

REGIONE MARCHE
PROVINCIA DI FERMO
COMUNE DI FERMO

IMPIANTO DI TRATTAMENTO ANAEROBICO DELLA FRAZIONE ORGANICA DEI
RIFIUTI SOLIDI URBANI PER LA PRODUZIONE DI BIOMETANO

CIG: 9880245C18 – CUP: F62F18000070004

PROGETTO ESECUTIVO

NOME ELABORATO VASCA CONFERIMENTO TABULATO DI CALCOLO		CLASSE	10.15
		STRUTTURE VASCA CONFERIMENTO	
		N. TAVOLA	10.15.2
		FORMATO	A4
		SCALA	/
CODIFICA ELABORATO	23008-OW-C-101-RS-098-MA1-0		

00	11/10/2024	PRIMA EMISSIONE	B. BARONE	C. BUTTICE'	R. MARTELLO
REV	DATA	DESCRIZIONE	ESEGUITO	VERIFICATO	APPROVATO

Committente	Progettista indicato	Mandataria
 CITTA' DI FERMO Settore IV e V Lavori Pubblici, Protezione Civile, Ambiente, Urbanistica, Patrimonio, Contratti e Appalti Via Mazzini 4 63900 – Fermo (FM) DOTT. Mauro Fortuna RUP	 Via Resuttana 360 90142 -PALERMO OWAC Engineering Company S.R.L. ING. Rocco Martello Direttore Tecnico UNI EN ISO 9001:2015 N. 30233/14/S UNI EN ISO 45001:2018 N. OHS-4849 UNI EN ISO 14001:2015 N. EMS-9477/S UNI/PdR 74 :2019 N. SGBIM-01/23 UNI/PdR 74:2019 N. 21042BIM	 Via del Cardoncello 22 70022 – Altamura (BA) EDILALTA S.R.L. DOTT. Angelantonio Disabato Socio
		Mandante  Via Bassa di Casalmoro 3 46041 – Asola (MN) ANAERGIA S.R.L. DOTT. Andrea Parisi Institore



00	B. BARONE	10/11/2024	C. BUTTICE'	11/10/2024	R. MARTELLO	11/10/2024
REV	ESEGUITO	DATA	VERIFICATO	DATA	APPROVATO	DATA



Relazione di calcolo strutturale impostata e redatta secondo le modalità previste nel D.M. 17 Gennaio 2018 cap. 10 "Redazione dei progetti strutturali esecutivi e delle relazioni di calcolo".

Origine e Caratteristiche dei Codici di Calcolo	
Codice di calcolo:	PRO_SAP PROfessional Structural Analysis Program
Versione:	PROFESSIONAL (build 2024-06-200)
Produttore-Distributore:	2S.I. Software e Servizi per l'Ingegneria s.r.l. Via Garibaldi, 90 44121 Ferrara FE (Italy) Tel. +39 0532 200091 www.2si.it
Codice Licenza:	Licenza dsi5924

Descrizione	
Progetto	Impianto di trattamento anaerobico della F.O.R.S.U. per la produzione di Biometano.
	Vasca di contenimento
Ubicazione	Comune di FERMO (FM) (Regione MARCHE)
	Località FERMO (FM)
	Longitudine 13.677, Latitudine 43.123

In merito al punto 10.2 delle Norme Tecniche per le Costruzioni (*Affidabilità dei codici utilizzati*), si fa riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" disponibile per il download sul sito: <https://www.2si.it/it/prodotti/affidabilita/>



INTESTAZIONE E CONTENUTI DELLA RELAZIONE

PROGETTO

La struttura della vasca di contenimento è un elemento che contiene i rifiuti scaricati dai mezzi di trasporto dalla raccolta urbana. Gli elementi sismo-resistenti sono per la parte in elevazione delle pareti in di spessore 30 cm e per gli elementi in fondazione una platea di spessore 40cm. La qualità del calcestruzzo è C35/45 in quanto la classe di esposizione è XA3, il copriferro è pari a cm 4,5.

Le barre di acciaio sono di qualità B450C.

Per il rifiuto sono stati utilizzati i seguenti parametri meccanici:

$\gamma = 1000 \text{ daN/mc};$

$\varphi' = 30^\circ$

I piani di calpestio intorno alla vasca sono posti a diversa quota. Di seguito sono riportati i valori del materiale utilizzato per creare il calpestio posto a quota maggiore.

Parametri del materiale utilizza come riempimento:

$\gamma = 1500 \text{ daN/mc};$

$\varphi' = 30^\circ$

La valutazione dell'incremento di spinta dei materiali sotto sisma è avvenuta utilizzando il metodo di Mononobe-Okabe.

Contenuti della relazione:

RELAZIONE DI CALCOLO STRUTTURALE

- Origine e Caratteristiche dei Codici di Calcolo
- Affidabilità dei codici utilizzati
- Validazione dei codici
- Tipo di analisi svolta
- Modalità di presentazione dei risultati
- Informazioni generali sull'elaborazione
- Giudizio motivato di accettabilità dei risultati

STAMPA DEI DATI DI INGRESSO

- Normative prese a riferimento
- Criteri adottati per le misure di sicurezza
- Criteri seguiti nella schematizzazione della struttura, dei vincoli e delle sconnessioni
- Interazione tra terreno e struttura
- Legami costitutivi adottati per la modellazione dei materiali e dei terreni
- Schematizzazione delle azioni, condizioni e combinazioni di carico
- Metodologie numeriche utilizzate per l'analisi strutturale
- Metodologie numeriche utilizzate per la progettazione e la verifica degli elementi strutturali

STAMPA DEI RISULTATI

Il Progettista:

MANDATARIA



MANDANTE



PROGETTISTA INDICATO



VASCA CONFERIMENTO
TABULATO DI CALCOLO

REV. 00

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Città di Fermo

Settore IV e V

Lavori Pubblici, Protezione Civile,
Ambiente, Urbanistica, Patrimonio,
Contratti e Appalti

PROGETTAZIONE ESECUTIVA "IMPIANTO DI TRATTAMENTO ANAEROBICO DELLA
FRAZIONE ORGANICA DEI RIFIUTI SOLIDI URBANI PER LA PRODUZIONE DI BIOMETANO"
CIG: 9880245C18 CUP: F62F18000070004

MANDATARIA



MANDANTE



PROGETTISTA INDICATO



**VASCA CONFERIMENTO
TABULATO DI CALCOLO**

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14 ottobre 2024

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RELAZIONE DI CALCOLO STRUTTURALE

PREMESSA

La presente relazione di calcolo strutturale, in conformità al §10.1 del DM 17/01/18, è comprensiva di una descrizione generale dell'opera e dei criteri generali di analisi e verifica. Segue inoltre le indicazioni fornite al §10.2 del DM stesso per quanto concerne analisi e verifiche svolte con l'ausilio di codici di calcolo.

Nella presente parte sono riportati i principali elementi di inquadramento del progetto esecutivo riguardante le strutture, in relazione agli strumenti urbanistici, al progetto architettonico, al progetto delle componenti tecnologiche in generale ed alle prestazioni attese dalla struttura.

La struttura della vasca di contenimento è un elemento che contiene il rifiuto scaricato dai veicoli per la raccolta dei rifiuti urbani.

DESCRIZIONE GENERALE DELL'OPERA

La struttura è costituita da una platea di fondazione e da pareti in calcestruzzo armato

Descrizione generale dell'opera	
Fabbricato ad uso	A servizio dei processi industriali
Ubicazione	Comune di FERMO (FM) (Regione MARCHE)
	Località FERMO (FM)
	Longitudine 13.677, Latitudine 43.123
Numero di piani	Fuori terra 0
	Interrati 0
	le dimensioni dell'opera in pianta sono racchiuse in un rettangolo di m 11,00 x 14,90
Numero vani scale	0
Numero vani ascensore	0
Tipo di fondazione	diretta

Principali caratteristiche della struttura	
Struttura regolare in pianta	Si
Struttura regolare in altezza	Si
Classe di duttilità	Non Dissipativa
Travi: ricalate o in spessore	0
Pilastrì	0
Pilastrì in falso	0
Tipo di fondazione	Platea
Condizioni per cui è necessario considerare la componente verticale del sisma	Nessuna

Parametri della struttura			
Classe d'uso	Vita Vn [anni]	Coeff. Uso	Periodo Vr [anni]
III	50.0	1.5	75.0

Fattore di struttura/comportamento
La struttura è non dissipativa

QUADRO NORMATIVO DI RIFERIMENTO ADOTTATO

Le norme ed i documenti assunti quale riferimento per la progettazione strutturale vengono indicati di seguito.

Nel capitolo "normativa di riferimento" è comunque presente l'elenco completo delle normative disponibili.

Progetto-verifica degli elementi	
Progetto cemento armato	D.M. 17-01-2018
Progetto acciaio	D.M. 17-01-2018
Progetto legno	D.M. 17-01-2018
Progetto muratura	D.M. 17-01-2018
Azione sismica	
Norma applicata per l'azione sismica	D.M. 17-01-2018



AZIONI DI PROGETTO SULLA COSTRUZIONE

Nei capitoli "modellazione delle azioni" e "schematizzazione dei casi di carico" sono indicate le azioni sulla costruzioni.

Nel prosieguo si indicano tipo di analisi strutturale condotta (statico, dinamico, lineare o non lineare) e il metodo adottato per la risoluzione del problema strutturale nonché le metodologie seguite per la verifica o per il progetto-verifica delle sezioni. Si riportano le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti; le configurazioni studiate per la struttura in esame *sono risultate effettivamente esaustive per la progettazione-verifica*.

La verifica della sicurezza degli elementi strutturali avviene con i metodi della scienza delle costruzioni. L'analisi strutturale è condotta con il metodo degli spostamenti per la valutazione dello stato tensodeformativo indotto da carichi statici. L'analisi strutturale è condotta con il metodo dell'analisi modale e dello spettro di risposta in termini di accelerazione per la valutazione dello stato tensodeformativo indotto da carichi dinamici (tra cui quelli di tipo sismico).

L'analisi strutturale viene effettuata con il metodo degli elementi finiti. Il metodo sopraindicato si basa sulla schematizzazione della struttura in elementi connessi solo in corrispondenza di un numero prefissato di punti denominati nodi. I nodi sono definiti dalle tre coordinate cartesiane in un sistema di riferimento globale. Le incognite del problema (nell'ambito del metodo degli spostamenti) sono le componenti di spostamento dei nodi riferite al sistema di riferimento globale (traslazioni secondo X, Y, Z, rotazioni attorno X, Y, Z). La soluzione del problema si ottiene con un sistema di equazioni algebriche lineari i cui termini noti sono costituiti dai carichi agenti sulla struttura opportunamente concentrati ai nodi:

$$\mathbf{K} \cdot \mathbf{u} = \mathbf{F} \quad \text{dove} \quad \mathbf{K} = \text{matrice di rigidezza}$$

$\mathbf{u}$ = vettore spostamenti nodali

$\mathbf{F}$ = vettore forze nodali

Dagli spostamenti ottenuti con la risoluzione del sistema vengono quindi dedotte le sollecitazioni e/o le tensioni di ogni elemento, riferite generalmente ad una terna locale all'elemento stesso.

Il sistema di riferimento utilizzato è costituito da una terna cartesiana destrorsa XYZ. Si assume l'asse Z verticale ed orientato verso l'alto.

Gli elementi utilizzati per la modellazione dello schema statico della struttura sono i seguenti:

Elemento tipo TRUSS	(biella-D2)
Elemento tipo BEAM	(trave-D2)
Elemento tipo MEMBRANE	(membrana-D3)
Elemento tipo PLATE	(piastra-guscio-D3)
Elemento tipo BOUNDARY	(molla)
Elemento tipo STIFFNESS	(matrice di rigidezza)
Elemento tipo BRICK	(elemento solido)
Elemento tipo SOLAIO	(macro elemento composto da più membrane)

MODELLO NUMERICO

In questa parte viene descritto il modello numerico utilizzato (o i modelli numerici utilizzati) per l'analisi della struttura. La presentazione delle informazioni deve essere, coerentemente con le prescrizioni del paragrafo 10.2 e relativi sottoparagrafi delle NTC-18, tale da garantirne la leggibilità, la corretta interpretazione e la riproducibilità

Gli elementi utilizzati per modellare le pareti e la plate di fondazione sono gli elementi shell (elementi D3).



Tipo di analisi strutturale

Sismica statica lineare	NO
Sismica dinamica lineare	SI
Sismica statica non lineare (prop. masse)	NO
Sismica statica non lineare (prop. modo)	NO
Sismica statica non lineare (triangolare)	NO
Non linearità geometriche (fattore P delta)	NO
Analisi lineare	SI

Di seguito si indicano l'origine e le caratteristiche dei codici di calcolo utilizzati riportando titolo, produttore e distributore, versione, estremi della licenza d'uso:

Informazioni sul codice di calcolo

Titolo:	PRO_SAP PROfessional Structural Analysis Program
Versione:	PROFESSIONAL (build 2024-06-200)
Produttore-Distributore:	2S.I. Software e Servizi per l'Ingegneria s.r.l., Ferrara
Dati utente finale:	Owac Engineering Company
Codice Utente:	Owac Engineering Company
Codice Licenza:	Licenza dsi5924

Un attento esame preliminare della documentazione a corredo del software **ha consentito di valutarne l'affidabilità e soprattutto l'idoneità al caso specifico**. La documentazione, fornita dal produttore e distributore del software, contiene una esauriente descrizione delle basi teoriche e degli algoritmi impiegati, l'individuazione dei campi d'impiego, nonché casi prova interamente risolti e commentati, corredati dei file di input necessari a riprodurre l'elaborazione:

Affidabilità dei codici utilizzati

2S.I. ha verificato l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche.

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

Modellazione della geometria e proprietà meccaniche:

nodi	572
elementi D2 (per aste, travi, pilastri...)	0
elementi D3 (per pareti, platee, gusci...)	543
elementi solaio	0
elementi solidi	0

Dimensione del modello strutturale [cm]:

X min =	40.00
Xmax =	1153.00
Ymin =	300.00
Ymax =	1767.00
Zmin =	-325.00
Zmax =	515.00

Strutture verticali:

Elementi di tipo asta	NO
-----------------------	----



Pilastrati	NO
Pareti	SI
Setti (a comportamento membranale)	NO
Strutture non verticali:	
Elementi di tipo asta	NO
Travi	NO
Gusci	NO
Membrane	NO
Orizzontamenti:	
Solai con la proprietà piano rigido	NO
Solai senza la proprietà piano rigido	NO
Tipo di vincoli:	
Nodi vincolati rigidamente	NO
Nodi vincolati elasticamente	NO
Nodi con isolatori sismici	NO
Fondazioni puntuali (plinti/plinti su palo)	NO
Fondazioni di tipo trave	NO
Fondazioni di tipo platea	SI
Fondazioni con elementi solidi	NO

MODELLAZIONE DELLE AZIONI

Si veda il capitolo **"Schematizzazione dei casi di carico"** per le informazioni necessarie alla comprensione ed alla ricostruzione delle azioni applicate al modello numerico, coerentemente con quanto indicato nella parte **"2.6. Azioni di progetto sulla costruzione"**.

COMBINAZIONI E/O PERCORSI DI CARICO

Si veda il capitolo **"Definizione delle combinazioni"** in cui sono indicate le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti.

Combinazioni dei casi di carico	
APPROCCIO PROGETTUALE	Approccio 2
SLU	SI
SLV (SLU con sisma)	SI
SLC	NO
SLD	SI
SLO	NO
SLU GEO A2 (per approccio 1)	NO
SLU EQU	NO
Combinazione caratteristica (rara)	SI
Combinazione frequente	SI
Combinazione quasi permanente (SLE)	SI
SLA (accidentale quale incendio)	NO

Principali risultati

I risultati devono costituire una sintesi completa ed efficace, presentata in modo da riassumere il comportamento della struttura, per ogni tipo di analisi svolta.

Nella presente relazione di calcolo sono riportati i seguenti risultati che il progettista ritiene di interesse per la descrizione e la comprensione del/i modello/i e del comportamento della struttura:

per l'analisi modale:

- periodi dei modi di vibrare della struttura
- masse eccitate dai singoli modi
- massa eccitata totale

deformate e sollecitazioni:



- spostamenti e rotazioni dei singoli nodi della struttura
- reazioni vincolari (nel caso siano presenti nodi vincolati rigidamente)
- pressioni sul terreno (nel caso siano presenti elementi di fondazione)
- sollecitazioni sugli elementi d2 nelle combinazioni di calcolo più significative
- tensioni sugli elementi d3 nelle combinazioni di calcolo più significative
- sollecitazioni sui macroelementi da elementi d3 nelle combinazioni di calcolo più significative

altri risultati significativi:

- nessuna

La presente relazione, oltre ad illustrare in modo esaustivo i dati in ingresso ed i risultati delle analisi in forma tabellare, riporta una serie di immagini: per i dati in ingresso:

- modello solido della struttura
- numerazione di nodi e ed elementi
- configurazioni di carico statiche
- configurazioni di carico sismiche con baricentri delle masse e eccentricità

per le combinazioni più significative (statisticamente più gravose per la struttura):

- configurazioni deformate
- diagrammi e involuipi delle azioni interne
- mappe delle tensioni
- reazioni vincolari
- mappe delle pressioni sul terreno

per il progetto-verifica degli elementi:

- diagrammi di armatura
- percentuali di sfruttamento
- mappe delle verifiche più significative per i vari stati limite

Informazioni generali sull'elaborazione e giudizio motivato di accettabilità dei risultati.

Il programma prevede una serie di controlli automatici (check) che consentono l'individuazione di errori di modellazione. Al termine dell'analisi un controllo automatico identifica la presenza di spostamenti o rotazioni anormali. Si può pertanto asserire che l'elaborazione sia corretta e completa. I risultati delle elaborazioni sono stati sottoposti a controlli che ne comprovano l'attendibilità. Tale valutazione ha compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali e adottati, anche in fase di primo proporzionamento della struttura. Inoltre, sulla base di considerazioni riguardanti gli stati tensionali e deformativi determinati, si è valutata la validità delle scelte operate in sede di schematizzazione e di modellazione della struttura e delle azioni. Si allega al termine della presente relazione elenco sintetico dei controlli svolti (verifiche di equilibrio tra reazioni vincolari e carichi applicati, comparazioni tra i risultati delle analisi e quelli di valutazioni semplificate, etc.).

VERIFICHE AGLI STATI LIMITE ULTIMI

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLU vengono indicate, con riferimento alla normativa adottata, le modalità ed i criteri seguiti per valutare la sicurezza della struttura nei confronti delle possibili situazioni di crisi ed i risultati delle valutazioni svolte. In via generale, oltre alle verifiche di resistenza e di spostamento, devono essere prese in considerazione verifiche nei confronti dei fenomeni di instabilità, locale e globale, di fatica, di duttilità, di degrado.

VERIFICHE AGLI STATI LIMITE DI ESERCIZIO

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLE vengono indicate, con riferimento alla normativa adottata, le modalità seguite per valutare l'affidabilità della struttura nei confronti delle possibili situazioni di perdita di funzionalità (per eccessive deformazioni, fessurazioni, vibrazioni, etc.) ed i risultati delle valutazioni svolte.



NORMATIVA DI RIFERIMENTO

1. D.Min. Infrastrutture Min. Interni e Prot. Civile 17 Gennaio 2018 e allegate "Norme tecniche per le costruzioni".
2. Circolare 21/01/19, n. 7 C.S.LL.PP. "Istruzioni per l'applicazione dell'aggiornamento delle Norme Tecniche delle Costruzioni di cui al decreto ministeriale 17 gennaio 2018"
3. D.Min. Infrastrutture e trasporti 14 Settembre 2005 e allegate "Norme tecniche per le costruzioni".
4. D.M. LL.PP. 9 Gennaio 1996 "Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato, normale e precompresso e per le strutture metalliche".
5. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>".
6. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche per le costruzioni in zone sismiche".
7. Circolare 4/07/96, n.156AA.GG./STC. istruzioni per l'applicazione delle "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>" di cui al D.M. 16/01/96.
8. Circolare 10/04/97, n.65AA.GG. istruzioni per l'applicazione delle "Norme tecniche per le costruzioni in zone sismiche" di cui al D.M. 16/01/96.
9. D.M. LL.PP. 20 Novembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
10. Circolare 4 Gennaio 1989 n. 30787 "Istruzioni in merito alle norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
11. D.M. LL.PP. 11 Marzo 1988 "Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione".
12. D.M. LL.PP. 3 Dicembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo delle costruzioni prefabbricate".
13. UNI 9502 - Procedimento analitico per valutare la resistenza al fuoco degli elementi costruttivi di conglomerato cementizio armato, normale e precompresso - edizione maggio 2001
14. Ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 marzo 2003 "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica" e successive modificazioni e integrazioni.
15. UNI EN 1990:2006 13/04/2006 Eurocodice 0 - Criteri generali di progettazione strutturale.
16. UNI EN 1991-1-1:2004 01/08/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-1: Azioni in generale - Pesi per unità di volume, pesi propri e sovraccarichi per gli edifici.
17. UNI EN 1991-2:2005 01/03/2005 Eurocodice 1 - Azioni sulle strutture - Parte 2: Carichi da traffico sui ponti.
18. UNI EN 1991-1-3:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-3: Azioni in generale - Carichi da neve.
19. UNI EN 1991-1-4:2005 01/07/2005 Eurocodice 1 - Azioni sulle strutture - Parte 1-4: Azioni in generale - Azioni del vento.
20. UNI EN 1991-1-5:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-5: Azioni in generale - Azioni termiche.
21. UNI EN 1992-1-1:2005 24/11/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
22. UNI EN 1992-1-2:2005 01/04/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-2: Regole generali - Progettazione strutturale contro l'incendio.
23. UNI EN 1993-1-1:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-1: Regole generali e regole per gli edifici.
24. UNI EN 1993-1-8:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-8: Progettazione dei collegamenti.
25. UNI EN 1994-1-1:2005 01/03/2005 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
26. UNI EN 1994-2:2006 12/01/2006 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 2: Regole generali e regole per i ponti.
27. UNI EN 1995-1-1:2005 01/02/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 1-1: Regole generali - Regole comuni e regole per gli edifici.
28. UNI EN 1995-2:2005 01/01/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 2: Ponti.
29. UNI EN 1996-1-1:2006 26/01/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 1-1:



Regole generali per strutture di muratura armata e non armata.

30. UNI EN 1996-3:2006 09/03/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 3: Metodi di calcolo semplificato per strutture di muratura non armata.
31. UNI EN 1997-1:2005 01/02/2005 Eurocodice 7 - Progettazione geotecnica - Parte 1: Regole generali.
32. UNI EN 1998-1:2005 01/03/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 1: Regole generali, azioni sismiche e regole per gli edifici.
33. UNI EN 1998-3:2005 01/08/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 3: Valutazione e adeguamento degli edifici.
34. UNI EN 1998-5:2005 01/01/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 5: Fondazioni, strutture di contenimento ed aspetti geotecnici.
35. CNR DT-200/2013 - Istruzioni per la Progettazione, l'Esecuzione ed il Controllo di Interventi di Consolidamento Statico mediante l'utilizzo di Compositi Fibrorinforzati
36. CNR DT-215/2018 - Istruzioni per la Progettazione, l'Esecuzione ed il Controllo di Interventi di Consolidamento Statico mediante l'utilizzo di Compositi Fibrorinforzati a Matrice Inorganica

NOTA: il presente capitolo riporta l'elenco delle normative implementate nel software. Le norme utilizzate per la struttura oggetto della presente relazione sono indicate nel precedente capitolo "RELAZIONE DI CALCOLO STRUTTURALE" "ANALISI E VERIFICHE SVOLTE CON L'AUSILIO DI CODICI DI CALCOLO".

Laddove nei capitoli successivi vengano richiamate normative antecedenti al DM 17.01.18 è dovuto alla progettazione simulata di edificio esistente.

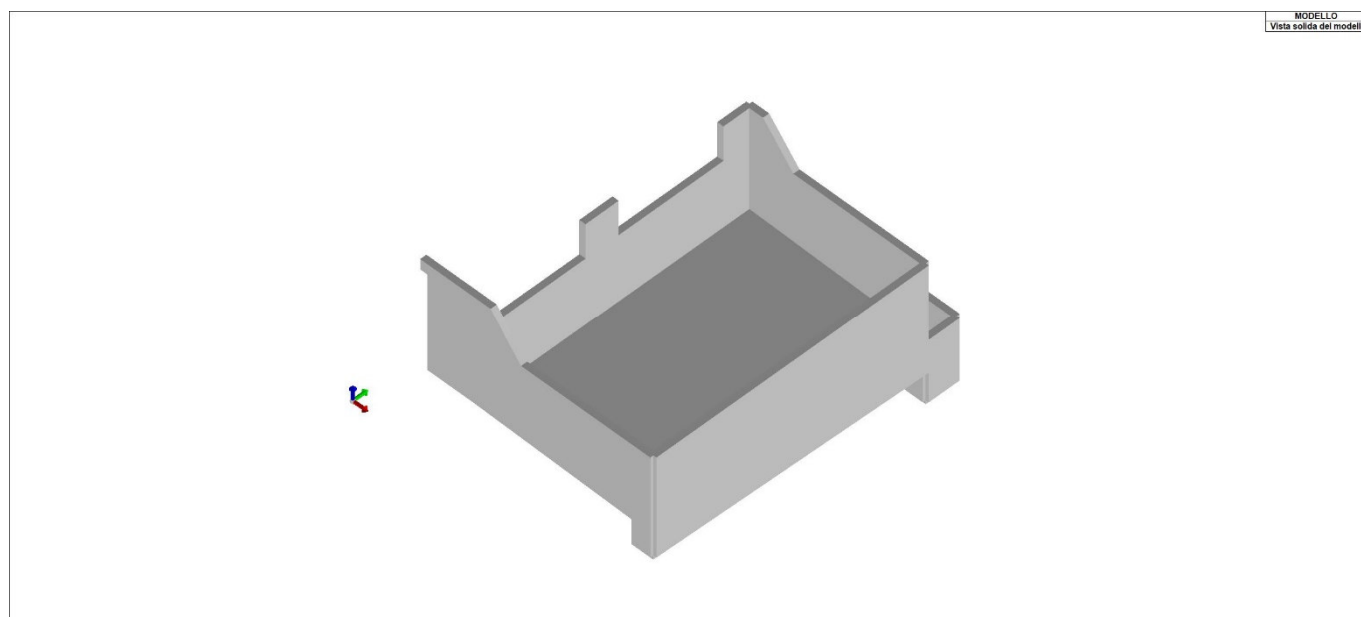


Figura 1 - VISTA_SOLIDA_001



MODELLO
Vista solida del modello

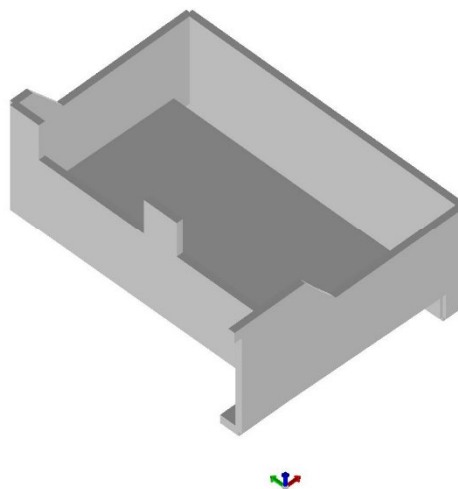


Figura 2 - VISTA_SOLIDA_002

MODELLO
Vista solida del modello

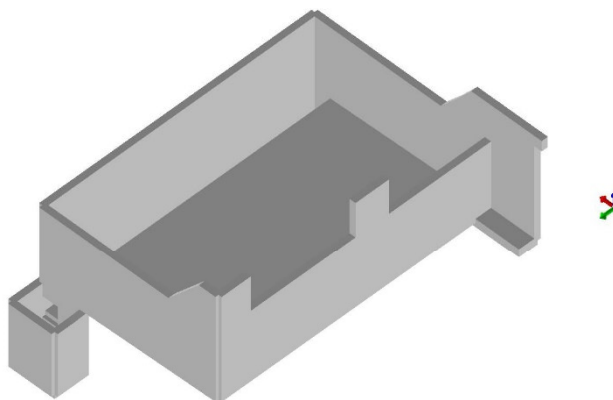


Figura 3 - VISTA_SOLIDA_003



MODELLO
Vista solida del modello

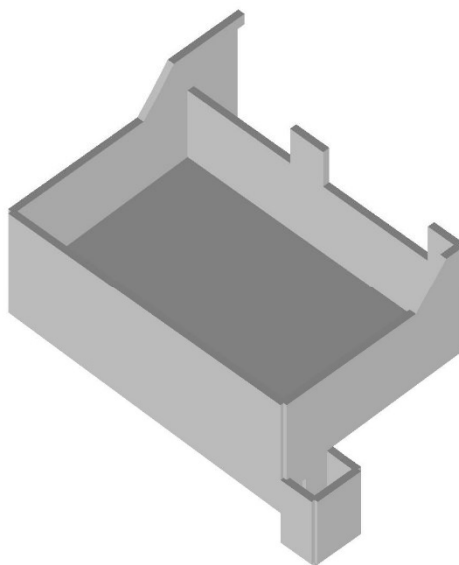


Figura 4 - VISTA_SOLIDA_004



CARATTERISTICHE MATERIALI UTILIZZATI

LEGENDA TABELLA DATI MATERIALI

Il programma consente l'uso di materiali diversi. Sono previsti i seguenti tipi di materiale:

1	materiale tipo cemento armato
2	materiale tipo acciaio
3	materiale tipo muratura
4	materiale tipo legno
5	materiale tipo generico

I materiali utilizzati nella modellazione sono individuati da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni materiale vengono riportati in tabella i seguenti dati:

Young	modulo di elasticità normale E
Poisson	coefficiente di contrazione trasversale ν
G	modulo di elasticità tangenziale
Gamma	peso specifico
Alfa	coefficiente di dilatazione termica
Fattore di confidenza FC m	Fattore di confidenza specifico per materiale; (è riportato solo se diverso da quello globale della struttura)
Fattore di confidenza FC a	Fattore di confidenza specifico per l'armatura (è riportato solo se diverso da quello globale della struttura)
Elasto-plastico	Materiale elastico perfettamente plastico per aste non lineari
Massima compressione	Massima tensione di compressione per aste non lineari
Massima trazione	Massima tensione di trazione per aste non lineari
Fattore attrito	Coefficiente di attrito per aste non lineari
Rapporto HRDb	Rapporto di hardening a flessione
Rapporto HRDv	Rapporto di hardening a taglio

I dati soprariportati vengono utilizzati per la modellazione dello schema statico e per la determinazione dei carichi inerziali e termici. In relazione al tipo di materiale vengono riportati inoltre:

1	c.a.	Resistenza Rc	resistenza a compressione cubica
		Resistenza fctm	resistenza media a trazione semplice
		Coefficiente ksb	Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
2	acciaio	Tensione ft	Valore della tensione di rottura
		Tensione fy	Valore della tensione di snervamento
		Resistenza fd	Resistenza di calcolo per SL CNR-UNI 10011
		Resistenza fd (>40)	Resistenza di calcolo per SL CNR-UNI 10011 per spessori > 40mm
		Tensione ammissibile	Tensione ammissibile CNR-UNI 10011
		Tensione ammissibile(>40)	Tensione ammissibile CNR-UNI 10011 per spessori > 40mm
3	muratura		



	Muratura consolidata	Muratura per la quale si prevedono interventi di rinforzo"
	Incremento resistenza	Incremento conseguito in termini di resistenza
	Incremento rigidezza	Incremento conseguito in termini di rigidezza
	Resistenza f	Valore della resistenza a compressione
	Resistenza fv0	Valore della resistenza a taglio in assenza di tensioni normali
	Resistenza fh	Valore della resistenza a compressione orizzontale
	Resistenza fb	Valore della resistenza a compressione dei blocchi
	Resistenza fbh	Valore della resistenza a compressione dei blocchi in direzione orizzontale
	Resistenza fv0h	Valore della resistenza a taglio in assenza di tensioni normali per le travi
	Resistenza ft	Valore della resistenza a trazione per fessurazione diagonale
	Resistenza fvim	Valore della massima resistenza a taglio
	Resistenza fbt	Valore della resistenza a trazione dei blocchi
	Coefficiente mu	Coefficiente d'attrito utilizzato per la resistenza a taglio
	Coefficiente fi	Coefficiente d'ingranamento utilizzato per la resistenza a taglio
	Coefficiente ksb	Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
4	legno	
	E0,05	Modulo di elasticità corrispondente ad un frattile del 5%
	Resistenza fc0	Valore della resistenza a compressione parallela
	Resistenza ft0	Valore della resistenza a trazione parallela
	Resistenza fm	Valore della resistenza a flessione
	Resistenza fv	Valore della resistenza a taglio
	Resist. ft0k	Resistenza caratteristica (tensione amm. per REGLES) per trazione
	Resist. fmk	Resistenza caratteristica (tensione amm. per REGLES) per flessione
	Resist. fvk	Resistenza caratteristica (tensione amm. per REGLES) per taglio
	Modulo E0,05	Modulo elastico parallelo caratteristico
	Lamellare	lamellare o massiccio

Nel tabulato si riportano sia i valori caratteristici che medi utilizzando gli uni e/o gli altri in relazione alle richieste di normativa ed alla tipologia di verifica. (Cap.7 NTC18 per materiali nuovi, Cap.8 NTC18 e relativa circolare 21/01/2019 per materiali esistenti, Linee Guida Reluis per incamiciatura CAM, CNR-DT 200 per interventi con FRP, CNR-DT 215 per interventi con FRCM)

Vengono inoltre riportate le tabelle contenenti il riassunto delle informazioni assegnate nei criteri di progetto in uso.

Id	Tipo / Note	V. caratt.	V. medio	Young	Poisson	G	Gamma	Alfa	Altri
		daN/cm2	daN/cm2	daN/cm2		daN/cm2	daN/cm3		
6	Calcestruzzo Classe C35/45			3.463e+05	0.20	1.443e+05	2.50e-03	1.00e-05	
	Resistenza Rc	450.0							
	Resistenza fctm		33.5						
	Rapporto Rfessurata (assiale)								1.00
	Rapporto Rfessurata (flessione)								1.00
	Rapporto Rfessurata (taglio)								1.00
	Coefficiente ksb								0.85
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05



MODELLO
Linee nascoste del D3 (per materiale)

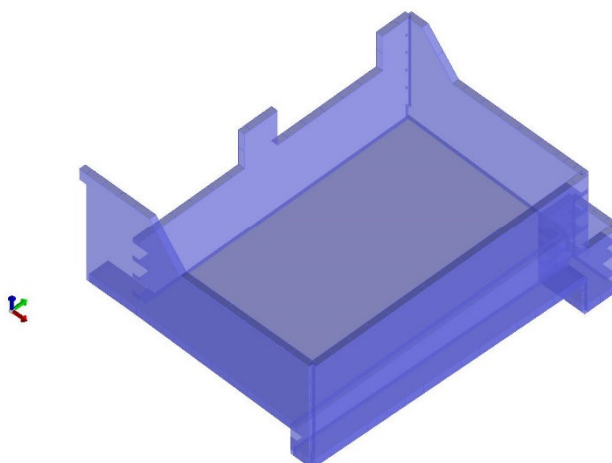


Figura 5 - MOD_MATERIALI_D3

Pareti c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Generalità						
Progetto armatura	Singolo elemento	Singolo elemento FONDAZIONE	Singolo elemento NON DISSIPATIVO	Singolo elemento	Parete estesa debolmente armata	Singolo elemento
	Singolo elemento	Singolo elemento FONDAZIONE	Singolo elemento NON DISSIPATIVO			
Armatura						
Inclinazione Av [gradi]	90.00	90.00	90.00	90.00	90.00	90.00
	90.00	90.00	90.00			
Angolo Av-Ao [gradi]	90.00	90.00	90.00	90.00	90.00	90.00
	90.00	90.00	90.00			
Minima tesa	0.20	0.20	0.20	2.000e-02	0.20	0.20
	0.20	0.20	0.20			
Massima tesa	4.00	4.00	4.00	4.00	4.00	4.00
	4.00	4.00	4.00			
Maglia unica centrale	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
Unico strato verticale	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
Unico strato orizzontale	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
Copriferro [cm]	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	4.50	4.50			
Maglia V						
diametro	10	10	10	10	10	10
	10	20	16			
passo	25	25	25	25	25	25
	25	40	25			
diametro aggiuntivi	12	12	12	12	12	12
	12	20	14			
Maglia O						
diametro	10	10	10	10	10	10
	10	20	14			
passo	25	25	25	25	25	25
	25	40	25			
diametro aggiuntivi	12	12	12	12	12	12
	12	20	14			
Stati limite ultimi						
Tensione fy [daN/cm2]	4500.00	4500.00	4500.00	4500.00	4500.00	4500.00
	4500.00	4500.00	4500.00			



Pareti c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Tipo acciaio	tipo C	tipo C	tipo C	tipo C	tipo C	tipo C
	tipo C	tipo C	tipo C			
Coefficiente gamma s	1.15	1.15	1.15	1.15	1.15	1.15
	1.15	1.15	1.15			
Coefficiente gamma c	1.50	1.50	1.50	1.50	1.50	1.50
	1.50	1.50	1.50			
Verifiche con N costante	SI	SI	SI	SI	SI	SI
	SI	SI	SI			
Tensioni ammissibili						
Tensione amm. cls [daN/cm ²]	97.50	97.50	97.50	97.50	97.50	97.50
	97.50	97.50	97.50			
Tensione amm. acciaio [daN/cm ²]	2600.00	2600.00	2600.00	2600.00	2600.00	2600.00
	2600.00	2600.00	2600.00			
Rapporto omogeneizzazione N	15.00	15.00	15.00	15.00	15.00	15.00
	15.00	15.00	15.00			
Massimo rapporto area compressa/tesa	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.00	1.00			
Parete estesa debolmente armata						
Fattore amplificazione taglio V	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0			
Hcrit. par. 7.4.4.5.1 [cm]	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0			
Hcrit. par. 7.4.6.1.4 [cm]	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0			
Diagramma involucro taglio	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
Vincolo lati	nessun lato	nessun lato	nessun lato	nessun lato	nessun lato	nessun lato
	nessun lato	nessun lato	nessun lato			
Verifica come fascia	NO	NO	NO	NO	SI	NO
	NO	NO	NO			
Diametro di estremità	0	0	0	0	0	0
	0	0	0			
Zona confinata						
Minima tesa	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.00	1.00			
Massima tesa	4.00	4.00	4.00	4.00	4.00	4.00
	4.00	4.00	4.00			
Distanza barre [cm]	2.00	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	2.00			
Interferro	2	2	2	2	2	2
	2	2	2			
Armatura inclinata						
Area barre [cm ²]	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0			
Angolo orizzontale [gradi]	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0			
Distanza di base [cm]	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0			
Resistenza al fuoco						
3- intradosso	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
3+ estradosso	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
Tempo di esposizione R	15	15	15	15	15	15
	15	15	15			



Gusci c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Armatura						
Inclinazione Ax [gradi]	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0			
Angolo Ax-Ay [gradi]	90.00	90.00	90.00	90.00	90.00	90.00
	90.00	90.00	90.00			
Minima tesa	0.31	0.10	0.13	2.000e-02	0.31	0.31
	0.31	0.10	0.31			
Massima tesa	0.78	4.00	4.00	4.00	0.78	0.78
	0.78	4.00	0.78			
Maglia unica centrale	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
Copriferro [cm]	2.00	3.00	2.00	2.00	2.00	2.00
	2.00	4.50	4.50			
Maglia x						
diametro	10	12	10	10	10	10
	10	20	16			
passo	20	20	20	20	20	20
	20	40	25			
diametro aggiuntivi	12	12	12	12	12	12
	12	20	14			
Maglia y						
diametro	10	12	10	10	10	10
	10	20	14			
passo	20	20	20	20	20	20
	20	40	25			
diametro aggiuntivi	12	12	12	12	12	12
	12	20	14			
Stati limite ultimi						
Tensione fy [daN/cm2]	4500.00	4500.00	4500.00	4500.00	4500.00	4500.00
	4500.00	4500.00	4500.00			
Tipo acciaio	tipo C	tipo C	tipo C	tipo C	tipo C	tipo C
	tipo C	tipo C	tipo C			
Coefficiente gamma s	1.15	1.15	1.15	1.15	1.15	1.15
	1.15	1.15	1.15			
Coefficiente gamma c	1.50	1.50	1.50	1.50	1.50	1.50
	1.50	1.50	1.50			
Verifiche con N costante	SI	SI	SI	SI	SI	SI
	SI	SI	SI			
Applica SLU da DIN	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
Tensioni ammissibili						
Tensione amm. cls [daN/cm2]	97.50	97.50	97.50	97.50	97.50	97.50
	97.50	97.50	97.50			
Tensione amm. acciaio [daN/cm2]	2600.00	2600.00	2600.00	2600.00	2600.00	2600.00
	2600.00	2600.00	2600.00			
Rapporto omogeneizzazione N	15.00	15.00	15.00	15.00	15.00	15.00
	15.00	15.00	15.00			
Massimo rapporto area compressa/tesa	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.00	1.00			
Resistenza al fuoco						
3- intradosso	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
3+ estradosso	NO	NO	NO	NO	NO	NO
	NO	NO	NO			
Tempo di esposizione R	15	15	15	15	15	15
	15	15	15			



MODELLAZIONE DELLE SEZIONI

LEGENDA TABELLA DATI SEZIONI

Il programma consente l'uso di sezioni diverse. Sono previsti i seguenti tipi di sezione:

1. sezione di tipo generico
2. profilati semplici
3. profilati accoppiati e speciali

Le sezioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni sezione vengono riportati in tabella i seguenti dati:

Area	area della sezione
A V2	area della sezione/fattore di taglio (per il taglio in direzione 2)
A V3	area della sezione/fattore di taglio (per il taglio in direzione 3)
Jt	fattore torsionale di rigidezza
J2-2	momento d'inerzia della sezione riferito all'asse 2
J3-3	momento d'inerzia della sezione riferito all'asse 3
W2-2	modulo di resistenza della sezione riferito all'asse 2
W3-3	modulo di resistenza della sezione riferito all'asse 3
Wp2-2	modulo di resistenza plastico della sezione riferito all'asse 2
Wp3-3	modulo di resistenza plastico della sezione riferito all'asse 3

I dati sopra riportati vengono utilizzati per la determinazione dei carichi inerziali e per la definizione delle rigidezze degli elementi strutturali; qualora il valore di Area V2 (e/o Area V3) sia nullo la deformabilità per taglio V2 (e/o V3) è trascurata. La valutazione delle caratteristiche inerziali delle sezioni è condotta nel riferimento 2-3 dell'elemento.

rettangolare	a T	a T rovescia	a T di colmo	a L	a L specchiata
a L specchiata rovescia	a L rovescia	a L di colmo	a doppio T	a quattro specchiata	a quattro
a U	a C	a croce	circolare	rettangolare cava	circolare cava



Per quanto concerne i profilati semplici ed accoppiati l'asse 2 del riferimento coincide con l'asse x riportato nei più diffusi profilati.

Per quanto concerne le sezioni di tipo generico (tipo 1.):

i valori dimensionali con prefisso B sono riferiti all'asse 2

i valori dimensionali con prefisso H sono riferiti all'asse 3

Id	Tipo	Area	A V2	A V3	Jt	J 2-2	J 3-3	W 2-2	W 3-3	Wp 2-2	Wp 3-3
		cm2	cm2	cm2	cm4	cm4	cm4	cm3	cm3	cm3	cm3

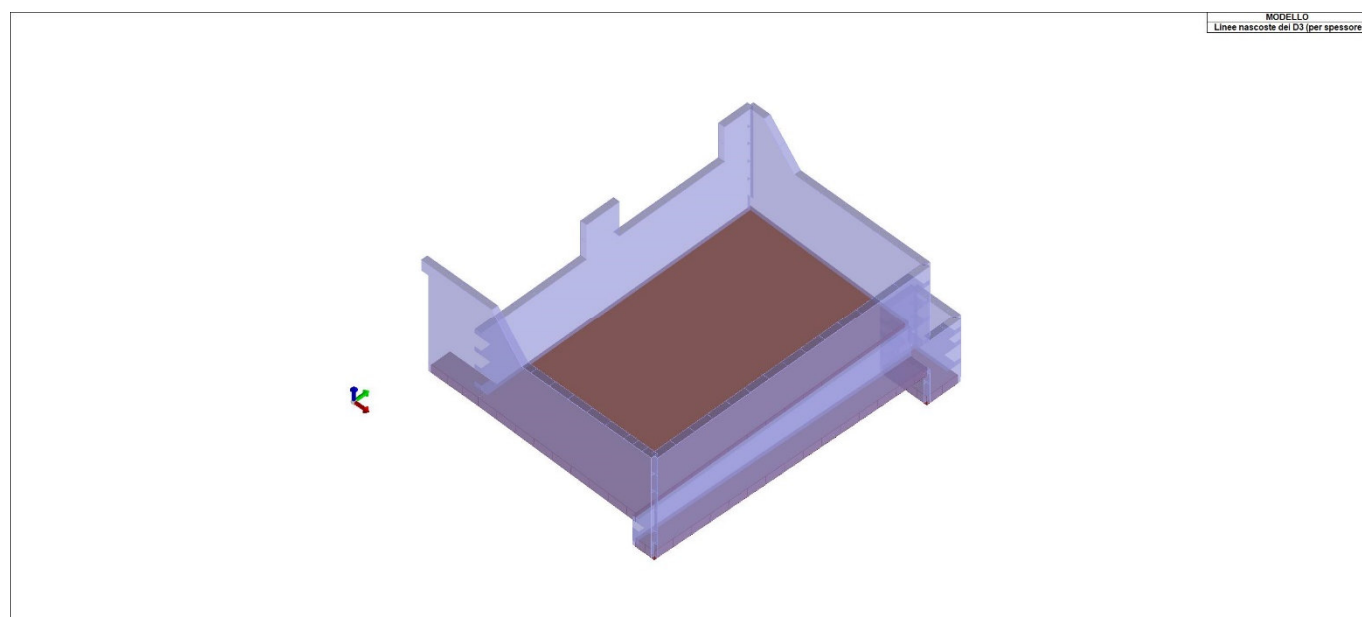


Figura 6 - MOD_SPESSORI_D3



MODELLAZIONE STRUTTURA: NODI

LEGENDA TABELLA DATI NODI

Il programma utilizza per la modellazione nodi strutturali.

Ogni nodo è individuato dalle coordinate cartesiane nel sistema di riferimento globale (X Y Z).

Ad ogni nodo è eventualmente associato un codice di vincolamento rigido, un codice di fondazione speciale, ed un set di sei molle (tre per le traslazioni, tre per le rotazioni). Le tabelle sottoriportate riflettono le succitate possibilità. In particolare per ogni nodo viene indicato in tabella:

Nodo	numero del nodo.
X	valore della coordinata X
Y	valore della coordinata Y
Z	valore della coordinata Z

Per i nodi ai quali sia associato un codice di vincolamento rigido, un codice di fondazione speciale o un set di molle viene indicato in tabella:

Nodo	numero del nodo.
X	valore della coordinata X
Y	valore della coordinata Y
Z	valore della coordinata Z
Note	eventuale codice di vincolo (es. v=110010 sei valori relativi ai sei gradi di libertà previsti per il nodo TxTyTzRxRyRz, il valore 1 indica che lo spostamento o rotazione relativo è impedito, il valore 0 indica che lo spostamento o rotazione relativo è libero).
Note	(FS = 1, 2,...) eventuale codice del tipo di fondazione speciale (1, 2,... fanno riferimento alle tipologie: plinto, palo, plinto su pali,...) che è collegato al nodo. (ISO = "id SIGLA") indice e sigla identificativa dell' eventuale isolatore sismico assegnato al nodo
Rig. TX	valore della rigidezza dei vincoli elastici eventualmente applicati al nodo, nello specifico TX (idem per TY, TZ, RX, RY, RZ).

Per strutture sismicamente isolate viene inoltre inserita la tabella delle caratteristiche per gli isolatori utilizzati; le caratteristiche sono indicate in conformità al cap. 7.10 del D.M. 17/01/18

TABELLA DATI NODI

Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
	cm	cm	cm		cm	cm	cm		cm	cm	cm
1	943.0	1617.0	-325.0	2	1020.0	1617.0	-325.0	3	1048.0	1617.0	-325.0
4	1107.5	1617.0	-325.0	5	1153.0	1617.0	-325.0	6	943.0	1692.0	-325.0
7	1020.0	1692.0	-325.0	8	1048.0	1692.0	-325.0	9	1107.5	1692.0	-325.0
10	1153.0	1692.0	-325.0	11	943.0	1767.0	-325.0	12	1020.0	1767.0	-325.0
13	1048.0	1767.0	-325.0	14	1107.5	1767.0	-325.0	15	1153.0	1767.0	-325.0
16	943.0	1617.0	-233.5	17	1020.0	1617.0	-233.5	18	1057.0	1617.0	-233.5
19	1107.5	1617.0	-233.5	20	1153.0	1617.0	-233.5	21	943.0	1692.0	-233.5
22	1153.0	1692.0	-233.5	23	943.0	1767.0	-233.5	24	1020.0	1767.0	-233.5
25	1048.0	1767.0	-233.5	26	1107.5	1767.0	-233.5	27	1153.0	1767.0	-233.5
28	1020.0	1617.0	-182.0	29	1062.0	1617.0	-182.0	30	1107.5	1617.0	-182.0
31	1153.0	1617.0	-182.0	32	1062.0	1558.8	-180.2	33	1107.5	1558.8	-180.2
34	1153.0	1558.8	-180.2	35	1062.0	1468.9	-177.5	36	1107.5	1468.9	-177.5
37	1153.0	1468.9	-177.5	38	1062.0	1379.0	-174.8	39	1107.5	1379.0	-174.8
40	1153.0	1379.0	-174.8	41	1062.0	1289.1	-172.0	42	1107.5	1289.1	-172.0
43	1153.0	1289.1	-172.0	44	1062.0	1199.2	-169.3	45	1107.5	1199.2	-169.3
46	1153.0	1199.2	-169.3	47	1062.0	1109.3	-166.6	48	1107.5	1109.3	-166.6
49	1153.0	1109.3	-166.6	50	1062.0	1019.3	-163.8	51	1107.5	1019.3	-163.8



Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
52	1153.0	1019.3	-163.8	53	1062.0	929.4	-161.1	54	1107.5	929.4	-161.1
55	1153.0	929.4	-161.1	56	1062.0	839.5	-158.4	57	1107.5	839.5	-158.4
58	1153.0	839.5	-158.4	59	1062.0	749.6	-155.7	60	1107.5	749.6	-155.7
61	1153.0	749.6	-155.7	62	1062.0	659.7	-152.9	63	1107.5	659.7	-152.9
64	1153.0	659.7	-152.9	65	1062.0	569.8	-150.2	66	1107.5	569.8	-150.2
67	1153.0	569.8	-150.2	68	1062.0	479.8	-147.5	69	1107.5	479.8	-147.5
70	1153.0	479.8	-147.5	71	1062.0	389.9	-144.7	72	1107.5	389.9	-144.7
73	1153.0	389.9	-144.7	74	1062.0	300.0	-142.0	75	1107.5	300.0	-142.0
76	1153.0	300.0	-142.0	77	943.0	1617.0	-142.0	78	943.0	1692.0	-142.0
79	1153.0	1692.0	-142.0	80	943.0	1767.0	-142.0	81	1020.0	1767.0	-142.0
82	1048.0	1767.0	-142.0	83	1107.5	1767.0	-142.0	84	1153.0	1767.0	-142.0
85	1062.0	300.0	-81.0	86	1107.5	300.0	-81.0	87	1153.0	300.0	-81.0
88	1062.0	390.0	-81.0	89	1153.0	390.0	-81.0	90	1062.0	480.0	-81.0
91	1153.0	480.0	-81.0	92	1062.0	570.0	-81.0	93	1153.0	570.0	-81.0
94	1062.0	660.0	-81.0	95	1153.0	660.0	-81.0	96	1062.0	750.0	-81.0
97	1153.0	750.0	-81.0	98	1062.0	840.0	-81.0	99	1153.0	840.0	-81.0
100	1062.0	930.0	-81.0	101	1153.0	930.0	-81.0	102	1062.0	1020.0	-81.0
103	1153.0	1020.0	-81.0	104	1062.0	1110.0	-81.0	105	1153.0	1110.0	-81.0
106	1062.0	1200.0	-81.0	107	1153.0	1200.0	-81.0	108	1062.0	1290.0	-81.0
109	1153.0	1290.0	-81.0	110	1062.0	1380.0	-81.0	111	1153.0	1380.0	-81.0
112	1062.0	1470.0	-81.0	113	1153.0	1470.0	-81.0	114	1062.0	1560.0	-81.0
115	1153.0	1560.0	-81.0	116	943.0	1617.0	-81.0	117	1020.0	1617.0	-81.0
118	1062.0	1617.0	-81.0	119	1107.5	1617.0	-81.0	120	1153.0	1617.0	-81.0
121	943.0	1692.0	-81.0	122	1153.0	1692.0	-81.0	123	943.0	1767.0	-81.0
124	1020.0	1767.0	-81.0	125	1048.0	1767.0	-81.0	126	1107.5	1767.0	-81.0
127	1153.0	1767.0	-81.0	128	1062.0	300.0	-22.0	129	1107.5	300.0	-22.0
130	1153.0	300.0	-22.0	131	1062.0	390.0	-22.0	132	1153.0	390.0	-22.0
133	1062.0	480.0	-22.0	134	1153.0	480.0	-22.0	135	1062.0	570.0	-22.0
136	1153.0	570.0	-22.0	137	1062.0	660.0	-22.0	138	1153.0	660.0	-22.0
139	1062.0	750.0	-22.0	140	1153.0	750.0	-22.0	141	1062.0	840.0	-22.0
142	1153.0	840.0	-22.0	143	1062.0	930.0	-22.0	144	1153.0	930.0	-22.0
145	1062.0	1020.0	-22.0	146	1153.0	1020.0	-22.0	147	1062.0	1110.0	-22.0
148	1153.0	1110.0	-22.0	149	1062.0	1200.0	-22.0	150	1153.0	1200.0	-22.0
151	1062.0	1290.0	-22.0	152	1153.0	1290.0	-22.0	153	1062.0	1380.0	-22.0
154	1153.0	1380.0	-22.0	155	1062.0	1470.0	-22.0	156	1153.0	1470.0	-22.0
157	1062.0	1560.0	-22.0	158	1153.0	1560.0	-22.0	159	1062.0	1617.0	-22.0
160	1107.5	1617.0	-22.0	161	1153.0	1617.0	-22.0	162	943.0	1692.0	-22.0
163	1153.0	1692.0	-22.0	164	943.0	1767.0	-22.0	165	1020.0	1767.0	-22.0
166	1048.0	1767.0	-22.0	167	1107.5	1767.0	-22.0	168	1153.0	1767.0	-22.0
169	1020.0	300.0	-20.8	170	1020.0	390.0	-20.8	171	1020.0	480.0	-20.8
172	1020.0	570.0	-20.8	173	1020.0	660.0	-20.8	174	1020.0	750.0	-20.8
175	1020.0	840.0	-20.8	176	1020.0	930.0	-20.8	177	1020.0	1020.0	-20.8
178	1020.0	1110.0	-20.8	179	1020.0	1200.0	-20.8	180	1020.0	1290.0	-20.8
181	1020.0	1380.0	-20.8	182	1020.0	1470.0	-20.8	183	1020.0	1560.0	-20.8
184	1020.0	1617.0	-20.8	185	930.0	300.0	-18.2	186	930.0	390.0	-18.2
187	930.0	480.0	-18.2	188	930.0	570.0	-18.2	189	930.0	660.0	-18.2
190	930.0	750.0	-18.2	191	930.0	840.0	-18.2	192	930.0	930.0	-18.2
193	930.0	1020.0	-18.2	194	930.0	1110.0	-18.2	195	930.0	1200.0	-18.2
196	930.0	1290.0	-18.2	197	930.0	1380.0	-18.2	198	930.0	1470.0	-18.2
199	930.0	1560.0	-18.2	200	943.1	1617.0	-18.6	201	840.0	300.0	-15.6
202	840.0	390.0	-15.6	203	840.0	480.0	-15.6	204	840.0	570.0	-15.6
205	840.0	660.0	-15.6	206	840.0	750.0	-15.6	207	840.0	840.0	-15.6
208	840.0	930.0	-15.6	209	840.0	1020.0	-15.6	210	840.0	1110.0	-15.6
211	840.0	1200.0	-15.6	212	840.0	1290.0	-15.6	213	840.0	1380.0	-15.6
214	840.0	1470.0	-15.6	215	840.0	1560.0	-15.6	216	840.0	1617.0	-15.6
217	750.0	300.0	-13.0	218	750.0	390.0	-13.0	219	750.0	480.0	-13.0
220	750.0	570.0	-13.0	221	750.0	660.0	-13.0	222	750.0	750.0	-13.0
223	750.0	840.0	-13.0	224	750.0	930.0	-13.0	225	750.0	1020.0	-13.0
226	750.0	1110.0	-13.0	227	750.0	1200.0	-13.0	228	750.0	1290.0	-13.0
229	750.0	1380.0	-13.0	230	750.0	1470.0	-13.0	231	750.0	1560.0	-13.0
232	750.0	1617.0	-13.0	233	660.0	300.0	-10.4	234	660.0	390.0	-10.4
235	660.0	480.0	-10.4	236	660.0	570.0	-10.4	237	660.0	660.0	-10.4
238	660.0	750.0	-10.4	239	660.0	840.0	-10.4	240	660.0	930.0	-10.4
241	660.0	1020.0	-10.4	242	660.0	1110.0	-10.4	243	660.0	1200.0	-10.4
244	660.0	1290.0	-10.4	245	660.0	1380.0	-10.4	246	660.0	1470.0	-10.4
247	660.0	1560.0	-10.4	248	660.0	1617.0	-10.4	249	570.0	300.0	-7.8
250	570.0	390.0	-7.8	251	570.0	480.0	-7.8	252	570.0	570.0	-7.8
253	570.0	660.0	-7.8	254	570.0	750.0	-7.8	255	570.0	840.0	-7.8
256	570.0	930.0	-7.8	257	570.0	1020.0	-7.8	258	570.0	1110.0	-7.8
259	570.0	1200.0	-7.8	260	570.0	1290.0	-7.8	261	570.0	1380.0	-7.8
262	570.0	1470.0	-7.8	263	570.0	1560.0	-7.8	264	570.0	1617.0	-7.8
265	480.0	300.0	-5.2	266	480.0	390.0	-5.2	267	480.0	480.0	-5.2



Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
268	480.0	570.0	-5.2	269	480.0	660.0	-5.2	270	480.0	750.0	-5.2
271	480.0	840.0	-5.2	272	480.0	930.0	-5.2	273	480.0	1020.0	-5.2
274	480.0	1110.0	-5.2	275	480.0	1200.0	-5.2	276	480.0	1290.0	-5.2
277	480.0	1380.0	-5.2	278	480.0	1470.0	-5.2	279	480.0	1560.0	-5.2
280	480.0	1617.0	-5.2	281	390.0	300.0	-2.6	282	390.0	390.0	-2.6
283	390.0	480.0	-2.6	284	390.0	570.0	-2.6	285	390.0	660.0	-2.6
286	390.0	750.0	-2.6	287	390.0	840.0	-2.6	288	390.0	930.0	-2.6
289	390.0	1020.0	-2.6	290	390.0	1110.0	-2.6	291	390.0	1200.0	-2.6
292	390.0	1290.0	-2.6	293	390.0	1380.0	-2.6	294	390.0	1470.0	-2.6
295	390.0	1560.0	-2.6	296	390.0	1617.0	-2.6	297	75.0	300.0	0.0
298	150.0	300.0	0.0	299	225.0	300.0	0.0	300	300.0	300.0	0.0
301	75.0	390.0	0.0	302	150.0	390.0	0.0	303	225.0	390.0	0.0
304	300.0	390.0	0.0	305	300.0	480.0	0.0	306	300.0	570.0	0.0
307	300.0	660.0	0.0	308	300.0	750.0	0.0	309	300.0	840.0	0.0
310	300.0	930.0	0.0	311	300.0	1020.0	0.0	312	300.0	1110.0	0.0
313	300.0	1200.0	0.0	314	300.0	1290.0	0.0	315	300.0	1380.0	0.0
316	300.0	1470.0	0.0	317	300.0	1560.0	0.0	318	300.0	1617.0	0.0
319	300.0	300.0	85.0	320	390.0	300.0	85.0	321	480.0	300.0	85.0
322	570.0	300.0	85.0	323	660.0	300.0	85.0	324	750.0	300.0	85.0
325	840.0	300.0	85.0	326	930.0	300.0	85.0	327	1020.0	300.0	85.0
328	1062.0	300.0	85.0	329	1107.5	300.0	85.0	330	1153.0	300.0	85.0
331	300.0	390.0	85.0	332	1153.0	390.0	85.0	333	300.0	480.0	85.0
334	1153.0	480.0	85.0	335	300.0	570.0	85.0	336	1153.0	570.0	85.0
337	300.0	660.0	85.0	338	1153.0	660.0	85.0	339	300.0	750.0	85.0
340	1153.0	750.0	85.0	341	300.0	840.0	85.0	342	1153.0	840.0	85.0
343	300.0	930.0	85.0	344	1153.0	930.0	85.0	345	300.0	1020.0	85.0
346	1153.0	1020.0	85.0	347	300.0	1110.0	85.0	348	1153.0	1110.0	85.0
349	300.0	1200.0	85.0	350	1153.0	1200.0	85.0	351	300.0	1290.0	85.0
352	1153.0	1290.0	85.0	353	300.0	1380.0	85.0	354	1153.0	1380.0	85.0
355	300.0	1470.0	85.0	356	1153.0	1470.0	85.0	357	300.0	1560.0	85.0
358	1153.0	1560.0	85.0	359	300.0	1617.0	85.0	360	390.0	1617.0	85.0
361	480.0	1617.0	85.0	362	570.0	1617.0	85.0	363	660.0	1617.0	85.0
364	750.0	1617.0	85.0	365	840.0	1617.0	85.0	366	930.0	1617.0	85.0
367	1020.0	1617.0	85.0	368	1062.0	1617.0	85.0	369	1107.5	1617.0	85.0
370	1153.0	1617.0	85.0	371	225.0	300.0	87.7	372	150.0	300.0	90.3
373	75.0	300.0	93.0	374	300.0	300.0	170.0	375	390.0	300.0	170.0
376	480.0	300.0	170.0	377	570.0	300.0	170.0	378	660.0	300.0	170.0
379	750.0	300.0	170.0	380	840.0	300.0	170.0	381	930.0	300.0	170.0
382	1020.0	300.0	170.0	383	1062.0	300.0	170.0	384	1107.5	300.0	170.0
385	1153.0	300.0	170.0	386	300.0	390.0	170.0	387	1153.0	390.0	170.0
388	300.0	480.0	170.0	389	1153.0	480.0	170.0	390	300.0	570.0	170.0
391	1153.0	570.0	170.0	392	300.0	660.0	170.0	393	1153.0	660.0	170.0
394	300.0	750.0	170.0	395	1153.0	750.0	170.0	396	300.0	840.0	170.0
397	1153.0	840.0	170.0	398	300.0	930.0	170.0	399	1153.0	930.0	170.0
400	300.0	1020.0	170.0	401	1153.0	1020.0	170.0	402	300.0	1110.0	170.0
403	1153.0	1110.0	170.0	404	300.0	1200.0	170.0	405	1153.0	1200.0	170.0
406	300.0	1290.0	170.0	407	1153.0	1290.0	170.0	408	300.0	1380.0	170.0
409	1153.0	1380.0	170.0	410	300.0	1470.0	170.0	411	1153.0	1470.0	170.0
412	300.0	1560.0	170.0	413	1153.0	1560.0	170.0	414	300.0	1617.0	170.0
415	390.0	1617.0	170.0	416	480.0	1617.0	170.0	417	570.0	1617.0	170.0
418	660.0	1617.0	170.0	419	750.0	1617.0	170.0	420	840.0	1617.0	170.0
421	930.0	1617.0	170.0	422	1020.0	1617.0	170.0	423	1062.0	1617.0	170.0
424	1107.5	1617.0	170.0	425	1153.0	1617.0	170.0	426	225.0	300.0	175.3
427	150.0	300.0	180.7	428	75.0	300.0	186.0	429	300.0	300.0	255.0
430	390.0	300.0	255.0	431	480.0	300.0	255.0	432	570.0	300.0	255.0
433	660.0	300.0	255.0	434	750.0	300.0	255.0	435	840.0	300.0	255.0
436	930.0	300.0	255.0	437	1020.0	300.0	255.0	438	1062.0	300.0	255.0
439	1107.5	300.0	255.0	440	1153.0	300.0	255.0	441	300.0	390.0	255.0
442	1153.0	390.0	255.0	443	300.0	480.0	255.0	444	1153.0	480.0	255.0
445	300.0	570.0	255.0	446	1153.0	570.0	255.0	447	300.0	660.0	255.0
448	1153.0	660.0	255.0	449	300.0	750.0	255.0	450	1153.0	750.0	255.0
451	300.0	840.0	255.0	452	1153.0	840.0	255.0	453	300.0	930.0	255.0
454	1153.0	930.0	255.0	455	300.0	1020.0	255.0	456	1153.0	1020.0	255.0
457	300.0	1110.0	255.0	458	1153.0	1110.0	255.0	459	300.0	1200.0	255.0
460	1153.0	1200.0	255.0	461	300.0	1290.0	255.0	462	1153.0	1290.0	255.0
463	300.0	1380.0	255.0	464	1153.0	1380.0	255.0	465	300.0	1470.0	255.0
466	1153.0	1470.0	255.0	467	300.0	1560.0	255.0	468	1153.0	1560.0	255.0
469	300.0	1617.0	255.0	470	390.0	1617.0	255.0	471	480.0	1617.0	255.0
472	570.0	1617.0	255.0	473	660.0	1617.0	255.0	474	750.0	1617.0	255.0
475	840.0	1617.0	255.0	476	930.0	1617.0	255.0	477	1020.0	1617.0	255.0
478	1062.0	1617.0	255.0	479	1107.5	1617.0	255.0	480	1153.0	1617.0	255.0
481	225.0	300.0	263.0	482	150.0	300.0	271.0	483	75.0	300.0	279.0



Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
484	300.0	300.0	340.0	485	381.0	300.0	340.0	486	480.0	300.0	340.0
487	528.0	300.0	340.0	488	570.0	300.0	340.0	489	660.0	300.0	340.0
490	750.0	300.0	340.0	491	840.0	300.0	340.0	492	930.0	300.0	340.0
493	1020.0	300.0	340.0	494	1062.0	300.0	340.0	495	1107.5	300.0	340.0
496	1153.0	300.0	340.0	497	300.0	390.0	340.0	498	1153.0	390.0	340.0
499	300.0	480.0	340.0	500	1153.0	480.0	340.0	501	300.0	570.0	340.0
502	1153.0	570.0	340.0	503	300.0	660.0	340.0	504	1153.0	660.0	340.0
505	300.0	750.0	340.0	506	1153.0	750.0	340.0	507	300.0	810.0	340.0
508	300.0	840.0	340.0	509	1153.0	840.0	340.0	510	300.0	930.0	340.0
511	1153.0	930.0	340.0	512	300.0	970.0	340.0	513	300.0	1020.0	340.0
514	1153.0	1020.0	340.0	515	300.0	1110.0	340.0	516	1153.0	1110.0	340.0
517	300.0	1200.0	340.0	518	1153.0	1200.0	340.0	519	300.0	1290.0	340.0
520	1153.0	1290.0	340.0	521	300.0	1380.0	340.0	522	1153.0	1380.0	340.0
523	1153.0	1470.0	340.0	524	300.0	1477.0	340.0	525	300.0	1560.0	340.0
526	1153.0	1560.0	340.0	527	300.0	1617.0	340.0	528	381.0	1617.0	340.0
529	480.0	1617.0	340.0	530	528.0	1617.0	340.0	531	570.0	1617.0	340.0
532	660.0	1617.0	340.0	533	750.0	1617.0	340.0	534	840.0	1617.0	340.0
535	930.0	1617.0	340.0	536	1020.0	1617.0	340.0	537	1062.0	1617.0	340.0
538	1107.5	1617.0	340.0	539	1153.0	1617.0	340.0	540	225.0	300.0	350.7
541	150.0	300.0	361.3	542	75.0	300.0	372.0	543	300.0	300.0	423.0
544	381.0	300.0	423.0	545	454.5	300.0	423.0	546	300.0	810.0	423.0
547	300.0	840.0	423.0	548	300.0	930.0	423.0	549	300.0	970.0	423.0
550	300.0	1477.0	423.0	551	300.0	1560.0	423.0	552	300.0	1617.0	423.0
553	381.0	1617.0	423.0	554	454.5	1617.0	423.0	555	225.0	300.0	437.0
556	150.0	300.0	451.0	557	40.0	300.0	465.0	558	75.0	300.0	465.0
559	300.0	810.0	506.0	560	300.0	840.0	506.0	561	300.0	930.0	506.0
562	300.0	970.0	506.0	563	300.0	1477.0	506.0	564	300.0	1560.0	506.0
565	300.0	1617.0	506.0	566	381.0	1617.0	506.0	567	40.0	300.0	515.0
568	75.0	300.0	515.0	569	150.0	300.0	515.0	570	225.0	300.0	515.0
571	300.0	300.0	515.0	572	381.0	300.0	515.0				

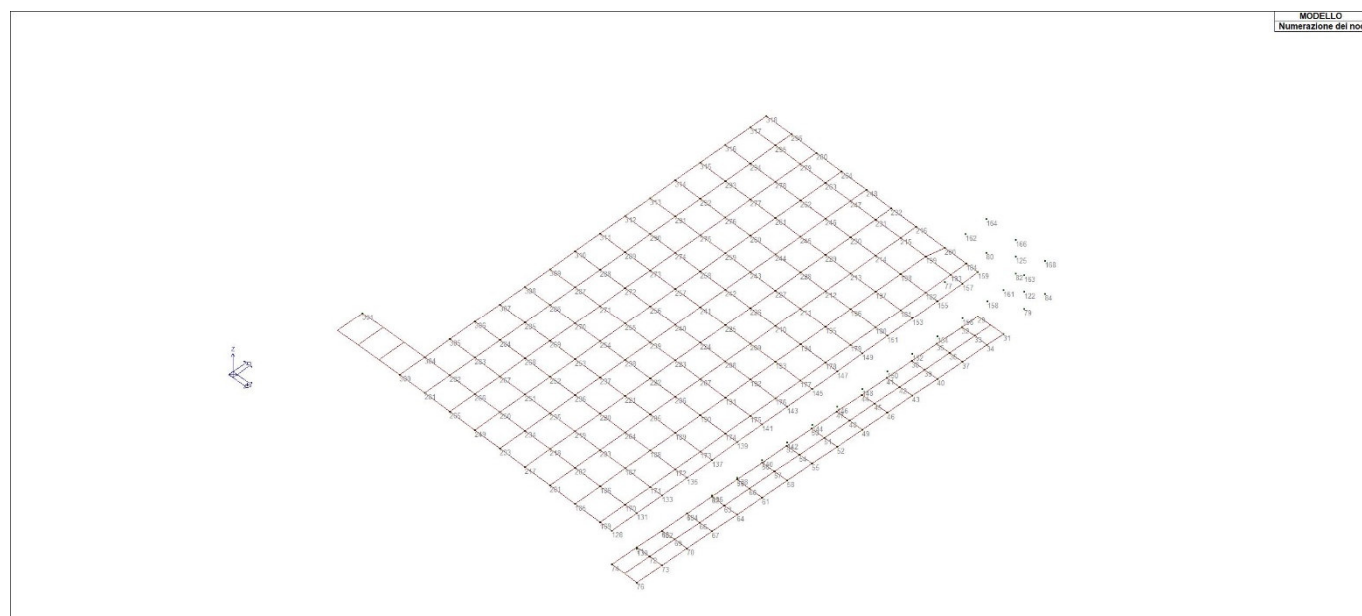


Figura 7 - MOD_NUMERAZIONE_NODI_GR_001



MODELLO
Numerazione dei nodi

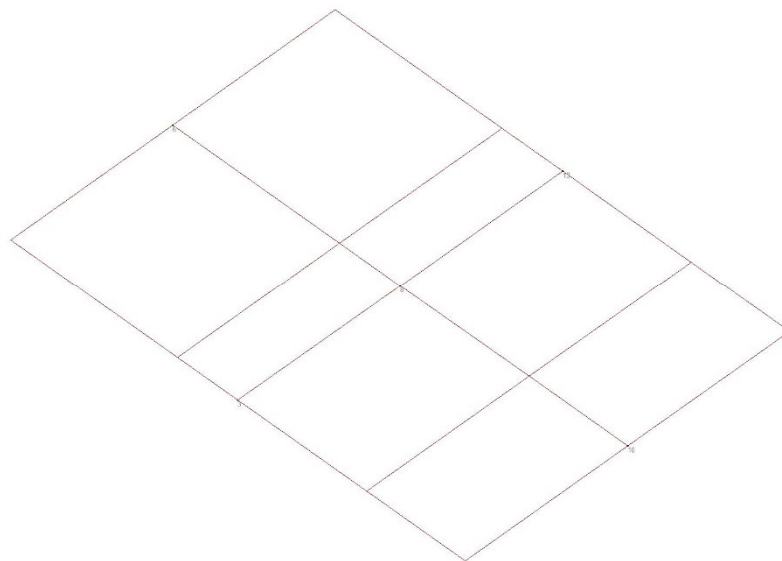


Figura 8 - MOD_NUMERAZIONE_NODI_GR_002

MODELLO
Numerazione dei nodi

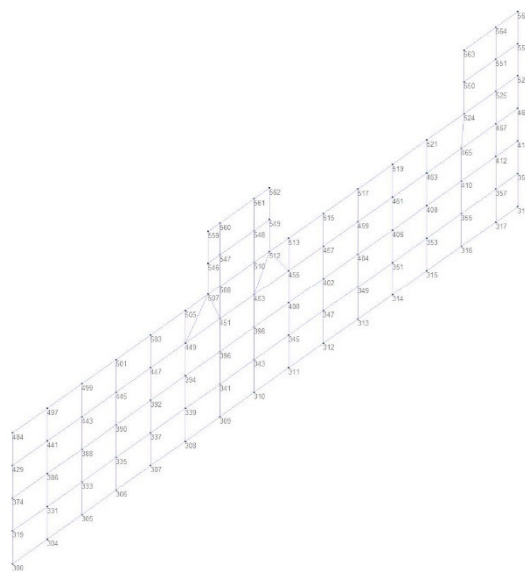


Figura 9 - MOD_NUMERAZIONE_NODI_GR_003



MODELLO
Numerazione dei nodi

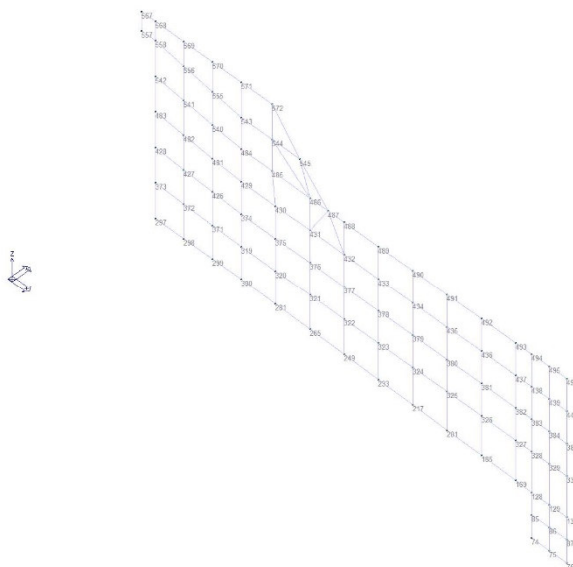


Figura 10 - MOD_NUMERAZIONE_NODI_GR_004

MODELLO
Numerazione dei nodi

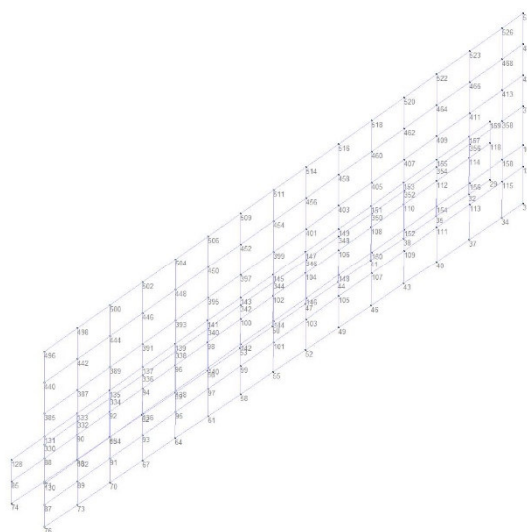


Figura 11 - MOD_NUMERAZIONE_NODI_GR_005



MODELLO
Numerazione dei nodi

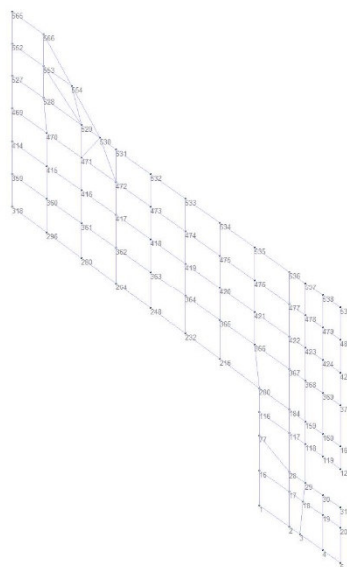


Figura 12 - MOD_NUMERAZIONE_NODI_GR_006

MODELLO
Numerazione dei nodi

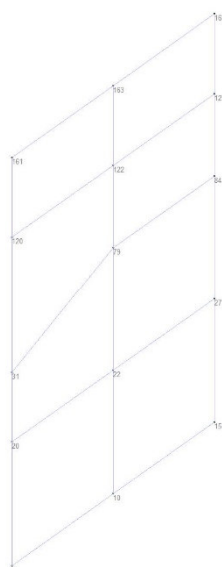


Figura 13 - MOD_NUMERAZIONE_NODI_GR_007



MODELLO
Numerazione dei nodi

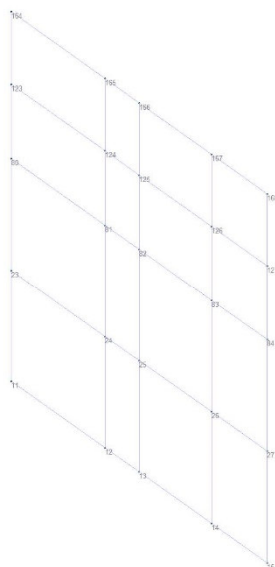


Figura 14 - MOD_NUMERAZIONE_NODI_GR_008

MODELLO
Numerazione dei nodi

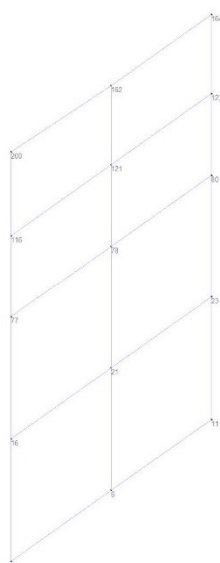


Figura 15 - MOD_NUMERAZIONE_NODI_GR_009



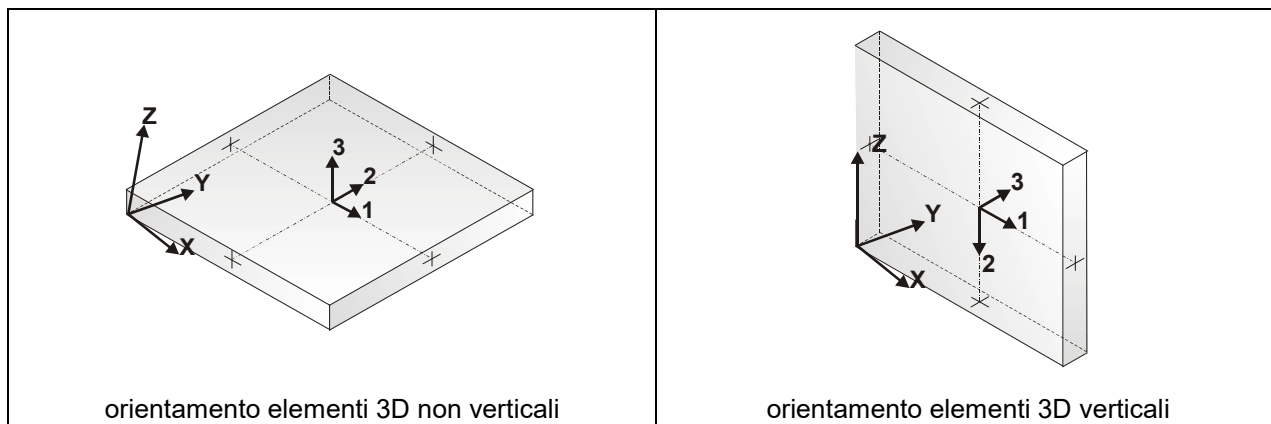
MODELLAZIONE STRUTTURA: ELEMENTI SHELL

LEGENDA TABELLA DATI SHELL

Il programma utilizza per la modellazione elementi a tre o quattro nodi denominati in generale shell.

Ogni elemento shell è individuato dai nodi I, J, K, L (L=I per gli elementi a tre nodi).

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione.



In particolare per ogni elemento viene indicato in tabella:

Elem.	numero dell'elemento
Note	codice di comportamento: <i>Guscio</i> (elemento guscio in elevazione non verticale) <i>Guscio fond.</i> (elemento guscio su suolo elastico) <i>Setto</i> (elemento guscio in elevazione verticale) <i>Membrana</i> (elemento guscio con comportamento membranale)
Nodo I (J, K, L)	numero del nodo I (J, K, L)
Mat.	codice del materiale assegnato all'elemento
Spessore	spessore dell'elemento (costante)
Wink V	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico verticale
Wink O	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale



Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
								cm		daN/cm3	daN/cm3
1	Guscio fond.	1	2	7	6	6	8	40.0		1.00	1.00
2	Guscio fond.	2	3	8	7	6	8	40.0		1.00	1.00
3	Guscio fond.	3	4	9	8	6	8	40.0		1.00	1.00
4	Guscio fond.	4	5	10	9	6	8	40.0		1.00	1.00
5	Guscio fond.	6	7	12	11	6	8	40.0		1.00	1.00
6	Guscio fond.	7	8	13	12	6	8	40.0		1.00	1.00
7	Guscio fond.	8	9	14	13	6	8	40.0		1.00	1.00
8	Guscio fond.	9	10	15	14	6	8	40.0		1.00	1.00
9	Setto	16	17	2	1	6	9	30.0			
10	Setto	17	18	3	2	6	9	30.0			
11	Setto	18	19	4	3	6	9	30.0			
12	Setto	19	20	5	4	6	9	30.0			
13	Setto	1	6	21	16	6	9	30.0			
14	Setto	5	10	22	20	6	9	30.0			
15	Setto	6	11	23	21	6	9	30.0			
16	Setto	10	15	27	22	6	9	30.0			
17	Setto	23	24	12	11	6	9	30.0			
18	Setto	24	25	13	12	6	9	30.0			
19	Setto	25	26	14	13	6	9	30.0			
20	Setto	26	27	15	14	6	9	30.0			
21	Setto	28	29	18	17	6	9	30.0			
22	Setto	29	30	19	18	6	9	30.0			
23	Setto	30	31	20	19	6	9	30.0			
24	Setto	77	28	17	16	6	9	30.0			
25	Setto	20	22	79	31	6	9	30.0			
26	Setto	16	21	78	77	6	9	30.0			
27	Setto	21	23	80	78	6	9	30.0			
28	Setto	22	27	84	79	6	9	30.0			
29	Setto	80	81	24	23	6	9	30.0			
30	Setto	81	82	25	24	6	9	30.0			
31	Setto	82	83	26	25	6	9	30.0			
32	Setto	83	84	27	26	6	9	30.0			
33	Guscio fond.	32	33	30	29	6	8	40.0		3.36	2.04
34	Guscio fond.	33	34	31	30	6	8	40.0		3.36	2.04
35	Guscio fond.	35	36	33	32	6	8	40.0		3.21	1.15
36	Guscio fond.	36	37	34	33	6	8	40.0		3.21	1.15
37	Guscio fond.	38	39	36	35	6	8	40.0		3.15	1.12
38	Guscio fond.	39	40	37	36	6	8	40.0		3.15	1.12
39	Guscio fond.	41	42	39	38	6	8	40.0		3.09	1.10
40	Guscio fond.	42	43	40	39	6	8	40.0		3.09	1.10
41	Guscio fond.	44	45	42	41	6	8	40.0		2.94	1.05
42	Guscio fond.	45	46	43	42	6	8	40.0		2.94	1.05
43	Guscio fond.	47	48	45	44	6	8	40.0		2.90	1.04
44	Guscio fond.	48	49	46	45	6	8	40.0		2.90	1.04
45	Guscio fond.	50	51	48	47	6	8	40.0		2.77	0.99
46	Guscio fond.	51	52	49	48	6	8	40.0		2.77	0.99
47	Guscio fond.	53	54	51	50	6	8	40.0		2.73	0.98
48	Guscio fond.	54	55	52	51	6	8	40.0		2.73	0.98
49	Guscio fond.	56	57	54	53	6	8	40.0		2.70	0.97
50	Guscio fond.	57	58	55	54	6	8	40.0		2.70	0.97
51	Guscio fond.	59	60	57	56	6	8	40.0		2.59	0.93
52	Guscio fond.	60	61	58	57	6	8	40.0		2.59	0.93
53	Guscio fond.	62	63	60	59	6	8	40.0		2.57	0.92
54	Guscio fond.	63	64	61	60	6	8	40.0		2.57	0.92
55	Guscio fond.	65	66	63	62	6	8	40.0		2.54	0.91
56	Guscio fond.	66	67	64	63	6	8	40.0		2.54	0.91
57	Guscio fond.	68	69	66	65	6	8	40.0		2.45	0.88
58	Guscio fond.	69	70	67	66	6	8	40.0		2.45	0.88
59	Guscio fond.	71	72	69	68	6	8	40.0		2.43	0.87
60	Guscio fond.	72	73	70	69	6	8	40.0		2.43	0.87
61	Guscio fond.	74	75	72	71	6	8	40.0		2.42	0.86
62	Guscio fond.	75	76	73	72	6	8	40.0		2.42	0.86
63	Setto	32	29	118	114	6	9	30.0			
64	Setto	34	31	120	115	6	9	30.0			
65	Setto	117	118	29	28	6	9	30.0			
66	Setto	35	32	114	112	6	9	30.0			
67	Setto	37	34	115	113	6	9	30.0			
68	Setto	38	35	112	110	6	9	30.0			



Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
69	Setto	40	37	113	111	6	9	30.0			
70	Setto	41	38	110	108	6	9	30.0			
71	Setto	43	40	111	109	6	9	30.0			
72	Setto	44	41	108	106	6	9	30.0			
73	Setto	46	43	109	107	6	9	30.0			
74	Setto	47	44	106	104	6	9	30.0			
75	Setto	49	46	107	105	6	9	30.0			
76	Setto	50	47	104	102	6	9	30.0			
77	Setto	52	49	105	103	6	9	30.0			
78	Setto	53	50	102	100	6	9	30.0			
79	Setto	55	52	103	101	6	9	30.0			
80	Setto	116	117	28	77	6	9	30.0			
81	Setto	31	79	122	120	6	9	30.0			
82	Setto	56	53	100	98	6	9	30.0			
83	Setto	58	55	101	99	6	9	30.0			
84	Setto	59	56	98	96	6	9	30.0			
85	Setto	61	58	99	97	6	9	30.0			
86	Setto	62	59	96	94	6	9	30.0			
87	Setto	64	61	97	95	6	9	30.0			
88	Setto	65	62	94	92	6	9	30.0			
89	Setto	67	64	95	93	6	9	30.0			
90	Setto	68	65	92	90	6	9	30.0			
91	Setto	70	67	93	91	6	9	30.0			
92	Setto	71	68	90	88	6	9	30.0			
93	Setto	73	70	91	89	6	9	30.0			
94	Setto	74	71	88	85	6	9	30.0			
95	Setto	76	73	89	87	6	9	30.0			
96	Setto	85	86	75	74	6	9	30.0			
97	Setto	86	87	76	75	6	9	30.0			
98	Setto	77	78	121	116	6	9	30.0			
99	Setto	78	80	123	121	6	9	30.0			
100	Setto	79	84	127	122	6	9	30.0			
101	Setto	123	124	81	80	6	9	30.0			
102	Setto	124	125	82	81	6	9	30.0			
103	Setto	125	126	83	82	6	9	30.0			
104	Setto	126	127	84	83	6	9	30.0			
105	Setto	128	129	86	85	6	9	30.0			
106	Setto	129	130	87	86	6	9	30.0			
107	Setto	85	88	131	128	6	9	30.0			
108	Setto	87	89	132	130	6	9	30.0			
109	Setto	88	90	133	131	6	9	30.0			
110	Setto	89	91	134	132	6	9	30.0			
111	Setto	90	92	135	133	6	9	30.0			
112	Setto	91	93	136	134	6	9	30.0			
113	Setto	92	94	137	135	6	9	30.0			
114	Setto	93	95	138	136	6	9	30.0			
115	Setto	94	96	139	137	6	9	30.0			
116	Setto	95	97	140	138	6	9	30.0			
117	Setto	96	98	141	139	6	9	30.0			
118	Setto	97	99	142	140	6	9	30.0			
119	Setto	98	100	143	141	6	9	30.0			
120	Setto	99	101	144	142	6	9	30.0			
121	Setto	100	102	145	143	6	9	30.0			
122	Setto	101	103	146	144	6	9	30.0			
123	Setto	102	104	147	145	6	9	30.0			
124	Setto	103	105	148	146	6	9	30.0			
125	Setto	104	106	149	147	6	9	30.0			
126	Setto	105	107	150	148	6	9	30.0			
127	Setto	106	108	151	149	6	9	30.0			
128	Setto	107	109	152	150	6	9	30.0			
129	Setto	108	110	153	151	6	9	30.0			
130	Setto	109	111	154	152	6	9	30.0			
131	Setto	110	112	155	153	6	9	30.0			
132	Setto	111	113	156	154	6	9	30.0			
133	Setto	112	114	157	155	6	9	30.0			
134	Setto	113	115	158	156	6	9	30.0			
135	Setto	114	118	159	157	6	9	30.0			
136	Setto	115	120	161	158	6	9	30.0			
137	Setto	184	159	118	117	6	9	30.0			
138	Setto	159	160	119	118	6	9	30.0			
139	Setto	160	161	120	119	6	9	30.0			
140	Setto	120	122	163	161	6	9	30.0			



Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
141	Setto	121	123	164	162	6	9	30.0			
142	Setto	122	127	168	163	6	9	30.0			
143	Setto	164	165	124	123	6	9	30.0			
144	Setto	165	166	125	124	6	9	30.0			
145	Setto	166	167	126	125	6	9	30.0			
146	Setto	167	168	127	126	6	9	30.0			
147	Setto	200	184	117	116	6	9	30.0			
148	Setto	116	121	162	200	6	9	30.0			
149	Guscio fond.	169	128	131	170	6	8	40.0		0.80	0.40
150	Guscio fond.	170	131	133	171	6	8	40.0		0.80	0.40
151	Guscio fond.	171	133	135	172	6	8	40.0		0.80	0.40
152	Guscio fond.	172	135	137	173	6	8	40.0		0.80	0.40
153	Guscio fond.	173	137	139	174	6	8	40.0		0.80	0.40
154	Guscio fond.	174	139	141	175	6	8	40.0		0.80	0.40
155	Guscio fond.	175	141	143	176	6	8	40.0		0.80	0.40
156	Guscio fond.	176	143	145	177	6	8	40.0		0.80	0.40
157	Guscio fond.	177	145	147	178	6	8	40.0		0.80	0.40
158	Guscio fond.	178	147	149	179	6	8	40.0		0.80	0.40
159	Guscio fond.	179	149	151	180	6	8	40.0		0.80	0.40
160	Guscio fond.	180	151	153	181	6	8	40.0		0.80	0.40
161	Guscio fond.	181	153	155	182	6	8	40.0		0.80	0.40
162	Guscio fond.	182	155	157	183	6	8	40.0		0.80	0.40
163	Guscio fond.	183	157	159	184	6	8	40.0		0.80	0.40
164	Guscio fond.	185	169	170	186	6	8	40.0		0.80	0.40
165	Guscio fond.	186	170	171	187	6	8	40.0		0.80	0.40
166	Guscio fond.	187	171	172	188	6	8	40.0		0.80	0.40
167	Guscio fond.	188	172	173	189	6	8	40.0		0.80	0.40
168	Guscio fond.	189	173	174	190	6	8	40.0		0.80	0.40
169	Guscio fond.	190	174	175	191	6	8	40.0		0.80	0.40
170	Guscio fond.	191	175	176	192	6	8	40.0		0.80	0.40
171	Guscio fond.	192	176	177	193	6	8	40.0		0.80	0.40
172	Guscio fond.	193	177	178	194	6	8	40.0		0.80	0.40
173	Guscio fond.	194	178	179	195	6	8	40.0		0.80	0.40
174	Guscio fond.	195	179	180	196	6	8	40.0		0.80	0.40
175	Guscio fond.	196	180	181	197	6	8	40.0		0.80	0.40
176	Guscio fond.	197	181	182	198	6	8	40.0		0.80	0.40
177	Guscio fond.	198	182	183	199	6	8	40.0		0.80	0.40
178	Guscio fond.	199	183	184	200	6	8	40.0		0.80	0.40
179	Guscio fond.	201	185	186	202	6	8	40.0		0.80	0.40
180	Guscio fond.	202	186	187	203	6	8	40.0		0.80	0.40
181	Guscio fond.	203	187	188	204	6	8	40.0		0.80	0.40
182	Guscio fond.	204	188	189	205	6	8	40.0		0.80	0.40
183	Guscio fond.	205	189	190	206	6	8	40.0		0.80	0.40
184	Guscio fond.	206	190	191	207	6	8	40.0		0.80	0.40
185	Guscio fond.	207	191	192	208	6	8	40.0		0.80	0.40
186	Guscio fond.	208	192	193	209	6	8	40.0		0.80	0.40
187	Guscio fond.	209	193	194	210	6	8	40.0		0.80	0.40
188	Guscio fond.	210	194	195	211	6	8	40.0		0.80	0.40
189	Guscio fond.	211	195	196	212	6	8	40.0		0.80	0.40
190	Guscio fond.	212	196	197	213	6	8	40.0		0.80	0.40
191	Guscio fond.	213	197	198	214	6	8	40.0		0.80	0.40
192	Guscio fond.	214	198	199	215	6	8	40.0		0.80	0.40
193	Guscio fond.	215	199	200	216	6	8	40.0		0.80	0.40
194	Guscio fond.	217	201	202	218	6	8	40.0		0.80	0.40
195	Guscio fond.	218	202	203	219	6	8	40.0		0.80	0.40
196	Guscio fond.	219	203	204	220	6	8	40.0		0.80	0.40
197	Guscio fond.	220	204	205	221	6	8	40.0		0.80	0.40
198	Guscio fond.	221	205	206	222	6	8	40.0		0.80	0.40
199	Guscio fond.	222	206	207	223	6	8	40.0		0.80	0.40
200	Guscio fond.	223	207	208	224	6	8	40.0		0.80	0.40
201	Guscio fond.	224	208	209	225	6	8	40.0		0.80	0.40
202	Guscio fond.	225	209	210	226	6	8	40.0		0.80	0.40
203	Guscio fond.	226	210	211	227	6	8	40.0		0.80	0.40
204	Guscio fond.	227	211	212	228	6	8	40.0		0.80	0.40
205	Guscio fond.	228	212	213	229	6	8	40.0		0.80	0.40
206	Guscio fond.	229	213	214	230	6	8	40.0		0.80	0.40
207	Guscio fond.	230	214	215	231	6	8	40.0		0.80	0.40
208	Guscio fond.	231	215	216	232	6	8	40.0		0.80	0.40
209	Guscio fond.	233	217	218	234	6	8	40.0		0.80	0.40
210	Guscio fond.	234	218	219	235	6	8	40.0		0.80	0.40
211	Guscio fond.	235	219	220	236	6	8	40.0		0.80	0.40
212	Guscio fond.	236	220	221	237	6	8	40.0		0.80	0.40



Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
213	Guscio fond.	237	221	222	238	6	8	40.0		0.80	0.40
214	Guscio fond.	238	222	223	239	6	8	40.0		0.80	0.40
215	Guscio fond.	239	223	224	240	6	8	40.0		0.80	0.40
216	Guscio fond.	240	224	225	241	6	8	40.0		0.80	0.40
217	Guscio fond.	241	225	226	242	6	8	40.0		0.80	0.40
218	Guscio fond.	242	226	227	243	6	8	40.0		0.80	0.40
219	Guscio fond.	243	227	228	244	6	8	40.0		0.80	0.40
220	Guscio fond.	244	228	229	245	6	8	40.0		0.80	0.40
221	Guscio fond.	245	229	230	246	6	8	40.0		0.80	0.40
222	Guscio fond.	246	230	231	247	6	8	40.0		0.80	0.40
223	Guscio fond.	247	231	232	248	6	8	40.0		0.80	0.40
224	Guscio fond.	249	233	234	250	6	8	40.0		0.80	0.40
225	Guscio fond.	250	234	235	251	6	8	40.0		0.80	0.40
226	Guscio fond.	251	235	236	252	6	8	40.0		0.80	0.40
227	Guscio fond.	252	236	237	253	6	8	40.0		0.80	0.40
228	Guscio fond.	253	237	238	254	6	8	40.0		0.80	0.40
229	Guscio fond.	254	238	239	255	6	8	40.0		0.80	0.40
230	Guscio fond.	255	239	240	256	6	8	40.0		0.80	0.40
231	Guscio fond.	256	240	241	257	6	8	40.0		0.80	0.40
232	Guscio fond.	257	241	242	258	6	8	40.0		0.80	0.40
233	Guscio fond.	258	242	243	259	6	8	40.0		0.80	0.40
234	Guscio fond.	259	243	244	260	6	8	40.0		0.80	0.40
235	Guscio fond.	260	244	245	261	6	8	40.0		0.80	0.40
236	Guscio fond.	261	245	246	262	6	8	40.0		0.80	0.40
237	Guscio fond.	262	246	247	263	6	8	40.0		0.80	0.40
238	Guscio fond.	263	247	248	264	6	8	40.0		0.80	0.40
239	Guscio fond.	265	249	250	266	6	8	40.0		0.80	0.40
240	Guscio fond.	266	250	251	267	6	8	40.0		0.80	0.40
241	Guscio fond.	267	251	252	268	6	8	40.0		0.80	0.40
242	Guscio fond.	268	252	253	269	6	8	40.0		0.80	0.40
243	Guscio fond.	269	253	254	270	6	8	40.0		0.80	0.40
244	Guscio fond.	270	254	255	271	6	8	40.0		0.80	0.40
245	Guscio fond.	271	255	256	272	6	8	40.0		0.80	0.40
246	Guscio fond.	272	256	257	273	6	8	40.0		0.80	0.40
247	Guscio fond.	273	257	258	274	6	8	40.0		0.80	0.40
248	Guscio fond.	274	258	259	275	6	8	40.0		0.80	0.40
249	Guscio fond.	275	259	260	276	6	8	40.0		0.80	0.40
250	Guscio fond.	276	260	261	277	6	8	40.0		0.80	0.40
251	Guscio fond.	277	261	262	278	6	8	40.0		0.80	0.40
252	Guscio fond.	278	262	263	279	6	8	40.0		0.80	0.40
253	Guscio fond.	279	263	264	280	6	8	40.0		0.80	0.40
254	Guscio fond.	281	265	266	282	6	8	40.0		0.80	0.40
255	Guscio fond.	282	266	267	283	6	8	40.0		0.80	0.40
256	Guscio fond.	283	267	268	284	6	8	40.0		0.80	0.40
257	Guscio fond.	284	268	269	285	6	8	40.0		0.80	0.40
258	Guscio fond.	285	269	270	286	6	8	40.0		0.80	0.40
259	Guscio fond.	286	270	271	287	6	8	40.0		0.80	0.40
260	Guscio fond.	287	271	272	288	6	8	40.0		0.80	0.40
261	Guscio fond.	288	272	273	289	6	8	40.0		0.80	0.40
262	Guscio fond.	289	273	274	290	6	8	40.0		0.80	0.40
263	Guscio fond.	290	274	275	291	6	8	40.0		0.80	0.40
264	Guscio fond.	291	275	276	292	6	8	40.0		0.80	0.40
265	Guscio fond.	292	276	277	293	6	8	40.0		0.80	0.40
266	Guscio fond.	293	277	278	294	6	8	40.0		0.80	0.40
267	Guscio fond.	294	278	279	295	6	8	40.0		0.80	0.40
268	Guscio fond.	295	279	280	296	6	8	40.0		0.80	0.40
269	Guscio fond.	300	281	282	304	6	8	40.0		0.80	0.40
270	Guscio fond.	304	282	283	305	6	8	40.0		0.80	0.40
271	Guscio fond.	305	283	284	306	6	8	40.0		0.80	0.40
272	Guscio fond.	306	284	285	307	6	8	40.0		0.80	0.40
273	Guscio fond.	307	285	286	308	6	8	40.0		0.80	0.40
274	Guscio fond.	308	286	287	309	6	8	40.0		0.80	0.40
275	Guscio fond.	309	287	288	310	6	8	40.0		0.80	0.40
276	Guscio fond.	310	288	289	311	6	8	40.0		0.80	0.40
277	Guscio fond.	311	289	290	312	6	8	40.0		0.80	0.40
278	Guscio fond.	312	290	291	313	6	8	40.0		0.80	0.40
279	Guscio fond.	313	291	292	314	6	8	40.0		0.80	0.40
280	Guscio fond.	314	292	293	315	6	8	40.0		0.80	0.40
281	Guscio fond.	315	293	294	316	6	8	40.0		0.80	0.40
282	Guscio fond.	316	294	295	317	6	8	40.0		0.80	0.40
283	Guscio fond.	317	295	296	318	6	8	40.0		0.80	0.40
284	Guscio fond.	297	298	302	301	6	8	40.0		0.80	0.40



Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
285	Guscio fond.	298	299	303	302	6	8	40.0		0.80	0.40
286	Guscio fond.	299	300	304	303	6	8	40.0		0.80	0.40
287	Setto	327	328	128	169	6	9	30.0			
288	Setto	328	329	129	128	6	9	30.0			
289	Setto	329	330	130	129	6	9	30.0			
290	Setto	130	132	332	330	6	9	30.0			
291	Setto	132	134	334	332	6	9	30.0			
292	Setto	134	136	336	334	6	9	30.0			
293	Setto	136	138	338	336	6	9	30.0			
294	Setto	138	140	340	338	6	9	30.0			
295	Setto	140	142	342	340	6	9	30.0			
296	Setto	142	144	344	342	6	9	30.0			
297	Setto	144	146	346	344	6	9	30.0			
298	Setto	146	148	348	346	6	9	30.0			
299	Setto	148	150	350	348	6	9	30.0			
300	Setto	150	152	352	350	6	9	30.0			
301	Setto	152	154	354	352	6	9	30.0			
302	Setto	154	156	356	354	6	9	30.0			
303	Setto	156	158	358	356	6	9	30.0			
304	Setto	158	161	370	358	6	9	30.0			
305	Setto	367	368	159	184	6	9	30.0			
306	Setto	368	369	160	159	6	9	30.0			
307	Setto	369	370	161	160	6	9	30.0			
308	Setto	326	327	169	185	6	9	30.0			
309	Setto	366	367	184	200	6	9	30.0			
310	Setto	325	326	185	201	6	9	30.0			
311	Setto	365	366	200	216	6	9	30.0			
312	Setto	324	325	201	217	6	9	30.0			
313	Setto	364	365	216	232	6	9	30.0			
314	Setto	323	324	217	233	6	9	30.0			
315	Setto	363	364	232	248	6	9	30.0			
316	Setto	322	323	233	249	6	9	30.0			
317	Setto	362	363	248	264	6	9	30.0			
318	Setto	321	322	249	265	6	9	30.0			
319	Setto	361	362	264	280	6	9	30.0			
320	Setto	320	321	265	281	6	9	30.0			
321	Setto	360	361	280	296	6	9	30.0			
322	Setto	319	320	281	300	6	9	30.0			
323	Setto	359	360	296	318	6	9	30.0			
324	Setto	300	304	331	319	6	9	30.0			
325	Setto	304	305	333	331	6	9	30.0			
326	Setto	305	306	335	333	6	9	30.0			
327	Setto	306	307	337	335	6	9	30.0			
328	Setto	307	308	339	337	6	9	30.0			
329	Setto	308	309	341	339	6	9	30.0			
330	Setto	309	310	343	341	6	9	30.0			
331	Setto	310	311	345	343	6	9	30.0			
332	Setto	311	312	347	345	6	9	30.0			
333	Setto	312	313	349	347	6	9	30.0			
334	Setto	313	314	351	349	6	9	30.0			
335	Setto	314	315	353	351	6	9	30.0			
336	Setto	315	316	355	353	6	9	30.0			
337	Setto	316	317	357	355	6	9	30.0			
338	Setto	317	318	359	357	6	9	30.0			
339	Setto	371	319	300	299	6	9	30.0			
340	Setto	372	371	299	298	6	9	30.0			
341	Setto	373	372	298	297	6	9	30.0			
342	Setto	374	375	320	319	6	9	30.0			
343	Setto	375	376	321	320	6	9	30.0			
344	Setto	376	377	322	321	6	9	30.0			
345	Setto	377	378	323	322	6	9	30.0			
346	Setto	378	379	324	323	6	9	30.0			
347	Setto	379	380	325	324	6	9	30.0			
348	Setto	380	381	326	325	6	9	30.0			
349	Setto	381	382	327	326	6	9	30.0			
350	Setto	382	383	328	327	6	9	30.0			
351	Setto	383	384	329	328	6	9	30.0			
352	Setto	384	385	330	329	6	9	30.0			
353	Setto	319	331	386	374	6	9	30.0			
354	Setto	330	332	387	385	6	9	30.0			
355	Setto	331	333	388	386	6	9	30.0			
356	Setto	332	334	389	387	6	9	30.0			



Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
357	Setto	333	335	390	388	6	9	30.0			
358	Setto	334	336	391	389	6	9	30.0			
359	Setto	335	337	392	390	6	9	30.0			
360	Setto	336	338	393	391	6	9	30.0			
361	Setto	337	339	394	392	6	9	30.0			
362	Setto	338	340	395	393	6	9	30.0			
363	Setto	339	341	396	394	6	9	30.0			
364	Setto	340	342	397	395	6	9	30.0			
365	Setto	341	343	398	396	6	9	30.0			
366	Setto	342	344	399	397	6	9	30.0			
367	Setto	343	345	400	398	6	9	30.0			
368	Setto	344	346	401	399	6	9	30.0			
369	Setto	345	347	402	400	6	9	30.0			
370	Setto	346	348	403	401	6	9	30.0			
371	Setto	347	349	404	402	6	9	30.0			
372	Setto	348	350	405	403	6	9	30.0			
373	Setto	349	351	406	404	6	9	30.0			
374	Setto	350	352	407	405	6	9	30.0			
375	Setto	351	353	408	406	6	9	30.0			
376	Setto	352	354	409	407	6	9	30.0			
377	Setto	353	355	410	408	6	9	30.0			
378	Setto	354	356	411	409	6	9	30.0			
379	Setto	355	357	412	410	6	9	30.0			
380	Setto	356	358	413	411	6	9	30.0			
381	Setto	357	359	414	412	6	9	30.0			
382	Setto	358	370	425	413	6	9	30.0			
383	Setto	414	415	360	359	6	9	30.0			
384	Setto	415	416	361	360	6	9	30.0			
385	Setto	416	417	362	361	6	9	30.0			
386	Setto	417	418	363	362	6	9	30.0			
387	Setto	418	419	364	363	6	9	30.0			
388	Setto	419	420	365	364	6	9	30.0			
389	Setto	420	421	366	365	6	9	30.0			
390	Setto	421	422	367	366	6	9	30.0			
391	Setto	422	423	368	367	6	9	30.0			
392	Setto	423	424	369	368	6	9	30.0			
393	Setto	424	425	370	369	6	9	30.0			
394	Setto	426	374	319	371	6	9	30.0			
395	Setto	427	426	371	372	6	9	30.0			
396	Setto	428	427	372	373	6	9	30.0			
397	Setto	429	430	375	374	6	9	30.0			
398	Setto	430	431	376	375	6	9	30.0			
399	Setto	431	432	377	376	6	9	30.0			
400	Setto	432	433	378	377	6	9	30.0			
401	Setto	433	434	379	378	6	9	30.0			
402	Setto	434	435	380	379	6	9	30.0			
403	Setto	435	436	381	380	6	9	30.0			
404	Setto	436	437	382	381	6	9	30.0			
405	Setto	437	438	383	382	6	9	30.0			
406	Setto	438	439	384	383	6	9	30.0			
407	Setto	439	440	385	384	6	9	30.0			
408	Setto	374	386	441	429	6	9	30.0			
409	Setto	385	387	442	440	6	9	30.0			
410	Setto	386	388	443	441	6	9	30.0			
411	Setto	387	389	444	442	6	9	30.0			
412	Setto	388	390	445	443	6	9	30.0			
413	Setto	389	391	446	444	6	9	30.0			
414	Setto	390	392	447	445	6	9	30.0			
415	Setto	391	393	448	446	6	9	30.0			
416	Setto	392	394	449	447	6	9	30.0			
417	Setto	393	395	450	448	6	9	30.0			
418	Setto	394	396	451	449	6	9	30.0			
419	Setto	395	397	452	450	6	9	30.0			
420	Setto	396	398	453	451	6	9	30.0			
421	Setto	397	399	454	452	6	9	30.0			
422	Setto	398	400	455	453	6	9	30.0			
423	Setto	399	401	456	454	6	9	30.0			
424	Setto	400	402	457	455	6	9	30.0			
425	Setto	401	403	458	456	6	9	30.0			
426	Setto	402	404	459	457	6	9	30.0			
427	Setto	403	405	460	458	6	9	30.0			
428	Setto	404	406	461	459	6	9	30.0			



Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
429	Setto	405	407	462	460	6	9	30.0			
430	Setto	406	408	463	461	6	9	30.0			
431	Setto	407	409	464	462	6	9	30.0			
432	Setto	408	410	465	463	6	9	30.0			
433	Setto	409	411	466	464	6	9	30.0			
434	Setto	410	412	467	465	6	9	30.0			
435	Setto	411	413	468	466	6	9	30.0			
436	Setto	412	414	469	467	6	9	30.0			
437	Setto	413	425	480	468	6	9	30.0			
438	Setto	469	470	415	414	6	9	30.0			
439	Setto	470	471	416	415	6	9	30.0			
440	Setto	471	472	417	416	6	9	30.0			
441	Setto	472	473	418	417	6	9	30.0			
442	Setto	473	474	419	418	6	9	30.0			
443	Setto	474	475	420	419	6	9	30.0			
444	Setto	475	476	421	420	6	9	30.0			
445	Setto	476	477	422	421	6	9	30.0			
446	Setto	477	478	423	422	6	9	30.0			
447	Setto	478	479	424	423	6	9	30.0			
448	Setto	479	480	425	424	6	9	30.0			
449	Setto	481	429	374	426	6	9	30.0			
450	Setto	482	481	426	427	6	9	30.0			
451	Setto	483	482	427	428	6	9	30.0			
452	Setto	431	487	432		6	9	30.0			
453	Setto	449	451	507		6	9	30.0			
454	Setto	453	455	512		6	9	30.0			
455	Setto	471	530	472		6	9	30.0			
456	Setto	484	485	430	429	6	9	30.0			
457	Setto	485	486	431	430	6	9	30.0			
458	Setto	488	489	433	432	6	9	30.0			
459	Setto	489	490	434	433	6	9	30.0			
460	Setto	490	491	435	434	6	9	30.0			
461	Setto	491	492	436	435	6	9	30.0			
462	Setto	492	493	437	436	6	9	30.0			
463	Setto	493	494	438	437	6	9	30.0			
464	Setto	494	495	439	438	6	9	30.0			
465	Setto	495	496	440	439	6	9	30.0			
466	Setto	429	441	497	484	6	9	30.0			
467	Setto	440	442	498	496	6	9	30.0			
468	Setto	441	443	499	497	6	9	30.0			
469	Setto	442	444	500	498	6	9	30.0			
470	Setto	443	445	501	499	6	9	30.0			
471	Setto	444	446	502	500	6	9	30.0			
472	Setto	445	447	503	501	6	9	30.0			
473	Setto	446	448	504	502	6	9	30.0			
474	Setto	447	449	505	503	6	9	30.0			
475	Setto	448	450	506	504	6	9	30.0			
476	Setto	450	452	509	506	6	9	30.0			
477	Setto	451	453	510	508	6	9	30.0			
478	Setto	452	454	511	509	6	9	30.0			
479	Setto	454	456	514	511	6	9	30.0			
480	Setto	455	457	515	513	6	9	30.0			
481	Setto	456	458	516	514	6	9	30.0			
482	Setto	457	459	517	515	6	9	30.0			
483	Setto	458	460	518	516	6	9	30.0			
484	Setto	459	461	519	517	6	9	30.0			
485	Setto	460	462	520	518	6	9	30.0			
486	Setto	461	463	521	519	6	9	30.0			
487	Setto	462	464	522	520	6	9	30.0			
488	Setto	464	466	523	522	6	9	30.0			
489	Setto	463	465	524	521	6	9	30.0			
490	Setto	466	468	526	523	6	9	30.0			
491	Setto	465	467	525	524	6	9	30.0			
492	Setto	467	469	527	525	6	9	30.0			
493	Setto	468	480	539	526	6	9	30.0			
494	Setto	527	528	470	469	6	9	30.0			
495	Setto	528	529	471	470	6	9	30.0			
496	Setto	531	532	473	472	6	9	30.0			
497	Setto	532	533	474	473	6	9	30.0			
498	Setto	533	534	475	474	6	9	30.0			
499	Setto	534	535	476	475	6	9	30.0			
500	Setto	535	536	477	476	6	9	30.0			



Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
501	Setto	536	537	478	477	6	9	30.0			
502	Setto	537	538	479	478	6	9	30.0			
503	Setto	538	539	480	479	6	9	30.0			
504	Setto	540	484	429	481	6	9	30.0			
505	Setto	541	540	481	482	6	9	30.0			
506	Setto	486	487	431		6	9	30.0			
507	Setto	487	488	432		6	9	30.0			
508	Setto	505	449	507		6	9	30.0			
509	Setto	507	451	508		6	9	30.0			
510	Setto	510	453	512		6	9	30.0			
511	Setto	512	455	513		6	9	30.0			
512	Setto	529	530	471		6	9	30.0			
513	Setto	530	531	472		6	9	30.0			
514	Setto	542	541	482	483	6	9	30.0			
515	Setto	485	544	486		6	9	30.0			
516	Setto	545	487	486		6	9	30.0			
517	Setto	528	553	529		6	9	30.0			
518	Setto	554	530	529		6	9	30.0			
519	Setto	543	544	485	484	6	9	30.0			
520	Setto	507	508	547	546	6	9	30.0			
521	Setto	508	510	548	547	6	9	30.0			
522	Setto	510	512	549	548	6	9	30.0			
523	Setto	524	525	551	550	6	9	30.0			
524	Setto	525	527	552	551	6	9	30.0			
525	Setto	552	553	528	527	6	9	30.0			
526	Setto	555	543	484	540	6	9	30.0			
527	Setto	544	545	486		6	9	30.0			
528	Setto	553	554	529		6	9	30.0			
529	Setto	556	555	540	541	6	9	30.0			
530	Setto	558	556	541	542	6	9	30.0			
531	Setto	553	566	554		6	9	30.0			
532	Setto	544	572	545		6	9	30.0			
533	Setto	546	547	560	559	6	9	30.0			
534	Setto	547	548	561	560	6	9	30.0			
535	Setto	548	549	562	561	6	9	30.0			
536	Setto	550	551	564	563	6	9	30.0			
537	Setto	551	552	565	564	6	9	30.0			
538	Setto	565	566	553	552	6	9	30.0			
539	Setto	571	572	544	543	6	9	30.0			
540	Setto	570	571	543	555	6	9	30.0			
541	Setto	569	570	555	556	6	9	30.0			
542	Setto	568	569	556	558	6	9	30.0			
543	Setto	567	568	558	557	6	9	30.0			



