

## **D.05\_FASCICOLO DEI CALCOLI B**

**Ubicazione:** Località CASACCE, Comune di MOLLIA (VC)  
Provincia di VERCELLI (Regione PIEMONTE)

**Progetto:** Mollia\_MLL

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**Committente:** Comune di Mollia  
Via Roma 16, Mollia (VC)

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**Progettista:** INGEGNERE STEFANO VANTAGGIATO  
VIA ANTONIO CECHOV 50 20100 MILANO MI  
3407953208  
stefano@riadatto.it

# SOMMARIO

<b>PREMESSA .....</b>	<b>3</b>
<b>VERIFICHE DEI CORDOLI/TRAVI IN C.A. ....</b>	<b>3</b>
MODELLAZIONE .....	4
ELEMENTI FINITI – SEZIONI E SPESSORI.....	5
CARATTERISTICHE MATERIALI UTILIZZATI .....	8
ANALISI DEI CARICHI DEI SOLAI.....	9
SCHEMATIZZAZIONE DEI CASI DI CARICO.....	11
DEFINIZIONE DELLE COMBINAZIONI.....	14
RISULTATI PRINCIPALI .....	16
LEGENDA RISULTATI ELEMENTI TIPO TRAVE .....	16
VERIFICHE ELEMENTI TRAVE IN C.A.....	72
LEGENDA TABELLA VERIFICHE ELEMENTI TRAVE E/O PILASTRO IN C.A.....	72
STATI LIMITE D' ESERCIZIO.....	97
LEGENDA TABELLA STATI LIMITE D' ESERCIZIO .....	97
<b>VERIFICA DEGLI ELEMENTI SOLAIO.....</b>	<b>111</b>
SOLAIO LUCE MAX 550CM.....	111
SOLAIO LUCE MAX 360CM .....	114
SOLAIO LUCE MAX 300CM .....	116
<b>VERIFICA DEL SISTEMA DI CONNESSIONE.....</b>	<b>118</b>
<b>CONCLUSIONI.....</b>	<b>127</b>

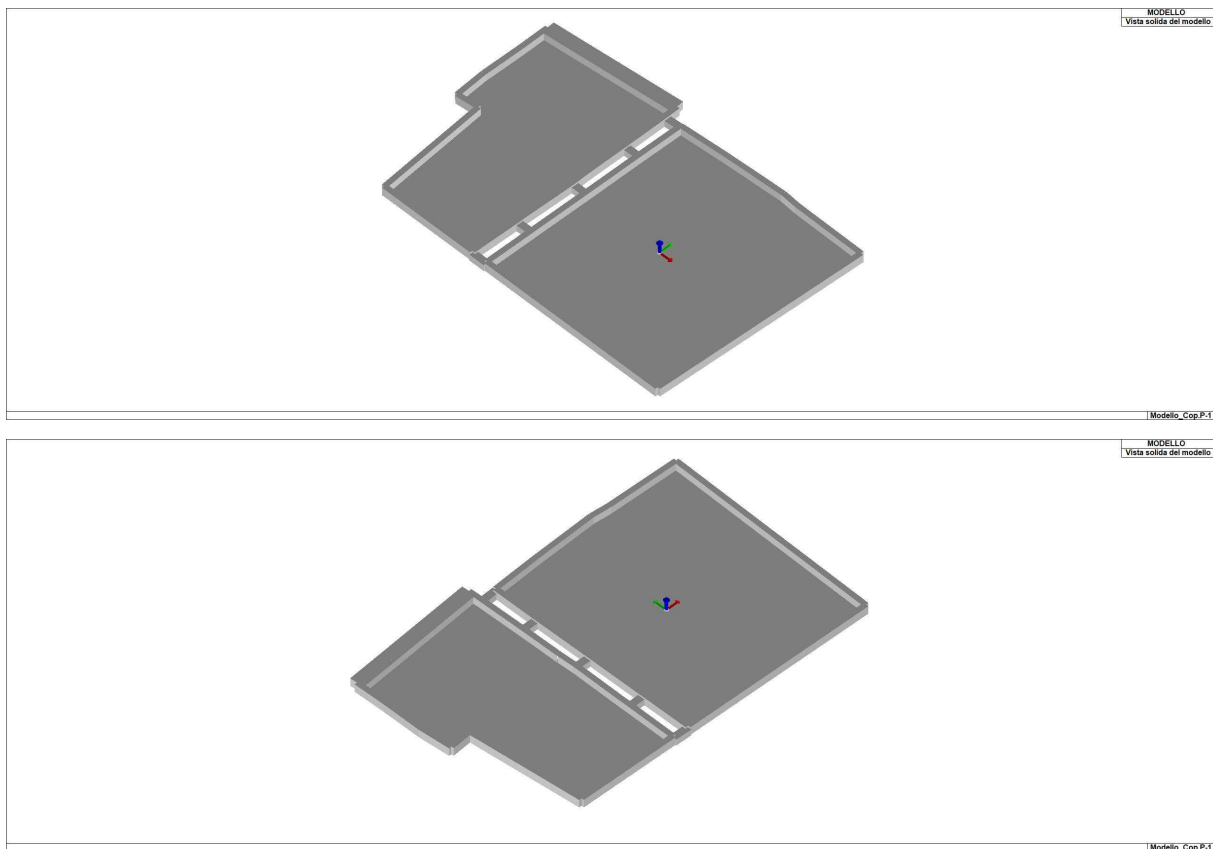
## **PREMESSA**

Nel presente Fascicolo dei calcoli viene presentato il progetto e la verifica delle soluzioni adottate per gli interventi locali di rifacimento del solaio di copertura del piano semi-interrato.

In particolare si è ipotizzato di realizzare un solaio in tecnica mista legno-calcestruzzo.

Dello stesso si riportano nel seguito le relative verifiche:

## **VERIFICHE DEI CORDOLI/TRAVI IN C.A.**



## INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA



## MODELLAZIONE

L'analisi strutturale è condotta con il metodo degli spostamenti per la valutazione dello stato tenso-deformativo 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 tenso-deformativo 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:

$$\mathbf{K} * \mathbf{u} = \mathbf{F}$$

dove  $\mathbf{K}$  = matrice di rigidezza  
 $\mathbf{u}$  = vettore spostamenti nodali  
 $\mathbf{F}$  = vettore forze nodali

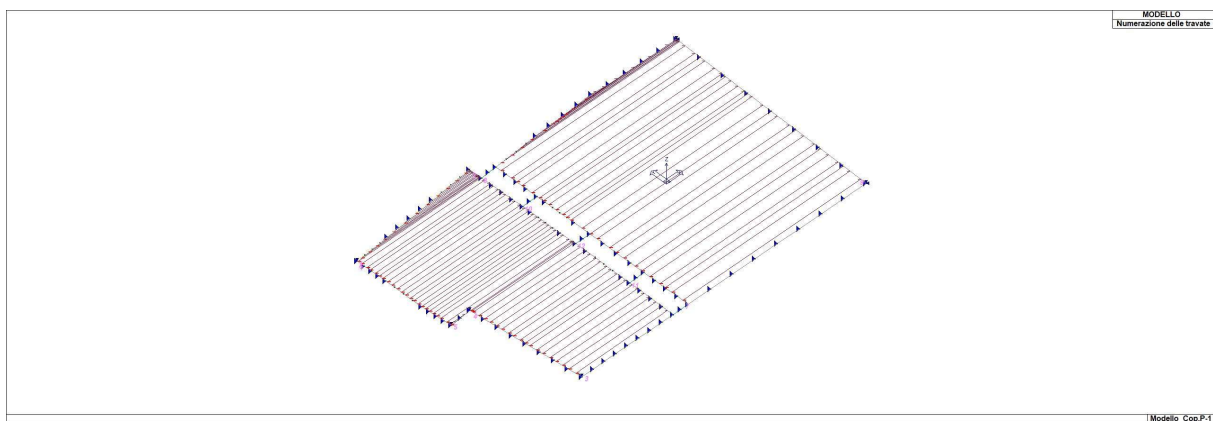
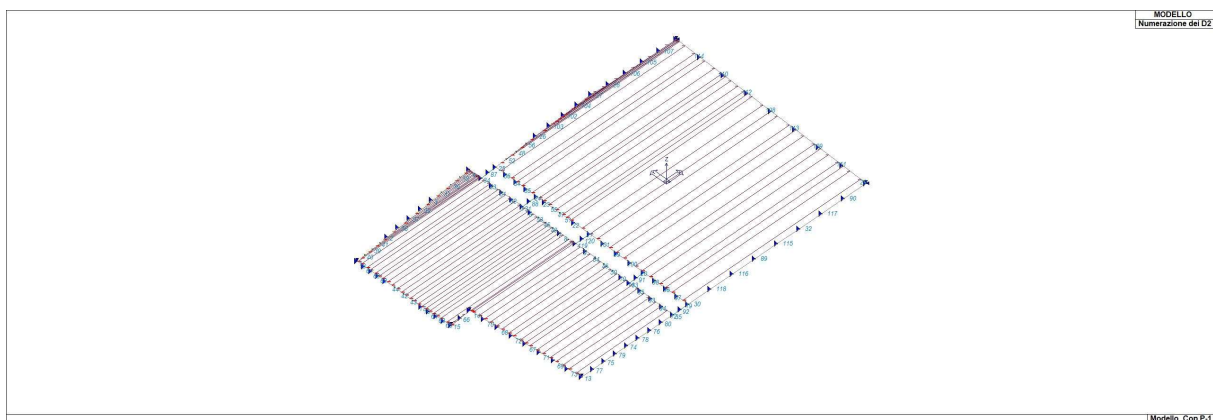
## INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Dagli spostamenti ottenuti con la risoluzione del sistema vengono quindi dedotte le sollecitazioni e/o le tensioni di ogni elemento, riferite generalmente a 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.

## ELEMENTI FINITI – SEZIONI E SPESSORI

A seguire si riportano le immagini relative alle numerazioni di interesse:



Si riportano di seguito le caratteristiche di sezioni e spessori degli elementi strutturali, in formato tabellare e immagini:

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

TABELLA\_SEZIONI

Id	Tipo SEZ	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
1	CORDOLI_15x23 Rettangolare: b=15 h=23	-345.00	287.50	287.50	1.524e+04	6468.754	1.521e+04	862.50	1322.50	1293.75	1983.75
2	SPERONI_20x18 Rettangolare: b=20 h=18	-360.00	300.00	300.00	1.812e+04	1.200e+04	9720.00	1200.00	1080.00	1800.00	1620.00
4	CORDOLO_40x23 Rettangolare: b=40 h=23	-920.00	766.67	766.67	1.035e+05	1.227e+05	4.056e+04	6133.33	3526.67	9200.00	5290.00

Legenda

Tipo SEZ Indica il nome identificativo e la tipologia di sezione

Area Area della sezione

A V2 Area della sezione/Fattore di taglio (direzione 2)

A V3 Area della sezione/Fattore di taglio (direzione 3)

Jt Momento di inerzia torsionale della sezione

J 2-2 Momento di inerzia della sezione riferito all'Asse 2

J 3-3 Momento di inerzia della sezione riferito all'Asse 3

W 2-2 Modulo di resistenza della sezione riferito all'Asse 2

W 3-3 Modulo di resistenza della sezione riferito all'Asse 3

Wp 2-2 Modulo di resistenza plastico della sezione riferito all'Asse 2

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Wp 3-3 Modulo di resistenza plastico della sezione riferito all'Asse 3

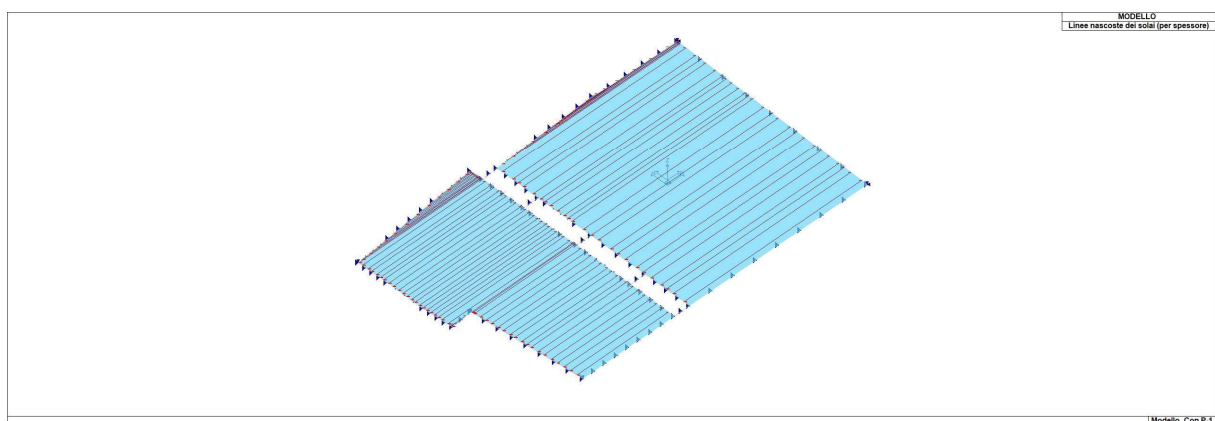
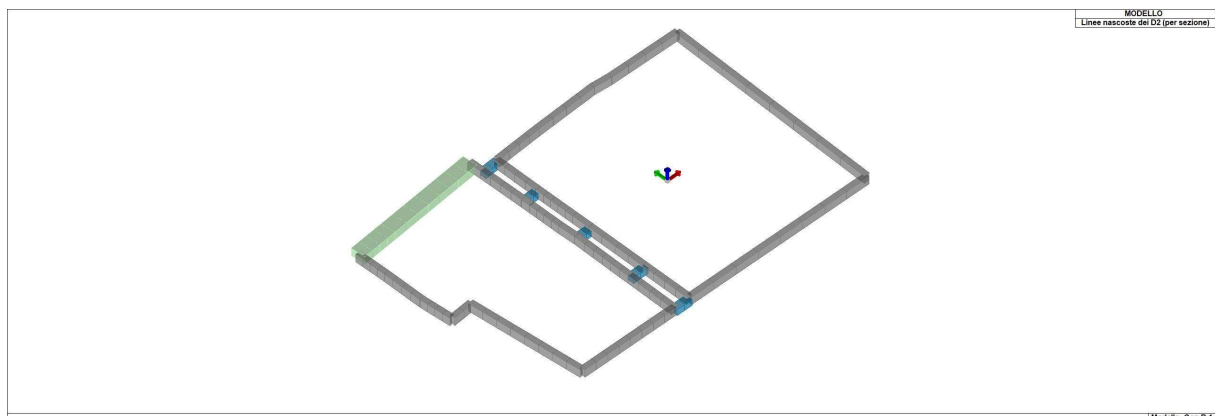
TABELLA\_SPESSORI

Id	Spessore Gusci	Spessore Setti	Sp. solai piano rigido
-	cm	cm	cm
1	-	-	5.00

Legenda

Spessore Gusci Spessore degli elementi shell con sviluppo orizzontale

Spessore Setti Spessore degli elementi shell con sviluppo verticale



## CARATTERISTICHE MATERIALI UTILIZZATI

Nell'esecuzione delle opere oggetto della presente relazione è previsto l'utilizzo dei seguenti materiali con le relative caratteristiche:

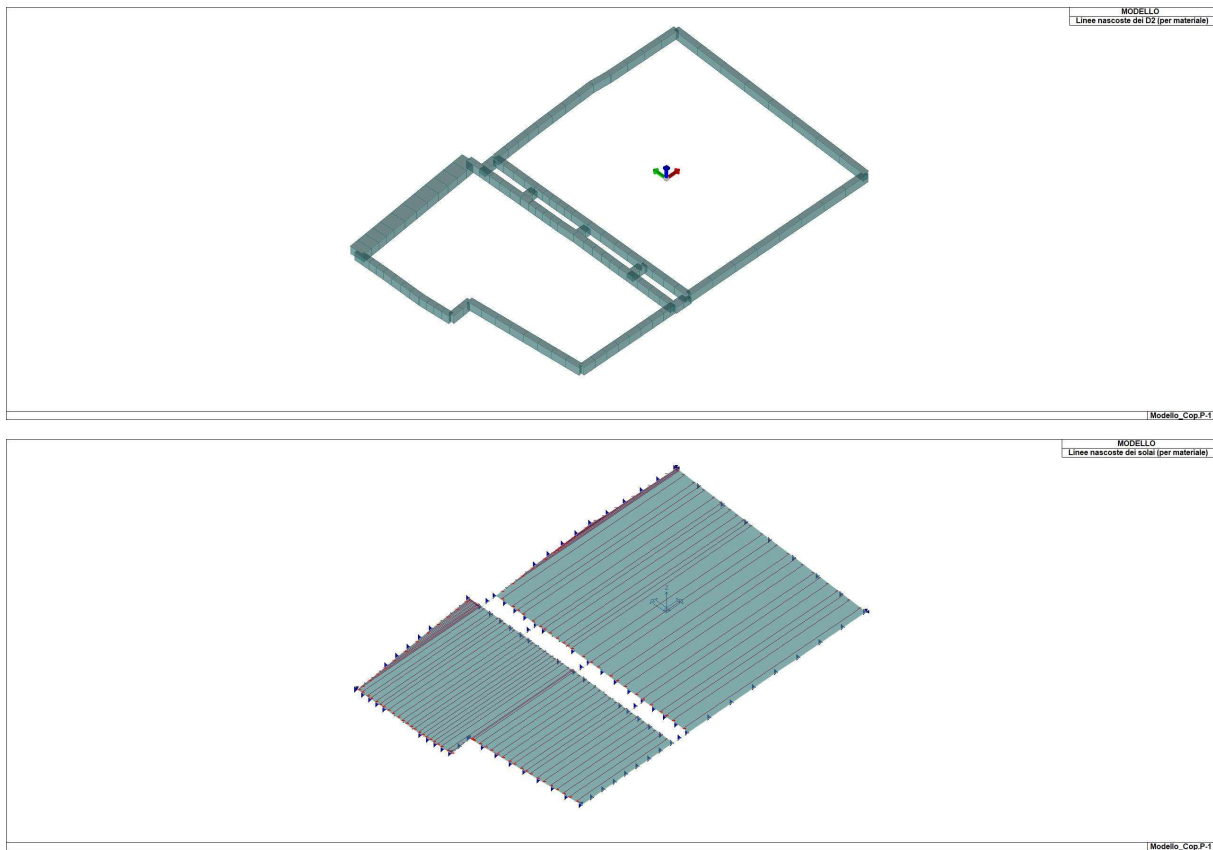
### ELENCO DEI MATERIALI IMPIEGATI

[3]- MATERIALE PER ELEVAZIONE -

	Calcestruzzo Classe C28/35		
Id	-	-	u.m.
3	< MATERIALE NUOVO >		
	Resistenza caratteristica cubica Rck	350.0	daN/cm2
	Resistenza caratteristica cilindrica fck	290.5	daN/cm2
	Resistenza fctm	28.4	daN/cm2
	Tensione caratteristica di snervamento acciaio	4500.0	daN/cm2
	Tipo acciaio	tipo C	
	Coefficiente gamma c	1.5	
	Coefficiente gamma s	1.1	
	Rapporto Rfessurata (assiale)	1.00	
	Rapporto Rfessurata (flessione)	1.00	
	Rapporto Rfessurata (taglio)	1.00	



INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA



## ANALISI DEI CARICHI DEI SOLAI

Si riportano di seguito l'analisi dei carichi relative ai solai presenti nella struttura in oggetto:

TABELLA\_CARICHI\_SOLAI

ID Arch.	Tipo SOL	G1	G2	Q	Fatt. A	s sis.	Psi 0	Psi 1	Psi 2	Psi S 2	Fatt. Fi
-	-	kN/ m2	kN/ m2	kN/ m2	-	-	-	-	-	-	-
1	Variab.	1.54	2.50	2.00		1.00	0.70	0.50	0.30	0.30	1.00
2	Variab.	1.54	1.50	4.00		1.00	0.70	0.50	0.30	0.30	1.00

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Legenda

Tipo  
SOL Indica la destinazione d'uso sulla base del carico variabile

G1 Carichi permanenti

G2 Carichi permanenti non strutturali

Q Carichi variabili e neve

Fatt. A Fattore di riduzione dell'area caricata (solo per solai speciali)

s sis. Coefficiente di riduzione del sovraccarico accidentale -(DM 96)-

Psi 0 Coefficiente di combinazione -(tab. 2.5.I NTC2018)-

Psi 1 Coefficiente di combinazione -(tab. 2.5.I NTC2018)-

Psi 2 Coefficiente di combinazione -(tab. 2.5.I NTC2018)-

Psi S<sub>2</sub> Coefficiente di combinazione che fornisce il valore Quasi Permanente dell'azione variabile Q<sub>i</sub> -(OPCM 3274)-

Fatt. Fi Coefficiente che tiene conto della probabilità che tutti i carichi siano presenti sull'intera struttura durante l'azione sismica -(OPCM 3274)-

**1 - SOLAIO INTERPIANO**

Per il solaio si adottano i seguenti carichi in daN/mq:

Permanente G1	Permanente G2	Variabile Q
154.0	250.0	200.0

Categoria carichi variabili: A - Ambienti ad uso residenziale - Aree per attività domestiche e residenziali.

Coefficienti di combinazione:  $\psi_0 = 0.70$ ,  $\psi_1 = 0.50$ ,  $\psi_2 = 0.30$

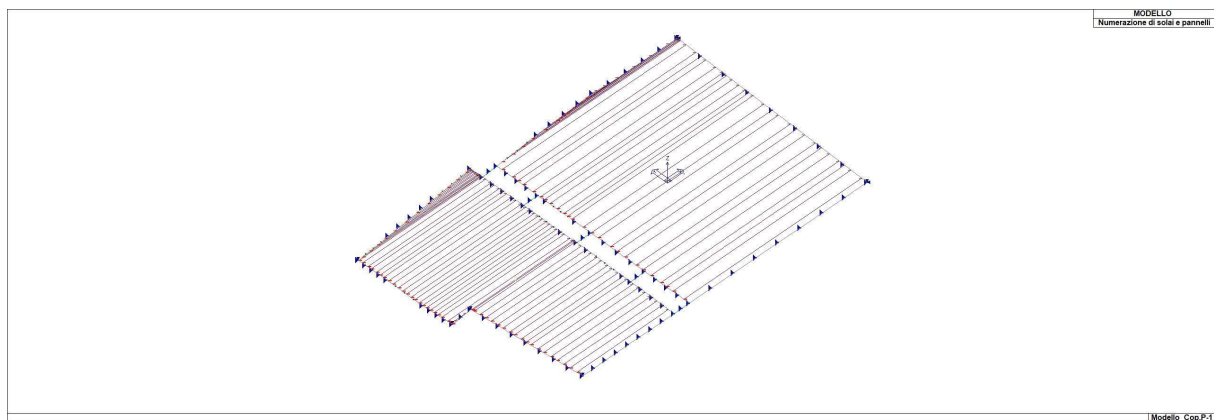
## 2 - TERRAZZO\_BALCONE

Per il solaio si adottano i seguenti carichi in daN/mq:

Permanente G1	Permanente G2	Variabile Q
154.0	150.0	400.0

Categoria carichi variabili: A - Ambienti ad uso residenziale - Aree per attività domestiche e residenziali.

Coefficienti di combinazione:  $\psi_0 = 0.70$ ,  $\psi_1 = 0.50$ ,  $\psi_2 = 0.30$



## SCHEMATIZZAZIONE DEI CASI DI CARICO

E' possibile definire i casi di carico scegliendo fra le dodici tipologie elencate nella tabella seguente:

	Tipo CDC	Descrizione
1	Ggk	caso di carico comprensivo del peso proprio struttura
2	Gk	caso di carico con azioni permanenti
3	Qk	caso di carico con azioni variabili
4	Gsk	caso di carico comprensivo dei carichi permanenti sui solai e sulle coperture
5	Qsk	caso di carico comprensivo dei carichi variabili sui solai
6	Qnk	caso di carico comprensivo dei carichi di neve sulle coperture

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

7	Qtk	caso di carico comprensivo di una variazione termica agente sulla struttura
8	Qvk	caso di carico comprensivo di azioni da vento sulla struttura
9	Esk	caso di carico sismico con analisi statica equivalente
10	Edk	caso di carico sismico con analisi dinamica
11	Etk	caso di carico comprensivo di azioni derivanti dall' incremento di spinta delle terre in condizione sismica
12	Pk	caso di carico comprensivo di azioni derivanti da coazioni, cedimenti e precompressioni

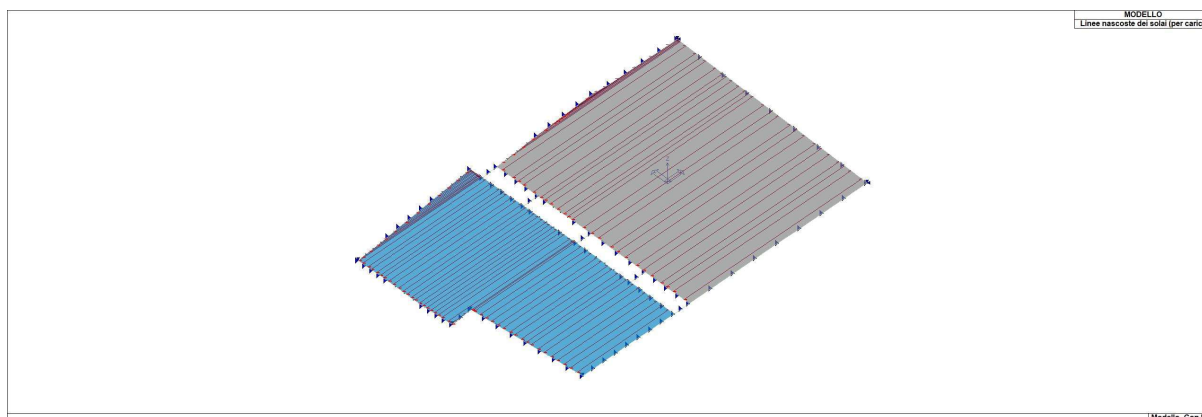
I casi di carico utilizzati nella modellazione oggetto della presente relazione sono i seguenti:

TABELLA\_CASI\_DI\_CARICO

CDC	Tipo CDC	Sigla Id	Note
1	Ggk	CDC=Ggk (peso proprio della struttura)	
2	Gsk	CDC=G1sk (permanente solai-coperture)	
3	Gsk	CDC=G2sk (permanente solai-coperture n.c.d.)	
4	Qsk	CDC=Qsk (variabile solai)	

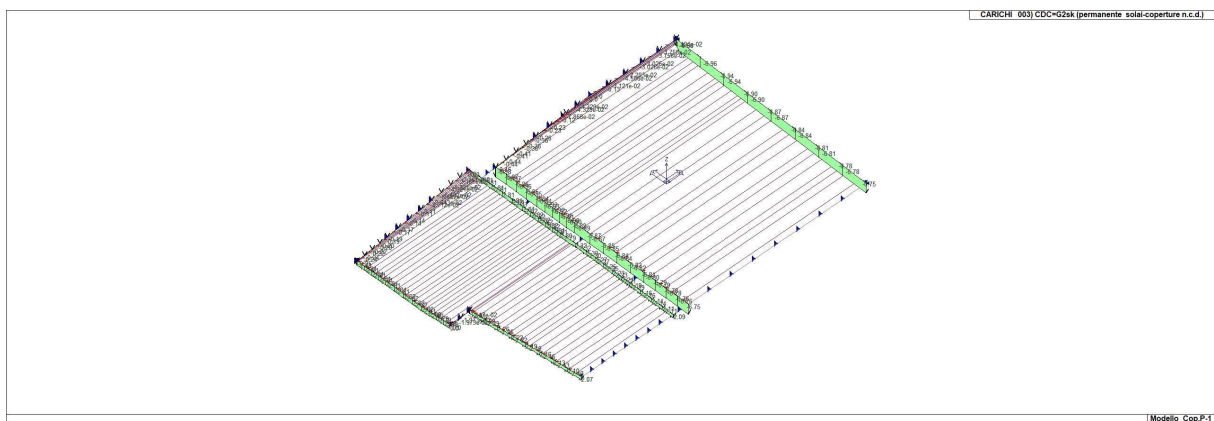
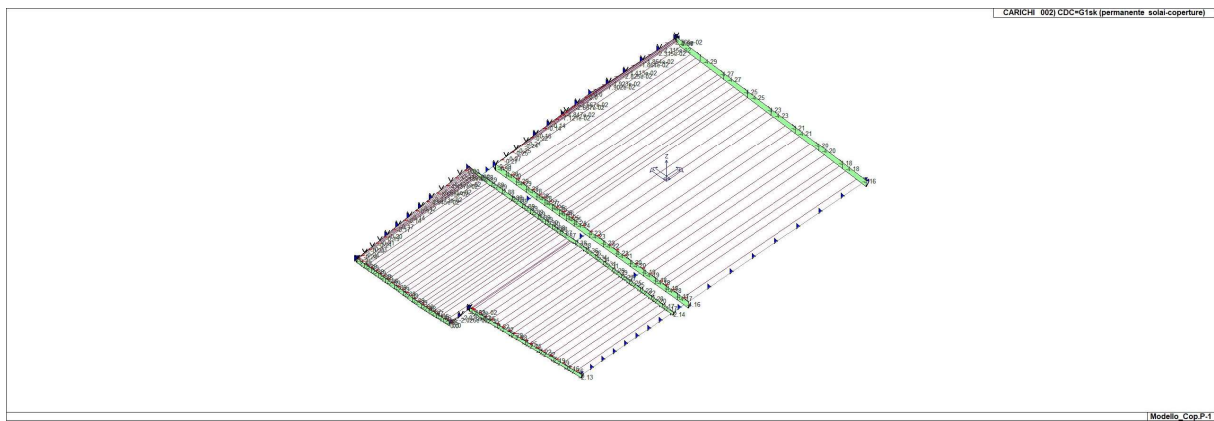
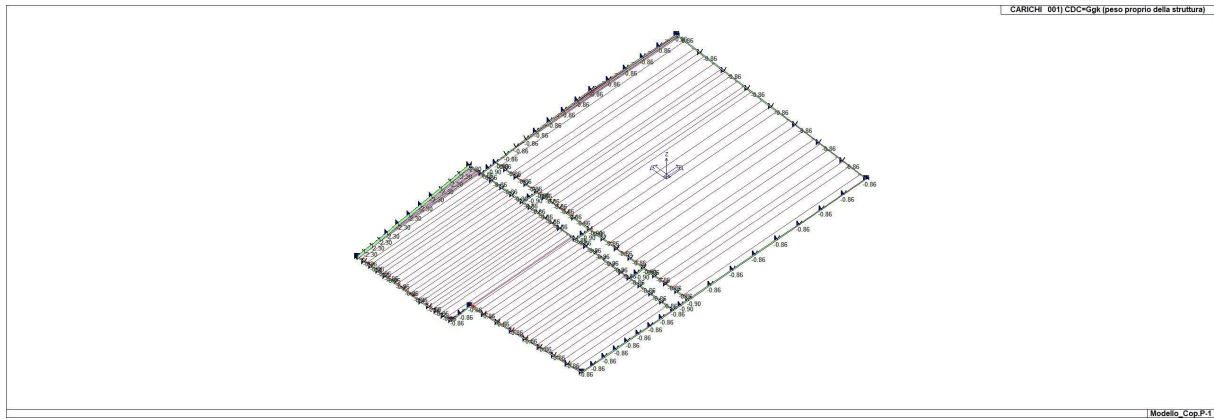
Legenda

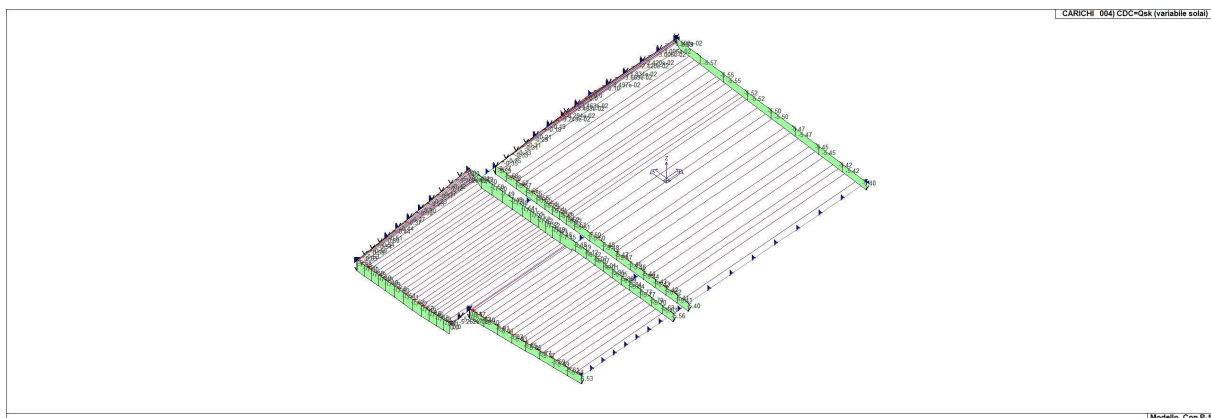
Tipo CDC Indica il tipo di caso di carico



# RELAZIONE DI CALCOLO

## INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA





## DEFINIZIONE DELLE COMBINAZIONI

Le combinazioni previste per i diversi casi di carico (CDC) seguono le regole previste dalla Normativa vigente e sono destinate al controllo di sicurezza della struttura e alla verifica degli spostamenti e delle sollecitazioni.

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

### Combinazione fondamentale SLU

$$\gamma G_1 \cdot G_1 + \gamma G_2 \cdot G_2 + \gamma P \cdot P + \gamma Q_1 \cdot Q_{k1} + \gamma Q_2 \cdot \psi_{02} \cdot Q_{k2} + \gamma Q_3 \cdot \psi_{03} \cdot Q_{k3} + \dots$$

### Combinazione caratteristica (rara) SLE

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

### Combinazione frequente SLE

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

### Combinazione quasi permanente SLE

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

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

$$E + G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots$$

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

$$A_d + G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots$$

Dove:

NTC 2018 Tabella 2.5.I

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

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 $\leq 30\text{kN}$ )	0,70	0,70	0,60
Categoria G Rimesse e parcheggi (autoveicoli $> 30\text{kN}$ )	0,70	0,50	0,30
Categoria H Coperture	0,00	0,00	0,00
Vento	0,60	0,20	0,00
Neve a quota $\leq 1000\text{ m}$	0,50	0,20	0,00
Neve a quota $> 1000\text{ m}$	0,70	0,50	0,20
Variazioni Termiche	0,60	0,50	0,00

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

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

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

NTC 2018 Tabella 2.6.I

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

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

TABELLA\_COMBINAZIONI

Tipo CMB	Da	Da	A	A
-	Id	Nome	Id	Nome
SLU	1	SLU		
SLE rara	2	SLE_Rare		
SLE frequente	3	SLE_Freq		
SLE quasi permanente	4	SLE_Q.Perm.		

Legenda

Tipo CMB                      Indica la categoria di combinazione

Si riportano di seguito, per completezza, le videate delle opzioni così come impostate nel programma:

## RISULTATI PRINCIPALI

### LEGENDA RISULTATI ELEMENTI TIPO TRAVE

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

Gli elementi vengono suddivisi in relazione alle proprietà in elementi:

tipo **pilastro**

tipo **trave in elevazione**

tipo **trave in fondazione**

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

Per gli elementi tipo *pilastro* sono riportati in tabella i seguenti valori:

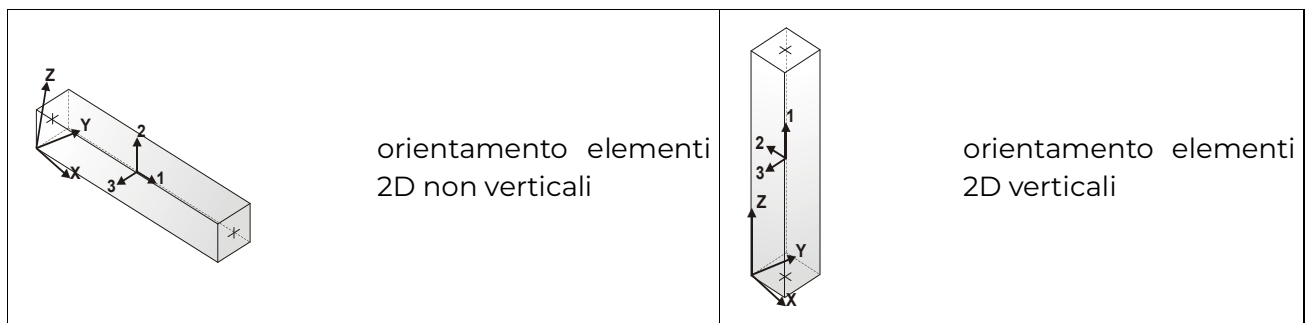


INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

<b>Pilas.</b>	numero dell'elemento pilastro
<b>Cmb</b>	combinazione in cui si verificano i valori riportati
<b>M3 mx/mn</b>	momento flettente in campata M3 max (prima riga) / min (seconda riga)
<b>M2 mx/mn</b>	momento flettente in campata M2 max (prima riga) / min (seconda riga)
<b>D2/D3</b>	freccia massima in direzione 2 (prima riga) / direzione 3 (seconda riga)
<b>Q2/Q3</b>	carico totale in direzione 2 (prima riga) / direzione 3 (seconda riga)
<b>Pos.</b>	ascissa del punto iniziale e finale dell'elemento
<b>N, V2, ecc..</b>	sei componenti di sollecitazione al piede ed in sommità dell'elemento

Per gli elementi tipo *trave in elevazione* sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri.

Per gli elementi tipo *trave in fondazione* (trave f.) sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri e la massima pressione sul terreno.



Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		kN m	kN m	m	kN	cm	kN	kN	kN	kN m	kN m	kN m
1	1	0.34	0.0	-2.49e-06	-1.18	0.0	0.0	1.91	0.0	5.47e-04	0.0	7.61e-03
		7.61e-03	0.0	0.0	0.0	12.5	0.0	1.32	0.0	5.47e-04	0.0	0.21
						25.1	0.0	0.73	0.0	5.47e-04	0.0	0.34
1	2	0.25	0.0	-1.83e-06	-0.86	0.0	0.0	1.40	0.0	1.73e-04	0.0	4.69e-03

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		4.69e-03	0.0	0.0	0.0	12.5	0.0	0.97	0.0	1.73e-04	0.0	0.15
						25.1	0.0	0.54	0.0	1.73e-04	0.0	0.25
1	3	0.22	0.0	-1.66e-06	-0.78	0.0	0.0	1.28	0.0	-3.05e-04	0.0	2.54e-03
		2.54e-03	0.0	0.0	0.0	12.5	0.0	0.88	0.0	-3.05e-04	0.0	0.14
						25.1	0.0	0.49	0.0	-3.05e-04	0.0	0.22
1	4	0.21	0.0	-1.59e-06	-0.75	0.0	0.0	1.22	0.0	-4.96e-04	0.0	1.67e-03
		1.67e-03	0.0	0.0	0.0	12.5	0.0	0.85	0.0	-4.96e-04	0.0	0.13
						25.1	0.0	0.47	0.0	-4.96e-04	0.0	0.21
2	1	-0.02	0.0	0.0	-1.60	0.0	0.0	1.81	0.0	1.86e-03	0.0	-0.40
		-0.40	0.0	0.0	0.0	18.8	0.0	1.00	0.0	1.86e-03	0.0	-0.13
						37.6	0.0	0.21	0.0	1.86e-03	0.0	-0.02
2	2	-0.01	0.0	0.0	-1.18	0.0	0.0	1.33	0.0	1.14e-03	0.0	-0.29
		-0.29	0.0	0.0	0.0	18.8	0.0	0.74	0.0	1.14e-03	0.0	-0.10
						37.6	0.0	0.15	0.0	1.14e-03	0.0	-0.01
2	3	-0.01	0.0	0.0	-1.09	0.0	0.0	1.22	0.0	5.72e-04	0.0	-0.26
		-0.26	0.0	0.0	0.0	18.8	0.0	0.67	0.0	5.72e-04	0.0	-0.09
						37.6	0.0	0.13	0.0	5.72e-04	0.0	-0.01
2	4	-0.01	0.0	0.0	-1.06	0.0	0.0	1.17	0.0	3.47e-04	0.0	-0.25
		-0.25	0.0	0.0	0.0	18.8	0.0	0.64	0.0	3.47e-04	0.0	-0.08
						37.6	0.0	0.12	0.0	3.47e-04	0.0	-0.01
3	1	0.13	0.0	-2.89e-06	-1.09	0.0	0.0	2.43	0.0	1.52e-03	0.0	-0.45
		-0.45	0.0	0.0	0.0	15.5	0.0	1.88	0.0	1.52e-03	0.0	-0.12
						31.1	0.0	1.34	0.0	1.52e-03	0.0	0.13
3	2	0.10	0.0	-2.20e-06	-0.83	0.0	0.0	1.84	0.0	8.79e-04	0.0	-0.34
		-0.34	0.0	0.0	0.0	15.5	0.0	1.42	0.0	8.79e-04	0.0	-0.09
						31.1	0.0	1.02	0.0	8.79e-04	0.0	0.10
3	3	0.10	0.0	-2.14e-06	-0.79	0.0	0.0	1.79	0.0	3.23e-04	0.0	-0.33
		-0.33	0.0	0.0	0.0	15.5	0.0	1.39	0.0	3.23e-04	0.0	-0.09

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						31.1	0.0	0.99	0.0	3.23e-04	0.0	0.10
3	4	0.10	0.0	-2.12e-06	-0.78	0.0	0.0	1.76	0.0	9.99e-05	0.0	-0.33
		-0.33	0.0	0.0	0.0	15.5	0.0	1.37	0.0	9.99e-05	0.0	-0.09
						31.1	0.0	0.98	0.0	9.99e-05	0.0	0.10
4	1	0.12	0.0	0.0	-4.50	0.0	0.0	1.06	0.0	-0.05	0.0	9.07e-04
		-0.20	0.0	0.0	0.0	19.0	0.0	-0.18	0.0	-0.05	0.0	0.12
						38.0	0.0	-3.44	0.0	-0.05	0.0	-0.20
4	2	0.08	0.0	0.0	-3.04	0.0	0.0	0.72	0.0	-0.04	0.0	9.71e-04
		-0.13	0.0	0.0	0.0	19.0	0.0	-0.13	0.0	-0.04	0.0	0.08
						38.0	0.0	-2.32	0.0	-0.04	0.0	-0.13
4	3	0.06	0.0	0.0	-2.27	0.0	0.0	0.55	0.0	-0.04	0.0	1.50e-03
		-0.10	0.0	0.0	0.0	19.0	0.0	-0.10	0.0	-0.04	0.0	0.06
						38.0	0.0	-1.72	0.0	-0.04	0.0	-0.10
4	4	0.05	0.0	0.0	-1.96	0.0	0.0	0.48	0.0	-0.04	0.0	1.71e-03
		-0.09	0.0	0.0	0.0	19.0	0.0	-0.09	0.0	-0.04	0.0	0.05
						38.0	0.0	-1.48	0.0	-0.04	0.0	-0.09
5	1	0.09	0.0	0.0	-6.59	0.0	0.0	3.30	0.0	-3.26e-03	0.0	-0.17
		-0.17	0.0	0.0	0.0	15.8	0.0	5.75e-03	0.0	-3.26e-03	0.0	0.09
						31.5	0.0	-3.29	0.0	-3.26e-03	0.0	-0.17
5	2	0.06	0.0	0.0	-4.43	0.0	0.0	2.22	0.0	-2.43e-03	0.0	-0.12
		-0.12	0.0	0.0	0.0	15.8	0.0	3.87e-03	0.0	-2.43e-03	0.0	0.06
						31.5	0.0	-2.21	0.0	-2.43e-03	0.0	-0.12
5	3	0.04	0.0	0.0	-3.25	0.0	0.0	1.63	0.0	-2.29e-03	0.0	-0.09
		-0.09	0.0	0.0	0.0	15.8	0.0	2.83e-03	0.0	-2.29e-03	0.0	0.04
						31.5	0.0	-1.62	0.0	-2.29e-03	0.0	-0.09
5	4	0.04	0.0	0.0	-2.78	0.0	0.0	1.39	0.0	-2.23e-03	0.0	-0.07
		-0.07	0.0	0.0	0.0	15.8	0.0	2.41e-03	0.0	-2.23e-03	0.0	0.04
						31.5	0.0	-1.39	0.0	-2.23e-03	0.0	-0.07

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
6	1	-0.18	0.0	0.0	-5.24	0.0	0.0	6.34	0.0	-0.01	0.0	-1.11
		-1.11	0.0	0.0	0.0	12.5	0.0	3.73	0.0	-0.01	0.0	-0.48
						25.0	0.0	1.11	0.0	-0.01	0.0	-0.18
6	2	-0.12	0.0	0.0	-3.52	0.0	0.0	4.26	0.0	-7.29e-03	0.0	-0.74
		-0.74	0.0	0.0	0.0	12.5	0.0	2.50	0.0	-7.29e-03	0.0	-0.32
						25.0	0.0	0.74	0.0	-7.29e-03	0.0	-0.12
6	3	-0.09	0.0	0.0	-2.58	0.0	0.0	3.13	0.0	-5.36e-03	0.0	-0.55
		-0.55	0.0	0.0	0.0	12.5	0.0	1.84	0.0	-5.36e-03	0.0	-0.24
						25.0	0.0	0.55	0.0	-5.36e-03	0.0	-0.09
6	4	-0.07	0.0	0.0	-2.21	0.0	0.0	2.67	0.0	-4.59e-03	0.0	-0.47
		-0.47	0.0	0.0	0.0	12.5	0.0	1.57	0.0	-4.59e-03	0.0	-0.20
						25.0	0.0	0.47	0.0	-4.59e-03	0.0	-0.07
7	1	0.45	0.0	-1.25e-05	-4.69	0.0	0.0	9.45	0.0	-0.01	0.0	-1.14
		-1.14	0.0	0.0	0.0	11.2	0.0	7.10	0.0	-0.01	0.0	-0.21
						22.5	0.0	4.76	0.0	-0.01	0.0	0.45
7	2	0.31	0.0	-8.40e-06	-3.15	0.0	0.0	6.35	0.0	-7.29e-03	0.0	-0.77
		-0.77	0.0	0.0	0.0	11.2	0.0	4.78	0.0	-7.29e-03	0.0	-0.14
						22.5	0.0	3.20	0.0	-7.29e-03	0.0	0.31
7	3	0.22	0.0	-6.16e-06	-2.31	0.0	0.0	4.66	0.0	-5.36e-03	0.0	-0.56
		-0.56	0.0	0.0	0.0	11.2	0.0	3.50	0.0	-5.36e-03	0.0	-0.10
						22.5	0.0	2.34	0.0	-5.36e-03	0.0	0.22
7	4	0.19	0.0	-5.26e-06	-1.98	0.0	0.0	3.98	0.0	-4.59e-03	0.0	-0.48
		-0.48	0.0	0.0	0.0	11.2	0.0	2.99	0.0	-4.59e-03	0.0	-0.09
						22.5	0.0	2.00	0.0	-4.59e-03	0.0	0.19
8	1	0.06	0.0	0.0	-9.58	0.0	0.0	7.08	0.0	0.03	0.0	-1.14
		-1.14	0.0	0.0	0.0	24.0	0.0	2.09	0.0	0.03	0.0	-0.04
						48.0	0.0	-2.51	0.0	0.03	0.0	-0.12
8	2	0.04	0.0	0.0	-6.44	0.0	0.0	4.76	0.0	0.02	0.0	-0.77

