000	0.00000	23	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	16	0.00	0.00	-0.01	0.00000	0.00000	0.00000	17	0.00	0.00	-0.01	0.00000	0.00000	0.00000
7	23	0.00	0.00	-0.01	0.00000	0.00000	0.00000	24	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	17	0.00	0.00	-0.01	0.00000	0.00000	0.00000	1	0.00	0.00	-0.02	0.00000	0.00000	0.00000
8	25	0.00	0.00	-0.01	0.00000	0.00000	0.00000	26	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	18	0.00	0.00	-0.01	0.00000	0.00000	0.00000	19	0.00	0.00	-0.01	0.00000	0.00000	0.00000
9	26	0.00	0.00	-0.01	0.00000	0.00000	0.00000	27	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	19	0.00	0.00	-0.01	0.00000	0.00000	0.00000	20	0.00	0.00	-0.01	0.00000	0.00000	0.00000
10	27	0.00	0.00	-0.01	0.00000	0.00000	0.00000	28	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	20	0.00	0.00	-0.01	0.00000	0.00000	0.00000	21	0.00	0.00	-0.01	0.00000	0.00000	0.00000
11	28	0.00	0.00	-0.01	0.00000	0.00000	0.00000	29	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	21	0.00	0.00	-0.01	0.00000	0.00000	0.00000	22	0.00	0.00	-0.01	0.00000	0.00000	0.00000
12	29	0.00	0.00	-0.01	0.00000	0.00000	0.00000	30	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	22	0.00	0.00	-0.01	0.00000	0.00000	0.00000	23	0.00	0.00	-0.01	0.00000	0.00000	0.00000
13	30	0.00	0.00	-0.01	0.00000	0.00000	0.00000	31	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	23	0.00	0.00	-0.01	0.00000	0.00000	0.00000	24	0.00	0.00	-0.01	0.00000	0.00000	0.00000
14	32	0.00	0.00	-0.01	0.00000	0.00000	0.00000	33	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	25	0.00	0.00	-0.01	0.00000	0.00000	0.00000	26	0.00	0.00	-0.01	0.00000	0.00000	0.00000
15	33	0.00	0.00	-0.01	0.00000	0.00000	0.00000	34	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	26	0.00	0.00	-0.01	0.00000	0.00000	0.00000	27	0.00	0.00	-0.01	0.00000	0.00000	0.00000
16	34	0.00	0.00	-0.01	0.00000	0.00000	0.00000	35	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	27	0.00	0.00	-0.01	0.00000	0.00000	0.00000	28	0.00	0.00	-0.01	0.00000	0.00000	0.00000

SPOST. H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
17	35	0.00	0.00	-0.01	0.00000	0.00000	0.00000	36	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	28	0.00	0.00	-0.01	0.00000	0.00000	0.00000	29	0.00	0.00	-0.01	0.00000	0.00000	0.00000
18	36	0.00	0.00	-0.01	0.00000	0.00000	0.00000	37	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	29	0.00	0.00	-0.01	0.00000	0.00000	0.00000	30	0.00	0.00	-0.01	0.00000	0.00000	0.00000
19	37	0.00	0.00	-0.01	0.00000	0.00000	0.00000	38	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	30	0.00	0.00	-0.01	0.00000	0.00000	0.00000	31	0.00	0.00	-0.01	0.00000	0.00000	0.00000
20	39	0.00	0.00	-0.01	0.00000	0.00000	0.00000	40	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	32	0.00	0.00	-0.01	0.00000	0.00000	0.00000	33	0.00	0.00	-0.01	0.00000	0.00000	0.00000
21	40	0.00	0.00	-0.01	0.00000	0.00000	0.00000	41	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	33	0.00	0.00	-0.01	0.00000	0.00000	0.00000	34	0.00	0.00	-0.01	0.00000	0.00000	0.00000
22	41	0.00	0.00	-0.01	0.00000	0.00000	0.00000	42	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	34	0.00	0.00	-0.01	0.00000	0.00000	0.00000	35	0.00	0.00	-0.01	0.00000	0.00000	0.00000
23	42	0.00	0.00	-0.01	0.00000	0.00000	0.00000	43	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	35	0.00	0.00	-0.01	0.00000	0.00000	0.00000	36	0.00	0.00	-0.01	0.00000	0.00000	0.00000
24	43	0.00	0.00	-0.01	0.00000	0.00000	0.00000	44	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	36	0.00	0.00	-0.01	0.00000	0.00000	0.00000	37	0.00	0.00	-0.01	0.00000	0.00000	0.00000
25	44	0.00	0.00	-0.01	0.00000	0.00000	0.00000	45	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	37	0.00	0.00	-0.01	0.00000	0.00000	0.00000	38	0.00	0.00	-0.01	0.00000	0.00000	0.00000
26	11	0.00	0.00	-0.01	0.00000	0.00000	0.00000	46	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	39	0.00	0.00	-0.01	0.00000	0.00000	0.00000	40	0.00	0.00	-0.01	0.00000	0.00000	0.00000
27	46	0.00	0.00	-0.01	0.00000	0.00000	0.00000	47	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	40	0.00	0.00	-0.01	0.00000	0.00000	0.00000	41	0.00	0.00	-0.01	0.00000	0.00000	0.00000
28	47	0.00	0.00	-0.01	0.00000	0.00000	0.00000	48	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	41	0.00	0.00	-0.01	0.00000	0.00000	0.00000	42	0.00	0.00	-0.01	0.00000	0.00000	0.00000
29	48	0.00	0.00	-0.01	0.00000	0.00000	0.00000	49	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	42	0.00	0.00	-0.01	0.00000	0.00000	0.00000	43	0.00	0.00	-0.01	0.00000	0.00000	0.00000
30	49	0.00	0.00	-0.01	0.00000	0.00000	0.00000	50	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	43	0.00	0.00	-0.01	0.00000	0.00000	0.00000	44	0.00	0.00	-0.01	0.00000	0.00000	0.00000
31	50	0.00	0.00	-0.01	0.00000	0.00000	0.00000	12	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	44	0.00	0.00	-0.01	0.00000	0.00000	0.00000	45	0.00	0.00	-0.01	0.00000	0.00000	0.00000
32	52	0.00	0.00	-0.01	0.00000	0.00000	0.00000	53	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	46	0.00	0.00	-0.01	0.00000	0.00000	0.00000	47	0.00	0.00	-0.01	0.00000	0.00000	0.00000
33	53	0.00	0.00	-0.01	0.00000	0.00000	0.00000	54	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	47	0.00	0.00	-0.01	0.00000	0.00000	0.00000	48	0.00	0.00	-0.01	0.00000	0.00000	0.00000
34	54	0.00	0.00	-0.01	0.00000	0.00000	0.00000	55	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	48	0.00	0.00	-0.01	0.00000	0.00000	0.00000	49	0.00	0.00	-0.01	0.00000	0.00000	0.00000
35	55	0.00	0.00	-0.01	0.00000	0.00000	0.00000	56	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	49	0.00	0.00	-0.01	0.00000	0.00000	0.00000	50	0.00	0.00	-0.01	0.00000	0.00000	0.00000
36	56	0.00	0.00	-0.01	0.00000	0.00000	0.00000	57	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	50	0.00	0.00	-0.01	0.00000	0.00000	0.00000	12	0.00	0.00	-0.01	0.00000	0.00000	0.00000
37	58	0.00	0.00	-0.01	0.00000	0.00000	0.00000	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	51	0.00	0.00	-0.01	0.00000	0.00000	0.00000	52	0.00	0.00	-0.01	0.00000	0.00000	0.00000
38	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	52	0.00	0.00	-0.01	0.00000	0.00000	0.00000	53	0.00	0.00	-0.01	0.00000	0.00000	0.00000
39	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	53	0.00	0.00	-0.01	0.00000	0.00000	0.00000	54	0.00	0.00	-0.01	0.00000	0.00000	0.00000
40	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	54	0.00	0.00	-0.01	0.00000	0.00000	0.00000	55	0.00	0.00	-0.01	0.00000	0.00000	0.00000
41	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	55	0.00	0.00	-0.01	0.00000	0.00000	0.00000	56	0.00	0.00	-0.01	0.00000	0.00000	0.00000
42	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000	64	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	56	0.00	0.00	-0.01	0.00000	0.00000	0.00000	57	0.00	0.00	-0.01	0.00000	0.00000	0.00000
43	65	0.00	0.00	-0.01	0.00000	0.00000	0.00000	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	58	0.00	0.00	-0.01	0.00000	0.00000	0.00000	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000
44	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000
45	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000
46	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000
47	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000
48	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000	71	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000	64	0.00	0.00	-0.01	0.00000	0.00000	0.00000
49	72	0.00	0.00	-0.01	0.00000	0.00000	0.00000	73	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	65	0.00	0.00	-0.01	0.00000	0.00000	0.00000	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000
50	73	0.00	0.00	-0.01	0.00000	0.00000	0.00000	74	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000
51	74	0.00	0.00	-0.01	0.00000	0.00000	0.00000	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000
52	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000	76	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000
53	76	0.00	0.00	-0.01	0.00000	0.00000	0.00000	77	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000
54	77	0.00	0.00	-0.01	0.00000	0.00000	0.00000	78	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000	71	0.00	0.00	-0.01	0.00000	0.00000	0.00000
55	4	0.00	0.00	-0.02	0.00000	0.00000	0.00000	79	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	72	0.00	0.00	-0.01	0.00000	0.00000	0.00000	73	0.00	0.00	-0.01	0.00000	0.00000	0.00000
56	79	0.00	0.00	-0.01	0.00000	0.00000	0.00000	80	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	73	0.00	0.00	-0.01	0.00000	0.00000	0.00000	74	0.00	0.00	-0.01	0.00000	0.00000	0.00000

SPOST. H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
57	80	0.00	0.00	-0.01	0.00000	0.00000	0.00000	81	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	74	0.00	0.00	-0.01	0.00000	0.00000	0.00000	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000
58	81	0.00	0.00	-0.01	0.00000	0.00000	0.00000	82	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000	76	0.00	0.00	-0.01	0.00000	0.00000	0.00000
59	82	0.00	0.00	-0.01	0.00000	0.00000	0.00000	83	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	76	0.00	0.00	-0.01	0.00000	0.00000	0.00000	77	0.00	0.00	-0.01	0.00000	0.00000	0.00000
60	83	0.00	0.00	-0.01	0.00000	0.00000	0.00000	2	0.00	0.00	-0.02	0.00000	0.00000	0.00000
	77	0.00	0.00	-0.01	0.00000	0.00000	0.00000	78	0.00	0.00	-0.01	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 0: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	3	3.19	0.01	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	5	3.19	-0.01	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	10	3.19	0.01	0.01	0.00	0.00000	0.00000	0.0000	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	12	3.19	-0.01	0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	4	3.19	0.00	0.00	-0.01	0.00000	0.00000	0.0000	12	3.19	0.01	0.00	-0.01	0.00000	0.00000	0.0000
	6	3.19	0.00	0.00	0.01	0.00000	0.00000	0.0000	5	3.19	0.01	0.00	0.01	0.00000	0.00000	0.0000
	3	3.19	-0.01	0.00	-0.01	0.00000	0.00000	0.0000	10	3.19	0.01	0.00	-0.01	0.00000	0.00000	0.0000
	5	3.19	-0.01	0.00	0.01	0.00000	0.00000	0.0000	12	3.19	0.01	0.00	0.01	0.00000	0.00000	0.0000
	10	3.19	-0.01	0.00	-0.01	0.00000	0.00000	0.0000	4	3.19	0.00	0.00	-0.01	0.00000	0.00000	0.0000
	3	3.19	-0.01	0.00	0.01	0.00000	0.00000	0.0000	6	3.19	0.00	0.00	0.01	0.00000	0.00000	0.0000
	6	3.19	-0.01	0.00	0.00	0.00000	0.00000	0.0000	4	3.19	0.01	0.00	0.00	0.00000	0.00000	0.0000
1	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	4	3.19	0.00	0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000

SPOST. Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	0.00	0.00000	0.00000	0.00000	19	0.00	0.00	0.00	0.00000	0.00000	0.00000
	3	0.00	0.00	0.00	0.00000	0.00000	0.00000	13	0.00	0.00	0.00	0.00000	0.00000	0.00000
2	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
	11	0.00	0.00	0.00	0.00000	0.00000	0.00000	46	0.00	0.00	0.00	0.00000	0.00000	0.00000
3	19	0.00	0.00	0.00	0.00000	0.00000	0.00000	20	0.00	0.00	0.00	0.00000	0.00000	0.00000
	13	0.00	0.00	0.00	0.00000	0.00000	0.00000	14	0.00	0.00	0.00	0.00000	0.00000	0.00000
4	20	0.00	0.00	0.00	0.00000	0.00000	0.00000	21	0.00	0.00	0.00	0.00000	0.00000	0.00000
	14	0.00	0.00	0.00	0.00000	0.00000	0.00000	15	0.00	0.00	0.00	0.00000	0.00000	0.00000
5	21	0.00	0.00	0.00	0.00000	0.00000	0.00000	22	0.00	0.00	0.00	0.00000	0.00000	0.00000
	15	0.00	0.00	0.00	0.00000	0.00000	0.00000	16	0.00	0.00	0.00	0.00000	0.00000	0.00000
6	22	0.00	0.00	0.00	0.00000	0.00000	0.00000	23	0.00	0.00	0.00	0.00000	0.00000	0.00000
	16	0.00	0.00	0.00	0.00000	0.00000	0.00000	17	0.00	0.00	0.00	0.00000	0.00000	0.00000
7	23	0.00	0.00	0.00	0.00000	0.00000	0.00000	24	0.00	0.00	0.00	0.00000	0.00000	0.00000
	17	0.00	0.00	0.00	0.00000	0.00000	0.00000	1	0.00	0.00	0.00	0.00000	0.00000	0.00000
8	25	0.00	0.00	0.00	0.00000	0.00000	0.00000	26	0.00	0.00	0.00	0.00000	0.00000	0.00000
	18	0.00	0.00	0.00	0.00000	0.00000	0.00000	19	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
9	26	0.00	0.00	0.00	0.00000	0.00000	0.00000	27	0.00	0.00	0.00	0.00000	0.00000	0.00000
	19	0.00	0.00	0.00	0.00000	0.00000	0.00000	20	0.00	0.00	0.00	0.00000	0.00000	0.00000
10	27	0.00	0.00	0.00	0.00000	0.00000	0.00000	28	0.00	0.00	0.00	0.00000	0.00000	0.00000
	20	0.00	0.00	0.00	0.00000	0.00000	0.00000	21	0.00	0.00	0.00	0.00000	0.00000	0.00000
11	28	0.00	0.00	0.00	0.00000	0.00000	0.00000	29	0.00	0.00	0.00	0.00000	0.00000	0.00000
	21	0.00	0.00	0.00	0.00000	0.00000	0.00000	22	0.00	0.00	0.00	0.00000	0.00000	0.00000
12	29	0.00	0.00	0.00	0.00000	0.00000	0.00000	30	0.00	0.00	0.00	0.00000	0.00000	0.00000
	22	0.00	0.00	0.00	0.00000	0.00000	0.00000	23	0.00	0.00	0.00	0.00000	0.00000	0.00000
13	30	0.00	0.00	0.00	0.00000	0.00000	0.00000	31	0.00	0.00	0.00	0.00000	0.00000	0.00000
	23	0.00	0.00	0.00	0.00000	0.00000	0.00000	24	0.00	0.00	0.00	0.00000	0.00000	0.00000
14	32	0.00	0.00	0.00	0.00000	0.00000	0.00000	33	0.00	0.00	0.00	0.00000	0.00000	0.00000
	25	0.00	0.00	0.00	0.00000	0.00000	0.00000	26	0.00	0.00	0.00	0.00000	0.00000	0.00000
15	33	0.00	0.00	0.00	0.00000	0.00000	0.00000	34	0.00	0.00	0.00	0.00000	0.00000	0.00000
	26	0.00	0.00	0.00	0.00000	0.00000	0.00000	27	0.00	0.00	0.00	0.00000	0.00000	0.00000
16	34	0.00	0.00	0.00	0.00000	0.00000	0.00000	35	0.00	0.00	0.00	0.00000	0.00000	0.00000
	27	0.00	0.00	0.00	0.00000	0.00000	0.00000	28	0.00	0.00	0.00	0.00000	0.00000	0.00000
17	35	0.00	0.00	0.00	0.00000	0.00000	0.00000	36	0.00	0.00	0.00	0.00000	0.00000	0.00000
	28	0.00	0.00	0.00	0.00000	0.00000	0.00000	29	0.00	0.00	0.00	0.00000	0.00000	0.00000
18	36	0.00	0.00	0.00	0.00000	0.00000	0.00000	37	0.00	0.00	0.00	0.00000	0.00000	0.00000
	29	0.00	0.00	0.00	0.00000	0.00000	0.00000	30	0.00	0.00	0.00	0.00000	0.00000	0.00000
19	37	0.00	0.00	0.00	0.00000	0.00000	0.00000	38	0.00	0.00	0.00	0.00000	0.00000	0.00000
	30	0.00	0.00	0.00	0.00000	0.00000	0.00000	31	0.00	0.00	0.00	0.00000	0.00000	0.00000
20	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
	32	0.00	0.00	0.00	0.00000	0.00000	0.00000	33	0.00	0.00	0.00	0.00000	0.00000	0.00000
21	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
	33	0.00	0.00	0.00	0.00000	0.00000	0.00000	34	0.00	0.00	0.00	0.00000	0.00000	0.00000
22	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
	34	0.00	0.00	0.00	0.00000	0.00000	0.00000	35	0.00	0.00	0.00	0.00000	0.00000	0.00000
23	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
	35	0.00	0.00	0.00	0.00000	0.00000	0.00000	36	0.00	0.00	0.00	0.00000	0.00000	0.00000
24	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
	36	0.00	0.00	0.00	0.00000	0.00000	0.00000	37	0.00	0.00	0.00	0.00000	0.00000	0.00000
25	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
	37	0.00	0.00	0.00	0.00000	0.00000	0.00000	38	0.00	0.00	0.00	0.00000	0.00000	0.00000
26	11	0.00	0.00	0.00	0.00000	0.00000	0.00000	46	0.00	0.00	0.00	0.00000	0.00000	0.00000
	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
27	46	0.00	0.00	0.00	0.00000	0.00000	0.00000	47	0.00	0.00	0.00	0.00000	0.00000	0.00000
	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
28	47	0.00	0.00	0.00	0.00000	0.00000	0.00000	48	0.00	0.00	0.00	0.00000	0.00000	0.00000
	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
29	48	0.00	0.00	0.00	0.00000	0.00000	0.00000	49	0.00	0.00	0.00	0.00000	0.00000	0.00000
	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
30	49	0.00	0.00	0.00	0.00000	0.00000	0.00000	50	0.00	0.00	0.00	0.00000	0.00000	0.00000
	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
31	50	0.00	0.00	0.00	0.00000	0.00000	0.00000	12	0.00	0.00	0.00	0.00000	0.00000	0.00000
	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
32	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
	46	0.00	0.00	0.00	0.00000	0.00000	0.00000	47	0.00	0.00	0.00	0.00000	0.00000	0.00000
33	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
	47	0.00	0.00	0.00	0.00000	0.00000	0.00000	48	0.00	0.00	0.00	0.00000	0.00000	0.00000
34	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000
	48	0.00	0.00	0.00	0.00000	0.00000	0.00000	49	0.00	0.00	0.00	0.00000	0.00000	0.00000
35	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
	49	0.00	0.00	0.00	0.00000	0.00000	0.00000	50	0.00	0.00	0.00	0.00000	0.00000	0.00000
36	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
	50	0.00	0.00	0.00	0.00000	0.00000	0.00000	12	0.00	0.00	0.00	0.00000	0.00000	0.00000
37	58	0.00	0.00	0.00	0.00000	0.00000	0.00000	59	0.00	0.00	0.00	0.00000	0.00000	0.00000
	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
38	59	0.00	0.00	0.00	0.00000	0.00000	0.00000	60	0.00	0.00	0.00	0.00000	0.00000	0.00000
	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
39	60	0.00	0.00	0.00	0.00000	0.00000	0.00000	61	0.00	0.00	0.00	0.00000	0.00000	0.00000
	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
40	61	0.00	0.00	0.00	0.00000	0.00000	0.00000	62	0.00	0.00	0.00	0.00000	0.00000	0.00000
	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000
41	62	0.00	0.00	0.00	0.00000	0.00000	0.00000	63	0.00	0.00	0.00	0.00000	0.00000	0.00000
	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
42	63	0.00	0.00	0.00	0.00000	0.00000	0.00000	64	0.00	0.00	0.00	0.00000	0.00000	0.00000
	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
43	65	0.00	0.00	0.00	0.00000	0.00000	0.00000	66	0.00	0.00	0.00	0.00000	0.00000	0.00000
	58	0.00	0.00	0.00	0.00000	0.00000	0.00000	59	0.00	0.00	0.00	0.00000	0.00000	0.00000
44	66	0.00	0.00	0.00	0.00000	0.00000	0.00000	67	0.00	0.00	0.00	0.00000	0.00000	0.00000
	59	0.00	0.00	0.00	0.00000	0.00000	0.00000	60	0.00	0.00	0.00	0.00000	0.00000	0.00000
45	67	0.00	0.00	0.00	0.00000	0.00000	0.00000	68	0.00	0.00	0.00	0.00000	0.00000	0.00000
	60	0.00	0.00	0.00	0.00000	0.00000	0.00000	61	0.00	0.00	0.00	0.00000	0.00000	0.00000
46	68	0.00	0.00	0.00	0.00000	0.00000	0.00000	69	0.00	0.00	0.00	0.00000	0.00000	0.00000
	61	0.00	0.00	0.00	0.00000	0.00000	0.00000	62	0.00	0.00	0.00	0.00000	0.00000	0.00000
47	69	0.00	0.00	0.00	0.00000	0.00000	0.00000	70	0.00	0.00	0.00	0.00000	0.00000	0.00000
	62	0.00	0.00	0.00	0.00000	0.00000	0.00000	63	0.00	0.00	0.00	0.00000	0.00000	0.00000
48	70	0.00	0.00	0.00	0.00000	0.00000	0.00000	71	0.00	0.00	0.00	0.00000	0.00000	0.00000
	63	0.00	0.00	0.00	0.00000	0.00000	0.00000	64	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
49	72	0.00	0.00	0.00	0.00000	0.00000	0.00000	73	0.00	0.00	0.00	0.00000	0.00000	0.00000
	65	0.00	0.00	0.00	0.00000	0.00000	0.00000	66	0.00	0.00	0.00	0.00000	0.00000	0.00000
50	73	0.00	0.00	0.00	0.00000	0.00000	0.00000	74	0.00	0.00	0.00	0.00000	0.00000	0.00000
	66	0.00	0.00	0.00	0.00000	0.00000	0.00000	67	0.00	0.00	0.00	0.00000	0.00000	0.00000
51	74	0.00	0.00	0.00	0.00000	0.00000	0.00000	75	0.00	0.00	0.00	0.00000	0.00000	0.00000
	67	0.00	0.00	0.00	0.00000	0.00000	0.00000	68	0.00	0.00	0.00	0.00000	0.00000	0.00000
52	75	0.00	0.00	0.00	0.00000	0.00000	0.00000	76	0.00	0.00	0.00	0.00000	0.00000	0.00000
	68	0.00	0.00	0.00	0.00000	0.00000	0.00000	69	0.00	0.00	0.00	0.00000	0.00000	0.00000
53	76	0.00	0.00	0.00	0.00000	0.00000	0.00000	77	0.00	0.00	0.00	0.00000	0.00000	0.00000
	69	0.00	0.00	0.00	0.00000	0.00000	0.00000	70	0.00	0.00	0.00	0.00000	0.00000	0.00000
54	77	0.00	0.00	0.00	0.00000	0.00000	0.00000	78	0.00	0.00	0.00	0.00000	0.00000	0.00000
	70	0.00	0.00	0.00	0.00000	0.00000	0.00000	71	0.00	0.00	0.00	0.00000	0.00000	0.00000
55	4	0.00	0.00	0.00	0.00000	0.00000	0.00000	79	0.00	0.00	0.00	0.00000	0.00000	0.00000
	72	0.00	0.00	0.00	0.00000	0.00000	0.00000	73	0.00	0.00	0.00	0.00000	0.00000	0.00000
56	79	0.00	0.00	0.00	0.00000	0.00000	0.00000	80	0.00	0.00	0.00	0.00000	0.00000	0.00000
	73	0.00	0.00	0.00	0.00000	0.00000	0.00000	74	0.00	0.00	0.00	0.00000	0.00000	0.00000
57	80	0.00	0.00	0.00	0.00000	0.00000	0.00000	81	0.00	0.00	0.00	0.00000	0.00000	0.00000
	74	0.00	0.00	0.00	0.00000	0.00000	0.00000	75	0.00	0.00	0.00	0.00000	0.00000	0.00000
58	81	0.00	0.00	0.00	0.00000	0.00000	0.00000	82	0.00	0.00	0.00	0.00000	0.00000	0.00000
	75	0.00	0.00	0.00	0.00000	0.00000	0.00000	76	0.00	0.00	0.00	0.00000	0.00000	0.00000
59	82	0.00	0.00	0.00	0.00000	0.00000	0.00000	83	0.00	0.00	0.00	0.00000	0.00000	0.00000
	76	0.00	0.00	0.00	0.00000	0.00000	0.00000	77	0.00	0.00	0.00	0.00000	0.00000	0.00000
60	83	0.00	0.00	0.00	0.00000	0.00000	0.00000	2	0.00	0.00	0.00	0.00000	0.00000	0.00000
	77	0.00	0.00	0.00	0.00000	0.00000	0.00000	78	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 90: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	3	3.19	0.02	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	5	3.19	-0.02	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	10	3.19	0.02	0.01	0.00	0.00000	0.00000	0.0000	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	12	3.19	-0.02	0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	4	3.19	0.00	0.00	-0.01	0.00000	0.00001	0.0000	12	3.19	0.02	0.00	-0.01	0.00000	0.00001	0.0000
	6	3.19	0.00	0.00	0.01	0.00000	0.00001	0.0000	5	3.19	0.02	0.00	0.01	0.00000	0.00001	0.0000
	3	3.19	-0.01	0.00	-0.02	0.00000	0.00001	0.0000	10	3.19	0.01	0.00	-0.02	0.00000	0.00001	0.0000
	5	3.19	-0.01	0.00	0.02	0.00000	0.00001	0.0000	12	3.19	0.01	0.00	0.02	0.00000	0.00001	0.0000
	10	3.19	-0.02	0.00	-0.01	0.00000	0.00001	0.0000	4	3.19	0.00	0.00	-0.01	0.00000	0.00001	0.0000
	3	3.19	-0.02	0.00	0.01	0.00000	0.00001	0.0000	6	3.19	0.00	0.00	0.01	0.00000	0.00001	0.0000
	6	3.19	-0.01	0.00	0.00	0.00000	0.00001	0.0000	4	3.19	0.01	0.00	0.00	0.00000	0.00001	0.0000
1	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	4	3.19	0.00	0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000

SPOST. Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)

SPOST. Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	0.00	0.00000	0.00000	0.00000	19	0.00	0.00	0.00	0.00000	0.00000	0.00000
	3	0.00	0.00	0.00	0.00000	0.00000	0.00000	13	0.00	0.00	0.00	0.00000	0.00000	0.00000
2	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
	11	0.00	0.00	0.00	0.00000	0.00000	0.00000	46	0.00	0.00	0.00	0.00000	0.00000	0.00000
3	19	0.00	0.00	0.00	0.00000	0.00000	0.00000	20	0.00	0.00	0.00	0.00000	0.00000	0.00000
	13	0.00	0.00	0.00	0.00000	0.00000	0.00000	14	0.00	0.00	0.00	0.00000	0.00000	0.00000
4	20	0.00	0.00	0.00	0.00000	0.00000	0.00000	21	0.00	0.00	0.00	0.00000	0.00000	0.00000
	14	0.00	0.00	0.00	0.00000	0.00000	0.00000	15	0.00	0.00	0.00	0.00000	0.00000	0.00000
5	21	0.00	0.00	0.00	0.00000	0.00000	0.00000	22	0.00	0.00	0.00	0.00000	0.00000	0.00000
	15	0.00	0.00	0.00	0.00000	0.00000	0.00000	16	0.00	0.00	0.00	0.00000	0.00000	0.00000
6	22	0.00	0.00	0.00	0.00000	0.00000	0.00000	23	0.00	0.00	0.00	0.00000	0.00000	0.00000
	16	0.00	0.00	0.00	0.00000	0.00000	0.00000	17	0.00	0.00	0.00	0.00000	0.00000	0.00000
7	23	0.00	0.00	0.00	0.00000	0.00000	0.00000	24	0.00	0.00	0.00	0.00000	0.00000	0.00000
	17	0.00	0.00	0.00	0.00000	0.00000	0.00000	1	0.00	0.00	0.00	0.00000	0.00000	0.00000
8	25	0.00	0.00	0.00	0.00000	0.00000	0.00000	26	0.00	0.00	0.00	0.00000	0.00000	0.00000
	18	0.00	0.00	0.00	0.00000	0.00000	0.00000	19	0.00	0.00	0.00	0.00000	0.00000	0.00000
9	26	0.00	0.00	0.00	0.00000	0.00000	0.00000	27	0.00	0.00	0.00	0.00000	0.00000	0.00000
	19	0.00	0.00	0.00	0.00000	0.00000	0.00000	20	0.00	0.00	0.00	0.00000	0.00000	0.00000
10	27	0.00	0.00	0.00	0.00000	0.00000	0.00000	28	0.00	0.00	0.00	0.00000	0.00000	0.00000
	20	0.00	0.00	0.00	0.00000	0.00000	0.00000	21	0.00	0.00	0.00	0.00000	0.00000	0.00000
11	28	0.00	0.00	0.00	0.00000	0.00000	0.00000	29	0.00	0.00	0.00	0.00000	0.00000	0.00000
	21	0.00	0.00	0.00	0.00000	0.00000	0.00000	22	0.00	0.00	0.00	0.00000	0.00000	0.00000
12	29	0.00	0.00	0.00	0.00000	0.00000	0.00000	30	0.00	0.00	0.00	0.00000	0.00000	0.00000
	22	0.00	0.00	0.00	0.00000	0.00000	0.00000	23	0.00	0.00	0.00	0.00000	0.00000	0.00000
13	30	0.00	0.00	0.00	0.00000	0.00000	0.00000	31	0.00	0.00	0.00	0.00000	0.00000	0.00000
	23	0.00	0.00	0.00	0.00000	0.00000	0.00000	24	0.00	0.00	0.00	0.00000	0.00000	0.00000
14	32	0.00	0.00	0.00	0.00000	0.00000	0.00000	33	0.00	0.00	0.00	0.00000	0.00000	0.00000
	25	0.00	0.00	0.00	0.00000	0.00000	0.00000	26	0.00	0.00	0.00	0.00000	0.00000	0.00000
15	33	0.00	0.00	0.00	0.00000	0.00000	0.00000	34	0.00	0.00	0.00	0.00000	0.00000	0.00000
	26	0.00	0.00	0.00	0.00000	0.00000	0.00000	27	0.00	0.00	0.00	0.00000	0.00000	0.00000
16	34	0.00	0.00	0.00	0.00000	0.00000	0.00000	35	0.00	0.00	0.00	0.00000	0.00000	0.00000
	27	0.00	0.00	0.00	0.00000	0.00000	0.00000	28	0.00	0.00	0.00	0.00000	0.00000	0.00000
17	35	0.00	0.00	0.00	0.00000	0.00000	0.00000	36	0.00	0.00	0.00	0.00000	0.00000	0.00000
	28	0.00	0.00	0.00	0.00000	0.00000	0.00000	29	0.00	0.00	0.00	0.00000	0.00000	0.00000
18	36	0.00	0.00	0.00	0.00000	0.00000	0.00000	37	0.00	0.00	0.00	0.00000	0.00000	0.00000
	29	0.00	0.00	0.00	0.00000	0.00000	0.00000	30	0.00	0.00	0.00	0.00000	0.00000	0.00000
19	37	0.00	0.00	0.00	0.00000	0.00000	0.00000	38	0.00	0.00	0.00	0.00000	0.00000	0.00000
	30	0.00	0.00	0.00	0.00000	0.00000	0.00000	31	0.00	0.00	0.00	0.00000	0.00000	0.00000
20	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
	32	0.00	0.00	0.00	0.00000	0.00000	0.00000	33	0.00	0.00	0.00	0.00000	0.00000	0.00000
21	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
	33	0.00	0.00	0.00	0.00000	0.00000	0.00000	34	0.00	0.00	0.00	0.00000	0.00000	0.00000
22	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
	34	0.00	0.00	0.00	0.00000	0.00000	0.00000	35	0.00	0.00	0.00	0.00000	0.00000	0.00000
23	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
	35	0.00	0.00	0.00	0.00000	0.00000	0.00000	36	0.00	0.00	0.00	0.00000	0.00000	0.00000
24	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
	36	0.00	0.00	0.00	0.00000	0.00000	0.00000	37	0.00	0.00	0.00	0.00000	0.00000	0.00000
25	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
	37	0.00	0.00	0.00	0.00000	0.00000	0.00000	38	0.00	0.00	0.00	0.00000	0.00000	0.00000
26	11	0.00	0.00	0.00	0.00000	0.00000	0.00000	46	0.00	0.00	0.00	0.00000	0.00000	0.00000
	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
27	46	0.00	0.00	0.00	0.00000	0.00000	0.00000	47	0.00	0.00	0.00	0.00000	0.00000	0.00000
	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
28	47	0.00	0.00	0.00	0.00000	0.00000	0.00000	48	0.00	0.00	0.00	0.00000	0.00000	0.00000
	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
29	48	0.00	0.00	0.00	0.00000	0.00000	0.00000	49	0.00	0.00	0.00	0.00000	0.00000	0.00000
	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
30	49	0.00	0.00	0.00	0.00000	0.00000	0.00000	50	0.00	0.00	0.00	0.00000	0.00000	0.00000
	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
31	50	0.00	0.00	0.00	0.00000	0.00000	0.00000	12	0.00	0.00	0.00	0.00000	0.00000	0.00000
	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
32	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
	46	0.00	0.00	0.00	0.00000	0.00000	0.00000	47	0.00	0.00	0.00	0.00000	0.00000	0.00000
33	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
	47	0.00	0.00	0.00	0.00000	0.00000	0.00000	48	0.00	0.00	0.00	0.00000	0.00000	0.00000
34	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000
	48	0.00	0.00	0.00	0.00000	0.00000	0.00000	49	0.00	0.00	0.00	0.00000	0.00000	0.00000
35	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
	49	0.00	0.00	0.00	0.00000	0.00000	0.00000	50	0.00	0.00	0.00	0.00000	0.00000	0.00000
36	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
	50	0.00	0.00	0.00	0.00000	0.00000	0.00000	12	0.00	0.00	0.00	0.00000	0.00000	0.00000
37	58	0.00	0.00	0.00	0.00000	0.00000	0.00000	59	0.00	0.00	0.00	0.00000	0.00000	0.00000
	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
38	59	0.00	0.00	0.00	0.00000	0.00000	0.00000	60	0.00	0.00	0.00	0.00000	0.00000	0.00000
	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
39	60	0.00	0.00	0.00	0.00000	0.00000	0.00000	61	0.00	0.00	0.00	0.00000	0.00000	0.00000
	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
40	61	0.00	0.00	0.00	0.00000	0.00000	0.00000	62	0.00	0.00	0.00	0.00000	0.00000	0.00000
	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
41	62	0.00	0.00	0.00	0.00000	0.00000	0.00000	63	0.00	0.00	0.00	0.00000	0.00000	0.00000
	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
42	63	0.00	0.00	0.00	0.00000	0.00000	0.00000	64	0.00	0.00	0.00	0.00000	0.00000	0.00000
	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
43	65	0.00	0.00	0.00	0.00000	0.00000	0.00000	66	0.00	0.00	0.00	0.00000	0.00000	0.00000
	58	0.00	0.00	0.00	0.00000	0.00000	0.00000	59	0.00	0.00	0.00	0.00000	0.00000	0.00000
44	66	0.00	0.00	0.00	0.00000	0.00000	0.00000	67	0.00	0.00	0.00	0.00000	0.00000	0.00000
	59	0.00	0.00	0.00	0.00000	0.00000	0.00000	60	0.00	0.00	0.00	0.00000	0.00000	0.00000
45	67	0.00	0.00	0.00	0.00000	0.00000	0.00000	68	0.00	0.00	0.00	0.00000	0.00000	0.00000
	60	0.00	0.00	0.00	0.00000	0.00000	0.00000	61	0.00	0.00	0.00	0.00000	0.00000	0.00000
46	68	0.00	0.00	0.00	0.00000	0.00000	0.00000	69	0.00	0.00	0.00	0.00000	0.00000	0.00000
	61	0.00	0.00	0.00	0.00000	0.00000	0.00000	62	0.00	0.00	0.00	0.00000	0.00000	0.00000
47	69	0.00	0.00	0.00	0.00000	0.00000	0.00000	70	0.00	0.00	0.00	0.00000	0.00000	0.00000
	62	0.00	0.00	0.00	0.00000	0.00000	0.00000	63	0.00	0.00	0.00	0.00000	0.00000	0.00000
48	70	0.00	0.00	0.00	0.00000	0.00000	0.00000	71	0.00	0.00	0.00	0.00000	0.00000	0.00000
	63	0.00	0.00	0.00	0.00000	0.00000	0.00000	64	0.00	0.00	0.00	0.00000	0.00000	0.00000
49	72	0.00	0.00	0.00	0.00000	0.00000	0.00000	73	0.00	0.00	0.00	0.00000	0.00000	0.00000
	65	0.00	0.00	0.00	0.00000	0.00000	0.00000	66	0.00	0.00	0.00	0.00000	0.00000	0.00000
50	73	0.00	0.00	0.00	0.00000	0.00000	0.00000	74	0.00	0.00	0.00	0.00000	0.00000	0.00000
	66	0.00	0.00	0.00	0.00000	0.00000	0.00000	67	0.00	0.00	0.00	0.00000	0.00000	0.00000
51	74	0.00	0.00	0.00	0.00000	0.00000	0.00000	75	0.00	0.00	0.00	0.00000	0.00000	0.00000
	67	0.00	0.00	0.00	0.00000	0.00000	0.00000	68	0.00	0.00	0.00	0.00000	0.00000	0.00000
52	75	0.00	0.00	0.00	0.00000	0.00000	0.00000	76	0.00	0.00	0.00	0.00000	0.00000	0.00000
	68	0.00	0.00	0.00	0.00000	0.00000	0.00000	69	0.00	0.00	0.00	0.00000	0.00000	0.00000
53	76	0.00	0.00	0.00	0.00000	0.00000	0.00000	77	0.00	0.00	0.00	0.00000	0.00000	0.00000
	69	0.00	0.00	0.00	0.00000	0.00000	0.00000	70	0.00	0.00	0.00	0.00000	0.00000	0.00000
54	77	0.00	0.00	0.00	0.00000	0.00000	0.00000	78	0.00	0.00	0.00	0.00000	0.00000	0.00000
	70	0.00	0.00	0.00	0.00000	0.00000	0.00000	71	0.00	0.00	0.00	0.00000	0.00000	0.00000
55	4	0.00	0.00	0.00	0.00000	0.00000	0.00000	79	0.00	0.00	0.00	0.00000	0.00000	0.00000
	72	0.00	0.00	0.00	0.00000	0.00000	0.00000	73	0.00	0.00	0.00	0.00000	0.00000	0.00000
56	79	0.00	0.00	0.00	0.00000	0.00000	0.00000	80	0.00	0.00	0.00	0.00000	0.00000	0.00000
	73	0.00	0.00	0.00	0.00000	0.00000	0.00000	74	0.00	0.00	0.00	0.00000	0.00000	0.00000
57	80	0.00	0.00	0.00	0.00000	0.00000	0.00000	81	0.00	0.00	0.00	0.00000	0.00000	0.00000
	74	0.00	0.00	0.00	0.00000	0.00000	0.00000	75	0.00	0.00	0.00	0.00000	0.00000	0.00000
58	81	0.00	0.00	0.00	0.00000	0.00000	0.00000	82	0.00	0.00	0.00	0.00000	0.00000	0.00000
	75	0.00	0.00	0.00	0.00000	0.00000	0.00000	76	0.00	0.00	0.00	0.00000	0.00000	0.00000
59	82	0.00	0.00	0.00	0.00000	0.00000	0.00000	83	0.00	0.00	0.00	0.00000	0.00000	0.00000
	76	0.00	0.00	0.00	0.00000	0.00000	0.00000	77	0.00	0.00	0.00	0.00000	0.00000	0.00000
60	83	0.00	0.00	0.00	0.00000	0.00000	0.00000	2	0.00	0.00	0.00	0.00000	0.00000	0.00000
	77	0.00	0.00	0.00	0.00000	0.00000	0.00000	78	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOSTAMENTI SISMICI RELATIVI

IDENTIFICATIVO					INVILUPPO S.L.D.				INVILUPPO S.L.O.				
Filo N.ro	Quota inf. (m)	Quota sup. (m)	Nodo inf. N.ro	Nodo sup. N.ro	Sisma Nro	Combin Nro	Spostam. Calcolo (mm)	Spostam. Limite (mm)	Sisma Nro	Combin Nro	Spostam. Calcolo (mm)	Spostam. Limite (mm)	Stringa di Controllo Verifica
3	0.00	3.19	1	5	2	28	0.454	15.950					VERIFICATO
4	0.00	3.19	11	9	2	27	0.389	15.950					VERIFICATO
5	0.00	3.19	2	6	2	22	0.454	15.950					VERIFICATO
6	0.00	3.19	12	10	2	22	0.389	15.950					VERIFICATO
10	0.00	3.19	3	7	2	25	0.454	15.950					VERIFICATO
12	0.00	3.19	4	8	2	27	0.454	15.950					VERIFICATO

BARICENTRI MASSE E RIGIDEZZE

IDENTIFICATORE		BARICENTRI MASSE E RIGIDEZZE							RIGIDEZZE FLESSIONALI E TORSIONAALI					
PIANO N.ro	QUOTA (m)	PESO (kN)	XG (m)	YG (m)	XR (m)	YR (m)	DX (m)	DY (m)	Lpianta (m)	Bpianta (m)	Rig.FleX (kN/m)	Rig.FleY (kN/m)	RigTors. (kN*m)	r / ls
1	3.19	178.8	3.10	1.95	3.10	1.95	0.00	0.00	3.90	6.20	54552	33127	485498	1.41

VARIAZIONI MASSE E RIGIDEZZE DI PIANO

				DIREZIONE X					DIREZIONE Y				
Piano N.ro	Quota (m)	Peso (kN)	Variaz. (%)	Tagliante (kN)	Spost. (mm)	Klat. (kN/m)	Variaz (%)	Teta	Tagliante (kN)	Spost. (mm)	Klat. (kN/m)	Variaz (%)	Teta
1	3.19	178.8	0.0	10.9	0.20	54552	0.0	0.013	10.4	0.31	33127	0.0	0.017

PERCENTUALI RIGIDEZZE PILASTRI E SETTI

	RAPPORTO DELLE RIGIDEZZE IN DIREZIONE X			RAPPORTO DELLE RIGIDEZZE IN DIREZIONE Y		
Piano N.r	RigidezzaPilastri / Rig.Pil+Rig.Setti	Rigidezza Setti / Rig.Pil+Rig.Setti	Rigid.Elem.Second / Rig.Pil+Rig.Setti	RigidezzaPilastri / Rig.Pil+Rig.Setti	Rigidezza Setti / Rig.Pil+Rig.Setti	Rigid.Elem.Second / Rig.Pil+Rig.Setti
1	1.00	0.00	0.00	1.00	0.00	0.00

REGOLARITA' STRUTTURALE

PIANO N.ro	QUOTA (m)	Res X kN	Res Y kN	SISMA 1 Dom X kN	SISMA 1 Dom Y kN	SISMA 1 Res/Dom	SISMA 1 Var.R/D	SISMA 2 Dom X kN	SISMA 2 Dom Y kN	SISMA 2 Res/Dom	SISMA 2 Var.R/D	Flag Verifica
1	3.19	264.1	187.4	10.9	0.0	24.30	0.00	0.0	10.4	18.02	0.00	VERIF

STAMPA PROGETTO S.L.U. - AZIONI S.L.V. - ELEVAZIONE

Filo Iniz Fin. Ctgθ	Quota Iniz. Final AmpC	Tra	Sez Bas t Alt	Conc	VERIFICA A PRESSO-FLESSIONE Comb	M Exd kN*m)	N Ed (kN)	Moltip Ultimo	x/d	εf% 100	εc% 100	Area cmq sup	Area cmq inf	VERIFICA A TAGLIO E TORSIONE Comb	V Exd (kN)	V Eyd (kN)	T Sdu kN*m)	V Rxd (kN)	V Ryd (kN)	TRd kN*m)	TRld kN*m)	Coe Cls	Coe Sta	ALon cmq	Staffe Pas	Lun	Fi
4	3.19	1	1	5	-19.9	9.9	2.1	23	100	31	6.0	6.0	5	-0.1	24.8	0.0	294.6	257.4	34.0	0.0	10	4	0.0	4	24	10
12	3.19	49	3	5	8.4	9.9	4.9	23	100	31	6.0	6.0	5	-0.1	22.1	0.0	294.6	257.4	34.0	0.0	9	9	0.0	10	262	10
2.5	1.00	24	5	3	-16.9	-9.9	2.5	24	100	31	6.0	6.0	3	-0.1	-21.9	0.0	294.6	257.4	34.0	0.0	9	3	0.0	4	24	10
6	3.19	1	1	5	-19.9	9.9	2.1	23	100	31	6.0	6.0	5	0.1	24.8	0.0	294.6	257.4	34.0	0.0	10	4	0.0	4	24	10
5	3.19	49	3	5	8.4	9.9	4.9	23	100	31	6.0	6.0	5	0.1	22.1	0.0	294.6	257.4	34.0	0.0	9	9	0.0	10	262	10
2.5	1.00	24	5	3	-16.9	-9.9	2.5	24	100	31	6.0	6.0	3	0.1	-21.9	0.0	294.6	257.4	34.0	0.0	9	3	0.0	4	24	10
3	3.19	4	1	3	-22.1	-8.2	2.5	25	100	33	8.0	8.0	1	0.0	38.6	0.0	355.2	304.6	42.0	0.0	13	6	0.0	4	24	10
10	3.19	58	3	5	21.5	8.2	2.5	24	100	32	8.0	8.0	1	0.0	33.7	0.0	723.8	256.8	96.9	0.0	11	13	0.0	10	342	10
2.5	1.00	24	5	3	-22.1	-8.2	2.5	25	100	33	8.0	8.0	1	0.0	-38.6	0.0	355.2	304.6	42.0	0.0	13	6	0.0	4	24	10
5	3.19	4	1	2	-20.3	-1.4	2.7	25	100	33	8.0	8.0	1	0.0	38.6	0.0	355.2	304.6	42.0	0.0	13	6	0.0	4	24	10
12	3.19	58	3	4	19.6	1.4	2.8	25	100	33	8.0	8.0	1	0.0	33.7	0.0	723.8	256.8	96.9	0.0	11	13	0.0	10	342	10
2.5	1.00	24	5	2	-20.3	-1.4	2.7	25	100	33	8.0	8.0	1	0.0	-38.6	0.0	355.2	304.6	42.0	0.0	13	6	0.0	4	24	10
10	3.19	1	1	3	-16.9	-15.3	2.6	24	100	32	6.0	6.0	3	0.1	20.7	0.0	294.6	257.4	34.0	0.0	8	3	0.0	4	24	10
4	3.19	49	3	5	9.6	15.3	4.3	23	100	30	6.0	6.0	5	0.1	-20.9	0.0	600.2	256.8	78.5	0.0	8	8	0.0	10	262	10
2.5	1.00	24	5	5	-16.4	15.3	2.5	23	100	30	6.0	6.0	5	0.1	-23.7	0.0	294.6	257.4	34.0	0.0	9	4	0.0	4	24	10
3	3.19	1	1	3	-16.9	-15.3	2.6	24	100	32	6.0	6.0	3	-0.1	20.7	0.0	294.6	257.4	34.0	0.0	8	3	0.0	4	24	10
6	3.19	49	3	5	9.6	15.3	4.3	23	100	30	6.0	6.0	5	-0.1	-20.9	0.0	600.2	256.8	78.5	0.0	8	8	0.0	10	262	10
2.5	1.00	24	5	5	-16.4	15.3	2.5	23	100	30	6.0	6.0	5	-0.1	-23.7	0.0	294.6	257.4	34.0	0.0	9	4	0.0	4	24	10
6	3.19	4	1	2	-28.5	-13.7	2.0	25	100	33	8.0	8.0	1	0.0	52.4	0.0	356.6	305.8	42.0	0.0	17	8	0.0	4	24	10
4	3.19	58	3	4	26.8	-6.0	2.1	25	100	33	8.0	8.0	1	0.0	45.8	0.0	723.8	256.8	96.9	0.0	15	18	0.0	10	342	10
2.5	1.00	24	5	2	-28.5	-13.7	2.0	25	100	33	8.0	8.0	1	0.0	-52.4	0.0	356.6	305.8	42.0	0.0	17	8	0.0	4	24	10

STAMPA PROGETTO S.L.U. - AZIONI S.L.V. - PILASTRI

Filo Iniz Fin. Ctgθ	Quota Iniz. Final N/Nc	Tra	Sez Bas t Alt	Conc	VERIFICA A PRESSO-FLESSIONE Comb	M Exd kN*m)	M Eyd kN*m)	N Ed (kN)	Molt Ult.	εf% 100	εc	Area cmq b	Area cmq h	VERIFICA A TAGLIO E TORSIONE Comb	V Exd (kN)	V Eyd (kN)	T Sdu kN*m)	V Rxd (kN)	V Ryd (kN)	TRd kN*m)	TRld kN*m)	Coe Cls	Coe Sta	ALon cmq	staffe Pas	Lun	Fi
3	0.00	2	1	3	37.0	-28.0	-70.6	2.0	51	35	6.0	6.0	3	15.3	16.4	0.0	282.3	297.4	37.7	0.0	11	5	0.0	12	70	10
3	3.19	30	3	5	-20.4	14.4	-54.6	3.8	52	35	6.0	6.0	3	15.3	16.4	0.0	282.3	297.4	37.7	0.0	11	9	0.0	19	204	10
2.5	0.02	40	5	3	-15.2	20.9	-58.2	3.2	58	35	6.0	6.0	3	15.3	16.4	0.0	282.3	297.4	37.7	0.0	11	5	0.0	12	45	10
5	0.00	2	1	3	-19.7	-11.7	-71.8	4.3	51	35	6.0	6.0	3	9.5	-11.0	0.0	282.5	297.7	37.7	0.0	7	3	0.0	12	70	10
5	3.19	30	3	4	3.8	8.7	-57.4	8.4	65	35	6.0	6.0	3	9.5	-11.0	0.0	282.5	297.7	37.7	0.0	7	5	0.0	19	204	10
2.5	0.02	40	5	3	15.2	18.4	-59.3	3.6	56	35	6.0	6.0	3	9.5	-11.0	0.0	282.5	297.7	37.7	0.0	7	3	0.0	12	45	10
10	0.00	2	1	3	37.0	28.0	-70.6	2.0	51	35	6.0	6.0	3	-15.3	16.4	0.0	282.4	297.5	37.7	0.0	11	5	0.0	12	70	10
10	3.19	30	3	5	-20.4	-14.4	-54.6	3.8	52	35	6.0	6.0	3	-15.3	16.4	0.0	282.4	297.5	37.7	0.0	11	9	0.0	19	204	10
2.5	0.02	40	5	3	-15.2	-20.9	-58.2	3.2	58	35	6.0	6.0	3	-15.3	16.4	0.0	282.4	297.5	37.7	0.0	11	5	0.0	12	45	10
12	0.00	2	1	3	-19.7	11.7	-71.8	4.3	51	35	6.0	6.0	3	-9.5	-11.0	0.0	282.6	297.8	37.7	0.0	7	3	0.0	12	70	10
12	3.19	30	3	4	3.8	-8.7	-57.4	8.4	65	35	6.0	6.0	3	-9.5	-11.0	0.0	282.6	297.8	37.7	0.0	7	5	0.0	19	204	10
2.5	0.02	40	5	3	15.2	-18.4	-59.3	3.6	56	35	6.0	6.0	3	-9.5	-11.0	0.0	282.6	297.8	37.7	0.0	7	3	0.0	12	45	10
6	0.00	2	1	3	-13.7	-25.4	-86.6	2.9	60	35	6.0	6.0	3	15.8	-5.4	0.0	285.6	300.9	37.7	0.0	7	6	0.0	12	64	10
6	3.19	30	3	5	3.4	14.2	-103.5	5.6	68	35	6.0	6.0	3	15.8	-5.4	0.0	178.6	250.8	45.8	0.0	7	9	0.0	19	210	10
2.5	0.03	40	5	3	3.5	25.2	-74.1	3.1	81	35	6.0	6.0	3	15.8	-5.4	0.0	285.6	300.9	37.7	0.0	7	6	0.0	12	45	10
4	0.00	2	1	3	-13.7	25.4	-86.6	2.9	60	35	6.0	6.0	3	-15.8	-5.4	0.0	285.7	301.0	37.7	0.0	7	6	0.0	12	64	10
4	3.19	30	3	5	3.4	-14.2	-103.5	5.6	68	35	6.0	6.0	3	-15.8	-5.4	0.0	178.6	250.8	45.8	0.0	7	9	0.0	19	210	10
2.5	0.03	40	5	3	3.5	-25.2	-74.1	3.1	81	35	6.0	6.0	3	-15.8	-5.4	0.0	285.7	301.0	37.7	0.0	7	6	0.0	12	45	10

STAMPA PROGETTO S.L.U. - AZIONI S.L.V. - FATTORI DI STRUTTURA DEGLI ELEMENTI

IDENTIFICATIVO Asta 3D	Nodo In.	Nodo Fin.	Filo Iniz	Filo Fin.	QuoIn (m)	QuoFi (m)	DIREZIONE X Fattore 'q' Tagl.	DIREZIONE X Fattore 'q' Fless	DIREZIONE Y Fattore 'q' Tagl.	DIREZIONE Y Fattore 'q' Fless.
1	3	13	10	3	0.00	0.00	3.30	3.30	3.30	3.30
3	5	1	3	3	0.00	3.19	3.30	3.30	3.30	3.30
5	7	3	10	10	0.00	3.19	3.30	3.30	3.30	3.30
7	9	8	4	12	3.19	3.19	3.30	3.30	3.30	3.30
9	5	7	3	10	3.19	3.19	3.30	3.30	3.30	3.30
11	7	9	10	4	3.19	3.19	3.30	3.30	3.30	3.30
13	10	9	6	4	3.19	3.19	3.30	3.30	3.30	3.30
15	11	51	4	12	0.00	0.00	3.30	3.30	3.30	3.30
17	12	57	6	5	0.00	0.00	3.30	3.30	3.30	3.30
19	9	11	4	4	0.00	3.19	3.30	3.30	3.30	3.30
21	13	14	10	3	0.00	0.00	3.30	3.30	3.30	3.30
23	15	16	10	3	0.00	0.00	3.30	3.30	3.30	3.30

IDENTIFICATIVO Asta 3D	Nodo In.	Nodo Fin.	Filo Iniz	Filo Fin.	QuoIn (m)	QuoFi (m)	DIREZIONE X Fattore 'q' Tagl.	DIREZIONE X Fattore 'q' Fless	DIREZIONE Y Fattore 'q' Tagl.	DIREZIONE Y Fattore 'q' Fless.
2	2	83	5	12	0.00	0.00	3.30	3.30	3.30	3.30
4	6	2	5	5	0.00	3.19	3.30	3.30	3.30	3.30
6	8	4	12	12	0.00	3.19	3.30	3.30	3.30	3.30
8	10	6	6	5	3.19	3.19	3.30	3.30	3.30	3.30
10	6	8	5	12	3.19	3.19	3.30	3.30	3.30	3.30
12	5	10	3	6	3.19	3.19	3.30	3.30	3.30	3.30
14	3	18	10	4	0.00	0.00	3.30	3.30	3.30	3.30
16	1	24	3	6	0.00	0.00	3.30	3.30	3.30	3.30
18	10	12	6	6	0.00	3.19	3.30	3.30	3.30	3.30
20	12	50	6	4	0.00	0.00	3.30	3.30	3.30	3.30
22	14	15	10	3	0.00	0.00	3.30	3.30	3.30	3.30
24	16	17	10	3	0.00	0.00	3.30	3.30	3.30	3.30

STAMPA PROGETTO S.L.U. - AZIONI S.L.V. - FATTORI DI STRUTTURA DEGLI ELEMENTI

IDENTIFICATIVO							DIREZIONE X		DIREZIONE Y	
Asta 3D	Nodo In.	Nodo Fin.	Filo Iniz	Filo Fin.	QuoIn (m)	QuoFi (m)	Fattore 'q' Tagl.	Fless	Fattore 'q' Tagl.	Fless.
25	17	1	10	3	0.00	0.00	3.30	3.30	3.30	3.30
27	82	81	5	12	0.00	0.00	3.30	3.30	3.30	3.30
29	80	79	5	12	0.00	0.00	3.30	3.30	3.30	3.30
31	18	25	10	4	0.00	0.00	3.30	3.30	3.30	3.30
33	32	39	10	4	0.00	0.00	3.30	3.30	3.30	3.30
35	51	58	4	12	0.00	0.00	3.30	3.30	3.30	3.30
37	65	72	4	12	0.00	0.00	3.30	3.30	3.30	3.30
39	24	31	3	6	0.00	0.00	3.30	3.30	3.30	3.30
41	38	45	3	6	0.00	0.00	3.30	3.30	3.30	3.30
43	57	64	6	5	0.00	0.00	3.30	3.30	3.30	3.30
45	71	78	6	5	0.00	0.00	3.30	3.30	3.30	3.30
47	50	49	6	4	0.00	0.00	3.30	3.30	3.30	3.30
49	48	47	6	4	0.00	0.00	3.30	3.30	3.30	3.30
51	46	11	6	4	0.00	0.00	3.30	3.30	3.30	3.30
26	83	82	5	12	0.00	0.00	3.30	3.30	3.30	3.30
28	81	80	5	12	0.00	0.00	3.30	3.30	3.30	3.30
30	79	4	5	12	0.00	0.00	3.30	3.30	3.30	3.30
32	25	32	10	4	0.00	0.00	3.30	3.30	3.30	3.30
34	39	11	10	4	0.00	0.00	3.30	3.30	3.30	3.30
36	58	65	4	12	0.00	0.00	3.30	3.30	3.30	3.30
38	72	4	4	12	0.00	0.00	3.30	3.30	3.30	3.30
40	31	38	3	6	0.00	0.00	3.30	3.30	3.30	3.30
42	45	12	3	6	0.00	0.00	3.30	3.30	3.30	3.30
44	64	71	6	5	0.00	0.00	3.30	3.30	3.30	3.30
46	78	2	6	5	0.00	0.00	3.30	3.30	3.30	3.30
48	49	48	6	4	0.00	0.00	3.30	3.30	3.30	3.30
50	47	46	6	4	0.00	0.00	3.30	3.30	3.30	3.30

STAMPA VERIFICHE S.L.E. ELEVAZIONE

			FESSURAZIONE							FRECCE		TENSIONI						
Filo In fi	Quota In Fi	Tratto	Combi Caric	Fessu.mm lim	cal	dist mm	Con cio	Com bin	Mf X kN*m)	Mf Y kN*m)	N (kN)	Frecce mm limite calc	Com bin	Combinaz Carico	σ lim. N/mmq	σ cal. N/mmq	Co nc	Comb	Mf X kN*m)	Mf Y kN*m)	N (kN)
4	3.19		Rara											Rara cls	19.20	6.89	1	5	-14.1	-0.1	6.6
12	3.19		Freq	0.4	0.000	0	1	3	-10.9	-0.1	3.3			Rara fer	360.0	142.4	1	5	-14.1	-0.1	6.6
			Perm	0.3	0.000	0	1	1	-7.8	-0.1	0.0			Perm cls	14.40	3.84	1	1	-7.8	-0.1	0.0
6	3.19		Rara											Rara cls	19.20	6.89	1	5	-14.1	0.1	6.6
5	3.19		Freq	0.4	0.000	0	1	3	-10.9	0.1	3.3			Rara fer	360.0	142.4	1	5	-14.1	0.1	6.6
			Perm	0.3	0.000	0	1	1	-7.8	0.1	0.0			Perm cls	14.40	3.84	1	1	-7.8	0.1	0.0
3	3.19		Rara											Rara cls	19.20	6.24	1	3	-16.0	0.0	-5.5
10	3.19		Freq	0.4	0.000	0	1	2	-14.6	0.0	-2.7			Rara fer	360.0	117.6	3	5	15.5	0.0	5.5
			Perm	0.3	0.000	0	1	1	-13.2	0.0	0.0			Perm cls	14.40	5.19	1	1	-13.2	0.0	0.0
5	3.19		Rara											Rara cls	19.20	5.81	1	2	-14.8	0.0	-0.9
12	3.19		Freq	0.4	0.000	0	1	2	-13.8	0.0	-0.8			Rara fer	360.0	107.8	1	2	-14.8	0.0	-0.9
			Perm	0.3	0.000	0	1	1	-13.2	0.0	0.0			Perm cls	14.40	5.19	1	1	-13.2	0.0	0.0
10	3.19		Rara											Rara cls	19.20	5.79	5	5	-11.7	-0.1	10.2
4	3.19		Freq	0.4	0.000	0	5	3	-9.8	-0.1	5.1			Rara fer	360.0	122.6	5	5	-11.7	-0.1	10.2
			Perm	0.3	0.000	0	5	1	-7.8	-0.1	0.0			Perm cls	14.40	3.84	5	1	-7.8	-0.1	0.0
3	3.19		Rara											Rara cls	19.20	5.79	5	5	-11.7	0.1	10.2
6	3.19		Freq	0.4	0.000	0	5	3	-9.8	0.1	5.1			Rara fer	360.0	122.6	5	5	-11.7	0.1	10.2
			Perm	0.3	0.000	0	5	1	-7.8	0.1	0.0			Perm cls	14.40	3.84	5	1	-7.8	0.1	0.0
6	3.19		Rara											Rara cls	19.20	7.98	1	2	-20.7	0.0	-9.8
4	3.19		Freq	0.4	0.000	0	1	2	-19.2	0.0	-8.8			Rara fer	360.0	145.0	1	2	-20.7	0.0	-9.8
			Perm	0.3	0.000	0	1	1	-18.0	0.0	-6.7			Perm cls	14.40	7.00	1	1	-18.0	0.0	-6.7

