Pretensioned girder frame bridge

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1. GENERAL / MEASUREMENT

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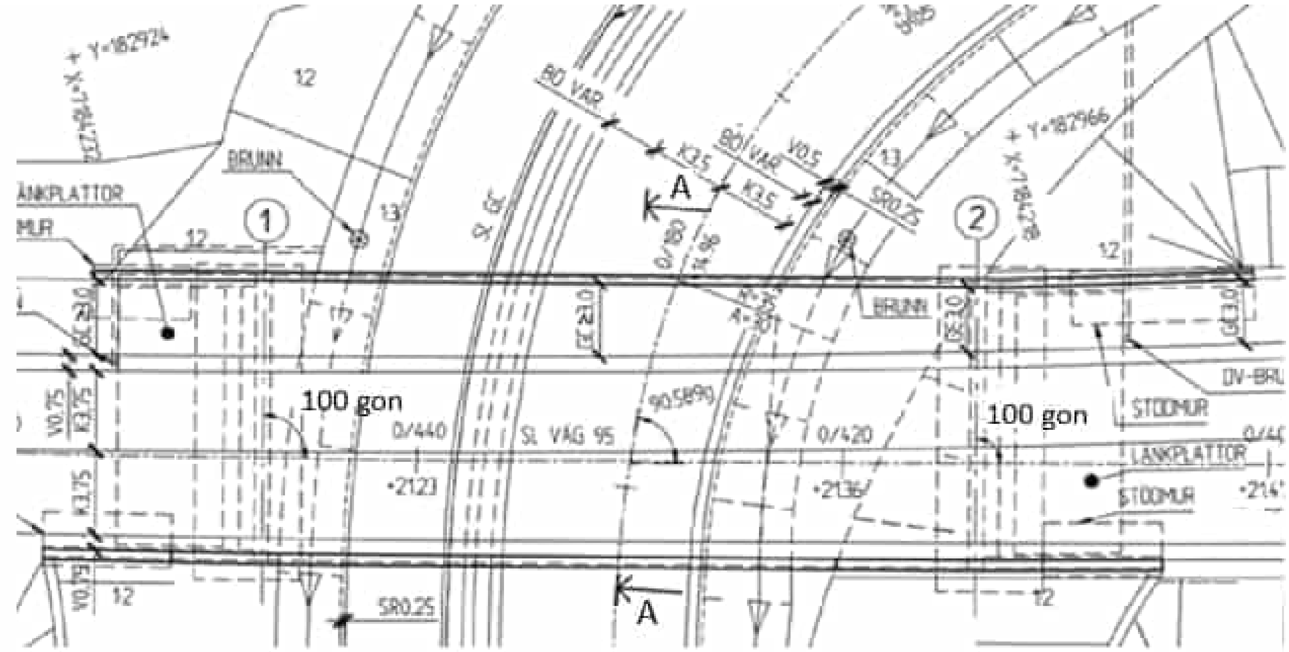
1.1 CONSTRUCTION TYPE

Beam frame constructed using reinforced concrete. Superstructure is modelled with longitudinal beams that are pretensioned.

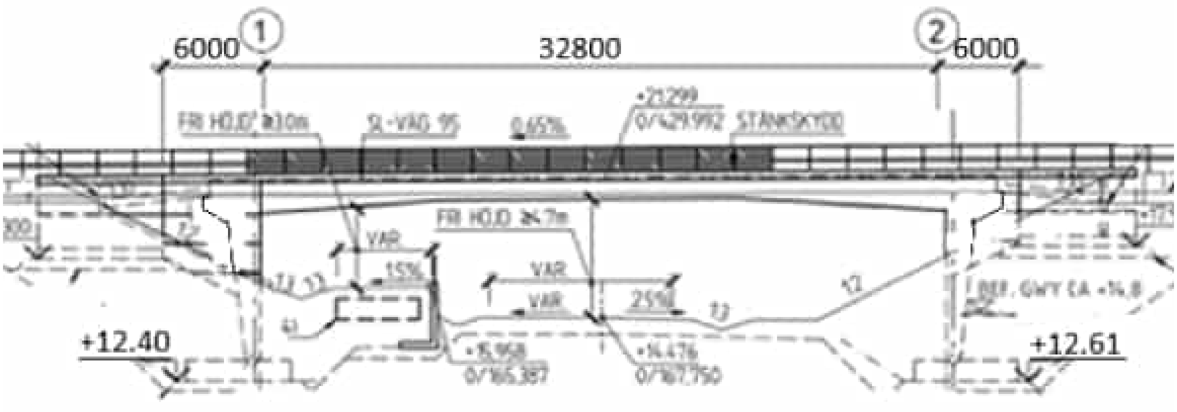
Foundation on compacted gravel.

1.2 MEASURMENT

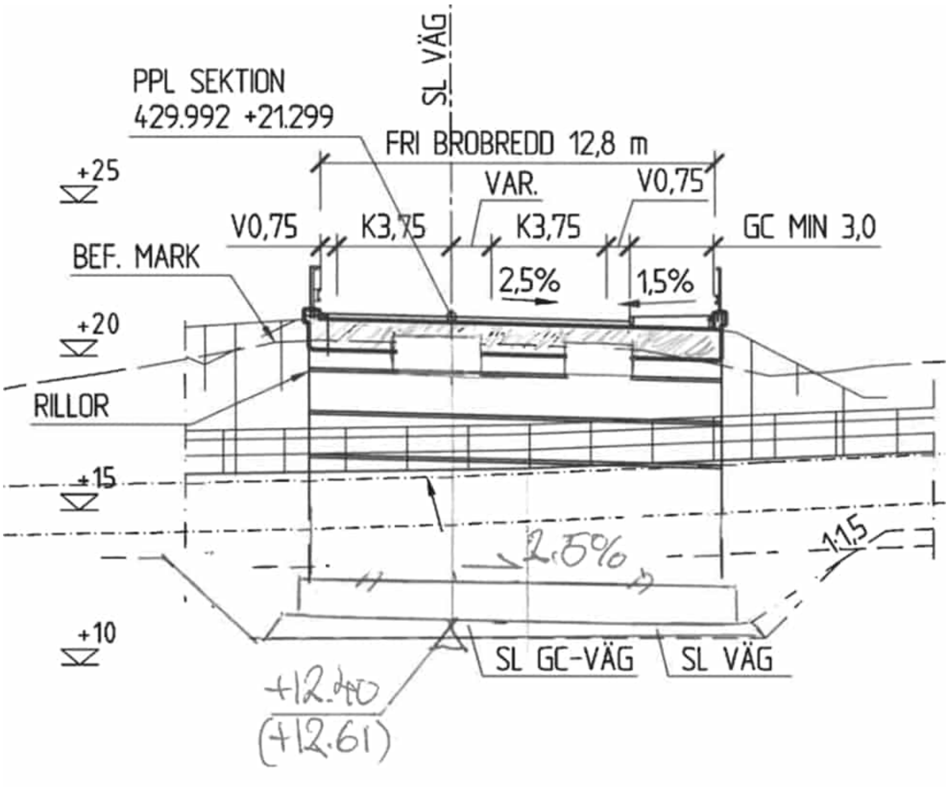
1.2.1 Overview



PLAN



ELEVATION

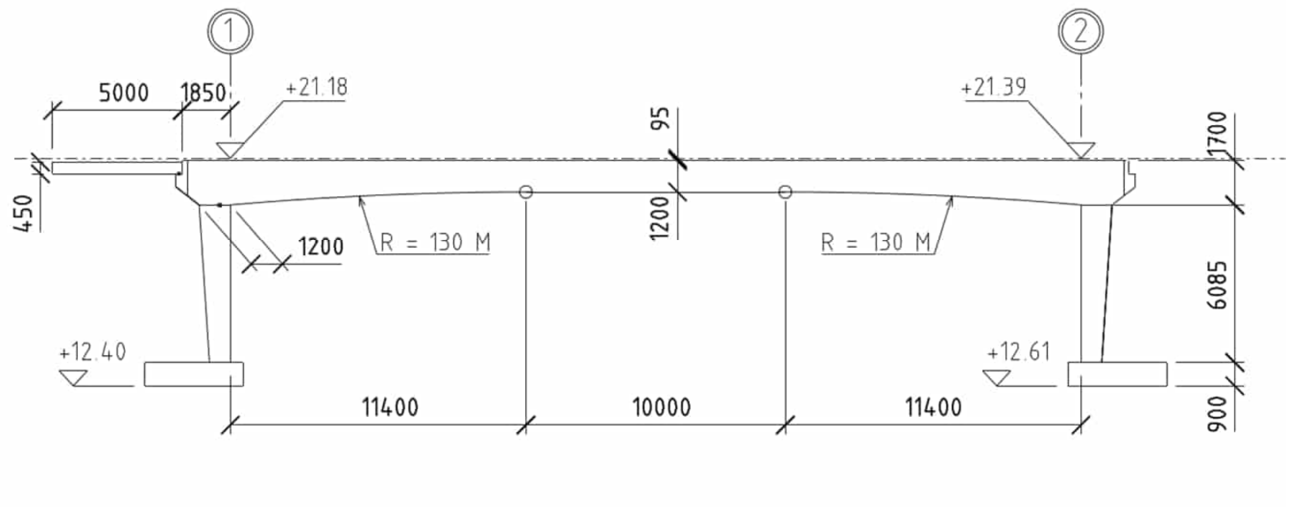


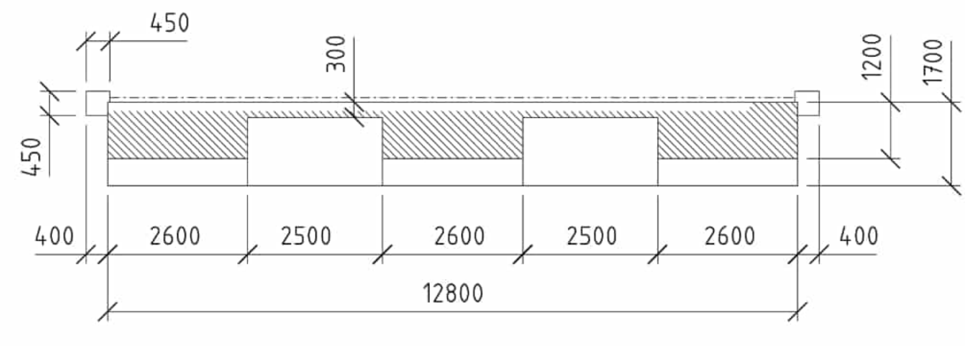
SL VÄG
PPL SEKTION
429.992 +21.299
FRI BROBREDD 12,8 m
+25
VAR.
V0,75
V0,75
K3,75
K3,75
GC MIN 3,0
BEF. MARK
2,5%
1,5%
+20
RILLOR
+15
2,5%
1:1,5
+10
SL GC-VÄG
SL VÄG
+12.40
(+12.61)

SECTION A-A

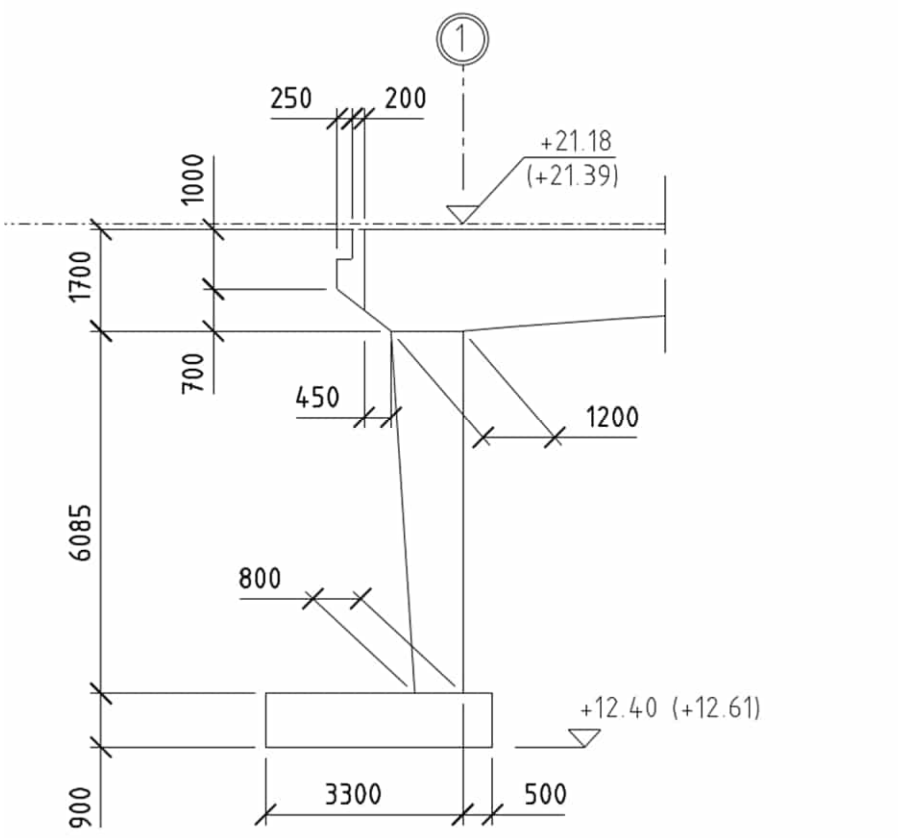
1.2.2 Detailed measurement

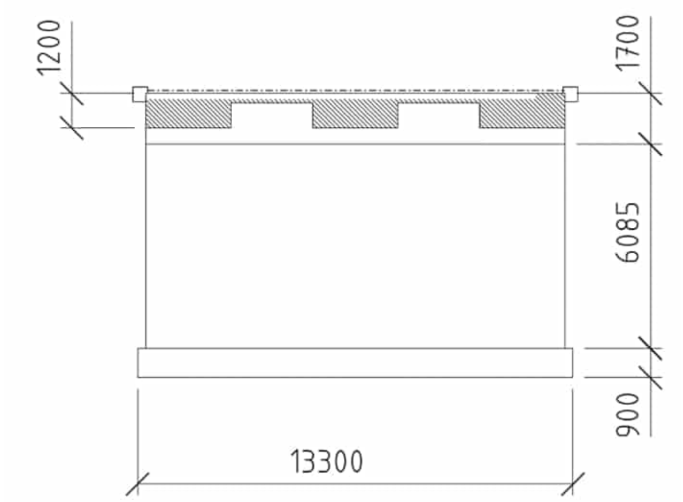
Superstructure:





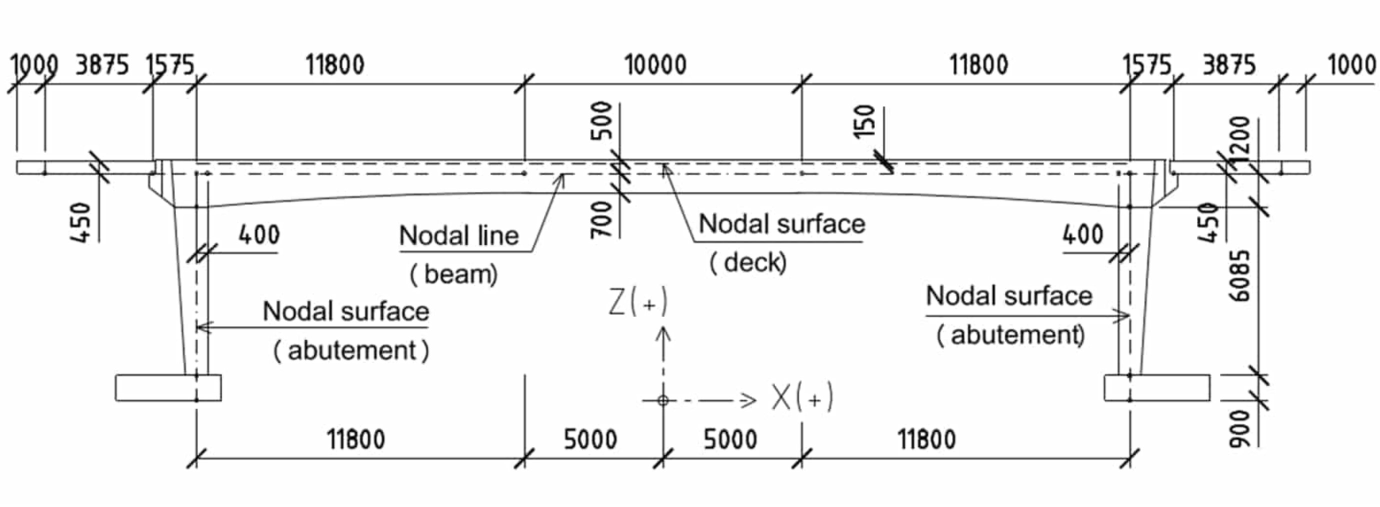
Substructure:

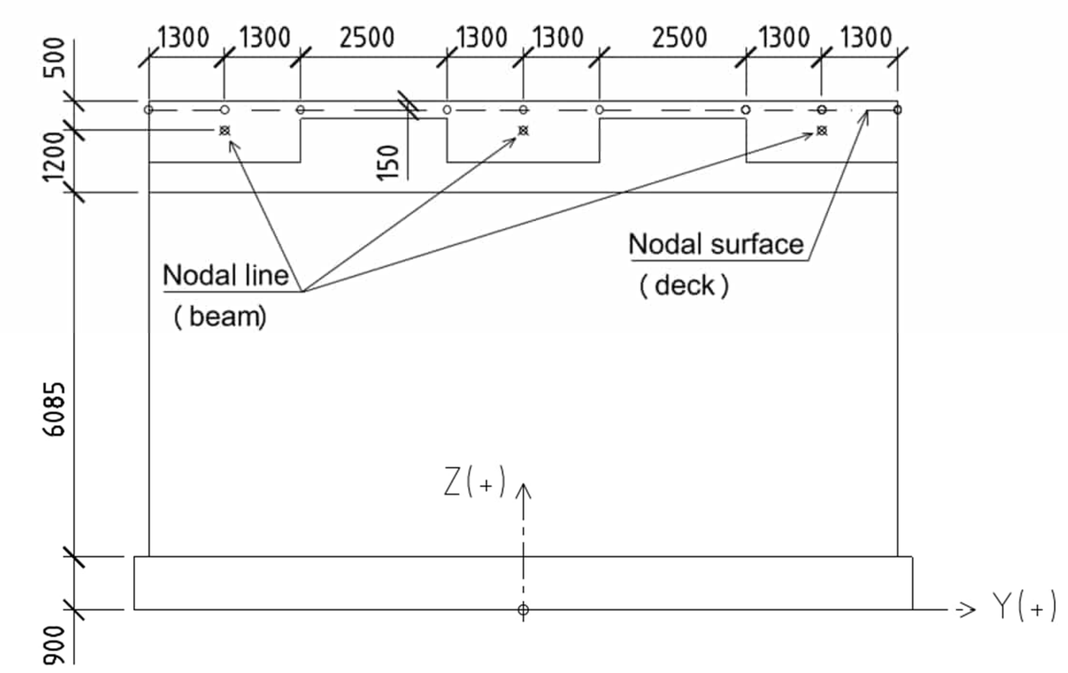




1.2.3 Measurements FEM-modell

Simplified measurements used in FEM-modell.





1.3 FOUNDATION

Both bottom slabs are founded on 0.3 m compacted gravel on rock.

1.4 CODE DOCUMENTS

Documents	Version	Name
SS-EN 1990-1997	-	Svensk Standard Eurokod 1-7
TRVINFRA-00226	2.0	KRAV, Bro och broliknande konstruktion, Allmänna krav
TRVINFRA-00227	2.0	KRAV, Bro och broliknande konstruktion, Byggande
TRVINFRA-00228	2.0	KRAV, Bro och broliknande konstruktion, Brounderhåll
TRVINFRA-00331	2.0	KRAV, Bro och broliknande konstruktion, Bärighetsberäkning
TSFS 2018:57		Transportstyrelsens föreskrifter och allmänna råd om tillämpning av eurokoder
TDOK 2013:0667	2.0	Trafikverkets tekniska krav för geokonstruktioner. TK Geo 13
TDOK 2013:0668	2.0	Trafikverkets tekniska råd för geokonstruktioner. TR Geo 13
AMA Anläggning 23		AMA, Svensk Byggtjänst
TDOK 2023:0125	2.0	TRVAMA Anläggning 23
SS 137006:2015	-	Betongkonstruktioner – Utförande – Tillämpning av SS-EN 13670:2009 i Sverige

1.5 TECHNICAL SERVICE LIFE

Technical life span 120 years (L100).

1.6 ENVIRONMENT

Pedestrian environment is assumed for the underlying pedestrical road.

Road traffic environment is assumed for the overlying traffic road.

1.7 MATERIAL

Concrete :	C35/45 & C40/50 (CEM I 42.5 N, Anläggningscement klass N)
Reinforcement :	B500B
Compacted fill :	”Förtärkningslagermaterial” according to AMA CEB.415
Backfill :	”Grovkrossad sprängsten” according to AMA CEB.524
Surfacing :	See document RKFM
Pretension:	VSL system or equivalent

1.8 GEOTECHNICAL CLASS

Geotechnical class GK2

1.9 SAFETY CLASS

Geotechnical resistance: SK 2

Bridge structure : SK 3

Retaining walls: SK 3

1.10 CONCRETE COVER AND CRACK CRITERIA

Class identification bridge components :

Bridge components	Exposure class[1.)]	Life spann	max vct_{ekv}[2.)]	ζ [3.)]
Substructure incl. linkplate:				
▫ Wingwall towards filling	XD1/XF4	L100	0.45	1.5
▫ Wingwall from filling	XD1/XF4	L100	0.45	1.5
▫ Abutemnt below ground	XC2/XF3	L100	0.50	1.0
▫ Abutement in air	XC4/XF3	L100	0.50	1.2
▫ Bottomslab in general	XC2/XF3	L100	0.50	1.0
▫ Bottomslab underside	XC2/XF3	L100	0.50	1.0
▫ Linkslab in general	XD3/XF2	L100	0.40	1.8
▫ Linkslab underside	XD3/XF2	L100	0.40	1.8
Superstructure:				
▫ Edge beam	XD3/XF4	L100	0.40	1.8
▫ Bridge deck	XD1/XF4	L100	0.40	1.5
Retaining wall:				
▫ Wall towards filling	XD1/XF4	L100	0.40	1.5
▫ Wall from filling	XC4/XF3	L100	0.40	1.2
▫ Bottomslab in general	XC2/XF3	L100	0.40	1.0
▫ Bottomslab underside	XC2/XF3	L100	0.40	1.0

Footnote:

[1.)] TRVINFRA-00227 section 5.3.2.3

[2.)] TSFS table 12.1

[3.)] TSFS table 12.3

Design parameters low corrosion sensitive reinforcement (rebars):

$c_{min.dur}$: minimum cover with regard to environmental impact

$c_{min.b}$: minimum cover with regard to adhesion requirements
Δc_{dev} : execution tolerance
c_{min} = max ($c_{min.b}$; $c_{min.dur}$; $10mm$) : SS-EN 1992-1-1 eq. 4.2
c_{nom} = c_{min} + Δc_{dev} : SS-EN 1992-1-1 eq. 4.1, noted as BM on the drawing

Construction part	$c_{min.dur}$ [1.)]	$c_{min.b}$ [2.)]	c_{min}	c_{dev} [3.)]	c_{nom}	$w_{k,till}$ [4.)]
Substructure including link slab:						
▫ Wing wall against fill	30	20	30	10	40	0.20
▫ Wing wall from fill	30	20	30	10	40	0.20
▫ Frame legs below ground	20	20	20	10	30	0.40
▫ Frame legs above ground	25	20	25	10	35	0.30
▫ Bottom slab (general)	20	20	20	10	30	0.40
▫ Underside of bottom slab	20	20	20	10	30	0.40
▫ Link slab (general)	45	20	45	10	55	0.15
▫ Underside of link slab	45	20	45	10	60[5.)]	0.15
Superstructure:						
▫ Edge beam	45	20	45	10	55	0.15
▫ Bridge deck	25	20	25	10	35	0.20
Retaining wall:						
▫ Wall against fill	25	20	25	10	35	0.20
▫ Wall from fill	25	20	25	10	35	0.30
▫ Bottom slab (general)	20	20	20	10	30	0.40
▫ Underside of bottom slab	20	20	20	10	35[5.)]	0.40
-	mm	mm	mm	mm	mm	mm

Footnotes:
1.) TSFS table 12.1
2.) SS-EN 1992-1-1 section 4.4.1.2 table 4.2
3.) SS-EN 1992-1-1 section 4.4.1.3
4.) TSFS tabele 12.2
5.) TSFS chapter 12 paragraph 3§ k_1= c_{min} + 15 mm vhen casting against building foil.

Design parameters high corrosion sensitive reinforcement (pretension):

$c_{min.dur}$: minimum cover with regard to environmental impact

$c_{min.b}$: minimum cover with regard to adhesion requirements
Δc_{dev} : execution tolerance
$c_{min} = \max(c_{min.b};c_{min.dur}; 10mm)$: SS-EN 1992-1-1 eq. 4.2
$c_{nom} = c_{min} + \Delta c_{dev}$: SS-EN 1992-1-1 eq. 4.1, noted as BM on the drawing

Construction part	$c_{min.dur}$ [1.)]	$c_{min.b}$ [2.)]	c_{min}	c_{dev} [3.)]	c_{nom}	$w_{k,till}$ [4.)]
Superstructure:						
▫ Top bridge deck	25	90	90	10	100	*
▫ Other part of bridge deck	25	90	90	10	100	*
	mm	mm	mm	mm	mm	mm

Footnotes:
1.) TSFS table 12.1
2.) SS-EN 1992-1-1 section 4.4.1.2 (3) specifies pretension tube ϕ90
3.) SS-EN 1992-1-1 section 4.4.1.3
4.) TSFS table 12.2 states that crack width is not needed when ”tensile stress” for SLS-F is less than $f_{ctk.0.05}/\zeta$

2. SYSTEM ANALYSIS

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2.5 BOUNDARY CONDITIONS page 2:36-48
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2.1 GENERAL

The bridge is built using reinforced concrete.

The bridge is designed as frame bridge with longitudinal beams in superstructure.

Stiffness of bridge deck in longitudinal direction is verified by determining effective width due to shear lag.

Abutments are defined by using shell elements applied to nodal surface in abutments.

Bridge deck is defined by using shell elements applied to nodal surface in superstructure.

Longitudinal beams are defined using beam elements applied to nodal line in superstructure.

Longitudinal beam will be connected to bridge deck using rigid constraints (= Tied Mesh).

FEM-program has the capability of analysing several different static systems within one FEM-model. This bridge use two different analysis (*Analysis 1* & *Analysis 2*). The geometry is the same for both, however the rigid constraints used in superstructure vary.
Analysis 1 is called “Base Analysis”. All changes in *Analysis 1* are based on changes from *Analysis 1*. Evaluation of traffic is performed on *“Base Analysis”*.

For load cases shrinkage (KRYMP) and temperature (TEMP) each longitudinal beam is attached one line of nodes in superstructure. This to avoid large internal forces in deck due to prevented contraction in transversal direction. These loads are performed in *Analysis 2*.

For all other load cases each longitudinal beam is attached two lines of nodes in superstructure. The reason for this is to get correct load effect in transversal direction, since with only one line the span length for deck would be too long. These loads are performed on *Analysis 1*.

Entire structure is modelled using isotropic material.

Bridge foundation consists of compacted gravel.

Wingwalls are not modelled statically since considered inactive in vertical direction. This is due cracking and the use of only minimal reinforcement in this direction.

Edge beams are not modelled statically since considered inactive. This assumption is considered on safe side. The assumption will facilitate future replacement of edge beams.

Bottom of abutments will be connected to fictive rigid beams using rigid constrains (= Tied Mesh). The rigid beams will have infinite stiffness in all directions apart from axial. In this direction stiffness will be negligible.

The end of longitudinal beams in superstructure are only to substructure to one node at location where each nodal line meets the shell elements in the abutments. To spread forces to substructure as accurately as possible fictious rigid beams are introduced at these connection points. The rigid beams (=Rigid beam superstructure) will have infinite stiffness in all directions apart but axial. In this direction stiffness will be negligible.

At bottom of abutments a fictitious rigid beam (= Rigid beam abutment) with infinite stiffness in all directions apart from axial. In this direction stiffness will be negligible. In the middle of this fictious rigid beam a super node will be connected. This to retrieve reactions a single point for every support.

Shell elements are used to define Superstructure end zone. To be able to apply prestress tendons in this area fictitious beams (= Weak beam superstructure) are applied with negligible stiffness in all directions.

In system analysis gross cross section may be used for longitudinal beams in superstructure, see SS-EN 1992-1-1 section 5.3.2.1 point (4).

In FEM-analysis constant cross section is used for longitudinal beams along entire span length, see SS-EN 1992-1-1 section 5.3.2.1 (4).

The difference in stiffness between conventionally reinforced construction elements shall be considered for statically indeterminate prestressed concrete structures. According to older technical practice, the stiffness for conventionally reinforced construction elements is 60% of that applicable to prestressed construction elements. This interpretation aligns with what is stated in TRVINFRA-003331 section 10.1.2.2. This technical practice is applied to the studied bridge.

The difference in stiffnesses is handled by using 60 % of E-modulus for shells in substructure.

For the deck in superstructure the 60 % of E-modulus in transversal direction is used. In the longitudinal direction 100 % of E-modulus is considered. This requirement requires use of orthotropic material.

For longitudinal beams in superstructure 100 % of E-modulus is considered.

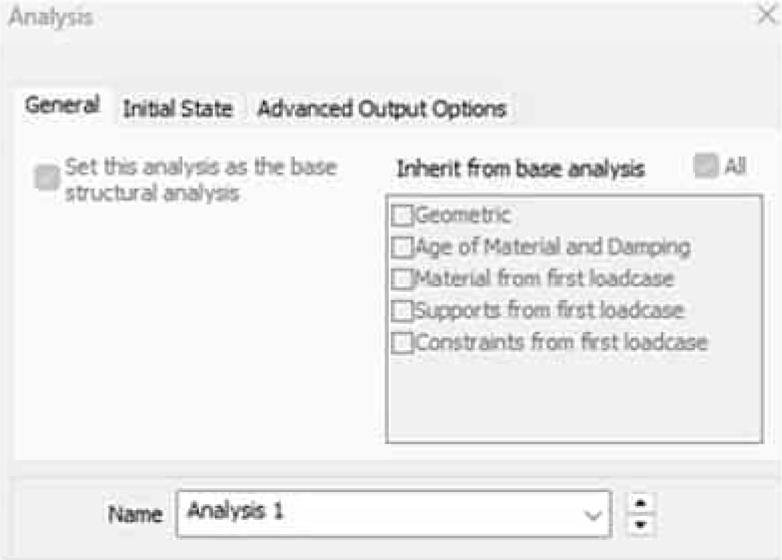
Attachments:

Attachment	Name
1	Input receipt
2	Results reactions
3	Results abutments
4	Results bridge deck
5	Results longitudinal beams

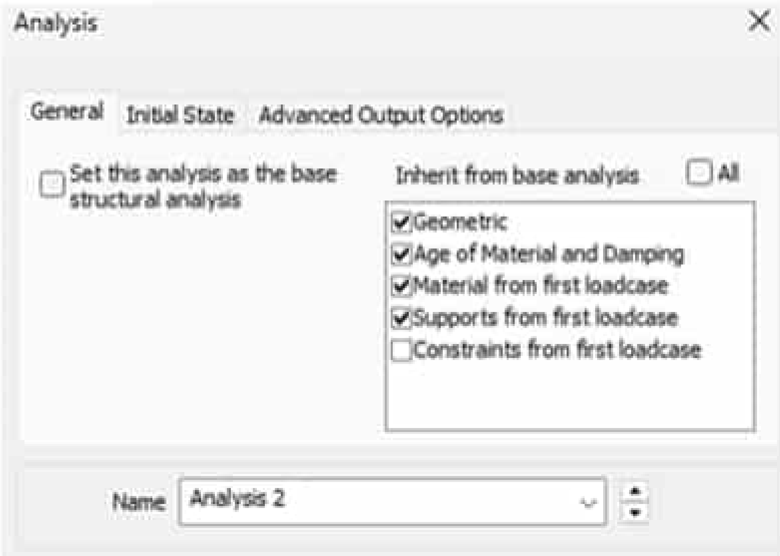
Table analysis:

Nr	Name	Remark
1	Analysis 1	Base Analysis
2	Analysis 2	Shrinkage & Temperature

Definition analysis 1:



Definition analysis 2:



2.2 SKETCH SYSTEM ANALYSIS

2.2.1 Geometry

In order to describe geometry first POINTS are defined.

Beam elements are defined by applying attributes to LINES.

Shell elements are defined by applying attributes to SURFACES.

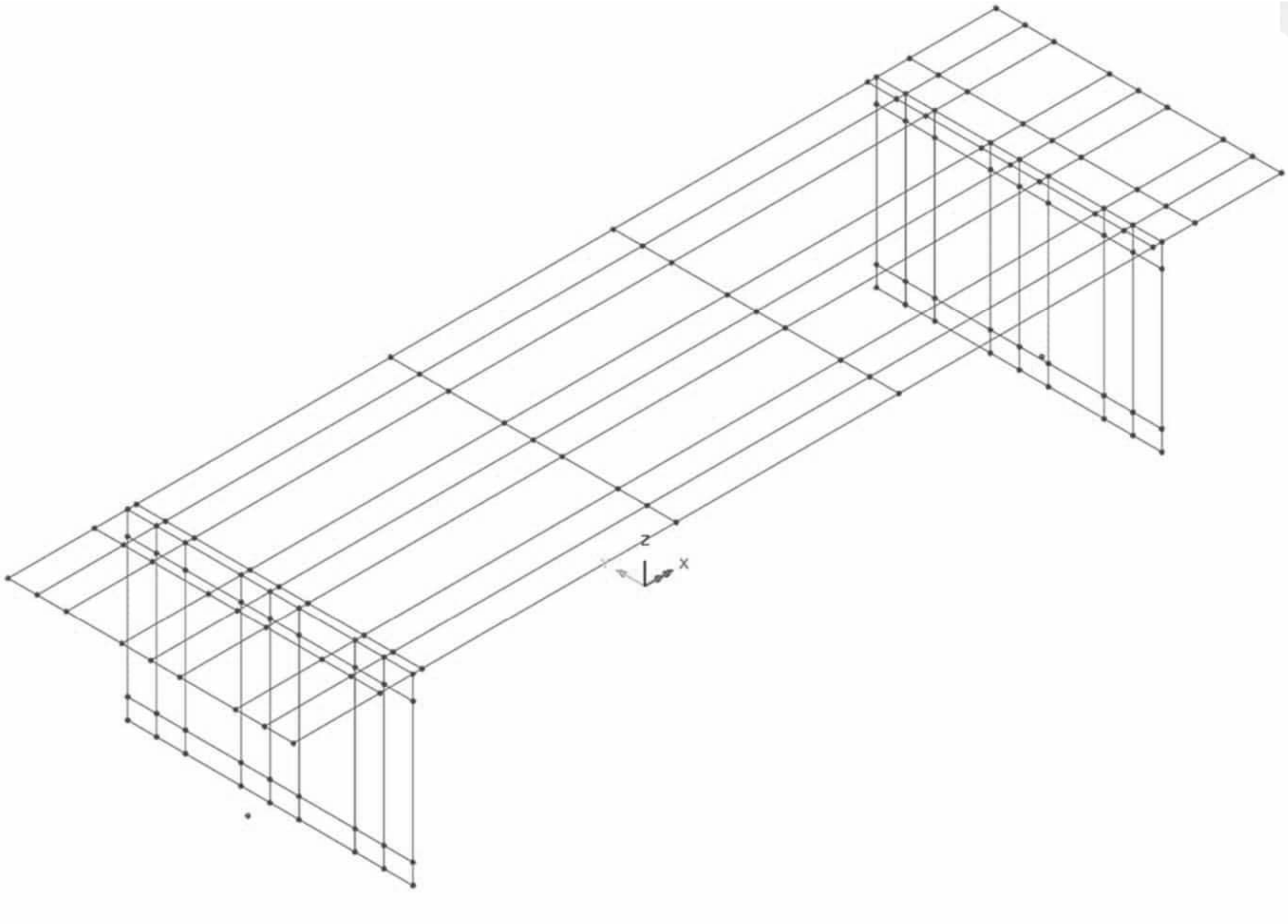
Attached pictures are retrieved from graphical sketches generated by FEM-program of POINTS, LINES and SURFACES.

All coordinates needed to describe POINTS are found in attachment 1.

All POINTS needed to describe LINES are found in attachment 1.

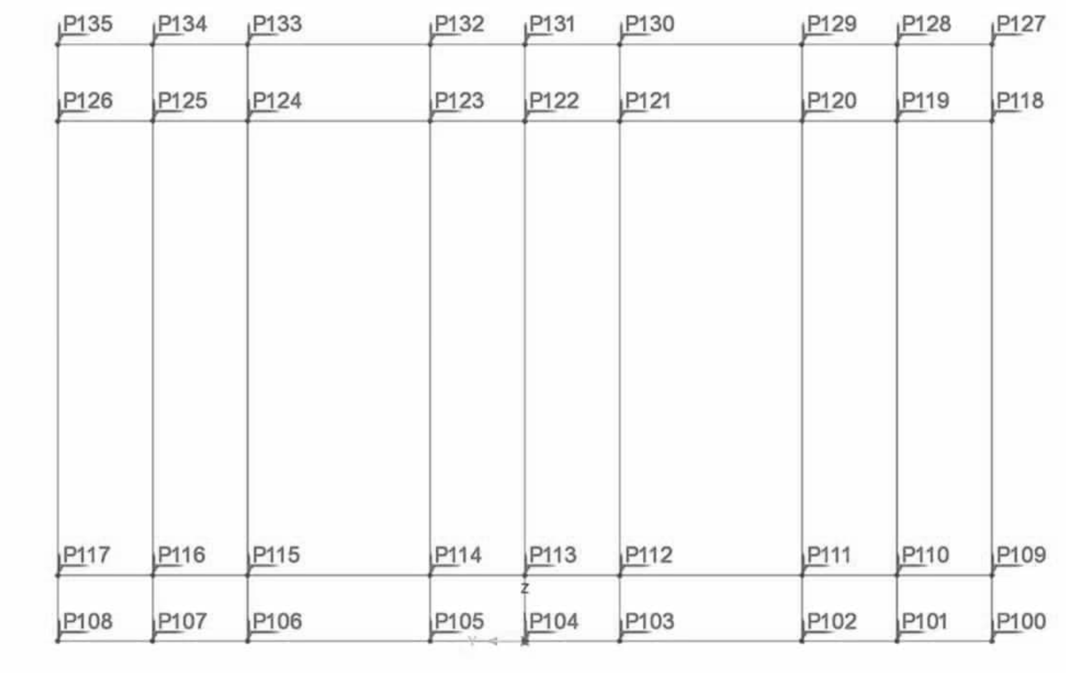
All LINES need to describe SURFACE are found in attachment 1.

Overview :

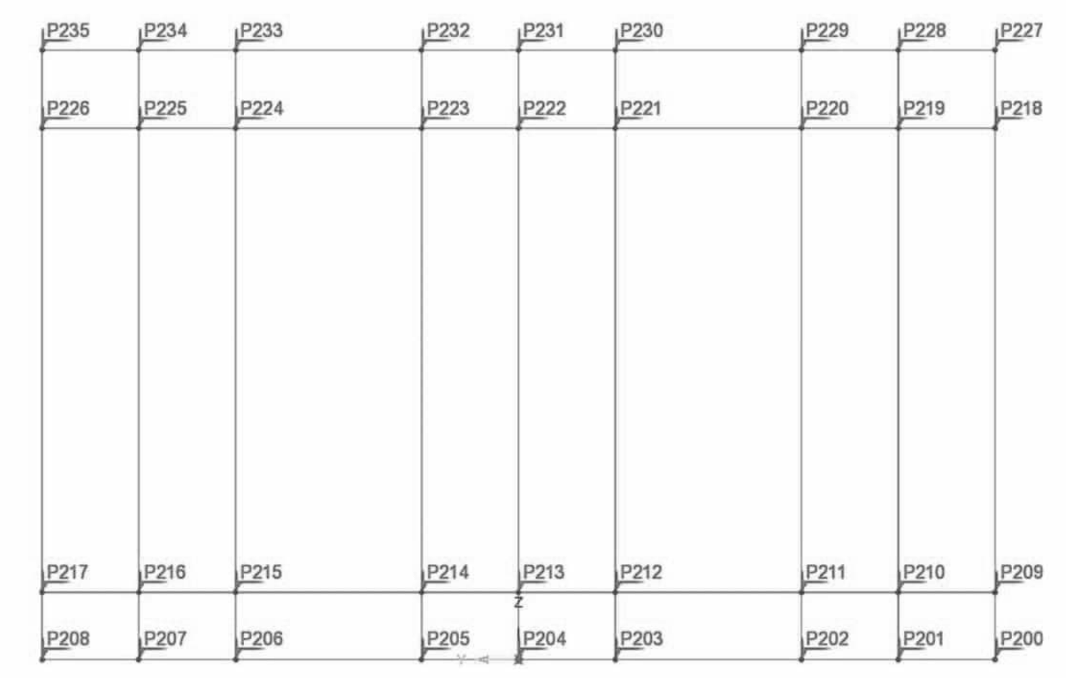


2.2.1.1 Geometry : POINTS

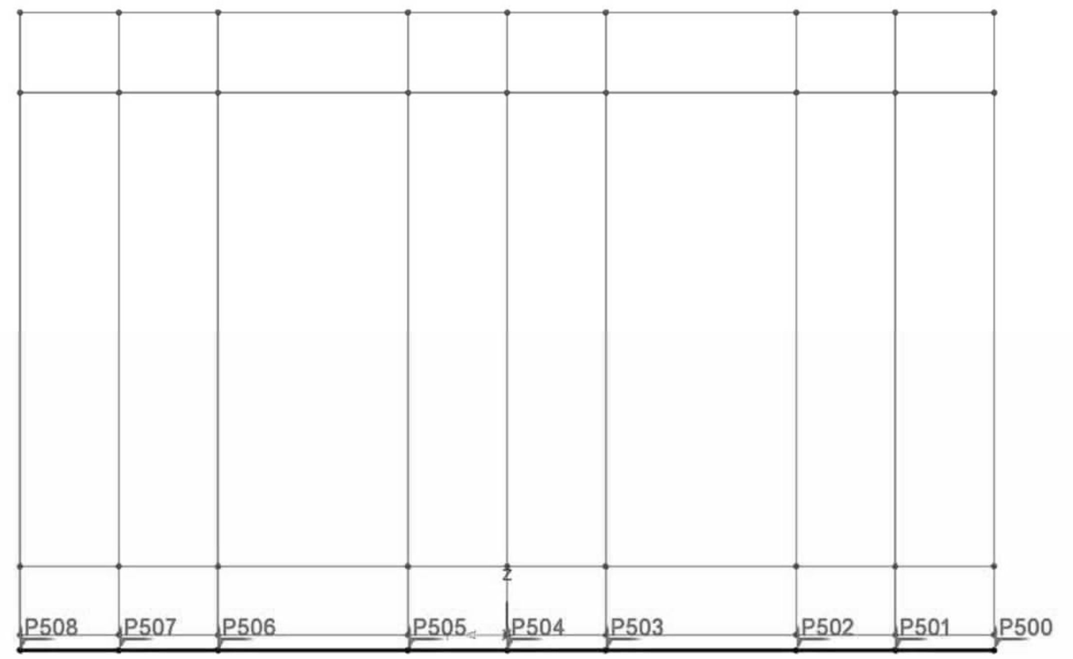
Abutment 1 :



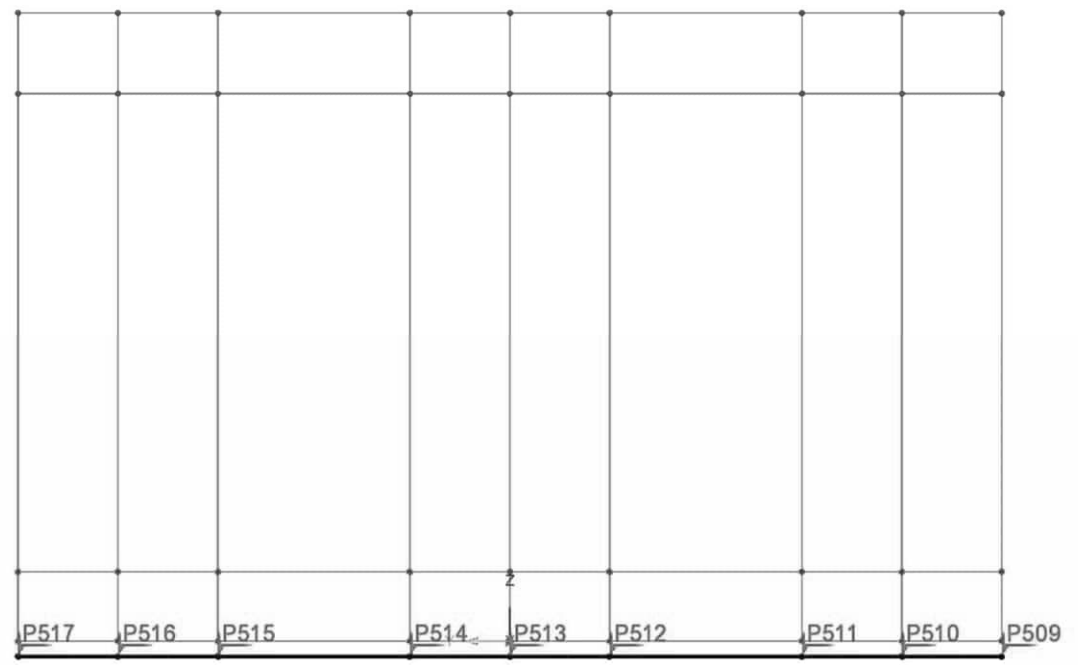
Abutment 2 :



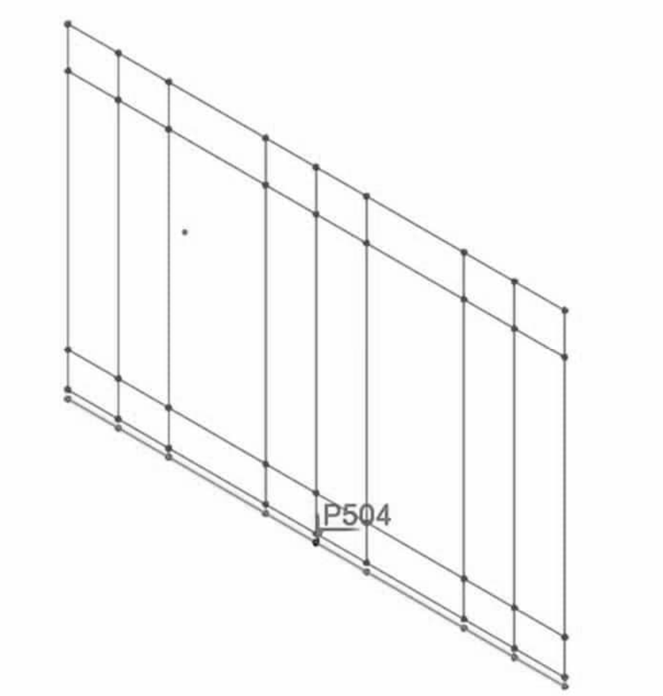
Rigid beam at abutment 1 :



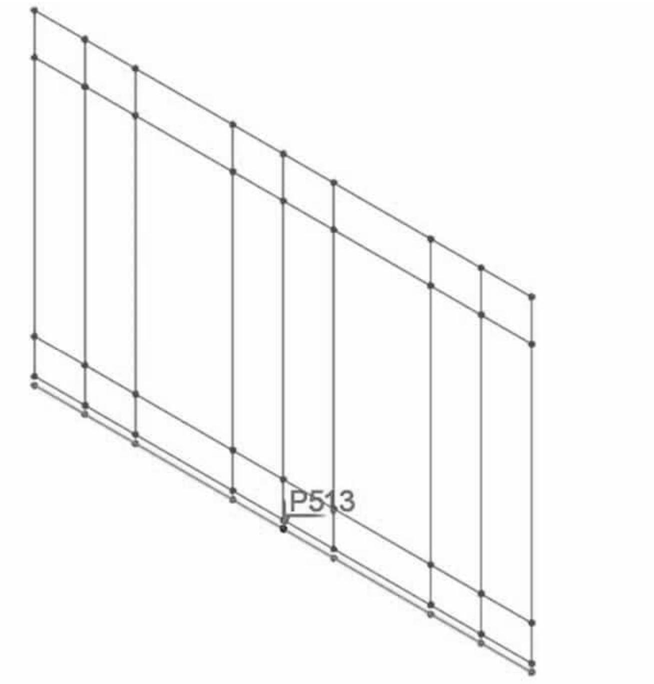
Rigid beam at abutment 2 :



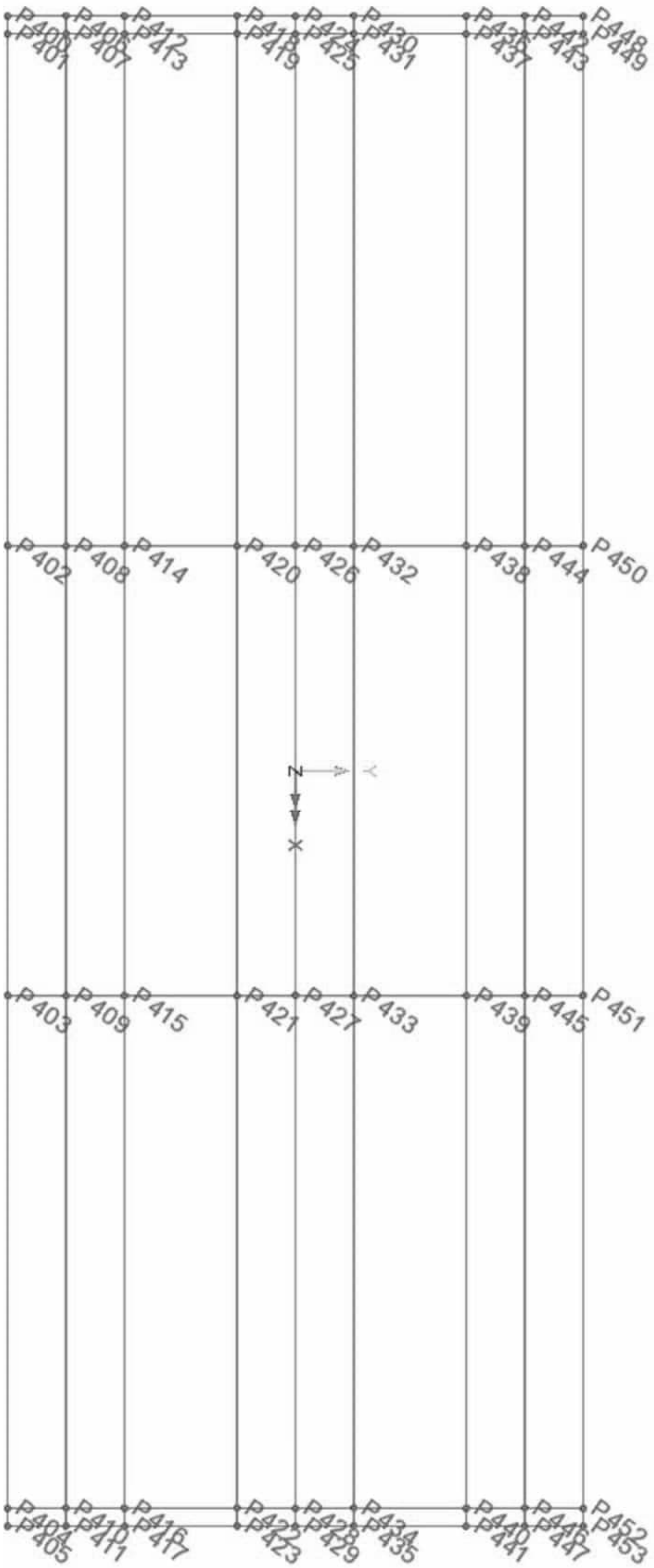
Supernode - point foundation 1 :



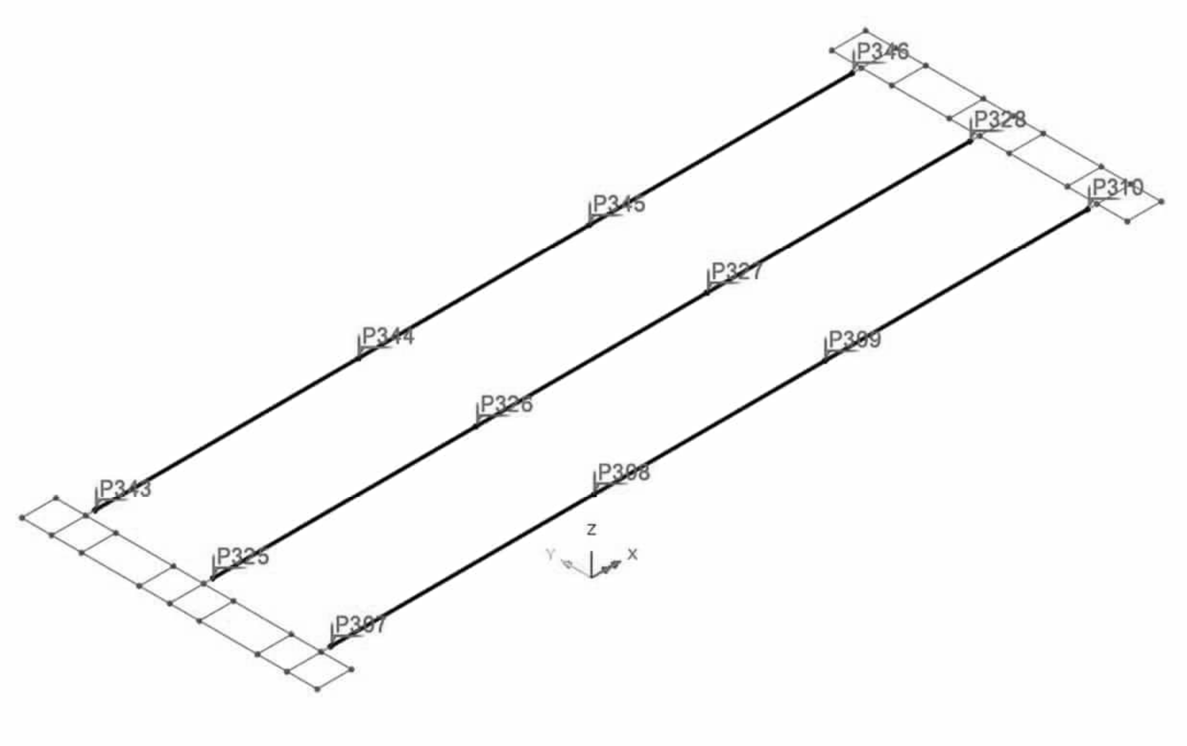
Supernode - point foundation 2 :



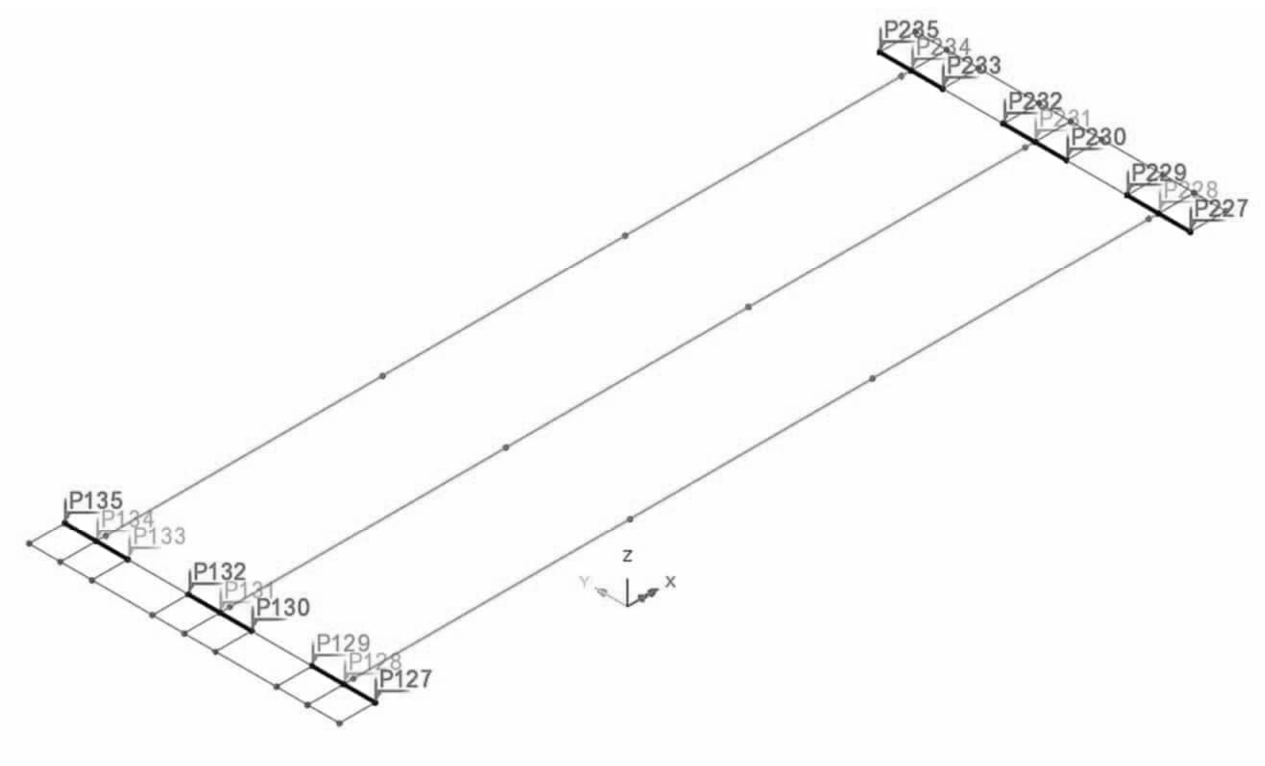
Superstructure - deck :



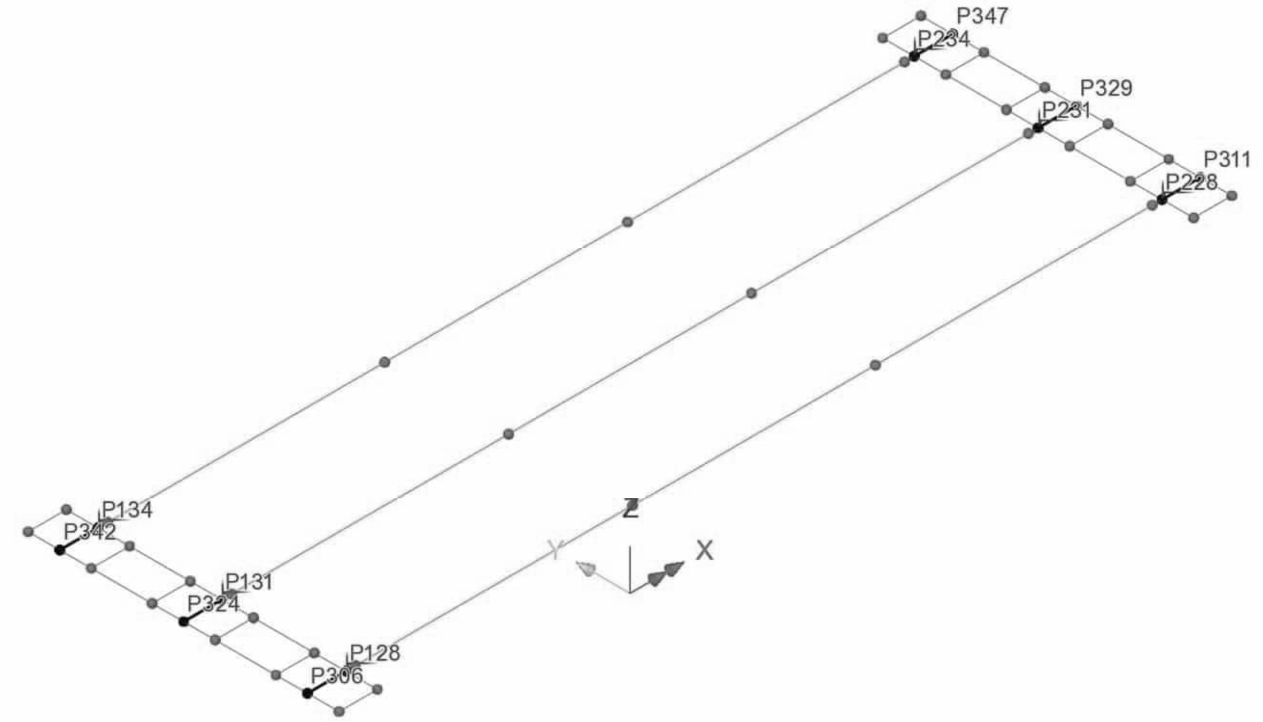
Superstructure - longitudinal beams :



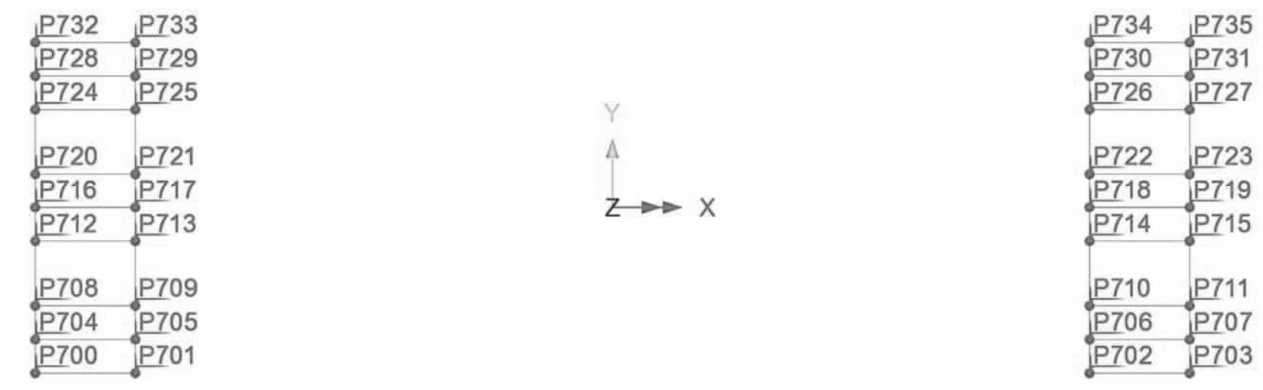
Superstructure – rigid beams :



Superstructure – weak beams:



Superstructure – link slab :



2.2.1.2 Geometry : LINES

See input receipt (attachment 1).

2.2.1.3 Geometri : SURFACES

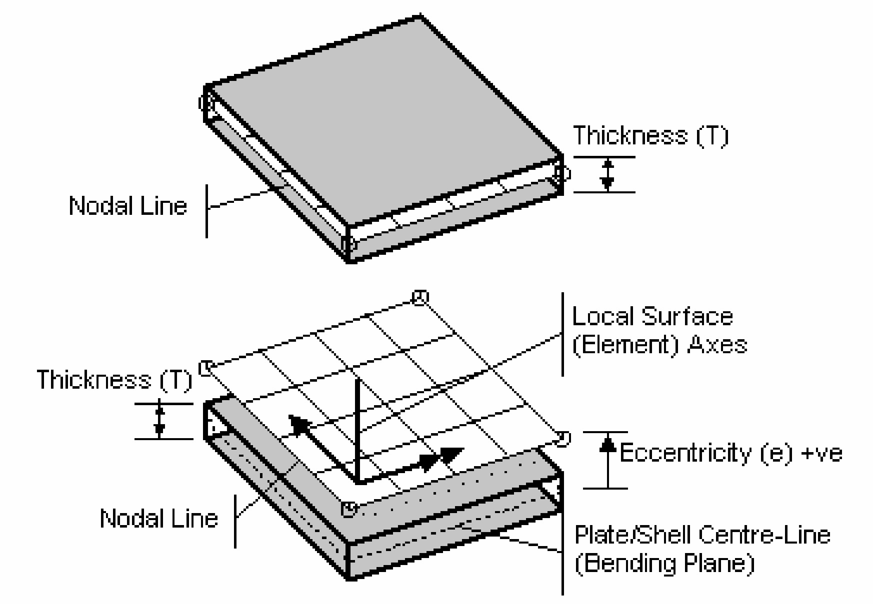
See input receipt (attachment 1).

2.3 CROSS SECTION PROPERTIES

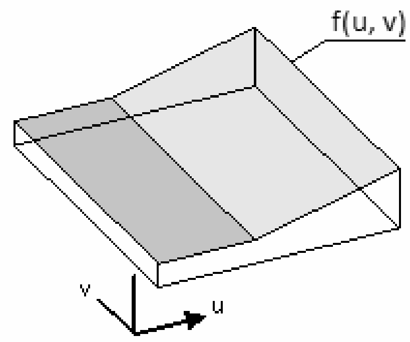
By experience stiffness increases by 1:3 at all joints as seen below.

2.3.1 Shell element

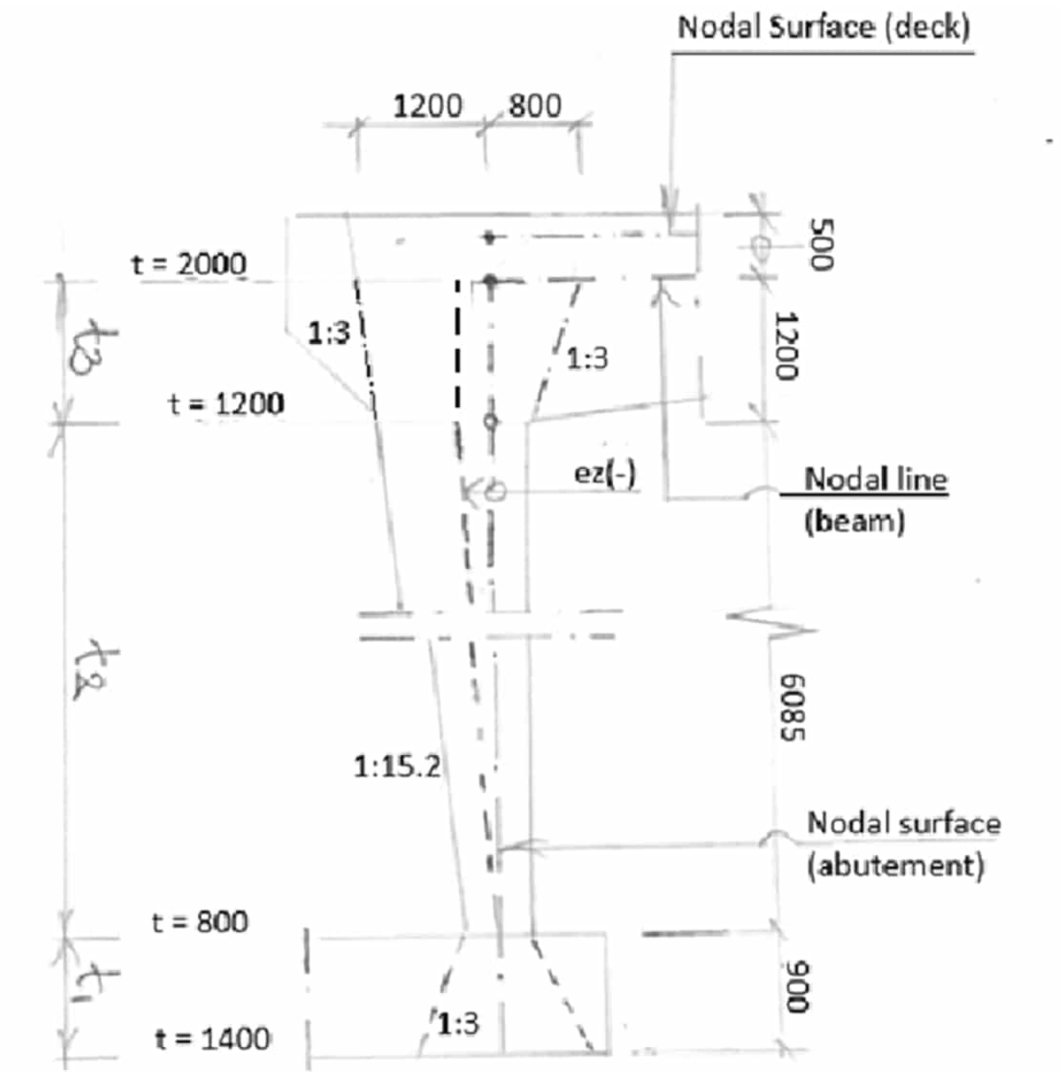
Principle figures of geometry associated to shell elements (”Thick shell” / QTS4) are seen below.



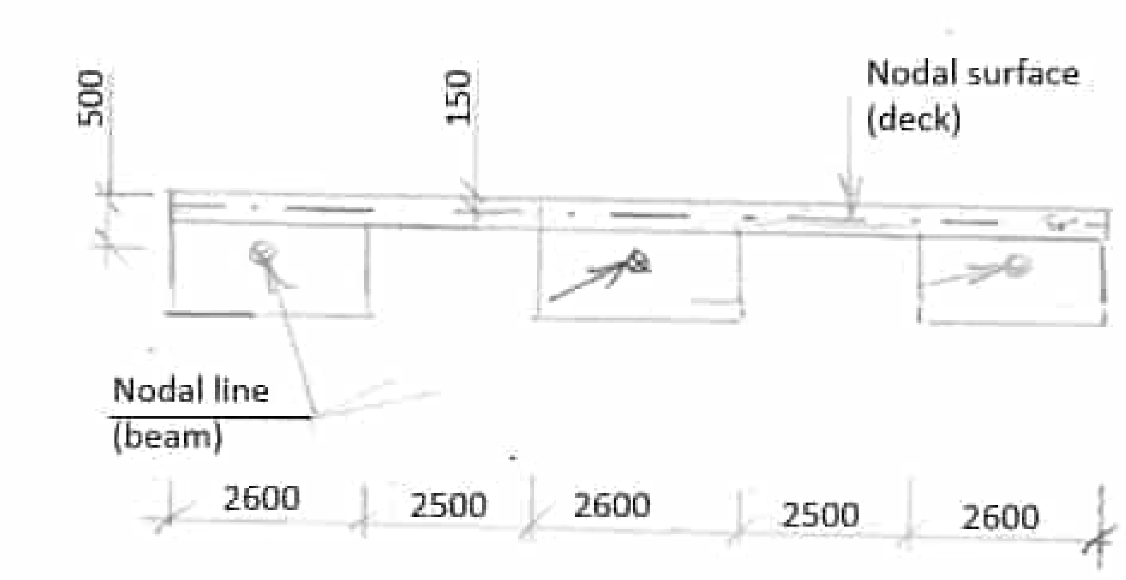
Varying thickness in shell element is handled using ”Function variation”. This makes it possible to create a function f(u,v) as seen below.

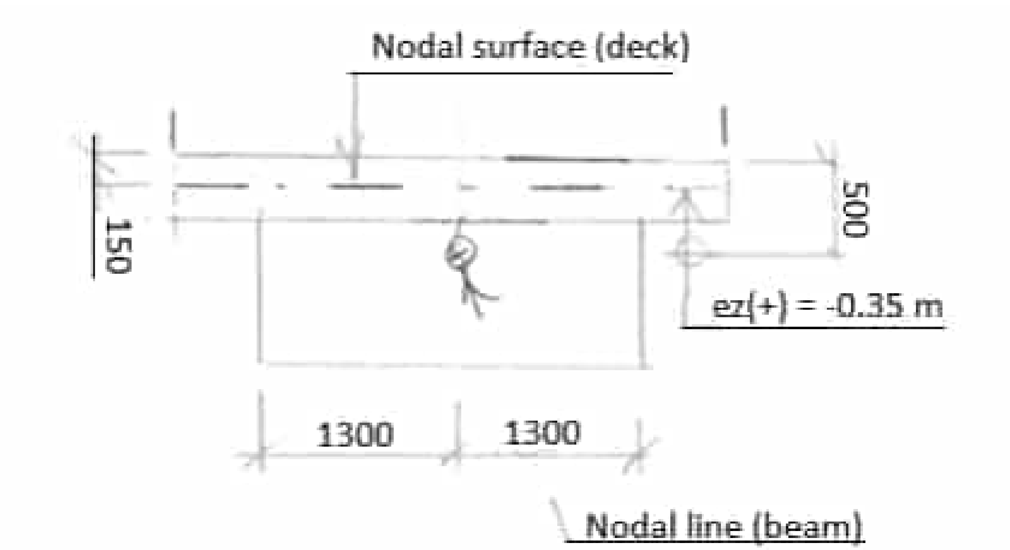


Geometry abutments:

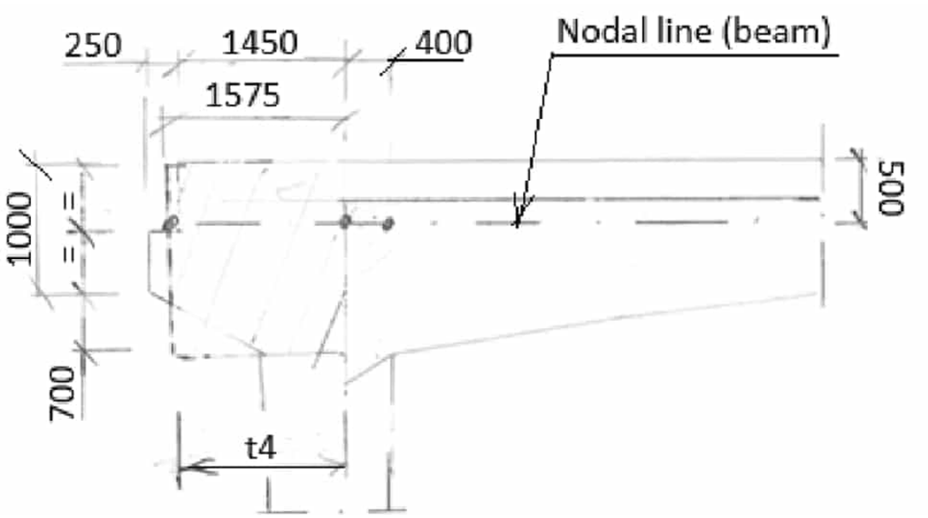


Geometry superstructure – deck :





Geometry superstructure end zone:



Surface function thickness :

Variation	function(u,v)	Anm.
t1	1.40-0.60·u	Slab
t2	0.80+0.40·u	Abutment
t3	1.20+0.80·u	Abutment – Joint areas
-	m	-

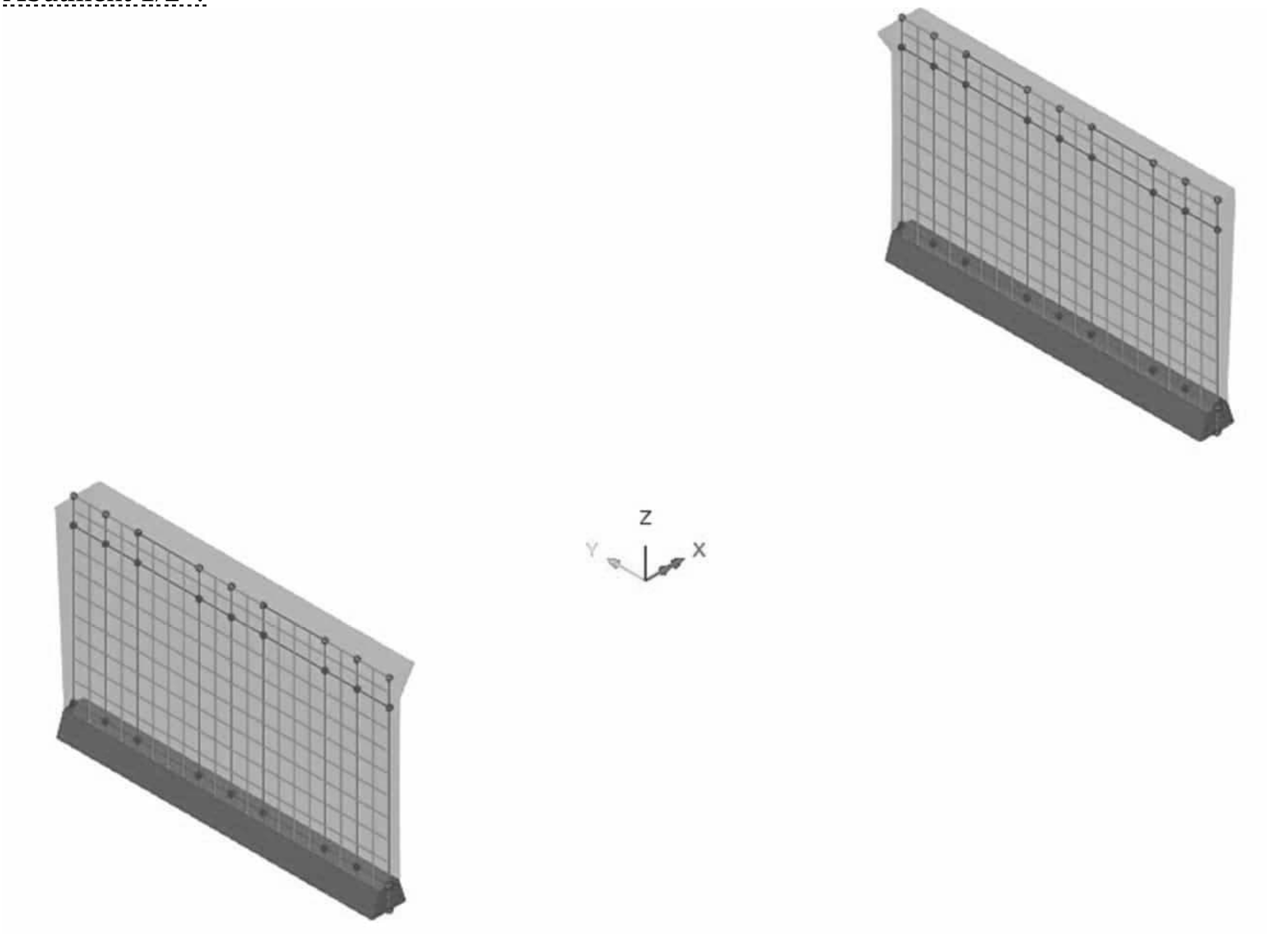
Surface function eccentricities:

Variation	Function(u,v)	Anm.
e2	-0.20·u	Abutment 1
-e2	0.20·u	Abutment 2
e3	-0.20	Abutment 1 – Joint area
-e3	0.20	Abutment 2 – Joint area
-	m	-

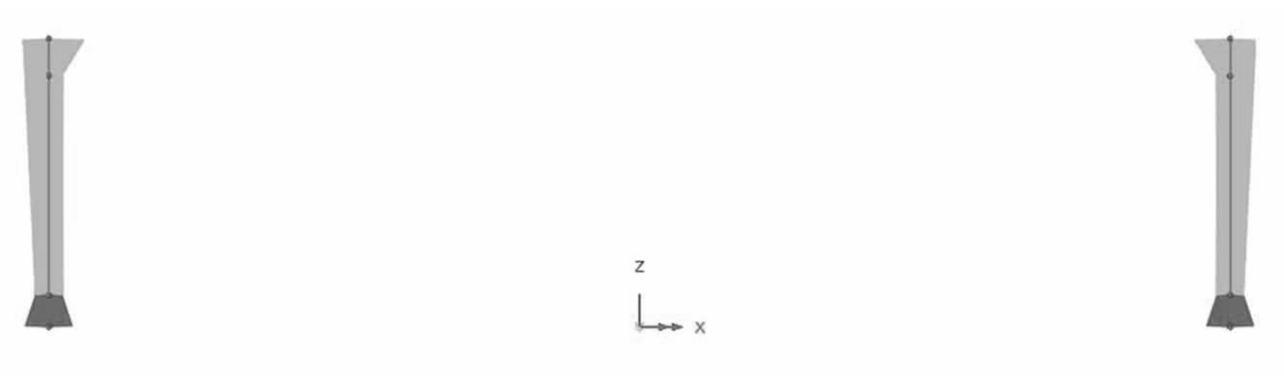
Surface geometry :

Attribute	t	ez	Anm.
t = 0.30 m	0.30	0	Superstructure deck
t1	t1	0	Slab
t21	t2	e2	Abutment 1
t31	t3	e3	Abutment 1 – Joint area
t22	t2	-e2	Abutment 2
t32	t3	-e3	Abutment 2 – Joint area
t4	1.70	0.350	Superstructure end zone
-	m	m	-

Abutment 1/2 :

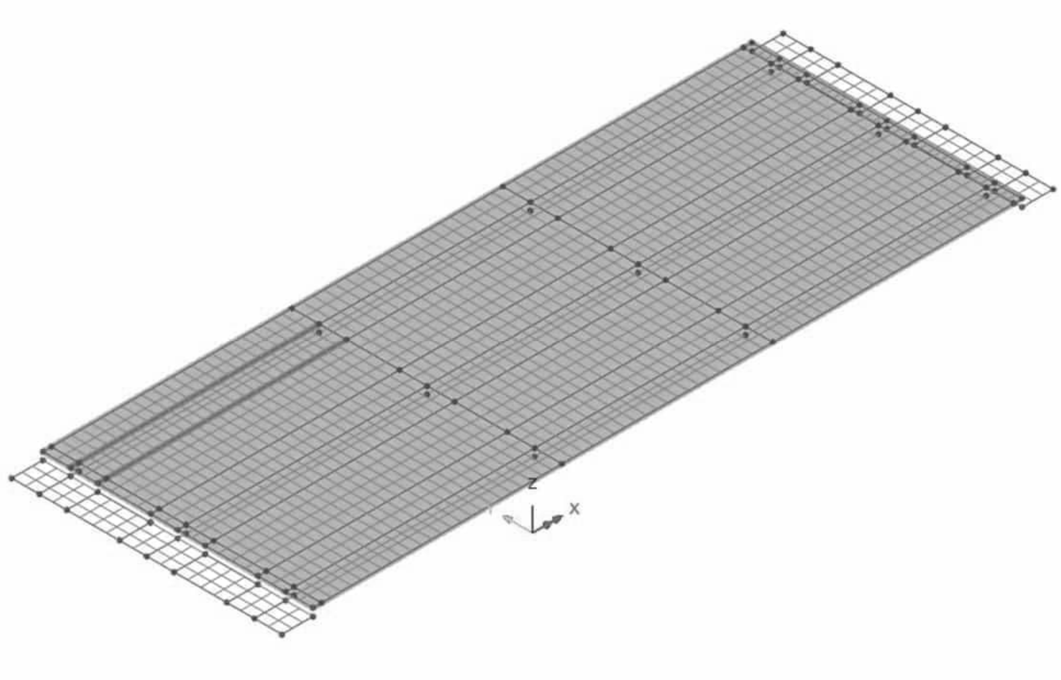


Overview

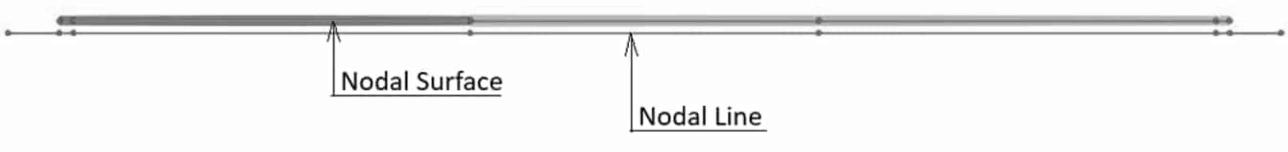


Elevation

Deck - superstructure:

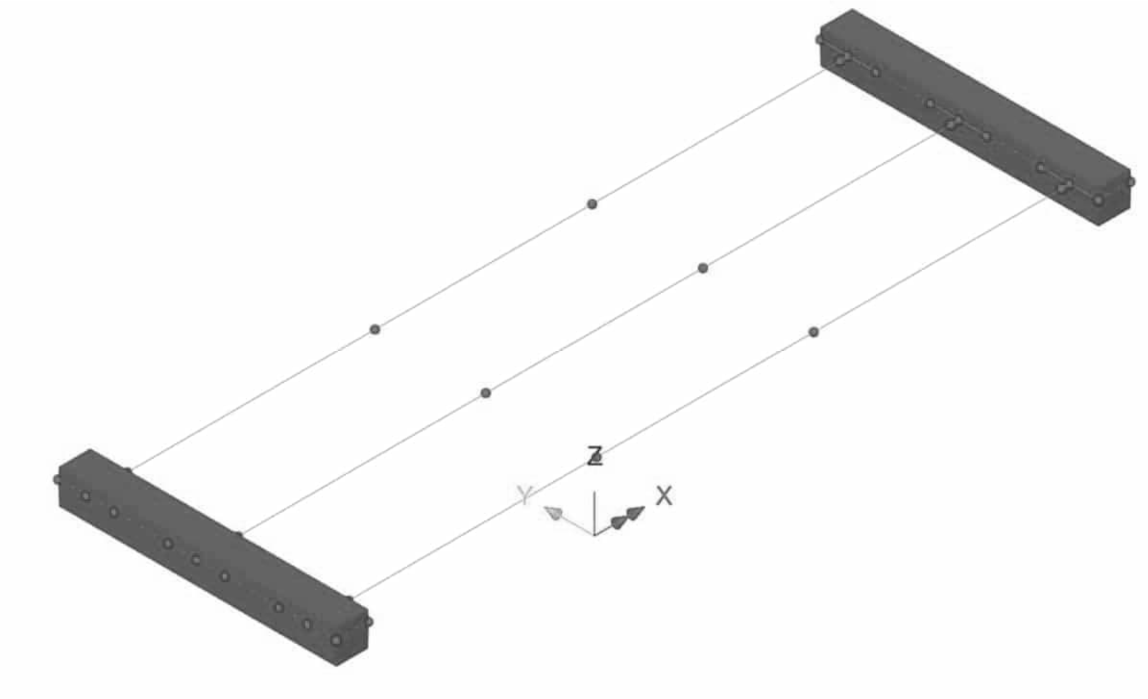


Overview

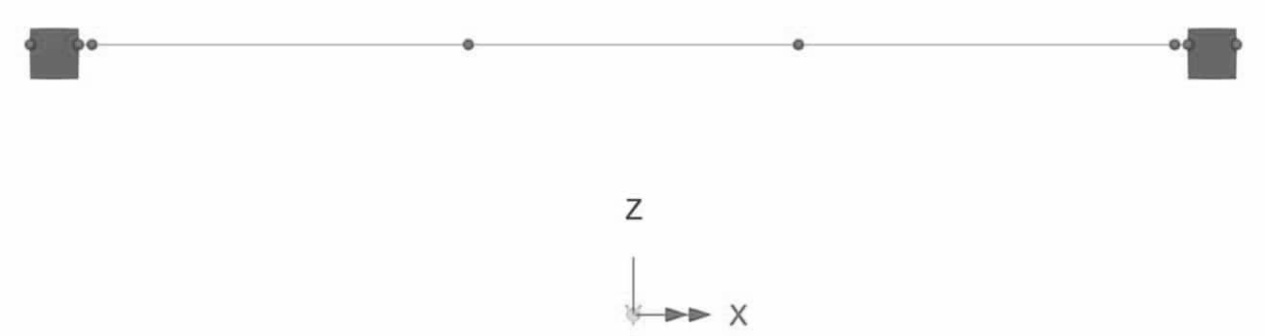


Elevation

Superstructure end zone:



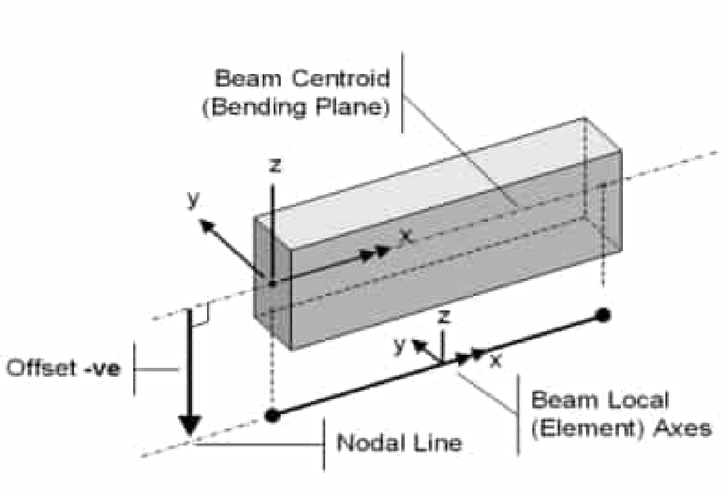
Overview



Elevation

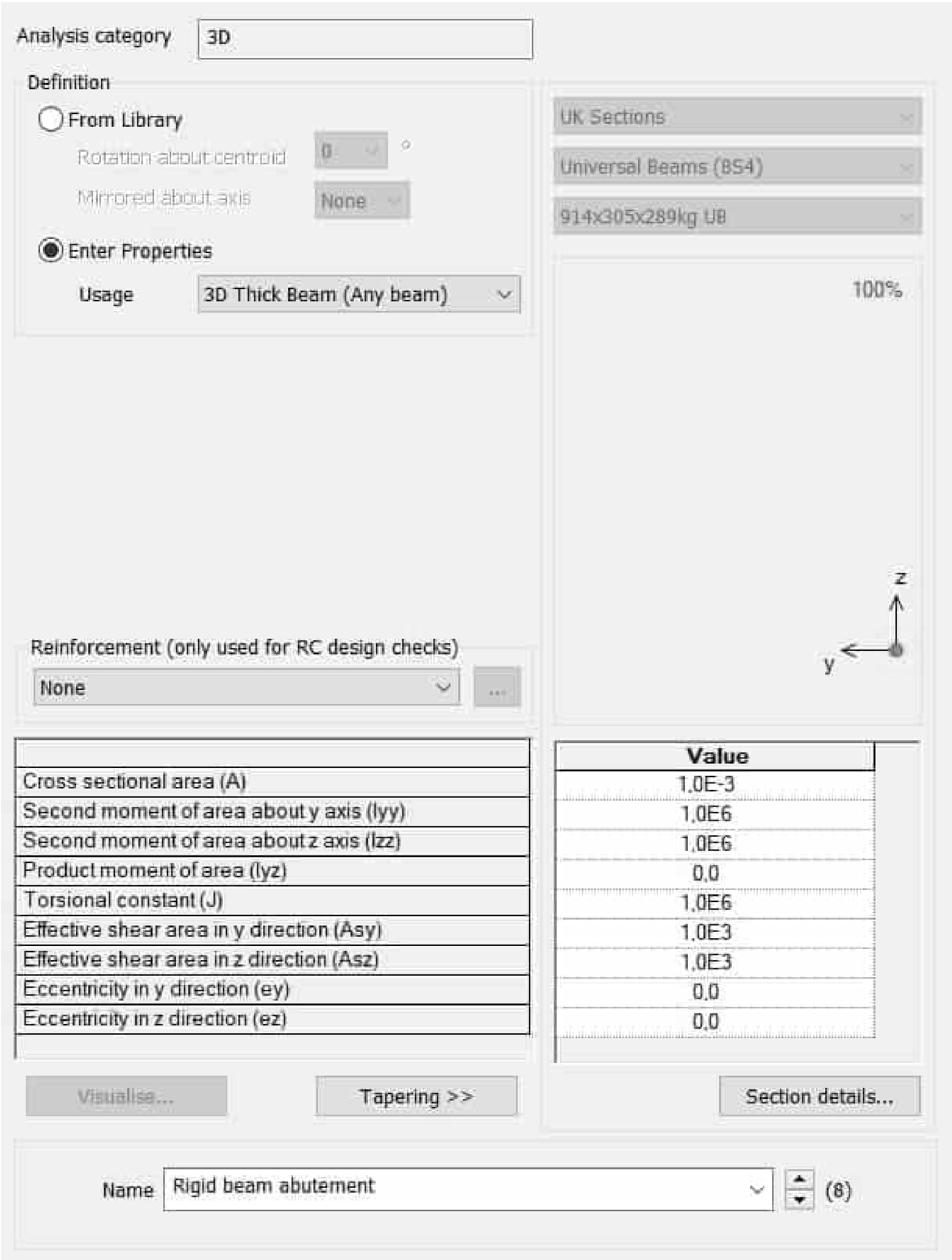
2.3.2 3D-beams (”Thick beam” / BMS3)

Principal sketch of geometry associated to 3D beam elements are seen below.



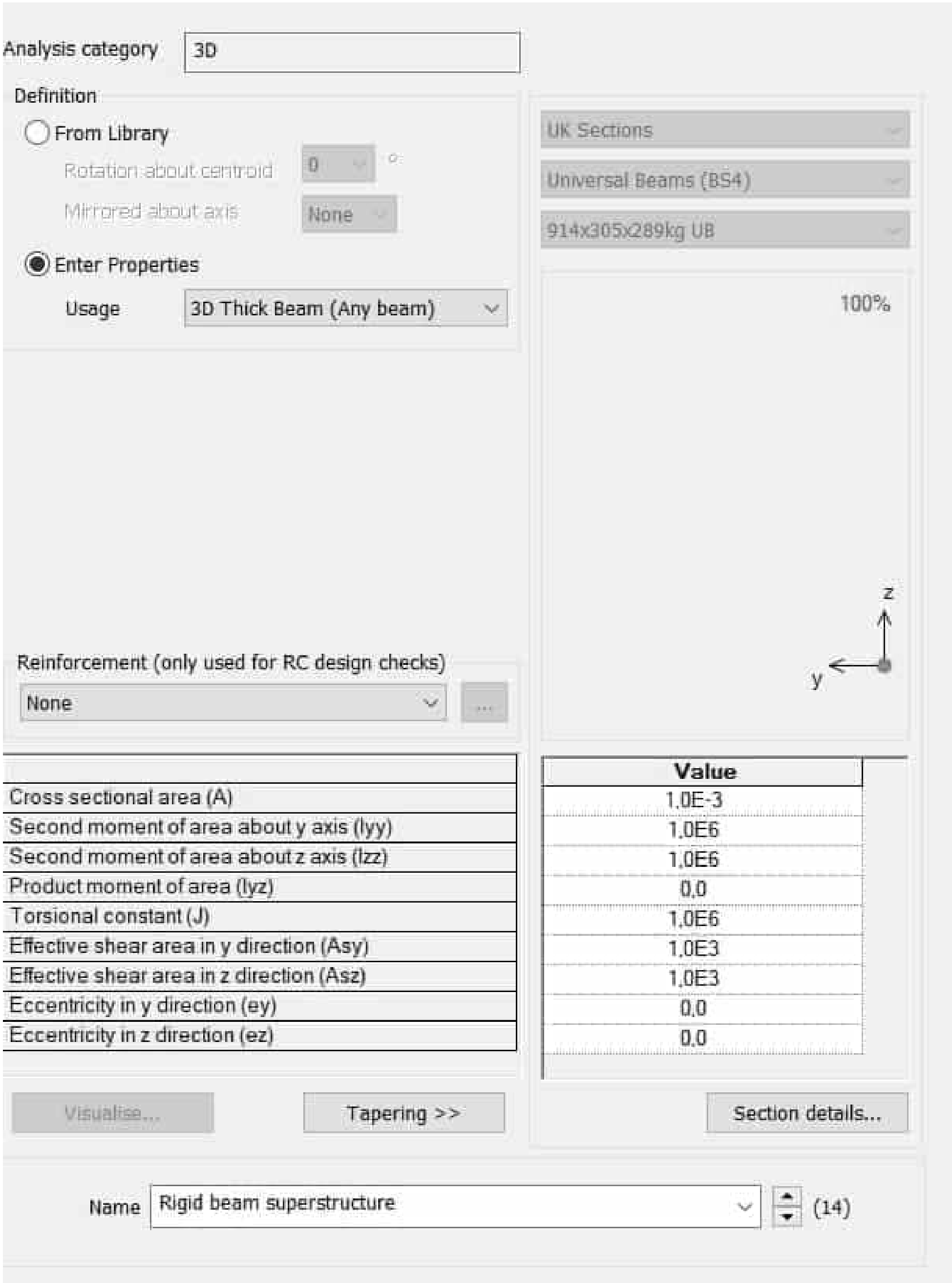
2.3.2.1 Rigid beam abutment

A fictive rigid beam is introduced at bottom of each abutment. The beam has infinite stiffness in all direction apart from axial direction. In this direction stiffness is negligible.



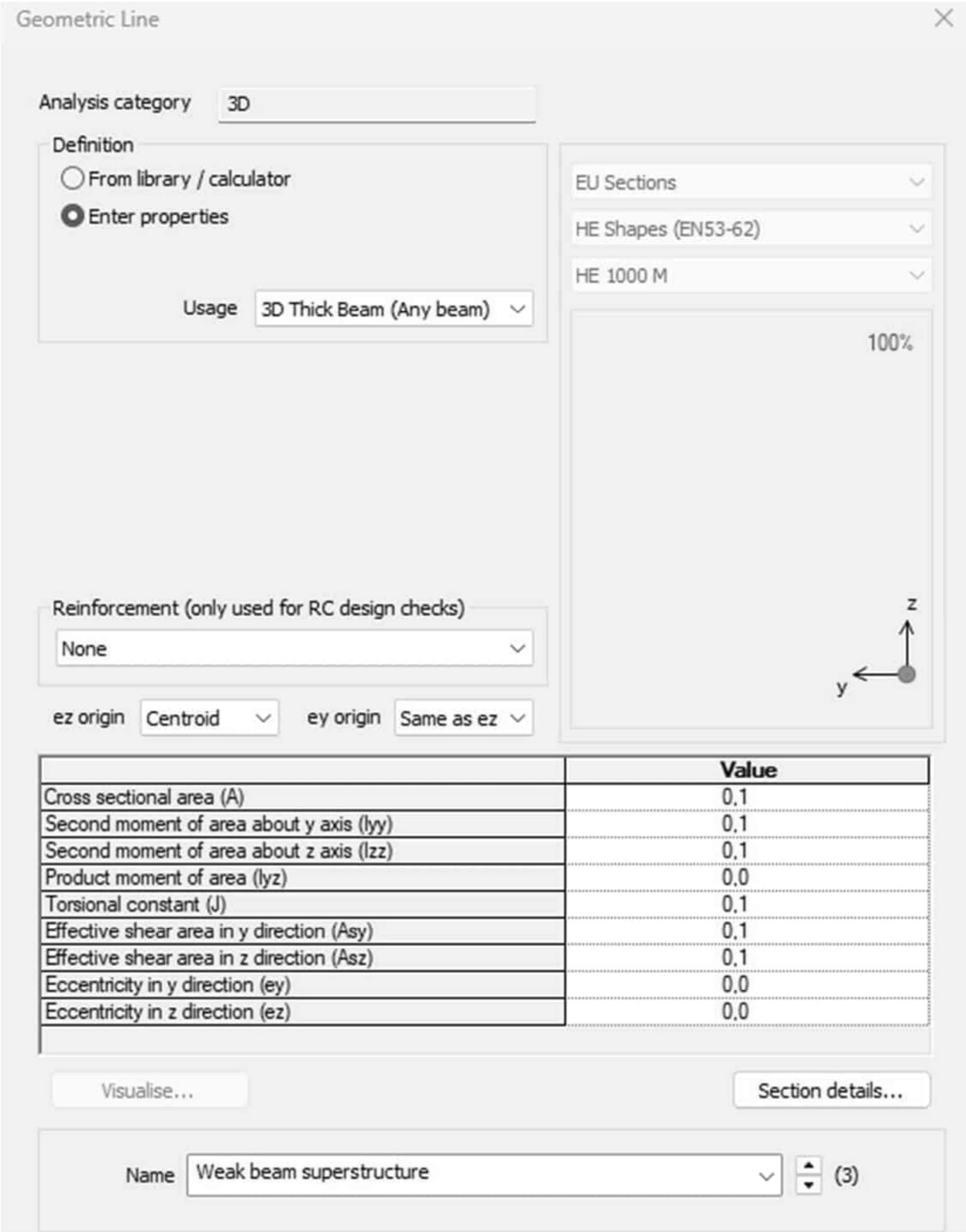
2.3.2.2 Rigid beam - superstructure

Rigid beams are introduced at top of abutment at location where nodal surface of superstructure is attached. bottom of abutment. The beam has infinite stiffness in all direction apart from axial direction. In this direction stiffness is negligible.



2.3.2.3 Weak beam - superstructure

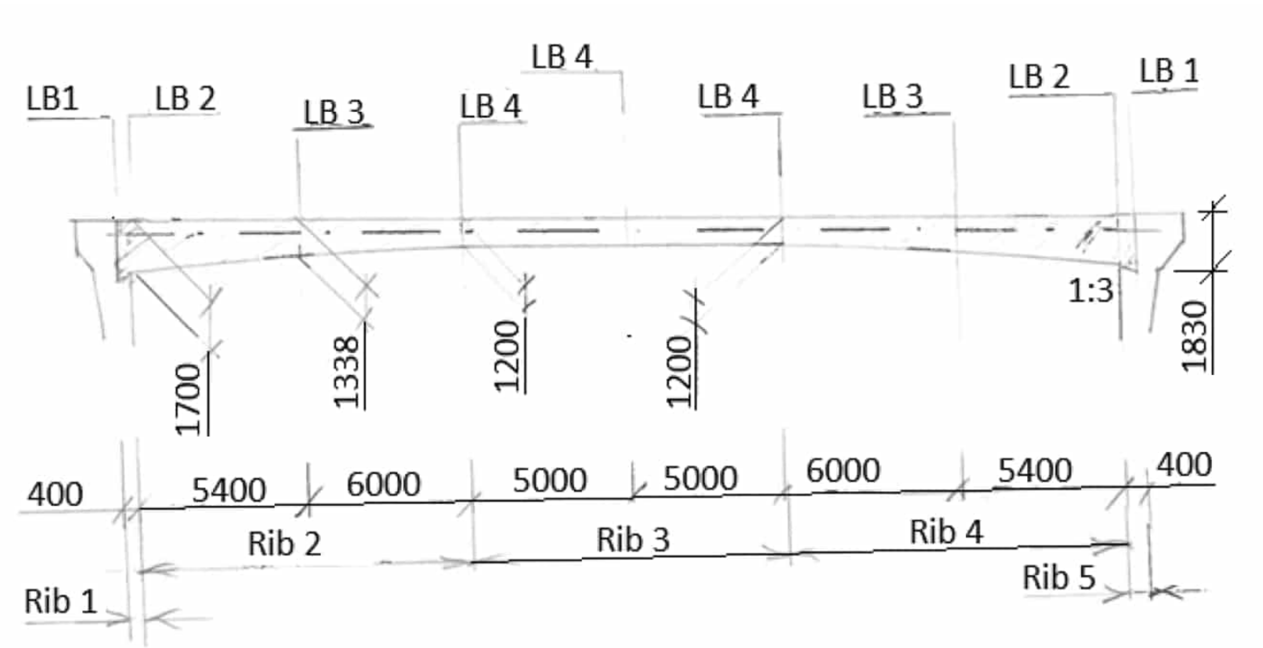
This fictious beam is only used to be able to apply tendons in end zone of superstructure. The beam has negligible stiffness in all directions.



2.3.2.4 Longitudinal beams

The 3 longitudinal beams are divided into 8 minor beams (Rib 1 – Rib 8) with varying height.

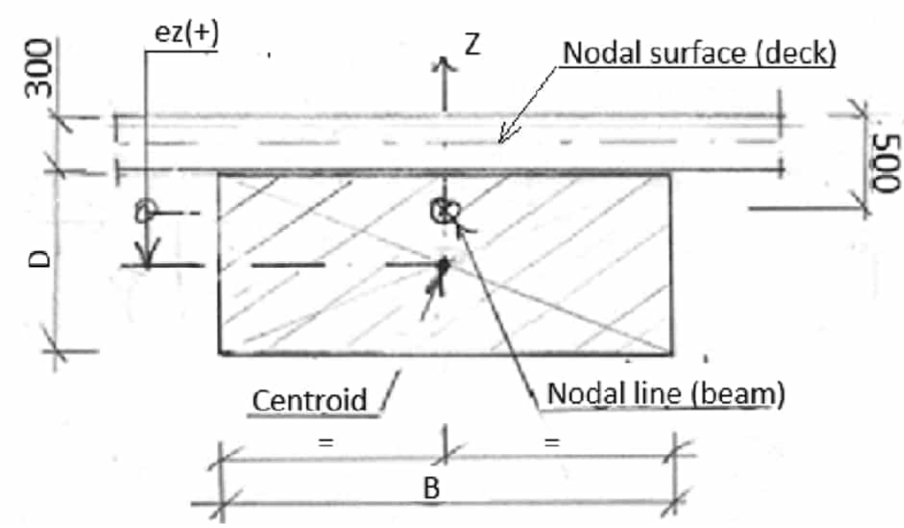
The beams are defined using 9 cross sections (LB1-LB9) as seen below.



Input rectangular cross section (LB1-LB4)

Data	LB 1	LB 2	LB 3	LB 4
H	1.830	1.700	1.338	1.200
D	1.530	1.400	1.038	0.900
B	2.600	2.600	2.600	2.600
-	m	m	m	m

Results rectangular cross section



Data	LB 1	LB 2	LB 3	LB 4	Unit
A	3.98	3.64	2.70	2.34	m^2
Iyy	0.776	0.594	0.242	0.158	m^4
Izz	2.241	2.051	1.520	1.318	m^4
Iyz	0	0	0	0	m^4
J	1.964	1.576	0.726	0.494	m^4
-	m	m	m	m	-

Multiple varying section

e_y : excentricity in y-direction

$e_z = \frac{D}{2} - 0.20m$: excentricity in z-direction

Balk	Section	Distance	ey	ez	Shape interpolation
Rib 1	LB 1	0	0	0.565	Start
	LB 2	0.40	0	0.500	Linear
Rib 2	LB 2	0	0	0.500	Start
	LB 3	5.40	0	0.319	Quadratic
	LB 4	11.40	0	0.250	Quadratic
Rib 3	LB 4	0	0	0.250	Start
	LB 4	10.00	0	0.250	Linear
Rib 4	LB 4	0	0	0.250	Start
	LB 3	6.00	0	0.319	Quadratic
	LB 2	11.40	0	0.500	Quadratic
Rib 3	LB 2	0	0	0.500	Start
	LB 1	0.40	0	0.565	Linear
-	-	m	m	m	-

2.4 MATERIAL

Material properties seen below are to be used.

Substructure C35/45 : E_{cm} = 34 GPa

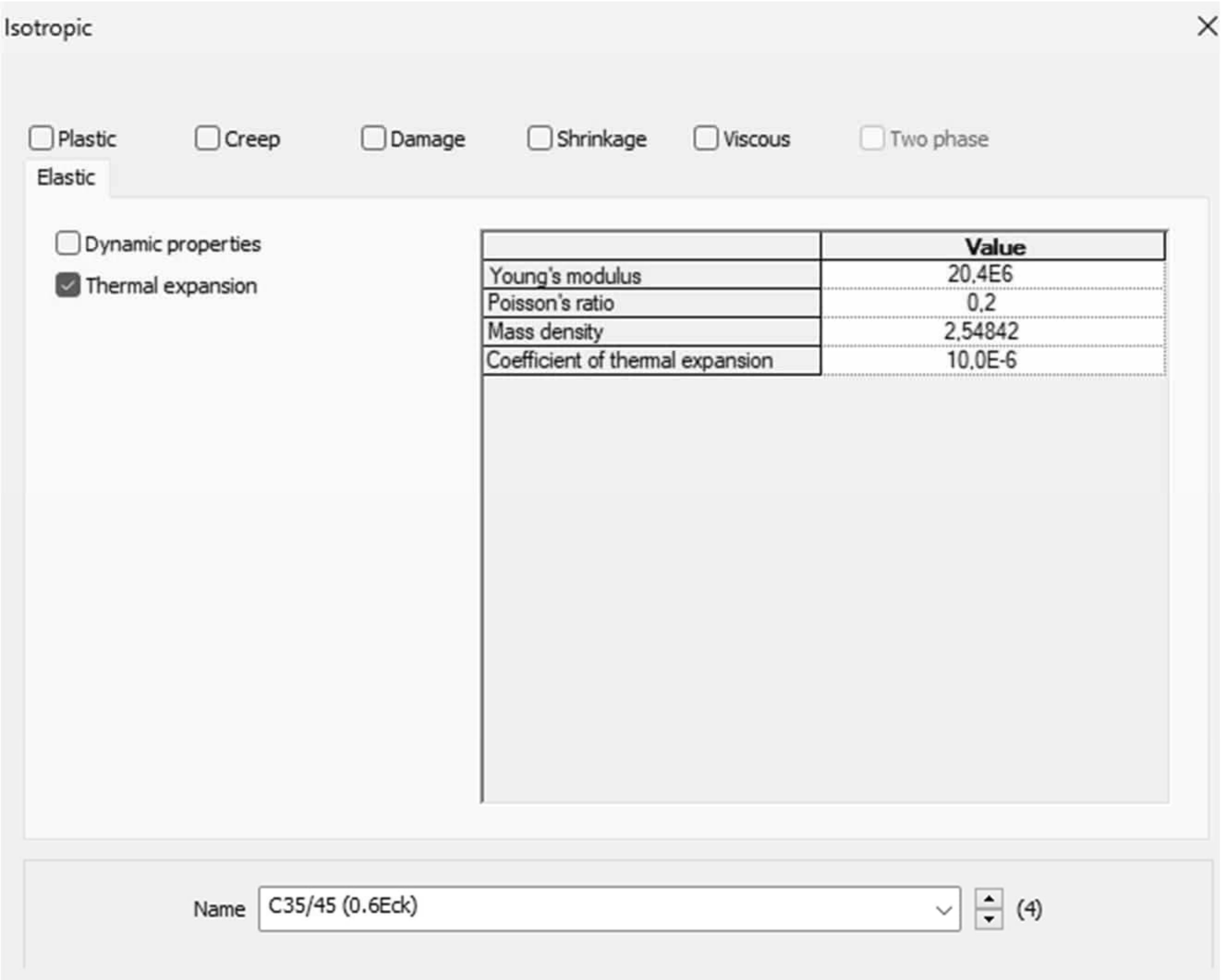
Superstructure C40/50 : E_{cm} = 35 GPa

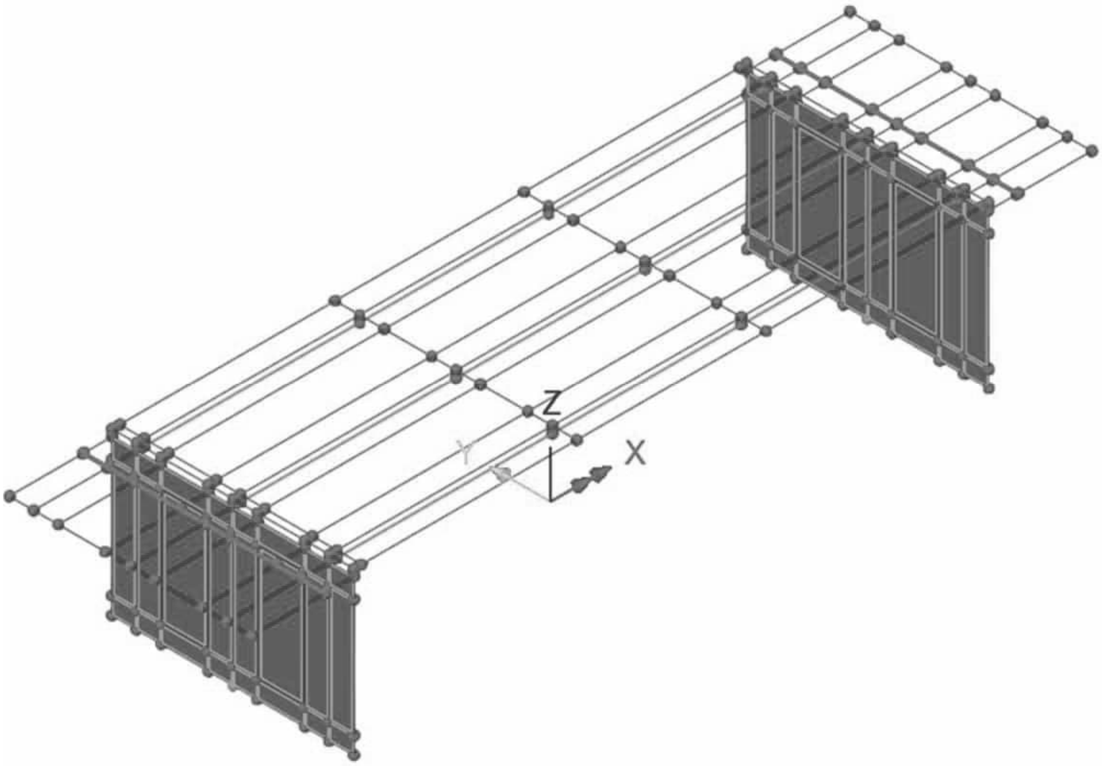
The use of function “Slice Resultant Beams/Shells” does not permit the use of orthropic material. All nodes in nodal surface and nodal line must be isotropic.