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.77	0.0	0.0	0.0	24.0	0.0	1.40	0.0	0.02	0.0	-0.03
						48.0	0.0	-1.69	0.0	0.02	0.0	-0.08
8	3	0.03	0.0	0.0	-4.73	0.0	0.0	3.49	0.0	0.01	0.0	-0.56
		-0.56	0.0	0.0	0.0	24.0	0.0	1.03	0.0	0.01	0.0	-0.02
						48.0	0.0	-1.24	0.0	0.01	0.0	-0.06
8	4	0.03	0.0	0.0	-4.05	0.0	0.0	2.98	0.0	0.01	0.0	-0.48
		-0.48	0.0	0.0	0.0	24.0	0.0	0.88	0.0	0.01	0.0	-0.02
						48.0	0.0	-1.07	0.0	0.01	0.0	-0.05
9	1	-0.10	0.0	1.02e-06	-5.56	0.0	0.0	6.97	0.0	-2.87e-03	0.0	-1.44
		-1.44	0.0	0.0	0.0	16.0	0.0	4.20	0.0	-2.87e-03	0.0	-0.54
						32.0	0.0	1.41	0.0	-2.87e-03	0.0	-0.10
9	2	-0.06	0.0	0.0	-3.74	0.0	0.0	4.69	0.0	-1.93e-03	0.0	-0.97
		-0.97	0.0	0.0	0.0	16.0	0.0	2.83	0.0	-1.93e-03	0.0	-0.37
						32.0	0.0	0.95	0.0	-1.93e-03	0.0	-0.06
9	3	-0.05	0.0	0.0	-2.76	0.0	0.0	3.46	0.0	-1.43e-03	0.0	-0.71
		-0.71	0.0	0.0	0.0	16.0	0.0	2.09	0.0	-1.43e-03	0.0	-0.27
						32.0	0.0	0.70	0.0	-1.43e-03	0.0	-0.05
9	4	-0.04	0.0	0.0	-2.36	0.0	0.0	2.97	0.0	-1.23e-03	0.0	-0.61
		-0.61	0.0	0.0	0.0	16.0	0.0	1.79	0.0	-1.23e-03	0.0	-0.23
						32.0	0.0	0.60	0.0	-1.23e-03	0.0	-0.04
10	1	0.54	0.0	-2.08e-05	-4.69	0.0	0.0	9.46	0.0	-2.87e-03	0.0	-1.45
		-1.45	0.0	0.0	0.0	14.0	0.0	7.12	0.0	-2.87e-03	0.0	-0.29
						28.0	0.0	4.77	0.0	-2.87e-03	0.0	0.54
10	2	0.37	0.0	-1.40e-05	-3.16	0.0	0.0	6.37	0.0	-1.94e-03	0.0	-0.98
		-0.98	0.0	0.0	0.0	14.0	0.0	4.80	0.0	-1.94e-03	0.0	-0.20
						28.0	0.0	3.21	0.0	-1.94e-03	0.0	0.37
10	3	0.27	0.0	-1.03e-05	-2.33	0.0	0.0	4.70	0.0	-1.43e-03	0.0	-0.72
		-0.72	0.0	0.0	0.0	14.0	0.0	3.54	0.0	-1.43e-03	0.0	-0.14

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						28.0	0.0	2.37	0.0	-1.43e-03	0.0	0.27
10	4	0.23	0.0	-8.85e-06	-2.00	0.0	0.0	4.03	0.0	-1.23e-03	0.0	-0.62
		-0.62	0.0	0.0	0.0	14.0	0.0	3.03	0.0	-1.23e-03	0.0	-0.12
						28.0	0.0	2.03	0.0	-1.23e-03	0.0	0.23
11	1	-0.17	0.0	0.0	-4.15	0.0	0.0	-3.07	0.0	0.02	0.0	-0.17
		-1.45	0.0	0.0	0.0	12.5	0.0	-5.14	0.0	0.02	0.0	-0.68
						25.0	0.0	-7.22	0.0	0.02	0.0	-1.45
11	2	-0.11	0.0	0.0	-2.80	0.0	0.0	-2.07	0.0	0.02	0.0	-0.11
		-0.98	0.0	0.0	0.0	12.5	0.0	-3.46	0.0	0.02	0.0	-0.46
						25.0	0.0	-4.86	0.0	0.02	0.0	-0.98
11	3	-0.08	0.0	0.0	-2.06	0.0	0.0	-1.52	0.0	0.01	0.0	-0.08
		-0.72	0.0	0.0	0.0	12.5	0.0	-2.55	0.0	0.01	0.0	-0.34
						25.0	0.0	-3.59	0.0	0.01	0.0	-0.72
11	4	-0.07	0.0	0.0	-1.77	0.0	0.0	-1.31	0.0	9.80e-03	0.0	-0.07
		-0.62	0.0	0.0	0.0	12.5	0.0	-2.19	0.0	9.80e-03	0.0	-0.29
						25.0	0.0	-3.08	0.0	9.80e-03	0.0	-0.62
12	1	0.17	0.0	0.0	-5.45	0.0	0.0	2.18	0.0	1.31e-03	0.0	0.02
		-0.17	0.0	0.0	0.0	17.1	0.0	-0.53	0.0	1.31e-03	0.0	0.16
						34.3	0.0	-3.26	0.0	1.31e-03	0.0	-0.17
12	2	0.11	0.0	0.0	-3.67	0.0	0.0	1.47	0.0	9.16e-04	0.0	0.01
		-0.11	0.0	0.0	0.0	17.1	0.0	-0.36	0.0	9.16e-04	0.0	0.11
						34.3	0.0	-2.20	0.0	9.16e-04	0.0	-0.11
12	3	0.08	0.0	0.0	-2.71	0.0	0.0	1.08	0.0	7.49e-04	0.0	0.01
		-0.08	0.0	0.0	0.0	17.1	0.0	-0.27	0.0	7.49e-04	0.0	0.08
						34.3	0.0	-1.63	0.0	7.49e-04	0.0	-0.08
12	4	0.07	0.0	0.0	-2.33	0.0	0.0	0.92	0.0	6.82e-04	0.0	9.94e-03
		-0.07	0.0	0.0	0.0	17.1	0.0	-0.24	0.0	6.82e-04	0.0	0.07
						34.3	0.0	-1.40	0.0	6.82e-04	0.0	-0.07

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
13	1	0.01	0.0	0.0	-0.39	0.0	0.0	0.16	0.0	1.26e-03	0.0	-1.07e-03
		-0.01	0.0	0.0	0.0	17.4	0.0	-0.03	0.0	1.26e-03	0.0	0.01
						34.8	0.0	-0.23	0.0	1.26e-03	0.0	-0.01
13	2	8.35e-03	0.0	0.0	-0.30	0.0	0.0	0.13	0.0	8.56e-04	0.0	-7.60e-04
		-9.24e-03	0.0	0.0	0.0	17.4	0.0	-0.02	0.0	8.56e-04	0.0	8.02e-03
						34.8	0.0	-0.17	0.0	8.56e-04	0.0	-9.24e-03
13	3	8.42e-03	0.0	0.0	-0.30	0.0	0.0	0.13	0.0	5.87e-04	0.0	-6.31e-04
		-9.25e-03	0.0	0.0	0.0	17.4	0.0	-0.02	0.0	5.87e-04	0.0	8.08e-03
						34.8	0.0	-0.17	0.0	5.87e-04	0.0	-9.25e-03
13	4	8.45e-03	0.0	0.0	-0.30	0.0	0.0	0.12	0.0	4.79e-04	0.0	-5.80e-04
		-9.26e-03	0.0	0.0	0.0	17.4	0.0	-0.02	0.0	4.79e-04	0.0	8.11e-03
						34.8	0.0	-0.17	0.0	4.79e-04	0.0	-9.26e-03
14	1	0.22	0.0	-1.48e-06	-6.93	0.0	0.0	2.91	0.0	-9.34e-04	0.0	-0.03
		-0.25	0.0	0.0	0.0	20.0	0.0	-0.57	0.0	-9.34e-04	0.0	0.21
						40.0	0.0	-4.02	0.0	-9.34e-04	0.0	-0.25
14	2	0.15	0.0	0.0	-4.66	0.0	0.0	1.96	0.0	-6.64e-04	0.0	-0.02
		-0.17	0.0	0.0	0.0	20.0	0.0	-0.38	0.0	-6.64e-04	0.0	0.14
						40.0	0.0	-2.71	0.0	-6.64e-04	0.0	-0.17
14	3	0.11	0.0	0.0	-3.44	0.0	0.0	1.44	0.0	-5.65e-04	0.0	-0.01
		-0.12	0.0	0.0	0.0	20.0	0.0	-0.28	0.0	-5.65e-04	0.0	0.10
						40.0	0.0	-1.99	0.0	-5.65e-04	0.0	-0.12
14	4	0.09	0.0	0.0	-2.95	0.0	0.0	1.24	0.0	-5.25e-04	0.0	-0.01
		-0.11	0.0	0.0	0.0	20.0	0.0	-0.24	0.0	-5.25e-04	0.0	0.09
						40.0	0.0	-1.71	0.0	-5.25e-04	0.0	-0.11
15	1	0.09	0.0	0.0	-0.36	0.0	0.0	-0.17	0.0	0.03	0.0	0.09
		-0.01	0.0	0.0	0.0	15.3	0.0	-0.34	0.0	0.03	0.0	0.05
						30.6	0.0	-0.53	0.0	0.03	0.0	-0.01
15	2	0.06	0.0	0.0	-0.28	0.0	0.0	-0.10	0.0	0.02	0.0	0.06

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-9.94e-03	0.0	0.0	0.0	15.3	0.0	-0.24	0.0	0.02	0.0	0.04
						30.6	0.0	-0.38	0.0	0.02	0.0	-9.94e-03
15	3	0.05	0.0	0.0	-0.27	0.0	0.0	-0.05	0.0	0.01	0.0	0.05
		-9.21e-03	0.0	0.0	0.0	15.3	0.0	-0.18	0.0	0.01	0.0	0.03
						30.6	0.0	-0.32	0.0	0.01	0.0	-9.21e-03
15	4	0.04	0.0	0.0	-0.27	0.0	0.0	-0.03	0.0	0.01	0.0	0.04
		-8.91e-03	0.0	0.0	0.0	15.3	0.0	-0.16	0.0	0.01	0.0	0.03
						30.6	0.0	-0.30	0.0	0.01	0.0	-8.91e-03
16	1	-0.22	0.0	0.0	-4.55	0.0	0.0	9.32	0.0	0.09	0.0	-1.76
		-1.76	0.0	0.0	0.0	10.9	0.0	7.04	0.0	0.09	0.0	-0.87
						21.8	0.0	4.77	0.0	0.09	0.0	-0.22
16	2	-0.15	0.0	0.0	-3.06	0.0	0.0	6.26	0.0	0.06	0.0	-1.18
		-1.18	0.0	0.0	0.0	10.9	0.0	4.73	0.0	0.06	0.0	-0.58
						21.8	0.0	3.21	0.0	0.06	0.0	-0.15
16	3	-0.11	0.0	0.0	-2.24	0.0	0.0	4.59	0.0	0.05	0.0	-0.87
		-0.87	0.0	0.0	0.0	10.9	0.0	3.47	0.0	0.05	0.0	-0.43
						21.8	0.0	2.35	0.0	0.05	0.0	-0.11
16	4	-0.09	0.0	0.0	-1.92	0.0	0.0	3.92	0.0	0.04	0.0	-0.74
		-0.74	0.0	0.0	0.0	10.9	0.0	2.96	0.0	0.04	0.0	-0.36
						21.8	0.0	2.01	0.0	0.04	0.0	-0.09
17	1	0.69	0.0	-2.58e-05	-5.87	0.0	0.0	11.69	0.0	-0.04	0.0	-1.76
		-1.76	0.0	0.0	0.0	14.0	0.0	8.76	0.0	-0.04	0.0	-0.33
						28.0	0.0	5.82	0.0	-0.04	0.0	0.69
17	2	0.46	0.0	-1.73e-05	-3.95	0.0	0.0	7.86	0.0	-0.03	0.0	-1.18
		-1.18	0.0	0.0	0.0	14.0	0.0	5.89	0.0	-0.03	0.0	-0.22
						28.0	0.0	3.91	0.0	-0.03	0.0	0.46
17	3	0.34	0.0	-1.27e-05	-2.89	0.0	0.0	5.76	0.0	-0.02	0.0	-0.87
		-0.87	0.0	0.0	0.0	14.0	0.0	4.32	0.0	-0.02	0.0	-0.16



RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						28.0	0.0	2.87	0.0	-0.02	0.0	0.34
17	4	0.29	0.0	-1.09e-05	-2.47	0.0	0.0	4.92	0.0	-0.02	0.0	-0.74
		-0.74	0.0	0.0	0.0	14.0	0.0	3.69	0.0	-0.02	0.0	-0.14
						28.0	0.0	2.45	0.0	-0.02	0.0	0.29
18	1	0.09	0.0	0.0	-4.55	0.0	0.0	1.92	0.0	-7.56e-03	0.0	9.90e-04
		-0.08	0.0	0.0	0.0	10.9	0.0	-0.36	0.0	-7.56e-03	0.0	0.09
						21.8	0.0	-2.63	0.0	-7.56e-03	0.0	-0.08
18	2	0.06	0.0	0.0	-3.06	0.0	0.0	1.29	0.0	-4.67e-03	0.0	4.47e-04
		-0.05	0.0	0.0	0.0	10.9	0.0	-0.24	0.0	-4.67e-03	0.0	0.06
						21.8	0.0	-1.77	0.0	-4.67e-03	0.0	-0.05
18	3	0.04	0.0	0.0	-2.24	0.0	0.0	0.95	0.0	-2.55e-03	0.0	-1.56e-04
		-0.04	0.0	0.0	0.0	10.9	0.0	-0.17	0.0	-2.55e-03	0.0	0.04
						21.8	0.0	-1.29	0.0	-2.55e-03	0.0	-0.04
18	4	0.04	0.0	0.0	-1.92	0.0	0.0	0.81	0.0	-1.70e-03	0.0	-3.97e-04
		-0.03	0.0	0.0	0.0	10.9	0.0	-0.15	0.0	-1.70e-03	0.0	0.04
						21.8	0.0	-1.10	0.0	-1.70e-03	0.0	-0.03
19	1	0.26	0.0	-1.52e-06	-8.84	0.0	0.0	3.61	0.0	-1.45e-03	0.0	5.71e-03
		-0.27	0.0	0.0	0.0	17.3	0.0	-0.80	0.0	-1.45e-03	0.0	0.25
						34.5	0.0	-5.22	0.0	-1.45e-03	0.0	-0.27
19	2	0.17	0.0	-1.02e-06	-5.93	0.0	0.0	2.42	0.0	-1.10e-03	0.0	3.88e-03
		-0.18	0.0	0.0	0.0	17.3	0.0	-0.54	0.0	-1.10e-03	0.0	0.17
						34.5	0.0	-3.51	0.0	-1.10e-03	0.0	-0.18
19	3	0.15	0.0	0.0	-5.00	0.0	0.0	2.05	0.0	-1.08e-03	0.0	1.93e-03
		-0.15	0.0	0.0	0.0	17.3	0.0	-0.45	0.0	-1.08e-03	0.0	0.14
						34.5	0.0	-2.95	0.0	-1.08e-03	0.0	-0.15
19	4	0.13	0.0	0.0	-4.62	0.0	0.0	1.90	0.0	-1.07e-03	0.0	1.16e-03
		-0.14	0.0	0.0	0.0	17.3	0.0	-0.42	0.0	-1.07e-03	0.0	0.13
						34.5	0.0	-2.73	0.0	-1.07e-03	0.0	-0.14

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
20	1	0.21	0.0	-1.97e-06	-10.84	0.0	0.0	5.27	0.0	-8.05e-05	0.0	-0.32
		-0.39	0.0	0.0	0.0	21.0	0.0	-0.15	0.0	-8.05e-05	0.0	0.21
						42.0	0.0	-5.57	0.0	-8.05e-05	0.0	-0.39
20	2	0.14	0.0	-1.32e-06	-7.28	0.0	0.0	3.54	0.0	-5.61e-05	0.0	-0.22
		-0.26	0.0	0.0	0.0	21.0	0.0	-0.10	0.0	-5.61e-05	0.0	0.14
						42.0	0.0	-3.74	0.0	-5.61e-05	0.0	-0.26
20	3	0.12	0.0	-1.12e-06	-6.13	0.0	0.0	2.98	0.0	-5.08e-05	0.0	-0.18
		-0.22	0.0	0.0	0.0	21.0	0.0	-0.08	0.0	-5.08e-05	0.0	0.12
						42.0	0.0	-3.15	0.0	-5.08e-05	0.0	-0.22
20	4	0.11	0.0	-1.03e-06	-5.67	0.0	0.0	2.76	0.0	-4.87e-05	0.0	-0.17
		-0.20	0.0	0.0	0.0	21.0	0.0	-0.08	0.0	-4.87e-05	0.0	0.11
						42.0	0.0	-2.92	0.0	-4.87e-05	0.0	-0.20
21	1	0.02	0.0	0.0	-12.77	0.0	0.0	4.09	0.0	7.44e-04	0.0	-0.30
		-1.42	0.0	0.0	0.0	24.5	0.0	-2.29	0.0	7.44e-04	0.0	-0.08
						49.0	0.0	-8.67	0.0	7.44e-04	0.0	-1.42
21	2	0.01	0.0	0.0	-8.57	0.0	0.0	2.75	0.0	5.21e-04	0.0	-0.20
		-0.96	0.0	0.0	0.0	24.5	0.0	-1.53	0.0	5.21e-04	0.0	-0.06
						49.0	0.0	-5.82	0.0	5.21e-04	0.0	-0.96
21	3	9.75e-03	0.0	0.0	-7.22	0.0	0.0	2.31	0.0	4.67e-04	0.0	-0.17
		-0.81	0.0	0.0	0.0	24.5	0.0	-1.29	0.0	4.67e-04	0.0	-0.05
						49.0	0.0	-4.90	0.0	4.67e-04	0.0	-0.81
21	4	8.90e-03	0.0	0.0	-6.68	0.0	0.0	2.14	0.0	4.46e-04	0.0	-0.16
		-0.75	0.0	0.0	0.0	24.5	0.0	-1.19	0.0	4.46e-04	0.0	-0.04
						49.0	0.0	-4.54	0.0	4.46e-04	0.0	-0.75
22	1	0.57	0.0	-1.56e-05	-5.87	0.0	0.0	11.81	0.0	7.44e-04	0.0	-1.42
		-1.42	0.0	0.0	0.0	11.2	0.0	8.87	0.0	7.44e-04	0.0	-0.26
						22.5	0.0	5.93	0.0	7.44e-04	0.0	0.57
22	2	0.38	0.0	-1.05e-05	-3.94	0.0	0.0	7.92	0.0	5.21e-04	0.0	-0.96

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.96	0.0	0.0	0.0	11.2	0.0	5.95	0.0	5.21e-04	0.0	-0.18
						22.5	0.0	3.98	0.0	5.21e-04	0.0	0.38
22	3	0.32	0.0	-8.84e-06	-3.32	0.0	0.0	6.68	0.0	4.67e-04	0.0	-0.81
		-0.81	0.0	0.0	0.0	11.2	0.0	5.02	0.0	4.67e-04	0.0	-0.15
						22.5	0.0	3.35	0.0	4.67e-04	0.0	0.32
22	4	0.30	0.0	-8.18e-06	-3.07	0.0	0.0	6.18	0.0	4.46e-04	0.0	-0.75
		-0.75	0.0	0.0	0.0	11.2	0.0	4.64	0.0	4.46e-04	0.0	-0.14
						22.5	0.0	3.10	0.0	4.46e-04	0.0	0.30
23	1	-0.22	0.0	0.0	-6.56	0.0	0.0	7.93	0.0	7.44e-04	0.0	-1.38
		-1.38	0.0	0.0	0.0	12.5	0.0	4.65	0.0	7.44e-04	0.0	-0.60
						25.0	0.0	1.36	0.0	7.44e-04	0.0	-0.22
23	2	-0.15	0.0	0.0	-4.40	0.0	0.0	5.32	0.0	5.21e-04	0.0	-0.93
		-0.93	0.0	0.0	0.0	12.5	0.0	3.12	0.0	5.21e-04	0.0	-0.40
						25.0	0.0	0.91	0.0	5.21e-04	0.0	-0.15
23	3	-0.13	0.0	0.0	-3.71	0.0	0.0	4.48	0.0	4.67e-04	0.0	-0.78
		-0.78	0.0	0.0	0.0	12.5	0.0	2.63	0.0	4.67e-04	0.0	-0.34
						25.0	0.0	0.77	0.0	4.67e-04	0.0	-0.13
23	4	-0.12	0.0	0.0	-3.43	0.0	0.0	4.15	0.0	4.46e-04	0.0	-0.72
		-0.72	0.0	0.0	0.0	12.5	0.0	2.43	0.0	4.46e-04	0.0	-0.31
						25.0	0.0	0.71	0.0	4.46e-04	0.0	-0.12
24	1	0.11	0.0	-1.00e-06	-8.41	0.0	0.0	4.20	0.0	0.02	0.0	-0.22
		-0.22	0.0	0.0	0.0	16.0	0.0	-3.85e-03	0.0	0.02	0.0	0.11
						32.0	0.0	-4.21	0.0	0.02	0.0	-0.22
24	2	0.08	0.0	0.0	-5.65	0.0	0.0	2.82	0.0	0.01	0.0	-0.15
		-0.15	0.0	0.0	0.0	16.0	0.0	-2.57e-03	0.0	0.01	0.0	0.08
						32.0	0.0	-2.83	0.0	0.01	0.0	-0.15
24	3	0.06	0.0	0.0	-4.76	0.0	0.0	2.38	0.0	9.97e-03	0.0	-0.13
		-0.13	0.0	0.0	0.0	16.0	0.0	-2.19e-03	0.0	9.97e-03	0.0	0.06

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						32.0	0.0	-2.38	0.0	9.97e-03	0.0	-0.13
24	4	0.06	0.0	0.0	-4.40	0.0	0.0	2.20	0.0	9.57e-03	0.0	-0.12
		-0.12	0.0	0.0	0.0	16.0	0.0	-2.03e-03	0.0	9.57e-03	0.0	0.06
						32.0	0.0	-2.20	0.0	9.57e-03	0.0	-0.12
25	1	0.12	0.0	-5.63e-06	-0.90	0.0	0.0	1.74	0.0	0.02	0.0	-0.30
		-0.30	0.0	0.0	0.0	16.3	0.0	1.29	0.0	0.02	0.0	-0.05
						32.5	0.0	0.85	0.0	0.02	0.0	0.12
25	2	0.09	0.0	-4.00e-06	-0.63	0.0	0.0	1.24	0.0	0.01	0.0	-0.21
		-0.21	0.0	0.0	0.0	16.3	0.0	0.92	0.0	0.01	0.0	-0.04
						32.5	0.0	0.60	0.0	0.01	0.0	0.09
25	3	0.08	0.0	-3.64e-06	-0.58	0.0	0.0	1.12	0.0	0.01	0.0	-0.19
		-0.19	0.0	0.0	0.0	16.3	0.0	0.83	0.0	0.01	0.0	-0.03
						32.5	0.0	0.55	0.0	0.01	0.0	0.08
25	4	0.08	0.0	-3.49e-06	-0.55	0.0	0.0	1.08	0.0	0.01	0.0	-0.19
		-0.19	0.0	0.0	0.0	16.3	0.0	0.80	0.0	0.01	0.0	-0.03
						32.5	0.0	0.53	0.0	0.01	0.0	0.08
26	1	1.90e-03	0.0	0.0	-0.89	0.0	0.0	1.12	0.0	0.01	0.0	-0.29
		-0.29	0.0	0.0	0.0	22.1	0.0	0.67	0.0	0.01	0.0	-0.10
						44.3	0.0	0.23	0.0	0.01	0.0	1.90e-03
26	2	8.74e-04	0.0	0.0	-0.65	0.0	0.0	0.80	0.0	9.98e-03	0.0	-0.21
		-0.21	0.0	0.0	0.0	22.1	0.0	0.47	0.0	9.98e-03	0.0	-0.07
						44.3	0.0	0.15	0.0	9.98e-03	0.0	8.74e-04
26	3	2.43e-04	0.0	0.0	-0.60	0.0	0.0	0.74	0.0	8.39e-03	0.0	-0.19
		-0.19	0.0	0.0	0.0	22.1	0.0	0.43	0.0	8.39e-03	0.0	-0.06
						44.3	0.0	0.13	0.0	8.39e-03	0.0	2.43e-04
26	4	-9.41e-06	0.0	0.0	-0.58	0.0	0.0	0.71	0.0	7.75e-03	0.0	-0.18
		-0.18	0.0	0.0	0.0	22.1	0.0	0.41	0.0	7.75e-03	0.0	-0.06
						44.3	0.0	0.13	0.0	7.75e-03	0.0	-9.41e-06

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
27	1	0.04	0.0	0.0	-0.67	0.0	0.0	0.09	0.0	0.02	0.0	0.04
		-0.07	0.0	0.0	0.0	24.7	0.0	-0.22	0.0	0.02	0.0	0.02
						49.3	0.0	-0.58	0.0	0.02	0.0	-0.07
27	2	0.03	0.0	0.0	-0.50	0.0	0.0	0.08	0.0	0.01	0.0	0.02
		-0.05	0.0	0.0	0.0	24.7	0.0	-0.15	0.0	0.01	0.0	0.02
						49.3	0.0	-0.42	0.0	0.01	0.0	-0.05
27	3	0.02	0.0	0.0	-0.49	0.0	0.0	0.10	0.0	0.01	0.0	0.02
		-0.05	0.0	0.0	0.0	24.7	0.0	-0.13	0.0	0.01	0.0	0.02
						49.3	0.0	-0.39	0.0	0.01	0.0	-0.05
27	4	0.02	0.0	0.0	-0.48	0.0	0.0	0.11	0.0	9.91e-03	0.0	0.02
		-0.04	0.0	0.0	0.0	24.7	0.0	-0.12	0.0	9.91e-03	0.0	0.02
						49.3	0.0	-0.37	0.0	9.91e-03	0.0	-0.04
28	1	-8.31e-04	0.0	0.0	-0.64	0.0	0.0	0.42	0.0	0.03	0.0	-0.07
		-0.07	0.0	0.0	0.0	25.4	0.0	0.10	0.0	0.03	0.0	-4.83e-03
						50.7	0.0	-0.22	0.0	0.03	0.0	-0.02
28	2	3.30e-04	0.0	0.0	-0.48	0.0	0.0	0.31	0.0	0.02	0.0	-0.05
		-0.05	0.0	0.0	0.0	25.4	0.0	0.07	0.0	0.02	0.0	-2.10e-03
						50.7	0.0	-0.18	0.0	0.02	0.0	-0.02
28	3	1.42e-03	0.0	0.0	-0.48	0.0	0.0	0.29	0.0	0.01	0.0	-0.05
		-0.05	0.0	0.0	0.0	25.4	0.0	0.06	0.0	0.01	0.0	-3.67e-04
						50.7	0.0	-0.18	0.0	0.01	0.0	-0.02
28	4	1.86e-03	0.0	0.0	-0.47	0.0	0.0	0.29	0.0	0.01	0.0	-0.04
		-0.04	0.0	0.0	0.0	25.4	0.0	0.05	0.0	0.01	0.0	3.26e-04
						50.7	0.0	-0.18	0.0	0.01	0.0	-0.02
29	1	1.17	0.0	-1.63e-05	-19.53	0.0	0.0	7.81	0.0	6.69e-04	0.0	-0.02
		-1.50	0.0	0.0	0.0	38.1	0.0	-1.94	0.0	6.69e-04	0.0	1.10
						76.2	0.0	-11.72	0.0	6.69e-04	0.0	-1.50
29	2	0.78	0.0	-1.09e-05	-13.11	0.0	0.0	5.24	0.0	4.83e-04	0.0	-0.01

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-1.01	0.0	0.0	0.0	38.1	0.0	-1.30	0.0	4.83e-04	0.0	0.74
						76.2	0.0	-7.86	0.0	4.83e-04	0.0	-1.01
29	3	0.66	0.0	-9.21e-06	-11.05	0.0	0.0	4.42	0.0	4.49e-04	0.0	-0.01
		-0.85	0.0	0.0	0.0	38.1	0.0	-1.10	0.0	4.49e-04	0.0	0.62
						76.2	0.0	-6.63	0.0	4.49e-04	0.0	-0.85
29	4	0.61	0.0	-8.52e-06	-10.22	0.0	0.0	4.09	0.0	4.35e-04	0.0	-0.01
		-0.79	0.0	0.0	0.0	38.1	0.0	-1.02	0.0	4.35e-04	0.0	0.58
						76.2	0.0	-6.13	0.0	4.35e-04	0.0	-0.79
30	1	0.03	0.0	0.0	-0.76	0.0	0.0	0.35	0.0	-0.02	0.0	-0.03
		-0.05	0.0	0.0	0.0	33.8	0.0	-0.03	0.0	-0.02	0.0	0.03
						67.5	0.0	-0.41	0.0	-0.02	0.0	-0.05
30	2	0.02	0.0	0.0	-0.58	0.0	0.0	0.27	0.0	-0.01	0.0	-0.02
		-0.04	0.0	0.0	0.0	33.8	0.0	-0.02	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.31	0.0	-0.01	0.0	-0.04
30	3	0.02	0.0	0.0	-0.58	0.0	0.0	0.27	0.0	-0.01	0.0	-0.02
		-0.04	0.0	0.0	0.0	33.8	0.0	-0.02	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.31	0.0	-0.01	0.0	-0.04
30	4	0.02	0.0	0.0	-0.58	0.0	0.0	0.27	0.0	-0.01	0.0	-0.02
		-0.04	0.0	0.0	0.0	33.8	0.0	-0.02	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.31	0.0	-0.01	0.0	-0.04
31	1	8.86e-03	0.0	0.0	-0.26	0.0	0.0	0.08	0.0	-4.31e-04	0.0	6.19e-03
		-4.71e-03	0.0	0.0	0.0	11.0	0.0	-0.05	0.0	-4.31e-04	0.0	7.82e-03
						22.0	0.0	-0.18	0.0	-4.31e-04	0.0	-4.71e-03
31	2	6.24e-03	0.0	0.0	-0.20	0.0	0.0	0.06	0.0	-2.89e-04	0.0	3.92e-03
		-3.63e-03	0.0	0.0	0.0	11.0	0.0	-0.03	0.0	-2.89e-04	0.0	5.59e-03
						22.0	0.0	-0.13	0.0	-2.89e-04	0.0	-3.63e-03
31	3	5.24e-03	0.0	0.0	-0.20	0.0	0.0	0.07	0.0	-2.24e-04	0.0	2.39e-03
		-3.62e-03	0.0	0.0	0.0	11.0	0.0	-0.03	0.0	-2.24e-04	0.0	4.83e-03

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						22.0	0.0	-0.13	0.0	-2.24e-04	0.0	-3.62e-03
31	4	4.85e-03	0.0	0.0	-0.20	0.0	0.0	0.07	0.0	-1.98e-04	0.0	1.77e-03
		-3.62e-03	0.0	0.0	0.0	11.0	0.0	-0.02	0.0	-1.98e-04	0.0	4.52e-03
						22.0	0.0	-0.12	0.0	-1.98e-04	0.0	-3.62e-03
32	1	0.02	0.0	0.0	-0.76	0.0	0.0	0.38	0.0	-0.02	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	2.96e-03	0.0	-0.02	0.0	0.02
						67.5	0.0	-0.38	0.0	-0.02	0.0	-0.04
32	2	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	2.28e-03	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
32	3	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	2.29e-03	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
32	4	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	2.29e-03	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
33	1	0.02	0.0	0.0	-0.26	0.0	0.0	0.02	0.0	-8.14e-03	0.0	0.02
		-5.05e-03	0.0	0.0	0.0	11.1	0.0	-0.11	0.0	-8.14e-03	0.0	0.01
						22.2	0.0	-0.24	0.0	-8.14e-03	0.0	-5.05e-03
33	2	0.01	0.0	0.0	-0.20	0.0	0.0	0.02	0.0	-5.46e-03	0.0	0.01
		-3.87e-03	0.0	0.0	0.0	11.1	0.0	-0.08	0.0	-5.46e-03	0.0	0.01
						22.2	0.0	-0.18	0.0	-5.46e-03	0.0	-3.87e-03
33	3	0.01	0.0	0.0	-0.20	0.0	0.0	0.04	0.0	-4.69e-03	0.0	9.42e-03
		-3.83e-03	0.0	0.0	0.0	11.1	0.0	-0.06	0.0	-4.69e-03	0.0	8.33e-03
						22.2	0.0	-0.16	0.0	-4.69e-03	0.0	-3.83e-03
33	4	9.23e-03	0.0	0.0	-0.20	0.0	0.0	0.05	0.0	-4.38e-03	0.0	8.03e-03
		-3.82e-03	0.0	0.0	0.0	11.1	0.0	-0.05	0.0	-4.38e-03	0.0	7.65e-03
						22.2	0.0	-0.15	0.0	-4.38e-03	0.0	-3.82e-03

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
34	1	1.55e-03	0.0	0.0	-0.27	0.0	0.0	0.37	0.0	0.03	0.0	-0.05
		-0.05	0.0	0.0	0.0	11.5	0.0	0.23	0.0	0.03	0.0	-0.02
						23.0	0.0	0.10	0.0	0.03	0.0	1.55e-03
34	2	8.34e-04	0.0	0.0	-0.21	0.0	0.0	0.28	0.0	0.02	0.0	-0.04
		-0.04	0.0	0.0	0.0	11.5	0.0	0.17	0.0	0.02	0.0	-0.01
						23.0	0.0	0.07	0.0	0.02	0.0	8.34e-04
34	3	4.44e-04	0.0	0.0	-0.21	0.0	0.0	0.27	0.0	0.02	0.0	-0.04
		-0.04	0.0	0.0	0.0	11.5	0.0	0.17	0.0	0.02	0.0	-0.01
						23.0	0.0	0.06	0.0	0.02	0.0	4.44e-04
34	4	2.88e-04	0.0	0.0	-0.21	0.0	0.0	0.27	0.0	0.02	0.0	-0.04
		-0.04	0.0	0.0	0.0	11.5	0.0	0.17	0.0	0.02	0.0	-0.01
						23.0	0.0	0.06	0.0	0.02	0.0	2.88e-04
35	1	1.68e-03	0.0	0.0	-0.27	0.0	0.0	0.15	0.0	-0.01	0.0	-7.55e-03
		-7.55e-03	0.0	0.0	0.0	11.5	0.0	0.01	0.0	-0.01	0.0	1.62e-03
						23.0	0.0	-0.12	0.0	-0.01	0.0	-4.69e-03
35	2	1.28e-03	0.0	0.0	-0.21	0.0	0.0	0.11	0.0	-9.72e-03	0.0	-5.84e-03
		-5.84e-03	0.0	0.0	0.0	11.5	0.0	9.68e-03	0.0	-9.72e-03	0.0	1.23e-03
						23.0	0.0	-0.09	0.0	-9.72e-03	0.0	-3.61e-03
35	3	1.26e-03	0.0	0.0	-0.21	0.0	0.0	0.11	0.0	-9.55e-03	0.0	-5.89e-03
		-5.89e-03	0.0	0.0	0.0	11.5	0.0	9.90e-03	0.0	-9.55e-03	0.0	1.21e-03
						23.0	0.0	-0.09	0.0	-9.55e-03	0.0	-3.61e-03
35	4	1.25e-03	0.0	0.0	-0.21	0.0	0.0	0.11	0.0	-9.48e-03	0.0	-5.91e-03
		-5.91e-03	0.0	0.0	0.0	11.5	0.0	9.99e-03	0.0	-9.48e-03	0.0	1.20e-03
						23.0	0.0	-0.09	0.0	-9.48e-03	0.0	-3.61e-03
36	1	0.40	0.0	1.13e-06	-1.00	0.0	0.0	0.29	0.0	1.52e-03	0.0	0.38
		0.32	0.0	0.0	0.0	15.5	0.0	-0.22	0.0	1.52e-03	0.0	0.39
						31.1	0.0	-0.71	0.0	1.52e-03	0.0	0.32
36	2	0.30	0.0	0.0	-0.76	0.0	0.0	0.22	0.0	8.79e-04	0.0	0.29



**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		0.24	0.0	0.0	0.0	15.5	0.0	-0.16	0.0	8.79e-04	0.0	0.30
						31.1	0.0	-0.54	0.0	8.79e-04	0.0	0.24
36	3	0.30	0.0	0.0	-0.75	0.0	0.0	0.22	0.0	3.23e-04	0.0	0.29
		0.24	0.0	0.0	0.0	15.5	0.0	-0.16	0.0	3.23e-04	0.0	0.29
						31.1	0.0	-0.53	0.0	3.23e-04	0.0	0.24
36	4	0.29	0.0	0.0	-0.74	0.0	0.0	0.22	0.0	9.99e-05	0.0	0.28
		0.24	0.0	0.0	0.0	15.5	0.0	-0.15	0.0	9.99e-05	0.0	0.29
						31.1	0.0	-0.52	0.0	9.99e-05	0.0	0.24
37	1	0.38	0.0	-1.80e-06	-1.05	0.0	0.0	1.34	0.0	1.52e-03	0.0	0.13
		0.13	0.0	0.0	0.0	15.5	0.0	0.81	0.0	1.52e-03	0.0	0.30
						31.1	0.0	0.29	0.0	1.52e-03	0.0	0.38
37	2	0.29	0.0	-1.37e-06	-0.79	0.0	0.0	1.02	0.0	8.79e-04	0.0	0.10
		0.10	0.0	0.0	0.0	15.5	0.0	0.61	0.0	8.79e-04	0.0	0.23
						31.1	0.0	0.22	0.0	8.79e-04	0.0	0.29
37	3	0.29	0.0	-1.34e-06	-0.77	0.0	0.0	0.99	0.0	3.23e-04	0.0	0.10
		0.10	0.0	0.0	0.0	15.5	0.0	0.60	0.0	3.23e-04	0.0	0.22
						31.1	0.0	0.22	0.0	3.23e-04	0.0	0.29
37	4	0.28	0.0	-1.33e-06	-0.76	0.0	0.0	0.98	0.0	9.99e-05	0.0	0.10
		0.10	0.0	0.0	0.0	15.5	0.0	0.60	0.0	9.99e-05	0.0	0.22
						31.1	0.0	0.22	0.0	9.99e-05	0.0	0.28
38	1	0.32	0.0	3.56e-06	-0.95	0.0	0.0	-0.71	0.0	1.52e-03	0.0	0.32
		-0.05	0.0	0.0	0.0	15.5	0.0	-1.19	0.0	1.52e-03	0.0	0.17
						31.1	0.0	-1.66	0.0	1.52e-03	0.0	-0.05
38	2	0.24	0.0	2.71e-06	-0.73	0.0	0.0	-0.54	0.0	8.79e-04	0.0	0.24
		-0.04	0.0	0.0	0.0	15.5	0.0	-0.91	0.0	8.79e-04	0.0	0.13
						31.1	0.0	-1.27	0.0	8.79e-04	0.0	-0.04
38	3	0.24	0.0	2.65e-06	-0.73	0.0	0.0	-0.53	0.0	3.23e-04	0.0	0.24
		-0.04	0.0	0.0	0.0	15.5	0.0	-0.89	0.0	3.23e-04	0.0	0.13

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						31.1	0.0	-1.25	0.0	3.23e-04	0.0	-0.04
38	4	0.24	0.0	2.63e-06	-0.72	0.0	0.0	-0.52	0.0	9.99e-05	0.0	0.24
		-0.04	0.0	0.0	0.0	15.5	0.0	-0.89	0.0	9.99e-05	0.0	0.13
						31.1	0.0	-1.25	0.0	9.99e-05	0.0	-0.04
39	1	0.38	0.0	1.22e-06	-1.12	0.0	0.0	-0.42	0.0	5.47e-04	0.0	0.38
		0.13	0.0	0.0	0.0	12.5	0.0	-0.99	0.0	5.47e-04	0.0	0.29
						25.1	0.0	-1.54	0.0	5.47e-04	0.0	0.13
39	2	0.28	0.0	0.0	-0.82	0.0	0.0	-0.31	0.0	1.73e-04	0.0	0.28
		0.09	0.0	0.0	0.0	12.5	0.0	-0.72	0.0	1.73e-04	0.0	0.21
						25.1	0.0	-1.13	0.0	1.73e-04	0.0	0.09
39	3	0.25	0.0	0.0	-0.75	0.0	0.0	-0.28	0.0	-3.05e-04	0.0	0.25
		0.09	0.0	0.0	0.0	12.5	0.0	-0.65	0.0	-3.05e-04	0.0	0.19
						25.1	0.0	-1.03	0.0	-3.05e-04	0.0	0.09
39	4	0.24	0.0	0.0	-0.73	0.0	0.0	-0.26	0.0	-4.96e-04	0.0	0.24
		0.08	0.0	0.0	0.0	12.5	0.0	-0.63	0.0	-4.96e-04	0.0	0.18
						25.1	0.0	-0.99	0.0	-4.96e-04	0.0	0.08
40	1	0.40	0.0	0.0	-1.15	0.0	0.0	0.73	0.0	5.47e-04	0.0	0.34
		0.34	0.0	0.0	0.0	12.5	0.0	0.15	0.0	5.47e-04	0.0	0.39
						25.1	0.0	-0.42	0.0	5.47e-04	0.0	0.38
40	2	0.29	0.0	0.0	-0.84	0.0	0.0	0.54	0.0	1.73e-04	0.0	0.25
		0.25	0.0	0.0	0.0	12.5	0.0	0.11	0.0	1.73e-04	0.0	0.29
						25.1	0.0	-0.31	0.0	1.73e-04	0.0	0.28
40	3	0.26	0.0	0.0	-0.77	0.0	0.0	0.49	0.0	-3.05e-04	0.0	0.22
		0.22	0.0	0.0	0.0	12.5	0.0	0.11	0.0	-3.05e-04	0.0	0.26
						25.1	0.0	-0.28	0.0	-3.05e-04	0.0	0.25
40	4	0.25	0.0	0.0	-0.74	0.0	0.0	0.47	0.0	-4.96e-04	0.0	0.21
		0.21	0.0	0.0	0.0	12.5	0.0	0.10	0.0	-4.96e-04	0.0	0.25
						25.1	0.0	-0.26	0.0	-4.96e-04	0.0	0.24

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
41	1	0.13	0.0	1.99e-06	-1.09	0.0	0.0	-1.54	0.0	5.47e-04	0.0	0.13
		-0.40	0.0	0.0	0.0	12.5	0.0	-2.09	0.0	5.47e-04	0.0	-0.10
						25.1	0.0	-2.64	0.0	5.47e-04	0.0	-0.40
41	2	0.09	0.0	1.46e-06	-0.80	0.0	0.0	-1.13	0.0	1.73e-04	0.0	0.09
		-0.29	0.0	0.0	0.0	12.5	0.0	-1.54	0.0	1.73e-04	0.0	-0.07
						25.1	0.0	-1.94	0.0	1.73e-04	0.0	-0.29
41	3	0.09	0.0	1.33e-06	-0.74	0.0	0.0	-1.03	0.0	-3.05e-04	0.0	0.09
		-0.26	0.0	0.0	0.0	12.5	0.0	-1.40	0.0	-3.05e-04	0.0	-0.07
						25.1	0.0	-1.77	0.0	-3.05e-04	0.0	-0.26
41	4	0.08	0.0	1.28e-06	-0.71	0.0	0.0	-0.99	0.0	-4.96e-04	0.0	0.08
		-0.25	0.0	0.0	0.0	12.5	0.0	-1.35	0.0	-4.96e-04	0.0	-0.06
						25.1	0.0	-1.70	0.0	-4.96e-04	0.0	-0.25
42	1	1.50	0.0	1.30e-05	-5.86	0.0	0.0	-0.05	0.0	-0.04	0.0	1.50
		0.67	0.0	0.0	0.0	14.0	0.0	-2.98	0.0	-0.04	0.0	1.29
						28.0	0.0	-5.91	0.0	-0.04	0.0	0.67
42	2	1.01	0.0	8.73e-06	-3.94	0.0	0.0	-0.03	0.0	-0.03	0.0	1.01
		0.45	0.0	0.0	0.0	14.0	0.0	-2.00	0.0	-0.03	0.0	0.87
						28.0	0.0	-3.97	0.0	-0.03	0.0	0.45
42	3	0.74	0.0	6.40e-06	-2.89	0.0	0.0	-0.02	0.0	-0.02	0.0	0.74
		0.33	0.0	0.0	0.0	14.0	0.0	-1.47	0.0	-0.02	0.0	0.63
						28.0	0.0	-2.91	0.0	-0.02	0.0	0.33
42	4	0.63	0.0	5.47e-06	-2.47	0.0	0.0	-0.02	0.0	-0.02	0.0	0.63
		0.28	0.0	0.0	0.0	14.0	0.0	-1.26	0.0	-0.02	0.0	0.54
						28.0	0.0	-2.49	0.0	-0.02	0.0	0.28
43	1	1.50	0.0	-1.28e-05	-5.87	0.0	0.0	5.82	0.0	-0.04	0.0	0.69
		0.69	0.0	0.0	0.0	14.0	0.0	2.89	0.0	-0.04	0.0	1.30
						28.0	0.0	-0.05	0.0	-0.04	0.0	1.50
43	2	1.01	0.0	-8.59e-06	-3.94	0.0	0.0	3.91	0.0	-0.03	0.0	0.46