STAMPA VERIFICHE S.L.E. PILASTRI

			FESSURAZIONE							FRECCE		TENSIONI						
Filo In fi	Quota In Fi	Tratto	Combi Caric	Fessu.mm lim	cal	dist mm	Con cio	Com bin	Mf X kN*m)	Mf Y kN*m)	N (kN)	Frecce mm limite calc	Com bin	Combinaz Carico	σ lim. N/mmq	σ cal. N/mmq	Co nc	Comb	Mf X kN*m)	Mf Y kN*m)	N (kN)
3	0.00		Rara											Rara cls	19.20	13.11	5	3	24.6	-19.1	-52.1
3	3.19		Freq	0.4	0.000	0	5	2	11.9	-11.7	-50.2			Rara fer	360.0	146.3	5	3	24.6	-19.1	-52.1
			Perm	0.3	0.000	0	1	1	-3.0	12.2	-38.8			Perm cls	14.40	4.94	1	1	-3.0	12.2	-38.8
5	0.00		Rara											Rara cls	19.20	7.47	1	3	10.5	13.5	-43.3
5	3.19		Freq	0.4	0.000	0	1	2	6.7	12.9	-41.0			Rara fer	360.0	76.8	1	3	10.5	13.5	-43.3
			Perm	0.3	0.000	0	1	1	3.0	12.2	-38.8			Perm cls	14.40	4.94	1	1	3.0	12.2	-38.8
10	0.00		Rara											Rara cls	19.20	13.11	5	3	24.6	19.1	-52.1
10	3.19		Freq	0.4	0.000	0	5	2	11.9	11.7	-50.2			Rara fer	360.0	146.3	5	3	24.6	19.1	-52.1
			Perm	0.3	0.000	0	1	1	-3.0	-12.2	-38.8			Perm cls	14.40	4.94	1	1	-3.0	-12.2	-38.8
12	0.00		Rara											Rara cls	19.20	7.47	1	3	10.5	-13.5	-43.3
12	3.19		Freq	0.4	0.000	0	1	2	6.7	-12.9	-41.0			Rara fer	360.0	76.8	1	3	10.5	-13.5	-43.3
			Perm	0.3	0.000	0	1	1	3.0	-12.2	-38.8			Perm cls	14.40	4.94	1	1	3.0	-12.2	-38.8
6	0.00		Rara											Rara cls	19.20	8.22	5	3	-9.1	-17.5	-65.1
6	3.19		Freq	0.4	0.000	0	1	2	1.2	17.0	-59.6			Rara fer	360.0	83.4	5	3	-9.1	-17.5	-65.1
			Perm	0.3	0.000	0	1	1	0.0	15.8	-63.7			Perm cls	14.40	5.14	1	1	0.0	15.8	-63.7
4	0.00		Rara											Rara cls	19.20	8.22	5	3	-9.1	17.5	-65.1
4	3.19		Freq	0.4	0.000	0	1	2	1.2	-17.0	-59.6			Rara fer	360.0	83.4	5	3	-9.1	17.5	-65.1
			Perm	0.3	0.000	0	1	1	0.0	-15.8	-63.7			Perm cls	14.40	5.14	1	1	0.0	-15.8	-63.7

S.L.U. - AZIONI S.L.V. -VERIFICA PIASTRE - QUOTA: 0 ELEMENTO: 1

Quo N.r	P. Nr	Nod3d N.ro	Nx N/m	Ny N/m	Txy N/m	Mx N*m /m	My N*m /m	Mxy N*m /m	Molt Direz. X	x/d Direz. X	Molt Direz. Y	x/d Direz. Y	Ax s	Ay s	Ax i	Ay i	Atag	σt N/mmq	eta mm	Fpunz. N	FpnzLi N	Apunz cmq
													--------		cmq	/m-------						
0	1	1	1238218	1203195	1065681	44937	44500	11875	1.5	0.2	1.5	0.25	40.8	40.8	40.8	40.8	13.6		-.12	-4411	105411	0.0
0	1	3	1238218	1203194	1065681	44937	44500	-11875	1.5	0.2	1.5	0.25	40.8	40.8	40.8	40.8	13.6		-.12	-4411	105411	0.0

S.L.U. - AZIONI S.L.V. -VERIFICA PIASTRE - QUOTA: 0 ELEMENTO: 1

Quo N.r	P. Nr	Nod3d N.ro	Nx N/m	Ny N/m	Txy N/m	Mx N*m /m	My N*m /m	Mxy N*m /m	Molt Direz. X	x/d	Molt Direz. Y	x/d	Ax s	Ay s	Ax i	Ay i	Atag	σt N/mmq	eta mm	Fpunz. N	FpnzLi N	Apunz cmq
													-------- cmq /m--------									
0	1	13	501198	1003721	576808	27564	36029	-6405	2.2	0.3	1.4	0.24	30.8	30.8	30.8	30.8	7.4		-.10			
0	1	14	462553	932295	203823	19374	30190	-2188	2.8	0.2	1.6	0.23	30.8	30.8	30.8	30.8	2.6		-.09			
0	1	16	462553	932295	203823	19374	30190	2188	2.8	0.2	1.6	0.23	30.8	30.8	30.8	30.8	2.6		-.09			
0	1	17	501198	1003721	576808	27564	36029	6405	2.2	0.3	1.4	0.24	30.8	30.8	30.8	30.8	7.4		-.10			
0	1	18	1050034	485015	596629	36215	29605	-5371	1.3	0.2	2.2	0.27	30.8	30.8	30.8	30.8	7.6		-.10			
0	1	19	591903	572721	403600	25557	26971	-2584	2.1	0.2	2.1	0.25	30.8	30.8	30.8	30.8	5.2		-.12			
0	1	23	591903	572721	403600	25557	26971	2584	2.1	0.2	2.1	0.25	30.8	30.8	30.8	30.8	5.2		-.12			
0	1	24	1050034	485015	596629	36215	29605	5371	1.3	0.2	2.2	0.27	30.8	30.8	30.8	30.8	7.6		-.10			
0	1	25	994457	443003	207760	30281	22000	-625	1.5	0.2	2.7	0.26	30.8	30.8	30.8	30.8	2.7		-.08			
0	1	31	994457	443003	207760	30281	22000	625	1.5	0.2	2.7	0.26	30.8	30.8	30.8	30.8	2.7		-.08			
0	1	39	1071123	541237	400420	36896	27894	6505	1.3	0.2	2.1	0.26	30.8	30.8	30.8	30.8	5.1		-.09			
0	1	41	597781	822658	111509	29952	30831	702	2.0	0.3	1.7	0.24	30.8	30.8	30.8	30.8	1.4		-.15			
0	1	43	597781	822658	111509	29952	30831	-702	2.0	0.3	1.7	0.24	30.8	30.8	30.8	30.8	1.4		-.15			
0	1	45	1071123	541237	400420	36896	27894	-6505	1.3	0.2	2.1	0.26	30.8	30.8	30.8	30.8	5.1		-.09			

S.L.E. - VERIFICA PIASTRE - QUOTA: 0 ELEMENTO: 1

			FESSURAZIONI											TENSIONI		DIREZIONE X				DIREZIONE Y			
Quo N.r	Per N.r	Nodo N.ro	Comb. Cari	Fes lim	Fess mm	dis mm	Co mb	MfX kN*m)	NX (kN)	MfY kN*m)	NY (kN)	cos teta	sin teta	Combina Carico	σ lim. N/mmq	σ cal. N/mmq	Co mb	Mf kN*m)	N (kN)	σ cal. N/mmq	Co mb	Mf kN*m)	N (kN)
0	1	1	Rara											RaraCls	19.20	10.53	3	-31.2	-840.9	10.48	3	-31.1	-832.6
			Freq	0.4	0.06	102	3	14.7	408.2	14.5	391.9	0.715	0.700	RaraFer	360.0	187.3	5	29.9	824.5	183.3	5	29.6	800.4
			Perm	0.3	0.00	0	1	-0.6	-8.2	-0.7	-16.3	0.000	0.000	PermCls	14.40	0.20	1	-0.6	-8.2	0.24	1	-0.7	-16.3
0	1	3	Rara											RaraCls	19.20	10.53	3	-31.2	-840.9	10.48	3	-31.1	-832.6
			Freq	0.4	0.06	102	3	14.7	408.2	14.5	391.9	0.715	0.700	RaraFer	360.0	187.3	5	29.9	824.5	183.3	5	29.6	800.4
			Perm	0.3	0.00	0	1	-0.6	-8.2	-0.7	-16.3	0.000	0.000	PermCls	14.40	0.20	1	-0.6	-8.2	0.24	1	-0.7	-16.3
0	1	13	Rara											RaraCls	19.20	7.30	3	-20.6	-320.4	9.44	3	-25.9	-701.7
			Freq	0.4	0.04	153	3	8.7	168.9	11.5	324.0	0.000	1.000	RaraFer	360.0	121.0	5	18.3	334.2	199.4	5	23.9	667.0
			Perm	0.3	0.00	0	1	-1.0	5.2	-0.9	-18.2	0.000	0.000	PermCls	14.40	0.37	1	-1.0	5.2	0.34	1	-0.9	-18.2
0	1	14	Rara											RaraCls	19.20	5.57	3	-15.6	-272.5	8.17	3	-21.8	-659.6
			Freq	0.4	0.00	0	2	-8.4	-130.0	-11.3	-341.7	0.000	0.000	RaraFer	360.0	98.1	5	12.8	309.1	177.7	5	20.1	618.6
			Perm	0.3	0.00	0	1	-1.2	15.3	-0.8	-22.2	0.000	0.000	PermCls	14.40	0.40	1	-1.2	15.3	0.31	1	-0.8	-22.2
0	1	16	Rara											RaraCls	19.20	5.57	3	-15.6	-272.5	8.17	3	-21.8	-659.6
			Freq	0.4	0.00	0	2	-8.4	-130.0	-11.3	-341.7	0.000	0.000	RaraFer	360.0	98.1	5	12.8	309.1	177.7	5	20.1	618.6
			Perm	0.3	0.00	0	1	-1.2	15.3	-0.8	-22.2	0.000	0.000	PermCls	14.40	0.40	1	-1.2	15.3	0.31	1	-0.8	-22.2
0	1	17	Rara											RaraCls	19.20	7.30	3	-20.6	-320.4	9.44	3	-25.9	-701.7
			Freq	0.4	0.04	153	3	8.7	168.9	11.5	324.0	0.000	1.000	RaraFer	360.0	121.0	5	18.3	334.2	199.4	5	23.9	667.0
			Perm	0.3	0.00	0	1	-1.0	5.2	-0.9	-18.2	0.000	0.000	PermCls	14.40	0.37	1	-1.0	5.2	0.34	1	-0.9	-18.2
0	1	18	Rara											RaraCls	19.20	9.44	3	-25.8	-715.6	7.80	3	-22.1	-314.0
			Freq	0.4	0.05	153	3	11.7	344.6	9.4	161.7	1.000	0.000	RaraFer	360.0	205.5	5	24.1	698.8	123.5	5	19.7	322.9
			Perm	0.3	0.00	0	1	-0.8	-9.0	-1.1	2.5	0.000	0.000	PermCls	14.40	0.29	1	-0.8	-9.0	0.39	1	-1.1	2.5
0	1	19	Rara											RaraCls	19.20	6.63	3	-18.5	-385.1	7.07	3	-19.9	-379.8
			Freq	0.4	0.00	0	2	-9.6	-191.9	-10.3	-191.5	0.000	0.000	RaraFer	360.0	127.3	5	17.0	394.5	128.0	5	17.9	381.0
			Perm	0.3	0.00	0	1	-0.7	3.0	-0.9	-1.3	0.000	0.000	PermCls	14.40	0.25	1	0.7	3.0	0.32	1	-0.9	-1.3
0	1	23	Rara											RaraCls	19.20	6.63	3	-18.5	-385.1	7.07	3	-19.9	-379.8
			Freq	0.4	0.00	0	2	-9.6	-191.9	-10.3	-191.5	0.000	0.000	RaraFer	360.0	127.3	5	17.0	394.5	128.0	5	17.9	381.0
			Perm	0.3	0.00	0	1	-0.7	3.0	-0.9	-1.3	0.000	0.000	PermCls	14.40	0.25	1	0.7	3.0	0.32	1	-0.9	-1.3
0	1	24	Rara											RaraCls	19.20	9.44	3	-25.8	-715.6	7.80	3	-22.1	-314.0
			Freq	0.4	0.05	153	3	11.7	344.6	9.4	161.7	1.000	0.000	RaraFer	360.0	205.5	5	24.1	698.8	123.5	5	19.7	322.9
			Perm	0.3	0.00	0	1	-0.8	-9.0	-1.1	2.5	0.000	0.000	PermCls	14.40	0.29	1	-0.8	-9.0	0.39	1	-1.1	2.5
0	1	25	Rara											RaraCls	19.20	8.14	3	-21.3	-685.0	6.09	3	-17.1	-267.9
			Freq	0.4	0.04	154	3	9.8	323.5	6.8	151.7	1.000	0.000	RaraFer	360.0	185.7	5	20.1	661.3	101.6	5	14.6	295.4
			Perm	0.3	0.00	0	1	-0.6	-13.0	-1.1	10.9	0.000	0.000	PermCls	14.40	0.20	1	-0.6	-13.0	0.37	1	-1.1	10.9
0	1	31	Rara											RaraCls	19.20	8.14	3	-21.3	-685.0	6.09	3	-17.1	-267.9
			Freq	0.4	0.04	154	3	9.8	323.5	6.8	151.7	1.000	0.000	RaraFer	360.0	185.7	5	20.1	661.3	101.6	5	14.6	295.4
			Perm	0.3	0.00	0	1	-0.6	-13.0	-1.1	10.9	0.000	0.000	PermCls	14.40	0.20	1	-0.6	-13.0	0.37	1	-1.1	10.9
0	1	39	Rara											RaraCls	19.20	9.58	3	-26.2	-729.6	7.23	3	-20.4	-360.5
			Freq	0.4	0.05	153	3	11.9	351.3	8.9	178.0	1.000	0.000	RaraFer	360.0	209.8	5	24.6	713.5	126.4	5	18.6	360.3
			Perm	0.3	0.00	0	1	-0.8	-9.4	-0.9	-2.2	0.000	0.000	PermCls	14.40	0.28	1	-0.8	-9.4	0.31	1	-0.9	-2.2
0	1	41	Rara											RaraCls	19.20	7.84	3	-22.2	-392.8	7.87	3	-21.7	-565.8
			Freq	0.4	0.00	0	2	-11.6	-196.8	-11.1	-290.0	0.000	0.000	RaraFer	360.0	137.8	5	19.9	398.2	166.4	5	20.5	547.2
			Perm	0.3	0.00	0	1	-1.1	0.9	-0.6	-11.7	0.000	0.000	PermCls	14.40	0.40	1	-1.1	0.9	0.22	1	-0.6	-11.7
0	1	43	Rara											RaraCls	19.20	7.84	3	-22.2	-392.8	7.87	3	-21.7	-565.8
			Freq	0.4	0.00	0	2	-11.6	-196.8	-11.1	-290.0	0.000	0.000	RaraFer	360.0	137.8	5	19.9	398.2	166.4	5	20.5	547.2
			Perm	0.3	0.00	0	1	-1.1	0.9	-0.6	-11.7	0.000	0.000	PermCls	14.40	0.40	1	-1.1	0.9	0.22	1	-0.6	-11.7
0	1	45	Rara											RaraCls	19.20	9.58	3	-26.2	-729.6	7.23	3	-20.4	-360.5
			Freq	0.4	0.05	153	3	11.9	351.3	8.9	178.0	1.000	0.000	RaraFer	360.0	209.8	5	24.6	713.5	126.4	5	18.6	360.3
			Perm	0.3	0.00	0	1	-0.8	-9.4	-0.9	-2.2	0.000	0.000	PermCls	14.40	0.28	1	-0.8	-9.4	0.31	1	-0.9	-2.2

RISULTATI VERIFICHE NODI CLS

IDENTIFICATIVO				GEOMETRIA PILASTRO			MATERIALE		DIREZ.X locale		DIREZ.Y locale		DIREZ.X locale		DIREZ.Y locale		
Filo N.ro	Quota (m)	Nodo3d N.ro	Posiz. Pilast	Sez. Nro	Rotaz Grd	HNodo (cm)	fck N/mmq	fy N/mmq	LyUtil (cm)	AfX cmq	LxUtil (cm)	AfY cmq	Vjbd N	VjbR N	Vjbd N	VjbR N	STATUS
3	0.00	1	SUP.	2	90	70	32.0	450.0	40	10.0	40	10.0					OK
5	0.00	2	SUP.	2	90	70	32.0	450.0	40	10.0	40	10.0					OK
10	0.00	3	SUP.	2	90	70	32.0	450.0	40	10.0	40	10.0					OK
12	0.00	4	SUP.	2	90	70	32.0	450.0	40	10.0	40	10.0					OK
3	3.19	5	INF.	2	90	24	32.0	450.0	55	4.7	49	4.2					OK
5	3.19	6	INF.	2	90	24	32.0	450.0	55	4.7	49	4.2					OK
10	3.19	7	INF.	2	90	24	32.0	450.0	55	4.7	49	4.2					OK
12	3.19	8	INF.	2	90	24	32.0	450.0	55	4.7	49	4.2					OK
4	3.19	9	INF.	2	90	24	32.0	450.0	55	4.7							OK
6	3.19	10	INF.	2	90	24	32.0	450.0	55	4.7							OK
4	0.00	11	SUP.	2	90	70	32.0	450.0	40	10.0							OK
6	0.00	12	SUP.	2	90	70	32.0	450.0	40	10.0							OK

- **SPECIFICHE CAMPI TABELLA DI STAMPA**

Si riporta appresso la spiegazione delle sigle usate nel tabulato di stampa *VERIFICHE DI DUTTILITA' ASTE IN C.A. - TRAVI ELEVAZIONE, PILASTRI e GERARCHIE TRAVE COLONNA.*

Filo Iniziale : *Numero del filo iniziale*

Filo Finale : *Numero del filo finale*

Quota Iniziale : *Altezza del nodo iniziale*

Quota Finale : *Altezza del nodo finale*

Tratto : *Numero della suddivisione dell'elemento. Se l'elemento è unico, ovvero non suddiviso in più tratti, la colonna è bianca*

Sez. : *Numero della sezione in archivio*

Bas : *Base della sezione*

Alt : *Altezza della sezione*

GRd : *Coefficiente di amplificazione dei momenti resistenti per il calcolo del taglio di progetto*

Passo : *Passo staffe*

Lun : *Lunghezza del tratto da staffare*

Travi

G : *carichi permanenti distribuiti*

g+s*q : *carichi permanenti più aliquota sismica dei carichi variabili distribuiti*

Concio : *i = iniziale; c = campata; f = finale*

MRu+, MRu- : *Momenti resistenti positivi e negativi*

x/d : *posizione adimensionalizzata dell'asse neutro*

Vmax, Vmin : *Valore massimo e minimo del taglio di progetto*

VRcd : *Taglio resistente del calcestruzzo*

VRsd : *Taglio resistente dell'acciaio*

SovrRes : *Taglio Sovraresistente calcolato in base ai momenti resistenti della trave*

con q=1 : *Taglio calcolato utilizzando lo spettro elastico ovvero con q=1*

Limite : *Segnala quale dei due tagli precedenti e' stato utilizzato per la verifica:*
SovRes -> Taglio SovraResistente
q=1 -> Taglio da spettro elastico

Pilastri

Concio : *i = iniziale; c = campata; f = finale*

ax e ay : *coefficienti di sovraresistenza del momento di verifica del pilastro in direzione X e Y*

ax*Mx, My, N : *Sollecitazioni di progetto per il sisma in direzione X*

Mx, ay*My, N : *Sollecitazioni di progetto per il sisma in direzione Y*

Mrux, Mruy : **2.1.1.1.1 Momenti resistenti del pilastro nelle due direzioni**

Vx, Vy : *Tagli di progetto calcolati dai momenti resistenti del pilastro, amplificati del coefficiente gRd. Al fine della verifica, i due tagli di progetto, vengono considerati agenti indipendentemente e vengono accoppiati con il taglio di calcolo in direzione ortogonale*

V Rxd, VRyd : *Taglio resistente in direzione X e Y. I tagli resistenti possono essere riferiti o al cls o alle staffe in base a quale materiale ha un coefficiente di impegno maggiore*

Limite : *Segnala quale taglio e' stato utilizzato per la verifica:*

Svr -> Taglio SovraResistente
q=1 -> Taglio da spettro elastico

Gerarchia Trave-Colonna

Nodo3d	:	**2.1.1.1.2 Numero del nodo dove si effettua il controllo di gerarchia**
Filo, Quota	:	*Numero del filo e quota del nodo in esame*
PilInf, PilSup	:	*Numero del pilastro inferiore e superiore collegati al Nodo3d*
TravX+ ; TravX-	:	*Numero delle travi in direzione X collegate al Nodo3d*
TravY+ ; TravY-	:	*Numero delle travi in direzione Y collegate al Nodo3d*
SMxc,pl,Rd	:	*Sommatoria dei momenti plastici delle colonne in direzione X*
gSMxb,pl,Rd	:	*Sommatoria dei momenti plastici delle travi in direzione X amplificate del coefficiente di sovraresistenza*
SMyc,pl,Rd	:	*Sommatoria dei momenti plastici delle colonne in direzione Y*
gSMyb,pl,Rd	:	*Sommatoria dei momenti plastici delle travi in direzione Y amplificate del coefficiente di sovraresistenza*
Flag Verifica	:	*Flag di controllo* (SMyc,pl,Rd > gSMyb,pl,Rd) *:* *- "OK" = Gerarchia della resistenza soddisfatta* *- "Elastico" = Colonna protetta dalla plasticizzazione anticipata in quanto sovraresistente rispetto all' azione sismica elastica (q=1)*

VERIFICHE DI DUTTILITA' ASTE IN C.A. - TRAVI ELEVAZIONE

Filo Iniz Fin. N.ro	Quota Iniz. Final (m)	Trat to Nr	Sez Bas Alt cm	CARICHI g kN/m)	g+s*q kN/m)	Conc	MOMENTI RESISTENTI Mru+ (kN*m)	x/d	Mru- (kN*m)	x/d	TAGLIO PROGETTO Vmax (kN)	Vmin (kN)	VERIFICA A TAGLIO VRcd (kN)	VRsd (kN)	Staffe Pas	Lu	VALORI DEL TAGLIO SovrRes (kN)	con q=1 (kN)	Limite
4	3.19	1	8.0	8.0	i	42.2	0.24	-42.2	0.24	15.8	9.0	257.4	642.1	4	24	39.7	15.8	q
12	3.19	49			c					13.9	-13.9	257.4	256.8	10	262	37.7	13.9	=
gRd=	1.0	24			f	42.2	0.24	-42.2	0.24	-9.0	-15.8	257.4	642.1	4	24	39.7	15.8	1
6	3.19	1	8.0	8.0	i	42.2	0.24	-42.2	0.24	15.8	9.0	257.4	642.1	4	24	39.7	15.8	q
5	3.19	49			c					13.9	-13.9	257.4	256.8	10	262	37.7	13.9	=
gRd=	1.0	24			f	42.2	0.24	-42.2	0.24	-9.0	-15.8	257.4	642.1	4	24	39.7	15.8	1
3	3.19	4	13.6	13.6	i	55.1	0.25	-55.1	0.25	30.4	22.8	304.6	642.1	4	24	54.9	30.4	q
10	3.19	58			c					27.1	-27.1	304.6	256.8	10	342	51.6	27.1	=
gRd=	1.0	24			f	55.1	0.25	-55.1	0.25	-22.8	-30.4	304.6	642.1	4	24	54.9	30.4	1
5	3.19	4	13.6	13.6	i	55.1	0.25	-55.1	0.25	30.4	22.8	304.6	642.1	4	24	54.9	30.4	q
12	3.19	58			c					27.1	-27.1	304.6	256.8	10	342	51.6	27.1	=
gRd=	1.0	24			f	55.1	0.25	-55.1	0.25	-22.8	-30.4	304.6	642.1	4	24	54.9	30.4	1
10	3.19	1	8.0	8.0	i	42.2	0.24	-42.2	0.24	15.8	9.0	257.4	642.1	4	24	39.7	15.8	q
4	3.19	49			c					13.9	-13.9	257.4	256.8	10	262	37.7	13.9	=
gRd=	1.0	24			f	42.2	0.24	-42.2	0.24	-9.0	-15.8	257.4	642.1	4	24	39.7	15.8	1
3	3.19	1	8.0	8.0	i	42.2	0.24	-42.2	0.24	15.8	9.0	257.4	642.1	4	24	39.7	15.8	q
6	3.19	49			c					13.9	-13.9	257.4	256.8	10	262	37.7	13.9	=
gRd=	1.0	24			f	42.2	0.24	-42.2	0.24	-9.0	-15.8	257.4	642.1	4	24	39.7	15.8	1
6	3.19	4	18.4	18.4	i	55.1	0.25	-55.1	0.25	39.4	32.2	304.6	642.1	4	24	64.1	39.4	q
4	3.19	58			c					35.0	-35.0	304.6	256.8	10	342	59.7	35.0	=
gRd=	1.0	24			f	55.1	0.25	-55.1	0.25	-32.2	-39.4	304.6	642.1	4	24	64.1	39.4	1

VERIFICHE DI DUTTILITA' ASTE IN C.A. - PILASTRI

Filo Iniz Fin. N.ro	Quota Iniz. Final (m)	Trat to Nr	Sez Bas Alt cm	SOVRARESIST. Conc	αx	αy	SOLLECITAZIONI SISMA X αx*Mx (kN*m)	My (kN*m)	N (kN)	SOLLECITAZIONI SISMA Y Mx (kN*m)	αy*My (kN*m)	N (kN)	MOM. RESISTENTI Mrux (kN*m)	Mruy (kN*m)	TAGLIO PROG. Vx (kN)	Vy (kN)	TAGLIO RESISTENTE V Rxd (kN)	V Ryd (kN)	staffe Pas	Lun	Lim.
3	3.19	2	i	1.0	1.0	-4.8	11.4	-39.5	-2.2	14.7	-39.6	105.0	-74.5	11.6	6.4	282.3	297.4	12	45	q
3	0.00	30	c											11.6	6.4	178.6	250.8	19	204	=
gRd=	1.1	40	f	1.0	1.0	-4.4	-5.8	-47.7	-2.3	-8.2	-49.2	-106.4	75.5	11.6	6.4	282.3	297.4	12	70	1
5	3.19	2	i	1.0	1.0	4.8	11.4	-39.5	2.2	14.7	-39.6	-105.0	-74.5	11.6	6.4	282.5	297.7	12	45	q
5	0.00	30	c											11.6	6.4	178.6	250.8	19	204	=
gRd=	1.1	40	f	1.0	1.0	4.4	-5.8	-47.7	2.3	-8.2	-49.2	106.4	75.5	11.6	6.4	282.5	297.7	12	70	1
10	3.19	2	i	1.0	1.0	-4.8	-11.4	-39.5	-2.2	-14.7	-39.6	105.0	74.5	11.6	6.4	282.4	297.5	12	45	q
10	0.00	30	c											11.6	6.4	178.6	250.8	19	204	=
gRd=	1.1	40	f	1.0	1.0	-4.4	5.8	-47.7	-2.3	8.2	-49.2	-106.4	-75.5	11.6	6.4	282.4	297.5	12	70	1
12	3.19	2	i	1.0	1.0	4.8	-11.4	-39.5	2.2	-14.7	-39.6	-105.0	74.5	11.6	6.4	282.6	297.8	12	45	q
12	0.00	30	c											11.6	6.4	178.6	250.8	19	204	=
gRd=	1.1	40	f	1.0	1.0	4.4	5.8	-47.7	2.3	8.2	-49.2	106.4	-75.5	11.6	6.4	282.6	297.8	12	70	1
6	3.19	2	i	1.0	1.0	3.2	15.2	-63.4	1.3	17.9	-64.9	-108.5	-77.0	12.3	8.0	285.6	300.9	12	45	q
6	0.00	30	c											12.3	8.0	178.6	250.8	19	210	=
gRd=	1.1	40	f	1.0	1.0	-4.5	-5.1	-72.9	-1.5	-9.2	-74.5	109.9	77.9	12.3	8.0	285.6	300.9	12	64	1
4	3.19	2	i	1.0	1.0	3.2	-16.5	-64.1	1.3	-17.9	-64.9	-108.5	77.0	12.3	8.0	285.7	301.0	12	45	q
4	0.00	30	c											12.3	8.0	178.6	250.8	19	210	=
gRd=	1.1	40	f	1.0	1.0	-4.5	7.0	-73.6	-1.5	9.2	-74.5	109.9	-77.9	12.3	8.0	285.7	301.0	12	64	1

VERIFICHE ASTE IN C.A. - PILASTRI

RIEPILOGO VERIFICHE A TAGLIO PILASTRI

Filo Iniz Fin. Ctgθ	Quota Iniz. Final	Tra kN	Sez Bas Alt cm	Con c	Comb in az	Tagli Analisi Vx (kN)	Vy (kN)	Tagli Progetto Vx (kN)	Vy (kN)	Tagli Resistenti Calcestruzzo V Rxd (kN)	V Ryd (kN)	Coef	Tagli Resistenti Staffe V Rxd (kN)	V Ryd (kN)	Coef	Staffe Pas cm	Lun cm	Fi mm	Tagli con q = 1 Vx (kN)	Vy (kN)	Tagli Sovra Resistenza Vx (kN)	Vy (kN)	Limite
3	3.19	2	1	3	3	15.3	16.4	11.6	6.4	282.3	297.4	0.06	282.7	397.2	0.04	12	45	10	11.6	6.4	51.7	72.9	q
3	0.00	30	3	3	15.3	16.4	11.6	6.4	282.3	297.4	0.04	178.6	250.8	0.06	19	204	10	11.6	6.4	51.7	72.9	=
2.50		40	5	3	15.3	16.4	11.6	6.4	282.3	297.4	0.06	282.7	397.2	0.04	12	70	10	11.6	6.4	51.7	72.9	1
5	3.19	2	1	3	9.5	-11.0	11.6	6.4	282.5	297.7	0.05	282.7	397.2	0.03	12	45	10	11.6	6.4	51.7	72.9	q
5	0.00	30	3	3	9.5	-11.0	11.6	6.4	282.5	297.7	0.04	178.6	250.8	0.06	19	204	10	11.6	6.4	51.7	72.9	=
2.50		40	5	3	9.5	-11.0	11.6	6.4	282.5	297.7	0.05	282.7	397.2	0.03	12	70	10	11.6	6.4	51.7	72.9	1

VERIFICHE ASTE IN C.A. - PILASTRI

RIEPILOGO VERIFICHE A TAGLIO PILASTRI

Filo Iniz / Fin. / Ctgθ	Quota Iniz. / Final	Tra kN	Sez Bas / Alt cm	Con c	Comb in az	Tagli Analisi Vx (kN)	Tagli Analisi Vy (kN)	Tagli Progetto Vx (kN)	Tagli Progetto Vy (kN)	Tagli Resistenti Calcestruzzo V Rxd (kN)	Tagli Resistenti Calcestruzzo V Ryd (kN)	Tagli Resistenti Calcestruzzo Coef	Tagli Resistenti Staffe V Rxd (kN)	Tagli Resistenti Staffe V Ryd (kN)	Tagli Resistenti Staffe Coef	Staffe Pas cm	Staffe Lun cm	Staffe Fi mm	Tagli con q = 1 Vx (kN)	Tagli con q = 1 Vy (kN)	Tagli Sovra Resistenza Vx (kN)	Tagli Sovra Resistenza Vy (kN)	Limite
10	3.19	2	1	3	-15.3	16.4	11.6	6.4	282.4	297.5	0.06	282.7	397.2	0.04	12	45	10	11.6	6.4	51.7	72.9	q
10	0.00	30	3	3	-15.3	16.4	11.6	6.4	282.4	297.5	0.04	178.6	250.8	0.06	19	204	10	11.6	6.4	51.7	72.9	=
2.50		40	5	3	-15.3	16.4	11.6	6.4	282.4	297.5	0.06	282.7	397.2	0.04	12	70	10	11.6	6.4	51.7	72.9	1
12	3.19	2	1	3	-9.5	-11.0	11.6	6.4	282.6	297.8	0.05	282.7	397.2	0.03	12	45	10	11.6	6.4	51.7	72.9	q
12	0.00	30	3	3	-9.5	-11.0	11.6	6.4	282.6	297.8	0.04	178.6	250.8	0.06	19	204	10	11.6	6.4	51.7	72.9	=
2.50		40	5	3	-9.5	-11.0	11.6	6.4	282.6	297.8	0.05	282.7	397.2	0.03	12	70	10	11.6	6.4	51.7	72.9	1
6	3.19	2	1	3	15.8	-5.4	12.3	8.0	285.6	300.9	0.06	282.7	397.2	0.04	12	45	10	12.3	8.0	53.4	75.3	q
6	0.00	30	3	3	15.8	-5.4	12.3	8.0	285.6	300.9	0.06	178.6	250.8	0.07	19	210	10	12.3	8.0	53.4	75.3	=
2.50		40	5	3	15.8	-5.4	12.3	8.0	285.6	300.9	0.06	282.7	397.2	0.04	12	64	10	12.3	8.0	53.4	75.3	1
4	3.19	2	1	3	-15.8	-5.4	12.3	8.0	285.7	301.0	0.06	282.7	397.2	0.04	12	45	10	12.3	8.0	53.4	75.3	q
4	0.00	30	3	3	-15.8	-5.4	12.3	8.0	285.7	301.0	0.06	178.6	250.8	0.07	19	210	10	12.3	8.0	53.4	75.3	=
2.50		40	5	3	-15.8	-5.4	12.3	8.0	285.7	301.0	0.06	282.7	397.2	0.04	12	64	10	12.3	8.0	53.4	75.3	1

INPUT E RISULTATI DELL'ANALISI CON FATTORE DI STRUTTURA q=1 ELEMENTI DI FONDAZIONE (GERARCHIA DELLE RESISTENZE)

DATI GENERALI DI STRUTTURA

DATI GENERALI DI STRUTTURA			
Massima dimens. dir. X (m)	6.20	Altezza edificio (m)	3.19
Massima dimens. dir. Y (m)	3.90	Differenza temperatura(°C)	15
PARAMETRI SISMICI			
Vita Nominale (Anni)	100	Classe d' Uso	QUARTA
Longitudine Est (Grd)	18.13688	Latitudine Nord (Grd)	40.45746
Categoria Suolo	A	Coeff. Condiz. Topogr.	1.00000
Sistema Costruttivo Dir.1	Utente	Sistema Costruttivo Dir.2	Utente
Regolarita' in Altezza	SI (KR=1)	Regolarita' in Pianta	SI
Direzione Sisma (Grd)	0	Sisma Verticale	ASSENTE
Effetti P/Delta	NO	Quota di Zero Sismico (m)	0.00000
PARAMETRI SPETTRO ELASTICO - SISMA S.L.V.			
Probabilita' Pvr	0.10	Periodo di Ritorno Anni	1898.00
Accelerazione Ag/g	0.07	Periodo T'c (sec.)	0.58
Fo	2.57	Fv	0.92
Fattore Stratigrafia'Ss'	1.00	Periodo TB (sec.)	0.19
Periodo TC (sec.)	0.58	Periodo TD (sec.)	1.88
PARAMETRI SISTEMA COSTRUTTIVO ESPLICITO - D I R. 1			
Fattore di struttura 'q'	1.00		
PARAMETRI SISTEMA COSTRUTTIVO ESPLICITO - D I R. 2			
Fattore di struttura 'q'	1.00		
COEFFICIENTI DI SICUREZZA PARZIALI DEI MATERIALI			
Acciaio per CLS armato	1.15	Calcestruzzo CLS armato	1.50
Legno per comb. eccez.	1.00	Legno per comb. fondament.:	1.30
Livello conoscenza	LC2		
FRP Collasso Tipo 'A'	1.10	FRP Delaminazione Tipo 'A'	1.20
FRP Collasso Tipo 'B'	1.25	FRP Delaminazione Tipo 'B'	1.50
FRP Resist. Press/Fless	1.00	FRP Resist. Taglio/Torsione	1.20
FRP Resist. Confinamento	1.10		

ATTRIBUTI TAMPONATURE SU PIANI SISMICI

IDENTIFICATIV		ATTRIBUTI	
Piano N.ro	Quota (m)	Irregol Pianta	Piano Soffice
1	3.19	NO	NO

COORDINATE DEI NODI

IDENT.	POSIZIONE NODO			ATTRIBUTI		
Nodo3d N.ro	Coord.X (m)	Coord.Y (m)	Coord.Z (m)	Filo N.ro	Piano Sism.	Peso (kN)
1	0.00	0.00	0.00	3	0	0.0
2	6.20	0.00	0.00	5	0	0.0
3	0.00	3.90	0.00	10	0	0.0
4	6.20	3.90	0.00	12	0	0.0
5	0.00	0.00	3.19	3	1	44.7
6	6.20	0.00	3.19	5	1	44.7
7	0.00	3.90	3.19	10	1	44.7
8	6.20	3.90	3.19	12	1	44.7
9	3.10	3.90	3.19	4	0	66.2
10	3.10	0.00	3.19	6	0	66.2
11	3.10	3.90	0.00	4	0	0.0
12	3.10	0.00	0.00	6	0	0.0

DATI ASTE SPAZIALI

IDENTIFICAZIONE								GEOMETRIA				SCOST.INIZIALI			SCOST. FINALI				
Asta3d N.ro	Filo in.	Filo fin.	Q.iniz (m)	Q.fin. (m)	Nod3d iniz.	Nod3d fin.	Cr. Pr.	Sez. N.ro	Sigla Sezione	Magr. (cm)	Rot. Grd	dx (cm)	dy (cm)	dz (cm)	dx (cm)	dy (cm)	dz (cm)	Cri Geo	Tipo Elemento ai fini sism.
1	10	3	0.00	0.00	3	1	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
2	5	12	0.00	0.00	2	4	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
3	3	3	3.19	0.00	5	1	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
4	5	5	3.19	0.00	6	2	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
5	10	10	3.19	0.00	7	3	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
6	12	12	3.19	0.00	8	4	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
7	4	12	3.19	3.19	9	8	1	1	Rett. 49 x 24	0	0	0	0	0	0	0	0		Trave telaio
8	6	5	3.19	3.19	10	6	1	1	Rett. 49 x 24	0	0	0	0	0	0	0	0		Trave telaio
9	3	10	3.19	3.19	5	7	1	4	Rett. 58 x 24	0	0	0	0	0	0	0	0		Trave telaio
10	5	12	3.19	3.19	6	8	1	4	Rett. 58 x 24	0	0	0	0	0	0	0	0		Trave telaio
11	10	4	3.19	3.19	7	9	1	1	Rett. 49 x 24	0	0	0	0	0	0	0	0		Trave telaio

DATI ASTE SPAZIALI

IDENTIFICAZIONE								GEOMETRIA			SCOST.INIZIALI			SCOST. FINALI				
Asta3d N.ro	Filo in.	Filo fin.	Q.iniz (m)	Q.fin. (m)	Nod3d iniz.	Nod3d fin.	Cr. Pr.	Sez. N.ro	Sigla Sezione	Magr. (cm)	Rot. Grd	dx (cm)	dy (cm)	dz (cm)	dx (cm)	dy (cm)	dz (cm)	Cri Geo	Tipo Elemento ai fini sism.
12	3	6	3.19	3.19	5	10	1	1	Rett. 49 x 24	0	0	0	0	0	0	0	0		Trave telaio
13	6	4	3.19	3.19	10	9	1	4	Rett. 58 x 24	0	0	0	0	0	0	0	0		Trave telaio
14	10	4	0.00	0.00	3	11	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
15	4	12	0.00	0.00	11	4	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
16	3	6	0.00	0.00	1	12	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
17	6	5	0.00	0.00	12	2	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A
18	6	6	3.19	0.00	10	12	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
19	4	4	3.19	0.00	9	11	3	2	Rett. 30 x 40	0	90	0	0	0	0	0	0		Pilastri
20	6	4	0.00	0.00	12	11	2	5	Rett. 40 x 70	60	0	0	0	-35	0	0	-35		Secondario C.A

DATI SHELL SPAZIALI

IDENTIFICAZIONE													CARATTERISTICHE SEZIONE				SUDDIVIS.	
Shell N.ro	Filo 1	Filo 2	Filo 3	Filo 4	Quota1 (m)	Quota2 (m)	Quota3 (m)	Quota4 (m)	Nod3d 1	Nod3d 2	Nod3d 3	Nod3d 4	Sez. N.ro	Spess (cm)	Kwinkl N/cmc	Tipo Mat.	MeshX	MeshY
1	10	3	6	4	0.00	0.00	0.00	0.00	3	1	12	11	1	15.0	0.0	1	6	5
2	4	6	5	12	0.00	0.00	0.00	0.00	11	12	2	4	1	15.0	0.0	1	6	5

VINCOLI E CEDIMENTI NODALI

IDENTIFIC.		RIGIDEZZE TRASLANTI			RIGIDEZZE ROTAZIONALI			SCOSTAMENTI						VERSO SPOSTAMENTI UNILATERI					
Nodo3d N.ro	Cod ice	Tx kN/m	Ty kN/m	Tz kN/m	Rx kN*m	Ry kN*m	Rz kN*m	Tr.X cm	Tr.Y cm	Tr.Z cm	Azim Grd	CoZe Grd	Ass. Grd	Tr.X	Tr.Y	Tr.Z	RotX	RotY	RotZ
1	W	-10	-10	0	0	0	-10	0	0	0	0	0	0						
2	W	-10	-10	0	0	0	-10	0	0	0	0	0	0						
3	W	-10	-10	0	0	0	-10	0	0	0	0	0	0						
4	W	-10	-10	0	0	0	-10	0	0	0	0	0	0						

CARICHI TERMICI ASTE

CONDIZ TERMICA			CONDIZ TERMICA			CONDIZ TERMICA	
Asta3d N.ro	Dt Grd		Asta3d N.ro	Dt Grd		Asta3d N.ro	Dt Grd
3	15.00		4	15.00		5	15.00
6	15.00		7	15.00		8	15.00
9	15.00		10	15.00		11	15.00
12	15.00		13	15.00		18	15.00
19	15.00						

CARICHI DISTRIBUITI ASTE

CONDIZIONE DI CARICO N.ro: 1 ALIQUOTA SISMICA: 100

IDENT.		NODO INIZIALE			NODO FINALE				
Asta3d N.ro	Riferimento	Qx kN/m	Qy kN/m	Qz kN/m	Qx kN/m	Qy kN/m	Qz kN/m	Mt kN**m/m	Pretens kN
1	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
2	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
7	0	0.00	0.00	-3.24	0.00	0.00	-3.24	-0.43	0.0
8	0	0.00	0.00	-3.24	0.00	0.00	-3.24	0.43	0.0
9	0	0.00	0.00	-6.39	0.00	0.00	-6.39	-0.43	0.0
10	0	0.00	0.00	-6.39	0.00	0.00	-6.39	0.43	0.0
11	0	0.00	0.00	-3.24	0.00	0.00	-3.24	-0.43	0.0
12	0	0.00	0.00	-3.24	0.00	0.00	-3.24	0.43	0.0
13	0	0.00	0.00	-9.18	0.00	0.00	-9.18	0.00	0.0
14	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
15	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
16	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0
17	0	0.00	0.00	-5.50	0.00	0.00	-5.50	0.00	0.0

CARICHI DISTRIBUITI ASTE

CONDIZIONE DI CARICO N.ro: 2 ALIQUOTA SISMICA: 100

IDENT.		NODO INIZIALE			NODO FINALE				
Asta3d N.ro	Riferimento	Qx kN/m	Qy kN/m	Qz kN/m	Qx kN/m	Qy kN/m	Qz kN/m	Mt kN**m/m	Pretens kN
1	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
2	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
7	0	0.00	0.00	-1.82	0.00	0.00	-1.82	-0.22	0.0
8	0	0.00	0.00	-1.82	0.00	0.00	-1.82	0.22	0.0
9	0	0.00	0.00	-3.77	0.00	0.00	-3.77	-0.22	0.0
10	0	0.00	0.00	-3.77	0.00	0.00	-3.77	0.22	0.0
11	0	0.00	0.00	-1.82	0.00	0.00	-1.82	-0.22	0.0
12	0	0.00	0.00	-1.82	0.00	0.00	-1.82	0.22	0.0

CARICHI DISTRIBUITI ASTE

CONDIZIONE DI CARICO N.ro: 2 ALIQUOTA SISMICA: 100

IDENT.		NODO INIZIALE			NODO FINALE				
Asta3d N.ro	Riferimento	Qx kN/m	Qy kN/m	Qz kN/m	Qx kN/m	Qy kN/m	Qz kN/m	Mt kN**m/m	Pretens kN
13	0	0.00	0.00	-5.70	0.00	0.00	-5.70	0.00	0.0
14	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
15	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
16	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0
17	0	0.00	0.00	-15.00	0.00	0.00	-15.00	0.00	0.0

CARICHI DISTRIBUITI ASTE

CONDIZIONE DI CARICO N.ro: 4 ALIQUOTA SISMICA: 0

IDENT.		NODO INIZIALE			NODO FINALE				
Asta3d N.ro	Riferimento	Qx kN/m	Qy kN/m	Qz kN/m	Qx kN/m	Qy kN/m	Qz kN/m	Mt kN**m/m	Pretens kN
7	0	0.00	0.00	-0.43	0.00	0.00	-0.43	-0.06	0.0
8	0	0.00	0.00	-0.43	0.00	0.00	-0.43	0.06	0.0
9	0	0.00	0.00	-0.86	0.00	0.00	-0.86	-0.06	0.0
10	0	0.00	0.00	-0.86	0.00	0.00	-0.86	0.06	0.0
11	0	0.00	0.00	-0.43	0.00	0.00	-0.43	-0.06	0.0
12	0	0.00	0.00	-0.43	0.00	0.00	-0.43	0.06	0.0
13	0	0.00	0.00	-1.24	0.00	0.00	-1.24	0.00	0.0

CARICHI SUGLI SHELL

CONDIZIONE DI CARICO N.ro: 2 ALIQUOTA SISMICA: 100

IDENT.		PRESSIONI				CARICHI PERIMETRALI			
Shell N.ro	Riferimento	P.a kN/mq	P.b kN/mq	P.c kN/mq	P.d kN/mq	Q.ab kN/m	Q.bc kN/m	Q.cd kN/m	Q.da kN/m
1	0	-1.0	-1.0	-1.0	-1.0	0.0	0.0	0.0	0.0
2	0	-1.0	-1.0	-1.0	-1.0	0.0	0.0	0.0	0.0

CARICHI SUGLI SHELL

CONDIZIONE DI CARICO N.ro: 3 ALIQUOTA SISMICA: 80

IDENT.		PRESSIONI				CARICHI PERIMETRALI			
Shell N.ro	Riferimento	P.a kN/mq	P.b kN/mq	P.c kN/mq	P.d kN/mq	Q.ab kN/m	Q.bc kN/m	Q.cd kN/m	Q.da kN/m
1	0	-6.0	-6.0	-6.0	-6.0	0.0	0.0	0.0	0.0
2	0	-6.0	-6.0	-6.0	-6.0	0.0	0.0	0.0	0.0

COMPOSIZIONE SHELL

Macro Nro	Col.1	Col.2	Col.3	Col.4	Col.5	Col.6		Macro Nro	Col.1	Col.2	Col.3	Col.4	Col.5	Col.6
1	1	3	4	5	6	7		2	2	32	33	34	35	36
	8	9	10	11	12	13			37	38	39	40	41	42
	14	15	16	17	18	19			43	44	45	46	47	48
	20	21	22	23	24	25			49	50	51	52	53	54
	26	27	28	29	30	31			55	56	57	58	59	60

VERTICI MICRO SHELL

Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4		Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4		Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4
1	1	3	13	19	18		2	2	11	46	52	51		3	3	13	14	20	19
4	4	14	15	21	20		5	5	15	16	22	21		6	6	16	17	23	22
7	7	17	1	24	23		8	8	18	19	26	25		9	9	19	20	27	26
10	10	20	21	28	27		11	11	21	22	29	28		12	12	22	23	30	29
13	13	23	24	31	30		14	14	25	26	33	32		15	15	26	27	34	33
16	16	27	28	35	34		17	17	28	29	36	35		18	18	29	30	37	36
19	19	30	31	38	37		20	20	32	33	40	39		21	21	33	34	41	40
22	22	34	35	42	41		23	23	35	36	43	42		24	24	36	37	44	43
25	25	37	38	45	44		26	26	39	40	46	11		27	27	40	41	47	46
28	28	41	42	48	47		29	29	42	43	49	48		30	30	43	44	50	49
31	31	44	45	12	50		32	32	46	47	53	52		33	33	47	48	54	53
34	34	48	49	55	54		35	35	49	50	56	55		36	36	50	12	57	56
37	37	51	52	59	58		38	38	52	53	60	59		39	39	53	54	61	60
40	40	54	55	62	61		41	41	55	56	63	62		42	42	56	57	64	63
43	43	58	59	66	65		44	44	59	60	67	66		45	45	60	61	68	67
46	46	61	62	69	68		47	47	62	63	70	69		48	48	63	64	71	70

VERTICI MICRO SHELL

Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4	Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4	Micro Nro	Macro Nro	Vert.1	Vert.2	Vert.3	Vert.4
49	49	65	66	73	72	50	50	66	67	74	73	51	51	67	68	75	74
52	52	68	69	76	75	53	53	69	70	77	76	54	54	70	71	78	77
55	55	72	73	79	4	56	56	73	74	80	79	57	57	74	75	81	80
58	58	75	76	82	81	59	59	76	77	83	82	60	60	77	78	2	83

COMPOSIZIONE ASTE

Macro Asta Input Numero	Micro-Asta 1			Micro-Asta 2			Micro-Asta 3			Micro-Asta 4			Micro-Asta 5			Micro-Asta 6		
	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.	Asta N.ro	Nodo iniz.	Nodo fin.
1	1	3	13	21	13	14	22	14	15	23	15	16	24	16	17	25	17	1
2	2	2	83	26	83	82	27	82	81	28	81	80	29	80	79	30	79	4
14	14	3	18	31	18	25	32	25	32	33	32	39	34	39	11			
15	15	11	51	35	51	58	36	58	65	37	65	72	38	72	4			
16	16	1	24	39	24	31	40	31	38	41	38	45	42	45	12			
17	17	12	57	43	57	64	44	64	71	45	71	78	46	78	2			
20	20	12	50	47	50	49	48	49	48	49	48	47	50	47	46	51	46	11

COMBINAZIONI CARICHI - S.L.V. - A1 / S.L.D.

DESCRIZIONI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Peso Strutturale	1.30	1.30	1.30	1.30	1.30	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Perm.Non Strutturale	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Var. Cat. E2	1.50	1.50	1.50	1.50	1.50	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
H1 car. manutenzione	1.50	1.50	0.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corr. Tors. dir. 0	0.00	0.00	0.00	0.00	0.00	1.00	-1.00	1.00	-1.00	1.00	-1.00	1.00	-1.00	-1.00	1.00
Corr. Tors. dir. 90	0.00	0.00	0.00	0.00	0.00	0.30	0.30	-0.30	-0.30	-0.30	-0.30	0.30	0.30	0.30	0.30
Carico termico	0.00	0.90	1.50	-0.90	-1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma direz. grd 0	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-1.00	-1.00
Sisma direz. grd 90	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.30	-0.30	-0.30	-0.30	-0.30	0.30	0.30

COMBINAZIONI CARICHI - S.L.V. - A1 / S.L.D.

DESCRIZIONI	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Peso Strutturale	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Perm.Non Strutturale	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Var. Cat. E2	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
H1 car. manutenzione	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corr. Tors. dir. 0	-1.00	1.00	-1.00	1.00	-1.00	1.00	0.30	-0.30	0.30	-0.30	0.30	-0.30	0.30	-0.30	-0.30
Corr. Tors. dir. 90	-0.30	-0.30	-0.30	-0.30	0.30	0.30	1.00	1.00	-1.00	-1.00	-1.00	-1.00	1.00	1.00	1.00
Carico termico	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma direz. grd 0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	-0.30
Sisma direz. grd 90	0.30	0.30	-0.30	-0.30	-0.30	-0.30	1.00	1.00	1.00	1.00	-1.00	-1.00	-1.00	-1.00	1.00

COMBINAZIONI CARICHI - S.L.V. - A1 / S.L.D.

DESCRIZIONI	31	32	33	34	35	36	37
Peso Strutturale	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Perm.Non Strutturale	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Var. Cat. E2	0.80	0.80	0.80	0.80	0.80	0.80	0.80
H1 car. manutenzione	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corr. Tors. dir. 0	0.30	-0.30	0.30	-0.30	0.30	-0.30	0.30
Corr. Tors. dir. 90	1.00	-1.00	-1.00	-1.00	-1.00	1.00	1.00
Carico termico	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sisma direz. grd 0	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Sisma direz. grd 90	1.00	1.00	1.00	-1.00	-1.00	-1.00	-1.00

COMBINAZIONI RARE - S.L.E.

DESCRIZIONI	1	2	3	4	5
Peso Strutturale	1.00	1.00	1.00	1.00	1.00
Perm.Non Strutturale	1.00	1.00	1.00	1.00	1.00
Var. Cat. E2	1.00	1.00	1.00	1.00	1.00
H1 car. manutenzione	1.00	1.00	0.00	1.00	0.00
Corr. Tors. dir. 0	0.00	0.00	0.00	0.00	0.00
Corr. Tors. dir. 90	0.00	0.00	0.00	0.00	0.00
Carico termico	0.00	0.60	1.00	-0.60	-1.00
Sisma direz. grd 0	0.00	0.00	0.00	0.00	0.00
Sisma direz. grd 90	0.00	0.00	0.00	0.00	0.00

COMBINAZIONI FREQUENTI - S.L.E.

DESCRIZIONI	1	2	3
Peso Strutturale	1.00	1.00	1.00
Perm.Non Strutturale	1.00	1.00	1.00
Var. Cat. E2	0.90	0.80	0.80
H1 car. manutenzione	0.00	0.00	0.00
Corr. Tors. dir. 0	0.00	0.00	0.00
Corr. Tors. dir. 90	0.00	0.00	0.00
Carico termico	0.00	0.50	-0.50
Sisma direz. grd 0	0.00	0.00	0.00
Sisma direz. grd 90	0.00	0.00	0.00

COMBINAZIONI PERMANENTI - S.L.E.

DESCRIZIONI	1
Peso Strutturale	1.00
Perm.Non Strutturale	1.00
Var. Cat. E2	0.80
H1 car. manutenzione	0.00
Corr. Tors. dir. 0	0.00
Corr. Tors. dir. 90	0.00
Carico termico	0.00
Sisma direz. grd 0	0.00
Sisma direz. grd 90	0.00

PULSAZIONI E MODI DI VIBRAZIONE

Modo N.ro	Pulsazione (rad/sec)	Periodo (sec)	Smorz Mod(%)	Sd/g SLO	Sd/g SLD	Sd/g SLV X	Sd/g SLV Y	Sd/g SLC X	Sd/g SLC Y	Piano N.ro	X (m)	Y (m)	Rot (rad)
1	42.627	0.14740	5.0		0.076	0.154	0.154			1	0.000000	0.236459	0.000000
2	44.558	0.14101	5.0		0.076	0.151	0.151			1	0.125903	-.200154	0.064566
3	54.701	0.11486	5.0		0.074	0.136	0.136			1	0.236460	0.000000	0.000000

FATTORI E FORZE DI PIANO MODALI S.L.V.

SISMA DIREZIONE: 0°

Massaeccitata (kN) :178.8Massatotale(t):178.8Rapporto:1

Modo N.ro	Fattore Modale	Fmod/Fmax (%)	Massa Mod Eff.(kN)	Mmod/Mtot %	Piano N.ro	FX (kN)	FY (kN)	Mt (kN*m)	Mom.Ecc. 5% (kN*m)
1	0.000	0.00	0.0	0.00	1	0.0	0.0	0.0	5.4
2	0.000	0.00	0.0	0.00	1	0.0	0.0	0.0	
3	4.229	100.00	178.8	100.03	1	24.3	0.0	0.0	

FATTORI E FORZE DI PIANO MODALI S.L.V.