2.4.2.1 Material : Isotropic concrete C35/45 reduced (0.6E_{ck})

Applied to elements in substructure. The stiffness is reduced to 40 %.

$E = 0.6 \cdot E_{ck} = 0.6 \cdot 34 \cdot 10^3$ MPa $= 20.4 \cdot 10^3$ MPa



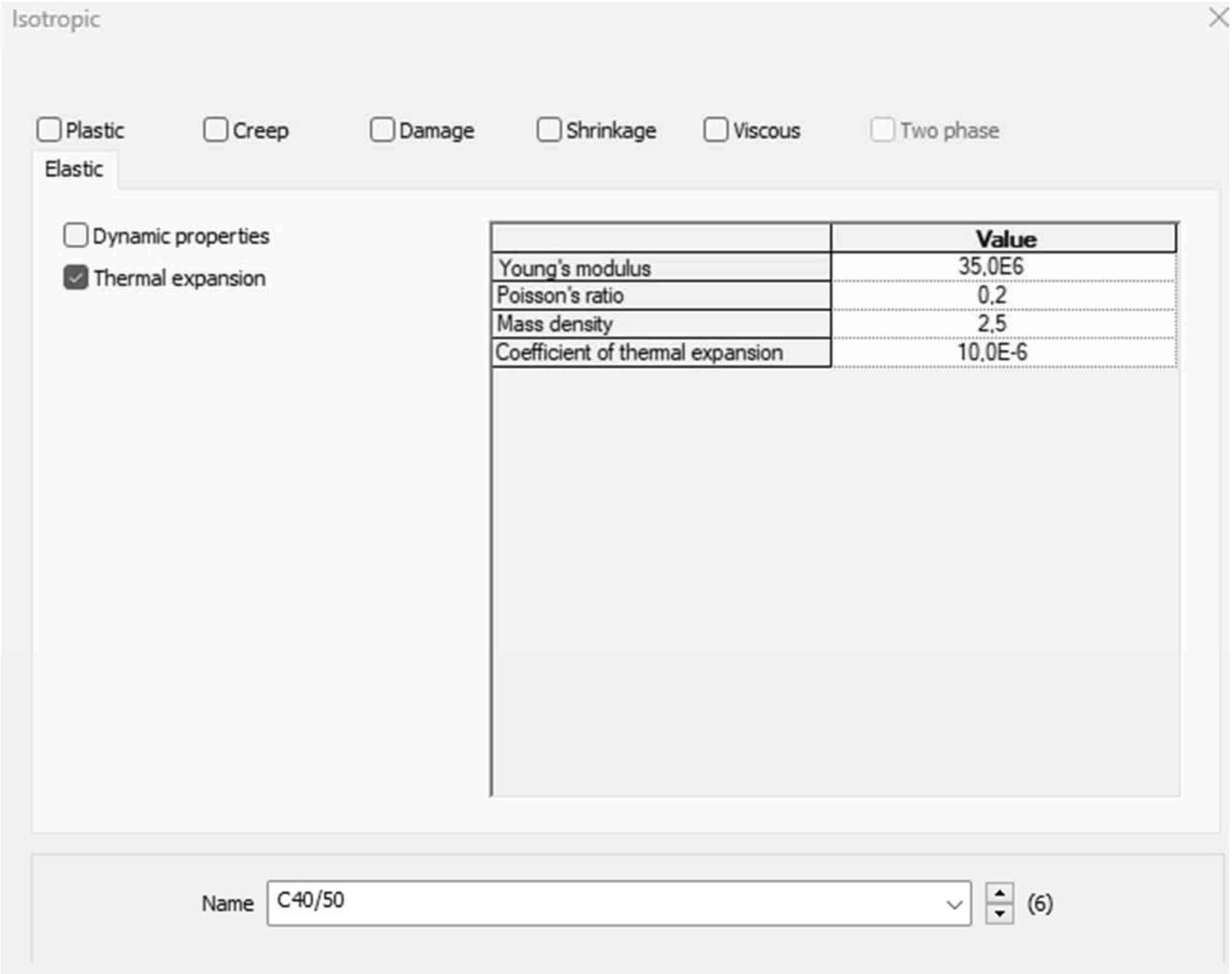


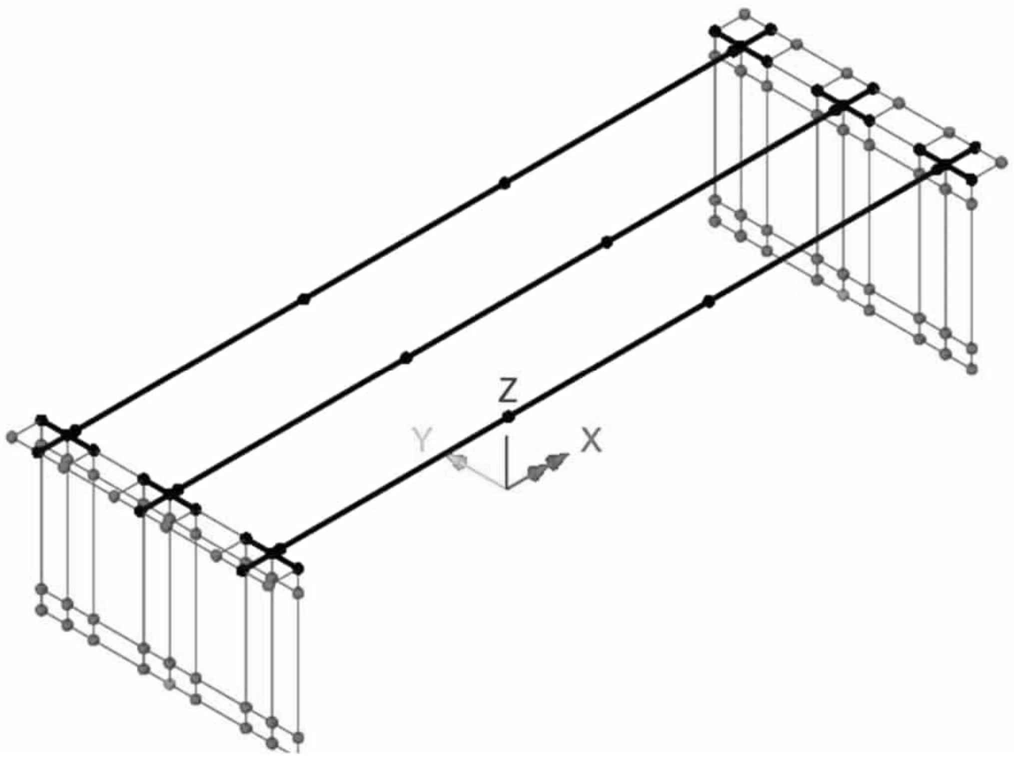
Overview 3D
Applied to abutments and rigid beams.

2.4.2.2 Material : Isotropic concrete C40/50

Applied to longitudinal beams and deck above beam.

$E = 35 \cdot 10^3$ MPa

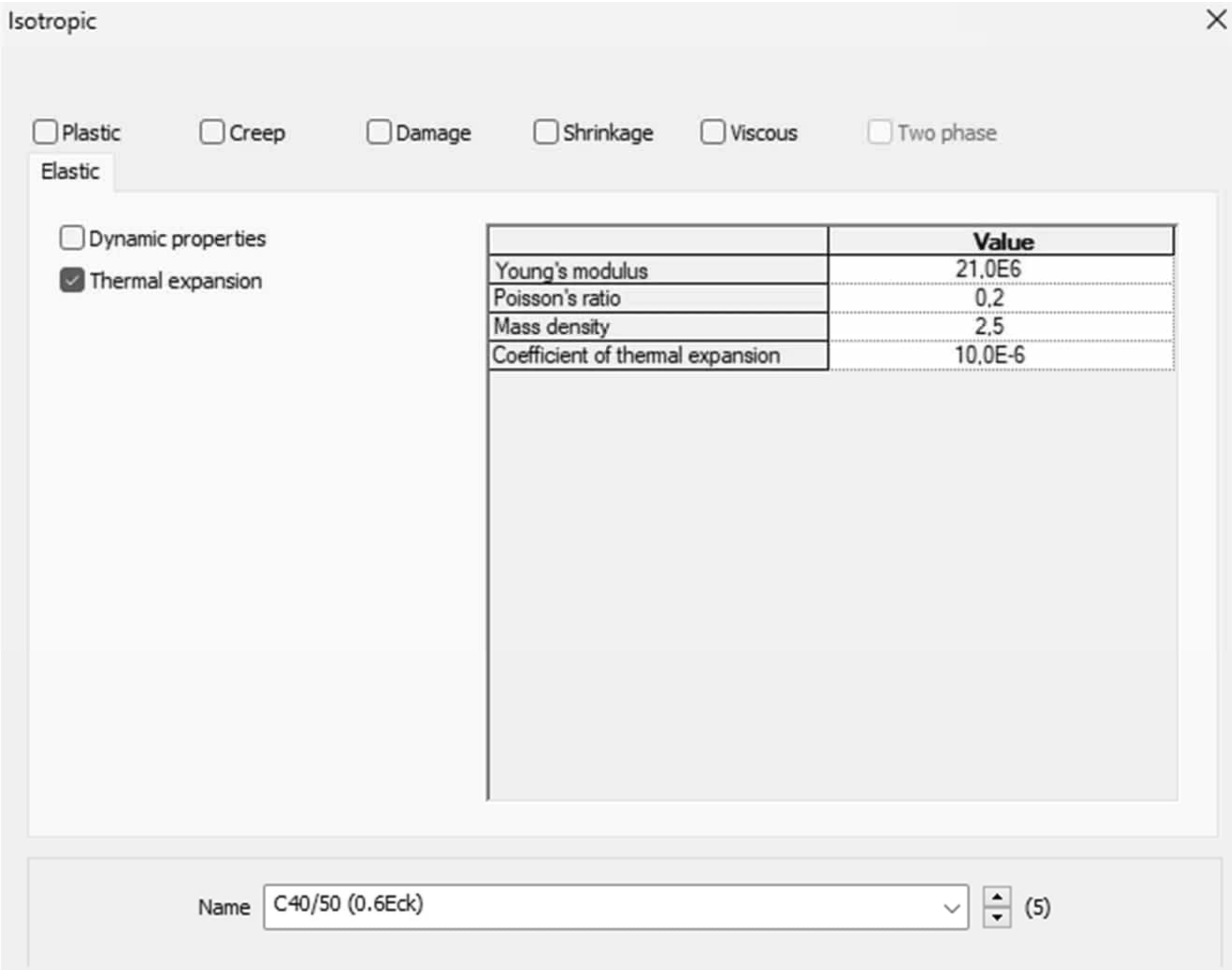


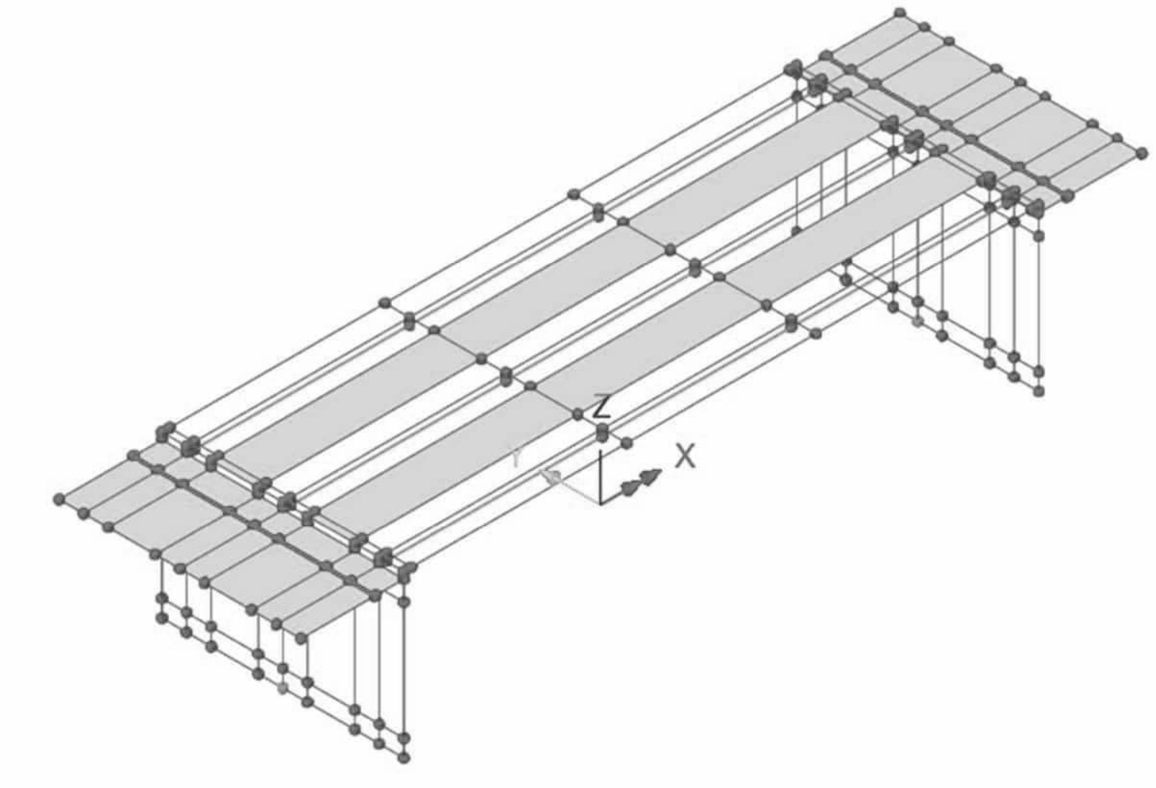


<u>Overview 3D</u>
Applied to beams in superstructure.

2.4.2.3 Material : Isotropic concrete C40/50 reduced ($0.6E_{ck}$)

$E = 0.6 \cdot E_{ck} = 0.6 \cdot 35{\cdot}10^3$ MPa $= 21.0 \cdot 10^3$ MPa



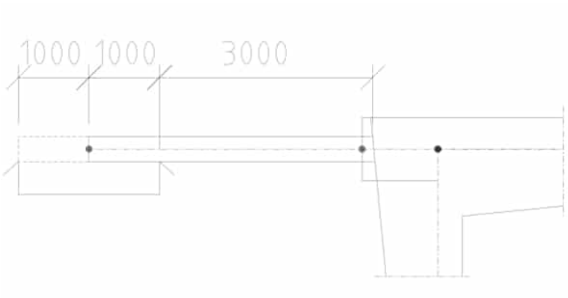


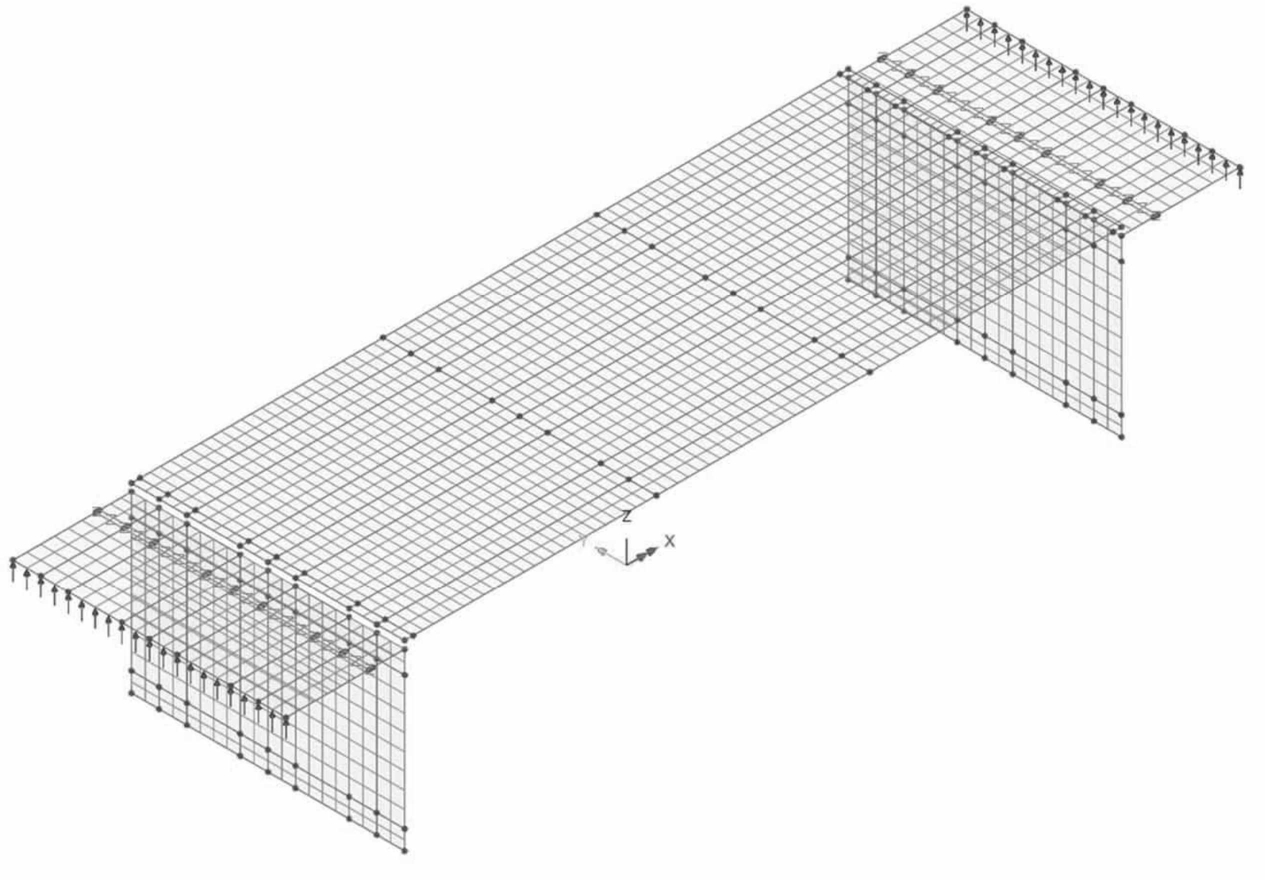
Overview 3D
Applied to deck between beams and link slab.

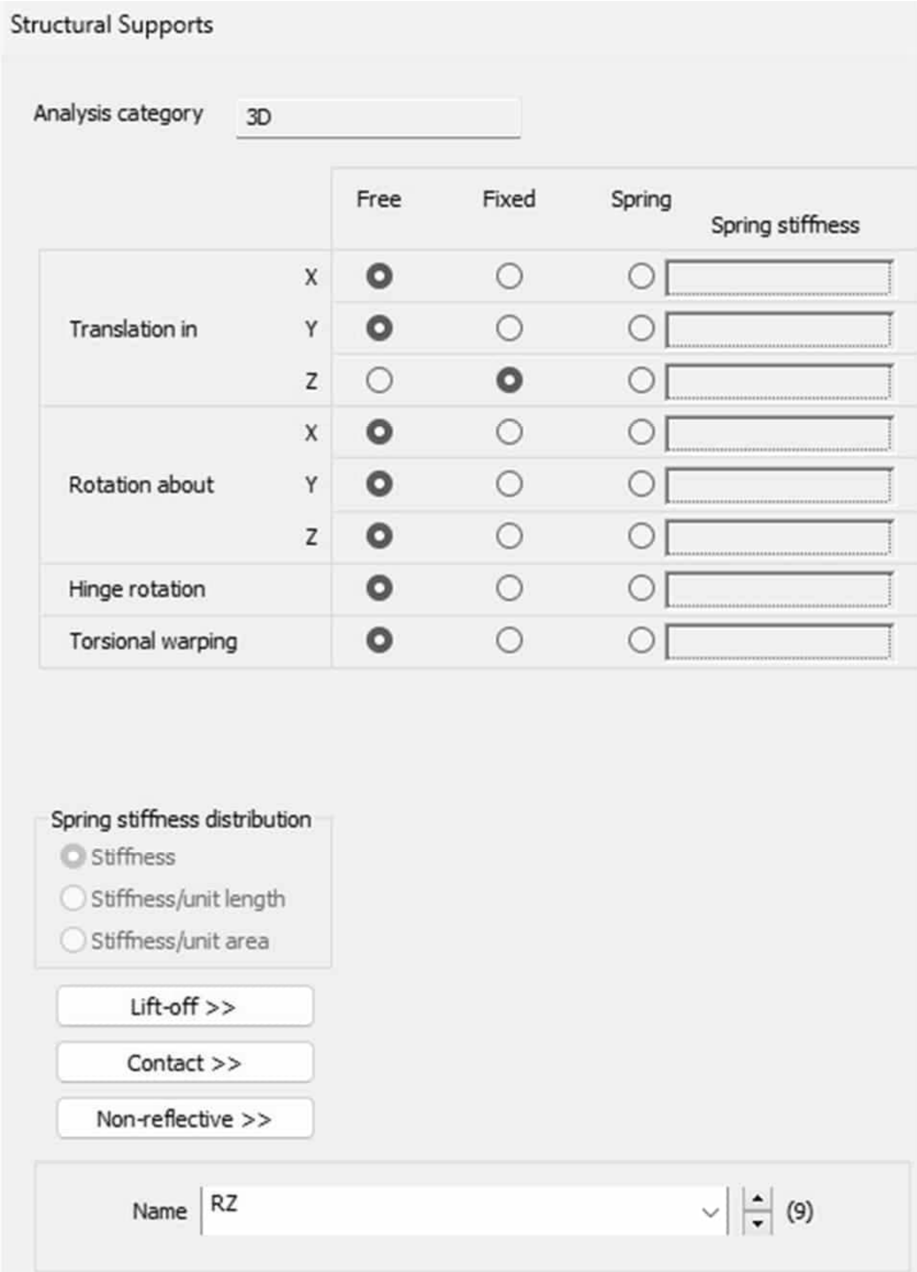
2.5 BOUNDARY CONDITIONS

2.5.1 Boundary conditions link slab

At a distance 1 m from edge of link slab att fictive line support is added in z-direction.





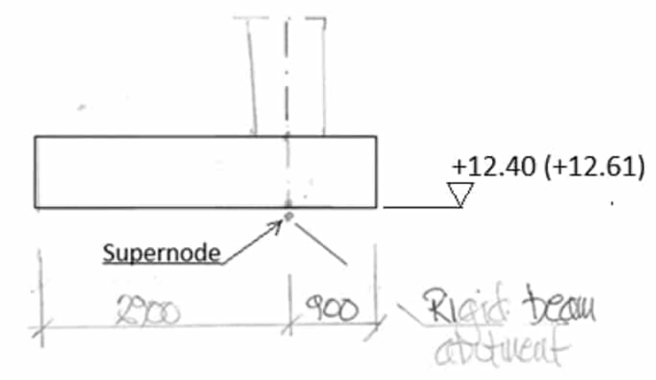


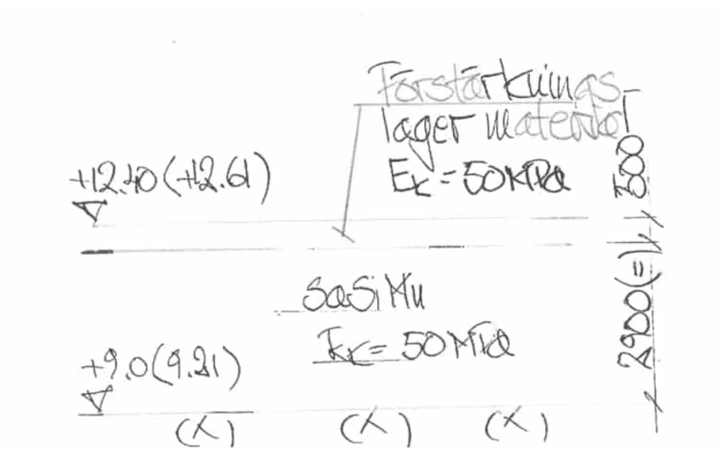
Structural Supports
Analysis category
3D
Free
Fixed
Spring
Spring stiffness
Translation in
X
Y
Z
Rotation about
X
Y
Z
Hinge rotation
Torsional warping
Spring stiffness distribution
Stiffness
Stiffness/unit length
Stiffness/unit area
Lift-off >>
Contact >>
Non-reflective >>
Name
RZ
(9)

2.5.2 Boundary conditions abutments

Boundary conditions for each support is modelled using super nodes.

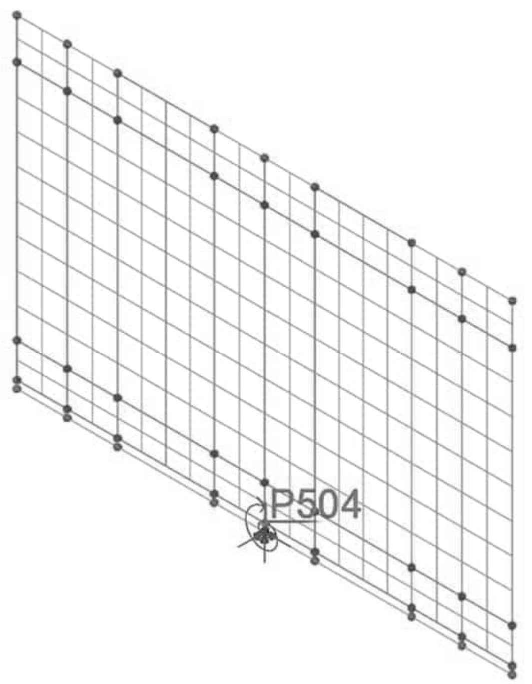
The super nodes are location at centre of rigid beam abutment, see sketches below.



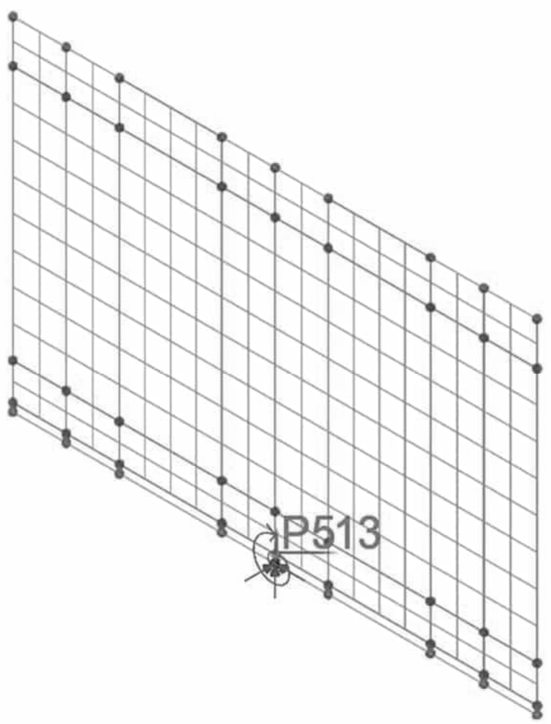


Geotechnical section at support 1
() marks support 2

Supernode – point foundation 1:



Supernode – point foundation 2:



Rotational stiffness of foundation is determined using software PROG G3.005.

Since the distance to solid ground (H) is less than twice the width of the bottom plate (2B), the method according to TRVINFRA-00227 appendix B5.1 is not applicable. Instead, a derived method for cases where H < 2B is used.

Stiffness transversal direction (Rotation X-X) :

$K_{Rx} = 10955 \cdot 10^3 \frac{kNm}{rad}$: page A2:46

Stiffness longitudinal direction (Rotation Y-Y) :

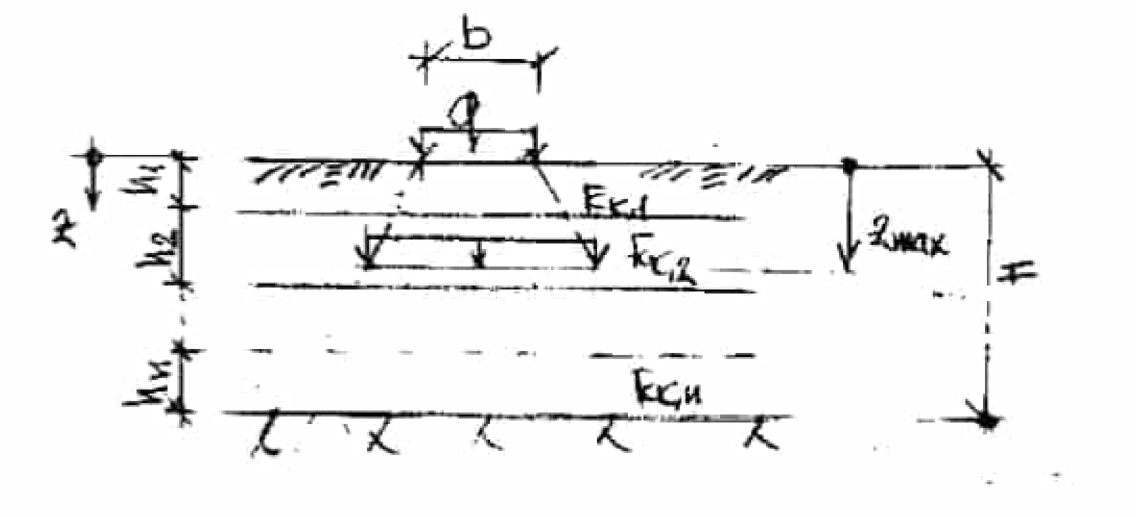
$K_{Ry} = 894 \cdot 10^3 \frac{kNm}{rad}$: page A2:46

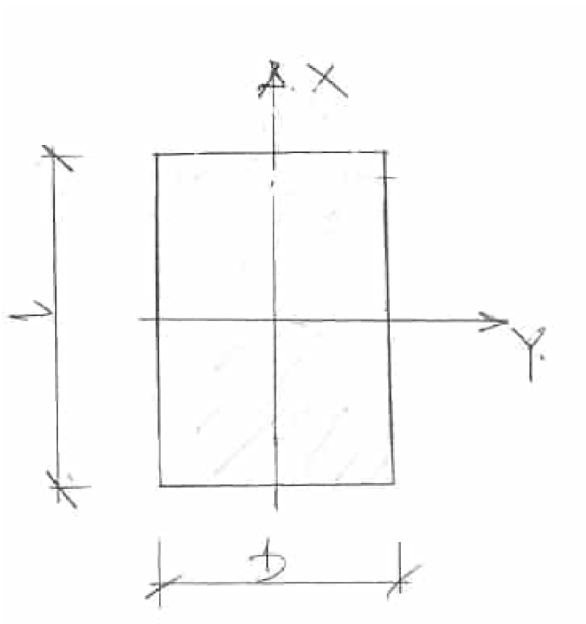
Object : Support 1/2

PRINCIPLE SKETCH

Geometry and foundation

The calculation of the equivalent stiffness in the foundation has been carried out according to TRVINFRA-00227, Appendix 4 (method 1). The equivalent E-modulus assumes a load spread of 2:1. The determination was made for a fictitious load corresponding to q (= 100 kPa).

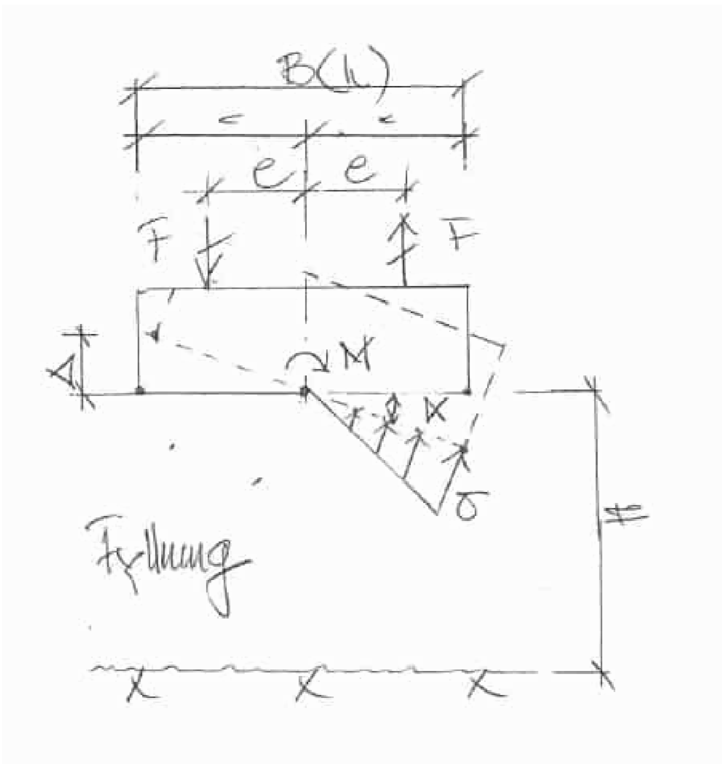




THEORY

When the distance to the rock is less than 2B, the formula below is applied, which also appears in BH page 594 (section 6.4:22 Calculation model).

When distance to rock is greater than 2B use TRVINFRA-00227, Appendix 5.



$$\Delta = \alpha \cdot \frac{B}{2}; \qquad \varepsilon = \frac{\Delta}{H} = \frac{\alpha \cdot \frac{B}{2}}{H}$$

$$\sigma = \varepsilon \cdot E'_k = \frac{E'_k \cdot \alpha \cdot B}{2 \cdot H}$$

$$F = \sigma \cdot \frac{B}{2} \cdot \frac{1}{2} \cdot L = \frac{E'_k \cdot \alpha \cdot B}{2 \cdot H} \cdot \frac{B \cdot L}{4} = \frac{E'_k \cdot \alpha \cdot B^2 \cdot L}{8 \cdot H}$$

$$M = F \cdot 2e \quad ; \qquad e = \frac{B}{3};$$

$$M = F \cdot \frac{2 \cdot B}{3} = \alpha \cdot \frac{L \cdot B^3 \cdot E'_k}{12 \cdot H}$$

$$\Rightarrow \frac{\alpha}{M} = \frac{12 \cdot H}{L \cdot B^3 \cdot E'_k}$$

INPUT

Geometry

Bottom slab : $b := 3.80\ m$ $l := 13.30 \cdot m$

Soil material

Number of layers (min. 2 layers): $n := 2$

Layer	E_k	h
1	50	0,50
2	50	2,90
-	MPa	m

CALCULATIONS

Total layer thickness

$$H := \sum_{i=1}^{n} h_i \qquad H = 3.4\ m$$

Total settlement thickness

$$z_{max} := min(2 \cdot b, H) \qquad z_{max} = 3.4\ m$$

Levels for each layer

$$z_s := \left\| \begin{array}{l} z_1 \leftarrow 1 \cdot mm \\ \text{for } i \in 1..n \\ \quad \left\| \begin{array}{l} z_{2 \cdot i} \leftarrow z_{2 \cdot i - 1} + h_i - 1 \cdot mm \\ z_{2 \cdot i + 1} \leftarrow z_{2 \cdot i} + 1 \cdot mm \end{array} \right. \\ z_1 \leftarrow 0 \cdot mm \end{array} \right.$$

$$z_s^{\mathrm{T}} = [0\ \ 0.5\ \ 0.501\ \ 3.4\ \ 3.401]\ m$$

Function - settlement modulus

$$E_{sk} := \left\| \begin{array}{l} E_1 \leftarrow E_{k_1} \\ \text{for } i \in 1..n-1 \\ \quad \left\| \begin{array}{l} E_{2 \cdot i} \leftarrow E_{k_i} \\ E_{2 \cdot i + 1} \leftarrow E_{k_{i+1}} \end{array} \right. \\ E_{2 \cdot n} \leftarrow E_{k_n} \\ E_{2 \cdot n + 1} \leftarrow 1000 \cdot MPa \end{array} \right.$$

$$E_{sk}^{\mathrm{T}} = [50\ \ 50\ \ 50\ \ 50\ \ 1000]\ MPa$$

$$E_{kar}(z) := \text{linterp}(z_s, E_{sk}, z)$$

Stress according to method 2:1

$q := 100 \cdot kPa$

$$\Delta\sigma_v(z) := q \cdot \frac{b \cdot l}{(b+z) \cdot (l+z)}$$

Characteristic settlement

$$s_k := \int_{0 \cdot m}^{H} \frac{\Delta\sigma_v(z)}{E_{kar}(z)} \, dz \qquad s_k = 4.4 \; mm$$

Equivalent settlement modulus

$$E'_k := \frac{\int_{0 \cdot m}^{z_{max}} \Delta\sigma_v(z) \, dz}{s_k} \qquad E'_k = 50 \; MPa$$

Function - stiffness when H < 2B
(See derivation section THEORY)

$$k_{\theta k}(B, L) := \frac{L \cdot B^3 \cdot E'_k}{12 \cdot H}$$

RESULTS

Results when H < 2B

Rotation about bottom slab short direction (x-x direction):

$$k_{\theta k}(b, l) = 894360 \, \frac{kNm}{rad}$$

$$C_{\phi.1} := \frac{1}{k_{\theta k}(b, l)}$$

$$10^9 \cdot C_{\phi.1} = 1118 \, \frac{rad}{kNm}$$

Rotation about bottom slab long direction (y-y direction):

$$k_{\theta k}(l, b) = 10955908 \, \frac{kNm}{rad}$$

$$C_{\eta.1} := \frac{1}{k_{\theta k}(l, b)}$$

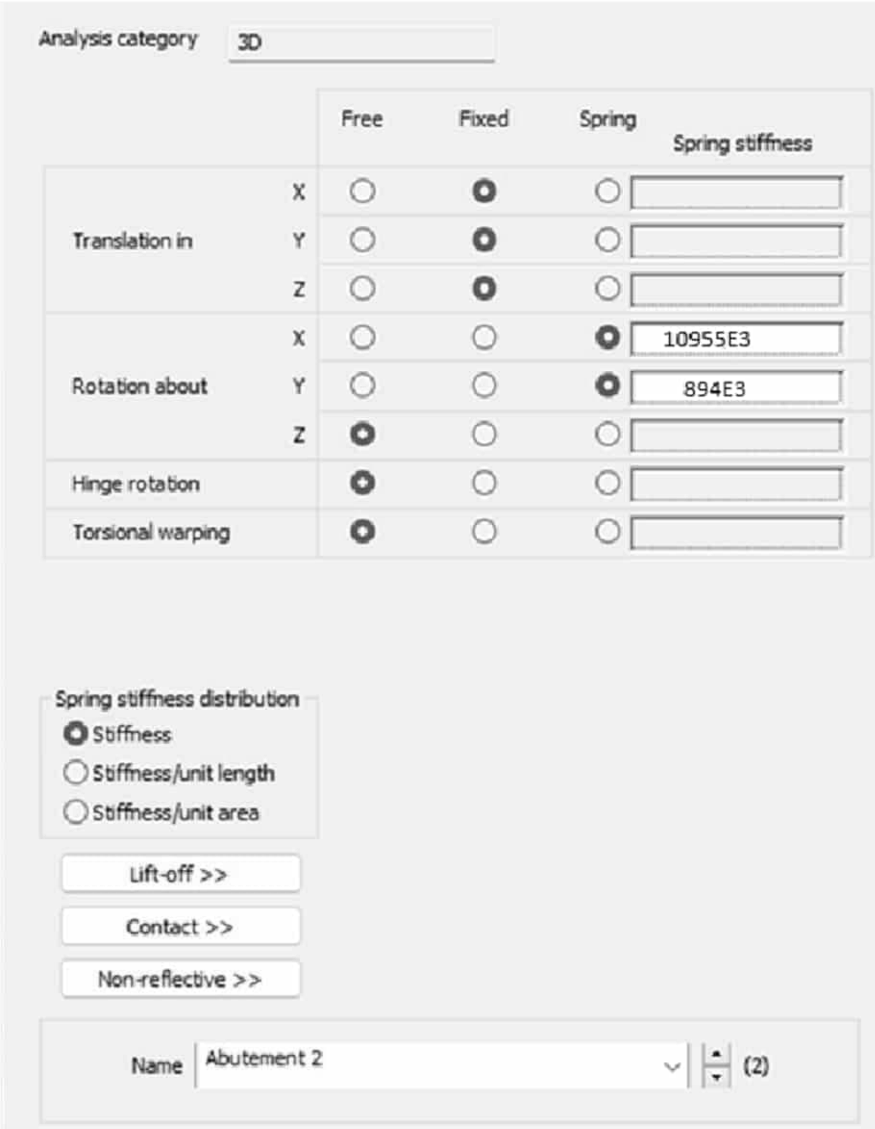
$$10^9 \cdot C_{\eta.1} = 91 \, \frac{rad}{kNm}$$

2.5.1 Boundary support 1

Supernode at support 1 is modelled as seen below. This super node is termed point P429 in model of system analysis.

2.5.2 Boundary support 2

Supernode at support 2 is modelled as seen below. This super node is termed point P430 in model of system analysis.



2.6 MESH

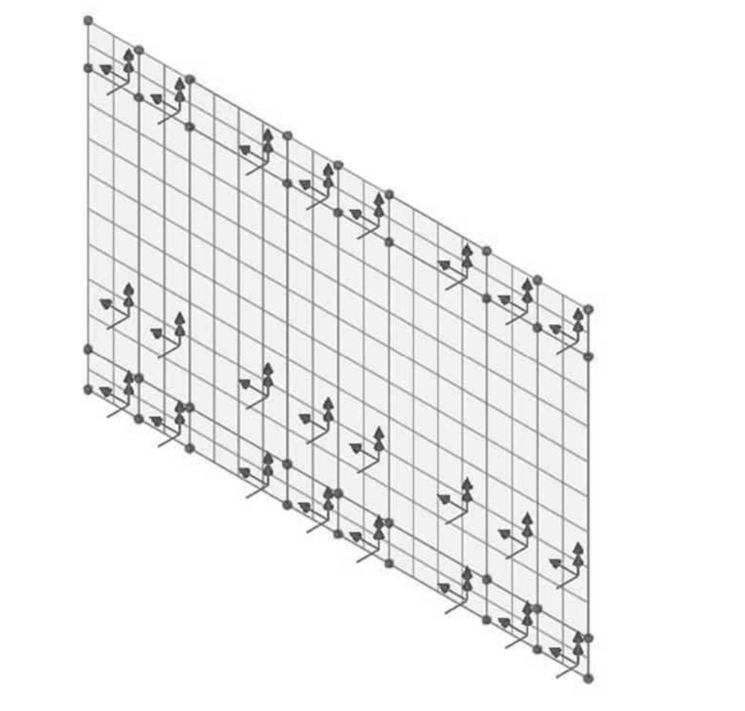
2.6.1 Shell element (QTS4): linear

Bridge deck is model using shell elements.

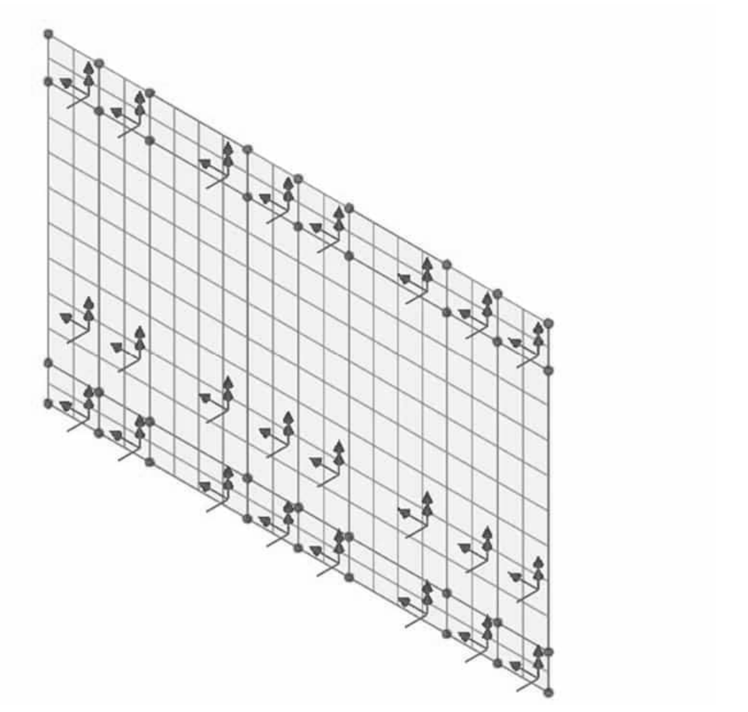
Shell elements are modelled with various subdivisions as seen below.

Type	x-divisions	y-divisions
Element 20 x 2	20	2
Element 20 x 4	20	4
Element 24 x 2	24	2
Element 24 x 4	24	4
Element 1 x 2	1	2
Element 1 x 4	1	4
Element 3 x 4	3	4
Element 3 x 2	3	2
Element 6 x 2	6	2
Element 6 x 4	6	4
Element 8 x 2	8	2
Element 8 x 4	8	4
Element 2 x 2	2	2
Element 2 x 4	2	4

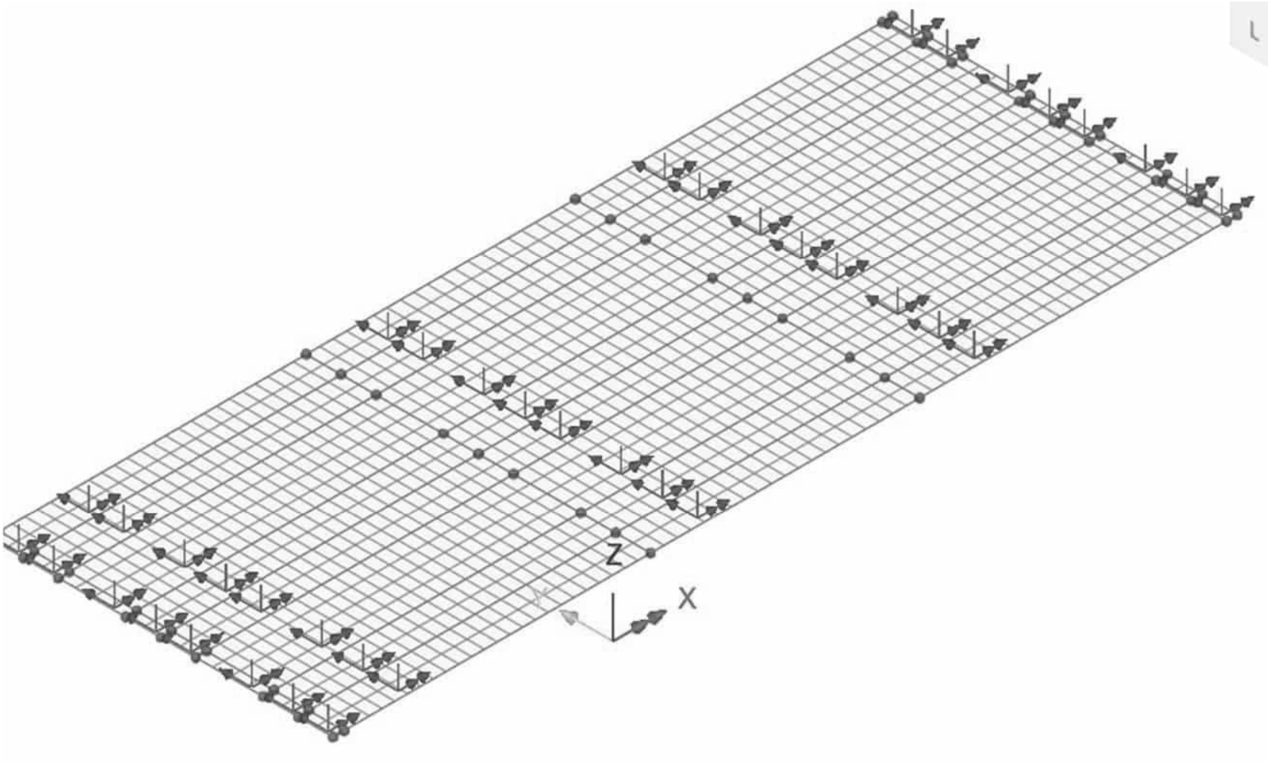
Abutment 1 :



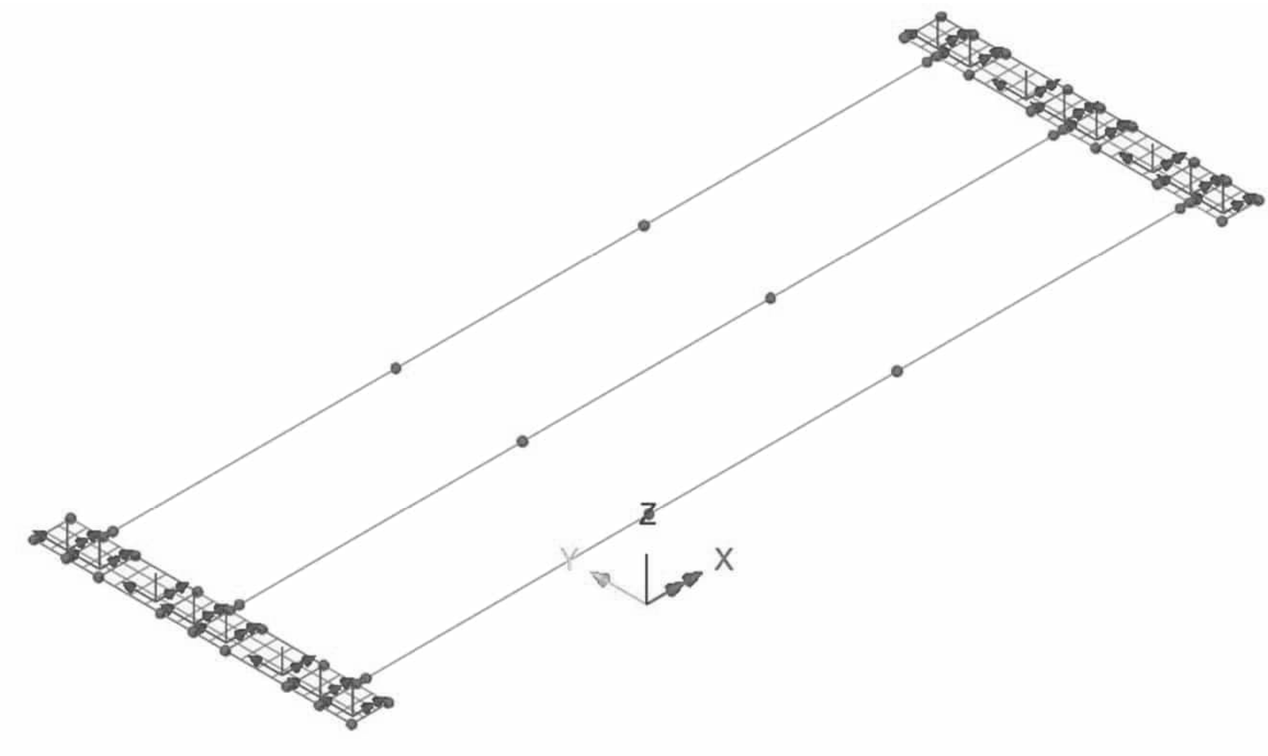
Abutment 2 :



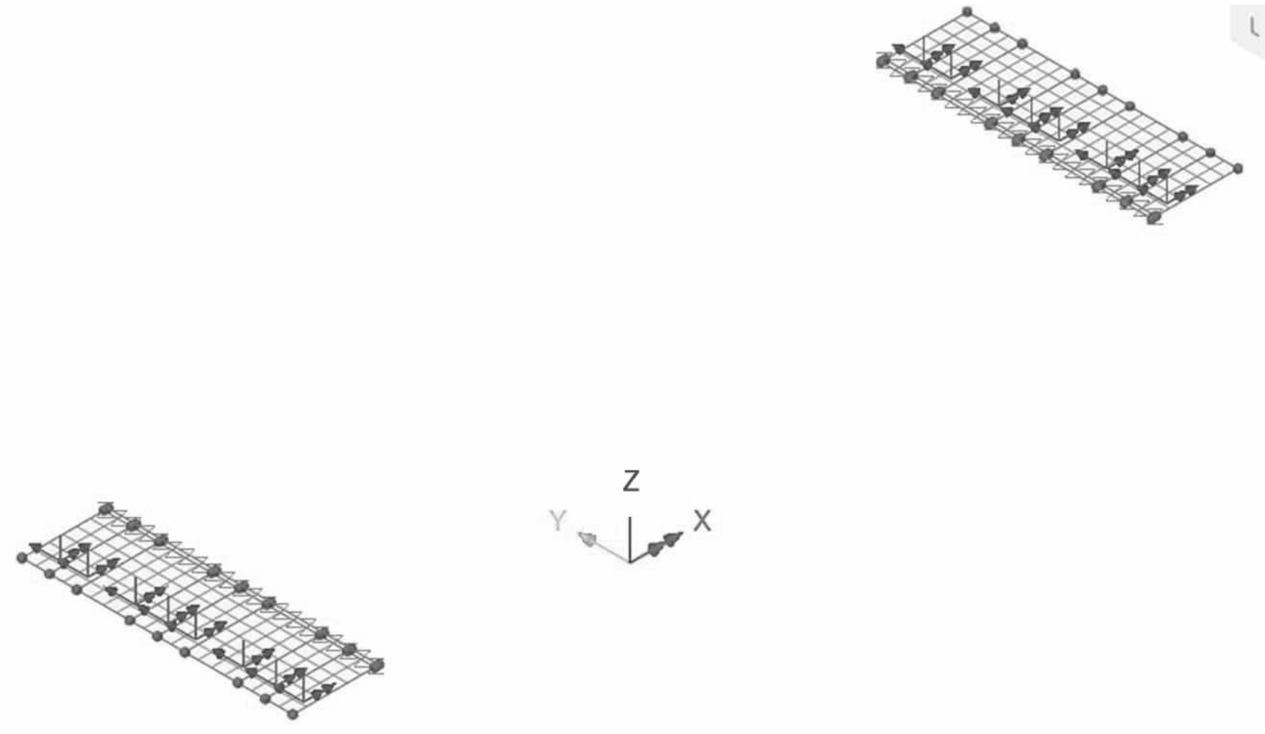
Deck - superstructure:



Beams - superstructure:



Link slabs - superstructure:



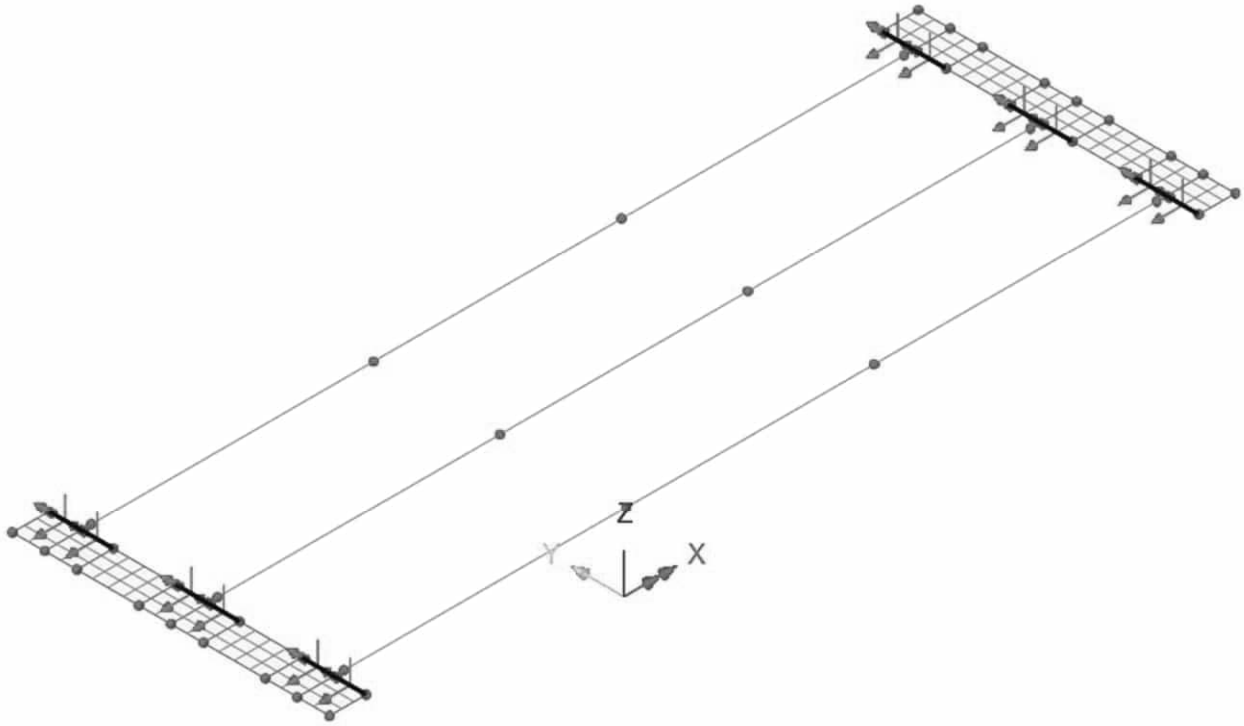
2.6.2 Beam element (BMI21) : linear

Longititudinal beams in superstructure are modelled using beam elements.

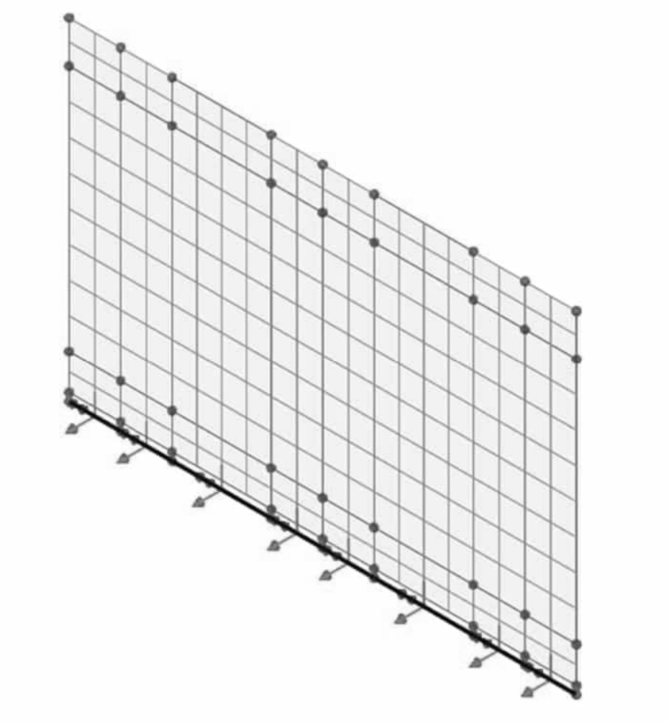
Beams elements are modelled with various subdivisions as seen below.

Typ	Divisions	End release: Start	End release: End
Element 1	1	None	None
Element 20	20	None	None
Element 24	24	None	None
Element 2	2	None	None
Element 4	4	None	None

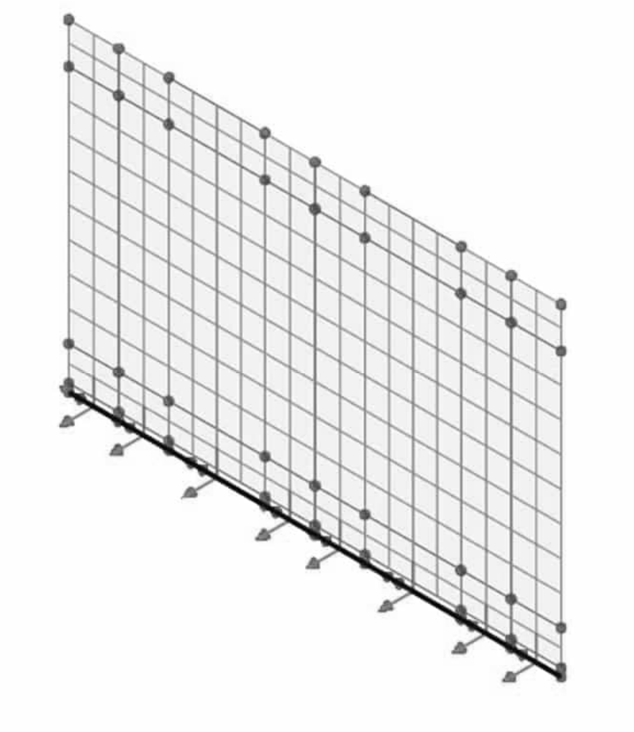
Rigid beam - superstructure :



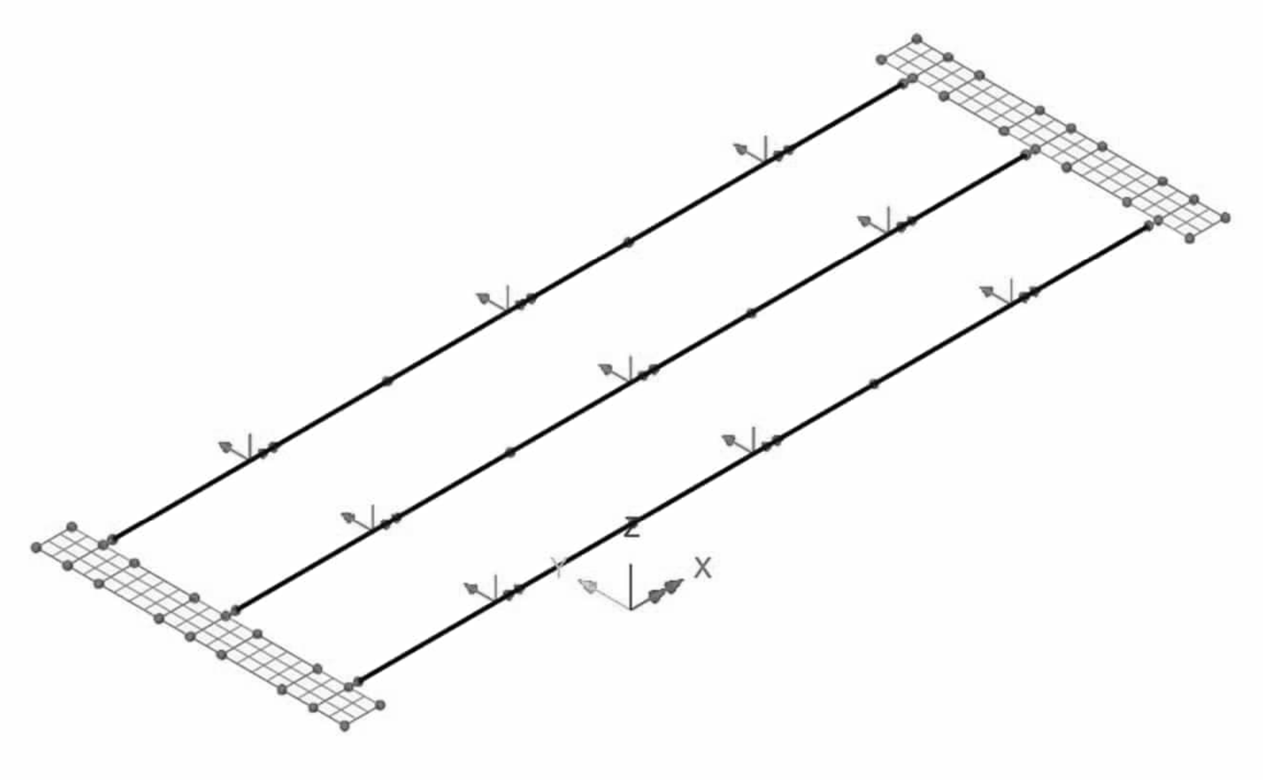
Rigid beam abutment 1:



Rigid beam abutment 2:



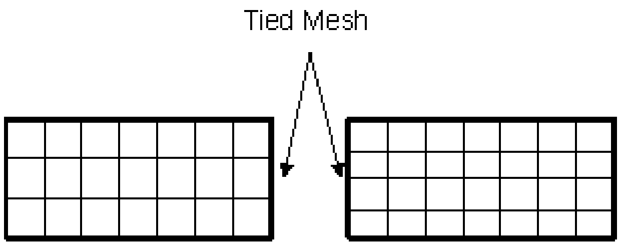
Beam - superstructure :



2.6.3 Rigid connections (Tied Mesh)

Tied mesh are used to two different locations.

Connection Tied Mesh: Rigid constraint

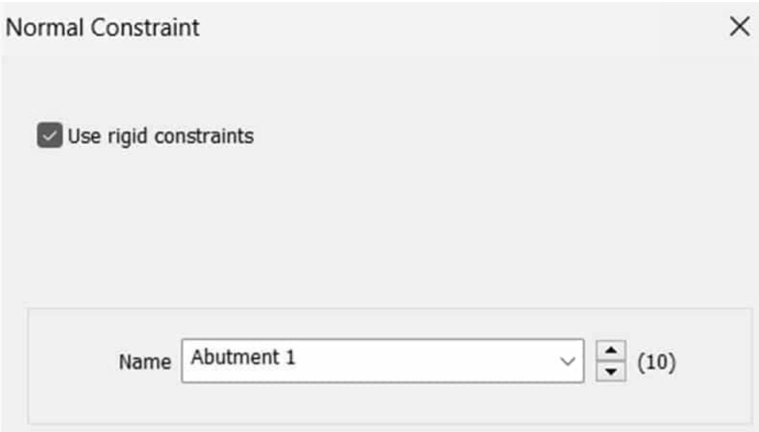


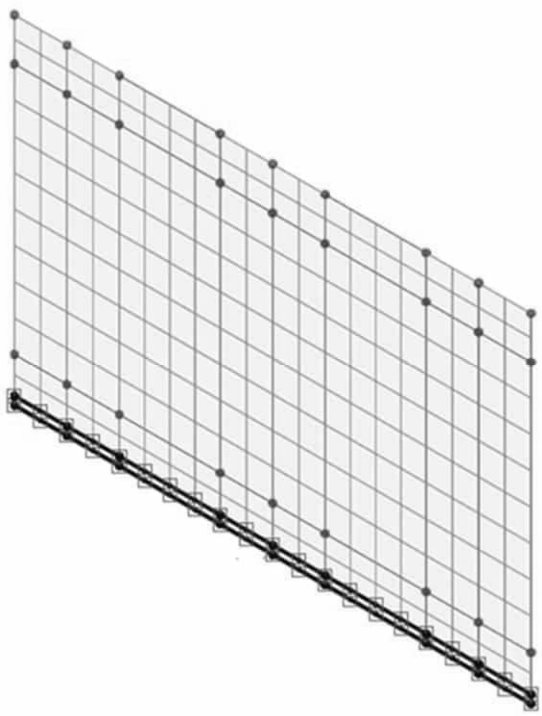
2.6.3.1 Tied mesh abutments

Type of node at rigid beams: Master

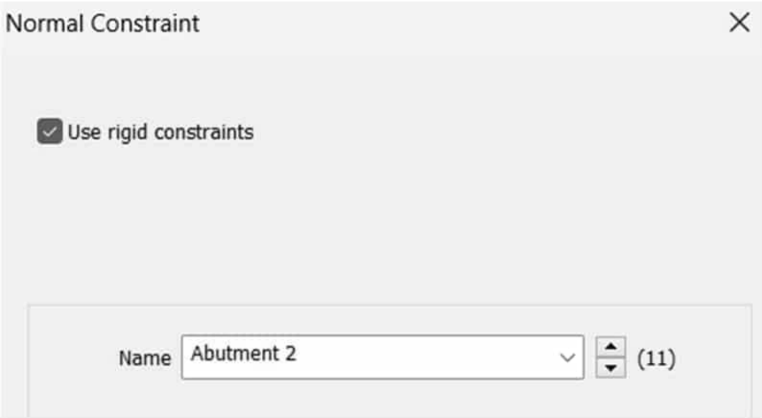
Type of node at bottom of abutments: Slave

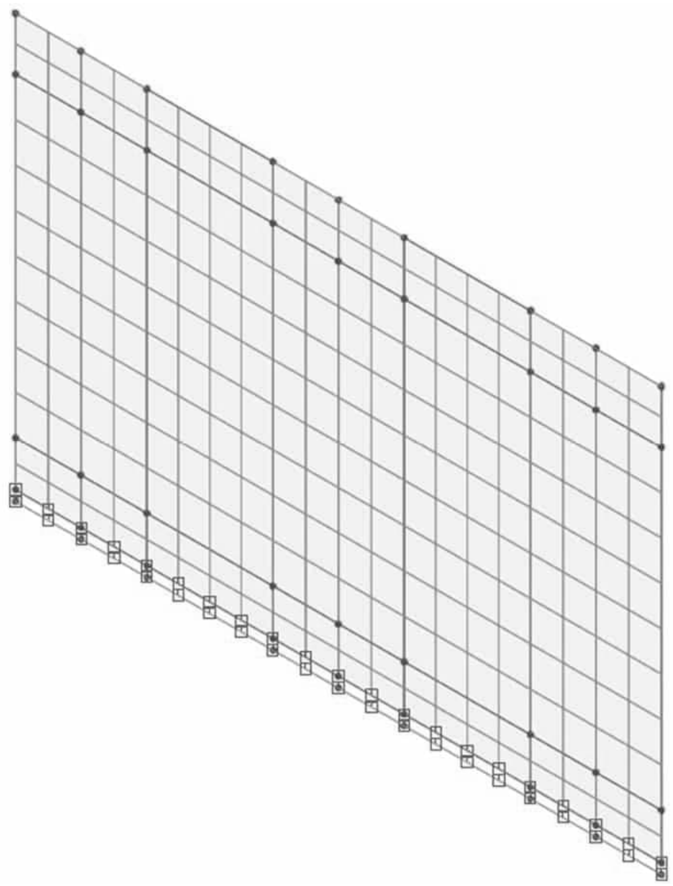
Abutment 1:





Abutment 2:


Normal Constraint
Use rigid constraints
Name
Abutment 2
(11)



2.6.3.2 Tied mesh superstructure

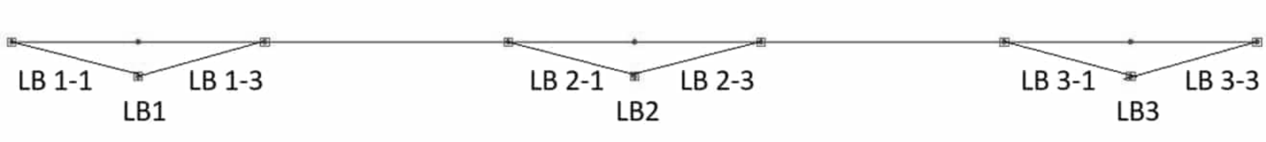
Deck is modelled as shell elements. They are defined by nodal surface.

Ribs are modelled as rectangular beam elements. They are defined by nodal lines.

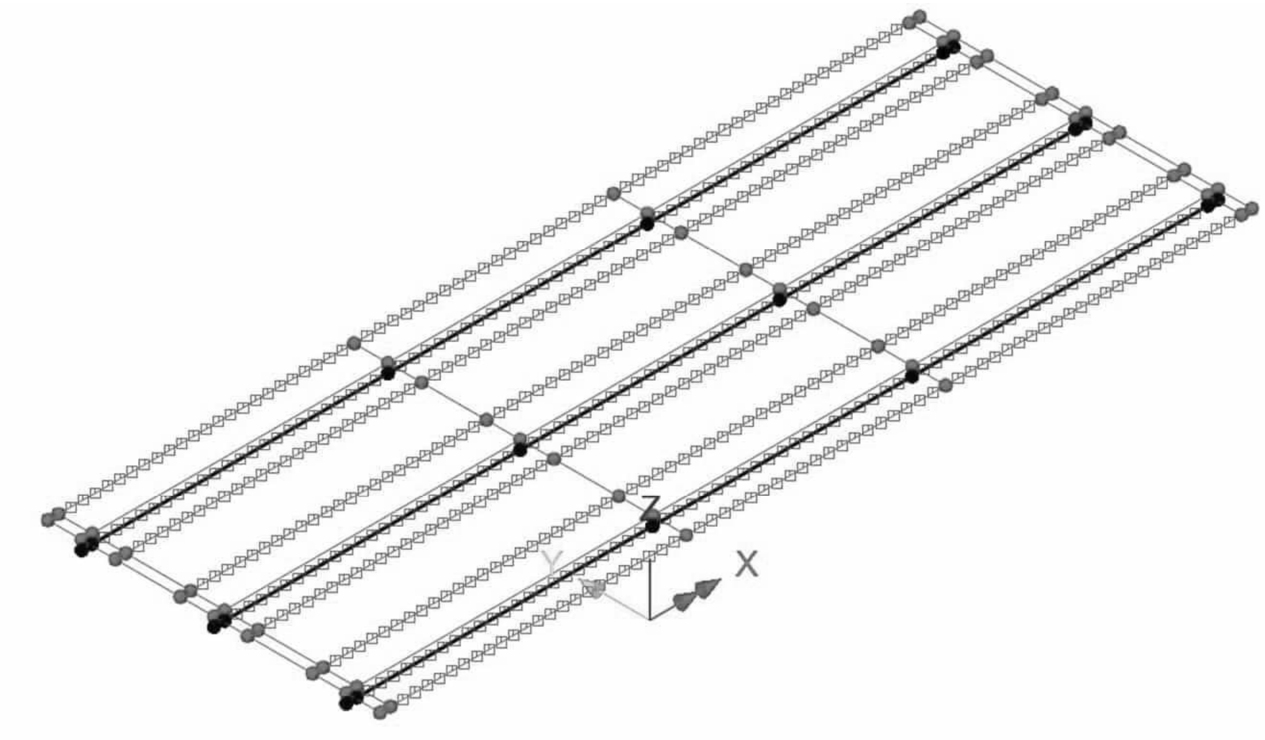
Deck is tied to ribs using constant constraints.

Deck is defined as master nodes.

Load cases excluding shrinkage & temperature (*Analysis 1*):

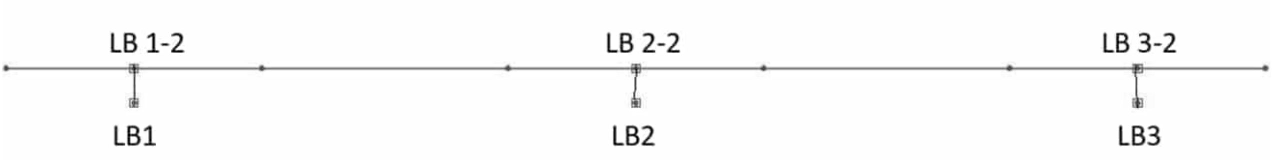


Cross section

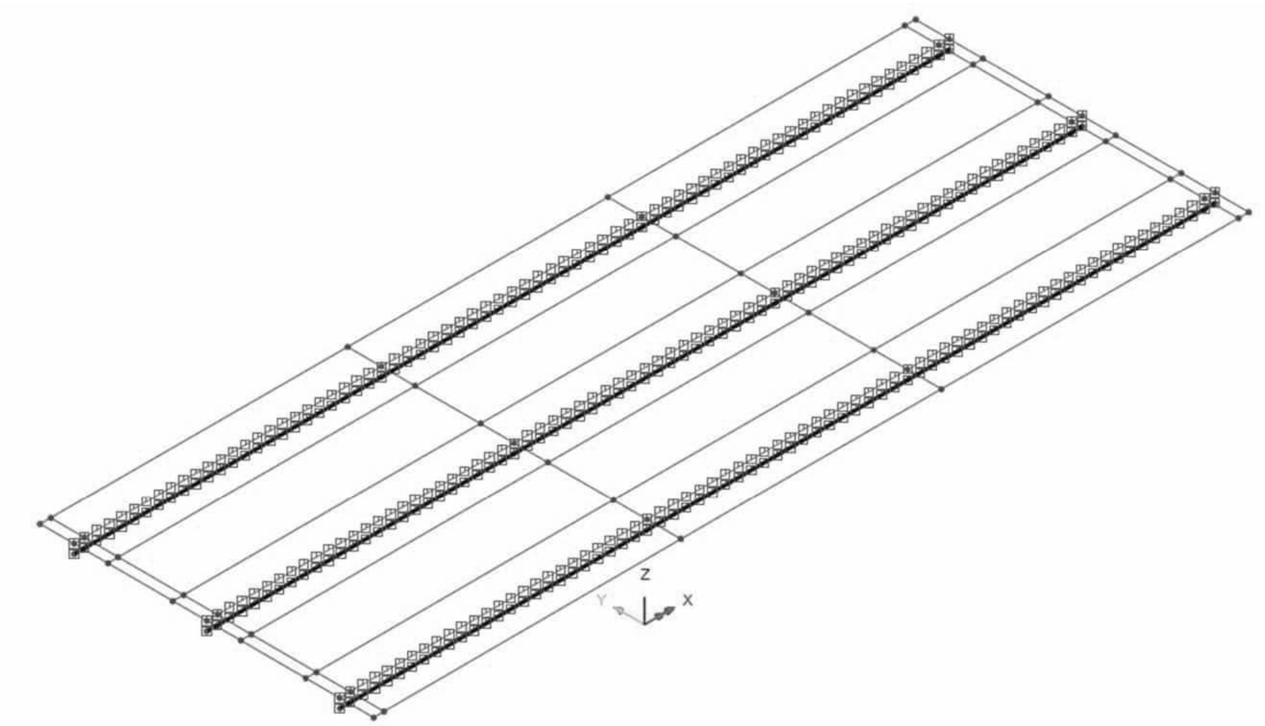


Overview 3D

Load cases shrinkage & temperature (*Analysis 2*):



Cross section

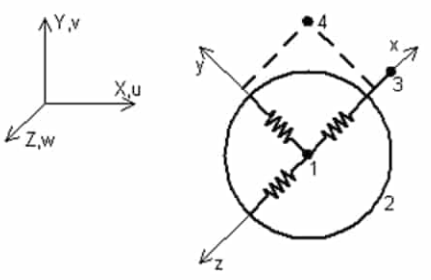


Overview 3D

2.6.4 Joint element between lines (JNT4) : linear

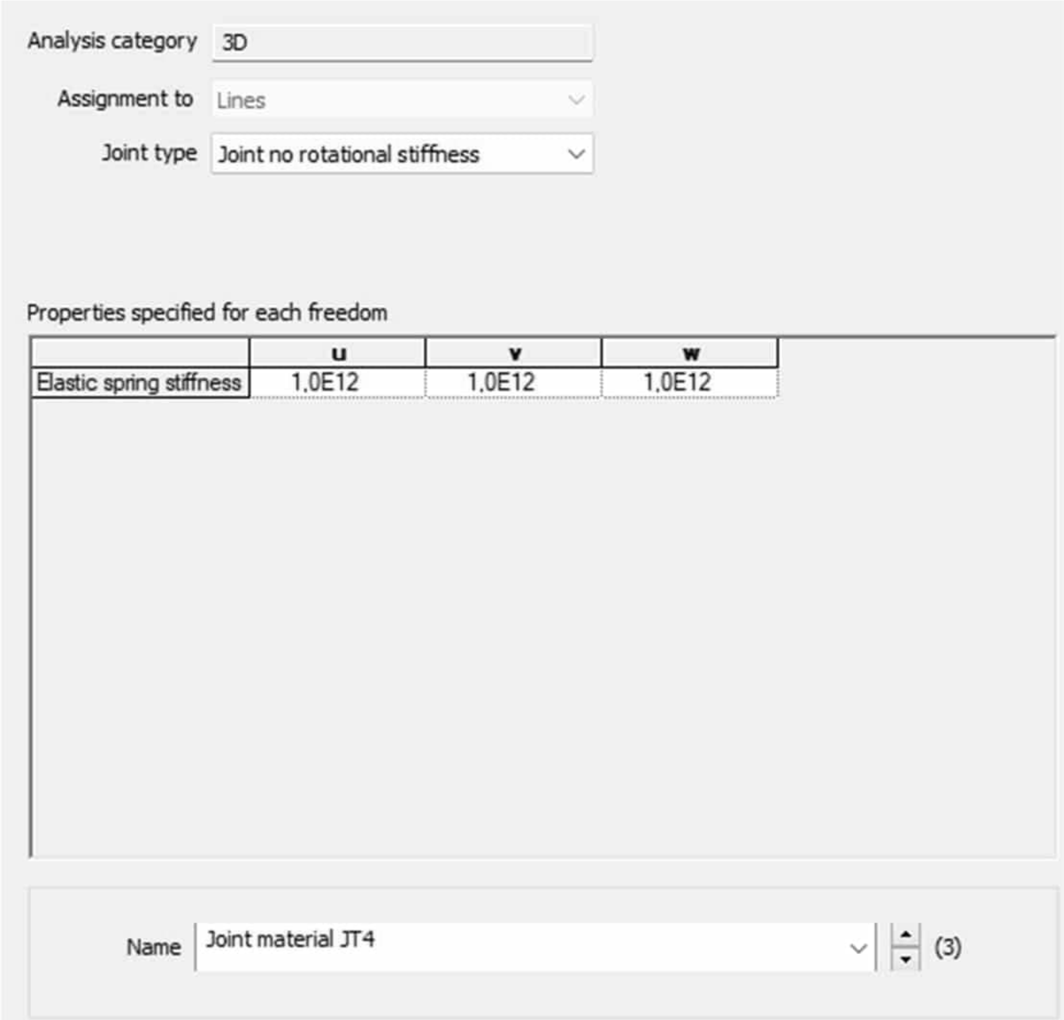
Connection between link slab & superstructure is of type joint element, see presentation below. The joint uses no rotational stiffness in order achieve a hinge.

Element Name	**JNT4**



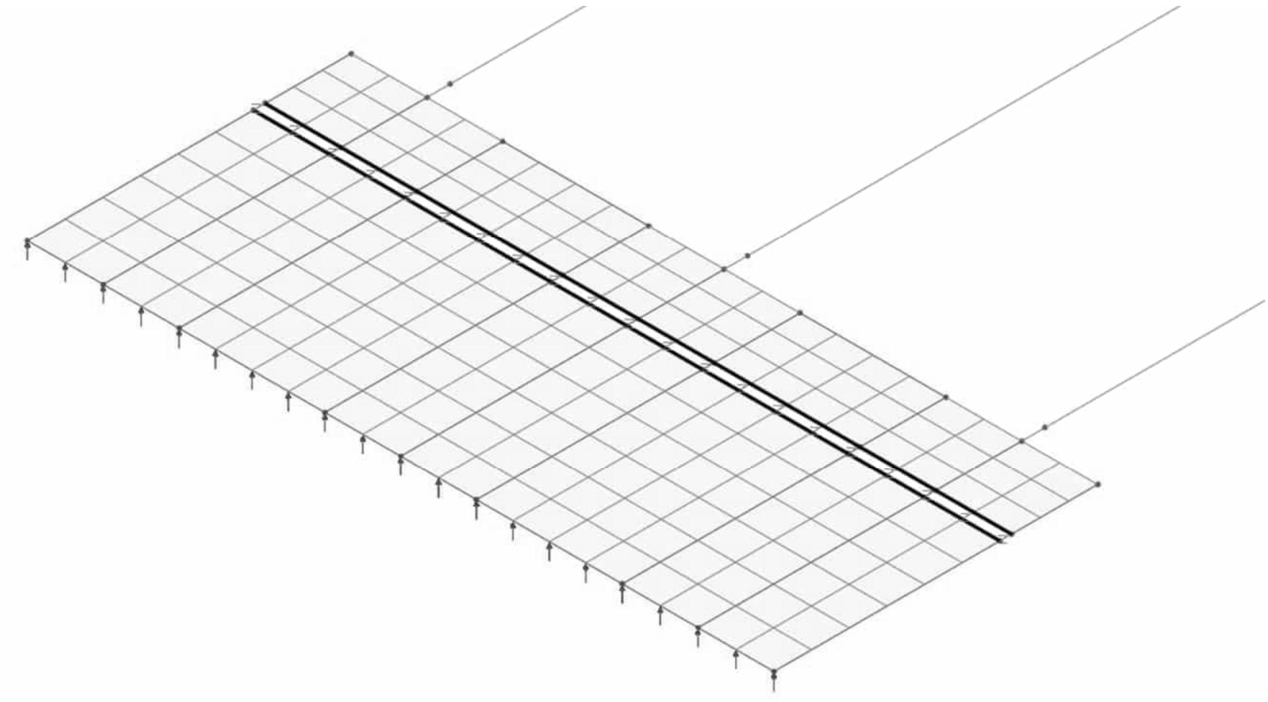
Element Group	Joints
Element Subgroup	3D Joints
Element Description	A 3D joint element which connects two nodes by three springs in the local x, y and z-directions.
Number Of Nodes	4. The 3rd and 4th nodes are used to define the local x-axis and local xy-plane.
Freedoms	U, V, W: at nodes 1 and 2 (active nodes).
Node Coordinates	X, Y, Z: at each node.

Material:

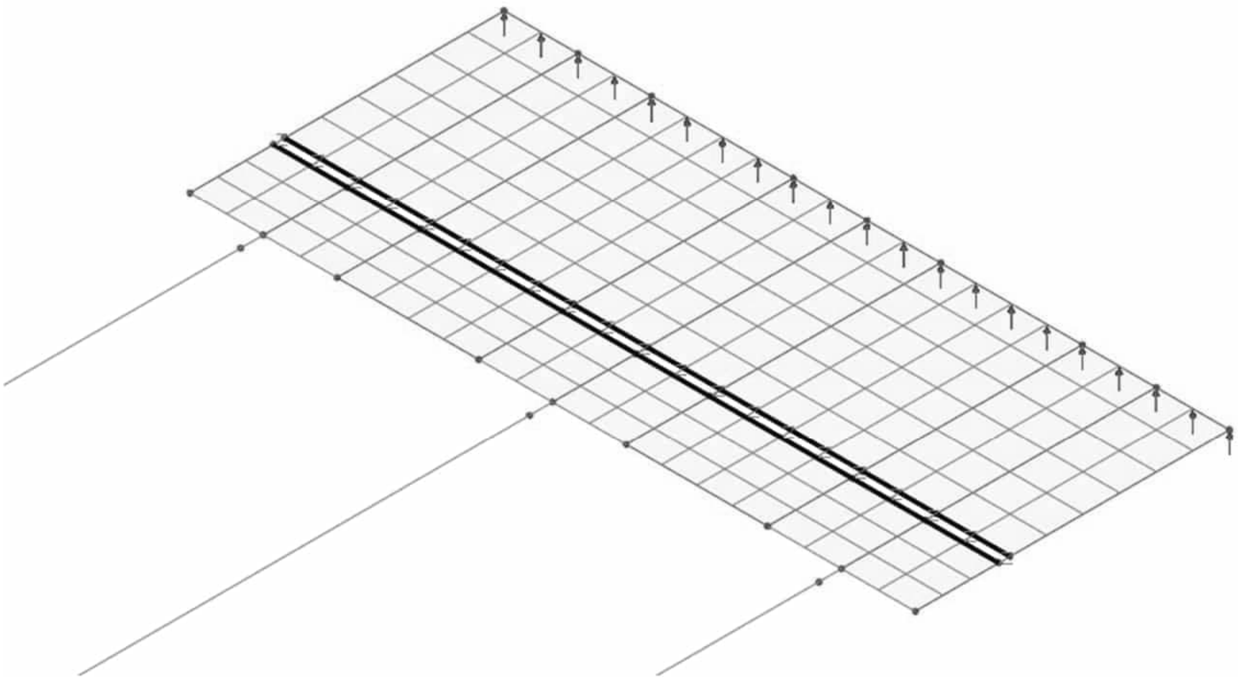


Analysis category
3D
Assignment to
Lines
Joint type
Joint no rotational stiffness
Properties specified for each freedom
u
v
w
Elastic spring stiffness
1,0E12
1,0E12
1,0E12
Name
Joint material JT4
(3)

Link slab at Abutment 1:



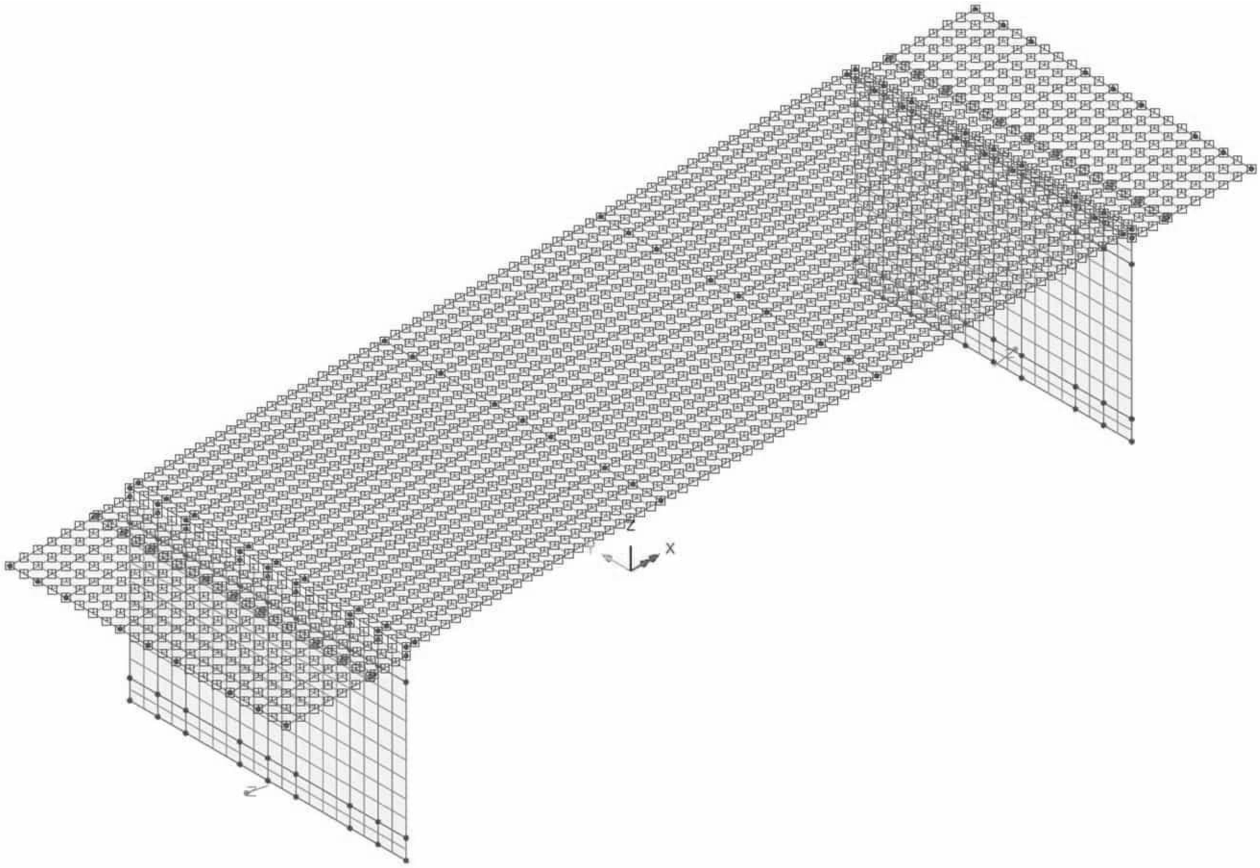
Link slab at Abutment 2:



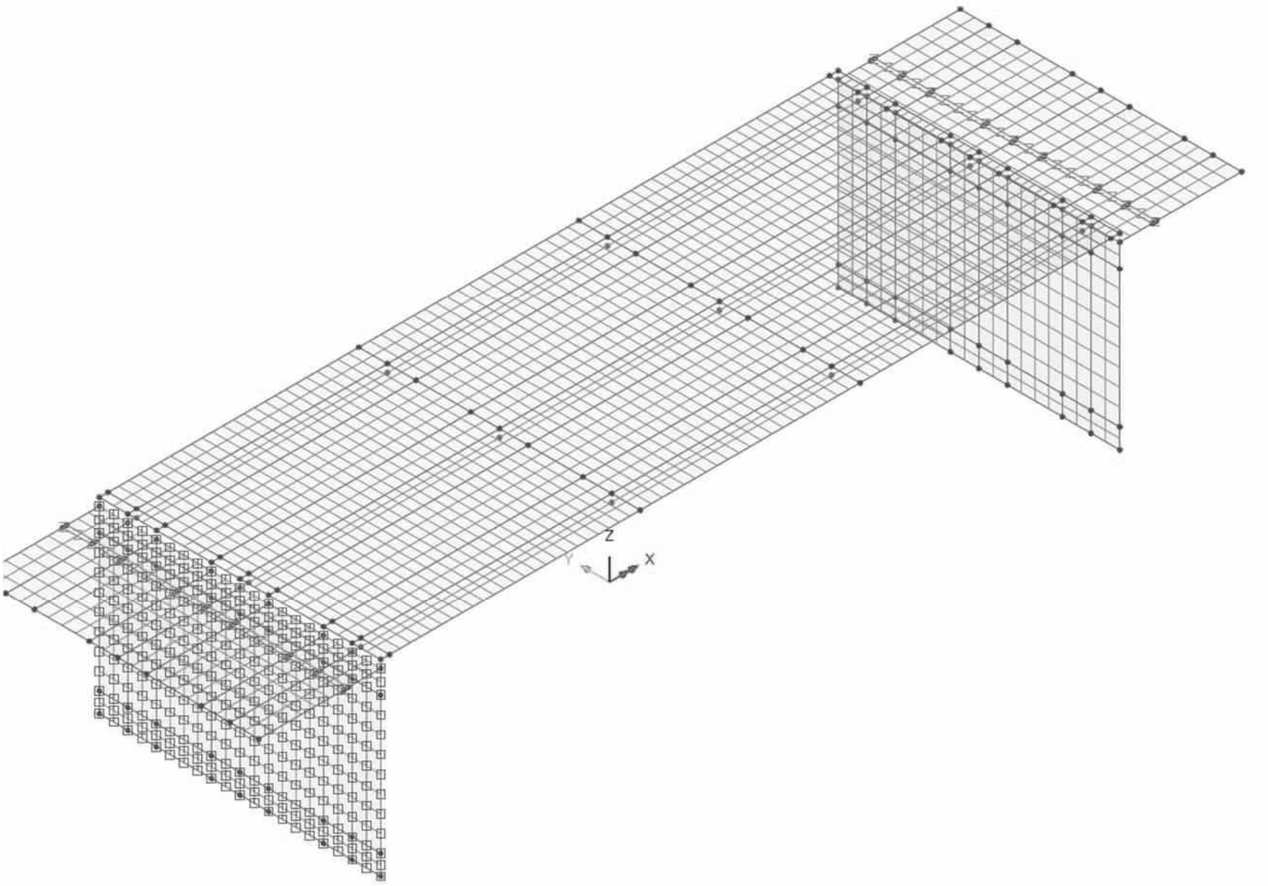
2.7 SEARCH AREA

Discrete load can be applied to structure as geometrical load areas. In FEM-program load areas are termed Search Area.

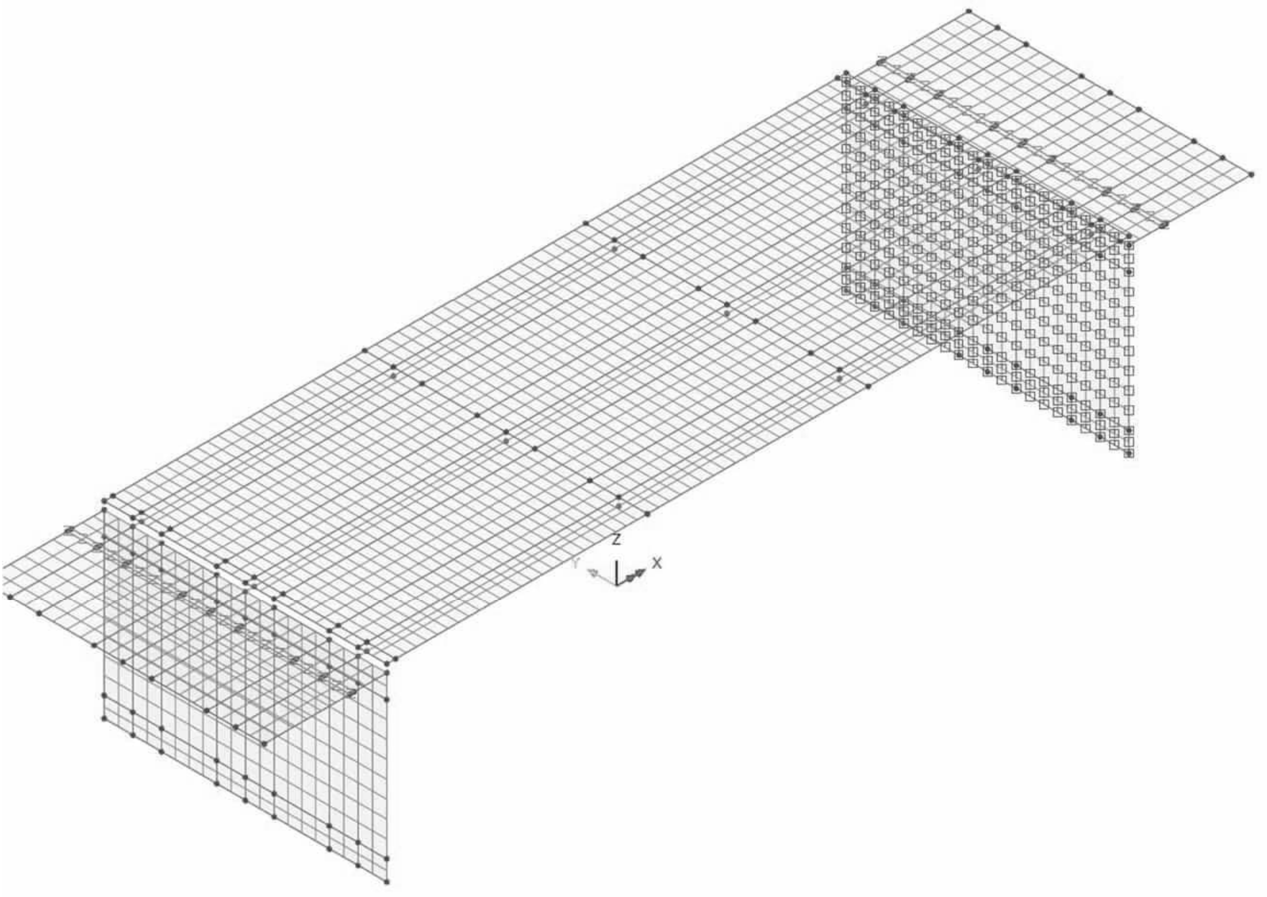
2.7.1 Search area : Superstructure



2.7.2 Search area : Abutment 1



2.7.3 Search area : Abutment 2

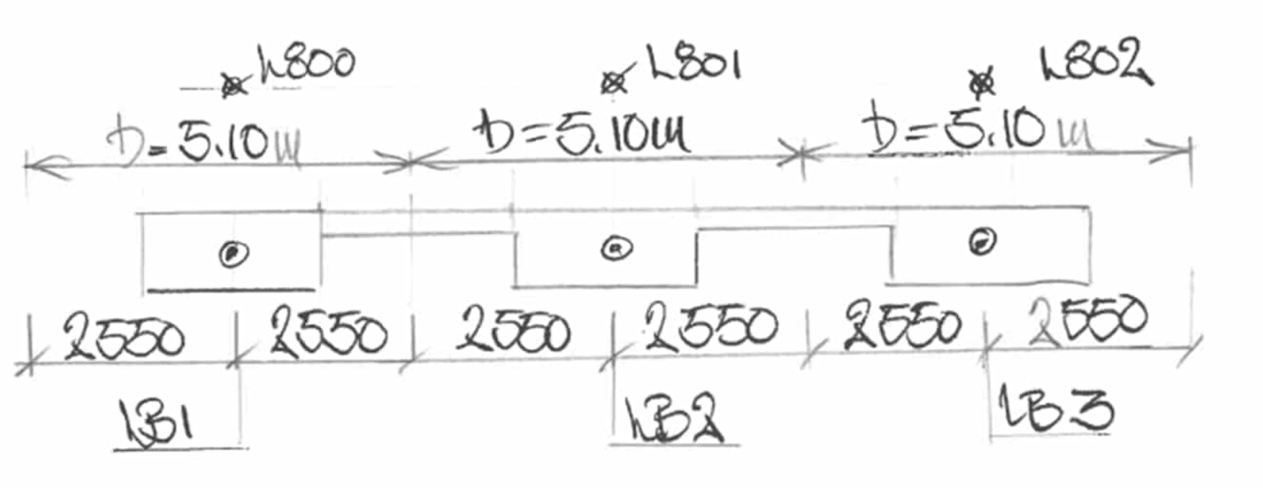


2.8 SLICE RESULTANTS BEAMS/SHELLS

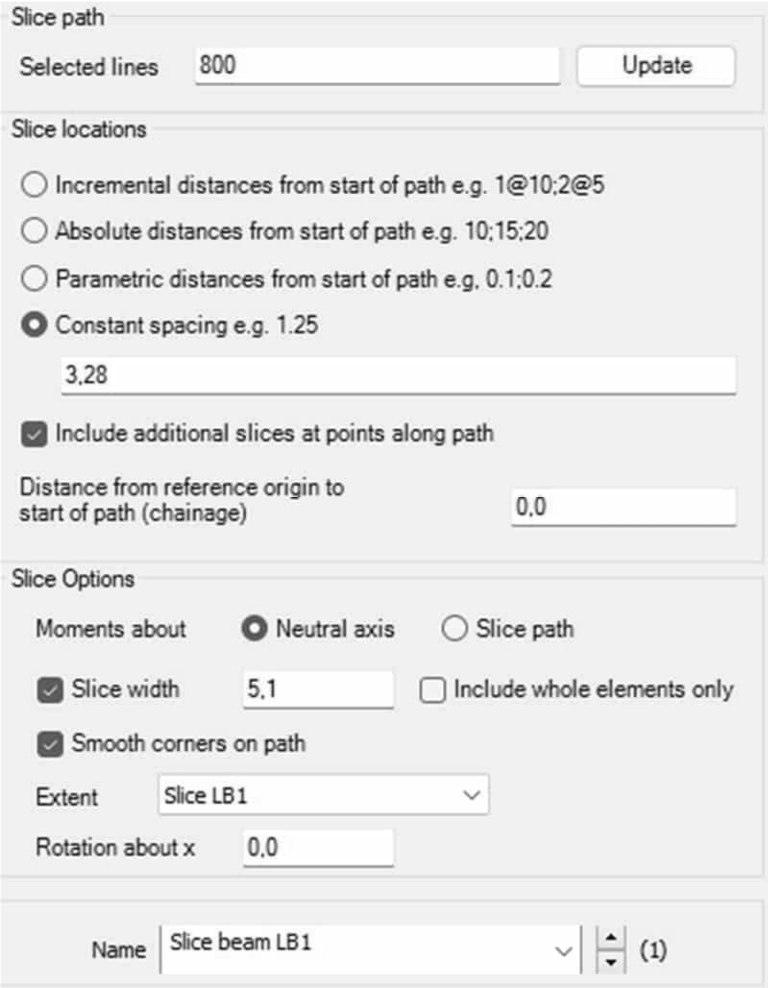
Equivalent section forces will be determined at 8 sub-points for each main beam. This is done by studying load effects in the Nodal surface and Nodal line for the respective main beams LB 1 and LB 2.

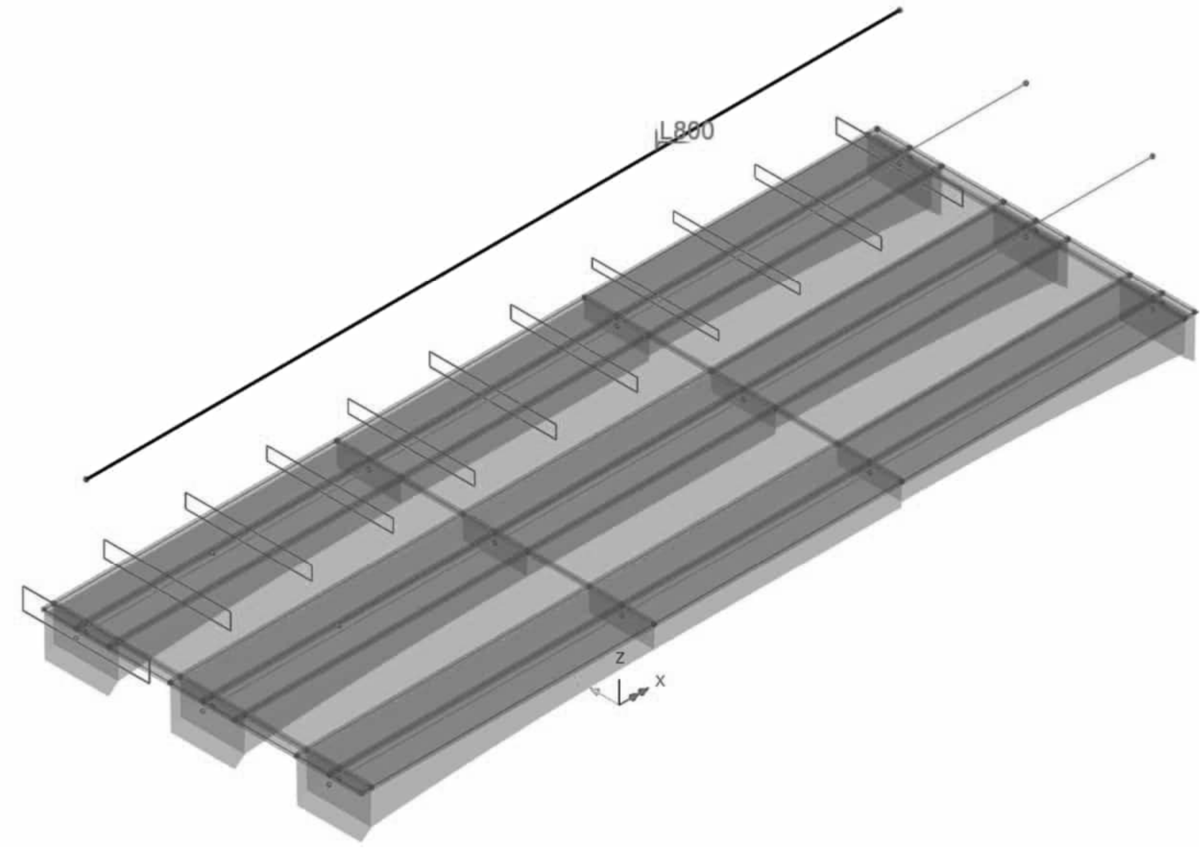
FEM-program has a script called "Slice Resultant Beams/Shells" to handle this, see the presentation below.