MODELLO
Numerazione dei D3

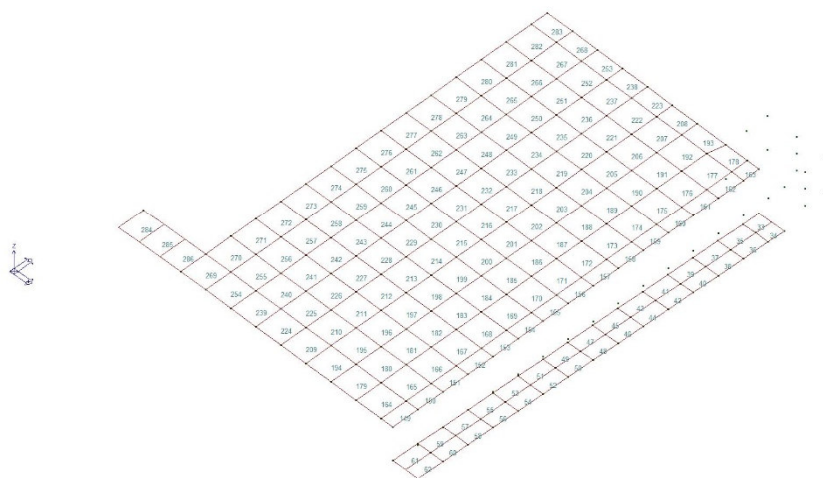


Figura 16 - MOD_NUMERAZIONE_D3_GR_001

MODELLO
Numerazione dei D3

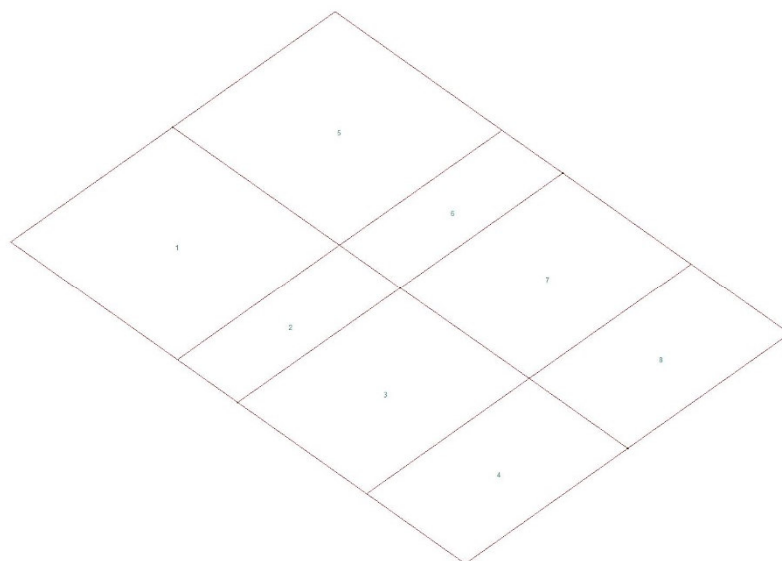


Figura 17 - MOD_NUMERAZIONE_D3_GR_002



MODELLO
Numerazione dei D3

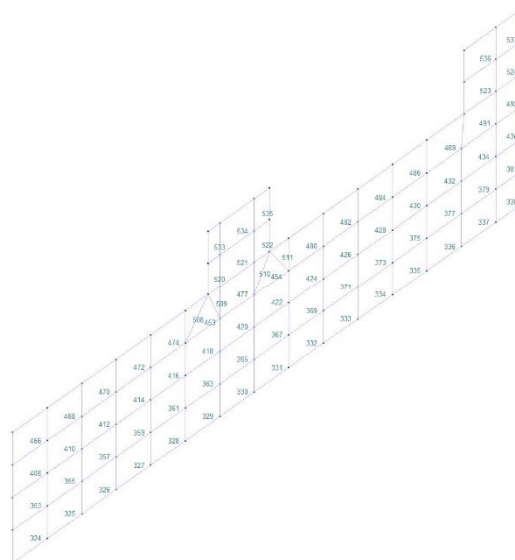


Figura 18 - MOD_NUMERAZIONE_D3_GR_003

MODELLO
Numerazione dei D3

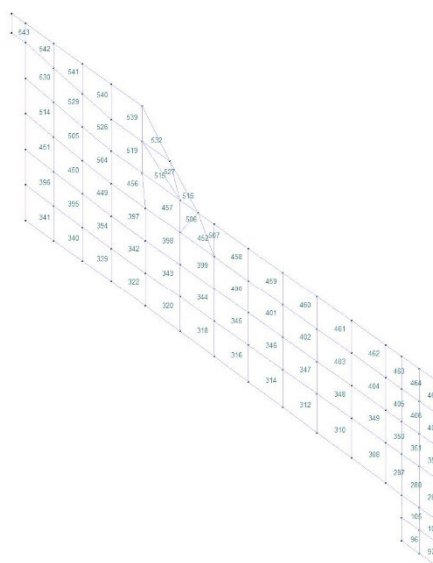


Figura 19 - MOD_NUMERAZIONE_D3_GR_004



MODELLO
Numerazione dei D3

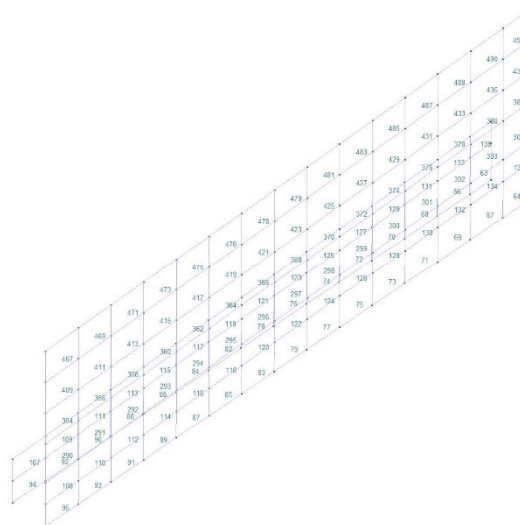


Figura 20 - MOD_NUMERAZIONE_D3_GR_005

MODELLO
Numerazione dei D3

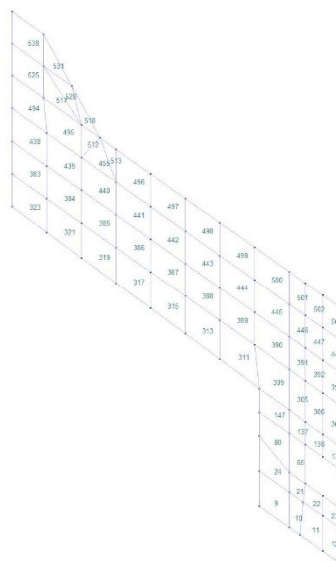


Figura 21 - MOD_NUMERAZIONE_D3_GR_006



MODELLO
Numerazione del D3

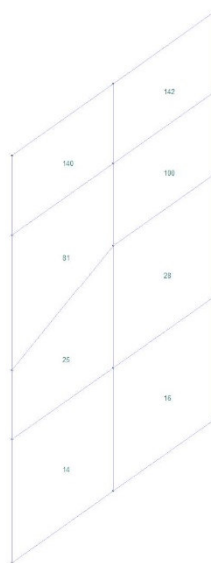


Figura 22 - MOD_NUMERAZIONE_D3_GR_007

MODELLO
Numerazione del D3

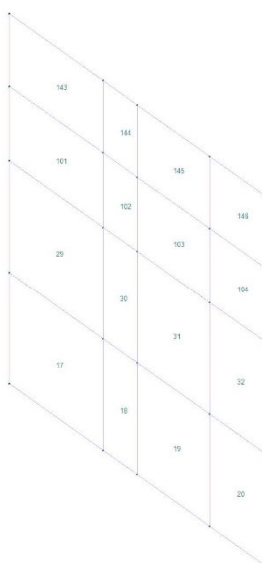


Figura 23 - MOD_NUMERAZIONE_D3_GR_008



MODELLO
Numerazione dei D3

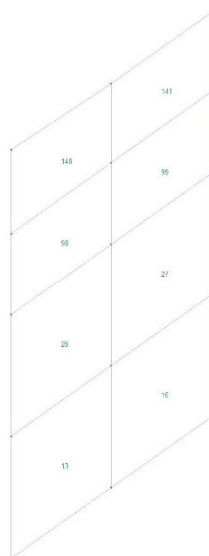


Figura 24 - MOD_NUMERAZIONE_D3_GR_009

MODELLO
Numerazione dei D3 (per macro)

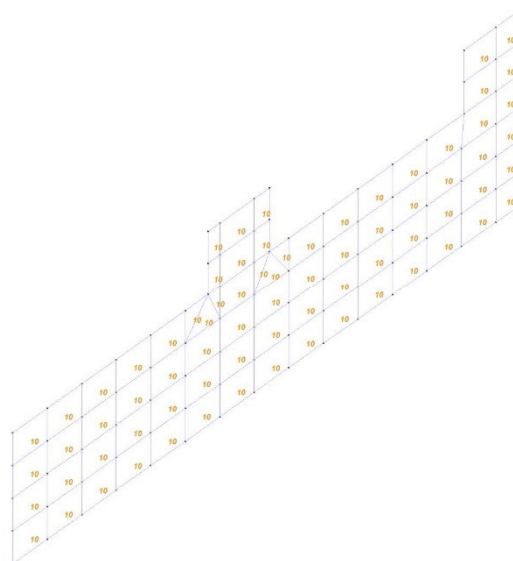


Figura 25 - MOD_NUMERAZIONE_D3_MACRO_GR_003



MODELLO
Numerazione dei D3 (per macro)



Figura 26 - MOD_NUMERAZIONE_D3_MACRO_GR_004

MODELLO
Numerazione dei D3 (per macro)

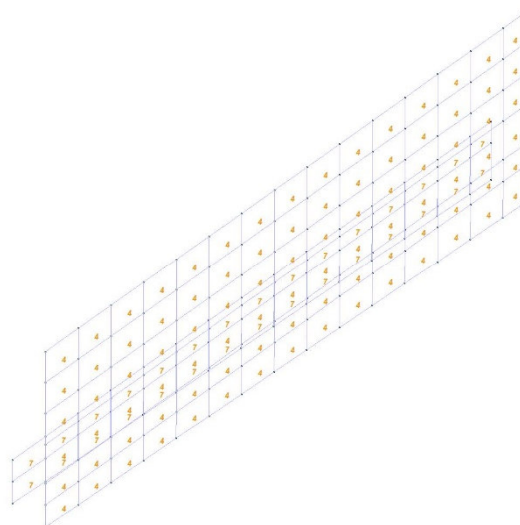


Figura 27 - MOD_NUMERAZIONE_D3_MACRO_GR_005



MODELLO
Numerazione dei D3 (per macro)

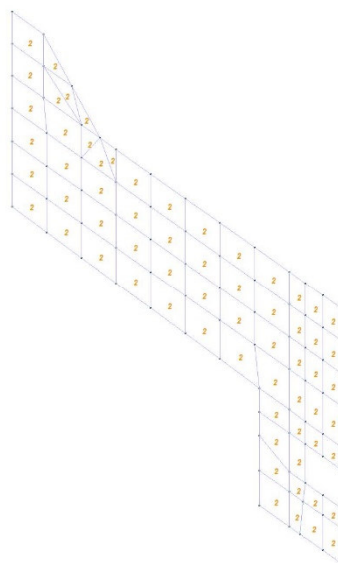


Figura 28 - MOD_NUMERAZIONE_D3_MACRO_GR_006

MODELLO
Numerazione dei D3 (per macro)



Figura 29 - MOD_NUMERAZIONE_D3_MACRO_GR_007



MODELLO
Numerazione dei D3 (per macro)

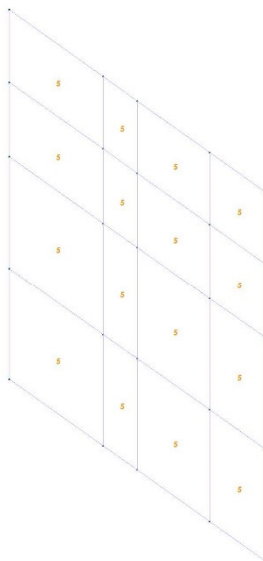


Figura 30 - MOD_NUMERAZIONE_D3_MACRO_GR_008

MODELLO
Numerazione dei D3 (per macro)



Figura 31 - MOD_NUMERAZIONE_D3_MACRO_GR_009



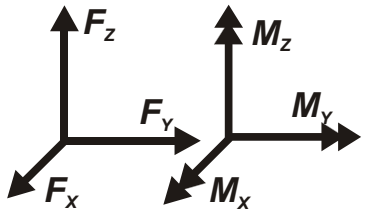
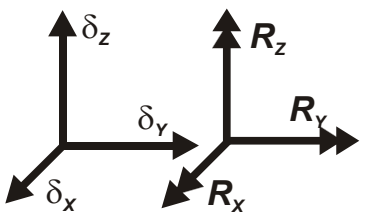
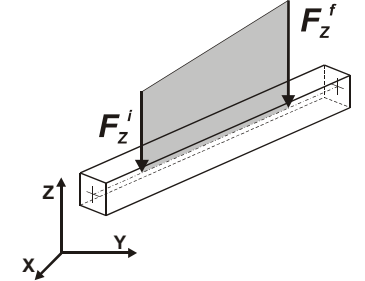
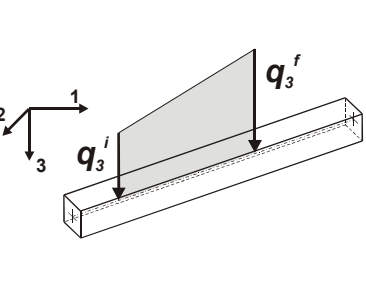
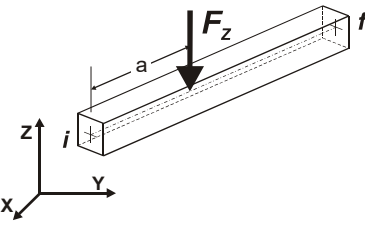
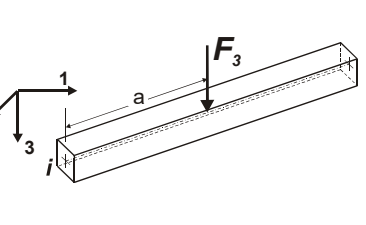
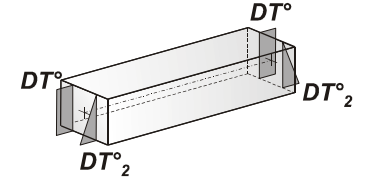
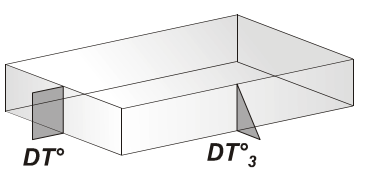
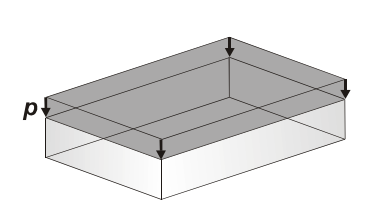
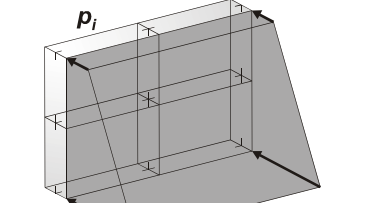
MODELLAZIONE DELLE AZIONI

LEGENDA TABELLA DATI AZIONI

Il programma consente l'uso di diverse tipologie di carico (azioni). Le azioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni azione applicata alla struttura viene di riportato il codice, il tipo e la sigla identificativa. Le tabelle successive dettagliano i valori caratteristici di ogni azione in relazione al tipo. Le tabelle riportano infatti i seguenti dati in relazione al tipo:

1	carico concentrato nodale 6 dati (forza F_x , F_y , F_z , momento M_x , M_y , M_z)
2	spostamento nodale impresso 6 dati (spostamento T_x , T_y , T_z , rotazione R_x , R_y , R_z)
3	carico distribuito globale su elemento tipo trave 7 dati (f_x , f_y , f_z , m_x , m_y , m_z , ascissa di inizio carico) 7 dati (f_x , f_y , f_z , m_x , m_y , m_z , ascissa di fine carico)
4	carico distribuito locale su elemento tipo trave 7 dati (f_1 , f_2 , f_3 , m_1 , m_2 , m_3 , ascissa di inizio carico) 7 dati (f_1 , f_2 , f_3 , m_1 , m_2 , m_3 , ascissa di fine carico)
5	carico concentrato globale su elemento tipo trave 7 dati (F_x , F_y , F_z , M_x , M_y , M_z , ascissa di carico)
6	carico concentrato locale su elemento tipo trave 7 dati (F_1 , F_2 , F_3 , M_1 , M_2 , M_3 , ascissa di carico)
7	variazione termica applicata ad elemento tipo trave 7 dati (variazioni termiche: uniforme, media e differenza in altezza e larghezza al nodo iniziale e finale)
8	carico di pressione uniforme su elemento tipo piastra 1 dato (pressione)
9	carico di pressione variabile su elemento tipo piastra 4 dati (pressione, quota, pressione, quota)
10	variazione termica applicata ad elemento tipo piastra 2 dati (variazioni termiche: media e differenza nello spessore)
11	carico variabile generale su elementi tipo trave e piastra 1 dato descrizione della tipologia 4 dati per segmento (posizione, valore, posizione, valore) la tipologia precisa l'ascissa di definizione, la direzione del carico, la modalità di carico e la larghezza d'influenza per gli elementi tipo trave
12	gruppo di carichi con impronta su piastra 9 dati (numero di ripetizioni in direzione X e Y, valore di ciascun carico, posizione centrale del primo, dimensioni dell'impronta, interasse tra i carichi)



 Carico concentrato nodale	 Spostamento impresso
 Carico distribuito globale	 Carico distribuito locale
 Carico concentrato globale	 Carico concentrato locale
 Carico termico 2D	 Carico termico 3D
 Carico pressione uniforme	 Carico pressione variabile

Tipo carico di pressione uniforme su piastra

Id	Tipo	pressione daN/cm2
9	CAR_RIF - P3:p=0.32	0.32

Tipo carico di pressione variabile su piastra



Id	Tipo	pressione	quota	pressione	quota
		daN/cm2	cm	daN/cm2	cm
10	SPIN RIF - PL3:pi=0.0 qi=340.00 pf=0.11 qf=0.0	0.0	340.00	0.11	0.0
11	INCR SS SLV SPIN RIF - PL3:pi=0.20 qi=340.00 pf=0.20 qf=0.0	0.20	340.00	0.20	0.0
12	INCR SS SLD SPIN RIF - PL3:pi=0.15 qi=340.00 pf=0.15 qf=0.0	0.15	340.00	0.15	0.0
13	SPIN TERR POST - PL3:pi=0.0 qi=330.00 pf=0.16 qf=-187.00	0.0	330.00	0.16	-187.00
14	SPIN TERR LAT1 - PL3:pi=0.0 qi=220.00 pf=0.19 qf=-147.00	0.0	220.00	0.19	-147.00
15	SPIN TERR LAT2 - PL3:pi=0.0 qi=220.00 pf=0.19 qf=-187.00	0.0	220.00	0.19	-187.00
16	SPIN TERR LAT2 TOM - PL3:pi=0.0 qi=-22.00 pf=0.16 qf=-325.00	0.0	-22.00	0.16	-325.00
17	SPIN TERR LAT3 TOM - PL3:pi=0.0 qi=-22.00 pf=0.16 qf=-325.00	0.0	-22.00	0.16	-325.00
18	SPIN TERR LAT4 TOM - PL3:pi=0.0 qi=-22.00 pf=0.16 qf=-325.00	0.0	-22.00	0.16	-325.00
19	INCR SS SLV TERR POST - PL3:pi=0.10 qi=340.00 pf=0.10 qf=-187.00	0.10	340.00	0.10	-187.00
20	INCR SS SLD TERR POST - PL3:pi= 7.000e-02 qi=330.00 pf=0.16 qf= 7.000e-02	0.07	330.00	0.16	0.07
21	INCR SS SLV TERR LAT1 - PL3:pi=0.12 qi=220.00 pf=0.12 qf=-147.00	0.12	220.00	0.12	-147.00
22	INCR SS SLD TERR LAT1 - PL3:pi= 9.000e-02 qi=220.00 pf= 9.000e-02 qf=-147.00	0.09	220.00	0.09	-147.00
23	INCR SS SLV TERR LAT2 - PL3:pi=0.12 qi=220.00 pf=0.12 qf=-147.00	0.12	220.00	0.12	-147.00
24	INCR SS SLD TERR LAT2 - PL3:pi= 9.000e-02 qi=220.00 pf= 9.000e-02 qf=-147.00	0.09	220.00	0.09	-147.00
25	INCR SS SLV TERR LAT2 TOM - PL3:pi=0.10 qi=-22.00 pf=0.10 qf=-325.00	0.10	-22.00	0.10	-325.00
26	INCR SS_SLD_TERR_LAT2_TOM - PL3:pi= 8.000e-02 qi=-22.00 pf= 8.000e-02 qf=-325.00	0.08	-22.00	0.08	-325.00
27	INCR SS SLV TERR LAT3 TOM - PL3:pi=0.10 qi=-22.00 pf=0.10 qf=-325.00	0.10	-22.00	0.10	-325.00
28	INCR SS_SLD_TERR_LAT3_TOM - PL3:pi= 8.000e-02 qi=-22.00 pf= 8.000e-02 qf=-325.00	0.08	-22.00	0.08	-325.00
29	INCR SS SLV TERR LAT4 TOM - PL3:pi=0.10 qi=-22.00 pf=0.10 qf=-325.00	0.10	-22.00	0.10	-325.00
30	INCR SS_SLD_TERR_LAT4_TOM - PL3:pi= 8.000e-02 qi=-22.00 pf= 8.000e-02 qf=-325.00	0.08	-22.00	0.08	-325.00



SCHEMATIZZAZIONE DEI CASI DI CARICO

LEGENDA TABELLA CASI DI CARICO

Il programma consente l'applicazione di diverse tipologie di casi di carico.

Sono previsti i seguenti 11 tipi di casi di carico:

	Sigla	Tipo	Descrizione
1	Ggk	A	caso di carico comprensivo del peso proprio struttura
2	Gk	NA	caso di carico con azioni permanenti
3	Qk	NA	caso di carico con azioni variabili
4	Gsk	A	caso di carico comprensivo dei carichi permanenti sui solai e sulle coperture
5	Qsk	A	caso di carico comprensivo dei carichi variabili sui solai
6	Qnk	A	caso di carico comprensivo dei carichi di neve sulle coperture
7	Qtk	SA	caso di carico comprensivo di una variazione termica agente sulla struttura
8	Qvk	NA	caso di carico comprensivo di azioni da vento sulla struttura
9	Esk	SA	caso di carico sismico con analisi statica equivalente
10	Edk	SA	caso di carico sismico con analisi dinamica
11	Etk	NA	caso di carico comprensivo di azioni derivanti dall' incremento di spinta delle terre in condizione sismica
12	Pk	NA	caso di carico comprensivo di azioni derivanti da coazioni, cedimenti e precompressioni

Sono di tipo automatico A (ossia non prevedono introduzione dati da parte dell'utente) i seguenti casi di carico: 1-Ggk; 4-Gsk; 5-Qsk; 6-Qnk.

Sono di tipo semi-automatico SA (ossia prevedono una minima introduzione dati da parte dell'utente) i seguenti casi di carico:

7-Qtk, in quanto richiede solo il valore della variazione termica;

9-Esk e 10-Edk, in quanto richiedono il valore dell'angolo di ingresso del sisma e l'individuazione dei casi di carico partecipanti alla definizione delle masse.

Sono di tipo non automatico NA ossia prevedono la diretta applicazione di carichi generici agli elementi strutturali (si veda il precedente punto Modellazione delle Azioni) i restanti casi di carico.

Nella tabella successiva vengono riportati i casi di carico agenti sulla struttura, con l'indicazione dei dati relativi al caso di carico stesso:

Numero Tipo e Sigla identificativa, Valore di riferimento del caso di carico (se previsto).

In successione, per i casi di carico non automatici, viene riportato l'elenco di nodi ed elementi direttamente caricati con la sigla identificativa del carico.

Per i casi di carico di tipo sismico (9-Esk e 10-Edk), viene riportata la tabella di definizione delle masse: per ogni caso di carico partecipante alla definizione delle masse viene indicata la relativa aliquota (partecipazione) considerata. Si precisa che per i caso di carico 5-Qsk e 6-Qnk la partecipazione è prevista localmente per ogni elemento solaio o copertura presente nel modello (si confronti il valore Sksol nel capitolo relativo agli elementi solaio) e pertanto la loro partecipazione è di norma pari a uno.

CDC	Tipo	Sigla Id	Note	Per non automatici:
1	Ggk	CDC=Ggk (peso proprio della struttura)		
2	Gk	CDC=G2k (permanente generico n.c.d.) RIF	Azioni applicate:	Ad elementi:
			[9] CAR_RIF - P3:p=0.32	D3: 149 # 283



CDC	Tipo	Sigla Id	Note	Per non automatici:
			[10] SPIN_RIF - PL3:pi=0.0 qi=340.00 pf=0.11 qf=0.0	D3: 64, 67, 69, 71, 73, 75, 77, 79, 83, 85, 87, 89, 91, 93, 95, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 287 # 338, 342 # 393, 397 # 448, 452 # 503, 506 # 513
3	Gk	CDC=G2k (permanente generico n.c.d.) TERR	Azioni applicate:	Ad elementi:
			[13] SPIN_TERR_POST - PL3:pi=0.0 qi=330.00 pf=0.16 qf=-187.00	D3: 63, 66, 68, 70, 72, 74, 76, 78, 82, 84, 86, 88, 90, 92, 94, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 324 # 338, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 453 # 454, 466, 468, 470, 472, 474, 477, 480, 482, 484, 486, 489, 491 # 492, 508 # 511
			[14] SPIN_TERR_LAT1 - PL3:pi=0.0 qi=220.00 pf=0.19 qf=-147.00	D3: 96 # 97, 105 # 106, 287 # 289, 308, 310, 312, 314, 316, 318, 320, 322, 339 # 352, 394 # 407, 449 # 452, 456 # 465, 504 # 507, 514
			[15] SPIN_TERR_LAT2 - PL3:pi=0.0 qi=220.00 pf=0.19 qf=-187.00	D3: 64, 67, 69, 71, 73, 75, 77, 79, 83, 85, 87, 89, 91, 93, 95, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 290 # 304, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 467, 469, 471, 473, 475 # 476, 478 # 479, 481, 483, 485, 487 # 488, 490, 493
			[16] SPIN_TERR_LAT2_TOM - PL3:pi=0.0 qi=-22.00 pf=0.16 qf=-325.00	D3: 14, 16, 25, 28, 81, 100, 140, 142
			[17] SPIN_TERR_LAT3_TOM - PL3:pi=0.0 qi=-22.00 pf=0.16 qf=-325.00	D3: 17 # 20, 29 # 32, 101 # 104, 143 # 146
			[18] SPIN_TERR_LAT4_TOM - PL3:pi=0.0 qi=-22.00 pf=0.16 qf=-325.00	D3: 13, 15, 26 # 27, 98 # 99, 141, 148
4	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	partecipazione:1.00 per 1 CDC=Ggk (peso proprio della struttura)	
			partecipazione:1.00 per 2 CDC=G2k (permanente generico n.c.d.) RIF	
			partecipazione:1.00 per 3 CDC=G2k (permanente generico n.c.d.) TERR	
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	come precedente CDC sismico	
6	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	come precedente CDC sismico	
7	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	come precedente CDC sismico	
8	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	come precedente CDC sismico	
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	come precedente CDC sismico	
10	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	come precedente CDC sismico	
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	come precedente CDC sismico	
12	Etk	CDC=Etk (inc. sp. terreno) SLV dir + alfa=0.0	Azioni applicate:	Ad elementi:
			[11] INCR_SS_SLV_SPIN_RIF - PL3:pi=0.20 qi=340.00 pf=0.20 qf=0.0	D3: 64, 67, 69, 71, 73, 75, 77, 79, 83, 85, 87, 89, 91, 93, 95, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 290 # 304, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 467, 469, 471, 473, 475 # 476, 478 # 479, 481, 483, 485, 487 # 488, 490, 493
			[19] INCR_SS_SLV_TERR_POST - PL3:pi=0.10 qi=340.00 pf=0.10 qf=-187.00	D3: 63, 66, 68, 70, 72, 74, 76, 78, 82, 84, 86, 88, 90, 92, 94, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 324 # 338, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432,



CDC	Tipo	Sigla Id	Note	Per non automatici:
				434, 436, 453 # 454, 466, 468, 470, 472, 474, 477, 480, 482, 484, 486, 489, 491 # 492, 508 # 511
			[29] INCR_SS_SLV_TERR_LAT4_TOM - PL3:pi=0.10 qi=-22.00 pf=0.10 qf=-325.00	D3: 13, 15, 26 # 27, 98 # 99, 141, 148
13	Etk	CDC=Etk (inc. sp. terreno) SLV dir - alfa=0.0	Azioni applicate:	Ad elementi:
			[11] INCR_SS_SLV_SPIN_RIF - PL3:pi=0.20 qi=340.00 pf=0.20 qf=0.0	D3: 324 # 338, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 453 # 454, 466, 468, 470, 472, 474, 477, 480, 482, 484, 486, 489, 491 # 492, 508 # 511
			[23] INCR_SS_SLV_TERR_LAT2 - PL3:pi=0.12 qi=220.00 pf=0.12 qf=-147.00	D3: 64, 67, 69, 71, 73, 75, 77, 79, 83, 85, 87, 89, 91, 93, 95, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 290 # 304, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 467, 469, 471, 473, 475 # 476, 478 # 479, 481, 483, 485, 487 # 488, 490, 493
			[25] INCR_SS_SLV_TERR_LAT2_TOM - PL3:pi=0.10 qi=-22.00 pf=0.10 qf=-325.00	D3: 14, 16, 25, 28, 81, 100, 140, 142
14	Etk	CDC=Etk (inc. sp. terreno) SLV dir + alfa=90.00	Azioni applicate:	Ad elementi:
			[21] INCR_SS_SLV_TERR_LAT1 - PL3:pi=0.12 qi=220.00 pf=0.12 qf=-147.00	D3: 96 # 97, 105 # 106, 287 # 289, 308, 310, 312, 314, 316, 318, 320, 322, 339 # 352, 394 # 407, 449 # 452, 456 # 465, 504 # 507, 514
15	Etk	CDC=Etk (inc. sp. terreno) SLV dir - alfa=90.00	Azioni applicate:	Ad elementi:
			[11] INCR_SS_SLV_SPIN_RIF - PL3:pi=0.20 qi=340.00 pf=0.20 qf=0.0	D3: 96 # 97, 105 # 106, 287 # 289, 308, 310, 312, 314, 316, 318, 320, 322, 339 # 352, 394 # 407, 449 # 452, 456 # 465, 504 # 507, 514
			[27] INCR_SS_SLV_TERR_LAT3_TOM - PL3:pi=0.10 qi=-22.00 pf=0.10 qf=-325.00	D3: 17 # 20, 29 # 32, 101 # 104, 143 # 146
16	Etk	CDC=Etk (inc. sp. terreno) SLD dir + alfa=0.0	Azioni applicate:	Ad elementi:
			[12] INCR_SS_SLD_SPIN_RIF - PL3:pi=0.15 qi=340.00 pf=0.15 qf=0.0	D3: 64, 67, 69, 71, 73, 75, 77, 79, 83, 85, 87, 89, 91, 93, 95, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 290 # 304, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 467, 469, 471, 473, 475 # 476, 478 # 479, 481, 483, 485, 487 # 488, 490, 493
			[20] INCR_SS_SLD_TERR_POST - PL3:pi= 7.000e-02 qi=330.00 pf=0.16 qf= 7.000e-02	D3: 63, 66, 68, 70, 72, 74, 76, 78, 82, 84, 86, 88, 90, 92, 94, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 324 # 338, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 453 # 454, 466, 468, 470, 472, 474, 477, 480, 482, 484, 486, 489, 491 # 492, 508 # 511
17	Etk	CDC=Etk (inc. sp. terreno) SLD dir - alfa=0.0	Azioni applicate:	Ad elementi:
			[12] INCR_SS_SLD_SPIN_RIF - PL3:pi=0.15 qi=340.00 pf=0.15 qf=0.0	D3: 324 # 338, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 453 # 454, 466, 468, 470, 472, 474, 477, 480, 482, 484, 486, 489, 491 # 492, 508 # 511
			[24] INCR_SS_SLD_TERR_LAT2 - PL3:pi= 9.000e-02 qi=220.00 pf= 9.000e-02 qf=-	D3: 64, 67, 69, 71, 73, 75, 77, 79, 83, 85, 87, 89, 91, 93, 95, 108, 110, 112, 114, 116,



CDC	Tipo	Sigla Id	Note	Per non automatici:
			147.00	118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 290 # 304, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 467, 469, 471, 473, 475 # 476, 478 # 479, 481, 483, 485, 487 # 488, 490, 493
			[26] INCR_SS_SLD_TERR_LAT2_TOM - PL3:pi= 8.000e-02 qi=-22.00 pf= 8.000e-02 qf=-325.00	D3: 14, 16, 25, 28, 81, 100, 140, 142
18	Etk	CDC=Etk (inc. sp. terreno) SLD dir + alfa=90.00	Azioni applicate:	Ad elementi:
			[22] INCR_SS_SLD_TERR_LAT1 - PL3:pi= 9.000e-02 qi=220.00 pf= 9.000e-02 qf=-147.00	D3: 96 # 97, 105 # 106, 287 # 289, 308, 310, 312, 314, 316, 318, 320, 322, 339 # 352, 394 # 407, 449 # 452, 456 # 465, 504 # 507, 514
			[30] INCR_SS_SLD_TERR_LAT4_TOM - PL3:pi= 8.000e-02 qi=-22.00 pf= 8.000e-02 qf=-325.00	D3: 13, 15, 26 # 27, 98 # 99, 141, 148
19	Etk	CDC=Etk (inc. sp. terreno) SLD dir - alfa=90.00	Azioni applicate:	Ad elementi:
			[12] INCR_SS_SLD_SPIN_RIF - PL3:pi=0.15 qi=340.00 pf=0.15 qf=0.0	D3: 96 # 97, 105 # 106, 287 # 289, 308, 310, 312, 314, 316, 318, 320, 322, 339 # 352, 394 # 407, 449 # 452, 456 # 465, 504 # 507, 514
			[28] INCR_SS_SLD_TERR_LAT3_TOM - PL3:pi= 8.000e-02 qi=-22.00 pf= 8.000e-02 qf=-325.00	D3: 17 # 20, 29 # 32, 101 # 104, 143 # 146

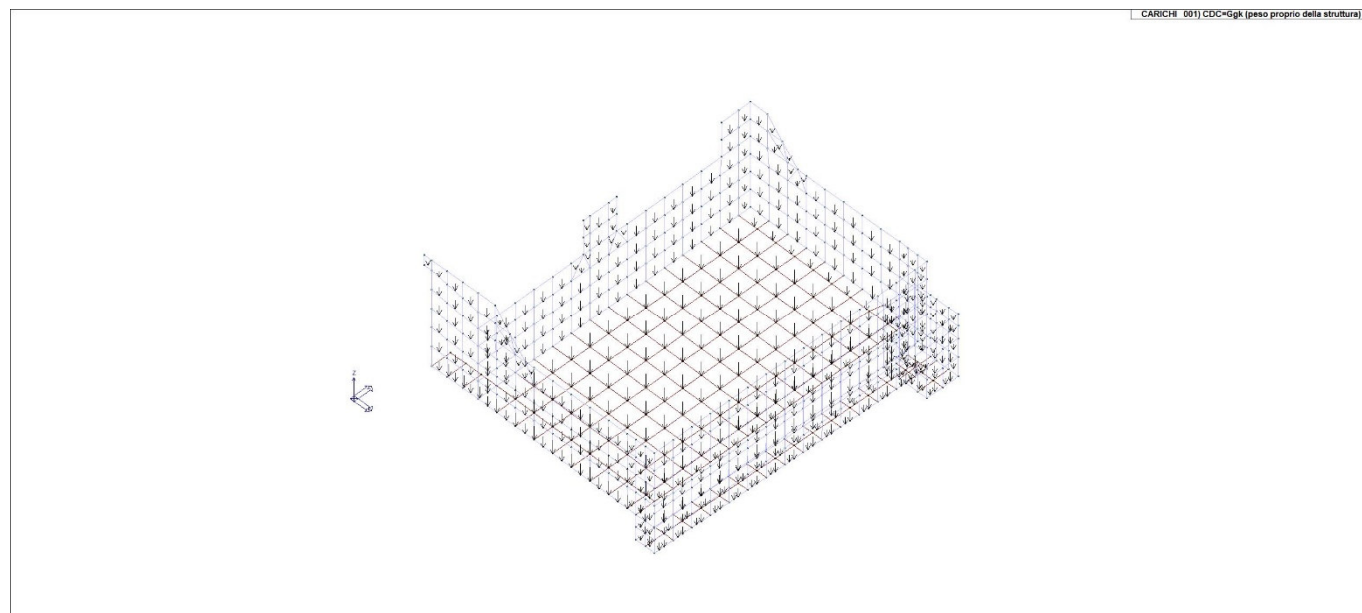


Figura 32 - CDC_001_CDCGgk peso proprio della struttura



CARICHE 002) CDC+G2k (permanente generico n.c.d.) RIF

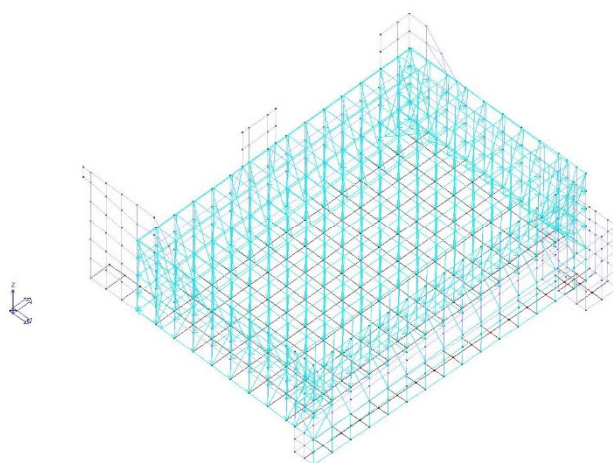


Figura 33 - CDC_002_CDCG2k permanente generico ncd RIF

CARICHE 003) CDC+G2k (permanente generico n.c.d.) TERR

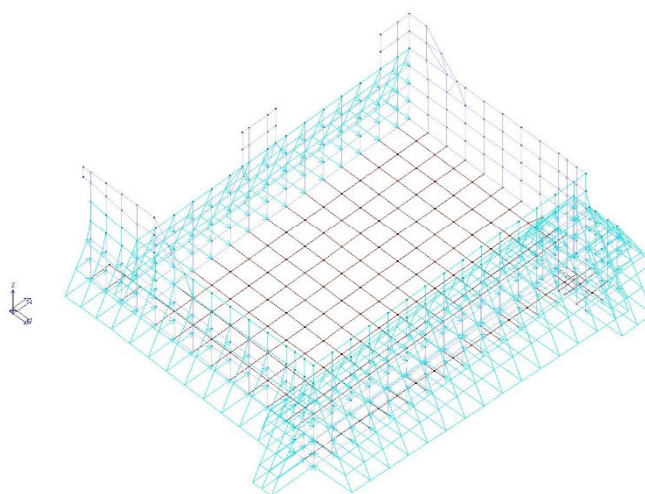


Figura 34 - CDC_003_CDCG2k permanente generico ncd TERR



CARICHI 004) CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)

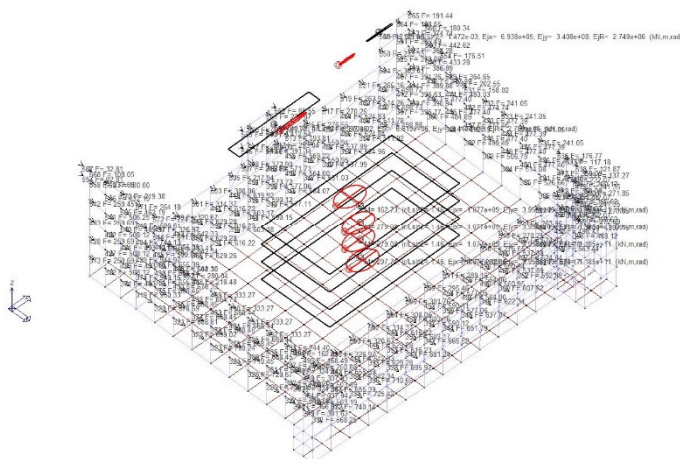


Figura 35 - CDC_004_CDCEd dinamico SLU alfa00 ecc +

CARICHI 005) CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)

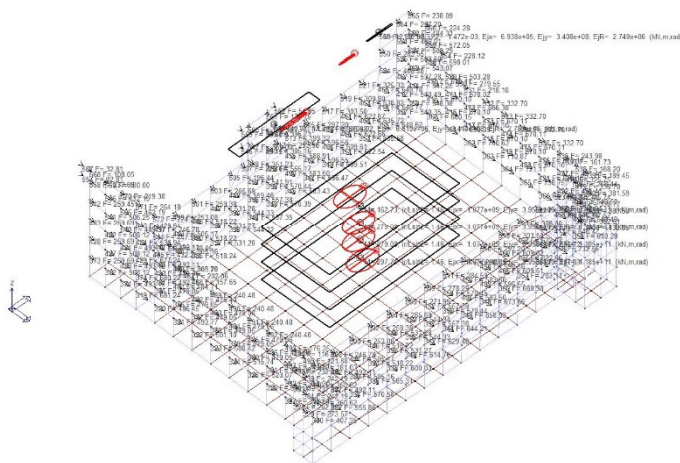


Figura 36 - CDC_005_CDCEd dinamico SLU alfa00 ecc -



CARICHE 006 CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)

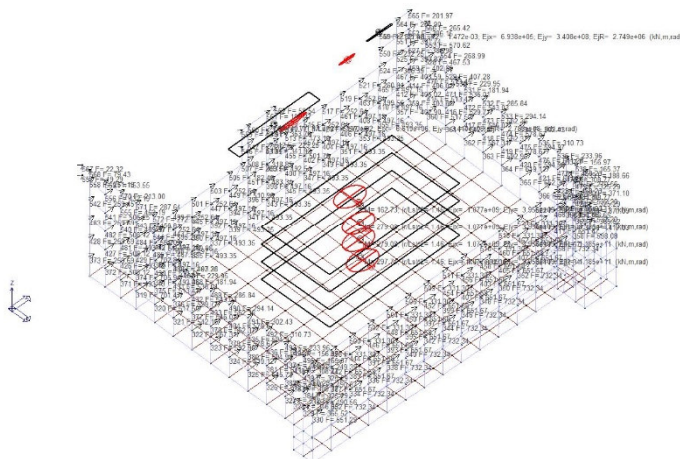


Figura 37 - CDC_006_CDCEd dinamico SLU alfa90 ecc +

CARICHE 007 CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)

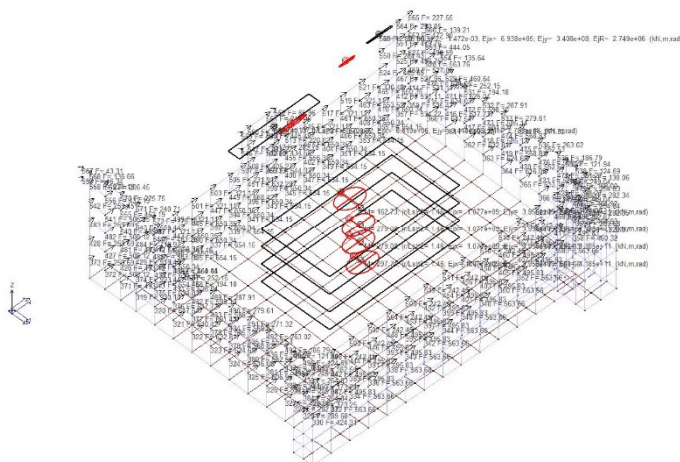


Figura 38 - CDC_007_CDCEd dinamico SLD alfa90 ecc -



CARICHI 008) CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)

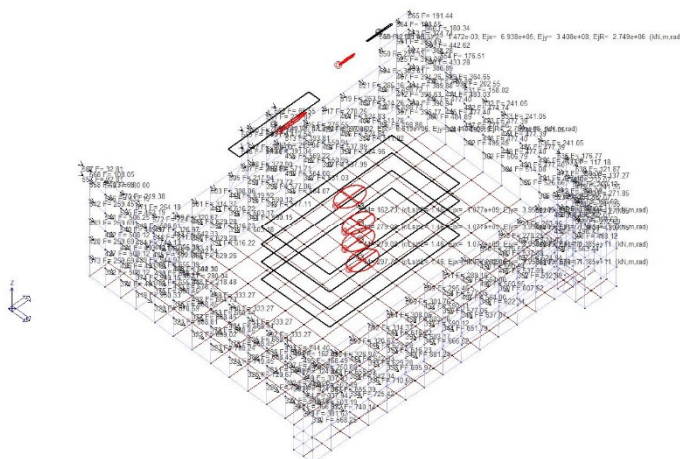


Figura 39 - CDC_008_CDCEd dinamico SLD alfa00 ecc +

CARICHI 009) CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)

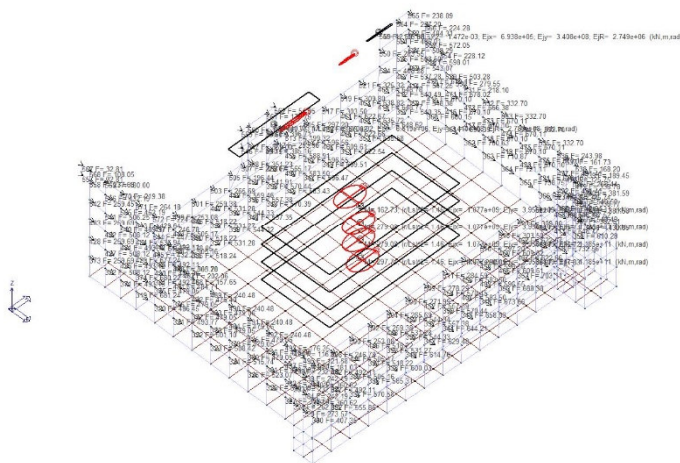


Figura 40 - CDC_009_CDCEd dinamico SLD alfa00 ecc -



CARICHI 010) CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)

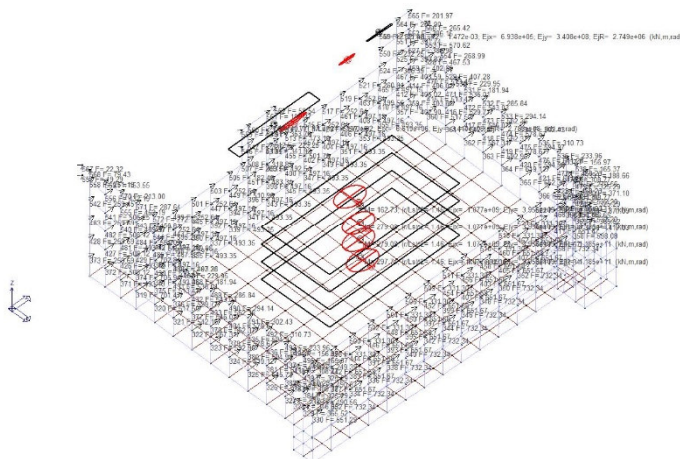


Figura 41 - CDC_010_CDCEd dinamico SLD alfa90 ecc +

CARICHI 011) CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)

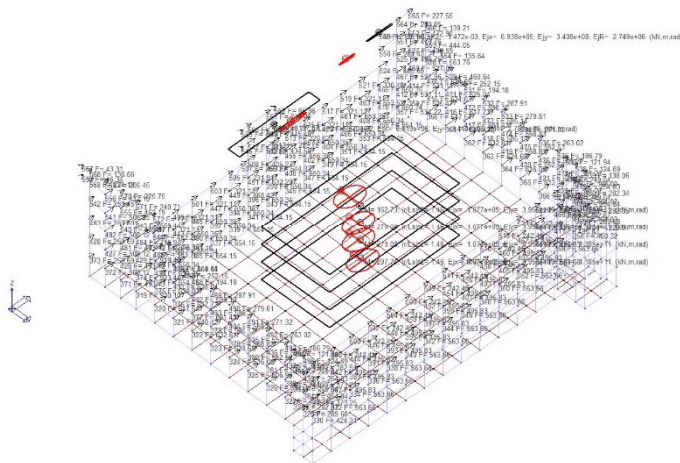


Figura 42 - CDC_011_CDCEd dinamico SLD alfa90 ecc -

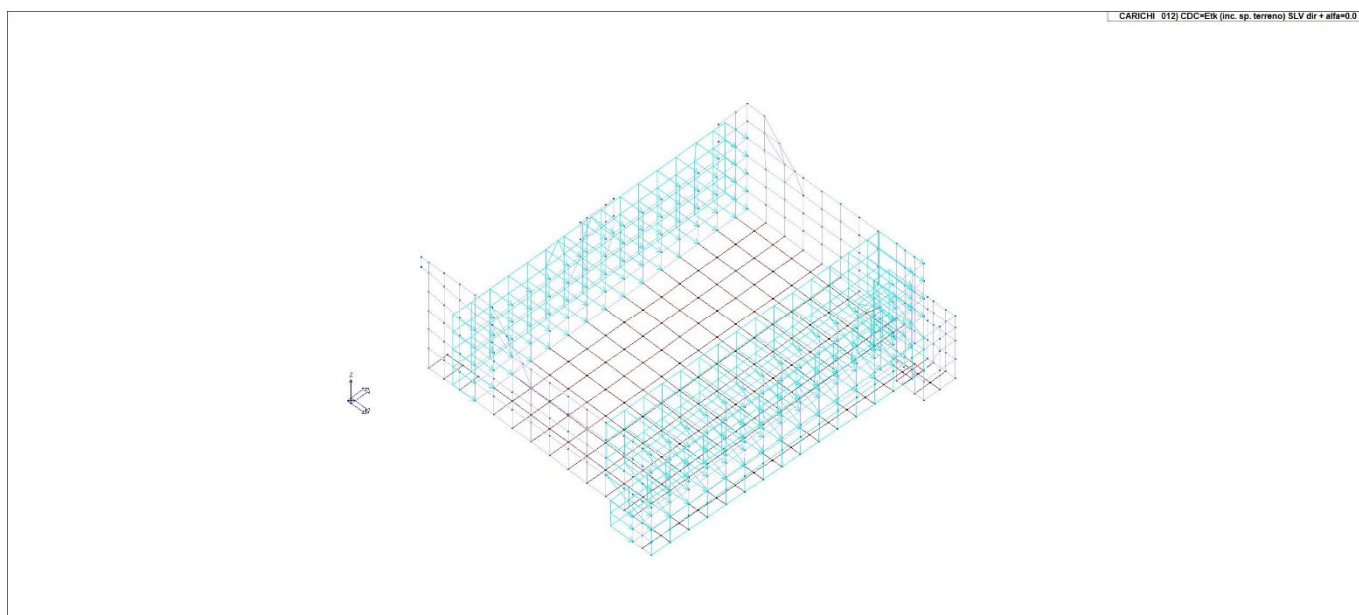


Figura 43 - CDC_012_CDCEtk inc sp terreno SLV dir + alfa00

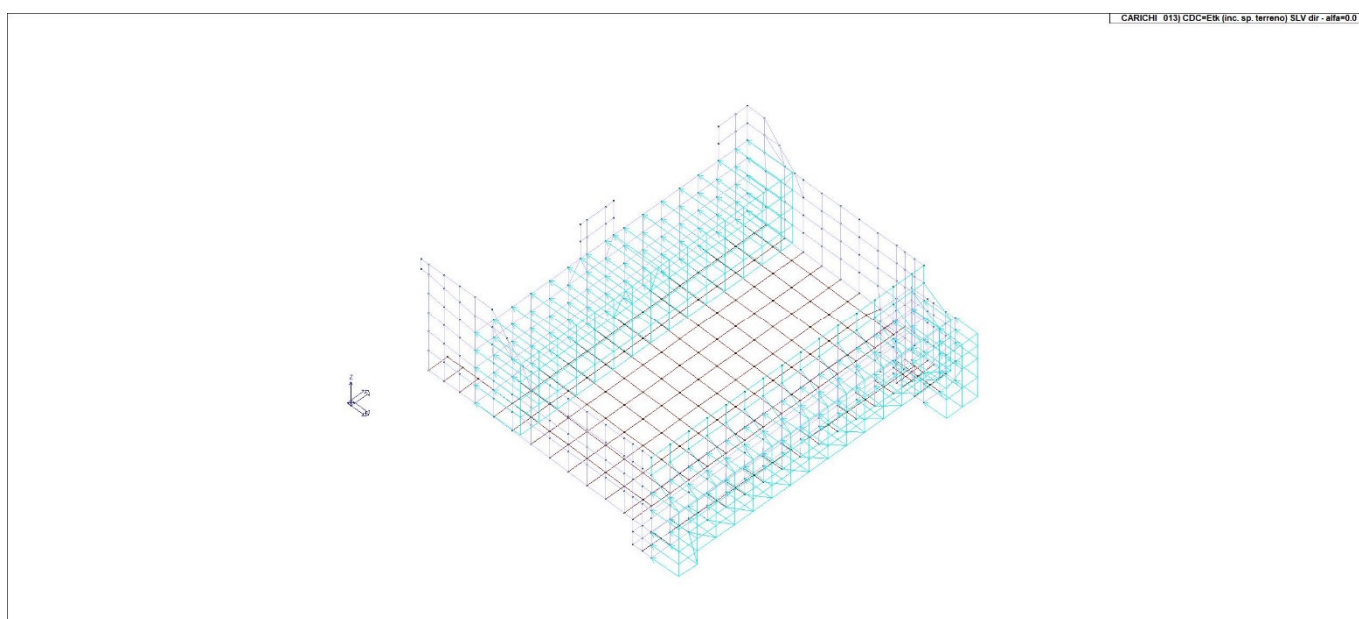


Figura 44 - CDC_013_CDCEtk inc sp terreno SLV dir - alfa00

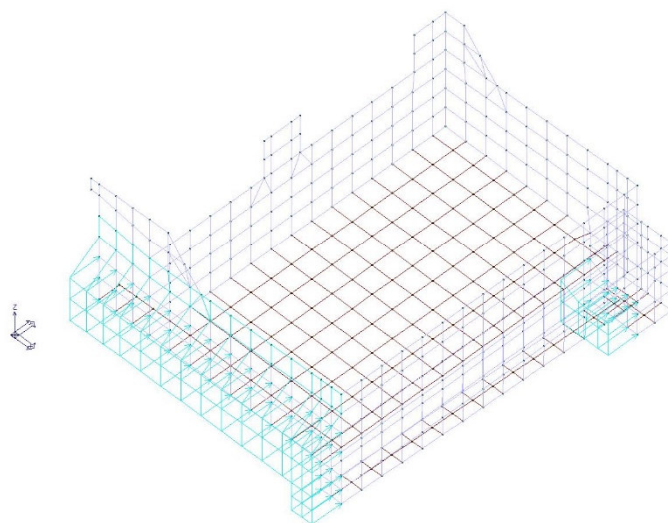


Figura 45 - CDC_014_CDCetk inc sp terreno SLV dir + alfa90

CARICHE 015 CDC=Etik (inc. sp. terreno) SLV dir - alfa=90.00

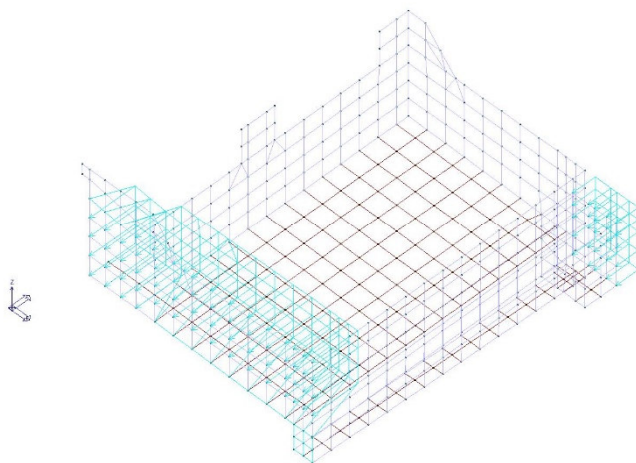


Figura 46 - CDC_015_CDCetk inc sp terreno SLV dir - alfa90



CARICHE 016) CDC=Etik (inc. sp. terreno) SLD dir + alfa=0.0

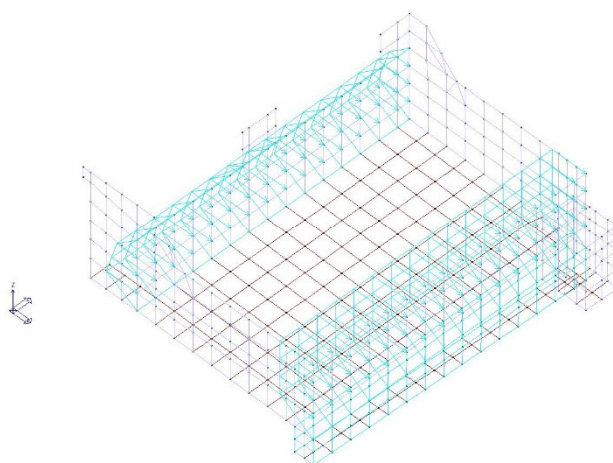


Figura 47 - CDC_016_CDCEtk inc sp terreno SLD dir + alfa00

CARICHE 017) CDC=Etik (inc. sp. terreno) SLD dir - alfa=0.0

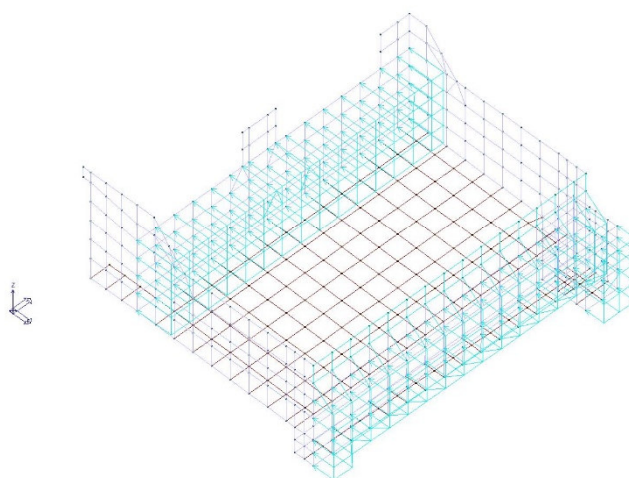


Figura 48 - CDC_017_CDCEtk inc sp terreno SLD dir - alfa00

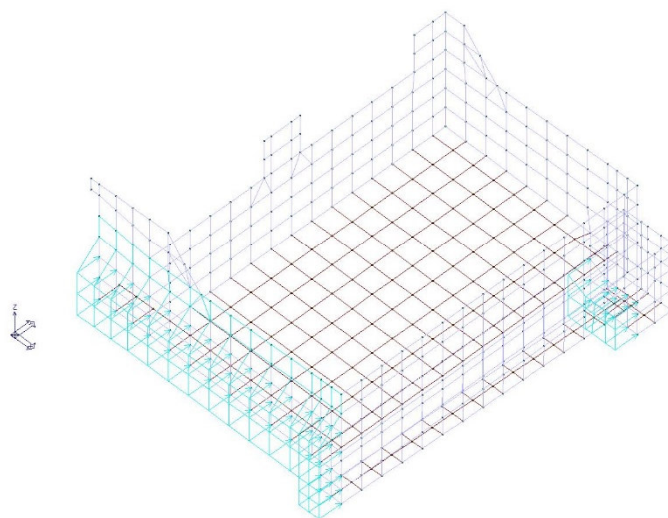


Figura 49 - CDC_018_CDCetk inc sp terreno SLD dir + alfa90

CARICHE 019 CDC=EBk (inc. sp. terreno) SLD dir - alfa=90.00

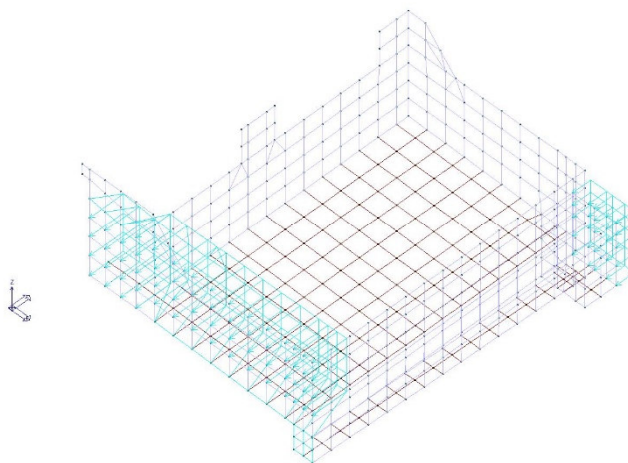


Figura 50 - CDC_019_CDCetk inc sp terreno SLD dir - alfa90



DEFINIZIONE DELLE COMBINAZIONI LEGENDA TABELLA COMBINAZIONI DI CARICO

Il programma combina i diversi tipi di casi di carico (CDC) secondo le regole previste dalla normativa vigente. Le combinazioni previste sono destinate al controllo di sicurezza della struttura ed alla verifica degli spostamenti e delle sollecitazioni.

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

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

Combinazione fondamentale SLU

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

Combinazione caratteristica (rara) SLE

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

Combinazione frequente SLE

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

Combinazione quasi permanente SLE

$$G1 + G2 + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \psi 23 \cdot Qk3 + \dots$$

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

$$E + G1 + G2 + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \dots$$

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

$$G1 + G2 + Ad + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \dots$$

Dove:

NTC 2018 Tabella 2.5.1

Destinazione d'uso/azione	$\psi 0$	$\psi 1$	$\psi 2$
Categoria A residenziali	0,70	0,50	0,30
Categoria B uffici	0,70	0,50	0,30
Categoria C ambienti suscettibili di affollamento	0,70	0,70	0,60
Categoria D ambienti ad uso commerciale	0,70	0,70	0,60
Categoria E biblioteche, archivi, magazzini,...	1,00	0,90	0,80
Categoria F Rimesse e parcheggi (autoveicoli $\leq 30kN$)	0,70	0,70	0,60
Categoria G Rimesse e parcheggi (autoveicoli $> 30kN$)	0,70	0,50	0,30
Categoria H Coperture	0,00	0,00	0,00
Vento	0,60	0,20	0,00
Neve a quota ≤ 1000 m	0,50	0,20	0,00
Neve a quota > 1000 m	0,70	0,50	0,20
Variazioni Termiche	0,60	0,50	0,00

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

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



NTC 2018 Tabella 2.6.1

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

Cmb	Tipo	Sigla Id	effetto P-delta
1	SLU	Comb. SLU A1 1	
2	SLU	Comb. SLU A1 2	
3	SLE(r)	Comb. SLE(rara) 3	
4	SLE(f)	Comb. SLE(freq.) 4	
5	SLE(p)	Comb. SLE(perm.) 5	
6	SLU	Comb. SLU A1 (SLV sism.) 6	
7	SLU	Comb. SLU A1 (SLV sism.) 7	
8	SLU	Comb. SLU A1 (SLV sism.) 8	
9	SLU	Comb. SLU A1 (SLV sism.) 9	
10	SLU	Comb. SLU A1 (SLV sism.) 10	
11	SLU	Comb. SLU A1 (SLV sism.) 11	
12	SLU	Comb. SLU A1 (SLV sism.) 12	
13	SLU	Comb. SLU A1 (SLV sism.) 13	
14	SLU	Comb. SLU A1 (SLV sism.) 14	
15	SLU	Comb. SLU A1 (SLV sism.) 15	
16	SLU	Comb. SLU A1 (SLV sism.) 16	
17	SLU	Comb. SLU A1 (SLV sism.) 17	
18	SLU	Comb. SLU A1 (SLV sism.) 18	
19	SLU	Comb. SLU A1 (SLV sism.) 19	
20	SLU	Comb. SLU A1 (SLV sism.) 20	
21	SLU	Comb. SLU A1 (SLV sism.) 21	
22	SLE(sis)	Comb. SLE (SLD Danno sism.) 22	
23	SLE(sis)	Comb. SLE (SLD Danno sism.) 23	
24	SLE(sis)	Comb. SLE (SLD Danno sism.) 24	
25	SLE(sis)	Comb. SLE (SLD Danno sism.) 25	
26	SLE(sis)	Comb. SLE (SLD Danno sism.) 26	
27	SLE(sis)	Comb. SLE (SLD Danno sism.) 27	
28	SLE(sis)	Comb. SLE (SLD Danno sism.) 28	
29	SLE(sis)	Comb. SLE (SLD Danno sism.) 29	
30	SLE(sis)	Comb. SLE (SLD Danno sism.) 30	
31	SLE(sis)	Comb. SLE (SLD Danno sism.) 31	
32	SLE(sis)	Comb. SLE (SLD Danno sism.) 32	
33	SLE(sis)	Comb. SLE (SLD Danno sism.) 33	
34	SLE(sis)	Comb. SLE (SLD Danno sism.) 34	
35	SLE(sis)	Comb. SLE (SLD Danno sism.) 35	
36	SLE(sis)	Comb. SLE (SLD Danno sism.) 36	
37	SLE(sis)	Comb. SLE (SLD Danno sism.) 37	
38	SLE(sis)	Comb. SLE (SLD Danno sism.) 38	
39	SLE(sis)	Comb. SLE (SLD Danno sism.) 39	
40	SLE(sis)	Comb. SLE (SLD Danno sism.) 40	
41	SLE(sis)	Comb. SLE (SLD Danno sism.) 41	
42	SLE(sis)	Comb. SLE (SLD Danno sism.) 42	
43	SLE(sis)	Comb. SLE (SLD Danno sism.) 43	
44	SLE(sis)	Comb. SLE (SLD Danno sism.) 44	
45	SLE(sis)	Comb. SLE (SLD Danno sism.) 45	
46	SLE(sis)	Comb. SLE (SLD Danno sism.) 46	



Cmb	Tipo	Sigla Id	effetto P-delta
47	SLE(sis)	Comb. SLE (SLD Danno sism.) 47	
48	SLE(sis)	Comb. SLE (SLD Danno sism.) 48	
49	SLE(sis)	Comb. SLE (SLD Danno sism.) 49	
50	SLE(sis)	Comb. SLE (SLD Danno sism.) 50	
51	SLE(sis)	Comb. SLE (SLD Danno sism.) 51	
52	SLE(sis)	Comb. SLE (SLD Danno sism.) 52	
53	SLE(sis)	Comb. SLE (SLD Danno sism.) 53	
54	SLE(sis)	Comb. SLE (SLD Danno sism.) 54	
55	SLE(sis)	Comb. SLE (SLD Danno sism.) 55	
56	SLE(sis)	Comb. SLE (SLD Danno sism.) 56	
57	SLE(sis)	Comb. SLE (SLD Danno sism.) 57	
58	SLE(sis)	Comb. SLE (SLD Danno sism.) 58	
59	SLE(sis)	Comb. SLE (SLD Danno sism.) 59	
60	SLE(sis)	Comb. SLE (SLD Danno sism.) 60	
61	SLE(sis)	Comb. SLE (SLD Danno sism.) 61	
62	SLE(sis)	Comb. SLE (SLD Danno sism.) 62	
63	SLE(sis)	Comb. SLE (SLD Danno sism.) 63	
64	SLE(sis)	Comb. SLE (SLD Danno sism.) 64	
65	SLE(sis)	Comb. SLE (SLD Danno sism.) 65	
66	SLE(sis)	Comb. SLE (SLD Danno sism.) 66	
67	SLE(sis)	Comb. SLE (SLD Danno sism.) 67	
68	SLE(sis)	Comb. SLE (SLD Danno sism.) 68	
69	SLE(sis)	Comb. SLE (SLD Danno sism.) 69	

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
1	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0									
2	1.00	0.80	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0									
3	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0									
4	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0									
5	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0									
6	1.00	1.00	1.00	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
	0.30	0.0	0.0	0.0	0.0									
7	1.00	1.00	1.00	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.30
	0.0	0.0	0.0	0.0	0.0									
8	1.00	1.00	1.00	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
	0.30	0.0	0.0	0.0	0.0									
9	1.00	1.00	1.00	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30
	0.0	0.0	0.0	0.0	0.0									
10	1.00	1.00	1.00	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
	0.30	0.0	0.0	0.0	0.0									
11	1.00	1.00	1.00	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.30
	0.0	0.0	0.0	0.0	0.0									
12	1.00	1.00	1.00	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
	0.30	0.0	0.0	0.0	0.0									
13	1.00	1.00	1.00	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30
	0.0	0.0	0.0	0.0	0.0									
14	1.00	1.00	1.00	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	1.00	0.0	0.0	0.0	0.0									
15	1.00	1.00	1.00	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.30	1.00
	0.0	0.0	0.0	0.0	0.0									
16	1.00	1.00	1.00	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	1.00	0.0	0.0	0.0	0.0									
17	1.00	1.00	1.00	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00
	0.0	0.0	0.0	0.0	0.0									
18	1.00	1.00	1.00	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	1.00	0.0	0.0	0.0	0.0									
19	1.00	1.00	1.00	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.30	1.00
	0.0	0.0	0.0	0.0	0.0									
20	1.00	1.00	1.00	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	1.00	0.0	0.0	0.0	0.0									
21	1.00	1.00	1.00	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00
	0.0	0.0	0.0	0.0	0.0									



Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
22	1.00 0.0	1.00 0.0	1.00 0.30	0.0 0.0	0.0 1.00	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.0
23	1.00 0.0	1.00 0.30	1.00 0.0	0.0 0.0	0.0 1.00	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0
24	1.00 0.0	1.00 0.0	1.00 0.30	0.0 1.00	0.0 0.0	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.0
25	1.00 0.0	1.00 0.30	1.00 0.0	0.0 1.00	0.0 0.0	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0
26	1.00 0.0	1.00 0.0	1.00 0.30	0.0 0.0	0.0 1.00	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0
27	1.00 0.0	1.00 0.30	1.00 0.0	0.0 0.0	0.0 1.00	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0
28	1.00 0.0	1.00 0.0	1.00 0.30	0.0 1.00	0.0 0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0
29	1.00 0.0	1.00 0.30	1.00 0.0	0.0 1.00	0.0 0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0
30	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.0	0.0 0.30	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.0
31	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.0	0.0 0.30	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.0
32	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.30	0.0 0.0	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.0
33	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.30	0.0 0.0	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.0
34	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.0	0.0 0.30	0.0	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0
35	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.30	0.0 0.0	0.0	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0
36	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.0	0.0 0.30	0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0
37	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.30	0.0 0.0	0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0
38	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.0	0.0 0.30	0.0	0.0	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0
39	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.30	0.0 0.0	0.0	0.0	-1.00	0.0	0.0	0.30	0.0	0.0	0.0
40	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.0	0.0 0.30	0.0	0.0	1.00	0.0	0.0	-0.30	0.0	0.0	0.0
41	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.30	0.0 0.0	0.0	0.0	1.00	0.0	0.0	0.30	0.0	0.0	0.0
42	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.0	0.0 0.30	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0
43	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.0	0.0 0.30	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0
44	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.30	0.0 0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0
45	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.30	0.0 0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0
46	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.0	0.0 0.30	0.0	0.0	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0
47	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.30	0.0 0.0	0.0	0.0	0.0	-1.00	0.30	0.0	0.0	0.0	0.0
48	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.0	0.0 0.30	0.0	0.0	0.0	1.00	-0.30	0.0	0.0	0.0	0.0
49	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.30	0.0 0.0	0.0	0.0	0.0	1.00	0.30	0.0	0.0	0.0	0.0
50	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.0	0.0 0.30	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0
51	1.00 0.0	1.00 0.0	1.00 1.00	0.0 0.30	0.0 0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0	0.0	0.0
52	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.0	0.0 0.30	0.0	0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0
53	1.00 0.0	1.00 1.00	1.00 0.0	0.0 0.30	0.0 0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0
54	1.00 0.0	1.00 0.0	1.00 0.30	0.0 0.0	0.0 1.00	0.0	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0
55	1.00 0.0	1.00 0.0	1.00 0.30	0.0 1.00	0.0 0.0	0.0	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0
56	1.00 0.0	1.00 0.30	1.00 0.0	0.0 0.0	0.0 1.00	0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0
57	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0



Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
	0.0	0.30	0.0	1.00	0.0									
58	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0
	0.0	0.0	0.30	0.0	1.00									
59	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	1.00	0.0	0.0	0.0	0.0
	0.0	0.0	0.30	1.00	0.0									
60	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.30	-1.00	0.0	0.0	0.0	0.0
	0.0	0.30	0.0	0.0	1.00									
61	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.30	1.00	0.0	0.0	0.0	0.0
	0.0	0.30	0.0	1.00	0.0									
62	1.00	1.00	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0
	0.0	0.0	0.30	0.0	1.00									
63	1.00	1.00	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	1.00	0.0	0.0	0.0
	0.0	0.0	0.30	1.00	0.0									
64	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0	-1.00	0.0	0.0	0.0
	0.0	0.30	0.0	0.0	1.00									
65	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0	1.00	0.0	0.0	0.0
	0.0	0.30	0.0	1.00	0.0									
66	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0
	0.0	0.0	0.30	0.0	1.00									
67	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0	0.0	0.0
	0.0	0.0	0.30	1.00	0.0									
68	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0
	0.0	0.30	0.0	0.0	1.00									
69	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0
	0.0	0.30	0.0	1.00	0.0									



AZIONE SISMICA

VALUTAZIONE DELL' AZIONE SISMICA

L'azione sismica sulle costruzioni è valutata a partire dalla "pericolosità sismica di base", in condizioni ideali di sito di riferimento rigido con superficie topografica orizzontale.

Allo stato attuale, la pericolosità sismica su reticolo di riferimento nell'intervallo di riferimento è fornita dai dati pubblicati sul sito <http://esse1.mi.ingv.it/>. Per punti non coincidenti con il reticolo di riferimento e periodi di ritorno non contemplati direttamente si opera come indicato nell' allegato alle NTC (rispettivamente media pesata e interpolazione).

L' azione sismica viene definita in relazione ad un periodo di riferimento V_r che si ricava, per ciascun tipo di costruzione, moltiplicandone la vita nominale per il coefficiente d'uso (vedi tabella Parametri della struttura). Fissato il periodo di riferimento V_r e la probabilità di superamento P_{ver} associata a ciascuno degli stati limite considerati, si ottiene il periodo di ritorno T_r e i relativi parametri di pericolosità sismica (vedi tabella successiva):

a_g : accelerazione orizzontale massima del terreno;

F_o : valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale;

T^*c : periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale;

Parametri della struttura					
Classe d'uso	Vita V_n [anni]	Coeff. Uso	Periodo V_r [anni]	Tipo di suolo	Categoria topografica
III	50.0	1.5	75.0	C	T1

Individuati su reticolo di riferimento i parametri di pericolosità sismica si valutano i parametri spettrali riportati in tabella:

S è il coefficiente che tiene conto della categoria di sottosuolo e delle condizioni topografiche mediante la relazione seguente $S = S_s \cdot S_t$ (3.2.3)

F_o è il fattore che quantifica l'amplificazione spettrale massima, su sito di riferimento rigido orizzontale

F_v è il fattore che quantifica l'amplificazione spettrale massima verticale, in termini di accelerazione orizzontale massima del terreno a_g su sito di riferimento rigido orizzontale

T_b è il periodo corrispondente all'inizio del tratto dello spettro ad accelerazione costante.

T_c è il periodo corrispondente all'inizio del tratto dello spettro a velocità costante.

T_d è il periodo corrispondente all'inizio del tratto dello spettro a spostamento costante.

Lo spettro di risposta elastico in accelerazione della componente orizzontale del moto sismico, S_e , è definito dalle seguenti espressioni:

$$\begin{aligned}
 0 \leq T < T_b & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left[\frac{T}{T_b} + \frac{1}{\eta \cdot F_o} \left(1 - \frac{T}{T_b} \right) \right] \\
 T_b \leq T < T_c & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \\
 T_c \leq T < T_d & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left(\frac{T_c}{T} \right) \\
 T_d \leq T & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left(\frac{T_c \cdot T_d}{T^2} \right)
 \end{aligned}$$

Dove per sottosuolo di categoria **A** i coefficienti S_s e C_c valgono 1; mentre per le categorie di sottosuolo B, C, D, E i coefficienti S_s e C_c vengono calcolati mediante le espressioni riportate nella seguente Tabella



Categoria sottosuolo	S_s	C_c
A	1,00	1,00
B	$1,00 \leq 1,40 - 0,40 \cdot F_o \cdot \frac{a_g}{g} \leq 1,20$	$1,10 \cdot (T_c^*)^{-0,20}$
C	$1,00 \leq 1,70 - 0,60 \cdot F_o \cdot \frac{a_g}{g} \leq 1,50$	$1,05 \cdot (T_c^*)^{-0,33}$
D	$0,90 \leq 2,40 - 1,50 \cdot F_o \cdot \frac{a_g}{g} \leq 1,80$	$1,25 \cdot (T_c^*)^{-0,50}$
E	$1,00 \leq 2,00 - 1,10 \cdot F_o \cdot \frac{a_g}{g} \leq 1,60$	$1,15 \cdot (T_c^*)^{-0,40}$

Per tenere conto delle condizioni topografiche e in assenza di specifiche analisi di risposta sismica locale, si utilizzano i valori del coefficiente topografico S_T riportati nella seguente Tabella

Categoria topografica	Ubicazione dell'opera o dell'intervento	S_T
T1	-	1,0
T2	In corrispondenza della sommità del pendio	1,2
T3	In corrispondenza della cresta di un rilievo con pendenza media minore o uguale a 30°	1,2
T4	In corrispondenza della cresta di un rilievo con pendenza media maggiore di 30°	1,4

Lo spettro di risposta elastico in accelerazione della componente verticale del moto sismico, S_{ve} , è definito dalle espressioni:

$$\begin{aligned}
 0 \leq T < T_B & \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left[\frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left(1 - \frac{T}{T_B} \right) \right] \\
 T_B \leq T < T_C & \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \\
 T_C \leq T < T_D & \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left(\frac{T_C}{T} \right) \\
 T_D \leq T & \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left(\frac{T_C \cdot T_D}{T^2} \right)
 \end{aligned}$$

I valori di S_s , T_B , T_C e T_D , sono riportati nella seguente Tabella

Categoria di sottosuolo	S_s	T_B	T_C	T_D
A, B, C, D, E	1,0	0,05 s	0,15 s	1,0 s

Id nodo	Longitudine	Latitudine	Distanza Km
Loc.	13.677	43.123	
23201	13.627	43.085	5.948
23202	13.695	43.085	4.503
22980	13.696	43.135	1.958
22979	13.627	43.135	4.324

SL	Pver	Tr	ag	Fo	T*c
		Anni	g		sec
SLO	81.0	45.2	0.063	2.439	0.290



SL	Pver	Tr	ag	Fo	T*c
SLD	63.0	75.4	0.080	2.432	0.307
SLV	10.0	711.8	0.210	2.462	0.333
SLC	5.0	1462.2	0.273	2.473	0.342

SL	ag	S	Fo	Fv	Tb	Tc	Td
	g				sec	sec	sec
SLO	0.063	1.500	2.439	0.826	0.153	0.458	1.852
SLD	0.080	1.500	2.432	0.927	0.159	0.476	1.919
SLV	0.210	1.390	2.462	1.523	0.168	0.503	2.440
SLC	0.273	1.295	2.473	1.744	0.171	0.512	2.692

Modo	Frequenza	Periodo	X M efficace x g	%	Y M efficace x g	%	Z M efficace x g	%	RZ M efficace x g	%
	1/sec	sec	daN		daN		daN		daN cm2	
1	6.82	0.15	6.871e+04	60	48.5	0	5996.6	5	3.483e+05	7
2	7.25	0.14	7821.7	6	3174.1	2	45.1	0	1.493e+06	30
3	7.94	0.13	9.16e-02	0	5.174e+04	45	1528.7	1	2.046e+06	42
4	10.14	0.10	3157.4	2	6816.7	5	1.078e+04	9	7.719e+04	1
5	10.69	0.09	1129.6	0	2.809e+04	24	181.3	0	7.383e+05	15
6	12.60	0.08	6421.9	5	192.1	0	3.361e+04	29	6.180e+04	1

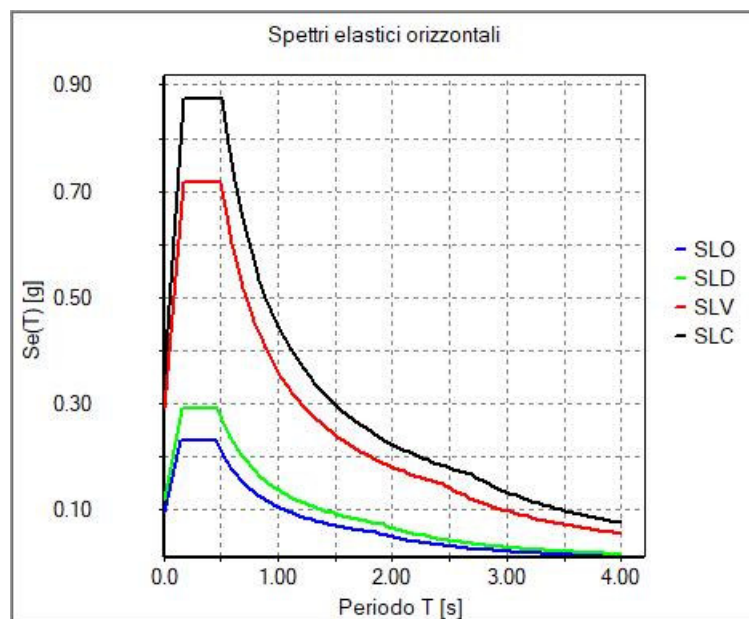


Figura 51 - DIA_SPETTRI_ELASTICI_O

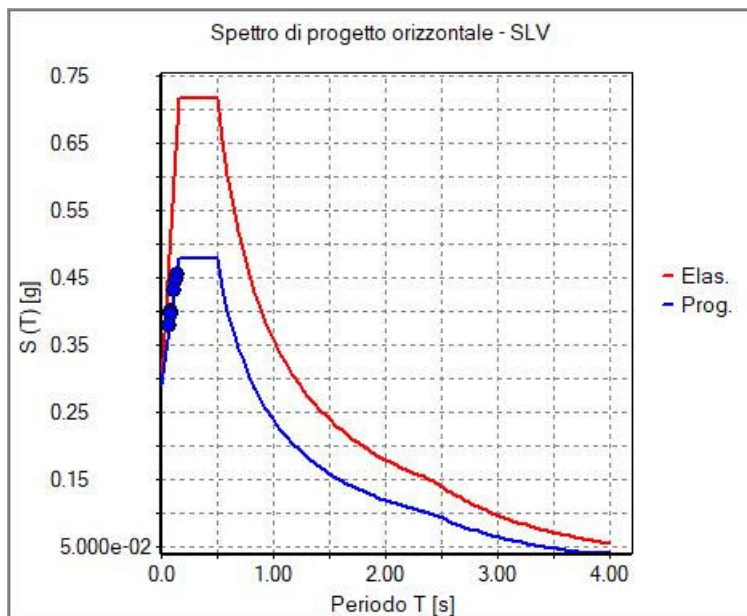


Figura 52 - DIA_SPETTRI_PROGETTO_SLV_O

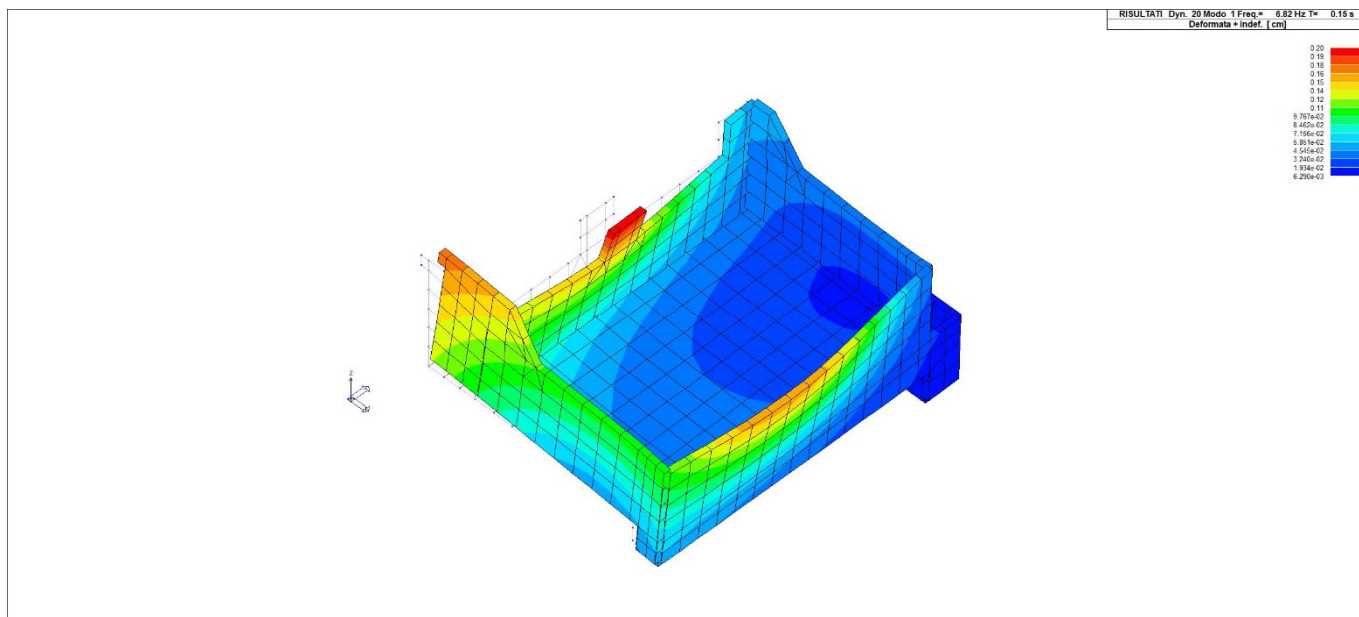


Figura 53 - INPSIS_001_FORME MODALI

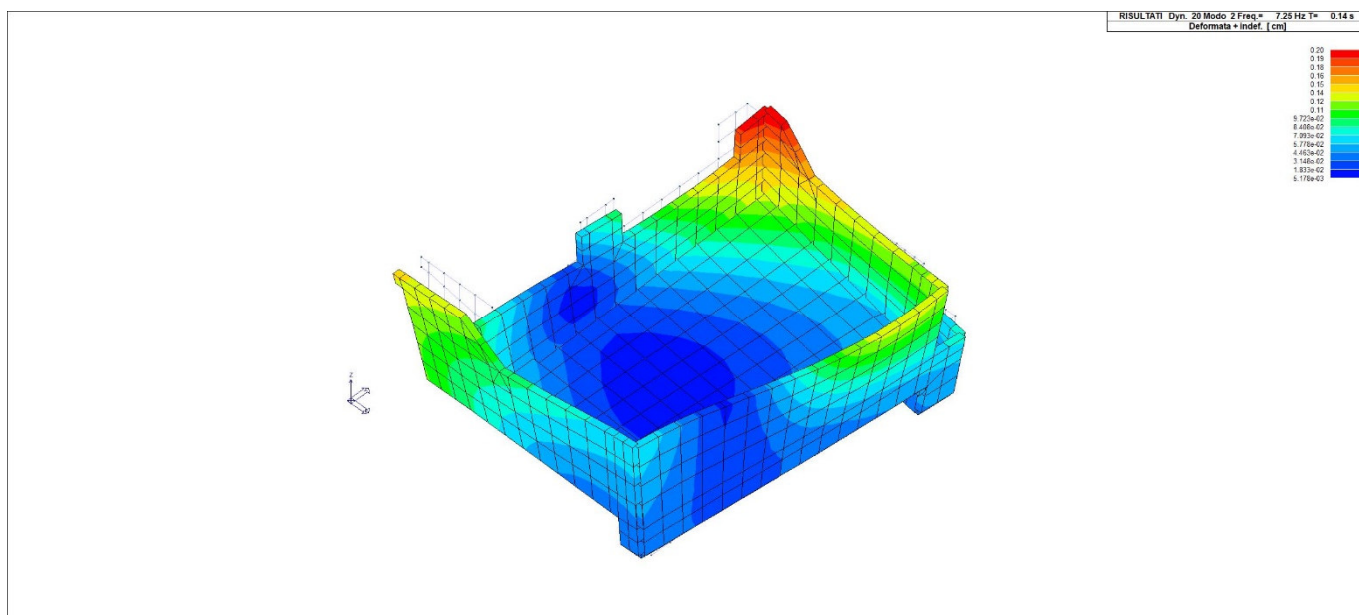


Figura 54 - INPSIS_002_FORME MODALI

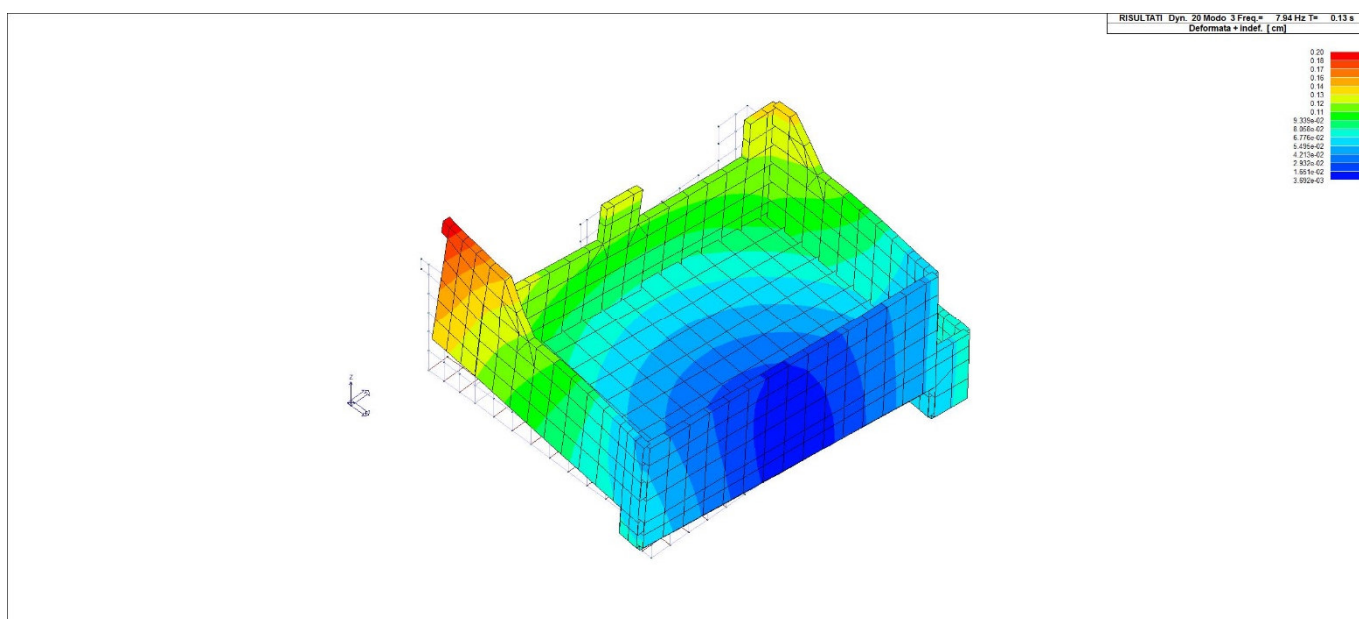


Figura 55 - INPSIS_003_FORME MODALI

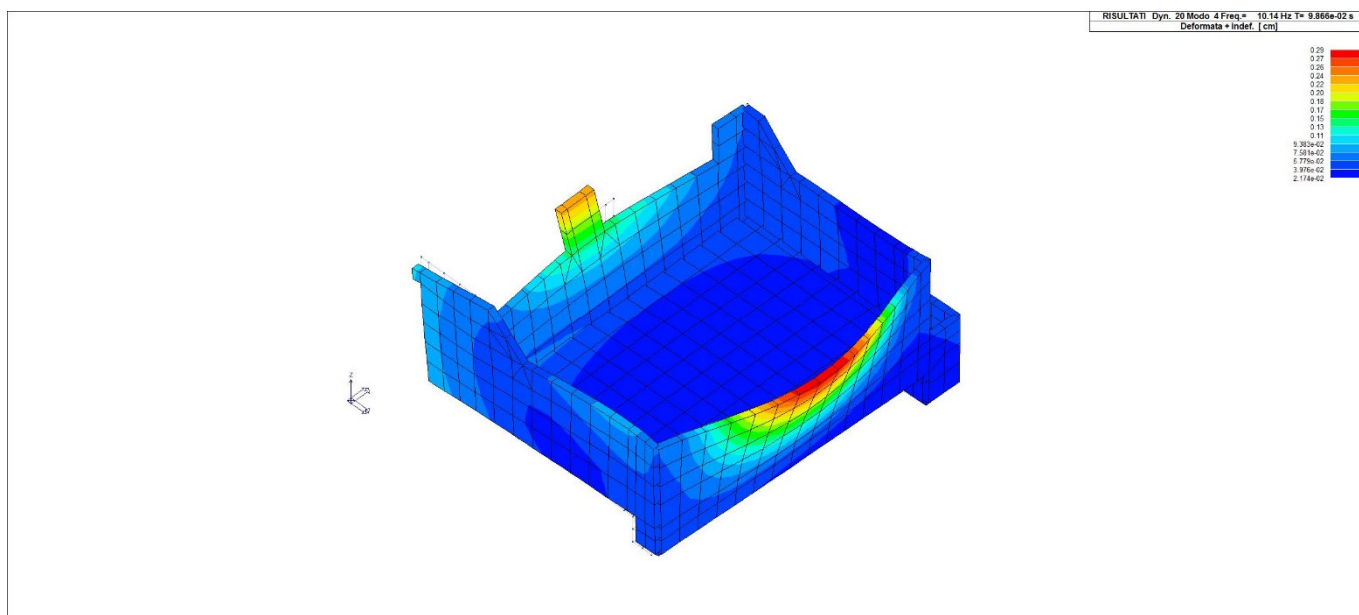


Figura 56 - INPSIS_004_FORME MODALI

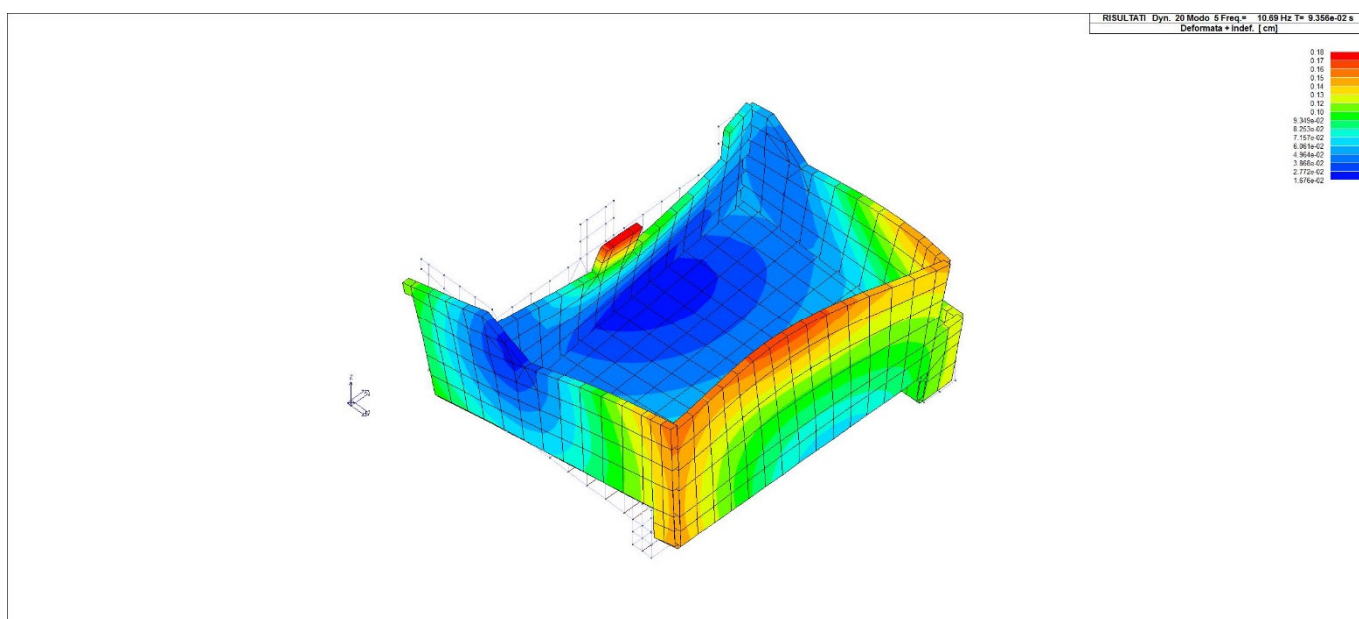


Figura 57 - INPSIS_005_FORME MODALI

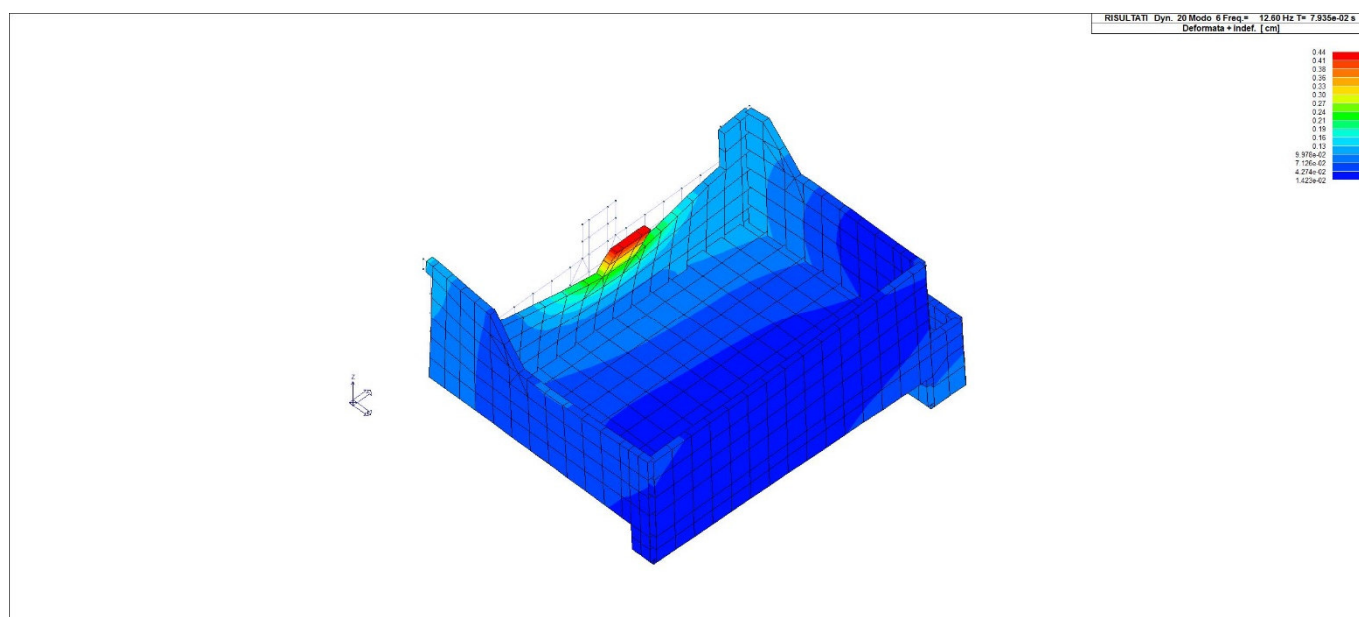


Figura 58 - INPSIS_006_FORME MODALI



RISULTATI ANALISI SISMICHE

LEGENDA TABELLA ANALISI SISMICHE

Il programma consente l'analisi di diverse configurazioni sismiche.

Sono previsti, infatti, i seguenti casi di carico:

9. Esk caso di carico sismico con analisi statica equivalente

10. Edk caso di carico sismico con analisi dinamica

Ciascun caso di carico è caratterizzato da un angolo di ingresso e da una configurazione di masse determinante la forza sismica complessiva (si rimanda al capitolo relativo ai casi di carico per chiarimenti inerenti questo aspetto).

Nella colonna Note, in funzione della norma in uso sono riportati i parametri fondamentali che caratterizzano l'azione sismica: in particolare possono essere presenti i seguenti valori:

Angolo di ingresso	di	Angolo di ingresso dell'azione sismica orizzontale
Fattore di importanza	di	Fattore di importanza dell'edificio, in base alla categoria di appartenenza
Zona sismica		Zona sismica
Accelerazione ag		Accelerazione orizzontale massima sul suolo
Categoria suolo		Categoria di profilo stratigrafico del suolo di fondazione
Fattore q		Fattore di struttura/di comportamento. Dipendente dalla tipologia strutturale
Amplificazione ND		Coefficiente di amplificazione q/q_{ND} delle azioni sismiche (solo per elementi progettati in campo non dissipativo)
Fattore di sito S		Fattore dipendente dalla stratigrafia e dal profilo topografico
Classe di duttilità CD		Classe di duttilità della struttura – "A" duttilità alta, "B" duttilità bassa
Fattore SLD	riduz.	Fattore di riduzione dello spettro elastico per lo stato limite di danno
Periodo T1	proprio	Periodo proprio di vibrazione della struttura
Coefficiente Lambda		Coefficiente dipendente dal periodo proprio T1 e dal numero di piani della struttura
Ordinata Sd(T1)	spettro	Valore delle ordinate dello spettro di progetto per lo stato limite ultimo, componente orizzontale (verticale Svd)
Ordinata Se(T1)	spettro	Valore delle ordinate dello spettro elastico ridotta del fattore SLD per lo stato limite di danno, componente orizzontale (verticale Sve)
Ordinata S (Tb-Tc)	spettro	Valore dell'ordinata dello spettro in uso nel tratto costante
N° di modi considerati		Numero di modi di vibrare della struttura considerati nell'analisi dinamica

Nel caso di elementi progettati in campo non dissipativo vengono adottate le sollecitazioni calcolate con un fattore q_{ND} ricavato come da 7.3.2 in funzione del fattore di comportamento q utilizzato per la struttura: $1 < q_{ND} = 2/3 * q < 1.5$

Il coefficiente di amplificazione delle azioni sismiche rispetto alle azioni calcolate con il fattore di comportamento globale viene indicato nelle relative tabelle.

Per ciascun caso di carico sismico viene riportato l'insieme di dati sotto riportati (le masse sono espresse in unità di



forza):

- a) analisi sismica statica equivalente:
 - quota, posizione del centro di applicazione e azione orizzontale risultante, posizione del baricentro delle rigidezze, rapporto r/L_s (per strutture a nucleo), indici di regolarità e/r secondo EC8 4.2.3.2
 - azione sismica complessiva
- b) analisi sismica dinamica con spettro di risposta:
 - quota, posizione del centro di massa e massa risultante, posizione del baricentro delle rigidezze, rapporto r/L_s (per strutture a nucleo), indici di regolarità e/r secondo EC8 4.2.3.2
 - frequenza, periodo, accelerazione spettrale, massa eccitata nelle tre direzioni globali per tutti i modi
 - massa complessiva ed aliquota di massa complessiva eccitata.

Per ciascuna combinazione sismica definita SLD o SLO viene riportato il livello di deformazione ϵ_T (dr) degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso anche in unità $1000 \cdot \epsilon_T/h$ da confrontare direttamente con i valori forniti nella norma (es. 5 per tamponature fragili, 7.5 per tamponature duttili, 10.0 per edifici con tamponamenti collegati elasticamente, 2 per edifici in muratura ordinaria, 3 per edifici in muratura armata, 2.5 per edifici in muratura confinata).

Note:

- I valori riportati sono già amplificati per un eventuale fattore q_{SLD}
- Per SLO i valori devono essere inferiori ai $2/3$ dei limiti sopra citati

Per gli edifici sismicamente isolati si riportano di seguito le verifiche condotte sui dispositivi di isolamento. Le verifiche sono effettuate secondo la circolare n.7/2019 del C.S.LL.PP nelle combinazioni in SLC come previsto dal DM 17-01-2018. Per ogni combinazione è riportato il codice di verifica ed i valori utilizzati per la verifica: spostamento d_E , area ridotta e dimensione A_2 , azione verticale, deformazioni di taglio dell'elastomero e tensioni nell'acciaio.