SISMA DIREZIONE: 90°

Massaeccitata (kN) :178.8Massatotale(t):178.8Rapporto:1

Modo N.ro	Fattore Modale	Fmod/Fmax (%)	Massa Mod Eff.(kN)	Mmod/Mtot %	Piano N.ro	FX (kN)	FY (kN)	Mt (kN*m)	Mom.Ecc. 5% (kN*m)
1	4.229	100.00	178.8	100.03	1	0.0	27.6	0.0	8.5
2	0.000	0.00	0.0	0.00	1	0.0	0.0	0.0	
3	0.000	0.00	0.0	0.00	1	0.0	0.0	0.0	

CARATT.: SISMA 0°°: MODO3: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	4.2	0.0	-0.7	0.0	-0.2	3	0.00	0.0	-2.6	0.0	-1.5	0.0	0.2
1	5	0.00	0.0	-4.2	0.0	0.7	0.0	0.2	12	0.00	0.0	2.6	0.0	1.5	0.0	-0.2
	3	3.19	0.1	-3.5	-2.3	3.8	0.0	0.0	3	0.00	-0.1	3.5	2.3	7.4	0.2	0.0
	5	3.19	-0.1	-3.5	2.3	3.8	0.0	0.0	5	0.00	0.1	3.5	-2.3	7.4	-0.2	0.0
	10	3.19	-0.1	-3.5	-2.3	3.8	0.0	0.0	10	0.00	0.1	3.5	2.3	7.4	-0.2	0.0
	12	3.19	0.1	-3.5	2.3	3.8	0.0	0.0	12	0.00	-0.1	3.5	-2.3	7.4	0.2	0.0
	4	3.19	0.0	-2.3	-2.5	3.4	0.0	0.0	12	3.19	0.0	2.3	2.5	3.8	0.0	0.0
	6	3.19	0.0	-2.3	-2.5	3.4	0.0	0.0	5	3.19	0.0	2.3	2.5	3.8	0.0	0.0
	3	3.19	0.0	0.0	0.0	0.0	0.0	0.0	10	3.19	0.0	0.0	0.0	0.0	0.0	0.0
	5	3.19	0.0	0.0	0.0	0.0	0.0	0.0	12	3.19	0.0	0.0	0.0	0.0	0.0	0.0
	10	3.19	0.0	-2.3	2.5	3.8	0.0	0.0	4	3.19	0.0	2.3	-2.5	3.4	0.0	0.0
	3	3.19	0.0	-2.3	2.5	3.8	0.0	0.0	6	3.19	0.0	2.3	-2.5	3.4	0.0	0.0
	6	3.19	0.0	0.0	0.0	0.0	0.0	0.0	4	3.19	0.0	0.0	0.0	0.0	0.0	0.0
1	10	0.00	0.0	-1.8	0.0	6.5	0.0	0.1	4	0.00	0.0	3.1	0.0	-5.0	0.0	-0.1
1	4	0.00	0.0	-4.7	0.0	4.5	0.0	0.0	12	0.00	0.0	4.6	0.0	-1.5	0.0	0.0
1	3	0.00	0.0	-1.8	0.0	6.5	0.0	-0.1	6	0.00	0.0	3.1	0.0	-5.0	0.0	0.1
1	6	0.00	0.0	-4.7	0.0	4.5	0.0	0.0	5	0.00	0.0	4.6	0.0	-1.5	0.0	0.0
	6	3.19	0.0	-5.1	0.0	6.7	0.0	0.0	6	0.00	0.0	5.1	0.0	9.4	0.0	0.0
	4	3.19	0.0	-5.1	0.0	6.7	0.0	0.0	4	0.00	0.0	5.1	0.0	9.4	0.0	0.0
1	6	0.00	0.0	0.0	0.0	0.0	0.0	0.1	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
2	10	0.00	0.0	2.4	0.0	1.2	0.0	-0.1	3	0.00	0.0	-1.1	0.0	-2.3	0.0	0.0
3	10	0.00	0.0	1.1	0.0	2.2	0.0	0.0	3	0.00	0.0	0.1	0.0	-2.5	0.0	0.0
4	10	0.00	0.0	0.1	0.0	2.5	0.0	0.0	3	0.00	0.0	1.1	0.0	-2.2	0.0	0.0
5	10	0.00	0.0	-1.1	0.0	2.3	0.0	0.0	3	0.00	0.0	2.4	0.0	-1.2	0.0	-0.1
6	10	0.00	0.0	-2.6	0.0	1.5	0.0	0.2	3	0.00	0.0	4.2	0.0	0.7	0.0	-0.2
2	5	0.00	0.0	-2.4	0.0	-1.2	0.0	0.1	12	0.00	0.0	1.1	0.0	2.3	0.0	0.0
3	5	0.00	0.0	-1.1	0.0	-2.2	0.0	0.0	12	0.00	0.0	-0.1	0.0	2.5	0.0	0.0
4	5	0.00	0.0	-0.1	0.0	-2.5	0.0	0.0	12	0.00	0.0	-1.1	0.0	2.2	0.0	0.0
5	5	0.00	0.0	1.1	0.0	-2.3	0.0	0.0	12	0.00	0.0	-2.4	0.0	1.2	0.0	0.1
6	5	0.00	0.0	2.6	0.0	-1.5	0.0	-0.2	12	0.00	0.0	-4.2	0.0	-0.7	0.0	0.2
2	10	0.00	0.0	-2.8	0.0	4.8	0.0	0.1	4	0.00	0.0	3.7	0.0	-2.8	0.0	-0.1
3	10	0.00	0.0	-3.5	0.0	3.0	0.0	0.0	4	0.00	0.0	4.1	0.0	-0.6	0.0	0.0
4	10	0.00	0.0	-4.1	0.0	0.9	0.0	0.0	4	0.00	0.0	4.5	0.0	1.8	0.0	0.0
5	10	0.00	0.0	-4.6	0.0	-1.5	0.0	0.0	4	0.00	0.0	4.7	0.0	4.5	0.0	0.0
2	4	0.00	0.0	-4.5	0.0	1.8	0.0	0.0	12	0.00	0.0	4.1	0.0	0.9	0.0	0.0
3	4	0.00	0.0	-4.1	0.0	-0.6	0.0	0.0	12	0.00	0.0	3.5	0.0	3.0	0.0	0.0
4	4	0.00	0.0	-3.7	0.0	-2.8	0.0	0.1	12	0.00	0.0	2.8	0.0	4.8	0.0	-0.1
5	4	0.00	0.0	-3.1	0.0	-5.0	0.0	0.1	12	0.00	0.0	1.8	0.0	6.5	0.0	-0.1
2	3	0.00	0.0	-2.8	0.0	4.8	0.0	-0.1	6	0.00	0.0	3.7	0.0	-2.8	0.0	0.1
3	3	0.00	0.0	-3.5	0.0	3.0	0.0	0.0	6	0.00	0.0	4.1	0.0	-0.6	0.0	0.0
4	3	0.00	0.0	-4.1	0.0	0.9	0.0	0.0	6	0.00	0.0	4.5	0.0	1.8	0.0	0.0
5	3	0.00	0.0	-4.6	0.0	-1.5	0.0	0.0	6	0.00	0.0	4.7	0.0	4.5	0.0	0.0
2	6	0.00	0.0	-4.5	0.0	1.8	0.0	0.0	5	0.00	0.0	4.1	0.0	0.9	0.0	0.0
3	6	0.00	0.0	-4.1	0.0	-0.6	0.0	0.0	5	0.00	0.0	3.5	0.0	3.0	0.0	0.0
4	6	0.00	0.0	-3.7	0.0	-2.8	0.0	-0.1	5	0.00	0.0	2.8	0.0	4.8	0.0	0.1
5	6	0.00	0.0	-3.1	0.0	-5.0	0.0	-0.1	5	0.00	0.0	1.8	0.0	6.5	0.0	0.1
2	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
3	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
4	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
5	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
6	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.1

FORZE: SISMA 0°°: MODO3: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	0.9	1.7	-0.1	0.1	0.0	0.2	19	1.7	2.4	0.0	0.1	0.0	-0.1
	3	-1.9	-4.1	0.0	-0.1	0.1	-0.2	13	-0.7	0.0	0.1	0.0	0.0	0.1
2	51	-0.2	1.4	0.0	0.0	0.0	0.1	52	-0.1	0.1	0.1	0.0	0.0	0.0
	11	0.0	-1.2	-0.1	-0.1	0.0	-0.1	46	0.3	-0.3	0.0	0.0	0.0	0.0
3	19	-0.4	-0.2	0.0	0.0	0.0	-0.1	20	1.5	0.6	-0.1	0.1	0.0	0.1
	13	-1.6	-0.9	0.1	0.0	0.0	0.1	14	0.5	0.4	0.0	0.0	0.0	-0.1
4	20	-0.9	-0.2	0.1	0.0	0.0	-0.1	21	1.3	0.1	0.0	0.0	0.0	0.1
	14	-1.5	-0.2	0.0	-0.1	0.0	0.1	15	1.1	0.3	-0.1	-0.1	0.0	-0.2
5	21	-1.3	0.1	0.0	0.0	0.0	-0.1	22	0.9	-0.2	0.1	0.0	0.0	0.1
	15	-1.1	0.3	-0.1	-0.1	0.0	0.2	16	1.5	-0.2	0.0	-0.1	0.0	-0.1
6	22	-1.5	0.6	-0.1	0.1	0.0	-0.1	23	0.4	-0.2	0.0	0.0	0.0	0.1
	16	-0.5	0.4	0.0	0.0	0.0	0.1	17	1.6	-0.9	0.1	0.0	0.0	-0.1
7	23	-1.7	2.4	0.0	0.1	0.0	0.1	24	-0.9	1.7	-0.1	0.1	0.0	-0.2
	17	0.7	0.0	0.1	0.0	0.0	-0.1	1	1.9	-4.1	0.0	-0.1	-0.1	0.2
8	25	0.0	1.9	0.0	0.0	0.0	0.2	26	0.4	1.4	0.1	0.0	0.0	-0.1
	18	-0.3	-2.2	-0.2	-0.1	0.1	-0.2	19	-0.1	-1.1	0.1	-0.1	0.0	0.1
9	26	-0.2	0.4	0.0	0.0	0.0	0.0	27	0.9	0.7	0.0	0.0	0.0	0.0
	19	-1.2	-1.1	0.0	-0.1	0.0	0.0	20	0.5	-0.1	0.0	0.0	0.0	-0.1
10	27	-0.6	0.1	0.0	0.0	0.0	0.0	28	0.8	0.3	0.0	0.0	0.0	0.1
	20	-1.1	-0.4	0.0	0.0	0.0	0.1	21	0.8	-0.1	0.0	0.0	0.0	-0.1
11	28	-0.8	0.3	0.0	0.0	0.0	-0.1	29	0.6	0.1	0.0	0.0	0.0	0.0
	21	-0.8	-0.1	0.0	0.0	0.0	0.1	22	1.1	-0.4	0.0	0.0	0.0	-0.1
12	29	-0.9	0.7	0.0	0.0	0.0	0.0	30	0.2	0.4	0.0	0.0	0.0	0.0
	22	-0.5	-0.1	0.0	0.0	0.0	0.1	23	1.2	-1.1	0.0	-0.1	0.0	0.0
13	30	-0.4	1.4	0.1	0.0	0.0	0.1	31	0.0	1.9	0.0	0.0	0.0	-0.2
	23	0.1	-1.1	0.1	-0.1	0.0	-0.1	24	0.3	-2.2	-0.2	-0.1	-0.1	0.2
14	32	-0.5	1.4	0.1	0.0	0.0	0.1	33	-0.2	0.4	0.1	0.0	0.0	-0.1
	25	0.4	-0.7	-0.1	-0.1	0.0	-0.1	26	0.4	-1.1	-0.1	0.0	0.0	0.1
15	33	-0.1	0.5	0.0	0.0	0.0	0.0	34	0.4	0.6	0.1	0.0	0.0	0.0
	26	-0.6	-0.7	-0.1	0.0	0.0	0.0	27	0.3	-0.4	0.0	0.0	0.0	0.0
16	34	-0.2	0.3	0.0	0.0	0.0	0.0	35	0.4	0.5	0.0	0.0	0.0	0.0
	27	-0.7	-0.5	0.0	0.0	0.0	0.0	28	0.5	-0.3	0.0	0.0	0.0	0.0
17	35	-0.4	0.5	0.0	0.0	0.0	0.0	36	0.2	0.3	0.0	0.0	0.0	0.0
	28	-0.5	-0.3	0.0	0.0	0.0	0.0	29	0.7	-0.5	0.0	0.0	0.0	0.0
18	36	-0.4	0.6	0.1	0.0	0.0	0.0	37	0.1	0.5	0.0	0.0	0.0	0.0
	29	-0.3	-0.4	0.0	0.0	0.0	0.0	30	0.6	-0.7	-0.1	0.0	0.0	0.0
19	37	0.2	0.4	0.1	0.0	0.0	0.1	38	0.5	1.4	0.1	0.0	0.0	-0.1
	30	-0.4	-1.1	-0.1	0.0	0.0	-0.1	31	-0.4	-0.7	-0.1	-0.1	0.0	0.1
20	39	-0.6	0.3	0.1	0.0	0.0	0.0	40	-0.3	-0.3	0.0	0.0	0.0	0.0
	32	0.5	0.5	-0.1	0.0	0.0	0.0	33	0.4	-0.6	-0.1	0.0	0.0	0.0
21	40	0.0	0.3	0.0	0.0	0.0	0.0	41	0.0	0.4	0.0	0.0	0.0	-0.1
	33	-0.1	-0.3	0.0	0.0	0.0	0.0	34	0.1	-0.4	0.0	0.0	0.0	0.0
22	41	-0.1	0.5	0.0	0.0	0.0	0.0	42	0.1	0.5	0.0	0.0	0.0	0.0
	34	-0.3	-0.5	0.0	0.0	0.0	0.0	35	0.2	-0.5	0.0	0.0	0.0	0.0
23	42	-0.1	0.5	0.0	0.0	0.0	0.0	43	0.1	0.5	0.0	0.0	0.0	0.0
	35	-0.2	-0.5	0.0	0.0	0.0	0.0	36	0.3	-0.5	0.0	0.0	0.0	0.0
24	43	0.0	0.4	0.0	0.0	0.0	0.1	44	0.0	0.3	0.0	0.0	0.0	0.0
	36	-0.1	-0.4	0.0	0.0	0.0	0.0	37	0.1	-0.3	0.0	0.0	0.0	0.0
25	44	0.3	-0.3	0.0	0.0	0.0	0.0	45	0.6	0.3	0.1	0.0	0.0	0.0
	37	-0.4	-0.6	-0.1	0.0	0.0	0.0	38	-0.5	0.5	-0.1	0.0	0.0	0.0
26	11	0.0	-1.2	0.1	-0.1	0.0	-0.1	46	-0.3	-0.3	0.0	0.0	0.0	0.0
	39	0.2	1.4	0.0	0.0	0.0	0.1	40	0.1	0.1	-0.1	0.0	0.0	0.0
27	46	-0.2	0.5	0.0	0.0	0.0	0.0	47	-0.1	0.2	0.0	0.0	0.0	0.0
	40	0.2	-0.1	0.0	0.0	0.0	0.0	41	0.2	-0.6	0.0	0.0	0.0	0.0
28	47	-0.1	0.4	0.1	-0.1	0.0	0.0	48	0.0	0.4	0.1	-0.1	0.0	0.0
	41	0.0	-0.3	-0.1	0.0	0.0	0.0	42	0.1	-0.5	0.0	0.0	0.0	0.0
29	48	0.0	0.4	0.1	-0.1	0.0	0.0	49	0.1	0.4	0.1	-0.1	0.0	0.0
	42	-0.1	-0.5	0.0	0.0	0.0	0.0	43	0.0	-0.3	-0.1	0.0	0.0	0.0
30	49	0.1	0.2	0.0	0.0	0.0	0.0	50	0.2	0.5	0.0	0.0	0.0	0.0
	43	-0.2	-0.6	0.0	0.0	0.0	0.0	44	-0.2	-0.1	0.0	0.0	0.0	0.0
31	50	0.3	-0.3	0.0	0.0	0.0	0.0	12	0.0	-1.2	0.1	-0.1	0.0	0.1
	44	-0.1	0.1	-0.1	0.0	0.0	0.0	45	-0.2	1.4	0.0	0.0	0.0	-0.1
32	52	-0.2	-0.1	0.0	0.0	0.0	0.0	53	-0.2	-0.6	0.0	0.0	0.0	0.0
	46	0.2	0.5	0.0	0.0	0.0	0.0	47	0.1	0.2	0.0	0.0	0.0	0.0
33	53	0.0	-0.3	0.1	0.0	0.0	0.0	54	-0.1	-0.5	0.0	0.0	0.0	0.0
	47	0.1	0.4	-0.1	-0.1	0.0	0.0	48	0.0	0.4	-0.1	-0.1	0.0	0.0
34	54	0.1	-0.5	0.0	0.0	0.0	0.0	55	0.0	-0.3	0.1	0.0	0.0	0.0
	48	0.0	0.4	-0.1	-0.1	0.0	0.0	49	-0.1	0.4	-0.1	-0.1	0.0	0.0
35	55	0.2	-0.6	0.0	0.0	0.0	0.0	56	0.2	-0.1	0.0	0.0	0.0	0.0
	49	-0.1	0.2	0.0	0.0	0.0	0.0	50	-0.2	0.5	0.0	0.0	0.0	0.0
36	56	0.1	0.1	0.1	0.0	0.0	0.0	57	0.2	1.4	0.0	0.0	0.0	-0.1
	50	-0.3	-0.3	0.0	0.0	0.0	0.0	12	0.0	-1.2	-0.1	-0.1	0.0	0.1
37	58	-0.5	0.5	0.1	0.0	0.0	0.0	59	-0.4	-0.6	0.1	0.0	0.0	0.0
	51	0.6	0.3	-0.1	0.0	0.0	0.0	52	0.3	-0.3	0.0	0.0	0.0	0.0
38	59	0.1	-0.3	0.0	0.0	0.0	0.0	60	-0.1	-0.4	0.0	0.0	0.0	0.0
	52	0.0	0.3	0.0	0.0	0.0	0.0	53	0.0	0.4	0.0	0.0	0.0	-0.1
39	60	0.3	-0.5	0.0	0.0	0.0	0.0	61	-0.2	-0.5	0.0	0.0	0.0	0.0
	53	0.1	0.5	0.0	0.0	0.0	0.0	54	-0.1	0.5	0.0	0.0	0.0	0.0
40	61	0.2	-0.5	0.0	0.0	0.0	0.0	62	-0.3	-0.5	0.0	0.0	0.0	0.0
	54	0.1	0.5	0.0	0.0	0.0	0.0	55	-0.1	0.5	0.0	0.0	0.0	0.0
41	62	0.1	-0.4	0.0	0.0	0.0	0.0	63	-0.1	-0.3	0.0	0.0	0.0	0.0

FORZE: SISMA 0°°: MODO3: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
	55	0.0	0.4	0.0	0.0	0.0	0.1	56	0.0	0.3	0.0	0.0	0.0	0.0
42	63	0.4	-0.6	0.1	0.0	0.0	0.0	64	0.5	0.5	0.1	0.0	0.0	0.0
	56	-0.3	-0.3	0.0	0.0	0.0	0.0	57	-0.6	0.3	-0.1	0.0	0.0	0.0
43	65	-0.4	-0.7	0.1	-0.1	0.0	-0.1	66	-0.4	-1.1	0.1	0.0	0.0	0.1
	58	0.5	1.4	-0.1	0.0	0.0	0.1	59	0.2	0.4	-0.1	0.0	0.0	-0.1
44	66	0.6	-0.7	0.1	0.0	0.0	0.0	67	-0.3	-0.4	0.0	0.0	0.0	0.0
	59	0.1	0.5	0.0	0.0	0.0	0.0	60	-0.4	0.6	-0.1	0.0	0.0	0.0
45	67	0.7	-0.5	0.0	0.0	0.0	0.0	68	-0.5	-0.3	0.0	0.0	0.0	0.0
	60	0.2	0.3	0.0	0.0	0.0	0.0	61	-0.4	0.5	0.0	0.0	0.0	0.0
46	68	0.5	-0.3	0.0	0.0	0.0	0.0	69	-0.7	-0.5	0.0	0.0	0.0	0.0
	61	0.4	0.5	0.0	0.0	0.0	0.0	62	-0.2	0.3	0.0	0.0	0.0	0.0
47	69	0.3	-0.4	0.0	0.0	0.0	0.0	70	-0.6	-0.7	0.1	0.0	0.0	0.0
	62	0.4	0.6	-0.1	0.0	0.0	0.0	63	-0.1	0.5	0.0	0.0	0.0	0.0
48	70	0.4	-1.1	0.1	0.0	0.0	-0.1	71	0.4	-0.7	0.1	-0.1	0.0	0.1
	63	-0.2	0.4	-0.1	0.0	0.0	0.1	64	-0.5	1.4	-0.1	0.0	0.0	-0.1
49	72	0.3	-2.2	0.2	-0.1	-0.1	-0.2	73	0.1	-1.1	-0.1	-0.1	0.0	0.1
	65	0.0	1.9	0.0	0.0	0.0	0.2	66	-0.4	1.4	-0.1	0.0	0.0	-0.1
50	73	1.2	-1.1	0.0	-0.1	0.0	0.0	74	-0.5	-0.1	0.0	0.0	0.0	-0.1
	66	0.2	0.4	0.0	0.0	0.0	0.0	67	-0.9	0.7	0.0	0.0	0.0	0.0
51	74	1.1	-0.4	0.0	0.0	0.0	0.1	75	-0.8	-0.1	0.0	0.0	0.0	-0.1
	67	0.6	0.1	0.0	0.0	0.0	0.0	68	-0.8	0.3	0.0	0.0	0.0	0.1
52	75	0.8	-0.1	0.0	0.0	0.0	0.1	76	-1.1	-0.4	0.0	0.0	0.0	-0.1
	68	0.8	0.3	0.0	0.0	0.0	-0.1	69	-0.6	0.1	0.0	0.0	0.0	0.0
53	76	0.5	-0.1	0.0	0.0	0.0	0.1	77	-1.2	-1.1	0.0	-0.1	0.0	0.0
	69	0.9	0.7	0.0	0.0	0.0	0.0	70	-0.2	0.4	0.0	0.0	0.0	0.0
54	77	-0.1	-1.1	-0.1	-0.1	0.0	-0.1	78	-0.3	-2.2	0.2	-0.1	0.1	0.2
	70	0.4	1.4	-0.1	0.0	0.0	0.1	71	0.0	1.9	0.0	0.0	0.0	-0.2
55	4	1.9	-4.1	0.0	-0.1	-0.1	-0.2	79	0.7	0.0	-0.1	0.0	0.0	0.1
	72	-0.9	1.7	0.1	0.1	0.0	0.2	73	-1.7	2.4	0.0	0.1	0.0	-0.1
56	79	1.6	-0.9	-0.1	0.0	0.0	0.1	80	-0.5	0.4	0.0	0.0	0.0	-0.1
	73	0.4	-0.2	0.0	0.0	0.0	-0.1	74	-1.5	0.6	0.1	0.1	0.0	0.1
57	80	1.5	-0.2	0.0	-0.1	0.0	0.1	81	-1.1	0.3	0.1	-0.1	0.0	-0.2
	74	0.9	-0.2	-0.1	0.0	0.0	-0.1	75	-1.3	0.1	0.0	0.0	0.0	0.1
58	81	1.1	0.3	0.1	-0.1	0.0	0.2	82	-1.5	-0.2	0.0	-0.1	0.0	-0.1
	75	1.3	0.1	0.0	0.0	0.0	-0.1	76	-0.9	-0.2	-0.1	0.0	0.0	0.1
59	82	0.5	0.4	0.0	0.0	0.0	0.1	83	-1.6	-0.9	-0.1	0.0	0.0	-0.1
	76	1.5	0.6	0.1	0.1	0.0	-0.1	77	-0.4	-0.2	0.0	0.0	0.0	0.1
60	83	-0.7	0.0	-0.1	0.0	0.0	-0.1	2	-1.9	-4.1	0.0	-0.1	0.1	0.2
	77	1.7	2.4	0.0	0.1	0.0	0.1	78	0.9	1.7	0.1	0.1	0.0	-0.2

CARATT.: SISMA 90°°: MODO1: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	2.4	0.0	-7.9	0.0	0.1	3	0.00	0.0	-4.1	0.0	5.7	0.0	-0.1
1	5	0.00	0.0	-2.4	0.0	7.9	0.0	-0.1	12	0.00	0.0	4.1	0.0	-5.7	0.0	0.1
	3	3.19	-4.7	0.3	-2.9	-0.2	-6.0	0.0	3	0.00	4.7	-0.3	2.9	-0.7	-9.0	0.0
	5	3.19	-4.7	-0.3	-2.9	0.2	-6.0	0.0	5	0.00	4.7	0.3	2.9	0.7	-9.0	0.0
	10	3.19	-4.7	-0.3	2.9	0.2	-6.0	0.0	10	0.00	4.7	0.3	-2.9	0.7	-9.0	0.0
	12	3.19	-4.7	0.3	2.9	-0.2	-6.0	0.0	12	0.00	4.7	-0.3	-2.9	-0.7	-9.0	0.0
	4	3.19	-2.2	0.2	0.0	-0.2	-3.4	0.0	12	3.19	2.2	-0.2	0.0	-0.2	-3.4	0.0
	6	3.19	-2.2	-0.2	0.0	0.2	-3.4	0.0	5	3.19	2.2	0.2	0.0	0.2	-3.4	0.0
	3	3.19	0.0	-3.0	0.0	5.9	0.0	0.0	10	3.19	0.0	3.0	0.0	5.9	0.0	0.0
	5	3.19	0.0	-3.0	0.0	5.9	0.0	0.0	12	3.19	0.0	3.0	0.0	5.9	0.0	0.0
	10	3.19	2.2	-0.2	0.0	0.2	3.4	0.0	4	3.19	-2.2	0.2	0.0	0.2	3.4	0.0
	3	3.19	2.2	0.2	0.0	-0.2	3.4	0.0	6	3.19	-2.2	-0.2	0.0	-0.2	3.4	0.0
	6	3.19	0.0	-2.9	0.0	5.6	0.0	0.0	4	3.19	0.0	2.9	0.0	5.6	0.0	0.0
1	10	0.00	0.0	-5.3	0.0	1.1	0.0	-0.3	4	0.00	0.0	3.2	0.0	1.5	0.0	0.3
1	4	0.00	0.0	-3.5	0.0	0.2	0.0	-0.2	12	0.00	0.0	2.0	0.0	1.5	0.0	0.1
1	3	0.00	0.0	5.3	0.0	-1.1	0.0	-0.3	6	0.00	0.0	-3.2	0.0	-1.5	0.0	0.3
1	6	0.00	0.0	3.5	0.0	-0.2	0.0	-0.2	5	0.00	0.0	-2.0	0.0	-1.5	0.0	0.1
	6	3.19	-4.4	0.0	-3.2	0.0	-5.6	0.0	6	0.00	4.4	0.0	3.2	0.0	-8.5	0.0
	4	3.19	-4.4	0.0	3.2	0.0	-5.6	0.0	4	0.00	4.4	0.0	-3.2	0.0	-8.5	0.0
1	6	0.00	0.0	-3.8	0.0	7.1	0.0	0.0	4	0.00	0.0	5.0	0.0	-4.3	0.0	0.0
2	10	0.00	0.0	3.8	0.0	-5.6	0.0	0.1	3	0.00	0.0	-4.7	0.0	2.8	0.0	-0.1
3	10	0.00	0.0	4.6	0.0	-3.0	0.0	0.1	3	0.00	0.0	-4.9	0.0	-0.1	0.0	-0.1
4	10	0.00	0.0	4.9	0.0	-0.1	0.0	0.1	3	0.00	0.0	-4.6	0.0	-3.0	0.0	-0.1
5	10	0.00	0.0	4.7	0.0	2.8	0.0	0.1	3	0.00	0.0	-3.8	0.0	-5.6	0.0	-0.1
6	10	0.00	0.0	4.1	0.0	5.7	0.0	0.1	3	0.00	0.0	-2.4	0.0	-7.9	0.0	-0.1
2	5	0.00	0.0	-3.8	0.0	5.6	0.0	-0.1	12	0.00	0.0	4.7	0.0	-2.8	0.0	0.1
3	5	0.00	0.0	-4.6	0.0	3.0	0.0	-0.1	12	0.00	0.0	4.9	0.0	0.1	0.0	0.1
4	5	0.00	0.0	-4.9	0.0	0.1	0.0	-0.1	12	0.00	0.0	4.6	0.0	3.0	0.0	0.1
5	5	0.00	0.0	-4.7	0.0	-2.8	0.0	-0.1	12	0.00	0.0	3.8	0.0	5.6	0.0	0.1
6	5	0.00	0.0	-4.1	0.0	-5.7	0.0	-0.1	12	0.00	0.0	2.4	0.0	7.9	0.0	0.1
2	10	0.00	0.0	-3.0	0.0	-1.0	0.0	-0.1	4	0.00	0.0	1.2	0.0	2.3	0.0	0.1
3	10	0.00	0.0	-1.2	0.0	-2.0	0.0	-0.1	4	0.00	0.0	-0.4	0.0	2.3	0.0	0.0
4	10	0.00	0.0	0.3	0.0	-2.1	0.0	0.0	4	0.00	0.0	-1.8	0.0	1.5	0.0	0.0
5	10	0.00	0.0	2.0	0.0	-1.5	0.0	0.1	4	0.00	0.0	-3.5	0.0	-0.2	0.0	-0.2
2	4	0.00	0.0	-1.8	0.0	-1.5	0.0	0.0	12	0.00	0.0	0.3	0.0	2.1	0.0	0.0
3	4	0.00	0.0	-0.4	0.0	-2.3	0.0	0.0	12	0.00	0.0	-1.2	0.0	2.0	0.0	-0.1
4	4	0.00	0.0	1.2	0.0	-2.3	0.0	0.1	12	0.00	0.0	-3.0	0.0	1.0	0.0	-0.1
5	4	0.00	0.0	3.2	0.0	-1.5	0.0	0.3	12	0.00	0.0	-5.3	0.0	-1.1	0.0	-0.3
2	3	0.00	0.0	3.0	0.0	1.0	0.0	-0.1	6	0.00	0.0	-1.2	0.0	-2.3	0.0	0.1

CARATT.: SISMA 90°°: MODO1: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
3	3	0.00	0.0	1.2	0.0	2.0	0.0	-0.1	6	0.00	0.0	0.4	0.0	-2.3	0.0	0.0
4	3	0.00	0.0	-0.3	0.0	2.1	0.0	0.0	6	0.00	0.0	1.8	0.0	-1.5	0.0	0.0
5	3	0.00	0.0	-2.0	0.0	1.5	0.0	0.1	6	0.00	0.0	3.5	0.0	0.2	0.0	-0.2
2	6	0.00	0.0	1.8	0.0	1.5	0.0	0.0	5	0.00	0.0	-0.3	0.0	-2.1	0.0	0.0
3	6	0.00	0.0	0.4	0.0	2.3	0.0	0.0	5	0.00	0.0	1.2	0.0	-2.0	0.0	-0.1
4	6	0.00	0.0	-1.2	0.0	2.3	0.0	0.1	5	0.00	0.0	3.0	0.0	-1.0	0.0	-0.1
5	6	0.00	0.0	-3.2	0.0	1.5	0.0	0.3	5	0.00	0.0	5.3	0.0	1.1	0.0	-0.3
2	6	0.00	0.0	-4.4	0.0	4.8	0.0	0.0	4	0.00	0.0	5.0	0.0	-1.7	0.0	0.0
3	6	0.00	0.0	-4.8	0.0	2.7	0.0	0.0	4	0.00	0.0	5.0	0.0	0.5	0.0	0.0
4	6	0.00	0.0	-5.0	0.0	0.5	0.0	0.0	4	0.00	0.0	4.8	0.0	2.7	0.0	0.0
5	6	0.00	0.0	-5.0	0.0	-1.7	0.0	0.0	4	0.00	0.0	4.4	0.0	4.8	0.0	0.0
6	6	0.00	0.0	-5.0	0.0	-4.3	0.0	0.0	4	0.00	0.0	3.8	0.0	7.1	0.0	0.0

FORZE: SISMA 90°°: MODO1: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-0.4	1.0	-0.1	0.0	0.0	0.1	19	-2.8	-1.9	0.0	0.0	0.1	-0.1
	3	4.9	2.1	0.0	0.1	-0.1	-0.3	13	-1.7	-1.2	0.1	0.0	0.1	0.3
2	51	0.8	-0.6	-0.1	0.0	0.0	0.0	52	-1.2	-0.7	0.0	0.0	0.1	0.0
	11	2.9	0.9	0.0	0.0	-0.1	-0.2	46	-2.6	0.4	0.1	0.0	0.1	0.2
3	19	0.9	0.2	-0.1	0.0	-0.1	0.1	20	-1.5	-0.5	-0.2	0.0	0.1	-0.1
	13	2.4	0.3	0.2	0.1	-0.1	-0.2	14	-1.8	-0.1	0.0	0.1	0.0	0.2
4	20	0.8	-0.2	0.1	0.0	0.0	0.1	21	-0.1	0.2	-0.1	0.0	0.0	0.0
	14	0.4	-0.4	0.1	0.0	-0.1	-0.1	15	-1.0	0.4	-0.1	0.0	0.0	0.0
5	21	-0.1	-0.2	0.1	0.0	0.0	0.0	22	0.8	0.2	-0.1	0.0	0.0	0.1
	15	-1.0	-0.4	0.1	0.0	0.0	0.0	16	0.4	0.4	-0.1	0.0	-0.1	-0.1
6	22	-1.5	0.5	0.2	0.0	0.1	-0.1	23	0.9	-0.2	0.1	0.0	-0.1	0.1
	16	-1.8	0.1	0.0	-0.1	0.0	0.2	17	2.4	-0.3	-0.2	-0.1	-0.1	-0.2
7	23	-2.8	1.9	0.0	0.0	0.1	-0.1	24	-0.4	-1.0	0.1	0.0	0.0	0.1
	17	-1.7	1.2	-0.1	0.0	0.1	0.3	1	4.9	-2.1	0.0	-0.1	-0.1	-0.3
8	25	-0.9	-0.2	0.0	0.0	0.0	-0.1	26	-0.9	-1.8	0.1	0.0	0.1	0.1
	18	1.2	2.0	-0.1	0.0	0.0	0.1	19	0.6	0.1	0.1	0.0	0.0	-0.1
9	26	-0.5	-0.2	0.0	0.0	0.0	-0.1	27	-0.9	-1.2	0.0	0.0	0.0	0.0
	19	1.4	1.6	0.0	0.0	-0.1	0.0	20	0.0	-0.1	0.0	0.0	0.0	0.0
10	27	-0.3	0.1	0.0	0.0	0.0	0.0	28	-0.5	-0.5	-0.1	0.0	0.0	0.0
	20	0.7	0.8	0.1	0.0	0.0	0.0	21	0.1	-0.3	0.0	0.0	0.0	0.0
11	28	-0.5	0.5	0.1	0.0	0.0	0.0	29	-0.3	-0.1	0.0	0.0	0.0	0.0
	21	0.1	0.3	0.0	0.0	0.0	0.0	22	0.7	-0.8	-0.1	0.0	0.0	0.0
12	29	-0.9	1.2	0.0	0.0	0.0	0.0	30	-0.5	0.2	0.0	0.0	0.0	-0.1
	22	0.0	0.1	0.0	0.0	0.0	0.0	23	1.4	-1.6	0.0	0.0	-0.1	0.0
13	30	-0.9	1.8	-0.1	0.0	0.1	0.1	31	-0.9	0.2	0.0	0.0	0.0	-0.1
	23	0.6	-0.1	-0.1	0.0	0.0	-0.1	24	1.2	-2.0	0.1	0.0	0.0	0.1
14	32	-0.8	-0.7	0.1	0.0	-0.1	-0.2	33	-0.5	-1.7	-0.1	0.0	0.0	0.1
	25	0.6	1.9	0.1	0.0	-0.1	0.1	26	0.7	0.5	-0.1	0.0	0.0	-0.1
15	33	-0.6	-0.4	0.0	0.0	0.0	-0.1	34	-0.6	-1.3	0.0	0.0	0.0	0.1
	26	0.7	1.6	0.0	0.0	0.0	0.1	27	0.6	0.1	0.0	0.0	0.0	-0.1
16	34	-0.6	0.1	0.0	0.0	0.0	-0.1	35	-0.7	-0.7	0.0	0.0	0.0	0.0
	27	0.7	1.1	0.0	0.0	0.0	0.1	28	0.5	-0.5	0.0	0.0	0.0	0.0
17	35	-0.7	0.7	0.0	0.0	0.0	0.0	36	-0.6	-0.1	0.0	0.0	0.0	-0.1
	28	0.5	0.5	0.0	0.0	0.0	0.0	29	0.7	-1.1	0.0	0.0	0.0	0.1
18	36	-0.6	1.3	0.0	0.0	0.0	0.1	37	-0.6	0.4	0.0	0.0	0.0	-0.1
	29	0.6	-0.1	0.0	0.0	0.0	-0.1	30	0.7	-1.6	0.0	0.0	0.0	0.1
19	37	-0.5	1.7	0.1	0.0	0.0	0.1	38	-0.8	0.7	-0.1	0.0	-0.1	-0.2
	30	0.7	-0.5	0.1	0.0	0.0	-0.1	31	0.6	-1.9	-0.1	0.0	-0.1	0.1
20	39	-0.2	-0.8	-0.1	0.0	0.0	-0.1	40	-0.6	-1.4	0.0	0.0	0.0	0.1
	32	0.3	1.5	0.0	0.0	0.0	0.1	33	0.4	0.7	0.1	0.0	0.0	-0.1
21	40	0.0	-0.4	0.0	0.0	0.0	-0.1	41	-1.1	-1.1	0.0	0.0	0.0	0.0
	33	0.7	1.5	0.0	0.0	0.0	0.1	34	0.4	0.1	0.0	0.0	0.0	0.0
22	41	-0.5	0.3	0.1	0.0	0.0	0.0	42	-1.0	-0.8	0.0	0.0	0.0	0.0
	34	0.8	1.1	0.0	0.0	0.0	0.0	35	0.7	-0.6	-0.1	0.0	0.0	0.0
23	42	-1.0	0.8	0.0	0.0	0.0	0.0	43	-0.5	-0.3	-0.1	0.0	0.0	0.0
	35	0.7	0.6	0.1	0.0	0.0	0.0	36	0.8	-1.1	0.0	0.0	0.0	0.0
24	43	-1.1	1.1	0.0	0.0	0.0	0.0	44	0.0	0.4	0.0	0.0	0.0	-0.1
	36	0.4	-0.1	0.0	0.0	0.0	0.0	37	0.7	-1.5	0.0	0.0	0.0	0.1
25	44	-0.6	1.4	0.0	0.0	0.0	0.1	45	-0.2	0.8	0.1	0.0	0.0	-0.1
	37	0.4	-0.7	-0.1	0.0	0.0	-0.1	38	0.3	-1.5	0.0	0.0	0.0	0.1
26	11	2.9	-0.9	0.0	0.0	-0.1	0.2	46	-2.6	-0.4	0.1	0.0	0.1	-0.2
	39	0.8	0.6	-0.1	0.0	0.0	0.0	40	-1.2	0.7	0.0	0.0	0.1	0.0
27	46	0.8	0.6	0.2	-0.1	-0.1	0.1	47	-2.5	-1.2	0.0	-0.1	0.0	-0.1
	40	1.8	1.1	0.0	0.0	-0.1	-0.1	41	-0.1	-0.5	-0.2	0.0	0.0	0.1
28	47	-0.7	1.2	0.1	0.0	0.0	0.1	48	-1.9	-1.4	-0.1	0.0	0.0	0.0
	41	1.7	1.3	0.1	0.0	0.0	0.0	42	1.0	-1.1	-0.1	0.0	0.0	0.0
29	48	-1.9	1.4	0.1	0.0	0.0	0.0	49	-0.7	-1.2	-0.1	0.0	0.0	0.1
	42	1.0	1.1	0.1	0.0	0.0	0.0	43	1.7	-1.3	-0.1	0.0	0.0	0.0
30	49	-2.5	1.2	0.0	0.1	0.0	-0.1	50	0.8	-0.6	-0.2	0.1	-0.1	0.1
	43	-0.1	0.5	0.2	0.0	0.0	0.1	44	1.8	-1.1	0.0	0.0	-0.1	-0.1
31	50	-2.6	0.4	-0.1	0.0	0.1	-0.2	12	2.9	0.9	0.0	0.0	-0.1	0.2
	44	-1.2	-0.7	0.0	0.0	0.1	0.0	45	0.8	-0.6	0.1	0.0	0.0	0.0
32	52	1.8	-1.1	0.0	0.0	-0.1	0.1	53	-0.1	0.5	-0.2	0.0	0.0	-0.1
	46	0.8	-0.6	0.2	0.1	-0.1	-0.1	47	-2.5	1.2	0.0	0.1	0.0	0.1

FORZE: SISMA 90°°: MODO1: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
33	53	1.7	-1.3	0.1	0.0	0.0	0.0	54	1.0	1.1	-0.1	0.0	0.0	0.0
	47	-0.7	-1.2	0.1	0.0	0.0	-0.1	48	-1.9	1.4	-0.1	0.0	0.0	0.0
34	54	1.0	-1.1	0.1	0.0	0.0	0.0	55	1.7	1.3	-0.1	0.0	0.0	0.0
	48	-1.9	-1.4	0.1	0.0	0.0	0.0	49	-0.7	1.2	-0.1	0.0	0.0	-0.1
35	55	-0.1	-0.5	0.2	0.0	0.0	-0.1	56	1.8	1.1	0.0	0.0	-0.1	0.1
	49	-2.5	-1.2	0.0	-0.1	0.0	0.1	50	0.8	0.6	-0.2	-0.1	-0.1	-0.1
36	56	-1.2	0.7	0.0	0.0	0.1	0.0	57	0.8	0.6	0.1	0.0	0.0	0.0
	50	-2.6	-0.4	-0.1	0.0	0.1	0.2	12	2.9	-0.9	0.0	0.0	-0.1	-0.2
37	58	0.3	-1.5	0.0	0.0	0.0	-0.1	59	0.4	-0.7	0.1	0.0	0.0	0.1
	51	-0.2	0.8	-0.1	0.0	0.0	0.1	52	-0.6	1.4	0.0	0.0	0.0	-0.1
38	59	0.7	-1.5	0.0	0.0	0.0	-0.1	60	0.4	-0.1	0.0	0.0	0.0	0.0
	52	0.0	0.4	0.0	0.0	0.0	0.1	53	-1.1	1.1	0.0	0.0	0.0	0.0
39	60	0.8	-1.1	0.0	0.0	0.0	0.0	61	0.7	0.6	-0.1	0.0	0.0	0.0
	53	-0.5	-0.3	0.1	0.0	0.0	0.0	54	-1.0	0.8	0.0	0.0	0.0	0.0
40	61	0.7	-0.6	0.1	0.0	0.0	0.0	62	0.8	1.1	0.0	0.0	0.0	0.0
	54	-1.0	-0.8	0.0	0.0	0.0	0.0	55	-0.5	0.3	-0.1	0.0	0.0	0.0
41	62	0.4	0.1	0.0	0.0	0.0	0.0	63	0.7	1.5	0.0	0.0	0.0	-0.1
	55	-1.1	-1.1	0.0	0.0	0.0	0.0	56	0.0	-0.4	0.0	0.0	0.0	0.1
42	63	0.4	0.7	-0.1	0.0	0.0	0.1	64	0.3	1.5	0.0	0.0	0.0	-0.1
	56	-0.6	-1.4	0.0	0.0	0.0	-0.1	57	-0.2	-0.8	0.1	0.0	0.0	0.1
43	65	0.6	-1.9	0.1	0.0	-0.1	-0.1	66	0.7	-0.5	-0.1	0.0	0.0	0.1
	58	-0.8	0.7	0.1	0.0	-0.1	0.2	59	-0.5	1.7	-0.1	0.0	0.0	-0.1
44	66	0.7	-1.6	0.0	0.0	0.0	-0.1	67	0.6	-0.1	0.0	0.0	0.0	0.1
	59	-0.6	0.4	0.0	0.0	0.0	0.1	60	-0.6	1.3	0.0	0.0	0.0	-0.1
45	67	0.7	-1.1	0.0	0.0	0.0	-0.1	68	0.5	0.5	0.0	0.0	0.0	0.0
	60	-0.6	-0.1	0.0	0.0	0.0	0.1	61	-0.7	0.7	0.0	0.0	0.0	0.0
46	68	0.5	-0.5	0.0	0.0	0.0	0.0	69	0.7	1.1	0.0	0.0	0.0	-0.1
	61	-0.7	-0.7	0.0	0.0	0.0	0.0	62	-0.6	0.1	0.0	0.0	0.0	0.1
47	69	0.6	0.1	0.0	0.0	0.0	0.1	70	0.7	1.6	0.0	0.0	0.0	-0.1
	62	-0.7	-1.3	0.0	0.0	0.0	-0.1	63	-0.6	-0.4	0.0	0.0	0.0	0.1
48	70	0.7	0.5	0.1	0.0	0.0	0.1	71	0.6	1.9	-0.1	0.0	-0.1	-0.1
	63	-0.5	-1.7	0.1	0.0	0.0	-0.1	64	-0.8	-0.7	-0.1	0.0	-0.1	0.2
49	72	1.2	-2.0	-0.1	0.0	0.0	-0.1	73	0.6	-0.1	0.1	0.0	0.0	0.1
	65	-0.9	0.2	0.0	0.0	0.0	0.1	66	-0.9	1.8	0.1	0.0	0.1	-0.1
50	73	1.4	-1.6	0.0	0.0	-0.1	0.0	74	0.0	0.1	0.0	0.0	0.0	0.0
	66	-0.5	0.2	0.0	0.0	0.0	0.1	67	-0.9	1.2	0.0	0.0	0.0	0.0
51	74	0.7	-0.8	0.1	0.0	0.0	0.0	75	0.1	0.3	0.0	0.0	0.0	0.0
	67	-0.3	-0.1	0.0	0.0	0.0	0.0	68	-0.5	0.5	-0.1	0.0	0.0	0.0
52	75	0.1	-0.3	0.0	0.0	0.0	0.0	76	0.7	0.8	-0.1	0.0	0.0	0.0
	68	-0.5	-0.5	0.1	0.0	0.0	0.0	69	-0.3	0.1	0.0	0.0	0.0	0.0
53	76	0.0	-0.1	0.0	0.0	0.0	0.0	77	1.4	1.6	0.0	0.0	-0.1	0.0
	69	-0.9	-1.2	0.0	0.0	0.0	0.0	70	-0.5	-0.2	0.0	0.0	0.0	0.1
54	77	0.6	0.1	-0.1	0.0	0.0	0.1	78	1.2	2.0	0.1	0.0	0.0	-0.1
	70	-0.9	-1.8	-0.1	0.0	0.1	-0.1	71	-0.9	-0.2	0.0	0.0	0.0	0.1
55	4	4.9	-2.1	0.0	-0.1	-0.1	0.3	79	-1.7	1.2	0.1	0.0	0.1	-0.3
	72	-0.4	-1.0	-0.1	0.0	0.0	-0.1	73	-2.8	1.9	0.0	0.0	0.1	0.1
56	79	2.4	-0.3	0.2	-0.1	-0.1	0.2	80	-1.8	0.1	0.0	-0.1	0.0	-0.2
	73	0.9	-0.2	-0.1	0.0	-0.1	-0.1	74	-1.5	0.5	-0.2	0.0	0.1	0.1
57	80	0.4	0.4	0.1	0.0	-0.1	0.1	81	-1.0	-0.4	-0.1	0.0	0.0	0.0
	74	0.8	0.2	0.1	0.0	0.0	-0.1	75	-0.1	-0.2	-0.1	0.0	0.0	0.0
58	81	-1.0	0.4	0.1	0.0	0.0	0.0	82	0.4	-0.4	-0.1	0.0	-0.1	0.1
	75	-0.1	0.2	0.1	0.0	0.0	0.0	76	0.8	-0.2	-0.1	0.0	0.0	-0.1
59	82	-1.8	-0.1	0.0	0.1	0.0	-0.2	83	2.4	0.3	-0.2	0.1	-0.1	0.2
	76	-1.5	-0.5	0.2	0.0	0.1	0.1	77	0.9	0.2	0.1	0.0	-0.1	-0.1
60	83	-1.7	-1.2	-0.1	0.0	0.1	-0.3	2	4.9	2.1	0.0	0.1	-0.1	0.3
	77	-2.8	-1.9	0.0	0.0	0.1	0.1	78	-0.4	1.0	0.1	0.0	0.0	-0.1

SPOST.: SISMA 0°: MODO3: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	0.04	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	0.04	0.00	0.00001	0.00000	0.0000
1	5	0.00	0.00	-0.04	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.04	0.00	-.00001	0.00000	0.0000
	3	3.19	0.00	-0.44	-0.04	-.00013	0.00000	0.0000	3	0.00	0.00	0.00	-0.04	-.00003	0.00001	0.0000
	5	3.19	0.00	-0.44	0.04	-.00013	0.00000	0.0000	5	0.00	0.00	0.00	0.04	-.00003	-.00001	0.0000
	10	3.19	0.00	-0.44	-0.04	-.00013	0.00000	0.0000	10	0.00	0.00	0.00	-0.04	-.00003	-.00001	0.0000
	12	3.19	0.00	-0.44	0.04	-.00013	0.00000	0.0000	12	0.00	0.00	0.00	0.04	-.00003	0.00001	0.0000
	4	3.19	0.00	0.00	0.44	0.00009	0.00000	0.0000	12	3.19	0.00	-0.04	0.44	0.00013	0.00000	0.0000
	6	3.19	0.00	0.00	0.44	0.00009	0.00000	0.0000	5	3.19	0.00	-0.04	0.44	0.00013	0.00000	0.0000
	3	3.19	-0.44	0.04	0.00	0.00000	0.00000	0.0001	10	3.19	-0.44	0.04	0.00	0.00000	0.00000	0.0001
	5	3.19	-0.44	-0.04	0.00	0.00000	0.00000	0.0001	12	3.19	-0.44	-0.04	0.00	0.00000	0.00000	0.0001
	10	3.19	0.00	0.04	0.44	0.00013	0.00000	0.0000	4	3.19	0.00	0.00	0.44	0.00009	0.00000	0.0000
	3	3.19	0.00	0.04	0.44	0.00013	0.00000	0.0000	6	3.19	0.00	0.00	0.44	0.00009	0.00000	0.0000
	6	3.19	-0.44	0.00	0.00	0.00000	0.00000	0.0001	4	3.19	-0.44	0.00	0.00	0.00000	0.00000	0.0001
1	10	0.00	0.00	0.04	0.00	0.00003	0.00000	0.0000	4	0.00	0.00	0.03	0.00	0.00002	0.00000	0.0000
1	4	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
1	3	0.00	0.00	0.04	0.00	0.00003	0.00000	0.0000	6	0.00	0.00	0.03	0.00	0.00002	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
	6	3.19	0.00	-0.44	0.00	-.00009	0.00000	0.0000	6	0.00	0.00	0.00	0.00	-.00001	0.00000	0.0000
	4	3.19	0.00	-0.44	0.00	-.00009	0.00000	0.0000	4	0.00	0.00	0.00	0.00	-.00001	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.04	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	0.03	0.00	0.00000	0.00000	0.0000

SPOST.: SISMA 0°: MODO3: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
3	10	0.00	0.00	0.03	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.03	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.03	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.03	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.03	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.04	0.00	-.00001	0.00000	0.0000
6	10	0.00	0.00	0.04	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	0.04	0.00	-.00001	0.00000	0.0000
2	5	0.00	0.00	-0.04	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.03	0.00	0.00000	0.00000	0.0000
3	5	0.00	0.00	-0.03	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.03	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.03	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.03	0.00	0.00000	0.00000	0.0000
5	5	0.00	0.00	-0.03	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.04	0.00	0.00001	0.00000	0.0000
6	5	0.00	0.00	-0.04	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.04	0.00	0.00001	0.00000	0.0000
2	10	0.00	0.00	0.03	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	0.02	0.00	0.00001	0.00000	0.0000
3	10	0.00	0.00	0.02	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
4	10	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
5	10	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
2	4	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
3	4	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00001	0.00000	0.0000
4	4	0.00	0.00	-0.02	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.03	0.00	0.00002	0.00000	0.0000
5	4	0.00	0.00	-0.03	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.04	0.00	0.00003	0.00000	0.0000
2	3	0.00	0.00	0.03	0.00	0.00002	0.00000	0.0000	6	0.00	0.00	0.02	0.00	0.00001	0.00000	0.0000
3	3	0.00	0.00	0.02	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
4	3	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000
5	3	0.00	0.00	0.01	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
2	6	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000
3	6	0.00	0.00	-0.01	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.02	0.00	0.00001	0.00000	0.0000
4	6	0.00	0.00	-0.02	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.03	0.00	0.00002	0.00000	0.0000
5	6	0.00	0.00	-0.03	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.04	0.00	0.00003	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000

SPOST.: SISMA 0°: MODO3: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	0.03	-.00002	0.00000	0.00000	19	0.00	0.00	0.03	-.00002	0.00000	0.00000
	3	0.00	0.00	0.04	-.00003	0.00001	0.00000	13	0.00	0.00	0.04	-.00002	0.00001	0.00000
2	51	0.00	0.00	-0.01	-.00001	0.00000	0.00000	52	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	11	0.00	0.00	0.00	-.00001	0.00000	0.00000	46	0.00	0.00	0.00	-.00001	0.00000	0.00000
3	19	0.00	0.00	0.03	-.00002	0.00000	0.00000	20	0.00	0.00	0.02	-.00001	0.00000	0.00000
	13	0.00	0.00	0.04	-.00002	0.00001	0.00000	14	0.00	0.00	0.03	-.00002	0.00000	0.00000
4	20	0.00	0.00	0.02	-.00001	0.00000	0.00000	21	0.00	0.00	0.02	-.00001	0.00000	0.00000
	14	0.00	0.00	0.03	-.00002	0.00000	0.00000	15	0.00	0.00	0.03	-.00001	0.00000	0.00000
5	21	0.00	0.00	0.02	-.00001	0.00000	0.00000	22	0.00	0.00	0.02	-.00001	0.00000	0.00000
	15	0.00	0.00	0.03	-.00001	0.00000	0.00000	16	0.00	0.00	0.03	-.00002	0.00000	0.00000
6	22	0.00	0.00	0.02	-.00001	0.00000	0.00000	23	0.00	0.00	0.03	-.00002	0.00000	0.00000
	16	0.00	0.00	0.03	-.00002	0.00000	0.00000	17	0.00	0.00	0.04	-.00002	-.00001	0.00000
7	23	0.00	0.00	0.03	-.00002	0.00000	0.00000	24	0.00	0.00	0.03	-.00002	0.00000	0.00000
	17	0.00	0.00	0.04	-.00002	-.00001	0.00000	1	0.00	0.00	0.04	-.00003	-.00001	0.00000
8	25	0.00	0.00	0.02	-.00001	0.00000	0.00000	26	0.00	0.00	0.02	-.00001	0.00000	0.00000
	18	0.00	0.00	0.03	-.00002	0.00000	0.00000	19	0.00	0.00	0.03	-.00002	0.00000	0.00000
9	26	0.00	0.00	0.02	-.00001	0.00000	0.00000	27	0.00	0.00	0.02	-.00001	0.00000	0.00000
	19	0.00	0.00	0.03	-.00002	0.00000	0.00000	20	0.00	0.00	0.02	-.00001	0.00000	0.00000
10	27	0.00	0.00	0.02	-.00001	0.00000	0.00000	28	0.00	0.00	0.02	-.00001	0.00000	0.00000
	20	0.00	0.00	0.02	-.00001	0.00000	0.00000	21	0.00	0.00	0.02	-.00001	0.00000	0.00000
11	28	0.00	0.00	0.02	-.00001	0.00000	0.00000	29	0.00	0.00	0.02	-.00001	0.00000	0.00000
	21	0.00	0.00	0.02	-.00001	0.00000	0.00000	22	0.00	0.00	0.02	-.00001	0.00000	0.00000
12	29	0.00	0.00	0.02	-.00001	0.00000	0.00000	30	0.00	0.00	0.02	-.00001	0.00000	0.00000
	22	0.00	0.00	0.02	-.00001	0.00000	0.00000	23	0.00	0.00	0.03	-.00002	0.00000	0.00000
13	30	0.00	0.00	0.02	-.00001	0.00000	0.00000	31	0.00	0.00	0.02	-.00001	0.00000	0.00000
	23	0.00	0.00	0.03	-.00002	0.00000	0.00000	24	0.00	0.00	0.03	-.00002	0.00000	0.00000
14	32	0.00	0.00	0.01	-.00001	0.00000	0.00000	33	0.00	0.00	0.01	-.00001	0.00000	0.00000
	25	0.00	0.00	0.02	-.00001	0.00000	0.00000	26	0.00	0.00	0.02	-.00001	0.00000	0.00000
15	33	0.00	0.00	0.01	-.00001	0.00000	0.00000	34	0.00	0.00	0.01	-.00001	0.00000	0.00000
	26	0.00	0.00	0.02	-.00001	0.00000	0.00000	27	0.00	0.00	0.02	-.00001	0.00000	0.00000
16	34	0.00	0.00	0.01	-.00001	0.00000	0.00000	35	0.00	0.00	0.01	-.00001	0.00000	0.00000
	27	0.00	0.00	0.02	-.00001	0.00000	0.00000	28	0.00	0.00	0.02	-.00001	0.00000	0.00000
17	35	0.00	0.00	0.01	-.00001	0.00000	0.00000	36	0.00	0.00	0.01	-.00001	0.00000	0.00000
	28	0.00	0.00	0.02	-.00001	0.00000	0.00000	29	0.00	0.00	0.02	-.00001	0.00000	0.00000
18	36	0.00	0.00	0.01	-.00001	0.00000	0.00000	37	0.00	0.00	0.01	-.00001	0.00000	0.00000
	29	0.00	0.00	0.02	-.00001	0.00000	0.00000	30	0.00	0.00	0.02	-.00001	0.00000	0.00000
19	37	0.00	0.00	0.01	-.00001	0.00000	0.00000	38	0.00	0.00	0.01	-.00001	0.00000	0.00000
	30	0.00	0.00	0.02	-.00001	0.00000	0.00000	31	0.00	0.00	0.02	-.00001	0.00000	0.00000
20	39	0.00	0.00	0.01	-.00001	0.00000	0.00000	40	0.00	0.00	0.01	-.00001	0.00000	0.00000
	32	0.00	0.00	0.01	-.00001	0.00000	0.00000	33	0.00	0.00	0.01	-.00001	0.00000	0.00000
21	40	0.00	0.00	0.01	-.00001	0.00000	0.00000	41	0.00	0.00	0.01	-.00001	0.00000	0.00000
	33	0.00	0.00	0.01	-.00001	0.00000	0.00000	34	0.00	0.00	0.01	-.00001	0.00000	0.00000
22	41	0.00	0.00	0.01	-.00001	0.00000	0.00000	42	0.00	0.00	0.01	-.00001	0.00000	0.00000
	34	0.00	0.00	0.01	-.00001	0.00000	0.00000	35	0.00	0.00	0.01	-.00001	0.00000	0.00000
23	42	0.00	0.00	0.01	-.00001	0.00000	0.00000	43	0.00	0.00	0.01	-.00001	0.00000	0.00000
	35	0.00	0.00	0.01	-.00001	0.00000	0.00000	36	0.00	0.00	0.01	-.00001	0.00000	0.00000
24	43	0.00	0.00	0.01	-.00001	0.00000	0.00000	44	0.00	0.00	0.01	-.00001	0.00000	0.00000
	36	0.00	0.00	0.01	-.00001	0.00000	0.00000	37	0.00	0.00	0.01	-.00001	0.00000	0.00000

SPOST.: SISMA 0°: MODO3: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
25	44	0.00	0.00	0.01	-.00001	0.00000	0.00000	45	0.00	0.00	0.01	-.00001	0.00000	0.00000
	37	0.00	0.00	0.01	-.00001	0.00000	0.00000	38	0.00	0.00	0.01	-.00001	0.00000	0.00000
26	11	0.00	0.00	0.00	-.00001	0.00000	0.00000	46	0.00	0.00	0.00	-.00001	0.00000	0.00000
	39	0.00	0.00	0.01	-.00001	0.00000	0.00000	40	0.00	0.00	0.01	-.00001	0.00000	0.00000
27	46	0.00	0.00	0.00	-.00001	0.00000	0.00000	47	0.00	0.00	0.00	-.00001	0.00000	0.00000
	40	0.00	0.00	0.01	-.00001	0.00000	0.00000	41	0.00	0.00	0.01	-.00001	0.00000	0.00000
28	47	0.00	0.00	0.00	-.00001	0.00000	0.00000	48	0.00	0.00	0.00	-.00001	0.00000	0.00000
	41	0.00	0.00	0.01	-.00001	0.00000	0.00000	42	0.00	0.00	0.01	-.00001	0.00000	0.00000
29	48	0.00	0.00	0.00	-.00001	0.00000	0.00000	49	0.00	0.00	0.00	-.00001	0.00000	0.00000
	42	0.00	0.00	0.01	-.00001	0.00000	0.00000	43	0.00	0.00	0.01	-.00001	0.00000	0.00000
30	49	0.00	0.00	0.00	-.00001	0.00000	0.00000	50	0.00	0.00	0.00	-.00001	0.00000	0.00000
	43	0.00	0.00	0.01	-.00001	0.00000	0.00000	44	0.00	0.00	0.01	-.00001	0.00000	0.00000
31	50	0.00	0.00	0.00	-.00001	0.00000	0.00000	12	0.00	0.00	0.00	-.00001	0.00000	0.00000
	44	0.00	0.00	0.01	-.00001	0.00000	0.00000	45	0.00	0.00	0.01	-.00001	0.00000	0.00000
32	52	0.00	0.00	-0.01	-.00001	0.00000	0.00000	53	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	46	0.00	0.00	0.00	-.00001	0.00000	0.00000	47	0.00	0.00	0.00	-.00001	0.00000	0.00000
33	53	0.00	0.00	-0.01	-.00001	0.00000	0.00000	54	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	47	0.00	0.00	0.00	-.00001	0.00000	0.00000	48	0.00	0.00	0.00	-.00001	0.00000	0.00000
34	54	0.00	0.00	-0.01	-.00001	0.00000	0.00000	55	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	48	0.00	0.00	0.00	-.00001	0.00000	0.00000	49	0.00	0.00	0.00	-.00001	0.00000	0.00000
35	55	0.00	0.00	-0.01	-.00001	0.00000	0.00000	56	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	49	0.00	0.00	0.00	-.00001	0.00000	0.00000	50	0.00	0.00	0.00	-.00001	0.00000	0.00000
36	56	0.00	0.00	-0.01	-.00001	0.00000	0.00000	57	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	50	0.00	0.00	0.00	-.00001	0.00000	0.00000	12	0.00	0.00	0.00	-.00001	0.00000	0.00000
37	58	0.00	0.00	-0.01	-.00001	0.00000	0.00000	59	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	51	0.00	0.00	-0.01	-.00001	0.00000	0.00000	52	0.00	0.00	-0.01	-.00001	0.00000	0.00000
38	59	0.00	0.00	-0.01	-.00001	0.00000	0.00000	60	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	52	0.00	0.00	-0.01	-.00001	0.00000	0.00000	53	0.00	0.00	-0.01	-.00001	0.00000	0.00000
39	60	0.00	0.00	-0.01	-.00001	0.00000	0.00000	61	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	53	0.00	0.00	-0.01	-.00001	0.00000	0.00000	54	0.00	0.00	-0.01	-.00001	0.00000	0.00000
40	61	0.00	0.00	-0.01	-.00001	0.00000	0.00000	62	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	54	0.00	0.00	-0.01	-.00001	0.00000	0.00000	55	0.00	0.00	-0.01	-.00001	0.00000	0.00000
41	62	0.00	0.00	-0.01	-.00001	0.00000	0.00000	63	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	55	0.00	0.00	-0.01	-.00001	0.00000	0.00000	56	0.00	0.00	-0.01	-.00001	0.00000	0.00000
42	63	0.00	0.00	-0.01	-.00001	0.00000	0.00000	64	0.00	0.00	-0.01	-.00001	0.00000	0.00000
	56	0.00	0.00	-0.01	-.00001	0.00000	0.00000	57	0.00	0.00	-0.01	-.00001	0.00000	0.00000
43	65	0.00	0.00	-0.02	-.00001	0.00000	0.00000	66	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	58	0.00	0.00	-0.01	-.00001	0.00000	0.00000	59	0.00	0.00	-0.01	-.00001	0.00000	0.00000
44	66	0.00	0.00	-0.02	-.00001	0.00000	0.00000	67	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	59	0.00	0.00	-0.01	-.00001	0.00000	0.00000	60	0.00	0.00	-0.01	-.00001	0.00000	0.00000
45	67	0.00	0.00	-0.02	-.00001	0.00000	0.00000	68	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	60	0.00	0.00	-0.01	-.00001	0.00000	0.00000	61	0.00	0.00	-0.01	-.00001	0.00000	0.00000
46	68	0.00	0.00	-0.02	-.00001	0.00000	0.00000	69	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	61	0.00	0.00	-0.01	-.00001	0.00000	0.00000	62	0.00	0.00	-0.01	-.00001	0.00000	0.00000
47	69	0.00	0.00	-0.02	-.00001	0.00000	0.00000	70	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	62	0.00	0.00	-0.01	-.00001	0.00000	0.00000	63	0.00	0.00	-0.01	-.00001	0.00000	0.00000
48	70	0.00	0.00	-0.02	-.00001	0.00000	0.00000	71	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	63	0.00	0.00	-0.01	-.00001	0.00000	0.00000	64	0.00	0.00	-0.01	-.00001	0.00000	0.00000
49	72	0.00	0.00	-0.03	-.00002	0.00000	0.00000	73	0.00	0.00	-0.03	-.00002	0.00000	0.00000
	65	0.00	0.00	-0.02	-.00001	0.00000	0.00000	66	0.00	0.00	-0.02	-.00001	0.00000	0.00000
50	73	0.00	0.00	-0.03	-.00002	0.00000	0.00000	74	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	66	0.00	0.00	-0.02	-.00001	0.00000	0.00000	67	0.00	0.00	-0.02	-.00001	0.00000	0.00000
51	74	0.00	0.00	-0.02	-.00001	0.00000	0.00000	75	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	67	0.00	0.00	-0.02	-.00001	0.00000	0.00000	68	0.00	0.00	-0.02	-.00001	0.00000	0.00000
52	75	0.00	0.00	-0.02	-.00001	0.00000	0.00000	76	0.00	0.00	-0.02	-.00001	0.00000	0.00000
	68	0.00	0.00	-0.02	-.00001	0.00000	0.00000	69	0.00	0.00	-0.02	-.00001	0.00000	0.00000
53	76	0.00	0.00	-0.02	-.00001	0.00000	0.00000	77	0.00	0.00	-0.03	-.00002	0.00000	0.00000
	69	0.00	0.00	-0.02	-.00001	0.00000	0.00000	70	0.00	0.00	-0.02	-.00001	0.00000	0.00000
54	77	0.00	0.00	-0.03	-.00002	0.00000	0.00000	78	0.00	0.00	-0.03	-.00002	0.00000	0.00000
	70	0.00	0.00	-0.02	-.00001	0.00000	0.00000	71	0.00	0.00	-0.02	-.00001	0.00000	0.00000
55	4	0.00	0.00	-0.04	-.00003	-.00001	0.00000	79	0.00	0.00	-0.04	-.00002	-.00001	0.00000
	72	0.00	0.00	-0.03	-.00002	0.00000	0.00000	73	0.00	0.00	-0.03	-.00002	0.00000	0.00000
56	79	0.00	0.00	-0.04	-.00002	-.00001	0.00000	80	0.00	0.00	-0.03	-.00002	0.00000	0.00000
	73	0.00	0.00	-0.03	-.00002	0.00000	0.00000	74	0.00	0.00	-0.02	-.00001	0.00000	0.00000
57	80	0.00	0.00	-0.03	-.00002	0.00000	0.00000	81	0.00	0.00	-0.03	-.00001	0.00000	0.00000
	74	0.00	0.00	-0.02	-.00001	0.00000	0.00000	75	0.00	0.00	-0.02	-.00001	0.00000	0.00000
58	81	0.00	0.00	-0.03	-.00001	0.00000	0.00000	82	0.00	0.00	-0.03	-.00002	0.00000	0.00000
	75	0.00	0.00	-0.02	-.00001	0.00000	0.00000	76	0.00	0.00	-0.02	-.00001	0.00000	0.00000
59	82	0.00	0.00	-0.03	-.00002	0.00000	0.00000	83	0.00	0.00	-0.04	-.00002	0.00001	0.00000
	76	0.00	0.00	-0.02	-.00001	0.00000	0.00000	77	0.00	0.00	-0.03	-.00002	0.00000	0.00000
60	83	0.00	0.00	-0.04	-.00002	0.00001	0.00000	2	0.00	0.00	-0.04	-.00003	0.00001	0.00000
	77	0.00	0.00	-0.03	-.00002	0.00000	0.00000	78	0.00	0.00	-0.03	-.00002	0.00000	0.00000