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		0.46	0.0	0.0	0.0	14.0	0.0	1.94	0.0	-0.03	0.0	0.87
						28.0	0.0	-0.03	0.0	-0.03	0.0	1.01
43	3	0.74	0.0	-6.30e-06	-2.89	0.0	0.0	2.87	0.0	-0.02	0.0	0.34
		0.34	0.0	0.0	0.0	14.0	0.0	1.42	0.0	-0.02	0.0	0.64
						28.0	0.0	-0.02	0.0	-0.02	0.0	0.74
43	4	0.63	0.0	-5.38e-06	-2.47	0.0	0.0	2.45	0.0	-0.02	0.0	0.29
		0.29	0.0	0.0	0.0	14.0	0.0	1.22	0.0	-0.02	0.0	0.55
						28.0	0.0	-0.02	0.0	-0.02	0.0	0.63
44	1	0.67	0.0	2.56e-05	-5.86	0.0	0.0	-5.91	0.0	-0.04	0.0	0.67
		-1.81	0.0	0.0	0.0	14.0	0.0	-8.84	0.0	-0.04	0.0	-0.37
						28.0	0.0	-11.77	0.0	-0.04	0.0	-1.81
44	2	0.45	0.0	1.72e-05	-3.94	0.0	0.0	-3.97	0.0	-0.03	0.0	0.45
		-1.22	0.0	0.0	0.0	14.0	0.0	-5.94	0.0	-0.03	0.0	-0.25
						28.0	0.0	-7.91	0.0	-0.03	0.0	-1.22
44	3	0.33	0.0	1.26e-05	-2.89	0.0	0.0	-2.91	0.0	-0.02	0.0	0.33
		-0.89	0.0	0.0	0.0	14.0	0.0	-4.36	0.0	-0.02	0.0	-0.18
						28.0	0.0	-5.80	0.0	-0.02	0.0	-0.89
44	4	0.28	0.0	1.08e-05	-2.47	0.0	0.0	-2.49	0.0	-0.02	0.0	0.28
		-0.76	0.0	0.0	0.0	14.0	0.0	-3.72	0.0	-0.02	0.0	-0.15
						28.0	0.0	-4.96	0.0	-0.02	0.0	-0.76
45	1	1.00	0.0	5.94e-06	-4.72	0.0	0.0	0.05	0.0	-0.01	0.0	1.00
		0.48	0.0	0.0	0.0	11.2	0.0	-2.31	0.0	-0.01	0.0	0.87
						22.5	0.0	-4.67	0.0	-0.01	0.0	0.48
45	2	0.67	0.0	3.99e-06	-3.17	0.0	0.0	0.03	0.0	-7.29e-03	0.0	0.67
		0.32	0.0	0.0	0.0	11.2	0.0	-1.55	0.0	-7.29e-03	0.0	0.58
						22.5	0.0	-3.14	0.0	-7.29e-03	0.0	0.32
45	3	0.49	0.0	2.93e-06	-2.33	0.0	0.0	0.02	0.0	-5.36e-03	0.0	0.49
		0.23	0.0	0.0	0.0	11.2	0.0	-1.14	0.0	-5.36e-03	0.0	0.43

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						22.5	0.0	-2.30	0.0	-5.36e-03	0.0	0.23
45	4	0.42	0.0	2.50e-06	-1.99	0.0	0.0	0.02	0.0	-4.59e-03	0.0	0.42
		0.20	0.0	0.0	0.0	11.2	0.0	-0.97	0.0	-4.59e-03	0.0	0.37
						22.5	0.0	-1.97	0.0	-4.59e-03	0.0	0.20
46	1	1.22	0.0	1.04e-05	-4.78	0.0	0.0	0.04	0.0	-2.87e-03	0.0	1.22
		0.56	0.0	0.0	0.0	14.0	0.0	-2.34	0.0	-2.87e-03	0.0	1.06
						28.0	0.0	-4.73	0.0	-2.87e-03	0.0	0.56
46	2	0.82	0.0	6.99e-06	-3.22	0.0	0.0	0.03	0.0	-1.94e-03	0.0	0.82
		0.38	0.0	0.0	0.0	14.0	0.0	-1.58	0.0	-1.94e-03	0.0	0.71
						28.0	0.0	-3.19	0.0	-1.94e-03	0.0	0.38
46	3	0.61	0.0	5.16e-06	-2.37	0.0	0.0	0.02	0.0	-1.43e-03	0.0	0.61
		0.28	0.0	0.0	0.0	14.0	0.0	-1.16	0.0	-1.43e-03	0.0	0.53
						28.0	0.0	-2.35	0.0	-1.43e-03	0.0	0.28
46	4	0.52	0.0	4.42e-06	-2.03	0.0	0.0	0.02	0.0	-1.23e-03	0.0	0.52
		0.24	0.0	0.0	0.0	14.0	0.0	-1.00	0.0	-1.23e-03	0.0	0.45
						28.0	0.0	-2.02	0.0	-1.23e-03	0.0	0.24
47	1	1.24	0.0	7.43e-06	-5.89	0.0	0.0	0.05	0.0	7.44e-04	0.0	1.24
		0.59	0.0	0.0	0.0	11.2	0.0	-2.89	0.0	7.44e-04	0.0	1.08
						22.5	0.0	-5.84	0.0	7.44e-04	0.0	0.59
47	2	0.84	0.0	4.99e-06	-3.95	0.0	0.0	0.03	0.0	5.21e-04	0.0	0.84
		0.40	0.0	0.0	0.0	11.2	0.0	-1.94	0.0	5.21e-04	0.0	0.73
						22.5	0.0	-3.92	0.0	5.21e-04	0.0	0.40
47	3	0.70	0.0	4.20e-06	-3.33	0.0	0.0	0.03	0.0	4.67e-04	0.0	0.70
		0.34	0.0	0.0	0.0	11.2	0.0	-1.64	0.0	4.67e-04	0.0	0.61
						22.5	0.0	-3.30	0.0	4.67e-04	0.0	0.34
47	4	0.65	0.0	3.89e-06	-3.08	0.0	0.0	0.03	0.0	4.46e-04	0.0	0.65
		0.31	0.0	0.0	0.0	11.2	0.0	-1.51	0.0	4.46e-04	0.0	0.57
						22.5	0.0	-3.06	0.0	4.46e-04	0.0	0.31

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
48	1	0.26	0.0	2.89e-06	-0.83	0.0	0.0	-0.02	0.0	0.02	0.0	0.26
		0.11	0.0	0.0	0.0	16.3	0.0	-0.44	0.0	0.02	0.0	0.22
						32.5	0.0	-0.85	0.0	0.02	0.0	0.11
48	2	0.18	0.0	2.05e-06	-0.59	0.0	0.0	-0.01	0.0	0.01	0.0	0.18
		0.08	0.0	0.0	0.0	16.3	0.0	-0.31	0.0	0.01	0.0	0.16
						32.5	0.0	-0.60	0.0	0.01	0.0	0.08
48	3	0.17	0.0	1.87e-06	-0.54	0.0	0.0	-0.01	0.0	0.01	0.0	0.17
		0.07	0.0	0.0	0.0	16.3	0.0	-0.28	0.0	0.01	0.0	0.14
						32.5	0.0	-0.55	0.0	0.01	0.0	0.07
48	4	0.16	0.0	1.79e-06	-0.52	0.0	0.0	-9.90e-03	0.0	0.01	0.0	0.16
		0.07	0.0	0.0	0.0	16.3	0.0	-0.27	0.0	0.01	0.0	0.14
						32.5	0.0	-0.53	0.0	0.01	0.0	0.07
49	1	1.00	0.0	-6.04e-06	-4.71	0.0	0.0	4.76	0.0	-0.01	0.0	0.45
		0.45	0.0	0.0	0.0	11.2	0.0	2.40	0.0	-0.01	0.0	0.86
						22.5	0.0	0.05	0.0	-0.01	0.0	1.00
49	2	0.67	0.0	-4.06e-06	-3.17	0.0	0.0	3.20	0.0	-7.29e-03	0.0	0.31
		0.31	0.0	0.0	0.0	11.2	0.0	1.62	0.0	-7.29e-03	0.0	0.58
						22.5	0.0	0.03	0.0	-7.29e-03	0.0	0.67
49	3	0.49	0.0	-2.98e-06	-2.32	0.0	0.0	2.34	0.0	-5.36e-03	0.0	0.22
		0.22	0.0	0.0	0.0	11.2	0.0	1.18	0.0	-5.36e-03	0.0	0.42
						22.5	0.0	0.02	0.0	-5.36e-03	0.0	0.49
49	4	0.42	0.0	-2.55e-06	-1.98	0.0	0.0	2.00	0.0	-4.59e-03	0.0	0.19
		0.19	0.0	0.0	0.0	11.2	0.0	1.01	0.0	-4.59e-03	0.0	0.36
						22.5	0.0	0.02	0.0	-4.59e-03	0.0	0.42
50	1	1.22	0.0	-1.05e-05	-4.73	0.0	0.0	4.77	0.0	-2.87e-03	0.0	0.54
		0.54	0.0	0.0	0.0	14.0	0.0	2.41	0.0	-2.87e-03	0.0	1.05
						28.0	0.0	0.04	0.0	-2.87e-03	0.0	1.22
50	2	0.82	0.0	-7.10e-06	-3.19	0.0	0.0	3.21	0.0	-1.94e-03	0.0	0.37

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		0.37	0.0	0.0	0.0	14.0	0.0	1.63	0.0	-1.94e-03	0.0	0.70
						28.0	0.0	0.03	0.0	-1.94e-03	0.0	0.82
50	3	0.61	0.0	-5.24e-06	-2.35	0.0	0.0	2.37	0.0	-1.43e-03	0.0	0.27
		0.27	0.0	0.0	0.0	14.0	0.0	1.20	0.0	-1.43e-03	0.0	0.52
						28.0	0.0	0.02	0.0	-1.43e-03	0.0	0.61
50	4	0.52	0.0	-4.49e-06	-2.02	0.0	0.0	2.03	0.0	-1.23e-03	0.0	0.23
		0.23	0.0	0.0	0.0	14.0	0.0	1.03	0.0	-1.23e-03	0.0	0.45
						28.0	0.0	0.02	0.0	-1.23e-03	0.0	0.52
51	1	1.24	0.0	-7.55e-06	-5.88	0.0	0.0	5.93	0.0	7.44e-04	0.0	0.57
		0.57	0.0	0.0	0.0	11.2	0.0	2.99	0.0	7.44e-04	0.0	1.07
						22.5	0.0	0.05	0.0	7.44e-04	0.0	1.24
51	2	0.84	0.0	-5.06e-06	-3.95	0.0	0.0	3.98	0.0	5.21e-04	0.0	0.38
		0.38	0.0	0.0	0.0	11.2	0.0	2.01	0.0	5.21e-04	0.0	0.72
						22.5	0.0	0.03	0.0	5.21e-04	0.0	0.84
51	3	0.70	0.0	-4.27e-06	-3.33	0.0	0.0	3.35	0.0	4.67e-04	0.0	0.32
		0.32	0.0	0.0	0.0	11.2	0.0	1.69	0.0	4.67e-04	0.0	0.61
						22.5	0.0	0.03	0.0	4.67e-04	0.0	0.70
51	4	0.65	0.0	-3.95e-06	-3.08	0.0	0.0	3.10	0.0	4.46e-04	0.0	0.30
		0.30	0.0	0.0	0.0	11.2	0.0	1.57	0.0	4.46e-04	0.0	0.56
						22.5	0.0	0.03	0.0	4.46e-04	0.0	0.65
52	1	0.26	0.0	-2.79e-06	-0.86	0.0	0.0	0.85	0.0	0.02	0.0	0.12
		0.12	0.0	0.0	0.0	16.3	0.0	0.41	0.0	0.02	0.0	0.22
						32.5	0.0	-0.02	0.0	0.02	0.0	0.26
52	2	0.18	0.0	-1.99e-06	-0.61	0.0	0.0	0.60	0.0	0.01	0.0	0.09
		0.09	0.0	0.0	0.0	16.3	0.0	0.29	0.0	0.01	0.0	0.16
						32.5	0.0	-0.01	0.0	0.01	0.0	0.18
52	3	0.17	0.0	-1.81e-06	-0.56	0.0	0.0	0.55	0.0	0.01	0.0	0.08
		0.08	0.0	0.0	0.0	16.3	0.0	0.27	0.0	0.01	0.0	0.14

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						32.5	0.0	-0.01	0.0	0.01	0.0	0.17
52	4	0.16	0.0	-1.74e-06	-0.54	0.0	0.0	0.53	0.0	0.01	0.0	0.08
		0.08	0.0	0.0	0.0	16.3	0.0	0.26	0.0	0.01	0.0	0.14
						32.5	0.0	-9.90e-03	0.0	0.01	0.0	0.16
53	1	0.48	0.0	1.26e-05	-4.72	0.0	0.0	-4.67	0.0	-0.01	0.0	0.48
		-1.11	0.0	0.0	0.0	11.2	0.0	-7.03	0.0	-0.01	0.0	-0.18
						22.5	0.0	-9.39	0.0	-0.01	0.0	-1.11
53	2	0.32	0.0	8.47e-06	-3.17	0.0	0.0	-3.14	0.0	-7.29e-03	0.0	0.32
		-0.74	0.0	0.0	0.0	11.2	0.0	-4.72	0.0	-7.29e-03	0.0	-0.12
						22.5	0.0	-6.31	0.0	-7.29e-03	0.0	-0.74
53	3	0.23	0.0	6.21e-06	-2.32	0.0	0.0	-2.30	0.0	-5.36e-03	0.0	0.23
		-0.55	0.0	0.0	0.0	11.2	0.0	-3.46	0.0	-5.36e-03	0.0	-0.09
						22.5	0.0	-4.63	0.0	-5.36e-03	0.0	-0.55
53	4	0.20	0.0	5.31e-06	-1.99	0.0	0.0	-1.97	0.0	-4.59e-03	0.0	0.20
		-0.47	0.0	0.0	0.0	11.2	0.0	-2.96	0.0	-4.59e-03	0.0	-0.08
						22.5	0.0	-3.95	0.0	-4.59e-03	0.0	-0.47
54	1	0.56	0.0	2.09e-05	-4.82	0.0	0.0	-4.73	0.0	-2.87e-03	0.0	0.56
		-1.44	0.0	0.0	0.0	14.0	0.0	-7.14	0.0	-2.87e-03	0.0	-0.27
						28.0	0.0	-9.55	0.0	-2.87e-03	0.0	-1.44
54	2	0.38	0.0	1.41e-05	-3.25	0.0	0.0	-3.19	0.0	-1.94e-03	0.0	0.38
		-0.97	0.0	0.0	0.0	14.0	0.0	-4.81	0.0	-1.94e-03	0.0	-0.18
						28.0	0.0	-6.43	0.0	-1.94e-03	0.0	-0.97
54	3	0.28	0.0	1.04e-05	-2.39	0.0	0.0	-2.35	0.0	-1.43e-03	0.0	0.28
		-0.71	0.0	0.0	0.0	14.0	0.0	-3.54	0.0	-1.43e-03	0.0	-0.13
						28.0	0.0	-4.74	0.0	-1.43e-03	0.0	-0.71
54	4	0.24	0.0	8.92e-06	-2.05	0.0	0.0	-2.02	0.0	-1.23e-03	0.0	0.24
		-0.61	0.0	0.0	0.0	14.0	0.0	-3.04	0.0	-1.23e-03	0.0	-0.11
						28.0	0.0	-4.07	0.0	-1.23e-03	0.0	-0.61



**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
55	1	0.59	0.0	1.58e-05	-5.90	0.0	0.0	-5.84	0.0	7.44e-04	0.0	0.59
		-1.38	0.0	0.0	0.0	11.2	0.0	-8.79	0.0	7.44e-04	0.0	-0.23
						22.5	0.0	-11.74	0.0	7.44e-04	0.0	-1.38
55	2	0.40	0.0	1.06e-05	-3.96	0.0	0.0	-3.92	0.0	5.21e-04	0.0	0.40
		-0.93	0.0	0.0	0.0	11.2	0.0	-5.90	0.0	5.21e-04	0.0	-0.15
						22.5	0.0	-7.88	0.0	5.21e-04	0.0	-0.93
55	3	0.34	0.0	8.91e-06	-3.33	0.0	0.0	-3.30	0.0	4.67e-04	0.0	0.34
		-0.78	0.0	0.0	0.0	11.2	0.0	-4.97	0.0	4.67e-04	0.0	-0.13
						22.5	0.0	-6.64	0.0	4.67e-04	0.0	-0.78
55	4	0.31	0.0	8.24e-06	-3.09	0.0	0.0	-3.06	0.0	4.46e-04	0.0	0.31
		-0.72	0.0	0.0	0.0	11.2	0.0	-4.60	0.0	4.46e-04	0.0	-0.12
						22.5	0.0	-6.14	0.0	4.46e-04	0.0	-0.72
56	1	0.11	0.0	5.53e-06	-0.80	0.0	0.0	-0.85	0.0	0.02	0.0	0.11
		-0.29	0.0	0.0	0.0	16.3	0.0	-1.26	0.0	0.02	0.0	-0.06
						32.5	0.0	-1.65	0.0	0.02	0.0	-0.29
56	2	0.08	0.0	3.93e-06	-0.57	0.0	0.0	-0.60	0.0	0.01	0.0	0.08
		-0.21	0.0	0.0	0.0	16.3	0.0	-0.89	0.0	0.01	0.0	-0.04
						32.5	0.0	-1.18	0.0	0.01	0.0	-0.21
56	3	0.07	0.0	3.58e-06	-0.52	0.0	0.0	-0.55	0.0	0.01	0.0	0.07
		-0.19	0.0	0.0	0.0	16.3	0.0	-0.82	0.0	0.01	0.0	-0.04
						32.5	0.0	-1.07	0.0	0.01	0.0	-0.19
56	4	0.07	0.0	3.44e-06	-0.50	0.0	0.0	-0.53	0.0	0.01	0.0	0.07
		-0.18	0.0	0.0	0.0	16.3	0.0	-0.78	0.0	0.01	0.0	-0.04
						32.5	0.0	-1.03	0.0	0.01	0.0	-0.18
57	1	0.04	0.0	0.0	-1.46	0.0	0.0	0.86	0.0	1.86e-03	0.0	-0.05
		-0.05	0.0	0.0	0.0	18.8	0.0	0.12	0.0	1.86e-03	0.0	0.04
						37.6	0.0	-0.60	0.0	1.86e-03	0.0	-7.00e-03
57	2	0.03	0.0	0.0	-1.09	0.0	0.0	0.64	0.0	1.14e-03	0.0	-0.04

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.04	0.0	0.0	0.0	18.8	0.0	0.09	0.0	1.14e-03	0.0	0.03
						37.6	0.0	-0.45	0.0	1.14e-03	0.0	-4.79e-03
57	3	0.03	0.0	0.0	-1.02	0.0	0.0	0.60	0.0	5.72e-04	0.0	-0.04
		-0.04	0.0	0.0	0.0	18.8	0.0	0.09	0.0	5.72e-04	0.0	0.03
						37.6	0.0	-0.42	0.0	5.72e-04	0.0	-3.70e-03
57	4	0.03	0.0	0.0	-1.00	0.0	0.0	0.59	0.0	3.47e-04	0.0	-0.04
		-0.04	0.0	0.0	0.0	18.8	0.0	0.09	0.0	3.47e-04	0.0	0.03
						37.6	0.0	-0.41	0.0	3.47e-04	0.0	-3.26e-03
58	1	0.04	0.0	0.0	-1.53	0.0	0.0	0.67	0.0	1.86e-03	0.0	-0.02
		-0.05	0.0	0.0	0.0	18.8	0.0	-0.10	0.0	1.86e-03	0.0	0.04
						37.6	0.0	-0.85	0.0	1.86e-03	0.0	-0.05
58	2	0.03	0.0	0.0	-1.13	0.0	0.0	0.50	0.0	1.14e-03	0.0	-0.01
		-0.04	0.0	0.0	0.0	18.8	0.0	-0.07	0.0	1.14e-03	0.0	0.03
						37.6	0.0	-0.63	0.0	1.14e-03	0.0	-0.04
58	3	0.03	0.0	0.0	-1.06	0.0	0.0	0.47	0.0	5.72e-04	0.0	-0.01
		-0.04	0.0	0.0	0.0	18.8	0.0	-0.07	0.0	5.72e-04	0.0	0.02
						37.6	0.0	-0.59	0.0	5.72e-04	0.0	-0.04
58	4	0.02	0.0	0.0	-1.03	0.0	0.0	0.45	0.0	3.47e-04	0.0	-0.01
		-0.04	0.0	0.0	0.0	18.8	0.0	-0.06	0.0	3.47e-04	0.0	0.02
						37.6	0.0	-0.57	0.0	3.47e-04	0.0	-0.04
59	1	-7.00e-03	0.0	0.0	-1.39	0.0	0.0	-0.48	0.0	1.86e-03	0.0	-7.00e-03
		-0.45	0.0	0.0	0.0	18.8	0.0	-1.18	0.0	1.86e-03	0.0	-0.16
						37.6	0.0	-1.87	0.0	1.86e-03	0.0	-0.45
59	2	-4.79e-03	0.0	0.0	-1.04	0.0	0.0	-0.37	0.0	1.14e-03	0.0	-4.79e-03
		-0.34	0.0	0.0	0.0	18.8	0.0	-0.90	0.0	1.14e-03	0.0	-0.12
						37.6	0.0	-1.41	0.0	1.14e-03	0.0	-0.34
59	3	-3.70e-03	0.0	0.0	-0.99	0.0	0.0	-0.38	0.0	5.72e-04	0.0	-3.70e-03
		-0.33	0.0	0.0	0.0	18.8	0.0	-0.88	0.0	5.72e-04	0.0	-0.12

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						37.6	0.0	-1.37	0.0	5.72e-04	0.0	-0.33
59	4	-3.26e-03	0.0	0.0	-0.97	0.0	0.0	-0.38	0.0	3.47e-04	0.0	-3.26e-03
		-0.33	0.0	0.0	0.0	18.8	0.0	-0.87	0.0	3.47e-04	0.0	-0.12
						37.6	0.0	-1.35	0.0	3.47e-04	0.0	-0.33
60	1	-0.03	0.0	0.0	-4.55	0.0	0.0	1.65	0.0	-7.56e-03	0.0	-0.09
		-0.23	0.0	0.0	0.0	10.9	0.0	-0.62	0.0	-7.56e-03	0.0	-0.04
						21.8	0.0	-2.89	0.0	-7.56e-03	0.0	-0.23
60	2	-0.02	0.0	0.0	-3.06	0.0	0.0	1.11	0.0	-4.67e-03	0.0	-0.06
		-0.15	0.0	0.0	0.0	10.9	0.0	-0.42	0.0	-4.67e-03	0.0	-0.03
						21.8	0.0	-1.95	0.0	-4.67e-03	0.0	-0.15
60	3	-0.01	0.0	0.0	-2.24	0.0	0.0	0.81	0.0	-2.55e-03	0.0	-0.05
		-0.11	0.0	0.0	0.0	10.9	0.0	-0.31	0.0	-2.55e-03	0.0	-0.02
						21.8	0.0	-1.43	0.0	-2.55e-03	0.0	-0.11
60	4	-0.01	0.0	0.0	-1.92	0.0	0.0	0.70	0.0	-1.70e-03	0.0	-0.04
		-0.10	0.0	0.0	0.0	10.9	0.0	-0.26	0.0	-1.70e-03	0.0	-0.02
						21.8	0.0	-1.22	0.0	-1.70e-03	0.0	-0.10
61	1	0.04	0.0	0.0	-4.55	0.0	0.0	2.19	0.0	-7.56e-03	0.0	-0.08
		-0.09	0.0	0.0	0.0	10.9	0.0	-0.08	0.0	-7.56e-03	0.0	0.04
						21.8	0.0	-2.36	0.0	-7.56e-03	0.0	-0.09
61	2	0.03	0.0	0.0	-3.06	0.0	0.0	1.47	0.0	-4.67e-03	0.0	-0.05
		-0.06	0.0	0.0	0.0	10.9	0.0	-0.06	0.0	-4.67e-03	0.0	0.03
						21.8	0.0	-1.58	0.0	-4.67e-03	0.0	-0.06
61	3	0.02	0.0	0.0	-2.24	0.0	0.0	1.08	0.0	-2.55e-03	0.0	-0.04
		-0.05	0.0	0.0	0.0	10.9	0.0	-0.04	0.0	-2.55e-03	0.0	0.02
						21.8	0.0	-1.16	0.0	-2.55e-03	0.0	-0.05
61	4	0.02	0.0	0.0	-1.92	0.0	0.0	0.92	0.0	-1.70e-03	0.0	-0.03
		-0.04	0.0	0.0	0.0	10.9	0.0	-0.03	0.0	-1.70e-03	0.0	0.02
						21.8	0.0	-0.99	0.0	-1.70e-03	0.0	-0.04

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
62	1	-0.23	0.0	0.0	-4.55	0.0	0.0	-4.99	0.0	-7.56e-03	0.0	-0.23
		-1.81	0.0	0.0	0.0	10.9	0.0	-7.27	0.0	-7.56e-03	0.0	-0.90
						21.8	0.0	-9.54	0.0	-7.56e-03	0.0	-1.81
62	2	-0.15	0.0	0.0	-3.06	0.0	0.0	-3.36	0.0	-4.67e-03	0.0	-0.15
		-1.22	0.0	0.0	0.0	10.9	0.0	-4.88	0.0	-4.67e-03	0.0	-0.60
						21.8	0.0	-6.41	0.0	-4.67e-03	0.0	-1.22
62	3	-0.11	0.0	0.0	-2.24	0.0	0.0	-2.46	0.0	-2.55e-03	0.0	-0.11
		-0.89	0.0	0.0	0.0	10.9	0.0	-3.58	0.0	-2.55e-03	0.0	-0.44
						21.8	0.0	-4.70	0.0	-2.55e-03	0.0	-0.89
62	4	-0.10	0.0	0.0	-1.91	0.0	0.0	-2.11	0.0	-1.70e-03	0.0	-0.10
		-0.76	0.0	0.0	0.0	10.9	0.0	-3.06	0.0	-1.70e-03	0.0	-0.38
						21.8	0.0	-4.02	0.0	-1.70e-03	0.0	-0.76
63	1	0.04	0.0	0.0	-4.52	0.0	0.0	2.33	0.0	0.09	0.0	-0.09
		-0.09	0.0	0.0	0.0	10.9	0.0	0.07	0.0	0.09	0.0	0.04
						21.8	0.0	-2.19	0.0	0.09	0.0	-0.08
63	2	0.03	0.0	0.0	-3.04	0.0	0.0	1.57	0.0	0.06	0.0	-0.06
		-0.06	0.0	0.0	0.0	10.9	0.0	0.05	0.0	0.06	0.0	0.03
						21.8	0.0	-1.47	0.0	0.06	0.0	-0.05
63	3	0.02	0.0	0.0	-2.23	0.0	0.0	1.15	0.0	0.05	0.0	-0.05
		-0.05	0.0	0.0	0.0	10.9	0.0	0.03	0.0	0.05	0.0	0.02
						21.8	0.0	-1.08	0.0	0.05	0.0	-0.04
63	4	0.02	0.0	0.0	-1.90	0.0	0.0	0.98	0.0	0.04	0.0	-0.04
		-0.04	0.0	0.0	0.0	10.9	0.0	0.03	0.0	0.04	0.0	0.02
						21.8	0.0	-0.92	0.0	0.04	0.0	-0.03
64	1	-0.03	0.0	0.0	-4.53	0.0	0.0	2.86	0.0	0.09	0.0	-0.22
		-0.22	0.0	0.0	0.0	10.9	0.0	0.60	0.0	0.09	0.0	-0.04
						21.8	0.0	-1.67	0.0	0.09	0.0	-0.09
64	2	-0.02	0.0	0.0	-3.05	0.0	0.0	1.92	0.0	0.06	0.0	-0.15

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.15	0.0	0.0	0.0	10.9	0.0	0.40	0.0	0.06	0.0	-0.02
						21.8	0.0	-1.12	0.0	0.06	0.0	-0.06
64	3	-0.01	0.0	0.0	-2.23	0.0	0.0	1.41	0.0	0.05	0.0	-0.11
		-0.11	0.0	0.0	0.0	10.9	0.0	0.29	0.0	0.05	0.0	-0.02
						21.8	0.0	-0.82	0.0	0.05	0.0	-0.05
64	4	-0.01	0.0	0.0	-1.91	0.0	0.0	1.21	0.0	0.04	0.0	-0.09
		-0.09	0.0	0.0	0.0	10.9	0.0	0.25	0.0	0.04	0.0	-0.01
						21.8	0.0	-0.70	0.0	0.04	0.0	-0.04
65	1	0.06	0.0	0.0	-3.56	0.0	0.0	2.38	0.0	0.09	0.0	-0.08
		-0.08	0.0	0.0	0.0	10.9	0.0	0.13	0.0	0.09	0.0	0.06
						21.8	0.0	-1.18	0.0	0.09	0.0	-0.03
65	2	0.04	0.0	0.0	-2.40	0.0	0.0	1.60	0.0	0.06	0.0	-0.05
		-0.05	0.0	0.0	0.0	10.9	0.0	0.09	0.0	0.06	0.0	0.04
						21.8	0.0	-0.80	0.0	0.06	0.0	-0.02
65	3	0.03	0.0	0.0	-1.77	0.0	0.0	1.18	0.0	0.05	0.0	-0.04
		-0.04	0.0	0.0	0.0	10.9	0.0	0.07	0.0	0.05	0.0	0.03
						21.8	0.0	-0.60	0.0	0.05	0.0	-0.01
65	4	0.02	0.0	0.0	-1.52	0.0	0.0	1.01	0.0	0.04	0.0	-0.03
		-0.03	0.0	0.0	0.0	10.9	0.0	0.06	0.0	0.04	0.0	0.02
						21.8	0.0	-0.51	0.0	0.04	0.0	-0.01
66	1	8.64e-03	0.0	0.0	-0.41	0.0	0.0	0.24	0.0	0.03	0.0	-0.01
		-0.01	0.0	0.0	0.0	15.3	0.0	0.04	0.0	0.03	0.0	8.06e-03
						30.6	0.0	-0.17	0.0	0.03	0.0	-1.51e-03
66	2	6.62e-03	0.0	0.0	-0.31	0.0	0.0	0.18	0.0	0.02	0.0	-9.94e-03
		-9.94e-03	0.0	0.0	0.0	15.3	0.0	0.03	0.0	0.02	0.0	6.20e-03
						30.6	0.0	-0.13	0.0	0.02	0.0	-1.05e-03
66	3	6.58e-03	0.0	0.0	-0.29	0.0	0.0	0.17	0.0	0.01	0.0	-9.21e-03
		-9.21e-03	0.0	0.0	0.0	15.3	0.0	0.03	0.0	0.01	0.0	6.20e-03

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						30.6	0.0	-0.12	0.0	0.01	0.0	-8.52e-04
66	4	6.56e-03	0.0	0.0	-0.29	0.0	0.0	0.17	0.0	0.01	0.0	-8.91e-03
		-8.91e-03	0.0	0.0	0.0	15.3	0.0	0.03	0.0	0.01	0.0	6.21e-03
						30.6	0.0	-0.12	0.0	0.01	0.0	-7.71e-04
67	1	0.11	0.0	-1.06e-06	-6.58	0.0	0.0	3.30	0.0	-9.33e-04	0.0	-0.22
		-0.22	0.0	0.0	0.0	20.0	0.0	2.77e-03	0.0	-9.33e-04	0.0	0.11
						40.0	0.0	-3.28	0.0	-9.33e-04	0.0	-0.22
67	2	0.07	0.0	0.0	-4.43	0.0	0.0	2.23	0.0	-6.64e-04	0.0	-0.15
		-0.15	0.0	0.0	0.0	20.0	0.0	1.84e-03	0.0	-6.64e-04	0.0	0.07
						40.0	0.0	-2.21	0.0	-6.64e-04	0.0	-0.15
67	3	0.05	0.0	0.0	-3.27	0.0	0.0	1.64	0.0	-5.65e-04	0.0	-0.11
		-0.11	0.0	0.0	0.0	20.0	0.0	1.30e-03	0.0	-5.65e-04	0.0	0.05
						40.0	0.0	-1.63	0.0	-5.65e-04	0.0	-0.11
67	4	0.05	0.0	0.0	-2.81	0.0	0.0	1.41	0.0	-5.25e-04	0.0	-0.09
		-0.09	0.0	0.0	0.0	20.0	0.0	1.09e-03	0.0	-5.25e-04	0.0	0.05
						40.0	0.0	-1.40	0.0	-5.25e-04	0.0	-0.09
68	1	0.11	0.0	-1.09e-06	-6.75	0.0	0.0	3.38	0.0	-9.33e-04	0.0	-0.22
		-0.22	0.0	0.0	0.0	20.0	0.0	-2.84e-03	0.0	-9.33e-04	0.0	0.11
						40.0	0.0	-3.37	0.0	-9.33e-04	0.0	-0.22
68	2	0.08	0.0	0.0	-4.55	0.0	0.0	2.28	0.0	-6.64e-04	0.0	-0.15
		-0.15	0.0	0.0	0.0	20.0	0.0	-1.93e-03	0.0	-6.64e-04	0.0	0.08
						40.0	0.0	-2.27	0.0	-6.64e-04	0.0	-0.15
68	3	0.06	0.0	0.0	-3.35	0.0	0.0	1.68	0.0	-5.65e-04	0.0	-0.11
		-0.11	0.0	0.0	0.0	20.0	0.0	-1.48e-03	0.0	-5.65e-04	0.0	0.06
						40.0	0.0	-1.67	0.0	-5.65e-04	0.0	-0.11
68	4	0.05	0.0	0.0	-2.88	0.0	0.0	1.44	0.0	-5.25e-04	0.0	-0.10
		-0.10	0.0	0.0	0.0	20.0	0.0	-1.29e-03	0.0	-5.25e-04	0.0	0.05
						40.0	0.0	-1.43	0.0	-5.25e-04	0.0	-0.10

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
69	1	0.10	0.0	0.0	-6.41	0.0	0.0	3.16	0.0	-9.33e-04	0.0	-0.21
		-0.23	0.0	0.0	0.0	20.0	0.0	-0.06	0.0	-9.33e-04	0.0	0.10
						40.0	0.0	-3.25	0.0	-9.33e-04	0.0	-0.23
69	2	0.07	0.0	0.0	-4.32	0.0	0.0	2.13	0.0	-6.64e-04	0.0	-0.14
		-0.16	0.0	0.0	0.0	20.0	0.0	-0.04	0.0	-6.64e-04	0.0	0.07
						40.0	0.0	-2.19	0.0	-6.64e-04	0.0	-0.16
69	3	0.05	0.0	0.0	-3.19	0.0	0.0	1.57	0.0	-5.65e-04	0.0	-0.11
		-0.12	0.0	0.0	0.0	20.0	0.0	-0.03	0.0	-5.65e-04	0.0	0.05
						40.0	0.0	-1.62	0.0	-5.65e-04	0.0	-0.12
69	4	0.04	0.0	0.0	-2.74	0.0	0.0	1.35	0.0	-5.25e-04	0.0	-0.09
		-0.10	0.0	0.0	0.0	20.0	0.0	-0.02	0.0	-5.25e-04	0.0	0.04
						40.0	0.0	-1.39	0.0	-5.25e-04	0.0	-0.10
70	1	0.10	0.0	-1.06e-06	-6.84	0.0	0.0	3.50	0.0	-9.33e-04	0.0	-0.25
		-0.25	0.0	0.0	0.0	20.0	0.0	0.06	0.0	-9.33e-04	0.0	0.10
						40.0	0.0	-3.34	0.0	-9.33e-04	0.0	-0.22
70	2	0.07	0.0	0.0	-4.61	0.0	0.0	2.35	0.0	-6.64e-04	0.0	-0.17
		-0.17	0.0	0.0	0.0	20.0	0.0	0.04	0.0	-6.64e-04	0.0	0.07
						40.0	0.0	-2.25	0.0	-6.64e-04	0.0	-0.15
70	3	0.05	0.0	0.0	-3.40	0.0	0.0	1.73	0.0	-5.65e-04	0.0	-0.12
		-0.12	0.0	0.0	0.0	20.0	0.0	0.03	0.0	-5.65e-04	0.0	0.05
						40.0	0.0	-1.66	0.0	-5.65e-04	0.0	-0.11
70	4	0.04	0.0	0.0	-2.91	0.0	0.0	1.49	0.0	-5.25e-04	0.0	-0.11
		-0.11	0.0	0.0	0.0	20.0	0.0	0.03	0.0	-5.25e-04	0.0	0.04
						40.0	0.0	-1.42	0.0	-5.25e-04	0.0	-0.10
71	1	0.11	0.0	-1.05e-06	-6.50	0.0	0.0	3.27	0.0	-9.33e-04	0.0	-0.22
		-0.22	0.0	0.0	0.0	20.0	0.0	0.01	0.0	-9.33e-04	0.0	0.11
						40.0	0.0	-3.23	0.0	-9.33e-04	0.0	-0.21
71	2	0.07	0.0	0.0	-4.38	0.0	0.0	2.20	0.0	-6.64e-04	0.0	-0.15

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.15	0.0	0.0	0.0	20.0	0.0	6.80e-03	0.0	-6.64e-04	0.0	0.07
						40.0	0.0	-2.18	0.0	-6.64e-04	0.0	-0.14
71	3	0.05	0.0	0.0	-3.23	0.0	0.0	1.63	0.0	-5.65e-04	0.0	-0.11
		-0.11	0.0	0.0	0.0	20.0	0.0	4.97e-03	0.0	-5.65e-04	0.0	0.05
						40.0	0.0	-1.61	0.0	-5.65e-04	0.0	-0.11
71	4	0.05	0.0	0.0	-2.77	0.0	0.0	1.40	0.0	-5.25e-04	0.0	-0.09
		-0.09	0.0	0.0	0.0	20.0	0.0	4.24e-03	0.0	-5.25e-04	0.0	0.05
						40.0	0.0	-1.38	0.0	-5.25e-04	0.0	-0.09
72	1	0.11	0.0	-1.07e-06	-6.66	0.0	0.0	3.35	0.0	-9.33e-04	0.0	-0.22
		-0.22	0.0	0.0	0.0	20.0	0.0	4.19e-03	0.0	-9.33e-04	0.0	0.11
						40.0	0.0	-3.32	0.0	-9.33e-04	0.0	-0.22
72	2	0.07	0.0	0.0	-4.49	0.0	0.0	2.25	0.0	-6.64e-04	0.0	-0.15
		-0.15	0.0	0.0	0.0	20.0	0.0	2.80e-03	0.0	-6.64e-04	0.0	0.07
						40.0	0.0	-2.23	0.0	-6.64e-04	0.0	-0.15
72	3	0.06	0.0	0.0	-3.31	0.0	0.0	1.66	0.0	-5.65e-04	0.0	-0.11
		-0.11	0.0	0.0	0.0	20.0	0.0	2.01e-03	0.0	-5.65e-04	0.0	0.06
						40.0	0.0	-1.65	0.0	-5.65e-04	0.0	-0.11
72	4	0.05	0.0	0.0	-2.84	0.0	0.0	1.43	0.0	-5.25e-04	0.0	-0.10
		-0.10	0.0	0.0	0.0	20.0	0.0	1.70e-03	0.0	-5.25e-04	0.0	0.05
						40.0	0.0	-1.41	0.0	-5.25e-04	0.0	-0.09
73	1	0.21	0.0	-1.39e-06	-6.29	0.0	0.0	3.75	0.0	-9.33e-04	0.0	-0.23
		-0.23	0.0	0.0	0.0	20.0	0.0	0.58	0.0	-9.33e-04	0.0	0.20
						40.0	0.0	-2.53	0.0	-9.33e-04	0.0	-1.37e-03
73	2	0.14	0.0	0.0	-4.24	0.0	0.0	2.53	0.0	-6.64e-04	0.0	-0.16
		-0.16	0.0	0.0	0.0	20.0	0.0	0.39	0.0	-6.64e-04	0.0	0.13
						40.0	0.0	-1.71	0.0	-6.64e-04	0.0	-9.32e-04
73	3	0.10	0.0	0.0	-3.13	0.0	0.0	1.87	0.0	-5.65e-04	0.0	-0.12
		-0.12	0.0	0.0	0.0	20.0	0.0	0.29	0.0	-5.65e-04	0.0	0.10



**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						40.0	0.0	-1.26	0.0	-5.65e-04	0.0	-6.51e-04
73	4	0.09	0.0	0.0	-2.69	0.0	0.0	1.60	0.0	-5.25e-04	0.0	-0.10
		-0.10	0.0	0.0	0.0	20.0	0.0	0.25	0.0	-5.25e-04	0.0	0.08
						40.0	0.0	-1.08	0.0	-5.25e-04	0.0	-5.39e-04
74	1	5.64e-03	0.0	0.0	-0.39	0.0	0.0	0.19	0.0	1.26e-03	0.0	-0.01
		-0.01	0.0	0.0	0.0	17.4	0.0	-4.20e-06	0.0	1.26e-03	0.0	5.64e-03
						34.8	0.0	-0.19	0.0	1.26e-03	0.0	-0.01
74	2	4.34e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	8.56e-04	0.0	-8.68e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	-3.23e-06	0.0	8.56e-04	0.0	4.34e-03
						34.8	0.0	-0.15	0.0	8.56e-04	0.0	-8.69e-03
74	3	4.34e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	5.87e-04	0.0	-8.68e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	-3.22e-06	0.0	5.87e-04	0.0	4.34e-03
						34.8	0.0	-0.15	0.0	5.87e-04	0.0	-8.69e-03
74	4	4.34e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	4.79e-04	0.0	-8.68e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	-3.21e-06	0.0	4.79e-04	0.0	4.34e-03
						34.8	0.0	-0.15	0.0	4.79e-04	0.0	-8.69e-03
75	1	5.67e-03	0.0	0.0	-0.39	0.0	0.0	0.19	0.0	1.26e-03	0.0	-0.01
		-0.01	0.0	0.0	0.0	17.4	0.0	-1.58e-04	0.0	1.26e-03	0.0	5.67e-03
						34.8	0.0	-0.20	0.0	1.26e-03	0.0	-0.01
75	2	4.36e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	8.56e-04	0.0	-8.65e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	-1.22e-04	0.0	8.56e-04	0.0	4.36e-03
						34.8	0.0	-0.15	0.0	8.56e-04	0.0	-8.69e-03
75	3	4.36e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	5.87e-04	0.0	-8.64e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	-1.24e-04	0.0	5.87e-04	0.0	4.36e-03
						34.8	0.0	-0.15	0.0	5.87e-04	0.0	-8.69e-03
75	4	4.36e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	4.79e-04	0.0	-8.64e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	-1.25e-04	0.0	4.79e-04	0.0	4.36e-03
						34.8	0.0	-0.15	0.0	4.79e-04	0.0	-8.69e-03

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
76	1	5.57e-03	0.0	0.0	-0.39	0.0	0.0	0.19	0.0	1.26e-03	0.0	-0.01
		-0.01	0.0	0.0	0.0	17.4	0.0	-5.06e-04	0.0	1.26e-03	0.0	5.57e-03
						34.8	0.0	-0.20	0.0	1.26e-03	0.0	-0.01
76	2	4.28e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	8.56e-04	0.0	-8.68e-03
		-8.82e-03	0.0	0.0	0.0	17.4	0.0	-4.04e-04	0.0	8.56e-04	0.0	4.28e-03
						34.8	0.0	-0.15	0.0	8.56e-04	0.0	-8.82e-03
76	3	4.28e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	5.87e-04	0.0	-8.67e-03
		-8.82e-03	0.0	0.0	0.0	17.4	0.0	-4.30e-04	0.0	5.87e-04	0.0	4.28e-03
						34.8	0.0	-0.15	0.0	5.87e-04	0.0	-8.82e-03
76	4	4.28e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	4.79e-04	0.0	-8.67e-03
		-8.83e-03	0.0	0.0	0.0	17.4	0.0	-4.41e-04	0.0	4.79e-04	0.0	4.28e-03
						34.8	0.0	-0.15	0.0	4.79e-04	0.0	-8.83e-03
77	1	5.31e-03	0.0	0.0	-0.39	0.0	0.0	0.20	0.0	1.26e-03	0.0	-0.01
		-0.01	0.0	0.0	0.0	17.4	0.0	2.22e-03	0.0	1.26e-03	0.0	5.31e-03
						34.8	0.0	-0.19	0.0	1.26e-03	0.0	-0.01
77	2	4.08e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	8.56e-04	0.0	-9.24e-03
		-9.24e-03	0.0	0.0	0.0	17.4	0.0	1.72e-03	0.0	8.56e-04	0.0	4.08e-03
						34.8	0.0	-0.15	0.0	8.56e-04	0.0	-8.65e-03
77	3	4.08e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	5.87e-04	0.0	-9.25e-03
		-9.25e-03	0.0	0.0	0.0	17.4	0.0	1.75e-03	0.0	5.87e-04	0.0	4.08e-03
						34.8	0.0	-0.15	0.0	5.87e-04	0.0	-8.64e-03
77	4	4.08e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	4.79e-04	0.0	-9.26e-03
		-9.26e-03	0.0	0.0	0.0	17.4	0.0	1.76e-03	0.0	4.79e-04	0.0	4.08e-03
						34.8	0.0	-0.15	0.0	4.79e-04	0.0	-8.64e-03
78	1	5.65e-03	0.0	0.0	-0.39	0.0	0.0	0.19	0.0	1.26e-03	0.0	-0.01
		-0.01	0.0	0.0	0.0	17.4	0.0	3.73e-05	0.0	1.26e-03	0.0	5.65e-03
						34.8	0.0	-0.19	0.0	1.26e-03	0.0	-0.01
78	2	4.35e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	8.56e-04	0.0	-8.69e-03