In particolare la tabella, per ogni combinazione di calcolo, riporta:

Nodo	Nodo di appoggio dell' isolatore
Cmb	Combinazione oggetto della verifica
Verif.	Codice di verifica ok – verifica positiva, NV – verifica negativa, ND – verifica non completata
d_E	Spostamento relativo tra le due facce combinato con la regola del 30%
Ang fi	Angolo utilizzato per il calcolo dell' area ridotta A_r (per dispositivi circolari)
V	Azione verticale agente
A_r	Area ridotta efficace
Dim A_2	Dimensione utile per il calcolo della deformazione per rotazione
Sig s	Tensione nell' inserto in acciaio
Gam $c(a,s,t)$	Deformazioni di taglio dell' elastomero
Vcr	Carico critico per instabilità

Affinché la verifica sia positiva deve essere:

- 1) $V > 0$
- 2) $Sig s < f_{yk}$
- 3) $Gam t < 5$
- 4) $Gam s < Gam^*$ (caratteristica dell' elastomero)
- 5) $Gam s < 2$
- 6) $V < 0.5 V_{cr}$

CDC	Tipo	Sigla Id	Note
4	Edk	CDC=Ed (dinamico SLU) $\alpha=0.0$ (ecc. +)	
			categoria suolo: C
			fattore di sito $S = 1.390$



CDC	Tipo	Sigla Id	Note
			ordinata spettro (tratto Tb-Tc) = 0.479 g
			angolo di ingresso: 0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.150 s
			fattore q: 1.500
			amplificazione ND (non dissipativi): 1.000
			fattore per spost. mu d: 2.672
			classe di duttilità CD: ND
			numero di modi considerati: 12
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
515.00	1028.66	243.49	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
506.00	1262.12	312.98	1305.98	0.0	-40.35	300.01	1475.37	0.001	1.445	0.851
465.00	270.47	70.75	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
451.00	432.19	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
437.00	462.19	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
423.00	4077.24	336.24	1021.33	0.0	-65.85	300.05	966.91	0.056	0.401	0.084
372.00	259.45	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361.33	506.25	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.67	489.37	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.00	1.627e+04	671.27	962.61	0.0	-65.85	726.50	958.50	1.460	0.101	0.004
279.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271.00	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263.00	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255.00	2.791e+04	722.84	952.76	0.0	-65.85	726.50	958.50	1.460	0.007	0.005
186.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.67	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.33	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.00	2.791e+04	722.82	952.82	0.0	-65.85	726.50	958.50	1.460	0.007	0.005
93.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.33	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.67	493.13	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.00	2.977e+04	742.24	953.19	0.0	-65.85	726.50	958.50	1.460	0.029	0.005
Risulta	1.144e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	6.648	0.150	0.459	6.318e+04	55.2	73.21	6.40e-02	4747.99	4.1	0.0	0.0
2	7.434	0.135	0.442	1.331e+04	11.6	7879.05	6.9	342.95	0.3	0.0	0.0
3	7.959	0.126	0.432	439.01	0.4	4.622e+04	40.4	2591.27	2.3	0.0	0.0
4	10.102	0.099	0.402	3301.51	2.9	6859.23	6.0	1.031e+04	9.0	0.0	0.0
5	10.657	0.094	0.396	1360.34	1.2	2.885e+04	25.2	48.61	4.25e-02	0.0	0.0
6	12.487	0.080	0.381	5338.94	4.7	329.35	0.3	3.252e+04	28.4	0.0	0.0
7	14.460	0.069	0.369	3420.95	3.0	1.164e+04	10.2	2.701e+04	23.6	0.0	0.0
8	15.780	0.063	0.362	8017.94	7.0	1.006e+04	8.8	1.304e+04	11.4	0.0	0.0
9	18.280	0.055	0.353	1.466e+04	12.8	186.67	0.2	2.175e+04	19.0	0.0	0.0
10	19.284	0.052	0.350	953.12	0.8	788.28	0.7	22.63	1.98e-02	0.0	0.0
11	20.428	0.049	0.346	2.08	1.82e-03	720.02	0.6	903.15	0.8	0.0	0.0
12	22.008	0.045	0.342	0.02	2.00e-05	6.75	5.90e-03	733.51	0.6	0.0	0.0
Risulta				1.140e+05		1.136e+05		1.140e+05			
In percentuale				99.60		99.27		99.64			

CDC	Tipo	Sigla Id	Note
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.390



CDC	Tipo	Sigla Id	Note
			ordinata spettro (tratto Tb-Tc) = 0.479 g
			angolo di ingresso: 0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.146 s
			fattore q: 1.500
			amplificazione ND (non dissipativi): 1.000
			fattore per spost. mu d: 2.724
			classe di duttilità CD: ND
			numero di modi considerati: 12
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
515.00	1028.66	243.49	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
506.00	1262.12	312.98	1305.98	0.0	40.35	300.01	1475.37	0.001	1.445	0.851
465.00	270.47	70.75	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
451.00	432.19	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
437.00	462.19	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
423.00	4077.24	336.24	1021.33	0.0	65.85	300.05	966.91	0.056	0.401	0.084
372.00	259.45	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361.33	506.25	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.67	489.37	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.00	1.627e+04	671.27	962.61	0.0	65.85	726.50	958.50	1.460	0.101	0.004
279.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271.00	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263.00	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255.00	2.791e+04	722.84	952.76	0.0	65.85	726.50	958.50	1.460	0.007	0.005
186.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.67	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.33	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.00	2.791e+04	722.82	952.82	0.0	65.85	726.50	958.50	1.460	0.007	0.005
93.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.33	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.67	493.13	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.00	2.977e+04	742.24	953.19	0.0	65.85	726.50	958.50	1.460	0.029	0.005
Risulta	1.144e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	6.853	0.146	0.454	7.409e+04	64.7	210.06	0.2	5157.33	4.5	0.0	0.0
2	7.198	0.139	0.447	2097.77	1.8	2110.49	1.8	1773.05	1.5	0.0	0.0
3	7.945	0.126	0.432	302.52	0.3	5.354e+04	46.8	727.51	0.6	0.0	0.0
4	10.160	0.098	0.402	2946.05	2.6	6577.64	5.7	1.107e+04	9.7	0.0	0.0
5	10.720	0.093	0.396	919.76	0.8	2.741e+04	24.0	382.91	0.3	0.0	0.0
6	12.718	0.079	0.379	7649.97	6.7	104.06	9.09e-02	3.492e+04	30.5	0.0	0.0
7	14.633	0.068	0.368	2182.71	1.9	1.159e+04	10.1	2.455e+04	21.5	0.0	0.0
8	15.564	0.064	0.363	8639.88	7.6	1.035e+04	9.0	1.225e+04	10.7	0.0	0.0
9	18.337	0.055	0.353	1.518e+04	13.3	163.61	0.1	2.101e+04	18.4	0.0	0.0
10	19.270	0.052	0.350	1.26	1.10e-03	888.46	0.8	479.21	0.4	0.0	0.0
11	20.318	0.049	0.347	21.30	1.86e-02	642.87	0.6	1047.21	0.9	0.0	0.0
12	21.984	0.045	0.343	9.08	7.94e-03	9.36	8.18e-03	645.14	0.6	0.0	0.0
Risulta				1.140e+05		1.136e+05		1.140e+05			
In percentuale				99.66		99.27		99.63			

CDC	Tipo	Sigla Id	Note
6	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.390
			ordinata spettro (tratto Tb-Tc) = 0.479 g



CDC	Tipo	Sigla Id	Note
			angolo di ingresso: 90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.123 s
			fattore q: 1.500
			amplificazione ND (non dissipativi): 1.000
			fattore per spost. mu d: 3.044
			classe di duttilità CD: ND
			numero di modi considerati: 12
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
515.00	1028.66	243.49	300.00	17.05	0.0	0.0	0.0	0.0	0.0	0.0
506.00	1262.12	312.98	1305.98	4.05	0.0	300.01	1475.37	0.001	1.445	0.851
465.00	270.47	70.75	300.00	1.75	0.0	0.0	0.0	0.0	0.0	0.0
451.00	432.19	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
437.00	462.19	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
423.00	4077.24	336.24	1021.33	7.73	0.0	300.05	966.91	0.056	0.401	0.084
372.00	259.45	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361.33	506.25	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.67	489.37	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.00	1.627e+04	671.27	962.61	42.65	0.0	726.50	958.50	1.460	0.101	0.004
279.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271.00	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263.00	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255.00	2.791e+04	722.84	952.76	42.65	0.0	726.50	958.50	1.460	0.007	0.005
186.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.67	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.33	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.00	2.791e+04	722.82	952.82	42.65	0.0	726.50	958.50	1.460	0.007	0.005
93.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.33	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.67	493.13	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.00	2.977e+04	742.24	953.19	42.65	0.0	726.50	958.50	1.460	0.029	0.005
Risulta	1.144e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	6.818	0.147	0.455	6.867e+04	60.0	9.46	8.26e-03	6036.92	5.3	0.0	0.0
2	7.244	0.138	0.446	7818.95	6.8	3610.82	3.2	51.88	4.53e-02	0.0	0.0
3	8.128	0.123	0.429	19.74	1.72e-02	4.867e+04	42.5	1663.32	1.5	0.0	0.0
4	10.047	0.100	0.403	3860.18	3.4	2.008e+04	17.5	8006.01	7.0	0.0	0.0
5	10.412	0.096	0.399	90.16	7.88e-02	1.805e+04	15.8	2701.39	2.4	0.0	0.0
6	12.589	0.079	0.380	6714.33	5.9	97.89	8.55e-02	3.327e+04	29.1	0.0	0.0
7	14.568	0.069	0.368	3370.26	2.9	1.016e+04	8.9	2.850e+04	24.9	0.0	0.0
8	15.674	0.064	0.363	8398.58	7.3	1.116e+04	9.8	9926.12	8.7	0.0	0.0
9	18.294	0.055	0.353	1.498e+04	13.1	209.50	0.2	2.178e+04	19.0	0.0	0.0
10	19.307	0.052	0.350	87.12	7.61e-02	975.70	0.9	361.59	0.3	0.0	0.0
11	20.295	0.049	0.347	6.33	5.53e-03	571.04	0.5	1197.62	1.0	0.0	0.0
12	22.053	0.045	0.342	1.40	1.22e-03	3.93	3.43e-03	531.56	0.5	0.0	0.0
Risulta				1.140e+05		1.136e+05		1.140e+05			
In percentuale				99.63		99.27		99.64			

CDC	Tipo	Sigla Id	Note
7	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.291 g



CDC	Tipo	Sigla Id	Note
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.129 s
			numero di modi considerati: 12
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
515.00	1028.66	243.49	300.00	-17.05	0.0	0.0	0.0	0.0	0.0	0.0
506.00	1262.12	312.98	1305.98	-4.05	0.0	300.01	1475.37	0.001	1.445	0.851
465.00	270.47	70.75	300.00	-1.75	0.0	0.0	0.0	0.0	0.0	0.0
451.00	432.19	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
437.00	462.19	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
423.00	4077.24	336.24	1021.33	-7.73	0.0	300.05	966.91	0.056	0.401	0.084
372.00	259.45	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361.33	506.25	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.67	489.37	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.00	1.627e+04	671.27	962.61	-42.65	0.0	726.50	958.50	1.460	0.101	0.004
279.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271.00	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263.00	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255.00	2.791e+04	722.84	952.76	-42.65	0.0	726.50	958.50	1.460	0.007	0.005
186.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.67	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.33	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.00	2.791e+04	722.82	952.82	-42.65	0.0	726.50	958.50	1.460	0.007	0.005
93.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.33	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.67	493.13	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.00	2.977e+04	742.24	953.19	-42.65	0.0	726.50	958.50	1.460	0.029	0.005
Risulta	1.144e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	6.816	0.147	0.278	6.872e+04	60.1	137.49	0.1	5940.05	5.2	0.0	0.0
2	7.253	0.138	0.268	7793.52	6.8	3004.76	2.6	36.38	3.18e-02	0.0	0.0
3	7.752	0.129	0.259	28.50	2.49e-02	5.510e+04	48.1	1444.31	1.3	0.0	0.0
4	10.164	0.098	0.226	2678.11	2.3	2951.88	2.6	1.131e+04	9.9	0.0	0.0
5	11.057	0.090	0.217	2202.74	1.9	2.778e+04	24.3	106.91	9.34e-02	0.0	0.0
6	12.627	0.079	0.205	5901.39	5.2	422.64	0.4	3.379e+04	29.5	0.0	0.0
7	14.498	0.069	0.194	2918.25	2.6	1.213e+04	10.6	2.430e+04	21.2	0.0	0.0
8	15.622	0.064	0.189	8501.96	7.4	1.034e+04	9.0	1.332e+04	11.6	0.0	0.0
9	18.279	0.055	0.179	1.472e+04	12.9	165.25	0.1	2.211e+04	19.3	0.0	0.0
10	19.185	0.052	0.176	544.65	0.5	745.24	0.7	35.05	3.06e-02	0.0	0.0
11	20.423	0.049	0.172	0.85	7.42e-04	798.55	0.7	765.24	0.7	0.0	0.0
12	21.951	0.046	0.169	2.12	1.85e-03	7.11	6.22e-03	847.75	0.7	0.0	0.0
Risulta				1.140e+05		1.136e+05		1.140e+05			
In percentuale				99.64		99.26		99.63			

CDC	Tipo	Sigla Id	Note
8	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.291 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.150 s
			numero di modi considerati: 12



CDC	Tipo	Sigla Id	Note
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
515.00	1028.66	243.49	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
506.00	1262.12	312.98	1305.98	0.0	-40.35	300.01	1475.37	0.001	1.445	0.851
465.00	270.47	70.75	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
451.00	432.19	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
437.00	462.19	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
423.00	4077.24	336.24	1021.33	0.0	-65.85	300.05	966.91	0.056	0.401	0.084
372.00	259.45	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361.33	506.25	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.67	489.37	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.00	1.627e+04	671.27	962.61	0.0	-65.85	726.50	958.50	1.460	0.101	0.004
279.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271.00	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263.00	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255.00	2.791e+04	722.84	952.76	0.0	-65.85	726.50	958.50	1.460	0.007	0.005
186.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.67	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.33	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.00	2.791e+04	722.82	952.82	0.0	-65.85	726.50	958.50	1.460	0.007	0.005
93.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.33	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.67	493.13	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.00	2.977e+04	742.24	953.19	0.0	-65.85	726.50	958.50	1.460	0.029	0.005
Risulta	1.144e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	6.648	0.150	0.282	6.318e+04	55.2	73.21	6.40e-02	4747.99	4.1	0.0	0.0
2	7.434	0.135	0.265	1.331e+04	11.6	7879.05	6.9	342.95	0.3	0.0	0.0
3	7.959	0.126	0.255	439.01	0.4	4.622e+04	40.4	2591.27	2.3	0.0	0.0
4	10.102	0.099	0.226	3301.51	2.9	6859.23	6.0	1.031e+04	9.0	0.0	0.0
5	10.657	0.094	0.221	1360.34	1.2	2.885e+04	25.2	48.61	4.25e-02	0.0	0.0
6	12.487	0.080	0.206	5338.94	4.7	329.35	0.3	3.252e+04	28.4	0.0	0.0
7	14.460	0.069	0.194	3420.95	3.0	1.164e+04	10.2	2.701e+04	23.6	0.0	0.0
8	15.780	0.063	0.188	8017.94	7.0	1.006e+04	8.8	1.304e+04	11.4	0.0	0.0
9	18.280	0.055	0.179	1.466e+04	12.8	186.67	0.2	2.175e+04	19.0	0.0	0.0
10	19.284	0.052	0.176	953.12	0.8	788.28	0.7	22.63	1.98e-02	0.0	0.0
11	20.428	0.049	0.172	2.08	1.82e-03	720.02	0.6	903.15	0.8	0.0	0.0
12	22.008	0.045	0.169	0.02	2.00e-05	6.75	5.90e-03	733.51	0.6	0.0	0.0
Risulta				1.140e+05		1.136e+05		1.140e+05			
In percentuale				99.60		99.27		99.64			

CDC	Tipo	Sigla Id	Note
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.291 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.146 s
			numero di modi considerati: 12
			combinaz. modale: CQC



Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
515.00	1028.66	243.49	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
506.00	1262.12	312.98	1305.98	0.0	40.35	300.01	1475.37	0.001	1.445	0.851
465.00	270.47	70.75	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
451.00	432.19	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
437.00	462.19	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
423.00	4077.24	336.24	1021.33	0.0	65.85	300.05	966.91	0.056	0.401	0.084
372.00	259.45	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361.33	506.25	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.67	489.37	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.00	1.627e+04	671.27	962.61	0.0	65.85	726.50	958.50	1.460	0.101	0.004
279.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271.00	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263.00	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255.00	2.791e+04	722.84	952.76	0.0	65.85	726.50	958.50	1.460	0.007	0.005
186.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.67	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.33	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.00	2.791e+04	722.82	952.82	0.0	65.85	726.50	958.50	1.460	0.007	0.005
93.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.33	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.67	493.13	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.00	2.977e+04	742.24	953.19	0.0	65.85	726.50	958.50	1.460	0.029	0.005
Risulta	1.144e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	6.853	0.146	0.277	7.409e+04	64.7	210.06	0.2	5157.33	4.5	0.0	0.0
2	7.198	0.139	0.269	2097.77	1.8	2110.49	1.8	1773.05	1.5	0.0	0.0
3	7.945	0.126	0.255	302.52	0.3	5.354e+04	46.8	727.51	0.6	0.0	0.0
4	10.160	0.098	0.226	2946.05	2.6	6577.64	5.7	1.107e+04	9.7	0.0	0.0
5	10.720	0.093	0.220	919.76	0.8	2.741e+04	24.0	382.91	0.3	0.0	0.0
6	12.718	0.079	0.204	7649.97	6.7	104.06	9.09e-02	3.492e+04	30.5	0.0	0.0
7	14.633	0.068	0.193	2182.71	1.9	1.159e+04	10.1	2.455e+04	21.5	0.0	0.0
8	15.564	0.064	0.189	8639.88	7.6	1.035e+04	9.0	1.225e+04	10.7	0.0	0.0
9	18.337	0.055	0.178	1.518e+04	13.3	163.61	0.1	2.101e+04	18.4	0.0	0.0
10	19.270	0.052	0.176	1.26	1.10e-03	888.46	0.8	479.21	0.4	0.0	0.0
11	20.318	0.049	0.173	21.30	1.86e-02	642.87	0.6	1047.21	0.9	0.0	0.0
12	21.984	0.045	0.169	9.08	7.94e-03	9.36	8.18e-03	645.14	0.6	0.0	0.0
Risulta				1.140e+05		1.136e+05		1.140e+05			
In percentuale				99.66		99.27		99.63			

CDC	Tipo	Sigla Id	Note
10	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.291 g
			angolo di ingresso: 90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.123 s
			numero di modi considerati: 12
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
515.00	1028.66	243.49	300.00	17.05	0.0	0.0	0.0	0.0	0.0	0.0
506.00	1262.12	312.98	1305.98	4.05	0.0	300.01	1475.37	0.001	1.445	0.851
465.00	270.47	70.75	300.00	1.75	0.0	0.0	0.0	0.0	0.0	0.0
451.00	432.19	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
437.00	462.19	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
423.00	4077.24	336.24	1021.33	7.73	0.0	300.05	966.91	0.056	0.401	0.084
372.00	259.45	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361.33	506.25	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.67	489.37	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.00	1.627e+04	671.27	962.61	42.65	0.0	726.50	958.50	1.460	0.101	0.004
279.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271.00	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263.00	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255.00	2.791e+04	722.84	952.76	42.65	0.0	726.50	958.50	1.460	0.007	0.005
186.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.67	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.33	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.00	2.791e+04	722.82	952.82	42.65	0.0	726.50	958.50	1.460	0.007	0.005
93.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.33	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.67	493.13	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.00	2.977e+04	742.24	953.19	42.65	0.0	726.50	958.50	1.460	0.029	0.005
Risulta	1.144e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	6.818	0.147	0.278	6.867e+04	60.0	9.46	8.26e-03	6036.92	5.3	0.0	0.0
2	7.244	0.138	0.269	7818.95	6.8	3610.82	3.2	51.88	4.53e-02	0.0	0.0
3	8.128	0.123	0.252	19.74	1.72e-02	4.867e+04	42.5	1663.32	1.5	0.0	0.0
4	10.047	0.100	0.227	3860.18	3.4	2.008e+04	17.5	8006.01	7.0	0.0	0.0
5	10.412	0.096	0.223	90.16	7.88e-02	1.805e+04	15.8	2701.39	2.4	0.0	0.0
6	12.589	0.079	0.205	6714.33	5.9	97.89	8.55e-02	3.327e+04	29.1	0.0	0.0
7	14.568	0.069	0.194	3370.26	2.9	1.016e+04	8.9	2.850e+04	24.9	0.0	0.0
8	15.674	0.064	0.188	8398.58	7.3	1.116e+04	9.8	9926.12	8.7	0.0	0.0
9	18.294	0.055	0.179	1.498e+04	13.1	209.50	0.2	2.178e+04	19.0	0.0	0.0
10	19.307	0.052	0.176	87.12	7.61e-02	975.70	0.9	361.59	0.3	0.0	0.0
11	20.295	0.049	0.173	6.33	5.53e-03	571.04	0.5	1197.62	1.0	0.0	0.0
12	22.053	0.045	0.169	1.40	1.22e-03	3.93	3.43e-03	531.56	0.5	0.0	0.0
Risulta				1.140e+05		1.136e+05		1.140e+05			
In percentuale				99.63		99.27		99.64			

CDC	Tipo	Sigla Id	Note
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.291 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.129 s
			numero di modi considerati: 12
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
515.00	1028.66	243.49	300.00	-17.05	0.0	0.0	0.0	0.0	0.0	0.0
506.00	1262.12	312.98	1305.98	-4.05	0.0	300.01	1475.37	0.001	1.445	0.851
465.00	270.47	70.75	300.00	-1.75	0.0	0.0	0.0	0.0	0.0	0.0
451.00	432.19	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
437.00	462.19	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
423.00	4077.24	336.24	1021.33	-7.73	0.0	300.05	966.91	0.056	0.401	0.084
372.00	259.45	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
361.33	506.25	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
350.67	489.37	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.00	1.627e+04	671.27	962.61	-42.65	0.0	726.50	958.50	1.460	0.101	0.004
279.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
271.00	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263.00	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255.00	2.791e+04	722.84	952.76	-42.65	0.0	726.50	958.50	1.460	0.007	0.005
186.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.67	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.33	493.12	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.00	2.791e+04	722.82	952.82	-42.65	0.0	726.50	958.50	1.460	0.007	0.005
93.00	259.69	75.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.33	508.12	150.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.67	493.13	225.00	300.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.00	2.977e+04	742.24	953.19	-42.65	0.0	726.50	958.50	1.460	0.029	0.005
Risulta	1.144e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	6.816	0.147	0.278	6.872e+04	60.1	137.49	0.1	5940.05	5.2	0.0	0.0
2	7.253	0.138	0.268	7793.52	6.8	3004.76	2.6	36.38	3.18e-02	0.0	0.0
3	7.752	0.129	0.259	28.50	2.49e-02	5.510e+04	48.1	1444.31	1.3	0.0	0.0
4	10.164	0.098	0.226	2678.11	2.3	2951.88	2.6	1.131e+04	9.9	0.0	0.0
5	11.057	0.090	0.217	2202.74	1.9	2.778e+04	24.3	106.91	9.34e-02	0.0	0.0
6	12.627	0.079	0.205	5901.39	5.2	422.64	0.4	3.379e+04	29.5	0.0	0.0
7	14.498	0.069	0.194	2918.25	2.6	1.213e+04	10.6	2.430e+04	21.2	0.0	0.0
8	15.622	0.064	0.189	8501.96	7.4	1.034e+04	9.0	1.332e+04	11.6	0.0	0.0
9	18.279	0.055	0.179	1.472e+04	12.9	165.25	0.1	2.211e+04	19.3	0.0	0.0
10	19.185	0.052	0.176	544.65	0.5	745.24	0.7	35.05	3.06e-02	0.0	0.0
11	20.423	0.049	0.172	0.85	7.42e-04	798.55	0.7	765.24	0.7	0.0	0.0
12	21.951	0.046	0.169	2.12	1.85e-03	7.11	6.22e-03	847.75	0.7	0.0	0.0
Risulta				1.140e+05		1.136e+05		1.140e+05			
In percentuale				99.64		99.26		99.63			

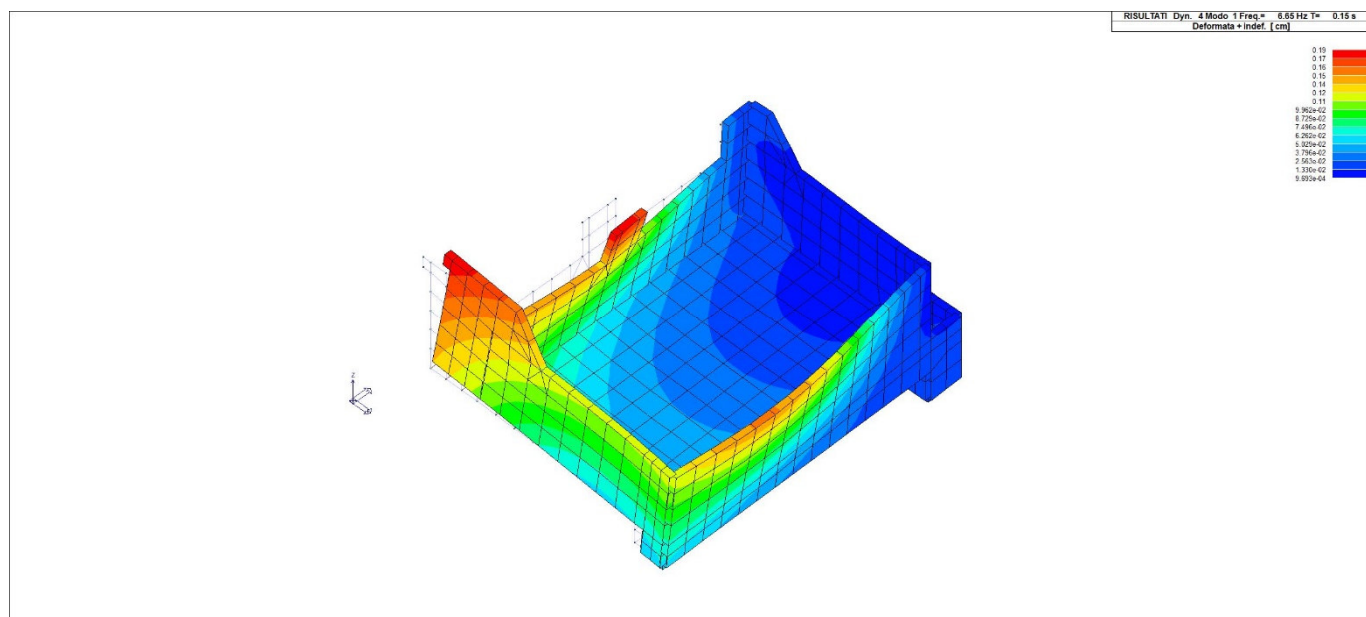


Figura 59 - RIS_MODAL_001_CDCEd dinamico SLU alfa00 ecc +

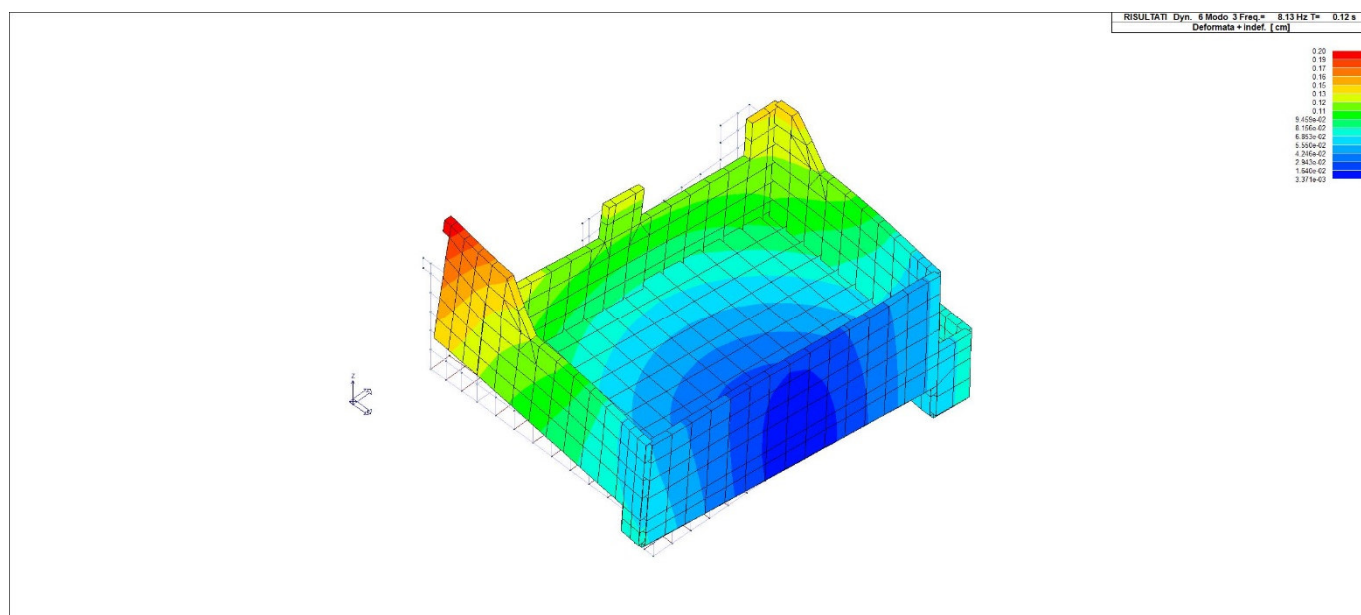


Figura 60 - RIS_MODALY_003_CDCEd dinamico SLU alfa90 ecc +



RISULTATI OPERE DI FONDAZIONE

LEGENDA RISULTATI OPERE DI FONDAZIONE

Il controllo dei risultati delle analisi condotte, per quanto concerne le opere di fondazione, è possibile in relazione alle tabelle sotto riportate.

La prima tabella è riferita alle fondazioni tipo palo e plinto su pali.

Per questo tipo di fondazione vengono riportate le sei componenti di sollecitazione (esprese nel riferimento globale della struttura) per ogni palo componente l'opera.

In particolare viene riportato:

Nodo	numero del nodo a cui è applicato il plinto
Tipo	codice corrispondente al nome assegnato al tipo di plinto di fondazione: 3) palo singolo (<i>PALO</i>) 4) plinto su palo 5) plinto su due pali (<i>PL.2P</i>) 6) plinto su tre pali (<i>PL.3P</i>) 7) plinto su quattro pali (<i>PL.4P</i>) 8) plinto rettangolare su cinque pali (<i>PL.5P.R</i>) 9) plinto pentagonale su cinque pali (<i>PL.5P</i>) 10) plinto su sei pali (<i>PL.6P</i>)
Palo	numero del palo
Comb.	combinazione di carico in cui si verificano le sei componenti di sollecitazione.
Quota	quota assoluta della sezione del palo per cui si riportano le sei componenti di sollecitazione.

L'azione F_z (corrispondente allo sforzo normale nel palo) è costante poiché il peso del palo stesso non è considerato nella modellazione.

La seconda tabella è riferita alle fondazioni tipo plinto su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni nei quattro vertici dell'impronta sul terreno.

In particolare viene riportato:

Nodo	numero del nodo a cui è applicato il plinto
Tipo	Codice identificativo del nome assegnato al plinto
area	area dell'impronta del plinto
Wink O Wink V	coefficienti di Winkler (orizzontale e verticale) adottati
Comb	Combinazione di carico in cui si verificano i valori riportati
Pt (P1 P2 P3 P4)	valori di pressione nei vertici

La terza tabella è riferita alle fondazioni tipo platea su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni in ogni vertice (nodo) degli elementi costituenti la platea.

La quarta tabella è riferita alle fondazioni tipo trave su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni alle estremità dell'elemento e la massima (in valore assoluto) pressione lungo lo sviluppo dell'elemento.

Vengono inoltre riportati, con funzione statistica, i valori massimo e minimo delle pressioni che compaiono nella tabella.



Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2
1	-0.66	-0.48	-0.48	-0.48	-0.48	-0.48					
2	-0.60	-0.43	-0.43	-0.43	-0.47	-0.47					
3	-0.57	-0.42	-0.42	-0.42	-0.47	-0.46					
4	-0.52	-0.38	-0.38	-0.38	-0.46	-0.45					
5	-0.49	-0.36	-0.36	-0.36	-0.45	-0.43					
6	-0.67	-0.48	-0.48	-0.48	-0.49	-0.49					
7	-0.60	-0.44	-0.44	-0.44	-0.48	-0.48					
8	-0.58	-0.42	-0.42	-0.42	-0.48	-0.47					
9	-0.53	-0.39	-0.39	-0.39	-0.46	-0.45					
10	-0.49	-0.37	-0.37	-0.37	-0.46	-0.44					
11	-0.68	-0.49	-0.49	-0.49	-0.50	-0.50					
12	-0.61	-0.45	-0.45	-0.45	-0.49	-0.48					
13	-0.59	-0.43	-0.43	-0.43	-0.48	-0.48					
14	-0.54	-0.40	-0.40	-0.40	-0.47	-0.46					
15	-0.50	-0.37	-0.37	-0.37	-0.46	-0.45					
29	-1.89	-1.38	-1.38	-1.38	-1.56	-1.54					
30	-1.76	-1.29	-1.29	-1.29	-1.53	-1.50					
31	-1.63	-1.21	-1.21	-1.21	-1.50	-1.46					
32	-1.86	-1.36	-1.36	-1.36	-1.53	-1.51					
33	-1.74	-1.28	-1.28	-1.28	-1.51	-1.48					
34	-1.62	-1.19	-1.19	-1.19	-1.48	-1.44					
35	-1.75	-1.27	-1.27	-1.27	-1.41	-1.40					
36	-1.64	-1.20	-1.20	-1.20	-1.40	-1.38					
37	-1.53	-1.12	-1.12	-1.12	-1.40	-1.36					
38	-1.69	-1.23	-1.23	-1.23	-1.34	-1.33					
39	-1.59	-1.16	-1.16	-1.16	-1.34	-1.32					
40	-1.48	-1.09	-1.09	-1.09	-1.35	-1.32					
41	-1.64	-1.19	-1.19	-1.19	-1.28	-1.28					
42	-1.55	-1.13	-1.13	-1.13	-1.29	-1.27					
43	-1.45	-1.06	-1.06	-1.06	-1.31	-1.28					
44	-1.54	-1.12	-1.12	-1.12	-1.18	-1.18					
45	-1.46	-1.06	-1.06	-1.06	-1.20	-1.19					
46	-1.37	-1.00	-1.00	-1.00	-1.23	-1.21					
47	-1.51	-1.09	-1.09	-1.09	-1.13	-1.14					
48	-1.42	-1.03	-1.03	-1.03	-1.16	-1.15					
49	-1.34	-0.98	-0.98	-0.98	-1.20	-1.18					
50	-1.43	-1.03	-1.03	-1.03	-1.07	-1.08					
51	-1.35	-0.98	-0.98	-0.98	-1.09	-1.09					
52	-1.27	-0.93	-0.93	-0.93	-1.14	-1.12					
53	-1.41	-1.01	-1.01	-1.01	-1.04	-1.05					
54	-1.33	-0.96	-0.96	-0.96	-1.06	-1.06					
55	-1.25	-0.91	-0.91	-0.91	-1.11	-1.09					
56	-1.39	-1.00	-1.00	-1.00	-1.04	-1.04					
57	-1.31	-0.95	-0.95	-0.95	-1.05	-1.05					
58	-1.23	-0.90	-0.90	-0.90	-1.09	-1.07					
59	-1.33	-0.96	-0.96	-0.96	-1.01	-1.01					
60	-1.26	-0.91	-0.91	-0.91	-1.01	-1.01					
61	-1.18	-0.86	-0.86	-0.86	-1.04	-1.03					
62	-1.32	-0.95	-0.95	-0.95	-1.02	-1.01					
63	-1.25	-0.90	-0.90	-0.90	-1.01	-1.01					
64	-1.17	-0.85	-0.85	-0.85	-1.03	-1.02					
65	-1.31	-0.94	-0.94	-0.94	-1.03	-1.02					
66	-1.24	-0.89	-0.89	-0.89	-1.02	-1.01					
67	-1.16	-0.84	-0.84	-0.84	-1.03	-1.01					
68	-1.27	-0.91	-0.91	-0.91	-1.02	-1.00					
69	-1.20	-0.86	-0.86	-0.86	-1.00	-0.99					
70	-1.12	-0.81	-0.81	-0.81	-0.99	-0.97					
71	-1.27	-0.91	-0.91	-0.91	-1.04	-1.02					
72	-1.19	-0.86	-0.86	-0.86	-1.01	-0.99					
73	-1.11	-0.80	-0.80	-0.80	-0.99	-0.97					
74	-1.27	-0.91	-0.91	-0.91	-1.05	-1.03					
75	-1.19	-0.85	-0.85	-0.85	-1.02	-1.00					
76	-1.11	-0.80	-0.80	-0.80	-0.99	-0.97					
128	-0.42	-0.30	-0.30	-0.30	-0.35	-0.34					
131	-0.42	-0.30	-0.30	-0.30	-0.34	-0.34					
133	-0.42	-0.30	-0.30	-0.30	-0.33	-0.33					
135	-0.41	-0.30	-0.30	-0.30	-0.32	-0.32					
137	-0.41	-0.30	-0.30	-0.30	-0.32	-0.31					



Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...						
139	-0.41	-0.30	-0.30	-0.30	-0.31	-0.31				
141	-0.41	-0.30	-0.30	-0.30	-0.31	-0.31				
143	-0.41	-0.30	-0.30	-0.30	-0.31	-0.31				
145	-0.41	-0.30	-0.30	-0.30	-0.31	-0.31				
147	-0.42	-0.30	-0.30	-0.30	-0.31	-0.32				
149	-0.42	-0.30	-0.30	-0.30	-0.32	-0.32				
151	-0.43	-0.31	-0.31	-0.31	-0.33	-0.33				
153	-0.43	-0.31	-0.31	-0.31	-0.34	-0.34				
155	-0.44	-0.32	-0.32	-0.32	-0.35	-0.35				
157	-0.45	-0.32	-0.32	-0.32	-0.37	-0.36				
159	-0.45	-0.33	-0.33	-0.33	-0.37	-0.37				
169	-0.45	-0.32	-0.32	-0.32	-0.37	-0.36				
170	-0.44	-0.32	-0.32	-0.32	-0.36	-0.35				
171	-0.44	-0.32	-0.32	-0.32	-0.35	-0.34				
172	-0.44	-0.31	-0.31	-0.31	-0.34	-0.33				
173	-0.44	-0.31	-0.31	-0.31	-0.33	-0.33				
174	-0.44	-0.31	-0.31	-0.31	-0.33	-0.33				
175	-0.43	-0.31	-0.31	-0.31	-0.32	-0.32				
176	-0.44	-0.31	-0.31	-0.31	-0.32	-0.32				
177	-0.44	-0.31	-0.31	-0.31	-0.32	-0.33				
178	-0.44	-0.32	-0.32	-0.32	-0.33	-0.33				
179	-0.44	-0.32	-0.32	-0.32	-0.33	-0.34				
180	-0.45	-0.32	-0.32	-0.32	-0.34	-0.34				
181	-0.46	-0.33	-0.33	-0.33	-0.35	-0.35				
182	-0.46	-0.34	-0.34	-0.34	-0.36	-0.36				
183	-0.47	-0.34	-0.34	-0.34	-0.37	-0.37				
184	-0.48	-0.35	-0.35	-0.35	-0.38	-0.38				
185	-0.51	-0.36	-0.36	-0.36	-0.40	-0.39				
186	-0.50	-0.36	-0.36	-0.36	-0.39	-0.38				
187	-0.50	-0.35	-0.35	-0.35	-0.38	-0.37				
188	-0.49	-0.35	-0.35	-0.35	-0.37	-0.37				
189	-0.49	-0.35	-0.35	-0.35	-0.37	-0.36				
190	-0.49	-0.34	-0.34	-0.34	-0.36	-0.36				
191	-0.49	-0.34	-0.34	-0.34	-0.36	-0.36				
192	-0.49	-0.34	-0.34	-0.34	-0.36	-0.35				
193	-0.49	-0.35	-0.35	-0.35	-0.36	-0.36				
194	-0.49	-0.35	-0.35	-0.35	-0.36	-0.36				
195	-0.50	-0.35	-0.35	-0.35	-0.36	-0.36				
196	-0.50	-0.36	-0.36	-0.36	-0.37	-0.37				
197	-0.51	-0.37	-0.37	-0.37	-0.38	-0.38				
198	-0.52	-0.37	-0.37	-0.37	-0.38	-0.38				
199	-0.53	-0.38	-0.38	-0.38	-0.39	-0.39				
200	-0.53	-0.38	-0.38	-0.38	-0.39	-0.39				
201	-0.56	-0.40	-0.40	-0.40	-0.44	-0.42				
202	-0.56	-0.40	-0.40	-0.40	-0.43	-0.42				
203	-0.55	-0.39	-0.39	-0.39	-0.42	-0.41				
204	-0.54	-0.38	-0.38	-0.38	-0.41	-0.40				
205	-0.54	-0.38	-0.38	-0.38	-0.40	-0.39				
206	-0.54	-0.38	-0.38	-0.38	-0.39	-0.39				
207	-0.54	-0.38	-0.38	-0.38	-0.39	-0.39				
208	-0.54	-0.38	-0.38	-0.38	-0.39	-0.39				
209	-0.54	-0.38	-0.38	-0.38	-0.39	-0.39				
210	-0.54	-0.38	-0.38	-0.38	-0.39	-0.39				
211	-0.55	-0.39	-0.39	-0.39	-0.39	-0.39				
212	-0.56	-0.39	-0.39	-0.39	-0.39	-0.39				
213	-0.57	-0.40	-0.40	-0.40	-0.41	-0.40				
214	-0.58	-0.41	-0.41	-0.41	-0.42	-0.42				
215	-0.59	-0.42	-0.42	-0.42	-0.43	-0.43				
216	-0.60	-0.43	-0.43	-0.43	-0.44	-0.43				
217	-0.62	-0.44	-0.44	-0.44	-0.48	-0.47				
218	-0.61	-0.43	-0.43	-0.43	-0.47	-0.46				
219	-0.60	-0.43	-0.43	-0.43	-0.46	-0.45				
220	-0.60	-0.42	-0.42	-0.42	-0.44	-0.43				
221	-0.59	-0.42	-0.42	-0.42	-0.43	-0.42				
222	-0.59	-0.41	-0.41	-0.41	-0.42	-0.42				
223	-0.59	-0.41	-0.41	-0.41	-0.42	-0.42				
224	-0.59	-0.41	-0.41	-0.41	-0.42	-0.41				
225	-0.59	-0.41	-0.41	-0.41	-0.41	-0.41				
226	-0.59	-0.42	-0.42	-0.42	-0.41	-0.41				
227	-0.60	-0.42	-0.42	-0.42	-0.43	-0.42				
228	-0.61	-0.43	-0.43	-0.43	-0.43	-0.43				
229	-0.62	-0.44	-0.44	-0.44	-0.44	-0.44				



Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...						
230	-0.63	-0.45	-0.45	-0.45	-0.45	-0.46				
231	-0.65	-0.47	-0.47	-0.47	-0.48	-0.48				
232	-0.67	-0.48	-0.48	-0.48	-0.49	-0.49				
233	-0.67	-0.48	-0.48	-0.48	-0.53	-0.51				
234	-0.66	-0.47	-0.47	-0.47	-0.51	-0.50				
235	-0.66	-0.46	-0.46	-0.46	-0.50	-0.48				
236	-0.65	-0.46	-0.46	-0.46	-0.48	-0.47				
237	-0.64	-0.45	-0.45	-0.45	-0.47	-0.46				
238	-0.64	-0.45	-0.45	-0.45	-0.46	-0.46				
239	-0.64	-0.45	-0.45	-0.45	-0.46	-0.45				
240	-0.64	-0.45	-0.45	-0.45	-0.46	-0.45				
241	-0.64	-0.45	-0.45	-0.45	-0.45	-0.45				
242	-0.65	-0.45	-0.45	-0.45	-0.46	-0.45				
243	-0.65	-0.46	-0.46	-0.46	-0.46	-0.46				
244	-0.66	-0.47	-0.47	-0.47	-0.47	-0.47				
245	-0.68	-0.48	-0.48	-0.48	-0.48	-0.48				
246	-0.69	-0.49	-0.49	-0.49	-0.51	-0.51				
247	-0.71	-0.51	-0.51	-0.51	-0.53	-0.53				
248	-0.73	-0.52	-0.52	-0.52	-0.55	-0.55				
249	-0.73	-0.52	-0.52	-0.52	-0.57	-0.55				
250	-0.72	-0.51	-0.51	-0.51	-0.55	-0.54				
251	-0.71	-0.50	-0.50	-0.50	-0.54	-0.53				
252	-0.70	-0.50	-0.50	-0.50	-0.52	-0.51				
253	-0.70	-0.49	-0.49	-0.49	-0.51	-0.50				
254	-0.70	-0.49	-0.49	-0.49	-0.50	-0.50				
255	-0.70	-0.49	-0.49	-0.49	-0.50	-0.49				
256	-0.70	-0.49	-0.49	-0.49	-0.49	-0.49				
257	-0.70	-0.49	-0.49	-0.49	-0.49	-0.49				
258	-0.71	-0.50	-0.50	-0.50	-0.49	-0.49				
259	-0.71	-0.50	-0.50	-0.50	-0.50	-0.50				
260	-0.72	-0.51	-0.51	-0.51	-0.52	-0.52				
261	-0.74	-0.52	-0.52	-0.52	-0.54	-0.54				
262	-0.75	-0.53	-0.53	-0.53	-0.56	-0.56				
263	-0.78	-0.55	-0.55	-0.55	-0.59	-0.59				
264	-0.79	-0.56	-0.56	-0.56	-0.61	-0.60				
265	-0.79	-0.56	-0.56	-0.56	-0.62	-0.60				
266	-0.78	-0.56	-0.56	-0.56	-0.60	-0.59				
267	-0.77	-0.55	-0.55	-0.55	-0.59	-0.58				
268	-0.77	-0.54	-0.54	-0.54	-0.57	-0.56				
269	-0.76	-0.54	-0.54	-0.54	-0.56	-0.56				
270	-0.76	-0.54	-0.54	-0.54	-0.55	-0.55				
271	-0.76	-0.54	-0.54	-0.54	-0.55	-0.55				
272	-0.77	-0.54	-0.54	-0.54	-0.55	-0.54				
273	-0.77	-0.54	-0.54	-0.54	-0.54	-0.55				
274	-0.77	-0.54	-0.54	-0.54	-0.55	-0.55				
275	-0.78	-0.55	-0.55	-0.55	-0.56	-0.57				
276	-0.79	-0.56	-0.56	-0.56	-0.58	-0.58				
277	-0.80	-0.57	-0.57	-0.57	-0.60	-0.60				
278	-0.82	-0.58	-0.58	-0.58	-0.63	-0.62				
279	-0.84	-0.59	-0.59	-0.59	-0.65	-0.65				
280	-0.85	-0.60	-0.60	-0.60	-0.67	-0.66				
281	-0.84	-0.60	-0.60	-0.60	-0.67	-0.65				
282	-0.84	-0.60	-0.60	-0.60	-0.65	-0.64				
283	-0.84	-0.60	-0.60	-0.60	-0.64	-0.63				
284	-0.83	-0.59	-0.59	-0.59	-0.63	-0.62				
285	-0.83	-0.59	-0.59	-0.59	-0.62	-0.62				
286	-0.84	-0.59	-0.59	-0.59	-0.62	-0.61				
287	-0.84	-0.59	-0.59	-0.59	-0.61	-0.62				
288	-0.84	-0.60	-0.60	-0.60	-0.62	-0.62				
289	-0.85	-0.60	-0.60	-0.60	-0.62	-0.63				
290	-0.85	-0.60	-0.60	-0.60	-0.63	-0.63				
291	-0.86	-0.61	-0.61	-0.61	-0.65	-0.64				
292	-0.87	-0.61	-0.61	-0.61	-0.66	-0.66				
293	-0.88	-0.62	-0.62	-0.62	-0.68	-0.67				
294	-0.89	-0.63	-0.63	-0.63	-0.70	-0.69				
295	-0.91	-0.64	-0.64	-0.64	-0.72	-0.71				
296	-0.92	-0.65	-0.65	-0.65	-0.73	-0.72				
297	-1.03	-0.74	-0.74	-0.74	-0.84	-0.81				
298	-0.99	-0.71	-0.71	-0.71	-0.80	-0.77				
299	-0.94	-0.67	-0.67	-0.67	-0.75	-0.73				
300	-0.90	-0.64	-0.64	-0.64	-0.71	-0.69				
301	-1.03	-0.73	-0.73	-0.73	-0.82	-0.80				



Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
302	-0.98	-0.70	-0.70	-0.70	-0.78	-0.76					
303	-0.94	-0.67	-0.67	-0.67	-0.75	-0.73					
304	-0.90	-0.64	-0.64	-0.64	-0.71	-0.69					
305	-0.90	-0.64	-0.64	-0.64	-0.70	-0.69					
306	-0.91	-0.65	-0.65	-0.65	-0.70	-0.70					
307	-0.91	-0.65	-0.65	-0.65	-0.70	-0.70					
308	-0.92	-0.65	-0.65	-0.65	-0.70	-0.70					
309	-0.92	-0.65	-0.65	-0.65	-0.71	-0.71					
310	-0.93	-0.66	-0.66	-0.66	-0.72	-0.72					
311	-0.93	-0.66	-0.66	-0.66	-0.73	-0.72					
312	-0.94	-0.66	-0.66	-0.66	-0.74	-0.73					
313	-0.94	-0.67	-0.67	-0.67	-0.75	-0.74					
314	-0.95	-0.67	-0.67	-0.67	-0.76	-0.75					
315	-0.96	-0.68	-0.68	-0.68	-0.77	-0.76					
316	-0.97	-0.68	-0.68	-0.68	-0.78	-0.76					
317	-0.97	-0.69	-0.69	-0.69	-0.79	-0.77					
318	-0.98	-0.69	-0.69	-0.69	-0.79	-0.78					
Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
	-1.89										
	-0.30										

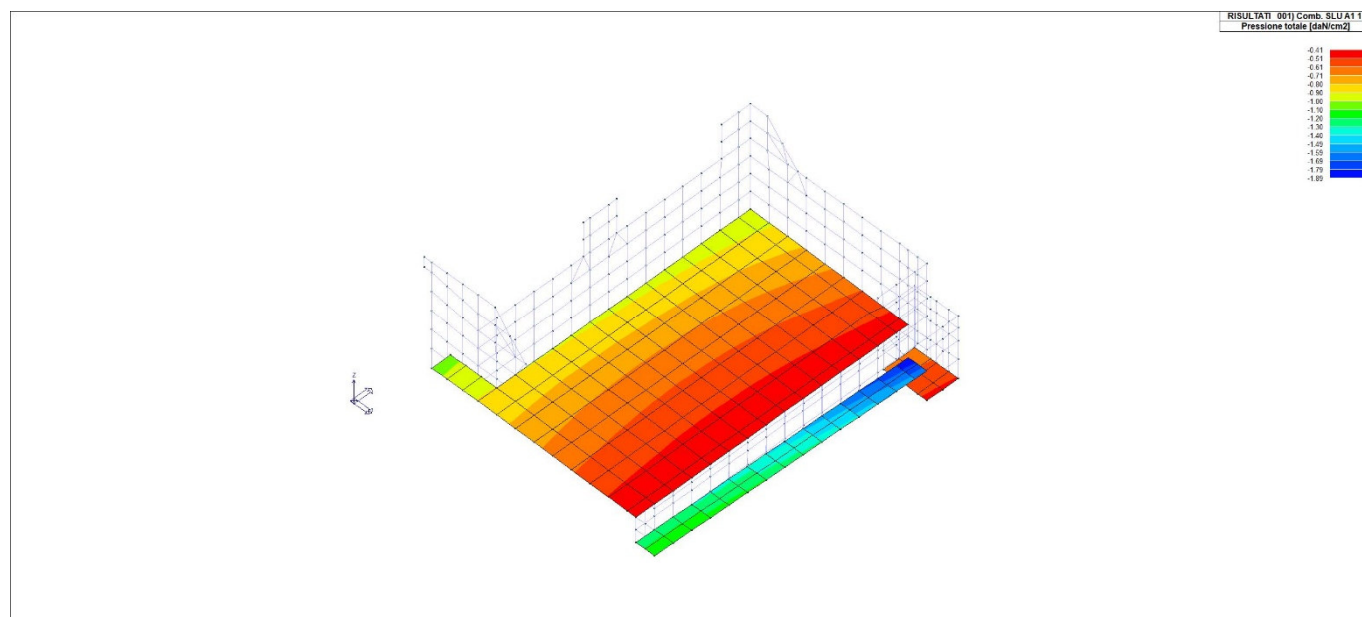


Figura 61 - RIS_PRESSIONI_001_Comb SLU A1 1

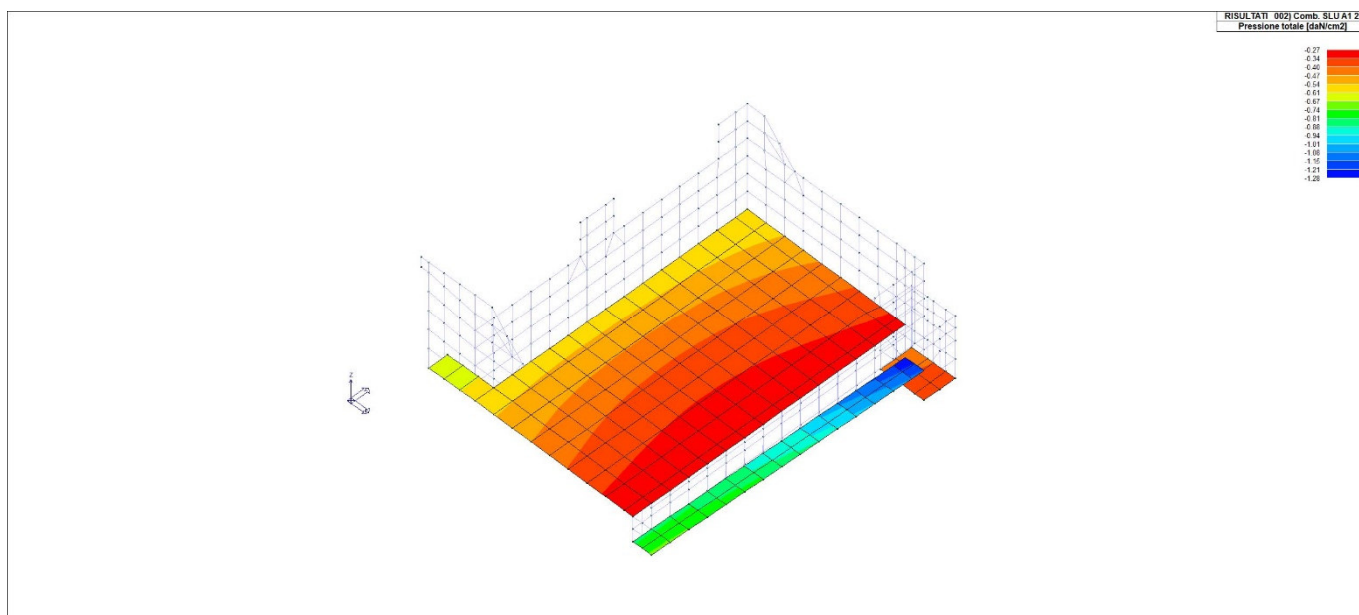


Figura 62 - RIS_PRESSIONI_002_Comb SLU A1 2

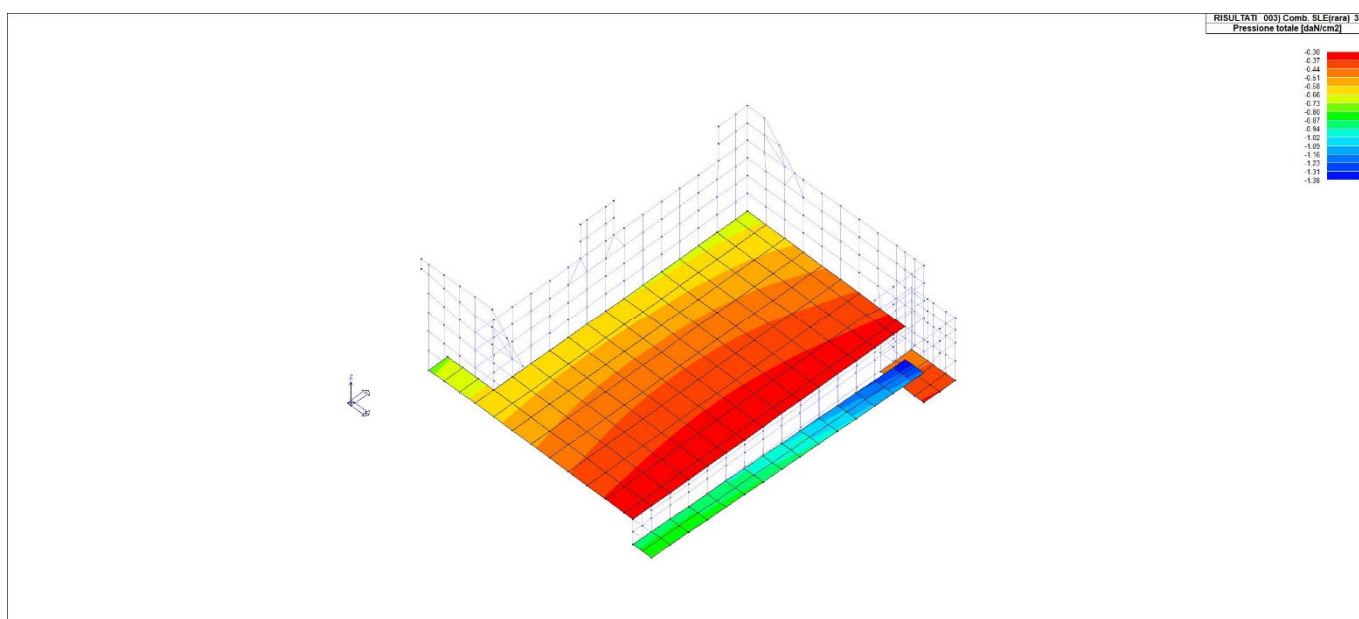


Figura 63 - RIS_PRESSIONI_003_Comb SLerara 3

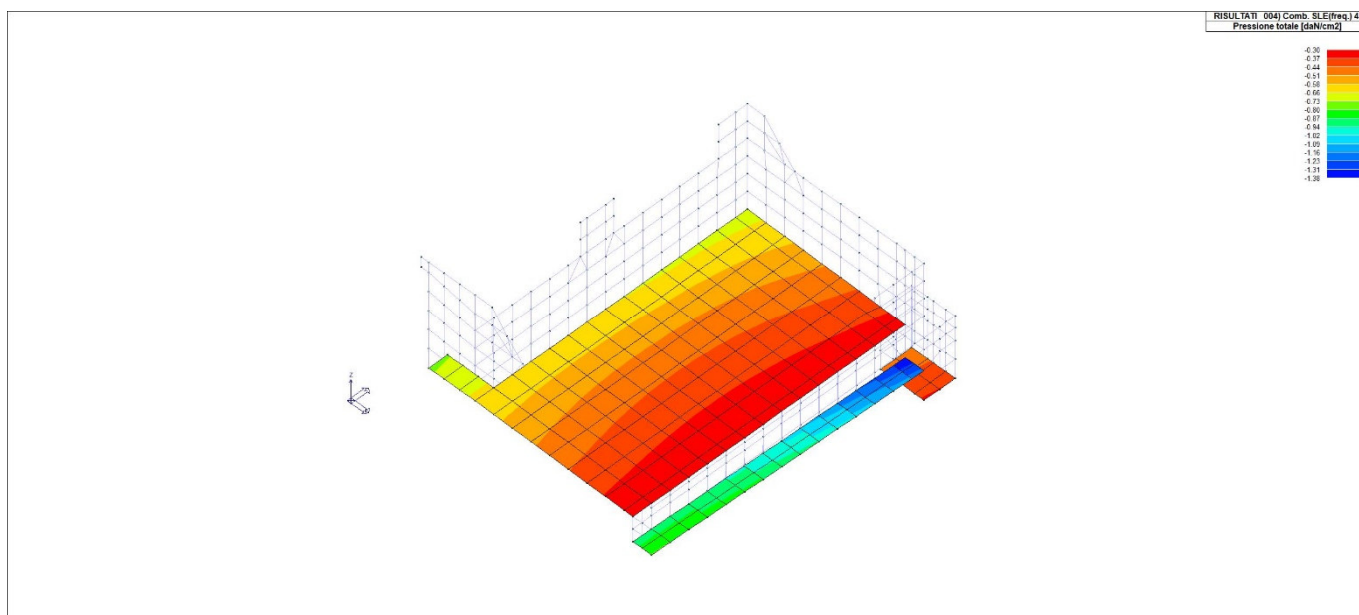


Figura 64 - RIS_PRESSIONI_004_Comb SLEfreq 4

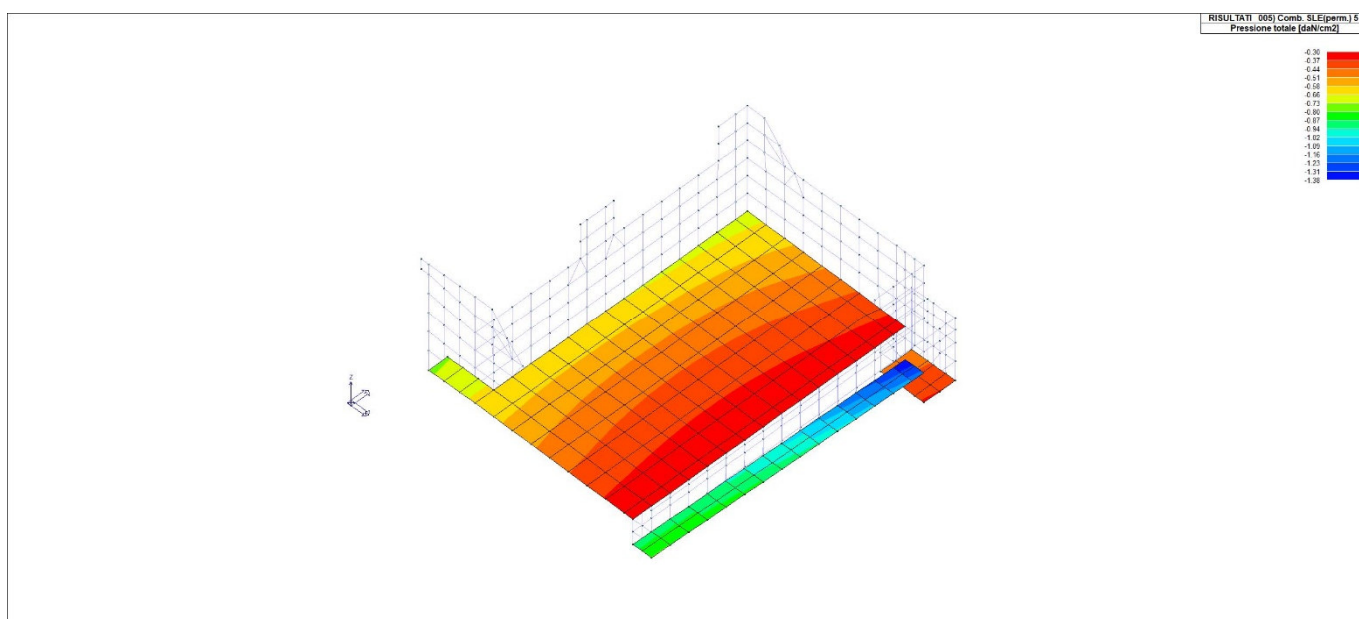


Figura 65 - RIS_PRESSIONI_005_Comb SLEperm 5

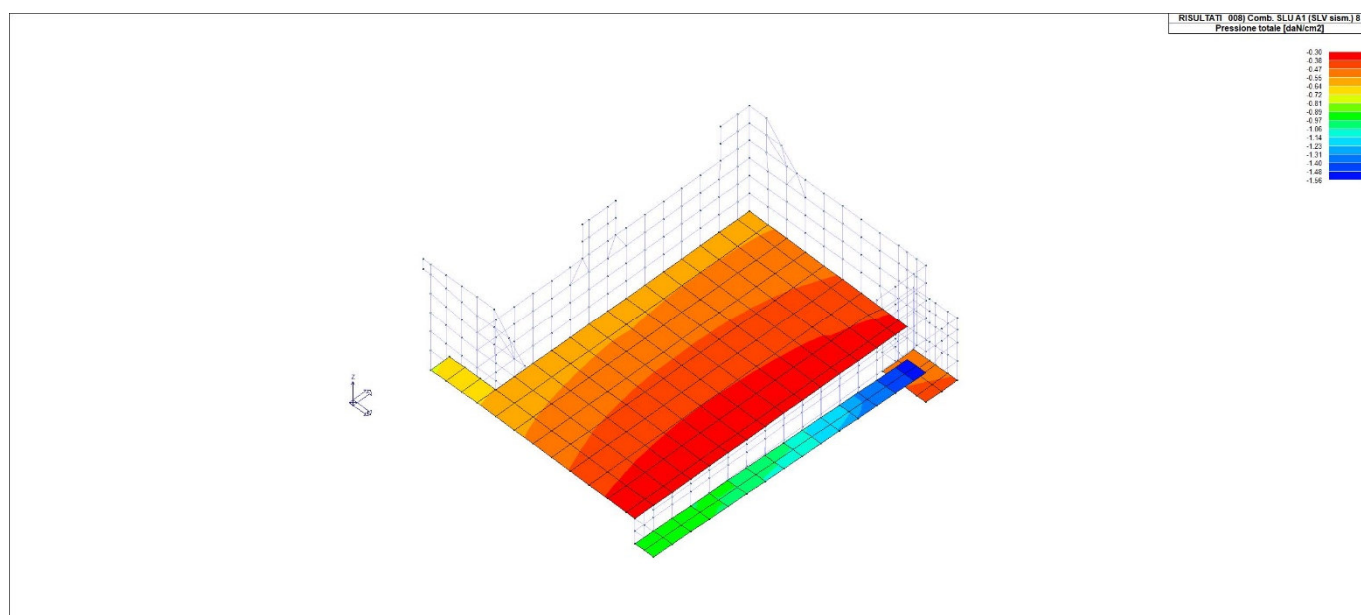


Figura 66 - RIS_PRESSIONI_008_Comb SLU A1 SLV sism 8

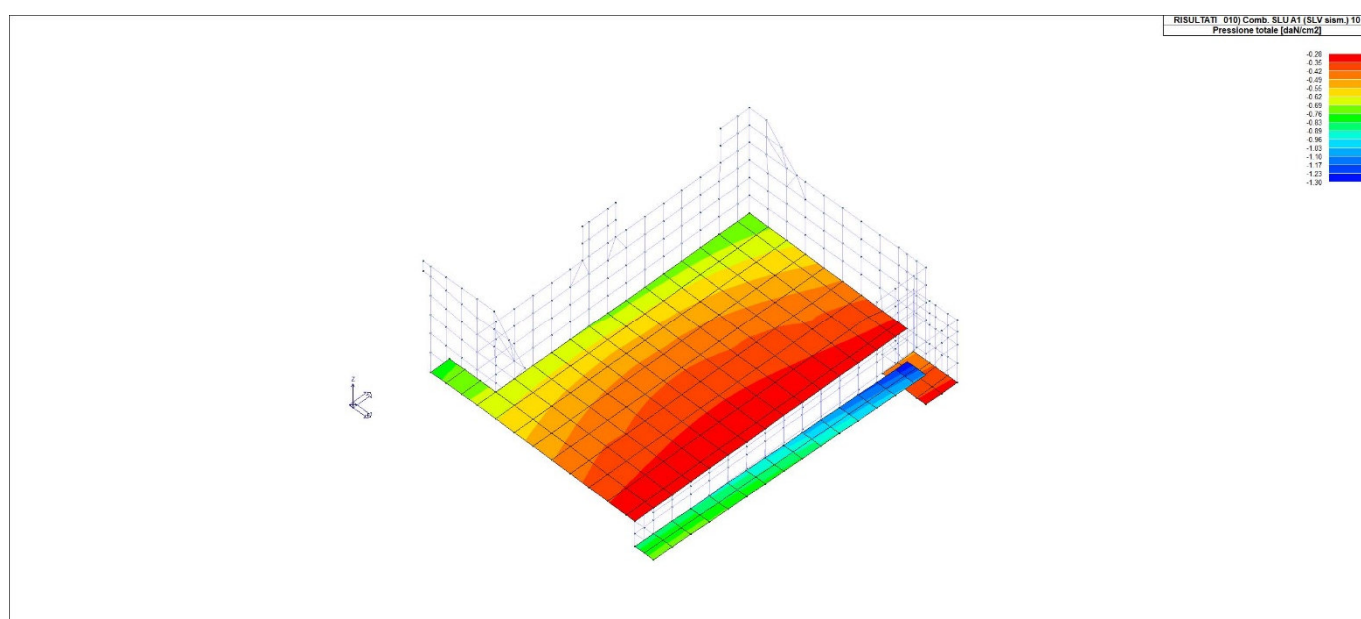


Figura 67 - RIS_PRESSIONI_010_Comb SLU A1 SLV sism 10

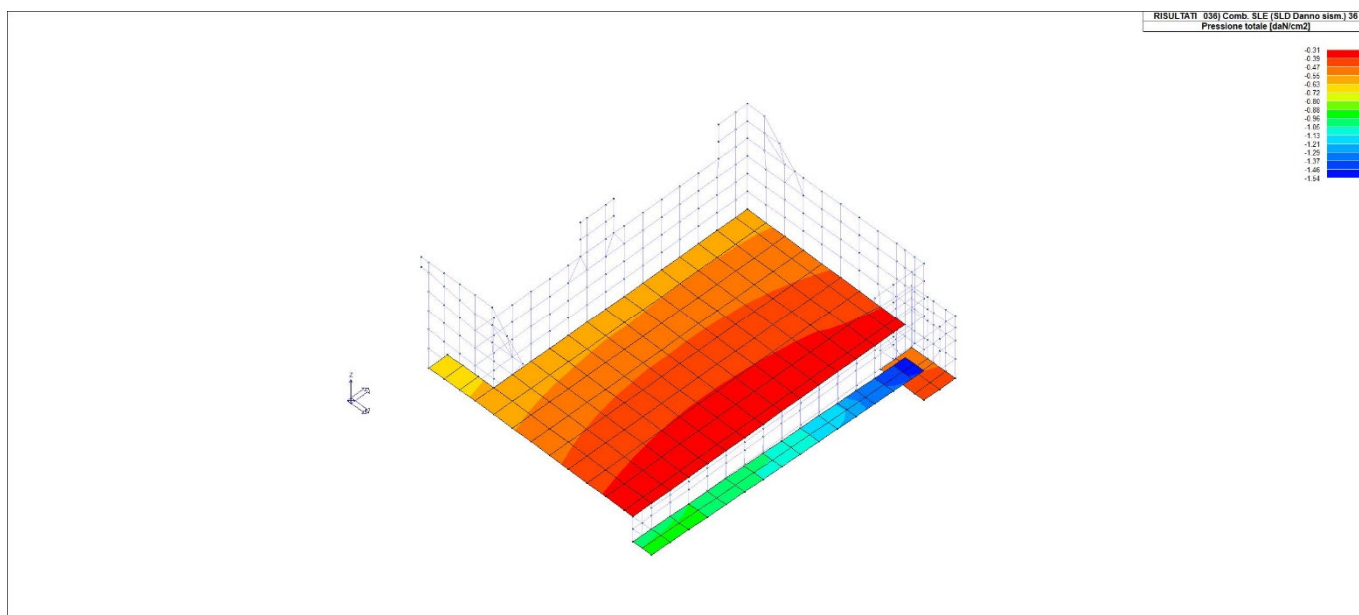


Figura 68 - RIS_PRESSIONI_036_Comb SLE SLD Danno sism 36

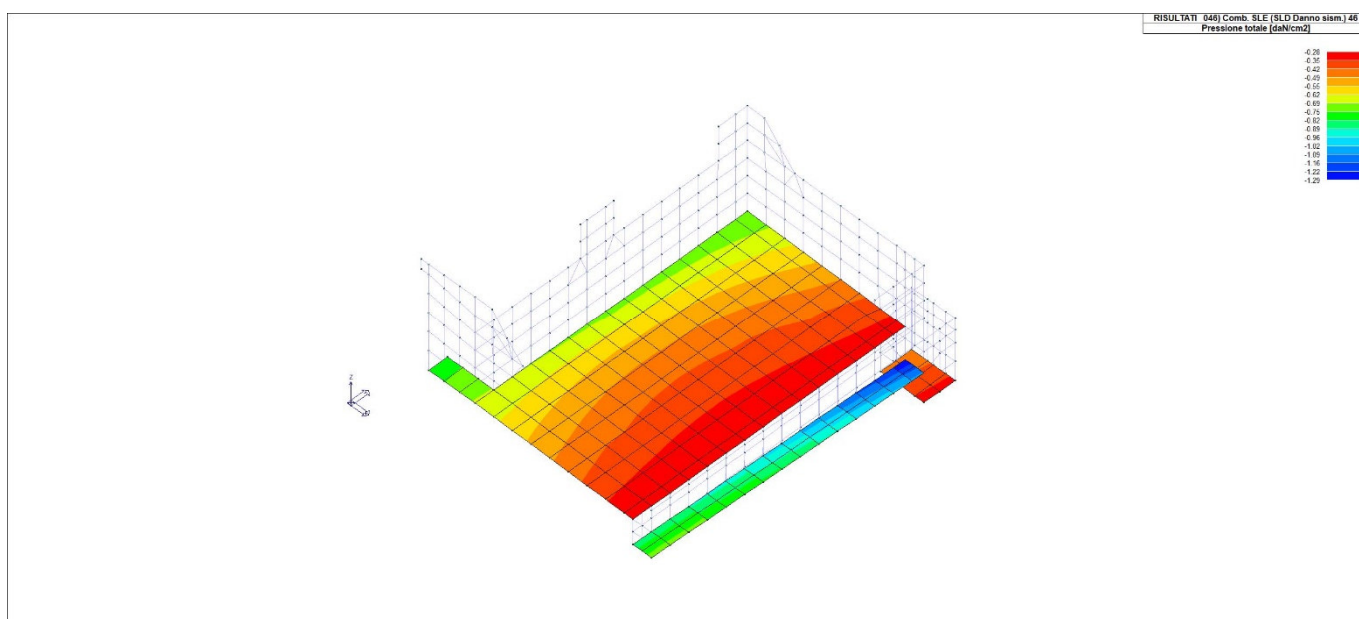


Figura 69 - RIS_PRESSIONI_046_Comb SLE SLD Danno sism 46

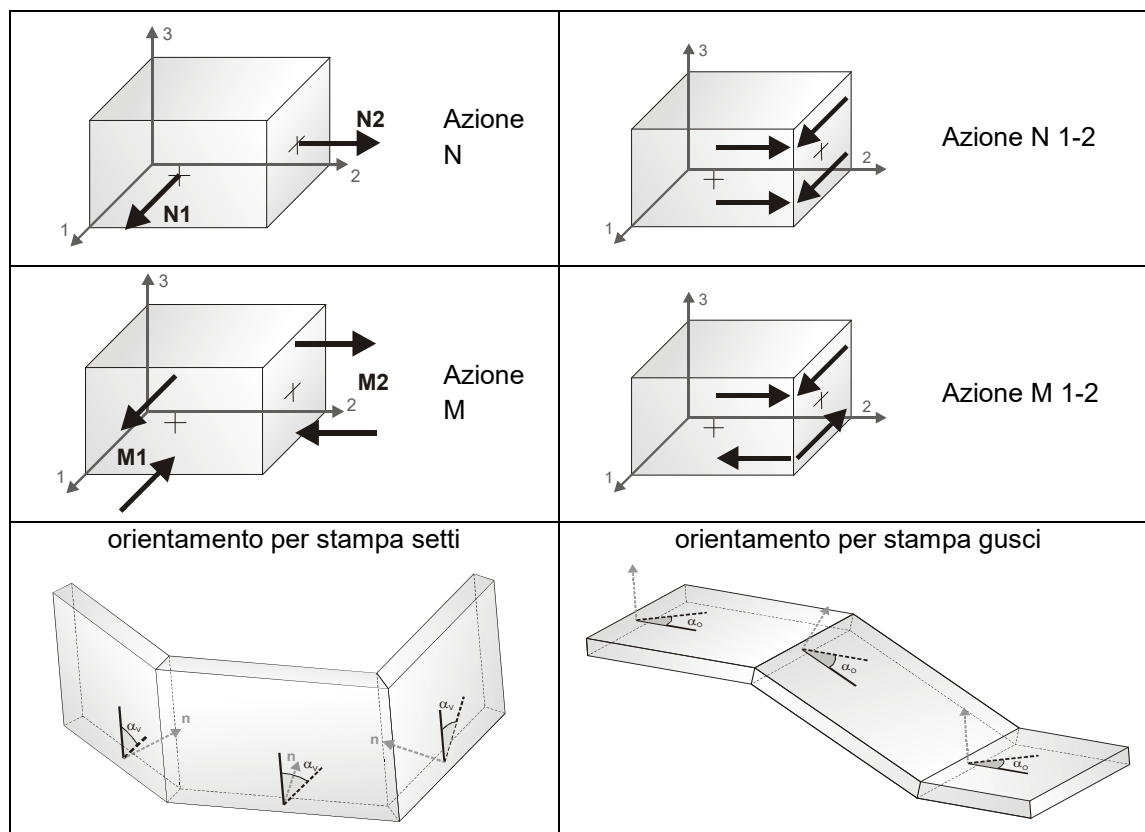


RISULTATI ELEMENTI TIPO SHELL

LEGENDA RISULTATI ELEMENTI TIPO SHELL

Il controllo dei risultati delle analisi condotte, per quanto concerne gli elementi tipo shell, è possibile in relazione alle tabelle sottoriportate.

Per ogni elemento, e per ogni combinazione(o caso di carico) vengono riportati i risultati più significativi.



In particolare vengono riportati in ogni nodo di un elemento per ogni combinazione:

tensione di Von Mises		(valore riassuntivo del complessivo stato di sollecitazione)
N max		sforzo membranale principale massimo
N min		sforzo membranale principale minimo
M max		sforzo flessionale principale massimo
M min		sforzo flessionale principale minimo
N1	N2	sforzi membranali e flessionali in direzione locale 1 e 2 dell'elemento (lo sforzo 2-1 è uguale allo sforzo 1-2 per la reciprocità delle tensioni tangenziali)
N1-2	M1	
M2	M1-2	

I suddetti risultati possono a scelta del progettista essere preceduti o sostituiti da valori di sollecitazione non più riferiti al sistema locale dell'elemento ma al sistema globale.

In questo caso gli elementi vengono raggruppati in gruppi (M_S: macro gusci o macro setti, raggruppati per materiale, spessore, e posizione fisica) per la valutazione dei valori mediati ai nodi appartenenti agli elementi dei gruppi stessi. I valori di sollecitazione sono, in questo caso, riferiti ad una terna specifica del gruppo ruotata di α_o attorno all'asse Z per i gusci e ruotata di α_v attorno alla normale (che per definizione è orizzontale) al piano del setto.

Per i setti, in particolare, se α_v è zero, l'asse '1-1 rappresenta la verticale e l'asse '2-2 l'orizzontale contenuta nel setto.

Le azioni sui setti possono essere espresse anche con formato macro, cioè riferite all'intero macroelemento.



In particolare vengono riportati per ogni quota Z dei nodi e per ogni combinazione i seguenti valori:

N memb.	Azione membranale complessiva agente sulla parete in direzione Z
V memb.	Azione complessiva di taglio agente nel piano del macroelemento
V orto	Azione complessiva di taglio agente in direzione perpendicolare al macroelemento
M memb.	Azione flessionale complessiva agente nel piano del macroelemento
M orto	Azione flessionale complessiva agente in direzione perpendicolare al macroelemento
T	Azione torsionale complessiva agente nel piano orizzontale

Macro	Tipo	Angolo 1-Z (gradi)
2	Setto	0.0

M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
			cm	daN	daN	daN	daN cm	daN cm	daN cm
2	1		-325.00	-4084.17	1931.80	952.92	2.519e+04	-6.121e+04	-1.229e+04
2	1		-233.50	-4942.70	1992.99	975.44	3278.27	-5.554e+04	-5568.34
2	1		-182.00	-3147.31	3254.53	3258.09	1.261e+05	8.393e+04	-1.601e+04
2	1		-142.00	-6248.86	8718.33	-158.73	8.557e+04	3.981e+04	-6516.14
2	1		-81.00	-5096.84	9016.59	-158.73	8.402e+04	4.031e+04	-1.765e+04
2	1		-22.00	-8070.33	1.183e+04	-1912.82	8.907e+05	-2.267e+04	-1.024e+05
2	1		-20.79	-8219.06	5360.28	-4106.96	9.603e+05	-4364.33	-1.278e+05
2	1		-18.57	-6726.58	-1356.49	-630.77	8.325e+05	2.442e+04	-1.644e+05
2	1		-15.59	-1.365e+04	2850.22	1266.68	1.144e+06	-1.023e+04	-2.721e+05
2	1		-12.99	-1.441e+04	3303.47	2634.07	6.726e+05	-2.393e+04	-3.310e+05
2	1		-10.39	-1.567e+04	2595.72	4064.63	3.224e+05	-2.341e+04	-3.623e+05
2	1		-7.80	-1.801e+04	1712.78	5217.06	2.474e+05	1674.00	-3.521e+05
2	1		-5.20	-2.113e+04	854.12	5978.62	4.074e+05	4.681e+04	-2.949e+05
2	1		-2.60	-2.408e+04	209.66	6048.70	5.112e+05	9.625e+04	-1.929e+05
2	1		0.0	-2.397e+04	-593.65	5074.54	-5.677e+05	1.258e+05	-1.109e+05
2	1		85.00	-1.860e+04	-1378.46	5029.94	1.465e+05	1.336e+05	-1.143e+05
2	1		170.00	-1.608e+04	385.71	113.04	-1.215e+05	3.837e+05	-8.272e+04
2	1		255.00	-1.100e+04	818.81	-2483.27	4.172e+05	2.831e+05	-8.323e+04
2	1		340.00	-4920.47	-5.20	-1148.47	7.627e+05	8.927e+04	-9.046e+04
2	1		423.00	-1441.03	-310.18	-996.59	1.994e+04	200.24	-2.913e+04
2	1		506.00	-409.46	99.00	329.38	-843.88	-2906.86	-1.719e+04
2	2		-325.00	-2324.73	971.65	563.30	1.190e+04	-3.872e+04	-6917.00
2	2		-233.50	-2881.50	1026.79	575.87	-2882.18	-3.503e+04	-2608.13
2	2		-182.00	-1192.65	1916.59	1963.11	7.259e+04	4.916e+04	-8861.47
2	2		-142.00	-3713.49	6419.85	-14.65	5.299e+04	2.816e+04	-981.23
2	2		-81.00	-2941.07	6611.25	-14.65	5.394e+04	2.824e+04	-4450.25
2	2		-22.00	-4992.73	8312.41	-1761.58	5.827e+05	-2.478e+04	-7.374e+04
2	2		-20.79	-4999.65	3470.44	-3528.71	6.407e+05	-5628.39	-8.909e+04
2	2		-18.57	-4617.94	-1581.38	-767.67	5.989e+05	3.714e+04	-1.169e+05
2	2		-15.59	-9966.11	910.67	209.36	8.793e+05	4.202e+04	-1.951e+05
2	2		-12.99	-1.131e+04	1061.76	787.85	6.578e+05	6.429e+04	-2.325e+05
2	2		-10.39	-1.293e+04	539.90	1408.46	5.076e+05	9.863e+04	-2.461e+05
2	2		-7.80	-1.517e+04	7.32	1836.10	5.147e+05	1.481e+05	-2.274e+05
2	2		-5.20	-1.778e+04	-436.74	2018.76	6.377e+05	2.063e+05	-1.745e+05
2	2		-2.60	-2.008e+04	-711.53	1742.42	6.578e+05	2.588e+05	-9.169e+04
2	2		0.0	-1.984e+04	-1128.82	898.91	-3.058e+05	2.865e+05	-2.974e+04
2	2		85.00	-1.547e+04	-1689.58	880.35	1.331e+05	2.886e+05	-3.150e+04
2	2		170.00	-1.297e+04	-469.84	-834.95	-1.443e+04	2.982e+05	-4035.40
2	2		255.00	-8650.98	-4.94	-1816.52	3.579e+05	1.857e+05	-4851.61
2	2		340.00	-3701.17	-275.56	-650.46	5.995e+05	5.202e+04	-1.308e+04
2	2		423.00	-1091.50	-297.38	-530.98	1.581e+04	-1979.07	-3.066e+04
2	2		506.00	-313.69	61.79	270.32	-737.51	-2555.04	-1.498e+04
2	3		-325.00	-2786.48	1262.37	659.22	1.613e+04	-4.345e+04	-8351.73



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
2	3	-233.50	-3401.82	1312.95	674.48	172.21	-3.938e+04	-3554.99	
2	3	-182.00	-1886.94	2248.31	2270.09	8.638e+04	5.787e+04	-1.081e+04	
2	3	-142.00	-4331.46	6581.82	-75.38	6.025e+04	2.955e+04	-3259.72	
2	3	-81.00	-3494.74	6794.72	-75.38	5.998e+04	2.980e+04	-9610.50	
2	3	-22.00	-5679.59	8757.83	-1597.56	6.406e+05	-2.063e+04	-7.656e+04	
2	3	-20.79	-5747.27	3839.45	-3319.86	6.961e+05	-4344.66	-9.430e+04	
2	3	-18.57	-4932.40	-1277.34	-608.02	6.224e+05	2.676e+04	-1.223e+05	
2	3	-15.59	-1.027e+04	1635.17	641.75	8.795e+05	1.382e+04	-2.031e+05	
2	3	-12.99	-1.118e+04	1897.93	1487.79	5.784e+05	1.755e+04	-2.450e+05	
2	3	-10.39	-1.244e+04	1363.31	2379.61	3.609e+05	3.270e+04	-2.645e+05	
2	3	-7.80	-1.443e+04	747.87	3066.59	3.314e+05	6.511e+04	-2.519e+05	
2	3	-5.20	-1.692e+04	181.47	3477.12	4.544e+05	1.100e+05	-2.041e+05	
2	3	-2.60	-1.920e+04	-218.21	3387.44	5.083e+05	1.544e+05	-1.237e+05	
2	3	0.0	-1.905e+04	-748.90	2597.15	-3.798e+05	1.793e+05	-6.115e+04	
2	3	85.00	-1.481e+04	-1333.93	2569.69	1.215e+05	1.836e+05	-6.341e+04	
2	3	170.00	-1.263e+04	-36.58	-313.87	-5.909e+04	2.965e+05	-3.772e+04	
2	3	255.00	-8544.04	353.85	-1869.47	3.370e+05	2.038e+05	-3.830e+04	
2	3	340.00	-3748.54	-122.07	-782.14	5.923e+05	6.143e+04	-4.502e+04	
2	3	423.00	-1101.10	-264.16	-664.16	1.555e+04	-773.40	-2.600e+04	
2	3	506.00	-314.42	69.91	260.74	-687.56	-2374.74	-1.399e+04	
2	4	-325.00	-2786.48	1262.37	659.22	1.613e+04	-4.345e+04	-8351.73	
2	4	-233.50	-3401.82	1312.95	674.48	172.21	-3.938e+04	-3554.99	
2	4	-182.00	-1886.94	2248.31	2270.09	8.638e+04	5.787e+04	-1.081e+04	
2	4	-142.00	-4331.46	6581.82	-75.38	6.025e+04	2.955e+04	-3259.72	
2	4	-81.00	-3494.74	6794.72	-75.38	5.998e+04	2.980e+04	-9610.50	
2	4	-22.00	-5679.59	8757.83	-1597.56	6.406e+05	-2.063e+04	-7.656e+04	
2	4	-20.79	-5747.27	3839.45	-3319.86	6.961e+05	-4344.66	-9.430e+04	
2	4	-18.57	-4932.40	-1277.34	-608.02	6.224e+05	2.676e+04	-1.223e+05	
2	4	-15.59	-1.027e+04	1635.17	641.75	8.795e+05	1.382e+04	-2.031e+05	
2	4	-12.99	-1.118e+04	1897.93	1487.79	5.784e+05	1.755e+04	-2.450e+05	
2	4	-10.39	-1.244e+04	1363.31	2379.61	3.609e+05	3.270e+04	-2.645e+05	
2	4	-7.80	-1.443e+04	747.87	3066.59	3.314e+05	6.511e+04	-2.519e+05	
2	4	-5.20	-1.692e+04	181.47	3477.12	4.544e+05	1.100e+05	-2.041e+05	
2	4	-2.60	-1.920e+04	-218.21	3387.44	5.083e+05	1.544e+05	-1.237e+05	
2	4	0.0	-1.905e+04	-748.90	2597.15	-3.798e+05	1.793e+05	-6.115e+04	
2	4	85.00	-1.481e+04	-1333.93	2569.69	1.215e+05	1.836e+05	-6.341e+04	
2	4	170.00	-1.263e+04	-36.58	-313.87	-5.909e+04	2.965e+05	-3.772e+04	
2	4	255.00	-8544.04	353.85	-1869.47	3.370e+05	2.038e+05	-3.830e+04	
2	4	340.00	-3748.54	-122.07	-782.14	5.923e+05	6.143e+04	-4.502e+04	
2	4	423.00	-1101.10	-264.16	-664.16	1.555e+04	-773.40	-2.600e+04	
2	4	506.00	-314.42	69.91	260.74	-687.56	-2374.74	-1.399e+04	
2	5	-325.00	-2786.48	1262.37	659.22	1.613e+04	-4.345e+04	-8351.73	
2	5	-233.50	-3401.82	1312.95	674.48	172.21	-3.938e+04	-3554.99	
2	5	-182.00	-1886.94	2248.31	2270.09	8.638e+04	5.787e+04	-1.081e+04	
2	5	-142.00	-4331.46	6581.82	-75.38	6.025e+04	2.955e+04	-3259.72	
2	5	-81.00	-3494.74	6794.72	-75.38	5.998e+04	2.980e+04	-9610.50	
2	5	-22.00	-5679.59	8757.83	-1597.56	6.406e+05	-2.063e+04	-7.656e+04	
2	5	-20.79	-5747.27	3839.45	-3319.86	6.961e+05	-4344.66	-9.430e+04	
2	5	-18.57	-4932.40	-1277.34	-608.02	6.224e+05	2.676e+04	-1.223e+05	
2	5	-15.59	-1.027e+04	1635.17	641.75	8.795e+05	1.382e+04	-2.031e+05	
2	5	-12.99	-1.118e+04	1897.93	1487.79	5.784e+05	1.755e+04	-2.450e+05	
2	5	-10.39	-1.244e+04	1363.31	2379.61	3.609e+05	3.270e+04	-2.645e+05	
2	5	-7.80	-1.443e+04	747.87	3066.59	3.314e+05	6.511e+04	-2.519e+05	
2	5	-5.20	-1.692e+04	181.47	3477.12	4.544e+05	1.100e+05	-2.041e+05	
2	5	-2.60	-1.920e+04	-218.21	3387.44	5.083e+05	1.544e+05	-1.237e+05	
2	5	0.0	-1.905e+04	-748.90	2597.15	-3.798e+05	1.793e+05	-6.115e+04	
2	5	85.00	-1.481e+04	-1333.93	2569.69	1.215e+05	1.836e+05	-6.341e+04	
2	5	170.00	-1.263e+04	-36.58	-313.87	-5.909e+04	2.965e+05	-3.772e+04	
2	5	255.00	-8544.04	353.85	-1869.47	3.370e+05	2.038e+05	-3.830e+04	
2	5	340.00	-3748.54	-122.07	-782.14	5.923e+05	6.143e+04	-4.502e+04	
2	5	423.00	-1101.10	-264.16	-664.16	1.555e+04	-773.40	-2.600e+04	
2	5	506.00	-314.42	69.91	260.74	-687.56	-2374.74	-1.399e+04	
2	6	-325.00	-3147.45	-541.82	907.88	-4.714e+04	-6.396e+04	-4944.01	
2	6	-233.50	-3186.37	-463.00	923.96	-4.752e+04	-5.625e+04	-2367.82	
2	6	-182.00	-1795.37	-1005.24	3660.50	-1.186e+05	1.043e+05	-1.839e+04	
2	6	-142.00	-241.11	2518.85	-262.78	-4.161e+04	4.097e+04	-3097.30	
2	6	-81.00	-700.75	2314.88	-262.78	-3.051e+04	3.935e+04	-6169.40	
2	6	-22.00	-746.80	6172.96	-3519.69	1.286e+05	-7.811e+04	-1.193e+05	
2	6	-20.79	1499.07	2105.54	-3495.34	1.852e+05	-6.910e+04	-1.589e+05	
2	6	-18.57	1863.80	-1912.32	1466.46	1.854e+05	-3.346e+04	-1.786e+05	
2	6	-15.59	606.50	-3919.66	3152.43	4.339e+05	-5.225e+04	-2.736e+05	
2	6	-12.99	-851.17	-6771.51	4006.20	7.124e+05	-1.974e+04	-3.214e+05	



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
2	6	-10.39	-3046.66	-9776.71	4683.28	1.143e+06	6.102e+04	-3.816e+05	
2	6	-7.80	-6790.27	-1.242e+04	4692.81	1.960e+06	1.956e+05	-3.873e+05	
2	6	-5.20	-1.212e+04	-1.442e+04	3955.42	3.247e+06	3.678e+05	-3.438e+05	
2	6	-2.60	-1.791e+04	-1.534e+04	1851.63	4.679e+06	5.319e+05	-2.590e+05	
2	6	0.0	-1.831e+04	-1.498e+04	305.37	3.991e+06	6.139e+05	-2.114e+05	
2	6	85.00	-1.245e+04	-1.525e+04	369.76	3.267e+06	6.068e+05	-3.063e+05	
2	6	170.00	-1.113e+04	-1.246e+04	-2604.38	2.050e+06	5.357e+05	-2.378e+05	
2	6	255.00	-7927.85	-8572.72	-3581.91	1.202e+06	2.851e+05	-2.190e+05	
2	6	340.00	-4024.84	-4486.48	-1631.07	6.131e+05	2.200e+04	-2.181e+05	
2	6	423.00	-449.17	-1777.71	745.66	1.235e+04	-4.274e+04	-2.273e+05	
2	6	506.00	-577.88	195.03	1277.78	-7412.80	-1.591e+04	-7.589e+04	
2	7	-325.00	-2979.58	105.40	915.78	-3.796e+04	-6.268e+04	-5159.64	
2	7	-233.50	-3150.66	83.43	933.32	-4.096e+04	-5.530e+04	-2940.62	
2	7	-182.00	-1341.90	-580.97	3426.83	-8.607e+04	9.753e+04	-1.456e+04	
2	7	-142.00	71.48	1809.35	-272.37	-3.704e+04	3.848e+04	1160.29	
2	7	-81.00	-261.71	1682.52	-272.37	-2.698e+04	3.696e+04	1748.80	
2	7	-22.00	427.05	5590.52	-2647.17	1.104e+05	-5.511e+04	-1.049e+05	
2	7	-20.79	1731.66	1739.75	-3260.13	1.291e+05	-4.170e+04	-1.360e+05	
2	7	-18.57	2030.04	-1831.41	915.57	1.301e+05	-3514.24	-1.464e+05	
2	7	-15.59	1285.17	-4524.63	2294.17	3.249e+05	3649.44	-2.196e+05	
2	7	-12.99	-129.08	-7805.38	2850.78	6.304e+05	6.089e+04	-2.524e+05	
2	7	-10.39	-2260.37	-1.117e+04	3216.02	1.087e+06	1.674e+05	-3.142e+05	
2	7	-7.80	-5915.62	-1.412e+04	2924.37	1.928e+06	3.262e+05	-3.367e+05	
2	7	-5.20	-1.114e+04	-1.638e+04	1927.41	3.234e+06	5.188e+05	-3.094e+05	
2	7	-2.60	-1.679e+04	-1.748e+04	-377.48	4.678e+06	6.966e+05	-2.408e+05	
2	7	0.0	-1.738e+04	-1.714e+04	-1801.44	4.135e+06	7.827e+05	-2.054e+05	
2	7	85.00	-1.010e+04	-1.740e+04	-1736.63	3.506e+06	7.711e+05	-3.008e+05	
2	7	170.00	-9603.43	-1.349e+04	-3614.43	2.173e+06	5.644e+05	-2.363e+05	
2	7	255.00	-6196.50	-9527.09	-3835.63	1.046e+06	2.620e+05	-2.364e+05	
2	7	340.00	-2631.64	-4947.91	-1704.04	5.005e+05	-3291.00	-2.367e+05	
2	7	423.00	-308.07	-1813.37	1259.52	-3879.66	-5.258e+04	-2.508e+05	
2	7	506.00	-477.08	50.45	1218.97	-7376.59	-1.697e+04	-8.145e+04	
2	8	-325.00	-2056.39	1738.90	-33.05	4.123e+04	-2.012e+04	-1.466e+04	
2	8	-233.50	-3806.50	1871.78	-18.18	5294.02	-2.144e+04	-7268.38	
2	8	-182.00	-2469.00	5044.65	397.26	1.977e+05	-1.912e+04	-9915.82	
2	8	-142.00	-1.019e+04	1.542e+04	304.74	2.155e+05	9103.46	6834.58	
2	8	-81.00	-7543.20	1.628e+04	304.74	2.035e+05	1.261e+04	-1.180e+04	
2	8	-22.00	-1.299e+04	1.565e+04	4262.10	1.542e+06	1.579e+05	-1.565e+04	
2	8	-20.79	-1.715e+04	5494.21	-4089.78	1.630e+06	2.392e+05	8.041e+04	
2	8	-18.57	-1.620e+04	-4526.08	-7470.38	1.481e+06	3.404e+05	3.363e+04	
2	8	-15.59	-2.970e+04	6233.97	-7719.48	1.934e+06	4.706e+05	-5.320e+04	
2	8	-12.99	-3.095e+04	1.165e+04	-7284.25	8.153e+05	5.393e+05	-1.210e+05	
2	8	-10.39	-3.178e+04	1.552e+04	-6398.33	-3.492e+05	5.667e+05	-1.177e+05	
2	8	-7.80	-3.270e+04	1.906e+04	-5252.93	-1.471e+06	5.675e+05	-8.968e+04	
2	8	-5.20	-3.347e+04	2.213e+04	-4083.84	-2.616e+06	5.525e+05	-3.953e+04	
2	8	-2.60	-3.378e+04	2.454e+04	-2984.85	-3.893e+06	5.333e+05	3.427e+04	
2	8	0.0	-3.336e+04	2.555e+04	-3237.57	-5.415e+06	5.244e+05	9.436e+04	
2	8	85.00	-2.496e+04	2.394e+04	-3534.13	-3.629e+06	5.084e+05	1.711e+05	
2	8	170.00	-1.752e+04	2.192e+04	-2101.11	-2.153e+06	1.975e+05	1.602e+05	
2	8	255.00	-8462.68	1.778e+04	-2268.11	3.082e+05	-3434.60	1.763e+05	
2	8	340.00	-433.12	8233.53	1553.71	1.734e+06	-4.924e+04	1.073e+05	
2	8	423.00	-1564.64	56.30	-1436.24	4.476e+04	1438.13	6.037e+04	
2	8	506.00	-172.89	-95.45	-118.32	3505.56	2216.96	1.451e+04	
2	30	-325.00	-2956.74	163.50	859.84	-2.978e+04	-5.778e+04	-6222.05	
2	30	-233.50	-3145.86	196.84	876.76	-3.440e+04	-5.114e+04	-2922.96	
2	30	-182.00	-1705.15	217.14	3353.66	-6.448e+04	9.382e+04	-1.583e+04	
2	30	-142.00	-1060.71	3293.98	-212.73	-1.711e+04	3.810e+04	-4181.42	
2	30	-81.00	-1198.85	3196.55	-212.73	-8742.47	3.702e+04	-9048.99	
2	30	-22.00	-1501.48	6730.37	-3227.97	2.411e+05	-6.853e+04	-1.093e+05	
2	30	-20.79	34.10	2451.87	-3434.15	2.884e+05	-5.955e+04	-1.470e+05	
2	30	-18.57	514.92	-1862.25	1141.94	2.698e+05	-2.535e+04	-1.701e+05	
2	30	-15.59	-1549.77	-2983.14	2738.33	5.160e+05	-4.397e+04	-2.656e+05	
2	30	-12.99	-2789.08	-5327.89	3582.17	6.624e+05	-1.647e+04	-3.144e+05	
2	30	-10.39	-4828.01	-7958.90	4267.07	9.759e+05	5.286e+04	-3.646e+05	
2	30	-7.80	-8247.13	-1.030e+04	4393.53	1.636e+06	1.684e+05	-3.633e+05	
2	30	-5.20	-1.301e+04	-1.212e+04	3880.58	2.695e+06	3.161e+05	-3.162e+05	
2	30	-2.60	-1.806e+04	-1.303e+04	2193.99	3.844e+06	4.565e+05	-2.295e+05	
2	30	0.0	-1.841e+04	-1.297e+04	792.57	3.146e+06	5.269e+05	-1.779e+05	
2	30	85.00	-1.289e+04	-1.330e+04	840.84	2.742e+06	5.231e+05	-2.335e+05	
2	30	170.00	-1.135e+04	-1.061e+04	-2106.47	1.633e+06	4.945e+05	-1.757e+05	
2	30	255.00	-7882.08	-7295.57	-3201.76	1.023e+06	2.737e+05	-1.713e+05	
2	30	340.00	-3834.09	-4008.74	-1485.60	6.120e+05	3.243e+04	-1.735e+05	



M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
2	30	423.00	-602.29	-1507.12	414.97	1.606e+04	-3.576e+04	-1.868e+05
2	30	506.00	-492.07	128.42	1061.85	-5732.53	-1.318e+04	-6.575e+04
2	31	-325.00	-2499.50	1838.03	208.78	2.030e+04	-3.069e+04	-1.838e+04
2	31	-233.50	-3943.29	1898.32	232.79	-1.623e+04	-2.964e+04	-1.239e+04
2	31	-182.00	-2646.04	4853.10	1005.03	1.412e+05	4679.05	-1.728e+04
2	31	-142.00	-8899.75	1.423e+04	180.03	1.739e+05	1.846e+04	2496.59
2	31	-81.00	-6812.79	1.498e+04	180.03	1.692e+05	2.151e+04	-1.583e+04
2	31	-22.00	-1.131e+04	1.647e+04	3263.48	1.400e+06	1.287e+05	-3.502e+04
2	31	-20.79	-1.479e+04	6198.58	-3754.90	1.482e+06	1.964e+05	3.859e+04
2	31	-18.57	-1.390e+04	-3662.13	-6120.36	1.352e+06	2.798e+05	2740.41
2	31	-15.59	-2.632e+04	5711.09	-6069.71	1.826e+06	3.811e+05	-7.302e+04
2	31	-12.99	-2.765e+04	1.015e+04	-5595.09	8.726e+05	4.368e+05	-1.260e+05
2	31	-10.39	-2.842e+04	1.313e+04	-4711.14	-1.585e+05	4.591e+05	-1.346e+05
2	31	-7.80	-2.932e+04	1.586e+04	-3650.08	-1.137e+06	4.626e+05	-1.147e+05
2	31	-5.20	-3.010e+04	1.827e+04	-2600.03	-2.132e+06	4.543e+05	-7.225e+04
2	31	-2.60	-3.040e+04	2.023e+04	-1609.71	-3.271e+06	4.422e+05	-6736.30
2	31	0.0	-2.993e+04	2.101e+04	-1833.14	-4.676e+06	4.368e+05	5.012e+04
2	31	85.00	-2.207e+04	1.958e+04	-2073.61	-2.996e+06	4.269e+05	8.877e+04
2	31	170.00	-1.619e+04	1.778e+04	-1648.02	-1.847e+06	2.168e+05	9.779e+04
2	31	255.00	-8220.14	1.398e+04	-2177.71	1.810e+05	4.231e+04	1.037e+05
2	31	340.00	-915.57	6240.23	951.69	1.413e+06	-2.409e+04	5.104e+04
2	31	423.00	-1375.11	-33.54	-1294.51	3.548e+04	1462.70	3.830e+04
2	31	506.00	-220.49	-58.79	-31.90	2309.00	840.60	5460.90
2	32	-325.00	-2834.87	-137.05	859.35	-2.163e+04	-5.636e+04	-4125.96
2	32	-233.50	-3146.68	-96.59	873.39	-2.641e+04	-5.016e+04	-815.07
2	32	-182.00	-1411.23	-313.72	3182.73	-3.918e+04	8.912e+04	-1.125e+04
2	32	-142.00	-898.32	2662.37	-218.87	-1.376e+04	3.566e+04	-891.40
2	32	-81.00	-908.12	2607.39	-218.87	-6974.22	3.446e+04	-1374.08
2	32	-22.00	-1169.77	5540.04	-2805.17	2.015e+05	-5.841e+04	-9.787e+04
2	32	-20.79	193.51	1961.75	-3397.88	2.380e+05	-4.614e+04	-1.311e+05
2	32	-18.57	593.01	-1807.76	835.87	2.224e+05	-9396.97	-1.498e+05
2	32	-15.59	-968.77	-3407.05	2258.50	4.148e+05	-1.305e+04	-2.324e+05
2	32	-12.99	-2190.82	-6006.45	2940.29	5.864e+05	2.856e+04	-2.727e+05
2	32	-10.39	-4232.50	-8833.57	3443.20	9.310e+05	1.132e+05	-3.152e+05
2	32	-7.80	-7640.95	-1.135e+04	3382.95	1.621e+06	2.435e+05	-3.229e+05
2	32	-5.20	-1.238e+04	-1.332e+04	2700.93	2.707e+06	4.038e+05	-2.835e+05
2	32	-2.60	-1.739e+04	-1.434e+04	877.85	3.877e+06	5.527e+05	-2.045e+05
2	32	0.0	-1.784e+04	-1.428e+04	-465.17	3.260e+06	6.262e+05	-1.593e+05
2	32	85.00	-1.146e+04	-1.460e+04	-414.66	2.887e+06	6.186e+05	-2.141e+05
2	32	170.00	-1.037e+04	-1.122e+04	-2719.40	1.725e+06	5.070e+05	-1.694e+05
2	32	255.00	-6793.68	-7864.09	-3363.34	9.360e+05	2.590e+05	-1.643e+05
2	32	340.00	-2971.44	-4262.40	-1502.36	5.419e+05	1.683e+04	-1.673e+05
2	32	423.00	-498.07	-1542.29	747.04	6546.56	-4.135e+04	-1.997e+05
2	32	506.00	-431.17	51.77	1030.55	-5702.02	-1.378e+04	-6.513e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-3.378e+04	-1.748e+04	-7719.48	-5.415e+06	-7.811e+04	-3.873e+05
			2030.04	2.555e+04	6048.70	4.679e+06	7.827e+05	1.763e+05

Macro	Tipo	Angolo 1-Z (gradi)
3	Setto	0.0

M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
		cm	daN	daN	daN	daN cm	daN cm	daN cm
3	1	-325.00	-2681.64	-707.09	319.83	-1.124e+04	-9428.52	1.091e+04
3	1	-233.50	-3060.40	-707.09	319.83	-1.114e+04	-1.300e+04	1.268e+04
3	1	-142.00	-4056.95	-854.11	-214.70	3.256e+04	-7901.47	1.943e+04
3	1	-81.00	-5729.49	-581.24	-73.73	1.405e+05	-1.833e+04	3.052e+04
3	1	-22.00	-6755.75	-2909.39	939.21	3.739e+05	1.012e+04	8812.29
3	2	-325.00	-1629.19	-185.96	172.92	-8610.69	-6223.23	6111.45
3	2	-233.50	-1847.83	-185.96	172.92	-8121.84	-8582.39	7625.42
3	2	-142.00	-2367.02	-117.73	-121.77	1.732e+04	-6127.01	1.257e+04
3	2	-81.00	-3382.06	309.06	-51.15	8.151e+04	-1.218e+04	1.995e+04
3	2	-22.00	-4228.69	-1563.99	591.50	2.325e+05	5300.70	6708.89



M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
3	3	-325.00	-1874.27	-388.28	214.24	-8631.45	-6805.11	7398.71
3	3	-233.50	-2134.02	-388.28	214.24	-8375.53	-9385.72	8827.08
3	3	-142.00	-2793.03	-422.54	-146.29	2.168e+04	-6099.34	1.391e+04
3	3	-81.00	-3961.54	-118.34	-54.30	9.654e+04	-1.327e+04	2.194e+04
3	3	-22.00	-4775.84	-1944.95	665.53	2.636e+05	6704.08	6748.34
3	4	-325.00	-1874.27	-388.28	214.24	-8631.45	-6805.11	7398.71
3	4	-233.50	-2134.02	-388.28	214.24	-8375.53	-9385.72	8827.08
3	4	-142.00	-2793.03	-422.54	-146.29	2.168e+04	-6099.34	1.391e+04
3	4	-81.00	-3961.54	-118.34	-54.30	9.654e+04	-1.327e+04	2.194e+04
3	4	-22.00	-4775.84	-1944.95	665.53	2.636e+05	6704.08	6748.34
3	5	-325.00	-1874.27	-388.28	214.24	-8631.45	-6805.11	7398.71
3	5	-233.50	-2134.02	-388.28	214.24	-8375.53	-9385.72	8827.08
3	5	-142.00	-2793.03	-422.54	-146.29	2.168e+04	-6099.34	1.391e+04
3	5	-81.00	-3961.54	-118.34	-54.30	9.654e+04	-1.327e+04	2.194e+04
3	5	-22.00	-4775.84	-1944.95	665.53	2.636e+05	6704.08	6748.34
3	7	-325.00	-909.48	-239.30	16.27	-1.140e+04	-1079.30	6891.64
3	7	-233.50	-1353.19	-239.30	16.27	-8008.32	-5608.36	7727.60
3	7	-142.00	-490.26	440.34	-119.32	-2.016e+04	-1.081e+04	1.107e+04
3	7	-81.00	263.47	1372.63	11.65	-6.807e+04	-1.416e+04	1.365e+04
3	7	-22.00	-1361.14	-1428.37	175.18	685.60	-8427.07	1.929e+04
3	8	-325.00	-2960.64	-317.37	551.38	-1.916e+04	-1.392e+04	1.071e+04
3	8	-233.50	-2923.47	-317.37	551.38	-2.312e+04	-1.296e+04	1.393e+04
3	8	-142.00	-5560.33	-1572.59	-227.69	5.998e+04	1748.62	2.503e+04
3	8	-81.00	-9812.50	-2550.01	-234.89	3.571e+05	-1.572e+04	4.507e+04
3	8	-22.00	-9447.32	-1652.79	1655.04	6.742e+05	3.060e+04	-1.095e+04
3	14	-325.00	-1505.33	211.01	-39.84	-2.344e+04	-4200.58	7234.82
3	14	-233.50	-1986.65	211.01	-39.84	-2.182e+04	-8829.89	8438.68
3	14	-142.00	-2377.14	-74.00	-153.65	-2.443e+04	-1.361e+04	1.617e+04
3	14	-81.00	-3452.17	-130.75	-40.07	8187.25	-1.952e+04	2.223e+04
3	14	-22.00	-4797.14	-3529.32	573.80	1.640e+05	3170.58	1.825e+04
3	22	-325.00	-1521.43	99.36	27.59	-2.083e+04	-4404.85	7765.32
3	22	-233.50	-1958.99	99.36	27.59	-1.954e+04	-8713.42	9191.06
3	22	-142.00	-2400.20	-149.38	-150.97	-1.557e+04	-1.176e+04	1.511e+04
3	22	-81.00	-3468.27	-188.99	-32.35	2.552e+04	-1.722e+04	2.169e+04
3	22	-22.00	-4673.43	-3083.35	586.39	1.824e+05	1587.03	1.255e+04
3	31	-325.00	-2527.85	-291.96	293.71	-2.359e+04	-1.151e+04	1.438e+04
3	31	-233.50	-2558.06	-291.96	293.71	-2.636e+04	-1.258e+04	1.785e+04
3	31	-142.00	-4761.18	-1274.36	-150.42	4.215e+04	-5905.81	2.864e+04
3	31	-81.00	-8574.12	-2117.29	-238.52	2.977e+05	-1.917e+04	4.843e+04
3	31	-22.00	-8846.42	-1982.08	1657.30	6.039e+05	2.641e+04	-1522.92
3	32	-325.00	-1159.47	-267.93	98.72	-9158.58	-2526.51	5283.23
3	32	-233.50	-1559.71	-267.93	98.72	-6490.15	-6264.40	5969.24
3	32	-142.00	-1012.35	263.45	-142.18	-8833.25	-8494.09	9699.28
3	32	-81.00	-638.61	1162.28	12.19	-3.233e+04	-1.322e+04	1.296e+04
3	32	-22.00	-1952.91	-1421.40	220.89	5.281e+04	-5008.58	1.581e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-9812.50	-3529.32	-238.52	-6.807e+04	-1.952e+04	-1.095e+04
			263.47	1372.63	1657.30	6.742e+05	3.060e+04	4.843e+04

Macro	Tipo	Angolo 1-Z (gradi)
4	Setto	0.0

M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
		cm	daN	daN	daN	daN cm	daN cm	daN cm
4	1	-325.00	-110.63	-1739.71	-39.71	4.875e+04	1016.63	2585.28
4	1	-233.50	-923.93	-1739.71	-39.71	4.583e+04	5861.90	2340.63
4	1	-182.00	653.19	1432.53	-157.42	1.847e+05	5486.92	1.165e+04
4	1	-180.23	-1038.74	1171.96	-161.34	3.469e+05	1.691e+04	2.109e+04
4	1	-177.50	-6746.30	-1634.18	-1372.65	9.524e+05	5.290e+04	4.228e+04
4	1	-174.77	-1.413e+04	-4663.58	-3457.33	1.823e+06	1.080e+05	8.169e+04
4	1	-172.04	-2.138e+04	-6950.03	-5655.25	2.700e+06	1.671e+05	1.300e+05
4	1	-169.31	-2.816e+04	-8543.69	-7745.04	3.498e+06	2.219e+05	1.744e+05
4	1	-166.58	-3.438e+04	-9599.38	-9719.72	4.179e+06	2.686e+05	2.101e+05



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
4	1	-163.85	-4.013e+04	-1.027e+04	-1.160e+04	4.738e+06	3.076e+05	2.346e+05	
4	1	-161.12	-4.552e+04	-1.067e+04	-1.342e+04	5.198e+06	3.409e+05	2.473e+05	
4	1	-158.39	-5.064e+04	-1.089e+04	-1.520e+04	5.575e+06	3.718e+05	2.477e+05	
4	1	-155.65	-5.551e+04	-1.095e+04	-1.699e+04	5.871e+06	4.034e+05	2.365e+05	
4	1	-152.92	-6.023e+04	-1.081e+04	-1.881e+04	6.116e+06	4.390e+05	2.148e+05	
4	1	-150.19	-6.478e+04	-1.048e+04	-2.071e+04	6.294e+06	4.803e+05	1.849e+05	
4	1	-147.46	-6.916e+04	-9845.95	-2.273e+04	6.396e+06	5.257e+05	1.525e+05	
4	1	-144.73	-7.295e+04	-9184.70	-2.455e+04	6.126e+06	5.649e+05	1.319e+05	
4	1	-142.00	-7.332e+04	-9664.94	-2.496e+04	3.496e+06	5.840e+05	1.298e+05	
4	1	-81.00	-5.999e+04	-7496.83	-2.511e+04	4.906e+06	5.814e+05	1.319e+05	
4	1	-22.00	-4.939e+04	-4245.90	-8700.56	5.744e+06	-6.807e+05	1.024e+05	
4	1	85.00	-3.979e+04	-2826.04	6983.81	-3.103e+05	-5.637e+05	9.717e+04	
4	1	170.00	-2.654e+04	-1420.03	3708.22	8.593e+05	-2.897e+04	1.008e+05	
4	1	255.00	-1.403e+04	-1024.20	7.55	6.166e+05	1.277e+05	1.019e+05	
4	1	340.00	-2170.38	-395.25	-1479.74	1.455e+05	6.475e+04	9.763e+04	
4	3	-325.00	-129.24	-1144.64	-33.78	3.493e+04	1055.55	1641.25	
4	3	-233.50	-700.79	-1144.64	-33.78	3.286e+04	4509.89	1120.09	
4	3	-182.00	396.12	1110.05	-136.71	1.340e+05	3117.17	8778.74	
4	3	-180.23	-775.78	808.85	-135.65	2.456e+05	1.176e+04	1.742e+04	
4	3	-177.50	-4936.85	-1450.06	-963.59	6.875e+05	3.897e+04	3.647e+04	
4	3	-174.77	-1.041e+04	-3884.40	-2381.52	1.336e+06	8.085e+04	6.789e+04	
4	3	-172.04	-1.583e+04	-5758.27	-3870.88	1.997e+06	1.266e+05	1.046e+05	
4	3	-169.31	-2.092e+04	-7094.60	-5282.75	2.609e+06	1.703e+05	1.375e+05	
4	3	-166.58	-2.564e+04	-7996.12	-6613.69	3.140e+06	2.092e+05	1.631e+05	
4	3	-163.85	-3.001e+04	-8564.65	-7877.76	3.584e+06	2.433e+05	1.799e+05	
4	3	-161.12	-3.411e+04	-8873.47	-9100.92	3.955e+06	2.740e+05	1.872e+05	
4	3	-158.39	-3.801e+04	-8988.40	-1.031e+04	4.262e+06	3.034e+05	1.848e+05	
4	3	-155.65	-4.171e+04	-8911.54	-1.151e+04	4.503e+06	3.336e+05	1.730e+05	
4	3	-152.92	-4.527e+04	-8614.63	-1.276e+04	4.696e+06	3.668e+05	1.528e+05	
4	3	-150.19	-4.867e+04	-8098.74	-1.406e+04	4.818e+06	4.037e+05	1.258e+05	
4	3	-147.46	-5.189e+04	-7299.46	-1.545e+04	4.851e+06	4.425e+05	9.627e+04	
4	3	-144.73	-5.457e+04	-6418.62	-1.672e+04	4.546e+06	4.749e+05	7.543e+04	
4	3	-142.00	-5.439e+04	-6563.37	-1.697e+04	2.269e+06	4.904e+05	7.129e+04	
4	3	-81.00	-4.422e+04	-4954.07	-1.707e+04	3.155e+06	4.886e+05	7.258e+04	
4	3	-22.00	-3.618e+04	-2584.60	-6191.18	3.666e+06	-3.778e+05	4.400e+04	
4	3	85.00	-2.916e+04	-1702.63	4320.04	-6.821e+05	-3.292e+05	3.662e+04	
4	3	170.00	-1.966e+04	-820.07	2277.75	3.675e+05	1302.55	3.811e+04	
4	3	255.00	-1.053e+04	-595.99	-123.52	3.409e+05	9.185e+04	3.887e+04	
4	3	340.00	-1711.72	-228.41	-1000.26	9.293e+04	4.378e+04	3.751e+04	
4	4	-325.00	-129.24	-1144.64	-33.78	3.493e+04	1055.55	1641.25	
4	4	-233.50	-700.79	-1144.64	-33.78	3.286e+04	4509.89	1120.09	
4	4	-182.00	396.12	1110.05	-136.71	1.340e+05	3117.17	8778.74	
4	4	-180.23	-775.78	808.85	-135.65	2.456e+05	1.176e+04	1.742e+04	
4	4	-177.50	-4936.85	-1450.06	-963.59	6.875e+05	3.897e+04	3.647e+04	
4	4	-174.77	-1.041e+04	-3884.40	-2381.52	1.336e+06	8.085e+04	6.789e+04	
4	4	-172.04	-1.583e+04	-5758.27	-3870.88	1.997e+06	1.266e+05	1.046e+05	
4	4	-169.31	-2.092e+04	-7094.60	-5282.75	2.609e+06	1.703e+05	1.375e+05	
4	4	-166.58	-2.564e+04	-7996.12	-6613.69	3.140e+06	2.092e+05	1.631e+05	
4	4	-163.85	-3.001e+04	-8564.65	-7877.76	3.584e+06	2.433e+05	1.799e+05	
4	4	-161.12	-3.411e+04	-8873.47	-9100.92	3.955e+06	2.740e+05	1.872e+05	
4	4	-158.39	-3.801e+04	-8988.40	-1.031e+04	4.262e+06	3.034e+05	1.848e+05	
4	4	-155.65	-4.171e+04	-8911.54	-1.151e+04	4.503e+06	3.336e+05	1.730e+05	
4	4	-152.92	-4.527e+04	-8614.63	-1.276e+04	4.696e+06	3.668e+05	1.528e+05	
4	4	-150.19	-4.867e+04	-8098.74	-1.406e+04	4.818e+06	4.037e+05	1.258e+05	
4	4	-147.46	-5.189e+04	-7299.46	-1.545e+04	4.851e+06	4.425e+05	9.627e+04	
4	4	-144.73	-5.457e+04	-6418.62	-1.672e+04	4.546e+06	4.749e+05	7.543e+04	
4	4	-142.00	-5.439e+04	-6563.37	-1.697e+04	2.269e+06	4.904e+05	7.129e+04	
4	4	-81.00	-4.422e+04	-4954.07	-1.707e+04	3.155e+06	4.886e+05	7.258e+04	
4	4	-22.00	-3.618e+04	-2584.60	-6191.18	3.666e+06	-3.778e+05	4.400e+04	
4	4	85.00	-2.916e+04	-1702.63	4320.04	-6.821e+05	-3.292e+05	3.662e+04	
4	4	170.00	-1.966e+04	-820.07	2277.75	3.675e+05	1302.55	3.811e+04	
4	4	255.00	-1.053e+04	-595.99	-123.52	3.409e+05	9.185e+04	3.887e+04	
4	4	340.00	-1711.72	-228.41	-1000.26	9.293e+04	4.378e+04	3.751e+04	
4	5	-325.00	-129.24	-1144.64	-33.78	3.493e+04	1055.55	1641.25	
4	5	-233.50	-700.79	-1144.64	-33.78	3.286e+04	4509.89	1120.09	
4	5	-182.00	396.12	1110.05	-136.71	1.340e+05	3117.17	8778.74	
4	5	-180.23	-775.78	808.85	-135.65	2.456e+05	1.176e+04	1.742e+04	
4	5	-177.50	-4936.85	-1450.06	-963.59	6.875e+05	3.897e+04	3.647e+04	
4	5	-174.77	-1.041e+04	-3884.40	-2381.52	1.336e+06	8.085e+04	6.789e+04	
4	5	-172.04	-1.583e+04	-5758.27	-3870.88	1.997e+06	1.266e+05	1.046e+05	
4	5	-169.31	-2.092e+04	-7094.60	-5282.75	2.609e+06	1.703e+05	1.375e+05	
4	5	-166.58	-2.564e+04	-7996.12	-6613.69	3.140e+06	2.092e+05	1.631e+05	



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
4	5	-163.85	-3.001e+04	-8564.65	-7877.76	3.584e+06	2.433e+05	1.799e+05	
4	5	-161.12	-3.411e+04	-8873.47	-9100.92	3.955e+06	2.740e+05	1.872e+05	
4	5	-158.39	-3.801e+04	-8988.40	-1.031e+04	4.262e+06	3.034e+05	1.848e+05	
4	5	-155.65	-4.171e+04	-8911.54	-1.151e+04	4.503e+06	3.336e+05	1.730e+05	
4	5	-152.92	-4.527e+04	-8614.63	-1.276e+04	4.696e+06	3.668e+05	1.528e+05	
4	5	-150.19	-4.867e+04	-8098.74	-1.406e+04	4.818e+06	4.037e+05	1.258e+05	
4	5	-147.46	-5.189e+04	-7299.46	-1.545e+04	4.851e+06	4.425e+05	9.627e+04	
4	5	-144.73	-5.457e+04	-6418.62	-1.672e+04	4.546e+06	4.749e+05	7.543e+04	
4	5	-142.00	-5.439e+04	-6563.37	-1.697e+04	2.269e+06	4.904e+05	7.129e+04	
4	5	-81.00	-4.422e+04	-4954.07	-1.707e+04	3.155e+06	4.886e+05	7.258e+04	
4	5	-22.00	-3.618e+04	-2584.60	-6191.18	3.666e+06	-3.778e+05	4.400e+04	
4	5	85.00	-2.916e+04	-1702.63	4320.04	-6.821e+05	-3.292e+05	3.662e+04	
4	5	170.00	-1.966e+04	-820.07	2277.75	3.675e+05	1302.55	3.811e+04	
4	5	255.00	-1.053e+04	-595.99	-123.52	3.409e+05	9.185e+04	3.887e+04	
4	5	340.00	-1711.72	-228.41	-1000.26	9.293e+04	4.378e+04	3.751e+04	
4	12	-325.00	-285.58	-1730.68	-4.87	4.089e+04	5075.62	2727.94	
4	12	-233.50	-592.36	-1730.68	-4.87	3.145e+04	6277.10	-1046.12	
4	12	-182.00	-407.68	491.38	-701.95	2.396e+05	-1.130e+04	2.009e+04	
4	12	-180.23	-1753.97	-1644.19	-1377.52	3.465e+05	-1.862e+04	8.178e+04	
4	12	-177.50	-5897.23	-7662.03	-3101.86	7.801e+05	-9.194e+04	2.624e+05	
4	12	-174.77	-1.150e+04	-1.356e+04	-4241.79	1.450e+06	-2.732e+05	4.914e+05	
4	12	-172.04	-1.599e+04	-1.792e+04	-4043.92	1.952e+06	-5.825e+05	7.120e+05	
4	12	-169.31	-1.939e+04	-2.088e+04	-2812.76	2.246e+06	-1.011e+06	8.927e+05	
4	12	-166.58	-2.205e+04	-2.280e+04	-853.38	2.380e+06	-1.536e+06	1.020e+06	
4	12	-163.85	-2.509e+04	-2.386e+04	1576.88	2.687e+06	-2.128e+06	1.092e+06	
4	12	-161.12	-2.707e+04	-2.414e+04	4253.23	2.642e+06	-2.765e+06	1.104e+06	
4	12	-158.39	-2.903e+04	-2.394e+04	7111.86	2.625e+06	-3.412e+06	1.054e+06	
4	12	-155.65	-3.101e+04	-2.286e+04	9783.13	2.657e+06	-4.019e+06	9.430e+05	
4	12	-152.92	-3.317e+04	-2.081e+04	1.198e+04	2.810e+06	-4.546e+06	7.768e+05	
4	12	-150.19	-3.553e+04	-1.774e+04	1.332e+04	3.106e+06	-4.956e+06	5.631e+05	
4	12	-147.46	-3.820e+04	-1.345e+04	1.328e+04	3.618e+06	-5.223e+06	3.306e+05	
4	12	-144.73	-4.026e+04	-8379.09	1.196e+04	3.745e+06	-5.349e+06	1.177e+05	
4	12	-142.00	-3.559e+04	-6858.28	1.092e+04	-8.165e+05	-5.379e+06	2.035e+04	
4	12	-81.00	-1.689e+04	-4234.51	1.077e+04	-1.414e+06	-5.382e+06	1.024e+05	
4	12	-22.00	-9247.88	-2260.64	1.879e+04	-1.781e+06	-4.381e+06	9.348e+04	
4	12	85.00	-9671.54	-3846.13	3.070e+04	-4.105e+06	-2.130e+06	3.387e+04	
4	12	170.00	-1.106e+04	-878.99	1.255e+04	-1.506e+06	-5.217e+04	2.314e+04	
4	12	255.00	-8226.90	128.49	-1131.56	-4.652e+05	5.184e+05	2.646e+04	
4	12	340.00	-4776.47	221.93	-5071.69	-2.573e+05	2.546e+05	2.534e+04	
4	13	-325.00	-142.13	-1565.53	-83.66	2.730e+04	5644.74	3093.18	
4	13	-233.50	-404.55	-1565.53	-83.66	1.825e+04	5803.29	-1421.50	
4	13	-182.00	230.42	446.88	-659.24	2.126e+05	-1.258e+04	1.749e+04	
4	13	-180.23	-307.81	-1580.97	-1396.11	2.788e+05	-2.144e+04	7.759e+04	
4	13	-177.50	-3999.42	-7655.01	-3142.89	7.356e+05	-1.005e+05	2.641e+05	
4	13	-174.77	-9416.09	-1.362e+04	-4240.70	1.470e+06	-2.918e+05	5.022e+05	
4	13	-172.04	-1.375e+04	-1.799e+04	-3982.48	2.045e+06	-6.167e+05	7.333e+05	
4	13	-169.31	-1.702e+04	-2.092e+04	-2662.39	2.422e+06	-1.066e+06	9.246e+05	
4	13	-166.58	-1.957e+04	-2.275e+04	-586.68	2.645e+06	-1.618e+06	1.062e+06	
4	13	-163.85	-2.247e+04	-2.367e+04	1982.67	3.031e+06	-2.242e+06	1.145e+06	
4	13	-161.12	-2.457e+04	-2.376e+04	4817.40	3.167e+06	-2.890e+06	1.168e+06	
4	13	-158.39	-2.662e+04	-2.335e+04	7574.98	3.323e+06	-3.528e+06	1.129e+06	
4	13	-155.65	-2.866e+04	-2.204e+04	1.018e+04	3.513e+06	-4.131e+06	1.030e+06	
4	13	-152.92	-3.081e+04	-1.977e+04	1.236e+04	3.795e+06	-4.660e+06	8.745e+05	
4	13	-150.19	-3.309e+04	-1.650e+04	1.377e+04	4.171e+06	-5.080e+06	6.706e+05	
4	13	-147.46	-3.561e+04	-1.203e+04	1.387e+04	4.724e+06	-5.361e+06	4.295e+05	
4	13	-144.73	-3.764e+04	-6680.53	1.259e+04	4.963e+06	-5.499e+06	2.174e+05	
4	13	-142.00	-3.268e+04	-4850.53	1.147e+04	3.407e+05	-5.535e+06	1.129e+05	
4	13	-81.00	-1.472e+04	-2235.55	1.131e+04	3.743e+05	-5.536e+06	3.464e+04	
4	13	-22.00	-8934.77	-406.37	1.936e+04	-1.403e+06	-4.495e+06	3.081e+04	
4	13	85.00	-1.048e+04	-1310.55	3.121e+04	-4.378e+06	-2.191e+06	-6.358e+04	
4	13	170.00	-1.183e+04	670.33	1.325e+04	-1.507e+06	-5.991e+04	-6.793e+04	
4	13	255.00	-9454.63	1014.82	-814.17	-3.352e+05	5.585e+05	-6.836e+04	
4	13	340.00	-5951.63	412.60	-5457.02	5.222e+04	2.824e+05	-6.107e+04	
4	14	-325.00	-340.72	-1775.53	102.41	7.003e+04	-693.09	1215.94	
4	14	-233.50	-1260.16	-1775.53	102.41	6.779e+04	5645.89	3309.25	
4	14	-182.00	-1078.27	1190.17	-64.86	2.110e+05	1.058e+04	1.149e+04	
4	14	-180.23	-3842.11	788.09	-121.09	3.955e+05	2.484e+04	1.710e+04	
4	14	-177.50	-8869.63	-988.57	-1191.02	7.782e+05	7.538e+04	8598.87	
4	14	-174.77	-1.452e+04	-2805.41	-3077.34	1.266e+06	1.607e+05	7118.29	
4	14	-172.04	-2.015e+04	-4208.22	-5304.36	1.772e+06	2.709e+05	1.380e+04	
4	14	-169.31	-2.550e+04	-5254.92	-7599.37	2.232e+06	3.986e+05	2.225e+04	
4	14	-166.58	-3.050e+04	-6031.66	-9912.20	2.613e+06	5.382e+05	2.944e+04	