SPOST.: SISMA 90°: MODO1: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.06	0.00	-.00004	0.00000	0.0000	3	0.00	0.00	-0.03	0.00	-.00003	0.00000	0.0000
1	5	0.00	0.00	0.06	0.00	0.00004	0.00000	0.0000	12	0.00	0.00	0.03	0.00	0.00003	0.00000	0.0000
	3	3.19	-0.83	0.00	-0.06	0.00000	0.00021	0.0000	3	0.00	0.00	0.00	-0.06	-.00001	0.00004	0.0000
	5	3.19	-0.83	0.00	-0.06	0.00000	0.00021	0.0000	5	0.00	0.00	0.00	-0.06	0.00001	0.00004	0.0000

SPOST.: SISMA 90°: MODO1: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
	10	3.19	-0.83	0.00	0.06	0.00000	0.00021	0.0000	10	0.00	0.00	0.00	0.06	0.00001	0.00004	0.0000
	12	3.19	-0.83	0.00	0.06	0.00000	0.00021	0.0000	12	0.00	0.00	0.00	0.06	-.00001	0.00004	0.0000
	4	3.19	0.76	-0.04	0.00	0.00000	0.00000	-.0002	12	3.19	0.83	-0.06	0.00	0.00000	0.00000	-.0002
	6	3.19	0.76	0.04	0.00	0.00000	0.00000	-.0002	5	3.19	0.83	0.06	0.00	0.00000	0.00000	-.0002
	3	3.19	0.00	0.06	0.83	0.00021	0.00000	0.0000	10	3.19	0.00	-0.06	0.83	0.00021	0.00000	0.0000
	5	3.19	0.00	0.06	0.83	0.00021	0.00000	0.0000	12	3.19	0.00	-0.06	0.83	0.00021	0.00000	0.0000
	10	3.19	0.83	-0.06	0.00	0.00000	0.00000	-.0002	4	3.19	0.76	-0.04	0.00	0.00000	0.00000	-.0002
	3	3.19	0.83	0.06	0.00	0.00000	0.00000	-.0002	6	3.19	0.76	0.04	0.00	0.00000	0.00000	-.0002
	6	3.19	0.00	0.04	0.76	0.00019	0.00000	0.0000	4	3.19	0.00	-0.04	0.76	0.00019	0.00000	0.0000
1	10	0.00	0.00	-0.06	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.05	0.00	-.00001	0.00000	0.0000
1	4	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	0.06	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.05	0.00	0.00001	0.00000	0.0000
1	6	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000
	6	3.19	-0.76	0.00	-0.04	0.00000	0.00019	0.0000	6	0.00	0.00	0.00	-0.04	0.00000	0.00003	0.0000
	4	3.19	-0.76	0.00	0.04	0.00000	0.00019	0.0000	4	0.00	0.00	0.00	0.04	0.00000	0.00003	0.0000
1	6	0.00	0.00	0.04	0.00	0.00003	0.00000	0.0000	4	0.00	0.00	0.02	0.00	0.00002	0.00000	0.0000
2	10	0.00	0.00	-0.03	0.00	-.00003	0.00000	0.0000	3	0.00	0.00	-0.02	0.00	-.00003	0.00000	0.0000
3	10	0.00	0.00	-0.02	0.00	-.00003	0.00000	0.0000	3	0.00	0.00	0.00	0.00	-.00002	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	-.00002	0.00000	0.0000	3	0.00	0.00	0.02	0.00	-.00003	0.00000	0.0000
5	10	0.00	0.00	0.02	0.00	-.00003	0.00000	0.0000	3	0.00	0.00	0.03	0.00	-.00003	0.00000	0.0000
6	10	0.00	0.00	0.03	0.00	-.00003	0.00000	0.0000	3	0.00	0.00	0.06	0.00	-.00004	0.00000	0.0000
2	5	0.00	0.00	0.03	0.00	0.00003	0.00000	0.0000	12	0.00	0.00	0.02	0.00	0.00003	0.00000	0.0000
3	5	0.00	0.00	0.02	0.00	0.00003	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00002	0.00000	0.0000
4	5	0.00	0.00	0.00	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00003	0.00000	0.0000
5	5	0.00	0.00	-0.02	0.00	0.00003	0.00000	0.0000	12	0.00	0.00	-0.03	0.00	0.00003	0.00000	0.0000
6	5	0.00	0.00	-0.03	0.00	0.00003	0.00000	0.0000	12	0.00	0.00	-0.06	0.00	0.00004	0.00000	0.0000
2	10	0.00	0.00	-0.05	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.05	0.00	-.00001	0.00000	0.0000
3	10	0.00	0.00	-0.05	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	-0.04	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.05	0.00	0.00001	0.00000	0.0000
4	4	0.00	0.00	-0.05	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.05	0.00	0.00001	0.00000	0.0000
5	4	0.00	0.00	-0.05	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.06	0.00	0.00001	0.00000	0.0000
2	3	0.00	0.00	0.05	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.05	0.00	0.00001	0.00000	0.0000
3	3	0.00	0.00	0.05	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.04	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.05	0.00	-.00001	0.00000	0.0000
4	6	0.00	0.00	0.05	0.00	-.00001	0.00000	0.0000	5	0.00	0.00	0.05	0.00	-.00001	0.00000	0.0000
5	6	0.00	0.00	0.05	0.00	-.00001	0.00000	0.0000	5	0.00	0.00	0.06	0.00	-.00001	0.00000	0.0000
2	6	0.00	0.00	0.02	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	0.01	0.00	0.00002	0.00000	0.0000
3	6	0.00	0.00	0.01	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00002	0.00000	0.0000
5	6	0.00	0.00	-0.01	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.02	0.00	0.00002	0.00000	0.0000
6	6	0.00	0.00	-0.02	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.04	0.00	0.00003	0.00000	0.0000

SPOST.: SISMA 90°: MODO1: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.05	0.00001	-.00003	0.00000	19	0.00	0.00	-0.03	0.00000	-.00003	0.00000
	3	0.01	0.00	-0.06	0.00001	-.00004	0.00000	13	0.00	0.00	-0.03	0.00001	-.00003	0.00000
2	51	0.00	0.00	-0.04	0.00000	-.00003	0.00000	52	0.00	0.00	-0.02	0.00000	-.00002	0.00000
	11	0.00	0.00	-0.04	0.00000	-.00003	0.00000	46	0.00	0.00	-0.02	0.00000	-.00002	0.00000
3	19	0.00	0.00	-0.03	0.00000	-.00003	0.00000	20	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	13	0.00	0.00	-0.03	0.00001	-.00003	0.00000	14	0.00	0.00	-0.02	0.00000	-.00003	0.00000
4	20	0.00	0.00	-0.01	0.00000	-.00002	0.00000	21	0.00	0.00	0.00	0.00000	-.00002	0.00000
	14	0.00	0.00	-0.02	0.00000	-.00003	0.00000	15	0.00	0.00	0.00	0.00000	-.00002	0.00000
5	21	0.00	0.00	0.00	0.00000	-.00002	0.00000	22	0.00	0.00	0.01	0.00000	-.00002	0.00000
	15	0.00	0.00	0.00	0.00000	-.00002	0.00000	16	0.00	0.00	0.02	0.00000	-.00003	0.00000
6	22	0.00	0.00	0.01	0.00000	-.00002	0.00000	23	0.00	0.00	0.03	0.00000	-.00003	0.00000
	16	0.00	0.00	0.02	0.00000	-.00003	0.00000	17	0.00	0.00	0.03	-.00001	-.00003	0.00000
7	23	0.00	0.00	0.03	0.00000	-.00003	0.00000	24	0.00	0.00	0.05	-.00001	-.00003	0.00000
	17	0.00	0.00	0.03	-.00001	-.00003	0.00000	1	0.01	0.00	0.06	-.00001	-.00004	0.00000
8	25	0.00	0.00	-0.05	0.00001	-.00003	0.00000	26	0.00	0.00	-0.03	0.00000	-.00002	0.00000
	18	0.00	0.00	-0.05	0.00001	-.00003	0.00000	19	0.00	0.00	-0.03	0.00000	-.00003	0.00000
9	26	0.00	0.00	-0.03	0.00000	-.00002	0.00000	27	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	19	0.00	0.00	-0.03	0.00000	-.00003	0.00000	20	0.00	0.00	-0.01	0.00000	-.00002	0.00000
10	27	0.00	0.00	-0.01	0.00000	-.00002	0.00000	28	0.00	0.00	0.00	0.00000	-.00002	0.00000
	20	0.00	0.00	-0.01	0.00000	-.00002	0.00000	21	0.00	0.00	0.00	0.00000	-.00002	0.00000
11	28	0.00	0.00	0.00	0.00000	-.00002	0.00000	29	0.00	0.00	0.01	0.00000	-.00002	0.00000
	21	0.00	0.00	0.00	0.00000	-.00002	0.00000	22	0.00	0.00	0.01	0.00000	-.00002	0.00000
12	29	0.00	0.00	0.01	0.00000	-.00002	0.00000	30	0.00	0.00	0.03	0.00000	-.00002	0.00000
	22	0.00	0.00	0.01	0.00000	-.00002	0.00000	23	0.00	0.00	0.03	0.00000	-.00003	0.00000
13	30	0.00	0.00	0.03	0.00000	-.00002	0.00000	31	0.00	0.00	0.05	-.00001	-.00003	0.00000
	23	0.00	0.00	0.03	0.00000	-.00003	0.00000	24	0.00	0.00	0.05	-.00001	-.00003	0.00000
14	32	0.00	0.00	-0.04	0.00000	-.00003	0.00000	33	0.00	0.00	-0.03	0.00000	-.00002	0.00000
	25	0.00	0.00	-0.05	0.00001	-.00003	0.00000	26	0.00	0.00	-0.03	0.00000	-.00002	0.00000
15	33	0.00	0.00	-0.03	0.00000	-.00002	0.00000	34	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	26	0.00	0.00	-0.03	0.00000	-.00002	0.00000	27	0.00	0.00	-0.01	0.00000	-.00002	0.00000
16	34	0.00	0.00	-0.01	0.00000	-.00002	0.00000	35	0.00	0.00	0.00	0.00000	-.00002	0.00000
	27	0.00	0.00	-0.01	0.00000	-.00002	0.00000	28	0.00	0.00	0.00	0.00000	-.00002	0.00000

SPOST.: SISMA 90°: MODO1: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
17	35	0.00	0.00	0.00	0.00000	-.00002	0.00000	36	0.00	0.00	0.01	0.00000	-.00002	0.00000
	28	0.00	0.00	0.00	0.00000	-.00002	0.00000	29	0.00	0.00	0.01	0.00000	-.00002	0.00000
18	36	0.00	0.00	0.01	0.00000	-.00002	0.00000	37	0.00	0.00	0.03	0.00000	-.00002	0.00000
	29	0.00	0.00	0.01	0.00000	-.00002	0.00000	30	0.00	0.00	0.03	0.00000	-.00002	0.00000
19	37	0.00	0.00	0.03	0.00000	-.00002	0.00000	38	0.00	0.00	0.04	0.00000	-.00003	0.00000
	30	0.00	0.00	0.03	0.00000	-.00002	0.00000	31	0.00	0.00	0.05	-.00001	-.00003	0.00000
20	39	0.00	0.00	-0.04	0.00000	-.00003	0.00000	40	0.00	0.00	-0.02	0.00000	-.00002	0.00000
	32	0.00	0.00	-0.04	0.00000	-.00003	0.00000	33	0.00	0.00	-0.03	0.00000	-.00002	0.00000
21	40	0.00	0.00	-0.02	0.00000	-.00002	0.00000	41	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	33	0.00	0.00	-0.03	0.00000	-.00002	0.00000	34	0.00	0.00	-0.01	0.00000	-.00002	0.00000
22	41	0.00	0.00	-0.01	0.00000	-.00002	0.00000	42	0.00	0.00	0.00	0.00000	-.00002	0.00000
	34	0.00	0.00	-0.01	0.00000	-.00002	0.00000	35	0.00	0.00	0.00	0.00000	-.00002	0.00000
23	42	0.00	0.00	0.00	0.00000	-.00002	0.00000	43	0.00	0.00	0.01	0.00000	-.00002	0.00000
	35	0.00	0.00	0.00	0.00000	-.00002	0.00000	36	0.00	0.00	0.01	0.00000	-.00002	0.00000
24	43	0.00	0.00	0.01	0.00000	-.00002	0.00000	44	0.00	0.00	0.02	0.00000	-.00002	0.00000
	36	0.00	0.00	0.01	0.00000	-.00002	0.00000	37	0.00	0.00	0.03	0.00000	-.00002	0.00000
25	44	0.00	0.00	0.02	0.00000	-.00002	0.00000	45	0.00	0.00	0.04	0.00000	-.00003	0.00000
	37	0.00	0.00	0.03	0.00000	-.00002	0.00000	38	0.00	0.00	0.04	0.00000	-.00003	0.00000
26	11	0.00	0.00	-0.04	0.00000	-.00003	0.00000	46	0.00	0.00	-0.02	0.00000	-.00002	0.00000
	39	0.00	0.00	-0.04	0.00000	-.00003	0.00000	40	0.00	0.00	-0.02	0.00000	-.00002	0.00000
27	46	0.00	0.00	-0.02	0.00000	-.00002	0.00000	47	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	40	0.00	0.00	-0.02	0.00000	-.00002	0.00000	41	0.00	0.00	-0.01	0.00000	-.00002	0.00000
28	47	0.00	0.00	-0.01	0.00000	-.00002	0.00000	48	0.00	0.00	0.00	0.00000	-.00001	0.00000
	41	0.00	0.00	-0.01	0.00000	-.00002	0.00000	42	0.00	0.00	0.00	0.00000	-.00002	0.00000
29	48	0.00	0.00	0.00	0.00000	-.00001	0.00000	49	0.00	0.00	0.01	0.00000	-.00002	0.00000
	42	0.00	0.00	0.00	0.00000	-.00002	0.00000	43	0.00	0.00	0.01	0.00000	-.00002	0.00000
30	49	0.00	0.00	0.01	0.00000	-.00002	0.00000	50	0.00	0.00	0.02	0.00000	-.00002	0.00000
	43	0.00	0.00	0.01	0.00000	-.00002	0.00000	44	0.00	0.00	0.02	0.00000	-.00002	0.00000
31	50	0.00	0.00	0.02	0.00000	-.00002	0.00000	12	0.00	0.00	0.04	0.00000	-.00003	0.00000
	44	0.00	0.00	0.02	0.00000	-.00002	0.00000	45	0.00	0.00	0.04	0.00000	-.00003	0.00000
32	52	0.00	0.00	-0.02	0.00000	-.00002	0.00000	53	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	46	0.00	0.00	-0.02	0.00000	-.00002	0.00000	47	0.00	0.00	-0.01	0.00000	-.00002	0.00000
33	53	0.00	0.00	-0.01	0.00000	-.00002	0.00000	54	0.00	0.00	0.00	0.00000	-.00002	0.00000
	47	0.00	0.00	-0.01	0.00000	-.00002	0.00000	48	0.00	0.00	0.00	0.00000	-.00001	0.00000
34	54	0.00	0.00	0.00	0.00000	-.00002	0.00000	55	0.00	0.00	0.01	0.00000	-.00002	0.00000
	48	0.00	0.00	0.00	0.00000	-.00001	0.00000	49	0.00	0.00	0.01	0.00000	-.00002	0.00000
35	55	0.00	0.00	0.01	0.00000	-.00002	0.00000	56	0.00	0.00	0.02	0.00000	-.00002	0.00000
	49	0.00	0.00	0.01	0.00000	-.00002	0.00000	50	0.00	0.00	0.02	0.00000	-.00002	0.00000
36	56	0.00	0.00	0.02	0.00000	-.00002	0.00000	57	0.00	0.00	0.04	0.00000	-.00003	0.00000
	50	0.00	0.00	0.02	0.00000	-.00002	0.00000	12	0.00	0.00	0.04	0.00000	-.00003	0.00000
37	58	0.00	0.00	-0.04	0.00000	-.00003	0.00000	59	0.00	0.00	-0.03	0.00000	-.00002	0.00000
	51	0.00	0.00	-0.04	0.00000	-.00003	0.00000	52	0.00	0.00	-0.02	0.00000	-.00002	0.00000
38	59	0.00	0.00	-0.03	0.00000	-.00002	0.00000	60	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	52	0.00	0.00	-0.02	0.00000	-.00002	0.00000	53	0.00	0.00	-0.01	0.00000	-.00002	0.00000
39	60	0.00	0.00	-0.01	0.00000	-.00002	0.00000	61	0.00	0.00	0.00	0.00000	-.00002	0.00000
	53	0.00	0.00	-0.01	0.00000	-.00002	0.00000	54	0.00	0.00	0.00	0.00000	-.00002	0.00000
40	61	0.00	0.00	0.00	0.00000	-.00002	0.00000	62	0.00	0.00	0.01	0.00000	-.00002	0.00000
	54	0.00	0.00	0.00	0.00000	-.00002	0.00000	55	0.00	0.00	0.01	0.00000	-.00002	0.00000
41	62	0.00	0.00	0.01	0.00000	-.00002	0.00000	63	0.00	0.00	0.03	0.00000	-.00002	0.00000
	55	0.00	0.00	0.01	0.00000	-.00002	0.00000	56	0.00	0.00	0.02	0.00000	-.00002	0.00000
42	63	0.00	0.00	0.03	0.00000	-.00002	0.00000	64	0.00	0.00	0.04	0.00000	-.00003	0.00000
	56	0.00	0.00	0.02	0.00000	-.00002	0.00000	57	0.00	0.00	0.04	0.00000	-.00003	0.00000
43	65	0.00	0.00	-0.05	-.00001	-.00003	0.00000	66	0.00	0.00	-0.03	0.00000	-.00002	0.00000
	58	0.00	0.00	-0.04	0.00000	-.00003	0.00000	59	0.00	0.00	-0.03	0.00000	-.00002	0.00000
44	66	0.00	0.00	-0.03	0.00000	-.00002	0.00000	67	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	59	0.00	0.00	-0.03	0.00000	-.00002	0.00000	60	0.00	0.00	-0.01	0.00000	-.00002	0.00000
45	67	0.00	0.00	-0.01	0.00000	-.00002	0.00000	68	0.00	0.00	0.00	0.00000	-.00002	0.00000
	60	0.00	0.00	-0.01	0.00000	-.00002	0.00000	61	0.00	0.00	0.00	0.00000	-.00002	0.00000
46	68	0.00	0.00	0.00	0.00000	-.00002	0.00000	69	0.00	0.00	0.01	0.00000	-.00002	0.00000
	61	0.00	0.00	0.00	0.00000	-.00002	0.00000	62	0.00	0.00	0.01	0.00000	-.00002	0.00000
47	69	0.00	0.00	0.01	0.00000	-.00002	0.00000	70	0.00	0.00	0.03	0.00000	-.00002	0.00000
	62	0.00	0.00	0.01	0.00000	-.00002	0.00000	63	0.00	0.00	0.03	0.00000	-.00002	0.00000
48	70	0.00	0.00	0.03	0.00000	-.00002	0.00000	71	0.00	0.00	0.05	0.00001	-.00003	0.00000
	63	0.00	0.00	0.03	0.00000	-.00002	0.00000	64	0.00	0.00	0.04	0.00000	-.00003	0.00000
49	72	0.00	0.00	-0.05	-.00001	-.00003	0.00000	73	0.00	0.00	-0.03	0.00000	-.00003	0.00000
	65	0.00	0.00	-0.05	-.00001	-.00003	0.00000	66	0.00	0.00	-0.03	0.00000	-.00002	0.00000
50	73	0.00	0.00	-0.03	0.00000	-.00003	0.00000	74	0.00	0.00	-0.01	0.00000	-.00002	0.00000
	66	0.00	0.00	-0.03	0.00000	-.00002	0.00000	67	0.00	0.00	-0.01	0.00000	-.00002	0.00000
51	74	0.00	0.00	-0.01	0.00000	-.00002	0.00000	75	0.00	0.00	0.00	0.00000	-.00002	0.00000
	67	0.00	0.00	-0.01	0.00000	-.00002	0.00000	68	0.00	0.00	0.00	0.00000	-.00002	0.00000
52	75	0.00	0.00	0.00	0.00000	-.00002	0.00000	76	0.00	0.00	0.01	0.00000	-.00002	0.00000
	68	0.00	0.00	0.00	0.00000	-.00002	0.00000	69	0.00	0.00	0.01	0.00000	-.00002	0.00000
53	76	0.00	0.00	0.01	0.00000	-.00002	0.00000	77	0.00	0.00	0.03	0.00000	-.00003	0.00000
	69	0.00	0.00	0.01	0.00000	-.00002	0.00000	70	0.00	0.00	0.03	0.00000	-.00002	0.00000
54	77	0.00	0.00	0.03	0.00000	-.00003	0.00000	78	0.00	0.00	0.05	0.00001	-.00003	0.00000
	70	0.00	0.00	0.03	0.00000	-.00002	0.00000	71	0.00	0.00	0.05	0.00001	-.00003	0.00000
55	4	0.01	0.00	-0.06	-.00001	-.00004	0.00000	79	0.00	0.00	-0.03	-.00001	-.00003	0.00000
	72	0.00	0.00	-0.05	-.00001	-.00003	0.00000	73	0.00	0.00	-0.03	0.00000	-.00003	0.00000
56	79	0.00	0.00	-0.03	-.00001	-.00003	0.00000	80	0.00	0.00	-0.02	0.00000	-.00003	0.00000
	73	0.00	0.00	-0.03	0.00000	-.00003	0.00000	74	0.00	0.00	-0.01	0.00000	-.00002	0.00000

SPOST.: SISMA 90°: MODO1: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
57	80	0.00	0.00	-0.02	0.00000	-.00003	0.00000	81	0.00	0.00	0.00	0.00000	-.00002	0.00000
	74	0.00	0.00	-0.01	0.00000	-.00002	0.00000	75	0.00	0.00	0.00	0.00000	-.00002	0.00000
58	81	0.00	0.00	0.00	0.00000	-.00002	0.00000	82	0.00	0.00	0.02	0.00000	-.00003	0.00000
	75	0.00	0.00	0.00	0.00000	-.00002	0.00000	76	0.00	0.00	0.01	0.00000	-.00002	0.00000
59	82	0.00	0.00	0.02	0.00000	-.00003	0.00000	83	0.00	0.00	0.03	0.00001	-.00003	0.00000
	76	0.00	0.00	0.01	0.00000	-.00002	0.00000	77	0.00	0.00	0.03	0.00000	-.00003	0.00000
60	83	0.00	0.00	0.03	0.00001	-.00003	0.00000	2	0.01	0.00	0.06	0.00001	-.00004	0.00000
	77	0.00	0.00	0.03	0.00000	-.00003	0.00000	78	0.00	0.00	0.05	0.00001	-.00003	0.00000

CARATT. PESO PROPRIO: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-19.6	0.0	-0.6	0.0	0.5	3	0.00	0.0	9.8	0.0	10.2	0.0	-0.5
1	5	0.00	0.0	-19.6	0.0	-0.6	0.0	0.5	12	0.00	0.0	9.8	0.0	10.2	0.0	-0.5
	3	3.19	3.7	0.7	28.0	-2.5	8.9	0.0	3	0.00	-3.7	-0.7	-37.6	0.3	2.9	0.0
	5	3.19	3.7	-0.7	28.0	2.5	8.9	0.0	5	0.00	-3.7	0.7	-37.6	-0.3	2.9	0.0
	10	3.19	-3.7	0.7	28.0	-2.5	-8.9	0.0	10	0.00	3.7	-0.7	-37.6	0.3	-2.9	0.0
	12	3.19	-3.7	-0.7	28.0	2.5	-8.9	0.0	12	0.00	3.7	0.7	-37.6	-0.3	-2.9	0.0
	4	3.19	-0.1	10.4	0.0	-5.9	-0.1	0.7	12	3.19	0.1	8.8	0.0	3.4	-0.1	0.6
	6	3.19	0.1	10.4	0.0	-5.9	0.1	-0.7	5	3.19	-0.1	8.8	0.0	3.4	0.1	-0.6
	3	3.19	0.0	19.2	0.0	-9.5	0.0	0.8	10	3.19	0.0	19.2	0.0	9.5	0.0	0.8
	5	3.19	0.0	19.2	0.0	-9.5	0.0	-0.8	12	3.19	0.0	19.2	0.0	9.5	0.0	-0.8
	10	3.19	0.1	8.8	0.0	-3.4	0.1	0.6	4	3.19	-0.1	10.4	0.0	5.9	0.1	0.7
	3	3.19	-0.1	8.8	0.0	-3.4	-0.1	-0.6	6	3.19	0.1	10.4	0.0	5.9	-0.1	-0.7
	6	3.19	0.0	24.7	4.7	-12.4	0.0	0.0	4	3.19	0.0	24.7	-4.7	12.4	0.0	0.0
1	10	0.00	0.0	-18.4	0.0	2.2	0.0	-0.6	4	0.00	0.0	8.8	0.0	6.2	0.0	0.6
1	4	0.00	0.0	-19.5	0.0	6.3	0.0	-0.5	12	0.00	0.0	11.0	0.0	3.2	0.0	0.5
1	3	0.00	0.0	-18.4	0.0	2.2	0.0	0.6	6	0.00	0.0	8.8	0.0	6.2	0.0	-0.6
1	6	0.00	0.0	-19.5	0.0	6.3	0.0	0.5	5	0.00	0.0	11.0	0.0	3.2	0.0	-0.5
	6	3.19	4.8	0.0	45.5	0.0	11.0	0.0	6	0.00	-4.8	0.0	-55.0	0.0	4.3	0.0
	4	3.19	-4.8	0.0	45.5	0.0	-11.0	0.0	4	0.00	4.8	0.0	-55.0	0.0	-4.3	0.0
1	6	0.00	0.0	-16.9	0.0	-1.4	0.0	0.0	4	0.00	0.0	4.9	0.0	8.4	0.0	0.0
2	10	0.00	0.0	-11.8	0.0	-7.9	0.0	0.3	3	0.00	0.0	3.0	0.0	12.7	0.0	-0.3
3	10	0.00	0.0	-6.4	0.0	-11.6	0.0	0.1	3	0.00	0.0	-1.9	0.0	13.1	0.0	-0.1
4	10	0.00	0.0	-1.9	0.0	-13.1	0.0	-0.1	3	0.00	0.0	-6.4	0.0	11.6	0.0	0.1
5	10	0.00	0.0	3.0	0.0	-12.7	0.0	-0.3	3	0.00	0.0	-11.8	0.0	7.9	0.0	0.3
6	10	0.00	0.0	9.8	0.0	-10.1	0.0	-0.5	3	0.00	0.0	-19.6	0.0	0.6	0.0	0.5
2	5	0.00	0.0	-11.8	0.0	-7.9	0.0	0.3	12	0.00	0.0	3.0	0.0	12.7	0.0	-0.3
3	5	0.00	0.0	-6.4	0.0	-11.6	0.0	0.1	12	0.00	0.0	-1.9	0.0	13.1	0.0	-0.1
4	5	0.00	0.0	-1.9	0.0	-13.1	0.0	-0.1	12	0.00	0.0	-6.4	0.0	11.6	0.0	0.1
5	5	0.00	0.0	3.0	0.0	-12.7	0.0	-0.3	12	0.00	0.0	-11.8	0.0	7.9	0.0	0.3
6	5	0.00	0.0	9.8	0.0	-10.2	0.0	-0.5	12	0.00	0.0	-19.6	0.0	0.6	0.0	0.5
2	10	0.00	0.0	-9.9	0.0	-4.2	0.0	-0.3	4	0.00	0.0	1.0	0.0	7.5	0.0	0.3
3	10	0.00	0.0	-3.4	0.0	-6.7	0.0	0.0	4	0.00	0.0	-5.1	0.0	6.1	0.0	0.0
4	10	0.00	0.0	3.0	0.0	-6.4	0.0	0.2	4	0.00	0.0	-11.4	0.0	1.9	0.0	-0.2
5	10	0.00	0.0	11.0	0.0	-3.2	0.0	0.5	4	0.00	0.0	-19.5	0.0	-6.3	0.0	-0.5
2	4	0.00	0.0	-11.4	0.0	-1.9	0.0	-0.2	12	0.00	0.0	3.0	0.0	6.4	0.0	0.2
3	4	0.00	0.0	-5.1	0.0	-6.1	0.0	0.0	12	0.00	0.0	-3.4	0.0	6.7	0.0	0.0
4	4	0.00	0.0	1.0	0.0	-7.5	0.0	0.3	12	0.00	0.0	-9.9	0.0	4.2	0.0	-0.3
5	4	0.00	0.0	8.8	0.0	-6.2	0.0	0.6	12	0.00	0.0	-18.4	0.0	-2.2	0.0	-0.6
2	3	0.00	0.0	-9.9	0.0	-4.2	0.0	0.3	6	0.00	0.0	1.0	0.0	7.5	0.0	-0.3
3	3	0.00	0.0	-3.4	0.0	-6.7	0.0	0.0	6	0.00	0.0	-5.1	0.0	6.1	0.0	0.0
4	3	0.00	0.0	3.0	0.0	-6.4	0.0	-0.2	6	0.00	0.0	-11.4	0.0	1.9	0.0	0.2
5	3	0.00	0.0	11.0	0.0	-3.2	0.0	-0.5	6	0.00	0.0	-19.5	0.0	-6.3	0.0	0.5
2	6	0.00	0.0	-11.4	0.0	-1.9	0.0	0.2	5	0.00	0.0	3.0	0.0	6.4	0.0	-0.2
3	6	0.00	0.0	-5.1	0.0	-6.1	0.0	0.0	5	0.00	0.0	-3.4	0.0	6.7	0.0	0.0
4	6	0.00	0.0	1.0	0.0	-7.5	0.0	-0.3	5	0.00	0.0	-9.9	0.0	4.2	0.0	0.3
5	6	0.00	0.0	8.8	0.0	-6.2	0.0	-0.6	5	0.00	0.0	-18.4	0.0	-2.2	0.0	0.6
2	6	0.00	0.0	-10.3	0.0	-6.3	0.0	0.0	4	0.00	0.0	-1.0	0.0	9.3	0.0	0.0
3	6	0.00	0.0	-6.7	0.0	-8.4	0.0	0.0	4	0.00	0.0	-4.1	0.0	9.2	0.0	0.0
4	6	0.00	0.0	-4.1	0.0	-9.2	0.0	0.0	4	0.00	0.0	-6.7	0.0	8.4	0.0	0.0
5	6	0.00	0.0	-1.0	0.0	-9.3	0.0	0.0	4	0.00	0.0	-10.3	0.0	6.3	0.0	0.0
6	6	0.00	0.0	4.9	0.0	-8.4	0.0	0.0	4	0.00	0.0	-16.9	0.0	1.4	0.0	0.0

FORZE PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-5.3	5.2	0.2	0.1	0.0	0.0	19	-8.2	-6.4	0.2	-0.1	0.2	-0.2
	3	9.8	7.8	0.4	0.2	-0.2	-0.2	13	3.8	-6.6	0.7	0.1	0.0	0.3
2	51	-1.7	3.0	-0.2	0.1	0.1	0.2	52	-4.6	-3.5	0.2	-0.1	0.2	-0.1
	11	5.9	3.0	0.4	0.2	-0.1	-0.3	46	0.4	-2.6	1.1	0.3	0.1	0.2
3	19	-0.4	4.8	-0.8	0.2	0.0	0.5	20	-8.0	-2.3	-0.6	0.0	0.2	-0.6
	13	9.7	3.3	1.3	0.6	-0.2	-0.7	14	-1.3	-5.8	1.6	0.5	0.1	0.7
4	20	3.5	3.6	-1.1	0.2	-0.1	0.8	21	-6.3	1.2	-1.0	0.1	0.2	-0.8
	14	8.0	-0.8	1.8	0.7	-0.2	-0.9	15	-5.1	-3.9	1.9	0.7	0.2	0.9
5	21	6.3	1.2	-1.0	0.1	-0.2	0.8	22	-3.5	3.6	-1.1	0.2	0.1	-0.8
	15	5.1	-3.9	1.9	0.7	-0.2	-0.9	16	-8.0	-0.8	1.8	0.7	0.2	0.9
6	22	8.0	-2.3	-0.6	0.0	-0.2	0.6	23	0.4	4.8	-0.8	0.2	0.0	-0.5
	16	1.3	-5.8	1.6	0.5	-0.1	-0.7	17	-9.7	3.3	1.3	0.6	0.2	0.7
7	23	8.2	-6.4	0.2	-0.1	-0.2	0.2	24	5.3	5.2	0.2	0.1	0.0	0.0
	17	-3.8	-6.6	0.7	0.1	0.0	-0.3	1	-9.8	7.8	0.4	0.2	0.2	0.2
8	25	-4.0	0.4	1.1	0.0	-0.3	-0.3	26	-3.8	-5.5	-0.3	-0.1	0.0	0.2
	18	4.5	7.0	0.9	0.1	-0.4	0.3	19	3.3	-1.9	-0.2	-0.1	-0.1	-0.2

FORZE PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
9	26	-0.4	1.3	0.2	0.3	0.1	0.1	27	-4.6	-2.7	-0.1	0.3	0.0	-0.2
	19	5.4	3.5	0.8	0.0	-0.1	-0.2	20	-0.4	-2.1	0.6	-0.2	-0.1	0.3
10	27	2.2	0.9	-0.3	0.5	0.1	0.3	28	-4.0	-0.5	-0.3	0.5	0.0	-0.4
	20	5.0	0.8	1.0	-0.1	0.0	-0.4	21	-3.2	-1.2	1.0	-0.1	0.0	0.5
11	28	4.0	-0.5	-0.3	0.5	0.0	0.4	29	-2.2	0.9	-0.3	0.5	-0.1	-0.3
	21	3.2	-1.2	1.0	-0.1	0.0	-0.5	22	-5.0	0.8	1.0	-0.1	0.0	0.4
12	29	4.6	-2.7	-0.1	0.3	0.0	0.2	30	0.4	1.3	0.2	0.3	-0.1	-0.1
	22	0.4	-2.1	0.6	-0.2	0.1	-0.3	23	-5.4	3.5	0.8	0.0	0.1	0.2
13	30	3.8	-5.5	-0.3	-0.1	0.0	-0.2	31	4.0	0.4	1.1	0.0	0.3	0.3
	23	-3.3	-1.9	-0.2	-0.1	0.1	0.2	24	-4.5	7.0	0.9	0.1	0.4	-0.3
14	32	-1.3	-2.6	1.3	0.0	-0.5	-0.4	33	-0.8	-3.4	-0.6	0.1	-0.1	0.3
	25	0.6	4.6	1.4	0.1	-0.5	0.4	26	1.5	1.4	-0.6	0.0	-0.1	-0.3
15	33	0.7	-1.0	0.6	0.2	0.0	0.0	34	-2.6	-2.2	0.2	0.3	-0.2	0.0
	26	2.7	2.8	0.6	-0.2	0.0	0.0	27	-0.8	0.4	0.1	-0.3	-0.2	0.0
16	34	2.1	-0.7	0.5	0.4	0.1	0.1	35	-2.9	-1.2	0.5	0.4	-0.1	-0.2
	27	3.2	1.4	0.3	-0.4	0.1	-0.2	28	-2.4	0.5	0.3	-0.5	-0.1	0.2
17	35	2.9	-1.2	0.5	0.4	0.1	0.2	36	-2.1	-0.7	0.5	0.4	-0.1	-0.1
	28	2.4	0.5	0.3	-0.5	0.1	-0.2	29	-3.2	1.4	0.3	-0.4	-0.1	0.2
18	36	2.6	-2.2	0.2	0.3	0.2	0.0	37	-0.7	-1.0	0.6	0.2	0.0	0.0
	29	0.8	0.4	0.1	-0.3	0.2	0.0	30	-2.7	2.8	0.6	-0.2	0.0	0.0
19	37	0.8	-3.4	-0.6	0.1	0.1	-0.3	38	1.3	-2.6	1.3	0.0	0.5	0.4
	30	-1.5	1.4	-0.6	0.0	0.1	0.3	31	-0.6	4.6	1.4	0.1	0.5	-0.4
20	39	2.3	-3.9	0.6	-0.1	-0.2	-0.2	40	0.4	-0.6	0.1	0.1	-0.1	0.1
	32	-1.4	1.3	0.8	0.0	-0.2	0.3	33	-1.3	3.2	0.0	0.1	0.1	-0.2
21	40	2.7	-2.0	0.8	-0.1	-0.1	0.1	41	-1.9	-1.0	0.9	0.1	-0.1	-0.1
	33	1.4	1.3	0.0	-0.3	0.1	0.0	34	-2.2	1.7	-0.2	-0.2	0.0	0.0
22	41	3.3	-1.4	1.2	-0.1	0.0	0.2	42	-3.1	-1.0	1.2	-0.1	0.0	-0.2
	34	2.7	1.2	-0.5	-0.5	0.1	-0.2	35	-2.9	1.2	-0.5	-0.4	0.0	0.2
23	42	3.1	-1.0	1.2	-0.1	0.0	0.2	43	-3.3	-1.4	1.2	-0.1	0.0	-0.2
	35	2.9	1.2	-0.5	-0.4	0.0	-0.2	36	-2.7	1.2	-0.5	-0.5	-0.1	0.2
24	43	1.9	-1.0	0.9	0.1	0.1	0.1	44	-2.7	-2.0	0.8	-0.1	0.1	-0.1
	36	2.2	1.7	-0.2	-0.2	0.0	0.0	37	-1.4	1.3	0.0	-0.3	-0.1	0.0
25	44	-0.4	-0.6	0.1	0.1	0.1	-0.1	45	-2.3	-3.9	0.6	-0.1	0.2	0.2
	37	1.3	3.2	0.0	0.1	-0.1	0.2	38	1.4	1.3	0.8	0.0	0.2	-0.3
26	11	5.9	-3.0	0.4	-0.2	-0.1	0.3	46	0.4	2.6	1.1	-0.3	0.1	-0.2
	39	-1.7	-3.0	-0.2	-0.1	0.1	-0.2	40	-4.6	3.5	0.2	0.1	0.2	0.1
27	46	6.3	-2.4	1.6	-0.8	-0.1	0.4	47	-2.9	1.0	1.9	-0.8	0.2	-0.4
	40	1.5	-0.9	-1.1	-0.1	0.0	-0.3	41	-4.9	2.3	-0.8	0.1	0.2	0.3
28	47	5.8	-1.1	2.0	-1.0	-0.2	0.5	48	-4.7	0.0	2.0	-1.0	0.2	-0.5
	41	3.5	0.1	-1.3	0.0	-0.1	-0.4	42	-4.6	1.0	-1.2	0.1	0.2	0.4
29	48	4.7	0.0	2.0	-1.0	-0.2	0.5	49	-5.8	-1.1	2.0	-1.0	0.2	-0.5
	42	4.6	1.0	-1.2	0.1	-0.2	-0.4	43	-3.5	0.1	-1.3	0.0	0.1	0.4
30	49	2.9	1.0	1.9	-0.8	-0.2	0.4	50	-6.3	-2.4	1.6	-0.8	0.1	-0.4
	43	4.9	2.3	-0.8	0.1	-0.2	-0.3	44	-1.5	-0.9	-1.1	-0.1	0.0	0.3
31	50	-0.4	2.6	1.1	-0.3	-0.1	0.2	12	-5.9	-3.0	0.4	-0.2	0.1	-0.3
	44	4.6	3.5	0.2	0.1	-0.2	-0.1	45	1.7	-3.0	-0.2	-0.1	-0.1	0.2
32	52	1.5	0.9	-1.1	0.1	0.0	0.3	53	-4.9	-2.3	-0.8	-0.1	0.2	-0.3
	46	6.3	2.4	1.6	0.8	-0.1	-0.4	47	-2.9	-1.0	1.9	0.8	0.2	0.4
33	53	3.5	-0.1	-1.3	0.0	-0.1	0.4	54	-4.6	-1.0	-1.2	-0.1	0.2	-0.4
	47	5.8	1.1	2.0	1.0	-0.2	-0.5	48	-4.7	0.0	2.0	1.0	0.2	0.5
34	54	4.6	-1.0	-1.2	-0.1	-0.2	0.4	55	-3.5	-0.1	-1.3	0.0	0.1	-0.4
	48	4.7	0.0	2.0	1.0	-0.2	-0.5	49	-5.8	1.1	2.0	1.0	0.2	0.5
35	55	4.9	-2.3	-0.8	-0.1	-0.2	0.3	56	-1.5	0.9	-1.1	0.1	0.0	-0.3
	49	2.9	-1.0	1.9	0.8	-0.2	-0.4	50	-6.3	2.4	1.6	0.8	0.1	0.4
36	56	4.6	-3.5	0.2	-0.1	-0.2	0.1	57	1.7	3.0	-0.2	0.1	-0.1	-0.2
	50	-0.4	-2.6	1.1	0.3	-0.1	-0.2	12	-5.9	3.0	0.4	0.2	0.1	0.3
37	58	-1.4	-1.3	0.8	0.0	-0.2	-0.3	59	-1.3	-3.2	0.0	-0.1	0.1	0.2
	51	2.3	3.9	0.6	0.1	-0.2	0.2	52	0.4	0.6	0.1	-0.1	-0.1	-0.1
38	59	1.4	-1.3	0.0	0.3	0.1	0.0	60	-2.2	-1.7	-0.2	0.2	0.0	0.0
	52	2.7	2.0	0.8	0.1	-0.1	-0.1	53	-1.9	1.0	0.9	-0.1	-0.1	0.1
39	60	2.7	-1.2	-0.5	0.5	0.1	0.2	61	-2.9	-1.2	-0.5	0.4	0.0	-0.2
	53	3.3	1.4	1.2	0.1	0.0	-0.2	54	-3.1	1.0	1.2	0.1	0.0	0.2
40	61	2.9	-1.2	-0.5	0.4	0.0	0.2	62	-2.7	-1.2	-0.5	0.5	-0.1	-0.2
	54	3.1	1.0	1.2	0.1	0.0	-0.2	55	-3.3	1.4	1.2	0.1	0.0	0.2
41	62	2.2	-1.7	-0.2	0.2	0.0	0.0	63	-1.4	-1.3	0.0	0.3	-0.1	0.0
	55	1.9	1.0	0.9	-0.1	0.1	-0.1	56	-2.7	2.0	0.8	0.1	0.1	0.1
42	63	1.3	-3.2	0.0	-0.1	-0.1	-0.2	64	1.4	-1.3	0.8	0.0	0.2	0.3
	56	-0.4	0.6	0.1	-0.1	0.1	0.1	57	-2.3	3.9	0.6	0.1	0.2	-0.2
43	65	0.6	-4.6	1.4	-0.1	-0.5	-0.4	66	1.5	-1.4	-0.6	0.0	-0.1	0.3
	58	-1.3	2.6	1.3	0.0	-0.5	0.4	59	-0.8	3.4	-0.6	-0.1	-0.1	-0.3
44	66	2.7	-2.8	0.6	0.2	0.0	0.0	67	-0.8	-0.4	0.1	0.3	-0.2	0.0
	59	0.7	1.0	0.6	-0.2	0.0	0.0	60	-2.6	2.2	0.2	-0.3	-0.2	0.0
45	67	3.2	-1.4	0.3	0.4	0.1	0.2	68	-2.4	-0.5	0.3	0.5	-0.1	-0.2
	60	2.1	0.7	0.5	-0.4	0.1	-0.1	61	-2.9	1.2	0.5	-0.4	-0.1	0.2
46	68	2.4	-0.5	0.3	0.5	0.1	0.2	69	-3.2	-1.4	0.3	0.4	-0.1	-0.2
	61	2.9	1.2	0.5	-0.4	0.1	-0.2	62	-2.1	0.7	0.5	-0.4	-0.1	0.1
47	69	0.8	-0.4	0.1	0.3	0.2	0.0	70	-2.7	-2.8	0.6	0.2	0.0	0.0
	62	2.6	2.2	0.2	-0.3	0.2	0.0	63	-0.7	1.0	0.6	-0.2	0.0	0.0
48	70	-1.5	-1.4	-0.6	0.0	0.1	-0.3	71	-0.6	-4.6	1.4	-0.1	0.5	0.4
	63	0.8	3.4	-0.6	-0.1	0.1	0.3	64	1.3	2.6	1.3	0.0	0.5	-0.4

FORZE PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
49	72	4.5	-7.0	0.9	-0.1	-0.4	-0.3	73	3.3	1.9	-0.2	0.1	-0.1	0.2
	65	-4.0	-0.4	1.1	0.0	-0.3	0.3	66	-3.8	5.5	-0.3	0.1	0.0	-0.2
50	73	5.4	-3.5	0.8	0.0	-0.1	0.2	74	-0.4	2.1	0.6	0.2	-0.1	-0.3
	66	-0.4	-1.3	0.2	-0.3	0.1	-0.1	67	-4.6	2.7	-0.1	-0.3	0.0	0.2
51	74	5.0	-0.8	1.0	0.1	0.0	0.4	75	-3.2	1.2	1.0	0.1	0.0	-0.5
	67	2.2	-0.9	-0.3	-0.5	0.1	-0.3	68	-4.0	0.5	-0.3	-0.5	0.0	0.4
52	75	3.2	1.2	1.0	0.1	0.0	0.5	76	-5.0	-0.8	1.0	0.1	0.0	-0.4
	68	4.0	0.5	-0.3	-0.5	0.0	-0.4	69	-2.2	-0.9	-0.3	-0.5	-0.1	0.3
53	76	0.4	2.1	0.6	0.2	0.1	0.3	77	-5.4	-3.5	0.8	0.0	0.1	-0.2
	69	4.6	2.7	-0.1	-0.3	0.0	-0.2	70	0.4	-1.3	0.2	-0.3	-0.1	0.1
54	77	-3.3	1.9	-0.2	0.1	0.1	-0.2	78	-4.5	-7.0	0.9	-0.1	0.4	0.3
	70	3.8	5.5	-0.3	0.1	0.0	0.2	71	4.0	-0.4	1.1	0.0	0.3	-0.3
55	4	9.8	-7.8	0.4	-0.2	-0.2	0.2	79	3.8	6.6	0.7	-0.1	0.0	-0.3
	72	-5.3	-5.2	0.2	-0.1	0.0	0.0	73	-8.2	6.4	0.2	0.1	0.2	0.2
56	79	9.7	-3.3	1.3	-0.6	-0.2	0.7	80	-1.3	5.8	1.6	-0.5	0.1	-0.7
	73	-0.4	-4.8	-0.8	-0.2	0.0	-0.5	74	-8.0	2.3	-0.6	0.0	0.2	0.6
57	80	8.0	0.8	1.8	-0.7	-0.2	0.9	81	-5.1	3.9	1.9	-0.7	0.2	-0.9
	74	3.5	-3.6	-1.1	-0.2	-0.1	-0.8	75	-6.3	-1.2	-1.0	-0.1	0.2	0.8
58	81	5.1	3.9	1.9	-0.7	-0.2	0.9	82	-8.0	0.8	1.8	-0.7	0.2	-0.9
	75	6.3	-1.2	-1.0	-0.1	-0.2	-0.8	76	-3.5	-3.6	-1.1	-0.2	0.1	0.8
59	82	1.3	5.8	1.6	-0.5	-0.1	0.7	83	-9.7	-3.3	1.3	-0.6	0.2	-0.7
	76	8.0	2.3	-0.6	0.0	-0.2	-0.6	77	0.4	-4.8	-0.8	-0.2	0.0	0.5
60	83	-3.8	6.6	0.7	-0.1	0.0	0.3	2	-9.8	-7.8	0.4	-0.2	0.2	-0.2
	77	8.2	6.4	0.2	0.1	-0.2	-0.2	78	5.3	-5.2	0.2	-0.1	0.0	0.0

CARATT. SOVRACCARICO PERMAN.: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-4.9	0.0	-0.5	0.0	0.2	3	0.00	0.0	2.5	0.0	2.9	0.0	-0.2
1	5	0.00	0.0	-4.9	0.0	-0.5	0.0	0.2	12	0.00	0.0	2.5	0.0	2.9	0.0	-0.2
	3	3.19	1.4	-0.3	10.6	-0.2	3.4	0.0	3	0.00	-1.4	0.3	-10.6	1.1	1.3	0.0
	5	3.19	1.4	0.3	10.6	0.2	3.4	0.0	5	0.00	-1.4	-0.3	-10.6	-1.1	1.3	0.0
	10	3.19	-1.4	-0.3	10.6	-0.2	-3.4	0.0	10	0.00	1.4	0.3	-10.6	1.1	-1.3	0.0
	12	3.19	-1.4	0.3	10.6	0.2	-3.4	0.0	12	0.00	1.4	-0.3	-10.6	-1.1	-1.3	0.0
	4	3.19	0.0	3.3	0.0	-2.1	0.0	0.4	12	3.19	0.0	2.3	0.0	0.6	0.0	0.3
	6	3.19	0.0	3.3	0.0	-2.1	0.0	-0.4	5	3.19	0.0	2.3	0.0	0.6	0.0	-0.3
	3	3.19	0.0	7.4	0.0	-3.7	0.0	0.4	10	3.19	0.0	7.4	0.0	3.7	0.0	0.4
	5	3.19	0.0	7.4	0.0	-3.7	0.0	-0.4	12	3.19	0.0	7.4	0.0	3.7	0.0	-0.4
	10	3.19	0.0	2.3	0.0	-0.6	0.0	0.3	4	3.19	0.0	3.3	0.0	2.1	0.0	0.4
	3	3.19	0.0	2.3	0.0	-0.6	0.0	-0.3	6	3.19	0.0	3.3	0.0	2.1	0.0	-0.4
	6	3.19	0.0	11.1	1.8	-5.5	0.0	0.0	4	3.19	0.0	11.1	-1.8	5.5	0.0	0.0
1	10	0.00	0.0	-5.9	0.0	1.6	0.0	-0.2	4	0.00	0.0	3.8	0.0	1.3	0.0	0.1
1	4	0.00	0.0	0.0	0.0	-5.4	0.0	-0.4	12	0.00	0.0	-0.6	0.0	5.2	0.0	0.4
1	3	0.00	0.0	-5.9	0.0	1.6	0.0	0.2	6	0.00	0.0	3.8	0.0	1.3	0.0	-0.1
1	6	0.00	0.0	0.0	0.0	-5.4	0.0	0.4	5	0.00	0.0	-0.6	0.0	5.2	0.0	-0.4
	6	3.19	1.9	0.0	18.6	0.0	4.8	0.0	6	0.00	-1.9	0.0	-18.6	0.0	1.2	0.0
	4	3.19	-1.9	0.0	18.6	0.0	-4.8	0.0	4	0.00	1.9	0.0	-18.6	0.0	-1.2	0.0
1	6	0.00	0.0	-18.6	0.0	1.0	0.0	0.0	4	0.00	0.0	8.9	0.0	7.9	0.0	0.0
2	10	0.00	0.0	-2.9	0.0	-2.2	0.0	0.1	3	0.00	0.0	0.9	0.0	3.4	0.0	-0.1
3	10	0.00	0.0	-1.5	0.0	-3.1	0.0	0.0	3	0.00	0.0	-0.4	0.0	3.5	0.0	0.0
4	10	0.00	0.0	-0.4	0.0	-3.5	0.0	0.0	3	0.00	0.0	-1.5	0.0	3.1	0.0	0.0
5	10	0.00	0.0	0.9	0.0	-3.4	0.0	-0.1	3	0.00	0.0	-2.9	0.0	2.2	0.0	0.1
6	10	0.00	0.0	2.5	0.0	-2.9	0.0	-0.2	3	0.00	0.0	-4.9	0.0	0.5	0.0	0.2
2	5	0.00	0.0	-2.9	0.0	-2.2	0.0	0.1	12	0.00	0.0	0.9	0.0	3.4	0.0	-0.1
3	5	0.00	0.0	-1.5	0.0	-3.1	0.0	0.0	12	0.00	0.0	-0.4	0.0	3.5	0.0	0.0
4	5	0.00	0.0	-0.4	0.0	-3.5	0.0	0.0	12	0.00	0.0	-1.5	0.0	3.1	0.0	0.0
5	5	0.00	0.0	0.9	0.0	-3.4	0.0	-0.1	12	0.00	0.0	-2.9	0.0	2.2	0.0	0.1
6	5	0.00	0.0	2.5	0.0	-2.9	0.0	-0.2	12	0.00	0.0	-4.9	0.0	0.5	0.0	0.2
2	10	0.00	0.0	-4.1	0.0	-0.6	0.0	0.0	4	0.00	0.0	2.5	0.0	2.6	0.0	0.0
3	10	0.00	0.0	-3.1	0.0	-2.2	0.0	0.1	4	0.00	0.0	2.0	0.0	3.7	0.0	-0.1
4	10	0.00	0.0	-2.1	0.0	-3.7	0.0	0.2	4	0.00	0.0	1.3	0.0	4.7	0.0	-0.3
5	10	0.00	0.0	-0.6	0.0	-5.2	0.0	0.4	4	0.00	0.0	0.0	0.0	5.4	0.0	-0.4
2	4	0.00	0.0	1.3	0.0	-4.7	0.0	-0.3	12	0.00	0.0	-2.1	0.0	3.7	0.0	0.2
3	4	0.00	0.0	2.0	0.0	-3.7	0.0	-0.1	12	0.00	0.0	-3.1	0.0	2.2	0.0	0.1
4	4	0.00	0.0	2.5	0.0	-2.6	0.0	0.0	12	0.00	0.0	-4.1	0.0	0.6	0.0	0.0
5	4	0.00	0.0	3.8	0.0	-1.3	0.0	0.1	12	0.00	0.0	-5.9	0.0	-1.6	0.0	-0.2
2	3	0.00	0.0	-4.1	0.0	-0.6	0.0	0.0	6	0.00	0.0	2.5	0.0	2.6	0.0	0.0
3	3	0.00	0.0	-3.1	0.0	-2.2	0.0	-0.1	6	0.00	0.0	2.0	0.0	3.7	0.0	0.1
4	3	0.00	0.0	-2.1	0.0	-3.7	0.0	-0.2	6	0.00	0.0	1.3	0.0	4.7	0.0	0.3
5	3	0.00	0.0	-0.6	0.0	-5.2	0.0	-0.4	6	0.00	0.0	0.0	0.0	5.4	0.0	0.4
2	6	0.00	0.0	1.3	0.0	-4.7	0.0	0.3	5	0.00	0.0	-2.1	0.0	3.7	0.0	-0.2
3	6	0.00	0.0	2.0	0.0	-3.7	0.0	0.1	5	0.00	0.0	-3.1	0.0	2.2	0.0	-0.1
4	6	0.00	0.0	2.5	0.0	-2.6	0.0	0.0	5	0.00	0.0	-4.1	0.0	0.6	0.0	0.0
5	6	0.00	0.0	3.8	0.0	-1.3	0.0	-0.1	5	0.00	0.0	-5.9	0.0	-1.6	0.0	0.2
2	6	0.00	0.0	-12.1	0.0	-6.0	0.0	0.0	4	0.00	0.0	3.2	0.0	11.0	0.0	0.0
3	6	0.00	0.0	-6.8	0.0	-10.0	0.0	0.0	4	0.00	0.0	-1.7	0.0	11.6	0.0	0.0
4	6	0.00	0.0	-1.7	0.0	-11.6	0.0	0.0	4	0.00	0.0	-6.8	0.0	10.0	0.0	0.0
5	6	0.00	0.0	3.2	0.0	-11.0	0.0	0.0	4	0.00	0.0	-12.1	0.0	6.0	0.0	0.0
6	6	0.00	0.0	8.9	0.0	-7.9	0.0	0.0	4	0.00	0.0	-18.6	0.0	-1.0	0.0	0.0

FORZE SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)