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	2.97e-05	0.0	8.56e-04	0.0	4.35e-03
						34.8	0.0	-0.15	0.0	8.56e-04	0.0	-8.68e-03
78	3	4.35e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	5.87e-04	0.0	-8.69e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	3.12e-05	0.0	5.87e-04	0.0	4.35e-03
						34.8	0.0	-0.15	0.0	5.87e-04	0.0	-8.67e-03
78	4	4.35e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	4.79e-04	0.0	-8.69e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	3.19e-05	0.0	4.79e-04	0.0	4.35e-03
						34.8	0.0	-0.15	0.0	4.79e-04	0.0	-8.67e-03
79	1	5.64e-03	0.0	0.0	-0.39	0.0	0.0	0.19	0.0	1.26e-03	0.0	-0.01
		-0.01	0.0	0.0	0.0	17.4	0.0	1.14e-05	0.0	1.26e-03	0.0	5.64e-03
						34.8	0.0	-0.19	0.0	1.26e-03	0.0	-0.01
79	2	4.34e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	8.56e-04	0.0	-8.69e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	8.82e-06	0.0	8.56e-04	0.0	4.34e-03
						34.8	0.0	-0.15	0.0	8.56e-04	0.0	-8.68e-03
79	3	4.34e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	5.87e-04	0.0	-8.69e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	8.94e-06	0.0	5.87e-04	0.0	4.34e-03
						34.8	0.0	-0.15	0.0	5.87e-04	0.0	-8.68e-03
79	4	4.34e-03	0.0	0.0	-0.30	0.0	0.0	0.15	0.0	4.79e-04	0.0	-8.69e-03
		-8.69e-03	0.0	0.0	0.0	17.4	0.0	8.99e-06	0.0	4.79e-04	0.0	4.34e-03
						34.8	0.0	-0.15	0.0	4.79e-04	0.0	-8.68e-03
80	1	6.72e-03	0.0	0.0	-0.39	0.0	0.0	0.20	0.0	1.26e-03	0.0	-0.01
		-0.01	0.0	0.0	0.0	17.4	0.0	7.15e-03	0.0	1.26e-03	0.0	6.72e-03
						34.8	0.0	-0.19	0.0	1.26e-03	0.0	-8.97e-03
80	2	5.21e-03	0.0	0.0	-0.30	0.0	0.0	0.16	0.0	8.56e-04	0.0	-8.82e-03
		-8.82e-03	0.0	0.0	0.0	17.4	0.0	5.72e-03	0.0	8.56e-04	0.0	5.21e-03
						34.8	0.0	-0.14	0.0	8.56e-04	0.0	-6.83e-03
80	3	5.26e-03	0.0	0.0	-0.30	0.0	0.0	0.16	0.0	5.87e-04	0.0	-8.82e-03
		-8.82e-03	0.0	0.0	0.0	17.4	0.0	6.09e-03	0.0	5.87e-04	0.0	5.26e-03

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						34.8	0.0	-0.14	0.0	5.87e-04	0.0	-6.71e-03
80	4	5.28e-03	0.0	0.0	-0.30	0.0	0.0	0.16	0.0	4.79e-04	0.0	-8.83e-03
		-8.83e-03	0.0	0.0	0.0	17.4	0.0	6.24e-03	0.0	4.79e-04	0.0	5.28e-03
						34.8	0.0	-0.14	0.0	4.79e-04	0.0	-6.66e-03
81	1	0.09	0.0	0.0	-6.59	0.0	0.0	3.29	0.0	-3.26e-03	0.0	-0.17
		-0.17	0.0	0.0	0.0	15.8	0.0	-1.27e-03	0.0	-3.26e-03	0.0	0.09
						31.5	0.0	-3.29	0.0	-3.26e-03	0.0	-0.17
81	2	0.06	0.0	0.0	-4.43	0.0	0.0	2.21	0.0	-2.43e-03	0.0	-0.12
		-0.12	0.0	0.0	0.0	15.8	0.0	-8.14e-04	0.0	-2.43e-03	0.0	0.06
						31.5	0.0	-2.21	0.0	-2.43e-03	0.0	-0.12
81	3	0.04	0.0	0.0	-3.25	0.0	0.0	1.62	0.0	-2.29e-03	0.0	-0.09
		-0.09	0.0	0.0	0.0	15.8	0.0	-6.91e-04	0.0	-2.29e-03	0.0	0.04
						31.5	0.0	-1.62	0.0	-2.29e-03	0.0	-0.09
81	4	0.04	0.0	0.0	-2.77	0.0	0.0	1.39	0.0	-2.23e-03	0.0	-0.07
		-0.07	0.0	0.0	0.0	15.8	0.0	-6.42e-04	0.0	-2.23e-03	0.0	0.04
						31.5	0.0	-1.39	0.0	-2.23e-03	0.0	-0.07
82	1	0.09	0.0	0.0	-6.58	0.0	0.0	3.29	0.0	-3.26e-03	0.0	-0.17
		-0.17	0.0	0.0	0.0	15.8	0.0	2.18e-05	0.0	-3.26e-03	0.0	0.09
						31.5	0.0	-3.29	0.0	-3.26e-03	0.0	-0.17
82	2	0.06	0.0	0.0	-4.43	0.0	0.0	2.21	0.0	-2.43e-03	0.0	-0.12
		-0.12	0.0	0.0	0.0	15.8	0.0	1.16e-05	0.0	-2.43e-03	0.0	0.06
						31.5	0.0	-2.21	0.0	-2.43e-03	0.0	-0.12
82	3	0.04	0.0	0.0	-3.25	0.0	0.0	1.62	0.0	-2.29e-03	0.0	-0.09
		-0.09	0.0	0.0	0.0	15.8	0.0	1.04e-05	0.0	-2.29e-03	0.0	0.04
						31.5	0.0	-1.62	0.0	-2.29e-03	0.0	-0.09
82	4	0.04	0.0	0.0	-2.77	0.0	0.0	1.39	0.0	-2.23e-03	0.0	-0.07
		-0.07	0.0	0.0	0.0	15.8	0.0	9.89e-06	0.0	-2.23e-03	0.0	0.04
						31.5	0.0	-1.39	0.0	-2.23e-03	0.0	-0.07

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
83	1	0.09	0.0	0.0	-6.59	0.0	0.0	3.32	0.0	-3.26e-03	0.0	-0.17
		-0.17	0.0	0.0	0.0	15.8	0.0	0.03	0.0	-3.26e-03	0.0	0.09
						31.5	0.0	-3.27	0.0	-3.26e-03	0.0	-0.16
83	2	0.06	0.0	0.0	-4.43	0.0	0.0	2.23	0.0	-2.43e-03	0.0	-0.12
		-0.12	0.0	0.0	0.0	15.8	0.0	0.02	0.0	-2.43e-03	0.0	0.06
						31.5	0.0	-2.20	0.0	-2.43e-03	0.0	-0.11
83	3	0.04	0.0	0.0	-3.25	0.0	0.0	1.64	0.0	-2.29e-03	0.0	-0.09
		-0.09	0.0	0.0	0.0	15.8	0.0	0.02	0.0	-2.29e-03	0.0	0.04
						31.5	0.0	-1.61	0.0	-2.29e-03	0.0	-0.08
83	4	0.04	0.0	0.0	-2.77	0.0	0.0	1.40	0.0	-2.23e-03	0.0	-0.07
		-0.07	0.0	0.0	0.0	15.8	0.0	0.01	0.0	-2.23e-03	0.0	0.04
						31.5	0.0	-1.37	0.0	-2.23e-03	0.0	-0.07
84	1	0.11	0.0	0.0	-8.44	0.0	0.0	4.19	0.0	0.02	0.0	-0.22
		-0.24	0.0	0.0	0.0	16.0	0.0	-0.03	0.0	0.02	0.0	0.11
						32.0	0.0	-4.25	0.0	0.02	0.0	-0.24
84	2	0.07	0.0	0.0	-5.66	0.0	0.0	2.81	0.0	0.01	0.0	-0.15
		-0.16	0.0	0.0	0.0	16.0	0.0	-0.02	0.0	0.01	0.0	0.07
						32.0	0.0	-2.85	0.0	0.01	0.0	-0.16
84	3	0.06	0.0	0.0	-4.77	0.0	0.0	2.37	0.0	9.97e-03	0.0	-0.13
		-0.13	0.0	0.0	0.0	16.0	0.0	-0.02	0.0	9.97e-03	0.0	0.06
						32.0	0.0	-2.40	0.0	9.97e-03	0.0	-0.13
84	4	0.06	0.0	0.0	-4.41	0.0	0.0	2.19	0.0	9.57e-03	0.0	-0.12
		-0.12	0.0	0.0	0.0	16.0	0.0	-0.02	0.0	9.57e-03	0.0	0.06
						32.0	0.0	-2.22	0.0	9.57e-03	0.0	-0.12
85	1	0.11	0.0	-1.00e-06	-8.43	0.0	0.0	4.21	0.0	0.02	0.0	-0.22
		-0.22	0.0	0.0	0.0	16.0	0.0	1.14e-03	0.0	0.02	0.0	0.11
						32.0	0.0	-4.21	0.0	0.02	0.0	-0.22
85	2	0.08	0.0	0.0	-5.65	0.0	0.0	2.83	0.0	0.01	0.0	-0.15

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.15	0.0	0.0	0.0	16.0	0.0	7.64e-04	0.0	0.01	0.0	0.08
						32.0	0.0	-2.83	0.0	0.01	0.0	-0.15
85	3	0.06	0.0	0.0	-4.76	0.0	0.0	2.38	0.0	9.97e-03	0.0	-0.13
		-0.13	0.0	0.0	0.0	16.0	0.0	6.48e-04	0.0	9.97e-03	0.0	0.06
						32.0	0.0	-2.38	0.0	9.97e-03	0.0	-0.13
85	4	0.06	0.0	0.0	-4.41	0.0	0.0	2.20	0.0	9.57e-03	0.0	-0.12
		-0.12	0.0	0.0	0.0	16.0	0.0	6.01e-04	0.0	9.57e-03	0.0	0.06
						32.0	0.0	-2.20	0.0	9.57e-03	0.0	-0.12
86	1	0.22	0.0	-1.26e-06	-8.45	0.0	0.0	4.91	0.0	0.02	0.0	-0.24
		-0.24	0.0	0.0	0.0	16.0	0.0	0.68	0.0	0.02	0.0	0.21
						32.0	0.0	-3.54	0.0	0.02	0.0	-0.02
86	2	0.15	0.0	0.0	-5.67	0.0	0.0	3.29	0.0	0.01	0.0	-0.16
		-0.16	0.0	0.0	0.0	16.0	0.0	0.46	0.0	0.01	0.0	0.14
						32.0	0.0	-2.38	0.0	0.01	0.0	-0.01
86	3	0.12	0.0	0.0	-4.78	0.0	0.0	2.78	0.0	9.97e-03	0.0	-0.13
		-0.13	0.0	0.0	0.0	16.0	0.0	0.39	0.0	9.97e-03	0.0	0.12
						32.0	0.0	-2.00	0.0	9.97e-03	0.0	-9.05e-03
86	4	0.12	0.0	0.0	-4.42	0.0	0.0	2.57	0.0	9.57e-03	0.0	-0.12
		-0.12	0.0	0.0	0.0	16.0	0.0	0.36	0.0	9.57e-03	0.0	0.11
						32.0	0.0	-1.85	0.0	9.57e-03	0.0	-8.36e-03
87	1	1.55e-03	0.0	0.0	-0.27	0.0	0.0	-1.10	0.0	0.03	0.0	1.55e-03
		-0.28	0.0	0.0	0.0	11.5	0.0	-1.23	0.0	0.03	0.0	-0.13
						23.0	0.0	-1.36	0.0	0.03	0.0	-0.28
87	2	8.34e-04	0.0	0.0	-0.21	0.0	0.0	-0.77	0.0	0.02	0.0	8.34e-04
		-0.20	0.0	0.0	0.0	11.5	0.0	-0.87	0.0	0.02	0.0	-0.09
						23.0	0.0	-0.98	0.0	0.02	0.0	-0.20
87	3	4.44e-04	0.0	0.0	-0.21	0.0	0.0	-0.69	0.0	0.02	0.0	4.44e-04
		-0.18	0.0	0.0	0.0	11.5	0.0	-0.79	0.0	0.02	0.0	-0.08

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						23.0	0.0	-0.90	0.0	0.02	0.0	-0.18
87	4	2.88e-04	0.0	0.0	-0.21	0.0	0.0	-0.66	0.0	0.02	0.0	2.88e-04
		-0.18	0.0	0.0	0.0	11.5	0.0	-0.76	0.0	0.02	0.0	-0.08
						23.0	0.0	-0.87	0.0	0.02	0.0	-0.18
88	1	-2.30e-03	0.0	0.0	-0.26	0.0	0.0	0.08	0.0	-4.31e-04	0.0	-4.71e-03
		-0.02	0.0	0.0	0.0	11.0	0.0	-0.05	0.0	-4.31e-04	0.0	-3.51e-03
						22.0	0.0	-0.18	0.0	-4.31e-04	0.0	-0.02
88	2	-1.44e-03	0.0	0.0	-0.20	0.0	0.0	0.06	0.0	-2.89e-04	0.0	-3.63e-03
		-0.01	0.0	0.0	0.0	11.0	0.0	-0.04	0.0	-2.89e-04	0.0	-2.18e-03
						22.0	0.0	-0.14	0.0	-2.89e-04	0.0	-0.01
88	3	-1.09e-03	0.0	0.0	-0.20	0.0	0.0	0.07	0.0	-2.24e-04	0.0	-3.62e-03
		-0.01	0.0	0.0	0.0	11.0	0.0	-0.03	0.0	-2.24e-04	0.0	-1.61e-03
						22.0	0.0	-0.13	0.0	-2.24e-04	0.0	-0.01
88	4	-9.24e-04	0.0	0.0	-0.20	0.0	0.0	0.07	0.0	-1.98e-04	0.0	-3.62e-03
		-0.01	0.0	0.0	0.0	11.0	0.0	-0.03	0.0	-1.98e-04	0.0	-1.39e-03
						22.0	0.0	-0.13	0.0	-1.98e-04	0.0	-0.01
89	1	0.02	0.0	0.0	-0.76	0.0	0.0	0.38	0.0	-0.02	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	3.42e-04	0.0	-0.02	0.0	0.02
						67.5	0.0	-0.38	0.0	-0.02	0.0	-0.04
89	2	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	2.63e-04	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
89	3	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	2.63e-04	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
89	4	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	2.63e-04	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
90	1	0.04	0.0	0.0	-0.76	0.0	0.0	0.45	0.0	-0.02	0.0	-0.05
		-0.05	0.0	0.0	0.0	33.8	0.0	0.07	0.0	-0.02	0.0	0.04
						67.5	0.0	-0.30	0.0	-0.02	0.0	-9.55e-04
90	2	0.03	0.0	0.0	-0.58	0.0	0.0	0.35	0.0	-0.01	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	0.06	0.0	-0.01	0.0	0.03
						67.5	0.0	-0.23	0.0	-0.01	0.0	-6.75e-04
90	3	0.03	0.0	0.0	-0.58	0.0	0.0	0.35	0.0	-0.01	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	0.06	0.0	-0.01	0.0	0.03
						67.5	0.0	-0.23	0.0	-0.01	0.0	-6.10e-04
90	4	0.03	0.0	0.0	-0.58	0.0	0.0	0.35	0.0	-0.01	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	0.06	0.0	-0.01	0.0	0.03
						67.5	0.0	-0.23	0.0	-0.01	0.0	-5.85e-04
91	1	3.95e-03	0.0	0.0	-0.26	0.0	0.0	0.15	0.0	-8.14e-03	0.0	-5.05e-03
		-5.05e-03	0.0	0.0	0.0	11.1	0.0	0.02	0.0	-8.14e-03	0.0	3.85e-03
						22.2	0.0	-0.11	0.0	-8.14e-03	0.0	-1.66e-03
91	2	3.07e-03	0.0	0.0	-0.20	0.0	0.0	0.11	0.0	-5.46e-03	0.0	-3.87e-03
		-3.87e-03	0.0	0.0	0.0	11.1	0.0	0.01	0.0	-5.46e-03	0.0	2.99e-03
						22.2	0.0	-0.09	0.0	-5.46e-03	0.0	-1.24e-03
91	3	3.11e-03	0.0	0.0	-0.20	0.0	0.0	0.11	0.0	-4.69e-03	0.0	-3.83e-03
		-3.83e-03	0.0	0.0	0.0	11.1	0.0	0.01	0.0	-4.69e-03	0.0	3.03e-03
						22.2	0.0	-0.09	0.0	-4.69e-03	0.0	-1.19e-03
91	4	3.13e-03	0.0	0.0	-0.20	0.0	0.0	0.11	0.0	-4.38e-03	0.0	-3.82e-03
		-3.82e-03	0.0	0.0	0.0	11.1	0.0	0.01	0.0	-4.38e-03	0.0	3.05e-03
						22.2	0.0	-0.09	0.0	-4.38e-03	0.0	-1.17e-03
92	1	-3.87e-03	0.0	0.0	-0.27	0.0	0.0	0.04	0.0	-0.01	0.0	-4.69e-03
		-0.03	0.0	0.0	0.0	11.5	0.0	-0.09	0.0	-0.01	0.0	-7.32e-03
						23.0	0.0	-0.22	0.0	-0.01	0.0	-0.03
92	2	-2.98e-03	0.0	0.0	-0.21	0.0	0.0	0.03	0.0	-9.72e-03	0.0	-3.61e-03



**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.02	0.0	0.0	0.0	11.5	0.0	-0.07	0.0	-9.72e-03	0.0	-5.64e-03
						23.0	0.0	-0.17	0.0	-9.72e-03	0.0	-0.02
92	3	-2.98e-03	0.0	0.0	-0.21	0.0	0.0	0.03	0.0	-9.55e-03	0.0	-3.61e-03
		-0.02	0.0	0.0	0.0	11.5	0.0	-0.07	0.0	-9.55e-03	0.0	-5.65e-03
						23.0	0.0	-0.17	0.0	-9.55e-03	0.0	-0.02
92	4	-2.98e-03	0.0	0.0	-0.21	0.0	0.0	0.03	0.0	-9.48e-03	0.0	-3.61e-03
		-0.02	0.0	0.0	0.0	11.5	0.0	-0.07	0.0	-9.48e-03	0.0	-5.65e-03
						23.0	0.0	-0.17	0.0	-9.48e-03	0.0	-0.02
93	1	0.08	0.0	0.0	-5.57	0.0	0.0	2.78	0.0	1.31e-03	0.0	-0.16
		-0.16	0.0	0.0	0.0	17.1	0.0	-2.52e-03	0.0	1.31e-03	0.0	0.08
						34.3	0.0	-2.80	0.0	1.31e-03	0.0	-0.16
93	2	0.05	0.0	0.0	-3.75	0.0	0.0	1.87	0.0	9.16e-04	0.0	-0.11
		-0.11	0.0	0.0	0.0	17.1	0.0	-1.68e-03	0.0	9.16e-04	0.0	0.05
						34.3	0.0	-1.88	0.0	9.16e-04	0.0	-0.11
93	3	0.04	0.0	0.0	-2.77	0.0	0.0	1.38	0.0	7.49e-04	0.0	-0.08
		-0.08	0.0	0.0	0.0	17.1	0.0	-1.17e-03	0.0	7.49e-04	0.0	0.04
						34.3	0.0	-1.39	0.0	7.49e-04	0.0	-0.08
93	4	0.03	0.0	0.0	-2.38	0.0	0.0	1.19	0.0	6.82e-04	0.0	-0.07
		-0.07	0.0	0.0	0.0	17.1	0.0	-9.66e-04	0.0	6.82e-04	0.0	0.03
						34.3	0.0	-1.19	0.0	6.82e-04	0.0	-0.07
94	1	0.07	0.0	0.0	-5.51	0.0	0.0	2.78	0.0	1.31e-03	0.0	-0.17
		-0.17	0.0	0.0	0.0	17.1	0.0	0.03	0.0	1.31e-03	0.0	0.07
						34.3	0.0	-2.73	0.0	1.31e-03	0.0	-0.16
94	2	0.05	0.0	0.0	-3.71	0.0	0.0	1.87	0.0	9.16e-04	0.0	-0.11
		-0.11	0.0	0.0	0.0	17.1	0.0	0.02	0.0	9.16e-04	0.0	0.05
						34.3	0.0	-1.84	0.0	9.16e-04	0.0	-0.11
94	3	0.04	0.0	0.0	-2.74	0.0	0.0	1.38	0.0	7.49e-04	0.0	-0.08
		-0.08	0.0	0.0	0.0	17.1	0.0	0.02	0.0	7.49e-04	0.0	0.04

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						34.3	0.0	-1.36	0.0	7.49e-04	0.0	-0.08
94	4	0.03	0.0	0.0	-2.35	0.0	0.0	1.19	0.0	6.82e-04	0.0	-0.07
		-0.07	0.0	0.0	0.0	17.1	0.0	0.01	0.0	6.82e-04	0.0	0.03
						34.3	0.0	-1.17	0.0	6.82e-04	0.0	-0.07
95	1	0.07	0.0	0.0	-5.64	0.0	0.0	2.77	0.0	1.31e-03	0.0	-0.16
		-0.17	0.0	0.0	0.0	17.1	0.0	-0.04	0.0	1.31e-03	0.0	0.07
						34.3	0.0	-2.87	0.0	1.31e-03	0.0	-0.17
95	2	0.05	0.0	0.0	-3.80	0.0	0.0	1.87	0.0	9.16e-04	0.0	-0.11
		-0.12	0.0	0.0	0.0	17.1	0.0	-0.03	0.0	9.16e-04	0.0	0.05
						34.3	0.0	-1.93	0.0	9.16e-04	0.0	-0.12
95	3	0.04	0.0	0.0	-2.80	0.0	0.0	1.38	0.0	7.49e-04	0.0	-0.08
		-0.09	0.0	0.0	0.0	17.1	0.0	-0.02	0.0	7.49e-04	0.0	0.04
						34.3	0.0	-1.43	0.0	7.49e-04	0.0	-0.09
95	4	0.03	0.0	0.0	-2.40	0.0	0.0	1.18	0.0	6.82e-04	0.0	-0.07
		-0.07	0.0	0.0	0.0	17.1	0.0	-0.02	0.0	6.82e-04	0.0	0.03
						34.3	0.0	-1.22	0.0	6.82e-04	0.0	-0.07
96	1	0.13	0.0	-1.17e-06	-8.87	0.0	0.0	4.44	0.0	-1.45e-03	0.0	-0.25
		-0.25	0.0	0.0	0.0	17.3	0.0	8.33e-03	0.0	-1.45e-03	0.0	0.13
						34.5	0.0	-4.43	0.0	-1.45e-03	0.0	-0.25
96	2	0.09	0.0	0.0	-5.95	0.0	0.0	2.98	0.0	-1.10e-03	0.0	-0.17
		-0.17	0.0	0.0	0.0	17.3	0.0	5.59e-03	0.0	-1.10e-03	0.0	0.09
						34.5	0.0	-2.97	0.0	-1.10e-03	0.0	-0.17
96	3	0.07	0.0	0.0	-5.02	0.0	0.0	2.51	0.0	-1.08e-03	0.0	-0.14
		-0.14	0.0	0.0	0.0	17.3	0.0	4.72e-03	0.0	-1.08e-03	0.0	0.07
						34.5	0.0	-2.50	0.0	-1.08e-03	0.0	-0.14
96	4	0.07	0.0	0.0	-4.64	0.0	0.0	2.32	0.0	-1.07e-03	0.0	-0.13
		-0.13	0.0	0.0	0.0	17.3	0.0	4.38e-03	0.0	-1.07e-03	0.0	0.07
						34.5	0.0	-2.32	0.0	-1.07e-03	0.0	-0.13

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
97	1	0.12	0.0	-1.14e-06	-8.85	0.0	0.0	4.48	0.0	-1.45e-03	0.0	-0.27
		-0.27	0.0	0.0	0.0	17.3	0.0	0.05	0.0	-1.45e-03	0.0	0.12
						34.5	0.0	-4.37	0.0	-1.45e-03	0.0	-0.25
97	2	0.08	0.0	0.0	-5.94	0.0	0.0	3.01	0.0	-1.10e-03	0.0	-0.18
		-0.18	0.0	0.0	0.0	17.3	0.0	0.04	0.0	-1.10e-03	0.0	0.08
						34.5	0.0	-2.94	0.0	-1.10e-03	0.0	-0.17
97	3	0.07	0.0	0.0	-5.01	0.0	0.0	2.53	0.0	-1.08e-03	0.0	-0.15
		-0.15	0.0	0.0	0.0	17.3	0.0	0.03	0.0	-1.08e-03	0.0	0.07
						34.5	0.0	-2.47	0.0	-1.08e-03	0.0	-0.14
97	4	0.06	0.0	0.0	-4.63	0.0	0.0	2.34	0.0	-1.07e-03	0.0	-0.14
		-0.14	0.0	0.0	0.0	17.3	0.0	0.03	0.0	-1.07e-03	0.0	0.06
						34.5	0.0	-2.29	0.0	-1.07e-03	0.0	-0.13
98	1	0.10	0.0	-1.08e-06	-8.89	0.0	0.0	4.25	0.0	-1.45e-03	0.0	-0.25
		-0.32	0.0	0.0	0.0	17.3	0.0	-0.19	0.0	-1.45e-03	0.0	0.10
						34.5	0.0	-4.63	0.0	-1.45e-03	0.0	-0.32
98	2	0.07	0.0	0.0	-5.96	0.0	0.0	2.85	0.0	-1.10e-03	0.0	-0.17
		-0.21	0.0	0.0	0.0	17.3	0.0	-0.13	0.0	-1.10e-03	0.0	0.07
						34.5	0.0	-3.11	0.0	-1.10e-03	0.0	-0.21
98	3	0.06	0.0	0.0	-5.03	0.0	0.0	2.41	0.0	-1.08e-03	0.0	-0.14
		-0.18	0.0	0.0	0.0	17.3	0.0	-0.11	0.0	-1.08e-03	0.0	0.06
						34.5	0.0	-2.62	0.0	-1.08e-03	0.0	-0.18
98	4	0.05	0.0	0.0	-4.65	0.0	0.0	2.23	0.0	-1.07e-03	0.0	-0.13
		-0.17	0.0	0.0	0.0	17.3	0.0	-0.10	0.0	-1.07e-03	0.0	0.05
						34.5	0.0	-2.42	0.0	-1.07e-03	0.0	-0.17
99	1	0.19	0.0	-1.86e-06	-10.89	0.0	0.0	5.42	0.0	-8.05e-05	0.0	-0.38
		-0.39	0.0	0.0	0.0	21.0	0.0	-0.02	0.0	-8.05e-05	0.0	0.19
						42.0	0.0	-5.47	0.0	-8.05e-05	0.0	-0.39
99	2	0.13	0.0	-1.25e-06	-7.31	0.0	0.0	3.64	0.0	-5.61e-05	0.0	-0.25

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.26	0.0	0.0	0.0	21.0	0.0	-0.01	0.0	-5.61e-05	0.0	0.13
						42.0	0.0	-3.67	0.0	-5.61e-05	0.0	-0.26
99	3	0.11	0.0	-1.05e-06	-6.16	0.0	0.0	3.07	0.0	-5.08e-05	0.0	-0.21
		-0.22	0.0	0.0	0.0	21.0	0.0	-0.01	0.0	-5.08e-05	0.0	0.11
						42.0	0.0	-3.09	0.0	-5.08e-05	0.0	-0.22
99	4	0.10	0.0	0.0	-5.70	0.0	0.0	2.84	0.0	-4.87e-05	0.0	-0.20
		-0.20	0.0	0.0	0.0	21.0	0.0	-0.01	0.0	-4.87e-05	0.0	0.10
						42.0	0.0	-2.86	0.0	-4.87e-05	0.0	-0.20
100	1	0.19	0.0	-1.86e-06	-10.87	0.0	0.0	5.45	0.0	-8.05e-05	0.0	-0.39
		-0.39	0.0	0.0	0.0	21.0	0.0	0.02	0.0	-8.05e-05	0.0	0.19
						42.0	0.0	-5.42	0.0	-8.05e-05	0.0	-0.38
100	2	0.13	0.0	-1.25e-06	-7.29	0.0	0.0	3.66	0.0	-5.61e-05	0.0	-0.26
		-0.26	0.0	0.0	0.0	21.0	0.0	0.01	0.0	-5.61e-05	0.0	0.13
						42.0	0.0	-3.64	0.0	-5.61e-05	0.0	-0.25
100	3	0.11	0.0	-1.05e-06	-6.14	0.0	0.0	3.08	0.0	-5.08e-05	0.0	-0.22
		-0.22	0.0	0.0	0.0	21.0	0.0	0.01	0.0	-5.08e-05	0.0	0.11
						42.0	0.0	-3.06	0.0	-5.08e-05	0.0	-0.21
100	4	0.10	0.0	0.0	-5.69	0.0	0.0	2.85	0.0	-4.87e-05	0.0	-0.20
		-0.20	0.0	0.0	0.0	21.0	0.0	9.61e-03	0.0	-4.87e-05	0.0	0.10
						42.0	0.0	-2.83	0.0	-4.87e-05	0.0	-0.20
101	1	0.22	0.0	-1.99e-06	-10.92	0.0	0.0	5.60	0.0	-8.05e-05	0.0	-0.39
		-0.39	0.0	0.0	0.0	21.0	0.0	0.15	0.0	-8.05e-05	0.0	0.22
						42.0	0.0	-5.31	0.0	-8.05e-05	0.0	-0.33
101	2	0.14	0.0	-1.34e-06	-7.32	0.0	0.0	3.76	0.0	-5.61e-05	0.0	-0.26
		-0.26	0.0	0.0	0.0	21.0	0.0	0.10	0.0	-5.61e-05	0.0	0.14
						42.0	0.0	-3.56	0.0	-5.61e-05	0.0	-0.22
101	3	0.12	0.0	-1.13e-06	-6.17	0.0	0.0	3.17	0.0	-5.08e-05	0.0	-0.22
		-0.22	0.0	0.0	0.0	21.0	0.0	0.09	0.0	-5.08e-05	0.0	0.12

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						42.0	0.0	-3.00	0.0	-5.08e-05	0.0	-0.18
101	4	0.11	0.0	-1.04e-06	-5.71	0.0	0.0	2.93	0.0	-4.87e-05	0.0	-0.20
		-0.20	0.0	0.0	0.0	21.0	0.0	0.08	0.0	-4.87e-05	0.0	0.11
						42.0	0.0	-2.78	0.0	-4.87e-05	0.0	-0.17
102	1	4.66e-03	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	22.1	0.0	6.87e-04	0.0	0.01	0.0	4.66e-03
						44.3	0.0	-0.29	0.0	0.01	0.0	-0.03
102	2	3.94e-03	0.0	0.0	-0.44	0.0	0.0	0.22	0.0	9.98e-03	0.0	-0.02
		-0.02	0.0	0.0	0.0	22.1	0.0	8.51e-04	0.0	9.98e-03	0.0	3.94e-03
						44.3	0.0	-0.22	0.0	9.98e-03	0.0	-0.02
102	3	4.33e-03	0.0	0.0	-0.43	0.0	0.0	0.21	0.0	8.39e-03	0.0	-0.02
		-0.02	0.0	0.0	0.0	22.1	0.0	1.20e-03	0.0	8.39e-03	0.0	4.33e-03
						44.3	0.0	-0.21	0.0	8.39e-03	0.0	-0.02
102	4	4.48e-03	0.0	0.0	-0.42	0.0	0.0	0.21	0.0	7.75e-03	0.0	-0.02
		-0.02	0.0	0.0	0.0	22.1	0.0	1.34e-03	0.0	7.75e-03	0.0	4.48e-03
						44.3	0.0	-0.21	0.0	7.75e-03	0.0	-0.02
103	1	0.03	0.0	0.0	-0.78	0.0	0.0	0.35	0.0	0.01	0.0	1.90e-03
		-0.03	0.0	0.0	0.0	22.1	0.0	-0.08	0.0	0.01	0.0	0.03
						44.3	0.0	-0.44	0.0	0.01	0.0	-0.03
103	2	0.02	0.0	0.0	-0.57	0.0	0.0	0.25	0.0	9.98e-03	0.0	8.74e-04
		-0.02	0.0	0.0	0.0	22.1	0.0	-0.06	0.0	9.98e-03	0.0	0.02
						44.3	0.0	-0.32	0.0	9.98e-03	0.0	-0.02
103	3	0.02	0.0	0.0	-0.54	0.0	0.0	0.24	0.0	8.39e-03	0.0	2.43e-04
		-0.02	0.0	0.0	0.0	22.1	0.0	-0.05	0.0	8.39e-03	0.0	0.02
						44.3	0.0	-0.30	0.0	8.39e-03	0.0	-0.02
103	4	0.02	0.0	0.0	-0.53	0.0	0.0	0.23	0.0	7.75e-03	0.0	-9.41e-06
		-0.02	0.0	0.0	0.0	22.1	0.0	-0.05	0.0	7.75e-03	0.0	0.02
						44.3	0.0	-0.30	0.0	7.75e-03	0.0	-0.02

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
104	1	0.05	0.0	0.0	-0.53	0.0	0.0	0.43	0.0	0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	22.1	0.0	0.15	0.0	0.01	0.0	0.04
						44.3	0.0	-0.10	0.0	0.01	0.0	0.04
104	2	0.03	0.0	0.0	-0.40	0.0	0.0	0.31	0.0	9.98e-03	0.0	-0.02
		-0.02	0.0	0.0	0.0	22.1	0.0	0.10	0.0	9.98e-03	0.0	0.03
						44.3	0.0	-0.09	0.0	9.98e-03	0.0	0.03
104	3	0.03	0.0	0.0	-0.40	0.0	0.0	0.29	0.0	8.39e-03	0.0	-0.02
		-0.02	0.0	0.0	0.0	22.1	0.0	0.09	0.0	8.39e-03	0.0	0.02
						44.3	0.0	-0.11	0.0	8.39e-03	0.0	0.02
104	4	0.02	0.0	0.0	-0.40	0.0	0.0	0.29	0.0	7.75e-03	0.0	-0.02
		-0.02	0.0	0.0	0.0	22.1	0.0	0.08	0.0	7.75e-03	0.0	0.02
						44.3	0.0	-0.11	0.0	7.75e-03	0.0	0.02
105	1	0.01	0.0	0.0	-0.63	0.0	0.0	0.31	0.0	0.03	0.0	-0.03
		-0.03	0.0	0.0	0.0	25.4	0.0	-8.51e-03	0.0	0.03	0.0	0.01
						50.7	0.0	-0.33	0.0	0.03	0.0	-0.03
105	2	8.44e-03	0.0	0.0	-0.48	0.0	0.0	0.23	0.0	0.02	0.0	-0.02
		-0.02	0.0	0.0	0.0	25.4	0.0	-6.56e-03	0.0	0.02	0.0	8.44e-03
						50.7	0.0	-0.25	0.0	0.02	0.0	-0.02
105	3	8.37e-03	0.0	0.0	-0.47	0.0	0.0	0.23	0.0	0.01	0.0	-0.02
		-0.02	0.0	0.0	0.0	25.4	0.0	-6.57e-03	0.0	0.01	0.0	8.37e-03
						50.7	0.0	-0.24	0.0	0.01	0.0	-0.02
105	4	8.34e-03	0.0	0.0	-0.47	0.0	0.0	0.23	0.0	0.01	0.0	-0.02
		-0.02	0.0	0.0	0.0	25.4	0.0	-6.57e-03	0.0	0.01	0.0	8.34e-03
						50.7	0.0	-0.24	0.0	0.01	0.0	-0.02
106	1	0.02	0.0	0.0	-0.62	0.0	0.0	0.29	0.0	0.03	0.0	-0.02
		-0.03	0.0	0.0	0.0	25.4	0.0	-0.01	0.0	0.03	0.0	0.02
						50.7	0.0	-0.32	0.0	0.03	0.0	-0.03
106	2	0.01	0.0	0.0	-0.47	0.0	0.0	0.23	0.0	0.02	0.0	-0.02

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.02	0.0	0.0	0.0	25.4	0.0	-8.65e-03	0.0	0.02	0.0	0.01
						50.7	0.0	-0.24	0.0	0.02	0.0	-0.02
106	3	0.01	0.0	0.0	-0.46	0.0	0.0	0.22	0.0	0.01	0.0	-0.02
		-0.02	0.0	0.0	0.0	25.4	0.0	-7.16e-03	0.0	0.01	0.0	0.01
						50.7	0.0	-0.24	0.0	0.01	0.0	-0.02
106	4	0.01	0.0	0.0	-0.46	0.0	0.0	0.22	0.0	0.01	0.0	-0.02
		-0.02	0.0	0.0	0.0	25.4	0.0	-6.57e-03	0.0	0.01	0.0	0.01
						50.7	0.0	-0.24	0.0	0.01	0.0	-0.02
107	1	0.03	0.0	0.0	-0.64	0.0	0.0	0.38	0.0	0.03	0.0	-0.03
		-0.03	0.0	0.0	0.0	25.4	0.0	0.06	0.0	0.03	0.0	0.03
						50.7	0.0	-0.26	0.0	0.03	0.0	7.81e-04
107	2	0.02	0.0	0.0	-0.49	0.0	0.0	0.29	0.0	0.02	0.0	-0.02
		-0.02	0.0	0.0	0.0	25.4	0.0	0.05	0.0	0.02	0.0	0.02
						50.7	0.0	-0.20	0.0	0.02	0.0	5.58e-04
107	3	0.02	0.0	0.0	-0.48	0.0	0.0	0.29	0.0	0.01	0.0	-0.02
		-0.02	0.0	0.0	0.0	25.4	0.0	0.05	0.0	0.01	0.0	0.02
						50.7	0.0	-0.19	0.0	0.01	0.0	5.11e-04
107	4	0.02	0.0	0.0	-0.48	0.0	0.0	0.28	0.0	0.01	0.0	-0.02
		-0.02	0.0	0.0	0.0	25.4	0.0	0.05	0.0	0.01	0.0	0.02
						50.7	0.0	-0.19	0.0	0.01	0.0	4.93e-04
108	1	0.63	0.0	-9.26e-06	-19.86	0.0	0.0	9.89	0.0	6.69e-04	0.0	-1.25
		-1.28	0.0	0.0	0.0	38.1	0.0	-0.03	0.0	6.69e-04	0.0	0.63
						76.2	0.0	-9.97	0.0	6.69e-04	0.0	-1.28
108	2	0.42	0.0	-6.21e-06	-13.33	0.0	0.0	6.64	0.0	4.83e-04	0.0	-0.84
		-0.86	0.0	0.0	0.0	38.1	0.0	-0.02	0.0	4.83e-04	0.0	0.42
						76.2	0.0	-6.69	0.0	4.83e-04	0.0	-0.86
108	3	0.35	0.0	-5.23e-06	-11.23	0.0	0.0	5.59	0.0	4.49e-04	0.0	-0.71
		-0.72	0.0	0.0	0.0	38.1	0.0	-0.02	0.0	4.49e-04	0.0	0.35

RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						76.2	0.0	-5.64	0.0	4.49e-04	0.0	-0.72
108	4	0.33	0.0	-4.84e-06	-10.39	0.0	0.0	5.18	0.0	4.35e-04	0.0	-0.66
		-0.67	0.0	0.0	0.0	38.1	0.0	-0.01	0.0	4.35e-04	0.0	0.33
						76.2	0.0	-5.22	0.0	4.35e-04	0.0	-0.67
109	1	0.65	0.0	-9.55e-06	-19.70	0.0	0.0	9.75	0.0	6.69e-04	0.0	-1.19
		-1.27	0.0	0.0	0.0	38.1	0.0	-0.09	0.0	6.69e-04	0.0	0.65
						76.2	0.0	-9.95	0.0	6.69e-04	0.0	-1.27
109	2	0.43	0.0	-6.41e-06	-13.22	0.0	0.0	6.54	0.0	4.83e-04	0.0	-0.80
		-0.85	0.0	0.0	0.0	38.1	0.0	-0.06	0.0	4.83e-04	0.0	0.43
						76.2	0.0	-6.68	0.0	4.83e-04	0.0	-0.85
109	3	0.37	0.0	-5.40e-06	-11.14	0.0	0.0	5.51	0.0	4.49e-04	0.0	-0.67
		-0.72	0.0	0.0	0.0	38.1	0.0	-0.05	0.0	4.49e-04	0.0	0.37
						76.2	0.0	-5.63	0.0	4.49e-04	0.0	-0.72
109	4	0.34	0.0	-5.00e-06	-10.31	0.0	0.0	5.10	0.0	4.35e-04	0.0	-0.62
		-0.66	0.0	0.0	0.0	38.1	0.0	-0.05	0.0	4.35e-04	0.0	0.34
						76.2	0.0	-5.21	0.0	4.35e-04	0.0	-0.66
110	1	0.53	0.0	-7.88e-06	-20.03	0.0	0.0	9.59	0.0	6.69e-04	0.0	-1.21
		-1.54	0.0	0.0	0.0	38.1	0.0	-0.42	0.0	6.69e-04	0.0	0.53
						76.2	0.0	-10.45	0.0	6.69e-04	0.0	-1.54
110	2	0.36	0.0	-5.29e-06	-13.44	0.0	0.0	6.43	0.0	4.83e-04	0.0	-0.81
		-1.03	0.0	0.0	0.0	38.1	0.0	-0.28	0.0	4.83e-04	0.0	0.36
						76.2	0.0	-7.01	0.0	4.83e-04	0.0	-1.03
110	3	0.30	0.0	-4.45e-06	-11.33	0.0	0.0	5.42	0.0	4.49e-04	0.0	-0.69
		-0.87	0.0	0.0	0.0	38.1	0.0	-0.24	0.0	4.49e-04	0.0	0.30
						76.2	0.0	-5.91	0.0	4.49e-04	0.0	-0.87
110	4	0.28	0.0	-4.12e-06	-10.48	0.0	0.0	5.01	0.0	4.35e-04	0.0	-0.63
		-0.80	0.0	0.0	0.0	38.1	0.0	-0.22	0.0	4.35e-04	0.0	0.28
						76.2	0.0	-5.47	0.0	4.35e-04	0.0	-0.80



RELAZIONE DI CALCOLO

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
111	1	0.52	0.0	-7.70e-06	-19.61	0.0	0.0	10.21	0.0	6.69e-04	0.0	-1.50
		-1.50	0.0	0.0	0.0	38.1	0.0	0.41	0.0	6.69e-04	0.0	0.52
						76.2	0.0	-9.41	0.0	6.69e-04	0.0	-1.19
111	2	0.35	0.0	-5.17e-06	-13.16	0.0	0.0	6.85	0.0	4.83e-04	0.0	-1.01
		-1.01	0.0	0.0	0.0	38.1	0.0	0.27	0.0	4.83e-04	0.0	0.35
						76.2	0.0	-6.31	0.0	4.83e-04	0.0	-0.80
111	3	0.29	0.0	-4.36e-06	-11.09	0.0	0.0	5.77	0.0	4.49e-04	0.0	-0.85
		-0.85	0.0	0.0	0.0	38.1	0.0	0.23	0.0	4.49e-04	0.0	0.29
						76.2	0.0	-5.32	0.0	4.49e-04	0.0	-0.67
111	4	0.27	0.0	-4.03e-06	-10.26	0.0	0.0	5.34	0.0	4.35e-04	0.0	-0.79
		-0.79	0.0	0.0	0.0	38.1	0.0	0.21	0.0	4.35e-04	0.0	0.27
						76.2	0.0	-4.92	0.0	4.35e-04	0.0	-0.62
112	1	0.66	0.0	-9.68e-06	-19.95	0.0	0.0	10.05	0.0	6.69e-04	0.0	-1.28
		-1.28	0.0	0.0	0.0	38.1	0.0	0.09	0.0	6.69e-04	0.0	0.66
						76.2	0.0	-9.90	0.0	6.69e-04	0.0	-1.21
112	2	0.44	0.0	-6.49e-06	-13.39	0.0	0.0	6.75	0.0	4.83e-04	0.0	-0.86
		-0.86	0.0	0.0	0.0	38.1	0.0	0.06	0.0	4.83e-04	0.0	0.44
						76.2	0.0	-6.64	0.0	4.83e-04	0.0	-0.81
112	3	0.37	0.0	-5.47e-06	-11.28	0.0	0.0	5.68	0.0	4.49e-04	0.0	-0.72
		-0.72	0.0	0.0	0.0	38.1	0.0	0.05	0.0	4.49e-04	0.0	0.37
						76.2	0.0	-5.60	0.0	4.49e-04	0.0	-0.69
112	4	0.34	0.0	-5.06e-06	-10.44	0.0	0.0	5.26	0.0	4.35e-04	0.0	-0.67
		-0.67	0.0	0.0	0.0	38.1	0.0	0.05	0.0	4.35e-04	0.0	0.34
						76.2	0.0	-5.18	0.0	4.35e-04	0.0	-0.63
113	1	0.62	0.0	-9.22e-06	-19.78	0.0	0.0	9.90	0.0	6.69e-04	0.0	-1.27
		-1.27	0.0	0.0	0.0	38.1	0.0	0.02	0.0	6.69e-04	0.0	0.62
						76.2	0.0	-9.88	0.0	6.69e-04	0.0	-1.25
113	2	0.42	0.0	-6.19e-06	-13.27	0.0	0.0	6.64	0.0	4.83e-04	0.0	-0.85