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
4	14	-163.85	-3.525e+04	-6630.22	-1.222e+04	2.936e+06	6.871e+05	3.289e+04	
4	14	-161.12	-3.934e+04	-7107.92	-1.454e+04	3.032e+06	8.018e+05	3.174e+04	
4	14	-158.39	-4.332e+04	-7502.44	-1.641e+04	3.107e+06	8.829e+05	1.073e+04	
4	14	-155.65	-4.727e+04	-7617.03	-1.835e+04	3.188e+06	9.748e+05	-1.313e+04	
4	14	-152.92	-5.131e+04	-7544.01	-2.041e+04	3.338e+06	1.080e+06	-3.912e+04	
4	14	-150.19	-5.546e+04	-7240.94	-2.265e+04	3.570e+06	1.196e+06	-6.449e+04	
4	14	-147.46	-5.959e+04	-6725.11	-2.500e+04	3.810e+06	1.312e+06	-5.580e+04	
4	14	-144.73	-6.276e+04	-6469.35	-2.669e+04	3.452e+06	1.400e+06	-4.908e+04	
4	14	-142.00	-6.318e+04	-7409.69	-2.660e+04	1.186e+06	1.438e+06	-2.240e+04	
4	14	-81.00	-5.199e+04	-5740.09	-2.668e+04	7.319e+05	1.432e+06	2.460e+05	
4	14	-22.00	-4.036e+04	-2541.53	-1.235e+04	3.203e+06	-1.377e+04	2.022e+05	
4	14	85.00	-2.949e+04	-2276.16	900.10	-4.577e+05	-3.603e+05	2.434e+05	
4	14	170.00	-1.887e+04	1545.90	967.90	-2.227e+04	-2.398e+05	2.319e+05	
4	14	255.00	-7861.72	2062.67	1532.11	-4.056e+05	-1.631e+05	2.424e+05	
4	14	340.00	1568.54	1675.41	716.86	-9.684e+05	-5.647e+04	2.155e+05	
4	45	-325.00	-261.15	-1522.67	-75.30	3.330e+04	4746.91	4507.08	
4	45	-233.50	-637.27	-1522.67	-75.30	2.678e+04	6215.18	930.94	
4	45	-182.00	182.50	613.23	-577.64	1.919e+05	-1.018e+04	1.953e+04	
4	45	-180.23	-893.89	-1150.12	-1036.17	2.944e+05	-1.504e+04	6.942e+04	
4	45	-177.50	-4905.35	-6593.34	-2515.76	7.443e+05	-7.097e+04	2.166e+05	
4	45	-174.77	-1.058e+04	-1.201e+04	-3659.60	1.457e+06	-2.107e+05	4.032e+05	
4	45	-172.04	-1.540e+04	-1.608e+04	-3784.61	2.045e+06	-4.530e+05	5.852e+05	
4	45	-169.31	-1.930e+04	-1.888e+04	-3069.50	2.459e+06	-7.926e+05	7.352e+05	
4	45	-166.58	-2.252e+04	-2.070e+04	-1750.58	2.724e+06	-1.212e+06	8.416e+05	
4	45	-163.85	-2.572e+04	-2.171e+04	-34.74	3.022e+06	-1.688e+06	9.020e+05	
4	45	-161.12	-2.828e+04	-2.200e+04	1892.76	3.120e+06	-2.188e+06	9.129e+05	
4	45	-158.39	-3.083e+04	-2.176e+04	3799.68	3.248e+06	-2.681e+06	8.730e+05	
4	45	-155.65	-3.331e+04	-2.078e+04	5579.41	3.377e+06	-3.147e+06	7.838e+05	
4	45	-152.92	-3.584e+04	-1.897e+04	7011.94	3.561e+06	-3.554e+06	6.488e+05	
4	45	-150.19	-3.842e+04	-1.630e+04	7822.13	3.796e+06	-3.873e+06	4.746e+05	
4	45	-147.46	-4.115e+04	-1.256e+04	7586.22	4.143e+06	-4.084e+06	2.777e+05	
4	45	-144.73	-4.334e+04	-8079.29	6315.57	4.145e+06	-4.185e+06	1.049e+05	
4	45	-142.00	-3.932e+04	-6678.56	5428.13	-1.750e+05	-4.210e+06	2.508e+04	
4	45	-81.00	-2.295e+04	-4267.90	5261.42	4.234e+04	-4.211e+06	3.531e+04	
4	45	-22.00	-1.576e+04	-2133.09	1.369e+04	-6.674e+05	-3.586e+06	1.865e+04	
4	45	85.00	-1.481e+04	-2141.47	2.515e+04	-3.692e+06	-1.792e+06	-5.367e+04	
4	45	170.00	-1.364e+04	-435.43	1.088e+04	-1.101e+06	-4.000e+04	-5.912e+04	
4	45	255.00	-9697.45	75.06	-555.69	-1.576e+05	4.490e+05	-5.962e+04	
4	45	340.00	-5030.63	49.36	-4496.35	4.075e+04	2.275e+05	-5.334e+04	
4	49	-325.00	-261.64	-1513.82	-73.61	3.310e+04	4731.68	4916.08	
4	49	-233.50	-637.76	-1513.82	-73.61	2.657e+04	5995.62	973.00	
4	49	-182.00	183.62	625.56	-581.20	1.921e+05	-9760.65	1.923e+04	
4	49	-180.23	-473.93	-1114.27	-1032.70	2.638e+05	-1.468e+04	6.909e+04	
4	49	-177.50	-4437.61	-6533.72	-2509.41	7.311e+05	-7.072e+04	2.184e+05	
4	49	-174.77	-1.006e+04	-1.194e+04	-3650.61	1.464e+06	-2.106e+05	4.101e+05	
4	49	-172.04	-1.484e+04	-1.598e+04	-3772.86	2.077e+06	-4.532e+05	5.978e+05	
4	49	-169.31	-1.871e+04	-1.874e+04	-3054.34	2.519e+06	-7.931e+05	7.535e+05	
4	49	-166.58	-2.190e+04	-2.052e+04	-1731.17	2.818e+06	-1.213e+06	8.656e+05	
4	49	-163.85	-2.507e+04	-2.150e+04	-10.25	3.153e+06	-1.690e+06	9.318e+05	
4	49	-161.12	-2.770e+04	-2.175e+04	1923.07	3.328e+06	-2.189e+06	9.486e+05	
4	49	-158.39	-3.023e+04	-2.148e+04	3825.17	3.498e+06	-2.682e+06	9.147e+05	
4	49	-155.65	-3.270e+04	-2.046e+04	5599.91	3.675e+06	-3.147e+06	8.318e+05	
4	49	-152.92	-3.522e+04	-1.863e+04	7027.68	3.913e+06	-3.553e+06	7.031e+05	
4	49	-150.19	-3.780e+04	-1.594e+04	7834.05	4.206e+06	-3.871e+06	5.351e+05	
4	49	-147.46	-4.052e+04	-1.219e+04	7597.01	4.615e+06	-4.081e+06	3.397e+05	
4	49	-144.73	-4.270e+04	-7716.81	6323.38	4.679e+06	-4.182e+06	1.685e+05	
4	49	-142.00	-3.866e+04	-6317.29	5442.84	4.175e+05	-4.206e+06	8.654e+04	
4	49	-81.00	-2.230e+04	-3908.55	5274.41	6.333e+05	-4.208e+06	4.337e+04	
4	49	-22.00	-1.549e+04	-1695.93	1.363e+04	-3.961e+05	-3.582e+06	2.968e+04	
4	49	85.00	-1.482e+04	-1630.39	2.514e+04	-3.606e+06	-1.790e+06	-4.450e+04	
4	49	170.00	-1.363e+04	-31.57	1.088e+04	-1.041e+06	-3.995e+04	-4.837e+04	
4	49	255.00	-9701.51	316.79	-548.39	-1.325e+05	4.503e+05	-4.838e+04	
4	49	340.00	-5055.13	134.53	-4490.91	5.612e+04	2.287e+05	-4.219e+04	
4	54	-325.00	-205.65	-1489.34	50.58	5.731e+04	-310.88	1543.41	
4	54	-233.50	-1060.86	-1489.34	50.58	5.506e+04	5233.55	2883.14	
4	54	-182.00	-577.31	1167.22	-54.53	1.827e+05	9179.60	9946.45	
4	54	-180.23	-2788.74	908.80	-127.54	3.412e+05	2.182e+04	1.536e+04	
4	54	-177.50	-7422.61	-808.34	-1144.50	7.334e+05	6.570e+04	1.403e+04	
4	54	-174.77	-1.288e+04	-2588.66	-2912.04	1.261e+06	1.388e+05	2.144e+04	
4	54	-172.04	-1.833e+04	-3921.34	-4946.37	1.808e+06	2.312e+05	3.654e+04	
4	54	-169.31	-2.351e+04	-4862.03	-7010.89	2.313e+06	3.359e+05	5.218e+04	
4	54	-166.58	-2.834e+04	-5502.21	-9068.84	2.746e+06	4.482e+05	6.526e+04	



M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
4	54	-163.85	-3.292e+04	-5935.26	-1.111e+04	3.115e+06	5.662e+05	7.356e+04
4	54	-161.12	-3.705e+04	-6220.94	-1.315e+04	3.342e+06	6.656e+05	7.625e+04
4	54	-158.39	-4.108e+04	-6401.74	-1.493e+04	3.548e+06	7.474e+05	6.398e+04
4	54	-155.65	-4.506e+04	-6352.63	-1.677e+04	3.752e+06	8.369e+05	4.718e+04
4	54	-152.92	-4.910e+04	-6104.65	-1.870e+04	4.009e+06	9.357e+05	2.667e+04
4	54	-150.19	-5.320e+04	-5624.68	-2.075e+04	4.321e+06	1.042e+06	4808.00
4	54	-147.46	-5.724e+04	-4912.36	-2.291e+04	4.618e+06	1.146e+06	3198.28
4	54	-144.73	-6.042e+04	-4387.27	-2.453e+04	4.366e+06	1.225e+06	5995.12
4	54	-142.00	-6.055e+04	-5100.67	-2.448e+04	2.013e+06	1.258e+06	2.511e+04
4	54	-81.00	-4.954e+04	-3476.09	-2.456e+04	1.930e+06	1.254e+06	1.789e+05
4	54	-22.00	-3.925e+04	-494.96	-1.101e+04	3.380e+06	-6.373e+04	1.373e+05
4	54	85.00	-2.946e+04	337.80	1501.62	-7.180e+05	-3.280e+05	1.525e+05
4	54	170.00	-1.909e+04	2837.04	1209.85	-5.173e+04	-1.773e+05	1.455e+05
4	54	255.00	-8609.11	2759.12	1076.85	-3.071e+05	-9.607e+04	1.528e+05
4	54	340.00	776.44	1770.56	319.60	-7.292e+05	-3.027e+04	1.330e+05
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-7.332e+04	-2.414e+04	-2.669e+04	-4.378e+06	-5.536e+06	-6.836e+04
			1568.54	2837.04	3.121e+04	6.396e+06	1.438e+06	1.168e+06

Macro	Tipo	Angolo 1-Z (gradi)
5	Setto	0.0

M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
		cm	daN	daN	daN	daN cm	daN cm	daN cm
5	1	-325.00	-3330.86	3199.52	-916.22	9.727e+04	1.677e+04	-1.197e+04
5	1	-233.50	-2893.79	3199.52	-916.22	9.742e+04	1.438e+04	-1.611e+04
5	1	-142.00	-687.43	3153.39	233.87	1.563e+05	-1.673e+04	-2.368e+04
5	1	-81.00	12.63	2361.29	-1.86	7.724e+04	-4860.98	-1.893e+04
5	1	-22.00	-142.64	1113.65	85.67	3.800e+04	-3011.98	-1.717e+04
5	3	-325.00	-2398.34	2213.14	-637.32	6.785e+04	1.253e+04	-8140.59
5	3	-233.50	-2087.05	2213.14	-637.32	6.789e+04	1.085e+04	-1.102e+04
5	3	-142.00	-516.95	2189.17	150.78	1.093e+05	-1.136e+04	-1.636e+04
5	3	-81.00	-31.91	1648.71	-4.98	5.365e+04	-3758.39	-1.302e+04
5	3	-22.00	-126.91	782.54	67.33	2.678e+04	-2358.81	-1.179e+04
5	4	-325.00	-2398.34	2213.14	-637.32	6.785e+04	1.253e+04	-8140.59
5	4	-233.50	-2087.05	2213.14	-637.32	6.789e+04	1.085e+04	-1.102e+04
5	4	-142.00	-516.95	2189.17	150.78	1.093e+05	-1.136e+04	-1.636e+04
5	4	-81.00	-31.91	1648.71	-4.98	5.365e+04	-3758.39	-1.302e+04
5	4	-22.00	-126.91	782.54	67.33	2.678e+04	-2358.81	-1.179e+04
5	5	-325.00	-2398.34	2213.14	-637.32	6.785e+04	1.253e+04	-8140.59
5	5	-233.50	-2087.05	2213.14	-637.32	6.789e+04	1.085e+04	-1.102e+04
5	5	-142.00	-516.95	2189.17	150.78	1.093e+05	-1.136e+04	-1.636e+04
5	5	-81.00	-31.91	1648.71	-4.98	5.365e+04	-3758.39	-1.302e+04
5	5	-22.00	-126.91	782.54	67.33	2.678e+04	-2358.81	-1.179e+04
5	8	-325.00	-2842.78	3560.72	-641.14	7.434e+04	1.325e+04	-1.250e+04
5	8	-233.50	-2621.51	3560.72	-641.14	7.811e+04	1.278e+04	-1.736e+04
5	8	-142.00	-916.47	3131.39	262.42	1.089e+05	-4961.67	-2.060e+04
5	8	-81.00	78.40	1971.57	-5.52	1.574e+04	5503.57	-1.234e+04
5	8	-22.00	-306.62	786.07	-53.04	2.652e+04	1331.42	-1.106e+04
5	12	-325.00	-2539.33	3567.04	-611.42	9.225e+04	1.246e+04	-1.177e+04
5	12	-233.50	-2318.06	3567.04	-611.42	9.602e+04	1.156e+04	-1.650e+04
5	12	-142.00	-353.84	3112.46	242.57	1.419e+05	-5054.58	-2.100e+04
5	12	-81.00	404.90	2007.62	-36.11	3.823e+04	4413.95	-1.397e+04
5	12	-22.00	-189.60	853.24	-50.65	3.255e+04	631.08	-1.200e+04
5	20	-325.00	-2628.92	2978.26	-1044.19	1.022e+05	1.696e+04	-1.179e+04
5	20	-233.50	-2504.60	2978.26	-1044.19	1.029e+05	1.294e+04	-1.551e+04
5	20	-142.00	-500.61	2818.80	277.90	1.687e+05	-2.073e+04	-2.322e+04
5	20	-81.00	183.88	2032.21	70.98	8.510e+04	-7332.90	-1.947e+04
5	20	-22.00	-70.98	940.80	86.38	3.699e+04	-3295.20	-1.615e+04
5	36	-325.00	-2857.50	3003.91	-695.74	7.727e+04	1.351e+04	-1.729e+04
5	36	-233.50	-2514.69	3003.91	-695.74	7.941e+04	1.232e+04	-2.201e+04
5	36	-142.00	-796.63	2932.39	235.03	1.083e+05	-8952.68	-2.646e+04
5	36	-81.00	62.25	2133.23	10.51	2.418e+04	1923.36	-1.895e+04



M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
5	36	-22.00	-246.50	941.84	-11.36	2.837e+04	-2.80	-1.836e+04
5	43	-325.00	-2669.67	3035.55	-676.47	8.743e+04	1.318e+04	-1.693e+04
5	43	-233.50	-2326.87	3035.55	-676.47	8.956e+04	1.162e+04	-2.162e+04
5	43	-142.00	-463.78	2946.72	222.57	1.271e+05	-9243.42	-2.658e+04
5	43	-81.00	256.46	2175.60	-8.05	3.704e+04	1116.85	-1.973e+04
5	43	-22.00	-175.03	992.04	-9.75	3.181e+04	-457.86	-1.891e+04
5	48	-325.00	-2675.21	3008.84	-677.96	8.764e+04	1.306e+04	-1.684e+04
5	48	-233.50	-2332.40	3008.84	-677.96	8.977e+04	1.161e+04	-2.147e+04
5	48	-142.00	-464.05	2920.55	222.43	1.275e+05	-9051.84	-2.673e+04
5	48	-81.00	254.24	2157.22	-8.21	3.743e+04	1230.77	-1.994e+04
5	48	-22.00	-176.49	984.74	-9.70	3.192e+04	-455.30	-1.892e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-3330.86	782.54	-1044.19	1.574e+04	-2.073e+04	-2.673e+04
			404.90	3567.04	277.90	1.687e+05	1.696e+04	-8140.59

Macro	Tipo	Angolo 1-Z (gradi)
7	Setto	0.0

M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
		cm	daN	daN	daN	daN cm	daN cm	daN cm
7	1	-180.23	-2743.36	4786.24	454.29	1.474e+04	1268.61	2.278e+04
7	1	-177.50	-8664.64	1.056e+04	2029.56	5.596e+04	-1.950e+04	8.019e+04
7	1	-174.77	-1.352e+04	1.466e+04	3517.87	2.936e+04	-3.168e+04	1.280e+05
7	1	-172.04	-1.793e+04	1.739e+04	4977.66	-3.446e+04	-3.908e+04	1.698e+05
7	1	-169.31	-2.224e+04	1.900e+04	6449.02	-9.747e+04	-3.965e+04	2.019e+05
7	1	-166.58	-2.648e+04	1.969e+04	7933.27	-1.516e+05	-3.569e+04	2.260e+05
7	1	-163.85	-3.067e+04	1.958e+04	9462.73	-1.922e+05	-2.775e+04	2.411e+05
7	1	-161.12	-3.481e+04	1.877e+04	1.104e+04	-2.133e+05	-1.745e+04	2.477e+05
7	1	-158.39	-3.885e+04	1.728e+04	1.267e+04	-2.265e+05	-6242.75	2.458e+05
7	1	-155.65	-4.273e+04	1.517e+04	1.434e+04	-2.589e+05	4026.43	2.358e+05
7	1	-152.92	-4.645e+04	1.249e+04	1.610e+04	-3.095e+05	1.139e+04	2.183e+05
7	1	-150.19	-4.998e+04	9212.94	1.787e+04	-3.947e+05	1.363e+04	1.936e+05
7	1	-147.46	-5.323e+04	5279.05	1.984e+04	-5.674e+05	9629.81	1.648e+05
7	1	-144.73	-5.674e+04	-84.24	2.193e+04	-5.162e+05	-2760.90	1.252e+05
7	1	-142.00	-6.167e+04	-4530.13	2.259e+04	4.740e+05	-1.725e+04	9.483e+04
7	1	-81.00	-4.561e+04	-3631.18	2.260e+04	1.831e+06	-1.551e+04	9.587e+04
7	1	-22.00	-3.389e+04	-4649.09	6478.68	4.614e+06	1.084e+06	7.762e+04
7	2	-180.23	-1703.66	3933.14	223.59	1.035e+04	1316.95	1.778e+04
7	2	-177.50	-5486.13	9143.87	1075.07	3.699e+04	-1.158e+04	6.076e+04
7	2	-174.77	-8416.50	1.311e+04	1718.32	7821.92	-1.744e+04	9.736e+04
7	2	-172.04	-1.093e+04	1.593e+04	2230.27	-5.739e+04	-1.906e+04	1.293e+05
7	2	-169.31	-1.333e+04	1.774e+04	2680.54	-1.296e+05	-1.556e+04	1.537e+05
7	2	-166.58	-1.565e+04	1.869e+04	3109.43	-2.016e+05	-9064.94	1.712e+05
7	2	-163.85	-1.791e+04	1.889e+04	3562.24	-2.673e+05	-252.42	1.808e+05
7	2	-161.12	-2.013e+04	1.838e+04	4052.07	-3.202e+05	9653.56	1.825e+05
7	2	-158.39	-2.227e+04	1.719e+04	4590.36	-3.654e+05	1.969e+04	1.764e+05
7	2	-155.65	-2.431e+04	1.536e+04	5185.28	-4.169e+05	2.860e+04	1.627e+05
7	2	-152.92	-2.626e+04	1.290e+04	5879.52	-4.651e+05	3.496e+04	1.418e+05
7	2	-150.19	-2.814e+04	9788.09	6653.88	-5.040e+05	3.674e+04	1.141e+05
7	2	-147.46	-2.986e+04	5940.64	7758.53	-5.762e+05	3.275e+04	8.272e+04
7	2	-144.73	-3.200e+04	743.75	9141.61	-3.478e+05	2.037e+04	4.089e+04
7	2	-142.00	-3.608e+04	-3284.16	9468.49	1.130e+06	6304.23	8829.79
7	2	-81.00	-2.318e+04	-2565.32	9471.22	2.021e+06	8242.64	1.119e+04
7	2	-22.00	-1.416e+04	-3531.11	1333.15	4.250e+06	4.209e+05	-1.178e+04
7	3	-180.23	-1933.49	3791.04	294.73	1.091e+04	1124.16	1.763e+04
7	3	-177.50	-6152.51	8568.13	1349.84	4.041e+04	-1.351e+04	6.128e+04
7	3	-174.77	-9539.74	1.208e+04	2276.60	1.617e+04	-2.135e+04	9.800e+04
7	3	-172.04	-1.255e+04	1.449e+04	3133.88	-3.994e+04	-2.527e+04	1.300e+05
7	3	-169.31	-1.547e+04	1.597e+04	3969.37	-9.873e+04	-2.401e+04	1.546e+05
7	3	-166.58	-1.832e+04	1.669e+04	4801.18	-1.536e+05	-1.946e+04	1.727e+05
7	3	-163.85	-2.112e+04	1.673e+04	5663.03	-1.998e+05	-1.218e+04	1.835e+05
7	3	-161.12	-2.388e+04	1.615e+04	6560.98	-2.319e+05	-3389.70	1.870e+05
7	3	-158.39	-2.658e+04	1.499e+04	7502.39	-2.574e+05	5845.34	1.836e+05



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
7	3	-155.65	-2.915e+04	1.327e+04	8490.14	-2.938e+05	1.418e+04	1.733e+05	
7	3	-152.92	-3.162e+04	1.104e+04	9554.36	-3.368e+05	2.015e+04	1.566e+05	
7	3	-150.19	-3.397e+04	8261.32	1.066e+04	-3.907e+05	2.190e+04	1.338e+05	
7	3	-147.46	-3.613e+04	4878.13	1.200e+04	-4.972e+05	1.842e+04	1.076e+05	
7	3	-144.73	-3.858e+04	286.74	1.351e+04	-3.757e+05	7655.85	7.223e+04	
7	3	-142.00	-4.250e+04	-3397.52	1.394e+04	6.973e+05	-4759.98	4.507e+04	
7	3	-81.00	-2.991e+04	-2694.13	1.394e+04	1.675e+06	-3157.66	4.655e+04	
7	3	-22.00	-2.089e+04	-3556.61	3396.45	3.854e+06	6.541e+05	2.863e+04	
7	4	-180.23	-1933.49	3791.04	294.73	1.091e+04	1124.16	1.763e+04	
7	4	-177.50	-6152.51	8568.13	1349.84	4.041e+04	-1.351e+04	6.128e+04	
7	4	-174.77	-9539.74	1.208e+04	2276.60	1.617e+04	-2.135e+04	9.800e+04	
7	4	-172.04	-1.255e+04	1.449e+04	3133.88	-3.994e+04	-2.527e+04	1.300e+05	
7	4	-169.31	-1.547e+04	1.597e+04	3969.37	-9.873e+04	-2.401e+04	1.546e+05	
7	4	-166.58	-1.832e+04	1.669e+04	4801.18	-1.536e+05	-1.946e+04	1.727e+05	
7	4	-163.85	-2.112e+04	1.673e+04	5663.03	-1.998e+05	-1.218e+04	1.835e+05	
7	4	-161.12	-2.388e+04	1.615e+04	6560.98	-2.319e+05	-3389.70	1.870e+05	
7	4	-158.39	-2.658e+04	1.499e+04	7502.39	-2.574e+05	5845.34	1.836e+05	
7	4	-155.65	-2.915e+04	1.327e+04	8490.14	-2.938e+05	1.418e+04	1.733e+05	
7	4	-152.92	-3.162e+04	1.104e+04	9554.36	-3.368e+05	2.015e+04	1.566e+05	
7	4	-150.19	-3.397e+04	8261.32	1.066e+04	-3.907e+05	2.190e+04	1.338e+05	
7	4	-147.46	-3.613e+04	4878.13	1.200e+04	-4.972e+05	1.842e+04	1.076e+05	
7	4	-144.73	-3.858e+04	286.74	1.351e+04	-3.757e+05	7655.85	7.223e+04	
7	4	-142.00	-4.250e+04	-3397.52	1.394e+04	6.973e+05	-4759.98	4.507e+04	
7	4	-81.00	-2.991e+04	-2694.13	1.394e+04	1.675e+06	-3157.66	4.655e+04	
7	4	-22.00	-2.089e+04	-3556.61	3396.45	3.854e+06	6.541e+05	2.863e+04	
7	5	-180.23	-1933.49	3791.04	294.73	1.091e+04	1124.16	1.763e+04	
7	5	-177.50	-6152.51	8568.13	1349.84	4.041e+04	-1.351e+04	6.128e+04	
7	5	-174.77	-9539.74	1.208e+04	2276.60	1.617e+04	-2.135e+04	9.800e+04	
7	5	-172.04	-1.255e+04	1.449e+04	3133.88	-3.994e+04	-2.527e+04	1.300e+05	
7	5	-169.31	-1.547e+04	1.597e+04	3969.37	-9.873e+04	-2.401e+04	1.546e+05	
7	5	-166.58	-1.832e+04	1.669e+04	4801.18	-1.536e+05	-1.946e+04	1.727e+05	
7	5	-163.85	-2.112e+04	1.673e+04	5663.03	-1.998e+05	-1.218e+04	1.835e+05	
7	5	-161.12	-2.388e+04	1.615e+04	6560.98	-2.319e+05	-3389.70	1.870e+05	
7	5	-158.39	-2.658e+04	1.499e+04	7502.39	-2.574e+05	5845.34	1.836e+05	
7	5	-155.65	-2.915e+04	1.327e+04	8490.14	-2.938e+05	1.418e+04	1.733e+05	
7	5	-152.92	-3.162e+04	1.104e+04	9554.36	-3.368e+05	2.015e+04	1.566e+05	
7	5	-150.19	-3.397e+04	8261.32	1.066e+04	-3.907e+05	2.190e+04	1.338e+05	
7	5	-147.46	-3.613e+04	4878.13	1.200e+04	-4.972e+05	1.842e+04	1.076e+05	
7	5	-144.73	-3.858e+04	286.74	1.351e+04	-3.757e+05	7655.85	7.223e+04	
7	5	-142.00	-4.250e+04	-3397.52	1.394e+04	6.973e+05	-4759.98	4.507e+04	
7	5	-81.00	-2.991e+04	-2694.13	1.394e+04	1.675e+06	-3157.66	4.655e+04	
7	5	-22.00	-2.089e+04	-3556.61	3396.45	3.854e+06	6.541e+05	2.863e+04	
7	7	-180.23	-2217.55	1634.35	-61.81	5537.76	1200.45	2.649e+04	
7	7	-177.50	-5876.57	3152.96	885.70	7927.93	-3.167e+04	8.527e+04	
7	7	-174.77	-8198.44	4266.02	2004.19	-7.485e+04	-8.742e+04	1.358e+05	
7	7	-172.04	-9778.85	5088.40	3495.48	-2.322e+05	-1.715e+05	1.876e+05	
7	7	-169.31	-1.104e+04	5809.93	4971.33	-4.275e+05	-2.792e+05	2.365e+05	
7	7	-166.58	-1.223e+04	6262.23	6699.84	-6.259e+05	-4.070e+05	2.802e+05	
7	7	-163.85	-1.346e+04	6436.30	8655.65	-7.980e+05	-5.479e+05	3.183e+05	
7	7	-161.12	-1.473e+04	6318.08	1.063e+04	-9.457e+05	-6.951e+05	3.513e+05	
7	7	-158.39	-1.611e+04	5620.79	1.270e+04	-1.042e+06	-8.414e+05	3.792e+05	
7	7	-155.65	-1.756e+04	4720.64	1.480e+04	-1.099e+06	-9.797e+05	4.022e+05	
7	7	-152.92	-1.909e+04	3373.97	1.686e+04	-1.108e+06	-1.104e+06	4.204e+05	
7	7	-150.19	-2.074e+04	1781.06	1.878e+04	-1.050e+06	-1.207e+06	4.340e+05	
7	7	-147.46	-2.263e+04	-36.23	2.084e+04	-8.538e+05	-1.284e+06	4.420e+05	
7	7	-144.73	-2.472e+04	-2562.80	2.253e+04	-5.392e+05	-1.335e+06	4.089e+05	
7	7	-142.00	-2.718e+04	-5657.96	2.303e+04	1.717e+04	-1.359e+06	3.649e+05	
7	7	-81.00	-2.368e+04	-5472.51	2.305e+04	1.538e+06	-1.356e+06	3.530e+05	
7	7	-22.00	-1.586e+04	-8366.97	1.147e+04	2.092e+06	-1.746e+05	2.565e+05	
7	8	-180.23	-1365.44	7448.73	749.47	2.619e+04	4042.18	2.272e+04	
7	8	-177.50	-6858.62	1.971e+04	2258.39	1.111e+05	3.348e+04	8.013e+04	
7	8	-174.77	-1.181e+04	3.063e+04	3184.52	1.554e+05	1.365e+05	1.250e+05	
7	8	-172.04	-1.709e+04	3.940e+04	2875.60	2.532e+05	3.165e+05	1.569e+05	
7	8	-169.31	-2.308e+04	4.580e+04	1779.01	4.765e+05	5.729e+05	1.757e+05	
7	8	-166.58	-2.942e+04	5.002e+04	-241.40	7.919e+05	8.938e+05	1.849e+05	
7	8	-163.85	-3.581e+04	5.204e+04	-2949.71	1.155e+06	1.263e+06	1.824e+05	
7	8	-161.12	-4.214e+04	5.187e+04	-5923.07	1.549e+06	1.659e+06	1.673e+05	
7	8	-158.39	-4.815e+04	4.977e+04	-8986.52	1.900e+06	2.060e+06	1.390e+05	
7	8	-155.65	-5.368e+04	4.543e+04	-1.180e+04	2.141e+06	2.440e+06	9.775e+04	
7	8	-152.92	-5.864e+04	3.919e+04	-1.393e+04	2.230e+06	2.776e+06	4.415e+04	
7	8	-150.19	-6.283e+04	3.097e+04	-1.515e+04	2.065e+06	3.042e+06	-2.125e+04	
7	8	-147.46	-6.580e+04	2.068e+04	-1.483e+04	1.376e+06	3.221e+06	-8.840e+04	



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
7	8	-144.73	-6.975e+04	7490.54	-1.247e+04	1.418e+06	3.302e+06	-1.442e+05	
7	8	-142.00	-7.901e+04	199.14	-1.171e+04	4.860e+06	3.303e+06	-1.736e+05	
7	8	-81.00	-4.777e+04	1570.32	-1.172e+04	4.326e+06	3.304e+06	-1.472e+05	
7	8	-22.00	-3.906e+04	4140.74	-2.642e+04	8.919e+06	2.124e+06	-1.575e+05	
7	9	-180.23	-1319.72	7033.07	714.20	2.651e+04	1255.76	2.154e+04	
7	9	-177.50	-6849.96	1.872e+04	2158.88	1.141e+05	3.461e+04	7.012e+04	
7	9	-174.77	-1.204e+04	2.921e+04	3217.92	1.767e+05	1.437e+05	1.052e+05	
7	9	-172.04	-1.747e+04	3.762e+04	3012.07	2.828e+05	3.321e+05	1.353e+05	
7	9	-169.31	-2.355e+04	4.397e+04	1985.72	5.064e+05	5.992e+05	1.612e+05	
7	9	-166.58	-2.993e+04	4.811e+04	13.52	8.150e+05	9.330e+05	1.775e+05	
7	9	-163.85	-3.635e+04	5.002e+04	-2657.46	1.169e+06	1.317e+06	1.823e+05	
7	9	-161.12	-4.255e+04	4.970e+04	-5883.58	1.505e+06	1.730e+06	1.748e+05	
7	9	-158.39	-4.844e+04	4.737e+04	-9193.81	1.800e+06	2.149e+06	1.546e+05	
7	9	-155.65	-5.387e+04	4.273e+04	-1.224e+04	1.995e+06	2.548e+06	1.223e+05	
7	9	-152.92	-5.877e+04	3.581e+04	-1.456e+04	2.060e+06	2.902e+06	7.883e+04	
7	9	-150.19	-6.300e+04	2.694e+04	-1.588e+04	1.908e+06	3.186e+06	2.529e+04	
7	9	-147.46	-6.616e+04	1.599e+04	-1.558e+04	1.318e+06	3.381e+06	-2.882e+04	
7	9	-144.73	-7.040e+04	2507.76	-1.291e+04	1.510e+06	3.468e+06	-9.229e+04	
7	9	-142.00	-7.991e+04	4684.09	-1.199e+04	5.053e+06	3.466e+06	-1.259e+05	
7	9	-81.00	-4.966e+04	-2969.82	-1.200e+04	5.042e+06	3.468e+06	-1.052e+05	
7	9	-22.00	-4.204e+04	-664.52	-2.651e+04	1.003e+07	2.195e+06	-1.344e+05	
7	33	-180.23	-1626.60	6528.84	627.35	2.296e+04	904.24	2.117e+04	
7	33	-177.50	-7052.37	1.696e+04	1909.45	9.537e+04	1.876e+04	7.461e+04	
7	33	-174.77	-1.192e+04	2.616e+04	2874.80	1.294e+05	9.558e+04	1.163e+05	
7	33	-172.04	-1.688e+04	3.344e+04	2922.66	1.903e+05	2.337e+05	1.494e+05	
7	33	-169.31	-2.234e+04	3.883e+04	2294.22	3.436e+05	4.335e+05	1.732e+05	
7	33	-166.58	-2.803e+04	4.230e+04	967.85	5.665e+05	6.854e+05	1.925e+05	
7	33	-163.85	-3.375e+04	4.386e+04	-868.17	8.286e+05	9.769e+05	2.007e+05	
7	33	-161.12	-3.932e+04	4.352e+04	-2998.27	1.091e+06	1.292e+06	1.974e+05	
7	33	-158.39	-4.465e+04	4.140e+04	-5261.09	1.327e+06	1.611e+06	1.823e+05	
7	33	-155.65	-4.960e+04	3.735e+04	-7306.57	1.487e+06	1.913e+06	1.558e+05	
7	33	-152.92	-5.412e+04	3.150e+04	-8779.80	1.547e+06	2.176e+06	1.162e+05	
7	33	-150.19	-5.811e+04	2.387e+04	-9485.52	1.439e+06	2.384e+06	6.414e+04	
7	33	-147.46	-6.122e+04	1.441e+04	-8824.87	9.762e+05	2.523e+06	1.058e+04	
7	33	-144.73	-6.526e+04	2601.32	-6387.18	1.188e+06	2.580e+06	-4.842e+04	
7	33	-142.00	-7.381e+04	-4020.77	-5604.18	4.270e+06	2.573e+06	-8.456e+04	
7	33	-81.00	-4.765e+04	-2544.02	-5614.63	4.573e+06	2.575e+06	-6.832e+04	
7	33	-22.00	-3.975e+04	1044.88	-1.221e+04	9.061e+06	1.994e+06	-1.008e+05	
7	35	-180.23	-2100.37	2121.00	5.11	6850.73	1361.78	2.342e+04	
7	35	-177.50	-5802.63	4324.17	974.72	1.546e+04	-2.931e+04	7.621e+04	
7	35	-174.77	-8305.08	5879.45	2007.35	-5.277e+04	-7.790e+04	1.214e+05	
7	35	-172.04	-1.017e+04	6947.99	3299.78	-1.841e+05	-1.492e+05	1.656e+05	
7	35	-169.31	-1.177e+04	7691.73	4664.07	-3.448e+05	-2.393e+05	2.051e+05	
7	35	-166.58	-1.329e+04	8061.13	6233.24	-5.071e+05	-3.457e+05	2.390e+05	
7	35	-163.85	-1.484e+04	8077.18	7994.99	-6.482e+05	-4.627e+05	2.670e+05	
7	35	-161.12	-1.642e+04	7753.24	9816.94	-7.638e+05	-5.851e+05	2.892e+05	
7	35	-158.39	-1.807e+04	6935.86	1.173e+04	-8.403e+05	-7.069e+05	3.058e+05	
7	35	-155.65	-1.974e+04	5865.66	1.367e+04	-8.901e+05	-8.225e+05	3.170e+05	
7	35	-152.92	-2.144e+04	4421.93	1.558e+04	-9.060e+05	-9.266e+05	3.231e+05	
7	35	-150.19	-2.320e+04	2726.91	1.738e+04	-8.740e+05	-1.014e+06	3.242e+05	
7	35	-147.46	-2.510e+04	807.29	1.924e+04	-7.502e+05	-1.081e+06	3.204e+05	
7	35	-144.73	-2.719e+04	-1804.78	2.082e+04	-5.010e+05	-1.126e+06	2.888e+05	
7	35	-142.00	-2.971e+04	-4701.17	2.125e+04	3.714e+04	-1.148e+06	2.525e+05	
7	35	-81.00	-2.401e+04	-4389.52	2.127e+04	1.361e+06	-1.145e+06	2.456e+05	
7	35	-22.00	-1.574e+04	-6798.66	9740.82	2.280e+06	-5.385e+04	1.886e+05	
7	36	-180.23	-1657.84	6684.65	651.06	2.281e+04	1762.70	2.197e+04	
7	36	-177.50	-7088.32	1.734e+04	1955.95	9.408e+04	1.769e+04	8.010e+04	
7	36	-174.77	-1.182e+04	2.670e+04	2851.67	1.168e+05	9.203e+04	1.270e+05	
7	36	-172.04	-1.670e+04	3.415e+04	2849.63	1.718e+05	2.267e+05	1.631e+05	
7	36	-169.31	-2.211e+04	3.958e+04	2190.73	3.234e+05	4.217e+05	1.878e+05	
7	36	-166.58	-2.776e+04	4.314e+04	846.52	5.484e+05	6.673e+05	2.033e+05	
7	36	-163.85	-3.346e+04	4.482e+04	-1001.58	8.149e+05	9.510e+05	2.078e+05	
7	36	-161.12	-3.909e+04	4.465e+04	-3063.96	1.107e+06	1.256e+06	2.005e+05	
7	36	-158.39	-4.447e+04	4.276e+04	-5179.86	1.370e+06	1.565e+06	1.813e+05	
7	36	-155.65	-4.945e+04	3.899e+04	-7091.89	1.549e+06	1.857e+06	1.500e+05	
7	36	-152.92	-5.397e+04	3.354e+04	-8463.49	1.610e+06	2.115e+06	1.074e+05	
7	36	-150.19	-5.788e+04	2.635e+04	-9133.93	1.477e+06	2.317e+06	5.397e+04	
7	36	-147.46	-6.080e+04	1.731e+04	-8495.84	9.261e+05	2.451e+06	-2078.63	
7	36	-144.73	-6.457e+04	5552.20	-6266.56	1.011e+06	2.506e+06	-5.793e+04	
7	36	-142.00	-7.305e+04	1656.78	-5595.99	4.104e+06	2.499e+06	-9.260e+04	
7	36	-81.00	-4.604e+04	-130.75	-5606.79	4.098e+06	2.501e+06	-7.403e+04	
7	36	-22.00	-3.745e+04	1541.64	-1.240e+04	8.271e+06	1.947e+06	-1.060e+05	



M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
7	37	-180.23	-1623.19	6512.40	632.61	2.296e+04	146.04	2.187e+04
7	37	-177.50	-7059.98	1.693e+04	1918.27	9.584e+04	1.787e+04	7.529e+04
7	37	-174.77	-1.193e+04	2.612e+04	2892.74	1.298e+05	9.479e+04	1.169e+05
7	37	-172.04	-1.690e+04	3.339e+04	2953.24	1.906e+05	2.332e+05	1.524e+05
7	37	-169.31	-2.236e+04	3.878e+04	2335.69	3.438e+05	4.333e+05	1.813e+05
7	37	-166.58	-2.805e+04	4.224e+04	1017.14	5.662e+05	6.856e+05	2.009e+05
7	37	-163.85	-3.377e+04	4.379e+04	-814.63	8.281e+05	9.775e+05	2.094e+05
7	37	-161.12	-3.934e+04	4.344e+04	-3026.35	1.088e+06	1.292e+06	2.065e+05
7	37	-158.39	-4.466e+04	4.132e+04	-5288.42	1.322e+06	1.612e+06	1.918e+05
7	37	-155.65	-4.960e+04	3.727e+04	-7332.94	1.478e+06	1.916e+06	1.658e+05
7	37	-152.92	-5.412e+04	3.132e+04	-8806.62	1.534e+06	2.185e+06	1.292e+05
7	37	-150.19	-5.809e+04	2.368e+04	-9515.60	1.422e+06	2.399e+06	8.317e+04
7	37	-147.46	-6.119e+04	1.422e+04	-8859.77	9.550e+05	2.543e+06	3.547e+04
7	37	-144.73	-6.524e+04	2420.08	-6428.43	1.169e+06	2.602e+06	-2.361e+04
7	37	-142.00	-7.377e+04	-4231.57	-5640.79	4.240e+06	2.595e+06	-5.969e+04
7	37	-81.00	-4.761e+04	-2754.74	-5651.33	4.542e+06	2.597e+06	-4.461e+04
7	37	-22.00	-3.960e+04	-1310.02	-1.241e+04	9.052e+06	1.997e+06	-8.693e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-7.991e+04	-8366.97	-2.651e+04	-1.108e+06	-1.359e+06	-1.736e+05
			-1319.72	5.204e+04	2.305e+04	1.003e+07	3.468e+06	4.420e+05

Macro	Tipo	Angolo 1-Z (gradi)
8	Setto	0.0

M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
		cm	daN	daN	daN	daN cm	daN cm	daN cm
8	1	-142.00	-2922.02	3121.08	265.22	6.691e+04	-1.172e+04	1.218e+04
8	1	-81.00	-3465.03	3121.08	265.22	6.525e+04	-1.452e+04	1.126e+04
8	1	-22.00	-4854.87	2100.34	-163.32	1.543e+05	-1.048e+04	2.509e+04
8	1	-20.79	-8776.46	1755.94	1148.61	1.662e+05	-3.462e+04	4.611e+04
8	1	-18.19	-1.110e+04	5504.03	1111.38	-1.035e+05	-4.940e+04	8.928e+04
8	1	-15.59	-1.083e+04	7067.37	580.09	-6.242e+05	-4.990e+04	1.232e+05
8	1	-12.99	-1.076e+04	7237.23	23.69	-1.105e+06	-5.030e+04	1.507e+05
8	1	-10.39	-1.150e+04	6468.35	-428.15	-1.414e+06	-6.454e+04	1.616e+05
8	1	-7.80	-1.317e+04	5089.12	-642.38	-1.495e+06	-9.797e+04	1.455e+05
8	1	-5.20	-1.544e+04	3486.69	-558.90	-1.399e+06	-1.466e+05	9.540e+04
8	1	-2.60	-1.674e+04	2228.14	-58.76	-1.649e+06	-1.945e+05	1.731e+04
8	1	0.0	-1.623e+04	426.30	765.71	-2.580e+06	-2.285e+05	-3.288e+04
8	1	85.00	-2.672e+04	534.90	3615.10	1.158e+06	-3.885e+05	-1.437e+04
8	1	87.67	-2.129e+04	1532.18	2304.10	2.191e+06	-3.246e+05	-3.898e+04
8	1	90.33	-2.069e+04	702.41	1386.37	1.905e+06	-2.743e+05	-5.474e+04
8	1	93.00	-1.945e+04	241.01	598.05	1.248e+06	-2.049e+05	-6.931e+04
8	1	170.00	-2.134e+04	371.47	598.05	1.327e+06	-2.021e+05	-7.912e+04
8	1	175.33	-1.669e+04	223.80	1338.39	2.811e+06	-1.543e+05	-8.199e+04
8	1	180.67	-1.629e+04	455.92	1149.70	2.579e+06	-1.491e+05	-8.639e+04
8	1	186.00	-1.477e+04	543.12	935.98	1.748e+06	-1.385e+05	-9.000e+04
8	1	255.00	-1.628e+04	612.43	935.98	1.686e+06	-1.370e+05	-9.198e+04
8	1	263.00	-1.045e+04	-317.99	1506.84	2.893e+06	-5.168e+04	-9.767e+04
8	1	271.00	-1.013e+04	88.11	1526.89	2.662e+06	-5.142e+04	-9.492e+04
8	1	279.00	-9055.77	374.55	1412.30	2.024e+06	-5.052e+04	-9.191e+04
8	1	340.00	-1.013e+04	436.41	609.22	1.823e+06	-4.418e+04	-8.038e+04
8	1	350.67	-6005.87	-268.31	-1276.56	3.584e+05	-936.13	-3.757e+04
8	1	361.33	-5353.49	-51.14	-1027.12	2.750e+05	302.91	-3.563e+04
8	1	372.00	-4521.78	111.68	-852.03	1.233e+05	602.55	-3.362e+04
8	1	423.00	-4283.53	-43.43	177.96	6.978e+04	-526.86	-2.848e+04
8	1	437.00	-2683.30	-38.52	67.16	1.386e+05	1548.87	-1.195e+04
8	1	451.00	-2062.24	-5.41	-29.82	9.407e+04	175.92	-1.248e+04
8	1	465.00	-1338.84	-59.66	-62.36	287.60	-1154.78	-1.161e+04
8	1	515.00	-1077.27	-64.40	-78.84	-2.051e+04	-1241.21	-1.465e+04
8	2	-142.00	-1960.40	3237.70	131.19	7.040e+04	-8112.88	1.350e+04
8	2	-81.00	-2419.36	3237.70	131.19	6.851e+04	-1.082e+04	1.246e+04
8	2	-22.00	-3568.68	2094.79	-198.64	1.625e+05	-1.213e+04	2.719e+04
8	2	-20.79	-7016.62	-212.11	1242.83	1.897e+05	-3.901e+04	5.255e+04



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
8	2	-18.19	-9739.86	2208.10	1363.32	3.266e+04	-6.849e+04	1.068e+05	
8	2	-15.59	-1.042e+04	3023.75	1157.10	-3.198e+05	-9.422e+04	1.478e+05	
8	2	-12.99	-1.124e+04	2978.75	970.92	-6.427e+05	-1.235e+05	1.787e+05	
8	2	-10.39	-1.256e+04	2465.92	858.79	-8.552e+05	-1.634e+05	1.915e+05	
8	2	-7.80	-1.444e+04	1736.81	907.86	-9.270e+05	-2.148e+05	1.795e+05	
8	2	-5.20	-1.661e+04	1039.08	1147.23	-9.080e+05	-2.719e+05	1.388e+05	
8	2	-2.60	-1.793e+04	687.95	1682.47	-1.187e+06	-3.211e+05	7.564e+04	
8	2	0.0	-1.777e+04	-142.17	2384.46	-2.021e+06	-3.500e+05	3.425e+04	
8	2	85.00	-2.211e+04	109.99	4024.80	-2.542e+05	-4.458e+05	5.315e+04	
8	2	87.67	-1.826e+04	425.52	2286.38	7.298e+05	-2.730e+05	3.747e+04	
8	2	90.33	-1.799e+04	79.07	1778.61	6.103e+05	-2.442e+05	2.793e+04	
8	2	93.00	-1.716e+04	-103.53	1347.14	1.855e+05	-2.042e+05	1.891e+04	
8	2	170.00	-1.736e+04	-42.35	1347.14	2.429e+05	-2.019e+05	1.117e+04	
8	2	175.33	-1.360e+04	-101.89	1273.12	1.535e+06	-1.120e+05	8869.74	
8	2	180.67	-1.339e+04	71.32	1153.07	1.443e+06	-1.086e+05	5410.28	
8	2	186.00	-1.248e+04	158.13	1039.18	9.763e+05	-1.020e+05	2659.05	
8	2	255.00	-1.255e+04	181.41	1039.18	9.926e+05	-1.010e+05	109.75	
8	2	263.00	-8277.60	-268.36	955.92	1.881e+06	-3.077e+04	-6989.50	
8	2	271.00	-8026.09	-68.58	971.35	1.770e+06	-3.069e+04	-5496.65	
8	2	279.00	-7351.56	91.92	895.52	1.429e+06	-2.967e+04	-3763.82	
8	2	340.00	-7340.36	155.42	355.35	1.417e+06	-2.556e+04	4230.21	
8	2	350.67	-4485.26	-118.26	-775.64	2.444e+05	-1004.11	-1.116e+04	
8	2	361.33	-4027.02	-58.54	-629.18	1.879e+05	188.46	-1.075e+04	
8	2	372.00	-3515.25	22.02	-536.92	9.618e+04	781.03	-1.058e+04	
8	2	423.00	-3316.42	-21.02	24.41	5.709e+04	37.47	-1.173e+04	
8	2	437.00	-1972.31	36.83	76.02	1.049e+05	504.89	-3110.23	
8	2	451.00	-1524.03	-0.11	2.94	7.014e+04	-14.27	-4102.60	
8	2	465.00	-1022.95	-63.20	-18.08	1098.45	-529.47	-4064.14	
8	2	515.00	-899.98	-44.09	-43.32	-2.303e+04	-977.15	-7277.32	
8	3	-142.00	-2122.79	2764.69	172.35	5.970e+04	-8622.53	1.116e+04	
8	3	-81.00	-2558.43	2764.69	172.35	5.816e+04	-1.101e+04	1.031e+04	
8	3	-22.00	-3662.41	1823.97	-157.38	1.377e+05	-9829.42	2.273e+04	
8	3	-20.79	-6866.55	671.23	1039.75	1.547e+05	-3.201e+04	4.290e+04	
8	3	-18.19	-9059.29	3353.10	1075.95	-3.082e+04	-5.126e+04	8.524e+04	
8	3	-15.59	-9241.79	4387.44	755.30	-4.105e+05	-6.266e+04	1.178e+05	
8	3	-12.99	-9561.50	4441.73	432.44	-7.597e+05	-7.556e+04	1.432e+05	
8	3	-10.39	-1.046e+04	3884.47	187.23	-9.867e+05	-9.911e+04	1.535e+05	
8	3	-7.80	-1.200e+04	2967.80	115.42	-1.053e+06	-1.360e+05	1.413e+05	
8	3	-5.20	-1.394e+04	1967.73	255.80	-1.003e+06	-1.819e+05	1.018e+05	
8	3	-2.60	-1.507e+04	1267.87	705.96	-1.233e+06	-2.242e+05	4.041e+04	
8	3	0.0	-1.478e+04	123.53	1369.64	-2.000e+06	-2.515e+05	594.09	
8	3	85.00	-2.123e+04	280.39	3321.70	3.930e+05	-3.627e+05	1.686e+04	
8	3	87.67	-1.720e+04	851.17	1995.86	1.270e+06	-2.598e+05	-657.28	
8	3	90.33	-1.682e+04	339.77	1376.08	1.094e+06	-2.254e+05	-1.166e+04	
8	3	93.00	-1.592e+04	59.77	845.73	6.233e+05	-1.779e+05	-2.191e+04	
8	3	170.00	-1.683e+04	143.10	845.73	6.826e+05	-1.757e+05	-2.954e+04	
8	3	175.33	-1.317e+04	53.00	1135.44	1.890e+06	-1.158e+05	-3.179e+04	
8	3	180.67	-1.291e+04	229.23	1001.20	1.749e+06	-1.120e+05	-3.521e+04	
8	3	186.00	-1.185e+04	304.89	858.76	1.184e+06	-1.046e+05	-3.797e+04	
8	3	255.00	-1.253e+04	345.15	858.76	1.165e+06	-1.035e+05	-3.994e+04	
8	3	263.00	-8144.16	-254.94	1070.76	2.075e+06	-3.585e+04	-4.550e+04	
8	3	271.00	-7892.03	8.49	1086.19	1.927e+06	-3.570e+04	-4.366e+04	
8	3	279.00	-7133.62	202.81	1003.40	1.501e+06	-3.486e+04	-4.160e+04	
8	3	340.00	-7593.81	257.31	419.38	1.409e+06	-3.032e+04	-3.311e+04	
8	3	350.67	-4561.36	-168.07	-892.26	2.621e+05	-843.58	-2.119e+04	
8	3	361.33	-4078.48	-47.69	-720.13	2.013e+05	213.64	-2.016e+04	
8	3	372.00	-3494.36	58.13	-603.89	9.541e+04	601.56	-1.922e+04	
8	3	423.00	-3304.33	-28.02	87.99	5.516e+04	-212.78	-1.748e+04	
8	3	437.00	-2024.18	-0.73	62.25	1.059e+05	892.94	-6548.00	
8	3	451.00	-1559.25	-2.40	-11.69	7.139e+04	70.28	-7211.39	
8	3	465.00	-1026.86	-53.42	-34.98	602.63	-732.28	-6813.83	
8	3	515.00	-859.67	-47.17	-53.11	-1.893e+04	-964.50	-9534.51	
8	4	-142.00	-2122.79	2764.69	172.35	5.970e+04	-8622.53	1.116e+04	
8	4	-81.00	-2558.43	2764.69	172.35	5.816e+04	-1.101e+04	1.031e+04	
8	4	-22.00	-3662.41	1823.97	-157.38	1.377e+05	-9829.42	2.273e+04	
8	4	-20.79	-6866.55	671.23	1039.75	1.547e+05	-3.201e+04	4.290e+04	
8	4	-18.19	-9059.29	3353.10	1075.95	-3.082e+04	-5.126e+04	8.524e+04	
8	4	-15.59	-9241.79	4387.44	755.30	-4.105e+05	-6.266e+04	1.178e+05	
8	4	-12.99	-9561.50	4441.73	432.44	-7.597e+05	-7.556e+04	1.432e+05	
8	4	-10.39	-1.046e+04	3884.47	187.23	-9.867e+05	-9.911e+04	1.535e+05	
8	4	-7.80	-1.200e+04	2967.80	115.42	-1.053e+06	-1.360e+05	1.413e+05	
8	4	-5.20	-1.394e+04	1967.73	255.80	-1.003e+06	-1.819e+05	1.018e+05	



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
8	4	-2.60	-1.507e+04	1267.87	705.96	-1.233e+06	-2.242e+05	4.041e+04	
8	4	0.0	-1.478e+04	123.53	1369.64	-2.000e+06	-2.515e+05	594.09	
8	4	85.00	-2.123e+04	280.39	3321.70	3.930e+05	-3.627e+05	1.686e+04	
8	4	87.67	-1.720e+04	851.17	1995.86	1.270e+06	-2.598e+05	-657.28	
8	4	90.33	-1.682e+04	339.77	1376.08	1.094e+06	-2.254e+05	-1.166e+04	
8	4	93.00	-1.592e+04	59.77	845.73	6.233e+05	-1.779e+05	-2.191e+04	
8	4	170.00	-1.683e+04	143.10	845.73	6.826e+05	-1.757e+05	-2.954e+04	
8	4	175.33	-1.317e+04	53.00	1135.44	1.890e+06	-1.158e+05	-3.179e+04	
8	4	180.67	-1.291e+04	229.23	1001.20	1.749e+06	-1.120e+05	-3.521e+04	
8	4	186.00	-1.185e+04	304.89	858.76	1.184e+06	-1.046e+05	-3.797e+04	
8	4	255.00	-1.253e+04	345.15	858.76	1.165e+06	-1.035e+05	-3.994e+04	
8	4	263.00	-8144.16	-254.94	1070.76	2.075e+06	-3.585e+04	-4.550e+04	
8	4	271.00	-7892.03	8.49	1086.19	1.927e+06	-3.570e+04	-4.366e+04	
8	4	279.00	-7133.62	202.81	1003.40	1.501e+06	-3.486e+04	-4.160e+04	
8	4	340.00	-7593.81	257.31	419.38	1.409e+06	-3.032e+04	-3.311e+04	
8	4	350.67	-4561.36	-168.07	-892.26	2.621e+05	-843.58	-2.119e+04	
8	4	361.33	-4078.48	-47.69	-720.13	2.013e+05	213.64	-2.016e+04	
8	4	372.00	-3494.36	58.13	-603.89	9.541e+04	601.56	-1.922e+04	
8	4	423.00	-3304.33	-28.02	87.99	5.516e+04	-212.78	-1.748e+04	
8	4	437.00	-2024.18	-0.73	62.25	1.059e+05	892.94	-6548.00	
8	4	451.00	-1559.25	-2.40	-11.69	7.139e+04	70.28	-7211.39	
8	4	465.00	-1026.86	-53.42	-34.98	602.63	-732.28	-6813.83	
8	4	515.00	-859.67	-47.17	-53.11	-1.893e+04	-964.50	-9534.51	
8	5	-142.00	-2122.79	2764.69	172.35	5.970e+04	-8622.53	1.116e+04	
8	5	-81.00	-2558.43	2764.69	172.35	5.816e+04	-1.101e+04	1.031e+04	
8	5	-22.00	-3662.41	1823.97	-157.38	1.377e+05	-9829.42	2.273e+04	
8	5	-20.79	-6866.55	671.23	1039.75	1.547e+05	-3.201e+04	4.290e+04	
8	5	-18.19	-9059.29	3353.10	1075.95	-3.082e+04	-5.126e+04	8.524e+04	
8	5	-15.59	-9241.79	4387.44	755.30	-4.105e+05	-6.266e+04	1.178e+05	
8	5	-12.99	-9561.50	4441.73	432.44	-7.597e+05	-7.556e+04	1.432e+05	
8	5	-10.39	-1.046e+04	3884.47	187.23	-9.867e+05	-9.911e+04	1.535e+05	
8	5	-7.80	-1.200e+04	2967.80	115.42	-1.053e+06	-1.360e+05	1.413e+05	
8	5	-5.20	-1.394e+04	1967.73	255.80	-1.003e+06	-1.819e+05	1.018e+05	
8	5	-2.60	-1.507e+04	1267.87	705.96	-1.233e+06	-2.242e+05	4.041e+04	
8	5	0.0	-1.478e+04	123.53	1369.64	-2.000e+06	-2.515e+05	594.09	
8	5	85.00	-2.123e+04	280.39	3321.70	3.930e+05	-3.627e+05	1.686e+04	
8	5	87.67	-1.720e+04	851.17	1995.86	1.270e+06	-2.598e+05	-657.28	
8	5	90.33	-1.682e+04	339.77	1376.08	1.094e+06	-2.254e+05	-1.166e+04	
8	5	93.00	-1.592e+04	59.77	845.73	6.233e+05	-1.779e+05	-2.191e+04	
8	5	170.00	-1.683e+04	143.10	845.73	6.826e+05	-1.757e+05	-2.954e+04	
8	5	175.33	-1.317e+04	53.00	1135.44	1.890e+06	-1.158e+05	-3.179e+04	
8	5	180.67	-1.291e+04	229.23	1001.20	1.749e+06	-1.120e+05	-3.521e+04	
8	5	186.00	-1.185e+04	304.89	858.76	1.184e+06	-1.046e+05	-3.797e+04	
8	5	255.00	-1.253e+04	345.15	858.76	1.165e+06	-1.035e+05	-3.994e+04	
8	5	263.00	-8144.16	-254.94	1070.76	2.075e+06	-3.585e+04	-4.550e+04	
8	5	271.00	-7892.03	8.49	1086.19	1.927e+06	-3.570e+04	-4.366e+04	
8	5	279.00	-7133.62	202.81	1003.40	1.501e+06	-3.486e+04	-4.160e+04	
8	5	340.00	-7593.81	257.31	419.38	1.409e+06	-3.032e+04	-3.311e+04	
8	5	350.67	-4561.36	-168.07	-892.26	2.621e+05	-843.58	-2.119e+04	
8	5	361.33	-4078.48	-47.69	-720.13	2.013e+05	213.64	-2.016e+04	
8	5	372.00	-3494.36	58.13	-603.89	9.541e+04	601.56	-1.922e+04	
8	5	423.00	-3304.33	-28.02	87.99	5.516e+04	-212.78	-1.748e+04	
8	5	437.00	-2024.18	-0.73	62.25	1.059e+05	892.94	-6548.00	
8	5	451.00	-1559.25	-2.40	-11.69	7.139e+04	70.28	-7211.39	
8	5	465.00	-1026.86	-53.42	-34.98	602.63	-732.28	-6813.83	
8	5	515.00	-859.67	-47.17	-53.11	-1.893e+04	-964.50	-9534.51	
8	9	-142.00	-3053.40	9451.13	272.15	1.889e+05	-1.249e+04	4.094e+04	
8	9	-81.00	-4278.05	9451.13	272.15	1.843e+05	-1.072e+04	5.312e+04	
8	9	-22.00	-6066.66	5915.81	-2390.17	4.442e+05	-5.959e+04	2.466e+04	
8	9	-20.79	-1.945e+04	-5024.20	5452.05	6.664e+05	-2.054e+05	-6.289e+04	
8	9	-18.19	-2.973e+04	1766.26	9169.45	3.905e+05	-4.264e+05	-5081.42	
8	9	-15.59	-3.229e+04	5569.36	1.061e+04	-6.372e+05	-5.896e+05	6.517e+04	
8	9	-12.99	-3.324e+04	8050.48	1.127e+04	-1.875e+06	-6.896e+05	1.456e+05	
8	9	-10.39	-3.463e+04	1.033e+04	1.171e+04	-2.993e+06	-7.588e+05	2.032e+05	
8	9	-7.80	-3.620e+04	1.227e+04	1.191e+04	-4.036e+06	-8.143e+05	2.461e+05	
8	9	-5.20	-3.781e+04	1.400e+04	1.195e+04	-5.041e+06	-8.462e+05	2.378e+05	
8	9	-2.60	-3.856e+04	1.561e+04	1.178e+04	-6.305e+06	-8.580e+05	2.166e+05	
8	9	0.0	-3.799e+04	1.651e+04	1.179e+04	-8.036e+06	-8.666e+05	1.967e+05	
8	9	85.00	-3.515e+04	1.760e+04	1.435e+04	-4.495e+06	-9.369e+05	5.835e+04	
8	9	87.67	-3.033e+04	1.677e+04	6132.90	-2.228e+06	-2.143e+05	4.635e+04	
8	9	90.33	-3.084e+04	1.610e+04	5482.54	-1.936e+06	-1.706e+05	3.896e+04	
8	9	93.00	-2.929e+04	1.566e+04	4704.34	-2.629e+06	-1.113e+05	3.316e+04	



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
8	9	170.00	-2.645e+04	1.575e+04	4704.34	-1.858e+06	-6.146e+04	6.884e+04	
8	9	175.33	-1.998e+04	1.342e+04	1388.11	9.113e+05	1.252e+05	8.548e+04	
8	9	180.67	-1.943e+04	1.323e+04	1125.03	8.771e+05	1.386e+05	9.043e+04	
8	9	186.00	-1.875e+04	1.303e+04	652.57	7.548e+05	1.535e+05	9.176e+04	
8	9	255.00	-1.500e+04	1.303e+04	652.57	1.752e+06	1.948e+05	9.238e+04	
8	9	263.00	-1.239e+04	5350.50	-1239.91	1.827e+06	1.097e+05	1.087e+05	
8	9	271.00	-1.140e+04	5360.21	-1379.98	1.910e+06	1.096e+05	1.177e+05	
8	9	279.00	-1.001e+04	5414.51	-1443.33	1.768e+06	1.049e+05	1.262e+05	
8	9	340.00	-4910.12	5607.82	-1752.78	3.475e+06	1.350e+05	1.717e+05	
8	9	350.67	-5668.52	-1579.87	695.06	4.829e+05	4.328e+04	4.799e+04	
8	9	361.33	-4853.54	-1738.93	577.68	3.725e+05	3.837e+04	3.755e+04	
8	9	372.00	-3954.63	-1711.85	627.78	1.945e+05	3.441e+04	3.313e+04	
8	9	423.00	-3927.01	-1692.74	517.94	1.260e+05	4.822e+04	2.075e+04	
8	9	437.00	-2559.76	-686.61	-435.55	1.764e+05	1.553e+04	4935.58	
8	9	451.00	-1783.67	-564.34	-239.74	1.174e+05	1.197e+04	7928.85	
8	9	465.00	-1046.37	-547.84	-127.47	1.488e+04	7619.74	7748.47	
8	9	515.00	-927.85	-589.34	-41.97	-4668.77	1596.43	7693.88	
8	13	-142.00	-2951.93	9365.04	434.35	1.935e+05	-1.397e+04	3.680e+04	
8	13	-81.00	-4176.58	9365.04	434.35	1.889e+05	-1.182e+04	4.739e+04	
8	13	-22.00	-6322.24	6054.77	-2294.73	4.486e+05	-5.717e+04	1.866e+04	
8	13	-20.79	-1.981e+04	-4456.83	5135.60	6.824e+05	-1.981e+05	-9.177e+04	
8	13	-18.19	-3.025e+04	3125.95	8815.54	4.012e+05	-4.154e+05	-6.488e+04	
8	13	-15.59	-3.285e+04	7648.21	1.027e+04	-6.456e+05	-5.781e+05	-2.298e+04	
8	13	-12.99	-3.390e+04	1.082e+04	1.096e+04	-1.894e+06	-6.806e+05	3.150e+04	
8	13	-10.39	-3.512e+04	1.373e+04	1.137e+04	-3.074e+06	-7.504e+05	5.185e+04	
8	13	-7.80	-3.647e+04	1.621e+04	1.154e+04	-4.195e+06	-8.038e+05	6.271e+04	
8	13	-5.20	-3.777e+04	1.835e+04	1.157e+04	-5.301e+06	-8.341e+05	5.542e+04	
8	13	-2.60	-3.814e+04	2.020e+04	1.142e+04	-6.690e+06	-8.447e+05	2.932e+04	
8	13	0.0	-3.721e+04	2.127e+04	1.144e+04	-8.541e+06	-8.525e+05	1.029e+04	
8	13	85.00	-3.448e+04	2.250e+04	1.397e+04	-4.899e+06	-9.247e+05	8671.72	
8	13	87.67	-2.975e+04	2.086e+04	6117.61	-2.658e+06	-2.210e+05	1567.41	
8	13	90.33	-2.972e+04	2.010e+04	5437.59	-2.597e+06	-1.756e+05	-6652.83	
8	13	93.00	-2.869e+04	1.958e+04	4684.24	-3.030e+06	-1.142e+05	-1.354e+04	
8	13	170.00	-2.585e+04	1.967e+04	4684.24	-2.259e+06	-5.904e+04	-1.563e+04	
8	13	175.33	-1.963e+04	1.623e+04	1351.91	6.561e+05	1.203e+05	-1.837e+04	
8	13	180.67	-1.914e+04	1.605e+04	1115.23	6.442e+05	1.343e+05	-1.279e+04	
8	13	186.00	-1.842e+04	1.585e+04	669.94	5.026e+05	1.493e+05	-1.047e+04	
8	13	255.00	-1.466e+04	1.585e+04	669.94	1.500e+06	1.917e+05	3899.57	
8	13	263.00	-1.239e+04	7165.51	-1305.93	1.736e+06	1.127e+05	3.480e+04	
8	13	271.00	-1.143e+04	7132.22	-1447.44	1.838e+06	1.140e+05	4.107e+04	
8	13	279.00	-1.000e+04	7154.90	-1487.28	1.680e+06	1.098e+05	4.682e+04	
8	13	340.00	-4812.88	7345.66	-1690.31	3.381e+06	1.385e+05	7.330e+04	
8	13	350.67	-5469.03	-826.16	373.53	4.609e+05	4.613e+04	3.593e+04	
8	13	361.33	-4744.16	-1016.24	283.52	3.580e+05	4.014e+04	2.659e+04	
8	13	372.00	-3815.95	-1029.16	366.71	1.717e+05	3.557e+04	2.338e+04	
8	13	423.00	-3862.37	-1214.91	458.46	1.038e+05	4.696e+04	1.695e+04	
8	13	437.00	-2563.51	-470.01	-461.82	1.742e+05	1.664e+04	4796.32	
8	13	451.00	-1838.36	-368.53	-273.66	1.206e+05	1.203e+04	4115.18	
8	13	465.00	-1032.31	-362.50	-182.25	1.116e+04	7485.13	4523.73	
8	13	515.00	-888.37	-462.42	-83.29	-1314.00	3338.56	4805.40	
8	16	-142.00	-3583.01	5658.16	115.96	1.238e+05	-1.635e+04	2.933e+04	
8	16	-81.00	-4540.79	5658.16	115.96	1.169e+05	-1.943e+04	2.241e+04	
8	16	-22.00	-7089.71	4066.67	489.57	3.119e+05	435.31	7.098e+04	
8	16	-20.79	-1.280e+04	286.29	2764.58	3.043e+05	-4302.56	2.036e+05	
8	16	-18.19	-1.627e+04	4727.84	1148.13	-9.099e+04	7.773e+04	3.864e+05	
8	16	-15.59	-1.576e+04	7563.16	-2119.99	-8.583e+05	2.400e+05	5.126e+05	
8	16	-12.99	-1.485e+04	9061.37	-6089.69	-1.664e+06	4.525e+05	5.704e+05	
8	16	-10.39	-1.443e+04	8561.31	-1.015e+04	-2.355e+06	6.677e+05	6.024e+05	
8	16	-7.80	-1.453e+04	7526.13	-1.388e+04	-2.901e+06	8.466e+05	5.483e+05	
8	16	-5.20	-1.502e+04	6247.49	-1.676e+04	-3.318e+06	9.667e+05	4.078e+05	
8	16	-2.60	-1.483e+04	5056.67	-1.781e+04	-3.967e+06	1.019e+06	2.244e+05	
8	16	0.0	-1.452e+04	2898.19	-1.700e+04	-4.633e+06	1.021e+06	1.015e+05	
8	16	85.00	-1.576e+04	1440.09	-1.564e+04	-6.971e+05	8.554e+05	2.674e+04	
8	16	87.67	-1.530e+04	1580.09	-6968.44	-2.234e+05	-1.576e+05	4636.63	
8	16	90.33	-1.454e+04	1615.45	-7348.69	-5.308e+05	-1.366e+05	-2.045e+04	
8	16	93.00	-1.299e+04	1862.43	-6860.45	-1.288e+06	-1.262e+05	-4.444e+04	
8	16	170.00	-1.193e+04	1890.84	-6860.45	-1.061e+06	-1.480e+05	-8.021e+04	
8	16	175.33	-1.141e+04	1991.99	24.52	4.604e+05	-4.963e+05	-8.565e+04	
8	16	180.67	-1.102e+04	2222.83	-163.93	3.683e+05	-4.951e+05	-1.201e+05	
8	16	186.00	-1.008e+04	2365.68	441.59	-1.921e+04	-4.849e+05	-1.524e+05	
8	16	255.00	-8791.29	2379.68	441.59	4.757e+05	-5.012e+05	-2.213e+05	
8	16	263.00	-7068.97	64.97	5255.31	1.265e+06	-3.799e+05	-2.751e+05	



M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
8	16	271.00	-6738.64	259.37	5011.97	1.184e+06	-3.615e+05	-2.846e+05
8	16	279.00	-6135.74	375.49	4952.95	9.492e+05	-3.191e+05	-2.906e+05
8	16	340.00	-5431.70	309.74	52.99	1.125e+06	-3.122e+05	-2.178e+05
8	16	350.67	-3735.79	-709.49	-3098.97	2.120e+05	-1.784e+05	-4.828e+05
8	16	361.33	-3325.20	-724.46	-2364.62	1.598e+05	-1.613e+05	-4.413e+05
8	16	372.00	-2986.09	-631.61	-2090.35	9.671e+04	-1.279e+05	-4.098e+05
8	16	423.00	-2864.99	-342.40	3449.13	5.778e+04	-1.102e+05	-3.264e+05
8	16	437.00	-1686.64	-262.18	357.01	6.916e+04	-1.943e+04	-2.198e+05
8	16	451.00	-1220.11	-283.00	351.24	3.279e+04	-2.339e+04	-1.937e+05
8	16	465.00	-940.01	-320.79	-338.22	-9304.53	-3.483e+04	-1.668e+05
8	16	515.00	-907.41	-157.95	-181.00	-3.634e+04	-2.130e+04	-1.504e+05
8	21	-142.00	-2365.42	5493.48	438.14	1.106e+05	-1.126e+04	1.404e+04
8	21	-81.00	-2965.49	5493.48	438.14	1.094e+05	-1.192e+04	1.839e+04
8	21	-22.00	-4523.80	3524.11	-939.12	2.461e+05	-2.247e+04	1.671e+04
8	21	-20.79	-1.177e+04	-1738.30	2065.11	3.685e+05	-7.999e+04	-1.653e+04
8	21	-18.19	-1.762e+04	2757.37	4014.58	1.885e+05	-1.701e+05	1.682e+04
8	21	-15.59	-1.935e+04	4192.59	5241.66	-4.016e+05	-2.457e+05	5.851e+04
8	21	-12.99	-2.069e+04	4592.69	6309.55	-1.034e+06	-3.088e+05	1.121e+05
8	21	-10.39	-2.255e+04	5640.50	7373.38	-1.551e+06	-3.704e+05	1.067e+05
8	21	-7.80	-2.496e+04	6385.86	8472.78	-1.924e+06	-4.337e+05	9.647e+04
8	21	-5.20	-2.765e+04	7019.85	9583.49	-2.205e+06	-4.901e+05	7.296e+04
8	21	-2.60	-2.938e+04	7823.67	1.042e+04	-2.810e+06	-5.282e+05	3.692e+04
8	21	0.0	-2.855e+04	8153.92	1.096e+04	-4.379e+06	-5.525e+05	1.248e+04
8	21	85.00	-3.371e+04	9865.64	1.379e+04	-2.241e+06	-6.378e+05	3.989e+04
8	21	87.67	-2.756e+04	1.030e+04	5550.10	-2.282e+04	-3.964e+04	2.684e+04
8	21	90.33	-2.788e+04	9266.03	4811.08	1.237e+05	9625.80	2.387e+04
8	21	93.00	-2.717e+04	8514.20	3636.33	-2.242e+05	8.393e+04	2.201e+04
8	21	170.00	-2.750e+04	8639.04	3636.33	1.185e+05	1.181e+05	2.644e+04
8	21	175.33	-2.064e+04	6829.71	-1584.54	2.257e+06	2.009e+05	3.067e+04
8	21	180.67	-2.030e+04	6818.57	-1855.95	2.139e+06	2.111e+05	4.563e+04
8	21	186.00	-1.924e+04	6733.43	-2653.00	1.641e+06	2.175e+05	5.674e+04
8	21	255.00	-1.889e+04	6782.42	-2653.00	1.927e+06	2.362e+05	8.818e+04
8	21	263.00	-1.297e+04	2686.74	601.63	2.738e+06	1.533e+05	9.813e+04
8	21	271.00	-1.239e+04	2931.82	675.31	2.625e+06	1.530e+05	1.009e+05
8	21	279.00	-1.120e+04	3128.71	836.15	2.173e+06	1.354e+05	1.021e+05
8	21	340.00	-9928.97	3307.91	606.41	2.677e+06	1.456e+05	8.749e+04
8	21	350.67	-5802.40	-229.29	-2148.77	4.095e+05	1.408e+05	8.831e+04
8	21	361.33	-5068.04	-207.80	-2065.34	3.163e+05	1.324e+05	5.735e+04
8	21	372.00	-4097.58	-162.38	-1621.99	1.372e+05	1.226e+05	4.433e+04
8	21	423.00	-3927.17	-559.12	-592.53	9.382e+04	1.150e+05	5.078e+04
8	21	437.00	-2699.82	-34.99	-827.92	1.811e+05	4.287e+04	4.760e+04
8	21	451.00	-1977.34	5.86	-801.35	1.306e+05	2.926e+04	3.983e+04
8	21	465.00	-1093.22	-39.16	-552.96	1.567e+04	2.337e+04	3.240e+04
8	21	515.00	-849.88	-238.65	-416.32	7038.02	1.350e+04	1.881e+04
8	33	-142.00	-2925.39	8350.33	268.69	1.646e+05	-1.197e+04	3.570e+04
...								
8	61	515.00	-850.51	-171.67	-246.85	-2784.53	7891.92	1.170e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-3.856e+04	-5186.90	-1.781e+04	-8.541e+06	-9.369e+05	-4.828e+05
			-849.88	2.250e+04	1.435e+04	3.475e+06	1.021e+06	6.024e+05

Macro	Tipo	Angolo 1-Z (gradi)
10	Setto	0.0

M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
		cm	daN	daN	daN	daN cm	daN cm	daN cm
10	1	0.0	-6.386e+04	-2137.78	4343.17	2.389e+06	-8.445e+05	1.465e+05
10	1	85.00	-4.959e+04	-2137.78	4343.17	1.797e+06	-8.423e+05	1.234e+05
10	1	170.00	-3.612e+04	-1313.65	3869.74	9.642e+05	-4.930e+05	1.293e+05
10	1	255.00	-2.080e+04	-542.03	2595.44	-5.816e+04	-2.187e+05	1.213e+05
10	1	340.00	-7529.47	-310.61	1063.75	-8.287e+05	-5.347e+04	1.289e+05
10	1	423.00	-5495.15	-301.75	173.55	3.623e+05	1.173e+04	7.228e+04
10	1	506.00	-1261.19	178.74	-244.04	-3.508e+04	8843.97	4.156e+04
10	2	0.0	-4.836e+04	-1281.82	4298.33	2.047e+06	-7.656e+05	1.769e+04



M	S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
10	2	85.00	-3.762e+04	-1281.82	4298.33	1.721e+06	-7.649e+05	2059.53	
10	2	170.00	-2.749e+04	-854.87	3435.04	9.811e+05	-4.365e+05	579.53	
10	2	255.00	-1.593e+04	-440.97	2262.71	1.213e+05	-1.945e+05	-5030.85	
10	2	340.00	-5968.40	-348.73	1033.25	-5.221e+05	-5.171e+04	4935.76	
10	2	423.00	-4264.43	-198.86	189.20	2.925e+05	6254.45	5.349e+04	
10	2	506.00	-988.46	160.78	-178.80	-3.337e+04	6365.23	3.222e+04	
10	3	0.0	-4.879e+04	-1486.78	3757.18	1.929e+06	-7.000e+05	7.138e+04	
10	3	85.00	-3.791e+04	-1486.78	3757.18	1.530e+06	-6.988e+05	5.456e+04	
10	3	170.00	-2.766e+04	-942.84	3175.99	8.458e+05	-4.041e+05	5.646e+04	
10	3	255.00	-1.597e+04	-427.39	2112.24	2.745e+04	-1.797e+05	5.054e+04	
10	3	340.00	-5868.64	-286.67	911.74	-5.873e+05	-4.573e+04	5.820e+04	
10	3	423.00	-4243.30	-217.66	157.72	2.847e+05	7817.45	5.468e+04	
10	3	506.00	-978.11	147.62	-183.84	-2.976e+04	6612.69	3.208e+04	
10	4	0.0	-4.879e+04	-1486.78	3757.18	1.929e+06	-7.000e+05	7.138e+04	
10	4	85.00	-3.791e+04	-1486.78	3757.18	1.530e+06	-6.988e+05	5.456e+04	
10	4	170.00	-2.766e+04	-942.84	3175.99	8.458e+05	-4.041e+05	5.646e+04	
10	4	255.00	-1.597e+04	-427.39	2112.24	2.745e+04	-1.797e+05	5.054e+04	
10	4	340.00	-5868.64	-286.67	911.74	-5.873e+05	-4.573e+04	5.820e+04	
10	4	423.00	-4243.30	-217.66	157.72	2.847e+05	7817.45	5.468e+04	
10	4	506.00	-978.11	147.62	-183.84	-2.976e+04	6612.69	3.208e+04	
10	5	0.0	-4.879e+04	-1486.78	3757.18	1.929e+06	-7.000e+05	7.138e+04	
10	5	85.00	-3.791e+04	-1486.78	3757.18	1.530e+06	-6.988e+05	5.456e+04	
10	5	170.00	-2.766e+04	-942.84	3175.99	8.458e+05	-4.041e+05	5.646e+04	
10	5	255.00	-1.597e+04	-427.39	2112.24	2.745e+04	-1.797e+05	5.054e+04	
10	5	340.00	-5868.64	-286.67	911.74	-5.873e+05	-4.573e+04	5.820e+04	
10	5	423.00	-4243.30	-217.66	157.72	2.847e+05	7817.45	5.468e+04	
10	5	506.00	-978.11	147.62	-183.84	-2.976e+04	6612.69	3.208e+04	
10	7	0.0	-3.974e+04	1181.29	-3.835e+04	2.784e+06	3.260e+06	3.370e+05	
10	7	85.00	-2.514e+04	1181.29	-3.835e+04	2.770e+06	3.241e+06	2.913e+05	
10	7	170.00	-1.918e+04	2478.27	-1.969e+04	1.177e+06	6.804e+05	3.370e+05	
10	7	255.00	-1.002e+04	2769.00	-5757.52	-2.237e+05	-4.205e+05	3.713e+05	
10	7	340.00	-3254.38	2773.81	2072.31	-1.030e+06	-4.737e+05	4.095e+05	
10	7	423.00	-4963.15	590.11	3548.54	2.818e+05	-1.733e+05	1.098e+05	
10	7	506.00	-1432.43	1179.99	300.65	-2.392e+05	-1.987e+04	9.374e+04	
10	15	0.0	-4.495e+04	7401.98	-9921.10	3.600e+06	6.555e+05	2.203e+04	
10	15	85.00	-3.421e+04	7401.98	-9921.10	3.719e+06	6.481e+05	3.600e+04	
10	15	170.00	-2.498e+04	8642.59	-4230.19	1.788e+06	-1.101e+04	1.245e+05	
10	15	255.00	-1.343e+04	7787.22	-797.82	-6.350e+05	-2.332e+05	3.063e+05	
10	15	340.00	-4855.45	7397.57	1728.64	-1.227e+06	-1.669e+05	3.214e+05	
10	15	423.00	-4570.02	1523.70	1031.89	1.833e+05	-5.734e+04	3.711e+04	
10	15	506.00	-1314.04	996.91	23.61	-1.432e+05	-8535.67	2.784e+04	
10	16	0.0	-5.380e+04	7703.22	1.164e+04	4.124e+06	-1.486e+06	4.342e+04	
10	16	85.00	-3.910e+04	7703.22	1.164e+04	1.862e+06	-1.475e+06	-1759.23	
10	16	170.00	-2.738e+04	6106.07	7368.89	7.151e+05	-6.092e+05	-8.695e+04	
10	16	255.00	-1.509e+04	4400.48	4050.88	-1.496e+04	-1.155e+05	-2.855e+05	
10	16	340.00	-3350.68	-203.68	-29.31	-1.991e+06	4.352e+04	-2.734e+05	
10	16	423.00	-4736.51	-1869.93	-314.16	5.539e+05	5.714e+04	7.667e+04	
10	16	506.00	-724.22	-532.15	-372.10	3.778e+04	2.031e+04	4.486e+04	
10	20	0.0	-5.409e+04	8219.47	1.162e+04	3.739e+06	-1.471e+06	1.130e+05	
10	20	85.00	-3.938e+04	8219.47	1.162e+04	1.477e+06	-1.460e+06	5.906e+04	
10	20	170.00	-2.759e+04	6609.46	7343.76	4.128e+05	-6.032e+05	-2.540e+04	
10	20	255.00	-1.507e+04	4787.05	4012.79	-2.712e+05	-1.211e+05	-2.233e+05	
10	20	340.00	-3468.63	16.68	-191.61	-2.118e+06	3.783e+04	-2.037e+05	
10	20	423.00	-4830.97	-1853.96	-253.33	5.324e+05	5.241e+04	7.424e+04	
10	20	506.00	-750.55	-520.14	-328.76	3.144e+04	1.850e+04	4.190e+04	
10	22	0.0	-5.304e+04	6208.33	-3755.31	3.606e+06	-7.694e+04	1.894e+05	
10	22	85.00	-3.601e+04	6208.33	-3755.31	1.927e+06	-7.466e+04	2.000e+05	
10	22	170.00	-2.523e+04	5546.96	-830.46	8.126e+05	-2.596e+05	2.732e+05	
10	22	255.00	-1.299e+04	3964.83	1227.14	-2.026e+05	-2.430e+05	2.507e+05	
10	22	340.00	-2443.25	940.63	573.67	-1.870e+06	-1.201e+05	2.726e+05	
10	22	423.00	-5180.70	-1241.31	776.38	5.563e+05	-1.612e+04	1.045e+05	
10	22	506.00	-925.40	-11.88	-239.23	-5.450e+04	5599.48	6.035e+04	
10	30	0.0	-4.599e+04	514.02	-2.784e+04	2.863e+06	2.270e+06	2.980e+05	
10	30	85.00	-3.044e+04	514.02	-2.784e+04	2.251e+06	2.257e+06	2.646e+05	
10	30	170.00	-2.250e+04	1136.53	-1.406e+04	9.989e+05	4.348e+05	3.005e+05	
10	30	255.00	-1.206e+04	1219.73	-3674.24	-2.849e+04	-3.283e+05	2.771e+05	
10	30	340.00	-3501.59	494.71	1508.56	-1.154e+06	-3.450e+05	3.074e+05	
10	30	423.00	-5065.65	-338.39	2562.48	3.655e+05	-1.069e+05	1.179e+05	
10	30	506.00	-1262.71	711.94	26.52	-1.750e+05	-6452.35	9.074e+04	
10	56	0.0	-5.224e+04	8342.80	1.205e+04	3.990e+06	-1.309e+06	2.855e+04	
10	56	85.00	-3.848e+04	8342.80	1.205e+04	2.183e+06	-1.301e+06	-3595.57	
10	56	170.00	-2.720e+04	6930.88	6848.74	9.379e+05	-4.644e+05	-5.208e+04	



M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
10	56	255.00	-1.498e+04	4998.92	3020.31	-1.053e+05	-4.073e+04	-1.673e+05
10	56	340.00	-3817.74	1156.42	-669.76	-1.745e+06	5.320e+04	-1.547e+05
10	56	423.00	-4675.88	-1183.51	-124.51	4.827e+05	3.494e+04	6.160e+04
10	56	506.00	-819.74	-266.60	-277.10	9502.05	1.379e+04	3.618e+04
10	60	0.0	-5.240e+04	8669.95	1.204e+04	3.746e+06	-1.302e+06	7.194e+04
10	60	85.00	-3.864e+04	8669.95	1.204e+04	1.939e+06	-1.293e+06	3.460e+04
10	60	170.00	-2.731e+04	7247.25	6839.47	7.467e+05	-4.616e+05	-1.307e+04
10	60	255.00	-1.497e+04	5240.85	3001.45	-2.653e+05	-4.403e+04	-1.278e+05
10	60	340.00	-3889.72	1294.20	-772.78	-1.825e+06	4.989e+04	-1.107e+05
10	60	423.00	-4734.53	-1173.73	-89.25	4.692e+05	3.206e+04	6.004e+04
10	60	506.00	-835.90	-259.50	-250.95	5468.32	1.269e+04	3.435e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-6.386e+04	-2137.78	-3.835e+04	-2.118e+06	-1.486e+06	-2.855e+05
			-724.22	8669.95	1.205e+04	4.124e+06	3.260e+06	4.095e+05

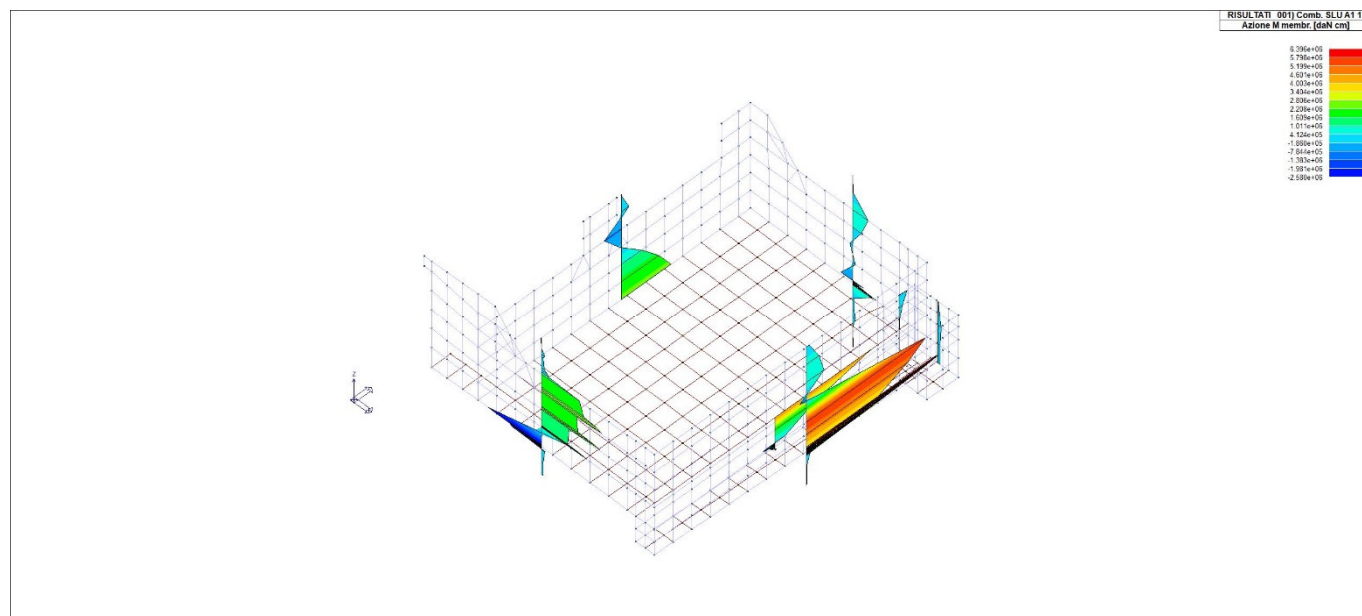


Figura 70 - RIS_M_001_Comb SLU A1 1



RESULTATI 003) Comb. SLE(rara) 3
Azione M membri [daN cm]

4.857e+05
4.796e+05
3.937e+05
3.887e+05
3.026e+05
2.707e+05
2.110e+05
1.054e+05
1.197e+05
7.483e+04
2.836e+05
-1.724e+05
-6.298e+05
-1.087e+05
-1.543e+05
-2.000e+05

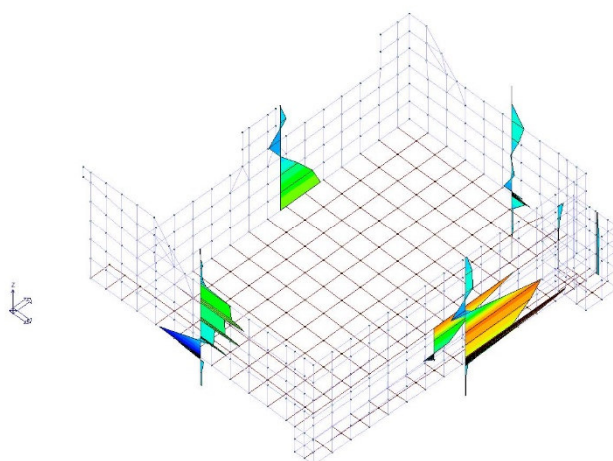


Figura 71 - RIS_M_003_Comb SLE(rara) 3

RESULTATI 004) Comb. SLE(freq) 4
Azione M membri [daN cm]

4.857e+05
4.796e+05
3.937e+05
3.887e+05
3.026e+05
2.707e+05
2.110e+05
1.054e+05
1.197e+05
7.483e+04
2.836e+05
-1.724e+05
-6.298e+05
-1.087e+05
-1.543e+05
-2.000e+05

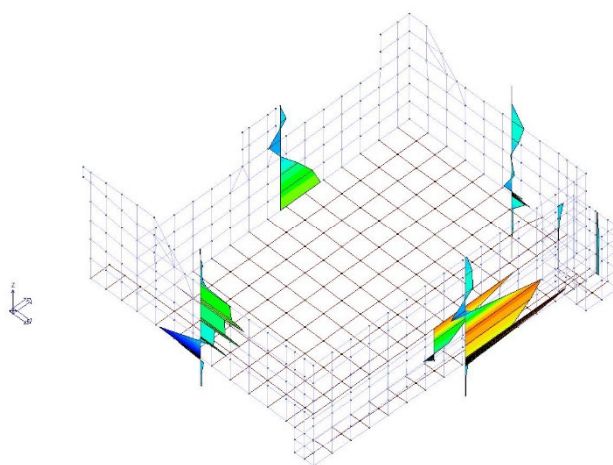


Figura 72 - RIS_M_004_Comb SLE(freq) 4

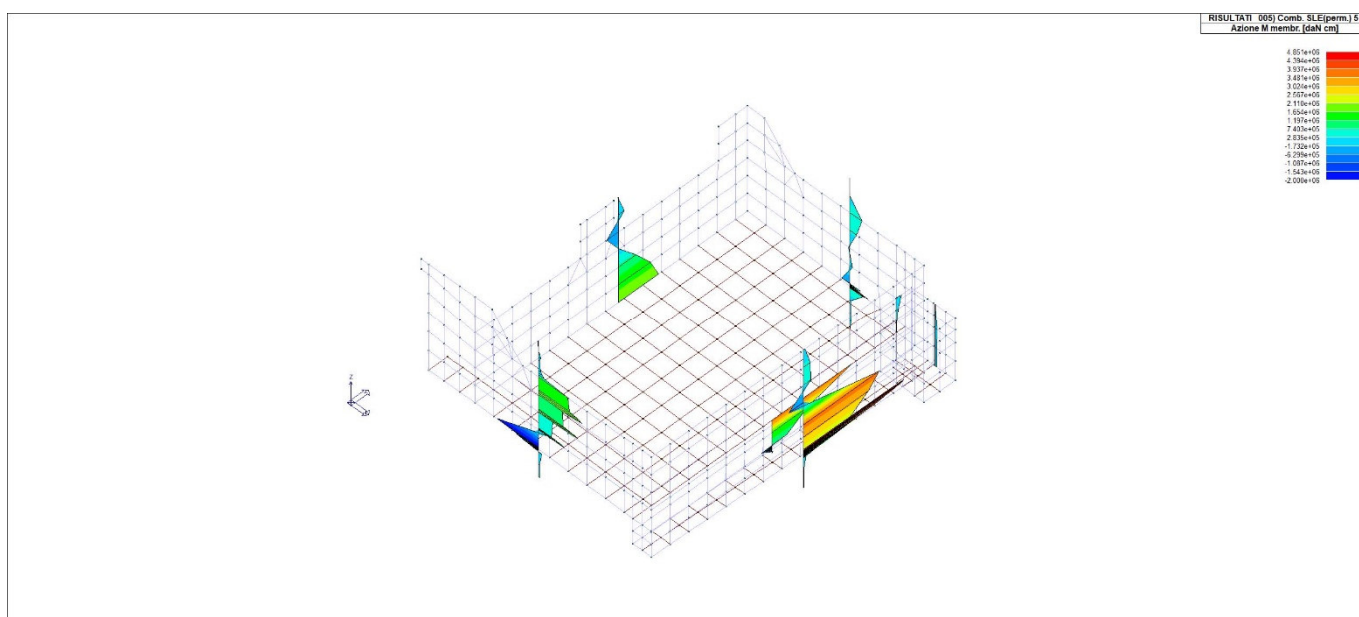


Figura 73 - RIS_M_005_Comb SLEperm 5

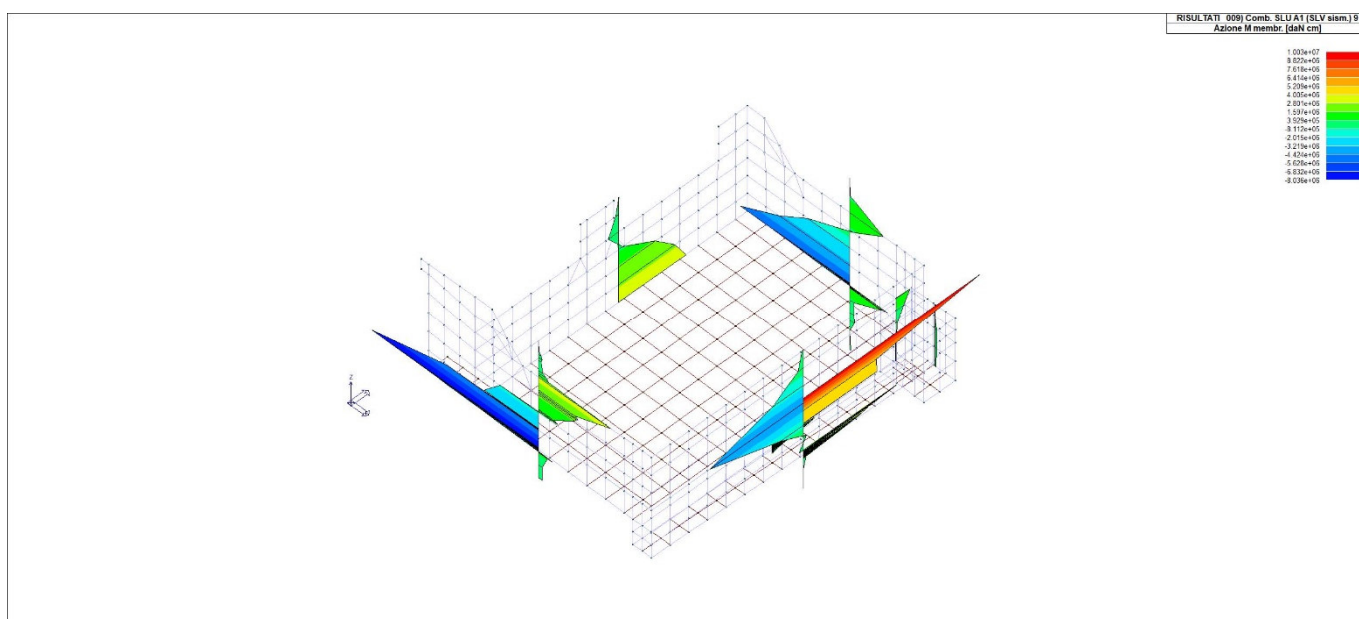


Figura 74 - RIS_M_009_Comb SLU A1 SLV sism 9

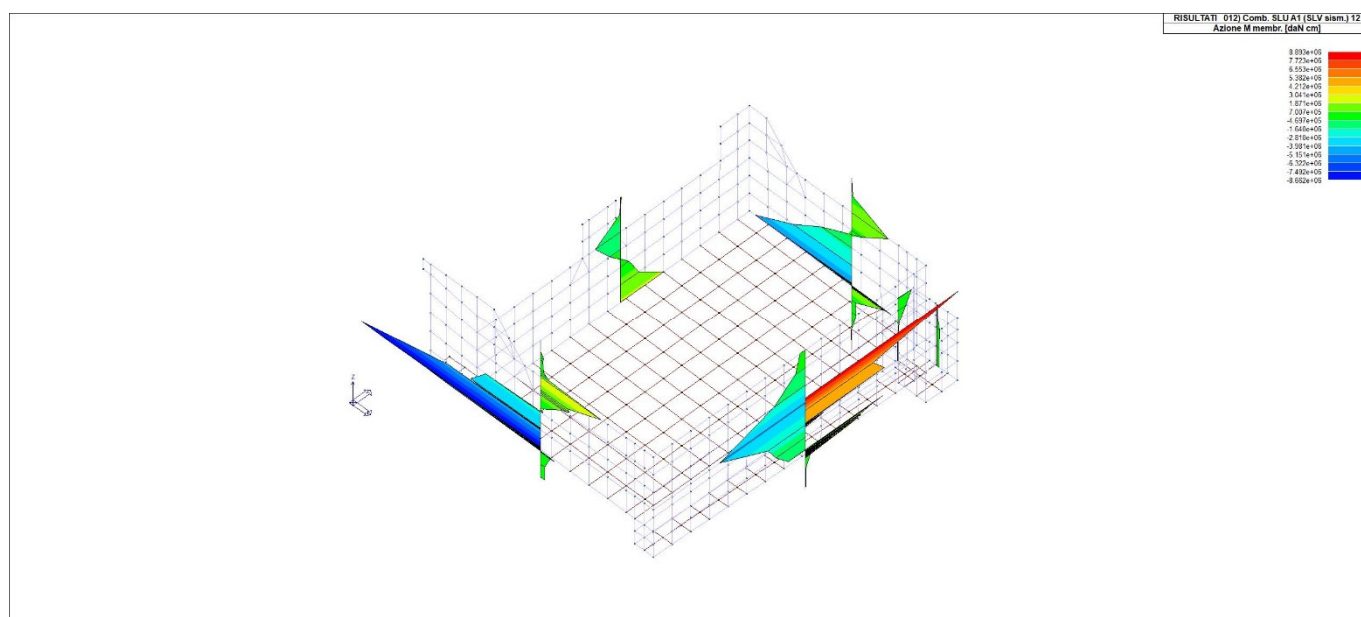


Figura 75 - RIS_M_012_Comb SLU A1 SLV sism 12

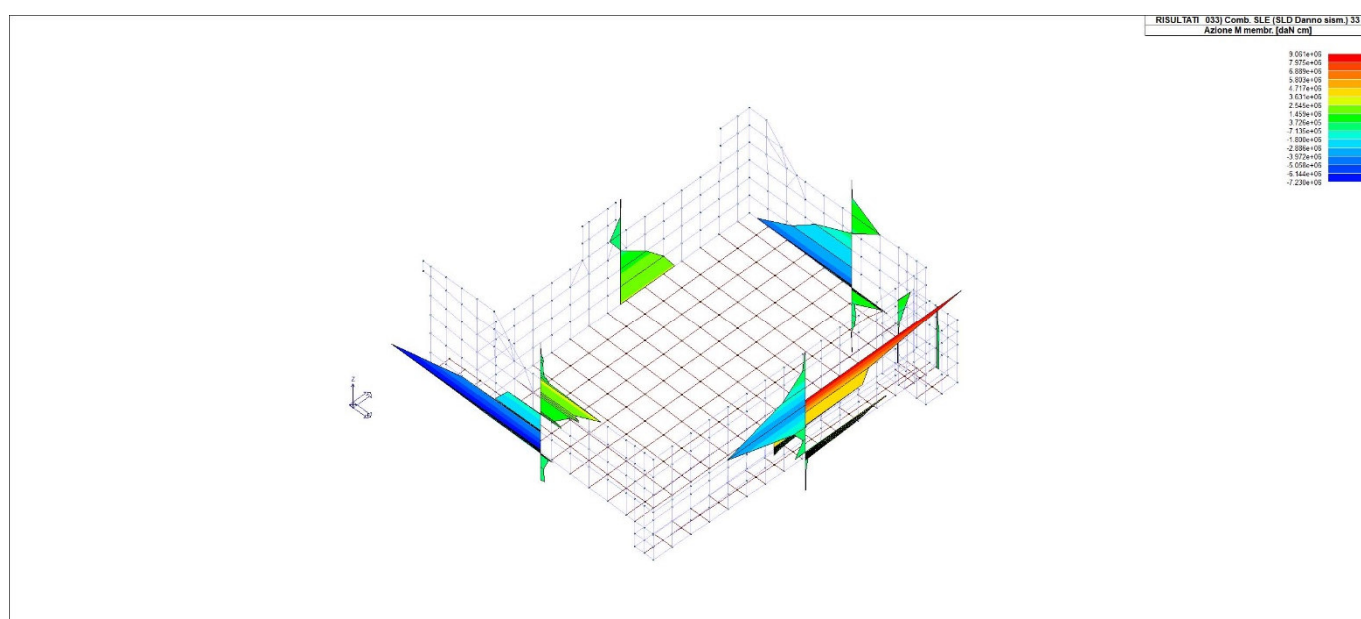


Figura 76 - RIS_M_033_Comb SLE SLD Danno sism 33



RISULTATI 043) Comb. SLE [SLD Danno sism.] 43	
Azione M membr. [daN cm]	
9.214e+05	
7.175e+05	
6.113e+05	
5.041e+05	
3.981e+05	
2.915e+05	
1.849e+05	
7.029e+05	
-2.831e+05	
-1.548e+05	
-2.419e+05	
-3.481e+05	
-4.547e+05	
-5.613e+05	
-6.679e+05	
-7.745e+05	

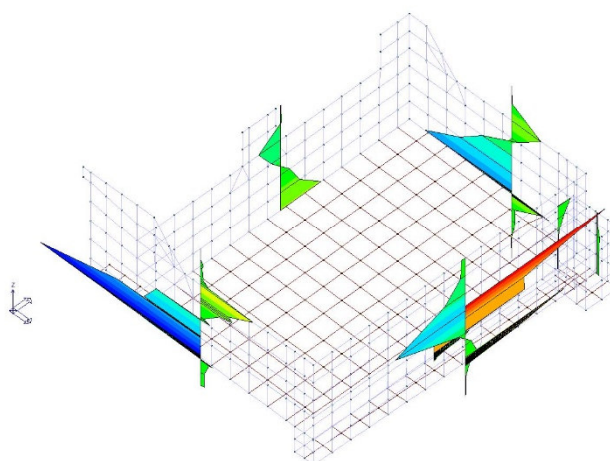


Figura 77 - RIS_M_043_Comb SLE SLD Danno sism 43

RISULTATI 001) Comb. SLU A1 1	
Azione N membr. [daN]	
652.19	
-4279.39	
9299.37	
-1.114e+04	
-1.967e+04	
2.460e+04	
-2.894e+04	
-3.281e+04	
-3.886e+04	
-4.377e+04	
-4.866e+04	
-5.355e+04	
-5.843e+04	
-6.332e+04	
-6.821e+04	
-7.310e+04	