FORZE SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-1.8	2.0	0.1	0.0	0.0	0.0	19	-2.9	-2.7	0.0	0.0	0.0	0.0
	3	3.3	2.5	0.1	0.0	-0.1	-0.1	13	1.3	-1.8	0.1	0.0	0.0	0.1
2	51	0.2	-1.2	-0.7	0.0	0.2	-0.1	52	-4.6	-4.1	0.1	-0.1	0.2	0.0
	11	4.9	5.3	0.0	0.3	0.1	0.1	46	-0.5	0.0	1.0	0.3	0.1	0.0
3	19	-0.2	0.7	-0.1	0.1	0.0	0.1	20	-2.7	-2.0	-0.1	0.1	0.0	-0.1
	13	3.1	2.0	0.3	0.0	0.0	-0.1	14	-0.3	-0.8	0.3	0.0	0.0	0.1
4	20	1.2	-0.2	-0.2	0.1	0.0	0.1	21	-2.1	-1.1	-0.2	0.1	0.0	-0.1
	14	2.5	1.1	0.4	0.0	0.0	-0.1	15	-1.5	0.2	0.4	0.0	0.0	0.1
5	21	2.1	-1.1	-0.2	0.1	0.0	0.1	22	-1.2	-0.2	-0.2	0.1	0.0	-0.1
	15	1.5	0.2	0.4	0.0	0.0	-0.1	16	-2.5	1.1	0.4	0.0	0.0	0.1
6	22	2.7	-2.0	-0.1	0.1	0.0	0.1	23	0.2	0.7	-0.1	0.1	0.0	-0.1
	16	0.3	-0.8	0.3	0.0	0.0	-0.1	17	-3.1	2.0	0.3	0.0	0.0	0.1
7	23	2.9	-2.7	0.0	0.0	0.0	0.0	24	1.8	2.0	0.1	0.0	0.0	0.0
	17	-1.3	-1.8	0.1	0.0	0.0	-0.1	1	-3.3	2.5	0.1	0.0	0.1	0.1
8	25	-1.2	0.3	0.3	0.0	-0.1	-0.1	26	-2.0	-2.8	0.0	0.0	0.0	0.1
	18	2.1	2.7	0.2	0.0	-0.1	0.1	19	1.0	-0.2	-0.1	0.0	0.0	-0.1
9	26	0.3	-0.6	0.1	0.1	0.0	0.0	27	-2.0	-2.2	0.0	0.1	0.0	0.0
	19	2.0	2.2	0.2	-0.1	0.0	0.0	20	-0.3	0.5	0.1	-0.1	0.0	0.0
10	27	1.3	-1.1	0.0	0.2	0.0	0.0	28	-1.9	-1.6	0.1	0.2	0.0	0.0
	20	1.9	1.6	0.1	-0.1	0.0	0.0	21	-1.3	1.1	0.2	-0.1	0.0	0.0
11	28	1.9	-1.6	0.1	0.2	0.0	0.0	29	-1.3	-1.1	0.0	0.2	0.0	0.0
	21	1.3	1.1	0.2	-0.1	0.0	0.0	22	-1.9	1.6	0.1	-0.1	0.0	0.0
12	29	2.0	-2.2	0.0	0.1	0.0	0.0	30	-0.3	-0.6	0.1	0.1	0.0	0.0
	22	0.3	0.5	0.1	-0.1	0.0	0.0	23	-2.0	2.2	0.2	-0.1	0.0	0.0
13	30	2.0	-2.8	0.0	0.0	0.0	-0.1	31	1.2	0.3	0.3	0.0	0.1	0.1
	23	-1.0	-0.2	-0.1	0.0	0.0	0.1	24	-2.1	2.7	0.2	0.0	0.1	-0.1
14	32	0.2	-1.4	0.3	-0.1	-0.1	-0.1	33	-1.5	-2.5	0.0	0.0	-0.1	0.1
	25	1.3	2.7	0.2	0.0	0.0	0.1	26	0.0	1.3	-0.1	0.0	0.0	-0.1
15	33	1.6	-1.6	0.1	0.0	0.0	0.0	34	-2.0	-2.0	0.2	0.1	0.0	0.0
	26	1.7	2.1	0.0	-0.1	0.0	0.0	27	-1.2	1.5	0.0	-0.1	0.0	0.0
16	34	2.2	-1.6	0.3	0.0	-0.1	0.1	35	-2.4	-1.7	0.3	0.1	0.1	-0.1
	27	1.9	1.7	-0.1	-0.2	0.0	0.0	28	-1.8	1.6	-0.1	-0.2	0.1	0.0
17	35	2.4	-1.7	0.3	0.1	-0.1	0.1	36	-2.2	-1.6	0.3	0.0	0.1	-0.1
	28	1.8	1.6	-0.1	-0.2	-0.1	0.0	29	-1.9	1.7	-0.1	-0.2	0.0	0.0
18	36	2.0	-2.0	0.2	0.1	0.0	0.0	37	-1.6	-1.6	0.1	0.0	0.0	0.0
	29	1.2	1.5	0.0	-0.1	0.0	0.0	30	-1.7	2.1	0.0	-0.1	0.0	0.0
19	37	1.5	-2.5	0.0	0.0	0.1	-0.1	38	-0.2	-1.4	0.3	-0.1	0.1	0.1
	30	0.0	1.3	-0.1	0.0	0.0	0.1	31	-1.3	2.7	0.2	0.0	0.0	-0.1
20	39	2.2	-3.2	0.0	-0.1	0.0	-0.1	40	-1.3	-1.8	0.4	0.0	0.0	0.1
	32	0.9	2.3	-0.2	0.0	0.1	0.1	33	-1.9	2.7	0.2	0.1	0.1	-0.1
21	40	3.6	-2.5	0.3	-0.2	-0.1	0.1	41	-2.5	-1.2	0.5	-0.1	0.1	-0.1
	33	1.8	1.5	-0.3	-0.1	0.0	0.0	34	-2.8	2.2	-0.1	0.0	0.1	0.1
22	41	4.0	-1.8	0.5	-0.2	-0.1	0.2	42	-3.6	-1.3	0.6	-0.2	0.1	-0.2
	34	2.6	1.4	-0.4	-0.1	-0.1	-0.1	35	-3.1	1.7	-0.3	-0.1	0.1	0.1
23	42	3.6	-1.3	0.6	-0.2	-0.1	0.2	43	-4.0	-1.8	0.5	-0.2	0.1	-0.2
	35	3.1	1.7	-0.3	-0.1	-0.1	-0.1	36	-2.6	1.4	-0.4	-0.1	0.1	0.1
24	43	2.5	-1.2	0.5	-0.1	-0.1	0.1	44	-3.6	-2.5	0.3	-0.2	0.1	-0.1
	36	2.8	2.2	-0.1	0.0	-0.1	-0.1	37	-1.8	1.5	-0.3	-0.1	0.0	0.0
25	44	1.3	-1.8	0.4	0.0	0.0	-0.1	45	-2.2	-3.2	0.0	-0.1	0.0	0.1
	37	1.9	2.7	0.2	0.1	-0.1	0.1	38	-0.9	2.3	-0.2	0.0	-0.1	-0.1
26	11	4.9	-5.3	0.0	-0.3	0.1	-0.1	46	-0.5	0.0	1.0	-0.3	0.1	0.0
	39	0.2	1.2	-0.7	0.0	0.2	0.1	40	-4.6	4.1	0.1	0.1	0.2	0.0
27	46	6.8	-3.3	0.7	-0.5	-0.1	0.3	47	-3.4	0.6	1.0	-0.5	0.2	-0.4
	40	2.2	0.1	-0.8	0.1	-0.1	-0.2	41	-5.6	2.6	-0.4	0.1	0.2	0.3
28	47	6.9	-1.5	0.8	-0.6	-0.2	0.5	48	-5.6	-0.1	0.8	-0.6	0.2	-0.6
	41	4.1	0.3	-0.6	0.2	-0.2	-0.4	42	-5.3	1.3	-0.6	0.2	0.2	0.4
29	48	5.6	-0.1	0.8	-0.6	-0.2	0.6	49	-6.9	-1.5	0.8	-0.6	0.2	-0.5
	42	5.3	1.3	-0.6	0.2	-0.2	-0.4	43	-4.1	0.3	-0.6	0.2	0.2	0.4
30	49	3.4	0.6	1.0	-0.5	-0.2	0.4	50	-6.8	-3.3	0.7	-0.5	0.1	-0.3
	43	5.6	2.6	-0.4	0.1	-0.2	-0.3	44	-2.2	0.1	-0.8	0.1	0.1	0.2
31	50	0.5	0.0	1.0	-0.3	-0.1	0.0	12	-4.9	-5.3	0.0	-0.3	-0.1	0.1
	44	4.6	4.1	0.1	0.1	-0.2	0.0	45	-0.2	1.2	-0.7	0.0	-0.2	-0.1
32	52	2.2	-0.1	-0.8	-0.1	-0.1	0.2	53	-5.6	-2.6	-0.4	-0.1	0.2	-0.3
	46	6.8	3.3	0.7	0.5	-0.1	-0.3	47	-3.4	-0.6	1.0	0.5	0.2	0.4
33	53	4.1	-0.3	-0.6	-0.2	-0.2	0.4	54	-5.3	-1.3	-0.6	-0.2	0.2	-0.4
	47	6.9	1.5	0.8	0.6	-0.2	-0.5	48	-5.6	0.1	0.8	0.6	0.2	0.6
34	54	5.3	-1.3	-0.6	-0.2	-0.2	0.4	55	-4.1	-0.3	-0.6	-0.2	0.2	-0.4
	48	5.6	0.1	0.8	0.6	-0.2	-0.6	49	-6.9	1.5	0.8	0.6	0.2	0.5
35	55	5.6	-2.6	-0.4	-0.1	-0.2	0.3	56	-2.2	-0.1	-0.8	-0.1	0.1	-0.2
	49	3.4	-0.6	1.0	0.5	-0.2	-0.4	50	-6.8	3.3	0.7	0.5	0.1	0.3
36	56	4.6	-4.1	0.1	-0.1	-0.2	0.0	57	-0.2	-1.2	-0.7	0.0	-0.2	0.1
	50	0.5	0.0	1.0	0.3	-0.1	0.0	12	-4.9	5.3	0.0	0.3	-0.1	-0.1
37	58	0.9	-2.3	-0.2	0.0	0.1	-0.1	59	-1.9	-2.7	0.2	-0.1	0.1	0.1
	51	2.2	3.2	0.0	0.1	0.0	0.1	52	-1.3	1.8	0.4	0.0	0.0	-0.1
38	59	1.8	-1.5	-0.3	0.1	0.0	0.0	60	-2.8	-2.2	-0.1	0.0	0.1	-0.1
	52	3.6	2.5	0.3	0.2	-0.1	-0.1	53	-2.5	1.2	0.5	0.1	0.1	0.1
39	60	2.6	-1.4	-0.4	0.1	-0.1	0.1	61	-3.1	-1.7	-0.3	0.1	0.1	-0.1
	53	4.0	1.8	0.5	0.2	-0.1	-0.2	54	-3.6	1.3	0.6	0.2	0.1	0.2
40	61	3.1	-1.7	-0.3	0.1	-0.1	0.1	62	-2.6	-1.4	-0.4	0.1	0.1	-0.1
	54	3.6	1.3	0.6	0.2	-0.1	-0.2	55	-4.0	1.8	0.5	0.2	0.1	0.2

FORZE SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
41	62	2.8	-2.2	-0.1	0.0	-0.1	0.1	63	-1.8	-1.5	-0.3	0.1	0.0	0.0
	55	2.5	1.2	0.5	0.1	-0.1	-0.1	56	-3.6	2.5	0.3	0.2	0.1	0.1
42	63	1.9	-2.7	0.2	-0.1	-0.1	-0.1	64	-0.9	-2.3	-0.2	0.0	-0.1	0.1
	56	1.3	1.8	0.4	0.0	0.0	0.1	57	-2.2	3.2	0.0	0.1	0.0	-0.1
43	65	1.3	-2.7	0.2	0.0	0.0	-0.1	66	0.0	-1.3	-0.1	0.0	0.0	0.1
	58	0.2	1.4	0.3	0.1	-0.1	0.1	59	-1.5	2.5	0.0	0.0	-0.1	-0.1
44	66	1.7	-2.1	0.0	0.1	0.0	0.0	67	-1.2	-1.5	0.0	0.1	0.0	0.0
	59	1.6	1.6	0.1	0.0	0.0	0.0	60	-2.0	2.0	0.2	-0.1	0.0	0.0
45	67	1.9	-1.7	-0.1	0.2	0.0	0.0	68	-1.8	-1.6	-0.1	0.2	0.1	0.0
	60	2.2	1.6	0.3	0.0	-0.1	-0.1	61	-2.4	1.7	0.3	-0.1	0.1	0.1
46	68	1.8	-1.6	-0.1	0.2	-0.1	0.0	69	-1.9	-1.7	-0.1	0.2	0.0	0.0
	61	2.4	1.7	0.3	-0.1	-0.1	-0.1	62	-2.2	1.6	0.3	0.0	0.1	0.1
47	69	1.2	-1.5	0.0	0.1	0.0	0.0	70	-1.7	-2.1	0.0	0.1	0.0	0.0
	62	2.0	2.0	0.2	-0.1	0.0	0.0	63	-1.6	1.6	0.1	0.0	0.0	0.0
48	70	0.0	-1.3	-0.1	0.0	0.0	-0.1	71	-1.3	-2.7	0.2	0.0	0.0	0.1
	63	1.5	2.5	0.0	0.0	0.1	0.1	64	-0.2	1.4	0.3	0.1	0.1	-0.1
49	72	2.1	-2.7	0.2	0.0	-0.1	-0.1	73	1.0	0.2	-0.1	0.0	0.0	0.1
	65	-1.2	-0.3	0.3	0.0	-0.1	0.1	66	-2.0	2.8	0.0	0.0	0.0	-0.1
50	73	2.0	-2.2	0.2	0.1	0.0	0.0	74	-0.3	-0.5	0.1	0.1	0.0	0.0
	66	0.3	0.6	0.1	-0.1	0.0	0.0	67	-2.0	2.2	0.0	-0.1	0.0	0.0
51	74	1.9	-1.6	0.1	0.1	0.0	0.0	75	-1.3	-1.1	0.2	0.1	0.0	0.0
	67	1.3	1.1	0.0	-0.2	0.0	0.0	68	-1.9	1.6	0.1	-0.2	0.0	0.0
52	75	1.3	-1.1	0.2	0.1	0.0	0.0	76	-1.9	-1.6	0.1	0.1	0.0	0.0
	68	1.9	1.6	0.1	-0.2	0.0	0.0	69	-1.3	1.1	0.0	-0.2	0.0	0.0
53	76	0.3	-0.5	0.1	0.1	0.0	0.0	77	-2.0	-2.2	0.2	0.1	0.0	0.0
	69	2.0	2.2	0.0	-0.1	0.0	0.0	70	-0.3	0.6	0.1	-0.1	0.0	0.0
54	77	-1.0	0.2	-0.1	0.0	0.0	-0.1	78	-2.1	-2.7	0.2	0.0	0.1	0.1
	70	2.0	2.8	0.0	0.0	0.0	0.1	71	1.2	-0.3	0.3	0.0	0.1	-0.1
55	4	3.3	-2.5	0.1	0.0	-0.1	0.1	79	1.3	1.8	0.1	0.0	0.0	-0.1
	72	-1.8	-2.0	0.1	0.0	0.0	0.0	73	-2.9	2.7	0.0	0.0	0.0	0.0
56	79	3.1	-2.0	0.3	0.0	0.0	0.1	80	-0.3	0.8	0.3	0.0	0.0	-0.1
	73	-0.2	-0.7	-0.1	-0.1	0.0	-0.1	74	-2.7	2.0	-0.1	-0.1	0.0	0.1
57	80	2.5	-1.1	0.4	0.0	0.0	0.1	81	-1.5	-0.2	0.4	0.0	0.0	-0.1
	74	1.2	0.2	-0.2	-0.1	0.0	-0.1	75	-2.1	1.1	-0.2	-0.1	0.0	0.1
58	81	1.5	-0.2	0.4	0.0	0.0	0.1	82	-2.5	-1.1	0.4	0.0	0.0	-0.1
	75	2.1	1.1	-0.2	-0.1	0.0	-0.1	76	-1.2	0.2	-0.2	-0.1	0.0	0.1
59	82	0.3	0.8	0.3	0.0	0.0	0.1	83	-3.1	-2.0	0.3	0.0	0.0	-0.1
	76	2.7	2.0	-0.1	-0.1	0.0	-0.1	77	0.2	-0.7	-0.1	-0.1	0.0	0.1
60	83	-1.3	1.8	0.1	0.0	0.0	0.1	2	-3.3	-2.5	0.1	0.0	0.1	-0.1
	77	2.9	2.7	0.0	0.0	0.0	0.0	78	1.8	-2.0	0.1	0.0	0.0	0.0

CARATT. Var. Cat. E2: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-0.5	0.0	0.3	0.0	0.2	3	0.00	0.0	-2.8	0.0	-1.0	0.0	-0.3
1	5	0.00	0.0	-0.5	0.0	0.3	0.0	0.2	12	0.00	0.0	-2.8	0.0	-1.0	0.0	-0.3
	3	3.19	0.1	0.3	0.2	-0.3	0.0	0.0	3	0.00	-0.1	-0.3	-0.2	-0.8	0.3	0.0
	5	3.19	0.1	-0.3	0.2	0.3	0.0	0.0	5	0.00	-0.1	0.3	-0.2	0.8	0.3	0.0
	10	3.19	-0.1	0.3	0.2	-0.3	0.0	0.0	10	0.00	0.1	-0.3	-0.2	-0.8	-0.3	0.0
	12	3.19	-0.1	-0.3	0.2	0.3	0.0	0.0	12	0.00	0.1	0.3	-0.2	0.8	-0.3	0.0
	4	3.19	0.0	-0.2	0.0	0.3	0.0	0.0	12	3.19	0.0	0.2	0.0	0.3	0.0	0.0
	6	3.19	0.0	-0.2	0.0	0.3	0.0	0.0	5	3.19	0.0	0.2	0.0	0.3	0.0	0.0
	3	3.19	0.0	0.0	0.0	0.0	0.0	0.0	10	3.19	0.0	0.0	0.0	0.0	0.0	0.0
	5	3.19	0.0	0.0	0.0	0.0	0.0	0.0	12	3.19	0.0	0.0	0.0	0.0	0.0	0.0
	10	3.19	0.0	0.2	0.0	-0.3	0.0	0.0	4	3.19	0.0	-0.2	0.0	-0.3	0.0	0.0
	3	3.19	0.0	0.2	0.0	-0.3	0.0	0.0	6	3.19	0.0	-0.2	0.0	-0.3	0.0	0.0
	6	3.19	0.0	0.0	0.3	-0.1	0.0	0.0	4	3.19	0.0	0.0	-0.3	0.1	0.0	0.0
1	10	0.00	0.0	-1.0	0.0	-0.2	0.0	-0.2	4	0.00	0.0	-2.2	0.0	-0.2	0.0	0.2
1	4	0.00	0.0	-3.7	0.0	3.5	0.0	0.0	12	0.00	0.0	-0.3	0.0	-2.4	0.0	0.0
1	3	0.00	0.0	-1.0	0.0	-0.2	0.0	0.2	6	0.00	0.0	-2.2	0.0	-0.2	0.0	-0.2
1	6	0.00	0.0	-3.7	0.0	3.5	0.0	0.0	5	0.00	0.0	-0.3	0.0	-2.4	0.0	0.0
	6	3.19	0.3	0.0	-0.4	0.0	0.1	0.0	6	0.00	-0.3	0.0	0.4	0.0	0.7	0.0
	4	3.19	-0.3	0.0	-0.4	0.0	-0.1	0.0	4	0.00	0.3	0.0	0.4	0.0	-0.7	0.0
1	6	0.00	0.0	5.1	0.0	-0.9	0.0	0.0	4	0.00	0.0	-9.6	0.0	-3.9	0.0	0.0
2	10	0.00	0.0	0.2	0.0	1.6	0.0	0.3	3	0.00	0.0	-3.7	0.0	-2.8	0.0	-0.3
3	10	0.00	0.0	-1.0	0.0	3.2	0.0	0.1	3	0.00	0.0	-2.7	0.0	-3.7	0.0	-0.1
4	10	0.00	0.0	-2.7	0.0	3.7	0.0	-0.1	3	0.00	0.0	-1.0	0.0	-3.2	0.0	0.1
5	10	0.00	0.0	-3.7	0.0	2.8	0.0	-0.3	3	0.00	0.0	0.2	0.0	-1.6	0.0	0.3
6	10	0.00	0.0	-2.8	0.0	1.0	0.0	-0.3	3	0.00	0.0	-0.5	0.0	-0.3	0.0	0.2
2	5	0.00	0.0	0.2	0.0	1.6	0.0	0.3	12	0.00	0.0	-3.7	0.0	-2.8	0.0	-0.3
3	5	0.00	0.0	-1.0	0.0	3.2	0.0	0.1	12	0.00	0.0	-2.7	0.0	-3.7	0.0	-0.1
4	5	0.00	0.0	-2.7	0.0	3.7	0.0	-0.1	12	0.00	0.0	-1.0	0.0	-3.2	0.0	0.1
5	5	0.00	0.0	-3.7	0.0	2.8	0.0	-0.3	12	0.00	0.0	0.2	0.0	-1.6	0.0	0.3
6	5	0.00	0.0	-2.8	0.0	1.0	0.0	-0.3	12	0.00	0.0	-0.5	0.0	-0.3	0.0	0.2
2	10	0.00	0.0	-0.4	0.0	0.8	0.0	-0.2	4	0.00	0.0	-3.0	0.0	-1.6	0.0	0.2
3	10	0.00	0.0	-1.2	0.0	1.9	0.0	0.0	4	0.00	0.0	-2.5	0.0	-2.3	0.0	0.1
4	10	0.00	0.0	-1.7	0.0	2.3	0.0	0.1	4	0.00	0.0	-2.2	0.0	-2.5	0.0	-0.1
5	10	0.00	0.0	-0.3	0.0	2.4	0.0	0.0	4	0.00	0.0	-3.7	0.0	-3.5	0.0	0.0
2	4	0.00	0.0	-2.2	0.0	2.5	0.0	-0.1	12	0.00	0.0	-1.7	0.0	-2.3	0.0	0.1
3	4	0.00	0.0	-2.5	0.0	2.3	0.0	0.1	12	0.00	0.0	-1.2	0.0	-1.9	0.0	0.0
4	4	0.00	0.0	-3.0	0.0	1.6	0.0	0.2	12	0.00	0.0	-0.4	0.0	-0.8	0.0	-0.2
5	4	0.00	0.0	-2.2	0.0	0.2	0.0	0.2	12	0.00	0.0	-1.0	0.0	0.2	0.0	-0.2

CARATT. Var. Cat. E2: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
2	3	0.00	0.0	-0.4	0.0	0.8	0.0	0.2	6	0.00	0.0	-3.0	0.0	-1.6	0.0	-0.2
3	3	0.00	0.0	-1.2	0.0	1.9	0.0	0.0	6	0.00	0.0	-2.5	0.0	-2.3	0.0	-0.1
4	3	0.00	0.0	-1.7	0.0	2.3	0.0	-0.1	6	0.00	0.0	-2.2	0.0	-2.5	0.0	0.1
5	3	0.00	0.0	-0.3	0.0	2.4	0.0	0.0	6	0.00	0.0	-3.7	0.0	-3.5	0.0	0.0
2	6	0.00	0.0	-2.2	0.0	2.5	0.0	0.1	5	0.00	0.0	-1.7	0.0	-2.3	0.0	-0.1
3	6	0.00	0.0	-2.5	0.0	2.3	0.0	-0.1	5	0.00	0.0	-1.2	0.0	-1.9	0.0	0.0
4	6	0.00	0.0	-3.0	0.0	1.6	0.0	-0.2	5	0.00	0.0	-0.4	0.0	-0.8	0.0	0.2
5	6	0.00	0.0	-2.2	0.0	0.2	0.0	-0.2	5	0.00	0.0	-1.0	0.0	0.2	0.0	0.2
2	6	0.00	0.0	4.5	0.0	3.3	0.0	0.0	4	0.00	0.0	-9.6	0.0	-7.8	0.0	0.0
3	6	0.00	0.0	0.1	0.0	7.3	0.0	0.0	4	0.00	0.0	-5.5	0.0	-9.2	0.0	0.0
4	6	0.00	0.0	-5.5	0.0	9.2	0.0	0.0	4	0.00	0.0	0.1	0.0	-7.3	0.0	0.0
5	6	0.00	0.0	-9.6	0.0	7.8	0.0	0.0	4	0.00	0.0	4.5	0.0	-3.3	0.0	0.0
6	6	0.00	0.0	-9.6	0.0	3.9	0.0	0.0	4	0.00	0.0	5.1	0.0	0.9	0.0	0.0

FORZE Var. Cat. E2: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-4.5	2.9	0.7	0.1	-0.2	-0.1	19	0.4	0.3	-0.2	-0.1	0.1	0.0
	3	0.8	0.9	1.3	0.3	-0.3	0.0	13	3.2	-4.2	0.6	0.2	-0.1	0.1
2	51	-2.5	2.0	0.8	0.1	-0.2	0.0	52	3.3	2.8	-0.2	-0.1	0.0	0.0
	11	-2.1	-2.7	1.3	0.2	-0.2	-0.1	46	1.4	-2.1	0.5	0.2	-0.1	0.1
3	19	-4.1	5.0	-0.6	0.3	0.2	0.1	20	1.0	2.8	-0.9	0.0	0.0	-0.2
	13	-0.6	-2.0	2.0	0.7	-0.1	-0.2	14	3.7	-5.8	2.0	0.7	-0.2	0.2
4	20	-3.3	5.7	-1.5	0.3	0.2	0.3	21	2.1	4.9	-1.5	0.2	-0.1	-0.3
	14	-2.3	-4.5	2.7	1.1	0.0	-0.3	15	3.5	-6.0	2.7	1.0	-0.1	0.3
5	21	-2.1	4.9	-1.5	0.2	0.1	0.3	22	3.3	5.7	-1.5	0.3	-0.2	-0.3
	15	-3.5	-6.0	2.7	1.0	0.1	-0.3	16	2.3	-4.5	2.7	1.1	0.0	0.3
6	22	-1.0	2.8	-0.9	0.0	0.0	0.2	23	4.1	5.0	-0.6	0.3	-0.2	-0.1
	16	-3.7	-5.8	2.0	0.7	0.2	-0.2	17	0.6	-2.0	2.0	0.7	0.1	0.2
7	23	-0.4	0.3	-0.2	-0.1	-0.1	0.0	24	4.5	2.9	0.7	0.1	0.2	0.1
	17	-3.2	-4.2	0.6	0.2	0.1	-0.1	1	-0.8	0.9	1.3	0.3	0.3	0.0
8	25	-5.8	3.3	1.9	0.1	-0.7	-0.2	26	2.5	0.7	-0.8	0.0	0.0	0.2
	18	-1.9	-0.2	1.9	0.1	-0.7	0.2	19	5.1	-3.9	-0.6	-0.2	-0.2	-0.1
9	26	-4.8	4.2	0.6	0.5	0.2	0.0	27	2.0	2.2	-0.4	0.4	-0.3	0.0
	19	-1.4	-1.4	1.4	0.0	0.0	0.0	20	4.3	-5.0	0.8	-0.2	-0.4	0.1
10	27	-3.5	4.6	-0.2	0.7	0.4	0.1	28	2.4	3.9	-0.4	0.7	-0.4	-0.2
	20	-2.0	-3.5	1.6	-0.1	0.3	-0.2	21	3.1	-4.9	1.5	-0.2	-0.4	0.2
11	28	-2.4	3.9	-0.4	0.7	0.4	0.2	29	3.5	4.6	-0.2	0.7	-0.4	-0.1
	21	-3.1	-4.9	1.5	-0.2	0.4	-0.2	22	2.0	-3.5	1.6	-0.1	-0.3	0.2
12	29	-2.0	2.2	-0.4	0.4	0.3	0.0	30	4.8	4.2	0.6	0.5	-0.2	0.0
	22	-4.3	-5.0	0.8	-0.2	0.4	-0.1	23	1.4	-1.4	1.4	0.0	0.0	0.0
13	30	-2.5	0.7	-0.8	0.0	0.0	-0.2	31	5.8	3.3	1.9	0.1	0.7	0.2
	23	-5.1	-3.9	-0.6	-0.2	0.2	0.1	24	1.9	-0.2	1.9	0.1	0.7	-0.2
14	32	-5.2	2.9	2.3	0.1	-0.9	-0.2	33	3.8	1.7	-1.2	0.1	-0.2	0.2
	25	-3.9	-1.6	2.4	0.0	-0.9	0.2	26	5.3	-3.0	-1.1	-0.2	-0.2	-0.2
15	33	-4.5	3.2	1.4	0.4	0.0	-0.1	34	3.1	2.4	-0.1	0.5	-0.5	0.1
	26	-3.0	-1.8	1.3	-0.4	0.0	0.1	27	4.3	-3.7	-0.1	-0.5	-0.5	0.0
16	34	-3.7	3.6	0.8	0.6	0.4	0.0	35	3.1	3.3	0.4	0.7	-0.5	0.0
	27	-2.8	-3.1	0.8	-0.6	0.4	-0.1	28	3.3	-3.9	0.4	-0.7	-0.5	0.1
17	35	-3.1	3.3	0.4	0.7	0.5	0.0	36	3.7	3.6	0.8	0.6	-0.4	0.0
	28	-3.3	-3.9	0.4	-0.7	0.5	-0.1	29	2.8	-3.1	0.8	-0.6	-0.4	0.1
18	36	-3.1	2.4	-0.1	0.5	0.5	-0.1	37	4.5	3.2	1.4	0.4	0.0	0.1
	29	-4.3	-3.7	-0.1	-0.5	0.5	0.0	30	3.0	-1.8	1.3	-0.4	0.0	-0.1
19	37	-3.8	1.7	-1.2	0.1	0.2	-0.2	38	5.2	2.9	2.3	0.1	0.9	0.2
	30	-5.3	-3.0	-1.1	-0.2	0.2	0.2	31	3.9	-1.6	2.4	0.0	0.9	-0.2
20	39	-3.6	2.3	1.8	0.0	-0.7	-0.1	40	3.6	2.4	-0.5	0.1	-0.2	0.1
	32	-4.3	-2.3	1.8	-0.1	-0.7	0.2	33	4.3	-2.4	-0.7	-0.1	0.0	-0.2
21	40	-3.8	2.7	1.4	0.0	0.0	-0.1	41	3.5	2.7	0.8	0.2	-0.4	0.1
	33	-3.7	-2.4	0.5	-0.5	0.2	0.1	34	4.0	-3.0	-0.4	-0.4	-0.3	-0.1
22	41	-4.0	3.2	1.6	0.0	0.3	-0.1	42	3.8	3.1	1.6	0.1	-0.4	0.1
	34	-3.4	-3.0	-0.3	-0.7	0.4	0.0	35	3.6	-3.3	-0.4	-0.7	-0.4	0.0
23	42	-3.8	3.1	1.6	0.1	0.4	-0.1	43	4.0	3.2	1.6	0.0	-0.3	0.1
	35	-3.6	-3.3	-0.4	-0.7	0.4	0.0	36	3.4	-3.0	-0.3	-0.7	-0.4	0.0
24	43	-3.5	2.7	0.8	0.2	0.4	-0.1	44	3.8	2.7	1.4	0.0	0.0	0.1
	36	-4.0	-3.0	-0.4	-0.4	0.3	0.1	37	3.7	-2.4	0.5	-0.5	-0.2	-0.1
25	44	-3.6	2.4	-0.5	0.1	0.2	-0.1	45	3.6	2.3	1.8	0.0	0.7	0.1
	37	-4.3	-2.4	-0.7	-0.1	0.0	0.2	38	4.3	-2.3	1.8	-0.1	0.7	-0.2
26	11	-2.1	2.7	1.3	-0.2	-0.2	0.1	46	1.4	2.1	0.5	-0.2	-0.1	-0.1
	39	-2.5	-2.0	0.8	-0.1	-0.2	0.0	40	3.3	-2.8	-0.2	0.1	0.0	0.0
27	46	-4.4	3.6	2.0	-0.7	0.0	-0.1	47	3.1	2.0	2.0	-0.8	-0.2	0.1
	40	-3.0	-2.3	-0.7	-0.2	0.2	0.0	41	4.3	-3.3	-0.9	0.0	-0.1	-0.1
28	47	-5.3	3.2	2.8	-1.2	0.1	-0.2	48	4.7	2.5	2.8	-1.2	-0.1	0.2
	41	-3.8	-2.6	-1.6	-0.2	0.2	0.1	42	4.5	-3.1	-1.6	-0.1	-0.1	-0.1
29	48	-4.7	2.5	2.8	-1.2	0.1	-0.2	49	5.3	3.2	2.8	-1.2	-0.1	0.2
	42	-4.5	-3.1	-1.6	-0.1	0.1	0.1	43	3.8	-2.6	-1.6	-0.2	-0.2	-0.1
30	49	-3.1	2.0	2.0	-0.8	0.2	-0.1	50	4.4	3.6	2.0	-0.7	0.0	0.1
	43	-4.3	-3.3	-0.9	0.0	0.1	0.1	44	3.0	-2.3	-0.7	-0.2	-0.2	0.0
31	50	-1.4	2.1	0.5	-0.2	0.1	0.1	12	2.1	2.7	1.3	-0.2	0.2	-0.1
	44	-3.3	-2.8	-0.2	0.1	0.0	0.0	45	2.5	-2.0	0.8	-0.1	0.2	0.0
32	52	-3.0	2.3	-0.7	0.2	0.2	0.0	53	4.3	3.3	-0.9	0.0	-0.1	0.1

FORZE Var. Cat. E2: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
	46	-4.4	-3.6	2.0	0.7	0.0	0.1	47	3.1	-2.0	2.0	0.8	-0.2	-0.1
33	53	-3.8	2.6	-1.6	0.2	0.2	-0.1	54	4.5	3.1	-1.6	0.1	-0.1	0.1
	47	-5.3	-3.2	2.8	1.2	0.1	0.2	48	4.7	-2.5	2.8	1.2	-0.1	-0.2
34	54	-4.5	3.1	-1.6	0.1	0.1	-0.1	55	3.8	2.6	-1.6	0.2	-0.2	0.1
	48	-4.7	-2.5	2.8	1.2	0.1	0.2	49	5.3	-3.2	2.8	1.2	-0.1	-0.2
35	55	-4.3	3.3	-0.9	0.0	0.1	-0.1	56	3.0	2.3	-0.7	0.2	-0.2	0.0
	49	-3.1	-2.0	2.0	0.8	0.2	0.1	50	4.4	-3.6	2.0	0.7	0.0	-0.1
36	56	-3.3	2.8	-0.2	-0.1	0.0	0.0	57	2.5	2.0	0.8	0.1	0.2	0.0
	50	-1.4	-2.1	0.5	0.2	0.1	-0.1	12	2.1	-2.7	1.3	0.2	0.2	0.1
37	58	-4.3	2.3	1.8	0.1	-0.7	-0.2	59	4.3	2.4	-0.7	0.1	0.0	0.2
	51	-3.6	-2.3	1.8	0.0	-0.7	0.1	52	3.6	-2.4	-0.5	-0.1	-0.2	-0.1
38	59	-3.7	2.4	0.5	0.5	0.2	-0.1	60	4.0	3.0	-0.4	0.4	-0.3	0.1
	52	-3.8	-2.7	1.4	0.0	0.0	0.1	53	3.5	-2.7	0.8	-0.2	-0.4	-0.1
39	60	-3.4	3.0	-0.3	0.7	0.4	0.0	61	3.6	3.3	-0.4	0.7	-0.4	0.0
	53	-4.0	-3.2	1.6	0.0	0.3	0.1	54	3.8	-3.1	1.6	-0.1	-0.4	-0.1
40	61	-3.6	3.3	-0.4	0.7	0.4	0.0	62	3.4	3.0	-0.3	0.7	-0.4	0.0
	54	-3.8	-3.1	1.6	-0.1	0.4	0.1	55	4.0	-3.2	1.6	0.0	-0.3	-0.1
41	62	-4.0	3.0	-0.4	0.4	0.3	-0.1	63	3.7	2.4	0.5	0.5	-0.2	0.1
	55	-3.5	-2.7	0.8	-0.2	0.4	0.1	56	3.8	-2.7	1.4	0.0	0.0	-0.1
42	63	-4.3	2.4	-0.7	0.1	0.0	-0.2	64	4.3	2.3	1.8	0.1	0.7	0.2
	56	-3.6	-2.4	-0.5	-0.1	0.2	0.1	57	3.6	-2.3	1.8	0.0	0.7	-0.1
43	65	-3.9	1.6	2.4	0.0	-0.9	-0.2	66	5.3	3.0	-1.1	0.2	-0.2	0.2
	58	-5.2	-2.9	2.3	-0.1	-0.9	0.2	59	3.8	-1.7	-1.2	-0.1	-0.2	-0.2
44	66	-3.0	1.8	1.3	0.4	0.0	-0.1	67	4.3	3.7	-0.1	0.5	-0.5	0.0
	59	-4.5	-3.2	1.4	-0.4	0.0	0.1	60	3.1	-2.4	-0.1	-0.5	-0.5	-0.1
45	67	-2.8	3.1	0.8	0.6	0.4	0.1	68	3.3	3.9	0.4	0.7	-0.5	-0.1
	60	-3.7	-3.6	0.8	-0.6	0.4	0.0	61	3.1	-3.3	0.4	-0.7	-0.5	0.0
46	68	-3.3	3.9	0.4	0.7	0.5	0.1	69	2.8	3.1	0.8	0.6	-0.4	-0.1
	61	-3.1	-3.3	0.4	-0.7	0.5	0.0	62	3.7	-3.6	0.8	-0.6	-0.4	0.0
47	69	-4.3	3.7	-0.1	0.5	0.5	0.0	70	3.0	1.8	1.3	0.4	0.0	0.1
	62	-3.1	-2.4	-0.1	-0.5	0.5	0.1	63	4.5	-3.2	1.4	-0.4	0.0	-0.1
48	70	-5.3	3.0	-1.1	0.2	0.2	-0.2	71	3.9	1.6	2.4	0.0	0.9	0.2
	63	-3.8	-1.7	-1.2	-0.1	0.2	0.2	64	5.2	-2.9	2.3	-0.1	0.9	-0.2
49	72	-1.9	0.2	1.9	-0.1	-0.7	-0.2	73	5.1	3.9	-0.6	0.2	-0.2	0.1
	65	-5.8	-3.3	1.9	-0.1	-0.7	0.2	66	2.5	-0.7	-0.8	0.0	0.0	-0.2
50	73	-1.4	1.4	1.4	0.0	0.0	0.0	74	4.3	5.0	0.8	0.2	-0.4	-0.1
	66	-4.8	-4.2	0.6	-0.5	0.2	0.0	67	2.0	-2.2	-0.4	-0.4	-0.3	0.0
51	74	-2.0	3.5	1.6	0.1	0.3	0.2	75	3.1	4.9	1.5	0.2	-0.4	-0.2
	67	-3.5	-4.6	-0.2	-0.7	0.4	-0.1	68	2.4	-3.9	-0.4	-0.7	-0.4	0.2
52	75	-3.1	4.9	1.5	0.2	0.4	0.2	76	2.0	3.5	1.6	0.1	-0.3	-0.2
	68	-2.4	-3.9	-0.4	-0.7	0.4	-0.2	69	3.5	-4.6	-0.2	-0.7	-0.4	0.1
53	76	-4.3	5.0	0.8	0.2	0.4	0.1	77	1.4	1.4	1.4	0.0	0.0	0.0
	69	-2.0	-2.2	-0.4	-0.4	0.3	0.0	70	4.8	-4.2	0.6	-0.5	-0.2	0.0
54	77	-5.1	3.9	-0.6	0.2	0.2	-0.1	78	1.9	0.2	1.9	-0.1	0.7	0.2
	70	-2.5	-0.7	-0.8	0.0	0.0	0.2	71	5.8	-3.3	1.9	-0.1	0.7	-0.2
55	4	0.8	-0.9	1.3	-0.3	-0.3	0.0	79	3.2	4.2	0.6	-0.2	-0.1	-0.1
	72	-4.5	-2.9	0.7	-0.1	-0.2	0.1	73	0.4	-0.3	-0.2	0.1	0.1	0.0
56	79	-0.6	2.0	2.0	-0.7	-0.1	0.2	80	3.7	5.8	2.0	-0.7	-0.2	-0.2
	73	-4.1	-5.0	-0.6	-0.3	0.2	-0.1	74	1.0	-2.8	-0.9	0.0	0.0	0.2
57	80	-2.3	4.5	2.7	-1.1	0.0	0.3	81	3.5	6.0	2.7	-1.0	-0.1	-0.3
	74	-3.3	-5.7	-1.5	-0.3	0.2	-0.3	75	2.1	-4.9	-1.5	-0.2	-0.1	0.3
58	81	-3.5	6.0	2.7	-1.0	0.1	0.3	82	2.3	4.5	2.7	-1.1	0.0	-0.3
	75	-2.1	-4.9	-1.5	-0.2	0.1	-0.3	76	3.3	-5.7	-1.5	-0.3	-0.2	0.3
59	82	-3.7	5.8	2.0	-0.7	0.2	0.2	83	0.6	2.0	2.0	-0.7	0.1	-0.2
	76	-1.0	-2.8	-0.9	0.0	0.0	-0.2	77	4.1	-5.0	-0.6	-0.3	-0.2	0.1
60	83	-3.2	4.2	0.6	-0.2	0.1	0.1	2	-0.8	-0.9	1.3	-0.3	0.3	0.0
	77	-0.4	-0.3	-0.2	0.1	-0.1	0.0	78	4.5	-2.9	0.7	-0.1	0.2	-0.1

CARATT. H1 car. manutenzione: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-1.3	0.0	-0.1	0.0	0.0	3	0.00	0.0	0.8	0.0	0.8	0.0	0.0
1	5	0.00	0.0	-1.3	0.0	-0.1	0.0	0.0	12	0.00	0.0	0.8	0.0	0.8	0.0	0.0
	3	3.19	0.3	0.0	2.5	-0.2	0.8	0.0	3	0.00	-0.3	0.0	-2.5	0.0	0.3	0.0
	5	3.19	0.3	0.0	2.5	0.2	0.8	0.0	5	0.00	-0.3	0.0	-2.5	0.0	0.3	0.0
	10	3.19	-0.3	0.0	2.5	-0.2	-0.8	0.0	10	0.00	0.3	0.0	-2.5	0.0	-0.3	0.0
	12	3.19	-0.3	0.0	2.5	0.2	-0.8	0.0	12	0.00	0.3	0.0	-2.5	0.0	-0.3	0.0
	4	3.19	0.0	0.7	0.0	-0.4	0.0	0.1	12	3.19	0.0	0.6	0.0	0.3	0.0	0.1
	6	3.19	0.0	0.7	0.0	-0.4	0.0	-0.1	5	3.19	0.0	0.6	0.0	0.3	0.0	-0.1
	3	3.19	0.0	1.7	0.0	-0.8	0.0	0.1	10	3.19	0.0	1.7	0.0	0.8	0.0	0.1
	5	3.19	0.0	1.7	0.0	-0.8	0.0	-0.1	12	3.19	0.0	1.7	0.0	0.8	0.0	-0.1
	10	3.19	0.0	0.6	0.0	-0.3	0.0	0.1	4	3.19	0.0	0.7	0.0	0.4	0.0	0.1
	3	3.19	0.0	0.6	0.0	-0.3	0.0	-0.1	6	3.19	0.0	0.7	0.0	0.4	0.0	-0.1
	6	3.19	0.0	2.4	0.4	-1.2	0.0	0.0	4	3.19	0.0	2.4	-0.4	1.2	0.0	0.0
1	10	0.00	0.0	-1.2	0.0	0.1	0.0	0.0	4	0.00	0.0	0.6	0.0	0.4	0.0	0.0
1	4	0.00	0.0	-1.5	0.0	0.6	0.0	0.0	12	0.00	0.0	1.0	0.0	0.1	0.0	0.0
1	3	0.00	0.0	-1.2	0.0	0.1	0.0	0.0	6	0.00	0.0	0.6	0.0	0.4	0.0	0.0
1	6	0.00	0.0	-1.5	0.0	0.6	0.0	0.0	5	0.00	0.0	1.0	0.0	0.1	0.0	0.0
	6	3.19	0.5	0.0	4.0	0.0	1.0	0.0	6	0.00	-0.5	0.0	-4.0	0.0	0.4	0.0
	4	3.19	-0.5	0.0	4.0	0.0	-1.0	0.0	4	0.00	0.5	0.0	-4.0	0.0	-0.4	0.0
1	6	0.00	0.0	-1.0	0.0	-0.2	0.0	0.0	4	0.00	0.0	0.5	0.0	0.7	0.0	0.0

CARATT. H1 car. manutenzione: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
2	10	0.00	0.0	-0.8	0.0	-0.7	0.0	0.0	3	0.00	0.0	0.4	0.0	1.0	0.0	0.0
3	10	0.00	0.0	-0.4	0.0	-1.0	0.0	0.0	3	0.00	0.0	0.0	0.0	1.1	0.0	0.0
4	10	0.00	0.0	0.0	0.0	-1.1	0.0	0.0	3	0.00	0.0	-0.4	0.0	1.0	0.0	0.0
5	10	0.00	0.0	0.4	0.0	-1.0	0.0	0.0	3	0.00	0.0	-0.8	0.0	0.7	0.0	0.0
6	10	0.00	0.0	0.8	0.0	-0.8	0.0	0.0	3	0.00	0.0	-1.3	0.0	0.1	0.0	0.0
2	5	0.00	0.0	-0.8	0.0	-0.7	0.0	0.0	12	0.00	0.0	0.4	0.0	1.0	0.0	0.0
3	5	0.00	0.0	-0.4	0.0	-1.0	0.0	0.0	12	0.00	0.0	0.0	0.0	1.1	0.0	0.0
4	5	0.00	0.0	0.0	0.0	-1.1	0.0	0.0	12	0.00	0.0	-0.4	0.0	1.0	0.0	0.0
5	5	0.00	0.0	0.4	0.0	-1.0	0.0	0.0	12	0.00	0.0	-0.8	0.0	0.7	0.0	0.0
6	5	0.00	0.0	0.8	0.0	-0.8	0.0	0.0	12	0.00	0.0	-1.3	0.0	0.1	0.0	0.0
2	10	0.00	0.0	-0.6	0.0	-0.3	0.0	0.0	4	0.00	0.0	0.1	0.0	0.5	0.0	0.0
3	10	0.00	0.0	-0.1	0.0	-0.5	0.0	0.0	4	0.00	0.0	-0.4	0.0	0.4	0.0	0.0
4	10	0.00	0.0	0.4	0.0	-0.4	0.0	0.0	4	0.00	0.0	-0.9	0.0	0.0	0.0	0.0
5	10	0.00	0.0	1.0	0.0	-0.1	0.0	0.0	4	0.00	0.0	-1.5	0.0	-0.6	0.0	0.0
2	4	0.00	0.0	-0.9	0.0	0.0	0.0	0.0	12	0.00	0.0	0.4	0.0	0.4	0.0	0.0
3	4	0.00	0.0	-0.4	0.0	-0.4	0.0	0.0	12	0.00	0.0	-0.1	0.0	0.5	0.0	0.0
4	4	0.00	0.0	0.1	0.0	-0.5	0.0	0.0	12	0.00	0.0	-0.6	0.0	0.3	0.0	0.0
5	4	0.00	0.0	0.6	0.0	-0.4	0.0	0.0	12	0.00	0.0	-1.2	0.0	-0.1	0.0	0.0
2	3	0.00	0.0	-0.6	0.0	-0.3	0.0	0.0	6	0.00	0.0	0.1	0.0	0.5	0.0	0.0
3	3	0.00	0.0	-0.1	0.0	-0.5	0.0	0.0	6	0.00	0.0	-0.4	0.0	0.4	0.0	0.0
4	3	0.00	0.0	0.4	0.0	-0.4	0.0	0.0	6	0.00	0.0	-0.9	0.0	0.0	0.0	0.0
5	3	0.00	0.0	1.0	0.0	-0.1	0.0	0.0	6	0.00	0.0	-1.5	0.0	-0.6	0.0	0.0
2	6	0.00	0.0	-0.9	0.0	0.0	0.0	0.0	5	0.00	0.0	0.4	0.0	0.4	0.0	0.0
3	6	0.00	0.0	-0.4	0.0	-0.4	0.0	0.0	5	0.00	0.0	-0.1	0.0	0.5	0.0	0.0
4	6	0.00	0.0	0.1	0.0	-0.5	0.0	0.0	5	0.00	0.0	-0.6	0.0	0.3	0.0	0.0
5	6	0.00	0.0	0.6	0.0	-0.4	0.0	0.0	5	0.00	0.0	-1.2	0.0	-0.1	0.0	0.0
2	6	0.00	0.0	-0.7	0.0	-0.6	0.0	0.0	4	0.00	0.0	0.3	0.0	0.9	0.0	0.0
3	6	0.00	0.0	-0.3	0.0	-0.8	0.0	0.0	4	0.00	0.0	0.0	0.0	0.9	0.0	0.0
4	6	0.00	0.0	0.0	0.0	-0.9	0.0	0.0	4	0.00	0.0	-0.3	0.0	0.8	0.0	0.0
5	6	0.00	0.0	0.3	0.0	-0.9	0.0	0.0	4	0.00	0.0	-0.7	0.0	0.6	0.0	0.0
6	6	0.00	0.0	0.5	0.0	-0.7	0.0	0.0	4	0.00	0.0	-1.0	0.0	0.2	0.0	0.0

FORZE H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-0.1	0.2	0.0	0.0	0.0	0.0	19	-0.6	-0.4	0.0	0.0	0.0	0.0
	3	0.6	0.5	0.0	0.0	0.0	0.0	13	0.1	-0.3	0.0	0.0	0.0	0.0
2	51	0.0	0.3	0.0	0.0	0.0	0.0	52	-0.4	-0.3	0.0	0.0	0.0	0.0
	11	0.5	0.2	0.0	0.0	0.0	0.0	46	0.0	-0.2	0.0	0.0	0.0	0.0
3	19	0.2	0.1	0.0	0.0	0.0	0.0	20	-0.6	-0.2	0.0	0.0	0.0	0.0
	13	0.7	0.3	0.0	0.0	0.0	0.0	14	-0.3	-0.2	0.0	0.0	0.0	0.0
4	20	0.4	0.0	0.0	0.0	0.0	0.0	21	-0.5	-0.1	0.0	0.0	0.0	0.0
	14	0.7	0.1	0.0	0.0	0.0	-0.1	15	-0.5	0.0	0.0	0.0	0.0	0.1
5	21	0.5	-0.1	0.0	0.0	0.0	0.0	22	-0.4	0.0	0.0	0.0	0.0	0.0
	15	0.5	0.0	0.0	0.0	0.0	-0.1	16	-0.7	0.1	0.0	0.0	0.0	0.1
6	22	0.6	-0.2	0.0	0.0	0.0	0.0	23	-0.2	0.1	0.0	0.0	0.0	0.0
	16	0.3	-0.2	0.0	0.0	0.0	0.0	17	-0.7	0.3	0.0	0.0	0.0	0.0
7	23	0.6	-0.4	0.0	0.0	0.0	0.0	24	0.1	0.2	0.0	0.0	0.0	0.0
	17	-0.1	-0.3	0.0	0.0	0.0	0.0	1	-0.6	0.5	0.0	0.0	0.0	0.0
8	25	0.0	-0.1	0.0	0.0	0.0	0.0	26	-0.3	-0.4	0.0	0.0	0.0	0.0
	18	0.4	0.4	0.0	0.0	0.0	0.0	19	0.0	0.0	0.0	0.0	0.0	0.0
9	26	0.2	-0.1	0.0	0.0	0.0	0.0	27	-0.4	-0.2	0.0	0.0	0.0	0.0
	19	0.4	0.3	0.0	0.0	0.0	0.0	20	-0.2	0.0	0.0	0.0	0.0	0.0
10	27	0.3	-0.1	0.0	0.0	0.0	0.0	28	-0.4	-0.2	0.0	0.0	0.0	0.0
	20	0.4	0.2	0.0	0.0	0.0	0.0	21	-0.4	0.1	0.0	0.0	0.0	0.0
11	28	0.4	-0.2	0.0	0.0	0.0	0.0	29	-0.3	-0.1	0.0	0.0	0.0	0.0
	21	0.4	0.1	0.0	0.0	0.0	0.0	22	-0.4	0.2	0.0	0.0	0.0	0.0
12	29	0.4	-0.2	0.0	0.0	0.0	0.0	30	-0.2	-0.1	0.0	0.0	0.0	0.0
	22	0.2	0.0	0.0	0.0	0.0	0.0	23	-0.4	0.3	0.0	0.0	0.0	0.0
13	30	0.3	-0.4	0.0	0.0	0.0	0.0	31	0.0	-0.1	0.0	0.0	0.0	0.0
	23	0.0	0.0	0.0	0.0	0.0	0.0	24	-0.4	0.4	0.0	0.0	0.0	0.0
14	32	0.2	-0.3	0.0	0.0	0.0	0.0	33	-0.2	-0.2	0.0	0.0	0.0	0.0
	25	0.2	0.3	0.0	0.0	0.0	0.0	26	-0.1	0.2	0.0	0.0	0.0	0.0
15	33	0.2	-0.2	0.0	0.0	0.0	0.0	34	-0.3	-0.2	0.0	0.0	0.0	0.0
	26	0.3	0.2	0.0	0.0	0.0	0.0	27	-0.2	0.1	0.0	0.0	0.0	0.0
16	34	0.3	-0.2	0.0	0.0	0.0	0.0	35	-0.3	-0.2	0.0	0.0	0.0	0.0
	27	0.3	0.2	0.0	0.0	0.0	0.0	28	-0.3	0.2	0.0	0.0	0.0	0.0
17	35	0.3	-0.2	0.0	0.0	0.0	0.0	36	-0.3	-0.2	0.0	0.0	0.0	0.0
	28	0.3	0.2	0.0	0.0	0.0	0.0	29	-0.3	0.2	0.0	0.0	0.0	0.0
18	36	0.3	-0.2	0.0	0.0	0.0	0.0	37	-0.2	-0.2	0.0	0.0	0.0	0.0
	29	0.2	0.1	0.0	0.0	0.0	0.0	30	-0.3	0.2	0.0	0.0	0.0	0.0
19	37	0.2	-0.2	0.0	0.0	0.0	0.0	38	-0.2	-0.3	0.0	0.0	0.0	0.0
	30	0.1	0.2	0.0	0.0	0.0	0.0	31	-0.2	0.3	0.0	0.0	0.0	0.0
20	39	0.3	-0.3	0.0	0.0	0.0	0.0	40	-0.1	0.0	0.0	0.0	0.0	0.0
	32	0.0	0.1	0.0	0.0	0.0	0.0	33	-0.3	0.3	0.0	0.0	0.0	0.0
21	40	0.3	-0.2	0.0	0.0	0.0	0.0	41	-0.2	-0.1	0.0	0.0	0.0	0.0
	33	0.2	0.1	0.0	0.0	0.0	0.0	34	-0.3	0.2	0.0	0.0	0.0	0.0
22	41	0.4	-0.2	0.0	0.0	0.0	0.0	42	-0.3	-0.2	0.0	0.0	0.0	0.0
	34	0.3	0.2	0.0	0.0	0.0	0.0	35	-0.3	0.2	0.0	0.0	0.0	0.0
23	42	0.3	-0.2	0.0	0.0	0.0	0.0	43	-0.4	-0.2	0.0	0.0	0.0	0.0
	35	0.3	0.2	0.0	0.0	0.0	0.0	36	-0.3	0.2	0.0	0.0	0.0	0.0
24	43	0.2	-0.1	0.0	0.0	0.0	0.0	44	-0.3	-0.2	0.0	0.0	0.0	0.0

FORZE H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
	36	0.3	0.2	0.0	0.0	0.0	0.0	37	-0.2	0.1	0.0	0.0	0.0	0.0
25	44	0.1	0.0	0.0	0.0	0.0	0.0	45	-0.3	-0.3	0.0	0.0	0.0	0.0
	37	0.3	0.3	0.0	0.0	0.0	0.0	38	0.0	0.1	0.0	0.0	0.0	0.0
26	11	0.5	-0.2	0.0	0.0	0.0	0.0	46	0.0	0.2	0.0	0.0	0.0	0.0
	39	0.0	-0.3	0.0	0.0	0.0	0.0	40	-0.4	0.3	0.0	0.0	0.0	0.0
27	46	0.5	-0.2	0.0	0.0	0.0	0.0	47	-0.3	0.0	0.0	0.0	0.0	0.0
	40	0.2	0.0	0.0	0.0	0.0	0.0	41	-0.5	0.2	0.0	0.0	0.0	0.0
28	47	0.5	-0.2	0.0	0.0	0.0	0.0	48	-0.5	-0.1	0.0	0.0	0.0	0.0
	41	0.4	0.1	0.0	0.0	0.0	0.0	42	-0.4	0.2	0.0	0.0	0.0	0.0
29	48	0.5	-0.1	0.0	0.0	0.0	0.0	49	-0.5	-0.2	0.0	0.0	0.0	0.0
	42	0.4	0.2	0.0	0.0	0.0	0.0	43	-0.4	0.1	0.0	0.0	0.0	0.0
30	49	0.3	0.0	0.0	0.0	0.0	0.0	50	-0.5	-0.2	0.0	0.0	0.0	0.0
	43	0.5	0.2	0.0	0.0	0.0	0.0	44	-0.2	0.0	0.0	0.0	0.0	0.0
31	50	0.0	0.2	0.0	0.0	0.0	0.0	12	-0.5	-0.2	0.0	0.0	0.0	0.0
	44	0.4	0.3	0.0	0.0	0.0	0.0	45	0.0	-0.3	0.0	0.0	0.0	0.0
32	52	0.2	0.0	0.0	0.0	0.0	0.0	53	-0.5	-0.2	0.0	0.0	0.0	0.0
	46	0.5	0.2	0.0	0.0	0.0	0.0	47	-0.3	0.0	0.0	0.0	0.0	0.0
33	53	0.4	-0.1	0.0	0.0	0.0	0.0	54	-0.4	-0.2	0.0	0.0	0.0	0.0
	47	0.5	0.2	0.0	0.0	0.0	0.0	48	-0.5	0.1	0.0	0.0	0.0	0.0
34	54	0.4	-0.2	0.0	0.0	0.0	0.0	55	-0.4	-0.1	0.0	0.0	0.0	0.0
	48	0.5	0.1	0.0	0.0	0.0	0.0	49	-0.5	0.2	0.0	0.0	0.0	0.0
35	55	0.5	-0.2	0.0	0.0	0.0	0.0	56	-0.2	0.0	0.0	0.0	0.0	0.0
	49	0.3	0.0	0.0	0.0	0.0	0.0	50	-0.5	0.2	0.0	0.0	0.0	0.0
36	56	0.4	-0.3	0.0	0.0	0.0	0.0	57	0.0	0.3	0.0	0.0	0.0	0.0
	50	0.0	-0.2	0.0	0.0	0.0	0.0	12	-0.5	0.2	0.0	0.0	0.0	0.0
37	58	0.0	-0.1	0.0	0.0	0.0	0.0	59	-0.3	-0.3	0.0	0.0	0.0	0.0
	51	0.3	0.3	0.0	0.0	0.0	0.0	52	-0.1	0.0	0.0	0.0	0.0	0.0
38	59	0.2	-0.1	0.0	0.0	0.0	0.0	60	-0.3	-0.2	0.0	0.0	0.0	0.0
	52	0.3	0.2	0.0	0.0	0.0	0.0	53	-0.2	0.1	0.0	0.0	0.0	0.0
39	60	0.3	-0.2	0.0	0.0	0.0	0.0	61	-0.3	-0.2	0.0	0.0	0.0	0.0
	53	0.4	0.2	0.0	0.0	0.0	0.0	54	-0.3	0.2	0.0	0.0	0.0	0.0
40	61	0.3	-0.2	0.0	0.0	0.0	0.0	62	-0.3	-0.2	0.0	0.0	0.0	0.0
	54	0.3	0.2	0.0	0.0	0.0	0.0	55	-0.4	0.2	0.0	0.0	0.0	0.0
41	62	0.3	-0.2	0.0	0.0	0.0	0.0	63	-0.2	-0.1	0.0	0.0	0.0	0.0
	55	0.2	0.1	0.0	0.0	0.0	0.0	56	-0.3	0.2	0.0	0.0	0.0	0.0
42	63	0.3	-0.3	0.0	0.0	0.0	0.0	64	0.0	-0.1	0.0	0.0	0.0	0.0
	56	0.1	0.0	0.0	0.0	0.0	0.0	57	-0.3	0.3	0.0	0.0	0.0	0.0
43	65	0.2	-0.3	0.0	0.0	0.0	0.0	66	-0.1	-0.2	0.0	0.0	0.0	0.0
	58	0.2	0.3	0.0	0.0	0.0	0.0	59	-0.2	0.2	0.0	0.0	0.0	0.0
44	66	0.3	-0.2	0.0	0.0	0.0	0.0	67	-0.2	-0.1	0.0	0.0	0.0	0.0
	59	0.2	0.2	0.0	0.0	0.0	0.0	60	-0.3	0.2	0.0	0.0	0.0	0.0
45	67	0.3	-0.2	0.0	0.0	0.0	0.0	68	-0.3	-0.2	0.0	0.0	0.0	0.0
	60	0.3	0.2	0.0	0.0	0.0	0.0	61	-0.3	0.2	0.0	0.0	0.0	0.0
46	68	0.3	-0.2	0.0	0.0	0.0	0.0	69	-0.3	-0.2	0.0	0.0	0.0	0.0
	61	0.3	0.2	0.0	0.0	0.0	0.0	62	-0.3	0.2	0.0	0.0	0.0	0.0
47	69	0.2	-0.1	0.0	0.0	0.0	0.0	70	-0.3	-0.2	0.0	0.0	0.0	0.0
	62	0.3	0.2	0.0	0.0	0.0	0.0	63	-0.2	0.2	0.0	0.0	0.0	0.0
48	70	0.1	-0.2	0.0	0.0	0.0	0.0	71	-0.2	-0.3	0.0	0.0	0.0	0.0
	63	0.2	0.2	0.0	0.0	0.0	0.0	64	-0.2	0.3	0.0	0.0	0.0	0.0
49	72	0.4	-0.4	0.0	0.0	0.0	0.0	73	0.0	0.0	0.0	0.0	0.0	0.0
	65	0.0	0.1	0.0	0.0	0.0	0.0	66	-0.3	0.4	0.0	0.0	0.0	0.0
50	73	0.4	-0.3	0.0	0.0	0.0	0.0	74	-0.2	0.0	0.0	0.0	0.0	0.0
	66	0.2	0.1	0.0	0.0	0.0	0.0	67	-0.4	0.2	0.0	0.0	0.0	0.0
51	74	0.4	-0.2	0.0	0.0	0.0	0.0	75	-0.4	-0.1	0.0	0.0	0.0	0.0
	67	0.3	0.1	0.0	0.0	0.0	0.0	68	-0.4	0.2	0.0	0.0	0.0	0.0
52	75	0.4	-0.1	0.0	0.0	0.0	0.0	76	-0.4	-0.2	0.0	0.0	0.0	0.0
	68	0.4	0.2	0.0	0.0	0.0	0.0	69	-0.3	0.1	0.0	0.0	0.0	0.0
53	76	0.2	0.0	0.0	0.0	0.0	0.0	77	-0.4	-0.3	0.0	0.0	0.0	0.0
	69	0.4	0.2	0.0	0.0	0.0	0.0	70	-0.2	0.1	0.0	0.0	0.0	0.0
54	77	0.0	0.0	0.0	0.0	0.0	0.0	78	-0.4	-0.4	0.0	0.0	0.0	0.0
	70	0.3	0.4	0.0	0.0	0.0	0.0	71	0.0	0.1	0.0	0.0	0.0	0.0
55	4	0.6	-0.5	0.0	0.0	0.0	0.0	79	0.1	0.3	0.0	0.0	0.0	0.0
	72	-0.1	-0.2	0.0	0.0	0.0	0.0	73	-0.6	0.4	0.0	0.0	0.0	0.0
56	79	0.7	-0.3	0.0	0.0	0.0	0.0	80	-0.3	0.2	0.0	0.0	0.0	0.0
	73	0.2	-0.1	0.0	0.0	0.0	0.0	74	-0.6	0.2	0.0	0.0	0.0	0.0
57	80	0.7	-0.1	0.0	0.0	0.0	0.1	81	-0.5	0.0	0.0	0.0	0.0	-0.1
	74	0.4	0.0	0.0	0.0	0.0	0.0	75	-0.5	0.1	0.0	0.0	0.0	0.0
58	81	0.5	0.0	0.0	0.0	0.0	0.1	82	-0.7	-0.1	0.0	0.0	0.0	-0.1
	75	0.5	0.1	0.0	0.0	0.0	0.0	76	-0.4	0.0	0.0	0.0	0.0	0.0
59	82	0.3	0.2	0.0	0.0	0.0	0.0	83	-0.7	-0.3	0.0	0.0	0.0	0.0
	76	0.6	0.2	0.0	0.0	0.0	0.0	77	-0.2	-0.1	0.0	0.0	0.0	0.0
60	83	-0.1	0.3	0.0	0.0	0.0	0.0	2	-0.6	-0.5	0.0	0.0	0.0	0.0
	77	0.6	0.4	0.0	0.0	0.0	0.0	78	0.1	-0.2	0.0	0.0	0.0	0.0

CARATT. Corr. Tors. dir. 0: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-0.3	0.0	0.4	0.0	0.0	3	0.00	0.0	0.3	0.0	-0.2	0.0	0.0
1	5	0.00	0.0	-0.3	0.0	0.4	0.0	0.0	12	0.00	0.0	0.3	0.0	-0.2	0.0	0.0