Beam	Path line	Extent	Remark
LB1	800	Slice LB1	Width = 5.10 m
LB2	801	Slice LB2	Width = 5.10 m
LB3	802	Slice LB3	Width = 5.10 m
-	-	-	-



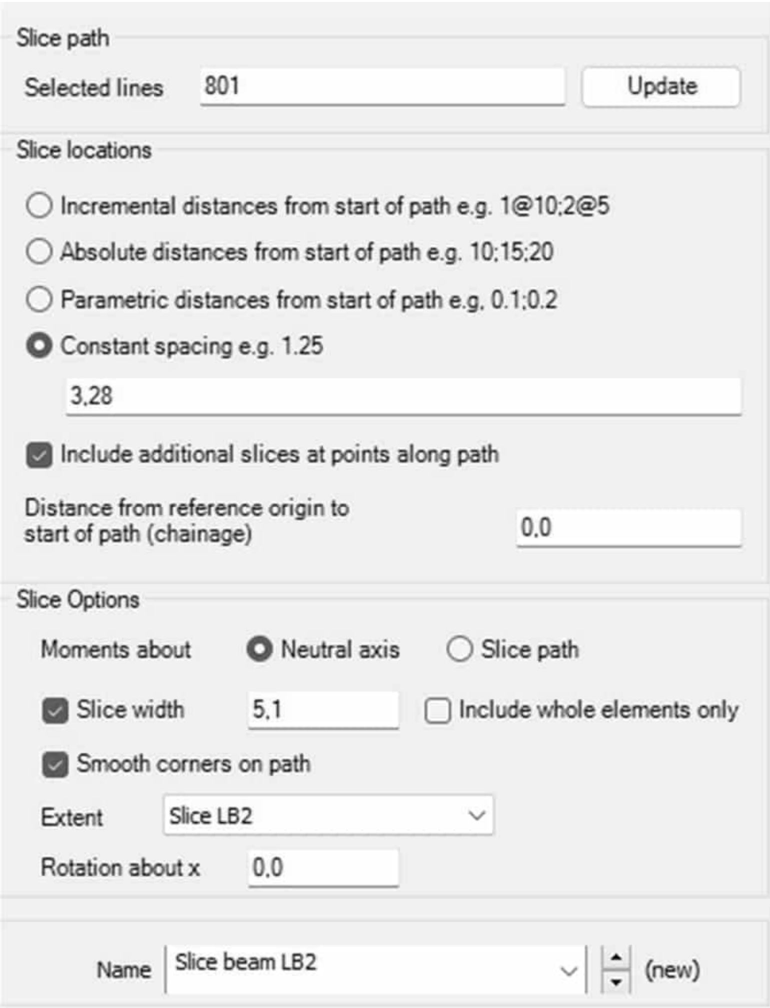
2.8.1 Slice beam LB1

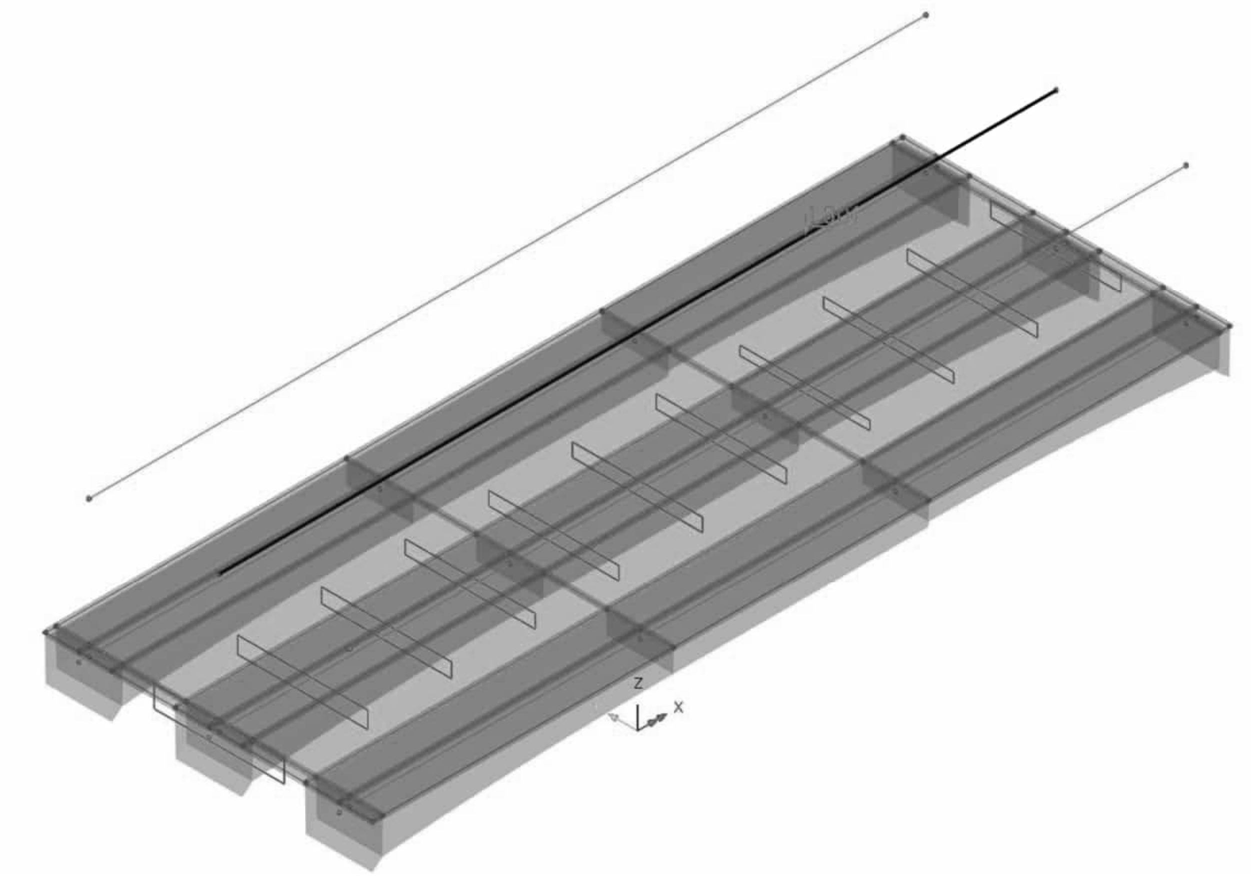




OVERVIEW

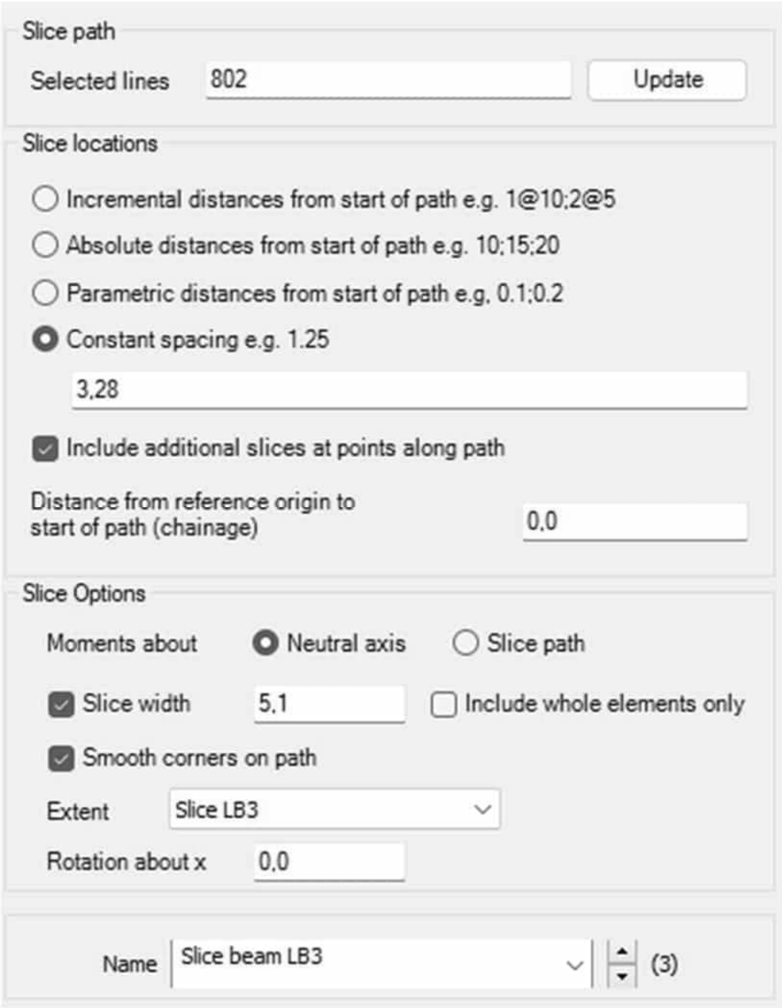
2.8.2 Slice beam LB2

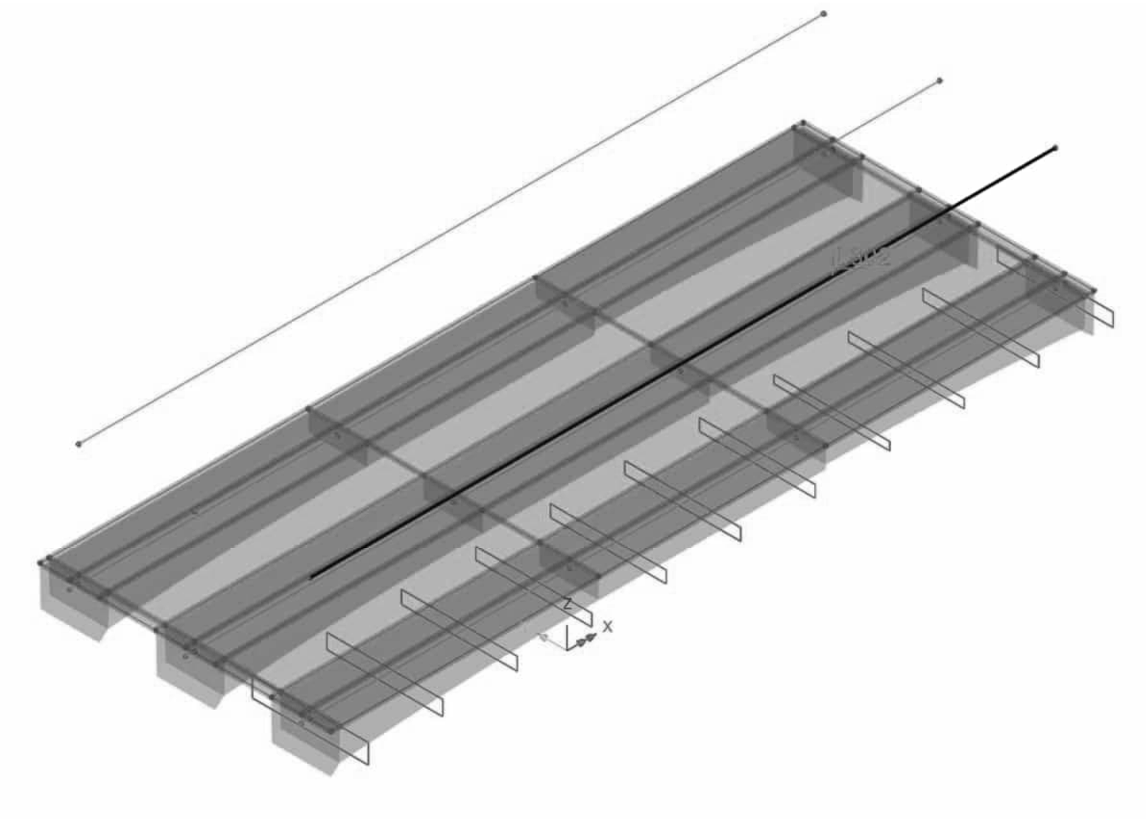




OVERVIEW

2.8.3 Slice beam LB3





OVERVIEW

2.9 FLANGE WIDTH

Flange width is determined by SS-EN 1992-1-1 section 5.3.2.1.

Verification shows that no reduction cross section is needed in “midspan”.

I are area 5 m (∴ 0.15 m ·33.6 m) from abutment a reduction of cross section is needed when studying capacity.

$l_1 = 8.2m$: length abutment

$l_2 = 33.6m$: length superstructure

Verification ”midspan” :

$l_0 = 0.70l_2 = 0.70 \cdot 33.6m = 23.5m$

$\min(0.2b_1 + 0.1l_0; 0.2l_0, b_1) = \min(0.2 \cdot 1.25m + 0.1 \cdot 23.5m\,; 0.2 \cdot 22.1m, 1.25m) = 1.25m$

$\rightarrow b_{ef.1} = 1.25m$

Verification “support” :

$l_0 = 0.15 \cdot (l_1 + l_2) = 0.15 \cdot (8.2m + 33.6m) = 6.3m$

$\min(0.2b_1 + 0.1l_0; 0.2l_0, b_1) = \min(0.2 \cdot 1.25m + 0.1 \cdot 6.3m\,; 0.2 \cdot 6.3m, 1.25m) = 0.88m$

$\rightarrow b_{ef.1} = 0.88m$

3. LOADS

3.1 DEAD WEIGHT page 3:2-8
3.2 SURFACING page 3:9-11
3.3 EARTH PRESSURE page 3:12-39
3.4 SUPPORT SETTLEMENT page 3:40-44
3.5 CREEP page 3:45-49
3.6 SHRINKAGE page 3:50-54
3.7 TRAFFIC LOAD page 3:55-73
3.8 BRAKING LOAD page 3:74-79
3.9 LATERAL LOAD page 3:80-85
3.10 WIND LOAD page 3:86-92
3.11 SURCHARGE page 3:93-107
3.12 TEMPERATURE page 3:108-132
3.13 PRESTRESS page 3:133-157
3.14 LOAD COMBINATIONS page 3:158-175

3.1 DEAD WEIGHT

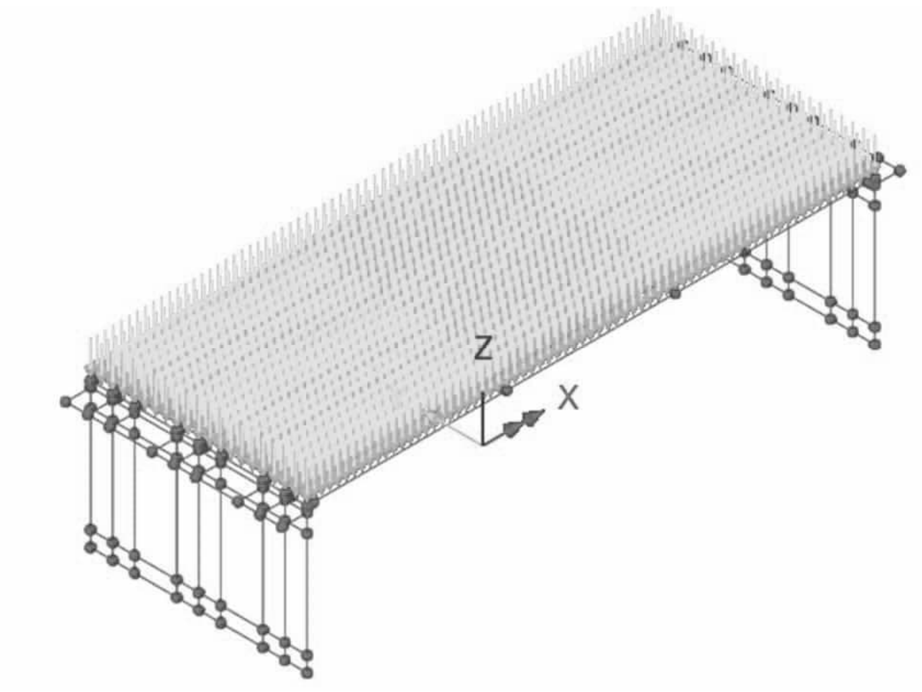
Load applied to Analysis : *Analysis 1*

$\gamma_c = 25 \cdot \frac{kN}{m^3}$: concrete

3.1.1 Superstructure - deck

Load case : EGEN 1

Structural loading : Body force
Linear acceleration in Z (a_z) : -10 $\frac{m}{s^2}$

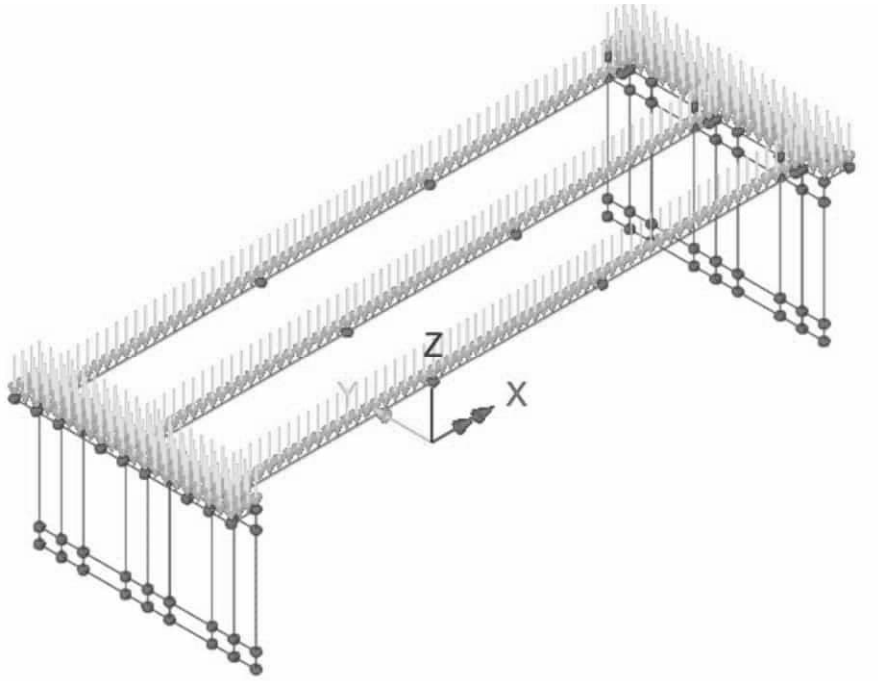


Overview 3D

3.1.2 Superstructure - beams

Loadcase : EGEN 2

Structural loading : Body force
Linear acceleration in Z (a_z) : -10 $\frac{m}{s^2}$



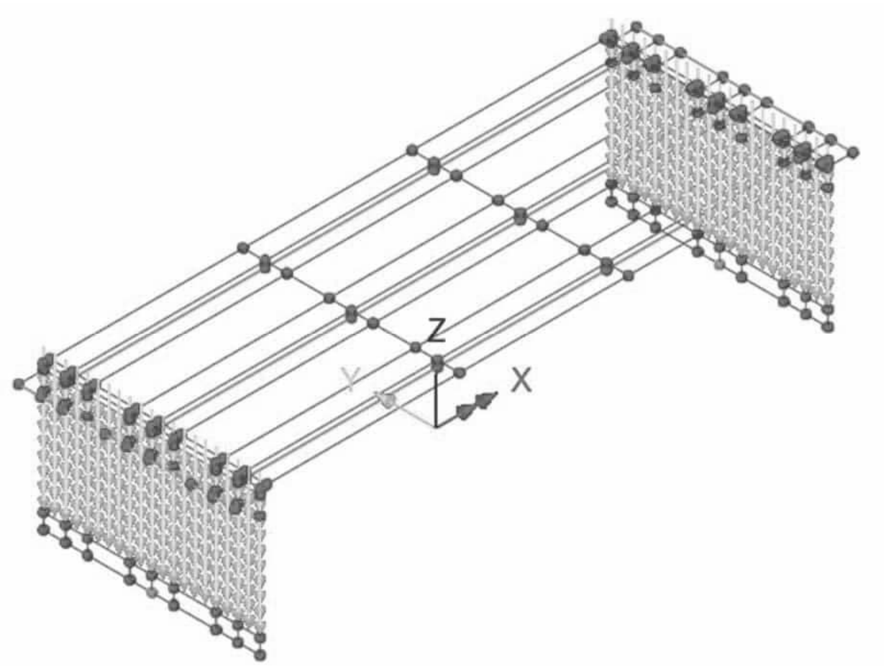
Overview 3D

3.1.3 Abutments

Loadcase : EGEN 3

Structural loading : Body force

Linear acceleration in Z (a_z) : -10 $\frac{m}{s^2}$



Overview 3D

3.1.4 Edge beams including railing

Along each edge bream a line load is introduced. The load includes weight of edge beam and railing.

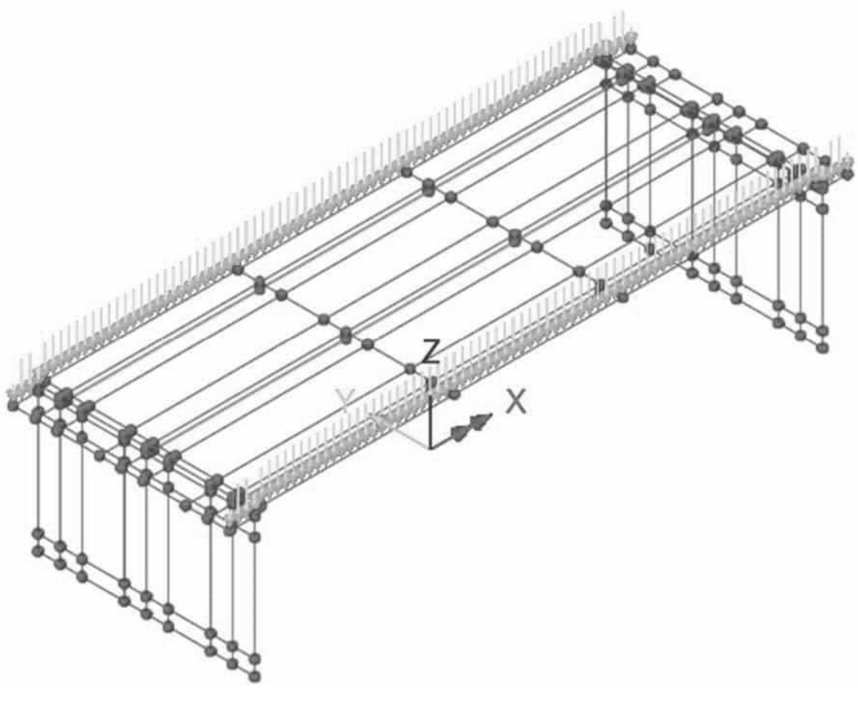
$p_{räcke} = 0.7\frac{kN}{m}$: weight railing

$$\rightarrow p_z = p_{räcke} + p_{KB} = 0.7\frac{kN}{m} + 0.40m \cdot 0.45m \cdot 25\frac{kN}{m^3} = -6\frac{kN}{m}$$

Loadcase : EGEN 4

Structural loading : Global distributed

Line load per unit length in Z direction: -6 $\frac{kN}{m}$



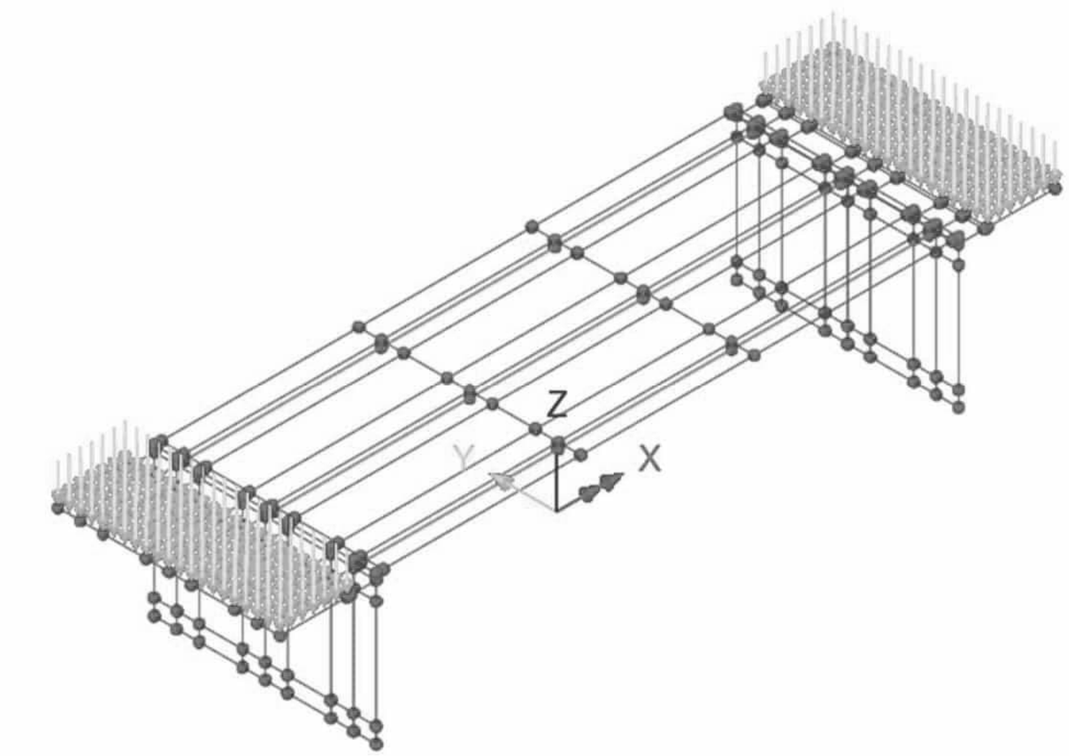
Overview 3D

3.1.5 Link slab

Loadcase : EGEN 5

Structural loading : Body force

Linear acceleration in Z (a_z) : -10 $\frac{m}{s^2}$



Overview 3D

3.1.6 Wingwalls

All wingwalls are alike (∴ L = 6.0 m).

$P_z = -223kN$: page A3:30

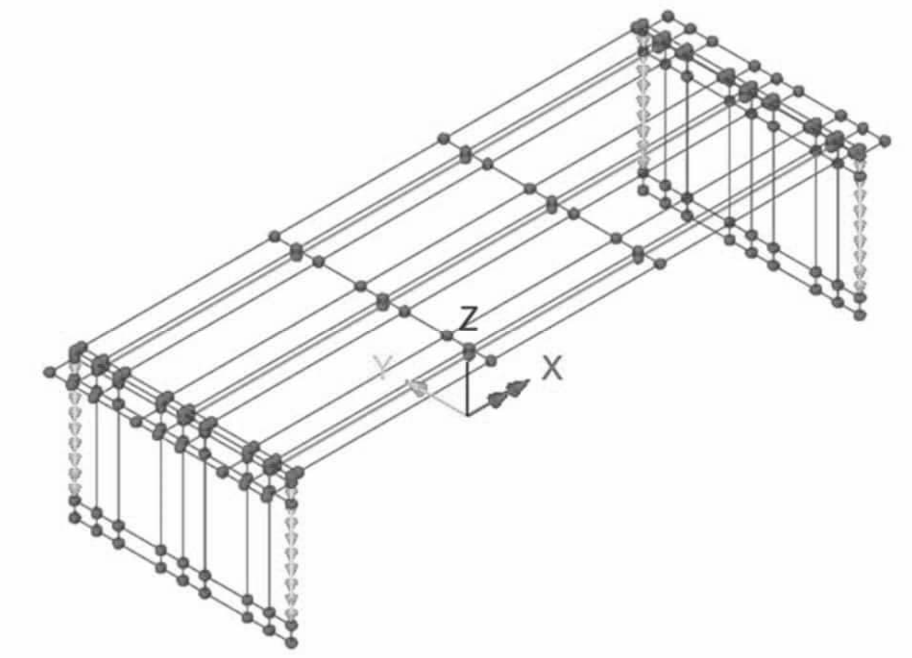
Load is distributed along edge of abutments from bottom of superstructure and distance 6.08 m downward.

$$p_z = \frac{P_z}{L} = -\frac{223N}{6.08m} = -37\frac{kN}{m}$$

Loadcase : EGEN 6

Structural loading : Global distributed

Line load per unit length in Z direction: -37 $\frac{kN}{m}$



Overview 3D

3.1.7 Load combination deadweight : EGEN

Basic load combination EGEN :

Loadcase	Factor
EGEN 1	1.00
EGEN 2	1.00
EGEN 3	1.00
EGEN 4	1.00
EGEN 5	1.00
EGEN 6	1.00

3.2 SURFACING

Load applied to Analysis : *Analysis 1*

3.2.1 Load on superstructure

Thickness pavement with a thickness of 95 mm built as follows:

- Wearing course ABS 11 40 mm
- Combined protective and binder course PGJA 50 mm
- Waterproofing layer 5 mm

$\gamma = 23\frac{kN}{m^3}$: course

$q_{matta} = 0.11kPa$: waterproofing

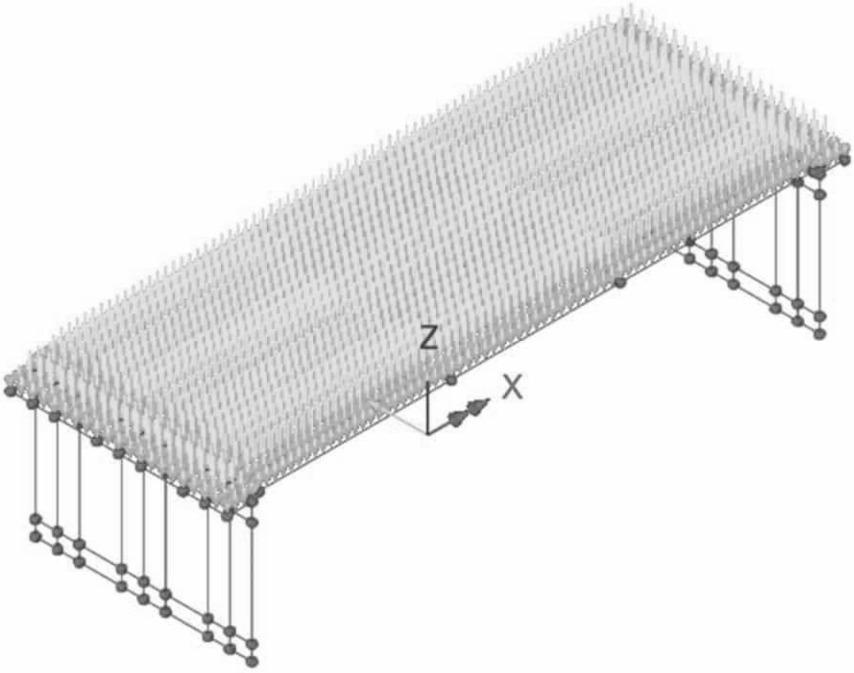
Surfacing load is seen below:

$$q_{belägg} = \gamma_{beläggning} \cdot t + q_{matta} = 23\frac{kN}{m^3} \cdot 0.09m + 0.11kPa = 2.2kPa$$

Load case : BELAGG 1

Structural loading : Global distributed

Surface load per unit area in Z direction: -3 $\frac{kN}{m^2}$



Overview 3D

3.2.2 Load on link slab

On the upper side of the link plate, there is a 95 mm pavement and an overfill with varying thickness (100-400 mm).

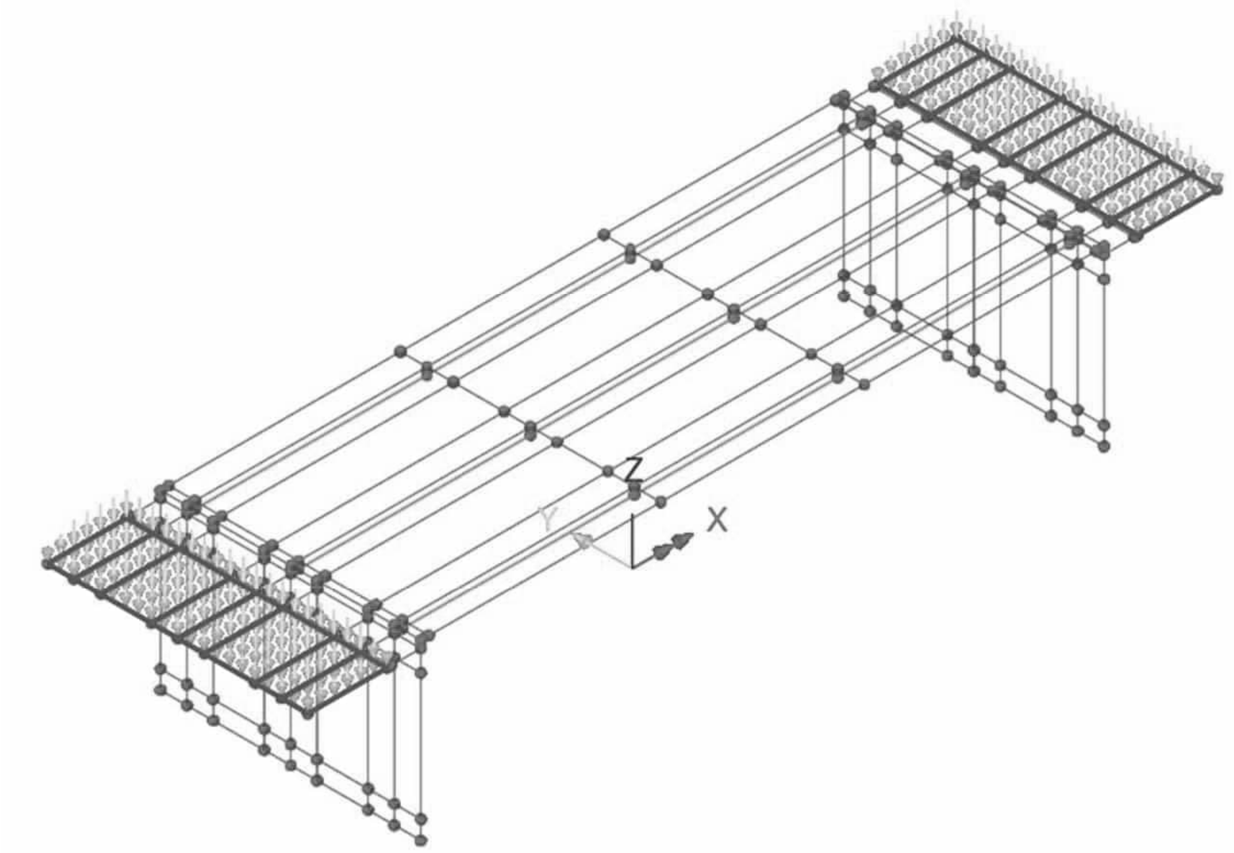
The overfill is considered equivalent to the base layer. In the static model, a fictitious load corresponding to the weights for the pavement and overfill is introduced (an average thickness of 250 mm is applied.

$$q_{belägg} = 2.2kPa + 22\frac{kN}{m^3} \cdot 0.25m = 8.0kPa$$

Load case : BELAGG 2

Structural loading : Global distributed

Surface load per unit area in Z direction: -8 $\frac{kN}{m^2}$



Overview 3D

3.2.3 Load combination surfacing: BELAGG

Basic load combination BELAGG :

Load case	Factor
BELAGG 1	1.00
BELAGG 2	1.00

3.3 EARTH PRESSURE

Load applied to Analysis : *Analysis 1*

Earth pressure in filling corresponds to coarse crushed blasted rock (AMA CEB.524).

φ_k = 45°

$\gamma = 20\dfrac{kN}{m^3}$

$\gamma' = 13\dfrac{kN}{m^3}$

$$X_d = \frac{1}{\gamma_m}\cdot\eta\cdot\overline{X} \equiv \frac{1}{\gamma_m}\cdot X_k$$

Earth pressure coefficient for design method 2 (D2) :
Design coefficients associated to *A1 + M1 + R2* according to SS-EN 1997-1 section 2.4.7.3.4.3 is applied.

$\gamma_{m.D2} = 1.0$: see TSFS chapter 38 table 38.3 for M1

$\rightarrow \varphi_d = artctan\left(\frac{tan\varphi_k}{\gamma_{m.D2}}\right) = arctan\left(\frac{tan45°}{1.0}\right) = 45°$

$K_0 = 1 - \sin(\varphi_d) = 0.29$

$K_a = tan^2\left(45° - \frac{\varphi_d}{2}\right) = 0.17$

$K_p = tan^2\left(45° + \frac{\varphi_d}{2}\right) = 5.82$

Earth pressure for design method 3 (D3) :
Design coefficients associated to *A1(design loads)* + *A2(geotechnical loads)* + *M2* + *R3* according to SS-EN 1997-1 section 2.4.7.3.4.4 is applied.

$\gamma_{m.D3} = 1.3$: see TSFS chapter 8 table 38.3 för M2

$\rightarrow \varphi_d = artctan\left(\frac{tan\varphi_k}{\gamma_m}\right) = arctan\left(\frac{tan45°}{1.3}\right) = 38°$

Remark
These are not used used in FEM-analysis. This is done by adjusting load coefficients.

Earth pressure in FEM-analysis:

During design earth press coefficients associated to method D2 will used applied, however the load coefficients are adjusted according verification, see pages A3:170.

K_0 = 0.29

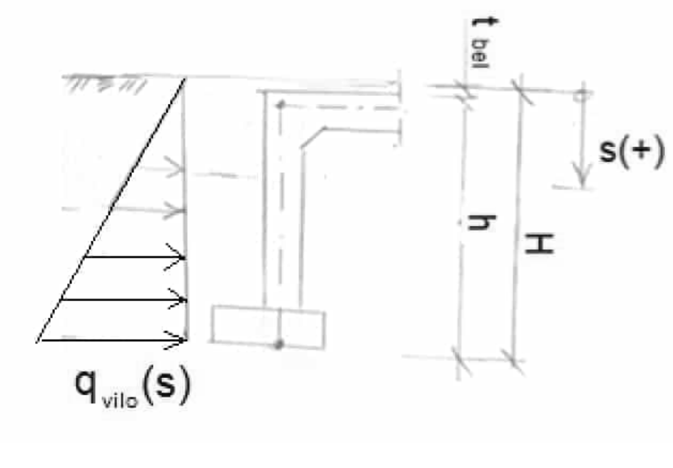
K_a = 0.17

K_p = 5.82

h = 0.90m + 6.085m + 1.70m = 8.685m

H = 0.095m + 8.685m = 8.78m

$$q_{vilo}\ (s) = K_0 \cdot \gamma \cdot s = 0.29 \cdot 20 \frac{kN}{m^3} \cdot s(+) = s(+) \cdot 5.8kPa$$



Remark
Load width B = 12.8 is used for the bottom slab even though width B = 13.3 m. This simplification is possible since favorable effect of passive earth pressure has not been considered on safe side.

3.3.1 Load against abutment 1

$q_{vilo}\ (0m) = 0kPa$: top surfacing

$q_{vilo}\ (8.78m) = 8.78m \cdot 5.8\,\frac{kN}{m^3} = 51kPa$: underside bottom slab

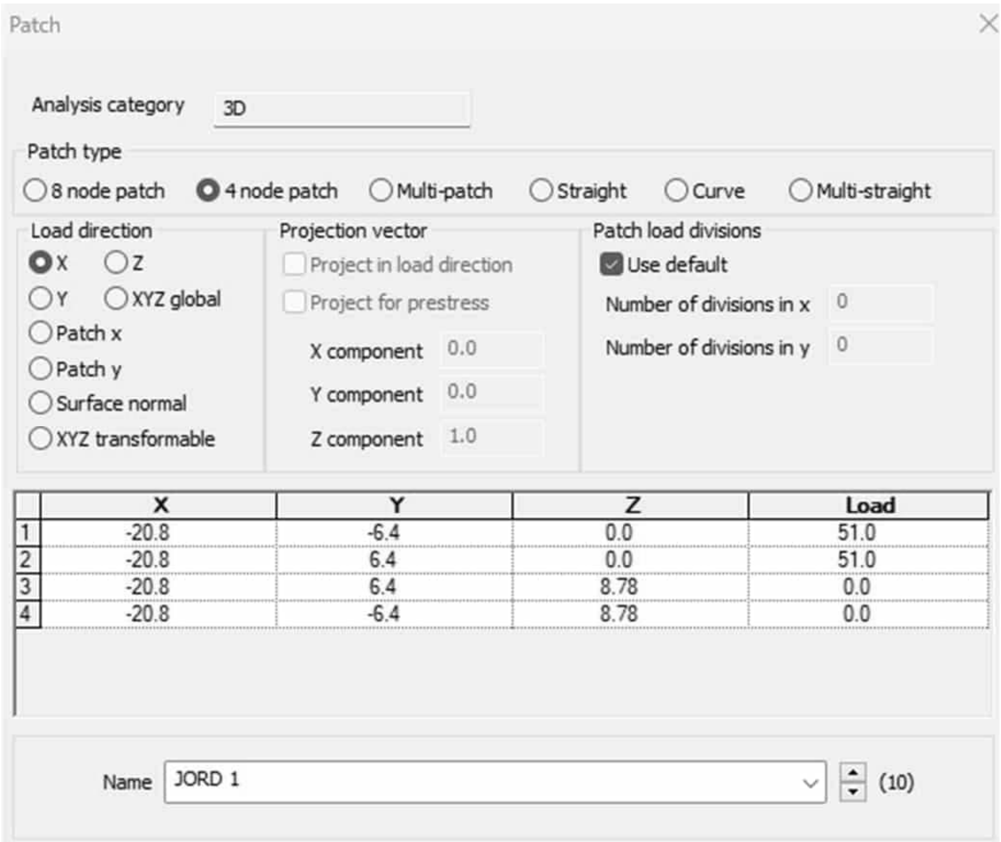
Loadcase : JORD 1

Structural loading : Discrete 4 node patch

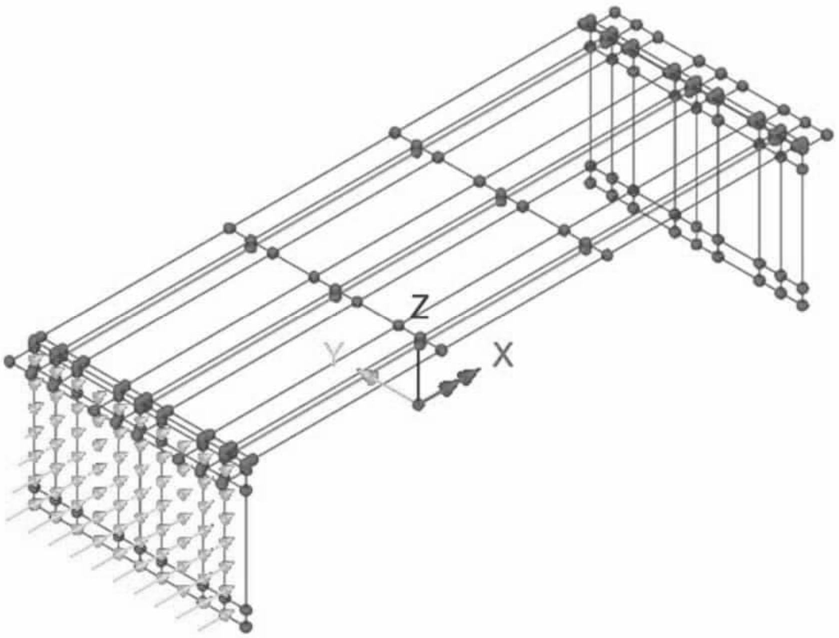
Surface load (q_x) : 0 kPa $\rightarrow$ +51 kPa

Search Area : Abutment 1

Loads outside search area : Include full load



	X	Y	Z	Load
1	-20.8	-6.4	0.0	51.0
2	-20.8	6.4	0.0	51.0
3	-20.8	6.4	8.78	0.0
4	-20.8	-6.4	8.78	0.0



Overview 3D

3.3.2 Load against abutment 2

$q_{vilo}\ (0m) = 0kPa$: top surfacing

$q_{vilo}\ (8.78m) = 8.78m \cdot 5.8\frac{kN}{m^3} = 51kPa$: underside bottom slab

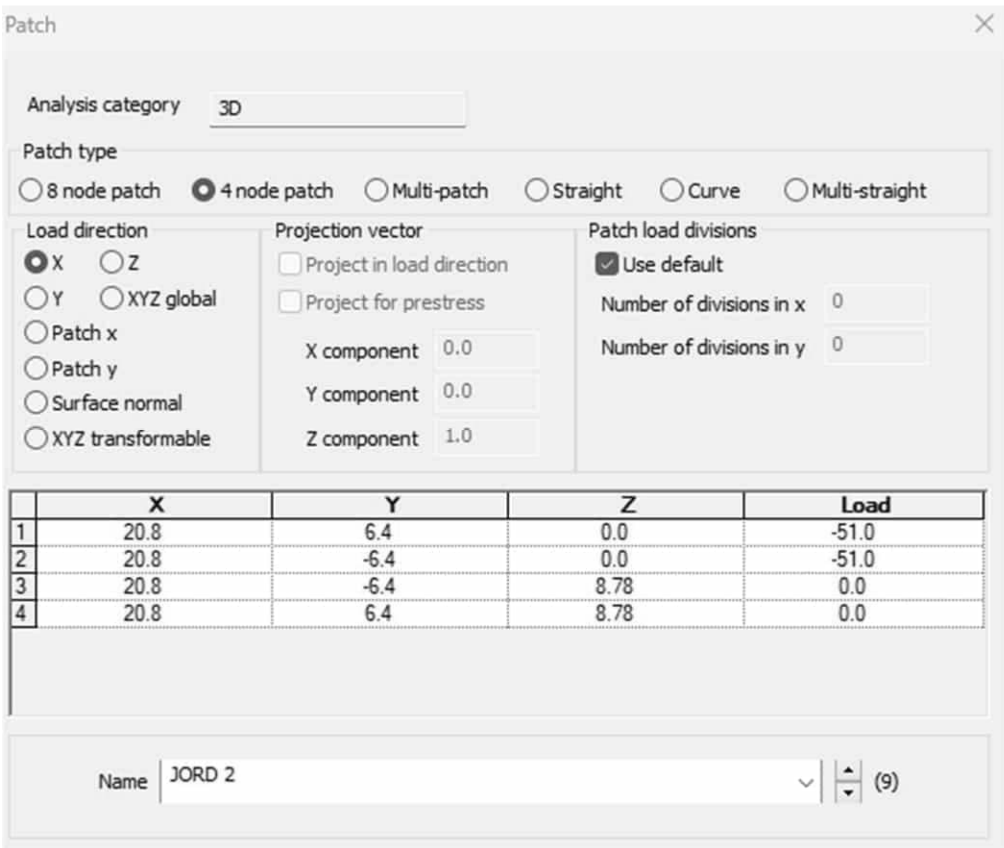
Loadcase : JORD 2

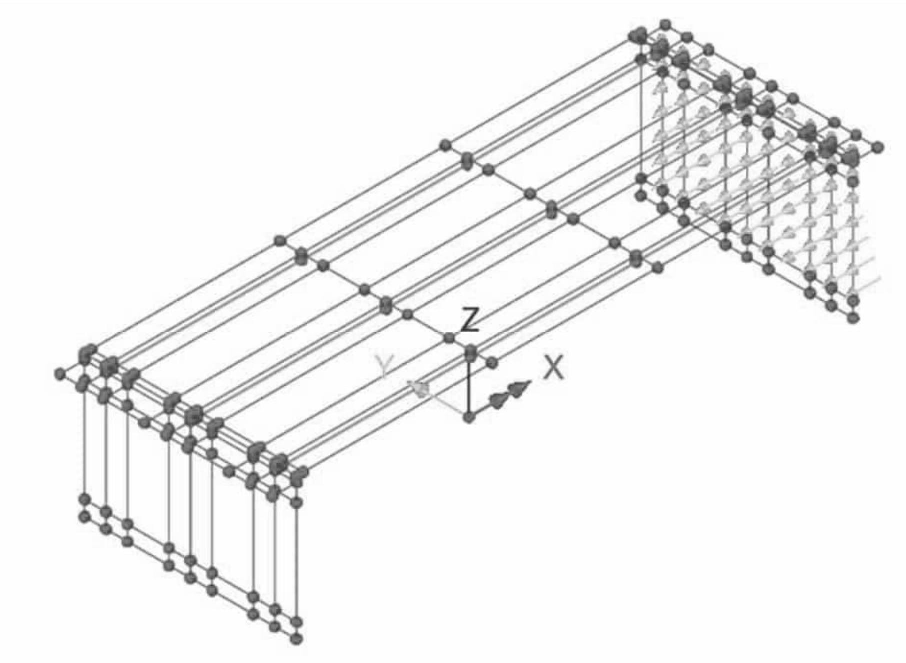
Structural loading : Discrete 4 node patch

Surface load (q_x) : 0 kPa → -51 kPa

Search Area : Abutement 2

Loads outside search area : Include full load



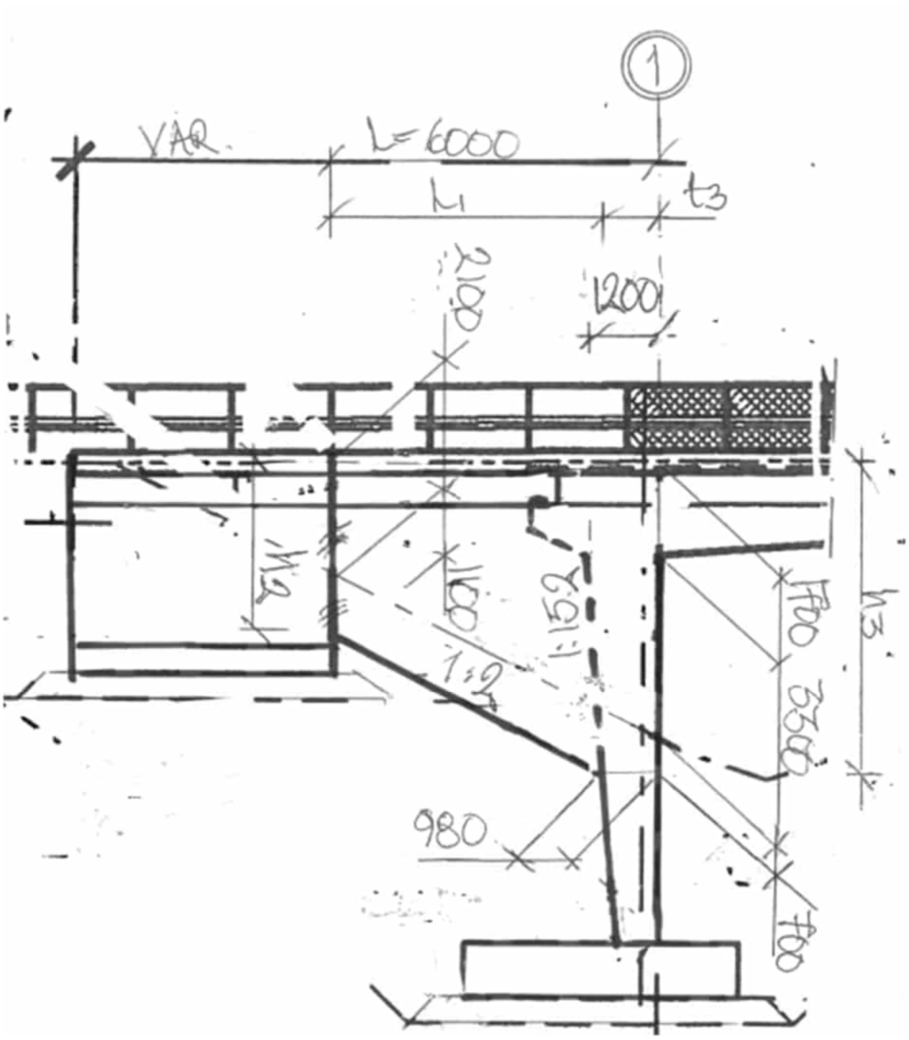


Overview 3D

3.3.3 Load against wingwalls

Design software K2.002 is used to determine earth pressure against wingwalls according to Culmans´s theory. All wingwalls are assumed to have same length (L = 6 m).

Load is distributed along edge of abutments from bottom of superstructure and distance 6.08 m downward. This assumption is on safe side.



$$t_3 = \frac{0.98m + 1.20m}{2} = 1.09m \rightarrow L_1 = L - t_3 = 6.0\ m - 1.09\ m = 4.91\ m$$

$$h_2 = 0.10m + 2.10m + 1.10m = 3.30m$$

$$h_3 = 0.10m + 1.70m + 4.00m = 5.80m$$

$$h_4 = 0.10m$$

Effective height along edge abutment:

$H_{ef} = 5.0m$: see page A3:30

Load at abutment edge quasi-load status (SLS-Q):

$N_{SLS-Q} = +81\frac{kNm}{m}$: see page A3:30

$M_{SLS-Q} = 207\frac{kNm}{m}$: see page A3:30

Characteristic earth pressure at abutment edge:

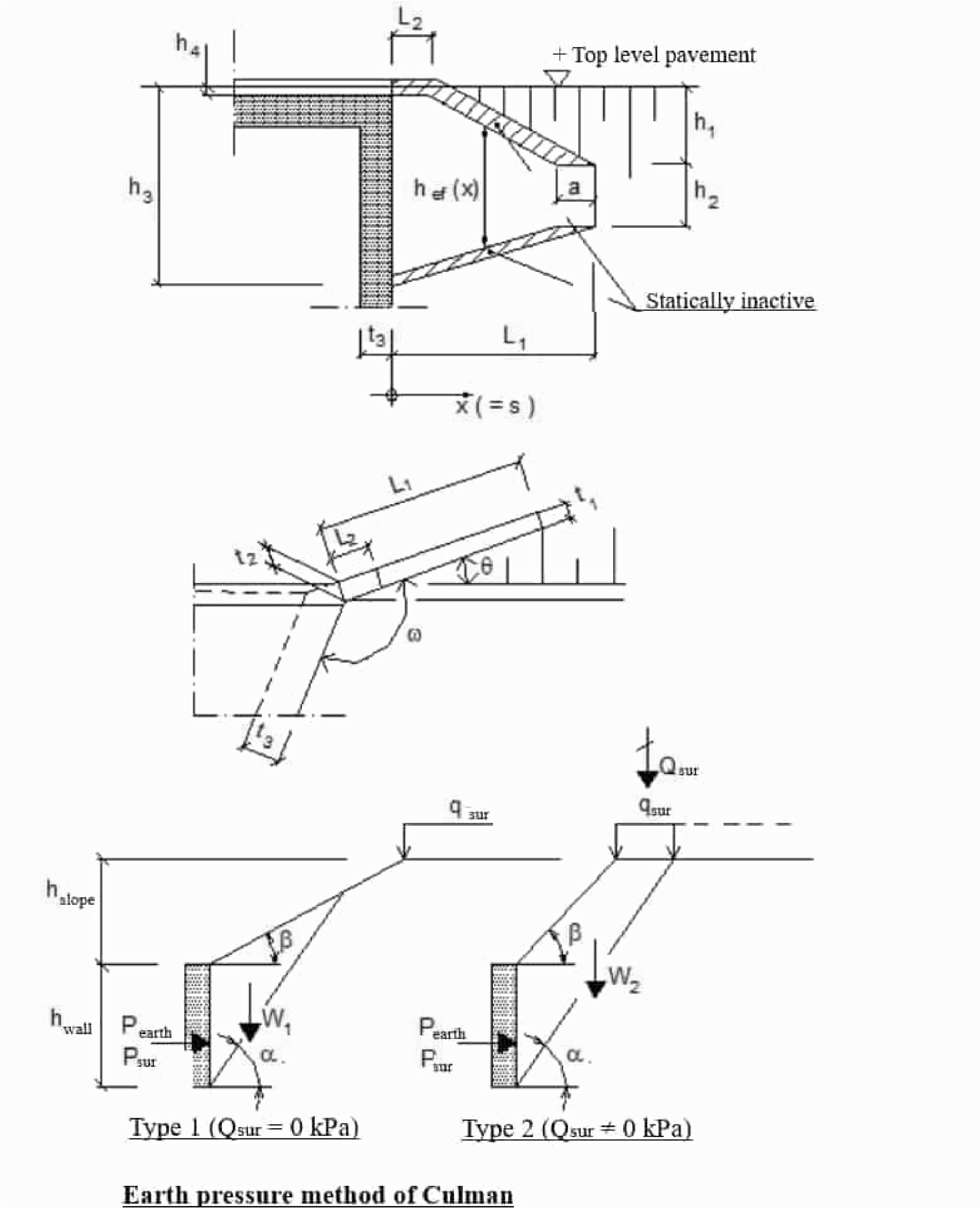
Load below is distributed along length 6.08 m in FEM-model.

$$N_{jord} = +81\frac{kN}{m} \cdot \frac{1}{1.34} = 60\frac{kN}{m}$$

$$M_{jord} = 207\frac{kNm}{m} \cdot \frac{1}{1.34} = 154\frac{kNm}{m}$$

Object : L = 6.0 m

PRINCIPLE SKETCH



INPUT

Geometry :

$L_1 := 4.91 \cdot m$ $L_2 := 1 \cdot mm$

$h_1 := 1 \cdot mm$ $h_2 := 3.30 \cdot m$ $h_3 := 5.80 \cdot m$ $h_4 := 0.10 \cdot m$

$t_1 := 0.40 \cdot m$ $t_2 := 0.40 \cdot m$ $t_3 := 1.09 \cdot m$

Angle wingwall-abutment: $\omega := 91 \cdot °$

Angle wingwall-road : $\theta := 1 \cdot °$

Distance from break point for effective height : $a := 1.4 \cdot m$

Material :

Soil material : $\gamma_{jord} := 20 \cdot \frac{kN}{m^3}$ $K_o := 0.29$ $K_a := 0.17$

Concrete : $\gamma_{btg} := 25 \cdot \frac{kN}{m^3}$

Loads :

Surcharge : $q_{över} := 20 \cdot kPa$

Load coefficients :

Earth pressure

$\psi\gamma_{ULS.1} := 1.49$ $\psi\gamma_{SLS.1} := 1.34$

Surcharge

$\psi\gamma_{ULS.2} := 1.71$ $\psi\gamma_{SLS.2} := 0$

CALCULATION

Earth pressure according method of Culman:

Nivå överkant vingmur : $mur_{ök} = \mathrm{linterp}\left[(0m \;\; L_2 \;\; L_1), (h_3 \;\; h_3 \;\; h_3 - h_1), s\right]$

Nivå underkant vingmur : $mur_{uk} = \mathrm{linterp}\left[(0m \;\; L_1), (0m \;\; h_3 - h_1 - h_2), s\right]$

Vingmurens höjd : $h_{mur} = mur_{ök} - mur_{uk}$

Släntens höjd : $h_{slänt} = \mathrm{linterp}\left[(0m \;\; L_2 \;\; L_1), (0m \;\; 0m \;\; h_1), s\right]$

Friktionsvinkel: $\varphi = \mathrm{asin}(1 - K_o)$

Lutning hos slänten ned till överkant vingmur mätt vinkelrätt mot vingen :

$$\beta = \mathrm{atan}\left[\frac{h_1}{(L_1 - L_2)\tan(\theta)}\right]$$

Vertikallast för brottfigur typ 1 (= brottlinje i slänt, sålunda inget tillskott av överlast) :

$$W_1 = h_{mur}\sin\left(\frac{\pi}{2} - \alpha\right)\cdot\left(h_{mur}\cos\left(\frac{\pi}{2} - \alpha\right) + \frac{h_{mur}\sin\left(\frac{\pi}{2} - \alpha\right)}{\tan(\alpha - \beta)}\right)\cdot\frac{\gamma_{jord}}{2}$$

Vertikallaster för brottfigur typ 2 (= brottlinje hamnar ovanför slänt vilket ger ett bidrag från överlast) :

$$W_2 = \left[(h_{mur} + h_{slänt})^2 \tan\left(\frac{\pi}{2} - \alpha\right) - \frac{h_{slänt}^{\,2}}{\tan(\beta)}\right]\cdot\frac{\gamma_{jord}}{2}$$

$$Q_{över}(q) = q\left[(h_{mur} + h_{slänt})\cdot\tan\left(\frac{\pi}{2} - \alpha\right) - \frac{h_{slänt}(s)}{\tan(\beta)}\right]$$

Vilojordtrycksresultant enligt Culmann under inverkan av jordlast + överlast :

$$p_o(q) = \left| \begin{array}{l} W_{jord} \leftarrow W_1 \ \text{ if } \ (h_{mur} + h_{slänt}) \cdot \tan(90° - \alpha) < \dfrac{h_{slänt}}{\tan(\beta)} \\ W_{jord} \leftarrow W_2 + Q_{över}(q) \ \ \text{otherwise} \\ p_{aktiv} \leftarrow W_{jord} \cdot \tan(\alpha - \varphi) \\ p_{aktiv} \cdot \dfrac{K_o}{K_a} \end{array} \right.$$

Utvärdera största last av jordtryck och överlast genom att kontrollera antal vinklar mellan φ och 90°. Överlastens lasteffekt fås som skillnaden mellan jordtrycksresultant med och utan överlast

$$p_{jord}(s) = \left| \begin{array}{l} N_\alpha \leftarrow 20st \\ \Delta\alpha \leftarrow \dfrac{90° - \varphi}{N_\alpha - 1} \\ \alpha \leftarrow \varphi \\ p_{max} \leftarrow p_o(0kPa) \\ \text{for } i \in 2..N_\alpha \\ \quad \left| \begin{array}{l} \alpha \leftarrow \alpha + \Delta\alpha \\ p_{vilo} \leftarrow p_o(0kPa) \\ \text{if } p_{vilo} > p_{max} \\ \quad \left| \begin{array}{l} p_{max} \leftarrow p_{vilo} \\ \alpha_{max} \leftarrow \alpha \end{array} \right. \end{array} \right. \end{array} \right.$$

$$p_{över}(s) = \left| \begin{array}{l} N_\alpha \leftarrow 20st \\ \Delta\alpha \leftarrow \dfrac{90° - \varphi}{N_\alpha - 1} \\ \alpha \leftarrow \varphi \\ p_{max} \leftarrow p_o(q_{över}) - p_o(0kPa) \\ \text{for } i \in 2..N_\alpha \\ \quad \left| \begin{array}{l} \alpha \leftarrow \alpha + \Delta\alpha \\ p_{över} \leftarrow p_o(q_{över}) - p_o(0kPa) \\ \text{if } p_{över} > p_{max} \\ \quad \left| \begin{array}{l} p_{max} \leftarrow p_{över} \\ \alpha_{max} \leftarrow \alpha \end{array} \right. \end{array} \right. \end{array} \right.$$

Forces earth pressure & surcharge :

$$H_{jord}(x_s) = \int_{x_s}^{L_1} p_{jord}(s)\, ds \qquad M_{jord}(x_s) = \int_{x_s}^{L_1} (s - x_s) \cdot p_{jord}(s)\, ds$$

$$H_{över}(x_s) = \int_{x_s}^{L_1} p_{över}(s)\, ds \qquad M_{över}(x_s) = \int_{x_s}^{L_1} (s - x_s) \cdot p_{över}(s)\, ds$$

Lastkombinering - Lk ULS och Lk SLS :

Snittkraft i frontmur för inspänningssnitt :

$$N'_{ULS.front} = \left(\psi\gamma_{ULS.1} \cdot H'_{jord}(0 \cdot m) + \psi\gamma_{ULS.2} \cdot H'_{över}(0 \cdot m)\right) \cdot \sin(\alpha)$$

$$M'_{ULS.front} = \psi\gamma_{ULS.1} \cdot M'_{jord}(0 \cdot m) + \psi\gamma_{ULS.2} \cdot M'_{över}(0 \cdot m) + N'_{ULS.front} \cdot \frac{t_3}{2}$$

$$N'_{SLS.front} = \left(\psi\gamma_{SLS.1} \cdot H'_{jord}(0 \cdot m) + \psi\gamma_{SLS.2} \cdot H'_{över}(0 \cdot m)\right) \cdot \sin(\alpha)$$

$$M'_{SLS.front} = \psi\gamma_{SLS.1} \cdot M'_{jord}(0 \cdot m) + \psi\gamma_{SLS.2} \cdot M'_{över}(0 \cdot m) + N'_{SLS.front} \cdot \frac{t_3}{2}$$

Snittkrafter i vingmur :

$$Q'_{ULS}(s) = \psi\gamma_{ULS.1} \cdot H'_{jord}(s) + \psi\gamma_{ULS.2} \cdot H'_{över}(s)$$

$$M'_{ULS}(s) = \psi\gamma_{ULS.1} \cdot M'_{jord}(s) + \psi\gamma_{ULS.2} \cdot M'_{över}(s)$$

$$M'_{SLS}(s) = \psi\gamma_{SLS.1} \cdot M'_{jord}(s) + \psi\gamma_{SLS.2} \cdot M'_{över}(s)$$

Beräkning av effektiv höjd :

$$\Delta h = h_3 - h_2 - h_1$$

$$\Delta h = 2.499\ m$$

Nivå överkant effektiv vingmur :

$$Nivå_{ök} = \mathrm{linterp}\left[\left(0m\ \ L_2\ \ L_1 - a\ \ L_1\right), \left(h_3 - h_1\ \ h_3 - h_4\ \ h_3 - h_1\ \ h_3 - h_1\right), s\right]$$

Nivå underkant effektiv vingmur :

$$Nivå_{uk} = \mathrm{linterp}\left[\left(0m\ \ L_1 - L_2\ \ L_1\right), \left(\frac{a}{L} \cdot \Delta h\ \ \Delta h\ \ \Delta h\right), s\right]$$

Effektiv höjd vingmur :

$$h_{ef}(s) = Nivå_{ök} - Nivå_{uk}$$

Design forces (Lc ULS & Lc SLS) distributes over effective height :

Snittkraft i frontmur för inspänningssnitt :

$$H_{ef} = h_{ef}(0m)$$

$$N_{ULS.front} = \frac{N'_{ULS.front}}{H_{ef}}$$

$$M_{ULS.front} = \frac{M'_{ULS.front}}{H_{ef}}$$

$$N_{SLS.front} = \frac{N'_{SLS.front}}{H_{ef}}$$

$$M_{SLS.front} = \frac{M'_{SLS.front}}{H_{ef}}$$

Snittkrafter i vingmur :

$$Q_{ULS.ving} = \frac{Q'_{ULS}(s)}{h_{ef}(s)}$$

$$M_{ULS.ving} = \frac{M'_{ULS}(s)}{h_{ef}(s)}$$

$$M_{SLS.ving} = \frac{M'_{SLS}(s)}{h_{ef}(s)}$$

Dead weight wingwall :

$$t = t_2 - \frac{t_2 - t_1}{L_1} \cdot s$$

$$A(s) = h_{mur} \cdot t$$

$$V_{egen} = \gamma_{btg} \int_0^{L_1} A(s)\, ds$$

$$M_{egen} = \gamma_{btg} \int_0^{L_1} A(s) \cdot s\, ds$$

RESULTS

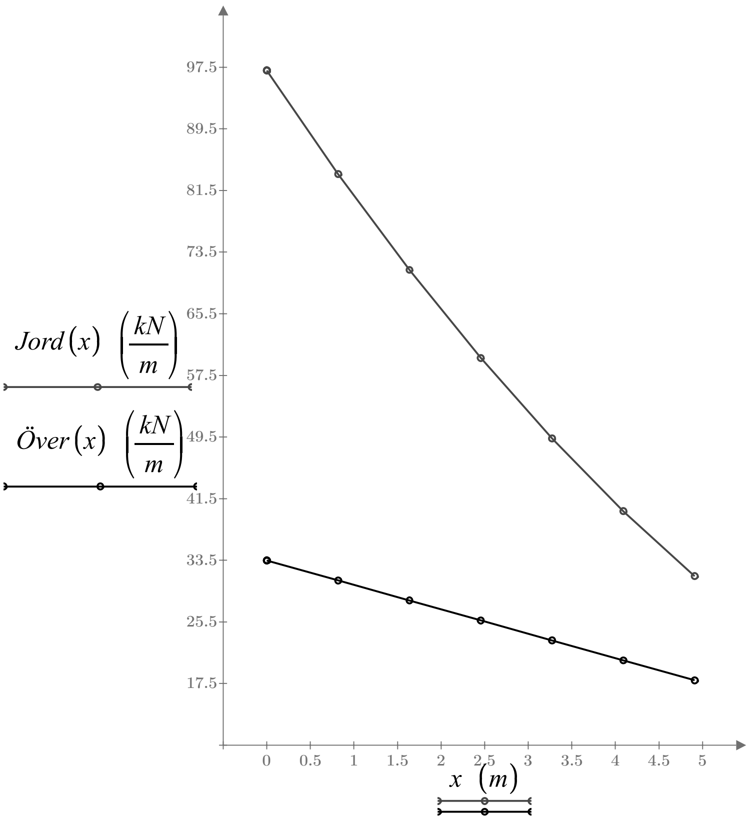
Partial results

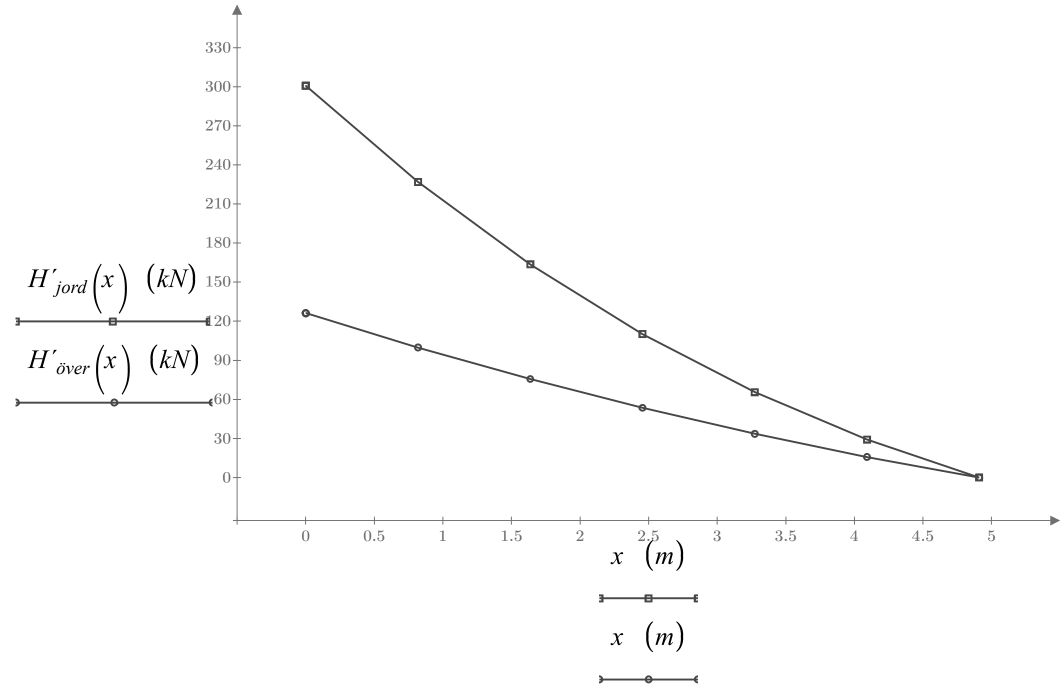
$\varphi = 45\ °$: design friction angle associated to K_o

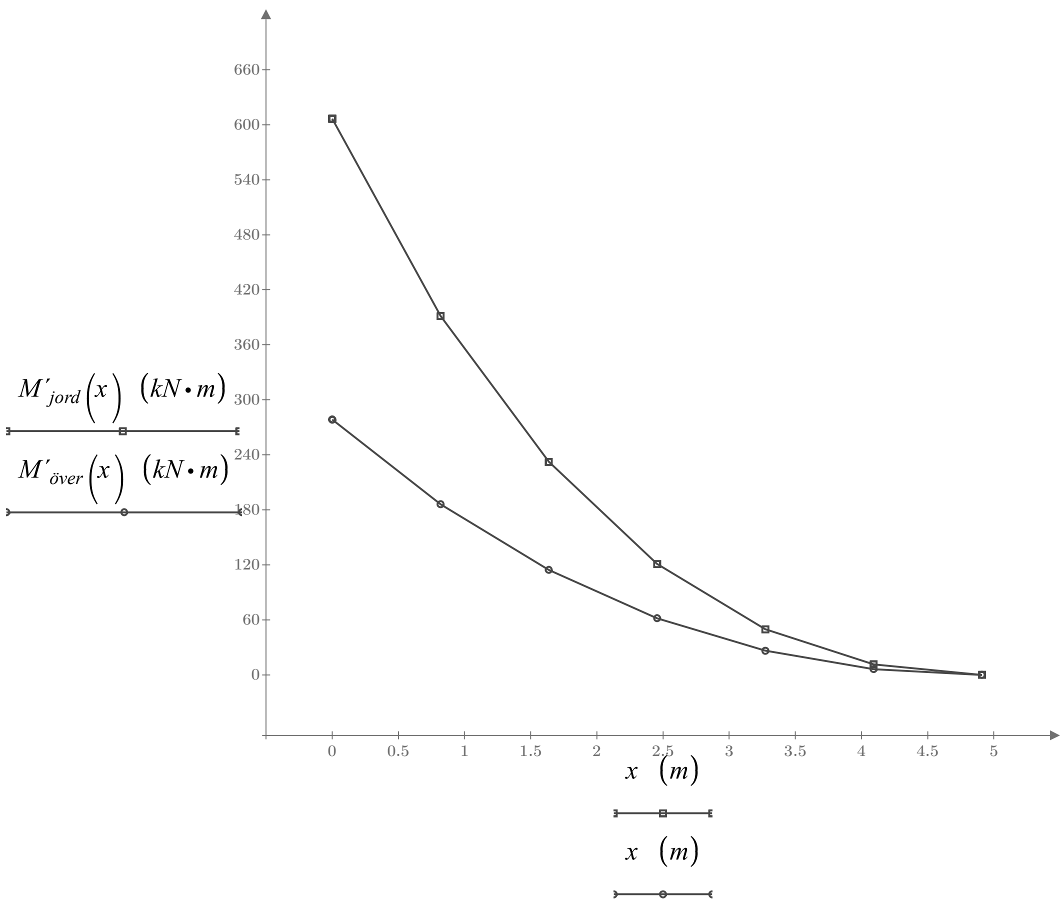
$\beta = 1\ °$: angle from top of road and to top of wing wall measured perpendicular to wingwall

Evaluation earth pressure, surcharge & associated critical rupture angle in table format :

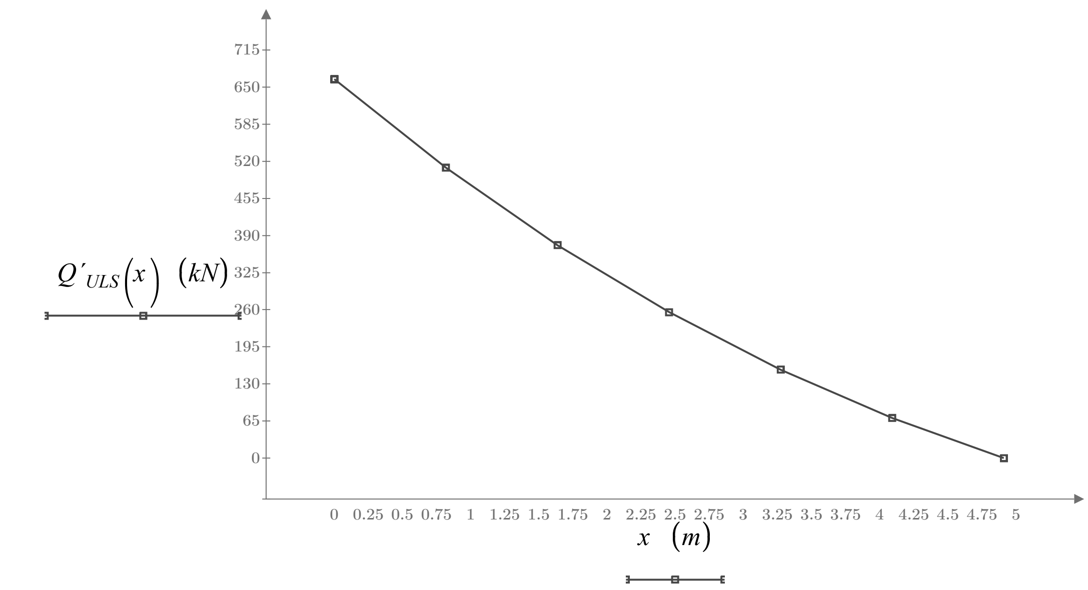
x	p_{jord}	α_{tillh}	$p_{över}$	α_{tillh}
0	97,1	66	33,5	66
0,000	97,1	66	33,5	66
0,001	97,1	66	33,5	66
0,001	97,1	66	33,5	66
0,82	83,6	66	30,9	66
1,64	71,2	66	28,3	66
2,46	59,8	66	25,7	66
3,27	49,3	66	23,1	66
4,09	39,9	66	20,5	66
4,91	31,4	66	17,9	66
m	kN/m	grader	kN/m	grader

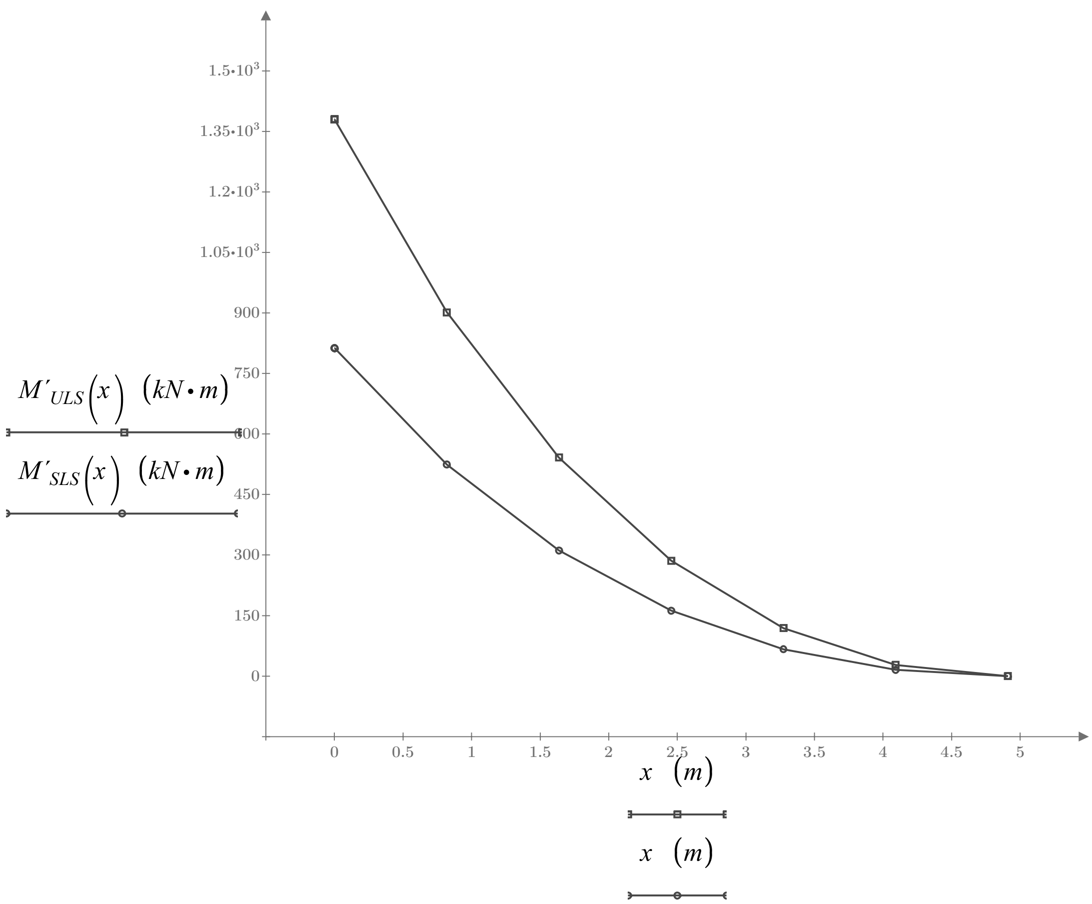



330
300
270
240
210
180
150
120
90
60
30
0
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
$H'_{jord}(x)$ (kN)
$H'_{över}(x)$ (kN)
x (m)
x (m)

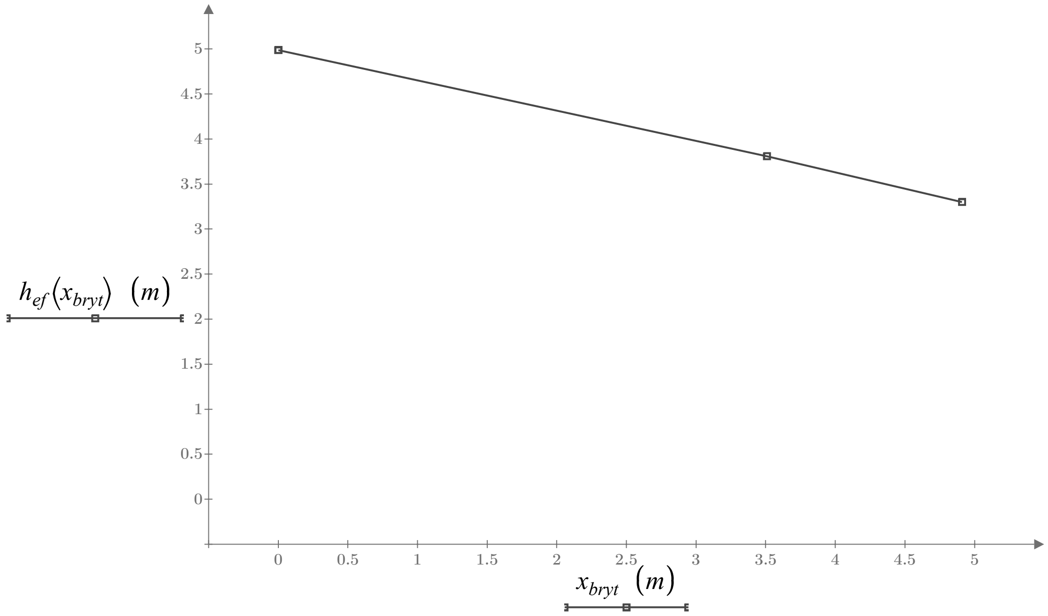

660
600
540
480
420
360
300
240
180
120
60
0
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
$M'_{jord}(x)$ $(kN \cdot m)$
$M'_{över}(x)$ $(kN \cdot m)$
x (m)
x (m)

Evaluation design forces associated to LC ULS & LC SLS :





Evaluation of effective height :



Detailed results

Design forces in section where wingwall is clamped to abutment:

Effective height in clamped section: $H_{ef} = 5.0\ m$

$N_{ULS.front}$	$M_{ULS.front}$	$N_{SLS.front}$	$M_{SLS.front}$
133	349	81	207
kN/m	kNm/m	kN/m	kNm/m

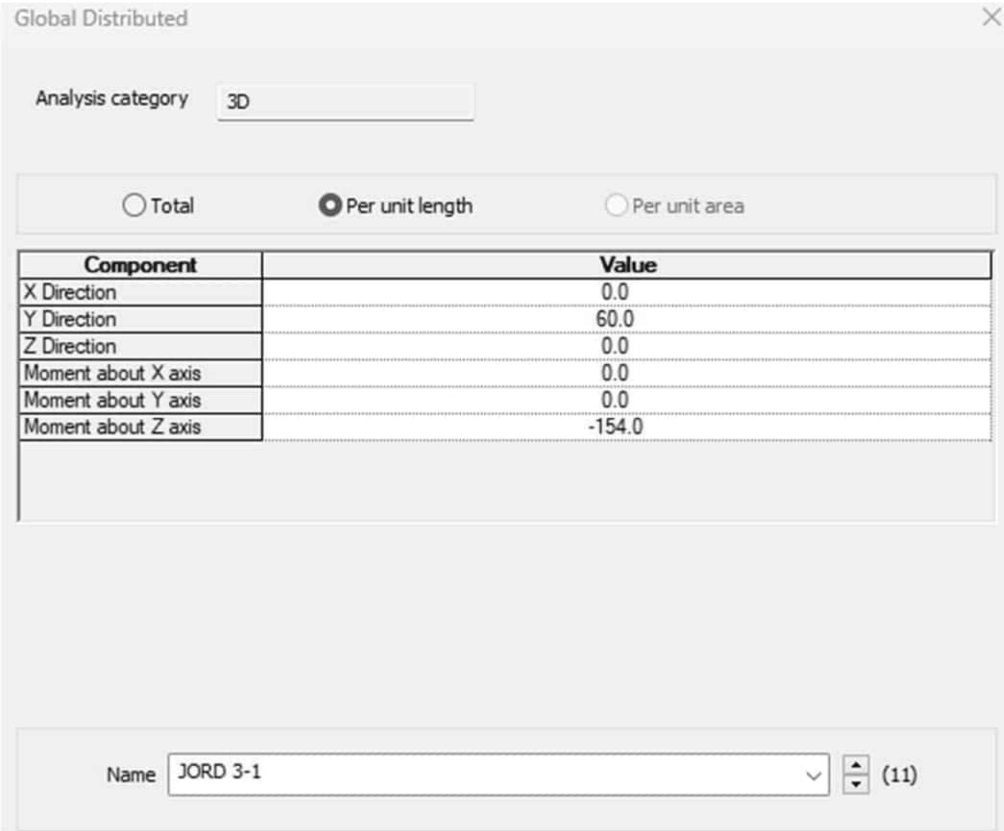
Design forces in wingwall:

x	$Q_{ULS.ving}$	$M_{ULS.ving}$	$M_{SLS.ving}$	t (x)
0	133	277	163	0,400
0,000	133	277	163	0,400
0,001	133	277	163	0,400
0,001	133	277	163	0,400
0,82	108	191	111	0,400
1,64	84	122	70	0,400
2,46	61	69	39	0,400
3,27	40	31	17	0,400
4,09	20	8	4	0,400
4,91	0	0	0	0,400
m	kN/m	kNm/m	kNm/m	m

Load case: JORD 3-1
(Northern wingwall abutment 1)

$$p_y = +60\,\frac{kN}{m}$$

$$m_z = -154\,\frac{kNm}{m}$$

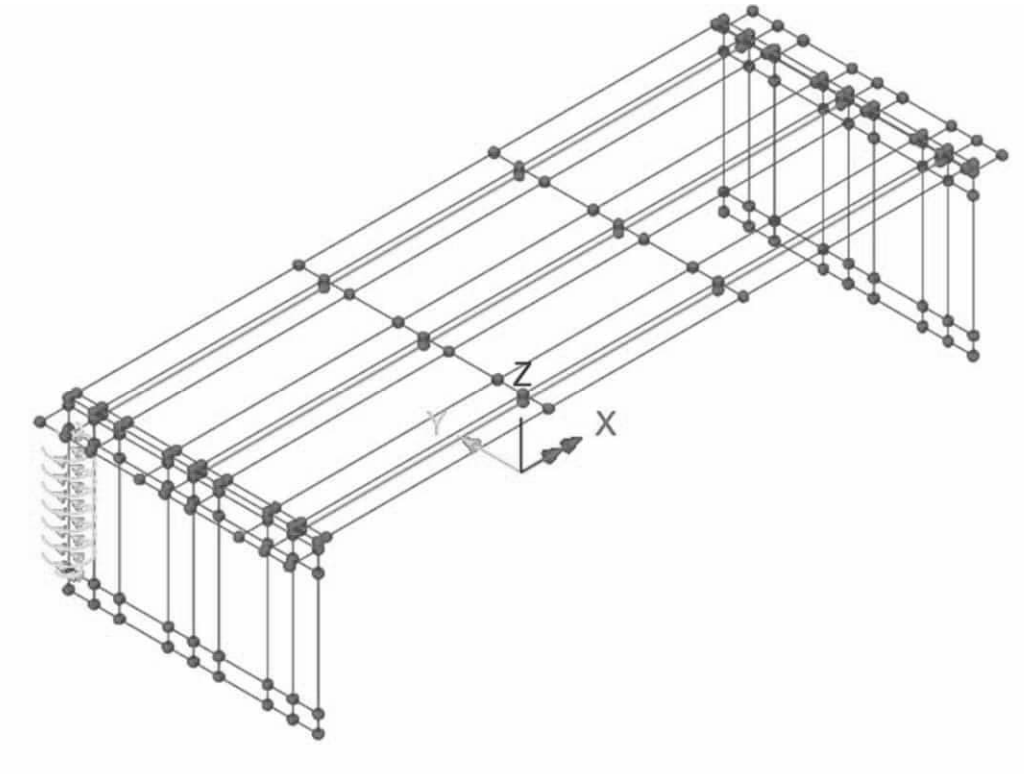

Global Distributed

Analysis category 3D

Total Per unit length Per unit area

Component	Value
X Direction	0.0
Y Direction	60.0
Z Direction	0.0
Moment about X axis	0.0
Moment about Y axis	0.0
Moment about Z axis	-154.0

Name JORD 3-1 (11)

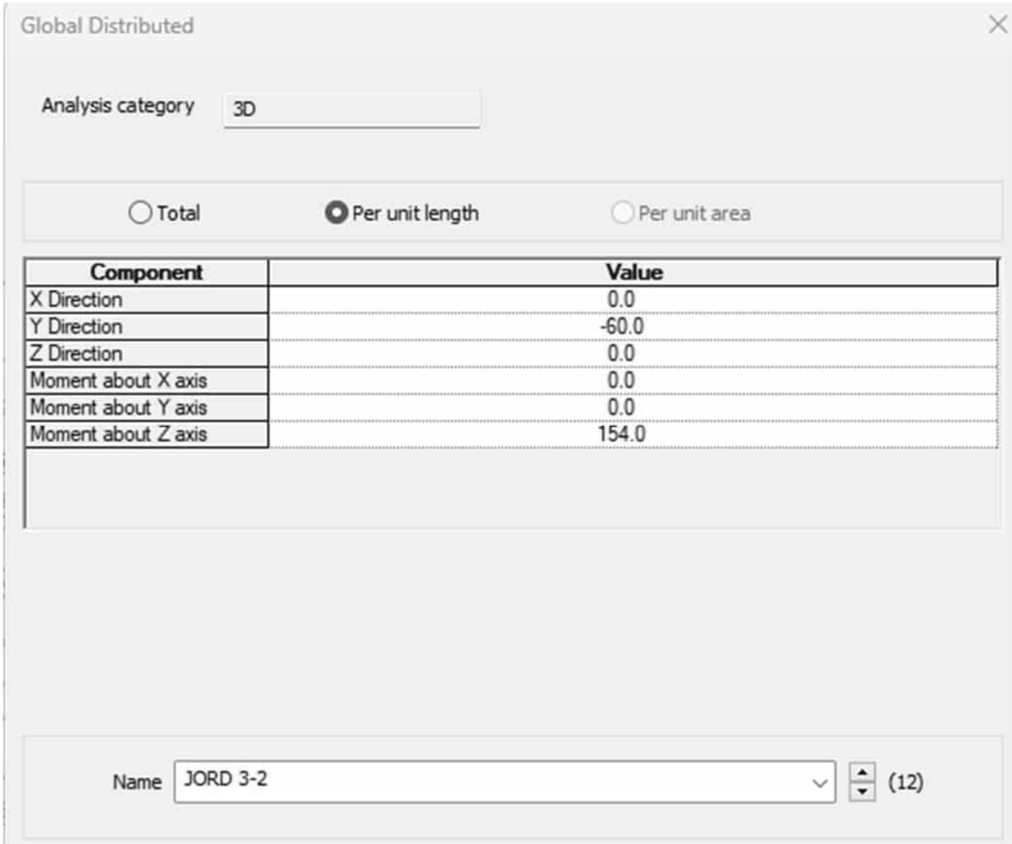


Overview 3D

Load case : JORD 3-2
(Southern wingwall abutment 1)

$$p_y = -60\frac{kN}{m}$$

$$m_z = +154\frac{kNm}{m}$$

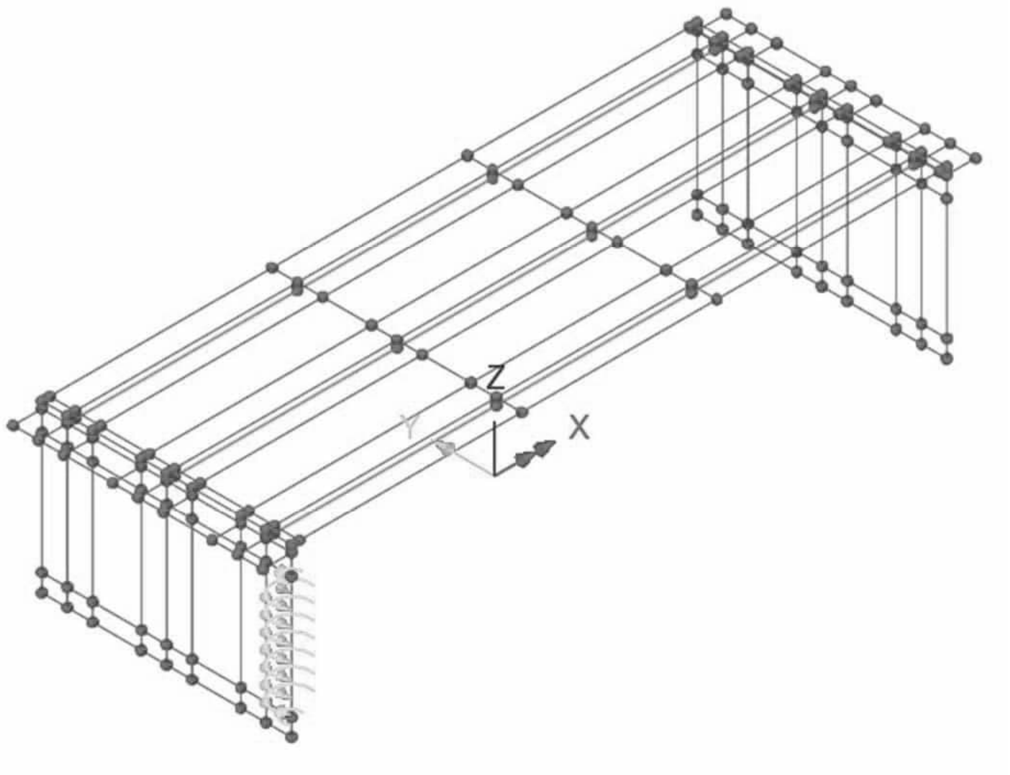

Global Distributed

Analysis category: 3D

Total / Per unit length (selected) / Per unit area

Component	Value
X Direction	0.0
Y Direction	-60.0
Z Direction	0.0
Moment about X axis	0.0
Moment about Y axis	0.0
Moment about Z axis	154.0

Name: JORD 3-2 (12)

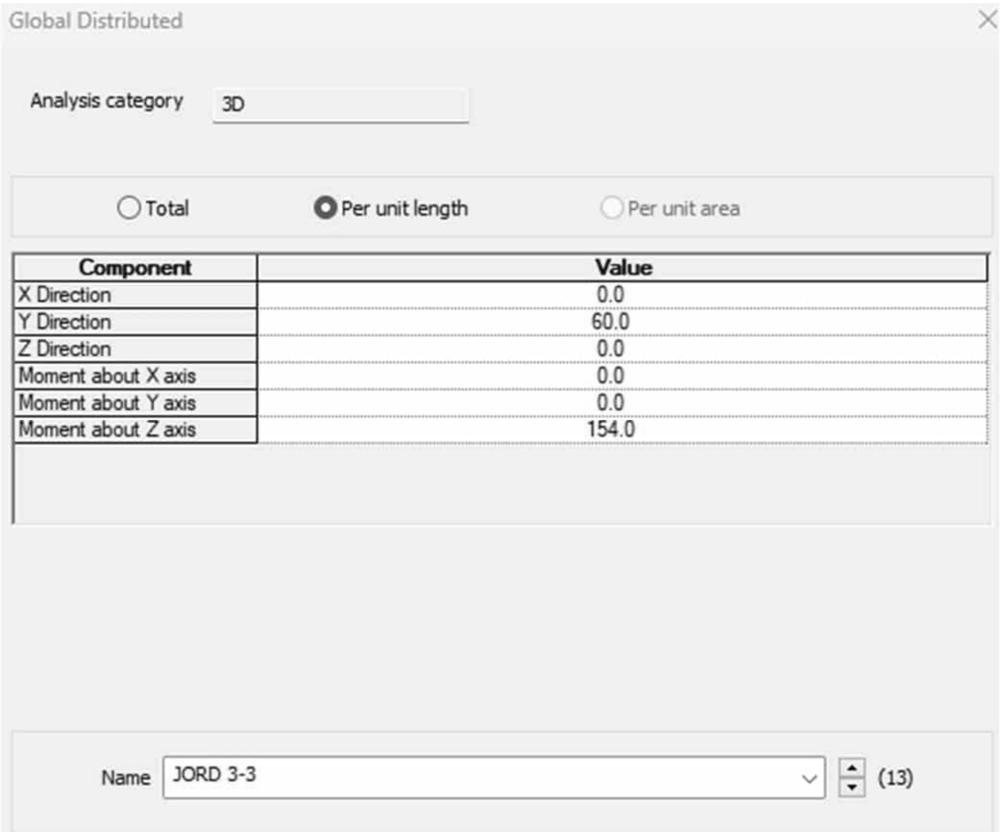


Overview 3D

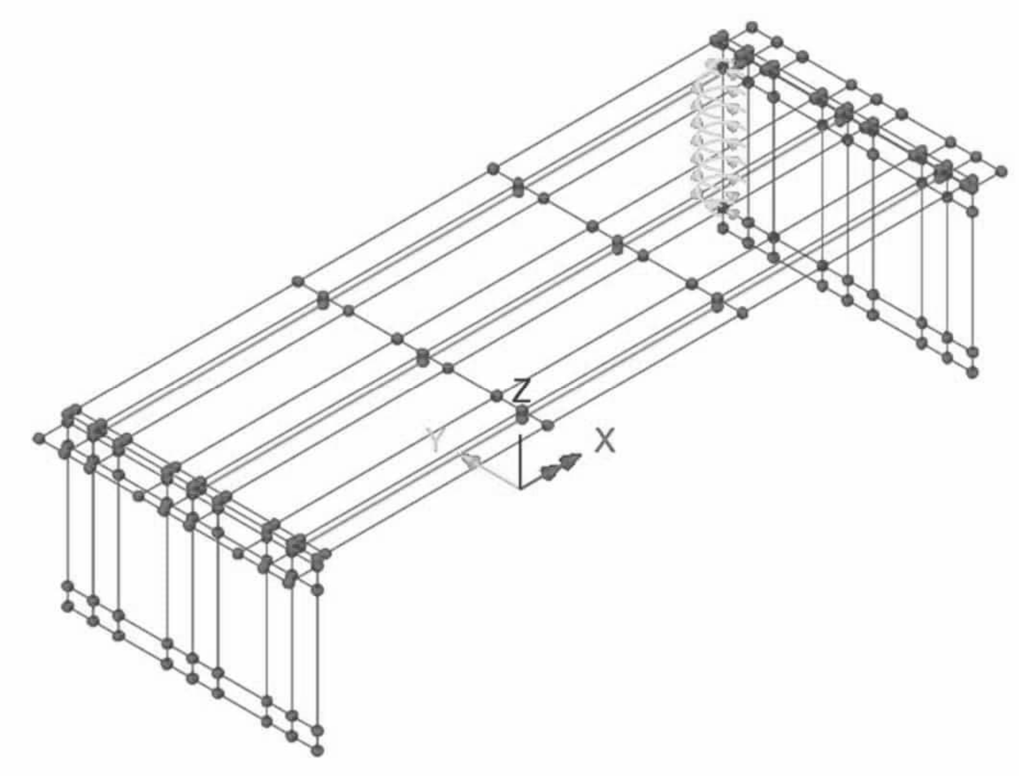
Load case : JORD 3-3
(Northern wingwall abutment 2)

$$p_y = +60 \frac{kN}{m}$$

$$m_z = +154 \frac{kNm}{m}$$



Component	Value
X Direction	0.0
Y Direction	60.0
Z Direction	0.0
Moment about X axis	0.0
Moment about Y axis	0.0
Moment about Z axis	154.0

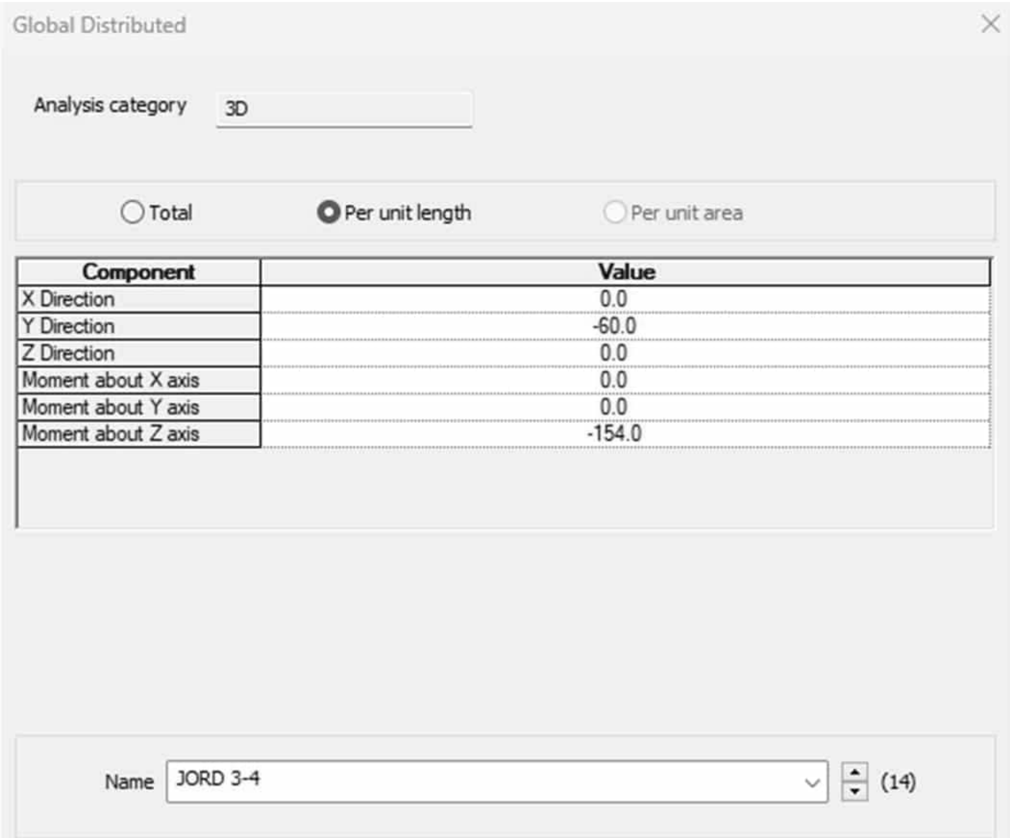


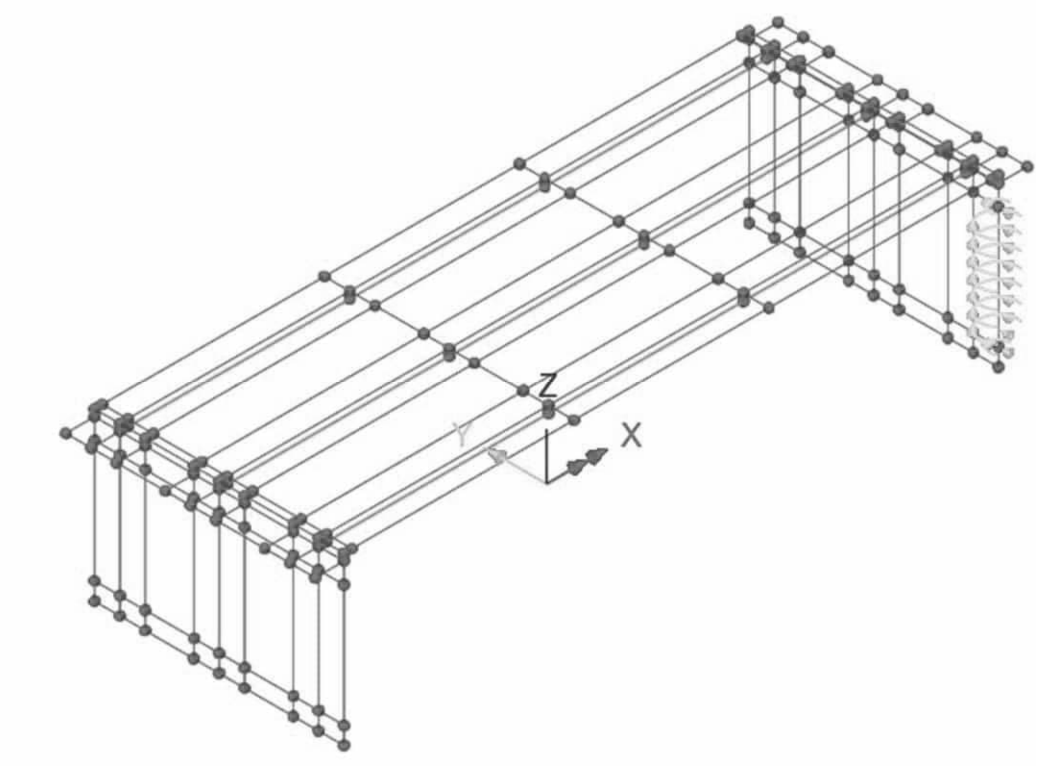
Overview 3D

Load case : JORD 3-4
(Southern wingwall abutment 2)

$$p_y = +60\frac{kN}{m}$$

$$m_z = +154\frac{kNm}{m}$$





Overview 3D

3.3.4 Summary earth pressure: JORD

Combination of occurring load cases.

Basic loadcombination JORD :

Loadcase	Factor
JORD 1	1
JORD 2	1
JORD 3-1	1
JORD 3-2	1
JORD 3-3	1
JORD 3-4	1

3.4 SUPPORT SETTLEMENT

Load applied to Analysis : *Analysis 1*

Load effect of support settlement shall be considered in TRVINFRA-00227 section 7.2.1.1.1.1.

Only horizontal support displacement in the longitudinal direction of the bridge needs to be considered. Additionally, it is stated that horizontal and vertical support displacements do not need to be combined.

A horizontal support displacement in the longitudinal direction of the bridge (x-direction) of ±5 mm for each support is applied.

Vertical settlement difference (Z-direction) corresponding to support settlement of 10 mm is assumed to occur for all supports.

A verification will be performed to demonstrate that this is on the safe side.

Horizontal displacement (X-direction) amounts to ±10 mm.

When determining associated load effects, reduction is carried out with consideration to creep and cracking.

Note:
The impact of support settlement in serviceability limit state (SLS) according to SS-EN 1992-1-1 §2.3.1.3. If this occurs, a gradual crack development should be applied according to SS-EN 1992-1-1 §5.4(3). Reduction is carried out with consideration to creep and cracking.

The impact of support settlement is not considered in the ultimate limit state (ULS) according to SS-EN 1992-1-1 §2.3.1.3 for this type of bridge.

3.4.1 Vertical settlement

3.4.1.1 Support 1

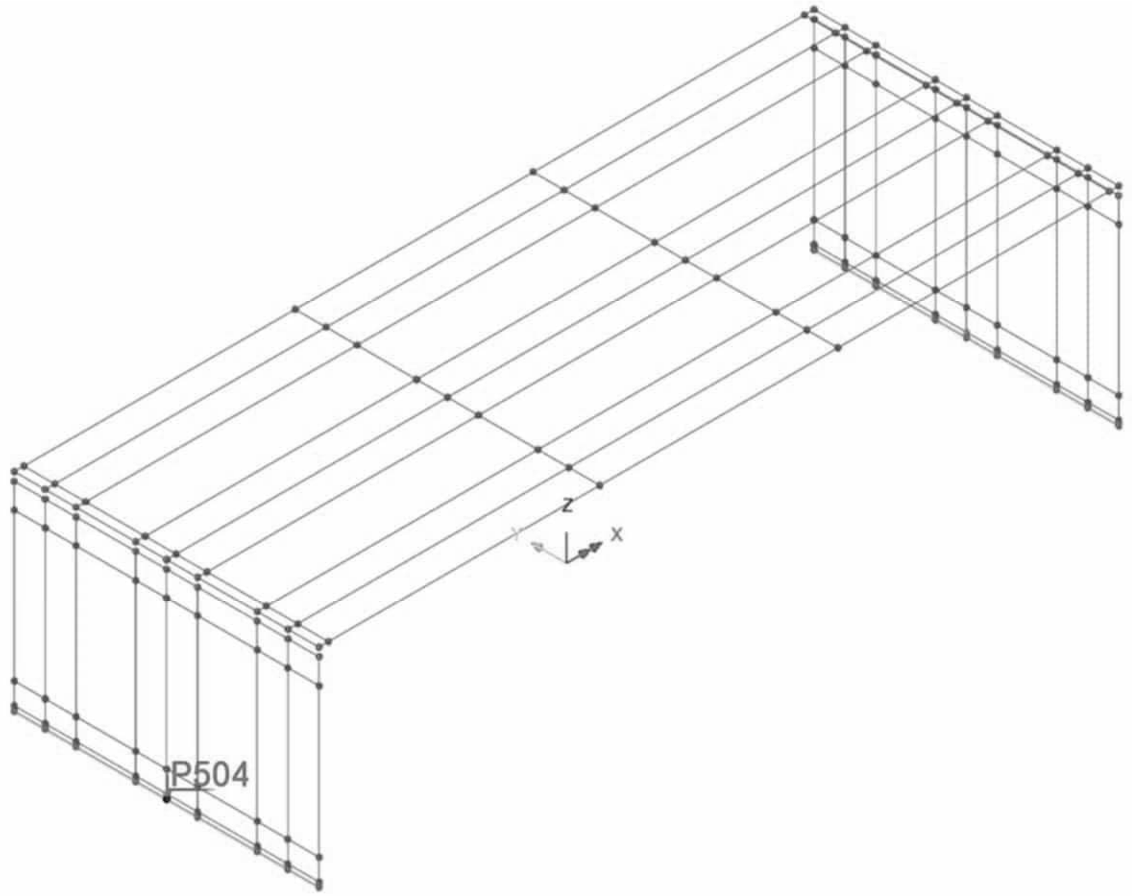
Load: STOD_1Z

Structural loading : Perscribed Displacement

Translation at point in Z direction : -0.010 m

Loadcase : STOD_1Z

Point : P504



Overview 3D

3.4.1.2 Support 2

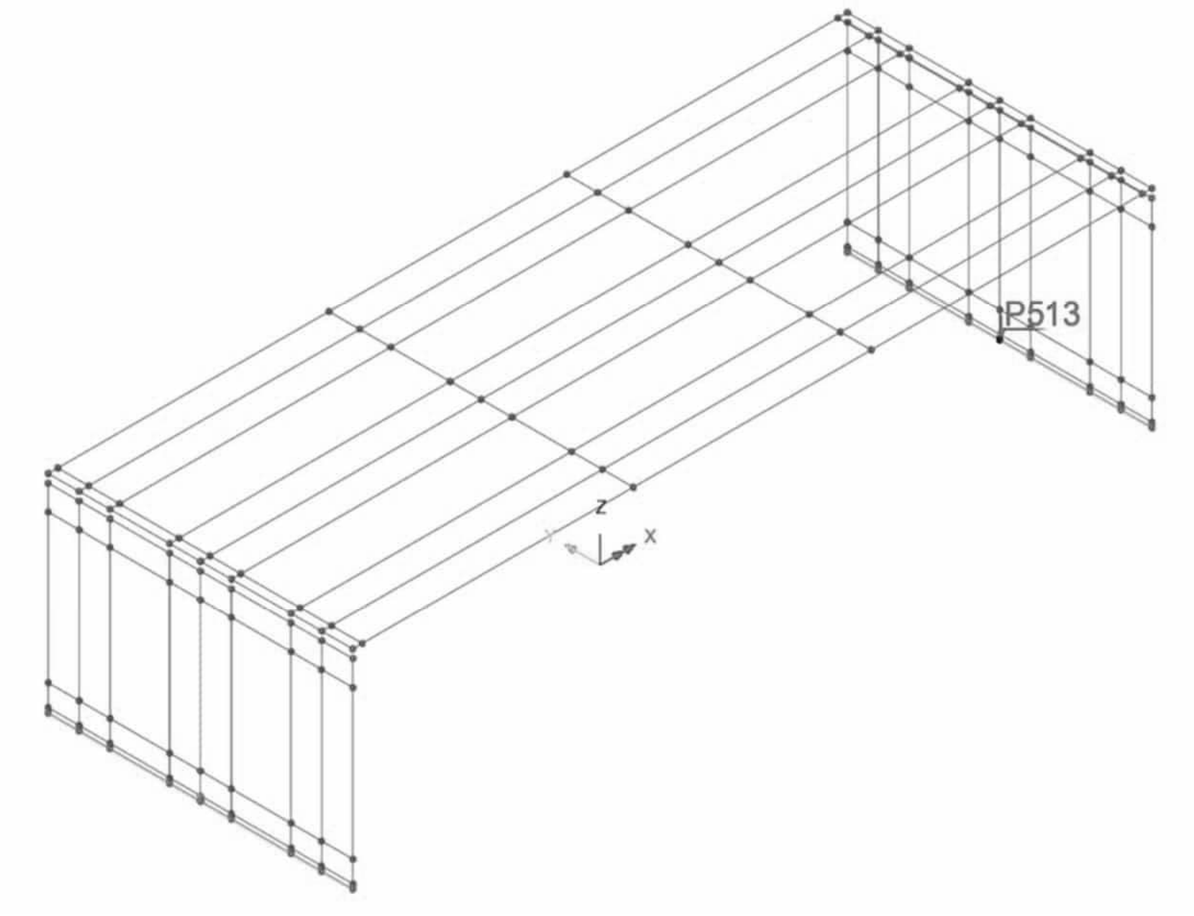
Load: STOD_2Z

Structural loading : Perscribed Displacement

Translation at point in Z direction : -0.010 m

Loadcase : STOD_2Z

Point : P513



Overview 3D

3.4.2 Horizontal settlement

3.4.2.1 Support 1

Load : STOD_1X

Structural loading : Prescribed Displacement

Translation at point in X direction : 0.010 m

Loadcase : STOD_1X+

Point : P504

3.4.2.2 Support 2

Load : STOD_2X

Structural loading : Prescribed Displacement

Translation at point in X direction : 0.010 m

Loadcase : STOD_2X+

Point : P513

3.4.3 Load combination settlement: STOD

Basic load cases :

Load case	Load	Factor
STOD_1X-	STOD_1X+	-1
STOD_2X-	STOD_2X+	-1

Envelope STOD-X :

Load case
STOD_1X+
STOD_2X+
STOD_1X-
STOD_2X-

Envelope STOD-Z :

Load case
STOD_1Z
STOD_2Z

Envelope STOD :

Load case
STOD-X
STOD-Z

3.5 CREEP

Total creep is determined according to SS-EN 1992-1-1 §3.1.4 and TRVINFRA-00227 section 7.1.6.4 for RH 80% at time t_1.