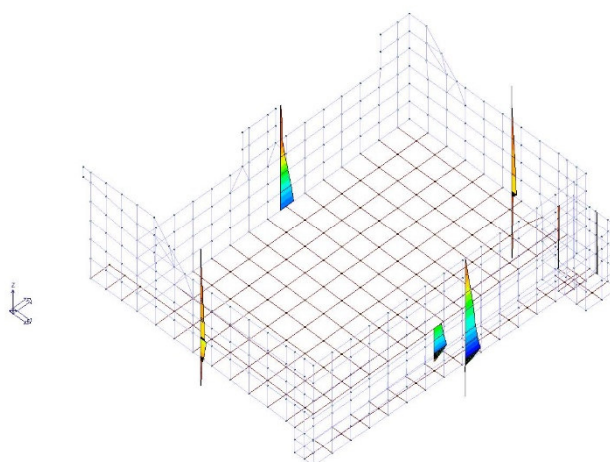


Figura 78 - RIS_N_001_Comb SLU A1 1

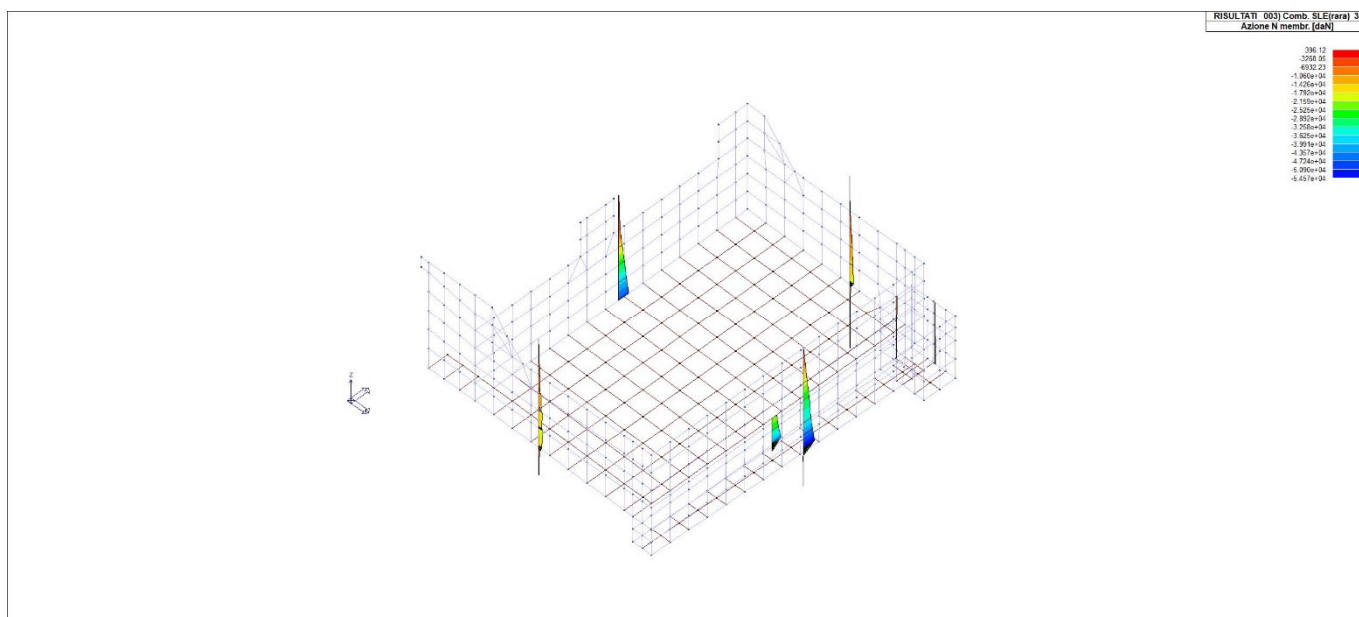


Figura 79 - RIS_N_003_Comb SLE(rara) 3

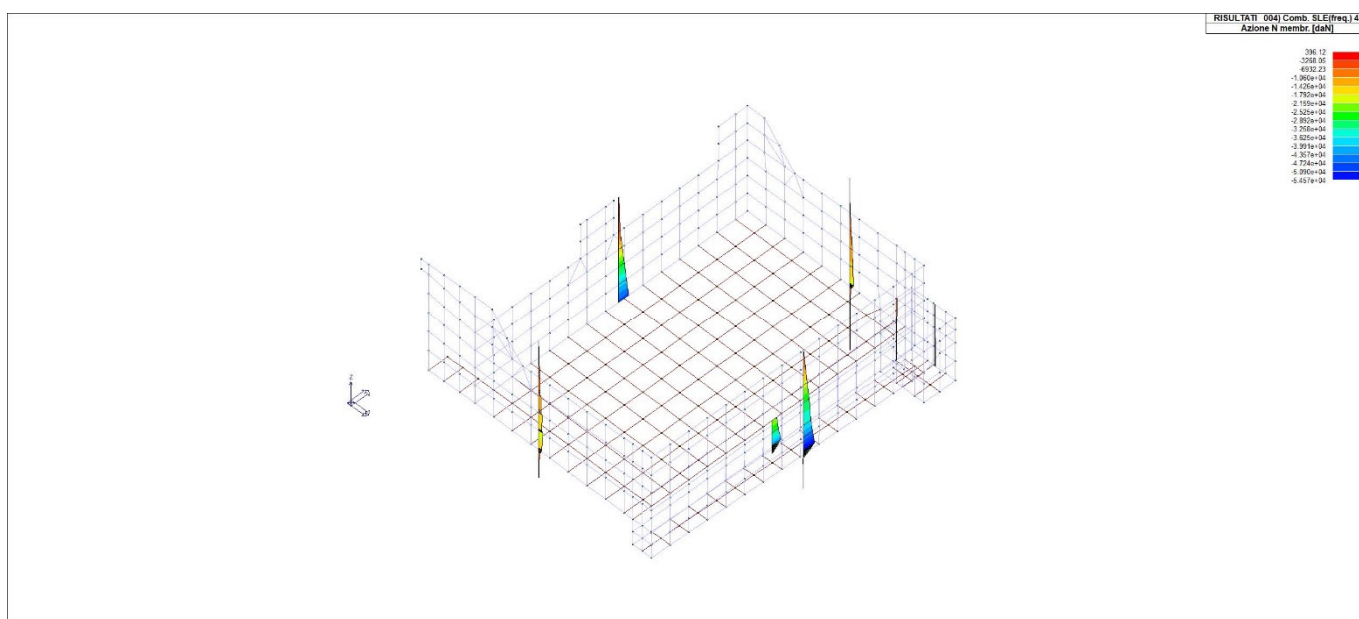


Figura 80 - RIS_N_004_Comb SLE(freq) 4

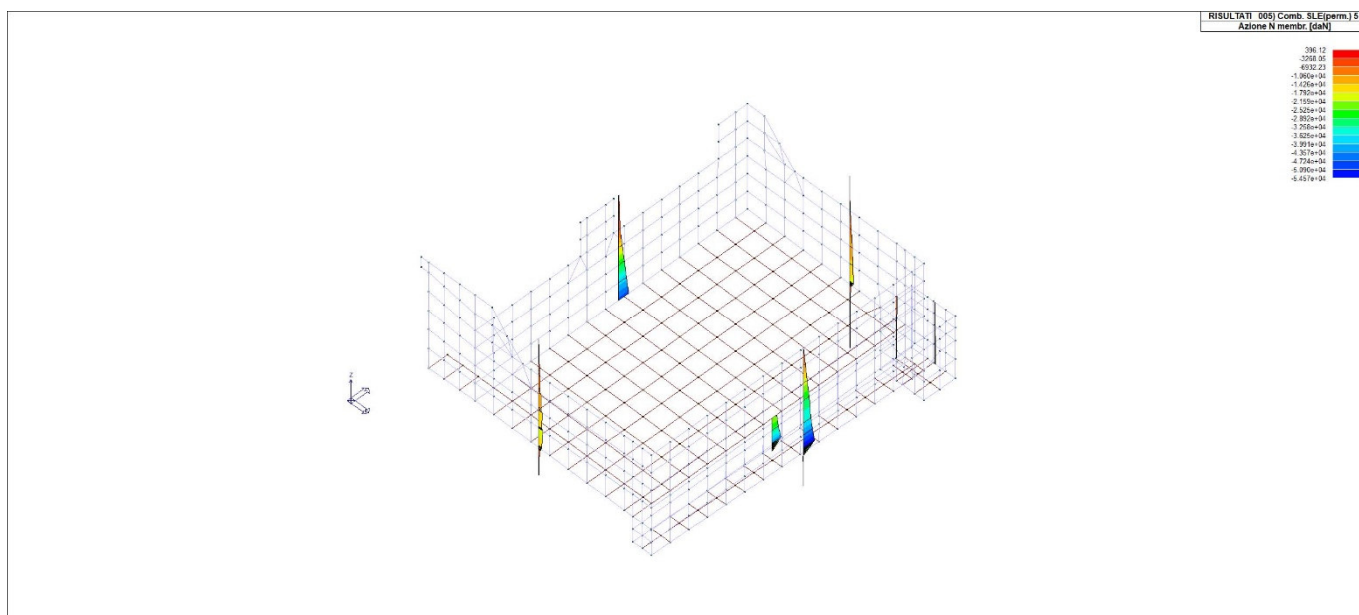


Figura 81 - RIS_N_005_Comb SLEperm 5

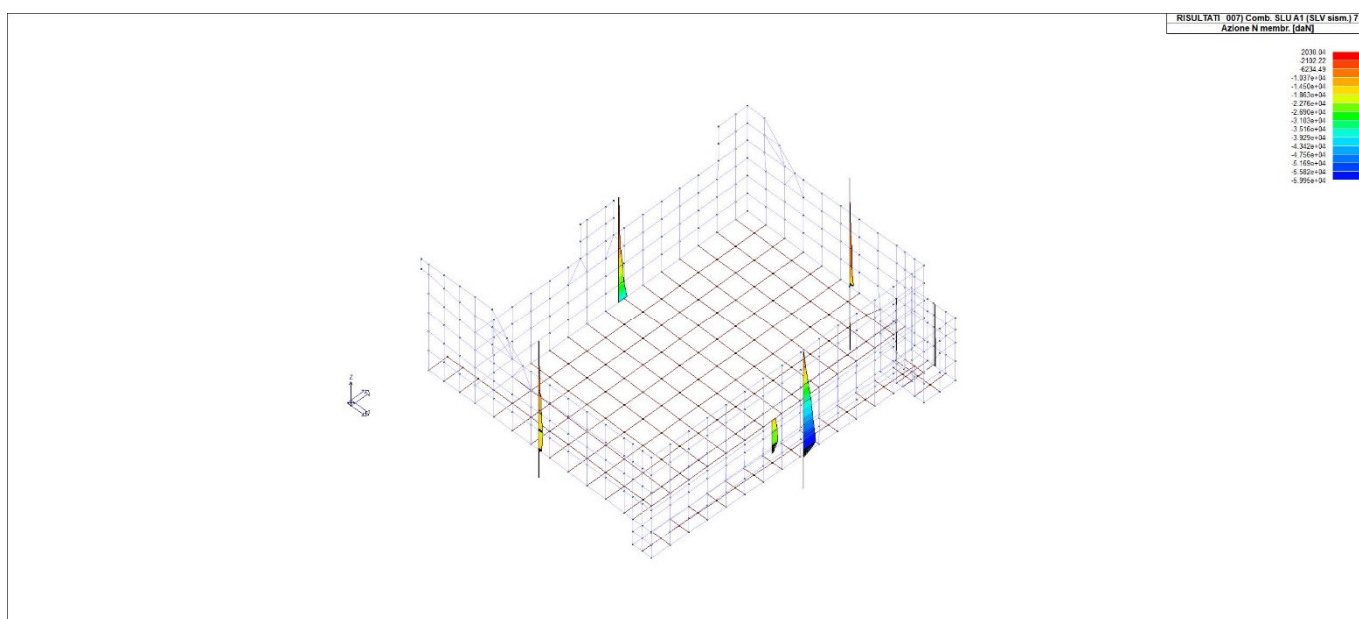


Figura 82 - RIS_N_007_Comb SLU A1 SLV sism 7

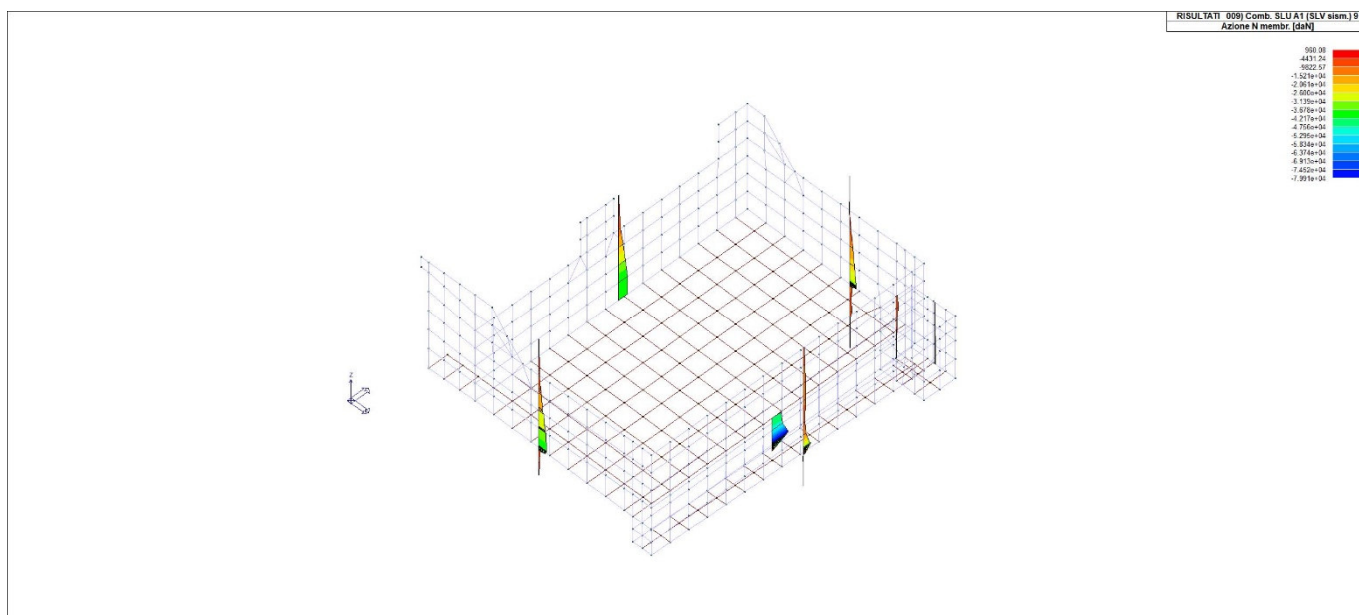


Figura 83 - RIS_N_009_Comb SLU A1 SLV sism 9

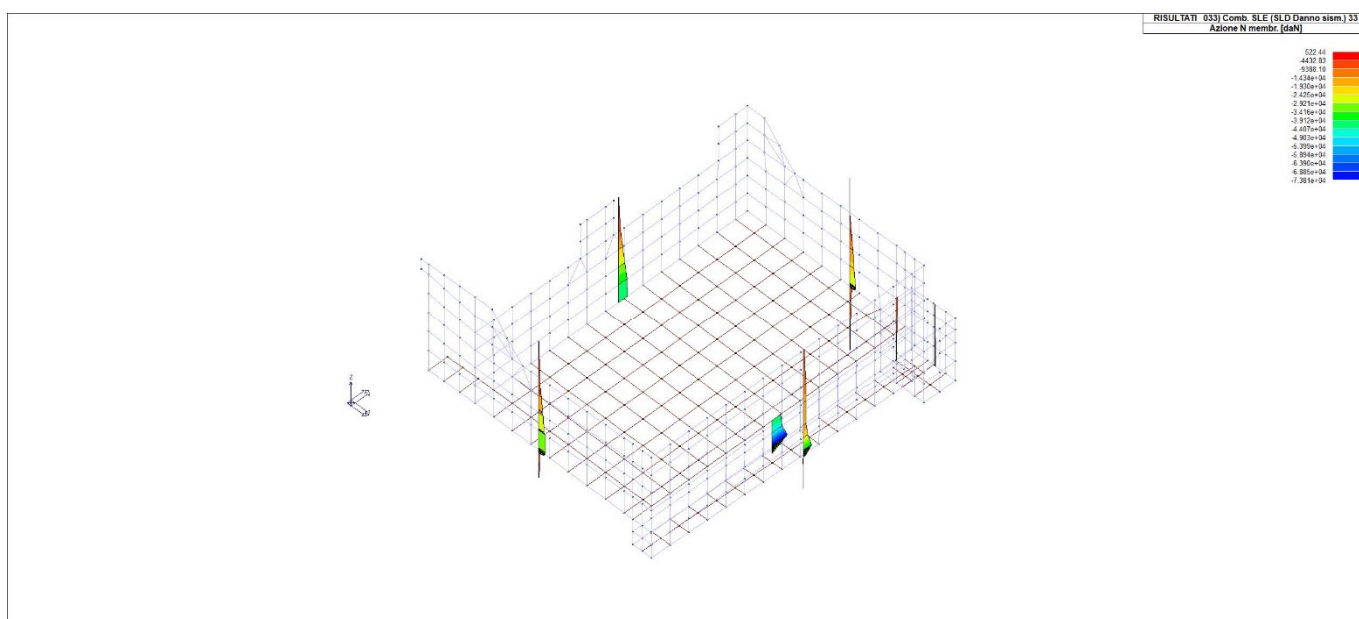


Figura 84 - RIS_N_033_Comb SLE SLD Danno sism 33

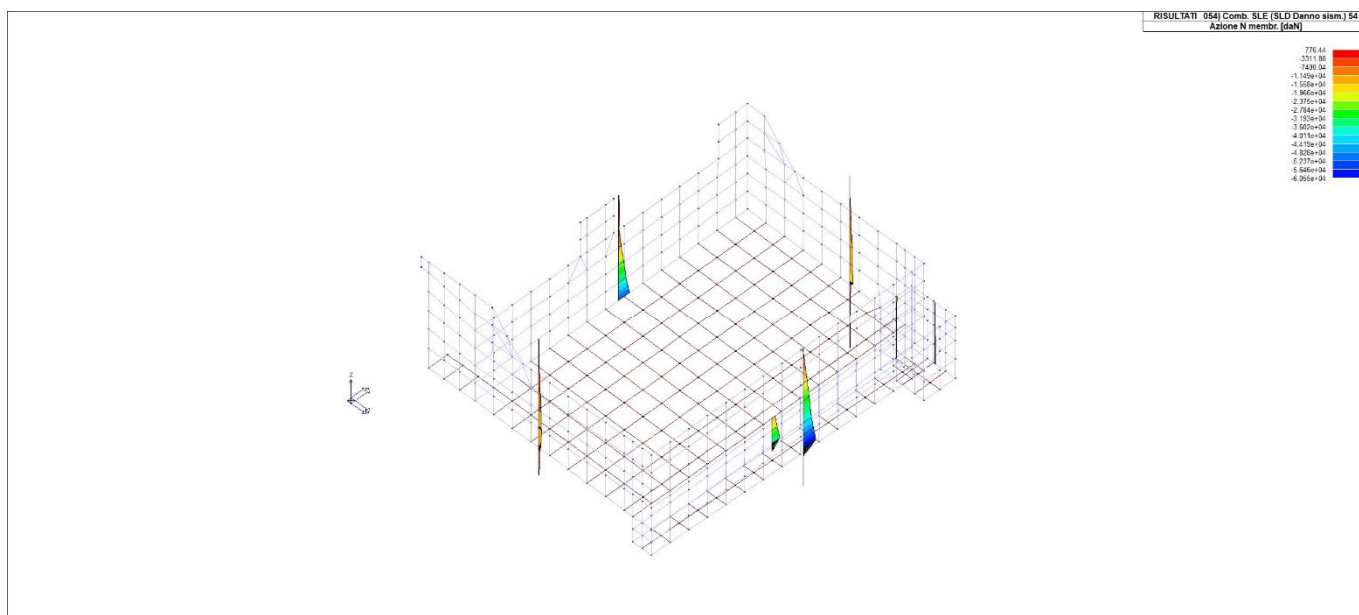


Figura 85 - RIS_N_054_Comb SLE SLD Danno sism 54

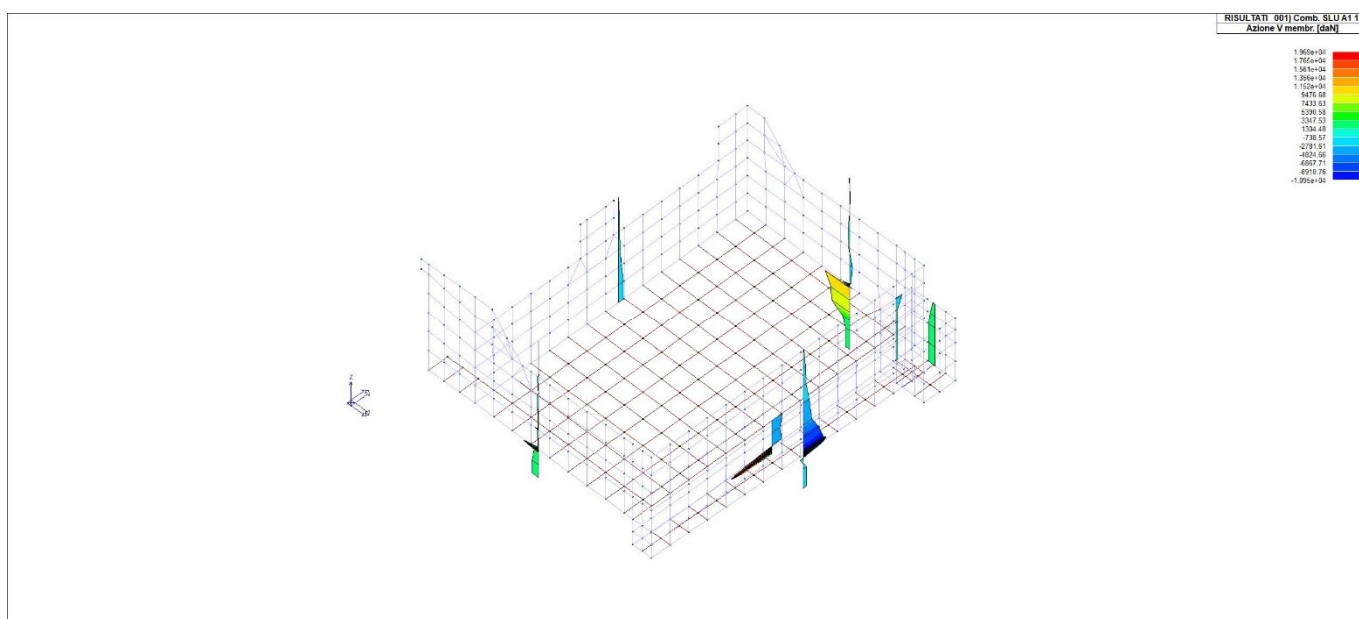


Figura 86 - RIS_V_001_Comb SLU A1 1

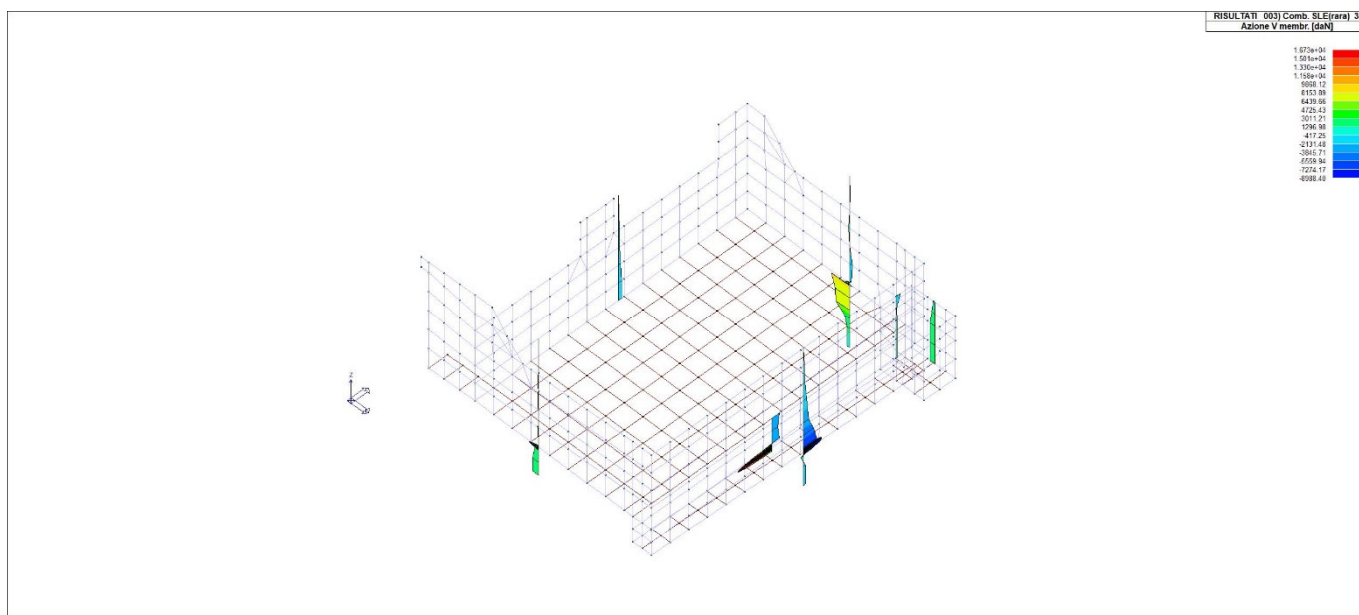


Figura 87 - RIS_V_003_Comb SLE(freq) 3

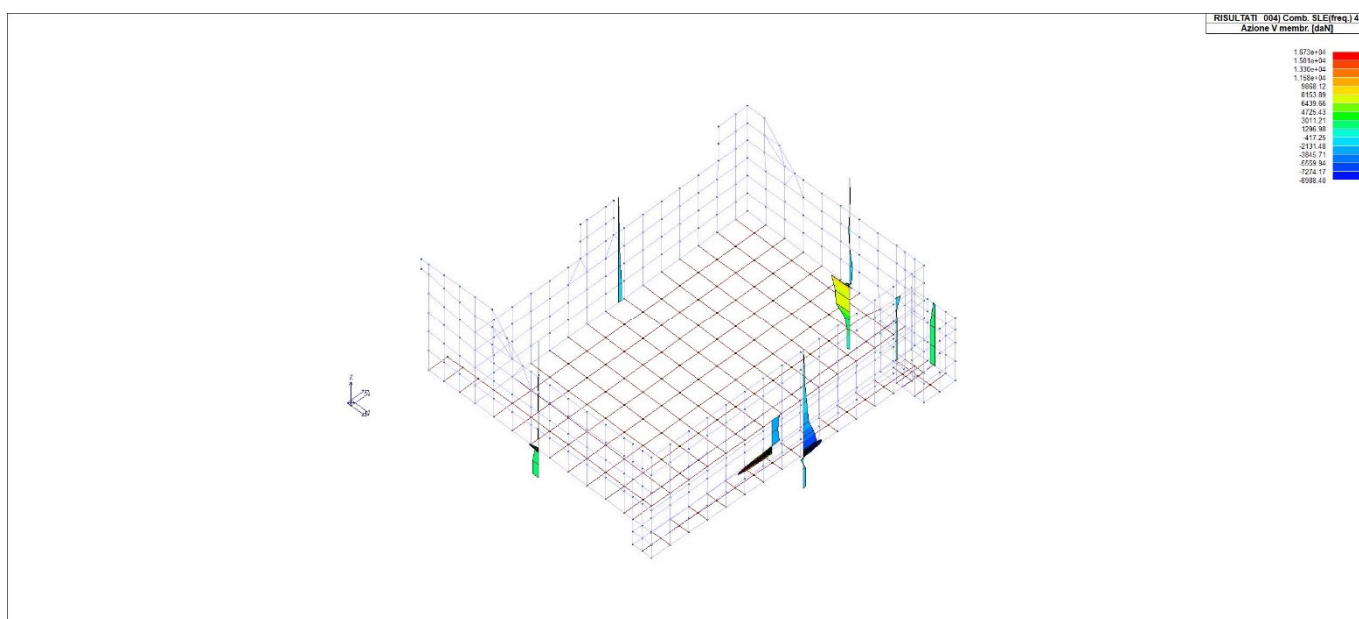


Figura 88 - RIS_V_004_Comb SLE(freq) 4

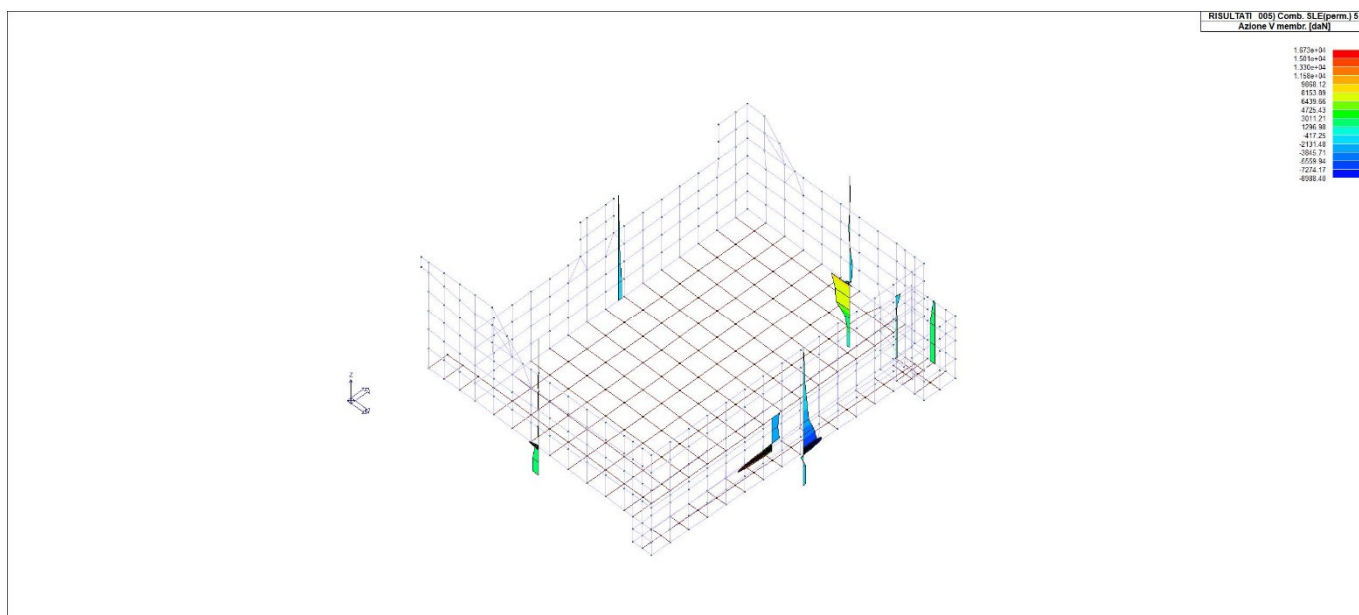


Figura 89 - RIS_V_005_Comb SLEperm 5

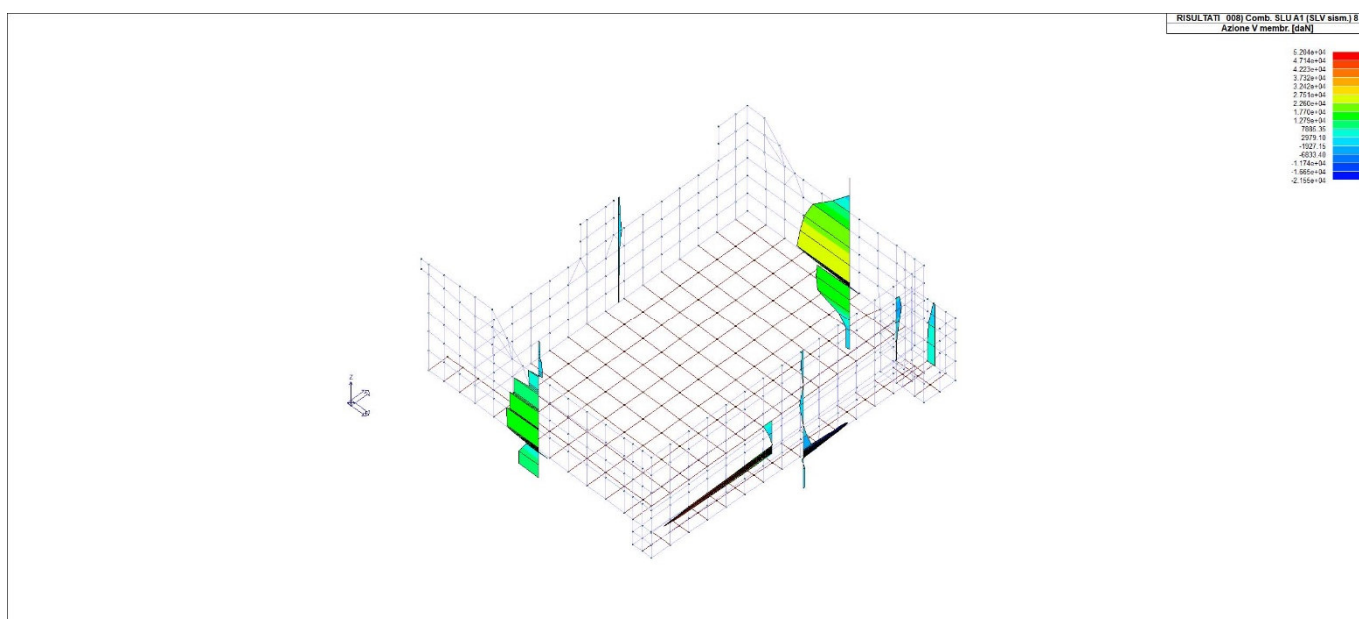


Figura 90 - RIS_V_008_Comb SLU A1 SLV sism 8

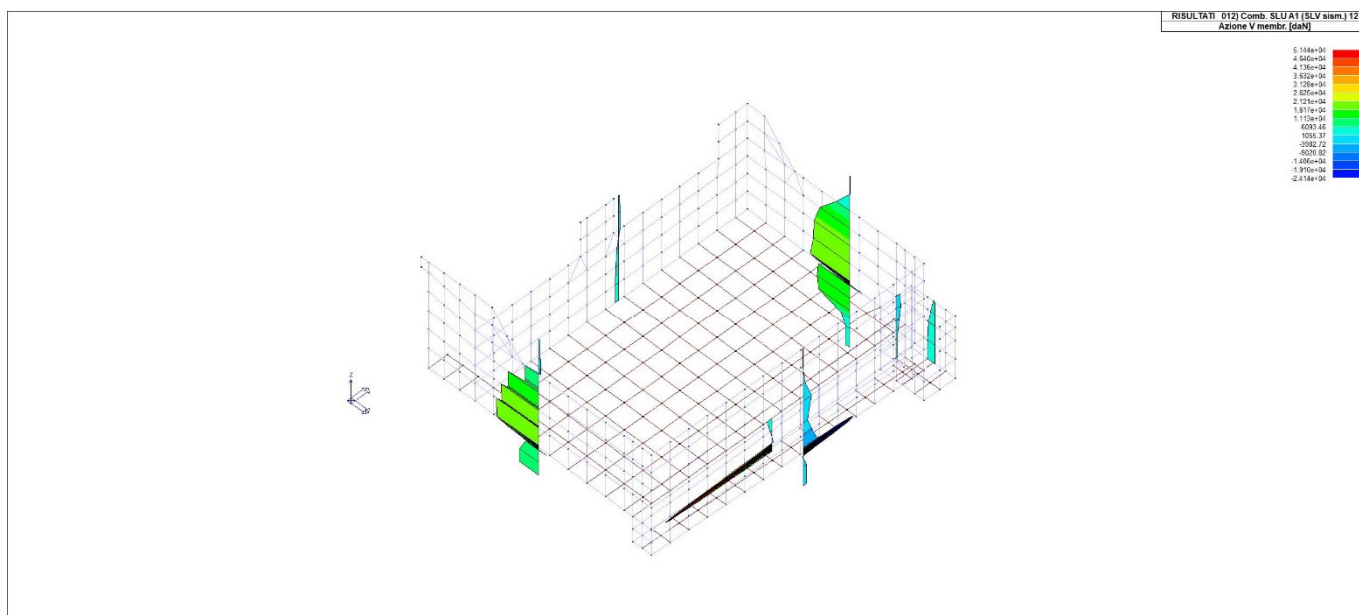


Figura 91 - RIS_V_012_Comb SLU A1 SLV sism 12

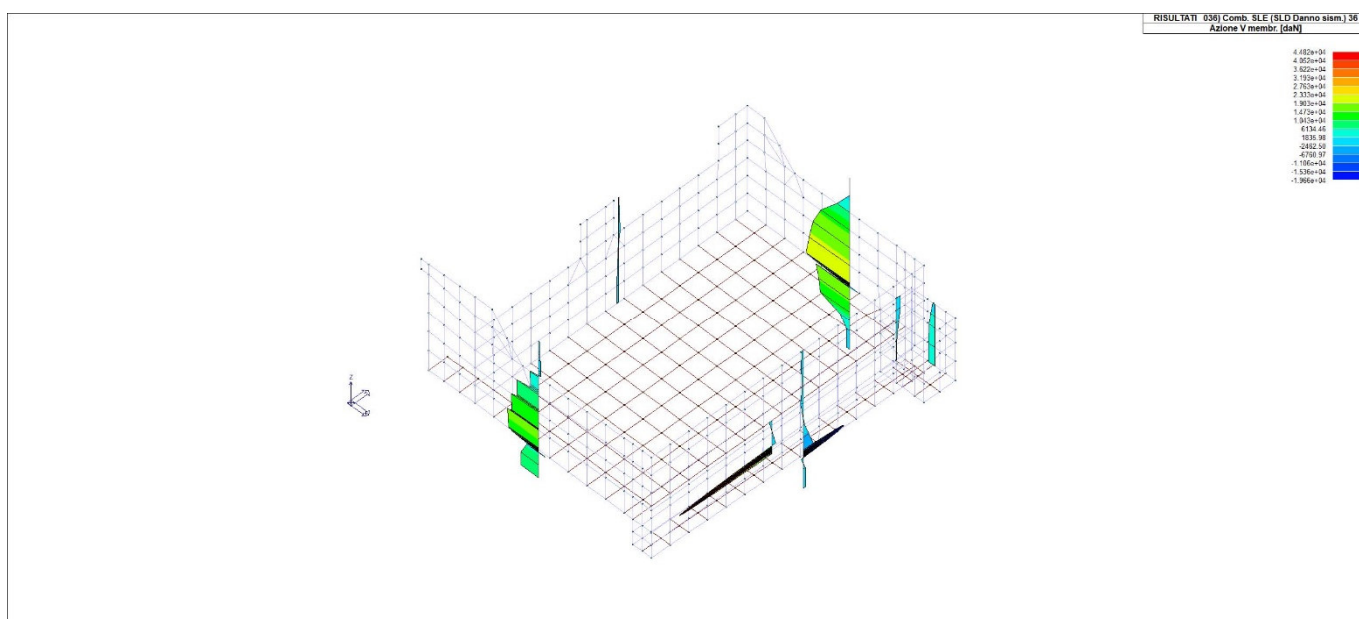


Figura 92 - RIS_V_036_Comb SLE SLD Danno sism 36

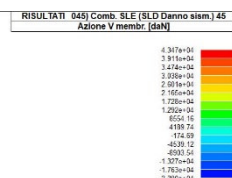


Figura 93 - RIS_V_045_Comb SLE SLD Danno sism 45

Macro	Tipo	Angolo 1-X (gradi)
1	Guscio	0.0

M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
			daN/cm	daN/cm	daN/cm	daN/cm	daN/cm	daN	daN	daN	daN	daN
1	1	1	12.34	-4.91	-2.83	10.26	-5.63	88.80	-86.60	-3.29	5.49	-87.59
1	1	2	-2.77	-14.85	-5.59	-12.03	-5.11	78.83	-152.18	7.48	-80.83	-106.73
1	1	3	-3.69	-15.93	-4.81	-14.81	-3.53	93.13	-119.46	33.03	-59.36	-95.73
1	1	4	-4.07	-7.08	-4.11	-7.05	0.32	39.49	-46.49	24.98	-31.98	-32.21
1	1	5	3.39	-4.37	-2.83	1.85	3.09	37.74	-7.26	25.60	4.87	-19.97
1	1	6	8.30	-5.95	-5.86	8.21	-1.11	100.78	-88.05	7.92	4.82	-94.40
1	1	7	-6.00	-13.25	-6.01	-13.24	0.26	175.54	-33.28	117.34	24.93	-93.63
1	1	8	-2.30	-16.12	-2.99	-15.43	3.00	238.93	16.96	207.07	48.82	-77.83
1	1	9	0.81	-12.81	-3.44	-8.56	6.31	131.79	16.81	114.86	33.75	-40.75
1	1	10	6.64	-10.04	-2.96	-0.44	8.24	57.72	10.80	44.21	24.31	-21.25
1	1	11	6.62	-10.74	-10.05	5.93	3.40	22.19	-40.84	-15.81	-2.84	-30.84
1	1	12	-12.67	-24.24	-19.79	-17.12	5.63	143.79	26.30	70.70	99.39	-56.97
1	1	13	-13.38	-32.98	-25.45	-20.90	9.53	216.10	42.01	147.78	110.33	-85.01
1	1	14	-4.42	-30.02	-20.77	-13.67	12.30	187.90	14.35	119.77	82.48	-84.75
1	1	15	3.72	-25.15	-16.10	-5.33	13.39	133.16	-4.18	81.51	47.48	-66.53
1	3	1	8.23	-3.61	-2.53	7.15	-3.41	65.94	-56.53	1.83	7.59	-61.17
1	3	2	-3.02	-10.19	-4.80	-8.42	-3.10	60.41	-98.85	11.24	-49.68	-73.57
1	3	3	-3.81	-11.22	-4.51	-10.51	-2.17	69.30	-75.90	28.91	-35.52	-65.06
1	3	4	-3.49	-4.99	-3.52	-4.97	0.20	28.46	-27.12	20.04	-18.71	-19.92
1	3	5	2.49	-2.98	-2.16	1.67	1.95	25.51	-1.48	18.66	5.37	-11.74
1	3	6	5.93	-3.74	-3.73	5.92	-0.30	71.35	-56.04	9.79	5.51	-63.66
1	3	7	-3.83	-9.17	-3.89	-9.11	0.57	127.62	-15.38	88.44	23.80	-63.77
1	3	8	-1.30	-11.19	-1.84	-10.65	2.24	173.73	19.58	152.25	41.07	-53.39
1	3	9	0.61	-8.62	-2.19	-5.83	4.24	95.05	16.08	83.46	27.66	-27.94
1	3	10	4.70	-6.35	-1.83	0.18	5.44	39.53	8.23	30.01	17.75	-14.40
1	3	11	5.08	-7.08	-6.39	4.39	2.81	10.60	-22.43	-9.76	-2.07	-16.06
1	3	12	-8.08	-16.63	-12.92	-11.78	4.24	100.48	25.33	51.39	74.42	-35.77
1	3	13	-8.70	-22.22	-16.64	-14.28	6.66	153.63	35.37	105.38	83.62	-58.12
1	3	14	-2.91	-20.07	-13.73	-9.26	8.28	136.10	10.47	84.92	61.65	-61.73
1	3	15	2.77	-16.59	-10.67	-3.15	8.92	95.89	-5.78	56.88	33.23	-49.44
1	4	1	8.23	-3.61	-2.53	7.15	-3.41	65.94	-56.53	1.83	7.59	-61.17
1	4	2	-3.02	-10.19	-4.80	-8.42	-3.10	60.41	-98.85	11.24	-49.68	-73.57
1	4	3	-3.81	-11.22	-4.51	-10.51	-2.17	69.30	-75.90	28.91	-35.52	-65.06
1	4	4	-3.49	-4.99	-3.52	-4.97	0.20	28.46	-27.12	20.04	-18.71	-19.92
1	4	5	2.49	-2.98	-2.16	1.67	1.95	25.51	-1.48	18.66	5.37	-11.74



M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
1	4	6	5.93	-3.74	-3.73	5.92	-0.30	71.35	-56.04	9.79	5.51	-63.66
1	4	7	-3.83	-9.17	-3.89	-9.11	0.57	127.62	-15.38	88.44	23.80	-63.77
1	4	8	-1.30	-11.19	-1.84	-10.65	2.24	173.73	19.58	152.25	41.07	-53.39
1	4	9	0.61	-8.62	-2.19	-5.83	4.24	95.05	16.08	83.46	27.66	-27.94
1	4	10	4.70	-6.35	-1.83	0.18	5.44	39.53	8.23	30.01	17.75	-14.40
1	4	11	5.08	-7.08	-6.39	4.39	2.81	10.60	-22.43	-9.76	-2.07	-16.06
1	4	12	-8.08	-16.63	-12.92	-11.78	4.24	100.48	25.33	51.39	74.42	-35.77
1	4	13	-8.70	-22.22	-16.64	-14.28	6.66	153.63	35.37	105.38	83.62	-58.12
1	4	14	-2.91	-20.07	-13.73	-9.26	8.28	136.10	10.47	84.92	61.65	-61.73
1	4	15	2.77	-16.59	-10.67	-3.15	8.92	95.89	-5.78	56.88	33.23	-49.44
1	5	1	8.23	-3.61	-2.53	7.15	-3.41	65.94	-56.53	1.83	7.59	-61.17
1	5	2	-3.02	-10.19	-4.80	-8.42	-3.10	60.41	-98.85	11.24	-49.68	-73.57
1	5	3	-3.81	-11.22	-4.51	-10.51	-2.17	69.30	-75.90	28.91	-35.52	-65.06
1	5	4	-3.49	-4.99	-3.52	-4.97	0.20	28.46	-27.12	20.04	-18.71	-19.92
1	5	5	2.49	-2.98	-2.16	1.67	1.95	25.51	-1.48	18.66	5.37	-11.74
1	5	6	5.93	-3.74	-3.73	5.92	-0.30	71.35	-56.04	9.79	5.51	-63.66
1	5	7	-3.83	-9.17	-3.89	-9.11	0.57	127.62	-15.38	88.44	23.80	-63.77
1	5	8	-1.30	-11.19	-1.84	-10.65	2.24	173.73	19.58	152.25	41.07	-53.39
1	5	9	0.61	-8.62	-2.19	-5.83	4.24	95.05	16.08	83.46	27.66	-27.94
1	5	10	4.70	-6.35	-1.83	0.18	5.44	39.53	8.23	30.01	17.75	-14.40
1	5	11	5.08	-7.08	-6.39	4.39	2.81	10.60	-22.43	-9.76	-2.07	-16.06
1	5	12	-8.08	-16.63	-12.92	-11.78	4.24	100.48	25.33	51.39	74.42	-35.77
1	5	13	-8.70	-22.22	-16.64	-14.28	6.66	153.63	35.37	105.38	83.62	-58.12
1	5	14	-2.91	-20.07	-13.73	-9.26	8.28	136.10	10.47	84.92	61.65	-61.73
1	5	15	2.77	-16.59	-10.67	-3.15	8.92	95.89	-5.78	56.88	33.23	-49.44
1	6	1	5.75	-6.80	-6.61	5.55	1.54	29.88	16.13	28.07	17.94	-4.65
1	6	2	-8.68	-14.45	-10.88	-12.25	2.80	3.28	-173.70	6.27e-02	-170.47	-23.65
1	6	3	-4.97	-21.63	-11.04	-15.56	8.02	-4.17	-193.60	-27.56	-170.22	-62.31
1	6	4	0.41	-15.62	-8.65	-6.56	7.94	-46.63	-190.48	-79.11	-157.99	-60.15
1	6	5	13.12	-12.00	-5.85	6.98	10.80	-54.24	-133.66	-96.16	-91.74	-39.65
1	6	6	6.08	-0.39	7.13e-02	5.62	1.67	112.29	-30.15	72.32	9.82	-64.00
1	6	7	-0.74	-13.15	-1.42	-12.47	2.84	98.45	-99.56	75.13	-76.24	-63.82
1	6	8	0.46	-16.35	-2.00	-13.88	5.95	99.74	-100.78	82.58	-83.63	-56.09
1	6	9	2.85	-13.47	-4.64	-5.98	8.13	27.96	-86.17	19.38	-77.58	-30.10
1	6	10	8.71	-7.34	-4.56	5.93	6.07	-16.26	-47.84	-17.08	-47.02	-5.04
1	6	11	2.95	-8.85	-8.32	2.42	2.44	37.42	-48.99	7.35	-18.93	-41.16
1	6	12	-12.12	-18.45	-14.87	-15.70	3.14	97.97	-56.10	41.25	0.61	-74.31
1	6	13	-12.77	-23.74	-18.84	-17.66	5.45	101.45	-49.66	60.37	-8.59	-67.23
1	6	14	-4.55	-20.95	-15.87	-9.63	7.58	71.17	-30.29	46.53	-5.65	-43.50
1	6	15	7.01	-16.12	-11.65	2.54	9.14	44.02	-25.10	31.25	-12.33	-26.82
1	9	1	9.14	-3.68	-0.43	5.89	-5.58	155.04	-150.44	-17.40	22.00	-151.46
1	9	2	7.32	-5.84	2.37	-0.89	-6.37	270.19	-96.31	21.60	152.28	-171.20
1	9	3	12.40	-8.64	4.86	-1.10	-10.09	230.37	9.40	60.83	178.94	-93.38
1	9	4	8.58	-3.62	4.56	0.40	-5.73	195.75	98.37	107.50	186.62	28.39
1	9	5	6.83	-6.31	4.11	-3.58	-5.33	148.61	117.30	134.33	131.58	15.59
1	9	6	2.85	-13.74	-13.68	2.79	-0.97	53.55	-145.19	-97.92	6.28	-84.62
1	9	7	-4.00	-11.68	-11.65	-4.03	-0.45	230.53	32.18	93.49	169.23	-91.66
1	9	8	-5.56	-7.07	-7.07	-5.56	-4.05e-03	305.16	149.17	236.43	217.90	-77.44
1	9	9	-2.85	-7.57	-6.09	-4.32	2.19	186.01	86.88	108.97	163.92	-41.25
1	9	10	-0.55	-14.05	-7.02	-7.57	6.74	95.17	-23.02	-9.32	81.47	-37.85
1	9	11	4.58	-8.17	-7.43	3.84	2.99	23.30	-46.79	-40.43	16.95	-20.12
1	9	12	-3.76	-16.63	-13.99	-6.40	5.20	162.28	52.12	54.76	159.64	-16.83
1	9	13	-4.47	-23.63	-18.47	-9.63	8.50	247.06	91.36	149.07	189.35	-75.20
1	9	14	0.33	-22.53	-14.74	-7.46	10.84	230.79	21.17	115.51	136.45	-104.28
1	9	15	6.78e-02	-22.15	-12.35	-9.73	11.03	150.26	-2.87	67.95	79.44	-76.35
1	30	1	5.71	-5.92	-5.88	5.68	0.61	32.42	-3.26	15.66	13.50	-17.81
1	30	2	-9.52	-11.72	-9.78	-11.46	0.72	11.99	-155.53	3.98	-147.52	-35.74
1	30	3	-7.49	-16.88	-9.94	-14.44	4.12	16.57	-169.24	-9.02	-143.64	-64.04
1	30	4	-2.20	-11.74	-7.76	-6.18	4.71	-19.25	-152.70	-44.22	-127.72	-52.05
1	30	5	10.12	-9.46	-5.31	5.97	8.00	-23.03	-98.76	-51.82	-69.96	-36.76
1	30	6	5.76	-1.01	-0.71	5.46	1.41	101.77	-36.88	58.17	6.72	-64.38
1	30	7	-1.53	-12.00	-1.93	-11.60	2.01	97.50	-84.70	70.88	-58.08	-64.36
1	30	8	-0.12	-15.02	-1.90	-13.24	4.83	105.84	-79.60	86.64	-60.39	-56.50
1	30	9	1.26	-11.36	-4.01	-6.09	6.23	42.94	-68.44	31.19	-56.68	-34.22
1	30	10	7.13	-7.07	-3.88	3.94	5.93	-0.43	-37.33	-4.57	-33.19	-11.64
1	30	11	3.30	-8.10	-7.46	2.66	2.62	29.24	-42.96	3.49	-17.22	-34.58
1	30	12	-10.93	-17.80	-13.87	-14.85	3.40	92.48	-39.80	39.82	12.86	-64.75
1	30	13	-11.85	-22.78	-17.66	-16.98	5.46	108.87	-36.27	66.06	6.54	-66.18
1	30	14	-4.58	-20.08	-14.96	-9.69	7.29	82.90	-25.19	52.66	5.06	-48.52
1	30	15	4.25	-15.88	-11.27	-0.36	8.45	54.21	-21.60	36.04	-3.43	-32.37
1	36	1	8.53	-1.97	-8.31e-02	6.64	-4.04	180.82	-141.01	18.71	21.10	-160.91
1	36	2	2.88	-7.24	1.27	-5.62	-3.70	224.34	-139.23	18.87	66.24	-180.24



M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
1	36	3	5.56	-7.64	3.92	-5.99	-4.36	196.65	-74.10	34.37	88.18	-132.68
1	36	4	4.46	-1.60	4.19	-1.33	-1.25	120.26	47.73	61.50	106.50	-28.44
1	36	5	4.43	1.20	4.24	1.39	-0.77	103.39	51.26	77.83	76.82	-26.06
1	36	6	5.08	-5.79	-5.79	5.08	-0.22	109.27	-121.70	-22.19	9.75	-114.38
1	36	7	-5.38	-7.77	-5.49	-7.66	0.50	228.84	-17.16	107.82	103.87	-122.98
1	36	8	-2.78	-9.37	-2.97	-9.18	1.12	291.74	56.91	211.26	137.39	-111.45
1	36	9	8.45e-02	-8.76	-3.40	-5.27	4.32	168.51	37.12	101.93	103.71	-65.69
1	36	10	4.44	-10.93	-4.24	-2.25	7.62	84.15	-30.65	3.71	49.78	-52.58
1	36	11	5.92	-6.54	-5.70	5.09	3.12	56.50	-64.25	-15.34	7.59	-59.28
1	36	12	-7.20	-16.88	-13.05	-11.03	4.74	167.09	10.09	61.61	115.57	-73.72
1	36	13	-8.15	-23.71	-17.91	-13.96	7.52	248.48	20.76	135.81	133.43	-113.85
1	36	14	-2.25	-22.56	-14.98	-9.84	9.83	219.20	-22.76	103.01	93.43	-120.88
1	36	15	2.44	-19.91	-12.34	-5.13	10.58	149.75	-34.21	61.44	54.10	-91.91
M_G			N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
				-32.98	-25.45	-20.90	-10.09		-193.60	-97.92	-170.47	-180.24
			13.12		4.86	10.26	13.39	305.16		236.43	217.90	28.39

Macro	Tipo	Angolo 1-X (gradi)
6	Guscio	0.0

M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
			daN/cm	daN/cm	daN/cm	daN/cm	daN/cm	daN	daN	daN	daN	daN
6	1	29	-35.14	-160.07	-87.68	-107.54	61.67	1033.39	-192.05	28.28	813.06	-470.59
6	1	30	-28.06	-89.23	-58.94	-58.36	30.58	1038.07	-171.02	90.53	776.52	-497.83
6	1	31	-63.15	-173.91	-63.15	-173.90	-0.50	992.98	-243.27	128.95	620.77	-567.10
6	1	32	-10.55	-148.00	-54.71	-103.83	64.19	834.22	-359.07	-71.40	546.55	-510.42
6	1	33	-7.97	-116.82	-33.75	-91.04	46.28	882.52	-241.22	68.03	573.27	-501.88
6	1	34	-24.44	-170.82	-30.17	-165.10	28.37	838.55	-134.31	190.25	513.98	-458.71
6	1	35	11.80	-130.28	-16.49	-101.99	56.75	616.11	-673.73	-261.73	204.11	-601.39
6	1	36	-4.58	-158.36	-27.05	-135.89	54.32	541.24	-746.94	-394.73	189.03	-574.16
6	1	37	-21.34	-193.11	-38.78	-175.67	51.89	395.80	-768.39	-530.87	158.27	-469.15
6	1	38	-13.93	-126.41	-31.16	-109.18	40.51	507.41	-674.72	-322.36	155.05	-540.72
6	1	39	-22.89	-162.48	-35.74	-149.63	40.36	376.45	-878.81	-574.02	71.66	-538.23
6	1	40	-30.93	-202.95	-40.90	-192.98	40.20	243.45	-1069.14	-823.73	-1.96	-511.76
6	1	41	-15.96	-117.20	-23.68	-109.49	26.86	451.04	-554.41	-284.75	181.39	-445.43
6	1	42	-25.61	-160.77	-31.35	-155.03	27.27	321.55	-785.09	-547.94	84.40	-454.09
6	1	43	-34.82	-206.94	-39.39	-202.37	27.67	200.29	-1024.71	-811.25	-13.17	-464.68
6	1	44	-22.58	-113.54	-24.89	-111.24	14.29	389.24	-414.68	-219.92	194.48	-344.44
6	1	45	-29.23	-160.56	-31.07	-158.71	15.46	269.01	-636.91	-465.20	97.30	-355.06
6	1	46	-35.85	-208.80	-37.46	-207.18	16.63	162.56	-872.23	-710.36	0.70	-375.89
6	1	47	-23.41	-113.19	-23.64	-112.96	4.58	323.69	-287.12	-169.48	206.06	-240.86
6	1	48	-29.42	-159.58	-29.72	-159.28	6.29	216.05	-486.93	-383.51	112.63	-249.02
6	1	49	-35.72	-207.43	-36.10	-207.06	7.99	120.76	-698.26	-597.39	19.89	-269.15
6	1	50	-23.93	-114.52	-24.07	-114.39	-3.49	259.79	-177.20	-130.81	213.40	-134.61
6	1	51	-29.23	-157.35	-29.24	-157.34	-1.05	165.51	-358.36	-317.56	124.71	-140.39
6	1	52	-34.75	-202.02	-34.76	-202.01	1.39	78.36	-545.94	-504.19	36.61	-155.95
6	1	53	-23.22	-115.22	-24.34	-114.10	-10.09	219.05	-110.74	-108.15	216.45	-29.15
6	1	54	-28.43	-152.61	-28.81	-152.23	-6.84	134.86	-276.17	-273.87	132.55	-30.68
6	1	55	-33.60	-192.44	-33.68	-192.35	-3.58	50.99	-442.85	-439.75	47.89	-39.00
6	1	56	-22.00	-113.78	-24.79	-110.99	-15.76	220.66	-130.51	-114.54	204.69	73.18
6	1	57	-27.40	-144.89	-28.56	-143.73	-11.63	139.21	-282.27	-267.38	124.31	77.82
6	1	58	-32.34	-178.79	-32.73	-178.40	-7.49	56.92	-433.18	-420.21	43.95	78.67
6	1	59	-20.48	-109.49	-25.61	-104.36	-20.74	254.46	-223.23	-149.28	180.51	172.80
6	1	60	-26.35	-134.06	-28.70	-131.71	-15.74	174.25	-365.77	-295.55	104.02	181.64
6	1	61	-31.28	-161.86	-32.17	-160.97	-10.74	94.82	-508.19	-441.67	28.30	188.91
6	1	62	-17.77	-102.29	-26.32	-93.74	-25.49	289.90	-346.97	-206.09	149.02	264.34
6	1	63	-24.79	-120.77	-29.05	-116.52	-19.76	216.79	-484.16	-348.93	81.56	276.59
6	1	64	-30.28	-142.51	-32.06	-140.73	-14.03	143.23	-624.02	-492.29	11.50	289.34
6	1	65	-12.05	-93.67	-26.58	-79.13	-31.23	298.99	-472.21	-276.57	103.35	335.57
6	1	66	-21.30	-104.84	-29.08	-97.07	-24.28	226.53	-616.99	-423.89	33.43	354.39
6	1	67	-28.84	-121.46	-32.20	-118.10	-17.32	156.63	-752.41	-569.23	-26.54	364.64
6	1	68	-4.60	-83.72	-31.80	-56.52	-37.58	302.87	-647.78	-383.79	38.88	425.76
6	1	69	-18.37	-86.89	-33.57	-71.70	-28.46	259.30	-708.98	-475.11	25.43	414.43



M	G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
6	1	70	-31.24	-101.34	-37.06	-95.51	-19.35	184.10	-756.06	-569.35	-2.61	375.07	
6	1	71	12.72	-67.73	-28.76	-26.26	-40.21	227.02	-536.78	-268.25	-41.51	364.68	
6	1	72	-4.04	-67.21	-28.69	-42.56	-30.82	260.54	-488.42	-254.87	26.99	346.95	
6	1	73	-19.34	-74.23	-29.63	-63.93	-21.43	239.19	-432.12	-249.32	56.39	298.83	
6	1	74	48.94	-33.36	18.18	-2.59	-39.82	158.40	-357.18	-108.73	-90.05	257.62	
6	1	75	31.03	-40.20	12.21	-21.37	-31.41	227.66	-264.48	-35.44	-1.37	245.48	
6	1	76	16.29	-47.98	6.60	-38.30	-23.00	258.41	-162.26	33.01	63.14	209.79	
6	3	29	-20.91	-121.08	-65.01	-76.98	49.73	720.06	-154.37	24.66	541.03	-352.85	
6	3	30	-15.47	-69.11	-42.81	-41.78	26.81	755.37	-145.07	65.95	544.35	-381.42	
6	3	31	-43.89	-124.18	-44.08	-123.99	3.90	739.06	-214.36	85.54	439.17	-442.71	
6	3	32	-1.60	-111.36	-38.36	-74.60	51.80	624.46	-273.51	-29.40	380.34	-399.52	
6	3	33	-0.97	-88.57	-23.55	-65.99	38.32	673.76	-193.77	67.79	412.19	-398.12	
6	3	34	-15.19	-125.19	-21.12	-119.26	24.83	648.97	-126.34	150.59	372.05	-371.50	
6	3	35	14.32	-99.29	-9.93	-75.04	46.55	508.08	-465.42	-126.55	169.21	-463.74	
6	3	36	1.51	-119.36	-17.71	-100.14	44.19	449.25	-532.30	-236.22	153.17	-450.50	
6	3	37	-11.51	-144.35	-26.34	-129.51	41.84	335.26	-557.04	-348.07	126.29	-377.88	
6	3	38	-4.68	-97.17	-20.07	-81.78	34.45	440.39	-443.57	-145.16	141.99	-418.01	
6	3	39	-12.17	-123.49	-23.63	-112.03	33.83	332.28	-608.00	-349.72	74.01	-419.69	
6	3	40	-18.89	-153.41	-27.66	-144.63	33.21	220.07	-760.52	-552.98	12.53	-400.54	
6	3	41	-6.67	-89.96	-14.19	-82.44	23.87	398.34	-336.19	-105.13	167.29	-341.07	
6	3	42	-14.72	-122.95	-20.23	-117.44	23.78	284.65	-525.72	-326.79	85.73	-348.76	
6	3	43	-22.32	-158.27	-26.58	-154.00	23.70	177.54	-722.13	-548.49	3.90	-355.06	
6	3	44	-12.19	-86.05	-14.84	-83.41	13.72	345.09	-223.54	-56.31	177.86	-259.09	
6	3	45	-17.99	-123.13	-19.98	-121.15	14.31	235.46	-410.65	-270.42	95.22	-266.35	
6	3	46	-23.68	-161.45	-25.31	-159.82	14.89	138.22	-609.79	-484.47	12.89	-279.35	
6	3	47	-13.37	-84.58	-13.80	-84.15	5.48	283.82	-123.14	-24.85	185.53	-174.18	
6	3	48	-18.59	-122.61	-19.01	-122.20	6.54	184.14	-298.24	-219.08	104.97	-178.66	
6	3	49	-24.04	-161.90	-24.46	-161.48	7.61	96.52	-484.79	-413.20	24.93	-191.03	
6	3	50	-14.04	-84.88	-14.08	-84.84	-1.65	222.46	-38.32	-5.12	189.26	-86.92	
6	3	51	-18.71	-121.13	-18.71	-121.13	1.64e-02	137.01	-205.82	-180.76	111.94	-89.24	
6	3	52	-23.59	-158.82	-23.61	-158.80	1.68	58.39	-379.64	-356.31	35.06	-98.37	
6	3	53	-13.50	-85.45	-14.34	-84.61	-7.74	189.78	1.92	1.92	189.78	0.12	
6	3	54	-18.17	-117.80	-18.47	-117.51	-5.42	115.80	-158.74	-158.74	115.80	1.03	
6	3	55	-22.83	-152.05	-22.91	-151.97	-3.10	41.29	-319.53	-319.50	41.27	-3.04	
6	3	56	-12.33	-85.16	-14.80	-82.70	-13.17	211.98	-44.83	-12.50	179.65	85.19	
6	3	57	-17.27	-112.30	-18.37	-111.20	-10.16	135.65	-190.89	-163.34	108.10	90.75	
6	3	58	-21.81	-141.65	-22.24	-141.22	-7.14	59.76	-337.36	-314.18	36.58	93.10	
6	3	59	-10.86	-83.40	-15.68	-78.58	-18.07	254.14	-142.56	-48.75	160.32	168.57	
6	3	60	-16.21	-104.53	-18.61	-102.13	-14.37	176.90	-278.38	-193.12	91.63	177.62	
6	3	61	-20.78	-128.26	-21.85	-127.19	-10.68	101.00	-414.90	-337.38	23.49	184.34	
6	3	62	-8.36	-79.82	-16.51	-71.67	-22.72	288.93	-258.57	-104.42	134.78	246.24	
6	3	63	-14.55	-94.98	-19.02	-90.51	-18.43	218.71	-387.37	-242.15	73.49	258.70	
6	3	64	-19.57	-112.71	-21.77	-110.51	-14.14	147.49	-517.53	-380.27	10.23	269.15	
6	3	65	-3.77	-74.96	-17.23	-61.49	-27.88	297.53	-375.36	-175.60	97.77	307.43	
6	3	66	-11.39	-83.39	-19.35	-75.42	-22.58	232.95	-506.44	-309.12	35.63	327.05	
6	3	67	-17.93	-95.92	-21.97	-91.87	-17.29	166.08	-626.38	-441.16	-19.14	335.37	
6	3	68	1.72	-67.53	-22.14	-43.67	-32.91	288.26	-547.47	-292.99	33.78	384.60	
6	3	69	-9.05	-69.94	-23.45	-55.54	-25.87	255.36	-600.58	-367.23	22.01	381.15	
6	3	70	-19.61	-80.68	-26.11	-74.17	-18.84	193.78	-637.39	-443.53	-7.34e-02	351.50	
6	3	71	15.06	-54.45	-20.50	-18.89	-34.74	212.80	-475.96	-222.17	-40.99	332.25	
6	3	72	1.66	-54.53	-20.38	-32.48	-27.44	244.64	-432.41	-206.85	19.08	319.12	
6	3	73	-10.82	-60.50	-21.09	-50.22	-20.13	232.46	-380.03	-197.39	49.81	280.19	
6	3	74	43.24	-27.33	15.85	5.94e-02	-34.39	150.08	-324.16	-95.63	-78.45	236.97	
6	3	75	28.21	-33.37	10.65	-15.82	-27.80	212.91	-241.09	-29.21	1.03	226.49	
6	3	76	15.39	-40.50	5.65	-30.76	-21.21	243.72	-149.49	33.30	60.92	196.12	
6	4	29	-20.91	-121.08	-65.01	-76.98	49.73	720.06	-154.37	24.66	541.03	-352.85	
6	4	30	-15.47	-69.11	-42.81	-41.78	26.81	755.37	-145.07	65.95	544.35	-381.42	
6	4	31	-43.89	-124.18	-44.08	-123.99	3.90	739.06	-214.36	85.54	439.17	-442.71	
6	4	32	-1.60	-111.36	-38.36	-74.60	51.80	624.46	-273.51	-29.40	380.34	-399.52	
6	4	33	-0.97	-88.57	-23.55	-65.99	38.32	673.76	-193.77	67.79	412.19	-398.12	
6	4	34	-15.19	-125.19	-21.12	-119.26	24.83	648.97	-126.34	150.59	372.05	-371.50	
6	4	35	14.32	-99.29	-9.93	-75.04	46.55	508.08	-465.42	-126.55	169.21	-463.74	
6	4	36	1.51	-119.36	-17.71	-100.14	44.19	449.25	-532.30	-236.22	153.17	-450.50	
6	4	37	-11.51	-144.35	-26.34	-129.51	41.84	335.26	-557.04	-348.07	126.29	-377.88	
6	4	38	-4.68	-97.17	-20.07	-81.78	34.45	440.39	-443.57	-145.16	141.99	-418.01	
6	4	39	-12.17	-123.49	-23.63	-112.03	33.83	332.28	-608.00	-349.72	74.01	-419.69	
6	4	40	-18.89	-153.41	-27.66	-144.63	33.21	220.07	-760.52	-552.98	12.53	-400.54	
6	4	41	-6.67	-89.96	-14.19	-82.44	23.87	398.34	-336.19	-105.13	167.29	-341.07	
6	4	42	-14.72	-122.95	-20.23	-117.44	23.78	284.65	-525.72	-326.79	85.73	-348.76	
6	4	43	-22.32	-158.27	-26.58	-154.00	23.70	177.54	-722.13	-548.49	3.90	-355.06	
6	4	44	-12.19	-86.05	-14.84	-83.41	13.72	345.09	-223.54	-56.31	177.86	-259.09	
6	4	45	-17.99	-123.13	-19.98	-121.15	14.31	235.46	-410.65	-270.42	95.22	-266.35	



M	G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
6	4	46	-23.68	-161.45	-25.31	-159.82	14.89	138.22	-609.79	-484.47	12.89	-279.35	
6	4	47	-13.37	-84.58	-13.80	-84.15	5.48	283.82	-123.14	-24.85	185.53	-174.18	
6	4	48	-18.59	-122.61	-19.01	-122.20	6.54	184.14	-298.24	-219.08	104.97	-178.66	
6	4	49	-24.04	-161.90	-24.46	-161.48	7.61	96.52	-484.79	-413.20	24.93	-191.03	
6	4	50	-14.04	-84.88	-14.08	-84.84	-1.65	222.46	-38.32	-5.12	189.26	-86.92	
6	4	51	-18.71	-121.13	-18.71	-121.13	1.64e-02	137.01	-205.82	-180.76	111.94	-89.24	
6	4	52	-23.59	-158.82	-23.61	-158.80	1.68	58.39	-379.64	-356.31	35.06	-98.37	
6	4	53	-13.50	-85.45	-14.34	-84.61	-7.74	189.78	1.92	1.92	189.78	0.12	
6	4	54	-18.17	-117.80	-18.47	-117.51	-5.42	115.80	-158.74	-158.74	115.80	1.03	
6	4	55	-22.83	-152.05	-22.91	-151.97	-3.10	41.29	-319.53	-319.50	41.27	-3.04	
6	4	56	-12.33	-85.16	-14.80	-82.70	-13.17	211.98	-44.83	-12.50	179.65	85.19	
6	4	57	-17.27	-112.30	-18.37	-111.20	-10.16	135.65	-190.89	-163.34	108.10	90.75	
6	4	58	-21.81	-141.65	-22.24	-141.22	-7.14	59.76	-337.36	-314.18	36.58	93.10	
6	4	59	-10.86	-83.40	-15.68	-78.58	-18.07	254.14	-142.56	-48.75	160.32	168.57	
6	4	60	-16.21	-104.53	-18.61	-102.13	-14.37	176.90	-278.38	-193.12	91.63	177.62	
6	4	61	-20.78	-128.26	-21.85	-127.19	-10.68	101.00	-414.90	-337.38	23.49	184.34	
6	4	62	-8.36	-79.82	-16.51	-71.67	-22.72	288.93	-258.57	-104.42	134.78	246.24	
6	4	63	-14.55	-94.98	-19.02	-90.51	-18.43	218.71	-387.37	-242.15	73.49	258.70	
6	4	64	-19.57	-112.71	-21.77	-110.51	-14.14	147.49	-517.53	-380.27	10.23	269.15	
6	4	65	-3.77	-74.96	-17.23	-61.49	-27.88	297.53	-375.36	-175.60	97.77	307.43	
6	4	66	-11.39	-83.39	-19.35	-75.42	-22.58	232.95	-506.44	-309.12	35.63	327.05	
6	4	67	-17.93	-95.92	-21.97	-91.87	-17.29	166.08	-626.38	-441.16	-19.14	335.37	
6	4	68	1.72	-67.53	-22.14	-43.67	-32.91	288.26	-547.47	-292.99	33.78	384.60	
6	4	69	-9.05	-69.94	-23.45	-55.54	-25.87	255.36	-600.58	-367.23	22.01	381.15	
6	4	70	-19.61	-80.68	-26.11	-74.17	-18.84	193.78	-637.39	-443.53	-7.34e-02	351.50	
6	4	71	15.06	-54.45	-20.50	-18.89	-34.74	212.80	-475.96	-222.17	-40.99	332.25	
6	4	72	1.66	-54.53	-20.38	-32.48	-27.44	244.64	-432.41	-206.85	19.08	319.12	
6	4	73	-10.82	-60.50	-21.09	-50.22	-20.13	232.46	-380.03	-197.39	49.81	280.19	
6	4	74	43.24	-27.33	15.85	5.94e-02	-34.39	150.08	-324.16	-95.63	-78.45	236.97	
6	4	75	28.21	-33.37	10.65	-15.82	-27.80	212.91	-241.09	-29.21	1.03	226.49	
6	4	76	15.39	-40.50	5.65	-30.76	-21.21	243.72	-149.49	33.30	60.92	196.12	
6	5	29	-20.91	-121.08	-65.01	-76.98	49.73	720.06	-154.37	24.66	541.03	-352.85	
6	5	30	-15.47	-69.11	-42.81	-41.78	26.81	755.37	-145.07	65.95	544.35	-381.42	
6	5	31	-43.89	-124.18	-44.08	-123.99	3.90	739.06	-214.36	85.54	439.17	-442.71	
6	5	32	-1.60	-111.36	-38.36	-74.60	51.80	624.46	-273.51	-29.40	380.34	-399.52	
6	5	33	-0.97	-88.57	-23.55	-65.99	38.32	673.76	-193.77	67.79	412.19	-398.12	
6	5	34	-15.19	-125.19	-21.12	-119.26	24.83	648.97	-126.34	150.59	372.05	-371.50	
6	5	35	14.32	-99.29	-9.93	-75.04	46.55	508.08	-465.42	-126.55	169.21	-463.74	
6	5	36	1.51	-119.36	-17.71	-100.14	44.19	449.25	-532.30	-236.22	153.17	-450.50	
6	5	37	-11.51	-144.35	-26.34	-129.51	41.84	335.26	-557.04	-348.07	126.29	-377.88	
6	5	38	-4.68	-97.17	-20.07	-81.78	34.45	440.39	-443.57	-145.16	141.99	-418.01	
6	5	39	-12.17	-123.49	-23.63	-112.03	33.83	332.28	-608.00	-349.72	74.01	-419.69	
6	5	40	-18.89	-153.41	-27.66	-144.63	33.21	220.07	-760.52	-552.98	12.53	-400.54	
6	5	41	-6.67	-89.96	-14.19	-82.44	23.87	398.34	-336.19	-105.13	167.29	-341.07	
6	5	42	-14.72	-122.95	-20.23	-117.44	23.78	284.65	-525.72	-326.79	85.73	-348.76	
6	5	43	-22.32	-158.27	-26.58	-154.00	23.70	177.54	-722.13	-548.49	3.90	-355.06	
6	5	44	-12.19	-86.05	-14.84	-83.41	13.72	345.09	-223.54	-56.31	177.86	-259.09	
6	5	45	-17.99	-123.13	-19.98	-121.15	14.31	235.46	-410.65	-270.42	95.22	-266.35	
6	5	46	-23.68	-161.45	-25.31	-159.82	14.89	138.22	-609.79	-484.47	12.89	-279.35	
6	5	47	-13.37	-84.58	-13.80	-84.15	5.48	283.82	-123.14	-24.85	185.53	-174.18	
6	5	48	-18.59	-122.61	-19.01	-122.20	6.54	184.14	-298.24	-219.08	104.97	-178.66	
6	5	49	-24.04	-161.90	-24.46	-161.48	7.61	96.52	-484.79	-413.20	24.93	-191.03	
6	5	50	-14.04	-84.88	-14.08	-84.84	-1.65	222.46	-38.32	-5.12	189.26	-86.92	
6	5	51	-18.71	-121.13	-18.71	-121.13	1.64e-02	137.01	-205.82	-180.76	111.94	-89.24	
6	5	52	-23.59	-158.82	-23.61	-158.80	1.68	58.39	-379.64	-356.31	35.06	-98.37	
6	5	53	-13.50	-85.45	-14.34	-84.61	-7.74	189.78	1.92	1.92	189.78	0.12	
6	5	54	-18.17	-117.80	-18.47	-117.51	-5.42	115.80	-158.74	-158.74	115.80	1.03	
6	5	55	-22.83	-152.05	-22.91	-151.97	-3.10	41.29	-319.53	-319.50	41.27	-3.04	
6	5	56	-12.33	-85.16	-14.80	-82.70	-13.17	211.98	-44.83	-12.50	179.65	85.19	
6	5	57	-17.27	-112.30	-18.37	-111.20	-10.16	135.65	-190.89	-163.34	108.10	90.75	
6	5	58	-21.81	-141.65	-22.24	-141.22	-7.14	59.76	-337.36	-314.18	36.58	93.10	
6	5	59	-10.86	-83.40	-15.68	-78.58	-18.07	254.14	-142.56	-48.75	160.32	168.57	
6	5	60	-16.21	-104.53	-18.61	-102.13	-14.37	176.90	-278.38	-193.12	91.63	177.62	
6	5	61	-20.78	-128.26	-21.85	-127.19	-10.68	101.00	-414.90	-337.38	23.49	184.34	
6	5	62	-8.36	-79.82	-16.51	-71.67	-22.72	288.93	-258.57	-104.42	134.78	246.24	
6	5	63	-14.55	-94.98	-19.02	-90.51	-18.43	218.71	-387.37	-242.15	73.49	258.70	
6	5	64	-19.57	-112.71	-21.77	-110.51	-14.14	147.49	-517.53	-380.27	10.23	269.15	
6	5	65	-3.77	-74.96	-17.23	-61.49	-27.88	297.53	-375.36	-175.60	97.77	307.43	
6	5	66	-11.39	-83.39	-19.35	-75.42	-22.58	232.95	-506.44	-309.12	35.63	327.05	
6	5	67	-17.93	-95.92	-21.97	-91.87	-17.29	166.08	-626.38	-441.16	-19.14	335.37	
6	5	68	1.72	-67.53	-22.14	-43.67	-32.91	288.26	-547.47	-292.99	33.78	384.60	
6	5	69	-9.05	-69.94	-23.45	-55.54	-25.87	255.36	-600.58	-367.23	22.01	381.15	



M	G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
6	5	70	-19.61	-80.68	-26.11	-74.17	-18.84	193.78	-637.39	-443.53	-7.34e-02	351.50	
6	5	71	15.06	-54.45	-20.50	-18.89	-34.74	212.80	-475.96	-222.17	-40.99	332.25	
6	5	72	1.66	-54.53	-20.38	-32.48	-27.44	244.64	-432.41	-206.85	19.08	319.12	
6	5	73	-10.82	-60.50	-21.09	-50.22	-20.13	232.46	-380.03	-197.39	49.81	280.19	
6	5	74	43.24	-27.33	15.85	5.94e-02	-34.39	150.08	-324.16	-95.63	-78.45	236.97	
6	5	75	28.21	-33.37	10.65	-15.82	-27.80	212.91	-241.09	-29.21	1.03	226.49	
6	5	76	15.39	-40.50	5.65	-30.76	-21.21	243.72	-149.49	33.30	60.92	196.12	
6	6	29	-15.26	-126.90	-19.85	-122.31	22.16	1406.73	64.07	350.26	1120.54	-549.86	
6	6	30	-18.64	-38.91	-19.74	-37.80	-4.60	876.97	-119.05	77.80	680.13	-396.63	
6	6	31	-41.04	-118.48	-50.60	-108.93	-25.47	621.06	-344.83	-176.84	453.07	-366.12	
6	6	32	-36.75	-137.87	-53.59	-121.03	37.67	768.49	-287.72	-115.47	596.24	-390.21	
6	6	33	-19.59	-78.69	-30.77	-67.51	23.15	517.02	-267.46	-156.96	406.52	-272.90	
6	6	34	-17.51	-96.97	-19.44	-95.04	12.25	342.40	-309.55	-271.14	303.98	-153.52	
6	6	35	13.93	-110.01	-10.28	-85.81	49.13	237.82	-988.43	-750.79	0.19	-484.70	
6	6	36	3.41	-118.41	-21.13	-93.87	48.86	19.37	-1259.32	-1160.78	-79.17	-341.01	
6	6	37	-10.32	-131.72	-35.08	-106.96	48.91	-155.62	-1579.53	-1572.11	-163.04	-102.49	
6	6	38	2.19	-83.14	-26.47	-54.47	40.30	-28.36	-1447.10	-1321.46	-154.00	-403.07	
6	6	39	-15.21	-117.93	-37.23	-95.91	42.16	-230.24	-1970.34	-1921.96	-278.63	-286.09	
6	6	40	-26.96	-158.38	-43.93	-141.42	44.07	-386.01	-2522.40	-2519.03	-389.38	-84.82	
6	6	41	8.94	-52.40	-22.48	-20.99	30.66	-197.57	-1877.29	-1803.76	-271.10	-343.66	
6	6	42	-21.84	-106.67	-36.30	-92.21	31.91	-350.17	-2465.17	-2436.58	-378.77	-244.25	
6	6	43	-43.27	-177.55	-52.25	-168.58	33.54	-478.27	-3077.53	-3068.59	-487.21	-152.20	
6	6	44	8.61	-34.59	-23.40	-2.58	18.92	-292.70	-2216.05	-2155.56	-353.20	-335.69	
6	6	45	-31.33	-98.14	-39.11	-90.36	21.42	-421.52	-2797.35	-2768.11	-450.76	-261.98	
6	6	46	-50.72	-188.51	-55.06	-184.17	24.06	-529.79	-3394.79	-3379.06	-545.52	-211.71	
6	6	47	9.62	-28.16	-23.87	5.33	11.98	-355.48	-2665.14	-2615.06	-405.55	-336.37	
6	6	48	-37.92	-90.83	-40.09	-88.67	10.48	-458.39	-3105.59	-3074.26	-489.72	-286.27	
6	6	49	-54.76	-190.74	-55.36	-190.14	8.96	-576.77	-3556.72	-3533.18	-600.31	-263.79	
6	6	50	6.00	-26.23	-26.18	5.96	1.20	-409.97	-2811.08	-2762.94	-458.12	-336.57	
6	6	51	-40.64	-88.09	-40.79	-87.94	2.67	-497.31	-3206.50	-3169.98	-533.82	-312.41	
6	6	52	-55.21	-189.86	-55.34	-189.73	4.24	-575.43	-3609.22	-3576.69	-607.95	-312.42	
6	6	53	6.50	-28.00	-27.78	6.28	-2.71	-437.88	-2845.99	-2798.10	-485.77	-336.20	
6	6	54	-40.90	-84.23	-40.90	-84.22	0.26	-496.48	-3137.03	-3092.66	-540.85	-339.42	
6	6	55	-54.75	-180.52	-54.76	-180.51	1.10	-552.03	-3433.52	-3387.60	-597.94	-360.83	
6	6	56	6.82	-29.42	-28.44	5.84	-5.89	-420.25	-2778.33	-2729.75	-468.83	-334.96	
6	6	57	-40.31	-79.52	-40.62	-79.21	-3.49	-532.39	-2941.75	-2936.48	-537.66	-112.57	
6	6	58	-53.65	-167.69	-53.66	-167.68	-1.18	-568.92	-3152.89	-3143.91	-577.90	-152.09	
6	6	59	8.15	-34.20	-28.45	2.40	-14.51	-421.82	-2565.09	-2554.16	-432.75	152.64	
6	6	60	-38.26	-77.05	-40.12	-75.18	-8.30	-498.36	-2773.57	-2770.10	-501.83	88.86	
6	6	61	-52.02	-156.09	-52.14	-155.96	-3.61	-569.37	-2986.74	-2986.47	-569.64	25.92	
6	6	62	4.43	-34.45	-27.91	-2.11	-14.54	-361.67	-2272.84	-2262.30	-372.21	141.54	
6	6	63	-34.09	-74.94	-38.92	-70.11	-13.19	-440.23	-2504.98	-2504.30	-440.92	37.56	
6	6	64	-47.76	-142.41	-49.33	-140.85	-12.06	-509.41	-2748.49	-2746.99	-510.91	-57.80	
6	6	65	2.63	-40.34	-26.14	-11.57	-20.21	-274.12	-1840.50	-1836.50	-278.12	79.04	
6	6	66	-27.47	-71.92	-35.87	-63.52	-17.41	-356.16	-2114.67	-2112.33	-358.51	-64.21	
6	6	67	-42.52	-122.15	-45.45	-119.22	-15.00	-410.81	-2408.35	-2386.93	-432.24	-205.75	
6	6	68	3.10	-54.24	-24.39	-26.75	-28.64	-118.56	-1289.26	-1285.37	-122.45	67.36	
6	6	69	-18.01	-67.48	-34.00	-51.48	-23.14	-186.27	-1537.97	-1526.95	-197.30	-121.58	
6	6	70	-37.92	-94.00	-44.56	-87.36	-18.12	-209.85	-1847.63	-1772.02	-285.46	-343.68	
6	6	71	2.36	-56.05	-22.68	-31.01	-28.91	10.70	-544.30	-529.76	-3.84	88.63	
6	6	72	-6.16	-49.36	-23.68	-31.84	-21.21	-34.47	-637.13	-627.66	-43.95	-74.95	
6	6	73	-21.43	-54.40	-28.48	-47.35	-13.51	20.16	-839.50	-727.77	-91.56	-289.07	
6	6	74	33.84	-14.12	18.13	1.60	-22.51	101.26	-158.17	-100.63	43.72	107.78	
6	6	75	26.38	-19.93	19.94	-13.49	-16.02	23.03	-105.08	-96.10	14.06	-32.70	
6	6	76	18.43	-21.33	16.46	-19.37	-8.61	198.21	-263.06	-83.62	18.77	-224.88	
6	9	29	60.66	-250.26	-188.96	-0.64	123.71	-31.03	-930.19	-510.32	-450.89	-448.60	
6	9	30	11.79	-202.42	-131.06	-59.56	100.96	805.87	-674.23	-133.59	265.23	-712.68	
6	9	31	-48.56	-223.77	-86.75	-185.58	72.34	1226.25	-609.75	162.52	453.98	-906.36	
6	9	32	111.13	-105.68	-17.59	23.04	106.49	852.69	-913.97	-5.00	-56.29	-882.96	
6	9	33	49.96	-141.30	-22.80	-68.54	92.85	1319.14	-784.04	205.21	329.89	-1049.74	
6	9	34	-6.63	-219.19	-38.22	-187.60	75.61	1635.23	-726.98	453.31	454.95	-1181.10	
6	9	35	53.14	-99.74	-18.41	-28.19	76.29	1600.07	-377.70	873.25	349.12	-953.53	
6	9	36	9.17	-155.58	-30.38	-116.04	70.37	2029.74	-474.99	1113.24	441.50	-1206.49	
6	9	37	-16.61	-221.20	-39.21	-198.60	64.13	2487.29	-608.75	1352.18	526.36	-1491.94	
6	9	38	8.93	-139.16	-18.01	-112.22	57.13	2731.93	212.69	2273.44	671.18	-972.03	
6	9	39	0.18	-163.13	-16.57	-146.38	49.55	3322.63	91.52	2692.63	721.52	-1280.12	
6	9	40	-9.81	-191.12	-20.08	-180.86	41.90	4003.39	-125.75	3110.27	767.37	-1700.05	
6	9	41	7.68	-202.12	-1.50	-192.94	42.92	4084.99	903.86	3847.31	1141.54	-836.42	
6	9	42	8.15	-184.04	0.81	-176.71	36.81	4774.19	765.40	4413.62	1125.97	-1146.93	
6	9	43	10.27	-163.09	4.80	-157.61	30.32	5495.11	597.81	4979.55	1113.38	-1503.02	
6	9	44	6.68	-257.74	2.88	-253.93	31.48	5303.18	1391.75	5204.41	1490.52	-613.65	
6	9	45	14.59	-205.27	11.55	-202.23	25.69	6040.66	1299.01	5876.69	1462.98	-866.38	



M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
6	9	46	22.28	-149.23	19.97	-146.92	19.76	6791.10	1185.67	6546.83	1429.94	-1144.37
6	9	47	11.50	-294.53	10.50	-293.53	17.46	6463.88	1729.00	6439.63	1753.25	-337.99
6	9	48	21.91	-221.62	20.67	-220.38	17.33	7111.71	1659.03	7062.35	1708.38	-516.41
6	9	49	30.76	-145.61	29.06	-143.92	17.19	7765.66	1607.64	7684.56	1688.74	-702.03
6	9	50	15.84	-314.73	15.69	-314.58	7.08	7088.72	1941.49	7088.49	1941.71	-34.21
6	9	51	25.97	-230.07	25.81	-229.92	6.29	7722.37	1884.76	7719.59	1887.54	-127.34
6	9	52	35.02	-142.62	34.85	-142.45	5.41	8356.94	1822.71	8349.95	1829.70	-213.69
6	9	53	18.84	-323.02	18.54	-322.73	-10.02	7326.58	2010.77	7311.42	2025.93	283.47
6	9	54	28.42	-233.01	28.06	-232.65	-9.71	7865.41	1936.17	7851.71	1949.87	284.70
6	9	55	37.47	-142.80	37.17	-142.51	-7.27	8405.59	1857.50	8391.54	1871.55	302.99
6	9	56	20.46	-318.90	18.20	-316.64	-27.63	7151.82	1897.06	7082.22	1966.65	600.72
6	9	57	29.64	-228.35	27.39	-226.10	-23.98	7553.27	1865.94	7517.62	1901.58	448.82
6	9	58	38.66	-139.99	36.34	-137.67	-20.24	8006.15	1752.09	7953.16	1805.08	573.23
6	9	59	18.39	-298.04	13.59	-293.24	-38.68	6428.22	1751.12	6389.75	1789.59	422.46
6	9	60	28.49	-213.41	22.96	-207.88	-36.17	6858.56	1647.83	6782.29	1724.10	625.78
6	9	61	38.00	-130.82	31.64	-124.47	-32.13	7304.85	1525.52	7174.89	1655.48	856.86
6	9	62	18.52	-265.12	6.54	-253.14	-57.05	5374.33	1366.14	5242.57	1497.90	714.66
6	9	63	25.64	-192.02	14.74	-181.12	-47.48	5818.28	1206.55	5580.00	1444.83	1020.84
6	9	64	31.70	-119.78	21.66	-109.74	-37.68	6294.25	1008.01	5916.64	1385.62	1361.45
6	9	65	20.02	-214.99	-3.48	-191.49	-70.50	4014.30	749.58	3683.95	1079.94	984.58
6	9	66	23.13	-165.06	2.24	-144.17	-59.12	4493.89	467.91	3932.72	1029.08	1394.40
6	9	67	24.47	-117.88	6.45	-99.85	-47.34	5011.87	161.51	4183.86	989.53	1824.98
6	9	68	21.86	-149.95	-31.22	-96.87	-79.38	2411.24	-336.34	1652.82	422.08	1228.26
6	9	69	13.18	-137.62	-25.42	-99.02	-65.81	2986.35	-547.94	1913.20	525.21	1625.17
6	9	70	1.95	-132.61	-22.35	-108.31	-51.76	3570.05	-772.80	2173.51	623.74	2028.46
6	9	71	66.06	-110.98	-39.04	-5.88	-86.95	1012.90	-1089.98	111.53	-188.61	1040.68
6	9	72	28.86	-123.37	-39.84	-54.68	-75.75	1548.63	-1032.62	390.51	125.50	1283.80
6	9	73	1.58	-141.38	-39.19	-100.60	-64.55	2058.78	-1040.22	655.01	363.55	1542.63
6	9	74	116.33	-71.90	26.96	17.47	-93.99	380.71	-984.82	-201.76	-402.35	675.36
6	9	75	75.08	-96.43	5.02	-26.37	-84.31	847.93	-834.90	41.05	-28.02	840.71
6	9	76	37.81	-127.40	-11.38	-78.21	-75.54	1279.06	-792.73	259.00	227.33	1035.78
6	34	29	-20.85	-120.24	-27.72	-113.36	25.22	1228.94	42.32	271.23	1000.04	-468.21
6	34	30	-23.71	-38.22	-23.71	-38.21	0.35	826.17	-108.47	61.67	656.03	-360.65
6	34	31	-41.72	-114.17	-48.49	-107.40	-21.08	604.42	-308.12	-138.40	434.70	-355.06
6	34	32	-32.65	-129.61	-50.40	-111.86	37.50	702.16	-254.34	-102.17	549.98	-349.85
6	34	33	-16.62	-77.39	-28.20	-65.81	23.87	516.95	-224.69	-117.86	410.12	-260.42
6	34	34	-16.41	-97.68	-18.34	-95.74	12.39	360.15	-226.68	-176.63	310.10	-163.91
6	34	35	11.48	-105.32	-10.24	-83.60	45.44	240.49	-848.07	-638.69	31.12	-429.05
6	34	36	1.26	-114.39	-20.08	-93.05	44.86	65.42	-1060.60	-964.60	-30.58	-314.45
6	34	37	-11.55	-128.07	-32.17	-107.45	44.47	-89.79	-1302.93	-1292.47	-100.25	-112.16
6	34	38	-1.79	-82.47	-25.09	-59.17	36.56	17.70	-1221.32	-1105.33	-98.29	-360.92
...												
6	37	76	34.60	-111.56	-6.73	-70.23	-65.82	1051.86	-631.58	220.24	200.04	841.66
M_G			N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
				-323.02	-188.96	-322.73	-93.99		-3609.22	-3576.69	-607.95	-1700.05
			116.33		37.17	23.04	123.71	8405.59		8391.54	2025.93	2028.46

Macro	Tipo	Angolo 1-X (gradi)
9	Guscio	0.0

M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
			daN/cm	daN/cm	daN/cm	daN/cm	daN/cm	daN	daN	daN	daN	daN
9	1	128	-33.47	-75.60	-59.95	-49.13	-20.36	774.98	-696.47	532.82	-454.31	545.60
9	1	131	9.61	-38.04	-17.89	-10.53	-23.54	705.22	21.85	662.75	64.33	164.99
9	1	133	56.51	-11.15	3.73	41.64	-28.02	913.40	246.68	749.56	410.52	287.04
9	1	135	77.44	-13.11	-5.07	69.41	-25.75	825.27	249.60	759.51	315.35	183.11
9	1	137	97.22	-4.14	0.15	92.92	-20.42	808.85	325.29	750.37	383.77	157.66
9	1	139	113.67	-2.22	0.12	111.33	-16.29	768.69	368.30	737.87	399.12	106.73
9	1	141	126.21	0.61	1.67	125.15	-11.52	728.64	403.06	716.37	415.32	61.98
9	1	143	134.89	2.28	2.60	134.57	-6.51	680.69	418.11	680.15	418.65	11.88
9	1	145	139.96	3.58	3.59	139.95	-1.04	637.43	406.77	629.22	414.97	-42.71
9	1	147	141.81	4.78	4.94	141.65	4.79	621.00	353.51	568.16	406.34	-106.49
9	1	149	140.52	4.18	5.14	139.57	11.36	639.91	261.56	505.62	395.86	-181.04
9	1	151	136.82	5.54	8.12	134.24	18.22	692.68	154.23	457.66	389.26	-267.04



M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
9	1	153	129.50	-1.05	4.69	123.77	26.75	763.15	56.76	431.19	388.72	-352.56
9	1	155	101.07	4.77	11.34	94.51	24.27	846.15	-47.83	433.39	364.93	-445.67
9	1	157	-8.16	-44.35	-37.86	-14.64	-13.88	339.32	-516.81	109.84	-287.33	-379.22
9	1	159	-40.02	-131.23	-74.74	-96.52	-44.29	188.36	-1253.46	-162.37	-902.73	-618.61
9	1	169	8.63	-44.43	-35.61	-0.19	-19.75	522.21	-400.06	191.34	-69.18	442.36
9	1	170	19.32	-24.93	-14.86	9.26	-18.55	431.93	-19.66	266.42	145.85	217.59
9	1	171	40.59	-7.69	1.14	31.77	-18.66	636.66	18.52	352.24	302.95	308.09
9	1	172	61.88	-8.40	-3.49	56.97	-17.91	534.40	83.61	349.70	268.30	221.69
9	1	173	81.22	-2.57	7.00e-02	78.59	-14.63	511.38	143.00	342.69	311.69	183.54
9	1	174	95.96	-0.82	0.64	94.50	-11.83	468.44	209.79	338.89	339.34	129.33
9	1	175	107.38	1.40	2.09	106.69	-8.52	421.82	262.38	329.24	354.96	78.67
9	1	176	115.01	2.99	3.20	114.80	-4.87	373.77	300.17	309.85	364.09	24.87
9	1	177	119.11	4.31	4.31	119.11	-0.77	379.60	267.37	279.64	367.33	-35.03
9	1	178	119.79	5.47	5.59	119.67	3.67	429.39	180.71	241.98	368.12	-107.16
9	1	179	116.59	5.43	6.09	115.93	8.57	497.90	74.15	203.99	368.07	-195.35
9	1	180	109.34	6.08	7.84	107.57	13.39	588.67	-41.22	178.57	368.88	-300.22
9	1	181	93.10	0.97	4.53	89.55	17.75	699.84	-144.90	175.79	379.15	-409.95
9	1	182	66.39	1.30	3.82	63.86	12.57	735.69	-258.70	172.85	304.13	-492.84
9	1	183	57.45	-38.13	-36.46	55.78	-12.51	490.76	-419.69	142.41	-71.33	-442.50
9	1	184	72.31	-64.97	-57.94	65.28	-30.26	463.68	-824.44	21.31	-382.06	-611.67
9	1	185	10.86	-16.04	-8.72	3.54	-11.97	309.78	-385.92	-163.29	87.14	324.53
9	1	186	12.59	-12.18	-10.03	10.45	-6.96	248.28	-384.09	-229.89	94.08	271.54
9	1	187	25.98	-1.10	-0.90	25.78	-2.32	339.60	-395.54	-225.57	169.62	309.94
9	1	188	39.96	-0.86	-0.66	39.76	-2.84	361.76	-343.06	-218.94	237.64	268.47
9	1	189	54.06	0.41	0.59	53.88	-3.10	346.50	-284.18	-208.62	270.93	204.81
9	1	190	65.26	1.85	2.00	65.11	-3.12	343.49	-226.56	-187.48	304.42	144.04
9	1	191	73.44	3.40	3.51	73.33	-2.77	341.51	-180.16	-165.28	326.63	86.85
9	1	192	78.60	4.91	4.97	78.54	-1.99	349.09	-149.36	-147.48	347.22	30.51
9	1	193	80.60	6.30	6.31	80.59	-0.88	374.54	-137.49	-135.40	372.45	-32.66
9	1	194	79.13	7.46	7.46	79.13	0.35	426.49	-151.37	-128.92	404.04	-111.65
9	1	195	73.48	8.13	8.16	73.45	1.35	511.18	-197.04	-125.00	439.14	-214.09
9	1	196	62.47	7.95	7.98	62.44	1.28	626.61	-275.20	-117.24	468.65	-342.78
9	1	197	45.70	4.45	4.52	45.64	-1.63	746.95	-371.82	-98.19	473.32	-480.89
9	1	198	30.06	-10.80	-8.40	27.66	-9.60	809.26	-520.96	-62.02	350.32	-632.35
9	1	199	13.20	-63.27	-58.67	8.60	-18.17	902.15	-528.63	154.57	218.95	-714.67
9	1	200	-8.53	-123.73	-119.68	-12.58	-21.23	1123.38	-470.89	361.85	290.64	-796.34
9	1	201	10.53	5.69	10.44	5.78	0.65	481.19	-360.85	-77.46	197.80	397.89
9	1	202	11.15	-1.78	-7.46e-02	9.44	4.38	414.93	-416.21	-167.49	166.21	380.60
9	1	203	22.64	-4.09	-0.97	19.52	8.59	381.46	-400.95	-225.19	205.69	326.53
9	1	204	30.17	-2.42	-0.32	28.07	8.00	423.02	-287.23	-179.33	315.11	254.94
9	1	205	36.52	-0.24	0.66	35.62	5.66	433.33	-174.24	-115.33	374.42	179.78
9	1	206	42.20	2.12	2.38	41.93	3.27	430.09	-75.56	-49.23	403.75	112.34
9	1	207	46.50	4.30	4.34	46.47	1.21	435.15	6.28	14.01	427.42	57.07
9	1	208	49.07	6.14	6.15	49.07	-0.53	457.25	69.76	69.87	457.14	6.70
9	1	209	49.62	7.51	7.62	49.51	-2.17	508.05	109.93	115.84	502.14	-48.14
9	1	210	47.86	8.15	8.57	47.44	-4.09	595.78	117.69	149.12	564.35	-118.49
9	1	211	43.80	7.30	8.64	42.46	-6.86	720.20	83.29	166.86	636.63	-215.05
9	1	212	38.55	2.83	6.87	34.51	-11.31	869.80	-1.94	167.90	699.97	-345.27
9	1	213	34.38	-9.10	0.53	24.75	-18.06	1006.14	-148.09	156.15	701.90	-508.52
9	1	214	29.13	-30.65	-16.93	15.41	-25.14	1238.67	-318.95	197.48	722.24	-733.28
9	1	215	19.18	-64.30	-55.52	10.40	-25.61	1551.12	-463.36	232.80	854.96	-958.00
9	1	216	9.55	-109.62	-105.00	4.93	-23.00	1689.59	-483.21	255.86	950.52	-1029.38
9	1	217	27.20	6.75e-02	22.73	4.53	10.06	467.66	-279.14	-16.15	204.67	356.71
9	1	218	19.11	-5.61	7.19	6.31	12.35	601.37	-189.28	124.48	287.62	386.82
9	1	219	22.21	-9.42	5.39e-03	12.78	14.47	657.69	32.62	264.62	425.68	301.98
9	1	220	23.48	-8.41	-2.06	17.13	12.74	674.08	276.33	411.39	539.02	188.36
9	1	221	23.57	-4.68	-1.19	20.07	9.30	685.54	475.66	561.42	599.78	103.18
9	1	222	23.56	-0.51	0.92	22.12	5.69	709.15	603.72	690.19	622.68	40.49
9	1	223	23.78	2.99	3.27	23.50	2.40	798.34	640.68	798.20	640.81	-4.68
9	1	224	24.16	5.22	5.24	24.13	-0.74	893.76	666.57	886.15	674.18	-40.88
9	1	225	24.74	5.67	6.56	23.84	-4.04	977.41	708.23	952.51	733.14	-78.00
9	1	226	25.77	3.64	6.97	22.45	-7.91	1059.10	753.35	991.98	820.47	-126.56
9	1	227	27.55	-1.60	5.97	19.98	-12.78	1161.82	759.90	994.15	927.58	-198.19
9	1	228	30.03	-10.51	2.53	16.99	-18.94	1294.82	676.45	945.92	1025.35	-306.63
9	1	229	32.36	-22.90	-5.36	14.82	-25.72	1445.54	484.96	843.70	1086.80	-464.66
9	1	230	32.72	-36.81	-20.09	16.01	-29.71	1572.47	181.82	677.99	1076.31	-666.19
9	1	231	27.32	-50.93	-42.22	18.61	-24.61	1415.76	-119.48	350.60	945.68	-707.61
9	1	232	26.06	-51.18	-46.25	21.12	-18.89	1174.80	-232.19	101.56	841.05	-598.49
9	1	233	39.78	-5.03	32.36	2.39	16.65	189.44	-65.49	21.06	102.90	120.72
9	1	234	24.61	-11.31	11.18	2.12	17.37	577.07	210.89	425.57	362.39	180.34
9	1	235	18.93	-14.74	-1.05	5.24	16.54	927.72	632.40	873.02	687.09	114.72
9	1	236	14.24	-13.40	-4.93	5.77	12.74	1196.12	812.22	1194.93	813.41	21.34



M	G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
9	1	237	9.93	-9.09	-3.83	4.68	8.50	1448.26	851.38	1445.17	854.46	-42.80	
9	1	238	6.33	-4.21	-1.14	3.26	4.79	1648.27	855.39	1640.31	863.36	-79.08	
9	1	239	3.35	0.32	1.44	2.24	1.46	1799.66	862.52	1789.49	872.70	-97.12	
9	1	240	4.59	0.43	3.33	1.69	-1.91	1911.81	893.08	1900.74	904.14	-105.60	
9	1	241	8.68	-2.99	4.26	1.43	-5.66	1988.41	956.79	1976.23	968.97	-111.44	
9	1	242	12.81	-7.43	3.97	1.41	-10.04	2024.52	1055.05	2009.26	1070.31	-120.67	
9	1	243	17.13	-13.26	2.00	1.87	-15.19	2007.48	1176.40	1982.76	1201.12	-141.19	
9	1	244	21.58	-20.57	-2.36	3.37	-20.88	1928.57	1280.22	1869.56	1339.24	-186.49	
9	1	245	25.57	-28.79	-9.84	6.62	-25.91	1812.71	1237.49	1627.11	1423.10	-268.91	
9	1	246	26.75	-35.92	-20.13	10.96	-27.20	1649.69	897.91	1208.54	1339.06	-370.18	
9	1	247	23.76	-37.23	-27.49	14.02	-22.34	1208.15	336.43	579.51	965.08	-390.91	
9	1	248	22.59	-32.46	-25.50	15.63	-18.29	870.22	124.85	287.42	707.64	-307.81	
9	1	249	50.18	-8.98	41.47	-0.28	20.96	304.07	-299.12	46.08	-41.12	-298.43	
9	1	250	24.50	-16.91	10.77	-3.18	19.50	805.79	244.35	675.20	374.94	-237.20	
9	1	251	9.52	-19.27	-5.98	-3.78	14.35	1461.43	758.40	1362.02	857.81	-244.96	
9	1	252	-1.08e-02	-16.16	-8.58	-7.59	8.06	1891.14	924.00	1818.91	996.23	-254.26	
9	1	253	-3.91	-14.62	-5.77	-12.76	4.06	2215.89	972.03	2161.20	1026.72	-255.02	
9	1	254	-2.51	-17.10	-2.68	-16.93	1.56	2443.67	980.66	2403.93	1020.40	-237.83	
9	1	255	-0.11	-19.32	-0.14	-19.29	-0.74	2605.46	993.03	2577.48	1021.01	-210.58	
9	1	256	1.95	-20.74	1.45	-20.23	-3.36	2716.75	1028.67	2697.72	1047.70	-178.22	
9	1	257	3.63	-21.75	1.85	-19.97	-6.48	2781.66	1096.58	2769.76	1108.49	-141.13	
9	1	258	5.29	-22.85	0.94	-18.51	-10.17	2793.74	1200.35	2787.78	1206.31	-97.28	
9	1	259	7.33	-24.42	-1.53	-15.56	-14.25	2734.56	1337.28	2733.11	1338.73	-44.97	
9	1	260	10.06	-26.72	-5.93	-10.74	-18.23	2568.34	1486.98	2568.18	1487.15	13.54	
9	1	261	13.49	-29.69	-12.13	-4.07	-21.21	2232.56	1573.30	2225.40	1580.46	68.35	
9	1	262	16.97	-31.48	-17.85	3.34	-21.79	1692.27	1389.98	1636.51	1445.74	117.24	
9	1	263	19.63	-27.24	-17.34	9.73	-19.13	980.37	608.53	732.18	856.72	175.19	
9	1	264	21.96	-19.73	-10.95	13.18	-17.00	616.29	79.12	259.98	435.43	253.85	
9	1	265	64.43	-11.36	55.46	-2.38	24.49	750.59	-907.64	56.79	-213.83	-818.00	
9	1	266	13.39	-24.21	0.26	-11.09	17.92	1311.93	-322.94	723.19	265.80	-784.79	
9	1	267	-10.13	-21.08	-15.03	-16.18	5.45	1866.05	334.92	1388.06	812.92	-709.50	
9	1	268	-9.54	-26.13	-9.65	-26.01	-1.39	2228.97	678.39	1932.27	975.10	-609.95	
9	1	269	-5.76	-35.47	-5.95	-35.28	-2.37	2473.15	816.13	2293.52	995.77	-515.16	
9	1	270	-2.77	-40.25	-2.96	-40.06	-2.63	2647.44	876.60	2541.20	982.84	-420.54	
9	1	271	-0.47	-42.73	-0.74	-42.46	-3.34	2772.81	919.76	2710.64	981.93	-333.68	
9	1	272	0.85	-43.64	0.37	-43.16	-4.60	2852.00	969.15	2818.32	1002.82	-249.54	
9	1	273	1.22	-43.18	0.28	-42.24	-6.39	2883.29	1035.80	2869.25	1049.84	-160.45	
9	1	274	0.81	-41.37	-1.00	-39.56	-8.55	2862.63	1122.33	2860.84	1124.12	-55.71	
9	1	275	-0.18	-38.17	-3.49	-34.85	-10.72	2783.23	1219.88	2779.31	1223.79	78.11	
9	1	276	-1.47	-33.65	-7.30	-27.82	-12.40	2645.47	1289.63	2595.69	1339.41	254.99	
9	1	277	-1.73	-29.00	-12.21	-18.53	-13.26	2467.97	1204.13	2252.78	1419.32	475.04	
9	1	278	1.91	-26.13	-16.10	-8.12	-13.44	2221.64	721.21	1664.47	1278.38	724.95	
9	1	279	9.18	-20.20	-12.46	1.43	-12.95	1533.32	-191.80	726.76	614.76	860.74	
9	1	280	16.11	-10.12	-1.04	7.03	-12.48	1070.22	-701.42	239.99	128.80	884.08	
9	1	281	82.56	-10.85	76.30	-4.59	23.36	797.37	-1364.83	-247.50	-319.97	-1080.49	
9	1	282	-21.13	-35.21	-30.29	-26.05	6.71	1047.71	-1292.09	-215.83	-28.55	-1166.14	
9	1	283	-11.45	-44.19	-16.08	-39.57	-11.40	1674.14	-538.81	639.82	495.51	-1104.12	
9	1	284	-5.12	-60.39	-7.36	-58.16	-10.89	1751.59	-110.92	1031.44	609.24	-907.02	
9	1	285	-3.46	-64.54	-4.51	-63.49	-7.95	1770.61	173.60	1325.26	618.95	-716.16	
9	1	286	-1.04	-66.67	-1.67	-66.04	-6.38	1790.04	360.48	1524.96	625.55	-555.59	
9	1	287	0.19	-68.14	-0.28	-67.67	-5.65	1804.01	481.69	1656.09	629.62	-416.80	
9	1	288	0.89	-68.41	0.43	-67.96	-5.60	1794.13	572.96	1723.23	643.86	-285.59	
9	1	289	0.68	-67.21	0.19	-66.72	-5.75	1749.88	647.44	1728.95	668.37	-150.46	
9	1	290	-0.44	-63.97	-0.96	-63.44	-5.77	1669.71	699.53	1669.69	699.55	3.56	
9	1	291	-2.52	-58.16	-3.04	-57.64	-5.35	1587.21	688.64	1542.20	733.65	196.00	
9	1	292	-5.77	-49.58	-6.21	-49.15	-4.33	1587.84	522.71	1342.70	767.85	448.34	
9	1	293	-9.94	-38.24	-10.23	-37.95	-2.83	1712.64	141.83	1065.10	789.37	773.21	
9	1	294	-14.62	-25.98	-15.14	-25.46	-2.37	1845.45	-473.20	682.49	689.76	1159.32	
9	1	295	-9.98	-20.18	-14.38	-15.78	-5.05	1563.11	-1120.73	225.75	216.63	1341.92	
9	1	296	1.87	-14.95	-2.45	-10.63	-7.35	1239.37	-1331.56	48.67	-140.86	1281.97	
9	1	297	16.64	-2.98	15.26	-1.60	-5.01	240.62	-1168.52	61.56	-989.46	469.32	
9	1	298	31.37	-14.66	26.00	-9.30	-14.77	285.65	-1298.23	-73.51	-939.07	663.23	
9	1	299	88.76	2.80	74.05	17.51	-32.38	631.09	-1266.20	-237.75	-397.35	945.28	
9	1	300	88.27	-38.47	87.49	-37.68	-9.93	351.61	-608.57	-364.66	107.70	-417.97	
9	1	301	-4.00	-15.22	-12.15	-7.08	-5.01	549.64	-1101.61	374.83	-926.81	508.02	
9	1	302	-13.57	-47.41	-38.74	-22.24	-14.77	907.93	-1216.38	513.26	-821.71	826.22	
9	1	303	-8.63	-119.37	-108.92	-19.08	-32.38	370.75	-2141.56	-1184.17	-586.64	1220.11	
9	1	304	-83.08	-113.53	-99.90	-96.71	-15.14	201.53	-2039.54	-1704.70	-133.32	-798.93	
9	1	305	-17.88	-116.34	-22.89	-111.32	-21.65	1512.73	-1326.15	28.59	157.98	-1417.97	
9	1	306	-6.49	-96.74	-8.89	-94.34	-14.52	1188.29	-825.46	212.81	150.02	-1006.39	
9	1	307	-5.34	-95.00	-6.50	-93.84	-10.14	1182.31	-455.10	477.90	249.32	-810.69	
9	1	308	-2.90	-95.23	-3.60	-94.53	-8.00	1091.12	-188.89	638.21	264.01	-612.05	



M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
9	1	309	-2.14	-95.18	-2.62	-94.70	-6.67	1013.57	13.76	743.81	283.52	-443.78
9	1	310	-1.70	-95.50	-2.09	-95.11	-6.07	910.79	165.26	782.82	293.23	-281.12
9	1	311	-2.25	-95.65	-2.56	-95.34	-5.39	785.10	273.15	758.27	299.98	-114.09
9	1	312	-3.54	-93.44	-3.74	-93.24	-4.18	676.36	280.37	662.93	293.80	71.67
9	1	313	-5.40	-86.92	-5.46	-86.85	-2.27	698.81	71.74	499.87	270.68	291.84
9	1	314	-8.05	-76.00	-8.05	-76.00	0.18	817.15	-307.62	280.66	228.86	561.79
9	1	315	-11.21	-62.50	-11.38	-62.34	2.91	1006.48	-780.02	37.10	189.36	890.00
9	1	316	-16.72	-48.16	-17.17	-47.71	3.74	1214.46	-1261.33	-194.20	147.33	1226.06
9	1	317	-18.68	-33.15	-18.75	-33.08	-1.00	1210.70	-1396.19	-213.61	28.12	1297.83
9	1	318	-5.74	-25.47	-7.20	-24.01	-5.16	1081.33	-1197.68	-65.58	-50.77	1139.48
9	3	128	-34.53	-64.79	-56.32	-43.00	-13.58	731.82	-708.66	450.93	-427.76	570.72
9	3	131	5.30	-31.16	-17.33	-8.53	-17.69	633.49	-58.88	539.81	34.80	236.82
9	3	133	49.45	-8.11	4.02	37.33	-23.47	783.57	93.31	538.91	337.97	330.19
9	3	135	67.29	-9.99	-3.08	60.38	-22.05	620.86	114.17	492.89	242.14	220.15
9	3	137	83.01	-1.75	1.98	79.28	-17.39	569.15	170.23	450.52	288.86	182.35
9	3	139	95.57	-3.67e-02	1.95	93.58	-13.65	498.34	215.21	420.52	293.03	126.40
9	3	141	104.93	2.42	3.28	104.07	-9.36	438.51	255.83	393.28	301.06	78.85
9	3	143	111.28	3.74	3.97	111.06	-4.92	371.75	289.03	359.91	300.88	28.98
9	3	145	114.86	4.73	4.73	114.86	-0.16	333.41	282.41	318.80	297.01	-23.06
9	3	147	115.92	5.51	5.72	115.71	4.84	364.43	199.99	273.64	290.78	-81.78
9	3	149	114.41	4.78	5.76	113.42	10.35	410.49	107.48	233.32	284.65	-149.31
9	3	151	110.68	5.23	7.71	108.20	15.98	477.91	18.51	213.52	282.89	-227.07
9	3	153	103.39	-0.58	4.56	98.25	22.53	563.26	-52.83	223.46	286.97	-306.41
9	3	155	78.65	2.58	8.36	72.87	20.16	656.50	-125.91	263.86	266.73	-391.20
9	3	157	-9.03	-33.98	-29.94	-13.06	-9.18	272.27	-466.74	62.54	-257.00	-333.18
9	3	159	-30.94	-98.90	-54.23	-75.62	-32.25	145.18	-1023.71	-128.71	-749.82	-495.11
9	3	169	5.44	-40.94	-36.49	0.99	-13.66	552.28	-464.49	174.18	-86.39	491.41
9	3	170	15.07	-21.60	-15.40	8.87	-13.74	499.25	-131.83	246.81	120.61	309.16
9	3	171	34.67	-6.05	1.12	27.50	-15.50	659.10	-91.19	294.94	272.97	374.98
9	3	172	52.90	-6.29	-1.93	48.54	-15.47	524.47	-22.73	266.01	235.73	273.18
9	3	173	68.68	-0.62	1.77	66.29	-12.65	468.72	32.28	239.71	261.28	217.95
9	3	174	80.23	1.08	2.38	78.93	-10.06	406.30	93.19	223.83	275.67	154.40
9	3	175	89.00	3.05	3.63	88.43	-7.00	350.69	140.55	208.89	282.36	98.44
9	3	176	94.70	4.32	4.47	94.55	-3.68	302.58	173.23	189.62	286.19	43.03
9	3	177	97.59	5.31	5.31	97.59	-3.86e-02	289.16	162.27	164.18	287.26	-15.42
9	3	178	97.72	6.05	6.21	97.56	3.82	324.62	98.72	135.24	288.10	-83.16
9	3	179	94.72	5.73	6.45	94.00	7.95	387.21	12.01	109.47	289.76	-164.52
9	3	180	88.33	5.66	7.41	86.58	11.90	474.20	-83.14	98.21	292.84	-261.13
9	3	181	74.76	0.97	4.26	71.47	15.22	582.50	-170.03	109.50	302.97	-363.62
9	3	182	52.84	0.15	2.53	50.46	10.93	622.51	-270.80	118.01	233.70	-442.89
9	3	183	43.80	-29.69	-28.69	42.80	-8.50	399.48	-414.79	89.16	-104.48	-395.46
9	3	184	54.84	-47.02	-41.98	49.79	-22.10	340.82	-724.43	-4.76	-378.85	-498.71
9	3	185	5.44	-19.71	-16.78	2.51	-8.07	316.11	-433.60	-121.00	3.51	369.65
9	3	186	9.46	-13.87	-12.96	8.55	-4.52	343.59	-379.98	-115.03	78.64	348.58
9	3	187	21.02	-1.95	-1.82	20.89	-1.73	486.59	-318.01	-50.14	218.71	379.18
9	3	188	32.57	-0.14	9.18e-02	32.34	-2.76	487.30	-223.83	-19.39	282.86	321.85
9	3	189	44.32	1.78	2.01	44.09	-3.06	436.52	-138.85	-2.19	299.87	244.85
9	3	190	53.55	3.33	3.50	53.38	-2.92	395.17	-63.44	16.71	315.02	174.16
9	3	191	60.17	4.70	4.80	60.07	-2.36	360.59	-4.22	33.42	322.95	110.97
9	3	192	64.22	5.89	5.93	64.18	-1.44	341.73	35.82	44.94	332.62	52.02
9	3	193	65.63	6.91	6.91	65.63	-0.27	349.56	50.43	50.79	349.21	-10.34
9	3	194	64.17	7.68	7.69	64.16	0.94	394.58	30.07	50.99	373.67	-84.77
9	3	195	59.35	7.93	8.00	59.28	1.91	476.95	-26.96	47.20	402.79	-178.52
9	3	196	50.33	7.33	7.42	50.24	1.97	586.00	-116.71	42.24	427.05	-293.99
9	3	197	36.91	4.01	4.01	36.91	-0.22	688.52	-228.57	36.38	423.57	-415.68
9	3	198	24.38	-8.19	-6.95	23.13	-6.25	708.34	-396.03	23.15	289.16	-535.93
9	3	199	12.28	-48.26	-45.40	9.42	-12.84	685.37	-487.52	118.32	79.54	-586.13
9	3	200	-2.90	-92.26	-89.57	-5.59	-15.27	783.51	-494.82	236.39	52.31	-632.51
9	3	201	4.02	-3.32	-2.93	3.63	1.65	392.54	-383.48	-53.35	62.40	383.67
9	3	202	8.30	-7.16	-5.81	6.95	4.37	428.98	-358.97	-53.67	123.68	383.87
9	3	203	17.35	-5.45	-2.83	14.72	7.28	501.63	-247.11	-10.37	264.89	348.15
9	3	204	23.48	-1.82	-1.97e-02	21.68	6.50	552.92	-88.29	83.01	381.61	283.72
9	3	205	28.81	1.16	1.91	28.05	4.49	542.77	48.16	165.32	425.60	210.29
9	3	206	33.70	3.56	3.78	33.48	2.61	509.13	159.50	232.53	436.10	142.13
9	3	207	37.42	5.44	5.47	37.38	1.07	480.22	249.40	287.38	442.24	85.58
9	3	208	39.58	6.88	6.88	39.58	-0.18	465.44	320.77	329.82	456.39	35.05
9	3	209	39.95	7.89	7.95	39.89	-1.35	488.97	357.14	359.51	486.61	-17.52
9	3	210	38.34	8.28	8.54	38.08	-2.75	568.09	340.01	374.31	533.79	-81.53
9	3	211	34.77	7.44	8.32	33.90	-4.81	679.05	281.59	370.41	590.23	-165.57
9	3	212	30.17	3.67	6.47	27.37	-8.15	800.35	178.74	343.27	635.83	-274.23
9	3	213	26.26	-5.98	0.84	19.43	-13.17	888.50	18.22	289.71	617.01	-403.19
9	3	214	21.30	-23.16	-13.50	11.64	-18.33	1000.03	-180.04	253.99	566.00	-569.04