CARATT. Corr. Tors. dir. 0: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
	3	3.19	0.2	-0.2	0.0	0.2	0.3	0.0	3	0.00	-0.2	0.2	0.0	0.4	0.4	0.0
	5	3.19	-0.2	-0.2	0.0	0.2	-0.3	0.0	5	0.00	0.2	0.2	0.0	0.4	-0.4	0.0
	10	3.19	0.2	0.2	0.0	-0.2	0.3	0.0	10	0.00	-0.2	-0.2	0.0	-0.4	0.4	0.0
	12	3.19	-0.2	0.2	0.0	-0.2	-0.3	0.0	12	0.00	0.2	-0.2	0.0	-0.4	-0.4	0.0
	4	3.19	0.0	0.1	0.1	-0.2	0.0	0.0	12	3.19	0.0	-0.1	-0.1	-0.2	0.0	0.0
	6	3.19	0.0	-0.1	-0.1	0.2	0.0	0.0	5	3.19	0.0	0.1	0.1	0.2	0.0	0.0
	3	3.19	0.0	0.1	0.0	-0.3	0.0	0.0	10	3.19	0.0	-0.1	0.0	-0.3	0.0	0.0
	5	3.19	0.0	-0.1	0.0	0.3	0.0	0.0	12	3.19	0.0	0.1	0.0	0.3	0.0	0.0
	10	3.19	0.0	0.1	-0.1	-0.2	0.0	0.0	4	3.19	0.0	-0.1	0.1	-0.2	0.0	0.0
	3	3.19	0.0	-0.1	0.1	0.2	0.0	0.0	6	3.19	0.0	0.1	-0.1	0.2	0.0	0.0
	6	3.19	0.0	0.0	0.0	0.0	0.0	0.0	4	3.19	0.0	0.0	0.0	0.0	0.0	0.0
1	10	0.00	0.0	0.3	0.0	-0.4	0.0	0.0	4	0.00	0.0	-0.3	0.0	0.2	0.0	0.0
1	4	0.00	0.0	0.2	0.0	-0.2	0.0	0.0	12	0.00	0.0	-0.2	0.0	0.1	0.0	0.0
1	3	0.00	0.0	-0.3	0.0	0.4	0.0	0.0	6	0.00	0.0	0.3	0.0	-0.2	0.0	0.0
1	6	0.00	0.0	-0.2	0.0	0.2	0.0	0.0	5	0.00	0.0	0.2	0.0	-0.1	0.0	0.0
	6	3.19	0.0	-0.3	0.0	0.4	0.0	0.0	6	0.00	0.0	0.3	0.0	0.5	0.0	0.0
	4	3.19	0.0	0.3	0.0	-0.4	0.0	0.0	4	0.00	0.0	-0.3	0.0	-0.5	0.0	0.0
1	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
2	10	0.00	0.0	-0.2	0.0	0.2	0.0	0.0	3	0.00	0.0	0.2	0.0	-0.1	0.0	0.0
3	10	0.00	0.0	-0.2	0.0	0.1	0.0	0.0	3	0.00	0.0	0.2	0.0	0.0	0.0	0.0
4	10	0.00	0.0	-0.2	0.0	0.0	0.0	0.0	3	0.00	0.0	0.2	0.0	0.1	0.0	0.0
5	10	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0	3	0.00	0.0	0.2	0.0	0.2	0.0	0.0
6	10	0.00	0.0	-0.3	0.0	-0.2	0.0	0.0	3	0.00	0.0	0.3	0.0	0.4	0.0	0.0
2	5	0.00	0.0	-0.2	0.0	0.2	0.0	0.0	12	0.00	0.0	0.2	0.0	-0.1	0.0	0.0
3	5	0.00	0.0	-0.2	0.0	0.1	0.0	0.0	12	0.00	0.0	0.2	0.0	0.0	0.0	0.0
4	5	0.00	0.0	-0.2	0.0	0.0	0.0	0.0	12	0.00	0.0	0.2	0.0	0.1	0.0	0.0
5	5	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0	12	0.00	0.0	0.2	0.0	0.2	0.0	0.0
6	5	0.00	0.0	-0.3	0.0	-0.2	0.0	0.0	12	0.00	0.0	0.3	0.0	0.4	0.0	0.0
2	10	0.00	0.0	0.2	0.0	-0.2	0.0	0.0	4	0.00	0.0	-0.2	0.0	0.1	0.0	0.0
3	10	0.00	0.0	0.2	0.0	-0.1	0.0	0.0	4	0.00	0.0	-0.2	0.0	0.0	0.0	0.0
4	10	0.00	0.0	0.2	0.0	0.0	0.0	0.0	4	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0
5	10	0.00	0.0	0.2	0.0	0.1	0.0	0.0	4	0.00	0.0	-0.2	0.0	-0.2	0.0	0.0
2	4	0.00	0.0	0.2	0.0	-0.1	0.0	0.0	12	0.00	0.0	-0.2	0.0	0.0	0.0	0.0
3	4	0.00	0.0	0.2	0.0	0.0	0.0	0.0	12	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0
4	4	0.00	0.0	0.2	0.0	0.1	0.0	0.0	12	0.00	0.0	-0.2	0.0	-0.2	0.0	0.0
5	4	0.00	0.0	0.3	0.0	0.2	0.0	0.0	12	0.00	0.0	-0.3	0.0	-0.4	0.0	0.0
2	3	0.00	0.0	-0.2	0.0	0.2	0.0	0.0	6	0.00	0.0	0.2	0.0	-0.1	0.0	0.0
3	3	0.00	0.0	-0.2	0.0	0.1	0.0	0.0	6	0.00	0.0	0.2	0.0	0.0	0.0	0.0
4	3	0.00	0.0	-0.2	0.0	0.0	0.0	0.0	6	0.00	0.0	0.2	0.0	0.1	0.0	0.0
5	3	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0	6	0.00	0.0	0.2	0.0	0.2	0.0	0.0
2	6	0.00	0.0	-0.2	0.0	0.1	0.0	0.0	5	0.00	0.0	0.2	0.0	0.0	0.0	0.0
3	6	0.00	0.0	-0.2	0.0	0.0	0.0	0.0	5	0.00	0.0	0.2	0.0	0.1	0.0	0.0
4	6	0.00	0.0	-0.2	0.0	-0.1	0.0	0.0	5	0.00	0.0	0.2	0.0	0.2	0.0	0.0
5	6	0.00	0.0	-0.3	0.0	-0.2	0.0	0.0	5	0.00	0.0	0.3	0.0	0.4	0.0	0.0
2	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
3	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
4	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
5	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
6	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-0.1	-0.1	0.0	0.0	0.0	0.0	19	0.1	-0.1	0.0	0.0	0.0	0.0
	3	-0.1	0.1	0.0	0.0	0.0	0.0	13	0.1	0.1	0.0	0.0	0.0	0.0
2	51	0.0	-0.1	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.1	0.0	0.0	0.0	0.0	46	0.0	0.0	0.0	0.0	0.0	0.0
3	19	-0.1	0.0	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
	13	-0.1	0.0	0.0	0.0	0.0	0.0	14	0.1	0.0	0.0	0.0	0.0	0.0
4	20	0.0	0.0	0.0	0.0	0.0	0.0	21	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0	15	0.1	0.0	0.0	0.0	0.0	0.0
5	21	0.0	0.0	0.0	0.0	0.0	0.0	22	0.0	0.0	0.0	0.0	0.0	0.0
	15	0.1	0.0	0.0	0.0	0.0	0.0	16	0.0	0.0	0.0	0.0	0.0	0.0
6	22	0.0	0.0	0.0	0.0	0.0	0.0	23	-0.1	0.0	0.0	0.0	0.0	0.0
	16	0.1	0.0	0.0	0.0	0.0	0.0	17	-0.1	0.0	0.0	0.0	0.0	0.0
7	23	0.1	0.1	0.0	0.0	0.0	0.0	24	-0.1	0.1	0.0	0.0	0.0	0.0
	17	0.1	-0.1	0.0	0.0	0.0	0.0	1	-0.1	-0.1	0.0	0.0	0.0	0.0
8	25	0.0	-0.1	0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0
	18	0.0	0.1	0.0	0.0	0.0	0.0	19	0.0	0.1	0.0	0.0	0.0	0.0
9	26	0.0	0.0	0.0	0.0	0.0	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0
	19	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
10	27	0.0	0.0	0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0
	20	0.0	0.0	0.0	0.0	0.0	0.0	21	0.0	0.0	0.0	0.0	0.0	0.0
11	28	0.0	0.0	0.0	0.0	0.0	0.0	29	0.0	0.0	0.0	0.0	0.0	0.0
	21	0.0	0.0	0.0	0.0	0.0	0.0	22	0.0	0.0	0.0	0.0	0.0	0.0
12	29	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0
	22	0.0	0.0	0.0	0.0	0.0	0.0	23	0.0	0.0	0.0	0.0	0.0	0.0
13	30	0.0	0.0	0.0	0.0	0.0	0.0	31	0.0	0.1	0.0	0.0	0.0	0.0
	23	0.0	-0.1	0.0	0.0	0.0	0.0	24	0.0	-0.1	0.0	0.0	0.0	0.0
14	32	0.0	0.0	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0
	25	0.0	0.0	0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0
15	33	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	0.0	0.0	0.0	0.0
	26	0.0	0.0	0.0	0.0	0.0	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
16	34	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0
	27	0.0	0.0	0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0
17	35	0.0	0.0	0.0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0
	28	0.0	0.0	0.0	0.0	0.0	0.0	29	0.0	0.0	0.0	0.0	0.0	0.0
18	36	0.0	0.0	0.0	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0
	29	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0
19	37	0.0	0.0	0.0	0.0	0.0	0.0	38	0.0	0.0	0.0	0.0	0.0	0.0
	30	0.0	0.0	0.0	0.0	0.0	0.0	31	0.0	0.0	0.0	0.0	0.0	0.0
20	39	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	0.0	0.0	0.0	0.0	0.0
	32	0.0	0.0	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0
21	40	0.0	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
	33	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	0.0	0.0	0.0	0.0
22	41	0.0	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0
	34	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0
23	42	0.0	0.0	0.0	0.0	0.0	0.0	43	0.0	0.0	0.0	0.0	0.0	0.0
	35	0.0	0.0	0.0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0
24	43	0.0	0.0	0.0	0.0	0.0	0.0	44	0.0	0.0	0.0	0.0	0.0	0.0
	36	0.0	0.0	0.0	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0
25	44	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	0.0	0.0	0.0	0.0	0.0
	37	0.0	0.0	0.0	0.0	0.0	0.0	38	0.0	0.0	0.0	0.0	0.0	0.0
26	11	0.0	0.1	0.0	0.0	0.0	0.0	46	0.0	0.0	0.0	0.0	0.0	0.0
	39	0.0	-0.1	0.0	0.0	0.0	0.0	40	0.0	0.0	0.0	0.0	0.0	0.0
27	46	0.0	0.0	0.0	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0
	40	0.0	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
28	47	0.0	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
	41	0.0	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0
29	48	0.0	0.0	0.0	0.0	0.0	0.0	49	0.0	0.0	0.0	0.0	0.0	0.0
	42	0.0	0.0	0.0	0.0	0.0	0.0	43	0.0	0.0	0.0	0.0	0.0	0.0
30	49	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0
	43	0.0	0.0	0.0	0.0	0.0	0.0	44	0.0	0.0	0.0	0.0	0.0	0.0
31	50	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	-0.1	0.0	0.0	0.0	0.0
	44	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	0.1	0.0	0.0	0.0	0.0
32	52	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0	0.0	0.0
	46	0.0	0.0	0.0	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0
33	53	0.0	0.0	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0	0.0	0.0
	47	0.0	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
34	54	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0	0.0	0.0
	48	0.0	0.0	0.0	0.0	0.0	0.0	49	0.0	0.0	0.0	0.0	0.0	0.0
35	55	0.0	0.0	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0	0.0	0.0
	49	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0
36	56	0.0	0.0	0.0	0.0	0.0	0.0	57	0.0	0.1	0.0	0.0	0.0	0.0
	50	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	-0.1	0.0	0.0	0.0	0.0
37	58	0.0	0.0	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0	0.0	0.0
	51	0.0	0.0	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0	0.0	0.0
38	59	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0
	52	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0	0.0	0.0
39	60	0.0	0.0	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0	0.0	0.0
	53	0.0	0.0	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0	0.0	0.0
40	61	0.0	0.0	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
	54	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0	0.0	0.0
41	62	0.0	0.0	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0	0.0	0.0
	55	0.0	0.0	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0	0.0	0.0
42	63	0.0	0.0	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0	0.0	0.0
	56	0.0	0.0	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0	0.0	0.0
43	65	0.0	0.0	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0	0.0	0.0
	58	0.0	0.0	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0	0.0	0.0
44	66	0.0	0.0	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0	0.0	0.0
	59	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0
45	67	0.0	0.0	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0	0.0	0.0
	60	0.0	0.0	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0	0.0	0.0
46	68	0.0	0.0	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
	61	0.0	0.0	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
47	69	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0	0.0	0.0
	62	0.0	0.0	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0	0.0	0.0
48	70	0.0	0.0	0.0	0.0	0.0	0.0	71	0.0	0.0	0.0	0.0	0.0	0.0
	63	0.0	0.0	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0	0.0	0.0
49	72	0.0	0.1	0.0	0.0	0.0	0.0	73	0.0	0.1	0.0	0.0	0.0	0.0
	65	0.0	-0.1	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0	0.0	0.0
50	73	0.0	0.0	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
	66	0.0	0.0	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0	0.0	0.0
51	74	0.0	0.0	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0	0.0	0.0
	67	0.0	0.0	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0	0.0	0.0
52	75	0.0	0.0	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0	0.0	0.0
	68	0.0	0.0	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
53	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0	0.0	0.0
	69	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0	0.0	0.0
54	77	0.0	-0.1	0.0	0.0	0.0	0.0	78	0.0	-0.1	0.0	0.0	0.0	0.0
	70	0.0	0.0	0.0	0.0	0.0	0.0	71	0.0	0.1	0.0	0.0	0.0	0.0
55	4	0.1	0.1	0.0	0.0	0.0	0.0	79	-0.1	0.1	0.0	0.0	0.0	0.0
	72	0.1	-0.1	0.0	0.0	0.0	0.0	73	-0.1	-0.1	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
56	79	0.1	0.0	0.0	0.0	0.0	0.0	80	-0.1	0.0	0.0	0.0	0.0	0.0
	73	0.1	0.0	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
57	80	0.0	0.0	0.0	0.0	0.0	0.0	81	-0.1	0.0	0.0	0.0	0.0	0.0
	74	0.0	0.0	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0	0.0	0.0
58	81	-0.1	0.0	0.0	0.0	0.0	0.0	82	0.0	0.0	0.0	0.0	0.0	0.0
	75	0.0	0.0	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0	0.0	0.0
59	82	-0.1	0.0	0.0	0.0	0.0	0.0	83	0.1	0.0	0.0	0.0	0.0	0.0
	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.1	0.0	0.0	0.0	0.0	0.0
60	83	-0.1	-0.1	0.0	0.0	0.0	0.0	2	0.1	-0.1	0.0	0.0	0.0	0.0
	77	-0.1	0.1	0.0	0.0	0.0	0.0	78	0.1	0.1	0.0	0.0	0.0	0.0

CARATT. Corr. Tors. dir. 90: ASTE

Tratto	Filo In.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)	Filo Fin.	Alt. (m)	Tx (kN)	Ty (kN)	N (kN)	Mx (kN*m)	My (kN*m)	Mt (kN*m)
1	10	0.00	0.0	-0.4	0.0	0.6	0.0	0.0	3	0.00	0.0	0.4	0.0	-0.4	0.0	0.0
1	5	0.00	0.0	-0.4	0.0	0.6	0.0	0.0	12	0.00	0.0	0.4	0.0	-0.4	0.0	0.0
	3	3.19	0.3	-0.3	0.0	0.3	0.4	0.0	3	0.00	-0.3	0.3	0.0	0.7	0.7	0.0
	5	3.19	-0.3	-0.3	0.0	0.3	-0.4	0.0	5	0.00	0.3	0.3	0.0	0.7	-0.7	0.0
	10	3.19	0.3	0.3	0.0	-0.3	0.4	0.0	10	0.00	-0.3	-0.3	0.0	-0.7	0.7	0.0
	12	3.19	-0.3	0.3	0.0	-0.3	-0.4	0.0	12	0.00	0.3	-0.3	0.0	-0.7	-0.7	0.0
	4	3.19	0.0	0.2	0.2	-0.3	0.0	0.0	12	3.19	0.0	-0.2	-0.2	-0.3	0.0	0.0
	6	3.19	0.0	-0.2	-0.2	0.3	0.0	0.0	5	3.19	0.0	0.2	0.2	0.3	0.0	0.0
	3	3.19	0.0	0.2	0.0	-0.4	0.0	0.0	10	3.19	0.0	-0.2	0.0	-0.4	0.0	0.0
	5	3.19	0.0	-0.2	0.0	0.4	0.0	0.0	12	3.19	0.0	0.2	0.0	0.4	0.0	0.0
	10	3.19	0.0	0.2	-0.2	-0.3	0.0	0.0	4	3.19	0.0	-0.2	0.2	-0.3	0.0	0.0
	3	3.19	0.0	-0.2	0.2	0.3	0.0	0.0	6	3.19	0.0	0.2	-0.2	0.3	0.0	0.0
	6	3.19	0.0	0.0	0.0	0.0	0.0	0.0	4	3.19	0.0	0.0	0.0	0.0	0.0	0.0
1	10	0.00	0.0	0.4	0.0	-0.6	0.0	0.0	4	0.00	0.0	-0.4	0.0	0.3	0.0	0.0
1	4	0.00	0.0	0.3	0.0	-0.4	0.0	0.0	12	0.00	0.0	-0.3	0.0	0.2	0.0	0.0
1	3	0.00	0.0	-0.4	0.0	0.6	0.0	0.0	6	0.00	0.0	0.4	0.0	-0.3	0.0	0.0
1	6	0.00	0.0	-0.3	0.0	0.4	0.0	0.0	5	0.00	0.0	0.3	0.0	-0.2	0.0	0.0
	6	3.19	0.0	-0.4	0.0	0.6	0.0	0.0	6	0.00	0.0	0.4	0.0	0.8	0.0	0.0
	4	3.19	0.0	0.4	0.0	-0.6	0.0	0.0	4	0.00	0.0	-0.4	0.0	-0.8	0.0	0.0
1	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
2	10	0.00	0.0	-0.3	0.0	0.4	0.0	0.0	3	0.00	0.0	0.3	0.0	-0.2	0.0	0.0
3	10	0.00	0.0	-0.3	0.0	0.2	0.0	0.0	3	0.00	0.0	0.3	0.0	0.0	0.0	0.0
4	10	0.00	0.0	-0.3	0.0	0.0	0.0	0.0	3	0.00	0.0	0.3	0.0	0.2	0.0	0.0
5	10	0.00	0.0	-0.3	0.0	-0.2	0.0	0.0	3	0.00	0.0	0.3	0.0	0.4	0.0	0.0
6	10	0.00	0.0	-0.4	0.0	-0.4	0.0	0.0	3	0.00	0.0	0.4	0.0	0.6	0.0	0.0
2	5	0.00	0.0	-0.3	0.0	0.4	0.0	0.0	12	0.00	0.0	0.3	0.0	-0.2	0.0	0.0
3	5	0.00	0.0	-0.3	0.0	0.2	0.0	0.0	12	0.00	0.0	0.3	0.0	0.0	0.0	0.0
4	5	0.00	0.0	-0.3	0.0	0.0	0.0	0.0	12	0.00	0.0	0.3	0.0	0.2	0.0	0.0
5	5	0.00	0.0	-0.3	0.0	-0.2	0.0	0.0	12	0.00	0.0	0.3	0.0	0.4	0.0	0.0
6	5	0.00	0.0	-0.4	0.0	-0.4	0.0	0.0	12	0.00	0.0	0.4	0.0	0.6	0.0	0.0
2	10	0.00	0.0	0.4	0.0	-0.4	0.0	0.0	4	0.00	0.0	-0.3	0.0	0.1	0.0	0.0
3	10	0.00	0.0	0.3	0.0	-0.2	0.0	0.0	4	0.00	0.0	-0.3	0.0	0.0	0.0	0.0
4	10	0.00	0.0	0.3	0.0	0.0	0.0	0.0	4	0.00	0.0	-0.3	0.0	-0.2	0.0	0.0
5	10	0.00	0.0	0.3	0.0	0.2	0.0	0.0	4	0.00	0.0	-0.3	0.0	-0.4	0.0	0.0
2	4	0.00	0.0	0.3	0.0	-0.2	0.0	0.0	12	0.00	0.0	-0.3	0.0	0.0	0.0	0.0
3	4	0.00	0.0	0.3	0.0	0.0	0.0	0.0	12	0.00	0.0	-0.3	0.0	-0.2	0.0	0.0
4	4	0.00	0.0	0.3	0.0	0.1	0.0	0.0	12	0.00	0.0	-0.4	0.0	-0.4	0.0	0.0
5	4	0.00	0.0	0.4	0.0	0.3	0.0	0.0	12	0.00	0.0	-0.4	0.0	-0.6	0.0	0.0
2	3	0.00	0.0	-0.4	0.0	0.4	0.0	0.0	6	0.00	0.0	0.3	0.0	-0.1	0.0	0.0
3	3	0.00	0.0	-0.3	0.0	0.2	0.0	0.0	6	0.00	0.0	0.3	0.0	0.0	0.0	0.0
4	3	0.00	0.0	-0.3	0.0	0.0	0.0	0.0	6	0.00	0.0	0.3	0.0	0.2	0.0	0.0
5	3	0.00	0.0	-0.3	0.0	-0.2	0.0	0.0	6	0.00	0.0	0.3	0.0	0.4	0.0	0.0
2	6	0.00	0.0	-0.3	0.0	0.2	0.0	0.0	5	0.00	0.0	0.3	0.0	0.0	0.0	0.0
3	6	0.00	0.0	-0.3	0.0	0.0	0.0	0.0	5	0.00	0.0	0.3	0.0	0.2	0.0	0.0
4	6	0.00	0.0	-0.3	0.0	-0.1	0.0	0.0	5	0.00	0.0	0.4	0.0	0.4	0.0	0.0
5	6	0.00	0.0	-0.4	0.0	-0.3	0.0	0.0	5	0.00	0.0	0.4	0.0	0.6	0.0	0.0
2	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
3	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
4	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
5	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0
6	6	0.00	0.0	0.0	0.0	0.0	0.0	0.0	4	0.00	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
1	18	-0.1	-0.2	0.0	0.0	0.0	0.0	19	0.1	-0.1	0.0	0.0	0.0	0.0
	3	-0.2	0.2	0.0	0.0	0.0	0.0	13	0.2	0.1	0.0	0.0	0.0	0.0
2	51	0.0	-0.1	0.0	0.0	0.0	0.0	52	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.1	0.0	0.0	0.0	0.0	46	0.0	0.0	0.0	0.0	0.0	0.0
3	19	-0.1	0.0	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
	13	-0.1	0.1	0.0	0.0	0.0	0.0	14	0.2	0.0	0.0	0.0	0.0	0.0
4	20	-0.1	0.0	0.0	0.0	0.0	0.0	21	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.1	0.0	0.0	0.0	0.0	15	0.1	-0.1	0.0	0.0	0.0	0.0
5	21	0.0	0.0	0.0	0.0	0.0	0.0	22	-0.1	0.0	0.0	0.0	0.0	0.0
	15	0.1	0.1	0.0	0.0	0.0	0.0	16	0.0	-0.1	0.0	0.0	0.0	0.0
6	22	0.0	0.0	0.0	0.0	0.0	0.0	23	-0.1	0.0	0.0	0.0	0.0	0.0
	16	0.2	0.0	0.0	0.0	0.0	0.0	17	-0.1	-0.1	0.0	0.0	0.0	0.0
7	23	0.1	0.1	0.0	0.0	0.0	0.0	24	-0.1	0.2	0.0	0.0	0.0	0.0
	17	0.2	-0.1	0.0	0.0	0.0	0.0	1	-0.2	-0.2	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
8	25	0.0	-0.1	0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	0.0	0.0	0.0
	18	-0.1	0.1	0.0	0.0	0.0	0.0	19	0.0	0.1	0.0	0.0	0.0	0.0
9	26	0.0	0.0	0.0	0.0	0.0	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0
	19	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	0.0	0.0	0.0	0.0	0.0
10	27	0.0	0.0	0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0
	20	0.0	0.0	0.0	0.0	0.0	0.0	21	0.0	0.0	0.0	0.0	0.0	0.0
11	28	0.0	0.0	0.0	0.0	0.0	0.0	29	0.0	0.0	0.0	0.0	0.0	0.0
	21	0.0	0.0	0.0	0.0	0.0	0.0	22	0.0	0.0	0.0	0.0	0.0	0.0
12	29	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0
	22	0.0	0.0	0.0	0.0	0.0	0.0	23	0.0	0.0	0.0	0.0	0.0	0.0
13	30	0.0	0.0	0.0	0.0	0.0	0.0	31	0.0	0.1	0.0	0.0	0.0	0.0
	23	0.0	-0.1	0.0	0.0	0.0	0.0	24	-0.1	-0.1	0.0	0.0	0.0	0.0
14	32	0.0	-0.1	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0
	25	-0.1	0.0	0.0	0.0	0.0	0.0	26	0.0	0.1	0.0	0.0	0.0	0.0
15	33	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	0.0	0.0	0.0	0.0
	26	0.0	0.0	0.0	0.0	0.0	0.0	27	0.0	0.0	0.0	0.0	0.0	0.0
16	34	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0
	27	0.0	0.0	0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0.0	0.0	0.0
17	35	0.0	0.0	0.0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0
	28	0.0	0.0	0.0	0.0	0.0	0.0	29	0.0	0.0	0.0	0.0	0.0	0.0
18	36	0.0	0.0	0.0	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0
	29	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0
19	37	0.0	0.0	0.0	0.0	0.0	0.0	38	0.0	0.1	0.0	0.0	0.0	0.0
	30	0.0	-0.1	0.0	0.0	0.0	0.0	31	-0.1	0.0	0.0	0.0	0.0	0.0
20	39	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	0.1	0.0	0.0	0.0	0.0
	32	0.0	-0.1	0.0	0.0	0.0	0.0	33	0.0	0.0	0.0	0.0	0.0	0.0
21	40	0.0	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
	33	0.0	0.0	0.0	0.0	0.0	0.0	34	0.0	0.0	0.0	0.0	0.0	0.0
22	41	0.0	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0
	34	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	0.0	0.0	0.0	0.0	0.0
23	42	0.0	0.0	0.0	0.0	0.0	0.0	43	0.0	0.0	0.0	0.0	0.0	0.0
	35	0.0	0.0	0.0	0.0	0.0	0.0	36	0.0	0.0	0.0	0.0	0.0	0.0
24	43	0.0	0.0	0.0	0.0	0.0	0.0	44	0.0	0.0	0.0	0.0	0.0	0.0
	36	0.0	0.0	0.0	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0
25	44	0.0	-0.1	0.0	0.0	0.0	0.0	45	0.0	0.0	0.0	0.0	0.0	0.0
	37	0.0	0.0	0.0	0.0	0.0	0.0	38	0.0	0.1	0.0	0.0	0.0	0.0
26	11	0.0	0.1	0.0	0.0	0.0	0.0	46	0.0	0.0	0.0	0.0	0.0	0.0
	39	0.0	-0.1	0.0	0.0	0.0	0.0	40	0.0	0.0	0.0	0.0	0.0	0.0
27	46	0.0	0.0	0.0	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0
	40	0.0	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
28	47	0.0	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
	41	0.0	0.0	0.0	0.0	0.0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0
29	48	0.0	0.0	0.0	0.0	0.0	0.0	49	0.0	0.0	0.0	0.0	0.0	0.0
	42	0.0	0.0	0.0	0.0	0.0	0.0	43	0.0	0.0	0.0	0.0	0.0	0.0
30	49	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0
	43	0.0	0.0	0.0	0.0	0.0	0.0	44	0.0	0.0	0.0	0.0	0.0	0.0
31	50	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	-0.1	0.0	0.0	0.0	0.0
	44	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	0.1	0.0	0.0	0.0	0.0
32	52	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0	0.0	0.0
	46	0.0	0.0	0.0	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0
33	53	0.0	0.0	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0	0.0	0.0
	47	0.0	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
34	54	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0	0.0	0.0
	48	0.0	0.0	0.0	0.0	0.0	0.0	49	0.0	0.0	0.0	0.0	0.0	0.0
35	55	0.0	0.0	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0	0.0	0.0
	49	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	0.0	0.0	0.0	0.0	0.0
36	56	0.0	0.0	0.0	0.0	0.0	0.0	57	0.0	0.1	0.0	0.0	0.0	0.0
	50	0.0	0.0	0.0	0.0	0.0	0.0	12	0.0	-0.1	0.0	0.0	0.0	0.0
37	58	0.0	-0.1	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0	0.0	0.0
	51	0.0	0.0	0.0	0.0	0.0	0.0	52	0.0	0.1	0.0	0.0	0.0	0.0
38	59	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0
	52	0.0	0.0	0.0	0.0	0.0	0.0	53	0.0	0.0	0.0	0.0	0.0	0.0
39	60	0.0	0.0	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0	0.0	0.0
	53	0.0	0.0	0.0	0.0	0.0	0.0	54	0.0	0.0	0.0	0.0	0.0	0.0
40	61	0.0	0.0	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
	54	0.0	0.0	0.0	0.0	0.0	0.0	55	0.0	0.0	0.0	0.0	0.0	0.0
41	62	0.0	0.0	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0	0.0	0.0
	55	0.0	0.0	0.0	0.0	0.0	0.0	56	0.0	0.0	0.0	0.0	0.0	0.0
42	63	0.0	0.0	0.0	0.0	0.0	0.0	64	0.0	0.1	0.0	0.0	0.0	0.0
	56	0.0	-0.1	0.0	0.0	0.0	0.0	57	0.0	0.0	0.0	0.0	0.0	0.0
43	65	0.1	0.0	0.0	0.0	0.0	0.0	66	0.0	0.1	0.0	0.0	0.0	0.0
	58	0.0	-0.1	0.0	0.0	0.0	0.0	59	0.0	0.0	0.0	0.0	0.0	0.0
44	66	0.0	0.0	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0	0.0	0.0
	59	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0
45	67	0.0	0.0	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0	0.0	0.0
	60	0.0	0.0	0.0	0.0	0.0	0.0	61	0.0	0.0	0.0	0.0	0.0	0.0
46	68	0.0	0.0	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
	61	0.0	0.0	0.0	0.0	0.0	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
47	69	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0	0.0	0.0
	62	0.0	0.0	0.0	0.0	0.0	0.0	63	0.0	0.0	0.0	0.0	0.0	0.0

FORZE Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)	Nodo N.ro	Tx (kN)	Ty (kN)	Tz (kN)	Mx (kN*m)	My (kN*m)	Mz (kN*m)
48	70	0.0	-0.1	0.0	0.0	0.0	0.0	71	0.1	0.0	0.0	0.0	0.0	0.0
	63	0.0	0.0	0.0	0.0	0.0	0.0	64	0.0	0.1	0.0	0.0	0.0	0.0
49	72	0.1	0.1	0.0	0.0	0.0	0.0	73	0.0	0.1	0.0	0.0	0.0	0.0
	65	0.0	-0.1	0.0	0.0	0.0	0.0	66	0.0	0.0	0.0	0.0	0.0	0.0
50	73	0.0	0.0	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
	66	0.0	0.0	0.0	0.0	0.0	0.0	67	0.0	0.0	0.0	0.0	0.0	0.0
51	74	0.0	0.0	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0	0.0	0.0
	67	0.0	0.0	0.0	0.0	0.0	0.0	68	0.0	0.0	0.0	0.0	0.0	0.0
52	75	0.0	0.0	0.0	0.0	0.0	0.0	76	0.0	0.0	0.0	0.0	0.0	0.0
	68	0.0	0.0	0.0	0.0	0.0	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
53	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.0	0.0	0.0	0.0	0.0	0.0
	69	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	0.0	0.0	0.0	0.0	0.0
54	77	0.0	-0.1	0.0	0.0	0.0	0.0	78	0.1	-0.1	0.0	0.0	0.0	0.0
	70	0.0	0.0	0.0	0.0	0.0	0.0	71	0.0	0.1	0.0	0.0	0.0	0.0
55	4	0.2	0.2	0.0	0.0	0.0	0.0	79	-0.2	0.1	0.0	0.0	0.0	0.0
	72	0.1	-0.2	0.0	0.0	0.0	0.0	73	-0.1	-0.1	0.0	0.0	0.0	0.0
56	79	0.1	0.1	0.0	0.0	0.0	0.0	80	-0.2	0.0	0.0	0.0	0.0	0.0
	73	0.1	0.0	0.0	0.0	0.0	0.0	74	0.0	0.0	0.0	0.0	0.0	0.0
57	80	0.0	0.1	0.0	0.0	0.0	0.0	81	-0.1	-0.1	0.0	0.0	0.0	0.0
	74	0.1	0.0	0.0	0.0	0.0	0.0	75	0.0	0.0	0.0	0.0	0.0	0.0
58	81	-0.1	0.1	0.0	0.0	0.0	0.0	82	0.0	-0.1	0.0	0.0	0.0	0.0
	75	0.0	0.0	0.0	0.0	0.0	0.0	76	0.1	0.0	0.0	0.0	0.0	0.0
59	82	-0.2	0.0	0.0	0.0	0.0	0.0	83	0.1	-0.1	0.0	0.0	0.0	0.0
	76	0.0	0.0	0.0	0.0	0.0	0.0	77	0.1	0.0	0.0	0.0	0.0	0.0
60	83	-0.2	-0.1	0.0	0.0	0.0	0.0	2	0.2	-0.2	0.0	0.0	0.0	0.0
	77	-0.1	0.1	0.0	0.0	0.0	0.0	78	0.1	0.2	0.0	0.0	0.0	0.0

SPOST. PESO PROPRIO: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.48	0.00	-.00005	0.00000	0.0000	3	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000
1	5	0.00	0.00	-0.48	0.00	-.00005	0.00000	0.0000	12	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000
	3	3.19	0.00	0.00	0.50	-.00005	0.00026	0.0000	3	0.00	0.00	0.00	0.48	0.00003	-.00005	0.0000
	5	3.19	0.00	0.00	0.50	0.00005	0.00026	0.0000	5	0.00	0.00	0.00	0.48	-.00003	-.00005	0.0000
	10	3.19	0.00	0.00	0.50	-.00005	-.00026	0.0000	10	0.00	0.00	0.00	0.48	0.00003	0.00005	0.0000
	12	3.19	0.00	0.00	0.50	0.00005	-.00026	0.0000	12	0.00	0.00	0.00	0.48	-.00003	0.00005	0.0000
	4	3.19	0.00	-0.48	0.00	0.00000	0.00000	0.0003	12	3.19	0.00	-0.50	0.00	-.00005	0.00000	0.0003
	6	3.19	0.00	-0.48	0.00	0.00000	0.00000	-.0003	5	3.19	0.00	-0.50	0.00	-.00005	0.00000	-.0003
	3	3.19	0.00	-0.50	0.00	0.00026	0.00000	0.0001	10	3.19	0.00	-0.50	0.00	-.00026	0.00000	0.0001
	5	3.19	0.00	-0.50	0.00	0.00026	0.00000	-.0001	12	3.19	0.00	-0.50	0.00	-.00026	0.00000	-.0001
	10	3.19	0.00	-0.50	0.00	0.00005	0.00000	0.0003	4	3.19	0.00	-0.48	0.00	0.00000	0.00000	0.0003
	3	3.19	0.00	-0.50	0.00	0.00005	0.00000	-.0003	6	3.19	0.00	-0.48	0.00	0.00000	0.00000	-.0003
	6	3.19	0.00	-0.48	0.00	0.00032	0.00000	0.0000	4	3.19	0.00	-0.48	0.00	-.00032	0.00000	0.0000
1	10	0.00	0.00	-0.48	0.00	-.00003	0.00000	-.0001	4	0.00	0.00	-0.46	0.00	-.00003	0.00000	0.0000
1	4	0.00	0.00	-0.44	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	-0.48	0.00	-.00003	0.00000	0.0001	6	0.00	0.00	-0.46	0.00	-.00003	0.00000	0.0000
1	6	0.00	0.00	-0.44	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	0.00	0.48	0.00000	0.00032	0.0000	6	0.00	0.00	0.00	0.44	0.00000	-.00004	0.0000
	4	3.19	0.00	0.00	0.48	0.00000	-.00032	0.0000	4	0.00	0.00	0.00	0.44	0.00000	0.00004	0.0000
1	6	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000	4	0.00	0.00	-0.41	0.00	-.00003	0.00000	0.0000
2	10	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000	3	0.00	0.00	-0.42	0.00	-.00002	0.00000	0.0000
3	10	0.00	0.00	-0.42	0.00	-.00002	0.00000	0.0000	3	0.00	0.00	-0.42	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.42	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.42	0.00	0.00002	0.00000	0.0000
5	10	0.00	0.00	-0.42	0.00	0.00002	0.00000	0.0000	3	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000
6	10	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000	3	0.00	0.00	-0.48	0.00	0.00005	0.00000	0.0000
2	5	0.00	0.00	-0.44	0.00	-.00004	0.00000	0.0000	12	0.00	0.00	-0.42	0.00	-.00002	0.00000	0.0000
3	5	0.00	0.00	-0.42	0.00	-.00002	0.00000	0.0000	12	0.00	0.00	-0.42	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.42	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.42	0.00	0.00002	0.00000	0.0000
5	5	0.00	0.00	-0.42	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000
6	5	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000	12	0.00	0.00	-0.48	0.00	0.00005	0.00000	0.0000
2	10	0.00	0.00	-0.46	0.00	-.00003	0.00000	0.0000	4	0.00	0.00	-0.44	0.00	-.00002	0.00000	0.0000
3	10	0.00	0.00	-0.44	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.44	0.00	-.00001	0.00000	0.0000
4	10	0.00	0.00	-0.44	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.44	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.44	0.00	0.00001	0.00000	0.0000
3	4	0.00	0.00	-0.44	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.44	0.00	0.00002	0.00000	0.0000
4	4	0.00	0.00	-0.44	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.46	0.00	0.00003	0.00000	0.0000
5	4	0.00	0.00	-0.46	0.00	0.00003	0.00000	0.0000	12	0.00	0.00	-0.48	0.00	0.00003	0.00000	-.0001
2	3	0.00	0.00	-0.46	0.00	-.00003	0.00000	0.0000	6	0.00	0.00	-0.44	0.00	-.00002	0.00000	0.0000
3	3	0.00	0.00	-0.44	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.44	0.00	-.00001	0.00000	0.0000
4	3	0.00	0.00	-0.44	0.00	-.00001	0.00000	0.0000	6	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.44	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.43	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.44	0.00	0.00001	0.00000	0.0000
3	6	0.00	0.00	-0.44	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.44	0.00	0.00002	0.00000	0.0000
4	6	0.00	0.00	-0.44	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.46	0.00	0.00003	0.00000	0.0000
5	6	0.00	0.00	-0.46	0.00	0.00003	0.00000	0.0000	5	0.00	0.00	-0.48	0.00	0.00003	0.00000	0.0001
2	6	0.00	0.00	-0.41	0.00	-.00003	0.00000	0.0000	4	0.00	0.00	-0.40	0.00	-.00002	0.00000	0.0000
3	6	0.00	0.00	-0.40	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.39	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.39	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.40	0.00	0.00002	0.00000	0.0000
5	6	0.00	0.00	-0.40	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.41	0.00	0.00003	0.00000	0.0000
6	6	0.00	0.00	-0.41	0.00	0.00003	0.00000	0.0000	4	0.00	0.00	-0.44	0.00	0.00004	0.00000	0.0000

SPOST. PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.46	0.00003	-.00002	0.00000	19	0.00	0.00	-0.45	-.00001	-.00001	0.00000
	3	0.01	0.00	-0.48	0.00003	-.00005	0.00000	13	0.01	0.00	-0.44	0.00001	-.00004	0.00000
2	51	0.00	0.00	-0.43	0.00000	-.00002	0.00000	52	0.00	0.00	-0.42	-.00003	-.00001	0.00000
	11	0.01	0.00	-0.44	0.00000	-.00004	0.00000	46	0.00	0.00	-0.41	0.00000	-.00003	0.00000
3	19	0.00	0.00	-0.45	-.00001	-.00001	0.00000	20	0.00	0.00	-0.44	-.00003	-.00001	0.00000
	13	0.01	0.00	-0.44	0.00001	-.00004	0.00000	14	0.00	0.00	-0.42	-.00001	-.00002	0.00000
4	20	0.00	0.00	-0.44	-.00003	-.00001	0.00000	21	0.00	0.00	-0.44	-.00004	0.00000	0.00000
	14	0.00	0.00	-0.42	-.00001	-.00002	0.00000	15	0.00	0.00	-0.42	-.00001	0.00000	0.00000
5	21	0.00	0.00	-0.44	-.00004	0.00000	0.00000	22	0.00	0.00	-0.44	-.00003	0.00001	0.00000
	15	0.00	0.00	-0.42	-.00001	0.00000	0.00000	16	0.00	0.00	-0.42	-.00001	0.00002	0.00000
6	22	0.00	0.00	-0.44	-.00003	0.00001	0.00000	23	0.00	0.00	-0.45	-.00001	0.00001	0.00000
	16	0.00	0.00	-0.42	-.00001	0.00002	0.00000	17	-0.01	0.00	-0.44	0.00001	0.00004	0.00000
7	23	0.00	0.00	-0.45	-.00001	0.00001	0.00000	24	0.00	0.00	-0.46	0.00003	0.00002	0.00000
	17	-0.01	0.00	-0.44	0.00001	0.00004	0.00000	1	-0.01	0.00	-0.48	0.00003	0.00005	0.00000
8	25	0.00	0.00	-0.44	0.00002	-.00001	0.00000	26	0.00	0.00	-0.45	0.00000	0.00001	0.00000
	18	0.00	0.00	-0.46	0.00003	-.00002	0.00000	19	0.00	0.00	-0.45	-.00001	-.00001	0.00000
9	26	0.00	0.00	-0.45	0.00000	0.00001	0.00000	27	0.00	0.00	-0.45	-.00001	0.00001	0.00000
	19	0.00	0.00	-0.45	-.00001	-.00001	0.00000	20	0.00	0.00	-0.44	-.00003	-.00001	0.00000
10	27	0.00	0.00	-0.45	-.00001	0.00001	0.00000	28	0.00	0.00	-0.45	-.00001	0.00000	0.00000
	20	0.00	0.00	-0.44	-.00003	-.00001	0.00000	21	0.00	0.00	-0.44	-.00004	0.00000	0.00000
11	28	0.00	0.00	-0.45	-.00001	0.00000	0.00000	29	0.00	0.00	-0.45	-.00001	-.00001	0.00000
	21	0.00	0.00	-0.44	-.00004	0.00000	0.00000	22	0.00	0.00	-0.44	-.00003	0.00001	0.00000
12	29	0.00	0.00	-0.45	-.00001	-.00001	0.00000	30	0.00	0.00	-0.45	0.00000	-.00001	0.00000
	22	0.00	0.00	-0.44	-.00003	0.00001	0.00000	23	0.00	0.00	-0.45	-.00001	0.00001	0.00000
13	30	0.00	0.00	-0.45	0.00000	-.00001	0.00000	31	0.00	0.00	-0.44	0.00002	0.00001	0.00000
	23	0.00	0.00	-0.45	-.00001	0.00001	0.00000	24	0.00	0.00	-0.46	0.00003	0.00002	0.00000
14	32	0.00	0.00	-0.44	0.00001	-.00001	0.00000	33	0.00	0.00	-0.44	0.00002	0.00001	0.00000
	25	0.00	0.00	-0.44	0.00002	-.00001	0.00000	26	0.00	0.00	-0.45	0.00000	0.00001	0.00000
15	33	0.00	0.00	-0.44	0.00002	0.00001	0.00000	34	0.00	0.00	-0.44	0.00003	0.00000	0.00000
	26	0.00	0.00	-0.45	0.00000	0.00001	0.00000	27	0.00	0.00	-0.45	-.00001	0.00001	0.00000
16	34	0.00	0.00	-0.44	0.00003	0.00000	0.00000	35	0.00	0.00	-0.45	0.00004	0.00000	0.00000
	27	0.00	0.00	-0.45	-.00001	0.00001	0.00000	28	0.00	0.00	-0.45	-.00001	0.00000	0.00000
17	35	0.00	0.00	-0.45	0.00004	0.00000	0.00000	36	0.00	0.00	-0.44	0.00003	0.00000	0.00000
	28	0.00	0.00	-0.45	-.00001	0.00000	0.00000	29	0.00	0.00	-0.45	-.00001	-.00001	0.00000
18	36	0.00	0.00	-0.44	0.00003	0.00000	0.00000	37	0.00	0.00	-0.44	0.00002	-.00001	0.00000
	29	0.00	0.00	-0.45	-.00001	-.00001	0.00000	30	0.00	0.00	-0.45	0.00000	-.00001	0.00000
19	37	0.00	0.00	-0.44	0.00002	-.00001	0.00000	38	0.00	0.00	-0.44	0.00001	0.00001	0.00000
	30	0.00	0.00	-0.45	0.00000	-.00001	0.00000	31	0.00	0.00	-0.44	0.00002	0.00001	0.00000
20	39	0.00	0.00	-0.43	0.00000	-.00002	0.00000	40	0.00	0.00	-0.42	0.00003	-.00001	0.00000
	32	0.00	0.00	-0.44	0.00001	-.00001	0.00000	33	0.00	0.00	-0.44	0.00002	0.00001	0.00000
21	40	0.00	0.00	-0.42	0.00003	-.00001	0.00000	41	0.00	0.00	-0.42	0.00005	-.00001	0.00000
	33	0.00	0.00	-0.44	0.00002	0.00001	0.00000	34	0.00	0.00	-0.44	0.00003	0.00000	0.00000
22	41	0.00	0.00	-0.42	0.00005	-.00001	0.00000	42	0.00	0.00	-0.41	0.00006	0.00000	0.00000
	34	0.00	0.00	-0.44	0.00003	0.00000	0.00000	35	0.00	0.00	-0.45	0.00004	0.00000	0.00000
23	42	0.00	0.00	-0.41	0.00006	0.00000	0.00000	43	0.00	0.00	-0.42	0.00005	0.00001	0.00000
	35	0.00	0.00	-0.45	0.00004	0.00000	0.00000	36	0.00	0.00	-0.44	0.00003	0.00000	0.00000
24	43	0.00	0.00	-0.42	0.00005	0.00001	0.00000	44	0.00	0.00	-0.42	0.00003	0.00001	0.00000
	36	0.00	0.00	-0.44	0.00003	0.00000	0.00000	37	0.00	0.00	-0.44	0.00002	-.00001	0.00000
25	44	0.00	0.00	-0.42	0.00003	0.00001	0.00000	45	0.00	0.00	-0.43	0.00000	0.00002	0.00000
	37	0.00	0.00	-0.44	0.00002	-.00001	0.00000	38	0.00	0.00	-0.44	0.00001	0.00001	0.00000
26	11	0.01	0.00	-0.44	0.00000	-.00004	0.00000	46	0.00	0.00	-0.41	0.00000	-.00003	0.00000
	39	0.00	0.00	-0.43	0.00000	-.00002	0.00000	40	0.00	0.00	-0.42	0.00003	-.00001	0.00000
27	46	0.00	0.00	-0.41	0.00000	-.00003	0.00000	47	0.00	0.00	-0.40	0.00000	-.00002	0.00000
	40	0.00	0.00	-0.42	0.00003	-.00001	0.00000	41	0.00	0.00	-0.42	0.00005	-.00001	0.00000
28	47	0.00	0.00	-0.40	0.00000	-.00002	0.00000	48	0.00	0.00	-0.39	0.00000	0.00000	0.00000
	41	0.00	0.00	-0.42	0.00005	-.00001	0.00000	42	0.00	0.00	-0.41	0.00006	0.00000	0.00000
29	48	0.00	0.00	-0.39	0.00000	0.00000	0.00000	49	0.00	0.00	-0.40	0.00000	0.00002	0.00000
	42	0.00	0.00	-0.41	0.00006	0.00000	0.00000	43	0.00	0.00	-0.42	0.00005	0.00001	0.00000
30	49	0.00	0.00	-0.40	0.00000	0.00002	0.00000	50	0.00	0.00	-0.41	0.00000	0.00003	0.00000
	43	0.00	0.00	-0.42	0.00005	0.00001	0.00000	44	0.00	0.00	-0.42	0.00003	0.00001	0.00000
31	50	0.00	0.00	-0.41	0.00000	0.00003	0.00000	12	-0.01	0.00	-0.44	0.00000	0.00004	0.00000
	44	0.00	0.00	-0.42	0.00003	0.00001	0.00000	45	0.00	0.00	-0.43	0.00000	0.00002	0.00000
32	52	0.00	0.00	-0.42	-.00003	-.00001	0.00000	53	0.00	0.00	-0.42	-.00005	-.00001	0.00000
	46	0.00	0.00	-0.41	0.00000	-.00003	0.00000	47	0.00	0.00	-0.40	0.00000	-.00002	0.00000
33	53	0.00	0.00	-0.42	-.00005	-.00001	0.00000	54	0.00	0.00	-0.41	-.00006	0.00000	0.00000
	47	0.00	0.00	-0.40	0.00000	-.00002	0.00000	48	0.00	0.00	-0.39	0.00000	0.00000	0.00000
34	54	0.00	0.00	-0.41	-.00006	0.00000	0.00000	55	0.00	0.00	-0.42	-.00005	0.00001	0.00000
	48	0.00	0.00	-0.39	0.00000	0.00000	0.00000	49	0.00	0.00	-0.40	0.00000	0.00002	0.00000
35	55	0.00	0.00	-0.42	-.00005	0.00001	0.00000	56	0.00	0.00	-0.42	-.00003	0.00001	0.00000
	49	0.00	0.00	-0.40	0.00000	0.00002	0.00000	50	0.00	0.00	-0.41	0.00000	0.00003	0.00000
36	56	0.00	0.00	-0.42	-.00003	0.00001	0.00000	57	0.00	0.00	-0.43	0.00000	0.00002	0.00000
	50	0.00	0.00	-0.41	0.00000	0.00003	0.00000	12	-0.01	0.00	-0.44	0.00000	0.00004	0.00000
37	58	0.00	0.00	-0.44	-.00001	-.00001	0.00000	59	0.00	0.00	-0.44	-.00002	0.00001	0.00000
	51	0.00	0.00	-0.43	0.00000	-.00002	0.00000	52	0.00	0.00	-0.42	-.00003	-.00001	0.00000
38	59	0.00	0.00	-0.44	-.00002	0.00001	0.00000	60	0.00	0.00	-0.44	-.00003	0.00000	0.00000
	52	0.00	0.00	-0.42	-.00003	-.00001	0.00000	53	0.00	0.00	-0.42	-.00005	-.00001	0.00000
39	60	0.00	0.00	-0.44	-.00003	0.00000	0.00000	61	0.00	0.00	-0.45	-.00004	0.00000	0.00000
	53	0.00	0.00	-0.42	-.00005	-.00001	0.00000	54	0.00	0.00	-0.41	-.00006	0.00000	0.00000
40	61	0.00	0.00	-0.45	-.00004	0.00000	0.00000	62	0.00	0.00	-0.44	-.00003	0.00000	0.00000
	54	0.00	0.00	-0.41	-.00006	0.00000	0.00000	55	0.00	0.00	-0.42	-.00005	0.00001	0.00000
41	62	0.00	0.00	-0.44	-.00003	0.00000	0.00000	63	0.00	0.00	-0.44	-.00002	-.00001	0.00000

SPOST. PESO PROPRIO: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
	55	0.00	0.00	-0.42	-.00005	0.00001	0.00000	56	0.00	0.00	-0.42	-.00003	0.00001	0.00000
42	63	0.00	0.00	-0.44	-.00002	-.00001	0.00000	64	0.00	0.00	-0.44	-.00001	0.00001	0.00000
	56	0.00	0.00	-0.42	-.00003	0.00001	0.00000	57	0.00	0.00	-0.43	0.00000	0.00002	0.00000
43	65	0.00	0.00	-0.44	-.00002	-.00001	0.00000	66	0.00	0.00	-0.45	0.00000	0.00001	0.00000
	58	0.00	0.00	-0.44	-.00001	-.00001	0.00000	59	0.00	0.00	-0.44	-.00002	0.00001	0.00000
44	66	0.00	0.00	-0.45	0.00000	0.00001	0.00000	67	0.00	0.00	-0.45	0.00001	0.00001	0.00000
	59	0.00	0.00	-0.44	-.00002	0.00001	0.00000	60	0.00	0.00	-0.44	-.00003	0.00000	0.00000
45	67	0.00	0.00	-0.45	0.00001	0.00001	0.00000	68	0.00	0.00	-0.45	0.00001	0.00000	0.00000
	60	0.00	0.00	-0.44	-.00003	0.00000	0.00000	61	0.00	0.00	-0.45	-.00004	0.00000	0.00000
46	68	0.00	0.00	-0.45	0.00001	0.00000	0.00000	69	0.00	0.00	-0.45	0.00001	-.00001	0.00000
	61	0.00	0.00	-0.45	-.00004	0.00000	0.00000	62	0.00	0.00	-0.44	-.00003	0.00000	0.00000
47	69	0.00	0.00	-0.45	0.00001	-.00001	0.00000	70	0.00	0.00	-0.45	0.00000	-.00001	0.00000
	62	0.00	0.00	-0.44	-.00003	0.00000	0.00000	63	0.00	0.00	-0.44	-.00002	-.00001	0.00000
48	70	0.00	0.00	-0.45	0.00000	-.00001	0.00000	71	0.00	0.00	-0.44	-.00002	0.00001	0.00000
	63	0.00	0.00	-0.44	-.00002	-.00001	0.00000	64	0.00	0.00	-0.44	-.00001	0.00001	0.00000
49	72	0.00	0.00	-0.46	-.00003	-.00002	0.00000	73	0.00	0.00	-0.45	0.00001	-.00001	0.00000
	65	0.00	0.00	-0.44	-.00002	-.00001	0.00000	66	0.00	0.00	-0.45	0.00000	0.00001	0.00000
50	73	0.00	0.00	-0.45	0.00001	-.00001	0.00000	74	0.00	0.00	-0.44	0.00003	-.00001	0.00000
	66	0.00	0.00	-0.45	0.00000	0.00001	0.00000	67	0.00	0.00	-0.45	0.00001	0.00001	0.00000
51	74	0.00	0.00	-0.44	0.00003	-.00001	0.00000	75	0.00	0.00	-0.44	0.00004	0.00000	0.00000
	67	0.00	0.00	-0.45	0.00001	0.00001	0.00000	68	0.00	0.00	-0.45	0.00001	0.00000	0.00000
52	75	0.00	0.00	-0.44	0.00004	0.00000	0.00000	76	0.00	0.00	-0.44	0.00003	0.00001	0.00000
	68	0.00	0.00	-0.45	0.00001	0.00000	0.00000	69	0.00	0.00	-0.45	0.00001	-.00001	0.00000
53	76	0.00	0.00	-0.44	0.00003	0.00001	0.00000	77	0.00	0.00	-0.45	0.00001	0.00001	0.00000
	69	0.00	0.00	-0.45	0.00001	-.00001	0.00000	70	0.00	0.00	-0.45	0.00000	-.00001	0.00000
54	77	0.00	0.00	-0.45	0.00001	0.00001	0.00000	78	0.00	0.00	-0.46	-.00003	0.00002	0.00000
	70	0.00	0.00	-0.45	0.00000	-.00001	0.00000	71	0.00	0.00	-0.44	-.00002	0.00001	0.00000
55	4	0.01	0.00	-0.48	-.00003	-.00005	0.00000	79	0.01	0.00	-0.44	-.00001	-.00004	0.00000
	72	0.00	0.00	-0.46	-.00003	-.00002	0.00000	73	0.00	0.00	-0.45	0.00001	-.00001	0.00000
56	79	0.01	0.00	-0.44	-.00001	-.00004	0.00000	80	0.00	0.00	-0.42	0.00001	-.00002	0.00000
	73	0.00	0.00	-0.45	0.00001	-.00001	0.00000	74	0.00	0.00	-0.44	0.00003	-.00001	0.00000
57	80	0.00	0.00	-0.42	0.00001	-.00002	0.00000	81	0.00	0.00	-0.42	0.00001	0.00000	0.00000
	74	0.00	0.00	-0.44	0.00003	-.00001	0.00000	75	0.00	0.00	-0.44	0.00004	0.00000	0.00000
58	81	0.00	0.00	-0.42	0.00001	0.00000	0.00000	82	0.00	0.00	-0.42	0.00001	0.00002	0.00000
	75	0.00	0.00	-0.44	0.00004	0.00000	0.00000	76	0.00	0.00	-0.44	0.00003	0.00001	0.00000
59	82	0.00	0.00	-0.42	0.00001	0.00002	0.00000	83	-0.01	0.00	-0.44	-.00001	0.00004	0.00000
	76	0.00	0.00	-0.44	0.00003	0.00001	0.00000	77	0.00	0.00	-0.45	0.00001	0.00001	0.00000
60	83	-0.01	0.00	-0.44	-.00001	0.00004	0.00000	2	-0.01	0.00	-0.48	-.00003	0.00005	0.00000
	77	0.00	0.00	-0.45	0.00001	0.00001	0.00000	78	0.00	0.00	-0.46	-.00003	0.00002	0.00000

SPOST. SOVRACCARICO PERMAN.: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000
1	5	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000
	3	3.19	0.00	0.00	0.32	-.00001	0.00010	0.0000	3	0.00	0.00	0.00	0.31	0.00002	-.00001	0.0000
	5	3.19	0.00	0.00	0.32	0.00001	0.00010	0.0000	5	0.00	0.00	0.00	0.31	-.00002	-.00001	0.0000
	10	3.19	0.00	0.00	0.32	-.00001	-.00010	0.0000	10	0.00	0.00	0.00	0.31	0.00002	0.00001	0.0000
	12	3.19	0.00	0.00	0.32	0.00001	-.00010	0.0000	12	0.00	0.00	0.00	0.31	-.00002	0.00001	0.0000
	4	3.19	0.00	-0.28	0.00	0.00000	0.00000	0.0001	12	3.19	0.00	-0.32	0.00	-.00001	0.00000	0.0001
	6	3.19	0.00	-0.28	0.00	0.00000	0.00000	-.0001	5	3.19	0.00	-0.32	0.00	-.00001	0.00000	-.0001
	3	3.19	0.00	-0.32	0.00	0.00010	0.00000	0.0000	10	3.19	0.00	-0.32	0.00	-.00010	0.00000	0.0000
	5	3.19	0.00	-0.32	0.00	0.00010	0.00000	0.0000	12	3.19	0.00	-0.32	0.00	-.00010	0.00000	0.0000
	10	3.19	0.00	-0.32	0.00	0.00001	0.00000	0.0001	4	3.19	0.00	-0.28	0.00	0.00000	0.00000	0.0001
	3	3.19	0.00	-0.32	0.00	0.00001	0.00000	-.0001	6	3.19	0.00	-0.28	0.00	0.00000	0.00000	-.0001
	6	3.19	0.00	-0.28	0.00	0.00015	0.00000	0.0000	4	3.19	0.00	-0.28	0.00	-.00015	0.00000	0.0000
1	10	0.00	0.00	-0.31	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.30	0.00	-.00002	0.00000	0.0000
1	4	0.00	0.00	-0.26	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.27	0.00	0.00001	0.00000	0.0000
1	3	0.00	0.00	-0.31	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.30	0.00	-.00002	0.00000	0.0000
1	6	0.00	0.00	-0.26	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.27	0.00	0.00001	0.00000	0.0000
	6	3.19	0.00	0.00	0.28	0.00000	0.00015	0.0000	6	0.00	0.00	0.00	0.26	0.00000	-.00004	0.0000
	4	3.19	0.00	0.00	0.28	0.00000	-.00015	0.0000	4	0.00	0.00	0.00	0.26	0.00000	0.00004	0.0000
1	6	0.00	0.00	-0.26	0.00	-.00004	0.00000	0.0000	4	0.00	0.00	-0.24	0.00	-.00003	0.00000	0.0000
2	10	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.30	0.00	-.00001	0.00000	0.0000
3	10	0.00	0.00	-0.30	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.30	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.30	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.30	0.00	0.00001	0.00000	0.0000
5	10	0.00	0.00	-0.30	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000
6	10	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000
2	5	0.00	0.00	-0.31	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.30	0.00	-.00001	0.00000	0.0000
3	5	0.00	0.00	-0.30	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.30	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.30	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.30	0.00	0.00001	0.00000	0.0000
5	5	0.00	0.00	-0.30	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000
6	5	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.31	0.00	0.00001	0.00000	0.0000
2	10	0.00	0.00	-0.30	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.29	0.00	-.00002	0.00000	0.0000
3	10	0.00	0.00	-0.29	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.27	0.00	-.00002	0.00000	0.0000
4	10	0.00	0.00	-0.27	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.27	0.00	-.00001	0.00000	0.0000
5	10	0.00	0.00	-0.27	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.26	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.27	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.27	0.00	0.00002	0.00000	0.0000
3	4	0.00	0.00	-0.27	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.29	0.00	0.00002	0.00000	0.0000
4	4	0.00	0.00	-0.29	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.30	0.00	0.00002	0.00000	0.0000
5	4	0.00	0.00	-0.30	0.00	0.00002	0.00000	0.0000	12	0.00	0.00	-0.31	0.00	0.00002	0.00000	0.0000
2	3	0.00	0.00	-0.30	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.29	0.00	-.00002	0.00000	0.0000

SPOST. SOVRACCARICO PERMAN.: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
3	3	0.00	0.00	-0.29	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.27	0.00	-.00002	0.00000	0.0000
4	3	0.00	0.00	-0.27	0.00	-.00002	0.00000	0.0000	6	0.00	0.00	-0.27	0.00	-.00001	0.00000	0.0000
5	3	0.00	0.00	-0.27	0.00	-.00001	0.00000	0.0000	6	0.00	0.00	-0.26	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.27	0.00	0.00001	0.00000	0.0000	5	0.00	0.00	-0.27	0.00	0.00002	0.00000	0.0000
3	6	0.00	0.00	-0.27	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.29	0.00	0.00002	0.00000	0.0000
4	6	0.00	0.00	-0.29	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.30	0.00	0.00002	0.00000	0.0000
5	6	0.00	0.00	-0.30	0.00	0.00002	0.00000	0.0000	5	0.00	0.00	-0.31	0.00	0.00002	0.00000	0.0000
2	6	0.00	0.00	-0.24	0.00	-.00003	0.00000	0.0000	4	0.00	0.00	-0.22	0.00	-.00002	0.00000	0.0000
3	6	0.00	0.00	-0.22	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.21	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.21	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.22	0.00	0.00002	0.00000	0.0000
5	6	0.00	0.00	-0.22	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.24	0.00	0.00003	0.00000	0.0000
6	6	0.00	0.00	-0.24	0.00	0.00003	0.00000	0.0000	4	0.00	0.00	-0.26	0.00	0.00004	0.00000	0.0000