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.85	0.0	0.0	0.0	38.1	0.0	0.01	0.0	4.83e-04	0.0	0.42
						76.2	0.0	-6.63	0.0	4.83e-04	0.0	-0.84
113	3	0.35	0.0	-5.21e-06	-11.18	0.0	0.0	5.60	0.0	4.49e-04	0.0	-0.72
		-0.72	0.0	0.0	0.0	38.1	0.0	0.01	0.0	4.49e-04	0.0	0.35
						76.2	0.0	-5.59	0.0	4.49e-04	0.0	-0.71
113	4	0.33	0.0	-4.82e-06	-10.35	0.0	0.0	5.18	0.0	4.35e-04	0.0	-0.66
		-0.66	0.0	0.0	0.0	38.1	0.0	0.01	0.0	4.35e-04	0.0	0.33
						76.2	0.0	-5.17	0.0	4.35e-04	0.0	-0.66
114	1	1.19	0.0	-1.67e-05	-19.66	0.0	0.0	12.01	0.0	6.69e-04	0.0	-1.54
		-1.54	0.0	0.0	0.0	38.1	0.0	1.97	0.0	6.69e-04	0.0	1.12
						76.2	0.0	-7.65	0.0	6.69e-04	0.0	-0.03
114	2	0.80	0.0	-1.12e-05	-13.19	0.0	0.0	8.06	0.0	4.83e-04	0.0	-1.03
		-1.03	0.0	0.0	0.0	38.1	0.0	1.32	0.0	4.83e-04	0.0	0.75
						76.2	0.0	-5.13	0.0	4.83e-04	0.0	-0.02
114	3	0.67	0.0	-9.42e-06	-11.12	0.0	0.0	6.79	0.0	4.49e-04	0.0	-0.87
		-0.87	0.0	0.0	0.0	38.1	0.0	1.11	0.0	4.49e-04	0.0	0.64
						76.2	0.0	-4.33	0.0	4.49e-04	0.0	-0.01
114	4	0.62	0.0	-8.71e-06	-10.29	0.0	0.0	6.28	0.0	4.35e-04	0.0	-0.80
		-0.80	0.0	0.0	0.0	38.1	0.0	1.03	0.0	4.35e-04	0.0	0.59
						76.2	0.0	-4.00	0.0	4.35e-04	0.0	-0.01
115	1	0.02	0.0	0.0	-0.76	0.0	0.0	0.38	0.0	-0.02	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	-6.35e-04	0.0	-0.02	0.0	0.02
						67.5	0.0	-0.38	0.0	-0.02	0.0	-0.04
115	2	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	-4.89e-04	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
115	3	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	-4.90e-04	0.0	-0.01	0.0	0.02

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
115	4	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	-4.91e-04	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
116	1	0.02	0.0	0.0	-0.76	0.0	0.0	0.38	0.0	-0.02	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	-1.14e-03	0.0	-0.02	0.0	0.02
						67.5	0.0	-0.38	0.0	-0.02	0.0	-0.04
116	2	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	-8.80e-04	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
116	3	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	-8.78e-04	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
116	4	0.02	0.0	0.0	-0.58	0.0	0.0	0.29	0.0	-0.01	0.0	-0.03
		-0.03	0.0	0.0	0.0	33.8	0.0	-8.78e-04	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
117	1	0.02	0.0	0.0	-0.76	0.0	0.0	0.36	0.0	-0.02	0.0	-0.04
		-0.05	0.0	0.0	0.0	33.8	0.0	-0.01	0.0	-0.02	0.0	0.02
						67.5	0.0	-0.39	0.0	-0.02	0.0	-0.05
117	2	0.01	0.0	0.0	-0.58	0.0	0.0	0.28	0.0	-0.01	0.0	-0.03
		-0.04	0.0	0.0	0.0	33.8	0.0	-0.01	0.0	-0.01	0.0	0.01
						67.5	0.0	-0.30	0.0	-0.01	0.0	-0.04
117	3	0.01	0.0	0.0	-0.58	0.0	0.0	0.28	0.0	-0.01	0.0	-0.03
		-0.04	0.0	0.0	0.0	33.8	0.0	-0.01	0.0	-0.01	0.0	0.01
						67.5	0.0	-0.30	0.0	-0.01	0.0	-0.04
117	4	0.01	0.0	0.0	-0.58	0.0	0.0	0.28	0.0	-0.01	0.0	-0.03
		-0.04	0.0	0.0	0.0	33.8	0.0	-0.01	0.0	-0.01	0.0	0.01
						67.5	0.0	-0.30	0.0	-0.01	0.0	-0.04

**RELAZIONE DI CALCOLO**

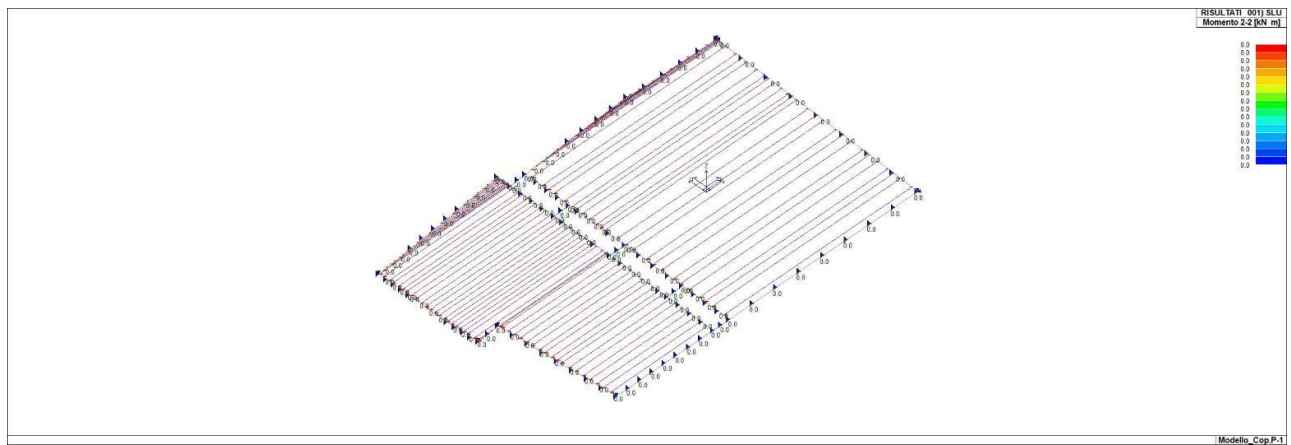
**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
118	1	0.02	0.0	0.0	-0.76	0.0	0.0	0.38	0.0	-0.02	0.0	-0.05
		-0.05	0.0	0.0	0.0	33.8	0.0	5.61e-03	0.0	-0.02	0.0	0.02
						67.5	0.0	-0.37	0.0	-0.02	0.0	-0.04
118	2	0.02	0.0	0.0	-0.58	0.0	0.0	0.30	0.0	-0.01	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	4.31e-03	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
118	3	0.02	0.0	0.0	-0.58	0.0	0.0	0.30	0.0	-0.01	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	4.31e-03	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
118	4	0.02	0.0	0.0	-0.58	0.0	0.0	0.30	0.0	-0.01	0.0	-0.04
		-0.04	0.0	0.0	0.0	33.8	0.0	4.30e-03	0.0	-0.01	0.0	0.02
						67.5	0.0	-0.29	0.0	-0.01	0.0	-0.03
119	1	0.02	0.0	0.0	-0.25	0.0	0.0	-5.89e-03	0.0	0.02	0.0	0.02
		-4.20e-03	0.0	0.0	0.0	10.6	0.0	-0.13	0.0	0.02	0.0	0.02
						21.2	0.0	-0.25	0.0	0.02	0.0	-4.20e-03
119	2	0.02	0.0	0.0	-0.19	0.0	0.0	6.14e-03	0.0	0.02	0.0	0.02
		-3.24e-03	0.0	0.0	0.0	10.6	0.0	-0.09	0.0	0.02	0.0	0.01
						21.2	0.0	-0.18	0.0	0.02	0.0	-3.24e-03
119	3	0.01	0.0	0.0	-0.19	0.0	0.0	0.03	0.0	0.01	0.0	0.01
		-3.27e-03	0.0	0.0	0.0	10.6	0.0	-0.07	0.0	0.01	0.0	9.18e-03
						21.2	0.0	-0.17	0.0	0.01	0.0	-3.27e-03
119	4	0.01	0.0	0.0	-0.19	0.0	0.0	0.03	0.0	0.01	0.0	9.80e-03
		-3.28e-03	0.0	0.0	0.0	10.6	0.0	-0.06	0.0	0.01	0.0	8.33e-03
						21.2	0.0	-0.16	0.0	0.01	0.0	-3.28e-03
120	1	4.56e-03	0.0	0.0	-0.25	0.0	0.0	0.14	0.0	0.02	0.0	-4.20e-03
		-4.20e-03	0.0	0.0	0.0	10.6	0.0	0.02	0.0	0.02	0.0	4.41e-03
						21.2	0.0	-0.11	0.0	0.02	0.0	-1.59e-04
120	2	3.49e-03	0.0	0.0	-0.19	0.0	0.0	0.11	0.0	0.02	0.0	-3.24e-03

# RELAZIONE DI CALCOLO

## INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-3.24e-03	0.0	0.0	0.0	10.6	0.0	0.01	0.0	0.02	0.0	3.38e-03
						21.2	0.0	-0.08	0.0	0.02	0.0	-1.31e-04
120	3	3.49e-03	0.0	0.0	-0.19	0.0	0.0	0.11	0.0	0.01	0.0	-3.27e-03
		-3.27e-03	0.0	0.0	0.0	10.6	0.0	0.01	0.0	0.01	0.0	3.37e-03
						21.2	0.0	-0.08	0.0	0.01	0.0	-1.25e-04
120	4	3.48e-03	0.0	0.0	-0.19	0.0	0.0	0.11	0.0	0.01	0.0	-3.28e-03
		-3.28e-03	0.0	0.0	0.0	10.6	0.0	0.01	0.0	0.01	0.0	3.36e-03
						21.2	0.0	-0.08	0.0	0.01	0.0	-1.22e-04
Trave		M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3		N	V 2	V 3	T		
		-1.81	0.0	-2.58e-05	-20.03		0.0	-11.77	0.0	-0.05		
		1.50	0.0	2.56e-05	0.0		0.0	12.01	0.0	0.09		

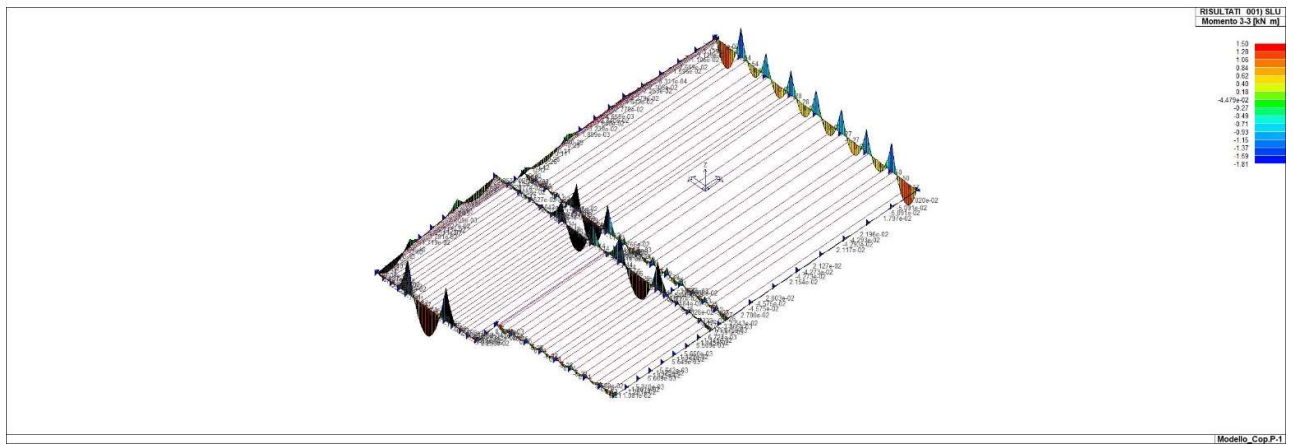


43\_RIS\_M2\_001\_SLU

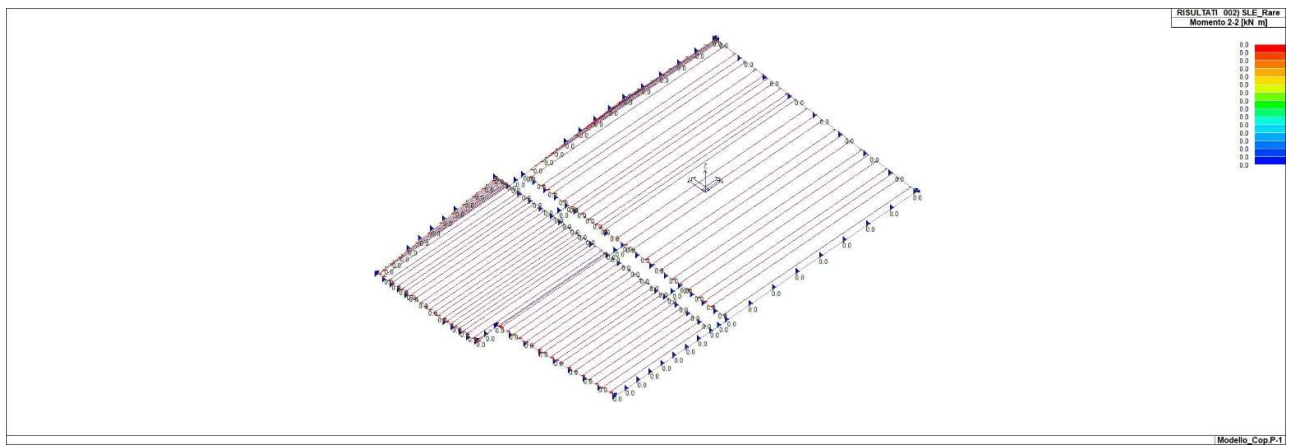
**RELAZIONE DI CALCOLO**

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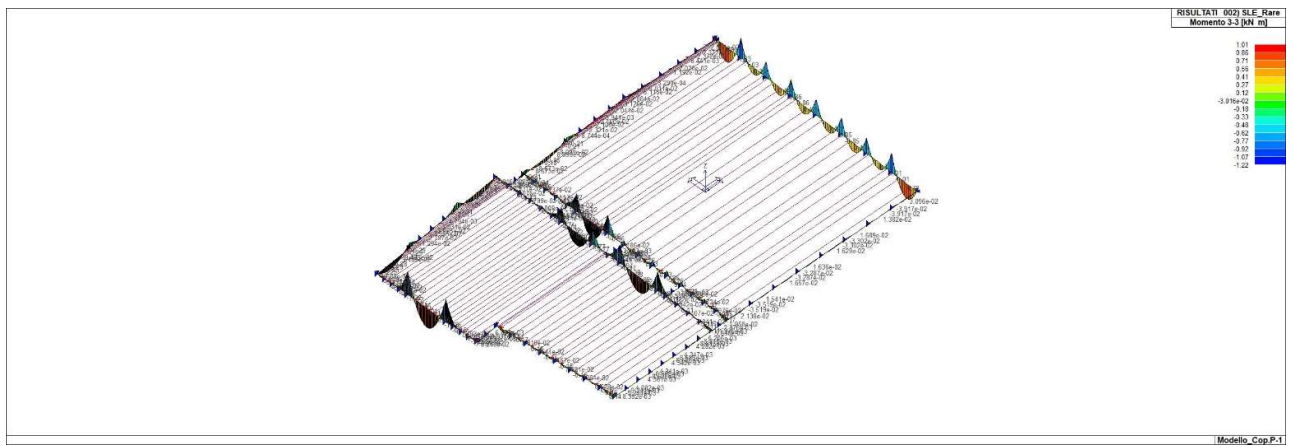
**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**



43\_RIS\_M3\_001\_SLU



43\_RIS\_M2\_002\_SLERare

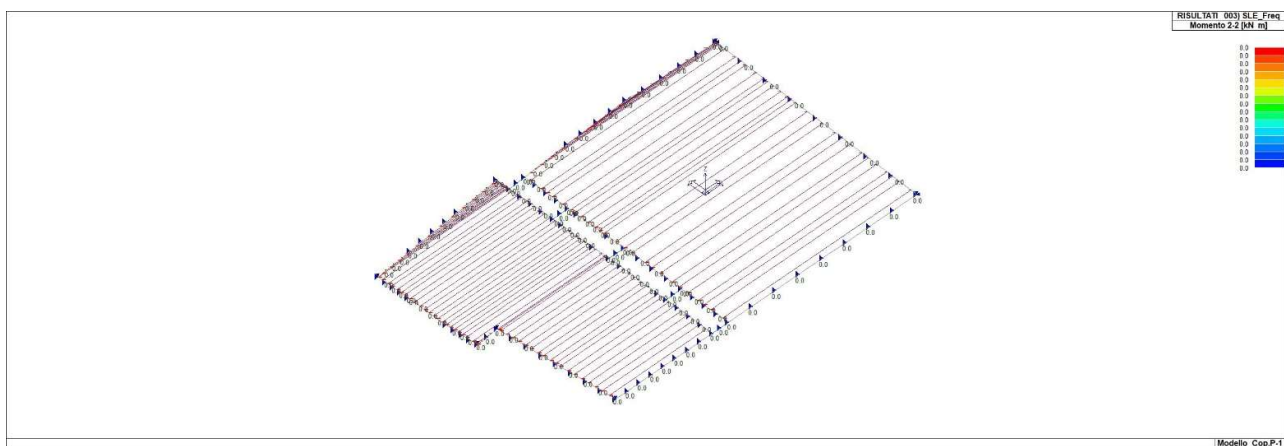


43\_RIS\_M3\_002\_SLERare

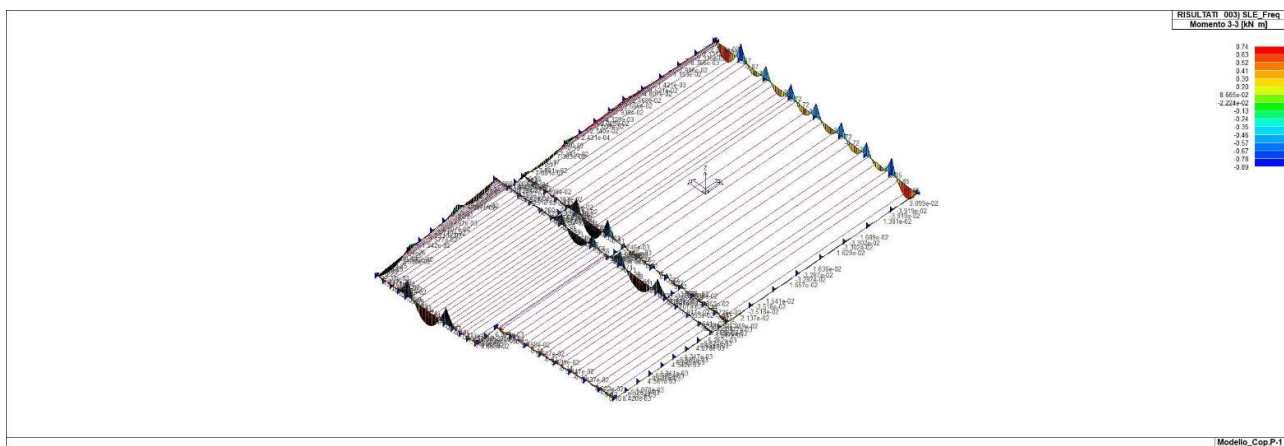
**RELAZIONE DI CALCOLO**

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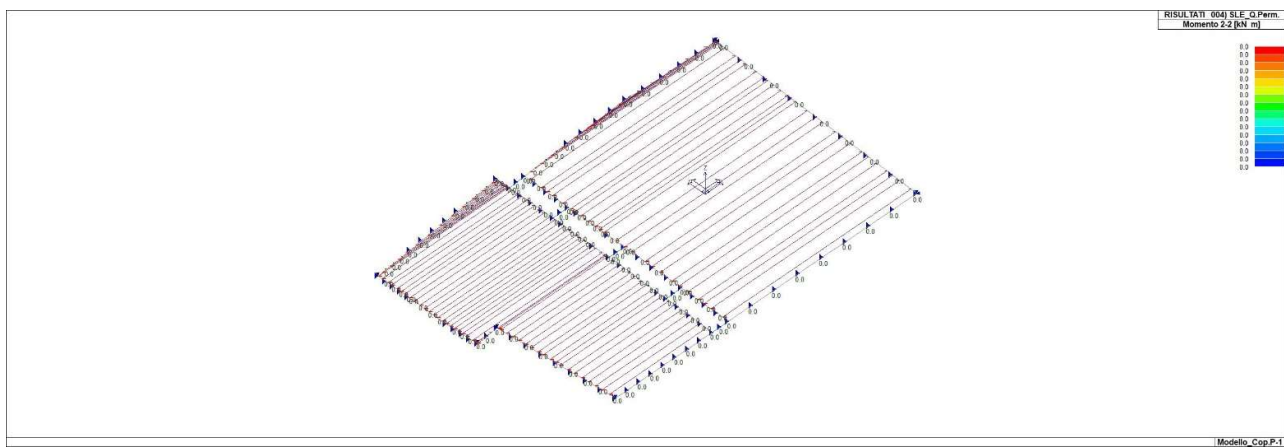
**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**



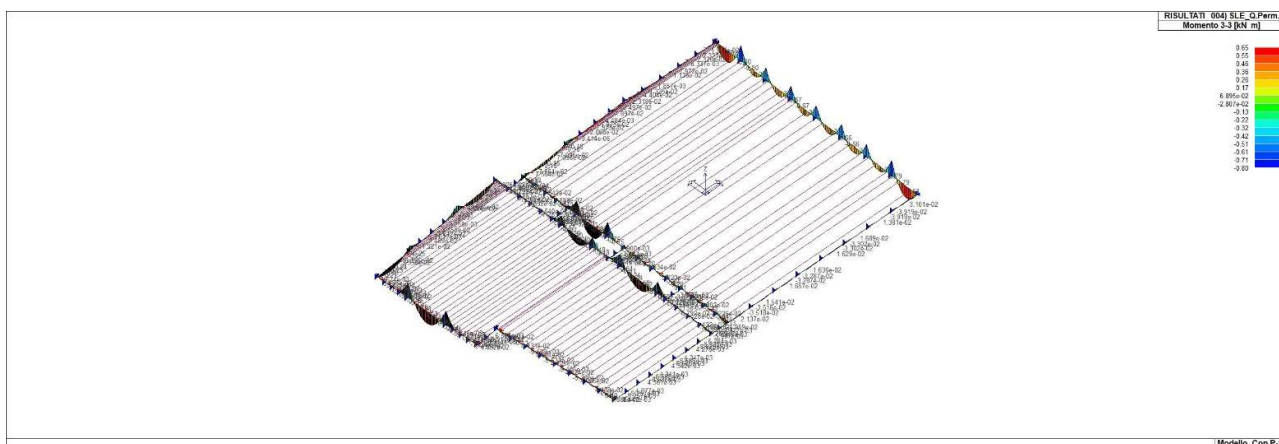
43\_RIS\_M2\_003\_SLEFreq



43\_RIS\_M3\_003\_SLEFreq



43\_RIS\_M2\_004\_SLEQPerm



43\_RIS\_M3\_004\_SLEQPerm

## VERIFICHE ELEMENTI TRAVE IN C.A.

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

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

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

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

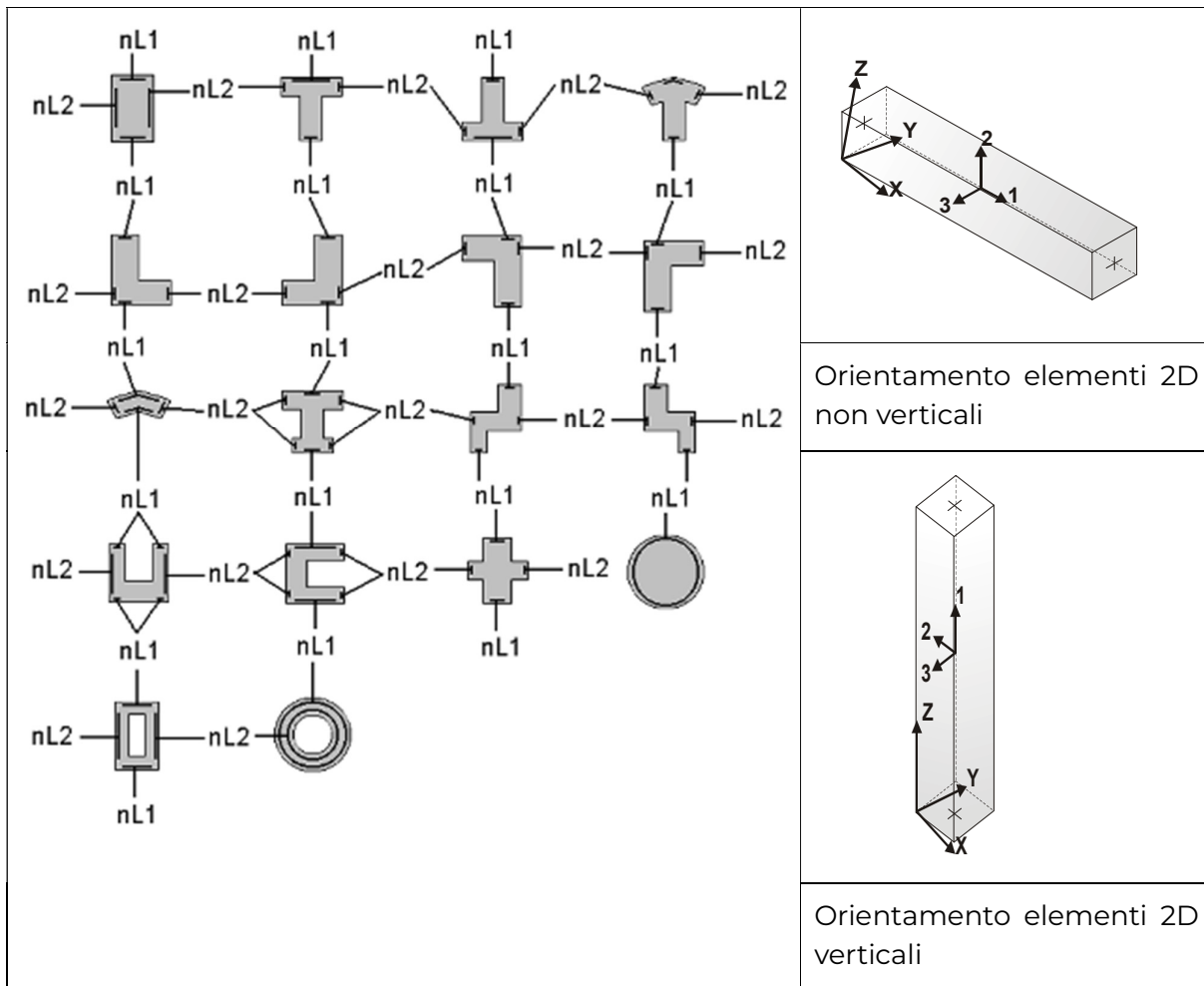
Nel caso in cui la struttura abbia comportamento dissipativo e sia prevista la progettazione con il criterio della gerarchia delle resistenze (**G.R.**) vengono riportate le verifiche di sovrarresistenza e del nodo.

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

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



**Schema della distribuzione delle armature longitudinali**



**Simbologia adottata nelle tabelle di verifica**

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

M_P	X Y	Numero della pilastrata (P) e posizione in pianta (X,Y)
Pilas.		numero identificativo dell'elemento D2
Note		Codici identificativi delle sezione (s) e materiale (m) pilastro
Stato		Codici relativi all'esito delle verifiche effettuate appresso descritte
Quota		Quota sezione di verifica
%Af		Percentuale di area di armatura rispetto a quella di calcestruzzo

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

r. snell.	Rapporto di snellezza $\lambda$ su $\lambda^*$ : valore superiore a 1 per elementi snelli nel caso in cui viene effettuata la verifica con il metodo diretto dello stato di equilibrio
Armat. long.	Numero e diametro (d) dei ferri di armatura longitudinale distinti in ferri di vertice + ferri di lato nelle posizioni nL1 e nL2, come da schemi in figura precedente
V N/M	Verifica a pressoflessione con rapporto $E_d/R_d$ : valore minore o uguale a 1 per verifica positiva
V N sis	Verifica a compressione solo calcestruzzo con rapporto $N_{sd}/N_{rd}$ ed $N_{rd}$ calcolato come al punto 7.4.4.2.1: valore minore o uguale a 1 per verifica positiva
Staffe	Dati tratto di staffatura oggetto di verifica, nello specifico: numero delle braccia, diametro, passo, lunghezza L tratto
V V/T cls	Verifica a taglio/torsione con rapporto $V_{ed}/V_{rd}$ : 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 di gerarchia delle resistenze dei pilastri è presente una tabella con i simboli di seguito descritti:**

Pilas.	numero identificativo dell'elemento D2 pilastro
sovr. Xi (Xf)	Verifica sovrarresistenza come da formula 7.4.4 in direzione X, alla base (i) ed alla sommità (f): rapporto tra i momenti resistenti dei pilastri e delle travi. La verifica è positiva se maggiore del $\gamma_{Rd}$ adottato
sovr. Yi (Yf)	Verifica sovrarresistenza come da formula 7.4.4 in direzione Y, alla base (i) ed alla sommità (f): rapporto tra i momenti resistenti dei pilastri e delle travi. La verifica è positiva se maggiore del $\gamma_{Rd}$ adottato
M 2-2 i (f)	Valore del momento resistente 2-2 alla base (i) ed alla sommità (f) con massimo momento in presenza dello sforzo normale di calcolo
M 3-3 i (f)	Valore del momento resistente 3-3 alla base (i) ed alla sommità (f) con massimo momento in presenza dello sforzo normale di calcolo

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Luce per V	Luce di calcolo per la definizione del taglio (generato dai momenti resistenti)
V	M2-2 Valore del taglio generato dai momenti resistenti 2-2 (3-3)
(M3-3)	

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

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

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

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

Nodo	Numero identificativo del nodo trave-pilastro
Stato	Esito delle verifiche

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Pilastro	Numero identificativo D2 pilastro
Diam st	Diametro staffe nodo
Passo	Passo staffe nodo
n. br. 2 (3)	Numero braccia staffe per il taglio in direzione 2 (3)
Bj2 (3)	Larghezza effettiva del nodo per il taglio in direzione 2 (3)
Hjc2 (3)	Distanza tra le giaciture più esterne delle armature del pilastro per il taglio in direzione 2 (3)
V. 7.4.8	Rapporto tra il taglio $V_{jbd}$ e il taglio resistente come da formula 7.4.8
V. Ash	Rapporto tra il passo staffe calcolato secondo il capitolo 7.4.4.3.1. e il passo staffe effettivamente inserita nel nodo. Nel caso di valore indica passo staffe utilizzato deriva dalle formule presenti nel paragrafo 7.4.4.3.1. Nel caso di valore minore di 1 il passo staffe utilizzato deriva del pilastro superiore o inferiore al nodo
7.4.10	Check passo staffe valutato in funzione della formula 7.4.10: SI il passo staffe è calcolato utilizzando la formula 7.4.10; NO il passo staffe è calcolato utilizzando le formule 7.4.11 e/o 7.4.12; NR calcolo passo staffe non richiesto;
Rif. comb.	Riferimento combinazioni da cui si generano le verifiche più gravose per il nodo

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

Pilastro I	Numero identificativo D2 del pilastro inferiore.
Pilastro S	Numero identificativo D2 del pilastro superiore.
Nodo	Numero identificativo del nodo trave-pilastro.
SL cod	Stato limite di riferimento e relativo esito delle verifiche.
ver. (+)	Coefficiente di sicurezza, calcolato come rapporto $D/C$ , nei riguardi della verifica di resistenza a trazione

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

V +	Azione di Taglio presente al di sopra del nodo nella verifica di resistenza a trazione
V + af s	Sollecitazione di trazione presente nell' armatura longitudinale superiore della trave nella verifica di resistenza a trazione
N +	Azione Assiale presente al di sopra del nodo nella verifica di resistenza a trazione
ver. (-)	Coefficiente di sicurezza, calcolato come rapporto D/C, nei riguardi della verifica di resistenza a compressione
V -	Azione di Taglio presente al di sopra del nodo nella verifica di resistenza a compressione
V - af s	Sollecitazione di trazione presente nell' armatura longitudinale superiore della trave nella verifica di resistenza a compressione
N -	Azione Assiale presente al di sopra del nodo nella verifica di resistenza a compressione
AreaV2	Area resistente del nodo in direzione 2 ( $A_{j2}=b_{j2}*h_{jc2}$ ).
AreaV3	Area resistente del nodo in direzione 3 ( $A_{j3}=b_{j3}*h_{jc3}$ ).
Rif. comb.	Combinazione (direzione) di riferimento nella verifica di trazione.

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

M_T Z P	Numero della travata (T), quota media (Z), n° pilastrata iniziale (P) e finale (P) (nodo in assenza di pilastrata)
Trave	numero identificativo dell'elemento D2
Note	Codici identificativi sezione (s) e materiale (m) trave; sono inoltre presenti le sigle relative all'esito delle verifiche effettuate appresso descritte
%Af	Percentuale di area di armatura rispetto a quella di calcestruzzo
Af inf.	Area di armatura longitudinale posta all'intradosso
Af sup	Area di armatura longitudinale posta all'estradosso
Af long.	Area complessiva armatura longitudinale

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

x/d	rapporto tra posizione dell'asse neutro e altezza utile
V N/M	Verifica a pressoflessione rapporto $E_d/R_d$ : valore minore o uguale a 1 per verifica positiva
Staffe	Dati tratto di staffatura oggetto di verifica, nello specifico: numero delle braccia, diametro, passo, lunghezza L tratto
V V/T cls	Verifica a taglio/torsione con rapporto $V_{ed}/V_{rd}$ : valore minore o uguale a 1 per verifica positiva
Rif. cmb.	Riferimento combinazioni da cui si generano le verifiche più gravose per la trave

**Per le verifiche di gerarchia delle resistenze delle travi è presente una tabella con i simboli di seguito descritti:**

Trave	numero identificativo dell'elemento D2 trave
M negativo i (f)	Valore del momento resistente negativo all' estremità iniziale i (finale f) della trave
M positivo i (f)	Valore del momento resistente positivo all' estremità iniziale i (finale f) della trave
Luce per V	Luce di calcolo per la definizione del taglio (generato dai momenti resistenti)
V M-i M+f	Taglio generato dai momenti resistenti negativo i e positivo f
V M+i M-f	Taglio generato dai momenti resistenti positivo i e negativo f
$V_{Ed, min}$	Valore di taglio minimo per verifica condizioni p.to 7.4.4.1.1 armatura diagonale (solo per CD "A")
$V_{Ed, max}$	Valore di taglio massimo per verifica condizioni p.to 7.4.4.1.1 armatura diagonale (solo per CD "A")
$V_{r1}$	Valore di taglio come da formula 7.4.1 per armatura diagonale (solo per CD "A")
$A_s$	Area singolo ordine armature diagonali come da formula 7.4.2 (solo per CD "A")

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

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

Trave/Pilastro	Numero identificativo dell'elemento D2 trave/pilastro
V. SLV	Codice relativo all'esito delle verifiche
Nodo	Numero identificativo del nodo di verifica
Ver. VC	Fattore di sicurezza nei confronti della verifica a taglio ciclico (verificato se < 1.00)
Direz.	Direzione di verifica
N fr	Valore di sforzo normale calcolato con fattore di comportamento fragile
V fr	Valore di taglio calcolato con fattore di comportamento fragile
M fr	Valore di momento calcolato con fattore di comportamento fragile
N dutt	Valore di sforzo normale calcolato con fattore di comportamento duttile
LV	Lunghezza di taglio
Mud,pl	Parte plastica della domanda di duttilità
V cic	Resistenza a taglio in condizioni cicliche (C8.7.2.8)
Cmb	Riferimento combinazioni da cui si generano le verifiche più gravose

							M_T= 1	Z=0.0	N=1	N=4			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
		cm									L=cm		
1	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	1.46e-04	9.92e-03	8.57e-03	4d8/15 L=25	1,1,1	
	s=4,m=3	12.5	0.87	8.0	8.0	0.0	0.25	4.04e-03	6.84e-03	5.90e-03	4d8/15 L=25	1,1,1	
		25.1	0.87	8.0	8.0	0.0	0.25	6.51e-03	3.80e-03	3.27e-03	4d8/15 L=25	1,1,1	
40	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	6.51e-03	3.80e-03	3.27e-03	4d8/15 L=25	1,1,1	
	s=4,m=3	12.5	0.87	8.0	8.0	0.0	0.25	7.57e-03	8.03e-04	6.74e-04	4d8/15 L=25	1,1,1	
		25.1	0.87	8.0	8.0	0.0	0.25	7.24e-03	2.21e-03	1.89e-03	4d8/15 L=25	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

39	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	7.24e-03	2.21e-03	1.89e-03	4d8/15 L=25	1,1,1	
	s=4,m=3	12.5	0.87	8.0	8.0	0.0	0.25	5.54e-03	5.13e-03	4.42e-03	4d8/15 L=25	1,1,1	
		25.1	0.87	8.0	8.0	0.0	0.25	2.48e-03	8.02e-03	6.92e-03	4d8/15 L=25	1,1,1	
41	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	2.48e-03	8.02e-03	6.92e-03	4d8/15 L=25	1,1,1	
	s=4,m=3	12.5	0.87	8.0	8.0	0.0	0.25	1.90e-03	0.01	9.39e-03	4d8/15 L=25	1,1,1	
		25.1	0.87	8.0	8.0	0.0	0.25	7.61e-03	0.01	0.01	4d8/15 L=25	1,1,1	
2	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	7.61e-03	9.46e-03	8.12e-03	4d8/15 L=38	1,1,1	
	s=4,m=3	18.8	0.87	8.0	8.0	0.0	0.25	2.52e-03	5.28e-03	4.49e-03	4d8/15 L=38	1,1,1	
		37.6	0.87	8.0	8.0	0.0	0.25	3.31e-04	1.18e-03	9.50e-04	4d8/15 L=38	1,1,1	
58	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	3.31e-04	3.58e-03	3.03e-03	4d8/15 L=38	1,1,1	
	s=4,m=3	18.8	0.87	8.0	8.0	0.0	0.25	7.07e-04	5.95e-04	4.42e-04	4d8/15 L=38	1,1,1	
		37.6	0.87	8.0	8.0	0.0	0.25	1.02e-03	4.51e-03	3.83e-03	4d8/15 L=38	1,1,1	
57	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	1.02e-03	4.53e-03	3.85e-03	4d8/15 L=38	1,1,1	
	s=4,m=3	18.8	0.87	8.0	8.0	0.0	0.25	7.42e-04	7.05e-04	5.37e-04	4d8/15 L=38	1,1,1	
		37.6	0.87	8.0	8.0	0.0	0.25	1.35e-04	3.20e-03	2.70e-03	4d8/15 L=38	1,1,1	
59	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	1.35e-04	2.56e-03	2.15e-03	4d8/15 L=38	1,1,1	
	s=4,m=3	18.8	0.87	8.0	8.0	0.0	0.25	3.15e-03	6.21e-03	5.30e-03	4d8/15 L=38	1,1,1	
		37.6	0.87	8.0	8.0	0.0	0.25	8.67e-03	9.76e-03	8.38e-03	4d8/15 L=38	1,1,1	
3	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	8.67e-03	0.01	0.01	4d8/15 L=31	1,1,1	
	s=4,m=3	15.5	0.87	8.0	8.0	0.0	0.25	2.23e-03	9.79e-03	8.42e-03	4d8/15 L=31	1,1,1	
		31.1	0.87	8.0	8.0	0.0	0.25	2.57e-03	6.99e-03	5.99e-03	4d8/15 L=31	1,1,1	
37	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	2.57e-03	6.99e-03	5.99e-03	4d8/15 L=31	1,1,1	
	s=4,m=3	15.5	0.87	8.0	8.0	0.0	0.25	5.78e-03	4.25e-03	3.62e-03	4d8/15 L=31	1,1,1	
		31.1	0.87	8.0	8.0	0.0	0.25	7.41e-03	1.56e-03	1.29e-03	4d8/15 L=31	1,1,1	
36	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	7.41e-03	1.56e-03	1.29e-03	4d8/15 L=31	1,1,1	
	s=4,m=3	15.5	0.87	8.0	8.0	0.0	0.25	7.51e-03	1.20e-03	9.75e-04	4d8/15 L=31	1,1,1	
		31.1	0.87	8.0	8.0	0.0	0.25	6.12e-03	3.75e-03	3.19e-03	4d8/15 L=31	1,1,1	
38	ok,ok	0.0	0.87	8.0	8.0	0.0	0.25	6.12e-03	3.75e-03	3.19e-03	4d8/15 L=31	1,1,1	
	s=4,m=3	15.5	0.87	8.0	8.0	0.0	0.25	3.27e-03	6.25e-03	5.35e-03	4d8/15 L=31	1,1,1	



**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

		31.1	0.87	8.0	8.0	0.0	0.25	1.01e-03	8.69e-03	7.46e-03	4d8/15 L=31	1,1,1	
							<b>M_T= 2</b>	<b>Z=0.0</b>	<b>N=4</b>	<b>N=9</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
4	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	3.58e-05	0.03	9.47e-03	2d8/15 L=38	1,1,1	
	s=1,m=3	19.0	1.17	4.0	4.0	0.0	0.27	4.60e-03	0.01	1.64e-03	2d8/15 L=38	1,1,1	
		38.0	1.17	4.0	4.0	0.0	0.27	7.83e-03	0.06	0.03	2d8/15 L=38	1,1,1	
83	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.85e-03	0.05	0.03	2d8/15 L=32	1,1,1	
	s=1,m=3	15.8	1.17	4.0	4.0	0.0	0.27	3.58e-03	1.09e-03	2.54e-04	2d8/15 L=32	1,1,1	
		31.5	1.17	4.0	4.0	0.0	0.27	6.50e-03	0.05	0.03	2d8/15 L=32	1,1,1	
81	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.83e-03	0.05	0.03	2d8/15 L=32	1,1,1	
	s=1,m=3	15.8	1.17	4.0	4.0	0.0	0.27	3.41e-03	7.12e-04	1.14e-05	2d8/15 L=32	1,1,1	
		31.5	1.17	4.0	4.0	0.0	0.27	6.85e-03	0.05	0.03	2d8/15 L=32	1,1,1	
82	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.83e-03	0.05	0.03	2d8/15 L=32	1,1,1	
	s=1,m=3	15.8	1.17	4.0	4.0	0.0	0.27	3.41e-03	6.95e-04	0.0	2d8/15 L=32	1,1,1	
		31.5	1.17	4.0	4.0	0.0	0.27	6.83e-03	0.05	0.03	2d8/15 L=32	1,1,1	
5	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.91e-03	0.05	0.03	2d8/15 L=31	1,1,1	
	s=1,m=3	15.8	1.17	4.0	4.0	0.0	0.27	3.39e-03	7.74e-04	5.16e-05	2d8/15 L=31	1,1,1	
		31.5	1.17	4.0	4.0	0.0	0.27	6.83e-03	0.05	0.03	2d8/15 L=31	1,1,1	
6	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.04	0.09	0.06	2d8/15 L=25	1,1,1	
	s=1,m=3	12.5	1.17	4.0	4.0	0.0	0.27	0.02	0.05	0.03	2d8/15 L=25	1,1,1	
		25.0	1.17	4.0	4.0	0.0	0.27	6.92e-03	0.02	9.93e-03	2d8/15 L=25	1,1,1	
53	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.02	0.07	0.04	2d8/15 L=22	1,1,1	
	s=1,m=3	11.2	1.17	4.0	4.0	0.0	0.27	7.24e-03	0.10	0.06	2d8/15 L=22	1,1,1	
		22.5	1.17	4.0	4.0	0.0	0.27	0.04	0.13	0.08	2d8/15 L=22	1,1,1	
45	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.04	2.96e-03	4.19e-04	2d8/15 L=22	1,1,1	
	s=1,m=3	11.2	1.17	4.0	4.0	0.0	0.27	0.03	0.03	0.02	2d8/15 L=22	1,1,1	
		22.5	1.17	4.0	4.0	0.0	0.27	0.02	0.07	0.04	2d8/15 L=22	1,1,1	
49	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.02	0.07	0.04	2d8/15 L=22	1,1,1	
	s=1,m=3	11.2	1.17	4.0	4.0	0.0	0.27	0.03	0.04	0.02	2d8/15 L=22	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