M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
9	3	215	12.88	-50.03	-43.84	6.69	-18.75	1117.39	-372.30	199.47	545.62	-724.46
9	3	216	5.05	-85.45	-82.16	1.76	-16.95	1153.39	-431.01	175.82	546.56	-770.21
9	3	217	13.07	-4.25	6.45	2.38	8.42	334.49	-286.46	-8.95	56.98	308.72
9	3	218	12.37	-8.69	-0.42	4.10	10.28	523.45	-150.54	165.54	207.37	336.34
9	3	219	16.47	-10.08	-2.40	8.79	12.04	676.04	114.02	359.28	430.78	278.73
9	3	220	18.05	-7.49	-1.70	12.26	10.70	741.18	352.55	533.49	560.25	193.85
9	3	221	18.38	-3.26	0.24	14.89	7.96	782.65	518.19	689.03	611.81	126.47
9	3	222	18.50	0.86	2.46	16.90	5.07	834.83	593.96	809.83	618.96	73.46
9	3	223	18.73	4.07	4.47	18.33	2.40	905.40	615.93	901.52	619.81	33.30
9	3	224	19.02	6.02	6.02	19.02	-0.14	968.33	635.20	968.33	635.20	0.42
9	3	225	19.45	6.35	6.97	18.82	-2.79	1014.14	671.50	1011.03	674.62	-32.53
9	3	226	20.22	4.52	7.13	17.60	-5.85	1043.52	721.63	1025.77	739.38	-73.47
9	3	227	21.48	4.63e-02	6.11	15.41	-9.65	1071.09	751.64	1003.20	819.54	-130.69
9	3	228	23.02	-7.29	3.04	12.70	-14.37	1122.19	693.76	930.52	885.44	-213.03
9	3	229	24.11	-17.30	-3.67	10.47	-19.46	1183.67	519.71	801.56	901.82	-328.17
9	3	230	23.46	-28.67	-15.85	10.64	-22.45	1196.31	232.12	608.84	819.59	-470.43
9	3	231	18.69	-40.92	-34.25	12.02	-18.79	956.19	-82.33	281.07	592.78	-495.32
9	3	232	17.19	-43.62	-39.86	13.42	-14.66	702.63	-205.88	58.12	438.63	-412.49
9	3	233	22.07	-6.88	14.47	0.72	12.73	92.14	-93.05	17.37	-18.27	90.86
9	3	234	15.54	-11.87	2.96	0.71	13.66	466.58	173.10	381.29	258.39	133.26
9	3	235	13.71	-14.15	-3.08	2.64	13.63	833.21	578.61	795.95	615.87	89.99
9	3	236	11.12	-12.10	-3.99	3.01	11.07	1097.56	753.50	1095.06	756.00	29.19
9	3	237	8.37	-8.01	-2.05	2.41	7.88	1322.18	795.21	1321.96	795.43	-10.82
9	3	238	6.00	-3.82	0.53	1.65	4.88	1492.60	792.68	1491.10	794.18	-32.37
9	3	239	4.12	-0.27	2.70	1.15	2.05	1614.70	786.94	1612.54	789.10	-42.23
9	3	240	4.39	0.69	4.20	0.88	-0.83	1697.58	800.35	1695.22	802.71	-45.96
9	3	241	7.28	-1.72	4.86	0.70	-3.99	1745.13	843.04	1742.58	845.59	-47.90
9	3	242	10.40	-5.32	4.52	0.56	-7.60	1753.16	915.96	1749.95	919.16	-51.73
9	3	243	13.53	-10.05	2.82	0.65	-11.74	1709.26	1008.60	1703.65	1014.21	-62.43
9	3	244	16.52	-15.95	-0.86	1.43	-16.19	1597.94	1090.00	1581.79	1106.15	-89.12
9	3	245	18.89	-22.58	-7.14	3.45	-20.05	1421.07	1066.11	1351.41	1135.77	-140.97
9	3	246	19.02	-28.58	-15.94	6.37	-21.02	1193.89	782.06	977.39	998.56	-205.64
9	3	247	16.04	-30.93	-23.40	8.51	-17.23	753.75	284.50	438.95	599.31	-220.50
9	3	248	14.71	-28.94	-23.79	9.56	-14.08	446.46	82.07	190.09	338.44	-166.41
9	3	249	29.78	-8.70	22.43	-1.35	15.12	227.46	-307.81	34.79	-115.14	-256.92
9	3	250	15.10	-15.00	3.52	-3.42	14.65	672.22	147.81	554.07	265.96	-219.09
9	3	251	6.64	-17.18	-6.18	-4.36	11.87	1226.34	629.29	1130.99	724.64	-218.71
9	3	252	0.79	-14.80	-6.65	-7.36	7.79	1578.81	806.00	1517.18	867.63	-209.36
9	3	253	-1.37	-13.58	-3.81	-11.14	4.88	1842.44	859.61	1803.13	898.91	-192.58
9	3	254	-0.54	-14.68	-1.09	-14.12	2.75	2025.12	864.25	2001.36	888.01	-164.38
9	3	255	1.03	-15.83	1.01	-15.80	0.62	2150.50	864.53	2136.93	878.10	-131.37
9	3	256	2.43	-16.64	2.26	-16.47	-1.79	2230.85	882.05	2223.88	889.02	-96.70
9	3	257	3.60	-17.36	2.55	-16.30	-4.58	2270.08	926.04	2267.44	928.67	-59.45
9	3	258	4.79	-18.29	1.78	-15.28	-7.76	2263.96	998.13	2263.74	998.35	-16.80
9	3	259	6.20	-19.65	-0.24	-13.21	-11.18	2199.55	1091.68	2198.54	1092.69	33.55
9	3	260	7.92	-21.53	-3.82	-9.79	-14.42	2052.67	1181.51	2043.24	1190.94	90.16
9	3	261	9.89	-23.87	-9.00	-4.98	-16.76	1784.66	1191.52	1747.28	1228.90	144.12
9	3	262	11.70	-25.47	-14.24	0.46	-17.07	1376.91	946.56	1261.27	1062.21	190.77
9	3	263	12.82	-23.07	-15.44	5.20	-14.68	757.30	304.32	539.33	522.29	226.33
9	3	264	14.01	-18.28	-11.95	7.68	-12.82	429.14	-109.35	167.74	152.05	269.13
9	3	265	40.15	-9.45	33.71	-3.01	16.67	590.36	-775.61	41.32	-226.57	-669.72
9	3	266	7.28	-19.17	-2.58	-9.31	12.79	1062.78	-307.31	572.06	183.41	-656.91
9	3	267	-7.54	-18.06	-11.91	-13.69	5.18	1519.91	252.30	1107.92	664.29	-593.72
9	3	268	-7.39	-21.18	-7.44	-21.12	0.86	1794.66	562.67	1542.22	815.11	-497.27
9	3	269	-4.27	-28.04	-4.28	-28.04	0.13	1972.09	694.21	1829.51	836.79	-402.34
9	3	270	-1.78	-31.79	-1.79	-31.79	-0.35	2097.67	747.66	2022.92	822.41	-308.74
9	3	271	5.05e-02	-33.80	1.67e-03	-33.75	-1.29	2187.41	777.32	2150.78	813.96	-224.31
9	3	272	1.08	-34.60	0.88	-34.40	-2.67	2241.49	807.85	2226.71	822.63	-144.79
9	3	273	1.38	-34.33	0.81	-33.77	-4.46	2258.13	849.97	2255.29	852.81	-63.18
9	3	274	1.09	-33.06	-0.19	-31.77	-6.51	2235.71	903.99	2235.03	904.66	29.99
9	3	275	0.38	-30.76	-2.15	-28.23	-8.51	2173.54	956.56	2155.86	974.25	145.64
9	3	276	-0.65	-27.46	-5.18	-22.93	-10.05	2080.00	965.83	1996.20	1049.62	293.83
9	3	277	-1.26	-23.87	-9.19	-15.94	-10.79	1965.98	831.89	1713.82	1084.05	471.58
9	3	278	0.56	-21.39	-12.76	-8.08	-10.72	1769.74	404.40	1246.19	927.94	663.87
9	3	279	5.11	-17.11	-11.15	-0.85	-9.85	1194.09	-311.38	523.96	358.74	748.19
9	3	280	9.72	-9.88	-3.50	3.34	-9.19	804.23	-694.38	153.99	-44.14	742.72
9	3	281	52.33	-9.58	48.47	-5.72	14.96	641.70	-1111.40	-187.07	-282.63	-875.25
9	3	282	-16.89	-25.59	-22.11	-20.37	4.26	854.32	-1055.88	-163.68	-37.87	-953.03
9	3	283	-9.81	-33.01	-12.33	-30.49	-7.22	1339.45	-456.54	489.07	393.83	-896.73
9	3	284	-4.71	-45.27	-5.80	-44.18	-6.57	1383.96	-101.07	788.86	494.03	-727.73
...												
9	32	318	-10.39	-44.04	-41.11	-13.31	-9.47	1479.43	-1508.80	93.92	-123.30	1490.16



M_G	Cmb	Nodo	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
M_G			N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
				-352.09	-287.67	-348.55	-91.07		-3764.01	-2167.69	-3750.95	-3110.32
			237.13		87.49	236.71	80.15	6602.26		6469.28	2221.44	2486.51

Elem.	Cmb	Nodo	Von Mises	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
			daN/cm2	daN/cm	daN/cm	daN/cm	daN/cm	daN/cm	daN	daN	daN	daN	daN
1	1	1	0.88	12.34	-4.91	-2.83	10.26	-5.63	88.80	-86.60	-3.29	5.49	-87.59
		2	0.96	-3.70	-16.03	-7.35	-12.38	-5.63	34.69	-143.08	-21.72	-86.67	-82.74
		7	1.16	-5.70	-17.31	-10.08	-12.93	-5.63	77.23	-171.45	-9.91	-84.31	-118.65
		6	1.10	11.56	-7.41	-5.56	9.71	-5.63	131.69	-115.31	8.53	7.85	-123.50
1	3	1	0.60	8.23	-3.61	-2.53	7.15	-3.41	65.94	-56.53	1.83	7.59	-61.17
		2	0.64	-3.43	-10.84	-5.68	-8.59	-3.41	29.30	-93.82	-10.50	-54.03	-57.59
		7	0.77	-4.16	-11.30	-6.67	-8.79	-3.41	58.39	-112.43	-1.76	-52.28	-81.59
		6	0.74	7.96	-4.53	-3.52	6.95	-3.41	95.12	-75.23	10.56	9.33	-85.18
1	4	1	0.60	8.23	-3.61	-2.53	7.15	-3.41	65.94	-56.53	1.83	7.59	-61.17
		2	0.64	-3.43	-10.84	-5.68	-8.59	-3.41	29.30	-93.82	-10.50	-54.03	-57.59
		7	0.77	-4.16	-11.30	-6.67	-8.79	-3.41	58.39	-112.43	-1.76	-52.28	-81.59
		6	0.74	7.96	-4.53	-3.52	6.95	-3.41	95.12	-75.23	10.56	9.33	-85.18
1	5	1	0.60	8.23	-3.61	-2.53	7.15	-3.41	65.94	-56.53	1.83	7.59	-61.17
		2	0.64	-3.43	-10.84	-5.68	-8.59	-3.41	29.30	-93.82	-10.50	-54.03	-57.59
		7	0.77	-4.16	-11.30	-6.67	-8.79	-3.41	58.39	-112.43	-1.76	-52.28	-81.59
		6	0.74	7.96	-4.53	-3.52	6.95	-3.41	95.12	-75.23	10.56	9.33	-85.18
1	8	1	1.27	9.18	-3.54	-0.89	6.54	-5.16	167.96	-147.70	1.35	18.92	-157.59
		2	1.51	2.51	-8.33	-2.56	-3.27	-5.41	259.23	-137.49	-7.24	128.97	-186.30
		7	1.33	-1.81	-16.68	-14.48	-4.02	-5.29	182.04	-126.61	-59.94	115.38	-127.01
		6	1.07	5.12	-13.75	-12.32	3.69	-4.99	67.93	-140.95	-78.30	5.28	-95.71
1	31	1	1.25	8.69	-1.91	0.04	6.74	-4.11	177.87	-145.90	11.41	20.56	-161.82
		2	1.33	0.29	-9.28	-2.45	-6.53	-4.33	216.59	-139.07	10.13	67.40	-175.51
		7	1.19	-3.21	-12.06	-8.49	-6.79	-4.34	176.56	-129.90	-14.22	60.88	-148.56
		6	1.10	6.60	-7.11	-5.76	5.25	-4.09	131.16	-137.63	-20.51	14.04	-133.28
2	1	2	1.21	-1.71	-13.79	-3.83	-11.68	-4.59	122.98	-161.29	36.68	-74.99	-130.71
		3	1.07	-2.69	-16.48	-4.44	-14.74	-4.59	106.84	-124.70	40.09	-57.95	-104.88
		8	1.29	-0.54	-15.80	-2.08	-14.26	-4.59	241.41	-51.69	213.07	-23.36	-86.62
		7	1.39	0.36	-13.03	-1.46	-11.20	-4.59	252.80	-83.53	209.66	-40.40	-112.45
2	3	2	0.80	-2.56	-9.61	-3.92	-8.24	-2.79	91.56	-103.92	32.97	-45.33	-89.56
		3	0.71	-3.29	-11.56	-4.37	-10.49	-2.79	79.87	-78.94	35.19	-34.26	-71.41
		8	0.90	-0.38	-10.67	-1.20	-9.85	-2.79	175.77	-29.06	156.68	-9.96	-59.55
		7	0.96	0.24	-8.60	-0.75	-7.61	-2.79	183.91	-50.49	154.46	-21.04	-77.69
2	4	2	0.80	-2.56	-9.61	-3.92	-8.24	-2.79	91.56	-103.92	32.97	-45.33	-89.56
		3	0.71	-3.29	-11.56	-4.37	-10.49	-2.79	79.87	-78.94	35.19	-34.26	-71.41
		8	0.90	-0.38	-10.67	-1.20	-9.85	-2.79	175.77	-29.06	156.68	-9.96	-59.55
		7	0.96	0.24	-8.60	-0.75	-7.61	-2.79	183.91	-50.49	154.46	-21.04	-77.69
2	5	2	0.80	-2.56	-9.61	-3.92	-8.24	-2.79	91.56	-103.92	32.97	-45.33	-89.56
		3	0.71	-3.29	-11.56	-4.37	-10.49	-2.79	79.87	-78.94	35.19	-34.26	-71.41
		8	0.90	-0.38	-10.67	-1.20	-9.85	-2.79	175.77	-29.06	156.68	-9.96	-59.55
		7	0.96	0.24	-8.60	-0.75	-7.61	-2.79	183.91	-50.49	154.46	-21.04	-77.69
2	9	2	1.47	11.74	-4.73	6.63	0.38	-7.62	269.08	-71.44	45.33	152.31	-161.64
		3	1.28	11.71	-5.90	6.49	-0.68	-8.04	252.25	-23.77	51.41	177.07	-122.87
		8	1.14	-1.02	-11.30	-7.55	-4.77	-4.95	336.92	148.03	252.64	232.31	-93.90
		7	1.41	3.65	-12.75	-7.32	-1.79	-7.72	362.15	92.97	247.80	207.32	-133.06
2	43	2	1.43	8.43	-7.49	6.07	-5.13	-5.66	217.98	-141.53	25.11	51.34	-179.27
		3	1.24	8.04	-8.55	5.86	-6.37	-5.60	203.18	-98.83	31.15	73.20	-149.54
		8	1.23	1.46	-11.45	-2.13	-7.86	-5.78	288.69	23.87	201.50	111.06	-124.45
		7	1.40	1.97	-10.52	-1.90	-6.66	-5.78	306.59	-20.13	197.08	89.38	-154.23
3	1	3	0.89	-4.59	-15.47	-5.17	-14.88	-2.46	79.44	-114.25	25.96	-60.78	-86.59
		4	0.48	-2.29	-8.24	-3.59	-6.94	-2.46	52.07	-50.64	32.00	-30.57	-40.72
		9	0.77	-0.86	-7.66	-1.91	-6.61	-2.46	180.11	-5.24	176.54	-1.67	-25.49
		8	1.06	-2.97	-15.07	-3.50	-14.55	-2.46	193.13	-54.50	170.50	-31.87	-71.36
3	3	3	0.59	-4.27	-10.93	-4.65	-10.54	-1.55	58.73	-72.86	22.63	-36.77	-58.71
		4	0.31	-2.55	-5.96	-3.54	-4.97	-1.55	38.46	-29.38	26.50	-17.42	-25.85
		9	0.55	-0.48	-5.08	-1.08	-4.48	-1.55	132.07	1.28	130.06	3.29	-16.09
		8	0.74	-1.90	-10.35	-2.20	-10.05	-1.55	141.41	-31.28	126.19	-16.06	-48.95
3	4	3	0.59	-4.27	-10.93	-4.65	-10.54	-1.55	58.73	-72.86	22.63	-36.77	-58.71
		4	0.31	-2.55	-5.96	-3.54	-4.97	-1.55	38.46	-29.38	26.50	-17.42	-25.85
		9	0.55	-0.48	-5.08	-1.08	-4.48	-1.55	132.07	1.28	130.06	3.29	-16.09
		8	0.74	-1.90	-10.35	-2.20	-10.05	-1.55	141.41	-31.28	126.19	-16.06	-48.95
3	5	3	0.59	-4.27	-10.93	-4.65	-10.54	-1.55	58.73	-72.86	22.63	-36.77	-58.71
		4	0.31	-2.55	-5.96	-3.54	-4.97	-1.55	38.46	-29.38	26.50	-17.42	-25.85



Elem.	Cmb	Nodo	Von Mises	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
		9	0.55	-0.48	-5.08	-1.08	-4.48	-1.55	132.07	1.28	130.06	3.29	-16.09
		8	0.74	-1.90	-10.35	-2.20	-10.05	-1.55	141.41	-31.28	126.19	-16.06	-48.95
3	9	3	1.09	13.21	-11.52	3.23	-1.53	-12.13	210.01	41.05	70.25	180.81	-63.88
		4	0.65	7.68	-3.85	3.46	0.38	-5.56	173.86	64.94	65.45	173.35	7.48
		9	0.93	1.60	-9.74	-5.84	-2.31	-5.39	236.01	200.26	218.61	217.66	-17.87
		8	1.24	7.09	-17.89	-6.28	-4.52	-12.46	297.22	146.26	218.80	224.68	-75.42
3	36	3	0.98	5.46	-8.74	2.89	-6.17	-5.47	175.40	-52.17	35.52	87.72	-110.75
		4	0.50	4.06	-1.68	3.72	-1.34	-1.36	129.36	5.11	36.16	98.31	-53.80
		9	0.75	-1.24	-3.72	-2.09	-2.86	-1.18	221.46	108.99	196.51	133.93	-46.73
		8	1.10	0.61	-11.54	-3.07	-7.86	-5.58	272.69	45.04	194.66	123.07	-108.05
4	1	4	0.33	-2.55	-9.23	-4.63	-7.15	3.09	27.21	-42.65	17.95	-33.38	-23.70
		5	0.32	3.39	-4.37	-2.83	1.85	3.09	37.74	-7.26	25.60	4.87	-19.97
		10	0.25	3.51	-4.08	-2.49	1.92	3.09	41.76	7.13	40.94	7.94	5.25
		9	0.33	-2.29	-9.08	-4.29	-7.09	3.09	33.32	-30.35	33.29	-30.32	1.53
4	3	4	0.21	-2.14	-6.31	-3.49	-4.96	1.95	18.65	-25.06	13.59	-20.00	-13.99
		5	0.21	2.49	-2.98	-2.16	1.67	1.95	25.51	-1.48	18.66	5.37	-11.74
		10	0.16	2.71	-2.41	-1.51	1.81	1.95	29.05	6.08	27.91	7.22	4.98
		9	0.22	-1.64	-6.02	-2.83	-4.83	1.95	23.02	-18.33	22.83	-18.15	2.74
4	4	4	0.21	-2.14	-6.31	-3.49	-4.96	1.95	18.65	-25.06	13.59	-20.00	-13.99
		5	0.21	2.49	-2.98	-2.16	1.67	1.95	25.51	-1.48	18.66	5.37	-11.74
		10	0.16	2.71	-2.41	-1.51	1.81	1.95	29.05	6.08	27.91	7.22	4.98
		9	0.22	-1.64	-6.02	-2.83	-4.83	1.95	23.02	-18.33	22.83	-18.15	2.74
4	5	4	0.21	-2.14	-6.31	-3.49	-4.96	1.95	18.65	-25.06	13.59	-20.00	-13.99
		5	0.21	2.49	-2.98	-2.16	1.67	1.95	25.51	-1.48	18.66	5.37	-11.74
		10	0.16	2.71	-2.41	-1.51	1.81	1.95	29.05	6.08	27.91	7.22	4.98
		9	0.22	-1.64	-6.02	-2.83	-4.83	1.95	23.02	-18.33	22.83	-18.15	2.74
4	14	4	0.91	1.39	-16.87	-7.72	-7.76	9.13	-48.62	-198.32	-99.39	-147.56	-70.87
		5	0.88	14.31	-9.33	5.21	10.20	8.97	-29.57	-135.57	-86.72	-78.42	-52.84
		10	0.66	17.95	-4.00	1.95	12.00	9.75	58.89	-61.05	53.90	-56.05	23.95
		9	0.90	9.82	-16.52	-0.45	-6.25	12.84	42.41	-125.61	42.40	-125.61	-1.17
4	22	4	0.73	-0.26	-13.62	-6.84	-7.04	6.68	18.78	-133.63	-4.72	-110.13	-55.04
		5	0.73	10.63	-7.52	-4.63	7.74	6.63	25.45	-75.54	4.35	-54.44	-41.05
		10	0.51	13.22	-2.94	1.10	9.19	6.99	50.83	-39.93	48.33	-37.43	14.85
		9	0.66	5.66	-12.54	-1.08	-5.79	8.79	38.33	-93.64	38.13	-93.44	-5.11
5	1	6	0.64	7.55	-7.00	-6.16	6.70	3.40	69.92	-60.82	7.31	1.78	-65.31
		7	0.89	-8.78	-17.05	-10.55	-15.27	3.40	139.24	-23.98	25.01	90.25	-74.80
		12	0.75	-11.76	-18.74	-14.44	-16.05	3.40	101.90	-14.38	1.89	85.63	-40.33
		11	0.46	6.62	-10.74	-10.05	5.93	3.40	22.19	-40.84	-15.81	-2.84	-30.84
5	3	6	0.45	5.70	-4.76	-3.94	4.88	2.81	47.66	-36.94	9.03	1.69	-42.14
		7	0.64	-5.49	-12.15	-7.03	-10.60	2.81	100.47	-9.43	22.42	68.63	-49.86
		12	0.53	-7.37	-13.22	-9.49	-11.10	2.81	73.02	-4.52	3.62	64.87	-23.78
		11	0.31	5.08	-7.08	-6.39	4.39	2.81	10.60	-22.43	-9.76	-2.07	-16.06
5	4	6	0.45	5.70	-4.76	-3.94	4.88	2.81	47.66	-36.94	9.03	1.69	-42.14
		7	0.64	-5.49	-12.15	-7.03	-10.60	2.81	100.47	-9.43	22.42	68.63	-49.86
		12	0.53	-7.37	-13.22	-9.49	-11.10	2.81	73.02	-4.52	3.62	64.87	-23.78
		11	0.31	5.08	-7.08	-6.39	4.39	2.81	10.60	-22.43	-9.76	-2.07	-16.06
5	5	6	0.45	5.70	-4.76	-3.94	4.88	2.81	47.66	-36.94	9.03	1.69	-42.14
		7	0.64	-5.49	-12.15	-7.03	-10.60	2.81	100.47	-9.43	22.42	68.63	-49.86
		12	0.53	-7.37	-13.22	-9.49	-11.10	2.81	73.02	-4.52	3.62	64.87	-23.78
		11	0.31	5.08	-7.08	-6.39	4.39	2.81	10.60	-22.43	-9.76	-2.07	-16.06
5	9	6	0.84	3.28	-14.16	-13.68	2.80	2.87	45.18	-137.08	-96.88	4.98	-75.57
		7	0.89	-4.95	-17.18	-15.94	-6.18	3.68	144.09	-79.58	-67.84	132.35	-49.88
		12	0.68	-3.11	-11.63	-9.56	-5.18	3.65	144.07	-25.49	-25.26	143.85	6.22
		11	0.44	4.58	-8.17	-7.43	3.84	2.99	23.30	-46.79	-40.43	16.95	-20.12
5	31	6	0.80	6.13	-6.88	-5.84	5.09	3.53	88.89	-108.01	-23.71	4.59	-97.43
		7	0.92	-5.82	-12.83	-8.89	-9.76	3.48	152.37	-57.11	-4.36	99.62	-90.92
		12	0.74	-5.80	-12.80	-8.64	-9.96	3.43	124.00	-25.39	-3.54	102.15	-52.79
		11	0.55	6.01	-6.49	-5.65	5.17	3.11	56.56	-64.65	-15.41	7.32	-59.53
6	1	7	1.20	2.03	-17.52	-1.93	-13.55	7.86	277.43	101.31	244.58	134.17	-68.61
		8	1.29	1.07	-19.87	-2.48	-16.31	7.86	288.38	84.78	243.64	129.51	-84.30
		13	1.41	-15.11	-31.54	-25.70	-20.95	7.86	214.08	32.98	138.57	108.49	-89.29
		12	1.33	-13.07	-30.27	-25.14	-18.19	7.86	201.10	51.56	139.51	113.15	-73.60
6	3	7	0.85	1.75	-12.29	-1.11	-9.42	5.66	199.79	78.73	178.64	99.88	-45.96
		8	0.92	1.11	-13.84	-1.48	-11.25	5.66	208.60	67.91	178.31	98.20	-57.83
		13	0.97	-9.72	-21.30	-16.72	-14.30	5.66	150.76	30.37	98.82	82.30	-59.62
		12	0.91	-8.43	-20.40	-16.36	-12.47	5.66	139.92	43.22	99.16	83.98	-47.75
6	4	7	0.85	1.75	-12.29	-1.11	-9.42	5.66	199.79	78.73	178.64	99.88	-45.96
		8	0.92	1.11	-13.84	-1.48	-11.25	5.66	208.60	67.91	178.31	98.20	-57.83
		13	0.97	-9.72	-21.30	-16.72	-14.30	5.66	150.76	30.37	98.82	82.30	-59.62
		12	0.91	-8.43	-20.40	-16.36	-12.47	5.66	139.92	43.22	99.16	83.98	-47.75
6	5	7	0.85	1.75	-12.29	-1.11	-9.42	5.66	199.79	78.73	178.64	99.88	-45.96
		8	0.92	1.11	-13.84	-1.48	-11.25	5.66	208.60	67.91	178.31	98.20	-57.83



Elem.	Cmb	Nodo	Von Mises	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
		13	0.97	-9.72	-21.30	-16.72	-14.30	5.66	150.76	30.37	98.82	82.30	-59.62
		12	0.91	-8.43	-20.40	-16.36	-12.47	5.66	139.92	43.22	99.16	83.98	-47.75
6	8	7	1.24	0.64	-13.97	-6.51	-6.82	7.31	288.77	136.63	254.55	170.85	-63.52
		8	1.36	-0.30	-15.98	-6.97	-9.31	7.75	310.44	125.92	256.45	179.91	-83.95
		13	1.23	-7.20	-23.88	-18.66	-12.43	7.74	217.43	69.09	131.87	154.65	-73.29
		12	1.10	-5.93	-22.51	-18.21	-10.22	7.26	191.00	84.66	130.03	145.62	-52.59
6	43	7	1.24	1.71	-12.63	-2.30	-8.62	6.43	287.42	68.91	216.80	139.52	-102.19
		8	1.34	0.90	-14.25	-2.68	-10.66	6.44	301.87	56.96	217.24	141.58	-116.46
		13	1.36	-9.52	-23.91	-19.40	-14.03	6.67	236.89	9.85	123.76	122.98	-113.52
		12	1.26	-8.30	-22.87	-19.02	-12.15	6.42	220.64	23.63	123.34	120.93	-98.49
7	1	8	1.27	2.63	-23.13	-3.90	-16.59	11.21	240.84	81.22	201.07	120.99	-69.04
		9	1.26	5.49	-18.12	-2.59	-10.03	11.21	243.69	50.55	196.43	97.81	-83.03
		14	1.50	-6.91	-31.29	-23.90	-14.30	11.21	220.54	20.79	152.34	88.99	-94.72
		13	1.50	-11.62	-34.45	-25.21	-20.85	11.21	218.35	50.80	156.98	112.17	-80.73
7	3	8	0.89	1.91	-15.83	-2.47	-11.45	7.65	174.80	65.13	147.82	92.10	-47.23
		9	0.88	3.90	-12.28	-1.55	-6.83	7.65	177.22	40.36	144.09	73.48	-58.62
		14	1.04	-4.43	-20.85	-15.64	-9.64	7.65	158.42	16.10	108.22	66.30	-68.01
		13	1.04	-7.68	-23.15	-16.56	-14.26	7.65	156.64	40.22	111.94	84.93	-56.62
7	4	8	0.89	1.91	-15.83	-2.47	-11.45	7.65	174.80	65.13	147.82	92.10	-47.23
		9	0.88	3.90	-12.28	-1.55	-6.83	7.65	177.22	40.36	144.09	73.48	-58.62
		14	1.04	-4.43	-20.85	-15.64	-9.64	7.65	158.42	16.10	108.22	66.30	-68.01
		13	1.04	-7.68	-23.15	-16.56	-14.26	7.65	156.64	40.22	111.94	84.93	-56.62
7	5	8	0.89	1.91	-15.83	-2.47	-11.45	7.65	174.80	65.13	147.82	92.10	-47.23
		9	0.88	3.90	-12.28	-1.55	-6.83	7.65	177.22	40.36	144.09	73.48	-58.62
		14	1.04	-4.43	-20.85	-15.64	-9.64	7.65	158.42	16.10	108.22	66.30	-68.01
		13	1.04	-7.68	-23.15	-16.56	-14.26	7.65	156.64	40.22	111.94	84.93	-56.62
7	9	8	1.27	3.52	-16.45	-6.59	-6.34	9.99	273.42	150.16	219.90	203.68	-61.10
		9	1.36	5.32	-18.00	-6.26	-6.42	11.66	271.63	93.95	210.30	155.28	-84.48
		14	1.51	-0.89	-25.42	-18.10	-8.21	11.22	256.80	37.14	150.99	142.96	-109.76
		13	1.41	-3.42	-24.23	-18.10	-9.54	9.48	265.89	87.05	161.09	191.84	-88.09
7	31	8	1.32	2.56	-16.79	-3.59	-10.65	9.00	271.53	67.13	194.05	144.61	-99.17
		9	1.36	4.85	-14.92	-2.82	-7.25	9.63	270.75	26.30	187.23	109.82	-115.94
		14	1.52	-3.89	-23.82	-17.36	-10.36	9.33	253.11	-16.61	136.94	99.56	-133.55
		13	1.47	-7.02	-24.90	-17.97	-13.96	8.71	256.78	21.90	144.05	134.63	-117.34
8	1	9	1.05	5.94	-21.42	-4.97	-10.51	13.39	117.74	4.60	53.18	69.16	-56.00
		10	0.92	10.29	-16.51	-3.43	-2.79	13.39	91.95	-3.79	47.48	40.67	-47.75
		15	1.18	3.72	-25.15	-16.10	-5.33	13.39	133.16	-4.18	81.51	47.48	-66.53
		14	1.28	-1.75	-28.94	-17.65	-13.04	13.39	156.58	6.59	87.21	75.96	-74.78
8	3	9	0.72	3.89	-14.37	-3.30	-7.18	8.92	84.95	3.95	36.87	52.04	-39.78
		10	0.63	7.12	-10.73	-2.16	-1.45	8.92	64.03	-3.63	32.12	28.28	-33.78
		15	0.82	2.77	-16.59	-10.67	-3.15	8.92	95.89	-5.78	56.88	33.23	-49.44
		14	0.89	-1.31	-19.39	-11.82	-8.88	8.92	114.81	3.81	61.63	56.99	-55.45
8	4	9	0.72	3.89	-14.37	-3.30	-7.18	8.92	84.95	3.95	36.87	52.04	-39.78
		10	0.63	7.12	-10.73	-2.16	-1.45	8.92	64.03	-3.63	32.12	28.28	-33.78
		15	0.82	2.77	-16.59	-10.67	-3.15	8.92	95.89	-5.78	56.88	33.23	-49.44
		14	0.89	-1.31	-19.39	-11.82	-8.88	8.92	114.81	3.81	61.63	56.99	-55.45
8	5	9	0.72	3.89	-14.37	-3.30	-7.18	8.92	84.95	3.95	36.87	52.04	-39.78
		10	0.63	7.12	-10.73	-2.16	-1.45	8.92	64.03	-3.63	32.12	28.28	-33.78
		15	0.82	2.77	-16.59	-10.67	-3.15	8.92	95.89	-5.78	56.88	33.23	-49.44
		14	0.89	-1.31	-19.39	-11.82	-8.88	8.92	114.81	3.81	61.63	56.99	-55.45
8	13	9	1.09	7.35	-18.91	-6.01	-5.55	13.13	136.37	-27.53	1.49	107.34	-62.57
		10	0.93	5.69	-20.83	-6.56	-8.58	13.22	78.92	-28.48	-8.88	59.32	-41.48
		15	1.24	3.59	-27.20	-13.52	-10.08	15.30	141.48	5.82	70.75	76.55	-67.77
		14	1.39	6.07	-25.30	-12.74	-6.49	15.37	194.63	12.88	83.31	124.20	-88.54
8	48	9	1.09	6.02	-17.74	-4.53	-7.20	11.80	123.48	-44.78	8.76	69.94	-78.37
		10	0.93	7.65	-15.56	-4.11	-3.80	11.61	85.87	-43.66	3.05	39.16	-62.19
		15	1.23	4.44	-22.88	-13.08	-5.36	13.10	144.53	-28.88	63.32	52.33	-86.53
		14	1.37	2.09	-24.74	-13.43	-9.22	13.25	179.44	-25.72	70.63	83.09	-102.39
9	1	16	2.70	-0.31	-24.73	-12.30	-12.74	-12.21	115.20	-232.87	-15.62	-102.04	168.59
		17	3.28	-8.99	-37.51	-15.87	-30.62	-12.21	19.88	-434.64	-65.14	-349.63	177.24
		2	3.03	-3.72	-35.17	-9.53	-29.36	-12.21	-28.22	-355.70	-39.44	-344.49	59.56
		1	1.37	3.80	-21.23	-5.95	-11.47	-12.21	30.43	-117.26	10.08	-96.90	50.91
9	3	16	1.96	0.25	-17.59	-8.80	-8.54	-8.92	85.80	-166.70	-10.25	-70.65	122.58
		17	2.33	-6.00	-26.31	-11.30	-21.02	-8.92	15.86	-312.80	-46.25	-250.69	128.67
		2	2.14	-2.50	-24.66	-7.00	-20.16	-8.92	-19.98	-255.25	-28.16	-247.07	43.09
		1	1.00	2.97	-15.15	-4.50	-7.68	-8.92	23.05	-82.24	7.85	-67.04	37.00
9	4	16	1.96	0.25	-17.59	-8.80	-8.54	-8.92	85.80	-166.70	-10.25	-70.65	122.58
		17	2.33	-6.00	-26.31	-11.30	-21.02	-8.92	15.86	-312.80	-46.25	-250.69	128.67
		2	2.14	-2.50	-24.66	-7.00	-20.16	-8.92	-19.98	-255.25	-28.16	-247.07	43.09
		1	1.00	2.97	-15.15	-4.50	-7.68	-8.92	23.05	-82.24	7.85	-67.04	37.00
9	5	16	1.96	0.25	-17.59	-8.80	-8.54	-8.92	85.80	-166.70	-10.25	-70.65	122.58
		17	2.33	-6.00	-26.31	-11.30	-21.02	-8.92	15.86	-312.80	-46.25	-250.69	128.67



Elem.	Cmb	Nodo	Von Mises	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
		2	2.14	-2.50	-24.66	-7.00	-20.16	-8.92	-19.98	-255.25	-28.16	-247.07	43.09
		1	1.00	2.97	-15.15	-4.50	-7.68	-8.92	23.05	-82.24	7.85	-67.04	37.00
9	6	16	2.40	-4.07	-12.56	-11.22	-5.41	-3.10	95.48	-281.23	-71.38	-114.38	187.12
		17	3.58	-11.90	-18.66	-13.93	-16.64	-3.10	-0.33	-506.88	-112.99	-394.22	210.65
		2	3.01	-7.67	-17.40	-8.79	-16.28	-3.10	-17.52	-412.45	-52.21	-377.76	111.79
		1	1.32	-2.40	-8.67	-6.02	-5.06	-3.10	49.29	-148.53	-2.44	-96.79	86.94
9	30	16	2.32	-3.37	-12.60	-10.33	-5.65	-3.98	108.34	-247.96	-38.73	-100.89	175.42
		17	3.25	-10.66	-19.76	-13.00	-17.42	-3.98	9.03	-454.97	-94.89	-351.04	193.44
		2	2.73	-6.96	-18.53	-8.54	-16.94	-3.98	-15.92	-367.23	-44.28	-338.88	95.70
		1	1.25	-1.51	-9.49	-5.83	-5.17	-3.98	48.03	-130.70	5.24	-87.90	76.27
10	1	17	5.01	-13.00	-44.22	-24.81	-32.41	-15.14	507.76	-269.51	479.04	-240.79	146.63
		18	4.93	-11.25	-41.92	-24.13	-29.04	-15.14	472.11	-327.39	463.45	-318.73	82.74
		3	3.77	1.79	-33.25	-6.90	-24.56	-15.14	-59.53	-452.11	-63.56	-448.07	-39.59
		2	3.05	0.09	-36.88	-7.79	-29.01	-15.14	-36.50	-351.68	-42.99	-345.20	44.75
10	3	17	3.62	-9.82	-31.30	-18.64	-22.48	-10.56	364.41	-192.84	344.17	-172.61	104.25
		18	3.57	-8.38	-29.58	-18.11	-19.85	-10.56	339.41	-232.90	333.33	-226.82	58.65
		3	2.64	0.79	-22.98	-5.64	-16.55	-10.56	-40.06	-321.24	-42.64	-318.67	-26.80
		2	2.15	-0.60	-25.77	-6.34	-20.02	-10.56	-23.35	-252.09	-28.33	-247.11	33.38
10	4	17	3.62	-9.82	-31.30	-18.64	-22.48	-10.56	364.41	-192.84	344.17	-172.61	104.25
		18	3.57	-8.38	-29.58	-18.11	-19.85	-10.56	339.41	-232.90	333.33	-226.82	58.65
		3	2.64	0.79	-22.98	-5.64	-16.55	-10.56	-40.06	-321.24	-42.64	-318.67	-26.80
		2	2.15	-0.60	-25.77	-6.34	-20.02	-10.56	-23.35	-252.09	-28.33	-247.11	33.38
10	5	17	3.62	-9.82	-31.30	-18.64	-22.48	-10.56	364.41	-192.84	344.17	-172.61	104.25
		18	3.57	-8.38	-29.58	-18.11	-19.85	-10.56	339.41	-232.90	333.33	-226.82	58.65
		3	2.64	0.79	-22.98	-5.64	-16.55	-10.56	-40.06	-321.24	-42.64	-318.67	-26.80
		2	2.15	-0.60	-25.77	-6.34	-20.02	-10.56	-23.35	-252.09	-28.33	-247.11	33.38
10	6	17	5.59	-13.16	-16.49	-13.52	-16.13	-1.04	663.98	-257.60	620.13	-213.76	196.17
		18	5.59	-13.11	-16.70	-13.43	-16.37	-1.04	619.05	-326.61	603.65	-311.21	119.70
		3	3.66	-9.74	-17.84	-9.88	-17.71	-1.04	-58.92	-506.51	-60.28	-505.15	-24.62
		2	3.00	-9.77	-17.53	-9.91	-17.39	-1.04	-13.02	-396.01	-34.60	-374.43	88.31
10	30	17	5.13	-12.71	-18.71	-14.02	-17.40	-2.48	603.06	-237.52	564.82	-199.29	175.15
		18	5.11	-12.48	-18.32	-13.85	-16.95	-2.48	562.41	-298.10	549.45	-285.14	104.81
		3	3.32	-8.51	-17.82	-9.22	-17.11	-2.48	-51.48	-452.26	-53.12	-450.62	-25.60
		2	2.71	-8.73	-18.39	-9.42	-17.70	-2.48	-13.17	-353.58	-30.53	-336.22	74.89
11	1	18	4.92	-24.37	-41.49	-34.99	-30.86	-8.31	431.60	-392.75	414.28	-375.43	-118.24
		19	5.06	-16.72	-37.24	-33.01	-20.95	-8.31	529.85	-291.22	447.58	-208.95	-246.55
		4	3.19	0.45	-19.57	-3.98	-15.15	-8.31	18.08	-371.40	-45.72	-307.61	-144.14
		3	3.60	-2.40	-26.83	-5.66	-23.57	-8.31	-70.74	-452.29	-74.00	-449.02	-35.15
11	3	18	3.58	-17.97	-29.07	-26.09	-20.95	-4.92	308.86	-279.67	296.61	-267.42	-84.02
		19	3.68	-12.60	-26.80	-24.82	-14.58	-4.92	379.21	-205.49	320.69	-146.97	-175.48
		4	2.20	-0.89	-12.87	-3.46	-10.31	-4.92	13.62	-261.82	-30.91	-217.29	-101.39
		3	2.51	-2.68	-17.57	-4.54	-15.72	-4.92	-49.29	-321.68	-51.37	-319.60	-23.71
11	4	18	3.58	-17.97	-29.07	-26.09	-20.95	-4.92	308.86	-279.67	296.61	-267.42	-84.02
		19	3.68	-12.60	-26.80	-24.82	-14.58	-4.92	379.21	-205.49	320.69	-146.97	-175.48
		4	2.20	-0.89	-12.87	-3.46	-10.31	-4.92	13.62	-261.82	-30.91	-217.29	-101.39
		3	2.51	-2.68	-17.57	-4.54	-15.72	-4.92	-49.29	-321.68	-51.37	-319.60	-23.71
11	5	18	3.58	-17.97	-29.07	-26.09	-20.95	-4.92	308.86	-279.67	296.61	-267.42	-84.02
		19	3.68	-12.60	-26.80	-24.82	-14.58	-4.92	379.21	-205.49	320.69	-146.97	-175.48
		4	2.20	-0.89	-12.87	-3.46	-10.31	-4.92	13.62	-261.82	-30.91	-217.29	-101.39
		3	2.51	-2.68	-17.57	-4.54	-15.72	-4.92	-49.29	-321.68	-51.37	-319.60	-23.71
11	6	18	5.98	-11.00	-27.50	-22.04	-16.46	7.76	535.67	-432.39	508.62	-405.34	-159.56
		19	5.86	-10.65	-27.45	-22.26	-15.85	7.76	635.20	-250.57	547.29	-162.66	-264.84
		4	2.64	-2.62	-19.98	-7.42	-15.18	7.76	48.24	-358.01	-11.83	-297.94	-144.20
		3	3.64	-2.76	-20.36	-7.42	-15.70	7.76	-47.89	-508.87	-50.62	-506.13	-35.40
11	34	18	5.37	-14.19	-25.27	-22.16	-17.30	4.98	487.21	-386.50	464.57	-363.87	-138.79
		19	5.39	-12.61	-24.61	-21.96	-15.26	4.98	584.49	-239.34	500.43	-155.29	-249.36
		4	2.49	-4.28	-16.29	-6.93	-13.63	4.98	45.06	-332.29	-14.98	-272.24	-138.03
		3	3.27	-4.84	-17.72	-7.19	-15.37	4.98	-46.39	-453.27	-48.99	-450.68	-32.39
12	1	19	4.56	-19.95	-29.66	-29.39	-20.23	-1.62	-87.74	-630.04	-349.43	-368.35	-270.99
		20	3.74	-15.96	-28.78	-28.57	-16.17	-1.62	-36.03	-485.64	-316.75	-204.92	-217.74
		5	1.64	-4.30	-11.76	-4.68	-11.39	-1.62	0.11	-200.52	-49.03	-151.38	-86.28
		4	2.89	-5.23	-15.71	-5.49	-15.45	-1.62	-16.46	-380.06	-81.71	-314.80	-139.53
12	3	19	3.15	-13.81	-21.03	-21.02	-13.82	0.28	-58.53	-443.24	-242.21	-259.56	-192.16
		20	2.59	-11.84	-20.63	-20.63	-11.85	0.28	-21.02	-340.66	-218.86	-142.81	-155.23
		5	1.11	-3.55	-8.45	-3.56	-8.43	0.28	1.78	-140.67	-33.21	-105.68	-61.32
		4	1.98	-3.94	-10.42	-3.96	-10.41	0.28	-10.92	-268.06	-56.56	-222.43	-98.25
12	4	19	3.15	-13.81	-21.03	-21.02	-13.82	0.28	-58.53	-443.24	-242.21	-259.56	-192.16
		20	2.59	-11.84	-20.63	-20.63	-11.85	0.28	-21.02	-340.66	-218.86	-142.81	-155.23
		5	1.11	-3.55	-8.45	-3.56	-8.43	0.28	1.78	-140.67	-33.21	-105.68	-61.32
		4	1.98	-3.94	-10.42	-3.96	-10.41	0.28	-10.92	-268.06	-56.56	-222.43	-98.25
12	5	19	3.15	-13.81	-21.03	-21.02	-13.82	0.28	-58.53	-443.24	-242.21	-259.56	-192.16
		20	2.59	-11.84	-20.63	-20.63	-11.85	0.28	-21.02	-340.66	-218.86	-142.81	-155.23



Elem.	Cmb	Nodo	Von Mises	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
		5	1.11	-3.55	-8.45	-3.56	-8.43	0.28	1.78	-140.67	-33.21	-105.68	-61.32
		4	1.98	-3.94	-10.42	-3.96	-10.41	0.28	-10.92	-268.06	-56.56	-222.43	-98.25
12	14	19	4.24	-1.97	-34.52	-19.99	-16.50	16.18	-51.80	-577.53	-314.62	-314.71	-262.87
		20	3.60	-4.18	-36.57	-19.72	-21.02	16.18	3.21	-446.43	-283.94	-159.27	-216.00
		5	2.10	4.45	-30.90	-6.12	-20.33	16.18	37.32	-179.00	-30.75	-110.93	-100.46
		4	2.87	5.67	-28.00	-6.53	-15.81	16.18	16.46	-341.65	-60.15	-265.05	-146.85
12	30	19	4.17	-13.84	-19.97	-17.35	-16.47	3.04	-87.86	-628.21	-372.56	-343.52	-269.79
		20	3.37	-15.09	-21.21	-17.75	-18.55	3.04	-22.77	-481.53	-337.22	-167.08	-213.02
		5	1.42	-7.22	-18.44	-8.11	-17.55	3.04	34.45	-161.48	-21.88	-105.15	-88.68
		4	2.62	-6.73	-16.52	-7.79	-15.47	3.04	15.26	-352.09	-56.08	-280.75	-145.32
13	1	1	1.32	6.43	-9.14	6.31	-9.02	1.33	21.73	-155.25	-56.24	-77.29	87.86
		6	1.27	3.46	-23.69	3.39	-23.62	1.33	-9.23	-106.63	-53.29	-62.57	48.48
		21	1.63	-9.22	-26.27	-9.32	-26.17	1.33	-59.41	-200.59	-173.41	-86.59	55.66
		16	1.72	-6.08	-11.89	-6.40	-11.57	1.33	-36.65	-241.02	-176.36	-101.31	95.04
13	3	1	0.90	4.57	-5.86	4.57	-5.86	0.15	13.88	-112.68	-41.71	-57.09	62.81
		6	0.88	2.39	-16.75	2.39	-16.75	0.15	-9.39	-75.41	-39.37	-45.43	32.87
		21	1.16	-6.49	-18.53	-6.49	-18.53	0.15	-46.10	-148.26	-130.68	-63.69	38.57
		16	1.22	-4.31	-7.64	-4.32	-7.64	0.15	-29.86	-178.50	-133.01	-75.35	68.50
13	4	1	0.90	4.57	-5.86	4.57	-5.86	0.15	13.88	-112.68	-41.71	-57.09	62.81
		6	0.88	2.39	-16.75	2.39	-16.75	0.15	-9.39	-75.41	-39.37	-45.43	32.87
...													
543	27	557	0.72	1.03	-2.36	-1.39	0.06	-1.53	-30.84	-117.79	-110.84	-37.79	23.56
Elem.			Von Mises	N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
					-505.82	-283.85	-452.13	-159.46		-9913.15	-9601.32	-7489.66	-3554.26
			72.27	273.50		220.12	273.18	151.29	1.045e+04		1.025e+04	4691.78	3442.87



VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.

LEGENDA TABELLA VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.

Per le pareti in c.a., in ottemperanza al cap. 7 del DM 17-01-18, viene effettuata una doppia progettazione: sia come *Singolo Elemento* sia come *Parete Sismica* o *Parete Debolmente Armata*.

Per la progettazione come *Singolo Elemento* di ogni elemento vengono riportati il codice dello stato di verifica con le sigle **Ok** e **NV**, il rapporto x/d , la verifica per sollecitazioni ultime (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti), gli sforzi membranali e flessionali, il quantitativo di armatura nella direzione principale e secondaria sia inferiore che superiore e il quantitativo di armatura a taglio.

Per la progettazione come *Parete Sismica* o *Parete Debolmente Armata* vengono riportate invece le caratteristiche geometriche della parete e delle zone dissipative (quest'ultime solo nel caso di parete sismica), i coefficienti di verifica a compressione assiale, pressoflessione e sollecitazioni taglianti.

Inoltre vengono riportate per ogni quota significativa l'armatura principale e secondaria, l'armatura in zona confinata (solo per parete sismica) e non confinata, l'armatura concentrata all'estremità (per pareti debolmente armate), lo sforzo assiale aggiuntivo per q superiore a 2 e i valori di involuppo di taglio e momento. Per le pareti debolmente armate viene riportato anche lo stato di verifica relativo alla snellezza.

Le azioni derivate dall'analisi, in ogni combinazione di calcolo, sono elaborate come previsto al punto 7.4.4.5.1: traslazione del momento, incremento e variazione diagramma taglio, incremento e decremento sforzo assiale.

La progettazione nel caso dei gusci viene effettuata una progettazione come *Singolo Elemento*, riportando in tabella il rapporto x/d , la verifica per sollecitazioni ultime, (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti) di ogni elemento.

Per ogni elemento, viene riportata inoltre la maglia di armatura necessaria in relazione alle risultanze della progettazione dei nodi dell'elemento stesso. Le quantità di armature necessarie sono armature (disposte rispettivamente in direzione principale e secondaria, inferiore e superiore) distribuite nell'elemento ed espresse in centimetri quadri per sviluppo lineare pari ad un metro.

Nel caso dei gusci viene effettuata, inoltre, la verifica a punzonamento, riportando in tabella il codice dello stato di verifica, il coefficiente di verifica per piastre prive di armature a taglio lungo il perimetro resistente e lungo il perimetro del pilastro, coefficiente di incremento dovuto ai momenti flettenti, fattore di amplificazione per le fondazioni, il fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta, il quantitativo di armatura a punzonamento, il numero di serie di armature, il numero di braccia di armatura ed il riferimento alla combinazione più gravosa.

Per gli elementi di fondazione si fa riferimento al paragrafo 7.2.5 del D.M.17/01/2018 che prevede:

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

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

[...]

Le strutture delle fondazioni superficiali devono essere progettate per le azioni definite al precedente capoverso, assumendo un comportamento non dissipativo; non sono quindi necessarie armature specifiche per ottenere un



comportamento duttile."

Nel caso di comportamento strutturale dissipativo l'incremento delle sollecitazioni sopracitato viene eseguito come previsto dall'Eurocodice

$$E_{Fd} = E_{F,G} + \gamma_{Rd} \Omega E_{F,E}$$

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

Simbologia adottata nelle tabelle di verifica

Per gli elementi con progettazione di tipo "*Singolo Elemento ...*" è presente una tabella con i simboli di seguito descritti:

Macro Guscio	Numero del macroelemento di tipo guscio (elementi non verticali contigui ed analoghi per proprietà)
Macro Setto	Numero del macroelemento di tipo setto (elementi verticali contigui ed analoghi per proprietà)
Spessore	Spessore della parete
Id Materiale	Codice del materiale assegnato all'elemento
Id Criterio	Codice del criterio di progetto assegnato all'elemento
Progettazione	Sigla tipo di Elemento: - Singolo Elemento; - Singolo Elemento FONDAZIONE; - Singolo Elemento NON DISSIPATIVO

Per gli elementi con progettazione di tipo "*Parete Sismica*" e "*Parete Debolmente Armata*" è presente una tabella con i simboli di seguito descritti:

Parete	Numero della PARETE SISMICA
Parete PDA	Numero della PARETE DEBOLMENTE ARMATA
H totale	Altezza complessiva della parete
Spessore	Spessore della parete
H critica	Altezza come da punto 7.4.4.5.1 per traslazione momento (solo in Parete Sismica)
H critica V	Altezza della zona dissipativa (solo in Parete Sismica)
L totale	Larghezza di base della parete
L confinata	Lunghezza della zona dissipativa (solo in Parete Sismica)
Verif. N	Verifica di cui al punto 7.4.4.5.1 compressione semplice
Verif. N-M	Verifica di cui al punto 7.4.4.5.1 pressoflessione
Fattore V	Fattore di amplificazione del taglio di cui al punto 7.4.4.5.1
Diagramma V	Diagramma elaborato per effetto modi superiori come da fig. 7.4.4
Verif. V	Verifica di cui al punto 7.4.4.5.1 taglio (compressione cls, trazione acciaio, scorrimento in zona critica) (solo in Parete Sismica)
Verifica Snellezza	Verifica di cui al punto 7.4.4.5.1 limitazione compressione per prevenire l'instabilità (solo in Parete Debolmente Armata)
Prog. composta	Sigla per la progettazione composta

Sia per le verifiche degli elementi con progettazione di tipo "*Singolo Elemento ...*" e "*Parete ...*" è presente una tabella con i simboli di seguito descritti:

Nodo	Numero del nodo
Stato	Codice di verifica dell'elemento ok o NV
x/d	Rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
V N/M	Verifica delle sollecitazioni Normali (momento e sforzo normale)
Ver. rid	Rapporto Nd/Nu (Nu ottenuto con riduzione del 25% di fcd)
Af pr+	Quantità di armatura richiesta in direzione principale relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)



Af pr-	Quantità di armatura richiesta in direzione principale relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec+	Quantità di armatura richiesta in direzione secondaria relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec-	Quantità di armatura richiesta in direzione secondaria relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Nz No Nzo	Sforzi membranali per pareti e/o setti verticali
Mz Mo Mzo	Sforzi flessionali per pareti e/o setti verticali
Nx Ny Nxy	Sforzi membranali per gusci orizzontali
Mx Mx Mxy	Sforzi flessionali per gusci orizzontali

Nodo	Numero del nodo
Stato	Codice di verifica dell'elemento ok, NV oppure ok Av (verificata, ma con richiesta di armatura a taglio)
Max tau	Tensione tangenziale Massima
Ver V pr	Verifica a taglio nella direzione principale lato calcestruzzo
Ver V sec	Verifica a taglio nella direzione secondaria lato calcestruzzo
Af V pr	Armatura nella direzione principale
V pr-	Verifica dell'armatura nella direzione principale
Af V sec	Armatura nella direzione secondaria
V sec-	Verifica dell'armatura nella direzione secondaria

Per le verifiche degli elementi con progettazione "*Parete Sismica o Parete Debolmente Armata*", oltre alla tabella con le verifiche per gli elementi con progettazione "*Singolo Elemento ...*", è presente una tabella con i simboli di seguito descritti:

Quota	Ascissa verticale di riferimento
Af conf.	Numero e diametro armatura presente in una zona confinata
Af std	Diametro e passo armatura in zona non confinata (doppia maglia)
Af estremi	Diametro dei ferri di estremità del pannello; se posto uguale 0, viene utilizzato il diametro standard
Af V (ori)	Diametro e passo armatura orizzontale (doppia maglia)
Ver. N	Rapporto tra azione di calcolo e resistenza a compressione (normalizzato a 1 in quanto da confrontare con 40% in CDB e 35 % in CDA)
Ver. N/M	Rapporto tra azione di calcolo e resistenza a pressoflessione
Ver. V acc(7)	Rapporto tra azione di calcolo e resistenza a taglio-trazione per alfaS minore di 2 secondo paragrafo 7.4.4.5.1
Ver. V cls	Rapporto tra azione di calcolo e resistenza a taglio-compressione
Ver. V acc	Rapporto tra azione di calcolo e resistenza a taglio-trazione
Ver. V scorr.	Rapporto tra azione di calcolo e resistenza a taglio scorrimento
N add	Sforzo assiale di cui al punto 7.4.4.5.1 da sommare e sottrarre nelle verifiche quando q supera 2
N invil M invil	Inviluppo del Momento e Sforzo Normale come al punto 7.4.4.5.1 (informativo) (solo in Parete Sismica)

Quota	Ascissa verticale di riferimento
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore



N v.Vacc, M v.Vacc, V v.Vacc,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. acc attinge il massimo valore
N v.Vscorr, M v.Vscorr, V v.Vscorr,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. scorr.e attinge il massimo valore
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore

Quota	Ascissa verticale di riferimento
CtgT Vcls	Valore di ctg(teta) adottato nella verifica V compressione cls
Vrsd Vcls	Valore della resistenza a taglio trazione (armatura di calcolo)
Vrcd Vcls	Valore della resistenza a taglio compressione
CtgT Vacc	Valore di ctg(teta) adottato nella verifica V trazione armatura
Vrsd Vacc	Valore della resistenza a taglio trazione (armatura presente)
Vrcd Vacc	Valore della resistenza a taglio compressione
Vdd	Valore del contributo alla resistenza allo scorrimento come da [7.4.20]
Vid	Valore del contributo alla resistenza allo scorrimento come da [7.4.21]
A s.i.	Somma delle aree di armature
Incli.	Angolo di inclinazione delle armature
Dist.	Distanza alla base tra le armature inclinate

Quota	Ascissa verticale di riferimento
V[7.4.16]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.16)
N M V	Sollecitazioni di calcolo della condizione più gravosa
Alfas	Rapporto di Taglio
Vrd,c	Resistenza a taglio degli elementi non armati
VRd,s	Resistenza a taglio nei confronti dello scorrimento
V[7.4.17]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.17)
roH	Rapporto tra l'armatura orizzontale e l'area della sezione relativa di calcestruzzo
roV	Rapporto tra l'armatura verticale e l'area della sezione relativa di calcestruzzo
roN	Sforzo normale adimensionalizzato Ned/(bw fyd)

Per la verifica a **Punzonamento** è presente una tabella con i simboli di seguito descritti:

Nodo	Numero del nodo
Stato	Codice di verifica dell'elemento ok o NV
V. 6.47	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro resistente U1
V. 6.53	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro del pilastro U0
Beta	Fattore di incremento dovuto ai momenti flettenti
f. a fon	Fattore di amplificazione per le fondazioni (solo per gusci di fondazione)
f. Uout	Fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta
Aw tot	Quantitativo di armatura per la verifica di piastre munite di armatura (formula 6.52 dell'EC2)
Asw,min	Quantitativo minimo di armatura previsto dai dettagli costruttivi (formula 9.11 dell'EC2)
n. x serie	Numero di serie di armature
n.ser 0(R)	Numero di braccia delle armature in direzione 0 (o numero di braccia radiale)
n.ser 90	Numero di braccia delle armature in direzione 90 (solo se armatura cruciforme)



Rif. cmb Riferimento combinazioni da cui si generano le verifiche più gravose

Macro Setto	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
2	30.00	6	9	Singolo elemento NON DISSIPATIVO

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									daN/cm	daN/cm	daN/cm	daN	daN	daN
1	ok	0.14	2.56e-02	3.98e-03	8.0	8.0	6.2	6.2	-6.0	-2.8	14.7	-55.9	-8.5	30.3
2	ok	0.14	4.15e-02	6.88e-03	8.0	8.0	6.2	6.2	-18.8	-1.2	19.7	-177.2	-28.3	28.1
3	ok	0.14	5.51e-02	6.21e-03	8.0	8.0	6.2	6.2	-11.3	0.2	19.7	-200.0	-39.6	41.6
4	ok	0.14	5.99e-02	4.08e-03	8.0	8.0	6.2	6.2	-6.4	3.4	14.4	-185.9	-72.6	41.7
5	ok	0.14	3.79e-02	4.50e-03	8.0	8.0	6.2	6.2	-3.8	3.1	5.8	-129.4	-50.8	-1.8
16	ok	0.14	4.23e-02	1.28e-02	8.0	8.0	6.2	6.2	-51.6	-30.6	45.6	35.3	56.5	-17.1
17	ok	0.14	0.1	1.08e-02	8.0	8.0	6.2	6.2	-22.9	-21.1	14.7	-170.4	-17.2	-19.7
18	ok	0.14	0.1	8.58e-03	8.0	8.0	6.2	6.2	42.6	-32.9	46.2	-294.2	-49.8	68.9
19	ok	0.14	0.1	8.27e-03	8.0	8.0	6.2	6.2	-19.1	-39.0	5.8	-204.8	-103.7	56.5
20	ok	0.14	6.83e-02	1.14e-02	8.0	8.0	6.2	6.2	-54.0	-44.3	-28.6	232.5	-58.6	76.3
28	ok	0.14	0.2	4.22e-02	8.0	8.0	6.2	6.2	-29.1	-148.2	46.2	-102.6	259.0	-106.3
29	ok	0.14	0.2	3.79e-02	8.0	8.0	6.2	6.2	14.1	-140.2	46.2	-235.2	227.4	-16.9
30	ok	0.14	0.2	2.10e-02	8.0	8.0	6.2	6.2	43.7	-30.9	-20.4	-188.1	-33.7	130.7
31	ok	0.14	6.22e-02	1.12e-02	8.0	8.0	6.2	6.2	-53.7	-41.7	-28.6	232.1	-123.5	204.2
77	ok	0.14	7.84e-02	3.35e-02	8.0	8.0	6.2	6.2	-189.0	-27.0	92.1	18.8	60.5	-135.2
116	ok	0.14	0.2	5.99e-02	8.0	8.0	6.2	6.2	-366.3	-71.9	126.2	767.6	451.7	53.7
117	ok	0.14	0.3	2.71e-02	8.0	8.0	6.2	6.2	-28.4	-6.8	130.1	726.8	437.3	37.3
118	ok	0.14	0.4	2.16e-02	8.0	8.0	6.2	6.2	-17.8	-62.2	35.4	-87.7	1772.2	79.1
119	ok	0.14	0.3	2.66e-02	8.0	8.0	6.2	6.2	18.4	-55.0	35.4	282.6	2127.1	-24.8
120	ok	0.14	0.2	2.42e-02	8.0	8.0	6.2	6.2	91.3	-155.6	4.3	276.5	-1474.1	-177.9
159	ok	0.14	0.4	1.86e-02	8.0	8.0	6.2	6.2	-81.9	-69.4	-51.4	2438.2	1470.0	159.3
160	ok	0.14	0.4	1.60e-02	8.0	8.0	6.2	6.2	24.2	-14.7	-45.3	467.0	-2313.6	-764.4
161	ok	0.14	0.5	9.08e-03	8.0	8.0	6.2	6.2	164.9	11.6	-45.3	-54.1	-2419.4	-1100.8
184	ok	0.14	0.3	3.00e-02	8.0	8.0	6.2	6.2	-110.6	-65.4	-23.7	2585.6	1173.3	235.1
200	ok	0.14	0.2	6.39e-02	8.0	8.0	6.2	6.2	-276.9	-153.8	-1.8	1630.2	387.1	350.1
216	ok	0.14	0.2	3.70e-02	8.0	8.0	6.2	6.2	-27.2	-97.1	60.6	1008.8	291.8	408.9
232	ok	0.14	0.2	1.83e-02	8.0	8.0	6.2	6.2	-5.3	-93.2	60.8	536.4	200.1	384.8
248	ok	0.14	0.2	1.25e-02	8.0	8.0	6.2	6.2	-34.7	-49.9	-37.5	1498.2	317.3	331.9
264	ok	0.14	0.2	1.28e-02	8.0	8.0	6.2	6.2	-49.3	-42.3	-25.0	2025.9	409.8	-107.3
280	ok	0.14	0.2	1.25e-02	8.0	8.0	6.2	6.2	-69.4	-50.9	-12.2	2245.0	400.7	-380.1
296	ok	0.14	0.2	1.03e-02	8.0	8.0	6.2	6.2	-59.8	-50.3	-12.1	1699.4	292.5	-374.8
318	ok	0.14	0.1	4.24e-03	8.0	8.0	6.2	6.2	50.5	-27.5	6.6	218.1	-109.3	-18.6
359	ok	0.14	0.4	3.14e-03	8.0	8.0	6.2	6.2	33.7	33.4	9.7	-194.6	-1290.9	679.8
360	ok	0.14	0.3	8.11e-03	8.0	8.0	6.2	6.2	-51.4	20.5	2.5	1343.5	-991.1	-52.9
361	ok	0.14	0.3	9.70e-03	8.0	8.0	6.2	6.2	-57.0	0.7	-25.9	2286.3	595.3	-279.6
362	ok	0.14	0.3	9.32e-03	8.0	8.0	6.2	6.2	-43.4	-10.2	-33.4	2073.0	624.3	-161.5
363	ok	0.14	0.2	1.13e-02	8.0	8.0	6.2	6.2	-22.3	-6.4	-33.2	1544.3	513.9	-59.3
364	ok	0.14	0.3	1.43e-02	8.0	8.0	6.2	6.2	-17.8	-28.5	58.1	752.5	409.9	404.7
365	ok	0.14	0.4	1.89e-02	8.0	8.0	6.2	6.2	8.2	18.4	96.3	1240.3	185.0	332.3
366	ok	0.17	0.2	3.54e-02	8.0	8.0	16.4	6.2	-201.9	-17.7	100.8	1733.7	321.7	498.3
367	ok	0.17	0.3	1.45e-02	9.6	8.0	16.4	6.2	-89.2	38.0	-2.0	2386.4	277.4	355.8
368	ok	0.17	0.3	1.13e-02	9.6	8.0	16.4	6.2	-20.3	43.2	-49.8	-988.0	-2481.0	-1326.0
369	ok	0.17	0.4	3.58e-03	9.6	8.0	16.4	6.2	16.4	26.6	-43.0	-1094.6	-4756.4	-1596.1
370	ok	0.17	0.5	2.43e-03	9.6	8.0	16.4	6.2	65.7	36.8	-43.0	-1012.9	-4739.9	-1938.1
414	ok	0.14	0.6	4.58e-03	8.0	8.0	6.2	6.2	0.1	46.7	3.9	-507.3	-2382.0	859.4
415	ok	0.14	0.5	6.35e-03	8.0	8.0	6.2	6.2	-20.0	42.4	3.9	-437.2	-2370.1	572.0
416	ok	0.14	0.2	6.65e-03	8.0	8.0	6.2	6.2	-41.9	31.3	-16.6	940.5	273.0	-132.1
417	ok	0.14	0.2	6.55e-03	8.0	8.0	6.2	6.2	-30.1	20.4	-28.7	1208.3	467.3	-258.1
418	ok	0.14	0.3	6.85e-03	8.0	8.0	6.2	6.2	-13.0	23.4	-28.7	1195.2	453.2	-223.8
419	ok	0.14	0.4	7.63e-03	8.0	8.0	6.2	6.2	-8.0	25.3	58.1	806.4	710.6	456.4
420	ok	0.14	0.4	1.31e-02	8.0	8.0	6.2	6.2	-49.2	36.4	71.5	847.6	534.7	591.6
421	ok	0.16	0.3	1.68e-02	8.0	8.0	16.4	6.2	-95.9	77.7	-8.2	436.5	-950.0	224.7
422	ok	0.17	0.3	1.27e-02	9.6	8.0	16.4	6.2	-31.7	83.4	-33.5	-736.8	-2676.2	-531.8
423	ok	0.17	0.4	6.51e-03	9.6	8.0	16.4	6.2	-22.4	59.4	-48.9	-1294.9	-4358.5	-1192.5
424	ok	0.17	0.5	2.97e-03	9.6	8.0	16.4	6.2	11.1	51.5	-20.1	-1560.4	-6375.5	-1424.0



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
425	ok	0.17	0.6	2.72e-03	9.6	8.0	16.4	6.2	18.0	54.7	-20.1	-1473.0	-6358.1	-1839.6
469	ok	0.14	0.7	4.83e-03	8.0	8.0	6.2	6.2	8.9	55.7	4.2	-605.0	-2899.6	1015.6
470	ok	0.14	0.7	4.26e-03	8.0	8.0	6.2	6.2	-12.6	52.4	-0.3	-810.3	-3074.4	706.7
471	ok	0.14	0.4	4.61e-03	8.0	8.0	6.2	6.2	-10.7	65.1	-3.4	-47.9	-1451.0	327.8
472	ok	0.14	0.4	3.97e-03	8.0	8.0	6.2	6.2	1.7	53.2	44.6	522.6	807.7	86.0
473	ok	0.14	0.4	3.73e-03	8.0	8.0	6.2	6.2	6.0	85.1	50.6	565.3	923.0	284.2
474	ok	0.14	0.4	4.44e-03	8.0	8.0	6.2	6.2	-7.9	82.3	50.6	553.9	923.5	370.2
475	ok	0.14	0.4	6.44e-03	8.0	8.0	6.2	6.2	-28.1	97.9	48.2	387.4	551.3	539.0
476	ok	0.16	0.3	6.53e-03	8.0	8.0	16.4	6.2	-38.7	135.5	-11.3	-437.0	-2018.9	3.3
477	ok	0.17	0.4	4.28e-03	9.6	8.0	16.4	6.2	-21.7	130.0	-33.5	-986.1	-3924.0	-486.3
478	ok	0.17	0.5	2.49e-03	9.6	8.0	16.4	6.2	-2.7	121.3	-24.5	-1353.8	-5822.0	-1140.9
479	ok	0.17	0.7	1.47e-03	9.6	8.0	16.4	6.2	21.9	102.8	-20.1	-1944.7	-8299.2	-1356.8
480	ok	0.17	0.7	8.31e-04	9.6	8.0	16.4	6.2	28.8	104.7	-20.1	-1857.7	-8281.8	-1773.7
527	ok	0.14	0.7	4.52e-03	8.0	8.0	6.2	6.2	-6.3	53.9	-0.3	-618.6	-3091.1	649.4
528	ok	0.14	0.7	3.08e-03	8.0	8.0	6.2	6.2	-12.8	51.8	-0.3	-844.8	-3135.4	624.6
529	ok	0.14	0.5	2.31e-03	8.0	8.0	6.2	6.2	-11.6	53.3	-2.9	-429.1	-1902.2	849.4
530	ok	0.14	0.5	2.00e-03	8.0	8.0	6.2	6.2	5.5	68.3	-19.1	-259.3	-1320.9	635.7
531	ok	0.14	0.4	1.39e-03	8.0	8.0	6.2	6.2	-0.7	113.0	-12.5	12.5	-842.8	-209.4
532	ok	0.14	0.5	1.22e-03	8.0	8.0	6.2	6.2	8.2	109.7	22.2	187.0	1008.8	288.5
533	ok	0.14	0.5	1.07e-03	8.0	8.0	6.2	6.2	-4.1	141.3	22.2	217.3	1017.3	345.4
534	ok	0.14	0.6	1.14e-03	8.0	8.0	6.2	6.2	-5.7	171.1	19.6	114.7	520.8	463.1
535	ok	0.17	0.4	1.37e-03	8.0	8.0	16.4	6.2	-3.0	215.0	-7.6	-417.3	-2617.3	38.3
536	ok	0.17	0.5	1.23e-03	9.6	8.0	16.4	6.2	3.0	208.4	-12.7	-633.1	-4794.0	-262.5
537	ok	0.17	0.7	9.89e-04	9.6	8.0	16.4	6.2	8.0	199.9	-8.8	-937.0	-7233.0	-838.3
538	ok	0.17	0.9	1.29e-03	9.6	8.0	16.4	6.2	19.0	209.7	4.3	-1135.1	-9249.0	-1439.8
539	ok	0.17	0.9	1.37e-03	9.6	8.0	16.4	6.2	41.2	213.8	4.3	-1198.7	-9261.7	-1757.9
552	ok	0.14	0.6	3.23e-03	8.0	8.0	6.2	6.2	5.7	28.6	-6.9	-544.2	-2491.8	577.3
553	ok	0.14	0.6	2.20e-03	8.0	8.0	6.2	6.2	-1.2	29.3	2.4	-557.2	-2648.8	804.7
554	ok	0.14	0.5	1.70e-03	8.0	8.0	6.2	6.2	-3.6	12.5	13.1	-395.6	-1635.0	956.6
565	ok	0.14	0.2	4.14e-03	8.0	8.0	6.2	6.2	-0.4	-27.8	2.4	-94.8	-1299.1	220.0
566	ok	0.14	0.4	4.63e-03	8.0	8.0	6.2	6.2	-3.6	12.5	13.1	-395.6	-1635.0	956.6
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									-366.28	-155.57	-51.39	-1944.70	-9261.72	-1938.05
		0.17	0.89	0.06	9.58	8.04	16.42	6.16	164.85	214.97	130.06	2585.59	2127.12	1015.60

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
1	ok	0.32						
2	ok	0.55						
3	ok	0.55						
4	ok	0.50						
5	ok	0.50						
16	ok	0.71						
17	ok	1.65						
18	ok	2.00						
19	ok	2.00						
20	ok	1.60						
28	ok	1.60						
29	ok	1.84						
30	ok	1.99						
31	ok	1.99						
77	ok	0.74						
116	ok	1.79						
117	ok	1.79						
118	ok	3.92						
119	ok	3.92						
120	ok	3.54						
159	ok	4.75						
160	ok	4.75						
161	ok	3.42						
184	ok	3.18						
200	ok	1.83						
216	ok	0.77						
232	ok	0.76						
248	ok	0.70						
264	ok	0.68						
280	ok	1.11						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
296	ok	1.12						
318	ok	1.05						
359	ok	1.26						
360	ok	1.26						
361	ok	1.10						
362	ok	0.61						
363	ok	0.66						
364	ok	0.66						
365	ok	0.77						
366	ok	1.37						
367	ok	3.18						
368	ok	4.87						
369	ok	4.87						
370	ok	2.93						
414	ok	1.42						
415	ok	1.42						
416	ok	1.08						
417	ok	0.60						
418	ok	0.31						
419	ok	0.33						
420	ok	0.55						
421	ok	1.15						
422	ok	1.82						
423	ok	2.22						
424	ok	3.11						
425	ok	3.11						
469	ok	1.08						
470	ok	1.08						
471	ok	0.87						
472	ok	2.98						
473	ok	1.04						
474	ok	0.83						
475	ok	0.95						
476	ok	1.19						
477	ok	1.55						
478	ok	2.11						
479	ok	2.86						
480	ok	2.86						
527	ok	1.01						
528	ok	1.01						
529	ok Av	6.72	0.04	0.20	1.6	7.5	33.0	158.1
530	ok Av	6.72	0.04	0.20	1.6	7.5	33.0	158.1
531	ok	2.98						
532	ok	0.80						
533	ok	0.57						
534	ok	0.90						
535	ok	1.19						
536	ok	1.36						
537	ok	1.90						
538	ok	3.22						
539	ok	3.22						
552	ok	0.94						
553	ok	0.94						
554	ok Av	6.72	0.04	0.20	1.6	7.5	33.0	158.1
565	ok	0.68						
566	ok	0.68						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		6.72	0.04	0.20	1.56	7.47	32.95	158.13

Macro Setto	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
3	30.00	6	9	Singolo elemento NON DISSIPATIVO



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									daN/cm	daN/cm	daN/cm	daN	daN	daN
1	ok	0.14	3.84e-02	1.69e-03	8.0	8.0	6.2	6.2	-9.0	6.3	-1.3	-77.3	-56.2	-87.9
6	ok	0.14	2.37e-02	4.92e-03	8.0	8.0	6.2	6.2	-30.5	-2.0	-8.4	-102.1	-42.6	-50.4
11	ok	0.14	1.64e-02	3.34e-03	8.0	8.0	6.2	6.2	-12.1	1.6	-8.4	-62.1	-33.2	-34.3
16	ok	0.14	4.55e-02	6.75e-03	8.0	8.0	6.2	6.2	-11.6	-6.4	-1.3	-101.3	-176.4	-95.0
21	ok	0.14	3.30e-02	7.80e-03	8.0	8.0	6.2	6.2	-26.2	-9.3	-1.3	-86.6	-173.4	-55.7
23	ok	0.14	4.53e-02	5.04e-03	8.0	8.0	6.2	6.2	-12.3	1.0	-8.4	-74.7	-86.3	-56.2
77	ok	0.14	7.41e-02	2.79e-02	8.0	8.0	6.2	6.2	-191.0	-26.3	-17.1	-294.9	76.4	-116.3
78	ok	0.14	5.97e-02	8.75e-03	8.0	8.0	6.2	6.2	-46.6	-22.9	-22.5	-17.1	-243.2	-109.7
80	ok	0.14	5.22e-02	5.51e-03	8.0	8.0	6.2	6.2	5.7	-11.5	-18.5	-105.2	-261.1	-90.4
116	ok	0.14	0.1	5.59e-02	8.0	8.0	6.2	6.2	-384.8	-88.8	-22.0	1175.0	233.8	-65.5
121	ok	0.14	0.1	9.44e-03	8.0	8.0	6.2	6.2	36.3	-37.5	11.8	-293.7	-320.9	-126.0
123	ok	0.14	5.65e-02	7.51e-03	8.0	8.0	6.2	6.2	-16.4	-37.9	-17.1	-130.4	-476.6	-44.6
162	ok	0.14	0.2	1.77e-02	8.0	8.0	6.2	6.2	52.3	35.6	14.4	-314.5	-428.4	-235.4
164	ok	0.14	0.1	4.56e-03	8.0	8.0	6.2	6.2	1.9	17.9	11.8	42.6	-430.7	-146.1
200	ok	0.14	9.13e-02	5.31e-02	8.0	8.0	6.2	6.2	-365.4	-46.5	-21.1	1243.3	506.6	354.9
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									-384.83	-88.76	-22.48	-314.52	-476.62	-235.42
		0.14	0.21	0.06	8.04	8.04	6.16	6.16	52.29	35.61	14.40	1243.27	506.56	354.86

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
1	ok	0.25						
6	ok	0.25						
11	ok	0.22						
16	ok	0.25						
21	ok	0.48						
23	ok	0.48						
77	ok	0.24						
78	ok	0.56						
80	ok	0.56						
116	ok	1.18						
121	ok	1.18						
123	ok	0.63						
162	ok	1.18						
164	ok	0.62						
200	ok	1.18						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		1.18						

Macro Setto	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
4	30.00	6	9	Singolo elemento NON DISSIPATIVO

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									daN/cm	daN/cm	daN/cm	daN	daN	daN
5	ok	0.14	2.54e-02	3.73e-03	8.0	8.0	6.2	6.2	-18.7	5.0	-11.9	0.4	41.1	77.8
10	ok	0.14	4.33e-02	3.12e-03	8.0	8.0	6.2	6.2	-3.6	7.5	-11.9	-16.4	40.0	-15.7
15	ok	0.14	6.47e-02	1.14e-03	8.0	8.0	6.2	6.2	14.3	8.4	-13.9	35.1	45.3	-63.8
20	ok	0.14	8.05e-02	9.33e-03	8.0	8.0	6.2	6.2	-25.3	-25.2	-11.9	64.8	322.6	78.0
22	ok	0.14	0.1	6.80e-03	8.0	8.0	6.2	6.2	-12.7	-24.4	-9.8	48.8	320.3	8.9
27	ok	0.14	5.18e-02	6.06e-03	8.0	8.0	6.2	6.2	7.7	-32.0	-13.9	51.3	151.8	-85.4
31	ok	0.14	0.1	3.08e-02	8.0	8.0	6.2	6.2	6.7	-45.9	52.4	82.2	657.9	21.8
34	ok	0.14	7.38e-02	2.74e-02	8.0	8.0	6.2	6.2	-30.9	-154.2	-70.8	-308.9	-276.3	-848.1
37	ok	0.14	0.1	3.14e-02	8.0	8.0	6.2	6.2	-73.9	-164.9	-70.4	-1327.2	-460.9	-1131.4
40	ok	0.14	0.4	3.20e-02	8.0	8.0	6.2	6.2	-66.6	-162.8	-69.3	-2735.4	-566.8	-1254.2
43	ok	0.14	0.6	3.21e-02	8.0	8.0	6.2	6.2	-83.4	-158.2	-29.0	648.8	66.1	-278.3
46	ok	0.14	0.8	3.21e-02	8.0	8.0	6.2	6.2	-77.7	-163.4	-21.2	568.0	61.8	-244.5



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
49	ok	0.14	0.9	3.19e-02	8.0	8.0	6.2	6.2	-72.4	-164.7	-15.2	472.1	40.1	-187.3
52	ok	0.14	0.9	3.12e-02	9.6	8.0	6.2	6.2	-68.2	-162.4	-10.9	393.9	28.2	-122.3
55	ok	0.14	0.9	2.97e-02	9.6	8.0	7.7	6.2	-65.4	-156.7	-7.8	347.8	21.4	-54.6
58	ok	0.14	1.0	2.82e-02	8.0	8.0	6.2	6.2	-59.7	-134.3	-3.9	339.1	28.3	44.3
61	ok	0.14	0.9	2.58e-02	8.0	8.0	6.2	6.2	-41.3	-138.0	4.4	-1476.8	-348.6	495.4
64	ok	0.14	0.7	2.31e-02	8.0	8.0	6.2	6.2	-44.0	-134.0	10.2	-953.8	-280.6	605.4
67	ok	0.14	0.5	2.02e-02	8.0	8.0	6.2	6.2	-49.6	-135.7	10.2	-333.2	-157.5	634.4
70	ok	0.14	0.3	2.00e-02	8.0	8.0	6.2	6.2	-42.4	-104.1	54.8	-2026.2	-683.4	1405.5
73	ok	0.14	0.1	1.90e-02	8.0	8.0	6.2	6.2	-19.9	-102.4	54.5	-528.9	-368.2	1150.0
76	ok	0.14	0.2	6.02e-03	8.0	8.0	6.2	6.2	115.4	-39.9	12.2	-25.9	-209.6	290.0
79	ok	0.14	0.1	2.09e-02	8.0	8.0	6.2	6.2	22.6	-109.0	8.4	116.2	539.0	-63.5
84	ok	0.14	6.30e-02	1.20e-02	8.0	8.0	6.2	6.2	25.4	-27.3	20.0	14.7	23.1	-73.3
87	ok	0.14	0.5	5.99e-03	8.0	8.0	6.2	6.2	259.7	64.3	13.5	454.1	-1044.7	779.6
89	ok	0.14	0.5	9.11e-03	8.0	8.0	6.2	6.2	-16.6	18.3	13.5	-1260.8	-1398.2	1543.5
91	ok	0.14	0.6	1.10e-02	8.0	8.0	6.2	6.2	-17.6	5.6	56.3	-2109.2	-1108.8	1835.4
93	ok	0.14	0.6	1.37e-02	8.0	8.0	6.2	6.2	-29.3	-60.6	17.6	-348.8	-250.3	484.7
95	ok	0.14	0.8	1.59e-02	8.0	8.0	6.2	6.2	-29.5	-76.2	11.1	-937.5	-211.3	464.1
97	ok	0.14	0.9	1.77e-02	8.0	8.0	6.2	6.2	-28.0	-84.4	5.2	-1448.5	-220.4	349.5
99	ok	0.14	1.0	1.89e-02	8.0	8.0	6.2	6.2	-53.2	-90.2	-10.2	-687.7	-112.0	64.4
101	ok	0.15	0.9	1.93e-02	9.6	8.0	7.7	6.2	-56.6	-100.7	-9.4	-709.9	-110.3	-75.0
103	ok	0.15	0.9	1.95e-02	9.6	8.0	7.7	6.2	-59.4	-100.6	-9.2	-714.8	-115.3	-168.6
105	ok	0.14	0.9	1.98e-02	8.0	8.0	6.2	6.2	-63.6	-95.7	-9.4	-707.6	-124.7	-252.1
107	ok	0.14	0.8	1.93e-02	8.0	8.0	6.2	6.2	-68.9	-84.9	-9.9	-698.2	-154.3	-309.8
109	ok	0.14	0.7	1.87e-02	8.0	8.0	6.2	6.2	-73.9	-66.0	-10.1	-695.2	-219.6	-316.0
111	ok	0.14	0.6	1.80e-02	8.0	8.0	6.2	6.2	-34.8	-11.8	-67.4	-2775.4	-707.4	-1882.4
113	ok	0.14	0.6	1.65e-02	8.0	8.0	6.2	6.2	-66.8	21.7	-38.3	-2209.6	-1464.6	-2123.0
115	ok	0.14	0.4	8.83e-03	8.0	8.0	6.2	6.2	-2.0	30.3	-38.3	-832.9	-1185.1	-1792.6
120	ok	0.14	0.4	8.11e-03	8.0	8.0	6.2	6.2	27.3	40.2	-38.3	-367.1	-1360.7	-449.8
122	ok	0.14	0.2	1.59e-02	8.0	8.0	6.2	6.2	30.3	6.7	44.0	125.1	942.7	-114.9
127	ok	0.14	0.2	5.09e-03	8.0	8.0	6.2	6.2	5.6	21.3	26.4	27.0	-148.0	-106.1
130	ok	0.14	0.8	6.38e-03	8.0	8.0	6.2	6.2	186.3	75.0	15.0	-128.2	-2332.9	1848.2
132	ok	0.14	0.8	8.49e-03	8.0	8.0	6.2	6.2	-9.4	40.9	13.5	-1513.6	-2626.2	1990.5
134	ok	0.14	0.7	9.98e-03	8.0	8.0	6.2	6.2	-27.7	43.4	2.5	-1420.0	-1251.2	2910.4
136	ok	0.14	0.7	1.14e-02	8.0	8.0	6.2	6.2	-32.2	-41.1	-20.9	-812.0	-446.8	-530.6
138	ok	0.14	0.7	1.23e-02	8.0	8.0	6.2	6.2	-42.9	-39.1	-19.4	-501.2	-81.8	246.2
140	ok	0.14	0.7	1.28e-02	8.0	8.0	6.2	6.2	-45.4	-50.0	-10.0	-634.3	-54.2	165.0
142	ok	0.14	0.7	1.31e-02	8.0	8.0	6.2	6.2	-46.7	-57.6	-10.2	-672.6	-36.6	75.8
144	ok	0.14	0.7	1.32e-02	8.0	8.0	6.2	6.2	-49.2	-63.9	-9.4	-693.8	-29.8	-73.9
146	ok	0.14	0.7	1.32e-02	8.0	8.0	6.2	6.2	-51.7	-61.8	-9.2	-699.9	-41.1	-171.1
148	ok	0.14	0.7	1.31e-02	8.0	8.0	6.2	6.2	-55.5	-55.2	-9.4	-696.4	-68.5	-256.3
150	ok	0.14	0.7	1.31e-02	8.0	8.0	6.2	6.2	-60.4	-42.5	-9.9	-693.3	-129.5	-314.2
152	ok	0.14	0.6	1.36e-02	8.0	8.0	6.2	6.2	-65.1	-22.1	-10.1	-703.9	-263.3	-326.6
154	ok	0.14	0.7	1.39e-02	8.0	8.0	6.2	6.2	-45.7	40.9	-40.9	-2950.3	-759.5	-2670.1
156	ok	0.15	0.8	1.18e-02	9.6	8.0	6.2	6.2	-55.5	92.8	-38.2	-2253.7	-1940.1	-2405.3
158	ok	0.15	0.7	4.72e-03	9.6	8.0	11.3	6.2	47.4	159.1	23.7	-969.9	-3255.0	-1965.9
161	ok	0.15	0.7	0.0	9.6	8.0	11.3	6.2	200.5	189.3	23.7	-568.9	-3175.4	-1632.0
163	ok	0.14	0.6	3.41e-03	8.0	8.0	6.2	6.2	24.6	199.4	71.4	194.6	1464.9	-39.4
168	ok	0.14	0.2	1.26e-03	8.0	8.0	6.2	6.2	10.5	45.6	26.4	6.2	-252.3	-157.0
330	ok	0.15	0.7	4.52e-03	9.6	8.0	10.6	6.2	70.1	70.7	11.5	-695.9	-4117.0	2576.5
332	ok	0.15	0.7	5.33e-03	9.6	8.0	10.6	6.2	20.6	62.8	15.0	-1279.5	-4246.3	2778.5
334	ok	0.15	0.8	7.89e-03	9.6	8.0	6.2	6.2	-31.5	58.9	-1.8	-1475.6	-1677.2	3336.5
336	ok	0.14	0.7	8.19e-03	8.0	8.0	6.2	6.2	-25.7	30.0	-13.7	-42.2	1329.2	2898.7
338	ok	0.14	0.6	8.05e-03	8.0	8.0	6.2	6.2	-23.3	30.3	-13.7	150.1	1318.2	2635.2
340	ok	0.14	0.5	7.87e-03	8.0	8.0	6.2	6.2	-26.3	-11.9	-16.0	-828.6	-400.3	-217.6
342	ok	0.14	0.5	7.71e-03	8.0	8.0	6.2	6.2	-27.5	-16.5	-14.2	-877.2	-346.9	-135.5
344	ok	0.14	0.4	7.66e-03	8.0	8.0	6.2	6.2	-28.9	-15.6	-11.7	-902.5	-380.0	48.8
346	ok	0.14	0.5	7.82e-03	8.0	8.0	6.2	6.2	-29.0	-12.4	2.7	-910.3	-512.2	-195.9
348	ok	0.14	0.5	8.37e-03	8.0	8.0	6.2	6.2	-31.9	-13.0	2.7	-923.2	-510.3	-145.7
350	ok	0.14	0.6	9.31e-03	8.0	8.0	6.2	6.2	-48.1	14.0	3.9	-567.6	-47.5	-330.8
352	ok	0.14	0.6	1.04e-02	8.0	8.0	6.2	6.2	-35.2	48.8	-14.2	-1673.5	714.1	-2789.4
354	ok	0.14	0.7	1.10e-02	8.0	8.0	6.2	6.2	-41.2	70.7	-6.5	-1557.4	-653.1	-3105.8
356	ok	0.15	0.9	1.11e-02	9.6	8.0	6.2	6.2	-40.7	80.1	10.7	-1486.4	-2542.7	-2995.9
358	ok	0.15	0.7	8.87e-03	9.6	8.0	11.3	6.2	29.6	62.7	23.7	-1287.2	-4954.8	-2267.2
370	ok	0.15	0.8	3.62e-03	9.6	8.0	11.3	6.2	75.8	70.8	4.5	-802.9	-4851.7	-2202.3
385	ok	0.15	0.8	3.17e-03	9.6	8.0	10.6	6.2	0.8	41.3	20.4	-1382.8	-5500.4	2333.6
387	ok	0.15	0.8	4.52e-03	9.6	8.0	10.6	6.2	0.9	41.5	20.4	-1128.7	-5449.7	3005.2
389	ok	0.15	0.8	6.44e-03	9.6	8.0	6.2	6.2	-20.8	55.3	-17.0	-430.0	-1729.7	3539.3
391	ok	0.14	0.8	6.83e-03	8.0	8.0	6.2	6.2	-12.7	57.5	-21.5	313.2	428.9	3287.6
393	ok	0.14	0.8	6.35e-03	8.0	8.0	6.2	6.2	-16.8	57.9	-10.3	316.5	1021.8	774.2
395	ok	0.14	0.8	5.76e-03	8.0	8.0	6.2	6.2	-17.2	55.8	-5.9	369.9	1284.8	556.5
397	ok	0.14	0.7	5.31e-03	8.0	8.0	6.2	6.2	-15.5	55.9	-5.9	370.5	1283.9	425.4
399	ok	0.14	0.7	5.08e-03	8.0	8.0	6.2	6.2	-15.3	54.0	-2.3	392.4	1005.5	141.9



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
401	ok	0.14	0.7	5.17e-03	8.0	8.0	6.2	6.2	-18.1	55.9	3.1	382.4	1007.9	-302.4
403	ok	0.14	0.8	5.65e-03	8.0	8.0	6.2	6.2	-18.5	55.3	7.5	345.1	910.5	-607.4
405	ok	0.14	0.8	6.87e-03	8.0	8.0	6.2	6.2	-19.0	55.2	7.5	331.7	908.1	-754.9
407	ok	0.14	0.8	8.45e-03	8.0	8.0	6.2	6.2	-18.7	63.9	20.7	511.8	1605.1	-2928.0
409	ok	0.14	0.8	9.76e-03	8.0	8.0	6.2	6.2	-17.2	64.4	20.7	493.9	1600.9	-3138.8
411	ok	0.15	0.9	8.64e-03	9.6	8.0	6.2	6.2	-24.1	54.4	28.7	-663.9	-2796.9	-3187.2
413	ok	0.15	0.8	3.04e-03	9.6	8.0	11.3	6.2	2.6	32.6	-13.3	-1274.4	-5900.6	-2614.7
425	ok	0.15	0.8	1.14e-03	9.6	8.0	11.3	6.2	13.7	35.3	-12.8	-1465.7	-5971.4	-2349.9
440	ok	0.15	0.9	2.38e-03	9.6	8.0	10.6	6.2	9.7	80.2	20.4	-1686.6	-7019.1	2234.0
442	ok	0.15	1.0	2.89e-03	9.6	8.0	10.6	6.2	9.8	80.4	20.4	-1432.4	-6968.4	2905.3
444	ok	0.15	0.8	3.97e-03	9.6	8.0	6.2	6.2	-7.9	82.1	-14.4	-223.0	-1823.7	1267.2
446	ok	0.14	0.9	4.15e-03	8.0	8.0	6.2	6.2	-5.8	95.4	-15.2	343.3	739.6	915.7
448	ok	0.15	0.8	3.62e-03	8.0	9.6	6.2	7.7	-7.6	99.5	-10.3	363.1	1347.7	774.1
450	ok	0.15	0.8	3.07e-03	8.0	9.6	6.2	7.7	-7.1	101.6	-5.9	428.5	1689.1	557.5
452	ok	0.15	0.8	2.66e-03	8.0	9.6	6.2	7.7	-5.3	101.7	-5.9	428.7	1688.3	426.5
454	ok	0.15	0.8	2.45e-03	8.0	9.6	6.2	7.7	-4.9	101.6	-2.3	455.7	1315.4	144.5
456	ok	0.15	0.8	2.45e-03	8.0	9.6	6.2	7.7	-8.7	103.6	3.1	444.0	1310.3	-297.9
458	ok	0.15	0.8	2.87e-03	8.0	9.6	6.2	7.7	-8.5	103.7	3.1	430.5	1307.7	-454.9
460	ok	0.15	0.8	3.85e-03	8.0	9.6	6.2	7.7	-10.9	96.1	7.5	387.6	1178.2	-751.2
462	ok	0.15	0.8	5.18e-03	8.0	9.6	6.2	7.7	-6.8	87.7	6.6	156.0	900.4	-955.9
464	ok	0.14	0.8	6.05e-03	8.0	8.0	6.2	6.2	-17.3	54.9	28.9	142.4	29.7	-3238.7
466	ok	0.15	0.9	3.78e-03	9.6	8.0	6.2	6.2	-12.2	51.3	19.7	-494.1	-3092.6	-3127.1
468	ok	0.15	1.0	1.70e-03	9.6	8.0	11.3	6.2	14.5	85.3	-12.8	-1564.1	-7346.0	-2615.5
480	ok	0.15	0.9	1.08e-03	9.6	8.0	11.3	6.2	25.7	87.6	-12.8	-1747.9	-7382.8	-2241.5
496	ok	0.15	0.9	7.71e-03	9.6	8.0	10.6	6.2	14.6	120.3	3.1	-422.1	-3523.6	-644.3
498	ok	0.15	1.0	7.62e-03	9.6	8.0	10.6	6.2	5.6	118.6	3.1	-451.6	-3529.5	-208.5
500	ok	0.15	0.8	2.56e-03	9.6	8.0	6.2	6.2	0.4	114.2	-4.1	-190.0	-1707.0	280.6
502	ok	0.14	1.0	1.62e-03	8.0	8.0	6.2	6.2	2.6	133.5	-7.4	223.5	888.0	891.6
504	ok	0.15	0.9	9.69e-04	8.0	9.6	6.2	7.7	2.2	145.0	-4.9	211.0	1599.2	750.5
506	ok	0.15	1.0	5.70e-04	8.0	9.6	6.2	7.7	2.1	151.1	-2.7	228.3	1988.3	532.1
509	ok	0.15	0.9	4.24e-04	8.0	9.6	6.2	7.7	2.4	151.0	-2.7	261.0	1981.9	415.4
511	ok	0.15	1.0	3.47e-04	8.0	9.6	6.2	7.7	2.8	152.3	-1.0	223.0	1531.3	144.9
514	ok	0.15	1.0	2.49e-04	8.0	9.6	6.2	7.7	0.3	156.5	1.6	218.6	1522.5	-287.9
516	ok	0.15	1.0	3.06e-04	8.0	9.6	6.2	7.7	2.0	156.8	1.6	226.7	1524.0	-427.6
518	ok	0.15	1.0	7.41e-04	8.0	9.6	6.2	7.7	1.3	144.1	3.7	215.7	1376.5	-715.4
520	ok	0.15	0.9	1.42e-03	8.0	9.6	6.2	7.7	-0.7	124.6	8.3	116.3	336.6	-391.9
522	ok	0.14	0.9	2.24e-03	8.0	8.0	6.2	6.2	-4.0	73.0	10.3	-22.0	-504.4	-318.7
523	ok	0.15	0.9	4.68e-03	9.6	8.0	6.2	6.2	-10.4	2.3	16.0	-478.7	-3643.7	-3047.7
526	ok	0.15	0.9	1.15e-02	9.6	8.0	11.3	6.2	-22.7	-62.3	17.7	-1200.7	-8286.5	-2366.7
539	ok	0.15	0.9	1.14e-02	9.6	8.0	11.3	6.2	-19.5	-61.7	17.7	-1168.6	-8280.0	-2085.9
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									-83.42	-164.90	-70.84	-2950.27	-8286.48	-3238.66
		0.15	1.00	0.03	9.58	9.58	11.29	7.70	259.73	199.44	71.42	648.81	1988.28	3539.33

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
5	ok	0.31						
10	ok	0.31						
15	ok	0.18						
20	ok	0.68						
22	ok	0.68						
27	ok	0.18						
31	ok	1.09						
34	ok	1.09						
37	ok	1.33						
40	ok	1.70						
43	ok	1.81						
46	ok	1.85						
49	ok	1.86						
52	ok	1.86						
55	ok	1.85						
58	ok	1.84						
61	ok	1.76						
64	ok	1.75						
67	ok	1.71						
70	ok	1.59						
73	ok	1.40						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
76	ok	1.01						
79	ok	0.64						
84	ok	0.34						
87	ok	1.20						
89	ok	1.77						
91	ok	1.79						
93	ok	1.79						
95	ok	1.75						
97	ok	1.76						
99	ok	1.79						
101	ok	1.83						
103	ok	1.85						
105	ok	1.85						
107	ok	1.85						
109	ok	1.83						
111	ok	1.73						
113	ok	1.44						
115	ok	1.18						
120	ok	1.41						
122	ok	1.41						
127	ok	0.78						
130	ok	1.86						
132	ok	1.86						
134	ok	0.96						
136	ok	1.38						
138	ok	1.64						
140	ok	1.81						
142	ok	1.91						
144	ok	1.94						
146	ok	1.94						
148	ok	1.89						
150	ok	1.76						
152	ok	1.53						
154	ok	1.25						
156	ok	0.82						
158	ok	2.45						
161	ok	2.45						
163	ok	1.13						
168	ok	0.85						
330	ok	2.57						
332	ok	2.57						
334	ok	1.37						
336	ok	1.38						
338	ok	1.64						
340	ok	1.81						
342	ok	1.91						
344	ok	1.94						
346	ok	1.94						
348	ok	1.89						
350	ok	1.76						
352	ok	1.53						
354	ok	1.24						
356	ok	1.63						
358	ok	3.34						
370	ok	3.34						
385	ok	3.09						
387	ok	3.09						
389	ok	1.20						
391	ok	0.86						
393	ok	0.94						
395	ok	1.05						
397	ok	1.11						
399	ok	1.14						
401	ok	1.14						
403	ok	1.10						
405	ok	1.02						
407	ok	0.91						
409	ok	0.96						
411	ok	1.51						
413	ok	3.97						
425	ok	3.97						
440	ok	5.22						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
442	ok	5.22						
444	ok	4.52						
446	ok	3.77						
448	ok	2.99						
450	ok	2.26						
452	ok	1.48						
454	ok	0.72						
456	ok	0.95						
458	ok	1.70						
460	ok	2.45						
462	ok	3.19						
464	ok	3.95						
466	ok	4.63						
468	ok	5.47						
480	ok	5.47						
496	ok	4.35						
498	ok	4.35						
500	ok	3.21						
502	ok	2.59						
504	ok	2.00						
506	ok	1.48						
509	ok	0.96						
511	ok	0.57						
514	ok	0.63						
516	ok	1.01						
518	ok	1.47						
520	ok	2.00						
522	ok	2.73						
523	ok	3.54						
526	ok	4.75						
539	ok	4.75						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		5.47						

Macro Setto	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
5	30.00	6	9	Singolo elemento NON DISSIPATIVO

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									daN/cm	daN/cm	daN/cm	daN	daN	daN
11	ok	0.14	1.76e-02	6.48e-03	8.0	8.0	6.2	6.2	-17.8	-12.0	19.4	-4.6	-13.5	27.9
12	ok	0.14	2.75e-02	8.11e-03	8.0	8.0	6.2	6.2	-25.6	-21.3	19.6	91.2	-28.8	74.1
13	ok	0.14	1.99e-02	8.14e-03	8.0	8.0	6.2	6.2	-25.8	-21.3	19.6	118.2	-23.4	53.4
14	ok	0.14	1.99e-02	5.53e-03	8.0	8.0	6.2	6.2	-13.3	-9.7	7.2	84.1	49.5	27.4
15	ok	0.14	3.95e-02	1.95e-03	8.0	8.0	6.2	6.2	14.7	-6.3	8.9	60.2	43.2	3.2
23	ok	0.14	3.88e-02	5.84e-03	8.0	8.0	6.2	6.2	-12.0	-9.6	16.6	53.5	172.4	36.6
24	ok	0.14	6.34e-02	6.68e-03	8.0	8.0	6.2	6.2	-18.2	-10.1	20.8	95.3	166.8	82.9
25	ok	0.14	6.50e-02	6.37e-03	8.0	8.0	6.2	6.2	-7.0	-4.8	14.2	-100.8	-162.8	94.4
26	ok	0.14	7.37e-02	3.59e-03	8.0	8.0	6.2	6.2	-7.5	-0.8	14.5	58.2	-219.3	-12.6
27	ok	0.14	6.46e-02	1.68e-03	8.0	8.0	6.2	6.2	30.3	-2.4	15.9	30.0	-41.8	-67.7
80	ok	0.14	4.72e-02	5.16e-03	8.0	8.0	6.2	6.2	8.6	-13.2	5.6	137.3	348.5	-31.6
81	ok	0.14	8.35e-02	4.69e-03	8.0	8.0	6.2	6.2	-7.6	-13.8	5.6	97.2	340.6	20.9
82	ok	0.14	9.70e-02	3.82e-03	8.0	8.0	6.2	6.2	-3.8	1.5	11.8	-70.5	-360.4	102.1
83	ok	0.14	0.1	3.29e-03	8.0	8.0	6.2	6.2	6.0	3.5	11.8	-94.2	-365.2	101.4
84	ok	0.14	7.47e-02	2.41e-03	8.0	8.0	6.2	6.2	14.5	2.2	20.2	-109.1	-325.5	9.2
123	ok	0.14	6.03e-02	2.31e-03	8.0	8.0	6.2	6.2	8.2	-13.0	5.6	163.0	476.4	-43.2
124	ok	0.14	8.18e-02	2.82e-03	8.0	8.0	6.2	6.2	-8.0	-16.3	5.6	123.0	468.6	7.9
125	ok	0.14	0.1	2.40e-03	8.0	8.0	6.2	6.2	-0.1	-5.2	4.5	-21.0	-181.2	57.0
126	ok	0.14	0.1	2.58e-03	8.0	8.0	6.2	6.2	6.8	7.3	20.2	-131.6	-552.3	65.6
127	ok	0.14	0.1	2.13e-03	8.0	8.0	6.2	6.2	15.9	9.1	20.2	-155.4	-557.0	-3.5
164	ok	0.14	5.60e-02	3.20e-03	8.0	8.0	6.2	6.2	-5.7	-21.7	0.3	56.8	480.3	1.27e-02
165	ok	0.14	5.69e-02	3.29e-03	8.0	8.0	6.2	6.2	-1.1	-20.9	0.3	83.4	485.6	-2.7
166	ok	0.14	9.43e-02	3.34e-03	8.0	8.0	6.2	6.2	-1.8	-14.7	4.5	-17.3	-162.2	59.1



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
167	ok	0.14	0.2	2.33e-03	8.0	8.0	6.2	6.2	4.6	19.3	13.8	-113.6	-777.7	38.0
168	ok	0.14	0.2	1.49e-03	8.0	8.0	6.2	6.2	5.2	19.4	13.8	-131.5	-781.3	-35.6
Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									-25.82	-21.72	0.29	-155.36	-781.26	-67.69
		0.14	0.17	8.14e-03	8.04	8.04	6.16	6.16	30.35	19.41	20.77	162.97	485.58	102.07

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
11	ok	0.19						
12	ok	0.48						
13	ok	0.48						
14	ok	0.40						
15	ok	0.23						
23	ok	0.53						
24	ok	0.53						
25	ok	0.48						
26	ok	0.56						
27	ok	0.56						
80	ok	0.64						
81	ok	0.64						
82	ok	0.25						
83	ok	0.46						
84	ok	0.46						
123	ok	0.66						
124	ok	0.66						
125	ok	0.36						
126	ok	0.33						
127	ok	0.33						
164	ok	0.63						
165	ok	0.63						
166	ok	0.39						
167	ok	0.30						
168	ok	0.30						
Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		0.66						

Macro Setto	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
7	30.00	6	9	Singolo elemento NON DISSIPATIVO

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									daN/cm	daN/cm	daN/cm	daN	daN	daN
29	ok	0.14	0.3	2.58e-02	8.0	8.0	6.2	6.2	-21.3	-78.4	82.0	68.6	835.3	-104.8
32	ok	0.14	0.3	3.10e-02	8.0	8.0	6.2	6.2	-73.3	-89.5	82.6	-22.2	830.5	-285.7
35	ok	0.14	0.2	2.79e-02	8.0	8.0	6.2	6.2	-65.8	-73.5	121.6	721.4	132.4	-268.1
38	ok	0.14	0.3	3.03e-02	8.0	8.0	6.2	6.2	-44.6	-70.2	121.3	1570.9	301.1	-259.0
41	ok	0.14	0.3	3.36e-02	8.0	8.0	6.2	6.2	-70.1	-196.7	71.1	2457.0	544.9	-123.3
44	ok	0.14	0.4	3.65e-02	8.0	8.0	6.2	6.2	-66.6	-198.9	71.0	3244.9	702.6	-135.1
47	ok	0.14	0.5	3.83e-02	8.0	8.0	6.2	6.2	-72.5	-237.9	46.7	3885.1	843.3	-85.5
50	ok	0.14	0.5	3.90e-02	8.0	8.0	6.2	6.2	-76.4	-264.6	-2.2	4317.2	940.9	41.4
53	ok	0.14	0.6	3.96e-02	8.0	8.0	6.2	6.2	-73.0	-257.6	-26.3	4692.1	1020.7	64.4
56	ok	0.14	0.5	3.91e-02	8.0	8.0	6.2	6.2	-69.1	-242.8	-52.2	4617.2	967.1	132.9
59	ok	0.14	0.5	3.85e-02	8.0	8.0	6.2	6.2	-73.2	-246.9	-52.2	4256.4	895.5	141.9
62	ok	0.14	0.5	3.74e-02	8.0	8.0	6.2	6.2	-59.4	-179.7	-98.8	3589.0	729.7	91.1
65	ok	0.14	0.4	3.52e-02	8.0	8.0	6.2	6.2	-65.7	-183.4	-98.8	2714.9	554.7	114.4
68	ok	0.14	0.4	3.17e-02	8.0	8.0	6.2	6.2	-27.0	-27.5	-152.3	1660.4	260.7	210.0
71	ok	0.14	0.2	3.27e-02	8.0	8.0	6.2	6.2	-99.4	-39.9	-151.4	335.0	38.0	406.5
74	ok	0.14	0.1	3.01e-02	8.0	8.0	6.2	6.2	-166.7	-5.9	-90.3	-336.2	-61.1	147.5



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
85	ok	0.14	0.1	6.71e-02	8.0	8.0	6.2	6.2	-420.8	-66.7	-129.4	1883.8	45.5	-284.1
88	ok	0.14	0.4	3.50e-02	8.0	8.0	6.2	6.2	-87.5	-65.8	-137.1	2511.4	767.1	105.9
90	ok	0.14	0.5	2.88e-02	8.0	8.0	6.2	6.2	-14.2	-53.5	-137.1	2161.6	712.4	-80.4
92	ok	0.14	0.5	2.29e-02	8.0	8.0	6.2	6.2	-30.6	-23.5	-96.7	2717.4	606.6	-129.7
94	ok	0.14	0.6	1.90e-02	8.0	8.0	6.2	6.2	-25.7	-25.8	-96.8	3590.7	780.8	-142.6
96	ok	0.14	0.6	1.56e-02	8.0	8.0	6.2	6.2	-20.5	-21.4	-73.7	4196.7	922.1	-122.3
98	ok	0.14	0.6	1.16e-02	8.0	8.0	6.2	6.2	-18.5	-8.0	-22.9	4618.3	1016.0	39.5
100	ok	0.14	0.6	7.86e-03	8.0	8.0	6.2	6.2	-17.8	-12.5	-23.0	4693.7	1031.0	35.6
102	ok	0.14	0.6	8.28e-03	8.0	8.0	6.2	6.2	-17.8	3.3	25.7	4319.5	949.9	143.4
104	ok	0.14	0.6	1.13e-02	8.0	8.0	6.2	6.2	-20.1	6.0	49.9	3892.4	853.8	185.3
106	ok	0.14	0.5	1.45e-02	8.0	8.0	6.2	6.2	-23.9	1.5	49.9	3256.9	726.6	184.9
108	ok	0.14	0.4	1.74e-02	8.0	8.0	6.2	6.2	-28.4	3.5	73.6	2464.2	543.9	16.9
110	ok	0.14	0.4	2.06e-02	8.0	8.0	6.2	6.2	-34.3	-1.6	121.9	1589.6	347.9	-62.0
112	ok	0.14	0.4	2.40e-02	8.0	8.0	6.2	6.2	-32.5	-3.5	118.8	1534.6	340.0	184.6
114	ok	0.14	0.3	2.73e-02	8.0	8.0	6.2	6.2	-78.0	-12.8	134.9	1135.3	199.5	-100.6
118	ok	0.14	0.4	1.53e-02	8.0	8.0	6.2	6.2	55.9	44.8	136.8	586.9	-364.1	96.2
128	ok	0.14	0.1	7.36e-02	8.0	8.0	6.2	6.2	-452.1	-215.3	-124.9	1723.3	-812.3	-284.0
131	ok	0.14	0.4	3.59e-02	8.0	8.0	6.2	6.2	-80.6	-21.0	-137.1	2565.0	994.0	185.4
133	ok	0.14	0.5	2.15e-02	8.0	8.0	6.2	6.2	-7.3	-7.6	-137.1	2210.7	942.2	-2.1
135	ok	0.14	0.5	1.55e-02	8.0	8.0	6.2	6.2	-11.0	93.7	-97.2	1893.0	479.0	-154.5
137	ok	0.14	0.5	1.01e-02	8.0	8.0	6.2	6.2	-10.2	93.9	-97.2	1774.7	456.1	-177.6
139	ok	0.14	0.5	5.50e-03	8.0	8.0	6.2	6.2	-5.8	131.2	-72.1	1675.4	356.6	-121.6
141	ok	0.14	0.4	4.55e-03	8.0	8.0	6.2	6.2	-3.88e-02	170.1	-19.1	1702.5	387.0	55.5
143	ok	0.14	0.4	3.94e-03	8.0	8.0	6.2	6.2	-1.8	169.8	-19.1	1674.5	381.5	86.4
145	ok	0.14	0.4	3.46e-03	8.0	8.0	6.2	6.2	-2.7	166.7	28.2	1590.1	363.8	35.9
147	ok	0.14	0.4	3.36e-03	8.0	8.0	6.2	6.2	-5.4	148.1	53.8	1533.9	357.6	117.5
149	ok	0.14	0.5	7.03e-03	8.0	8.0	6.2	6.2	-3.1	148.5	53.8	1483.7	347.7	140.1
151	ok	0.14	0.5	1.06e-02	8.0	8.0	6.2	6.2	-12.5	105.0	103.6	1458.4	352.3	190.6
153	ok	0.14	0.5	1.55e-02	8.0	8.0	6.2	6.2	-7.2	106.0	103.6	1477.5	355.5	154.0
155	ok	0.14	0.4	2.56e-02	8.0	8.0	6.2	6.2	-36.9	-43.1	134.9	1491.1	548.4	162.0
157	ok	0.14	0.3	5.03e-02	8.0	8.0	6.2	6.2	-128.2	-265.4	129.1	874.4	-1040.7	-16.4
159	ok	0.14	0.2	4.40e-02	8.0	8.0	6.2	6.2	-9.5	-241.7	129.1	411.0	-1104.7	269.8
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									-452.13	-265.39	-152.34	-336.22	-1104.69	-285.66
		0.14	0.64	0.07	8.04	8.04	6.16	6.16	55.88	170.09	136.75	4693.70	1031.04	406.48

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
29	ok	1.93						
32	ok	1.93						
35	ok	0.84						
38	ok	0.85						
41	ok	0.85						
44	ok	1.03						
47	ok	1.31						
50	ok	1.52						
53	ok	1.55						
56	ok	1.55						
59	ok	1.41						
62	ok	1.08						
65	ok	1.01						
68	ok	1.26						
71	ok	1.26						
74	ok	0.77						
85	ok	2.86						
88	ok	2.86						
90	ok	1.24						
92	ok	1.15						
94	ok	1.69						
96	ok	2.00						
98	ok	2.13						
100	ok	2.13						
102	ok	2.11						
104	ok	1.88						
106	ok	1.59						
108	ok	1.18						
110	ok	0.92						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
112	ok	0.73						
114	ok	1.94						
118	ok	1.94						
128	ok	3.93						
131	ok	3.93						
133	ok	1.01						
135	ok	1.11						
137	ok	1.70						
139	ok	2.01						
141	ok	2.14						
143	ok	2.14						
145	ok	2.11						
147	ok	1.88						
149	ok	1.58						
151	ok	1.17						
153	ok	0.89						
155	ok	0.59						
157	ok	2.87						
159	ok	2.87						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		3.93						

Macro Setto	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
8	30.00	6	9	Singolo elemento NON DISSIPATIVO

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									daN/cm	daN/cm	daN/cm	daN	daN	daN
74	ok	0.14	9.72e-02	3.11e-02	8.0	8.0	6.2	6.2	-166.0	-13.4	98.3	-25.0	-26.1	-147.1
75	ok	0.14	0.2	2.30e-02	8.0	8.0	6.2	6.2	-79.0	-4.5	110.3	-188.7	-201.5	-350.4
76	ok	0.14	0.4	6.20e-03	8.0	8.0	6.2	6.2	134.0	29.4	110.3	-252.2	-211.6	-187.2
85	ok	0.14	0.1	6.42e-02	8.0	8.0	6.2	6.2	-427.5	-107.4	72.3	-765.0	-717.2	-437.4
86	ok	0.14	0.3	2.90e-02	8.0	8.0	6.2	6.2	17.6	-35.0	72.3	-1069.4	-782.0	-419.2
87	ok	0.14	0.5	1.47e-02	8.0	8.0	6.2	6.2	116.3	-44.0	110.3	-95.5	541.9	-220.8
128	ok	0.14	0.2	7.05e-02	8.0	8.0	6.2	6.2	-368.1	-239.9	90.5	-2189.7	-1456.2	-372.8
129	ok	0.14	0.2	3.62e-02	8.0	8.0	6.2	6.2	-102.0	-117.8	-77.9	-422.0	2115.8	587.9
130	ok	0.14	0.6	1.48e-02	8.0	8.0	6.2	6.2	159.7	-75.0	-77.9	104.1	2220.7	970.1
169	ok	0.14	0.3	4.21e-02	8.0	8.0	6.2	6.2	-173.1	-209.5	92.7	-2483.7	-1535.9	-551.1
185	ok	0.14	0.4	2.67e-02	8.0	8.0	6.2	6.2	-45.7	-93.4	50.2	-2170.7	-406.4	-239.8
201	ok	0.14	0.4	1.70e-02	8.0	8.0	6.2	6.2	-15.9	-66.4	35.3	-1476.9	-275.5	-328.0
217	ok	0.14	0.4	1.25e-02	8.0	8.0	6.2	6.2	-14.0	-67.3	35.3	-832.7	-207.0	-304.2
233	ok	0.14	0.3	9.92e-03	8.0	8.0	6.2	6.2	-24.2	-24.5	-21.6	-1073.2	-219.5	78.4
249	ok	0.14	0.3	8.41e-03	8.0	8.0	6.2	6.2	-38.9	-32.9	-16.2	-1509.5	-296.7	281.2
265	ok	0.14	0.3	8.72e-03	8.0	8.0	6.2	6.2	-53.2	-21.3	-16.4	-1694.8	-331.1	328.3
281	ok	0.14	0.3	4.91e-03	8.0	8.0	6.2	6.2	-0.9	65.1	-20.1	-491.2	-197.5	383.8
297	ok	0.14	0.1	1.84e-02	8.0	8.0	6.2	6.2	-99.0	-7.7	-2.0	-1139.5	-118.5	-175.0
298	ok	0.14	0.1	1.13e-02	8.0	8.0	6.2	6.2	-57.0	19.0	-2.6	-962.9	-273.6	-276.2
299	ok	0.14	0.3	4.12e-03	8.0	8.0	6.2	6.2	-4.0	93.7	12.7	-414.2	-248.3	-123.6
300	ok	0.14	0.3	3.35e-03	8.0	8.0	6.2	6.2	12.2	68.4	-20.0	-263.0	-167.2	167.2
319	ok	0.14	0.3	4.10e-03	8.0	8.0	6.2	6.2	7.7	11.0	-27.9	52.1	1496.1	491.0
320	ok	0.14	0.3	4.74e-03	8.0	8.0	6.2	6.2	-10.3	7.8	-28.6	171.0	1519.1	1070.0
321	ok	0.14	0.4	7.51e-03	8.0	8.0	6.2	6.2	-30.2	17.8	-17.7	-629.8	-322.1	352.8
322	ok	0.14	0.3	6.99e-03	8.0	8.0	6.2	6.2	-37.2	-4.0	-22.0	-1546.7	-527.3	333.5
323	ok	0.14	0.3	7.31e-03	8.0	8.0	6.2	6.2	-20.2	-1.2	-21.8	-1111.0	-444.2	261.9
324	ok	0.14	0.4	8.99e-03	8.0	8.0	6.2	6.2	-12.2	-17.1	46.8	-592.8	-180.0	-604.1
325	ok	0.14	0.4	1.09e-02	8.0	8.0	6.2	6.2	1.7	-13.2	39.1	-647.7	-351.3	-542.4
326	ok	0.14	0.5	1.52e-02	8.0	8.0	6.2	6.2	-30.8	-20.4	49.3	-2156.8	-353.7	-494.9
327	ok	0.17	0.4	2.83e-02	8.0	9.6	6.2	16.4	-164.3	-1.6	81.4	-2674.7	-337.7	-311.2
328	ok	0.17	0.4	4.71e-02	8.0	9.6	6.2	16.4	-67.4	120.2	-49.8	996.0	2496.1	1486.1
329	ok	0.17	0.4	1.51e-02	8.0	9.6	6.2	16.4	-48.8	48.8	-82.7	978.6	4476.1	1696.1
330	ok	0.17	0.4	4.10e-03	8.0	9.6	6.2	16.4	72.2	70.4	-82.7	841.6	4445.4	2033.1
371	ok	0.14	0.1	4.57e-03	8.0	8.0	6.2	6.2	-17.7	12.9	13.7	-365.6	-246.1	-38.3
372	ok	0.14	0.1	1.09e-02	8.0	8.0	6.2	6.2	-37.6	-15.9	-17.3	-292.6	-148.9	-371.2