Time for first loading (= time when formwork was removed) is termed t_0.

$t_0 = 5\ days$

$t_1 = 120\ years$

Bridge consists of parts with different thicknesses as seen below.

Creep is determine using Mathcad program PROG A001.

Substructure (b = 12.8 m; C35/45):
For t = 0.80 m → $\phi(t_1, t_0) = 1.95$: see page A3:49
For t = 1.20 m → $\phi(t_1, t_0) = 1.93$: see page A3:49

Superstructure (b = 2.60 m; C40/50):
For t = 1.20 m → $\phi(t_1, t_0) = 1.76$: see page A3:49
For t = 1.70 m → $\phi(t_1, t_0) = 1.73$: see page A3:49

Creep $\phi(t_1, t_0) = 1.70$ is used for the entire bridge on safe side since reduces stiffness and associated constraint forces ($\therefore$ support settlement, shrinkage and temperature).

$$\varepsilon_{cc}(t_1, t_0) = \varphi(t_1, t_0) \cdot \frac{\sigma_c}{E_c}$$

To study the effect concrete stiffness according to SS-EN 1992-1-1 5.8.7 creep values seen below are used.

Load cases	φ
Permanent	1.9
Variable excluding temperature	0
Temperature	0.3*

* = According to Swedish work practice

$$E^{system} = \frac{E_{cm}}{1+\varphi}$$

Instead of adjusting E-modulus the load coefficients are adjusted.

$$f_{KRYMP} = \frac{1}{1+\varphi_{ef}} = \frac{1}{1+1.70} = 0.37$$

$$f_{STÖD} = \frac{1}{1+\varphi_{ef}} = \frac{1}{1+1.70} = 0.37$$

$$f_{JTEMP} = \frac{1}{1+\varphi_{ef}} = \frac{1}{1+0.3} = 0.77$$

<u>Note:</u>
According to TRVINFRA-00227 section 7.2.1.1.2.4, no reduction is permitted for uneven temperature across the cross-section. This is because this temperature variation is considered to have a very short duration (only over the day).

Object: Abutment & superstructure

INPUT

Number of sections

$N := 4\ pcs$

Geometry & concrete (C30/37, C35/45, C40/50 & C45/55)

Section	B	H	Concrete
1	12,8	0,8	C30/37
2	12,8	1,2	C30/37
3	2,6	1,2	C40/50
4	2,6	1,7	C40/50
-	m	m	-

Relative humidity

$RH := 80\%$

Time of loading (i.e. removal formwork)

$t_0 := 5\ days$

Studied time for determination of creep

$t_2 := 120\ year \qquad t_2 = 43800\ days$

Input receipt

$f_{cm} = [38\ \ 38\ \ 48\ \ 48]\ MPa$

CALCULATION

Area

$$A_c := B \cdot H$$

Perimeter exposed to "air"

$$u := 2 \cdot B$$

Effective thickness structure

$$h_0 := \frac{2 \cdot A_c}{u}$$

Creep coefficients

The expressions for determining the creep coefficients are taken from SS-EN 1992-1-1 Annex B.1.

$$\alpha_1 := \left(\frac{35 \cdot MPa}{f_{cm}}\right)^{0.7} = \begin{bmatrix} 0.94 \\ 0.94 \\ 0.8 \\ 0.8 \end{bmatrix}$$

$$\alpha_2 := \left(\frac{35 \cdot MPa}{f_{cm}}\right)^{0.2} = \begin{bmatrix} 0.984 \\ 0.984 \\ 0.939 \\ 0.939 \end{bmatrix}$$

$$\alpha_3 := \left(\frac{35 \cdot MPa}{f_{cm}}\right)^{0.5} = \begin{bmatrix} 0.96 \\ 0.96 \\ 0.854 \\ 0.854 \end{bmatrix}$$

$$\varphi_{RH} := \left\| \begin{array}{l} \text{if } f_{cm} \le 35\ MPa \\ \quad \left\| \varphi_{RH} \leftarrow 38 \cdot MPa \right. \\ \text{else} \\ \quad \left\| \varphi_{RH} \leftarrow \left(1 + \dfrac{1 - RH}{0.1 \cdot \sqrt[3]{\dfrac{h_0}{mm}}} \cdot \alpha_1\right) \cdot \alpha_2 \right. \end{array} \right.$$

$$\varphi_{RH} = \begin{bmatrix} 1.184 \\ 1.158 \\ 1.08 \\ 1.065 \end{bmatrix}$$

$$\beta_0 := \frac{1}{0.1 + t_0^{\,0.20}} = 0.68$$

$$\beta_{fcm} := \frac{16.8}{\sqrt{\dfrac{f_{cm}}{MPa}}} = \begin{bmatrix} 2.73 \\ 2.73 \\ 2.42 \\ 2.42 \end{bmatrix}$$

$$\beta_H := \begin{array}{l} \text{if } f_{cm} \le 35 \cdot MPa \\ \quad \beta_{H.max} \leftarrow 1500 \\ \quad \text{if } 1.5 \cdot \left(1 + (0.012 \cdot 100 \cdot RH)^{18}\right) \cdot \dfrac{h_0}{mm} + 250 > \beta_{H.max} \\ \quad\quad \beta_H \leftarrow \beta_{H.max} \\ \quad \text{else} \\ \quad\quad \beta_H \leftarrow 1.5 \cdot \left(1 + (0.012 \cdot 100 \cdot RH)^{18}\right) \cdot \dfrac{h_0}{mm} + 250 \\ \text{if } f_{cm} > 35 \cdot MPa \\ \quad \beta_{H.max} \leftarrow 1500 \cdot \alpha_3 \\ \quad \text{if } 1.5 \cdot \left(1 + (0.012 \cdot 100 \cdot RH)^{18}\right) \cdot \dfrac{h_0}{mm} + 250 > \beta_{H.max} \\ \quad\quad \beta_H \leftarrow \beta_{H.max} \\ \quad \text{else} \\ \quad\quad \beta_H \leftarrow 1.5 \cdot \left(1 + (0.012 \cdot 100 \cdot RH)^{18}\right) \cdot \dfrac{h_0}{mm} + 250 \cdot \alpha_3 \end{array}$$

$$\beta_H = \begin{bmatrix} 1440 \\ 1440 \\ 1281 \\ 1281 \end{bmatrix}$$

$$\beta_c := \left(\frac{t_2 - t_0}{\beta_H + t_2 - t_0}\right)^{0.3} = \begin{bmatrix} 0.99 \\ 0.99 \\ 0.99 \\ 0.99 \end{bmatrix}$$

$$\varphi_{t0} := \varphi_{RH} \cdot \beta_{fcm} \cdot \beta_0 = \begin{bmatrix} 2.18 \\ 2.13 \\ 1.77 \\ 1.75 \end{bmatrix}$$

RESULTS

$$\varphi_{t2} := \varphi_{t0} \cdot \beta_c = \begin{bmatrix} 2.16 \\ 2.11 \\ 1.76 \\ 1.73 \end{bmatrix}$$

3.6 SHRINKAGE

Load applied to Analysis : *Analysis 2*

Total shrinkage according to SS-EN 1992-1-1 §3.1.4 and TRVINFRA-00227 section 7.1.6.4 for RH 80% at time t_1.

Determination of load effect from shrinkage should consider the reduced concrete stiffness from creep.

$t_s = 0\ days$

$t_1 = 120\ years$

Shrinkage is determined using Mathcad program PROG A002 after time t_1.

Substructure (b = 12.8 m; C35/45):
For t = 0.80 m → $\varepsilon_{cs}\ (t_1) = 0.024\%$: see page A3:53
For t = 1.20 m → $\varepsilon_{cs}\ (t_1) = 0.023\%$: see page A3:53

Superstructure (b = 2.60 m; C40/50):
For t = 1.20 m → $\varepsilon_{cs}\ (t_1) = 0.025\%$: see page A3:53
For t = 1.70 m → $\varepsilon_{cs}\ (t_1) = 0.024\%$: see page A3:53

Shrinkage $\varepsilon_{cs} = 0.025\%$ is applied to all construction parts for safety. The movement corresponds to that which occurs due to an imaginary temperature load ∴ T = -25°C.

Remark
Shrinkage must be considered for service state (SLS) see SS-EN 1992-1-1 §2.3.2.2(1).

Shrinkage does not have to be used for ultimate state (ULS) see SS-EN 1992-1-1 §2.3.2.2(2).

Object: Abutment & superstructure

Number of sections

$N := 4\ pcs$

Geometry & concrete (C30/37, C35/45, C40/50 & C45/55)

Section	B	H	Concrete
1	12,8	0,8	C30/37
2	12,8	1,2	C30/37
3	2,6	1,2	C40/50
4	2,6	1,7	C40/50
-	m	m	-

Relative humidity

$RH := 80\%$

Time of load (i.e. removal formwork)

$t_0 := 5 \cdot days$

Studied time for determination of shrinkage

$t_2 := 120\ year$ $\qquad t_2 = 43800\ days$

Cement class (S, N, R)

$Klass := \text{“N”}$

Concrete age when drying starts

$t_s := 0 \cdot days$

Input receipt

$f_{cm} = [38\ \ 38\ \ 48\ \ 48]\ MPa$ $\qquad f_{ck} = [30\ \ 30\ \ 40\ \ 40]\ MPa$ $\qquad f_{cmo} = 10\ MPa$

CALCULATION

Area

$A_c := B \cdot H$

Perimeter exposed to "air"

$u := 2 \cdot B$

Effective thickness structure

$$h_0 := \frac{2 \cdot A_c}{u} = \begin{bmatrix} 0.8 \\ 1.2 \\ 1.2 \\ 1.7 \end{bmatrix} m$$

Basic value of drying shrinkage see SS-EN 1992-1-1, Annex B.2

$$\alpha_{ds1} := \left\| \begin{array}{l} \text{if } Klass = \text{“S”} \\ \quad \| 3.0 \\ \text{if } Klass = \text{“N”} \\ \quad \| 4.0 \\ \text{if } Klass = \text{“R”} \\ \quad \| 6.0 \end{array} \right. = 4.00$$

$$\alpha_{ds2} := \left\| \begin{array}{l} \text{if } Klass = \text{“S”} \\ \quad \| 0.13 \\ \text{if } Klass = \text{“N”} \\ \quad \| 0.12 \\ \text{if } Klass = \text{“R”} \\ \quad \| 0.11 \end{array} \right. = 0.12$$

$RH_o := 100\%$

$$\beta_{RH} := 1.55 \cdot \left(1 - \left(\frac{RH}{RH_o}\right)^3\right) = 0.76$$

$$\varepsilon_{cd.0} := 0.85 \cdot \left(\left(220 + 110 \cdot \alpha_{ds1}\right) \cdot e^{-\alpha_{ds2} \cdot \frac{f_{cm}}{f_{cmo}}}\right) \cdot 10^{-6} \cdot \beta_{RH} = \begin{bmatrix} 2.69 \cdot 10^{-4} \\ 2.69 \cdot 10^{-4} \\ 2.385 \cdot 10^{-4} \\ 2.385 \cdot 10^{-4} \end{bmatrix}$$

Basic drying shrinkage (SS-EN 1992-1-1, section 3.1.4, see equations 3.9 and 3.1

$$k_h := \mathrm{linterp}\left(\left(\begin{bmatrix} 0 & 100 & 200 & 300 & 500 & 10^4 \end{bmatrix} \cdot mm\right), \begin{bmatrix} 1.00 & 1.00 & 0.85 & 0.75 & 0.70 & 0.70 \end{bmatrix}, h_0\right) = \begin{bmatrix} 0.70 \\ 0.70 \\ 0.70 \\ 0.70 \end{bmatrix}$$

$$\beta_{ds} := \frac{t_2 - t_s}{t_2 - t_s + 0.04 \cdot \sqrt{\left(\frac{h_0}{mm}\right)^3}} = \begin{bmatrix} 0.98 \\ 0.96 \\ 0.96 \\ 0.94 \end{bmatrix}$$

$$\varepsilon_{cd} := \beta_{ds} \cdot k_h \cdot \varepsilon_{cd.0} = \begin{bmatrix} 1.845 \cdot 10^{-4} \\ 1.814 \cdot 10^{-4} \\ 1.609 \cdot 10^{-4} \\ 1.569 \cdot 10^{-4} \end{bmatrix}$$

Autogenous-shrinkage, see EN 1992-1-1 §3.1.4, eqns. 3.11–3.13

$$\beta_{as} := 1 - e^{-0.2 \cdot \sqrt{t_2}} = 1.00$$

$$\varepsilon_{ca.\infty} := 2.5 \cdot \left(\frac{f_{ck}}{MPa} - 10\right) \cdot 10^{-6} = \begin{bmatrix} 5 \cdot 10^{-5} \\ 5 \cdot 10^{-5} \\ 7.5 \cdot 10^{-5} \\ 7.5 \cdot 10^{-5} \end{bmatrix}$$

$$\varepsilon_{ca} := \beta_{as} \cdot \varepsilon_{ca.\infty} = \begin{bmatrix} 5 \cdot 10^{-5} \\ 5 \cdot 10^{-5} \\ 7.5 \cdot 10^{-5} \\ 7.5 \cdot 10^{-5} \end{bmatrix}$$

RESULTS

Total shrinkage, see SS-EN 1992-1-1 §3.1.4, eqn. 3.8

$$\varepsilon_{cs} := \varepsilon_{cd} + \varepsilon_{ca} = \begin{bmatrix} 2.345 \cdot 10^{-4} \\ 2.314 \cdot 10^{-4} \\ 2.359 \cdot 10^{-4} \\ 2.319 \cdot 10^{-4} \end{bmatrix}$$

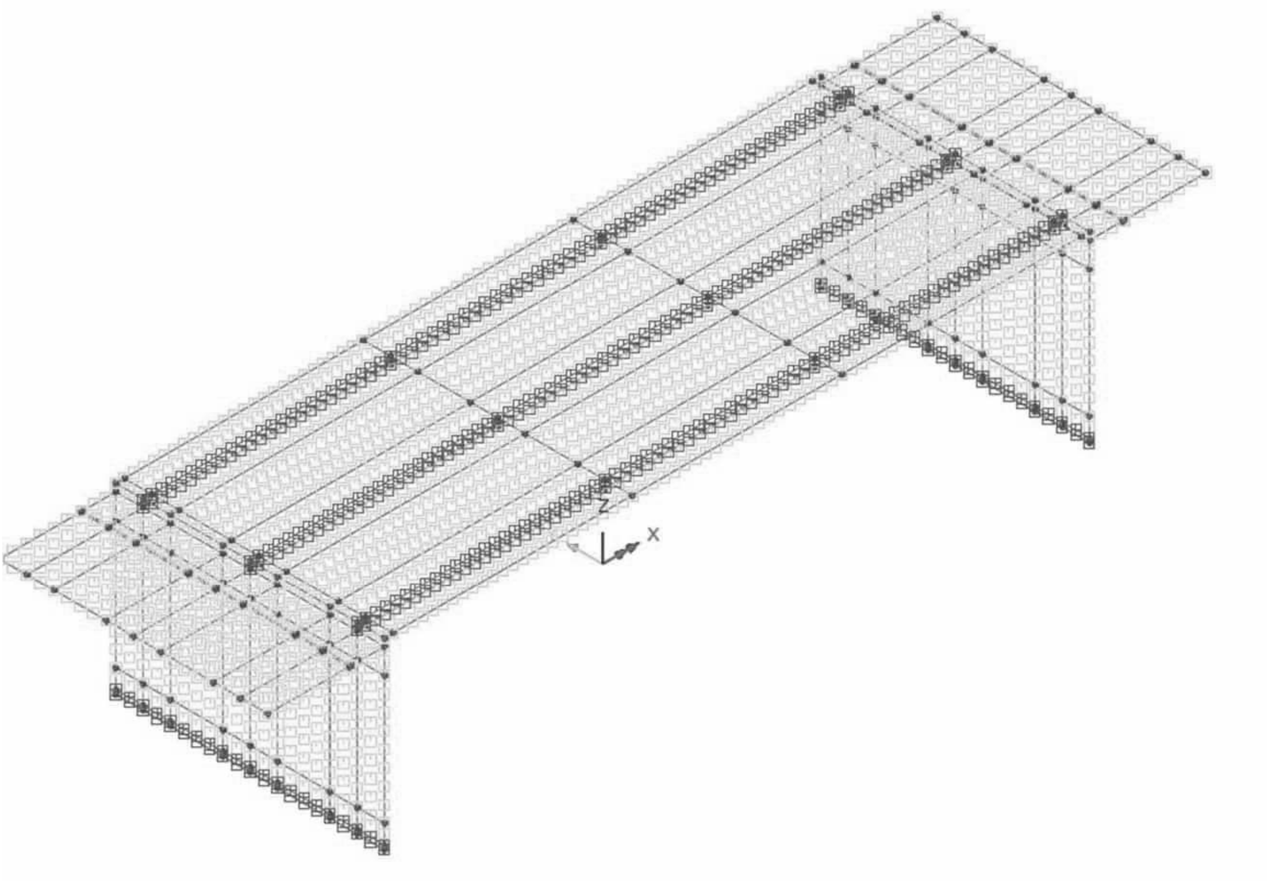
Loadcase : KRYMP

Structural loading : Temperature

Definition : Nodal

Initial temperature : 0 °C

Final temperature : -25 °C



Overview 3D

Remark
Load is applied to entire structure.

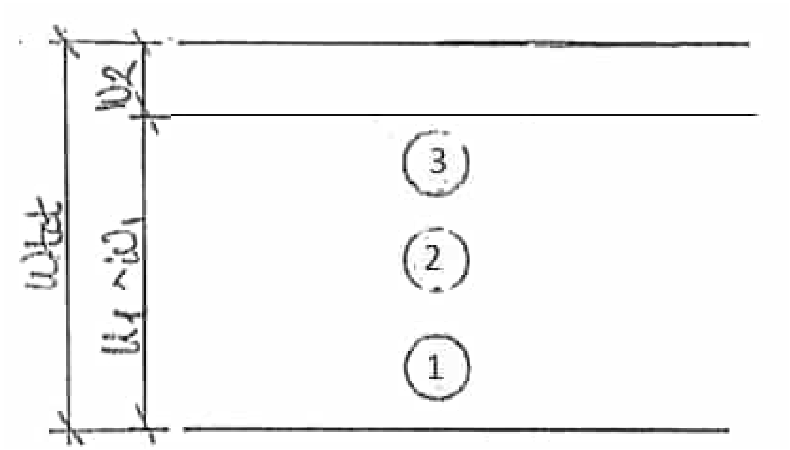
3.7 TRAFFIC

Load applied to Analysis : *Analysis 2*

Evaluation of vertical traffic is performed for LM 1 and LM 2 according to SS-EN 1991-2 section 4.3.

Evaluation will also be performed EG A/B = 180kN/300 kN according to TRVFS 2011:12 chapter 6 point 3§.

3.7.1 Traffic lane division



Total traffic width : $w_{tot} = 12.8\,m$

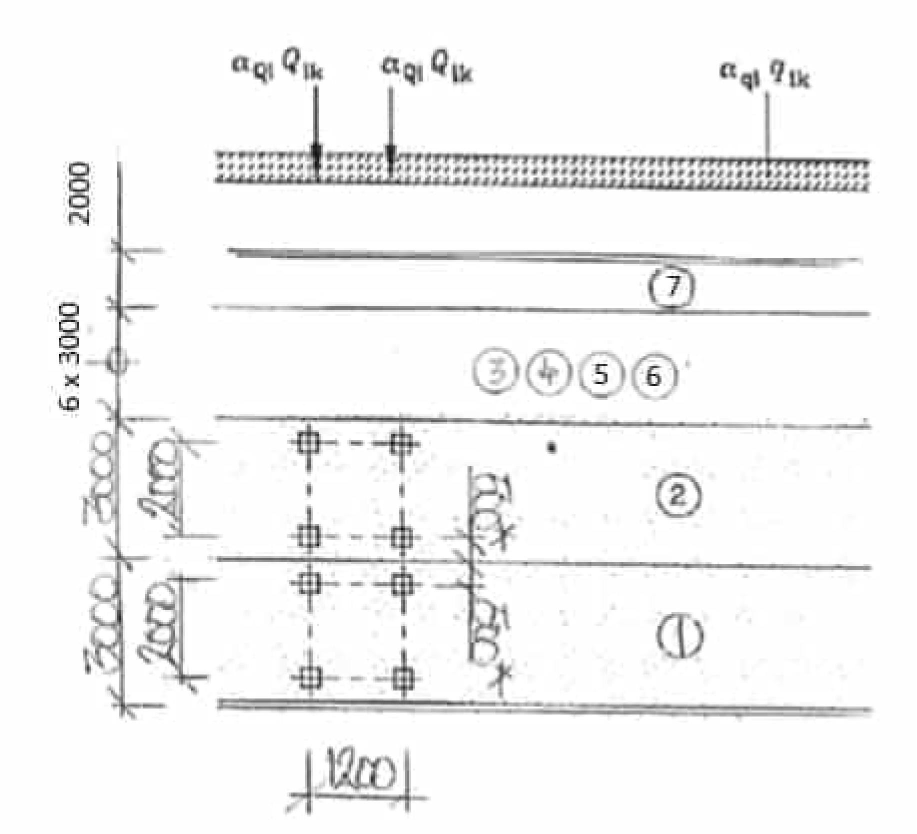
Number of traffic lanes : $n_1 = Integer\left[\frac{w_{tot}}{3.0m}\right] = 4\;lanes$

Full traffic width : $w_1 = 3.0m$

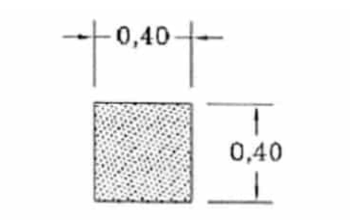
Remaining width : $w_2 = 0.8m$

3.7.2 Load model 1 (LM 1)

Characteristic values according to SS-EN 1991-2 §4.3.2.



* = When studying local effects 250 mm is to be assumed.



Axellaster :

α_Q : national adaptation factor according to TRVFS 2011:12 table 7.1

$Q'_k = \alpha_Q \cdot Q_k$: characteristic value including national adaptation factor

Traffic lane	Q_k	α_Q	Q'_k	Remark
1	300	0,9	270	LM1- 2 x 270 kN
2	200	0,9	180	LM1- 2 x 180 kN
3-6	100	0	0	No load
-	kN	-	kN	-

Utbredda laster :

α_q : national adaptation factor according to TRVFS 2011:12 table 7.1

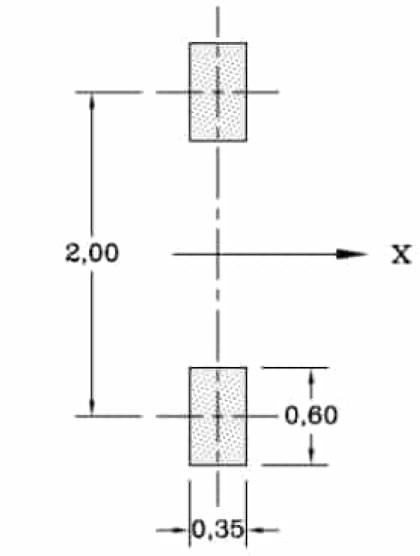
$q'_k = \alpha_q \cdot q_k$: characteristic value including national adaptation factor

Traffic lande	q_k	α_q	q'_k
1	9.0	0.8	7.2
2-7	2.5	1.0	2.5
-	kPa	-	kPa

Remark
Evaluation is performed using Vehicle Load Optimisation (VLO), see section 3.7.4.

3.7.3 Load model 2 (LM 2)

Characteristic vertical load according to SS-EN 1991-2 §4.3.3.



$\beta_Q = \alpha_Q = 0.90$: national adaptation factor

$Q_k = 400$ kN : characteristic value

$Q'_k = \beta_k \cdot Q_k = 360$ kN : characteristic value including national adaptation factor

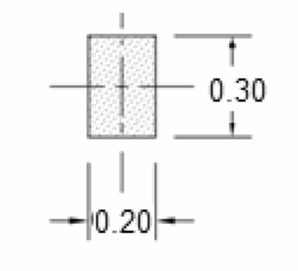
Tire pressure
TSFS Chapter 11 Section 4 states that the same contact surface as LM 1 may be used.

3.7.4 Load model EG A/B

Calculation is performed using traffic load EG A/B = 180 kN/300 kN excluding dynamic factor.

Traffic load EG A/B are applied to two traffic lanes. Traffic on first lane is multiplied by 1.00 while second lane is multiplied 0.80.

The center distance between the wheel pressures is 2.0 meters according to TSFS chapter 11 §2.



Wheel pressure

$\varepsilon_{dyn} = 25\ \%$: dynamic factor [1.)]

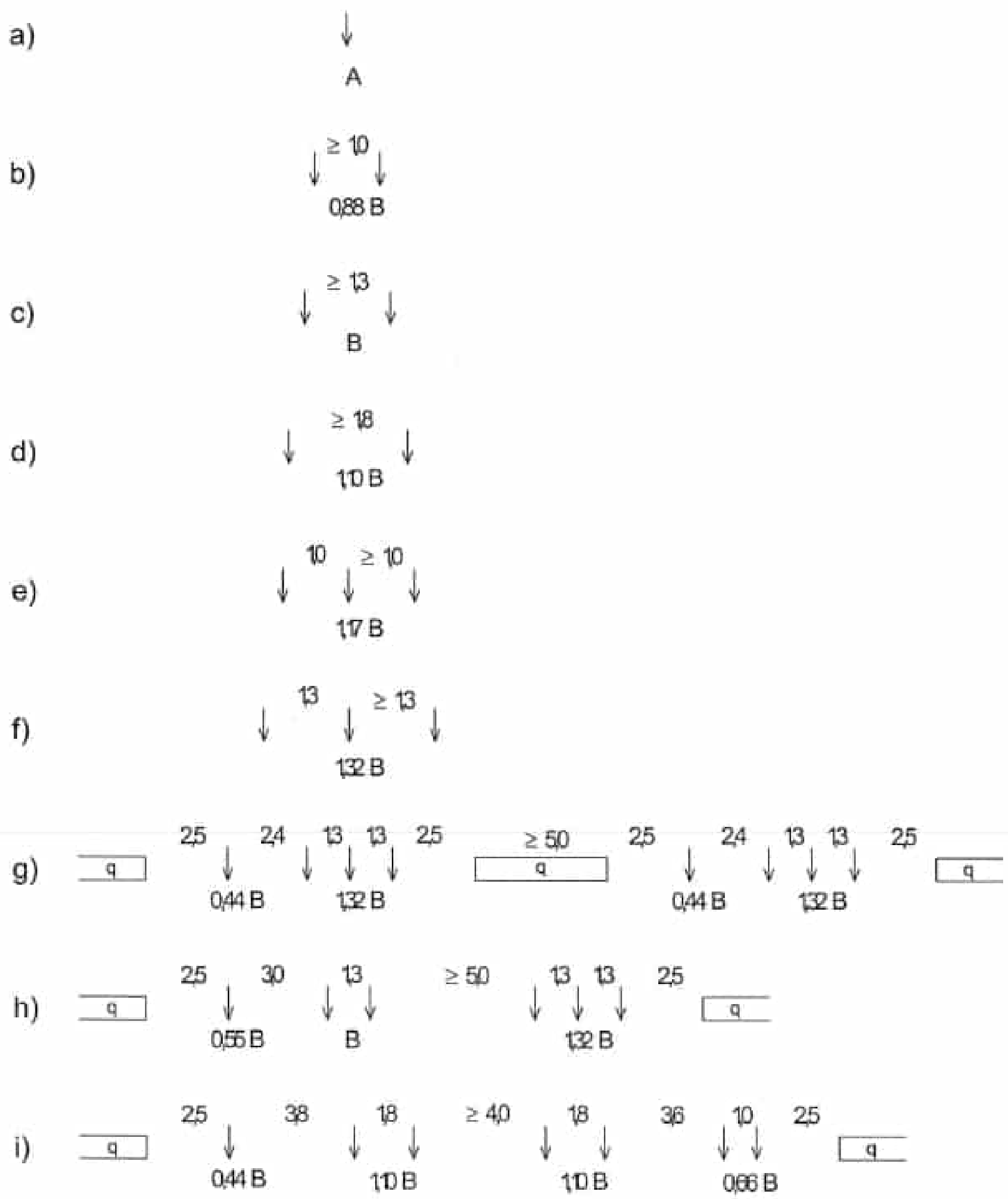
$A' = A \cdot (1 + \varepsilon_{dyn}) = 180\ kN \cdot (1+0.25) = 225\ kN$: single load including dynamic factor

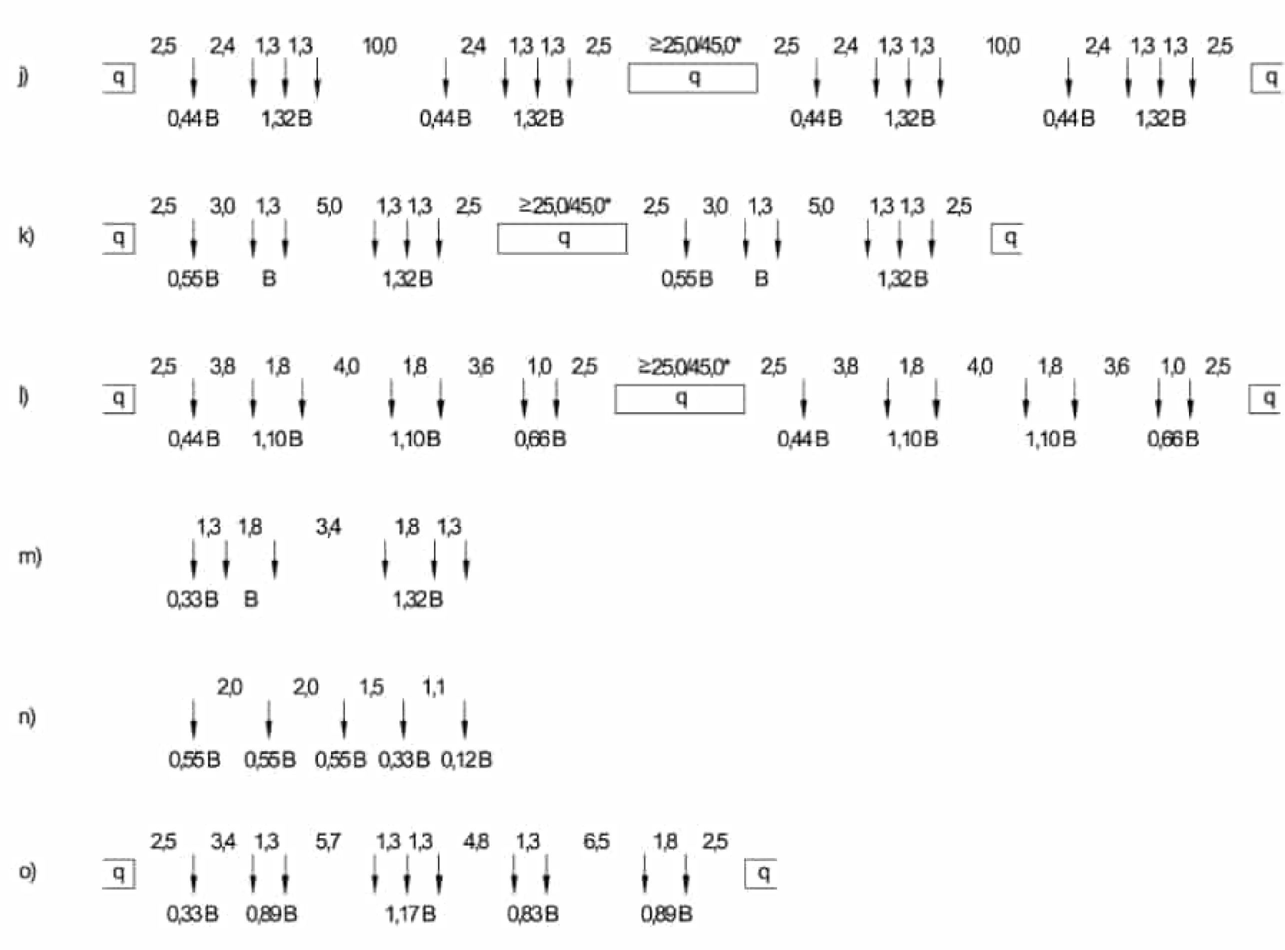
$B' = B \cdot (1 + \varepsilon_{dyn}) = 300\ kN \cdot (1+0.25) = 375\ kN$: tandem load including dynamic factor

$p = 5 \dfrac{kN}{m}$: surface load

Footnote:
[1.)] TRVINFRA-00227 table 7.1-5 section 4.2.1(1) states apply 25 % ..

Graphic presentation of common vehicle types:
(Vehicle types according to TRVINFRA-00331 Appendix 1)





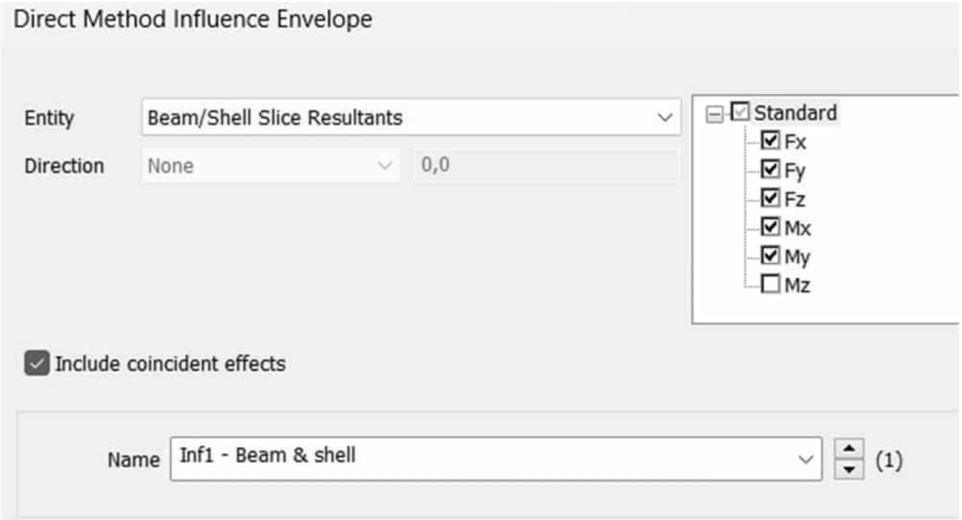
Note:
Evaluation is carried out with the script Vehicle Load Optimization (VLO), see sections 3.5.3 and 3.5.4.
Since there is no motorway, * = 45 m is applied according to TRVINFRA-00331 section 8.3.2.2.1 for vehicle types j, k, and l.

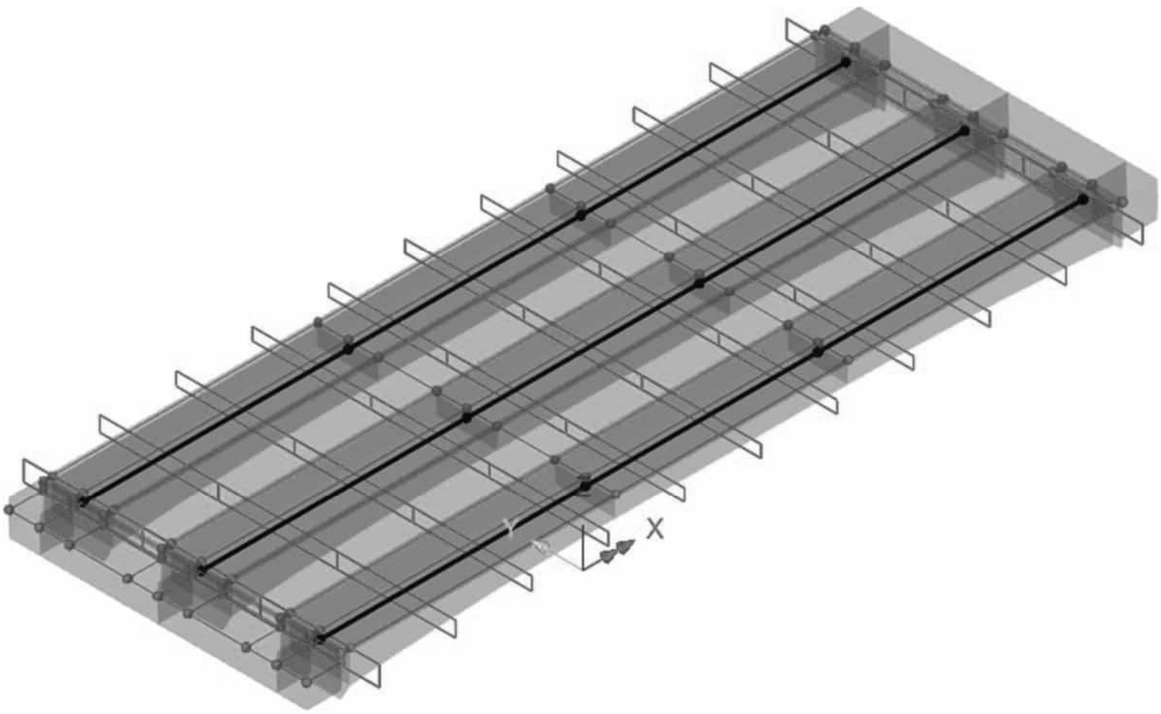
3.7.5 Vehicle Load Optimization (VLO)

3.7.5.1 Influence components

Influence surfaces are created using *Direct Method Influence Envelope.* This is done by applying *Influence components* seen below.

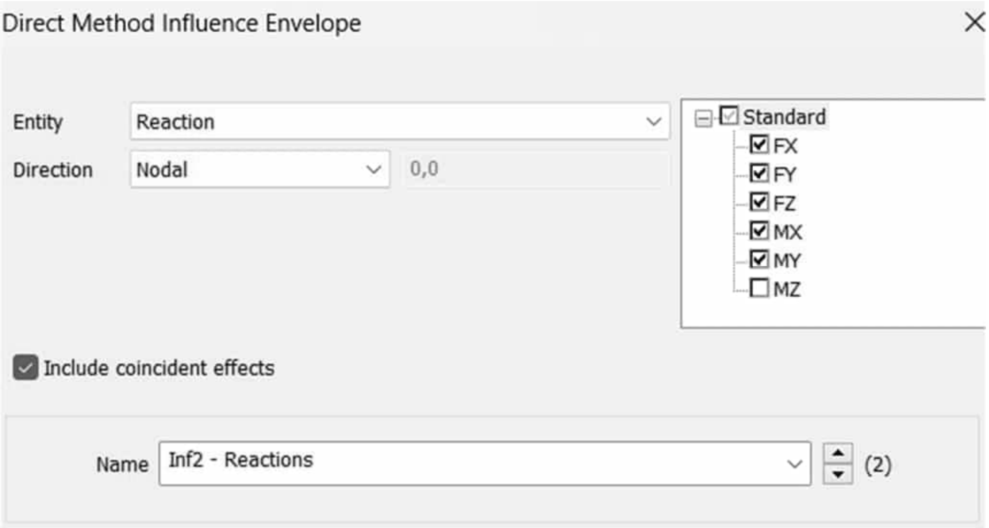
Inf1 – Beam & shells :

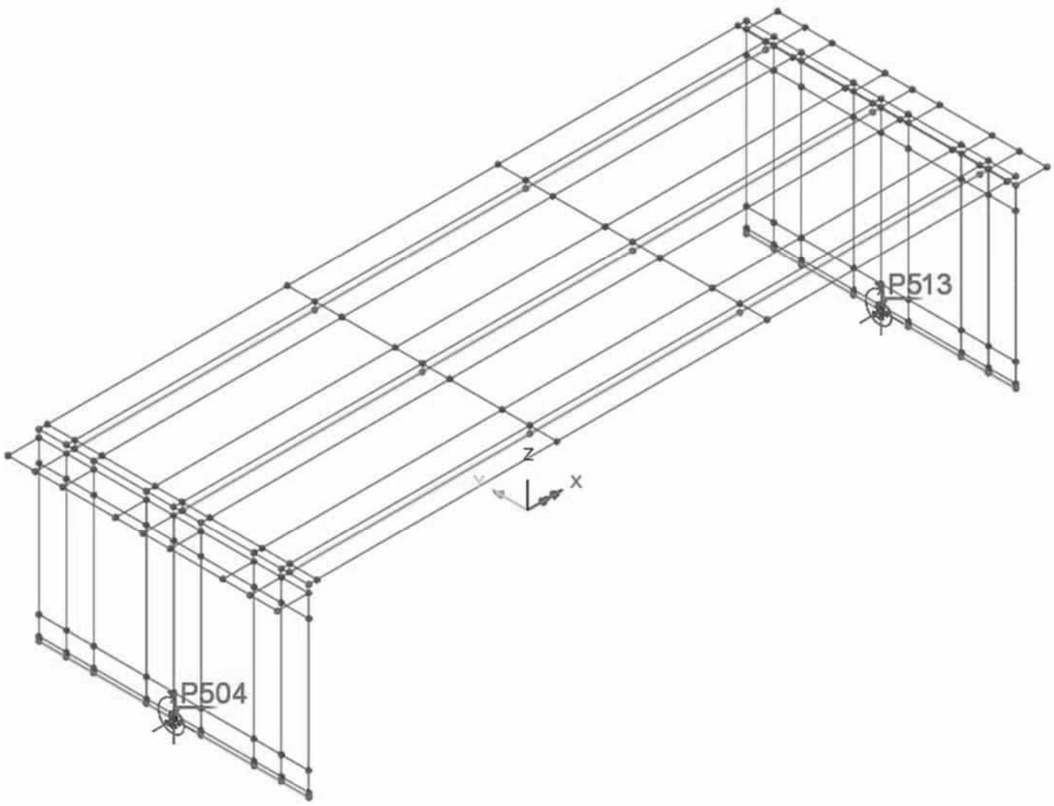




Overview 3D

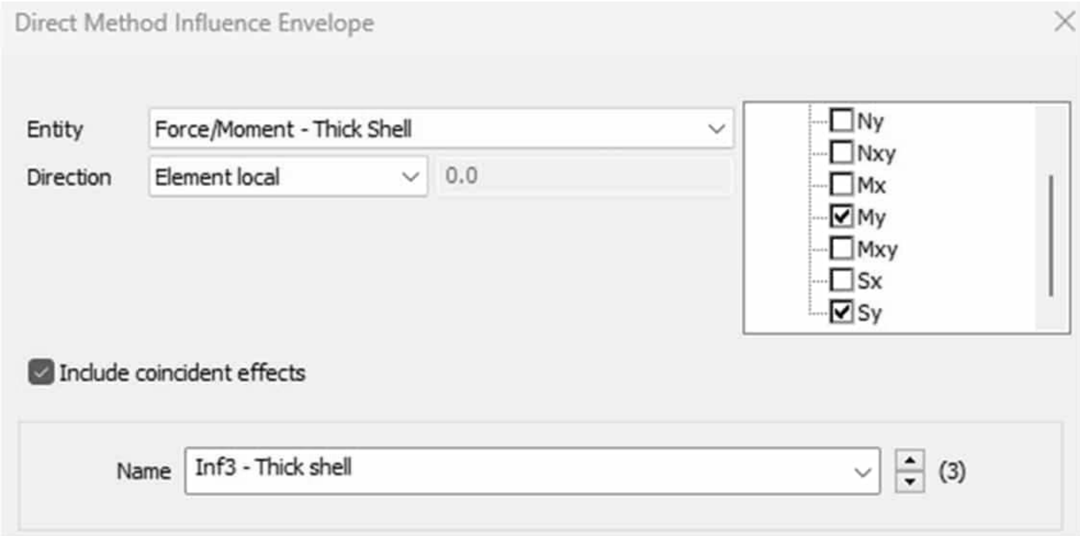
Inf2 – Reactions :

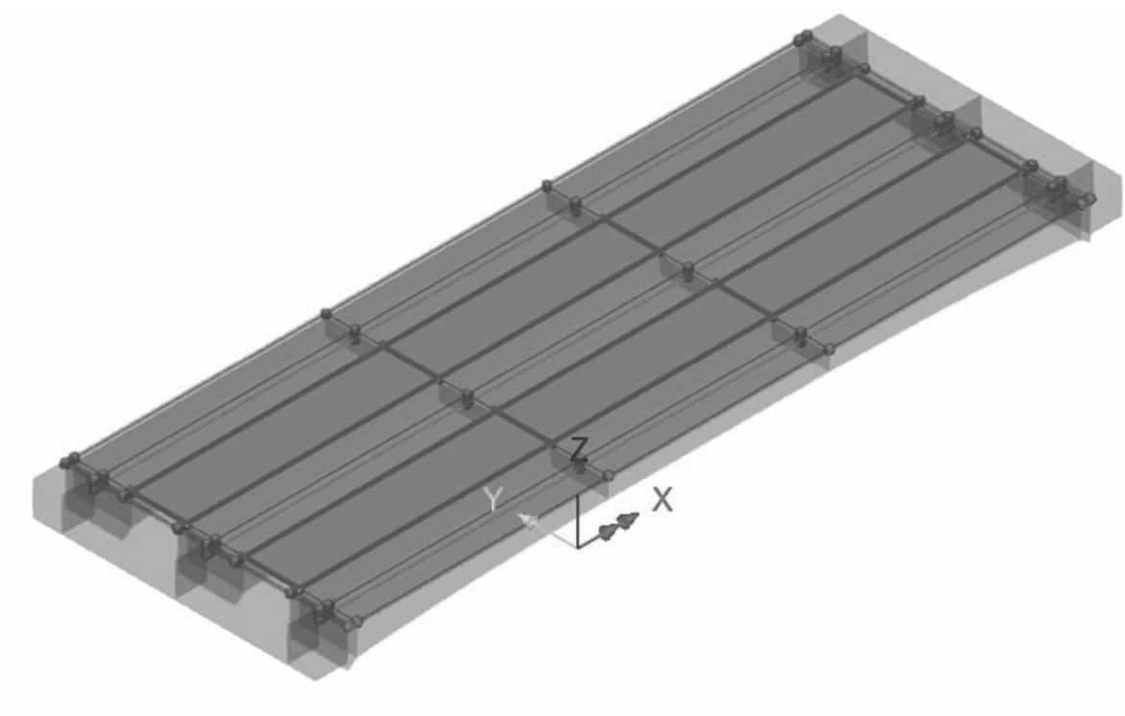




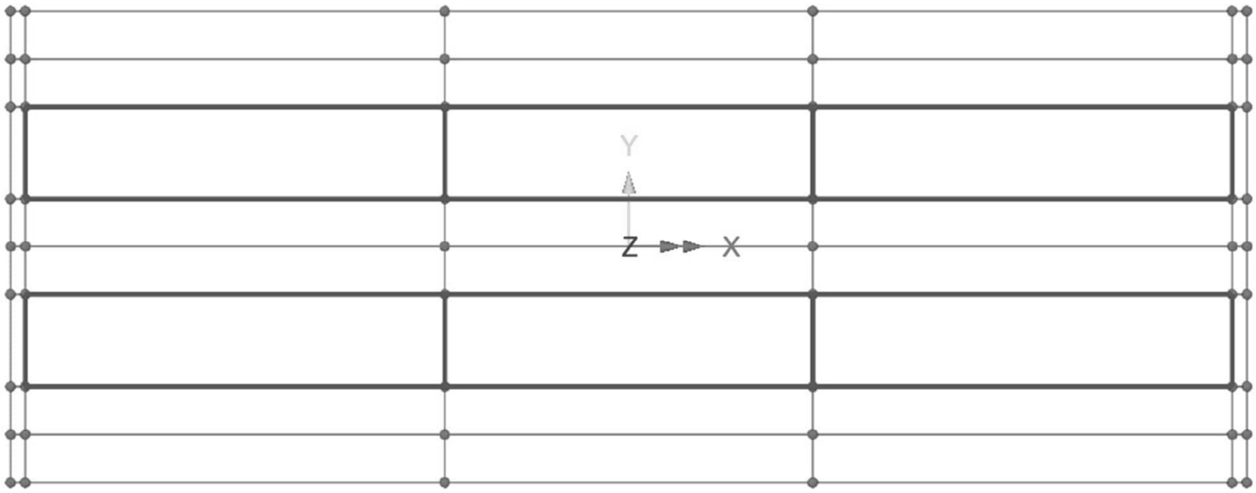
Overview 3D

Inf3 – Thick shells :
(Deck superstructure)



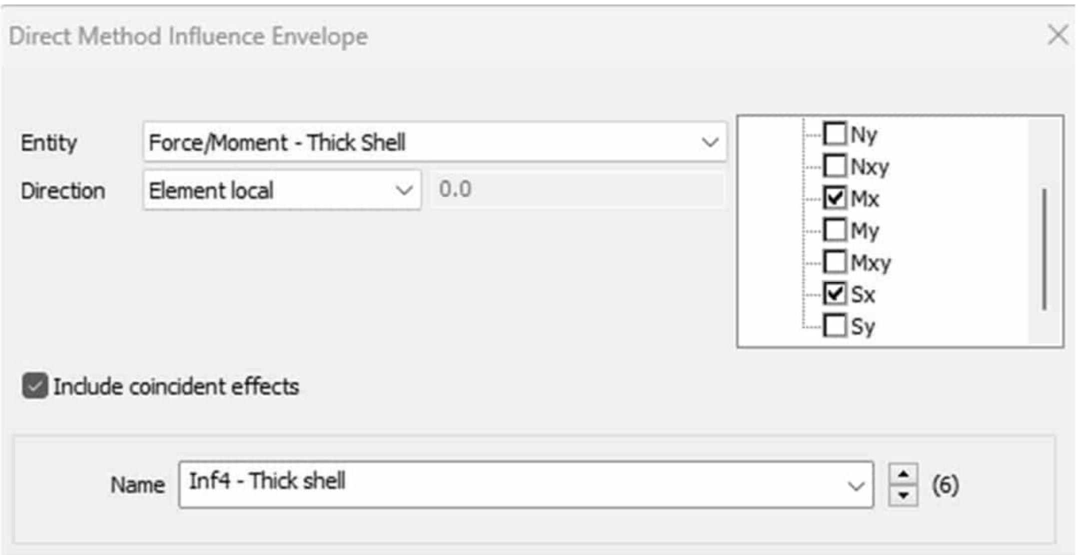


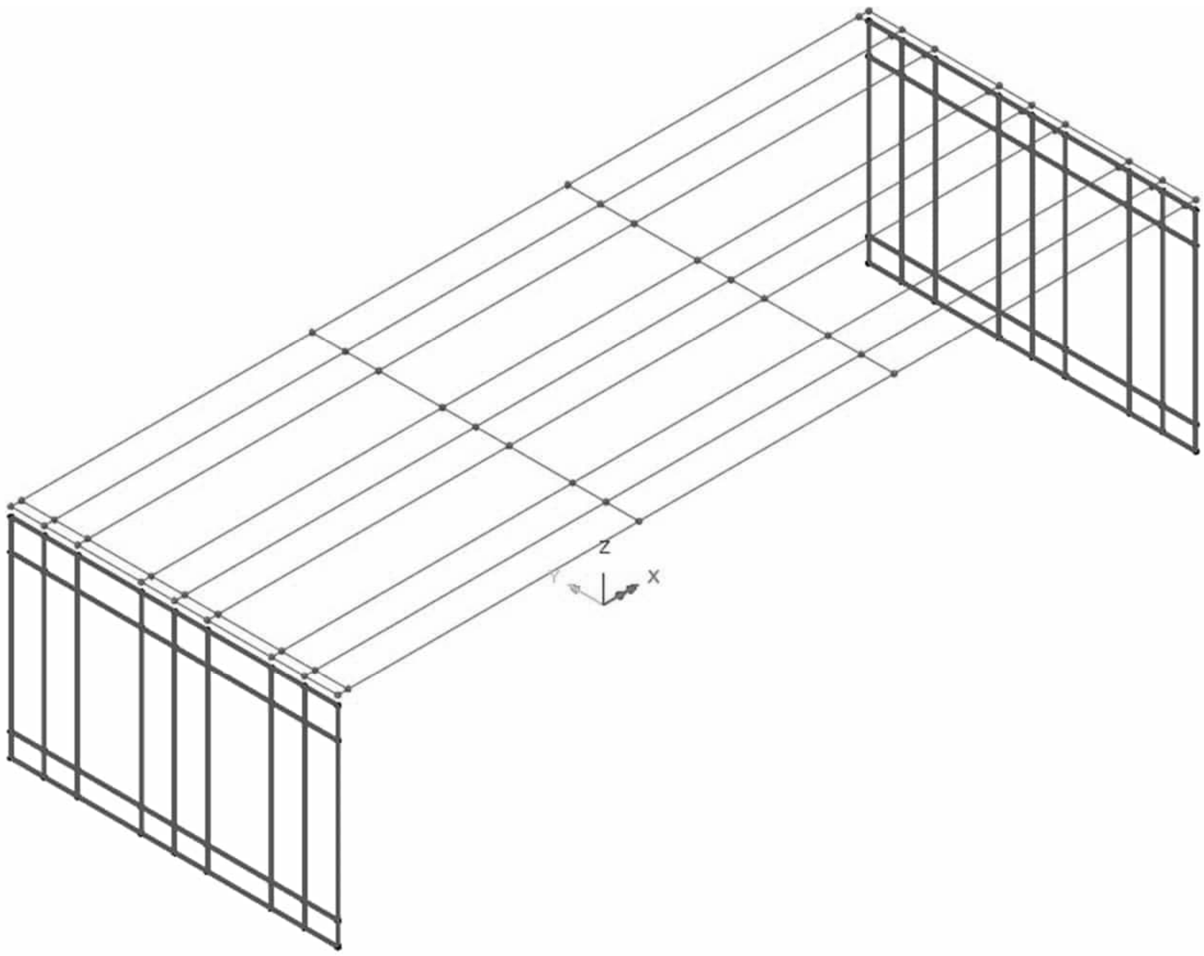
Overview 3D



PLAN

Inf4 – Thick shells :
(Abutments)



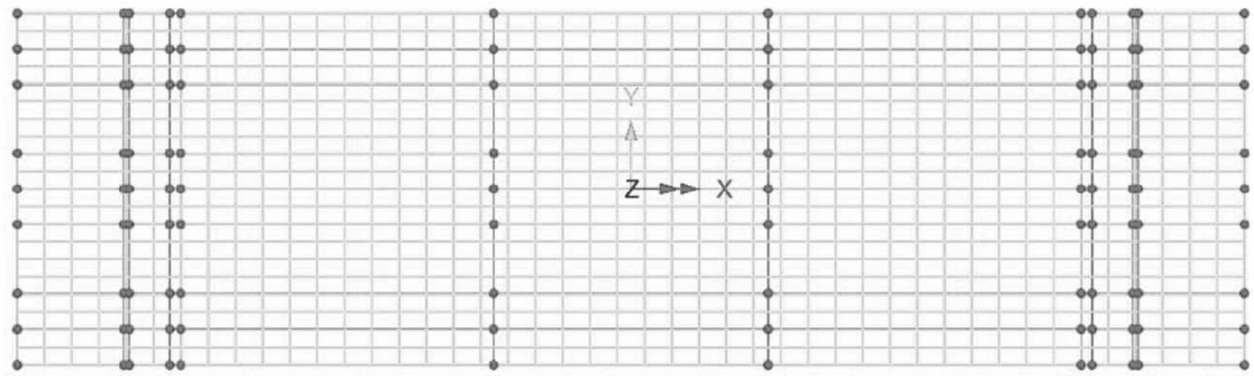


Overview 3D

3.7.5.2 Influence surface analysis

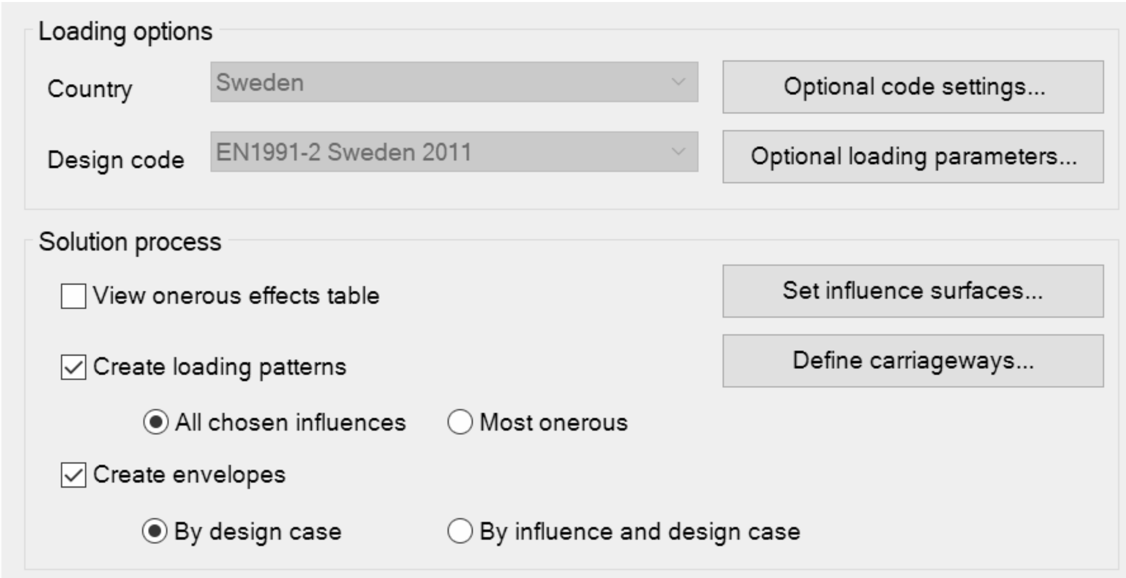
Influence surfaces :

Search area:	Superstructure
Definition type:	Grid
Path:	Centerline X
Transverse width:	12.8 m
Longitudinal spacing:	1.0 m
Transversal spacing:	0.64 m



PLAN

3.7.5.3 Traffic load analysis (VLO)



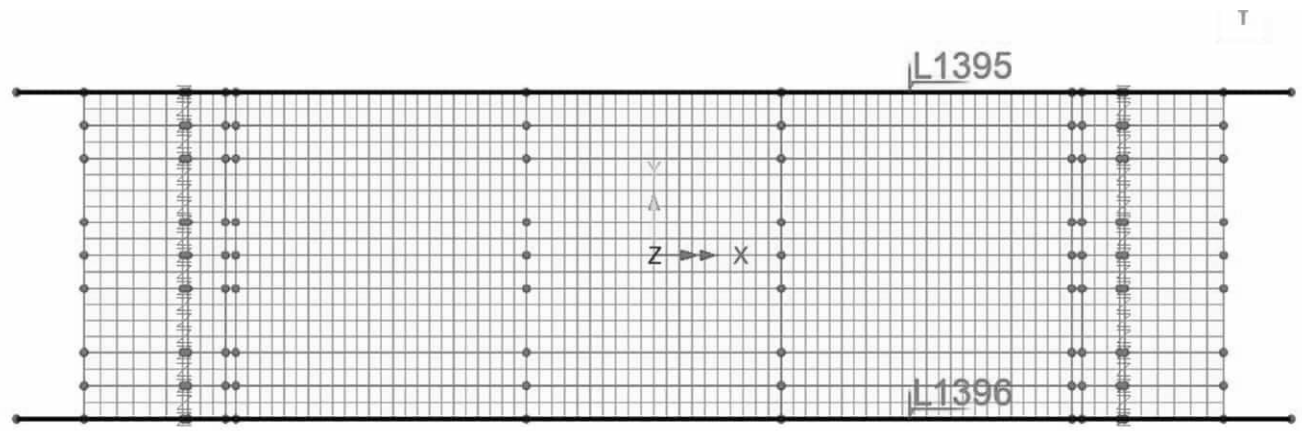
Vehicle longitudinal incremental movement: 0.25 m

Vehicle transverse incremental movement: 0.50 m

Vehicle direction: both

Definition of carriageway (kerbs): L1395 & L1396

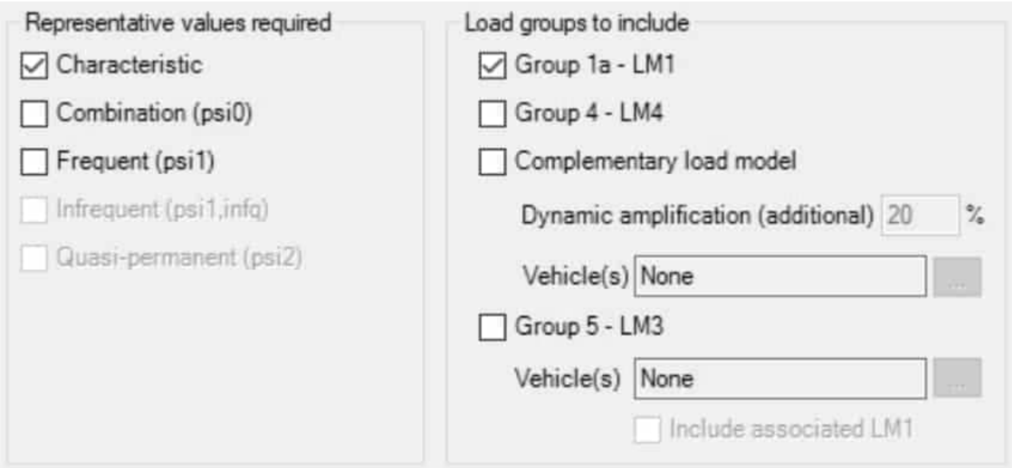
Influence surfaces: Include all (positive & negative)



PLAN

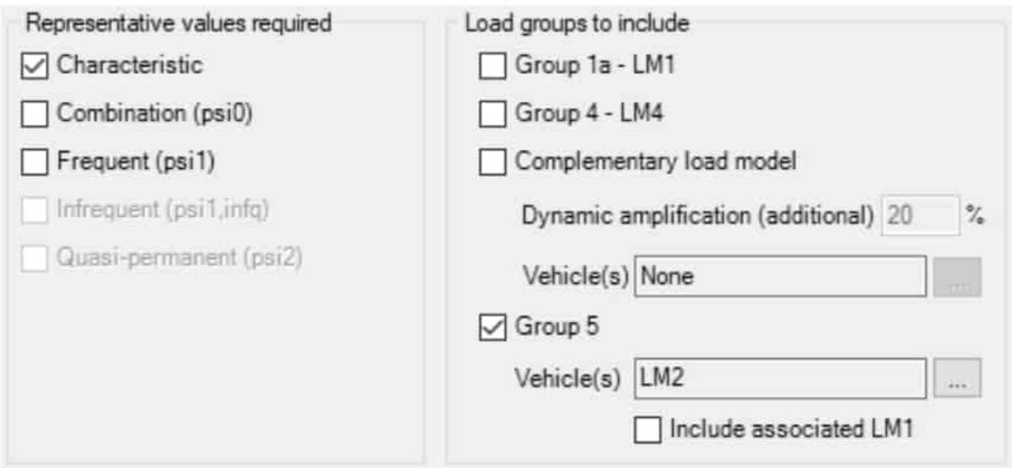
3.7.5.4 Envelope : LM 1

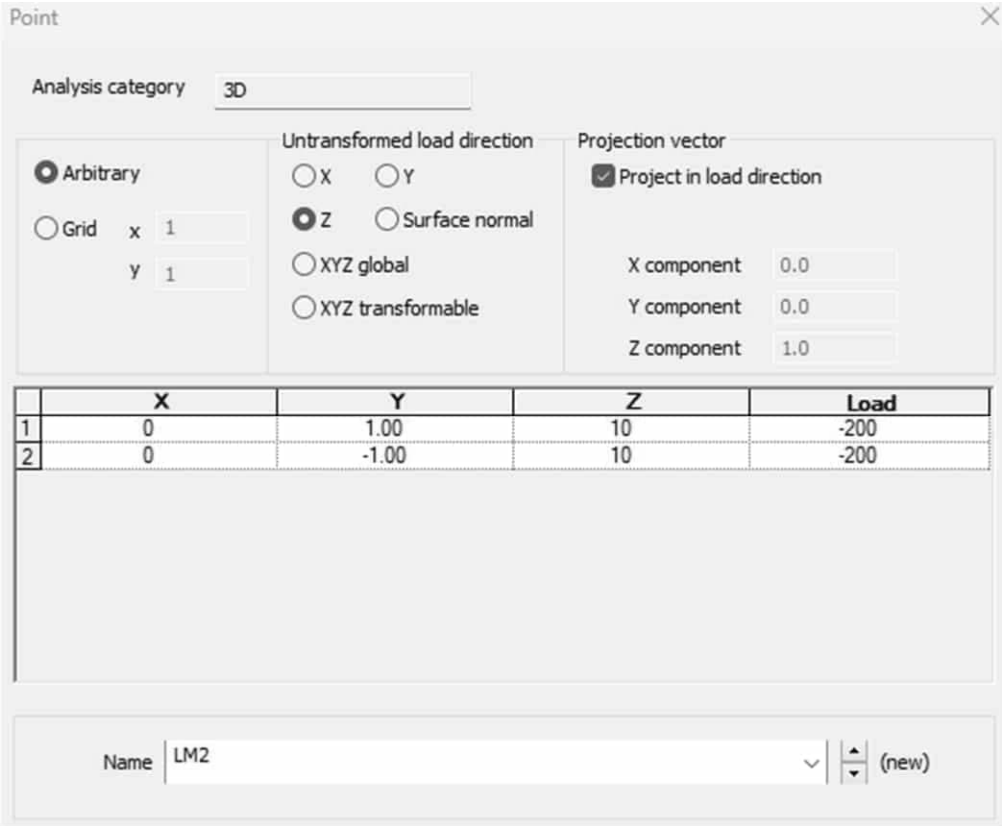
Load model 1 (LM1) defined in SS-EN 1991-2 section 4.3.2.



3.7.5.5 Envelope : LM 2

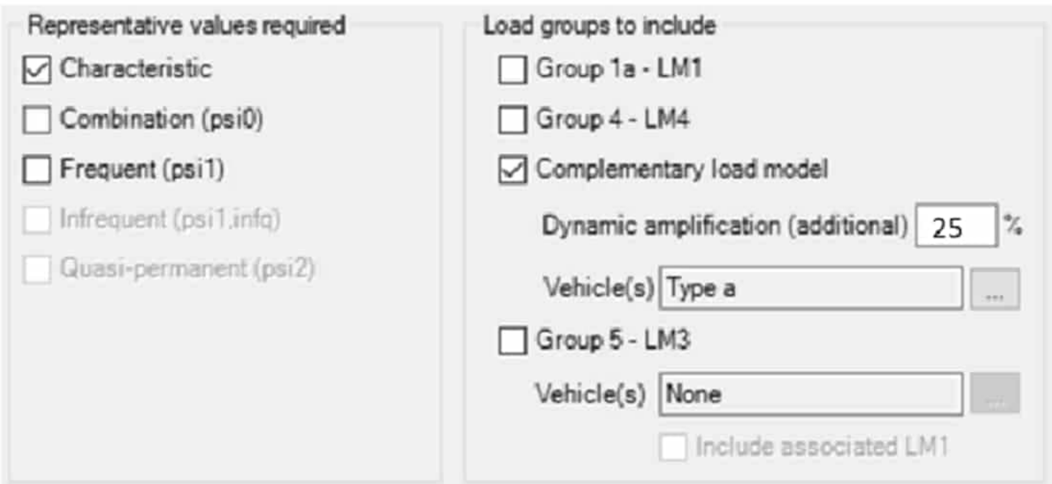
Load model 2 (LM2) defined in SS-EN 1991-2 section 4.3.3. The load is defined in Group 5 vehicle) since Group 1b is not defined in present version of software.





3.7.5.6 Envelope : EG A

EG A is defined as complementary load model with options seen below.

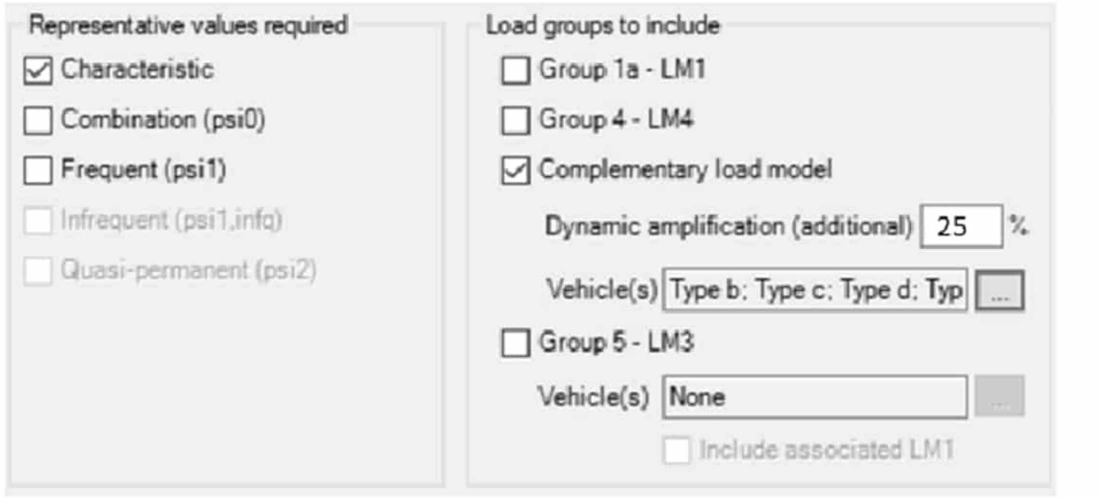


Dynamic amplification (additional): 25 %

Vehicle selection: Type a

3.7.5.7 Envelope : EG B

EG B is defined as complementary load model with options seen below.



Dynamic amplification (additional): 25 %

Vehicle selection: Type b → o

3.7.5.8 Combined traffic load (TRAFIK)

There are a total 4 different traffic loads termed LM 1, LM2, EG A and EG B.

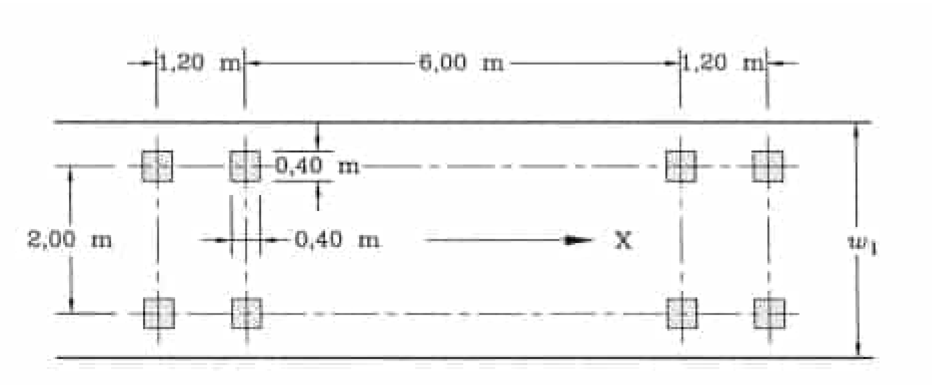
The envelope is used to identify the most onerous load effect.

Envelope TRAFIK :

Envelope
LM 1
LM 2
EG A
EG B

3.7.5.9 Fatigue model

Fatigue model 3 (UTM3) defined in SS-EN 1991-2 section 4.6.4. The load is defined in Group 5 (special vehicle) in present version of software.



Q_k = 120 kN : characteristic value including nation adaptation factors.

Traffic data according to document 1C070001 section B1:

· Reference speed: 80 km/h

· Annual Average Daily Traffic (AADT until 2045) amounts to 7000 vehicles/day

· Proportion of heavy annual average daily traffic is 12% of AADT → 840 vehicles/day until 2045.

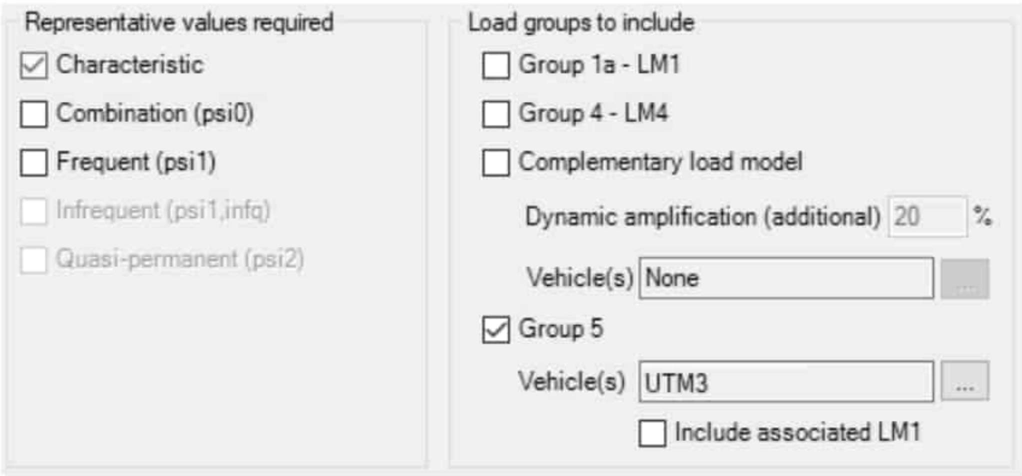
An annual traffic increase of 1% over 100 years results in a total annual AADT of
143,204 vehicles → average AADT = 1,432 vehicles/day.

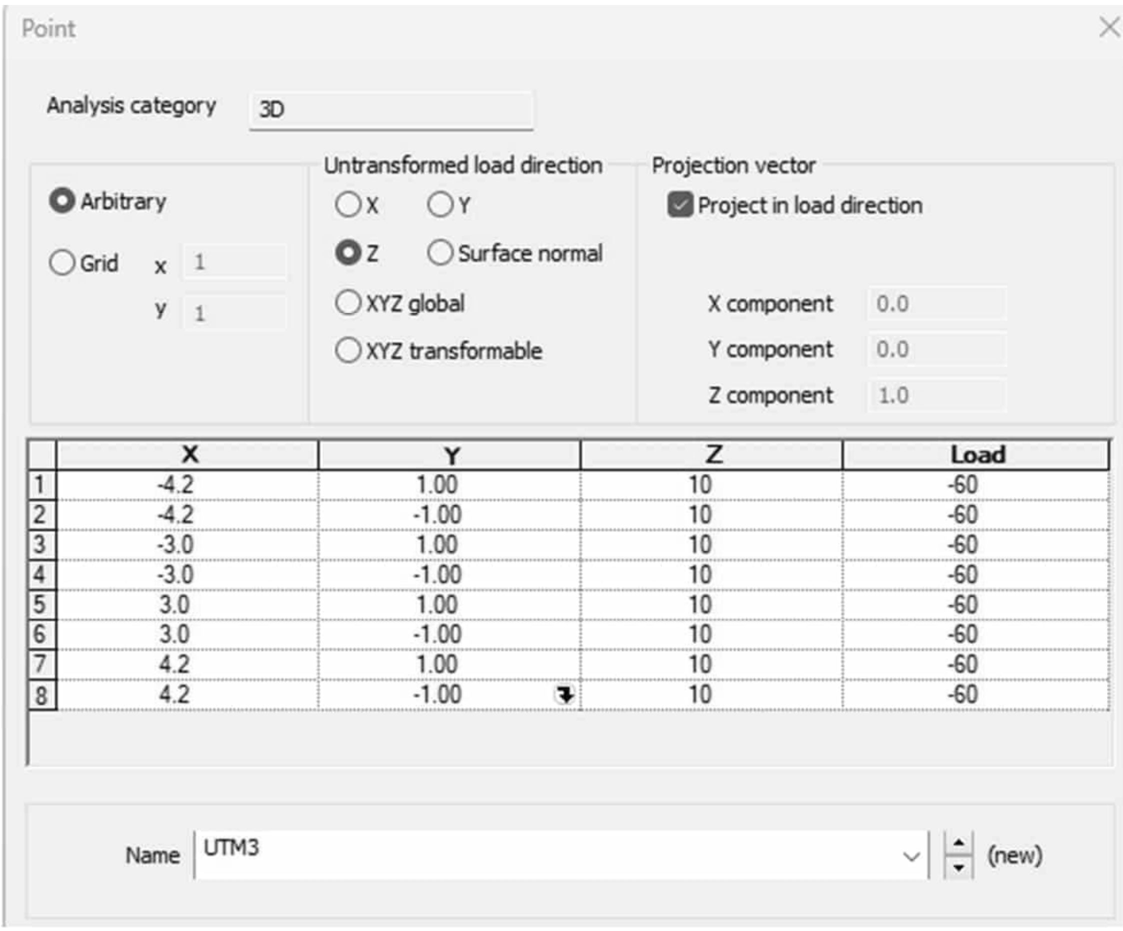
Traffic category:
TRVINFRA-0027 table 7.1-5(h) gives traffic category 3

Reference values for the number of heavy vehicles:
According to SS-EN 1991-2 section 4.6.1 table 4.5(n), Category 3 is obtained

→ N_{obs} = 125,000 vehicles/year

The load definition:
The load UTM3 is defined as a special vehicle in "load group 5."





	X	Y	Z	Load
1	-4.2	1.00	10	-60
2	-4.2	-1.00	10	-60
3	-3.0	1.00	10	-60
4	-3.0	-1.00	10	-60
5	3.0	1.00	10	-60
6	3.0	-1.00	10	-60
7	4.2	1.00	10	-60
8	4.2	-1.00	10	-60

3.8 BRAKING LOAD

Load applied to Analysis : *Analysis 1*

Braking load is defined by SS-EN 1991-2 §4.4.1.

Load acts at level of surfacing.

L = 1.75 m + 32.8 m + 1.75 m = 36.3 m

Load modell LM 1 :

$$Q_{lk} = 0.6\alpha_{Q1} \cdot (2Q_{ik}) + 0.1\alpha_{q1} \cdot q_{1k} \cdot w_1 \cdot L$$

$$180kN \cdot \alpha_{Q1} \leq Q_{lk} \leq 900kN$$

$$Q_{broms} = 0.6 \cdot (2 \cdot 270kN) + 0.1 \cdot 7.2kPa \cdot 3.0m \cdot 36.3m = 324kN + 78kN = 402kN$$

Load modell EG B = 300 kN (see TSFS chapter 11 §2) :

Typ o is dimensioning.

$$Q_{lk} = 0.35 \cdot \sum Q_{EG\ B} + 0.1 \cdot p \cdot L_q$$

$$Q_{lk} \leq 500kN$$

$$Q_{broms} = 0.35 \cdot (0.89 + 1.17 + 0.83 + 0.89) \cdot B = 0.35 \cdot 3.78 \cdot 300kN = 397kN$$

Note:
The braking force associated with LM 1 is applied on the safe side in the system calculation.

The impact of the resisting earth pressure against the frame legs is neglected on the safe side.

3.8.1 Load definition

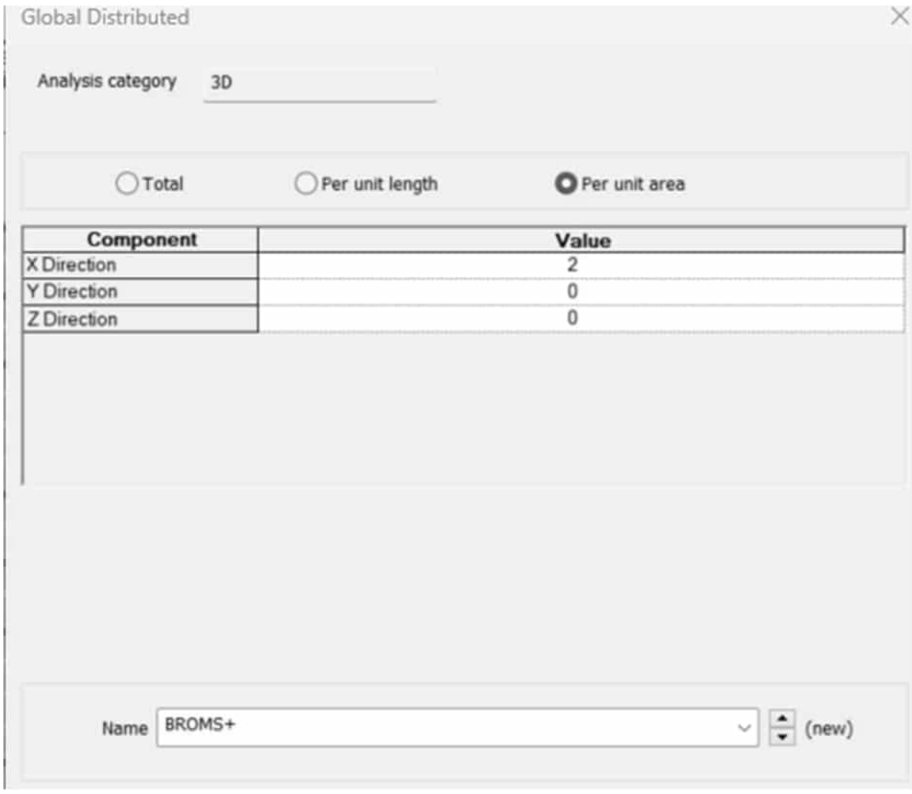
The load is introduced as a surface load in the bridge deck's system line, located 0.25 meters below the pavement level. In the static model, this is disregarded since the effect of load my is small.

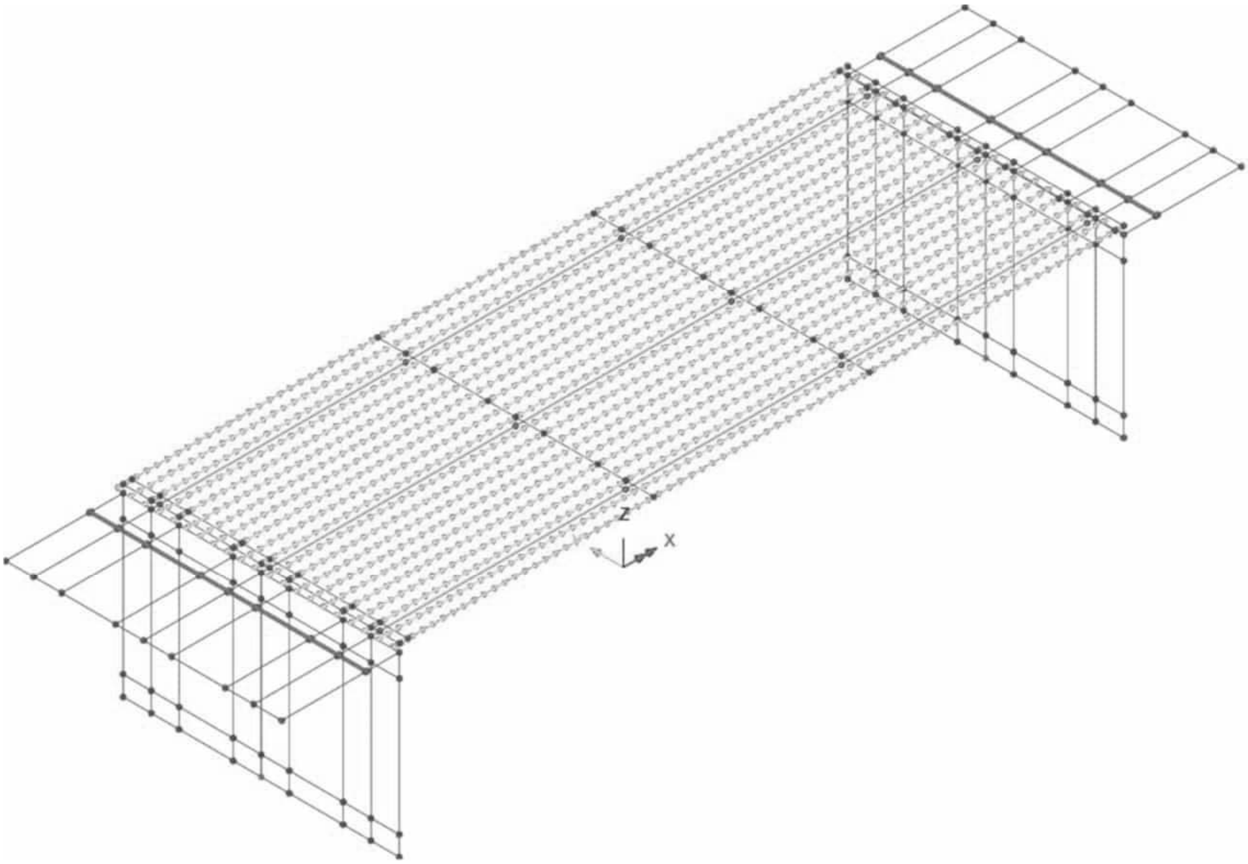
To avoid considering varying load placement laterally, it is assumed that two braking forces occur symmetrically on the bridge deck. This simplification of braking forces is considered safe.
The braking force is considered evenly distributed over the entire bridge deck.

$$q_x = 2 \cdot \frac{Q_{broms}}{w_{tot} \cdot L_{deck}} = 2 \cdot \frac{402kN}{12.8m \cdot 33.6m} = 1.9\frac{kN}{m^2}$$

$$m_y = q_x \cdot (0.15m + t_{bel}) = 1.9\frac{kN}{m^2} \cdot (0.15m + 0.10m) = 0.5\frac{kNm}{m^2}$$

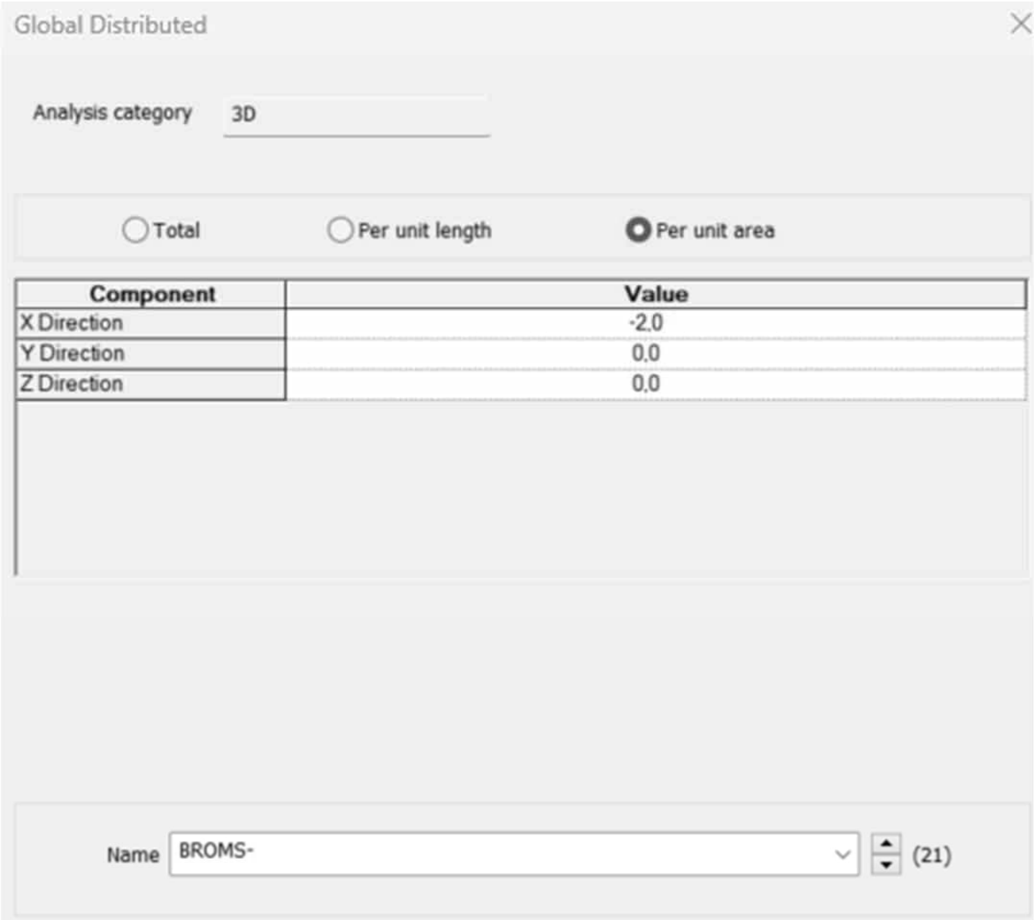
Load case : BROMS +

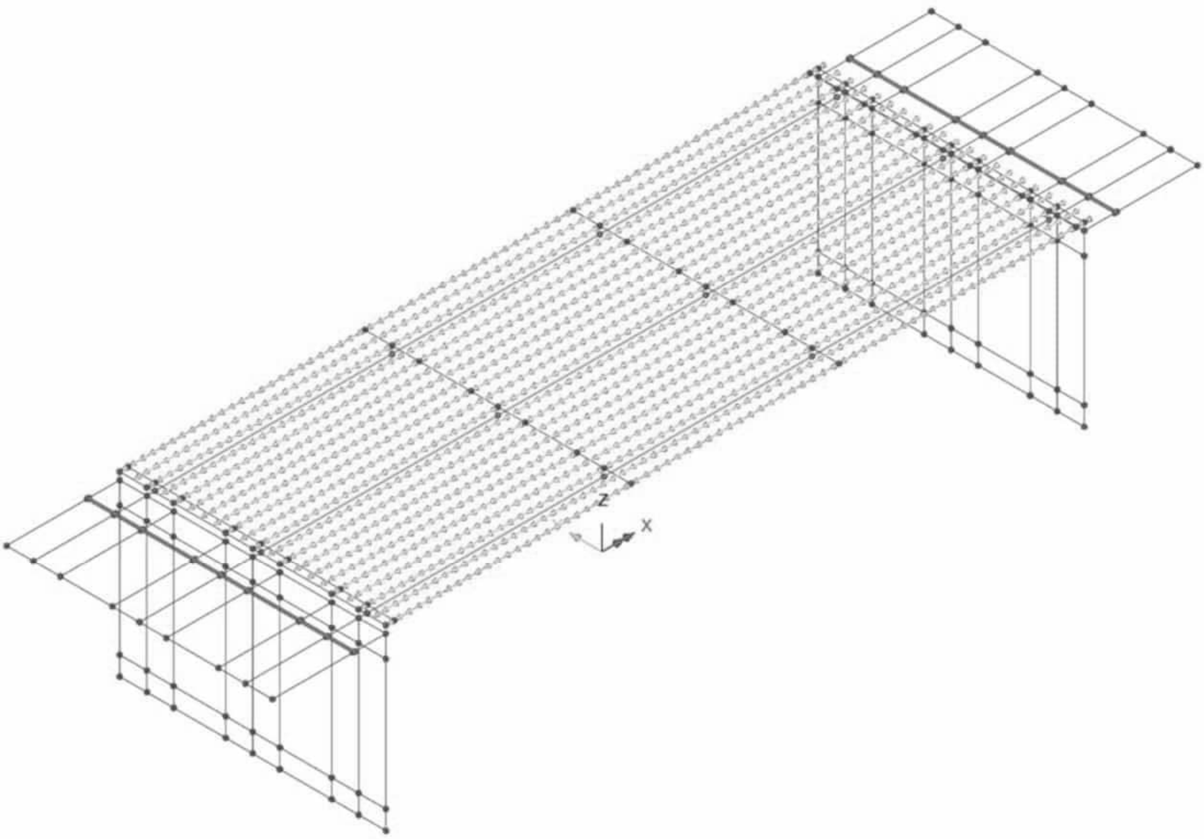




Overview 3D

Loadcase : BROMS-





Overview 3D

3.8.2 Load combination (BROMS)

Envelope BROMS :

Load case
BROMS +
BROMS -

3.9 LATERAL FORCE

Load applied to Analysis : *Analysis 1*

Lateral force is defined by SS-EN 1991-2 §4.4.2.

The load is orthogonal to braking force and acts due to skewed braking.

The acting load acts at the level of the pavement and evenly distributed over the load length.

Load model LM 1 :

$Q_{tk} = 0.25 Q_{lk} = 0.25 \cdot 402 kN = 100 kN$: skewed braking

Load model EG B = 300 kN (see TSFS chapter 11 §2) :

$Q_{tk} = 0.25 Q_{lk} = 0.25 \cdot 397 kN = 69 kN$: skewed braking

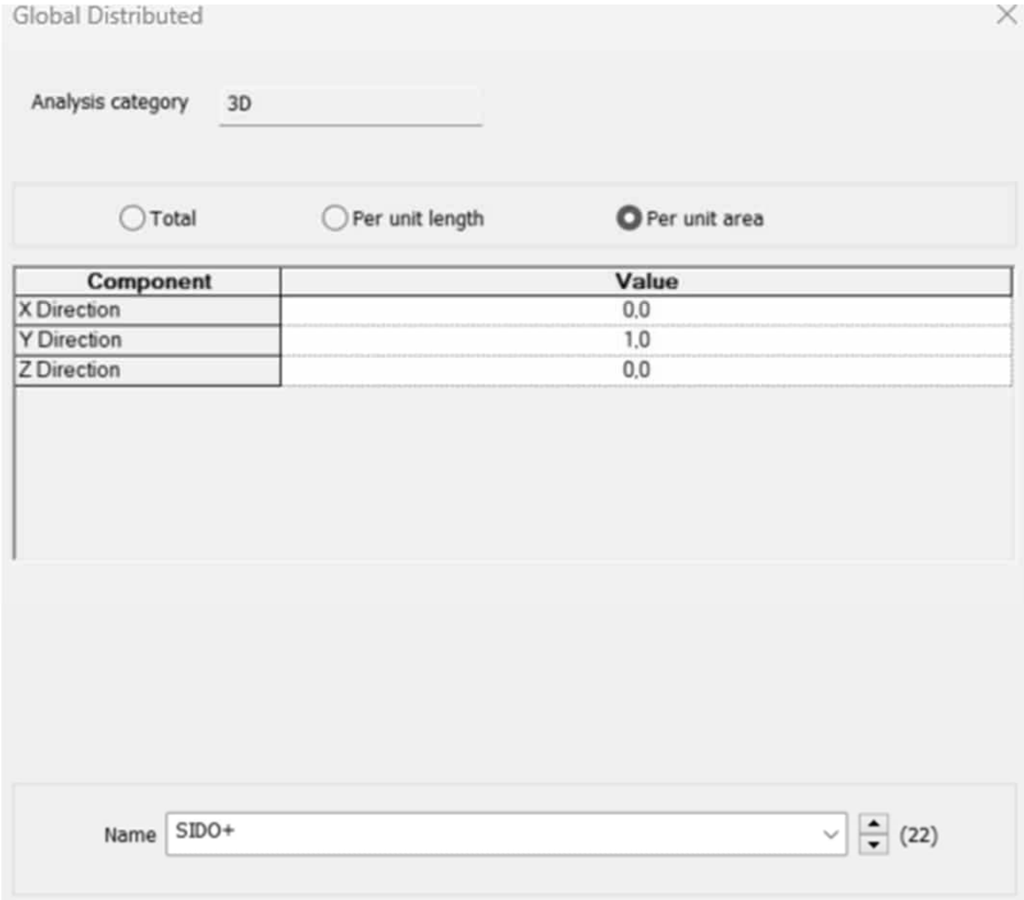
Last definition:
The load is applied as a surface load on the system line of the bridge deck, which is located 0.35 m below the pavement level. In the static model, the impact of m_x is not considered as it is deemed negligible.
To avoid considering varying load placement longitudinally, it is assumed that two lateral forces occur symmetrically on the bridge deck. This simplification of lateral forces is considered safe.
The lateral force is considered evenly distributed over the entire bridge deck.

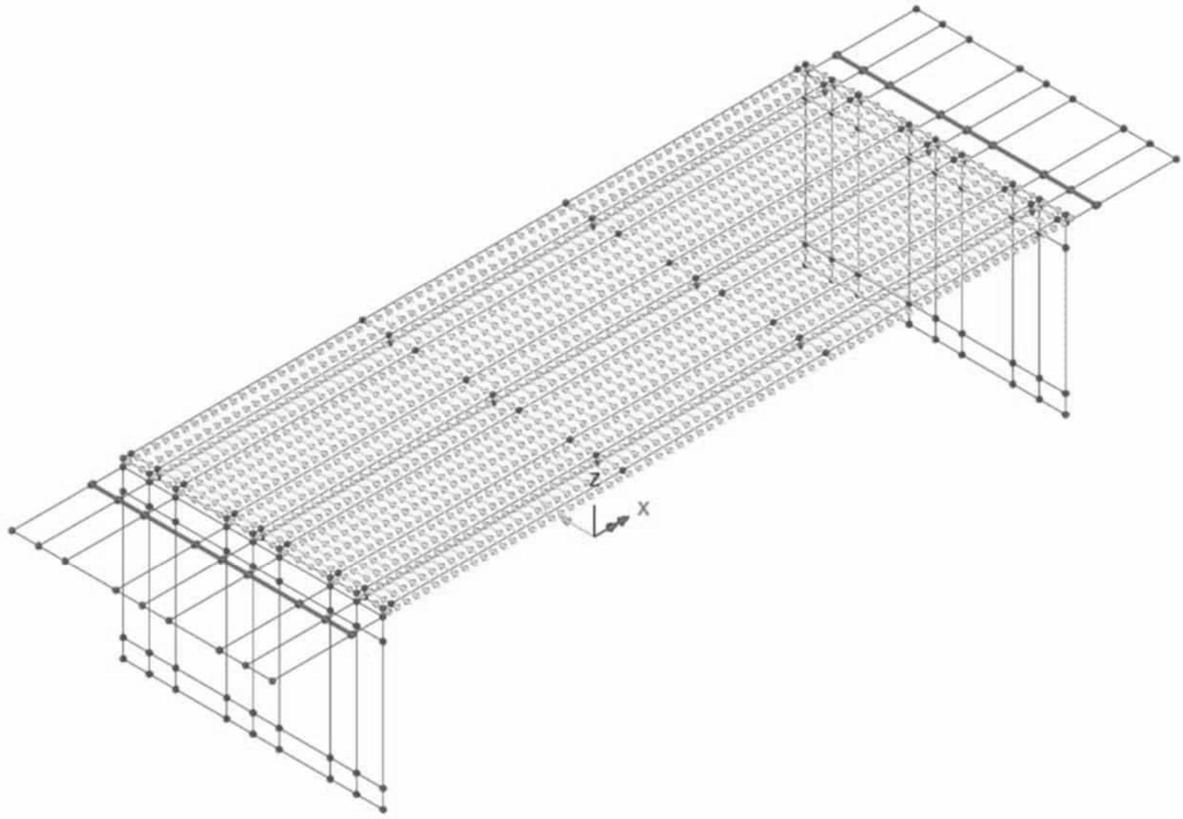
$$q_y = 2 \cdot \frac{Q_{sido}}{w_{tot} \cdot L_{deck}} = 2 \cdot \frac{100 kN}{12.8 m \cdot 33.6 m} = 0.5 \frac{kN}{m^2}$$

$$m_x = q_y \cdot (0.15 m + t_{bel}) = 0.5 \frac{kN}{m} \cdot (0.15 m + 0.10 m) = 0.1 \frac{kNm}{m^2}$$

Note:
The braking force associated with LM 1 is applied on the safe side in the system calculation.

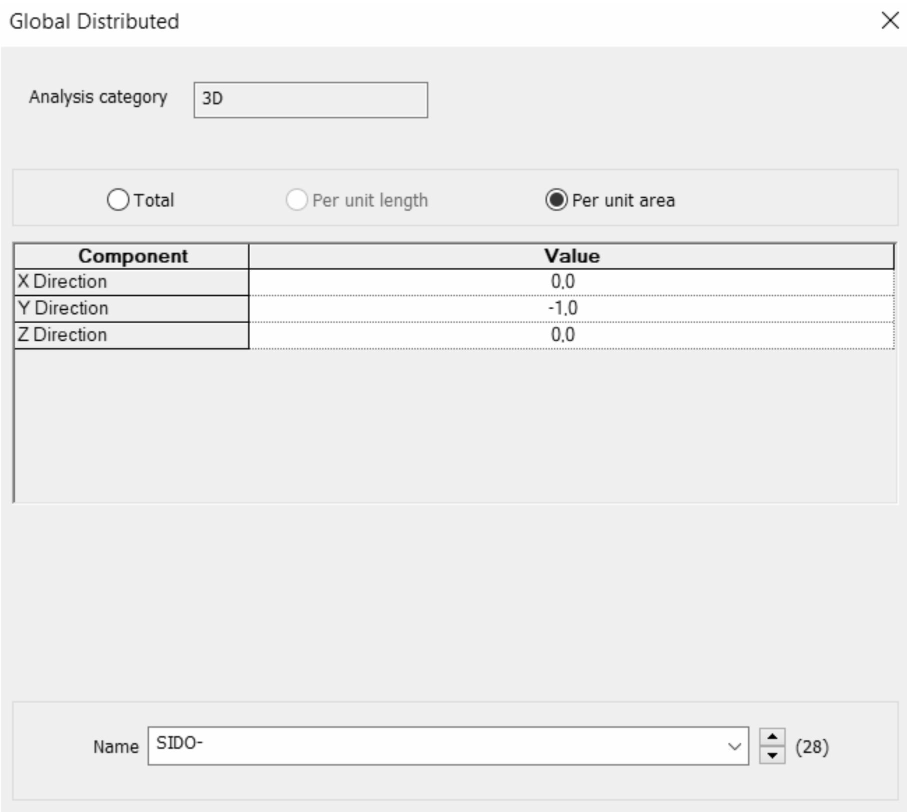
Load case : SIDO +

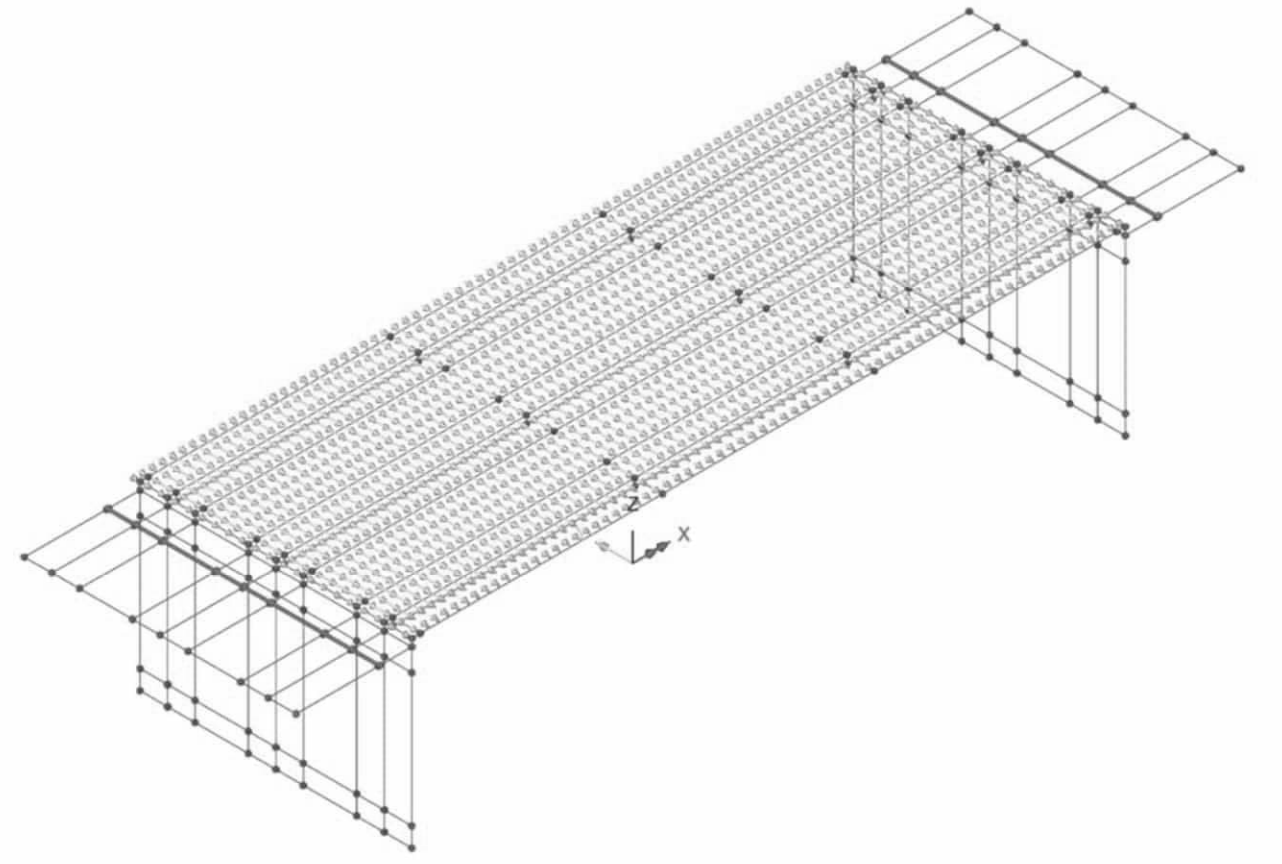




Overview 3D

Loadcase : SIDO-





Overview 3D

3.9.2.2 Load combination

Envelope SIDO :

Load case
SIDO +
SIDO -

3.10 WIND LOAD

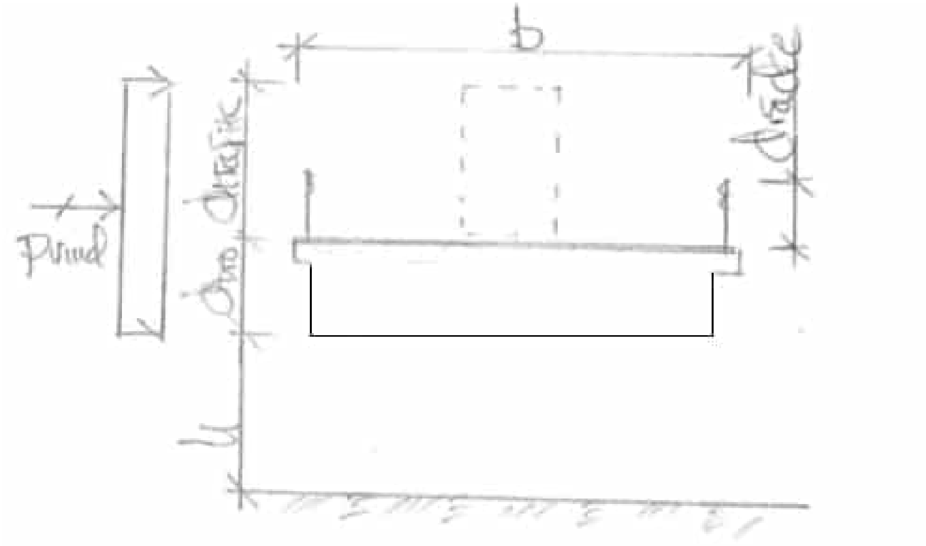
Load applied to Analysis : *Analysis 1*

Windload on bridges is defined by EN 1991-1-4 chapter 8.

Duration coefficients (see SS-EN 1990 attachment A2 table A2.1) :

$\psi_k = 1.00$
$\psi_0 = 0.30$
$\psi_1 = 0.20$
$\psi_2 = 0$

Load intensity:



Terrain type II is applied on safe side according to SS-EN 1991-1-4 table 4.1.