		22.5	1.17	4.0	4.0	0.0	0.27	0.04	2.96e-03	4.19e-04	2d8/15 L=22	1,1,1	
7	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	0.13	0.08	2d8/15 L=22	1,1,1	
	s=1,m=3	11.2	1.17	4.0	4.0	0.0	0.27	8.40e-03	0.10	0.06	2d8/15 L=22	1,1,1	
		22.5	1.17	4.0	4.0	0.0	0.27	0.02	0.07	0.04	2d8/15 L=22	1,1,1	
8	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	0.10	0.06	2d8/15 L=48	1,1,1	
	s=1,m=3	24.0	1.17	4.0	4.0	0.0	0.27	1.70e-03	0.03	0.02	2d8/15 L=48	1,1,1	
		48.0	1.17	4.0	4.0	0.0	0.27	4.61e-03	0.04	0.02	2d8/15 L=48	1,1,1	
9	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.06	0.10	0.06	2d8/15 L=32	1,1,1	
	s=1,m=3	16.0	1.17	4.0	4.0	0.0	0.27	0.02	0.06	0.04	2d8/15 L=32	1,1,1	
		32.0	1.17	4.0	4.0	0.0	0.27	3.78e-03	0.02	0.01	2d8/15 L=32	1,1,1	
54	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.02	0.07	0.04	2d8/15 L=28	1,1,1	
	s=1,m=3	14.0	1.17	4.0	4.0	0.0	0.27	0.01	0.10	0.06	2d8/15 L=28	1,1,1	
		28.0	1.17	4.0	4.0	0.0	0.27	0.06	0.13	0.09	2d8/15 L=28	1,1,1	
46	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	1.19e-03	3.73e-04	2d8/15 L=28	1,1,1	
	s=1,m=3	14.0	1.17	4.0	4.0	0.0	0.27	0.04	0.03	0.02	2d8/15 L=28	1,1,1	
		28.0	1.17	4.0	4.0	0.0	0.27	0.02	0.07	0.04	2d8/15 L=28	1,1,1	
50	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.02	0.07	0.04	2d8/15 L=28	1,1,1	
	s=1,m=3	14.0	1.17	4.0	4.0	0.0	0.27	0.04	0.03	0.02	2d8/15 L=28	1,1,1	
		28.0	1.17	4.0	4.0	0.0	0.27	0.05	1.19e-03	3.73e-04	2d8/15 L=28	1,1,1	
10	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.06	0.13	0.08	2d8/15 L=28	1,1,1	
	s=1,m=3	14.0	1.17	4.0	4.0	0.0	0.27	0.01	0.10	0.06	2d8/15 L=28	1,1,1	
		28.0	1.17	4.0	4.0	0.0	0.27	0.02	0.07	0.04	2d8/15 L=28	1,1,1	
11	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.54e-03	0.05	0.03	2d8/15 L=25	1,1,1	
	s=1,m=3	12.5	1.17	4.0	4.0	0.0	0.27	0.03	0.08	0.05	2d8/15 L=25	1,1,1	
		25.0	1.17	4.0	4.0	0.0	0.27	0.06	0.10	0.06	2d8/15 L=25	1,1,1	
95	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.29e-03	0.04	0.02	2d8/15 L=34	1,1,1	
	s=1,m=3	17.1	1.17	4.0	4.0	0.0	0.27	2.96e-03	8.28e-04	3.56e-04	2d8/15 L=34	1,1,1	
		34.3	1.17	4.0	4.0	0.0	0.27	6.87e-03	0.04	0.03	2d8/15 L=34	1,1,1	
93	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.22e-03	0.04	0.02	2d8/15 L=34	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

	s=1,m=3	17.1	1.17	4.0	4.0	0.0	0.27	3.17e-03	3.14e-04	2.26e-05	2d8/15 L=34	1,1,1	
		34.3	1.17	4.0	4.0	0.0	0.27	6.29e-03	0.04	0.03	2d8/15 L=34	1,1,1	
94	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.63e-03	0.04	0.02	2d8/15 L=34	1,1,1	
	s=1,m=3	17.1	1.17	4.0	4.0	0.0	0.27	2.90e-03	7.27e-04	2.91e-04	2d8/15 L=34	1,1,1	
		34.3	1.17	4.0	4.0	0.0	0.27	6.22e-03	0.04	0.02	2d8/15 L=34	1,1,1	
12	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	6.25e-04	0.03	0.02	2d8/15 L=34	1,1,1	
	s=1,m=3	17.1	1.17	4.0	4.0	0.0	0.27	6.21e-03	7.64e-03	4.78e-03	2d8/15 L=34	1,1,1	
		34.3	1.17	4.0	4.0	0.0	0.27	6.63e-03	0.05	0.03	2d8/15 L=34	1,1,1	
							<b>M_T= 3</b>	<b>Z=0.0</b>	<b>N=10</b>	<b>N=30</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
13	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.25e-05	2.53e-03	1.47e-03	2d8/15 L=35	1,1,1	
	s=1,m=3	17.4	1.17	4.0	4.0	0.0	0.27	4.11e-04	7.04e-04	2.82e-04	2d8/15 L=35	1,1,1	
		34.8	1.17	4.0	4.0	0.0	0.27	4.75e-04	3.40e-03	2.03e-03	2d8/15 L=35	1,1,1	
77	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.75e-04	2.99e-03	1.77e-03	2d8/15 L=35	1,1,1	
	s=1,m=3	17.4	1.17	4.0	4.0	0.0	0.27	2.10e-04	3.00e-04	1.99e-05	2d8/15 L=35	1,1,1	
		34.8	1.17	4.0	4.0	0.0	0.27	4.44e-04	2.93e-03	1.73e-03	2d8/15 L=35	1,1,1	
75	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.44e-04	2.96e-03	1.75e-03	2d8/15 L=35	1,1,1	
	s=1,m=3	17.4	1.17	4.0	4.0	0.0	0.27	2.24e-04	2.72e-04	1.42e-06	2d8/15 L=35	1,1,1	
		34.8	1.17	4.0	4.0	0.0	0.27	4.46e-04	2.96e-03	1.75e-03	2d8/15 L=35	1,1,1	
79	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.46e-04	2.96e-03	1.75e-03	2d8/15 L=35	1,1,1	
	s=1,m=3	17.4	1.17	4.0	4.0	0.0	0.27	2.23e-04	2.70e-04	0.0	2d8/15 L=35	1,1,1	
		34.8	1.17	4.0	4.0	0.0	0.27	4.46e-04	2.96e-03	1.75e-03	2d8/15 L=35	1,1,1	
74	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.46e-04	2.96e-03	1.75e-03	2d8/15 L=35	1,1,1	
	s=1,m=3	17.4	1.17	4.0	4.0	0.0	0.27	2.23e-04	2.70e-04	0.0	2d8/15 L=35	1,1,1	
		34.8	1.17	4.0	4.0	0.0	0.27	4.46e-04	2.96e-03	1.75e-03	2d8/15 L=35	1,1,1	
78	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.46e-04	2.96e-03	1.75e-03	2d8/15 L=35	1,1,1	
	s=1,m=3	17.4	1.17	4.0	4.0	0.0	0.27	2.23e-04	2.70e-04	0.0	2d8/15 L=35	1,1,1	
		34.8	1.17	4.0	4.0	0.0	0.27	4.46e-04	2.96e-03	1.75e-03	2d8/15 L=35	1,1,1	
76	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.46e-04	2.95e-03	1.74e-03	2d8/15 L=35	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

	s=1,m=3	17.4	1.17	4.0	4.0	0.0	0.27	2.20e-04	2.77e-04	4.53e-06	2d8/15 L=35	1,1,1	
		34.8	1.17	4.0	4.0	0.0	0.27	4.53e-04	2.97e-03	1.75e-03	2d8/15 L=35	1,1,1	
80	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.53e-04	3.06e-03	1.81e-03	2d8/15 L=35	1,1,1	
	s=1,m=3	17.4	1.17	4.0	4.0	0.0	0.27	2.66e-04	3.68e-04	6.41e-05	2d8/15 L=35	1,1,1	
		34.8	1.17	4.0	4.0	0.0	0.27	3.54e-04	2.86e-03	1.68e-03	2d8/15 L=35	1,1,1	
35	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	4.17e-04	4.77e-03	1.79e-03	2d8/15 L=23	1,1,1	
	s=2,m=3	11.5	1.12	4.0	4.0	0.0	0.33	8.94e-05	2.88e-03	1.51e-04	2d8/15 L=23	1,1,1	
		23.0	1.12	4.0	4.0	0.0	0.33	2.59e-04	4.42e-03	1.49e-03	2d8/15 L=23	1,1,1	
92	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	2.59e-04	3.33e-03	5.42e-04	2d8/15 L=23	1,1,1	
	s=2,m=3	11.5	1.12	4.0	4.0	0.0	0.33	4.04e-04	3.97e-03	1.10e-03	2d8/15 L=23	1,1,1	
		23.0	1.12	4.0	4.0	0.0	0.33	1.40e-03	5.87e-03	2.74e-03	2d8/15 L=23	1,1,1	
30	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.06e-03	9.16e-03	3.14e-03	2d8/15 L=68	1,1,1	
	s=1,m=3	33.8	1.17	4.0	4.0	0.0	0.27	1.09e-03	4.71e-03	2.52e-04	2d8/15 L=68	1,1,1	
		67.5	1.17	4.0	4.0	0.0	0.27	1.81e-03	9.94e-03	3.65e-03	2d8/15 L=68	1,1,1	
118	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.81e-03	9.63e-03	3.44e-03	2d8/15 L=68	1,1,1	
	s=1,m=3	33.8	1.17	4.0	4.0	0.0	0.27	7.92e-04	4.40e-03	5.03e-05	2d8/15 L=68	1,1,1	
		67.5	1.17	4.0	4.0	0.0	0.27	1.66e-03	9.47e-03	3.34e-03	2d8/15 L=68	1,1,1	
116	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.66e-03	9.53e-03	3.38e-03	2d8/15 L=68	1,1,1	
	s=1,m=3	33.8	1.17	4.0	4.0	0.0	0.27	8.51e-04	4.34e-03	1.03e-05	2d8/15 L=68	1,1,1	
		67.5	1.17	4.0	4.0	0.0	0.27	1.69e-03	9.57e-03	3.40e-03	2d8/15 L=68	1,1,1	
89	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.69e-03	9.55e-03	3.40e-03	2d8/15 L=68	1,1,1	
	s=1,m=3	33.8	1.17	4.0	4.0	0.0	0.27	8.41e-04	4.33e-03	3.07e-06	2d8/15 L=68	1,1,1	
		67.5	1.17	4.0	4.0	0.0	0.27	1.68e-03	9.55e-03	3.39e-03	2d8/15 L=68	1,1,1	
115	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.68e-03	9.54e-03	3.39e-03	2d8/15 L=68	1,1,1	
	s=1,m=3	33.8	1.17	4.0	4.0	0.0	0.27	8.37e-04	4.33e-03	5.70e-06	2d8/15 L=68	1,1,1	
		67.5	1.17	4.0	4.0	0.0	0.27	1.70e-03	9.56e-03	3.40e-03	2d8/15 L=68	1,1,1	
32	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.70e-03	9.59e-03	3.42e-03	2d8/15 L=68	1,1,1	
	s=1,m=3	33.8	1.17	4.0	4.0	0.0	0.27	8.68e-04	4.36e-03	2.66e-05	2d8/15 L=68	1,1,1	
		67.5	1.17	4.0	4.0	0.0	0.27	1.62e-03	9.51e-03	3.37e-03	2d8/15 L=68	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

117	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.62e-03	9.35e-03	3.26e-03	2d8/15 L=68	1,1,1	
	s=1,m=3	33.8	1.17	4.0	4.0	0.0	0.27	7.10e-04	4.53e-03	1.33e-04	2d8/15 L=68	1,1,1	
		67.5	1.17	4.0	4.0	0.0	0.27	2.01e-03	9.75e-03	3.53e-03	2d8/15 L=68	1,1,1	
90	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	2.01e-03	0.01	4.06e-03	2d8/15 L=68	1,1,1	
	s=1,m=3	33.8	1.17	4.0	4.0	0.0	0.27	1.50e-03	5.35e-03	6.63e-04	2d8/15 L=68	1,1,1	
		67.5	1.17	4.0	4.0	0.0	0.27	3.77e-05	8.53e-03	2.73e-03	2d8/15 L=68	1,1,1	
							<b>M_T= 4</b>	<b>Z=0.0</b>	<b>N=10</b>	<b>N=11</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
14	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.03e-03	0.04	0.03	2d8/15 L=40	1,1,1	
	s=1,m=3	20.0	1.17	4.0	4.0	0.0	0.27	8.20e-03	8.03e-03	5.08e-03	2d8/15 L=40	1,1,1	
		40.0	1.17	4.0	4.0	0.0	0.27	9.93e-03	0.06	0.04	2d8/15 L=40	1,1,1	
70	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	9.93e-03	0.05	0.03	2d8/15 L=40	1,1,1	
	s=1,m=3	20.0	1.17	4.0	4.0	0.0	0.27	4.11e-03	1.09e-03	5.80e-04	2d8/15 L=40	1,1,1	
		40.0	1.17	4.0	4.0	0.0	0.27	8.85e-03	0.05	0.03	2d8/15 L=40	1,1,1	
68	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.85e-03	0.05	0.03	2d8/15 L=40	1,1,1	
	s=1,m=3	20.0	1.17	4.0	4.0	0.0	0.27	4.49e-03	2.38e-04	2.54e-05	2d8/15 L=40	1,1,1	
		40.0	1.17	4.0	4.0	0.0	0.27	8.84e-03	0.05	0.03	2d8/15 L=40	1,1,1	
72	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.84e-03	0.05	0.03	2d8/15 L=40	1,1,1	
	s=1,m=3	20.0	1.17	4.0	4.0	0.0	0.27	4.38e-03	2.57e-04	3.76e-05	2d8/15 L=40	1,1,1	
		40.0	1.17	4.0	4.0	0.0	0.27	8.72e-03	0.05	0.03	2d8/15 L=40	1,1,1	
67	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.72e-03	0.05	0.03	2d8/15 L=40	1,1,1	
	s=1,m=3	20.0	1.17	4.0	4.0	0.0	0.27	4.33e-03	2.37e-04	2.48e-05	2d8/15 L=40	1,1,1	
		40.0	1.17	4.0	4.0	0.0	0.27	8.62e-03	0.05	0.03	2d8/15 L=40	1,1,1	
71	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.62e-03	0.05	0.03	2d8/15 L=40	1,1,1	
	s=1,m=3	20.0	1.17	4.0	4.0	0.0	0.27	4.32e-03	3.39e-04	9.09e-05	2d8/15 L=40	1,1,1	
		40.0	1.17	4.0	4.0	0.0	0.27	8.40e-03	0.04	0.03	2d8/15 L=40	1,1,1	
69	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.40e-03	0.04	0.03	2d8/15 L=40	1,1,1	
	s=1,m=3	20.0	1.17	4.0	4.0	0.0	0.27	3.83e-03	1.00e-03	5.20e-04	2d8/15 L=40	1,1,1	
		40.0	1.17	4.0	4.0	0.0	0.27	9.26e-03	0.05	0.03	2d8/15 L=40	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

73	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	9.26e-03	0.05	0.03	2d8/15 L=40	1,1,1	
	s=1,m=3	20.0	1.17	4.0	4.0	0.0	0.27	7.83e-03	8.20e-03	5.19e-03	2d8/15 L=40	1,1,1	
		40.0	1.17	4.0	4.0	0.0	0.27	5.42e-05	0.04	0.02	2d8/15 L=40	1,1,1	
							<b>M_T= 5</b>	<b>Z=0.0</b>	<b>N=11</b>	<b>N=12</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
15	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	3.65e-03	7.89e-03	1.50e-03	2d8/15 L=31	1,1,1	
	s=1,m=3	15.3	1.17	4.0	4.0	0.0	0.27	2.11e-03	0.01	3.09e-03	2d8/15 L=31	1,1,1	
		30.6	1.17	4.0	4.0	0.0	0.27	5.31e-04	0.01	4.77e-03	2d8/15 L=31	1,1,1	
66	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	5.31e-04	8.87e-03	2.14e-03	2d8/15 L=31	1,1,1	
	s=1,m=3	15.3	1.17	4.0	4.0	0.0	0.27	3.18e-04	6.14e-03	3.66e-04	2d8/15 L=31	1,1,1	
		30.6	1.17	4.0	4.0	0.0	0.27	5.97e-05	7.89e-03	1.50e-03	2d8/15 L=31	1,1,1	
							<b>M_T= 6</b>	<b>Z=0.0</b>	<b>N=1</b>	<b>N=12</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
18	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	3.91e-05	0.03	0.02	2d8/15 L=22	1,1,1	
	s=1,m=3	10.9	1.17	4.0	4.0	0.0	0.27	3.40e-03	6.53e-03	3.19e-03	2d8/15 L=22	1,1,1	
		21.8	1.17	4.0	4.0	0.0	0.27	3.02e-03	0.04	0.02	2d8/15 L=22	1,1,1	
61	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	3.02e-03	0.03	0.02	2d8/15 L=22	1,1,1	
	s=1,m=3	10.9	1.17	4.0	4.0	0.0	0.27	1.51e-03	2.75e-03	7.40e-04	2d8/15 L=22	1,1,1	
		21.8	1.17	4.0	4.0	0.0	0.27	3.73e-03	0.03	0.02	2d8/15 L=22	1,1,1	
60	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	3.73e-03	0.02	0.01	2d8/15 L=22	1,1,1	
	s=1,m=3	10.9	1.17	4.0	4.0	0.0	0.27	1.51e-03	0.01	5.57e-03	2d8/15 L=22	1,1,1	
		21.8	1.17	4.0	4.0	0.0	0.27	9.07e-03	0.04	0.03	2d8/15 L=22	1,1,1	
62	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	9.07e-03	0.07	0.04	2d8/15 L=22	1,1,1	
	s=1,m=3	10.9	1.17	4.0	4.0	0.0	0.27	0.04	0.10	0.07	2d8/15 L=22	1,1,1	
		21.8	1.17	4.0	4.0	0.0	0.27	0.07	0.13	0.09	2d8/15 L=22	1,1,1	
44	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.03	0.09	0.05	2d8/15 L=28	1,1,1	
	s=1,m=3	14.0	1.17	4.0	4.0	0.0	0.27	0.01	0.13	0.08	2d8/15 L=28	1,1,1	
		28.0	1.17	4.0	4.0	0.0	0.27	0.07	0.17	0.11	2d8/15 L=28	1,1,1	
42	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.06	0.01	4.16e-04	2d8/15 L=28	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

	s=1,m=3	14.0	1.17	4.0	4.0	0.0	0.27	0.05	0.05	0.03	2d8/15 L=28	1,1,1	
		28.0	1.17	4.0	4.0	0.0	0.27	0.03	0.09	0.05	2d8/15 L=28	1,1,1	
43	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.03	0.09	0.05	2d8/15 L=28	1,1,1	
	s=1,m=3	14.0	1.17	4.0	4.0	0.0	0.27	0.05	0.05	0.03	2d8/15 L=28	1,1,1	
		28.0	1.17	4.0	4.0	0.0	0.27	0.06	0.01	4.16e-04	2d8/15 L=28	1,1,1	
17	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.07	0.17	0.10	2d8/15 L=28	1,1,1	
	s=1,m=3	14.0	1.17	4.0	4.0	0.0	0.27	0.01	0.13	0.08	2d8/15 L=28	1,1,1	
		28.0	1.17	4.0	4.0	0.0	0.27	0.03	0.09	0.05	2d8/15 L=28	1,1,1	
16	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.07	0.15	0.08	2d8/15 L=22	1,1,1	
	s=1,m=3	10.9	1.17	4.0	4.0	0.0	0.27	0.03	0.12	0.06	2d8/15 L=22	1,1,1	
		21.8	1.17	4.0	4.0	0.0	0.27	8.84e-03	0.09	0.04	2d8/15 L=22	1,1,1	
64	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.84e-03	0.06	0.03	2d8/15 L=22	1,1,1	
	s=1,m=3	10.9	1.17	4.0	4.0	0.0	0.27	1.39e-03	0.03	5.34e-03	2d8/15 L=22	1,1,1	
		21.8	1.17	4.0	4.0	0.0	0.27	3.70e-03	0.04	0.01	2d8/15 L=22	1,1,1	
63	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	3.70e-03	0.05	0.02	2d8/15 L=22	1,1,1	
	s=1,m=3	10.9	1.17	4.0	4.0	0.0	0.27	1.47e-03	0.02	6.36e-04	2d8/15 L=22	1,1,1	
		21.8	1.17	4.0	4.0	0.0	0.27	3.09e-03	0.05	0.02	2d8/15 L=22	1,1,1	
65	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	3.09e-03	0.05	0.02	2d8/15 L=22	1,1,1	
	s=1,m=3	10.9	1.17	4.0	4.0	0.0	0.27	2.32e-03	0.02	1.16e-03	2d8/15 L=22	1,1,1	
		21.8	1.17	4.0	4.0	0.0	0.27	1.02e-03	0.04	0.01	2d8/15 L=22	1,1,1	
							<b>M_T= 7</b>	<b>Z=0.0</b>	<b>N=15</b>	<b>N=23</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
19	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	2.26e-04	0.05	0.03	2d8/15 L=34	1,1,1	
	s=1,m=3	17.3	1.17	4.0	4.0	0.0	0.27	9.79e-03	0.01	7.21e-03	2d8/15 L=34	1,1,1	
		34.5	1.17	4.0	4.0	0.0	0.27	0.01	0.07	0.05	2d8/15 L=34	1,1,1	
97	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.01	0.06	0.04	2d8/15 L=34	1,1,1	
	s=1,m=3	17.3	1.17	4.0	4.0	0.0	0.27	4.70e-03	1.05e-03	4.79e-04	2d8/15 L=34	1,1,1	
		34.5	1.17	4.0	4.0	0.0	0.27	0.01	0.06	0.04	2d8/15 L=34	1,1,1	
96	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.01	0.06	0.04	2d8/15 L=34	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

	s=1,m=3	17.3	1.17	4.0	4.0	0.0	0.27	5.14e-03	4.25e-04	7.47e-05	2d8/15 L=34	1,1,1	
		34.5	1.17	4.0	4.0	0.0	0.27	9.93e-03	0.06	0.04	2d8/15 L=34	1,1,1	
98	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	9.93e-03	0.06	0.04	2d8/15 L=34	1,1,1	
	s=1,m=3	17.3	1.17	4.0	4.0	0.0	0.27	3.94e-03	2.90e-03	1.68e-03	2d8/15 L=34	1,1,1	
		34.5	1.17	4.0	4.0	0.0	0.27	0.01	0.06	0.04	2d8/15 L=34	1,1,1	
20	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.01	0.07	0.05	2d8/15 L=42	1,1,1	
	s=1,m=3	21.0	1.17	4.0	4.0	0.0	0.27	8.45e-03	2.05e-03	1.32e-03	2d8/15 L=42	1,1,1	
		42.0	1.17	4.0	4.0	0.0	0.27	0.02	0.08	0.05	2d8/15 L=42	1,1,1	
100	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.02	0.08	0.05	2d8/15 L=42	1,1,1	
	s=1,m=3	21.0	1.17	4.0	4.0	0.0	0.27	7.41e-03	2.70e-04	1.64e-04	2d8/15 L=42	1,1,1	
		42.0	1.17	4.0	4.0	0.0	0.27	0.01	0.07	0.05	2d8/15 L=42	1,1,1	
99	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.01	0.07	0.05	2d8/15 L=42	1,1,1	
	s=1,m=3	21.0	1.17	4.0	4.0	0.0	0.27	7.43e-03	3.04e-04	1.87e-04	2d8/15 L=42	1,1,1	
		42.0	1.17	4.0	4.0	0.0	0.27	0.02	0.08	0.05	2d8/15 L=42	1,1,1	
101	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.02	0.08	0.05	2d8/15 L=42	1,1,1	
	s=1,m=3	21.0	1.17	4.0	4.0	0.0	0.27	8.53e-03	2.07e-03	1.34e-03	2d8/15 L=42	1,1,1	
		42.0	1.17	4.0	4.0	0.0	0.27	0.01	0.07	0.05	2d8/15 L=42	1,1,1	
21	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.01	0.06	0.04	2d8/15 L=49	1,1,1	
	s=1,m=3	24.5	1.17	4.0	4.0	0.0	0.27	3.26e-03	0.03	0.02	2d8/15 L=49	1,1,1	
		49.0	1.17	4.0	4.0	0.0	0.27	0.06	0.12	0.08	2d8/15 L=49	1,1,1	
22	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.06	0.16	0.11	2d8/15 L=22	1,1,1	
	s=1,m=3	11.2	1.17	4.0	4.0	0.0	0.27	0.01	0.12	0.08	2d8/15 L=22	1,1,1	
		22.5	1.17	4.0	4.0	0.0	0.27	0.02	0.08	0.05	2d8/15 L=22	1,1,1	
51	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.02	0.08	0.05	2d8/15 L=22	1,1,1	
	s=1,m=3	11.2	1.17	4.0	4.0	0.0	0.27	0.04	0.04	0.03	2d8/15 L=22	1,1,1	
		22.5	1.17	4.0	4.0	0.0	0.27	0.05	8.62e-04	4.57e-04	2d8/15 L=22	1,1,1	
47	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	8.62e-04	4.57e-04	2d8/15 L=22	1,1,1	
	s=1,m=3	11.2	1.17	4.0	4.0	0.0	0.27	0.04	0.04	0.03	2d8/15 L=22	1,1,1	
		22.5	1.17	4.0	4.0	0.0	0.27	0.02	0.08	0.05	2d8/15 L=22	1,1,1	



**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

55	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.02	0.08	0.05	2d8/15 L=22	1,1,1	
	s=1,m=3	11.2	1.17	4.0	4.0	0.0	0.27	9.06e-03	0.12	0.08	2d8/15 L=22	1,1,1	
		22.5	1.17	4.0	4.0	0.0	0.27	0.05	0.16	0.11	2d8/15 L=22	1,1,1	
23	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	0.11	0.07	2d8/15 L=25	1,1,1	
	s=1,m=3	12.5	1.17	4.0	4.0	0.0	0.27	0.02	0.06	0.04	2d8/15 L=25	1,1,1	
		25.0	1.17	4.0	4.0	0.0	0.27	8.80e-03	0.02	0.01	2d8/15 L=25	1,1,1	
24	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.82e-03	0.06	0.04	2d8/15 L=32	1,1,1	
	s=1,m=3	16.0	1.17	4.0	4.0	0.0	0.27	4.45e-03	3.35e-03	3.45e-05	2d8/15 L=32	1,1,1	
		32.0	1.17	4.0	4.0	0.0	0.27	8.88e-03	0.06	0.04	2d8/15 L=32	1,1,1	
85	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.88e-03	0.06	0.04	2d8/15 L=32	1,1,1	
	s=1,m=3	16.0	1.17	4.0	4.0	0.0	0.27	4.45e-03	3.32e-03	1.02e-05	2d8/15 L=32	1,1,1	
		32.0	1.17	4.0	4.0	0.0	0.27	8.87e-03	0.06	0.04	2d8/15 L=32	1,1,1	
84	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.87e-03	0.06	0.04	2d8/15 L=32	1,1,1	
	s=1,m=3	16.0	1.17	4.0	4.0	0.0	0.27	4.26e-03	3.75e-03	2.92e-04	2d8/15 L=32	1,1,1	
		32.0	1.17	4.0	4.0	0.0	0.27	9.29e-03	0.06	0.04	2d8/15 L=32	1,1,1	
86	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	9.29e-03	0.07	0.04	2d8/15 L=32	1,1,1	
	s=1,m=3	16.0	1.17	4.0	4.0	0.0	0.27	8.40e-03	0.01	6.14e-03	2d8/15 L=32	1,1,1	
		32.0	1.17	4.0	4.0	0.0	0.27	6.32e-04	0.05	0.03	2d8/15 L=32	1,1,1	
							<b>M_T= 8</b>	<b>Z=0.0</b>	<b>N=5</b>	<b>N=29</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
34	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	2.86e-03	0.01	4.47e-03	2d8/15 L=23	1,1,1	
	s=2,m=3	11.5	1.12	4.0	4.0	0.0	0.33	9.59e-04	9.68e-03	2.82e-03	2d8/15 L=23	1,1,1	
		23.0	1.12	4.0	4.0	0.0	0.33	8.54e-05	7.78e-03	1.18e-03	2d8/15 L=23	1,1,1	
87	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	8.54e-05	0.02	0.01	2d8/15 L=23	1,1,1	
	s=2,m=3	11.5	1.12	4.0	4.0	0.0	0.33	7.31e-03	0.02	0.01	2d8/15 L=23	1,1,1	
		23.0	1.12	4.0	4.0	0.0	0.33	0.02	0.03	0.02	2d8/15 L=23	1,1,1	
25	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.01	0.03	0.02	2d8/15 L=33	1,1,1	
	s=1,m=3	16.3	1.17	4.0	4.0	0.0	0.27	2.03e-03	0.02	0.01	2d8/15 L=33	1,1,1	
		32.5	1.17	4.0	4.0	0.0	0.27	4.83e-03	0.02	7.59e-03	2d8/15 L=33	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

52	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.83e-03	0.02	7.59e-03	2d8/15 L=33	1,1,1	
	s=1,m=3	16.3	1.17	4.0	4.0	0.0	0.27	8.87e-03	9.96e-03	3.68e-03	2d8/15 L=33	1,1,1	
		32.5	1.17	4.0	4.0	0.0	0.27	0.01	4.55e-03	1.63e-04	2d8/15 L=33	1,1,1	
48	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.01	4.55e-03	1.63e-04	2d8/15 L=33	1,1,1	
	s=1,m=3	16.3	1.17	4.0	4.0	0.0	0.27	8.65e-03	0.01	3.93e-03	2d8/15 L=33	1,1,1	
		32.5	1.17	4.0	4.0	0.0	0.27	4.50e-03	0.02	7.63e-03	2d8/15 L=33	1,1,1	
56	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	4.50e-03	0.02	7.63e-03	2d8/15 L=33	1,1,1	
	s=1,m=3	16.3	1.17	4.0	4.0	0.0	0.27	2.27e-03	0.02	0.01	2d8/15 L=33	1,1,1	
		32.5	1.17	4.0	4.0	0.0	0.27	0.01	0.03	0.01	2d8/15 L=33	1,1,1	
26	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.01	0.02	0.01	2d8/15 L=44	1,1,1	
	s=1,m=3	22.1	1.17	4.0	4.0	0.0	0.27	3.82e-03	0.01	5.98e-03	2d8/15 L=44	1,1,1	
		44.3	1.17	4.0	4.0	0.0	0.27	7.51e-05	6.30e-03	2.03e-03	2d8/15 L=44	1,1,1	
103	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	7.51e-05	7.96e-03	3.10e-03	2d8/15 L=44	1,1,1	
	s=1,m=3	22.1	1.17	4.0	4.0	0.0	0.27	1.22e-03	4.27e-03	7.06e-04	2d8/15 L=44	1,1,1	
		44.3	1.17	4.0	4.0	0.0	0.27	1.12e-03	9.23e-03	3.93e-03	2d8/15 L=44	1,1,1	
102	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.12e-03	7.12e-03	2.56e-03	2d8/15 L=44	1,1,1	
	s=1,m=3	22.1	1.17	4.0	4.0	0.0	0.27	1.84e-04	3.19e-03	6.16e-06	2d8/15 L=44	1,1,1	
		44.3	1.17	4.0	4.0	0.0	0.27	1.10e-03	7.20e-03	2.61e-03	2d8/15 L=44	1,1,1	
104	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.10e-03	9.10e-03	3.84e-03	2d8/15 L=44	1,1,1	
	s=1,m=3	22.1	1.17	4.0	4.0	0.0	0.27	1.44e-03	5.31e-03	1.38e-03	2d8/15 L=44	1,1,1	
		44.3	1.17	4.0	4.0	0.0	0.27	1.65e-03	4.60e-03	9.20e-04	2d8/15 L=44	1,1,1	
27	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.56e-03	5.50e-03	7.84e-04	2d8/15 L=49	1,1,1	
	s=1,m=3	24.7	1.17	4.0	4.0	0.0	0.27	9.75e-04	7.30e-03	1.95e-03	2d8/15 L=49	1,1,1	
		49.3	1.17	4.0	4.0	0.0	0.27	2.87e-03	0.01	5.21e-03	2d8/15 L=49	1,1,1	
28	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	2.81e-03	0.01	3.75e-03	2d8/15 L=51	1,1,1	
	s=1,m=3	25.4	1.17	4.0	4.0	0.0	0.27	1.91e-04	6.77e-03	9.16e-04	2d8/15 L=51	1,1,1	
		50.7	1.17	4.0	4.0	0.0	0.27	7.82e-04	8.42e-03	1.98e-03	2d8/15 L=51	1,1,1	
106	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	7.82e-04	9.42e-03	2.64e-03	2d8/15 L=51	1,1,1	
	s=1,m=3	25.4	1.17	4.0	4.0	0.0	0.27	6.31e-04	5.54e-03	1.17e-04	2d8/15 L=51	1,1,1	

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

		50.7	1.17	4.0	4.0	0.0	0.27	1.05e-03	9.83e-03	2.90e-03	2d8/15 L=51	1,1,1	
105	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.05e-03	9.58e-03	2.74e-03	2d8/15 L=51	1,1,1	
	s=1,m=3	25.4	1.17	4.0	4.0	0.0	0.27	4.37e-04	5.48e-03	7.63e-05	2d8/15 L=51	1,1,1	
		50.7	1.17	4.0	4.0	0.0	0.27	1.24e-03	9.86e-03	2.92e-03	2d8/15 L=51	1,1,1	
107	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	1.24e-03	0.01	3.45e-03	2d8/15 L=51	1,1,1	
	s=1,m=3	25.4	1.17	4.0	4.0	0.0	0.27	1.01e-03	6.24e-03	5.72e-04	2d8/15 L=51	1,1,1	
		50.7	1.17	4.0	4.0	0.0	0.27	3.09e-05	8.96e-03	2.33e-03	2d8/15 L=51	1,1,1	
							<b>M_T= 9</b>	<b>Z=0.0</b>	<b>N=29</b>	<b>N=30</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
29	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	8.01e-04	0.11	0.07	2d8/15 L=76	1,1,1	
	s=1,m=3	38.1	1.17	4.0	4.0	0.0	0.27	0.04	0.03	0.02	2d8/15 L=76	1,1,1	
		76.2	1.17	4.0	4.0	0.0	0.27	0.06	0.16	0.11	2d8/15 L=76	1,1,1	
111	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.06	0.14	0.09	2d8/15 L=76	1,1,1	
	s=1,m=3	38.1	1.17	4.0	4.0	0.0	0.27	0.02	5.80e-03	3.67e-03	2d8/15 L=76	1,1,1	
		76.2	1.17	4.0	4.0	0.0	0.27	0.05	0.13	0.08	2d8/15 L=76	1,1,1	
109	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	0.13	0.09	2d8/15 L=76	1,1,1	
	s=1,m=3	38.1	1.17	4.0	4.0	0.0	0.27	0.03	1.42e-03	8.27e-04	2d8/15 L=76	1,1,1	
		76.2	1.17	4.0	4.0	0.0	0.27	0.05	0.14	0.09	2d8/15 L=76	1,1,1	
113	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	0.14	0.09	2d8/15 L=76	1,1,1	
	s=1,m=3	38.1	1.17	4.0	4.0	0.0	0.27	0.02	4.09e-04	1.73e-04	2d8/15 L=76	1,1,1	
		76.2	1.17	4.0	4.0	0.0	0.27	0.05	0.14	0.09	2d8/15 L=76	1,1,1	
108	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	0.14	0.09	2d8/15 L=76	1,1,1	
	s=1,m=3	38.1	1.17	4.0	4.0	0.0	0.27	0.02	5.12e-04	2.40e-04	2d8/15 L=76	1,1,1	
		76.2	1.17	4.0	4.0	0.0	0.27	0.05	0.14	0.09	2d8/15 L=76	1,1,1	
112	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	0.14	0.09	2d8/15 L=76	1,1,1	
	s=1,m=3	38.1	1.17	4.0	4.0	0.0	0.27	0.03	1.34e-03	7.77e-04	2d8/15 L=76	1,1,1	
		76.2	1.17	4.0	4.0	0.0	0.27	0.05	0.14	0.09	2d8/15 L=76	1,1,1	
110	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.05	0.13	0.09	2d8/15 L=76	1,1,1	
	s=1,m=3	38.1	1.17	4.0	4.0	0.0	0.27	0.02	5.98e-03	3.79e-03	2d8/15 L=76	1,1,1	

**RELAZIONE DI CALCOLO**

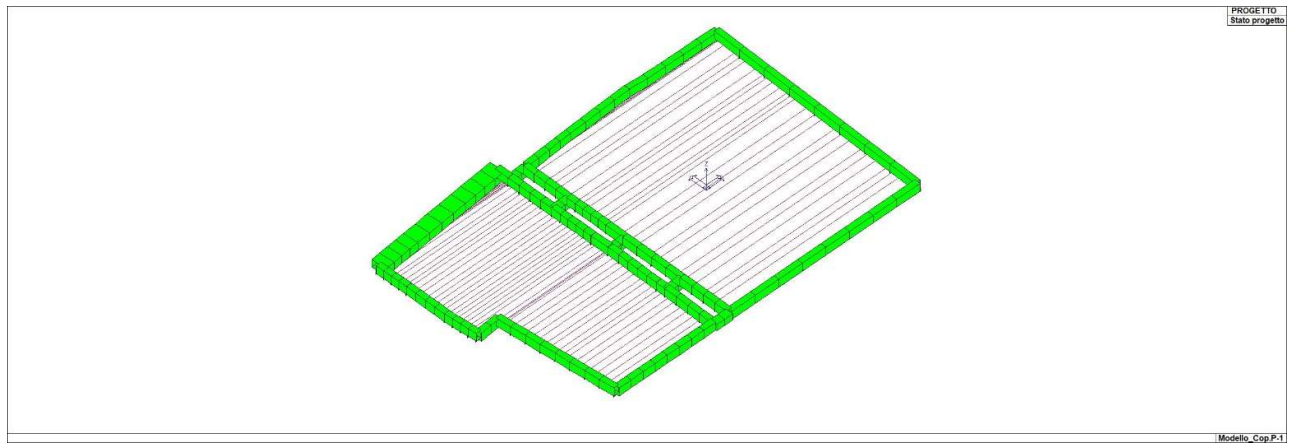
**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

		76.2	1.17	4.0	4.0	0.0	0.27	0.06	0.14	0.09	2d8/15 L=76	1,1,1	
114	ok,ok	0.0	1.17	4.0	4.0	0.0	0.27	0.06	0.17	0.11	2d8/15 L=76	1,1,1	
	s=1,m=3	38.1	1.17	4.0	4.0	0.0	0.27	0.04	0.03	0.02	2d8/15 L=76	1,1,1	
		76.2	1.17	4.0	4.0	0.0	0.27	9.93e-04	0.11	0.07	2d8/15 L=76	1,1,1	
							<b>M_T= 10</b>	<b>Z=0.0</b>	<b>N=6</b>	<b>N=16</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
31	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	3.42e-04	1.19e-03	9.65e-04	2d8/15 L=22	1,1,1	
	s=2,m=3	11.0	1.12	4.0	4.0	0.0	0.33	4.32e-04	7.78e-04	6.04e-04	2d8/15 L=22	1,1,1	
		22.0	1.12	4.0	4.0	0.0	0.33	2.60e-04	2.59e-03	2.17e-03	2d8/15 L=22	1,1,1	
88	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	2.60e-04	1.14e-03	9.18e-04	2d8/15 L=22	1,1,1	
	s=2,m=3	11.0	1.12	4.0	4.0	0.0	0.33	1.94e-04	8.32e-04	6.51e-04	2d8/15 L=22	1,1,1	
		22.0	1.12	4.0	4.0	0.0	0.33	9.09e-04	2.64e-03	2.22e-03	2d8/15 L=22	1,1,1	
							<b>M_T= 11</b>	<b>Z=0.0</b>	<b>N=8</b>	<b>N=24</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
33	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	1.06e-03	1.80e-03	2.51e-04	2d8/15 L=22	1,1,1	
	s=2,m=3	11.1	1.12	4.0	4.0	0.0	0.33	7.89e-04	3.05e-03	1.33e-03	2d8/15 L=22	1,1,1	
		22.2	1.12	4.0	4.0	0.0	0.33	2.79e-04	4.88e-03	2.91e-03	2d8/15 L=22	1,1,1	
91	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	2.79e-04	3.56e-03	1.77e-03	2d8/15 L=22	1,1,1	
	s=2,m=3	11.1	1.12	4.0	4.0	0.0	0.33	2.13e-04	1.73e-03	1.86e-04	2d8/15 L=22	1,1,1	
		22.2	1.12	4.0	4.0	0.0	0.33	9.17e-05	3.13e-03	1.40e-03	2d8/15 L=22	1,1,1	
							<b>M_T= 12</b>	<b>Z=0.0</b>	<b>N=7</b>	<b>N=25</b>			
Trave	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
119	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	1.29e-03	4.24e-03	7.18e-05	2d8/15 L=21	1,1,1	
	s=2,m=3	10.6	1.12	4.0	4.0	0.0	0.33	8.94e-04	5.99e-03	1.59e-03	2d8/15 L=21	1,1,1	
		21.2	1.12	4.0	4.0	0.0	0.33	2.32e-04	7.74e-03	3.10e-03	2d8/15 L=21	1,1,1	
120	ok,ok	0.0	1.12	4.0	4.0	0.0	0.33	2.32e-04	6.18e-03	1.75e-03	2d8/15 L=21	1,1,1	
	s=2,m=3	10.6	1.12	4.0	4.0	0.0	0.33	2.43e-04	4.43e-03	2.32e-04	2d8/15 L=21	1,1,1	
		21.2	1.12	4.0	4.0	0.0	0.33	8.78e-06	5.64e-03	1.28e-03	2d8/15 L=21	1,1,1	

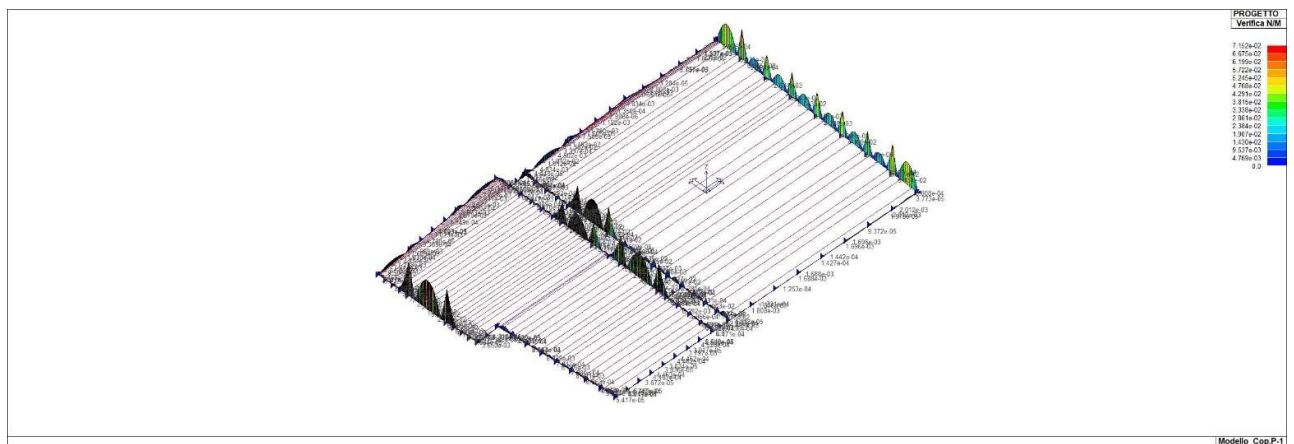
# RELAZIONE DI CALCOLO

## INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave			%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc			
			1.17	8.04	8.04	0.0	0.33	0.07	0.17	0.11			



71\_CA\_TRV\_01\_Stato progetto

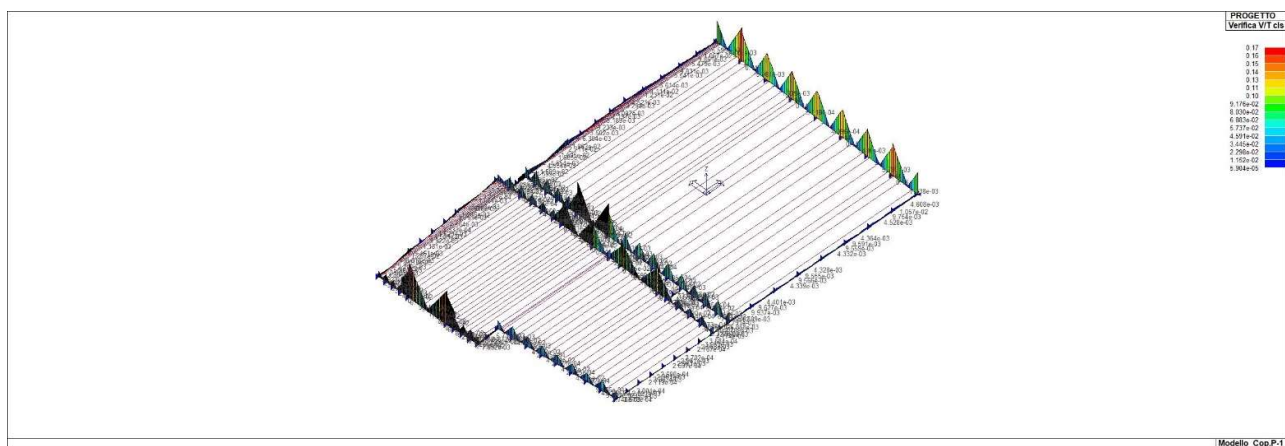


71\_CA\_TRV\_09\_Verifica NM

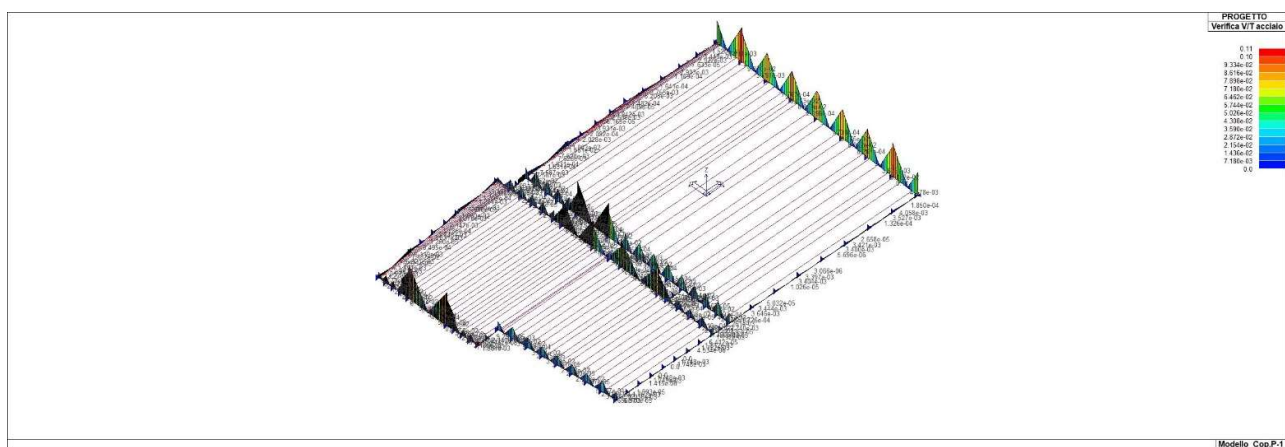
**RELAZIONE DI CALCOLO**

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**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