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
373	ok	0.14	0.1	1.79e-02	8.0	8.0	6.2	6.2	-77.7	-9.1	-16.3	-404.8	-64.5	-305.1
374	ok	0.14	0.6	5.59e-03	8.0	8.0	6.2	6.2	-19.1	19.5	-19.8	546.1	2622.2	-414.4
375	ok	0.14	0.6	4.69e-03	8.0	8.0	6.2	6.2	-18.6	19.3	-19.8	703.8	2653.0	42.4
376	ok	0.14	0.4	4.73e-03	8.0	8.0	6.2	6.2	-22.3	19.7	-13.0	-344.0	566.4	587.7
377	ok	0.14	0.4	5.09e-03	8.0	8.0	6.2	6.2	-16.0	20.1	29.0	-400.8	-503.6	-215.3
378	ok	0.14	0.4	4.96e-03	8.0	8.0	6.2	6.2	-2.7	28.4	40.7	-504.0	-426.4	-416.8
379	ok	0.14	0.3	4.79e-03	8.0	8.0	6.2	6.2	-3.3	28.7	40.7	-641.5	-454.2	-481.9
380	ok	0.14	0.4	6.18e-03	8.0	8.0	6.2	6.2	-12.8	36.4	46.8	-612.5	-303.9	-659.3
381	ok	0.14	0.4	1.08e-02	8.0	8.0	6.2	6.2	-33.8	86.3	11.2	438.2	1260.3	-22.7
382	ok	0.17	0.4	1.75e-02	8.0	9.6	6.2	16.4	-39.0	88.9	-19.7	861.2	2764.0	574.0
383	ok	0.17	0.4	1.37e-02	8.0	9.6	6.2	16.4	-80.2	65.3	-49.8	1362.2	4448.4	1165.8
384	ok	0.17	0.5	1.42e-02	8.0	9.6	6.2	16.4	-5.5	60.6	-21.9	1569.3	6379.8	1092.2
385	ok	0.17	0.6	3.73e-03	8.0	9.6	6.2	16.4	6.3	62.7	-21.9	1523.2	6370.5	1561.7
426	ok	0.14	0.3	4.97e-03	8.0	8.0	6.2	6.2	-7.3	-12.1	5.98e-02	-432.9	-359.0	-230.9
427	ok	0.14	0.1	9.54e-03	8.0	8.0	6.2	6.2	-34.0	2.5	-5.2	379.7	58.3	-191.4
428	ok	0.14	0.2	1.40e-02	8.0	8.0	6.2	6.2	-50.4	-1.0	-6.4	446.1	73.5	-179.2
429	ok	0.14	0.8	6.04e-03	8.0	8.0	6.2	6.2	-11.3	48.6	-19.8	752.5	3643.3	-349.9
430	ok	0.14	0.8	4.69e-03	8.0	8.0	6.2	6.2	-14.3	48.0	-7.1	1053.8	3714.3	-83.5
431	ok	0.14	0.4	4.69e-03	8.0	8.0	6.2	6.2	-9.2	39.5	-3.7	169.2	956.6	-109.2
432	ok	0.14	0.5	8.56e-03	8.0	8.0	6.2	6.2	-6.4	52.0	28.2	-247.8	-745.0	-347.5
433	ok	0.14	0.5	4.45e-03	8.0	8.0	6.2	6.2	-5.8	51.7	28.2	-311.8	-758.4	-432.4
434	ok	0.14	0.5	4.63e-03	8.0	8.0	6.2	6.2	-4.8	73.6	31.0	-305.0	-617.5	-539.5
435	ok	0.14	0.5	4.76e-03	8.0	8.0	6.2	6.2	-7.9	110.5	12.3	103.0	552.7	-396.8
436	ok	0.14	0.7	5.84e-03	8.0	8.0	6.2	6.2	-25.6	124.1	11.2	622.4	2181.4	17.0
437	ok	0.17	0.5	5.58e-03	8.0	9.6	6.2	16.4	-31.4	122.5	-19.7	1108.2	4000.8	506.0
438	ok	0.17	0.5	4.22e-03	8.0	9.6	6.2	16.4	-17.9	114.5	-24.2	1398.0	5745.6	1218.6
439	ok	0.17	0.7	2.94e-03	8.0	9.6	6.2	16.4	8.0	96.8	-26.8	1919.5	8019.0	1407.0
440	ok	0.17	0.7	2.51e-03	8.0	9.6	6.2	16.4	16.4	105.8	-21.9	1951.5	8512.1	1522.6
481	ok	0.14	0.3	4.46e-03	8.0	8.0	6.2	6.2	-6.6	-22.7	6.4	-661.1	-1130.3	16.2
482	ok	0.14	0.1	6.84e-03	8.0	8.0	6.2	6.2	-33.0	-1.2	-4.8	372.5	21.2	-223.7
483	ok	0.14	0.2	8.43e-03	8.0	8.0	6.2	6.2	-49.4	-4.3	-6.0	439.3	37.4	-210.7
484	ok	0.14	0.7	5.44e-03	8.0	8.0	6.2	6.2	-16.6	45.8	-7.1	648.8	3174.1	105.4
485	ok	0.14	0.7	3.86e-03	8.0	8.0	6.2	6.2	-13.6	46.0	-7.1	988.1	3239.6	17.9
486	ok	0.14	0.3	5.37e-03	8.0	8.0	6.2	6.2	-10.4	35.3	-0.8	276.6	1117.2	-509.8
487	ok	0.14	0.5	8.56e-03	8.0	8.0	6.2	6.2	1.3	41.5	-13.4	304.2	966.2	-374.4
488	ok	0.14	0.6	9.57e-03	8.0	8.0	6.2	6.2	-0.7	81.2	11.7	-81.2	-724.3	-302.1
489	ok	0.14	0.6	9.58e-03	8.0	8.0	6.2	6.2	-6.0	80.4	11.7	-131.0	-729.7	-422.9
490	ok	0.14	0.6	8.48e-03	8.0	8.0	6.2	6.2	-3.8	115.0	13.9	-126.8	-652.4	-507.4
491	ok	0.14	0.6	7.11e-03	8.0	8.0	6.2	6.2	6.1	175.3	12.3	169.9	888.3	-434.1
492	ok	0.14	0.9	4.98e-03	8.0	8.0	6.2	6.2	0.2	191.8	1.9	447.6	2749.4	-36.1
493	ok	0.17	0.5	2.59e-03	8.0	9.6	6.2	16.4	1.8	197.2	-6.0	644.3	4841.7	284.1
494	ok	0.17	0.7	2.19e-03	8.0	9.6	6.2	16.4	6.3	198.5	-3.4	922.9	7123.2	919.1
495	ok	0.17	0.9	3.03e-03	8.0	9.6	6.2	16.4	16.1	203.3	5.0	1151.6	9348.0	1346.9
496	ok	0.17	0.9	3.16e-03	8.0	9.6	6.2	16.4	37.8	207.0	5.0	1201.1	9357.9	1671.8
540	ok	0.14	0.3	4.02e-03	8.0	8.0	6.2	6.2	-12.1	-14.9	13.1	-207.1	-726.1	195.5
541	ok	0.14	0.2	4.31e-03	8.0	8.0	6.2	6.2	-28.8	3.1	-3.9	133.8	40.6	-40.9
542	ok	0.14	0.1	4.57e-03	8.0	8.0	6.2	6.2	-16.3	0.6	-1.2	1.6	-28.1	-173.3
543	ok	0.14	0.4	3.53e-03	8.0	8.0	6.2	6.2	-18.8	11.4	7.2	-3.4	871.3	625.4
544	ok	0.14	0.4	2.84e-03	8.0	8.0	6.2	6.2	-10.4	35.3	-0.8	276.6	1117.2	-509.8
545	ok	0.14	0.3	5.37e-03	8.0	8.0	6.2	6.2	-0.5	10.4	-10.7	213.4	1032.4	-550.6
555	ok	0.14	0.3	2.55e-03	8.0	8.0	6.2	6.2	-2.9	9.8	-0.3	134.2	707.6	248.4
556	ok	0.14	0.2	2.60e-03	8.0	8.0	6.2	6.2	-15.4	-2.5	-4.9	62.7	68.1	-3.2
557	ok	0.14	2.50e-02	6.31e-04	8.0	8.0	6.2	6.2	-0.4	-1.3	2.0	-45.6	-126.4	-25.3
558	ok	0.14	0.1	2.49e-03	8.0	8.0	6.2	6.2	-3.7	-3.9	2.0	58.4	-102.1	25.6
567	ok	0.14	2.79e-02	1.91e-04	8.0	8.0	6.2	6.2	1.7	4.8	0.9	-1.3	25.4	9.2
568	ok	0.14	9.67e-02	6.73e-04	8.0	8.0	6.2	6.2	-2.5	3.1	0.9	29.8	34.4	29.1
569	ok	0.14	0.2	9.66e-04	8.0	8.0	6.2	6.2	1.1	7.2	3.1	39.8	249.5	54.1
570	ok	0.14	0.3	8.71e-04	8.0	8.0	6.2	6.2	-4.5	5.6	8.92e-02	96.0	1416.9	336.8
571	ok	0.14	0.3	1.48e-03	8.0	8.0	6.2	6.2	-5.6	5.4	0.2	-94.8	601.7	138.6
572	ok	0.14	0.3	1.21e-03	8.0	8.0	6.2	6.2	-0.5	10.1	4.1	135.5	1016.1	-424.6
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									-427.49	-239.90	-82.68	-2674.66	-1535.95	-659.34
		0.17	0.94	0.07	8.04	9.58	6.16	16.42	159.70	206.97	110.31	1951.49	9357.94	2033.10

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
74	ok	0.27						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
75	ok	0.82						
76	ok	0.82						
85	ok	3.90						
86	ok	3.90						
87	ok	1.90						
128	ok	4.28						
129	ok	4.28						
130	ok	2.72						
169	ok	3.26						
185	ok	1.78						
201	ok	1.91						
217	ok	1.91						
233	ok	1.90						
249	ok	1.74						
265	ok	1.40						
281	ok	1.16						
297	ok	0.78						
298	ok	0.78						
299	ok	0.79						
300	ok	1.16						
319	ok	1.52						
320	ok	1.52						
321	ok	1.51						
322	ok	1.78						
323	ok	1.90						
324	ok	1.95						
325	ok	1.95						
326	ok	1.89						
327	ok	3.20						
328	ok	4.57						
329	ok	4.57						
330	ok	2.79						
371	ok	1.02						
372	ok	0.75						
373	ok	0.75						
374	ok	2.03						
375	ok	2.03						
376	ok	1.22						
377	ok	0.96						
378	ok	1.08						
379	ok	1.09						
380	ok	1.09						
381	ok	1.10						
382	ok	1.92						
383	ok	2.32						
384	ok	2.92						
385	ok	2.92						
426	ok	1.13						
427	ok	0.57						
428	ok	0.54						
429	ok	2.49						
430	ok	2.49						
431	ok	1.75						
432	ok Av	8.16	0.14	0.21	5.2	7.7	110.3	162.4
433	ok	1.74						
434	ok	0.85						
435	ok	1.31						
436	ok	2.02						
437	ok	2.60						
438	ok	3.00						
439	ok	3.55						
440	ok	3.55						
481	ok	1.11						
482	ok	0.87						
483	ok	0.88						
484	ok	1.84						
485	ok	1.84						
486	ok Av	13.01	0.10	0.38	3.6	14.3	75.8	303.5
487	ok Av	13.01	0.14	0.38	5.2	14.3	110.3	303.5
488	ok Av	8.16	0.14	0.21	5.2	7.7	110.3	162.4
489	ok	1.10						
490	ok	0.54						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
491	ok	0.84						
492	ok	1.59						
493	ok	2.31						
494	ok	2.76						
495	ok	3.44						
496	ok	3.44						
540	ok	0.98						
541	ok	0.87						
542	ok	0.87						
543	ok	1.41						
544	ok	2.34						
545	ok Av	13.01	0.10	0.38	3.6	14.3	75.8	303.5
555	ok	0.65						
556	ok	0.43						
557	ok	0.07						
558	ok	0.43						
567	ok	0.05						
568	ok	0.09						
569	ok	0.17						
570	ok	0.51						
571	ok	0.51						
572	ok	0.86						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		13.01	0.14	0.38	5.21	14.33	110.32	303.53

Macro Setto	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
10	30.00	6	9	Singolo elemento NON DISSIPATIVO

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									daN/cm	daN/cm	daN/cm	daN	daN	daN
300	ok	0.14	0.2	1.11e-02	8.0	8.0	6.2	6.2	-10.6	-43.5	-27.0	196.6	206.3	-157.2
304	ok	0.14	0.2	2.10e-02	8.0	8.0	6.2	6.2	-101.5	-110.2	-0.8	78.1	167.1	-638.5
305	ok	0.14	0.3	1.90e-02	8.0	8.0	6.2	6.2	-44.8	-79.2	-14.3	-726.5	-195.0	-516.4
306	ok	0.14	0.4	1.60e-02	8.0	8.0	6.2	6.2	-43.4	-78.9	-14.3	-713.2	-192.3	-500.9
307	ok	0.14	0.5	1.58e-02	8.0	8.0	6.2	6.2	-44.4	-77.5	-14.4	-650.1	-100.5	-403.9
308	ok	0.14	0.5	1.56e-02	8.0	8.0	6.2	6.2	-45.6	-79.3	-10.1	-595.3	-123.1	-310.6
309	ok	0.14	0.5	1.56e-02	8.0	8.0	6.2	6.2	-48.2	-80.2	-7.6	-561.6	-100.2	-220.7
310	ok	0.14	0.6	1.57e-02	8.0	8.0	6.2	6.2	-49.3	-80.6	-7.2	-568.2	-107.1	-137.3
311	ok	0.14	0.6	1.57e-02	8.0	8.0	6.2	6.2	-49.2	-81.1	-6.9	-618.8	-114.6	-51.0
312	ok	0.14	0.5	1.55e-02	8.0	8.0	6.2	6.2	-49.3	-77.7	1.2	-716.8	-136.7	90.9
313	ok	0.14	0.5	1.49e-02	8.0	8.0	6.2	6.2	-50.8	-71.0	7.3	-858.5	-169.5	203.8
314	ok	0.14	0.4	1.42e-02	8.0	8.0	6.2	6.2	-53.0	-61.3	12.7	-1007.1	-198.0	327.0
315	ok	0.14	0.3	1.37e-02	8.0	8.0	6.2	6.2	-55.2	-50.4	16.7	-1092.9	-220.4	454.2
316	ok	0.14	0.3	1.32e-02	8.0	8.0	6.2	6.2	-56.1	-50.6	16.7	-1007.6	-203.4	480.0
317	ok	0.14	0.2	9.45e-03	8.0	8.0	6.2	6.2	-28.5	-32.8	19.4	-526.6	-57.2	473.3
318	ok	0.14	0.2	3.59e-03	8.0	8.0	6.2	6.2	25.7	-11.8	17.8	-159.3	54.1	141.3
319	ok	0.14	0.5	6.94e-03	8.0	8.0	6.2	6.2	35.8	67.9	-35.5	338.2	987.8	-79.9
331	ok	0.14	0.5	1.60e-02	8.0	8.0	6.2	6.2	-47.8	54.0	-52.9	43.4	914.8	-475.2
333	ok	0.14	0.4	1.08e-02	8.0	8.0	6.2	6.2	-35.1	-30.8	-14.3	-733.8	-231.4	-521.4
335	ok	0.14	0.5	8.95e-03	8.0	8.0	6.2	6.2	-33.8	-30.5	-14.3	-720.5	-228.8	-506.0
337	ok	0.14	0.5	9.09e-03	8.0	8.0	6.2	6.2	-35.3	-32.4	-14.4	-676.4	-232.0	-421.5
339	ok	0.14	0.5	8.25e-03	8.0	8.0	6.2	6.2	-36.0	-31.3	-10.1	-613.9	-216.0	-333.9
341	ok	0.14	0.6	8.07e-03	8.0	8.0	6.2	6.2	-38.0	-29.4	-7.6	-583.9	-211.7	-232.2
343	ok	0.14	0.6	8.46e-03	8.0	8.0	6.2	6.2	-38.7	-27.5	-7.2	-588.4	-207.7	-135.2
345	ok	0.14	0.6	7.76e-03	8.0	8.0	6.2	6.2	-38.4	-27.2	-4.0	-642.8	-234.7	29.0
347	ok	0.14	0.5	7.52e-03	8.0	8.0	6.2	6.2	-38.8	-24.9	1.2	-742.8	-266.5	144.1
349	ok	0.14	0.5	8.01e-03	8.0	8.0	6.2	6.2	-40.7	-20.5	7.3	-883.7	-295.3	260.0
351	ok	0.14	0.4	9.16e-03	8.0	8.0	6.2	6.2	-43.3	-13.3	12.7	-1030.6	-315.6	359.1
353	ok	0.14	0.4	1.02e-02	8.0	8.0	6.2	6.2	-48.0	-14.2	12.7	-1115.3	-332.5	408.8
355	ok	0.14	0.4	1.03e-02	8.0	8.0	6.2	6.2	-46.4	-2.4	16.7	-1019.8	-264.2	447.7
357	ok	0.14	0.5	7.38e-03	8.0	8.0	6.2	6.2	-2.0	43.2	3.4	384.1	1557.9	1230.1
359	ok	0.14	0.5	1.90e-03	8.0	8.0	6.2	6.2	28.3	48.1	18.7	306.6	1531.9	1092.4



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
374	ok	0.14	0.7	7.11e-03	8.0	8.0	6.2	6.2	-13.1	87.7	-38.3	489.1	1855.7	42.9
386	ok	0.14	0.8	1.34e-02	8.0	8.0	6.2	6.2	-15.0	83.9	-38.3	324.2	1823.3	-414.1
388	ok	0.14	0.5	8.68e-03	8.0	8.0	6.2	6.2	-33.2	85.6	-28.4	86.7	478.3	-976.3
390	ok	0.14	0.5	5.38e-03	8.0	8.0	6.2	6.2	-17.0	68.2	-2.3	-371.2	-493.8	-726.4
392	ok	0.14	0.4	4.96e-03	8.0	8.0	6.2	6.2	-10.5	69.6	-2.3	-287.5	-480.2	-618.5
394	ok	0.14	0.4	4.93e-03	8.0	8.0	6.2	6.2	-10.9	63.9	4.2	-188.5	-511.7	-819.0
396	ok	0.14	0.3	6.83e-03	8.0	8.0	6.2	6.2	-34.0	59.1	11.1	-345.1	-474.1	-549.2
398	ok	0.14	0.3	7.39e-03	8.0	8.0	6.2	6.2	-40.2	53.2	-1.6	-599.5	-526.2	-304.9
400	ok	0.14	0.3	5.08e-03	8.0	8.0	6.2	6.2	-16.3	58.4	4.7	-462.0	-548.0	256.9
402	ok	0.14	0.3	4.66e-03	8.0	8.0	6.2	6.2	-16.3	53.1	10.4	-427.3	-546.5	523.0
404	ok	0.14	0.4	5.40e-03	8.0	8.0	6.2	6.2	-18.4	49.1	14.5	-378.2	-478.6	772.3
406	ok	0.14	0.4	6.75e-03	8.0	8.0	6.2	6.2	-18.3	49.0	14.5	-388.1	-486.4	896.9
408	ok	0.14	0.5	8.36e-03	8.0	8.0	6.2	6.2	-14.5	44.8	19.2	-432.4	-370.5	963.7
410	ok	0.14	0.5	9.29e-03	8.0	8.0	6.2	6.2	-24.7	39.0	30.0	-253.6	13.1	666.6
412	ok	0.14	0.7	6.35e-03	8.0	8.0	6.2	6.2	-9.3	32.8	18.7	562.0	2573.3	1395.3
414	ok	0.14	0.6	5.16e-03	8.0	8.0	6.2	6.2	26.1	38.8	18.7	512.9	2563.9	1117.8
429	ok	0.15	0.6	6.55e-03	8.0	9.6	6.2	10.0	-11.0	112.5	-38.3	655.3	2686.6	103.7
441	ok	0.15	0.7	7.87e-03	8.0	9.6	6.2	10.0	-12.9	103.8	-38.3	491.4	2654.2	-349.1
443	ok	0.15	0.5	6.10e-03	8.0	9.6	6.2	10.0	-21.3	124.5	-28.4	200.0	841.1	-950.6
445	ok	0.14	0.6	3.40e-03	8.0	8.0	6.2	6.2	-6.2	137.3	-5.4	-233.9	-600.0	-643.8
447	ok	0.14	0.6	2.12e-03	8.0	8.0	6.2	6.2	-1.3	129.2	1.1	-333.1	-760.8	-497.1
449	ok	0.14	0.7	3.64e-03	8.0	8.0	6.2	6.2	3.8	130.2	1.1	-304.0	-769.5	-385.7
451	ok	0.14	0.5	4.89e-03	8.0	8.0	6.2	6.2	-18.5	122.8	11.1	-431.5	-708.6	-122.8
453	ok	0.14	0.5	5.37e-03	8.0	8.0	6.2	6.2	-26.9	109.2	-1.6	-640.7	-931.6	-39.7
455	ok	0.14	0.7	3.53e-03	8.0	8.0	6.2	6.2	-2.6	185.0	3.9	-369.6	-1350.9	26.8
457	ok	0.14	0.6	2.24e-03	8.0	8.0	6.2	6.2	-3.3	117.2	10.4	-486.7	-886.2	525.3
459	ok	0.14	0.6	2.53e-03	8.0	8.0	6.2	6.2	-7.2	105.2	14.5	-439.1	-798.1	786.0
461	ok	0.14	0.6	3.72e-03	8.0	8.0	6.2	6.2	-7.2	105.1	14.5	-381.2	-805.8	910.8
463	ok	0.14	0.6	5.51e-03	8.0	8.0	6.2	6.2	-6.0	90.7	19.2	-428.9	-144.5	1017.0
465	ok	0.14	0.5	6.88e-03	8.0	8.0	6.2	6.2	-7.0	50.2	10.5	-468.3	950.4	305.6
467	ok	0.14	0.7	5.66e-03	8.0	8.0	6.2	6.2	-19.3	28.9	30.0	281.2	1918.7	153.8
469	ok	0.14	0.7	5.10e-03	8.0	8.0	6.2	6.2	-21.6	27.4	6.8	394.1	1941.4	67.1
484	ok	0.15	0.9	3.00e-03	8.0	9.6	6.2	10.0	11.0	138.7	-17.6	513.2	4014.4	318.4
497	ok	0.15	1.0	2.16e-03	8.0	9.6	6.2	10.0	11.7	137.3	-17.6	537.9	4019.3	-425.9
499	ok	0.15	0.6	1.41e-03	8.0	9.6	6.2	10.0	-1.3	177.1	-13.8	158.1	1036.1	-1022.7
501	ok	0.14	0.8	7.08e-04	8.0	8.0	6.2	6.2	5.3	217.1	-4.5	-124.6	-666.3	-599.0
503	ok	0.14	0.8	8.35e-04	8.0	8.0	6.2	6.2	13.8	234.2	-6.4	-152.0	-1006.9	-391.0
505	ok	0.14	0.8	9.11e-04	8.0	8.0	6.2	6.2	4.4	232.6	-6.4	-204.5	-1034.3	-253.3
507	ok	0.14	0.7	4.13e-03	8.0	8.0	6.2	6.2	-1.4	213.3	-3.6	-228.7	-886.2	-129.2
508	ok	0.14	0.5	4.38e-03	8.0	8.0	6.2	6.2	-23.8	109.5	3.4	-403.6	-807.6	-20.2
510	ok	0.14	0.5	5.17e-03	8.0	8.0	6.2	6.2	-27.0	116.8	-7.2	-559.9	-892.4	-151.8
512	ok	0.14	0.7	4.89e-03	8.0	8.0	6.2	6.2	-2.6	185.0	3.9	-369.6	-1350.9	26.8
513	ok	0.14	0.8	1.00e-03	8.0	8.0	6.2	6.2	0.3	192.2	8.2	-412.0	-1323.4	165.9
515	ok	0.14	0.8	8.31e-04	8.0	8.0	6.2	6.2	4.6	188.9	6.1	-231.5	-1148.0	520.8
517	ok	0.14	0.8	7.71e-04	8.0	8.0	6.2	6.2	5.2	189.0	6.1	-210.8	-1153.8	639.5
519	ok	0.14	0.8	8.17e-04	8.0	8.0	6.2	6.2	4.1	165.6	6.4	-187.4	-998.7	846.2
521	ok	0.14	0.8	2.32e-03	8.0	8.0	6.2	6.2	2.7	124.5	6.5	82.9	1164.5	897.3
524	ok	0.14	0.5	3.56e-03	8.0	8.0	6.2	6.2	-4.0	47.4	-10.5	-387.2	1357.7	-603.3
525	ok	0.14	0.6	4.21e-03	8.0	8.0	6.2	6.2	-12.3	25.7	-7.2	241.7	1808.4	-126.9
527	ok	0.14	0.6	4.36e-03	8.0	8.0	6.2	6.2	-23.1	22.7	6.8	372.4	1836.3	-28.7
546	ok	0.14	9.36e-02	6.69e-03	8.0	8.0	6.2	6.2	-12.2	-25.4	-26.0	-231.8	68.3	160.3
547	ok	0.14	7.14e-02	7.77e-03	8.0	8.0	6.2	6.2	-23.2	-2.2	-4.9	-252.3	-166.5	116.6
548	ok	0.14	0.1	7.16e-03	8.0	8.0	6.2	6.2	-24.6	-3.7	-4.9	-58.4	-110.1	-67.6
549	ok	0.14	0.2	5.90e-03	8.0	8.0	6.2	6.2	-23.1	-19.5	18.0	-86.0	1.1	-415.2
550	ok	0.14	0.3	4.63e-03	8.0	8.0	6.2	6.2	-10.8	2.1	6.8	468.1	920.4	-687.5
551	ok	0.14	0.5	3.09e-03	8.0	8.0	6.2	6.2	3.2	16.8	7.3	22.4	2455.9	-323.5
552	ok	0.14	0.5	3.26e-03	8.0	8.0	6.2	6.2	12.1	18.3	7.3	279.8	2506.5	-109.9
559	ok	0.14	4.33e-02	3.52e-03	8.0	8.0	6.2	6.2	-21.4	4.8	9.0	-95.6	-58.8	-7.9
560	ok	0.14	4.24e-02	1.61e-03	8.0	8.0	6.2	6.2	8.9	10.0	9.0	-83.2	-49.2	17.4
561	ok	0.14	3.58e-02	1.62e-03	8.0	8.0	6.2	6.2	7.6	5.0	-9.1	31.7	-58.5	-14.2
562	ok	0.14	2.55e-02	3.85e-03	8.0	8.0	6.2	6.2	-23.4	-0.1	-9.1	-90.2	-78.7	1.4
563	ok	0.14	0.2	2.75e-03	8.0	8.0	6.2	6.2	-13.5	-10.3	6.8	441.0	788.5	-378.3
564	ok	0.14	0.2	5.69e-03	8.0	8.0	6.2	6.2	-10.3	-35.1	10.1	-177.2	1385.6	-411.2
565	ok	0.14	0.2	5.32e-03	8.0	8.0	6.2	6.2	-1.4	-33.2	10.1	80.0	1437.5	-164.5
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N z	N o	N zo	M z	M o	M zo
									-101.50	-110.18	-52.89	-1115.34	-1350.92	-1022.74
		0.15	0.96	0.02	8.04	9.58	6.16	10.01	35.79	234.19	30.02	655.25	4019.33	1395.28



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
300	ok	0.56						
304	ok	0.71						
305	ok	1.29						
306	ok	1.76						
307	ok	1.91						
308	ok	2.00						
309	ok	2.04						
310	ok	2.10						
311	ok	2.10						
312	ok	2.07						
313	ok	1.99						
314	ok	1.87						
315	ok	1.58						
316	ok	1.11						
317	ok	1.35						
318	ok	1.35						
319	ok	1.41						
331	ok	1.42						
333	ok	1.76						
335	ok	2.07						
337	ok	2.07						
339	ok	2.08						
341	ok	2.08						
343	ok	2.08						
345	ok	2.08						
347	ok	2.08						
349	ok	2.07						
351	ok	2.03						
353	ok	1.96						
355	ok	1.73						
357	ok	1.95						
359	ok	1.95						
374	ok	1.88						
386	ok	1.88						
388	ok	0.92						
390	ok	0.86						
392	ok	1.09						
394	ok	1.21						
396	ok	1.28						
398	ok	1.31						
400	ok	1.31						
402	ok	1.30						
404	ok	1.23						
406	ok	1.08						
408	ok	0.86						
410	ok	0.97						
412	ok	2.05						
414	ok	2.05						
429	ok	4.45						
441	ok	4.45						
443	ok	3.33						
445	ok	2.66						
447	ok	2.02						
449	ok	1.74						
451	ok	1.67						
453	ok	1.11						
455	ok	3.24						
457	ok	1.15						
459	ok	1.74						
461	ok	2.33						
463	ok	3.71						
465	ok	3.71						
467	ok	1.99						
469	ok	1.99						
484	ok	3.20						
497	ok	3.20						
499	ok	2.12						
501	ok	1.41						
503	ok	1.17						
505	ok	1.41						
507	ok	1.67						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
508	ok	1.29						
510	ok	0.98						
512	ok	3.24						
513	ok	3.24						
515	ok	1.33						
517	ok	0.92						
519	ok	1.19						
521	ok	1.86						
524	ok	1.93						
525	ok	1.93						
527	ok	1.81						
546	ok	0.79						
547	ok	0.83						
548	ok	0.88						
549	ok	0.88						
550	ok	1.90						
551	ok	1.90						
552	ok	1.47						
559	ok	0.41						
560	ok	0.41						
561	ok	0.46						
562	ok	0.46						
563	ok	0.80						
564	ok	0.80						
565	ok	0.61						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		4.45						

Macro Guscio	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
1	40.00	6	8	Singolo elemento

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									daN/cm	daN/cm	daN/cm	daN	daN	daN
1	ok	0.10	3.13e-02	8.03e-04	7.9	7.9	7.9	7.9	-0.4	5.9	-5.6	-17.4	22.0	-151.5
2	ok	0.10	4.57e-02	2.34e-03	7.9	7.9	7.9	7.9	6.6	0.4	-7.6	45.3	152.3	-161.6
3	ok	0.10	4.31e-02	2.70e-03	7.9	7.9	7.9	7.9	6.5	-0.7	-8.0	51.4	177.1	-122.9
4	ok	0.10	2.87e-02	2.15e-03	7.9	7.9	7.9	7.9	5.7	0.4	-5.9	149.6	199.9	49.3
5	ok	0.10	3.71e-02	1.33e-03	7.9	7.9	7.9	7.9	4.1	-3.6	-5.3	134.3	131.6	15.6
6	ok	0.10	2.45e-02	1.66e-03	7.9	7.9	7.9	7.9	-13.7	2.8	-4.8	-99.0	7.6	-93.7
7	ok	0.10	4.24e-02	2.52e-03	7.9	7.9	7.9	7.9	-7.3	-1.8	-7.7	247.8	207.3	-133.1
8	ok	0.10	4.25e-02	3.32e-03	7.9	7.9	7.9	7.9	-7.5	-4.8	-4.9	252.6	232.3	-93.9
9	ok	0.10	2.68e-02	3.08e-03	7.9	7.9	7.9	7.9	-5.8	-2.3	-5.4	218.6	217.7	-17.9
10	ok	0.10	3.09e-02	2.37e-03	7.9	7.9	7.9	7.9	-6.9	-7.0	1.6	-5.5	101.9	-30.6
11	ok	0.10	2.18e-02	1.54e-03	7.9	7.9	7.9	7.9	-7.4	3.8	3.0	-40.4	16.9	-20.1
12	ok	0.10	1.70e-02	4.35e-03	7.9	7.9	7.9	7.9	-18.4	-7.6	6.7	134.8	175.4	-39.9
13	ok	0.10	1.84e-02	4.95e-03	7.9	7.9	7.9	7.9	-18.1	-9.5	9.5	161.1	191.8	-88.1
14	ok	0.10	1.86e-02	4.49e-03	7.9	7.9	7.9	7.9	-18.1	-8.2	11.2	151.0	143.0	-109.8
15	ok	0.10	2.05e-02	3.61e-03	7.9	7.9	7.9	7.9	-12.3	-9.7	11.0	67.9	79.4	-76.4
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									-18.42	-9.73	-8.04	-98.97	7.59	-161.64
		0.10	0.05	4.95e-03	7.85	7.85	7.85	7.85	6.63	5.89	11.22	252.64	232.31	49.30

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
1	ok	0.22						
2	ok	0.65						
3	ok	0.65						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
4	ok	0.54						
5	ok	0.24						
6	ok	0.32						
7	ok	0.65						
8	ok	0.65						
9	ok	0.54						
10	ok	0.24						
11	ok	0.32						
12	ok	0.46						
13	ok	0.46						
14	ok	0.40						
15	ok	0.18						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		0.65						

Macro Guscio	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
6	40.00	6	8	Singolo elemento

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									daN/cm	daN/cm	daN/cm	daN	daN	daN
29	ok	0.10	0.2	2.87e-02	7.9	7.9	7.9	7.9	-19.8	-122.3	22.2	350.3	1120.5	-549.9
30	ok	0.10	0.1	3.23e-02	7.9	7.9	7.9	7.9	-55.6	-45.9	68.6	177.3	363.1	-975.1
31	ok	0.10	7.33e-02	2.69e-02	7.9	7.9	7.9	7.9	-88.3	-210.5	70.0	227.6	503.2	-1029.6
32	ok	0.10	0.3	2.19e-02	7.9	7.9	7.9	7.9	-24.8	-6.30e-02	102.9	79.6	267.3	-1197.0
33	ok	0.10	0.2	2.49e-02	7.9	7.9	7.9	7.9	-20.8	-99.1	87.9	420.8	358.3	-1164.0
34	ok	0.10	8.13e-02	2.83e-02	7.9	7.9	7.9	7.9	-40.9	-200.0	88.2	434.4	418.4	-1356.0
35	ok	0.10	0.2	1.95e-02	7.9	7.9	7.9	7.9	-8.8	3.2	92.0	907.5	434.7	-1228.2
36	ok	0.10	0.2	2.33e-02	7.9	7.9	7.9	7.9	-22.5	-98.7	74.7	1357.8	548.5	-1188.6
37	ok	0.10	0.1	2.88e-02	7.9	7.9	7.9	7.9	-38.6	-197.7	53.3	1336.7	449.3	-1602.8
38	ok	0.10	0.2	2.09e-02	7.9	7.9	7.9	7.9	-26.0	-169.2	56.1	2418.8	825.0	-882.8
39	ok	0.10	0.3	2.36e-02	7.9	7.9	7.9	7.9	-14.6	-163.5	39.6	3123.9	829.8	-1302.0
40	ok	0.10	0.3	2.96e-02	7.9	7.9	7.9	7.9	-22.8	-193.7	43.7	3115.7	793.8	-1717.2
41	ok	0.10	0.4	2.74e-02	7.9	7.9	7.9	7.9	5.7	-162.6	52.6	3962.7	1134.3	-794.2
42	ok	0.10	0.5	2.32e-02	7.9	7.9	7.9	7.9	4.7	-159.6	33.2	4997.0	1194.6	-1226.5
43	ok	0.10	0.5	3.00e-02	7.9	7.9	7.9	7.9	3.6	-164.1	33.5	4977.9	1104.7	-1607.6
44	ok	0.10	0.6	3.25e-02	7.9	7.9	7.9	7.9	9.1	-236.2	42.0	5322.6	1487.8	-582.6
45	ok	0.10	0.7	2.50e-02	7.9	7.9	7.9	7.9	11.5	-189.6	24.5	6574.1	1560.4	-968.2
46	ok	0.10	0.7	3.01e-02	7.9	7.9	7.9	7.9	19.6	-148.4	24.6	6546.1	1425.9	-1287.0
47	ok	0.10	0.7	3.56e-02	7.9	7.9	7.9	7.9	13.8	-277.5	26.7	6435.5	1731.9	-412.4
48	ok	0.10	0.8	2.65e-02	7.9	7.9	7.9	7.9	17.5	-212.7	31.7	7717.7	1820.1	-633.1
49	ok	0.10	0.8	3.00e-02	7.9	7.9	7.9	7.9	30.2	-143.3	31.8	7683.4	1654.7	-865.0
50	ok	0.10	0.8	3.69e-02	7.9	7.9	7.9	7.9	13.7	-321.4	-9.5	7090.8	1981.4	45.1
51	ok	0.10	0.9	2.74e-02	7.9	7.9	7.9	7.9	20.0	-228.1	20.9	8386.6	1977.5	-252.3
52	ok	0.10	0.9	2.96e-02	7.9	7.9	7.9	7.9	35.8	-143.3	21.1	8349.1	1796.0	-387.8
53	ok	0.10	0.8	3.69e-02	7.9	7.9	7.9	7.9	18.8	-324.7	-30.8	7311.4	2026.2	363.5
54	ok	0.10	0.9	2.74e-02	7.9	7.9	7.9	7.9	19.9	-234.8	-23.6	8575.6	2096.9	414.0
55	ok	0.10	0.9	2.85e-02	7.9	7.9	7.9	7.9	36.9	-143.6	-23.6	8536.5	1901.5	485.2
56	ok	0.10	0.8	3.61e-02	7.9	7.9	7.9	7.9	19.9	-308.1	-47.9	7079.2	1951.9	678.2
57	ok	0.10	0.9	2.66e-02	7.9	7.9	7.9	7.9	17.2	-236.9	1.4	8083.8	1952.4	704.4
58	ok	0.10	0.9	2.68e-02	7.9	7.9	7.9	7.9	33.0	-148.6	1.4	8044.4	1816.0	787.4
59	ok	0.10	0.7	3.46e-02	7.9	7.9	7.9	7.9	16.9	-276.4	-51.6	6384.3	1763.4	497.9
60	ok	0.10	0.8	2.54e-02	7.9	7.9	7.9	7.9	17.1	-200.8	-40.1	7227.7	1742.7	896.1
61	ok	0.10	0.8	2.46e-02	7.9	7.9	7.9	7.9	31.8	-129.1	-40.3	7193.5	1575.9	1196.6
62	ok	0.10	0.6	3.21e-02	7.9	7.9	7.9	7.9	11.9	-233.0	-69.5	5253.3	1478.1	813.9
63	ok	0.10	0.6	2.35e-02	7.9	7.9	7.9	7.9	13.3	-176.2	-41.5	5966.0	1479.4	1263.3
64	ok	0.10	0.7	2.20e-02	7.9	7.9	7.9	7.9	23.0	-123.2	-41.3	5938.4	1344.8	1615.7
65	ok	0.10	0.4	2.79e-02	7.9	7.9	7.9	7.9	4.9	-160.8	-81.5	3742.4	1045.4	1088.4
66	ok	0.10	0.5	2.14e-02	7.9	7.9	7.9	7.9	4.1	-127.6	-53.3	4338.6	1073.7	1503.9
67	ok	0.10	0.5	1.91e-02	7.9	7.9	7.9	7.9	9.4	-98.9	-53.9	4321.9	987.9	1918.5
68	ok	0.10	0.2	2.28e-02	7.9	7.9	7.9	7.9	-42.4	-170.0	-75.7	1810.7	657.4	1175.7
69	ok	0.10	0.2	1.97e-02	7.9	7.9	7.9	7.9	-28.0	-134.2	-48.7	2350.3	668.2	1568.6
70	ok	0.10	0.2	1.83e-02	7.9	7.9	7.9	7.9	-24.6	-114.5	-53.2	2366.9	749.4	1889.8



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
71	ok	0.10	0.3	1.52e-02	7.9	7.9	7.9	7.9	-33.9	9.9	-89.0	130.6	-326.0	949.3
72	ok	0.10	0.2	1.78e-02	7.9	7.9	7.9	7.9	-34.2	-78.1	-56.3	778.8	300.6	1450.3
73	ok	0.10	0.1	1.79e-02	7.9	7.9	7.9	7.9	-42.7	-118.1	-57.0	808.3	434.7	1774.6
74	ok	0.10	0.3	8.04e-03	7.9	7.9	7.9	7.9	26.8	21.7	-95.5	-207.6	-401.3	695.7
75	ok	0.10	0.2	1.18e-02	7.9	7.9	7.9	7.9	-5.1	-28.7	-75.4	212.3	9.8	895.8
76	ok	0.10	0.1	1.46e-02	7.9	7.9	7.9	7.9	-11.4	-78.2	-75.5	259.0	227.3	1035.8
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									-88.28	-324.69	-95.45	-207.57	-401.33	-1717.19
		0.10	0.94	0.04	7.85	7.85	7.85	7.85	36.87	21.67	102.95	8575.56	2096.91	1918.48

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
29	ok	2.32						
30	ok	2.31						
31	ok	0.99						
32	ok	2.32						
33	ok	2.31						
34	ok	1.62						
35	ok	2.08						
36	ok	2.07						
37	ok	1.62						
38	ok	2.07						
39	ok	2.07						
40	ok	1.57						
41	ok	1.97						
42	ok	1.98						
43	ok	1.41						
44	ok	1.84						
45	ok	1.85						
46	ok	1.34						
47	ok	1.65						
48	ok	1.67						
49	ok	1.24						
50	ok	1.51						
51	ok	1.53						
52	ok	1.14						
53	ok	1.35						
54	ok	1.35						
55	ok	1.09						
56	ok	1.37						
57	ok	1.35						
58	ok	1.05						
59	ok	1.56						
60	ok	1.54						
61	ok	1.01						
62	ok	1.77						
63	ok	1.76						
64	ok	1.22						
65	ok	2.02						
66	ok	2.02						
67	ok	1.39						
68	ok	2.09						
69	ok	2.09						
70	ok	1.62						
71	ok	2.09						
72	ok	2.09						
73	ok	1.62						
74	ok	1.54						
75	ok	1.55						
76	ok	0.81						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		2.32						



Macro Guscio	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
9	40.00	6	8	Singolo elemento

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									daN/cm	daN/cm	daN/cm	daN	daN	daN
128	ok	0.10	0.2	3.27e-02	7.9	7.9	7.9	7.9	-278.9	-225.1	13.1	1758.5	-2611.3	933.2
131	ok	0.10	0.3	1.96e-02	7.9	7.9	7.9	7.9	-23.1	-13.7	-78.9	2239.8	1623.0	-269.1
133	ok	0.10	0.4	7.83e-03	7.9	7.9	7.9	7.9	16.0	-5.9	-74.8	1670.9	1522.0	146.5
135	ok	0.10	0.4	5.77e-03	7.9	7.9	7.9	7.9	29.1	135.0	-69.7	1030.4	762.3	-334.6
137	ok	0.10	0.4	1.15e-03	7.9	7.9	7.9	7.9	44.9	138.4	-69.8	499.4	654.7	-268.7
139	ok	0.10	0.5	1.33e-03	7.9	7.9	7.9	7.9	1.7	119.5	-13.9	740.8	414.0	91.7
141	ok	0.10	0.5	1.27e-03	7.9	7.9	7.9	7.9	0.5	119.2	-13.9	715.1	408.8	78.1
143	ok	0.10	0.5	1.17e-03	7.9	7.9	7.9	7.9	1.9	130.9	-9.1	679.2	414.1	29.1
145	ok	0.10	0.5	1.01e-03	7.9	7.9	7.9	7.9	3.9	141.7	1.8	629.7	417.2	-62.1
147	ok	0.10	0.5	5.86e-04	7.9	7.9	7.9	7.9	4.9	141.4	7.8	568.5	407.8	-129.1
149	ok	0.10	0.4	3.63e-04	7.9	7.9	7.9	7.9	49.7	210.7	43.2	289.9	626.0	308.9
151	ok	0.10	0.4	1.10e-03	7.9	7.9	7.9	7.9	40.5	169.6	63.9	543.5	598.7	372.3
153	ok	0.10	0.4	5.45e-03	7.9	7.9	7.9	7.9	29.5	149.2	82.4	813.6	581.8	386.7
155	ok	0.10	0.4	9.24e-03	7.9	7.9	7.9	7.9	22.6	84.8	92.2	1153.4	446.9	244.6
157	ok	0.10	0.2	3.89e-02	7.9	7.9	7.9	7.9	-105.6	-343.4	-42.8	12.7	-3698.8	518.4
159	ok	0.10	0.2	3.91e-02	7.9	7.9	7.9	7.9	-126.6	-348.6	-28.2	-193.9	-3751.0	-215.9
169	ok	0.10	0.3	2.90e-02	7.9	7.9	7.9	7.9	-248.1	-85.5	9.5	1956.0	-1977.7	698.8
170	ok	0.10	0.3	1.18e-02	7.9	7.9	7.9	7.9	-26.2	-31.3	-77.5	2146.2	1163.7	-172.8
171	ok	0.10	0.3	8.98e-03	7.9	7.9	7.9	7.9	13.1	-23.6	-73.4	1582.2	1063.0	243.2
172	ok	0.10	0.3	7.58e-03	7.9	7.9	7.9	7.9	22.0	98.7	-68.9	1016.3	692.8	-236.7
173	ok	0.10	0.4	1.56e-03	7.9	7.9	7.9	7.9	45.7	143.5	-54.2	501.3	665.9	-163.8
174	ok	0.10	0.4	1.56e-03	7.9	7.9	7.9	7.9	-1.9	101.0	-13.9	744.0	429.9	96.6
175	ok	0.10	0.4	1.51e-03	7.9	7.9	7.9	7.9	-3.2	100.7	-13.9	718.3	424.8	82.9
176	ok	0.10	0.4	1.40e-03	7.9	7.9	7.9	7.9	-2.2	110.7	-9.1	683.2	433.7	36.2
177	ok	0.10	0.4	1.25e-03	7.9	7.9	7.9	7.9	69.1	200.4	1.2	-284.4	516.9	382.1
178	ok	0.10	0.4	8.47e-04	7.9	7.9	7.9	7.9	0.2	117.8	7.8	574.6	438.7	-117.3
179	ok	0.10	0.4	6.44e-04	7.9	7.9	7.9	7.9	6.0	78.9	1.9	-403.5	123.1	-762.5
180	ok	0.10	0.4	2.72e-03	7.9	7.9	7.9	7.9	9.2	57.5	-0.2	-412.1	132.0	-1002.1
181	ok	0.10	0.4	8.00e-03	7.9	7.9	7.9	7.9	21.8	108.4	82.2	811.6	567.5	338.4
182	ok	0.10	0.3	8.54e-03	7.9	7.9	7.9	7.9	14.0	38.1	92.0	1175.7	541.3	194.5
183	ok	0.10	0.3	1.34e-02	7.9	7.9	7.9	7.9	-43.3	-24.1	-36.3	356.6	-2159.1	692.4
184	ok	0.10	0.3	1.59e-02	7.9	7.9	7.9	7.9	-141.3	-44.5	-3.1	-97.2	-2256.5	491.3
185	ok	0.10	0.4	2.04e-02	7.9	7.9	7.9	7.9	3.7	41.7	3.2	572.4	2885.1	1261.8
186	ok	0.10	0.4	9.96e-03	7.9	7.9	7.9	7.9	5.2	42.1	2.8	842.5	2940.5	1005.3
187	ok	0.10	0.3	2.95e-03	7.9	7.9	7.9	7.9	11.8	52.5	8.9	713.8	1531.7	629.4
188	ok	0.10	0.2	1.99e-03	7.9	7.9	7.9	7.9	0.7	59.9	9.2	488.8	756.9	173.0
189	ok	0.10	0.2	8.67e-04	7.9	7.9	7.9	7.9	6.1	49.7	-1.9	122.4	419.3	514.9
190	ok	0.10	0.2	8.66e-04	7.9	7.9	7.9	7.9	6.5	49.7	-2.9	151.3	425.9	420.6
191	ok	0.10	0.2	8.18e-04	7.9	7.9	7.9	7.9	69.1	114.8	-3.6	-431.1	319.9	173.5
192	ok	0.10	0.2	8.16e-04	7.9	7.9	7.9	7.9	12.9	46.1	-3.7	200.5	572.2	-272.6
193	ok	0.10	0.2	6.34e-04	7.9	7.9	7.9	7.9	11.9	46.4	-4.0	170.1	552.4	-388.4
194	ok	0.10	0.2	2.03e-04	7.9	7.9	7.9	7.9	-1.6	43.2	2.0	-310.1	493.1	-486.2
195	ok	0.10	0.2	2.56e-05	7.9	7.9	7.9	7.9	-4.35e-02	29.7	2.4	-338.5	511.3	-767.0
196	ok	0.10	0.2	9.27e-04	7.9	7.9	7.9	7.9	1.6	29.4	0.3	-358.4	479.6	-1023.7
197	ok	0.10	0.2	3.46e-03	7.9	7.9	7.9	7.9	0.6	34.3	-3.6	-324.3	460.2	-1191.2
198	ok	0.10	0.2	5.32e-03	7.9	7.9	7.9	7.9	-2.9	34.5	-4.3	-282.3	483.7	-1241.3
199	ok	0.10	0.2	1.41e-02	7.9	7.9	7.9	7.9	-109.9	-46.2	-8.7	-9.7	-1785.0	571.7
200	ok	0.10	0.2	2.97e-02	7.9	7.9	7.9	7.9	-142.3	-59.7	-6.5	-48.2	-1471.0	538.9
201	ok	0.10	0.5	1.41e-02	7.9	7.9	7.9	7.9	4.3	45.7	15.0	702.9	3543.3	1125.2
202	ok	0.10	0.5	8.96e-03	7.9	7.9	7.9	7.9	9.3	46.9	9.9	1254.9	3657.9	719.7
203	ok	0.10	0.3	3.80e-03	7.9	7.9	7.9	7.9	7.6	49.8	14.2	1209.5	2132.0	526.0
204	ok	0.10	0.2	1.24e-03	7.9	7.9	7.9	7.9	-2.4	51.9	11.7	1074.0	1287.2	227.2
205	ok	0.10	0.2	3.40e-04	7.9	7.9	7.9	7.9	0.8	56.3	5.3	960.9	763.8	16.2
206	ok	0.10	0.2	4.06e-04	7.9	7.9	7.9	7.9	15.4	32.2	-0.1	785.9	714.2	315.2
207	ok	0.10	0.2	4.21e-04	7.9	7.9	7.9	7.9	17.4	32.6	-1.4	850.0	726.9	227.4
208	ok	0.10	0.2	3.80e-04	7.9	7.9	7.9	7.9	22.5	24.0	-4.5	953.1	880.9	-300.8
209	ok	0.10	0.2	0.0	7.9	7.9	7.9	7.9	21.4	24.2	-5.2	927.2	851.0	-402.2
210	ok	0.10	0.2	0.0	7.9	7.9	7.9	7.9	21.9	21.9	-0.7	930.0	926.1	-443.4
211	ok	0.10	0.2	9.71e-05	7.9	7.9	7.9	7.9	21.1	29.2	0.7	936.8	948.6	-575.7
212	ok	0.10	0.2	7.40e-04	7.9	7.9	7.9	7.9	13.6	19.9	-7.5	810.3	869.9	-966.3
213	ok	0.10	0.2	3.07e-03	7.9	7.9	7.9	7.9	5.4	19.2	-8.8	676.5	841.9	-1089.6
214	ok	0.10	0.2	6.57e-03	7.9	7.9	7.9	7.9	-8.2	12.5	-17.6	523.7	650.7	-1296.5
215	ok	0.10	0.2	1.34e-02	7.9	7.9	7.9	7.9	-29.4	17.2	-22.7	355.9	1065.9	-989.0



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
216	ok	0.10	0.2	2.90e-02	7.9	7.9	7.9	7.9	-148.5	-3.8	-26.2	635.5	1026.4	-1152.0
217	ok	0.10	0.5	1.02e-02	7.9	7.9	7.9	7.9	20.5	47.1	10.3	752.0	3693.4	516.2
218	ok	0.10	0.5	7.15e-03	7.9	7.9	7.9	7.9	12.2	46.7	12.9	1521.5	3859.9	227.1
219	ok	0.10	0.4	4.57e-03	7.9	7.9	7.9	7.9	5.8	46.7	14.9	1726.8	2541.7	275.8
220	ok	0.10	0.3	2.96e-03	7.9	7.9	7.9	7.9	5.2	44.4	12.5	1755.9	1623.8	165.3
221	ok	0.10	0.2	1.68e-03	7.9	7.9	7.9	7.9	19.1	13.7	-1.4	1757.8	1071.5	370.2
222	ok	0.10	0.2	6.82e-04	7.9	7.9	7.9	7.9	26.3	2.0	-2.4	1906.6	1196.7	328.3
223	ok	0.10	0.3	2.46e-04	7.9	7.9	7.9	7.9	26.0	14.8	-0.8	2187.2	1200.5	-234.2
224	ok	0.10	0.3	1.38e-04	7.9	7.9	7.9	7.9	27.6	14.0	-0.3	2315.8	1292.2	-257.9
225	ok	0.10	0.3	3.25e-04	7.9	7.9	7.9	7.9	30.4	14.2	-1.2	2431.6	1346.9	-327.1
226	ok	0.10	0.3	4.69e-04	7.9	7.9	7.9	7.9	29.6	10.4	-0.4	2397.6	1483.6	-347.7
227	ok	0.10	0.3	9.83e-04	7.9	7.9	7.9	7.9	27.6	8.3	-3.0	2256.6	1502.6	-559.3
228	ok	0.10	0.3	2.48e-03	7.9	7.9	7.9	7.9	16.8	7.0	-7.6	1992.6	1405.9	-787.0
229	ok	0.10	0.3	4.07e-03	7.9	7.9	7.9	7.9	6.9	5.0	-8.9	1635.5	1331.6	-897.1
230	ok	0.10	0.2	6.74e-03	7.9	7.9	7.9	7.9	-10.5	3.9	-16.0	1148.6	1031.2	-1101.6
231	ok	0.10	0.2	1.23e-02	7.9	7.9	7.9	7.9	-17.8	22.2	-23.3	505.5	969.7	-876.4
232	ok	0.10	0.2	1.45e-02	7.9	7.9	7.9	7.9	-14.1	23.4	-22.1	323.8	916.7	-642.1
233	ok	0.10	0.4	6.96e-03	7.9	7.9	7.9	7.9	16.6	44.6	7.2	780.5	3485.3	440.6
234	ok	0.10	0.5	5.86e-03	7.9	7.9	7.9	7.9	11.0	40.7	12.2	1450.2	3585.7	501.2
235	ok	0.10	0.4	4.74e-03	7.9	7.9	7.9	7.9	4.3	38.3	12.6	2094.0	2640.1	390.9
236	ok	0.10	0.3	3.71e-03	7.9	7.9	7.9	7.9	2.9	32.7	8.8	2283.0	1801.8	-121.6
237	ok	0.10	0.3	2.96e-03	7.9	7.9	7.9	7.9	23.9	2.1	-2.5	2931.8	1496.6	105.1
238	ok	0.10	0.4	2.23e-03	7.9	7.9	7.9	7.9	34.6	-12.0	-3.3	3311.2	1608.3	-231.8
239	ok	0.10	0.4	1.97e-03	7.9	7.9	7.9	7.9	38.1	-10.1	-2.8	3664.5	1722.9	-307.9
240	ok	0.10	0.5	1.78e-03	7.9	7.9	7.9	7.9	39.9	-9.9	-2.9	3894.7	1828.4	-376.6
241	ok	0.10	0.5	1.85e-03	7.9	7.9	7.9	7.9	37.3	-1.8	-5.4	4005.2	1805.2	-490.4
242	ok	0.10	0.5	1.98e-03	7.9	7.9	7.9	7.9	36.2	-4.4	-0.7	3948.3	1979.2	-142.4
243	ok	0.10	0.4	2.43e-03	7.9	7.9	7.9	7.9	28.6	-5.5	-2.9	3723.5	2018.4	-250.2
244	ok	0.10	0.4	3.34e-03	7.9	7.9	7.9	7.9	23.1	-5.4	-6.1	3299.2	1923.5	-378.1
245	ok	0.10	0.3	4.55e-03	7.9	7.9	7.9	7.9	10.4	-7.7	-7.4	2670.0	1793.7	-428.5
246	ok	0.10	0.2	6.63e-03	7.9	7.9	7.9	7.9	-9.4	-4.9	-11.6	1810.4	1383.3	-555.6
247	ok	0.10	0.2	8.74e-03	7.9	7.9	7.9	7.9	-20.6	14.2	-24.4	737.3	1195.6	-290.4
248	ok	0.10	0.1	9.74e-03	7.9	7.9	7.9	7.9	-15.9	14.6	-23.6	261.2	637.5	-532.6
249	ok	0.10	0.4	4.67e-03	7.9	7.9	7.9	7.9	42.3	39.7	6.7	697.9	2945.5	-1009.2
250	ok	0.10	0.4	4.61e-03	7.9	7.9	7.9	7.9	10.2	29.8	8.2	1503.2	2855.5	-725.5
251	ok	0.10	0.3	4.77e-03	7.9	7.9	7.9	7.9	2.9	24.3	7.1	2113.1	2317.8	-304.6
252	ok	0.10	0.4	4.11e-03	7.9	7.9	7.9	7.9	22.9	-12.0	-3.7	3278.3	1662.5	-255.0
253	ok	0.10	0.5	3.83e-03	7.9	7.9	7.9	7.9	31.3	-25.0	-4.6	3982.1	1753.1	-622.3
254	ok	0.10	0.6	3.68e-03	7.9	7.9	7.9	7.9	37.3	-24.0	-4.1	4633.3	1921.9	-607.9
255	ok	0.10	0.6	3.60e-03	7.9	7.9	7.9	7.9	42.2	-23.1	-3.6	5099.2	2044.5	-567.7
256	ok	0.10	0.6	3.51e-03	7.9	7.9	7.9	7.9	43.8	-21.6	1.5	5389.6	2158.2	-510.2
257	ok	0.10	0.6	3.25e-03	7.9	7.9	7.9	7.9	41.3	-16.0	0.4	5505.9	2226.4	-537.0
258	ok	0.10	0.6	3.47e-03	7.9	7.9	7.9	7.9	40.1	-16.8	-0.7	5395.3	2320.7	-464.2
259	ok	0.10	0.6	3.78e-03	7.9	7.9	7.9	7.9	37.0	-17.4	-2.3	5077.8	2365.7	-381.6
260	ok	0.10	0.5	4.21e-03	7.9	7.9	7.9	7.9	30.5	-16.8	-4.2	4499.9	2274.3	-302.9
261	ok	0.10	0.4	4.94e-03	7.9	7.9	7.9	7.9	17.0	-19.0	-5.5	3627.4	2095.1	-236.8
262	ok	0.10	0.2	5.60e-03	7.9	7.9	7.9	7.9	-4.2	-16.6	-7.1	2441.2	1607.2	-58.7
263	ok	0.10	0.2	5.74e-03	7.9	7.9	7.9	7.9	-13.5	8.3	-18.2	865.6	1210.2	345.3
264	ok	0.10	0.1	7.30e-03	7.9	7.9	7.9	7.9	-60.5	-8.7	-9.6	64.3	-1365.1	512.5
265	ok	0.10	0.4	5.29e-03	7.9	7.9	7.9	7.9	43.8	23.6	3.8	452.0	1929.4	-1631.8
266	ok	0.10	0.3	6.08e-03	7.9	7.9	7.9	7.9	9.7	10.3	4.2	1028.6	1637.5	-1372.1
267	ok	0.10	0.3	4.63e-03	7.9	7.9	7.9	7.9	9.5	-33.9	-4.7	2527.8	1237.7	-1199.8
268	ok	0.10	0.5	5.16e-03	7.9	7.9	7.9	7.9	29.6	-34.3	0.9	3943.0	1752.9	-985.3
269	ok	0.10	0.6	5.67e-03	7.9	7.9	7.9	7.9	41.1	-32.0	-5.7	4922.6	1949.3	-856.9
270	ok	0.10	0.7	6.13e-03	7.9	7.9	7.9	7.9	46.1	-32.2	-5.0	5637.7	2108.3	-648.5
271	ok	0.10	0.7	6.34e-03	7.9	7.9	7.9	7.9	48.6	-31.3	-4.1	6085.6	2160.5	-425.2
272	ok	0.10	0.8	6.35e-03	7.9	7.9	7.9	7.9	51.5	-32.5	-4.5	6458.5	2205.2	-767.9
273	ok	0.10	0.8	6.35e-03	7.9	7.9	7.9	7.9	49.7	-27.0	0.7	6548.2	2318.1	-513.7
274	ok	0.10	0.7	6.26e-03	7.9	7.9	7.9	7.9	48.3	-27.3	-2.01e-02	6388.8	2388.5	-230.5
275	ok	0.10	0.7	6.05e-03	7.9	7.9	7.9	7.9	45.0	-27.4	-1.1	5970.6	2406.0	87.3
276	ok	0.10	0.6	5.76e-03	7.9	7.9	7.9	7.9	38.4	-26.8	-2.3	5252.1	2298.5	432.4
277	ok	0.10	0.5	5.47e-03	7.9	7.9	7.9	7.9	25.1	-29.0	-7.5	4207.4	2084.9	649.2
278	ok	0.10	0.3	5.11e-03	7.9	7.9	7.9	7.9	3.6	-29.0	-4.3	2804.1	1590.7	1060.2
279	ok	0.10	0.2	5.36e-03	7.9	7.9	7.9	7.9	-27.7	-13.3	-6.0	713.4	-1471.6	1087.0
280	ok	0.10	0.2	7.34e-03	7.9	7.9	7.9	7.9	-48.1	-19.9	-6.9	201.7	-1588.7	1049.1
281	ok	0.10	0.3	5.12e-03	7.9	7.9	7.9	7.9	6.1	-38.7	4.6	-804.9	-1471.7	-1441.9
282	ok	0.10	0.3	9.99e-03	7.9	7.9	7.9	7.9	8.6	-37.3	1.3	-1089.8	-1245.9	-2189.2
283	ok	0.10	0.4	8.79e-03	7.9	7.9	7.9	7.9	13.4	-43.9	-2.3	2445.0	1064.4	-2109.3
284	ok	0.10	0.5	9.26e-03	7.9	7.9	7.9	7.9	41.0	-39.1	-10.1	3761.8	1329.8	-1918.3
285	ok	0.10	0.6	9.57e-03	7.9	7.9	7.9	7.9	50.8	-32.2	-3.0	4887.1	1624.1	-1479.4
286	ok	0.10	0.7	9.84e-03	7.9	7.9	7.9	7.9	55.5	-31.7	-1.5	5692.9	1751.9	-1093.0
287	ok	0.10	0.7	9.94e-03	7.9	7.9	7.9	7.9	57.7	-31.0	-0.9	6178.6	1794.0	-728.0



Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
288	ok	0.10	0.8	9.92e-03	7.9	7.9	7.9	7.9	57.4	-39.9	-5.9	6534.0	1886.2	-901.7
289	ok	0.10	0.8	9.91e-03	7.9	7.9	7.9	7.9	58.0	-37.5	-5.3	6563.6	1921.1	-485.0
290	ok	0.10	0.8	9.66e-03	7.9	7.9	7.9	7.9	45.3	-38.9	-5.3	6293.9	1909.4	-283.2
291	ok	0.10	0.7	9.12e-03	7.9	7.9	7.9	7.9	55.8	-34.2	1.8	5805.1	1891.2	669.6
292	ok	0.10	0.6	8.20e-03	7.9	7.9	7.9	7.9	49.1	-31.7	1.1	4942.7	1732.9	1200.5
293	ok	0.10	0.5	6.91e-03	7.9	7.9	7.9	7.9	24.3	-32.8	-3.4	4089.9	1493.8	1450.8
294	ok	0.10	0.4	5.30e-03	7.9	7.9	7.9	7.9	0.8	-36.5	-4.5	2728.9	1216.2	1606.9
295	ok	0.10	0.2	4.55e-03	7.9	7.9	7.9	7.9	-21.2	-36.6	-7.6	749.3	-1343.7	1457.0
296	ok	0.10	0.2	6.81e-03	7.9	7.9	7.9	7.9	-57.3	-45.8	-7.9	-134.0	-1657.1	1274.1
297	ok	0.10	0.1	1.17e-03	7.9	7.9	7.9	7.9	15.3	-1.6	-5.0	61.6	-989.5	469.3
298	ok	0.10	0.2	3.12e-03	7.9	7.9	7.9	7.9	38.8	-6.7	-24.5	-224.7	-969.3	752.7
299	ok	0.10	0.3	1.60e-03	7.9	7.9	7.9	7.9	105.7	23.8	-40.2	-370.5	-423.9	851.1
300	ok	0.10	0.2	6.88e-03	7.9	7.9	7.9	7.9	-10.1	-33.3	-4.3	-502.6	52.8	-1555.1
301	ok	0.10	0.1	2.82e-03	7.9	7.9	7.9	7.9	-12.1	-7.1	-5.0	374.8	-926.8	508.0
302	ok	0.10	0.2	1.09e-02	7.9	7.9	7.9	7.9	-25.9	-12.7	-3.5	753.2	-169.1	1275.7
303	ok	0.10	0.5	2.65e-02	7.9	7.9	7.9	7.9	13.4	2.5	9.9	-4874.6	-710.9	1006.5
304	ok	0.10	0.5	2.82e-02	7.9	7.9	7.9	7.9	-78.5	-43.8	-20.9	-4814.7	-830.8	-561.1
305	ok	0.10	0.5	1.88e-02	7.9	7.9	7.9	7.9	9.0	-62.4	-5.3	2339.8	535.6	-3229.3
306	ok	0.10	0.6	1.42e-02	7.9	7.9	7.9	7.9	39.2	-45.4	-2.3	3659.8	797.7	-2457.9
307	ok	0.10	0.6	1.38e-02	7.9	7.9	7.9	7.9	48.7	-38.9	-1.2	4782.4	1134.9	-1976.7
308	ok	0.10	0.7	1.37e-02	7.9	7.9	7.9	7.9	53.3	-38.6	-0.3	5586.3	1250.4	-1419.3
309	ok	0.10	0.7	1.37e-02	7.9	7.9	7.9	7.9	55.5	-37.5	-0.2	6081.5	1336.0	-924.9
310	ok	0.10	0.8	1.38e-02	7.9	7.9	7.9	7.9	56.7	-44.8	1.5	6444.2	1436.3	-704.1
311	ok	0.10	0.8	1.38e-02	7.9	7.9	7.9	7.9	55.7	-44.8	-5.7	6467.5	1441.1	-491.9
312	ok	0.10	0.7	1.37e-02	7.9	7.9	7.9	7.9	55.1	-37.2	1.0	5979.1	1355.8	788.9
313	ok	0.10	0.7	1.32e-02	7.9	7.9	7.9	7.9	54.5	-38.8	-3.3	5679.4	1283.8	1024.1
314	ok	0.10	0.6	1.19e-02	7.9	7.9	7.9	7.9	49.1	-29.7	-3.5	4811.7	1106.3	1680.8
315	ok	0.10	0.5	1.01e-02	7.9	7.9	7.9	7.9	39.2	-18.0	-4.4	3619.6	887.7	2176.6
316	ok	0.10	0.4	8.15e-03	7.9	7.9	7.9	7.9	21.0	-22.3	-6.4	2141.8	599.7	2408.4
317	ok	0.10	0.3	5.83e-03	7.9	7.9	7.9	7.9	-12.1	-13.2	-9.1	656.7	181.7	2571.7
318	ok	0.10	0.1	5.93e-03	7.9	7.9	7.9	7.9	-50.8	-9.6	-10.9	141.1	-138.2	1589.7
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									-278.88	-348.55	-78.94	-4874.56	-3750.95	-3229.27
		0.10	0.78	0.04	7.85	7.85	7.85	7.85	105.72	210.69	92.19	6563.63	3859.85	2571.73

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					daN/cm	daN/cm
128	ok	4.65						
131	ok	4.65						
133	ok	1.81						
135	ok	0.69						
137	ok	0.61						
139	ok	0.59						
141	ok	0.58						
143	ok	0.56						
145	ok	0.53						
147	ok	0.51						
149	ok	0.68						
151	ok	0.85						
153	ok	0.97						
155	ok	1.16						
157	ok	3.60						
159	ok	3.54						
169	ok	4.65						
170	ok	4.65						
171	ok	1.81						
172	ok	0.69						
173	ok	0.61						
174	ok	0.59						
175	ok	0.58						
176	ok	0.56						
177	ok	0.53						
178	ok	0.51						
179	ok	0.68						
180	ok	0.85						
181	ok	0.97						
182	ok	1.16						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
183	ok	3.60						
184	ok	3.54						
185	ok	1.55						
186	ok	1.55						
187	ok	0.68						
188	ok	0.44						
189	ok	0.25						
190	ok	0.25						
191	ok	0.28						
192	ok	0.30						
193	ok	0.31						
194	ok	0.32						
195	ok	0.32						
196	ok	0.31						
197	ok	0.32						
198	ok	0.47						
199	ok	1.32						
200	ok	1.31						
201	ok	0.71						
202	ok	0.70						
203	ok	0.50						
204	ok	0.35						
205	ok	0.38						
206	ok	0.41						
207	ok	0.44						
208	ok	0.46						
209	ok	0.47						
210	ok	0.47						
211	ok	0.47						
212	ok	0.45						
213	ok	0.42						
214	ok	0.33						
215	ok	1.32						
216	ok	1.31						
217	ok	0.61						
218	ok	0.61						
219	ok	0.37						
220	ok	0.42						
221	ok	0.47						
222	ok	0.50						
223	ok	0.53						
224	ok	0.54						
225	ok	0.55						
226	ok	0.55						
227	ok	0.54						
228	ok	0.52						
229	ok	0.48						
230	ok	0.49						
231	ok	0.84						
232	ok	0.84						
233	ok	0.80						
234	ok	0.80						
235	ok	0.56						
236	ok	0.46						
237	ok	0.48						
238	ok	0.50						
239	ok	0.53						
240	ok	0.54						
241	ok	0.55						
242	ok	0.55						
243	ok	0.54						
244	ok	0.51						
245	ok	0.54						
246	ok	0.76						
247	ok	1.07						
248	ok	1.07						
249	ok	1.10						
250	ok	1.10						
251	ok	0.56						
252	ok	0.46						
253	ok	0.47						
254	ok	0.49						



Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
255	ok	0.52						
256	ok	0.54						
257	ok	0.54						
258	ok	0.53						
259	ok	0.52						
260	ok	0.50						
261	ok	0.54						
262	ok	0.88						
263	ok	1.43						
264	ok	1.43						
265	ok	1.25						
266	ok	1.26						
267	ok	1.14						
268	ok	0.79						
269	ok	0.58						
270	ok	0.41						
271	ok	0.40						
272	ok	0.42						
273	ok	0.42						
274	ok	0.40						
275	ok	0.43						
276	ok	0.56						
277	ok	0.82						
278	ok	1.23						
279	ok	2.01						
280	ok	2.01						
281	ok	1.25						
282	ok	1.36						
283	ok	1.36						
284	ok	0.97						
285	ok	0.97						
286	ok	0.95						
287	ok	0.96						
288	ok	0.98						
289	ok	1.01						
290	ok	1.05						
291	ok	1.10						
292	ok	1.16						
293	ok	1.16						
294	ok	1.23						
295	ok	2.01						
296	ok	2.01						
297	ok	1.00						
298	ok	1.00						
299	ok	2.10						
300	ok	2.10						
301	ok	1.00						
302	ok	1.00						
303	ok	2.10						
304	ok	2.10						
305	ok	1.36						
306	ok	0.97						
307	ok	0.97						
308	ok	0.95						
309	ok	0.96						
310	ok	0.98						
311	ok	1.01						
312	ok	1.05						
313	ok	1.10						
314	ok	1.16						
315	ok	1.16						
316	ok	1.13						
317	ok	1.10						
318	ok	1.09						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		4.65						

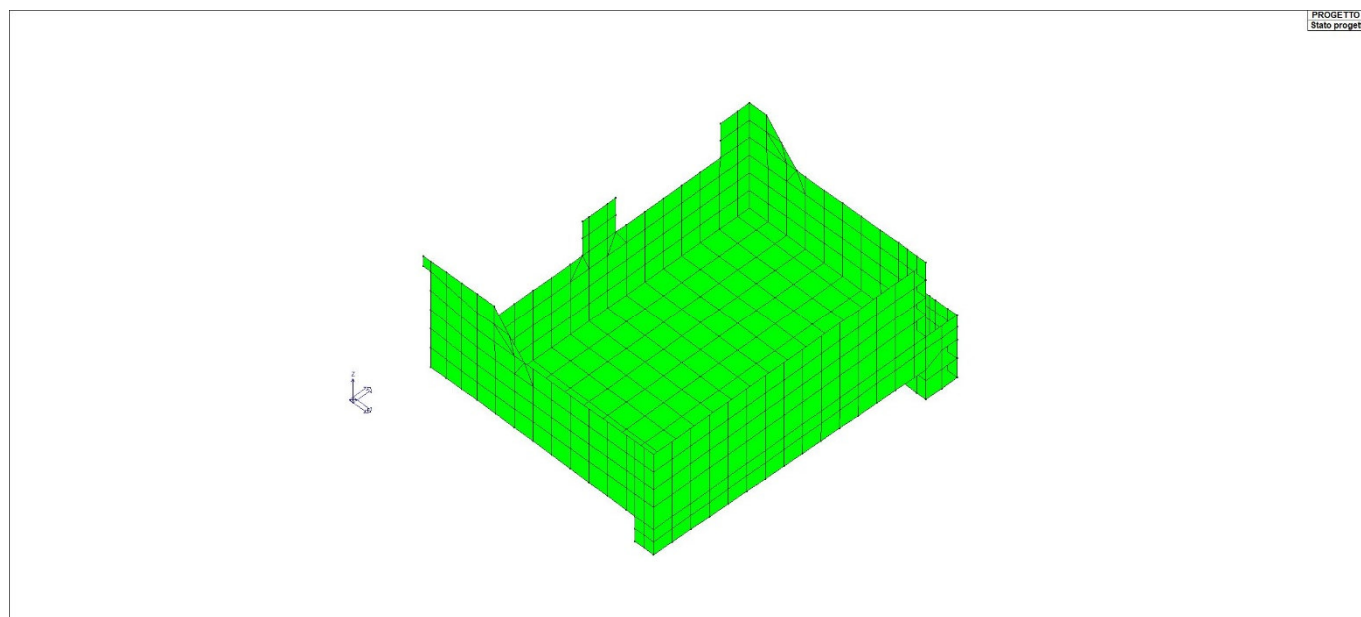


Figura 94 - CA_D3_01_Stato progetto

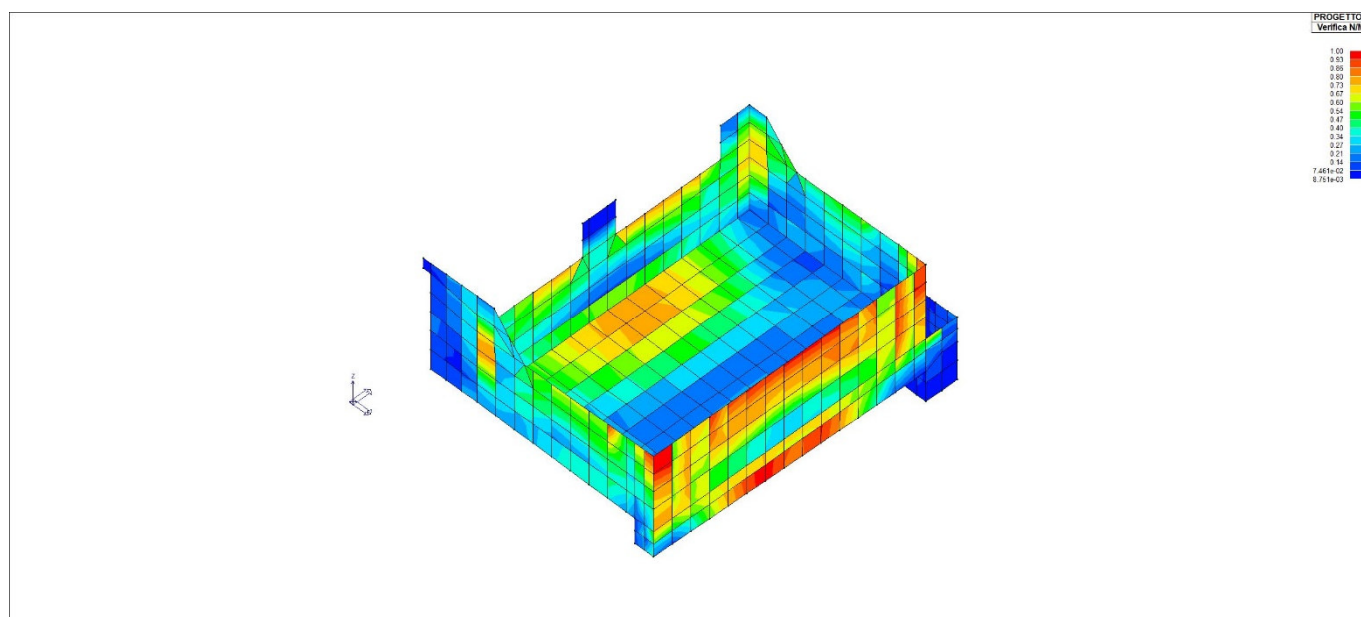


Figura 95 - CA_D3_02_Verifica NM

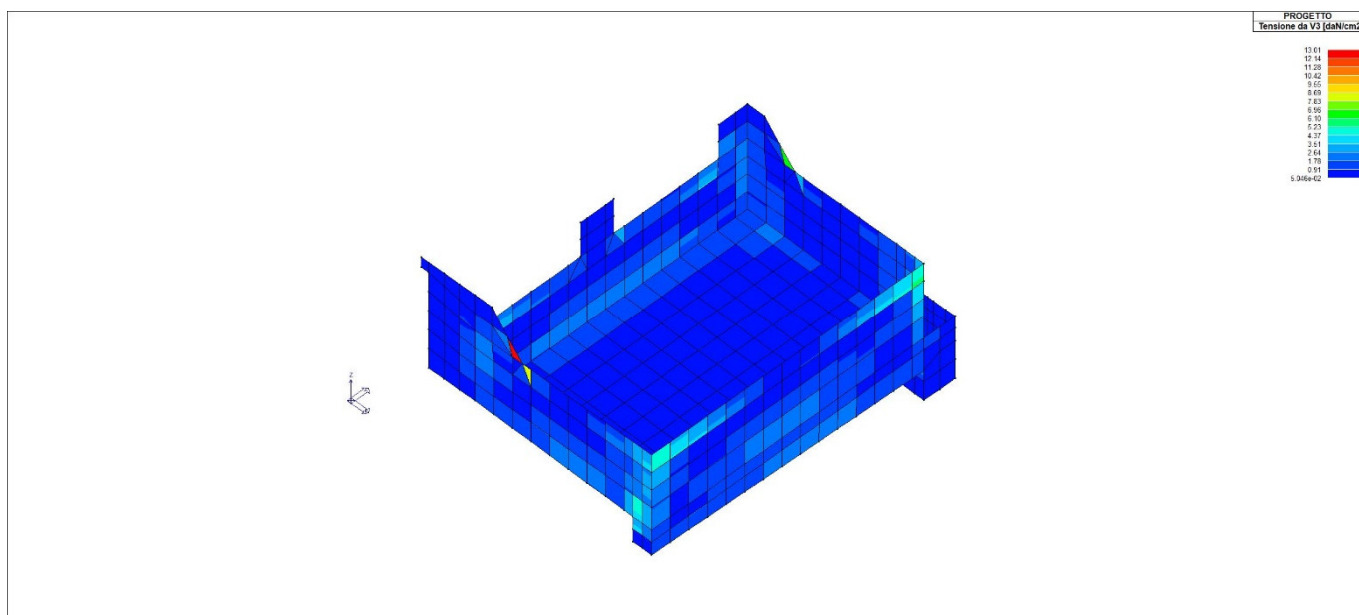


Figura 96 - CA_D3_05_Tensione da V3

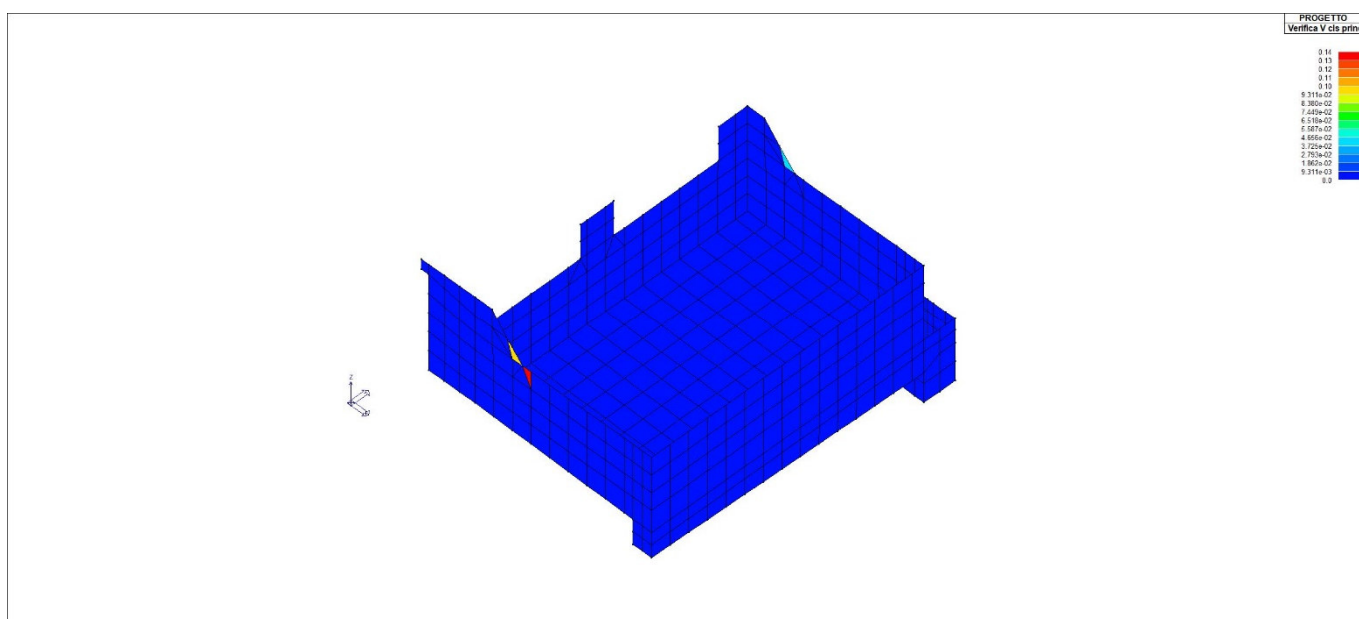


Figura 97 - CA_D3_06_Verifica V cls princ

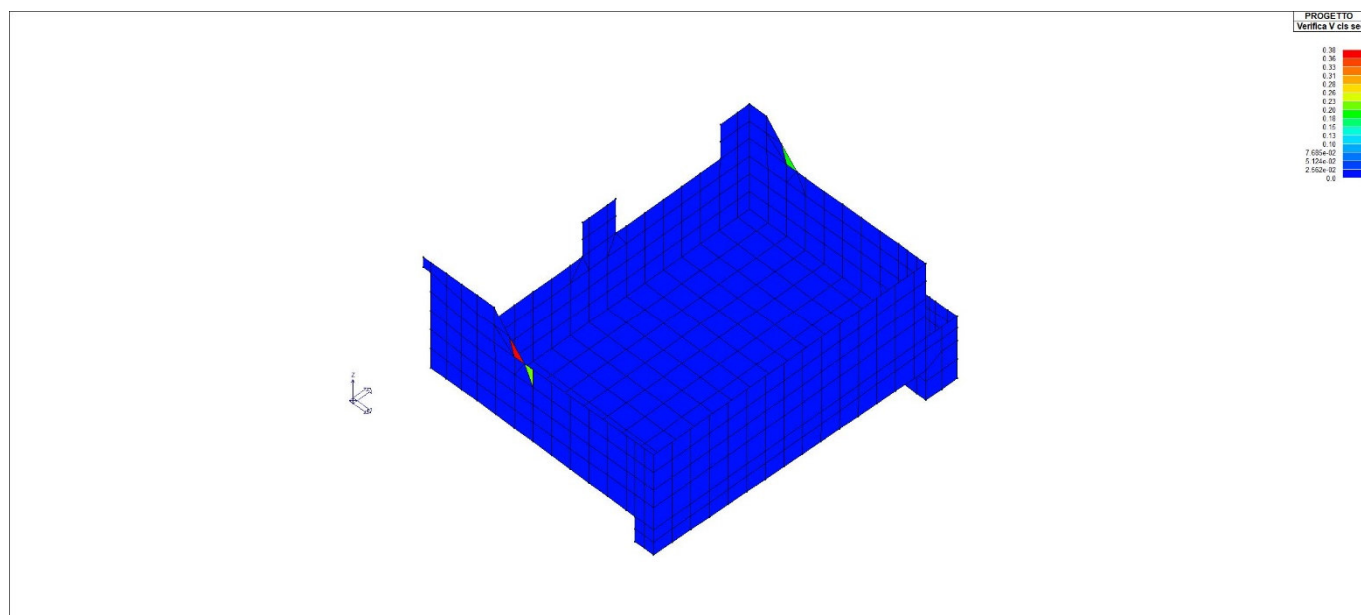


Figura 98 - CA_D3_07_Verifica V cls sec

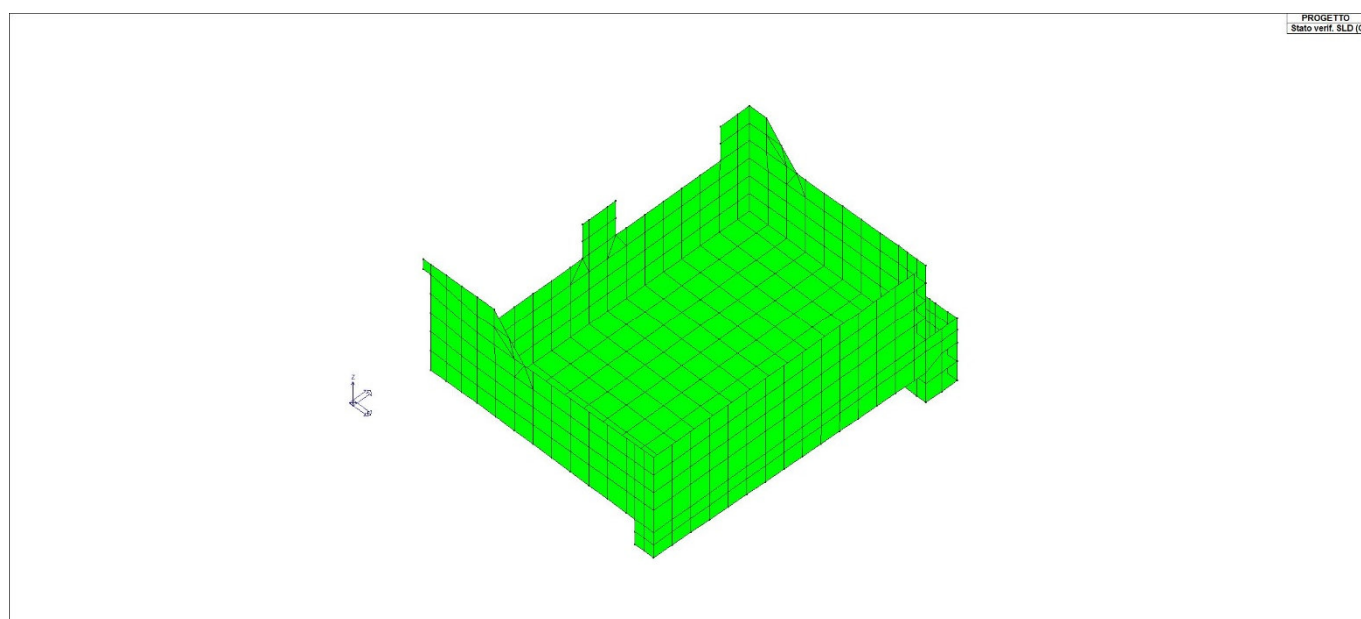


Figura 99 - CA_D3_12_Stato verif SLD G

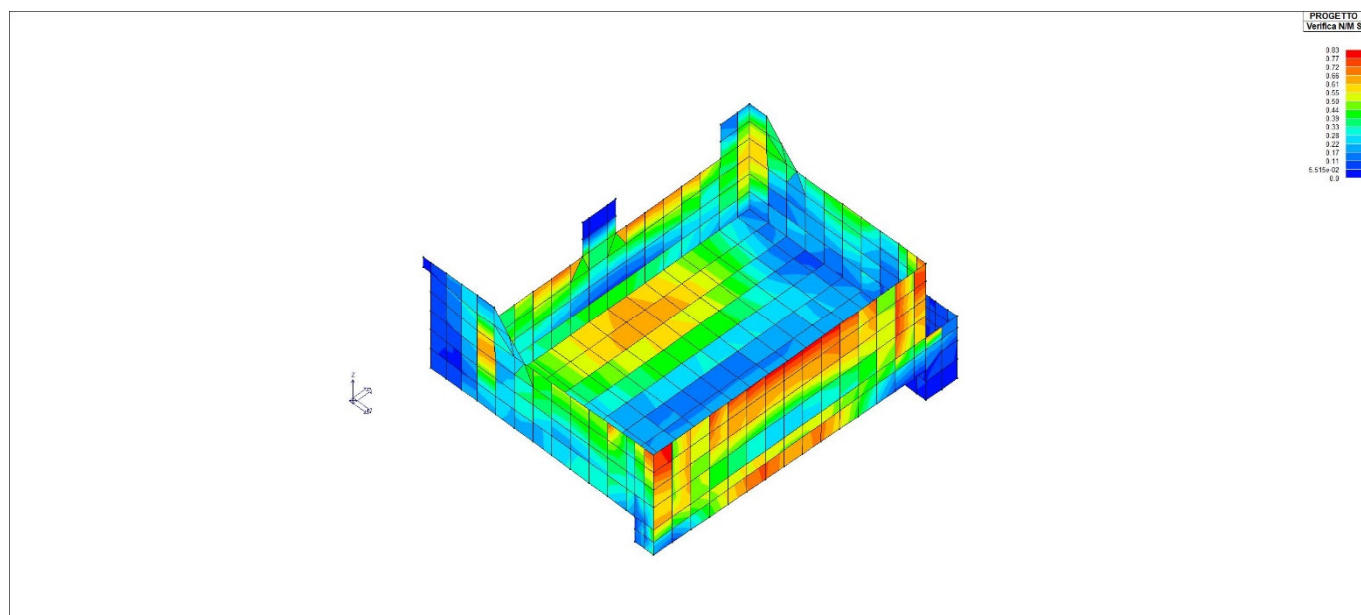


Figura 100 - CA_D3_13_Verifica NM SE

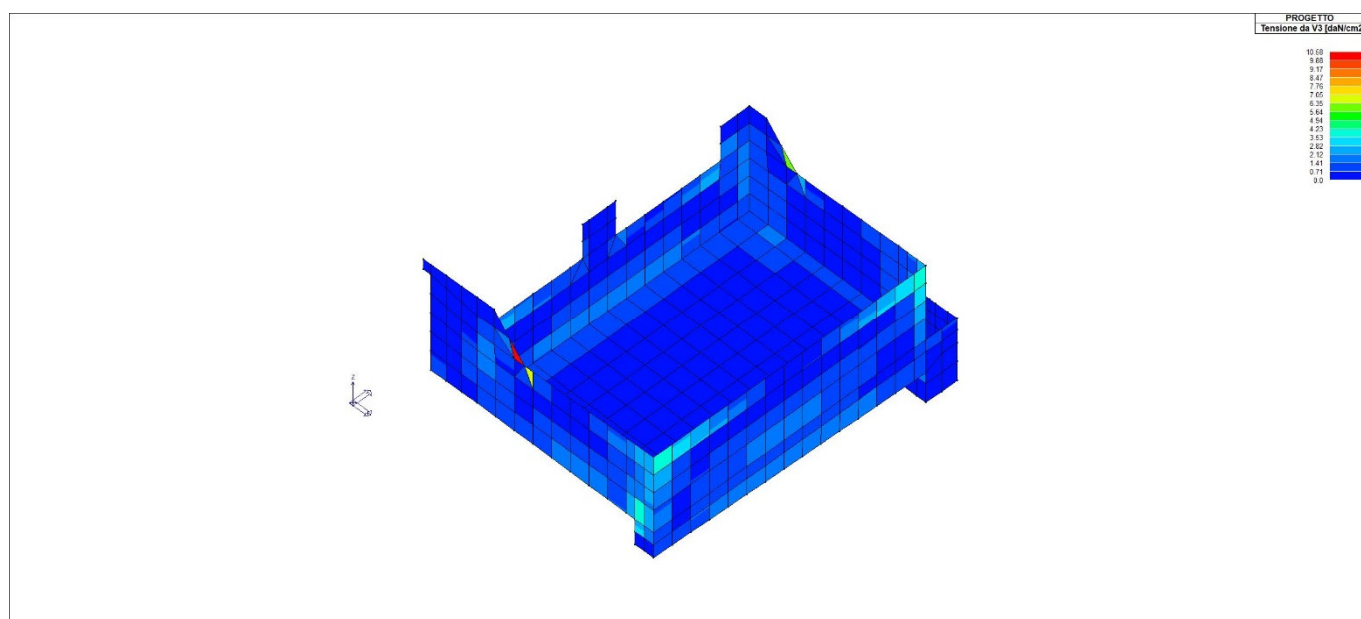


Figura 101 - CA_D3_14_Tensione da V3

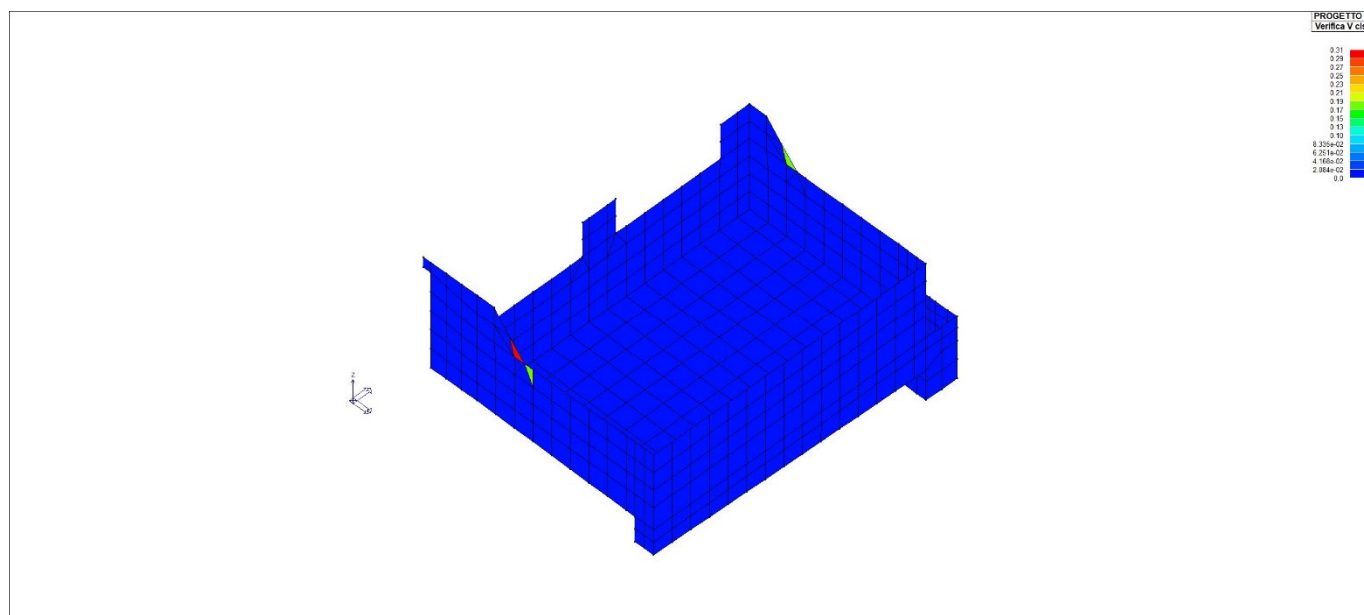


Figura 102 - CA_D3_15_Verifica V cls

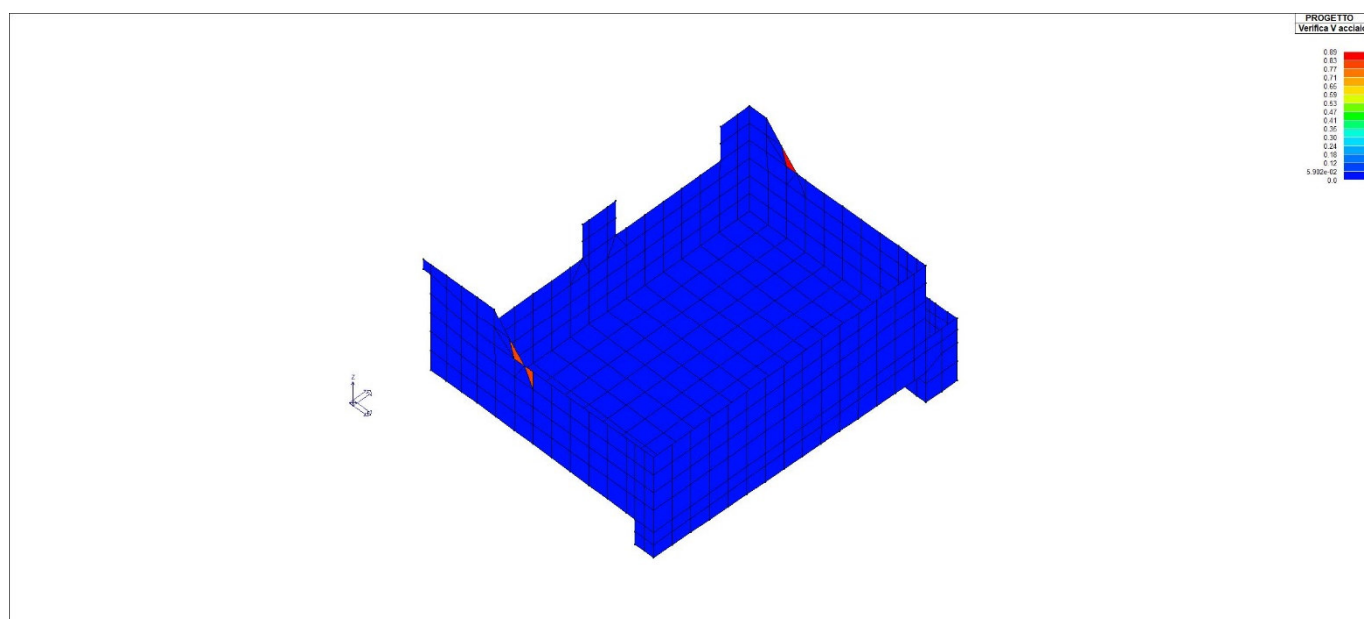


Figura 103 - CA_D3_16_Verifica V acciaio

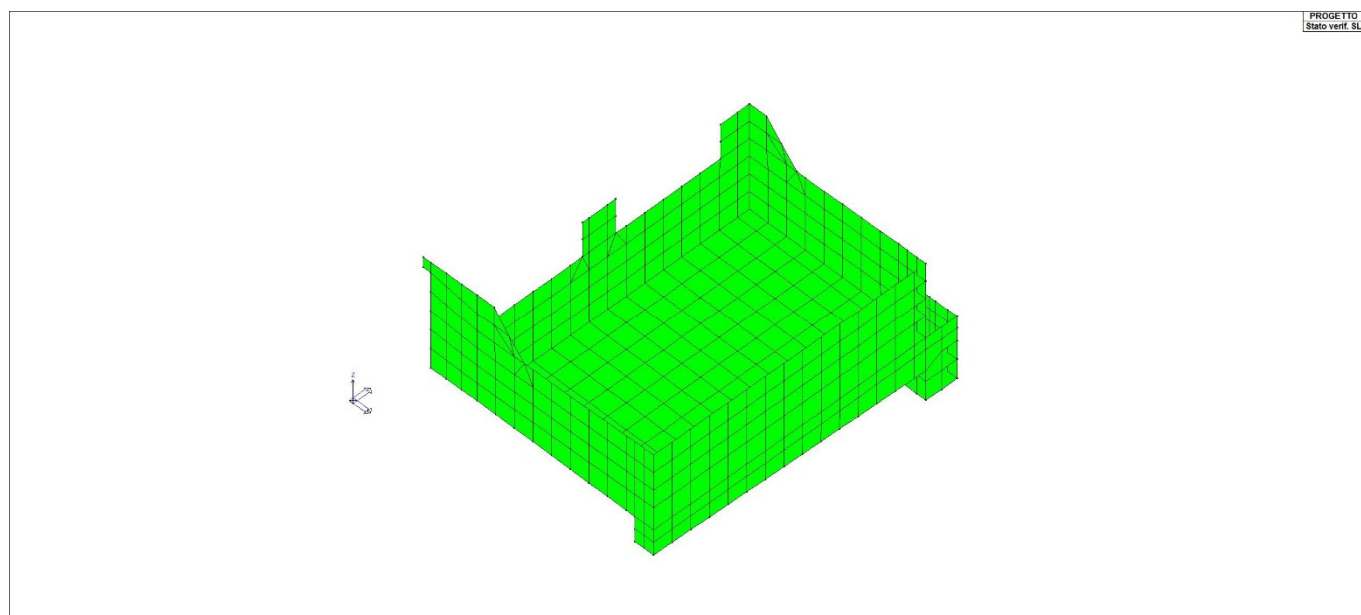


Figura 104 - CA_D3_17_Stato verif SLE

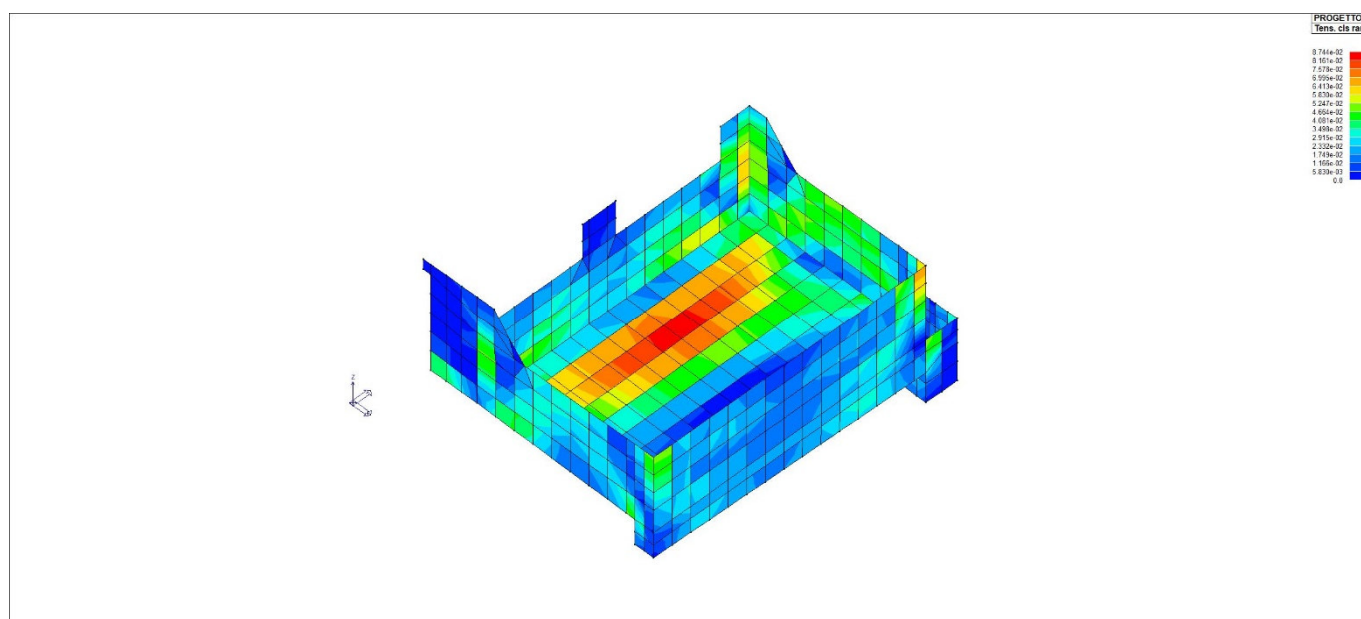


Figura 105 - CA_D3_21_Tens cls rare

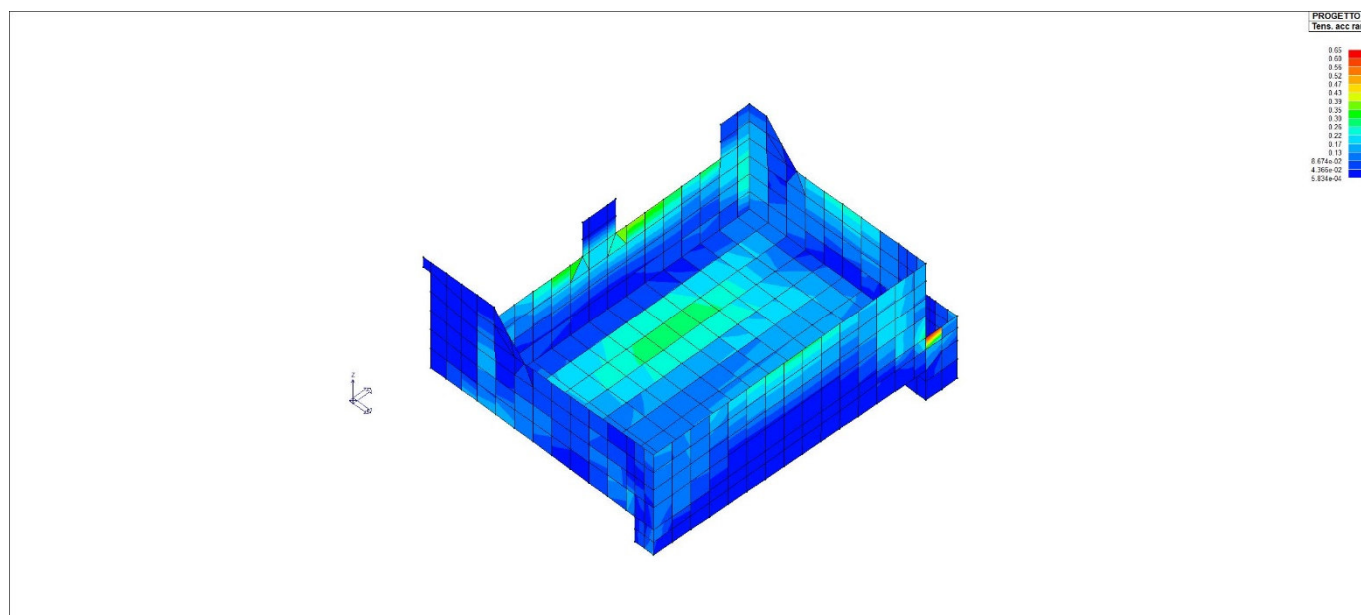


Figura 106 - CA_D3_22_Tens acc rare

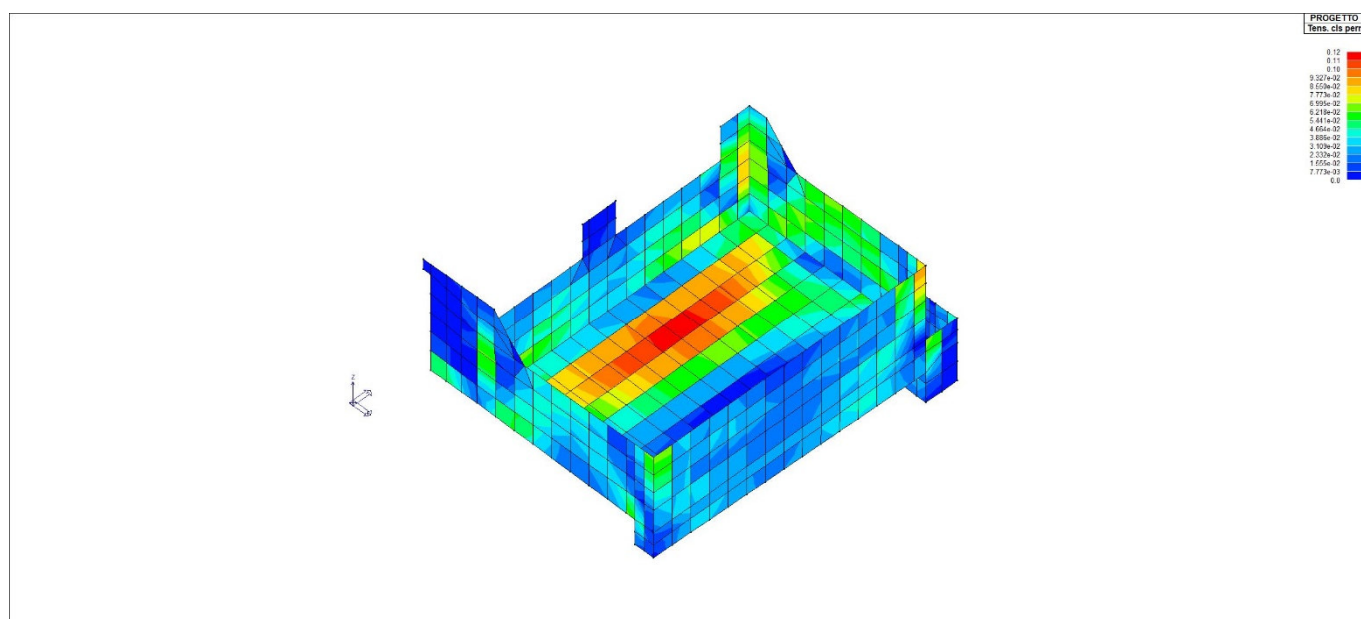


Figura 107 - CA_D3_23_Tens cls perm

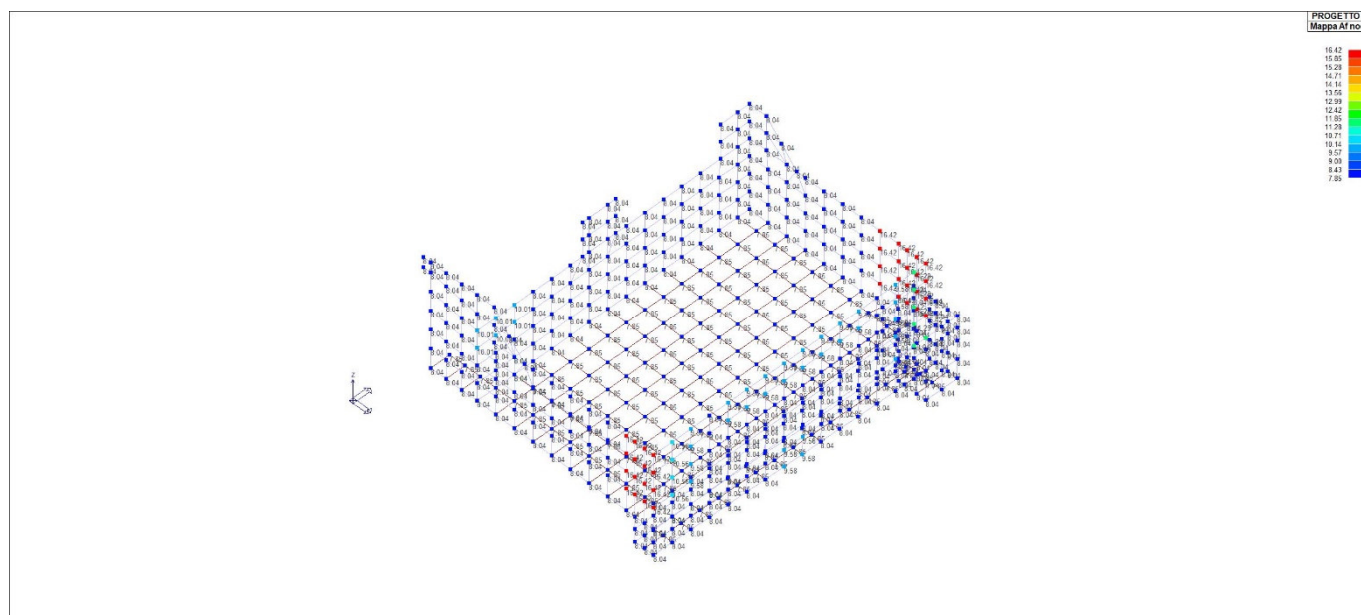


Figura 108 - CA_D3_25_Mappa Af nodi

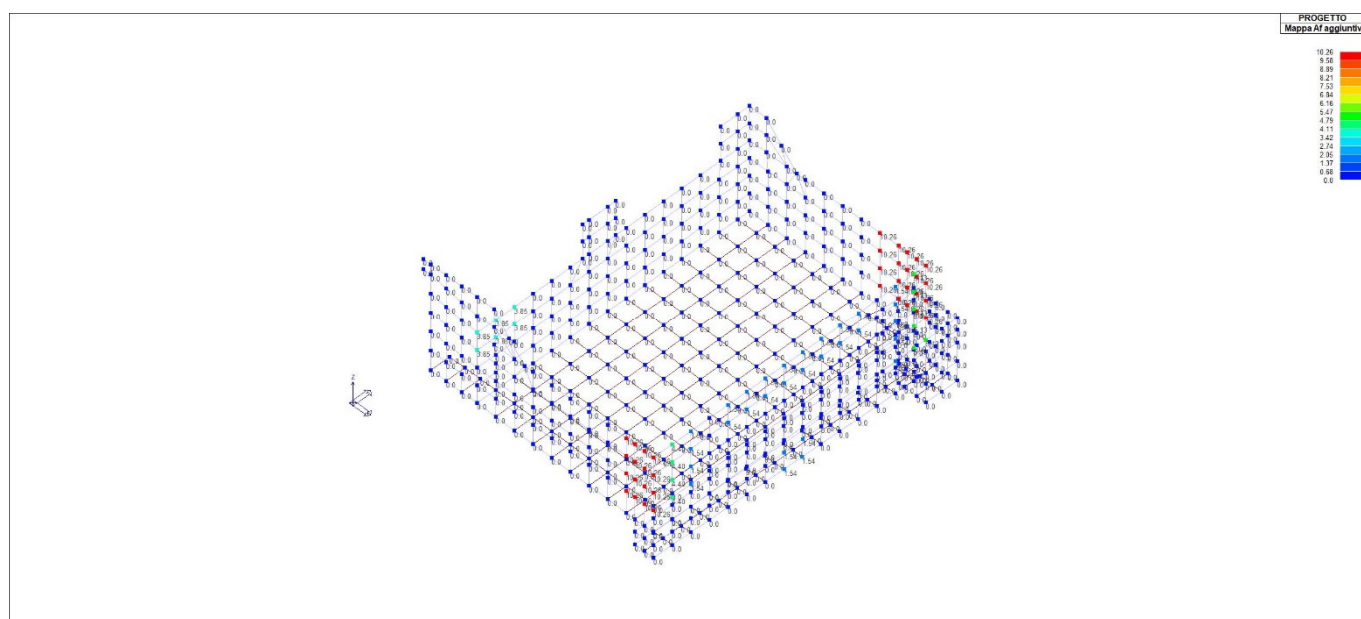


Figura 109 - CA_D3_26_Mappa Af aggiuntiva

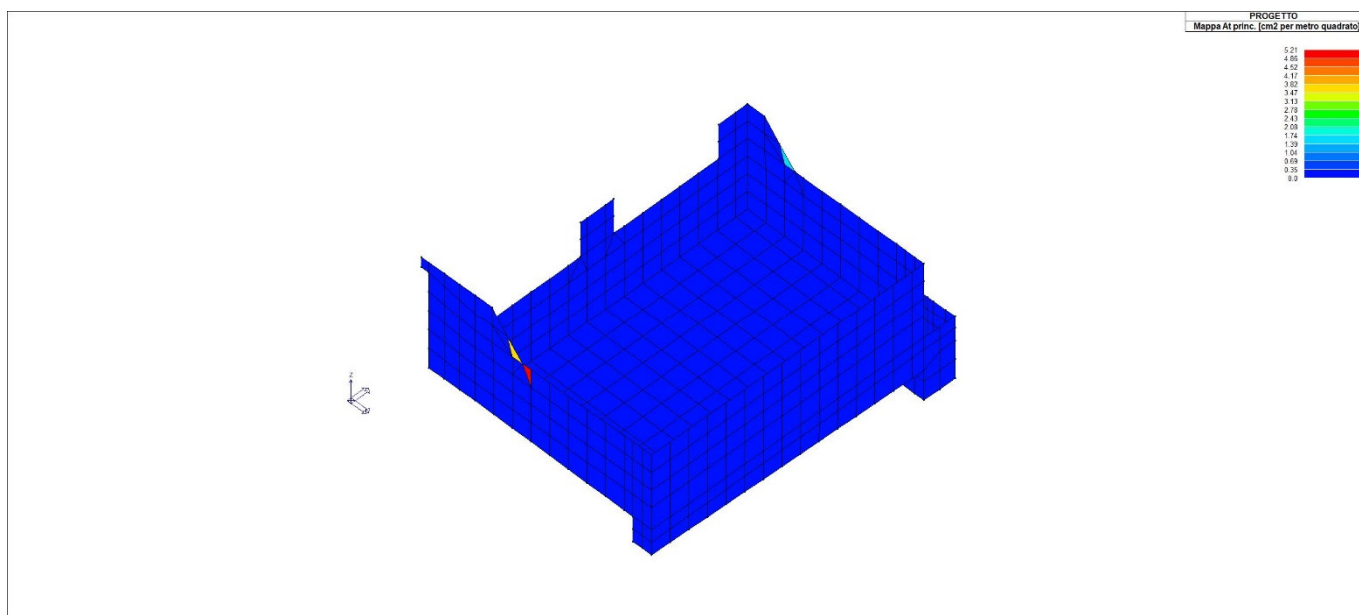


Figura 110 - CA_D3_34_Mappa At princ cm2 per metro quadrato

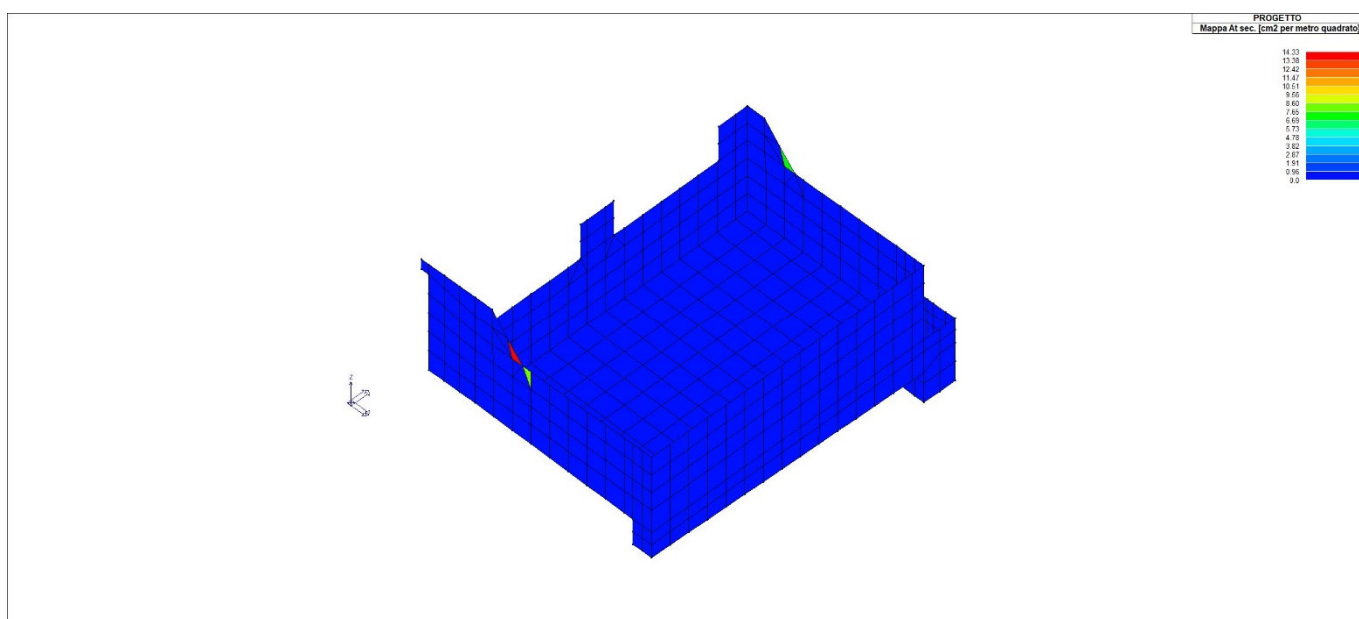


Figura 111 - CA_D3_35_Mappa At sec cm2 per metro quadrato



STATI LIMITE D' ESERCIZIO

LEGENDA TABELLA STATI LIMITE D' ESERCIZIO

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

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

- Combinazioni rare
- Combinazioni frequenti
- Combinazioni quasi permanenti.