Reference height z_e = 6 m : SS-EN 1991-1-4 section 8.3.1 (6)

$v_b(Skellefteå; z_e = 10m; z_0 = 0.05m) = 22\frac{m}{s}$: TRVFS 2018:57 chapter 7 figure 7.1

$q_p\left(z_e = 6m, Terrängtyp\ II, v_b = 22\frac{m}{s}\right) = 0.56kPa$: TRVFS 2011:12 attachment 4 table 4.2

$q_b = \frac{1}{2}\cdot\rho\cdot v_b^2 = \frac{1}{2}\cdot 1.25\frac{kg}{m^3}\cdot\left(22\frac{m}{s}\right)^2 = 0.30\frac{kN}{m^2}$: SS-EN 1991-1-4 chapter 4.5

$c_e = \frac{q_p}{q_b} = \frac{0.56kPa}{0.30kPa} = 1.87$: SS-EN 1991-1-4 chapter 4.5

$d_{bro} = \frac{1.2m+1.7m}{2} + 0.10m = 1.55m$: construction height incl. pavement

$d_{traf} = 2.0m$: traffic height pavement

$d_{tot} = 1.55m + 2.0m = 3.55m$

$\rightarrow \frac{b_{bro}}{d_{tot}} = \frac{12.8m}{3.55m} = 3.6$

$c_{f.x0}\left(\frac{b_{bro}}{d_{tot}} = 3.6\right) = 1.4$: SS-EN 1991-1-4 sketch 8.3

$c_{f.x} = c_{f.x0} = 1.4$: SS-EN 1991-1-4 section 8.3.1 (1)

$C = c_e \cdot c_{f.x} = 1.87 \cdot 1.4 = 2.61$

Wind load structure (below pavement) :

$$\frac{A_{ref.x}^{bro}}{L} \equiv d_{bro}$$

$$p_{vind}^{bro} = \frac{F_w}{L} = \frac{1}{2} \cdot \rho \cdot v_b^2 \cdot C \cdot \frac{A_{ref.x}^{bro}}{L} = \frac{1}{2} \cdot 1.25 \frac{kg}{m^3} \cdot \left(22 \frac{m}{s}\right)^2 \cdot 2.61 \cdot 1.55m = 1.2 \frac{kN}{m}$$

Wind load traffic (above pavement) :

$$\frac{A_{ref.x}^{traf}}{L} \equiv d_{traf}$$

$$p_{vind}^{traf} = \frac{F_w}{L} = \frac{1}{2} \cdot \rho \cdot v_b^2 \cdot C \cdot \frac{A_{ref.x}^{bro}}{L} = \frac{1}{2} \cdot 1.25 \frac{kg}{m^3} \cdot \left(22 \frac{m}{s}\right)^2 \cdot 2.61 \cdot 2.00m = 1.6 \frac{kN}{m}$$

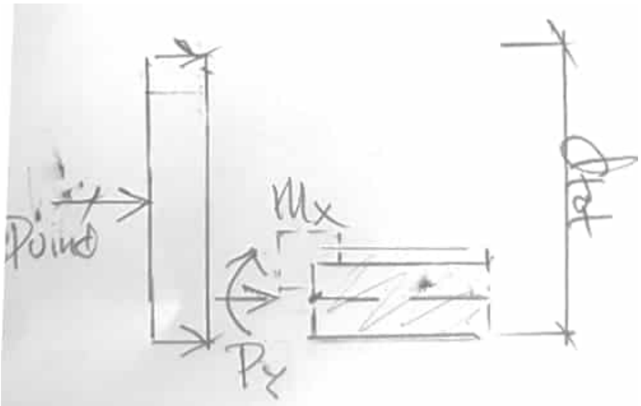
When traffic load acts om bridge together load associated to traffic can be reduced according to SS-EN 1991-1-4 section 8.1 (4). However this reduction is not considered on safe side.

$$* p_{vind}^{traf} = \psi_0 \cdot \frac{F_w}{L} = \psi_0 \cdot \frac{1}{2} \cdot \rho \cdot v_{b.0}^2 \cdot C \cdot \frac{A_{ref.x}^{bro}}{L} = 0.3 \cdot \frac{1}{2} \cdot 1.25 \frac{kg}{m^3} \cdot \left(23 \frac{m}{s}\right)^2 \cdot 2.61 \cdot 2.00m$$
$$= 0.5 \frac{kN}{m}$$

3.10.1 Definition of load

Load is applied as a line load acting along each edge beam.

$$p_{vind} = p_{vind}^{bro} +* \, p_{vind}^{traf} = 1.2\frac{kN}{m} + 1.6\frac{kN}{m} = 2.8\frac{kN}{m}$$



$$\rightarrow \quad p_y = 3\frac{kN}{m}$$

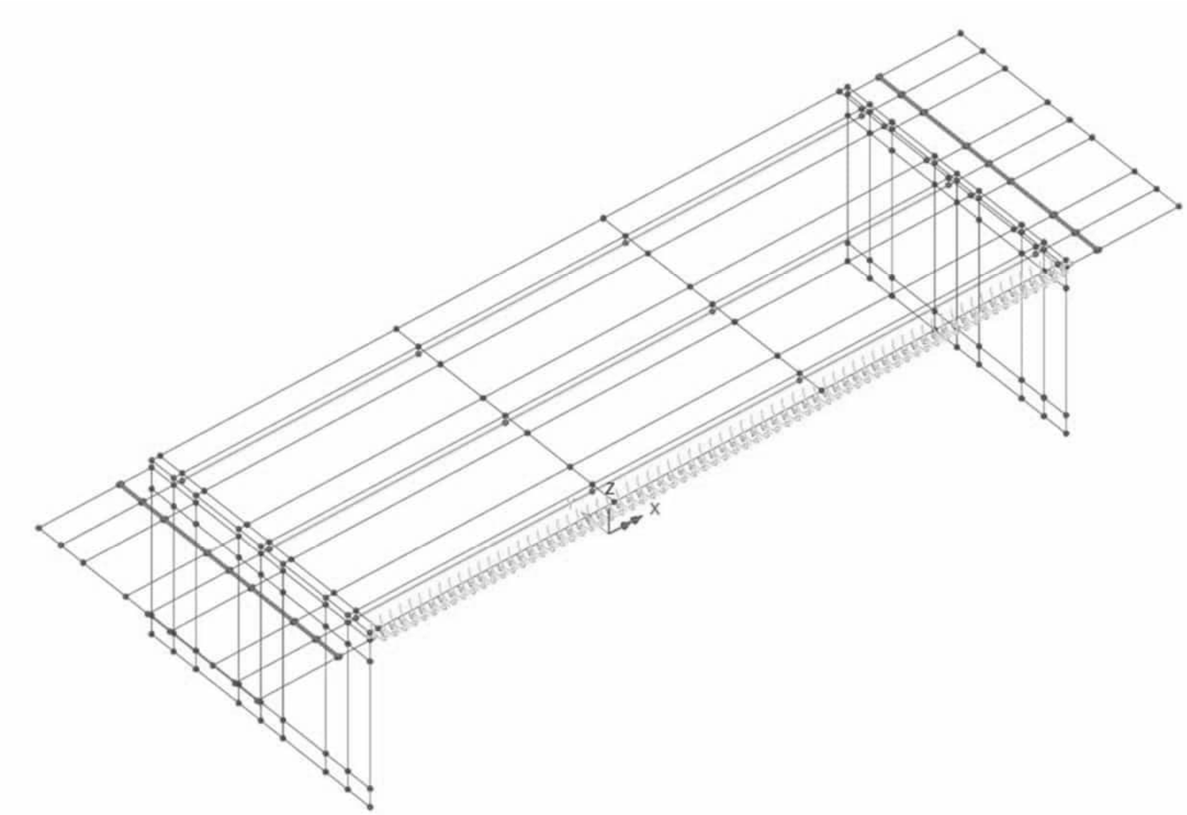
$$m_x = -p_y \cdot \left[\frac{d_{tot}}{2} - (1.45m - 0.50m)\right] = -3\frac{kN}{m} \cdot \left[\frac{3.55m}{2} - 0.95m\right] = -3\frac{kNm}{m}$$

Load : VIND+

Structural loading : Global distributed

Line load in Y direction (p_y) : +3 $\frac{kN}{m}$

Line moment about X axis (m_x) : -3 $\frac{kNm}{m}$

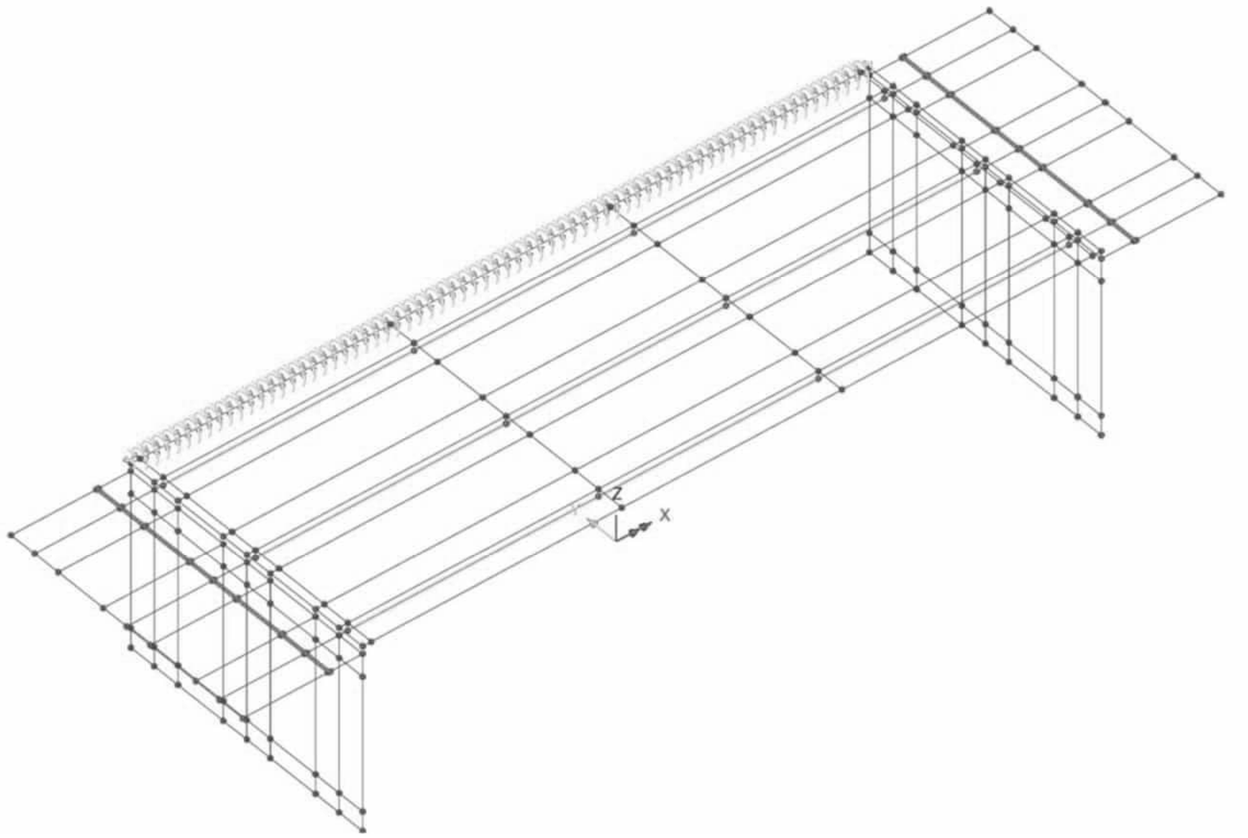


Load : VIND-

Structural loading : Global distributed

Line load in Y direction (p_y) : -3 $\frac{kN}{m}$

Line moment about X axis (m_x) : 3 $\frac{kNm}{m}$



3.10.2 Load combination

Envelope VIND :

Load case
VIND+
VIND-

3.11 SURCHARGE

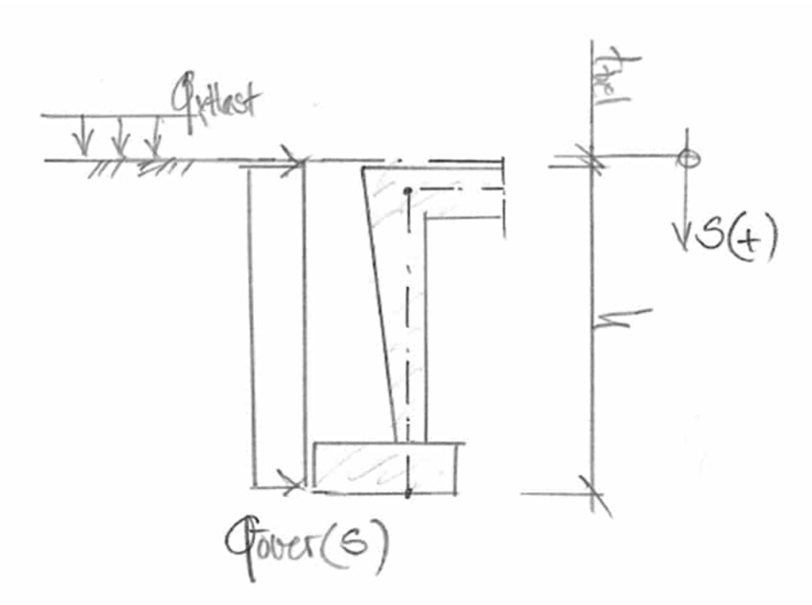
Load applied to Analysis : *Analysis 1*

TSFS chapter 11 section §8 describes load seen below.

$q_{ytlast.1} = 20kPa$: road width 6.0 m

$q_{ytlast.2} = 10kPa$: remaining width

$q_{över}\ (s) = K_0 \cdot q_{ytlast}$



$q_{ytlast}^{b=6.0m} = 0.29 \cdot 20kPa = 6kPa$

$q_{ytlast}^{övrigt} = 0.29 \cdot 10kPa = 3kPa$

Note:
Since the bridge has a link plate with a fictitious bearing located 4 meters from the back edge of the frame beam, no overload theoretically occurs towards the frame beam or wing walls. On the safe side, this favourable effect is not considered.

On the safe side, a surface load of 20 kPa is applied to the entire bridge width of 12.8 meters.

The favourable impact of the counteracting earth pressure due to movement is not accounted for on the safe side.

3.11.1 Load abutment 1

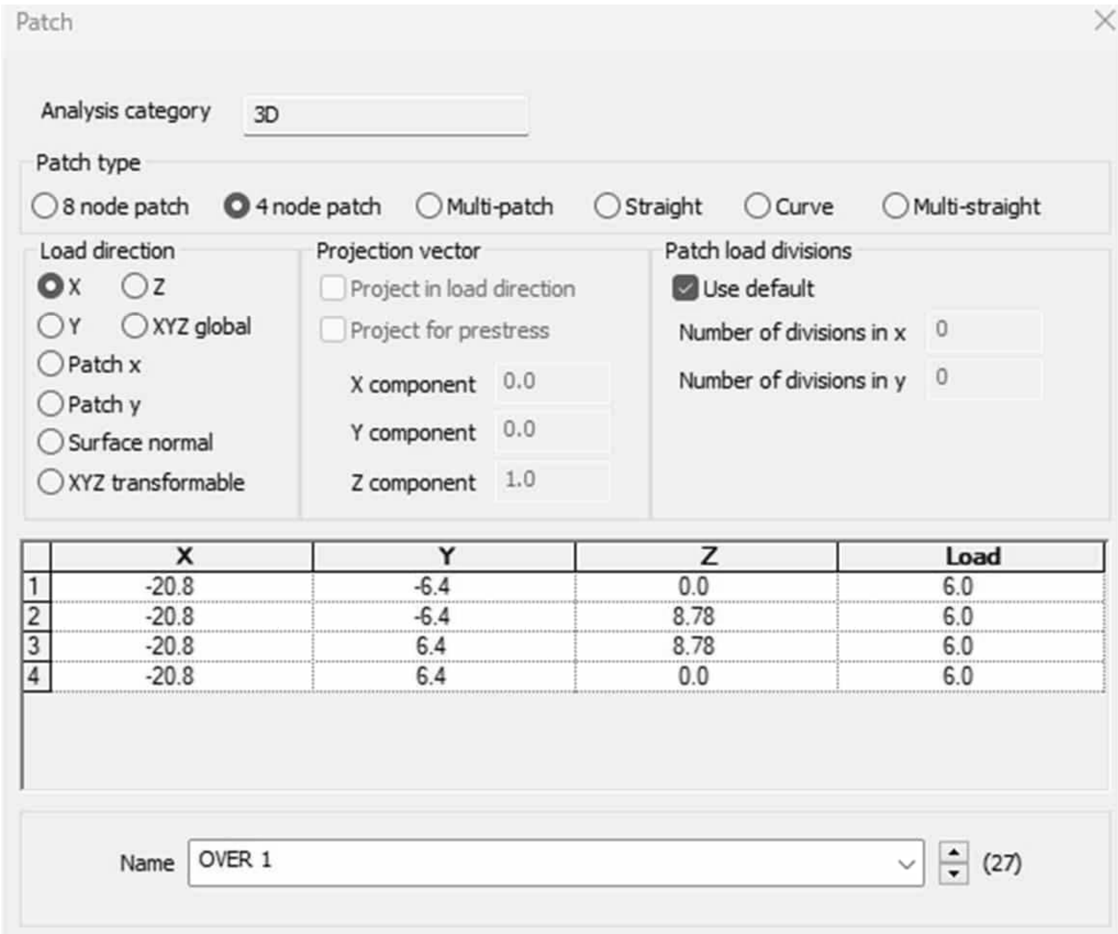
Load case : OVER 1

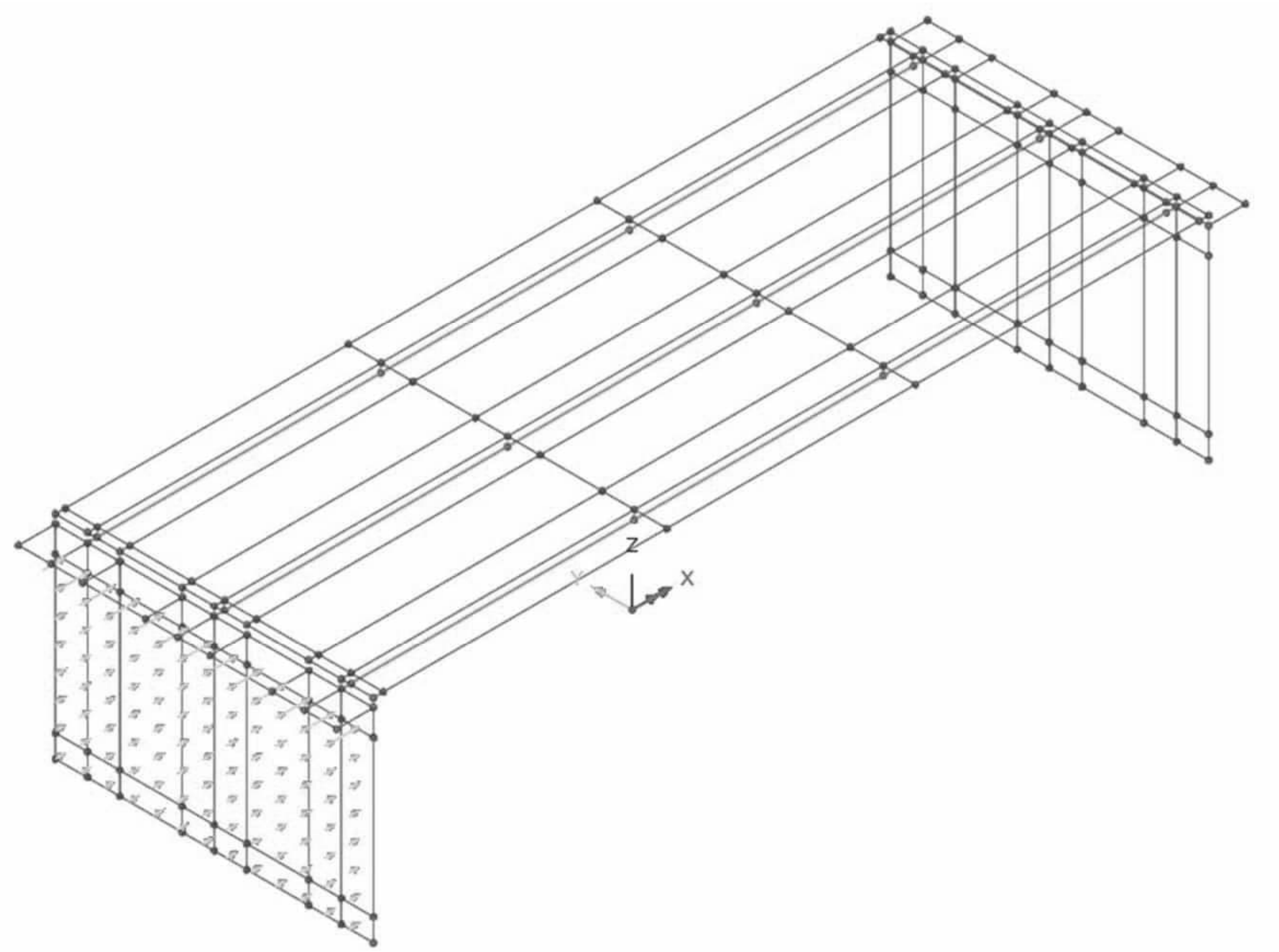
Structural loading : Discrete 4 node patch load

Surface load (q_x) : 6 kPa

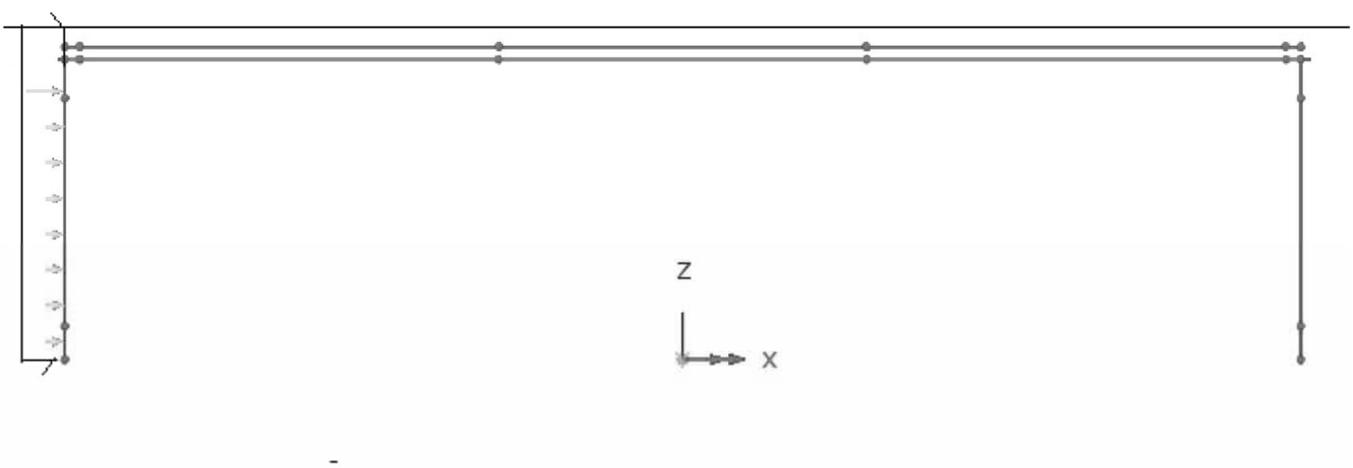
Search Area : Abutment 1

Loads outside search area : Include full load





Overview 3D



ELEVATION

The vector for load intensity in the figure appears to be higher at the top of the frame leg. This is because the load surface 'Abutment 1' is lower than the load surface."

3.11.2 Load abutment 2

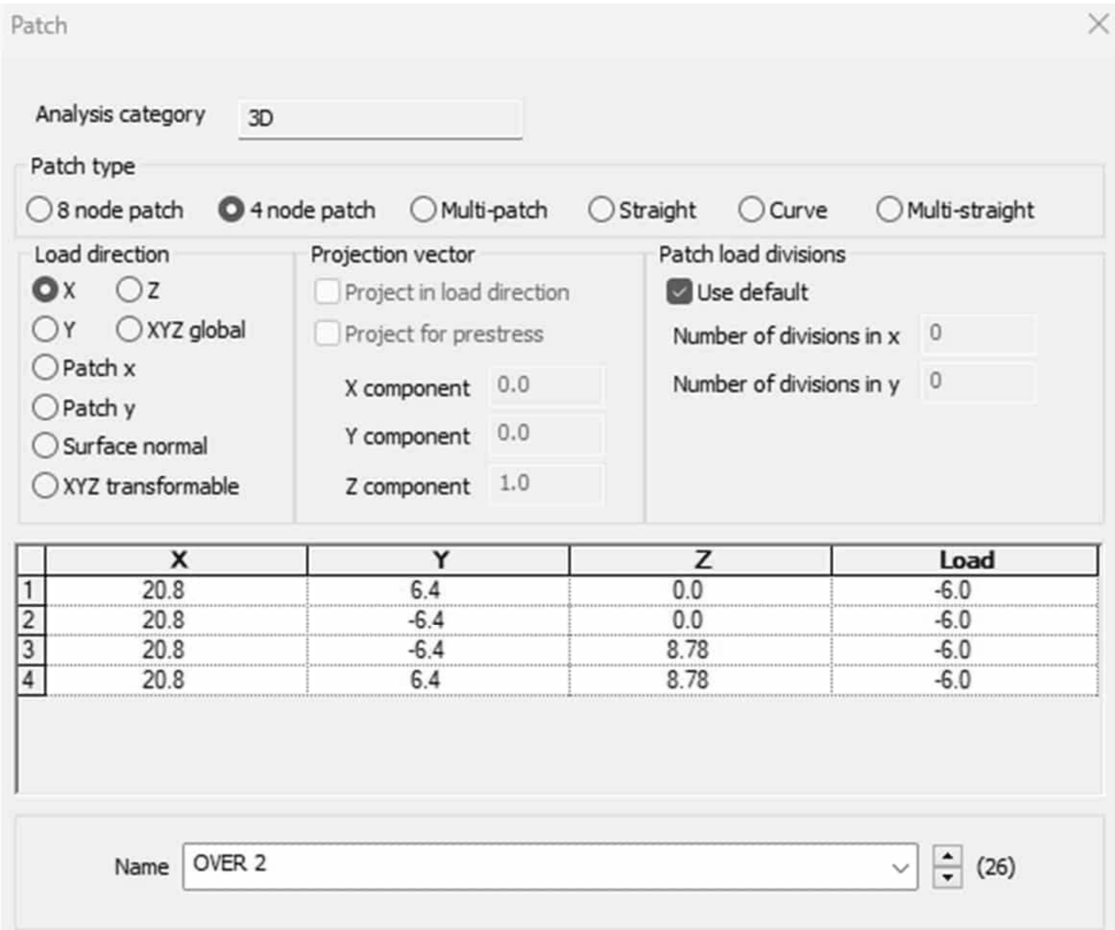
Load case : OVER 2

Structural loading : Discrete 4 node patch load

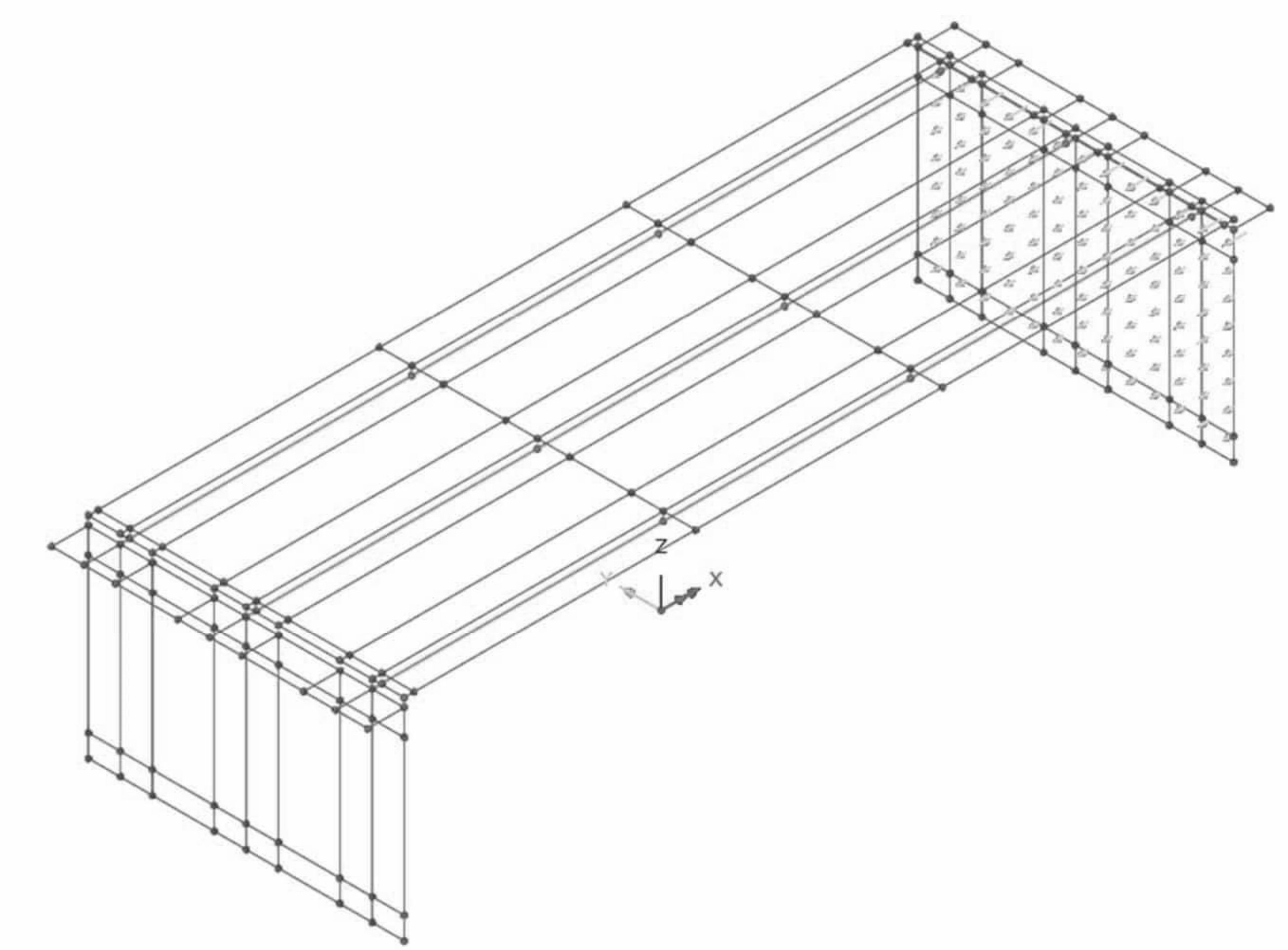
Surface load (q_x) : -6kPa

Search Area : Abutment 2

Loads outside search area : Include full load



	X	Y	Z	Load
1	20.8	6.4	0.0	-6.0
2	20.8	-6.4	0.0	-6.0
3	20.8	-6.4	8.78	-6.0
4	20.8	6.4	8.78	-6.0



Overview 3D

3.11.3 Load wingwalls

Calculation software K2.002 is used to determine the earth pressure against wing walls according to Culman's method. All wing walls are assumed to have the same length (L = 6.0 m).

Load is distributed along edge of abutments from bottom of superstructure and distance 6.08 m downward. This assumption is on safe side.

Effective height at edge abutment:

$H_{ef} = 5.0m$: see page A3:30

Forces at edge abutment in limit state (ULS):

$N_{ULS} = +133\frac{kNm}{m}$: see page A3:30

$M_{ULS} = 349\frac{kNm}{m}$: see page A3:30

Characteristic earth pressure at edge abutment:

$N_{jord} = 60\frac{kN}{m}$: see page A3:19

$M_{jord} = 154\frac{kNm}{m}$: see page A3:19

Characteristic surcharge at edge abutment:

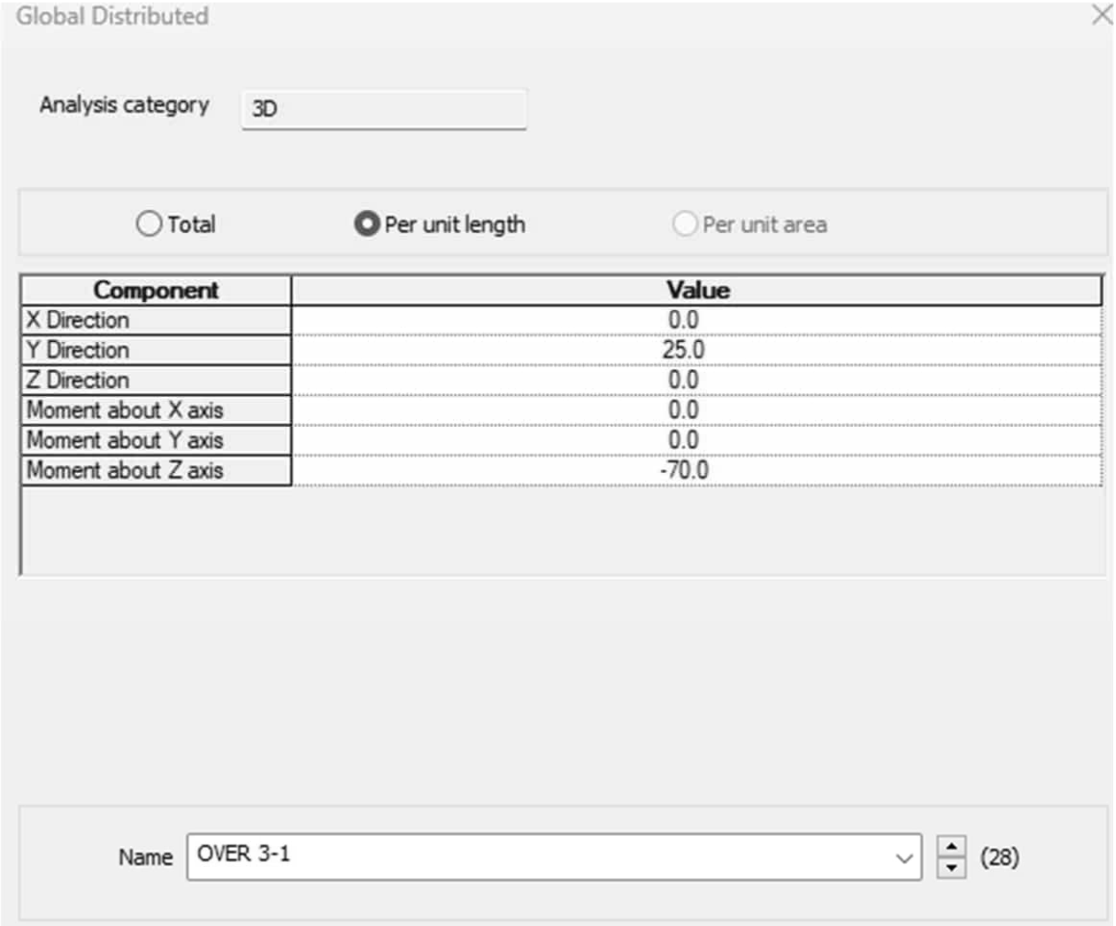
$$N_{\ddot{o}ver} = \left(133\frac{kN}{m} - 60\frac{kN}{m} \cdot 1.49\right) \cdot \frac{1}{1.71} = 25\frac{kN}{m}$$

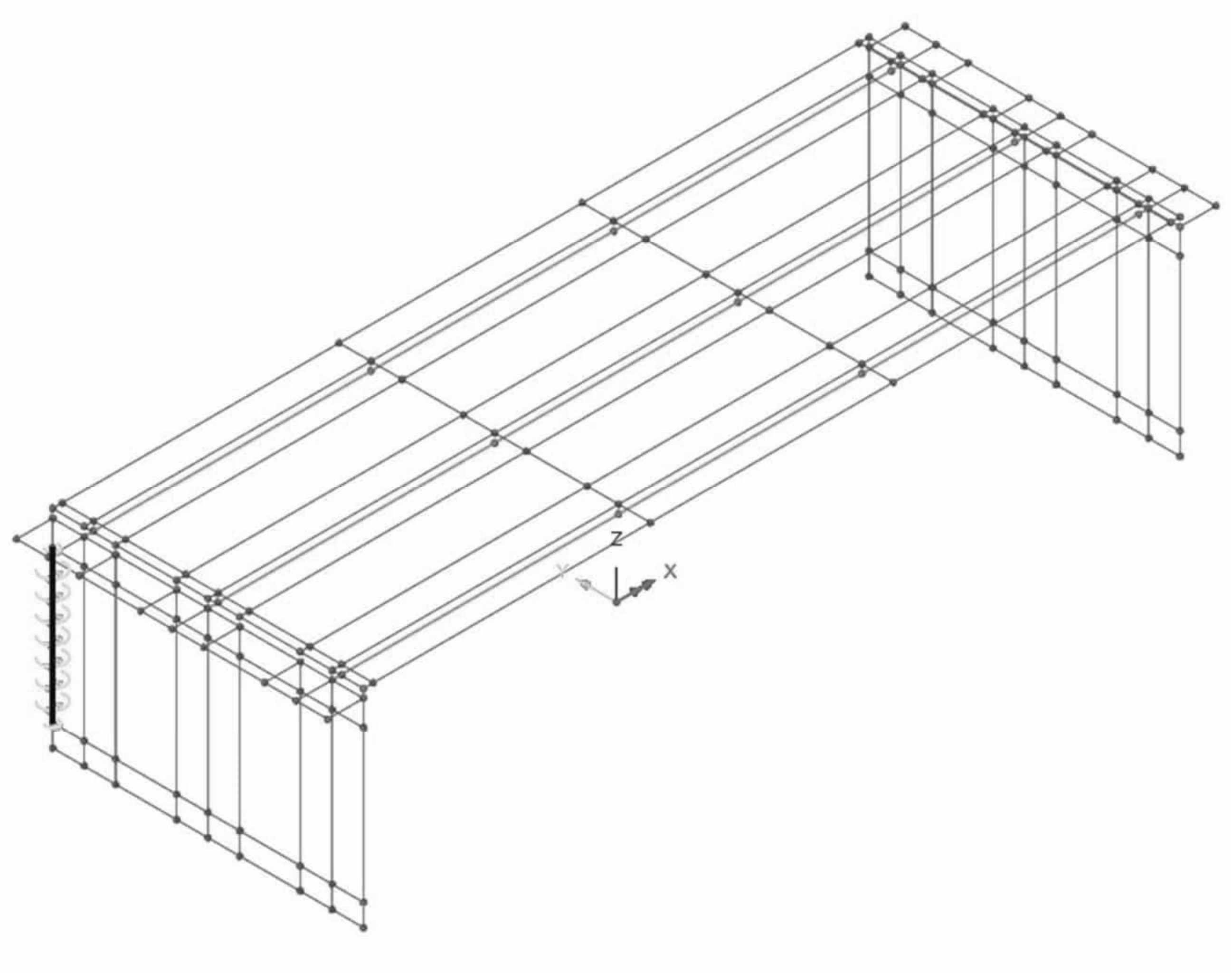
$$M_{\ddot{o}ver} = \left(349\frac{kNm}{m} - 154\frac{kNm}{m} \cdot 1.49\right) \cdot \frac{1}{1.71} = 70\frac{kNm}{m}$$

Load case : JORD 3-1
(Northern wing wall abutment 1)

$$p_y = +25\frac{kN}{m}$$

$$m_z = -70\frac{kNm}{m}$$



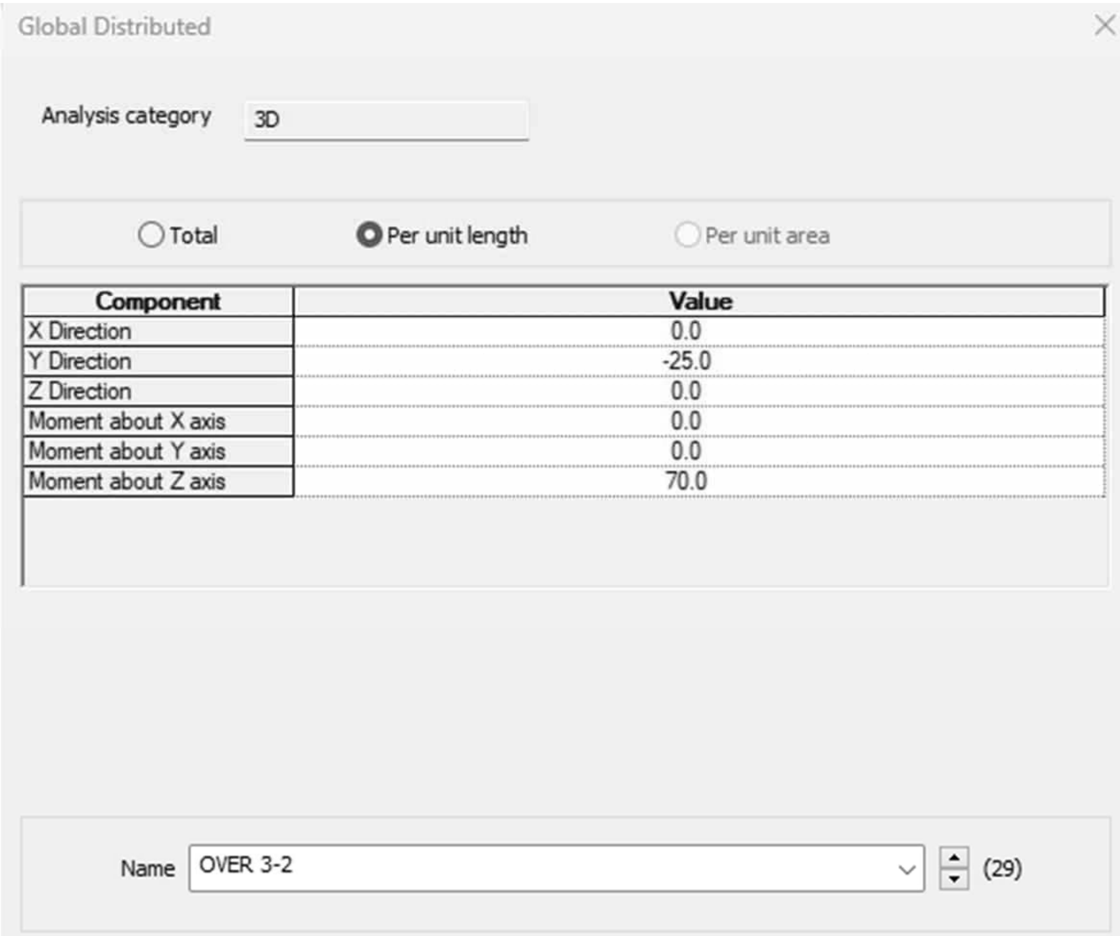


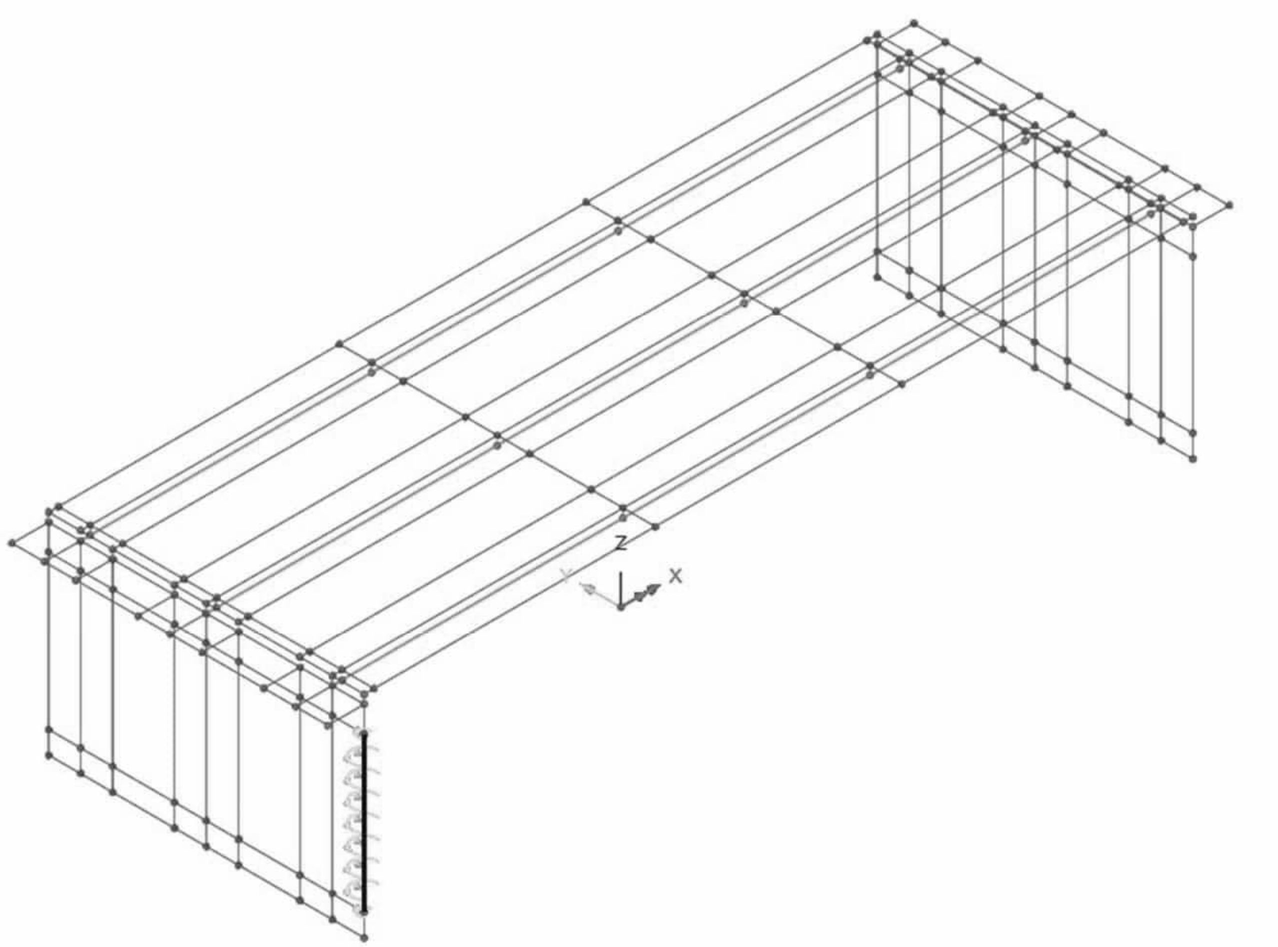
Overview 3D

Load case : OVER 3-2
(Southern wing wall abutment 1)

$$p_y = -25\frac{kN}{m}$$

$$m_z = +70\frac{kNm}{m}$$



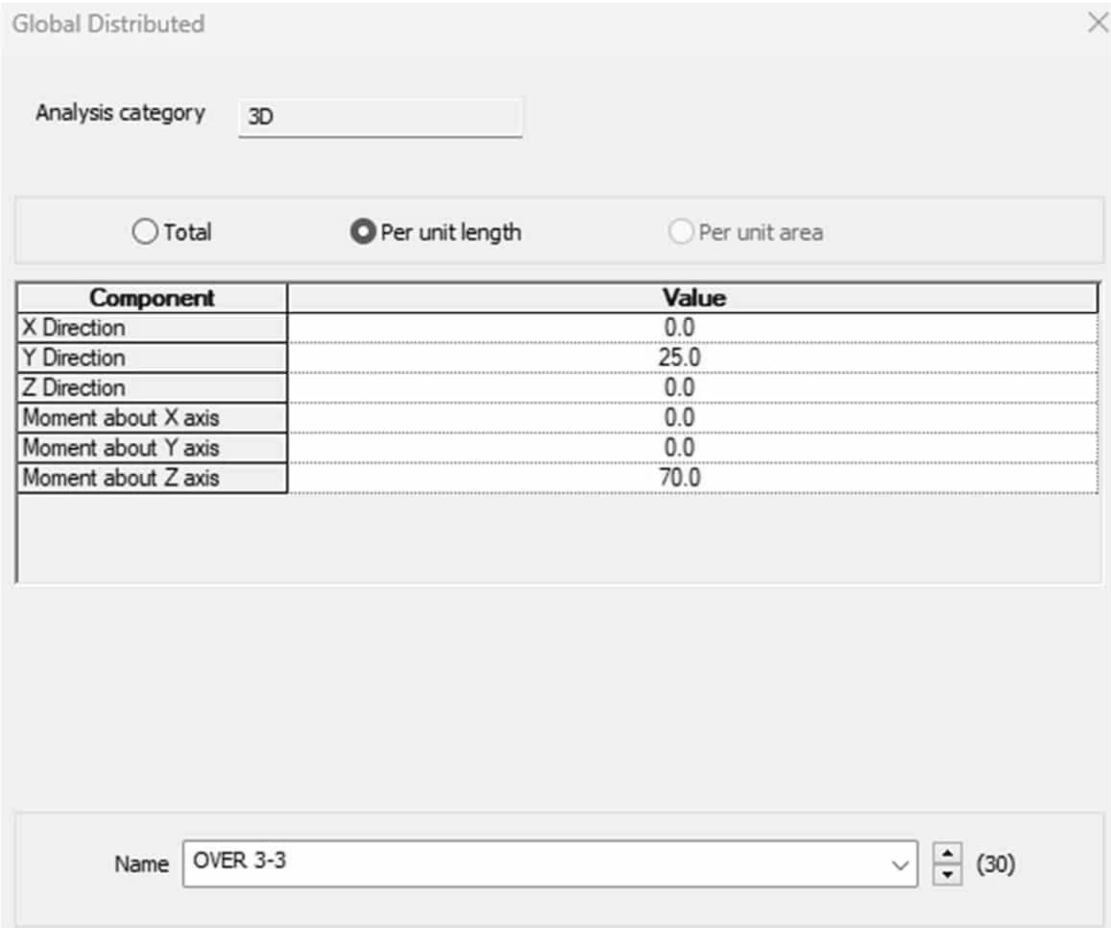


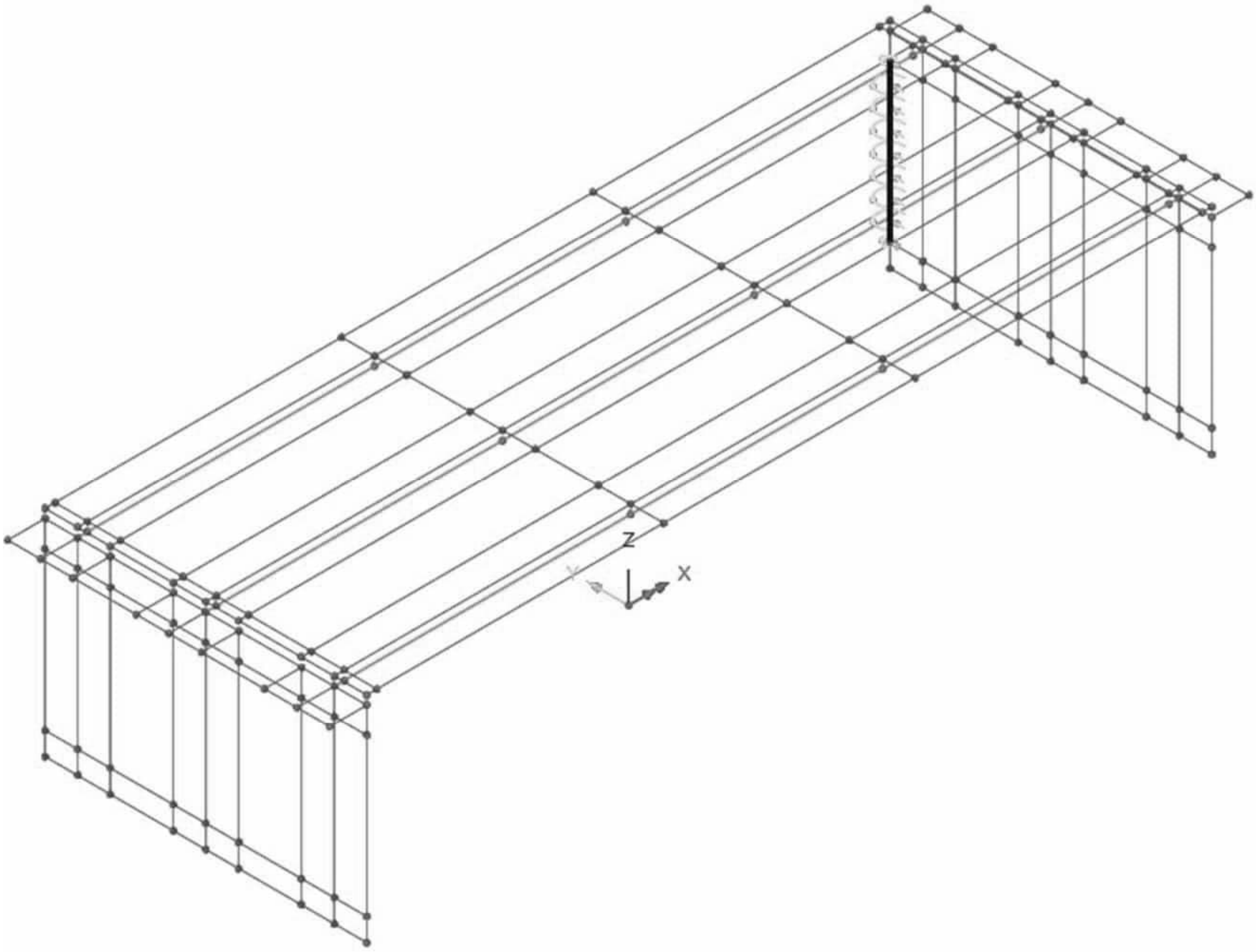
Overview 3D

Load case : OVER 3-3
(Northern wing wall abutment 2)

$$p_y = +25\frac{kN}{m}$$

$$m_z = +70\frac{kNm}{m}$$



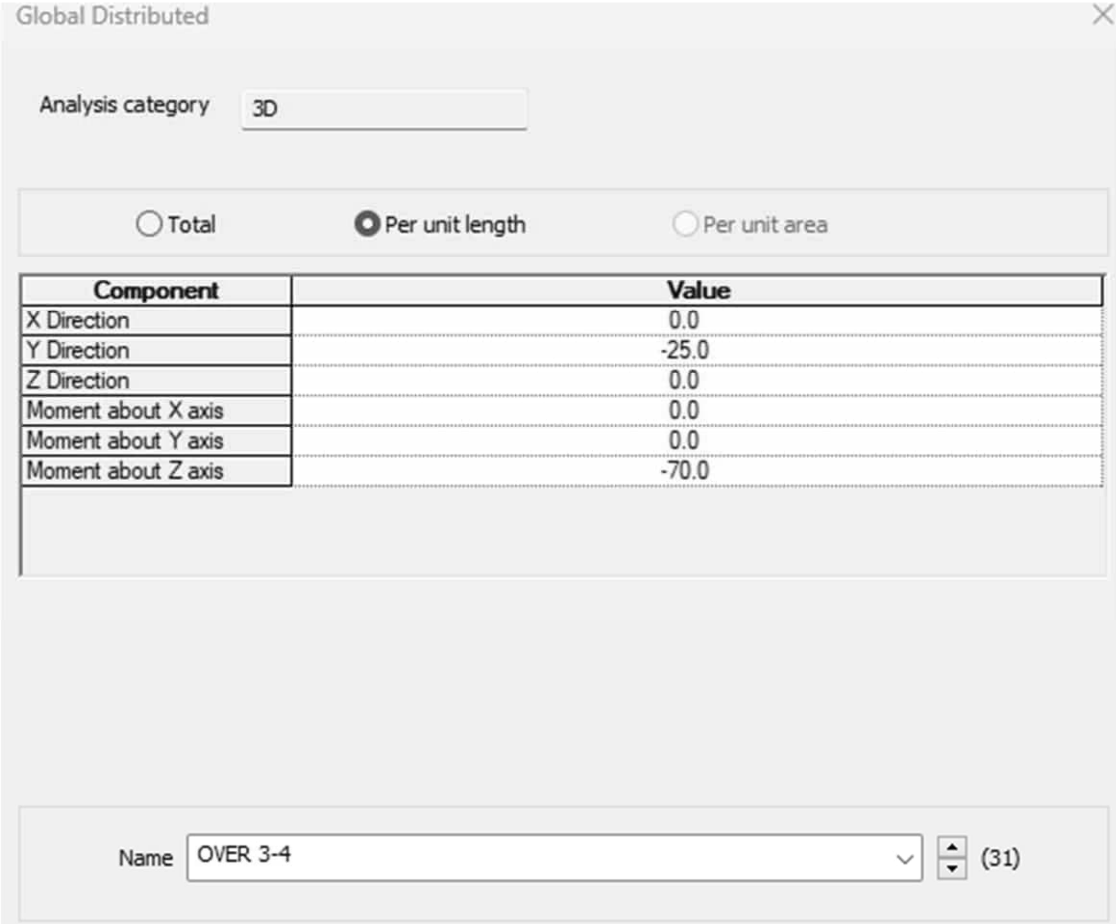


Overview 3D

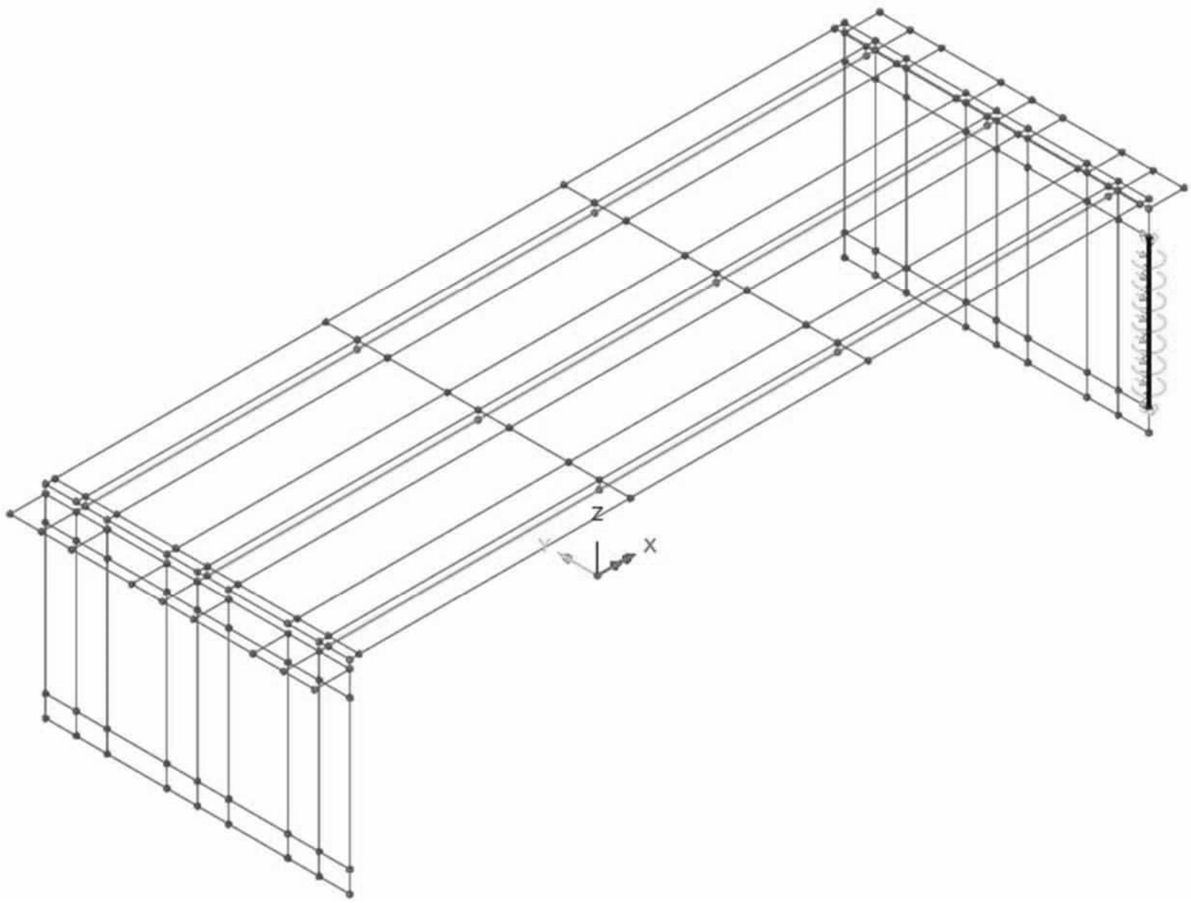
Load case : OVER 3-4
(Southern wing wall abutment 2)

$$p_y = -25\frac{kN}{m}$$

$$m_z = -70\frac{kNm}{m}$$



Component	Value
X Direction	0.0
Y Direction	-25.0
Z Direction	0.0
Moment about X axis	0.0
Moment about Y axis	0.0
Moment about Z axis	-70.0



Overview 3D

3.11.4 Load combination

Load combination smart OVER :

Load case	Permanent factor	Variable factor
OVER 1	0	1
OVER 2	0	1
OVER 3-1	0	1
OVER 3-2	0	1
OVER 3-3	0	1
OVER 3-4	0	1

3.12 TEMPERATURE

Load applied to Analysis : *Analysis 2*

Temperature effect bridges according to TSFS section B.3.2.5 and EN 1991-1-5 chapter 6.

Effect in service state see SS-EN 1992-1-1 §2.3.1.2. If used then apply effect of gradual cracking according to SS-EN 1992-1-1 §5.4(3).

Effect in ultimate state is not required according to SS-EN 1992-1-1 §2.3.1.2. If used apply reduced stiffness according to SS-EN 1992-1-1 §5.4(3).

Casting temperature, $T_{mont} = +10° C$: EN 1991-1-5A.1(3)

Expansion coefficient, $\alpha = 12 \cdot 10^{-6}$

Concrete slab $\Rightarrow$ typ 3

Location : Skellefteå

$T_{max} = +34°C$: TSFS chapter 8 sketch 8.1
$T_{min} = -42°C$: TSFS chapter 8 sketch 8.2

Duration coefficients :

Coefficients according to SS-EN 1990/A1 table A2.3

$\psi_0 = 0.60$
$\psi_1 = 0.60$
$\psi_2 = 0.50$

System superstructure:
Analysis 2 is used (see page A2:57).

13.12.1 Effect of concrete stiffness due to cracking

Impact is considered in the serviceability limit state according to SS-EN 1992-1-1 §2.3.1.2 (1). If this is done, a gradual development of cracking may be applied according to SS-EN 1992-1-1 §5.4(3).

In the studied bridge, all concrete is assumed to be cracked for the load cases of temperature, support settlement, and creep.

This assumption will be verified to ensure that it is accurate. If it is not, the calculation model will be adjusted accordingly.

Verification of whether the concrete is cracked will be done according to SS-EN 1992.2 section 7.2 (102) under the condition $\sigma_{ct}^{SLS-K} > f_{ctm}$.

A review of the bending stiffness according to SS-EN 1992-1-1 shows that completely uncracked reinforced concrete has a stiffness that is 13% of the cracked concrete according to SS-EN 1992-1-1 section 7.4.3 when applied to a slab with a thickness of 1200 mm, see page A3:116.

Selected bending stiffness in the calculation model:

In the chosen calculation, standard Swedish calculation practice is applied with stiffness of 60% for cracked compared to uncracked concrete.

Uncracked section (stage I): $EI_{osprucket} = EI_I = E_{cm} \cdot I_c$

Cracked section (stage II): $EI_{sprucket} = EI_{II} = 0.6 E_{cm} \cdot I_c$

Evaluation of bending stiffnesses according to SS-EN 1992-1-1 :
The control is performed for a section corresponding to b x h = 1000 mm x 1200 mm and reinforcement ϕ16s250 (∴ 804 mm^2/m).

The evaluation of stiffness for stage II (cracked section) is done using the calculation program caeEc205.

$$I_I = \frac{b \cdot h^3}{12} = \frac{1.0m \cdot (1.20m)^3}{12} = 144 \cdot 10^{-3} m^4 \qquad : \text{uncracked crossection}$$

$$I_{II} = 18 \cdot 10^{-3} m^4 \qquad : \text{cracked crossection, see page A3: 116}$$

$\rightarrow \eta = \frac{I_{II}}{I_I} = 13\% < 60\,\%$ thus on safe side !

```
Position: Kontroll styvhet stadium II
caeEc205-----------------------------------------------------------Version 2.2.3


Stadium I och II


Materialparametrar bruksstadie---------------------------------------------------

Betong ..........  fcm         fctk0,05     Ecm ------------------------------
                   MPa          MPa         GPa
C35/45               3,2         2,20        34,0


Materialindata------------------------------------------------------------------

Spricksäkerhetsfaktor, Zeta.........................   1,00
Effektivt kryptal, FIeff ...........................   2,00
Betongens slutkrympning, ecs .......................   0,00 ‰
Elasticitetsmodul armering, Es...................... 200,00 GPa
Töjning i förespänd armering, ep ..................    0,00 ‰


Krafter + armering--------------------------------------------------------------

Moment, MEd (Positivt dragen underkant)............  1000,0 kNm
Normalkraft, NEd (Positiv draget tvärsnitt)........     0,0 kN
Normalkraftens excentricitet, e (Pos från ÖK uppåt)    0 mm
Effektiv höjd underkantsarmering, d................ 1250 mm
Armeringsarea underkantsarmering, As...............  804 mm2


Rektangulärt tvärsnitt, mått i mm-----------------------------------------------

    h      bw     bök    tök   tsök    buk    tuk   tsuk
   1200   1000     0      0      0      0      0      0


Beräkningsresultat stadium II---------------------------------------------------

Neutrallagrets läge ................................  0,174 m
Ideelt tröghetsmoment ..............................  1,818*10^-2 m4
Betongspänning tryckt kant .........................  -9,61 MPa
Stålspänning dragen kant ........................... 1043,6 MPa
```

3.12.2 Even temperature over entire bridge (JTEMP)

Even temperature over entire bridge according to EN 1991-1-5 section 6.1.3.3. This temperature change is seasonal.

Uniform temperature change across the entire bridge is given by EN 1991-1-5, section 6.1.3.3. This temperature change is seasonal and primarily causes translation from the bridge's movement center towards the respective supports. This movement is considered to give rise to increased earth pressure due to the movement.

Function according to SS EN 1991-1-5 sketch 6.1 (bridge type 3) :

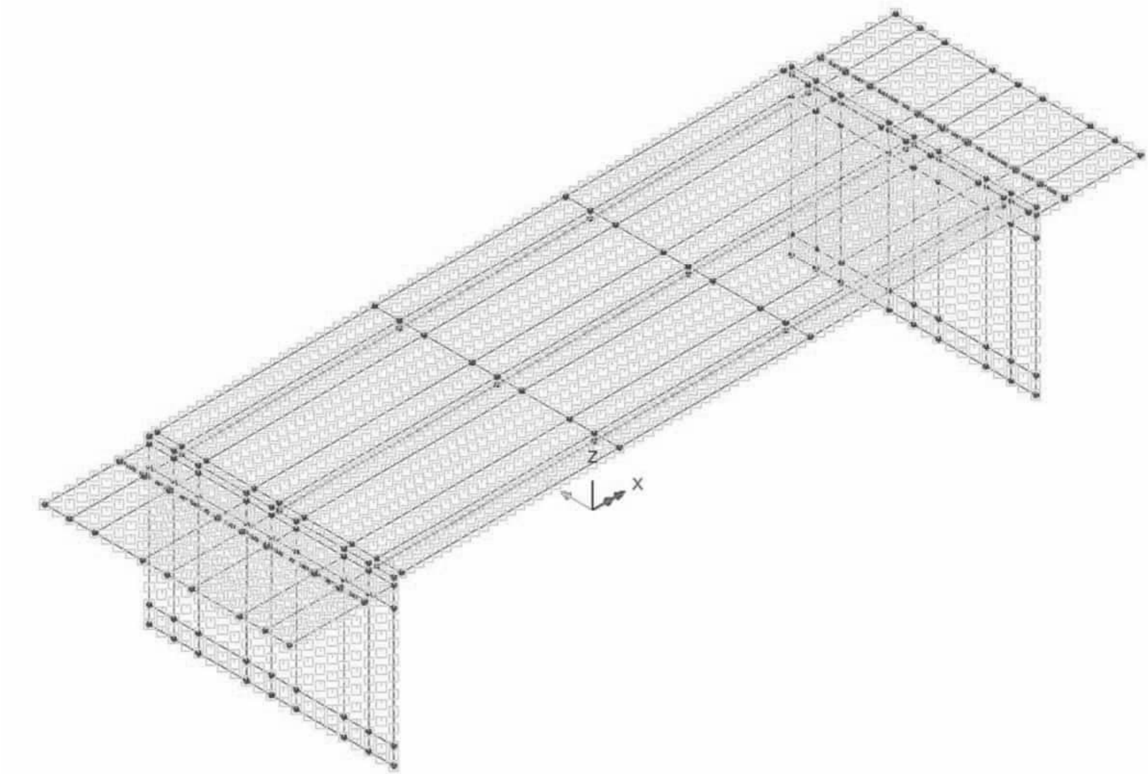
$$T_e(T) = \mathrm{linterp}\left[(-50 \quad 0 \quad 30 \quad 50)^T \cdot °C, (-42 \quad 7 \quad 32 \quad 52)^T \cdot °C, T\right]$$

$$T_{e.max} = T_e\left(T_{max}\right) = 36\,°C$$

$$T_{e.min} = T_e\left(T_{min}\right) = -34\,°C$$

$$T^+ = T_{e.max} - T_0 = +36℃ - 10℃ = +26℃$$

$$T^- = T_{e.min} - T_0 = -34℃ - 10℃ = -44℃$$



<u>Overview 3D</u>

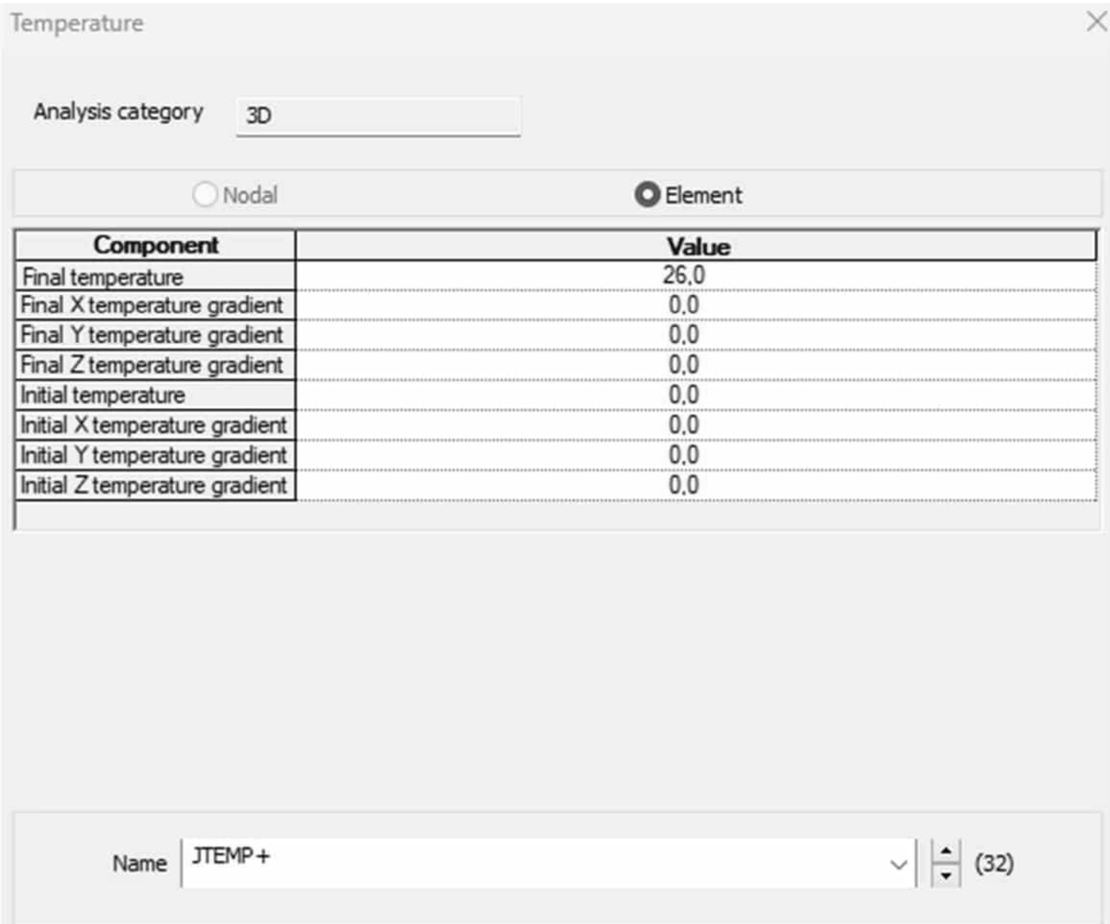
Load : JTEMP+

Structural loading : Temperature

Final temperature : +26C

Initial temperature : ±0 C

Load case : JTEMP+


Temperature

Analysis category 3D

Nodal Element

Component	Value
Final temperature	26,0
Final X temperature gradient	0,0
Final Y temperature gradient	0,0
Final Z temperature gradient	0,0
Initial temperature	0,0
Initial X temperature gradient	0,0
Initial Y temperature gradient	0,0
Initial Z temperature gradient	0,0

Name JTEMP+ (32)

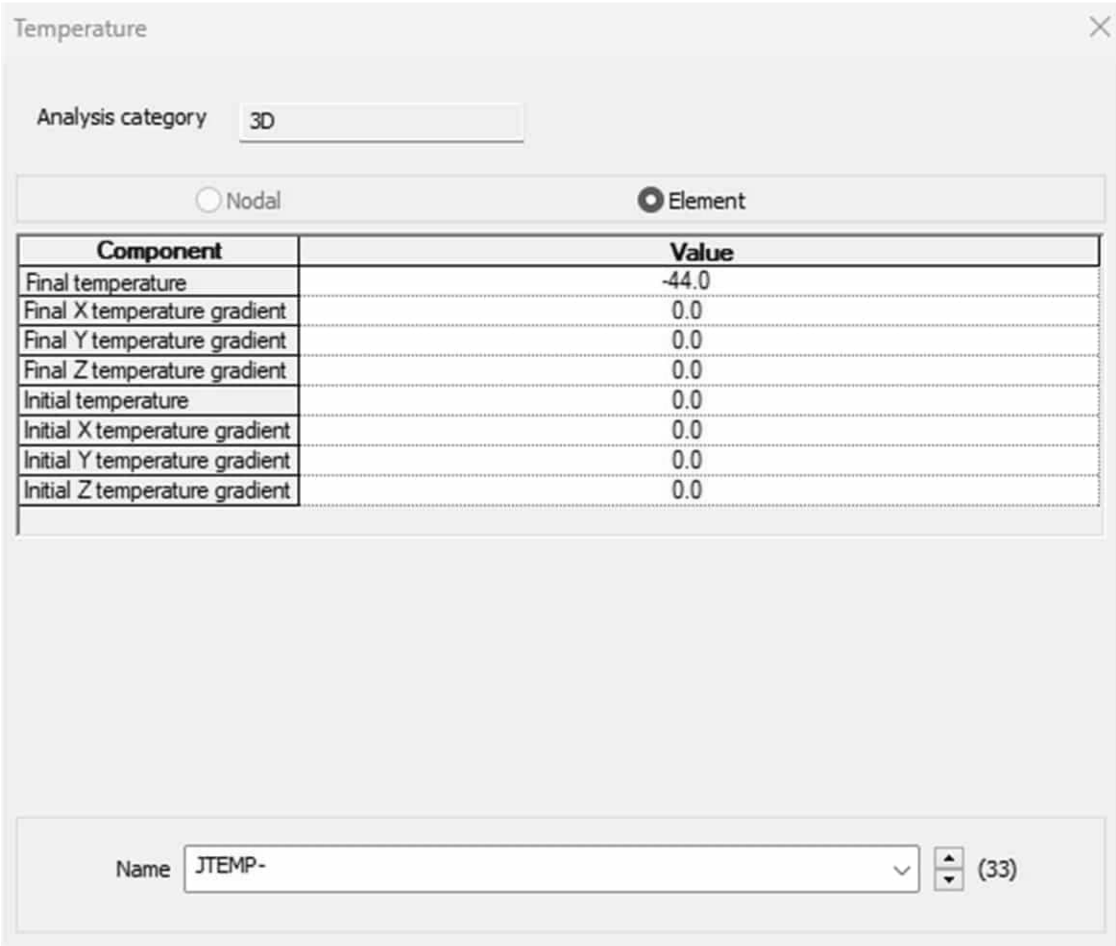
Load : JTEMP-

Structural loading : Temperature

Final temperature : -44C

Initial temperature : ±0 C

Load case : JTEMP-


Temperature

Analysis category 3D

Nodal Element

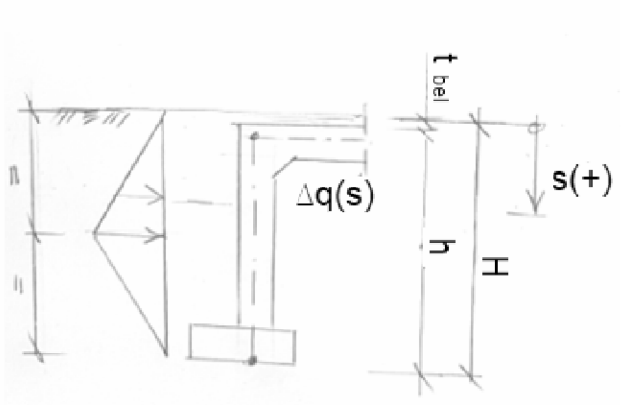
Component	Value
Final temperature	-44.0
Final X temperature gradient	0.0
Final Y temperature gradient	0.0
Final Z temperature gradient	0.0
Initial temperature	0.0
Initial X temperature gradient	0.0
Initial Y temperature gradient	0.0
Initial Z temperature gradient	0.0

Name JTEMP- (33)

3.12.2 Increased earth pressure due to movement (DELTA P)

The increased earth pressure caused by the movement of the approach slab towards the backfill is calculated according to TRVINFRA-00227, section 7.2.1..2.1. This load corresponds to what is stated in SS-EN 1997-1, section C.3. This section is used to ensure that movements for Δq(s) do not exceed the limit for passive earth pressure. During this check, "firm ground" and "wall movement type" b are applied. . Vid denna kontroll tillämpas ”fast jord” och ”väggens rörelsesätt” typ b.

$$\rightarrow \delta = (T^{+} - T^{-}) \cdot \alpha \cdot \frac{L_{bro}}{2} = (26℃ + 44℃) \cdot 1.2 \cdot 10^{-5} \cdot \frac{36300mm}{2} = 15mm$$



$h = 8685mm$

$t_{bel} = 95mm$

$\rightarrow H = 8780mm$

$$\Delta q(s) = c \cdot \gamma \cdot s \cdot \frac{\delta}{H} = 600 \cdot 20 \frac{kN}{m^3} \cdot s \cdot \frac{15mm}{8780mm}$$

$$\Delta q_{max} = 600 \cdot 20 \frac{kN}{m^3} \cdot \frac{8780m}{2} \cdot \frac{15mm}{8780mm} = 90kPa$$

Note:
No reduction is made considering creep or cracking, as this is not an internal constraint load. This applies to both ultimate limit state (ULS) and serviceability limit state (SLS).

3.12.2.1 Load abutment 1

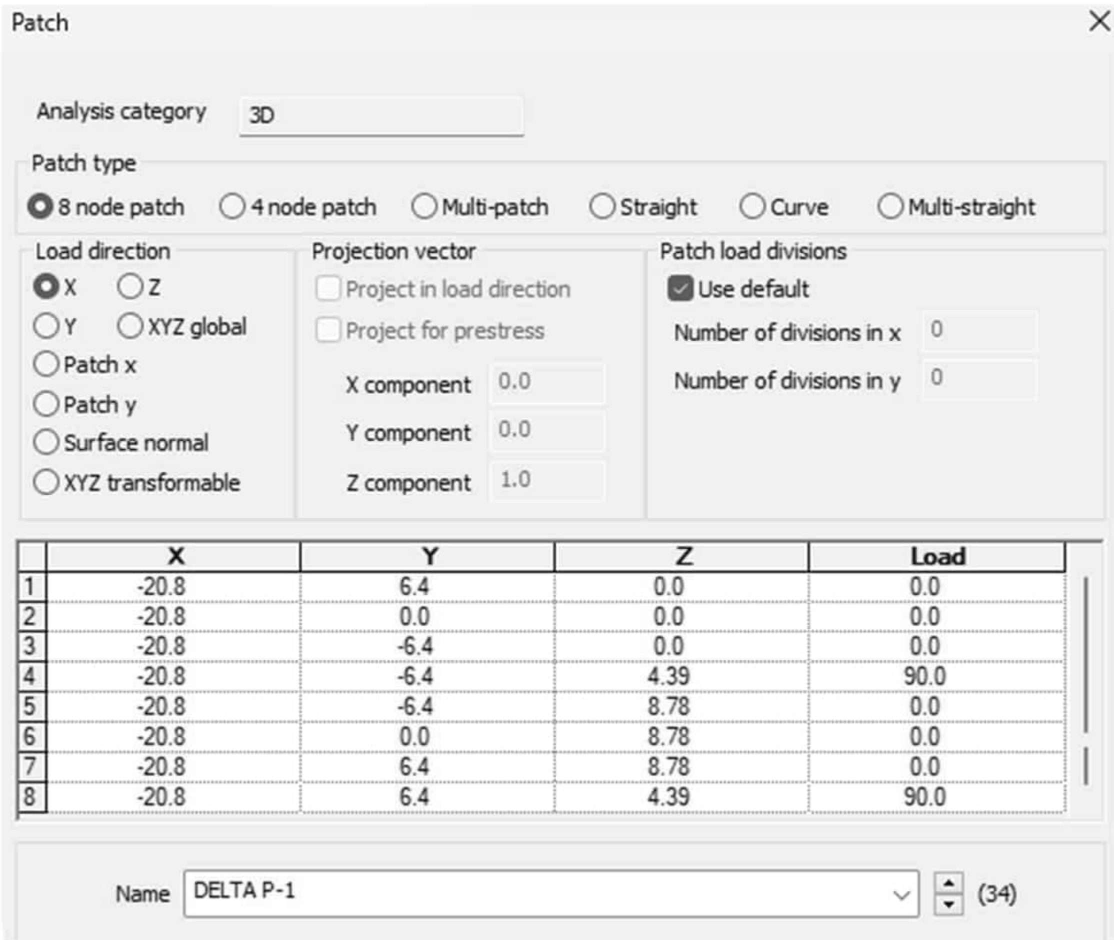
Discrete patch load : DELTA P-1

Structural loading : Discrete 8 node patch

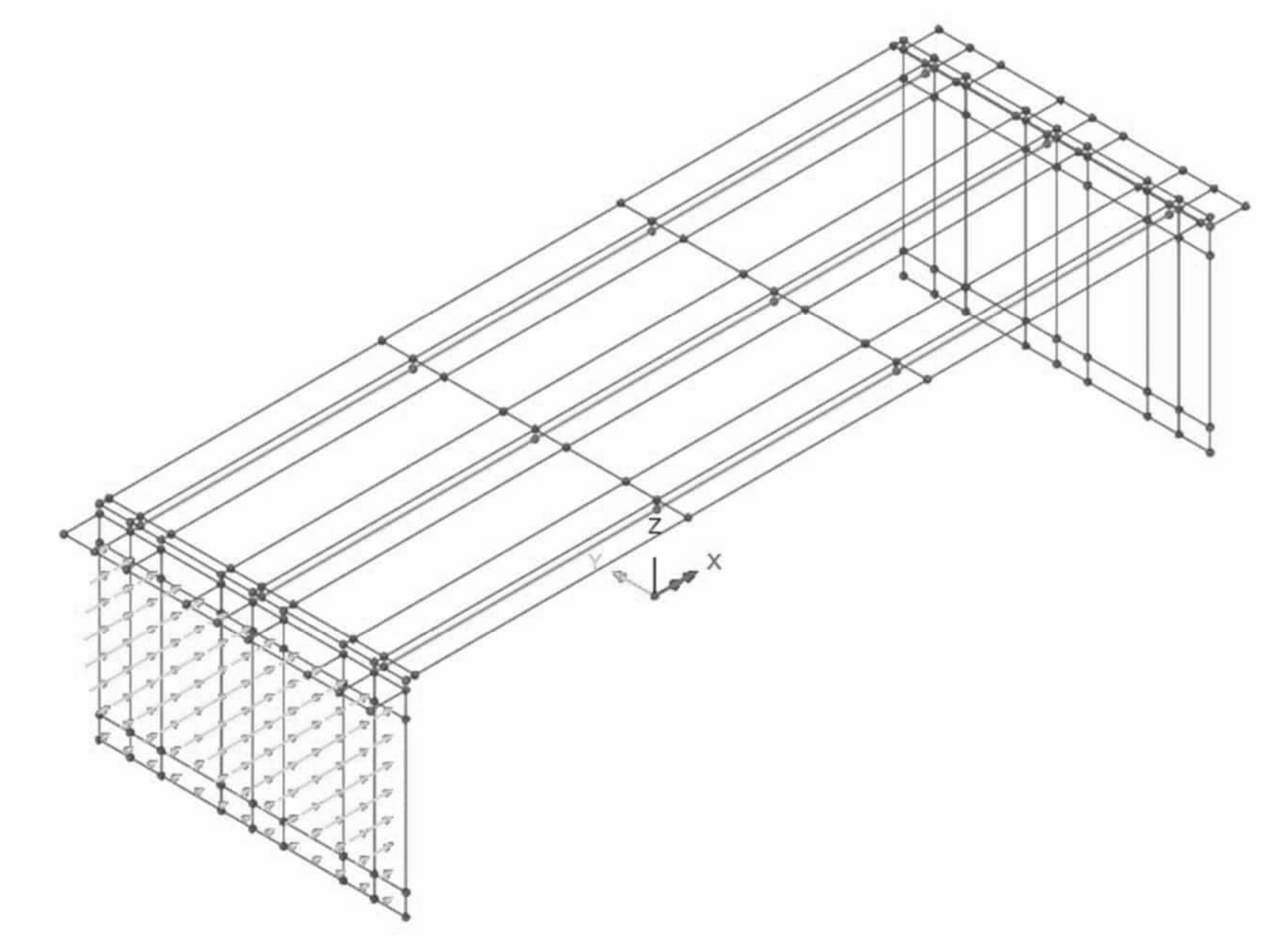
Surface load (q_x) : 0 kPa → +90 kPa

Search Area : Abutment 1

Loads outside search area : Include full load



	X	Y	Z	Load
1	-20.8	6.4	0.0	0.0
2	-20.8	0.0	0.0	0.0
3	-20.8	-6.4	0.0	0.0
4	-20.8	-6.4	4.39	90.0
5	-20.8	-6.4	8.78	0.0
6	-20.8	0.0	8.78	0.0
7	-20.8	6.4	8.78	0.0
8	-20.8	6.4	4.39	90.0



Overview 3D

3.12.2.2 Load abutment 2

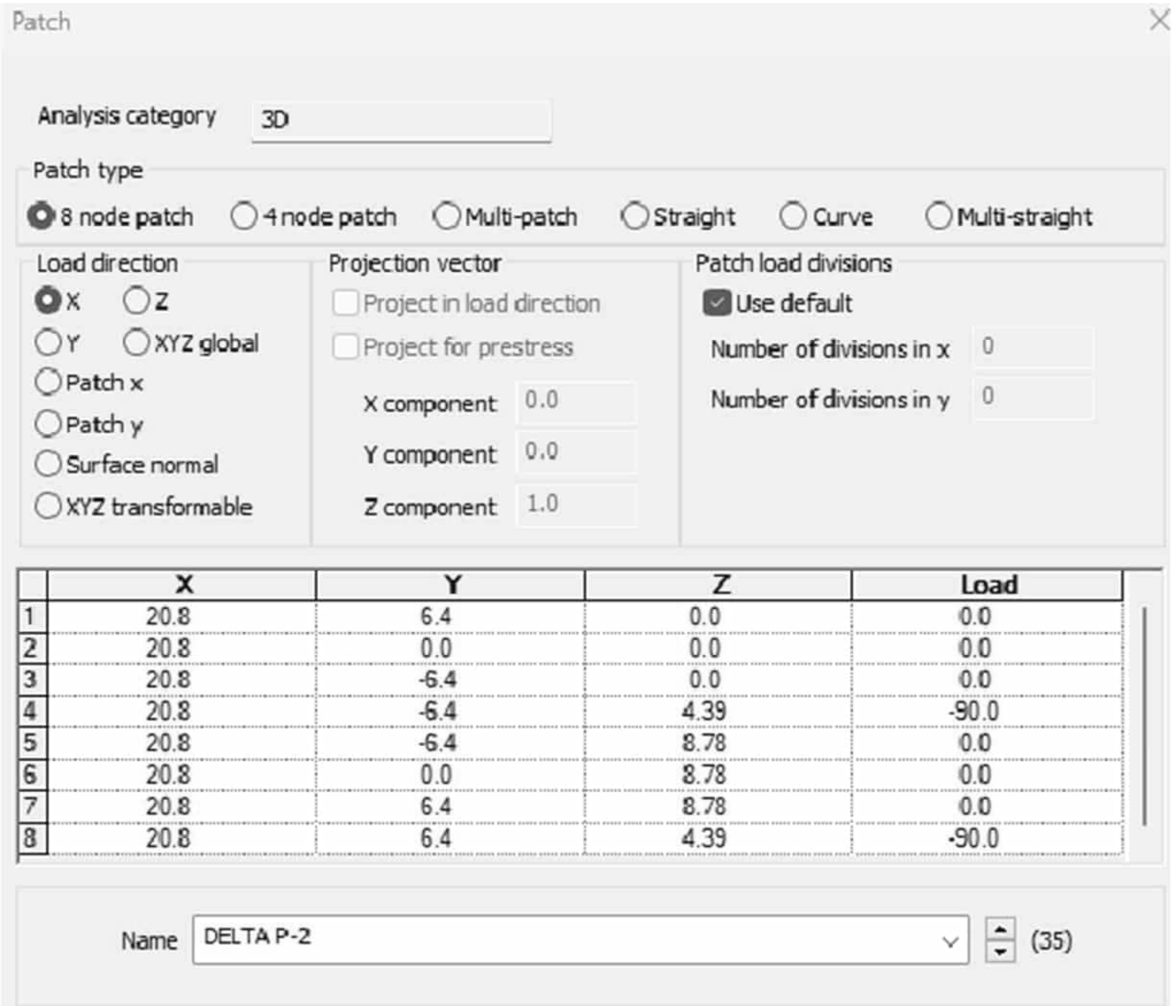
Discrete patch load : DELTA P-2

Structural loading : Discrete 8 node patch

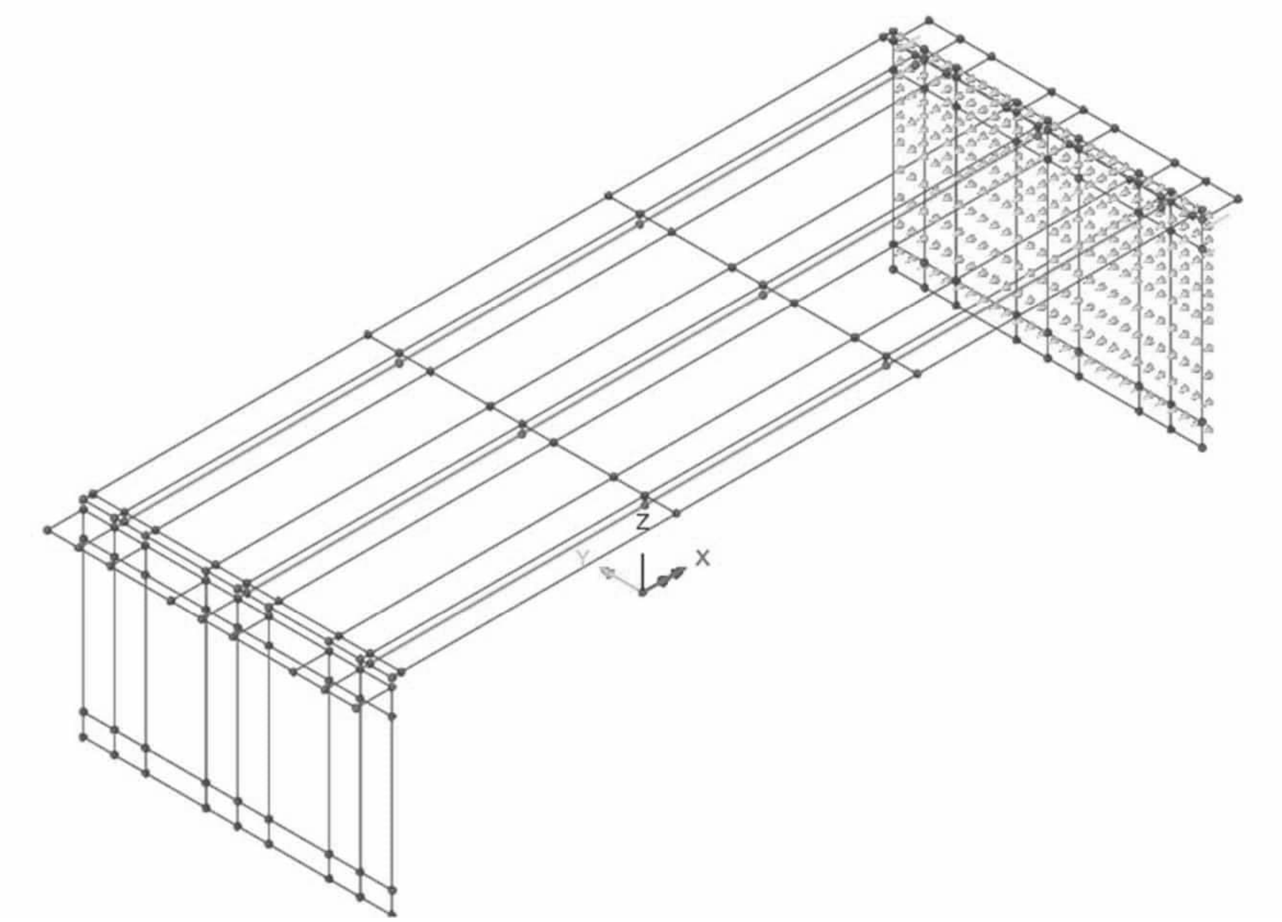
Surface load (q_x) : 0 kPa → -90 kPa

Search Area : Abutment 2

Loads outside search area : Include full load



	X	Y	Z	Load
1	20.8	6.4	0.0	0.0
2	20.8	0.0	0.0	0.0
3	20.8	-6.4	0.0	0.0
4	20.8	-6.4	4.39	-90.0
5	20.8	-6.4	8.78	0.0
6	20.8	0.0	8.78	0.0
7	20.8	6.4	8.78	0.0
8	20.8	6.4	4.39	-90.0



Overview 3D

3.12.2.3 Load combination

Load combination basic DELTA P :

Load case	Factor
DELTA P-1	1
DELTA P-2	1

3.12.3 Uneven temperature of entire cross section (OJTEMP1)

.

Determined according to EN 1991-1-5 § 6.1.4.1. When assessing the impact, a coating with a thickness of 110 mm is applied on the safe side.

$k_{1.sur}(t = 100mm) = 0.7$

$k_{1.sur}(t = 150mm) = 0.5$ $\rightarrow$ $k_{1.sur}(t = 100mm) = 0.70$

$k_{2.sur}(t = 100mm) = 1.0$

$\Delta T_{max} = +15°C \cdot k_{1.sur} = +11°C$: : upper surface warmer

$\Delta T_{min} = -8°C \cdot k_{2.sur} = -8°C$: : lower surface warmer

The occurring temperature change ΔT refers to the linear difference between the temperature at the top and bottom of the bridge deck slab.

Uneven temperature is indicated as a temperature gradient $\frac{\delta T}{\delta Z}$ when defined in FEM-program.

The load effect is added to longitudinal beams with varying height (D: 0.90 m → 1.40), see page A2:24. On safe side δZ = 0.9 m is assumed.

$\frac{\delta T^{max}}{\delta Z} = \frac{+11°C}{0.90m} = +12\frac{°C}{m}$: maximal temperature gradient

$\frac{\delta T^{min}}{\delta Z} = \frac{-8°C}{0.90m} = -9\frac{°C}{m}$: minimal temperature gradient

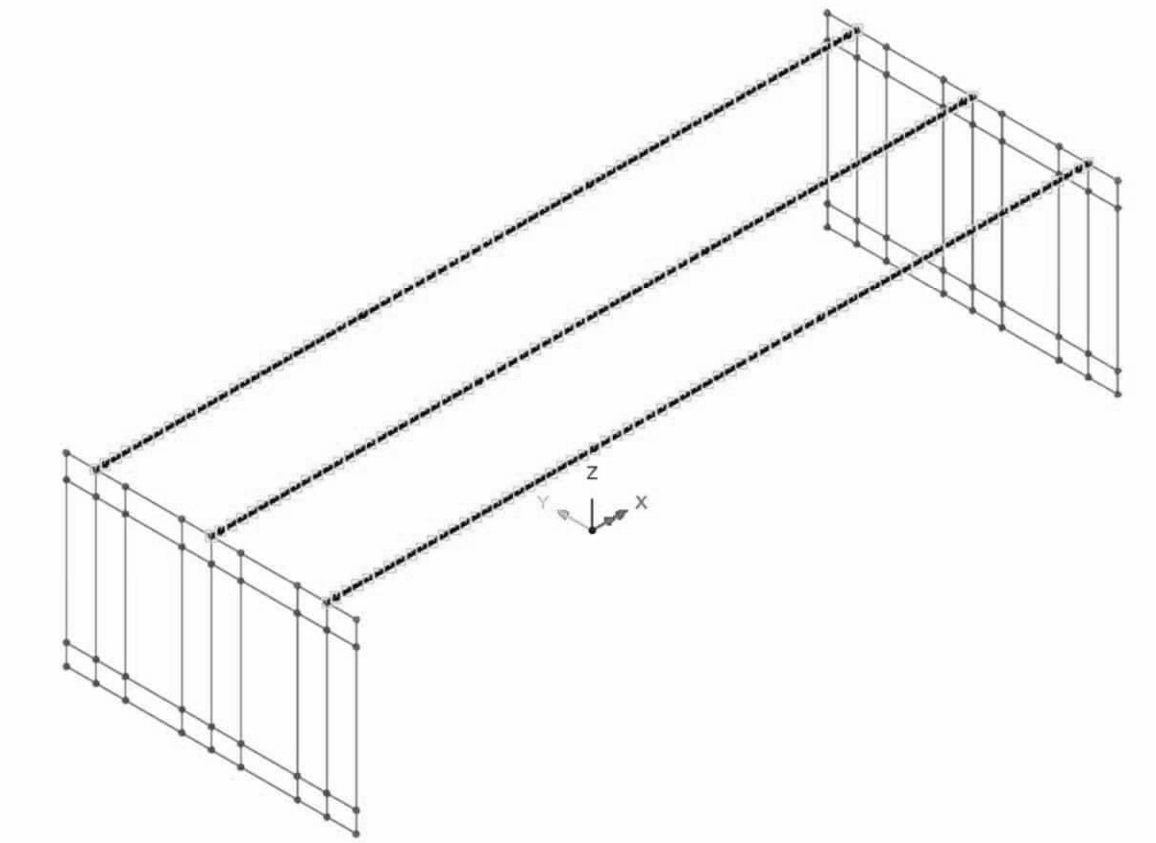
Load case : OJTEMP 1+

Structural loading : Temperature

Definition : Element

Final Z temperature gradient : +12 °C/m

Initial Z temperature gradient : 0°C/m



Overview 3D

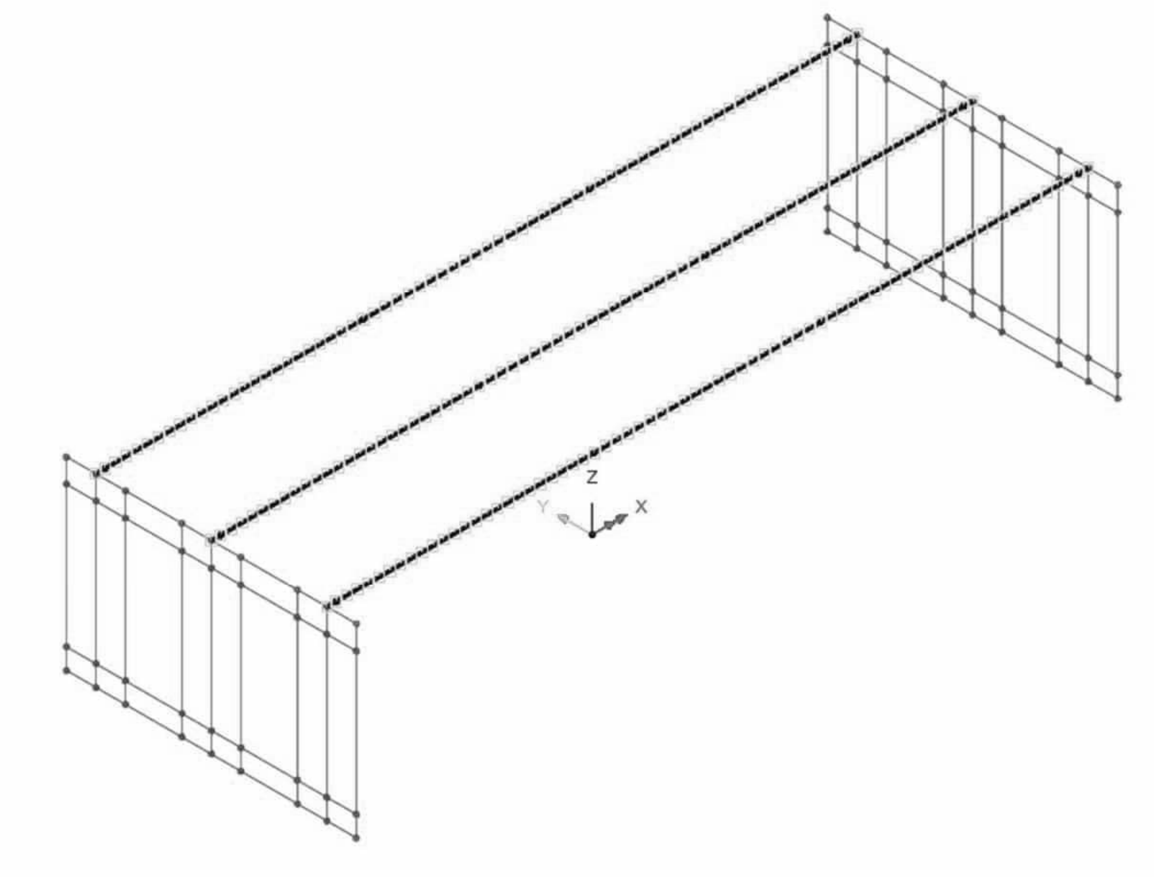
Load case : OJTEMP 1-

Structural loading : Temperature

Definition : Element

Final Z temperature gradient : -9 °C/m

Initial Z temperature gradient : 0°C/m



Overview 3D

Envelope OJTEMP 1 :

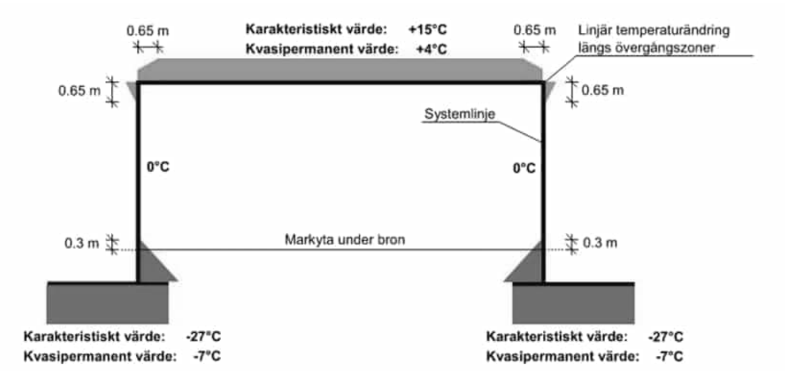
Load case
OJTEMP 1+
OJTEMP 1-

3.12.5 Uneven temperature differences between different construction parts (OJTEMP 2)

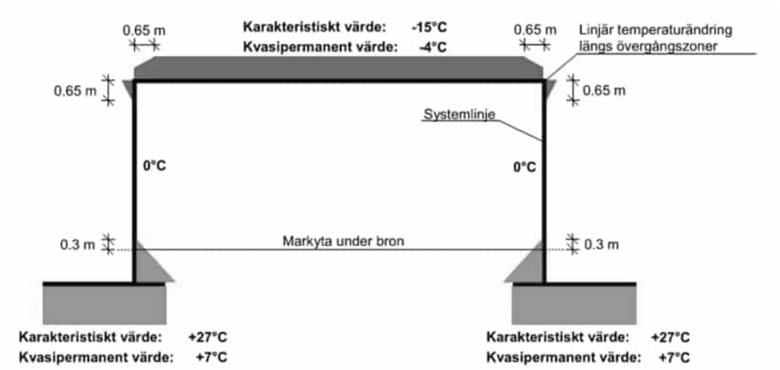
This section states that these effects should be combined with those caused by uniform temperature across the entire bridge (JTEMP).

Recommended values should, according to TRVINFRA-00227 section 2.1.1.2.4, be obtained from TVBK-0373. See extract below.

In TRVINFRA-00227 section 2.1.1.2.4, it is stated that no reduction should be made considering creep, but consideration should be made for cracking.



Principfigur T(+)



Principfigur T(-)

Applied temperature differences between superstructure and abutments:

$\Delta T = \pm 4°C$: SLS-Q

$\Delta T = \pm 15°C$: SLS-K, SLS-F and ULS

Remark
Since temperature load is not considered in the ultimate limit state (ULS).

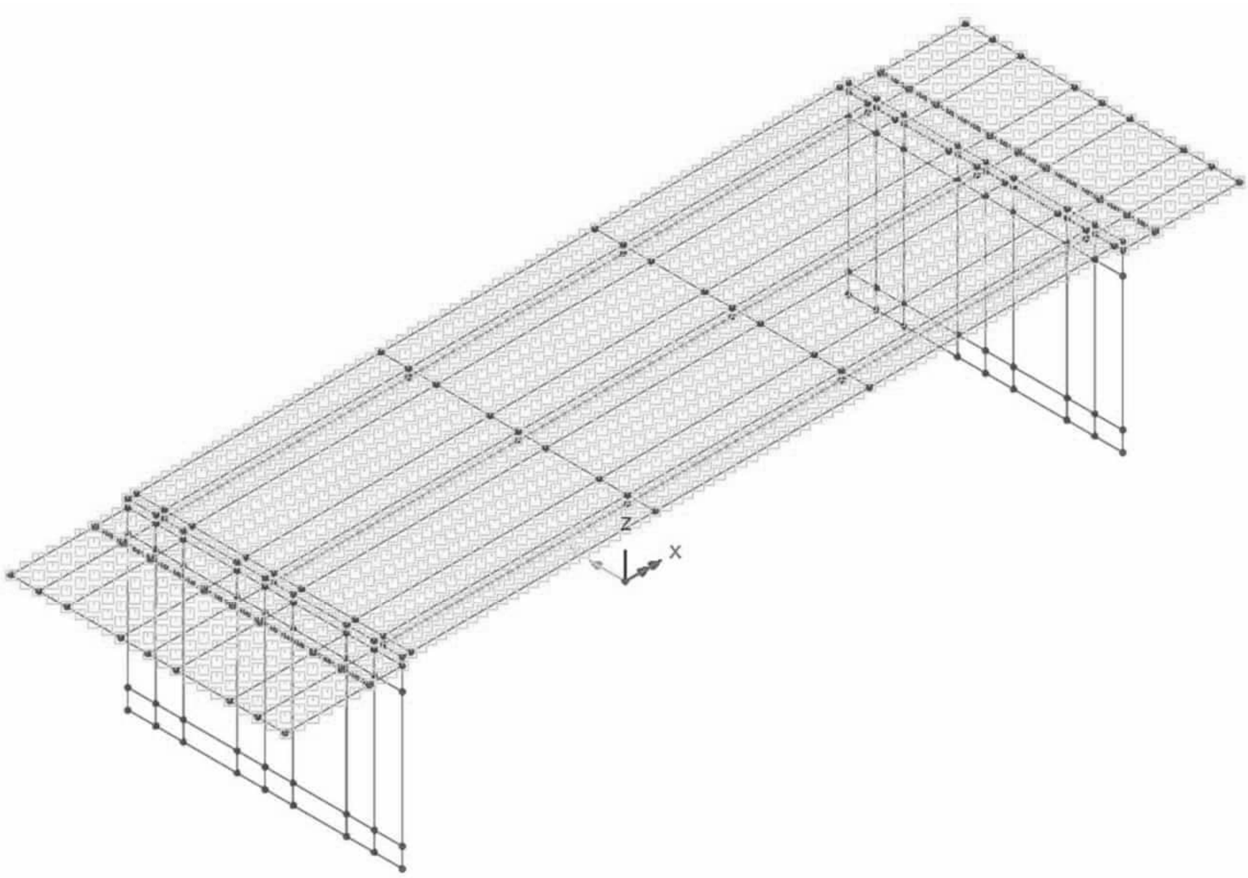
Load : OJTEMP 2

Structural loading : Temperature

Final temperature : +15 C

Initial temperature : ±0 C

Load case : OJTEMP 2+



Overview 3D

Basic load cases :

Load case	Load	Factor
OJTEMP 2-	OJTEMP 2+	-1

Envelope OJTEMP *2:*

Load case
OTJEMP 2+
OJTEMP 2-

3.12.6 Impact of uniform temperature change

Load combination basic JTEMP MAX :

Load case	Factor
JTEMP+	1.00

Load combination basic JTEMP MIN :

Load case	Factor
JTEMP-	1.00

Envelope JTEMP :

Load case
JTEMP MAX
JTEMP MIN

3.12.6.1 Combining load case JTEMP and OJTEMP 1

Load combination is conducted according to SS-EN 1991-1-5, section 6.1.5. For such a combination, $\omega_M = 0.75$ och $\omega_N = 0.35$ shall be applied as shown below.

Alternative 1 ($\omega_M = 0.75$) : $T + \omega_M \cdot \Delta T$

Alternative 2 ($\omega_N = 0.35$) : $\omega_N \cdot T + \Delta T$

Load combination smart TEMP-1 :

Loadcase	Permanent factor	Variable factor
JTEMP	0	0.47 (= 0.77[1.)] x 0.6[2.)] x 1.00)
OJTEMP 1	0	0.45 (= 1.00[1.)] x 0.6[2.)] x 0.75)
DELTA-P	0	1.0

Load combination smart TEMP-2 :

Loadcase	Permanent factor	Variable factor
JTEMP	0	0.16 (= 0.77[1.)] x 0.6[2.)] x 0.35)
OJTEMP 1	0	0.60 (= 1.00[1.)] x 0.6[2.)] x 1.00)
DELTA-P	0	1.0

Note:
[1.)] Impact of creep results in reduced rigidity, see page A3:46.
[2.)] Impact of cracking results in reduced rigidity, see page A3:115.

3.12.6.2 Combining load case JTEMP and OJTEMP 2

Load combination smart TEMP-3 (SLS-F & SLS-K) :

Load case	Permanent factor	Variable factor
JTEMP	0	0.46 (= 0.77[1.)] x 0.6[2.)])
OJTEMP 2	0	0.60 (= 1.00 x 0.6[2.)])
DELTA-P	0	1.0

Note:
[1.)] Impact of creep results in reduced rigidity, see page A3:46.
[2.)] Impact of cracking results in reduced rigidity, see page A3:115.

Load combination smart TEMP-4 (SLS-Q) :

Load case	Permanent factor	Variable factor
JTEMP	0	0.46
OJTEMP 2	0	0.16 (= 0.60 x 4°C/ 15°C)
DELTA-P	0	1.0

3.12.6.3 Summary load combination limit service state (SLS-F & SLS-K)

Envelope TEMP:

Load case
TEMP-1
TEMP-2
TEMP-3

3.12.6.4 Summary load combination limit service state (SLS-Q)

Envelope TEMP-SLS Q:

Load case
TEMP-1
TEMP-2
TEMP-4

3.12.6.5 Summary load combination ultimate limit state (ULS)

Basic load combination TEMP-ULS:

Load case
DELTA P

3.13 PRESTESS

Load applied to Analysis : *Analysis 1*

Analysis of pre tensioned cable is studied at times : t_0 (5 days), t_1(30 days) and t_2 (120 years).