SPOST. SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.30	0.00002	-.00001	0.00000	19	0.00	0.00	-0.30	0.00002	0.00000	0.00000
	3	0.00	0.00	-0.31	0.00002	-.00001	0.00000	13	0.00	0.00	-0.31	0.00001	-.00001	0.00000
2	51	0.00	0.00	-0.27	-.00001	-.00002	0.00000	52	0.00	0.00	-0.25	-.00003	-.00003	0.00000
	11	0.01	0.00	-0.26	0.00000	-.00004	0.00000	46	0.01	0.00	-0.24	0.00000	-.00003	0.00000
3	19	0.00	0.00	-0.30	0.00002	0.00000	0.00000	20	0.00	0.00	-0.29	0.00001	0.00000	0.00000
	13	0.00	0.00	-0.31	0.00001	-.00001	0.00000	14	0.00	0.00	-0.30	0.00001	-.00001	0.00000
4	20	0.00	0.00	-0.29	0.00001	0.00000	0.00000	21	0.00	0.00	-0.29	0.00001	0.00000	0.00000
	14	0.00	0.00	-0.30	0.00001	-.00001	0.00000	15	0.00	0.00	-0.30	0.00001	0.00000	0.00000
5	21	0.00	0.00	-0.29	0.00001	0.00000	0.00000	22	0.00	0.00	-0.29	0.00001	0.00000	0.00000
	15	0.00	0.00	-0.30	0.00001	0.00000	0.00000	16	0.00	0.00	-0.30	0.00001	0.00001	0.00000
6	22	0.00	0.00	-0.29	0.00001	0.00000	0.00000	23	0.00	0.00	-0.30	0.00002	0.00000	0.00000
	16	0.00	0.00	-0.30	0.00001	0.00001	0.00000	17	0.00	0.00	-0.31	0.00001	0.00001	0.00000
7	23	0.00	0.00	-0.30	0.00002	0.00000	0.00000	24	0.00	0.00	-0.30	0.00002	0.00001	0.00000
	17	0.00	0.00	-0.31	0.00001	0.00001	0.00000	1	0.00	0.00	-0.31	0.00002	0.00001	0.00000
8	25	0.00	0.00	-0.29	0.00002	-.00001	0.00000	26	0.00	0.00	-0.28	0.00002	0.00000	0.00000
	18	0.00	0.00	-0.30	0.00002	-.00001	0.00000	19	0.00	0.00	-0.30	0.00002	0.00000	0.00000
9	26	0.00	0.00	-0.28	0.00002	0.00000	0.00000	27	0.00	0.00	-0.28	0.00003	0.00000	0.00000
	19	0.00	0.00	-0.30	0.00002	0.00000	0.00000	20	0.00	0.00	-0.29	0.00001	0.00000	0.00000
10	27	0.00	0.00	-0.28	0.00003	0.00000	0.00000	28	0.00	0.00	-0.28	0.00003	0.00000	0.00000
	20	0.00	0.00	-0.29	0.00001	0.00000	0.00000	21	0.00	0.00	-0.29	0.00001	0.00000	0.00000
11	28	0.00	0.00	-0.28	0.00003	0.00000	0.00000	29	0.00	0.00	-0.28	0.00003	0.00000	0.00000
	21	0.00	0.00	-0.29	0.00001	0.00000	0.00000	22	0.00	0.00	-0.29	0.00001	0.00000	0.00000
12	29	0.00	0.00	-0.28	0.00003	0.00000	0.00000	30	0.00	0.00	-0.28	0.00002	0.00000	0.00000
	22	0.00	0.00	-0.29	0.00001	0.00000	0.00000	23	0.00	0.00	-0.30	0.00002	0.00000	0.00000
13	30	0.00	0.00	-0.28	0.00002	0.00000	0.00000	31	0.00	0.00	-0.29	0.00002	0.00001	0.00000
	23	0.00	0.00	-0.30	0.00002	0.00000	0.00000	24	0.00	0.00	-0.30	0.00002	0.00001	0.00000
14	32	0.00	0.00	-0.27	0.00002	-.00001	0.00000	33	0.00	0.00	-0.27	0.00003	-.00001	0.00000
	25	0.00	0.00	-0.29	0.00002	-.00001	0.00000	26	0.00	0.00	-0.28	0.00002	0.00000	0.00000
15	33	0.00	0.00	-0.27	0.00003	-.00001	0.00000	34	0.00	0.00	-0.26	0.00004	-.00001	0.00000
	26	0.00	0.00	-0.28	0.00002	0.00000	0.00000	27	0.00	0.00	-0.28	0.00003	0.00000	0.00000
16	34	0.00	0.00	-0.26	0.00004	-.00001	0.00000	35	0.00	0.00	-0.26	0.00004	0.00000	0.00000
	27	0.00	0.00	-0.28	0.00003	0.00000	0.00000	28	0.00	0.00	-0.28	0.00003	0.00000	0.00000
17	35	0.00	0.00	-0.26	0.00004	0.00000	0.00000	36	0.00	0.00	-0.26	0.00004	0.00001	0.00000
	28	0.00	0.00	-0.28	0.00003	0.00000	0.00000	29	0.00	0.00	-0.28	0.00003	0.00000	0.00000
18	36	0.00	0.00	-0.26	0.00004	0.00001	0.00000	37	0.00	0.00	-0.27	0.00003	0.00001	0.00000
	29	0.00	0.00	-0.28	0.00003	0.00000	0.00000	30	0.00	0.00	-0.28	0.00002	0.00000	0.00000
19	37	0.00	0.00	-0.27	0.00003	0.00001	0.00000	38	0.00	0.00	-0.27	0.00002	0.00001	0.00000
	30	0.00	0.00	-0.28	0.00002	0.00000	0.00000	31	0.00	0.00	-0.29	0.00002	0.00001	0.00000
20	39	0.00	0.00	-0.27	0.00001	-.00002	0.00000	40	0.00	0.00	-0.25	0.00003	-.00003	0.00000
	32	0.00	0.00	-0.27	0.00002	-.00001	0.00000	33	0.00	0.00	-0.27	0.00003	-.00001	0.00000
21	40	0.00	0.00	-0.25	0.00003	-.00003	0.00000	41	0.00	0.00	-0.23	0.00004	-.00002	0.00000
	33	0.00	0.00	-0.27	0.00003	-.00001	0.00000	34	0.00	0.00	-0.26	0.00004	-.00001	0.00000
22	41	0.00	0.00	-0.23	0.00004	-.00002	0.00000	42	0.00	0.00	-0.23	0.00004	0.00000	0.00000
	34	0.00	0.00	-0.26	0.00004	-.00001	0.00000	35	0.00	0.00	-0.26	0.00004	0.00000	0.00000
23	42	0.00	0.00	-0.23	0.00004	0.00000	0.00000	43	0.00	0.00	-0.23	0.00004	0.00002	0.00000
	35	0.00	0.00	-0.26	0.00004	0.00000	0.00000	36	0.00	0.00	-0.26	0.00004	0.00001	0.00000
24	43	0.00	0.00	-0.23	0.00004	0.00002	0.00000	44	0.00	0.00	-0.25	0.00003	0.00003	0.00000
	36	0.00	0.00	-0.26	0.00004	0.00001	0.00000	37	0.00	0.00	-0.27	0.00003	0.00001	0.00000
25	44	0.00	0.00	-0.25	0.00003	0.00003	0.00000	45	0.00	0.00	-0.27	0.00001	0.00002	0.00000
	37	0.00	0.00	-0.27	0.00003	0.00001	0.00000	38	0.00	0.00	-0.27	0.00002	0.00001	0.00000
26	11	0.01	0.00	-0.26	0.00000	-.00004	0.00000	46	0.01	0.00	-0.24	0.00000	-.00003	0.00000
	39	0.00	0.00	-0.27	0.00001	-.00002	0.00000	40	0.00	0.00	-0.25	0.00003	-.00003	0.00000
27	46	0.01	0.00	-0.24	0.00000	-.00003	0.00000	47	0.00	0.00	-0.22	0.00000	-.00002	0.00000
	40	0.00	0.00	-0.25	0.00003	-.00003	0.00000	41	0.00	0.00	-0.23	0.00004	-.00002	0.00000
28	47	0.00	0.00	-0.22	0.00000	-.00002	0.00000	48	0.00	0.00	-0.21	0.00000	0.00000	0.00000
	41	0.00	0.00	-0.23	0.00004	-.00002	0.00000	42	0.00	0.00	-0.23	0.00004	0.00000	0.00000
29	48	0.00	0.00	-0.21	0.00000	0.00000	0.00000	49	0.00	0.00	-0.22	0.00000	0.00002	0.00000
	42	0.00	0.00	-0.23	0.00004	0.00000	0.00000	43	0.00	0.00	-0.23	0.00004	0.00002	0.00000
30	49	0.00	0.00	-0.22	0.00000	0.00002	0.00000	50	-0.01	0.00	-0.24	0.00000	0.00003	0.00000
	43	0.00	0.00	-0.23	0.00004	0.00002	0.00000	44	0.00	0.00	-0.25	0.00003	0.00003	0.00000
31	50	-0.01	0.00	-0.24	0.00000	0.00003	0.00000	12	-0.01	0.00	-0.26	0.00000	0.00004	0.00000
	44	0.00	0.00	-0.25	0.00003	0.00003	0.00000	45	0.00	0.00	-0.27	0.00001	0.00002	0.00000
32	52	0.00	0.00	-0.25	-.00003	-.00003	0.00000	53	0.00	0.00	-0.23	-.00004	-.00002	0.00000
	46	0.01	0.00	-0.24	0.00000	-.00003	0.00000	47	0.00	0.00	-0.22	0.00000	-.00002	0.00000

SPOST. SOVRACCARICO PERMAN.: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
33	53	0.00	0.00	-0.23	-.00004	-.00002	0.00000	54	0.00	0.00	-0.23	-.00004	0.00000	0.00000
	47	0.00	0.00	-0.22	0.00000	-.00002	0.00000	48	0.00	0.00	-0.21	0.00000	0.00000	0.00000
34	54	0.00	0.00	-0.23	-.00004	0.00000	0.00000	55	0.00	0.00	-0.23	-.00004	0.00002	0.00000
	48	0.00	0.00	-0.21	0.00000	0.00000	0.00000	49	0.00	0.00	-0.22	0.00000	0.00002	0.00000
35	55	0.00	0.00	-0.23	-.00004	0.00002	0.00000	56	0.00	0.00	-0.25	-.00003	0.00003	0.00000
	49	0.00	0.00	-0.22	0.00000	0.00002	0.00000	50	-0.01	0.00	-0.24	0.00000	0.00003	0.00000
36	56	0.00	0.00	-0.25	-.00003	0.00003	0.00000	57	0.00	0.00	-0.27	-.00001	0.00002	0.00000
	50	-0.01	0.00	-0.24	0.00000	0.00003	0.00000	12	-0.01	0.00	-0.26	0.00000	0.00004	0.00000
37	58	0.00	0.00	-0.27	-.00002	-.00001	0.00000	59	0.00	0.00	-0.27	-.00003	-.00001	0.00000
	51	0.00	0.00	-0.27	-.00001	-.00002	0.00000	52	0.00	0.00	-0.25	-.00003	-.00003	0.00000
38	59	0.00	0.00	-0.27	-.00003	-.00001	0.00000	60	0.00	0.00	-0.26	-.00004	-.00001	0.00000
	52	0.00	0.00	-0.25	-.00003	-.00003	0.00000	53	0.00	0.00	-0.23	-.00004	-.00002	0.00000
39	60	0.00	0.00	-0.26	-.00004	-.00001	0.00000	61	0.00	0.00	-0.26	-.00004	0.00000	0.00000
	53	0.00	0.00	-0.23	-.00004	-.00002	0.00000	54	0.00	0.00	-0.23	-.00004	0.00000	0.00000
40	61	0.00	0.00	-0.26	-.00004	0.00000	0.00000	62	0.00	0.00	-0.26	-.00004	0.00001	0.00000
	54	0.00	0.00	-0.23	-.00004	0.00000	0.00000	55	0.00	0.00	-0.23	-.00004	0.00002	0.00000
41	62	0.00	0.00	-0.26	-.00004	0.00001	0.00000	63	0.00	0.00	-0.27	-.00003	0.00001	0.00000
	55	0.00	0.00	-0.23	-.00004	0.00002	0.00000	56	0.00	0.00	-0.25	-.00003	0.00003	0.00000
42	63	0.00	0.00	-0.27	-.00003	0.00001	0.00000	64	0.00	0.00	-0.27	-.00002	0.00001	0.00000
	56	0.00	0.00	-0.25	-.00003	0.00003	0.00000	57	0.00	0.00	-0.27	-.00001	0.00002	0.00000
43	65	0.00	0.00	-0.29	-.00002	-.00001	0.00000	66	0.00	0.00	-0.28	-.00002	0.00000	0.00000
	58	0.00	0.00	-0.27	-.00002	-.00001	0.00000	59	0.00	0.00	-0.27	-.00003	-.00001	0.00000
44	66	0.00	0.00	-0.28	-.00002	0.00000	0.00000	67	0.00	0.00	-0.28	-.00003	0.00000	0.00000
	59	0.00	0.00	-0.27	-.00003	-.00001	0.00000	60	0.00	0.00	-0.26	-.00004	-.00001	0.00000
45	67	0.00	0.00	-0.28	-.00003	0.00000	0.00000	68	0.00	0.00	-0.28	-.00003	0.00000	0.00000
	60	0.00	0.00	-0.26	-.00004	-.00001	0.00000	61	0.00	0.00	-0.26	-.00004	0.00000	0.00000
46	68	0.00	0.00	-0.28	-.00003	0.00000	0.00000	69	0.00	0.00	-0.28	-.00003	0.00000	0.00000
	61	0.00	0.00	-0.26	-.00004	0.00000	0.00000	62	0.00	0.00	-0.26	-.00004	0.00001	0.00000
47	69	0.00	0.00	-0.28	-.00003	0.00000	0.00000	70	0.00	0.00	-0.28	-.00002	0.00000	0.00000
	62	0.00	0.00	-0.26	-.00004	0.00001	0.00000	63	0.00	0.00	-0.27	-.00003	0.00001	0.00000
48	70	0.00	0.00	-0.28	-.00002	0.00000	0.00000	71	0.00	0.00	-0.29	-.00002	0.00001	0.00000
	63	0.00	0.00	-0.27	-.00003	0.00001	0.00000	64	0.00	0.00	-0.27	-.00002	0.00001	0.00000
49	72	0.00	0.00	-0.30	-.00002	-.00001	0.00000	73	0.00	0.00	-0.30	-.00002	0.00000	0.00000
	65	0.00	0.00	-0.29	-.00002	-.00001	0.00000	66	0.00	0.00	-0.28	-.00002	0.00000	0.00000
50	73	0.00	0.00	-0.30	-.00002	0.00000	0.00000	74	0.00	0.00	-0.29	-.00001	0.00000	0.00000
	66	0.00	0.00	-0.28	-.00002	0.00000	0.00000	67	0.00	0.00	-0.28	-.00003	0.00000	0.00000
51	74	0.00	0.00	-0.29	-.00001	0.00000	0.00000	75	0.00	0.00	-0.29	-.00001	0.00000	0.00000
	67	0.00	0.00	-0.28	-.00003	0.00000	0.00000	68	0.00	0.00	-0.28	-.00003	0.00000	0.00000
52	75	0.00	0.00	-0.29	-.00001	0.00000	0.00000	76	0.00	0.00	-0.29	-.00001	0.00000	0.00000
	68	0.00	0.00	-0.28	-.00003	0.00000	0.00000	69	0.00	0.00	-0.28	-.00003	0.00000	0.00000
53	76	0.00	0.00	-0.29	-.00001	0.00000	0.00000	77	0.00	0.00	-0.30	-.00002	0.00000	0.00000
	69	0.00	0.00	-0.28	-.00003	0.00000	0.00000	70	0.00	0.00	-0.28	-.00002	0.00000	0.00000
54	77	0.00	0.00	-0.30	-.00002	0.00000	0.00000	78	0.00	0.00	-0.30	-.00002	0.00001	0.00000
	70	0.00	0.00	-0.28	-.00002	0.00000	0.00000	71	0.00	0.00	-0.29	-.00002	0.00001	0.00000
55	4	0.00	0.00	-0.31	-.00002	-.00001	0.00000	79	0.00	0.00	-0.31	-.00001	-.00001	0.00000
	72	0.00	0.00	-0.30	-.00002	-.00001	0.00000	73	0.00	0.00	-0.30	-.00002	0.00000	0.00000
56	79	0.00	0.00	-0.31	-.00001	-.00001	0.00000	80	0.00	0.00	-0.30	-.00001	-.00001	0.00000
	73	0.00	0.00	-0.30	-.00002	0.00000	0.00000	74	0.00	0.00	-0.29	-.00001	0.00000	0.00000
57	80	0.00	0.00	-0.30	-.00001	-.00001	0.00000	81	0.00	0.00	-0.30	-.00001	0.00000	0.00000
	74	0.00	0.00	-0.29	-.00001	0.00000	0.00000	75	0.00	0.00	-0.29	-.00001	0.00000	0.00000
58	81	0.00	0.00	-0.30	-.00001	0.00000	0.00000	82	0.00	0.00	-0.30	-.00001	0.00001	0.00000
	75	0.00	0.00	-0.29	-.00001	0.00000	0.00000	76	0.00	0.00	-0.29	-.00001	0.00000	0.00000
59	82	0.00	0.00	-0.30	-.00001	0.00001	0.00000	83	0.00	0.00	-0.31	-.00001	0.00001	0.00000
	76	0.00	0.00	-0.29	-.00001	0.00000	0.00000	77	0.00	0.00	-0.30	-.00002	0.00000	0.00000
60	83	0.00	0.00	-0.31	-.00001	0.00001	0.00000	2	0.00	0.00	-0.31	-.00002	0.00001	0.00000
	77	0.00	0.00	-0.30	-.00002	0.00000	0.00000	78	0.00	0.00	-0.30	-.00002	0.00001	0.00000

SPOST. Var. Cat. E2: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.08	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
1	5	0.00	0.00	-0.08	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
	3	3.19	0.00	0.00	0.08	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.08	-.00001	0.00001	0.0000
	5	3.19	0.00	0.00	0.08	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.08	0.00001	0.00001	0.0000
	10	3.19	0.00	0.00	0.08	0.00000	0.00000	0.0000	10	0.00	0.00	0.00	0.08	-.00001	-.00001	0.0000
	12	3.19	0.00	0.00	0.08	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.08	0.00001	-.00001	0.0000
	4	3.19	0.00	-0.11	0.00	0.00000	0.00000	0.0000	12	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.11	0.00	0.00000	0.00000	0.0000	5	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000	10	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000
	5	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000	12	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000
	10	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000	4	3.19	0.00	-0.11	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.08	0.00	0.00000	0.00000	0.0000	6	3.19	0.00	-0.11	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.11	0.00	-.00001	0.00000	0.0000	4	3.19	0.00	-0.11	0.00	0.00001	0.00000	0.0000
1	10	0.00	0.00	-0.08	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
1	4	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	-0.08	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
1	6	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	0.00	0.11	0.00000	-.00001	0.0000	6	0.00	0.00	0.00	0.11	0.00000	0.00002	0.0000
	4	3.19	0.00	0.00	0.11	0.00000	0.00001	0.0000	4	0.00	0.00	0.00	0.11	0.00000	-.00002	0.0000
1	6	0.00	0.00	-0.11	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.12	0.00	0.00002	0.00000	0.0000
2	10	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000

SPOST. Var. Cat. E2: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
3	10	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.09	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
5	10	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
6	10	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	3	0.00	0.00	-0.08	0.00	-.00001	0.00000	0.0000
2	5	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000
3	5	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.09	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
5	5	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
6	5	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.08	0.00	-.00001	0.00000	0.0000
2	10	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000
3	10	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000
4	10	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000
3	4	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000
4	4	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
5	4	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	12	0.00	0.00	-0.08	0.00	-.00001	0.00000	0.0000
2	3	0.00	0.00	-0.09	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000
3	3	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000
4	3	0.00	0.00	-0.10	0.00	0.00001	0.00000	0.0000	6	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.11	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000
3	6	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000	5	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000
4	6	0.00	0.00	-0.10	0.00	-.00001	0.00000	0.0000	5	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000
5	6	0.00	0.00	-0.09	0.00	-.00001	0.00000	0.0000	5	0.00	0.00	-0.08	0.00	-.00001	0.00000	0.0000
2	6	0.00	0.00	-0.12	0.00	0.00002	0.00000	0.0000	4	0.00	0.00	-0.14	0.00	0.00001	0.00000	0.0000
3	6	0.00	0.00	-0.14	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	-0.14	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.14	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.14	0.00	-.00001	0.00000	0.0000
5	6	0.00	0.00	-0.14	0.00	-.00001	0.00000	0.0000	4	0.00	0.00	-0.12	0.00	-.00002	0.00000	0.0000
6	6	0.00	0.00	-0.12	0.00	-.00002	0.00000	0.0000	4	0.00	0.00	-0.11	0.00	-.00002	0.00000	0.0000

SPOST. Var. Cat. E2: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.09	-.00001	0.00002	0.00000	19	0.00	0.00	-0.11	-.00004	0.00004	0.00000
	3	0.00	0.00	-0.08	-.00001	0.00001	0.00000	13	0.00	0.00	-0.09	-.00002	0.00001	0.00000
2	51	0.00	0.00	-0.11	0.00000	0.00003	0.00000	52	0.00	0.00	-0.13	-.00002	0.00005	0.00000
	11	0.00	0.00	-0.11	0.00000	0.00002	0.00000	46	0.00	0.00	-0.12	0.00000	0.00002	0.00000
3	19	0.00	0.00	-0.11	-.00004	0.00004	0.00000	20	0.00	0.00	-0.13	-.00008	0.00002	0.00000
	13	0.00	0.00	-0.09	-.00002	0.00001	0.00000	14	0.00	-0.01	-0.09	-.00004	0.00001	0.00000
4	20	0.00	0.00	-0.13	-.00008	0.00002	0.00000	21	0.00	0.00	-0.14	-.00009	0.00000	0.00000
	14	0.00	-0.01	-0.09	-.00004	0.00001	0.00000	15	0.00	-0.01	-0.09	-.00004	0.00000	0.00000
5	21	0.00	0.00	-0.14	-.00009	0.00000	0.00000	22	0.00	0.00	-0.13	-.00008	-.00002	0.00000
	15	0.00	-0.01	-0.09	-.00004	0.00000	0.00000	16	0.00	-0.01	-0.09	-.00004	-.00001	0.00000
6	22	0.00	0.00	-0.13	-.00008	-.00002	0.00000	23	0.00	0.00	-0.11	-.00004	-.00004	0.00000
	16	0.00	-0.01	-0.09	-.00004	-.00001	0.00000	17	0.00	0.00	-0.09	-.00002	-.00001	0.00000
7	23	0.00	0.00	-0.11	-.00004	-.00004	0.00000	24	0.00	0.00	-0.09	-.00001	-.00002	0.00000
	17	0.00	0.00	-0.09	-.00002	-.00001	0.00000	1	0.00	0.00	-0.08	-.00001	-.00001	0.00000
8	25	0.00	0.00	-0.10	-.00001	0.00003	0.00000	26	0.00	0.00	-0.13	-.00003	0.00007	0.00000
	18	0.00	0.00	-0.09	-.00001	0.00002	0.00000	19	0.00	0.00	-0.11	-.00004	0.00004	0.00000
9	26	0.00	0.00	-0.13	-.00003	0.00007	0.00000	27	0.00	0.00	-0.17	-.00004	0.00004	0.00000
	19	0.00	0.00	-0.11	-.00004	0.00004	0.00000	20	0.00	0.00	-0.13	-.00008	0.00002	0.00000
10	27	0.00	0.00	-0.17	-.00004	0.00004	0.00000	28	0.00	0.00	-0.18	-.00005	0.00000	0.00000
	20	0.00	0.00	-0.13	-.00008	0.00002	0.00000	21	0.00	0.00	-0.14	-.00009	0.00000	0.00000
11	28	0.00	0.00	-0.18	-.00005	0.00000	0.00000	29	0.00	0.00	-0.17	-.00004	-.00004	0.00000
	21	0.00	0.00	-0.14	-.00009	0.00000	0.00000	22	0.00	0.00	-0.13	-.00008	-.00002	0.00000
12	29	0.00	0.00	-0.17	-.00004	-.00004	0.00000	30	0.00	0.00	-0.13	-.00003	-.00007	0.00000
	22	0.00	0.00	-0.13	-.00008	-.00002	0.00000	23	0.00	0.00	-0.11	-.00004	-.00004	0.00000
13	30	0.00	0.00	-0.13	-.00003	-.00007	0.00000	31	0.00	0.00	-0.10	-.00001	-.00003	0.00000
	23	0.00	0.00	-0.11	-.00004	-.00004	0.00000	24	0.00	0.00	-0.09	-.00001	-.00002	0.00000
14	32	0.00	0.00	-0.10	-.00001	0.00003	0.00000	33	0.00	0.00	-0.14	0.00000	0.00007	0.00000
	25	0.00	0.00	-0.10	-.00001	0.00003	0.00000	26	0.00	0.00	-0.13	-.00003	0.00007	0.00000
15	33	0.00	0.00	-0.14	0.00000	0.00007	0.00000	34	0.00	0.00	-0.18	0.00002	0.00004	0.00000
	26	0.00	0.00	-0.13	-.00003	0.00007	0.00000	27	0.00	0.00	-0.17	-.00004	0.00004	0.00000
16	34	0.00	0.00	-0.18	0.00002	0.00004	0.00000	35	0.00	0.00	-0.19	0.00002	0.00000	0.00000
	27	0.00	0.00	-0.17	-.00004	0.00004	0.00000	28	0.00	0.00	-0.18	-.00005	0.00000	0.00000
17	35	0.00	0.00	-0.19	0.00002	0.00000	0.00000	36	0.00	0.00	-0.18	0.00002	-.00004	0.00000
	28	0.00	0.00	-0.18	-.00005	0.00000	0.00000	29	0.00	0.00	-0.17	-.00004	-.00004	0.00000
18	36	0.00	0.00	-0.18	0.00002	-.00004	0.00000	37	0.00	0.00	-0.14	0.00000	-.00007	0.00000
	29	0.00	0.00	-0.17	-.00004	-.00004	0.00000	30	0.00	0.00	-0.13	-.00003	-.00007	0.00000
19	37	0.00	0.00	-0.14	0.00000	-.00007	0.00000	38	0.00	0.00	-0.10	-.00001	-.00003	0.00000
	30	0.00	0.00	-0.13	-.00003	-.00007	0.00000	31	0.00	0.00	-0.10	-.00001	-.00003	0.00000
20	39	0.00	0.00	-0.11	0.00000	0.00003	0.00000	40	0.00	0.00	-0.13	0.00002	0.00005	0.00000
	32	0.00	0.00	-0.10	-.00001	0.00003	0.00000	33	0.00	0.00	-0.14	0.00000	0.00007	0.00000
21	40	0.00	0.00	-0.13	0.00002	0.00005	0.00000	41	0.00	0.00	-0.16	0.00005	0.00003	0.00000
	33	0.00	0.00	-0.14	0.00000	0.00007	0.00000	34	0.00	0.00	-0.18	0.00002	0.00004	0.00000
22	41	0.00	0.00	-0.16	0.00005	0.00003	0.00000	42	0.00	0.00	-0.16	0.00006	0.00000	0.00000
	34	0.00	0.00	-0.18	0.00002	0.00004	0.00000	35	0.00	0.00	-0.19	0.00002	0.00000	0.00000
23	42	0.00	0.00	-0.16	0.00006	0.00000	0.00000	43	0.00	0.00	-0.16	0.00005	-.00003	0.00000
	35	0.00	0.00	-0.19	0.00002	0.00000	0.00000	36	0.00	0.00	-0.18	0.00002	-.00004	0.00000
24	43	0.00	0.00	-0.16	0.00005	-.00003	0.00000	44	0.00	0.00	-0.13	0.00002	-.00005	0.00000
	36	0.00	0.00	-0.18	0.00002	-.00004	0.00000	37	0.00	0.00	-0.14	0.00000	-.00007	0.00000

SPOST. Var. Cat. E2: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
25	44	0.00	0.00	-0.13	0.00002	-.00005	0.00000	45	0.00	0.00	-0.11	0.00000	-.00003	0.00000
	37	0.00	0.00	-0.14	0.00000	-.00007	0.00000	38	0.00	0.00	-0.10	-.00001	-.00003	0.00000
26	11	0.00	0.00	-0.11	0.00000	0.00002	0.00000	46	0.00	0.00	-0.12	0.00000	0.00002	0.00000
	39	0.00	0.00	-0.11	0.00000	0.00003	0.00000	40	0.00	0.00	-0.13	0.00002	0.00005	0.00000
27	46	0.00	0.00	-0.12	0.00000	0.00002	0.00000	47	0.00	0.00	-0.14	0.00000	0.00001	0.00000
	40	0.00	0.00	-0.13	0.00002	0.00005	0.00000	41	0.00	0.00	-0.16	0.00005	0.00003	0.00000
28	47	0.00	0.00	-0.14	0.00000	0.00001	0.00000	48	0.00	0.00	-0.14	0.00000	0.00000	0.00000
	41	0.00	0.00	-0.16	0.00005	0.00003	0.00000	42	0.00	0.00	-0.16	0.00006	0.00000	0.00000
29	48	0.00	0.00	-0.14	0.00000	0.00000	0.00000	49	0.00	0.00	-0.14	0.00000	-.00001	0.00000
	42	0.00	0.00	-0.16	0.00006	0.00000	0.00000	43	0.00	0.00	-0.16	0.00005	-.00003	0.00000
30	49	0.00	0.00	-0.14	0.00000	-.00001	0.00000	50	0.00	0.00	-0.12	0.00000	-.00002	0.00000
	43	0.00	0.00	-0.16	0.00005	-.00003	0.00000	44	0.00	0.00	-0.13	0.00002	-.00005	0.00000
31	50	0.00	0.00	-0.12	0.00000	-.00002	0.00000	12	0.00	0.00	-0.11	0.00000	-.00002	0.00000
	44	0.00	0.00	-0.13	0.00002	-.00005	0.00000	45	0.00	0.00	-0.11	0.00000	-.00003	0.00000
32	52	0.00	0.00	-0.13	-.00002	0.00005	0.00000	53	0.00	0.00	-0.16	-.00005	0.00003	0.00000
	46	0.00	0.00	-0.12	0.00000	0.00002	0.00000	47	0.00	0.00	-0.14	0.00000	0.00001	0.00000
33	53	0.00	0.00	-0.16	-.00005	0.00003	0.00000	54	0.00	0.00	-0.16	-.00006	0.00000	0.00000
	47	0.00	0.00	-0.14	0.00000	0.00001	0.00000	48	0.00	0.00	-0.14	0.00000	0.00000	0.00000
34	54	0.00	0.00	-0.16	-.00006	0.00000	0.00000	55	0.00	0.00	-0.16	-.00005	-.00003	0.00000
	48	0.00	0.00	-0.14	0.00000	0.00000	0.00000	49	0.00	0.00	-0.14	0.00000	-.00001	0.00000
35	55	0.00	0.00	-0.16	-.00005	-.00003	0.00000	56	0.00	0.00	-0.13	-.00002	-.00005	0.00000
	49	0.00	0.00	-0.14	0.00000	-.00001	0.00000	50	0.00	0.00	-0.12	0.00000	-.00002	0.00000
36	56	0.00	0.00	-0.13	-.00002	-.00005	0.00000	57	0.00	0.00	-0.11	0.00000	-.00003	0.00000
	50	0.00	0.00	-0.12	0.00000	-.00002	0.00000	12	0.00	0.00	-0.11	0.00000	-.00002	0.00000
37	58	0.00	0.00	-0.10	0.00001	0.00003	0.00000	59	0.00	0.00	-0.14	0.00000	0.00007	0.00000
	51	0.00	0.00	-0.11	0.00000	0.00003	0.00000	52	0.00	0.00	-0.13	-.00002	0.00005	0.00000
38	59	0.00	0.00	-0.14	0.00000	0.00007	0.00000	60	0.00	0.00	-0.18	-.00002	0.00004	0.00000
	52	0.00	0.00	-0.13	-.00002	0.00005	0.00000	53	0.00	0.00	-0.16	-.00005	0.00003	0.00000
39	60	0.00	0.00	-0.18	-.00002	0.00004	0.00000	61	0.00	0.00	-0.19	-.00002	0.00000	0.00000
	53	0.00	0.00	-0.16	-.00005	0.00003	0.00000	54	0.00	0.00	-0.16	-.00006	0.00000	0.00000
40	61	0.00	0.00	-0.19	-.00002	0.00000	0.00000	62	0.00	0.00	-0.18	-.00002	-.00004	0.00000
	54	0.00	0.00	-0.16	-.00006	0.00000	0.00000	55	0.00	0.00	-0.16	-.00005	-.00003	0.00000
41	62	0.00	0.00	-0.18	-.00002	-.00004	0.00000	63	0.00	0.00	-0.14	0.00000	-.00007	0.00000
	55	0.00	0.00	-0.16	-.00005	-.00003	0.00000	56	0.00	0.00	-0.13	-.00002	-.00005	0.00000
42	63	0.00	0.00	-0.14	0.00000	-.00007	0.00000	64	0.00	0.00	-0.10	0.00001	-.00003	0.00000
	56	0.00	0.00	-0.13	-.00002	-.00005	0.00000	57	0.00	0.00	-0.11	0.00000	-.00003	0.00000
43	65	0.00	0.00	-0.10	0.00001	0.00003	0.00000	66	0.00	0.00	-0.13	0.00003	0.00007	0.00000
	58	0.00	0.00	-0.10	0.00001	0.00003	0.00000	59	0.00	0.00	-0.14	0.00000	0.00007	0.00000
44	66	0.00	0.00	-0.13	0.00003	0.00007	0.00000	67	0.00	0.00	-0.17	0.00004	0.00004	0.00000
	59	0.00	0.00	-0.14	0.00000	0.00007	0.00000	60	0.00	0.00	-0.18	-.00002	0.00004	0.00000
45	67	0.00	0.00	-0.17	0.00004	0.00004	0.00000	68	0.00	0.00	-0.18	0.00005	0.00000	0.00000
	60	0.00	0.00	-0.18	-.00002	0.00004	0.00000	61	0.00	0.00	-0.19	-.00002	0.00000	0.00000
46	68	0.00	0.00	-0.18	0.00005	0.00000	0.00000	69	0.00	0.00	-0.17	0.00004	-.00004	0.00000
	61	0.00	0.00	-0.19	-.00002	0.00000	0.00000	62	0.00	0.00	-0.18	-.00002	-.00004	0.00000
47	69	0.00	0.00	-0.17	0.00004	-.00004	0.00000	70	0.00	0.00	-0.13	0.00003	-.00007	0.00000
	62	0.00	0.00	-0.18	-.00002	-.00004	0.00000	63	0.00	0.00	-0.14	0.00000	-.00007	0.00000
48	70	0.00	0.00	-0.13	0.00003	-.00007	0.00000	71	0.00	0.00	-0.10	0.00001	-.00003	0.00000
	63	0.00	0.00	-0.14	0.00000	-.00007	0.00000	64	0.00	0.00	-0.10	0.00001	-.00003	0.00000
49	72	0.00	0.00	-0.09	0.00001	0.00002	0.00000	73	0.00	0.00	-0.11	0.00004	0.00004	0.00000
	65	0.00	0.00	-0.10	0.00001	0.00003	0.00000	66	0.00	0.00	-0.13	0.00003	0.00007	0.00000
50	73	0.00	0.00	-0.11	0.00004	0.00004	0.00000	74	0.00	0.00	-0.13	0.00008	0.00002	0.00000
	66	0.00	0.00	-0.13	0.00003	0.00007	0.00000	67	0.00	0.00	-0.17	0.00004	0.00004	0.00000
51	74	0.00	0.00	-0.13	0.00008	0.00002	0.00000	75	0.00	0.00	-0.14	0.00009	0.00000	0.00000
	67	0.00	0.00	-0.17	0.00004	0.00004	0.00000	68	0.00	0.00	-0.18	0.00005	0.00000	0.00000
52	75	0.00	0.00	-0.14	0.00009	0.00000	0.00000	76	0.00	0.00	-0.13	0.00008	-.00002	0.00000
	68	0.00	0.00	-0.18	0.00005	0.00000	0.00000	69	0.00	0.00	-0.17	0.00004	-.00004	0.00000
53	76	0.00	0.00	-0.13	0.00008	-.00002	0.00000	77	0.00	0.00	-0.11	0.00004	-.00004	0.00000
	69	0.00	0.00	-0.17	0.00004	-.00004	0.00000	70	0.00	0.00	-0.13	0.00003	-.00007	0.00000
54	77	0.00	0.00	-0.11	0.00004	-.00004	0.00000	78	0.00	0.00	-0.09	0.00001	-.00002	0.00000
	70	0.00	0.00	-0.13	0.00003	-.00007	0.00000	71	0.00	0.00	-0.10	0.00001	-.00003	0.00000
55	4	0.00	0.00	-0.08	0.00001	0.00001	0.00000	79	0.00	0.00	-0.09	0.00002	0.00001	0.00000
	72	0.00	0.00	-0.09	0.00001	0.00002	0.00000	73	0.00	0.00	-0.11	0.00004	0.00004	0.00000
56	79	0.00	0.00	-0.09	0.00002	0.00001	0.00000	80	0.00	0.01	-0.09	0.00004	0.00001	0.00000
	73	0.00	0.00	-0.11	0.00004	0.00004	0.00000	74	0.00	0.00	-0.13	0.00008	0.00002	0.00000
57	80	0.00	0.01	-0.09	0.00004	0.00001	0.00000	81	0.00	0.01	-0.09	0.00004	0.00000	0.00000
	74	0.00	0.00	-0.13	0.00008	0.00002	0.00000	75	0.00	0.00	-0.14	0.00009	0.00000	0.00000
58	81	0.00	0.01	-0.09	0.00004	0.00000	0.00000	82	0.00	0.01	-0.09	0.00004	-.00001	0.00000
	75	0.00	0.00	-0.14	0.00009	0.00000	0.00000	76	0.00	0.00	-0.13	0.00008	-.00002	0.00000
59	82	0.00	0.01	-0.09	0.00004	-.00001	0.00000	83	0.00	0.00	-0.09	0.00002	-.00001	0.00000
	76	0.00	0.00	-0.13	0.00008	-.00002	0.00000	77	0.00	0.00	-0.11	0.00004	-.00004	0.00000
60	83	0.00	0.00	-0.09	0.00002	-.00001	0.00000	2	0.00	0.00	-0.08	0.00001	-.00001	0.00000
	77	0.00	0.00	-0.11	0.00004	-.00004	0.00000	78	0.00	0.00	-0.09	0.00001	-.00002	0.00000

SPOST. H1 car. manutenzione: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
1	5	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	0.00	0.02	0.00000	0.00002	0.0000	3	0.00	0.00	0.00	0.02	0.00000	0.00000	0.0000
	5	3.19	0.00	0.00	0.02	0.00000	0.00002	0.0000	5	0.00	0.00	0.00	0.02	0.00000	0.00000	0.0000

SPOST. H1 car. manutenzione: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
	10	3.19	0.00	0.00	0.02	0.00000	-.00002	0.0000	10	0.00	0.00	0.00	0.02	0.00000	0.00000	0.0000
	12	3.19	0.00	0.00	0.02	0.00000	-.00002	0.0000	12	0.00	0.00	0.00	0.02	0.00000	0.00000	0.0000
	4	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	12	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	5	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.02	0.00	0.00002	0.00000	0.0000	10	3.19	0.00	-0.02	0.00	-.00002	0.00000	0.0000
	5	3.19	0.00	-0.02	0.00	0.00002	0.00000	0.0000	12	3.19	0.00	-0.02	0.00	-.00002	0.00000	0.0000
	10	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	3	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	6	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.02	0.00	0.00003	0.00000	0.0000	4	3.19	0.00	-0.02	0.00	-.00003	0.00000	0.0000
1	10	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
1	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	0.00	0.02	0.00000	0.00003	0.0000	6	0.00	0.00	0.00	0.01	0.00000	0.00000	0.0000
	4	3.19	0.00	0.00	0.02	0.00000	-.00003	0.0000	4	0.00	0.00	0.00	0.01	0.00000	0.00000	0.0000
1	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
6	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
6	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	-0.02	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000
6	6	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	-0.01	0.00	0.00000	0.00000	0.0000

SPOST. H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	-0.01	0.00000	0.00000	0.00000	19	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	3	0.00	0.00	-0.02	0.00000	0.00000	0.00000	13	0.00	0.00	-0.01	0.00000	0.00000	0.00000
2	51	0.00	0.00	-0.01	0.00000	0.00000	0.00000	52	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	11	0.00	0.00	-0.01	0.00000	0.00000	0.00000	46	0.00	0.00	-0.01	0.00000	0.00000	0.00000
3	19	0.00	0.00	-0.01	0.00000	0.00000	0.00000	20	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	13	0.00	0.00	-0.01	0.00000	0.00000	0.00000	14	0.00	0.00	-0.01	0.00000	0.00000	0.00000
4	20	0.00	0.00	-0.01	0.00000	0.00000	0.00000	21	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	14	0.00	0.00	-0.01	0.00000	0.00000	0.00000	15	0.00	0.00	-0.01	0.00000	0.00000	0.00000
5	21	0.00	0.00	-0.01	0.00000	0.00000	0.00000	22	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	15	0.00	0.00	-0.01	0.00000	0.00000	0.00000	16	0.00	0.00	-0.01	0.00000	0.00000	0.00000
6	22	0.00	0.00	-0.01	0.00000	0.00000	0.00000	23	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	16	0.00	0.00	-0.01	0.00000	0.00000	0.00000	17	0.00	0.00	-0.01	0.00000	0.00000	0.00000
7	23	0.00	0.00	-0.01	0.00000	0.00000	0.00000	24	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	17	0.00	0.00	-0.01	0.00000	0.00000	0.00000	1	0.00	0.00	-0.02	0.00000	0.00000	0.00000
8	25	0.00	0.00	-0.01	0.00000	0.00000	0.00000	26	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	18	0.00	0.00	-0.01	0.00000	0.00000	0.00000	19	0.00	0.00	-0.01	0.00000	0.00000	0.00000
9	26	0.00	0.00	-0.01	0.00000	0.00000	0.00000	27	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	19	0.00	0.00	-0.01	0.00000	0.00000	0.00000	20	0.00	0.00	-0.01	0.00000	0.00000	0.00000
10	27	0.00	0.00	-0.01	0.00000	0.00000	0.00000	28	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	20	0.00	0.00	-0.01	0.00000	0.00000	0.00000	21	0.00	0.00	-0.01	0.00000	0.00000	0.00000
11	28	0.00	0.00	-0.01	0.00000	0.00000	0.00000	29	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	21	0.00	0.00	-0.01	0.00000	0.00000	0.00000	22	0.00	0.00	-0.01	0.00000	0.00000	0.00000
12	29	0.00	0.00	-0.01	0.00000	0.00000	0.00000	30	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	22	0.00	0.00	-0.01	0.00000	0.00000	0.00000	23	0.00	0.00	-0.01	0.00000	0.00000	0.00000
13	30	0.00	0.00	-0.01	0.00000	0.00000	0.00000	31	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	23	0.00	0.00	-0.01	0.00000	0.00000	0.00000	24	0.00	0.00	-0.01	0.00000	0.00000	0.00000
14	32	0.00	0.00	-0.01	0.00000	0.00000	0.00000	33	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	25	0.00	0.00	-0.01	0.00000	0.00000	0.00000	26	0.00	0.00	-0.01	0.00000	0.00000	0.00000
15	33	0.00	0.00	-0.01	0.00000	0.00000	0.00000	34	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	26	0.00	0.00	-0.01	0.00000	0.00000	0.00000	27	0.00	0.00	-0.01	0.00000	0.00000	0.00000
16	34	0.00	0.00	-0.01	0.00000	0.00000	0.00000	35	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	27	0.00	0.00	-0.01	0.00000	0.00000	0.00000	28	0.00	0.00	-0.01	0.00000	0.00000	0.00000

SPOST. H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
17	35	0.00	0.00	-0.01	0.00000	0.00000	0.00000	36	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	28	0.00	0.00	-0.01	0.00000	0.00000	0.00000	29	0.00	0.00	-0.01	0.00000	0.00000	0.00000
18	36	0.00	0.00	-0.01	0.00000	0.00000	0.00000	37	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	29	0.00	0.00	-0.01	0.00000	0.00000	0.00000	30	0.00	0.00	-0.01	0.00000	0.00000	0.00000
19	37	0.00	0.00	-0.01	0.00000	0.00000	0.00000	38	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	30	0.00	0.00	-0.01	0.00000	0.00000	0.00000	31	0.00	0.00	-0.01	0.00000	0.00000	0.00000
20	39	0.00	0.00	-0.01	0.00000	0.00000	0.00000	40	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	32	0.00	0.00	-0.01	0.00000	0.00000	0.00000	33	0.00	0.00	-0.01	0.00000	0.00000	0.00000
21	40	0.00	0.00	-0.01	0.00000	0.00000	0.00000	41	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	33	0.00	0.00	-0.01	0.00000	0.00000	0.00000	34	0.00	0.00	-0.01	0.00000	0.00000	0.00000
22	41	0.00	0.00	-0.01	0.00000	0.00000	0.00000	42	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	34	0.00	0.00	-0.01	0.00000	0.00000	0.00000	35	0.00	0.00	-0.01	0.00000	0.00000	0.00000
23	42	0.00	0.00	-0.01	0.00000	0.00000	0.00000	43	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	35	0.00	0.00	-0.01	0.00000	0.00000	0.00000	36	0.00	0.00	-0.01	0.00000	0.00000	0.00000
24	43	0.00	0.00	-0.01	0.00000	0.00000	0.00000	44	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	36	0.00	0.00	-0.01	0.00000	0.00000	0.00000	37	0.00	0.00	-0.01	0.00000	0.00000	0.00000
25	44	0.00	0.00	-0.01	0.00000	0.00000	0.00000	45	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	37	0.00	0.00	-0.01	0.00000	0.00000	0.00000	38	0.00	0.00	-0.01	0.00000	0.00000	0.00000
26	11	0.00	0.00	-0.01	0.00000	0.00000	0.00000	46	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	39	0.00	0.00	-0.01	0.00000	0.00000	0.00000	40	0.00	0.00	-0.01	0.00000	0.00000	0.00000
27	46	0.00	0.00	-0.01	0.00000	0.00000	0.00000	47	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	40	0.00	0.00	-0.01	0.00000	0.00000	0.00000	41	0.00	0.00	-0.01	0.00000	0.00000	0.00000
28	47	0.00	0.00	-0.01	0.00000	0.00000	0.00000	48	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	41	0.00	0.00	-0.01	0.00000	0.00000	0.00000	42	0.00	0.00	-0.01	0.00000	0.00000	0.00000
29	48	0.00	0.00	-0.01	0.00000	0.00000	0.00000	49	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	42	0.00	0.00	-0.01	0.00000	0.00000	0.00000	43	0.00	0.00	-0.01	0.00000	0.00000	0.00000
30	49	0.00	0.00	-0.01	0.00000	0.00000	0.00000	50	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	43	0.00	0.00	-0.01	0.00000	0.00000	0.00000	44	0.00	0.00	-0.01	0.00000	0.00000	0.00000
31	50	0.00	0.00	-0.01	0.00000	0.00000	0.00000	12	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	44	0.00	0.00	-0.01	0.00000	0.00000	0.00000	45	0.00	0.00	-0.01	0.00000	0.00000	0.00000
32	52	0.00	0.00	-0.01	0.00000	0.00000	0.00000	53	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	46	0.00	0.00	-0.01	0.00000	0.00000	0.00000	47	0.00	0.00	-0.01	0.00000	0.00000	0.00000
33	53	0.00	0.00	-0.01	0.00000	0.00000	0.00000	54	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	47	0.00	0.00	-0.01	0.00000	0.00000	0.00000	48	0.00	0.00	-0.01	0.00000	0.00000	0.00000
34	54	0.00	0.00	-0.01	0.00000	0.00000	0.00000	55	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	48	0.00	0.00	-0.01	0.00000	0.00000	0.00000	49	0.00	0.00	-0.01	0.00000	0.00000	0.00000
35	55	0.00	0.00	-0.01	0.00000	0.00000	0.00000	56	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	49	0.00	0.00	-0.01	0.00000	0.00000	0.00000	50	0.00	0.00	-0.01	0.00000	0.00000	0.00000
36	56	0.00	0.00	-0.01	0.00000	0.00000	0.00000	57	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	50	0.00	0.00	-0.01	0.00000	0.00000	0.00000	12	0.00	0.00	-0.01	0.00000	0.00000	0.00000
37	58	0.00	0.00	-0.01	0.00000	0.00000	0.00000	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	51	0.00	0.00	-0.01	0.00000	0.00000	0.00000	52	0.00	0.00	-0.01	0.00000	0.00000	0.00000
38	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	52	0.00	0.00	-0.01	0.00000	0.00000	0.00000	53	0.00	0.00	-0.01	0.00000	0.00000	0.00000
39	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	53	0.00	0.00	-0.01	0.00000	0.00000	0.00000	54	0.00	0.00	-0.01	0.00000	0.00000	0.00000
40	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	54	0.00	0.00	-0.01	0.00000	0.00000	0.00000	55	0.00	0.00	-0.01	0.00000	0.00000	0.00000
41	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	55	0.00	0.00	-0.01	0.00000	0.00000	0.00000	56	0.00	0.00	-0.01	0.00000	0.00000	0.00000
42	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000	64	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	56	0.00	0.00	-0.01	0.00000	0.00000	0.00000	57	0.00	0.00	-0.01	0.00000	0.00000	0.00000
43	65	0.00	0.00	-0.01	0.00000	0.00000	0.00000	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	58	0.00	0.00	-0.01	0.00000	0.00000	0.00000	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000
44	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	59	0.00	0.00	-0.01	0.00000	0.00000	0.00000	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000
45	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	60	0.00	0.00	-0.01	0.00000	0.00000	0.00000	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000
46	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	61	0.00	0.00	-0.01	0.00000	0.00000	0.00000	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000
47	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	62	0.00	0.00	-0.01	0.00000	0.00000	0.00000	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000
48	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000	71	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	63	0.00	0.00	-0.01	0.00000	0.00000	0.00000	64	0.00	0.00	-0.01	0.00000	0.00000	0.00000
49	72	0.00	0.00	-0.01	0.00000	0.00000	0.00000	73	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	65	0.00	0.00	-0.01	0.00000	0.00000	0.00000	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000
50	73	0.00	0.00	-0.01	0.00000	0.00000	0.00000	74	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	66	0.00	0.00	-0.01	0.00000	0.00000	0.00000	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000
51	74	0.00	0.00	-0.01	0.00000	0.00000	0.00000	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	67	0.00	0.00	-0.01	0.00000	0.00000	0.00000	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000
52	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000	76	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	68	0.00	0.00	-0.01	0.00000	0.00000	0.00000	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000
53	76	0.00	0.00	-0.01	0.00000	0.00000	0.00000	77	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	69	0.00	0.00	-0.01	0.00000	0.00000	0.00000	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000
54	77	0.00	0.00	-0.01	0.00000	0.00000	0.00000	78	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	70	0.00	0.00	-0.01	0.00000	0.00000	0.00000	71	0.00	0.00	-0.01	0.00000	0.00000	0.00000
55	4	0.00	0.00	-0.02	0.00000	0.00000	0.00000	79	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	72	0.00	0.00	-0.01	0.00000	0.00000	0.00000	73	0.00	0.00	-0.01	0.00000	0.00000	0.00000
56	79	0.00	0.00	-0.01	0.00000	0.00000	0.00000	80	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	73	0.00	0.00	-0.01	0.00000	0.00000	0.00000	74	0.00	0.00	-0.01	0.00000	0.00000	0.00000

SPOST. H1 car. manutenzione: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
57	80	0.00	0.00	-0.01	0.00000	0.00000	0.00000	81	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	74	0.00	0.00	-0.01	0.00000	0.00000	0.00000	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000
58	81	0.00	0.00	-0.01	0.00000	0.00000	0.00000	82	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	75	0.00	0.00	-0.01	0.00000	0.00000	0.00000	76	0.00	0.00	-0.01	0.00000	0.00000	0.00000
59	82	0.00	0.00	-0.01	0.00000	0.00000	0.00000	83	0.00	0.00	-0.01	0.00000	0.00000	0.00000
	76	0.00	0.00	-0.01	0.00000	0.00000	0.00000	77	0.00	0.00	-0.01	0.00000	0.00000	0.00000
60	83	0.00	0.00	-0.01	0.00000	0.00000	0.00000	2	0.00	0.00	-0.02	0.00000	0.00000	0.00000
	77	0.00	0.00	-0.01	0.00000	0.00000	0.00000	78	0.00	0.00	-0.01	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 0: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	3	3.19	0.03	-0.02	0.00	-.00001	-.00001	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	5	3.19	-0.03	-0.02	0.00	-.00001	0.00001	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	10	3.19	0.03	0.02	0.00	0.00001	-.00001	0.0000	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	12	3.19	-0.03	0.02	0.00	0.00001	0.00001	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	4	3.19	0.00	0.00	-0.02	0.00000	0.00001	0.0000	12	3.19	0.03	0.00	-0.02	-.00001	0.00001	0.0000
	6	3.19	0.00	0.00	0.02	0.00000	0.00001	0.0000	5	3.19	0.03	0.00	0.02	0.00001	0.00001	0.0000
	3	3.19	-0.02	0.00	-0.03	-.00001	0.00001	0.0000	10	3.19	0.02	0.00	-0.03	-.00001	0.00001	0.0000
	5	3.19	-0.02	0.00	0.03	0.00001	0.00001	0.0000	12	3.19	0.02	0.00	0.03	0.00001	0.00001	0.0000
	10	3.19	-0.03	0.00	-0.02	-.00001	0.00001	0.0000	4	3.19	0.00	0.00	-0.02	0.00000	0.00001	0.0000
	3	3.19	-0.03	0.00	0.02	0.00001	0.00001	0.0000	6	3.19	0.00	0.00	0.02	0.00000	0.00001	0.0000
	6	3.19	-0.02	0.00	0.00	0.00000	0.00001	0.0000	4	3.19	0.02	0.00	0.00	0.00000	0.00001	0.0000
1	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.02	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	4	3.19	0.00	0.02	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000

SPOST. Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	0.00	0.00000	0.00000	0.00000	19	0.00	0.00	0.00	0.00000	0.00000	0.00000
	3	0.00	0.00	0.00	0.00000	0.00000	0.00000	13	0.00	0.00	0.00	0.00000	0.00000	0.00000
2	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
	11	0.00	0.00	0.00	0.00000	0.00000	0.00000	46	0.00	0.00	0.00	0.00000	0.00000	0.00000
3	19	0.00	0.00	0.00	0.00000	0.00000	0.00000	20	0.00	0.00	0.00	0.00000	0.00000	0.00000
	13	0.00	0.00	0.00	0.00000	0.00000	0.00000	14	0.00	0.00	0.00	0.00000	0.00000	0.00000
4	20	0.00	0.00	0.00	0.00000	0.00000	0.00000	21	0.00	0.00	0.00	0.00000	0.00000	0.00000
	14	0.00	0.00	0.00	0.00000	0.00000	0.00000	15	0.00	0.00	0.00	0.00000	0.00000	0.00000
5	21	0.00	0.00	0.00	0.00000	0.00000	0.00000	22	0.00	0.00	0.00	0.00000	0.00000	0.00000
	15	0.00	0.00	0.00	0.00000	0.00000	0.00000	16	0.00	0.00	0.00	0.00000	0.00000	0.00000
6	22	0.00	0.00	0.00	0.00000	0.00000	0.00000	23	0.00	0.00	0.00	0.00000	0.00000	0.00000
	16	0.00	0.00	0.00	0.00000	0.00000	0.00000	17	0.00	0.00	0.00	0.00000	0.00000	0.00000
7	23	0.00	0.00	0.00	0.00000	0.00000	0.00000	24	0.00	0.00	0.00	0.00000	0.00000	0.00000
	17	0.00	0.00	0.00	0.00000	0.00000	0.00000	1	0.00	0.00	0.00	0.00000	0.00000	0.00000
8	25	0.00	0.00	0.00	0.00000	0.00000	0.00000	26	0.00	0.00	0.00	0.00000	0.00000	0.00000
	18	0.00	0.00	0.00	0.00000	0.00000	0.00000	19	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
9	26	0.00	0.00	0.00	0.00000	0.00000	0.00000	27	0.00	0.00	0.00	0.00000	0.00000	0.00000
	19	0.00	0.00	0.00	0.00000	0.00000	0.00000	20	0.00	0.00	0.00	0.00000	0.00000	0.00000
10	27	0.00	0.00	0.00	0.00000	0.00000	0.00000	28	0.00	0.00	0.00	0.00000	0.00000	0.00000
	20	0.00	0.00	0.00	0.00000	0.00000	0.00000	21	0.00	0.00	0.00	0.00000	0.00000	0.00000
11	28	0.00	0.00	0.00	0.00000	0.00000	0.00000	29	0.00	0.00	0.00	0.00000	0.00000	0.00000
	21	0.00	0.00	0.00	0.00000	0.00000	0.00000	22	0.00	0.00	0.00	0.00000	0.00000	0.00000
12	29	0.00	0.00	0.00	0.00000	0.00000	0.00000	30	0.00	0.00	0.00	0.00000	0.00000	0.00000
	22	0.00	0.00	0.00	0.00000	0.00000	0.00000	23	0.00	0.00	0.00	0.00000	0.00000	0.00000
13	30	0.00	0.00	0.00	0.00000	0.00000	0.00000	31	0.00	0.00	0.00	0.00000	0.00000	0.00000
	23	0.00	0.00	0.00	0.00000	0.00000	0.00000	24	0.00	0.00	0.00	0.00000	0.00000	0.00000
14	32	0.00	0.00	0.00	0.00000	0.00000	0.00000	33	0.00	0.00	0.00	0.00000	0.00000	0.00000
	25	0.00	0.00	0.00	0.00000	0.00000	0.00000	26	0.00	0.00	0.00	0.00000	0.00000	0.00000
15	33	0.00	0.00	0.00	0.00000	0.00000	0.00000	34	0.00	0.00	0.00	0.00000	0.00000	0.00000
	26	0.00	0.00	0.00	0.00000	0.00000	0.00000	27	0.00	0.00	0.00	0.00000	0.00000	0.00000
16	34	0.00	0.00	0.00	0.00000	0.00000	0.00000	35	0.00	0.00	0.00	0.00000	0.00000	0.00000
	27	0.00	0.00	0.00	0.00000	0.00000	0.00000	28	0.00	0.00	0.00	0.00000	0.00000	0.00000
17	35	0.00	0.00	0.00	0.00000	0.00000	0.00000	36	0.00	0.00	0.00	0.00000	0.00000	0.00000
	28	0.00	0.00	0.00	0.00000	0.00000	0.00000	29	0.00	0.00	0.00	0.00000	0.00000	0.00000
18	36	0.00	0.00	0.00	0.00000	0.00000	0.00000	37	0.00	0.00	0.00	0.00000	0.00000	0.00000
	29	0.00	0.00	0.00	0.00000	0.00000	0.00000	30	0.00	0.00	0.00	0.00000	0.00000	0.00000
19	37	0.00	0.00	0.00	0.00000	0.00000	0.00000	38	0.00	0.00	0.00	0.00000	0.00000	0.00000
	30	0.00	0.00	0.00	0.00000	0.00000	0.00000	31	0.00	0.00	0.00	0.00000	0.00000	0.00000
20	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
	32	0.00	0.00	0.00	0.00000	0.00000	0.00000	33	0.00	0.00	0.00	0.00000	0.00000	0.00000
21	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
	33	0.00	0.00	0.00	0.00000	0.00000	0.00000	34	0.00	0.00	0.00	0.00000	0.00000	0.00000
22	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
	34	0.00	0.00	0.00	0.00000	0.00000	0.00000	35	0.00	0.00	0.00	0.00000	0.00000	0.00000
23	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
	35	0.00	0.00	0.00	0.00000	0.00000	0.00000	36	0.00	0.00	0.00	0.00000	0.00000	0.00000
24	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
	36	0.00	0.00	0.00	0.00000	0.00000	0.00000	37	0.00	0.00	0.00	0.00000	0.00000	0.00000
25	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
	37	0.00	0.00	0.00	0.00000	0.00000	0.00000	38	0.00	0.00	0.00	0.00000	0.00000	0.00000
26	11	0.00	0.00	0.00	0.00000	0.00000	0.00000	46	0.00	0.00	0.00	0.00000	0.00000	0.00000
	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
27	46	0.00	0.00	0.00	0.00000	0.00000	0.00000	47	0.00	0.00	0.00	0.00000	0.00000	0.00000
	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
28	47	0.00	0.00	0.00	0.00000	0.00000	0.00000	48	0.00	0.00	0.00	0.00000	0.00000	0.00000
	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
29	48	0.00	0.00	0.00	0.00000	0.00000	0.00000	49	0.00	0.00	0.00	0.00000	0.00000	0.00000
	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
30	49	0.00	0.00	0.00	0.00000	0.00000	0.00000	50	0.00	0.00	0.00	0.00000	0.00000	0.00000
	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
31	50	0.00	0.00	0.00	0.00000	0.00000	0.00000	12	0.00	0.00	0.00	0.00000	0.00000	0.00000
	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
32	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
	46	0.00	0.00	0.00	0.00000	0.00000	0.00000	47	0.00	0.00	0.00	0.00000	0.00000	0.00000
33	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
	47	0.00	0.00	0.00	0.00000	0.00000	0.00000	48	0.00	0.00	0.00	0.00000	0.00000	0.00000
34	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000
	48	0.00	0.00	0.00	0.00000	0.00000	0.00000	49	0.00	0.00	0.00	0.00000	0.00000	0.00000
35	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
	49	0.00	0.00	0.00	0.00000	0.00000	0.00000	50	0.00	0.00	0.00	0.00000	0.00000	0.00000
36	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
	50	0.00	0.00	0.00	0.00000	0.00000	0.00000	12	0.00	0.00	0.00	0.00000	0.00000	0.00000
37	58	0.00	0.00	0.00	0.00000	0.00000	0.00000	59	0.00	0.00	0.00	0.00000	0.00000	0.00000
	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
38	59	0.00	0.00	0.00	0.00000	0.00000	0.00000	60	0.00	0.00	0.00	0.00000	0.00000	0.00000
	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
39	60	0.00	0.00	0.00	0.00000	0.00000	0.00000	61	0.00	0.00	0.00	0.00000	0.00000	0.00000
	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
40	61	0.00	0.00	0.00	0.00000	0.00000	0.00000	62	0.00	0.00	0.00	0.00000	0.00000	0.00000
	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000
41	62	0.00	0.00	0.00	0.00000	0.00000	0.00000	63	0.00	0.00	0.00	0.00000	0.00000	0.00000
	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
42	63	0.00	0.00	0.00	0.00000	0.00000	0.00000	64	0.00	0.00	0.00	0.00000	0.00000	0.00000
	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
43	65	0.00	0.00	0.00	0.00000	0.00000	0.00000	66	0.00	0.00	0.00	0.00000	0.00000	0.00000
	58	0.00	0.00	0.00	0.00000	0.00000	0.00000	59	0.00	0.00	0.00	0.00000	0.00000	0.00000
44	66	0.00	0.00	0.00	0.00000	0.00000	0.00000	67	0.00	0.00	0.00	0.00000	0.00000	0.00000
	59	0.00	0.00	0.00	0.00000	0.00000	0.00000	60	0.00	0.00	0.00	0.00000	0.00000	0.00000
45	67	0.00	0.00	0.00	0.00000	0.00000	0.00000	68	0.00	0.00	0.00	0.00000	0.00000	0.00000
	60	0.00	0.00	0.00	0.00000	0.00000	0.00000	61	0.00	0.00	0.00	0.00000	0.00000	0.00000
46	68	0.00	0.00	0.00	0.00000	0.00000	0.00000	69	0.00	0.00	0.00	0.00000	0.00000	0.00000
	61	0.00	0.00	0.00	0.00000	0.00000	0.00000	62	0.00	0.00	0.00	0.00000	0.00000	0.00000
47	69	0.00	0.00	0.00	0.00000	0.00000	0.00000	70	0.00	0.00	0.00	0.00000	0.00000	0.00000
	62	0.00	0.00	0.00	0.00000	0.00000	0.00000	63	0.00	0.00	0.00	0.00000	0.00000	0.00000
48	70	0.00	0.00	0.00	0.00000	0.00000	0.00000	71	0.00	0.00	0.00	0.00000	0.00000	0.00000
	63	0.00	0.00	0.00	0.00000	0.00000	0.00000	64	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 0: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
49	72	0.00	0.00	0.00	0.00000	0.00000	0.00000	73	0.00	0.00	0.00	0.00000	0.00000	0.00000
	65	0.00	0.00	0.00	0.00000	0.00000	0.00000	66	0.00	0.00	0.00	0.00000	0.00000	0.00000
50	73	0.00	0.00	0.00	0.00000	0.00000	0.00000	74	0.00	0.00	0.00	0.00000	0.00000	0.00000
	66	0.00	0.00	0.00	0.00000	0.00000	0.00000	67	0.00	0.00	0.00	0.00000	0.00000	0.00000
51	74	0.00	0.00	0.00	0.00000	0.00000	0.00000	75	0.00	0.00	0.00	0.00000	0.00000	0.00000
	67	0.00	0.00	0.00	0.00000	0.00000	0.00000	68	0.00	0.00	0.00	0.00000	0.00000	0.00000
52	75	0.00	0.00	0.00	0.00000	0.00000	0.00000	76	0.00	0.00	0.00	0.00000	0.00000	0.00000
	68	0.00	0.00	0.00	0.00000	0.00000	0.00000	69	0.00	0.00	0.00	0.00000	0.00000	0.00000
53	76	0.00	0.00	0.00	0.00000	0.00000	0.00000	77	0.00	0.00	0.00	0.00000	0.00000	0.00000
	69	0.00	0.00	0.00	0.00000	0.00000	0.00000	70	0.00	0.00	0.00	0.00000	0.00000	0.00000
54	77	0.00	0.00	0.00	0.00000	0.00000	0.00000	78	0.00	0.00	0.00	0.00000	0.00000	0.00000
	70	0.00	0.00	0.00	0.00000	0.00000	0.00000	71	0.00	0.00	0.00	0.00000	0.00000	0.00000
55	4	0.00	0.00	0.00	0.00000	0.00000	0.00000	79	0.00	0.00	0.00	0.00000	0.00000	0.00000
	72	0.00	0.00	0.00	0.00000	0.00000	0.00000	73	0.00	0.00	0.00	0.00000	0.00000	0.00000
56	79	0.00	0.00	0.00	0.00000	0.00000	0.00000	80	0.00	0.00	0.00	0.00000	0.00000	0.00000
	73	0.00	0.00	0.00	0.00000	0.00000	0.00000	74	0.00	0.00	0.00	0.00000	0.00000	0.00000
57	80	0.00	0.00	0.00	0.00000	0.00000	0.00000	81	0.00	0.00	0.00	0.00000	0.00000	0.00000
	74	0.00	0.00	0.00	0.00000	0.00000	0.00000	75	0.00	0.00	0.00	0.00000	0.00000	0.00000
58	81	0.00	0.00	0.00	0.00000	0.00000	0.00000	82	0.00	0.00	0.00	0.00000	0.00000	0.00000
	75	0.00	0.00	0.00	0.00000	0.00000	0.00000	76	0.00	0.00	0.00	0.00000	0.00000	0.00000
59	82	0.00	0.00	0.00	0.00000	0.00000	0.00000	83	0.00	0.00	0.00	0.00000	0.00000	0.00000
	76	0.00	0.00	0.00	0.00000	0.00000	0.00000	77	0.00	0.00	0.00	0.00000	0.00000	0.00000
60	83	0.00	0.00	0.00	0.00000	0.00000	0.00000	2	0.00	0.00	0.00	0.00000	0.00000	0.00000
	77	0.00	0.00	0.00	0.00000	0.00000	0.00000	78	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 90: ASTE