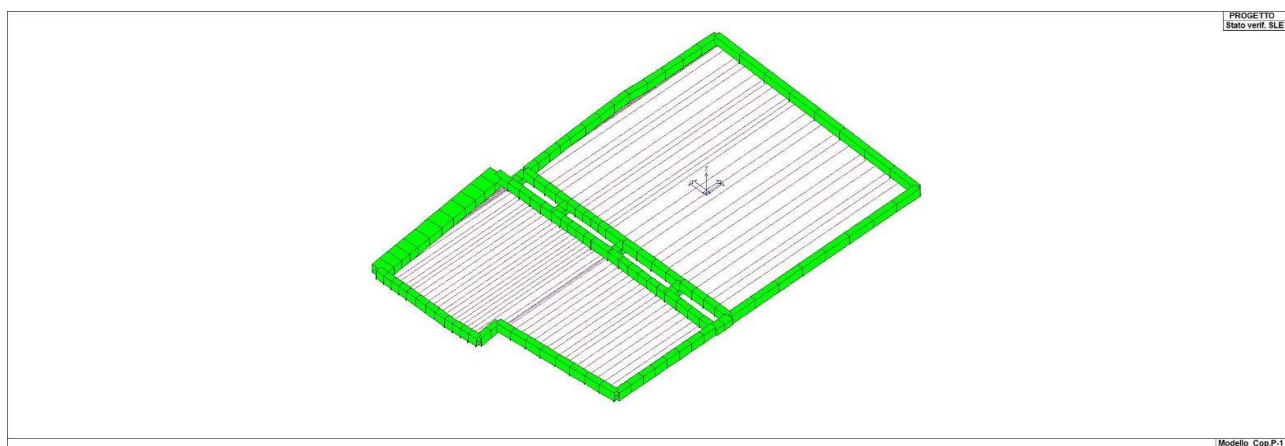


71\_CA\_TRV\_11\_Verifica VT cls

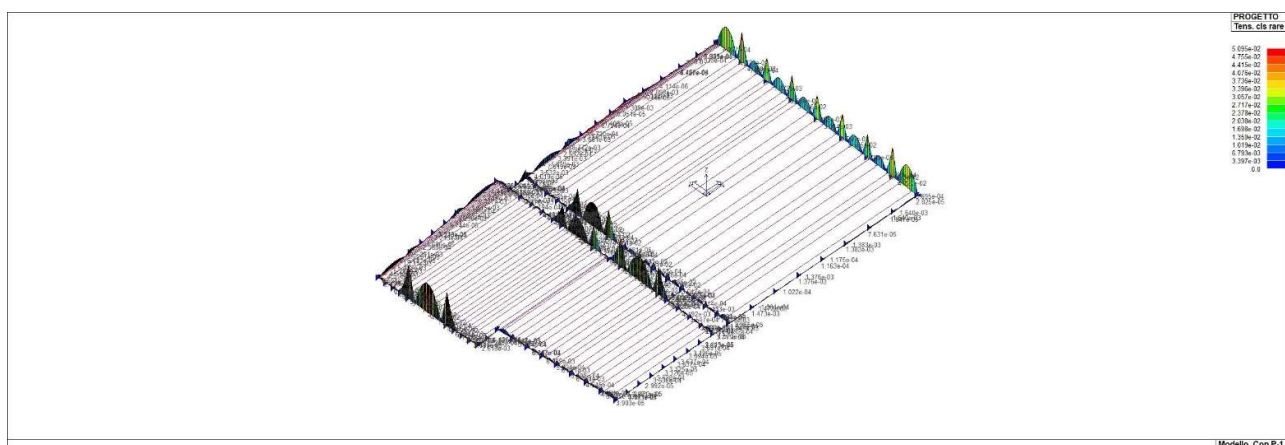


71\_CA\_TRV\_12\_Verifica VT acciaio

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA



71\_CA\_TRV\_19\_Stato verif SLE

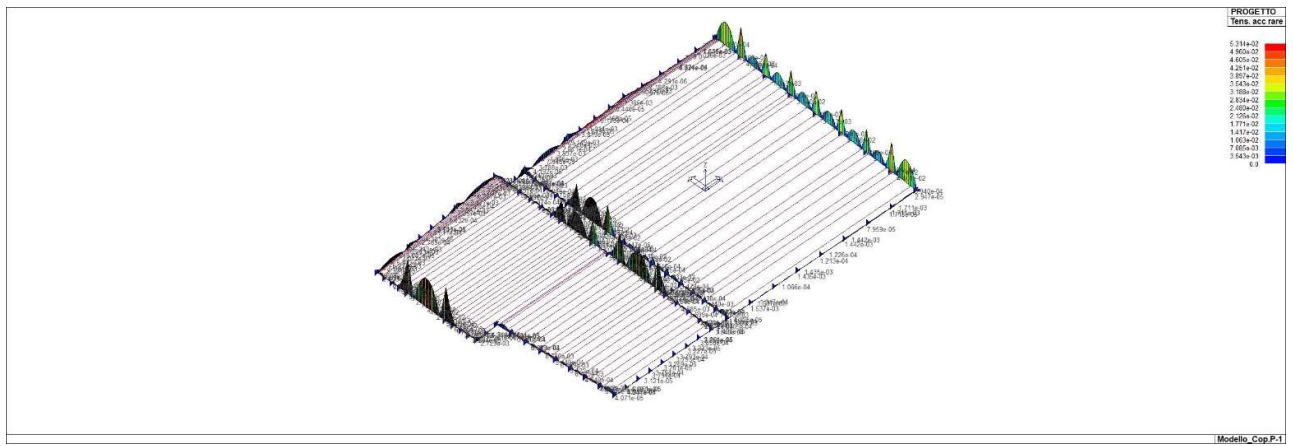


71\_CA\_TRV\_23\_Tens cls rare

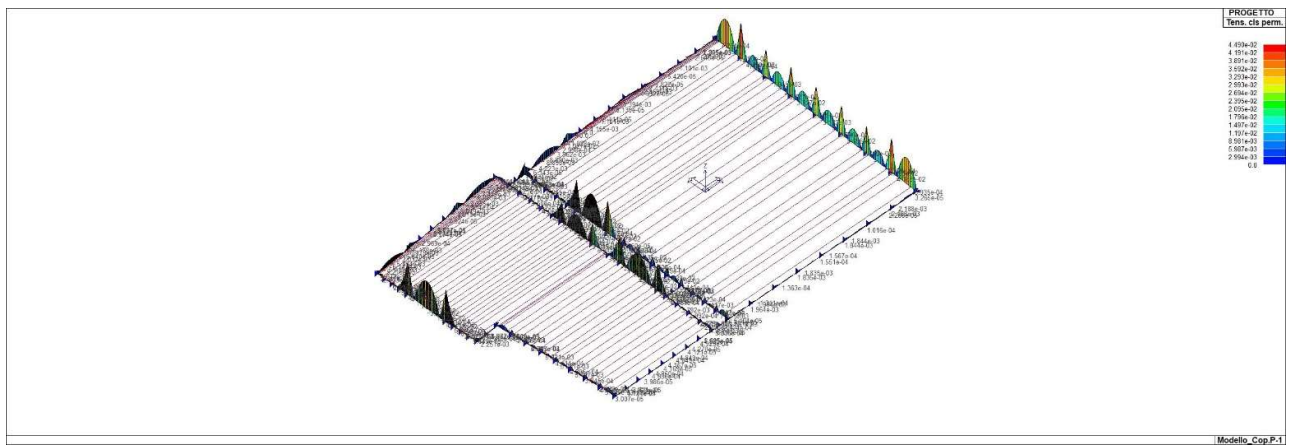
**RELAZIONE DI CALCOLO**

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**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**



71\_CA\_TRV\_24\_Tens acc rare



71\_CA\_TRV\_25\_Tens cls perm



## STATI LIMITE D' ESERCIZIO

### LEGENDA TABELLA STATI LIMITE D' ESERCIZIO

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

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

Combinazioni rare

Combinazioni frequenti

Combinazioni quasi permanenti.

I valori di interesse sono i seguenti:

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

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

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

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	cm					mm	mm	mm		cm	cm	cm	
1	0.0	8.55e-05	1.01e-04	4.07e-05	2,2,4	0.0	0.0	0.0	0,0,0	-4.35e-04	-3.95e-04	-3.80e-04	2,3,4
	12.5	2.79e-03	3.29e-03	3.20e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	25.1	4.51e-03	5.32e-03	5.21e-03	2,2,4	0.0	0.0	0.0	0,0,0				
2	0.0	5.29e-03	6.24e-03	6.18e-03	2,2,4	0.0	0.0	0.0	0,0,0	1.80e-05	1.62e-05	1.55e-05	2,3,4
	18.8	1.75e-03	2.07e-03	2.03e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	37.6	2.36e-04	2.78e-04	2.97e-04	2,2,4	0.0	0.0	0.0	0,0,0				
3	0.0	6.24e-03	7.36e-03	8.02e-03	2,2,4	0.0	0.0	0.0	0,0,0	-6.57e-04	-6.42e-04	-6.37e-04	2,3,4
	15.5	1.61e-03	1.90e-03	2.09e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	31.1	1.85e-03	2.18e-03	2.36e-03	2,2,4	0.0	0.0	0.0	0,0,0				
4	0.0	4.07e-05	4.24e-05	9.55e-05	2,2,4	0.0	0.0	0.0	0,0,0	-9.71e-05	-7.27e-05	-6.29e-05	2,3,4
	19.0	3.31e-03	3.45e-03	2.87e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	38.0	5.59e-03	5.83e-03	4.81e-03	2,2,4	0.0	0.0	0.0	0,0,0				
5	0.0	4.92e-03	5.13e-03	4.11e-03	2,2,4	0.0	0.0	0.0	0,0,0	-8.79e-05	-6.45e-05	-5.51e-05	2,3,4
	15.8	2.41e-03	2.52e-03	2.02e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	31.5	4.86e-03	5.07e-03	4.06e-03	2,2,4	0.0	0.0	0.0	0,0,0				
6	0.0	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0	4.74e-05	3.47e-05	2.97e-05	2,3,4

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	12.5	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
	25.0	4.93e-03	5.14e-03	4.12e-03	2,2,4	0.0	0.0	0.0	0,0,0				
7	0.0	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0	-1.43e-03	-1.05e-03	-8.97e-04	2,3,4
	11.2	5.98e-03	6.24e-03	5.00e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	22.5	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
8	0.0	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0	-9.22e-05	-6.76e-05	-5.78e-05	2,3,4
	24.0	1.21e-03	1.26e-03	1.01e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	48.0	3.29e-03	3.43e-03	2.79e-03	2,2,4	0.0	0.0	0.0	0,0,0				
9	0.0	0.04	0.04	0.03	2,2,4	0.0	0.0	0.0	0,0,0	1.17e-04	8.60e-05	7.37e-05	2,3,4
	16.0	0.02	0.02	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
	32.0	2.69e-03	2.81e-03	2.23e-03	2,2,4	0.0	0.0	0.0	0,0,0				
10	0.0	0.04	0.04	0.03	2,2,4	0.0	0.0	0.0	0,0,0	-2.38e-03	-1.76e-03	-1.51e-03	2,3,4
	14.0	8.18e-03	8.53e-03	6.89e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	28.0	0.02	0.02	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
11	0.0	4.67e-03	4.87e-03	3.91e-03	2,2,4	0.0	0.0	0.0	0,0,0	9.24e-05	6.81e-05	5.84e-05	2,3,4
	12.5	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	25.0	0.04	0.04	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
12	0.0	4.42e-04	4.62e-04	5.55e-04	2,2,4	0.0	0.0	0.0	0,0,0	-1.08e-04	-8.06e-05	-6.95e-05	2,3,4
	17.1	4.44e-03	4.63e-03	3.84e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	34.3	4.73e-03	4.93e-03	4.01e-03	2,2,4	0.0	0.0	0.0	0,0,0				
13	0.0	3.18e-05	3.32e-05	3.24e-05	2,2,4	0.0	0.0	0.0	0,0,0	-8.69e-06	-8.72e-06	-8.73e-06	2,3,4
	17.4	3.36e-04	3.50e-04	4.53e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	34.8	3.87e-04	4.04e-04	5.17e-04	2,2,4	0.0	0.0	0.0	0,0,0				
14	0.0	7.37e-04	7.69e-04	6.22e-04	2,2,4	0.0	0.0	0.0	0,0,0	-1.70e-04	-1.25e-04	-1.07e-04	2,3,4
	20.0	5.85e-03	6.10e-03	4.92e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	40.0	7.09e-03	7.39e-03	5.97e-03	2,2,4	0.0	0.0	0.0	0,0,0				
15	0.0	2.62e-03	2.73e-03	2.25e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.90e-05	-1.58e-05	-1.45e-05	2,3,4
	15.3	1.54e-03	1.61e-03	1.46e-03	2,2,4	0.0	0.0	0.0	0,0,0				

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	30.6	4.16e-04	4.34e-04	4.98e-04	2,2,4	0.0	0.0	0.0	0,0,0				
16	0.0	0.05	0.05	0.04	2,2,4	0.0	0.0	0.0	0,0,0	8.87e-05	6.50e-05	5.55e-05	2,3,4
	10.9	0.02	0.03	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	21.8	6.29e-03	6.57e-03	5.26e-03	2,2,4	0.0	0.0	0.0	0,0,0				
17	0.0	0.05	0.05	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-2.95e-03	-2.16e-03	-1.85e-03	2,3,4
	14.0	9.26e-03	9.66e-03	7.71e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	28.0	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
18	0.0	1.87e-05	1.95e-05	2.22e-05	2,2,4	0.0	0.0	0.0	0,0,0	-4.51e-05	-3.30e-05	-2.82e-05	2,3,4
	10.9	2.41e-03	2.52e-03	2.00e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	21.8	2.15e-03	2.24e-03	1.80e-03	2,2,4	0.0	0.0	0.0	0,0,0				
19	0.0	1.62e-04	1.69e-04	6.45e-05	2,2,4	0.0	0.0	0.0	0,0,0	-1.74e-04	-1.47e-04	-1.35e-04	2,3,4
	17.3	6.97e-03	7.27e-03	7.20e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	34.5	7.64e-03	7.97e-03	7.94e-03	2,2,4	0.0	0.0	0.0	0,0,0				
20	0.0	9.11e-03	9.50e-03	9.48e-03	2,2,4	0.0	0.0	0.0	0,0,0	-2.26e-04	-1.90e-04	-1.76e-04	2,3,4
	21.0	6.01e-03	6.27e-03	6.25e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	42.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
21	0.0	8.54e-03	8.90e-03	8.91e-03	2,2,4	0.0	0.0	0.0	0,0,0	-9.90e-05	-8.32e-05	-7.69e-05	2,3,4
	24.5	2.32e-03	2.42e-03	2.42e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	49.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
22	0.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-2.65e-03	-2.23e-03	-2.07e-03	2,3,4
	11.2	7.35e-03	7.67e-03	7.64e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	22.5	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
23	0.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	5.93e-05	4.99e-05	4.62e-05	2,3,4
	12.5	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	25.0	6.26e-03	6.53e-03	6.50e-03	2,2,4	0.0	0.0	0.0	0,0,0				
24	0.0	6.27e-03	6.54e-03	6.52e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.15e-04	-9.67e-05	-8.95e-05	2,3,4
	16.0	3.17e-03	3.30e-03	3.29e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	32.0	6.31e-03	6.58e-03	6.56e-03	2,2,4	0.0	0.0	0.0	0,0,0				

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
25	0.0	8.86e-03	9.24e-03	0.01	2,2,4	0.0	0.0	0.0	0,0,0	-1.02e-03	-9.28e-04	-8.92e-04	2,3,4
	16.3	1.53e-03	1.60e-03	1.80e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	32.5	3.63e-03	3.79e-03	4.22e-03	2,2,4	0.0	0.0	0.0	0,0,0				
26	0.0	8.77e-03	9.15e-03	0.01	2,2,4	0.0	0.0	0.0	0,0,0	5.15e-05	4.65e-05	4.46e-05	2,3,4
	22.1	2.87e-03	2.99e-03	3.33e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	44.3	3.66e-05	3.82e-05	0.0	2,2,4	0.0	0.0	0.0	0,0,0				
27	0.0	1.04e-03	1.08e-03	9.12e-04	2,2,4	0.0	0.0	0.0	0,0,0	-2.76e-05	-2.58e-05	-2.52e-05	2,3,4
	24.7	7.45e-04	7.77e-04	8.94e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	49.3	2.14e-03	2.23e-03	2.46e-03	2,2,4	0.0	0.0	0.0	0,0,0				
28	0.0	2.10e-03	2.19e-03	2.41e-03	2,2,4	0.0	0.0	0.0	0,0,0	-6.11e-06	-7.56e-06	-8.18e-06	2,3,4
	25.4	8.80e-05	9.18e-05	1.82e-05	2,2,4	0.0	0.0	0.0	0,0,0				
	50.7	6.54e-04	6.82e-04	9.07e-04	2,2,4	0.0	0.0	0.0	0,0,0				
29	0.0	5.70e-04	5.94e-04	5.93e-04	2,2,4	0.0	0.0	0.0	0,0,0	-1.86e-03	-1.57e-03	-1.45e-03	2,3,4
	38.1	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
	76.2	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
30	0.0	8.64e-04	9.01e-04	1.15e-03	2,2,4	0.0	0.0	0.0	0,0,0	-4.65e-05	-4.65e-05	-4.65e-05	2,3,4
	33.8	8.89e-04	9.27e-04	1.19e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	67.5	1.47e-03	1.54e-03	1.96e-03	2,2,4	0.0	0.0	0.0	0,0,0				
31	0.0	2.49e-04	2.38e-04	1.50e-04	2,2,4	0.0	0.0	0.0	0,0,0	-2.23e-06	-2.08e-06	-2.02e-06	2,3,4
	11.0	3.56e-04	3.39e-04	3.83e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	22.0	2.31e-04	2.20e-04	3.07e-04	2,2,4	0.0	0.0	0.0	0,0,0				
32	0.0	1.38e-03	1.44e-03	1.84e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.80e-05	-3.80e-05	-3.80e-05	2,3,4
	33.8	7.07e-04	7.38e-04	9.43e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	67.5	1.32e-03	1.37e-03	1.76e-03	2,2,4	0.0	0.0	0.0	0,0,0				
33	0.0	8.19e-04	7.82e-04	6.81e-04	2,2,4	0.0	0.0	0.0	0,0,0	-5.92e-06	-5.28e-06	-5.02e-06	2,3,4
	11.1	6.39e-04	6.10e-04	6.48e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	22.2	2.46e-04	2.34e-04	3.24e-04	2,2,4	0.0	0.0	0.0	0,0,0				
34	0.0	2.50e-03	2.38e-03	3.21e-03	2,2,4	0.0	0.0	0.0	0,0,0	3.37e-06	3.24e-06	3.19e-06	2,3,4

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	11.5	8.44e-04	8.05e-04	1.09e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	23.0	5.30e-05	5.06e-05	2.44e-05	2,2,4	0.0	0.0	0.0	0,0,0				
35	0.0	3.71e-04	3.54e-04	5.01e-04	2,2,4	0.0	0.0	0.0	0,0,0	-1.50e-06	-1.50e-06	-1.50e-06	2,3,4
	11.5	7.82e-05	7.46e-05	1.01e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	23.0	2.29e-04	2.19e-04	3.06e-04	2,2,4	0.0	0.0	0.0	0,0,0				
36	0.0	5.34e-03	6.30e-03	6.90e-03	2,2,4	0.0	0.0	0.0	0,0,0	-6.57e-04	-6.42e-04	-6.37e-04	2,3,4
	15.5	5.42e-03	6.39e-03	7.02e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	31.1	4.42e-03	5.21e-03	5.74e-03	2,2,4	0.0	0.0	0.0	0,0,0				
37	0.0	1.85e-03	2.18e-03	2.36e-03	2,2,4	0.0	0.0	0.0	0,0,0	-6.57e-04	-6.42e-04	-6.37e-04	2,3,4
	15.5	4.15e-03	4.90e-03	5.35e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	31.1	5.34e-03	6.30e-03	6.90e-03	2,2,4	0.0	0.0	0.0	0,0,0				
38	0.0	4.42e-03	5.21e-03	5.74e-03	2,2,4	0.0	0.0	0.0	0,0,0	-6.57e-04	-6.42e-04	-6.37e-04	2,3,4
	15.5	2.36e-03	2.79e-03	3.08e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	31.1	7.32e-04	8.63e-04	9.55e-04	2,2,4	0.0	0.0	0.0	0,0,0				
39	0.0	5.03e-03	5.93e-03	5.85e-03	2,2,4	0.0	0.0	0.0	0,0,0	-4.35e-04	-3.95e-04	-3.80e-04	2,3,4
	12.5	3.85e-03	4.54e-03	4.50e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	25.1	1.73e-03	2.04e-03	2.03e-03	2,2,4	0.0	0.0	0.0	0,0,0				
40	0.0	4.51e-03	5.32e-03	5.21e-03	2,2,4	0.0	0.0	0.0	0,0,0	-4.35e-04	-3.95e-04	-3.80e-04	2,3,4
	12.5	5.25e-03	6.20e-03	6.10e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	25.1	5.03e-03	5.93e-03	5.85e-03	2,2,4	0.0	0.0	0.0	0,0,0				
41	0.0	1.73e-03	2.04e-03	2.03e-03	2,2,4	0.0	0.0	0.0	0,0,0	-4.35e-04	-3.95e-04	-3.80e-04	2,3,4
	12.5	1.32e-03	1.56e-03	1.53e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	25.1	5.29e-03	6.24e-03	6.18e-03	2,2,4	0.0	0.0	0.0	0,0,0				
42	0.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	1.49e-03	1.09e-03	9.32e-04	2,3,4
	14.0	0.04	0.04	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
	28.0	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
43	0.0	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0	-1.46e-03	-1.07e-03	-9.17e-04	2,3,4
	14.0	0.04	0.04	0.03	2,2,4	0.0	0.0	0.0	0,0,0				

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	28.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
44	0.0	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0	2.93e-03	2.15e-03	1.83e-03	2,3,4
	14.0	0.01	0.01	8.65e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	28.0	0.05	0.05	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
45	0.0	0.03	0.03	0.02	2,2,4	0.0	0.0	0.0	0,0,0	6.80e-04	4.99e-04	4.26e-04	2,3,4
	11.2	0.02	0.03	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	22.5	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
46	0.0	0.03	0.04	0.03	2,2,4	0.0	0.0	0.0	0,0,0	1.19e-03	8.79e-04	7.54e-04	2,3,4
	14.0	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
	28.0	0.02	0.02	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
47	0.0	0.03	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-2.65e-03	-2.23e-03	-2.07e-03	2,3,4
	11.2	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
	22.5	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
48	0.0	7.62e-03	7.95e-03	8.89e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.02e-03	-9.28e-04	-8.92e-04	2,3,4
	16.3	6.51e-03	6.79e-03	7.61e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	32.5	3.39e-03	3.54e-03	3.96e-03	2,2,4	0.0	0.0	0.0	0,0,0				
49	0.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0	-6.92e-04	-5.08e-04	-4.34e-04	2,3,4
	11.2	0.02	0.03	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	22.5	0.03	0.03	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
50	0.0	0.02	0.02	0.01	2,2,4	0.0	0.0	0.0	0,0,0	-1.21e-03	-8.93e-04	-7.65e-04	2,3,4
	14.0	0.03	0.03	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	28.0	0.03	0.04	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
51	0.0	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0	-2.65e-03	-2.23e-03	-2.07e-03	2,3,4
	11.2	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
	22.5	0.03	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
52	0.0	3.63e-03	3.79e-03	4.22e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.02e-03	-9.28e-04	-8.92e-04	2,3,4
	16.3	6.67e-03	6.96e-03	7.77e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	32.5	7.62e-03	7.95e-03	8.89e-03	2,2,4	0.0	0.0	0.0	0,0,0				

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
53	0.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0	1.44e-03	1.06e-03	9.05e-04	2,3,4
	11.2	5.15e-03	5.38e-03	4.31e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	22.5	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
54	0.0	0.02	0.02	0.01	2,2,4	0.0	0.0	0.0	0,0,0	2.40e-03	1.77e-03	1.52e-03	2,3,4
	14.0	7.58e-03	7.91e-03	6.40e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	28.0	0.04	0.04	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
55	0.0	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0	-2.65e-03	-2.23e-03	-2.07e-03	2,3,4
	11.2	6.44e-03	6.72e-03	6.70e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	22.5	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
56	0.0	3.39e-03	3.54e-03	3.96e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.02e-03	-9.28e-04	-8.92e-04	2,3,4
	16.3	1.71e-03	1.79e-03	2.01e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	32.5	8.76e-03	9.14e-03	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
57	0.0	7.21e-04	8.51e-04	8.78e-04	2,2,4	0.0	0.0	0.0	0,0,0	-1.40e-05	-1.33e-05	-1.31e-05	2,3,4
	18.8	5.29e-04	6.24e-04	6.64e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	37.6	8.74e-05	1.03e-04	7.92e-05	2,2,4	0.0	0.0	0.0	0,0,0				
58	0.0	2.36e-04	2.78e-04	2.97e-04	2,2,4	0.0	0.0	0.0	0,0,0	-1.39e-05	-1.29e-05	-1.25e-05	2,3,4
	18.8	4.94e-04	5.83e-04	5.87e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	37.6	7.21e-04	8.51e-04	8.78e-04	2,2,4	0.0	0.0	0.0	0,0,0				
59	0.0	8.74e-05	1.03e-04	7.92e-05	2,2,4	0.0	0.0	0.0	0,0,0	2.59e-05	2.56e-05	2.54e-05	2,3,4
	18.8	2.27e-03	2.68e-03	2.94e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	37.6	6.24e-03	7.36e-03	8.02e-03	2,2,4	0.0	0.0	0.0	0,0,0				
60	0.0	2.66e-03	2.77e-03	2.22e-03	2,2,4	0.0	0.0	0.0	0,0,0	-2.81e-05	-2.06e-05	-1.76e-05	2,3,4
	10.9	1.08e-03	1.12e-03	9.01e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	21.8	6.46e-03	6.74e-03	5.40e-03	2,2,4	0.0	0.0	0.0	0,0,0				
61	0.0	2.15e-03	2.24e-03	1.80e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.86e-05	-1.66e-05	-1.42e-05	2,3,4
	10.9	1.08e-03	1.12e-03	8.98e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	21.8	2.66e-03	2.77e-03	2.22e-03	2,2,4	0.0	0.0	0.0	0,0,0				
62	0.0	6.46e-03	6.74e-03	5.40e-03	2,2,4	0.0	0.0	0.0	0,0,0	9.22e-05	6.76e-05	5.78e-05	2,3,4



**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	10.9	0.03	0.03	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	21.8	0.05	0.05	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
63	0.0	2.64e-03	2.75e-03	2.20e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.83e-05	-1.65e-05	-1.41e-05	2,3,4
	10.9	1.05e-03	1.09e-03	8.75e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	21.8	2.20e-03	2.29e-03	1.84e-03	2,2,4	0.0	0.0	0.0	0,0,0				
64	0.0	6.29e-03	6.57e-03	5.26e-03	2,2,4	0.0	0.0	0.0	0,0,0	-2.85e-05	-2.09e-05	-1.79e-05	2,3,4
	10.9	9.90e-04	1.03e-03	8.25e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	21.8	2.64e-03	2.75e-03	2.20e-03	2,2,4	0.0	0.0	0.0	0,0,0				
65	0.0	2.20e-03	2.29e-03	1.84e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.78e-05	-2.78e-05	-2.38e-05	2,3,4
	10.9	1.66e-03	1.73e-03	1.39e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	21.8	7.28e-04	7.59e-04	6.13e-04	2,2,4	0.0	0.0	0.0	0,0,0				
66	0.0	4.16e-04	4.34e-04	4.98e-04	2,2,4	0.0	0.0	0.0	0,0,0	-6.79e-06	-6.62e-06	-6.55e-06	2,3,4
	15.3	2.60e-04	2.71e-04	3.47e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	30.6	4.41e-05	4.60e-05	4.31e-05	2,2,4	0.0	0.0	0.0	0,0,0				
67	0.0	6.22e-03	6.49e-03	5.25e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.21e-04	-8.95e-05	-7.68e-05	2,3,4
	20.0	3.09e-03	3.22e-03	2.61e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	40.0	6.15e-03	6.42e-03	5.20e-03	2,2,4	0.0	0.0	0.0	0,0,0				
68	0.0	6.32e-03	6.59e-03	5.33e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.25e-04	-9.21e-05	-7.90e-05	2,3,4
	20.0	3.20e-03	3.34e-03	2.70e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	40.0	6.31e-03	6.58e-03	5.32e-03	2,2,4	0.0	0.0	0.0	0,0,0				
69	0.0	6.00e-03	6.26e-03	5.07e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.14e-04	-8.39e-05	-7.20e-05	2,3,4
	20.0	2.73e-03	2.85e-03	2.31e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	40.0	6.62e-03	6.90e-03	5.59e-03	2,2,4	0.0	0.0	0.0	0,0,0				
70	0.0	7.09e-03	7.39e-03	5.97e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.21e-04	-8.95e-05	-7.68e-05	2,3,4
	20.0	2.94e-03	3.06e-03	2.47e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	40.0	6.32e-03	6.59e-03	5.33e-03	2,2,4	0.0	0.0	0.0	0,0,0				
71	0.0	6.15e-03	6.42e-03	5.20e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.20e-04	-8.88e-05	-7.62e-05	2,3,4
	20.0	3.08e-03	3.22e-03	2.61e-03	2,2,4	0.0	0.0	0.0	0,0,0				

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	40.0	6.00e-03	6.26e-03	5.07e-03	2,2,4	0.0	0.0	0.0	0,0,0				
72	0.0	6.31e-03	6.58e-03	5.32e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.23e-04	-9.05e-05	-7.77e-05	2,3,4
	20.0	3.13e-03	3.26e-03	2.64e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	40.0	6.22e-03	6.49e-03	5.25e-03	2,2,4	0.0	0.0	0.0	0,0,0				
73	0.0	6.62e-03	6.90e-03	5.59e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.60e-04	-1.18e-04	-1.01e-04	2,3,4
	20.0	5.59e-03	5.84e-03	4.73e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	40.0	3.90e-05	4.07e-05	3.01e-05	2,2,4	0.0	0.0	0.0	0,0,0				
74	0.0	3.64e-04	3.79e-04	4.85e-04	2,2,4	0.0	0.0	0.0	0,0,0	-3.98e-06	-3.98e-06	-3.98e-06	2,3,4
	17.4	1.82e-04	1.90e-04	2.42e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	34.8	3.64e-04	3.79e-04	4.85e-04	2,2,4	0.0	0.0	0.0	0,0,0				
75	0.0	3.62e-04	3.78e-04	4.83e-04	2,2,4	0.0	0.0	0.0	0,0,0	-3.98e-06	-3.98e-06	-3.98e-06	2,3,4
	17.4	1.83e-04	1.90e-04	2.43e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	34.8	3.64e-04	3.79e-04	4.85e-04	2,2,4	0.0	0.0	0.0	0,0,0				
76	0.0	3.63e-04	3.79e-04	4.84e-04	2,2,4	0.0	0.0	0.0	0,0,0	-3.96e-06	-3.96e-06	-3.96e-06	2,3,4
	17.4	1.79e-04	1.87e-04	2.39e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	34.8	3.69e-04	3.85e-04	4.93e-04	2,2,4	0.0	0.0	0.0	0,0,0				
77	0.0	3.87e-04	4.04e-04	5.17e-04	2,2,4	0.0	0.0	0.0	0,0,0	-3.90e-06	-3.90e-06	-3.90e-06	2,3,4
	17.4	1.71e-04	1.78e-04	2.28e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	34.8	3.62e-04	3.78e-04	4.83e-04	2,2,4	0.0	0.0	0.0	0,0,0				
78	0.0	3.64e-04	3.79e-04	4.85e-04	2,2,4	0.0	0.0	0.0	0,0,0	-3.98e-06	-3.98e-06	-3.98e-06	2,3,4
	17.4	1.82e-04	1.90e-04	2.43e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	34.8	3.63e-04	3.79e-04	4.84e-04	2,2,4	0.0	0.0	0.0	0,0,0				
79	0.0	3.64e-04	3.79e-04	4.85e-04	2,2,4	0.0	0.0	0.0	0,0,0	-3.98e-06	-3.98e-06	-3.98e-06	2,3,4
	17.4	1.82e-04	1.90e-04	2.42e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	34.8	3.64e-04	3.79e-04	4.85e-04	2,2,4	0.0	0.0	0.0	0,0,0				
80	0.0	3.69e-04	3.85e-04	4.93e-04	2,2,4	0.0	0.0	0.0	0,0,0	-4.24e-06	-4.26e-06	-4.27e-06	2,3,4
	17.4	2.18e-04	2.27e-04	2.95e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	34.8	2.86e-04	2.98e-04	3.72e-04	2,2,4	0.0	0.0	0.0	0,0,0				

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
81	0.0	4.86e-03	5.07e-03	4.06e-03	2,2,4	0.0	0.0	0.0	0,0,0	-8.80e-05	-6.46e-05	-5.52e-05	2,3,4
	15.8	2.43e-03	2.53e-03	2.03e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	31.5	4.88e-03	5.09e-03	4.08e-03	2,2,4	0.0	0.0	0.0	0,0,0				
82	0.0	4.86e-03	5.07e-03	4.06e-03	2,2,4	0.0	0.0	0.0	0,0,0	-8.81e-05	-6.46e-05	-5.52e-05	2,3,4
	15.8	2.43e-03	2.54e-03	2.03e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	31.5	4.86e-03	5.07e-03	4.06e-03	2,2,4	0.0	0.0	0.0	0,0,0				
83	0.0	4.88e-03	5.09e-03	4.08e-03	2,2,4	0.0	0.0	0.0	0,0,0	-8.92e-05	-6.56e-05	-5.61e-05	2,3,4
	15.8	2.54e-03	2.65e-03	2.15e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	31.5	4.64e-03	4.84e-03	3.82e-03	2,2,4	0.0	0.0	0.0	0,0,0				
84	0.0	6.31e-03	6.58e-03	6.55e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.14e-04	-9.57e-05	-8.85e-05	2,3,4
	16.0	3.03e-03	3.16e-03	3.15e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	32.0	6.60e-03	6.89e-03	6.86e-03	2,2,4	0.0	0.0	0.0	0,0,0				
85	0.0	6.31e-03	6.58e-03	6.56e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.15e-04	-9.68e-05	-8.95e-05	2,3,4
	16.0	3.16e-03	3.30e-03	3.29e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	32.0	6.31e-03	6.58e-03	6.55e-03	2,2,4	0.0	0.0	0.0	0,0,0				
86	0.0	6.60e-03	6.89e-03	6.86e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.45e-04	-1.22e-04	-1.13e-04	2,3,4
	16.0	5.97e-03	6.23e-03	6.21e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	32.0	4.51e-04	4.70e-04	4.67e-04	2,2,4	0.0	0.0	0.0	0,0,0				
87	0.0	5.30e-05	5.06e-05	2.44e-05	2,2,4	0.0	0.0	0.0	0,0,0	3.56e-05	3.21e-05	3.07e-05	2,3,4
	11.5	5.95e-03	5.68e-03	6.91e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	23.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
88	0.0	2.31e-04	2.20e-04	3.07e-04	2,2,4	0.0	0.0	0.0	0,0,0	0.0	0.0	0.0	2,3,4
	11.0	1.38e-04	1.32e-04	1.17e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	22.0	7.38e-04	7.04e-04	8.51e-04	2,2,4	0.0	0.0	0.0	0,0,0				
89	0.0	1.38e-03	1.44e-03	1.84e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.70e-05	-3.70e-05	-3.70e-05	2,3,4
	33.8	6.85e-04	7.15e-04	9.14e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	67.5	1.37e-03	1.43e-03	1.83e-03	2,2,4	0.0	0.0	0.0	0,0,0				
90	0.0	1.64e-03	1.71e-03	2.19e-03	2,2,4	0.0	0.0	0.0	0,0,0	-6.25e-05	-6.25e-05	-6.25e-05	2,3,4

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	33.8	1.22e-03	1.28e-03	1.63e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	67.5	2.83e-05	2.95e-05	3.26e-05	2,2,4	0.0	0.0	0.0	0,0,0				
91	0.0	2.46e-04	2.34e-04	3.24e-04	2,2,4	0.0	0.0	0.0	0,0,0	-1.76e-06	-1.76e-06	-1.77e-06	2,3,4
	11.1	1.90e-04	1.81e-04	2.58e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	22.2	7.85e-05	7.49e-05	9.91e-05	2,2,4	0.0	0.0	0.0	0,0,0				
92	0.0	2.29e-04	2.19e-04	3.06e-04	2,2,4	0.0	0.0	0.0	0,0,0	0.0	0.0	0.0	2,3,4
	11.5	3.59e-04	3.42e-04	4.79e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	23.0	1.24e-03	1.19e-03	1.66e-03	2,2,4	0.0	0.0	0.0	0,0,0				
93	0.0	4.44e-03	4.63e-03	3.75e-03	2,2,4	0.0	0.0	0.0	0,0,0	-8.35e-05	-6.17e-05	-5.29e-05	2,3,4
	17.1	2.26e-03	2.36e-03	1.91e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	34.3	4.49e-03	4.69e-03	3.79e-03	2,2,4	0.0	0.0	0.0	0,0,0				
94	0.0	4.73e-03	4.93e-03	4.01e-03	2,2,4	0.0	0.0	0.0	0,0,0	-8.05e-05	-5.94e-05	-5.10e-05	2,3,4
	17.1	2.07e-03	2.16e-03	1.74e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	34.3	4.44e-03	4.63e-03	3.75e-03	2,2,4	0.0	0.0	0.0	0,0,0				
95	0.0	4.49e-03	4.69e-03	3.79e-03	2,2,4	0.0	0.0	0.0	0,0,0	-8.23e-05	-6.07e-05	-5.20e-05	2,3,4
	17.1	2.11e-03	2.20e-03	1.77e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	34.3	4.90e-03	5.11e-03	4.16e-03	2,2,4	0.0	0.0	0.0	0,0,0				
96	0.0	7.13e-03	7.44e-03	7.42e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.34e-04	-1.13e-04	-1.05e-04	2,3,4
	17.3	3.65e-03	3.81e-03	3.80e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	34.5	7.06e-03	7.36e-03	7.34e-03	2,2,4	0.0	0.0	0.0	0,0,0				
97	0.0	7.64e-03	7.97e-03	7.94e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.30e-04	-1.10e-04	-1.01e-04	2,3,4
	17.3	3.34e-03	3.48e-03	3.48e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	34.5	7.13e-03	7.44e-03	7.42e-03	2,2,4	0.0	0.0	0.0	0,0,0				
98	0.0	7.06e-03	7.36e-03	7.34e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.24e-04	-1.04e-04	-9.66e-05	2,3,4
	17.3	2.80e-03	2.92e-03	2.91e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	34.5	8.88e-03	9.27e-03	9.23e-03	2,2,4	0.0	0.0	0.0	0,0,0				
99	0.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0	-2.13e-04	-1.80e-04	-1.66e-04	2,3,4
	21.0	5.28e-03	5.51e-03	5.49e-03	2,2,4	0.0	0.0	0.0	0,0,0				

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	42.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
100	0.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0	-2.13e-04	-1.79e-04	-1.66e-04	2,3,4
	21.0	5.27e-03	5.50e-03	5.48e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	42.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0				
101	0.0	0.01	0.01	0.01	2,2,4	0.0	0.0	0.0	0,0,0	-2.28e-04	-1.92e-04	-1.78e-04	2,3,4
	21.0	6.06e-03	6.32e-03	6.32e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	42.0	9.17e-03	9.56e-03	9.50e-03	2,2,4	0.0	0.0	0.0	0,0,0				
102	0.0	8.79e-04	9.17e-04	1.10e-03	2,2,4	0.0	0.0	0.0	0,0,0	-6.15e-06	-6.24e-06	-6.28e-06	2,3,4
	22.1	1.65e-04	1.72e-04	2.50e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	44.3	8.55e-04	8.92e-04	1.06e-03	2,2,4	0.0	0.0	0.0	0,0,0				
103	0.0	3.66e-05	3.82e-05	0.0	2,2,4	0.0	0.0	0.0	0,0,0	-2.80e-05	-2.61e-05	-2.53e-05	2,3,4
	22.1	9.27e-04	9.67e-04	1.10e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	44.3	8.79e-04	9.17e-04	1.10e-03	2,2,4	0.0	0.0	0.0	0,0,0				
104	0.0	8.55e-04	8.92e-04	1.06e-03	2,2,4	0.0	0.0	0.0	0,0,0	-2.82e-05	-2.56e-05	-2.46e-05	2,3,4
	22.1	1.06e-03	1.11e-03	1.19e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	44.3	1.10e-03	1.15e-03	9.75e-04	2,2,4	0.0	0.0	0.0	0,0,0				
105	0.0	8.46e-04	8.82e-04	1.10e-03	2,2,4	0.0	0.0	0.0	0,0,0	-1.68e-05	-1.66e-05	-1.66e-05	2,3,4
	25.4	3.53e-04	3.69e-04	4.65e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	50.7	9.93e-04	1.04e-03	1.30e-03	2,2,4	0.0	0.0	0.0	0,0,0				
106	0.0	6.54e-04	6.82e-04	9.07e-04	2,2,4	0.0	0.0	0.0	0,0,0	-2.05e-05	-2.00e-05	-1.98e-05	2,3,4
	25.4	4.99e-04	5.21e-04	6.35e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	50.7	8.46e-04	8.82e-04	1.10e-03	2,2,4	0.0	0.0	0.0	0,0,0				
107	0.0	9.93e-04	1.04e-03	1.30e-03	2,2,4	0.0	0.0	0.0	0,0,0	-2.91e-05	-2.86e-05	-2.84e-05	2,3,4
	25.4	8.12e-04	8.47e-04	1.05e-03	2,2,4	0.0	0.0	0.0	0,0,0				
	50.7	2.34e-05	2.44e-05	2.75e-05	2,2,4	0.0	0.0	0.0	0,0,0				
108	0.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-1.06e-03	-8.92e-04	-8.25e-04	2,3,4
	38.1	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	76.2	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				

**RELAZIONE DI CALCOLO**

**INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA**

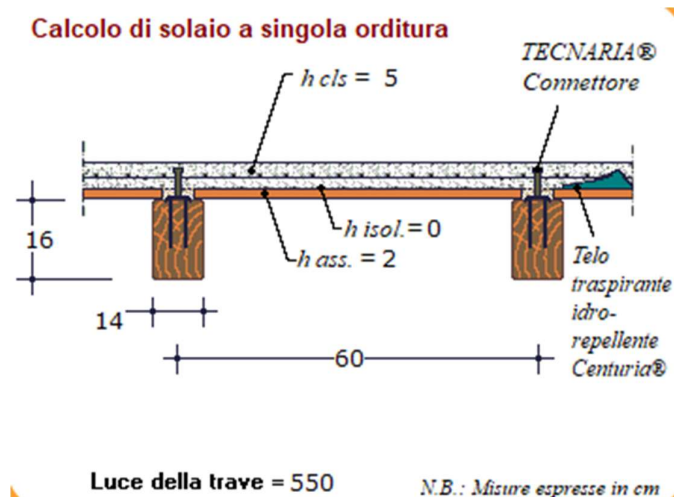
Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
109	0.0	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0	-1.09e-03	-9.20e-04	-8.51e-04	2,3,4
	38.1	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	76.2	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
110	0.0	0.03	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-9.01e-04	-7.59e-04	-7.02e-04	2,3,4
	38.1	0.01	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	76.2	0.04	0.05	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
111	0.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-8.81e-04	-7.42e-04	-6.87e-04	2,3,4
	38.1	0.01	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	76.2	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
112	0.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-1.11e-03	-9.32e-04	-8.63e-04	2,3,4
	38.1	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	76.2	0.03	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
113	0.0	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-1.05e-03	-8.88e-04	-8.22e-04	2,3,4
	38.1	0.02	0.02	0.02	2,2,4	0.0	0.0	0.0	0,0,0				
	76.2	0.04	0.04	0.04	2,2,4	0.0	0.0	0.0	0,0,0				
114	0.0	0.04	0.05	0.04	2,2,4	0.0	0.0	0.0	0,0,0	-1.90e-03	-1.60e-03	-1.48e-03	2,3,4
	38.1	0.03	0.03	0.03	2,2,4	0.0	0.0	0.0	0,0,0				
	76.2	7.03e-04	7.33e-04	7.23e-04	2,2,4	0.0	0.0	0.0	0,0,0				
115	0.0	1.37e-03	1.43e-03	1.83e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.68e-05	-3.68e-05	-3.68e-05	2,3,4
	33.8	6.82e-04	7.11e-04	9.09e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	67.5	1.38e-03	1.44e-03	1.84e-03	2,2,4	0.0	0.0	0.0	0,0,0				
116	0.0	1.35e-03	1.41e-03	1.80e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.74e-05	-3.74e-05	-3.74e-05	2,3,4
	33.8	6.94e-04	7.24e-04	9.25e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	67.5	1.38e-03	1.44e-03	1.84e-03	2,2,4	0.0	0.0	0.0	0,0,0				
117	0.0	1.32e-03	1.37e-03	1.76e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.20e-05	-3.20e-05	-3.20e-05	2,3,4
	33.8	5.78e-04	6.03e-04	7.71e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	67.5	1.64e-03	1.71e-03	2.19e-03	2,2,4	0.0	0.0	0.0	0,0,0				
118	0.0	1.47e-03	1.54e-03	1.96e-03	2,2,4	0.0	0.0	0.0	0,0,0	-3.51e-05	-3.51e-05	-3.51e-05	2,3,4