The preliminary location of cables is determined with program PROG B2.001.

The location is imported as a spread sheet into FEM-program as a tension profile. The location is defined with local coordinates associated to nodal lines (LB 1-3).

Initial prestress loss at time t0 is only due to friction. This is determined with FEM-program and program PROG B2.001.

Determination of time loses (η_t) is made in separate program PROG B2.002. Preliminary analysis will use losses seen below. They will be verified later during detailed design.

Time	η_t	Load combination	Load case
t0	0 %	PT-T0	1.00 x PT-T0
t1	6 %	PT-T1	0.94 x PT-T0
t2	16 %	PT-T2	0.84 x PT-T0

3.13.1 General

Pre tensions system VSL 6-15.

Material :

$f_{p0.1k} = 1640 \; MPa$

$f_{pk} = 1860 \; MPa$

$E_{sk} = 195 \; GPa$

$\mu = 0.18$

$k = 0.005 \cdot \frac{1}{m}$

Casting tube :
80 mm / 86 mm

Slip during locking:
6 mm

Permissible curvature :

$R_{\min} = 5.7m$

Cabel area :

$A_p = 15 \cdot 150 \; mm^2 = 2250 \; mm^2$

Anchor plate :
290 mm x 290 mm (same for both passiv and active anchorage)

Ultimate load :

$F_u = 2250 \; mm^2 \cdot 1860 \; MPa = 4185 \; kN$

Permissible stress before locking :
See SS-EN 1992-1-1 section 5.10.2.1

$\sigma_{p,\max}^{före} = \min(0.8 f_{pk}; 0.9 f_{p0.1k}) = \min(1488 \; MPa; 1476 \; MPa) = 1476 \; MPa$

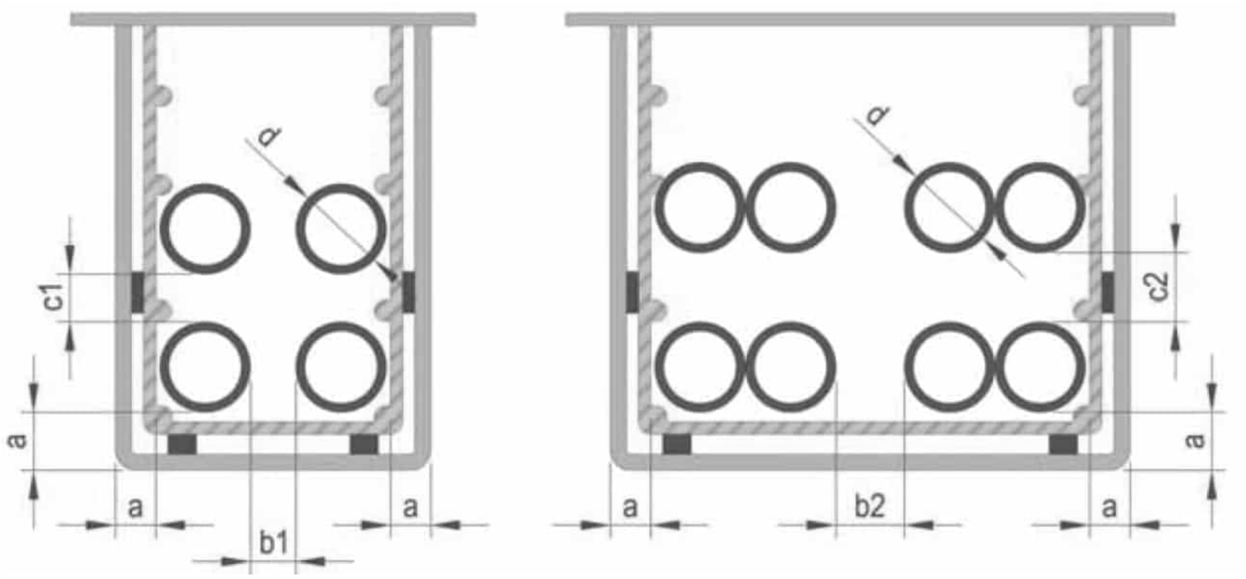
Permissible stress after locking :
See SS-EN 1992-1-1 section 5.10.3

$\sigma_{p,\max}^{efter} = \min(0.75 f_{pk}; 0.85 f_{p0.1k}) = \min(1395 \; MPa; 1394 \; MPa) = 1394 \; MPa$

3.13.2 Execution

Associated to pre tension system VSL 6-15.

Recommended measurements :



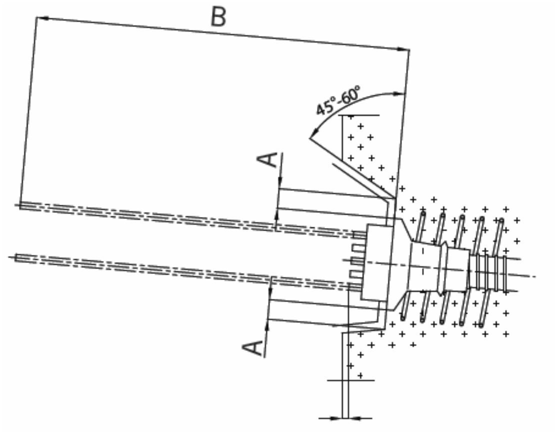
d = 90 mm

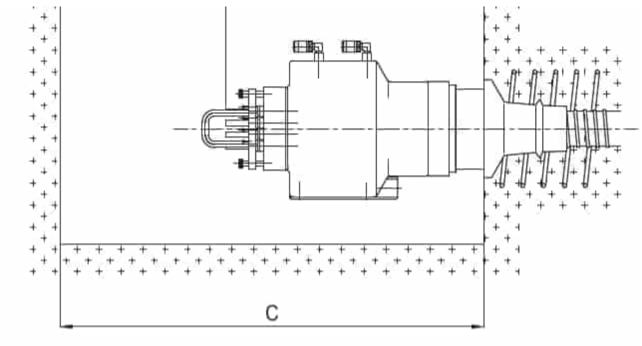
a > 50 mm

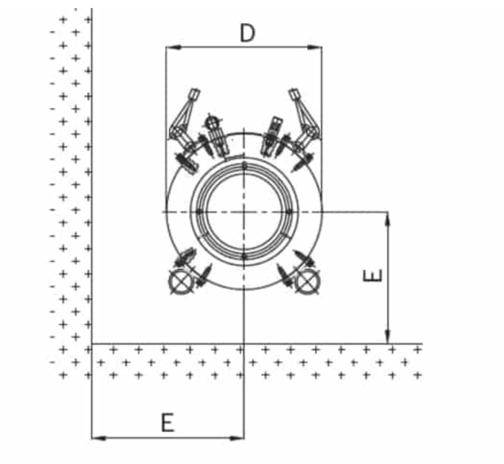
b1, c1 > 0.7d = 63 mm but 100 chosen !

b2, c2 > 1.0d = 90 mm but 100 mm chosen !

Demand for space during tensioning :





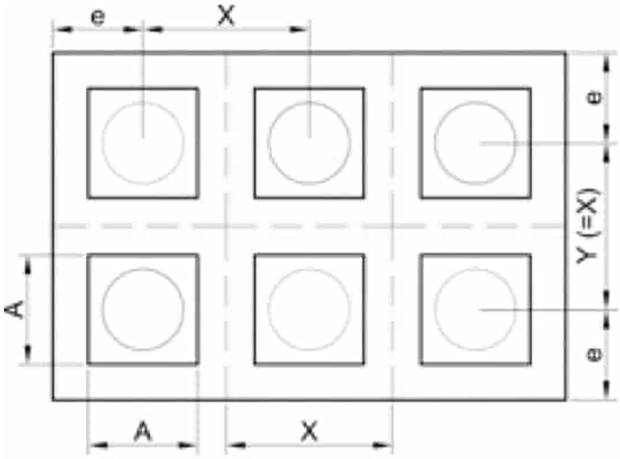


A = 70 mm

B = 1200 mm

C = 1700 mm

Measurements of cables VSL 12-15 :



A = 290 mm

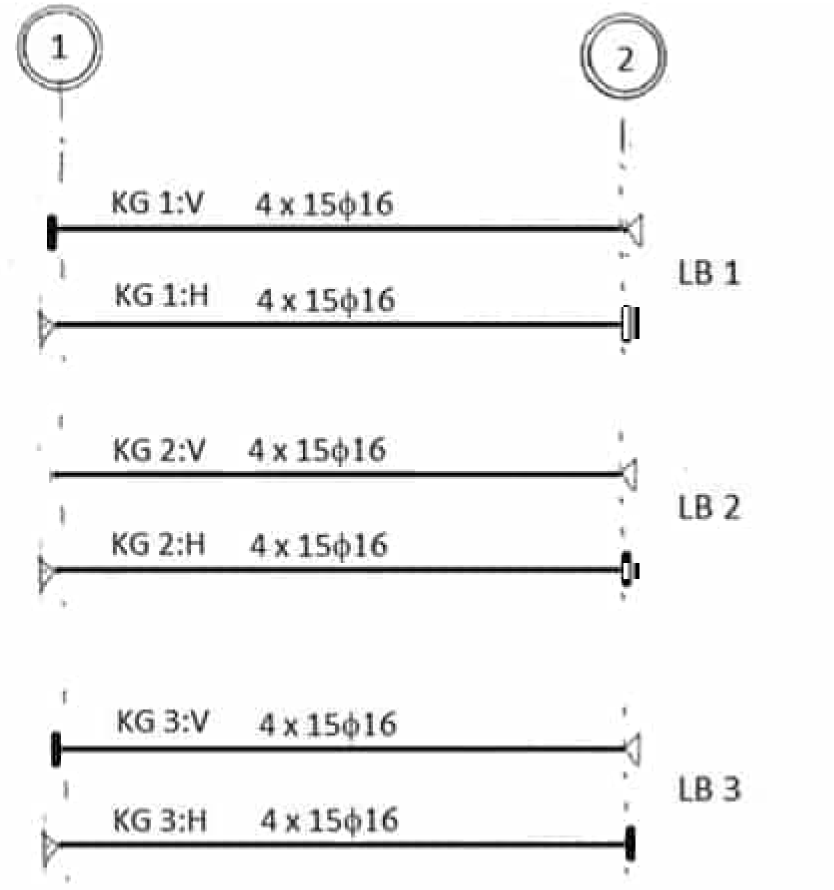
e ≥ 175 mm + TB

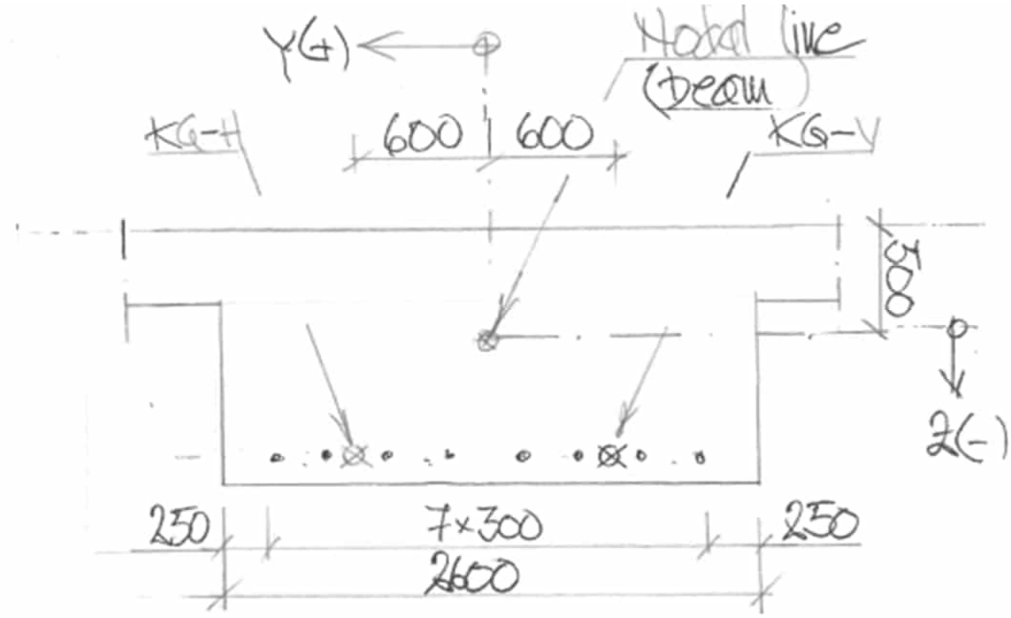
X ≥ 400 mm

3.13.3 Preliminary cable location

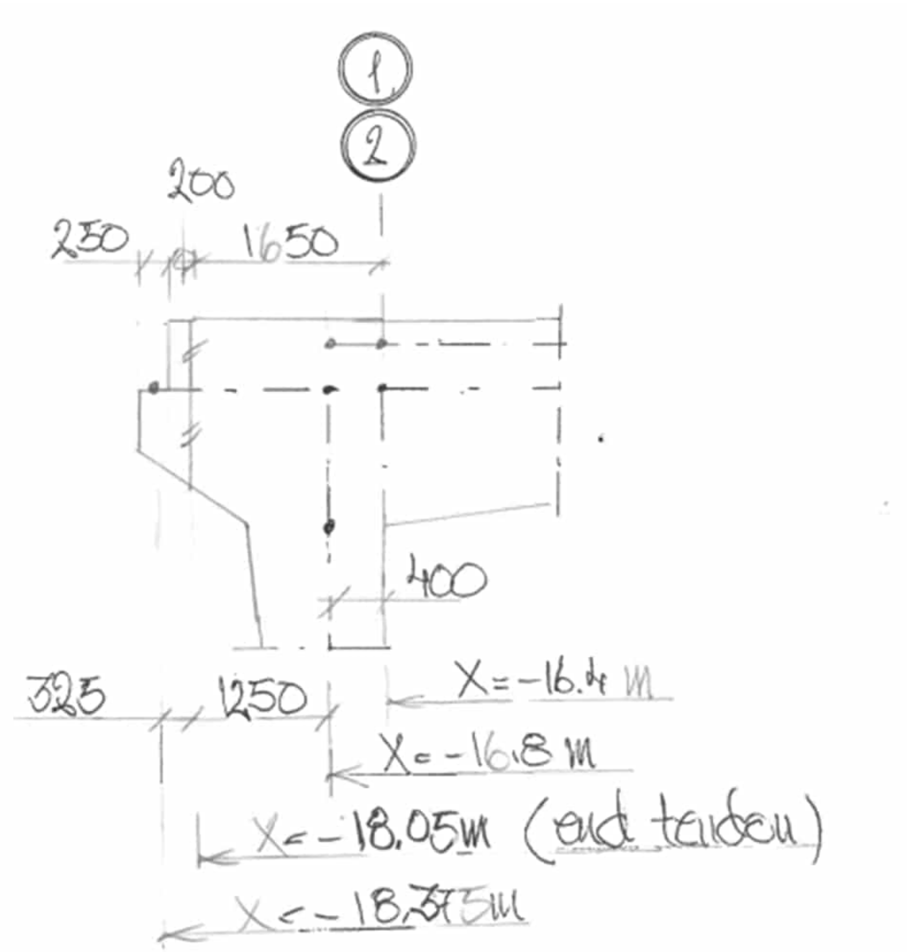
In the static model cables are simplified (= 4 cables are modelled as one fictive cable as seen below).

Profiles can be defined using “global coordinates” or as “local coordinates mapped to lines”. The later of this method is used. The nodal lines associated to LB 1, LB 2 and LB 3 are used.



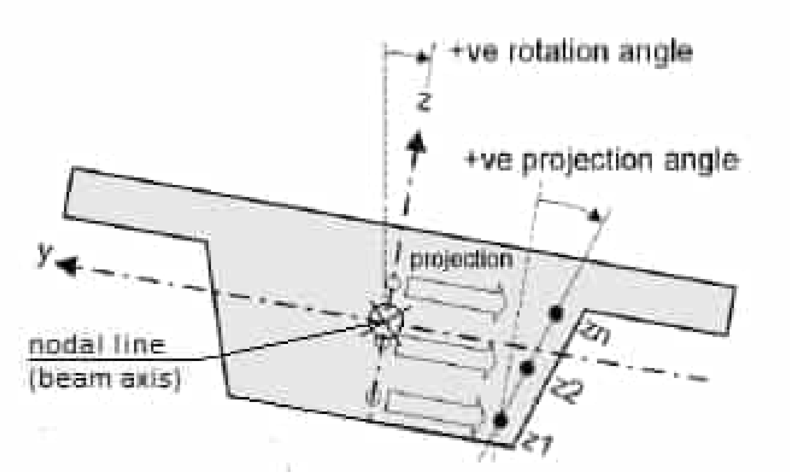


Cross section



Detail end of tendon

Principle sketch:



Summary input - pretensioned cables:

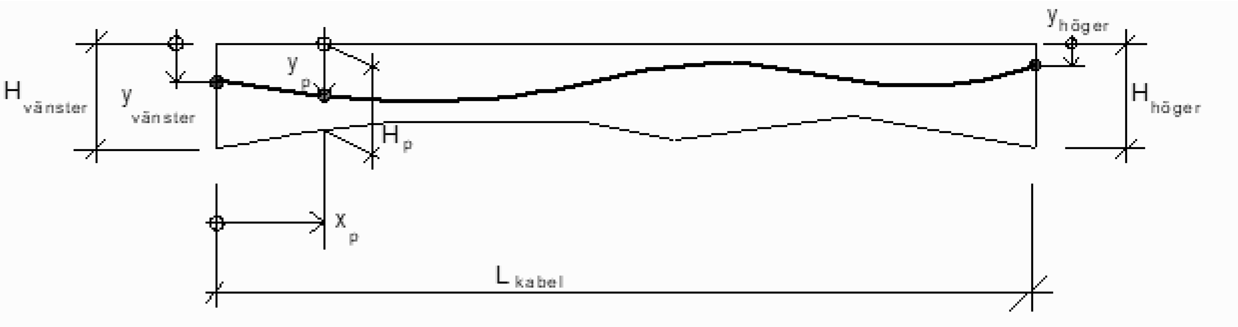
Cable	Area	Slip	Left side	Right side	Max. prestress before	Min. prestress after	Pretension force	Location y(+)
KG-V	2250	6	Active	Active	1476	1394	3150*	+0.60
KG-H	2250	6	Active	Active	1476	1394	3150*	-0.60
-	mm^2	mm	-	-	MPa	MPa	kN	m

* = chosen prestress 1400 MPa

Beam	Location	Cables	Fictive load
LB 1	Left side	4	4 x KG-V
-"-	Right side	4	4 x KG-H
LB 2	Left side	4	4 x KG-V
-"-	Right side	4	4 x KG-H
LB 3	Left side	4	4 x KG-V
-"-	Right side	4	4 x KG-H
-	-	-	mm^2

Object: Tendon profile (1 cable VSL 6-15)

PRINCIPLE SKETCH



INPUT

Total cable length: $L_{kabel} := 1.65 \cdot m + 32.8 \cdot m + 1.65\ m = 36.1\ m$

Number of definition points: $N := 11 \cdot st$

Friction coefficients: $\mu := 0.18$ $k := 0.005 \cdot \frac{rad}{m}$

Resistance cable: $f_{p0.1k} := 1640 \cdot MPa$

$f_{pk} := 1860 \cdot MPa$

E-modulus cable: $E_s := 195 \cdot GPa$

Tendon area: $A_s := 2250 \cdot mm^2$

Maximum permissible tensile force before locking according to SS-EN 1992-1-1 section 5.10.2.1:

$$min\left(0.8 \cdot f_{pk}, 0.9 \cdot f_{p0.1k}\right) \cdot A_s = 3321\ kN$$

Selected prestressing force:

$$V_{ö} := 3320 \cdot kN$$

Maximum permissible tensile force after locking according to SS-EN 1992-1-1 section 5.10.3:

$$min\left(0.75 \cdot f_{pk}, 0.85 \cdot f_{p0.1k}\right) \cdot A_s = 3137\ kN$$

Type of anchorage ("Passiv" or "Aktiv") / chosen maximum tendon force after locking:

Section	Type	V_{max} [kN]
Left	Aktiv	3137
Right	Passiv	3137

<u>Defined points along cable:</u>

Snitt	x_p (m)	y_p (mm)	H_p (mm)
1	0	300	1700
2	1,00	300	1700
3	1,65	320	1700
4	7,05	500	1338
5	13,05	850	1200
6	18,05	900	1200
7	23,05	850	1200
8	29,05	500	1338
9	34,45	320	1700
10	35,10	300	1700
11	36,10	300	1700

LUSAS ⇒

x(+)	z(+)
0	0,20
1,00	0,20
1,65	0,18
7,05	0,00
13,05	-0,35
18,05	-0,40
23,05	-0,35
29,05	0,00
34,45	0,18
35,10	0,20
36,10	0,20
m	m

CALCULATION

Create mathematical functions for a beam and a cable

$C := \text{pspline}\left(x_p, y_p\right)$: determination of coefficients for parabolic spline functions

$y(x) := \text{interp}\left(C, x_p, y_p, x\right)$: cable routing (= spline functions)

$y'(x) := \frac{d}{dx} y(x)$: slope of cable routing

$y''(x) := \frac{d^2}{dx^2} y(x)$: curvature change of cable routing

$R_{min} := \frac{1}{\max\left(y''(x)\right)}$: lowest curvature radius of cable routing

Friction loss function measured from the "left" side

$\alpha_v := \mathbf{if}\left(i > 1, \sum_{j=2}^{i} \left|y'\left(x_j\right) - y'\left(x_{j-1}\right)\right|, 0\right)$: accumulated change in angle

$\beta_v := \mu \cdot \left(\alpha_v + k \cdot x\right)$: friction loss exponent

$\eta_{vf} := e^{-\beta_v}$: friction loss before locking

$\eta_{ve} := e^{\beta_v}$: friction loss after locking

Location of maximal cable force on "left" side after locking of cable

$$X_{mv} = \left| \begin{array}{l} x_{skär} \leftarrow 0\text{m} \quad \text{if} \quad Typ = \text{"Passiv"} \\ \text{if} \quad Typ = \text{"Aktiv"} \\ \quad \left| \begin{array}{l} x_{start} \leftarrow 2\text{m} \\ x_{skär} \leftarrow \text{root}\left(V_{max} - V_ö \cdot \text{linterp}\left(X, \eta_{vf}, x_{start}\right), x_{start}\right) \end{array} \right. \end{array} \right.$$

Friction loss function measured from the "right" side

$\alpha_h := \mathbf{if}\left(i > 1, \sum_{j=i+1}^{n} \left|y'(x_j) - y'(x_{j-1})\right|, 0\right)$: accumulated change in angle

$\beta_h := \mu \cdot (\alpha_h + k \cdot (L_{kabel} - x))$: friction loss exponent

$\eta_{hf} := e^{-\beta_h}$: friction loss before locking

$\eta_{he} := e^{\beta_h}$: friction loss after locking

Location of maximal cable force on "right" side after locking of cable

$$X_{mh} = \left| \begin{array}{l} x_{sk\ddot{a}r} \leftarrow L_{kabel} \ \text{ if } \ Typ = \text{"Passiv"} \\ \text{if } \ Typ = \text{"Aktiv"} \\ \quad \left| \begin{array}{l} x_{start} \leftarrow L_{kabel} - 2m \\ x_{sk\ddot{a}r} \leftarrow \text{root}(V_{max} - V_{\ddot{o}} \cdot \text{linterp}(X, \eta_{hf}, x_{start}), x_{start}) \end{array} \right. \end{array} \right.$$

Location where curve of cable force "right" side intersects curve of cable force "left"

$$X_m = \left| \begin{array}{l} x_{sk\ddot{a}r} \leftarrow L_{kabel} \ \text{ if } \ Typ = \text{"Aktiv"} \ \wedge Typ = \text{"Passiv"} \\ x_{sk\ddot{a}r} \leftarrow 0m \ \text{ if } \ Typ = \text{"Passiv"} \ \wedge Typ = \text{"Aktiv"} \\ \text{if } \ Typ = \text{"Aktiv"} \ \wedge Typ = \text{"Aktiv"} \\ \quad \left| \begin{array}{l} x_{start} \leftarrow 0.5 \cdot L_{kabel} \\ x_{sk\ddot{a}r} \leftarrow \text{root}(V_{\ddot{o}} \cdot \text{linterp}(X, \eta_{vf}, x_{start}) - V_{\ddot{o}} \cdot \text{linterp}(X, \eta_{hf}, x_{start}), x_{start}) \end{array} \right. \end{array} \right.$$

Determine cable force at each end of cable after locking

Cable force at "left" side :

$$P_{ve} = \left| \begin{array}{l} V_{max} \cdot \text{linterp}(X, \eta_{hf}, 0m) \ \text{ if } \ Typ = \text{"Passiv"} \\ \dfrac{V_{max}}{\text{linterp}(X, \eta_{ve}, X_{mv})} \ \text{ if } \ Typ = \text{"Aktiv"} \end{array} \right.$$

Cable force at "right" side :

$$P_{he} = \left| \begin{array}{l} V_{max} \cdot \text{linterp}(X, \eta_{vf}, L_{kabel}) \ \text{ if } \ Typ = \text{"Passiv"} \\ \dfrac{V_{max}}{\text{linterp}(X, \eta_{he}, X_{mh})} \ \text{ if } \ Typ = \text{"Aktiv"} \end{array} \right.$$

Determine post slip / "lock sliding" at each end of cable

Left side :

$$\Delta L_v := \mathbf{if}\left(Typ = \text{“Aktiv”}, \frac{1}{A_s \cdot E_s} \cdot \int_0^{X_{mv}} \left(V_ö \cdot \text{linterp}\left(X, \eta_{vf}, x\right) - P_{ve} \cdot \text{linterp}\left(X, \eta_{ve}, x\right)\right) \mathrm{d}x, 0\right)$$

Right side :

$$\Delta L_h := \mathbf{if}\left(Typ = \text{“Aktiv”}, \frac{1}{A_s \cdot E_s} \cdot \int_{X_{mh}}^{L_{kabel}} \left(V_ö \cdot \text{linterp}\left(X, \eta_{hf}, x\right) - P_{ve} \cdot \text{linterp}\left(X, \eta_{he}, x\right)\right) \mathrm{d}x, 0\right)$$

Determine cable elongation before locking of cable

Left side:

$$L_v := \frac{1}{A_s \cdot E_s} \cdot \int_0^{X_m} \left(V_ö \cdot \text{linterp}\left(X, \eta_{vf}, x\right)\right) \mathrm{d}x$$

Right side :

$$L_h := \frac{1}{A_s \cdot E_s} \cdot \int_{X_m}^{L_{kabel}} \left(V_ö \cdot \text{linterp}\left(X, \eta_{hf}, x\right)\right) \mathrm{d}x$$

Function - determine cable force at arbitrary location along cable before locking

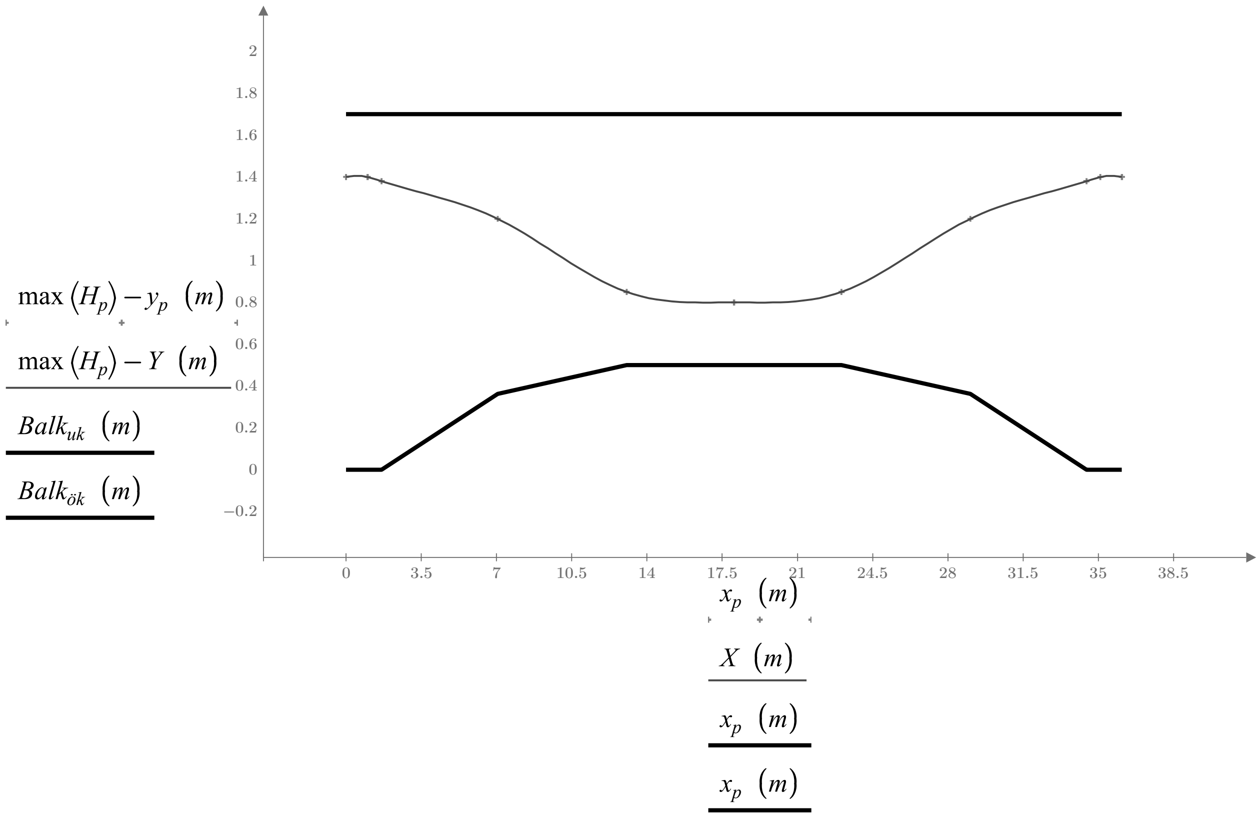
$$P_{före} = \left| \begin{array}{ll} V_ö \cdot \text{linterp}(X, \eta_{vf}, x) & \text{if } x \le X_m \\ V_ö \cdot \text{linterp}(X, \eta_{hf}, x) & \text{if } x > X_m \end{array} \right.$$

Function - determine cable force at arbitrary location along cable after locking

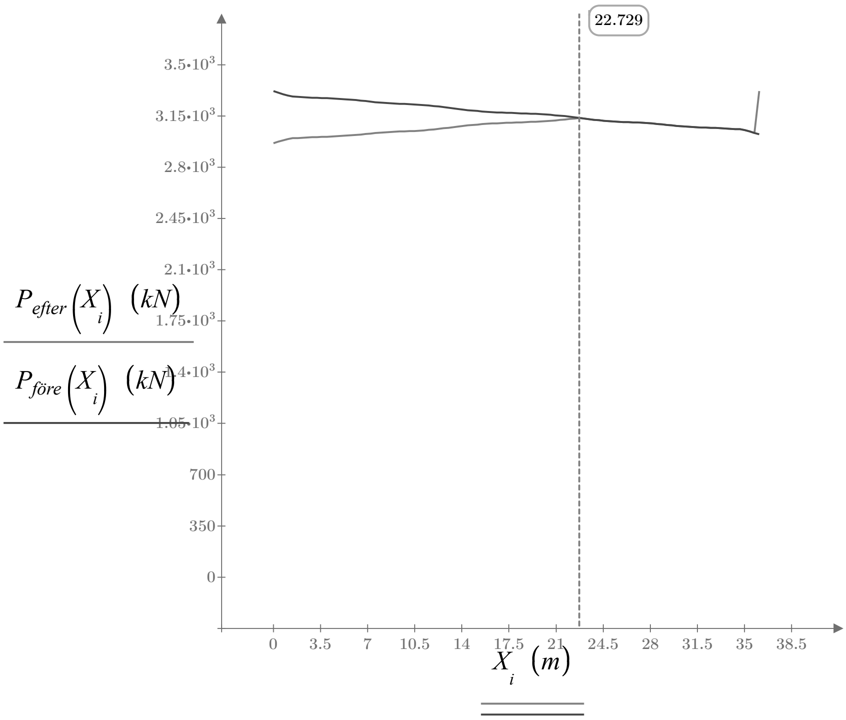
$$P_{efter} := \left\| \begin{array}{l} \text{if } x \le X_{mv} \\ \quad \left\| P_{ve} \cdot \text{linterp}\left(X, \eta_{ve}, x\right) \right. \\ \text{if } X_{mv} < x < X_m \\ \quad \left\| V_ö \cdot \text{linterp}\left(X, \eta_{vf}, x\right) \right. \\ \text{if } X_m \le x \le X_{mh} \\ \quad \left\| V_ö \cdot \text{linterp}\left(X, \eta_{hf}, x\right) \right. \\ \text{if } x > X_{mh} \\ \quad \left\| P_{he} \cdot \text{linterp}\left(X, \eta_{he}, x\right) \right. \end{array} \right.$$

RESULTS

Beam and Cable routing — graphic presentation



Graphical plotting of cable forces



Minimum curvature radius

$R_{min} = 22.7\ m$

Cable elongation before locking

$L_v = 261\ mm$: left side

$L_h = 0\ mm$: right side

Post slip / "lock sliding" at each end of cable

$\Delta L_v = 8\ mm$: left side

$\Delta L_h = 0$: right side

Cable force at each end after locking

$P_{ve} = 2964\ kN$: left side

$P_{he} = 2858\ kN$: right side

Location of maximum cable force after locking

$X_{mv} = 22.729\ m$: left side

$X_{mh} = 36.1\ m$: right side

Location of minimum cable force after locking

$X_m = 36.1\ m$

3.13.4 Load definition

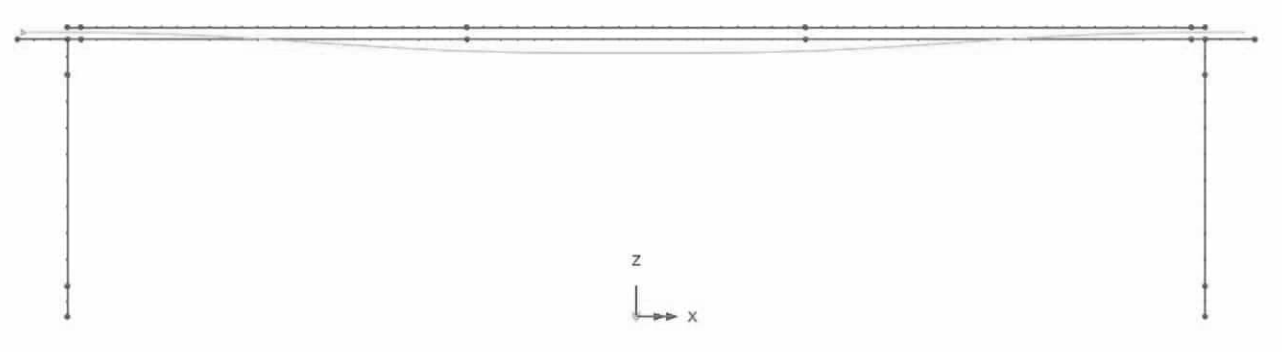
Spread sheet input (see page A3:146):

Offset from end 1 : 0.325 m

x(+) : $x_p(+)$

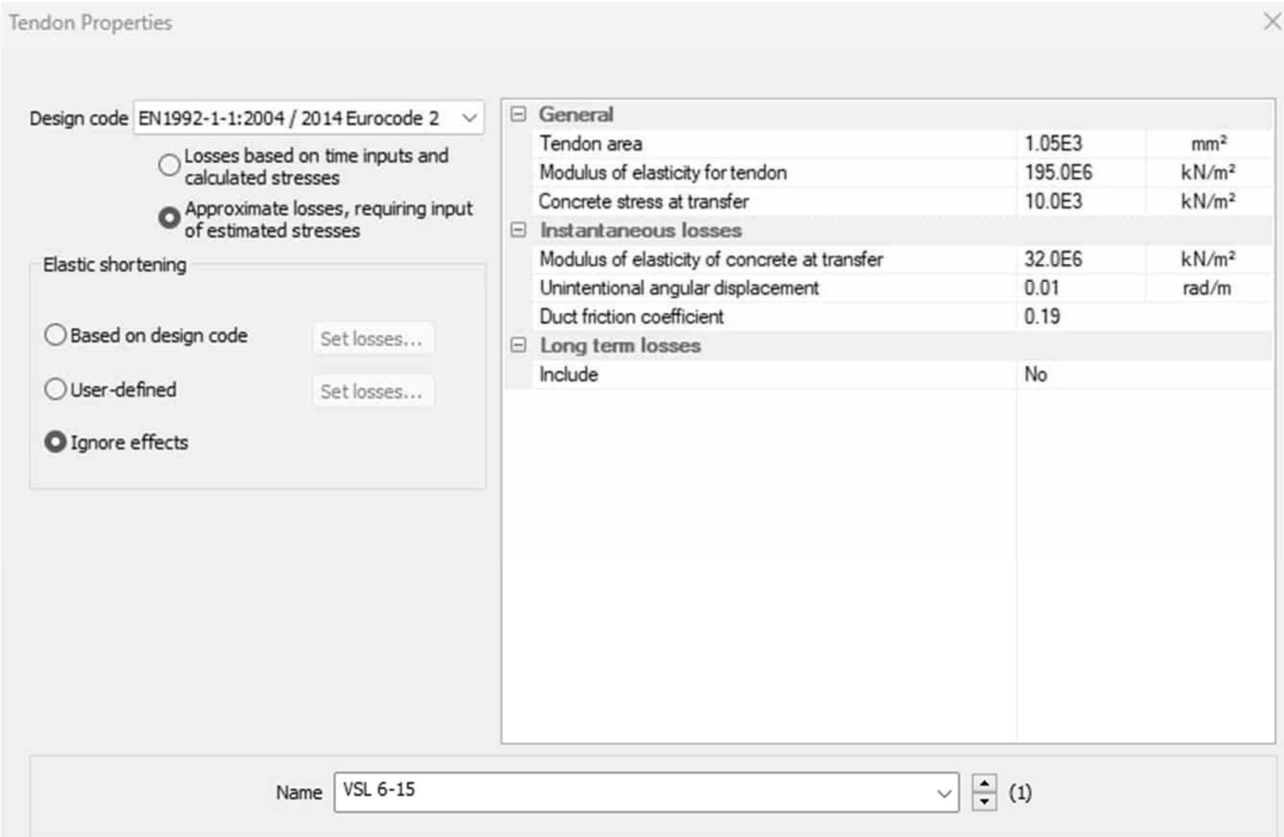
z(+): 0.50 m - $y_p(+)$

x(+)	z(+)
0,000	0,200
1,000	0,200
1,650	0,180
7,050	0
13,050	-0,350
18,050	-0,400
23,050	-0,350
29,050	0
34,450	0,180
35,100	0,200
36,100	0,200
m	m

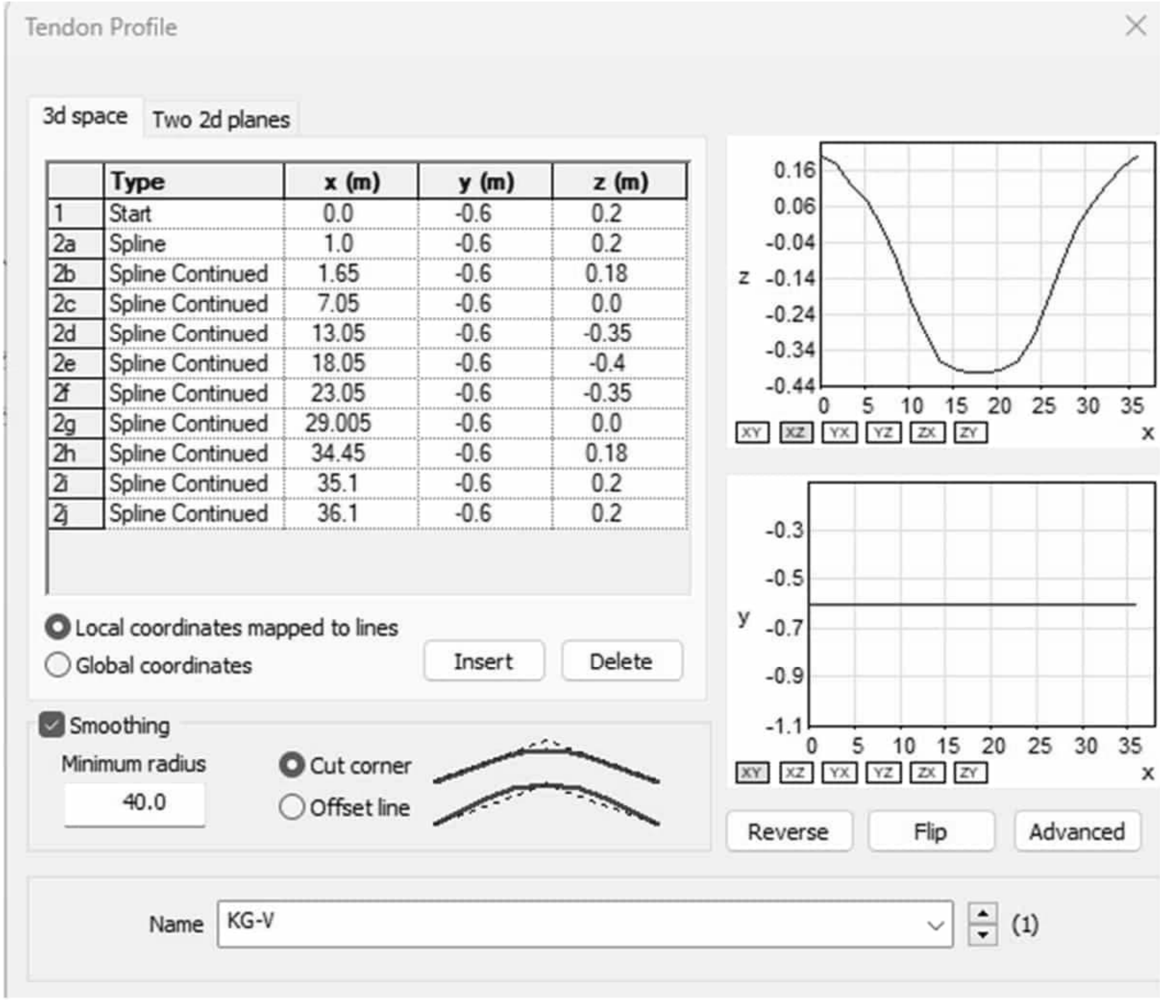


ELEVATION

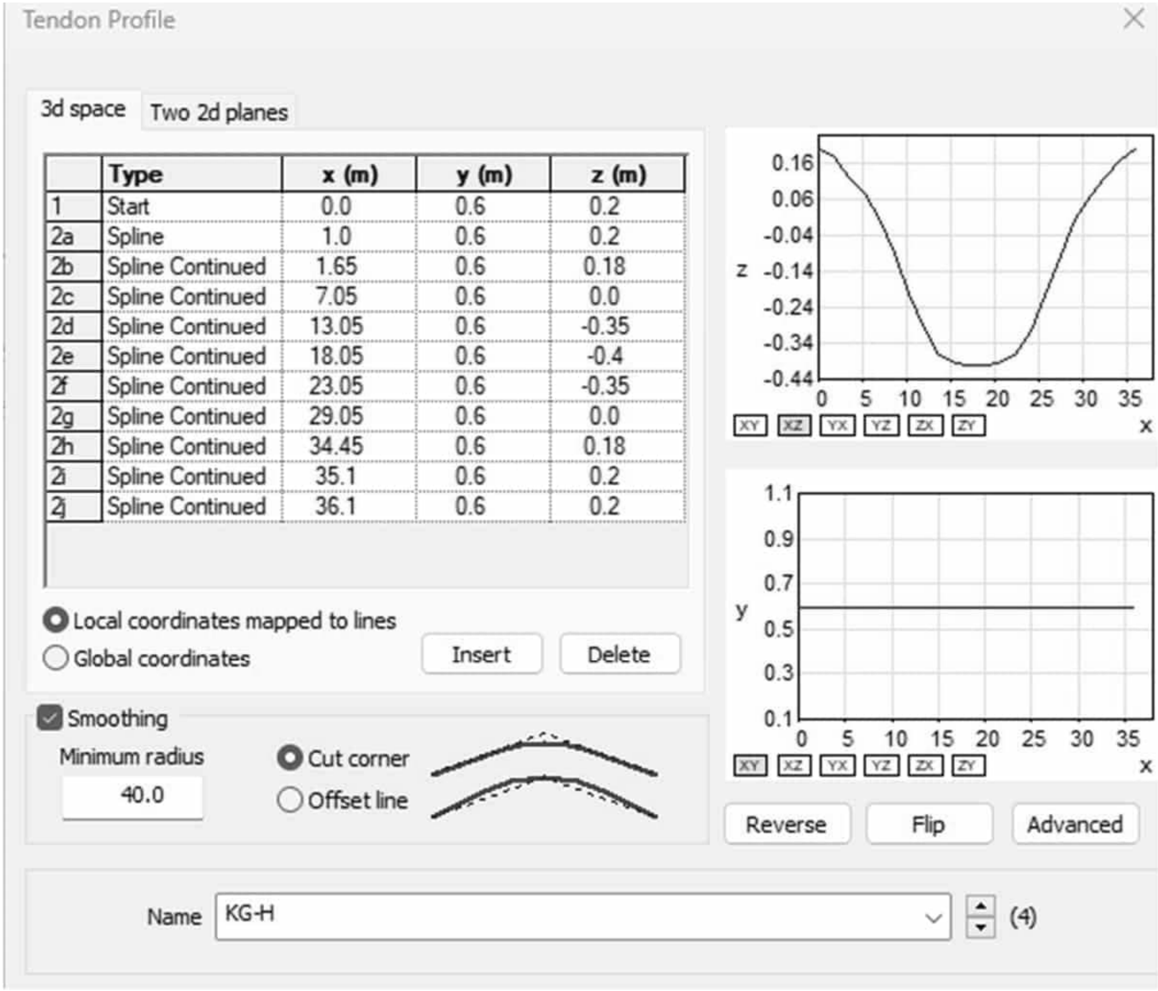
Tendon properties:



Tendon profiles:

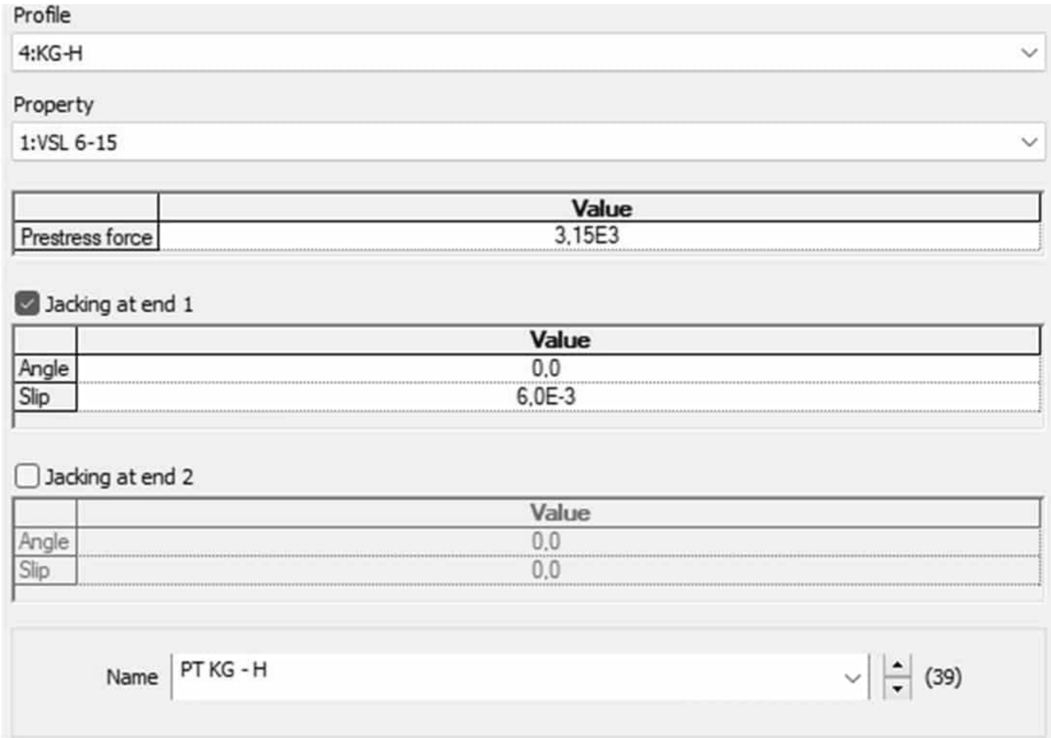


	Type	x (m)	y (m)	z (m)
1	Start	0.0	-0.6	0.2
2a	Spline	1.0	-0.6	0.2
2b	Spline Continued	1.65	-0.6	0.18
2c	Spline Continued	7.05	-0.6	0.0
2d	Spline Continued	13.05	-0.6	-0.35
2e	Spline Continued	18.05	-0.6	-0.4
2f	Spline Continued	23.05	-0.6	-0.35
2g	Spline Continued	29.005	-0.6	0.0
2h	Spline Continued	34.45	-0.6	0.18
2i	Spline Continued	35.1	-0.6	0.2
2j	Spline Continued	36.1	-0.6	0.2

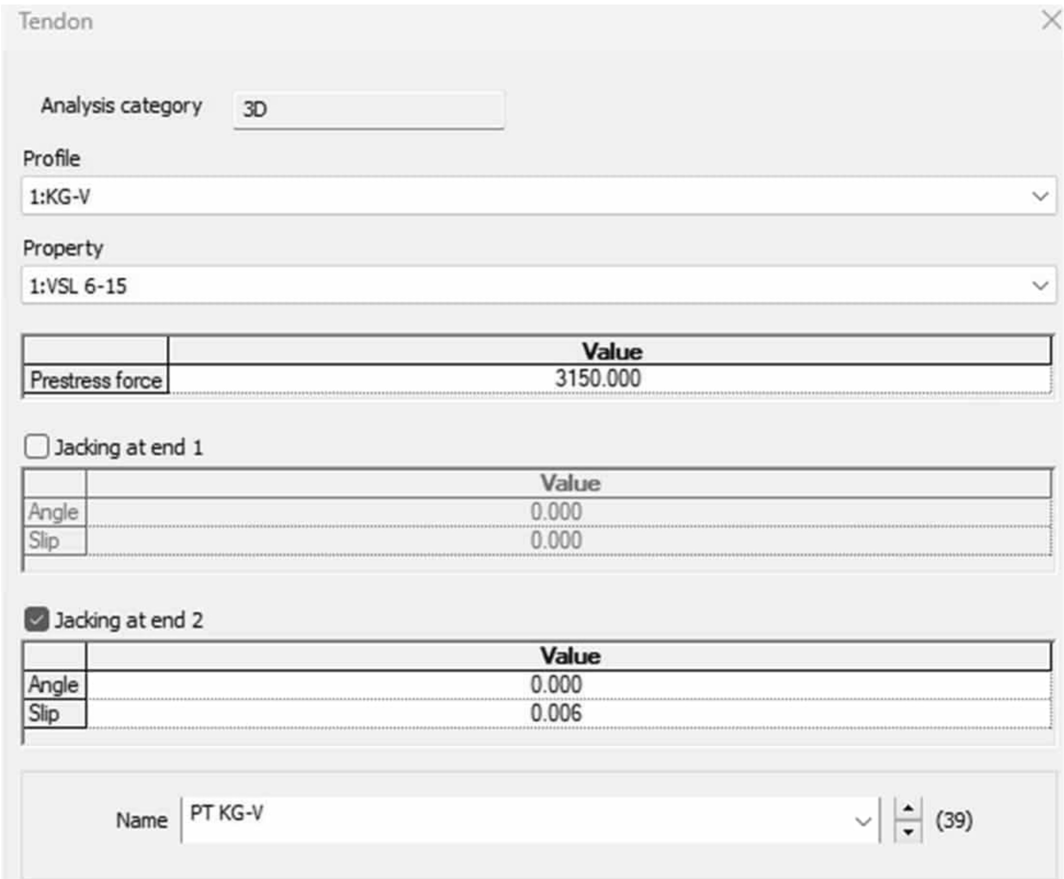


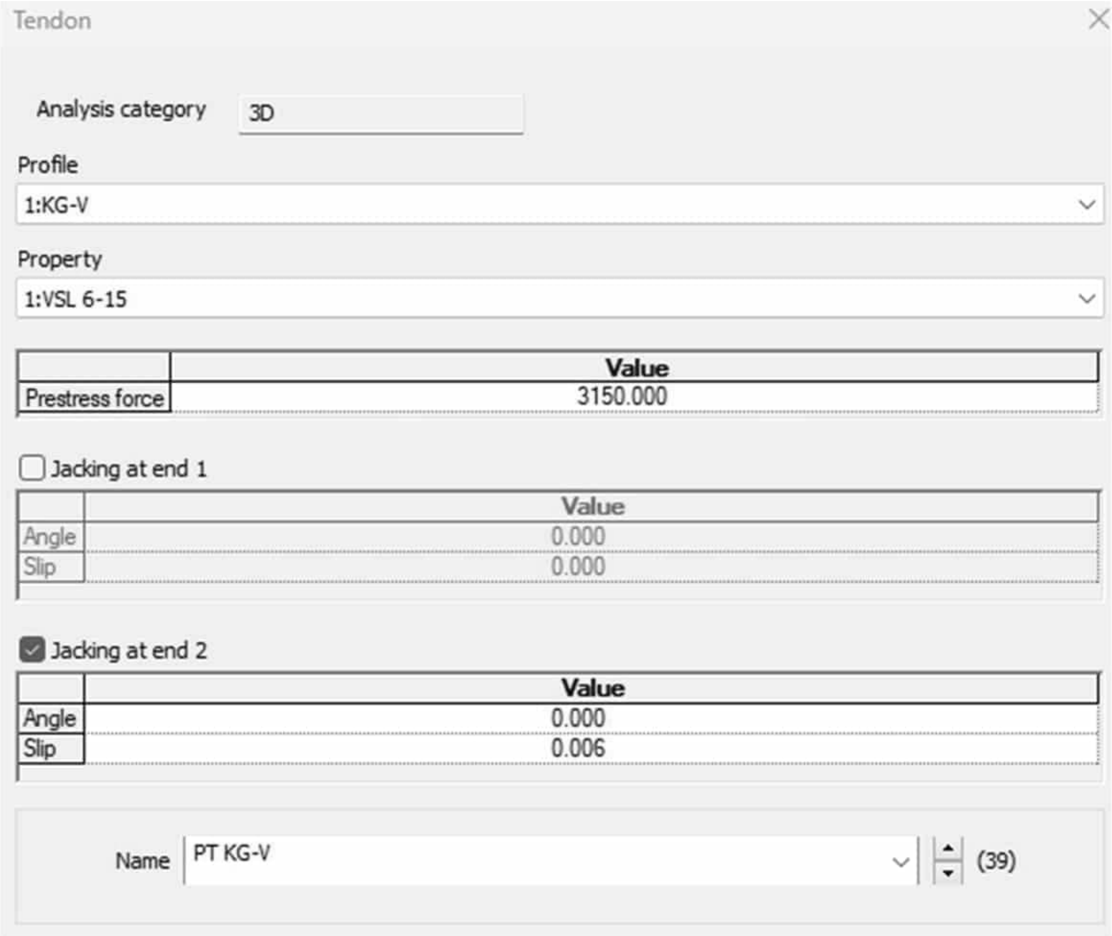
	Type	x (m)	y (m)	z (m)
1	Start	0.0	0.6	0.2
2a	Spline	1.0	0.6	0.2
2b	Spline Continued	1.65	0.6	0.18
2c	Spline Continued	7.05	0.6	0.0
2d	Spline Continued	13.05	0.6	-0.35
2e	Spline Continued	18.05	0.6	-0.4
2f	Spline Continued	23.05	0.6	-0.35
2g	Spline Continued	29.05	0.6	0.0
2h	Spline Continued	34.45	0.6	0.18
2i	Spline Continued	35.1	0.6	0.2
2j	Spline Continued	36.1	0.6	0.2

Tendon loads:

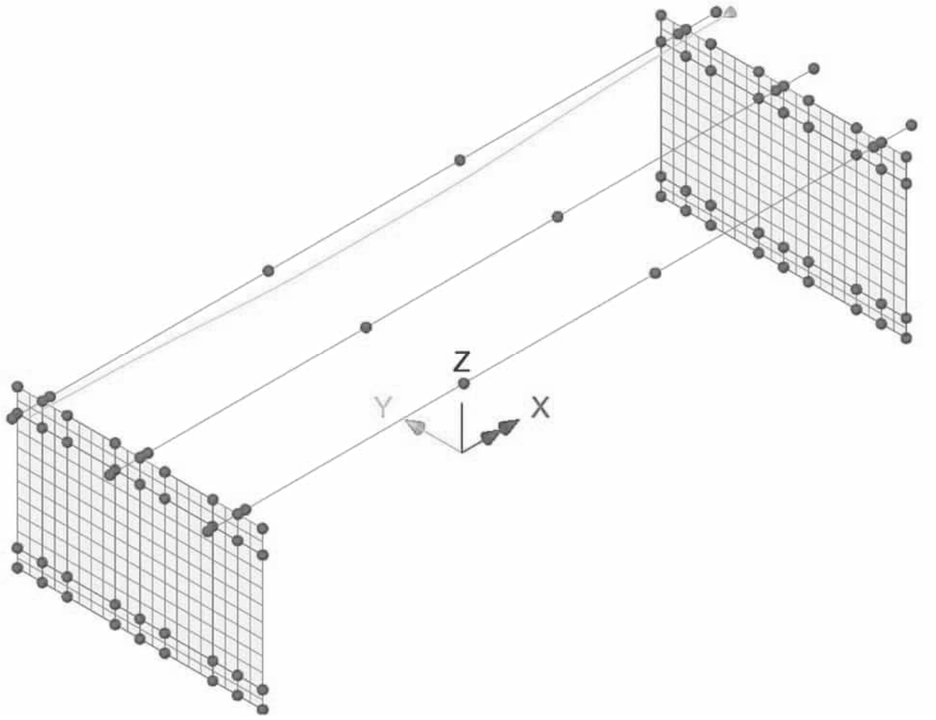


-

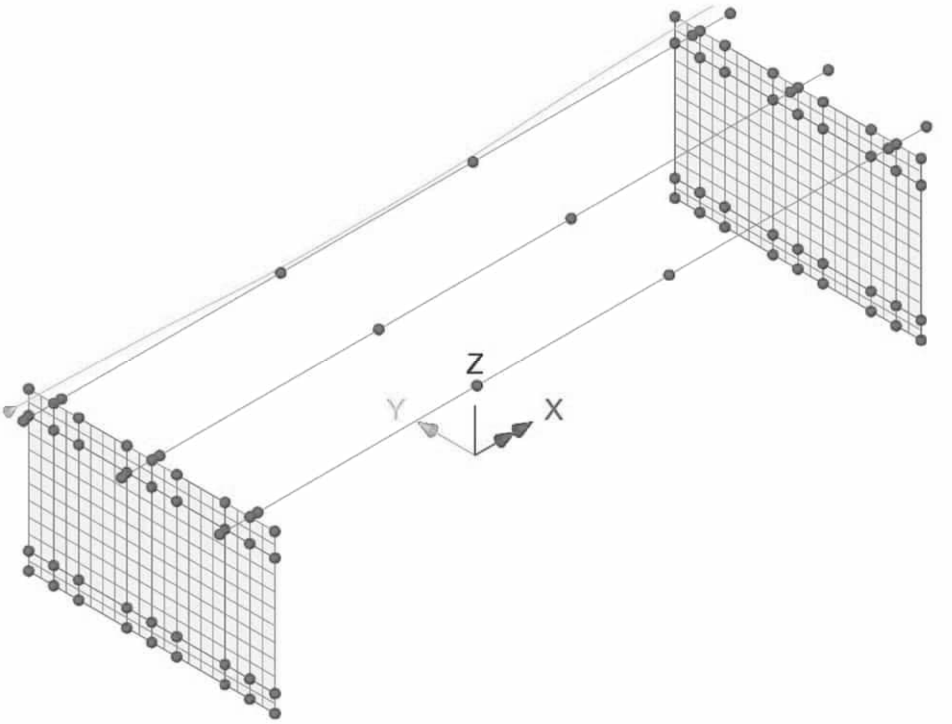




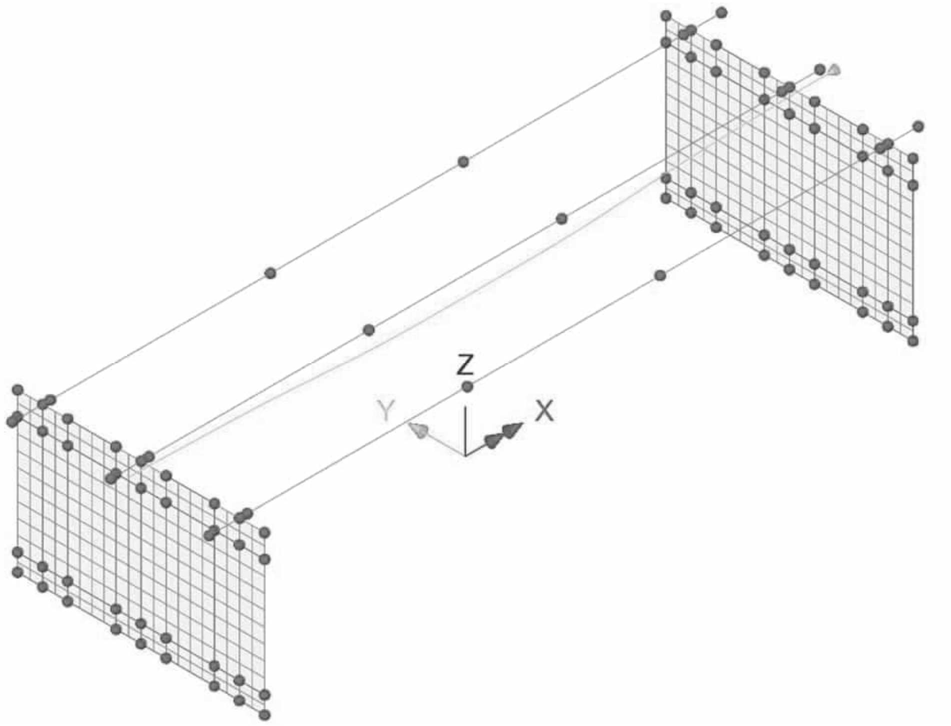
Tendon
Analysis category
3D
Profile
1:KG-V
Property
1:VSL 6-15
Value
Prestress force
3150.000
Jacking at end 1
Value
Angle
0.000
Slip
0.000
Jacking at end 2
Value
Angle
0.000
Slip
0.006
Name
PT KG-V
(39)



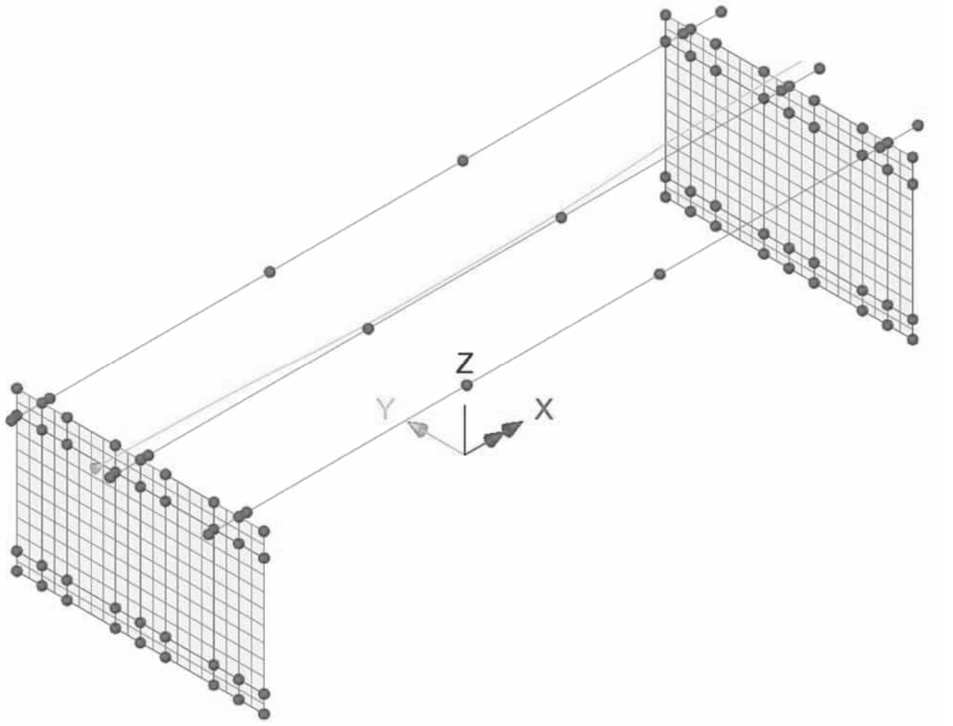
Load case: PT KG V1
(Tendons applied to beam L1)



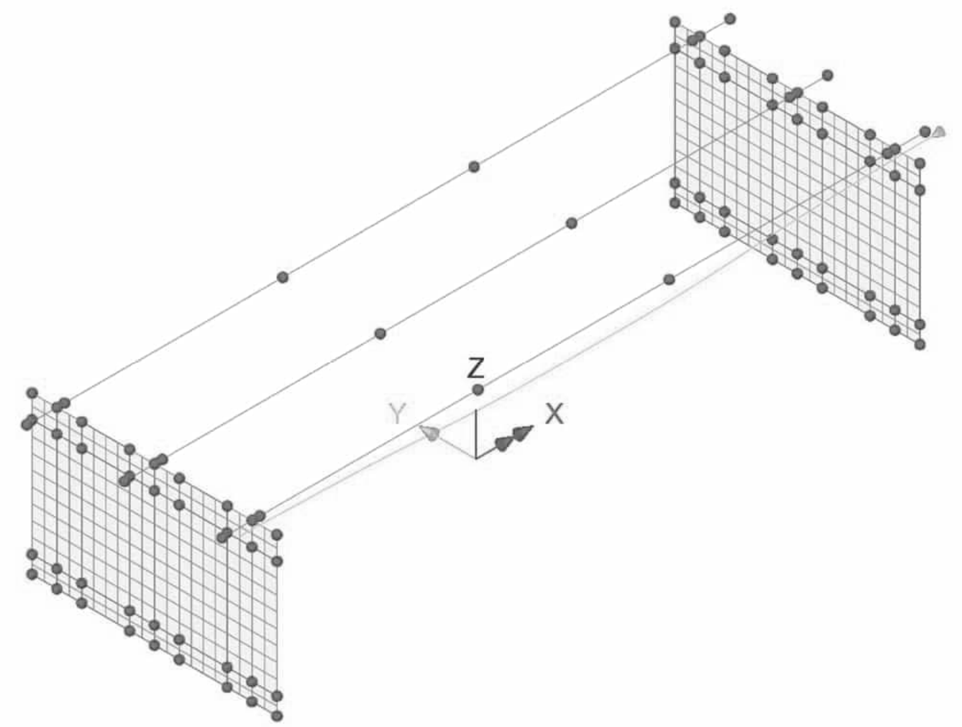
Load case: PT KG H1
(Tendons applied to beam L1)



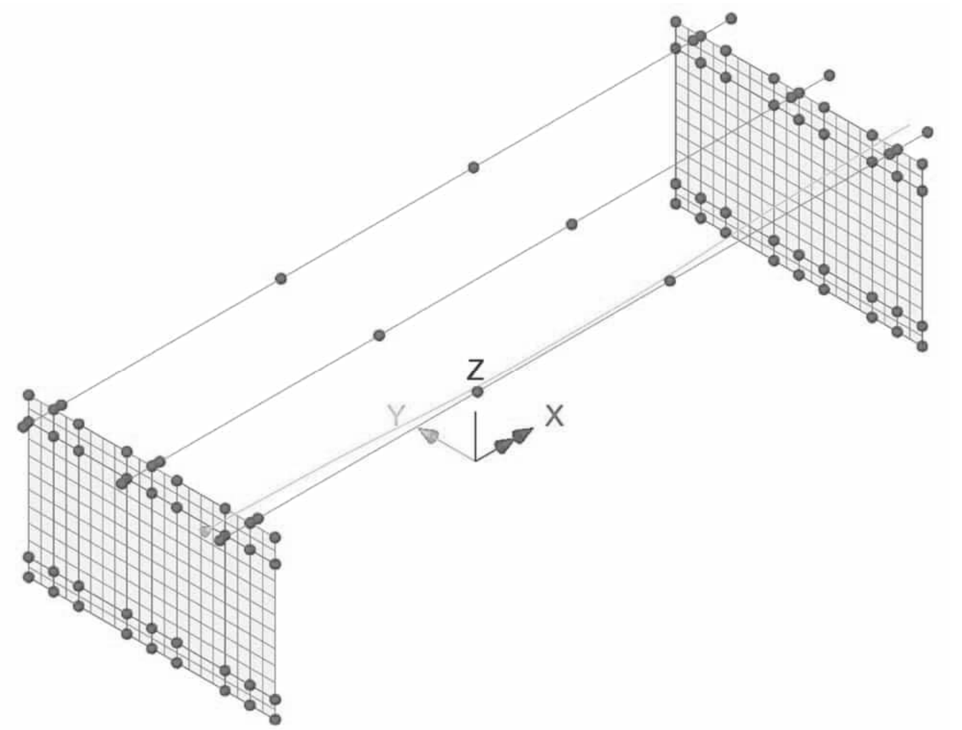
Load case: PT KG V2
(Tendons applied to beam L2)



Load case: PT KG H2
(Tendons applied to beam L2)



Load case: PT KG V3
(Tendons applied to beam L3)



Load case: PT KG H3
(Tendons applied to beam L3)

3.13.4 Load combination

Load combination basis PT-t0:

Load case	Factor
PT – KG V1	4.00
PT – KG V2	4.00
PT – KG V3	4.00
PT – KG H1	4.00
PT – KG H2	4.00
PT – KG H3	4.00

Load combination basis PT-t1:

Load case	Factor
PT – t0	0.94

Load combination basis PT-t2:

Load case	Factor
PT – t0	0.84

3.14 LOAD COMBINATIONS

Verification of load capacity shall be carried out for several limit states as detailed in this section.

Fatigue Limit State:
The risk of fatigue according to the partial factor method is checked using equation 6.69 provided in document SS-EN 1992-1-1.

Other Limit States:
For other limit states, section 6.4.3 of EN-1990 is applied.

3.14.1 Ultimate Limit States (ULS)

When checking the ultimate limit state, the load factors vary depending on the type of failure as detailed below:

STR: Verification of structural bearing capacity

GEO: Verification of geotechnical bearing capacity

For checking the ultimate limit state, TRVNFRA-00227 section 7.1.6.3 specifies requirements for load combinations as follows.

Design Method D2 (Set B):
Design Method D2 (Set B) according to TSFS 2018:57 Table 4.4 shall be applied for the structural bearing capacity of the construction (STR; SK 3).

Design Method is defined according to EN-1990 equations 6.10a and 6.10b as detailed below.

$$E_{Sd}^{10a} = \sum_{j\geq 1} \gamma_{G.j} \cdot G_{k,j} + \gamma_{Q.1} \cdot \psi_{0,1} \cdot Q_{k.1} + \sum_{i>1} \gamma_{Q.i} \cdot \psi_{0,i} \cdot Q_{k,i} = \psi\gamma_{ULS-A} \cdot (\sum_{j>1} G_{k,j} + \sum_{i>1} Q_{k,i})$$

$$E_{sd}^{10b} = \sum_{j\geq 1} \xi_j \cdot \gamma_{G.j} \cdot G_{k,j} + \gamma_{Q.1} \cdot Q_{k.1} + \sum_{i>1} \gamma_{Q.i} \cdot \psi_{0,i} \cdot Q_{k,i} = \psi\gamma_{ULS-B} \cdot (\sum_{j>1} G_{k,j} + \sum_{i>1} Q_{k,i})$$

Equation 6.10a refers to the (ULS-A) case where the permanent loads are dominant, usually during the construction phase.

Equation 6.10b refers to the (ULS-B) case where the variable loads are dominant.
Design method 2 (set B) according to TSFS 2018:57 table 4.4 shall be applied for the structural capacity (STR; SK3).

A1 (construction loads)
All load factors are greater than set C.

A2 (geotechnical loads)

- Load coefficient earth pressure:

$\psi\gamma_{\mathrm{ULS-A}} = \gamma_d \cdot 1.35 \cdot \eta_{\mathrm{sup.G}} = 1.0 \cdot 0.89 \cdot 1.35 \cdot 1.1 = 1.49$ ← dimensioning
$\psi\gamma_{\mathrm{ULS-B}} = \gamma_d \cdot 0.89 \cdot 1.35 \cdot \eta_{\mathrm{sup.G}} = 1.0 \cdot 0.89 \cdot 1.35 \cdot 1.1 = 1.33$

- Load coefficient surcharge:

$\psi\gamma_{\mathrm{ULS-A}} = \gamma_d \cdot \psi_0 \cdot 1.50 = 1.0 \cdot 0.75 \cdot 1.50 = 1.13$
$\psi\gamma_{\mathrm{ULS-B}} = \gamma_d \cdot 1.50 = 1.0 \cdot 1.50 = 1.50$ ← dimensioning

Design method D3 (set C):

Design method D3 (set C) according to TSFS 2018:57 table 4.5 shall be applied for determining geotechnical bearing capacity (GEO; SK 2).

The design method is defined according to EN-1990 equation 6.10a and 6.10b as presented below.

$$E_{Sd}^{10a} = \sum_{j\geq 1} \gamma_{G.j} \cdot G_{k,j} + \gamma_{Q.1} \cdot \psi_{0,1} \cdot Q_{k.1} + \sum_{i>1} \gamma_{Q.i} \cdot \psi_{0,i} \cdot Q_{k,i} = \psi\gamma_{ULS-GA} \cdot (\sum_{j>1} G_{k,j} + \sum_{i>1} Q_{k,i})$$

$$E_{sd}^{10b} = \sum_{j\geq 1} \xi_j \cdot \gamma_{G.j} \cdot G_{k,j} + \gamma_{Q.1} \cdot Q_{k.1} + \sum_{i>1} \gamma_{Q.i} \cdot \psi_{0,i} \cdot Q_{k,i} = \psi\gamma_{ULS-GB} \cdot (\sum_{j>1} G_{k,j} + \sum_{i>1} Q_{k,i})$$

Equation 6.10a refers to the (ULS-A) case where the permanent loads are dominant, usually during the construction phase.

Equation 6.10b (ULS-B) refers to the case where the variable loads are dominant.

Design method 3 (set C) according to TSFS 2018:57 table 4.5 shall be applied for determining geotechnical bearing capacity (GEO).

A1 (construction loads)
All load factors are less than set B.

A2 (geotechnical loads)

- Load coefficient earth pressure: $\psi\gamma_{jord} = \gamma_d \cdot 1.1 \cdot \eta_{sup.G} = 0.91 \cdot 1.1 \cdot 1.1 = 1.10$

- Load coefficient surcharge: $\psi\gamma_{\text{över}} = \gamma_d \cdot 1.40 = 0.91 \cdot 1.40 = 1.27$

Simplified Design Method ULS:

To limit the number of load combinations, design method D2 (STR) is also applied for checking geotechnical bearing capacity (GEO). This is done by adjusting load coefficients associated with the geotechnical loads.
When applying the geotechnical loads, the earth pressure coefficient corresponding to D2 is applied.

Check load coefficients associated with the geotechnical loads

$$K_o(D2) = 1 - sin(\varphi_d) = 1 - sin45^{\circ} = 0.29$$

$$K_o(D3) = 1 - sin(\varphi_d) = 1 - sin38^{\circ} = 0.39$$

Earth pressure→ 1.48[1.)] $\cdot K_0(D2) = 0.43 \equiv 1.10 \cdot K_0(D3) = 0.43$ i.e. OK!

Surcharge → 1.71[2.)] $\cdot K_0(D2) = 0.43 \equiv 1.27 \cdot K_0(D3) = 0.50$ i.e. OK!

Footnotes

[1.)] Last coefficient $\psi\gamma_{ULS} = 1.48$ is applied instead of 1.33.

[2.)] Last coefficient $\psi\gamma_{ULS} = 1.71$ is applied instead of 1.50.

Permanent loads:

Nr	Load		$\psi\gamma_{ULS\text{-}A}$	$\psi\gamma_{ULS\text{-}B}$		$\psi\gamma_{ULS}$
1	Egentyngd	max	1.35	1.20		1.20
		min	1.00	1.00		1.00
2	Beläggning	max	1.49	1.33		1.33
		min	0.90	0.90		0.90
3	Överfyllnad	max	1.49	1.33		1.33
		min	0.90	0.90		0.90
4	Jordtryck	max	1.49	1.33	⇒	1.48[1.)]
		min	0.90	0.90		0.90
5	Vattentryck	max	1.35	1.09		1.09
		min	1.00	1.00		1.00
6	Stödförskjutning	max	1.35	1.20		1.20
		min	1.00	1.00		1.00
7	Krympning	max	1.35	1.20		1.20
		min	1.00	1.00		1.00
8	Spännkraft	max	1.35	1.35		1.35
		min	1.00	1.00		1.00

Footnote:

[1.)] Load coefficient according to page A3:172 is applied.

Remark

Equation ULS-B is considered dominant; thus ULS-A is not considered.

Variable loads:

Nr	Load	ψγ ULS-A	ψγ ULS-B		ψγ ULS
	Lastmodell LM 1 :				
9	Boggiesystem	1.13	1.03/1.50		1.03/1.50
10	Utbredd last	0.60	0.60/1.50		0.60/1.50
11	Bromskraft	0.84	0.84/1.13		0.84/1.13
12	Sidokraft	0.84	0.84/1.13		0.84/1.13
13	Centrifugalkraft	0.84	0.84/1.13		0.84/1.13
	Lastmodell LM 2 :				
14	Enstaka axellast	0	0/1.50		0/1.50
	Typfordon EG A/B :				
15	Typfordon EG A/B	1.13	1.13/1.50		1.13/1.50
16	Bromskraft	0.84	0.84/1.13		0.84/1.13
17	Sidokraft	0.84	0.84/1.13		0.84/1.13
18	Centrifugalkraft	0.84	0.84/1.13	⇒	0.84/1.13
19	Temperatur	0.90	0.90/1.50		0.90/1.50
	Vindlaster:				
20	Vindlast mot bro	0.45	0.45/1.50		0.45/1.50
21	Vindlast mot trafik	0.45	0.45/1.50		0.45/1.50
22	Överlast	1.13	1.13/1.50		1.13/1.71 [2.)]

Footnote:

[2.)] Load coefficient according to page A3:172 is applied.

Remark

Equation ULS-B is considered dominant; thus ULS-A is not considered.

Load combination smart *ULS-PERM :*

Load case	Permanent factor	Variable factor
EGEN	1.00	0.20
BELÄGG	0.90	0.43
JORD	0.90	0.58
STOD	0	0.30 = (1.20 x 0.37[1.)] x 0.6[2.)])
KRYMP	0	0.30 = (1.20 x 0.37[1.)] x 0.6[2.)])
PT-t0	0.84 (= 0.84·1.00) [3.)]	0.51 (= 1.35 - 0.84) [3.)]

Footnotes:

[1.)] The effect of creep results in reduced stiffness; see page A3:46.

[2.)] The effect of cracking results in reduced stiffness; see page A3:114.

[3.)] Load case pretension varies from PT-t0 to PT-t2 (= 0.84·PT-t0) is applied.

Although the load cases STOD and KRYMP do not need to be considered according to SS-EN 1992-1-1, this is done on the safe side.

Load combination smart *ULS-PERM-0 :*

(Identical to ULS-PERM but does not contain load case PT-t0)

Load case	Permanent factor	Variable factor
EGEN	1.00	0.20
BELÄGG	0.90	0.43
JORD	0.90	0.58
STOD	0	0.30
KRYMP	0	0.30

Load combination smart *ULS-VAR :*
(Load cases to consider : 6 / Variable load cases : 1)

Load case	Permanent factor	Variable factor
TRAFIK	1.03	0.47
BROMS	0.84	0.29
SIDO	0.84	0.29
TEMP-ULS	0.90	0.60
OVER	1.13	0.58
VIND	0.45	1.05

Load combination smart *ULS :*

Load case	Permanent factor	Variable factor
ULS-PERM	1	0
ULS-VAR	0	1

Load combination smart *ULS-0 :*
(Is identical to ULS but does not contain load case PT-t0)

Load case	Permanent factor	Variable factor
ULS-PERM-0	1	0
ULS-VAR	0	1

3.14.2 Service limit state (SLS)

The service limit state is divided into 3 load combinations based on their duration. The load combinations are presented below.

Load combination	Duration
SLS:K	Characteristic
SLS:F	Frequent
SLS:Q	Quasi-permanent

Load Combination SLS:K according to EN 1990 equation 6.14b is presented below.

$$E_{Sd} = \sum_{j\geq 1} G_{k,j} + Q_{k.1} + \sum_{i>1} \psi_{0,i} \cdot Q_{k,i} = \psi\gamma_{SLS.K} \cdot (\sum_{j>1} G_{k,j} + \sum_{i>1} Q_{k,i})$$

Load Combination SLS:F according to EN 1990 equation 6.15b is presented below.

$$E_{Sd} = \sum_{j\geq 1} G_{k,j} + \psi_1 \cdot Q_{k.1} + \sum_{i>1} \psi_{2,i} \cdot Q_{k,i} = \psi\gamma_{SLS.2} \cdot (\sum_{j>1} G_{k,j} + \sum_{i>1} Q_{k,i})$$

Load Combination SLS:Q according to EN 1990 equation 6.16b is presented below.

$$E_{Sd} = \sum_{j\geq 1} G_{k,j} + \sum_{i>0} \psi_{2,i} \cdot Q_{k,i} = \psi\gamma_{SLS.Q} \cdot (\sum_{j>1} G_{k,j} + \sum_{i>1} Q_{k,i})$$

When designing, load coefficients according to equations 6.14a, 6.15b, and 6.16b are applied. Refer to the derivation in Appendix 2.

Adjustment of load coefficients for geotechnical loads:

$K_o(D2) = 1 - sin(\varphi_d) = 1 - sin45^{\circ} = 0.29$

$K_o(D3) = 1 - sin(\varphi_d) = 1 - sin38^{\circ} = 0.39$

LC	Earth pressue
SLS-K	$\frac{K0(D3)}{K0(D2)} \cdot 1.1 = \frac{0.39}{0.29} \cdot 1.1 = 1.48$
SLS-F	$\frac{K0(D3)}{K0(D2)} \cdot 1.1 = \frac{0.39}{0.29} \cdot 1.1 = 1.48$
SLS-Q	$\frac{K0(D3)}{K0(D2)} \cdot 1.0 = \frac{0.39}{0.29} \cdot 1.0 = 1.34$

LC	Temparature
SLS-K	$\frac{K0(D3)}{K0(D2)} \cdot 1.0 = \frac{0.39}{0.29} \cdot 1.00 = 1.34$
SLS-F	$\frac{K0(D3)}{K0(D2)} \cdot 0.60 = \frac{0.39}{0.29} \cdot 0.60 = 0.81$
SLS-Q	0

LC	Surcharge
SLS-K	$\frac{K0(D3)}{K0(D2)} \cdot 1.0 = \frac{0.39}{0.29} \cdot 1.00 = 1.34$
SLS-F	$\frac{K0(D3)}{K0(D2)} \cdot 0.75 = \frac{0.39}{0.29} \cdot 0.75 = 1.01$
SLS-Q	0

Permanent loads:

Nr	Load		$\psi\gamma_{SLS-K}$	$\psi\gamma_{SLS-F}$	$\psi\gamma_{SLS-Q}$
1	Egentyngd	max	1.00	1.00	1.00
		min	1.00	1.00	1.00
2	Beläggning	max	1.10	1.10	1.00
		min	0.90	0.90	1.00
3	Överfyllnad	max	1.10	1.10	1.00
		min	0.90	0.90	1.00
4	Jordtryck	max	1.48[3.)]	1.48[3.)]	1.34[3.)]
		min	0.90	0.90	1.00
5	Vattentryck	max	1.00	1.00	1,00
		min	1.00	1.00	1.00
6	Stödförskjutning	max	1.00	1.00	1.00
		min	1.00	1.00	1.00
7	Krympning	max	1.00	1.00	1.00
		min	1.00	1.00	1.00
8	Spännkraft	max	1.00	1.00	1.00
		min	1.00	1.00	1.00

Footnote:
[3.)] Load coefficient page A3:175 is applied.

Variable loads:

Nr	Load	$\psi\gamma_{SLS-K}$	$\psi\gamma_{SLS-F}$	$\psi\gamma_{SLS-Q}$
	Lastmodell LM 1 :			
9	Boggiesystem	0.75/1.00	0/0.75	0
10	Utbredd last	0.40/1.00	0/0.40	0
11	Bromskraft	0.56/0.75	0/0.56	0
12	Sidokraft	0.56/0.75	0/0.56	0
13	Centrifugalkraft	0.56/0.75	0/0.56	0
	Lastmodell LM 2 :			
14	Enstaka axellast	0.75/1.00	0/0.75	0
	Typfordon EG A/B :			
15	Typfordon EG A/B	0.75/1.00	0/0.75	0
16	Bromskraft	0.56/0.75	0/0.56	0
17	Sidokraft	0.56/0.75	0/0.56	0
18	Centrifugalkraft	0.56/0.75	0/0.56	0
19	Temperatur	0.60/1.00	0.50/0.60	0.50
	Vindlaster:			
20	Vindlast mot bro	0.30/1.00	0/0.30	0
21	Vindlast mot trafik	0.30/1.00	0/0.30	0
22	Överlast	0.75/1.34[4.)]	0/1.01[4.)]	0

Footnote:
[4.)] Load coefficients according to page A3:175 is applied.

Load combination smart *SLS-PERM :*

Loadcase	Permanent factor	Variable factor
EGEN	1.00	0
BELÄGG	0.90	0.20
JORD	0.90	0.58
STOD	0	0.22 = (1.0 x 0.37[1.)] x 0.6[2.)])
KRYMP	0	0.22 = (1.0 x 0.37[1).] x 0.6[2.)])
PT-t0	0.84[3.)]	0.16[3.)]

Footnotes:

[1.)] The effect of creep results in reduced stiffness; see page A3:46

[2.)] The effect of cracking results in reduced stiffness; see page A3:114

[3.)] Load case pretension varies from PT-t0 to PT-t2 (= 0.84·PT-t0) is applied.

Load combination smart *SLS-PERM-0 :*

(Identical to SLS-PERM but does not contain load case PT-t0)

Loadcase	Permanent factor	Variable factor
EGEN	1.00	0
BELÄGG	0.90	0.20
JORD	0.90	0.58
STOD	0	0.22
KRYMP	0	0.22

Load combination smart *SLS-K-VAR :*

(Load cases to consider : 6 / Variable load cases : 1)

Load case	Permanent factor	Variable factor
TRAFIK	0.75	0.25
BROMS	0.56	0.19
SIDO	0.56	0.19
TEMP	0.60	0.40
OVER	0.75	0.59
VIND	0.30	0.70

Load combination smart *SLS-F-VAR :*

Load case	Permanent factor	Variable factor
TRAFIK	0	0.75
BROMS	0	0.56
SIDO	0	0.56
TEMP	0	0.60
OVER	0	0.95
VIND	0	0.30

Load combination smart *SLS-K :*

Load case	Permanent factor	Variable factor
SLS-PERM	1	0
SLS-K-VAR	0	1

Load combination smart *SLS-K0 :*
(Is identical to SLS-K but does not contain load case PT-t0)

Load case	Permanent factor	Variable factor
SLS-PERM-0	1	0
SLS-K-VAR	0	1

Load combination smart *SLS-F :*
(SLS-F0 is identical but does not contain load case PT-t0)

Load case	Permanent factor	Variable factor
SLS-PERM	1	0
SLS-F-VAR	0	1

Load combination smart *SLS-F0 :*
(Is identical SLS-F0 but does not contain load case PT-t0)

Load case	Permanent factor	Variable factor
SLS-PERM-0	1	0
SLS-F-VAR	0	1

Load combination smart *SLS-Q :*
(SLS-Q0 is identical but does not contain load case PT-t0)

Load case	Permanent factor	Variable factor
EGEN	1.00	0
BELÄGG	1.00	0.20
JORD	1.00	0.34
STOD	0	0.22 = (1.0 x 0.37[1.)] x 0.6[2.)])
KRYMP	0	0.22 = (1.0 x 0.37[1).] x 0.6[2.)])
PT-t0	0.84[3.)]	0
TEMP-SLS Q	0	0.50

Footnotes:
[1.)] The effect of creep results in reduced stiffness; see page A3:46
[2.)] The effect of cracking results in reduced stiffness; see page A3:114
[3.)] Load case pretension PT-t2 (= 0.84·PT-t0) is assumed.

3.14.3 Accidental load combination

The accidental load case is also designated as exceptional load combination EXC according to SS-EN 1990 section 6.4.3.3 equation 6.11a as shown below.
The accidental load case is denoted as A_d and consists of cable loss or impact load.

$$E_{Sd} = \sum_{j\geq 1} G_{k,j} + P + A_d + \psi_{1,1} \cdot Q_{k,1} + \sum_{i>1} \psi_{2,i} \cdot Q_{k,i} = \cdots$$

$$\psi\gamma_{EXC} \cdot \left(\sum_{j\geq 1} G_{k,j} + P + A_d + \sum_{i\geq 1} Q_{k,j}\right)$$

3.14.4 Fatigue load combination

Fatigue is considered according to SS EN 1992-1-1, 6.8.4 and 6.8.6, and SS EN 1992-2, 6.8 and Appendix NN.

The risk of fatigue is checked using a simplified method, denoted as the λ-method.
Load combination according to equation SS-EN 1992-1-1 section 6.8.3 equation 6.69.

In this load combination, the traffic load is considered to consist of UTM, whereby other traffic loads are excluded.

$$E_{Sd} = \sum_{j\geq 1} G_{k,j} + P + \psi_{1,1} \cdot Q_{k,1} + \sum_{i>1} \psi_{2,i} \cdot Q_{k,i} + Q_{fat} = \psi\gamma_{UTM} \cdot (\sum_{j\geq 1} G_{k,j} + P + \sum_{i\geq 1} Q_{k,i} + Q_{fat})$$

Permanent loads:

Nr	Load		$\psi\gamma_{UTM}$
1	Egentyngd	max	1.00
		min	1.00
2	Beläggning	max	1.10
		min	0.90
3	Överfyllnad	max	1.10
		min	0.90
4	Jordtryck	max	1.48
		min	0.90
5	Vattentryck	max	1.00
		min	1.00
6	Stödförskjutning	max	1.00
		min	1.00
7	Krympning	max	1.00
		min	1.00
8	Spännkraft	max	1.00
		min	1.00

Variable loads:

Nr	Load	$\psi\gamma_{UTM}$
	Lastmodell LM 1 :	
9	Boggiesystem	-
10	Utbredd last	-
11	Bromskraft	-
12	Sidokraft	-
13	Centrifugalkraft	-
	Lastmodell LM 2 :	
14	Enstaka axellast	-
	Typfordon EG A/B :	
15	Typfordon EG A/B	-
16	Bromskraft	-
17	Sidokraft	-
18	Centrifugalkraft	-
19	Temperatur	0.60
	Vindlaster:	
20	Vindlast mot bro	0.30
21	Vindlast mot trafik	0.30
22	Överlast	1.01
23	UTM3	1.00

Load combination smart FAT :

(FAT-0 is identical but does not contain load case PT-t0)

Load case	Permanent factor	Variable factor
EGEN	1.00	0
BELÄGG	1.00	0
JORD	1.48	0
STOD	-	-
KRYMP	-	-
PT-t0	0.84	-
VIND	-	-
UTM	-	1.00
OVER	-	-
TEMP	-	-

Load cases BELÄGG, STOD and KRYMP are not fatigue loads, thus load coefficient 1.0 is applied.

Load cases pretension is not a fatigue loads, thus load coefficient lowest load value of value is assumed PT-t2 (= 0.84·PT-t0) is applied.

Load case JORD is not a fatigue load, thus load coefficient highest load coefficient is applied.

Load cases TEMP, VIND and OVER are not fatigue loads, thus load is not considered.

During verification STR, the load case TEMP can be neglected according to SS-EN 1992-1-1 section 2.3.1.2(2).

Title: Input receipt

Model Units: kN,m,t,s,C
Report Units: kN,m,t,s,C

Model Title: System 001
Model File: System 001

Clarification of definitions.

In the report, the letter "T" is used to describe a range. The letter is an abbreviation of "to".

See example of assignment below.

Assignment to Lines:
105T110;114T119

This expression means that the assignment occurs to the lines L105 → L110 and L114 → L119.

Assignment to Surfaces:
3T17;19T24

This expression means that the assignment occurs to the surfaces S3 → S17 and S19 → S24.

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1. Points

Point	X coordinate	Y coordinate	Z coordinate
128	-16,8	-5,1	8,2
131	-16,8	0,0	8,2
134	-16,8	5,1	8,2
228	16,8	-5,1	8,2
231	16,8	0,0	8,2
234	16,8	5,1	8,2
307	-16,4	-5,1	8,2
308	-5,0	-5,1	8,2
309	5,0	-5,1	8,2
310	16,4	-5,1	8,2
325	-16,4	0,0	8,2
326	-5,0	0,0	8,2
327	5,0	0,0	8,2
328	16,4	0,0	8,2
343	-16,4	5,1	8,2
344	-5,0	5,1	8,2
345	5,0	5,1	8,2
346	16,4	5,1	8,2
400	-16,8	-6,4	8,5
401	-16,4	-6,4	8,5
402	-5,0	-6,4	8,5
403	5,0	-6,4	8,5
404	16,4	-6,4	8,5
405	16,8	-6,4	8,5
406	-16,8	-5,1	8,5
407	-16,4	-5,1	8,5
408	-5,0	-5,1	8,5
409	5,0	-5,1	8,5
410	16,4	-5,1	8,5
411	16,8	-5,1	8,5
412	-16,8	-3,8	8,5
413	-16,4	-3,8	8,5
414	-5,0	-3,8	8,5
415	5,0	-3,8	8,5
416	16,4	-3,8	8,5
417	16,8	-3,8	8,5
418	-16,8	-1,3	8,5
419	-16,4	-1,3	8,5
420	-5,0	-1,3	8,5
421	5,0	-1,3	8,5
422	16,4	-1,3	8,5
423	16,8	-1,3	8,5
424	-16,8	0,0	8,5
425	-16,4	0,0	8,5
426	-5,0	0,0	8,5
427	5,0	0,0	8,5
428	16,4	0,0	8,5
429	16,8	0,0	8,5
430	-16,8	1,3	8,5
431	-16,4	1,3	8,5
432	-5,0	1,3	8,5
433	5,0	1,3	8,5
434	16,4	1,3	8,5
435	16,8	1,3	8,5
436	-16,8	3,8	8,5
437	-16,4	3,8	8,5
438	-5,0	3,8	8,5
439	5,0	3,8	8,5

440	16,4	3,8	8,5
441	16,8	3,8	8,5
442	-16,8	5,1	8,5
443	-16,4	5,1	8,5
444	-5,0	5,1	8,5
445	5,0	5,1	8,5
446	16,4	5,1	8,5
447	16,8	5,1	8,5
448	-16,8	6,4	8,5
449	-16,4	6,4	8,5
450	-5,0	6,4	8,5
451	5,0	6,4	8,5
452	16,4	6,4	8,5
453	16,8	6,4	8,5

2. Lines

Line	Points	Line	Points
316	128;307	317	307;308
318	308;309	319	309;310
320	310;228	361	131;325
362	325;326	363	326;327
364	327;328	365	328;231
406	134;343	407	343;344
408	344;345	409	345;346
410	346;234	1293	406;407
1294	407;401	1295	400;401
1296	406;400	1297	407;408
1298	408;402	1299	401;402
1300	408;409	1301	409;403
1302	402;403	1303	409;410
1304	410;404	1305	403;404
1306	411;410	1307	405;404
1308	411;405	1309	412;413
1310	413;407	1311	412;406
1312	413;414	1313	414;408
1314	414;415	1315	415;409
1316	415;416	1317	416;410
1318	417;416	1319	417;411
1320	418;419	1321	419;413
1322	418;412	1323	419;420
1324	420;414	1325	420;421
1326	421;415	1327	421;422
1328	422;416	1329	423;422
1330	423;417	1331	424;425
1332	425;419	1333	424;418
1334	425;426	1335	426;420
1336	426;427	1337	427;421
1338	427;428	1339	428;422
1340	429;428	1341	429;423
1342	425;431	1343	430;431
1344	424;430	1345	426;432
1346	431;432	1347	427;433
1348	432;433	1349	428;434
1350	433;434	1351	435;434
1352	429;435	1353	431;437
1354	436;437	1355	430;436
1356	432;438	1357	437;438
1358	433;439	1359	438;439
1360	434;440	1361	439;440
1362	441;440	1363	435;441
1364	437;443	1365	442;443
1366	436;442	1367	438;444
1368	443;444	1369	439;445
1370	444;445	1371	440;446
1372	445;446	1373	447;446
1374	441;447	1375	443;449
1376	448;449	1377	442;448
1378	444;450	1379	449;450
1380	445;451	1381	450;451
1382	446;452	1383	451;452
1384	453;452	1385	447;453

3. Surfaces

Surface	Lines	Surface	Lines
587	1295;1294;1293;1296	588	1299;1298;1297;1294
589	1302;1301;1300;1298	590	1305;1304;1303;1301
591	1307;1308;1306;1304	592	1293;1310;1309;1311
593	1297;1313;1312;1310	594	1300;1315;1314;1313
595	1303;1317;1316;1315	596	1306;1319;1318;1317
597	1309;1321;1320;1322	598	1312;1324;1323;1321
599	1314;1326;1325;1324	600	1316;1328;1327;1326
601	1318;1330;1329;1328	602	1320;1332;1331;1333
603	1323;1335;1334;1332	604	1325;1337;1336;1335
605	1327;1339;1338;1337	606	1329;1341;1340;1339
607	1331;1342;1343;1344	608	1334;1345;1346;1342
609	1336;1347;1348;1345	610	1338;1349;1350;1347
611	1340;1352;1351;1349	612	1343;1353;1354;1355
614	1348;1358;1359;1356	615	1350;1360;1361;1358
616	1351;1363;1362;1360	617	1354;1364;1365;1366
618	1357;1367;1368;1364	619	1359;1369;1370;1367
620	1361;1371;1372;1369	621	1362;1374;1373;1371
622	1365;1375;1376;1377	623	1368;1378;1379;1375
624	1370;1380;1381;1378	625	1372;1382;1383;1380
626	1373;1385;1384;1382	627	1346;1356;1357;1353

4. MESH:Line

Attribute: 2 Title: Element 3

Sub Type = Line Mesh Element Type = BMI21

Mesh spacing	**Nr. of elements**	**Start node end releases:**	**End node end releases:**
Uniform	3	None	None

Assignment to Lines: Beta angle = 0,000
315;321;360;366;405;411

Attribute: 17 Title: Element 1

Sub Type = Line Mesh Element Type = BMI21

Mesh spacing	**Nr. of elements**	**Start node end releases:**	**End node end releases:**
Uniform	1	None	None

Assignment to Lines: Beta angle = 0,000
316;320;361;365;406;410

Attribute: 18 Title: Element 20

Sub Type = Line Mesh Element Type = BMI21

Mesh spacing	**Nr. of elements**	**Start node end releases:**	**End node end releases:**
Uniform	20	None	None

Assignment to Lines: Beta angle = 0,000
318T408I45

Attribute: 19 Title: Element 24

Sub Type = Line Mesh Element Type = BMI21

Mesh spacing	**Nr. of elements**	**Start node end releases:**	**End node end releases:**
Uniform	24	None	None

Assignment to Lines: Beta angle = 0,000
317;319;362;364;407;409

Attribute: 20 Title: Element 2

Sub Type = Line Mesh Element Type = BMI21

Mesh spacing	**Nr. of elements**	**Start node end releases:**	**End node end releases:**
Uniform	2	None	None

Assignment to Lines: Beta angle = 0,000
151;152;154;155;157;158;251;252;254;255;257;258;1277;1278;1280;1281;1283T1286;1288;1289;1291;1292

Attribute: 21 Title: Element 4

Sub Type = Line Mesh Element Type = BMI21

Mesh spacing	**Nr. of elements**	**Start node end releases:**	**End node end releases:**
Uniform	4	None	None

Assignment to Lines: Beta angle = 0,000
1279;1282;1287;1290

5. MESH:Surface

Attribute: 11 Title: Element 20 x 2

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	20
Number of divisions in y	yDivisions	2
Transition mesh	transition	true
Allow irregular mesh	allowIrregular	true
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
589;594;604;609;619;624

Attribute: 12 Title: Element 20 x 4

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	20
Number of divisions in y	yDivisions	4
Transition mesh	transition	true
Allow irregular mesh	allowIrregular	true
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
599;614

Attribute: 13 Title: Element 24 x 2

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	24
Number of divisions in y	yDivisions	2
Transition mesh	transition	true
Allow irregular mesh	allowIrregular	true
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
588;590;593;595;603;605;608;610;618;620;623;625

Attribute: 14 Title: Element 24 x 4

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	24
Number of divisions in y	yDivisions	4
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
598;600;615;627

Attribute: 15 Title: Element 1 x 2

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	1
Number of divisions in y	yDivisions	2
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
587;591;592;596;602;606;607;611;617;621;622;626

Attribute: 16 Title: Element 6 x 2

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	6
Number of divisions in y	yDivisions	2
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
571;572;574;576;577;578;636;637;639;640;642;643

Attribute: 22 Title: Element 3 x 4

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	3
Number of divisions in y	yDivisions	4
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
314;320;335;341

Attribute: 23 Title: Element 3 x 2

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	3
Number of divisions in y	yDivisions	2
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
300;306;307;313;321;327;328;334;342;348;349;355

Attribute: 24 Title: Element 1 x 4

Sub Type = Surface Mesh **Element Type = QTS4**

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	1
Number of divisions in y	yDivisions	4
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
597;601;612;616

Attribute: 25 Title: Element 6 x 4

Sub Type = Surface Mesh **Element Type = QTS4**

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	6
Number of divisions in y	yDivisions	4
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
573;575;638;641

Attribute: 26 Title: Element 8 x 2

Sub Type = Surface Mesh **Element Type = QTS4**

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	8
Number of divisions in y	yDivisions	2
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
108;109;111;112;114;115;208;209;211;212;214;215

Attribute: 27 Title: Element 8 x 4

Sub Type = Surface Mesh **Element Type = QTS4**

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	8
Number of divisions in y	yDivisions	4
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
110;113;210;213

Attribute: 28 Title: Element 2 x 2

Sub Type = Surface Mesh **Element Type = QTS4**

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	2
Number of divisions in y	yDivisions	2
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
100;101;103;104;106;107;116;117;119;120;122;123;200;201;203;204;206;207;216;217;219;220;222;223

Attribute: 29 Title: Element 2 x 4

Sub Type = Surface Mesh Element Type = QTS4

Property	Symbol	Value
Element size	size	0,0
Number of divisions in x	xDivisions	2
Number of divisions in y	yDivisions	4
Transition mesh	transition	false
Allow irregular mesh	allowIrregular	false
Element defined by name	DefinedByName	true
Single feature joint	isSingleFtrJnt	false

Assignment to Surfaces:
102;105;118;121;202;205;218;221

6. MESH:Joint

Attribute: 3 Title: Joint elements (JNT4) - 4 elements

Sub Type = Line Mesh **Element Type = JNT4**

Mesh spacing	Nr. of elements	Start node end releases:	End node end releases:
Uniform	4	None	None

Assignment to Lines: Beta angle = 0,000, Interface secondary Line 382, Mesh from primary to secondary
1236;1243;1399;1402

Attribute: 4 Title: Joint elements (JNT4) - 2 elements

Sub Type = Line Mesh **Element Type = JNT4**

Mesh spacing	Nr. of elements	Start node end releases:	End node end releases:
Uniform	2	None	None

Assignment to Lines: Beta angle = 0,000, Interface secondary Line 412, Mesh from primary to secondary
1230;1233;1240;1247;1249;1251;1397;1398;1400;1401;1403;1404

7. Geometric : Line

Attribute: 3 Title: Weak beam superstructure

Sub Type = Line Geometric

Property	**Symbol**	**Value**
Cross sectional area	A	0,1
Second moment of area about y axis	Iyy	0,1
Second moment of area about z axis	Izz	0,1
Product moment of area	Iyz	0,0
Torsional constant	J	0,1
Eccentricity in local z direction, relative to specified origin	ez0	0,0
Eccentricity in local y direction, relative to specified origin	ey0	0,0
Eccentricity in local z direction, relative to beam centroid	ez	0,0
Eccentricity in local y direction, relative to beam centroid	ey	0,0
Wagner constant 1st moment of square radius about y (Iyr)	Iyr	0,0
Wagner constant 1st moment of square radius about z (Izr)	Izr	0,0
Wagner constant 4th moment of area about origin (Irr)	Irr	0,0
Wagner constant 2nd moment of warping about origin (Iwr)	Iwr	0,0
Effective shear area in local z direction	Asz	0,1
Effective shear area in local y direction	Asy	0,1
Radius of gyration about y axis	ky	1,0
Radius of gyration about z axis	kz	1,0
y axis extreme fibre, top	yt	0,0
y axis extreme fibre, bottom	yb	0,0
z axis extreme fibre, top	zt	0,0
z axis extreme fibre, bottom	zb	0,0
Shape code identifier	Type	-1
Element type	elementType	"3D Thick Beam"
Reinforcement	reinforcement	None

Assignment to Lines:
315;321;360;366;405;411

Attribute: 5 Title: Rigid beam superstructure

Sub Type = Line Geometric

Property	**Symbol**	**Value**
Cross sectional area	A	0,0
Second moment of area about y axis	Iyy	1000000,0
Second moment of area about z axis	Izz	1000000,0
Product moment of area	Iyz	0,0
Torsional constant	J	1000000,0
Eccentricity in local z direction, relative to specified origin	ez0	0,0
Eccentricity in local y direction, relative to specified origin	ey0	0,0
Eccentricity in local z direction, relative to beam centroid	ez	0,0
Eccentricity in local y direction, relative to beam centroid	ey	0,0
Wagner constant 1st moment of square radius about y (Iyr)	Iyr	0,0
Wagner constant 1st moment of square radius about z (Izr)	Izr	0,0
Wagner constant 4th moment of area about origin (Irr)	Irr	0,0
Wagner constant 2nd moment of warping about origin (Iwr)	Iwr	0,0
Effective shear area in local z direction	Asz	1000,0
Effective shear area in local y direction	Asy	1000,0
Radius of gyration about y axis	ky	31622,8
Radius of gyration about z axis	kz	31622,8
y axis extreme fibre, top	yt	0,0
y axis extreme fibre, bottom	yb	0,0
z axis extreme fibre, top	zt	0,0
z axis extreme fibre, bottom	zb	0,0
Shape code identifier	Type	-1
Element type	elementType	"3D Thick Beam"
Reinforcement	reinforcement	None

Assignment to Lines:
151;152;154;155;157;158;251;252;254;255;257;258

Attribute: 12 Title: Rigid beam abutment

Sub Type = Line Geometric

Property	Symbol	Value
Cross sectional area	A	0,0
Second moment of area about y axis	Iyy	1000000,0
Second moment of area about z axis	Izz	1000000,0
Product moment of area	Iyz	0,0
Torsional constant	J	1000000,0
Eccentricity in local z direction, relative to specified origin	ez0	0,0
Eccentricity in local y direction, relative to specified origin	ey0	0,0
Eccentricity in local z direction, relative to beam centroid	ez	0,0
Eccentricity in local y direction, relative to beam centroid	ey	0,0
Wagner constant 1st moment of square radius about y (Iyr)	Iyr	0,0
Wagner constant 1st moment of square radius about z (Izr)	Izr	0,0
Wagner constant 4th moment of area about origin (Irr)	Irr	0,0
Wagner constant 2nd moment of warping about origin (Iwr)	Iwr	0,0
Effective shear area in local z direction	Asz	1000,0
Effective shear area in local y direction	Asy	1000,0
Radius of gyration about y axis	ky	31622,8
Radius of gyration about z axis	kz	31622,8
y axis extreme fibre, top	yt	0,0
y axis extreme fibre, bottom	yb	0,0
z axis extreme fibre, top	zt	0,0
z axis extreme fibre, bottom	zb	0,0
Shape code identifier	Type	-1
Element type	elementType	"3D Thick Beam"
Reinforcement	reinforcement	None

Assignment to Lines:

1277T1292

8. Geometric : Muliple varying line

Symbol	Property
elementType	Element type
isSpecifyInterp	Interpolation order specified
isEqualSpacing	Equal spacing assumed
isSymmetry	Symmetry
distanceType	Distance type
vAlign	Vertical alignment eccentricity
hAlign	Horizontal alignment eccentricity
alignToRow	Section to which others are aligned
vAlignType	Vertical alignment type
hAlignType	Horizontal alignment type
interpMethod	Interpolation method
reinforcement	Reinforcement
A	Cross sectional area
Iyy	Second moment of area about y axis
Izz	Second moment of area about z axis
Iyz	Product moment of area
J	Torsional constant
ez0	Eccentricity in local z direction, relative to specified origin
ey0	Eccentricity in local y direction, relative to specified origin
ez	Eccentricity in local z direction, relative to beam centroid
ey	Eccentricity in local y direction, relative to beam centroid
Iyr	Wagner constant 1st moment of square radius about y (Iyr)
Izr	Wagner constant 1st moment of square radius about z (Izr)
Irr	Wagner constant 4th moment of area about origin (Irr)
Iwr	Wagner constant 2nd moment of warping about origin (Iwr)
Asz	Effective shear area in local z direction
Asy	Effective shear area in local y direction
Ap	Plastic area
Zpy	Plastic modulus for bending about y
Zpz	Plastic modulus for bending about z
yp	Plastic neutral axis, distance from centroid along y axis
zp	Plastic neutral axis, distance from centroid along z axis
Zpt	Plastic torsional section modulus
Cw	Warping torsional constant about shear centre
yo	Shear centre about y axis
zo	Shear centre about z axis
betay	Monosymmetry constant about y
betaz	Monosymmetry constant about z
ky	Radius of gyration about y axis
kz	Radius of gyration about z axis
yt	y axis extreme fibre, top
yb	y axis extreme fibre, bottom
zt	z axis extreme fibre, top
zb	z axis extreme fibre, bottom
name	Description
distanceAlongBeam	Distance along beam
interpolationOrder	Interpolation order
Type	Shape code identifier
B	Breadth of this section
D	Depth of this section