I valori di interesse sono i seguenti:

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

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

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

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

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



Setto	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
					mm	mm	mm	
9	0.02	0.03	0.02	3,3,5	0.0	0.0	0.0	0,0,0
10	0.02	0.03	0.03	3,3,5	0.0	0.0	0.0	0,0,0
11	0.02	0.03	0.03	3,3,5	0.0	0.0	0.0	0,0,0
12	0.03	0.04	0.03	3,3,5	0.0	0.0	0.0	0,0,0
13	0.01	0.02	0.01	3,3,5	0.0	0.0	0.0	0,0,0
14	0.01	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
15	6.66e-03	0.02	8.88e-03	3,3,5	0.0	0.0	0.0	0,0,0
16	4.13e-03	0.03	5.50e-03	3,3,5	0.0	0.0	0.0	0,0,0
17	9.18e-03	0.04	0.01	3,3,5	0.0	0.0	0.0	0,0,0
18	8.96e-03	0.03	0.01	3,3,5	0.0	0.0	0.0	0,0,0
19	9.58e-03	0.04	0.01	3,3,5	0.0	0.0	0.0	0,0,0
20	3.93e-03	0.03	5.23e-03	3,3,5	0.0	0.0	0.0	0,0,0
21	0.04	0.11	0.06	3,3,5	0.0	0.0	0.0	0,0,0
22	0.04	0.09	0.06	3,3,5	0.0	0.0	0.0	0,0,0
23	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
24	0.02	0.03	0.03	3,3,5	0.0	0.0	0.0	0,0,0
25	0.03	0.08	0.04	3,3,5	0.0	0.0	0.0	0,0,0
26	9.69e-03	0.02	0.01	3,3,5	0.0	0.0	0.0	0,0,0
27	0.01	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
28	4.87e-03	0.05	6.49e-03	3,3,5	0.0	0.0	0.0	0,0,0
29	8.87e-03	0.03	0.01	3,3,5	0.0	0.0	0.0	0,0,0
30	0.01	0.04	0.02	3,3,5	0.0	0.0	0.0	0,0,0
31	0.02	0.06	0.02	3,3,5	0.0	0.0	0.0	0,0,0
32	0.02	0.08	0.02	3,3,5	0.0	0.0	0.0	0,0,0
63	0.03	0.16	0.05	3,3,5	0.0	0.0	0.0	0,0,0
64	0.02	0.09	0.03	3,3,5	0.0	0.0	0.0	0,0,0
65	0.05	0.23	0.06	3,3,5	0.0	0.0	0.0	0,0,0
66	0.03	0.14	0.04	3,3,5	0.0	0.0	0.0	0,0,0
67	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
68	0.02	0.12	0.02	3,3,5	0.0	0.0	0.0	0,0,0
69	0.03	0.05	0.04	3,3,5	0.0	0.0	0.0	0,0,0
70	0.01	0.10	0.02	3,3,5	0.0	0.0	0.0	0,0,0
71	0.03	0.04	0.04	3,3,5	0.0	0.0	0.0	0,0,0
72	0.01	0.08	0.02	3,3,5	0.0	0.0	0.0	0,0,0
73	0.03	0.03	0.04	3,3,5	0.0	0.0	0.0	0,0,0
74	0.01	0.06	0.01	3,3,5	0.0	0.0	0.0	0,0,0
75	0.03	0.02	0.04	3,3,5	0.0	0.0	0.0	0,0,0
76	0.01	0.05	0.01	3,3,5	0.0	0.0	0.0	0,0,0
77	0.02	0.02	0.03	3,3,5	0.0	0.0	0.0	0,0,0
78	0.01	0.05	0.01	3,3,5	0.0	0.0	0.0	0,0,0
79	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
80	0.02	0.13	0.02	3,3,5	0.0	0.0	0.0	0,0,0
81	0.04	0.17	0.06	3,3,5	0.0	0.0	0.0	0,0,0
82	0.01	0.05	0.01	3,3,5	0.0	0.0	0.0	0,0,0
83	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
84	0.01	0.05	0.02	3,3,5	0.0	0.0	0.0	0,0,0
85	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
86	0.01	0.06	0.02	3,3,5	0.0	0.0	0.0	0,0,0
87	0.02	0.01	0.03	3,3,5	0.0	0.0	0.0	0,0,0
88	0.01	0.07	0.02	3,3,5	0.0	0.0	0.0	0,0,0
89	0.03	0.02	0.03	3,3,5	0.0	0.0	0.0	0,0,0
90	0.01	0.09	0.02	3,3,5	0.0	0.0	0.0	0,0,0
91	0.03	0.03	0.03	3,3,5	0.0	0.0	0.0	0,0,0
92	0.02	0.10	0.03	3,3,5	0.0	0.0	0.0	0,0,0
93	0.02	0.02	0.03	3,3,5	0.0	0.0	0.0	0,0,0
94	0.02	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
95	0.02	0.05	0.02	3,3,5	0.0	0.0	0.0	0,0,0
96	0.02	0.07	0.03	3,3,5	0.0	0.0	0.0	0,0,0
97	0.01	0.15	0.02	3,3,5	0.0	0.0	0.0	0,0,0
98	0.01	0.07	0.02	3,3,5	0.0	0.0	0.0	0,0,0
99	0.02	0.03	0.02	3,3,5	0.0	0.0	0.0	0,0,0
100	7.92e-03	0.17	0.01	3,3,5	0.0	0.0	0.0	0,0,0
101	0.01	0.04	0.02	3,3,5	0.0	0.0	0.0	0,0,0
102	0.01	0.04	0.02	3,3,5	0.0	0.0	0.0	0,0,0
103	0.02	0.06	0.02	3,3,5	0.0	0.0	0.0	0,0,0
104	0.03	0.11	0.03	3,3,5	0.0	0.0	0.0	0,0,0
105	0.04	0.07	0.05	3,3,5	0.0	0.0	0.0	0,0,0
106	0.01	0.13	0.02	3,3,5	0.0	0.0	0.0	0,0,0



Setto	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
107	0.04	0.11	0.05	3,3,5	0.0	0.0	0.0	0,0,0
108	0.02	0.13	0.03	3,3,5	0.0	0.0	0.0	0,0,0
109	0.04	0.14	0.06	3,3,5	0.0	0.0	0.0	0,0,0
110	0.03	0.07	0.04	3,3,5	0.0	0.0	0.0	0,0,0
111	0.04	0.13	0.05	3,3,5	0.0	0.0	0.0	0,0,0
112	0.02	0.03	0.03	3,3,5	0.0	0.0	0.0	0,0,0
113	0.04	0.16	0.05	3,3,5	0.0	0.0	0.0	0,0,0
114	0.02	0.02	0.03	3,3,5	0.0	0.0	0.0	0,0,0
115	0.03	0.18	0.05	3,3,5	0.0	0.0	0.0	0,0,0
116	0.02	0.01	0.03	3,3,5	0.0	0.0	0.0	0,0,0
117	0.03	0.20	0.04	3,3,5	0.0	0.0	0.0	0,0,0
118	0.02	0.01	0.03	3,3,5	0.0	0.0	0.0	0,0,0
119	0.03	0.21	0.04	3,3,5	0.0	0.0	0.0	0,0,0
120	0.02	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
121	0.03	0.22	0.04	3,3,5	0.0	0.0	0.0	0,0,0
122	0.02	0.01	0.03	3,3,5	0.0	0.0	0.0	0,0,0
123	0.03	0.22	0.04	3,3,5	0.0	0.0	0.0	0,0,0
124	0.02	0.02	0.03	3,3,5	0.0	0.0	0.0	0,0,0
125	0.03	0.22	0.04	3,3,5	0.0	0.0	0.0	0,0,0
126	0.02	0.02	0.03	3,3,5	0.0	0.0	0.0	0,0,0
127	0.03	0.20	0.03	3,3,5	0.0	0.0	0.0	0,0,0
128	0.02	0.02	0.03	3,3,5	0.0	0.0	0.0	0,0,0
129	0.03	0.20	0.04	3,3,5	0.0	0.0	0.0	0,0,0
130	0.03	0.02	0.04	3,3,5	0.0	0.0	0.0	0,0,0
131	0.03	0.18	0.03	3,3,5	0.0	0.0	0.0	0,0,0
132	0.03	0.08	0.04	3,3,5	0.0	0.0	0.0	0,0,0
133	0.03	0.17	0.04	3,3,5	0.0	0.0	0.0	0,0,0
134	0.03	0.17	0.04	3,3,5	0.0	0.0	0.0	0,0,0
135	0.04	0.15	0.05	3,3,5	0.0	0.0	0.0	0,0,0
136	0.01	0.22	0.02	3,3,5	0.0	0.0	0.0	0,0,0
137	0.04	0.18	0.05	3,3,5	0.0	0.0	0.0	0,0,0
138	0.07	0.18	0.09	3,3,5	0.0	0.0	0.0	0,0,0
139	0.03	0.16	0.04	3,3,5	0.0	0.0	0.0	0,0,0
140	0.05	0.65	0.07	3,3,5	0.0	0.0	0.0	0,0,0
141	0.03	0.11	0.04	3,3,5	0.0	0.0	0.0	0,0,0
142	0.01	0.15	0.02	3,3,5	0.0	0.0	0.0	0,0,0
143	0.02	0.04	0.02	3,3,5	0.0	0.0	0.0	0,0,0
144	8.61e-03	0.02	0.01	3,3,5	0.0	0.0	0.0	0,0,0
145	0.02	0.06	0.02	3,3,5	0.0	0.0	0.0	0,0,0
146	0.04	0.15	0.05	3,3,5	0.0	0.0	0.0	0,0,0
147	0.04	0.10	0.06	3,3,5	0.0	0.0	0.0	0,0,0
148	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
287	0.05	0.19	0.07	3,3,5	0.0	0.0	0.0	0,0,0
288	0.04	0.07	0.05	3,3,5	0.0	0.0	0.0	0,0,0
289	0.01	0.07	0.02	3,3,5	0.0	0.0	0.0	0,0,0
290	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
291	0.03	0.12	0.04	3,3,5	0.0	0.0	0.0	0,0,0
292	0.03	0.09	0.04	3,3,5	0.0	0.0	0.0	0,0,0
293	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
294	0.02	0.04	0.03	3,3,5	0.0	0.0	0.0	0,0,0
295	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
296	0.01	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
297	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
298	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
299	0.02	0.02	0.03	3,3,5	0.0	0.0	0.0	0,0,0
300	0.02	0.05	0.03	3,3,5	0.0	0.0	0.0	0,0,0
301	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
302	0.04	0.16	0.05	3,3,5	0.0	0.0	0.0	0,0,0
303	0.04	0.20	0.05	3,3,5	0.0	0.0	0.0	0,0,0
304	0.03	0.30	0.05	3,3,5	0.0	0.0	0.0	0,0,0
305	0.05	0.11	0.07	3,3,5	0.0	0.0	0.0	0,0,0
306	0.06	0.09	0.08	3,3,5	0.0	0.0	0.0	0,0,0
307	0.01	0.16	0.02	3,3,5	0.0	0.0	0.0	0,0,0
308	0.04	0.14	0.05	3,3,5	0.0	0.0	0.0	0,0,0
309	0.04	0.09	0.05	3,3,5	0.0	0.0	0.0	0,0,0
310	0.02	0.07	0.03	3,3,5	0.0	0.0	0.0	0,0,0
311	0.03	0.11	0.04	3,3,5	0.0	0.0	0.0	0,0,0
312	0.02	0.04	0.02	3,3,5	0.0	0.0	0.0	0,0,0
313	0.02	0.03	0.03	3,3,5	0.0	0.0	0.0	0,0,0
314	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
315	0.02	0.03	0.02	3,3,5	0.0	0.0	0.0	0,0,0
316	0.04	0.10	0.05	3,3,5	0.0	0.0	0.0	0,0,0



Setto	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
317	0.04	0.08	0.05	3,3,5	0.0	0.0	0.0	0,0,0
318	0.04	0.13	0.06	3,3,5	0.0	0.0	0.0	0,0,0
319	0.05	0.12	0.07	3,3,5	0.0	0.0	0.0	0,0,0
320	0.04	0.15	0.06	3,3,5	0.0	0.0	0.0	0,0,0
321	0.05	0.13	0.06	3,3,5	0.0	0.0	0.0	0,0,0
322	0.03	0.18	0.05	3,3,5	0.0	0.0	0.0	0,0,0
323	0.04	0.15	0.05	3,3,5	0.0	0.0	0.0	0,0,0
324	0.04	0.17	0.05	3,3,5	0.0	0.0	0.0	0,0,0
325	0.05	0.07	0.07	3,3,5	0.0	0.0	0.0	0,0,0
326	0.05	0.07	0.06	3,3,5	0.0	0.0	0.0	0,0,0
327	0.05	0.07	0.06	3,3,5	0.0	0.0	0.0	0,0,0
328	0.04	0.06	0.05	3,3,5	0.0	0.0	0.0	0,0,0
329	0.03	0.05	0.05	3,3,5	0.0	0.0	0.0	0,0,0
330	0.03	0.03	0.04	3,3,5	0.0	0.0	0.0	0,0,0
331	0.03	0.04	0.04	3,3,5	0.0	0.0	0.0	0,0,0
332	0.04	0.05	0.05	3,3,5	0.0	0.0	0.0	0,0,0
333	0.04	0.07	0.06	3,3,5	0.0	0.0	0.0	0,0,0
334	0.05	0.09	0.07	3,3,5	0.0	0.0	0.0	0,0,0
335	0.06	0.10	0.08	3,3,5	0.0	0.0	0.0	0,0,0
336	0.06	0.10	0.08	3,3,5	0.0	0.0	0.0	0,0,0
337	0.06	0.08	0.07	3,3,5	0.0	0.0	0.0	0,0,0
338	0.04	0.20	0.06	3,3,5	0.0	0.0	0.0	0,0,0
339	0.03	0.16	0.03	3,3,5	0.0	0.0	0.0	0,0,0
340	0.04	0.09	0.05	3,3,5	0.0	0.0	0.0	0,0,0
341	0.04	0.04	0.05	3,3,5	0.0	0.0	0.0	0,0,0
342	0.04	0.14	0.05	3,3,5	0.0	0.0	0.0	0,0,0
343	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
344	0.03	0.11	0.04	3,3,5	0.0	0.0	0.0	0,0,0
345	0.03	0.09	0.04	3,3,5	0.0	0.0	0.0	0,0,0
346	0.03	0.07	0.04	3,3,5	0.0	0.0	0.0	0,0,0
347	0.03	0.07	0.03	3,3,5	0.0	0.0	0.0	0,0,0
348	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
349	0.03	0.12	0.04	3,3,5	0.0	0.0	0.0	0,0,0
350	0.02	0.11	0.03	3,3,5	0.0	0.0	0.0	0,0,0
351	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
352	0.03	0.06	0.04	3,3,5	0.0	0.0	0.0	0,0,0
353	0.05	0.22	0.06	3,3,5	0.0	0.0	0.0	0,0,0
354	0.04	0.11	0.05	3,3,5	0.0	0.0	0.0	0,0,0
355	0.02	0.14	0.03	3,3,5	0.0	0.0	0.0	0,0,0
356	0.03	0.13	0.03	3,3,5	0.0	0.0	0.0	0,0,0
357	0.03	0.08	0.05	3,3,5	0.0	0.0	0.0	0,0,0
358	0.02	0.11	0.02	3,3,5	0.0	0.0	0.0	0,0,0
359	0.04	0.09	0.05	3,3,5	0.0	0.0	0.0	0,0,0
360	0.02	0.08	0.03	3,3,5	0.0	0.0	0.0	0,0,0
361	0.04	0.10	0.05	3,3,5	0.0	0.0	0.0	0,0,0
362	0.02	0.10	0.03	3,3,5	0.0	0.0	0.0	0,0,0
363	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
364	0.02	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
365	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
366	0.02	0.13	0.02	3,3,5	0.0	0.0	0.0	0,0,0
367	0.03	0.11	0.03	3,3,5	0.0	0.0	0.0	0,0,0
368	0.01	0.13	0.02	3,3,5	0.0	0.0	0.0	0,0,0
369	0.03	0.11	0.04	3,3,5	0.0	0.0	0.0	0,0,0
370	0.02	0.13	0.02	3,3,5	0.0	0.0	0.0	0,0,0
371	0.04	0.12	0.05	3,3,5	0.0	0.0	0.0	0,0,0
372	0.02	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
373	0.04	0.12	0.06	3,3,5	0.0	0.0	0.0	0,0,0
374	0.02	0.10	0.03	3,3,5	0.0	0.0	0.0	0,0,0
375	0.04	0.10	0.05	3,3,5	0.0	0.0	0.0	0,0,0
376	0.02	0.13	0.02	3,3,5	0.0	0.0	0.0	0,0,0
377	0.04	0.10	0.05	3,3,5	0.0	0.0	0.0	0,0,0
378	0.02	0.18	0.03	3,3,5	0.0	0.0	0.0	0,0,0
379	0.02	0.16	0.03	3,3,5	0.0	0.0	0.0	0,0,0
380	0.04	0.21	0.05	3,3,5	0.0	0.0	0.0	0,0,0
381	0.06	0.25	0.08	3,3,5	0.0	0.0	0.0	0,0,0
382	0.05	0.14	0.06	3,3,5	0.0	0.0	0.0	0,0,0
383	0.05	0.18	0.06	3,3,5	0.0	0.0	0.0	0,0,0
384	0.04	0.11	0.06	3,3,5	0.0	0.0	0.0	0,0,0
385	0.05	0.13	0.06	3,3,5	0.0	0.0	0.0	0,0,0
386	0.05	0.13	0.07	3,3,5	0.0	0.0	0.0	0,0,0
387	0.04	0.11	0.05	3,3,5	0.0	0.0	0.0	0,0,0
388	0.04	0.14	0.05	3,3,5	0.0	0.0	0.0	0,0,0



Setto	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
389	0.05	0.14	0.06	3,3,5	0.0	0.0	0.0	0,0,0
390	0.05	0.10	0.06	3,3,5	0.0	0.0	0.0	0,0,0
391	0.04	0.08	0.06	3,3,5	0.0	0.0	0.0	0,0,0
392	0.02	0.07	0.03	3,3,5	0.0	0.0	0.0	0,0,0
393	0.04	0.08	0.05	3,3,5	0.0	0.0	0.0	0,0,0
394	3.26e-03	0.02	4.35e-03	3,3,5	0.0	0.0	0.0	0,0,0
395	6.83e-03	0.03	9.10e-03	3,3,5	0.0	0.0	0.0	0,0,0
396	0.01	0.02	0.01	3,3,5	0.0	0.0	0.0	0,0,0
397	0.05	0.15	0.06	3,3,5	0.0	0.0	0.0	0,0,0
398	0.01	0.05	0.02	3,3,5	0.0	0.0	0.0	0,0,0
399	0.03	0.09	0.04	3,3,5	0.0	0.0	0.0	0,0,0
400	0.03	0.08	0.04	3,3,5	0.0	0.0	0.0	0,0,0
401	0.03	0.07	0.04	3,3,5	0.0	0.0	0.0	0,0,0
402	0.03	0.08	0.04	3,3,5	0.0	0.0	0.0	0,0,0
403	0.03	0.09	0.04	3,3,5	0.0	0.0	0.0	0,0,0
404	0.02	0.08	0.03	3,3,5	0.0	0.0	0.0	0,0,0
405	0.01	0.03	0.02	3,3,5	0.0	0.0	0.0	0,0,0
406	0.02	0.05	0.03	3,3,5	0.0	0.0	0.0	0,0,0
407	0.04	0.09	0.05	3,3,5	0.0	0.0	0.0	0,0,0
408	0.05	0.21	0.07	3,3,5	0.0	0.0	0.0	0,0,0
409	0.04	0.13	0.06	3,3,5	0.0	0.0	0.0	0,0,0
410	0.02	0.15	0.03	3,3,5	0.0	0.0	0.0	0,0,0
411	0.02	0.14	0.03	3,3,5	0.0	0.0	0.0	0,0,0
412	0.02	0.15	0.03	3,3,5	0.0	0.0	0.0	0,0,0
413	0.02	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
414	0.03	0.17	0.04	3,3,5	0.0	0.0	0.0	0,0,0
415	0.03	0.14	0.04	3,3,5	0.0	0.0	0.0	0,0,0
416	0.03	0.19	0.04	3,3,5	0.0	0.0	0.0	0,0,0
417	0.02	0.15	0.03	3,3,5	0.0	0.0	0.0	0,0,0
418	0.03	0.21	0.04	3,3,5	0.0	0.0	0.0	0,0,0
419	0.02	0.17	0.03	3,3,5	0.0	0.0	0.0	0,0,0
420	0.02	0.19	0.03	3,3,5	0.0	0.0	0.0	0,0,0
421	0.02	0.19	0.03	3,3,5	0.0	0.0	0.0	0,0,0
422	0.02	0.23	0.03	3,3,5	0.0	0.0	0.0	0,0,0
423	0.02	0.19	0.02	3,3,5	0.0	0.0	0.0	0,0,0
424	0.03	0.23	0.04	3,3,5	0.0	0.0	0.0	0,0,0
425	0.02	0.19	0.03	3,3,5	0.0	0.0	0.0	0,0,0
426	0.03	0.23	0.04	3,3,5	0.0	0.0	0.0	0,0,0
427	0.02	0.17	0.03	3,3,5	0.0	0.0	0.0	0,0,0
428	0.04	0.21	0.05	3,3,5	0.0	0.0	0.0	0,0,0
429	0.02	0.14	0.03	3,3,5	0.0	0.0	0.0	0,0,0
430	0.03	0.14	0.04	3,3,5	0.0	0.0	0.0	0,0,0
431	0.02	0.16	0.03	3,3,5	0.0	0.0	0.0	0,0,0
432	0.02	0.17	0.03	3,3,5	0.0	0.0	0.0	0,0,0
433	0.02	0.19	0.03	3,3,5	0.0	0.0	0.0	0,0,0
434	0.04	0.21	0.05	3,3,5	0.0	0.0	0.0	0,0,0
435	0.04	0.22	0.06	3,3,5	0.0	0.0	0.0	0,0,0
436	0.06	0.24	0.09	3,3,5	0.0	0.0	0.0	0,0,0
437	0.06	0.17	0.08	3,3,5	0.0	0.0	0.0	0,0,0
438	0.05	0.17	0.07	3,3,5	0.0	0.0	0.0	0,0,0
439	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
440	0.04	0.11	0.05	3,3,5	0.0	0.0	0.0	0,0,0
441	0.05	0.16	0.06	3,3,5	0.0	0.0	0.0	0,0,0
442	0.05	0.18	0.06	3,3,5	0.0	0.0	0.0	0,0,0
443	0.05	0.19	0.06	3,3,5	0.0	0.0	0.0	0,0,0
444	0.04	0.17	0.06	3,3,5	0.0	0.0	0.0	0,0,0
445	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
446	0.01	0.05	0.02	3,3,5	0.0	0.0	0.0	0,0,0
447	0.03	0.08	0.03	3,3,5	0.0	0.0	0.0	0,0,0
448	0.05	0.11	0.07	3,3,5	0.0	0.0	0.0	0,0,0
449	7.11e-03	8.27e-03	9.48e-03	3,3,5	0.0	0.0	0.0	0,0,0
450	4.29e-03	7.80e-03	5.72e-03	3,3,5	0.0	0.0	0.0	0,0,0
451	5.09e-03	7.79e-03	6.78e-03	3,3,5	0.0	0.0	0.0	0,0,0
452	0.02	0.05	0.03	3,3,5	0.0	0.0	0.0	0,0,0
453	0.02	0.20	0.02	3,3,5	0.0	0.0	0.0	0,0,0
454	8.13e-03	0.22	0.01	3,3,5	0.0	0.0	0.0	0,0,0
455	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
456	0.05	0.15	0.06	3,3,5	0.0	0.0	0.0	0,0,0
457	0.02	0.03	0.02	3,3,5	0.0	0.0	0.0	0,0,0
458	0.03	0.07	0.04	3,3,5	0.0	0.0	0.0	0,0,0
459	0.04	0.07	0.05	3,3,5	0.0	0.0	0.0	0,0,0
460	0.03	0.07	0.04	3,3,5	0.0	0.0	0.0	0,0,0



Setto	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
461	0.03	0.07	0.04	3,3,5	0.0	0.0	0.0	0,0,0
462	0.01	0.04	0.01	3,3,5	0.0	0.0	0.0	0,0,0
463	0.02	0.03	0.02	3,3,5	0.0	0.0	0.0	0,0,0
464	0.03	0.06	0.04	3,3,5	0.0	0.0	0.0	0,0,0
465	0.05	0.10	0.06	3,3,5	0.0	0.0	0.0	0,0,0
466	0.06	0.21	0.09	3,3,5	0.0	0.0	0.0	0,0,0
467	0.05	0.13	0.07	3,3,5	0.0	0.0	0.0	0,0,0
468	0.02	0.16	0.03	3,3,5	0.0	0.0	0.0	0,0,0
469	0.03	0.15	0.04	3,3,5	0.0	0.0	0.0	0,0,0
470	0.02	0.22	0.02	3,3,5	0.0	0.0	0.0	0,0,0
471	0.02	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
472	0.02	0.27	0.03	3,3,5	0.0	0.0	0.0	0,0,0
473	0.02	0.20	0.03	3,3,5	0.0	0.0	0.0	0,0,0
474	0.02	0.35	0.03	3,3,5	0.0	0.0	0.0	0,0,0
...								
543	6.37e-04	8.10e-03	8.50e-04	3,3,5	0.0	0.0	0.0	0,0,0
Setto	rRfck	rRfyk	rPfck		wR	wF	wP	
	0.07	0.65	0.09		0.0	0.0	0.0	

Guscio	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
					mm	mm	mm	
1	3.03e-03	0.02	4.05e-03	3,3,5	0.0	0.0	0.0	0,0,0
2	6.23e-03	0.02	8.31e-03	3,3,5	0.0	0.0	0.0	0,0,0
3	4.79e-03	0.01	6.38e-03	3,3,5	0.0	0.0	0.0	0,0,0
4	9.85e-04	6.76e-03	1.31e-03	3,3,5	0.0	0.0	0.0	0,0,0
5	2.84e-03	0.01	3.79e-03	3,3,5	0.0	0.0	0.0	0,0,0
6	6.71e-03	0.02	8.95e-03	3,3,5	0.0	0.0	0.0	0,0,0
7	5.45e-03	0.02	7.27e-03	3,3,5	0.0	0.0	0.0	0,0,0
8	3.79e-03	0.01	5.06e-03	3,3,5	0.0	0.0	0.0	0,0,0
33	0.02	0.04	0.03	3,3,5	0.0	0.0	0.0	0,0,0
34	0.03	0.04	0.03	3,3,5	0.0	0.0	0.0	0,0,0
35	0.02	0.09	0.03	3,3,5	0.0	0.0	0.0	0,0,0
36	0.02	0.07	0.03	3,3,5	0.0	0.0	0.0	0,0,0
37	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
38	0.03	0.07	0.04	3,3,5	0.0	0.0	0.0	0,0,0
39	0.02	0.03	0.03	3,3,5	0.0	0.0	0.0	0,0,0
40	0.03	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
41	0.02	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
42	0.02	0.04	0.03	3,3,5	0.0	0.0	0.0	0,0,0
43	0.02	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
44	0.02	0.03	0.02	3,3,5	0.0	0.0	0.0	0,0,0
45	0.02	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
46	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
47	0.01	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
48	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
49	0.01	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
50	0.02	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
51	0.01	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
52	0.02	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
53	0.01	0.01	0.02	3,3,5	0.0	0.0	0.0	0,0,0
54	0.01	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
55	0.01	0.02	0.02	3,3,5	0.0	0.0	0.0	0,0,0
56	0.02	0.03	0.03	3,3,5	0.0	0.0	0.0	0,0,0
57	0.02	0.05	0.02	3,3,5	0.0	0.0	0.0	0,0,0
58	0.02	0.05	0.03	3,3,5	0.0	0.0	0.0	0,0,0
59	0.02	0.08	0.03	3,3,5	0.0	0.0	0.0	0,0,0
60	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
61	0.01	0.12	0.02	3,3,5	0.0	0.0	0.0	0,0,0
62	0.01	0.06	0.02	3,3,5	0.0	0.0	0.0	0,0,0
149	0.03	0.04	0.04	3,3,5	0.0	0.0	0.0	0,0,0
150	0.03	0.09	0.04	3,3,5	0.0	0.0	0.0	0,0,0
151	0.02	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
152	0.02	0.16	0.03	3,3,5	0.0	0.0	0.0	0,0,0
153	0.02	0.19	0.03	3,3,5	0.0	0.0	0.0	0,0,0
154	0.02	0.21	0.02	3,3,5	0.0	0.0	0.0	0,0,0
155	0.01	0.23	0.02	3,3,5	0.0	0.0	0.0	0,0,0
156	0.01	0.24	0.02	3,3,5	0.0	0.0	0.0	0,0,0
157	0.01	0.24	0.01	3,3,5	0.0	0.0	0.0	0,0,0



Guscio	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
158	0.01	0.24	0.01	3,3,5	0.0	0.0	0.0	0,0,0
159	0.01	0.23	0.02	3,3,5	0.0	0.0	0.0	0,0,0
160	0.02	0.22	0.02	3,3,5	0.0	0.0	0.0	0,0,0
161	0.02	0.20	0.03	3,3,5	0.0	0.0	0.0	0,0,0
162	0.02	0.13	0.03	3,3,5	0.0	0.0	0.0	0,0,0
163	0.03	0.14	0.04	3,3,5	0.0	0.0	0.0	0,0,0
164	0.02	0.07	0.03	3,3,5	0.0	0.0	0.0	0,0,0
165	0.02	0.08	0.03	3,3,5	0.0	0.0	0.0	0,0,0
166	0.02	0.10	0.03	3,3,5	0.0	0.0	0.0	0,0,0
167	0.02	0.13	0.02	3,3,5	0.0	0.0	0.0	0,0,0
168	0.01	0.16	0.02	3,3,5	0.0	0.0	0.0	0,0,0
169	7.25e-03	0.18	9.67e-03	3,3,5	0.0	0.0	0.0	0,0,0
170	3.75e-03	0.19	4.99e-03	3,3,5	0.0	0.0	0.0	0,0,0
171	9.40e-04	0.20	1.25e-03	3,3,5	0.0	0.0	0.0	0,0,0
172	0.0	0.21	0.0	0,3,0	0.0	0.0	0.0	0,0,0
173	4.85e-03	0.20	6.47e-03	3,3,5	0.0	0.0	0.0	0,0,0
174	0.01	0.20	0.02	3,3,5	0.0	0.0	0.0	0,0,0
175	0.02	0.18	0.03	3,3,5	0.0	0.0	0.0	0,0,0
176	0.02	0.16	0.03	3,3,5	0.0	0.0	0.0	0,0,0
177	0.03	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
178	0.02	0.14	0.03	3,3,5	0.0	0.0	0.0	0,0,0
179	0.02	0.05	0.02	3,3,5	0.0	0.0	0.0	0,0,0
180	0.01	0.07	0.02	3,3,5	0.0	0.0	0.0	0,0,0
181	0.02	0.10	0.02	3,3,5	0.0	0.0	0.0	0,0,0
182	0.01	0.12	0.02	3,3,5	0.0	0.0	0.0	0,0,0
183	0.01	0.13	0.02	3,3,5	0.0	0.0	0.0	0,0,0
184	8.70e-03	0.14	0.01	3,3,5	0.0	0.0	0.0	0,0,0
185	5.95e-03	0.15	7.93e-03	3,3,5	0.0	0.0	0.0	0,0,0
186	3.93e-03	0.16	5.24e-03	3,3,5	0.0	0.0	0.0	0,0,0
187	7.08e-03	0.16	9.44e-03	3,3,5	0.0	0.0	0.0	0,0,0
188	0.01	0.16	0.02	3,3,5	0.0	0.0	0.0	0,0,0
189	0.02	0.16	0.03	3,3,5	0.0	0.0	0.0	0,0,0
190	0.03	0.15	0.03	3,3,5	0.0	0.0	0.0	0,0,0
191	0.03	0.14	0.04	3,3,5	0.0	0.0	0.0	0,0,0
192	0.04	0.14	0.05	3,3,5	0.0	0.0	0.0	0,0,0
193	0.05	0.15	0.06	3,3,5	0.0	0.0	0.0	0,0,0
194	0.01	0.06	0.02	3,3,5	0.0	0.0	0.0	0,0,0
195	0.02	0.09	0.02	3,3,5	0.0	0.0	0.0	0,0,0
196	0.02	0.11	0.03	3,3,5	0.0	0.0	0.0	0,0,0
197	0.02	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
198	0.02	0.12	0.03	3,3,5	0.0	0.0	0.0	0,0,0
199	0.02	0.13	0.03	3,3,5	0.0	0.0	0.0	0,0,0
200	0.02	0.13	0.03	3,3,5	0.0	0.0	0.0	0,0,0
201	0.02	0.13	0.03	3,3,5	0.0	0.0	0.0	0,0,0
202	0.02	0.14	0.03	3,3,5	0.0	0.0	0.0	0,0,0
203	0.03	0.15	0.03	3,3,5	0.0	0.0	0.0	0,0,0
204	0.03	0.16	0.04	3,3,5	0.0	0.0	0.0	0,0,0
205	0.03	0.16	0.05	3,3,5	0.0	0.0	0.0	0,0,0
206	0.04	0.17	0.05	3,3,5	0.0	0.0	0.0	0,0,0
207	0.04	0.18	0.05	3,3,5	0.0	0.0	0.0	0,0,0
208	0.04	0.14	0.05	3,3,5	0.0	0.0	0.0	0,0,0
209	0.02	0.08	0.02	3,3,5	0.0	0.0	0.0	0,0,0
210	0.02	0.11	0.03	3,3,5	0.0	0.0	0.0	0,0,0
211	0.03	0.13	0.04	3,3,5	0.0	0.0	0.0	0,0,0
212	0.03	0.14	0.05	3,3,5	0.0	0.0	0.0	0,0,0
213	0.04	0.14	0.05	3,3,5	0.0	0.0	0.0	0,0,0
214	0.04	0.15	0.06	3,3,5	0.0	0.0	0.0	0,0,0
215	0.05	0.16	0.06	3,3,5	0.0	0.0	0.0	0,0,0
216	0.05	0.17	0.06	3,3,5	0.0	0.0	0.0	0,0,0
217	0.05	0.17	0.06	3,3,5	0.0	0.0	0.0	0,0,0
218	0.05	0.18	0.06	3,3,5	0.0	0.0	0.0	0,0,0
219	0.05	0.19	0.06	3,3,5	0.0	0.0	0.0	0,0,0
220	0.05	0.20	0.06	3,3,5	0.0	0.0	0.0	0,0,0
221	0.04	0.20	0.06	3,3,5	0.0	0.0	0.0	0,0,0
222	0.04	0.18	0.05	3,3,5	0.0	0.0	0.0	0,0,0
223	0.03	0.12	0.04	3,3,5	0.0	0.0	0.0	0,0,0
224	0.02	0.07	0.02	3,3,5	0.0	0.0	0.0	0,0,0
225	0.04	0.12	0.05	3,3,5	0.0	0.0	0.0	0,0,0
226	0.05	0.15	0.06	3,3,5	0.0	0.0	0.0	0,0,0
227	0.06	0.18	0.08	3,3,5	0.0	0.0	0.0	0,0,0
228	0.06	0.21	0.08	3,3,5	0.0	0.0	0.0	0,0,0
229	0.07	0.22	0.09	3,3,5	0.0	0.0	0.0	0,0,0



Guscio	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
230	0.07	0.24	0.09	3,3,5	0.0	0.0	0.0	0,0,0
231	0.07	0.24	0.09	3,3,5	0.0	0.0	0.0	0,0,0
232	0.07	0.25	0.09	3,3,5	0.0	0.0	0.0	0,0,0
233	0.07	0.25	0.10	3,3,5	0.0	0.0	0.0	0,0,0
234	0.07	0.24	0.09	3,3,5	0.0	0.0	0.0	0,0,0
235	0.06	0.23	0.09	3,3,5	0.0	0.0	0.0	0,0,0
236	0.06	0.20	0.07	3,3,5	0.0	0.0	0.0	0,0,0
237	0.04	0.16	0.05	3,3,5	0.0	0.0	0.0	0,0,0
238	0.02	0.09	0.02	3,3,5	0.0	0.0	0.0	0,0,0
239	0.03	0.12	0.04	3,3,5	0.0	0.0	0.0	0,0,0
240	0.05	0.13	0.07	3,3,5	0.0	0.0	0.0	0,0,0
241	0.06	0.18	0.08	3,3,5	0.0	0.0	0.0	0,0,0
242	0.07	0.22	0.09	3,3,5	0.0	0.0	0.0	0,0,0
243	0.08	0.25	0.10	3,3,5	0.0	0.0	0.0	0,0,0
244	0.08	0.26	0.11	3,3,5	0.0	0.0	0.0	0,0,0
245	0.08	0.27	0.11	3,3,5	0.0	0.0	0.0	0,0,0
246	0.08	0.28	0.11	3,3,5	0.0	0.0	0.0	0,0,0
247	0.08	0.28	0.11	3,3,5	0.0	0.0	0.0	0,0,0
248	0.08	0.28	0.11	3,3,5	0.0	0.0	0.0	0,0,0
249	0.08	0.27	0.11	3,3,5	0.0	0.0	0.0	0,0,0
250	0.08	0.24	0.10	3,3,5	0.0	0.0	0.0	0,0,0
251	0.07	0.20	0.09	3,3,5	0.0	0.0	0.0	0,0,0
252	0.06	0.15	0.08	3,3,5	0.0	0.0	0.0	0,0,0
253	0.03	0.08	0.04	3,3,5	0.0	0.0	0.0	0,0,0
254	0.04	0.18	0.05	3,3,5	0.0	0.0	0.0	0,0,0
255	0.05	0.14	0.07	3,3,5	0.0	0.0	0.0	0,0,0
256	0.06	0.19	0.09	3,3,5	0.0	0.0	0.0	0,0,0
257	0.07	0.21	0.09	3,3,5	0.0	0.0	0.0	0,0,0
258	0.07	0.22	0.09	3,3,5	0.0	0.0	0.0	0,0,0
259	0.07	0.23	0.09	3,3,5	0.0	0.0	0.0	0,0,0
260	0.07	0.24	0.09	3,3,5	0.0	0.0	0.0	0,0,0
261	0.07	0.24	0.09	3,3,5	0.0	0.0	0.0	0,0,0
262	0.07	0.24	0.09	3,3,5	0.0	0.0	0.0	0,0,0
263	0.07	0.23	0.09	3,3,5	0.0	0.0	0.0	0,0,0
264	0.07	0.22	0.09	3,3,5	0.0	0.0	0.0	0,0,0
265	0.07	0.21	0.09	3,3,5	0.0	0.0	0.0	0,0,0
266	0.07	0.20	0.09	3,3,5	0.0	0.0	0.0	0,0,0
267	0.06	0.18	0.09	3,3,5	0.0	0.0	0.0	0,0,0
268	0.04	0.12	0.05	3,3,5	0.0	0.0	0.0	0,0,0
269	0.06	0.22	0.08	3,3,5	0.0	0.0	0.0	0,0,0
270	0.05	0.13	0.07	3,3,5	0.0	0.0	0.0	0,0,0
271	0.04	0.11	0.05	3,3,5	0.0	0.0	0.0	0,0,0
272	0.03	0.09	0.04	3,3,5	0.0	0.0	0.0	0,0,0
273	0.03	0.08	0.04	3,3,5	0.0	0.0	0.0	0,0,0
274	0.03	0.08	0.04	3,3,5	0.0	0.0	0.0	0,0,0
275	0.02	0.08	0.03	3,3,5	0.0	0.0	0.0	0,0,0
276	0.02	0.07	0.03	3,3,5	0.0	0.0	0.0	0,0,0
277	0.02	0.07	0.03	3,3,5	0.0	0.0	0.0	0,0,0
278	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
279	0.02	0.06	0.03	3,3,5	0.0	0.0	0.0	0,0,0
280	0.03	0.07	0.04	3,3,5	0.0	0.0	0.0	0,0,0
281	0.04	0.10	0.05	3,3,5	0.0	0.0	0.0	0,0,0
282	0.04	0.12	0.06	3,3,5	0.0	0.0	0.0	0,0,0
283	0.04	0.13	0.06	3,3,5	0.0	0.0	0.0	0,0,0
284	0.03	0.10	0.04	3,3,5	0.0	0.0	0.0	0,0,0
285	0.04	0.17	0.05	3,3,5	0.0	0.0	0.0	0,0,0
286	0.09	0.24	0.12	3,3,5	0.0	0.0	0.0	0,0,0
Guscio	rRfck	rRfyk	rPfck		wR	wF	wP	
	0.09	0.28	0.12		0.0	0.0	0.0	



STATO LIMITE D' ESERCIZIO: SLD DANNO SISMICO

LEGENDA TABELLA STATI LIMITE DI DANNO (VERIFICHE RES)

Le verifiche RES per SLD sono effettuate in accordo alle Norme Tecniche 17 Gennaio 2018 e alla circolare n.7 del 21 gennaio 2019 nonché alle linee guida del Consiglio Superiore LL.PP. "Linee guida per la Progettazione, l'Esecuzione ed il Collaudo di Interventi di Rinforzo di strutture di c.a., c.a.p. e murarie mediante FRP".

Le verifiche RES per SLD, sono riportate nelle successive tabelle nella forma di rapporto "domanda" su "capacità" e hanno esito positivo quando il rapporto è non superiore al valore unitario.

La "domanda" è ottenuta direttamente dall'analisi per le previste combinazioni SLD (NTC18 2.5.3. COMBINAZIONI DELLE AZIONI formula [2.5.5]).

Per "capacità" si intende qui il valore della sollecitazione corrispondente al raggiungimento dello stato limite di danno per la sezione: per la resistenza flessionale questo stato limite si identifica con la tensione di snervamento dell'acciaio o la resistenza massima a compressione per il calcestruzzo e la muratura. Lo stato limite di danno si ritiene attinto anche in caso di superamento della resistenza a taglio.

Le resistenze flessionali sono valutate utilizzando i legami costitutivi del materiale limitati al solo tratto elastico, ottenendo così resistenze sostanzialmente elastiche come previsto dalla norma.

La seguente tabella identifica per quali configurazioni (materiale nuovo, esistente, con rinforzi e metodo di analisi) sono state condotte le verifiche di seguito riportate.

Configurazione	Verifica SLD	NOTE
1) c.a. nuovo e esist. Verifica SLU con $q > 1$	Verifica N/M SE Verifica V/T	Sono verifiche per struttura non dissipativa condotte secondo il cap.4 NTC18 in regime sostanzialmente elastico; si verificano travi, pilastri, setti e gusci.
2) Muratura nuova Verifica SLU con $q > 1$	Verifica N/M SE Verifica V	Per N/M identificato SL elastico, per V formulazione secondo cap.7
3) Muratura esis. AO Verifica SLU con $q > 1$	Verifica N/M SE Verifica V	Per N/M identificato SL elastico, per V formulazione secondo cap. 7 e 8
4) Muratura esis. PO Verifica SLU con $q > 1$	Verifica N/M SE Verifica V	Per N/M identificato SL elastico, per V formulazione secondo cap. 7 e 8; Anche per rinforzi FRP è prevista verifica N/M SE e V

Simbologia adottata nelle tabelle di verifica

Per le verifiche agli SLD di pilastri, travi setti e gusci in c.a. è presente una tabella con i simboli di seguito descritti:

Pilas./Trave/ Setto/Guscio	numero identificativo dell'elemento D2 o D3
Stato	Codici relativi all'esito delle verifiche effettuate appresso descritte
Pos.	Posizione nell'elemento della sezione per la quale si riporta la verifica
V N/M	Verifica a pressoflessione con rapporto E_d/R_d : valore minore o uguale a 1 per verifica positiva
V V/T cls	Verifica a taglio/torsione con rapporto V_{ed}/V_{rd} lato cls: valore minore o uguale a 1 per verifica positiva
V V/T acc	Verifica a taglio/torsione con rapporto V_{ed}/V_{rd} lato acciaio: valore minore o uguale a 1 per verifica positiva



Rif. cmb. Riferimento combinazioni da cui si generano le verifiche più gravose per il pilastro

Per le verifiche agli SLD di maschi e fasce in **muratura**, è presente una tabella con i simboli di seguito descritti:

Setto/Fascia/Elem.	numero del macroelemento (D3) o elemento (D2) considerato	
Mat.	Materiale	
s=,m=	Indice della sezione e del materiale assegnati all' elemento (per D2)	
Spessore	spessore dell'elemento	
Stato	ok	elemento verificato (SLD)
	NV	elemento non verificato (SLD)

e a seguire:

Nodo/Pos.	numero del nodo appartenente al setto / posizione relativa al nodo I per D2
h0/t	valore della snellezza convenzionale
P/Ap	tensione verticale media utilizzata per la verifica a pressoflessione nel piano del muro
P/Acv	tensione verticale media nella parte compressa, utilizzata nella verifica a taglio nel piano del muro
Ver. Mp	rapporto tra il momento di progetto e il momento Mrd in relazione alla verifica Par. 7.8.2.2.1 (pressoflessione complanare) effettuato per tutte le combinazioni
Ver. V	rapporto il taglio di progetto e il taglio ultimo in relazione alla verifica Par. 7.8.2.2.2 (taglio complanare) o C8.7.1.16 della circolare 21-01-19 per edifici esistenti effettuato per tutte le combinazioni (solo per elementi maschi)
Ver. V	rapporto tra il taglio di progetto e il minore dei tagli resistenti Vp e Vt in relazione alla verifica del par. 7.8.2.2.3 (solo per elementi fasce)
Rif. cmb	Combinazioni in cui si hanno i massimi valori dei rapporti Ver. Mp, Ver. V

Per elementi consolidati secondo il paragrafo C8.5.3.1 il programma opera come per gli elementi non rinforzati, considerando ai fini delle analisi e delle verifiche gli opportuni coefficienti correttivi delle rigidezze e delle resistenze.

Per elementi consolidati con FRP il programma implementa le verifiche previste dalle "Linee guida per la Progettazione, l'Esecuzione ed il Collaudo di Interventi di Rinforzo di strutture di c.a., c.a.p. e murarie mediante FRP" approvate dal CSLLPP il 24/07/2009.

Per elementi consolidati con FRCM il programma implementa le verifiche previste dalle CNR-DT 215/2018 "Istruzioni per la Progettazione, l'Esecuzione ed il Controllo di Interventi di Consolidamento Statico mediante l'utilizzo di Compositi Fibrorinforzati a Matrice Inorganica"

Per semplicità la simbologia adottata nelle tabelle è uniformata a quella degli elementi non rinforzati.

Le tabelle riportano inoltre i seguenti parametri:

Fibra	Tipo di fibra del fibrorinforzo
E fibra	Modulo elastico del fibrorinforzo
epsr	Dilatazione di rottura del fibrorinforzo
epsd	Dilatazione di calcolo
epsd(s)	Dilatazione di calcolo per combinazioni sismiche
Spess.	Spessore del fibrorinforzo, il programma prevede l' applicazione di uno strato di spessore s su entrambe le facce della parete (o sui quattro lati della sezione in caso di confinamento)
AO fib.	Area orizzontale complessiva di fibrorinforzo per metro lineare
AV fib.	Area verticale complessiva di fibrorinforzo per metro lineare

Affinché l'elemento sia verificato deve essere:

Ver. Mp, Ver.V non superiore a 1



TABELLA VERIFICHE ELEMENTI D3 SETTI C.A.

Setto	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
9	ok	16	0.04	0.0	0.0	54,0,0	17	0.05	0.0	0.0	30,0,0
		2	0.03	0.0	0.0	30,0,0	1	0.02	0.0	0.0	60,0,0
10	ok	17	0.08	0.0	0.0	34,0,0	18	0.07	0.0	0.0	34,0,0
		3	0.04	0.0	0.0	32,0,0	2	0.03	0.0	0.0	22,0,0
11	ok	18	0.04	0.0	0.0	30,0,0	19	0.06	0.0	0.0	30,0,0
		4	0.04	0.0	0.0	54,0,0	3	0.04	0.0	0.0	34,0,0
12	ok	19	0.08	0.0	0.0	46,0,0	20	0.06	0.0	0.0	46,0,0
		5	0.03	0.0	0.0	56,0,0	4	0.05	0.0	0.0	58,0,0
13	ok	1	0.03	0.0	0.0	22,0,0	6	0.02	0.0	0.0	26,0,0
		21	0.02	0.0	0.0	34,0,0	16	0.03	0.0	0.0	54,0,0
14	ok	5	0.02	0.0	0.0	63,0,0	10	0.03	0.0	0.0	30,0,0
		22	0.02	0.0	0.0	30,0,0	20	0.02	0.0	0.0	22,0,0
15	ok	6	0.01	0.0	0.0	27,0,0	11	0.02	0.0	0.0	43,0,0
		23	0.03	0.0	0.0	31,0,0	21	0.02	0.0	0.0	31,0,0
16	ok	10	0.03	0.0	0.0	54,0,0	15	0.05	0.0	0.0	54,0,0
		27	0.03	0.0	0.0	54,0,0	22	7.98e-03	0.0	0.0	54,0,0
17	ok	23	0.04	0.0	0.0	31,0,0	24	0.05	0.0	0.0	31,0,0
		12	0.03	0.0	0.0	31,0,0	11	0.02	0.0	0.0	23,0,0
18	ok	24	0.04	0.0	0.0	54,0,0	25	0.04	0.0	0.0	54,0,0
		13	0.02	0.0	0.0	23,0,0	12	0.02	0.0	0.0	23,0,0
19	ok	25	0.04	0.0	0.0	27,0,0	26	0.06	0.0	0.0	27,0,0
		14	0.02	0.0	0.0	31,0,0	13	9.19e-03	0.0	0.0	31,0,0
20	ok	26	8.28e-03	0.0	0.0	54,0,0	27	0.03	0.0	0.0	27,0,0
		15	0.03	0.0	0.0	43,0,0	14	0.01	0.0	0.0	43,0,0
21	ok	28	0.13	0.0	0.0	34,0,0	29	0.12	0.0	0.0	34,0,0
		18	0.12	0.0	0.0	34,0,0	17	0.12	0.0	0.0	34,0,0
22	ok	29	0.19	0.0	0.0	34,0,0	30	0.19	0.0	0.0	30,0,0
		19	0.11	0.0	0.0	42,0,0	18	0.11	0.0	0.0	42,0,0
23	ok	30	0.11	0.0	0.0	33,0,0	31	0.05	0.0	0.0	58,0,0
		20	0.04	0.0	0.0	46,0,0	19	0.10	0.0	0.0	33,0,0
24	ok	77	0.02	0.0	0.0	31,0,0	28	0.05	0.0	0.0	36,0,0
		17	0.07	0.0	0.0	31,0,0	16	0.03	0.0	0.0	22,0,0
25	ok	20	0.05	0.0	0.0	33,0,0	22	0.10	0.0	0.0	33,0,0
		79	0.05	0.0	0.0	25,0,0	31	0.04	0.0	0.0	22,0,0
26	ok	16	0.04	0.0	0.0	34,0,0	21	0.03	0.0	0.0	34,0,0
		78	0.02	0.0	0.0	34,0,0	77	0.03	0.0	0.0	34,0,0
27	ok	21	0.02	0.0	0.0	31,0,0	23	0.04	0.0	0.0	31,0,0
		80	0.05	0.0	0.0	43,0,0	78	0.04	0.0	0.0	22,0,0
28	ok	22	0.07	0.0	0.0	43,0,0	27	0.05	0.0	0.0	43,0,0
		84	0.06	0.0	0.0	43,0,0	79	0.08	0.0	0.0	49,0,0
29	ok	80	0.06	0.0	0.0	31,0,0	81	0.06	0.0	0.0	31,0,0
		24	0.05	0.0	0.0	31,0,0	23	0.04	0.0	0.0	31,0,0
30	ok	81	0.07	0.0	0.0	22,0,0	82	0.08	0.0	0.0	22,0,0
		25	0.06	0.0	0.0	54,0,0	24	0.06	0.0	0.0	54,0,0
31	ok	82	0.09	0.0	0.0	22,0,0	83	0.09	0.0	0.0	22,0,0
		26	0.07	0.0	0.0	27,0,0	25	0.06	0.0	0.0	27,0,0
32	ok	83	0.06	0.0	0.0	27,0,0	84	0.08	0.0	0.0	43,0,0
		27	0.06	0.0	0.0	27,0,0	26	0.04	0.0	0.0	27,0,0
63	ok	32	0.15	0.0	0.0	36,0,0	29	0.23	0.0	0.0	36,0,0
		118	0.32	0.0	0.0	43,0,0	114	0.29	0.0	0.0	48,0,0
64	ok	34	0.04	0.0	0.0	43,0,0	31	0.04	0.0	0.0	49,0,0
		120	0.25	0.0	0.0	45,0,0	115	0.25	0.0	0.0	49,0,0
65	ok	117	0.32	0.0	0.0	43,0,0	118	0.37	0.0	0.0	43,0,0
		29	0.21	0.0	0.0	36,0,0	28	0.15	0.0	0.0	23,0,0
66	ok	35	0.19	0.0	0.0	43,0,0	32	0.23	0.0	0.0	43,0,0
		114	0.20	0.0	0.0	48,0,0	112	0.22	0.0	0.0	33,0,0
67	ok	37	0.09	0.0	0.0	37,0,0	34	0.05	0.0	0.0	53,0,0
		115	0.23	0.0	0.0	37,0,0	113	0.29	0.0	0.0	37,0,0
68	ok	38	0.18	0.0	0.0	37,0,0	35	0.08	0.0	0.0	37,0,0
		112	0.19	0.0	0.0	33,0,0	110	0.28	0.0	0.0	37,0,0



Setto	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
69	ok	40	0.22	0.0	0.0	37,0,0	37	0.09	0.0	0.0	37,0,0
		113	0.21	0.0	0.0	45,0,0	111	0.34	0.0	0.0	37,0,0
70	ok	41	0.21	0.0	0.0	33,0,0	38	0.11	0.0	0.0	37,0,0
		110	0.25	0.0	0.0	37,0,0	108	0.32	0.0	0.0	33,0,0
71	ok	43	0.40	0.0	0.0	37,0,0	40	0.23	0.0	0.0	37,0,0
		111	0.31	0.0	0.0	37,0,0	109	0.47	0.0	0.0	37,0,0
72	ok	44	0.27	0.0	0.0	33,0,0	41	0.18	0.0	0.0	33,0,0
		108	0.29	0.0	0.0	33,0,0	106	0.38	0.0	0.0	33,0,0
73	ok	46	0.56	0.0	0.0	37,0,0	43	0.41	0.0	0.0	37,0,0
		109	0.45	0.0	0.0	37,0,0	107	0.60	0.0	0.0	37,0,0
74	ok	47	0.33	0.0	0.0	37,0,0	44	0.26	0.0	0.0	37,0,0
		106	0.35	0.0	0.0	37,0,0	104	0.43	0.0	0.0	37,0,0
75	ok	49	0.68	0.0	0.0	37,0,0	46	0.57	0.0	0.0	37,0,0
		107	0.58	0.0	0.0	37,0,0	105	0.70	0.0	0.0	37,0,0
76	ok	50	0.38	0.0	0.0	37,0,0	47	0.33	0.0	0.0	37,0,0
		104	0.41	0.0	0.0	37,0,0	102	0.46	0.0	0.0	37,0,0
77	ok	52	0.64	0.0	0.0	37,0,0	49	0.68	0.0	0.0	37,0,0
		105	0.69	0.0	0.0	37,0,0	103	0.64	0.0	0.0	37,0,0
78	ok	53	0.40	0.0	0.0	37,0,0	50	0.38	0.0	0.0	37,0,0
		102	0.46	0.0	0.0	37,0,0	100	0.48	0.0	0.0	37,0,0
79	ok	55	0.64	0.0	0.0	36,0,0	52	0.64	0.0	0.0	33,0,0
		103	0.64	0.0	0.0	33,0,0	101	0.65	0.0	0.0	36,0,0
80	ok	116	0.11	0.0	0.0	31,0,0	117	0.27	0.0	0.0	31,0,0
		28	0.23	0.0	0.0	31,0,0	77	0.06	0.0	0.0	31,0,0
81	ok	31	0.12	0.0	0.0	30,0,0	79	0.09	0.0	0.0	49,0,0
		122	0.21	0.0	0.0	30,0,0	120	0.20	0.0	0.0	30,0,0
82	ok	56	0.39	0.0	0.0	37,0,0	53	0.40	0.0	0.0	37,0,0
		100	0.48	0.0	0.0	37,0,0	98	0.47	0.0	0.0	37,0,0
83	ok	58	0.72	0.0	0.0	36,0,0	55	0.64	0.0	0.0	36,0,0
		101	0.65	0.0	0.0	36,0,0	99	0.73	0.0	0.0	36,0,0
84	ok	59	0.36	0.0	0.0	37,0,0	56	0.40	0.0	0.0	37,0,0
		98	0.49	0.0	0.0	37,0,0	96	0.44	0.0	0.0	37,0,0
85	ok	61	0.66	0.0	0.0	33,0,0	58	0.73	0.0	0.0	33,0,0
		99	0.74	0.0	0.0	36,0,0	97	0.67	0.0	0.0	33,0,0
86	ok	62	0.30	0.0	0.0	49,0,0	59	0.38	0.0	0.0	49,0,0
		96	0.46	0.0	0.0	37,0,0	94	0.40	0.0	0.0	49,0,0
87	ok	64	0.54	0.0	0.0	45,0,0	61	0.66	0.0	0.0	33,0,0
		97	0.69	0.0	0.0	33,0,0	95	0.57	0.0	0.0	45,0,0
88	ok	65	0.23	0.0	0.0	49,0,0	62	0.33	0.0	0.0	49,0,0
		94	0.42	0.0	0.0	49,0,0	92	0.34	0.0	0.0	49,0,0
89	ok	67	0.40	0.0	0.0	45,0,0	64	0.55	0.0	0.0	45,0,0
		95	0.59	0.0	0.0	45,0,0	93	0.44	0.0	0.0	45,0,0
90	ok	68	0.18	0.0	0.0	49,0,0	65	0.28	0.0	0.0	49,0,0
		92	0.36	0.0	0.0	49,0,0	90	0.27	0.0	0.0	49,0,0
91	ok	70	0.21	0.0	0.0	45,0,0	67	0.40	0.0	0.0	45,0,0
		93	0.46	0.0	0.0	45,0,0	91	0.30	0.0	0.0	45,0,0
92	ok	71	0.20	0.0	0.0	33,0,0	68	0.28	0.0	0.0	49,0,0
		90	0.33	0.0	0.0	49,0,0	88	0.14	0.0	0.0	43,0,0
93	ok	73	0.07	0.0	0.0	33,0,0	70	0.21	0.0	0.0	45,0,0
		91	0.33	0.0	0.0	53,0,0	89	0.21	0.0	0.0	33,0,0
94	ok	74	0.11	0.0	0.0	36,0,0	71	0.17	0.0	0.0	60,0,0
		88	0.19	0.0	0.0	56,0,0	85	0.11	0.0	0.0	48,0,0
95	ok	76	0.16	0.0	0.0	36,0,0	73	0.09	0.0	0.0	42,0,0
		89	0.26	0.0	0.0	33,0,0	87	0.26	0.0	0.0	33,0,0
96	ok	85	0.11	0.0	0.0	33,0,0	86	0.20	0.0	0.0	45,0,0
		75	0.20	0.0	0.0	48,0,0	74	0.09	0.0	0.0	36,0,0
97	ok	86	0.07	0.0	0.0	48,0,0	87	0.28	0.0	0.0	36,0,0
		76	0.38	0.0	0.0	36,0,0	75	0.22	0.0	0.0	48,0,0
98	ok	77	0.05	0.0	0.0	34,0,0	78	0.04	0.0	0.0	32,0,0
		121	0.10	0.0	0.0	30,0,0	116	0.11	0.0	0.0	30,0,0
99	ok	78	0.04	0.0	0.0	27,0,0	80	0.06	0.0	0.0	43,0,0
		123	0.04	0.0	0.0	34,0,0	121	0.04	0.0	0.0	34,0,0
100	ok	79	0.12	0.0	0.0	43,0,0	84	0.07	0.0	0.0	49,0,0
		127	0.17	0.0	0.0	43,0,0	122	0.21	0.0	0.0	43,0,0
101	ok	123	0.08	0.0	0.0	31,0,0	124	0.07	0.0	0.0	31,0,0
		81	0.05	0.0	0.0	31,0,0	80	0.05	0.0	0.0	31,0,0
102	ok	124	0.06	0.0	0.0	22,0,0	125	0.07	0.0	0.0	22,0,0
		82	0.07	0.0	0.0	22,0,0	81	0.07	0.0	0.0	22,0,0
103	ok	125	0.09	0.0	0.0	22,0,0	126	0.09	0.0	0.0	22,0,0
		83	0.09	0.0	0.0	22,0,0	82	0.08	0.0	0.0	22,0,0
104	ok	126	0.10	0.0	0.0	30,0,0	127	0.11	0.0	0.0	30,0,0
		84	0.08	0.0	0.0	43,0,0	83	0.06	0.0	0.0	43,0,0



Setto	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
105	ok	128	0.08	0.0	0.0	33,0,0	129	0.19	0.0	0.0	36,0,0
		86	0.28	0.0	0.0	36,0,0	85	0.07	0.0	0.0	33,0,0
106	ok	129	0.15	0.0	0.0	33,0,0	130	0.47	0.0	0.0	45,0,0
		87	0.40	0.0	0.0	36,0,0	86	0.13	0.0	0.0	33,0,0
107	ok	85	0.10	0.0	0.0	48,0,0	88	0.37	0.0	0.0	43,0,0
		131	0.27	0.0	0.0	58,0,0	128	0.10	0.0	0.0	48,0,0
108	ok	87	0.45	0.0	0.0	36,0,0	89	0.36	0.0	0.0	33,0,0
		132	0.59	0.0	0.0	33,0,0	130	0.59	0.0	0.0	33,0,0
109	ok	88	0.33	0.0	0.0	49,0,0	90	0.40	0.0	0.0	49,0,0
		133	0.45	0.0	0.0	49,0,0	131	0.39	0.0	0.0	43,0,0
110	ok	89	0.35	0.0	0.0	33,0,0	91	0.45	0.0	0.0	33,0,0
		134	0.56	0.0	0.0	36,0,0	132	0.48	0.0	0.0	33,0,0
111	ok	90	0.36	0.0	0.0	45,0,0	92	0.30	0.0	0.0	49,0,0
		135	0.38	0.0	0.0	49,0,0	133	0.43	0.0	0.0	49,0,0
112	ok	91	0.40	0.0	0.0	33,0,0	93	0.49	0.0	0.0	33,0,0
		136	0.54	0.0	0.0	33,0,0	134	0.47	0.0	0.0	33,0,0
113	ok	92	0.29	0.0	0.0	49,0,0	94	0.29	0.0	0.0	49,0,0
		137	0.42	0.0	0.0	49,0,0	135	0.42	0.0	0.0	49,0,0
114	ok	93	0.46	0.0	0.0	33,0,0	95	0.53	0.0	0.0	33,0,0
		138	0.56	0.0	0.0	33,0,0	136	0.49	0.0	0.0	33,0,0
115	ok	94	0.26	0.0	0.0	49,0,0	96	0.24	0.0	0.0	49,0,0
		139	0.41	0.0	0.0	49,0,0	137	0.42	0.0	0.0	49,0,0
116	ok	95	0.51	0.0	0.0	33,0,0	97	0.56	0.0	0.0	33,0,0
		140	0.57	0.0	0.0	33,0,0	138	0.52	0.0	0.0	33,0,0
117	ok	96	0.21	0.0	0.0	49,0,0	98	0.20	0.0	0.0	49,0,0
		141	0.41	0.0	0.0	43,0,0	139	0.41	0.0	0.0	43,0,0
118	ok	97	0.54	0.0	0.0	33,0,0	99	0.57	0.0	0.0	33,0,0
		142	0.57	0.0	0.0	33,0,0	140	0.54	0.0	0.0	33,0,0
119	ok	98	0.17	0.0	0.0	37,0,0	100	0.16	0.0	0.0	31,0,0
		143	0.40	0.0	0.0	43,0,0	141	0.40	0.0	0.0	43,0,0
120	ok	99	0.55	0.0	0.0	33,0,0	101	0.48	0.0	0.0	36,0,0
		144	0.56	0.0	0.0	36,0,0	142	0.55	0.0	0.0	33,0,0
121	ok	100	0.16	0.0	0.0	36,0,0	102	0.15	0.0	0.0	36,0,0
		145	0.40	0.0	0.0	31,0,0	143	0.41	0.0	0.0	31,0,0
122	ok	101	0.48	0.0	0.0	33,0,0	103	0.47	0.0	0.0	37,0,0
		146	0.56	0.0	0.0	37,0,0	144	0.56	0.0	0.0	33,0,0
123	ok	102	0.19	0.0	0.0	36,0,0	104	0.17	0.0	0.0	36,0,0
		147	0.40	0.0	0.0	36,0,0	145	0.40	0.0	0.0	36,0,0
124	ok	103	0.48	0.0	0.0	37,0,0	105	0.52	0.0	0.0	37,0,0
		148	0.52	0.0	0.0	37,0,0	146	0.56	0.0	0.0	37,0,0
125	ok	104	0.21	0.0	0.0	36,0,0	106	0.21	0.0	0.0	36,0,0
		149	0.41	0.0	0.0	36,0,0	147	0.41	0.0	0.0	36,0,0
126	ok	105	0.53	0.0	0.0	37,0,0	107	0.47	0.0	0.0	37,0,0
		150	0.48	0.0	0.0	37,0,0	148	0.54	0.0	0.0	37,0,0
127	ok	106	0.25	0.0	0.0	36,0,0	108	0.26	0.0	0.0	36,0,0
		151	0.41	0.0	0.0	36,0,0	149	0.40	0.0	0.0	36,0,0
128	ok	107	0.49	0.0	0.0	37,0,0	109	0.42	0.0	0.0	37,0,0
		152	0.44	0.0	0.0	37,0,0	150	0.51	0.0	0.0	37,0,0
129	ok	108	0.29	0.0	0.0	36,0,0	110	0.29	0.0	0.0	36,0,0
		153	0.41	0.0	0.0	36,0,0	151	0.42	0.0	0.0	36,0,0
130	ok	109	0.45	0.0	0.0	37,0,0	111	0.37	0.0	0.0	37,0,0
		154	0.42	0.0	0.0	37,0,0	152	0.49	0.0	0.0	37,0,0
131	ok	110	0.31	0.0	0.0	33,0,0	112	0.31	0.0	0.0	33,0,0
		155	0.38	0.0	0.0	33,0,0	153	0.38	0.0	0.0	33,0,0
132	ok	111	0.43	0.0	0.0	37,0,0	113	0.35	0.0	0.0	37,0,0
		156	0.39	0.0	0.0	37,0,0	154	0.51	0.0	0.0	37,0,0
133	ok	112	0.35	0.0	0.0	33,0,0	114	0.24	0.0	0.0	33,0,0
		157	0.27	0.0	0.0	31,0,0	155	0.37	0.0	0.0	36,0,0
134	ok	113	0.42	0.0	0.0	37,0,0	115	0.35	0.0	0.0	37,0,0
		158	0.35	0.0	0.0	37,0,0	156	0.59	0.0	0.0	37,0,0
135	ok	114	0.23	0.0	0.0	37,0,0	118	0.34	0.0	0.0	31,0,0
		159	0.15	0.0	0.0	36,0,0	157	0.16	0.0	0.0	58,0,0
136	ok	115	0.32	0.0	0.0	37,0,0	120	0.30	0.0	0.0	49,0,0
		161	0.46	0.0	0.0	49,0,0	158	0.47	0.0	0.0	49,0,0
137	ok	184	0.27	0.0	0.0	49,0,0	159	0.39	0.0	0.0	43,0,0
		118	0.37	0.0	0.0	43,0,0	117	0.26	0.0	0.0	43,0,0
138	ok	159	0.24	0.0	0.0	43,0,0	160	0.23	0.0	0.0	43,0,0
		119	0.25	0.0	0.0	43,0,0	118	0.26	0.0	0.0	43,0,0
139	ok	160	0.32	0.0	0.0	49,0,0	161	0.39	0.0	0.0	37,0,0
		120	0.18	0.0	0.0	49,0,0	119	0.08	0.0	0.0	43,0,0
140	ok	120	0.30	0.0	0.0	30,0,0	122	0.20	0.0	0.0	30,0,0
		163	0.62	0.0	0.0	30,0,0	161	0.68	0.0	0.0	30,0,0



Setto	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
141	ok	121	0.12	0.0	0.0	31,0,0	123	0.04	0.0	0.0	34,0,0
		164	0.15	0.0	0.0	31,0,0	162	0.22	0.0	0.0	31,0,0
142	ok	122	0.12	0.0	0.0	43,0,0	127	0.13	0.0	0.0	49,0,0
		168	0.16	0.0	0.0	43,0,0	163	0.15	0.0	0.0	43,0,0
143	ok	164	0.06	0.0	0.0	31,0,0	165	0.07	0.0	0.0	31,0,0
		124	0.07	0.0	0.0	31,0,0	123	0.07	0.0	0.0	31,0,0
144	ok	165	0.04	0.0	0.0	22,0,0	166	0.04	0.0	0.0	22,0,0
		125	0.06	0.0	0.0	22,0,0	124	0.07	0.0	0.0	54,0,0
145	ok	166	0.08	0.0	0.0	22,0,0	167	0.09	0.0	0.0	22,0,0
		126	0.09	0.0	0.0	22,0,0	125	0.09	0.0	0.0	22,0,0
146	ok	167	0.16	0.0	0.0	30,0,0	168	0.16	0.0	0.0	30,0,0
		127	0.10	0.0	0.0	30,0,0	126	0.09	0.0	0.0	30,0,0
147	ok	200	0.13	0.0	0.0	34,0,0	184	0.18	0.0	0.0	45,0,0
		117	0.32	0.0	0.0	31,0,0	116	0.15	0.0	0.0	34,0,0
148	ok	116	0.11	0.0	0.0	30,0,0	121	0.14	0.0	0.0	43,0,0
		162	0.16	0.0	0.0	49,0,0	200	0.08	0.0	0.0	31,0,0
287	ok	327	0.37	0.0	0.0	56,0,0	328	0.27	0.0	0.0	56,0,0
		128	0.13	0.0	0.0	58,0,0	169	0.24	0.0	0.0	36,0,0
288	ok	328	0.16	0.0	0.0	48,0,0	329	0.37	0.0	0.0	33,0,0
		129	0.14	0.0	0.0	33,0,0	128	0.11	0.0	0.0	36,0,0
289	ok	329	0.28	0.0	0.0	31,0,0	330	0.35	0.0	0.0	45,0,0
		130	0.30	0.0	0.0	45,0,0	129	0.12	0.0	0.0	33,0,0
290	ok	130	0.63	0.0	0.0	33,0,0	132	0.62	0.0	0.0	33,0,0
		332	0.58	0.0	0.0	36,0,0	330	0.57	0.0	0.0	33,0,0
291	ok	132	0.55	0.0	0.0	33,0,0	134	0.58	0.0	0.0	36,0,0
		334	0.65	0.0	0.0	36,0,0	332	0.46	0.0	0.0	36,0,0
292	ok	134	0.47	0.0	0.0	33,0,0	136	0.49	0.0	0.0	33,0,0
		336	0.54	0.0	0.0	37,0,0	334	0.47	0.0	0.0	37,0,0
293	ok	136	0.40	0.0	0.0	33,0,0	138	0.41	0.0	0.0	33,0,0
		338	0.42	0.0	0.0	37,0,0	336	0.42	0.0	0.0	37,0,0
294	ok	138	0.35	0.0	0.0	33,0,0	140	0.35	0.0	0.0	33,0,0
		340	0.35	0.0	0.0	33,0,0	338	0.37	0.0	0.0	31,0,0
295	ok	140	0.30	0.0	0.0	33,0,0	142	0.29	0.0	0.0	33,0,0
		342	0.29	0.0	0.0	33,0,0	340	0.32	0.0	0.0	31,0,0
296	ok	142	0.26	0.0	0.0	33,0,0	144	0.25	0.0	0.0	33,0,0
		344	0.25	0.0	0.0	31,0,0	342	0.27	0.0	0.0	31,0,0
297	ok	144	0.25	0.0	0.0	33,0,0	146	0.25	0.0	0.0	37,0,0
		346	0.26	0.0	0.0	31,0,0	344	0.26	0.0	0.0	31,0,0
298	ok	146	0.25	0.0	0.0	37,0,0	148	0.25	0.0	0.0	49,0,0
		348	0.31	0.0	0.0	36,0,0	346	0.29	0.0	0.0	31,0,0
299	ok	148	0.28	0.0	0.0	49,0,0	150	0.27	0.0	0.0	49,0,0
		350	0.37	0.0	0.0	48,0,0	348	0.34	0.0	0.0	48,0,0
300	ok	150	0.32	0.0	0.0	37,0,0	152	0.31	0.0	0.0	37,0,0
		352	0.42	0.0	0.0	48,0,0	350	0.39	0.0	0.0	48,0,0
301	ok	152	0.39	0.0	0.0	31,0,0	154	0.38	0.0	0.0	31,0,0
		354	0.43	0.0	0.0	43,0,0	352	0.42	0.0	0.0	31,0,0
302	ok	154	0.50	0.0	0.0	49,0,0	156	0.44	0.0	0.0	49,0,0
		356	0.52	0.0	0.0	43,0,0	354	0.57	0.0	0.0	43,0,0
303	ok	156	0.66	0.0	0.0	49,0,0	158	0.43	0.0	0.0	49,0,0
		358	0.49	0.0	0.0	49,0,0	356	0.75	0.0	0.0	49,0,0
304	ok	158	0.55	0.0	0.0	49,0,0	161	0.58	0.0	0.0	49,0,0
		370	0.63	0.0	0.0	31,0,0	358	0.61	0.0	0.0	31,0,0
305	ok	367	0.16	0.0	0.0	49,0,0	368	0.20	0.0	0.0	49,0,0
		159	0.20	0.0	0.0	49,0,0	184	0.18	0.0	0.0	49,0,0
306	ok	368	0.23	0.0	0.0	49,0,0	369	0.30	0.0	0.0	49,0,0
		160	0.25	0.0	0.0	45,0,0	159	0.19	0.0	0.0	49,0,0
307	ok	369	0.29	0.0	0.0	31,0,0	370	0.37	0.0	0.0	31,0,0
		161	0.43	0.0	0.0	33,0,0	160	0.32	0.0	0.0	45,0,0
308	ok	326	0.39	0.0	0.0	36,0,0	327	0.31	0.0	0.0	36,0,0
		169	0.15	0.0	0.0	33,0,0	185	0.27	0.0	0.0	26,0,0
309	ok	366	0.09	0.0	0.0	48,0,0	367	0.24	0.0	0.0	45,0,0
		184	0.15	0.0	0.0	45,0,0	200	0.08	0.0	0.0	37,0,0
310	ok	325	0.30	0.0	0.0	26,0,0	326	0.29	0.0	0.0	45,0,0
		185	0.28	0.0	0.0	26,0,0	201	0.30	0.0	0.0	26,0,0
311	ok	365	0.32	0.0	0.0	49,0,0	366	0.19	0.0	0.0	31,0,0
		200	0.08	0.0	0.0	34,0,0	216	0.15	0.0	0.0	33,0,0
312	ok	324	0.26	0.0	0.0	23,0,0	325	0.29	0.0	0.0	26,0,0
		201	0.31	0.0	0.0	26,0,0	217	0.28	0.0	0.0	26,0,0
313	ok	364	0.18	0.0	0.0	49,0,0	365	0.20	0.0	0.0	49,0,0
		216	0.15	0.0	0.0	37,0,0	232	0.13	0.0	0.0	33,0,0
314	ok	323	0.22	0.0	0.0	27,0,0	324	0.27	0.0	0.0	23,0,0
		217	0.29	0.0	0.0	58,0,0	233	0.24	0.0	0.0	27,0,0



Setto	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
315	ok	363	0.18	0.0	0.0	32,0,0	364	0.15	0.0	0.0	49,0,0
		232	0.10	0.0	0.0	49,0,0	248	0.12	0.0	0.0	32,0,0
316	ok	322	0.20	0.0	0.0	47,0,0	323	0.24	0.0	0.0	27,0,0
		233	0.24	0.0	0.0	27,0,0	249	0.19	0.0	0.0	27,0,0
317	ok	362	0.23	0.0	0.0	32,0,0	363	0.18	0.0	0.0	32,0,0
		248	0.13	0.0	0.0	32,0,0	264	0.17	0.0	0.0	32,0,0
318	ok	321	0.24	0.0	0.0	42,0,0	322	0.22	0.0	0.0	27,0,0
		249	0.22	0.0	0.0	27,0,0	265	0.18	0.0	0.0	35,0,0
319	ok	361	0.25	0.0	0.0	32,0,0	362	0.23	0.0	0.0	32,0,0
		264	0.19	0.0	0.0	32,0,0	280	0.20	0.0	0.0	32,0,0
320	ok	320	0.25	0.0	0.0	26,0,0	321	0.22	0.0	0.0	27,0,0
		265	0.20	0.0	0.0	27,0,0	281	0.23	0.0	0.0	22,0,0
321	ok	360	0.18	0.0	0.0	34,0,0	361	0.22	0.0	0.0	32,0,0
		280	0.20	0.0	0.0	32,0,0	296	0.16	0.0	0.0	32,0,0
322	ok	319	0.25	0.0	0.0	54,0,0	320	0.28	0.0	0.0	22,0,0
		281	0.20	0.0	0.0	22,0,0	300	0.18	0.0	0.0	61,0,0
323	ok	359	0.30	0.0	0.0	34,0,0	360	0.20	0.0	0.0	46,0,0
		296	0.13	0.0	0.0	32,0,0	318	0.11	0.0	0.0	34,0,0
324	ok	300	0.14	0.0	0.0	42,0,0	304	0.16	0.0	0.0	32,0,0
		331	0.43	0.0	0.0	34,0,0	319	0.41	0.0	0.0	34,0,0
325	ok	304	0.15	0.0	0.0	35,0,0	305	0.24	0.0	0.0	35,0,0
		333	0.33	0.0	0.0	35,0,0	331	0.25	0.0	0.0	30,0,0
...											
543	ok	558	9.99e-03	0.0	0.0	27,0,0	557	0.02	0.0	0.0	27,0,0
Setto			V N/M	V V/T cls	V V/T acc			V N/M	V V/T cls	V V/T acc	
			0.83	0.31	0.89						

TABELLA VERIFICHE ELEMENTI D3 GUSCI C.A.

Guscio	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
1	ok	1	0.03	0.0	0.0	31,0,0	2	0.02	0.0	0.0	37,0,0
		7	0.01	0.0	0.0	31,0,0	6	0.02	0.0	0.0	27,0,0
2	ok	2	0.04	0.0	0.0	37,0,0	3	0.03	0.0	0.0	37,0,0
		8	0.03	0.0	0.0	36,0,0	7	0.04	0.0	0.0	37,0,0
3	ok	3	0.03	0.0	0.0	37,0,0	4	0.02	0.0	0.0	37,0,0
		9	0.02	0.0	0.0	31,0,0	8	0.03	0.0	0.0	33,0,0
4	ok	4	0.02	0.0	0.0	37,0,0	5	0.03	0.0	0.0	34,0,0
		10	0.02	0.0	0.0	26,0,0	9	0.02	0.0	0.0	34,0,0
5	ok	6	0.02	0.0	0.0	27,0,0	7	4.59e-03	0.0	0.0	37,0,0
		12	3.97e-03	0.0	0.0	33,0,0	11	0.02	0.0	0.0	27,0,0
6	ok	7	0.02	0.0	0.0	36,0,0	8	0.02	0.0	0.0	36,0,0
		13	6.74e-03	0.0	0.0	36,0,0	12	6.24e-03	0.0	0.0	43,0,0
7	ok	8	0.02	0.0	0.0	29,0,0	9	0.02	0.0	0.0	29,0,0
		14	7.14e-03	0.0	0.0	33,0,0	13	7.38e-03	0.0	0.0	37,0,0
8	ok	9	0.02	0.0	0.0	43,0,0	10	0.02	0.0	0.0	54,0,0
		15	0.02	0.0	0.0	54,0,0	14	7.07e-03	0.0	0.0	29,0,0
33	ok	32	0.25	0.0	0.0	37,0,0	33	0.20	0.0	0.0	37,0,0
		30	0.06	0.0	0.0	49,0,0	29	0.13	0.0	0.0	37,0,0
34	ok	33	0.10	0.0	0.0	49,0,0	34	0.04	0.0	0.0	48,0,0
		31	0.04	0.0	0.0	48,0,0	30	0.07	0.0	0.0	33,0,0
35	ok	35	0.18	0.0	0.0	43,0,0	36	0.11	0.0	0.0	30,0,0
		33	0.14	0.0	0.0	31,0,0	32	0.22	0.0	0.0	49,0,0
36	ok	36	0.13	0.0	0.0	34,0,0	37	0.11	0.0	0.0	34,0,0
		34	0.07	0.0	0.0	43,0,0	33	0.12	0.0	0.0	49,0,0
37	ok	38	0.17	0.0	0.0	36,0,0	39	0.15	0.0	0.0	36,0,0
		36	0.08	0.0	0.0	35,0,0	35	0.10	0.0	0.0	35,0,0
38	ok	39	0.22	0.0	0.0	37,0,0	40	0.20	0.0	0.0	37,0,0
		37	0.10	0.0	0.0	34,0,0	36	0.12	0.0	0.0	34,0,0
39	ok	41	0.32	0.0	0.0	36,0,0	42	0.31	0.0	0.0	36,0,0
		39	0.15	0.0	0.0	36,0,0	38	0.15	0.0	0.0	36,0,0
40	ok	42	0.38	0.0	0.0	37,0,0	43	0.38	0.0	0.0	37,0,0
		40	0.21	0.0	0.0	37,0,0	39	0.21	0.0	0.0	37,0,0



Guscio	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
41	ok	44	0.43	0.0	0.0	33,0,0	45	0.43	0.0	0.0	33,0,0
		42	0.30	0.0	0.0	36,0,0	41	0.30	0.0	0.0	36,0,0
42	ok	45	0.52	0.0	0.0	37,0,0	46	0.52	0.0	0.0	37,0,0
		43	0.38	0.0	0.0	37,0,0	42	0.38	0.0	0.0	37,0,0
43	ok	47	0.52	0.0	0.0	37,0,0	48	0.53	0.0	0.0	37,0,0
		45	0.43	0.0	0.0	33,0,0	44	0.42	0.0	0.0	33,0,0
44	ok	48	0.62	0.0	0.0	37,0,0	49	0.63	0.0	0.0	37,0,0
		46	0.52	0.0	0.0	37,0,0	45	0.51	0.0	0.0	37,0,0
45	ok	50	0.58	0.0	0.0	37,0,0	51	0.59	0.0	0.0	37,0,0
		48	0.53	0.0	0.0	37,0,0	47	0.51	0.0	0.0	37,0,0
46	ok	51	0.68	0.0	0.0	37,0,0	52	0.69	0.0	0.0	37,0,0
		49	0.63	0.0	0.0	37,0,0	48	0.61	0.0	0.0	37,0,0
47	ok	53	0.60	0.0	0.0	37,0,0	54	0.61	0.0	0.0	37,0,0
		51	0.59	0.0	0.0	37,0,0	50	0.57	0.0	0.0	37,0,0
48	ok	54	0.68	0.0	0.0	36,0,0	55	0.70	0.0	0.0	36,0,0
		52	0.69	0.0	0.0	37,0,0	51	0.68	0.0	0.0	37,0,0
49	ok	56	0.58	0.0	0.0	37,0,0	57	0.59	0.0	0.0	37,0,0
		54	0.61	0.0	0.0	37,0,0	53	0.60	0.0	0.0	37,0,0
50	ok	57	0.65	0.0	0.0	36,0,0	58	0.67	0.0	0.0	36,0,0
		55	0.71	0.0	0.0	37,0,0	54	0.69	0.0	0.0	37,0,0
51	ok	59	0.51	0.0	0.0	33,0,0	60	0.53	0.0	0.0	33,0,0
		57	0.59	0.0	0.0	37,0,0	56	0.58	0.0	0.0	37,0,0
52	ok	60	0.58	0.0	0.0	45,0,0	61	0.60	0.0	0.0	37,0,0
		58	0.67	0.0	0.0	36,0,0	57	0.66	0.0	0.0	36,0,0
53	ok	62	0.41	0.0	0.0	45,0,0	63	0.43	0.0	0.0	45,0,0
		60	0.53	0.0	0.0	33,0,0	59	0.52	0.0	0.0	33,0,0
54	ok	63	0.48	0.0	0.0	45,0,0	64	0.49	0.0	0.0	45,0,0
		61	0.60	0.0	0.0	45,0,0	60	0.59	0.0	0.0	45,0,0
55	ok	65	0.27	0.0	0.0	49,0,0	66	0.28	0.0	0.0	49,0,0
		63	0.43	0.0	0.0	49,0,0	62	0.42	0.0	0.0	45,0,0
56	ok	66	0.33	0.0	0.0	45,0,0	67	0.35	0.0	0.0	45,0,0
		64	0.50	0.0	0.0	45,0,0	63	0.48	0.0	0.0	45,0,0
57	ok	68	0.10	0.0	0.0	46,0,0	69	0.08	0.0	0.0	46,0,0
		66	0.30	0.0	0.0	49,0,0	65	0.29	0.0	0.0	49,0,0
58	ok	69	0.15	0.0	0.0	45,0,0	70	0.17	0.0	0.0	49,0,0
		67	0.35	0.0	0.0	49,0,0	66	0.34	0.0	0.0	45,0,0
59	ok	71	0.17	0.0	0.0	33,0,0	72	0.15	0.0	0.0	37,0,0
		69	0.13	0.0	0.0	33,0,0	68	0.14	0.0	0.0	36,0,0
60	ok	72	0.09	0.0	0.0	37,0,0	73	0.07	0.0	0.0	37,0,0
		70	0.16	0.0	0.0	49,0,0	69	0.17	0.0	0.0	49,0,0
61	ok	74	0.28	0.0	0.0	48,0,0	75	0.23	0.0	0.0	36,0,0
		72	0.17	0.0	0.0	33,0,0	71	0.24	0.0	0.0	36,0,0
62	ok	75	0.16	0.0	0.0	36,0,0	76	0.12	0.0	0.0	31,0,0
		73	0.09	0.0	0.0	33,0,0	72	0.13	0.0	0.0	36,0,0
149	ok	169	0.28	0.0	0.0	58,0,0	128	0.14	0.0	0.0	26,0,0
		131	0.10	0.0	0.0	42,0,0	170	0.24	0.0	0.0	22,0,0
150	ok	170	0.23	0.0	0.0	49,0,0	131	0.28	0.0	0.0	49,0,0
		133	0.26	0.0	0.0	43,0,0	171	0.22	0.0	0.0	48,0,0
151	ok	171	0.29	0.0	0.0	43,0,0	133	0.31	0.0	0.0	43,0,0
		135	0.30	0.0	0.0	43,0,0	172	0.28	0.0	0.0	43,0,0
152	ok	172	0.31	0.0	0.0	43,0,0	135	0.36	0.0	0.0	43,0,0
		137	0.35	0.0	0.0	43,0,0	173	0.29	0.0	0.0	43,0,0
153	ok	173	0.33	0.0	0.0	43,0,0	137	0.39	0.0	0.0	43,0,0
		139	0.38	0.0	0.0	43,0,0	174	0.33	0.0	0.0	43,0,0
154	ok	174	0.35	0.0	0.0	43,0,0	139	0.41	0.0	0.0	43,0,0
		141	0.41	0.0	0.0	43,0,0	175	0.35	0.0	0.0	43,0,0
155	ok	175	0.36	0.0	0.0	43,0,0	141	0.43	0.0	0.0	43,0,0
		143	0.42	0.0	0.0	43,0,0	176	0.35	0.0	0.0	43,0,0
156	ok	176	0.36	0.0	0.0	31,0,0	143	0.43	0.0	0.0	31,0,0
		145	0.43	0.0	0.0	31,0,0	177	0.36	0.0	0.0	36,0,0
157	ok	177	0.35	0.0	0.0	36,0,0	145	0.42	0.0	0.0	36,0,0
		147	0.42	0.0	0.0	31,0,0	178	0.36	0.0	0.0	36,0,0
158	ok	178	0.34	0.0	0.0	36,0,0	147	0.40	0.0	0.0	36,0,0
		149	0.41	0.0	0.0	36,0,0	179	0.35	0.0	0.0	36,0,0
159	ok	179	0.32	0.0	0.0	36,0,0	149	0.37	0.0	0.0	36,0,0
		151	0.38	0.0	0.0	36,0,0	180	0.35	0.0	0.0	36,0,0
160	ok	180	0.31	0.0	0.0	36,0,0	151	0.36	0.0	0.0	36,0,0
		153	0.37	0.0	0.0	36,0,0	181	0.32	0.0	0.0	36,0,0
161	ok	181	0.26	0.0	0.0	33,0,0	153	0.31	0.0	0.0	33,0,0
		155	0.32	0.0	0.0	36,0,0	182	0.28	0.0	0.0	33,0,0
162	ok	182	0.17	0.0	0.0	30,0,0	155	0.18	0.0	0.0	42,0,0
		157	0.17	0.0	0.0	46,0,0	183	0.14	0.0	0.0	30,0,0



Guscio	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
163	ok	183	0.23	0.0	0.0	49,0,0	157	0.10	0.0	0.0	42,0,0
		159	0.11	0.0	0.0	30,0,0	184	0.25	0.0	0.0	30,0,0
164	ok	185	0.33	0.0	0.0	26,0,0	169	0.25	0.0	0.0	26,0,0
		170	0.25	0.0	0.0	26,0,0	186	0.33	0.0	0.0	26,0,0
165	ok	186	0.24	0.0	0.0	58,0,0	170	0.20	0.0	0.0	58,0,0
		171	0.17	0.0	0.0	26,0,0	187	0.22	0.0	0.0	26,0,0
166	ok	187	0.18	0.0	0.0	27,0,0	171	0.17	0.0	0.0	27,0,0
		172	0.18	0.0	0.0	43,0,0	188	0.17	0.0	0.0	27,0,0
167	ok	188	0.19	0.0	0.0	43,0,0	172	0.25	0.0	0.0	43,0,0
		173	0.25	0.0	0.0	43,0,0	189	0.19	0.0	0.0	43,0,0
168	ok	189	0.21	0.0	0.0	43,0,0	173	0.30	0.0	0.0	43,0,0
		174	0.30	0.0	0.0	43,0,0	190	0.21	0.0	0.0	43,0,0
169	ok	190	0.22	0.0	0.0	43,0,0	174	0.34	0.0	0.0	43,0,0
		175	0.33	0.0	0.0	43,0,0	191	0.22	0.0	0.0	43,0,0
170	ok	191	0.23	0.0	0.0	43,0,0	175	0.35	0.0	0.0	43,0,0
		176	0.35	0.0	0.0	43,0,0	192	0.23	0.0	0.0	43,0,0
171	ok	192	0.23	0.0	0.0	36,0,0	176	0.36	0.0	0.0	31,0,0
		177	0.36	0.0	0.0	31,0,0	193	0.23	0.0	0.0	31,0,0
172	ok	193	0.23	0.0	0.0	48,0,0	177	0.35	0.0	0.0	36,0,0
		178	0.35	0.0	0.0	36,0,0	194	0.23	0.0	0.0	36,0,0
173	ok	194	0.22	0.0	0.0	36,0,0	178	0.33	0.0	0.0	36,0,0
		179	0.33	0.0	0.0	36,0,0	195	0.22	0.0	0.0	36,0,0
174	ok	195	0.21	0.0	0.0	36,0,0	179	0.29	0.0	0.0	36,0,0
		180	0.31	0.0	0.0	36,0,0	196	0.22	0.0	0.0	36,0,0
175	ok	196	0.18	0.0	0.0	36,0,0	180	0.26	0.0	0.0	36,0,0
		181	0.25	0.0	0.0	36,0,0	197	0.17	0.0	0.0	36,0,0
176	ok	197	0.16	0.0	0.0	34,0,0	181	0.19	0.0	0.0	30,0,0
		182	0.19	0.0	0.0	30,0,0	198	0.17	0.0	0.0	30,0,0
177	ok	198	0.18	0.0	0.0	30,0,0	182	0.19	0.0	0.0	34,0,0
		183	0.18	0.0	0.0	30,0,0	199	0.16	0.0	0.0	34,0,0
178	ok	199	0.13	0.0	0.0	34,0,0	183	0.20	0.0	0.0	30,0,0
		184	0.20	0.0	0.0	30,0,0	200	0.11	0.0	0.0	32,0,0
179	ok	201	0.39	0.0	0.0	58,0,0	185	0.34	0.0	0.0	26,0,0
		186	0.34	0.0	0.0	26,0,0	202	0.39	0.0	0.0	26,0,0
180	ok	202	0.28	0.0	0.0	58,0,0	186	0.25	0.0	0.0	58,0,0
		187	0.24	0.0	0.0	26,0,0	203	0.27	0.0	0.0	58,0,0
181	ok	203	0.20	0.0	0.0	58,0,0	187	0.19	0.0	0.0	58,0,0
		188	0.18	0.0	0.0	56,0,0	204	0.19	0.0	0.0	58,0,0
182	ok	204	0.16	0.0	0.0	58,0,0	188	0.18	0.0	0.0	27,0,0
		189	0.18	0.0	0.0	56,0,0	205	0.17	0.0	0.0	58,0,0
183	ok	205	0.16	0.0	0.0	56,0,0	189	0.19	0.0	0.0	43,0,0
		190	0.19	0.0	0.0	43,0,0	206	0.15	0.0	0.0	56,0,0
184	ok	206	0.15	0.0	0.0	36,0,0	190	0.21	0.0	0.0	43,0,0
		191	0.21	0.0	0.0	43,0,0	207	0.15	0.0	0.0	36,0,0
185	ok	207	0.15	0.0	0.0	36,0,0	191	0.22	0.0	0.0	43,0,0
		192	0.22	0.0	0.0	43,0,0	208	0.15	0.0	0.0	36,0,0
186	ok	208	0.15	0.0	0.0	36,0,0	192	0.23	0.0	0.0	36,0,0
		193	0.23	0.0	0.0	36,0,0	209	0.16	0.0	0.0	36,0,0
187	ok	209	0.15	0.0	0.0	48,0,0	193	0.23	0.0	0.0	48,0,0
		194	0.23	0.0	0.0	48,0,0	210	0.15	0.0	0.0	48,0,0
188	ok	210	0.14	0.0	0.0	48,0,0	194	0.21	0.0	0.0	48,0,0
		195	0.21	0.0	0.0	36,0,0	211	0.14	0.0	0.0	48,0,0
189	ok	211	0.15	0.0	0.0	30,0,0	195	0.19	0.0	0.0	36,0,0
		196	0.19	0.0	0.0	36,0,0	212	0.17	0.0	0.0	30,0,0
190	ok	212	0.17	0.0	0.0	30,0,0	196	0.18	0.0	0.0	30,0,0
		197	0.18	0.0	0.0	30,0,0	213	0.18	0.0	0.0	34,0,0
191	ok	213	0.19	0.0	0.0	34,0,0	197	0.19	0.0	0.0	30,0,0
		198	0.19	0.0	0.0	30,0,0	214	0.19	0.0	0.0	34,0,0
192	ok	214	0.20	0.0	0.0	30,0,0	198	0.20	0.0	0.0	30,0,0
		199	0.19	0.0	0.0	34,0,0	215	0.19	0.0	0.0	34,0,0
193	ok	215	0.18	0.0	0.0	34,0,0	199	0.17	0.0	0.0	30,0,0
		200	0.16	0.0	0.0	34,0,0	216	0.16	0.0	0.0	34,0,0
194	ok	217	0.38	0.0	0.0	26,0,0	201	0.39	0.0	0.0	26,0,0
		202	0.39	0.0	0.0	26,0,0	218	0.39	0.0	0.0	26,0,0
195	ok	218	0.30	0.0	0.0	58,0,0	202	0.29	0.0	0.0	58,0,0
		203	0.29	0.0	0.0	26,0,0	219	0.30	0.0	0.0	58,0,0
196	ok	219	0.22	0.0	0.0	58,0,0	203	0.22	0.0	0.0	58,0,0
		204	0.21	0.0	0.0	26,0,0	220	0.22	0.0	0.0	58,0,0
197	ok	220	0.18	0.0	0.0	58,0,0	204	0.18	0.0	0.0	58,0,0
		205	0.17	0.0	0.0	56,0,0	221	0.17	0.0	0.0	58,0,0
198	ok	221	0.14	0.0	0.0	58,0,0	205	0.18	0.0	0.0	58,0,0
		206	0.17	0.0	0.0	56,0,0	222	0.16	0.0	0.0	58,0,0



Guscio	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
199	ok	222	0.14	0.0	0.0	58,0,0	206	0.17	0.0	0.0	56,0,0
		207	0.16	0.0	0.0	36,0,0	223	0.13	0.0	0.0	58,0,0
200	ok	223	0.12	0.0	0.0	58,0,0	207	0.16	0.0	0.0	36,0,0
		208	0.17	0.0	0.0	36,0,0	224	0.13	0.0	0.0	35,0,0
201	ok	224	0.14	0.0	0.0	35,0,0	208	0.16	0.0	0.0	36,0,0
		209	0.17	0.0	0.0	36,0,0	225	0.15	0.0	0.0	35,0,0
202	ok	225	0.14	0.0	0.0	35,0,0	209	0.16	0.0	0.0	48,0,0
		210	0.16	0.0	0.0	35,0,0	226	0.15	0.0	0.0	30,0,0
203	ok	226	0.17	0.0	0.0	30,0,0	210	0.17	0.0	0.0	30,0,0
		211	0.18	0.0	0.0	35,0,0	227	0.17	0.0	0.0	30,0,0
204	ok	227	0.19	0.0	0.0	30,0,0	211	0.20	0.0	0.0	30,0,0
		212	0.20	0.0	0.0	30,0,0	228	0.19	0.0	0.0	30,0,0
205	ok	228	0.21	0.0	0.0	34,0,0	212	0.22	0.0	0.0	30,0,0
		213	0.21	0.0	0.0	34,0,0	229	0.21	0.0	0.0	30,0,0
206	ok	229	0.23	0.0	0.0	30,0,0	213	0.22	0.0	0.0	34,0,0
		214	0.22	0.0	0.0	30,0,0	230	0.22	0.0	0.0	30,0,0
207	ok	230	0.22	0.0	0.0	34,0,0	214	0.23	0.0	0.0	30,0,0
		215	0.20	0.0	0.0	34,0,0	231	0.19	0.0	0.0	34,0,0
208	ok	231	0.17	0.0	0.0	54,0,0	215	0.19	0.0	0.0	34,0,0
		216	0.17	0.0	0.0	22,0,0	232	0.15	0.0	0.0	54,0,0
209	ok	233	0.34	0.0	0.0	56,0,0	217	0.37	0.0	0.0	26,0,0
		218	0.39	0.0	0.0	26,0,0	234	0.35	0.0	0.0	58,0,0
210	ok	234	0.27	0.0	0.0	58,0,0	218	0.29	0.0	0.0	58,0,0
		219	0.31	0.0	0.0	58,0,0	235	0.28	0.0	0.0	58,0,0
211	ok	235	0.23	0.0	0.0	58,0,0	219	0.24	0.0	0.0	58,0,0
		220	0.24	0.0	0.0	58,0,0	236	0.23	0.0	0.0	58,0,0
212	ok	236	0.19	0.0	0.0	58,0,0	220	0.20	0.0	0.0	58,0,0
		221	0.22	0.0	0.0	42,0,0	237	0.21	0.0	0.0	42,0,0
213	ok	237	0.20	0.0	0.0	42,0,0	221	0.21	0.0	0.0	42,0,0
		222	0.23	0.0	0.0	46,0,0	238	0.22	0.0	0.0	46,0,0
214	ok	238	0.22	0.0	0.0	30,0,0	222	0.23	0.0	0.0	46,0,0
		223	0.25	0.0	0.0	34,0,0	239	0.25	0.0	0.0	34,0,0
215	ok	239	0.25	0.0	0.0	30,0,0	223	0.25	0.0	0.0	30,0,0
		224	0.27	0.0	0.0	35,0,0	240	0.26	0.0	0.0	35,0,0
216	ok	240	0.27	0.0	0.0	35,0,0	224	0.27	0.0	0.0	35,0,0
		225	0.28	0.0	0.0	30,0,0	241	0.28	0.0	0.0	30,0,0
217	ok	241	0.27	0.0	0.0	30,0,0	225	0.28	0.0	0.0	30,0,0
		226	0.28	0.0	0.0	30,0,0	242	0.27	0.0	0.0	30,0,0
218	ok	242	0.27	0.0	0.0	30,0,0	226	0.28	0.0	0.0	30,0,0
		227	0.27	0.0	0.0	34,0,0	243	0.26	0.0	0.0	34,0,0
219	ok	243	0.27	0.0	0.0	34,0,0	227	0.28	0.0	0.0	34,0,0
		228	0.26	0.0	0.0	30,0,0	244	0.25	0.0	0.0	30,0,0
220	ok	244	0.26	0.0	0.0	30,0,0	228	0.28	0.0	0.0	30,0,0
		229	0.25	0.0	0.0	30,0,0	245	0.24	0.0	0.0	30,0,0
221	ok	245	0.25	0.0	0.0	30,0,0	229	0.27	0.0	0.0	34,0,0
		230	0.23	0.0	0.0	30,0,0	246	0.22	0.0	0.0	34,0,0
222	ok	246	0.20	0.0	0.0	34,0,0	230	0.24	0.0	0.0	30,0,0
		231	0.19	0.0	0.0	22,0,0	247	0.17	0.0	0.0	22,0,0
223	ok	247	0.13	0.0	0.0	54,0,0	231	0.17	0.0	0.0	54,0,0
		232	0.16	0.0	0.0	54,0,0	248	0.12	0.0	0.0	54,0,0
224	ok	249	0.29	0.0	0.0	27,0,0	233	0.34	0.0	0.0	27,0,0
		234	0.35	0.0	0.0	27,0,0	250	0.29	0.0	0.0	23,0,0
225	ok	250	0.23	0.0	0.0	56,0,0	234	0.28	0.0	0.0	56,0,0
		235	0.30	0.0	0.0	58,0,0	251	0.25	0.0	0.0	56,0,0
226	ok	251	0.18	0.0	0.0	54,0,0	235	0.22	0.0	0.0	58,0,0
		236	0.26	0.0	0.0	46,0,0	252	0.25	0.0	0.0	46,0,0
227	ok	252	0.25	0.0	0.0	46,0,0	236	0.26	0.0	0.0	46,0,0
		237	0.32	0.0	0.0	46,0,0	253	0.32	0.0	0.0	46,0,0
228	ok	253	0.32	0.0	0.0	34,0,0	237	0.31	0.0	0.0	46,0,0
		238	0.36	0.0	0.0	30,0,0	254	0.36	0.0	0.0	30,0,0
229	ok	254	0.36	0.0	0.0	30,0,0	238	0.36	0.0	0.0	30,0,0
		239	0.40	0.0	0.0	32,0,0	255	0.40	0.0	0.0	30,0,0
230	ok	255	0.40	0.0	0.0	32,0,0	239	0.40	0.0	0.0	32,0,0
		240	0.42	0.0	0.0	32,0,0	256	0.42	0.0	0.0	35,0,0
231	ok	256	0.42	0.0	0.0	35,0,0	240	0.42	0.0	0.0	35,0,0
		241	0.43	0.0	0.0	30,0,0	257	0.43	0.0	0.0	30,0,0
232	ok	257	0.43	0.0	0.0	34,0,0	241	0.43	0.0	0.0	34,0,0
		242	0.42	0.0	0.0	34,0,0	258	0.41	0.0	0.0	34,0,0
233	ok	258	0.42	0.0	0.0	34,0,0	242	0.42	0.0	0.0	30,0,0
		243	0.39	0.0	0.0	30,0,0	259	0.39	0.0	0.0	30,0,0
234	ok	259	0.39	0.0	0.0	30,0,0	243	0.40	0.0	0.0	30,0,0
		244	0.35	0.0	0.0	30,0,0	260	0.34	0.0	0.0	30,0,0



Guscio	Stato	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb	Nodo	V N/M	V V/T cls	V V/T acc	Rif. cmb
235	ok	260	0.34	0.0	0.0	30,0,0	244	0.36	0.0	0.0	30,0,0
		245	0.29	0.0	0.0	30,0,0	261	0.27	0.0	0.0	30,0,0
236	ok	261	0.27	0.0	0.0	30,0,0	245	0.30	0.0	0.0	30,0,0
		246	0.22	0.0	0.0	34,0,0	262	0.18	0.0	0.0	30,0,0
237	ok	262	0.15	0.0	0.0	30,0,0	246	0.20	0.0	0.0	30,0,0
		247	0.16	0.0	0.0	22,0,0	263	0.12	0.0	0.0	27,0,0
238	ok	263	0.11	0.0	0.0	32,0,0	247	0.12	0.0	0.0	26,0,0
		248	0.10	0.0	0.0	23,0,0	264	0.11	0.0	0.0	44,0,0
239	ok	265	0.25	0.0	0.0	27,0,0	249	0.32	0.0	0.0	27,0,0
		250	0.30	0.0	0.0	27,0,0	266	0.23	0.0	0.0	27,0,0
240	ok	266	0.20	0.0	0.0	26,0,0	250	0.24	0.0	0.0	60,0,0
		251	0.24	0.0	0.0	54,0,0	267	0.25	0.0	0.0	46,0,0
241	ok	267	0.25	0.0	0.0	42,0,0	251	0.25	0.0	0.0	30,0,0
		252	0.34	0.0	0.0	34,0,0	268	0.35	0.0	0.0	46,0,0
242	ok	268	0.34	0.0	0.0	46,0,0	252	0.34	0.0	0.0	34,0,0
		253	0.43	0.0	0.0	34,0,0	269	0.42	0.0	0.0	46,0,0
243	ok	269	0.42	0.0	0.0	46,0,0	253	0.43	0.0	0.0	34,0,0
		254	0.49	0.0	0.0	34,0,0	270	0.48	0.0	0.0	44,0,0
244	ok	270	0.48	0.0	0.0	32,0,0	254	0.49	0.0	0.0	32,0,0
		255	0.53	0.0	0.0	35,0,0	271	0.53	0.0	0.0	35,0,0
245	ok	271	0.53	0.0	0.0	35,0,0	255	0.53	0.0	0.0	35,0,0
		256	0.56	0.0	0.0	35,0,0	272	0.55	0.0	0.0	35,0,0
246	ok	272	0.55	0.0	0.0	35,0,0	256	0.56	0.0	0.0	32,0,0
		257	0.57	0.0	0.0	30,0,0	273	0.56	0.0	0.0	30,0,0
247	ok	273	0.56	0.0	0.0	34,0,0	257	0.57	0.0	0.0	30,0,0
		258	0.55	0.0	0.0	30,0,0	274	0.54	0.0	0.0	34,0,0
248	ok	274	0.54	0.0	0.0	34,0,0	258	0.55	0.0	0.0	30,0,0
		259	0.52	0.0	0.0	30,0,0	275	0.51	0.0	0.0	30,0,0
249	ok	275	0.51	0.0	0.0	34,0,0	259	0.52	0.0	0.0	30,0,0
		260	0.46	0.0	0.0	30,0,0	276	0.45	0.0	0.0	30,0,0
250	ok	276	0.45	0.0	0.0	30,0,0	260	0.46	0.0	0.0	30,0,0
		261	0.36	0.0	0.0	30,0,0	277	0.35	0.0	0.0	30,0,0
251	ok	277	0.35	0.0	0.0	34,0,0	261	0.36	0.0	0.0	30,0,0
		262	0.23	0.0	0.0	30,0,0	278	0.22	0.0	0.0	34,0,0
252	ok	278	0.21	0.0	0.0	34,0,0	262	0.21	0.0	0.0	30,0,0
		263	0.14	0.0	0.0	56,0,0	279	0.13	0.0	0.0	60,0,0
253	ok	279	0.14	0.0	0.0	32,0,0	263	0.12	0.0	0.0	36,0,0
		264	0.12	0.0	0.0	44,0,0	280	0.15	0.0	0.0	32,0,0
254	ok	281	0.22	0.0	0.0	27,0,0	265	0.29	0.0	0.0	27,0,0
		266	0.24	0.0	0.0	22,0,0	282	0.18	0.0	0.0	22,0,0
255	ok	282	0.23	0.0	0.0	30,0,0	266	0.23	0.0	0.0	58,0,0
		267	0.29	0.0	0.0	46,0,0	283	0.30	0.0	0.0	42,0,0
256	ok	283	0.32	0.0	0.0	47,0,0	267	0.30	0.0	0.0	42,0,0
		268	0.42	0.0	0.0	46,0,0	284	0.44	0.0	0.0	44,0,0
257	ok	284	0.42	0.0	0.0	44,0,0	268	0.42	0.0	0.0	44,0,0
		269	0.52	0.0	0.0	44,0,0	285	0.52	0.0	0.0	44,0,0
258	ok	285	0.51	0.0	0.0	44,0,0	269	0.51	0.0	0.0	44,0,0
		270	0.58	0.0	0.0	44,0,0	286	0.57	0.0	0.0	44,0,0
259	ok	286	0.56	0.0	0.0	44,0,0	270	0.57	0.0	0.0	44,0,0
		271	0.62	0.0	0.0	32,0,0	287	0.61	0.0	0.0	32,0,0
...											
286	ok	304	0.42	0.0	0.0	46,0,0	303	0.46	0.0	0.0	46,0,0
Guscio			V N/M	V V/T cls	V V/T acc			V N/M	V V/T cls	V V/T acc	
			0.71	0.0	0.0						