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Trave	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	33.8	6.45e-04	6.73e-04	8.61e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	67.5	1.35e-03	1.41e-03	1.80e-03	2,2,4	0.0	0.0	0.0	0,0,0				
119	0.0	9.99e-04	9.53e-04	8.31e-04	2,2,4	0.0	0.0	0.0	0,0,0	-5.87e-06	-5.14e-06	-4.85e-06	2,3,4
	10.6	7.18e-04	6.85e-04	7.06e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	21.2	2.06e-04	1.97e-04	2.78e-04	2,2,4	0.0	0.0	0.0	0,0,0				
120	0.0	2.06e-04	1.97e-04	2.78e-04	2,2,4	0.0	0.0	0.0	0,0,0	-1.69e-06	-1.69e-06	-1.69e-06	2,3,4
	10.6	2.15e-04	2.05e-04	2.85e-04	2,2,4	0.0	0.0	0.0	0,0,0				
	21.2	8.34e-06	7.96e-06	1.04e-05	2,2,4	0.0	0.0	0.0	0,0,0				
Trave		rRfck	rRfyk	rPfck		wR	wF	wP		dR	dF	dP	
										-2.95e-03	-2.23e-03	-2.07e-03	
		0.05	0.05	0.04		0.0	0.0	0.0		2.93e-03	2.15e-03	1.83e-03	

## VERIFICA DEGLI ELEMENTI SOLAIO

### SOLAIO LUCE MAX 550CM



Schematizzazione come trave in semplice appoggio:

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

DATI

Solaio a semplice orditura con assito carotato  
Trave puntellata o tirantata

GEOMETRIA

- Spessore soletta: 5 cm
- Spessore assito/pianelle/tavelle: 2 cm
- Spessore isolante: 0 cm
- Interasse travi: 60 cm
- Base travi: 14 cm
- Altezza travi: 16 cm
- Luce travi: 550 cm
- Limite freccia istantanea carichi variabili:  $L/300 = 18.33 \text{ mm}$
- Limite freccia attiva: 2: Finiture non fragili = 12.86 mm
- Limite freccia finale comb. quasi perm.:  $L/200 = 27.50 \text{ mm}$

CARICHI

- Permanenti strutturali: 1.54 kN/m<sup>2</sup>
- Permanenti non strutturali
- Carico iniziale 1: 0.00 kN/m<sup>2</sup>
- Carico iniziale 2: 1.00 kN/m<sup>2</sup>
- 1° carico fragile: 0.80 kN/m<sup>2</sup>
- Carichi successivi: 0.70 kN/m<sup>2</sup>
- Totale perm. non strutturali: 2.50 kN/m<sup>2</sup>
- Variabili: 2.00 kN/m<sup>2</sup>
- Carico SLU a metro lineare: 4.96 kN/m

MATERIALI

- Legno - Tipo: GL24 secondo EN 14080:2013
- Resistenza a flessione caratteristica  $f_{m,k}$ : 24.0 N/mm<sup>2</sup>
- kh a flessione: 1.10
- Resistenza a trazione caratteristica  $f_{t,0,k}$ : 19.2 N/mm<sup>2</sup>
- kh a trazione: 1.10
- Resistenza a taglio caratteristica  $f_{v,k}$ : 3.50 N/mm<sup>2</sup>
- Modulo di elasticità medio  $E_{0,m}$ : 11500 N/mm<sup>2</sup>
- Peso specifico medio  $\rho_m$ : 4.2 kN/m<sup>3</sup>
- Coeff. modificazione azioni variabili  $K_{mod}$ : 0.80
- Fattore di deformazione  $K_{def}$ : 0.60
- Riduzione larghezza per verifica a taglio  $k_{cr}$ : 0.67
- Coefficiente di sicurezza: 1.45
- Classe calcestruzzo: C28/35 - Rck35
- Resistenza caratteristica cilindrica  $f_{c,k}$ : 28.0 N/mm<sup>2</sup>
- Resistenza caratteristica a trazione  $5\% f_{ctk}$ : 1.9 N/mm<sup>2</sup>
- Modulo elasticità E: 31500 N/mm<sup>2</sup>
- Peso specifico  $\rho$ : 25.0 kN/m<sup>3</sup>
- Coefficiente di viscosità  $\phi$ : 2.50
- Coefficiente di sicurezza  $\gamma_m$ : 1.50
- Connettore: Tecnaria CTL BASE 12/ 60 posato su trave
- Resistenza caratteristica connettore  $F_k$ : 17200 N
- Rigidità connettore in esercizio  $K_{ser}$ : 17900 N/mm
- Rigidità connettore ultima  $K_u$ : 9990 N/mm
- Coefficiente di sicurezza  $\gamma_{mk}$ : 1.50
- Altri parametri
- Peso specifico assito/pianelle/tavelle: 4.20 kN/m<sup>3</sup>
- Peso specifico isolante: 0.25 kN/m<sup>3</sup>
- Coefficiente parziale carichi strutturali  $g_{G1}$ : 1.30
- Coefficiente parziale perm. non strut.  $g_{G2}$ : 1.30



INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Coefficiente parziale carichi variabili gQ: 1.50  
 Coefficiente psi2 carichi quasi permanenti: 0.30  
 Appoggio del tavolato su trave: 2.0 cm  
 Resistenza di progetto armatura fyd: 391.3 N/mm<sup>2</sup>

RISULTATI

Connettori Tecnaria BASE 12/ 60 posati su trave con tavolato carotato  
 Connettori a spaziatura costante: 10.7 cm  
 Numero di connettori per trave: 52  
 Numero di connettori a m<sup>2</sup>: 15.76  
 Armatura longitudinale minima nel raccordo: 0.00 cm<sup>2</sup>/trave nella parte inferiore.  
 Armatura longitudinale minima nella soletta: 0.15 cm<sup>2</sup>/trave nella parte inferiore.  
 Armatura trasversale nella soletta: 0.75 cm<sup>2</sup>/m

VERIFICHE

Larghezza soletta collaborante: 60.0 cm  
 - Larghezza interruzione/carotaggio tavolato: 6.5 cm  
 STATO LIMITE ULTIMO  
 - Momento massimo: 18.74 kNm  
 Taglio massimo: 13.63 kN  
 - Verifiche a tempo zero  
 CLS - tensione max: 9.24 N/mm<sup>2</sup> <= 15.87 N/mm<sup>2</sup>  
 CLS - tensione min: -2.12 N/mm<sup>2</sup>  
 LEGNO - tensoflessione: 0.86 <= 1.00  
 LEGNO - taglio: 0.85 N/mm<sup>2</sup> <= 1.93 N/mm<sup>2</sup>  
 CONN. - taglio: 8314 N <= 9173 N  
 - Verifiche a tempo infinito  
 CLS - tensione max: 7.56 N/mm<sup>2</sup> <= 15.87 N/mm<sup>2</sup>  
 CLS - tensione min: -0.38 N/mm<sup>2</sup>  
 LEGNO - tensoflessione: 0.90 <= 1.00  
 LEGNO - taglio: 0.87 N/mm<sup>2</sup> <= 1.93 N/mm<sup>2</sup>  
 CONN. - taglio: 8389 N <= 9173 N  
 STATO LIMITE DI ESERCIZIO  
 EJ a tempo zero: 3014.0 kNm<sup>2</sup>  
 EJ a tempo infinito: 1598.4 kNm<sup>2</sup>  
 Freccia istantanea car. var.: 4.74 mm <= 18.33 mm  
 Freccia attiva: 12.84 mm <= 12.86 mm  
 Freccia a tempo infinito: 20.78 mm <= 27.50 mm

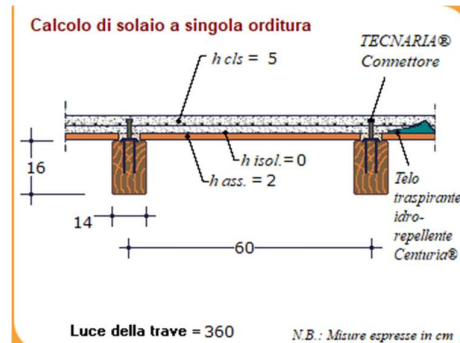
AVVERTENZE

- Oltre all'armatura trasversale indicata inserire armatura per il calcolo a flessione della soletta in direzione trasversale alle travi (almeno rete d6 20x20)
- Puntellare o tirantare il solaio prima del getto fino a completa maturazione del cls
- Si consiglia di collegare la soletta alle murature perimetrali mediante perforazioni armate utilizzando l'apposita resina epossidica bicomponente RTEC400.
- Dettagli di rinforzo sezioni: [www.tecnaria.com/legno/dwg.htm](http://www.tecnaria.com/legno/dwg.htm)

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Come si può vedere dalle immagini sopra, ipotizzando un solaio in tecnica mista legno-calcestruzzo, composto da travetti in legno 14x16cm, posti ad un interasse di 60cm, distribuiti su una luce di 550cm massimo e unito da appositi connettori tipo TECNARIA BASE 12/ 60, posti a passo 10,7cm, alla cappa sovrastante di c.a. sp.5cm, le verifiche risultano soddisfatte.

# SOLAIO LUCE MAX 360CM



Schematizzazione come trave in semplice appoggio:

## DATI

Solaio a semplice orditura con assito carotato  
Trave puntellata o tirantata

### GEOMETRIA

- Spessore soletta: 5 cm
- Spessore assito/pianelle/tavelle: 2 cm
- Spessore isolante: 0 cm
- Interasse travi: 60 cm
- Base travi: 14 cm
- Altezza travi: 16 cm
- Luce travi: 360 cm
- Limite freccia istantanea carichi variabili:  $L/300 = 12.00$  mm
- Limite freccia attiva: 2: Finiture non fragili = 10.14 mm
- Limite freccia finale comb. quasi perm.:  $L/200 = 18.00$  mm

### CARICHI

- Permanenti strutturali: 1.54 kN/m<sup>2</sup>
- Permanenti non strutturali
- Carico iniziale 1: 0.00 kN/m<sup>2</sup>
- Carico iniziale 2: 0.00 kN/m<sup>2</sup>
- 1° carico fragile: 0.80 kN/m<sup>2</sup>
- Carichi successivi: 0.70 kN/m<sup>2</sup>
- Totale perm. non strutturali: 1.50 kN/m<sup>2</sup>
- Variabili: 4 kN/m<sup>2</sup>
- Carico SLU a metro lineare: 5.98 kN/m

### MATERIALI

- Legno - Tipo : GL24 secondo EN 14080:2013
- Resistenza a flessione caratteristica  $f_{m,k}$ : 24.0 N/mm<sup>2</sup>
- $k_h$  a flessione: 1.10
- Resistenza a trazione caratteristica  $f_{t,0,k}$ : 19.2 N/mm<sup>2</sup>
- $k_h$  a trazione: 1.10
- Resistenza a taglio caratteristica  $f_{v,k}$ : 3.50 N/mm<sup>2</sup>
- Modulo di elasticità medio  $E_{0,m}$ : 11500 N/mm<sup>2</sup>
- Peso specifico medio  $\rho_m$ : 4.2 kN/m<sup>3</sup>
- Coeff. modificazione azioni variabili  $K_{mod}$ : 0.80
- Fattore di deformazione  $K_{def}$ : 0.60
- Riduzione larghezza per verifica a taglio  $k_{cr}$ : 0.67
- Coefficiente di sicurezza: 1.45
- Classe calcestruzzo: C28/35 - Rck35
- Resistenza caratteristica cilindrica  $f_{c,k}$ : 28.0 N/mm<sup>2</sup>
- Resistenza caratteristica a trazione  $5\% f_{ctk}$ : 1.9 N/mm<sup>2</sup>
- Modulo elasticità E: 31500 N/mm<sup>2</sup>
- Peso specifico  $\rho$ : 25.0 kN/m<sup>3</sup>
- Coefficiente di viscosità  $\phi$ : 2.50
- Coefficiente di sicurezza  $\gamma_m$ : 1.50
- Connettore: Tecnaria CTL BASE 12/ 60 posato su trave
- Resistenza caratteristica connettore  $F_{k1}$ : 17200 N
- Rigidezza connettore in esercizio  $K_{ser}$ : 17900 N/mm
- Rigidezza connettore ultima  $K_u$ : 9990 N/mm
- Coefficiente di sicurezza  $\gamma_{mk}$ : 1.50
- Altri parametri
- Peso specifico assito/pianelle/tavelle: 4.20 kN/m<sup>3</sup>
- Peso specifico isolante: 0.25 kN/m<sup>3</sup>
- Coefficiente parziale carichi strutturali  $g_{G1}$ : 1.30

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Coefficiente parziale perm. non strut.	gG2: 1.30
Coefficiente parziale carichi variabili	gQ: 1.50
Coefficiente psi2 carichi quasi permanenti:	0.60
Appoggio del tavolato su trave:	2.0 cm
Resistenza di progetto armatura fyd:	391.3 N/mm²

RISULTATI

Connettori Tecnaria BASE 12/ 60 posati su trave con tavolato carotato  
 Connettori a spaziatura costante: 20.3 cm  
 Numero di connettori per trave: 18  
 Numero di connettori a m²: 8.33  
 Armatura longitudinale minima nel raccordo: 0.00 cm²/trave nella parte inferiore.  
 Armatura longitudinale minima nella soletta: 0.53 cm²/trave nella parte inferiore.  
 Armatura trasversale nella soletta: 0.47 cm²/m

VERIFICHE

Larghezza soletta collaborante: 60.0 cm  
 - Larghezza interruzione/carotaggio tavolato: 6.5 cm  
 STATO LIMITE ULTIMO  
 - Momento massimo: 9.68 kNm  
 Taglio massimo: 10.76 kN  
 - Verifiche a tempo zero  
 CLS - tensione max: 6.35 N/mm² ≤ 15.87 N/mm²  
 CLS - tensione min: -3.74 N/mm²  
 LEGNO - tensoflessione: 0.88 ≤ 1.00  
 LEGNO - taglio: 0.66 N/mm² ≤ 1.93 N/mm²  
 CONN. - taglio: 8843 N ≤ 9173 N  
 - Verifiche a tempo infinito  
 CLS - tensione max: 4.79 N/mm² ≤ 15.87 N/mm²  
 CLS - tensione min: -2.08 N/mm²  
 LEGNO - tensoflessione: 0.59 ≤ 1.00  
 LEGNO - taglio: 0.69 N/mm² ≤ 1.93 N/mm²  
 CONN. - taglio: 9152 N ≤ 9173 N  
 STATO LIMITE DI ESERCIZIO  
 EJ a tempo zero: 1897.3 kNm²  
 EJ a tempo infinito: 1058.1 kNm²  
 Freccia istantanea car. var.: 2.77 mm ≤ 12.00 mm  
 Freccia attiva: 5.13 mm ≤ 10.14 mm  
 Freccia a tempo infinito: 6.75 mm ≤ 18.00 mm

AVVERTENZE

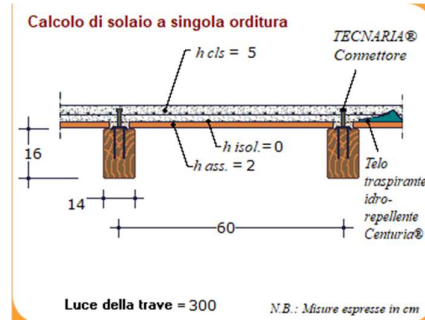
- Oltre all'armatura trasversale indicata inserire armatura per il calcolo a flessione della soletta in direzione trasversale alle travi (almeno rete d6 20x20)  
 - Puntellare o tirantare il solaio prima del getto fino a completa maturazione del cls  
 - Si consiglia di collegare la soletta alle murature perimetrali mediante perforazioni armate utilizzando l'apposita resina epossidica bicomponente RTEC400.  
 - Dettagli di rinforzo sezioni: [www.tecnaria.com/legno/dwg.htm](http://www.tecnaria.com/legno/dwg.htm)

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Come si può vedere dalle immagini sopra, ipotizzando un solaio in tecnica mista legno-calcestruzzo, composto da travetti in legno 14x16cm, posti ad un interasse di 60cm, distribuiti su una luce di 360cm massimo e unito da appositi connettori tipo TECNARIA BASE 12/ 60, posti a passo 20,3cm, alla cappa sovrastante di c.a. sp.5cm, le verifiche risultano soddisfatte.



# SOLAIO LUCE MAX 300CM



Schematizzazione come trave in semplice appoggio:

## DATI

Solaio a semplice orditura con assito carotato  
Trave puntellata o tirantata

### GEOMETRIA

- Spessore soletta: 5 cm
- Spessore assito/pianelle/tavole: 2 cm
- Spessore isolante: 0 cm
- Interasse travi: 60 cm
- Base travi: 14 cm
- Altezza travi: 16 cm
- Luce travi: 300 cm
- Limite freccia istantanea carichi variabili:  $L/300 = 10.00$  mm
- Limite freccia attiva: 2: Finiture non fragili = 8.57 mm
- Limite freccia finale comb. quasi perm.:  $L/200 = 15.00$  mm

### CARICHI

- Permanenti strutturali: 1.54 kN/m²
- Permanenti non strutturali
- Carico iniziale 1: 0.00 kN/m²
- Carico iniziale 2: 1.00 kN/m²
- 1° carico fragile: 0.80 kN/m²
- Carichi successivi: 0.70 kN/m²
- Totale perm. non strutturali: 2.50 kN/m²
- Variabili: 2.00 kN/m²
- Carico SLU a metro lineare: 4.96 kN/m

### MATERIALI

- Legno - Tipo: GL24 secondo EN 14080:2013
- Resistenza a flessione caratteristica  $f_{m,k}$ : 24.0 N/mm²
- $k_h$  a flessione: 1.10
- Resistenza a trazione caratteristica  $f_{t,0,k}$ : 19.2 N/mm²
- $k_h$  a trazione: 1.10
- Resistenza a taglio caratteristica  $f_{v,k}$ : 3.50 N/mm²
- Modulo di elasticità medio  $E_{0,m}$ : 11500 N/mm²
- Peso specifico medio  $\rho_m$ : 4.2 kN/m³
- Coeff. modificazione azioni variabili  $K_{mod}$ : 0.80
- Fattore di deformazione  $K_{def}$ : 0.60
- Riduzione larghezza per verifica a taglio  $k_{cr}$ : 0.67
- Coefficiente di sicurezza: 1.45
- Classe calcestruzzo: C28/35 - Rck35
- Resistenza caratteristica cilindrica  $f_{c,k}$ : 28.0 N/mm²
- Resistenza caratteristica a trazione  $5\% f_{ctk}$ : 1.9 N/mm²
- Modulo elasticità  $E$ : 31500 N/mm²
- Peso specifico  $\rho$ : 25.0 kN/m³
- Coefficiente di viscosità  $\phi$ : 2.50
- Coefficiente di sicurezza  $\gamma_m$ : 1.50
- Connettore: Tecnaria CTL BASE 12/60 posato su trave
- Resistenza caratteristica connettore  $F_k$ : 17200 N
- Rigidezza connettore in esercizio  $K_{ser}$ : 17900 N/mm
- Rigidezza connettore ultima  $K_u$ : 9990 N/mm
- Coefficiente di sicurezza  $\gamma_{mk}$ : 1.50
- Altri parametri
- Peso specifico assito/pianelle/tavole: 4.20 kN/m³
- Peso specifico isolante: 0.25 kN/m³
- Coefficiente parziale carichi strutturali  $g_{G1}$ : 1.30

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Coefficiente parziale perm. non strut. gG2: 1.30  
 Coefficiente parziale carichi variabili gQ: 1.50  
 Coefficiente psi2 carichi quasi permanenti: 0.30  
 Appoggio del tavolato su trave: 2.0 cm  
 Resistenza di progetto armatura fyd: 391.3 N/mm<sup>2</sup>

RISULTATI

Connettori Tecnaria BASE 12/ 60 posati su trave con tavolato carotato  
 Connettori a spaziatura costante: 50.0 cm  
 Numero di connettori per trave: 7  
 Numero di connettori a m<sup>2</sup>: 3.89  
 Armatura longitudinale minima nel raccordo: 0.00 cm<sup>2</sup>/trave nella parte inferiore.  
 Armatura longitudinale minima nella soletta: 0.69 cm<sup>2</sup>/trave nella parte inferiore.  
 Armatura trasversale nella soletta: 0.47 cm<sup>2</sup>/m

VERIFICHE

Larghezza soletta collaborante: 60.0 cm  
 - Larghezza interruzione/carotaggio tavolato: 6.5 cm  
 STATO LIMITE ULTIMO  
 - Momento massimo: 5.57 kNm  
 Taglio massimo: 7.43 kN  
 - Verifiche a tempo zero  
 CLS - tensione max: 4.74 N/mm<sup>2</sup> <= 15.87 N/mm<sup>2</sup>  
 CLS - tensione min: -3.97 N/mm<sup>2</sup>  
 LEGNO - tensoflessione: 0.39 <= 1.00  
 LEGNO - taglio: 0.49 N/mm<sup>2</sup> <= 1.93 N/mm<sup>2</sup>  
 CONN. - taglio: 7706 N <= 9173 N  
 - Verifiche a tempo infinito  
 CLS - tensione max: 3.45 N/mm<sup>2</sup> <= 15.87 N/mm<sup>2</sup>  
 CLS - tensione min: -2.63 N/mm<sup>2</sup>  
 LEGNO - tensoflessione: 0.42 <= 1.00  
 LEGNO - taglio: 0.53 N/mm<sup>2</sup> <= 1.93 N/mm<sup>2</sup>  
 CONN. - taglio: 8217 N <= 9173 N  
 STATO LIMITE DI ESERCIZIO  
 EJ a tempo zero: 1185.7 kNm<sup>2</sup>  
 EJ a tempo infinito: 664.9 kNm<sup>2</sup>  
 Freccia istantanea car. var.: 1.07 mm <= 10.00 mm  
 Freccia attiva: 2.64 mm <= 8.57 mm  
 Freccia a tempo infinito: 4.42 mm <= 15.00 mm

AVVERTENZE

- Oltre all'armatura trasversale indicata inserire armatura per il calcolo a flessione della soletta in direzione trasversale alle travi (almeno rete d6 20x20)
- Puntellare o tirantare il solaio prima del getto fino a completa maturazione del cls
- Si consiglia di collegare la soletta alle murature perimetrali mediante perforazioni armate utilizzando l'apposita resina epossidica bicomponente RTEC400.
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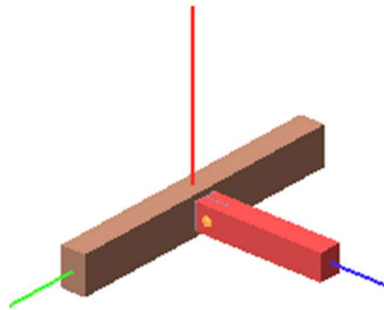
Come si può vedere dalle immagini sopra, ipotizzando un solaio in tecnica mista legno-calcestruzzo, composto da travetti in legno 14x16cm, posti ad un interasse di 60cm, distribuiti su una luce di 360cm massimo e unito da appositi connettori tipo TECNARIA BASE 12/ 60, posti a passo 50,0cm, alla cappa sovrastante di c.a. sp.5cm, le verifiche risultano soddisfatte.

## VERIFICA DEL SISTEMA DI CONNESSIONE

Le travi in legno vengono collegate ai cordoli perimetrali per mezzo di connessioni a piastra in acciaio bullonate e ancoranti chimici.

In particolare, l'azione trasmessa è di solo taglio:

$$V_{Ed,SLU,MAX} = 13,63 \text{ kN}$$



### Classe di servizio 2

L'opera è caratterizzata da un'umidità del materiale in equilibrio con l'ambiente a una temperatura di 20°C e un'umidità relativa dell'aria circostante che supera l'85% solo per poche settimane all'anno.

### Coefficiente di sicurezza utilizzato

$$Y_M = 1,50$$

### Trave lato 3+

Dimensioni sezione ( $B_{el} \times H_{el}$ ):.....140x160mm

Legno: GL24h – UNI EN 14080:2013

Essenza: conifere

Massa volumica caratteristica:..... $\rho_k = 385,00 \text{ daN/mc}$

Massa volumica media:..... $\rho_m = 420,00 \text{ daN/mc}$

Resistenza caratteristica a trazione parallela alle fibre:..... $f_{t,0,k} = 19,20 \text{ N/mm}^2$

Resistenza caratteristica a trazione ortogonale alle fibre:..... $f_{t,90,k} = 0,50 \text{ N/mm}^2$

Resistenza caratteristica a compressione parallela alle fibre:..... $f_{c,0,k} = 24,00 \text{ N/mm}^2$

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Resistenza caratteristica a compressione ortogonale alle fibre:..... $f_{c,90,k} = 2,50 \text{ N/mm}^2$

Resistenza caratteristica a taglio:..... $f_{v,k} = 3,50 \text{ N/mm}^2$

Resistenza caratteristica a flessione:..... $f_{m,k} = 24,00 \text{ N/mm}^2$

Coefficiente correttivo  $K_{mod}$ :

Classe durata carico	permanente	lunga	media	breve	istantanea
Classe di servizio 1	0.60	0.70	0.80	0.90	1.10
<b>Classe di servizio 2</b>	<b>0.60</b>	<b>0.70</b>	<b>0.80</b>	<b>0.90</b>	<b>1.10</b>
Classe di servizio 3	0.50	0.55	0.65	0.70	0.90

Dati unione

Unione realizzata con l'utilizzo di una staffa d'acciaio a T con l'ala fissata alla trave di bordo in c.a. per mezzo di connettori chimici e l'anima inserita nel travetto:

La staffa ha dimensioni ( $S_s \times H_s \times L_{anima} \times B_{ala}$ ) 10,00x160,00x140,00x140,00mm.

Materiale staffa: Acciaio S275

Tensione caratteristica di snervamento:..... $f_{yk} = 275,00 \text{ N/mm}^2$

Tensione caratteristica di rottura:..... $f_{tk} = 430,00 \text{ N/mm}^2$

Dati connettore travetti-staffa

Bullone: M22

Diametro:..... $\emptyset = 22,00 \text{ mm}$

Limite "Johanson" per  $E_{fune}$ :..... $L_{EF} = 25\%$

Numero :..... $n = 1$  (1 righe e 1 colonne)

Diametro rondella:..... $\emptyset_r = 60,00 \text{ mm}$

Materiale: Classe 8.8 (NTC18/EC3)

Tensione di snervamento:..... $f_{yb} = 640,00 \text{ N/mm}^2$

Tensione di rottura:..... $f_{tb} = 800,00 \text{ N/mm}^2$

Dati connettori staffa-cordolo in c.a.

Bullone: M12 e ancorante chimico tipo WIT-UH 300 WURTH.

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Diametro:..... $\varnothing = 12,00$  mm

Numero :.....n = 4 (2 righe e 2 colonne)

Materiale: Classe 8.8 (NTC18/EC3)

Tensione di snervamento:..... $f_{yb} = 640,00$  N/mm<sup>2</sup>

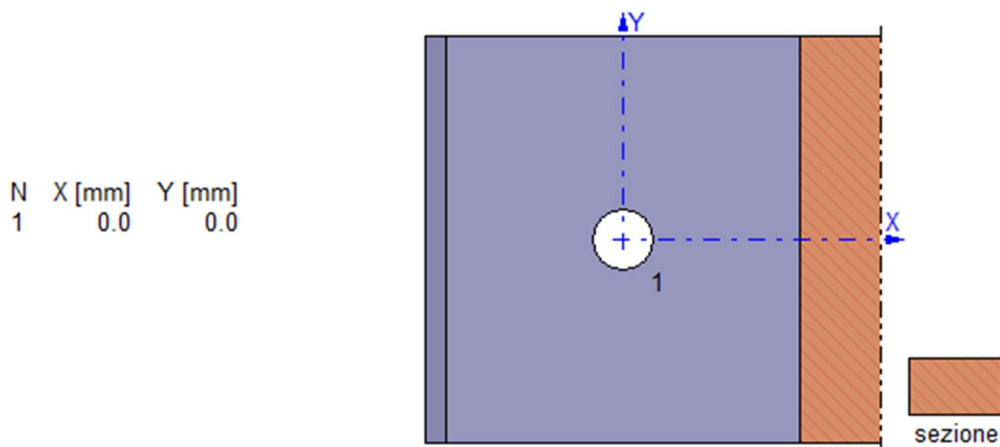
Tensione di rottura:..... $f_{tb} = 800,00$  N/mm<sup>2</sup>

Sollecitazioni nella sezione d'attacco dell'elemento:

N.C.D.	V2 [N]	V3 [N]	N [N]	M2 [N.mm]	M3[N.mm]	T[N.mm]
1.1.M	1363,00	0,00	0,00	0,00	0,00	0,00

Nota: la prima colonna della tabella riporta il numero del nodo (N), il numero della combinazione © e l'iniziale della classe di durata del carico (D: Permanente; Lunga durata; Media durata; Breve durata; Istantanea).

**Verifica unione travetto-staffa a T**



Verifica "lato legno" (Nodo n.1, CMB n.1)

Capacità caratteristica a estrazione del bullone:  $F_{ax,Rk} = F_{cr,Rd} = 17.952,70$  N

$F_{cr,Rd} = 3 \times f_{c,90ck} \times (\varnothing_r^2 - \varnothing_f^2) \times \pi / 4$  capacità di carico rondella

$\varnothing_f = 23,50$  mm diametro foro

Momento caratteristico di snervamento:  $M_{y,Rk} = 0,30 \times t_{fb} \times \varnothing^{2,6} = 742.181,60$  N.mm

Resistenza caratteristica a rifollamento per. alle fibre:



INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

$$f_{h,0,k} = 0,082 \times (1 - 0,01 \times \emptyset) \times p_k = 24,62 \text{ N/mm}^2$$

$$\text{Coefficiente di essenza legnosa: } k_{90} = 1,35 + 0,015 \times \emptyset = 1,68$$

$$\text{Angolo di inclinazione del carico rispetto alle fibre: } \alpha = 90,00^\circ$$

Resistenza caratteristica a rifollamento secondo  $\alpha$ :

$$f_{h,\alpha,k} = f_{h,0,k} / (k_{90} \times \sin^2 \alpha + \cos^2 \alpha) = 14,66 \text{ N/mm}^2$$

Equazione di Johansen: piastra di qualunque spessore elemento centrale di una connessione a doppio taglio.

$$\text{Capacità di carico per piano di taglio: } F_{v,Rk} = \min [F_{v,Rk,f}; F_{v,Rk,g}; F_{v,Rk,h}] = 21.282,70 \text{ N}$$

$$F_{v,Rk,f} = f_{h,\alpha,k} \times t \times \emptyset = 21.282,70 \text{ N}$$

$$F_{v,Rk,g} = f_{h,\alpha,k} \times t \times \emptyset \times [(2 + 4 \times M_{y,Rk} / (f_{h,\alpha,k} \times \emptyset \times t^2))^{0,5} - 1] + E_{fune,g} = 26.370,50 \text{ N}$$

$$F_{v,Rk,h} = 2,3 \times (M_{y,Rk} \times f_{h,\alpha,k} \times \emptyset)^{0,5} + E_{fune,h} = 40.069,70 \text{ N}$$

$$E_{fune,g} = \min [L_{EF} \times F_{v,Rk,g}; F_{ax,Rk} / 4] = 4.488,20 \text{ N}$$

$$E_{fune,h} = \min [L_{EF} \times F_{v,Rk,h}; F_{ax,Rk} / 4] = 4.488,20 \text{ N}$$

$$\text{Resistenza di progetto del bullone per piano di taglio: } F_{v,Rd} = K_{mod} \times F_{v,Rk} / Y_M = 11.350,80 \text{ N}$$

Numero efficace bulloni per ogni gruppo par. alle fibre:

$$\text{Carico parallelo alle fibre: } n_{ef,II} = n = 1,00$$

$$\text{Carico perpendicolare alle fibre: } n_{ef,T} = n = 1,00$$

$$\text{Carico reale (secondo } \alpha): n_{ef,\alpha} = n_{ef,II} + (n_{ef,T} - n_{ef,II}) \times \alpha / 90 = 1,00$$

$$\text{Numero di gruppi par. alle fibre: } n_g = 1,00$$

$$\text{Resistenza di progetto del giunto per piano di taglio: } F_{v,G,Rd} = n_{ef,\alpha} \times n_g \times F_{v,Rd} = 11.350,80 \text{ N}$$

$$\text{Forza agente sul giunto per piano di taglio: } F_{v,Ed} = 6.815,00 \text{ N}$$

$$>> F_{v,Ed} / F_{v,G,Rd} = 0,60 \rightarrow \text{OK}$$

Verifica "Lato acciaio" (Nodo n.1, CMB n.1)

*Calcolo resistenze*

$$\text{Resistenza a taglio dei bulloni: } F_{vb,Rd} = 0,50 \times f_{tb} \times 2 \times A_{res} / Y_{M2} = 194.628,00 \text{ N}$$

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Connessione	$F_{b,x,Rd}$ [N]	$F_{v,x,Rd}$ [N]	$F_{b,y,Rd}$ [N]	$F_{v,y,Rd}$ [N]
1	141.698,70	141.698,70	151.360,00	151.360,00

Legenda:

$F_{b,x,Rd} = k \times \alpha \times f_{tk} \times \emptyset \times S_s / Y_{M2} \rightarrow$  resistenza a rifollamento anima staffa in direzione x

$F_{v,x,Rd} = \min [F_{vb,Rd}; F_{b,x,Rd}] \rightarrow$  resistenza a taglio di progetto in direzione x

$F_{b,y,Rd} = k \times \alpha \times f_{tk} \times \emptyset \times S_s / Y_{M2} \rightarrow$  resistenza a rifollamento anima staffa in direzione y

$F_{v,y,Rd} = \min [F_{vb,Rd}; F_{b,y,Rd}] \rightarrow$  resistenza a taglio di progetto in direzione y

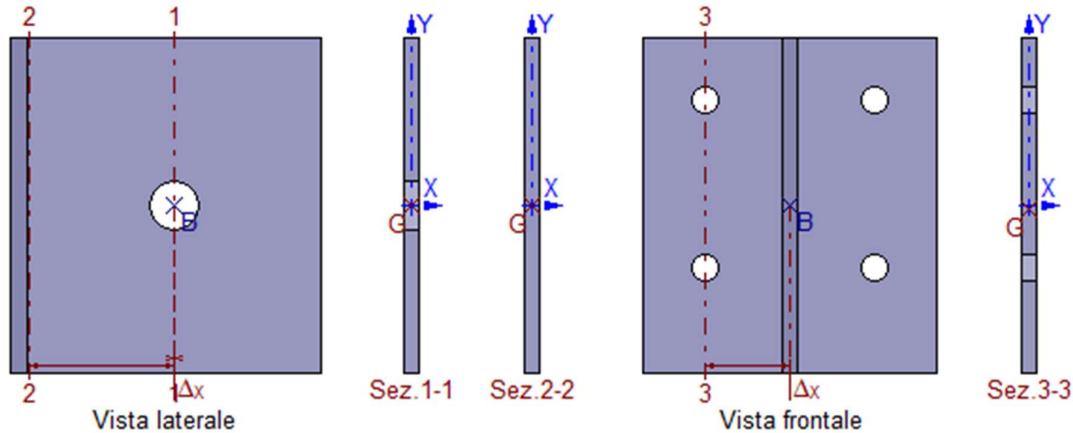
Verifica connettori

$F_{v,Ed} = 13.630,00N$

$F_{v,Rd} = 151.360,00 N$

$\gg F_{v,Ed} / F_{v,Rd} = 0,09 \rightarrow \text{OK}$

Verifica staffa a T



Caratteristiche sezioni

Sez.	$\Delta_x$	$Y_G$	$X_G$	A	$A_{vy}$	$A_{vx}$	$J_{xG}$	$W_{xG}^*$	$J_{yG}$	$W_{yG}^*$
	[mm]	[mm]	[mm]	[mm <sup>2</sup> ]	[mm <sup>2</sup> ]	[mm <sup>2</sup> ]	[mm <sup>4</sup> ]	[mm <sup>3</sup> ]	[mm <sup>4</sup> ]	[mm <sup>3</sup> ]
1-1	0	0	0	1.092	1.092	-	2.730.667	34.133	-	-
2-2	70	0	0	1.280	1.280	1.280	2.730.667	34.133	6.827	1.707

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

3-3	40	-1,94	0	1.072	1.072	1.072	2.373.031	28.960	5.717	1.429
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Sollecitazioni massime

Sez.	Nodo CMB	$V_y$ [N]	$V_x$ [N]	N [N]	$M_y$ [N.mm]	$M_x$ [N.mm]
1-1	1.1	-13.630	-	0	-	0
2-2	1.1	-13.630	0	0	0	954.100
3-3	1.1	-6.815	0	0	0	-272.600

Tensioni massime

Sez.	$\tau_{MED}$ [N/mm <sup>2</sup> ]	$\sigma_{MAX}$ [N/mm <sup>2</sup> ]	$\sigma_{ID}$ [N/mm <sup>2</sup> ]	FV	VER
1-1	12,48	0,00	21,62	0.08	OK
2-2	10,65	27,95	33,49	0,13	OK
3-3	6,36	-9,41	14,49	0,06	OK

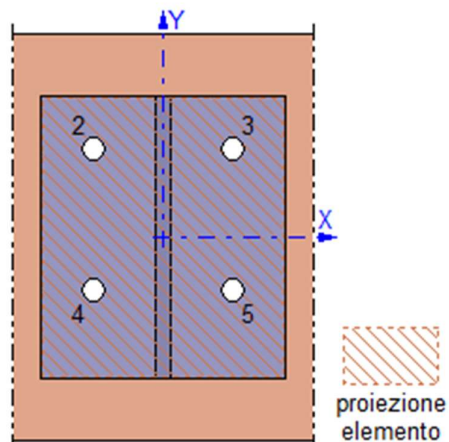
Legenda:

$$FV = \sigma_{ID} / f_d = (f_d = f_{yk} / \gamma_{M0} = 261,90 \text{ N/mm}^2)$$

$$VER \rightarrow FV \leq 1,00$$

Verifica staffa a T-cordolo c.a.

N	X [mm]	Y [mm]
2	-40.0	50.0
3	40.0	50.0
4	-40.0	-30.0
5	40.0	-30.0



INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Dati di ingresso

Materiale base	Calcestruzzo: fessurato   C25/30; $f_{ck} = 25.00 \text{ N/mm}^2$ , $f_{ct,crack} = 30.00 \text{ N/mm}^2$   $h = 150 \text{ mm}$ Intervallo di temperature: 40 °C / 24 °C (Utente)   40 °C / 24 °C (Progettazione)
Armatura	Armatura del calcestruzzo: Normale   Armatura di bordo: Armatura di bordo dritta + armatura di sospensione a maglia stretta Armatura per limitare la fessurazione: Disponibile
Condizioni di installazione	Metodo di perforazione: Foro trapanato   Modalità di perforazione: Asciutto Flessione dell'ancorante: No Pulizia: Pulizia ad aria compressa (CAC), vedere istruzioni di settaggio

Ancorante:

Art. Nr.	Descrizione	$\varnothing$ [mm]	l [mm]	$t_{fix,max}$ [mm]	VE [Pezzi]
Disponibile su richiesta	Barra filettata F-8.8 x 1000 - Lunghezza dello spezzone: 100 mm - Numero di spezzoni per ogni barra filettata venduta a metro: 9	M12	1000 mm	10 mm	1

Barre filettate commerciali standardizzate con:

- Materiali, dimensioni e proprietà meccaniche secondo la tabella a1 della certificazione della resina corrispettiva.
- Certificazione di controllo 3.1 secondo EN 10204:2004
- Marcatura della profondità di infissione.

Resina / adesivo:

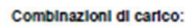
Art. Nr.	Descrizione
5918 500 320	ancorante chimico WIT-UH 300 in cartuccia per iniezione da 320 ml
5918 500 420	ancorante chimico WIT-UH 300 in cartuccia per iniezione da 420 ml
5918 503 825	ancorante chimico WIT-UH 300 in cartuccia per iniezione da 825 ml
5918 504 280	ancorante chimico WIT-UH 300 in cartuccia per iniezione da 280 ml

Tipo e dimensione dell'ancorante WIT-UH 300 + Barra d'ancoraggio a metro/ F M12 selezionato

Materiale F 8.8  
Reale profondità di ancoraggio 75 mm



Geometria e sollecitazioni:



## Verifiche

**Forze di ancoraggio risultanti:**

	$\Sigma N_{Ed,x}^I$ [kN]	$\Sigma (V_{Ed,y}^{Mh,i})$ [kN]	$\Sigma (V_{Ed,x}^{Mh,i})$ [kN]	$\Sigma (V_{Ed,y}^{Vh,i})$ [kN]	$\Sigma (V_{Ed,x}^{Vh,i})$ [kN]	$\Sigma V_{Ed,y}^I$ [kN]	$\Sigma V_{Ed,x}^I$ [kN]	$ \Sigma V_{Ed}^I $ [kN]
Totale	8.527	0.000	0.000	0.000	-13.630	0.000	-13.630	13.630

### Riepilogo:

INTERVENTI LOCALI SU FABBRICATO ESISTENTE A MOLLIA

Forza	Verifica	Sfruttamento	Condizione
Trazione	Cedimento lato acciaio	9.49 %	comprovato
Trazione	Cedimento combinato per sfiliamento e rottura del calcestruzzo	48.85 %	comprovato
Trazione	Rottura del calcestruzzo	41.33 %	comprovato
Taglio	Cedimento lato acciaio, azioni di taglio senza braccio di leva	25.27 %	comprovato
Taglio	Scazzamento del calcestruzzo (Gruppo di ancoranti)	35.13 %	comprovato
Taglio	Rottura del bordo di calcestruzzo	69.45 %	comprovato
Combinazione Trazione/Taglio	Interazione (Cedimento lato acciaio)	7.29 %	comprovato
Combinazione Trazione/Taglio	Interazione (Escluso il cedimento lato acciaio)	92.01 %	comprovato

Calcolo dello spessore della piastra di ancoraggio.:

Non è stato eseguito il dimensionamento della piastra di ancoraggio. E' necessario che l'utente verifichi che la sua rigidità sia sufficiente.

Verifica effettuata con successo!

Osservazioni:

- metodo di verifica: EN1992-4
- Il presente documento è da considerarsi come una progettazione preliminare. Il dimensionamento e l'installazione dei mezzi di unione sono subordinati alla revisione e approvazione da parte del progettista responsabile delle strutture.
- Si prega di osservare le condizioni d'uso del software, in particolare il §4.
- Il numero di articolo degli ancoranti viene riportato nella relativa scheda prodotto.
- Il numero articolo degli accessori viene riportato nella relativa scheda informativa del prodotto. Le istruzioni di posa, invece, nella relativa certificazione.
- The results using the respective design methods are listed. For the details of the verifications please contact your certified structural engineer.
- Le verifiche dettagliate dello Stato Limite di Servizio non vengono riportate. Si raccomanda di richiederle ad un progettista abilitato.
- Il calcolo è valido solo se il foro passante non è più grande di quello indicato nella tabella 4.1 della EN 1992-4. In caso contrario, si veda il cap. 1.1 della EN 1992-4
- La progettazione si basa su numerosi parametri specifici dell'ancorante. Se l'ancorante scelto viene cambiato o se vengono modificati i valori di sollecitazione indicati o i dati geometrici, la verifica non è più valida e deve essere ripetuta con le nuove condizioni. E' necessario rispettare i requisiti e le indicazioni riportate nel Benestare Tecnico Europeo.
- In un gruppo di ancoranti devono essere utilizzati solo i tasselli dello stesso tipo, dimensione e lunghezza.
- La resistenza della resina varia in funzione della temperatura nel breve e lungo termine del materiale base.
- Verificare la resistenza del materiale base selezionato
- Il metodo di progettazione si applica a fissaggi sufficientemente rigidi da rendere effettiva la distribuzione lineare della deformazione.
- L'ipotesi che il fissaggio in esame sia sufficientemente rigido fa parte della sua valutazione tecnica.
- Se ci si discosta dall'ipotesi di piastra di ancoraggio rigida, le forze interne determinate vengono incrementate con un fattore di scale (forze realistiche sull'ancorante/forze lineari sull'ancorante) secondo la teoria dell'elasticità. Si prega di far controllare e verificare questo risultato da un ingegnere strutturista abilitato.
- Per ulteriori informazioni sulla piastra di ancoraggio rigida e sulla sua progettazione, si veda il documento del Prof. Ing. Jan Hofmann.
- La trasmissione dei carichi negli elementi strutturali deve essere verificata secondo EN 1992-4, cap. 7. Nel caso vi sia uno strato di malta di inghiessaggio, si presume che non ci siano sacche d'aria sotto la piastra di ancoraggio, che lo strato sia stato preparato in anticipo e che sia completamente indurito.
- Il foro deve essere pulito con aria compressa (CAC) secondo ETA-17/0127.
- Non è stato eseguito il dimensionamento della piastra di ancoraggio. E' necessario che l'utente verifichi che la sua rigidità sia

## CONCLUSIONI

Il sottoscritto Ing. Stefano Vantaggiato, iscritto all'albo degli Ingegneri della Provincia di Milano al n° 31571, quale progettista delle opere strutturali

### DICHIARA

che tutte le opere strutturali sono state calcolate e progettate a norma della Scienza delle Costruzioni ed in osservanza delle vigenti disposizioni di Legge.

Dichiara inoltre che tutti gli elaborati allegati sono sufficienti per individuare i lavori da eseguirsi e che i materiali di cui si prevede l'impiego, nonché le relative dosature, sono idonei in relazione alle sollecitazioni assunte a base del calcolo.

Luogo e data

**Milano, Luglio 2024**

Il Tecnico

Dott. Ing. Stefano Vantaggiato