Attribute: 6 Title: Rib 1 (Varying - 2 sections)

Sub Type = Multiple Varying Geometric

Cross Section	**name**	**interpolationOrder**	**distanceAlongBeam**
Section 1	"LB1 (RSS D=1,53 B=2,6)"	"Constant"	0,0
Section 2	"LB2 (RSS D=1,4 B=2,6)"	"Linear"	0,4

Symbol	**Section 1**	**Section 2**
A	4,0	3,6
Iyy	0,8	0,6
Izz	2,2	2,1
Iyz	0,0	0,0
J	2,0	1,6
ez0	0,6	0,5
ey0	0,0	0,0
ez	0,6	0,5
ey	0,0	0,0
Iyr	0,0	0,0
Izr	0,0	0,0
Irr	3,4	2,9
Iwr	0,0	0,0
Asz	3,3	3,0
Asy	3,3	3,0
Ap	4,0	3,6
Zpy	1,5	1,3
Zpz	2,6	2,4
yp	0,0	0,0
zp	0,0	0,0
Zpt	2,9	2,5
Cw	0,1	0,1
yo	0,0	0,0
zo	0,0	0,0
betay	0,0	0,0
betaz	0,0	0,0
ky	0,4	0,4
kz	0,8	0,8
yt	1,3	1,3
yb	-1,3	-1,3
zt	0,8	0,7
zb	-0,8	-0,7
Type	1	1
B	2,6	2,6
D	1,5	1,4

Symbol	**Value**
elementType	"3D Thick Beam"
isSpecifyInterp	true
isEqualSpacing	false
isSymmetry	false
distanceType	"Parametric"
vAlign	0,0
hAlign	0,0
alignToRow	0
vAlignType	"IndividualOffsets"
hAlignType	"CenterToCenter"
interpMethod	"Use Section Calculator"
reinforcement	None

Assignment to Lines:

316T406I45

Attribute: 13 Title: Rib 2 (Varying - 3 sections)

Sub Type = Multiple Varying Geometric

Cross Section	name	interpolationOrder	distanceAlongBeam
Section 1	""	"Constant"	0,0
Section 2	""	"Quadratic"	5,4
Section 3	""	"Quadratic"	11,4

Symbol	Section 1	Section 2	Section 3
A	3,6	2,7	2,3
Iyy	0,6	0,2	0,2
Izz	2,1	1,5	1,3
Iyz	0,0	0,0	0,0
J	1,6	0,7	0,5
ez0	0,4	0,3	0,3
ey0	0,0	0,0	0,0
ez	0,4	0,3	0,3
ey	0,0	0,0	0,0
Iyr	0,0	0,0	0,0
Izr	0,0	0,0	0,0
Irr	2,9	1,9	1,5
Iwr	0,0	0,0	0,0
Asz	3,0	2,2	2,0
Asy	3,0	2,2	2,0
Ap	3,6	2,7	2,3
Zpy	1,3	0,7	0,5
Zpz	2,4	1,8	1,5
yp	0,0	0,0	0,0
zp	0,0	0,0	0,0
Zpt	2,5	1,5	1,2
Cw	0,1	0,1	0,1
yo	0,0	0,0	0,0
zo	0,0	0,0	0,0
betay	0,0	0,0	0,0
betaz	0,0	0,0	0,0
ky	0,4	0,3	0,3
kz	0,8	0,8	0,8
yt	1,3	1,3	1,3
yb	-1,3	-1,3	-1,3
zt	0,7	0,5	0,5
zb	-0,7	-0,5	-0,5
Type	1	1	1
B	2,6	2,6	2,6
D	1,4	1,0	0,9

Symbol	Value
elementType	"3D Thick Beam"
isSpecifyInterp	true
isEqualSpacing	false
isSymmetry	false
distanceType	"Parametric"
vAlign	0,0
hAlign	0,0
alignToRow	0
vAlignType	"IndividualOffsets"
hAlignType	"CenterToCenter"
interpMethod	"Use Section Calculator"
reinforcement	None

Assignment to Lines:
317T407I45

Attribute: 14 Title: Rib 3 (Varying - 2 sections)

Sub Type = Multiple Varying Geometric

Cross Section	name	interpolationOrder	distanceAlongBeam
Section 1	"LB4 (RSS D=0,9 B=2,6)"	"Constant"	0,0
Section 2	"LB4 (RSS D=0,9 B=2,6)"	"Linear"	10,0

Symbol	Section 1	Section 2
A	2,3	2,3
Iyy	0,2	0,2
Izz	1,3	1,3
Iyz	0,0	0,0
J	0,5	0,5
ez0	0,3	0,3
ey0	0,0	0,0
ez	0,3	0,3
ey	0,0	0,0
Iyr	0,0	0,0
Izr	0,0	0,0
Irr	1,5	1,5
Iwr	0,0	0,0
Asz	2,0	2,0
Asy	2,0	2,0
Ap	2,3	2,3
Zpy	0,5	0,5
Zpz	1,5	1,5
yp	0,0	0,0
zp	0,0	0,0
Zpt	1,2	1,2
Cw	0,1	0,1
yo	0,0	0,0
zo	0,0	0,0
betay	0,0	0,0
betaz	0,0	0,0
ky	0,3	0,3
kz	0,8	0,8
yt	1,3	1,3
yb	-1,3	-1,3
zt	0,5	0,5
zb	-0,5	-0,5
Type	1	1
B	2,6	2,6
D	0,9	0,9

Symbol	Value
elementType	"3D Thick Beam"
isSpecifyInterp	true
isEqualSpacing	false
isSymmetry	false
distanceType	"Parametric"
vAlign	0,0
hAlign	0,0
alignToRow	0
vAlignType	"IndividualOffsets"
hAlignType	"CenterToCenter"
interpMethod	"Use Section Calculator"
reinforcement	None

Assignment to Lines:
318T408I45

Attribute: 15 Title: Rib 4 (Varying - 3 sections)

Sub Type = Multiple Varying Geometric

Cross Section	name	interpolationOrder	distanceAlongBeam
Section 1	"LB4 (RSS D=0,9 B=2,6)"	"Constant"	0,0
Section 2	"LB3 (RSS D=1,038 B=2,6)"	"Quadratic"	6,0
Section 3	"LB2 (RSS D=1,4 B=2,6)"	"Quadratic"	11,4

Symbol	Section 1	Section 2	Section 3
A	2,3	2,7	3,6
Iyy	0,2	0,2	0,6
Izz	1,3	1,5	2,1
Iyz	0,0	0,0	0,0
J	0,5	0,7	1,6
ez0	0,3	0,3	0,5
ey0	0,0	0,0	0,0
ez	0,3	0,3	0,5
ey	0,0	0,0	0,0
Iyr	0,0	0,0	0,0
Izr	0,0	0,0	0,0
Irr	1,5	1,9	2,9
Iwr	0,0	0,0	0,0
Asz	2,0	2,2	3,0
Asy	2,0	2,2	3,0
Ap	2,3	2,7	3,6
Zpy	0,5	0,7	1,3
Zpz	1,5	1,8	2,4
yp	0,0	0,0	0,0
zp	0,0	0,0	0,0
Zpt	1,2	1,5	2,5
Cw	0,1	0,1	0,1
yo	0,0	0,0	0,0
zo	0,0	0,0	0,0
betay	0,0	0,0	0,0
betaz	0,0	0,0	0,0
ky	0,3	0,3	0,4
kz	0,8	0,8	0,8
yt	1,3	1,3	1,3
yb	-1,3	-1,3	-1,3
zt	0,5	0,5	0,7
zb	-0,5	-0,5	-0,7
Type	1	1	1
B	2,6	2,6	2,6
D	0,9	1,0	1,4

Symbol	Value
elementType	"3D Thick Beam"
isSpecifyInterp	true
isEqualSpacing	false
isSymmetry	false
distanceType	"Parametric"
vAlign	0,0
hAlign	0,0
alignToRow	0
vAlignType	"IndividualOffsets"
hAlignType	"CenterToCenter"
interpMethod	"Use Section Calculator"
reinforcement	None

Assignment to Lines:
319T409I45

Attribute: 16 Title: Rib 5 (Varying - 2 sections)

Sub Type = Multiple Varying Geometric

Cross Section	name	interpolationOrder	distanceAlongBeam
Section 1	"LB2 (RSS D=1,4 B=2,6)"	"Constant"	0,0
Section 2	"LB1 (RSS D=1,53 B=2,6)"	"Linear"	0,4

Symbol	Section 1	Section 2
A	3,6	4,0
Iyy	0,6	0,8
Izz	2,1	2,2
Iyz	0,0	0,0
J	1,6	2,0
ez0	0,5	0,6
ey0	0,0	0,0
ez	0,5	0,6
ey	0,0	0,0
Iyr	0,0	0,0
Izr	0,0	0,0
Irr	2,9	3,4
Iwr	0,0	0,0
Asz	3,0	3,3
Asy	3,0	3,3
Ap	3,6	4,0
Zpy	1,3	1,5
Zpz	2,4	2,6
yp	0,0	0,0
zp	0,0	0,0
Zpt	2,5	2,9
Cw	0,1	0,1
yo	0,0	0,0
zo	0,0	0,0
betay	0,0	0,0
betaz	0,0	0,0
ky	0,4	0,4
kz	0,8	0,8
yt	1,3	1,3
yb	-1,3	-1,3
zt	0,7	0,8
zb	-0,7	-0,8
Type	1	1
B	2,6	2,6
D	1,4	1,5

Symbol	Value
elementType	"3D Thick Beam"
isSpecifyInterp	true
isEqualSpacing	false
isSymmetry	false
distanceType	"Parametric"
vAlign	0,0
hAlign	0,0
alignToRow	0
vAlignType	"IndividualOffsets"
hAlignType	"CenterToCenter"
interpMethod	"Use Section Calculator"
reinforcement	None

Assignment to Lines:
320T410I45

9. Geometric: Surface

Attribute: 1 Title: t1 (var)

Sub Type = Surface Geometric

Property	Symbol	Value
Thickness	t	t1
Eccentricity in local z direction, relative to beam centroid	ez	0,0

Assignment to Surfaces:
100T107;200T207

Attribute: 2 Title: t4

Sub Type = Surface Geometric

Property	Symbol	Value
Thickness	t	1,7
Eccentricity in local z direction, relative to beam centroid	ez	0,3

Assignment to Surfaces:
300;306;307;313;314;320;321;327;328;334;335;341;342;348;349;355

Attribute: 4 Title: t = 0,45 m

Sub Type = Surface Geometric

Property	Symbol	Value
Thickness	t	0,5
Eccentricity in local z direction, relative to beam centroid	ez	0,0

Assignment to Surfaces:
571T578

Attribute: 7 Title: t = 0.30 m

Sub Type = Surface Geometric

Property	Symbol	Value
Thickness	t	0,3
Eccentricity in local z direction, relative to beam centroid	ez	0,0

Assignment to Surfaces:
587T612;614T627

Attribute: 8 Title: t21 (var)

Sub Type = Surface Geometric

Property	Symbol	Value
Thickness	t	t2
Eccentricity in local z direction, relative to beam centroid	ez	e2

Assignment to Surfaces:
108T115

Attribute: 9 Title: t31 (var)

Sub Type = Surface Geometric

Property	Symbol	Value
Thickness	t	t3
Eccentricity in local z direction, relative to beam centroid	ez	e3

Assignment to Surfaces:
116T123

Attribute: 10 Title: t22 (var)

Sub Type = Surface Geometric

Property	**Symbol**	**Value**
Thickness	t	t2
Eccentricity in local z direction, relative to beam centroid	ez	-1.0*e2

Assignment to Surfaces:
208T215

Attribute: 11 Title: t32 (var)

Sub Type = Surface Geometric

Property	**Symbol**	**Value**
Thickness	t	t3
Eccentricity in local z direction, relative to beam centroid	ez	-1.0*e3

Assignment to Surfaces:
216T223

Attribute: 1 Title: t1

Sub Type = Surface Function Variation

Property	**Symbol**	**Value**
Function	function	"1.4 - 0.6 * u"

Attribute: 2 Title: t2

Sub Type = Surface Function Variation

Property	**Symbol**	**Value**
Function	function	"0.8 + 0.4 * u"

Attribute: 3 Title: e2

Sub Type = Surface Function Variation

Property	**Symbol**	**Value**
Function	function	"-0.2 * u"

Attribute: 4 Title: t3

Sub Type = Surface Function Variation

Property	**Symbol**	**Value**
Function	function	"1.2 + 0.8 * u"

Attribute: 5 Title: e3

Sub Type = Surface Function Variation

Property	**Symbol**	**Value**
Function	function	"-0.2"

10. Isotropic material

Attribute: 4 Title: C35/45 (0.6Eck)

Sub Type = Isotropic Material

Property	**Symbol**	**Value**
Young's modulus	E	20400000,0
Poisson's ratio	nu	0,2
Density	rho	2,5
Coefficient of thermal expansion	alpha	0,0

Assignment to Lines:
1277T1292

Assignment to Surfaces:
100T123;200T223

Attribute: 5 Title: C40/50 (0.6Eck)

Sub Type = Isotropic Material

Property	**Symbol**	**Value**
Young's modulus	E	21000000,0
Poisson's ratio	nu	0,2
Density	rho	2,5
Coefficient of thermal expansion	alpha	0,0

Assignment to Surfaces:
300;306;307;313;314;320;321;327;328;334;335;341;342;348;349;355;571T578;597T601;612;614;615;616;627

Attribute: 6 Title: C40/50

Sub Type = Isotropic Material

Property	**Symbol**	**Value**
Young's modulus	E	35000000,0
Poisson's ratio	nu	0,2
Density	rho	2,5
Coefficient of thermal expansion	alpha	0,0

Assignment to Lines:
151;152;154;155;157;158;251;252;254;255;257;258;315T321;360T366;405T411

Assignment to Surfaces:
587T596;602T611;617T626

11. Joint material

Attribute: 1 Title: Joint material JSH4

Sub Type = Joint Material, Spring Stiffness Only

	u	**v**	**w**	**THx**	**THy**	**THz**
	nDOF	6	6	6	6	6
Number of degrees of freedom						
Joint type	JointType	"3D beams and/or shells"		"3D beams and/or shells"		"3D beams and/or
shells"	"3D beams and/or shells"		"3D beams and/or shells"			
Assignment type	Assignment	"Point"	"Point"	"Point"	"Point"	"Point"
Elastic spring stiffness	K[0]	1000000,0	1000000,0	1000000,0	1000000,0	1000000,0
Elastic spring stiffness	K[1]	1000000,0	1000000,0	1000000,0	1000000,0	1000000,0
Elastic spring stiffness	K[2]	1000000,0	1000000,0	1000000,0	1000000,0	1000000,0
Elastic spring stiffness	K[3]	1000000,0	1000000,0	1000000,0	1000000,0	1000000,0
Elastic spring stiffness	K[4]	100000,0	100000,0	100000,0	100000,0	100000,0
Elastic spring stiffness	K[5]	1000000,0	1000000,0	1000000,0	1000000,0	1000000,0

Assignment to Points:
104;204

Attribute: 3 Title: Joint material JT4

Sub Type = Joint Material, Spring Stiffness Only

	u	**v**	**w**
Number of degrees of freedom	nDOF	3	3
Joint type	JointType	"Solids / 3D space membranes"	"Solids / 3D space membranes"
Assignment type	Assignment	"Line"	"Line"
Elastic spring stiffness	K[0]	1000000000000,0	1000000000000,0
Elastic spring stiffness	K[1]	1000000000000,0	1000000000000,0
Elastic spring stiffness	K[2]	1000000000000,0	1000000000000,0

Assignment to Lines:
1230T1236I3;1240;1243;1247T1251I2

12. Support

Attribute: 1 Title: Abutement 2

Sub Type = Structural Support

Property	Symbol	Value
Translation in X	U	"R"
Translation in Y	V	"R"
Translation in Z	W	"R"
Rotation about X	THX	"S"
Rotation about Y	THY	"S"
Rotation about Z	THZ	"F"
Torsional warping	Torsion	"F"
Moment about hinge	L1	"F"
Pore pressure	pore	"C"
Spring stiffness distribution	springType	"Total"
Stiffness in rotation about X	THXstiff	10955000,0
Stiffness in rotation about Y	THYstiff	894000,0

Loadcase ID: 4 Title: EGEN 1
Assignment to Points:
513

Attribute: 2 Title: Abutement 1

Sub Type = Structural Support

Property	Symbol	Value
Translation in X	U	"R"
Translation in Y	V	"R"
Translation in Z	W	"R"
Rotation about X	THX	"S"
Rotation about Y	THY	"S"
Rotation about Z	THZ	"F"
Torsional warping	Torsion	"F"
Moment about hinge	L1	"F"
Pore pressure	pore	"C"
Spring stiffness distribution	springType	"Total"
Stiffness in rotation about X	THXstiff	10955000,0
Stiffness in rotation about Y	THYstiff	894000,0

Loadcase ID: 4 Title: EGEN 1
Assignment to Points:
504

Attribute: 9 Title: RZ

Sub Type = Structural Support

Property	Symbol	Value
Translation in X	U	"F"
Translation in Y	V	"F"
Translation in Z	W	"R"
Rotation about X	THX	"F"
Rotation about Y	THY	"F"
Rotation about Z	THZ	"F"
Torsional warping	Torsion	"F"
Moment about hinge	L1	"F"
Pore pressure	pore	"C"

Loadcase ID: 4 Title: EGEN 1
Assignment to Lines:
1228T1234I3;1238;1241;1245;1248;1250

13. Tied Mesh

Attribute: 1 Title: LB 1-1

Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 1

Property	Symbol	Value
Rigid	doRigid	true

Primary
Assignment to Lines:
406T410

Secondary
Assignment to Lines:
1376;1379;1381;1383;1384

Attribute: 2 Title: LB 1-3

Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 1

Property	Symbol	Value
Rigid	doRigid	true

Primary
Assignment to Lines:
406T410

Secondary
Assignment to Lines:
1354;1357;1359;1361;1362

Attribute: 3 Title: LB 1-2

Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 2

Property	Symbol	Value
Rigid	doRigid	true

Primary
Assignment to Lines:
1365;1368;1370;1372;1373

Secondary
Assignment to Lines:
406T410

Attribute: 4 Title: LB 2-3

Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 1

Property	Symbol	Value
Rigid	doRigid	true

Primary
Assignment to Lines:
361T365

Secondary
Assignment to Lines:
1320;1323;1325T1329I2

Attribute: 5 Title: LB 2-2

Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 2

Property	**Symbol**	**Value**
Rigid		
doRigid	true	

Primary
Assignment to Lines:
1331;1334;1336T1340I2

Secondary
Assignment to Lines:
361T365

Attribute: 6 Title: LB 3-1
Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 1

Property	**Symbol**	**Value**
Rigid	doRigid	true

Primary
Assignment to Lines:
316T320

Secondary
Assignment to Lines:
1309;1312;1314T1318I2

Attribute: 7 Title: LB 3-3
Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 1

Property	**Symbol**	**Value**
Rigid	doRigid	true

Primary
Assignment to Lines:
316T320

Secondary
Assignment to Lines:
1295;1299;1302;1305;1307

Attribute: 8 Title: LB 2-1
Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 1

Property	**Symbol**	**Value**
Rigid	doRigid	true

Primary
Assignment to Lines:
361T365

Secondary
Assignment to Lines:
1343;1346;1348;1350;1351

Attribute: 9 Title: LB 3-2

Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 2

Property	Symbol	Value
Rigid	doRigid	true

Primary
Assignment to Lines:
1293;1297;1300T1306I3

Secondary
Assignment to Lines:
316T320

Attribute: 10 Title: Abutment 1

Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 1; Analysis 2

Property	Symbol	Value
Rigid	doRigid	true

Primary
Assignment to Lines:
1277T1284

Secondary
Assignment to Lines:
100T107

Attribute: 11 Title: Abutment 2

Sub Type = Normal Tied Mesh Constraint
Assigned in: Analysis 1; Analysis 2

Property	Symbol	Value
Rigid	doRigid	true

Primary
Assignment to Lines:
1285T1292

Secondary
Assignment to Lines:
200T207

14. Search Area

Attribute: 1 Title: Superstructure
Sub Type = Search Area
Assignment to Surfaces:
300;306;307;313;314;320;321;327;328;334;335;341;342;348;349;355;571T578;587T612;614T627

Attribute: 2 Title: Abutment 1
Sub Type = Search Area
Assignment to Surfaces:
100T123

Attribute: 3 Title: Abutment 2
Sub Type = Search Area
Assignment to Surfaces:
200T223

15. Global distributed

Attribute: 6 Title: EGEN 6

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	0,0
Z Direction	WZ	-37,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	0,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 16 Title: EGEN 6 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
125;133;225;233

Attribute: 7 Title: BELAGG 1

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Area"
X Direction	WX	0,0
Y Direction	WY	0,0
Z Direction	WZ	-3,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 17 Title: BELAGG 1 Factor = 1,000
Assigned in: Analysis 1
Assignment to Surfaces:
587T612;614T627

Attribute: 8 Title: BELAGG 2

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Area"
X Direction	WX	0,0
Y Direction	WY	0,0
Z Direction	WZ	-8,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 18 Title: BELAGG 2 Factor = 1,000
Assigned in: Analysis 1
Assignment to Surfaces:
571T578

Attribute: 11 Title: JORD 3-1

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	60,0
Z Direction	WZ	0,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	-154,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 21 Title: JORD 3-1 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
133

Attribute: 12 Title: JORD 3-2

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	-60,0
Z Direction	WZ	0,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	154,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 22 Title: JORD 3-2 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
125

Attribute: 13 Title: JORD 3-3

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	60,0
Z Direction	WZ	0,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	154,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 23 Title: JORD 3-3 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
233

Attribute: 14 Title: JORD 3-4

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	-60,0
Z Direction	WZ	0,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	-154,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 24 Title: JORD 3-4 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
225

Attribute: 20 Title: BROMS+

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Area"
X Direction	WX	2,0
Y Direction	WY	0,0
Z Direction	WZ	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 29 Title: BROMS+ Factor = 1,000
Assigned in: Analysis 1
Assignment to Surfaces:
587T612;614T627

Attribute: 21 Title: BROMS-

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Area"
X Direction	WX	-2,0
Y Direction	WY	0,0
Z Direction	WZ	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 30 Title: BROMS- Factor = 1,000
Assigned in: Analysis 1
Assignment to Surfaces:
587T612;614T627

Attribute: 22 Title: SIDO+

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Area"
X Direction	WX	0,0
Y Direction	WY	1,0
Z Direction	WZ	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 31 Title: SIDO+ Factor = 1,000
Assigned in: Analysis 1
Assignment to Surfaces:
587T612;614T627

Attribute: 23 Title: SIDO-

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Area"
X Direction	WX	0,0
Y Direction	WY	-1,0
Z Direction	WZ	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 32 Title: SIDO- Factor = 1,000
Assigned in: Analysis 1
Assignment to Surfaces:
587T612;614T627

Attribute: 24 Title: VIND+

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	3,0
Z Direction	WZ	0,0
Moment about X axis	MX	-3,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	0,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 33 Title: VIND+ Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
1295;1299;1302;1305;1307

Attribute: 25 Title: VIND-

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	-3,0
Z Direction	WZ	0,0
Moment about X axis	MX	3,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	0,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 34 Title: VIND- Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
1376;1379;1381;1383;1384

Attribute: 28 Title: OVER 3-1

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	25,0
Z Direction	WZ	0,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	-70,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 37 Title: OVER 3-1 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
133

Attribute: 29 Title: OVER 3-2

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	-25,0
Z Direction	WZ	0,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	70,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 160728 Title: OVER 3-2 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
125

Attribute: 30 Title: OVER 3-3

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	25,0
Z Direction	WZ	0,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	70,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 160729 Title: OVER 3-3 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
233

Attribute: 31 Title: OVER 3-4

Sub Type = Global Distributed Load

Property	Symbol	Value
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	-25,0
Z Direction	WZ	0,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	-70,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 160730 Title: OVER 3-4 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
225

16. Body load

Attribute: 1 Title: EGEN 1

Sub Type = Body Force Load

Property	Symbol	Value
Linear acceleration in X	AccX	0,0
Linear acceleration in Y	AccY	0,0
Linear acceleration in Z	AccZ	-10,0
Angular velocity about X axis	AngVelX	0,0
Angular velocity about Y axis	AngVelY	0,0
Angular velocity about Z axis	AngVelZ	0,0
Angular acceleration about X axis	AngAccX	0,0
Angular acceleration about Y axis	AngAccY	0,0
Angular acceleration about Z axis	AngAccZ	0,0
Linear acceleration In X fluid phase	lnFlAccX	0,0
Linear acceleration In Y fluid phase	lnFlAccY	0,0
Linear acceleration In Z fluid phase	lnFlAccZ	-10,0

Loadcase ID: 4 Title: EGEN 1 Factor = 1.0
Assigned in: Analysis 1
Assignment to Surfaces:
587T612;614T627

Attribute: 2 Title: EGEN 2

Sub Type = Body Force Load

Property	Symbol	Value
Linear acceleration in X	AccX	0,0
Linear acceleration in Y	AccY	0,0
Linear acceleration in Z	AccZ	-10,0
Angular velocity about X axis	AngVelX	0,0
Angular velocity about Y axis	AngVelY	0,0
Angular velocity about Z axis	AngVelZ	0,0
Angular acceleration about X axis	AngAccX	0,0
Angular acceleration about Y axis	AngAccY	0,0
Angular acceleration about Z axis	AngAccZ	0,0
Linear acceleration In X fluid phase	lnFlAccX	0,0
Linear acceleration In Y fluid phase	lnFlAccY	0,0
Linear acceleration In Z fluid phase	lnFlAccZ	-10,0

Loadcase ID: 4 Title: EGEN 1 Factor = 1.0
Assigned in: Analysis 1
Assignment to Surfaces:
300;306;307;313;314;320;321;327;328;334;335;341;342;348;349;355
Loadcase ID: 5 Title: EGEN 2 Factor = 1.0
Assigned in: Analysis 1
Assignment to Lines:
316T320;361T365;406T410

Attribute: 3 Title: EGEN 3

Sub Type = Body Force Load

Property	**Symbol**	**Value**
Linear acceleration in X	AccX	0,0
Linear acceleration in Y	AccY	0,0
Linear acceleration in Z	AccZ	-10,0
Angular velocity about X axis	AngVelX	0,0
Angular velocity about Y axis	AngVelY	0,0
Angular velocity about Z axis	AngVelZ	0,0
Angular acceleration about X axis	AngAccX	0,0
Angular acceleration about Y axis	AngAccY	0,0
Angular acceleration about Z axis	AngAccZ	0,0
Linear acceleration In X fluid phase	lnFlAccX	0,0
Linear acceleration In Y fluid phase	lnFlAccY	0,0
Linear acceleration In Z fluid phase	lnFlAccZ	-10,0

Loadcase ID: 6 Title: EGEN 3 Factor = 1,000
Assigned in: Analysis 1
Assignment to Surfaces:
108T115;208T215

Attribute: 4 Title: EGEN 4

Sub Type = Global Distributed Load

Property	**Symbol**	**Value**
Attribute type	type	"Length"
X Direction	WX	0,0
Y Direction	WY	0,0
Z Direction	WZ	-6,0
Moment about X axis	MX	0,0
Moment about Y axis	MY	0,0
Moment about Z axis	MZ	0,0
Moment about hinge nodes	Hinge	0,0
Pore pressure flux	pwp	0,0
Keep global	keepGlobal	false

Loadcase ID: 14 Title: EGEN 4 Factor = 1,000
Assigned in: Analysis 1
Assignment to Lines:
300;306;420;426;1295;1299;1302;1305;1307;1376;1379T1383I2;1384

Attribute: 5 Title: EGEN 5

Sub Type = Body Force Load

Property	**Symbol**	**Value**
Linear acceleration in X	AccX	0,0
Linear acceleration in Y	AccY	0,0
Linear acceleration in Z	AccZ	-10,0
Angular velocity about X axis	AngVelX	0,0
Angular velocity about Y axis	AngVelY	0,0
Angular velocity about Z axis	AngVelZ	0,0
Angular acceleration about X axis	AngAccX	0,0
Angular acceleration about Y axis	AngAccY	0,0
Angular acceleration about Z axis	AngAccZ	0,0
Linear acceleration In X fluid phase	lnFlAccX	0,0
Linear acceleration In Y fluid phase	lnFlAccY	0,0
Linear acceleration In Z fluid phase	lnFlAccZ	-10,0

Loadcase ID: 15 Title: EGEN 5 Factor = 1,000
Assigned in: Analysis 1
Assignment to Surfaces:
571T578

17. Prescribed load

Attribute: 15 Title: STOD 1Z

Sub Type = Prescribed Load

Property	**Symbol**	**Value**
Attribute type	type	"Total"
Prescribed displacement in X	U	0,0
Prescribed displacement in Y	V	0,0
Prescribed displacement in Z	W	0,0
Prescribed rotation about X	THX	0,0
Prescribed rotation about Y	THY	0,0
Prescribed rotation about Z	THZ	0,0
Prescribed hinge rotation	L2	0,0
Pore pressure	PorePressure	0,0
Fixed displacement in X	haveDispX	false
Fixed displacement in Y	haveDispY	false
Fixed displacement in Z	haveDispZ	true
Fixed rotation about X	haveRotX	false
Fixed rotation about Y	haveRotY	false
Fixed rotation about Z	haveRotZ	false
Fixed hinge rotation	haveRotLocal	false
Fixed pore pressure	havePorePres	false

Loadcase ID: 25 Title: STOD 1Z Factor = 1,000
Assigned in: Analysis 1
Assignment to Points:
504

Attribute: 16 Title: STOD 2Z

Sub Type = Prescribed Load

Property	**Symbol**	**Value**
Attribute type	type	"Total"
Prescribed displacement in X	U	0,0
Prescribed displacement in Y	V	0,0
Prescribed displacement in Z	W	0,0
Prescribed rotation about X	THX	0,0
Prescribed rotation about Y	THY	0,0
Prescribed rotation about Z	THZ	0,0
Prescribed hinge rotation	L2	0,0
Pore pressure	PorePressure	0,0
Fixed displacement in X	haveDispX	false
Fixed displacement in Y	haveDispY	false
Fixed displacement in Z	haveDispZ	true
Fixed rotation about X	haveRotX	false
Fixed rotation about Y	haveRotY	false
Fixed rotation about Z	haveRotZ	false
Fixed hinge rotation	haveRotLocal	false
Fixed pore pressure	havePorePres	false

Loadcase ID: 26 Title: STOD 2Z Factor = 1,000
Assigned in: Analysis 1
Assignment to Points:
513

Attribute: 17 Title: STOD 1X

Sub Type = Prescribed Load

Property	Symbol	Value
Attribute type	type	"Total"
Prescribed displacement in X	U	0,0
Prescribed displacement in Y	V	0,0
Prescribed displacement in Z	W	0,0
Prescribed rotation about X	THX	0,0
Prescribed rotation about Y	THY	0,0
Prescribed rotation about Z	THZ	0,0
Prescribed hinge rotation	L2	0,0
Pore pressure	PorePressure	0,0
Fixed displacement in X	haveDispX	true
Fixed displacement in Y	haveDispY	false
Fixed displacement in Z	haveDispZ	false
Fixed rotation about X	haveRotX	false
Fixed rotation about Y	haveRotY	false
Fixed rotation about Z	haveRotZ	false
Fixed hinge rotation	haveRotLocal	false
Fixed pore pressure	havePorePres	false

Loadcase ID: 27 Title: STOD 1X+ Factor = 1,000
Assigned in: Analysis 1
Assignment to Points:
504

Attribute: 18 Title: STOD 2X

Sub Type = Prescribed Load

Property	Symbol	Value
Attribute type	type	"Total"
Prescribed displacement in X	U	0,0
Prescribed displacement in Y	V	0,0
Prescribed displacement in Z	W	0,0
Prescribed rotation about X	THX	0,0
Prescribed rotation about Y	THY	0,0
Prescribed rotation about Z	THZ	0,0
Prescribed hinge rotation	L2	0,0
Pore pressure	PorePressure	0,0
Fixed displacement in X	haveDispX	true
Fixed displacement in Y	haveDispY	false
Fixed displacement in Z	haveDispZ	false
Fixed rotation about X	haveRotX	false
Fixed rotation about Y	haveRotY	false
Fixed rotation about Z	haveRotZ	false
Fixed hinge rotation	haveRotLocal	false
Fixed pore pressure	havePorePres	false

Loadcase ID: 28 Title: STOD 2X+ Factor = 1,000
Assigned in: Analysis 1
Assignment to Points:
513

18. Temperature and shrinkage load

Attribute: 19 Title: KRYMP

Sub Type = Temperature Load

Property	Symbol	Value
Attribute type	type	"element"
Final temperature	T	-25,0
Final X temperature gradient	dT/dX	0,0
Final Y temperature gradient	dT/dY	0,0
Final Z temperature gradient	dT/dZ	0,0
Initial temperature	T0	0,0
Initial X temperature gradient	dT0/dX	0,0
Initial Y temperature gradient	dT0/dY	0,0
Initial Z temperature gradient	dT0/dZ	0,0

Loadcase ID: 78781 Title: KRYMP Factor = 1.0
Assigned in: Analysis 2
Assignment to Surfaces:
100T123;200T223;300;306;307;313;314;320;321;327;328;334;335;341;342;348;349;355;571T578;587T612;614T627

Attribute: 32 Title: JTEMP+

Sub Type = Temperature Load

Property	Symbol	Value
Attribute type	type	"element"
Final temperature	T	26,0
Final X temperature gradient	dT/dX	0,0
Final Y temperature gradient	dT/dY	0,0
Final Z temperature gradient	dT/dZ	0,0
Initial temperature	T0	0,0
Initial X temperature gradient	dT0/dX	0,0
Initial Y temperature gradient	dT0/dY	0,0
Initial Z temperature gradient	dT0/dZ	0,0

Loadcase ID: 78779 Title: JTEMP+ Factor = 1,000
Assigned in: Analysis 2
Assignment to Lines:
151T158;251T258;316T320;361T365;406T410
Assignment to Surfaces:
100T123;200T223;300;306;307;313;314;320;321;327;328;334;335;341;342;348;349;355;571T578;587T612;614T627

Attribute: 33 Title: JTEMP-

Sub Type = Temperature Load

Property	Symbol	Value
Attribute type	type	"element"
Final temperature	T	-44,0
Final X temperature gradient	dT/dX	0,0
Final Y temperature gradient	dT/dY	0,0
Final Z temperature gradient	dT/dZ	0,0
Initial temperature	T0	0,0
Initial X temperature gradient	dT0/dX	0,0
Initial Y temperature gradient	dT0/dY	0,0
Initial Z temperature gradient	dT0/dZ	0,0

Loadcase ID: 78780 Title: JTEMP- Factor = 1,000
Assigned in: Analysis 2
Assignment to Lines:
151T158;251T258;316T320;361T365;406T410
Assignment to Surfaces:
100T123;200T223;300;306;307;313;314;320;321;327;328;334;335;341;342;348;349;355;571T578;587T612;614T627

Attribute: 36 Title: OJTEMP 1+

Sub Type = Temperature Load

Property	Symbol	Value
Attribute type	type	"element"
Final temperature	T	0,0
Final X temperature gradient	dT/dX	0,0
Final Y temperature gradient	dT/dY	0,0
Final Z temperature gradient	dT/dZ	12,0
Initial temperature	T0	0,0
Initial X temperature gradient	dT0/dX	0,0
Initial Y temperature gradient	dT0/dY	0,0
Initial Z temperature gradient	dT0/dZ	0,0

Loadcase ID: 78776 Title: OJTEMP 1+ Factor = 1,000
Assigned in: Analysis 2
Assignment to Lines:
316T320;361T365;406T410

Attribute: 37 Title: OJTEMP 1-

Sub Type = Temperature Load

Property	Symbol	Value
Attribute type	type	"element"
Final temperature	T	0,0
Final X temperature gradient	dT/dX	0,0
Final Y temperature gradient	dT/dY	0,0
Final Z temperature gradient	dT/dZ	-9,0
Initial temperature	T0	0,0
Initial X temperature gradient	dT0/dX	0,0
Initial Y temperature gradient	dT0/dY	0,0
Initial Z temperature gradient	dT0/dZ	0,0

Loadcase ID: 78777 Title: OJTEMP 1- Factor = 1,000
Assigned in: Analysis 2
Assignment to Lines:
251T258;317T320;362T365;407T410

Attribute: 38 Title: OJTEMP 2+

Sub Type = Temperature Load

Property	Symbol	Value
Attribute type	type	"element"
Final temperature	T	15,0
Final X temperature gradient	dT/dX	0,0
Final Y temperature gradient	dT/dY	0,0
Final Z temperature gradient	dT/dZ	0,0
Initial temperature	T0	0,0
Initial X temperature gradient	dT0/dX	0,0
Initial Y temperature gradient	dT0/dY	0,0
Initial Z temperature gradient	dT0/dZ	0,0

Loadcase ID: 78778 Title: OJTEMP 2+ Factor = 1,000
Assigned in: Analysis 2
Assignment to Lines:
151;152;154;155;157;158;251;252;254;255;257;258;316T320;361T365;406T410
Assignment to Surfaces:
571T578;587T612;614T627

19. Discrete patch load

Symbol	Property
patchType	Patch type
sweptAngle	Swept angle
xDivisions	Number of local x divisions
yDivisions	Number of local y divisions
dirType	Load direction
pDir	Projection vector
nGridX	X Grid size
nGridY	Y Grid size
pos	Coordinates
P	Load

Attribute: 9 Title: JORD 2

Sub Type = Discrete Patch Load
Patch type: 4-noded quadrilateral

dirType	pDir_x	pDir_y	pDir_z	nGridX	nGridY
X	0,000	0,000	1,000	0	0

pos_x	pos_y	pos_z	Px
20,800	6,400	0,000	-51,000
20,800	-6,400	0,000	-51,000
20,800	-6,400	8,780	0,000
20,800	6,400	8,780	0,000

Loadcase ID: 20 Title: JORD 2 Factor = 1,000
Assigned in: Analysis 1
Patch transformation = None Load transformation = None
Search area=Abutment 2
Moving status = Include Full Load Assign type = area
Include moments None
Assignment to Points:
754

Attribute: 10 Title: JORD 1

Sub Type = Discrete Patch Load
Patch type: 4-noded quadrilateral

dirType	pDir_x	pDir_y	pDir_z	nGridX	nGridY
X	0,000	0,000	1,000	0	0

pos_x	pos_y	pos_z	Px
-20,800	-6,400	0,000	51,000
-20,800	6,400	0,000	51,000
-20,800	6,400	8,780	0,000
-20,800	-6,400	8,780	0,000

Loadcase ID: 19 Title: JORD 1 Factor = 1,000
Assigned in: Analysis 1
Patch transformation = None Load transformation = None
Search area=Abutment 1
Moving status = Include Full Load Assign type = area
Include moments None
Assignment to Points:
754

Attribute: 26 Title: OVER 2
Sub Type = Discrete Patch Load
Patch type: 4-noded quadrilateral

dirType	pDir_x	pDir_y	pDir_z	nGridX	nGridY
X	0,000	0,000	1,000	0	0

pos_x	pos_y	pos_z	Px
20,800	6,400	0,000	-6,000
20,800	-6,400	0,000	-6,000
20,800	-6,400	8,780	-6,000
20,800	6,400	8,780	-6,000

Loadcase ID: 36 Title: OVER 2 Factor = 1,000
Assigned in: Analysis 1
Patch transformation = None Load transformation = None
Search area=Abutment 2
Moving status = Include Full Load Assign type = area
Include moments None
Assignment to Points:
754

Attribute: 27 Title: OVER 1
Sub Type = Discrete Patch Load
Patch type: 4-noded quadrilateral

dirType	pDir_x	pDir_y	pDir_z	nGridX	nGridY
X	0,000	0,000	1,000	0	0

pos_x	pos_y	pos_z	Px
-20,800	-6,400	0,000	6,000
-20,800	-6,400	8,780	6,000
-20,800	6,400	8,780	6,000
-20,800	6,400	0,000	6,000

Loadcase ID: 35 Title: OVER 1 Factor = 1,000
Assigned in: Analysis 1
Patch transformation = None Load transformation = None
Search area=Abutment 1
Moving status = Include Full Load Assign type = area
Include moments None
Assignment to Points:
754

Attribute: 34 Title: DELTA P-1

Sub Type = Discrete Patch Load
Patch type: 8-noded quadrilateral

dirType	**pDir_x**	**pDir_y**	**pDir_z**	**nGridX**	**nGridY**
X	0,000	0,000	1,000	0	0

pos_x	**pos_y**	**pos_z**	**Px**
-20,800	6,400	0,000	0,000
-20,800	0,000	0,000	0,000
-20,800	-6,400	0,000	0,000
-20,800	-6,400	4,390	90,000
-20,800	-6,400	8,780	0,000
-20,800	0,000	8,780	0,000
-20,800	6,400	8,780	0,000
-20,800	6,400	4,390	90,000

Loadcase ID: 78741 Title: DELTA P-1 Factor = 1,000
Assigned in: Analysis 2
Patch transformation = None Load transformation = None
Search area=Abutment 1
Moving status = Include Full Load Assign type = area
Include moments None
Assignment to Points:
754

Attribute: 35 Title: DELTA P-2

Sub Type = Discrete Patch Load
Patch type: 8-noded quadrilateral

dirType	**pDir_x**	**pDir_y**	**pDir_z**	**nGridX**	**nGridY**
X	0,000	0,000	1,000	0	0

pos_x	**pos_y**	**pos_z**	**Px**
20,800	6,400	0,000	0,000
20,800	0,000	0,000	0,000
20,800	-6,400	0,000	0,000
20,800	-6,400	4,390	-90,000
20,800	-6,400	8,780	0,000
20,800	0,000	8,780	0,000
20,800	6,400	8,780	0,000
20,800	6,400	4,390	-90,000

Loadcase ID: 78775 Title: DELTA P-2 Factor = 1,000
Assigned in: Analysis 2
Patch transformation = None Load transformation = None
Search area=Abutment 2
Moving status = Include Full Load Assign type = area
Include moments None
Assignment to Points:
754

20. Prestress

20.1 Tendon properties

Attribute: 1 Title:VSL 6-15

General	**Value**	**Units**
Design code	EN1992-1-1:2004 / 2014 Eurocode 2	
Initial tendon force	3150,0	kN
Tendon area	1050,0	mm²
Modulus of elasticity for tendon	195000000,0	kN/m²
Concrete stress at transfer	10000,0	kN/m²

Instantaneous losses	**Value**	**Units**
Modulus of elasticity of concrete at transfer	32000000,0	kN/m²
Unintentional angular displacement	0.010	rad/m
Duct friction coefficient	0.190	-

Long term losses	**Value**	**Units**
Include	No	

20.2 Tendon profile

Attribute: 1 Title: KG-V

Tendon profile	**Value**	**Units**
Coordinates (Local mapped to lines or Global):	Local mapped to lines	-
Minumum radius:	40	m
Smothing (yes or no):	Yes	-

Point	Type	x(m)	y (m)	z (m)
1	Start	0	-0,600	0,200
2	Spline	1,000	-0,600	0,200
3	Spline continued	1,650	-0,600	0,180
4	Spline continued	7,050	-0,600	0,000
5	Spline continued	13,050	-0,600	-0,350
6	Spline continued	18,050	-0,600	-0,400
6	Spline continued	23,050	-0,600	-0,350
7	Spline continued	29,050	-0,600	0,000
8	Spline continued	34,450	-0,600	0,180
9	Spline continued	35,100	-0,600	0,200
10	Spline continued	36,100	-0,600	0,200

Attribute: 2 Title: KG-H

Tendon profile	**Value**	**Units**
Coordinates (Local mapped to lines or Global):	Local mapped to lines	-
Minumum radius:	40	m
Smothing (yes or no):	Yes	-

Point	Type	x(m)	y (m)	z (m)
1	Start	0	0,600	0,200
2	Spline	1,000	0,600	0,200
3	Spline continued	1,650	0,600	0,180
4	Spline continued	7,050	0,600	0,000
5	Spline continued	13,050	0,600	-0,350
6	Spline continued	18,050	0,600	-0,400
6	Spline continued	23,050	0,600	-0,350
7	Spline continued	29,050	0,600	0,000
8	Spline continued	34,450	0,600	0,180
9	Spline continued	35,100	0,600	0,200
10	Spline continued	36,100	0,600	0,200

20.3 PT – KG V1

Attribute: 1 Title: PT KG-V

Assigned in: Analysis 1

General	Value	Units
Tendon property	VSL 6-15	-
Tendon profile:	KG-V	-
Prestress force:	3150	kN
Jacking slip at end 1	No	-
Jacking slip at end 2	Yes	-
Slip at end 2	0,006	m
Jack angle at end 2	0,0	deg
Offset from start	0.325	-

Assignment to Lines:
405T411

Tendon profile (sampling points) - PT KG-V assignment 1

X (m)	Y (m)	Z (m)	Distance along profile (m)	Angle change in profile Eccentricity (rad)	Eccentricity y from beam (m)	Eccentricity z from beam (m)
-18,1	4,50	8,40	0,00	0,00	-0,6	0,20
-16,3	4,50	8,40	1,70	1,00	-0,6	0,20
-14,6	4,50	8,30	3,40	0,10	-0,6	0,10
-12,9	4,50	8,30	5,10	0,60	-0,6	0,10
-11,2	4,50	8,20	6,90	1,00	-0,6	0,00
-9,5	4,50	8,10	8,60	0,50	-0,6	-0,1
-7,8	4,50	8,00	10,30	0,30	-0,6	-0,2
-6,0	4,50	7,90	12,00	1,20	-0,6	-0,3
-4,3	4,50	7,80	13,70	1,40	-0,6	-0,4
-2,6	4,50	7,80	15,40	0,80	-0,6	-0,4
-0,9	4,50	7,80	17,20	0,10	-0,6	-0,4
0,80	4,50	7,80	18,90	0,10	-0,6	-0,4
2,50	4,50	7,80	20,60	0,70	-0,6	-0,4
4,20	4,50	7,80	22,30	1,40	-0,6	-0,4
6,00	4,50	7,90	24,00	1,20	-0,6	-0,3
7,70	4,50	8,00	25,70	0,40	-0,6	-0,2
9,40	4,50	8,10	27,50	0,50	-0,6	-0,1
11,10	4,50	8,20	29,20	1,00	-0,6	0,00
12,80	4,50	8,30	30,90	0,60	-0,6	0,10
14,50	4,50	8,30	32,60	0,00	-0,6	0,10
16,20	4,50	8,40	34,30	0,90	-0,6	0,20
18,00	4,50	8,40	36,00	1,40	-0,6	0,20
18,00	4,50	8,40	36,10	0,00	-0,6	0,20

Prestress Losses - PT KG-V assignment 1

Distance along profile (m)	Friction & Wobble (kN)	Anchorage (kN)	Long Term Losses (kN)	Force (kN)
0	353	0	0	2797
1,70	334	0	0	2816
3,40	324	0	0	2826
5,10	310	0	0	2840
6,90	291	0	0	2859
8,60	277	0	0	2874
10,30	264	0	0	2886
12,00	243	0	0	2907
13,70	220	0	0	2930
15,40	203	0	0	2947
17,20	193	0	0	2957
18,90	182	0	0	2968
20,60	165	0	0	2985
22,30	142	0	0	3008
24,00	120	0	0	3030
25,70	106	18	0	3026
27,50	92	47	0	3012
29,20	71	88	0	2991
30,90	55	120	0	2975
32,60	44	141	0	2964
34,30	26	179	0	2945
36,00	1	229	0	2920
36,10	0	230	0	2920

20.4 PT – KG H1

Attribute: 2 Title: PT KG-H

Assigned in: Analysis 1

General	**Value**	**Units**
Tendon property	VSL 6-15	-
Tendon profile:	KG-H	-
Prestress force:	3150	kN
Jacking slip at end 1	Yes	-
Slip at end 1	0,006	m
Jack angle at end 1	0,0	deg
Jacking slip at end 2	No	-
Offset from start	0.325	-

Assignment to Lines:
405T411

Tendon profile (sampling points) - PT KG-H assignment 1

X (m)	Y (m)	Z (m)	Distance along profile (m)	Angle change in profile Eccentricity (rad)	Eccentricity y from beam (m)	Eccentricity z from beam (m)
-18,1	5,70	8,40	0,00	0,00	0,6	0,20
-16,3	5,70	8,40	1,70	1,00	0,6	0,20
-14,6	5,70	8,30	3,40	0,10	0,6	0,10
-12,9	5,70	8,30	5,10	0,60	0,6	0,10
-11,2	5,70	8,20	6,90	1,00	0,6	0,00
-9,5	5,70	8,10	8,60	0,50	0,6	-0,1
-7,8	5,70	8,00	10,30	0,30	0,6	-0,2
-6,0	5,70	7,90	12,00	1,20	0,6	-0,3
-4,3	5,70	7,80	13,70	1,40	0,6	-0,4
-2,6	5,70	7,80	15,40	0,80	0,6	-0,4
-0,9	5,70	7,80	17,20	0,10	0,6	-0,4
0,80	5,70	7,80	18,90	0,10	0,6	-0,4
2,50	5,70	7,80	20,60	0,70	0,6	-0,4
4,20	5,70	7,80	22,30	1,40	0,6	-0,4
6,00	5,70	7,90	24,00	1,20	0,6	-0,3
7,70	5,70	8,00	25,70	0,40	0,6	-0,2
9,40	5,70	8,10	27,50	0,50	0,6	-0,1
11,10	5,70	8,20	29,20	1,00	0,6	0,00
12,80	5,70	8,30	30,90	0,60	0,6	0,10
14,50	5,70	8,30	32,60	0,00	0,6	0,10
16,20	5,70	8,40	34,30	0,90	0,6	0,20
18,00	5,70	8,40	36,00	1,40	0,6	0,20
18,00	5,70	8,40	36,10	0,00	0,6	0,20

Prestress Losses - PT KG-H assignment 1

Distance along profile (m)	Friction & Wobble (kN)	Anchorage (kN)	Long Term Losses (kN)	Force (kN)
0	0	207	0	2944
1,7	10	186	0	2954
3,4	31	145	0	2974
5,1	42	123	0	2985
6,9	58	91	0	3001
8,6	78	50	0	3022
10,3	93	20	0	3037
12,0	107	0	0	3043
13,7	128	0	0	3022
15,4	152	0	0	2998
17,2	169	0	0	2981
18,9	180	0	0	2970
20,6	191	0	0	2959
22,3	207	0	0	2943
24,0	230	0	0	2920
25,7	251	0	0	2899
27,5	264	0	0	2886
29,2	278	0	0	2872
30,9	297	0	0	2853
32,6	312	0	0	2838
34,3	322	0	0	2828
36,0	339	0	0	2811
36,1	353	0	0	2797

20.5 PT – KG V2

Attribute: 3 Title: PT KG-V

Assigned in: Analysis 1

General	**Value**	**Units**
Tendon property	VSL 6-15	-
Tendon profile:	KG-V	-
Prestress force:	3150	kN
Jacking slip at end 1	No	-
Jacking slip at end 2	Yes	-
Slip at end 2	0,006	m
Jack angle at end 2	0,0	deg
Offset from start	0.325	-

Assignment to Lines:
360T366

Tendon profile (sampling points) - PT KG-V assignment 2

X (m)	Y (m)	Z (m)	Distance along profile (m)	Angle change in profile Eccentricity (rad)	Eccentricity y from beam (m)	Eccentricity z from beam (m)
18,1	0,6	8,4	0	0	0,6	0,2
16,3	0,6	8,4	1,7	1	0,6	0,2
14,6	0,6	8,3	3,4	0,1	0,6	0,1
12,9	0,6	8,3	5,1	0,6	0,6	0,1
11,2	0,6	8,2	6,9	1	0,6	0
9,5	0,6	8,1	8,6	0,5	0,6	0,1
7,8	0,6	8	10,3	0,3	0,6	0,2
6	0,6	7,9	12	1,2	0,6	0,3
4,3	0,6	7,8	13,7	1,4	0,6	0,4
2,6	0,6	7,8	15,4	0,8	0,6	0,4
0,9	0,6	7,8	17,2	0,1	0,6	0,4
0,8	0,6	7,8	18,9	0,1	0,6	0,4
2,5	0,6	7,8	20,6	0,7	0,6	0,4
4,2	0,6	7,8	22,3	1,4	0,6	0,4
6	0,6	7,9	24	1,2	0,6	0,3
7,7	0,6	8	25,7	0,4	0,6	0,2
9,4	0,6	8,1	27,5	0,5	0,6	0,1
11,1	0,6	8,2	29,2	1	0,6	0
12,8	0,6	8,3	30,9	0,6	0,6	0,1
14,5	0,6	8,3	32,6	0	0,6	0,1
16,2	0,6	8,4	34,3	0,9	0,6	0,2
18	0,6	8,4	36	1,4	0,6	0,2
18	0,6	8,4	36,1	0	0,6	0,2

Distance along profile (m)	Friction & Wobble (kN)	Anchorage (kN)	Long Term Losses (kN)	Force (kN)
0	353	0	0	2797
1,7	334	0	0	2816
3,4	324	0	0	2826
5,1	310	0	0	2840
6,9	291	0	0	2859
8,6	277	0	0	2874
10,3	264	0	0	2886
12,0	243	0	0	2907
13,7	220	0	0	2930
15,4	203	0	0	2947
17,2	193	0	0	2957
18,9	182	0	0	2968
20,6	165	0	0	2985
22,3	142	0	0	3008
24,0	120	0	0	3030
25,7	106	18	0	3026
27,5	92	47	0	3012
29,2	71	88	0	2991
30,9	55	120	0	2975
32,6	44	141	0	2964
34,3	26	179	0	2945
36,0	1	229	0	2920
36,1	0	230	0	2920

20.6 PT – KG H2

Attribute:4 Title: PT KG-H

Assigned in: Analysis 1

General	**Value**	**Units**
Tendon property	VSL 6-15	-
Tendon profile:	KG-H	-
Prestress force:	3150	kN
Jacking slip at end 1	Yes	-
Slip at end 1	0,006	m
Jack angle at end 1	0,0	deg
Jacking slip at end 2	No	-
Offset from start	0.325	-

Assignment to Lines:
360T366

Tendon profile (sampling points) - PT KG-H assignment 2

X (m)	Y (m)	Z (m)	Distance along profile (m)	Angle change in profile Eccentricity (rad)	Eccentricity y from beam (m)	Eccentricity z from beam (m)
-18,1	0,6	8,4	0	0	0,6	0,2
-16,3	0,6	8,4	1,7	1	0,6	0,2
-14,6	0,6	8,3	3,4	0,1	0,6	0,1
-12,9	0,6	8,3	5,1	0,6	0,6	0,1
-11,2	0,6	8,2	6,9	1	0,6	0
-9,5	0,6	8,1	8,6	0,5	0,6	-0,1
-7,8	0,6	8	10,3	0,3	0,6	-0,2
-6,0	0,6	7,9	12	1,2	0,6	-0,3
-4,3	0,6	7,8	13,7	1,4	0,6	-0,4
-2,6	0,6	7,8	15,4	0,8	0,6	-0,4
-0,9	0,6	7,8	17,2	0,1	0,6	-0,4
0,8	0,6	7,8	18,9	0,1	0,6	-0,4
2,5	0,6	7,8	20,6	0,7	0,6	-0,4
4,2	0,6	7,8	22,3	1,4	0,6	-0,4
6	0,6	7,9	24	1,2	0,6	-0,3
7,7	0,6	8	25,7	0,4	0,6	-0,2
9,4	0,6	8,1	27,5	0,5	0,6	-0,1
11,1	0,6	8,2	29,2	1	0,6	0
12,8	0,6	8,3	30,9	0,6	0,6	0,1
14,5	0,6	8,3	32,6	0	0,6	0,1
16,2	0,6	8,4	34,3	0,9	0,6	0,2
18	0,6	8,4	36	1,4	0,6	0,2
18	0,6	8,4	36,1	0	0,6	0,2

Prestress Losses - PT KG-H assignment 2

Distance along profile (m)	Friction & Wobble (kN)	Anchorage (kN)	Long Term Losses (kN)	Force (kN)
0	0	207	0	2944
1,7	10	186	0	2954
3,4	31	145	0	2974
5,1	42	123	0	2985
6,9	58	91	0	3001
8,6	78	50	0	3022
10,3	93	20	0	3037
12,0	107	0	0	3043
13,7	128	0	0	3022
15,4	152	0	0	2998
17,2	169	0	0	2981
18,9	180	0	0	2970
20,6	191	0	0	2959
22,3	207	0	0	2943
24,0	230	0	0	2920
25,7	251	0	0	2899
27,5	264	0	0	2886
29,2	278	0	0	2872
30,9	297	0	0	2853
32,6	312	0	0	2838
34,3	322	0	0	2828
36,0	339	0	0	2811
36,1	353	0	0	2797

20.7 PT – KG V3

Attribute: 5 Title: PT KG-V

Assigned in: Analysis 1

General	**Value**	**Units**
Tendon property	VSL 6-15	-
Tendon profile:	KG-V	-
Prestress force:	3150	kN
Jacking slip at end 1	No	-
Jacking slip at end 2	Yes	-
Slip at end 2	0,006	m
Jack angle at end 2	0,0	deg
Offset from start	0.325	-

Assignment to Lines:
405T411

Tendon profile (sampling points) - PT KG-V assignment 3

X (m)	Y (m)	Z (m)	Distance along profile (m)	Angle change in profile Eccentricity (rad)	Eccentricity y from beam (m)	Eccentricity z from beam (m)
-18,1	-5,7	8,4	0	0	-0,6	0,2
-16,3	-5,7	8,4	1,7	1	-0,6	0,2
-14,6	-5,7	8,3	3,4	0,1	-0,6	0,1
-12,9	-5,7	8,3	5,1	0,6	-0,6	0,1
-11,2	-5,7	8,2	6,9	1	-0,6	0
-9,5	-5,7	8,1	8,6	0,5	-0,6	-0,1
-7,8	-5,7	8	10,3	0,3	-0,6	-0,2
-6,0	-5,7	7,9	12	1,2	-0,6	-0,3
-4,3	-5,7	7,8	13,7	1,4	-0,6	-0,4
-2,6	-5,7	7,8	15,4	0,8	-0,6	-0,4
-0,9	-5,7	7,8	17,2	0,1	-0,6	-0,4
0,8	-5,7	7,8	18,9	0,1	-0,6	-0,4
2,5	-5,7	7,8	20,6	0,7	-0,6	-0,4
4,2	-5,7	7,8	22,3	1,4	-0,6	-0,4
6	-5,7	7,9	24	1,2	-0,6	-0,3
7,7	-5,7	8	25,7	0,4	-0,6	-0,2
9,4	-5,7	8,1	27,5	0,5	-0,6	-0,1
11,1	-5,7	8,2	29,2	1	-0,6	0
12,8	-5,7	8,3	30,9	0,6	-0,6	0,1
14,5	-5,7	8,3	32,6	0	-0,6	0,1
16,2	-5,7	8,4	34,3	0,9	-0,6	0,2
18	-5,7	8,4	36	1,4	-0,6	0,2
18	-5,7	8,4	36,1	0	-0,6	0,2

Prestress Losses - PT KG-V assignment 3

Distance along profile (m)	Friction & Wobble (kN)	Anchorage (kN)	Long Term Losses (kN)	Force (kN)
0	353	0	0	2797
1,7	334	0	0	2816
3,4	324	0	0	2826
5,1	310	0	0	2840
6,9	291	0	0	2859
8,6	277	0	0	2874
10,3	264	0	0	2886
12,0	243	0	0	2907
13,7	220	0	0	2930
15,4	203	0	0	2947
17,2	193	0	0	2957
18,9	182	0	0	2968
20,6	165	0	0	2985
22,3	142	0	0	3008
24,0	120	0	0	3030
25,7	106	18	0	3026
27,5	92	47	0	3012
29,2	71	88	0	2991
30,9	55	120	0	2975
32,6	44	141	0	2964
34,3	26	179	0	2945
36,0	1	229	0	2920
36,1	0	230	0	2920

20.6 PT – KG H3

Attribute:6 Title: PT KG-H

Assigned in: Analysis 1

General	**Value**	**Units**
Tendon property	VSL 6-15	-
Tendon profile:	KG-H	-
Prestress force:	3150	kN
Jacking slip at end 1	Yes	-
Slip at end 1	0,006	m
Jack angle at end 1	0,0	deg
Jacking slip at end 2	No	-
Offset from start	0.325	-

Assignment to Lines:
405T411

Tendon profile (sampling points) - PT KG-H assignment 3

X (m)	Y (m)	Z (m)	Distance along profile (m)	Angle change in profile Eccentricity (rad)	Eccentricity y from beam (m)	Eccentricity z from beam (m)
-18,1	-4,5	8,40	0,00	0,00	0,60	0,20
-16,3	-4,5	8,40	1,70	1,00	0,60	0,20
-14,6	-4,5	8,30	3,40	0,10	0,60	0,10
-12,9	-4,5	8,30	5,10	0,60	0,60	0,10
-11,2	-4,5	8,20	6,90	1,00	0,60	0,00
-9,5	-4,5	8,10	8,60	0,50	0,60	-0,1
-7,8	-4,5	8,00	10,30	0,30	0,60	-0,2
-6,0	-4,5	7,90	12,00	1,20	0,60	-0,3
-4,3	-4,5	7,80	13,70	1,40	0,60	-0,4
-2,6	-4,5	7,80	15,40	0,80	0,60	-0,4
-0,9	-4,5	7,80	17,20	0,10	0,60	-0,4
0,80	-4,5	7,80	18,90	0,10	0,60	-0,4
2,50	-4,5	7,80	20,60	0,70	0,60	-0,4
4,20	-4,5	7,80	22,30	1,40	0,60	-0,4
6,00	-4,5	7,90	24,00	1,20	0,60	-0,3
7,70	-4,5	8,00	25,70	0,40	0,60	-0,2
9,40	-4,5	8,10	27,50	0,50	0,60	-0,1
11,10	-4,5	8,20	29,20	1,00	0,60	0,00
12,80	-4,5	8,30	30,90	0,60	0,60	0,10
14,50	-4,5	8,30	32,60	0,00	0,60	0,10
16,20	-4,5	8,40	34,30	0,90	0,60	0,20
18,00	-4,5	8,40	36,00	1,40	0,60	0,20
18,00	-4,5	8,40	36,10	0,00	0,60	0,20

Prestress Losses - PT KG-H assignment 3

Distance along profile (m)	Friction & Wobble (kN)	Anchorage (kN)	Long Term Losses (kN)	Force (kN)
0	0	207	0	2944
1,7	10	186	0	2954
3,4	31	145	0	2974
5,1	42	123	0	2985
6,9	58	91	0	3001
8,6	78	50	0	3022
10,3	93	20	0	3037
12,0	107	0	0	3043
13,7	128	0	0	3022
15,4	152	0	0	2998
17,2	169	0	0	2981
18,9	180	0	0	2970
20,6	191	0	0	2959
22,3	207	0	0	2943
24,0	230	0	0	2920
25,7	251	0	0	2899
27,5	264	0	0	2886
29,2	278	0	0	2872
30,9	297	0	0	2853
32,6	312	0	0	2838
34,3	322	0	0	2828
36,0	339	0	0	2811
36,1	353	0	0	2797

21. Beam/Shell Slicing

Attribute: 1 Title: Slice beam LB1

Slice path: L800
Slice locations along path: 0, 3.28, 6.56, 13.64, 16.92, 20.2, 23.48, 26.76, 30.04, 33.32, 36.6
Slice width: 5.1
Extent: Slice LB1
Moment about (Neutral Axis or Slice Path): Neutral axis

Attribute: 2 Title: Slice beam LB2

Slice path: L801
Slice locations along path: 0, 3.28, 6.56, 13.64, 16.92, 20.2, 23.48, 26.76, 30.04, 33.32, 36.6
Slice width: 5.1
Extent: Slice LB2
Moment about (Neutral Axis or Slice Path): Neutral axis

Attribute: 3 Title: Slice beam LB3

Slice path: L8022
Slice locations along path: 0, 3.28, 6.56, 13.64, 16.92, 20.2, 23.48, 26.76, 30.04, 33.32, 36.6
Slice width: 5.1
Extent: Slice LB3
Moment about (Neutral Axis or Slice Path): Neutral axis

22. Direct Method Influence Envelope

Attribute: 1 Title: Inf1 - Reactions
Sub Type = Direct method influence
Entity: Reactions
Directions: FX, FY, FZ, MX, MY
Assignment to Points:
504;513

Attribute: 2 Title: Inf2 - Abutments
Sub Type = Direct method influence
Entity: Force/Moment – Thick Shell
Directions: Sx, Mx
Assignment to Points:
128T134;228T234
Assignment to Lines:
151;152;154;155;157;158;251;252;254;255;257;25

Attribute: 3 Title: Inf3 - Deck
Sub Type = Direct method influence
Entity: Reactions
Directions: Sy, My
Assignment to Points:
413T416;419T422;431T434;437T440
Assignment to Lines:
1312T1316I2;1321;1323;1324T1328;1346T1350I2;1353;1356;1357T1361
Assignment to Surfaces:
598T600;614;615;627

Attribute: 5 Title: Inf4 - LB 2
Sub Type = Direct method influence
Entity: ReactiBeam/shell
Directions: Fx, Fy, Fz, Mx, My
Assignment to Beam/Shell Slices: Slice beam LB2

Attribute: 6 Title: Inf4 - LB 4
Sub Type = Direct method influence
Entity: ReactiBeam/shell
Directions: Fx, Fy, Fz, Mx, My
Assignment to Beam/Shell Slices: Slice beam LB3

23. Load groups: traffic

Load groups : Eurocode Load Modell 1 (LM1)
Type: Tandem axle
Axle load - lane 1: 300 kN
Axle load - lane 2: 200 kN
Axel load - lane 3: 100 kN

Lane load
Surface load - lane 1: 9.0 kPa
Surface load - remaining: 2.5 kPa

Load groups : Eurocode Load Modell 2 (LM2)
Type: Single axle
Axle load: 400 kN

Load groups : Fatigue modell 3 (UTM3)
Type: Quadruple axel
Axle load: 120 kN

24. VLO Analysis

Type: VLO – LM1 ~ Characteristic
Representative values : Charateristic
Design code : EN 1991-2 Sweden 2011
Load groups : LM1
Longitudinal increment : 0.50 m
Transverse increment : 0.50 m
Vehicule direction : Both
Kerbs : L1395, L1396
UDL alfa factor : 0.8, 1, 1 , 1, 1
TS alfa factor : 0.9, 0.9,0
Influence attributes :
Inf 1: Reactions
Inf 2: Abutments
Inf 3: Deck
Inf 4: LB1
Inf 5: LB2
Inf 6: LB3

Type: VLO – LM2 ~ Characteristic
Representative values : Charateristic
Design code : EN 1991-2 Sweden 2011
Load groups : LM2
Longitudinal increment : 0.50 m
Transverse increment : 0.50 m
Vehicule direction : Both
Kerbs : L1395, L1396
TS alfa factor : 0.9
Influence attributes :
Inf 1: Reactions
Inf 2: Abutments
Inf 3: Deck
Inf 4: LB1
Inf 5: LB2
Inf 6: LB3

Type: VLO – UTM3 ~ Characteristic
Representative values : Charateristic
Design code : EN 1991-2 Sweden 2011
Load groups : UTM3
Longitudinal increment : 0.50 m
Transverse increment : 0.50 m
Vehicule direction : Both
Kerbs : L1395, L1396
Influence attributes :
Inf 2: Abutments
Inf 3: Deck
Inf 4: LB1
Inf 5: LB2
Inf 6: LB3

Type: VLO – EG A ~ Characteristic

Representative values : Charateristic
Design code : EN 1991-2 Sweden 2011
Load groups : Complementary load modell
Dynamic amplification : 25 %
Load model value A : 180 kN
Load model value B : 300 kN
Load modell valute q : 5 kN/m
Lane vehicule factor most onerous lane : 1.0
Lane vehicule factor second lane : 0.8
Type vehicules : a
Longitudinal increment : 0.50 m
Transverse increment : 0.50 m
Vehicule direction : Both
Kerbs : L1395, L1396
Minimum width vehicule : 2.0 m
Maximum width vehicle : 2.0 m
Influence attributes :
Inf 2: Abutments
Inf 3: Deck
Inf 4: LB1
Inf 5: LB2
Inf 6: LB3

Type: VLO – EG B ~ Characteristic
Representative values : Charateristic
Design code : EN 1991-2 Sweden 2011
Load groups : Complementary load modell
Dynamic amplification : 25 %
Load model value A : 180 kN
Load model value B : 300 kN
Load modell valute q : 5 kN/m
Lane vehicule factor most onerous lane : 1.0
Lane vehicule factor second lane : 0.8
Type vehicules : b, c, d, e, f, g,h,I,j,k,l,m,n,o
Longitudinal increment : 0.50 m
Transverse increment : 0.50 m
Vehicule direction : Both
Kerbs : L1395, L1396
Minimum width vehicule : 2.0 m
Maximum width vehicle : 2.0 m
Influence attributes :
Inf 2: Abutments
Inf 3: Deck
Inf 4: LB1
Inf 5: LB2
Inf 6: LB3

25. Basic combination

Loadcase ID: 76799 Title: PT-t0

Sub Type: Basic Combination

Loadcase	Resulte	Factor	Title
78772	26	4,000	PT – KG V1
78773	26	4,000	PT – KG V2
78774	26	4,000	PT – KG V3
78775	26	4,000	PT – KG H1
78776	26	4,000	PT – KG H2
78777	26	4,000	PT – KG H3

Loadcase ID: 76800 Title: PT-t1

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
76799	0	0,940	PT-t0

Loadcase ID: 76801 Title: PT-t2

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
76799	0	0,840	PT-t0

Loadcase ID: 38 Title: EGEN

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
4	0	1,000	EGEN 1
5	0	1,000	EGEN 2
6	0	1,000	EGEN 3
14	0	1,000	EGEN 4
15	0	1,000	EGEN 5
16	0	1,000	EGEN 6

Loadcase ID: 39 Title: JORD

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
19	0	1,000	JORD 1
20	0	1,000	JORD 2
21	0	1,000	JORD 3-1
22	0	1,000	JORD 3-2
23	0	1,000	JORD 3-3
24	0	1,000	JORD 3-4

Loadcase ID: 40   Title: STOD 1X-

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
27	0	-1,000	STOD 1X+

Loadcase ID: 41   Title: STOD 2X-

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
28	0	-1,000	STOD 2X+

Loadcase ID: 50   Title: BELAGG

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
17	0	1,000	BELAGG 1
18	0	1,000	BELAGG 2

Loadcase ID: 59   Title: DELTA P

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
78741	0	1,000	DELTA P-1
78775	0	1,000	DELTA P-2

Loadcase ID: 63692 Title: OJTEMP 2-

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
78778	0	-1,000	OJTEMP 2+

Loadcase ID: 63693 Title: JTEMP MAX

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
78779	0	1,000	JTEMP+

Loadcase ID: 63694 Title: JTEMP MIN

Sub Type: Basic Combination

Loadcase	Results	Factor	Title
78780	0	1,000	JTEMP-

26. Smart combination

Loadcase ID: 57 Title: OVER

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
35	0	0,000	1,000	OVER 1
36	0	0,000	1,000	OVER 2
37	0	0,000	1,000	OVER 3-1
160728	0	0,000	1,000	OVER 3-2
160729	0	0,000	1,000	OVER 3-3
160730	0	0,000	1,000	OVER 3-4

Loadcase ID: 63697 Title: TEMP-1

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
63695	0	0,000	0,470	JTEMP (Max)
63696	0	0,000	0,470	JTEMP (Min)
63689	0	0,000	0,450	OJTEMP 1 (Max)
63690	0	0,000	0,450	OJTEMP 1 (Min)
59	0	0,000	1,000	DELTA P

Loadcase ID: 63699 Title: TEMP-2

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
63695	0	0,000	0,160	JTEMP (Max)
63696	0	0,000	0,160	JTEMP (Min)
63689	0	0,000	0,600	OJTEMP 1 (Max)
63690	0	0,000	0,600	OJTEMP 1 (Min)
59	0	0,000	1,000	DELTA P

Loadcase ID: 63703 Title: TEMP-3

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
63695	0	0,000	0,460	JTEMP (Max)
63696	0	0,000	0,460	JTEMP (Min)
63705	0	0,000	0,600	OJTEMP 2 (Max)
63706	0	0,000	0,600	OJTEMP 2 (Min)
59	0	0,000	0,000	DELTA P

Loadcase ID: 78782 Title: ULS-PERM-0

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
38	0	1,000	0,200	EGEN
50	0	0,900	0,420	BELAGG
78781	0	0,000	0,300	KRYMP
46	0	0,000	0,300	ST0D (Max)
47	0	0,000	0,300	ST0D (Min)
39	0	0,900	0,580	JORD

Loadcase ID: 78786 Title: ULS-0

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
78782	0	1,000	0,000	ULS-PERM-0 (Max)
78783	0	1,000	0,000	ULS-PERM-0 (Min)
157362	0	0,000	1,000	ULS-VAR (Max)
157363	0	0,000	1,000	ULS-VAR (Min)

Loadcase ID: 127138 Title: SLS-PERM-0

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
38	0	1,000	0,000	EGEN
50	0	0,900	0,200	BELAGG
78781	0	0,000	0,220	KRYMP
46	0	0,000	0,220	ST0D (Max)
47	0	0,000	0,220	ST0D (Min)
39	0	0,900	0,580	JORD

Loadcase ID: 127140 Title: SLS-K-VAR

Sub Type: Smart Combination
Loadcases to consider: 6
Variable Loadcases: 1

Loadcase	Results	Permanent Factor	Variable Factor	Title
51	0	0,560	0,190	BROMS (Max)
52	0	0,560	0,190	BROMS (Min)
53	0	0,560	0,190	SIDO (Max)
54	0	0,560	0,190	SIDO (Min)
55	0	0,300	0,700	VIND (Max)
56	0	0,300	0,700	VIND (Min)
57	0	0,750	0,590	OVER (Max)
58	0	0,750	0,590	OVER (Min)
63701	0	0,600	0,400	TEMP (Max)
63702	0	0,600	0,400	TEMP (Min)
178261	0	0,750	0,250	TRAFFIC (Max)
178262	0	0,750	0,250	TRAFFIC (Min)

Loadcase ID: 127142 Title: SLS-F-VAR

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
51	0	0,000	0,560	BROMS (Max)
52	0	0,000	0,560	BROMS (Min)
53	0	0,000	0,560	SIDO (Max)
54	0	0,000	0,190	SIDO (Min)
55	0	0,000	0,300	VIND (Max)
56	0	0,000	0,300	VIND (Min)
57	0	0,000	0,950	OVER (Max)
58	0	0,000	0,950	OVER (Min)
63701	0	0,000	0,600	TEMP (Max)
63702	0	0,000	0,600	TEMP (Min)
178261	0	0,000	0,750	TRAFFIC (Max)
178262	0	0,000	0,750	TRAFFIC (Min)

Loadcase ID: 127144 Title: SLS-K0

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
127138	0	1,000	0,000	SLS-PERM-0 (Max)
127139	0	1,000	0,000	SLS-PERM-0 (Min)
127140	0	0,000	1,000	SLS-K-VAR (Max)
127141	0	0,000	1,000	SLS-K-VAR (Min)

Loadcase ID: 127146 Title: SLS-F0

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	PermanentFactor	Variable Factor	Title
127138	0	1,000	0,000	SLS-PERM-0 (Max)
127139	0	1,000	0,000	SLS-PERM-0 (Min)
127142	0	0,000	1,000	SLS-F-VAR (Max)
127143	0	0,000	1,000	SLS-F-VAR (Min)

Loadcase ID: 127148 Title: SLS-Q0

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
38	0	1,000	0,000	EGEN
50	0	1,000	0,200	BELAGG
78781	0	0,000	0,220	KRYMP
46	0	0,000	0,220	ST0D (Max)
47	0	0,000	0,220	ST0D (Min)
39	0	1,000	0,340	JORD
197126	0	0,000	0,500	TEMP-SLS Q (Max)
197127	0	0,000	0,500	TEMP-SLS Q (Min)

Loadcase ID: 157362 Title: ULS-VAR

Sub Type: Smart Combination
Loadcases to consider: 6
Variable Loadcases: 1

Loadcase	Results	Permanent Factor	Variable Factor	Title
51	0	0,840	0,290	BROMS (Max)
52	0	0,840	0,290	BROMS (Min)
53	0	0,840	0,290	SIDO (Max)
54	0	0,840	0,290	SIDO (Min)
55	0	0,450	1,050	VIND (Max)
56	0	0,450	1,050	VIND (Min)
57	0	1,130	0,580	OVER (Max)
58	0	1,130	0,580	OVER (Min)
63707	0	0,900	0,600	TEMP- ULS (Max)
63708	0	0,900	0,600	TEMP- ULS (Min)
178261	0	1,030	0,470	TRAFFIC (Max)
178262	0	1,030	0,470	TRAFFIC (Min)

Loadcase ID: 157530 Title: FAT-0

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
38	0	1,000	0,000	EGEN
50	0	1,000	0,000	BELAGG
39	0	1,480	0,000	JORD
127160	0	0,000	1,000	UTM3 (Max)
127161	0	0,000	1,000	UTM3 (Min)

Loadcase ID: 197124 Title: TEMP-4

Sub Type: Smart Combination
Loadcases to consider: All
Variable Loadcases: All

Loadcase	Results	Permanent Factor	Variable Factor	Title
63695	0	0,000	0,460	JTEMP (Max)
63696	0	0,000	0,460	JTEMP (Min)
63705	0	0,000	0,160	OJTEMP 2 (Max)
63706	0	0,000	0,160	OJTEMP 2 (Min)
59	0	0,000	1,000	DELTA P

27. Envelopes

Loadcase ID: 42 Title: STOD-X
Sub Type: Envelope

Loadcase	Results	Title
27	0	STOD 1X+
28	0	STOD 2X+
40	0	STOD 1X-
41	0	STOD 2X-

Loadcase ID: 44 Title: STOD-Z
Sub Type: Envelope

Loadcase	Results	Title
25	0	STOD 1Z
26	0	STOD 2Z

Loadcase ID: 46 Title: ST0D
Sub Type: Envelope

Loadcase	Results	Title
197128	0	STOD-X (Max)
197129	0	STOD-X (Min)
44	0	STOD-Z (Max)
45	0	STOD-Z (Min)

Loadcase ID: 51 Title: BROMS
Sub Type: Envelope

Loadcase File	Results Title	Type
29	0	BROMS+
30	0	BROMS-

Loadcase ID: 53 Title: SIDO
Sub Type: Envelope

Loadcase	Results	Title
31	0	SIDO+
32	0	SIDO-

Loadcase ID: 55 Title: VIND
Sub Type: Envelope

Loadcase File	Results Title	Type
33	0	VIND+
34	0	VIND-

Loadcase ID: 63689 Title: OJTEMP 1

Sub Type: Envelope

Loadcase File	**Results Title**	**Type**
78776	0	OJTEMP 1+
78777	0	OJTEMP 1-

Loadcase ID: 63695 Title: JTEMP

Sub Type: Envelope

Loadcase File	**Results Title**	**Type**
63693	0	JTEMP MAX
63694	0	JTEMP MIN

Loadcase ID: 63701 Title: TEMP

Sub Type: Envelope

Loadcase File	**Results Title**	**Type**
63697	0	TEMP-1 (Max)
63698	0	TEMP-1 (Min)
63699	0	TEMP-2 (Max)
63700	0	TEMP-2 (Min)
63703	0	TEMP-3 (Max)
63704	0	TEMP-3 (Min)

Loadcase ID: 63705 Title: OJTEMP 2

Sub Type: Envelope

Loadcase File	**Results Title**	**Type**
63692	0	OJTEMP 2-
78778	0	OJTEMP 2+

Loadcase ID: 63707 Title: TEMP- ULS

Sub Type: Envelope

Loadcase File	**Results Title**	**Type**
59	0	DELTA P

Loadcase ID: 197126 Title: TEMP-SLS Q

Sub Type: Envelope

Loadcase	**Results**	**Title**
63697	0	TEMP-1 (Max)
63698	0	TEMP-1 (Min)
63699	0	TEMP-2 (Max)
63700	0	TEMP-2 (Min)
197124	0	TEMP-4 (Max)
197125	0	TEMP-4 (Min)

Loadcase ID: 127160 Title: UTM3

Sub Type: Envelope

Loadcase File	Results Title	Type
195801	0	UTM3 Inf2 - Abutments ~ Characteristic (Max)
195802	0	UTM3 Inf2 - Abutments ~ Characteristic (Min)
195815	0	UTM3 Inf3 - Deck ~ Characteristic (Max)
195816	0	UTM3 Inf3 - Deck ~ Characteristic (Min)
178249	0	UTM3 Inf4 - LB 1 ~ Characteristic (Max)
178250	0	UTM3 Inf4 - LB 1 ~ Characteristic (Min)
178251	0	UTM3 Inf5 - LB2 ~ Characteristic (Max)
178252	0	UTM3 Inf5 - LB2 ~ Characteristic (Min)
178253	0	UTM3 Inf6 - LB3 ~ Characteristic (Max)
178254	0	UTM3 Inf6 - LB3 ~ Characteristic (Min)

Loadcase ID: 178255 Title: TRAFFIC

Sub Type: Envelope

Loadcase File	Results Title	Type
195799	0	EG A Inf1 - Reactions ~ Characteristic (Max)
195800	0	EG A Inf1 - Reactions ~ Characteristic (Min)
195811	0	EG B Inf1 - Reactions ~ Characteristic (Max)
195812	0	EG B Inf1 - Reactions ~ Characteristic (Min)
178243	0	LM 1 Inf1 - Reactions ~ Characteristic (Max)
178244	0	LM1 Inf1 - Reactions ~ Characteristic (Min)
195787	0	LM2 Inf1 - Reactions ~ Characteristic (Max)
195788	0	LM2 Inf1 - Reactions ~ Characteristic (Min)
195801	0	EG A Inf1 - Abutments ~ Characteristic (Max)
195802	0	EG A Inf2 - Abutments ~ Characteristic (Min)
195813	0	EG B Inf2 - Abutments ~ Characteristic (Max)
195814	0	LM1 Inf2 - Abutments ~ Characteristic (Min)
178245	0	LM1 Inf2 - Abutments ~ Characteristic (Max)
178246	0	LM2 Inf2 - Abutments ~ Characteristic (Min)
195789	0	LM2 Inf2 - Abutments ~ Characteristic (Max)
195815	0	EGA Inf3 - Deck ~ Characteristic (Max)
195816	0	EG A Inf3 - Deck ~ Characteristic (Min)
178247	0	EG B Inf3 - Deck ~ Characteristic (Max)
178248	0	LM1 Inf3 - Deck ~ Characteristic (Min)
195791	0	LM1 Inf3 - Deck ~ Characteristic (Max)
195792	0	LM2 Inf3 - Deck ~ Characteristic (Min)
178249	0	EG A Inf4 - LB 1 ~ Characteristic (Max)
178250	0	EG A Inf4 - LB 1 ~ Characteristic (Min)
178251	0	EG A Inf5 - LB2 ~ Characteristic (Max)
178252	0	EG A Inf5 - LB2 ~ Characteristic (Min)
178253	0	EG A Inf6 - LB3 ~ Characteristic (Max)
178254	0	EG A Inf6 - LB3 ~ Characteristic (Min)
178249	0	EG B Inf4 - LB 1 ~ Characteristic (Max)
178250	0	EG B Inf4 - LB 1 ~ Characteristic (Min)
178251	0	EG B Inf5 - LB2 ~ Characteristic (Max)
178252	0	EG B Inf5 - LB2 ~ Characteristic (Min)
178253	0	EG B Inf6 - LB3 ~ Characteristic (Max)
178254	0	EG B Inf6 - LB3 ~ Characteristic (Min)
178249	0	LM1 Inf4 - LB 1 ~ Characteristic (Max)
178250	0	LM1 Inf4 - LB 1 ~ Characteristic (Min)
178251	0	LM1 Inf5 - LB2 ~ Characteristic (Max)
178252	0	LM1 Inf5 - LB2 ~ Characteristic (Min)
178253	0	LM1 Inf6 - LB3 ~ Characteristic (Max)
178254	0	LM1 Inf6 - LB3 ~ Characteristic (Min)
178249	0	LM2 Inf4 - LB 1 ~ Characteristic (Max)
178250	0	LM2 Inf4 - LB 1 ~ Characteristic (Min)
178251	0	LM2 Inf5 - LB2 ~ Characteristic (Max)
178252	0	LM2 Inf5 - LB2 ~ Characteristic (Min)
178253	0	LM2 Inf6 - LB3 ~ Characteristic (Max)
178254	0	LM2 Inf6 - LB3 ~ Characteristic (Min)

Title: Results reactions

Model Units: kN,m,t,s,C
Report Units: kN,m,t,s,C

Model Title: System 001
Model File: System 001

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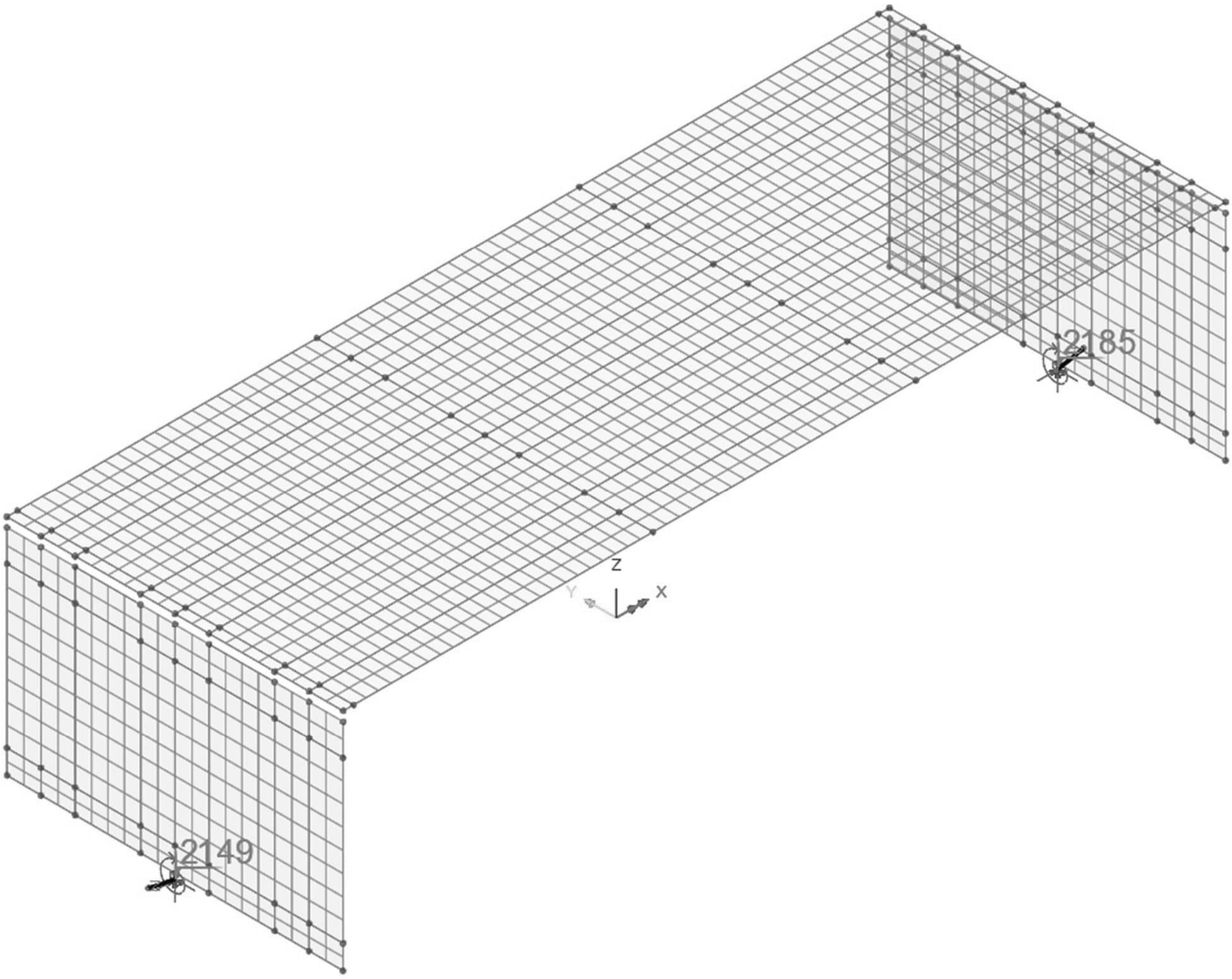
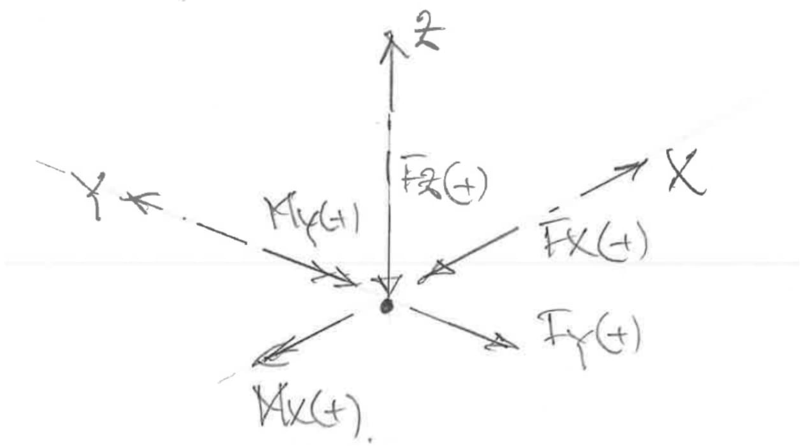
1. Reaction nodes



Support 1 & 2
Nodes

2. Sign convention



3. Results loadcase

EGEN 1

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	922.7	0.0	2469.4	0.0	389.0	N/A
2185	16.8	0.0	-0.2	-922.7	0.0	2469.8	0.0	-381.3	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EGEN 2

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	1926.9	0.0	3361.6	0.0	796.0	N/A
2185	16.8	0.0	-0.2	-1926.9	0.0	3362.5	0.0	-781.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EGEN 3

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-26.2	0.0	1945.6	0.0	1.9	N/A
2185	16.8	0.0	-0.2	26.2	0.0	1945.6	0.0	-2.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EGEN 4

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	123.0	0.0	220.5	0.0	51.0	N/A
2185	16.8	0.0	-0.2	-123.0	0.0	220.5	0.0	-50.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EGEN 5

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-45.4	0.0	279.0	0.0	-15.3	N/A
2185	16.8	0.0	-0.2	45.4	0.0	279.0	0.0	15.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EGEN 6

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-0.4	0.0	449.9	0.0	1.7	N/A
2185	16.8	0.0	-0.2	0.4	0.0	449.9	0.0	-1.7	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EGEN

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	2900.7	0.0	8726.0	0.0	1224.3	N/A
2185	16.8	0.0	-0.2	-2900.7	0.0	8727.4	0.0	-1201.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

BELAGG 1

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	397.7	0.0	645.0	0.0	164.0	N/A
2185	16.8	0.0	-0.2	-397.7	0.0	645.2	0.0	-160.9	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

BELAGG 2

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-32.3	0.0	198.4	0.0	-10.9	N/A
2185	16.8	0.0	-0.2	32.3	0.0	198.4	0.0	10.9	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

BELAGG

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	365.4	0.0	843.4	0.0	153.0	N/A
2185	16.8	0.0	-0.2	-365.4	0.0	843.6	0.0	-150.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

KG-1

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-67.9	0.0	0.0	17.8	-52.3	N/A
2185	16.8	0.0	-0.2	67.9	0.0	0.0	12.7	53.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

KG-2

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-69.7	0.0	0.0	5.8	-54.3	N/A
2185	16.8	0.0	-0.2	69.7	0.0	0.0	-5.8	55.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

KG-3

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-67.9	0.0	0.0	-6.5	-52.3	N/A
2185	16.8	0.0	-0.2	67.9	0.0	0.0	-24.0	53.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

PT-T0

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-822.3	0.0	-0.3	68.2	-635.7	N/A
2185	16.8	0.0	-0.2	822.3	0.0	0.3	-68.3	645.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JORD 1

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-2294.9	0.0	-212.3	0.0	-1095.6	N/A
2185	16.8	0.0	-0.2	-570.9	0.0	212.3	0.0	-749.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JORD 2

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	569.3	0.0	212.2	0.0	749.1	N/A
2185	16.8	0.0	-0.2	2296.5	0.0	-212.2	0.0	1097.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JORD 3-1

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.9	-392.7	0.3	1425.2	-7.6	N/A
2185	16.8	0.0	-0.2	-0.9	27.9	-0.3	-24.7	-2.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JORD 3-2

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.9	392.7	0.3	-1425.2	-7.6	N/A
2185	16.8	0.0	-0.2	-0.9	-27.9	-0.3	24.7	-2.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JORD 3-3

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.9	27.9	-0.3	-24.9	2.4	N/A
2185	16.8	0.0	-0.2	-0.9	-392.7	0.3	1425.4	7.6	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JORD 3-4

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.9	-27.9	-0.3	24.9	2.4	N/A
2185	16.8	0.0	-0.2	-0.9	392.7	0.3	-1425.4	7.6	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JORD

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-1722.2	0.0	-0.04	0.0	-356.9	N/A
2185	16.8	0.0	-0.2	1722.2	0.0	0.04	0.0	358.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OVER 1

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-484.6	0.0	-73.4	0.0	-313.2	N/A
2185	16.8	0.0	-0.2	-189.7	0.0	73.4	0.0	-243.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OVER 2

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	189.1	0.0	73.4	0.0	242.9	N/A
2185	16.8	0.0	-0.2	485.2	0.0	-73.4	0.0	313.7	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OVER 3-1

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.4	-164.7	0.1	600.9	-3.5	N/A
2185	16.8	0.0	-0.2	-0.4	12.7	-0.1	-17.5	-1.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OVER 3-2

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.4	164.7	0.1	-600.9	-3.5	N/A
2185	16.8	0.0	-0.2	-0.4	-12.7	-0.1	17.5	-1.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OVER 3-3

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.4	12.7	-0.1	-17.6	1.1	N/A
2185	16.8	0.0	-0.2	-0.4	-164.7	0.1	601.0	3.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OVER 3-4

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.4	-12.7	-0.1	17.6	1.1	N/A
2185	16.8	0.0	-0.2	-0.4	164.7	0.1	-601.0	3.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

STOD_1Z

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.0	0.0	-11.4	0.0	192.3	N/A
2185	16.8	0.0	-0.2	0.0	0.0	11.4	0.0	192.3	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

STOD_2Z

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.0	0.0	11.4	0.0	-192.3	N/A
2185	16.8	0.0	-0.2	0.0	0.0	-11.4	0.0	-192.3	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

STOD_1X+

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	271.0	0.0	0.0	0.0	563.7	N/A
2185	16.8	0.0	-0.2	-271.0	0.0	0.0	0.0	-562.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

STOD_2X+

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-271.0	0.0	0.0	0.0	-563.7	N/A
2185	16.8	0.0	-0.2	271.0	0.0	0.0	0.0	562.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

KRYMP

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	1124.8	0.0	-0.33	0.0	340.8	N/A
2185	16.8	0.0	-0.2	-1124.8	0.0	0.33	0.0	-329.8	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

DELTA P-1

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-4742.6	0.0	-729.7	0.0	-3313.1	N/A
2185	16.8	0.0	-0.2	-1917.1	0.0	729.7	0.0	-2519.7	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

DELTA P-2

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	1911.8	0.0	729.6	0.0	2518.6	N/A
2185	16.8	0.0	-0.2	4747.9	0.0	-729.6	0.0	3318.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

DELTA P

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-2830.8	0.0	-0.12	0.0	-794.5	N/A
2185	16.8	0.0	-0.2	2830.8	0.0	0.12	0.0	798.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JTEMP+

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	233.2	0.0	-0.04	0.0	491.4	N/A
2185	16.8	0.0	-0.2	-233.2	0.0	0.04	0.0	-490.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

JTEMP-

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-394.7	0.0	0.06	0.0	-831.6	N/A
2185	16.8	0.0	-0.2	394.7	0.0	-0.06	0.0	829.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OJTEMP:1+

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-285.6	0.0	-0.1	0.0	-104.7	N/A
2185	16.8	0.0	-0.2	285.6	0.0	0.1	0.0	108.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OJTEMP:1-

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	208.7	0.0	-0.5	0.0	87.5	N/A
2185	16.8	0.0	-0.2	-208.7	0.0	0.5	0.0	-69.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

OJTEMP:2+

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	125.1	0.0	0.0	0.0	281.2	N/A
2185	16.8	0.0	-0.2	-125.1	0.0	0.0	0.0	-280.6	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

BROMS+

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-429.3	0.0	-192.5	0.0	-520.3	N/A
2185	16.8	0.0	-0.2	-430.8	0.0	192.5	0.0	-521.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

BROMS-

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	429.3	0.0	192.5	0.0	520.3	N/A
2185	16.8	0.0	-0.2	430.8	0.0	-192.5	0.0	521.1	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SIDO+

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.0	-215.0	0.0	1744.2	0.0	N/A
2185	16.8	0.0	-0.2	0.0	-215.0	0.0	1743.8	0.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SIDO-

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	0.0	215.0	0.0	-1744.2	0.0	N/A
2185	16.8	0.0	-0.2	0.0	215.0	0.0	-1743.8	0.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

VIND+

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-0.1	-50.4	0.0	455.6	0.0	N/A
2185	16.8	0.0	-0.2	0.1	-50.4	0.0	455.6	0.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

VIND-

Node	X	Y	Z	FX	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-0.1	50.4	0.0	-455.6	0.0	N/A
2185	16.8	0.0	-0.2	0.1	50.4	0.0	-455.6	0.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

4. Results load – Fz

EG A: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	76.	0.	623.	-181.	52.	0
2185	16.8	0.0	-0.2	-76.	0.	623.	181.	-51.	0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EG A: Min FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	-34.1	0.0	-18.5	-21.8	-33.0	0
2185	16.8	0.0	-0.2	34.2	0.0	-18.5	-21.8	33.2	0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EG B: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	765.1	0.0	2030.2	-383.5	295.3	0.0
2185	16.8	0.0	-0.2	-731.6	0.0	2069.1	3889.5	-281.3	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EG B: Min FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	-50.4	0.0	-27.2	-37.2	-49.1	N/A
2185	16.8	0.0	-0.2	51.1	0.0	-27.6	-33.4	49.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

LM 1: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	389.9	0.0	1763.3	1762.5	194.9	0.0
2185	16.8	0.0	-0.2	-381.0	0.0	1768.6	-1763.1	-192.9	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

LM 1: Min Fz

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	-69.6	0.0	-37.7	94.0	-67.6	0.0
2185	16.8	0.0	-0.2	71.0	0.0	-38.3	100.9	69.0	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

LM 2: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	-22.4	0.0	372.0	1596.1	7.4	N/A
2185	16.8	0.0	-0.2	22.3	0.0	372.0	1596.2	-7.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

LM 2: Min Fz

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	-28.2	0.0	-15.4	-193.3	-27.3	N/A
2185	16.8	0.0	-0.2	28.3	0.0	-15.4	-193.4	27.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

UTM3: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	51.1	0.0	441.0	409.4	10.1	N/A
2185	16.8	0.0	-0.2	-52.4	0.0	442.9	411.6	-9.9	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

UTM3: Min Fz

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	-16.1	0.0	-8.7	99.1	-15.5	N/A
2185	16.8	0.0	-0.2	15.7	0.0	-8.5	108.0	15.3	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

5. Results loads – My

EG A: Max MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	271.0	0.0	339.3	82.6	143.9	0
2185	16.8	0.0	-0.2	34.5	0.0	-18.4	10.8	33.8	0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EG A: Min MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	-34.4	0.0	-18.4	10.6	-33.6	0
2185	16.8	0.0	-0.2	-270.7	0.0	339.7	-77.0	-141.6	0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EG B: Max MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	973.0	0.0	1117.6	-1115.6	492.4	0.0
2185	16.8	0.0	-0.2	51.6	0.0	-27.6	15.7	50.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

EG B: Min MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	-50.8	0.0	-27.2	17.1	-50.0	N/A
2185	16.8	0.0	-0.2	-982.5	0.0	1135.8	-1734.2	-483.5	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

LM 1: Max MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	784.2	0.0	1130.8	1927.3	402.5	0.0
2185	16.8	0.0	-0.2	71.6	0.0	-38.2	-7.6	70.2	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

LM 1: Min MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	-70.2	0.0	-37.7	-7.2	-68.7	0.0
2185	16.8	0.0	-0.2	-787.9	0.0	1137.6	-1306.1	-396.0	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

LM 2: Max MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	151.2	0.0	119.4	-605.6	89.4	N/A
2185	16.8	0.0	-0.2	28.7	0.0	-15.3	-31.9	28.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

LM 2: Min MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	-28.5	0.0	-15.3	-31.9	-27.9	N/A
2185	16.8	0.0	-0.2	-151.0	0.0	119.5	-608.2	-88.0	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

UTM3: Max MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	192.2	0.0	164.0	172.4	107.2	N/A
2185	16.8	0.0	-0.2	15.9	0.0	-8.4	24.1	15.6	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

UTM3: Min MY

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	-16.2	0.0	-8.7	-22.1	-15.9	N/A
2185	16.8	0.0	-0.2	-191.2	0.0	162.6	171.8	-105.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

6. Results loadcombination – Fx

ULS: Max FX

Node	X	Y	Z	FX*	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	5410.6	-180.6	15295.0	2226.2	3162.2	0.0
2185	16.8	0.0	-0.2	4675.1	158.0	9963.6	-1100.6	1387.1	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS: Min FX

Node	X	Y	Z	FX*	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	-4673.2	158.0	9881.4	-1113.1	-1358.0	0.0
2185	16.8	0.0	-0.2	-5412.5	-180.6	15286.2	2214.9	-3115.1	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Max FX

Node	X	Y	Z	FX*	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	1924.1	0.0	9738.0	0.0	1250.0	N/A
2185	16.8	0.0	-0.2	-898.8	0.0	9571.0	0.0	-747.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Min FX

Node	X	Y	Z	FX*	FY	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	898.8	0.0	9569.4	0.0	775.1	N/A
2185	16.8	0.0	-0.2	-1924.1	0.0	9739.8	0.0	-1219.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

7. Results loadcombination – Fy

ULS: Max FY

Node	X	Y	Z	FX	FY*	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	1235.5	506.6	11540.0	-7936.0	551.3	0.0
2185	16.8	0.0	-0.2	1168.9	506.6	14024.2	-7301.8	-32.8	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS: Min FY

Node	X	Y	Z	FX	FY*	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	547.8	-506.6	13902.4	5121.1	1347.4	0.0
2185	16.8	0.0	-0.2	-2602.5	-506.6	11839.5	7538.4	-1489.8	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Max FY

Node	X	Y	Z	FX	FY*	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	1219.3	0.0	9738.0	0.0	880.6	N/A
2185	16.8	0.0	-0.2	-1205.8	0.0	9573.6	0.0	-901.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Min FY

Node	X	Y	Z	FX	FY*	FZ	MX	MY	MZ
2149	-16.8	0.0	-0.2	1543.9	0.0	9566.9	0.0	1062.7	N/A
2185	16.8	0.0	-0.2	-1557.4	0.0	9739.7	0.0	-899.3	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

8. Results loadcombination – Fz

ULS-PERM: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	2910.4	0.0	13040.2	0.0	1501.9	N/A
2185	16.8	0.0	-0.2	-2141.8	0.0	13042.5	0.0	-1326.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS-PERM : Min FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	911.0	0.0	9481.5	0.0	962.9	N/A
2185	16.8	0.0	-0.2	-1679.6	0.0	9483.2	0.0	-1071.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS-VAR: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	1722.8	203.3	3290.2	-2245.4	1146.6	0.0
2185	16.8	0.0	-0.2	873.2	180.6	3348.7	4369.4	-407.9	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS-VAR: Min FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	-3651.3	-180.6	-339.7	1562.0	-1724.1	0.0
2185	16.8	0.0	-0.2	1107.4	-158.0	-340.2	1363.7	1012.0	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	4633.2	203.3	16330.4	-2245.4	2648.5	0.0
2185	16.8	0.0	-0.2	-1268.6	180.6	16391.2	4369.4	-1734.1	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS: Min FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	-2740.3	-180.6	9141.9	1562.0	-761.2	0.0
2185	16.8	0.0	-0.2	-572.1	-158.0	9143.0	1363.7	-59.5	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Max FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	1617.0	0.0	9740.6	0.0	1008.7	N/A
2185	16.8	0.0	-0.2	-1278.9	0.0	9742.3	0.0	-931.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Min FZ

Node	X	Y	Z	FX	FY	FZ*	MX	MY	MZ
2149	-16.8	0.0	-0.2	1205.8	0.0	9566.8	0.0	1016.4	N/A
2185	16.8	0.0	-0.2	-1543.9	0.0	9568.5	0.0	-1035.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

9. Results loadcombination – Mx

ULS: Max MX

Node	X	Y	Z	FX	FY	FZ	MX*	MY	MZ
2149	-16.8	0.0	-0.2	1081.0	-403.7	15435.6	10984.9	1279.3	0.0
2185	16.8	0.0	-0.2	-2115.6	-403.7	12912.8	11083.1	-1598.3	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS: Min MX

Node	X	Y	Z	FX	FY	FZ	MX*	MY	MZ
2149	-16.8	0.0	-0.2	1673.1	403.7	12548.8	-10979.3	841.4	0.0
2185	16.8	0.0	-0.2	-573.4	403.7	15153.3	-11078.3	-425.0	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Max MX

Node	X	Y	Z	FX	FY	FZ	MX*	MY	MZ
2149	-16.8	0.0	-0.2	1543.9	0.0	9571.9	0.0	978.1	N/A
2185	16.8	0.0	-0.2	-1031.4	0.0	9737.2	0.0	-943.4	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Min MX

Node	X	Y	Z	FX	FY	FZ	MX*	MY	MZ
2149	-16.8	0.0	-0.2	1278.9	0.0	9735.5	0.0	1047.0	N/A
2185	16.8	0.0	-0.2	-1791.4	0.0	9573.6	0.0	-1023.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

10. Results loadcombination – My

ULS-PERM: Max My

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	3239.2	0.0	13036.7	0.0	1803.7	N/A
2185	16.8	0.0	-0.2	-582.2	0.0	9486.7	0.0	-633.8	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS-PERM : Min My

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	582.2	0.0	9485.0	0.0	661.1	N/A
2185	16.8	0.0	-0.2	-3239.2	0.0	13039.0	0.0	-1763.8	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS-VAR: Max My

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	2034.8	-180.6	1920.7	-208.3	1452.6	0.0
2185	16.8	0.0	-0.2	5229.3	203.3	-283.4	-1677.6	2070.1	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS-VAR: Min My

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	-5225.9	158.0	-283.3	-1267.6	-2061.4	0.0
2185	16.8	0.0	-0.2	-2050.9	-180.6	1948.0	-1136.5	-1440.0	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS: Max My

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	5273.9	-180.6	14957.3	-208.3	3256.3	0.0
2185	16.8	0.0	-0.2	4647.1	203.3	9203.2	-1677.6	1436.3	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

ULS: Min My

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	-4643.7	158.0	9201.8	-1267.6	-1400.3	0.0
2185	16.8	0.0	-0.2	-5290.0	-180.6	14987.0	-1136.5	-3203.9	0.0
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Max My

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	1924.1	0.0	9738.0	0.0	1250.0	N/A
2185	16.8	0.0	-0.2	-898.8	0.0	9571.0	0.0	-747.5	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

SLS-Q: Min My

Node	X	Y	Z	FX	FY	FZ	MX	MY*	MZ
2149	-16.8	0.0	-0.2	898.8	0.0	9569.4	0.0	775.1	N/A
2185	16.8	0.0	-0.2	-1924.1	0.0	9739.8	0.0	-1219.2	N/A
-	m	m	m	kN	kN	kN	kNm	kNm	kNm

Title: Results abutments

Model Units: kN,m,t,s,C
Report Units: kN,m,t,s,C

Model Title: System 001
Model File: System 001

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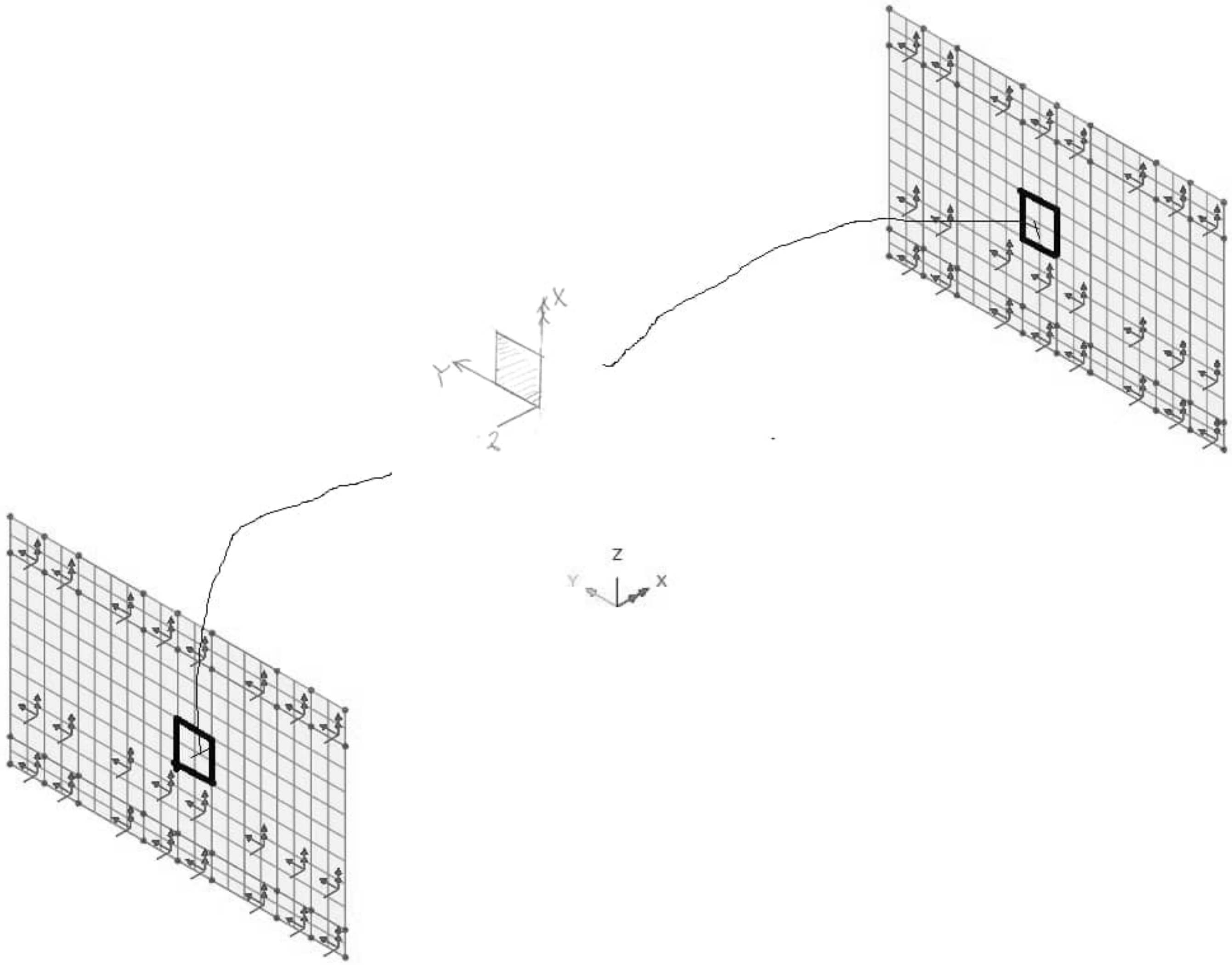
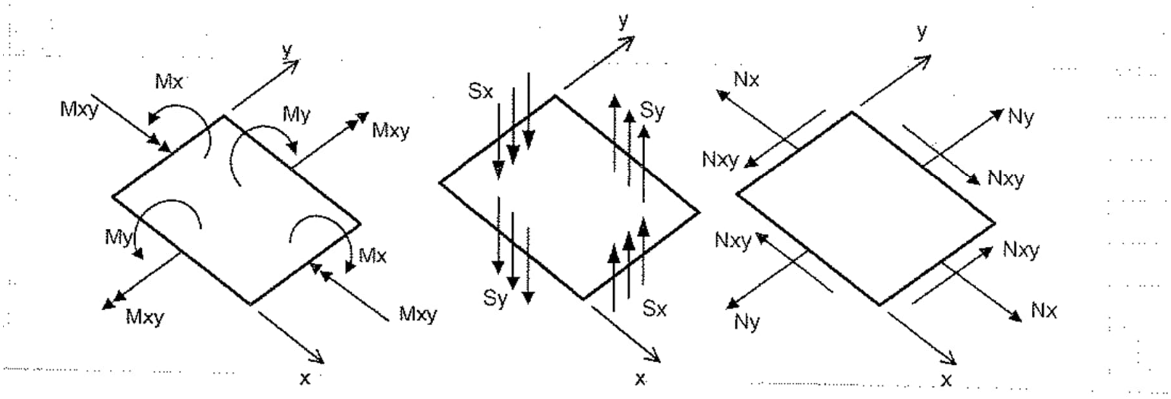
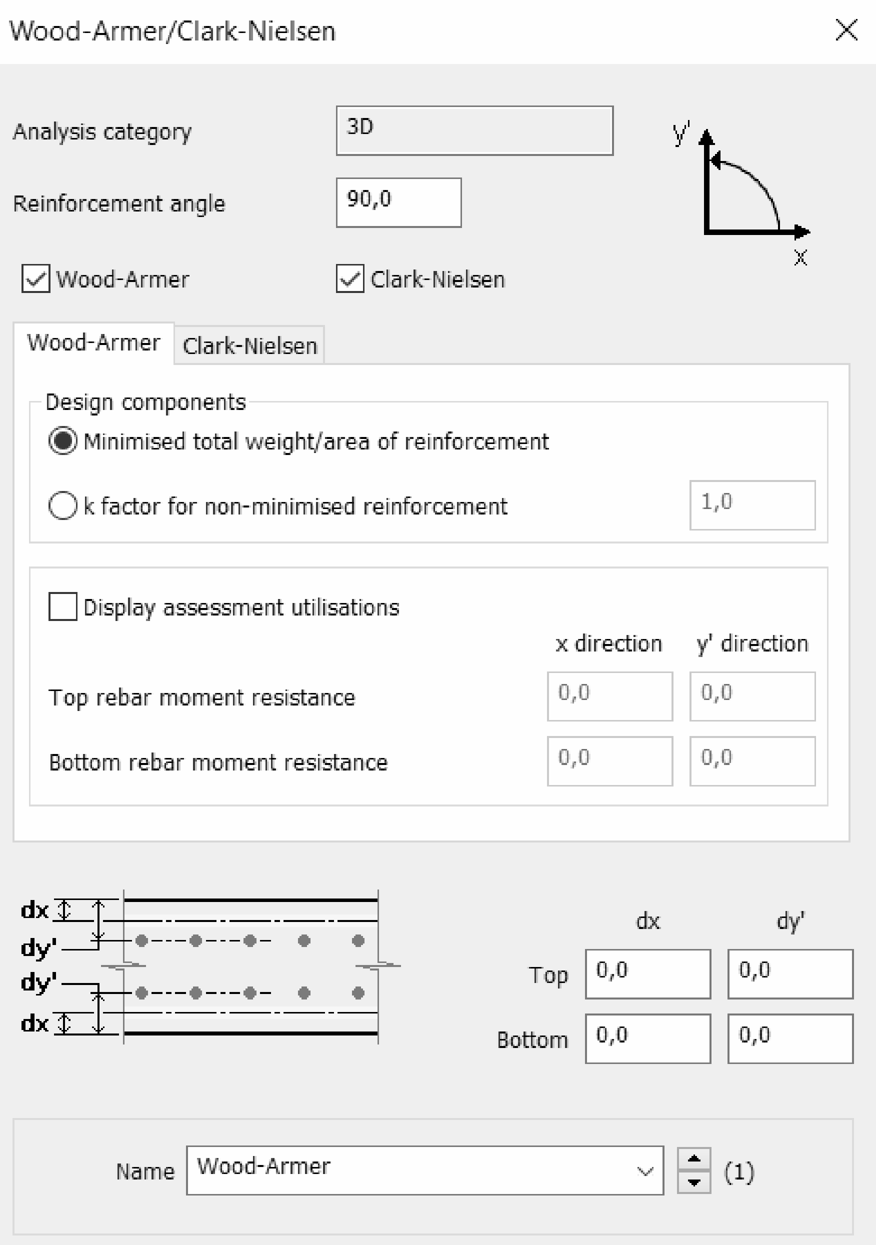
1. Sign convention





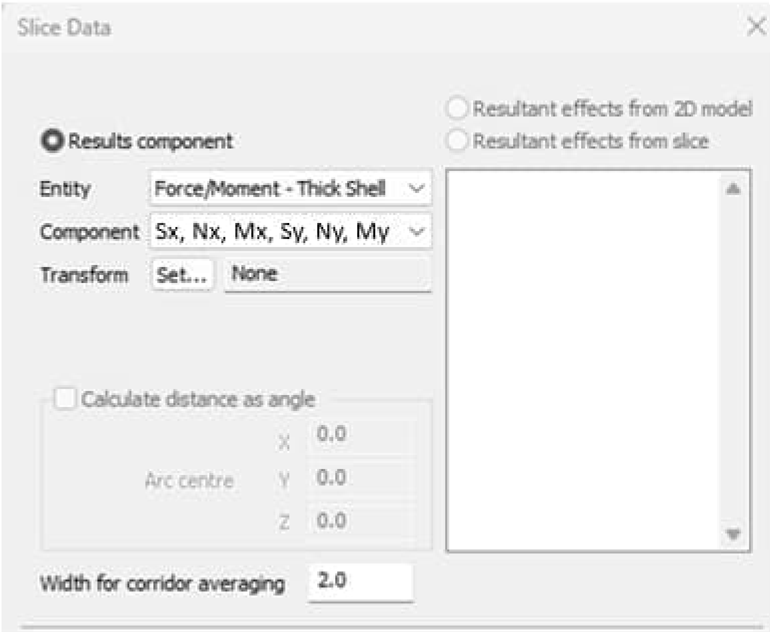
The +ve local z-direction defines the top surface.