Tratto	Filo In.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)	Filo Fin.	Alt. (m)	Sx (mm)	Sy (mm)	Sz (mm)	Rx (rad)	Ry (rad)	Rz (rad)
1	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	3	3.19	0.05	-0.03	0.00	-.00001	-.00001	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	5	3.19	-0.05	-0.03	0.00	-.00001	0.00001	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	10	3.19	0.05	0.03	0.00	0.00001	-.00001	0.0000	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	12	3.19	-0.05	0.03	0.00	0.00001	0.00001	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	4	3.19	0.00	0.00	-0.03	-.00001	0.00002	0.0000	12	3.19	0.05	0.00	-0.03	-.00001	0.00002	0.0000
	6	3.19	0.00	0.00	0.03	0.00001	0.00002	0.0000	5	3.19	0.05	0.00	0.03	0.00001	0.00002	0.0000
	3	3.19	-0.03	0.00	-0.05	-.00001	0.00002	0.0000	10	3.19	0.03	0.00	-0.05	-.00001	0.00002	0.0000
	5	3.19	-0.03	0.00	0.05	0.00001	0.00002	0.0000	12	3.19	0.03	0.00	0.05	0.00001	0.00002	0.0000
	10	3.19	-0.05	0.00	-0.03	-.00001	0.00002	0.0000	4	3.19	0.00	0.00	-0.03	-.00001	0.00002	0.0000
	3	3.19	-0.05	0.00	0.03	0.00001	0.00002	0.0000	6	3.19	0.00	0.00	0.03	0.00001	0.00002	0.0000
	6	3.19	-0.03	0.00	0.00	0.00000	0.00002	0.0000	4	3.19	0.03	0.00	0.00	0.00000	0.00002	0.0000
1	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	6	3.19	0.00	-0.03	0.00	-.00001	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
	4	3.19	0.00	0.03	0.00	0.00001	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
1	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	10	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	12	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	3	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	5	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
2	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
3	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
4	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
5	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000
6	6	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000	4	0.00	0.00	0.00	0.00	0.00000	0.00000	0.0000

SPOST. Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)

SPOST. Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
1	18	0.00	0.00	0.00	0.00000	0.00000	0.00000	19	0.00	0.00	0.00	0.00000	0.00000	0.00000
	3	0.00	0.00	0.00	0.00000	0.00000	0.00000	13	0.00	0.00	0.00	0.00000	0.00000	0.00000
2	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
	11	0.00	0.00	0.00	0.00000	0.00000	0.00000	46	0.00	0.00	0.00	0.00000	0.00000	0.00000
3	19	0.00	0.00	0.00	0.00000	0.00000	0.00000	20	0.00	0.00	0.00	0.00000	0.00000	0.00000
	13	0.00	0.00	0.00	0.00000	0.00000	0.00000	14	0.00	0.00	0.00	0.00000	0.00000	0.00000
4	20	0.00	0.00	0.00	0.00000	0.00000	0.00000	21	0.00	0.00	0.00	0.00000	0.00000	0.00000
	14	0.00	0.00	0.00	0.00000	0.00000	0.00000	15	0.00	0.00	0.00	0.00000	0.00000	0.00000
5	21	0.00	0.00	0.00	0.00000	0.00000	0.00000	22	0.00	0.00	0.00	0.00000	0.00000	0.00000
	15	0.00	0.00	0.00	0.00000	0.00000	0.00000	16	0.00	0.00	0.00	0.00000	0.00000	0.00000
6	22	0.00	0.00	0.00	0.00000	0.00000	0.00000	23	0.00	0.00	0.00	0.00000	0.00000	0.00000
	16	0.00	0.00	0.00	0.00000	0.00000	0.00000	17	0.00	0.00	0.00	0.00000	0.00000	0.00000
7	23	0.00	0.00	0.00	0.00000	0.00000	0.00000	24	0.00	0.00	0.00	0.00000	0.00000	0.00000
	17	0.00	0.00	0.00	0.00000	0.00000	0.00000	1	0.00	0.00	0.00	0.00000	0.00000	0.00000
8	25	0.00	0.00	0.00	0.00000	0.00000	0.00000	26	0.00	0.00	0.00	0.00000	0.00000	0.00000
	18	0.00	0.00	0.00	0.00000	0.00000	0.00000	19	0.00	0.00	0.00	0.00000	0.00000	0.00000
9	26	0.00	0.00	0.00	0.00000	0.00000	0.00000	27	0.00	0.00	0.00	0.00000	0.00000	0.00000
	19	0.00	0.00	0.00	0.00000	0.00000	0.00000	20	0.00	0.00	0.00	0.00000	0.00000	0.00000
10	27	0.00	0.00	0.00	0.00000	0.00000	0.00000	28	0.00	0.00	0.00	0.00000	0.00000	0.00000
	20	0.00	0.00	0.00	0.00000	0.00000	0.00000	21	0.00	0.00	0.00	0.00000	0.00000	0.00000
11	28	0.00	0.00	0.00	0.00000	0.00000	0.00000	29	0.00	0.00	0.00	0.00000	0.00000	0.00000
	21	0.00	0.00	0.00	0.00000	0.00000	0.00000	22	0.00	0.00	0.00	0.00000	0.00000	0.00000
12	29	0.00	0.00	0.00	0.00000	0.00000	0.00000	30	0.00	0.00	0.00	0.00000	0.00000	0.00000
	22	0.00	0.00	0.00	0.00000	0.00000	0.00000	23	0.00	0.00	0.00	0.00000	0.00000	0.00000
13	30	0.00	0.00	0.00	0.00000	0.00000	0.00000	31	0.00	0.00	0.00	0.00000	0.00000	0.00000
	23	0.00	0.00	0.00	0.00000	0.00000	0.00000	24	0.00	0.00	0.00	0.00000	0.00000	0.00000
14	32	0.00	0.00	0.00	0.00000	0.00000	0.00000	33	0.00	0.00	0.00	0.00000	0.00000	0.00000
	25	0.00	0.00	0.00	0.00000	0.00000	0.00000	26	0.00	0.00	0.00	0.00000	0.00000	0.00000
15	33	0.00	0.00	0.00	0.00000	0.00000	0.00000	34	0.00	0.00	0.00	0.00000	0.00000	0.00000
	26	0.00	0.00	0.00	0.00000	0.00000	0.00000	27	0.00	0.00	0.00	0.00000	0.00000	0.00000
16	34	0.00	0.00	0.00	0.00000	0.00000	0.00000	35	0.00	0.00	0.00	0.00000	0.00000	0.00000
	27	0.00	0.00	0.00	0.00000	0.00000	0.00000	28	0.00	0.00	0.00	0.00000	0.00000	0.00000
17	35	0.00	0.00	0.00	0.00000	0.00000	0.00000	36	0.00	0.00	0.00	0.00000	0.00000	0.00000
	28	0.00	0.00	0.00	0.00000	0.00000	0.00000	29	0.00	0.00	0.00	0.00000	0.00000	0.00000
18	36	0.00	0.00	0.00	0.00000	0.00000	0.00000	37	0.00	0.00	0.00	0.00000	0.00000	0.00000
	29	0.00	0.00	0.00	0.00000	0.00000	0.00000	30	0.00	0.00	0.00	0.00000	0.00000	0.00000
19	37	0.00	0.00	0.00	0.00000	0.00000	0.00000	38	0.00	0.00	0.00	0.00000	0.00000	0.00000
	30	0.00	0.00	0.00	0.00000	0.00000	0.00000	31	0.00	0.00	0.00	0.00000	0.00000	0.00000
20	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
	32	0.00	0.00	0.00	0.00000	0.00000	0.00000	33	0.00	0.00	0.00	0.00000	0.00000	0.00000
21	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
	33	0.00	0.00	0.00	0.00000	0.00000	0.00000	34	0.00	0.00	0.00	0.00000	0.00000	0.00000
22	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
	34	0.00	0.00	0.00	0.00000	0.00000	0.00000	35	0.00	0.00	0.00	0.00000	0.00000	0.00000
23	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
	35	0.00	0.00	0.00	0.00000	0.00000	0.00000	36	0.00	0.00	0.00	0.00000	0.00000	0.00000
24	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
	36	0.00	0.00	0.00	0.00000	0.00000	0.00000	37	0.00	0.00	0.00	0.00000	0.00000	0.00000
25	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
	37	0.00	0.00	0.00	0.00000	0.00000	0.00000	38	0.00	0.00	0.00	0.00000	0.00000	0.00000
26	11	0.00	0.00	0.00	0.00000	0.00000	0.00000	46	0.00	0.00	0.00	0.00000	0.00000	0.00000
	39	0.00	0.00	0.00	0.00000	0.00000	0.00000	40	0.00	0.00	0.00	0.00000	0.00000	0.00000
27	46	0.00	0.00	0.00	0.00000	0.00000	0.00000	47	0.00	0.00	0.00	0.00000	0.00000	0.00000
	40	0.00	0.00	0.00	0.00000	0.00000	0.00000	41	0.00	0.00	0.00	0.00000	0.00000	0.00000
28	47	0.00	0.00	0.00	0.00000	0.00000	0.00000	48	0.00	0.00	0.00	0.00000	0.00000	0.00000
	41	0.00	0.00	0.00	0.00000	0.00000	0.00000	42	0.00	0.00	0.00	0.00000	0.00000	0.00000
29	48	0.00	0.00	0.00	0.00000	0.00000	0.00000	49	0.00	0.00	0.00	0.00000	0.00000	0.00000
	42	0.00	0.00	0.00	0.00000	0.00000	0.00000	43	0.00	0.00	0.00	0.00000	0.00000	0.00000
30	49	0.00	0.00	0.00	0.00000	0.00000	0.00000	50	0.00	0.00	0.00	0.00000	0.00000	0.00000
	43	0.00	0.00	0.00	0.00000	0.00000	0.00000	44	0.00	0.00	0.00	0.00000	0.00000	0.00000
31	50	0.00	0.00	0.00	0.00000	0.00000	0.00000	12	0.00	0.00	0.00	0.00000	0.00000	0.00000
	44	0.00	0.00	0.00	0.00000	0.00000	0.00000	45	0.00	0.00	0.00	0.00000	0.00000	0.00000
32	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
	46	0.00	0.00	0.00	0.00000	0.00000	0.00000	47	0.00	0.00	0.00	0.00000	0.00000	0.00000
33	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
	47	0.00	0.00	0.00	0.00000	0.00000	0.00000	48	0.00	0.00	0.00	0.00000	0.00000	0.00000
34	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000
	48	0.00	0.00	0.00	0.00000	0.00000	0.00000	49	0.00	0.00	0.00	0.00000	0.00000	0.00000
35	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
	49	0.00	0.00	0.00	0.00000	0.00000	0.00000	50	0.00	0.00	0.00	0.00000	0.00000	0.00000
36	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
	50	0.00	0.00	0.00	0.00000	0.00000	0.00000	12	0.00	0.00	0.00	0.00000	0.00000	0.00000
37	58	0.00	0.00	0.00	0.00000	0.00000	0.00000	59	0.00	0.00	0.00	0.00000	0.00000	0.00000
	51	0.00	0.00	0.00	0.00000	0.00000	0.00000	52	0.00	0.00	0.00	0.00000	0.00000	0.00000
38	59	0.00	0.00	0.00	0.00000	0.00000	0.00000	60	0.00	0.00	0.00	0.00000	0.00000	0.00000
	52	0.00	0.00	0.00	0.00000	0.00000	0.00000	53	0.00	0.00	0.00	0.00000	0.00000	0.00000
39	60	0.00	0.00	0.00	0.00000	0.00000	0.00000	61	0.00	0.00	0.00	0.00000	0.00000	0.00000
	53	0.00	0.00	0.00	0.00000	0.00000	0.00000	54	0.00	0.00	0.00	0.00000	0.00000	0.00000
40	61	0.00	0.00	0.00	0.00000	0.00000	0.00000	62	0.00	0.00	0.00	0.00000	0.00000	0.00000
	54	0.00	0.00	0.00	0.00000	0.00000	0.00000	55	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOST. Corr. Tors. dir. 90: SHELL

Shell Nro	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)	Nodo N.ro	S1 (mm)	S2 (mm)	S3 (mm)	R1 (rad)	R2 (rad)	R3 (rad)
41	62	0.00	0.00	0.00	0.00000	0.00000	0.00000	63	0.00	0.00	0.00	0.00000	0.00000	0.00000
	55	0.00	0.00	0.00	0.00000	0.00000	0.00000	56	0.00	0.00	0.00	0.00000	0.00000	0.00000
42	63	0.00	0.00	0.00	0.00000	0.00000	0.00000	64	0.00	0.00	0.00	0.00000	0.00000	0.00000
	56	0.00	0.00	0.00	0.00000	0.00000	0.00000	57	0.00	0.00	0.00	0.00000	0.00000	0.00000
43	65	0.00	0.00	0.00	0.00000	0.00000	0.00000	66	0.00	0.00	0.00	0.00000	0.00000	0.00000
	58	0.00	0.00	0.00	0.00000	0.00000	0.00000	59	0.00	0.00	0.00	0.00000	0.00000	0.00000
44	66	0.00	0.00	0.00	0.00000	0.00000	0.00000	67	0.00	0.00	0.00	0.00000	0.00000	0.00000
	59	0.00	0.00	0.00	0.00000	0.00000	0.00000	60	0.00	0.00	0.00	0.00000	0.00000	0.00000
45	67	0.00	0.00	0.00	0.00000	0.00000	0.00000	68	0.00	0.00	0.00	0.00000	0.00000	0.00000
	60	0.00	0.00	0.00	0.00000	0.00000	0.00000	61	0.00	0.00	0.00	0.00000	0.00000	0.00000
46	68	0.00	0.00	0.00	0.00000	0.00000	0.00000	69	0.00	0.00	0.00	0.00000	0.00000	0.00000
	61	0.00	0.00	0.00	0.00000	0.00000	0.00000	62	0.00	0.00	0.00	0.00000	0.00000	0.00000
47	69	0.00	0.00	0.00	0.00000	0.00000	0.00000	70	0.00	0.00	0.00	0.00000	0.00000	0.00000
	62	0.00	0.00	0.00	0.00000	0.00000	0.00000	63	0.00	0.00	0.00	0.00000	0.00000	0.00000
48	70	0.00	0.00	0.00	0.00000	0.00000	0.00000	71	0.00	0.00	0.00	0.00000	0.00000	0.00000
	63	0.00	0.00	0.00	0.00000	0.00000	0.00000	64	0.00	0.00	0.00	0.00000	0.00000	0.00000
49	72	0.00	0.00	0.00	0.00000	0.00000	0.00000	73	0.00	0.00	0.00	0.00000	0.00000	0.00000
	65	0.00	0.00	0.00	0.00000	0.00000	0.00000	66	0.00	0.00	0.00	0.00000	0.00000	0.00000
50	73	0.00	0.00	0.00	0.00000	0.00000	0.00000	74	0.00	0.00	0.00	0.00000	0.00000	0.00000
	66	0.00	0.00	0.00	0.00000	0.00000	0.00000	67	0.00	0.00	0.00	0.00000	0.00000	0.00000
51	74	0.00	0.00	0.00	0.00000	0.00000	0.00000	75	0.00	0.00	0.00	0.00000	0.00000	0.00000
	67	0.00	0.00	0.00	0.00000	0.00000	0.00000	68	0.00	0.00	0.00	0.00000	0.00000	0.00000
52	75	0.00	0.00	0.00	0.00000	0.00000	0.00000	76	0.00	0.00	0.00	0.00000	0.00000	0.00000
	68	0.00	0.00	0.00	0.00000	0.00000	0.00000	69	0.00	0.00	0.00	0.00000	0.00000	0.00000
53	76	0.00	0.00	0.00	0.00000	0.00000	0.00000	77	0.00	0.00	0.00	0.00000	0.00000	0.00000
	69	0.00	0.00	0.00	0.00000	0.00000	0.00000	70	0.00	0.00	0.00	0.00000	0.00000	0.00000
54	77	0.00	0.00	0.00	0.00000	0.00000	0.00000	78	0.00	0.00	0.00	0.00000	0.00000	0.00000
	70	0.00	0.00	0.00	0.00000	0.00000	0.00000	71	0.00	0.00	0.00	0.00000	0.00000	0.00000
55	4	0.00	0.00	0.00	0.00000	0.00000	0.00000	79	0.00	0.00	0.00	0.00000	0.00000	0.00000
	72	0.00	0.00	0.00	0.00000	0.00000	0.00000	73	0.00	0.00	0.00	0.00000	0.00000	0.00000
56	79	0.00	0.00	0.00	0.00000	0.00000	0.00000	80	0.00	0.00	0.00	0.00000	0.00000	0.00000
	73	0.00	0.00	0.00	0.00000	0.00000	0.00000	74	0.00	0.00	0.00	0.00000	0.00000	0.00000
57	80	0.00	0.00	0.00	0.00000	0.00000	0.00000	81	0.00	0.00	0.00	0.00000	0.00000	0.00000
	74	0.00	0.00	0.00	0.00000	0.00000	0.00000	75	0.00	0.00	0.00	0.00000	0.00000	0.00000
58	81	0.00	0.00	0.00	0.00000	0.00000	0.00000	82	0.00	0.00	0.00	0.00000	0.00000	0.00000
	75	0.00	0.00	0.00	0.00000	0.00000	0.00000	76	0.00	0.00	0.00	0.00000	0.00000	0.00000
59	82	0.00	0.00	0.00	0.00000	0.00000	0.00000	83	0.00	0.00	0.00	0.00000	0.00000	0.00000
	76	0.00	0.00	0.00	0.00000	0.00000	0.00000	77	0.00	0.00	0.00	0.00000	0.00000	0.00000
60	83	0.00	0.00	0.00	0.00000	0.00000	0.00000	2	0.00	0.00	0.00	0.00000	0.00000	0.00000
	77	0.00	0.00	0.00	0.00000	0.00000	0.00000	78	0.00	0.00	0.00	0.00000	0.00000	0.00000

SPOSTAMENTI SISMICI RELATIVI

IDENTIFICATIVO					INVILUPPO S.L.D.				INVILUPPO S.L.O.				
Filo N.ro	Quota inf. (m)	Quota sup. (m)	Nodo inf. N.ro	Nodo sup. N.ro	Sisma Nro	Combin Nro	Spostam. Calcolo (mm)	Spostam. Limite (mm)	Sisma Nro	Combin Nro	Spostam. Calcolo (mm)	Spostam. Limite (mm)	Stringa di Controllo Verifica
3	0.00	3.19	1	5	2	28	0.454	9.570					VERIFICATO
4	0.00	3.19	11	9	2	27	0.389	9.570					VERIFICATO
5	0.00	3.19	2	6	2	22	0.454	9.570					VERIFICATO
6	0.00	3.19	12	10	2	22	0.389	9.570					VERIFICATO
10	0.00	3.19	3	7	2	25	0.454	9.570					VERIFICATO
12	0.00	3.19	4	8	2	27	0.454	9.570					VERIFICATO

BARICENTRI MASSE E RIGIDEZZE

IDENTIFICATORE		BARICENTRI MASSE E RIGIDEZZE							RIGIDEZZE FLESSIONALI E TORSIONAALI					
PIANO N.ro	QUOTA (m)	PESO (kN)	XG (m)	YG (m)	XR (m)	YR (m)	DX (m)	DY (m)	Lpianta (m)	Bpianta (m)	Rig.FleX (kN/m)	Rig.FleY (kN/m)	RigTors. (kN*m)	r / ls
1	3.19	178.8	3.10	1.95	3.10	1.95	0.00	0.00	3.90	6.20	54552	33127	485498	

VARIAZIONI MASSE E RIGIDEZZE DI PIANO

				DIREZIONE X					DIREZIONE Y				
Piano N.ro	Quota (m)	Peso (kN)	Variaz. (%)	Tagliante (kN)	Spost. (mm)	Klat. (kN/m)	Variaz (%)	Teta	Tagliante (kN)	Spost. (mm)	Klat. (kN/m)	Variaz (%)	Teta
1	3.19	178.8	0.0	24.3	0.44	54552	0.0	0.001	27.6	0.83	33127	0.0	0.002

PERCENTUALI RIGIDEZZE PILASTRI E SETTI

	RAPPORTO DELLE RIGIDEZZE IN DIREZIONE X			RAPPORTO DELLE RIGIDEZZE IN DIREZIONE Y		
Piano N.r	RigidezzaPilastri / Rig.Pil+Rig.Setti	Rigidezza Setti / Rig.Pil+Rig.Setti	Rigid.Elem.Second / Rig.Pil+Rig.Setti	RigidezzaPilastri / Rig.Pil+Rig.Setti	Rigidezza Setti / Rig.Pil+Rig.Setti	Rigid.Elem.Second / Rig.Pil+Rig.Setti
1	1.00	0.00	0.00	1.00	0.00	0.00

STAMPA PROGETTO S.L.U. - AZIONI S.L.V. - ELEVAZIONE

Filo Iniz Fin. Ctgθ	Quota Iniz. Final AmpC	Tra t	Sez Bas t Alt	Conc	VERIFICA A PRESSO-FLESSIONE Comb	M Exd kN*m)	N Ed (kN)	Moltip Ultimo	x/ /d	εf% 100	εc% 100	Area cmq sup	Area cmq inf	VERIFICA A TAGLIO E TORSIONE Comb	V Exd (kN)	V Eyd (kN)	T Sdu kN*m)	V Rxd (kN)	V Ryd (kN)	TRd kN*m)	TRld kN*m)	Coe Cls	Coe Sta	ALon cmq	Staffe Pas	Staffe Lun	Staffe Fi
4	3.19		1	1 5	-19.9	9.9	2.1	23	100	31	6.0	6.0	5	-0.1	24.8	0.0	294.6	257.4	34.0	0.0	10	4	0.0	4	24	10
12	3.19		49	3 5	8.4	9.9	4.9	23	100	31	6.0	6.0	5	-0.1	22.1	0.0	294.6	257.4	34.0	0.0	9	9	0.0	10	262	10
2.5	1.00		24	5 3	-16.9	-9.9	2.5	24	100	31	6.0	6.0	3	-0.1	-21.9	0.0	294.6	257.4	34.0	0.0	9	3	0.0	4	24	10
6	3.19		1	1 5	-19.9	9.9	2.1	23	100	31	6.0	6.0	5	0.1	24.8	0.0	294.6	257.4	34.0	0.0	10	4	0.0	4	24	10
5	3.19		49	3 5	8.4	9.9	4.9	23	100	31	6.0	6.0	5	0.1	22.1	0.0	294.6	257.4	34.0	0.0	9	9	0.0	10	262	10
2.5	1.00		24	5 3	-16.9	-9.9	2.5	24	100	31	6.0	6.0	3	0.1	-21.9	0.0	294.6	257.4	34.0	0.0	9	3	0.0	4	24	10
3	3.19		4	1 3	-22.1	-8.2	2.5	25	100	33	8.0	8.0	1	0.0	38.6	0.0	355.2	304.6	42.0	0.0	13	6	0.0	4	24	10
10	3.19		58	3 5	21.5	8.2	2.5	24	100	32	8.0	8.0	1	0.0	33.7	0.0	723.8	256.8	96.9	0.0	11	13	0.0	10	342	10
2.5	1.00		24	5 3	-22.1	-8.2	2.5	25	100	33	8.0	8.0	1	0.0	-38.6	0.0	355.2	304.6	42.0	0.0	13	6	0.0	4	24	10
5	3.19		4	1 2	-20.3	-1.4	2.7	25	100	33	8.0	8.0	1	0.0	38.6	0.0	355.2	304.6	42.0	0.0	13	6	0.0	4	24	10
12	3.19		58	3 4	19.6	1.4	2.8	25	100	33	8.0	8.0	1	0.0	33.7	0.0	723.8	256.8	96.9	0.0	11	13	0.0	10	342	10
2.5	1.00		24	5 2	-20.3	-1.4	2.7	25	100	33	8.0	8.0	1	0.0	-38.6	0.0	355.2	304.6	42.0	0.0	13	6	0.0	4	24	10
10	3.19		1	1 3	-16.9	-15.3	2.6	24	100	32	6.0	6.0	3	0.1	20.7	0.0	294.6	257.4	34.0	0.0	8	3	0.0	4	24	10
4	3.19		49	3 5	9.6	15.3	4.3	23	100	30	6.0	6.0	5	0.1	-20.9	0.0	600.2	256.8	78.5	0.0	8	8	0.0	10	262	10
2.5	1.00		24	5 5	-16.4	15.3	2.5	23	100	30	6.0	6.0	5	0.1	-23.7	0.0	294.6	257.4	34.0	0.0	9	4	0.0	4	24	10
3	3.19		1	1 3	-16.9	-15.3	2.6	24	100	32	6.0	6.0	3	-0.1	20.7	0.0	294.6	257.4	34.0	0.0	8	3	0.0	4	24	10
6	3.19		49	3 5	9.6	15.3	4.3	23	100	30	6.0	6.0	5	-0.1	-20.9	0.0	600.2	256.8	78.5	0.0	8	8	0.0	10	262	10
2.5	1.00		24	5 5	-16.4	15.3	2.5	23	100	30	6.0	6.0	5	-0.1	-23.7	0.0	294.6	257.4	34.0	0.0	9	4	0.0	4	24	10
6	3.19		4	1 2	-28.5	-13.7	2.0	25	100	33	8.0	8.0	1	0.0	52.4	0.0	356.6	305.8	42.0	0.0	17	8	0.0	4	24	10
4	3.19		58	3 4	26.8	-6.0	2.1	25	100	33	8.0	8.0	1	0.0	45.8	0.0	723.8	256.8	96.9	0.0	15	18	0.0	10	342	10
2.5	1.00		24	5 2	-28.5	-13.7	2.0	25	100	33	8.0	8.0	1	0.0	-52.4	0.0	356.6	305.8	42.0	0.0	17	8	0.0	4	24	10

STAMPA PROGETTO S.L.U. - AZIONI S.L.V. - FATTORI DI STRUTTURA DEGLI ELEMENTI

IDENTIFICATIVO Asta 3D	Nodo In.	Nodo Fin.	Filo Iniz	Filo Fin.	QuoIn (m)	QuoFi (m)	DIREZIONE X Fattore 'q' Tagl.	DIREZIONE X Fattore 'q' Fless	DIREZIONE Y Fattore 'q' Tagl.	DIREZIONE Y Fattore 'q' Fless.	IDENTIFICATIVO Asta 3D	Nodo In.	Nodo Fin.	Filo Iniz	Filo Fin.	QuoIn (m)	QuoFi (m)	DIREZIONE X Fattore 'q' Tagl.	DIREZIONE X Fattore 'q' Fless	DIREZIONE Y Fattore 'q' Tagl.	DIREZIONE Y Fattore 'q' Fless.
1	3	13	10	3	0.00	0.00	1.00	1.00	1.00	1.00	2	2	83	5	12	0.00	0.00	1.00	1.00	1.00	1.00
7	9	8	4	12	3.19	3.19	1.00	1.00	1.00	1.00	8	10	6	6	5	3.19	3.19	1.00	1.00	1.00	1.00
9	5	7	3	10	3.19	3.19	1.00	1.00	1.00	1.00	10	6	8	5	12	3.19	3.19	1.00	1.00	1.00	1.00
11	7	9	10	4	3.19	3.19	1.00	1.00	1.00	1.00	12	5	10	3	6	3.19	3.19	1.00	1.00	1.00	1.00
13	10	9	6	4	3.19	3.19	1.00	1.00	1.00	1.00	14	3	18	10	4	0.00	0.00	1.00	1.00	1.00	1.00
15	11	51	4	12	0.00	0.00	1.00	1.00	1.00	1.00	16	1	24	3	6	0.00	0.00	1.00	1.00	1.00	1.00
17	12	57	6	5	0.00	0.00	1.00	1.00	1.00	1.00	20	12	50	6	4	0.00	0.00	1.00	1.00	1.00	1.00
21	13	14	10	3	0.00	0.00	1.00	1.00	1.00	1.00	22	14	15	10	3	0.00	0.00	1.00	1.00	1.00	1.00
23	15	16	10	3	0.00	0.00	1.00	1.00	1.00	1.00	24	16	17	10	3	0.00	0.00	1.00	1.00	1.00	1.00
25	17	1	10	3	0.00	0.00	1.00	1.00	1.00	1.00	26	83	82	5	12	0.00	0.00	1.00	1.00	1.00	1.00
27	82	81	5	12	0.00	0.00	1.00	1.00	1.00	1.00	28	81	80	5	12	0.00	0.00	1.00	1.00	1.00	1.00
29	80	79	5	12	0.00	0.00	1.00	1.00	1.00	1.00	30	79	4	5	12	0.00	0.00	1.00	1.00	1.00	1.00
31	18	25	10	4	0.00	0.00	1.00	1.00	1.00	1.00	32	25	32	10	4	0.00	0.00	1.00	1.00	1.00	1.00
33	32	39	10	4	0.00	0.00	1.00	1.00	1.00	1.00	34	39	11	10	4	0.00	0.00	1.00	1.00	1.00	1.00
35	51	58	4	12	0.00	0.00	1.00	1.00	1.00	1.00	36	58	65	4	12	0.00	0.00	1.00	1.00	1.00	1.00
37	65	72	4	12	0.00	0.00	1.00	1.00	1.00	1.00	38	72	4	4	12	0.00	0.00	1.00	1.00	1.00	1.00
39	24	31	3	6	0.00	0.00	1.00	1.00	1.00	1.00	40	31	38	3	6	0.00	0.00	1.00	1.00	1.00	1.00
41	38	45	3	6	0.00	0.00	1.00	1.00	1.00	1.00	42	45	12	3	6	0.00	0.00	1.00	1.00	1.00	1.00
43	57	64	6	5	0.00	0.00	1.00	1.00	1.00	1.00	44	64	71	6	5	0.00	0.00	1.00	1.00	1.00	1.00
45	71	78	6	5	0.00	0.00	1.00	1.00	1.00	1.00	46	78	2	6	5	0.00	0.00	1.00	1.00	1.00	1.00
47	50	49	6	4	0.00	0.00	1.00	1.00	1.00	1.00	48	49	48	6	4	0.00	0.00	1.00	1.00	1.00	1.00
49	48	47	6	4	0.00	0.00	1.00	1.00	1.00	1.00	50	47	46	6	4	0.00	0.00	1.00	1.00	1.00	1.00
51	46	11	6	4	0.00	0.00	1.00	1.00	1.00	1.00											

STAMPA VERIFICHE S.L.E. ELEVAZIONE

Filo In fi	Quota In Fi	Tratto	FESSURAZIONE Combi Caric	Fessu.mm lim	Fessu.mm cal	dist mm	Conc io	Comb in	Mf X kN*m)	Mf Y kN*m)	N (kN)	FRECCE Frecce mm limite calc	FRECCE Comb in	TENSIONI Combinaz Carico	σ lim. N/mmq	σ cal. N/mmq	Conc	Comb	Mf X kN*m)	Mf Y kN*m)	N (kN)
4	3.19		Rara											Rara cls	19.20	6.89	1	5	-14.1	-0.1	6.6
12	3.19		Freq	0.4	0.000	0	1	3	-10.9	-0.1	3.3			Rara fer	360.0	142.4	1	5	-14.1	-0.1	6.6
			Perm	0.3	0.000	0	1	1	-7.8	-0.1	0.0			Perm cls	14.40	3.84	1	1	-7.8	-0.1	0.0
6	3.19		Rara											Rara cls	19.20	6.89	1	5	-14.1	0.1	6.6
5	3.19		Freq	0.4	0.000	0	1	3	-10.9	0.1	3.3			Rara fer	360.0	142.4	1	5	-14.1	0.1	6.6
			Perm	0.3	0.000	0	1	1	-7.8	0.1	0.0			Perm cls	14.40	3.84	1	1	-7.8	0.1	0.0
3	3.19		Rara											Rara cls	19.20	6.24	1	3	-16.0	0.0	-5.5
10	3.19		Freq	0.4	0.000	0	1	2	-14.6	0.0	-2.7			Rara fer	360.0	117.6	3	5	15.5	0.0	5.5
			Perm	0.3	0.000	0	1	1	-13.2	0.0	0.0			Perm cls	14.40	5.19	1	1	-13.2	0.0	0.0
5	3.19		Rara											Rara cls	19.20	5.81	1	2	-14.8	0.0	-0.9
12	3.19		Freq	0.4	0.000	0	1	2	-13.8	0.0	-0.8			Rara fer	360.0	107.8	1	2	-14.8	0.0	-0.9
			Perm	0.3	0.000	0	1	1	-13.2	0.0	0.0			Perm cls	14.40	5.19	1	1	-13.2	0.0	0.0
10	3.19		Rara											Rara cls	19.20	5.79	5	5	-11.7	-0.1	10.2
4	3.19		Freq	0.4	0.000	0	5	3	-9.8	-0.1	5.1			Rara fer	360.0	122.6	5	5	-11.7	-0.1	10.2
			Perm	0.3	0.000	0	5	1	-7.8	-0.1	0.0			Perm cls	14.40	3.84	5	1	-7.8	-0.1	0.0
3	3.19		Rara											Rara cls	19.20	5.79	5	5	-11.7	0.1	10.2
6	3.19		Freq	0.4	0.000	0	5	3	-9.8	0.1	5.1			Rara fer	360.0	122.6	5	5	-11.7	0.1	10.2

STAMPA VERIFICHE S.L.E. ELEVAZIONE

			FESSURAZIONE								FRECCE		TENSIONI							
Filo In fi	Quota In Fi	Tratto	Combi Caric	Fessu.mm lim	cal	dist mm	Concio	Combin	Mf X kN*m)	Mf Y kN*m)	N (kN)	Frecce mm limite	calc	Combin	Combinaz Carico	σ lim. N/mmq	σ cal. N/mmq	Conc	Comb	Mf X kN*m)	Mf Y kN*m)	N (kN)
			Perm	0.3	0.000	0	5	1	-7.8	0.1	0.0				Perm cls	14.40	3.84	5	1	-7.8	0.1	0.0
6	3.19		Rara												Rara cls	19.20	7.98	1	2	-20.7	0.0	-9.8
4	3.19		Freq	0.4	0.000	0	1	2	-19.2	0.0	-8.8				Rara fer	360.0	145.0	1	2	-20.7	0.0	-9.8
			Perm	0.3	0.000	0	1	1	-18.0	0.0	-6.7				Perm cls	14.40	7.00	1	1	-18.0	0.0	-6.7

RISULTATI VERIFICHE NODI CLS

IDENTIFICATIVO				GEOMETRIA PILASTRO			MATERIALE		DIREZ.X locale		DIREZ.Y locale		DIREZ.X locale		DIREZ.Y locale		
Filo N.ro	Quota (m)	Nodo3d N.ro	Posiz. Pilast	Sez. Nro	Rotaz Grd	HNodo (cm)	fck N/mmq	fy N/mmq	LyUtil (cm)	AfX cmq	LxUtil (cm)	AfY cmq	Vjbd N	VjbR N	Vjbd N	VjbR N	STATUS
3	0.00	1	SUP.	2	90	70	32.0	450.0	40	10.0	40	10.0					OK
5	0.00	2	SUP.	2	90	70	32.0	450.0	40	10.0	40	10.0					OK
10	0.00	3	SUP.	2	90	70	32.0	450.0	40	10.0	40	10.0					OK
12	0.00	4	SUP.	2	90	70	32.0	450.0	40	10.0	40	10.0					OK
3	3.19	5	INF.	2	90	24	32.0	450.0	55	4.7	49	4.2					OK
5	3.19	6	INF.	2	90	24	32.0	450.0	55	4.7	49	4.2					OK
10	3.19	7	INF.	2	90	24	32.0	450.0	55	4.7	49	4.2					OK
12	3.19	8	INF.	2	90	24	32.0	450.0	55	4.7	49	4.2					OK
4	3.19	9	INF.	2	90	24	32.0	450.0	55	4.7							OK
6	3.19	10	INF.	2	90	24	32.0	450.0	55	4.7							OK
4	0.00	11	SUP.	2	90	70	32.0	450.0	40	10.0							OK
6	0.00	12	SUP.	2	90	70	32.0	450.0	40	10.0							OK

VERIFICA DEI SOLAI

MATERIALI

rbk	40.0	C32/40	fyk	450	
fck	32.0		γs	1.15	
γc	1.5		fyd	391.30	
fcd	18.13		Ea	210 000	
Ec	33 346		εsy	0.186%	

ANALISI DEI CARICHI

	base		altez.		peso	/	inter.	=	totale
TRAVETTI:	0.120	x	0.240	x	25	/	0.50	=	1.44 kN/mq
PIGNATTE:	0.380	x	0.240	x	6.65	/	0.50	=	1.21 kN/mq
SOLETTA:	1.000	x	0.040	x	25	/	1.00	=	1.00 kN/mq
		x	0.000	x	0	/	1.00	=	0.00 kN/mq
					SOMMA PERMANENTI G1= ~				3.70 kN/mq
INTONACO:	1.000	x	0.020	x	15	/	1.00	=	0.30 kN/mq
malta pendenza	1.000	x	0.085	x	20	/	1.00	=	1.70 kN/mq
impermeabilizzazione	1.000	x	0.005	x	60	/	1.00	=	0.30 kN/mq
	0.000	x	0.000	x	0	/	1.00	=	0.00 kN/mq
	0.000	x	0.000	x	0	/	1.00	=	0.00 kN/mq
					SOMMA PERMANENTI NON STRUTTURALI G2= ~				2.30 kN/mq

Zona III — H=

SOMMA VARIABILI — E1 - Biblioteche, archivi, magazzini, depositi, — 0.50 kN/mq

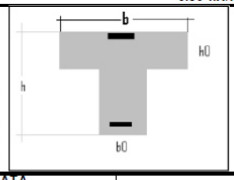
TOTALE = **6.50 kN/mq**

VALORE DI CALCOLO			INTERASSE =	0.5			
PERMANENTI G1	=	3.70	x	1.3	=	4.81	
PERM. NON STRUT. G2	=	2.30	x	1.5	=	3.45	
SOMMA VARIABILI Qi	=	0.50	x	1.5	=	0.75	

MOMENTI DI CALCOLO

	LUCE NETTA:	=	2.80	FATTORE M +	=	10	
☑ ATTIVA	LUCE DI CALCOLO:	=	2.94	FATTORE M -	=	14	VERO
	M ULTIMO +	=	3.89	M ULTIMO -	=	2.78	
	VEd	=	6.62				

ATTENZIONE TRAVE RETTANGOLARE b0=b e h0=0 [mm]



VERIFICA SLU FLESSIONE IN MEZZERIA (+)

					SEZIONE VERIFICATA				
mom	3.89	x	=	45.20				n° ferri	
fcd	18.13	C	=	78.68	ferri superiori	Ø 1 [mm]=	16	x 1	201.06
b	120	S2	=	-15.71		Ø 2 [mm]=	0	x 0	0.00
d	190	S1	=	-157.35				A.ferro adottata=	201.06
h	240	C+S1+S2	=	-94.39					
b0	120	ε_{cu}	=	0.350%		a inf hp	58.194		
h0	0	ε_{s2}	=	-0.037%				n° ferri	
		ε_{s1}	=	1.121%	ferri inferiori	Ø 1 [mm]=	16	x 2	402.12
c sup	50	MRT	=	**24.99**		Ø 2 [mm]=	0	x 0	0.00
c inf	50							A.ferro adottata=	402.12

VERIFICA SLU FLESSIONE APPOGGIO (-)

					SEZIONE VERIFICATA				
mom	2.78	x	=	48.16		a inf hp	41.567		
fcd	18.13	C	=	83.84				n° ferri	
b	120	S2	=	-11.30	ferri superiori	Ø 1 [mm]=	16	x 1	201.06
d	190	S1	=	-78.68		Ø 2 [mm]=	0	x 0	0.00
h	240	C+S1+S2	=	-6.14				A.ferro adottata=	201.06
b0	120	ε_{cu}	=	0.350%					
h0	0	ε_{s2}	=	-0.013%				n° ferri	
		ε_{s1}	=	1.031%	ferri inferiori	Ø 1 [mm]=	16	x 2	402.12
c sup	50	MRT	=	**13.60**		Ø 2 [mm]=	0	x 0	0.00
c inf	50							A.ferro adottata=	402.12

VERIFICA SLU TAGLIO ALL'APPOGGIO

◉ SENZA ARMATURA A TAGLIO — ○ CON ARMATURA A TAGLIO

K=	2.00	RO1=	0.02		
VMIN=	0.56	VRd=	21.89 KN	> Ved	

VERIFICA A TRANCIAMENTO DEI FERRI: VC,RD= 136.27 kN **> Ved**

VERIFICA A DEFORMAZIONE (NTC 2008 E EC2-2007-1)

CARATTERISTICHE SEZIONE INTEGRA

n=	7		6.30
A*=	33 022.30	mm^2	
x*=	122.98	mm	
J*=	1.58635E+08	mm^4	
W*=	1 355 666	mm^3	
f_{CTM}=	3.02	Mpa	
M_{cr}=	4.10	kNm	

CARATTERISTICHE SEZIONE FESSURATA

A=	12 770.08	mm2
x=	71.23	mm
J=	5.4798E+07	mm4
W=	769 291	mm3

se 0 non collabora

Larghezza solaio= 0

k= 1.0000

Mqp ridotto= 2.77

β=	0.5000	carichi di lunga durata o ripetuti
λ=	2.8949	
c=	1.4820	
ξ=	0.0000	
v_1=	1.1213	mm
Δv=	2.1773	

freccia= 2.44 mm ---> L / freccia = 1/ 1 146.81

Limite della freccia: 1/250 salvagaurdare l'aspetto estetico e la funzionalità delle strutture (quasi permanente)
1/500 spostamenti che possano danneggiare le strutture (quasi permanente)

VERIFICA FESSURAZIONE (NTC 2008 E EC2-2007-1)

ϕeq= 16 ρeff= 0.059567

i = 20.00 i max= 290 **OK**

a - ordinarie - X0,XC1,XC2,XC3,XF1

combinazione quasi permanente			combinazione frequente		
Mqp=	2.77		Mf=	2.81	
σ_{smax}=	89.92		σ_{smax}=	91.33	
$s_{r,max}$ =	188.46		$s_{r,max}$ =	188.46	
Δ ε,min=	0.00025692		Δ ε,min=	0.00026094	
Δ ε =	0.00029120		Δ ε =	0.00029789	
w =	**0.055**	**OK**	w =	**0.056**	**OK**

VERIFICA DELLE TENSIONI DI ESERCIZIO IN MEZZERIA

combinazione quasi permanente			combinazione caratteristica (rara)		
Mqp=	2.77		Mf=	2.81	
σ_{smax}=	89.92	**OK**	σ_{smax}=	91.3288	**OK**
σ_{cmax}=	3.60	**OK**	σ_{cmax}=	3.65	**OK**

VERIFICA TAMPONATURE FUORI DAL PIANO

1 - PREMESSA ED IPOTESI DI CALCOLO

Secondo il § 7.2.3 del D.M. 14 gennaio 2008, con l'esclusione dei soli tamponamenti interni di spessore non superiore a 100 mm, gli elementi costruttivi senza funzione strutturale, il cui danneggiamento può provocare danni a persone, devono essere verificati, insieme alle loro connessioni alla struttura, per l'azione sismica corrispondente a ciascuno degli stati limite considerati.

Gli effetti dell'azione sismica sugli elementi costruttivi senza funzione strutturale possono essere determinati applicando a tali elementi una forza orizzontale F_a definita come segue (§ 7.2.3 - Formula 7.2.1):

$$F_a = \frac{S_a \cdot W_a}{q_a}$$

dove:

- F_a = Forza sismica orizzontale agente nel centro di massa dell'elemento non strutturale nella direzione più sfavorevole;
- W_a = Peso dell'elemento comprensivo delle parti non aventi funzione resistente (intonaco, isolamento termico eccetera);
- S_a = Accelerazione massima, adimensionalizzata rispetto a quella di gravità, che l'elemento strutturale subisce durante il sisma e corrisponde allo stato limite in esame (vedi § 3.2.1);
- q_a = Fattore di struttura del pannello.

In assenza di specifiche determinazioni, per q_a si possono assumere i valori riportati nella Tab. 7.2.I. di cui al § 7.2.3 delle NTC 2008:

Tabella 7.2.I – *Valori di q_a per elementi non strutturale*

Elemento non strutturale	q_a
Parapetti o decorazioni aggettanti	1,0
Insegne e pannelli pubblicitari	
Ciminiere, antenne e serbatoi su supporti funzionanti come mensole senza controventi per più di metà della loro altezza	
Pareti interne ed esterne	2,0
Tramezzature e facciate	
Ciminiere, antenne e serbatoi su supporti funzionanti come mensole non controventate per meno di metà della loro altezza o connesse alla struttura in corrispondenza o al di sopra del loro centro di massa	
Elementi di ancoraggio per armadi e librerie permanenti direttamente poggianti sul pavimento	
Elementi di ancoraggio per controsoffitti e corpi illuminanti	

In mancanza di analisi più accurate l'accelerazione massima S_a può essere calcolata con la seguente relazione (§ 7.2.3 - Formula 7.2.2):

$$S_a = \alpha \cdot S \cdot \left[\frac{3 \cdot \left(1 + \frac{Z}{H}\right)}{1 + \left(1 - \frac{T_a}{T_1}\right)^2} - 0{,}5 \right]$$

dove:

- α = Rapporto tra l'accelerazione massima del terreno a_g su sottosuolo tipo A da considerare nello stato limite in esame (vedi § 3.2.1) e l'accelerazione di gravità g;
- S = Coefficiente che tiene conto della categoria di sottosuolo e delle condizioni topografiche, secondo quanto riportato nel § 3.2.3.2.1 (Formula 3.2.5: $S = S_T \cdot S_S$);
- S_T = Coefficiente di amplificazione topografica (§ 3.2.3.2.1 - Tabella 3.2.VI);
- S_S = Coefficiente di amplificazione stratigrafica (§ 3.2.3.2.1 - Tabella 3.2.V);
- T_a = Periodo fondamentale di vibrazione dell'elemento non strutturale;
- T_1 = Periodo fondamentale di vibrazione della costruzione nella direzione considerata;
- Z = Quota del baricentro dell'elemento non strutturale misurata a partire dal piano di fondazione (vedi § 3.2.2);
- H = Altezza della costruzione misurata a partire dal piano di fondazione.

Il valore del coefficiente sismico S_a non può essere assunto minore di $\alpha \cdot S$. Volendo procedere a vantaggio di sicurezza, nel calcolo del fattore S_a si può porre il rapporto T_a/T_1 pari a 1.

Relativamente al calcolo del periodo di vibrazione dell'elemento non strutturale (T_a) si può fare riferimento alla seguente formulazione:

$$T_a = \frac{2 \cdot h^2}{(\pi \cdot k^2)} \cdot \sqrt{\frac{A \cdot \gamma_{mur}}{E \cdot I \cdot g}}$$

dove:

- k = Numero intero che indica il modo di vibrare considerato per l'elemento non strutturale (= 1,2,3, per il primo, secondo, terzo modo di vibrare eccetera);
- h = Altezza del pannello di tamponatura;
- s = Spessore del pannello di tamponatura, comprensivo anche delle parti non aventi funzione resistente (intonaco, isolamento eccetera);
- L = Lunghezza del pannello di tamponatura;
- A = Area di base del pannello di tamponatura ($A = s \cdot L$);
- γ_{mur} = Peso per unità di volume del pannello di tamponatura;
- E = Modulo elastico del pannello di tamponatura;
- I = Momento di inerzia del pannello di tamponatura rispetto all'asse baricentrico ortogonale alla forza F_a, calcolato tenendo conto delle parti non aventi funzione resistente (intonaco, isolamento termico eccetera);
- g = Accelerazione di gravità.

Le verifiche di resistenza e stabilità del pannello di tamponatura vengono effettuate per tre diverse ipotesi di calcolo, ovvero:

1) <u>Tamponatura doppiamente appoggiata in testa ed al piede con carico concentrato in mezzeria</u>

In tale ipotesi il momento sollecitante massimo, valutato nella sezione di mezzeria, è pari a:

$$M_{sd} = \frac{F_a \cdot h}{4}$$

In tale ipotesi il momento resistente è invece pari a:

$$M_{rd} = \left(L \cdot s^2 \cdot \frac{\sigma_0}{2}\right) \cdot \left(1 - \frac{\sigma_0}{0{,}85 f_d}\right)$$

2) Tamponatura doppiamente appoggiata in testa ed al piede con carico uniformemente distribuito

In tale ipotesi il momento sollecitante massimo, valutato nella sezione di mezzeria, è pari a:

$$M_{ed} = \frac{\left(F_a \cdot h^2\right)}{8h}$$

In tale ipotesi il momento resistente è invece pari a:

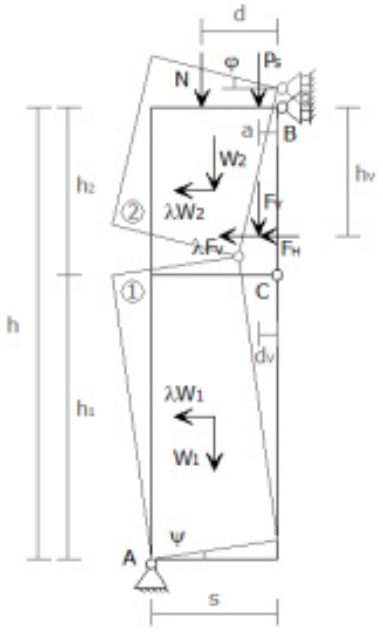
$$M_{rd} = \left(L \cdot s^2 \cdot \frac{\sigma_0}{2}\right) \cdot \left(1 - \frac{\sigma_0}{0{,}85 f_d}\right)$$

3) Cinematismo con formazione di cerniere plastiche in appoggio e in mezzeria

In tale ipotesi il momento ribaltante massimo, valutato nella sezione di mezzeria, è pari a:

$$M_{ed} = \left(F_a \cdot \frac{h}{8}\right) + \left(W_a \cdot \frac{s}{4}\right)$$

In tale ipotesi il momento stabilizzante, con riferimento alla sezione di mezzeria, è invece pari a:



$$M_{rd} = \frac{W_a}{2} \cdot \left[s - \frac{W_a}{4 \cdot 0{,}85 f_d \cdot L}\right]$$

In tutte e tre le ipotesi considerate la verifica risulta essere soddisfatta se $M_{rd}/M_{ed} \geq 1$.

2 - VERIFICHE DI RESISTENZA E STABILITA'

Nel caso in esame si provvede a verificare i tamponamenti esterni, per i quali il fattore di struttura q_a risulta essere pari a 2, come si evince dalla Tabella 7.2.I. Le tamponature oggetto di verifica risultano essere costituite da blocchi in laterizio forati intonacati su entrambi i lati.

I calcoli successivi fanno riferimento ad un pannello di tamponatura situato all'ultimo livello del fabbricato, ove le azioni dovute al sisma risultano essere più gravose. Nel caso di tamponatura di forma trapezoidale e/o triangolare, tipica dei livelli più alti (di sottotetto), si provvederà ad effettuare i calcoli di verifica (in forma semplificata) su un pannello equivalente di forma rettangolare, avente lunghezza pari a quella effettiva e altezza pari alla media delle altezze del pannello stesso.

Per le verifiche inerenti tutti gli altri pannelli di tamponatura del fabbricato si rimanda alle tabelle riassuntive riportate in appendice.

Le caratteristiche geometriche e meccaniche dei parametri in gioco vengono riportate di seguito:

Altezza minima del pannello di tamponatura	h_{min}	3.07 m
Altezza massima del pannello di tamponatura	h_{max}	3.07 m
Quota dell'impalcato su cui poggia la tamponatura dal piano di fondazione	Z_{imp}	0.00 m
Quota del baricentro della tamponatura dal piano di fondazione	Z	1.54 m
Altezza del fabbricato misurata a partire dal piano di fondazione	H	4.00 m
Altezza del pannello di tamponatura	h	3.07 m
Resistenza caratteristica a compressione dell'elemento della tamponatura	f_{bk}	10.00 N/mm^2
Tipo di malta		M 5
Resistenza a compressione della malta	f_m	5.00 N/mm^2
Resistenza caratteristica a compressione del pannello di tamponatura	f_k	4.70 N/mm^2
Coefficiente parziale di sicurezza	γ_m	2
Resistenza di progetto del pannello di tamponatura	f_d	2.35 N/mm^2
Modulo elastico del pannello di tamponatura	E	4700 N/mm^2
Spessore del pannello di tamponatura	s	0.38 m
Lunghezza del pannello di tamponatura	L	1.00 m
Area di base del pannello di tamponatura	A	0.38 m^2
Momento di inerzia del pannello di tamponatura	I	0.0046 m^4
Peso per unità di volume del pannello di tamponatura	γ_{mur}	8000 N/m^3
Modo di vibrare preso in esame per l'elemento non strutturale	k	1
Accelerazione di gravità	g	9.81 m/s^2

Si ottiene pertanto:

Periodo di vibrazione dell'elemento non strutturale	T_a	0.023 s
Periodo della struttura in direzione ortogonale al piano della tamponatura	T_1	0.147 s
Accelerazione orizzontale massima al suolo per terreno di categoria A	a_g	0.0700 g
Procedere a vantaggio di sicurezza?		No
Rapporto tra il periodo di vibrazione della tamponatura e il periodo della struttura in direzione ortogonale al piano della tamponatura	T_a/T_1	0.155
Valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale	F_0	2.570
Periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale	T_C^*	0.580 s
Vita nominale	V_N	100
Quota s.l.m. del sito	q	0 m
Classe d'uso	C	IV
Coefficiente d'uso	C_U	2.00
Periodo di riferimento dell'azione sismica	V_R	200
Probabilità di superamento	P_{VR}	10%
Tempo di ritorno dell'azione sismica	T_R	1898
Categoria di sottosuolo		A
Coefficienti di amplificazione stratigrafica	S_S	1.00
	C_C	1.00
Categoria topografica		T1
Coefficiente di amplificazione topografica	S_T	1.00
Coefficiente per categoria di sottosuolo e delle condizioni topografiche	S	1.00
Periodo corrispondente all'inizio del tratto dello spettro ad accelerazione costante	T_B	0.193 s
Periodo corrispondente all'inizio del tratto a velocità costante dello spettro	T_C	0.580 s
Periodo corrispondente all'inizio del tratto a spostamento costante dello spettro	T_D	1.880 s
Accelerazione massima calcolata allo SLV	S_a	0.134/g
Peso del pannello di tamponatura	W_a	9332.80 N
Tensione media agente sulla sezione mediana del pannello	σ_0	0.012 N/mm^2
Fattore di struttura del pannello di tamponatura	q_a	2
Forza sismica orizzontale agente nel centro di massa dell'elemento non strutturale nella direzione più sfavorevole	F_a	627.46 N

Le verifiche di resistenza e stabilità della tamponatura forniscono, per le tre ipotesi considerate, i seguenti risultati:

1) Tamponatura doppiamente appoggiata in testa ed al piede con carico concentrato in mezzeria

Momento sollecitante massimo nella sezione di mezzeria	M_{ed}	481.58 Nm
Momento resistente	M_{rd}	881.17 Nm
Rapporto tra momento resistente e momento sollecitante	M_{rd}/M_{ed}	1.83
Mrd/Med > 1 - VERIFICA SODDISFATTA		

2) Tamponatura doppiamente appoggiata in testa ed al piede con carico uniformemente distribuito

Momento sollecitante massimo nella sezione di mezzeria	M_{ed}	240.79 Nm
Momento resistente	M_{rd}	881.17 Nm
Rapporto tra momento resistente e momento sollecitante	M_{rd}/M_{ed}	3.66
Mrd/Med > 1 - VERIFICA SODDISFATTA		

3) Cinematismo con formazione di cerniere plastiche in appoggio e in mezzeria

Momento ribaltante massimo nella sezione di mezzeria	M_{ed}	1127.40 Nm
Momento stabilizzante nella sezione di mezzeria	M_{rd}	1767.78 Nm
Rapporto tra momento resistente e momento ribaltante	M_{rd}/M_{ed}	1.57
Mrd/Med > 1 - VERIFICA SODDISFATTA		

Qualora le verifiche di resistenza e stabilità del pannello non risultino verificate bisognerà provvedere all'inserimento di leggere reti da intonaco sui due lati della muratura, collegate tra loro ed alle strutture circostanti a distanza non superiore a 500 mm sia in direzione orizzontale che in direzione verticale, ovvero all'inserimento di elementi di armatura orizzontale nei letti di malta, a distanza non superiore a 500 mm, così come prescritto dalla Circolare 2 febbraio 2009 n° 617 al § C7.3.6.3.