2. Wood-Armer



Wood-Armer/Clark-Nielsen
Analysis category
3D
Reinforcement angle
90,0
y'
x
Wood-Armer
Clark-Nielsen
Wood-Armer
Clark-Nielsen
Design components
Minimised total weight/area of reinforcement
k factor for non-minimised reinforcement
1,0
Display assessment utilisations
x direction
y' direction
Top rebar moment resistance
0,0
0,0
Bottom rebar moment resistance
0,0
0,0
dx
dy'
dy'
dx
dx
dy'
Top
0,0
0,0
Bottom
0,0
0,0
Name
Wood-Armer
(1)

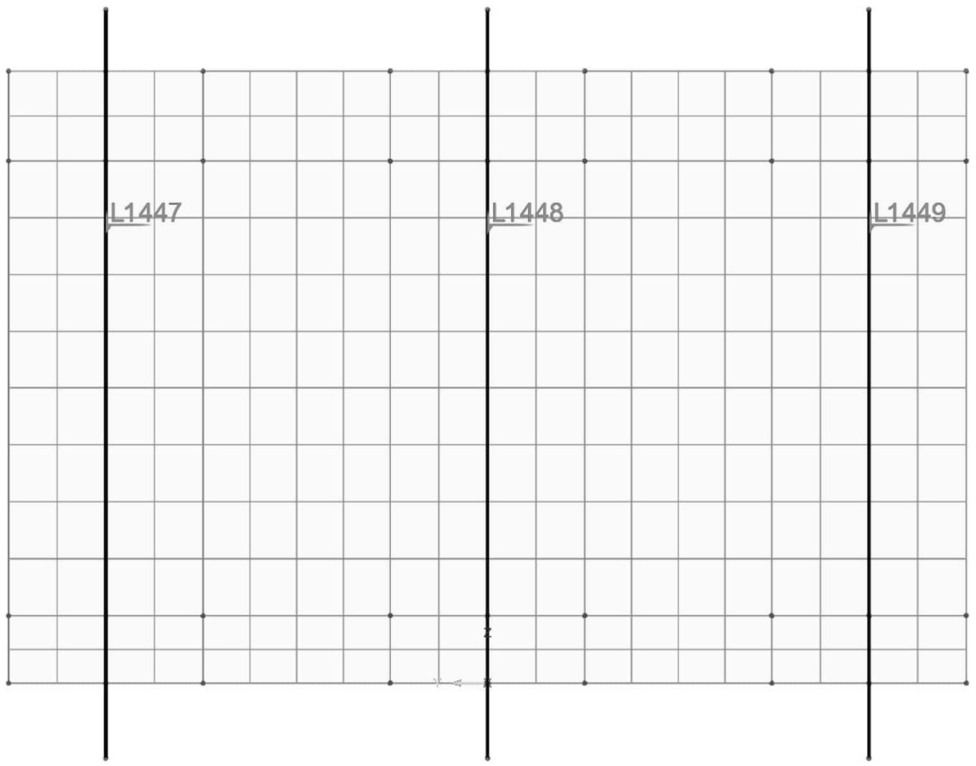
3. Slice Data



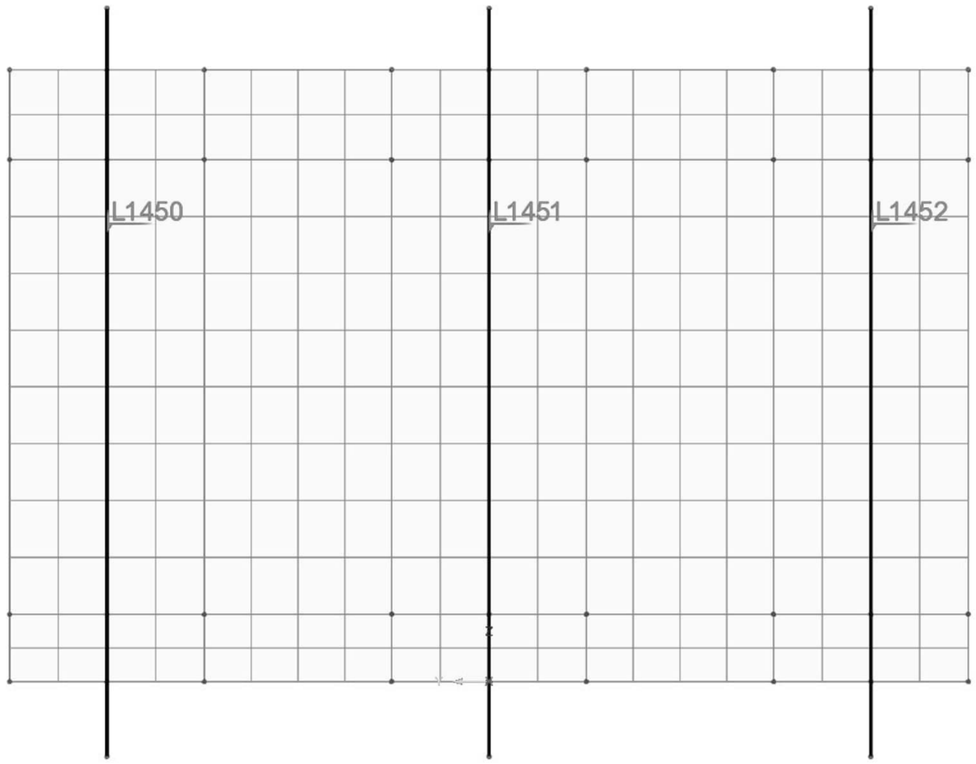
<u>Remark</u>
Width of corridor is the width over which load effect is averaged (± 1.0 m från resultline).

4. Definition result lines

Abutement 1:



Abutement 2:



Points:

Point	X coordinate	Y coordinate	Z coordinate
804	-16.8	5.1	9.0
805	-16.8	5.1	-1.0
806	-16.8	-5.1	9.0
807	-16.8	0	9.0
808	-16.8	0	-1.0
809	-16.8	-5.1	-1.0
810	16.8	-5.1	-1.0
811	16.8	0	-1.0
812	16.8	5.1	-1.0
813	16.8	-5.1	9.0
814	16.8	0	9.0
815	16.8	5.1	9.0

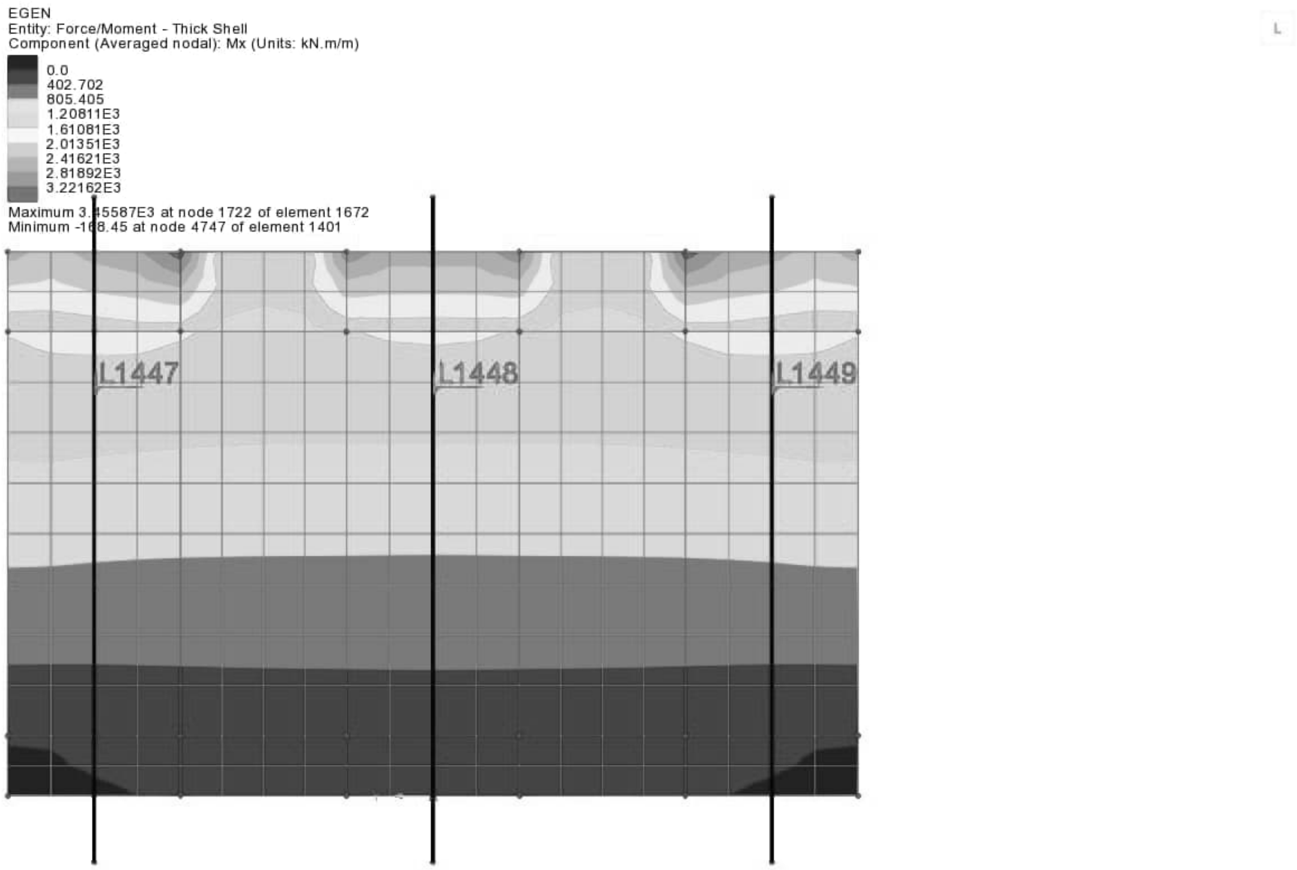
Lines:

Line	Points
1447	805;804
1448	808;807
1449	809;806
1450	812;815
1451	811;814
1452	810;813

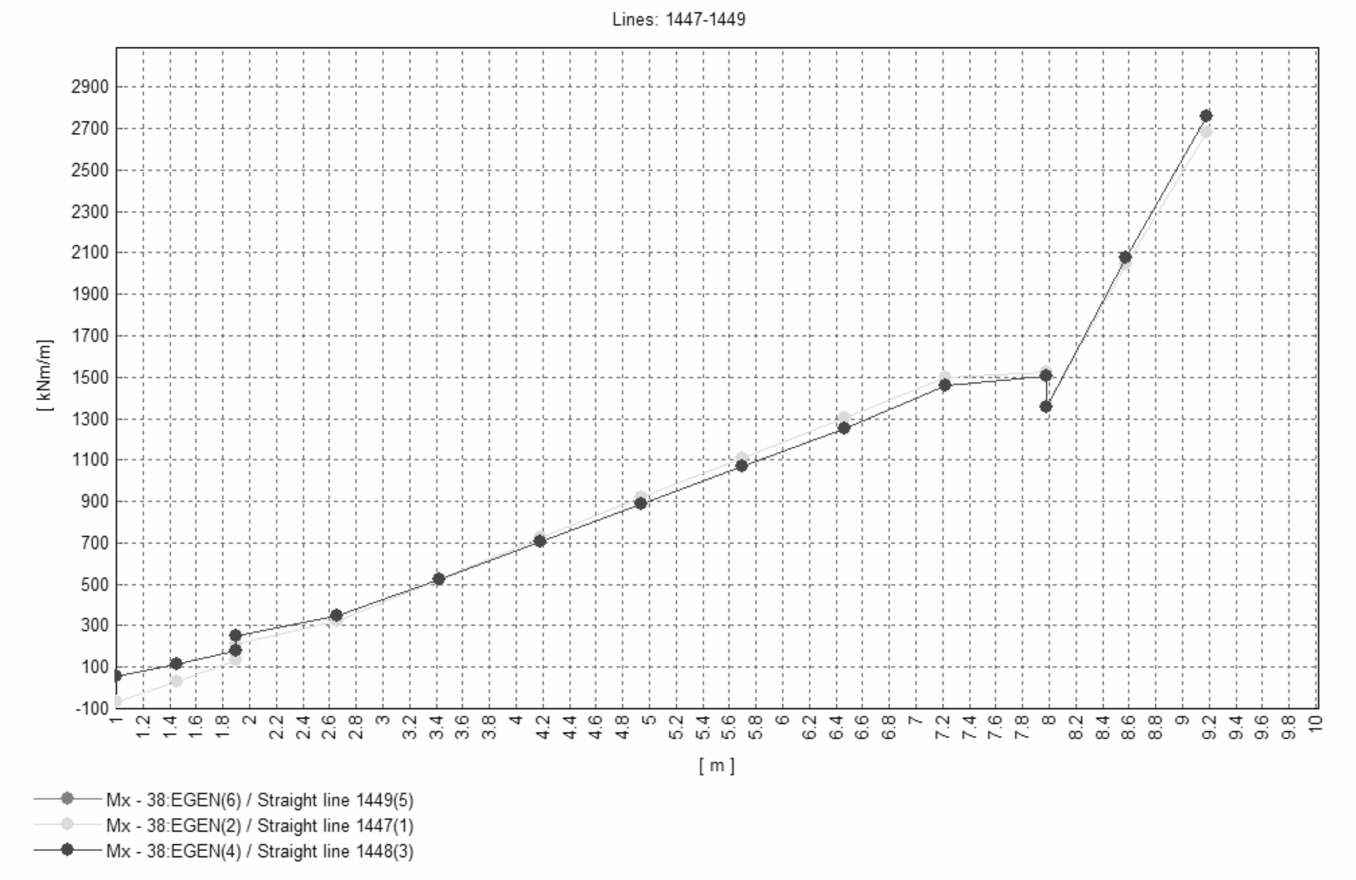
5. EGEN - Mx

5.1 ABUTEMENT 1

5.1.1 Contour



5.1.2 Diagram


Lines: 1447-1449
[kNm/m]
2900
2700
2500
2300
2100
1900
1700
1500
1300
1100
900
700
500
300
100
-100
1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10
[m]
Mx - 38:EGEN(6) / Straight line 1449(5)
Mx - 38:EGEN(2) / Straight line 1447(1)
Mx - 38:EGEN(4) / Straight line 1448(3)

5.1.3 Table

Line 1447:

s	Mx
0	-65
0.9	212
1.66	321
2.42	525
3.18	724
3.94	918
4.70	1109
5.46	1301
6.22	1501
6.98	1527
7.58	2047
8.18	2679
m	kNm/m

Line 1448:

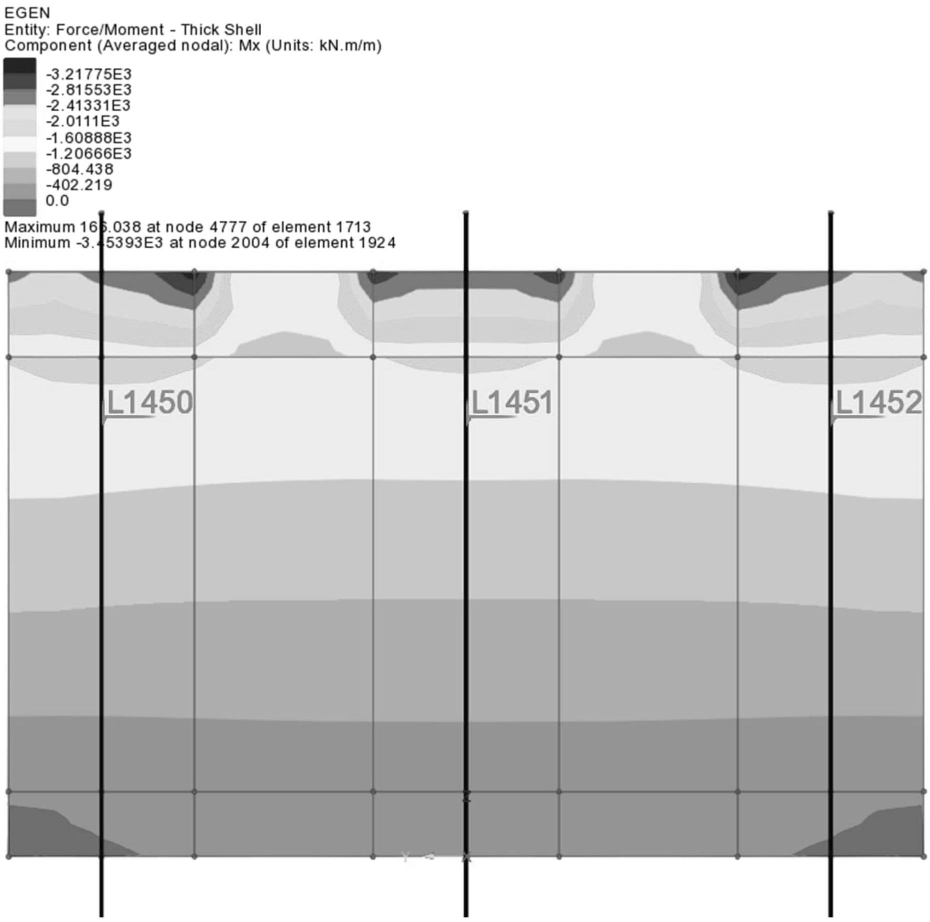
s	Mx
0	57
0.9	251
1.66	350
2.42	526
3.18	704
3.94	885
4.70	1067
5.46	1254
6.22	1461
6.98	1506
7.58	2077
8.18	2756
m	kNm/m

Line 1449:

s	Mx
0	-65
0.9	212
1.66	321
2.42	525
3.18	724
3.94	918
4.70	1109
5.46	1301
6.22	1501
6.98	1527
7.58	2047
8.18	2679
m	kNm/m

5.2 ABUTEMENT 2

5.2.1 Contour



5.2.2 Diagram

Compare abutement 1.

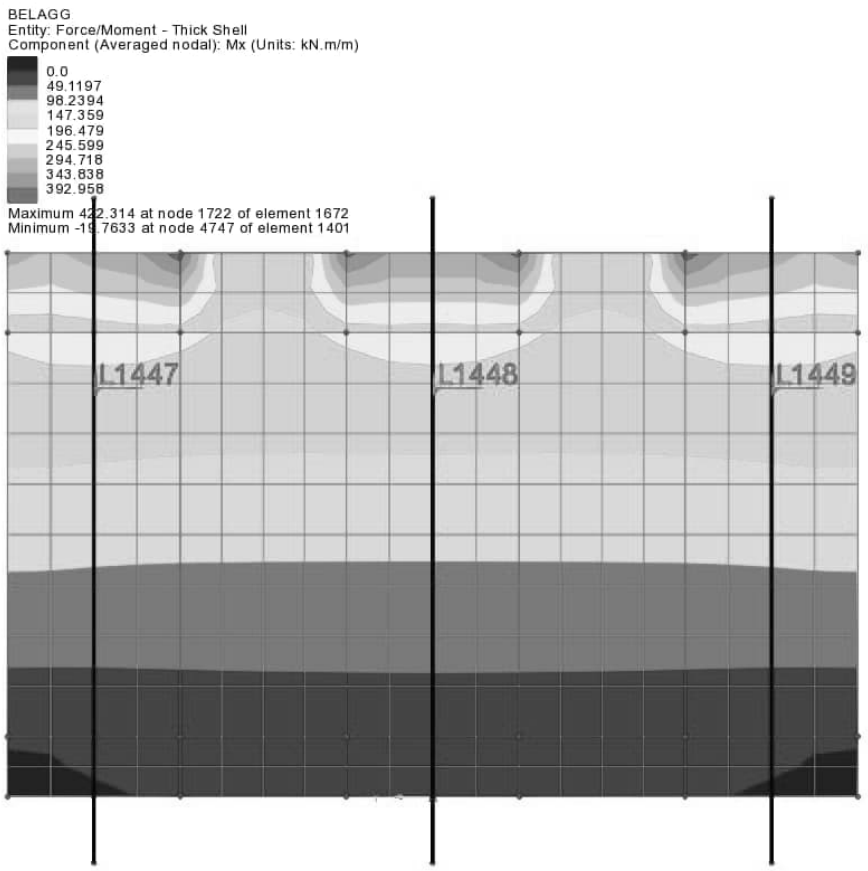
5.2.3 Table

Compare abutement 1.

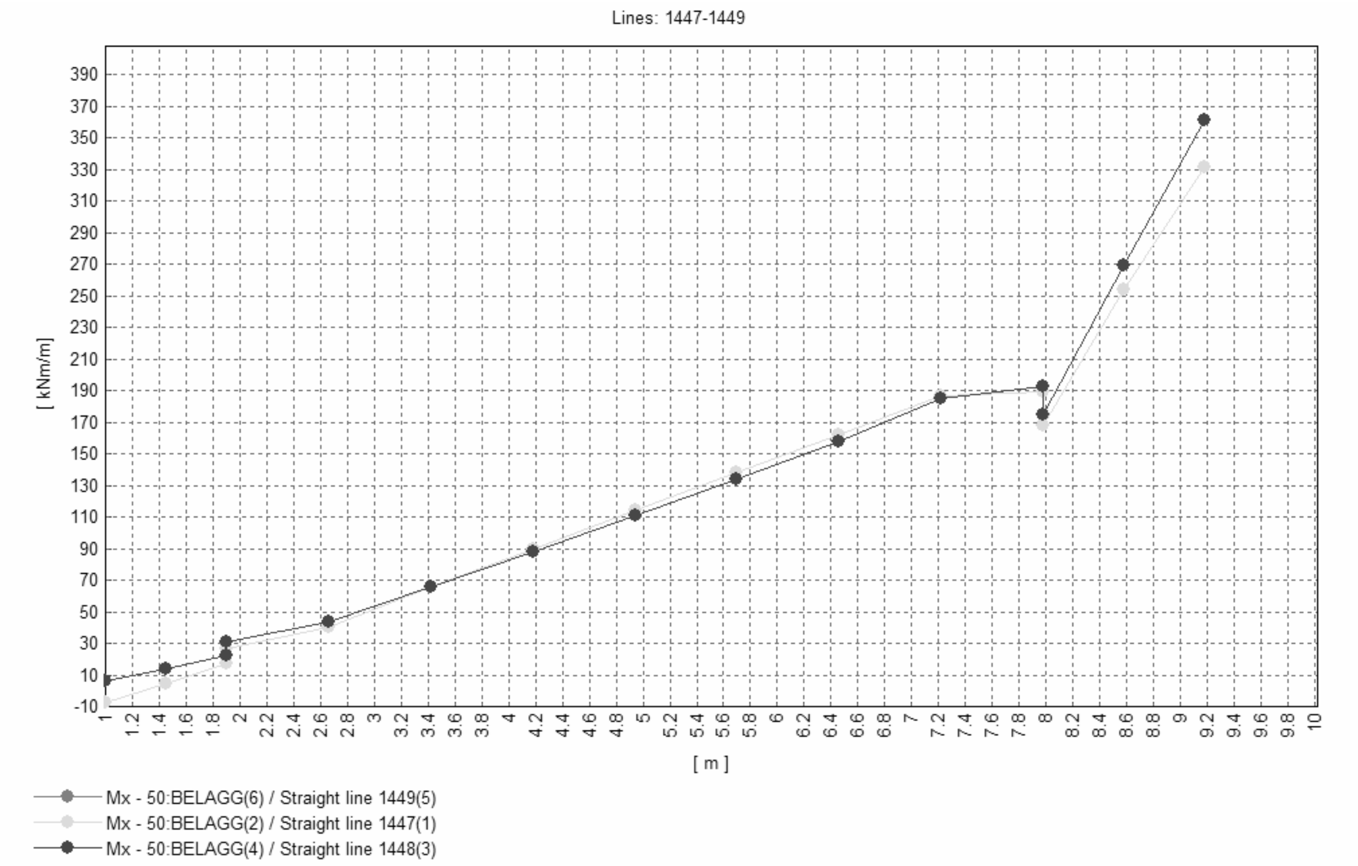
6. BELAGG - Mx

6.1 ABUTEMENT 1

6.1.1 Contour



6.1.2 Digram



Lines: 1447-1449
[kNm/m]
[m]
Mx - 50:BELAGG(6) / Straight line 1449(5)
Mx - 50:BELAGG(2) / Straight line 1447(1)
Mx - 50:BELAGG(4) / Straight line 1448(3)

6.1.3 Table

Line 1447:

s	Mx
0	-7
0.9	27
1.66	40
2.42	65
3.18	90
3.94	114
4.70	138
5.46	162
6.22	187
6.98	190
7.58	254
8.18	331
m	kNm/m

Line 1448:

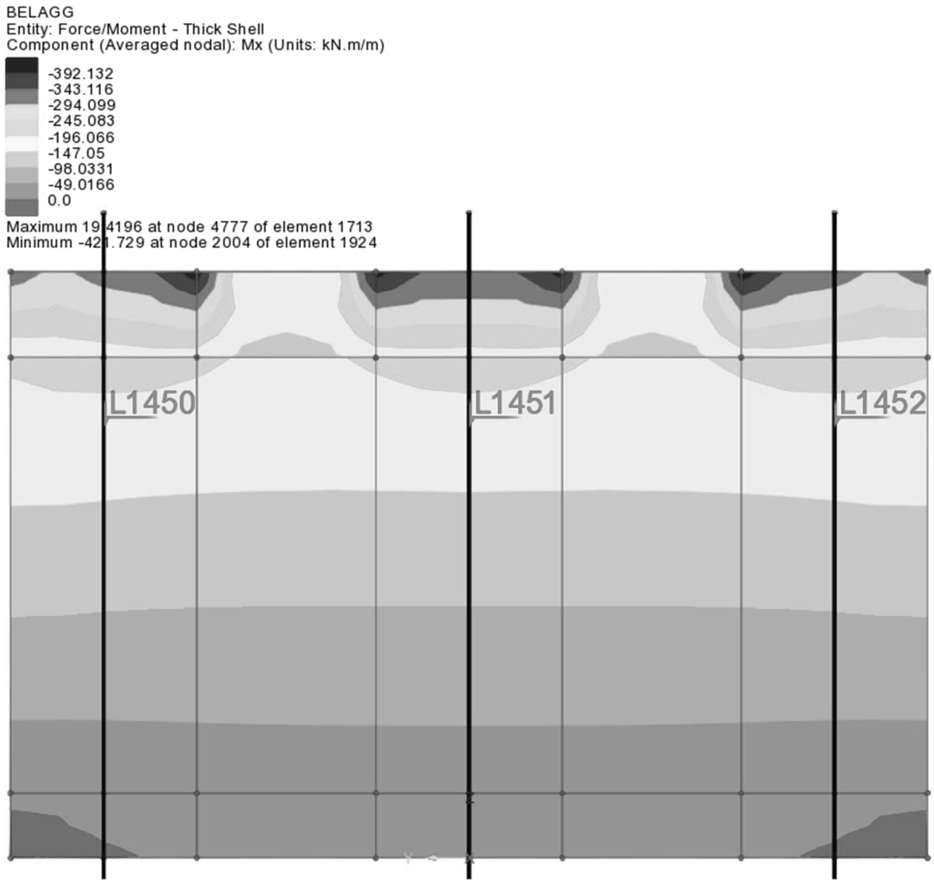
s	Mx
0	6
0.9	31
1.66	44
2.42	66
3.18	88
3.94	111
4.70	134
5.46	158
6.22	185
6.98	193
7.58	269
8.18	361
m	kNm/m

Line 1449:

s	Mx
0	-7
0.9	27
1.66	40
2.42	65
3.18	90
3.94	114
4.70	138
5.46	162
6.22	187
6.98	190
7.58	254
8.18	331
m	kNm/m

6.2 ABUTEMENT 2

6.2.1 Contour



6.2.2 Diagram

Compare abutement 1.

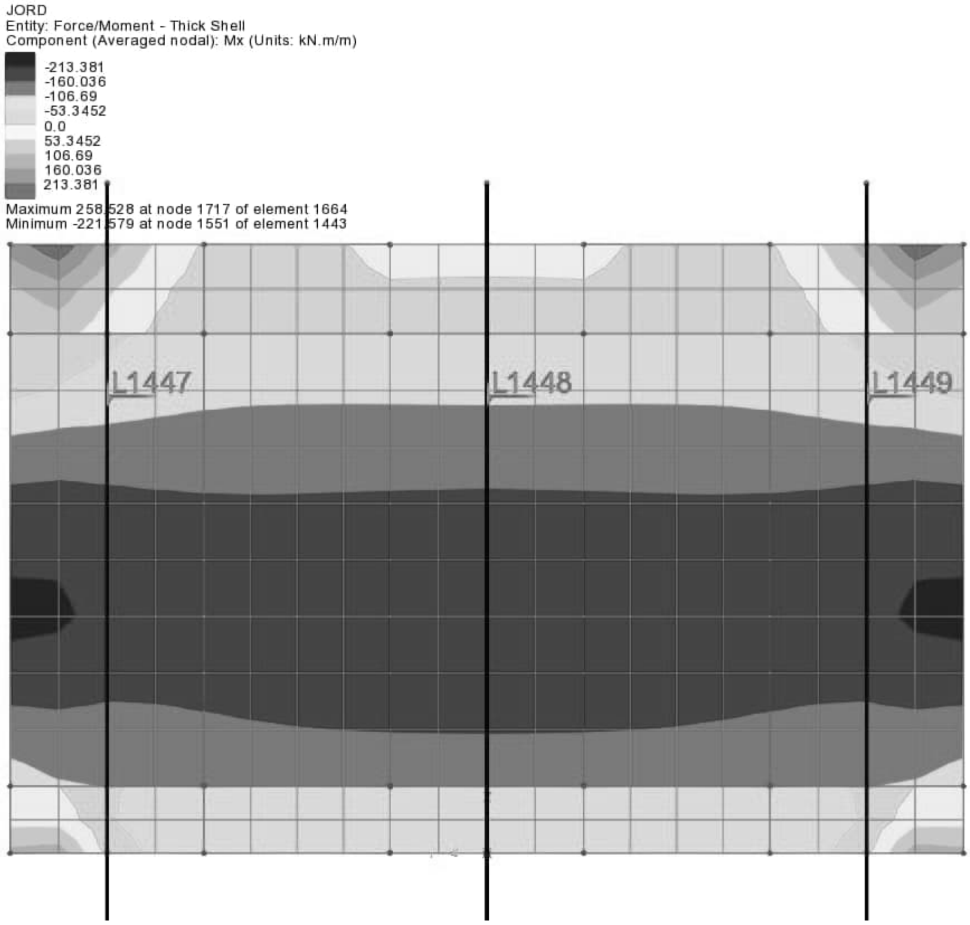
6.2.3 Table

Compare abutement 1.

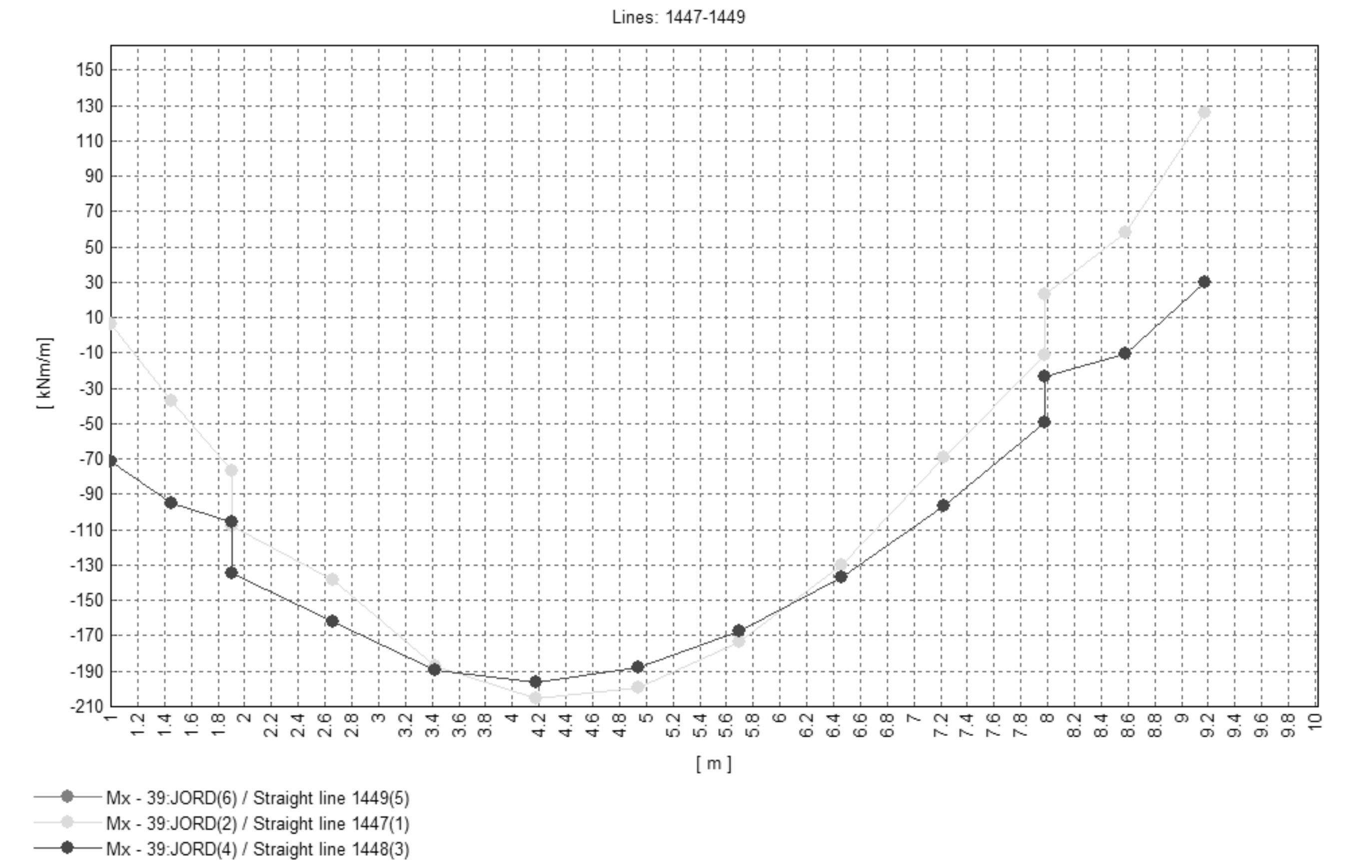
7. JORD - Mx

7.1 ABUTEMENT 1

7.1.1 Contour



7.1.2 Digram


Lines: 1447-1449
[kNm/m]
[m]
Mx - 39:JORD(6) / Straight line 1449(5)
Mx - 39:JORD(2) / Straight line 1447(1)
Mx - 39:JORD(4) / Straight line 1448(3)

7.1.3 Table

Line 1447:

s	Mx
0	7
0.9	-108
1.66	-138
2.42	-187
3.18	-205
3.94	-199
4.70	-174
5.46	-130
6.22	-69
6.98	-11
7.58	58
8.18	126
m	kNm/m

Line 1448:

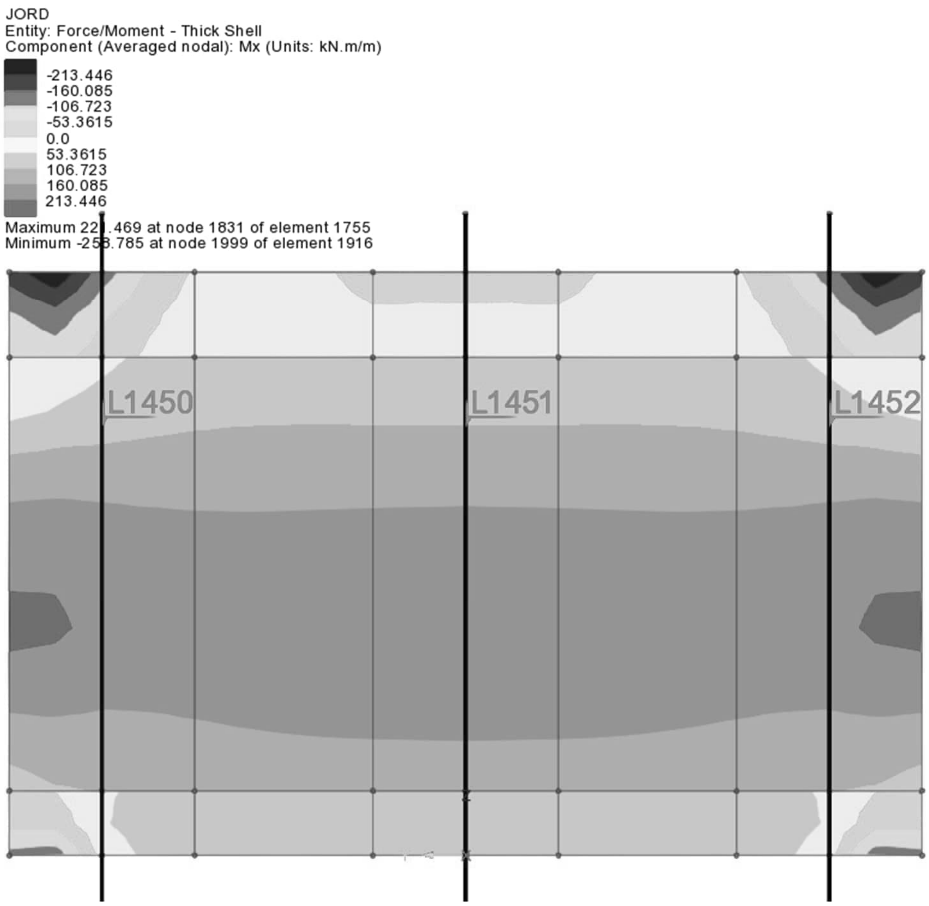
s	Mx
0	-71
0.9	-134
1.66	-162
2.42	-190
3.18	-197
3.94	-188
4.70	-167
5.46	-137
6.22	-96
6.98	-49
7.58	-10
8.18	30
m	kNm/m

Line 1449:

s	Mx
0	7
0.9	-108
1.66	-138
2.42	-187
3.18	-205
3.94	-199
4.70	-174
5.46	-130
6.22	-69
6.98	-11
7.58	58
8.18	126
m	kNm/m

7.2 ABUTEMENT 2

7.2.1 Contour



7.2.2 Digram

Compare abutement 1.

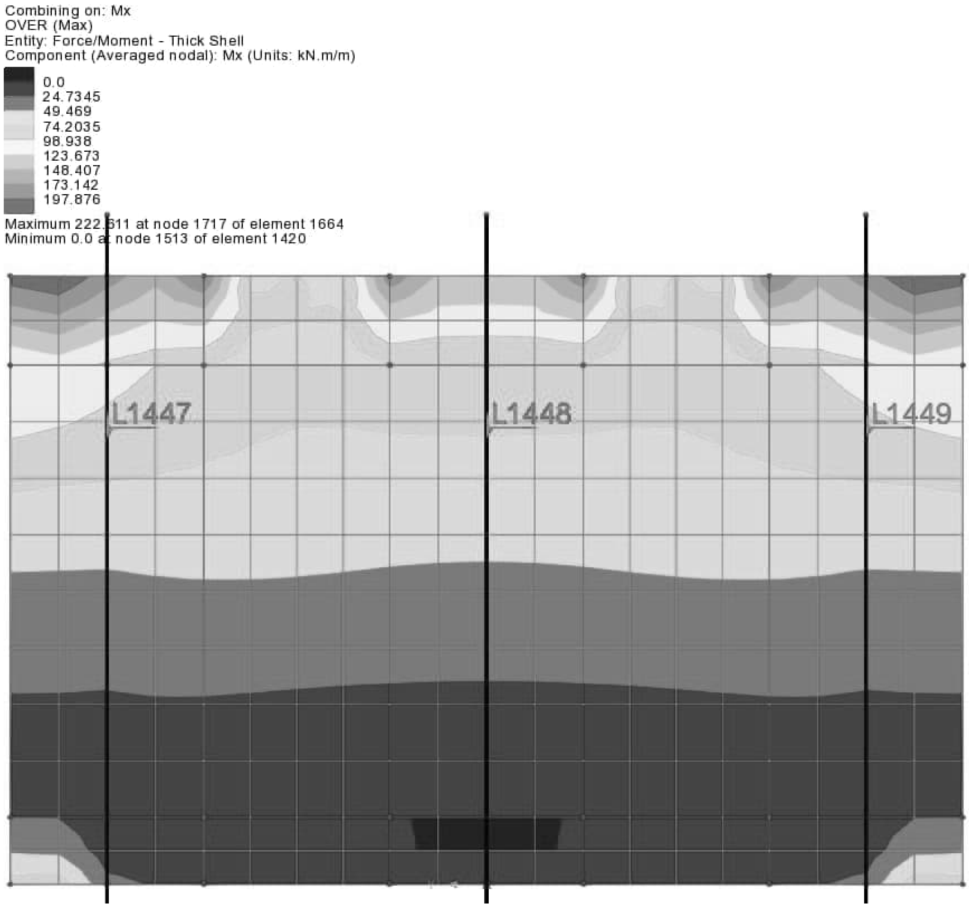
7.2.3 Table

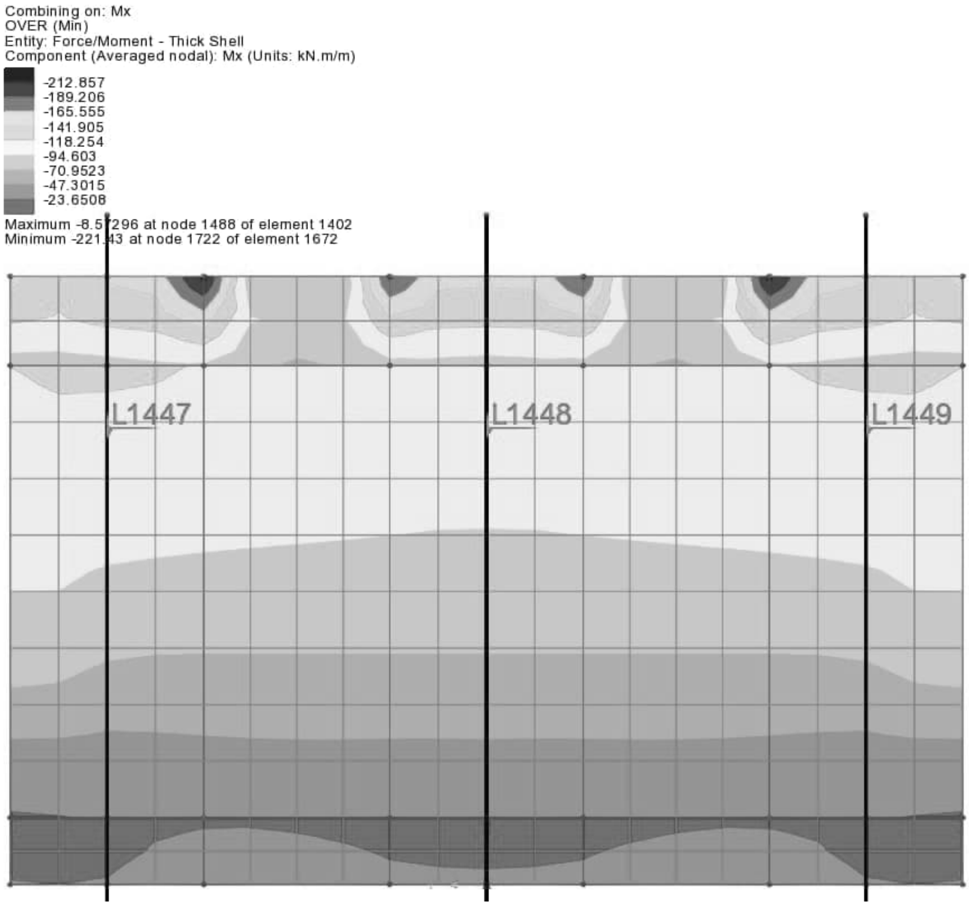
Compare abutement 1.

8. OVER Max/Min Mx

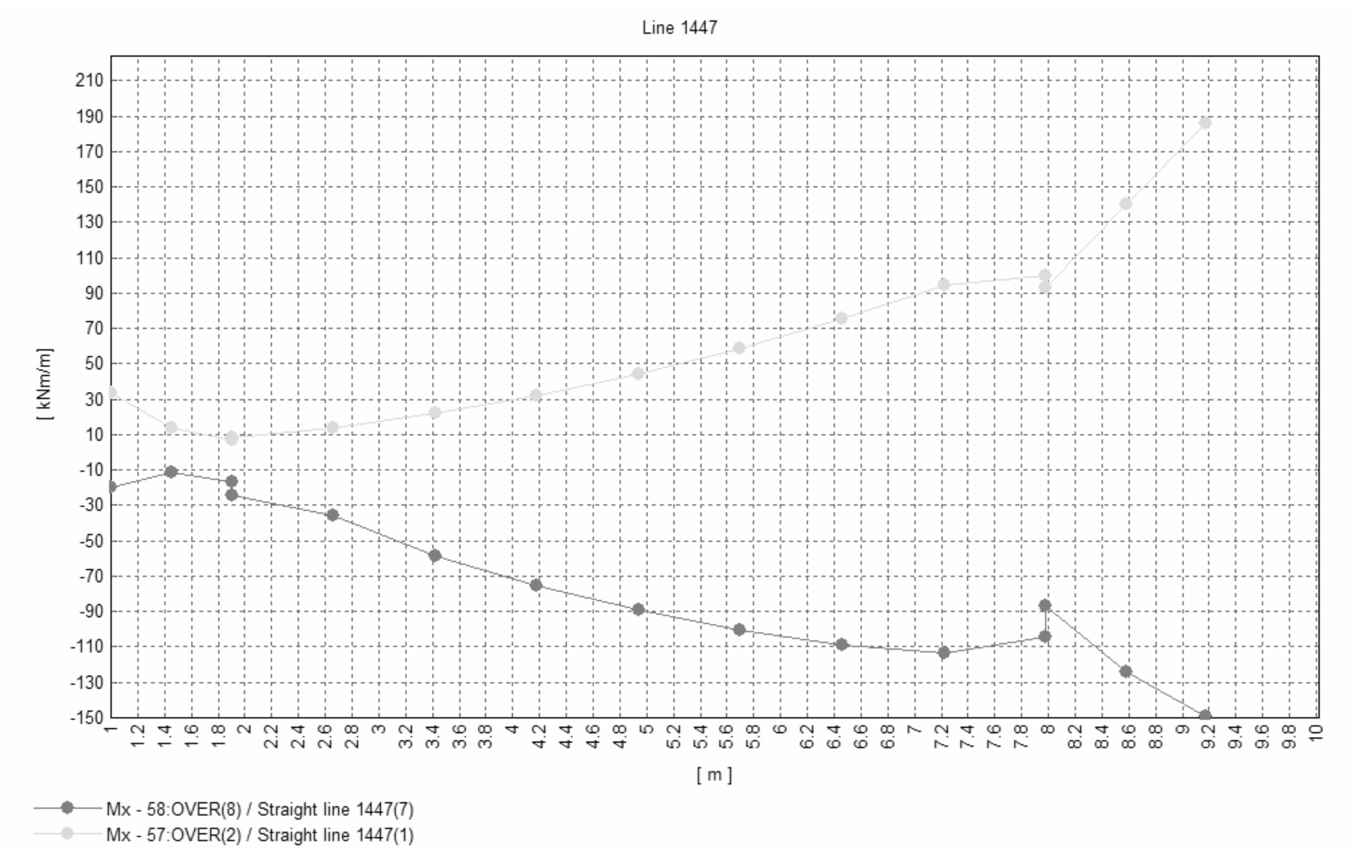
8.1 ABUTEMENT 1

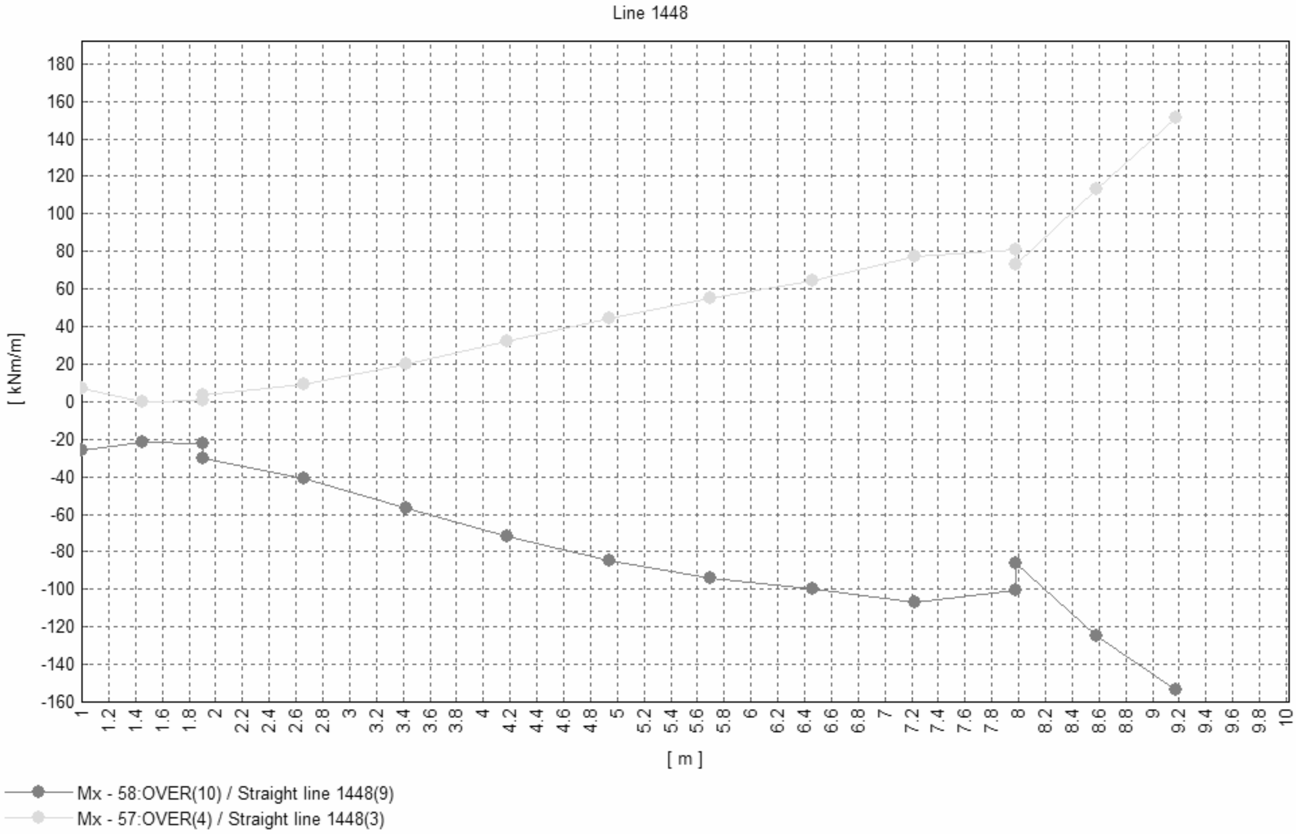
8.1.1 Contour



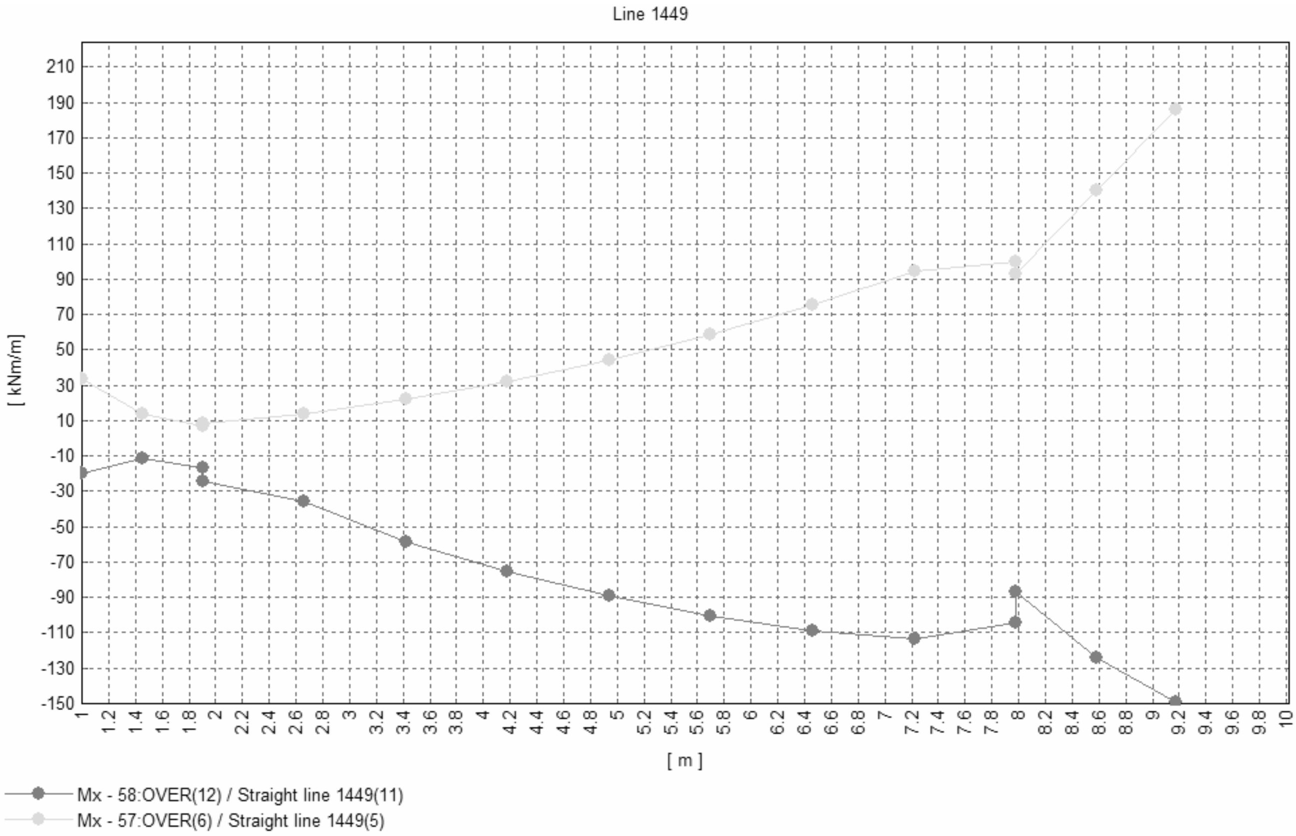

Combining on: Mx
OVER (Min)
Entity: Force/Moment - Thick Shell
Component (Averaged nodal): Mx (Units: kN.m/m)
-212.857
-189.206
-165.555
-141.905
-118.254
-94.603
-70.9523
-47.3015
-23.6508
Maximum -8.57296 at node 1488 of element 1402
Minimum -221.43 at node 1722 of element 1672
L1447
L1448
L1449

8.1.2 Digram


Line 1447
210
190
170
150
130
110
90
70
50
30
10
-10
-30
-50
-70
-90
-110
-130
-150
[kNm/m]
1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10
[m]
Mx - 58:OVER(8) / Straight line 1447(7)
Mx - 57:OVER(2) / Straight line 1447(1)



Line 1448
[kNm/m]
[m]
Mx - 58:OVER(10) / Straight line 1448(9)
Mx - 57:OVER(4) / Straight line 1448(3)



Line 1449
[kNm/m]
[m]
Mx - 58:OVER(12) / Straight line 1449(11)
Mx - 57:OVER(6) / Straight line 1449(5)

8.1.3 Table

Line 1447:

s	Max Mx	Min Mx
0	33	-20
0.9	9	-25
1.66	14	-36
2.42	22	-58
3.18	32	-75
3.94	44	-89
4.70	59	-101
5.46	76	-109
6.22	95	-114
6.98	100	-104
7.58	140	-124
8.18	186	-149
m	kNm/m	kNm/m

Line 1448:

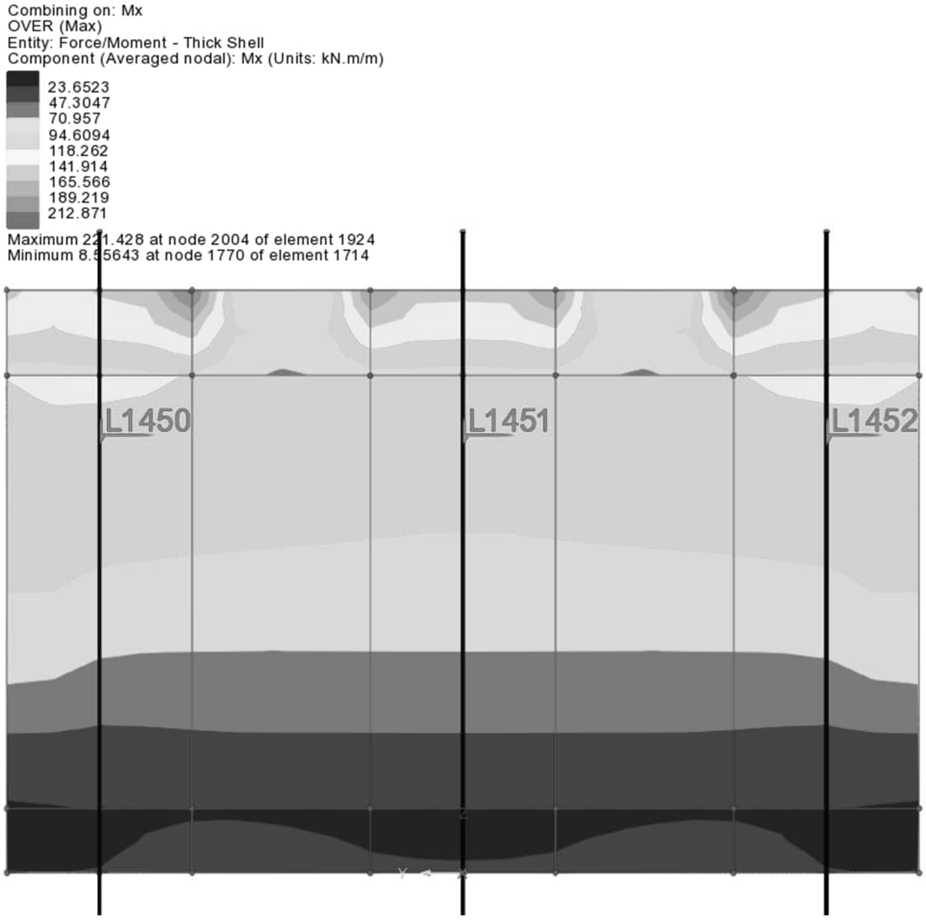
s	Max Mx	Min Mx
0	7	-26
0.9	4	-30
1.66	9	-41
2.42	20	-57
3.18	32	-72
3.94	44	-84
4.70	55	-94
5.46	64	-100
6.22	77	-107
6.98	81	-101
7.58	113	-125
8.18	151	-153
m	kNm/m	kNm/m

Line 1449:

s	Max Mx	Min Mx
0	33	-20
0.9	9	-25
1.66	14	-36
2.42	22	-58
3.18	32	-75
3.94	44	-89
4.70	59	-101
5.46	76	-109
6.22	95	-114
6.98	100	-104
7.58	140	-124
8.18	186	-149
m	kNm/m	kNm/m

8.2 ABUTEMENT 2

8.2.1 Contour



8.2.2 Digram

Compare abutement 1.

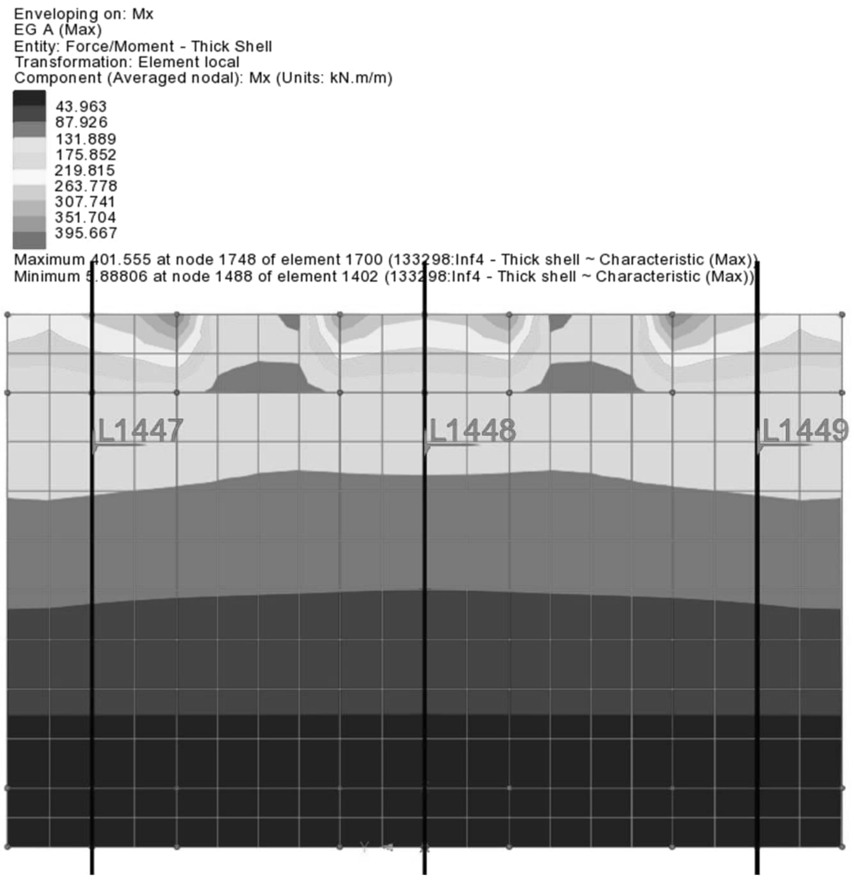
8.2.3 Table

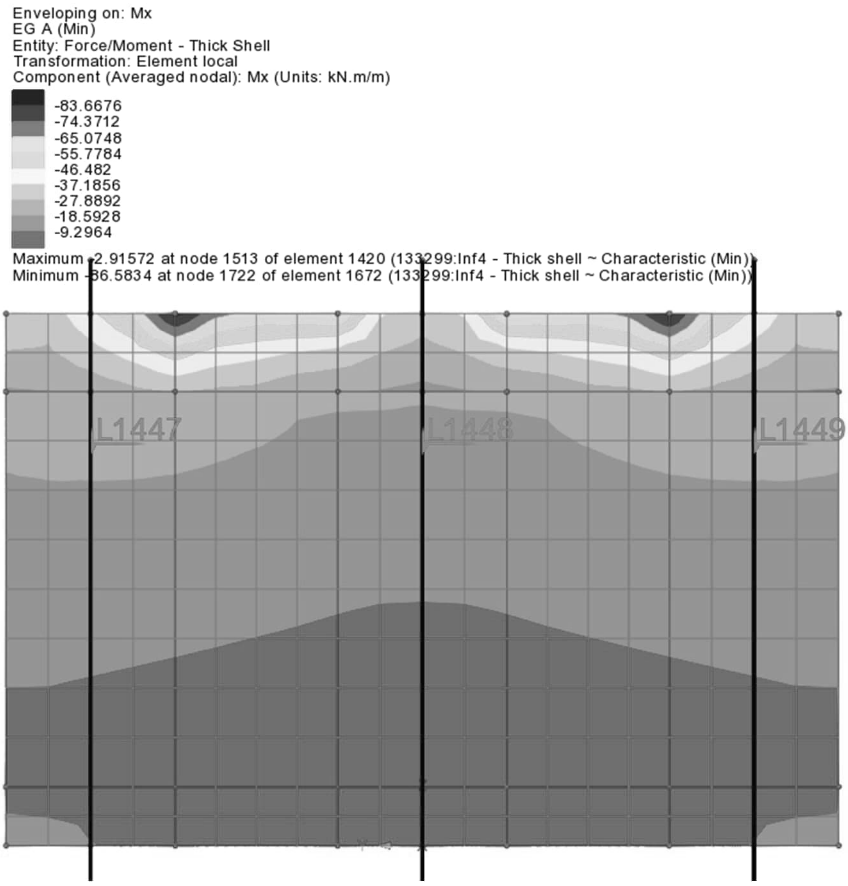
Compare abutement 1.

9. EG A Max/Min Mx

9.1 ABUTEMENT 1

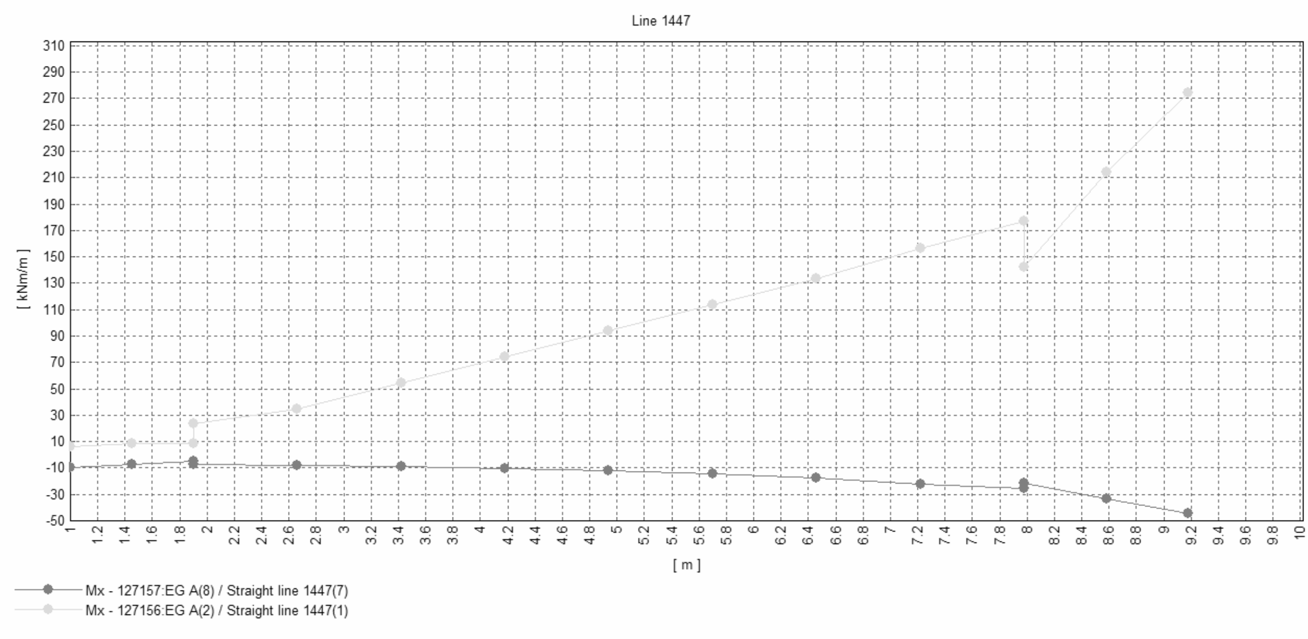
9.1.1 Contour



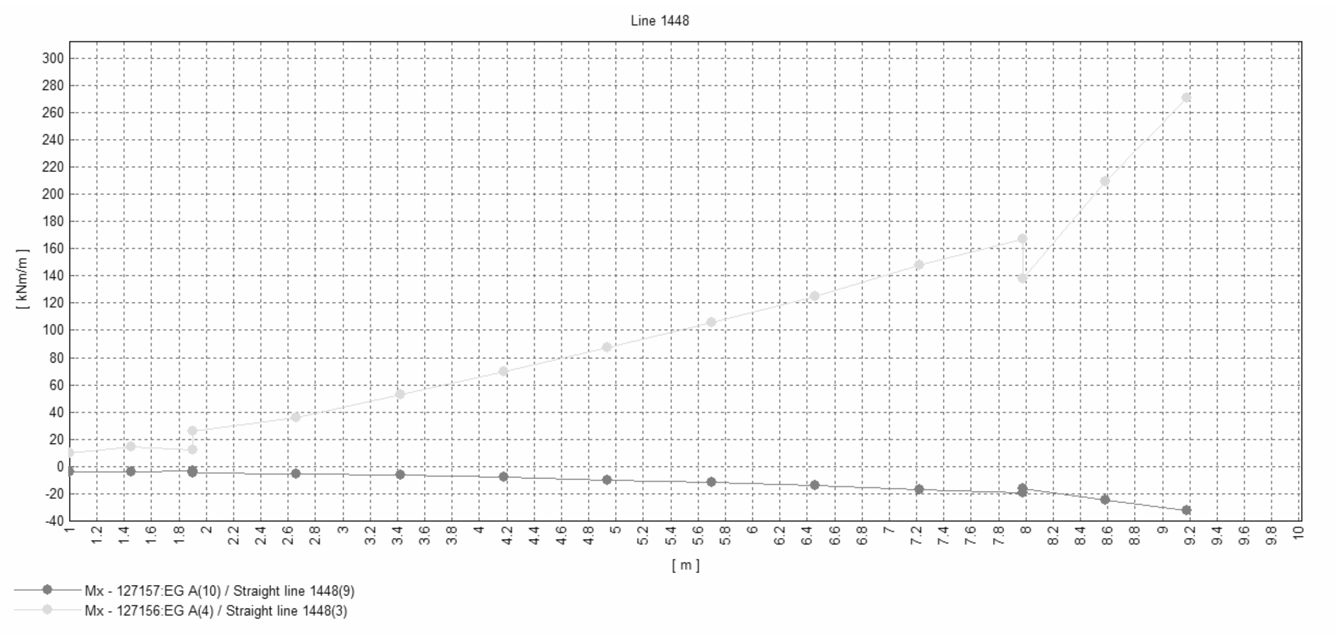


Enveloping on: Mx
EG A (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)
-83.6676
-74.3712
-65.0748
-55.7784
-46.482
-37.1856
-27.8892
-18.5928
-9.2964
Maximum 2.91572 at node 1513 of element 1420 (133299:Inf4 - Thick shell ~ Characteristic (Min))
Minimum -86.5834 at node 1722 of element 1672 (133299:Inf4 - Thick shell ~ Characteristic (Min))
L1447
L1448
L1449

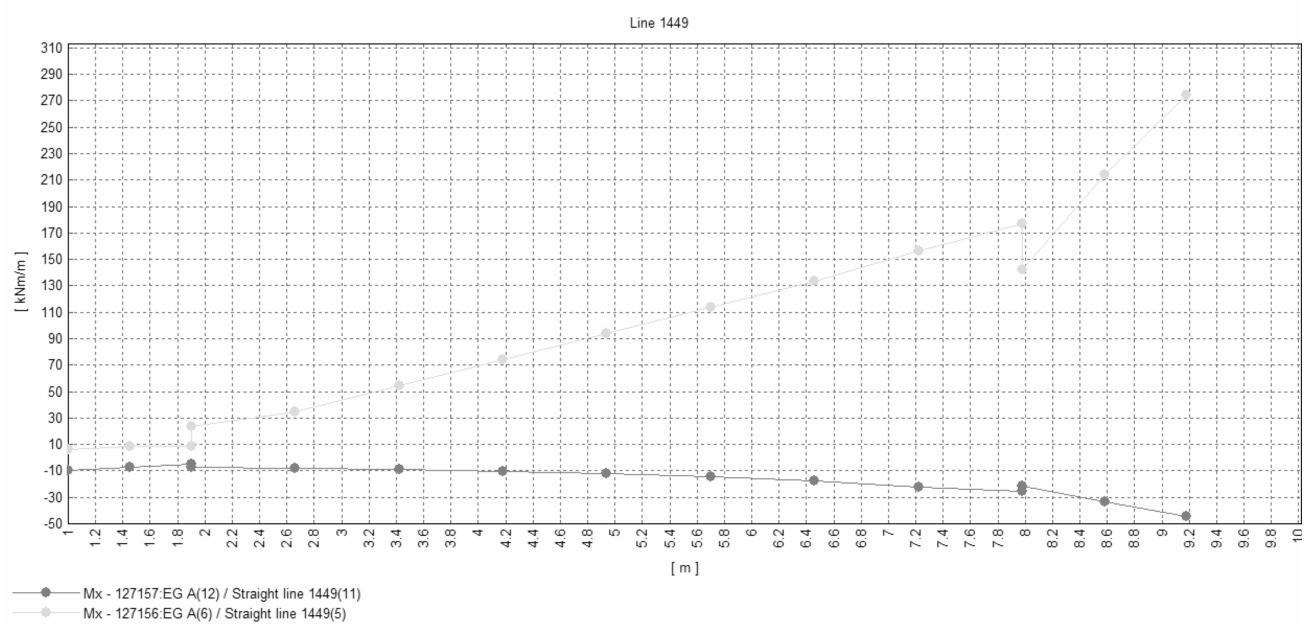
9.1.2 Digram



Line 1447
[kNm/m]
[m]
Mx - 127157:EG A(8) / Straight line 1447(7)
Mx - 127156:EG A(2) / Straight line 1447(1)



Line 1448
[kNm/m]
[m]
Mx - 127157:EG A(10) / Straight line 1448(9)
Mx - 127156:EG A(4) / Straight line 1448(3)


Line 1449
310
290
270
250
230
210
190
170
150
130
110
90
70
50
30
10
-10
-30
-50
[kNm/m]
1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10
[m]
Mx - 127157:EG A(12) / Straight line 1449(11)
Mx - 127156:EG A(6) / Straight line 1449(5)

-

9.1.3 Table

Line 1447:

s	Max Mx	Min Mx
0	6	-10
0.9	24	-7
1.66	34	-8
2.42	54	-9
3.18	74	-10
3.94	94	-12
4.70	113	-15
5.46	134	-18
6.22	157	-22
6.98	177	-25
7.58	214	-34
8.18	274	-45
m	kNm/m	kNm/m

Line 1448 :

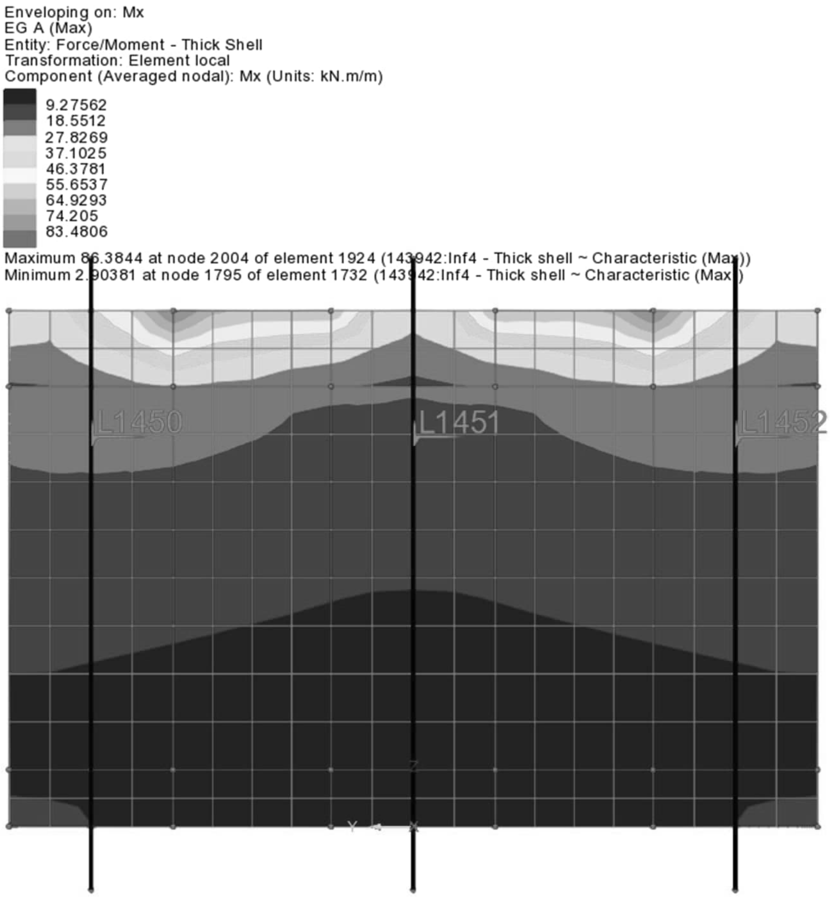
s	Max Mx	Min Mx
0	10	-4
0.9	26	-5
1.66	36	-5
2.42	53	-6
3.18	70	-8
3.94	88	-10
4.70	106	-12
5.46	125	-14
6.22	148	-17
6.98	167	-19
7.58	210	-25
8.18	271	-32
m	kNm/m	kNm/m

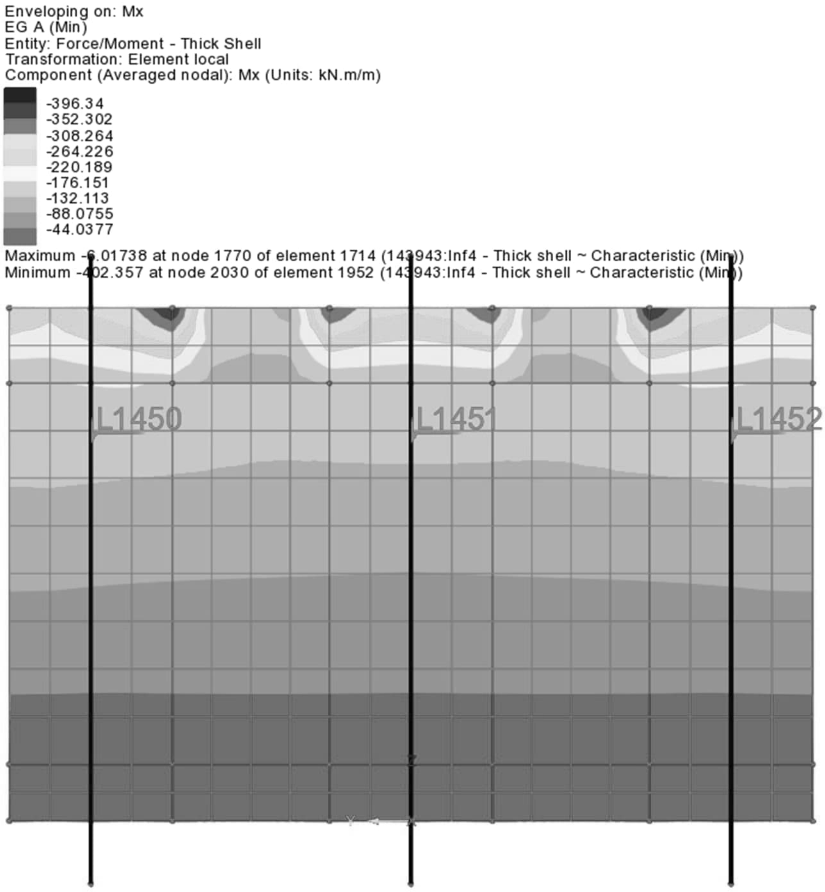
Line 1449:

s	Max Mx	Min Mx
0	6	-10
0.9	24	-7
1.66	34	-8
2.42	54	-9
3.18	74	-10
3.94	94	-12
4.70	113	-15
5.46	134	-18
6.22	157	-22
6.98	177	-25
7.58	214	-34
8.18	274	-45
m	kNm/m	kNm/m

9.2 ABUTEMENT 2

9.2.1 Contour





Enveloping on: Mx
EG A (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)
-396.34
-352.302
-308.264
-264.226
-220.189
-176.151
-132.113
-88.0755
-44.0377
Maximum -6.01738 at node 1770 of element 1714 (143943:Inf4 - Thick shell ~ Characteristic (Min))
Minimum -402.357 at node 2030 of element 1952 (143943:Inf4 - Thick shell ~ Characteristic (Min))
L1450
L1451
L1452

9.2.2 Digram

Compare abutement 1.

9.2.3 Table

Compare abutement 1.

10. EG B – Max/Min Mx

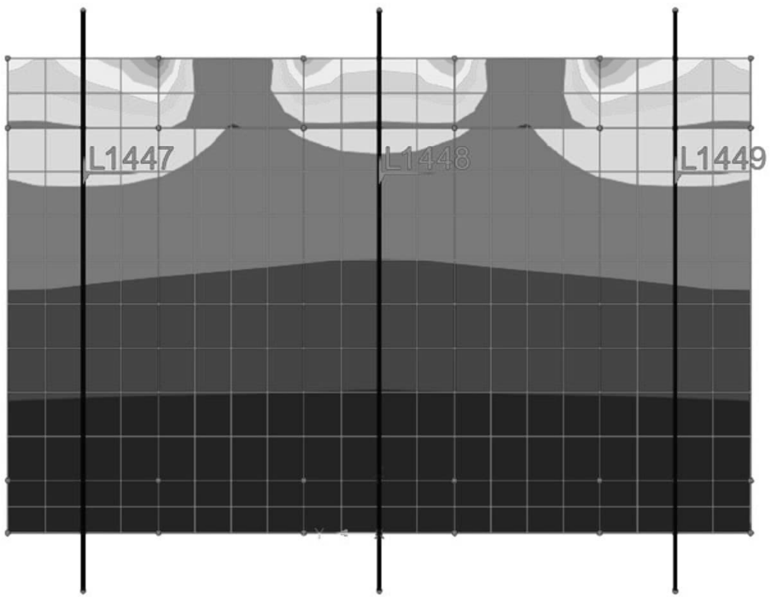
10.1 ABUTEMENT 1

10.1.1 Contour

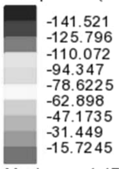
Enveloping on: Mx
EG B (Max)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)

192.345
384.691
577.036
769.382
961.727
1.15407E3
1.34642E3
1.53876E3
1.73111E3

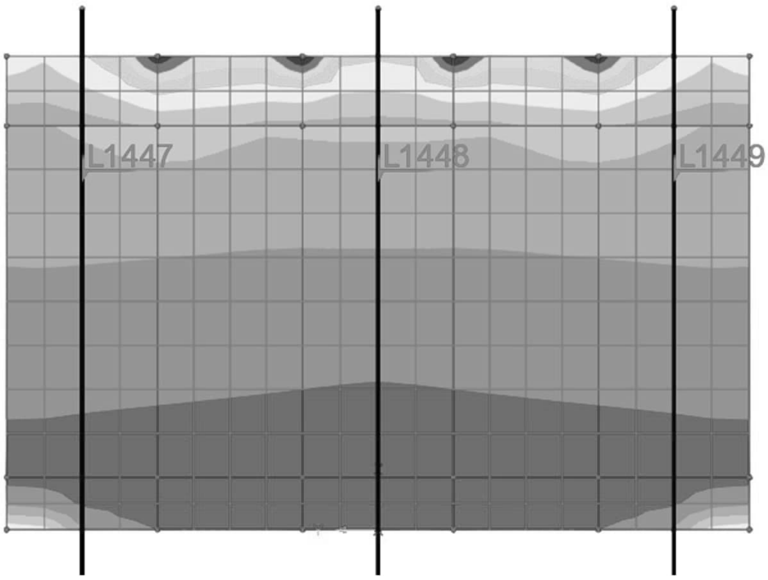
Maximum 1.74554E3 at node 1722 of element 1672 (133300:Inf4 - Thick shell ~ Characteristic (Max))
Minimum 14.4347 at node 1493 of element 1401 (133300:Inf4 - Thick shell ~ Characteristic (Max))



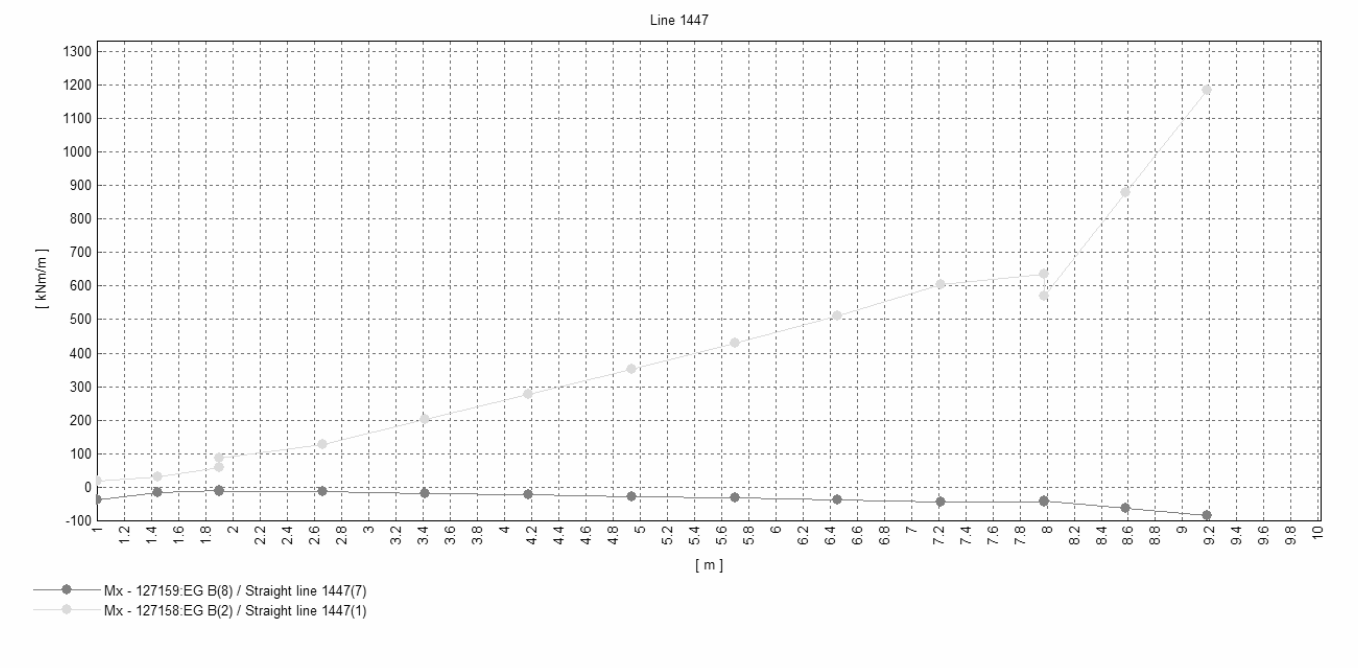
Enveloping on: Mx
EG B (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)

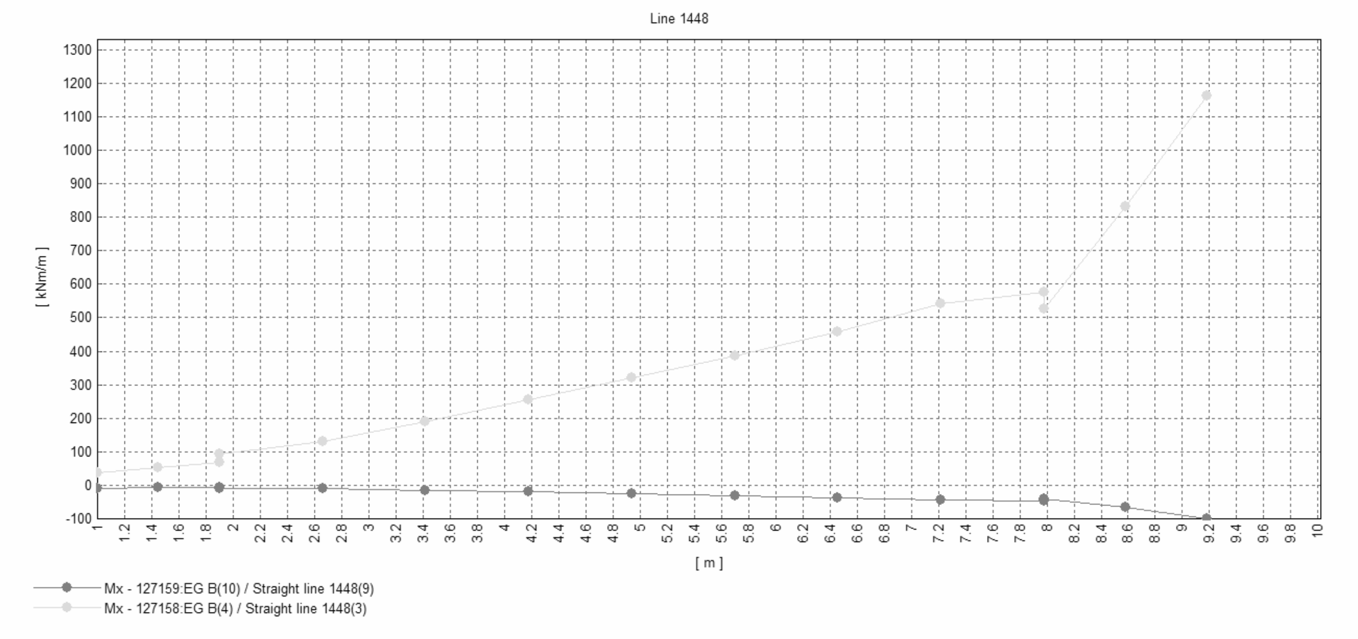


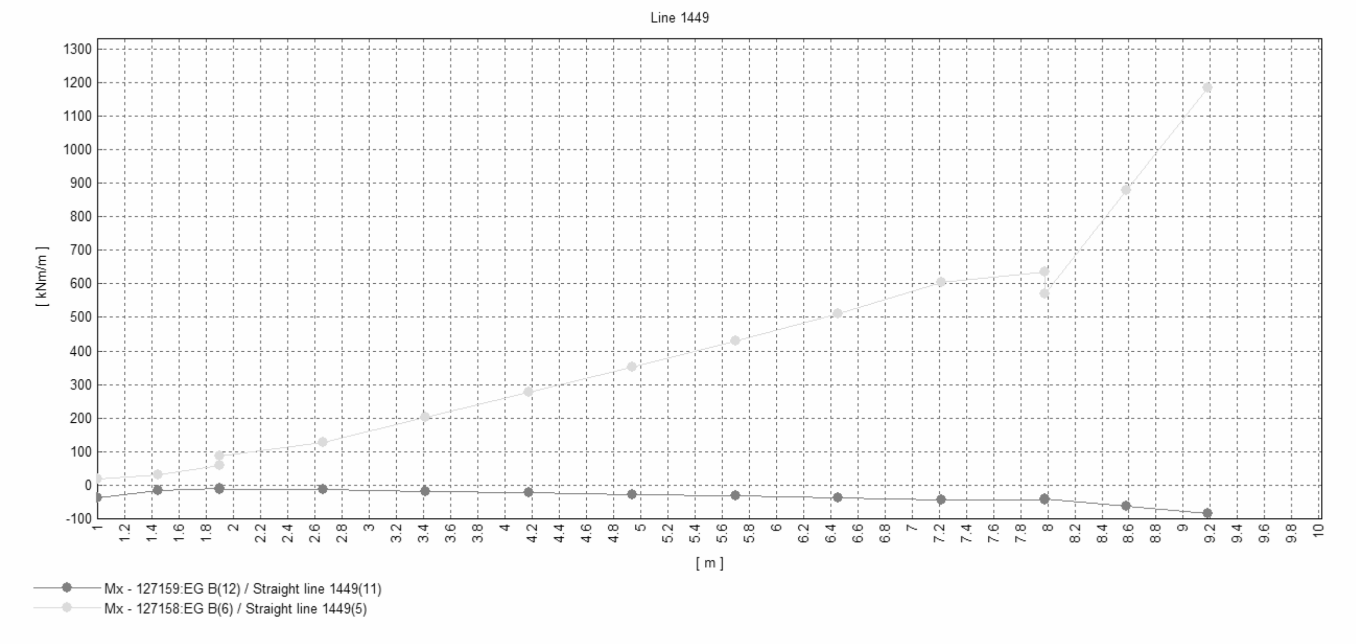
Maximum -4.47579 at node 1513 of element 1420 (133301:Inf4 - Thick shell ~ Characteristic (Min))
Minimum -145.996 at node 1728 of element 1680 (133301:Inf4 - Thick shell ~ Characteristic (Min))



10.1.2 Diagram






Line 1449
[kNm/m]
[m]
Mx - 127159:EG B(12) / Straight line 1449(11)
Mx - 127158:EG B(6) / Straight line 1449(5)

10.1.3 Table

Line 1447:

s	Max Mx	Min Mx
0	18	-39
0.9	88	-12
1.66	202	-18
2.42	88	-12
3.18	277	-22
3.94	352	-27
4.70	430	-32
5.46	512	-38
6.22	605	-44
6.98	635	-45
7.58	605	-44
8.18	1183	-85
m	kNm/m	kNm/m

Line 1448:

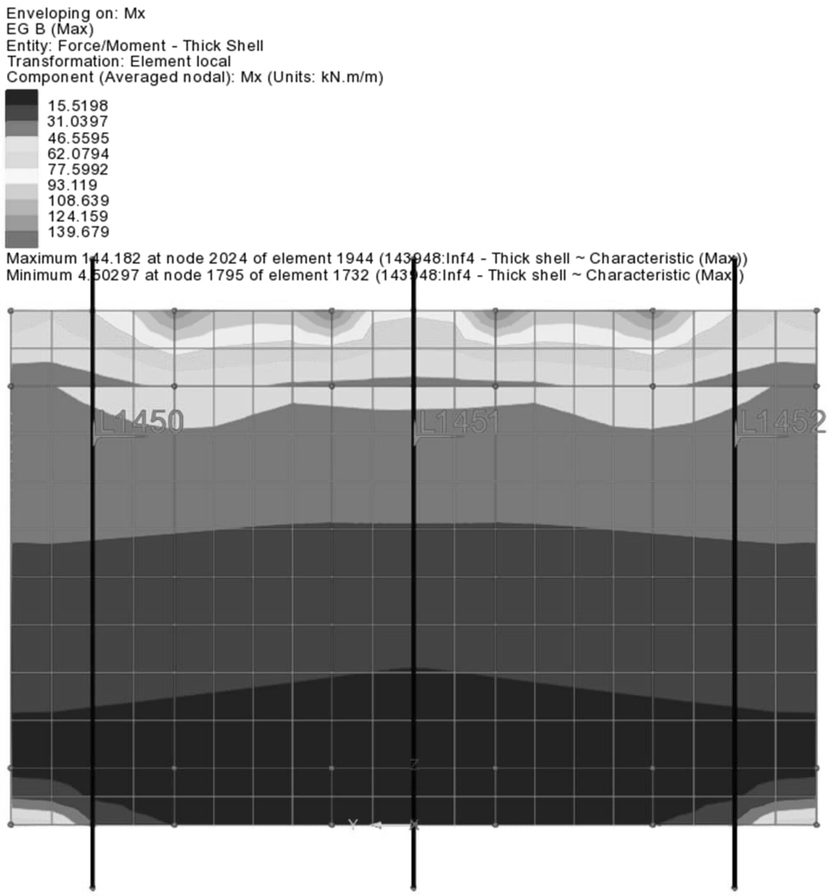
s	Max Mx	Min Mx
0	36	-10
0.9	95	-9
1.66	190	-15
2.42	95	-9
3.18	254	-20
3.94	319	-25
4.70	387	-30
5.46	457	-36
6.22	541	-44
6.98	578	-46
7.58	541	-44
8.18	1161	-99
m	kNm/m	kNm/m

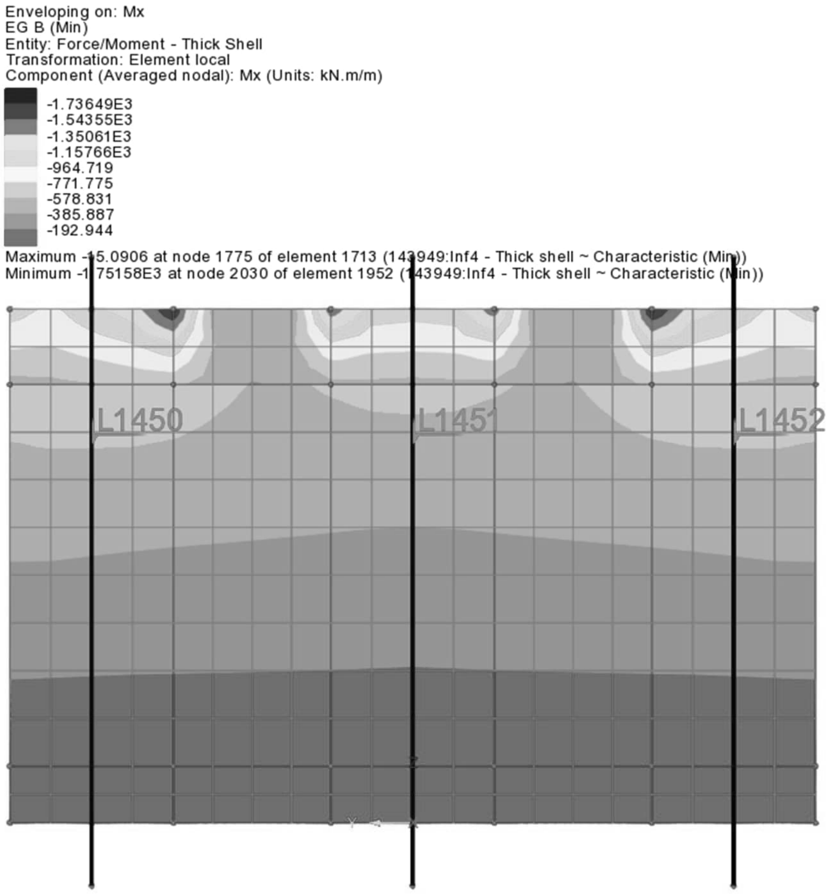
Line 1449:

s	Max Mx	Min Mx
0	18	-39
0.9	88	-12
1.66	202	-18
2.42	88	-12
3.18	277	-22
3.94	352	-27
4.70	430	-32
5.46	512	-38
6.22	605	-44
6.98	635	-45
7.58	605	-44
8.18	1183	-85
m	kNm/m	kNm/m

10.2 ABUTEMENT 2

10.2.1 Contour





Enveloping on: Mx
EG B (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)
-1.73649E3
-1.54355E3
-1.35061E3
-1.15766E3
-964.719
-771.775
-578.831
-385.887
-192.944
L1450
L1451
L1452

10.2.2 Digram

Compare abutement 1.

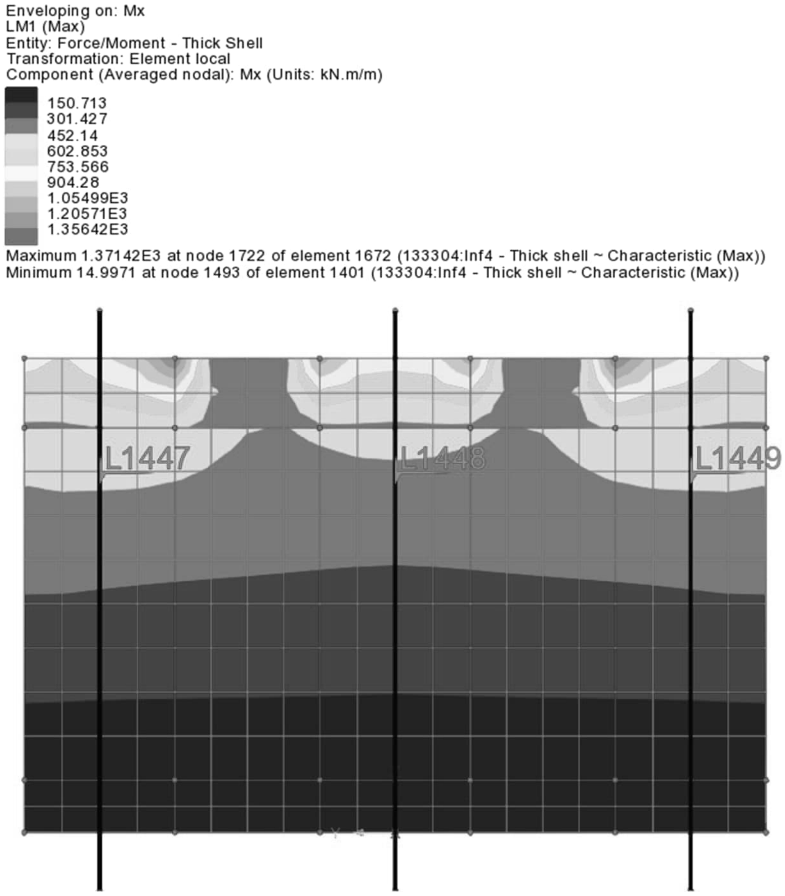
10.2.3 Table

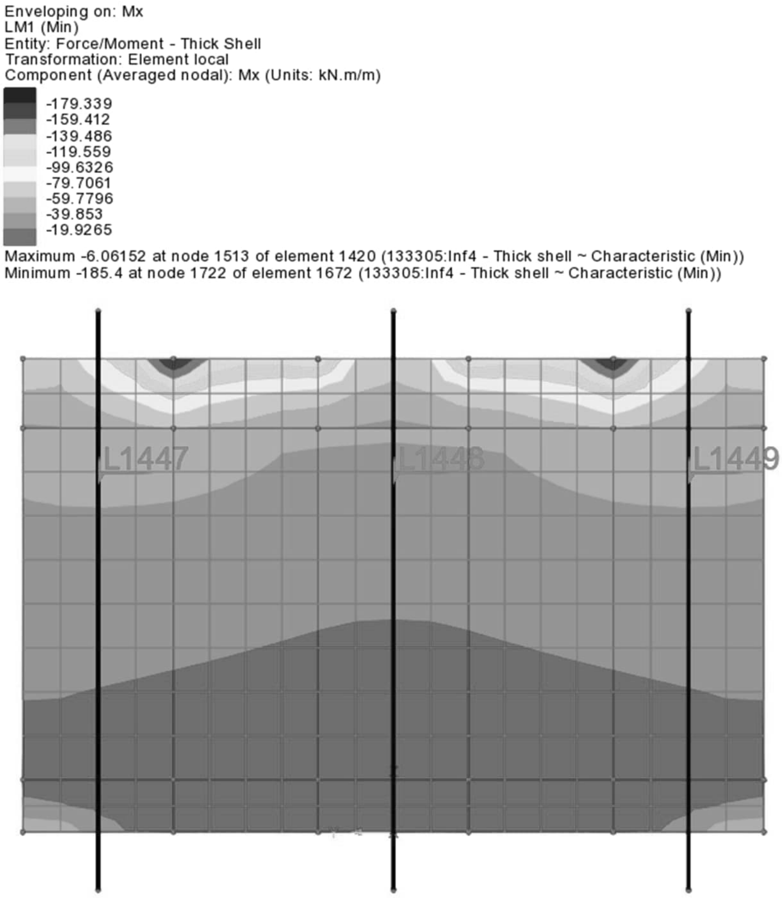
Compare abutement 1.

11. LM 1 – Max/Min Mx

11.1 ABUTEMENT 1

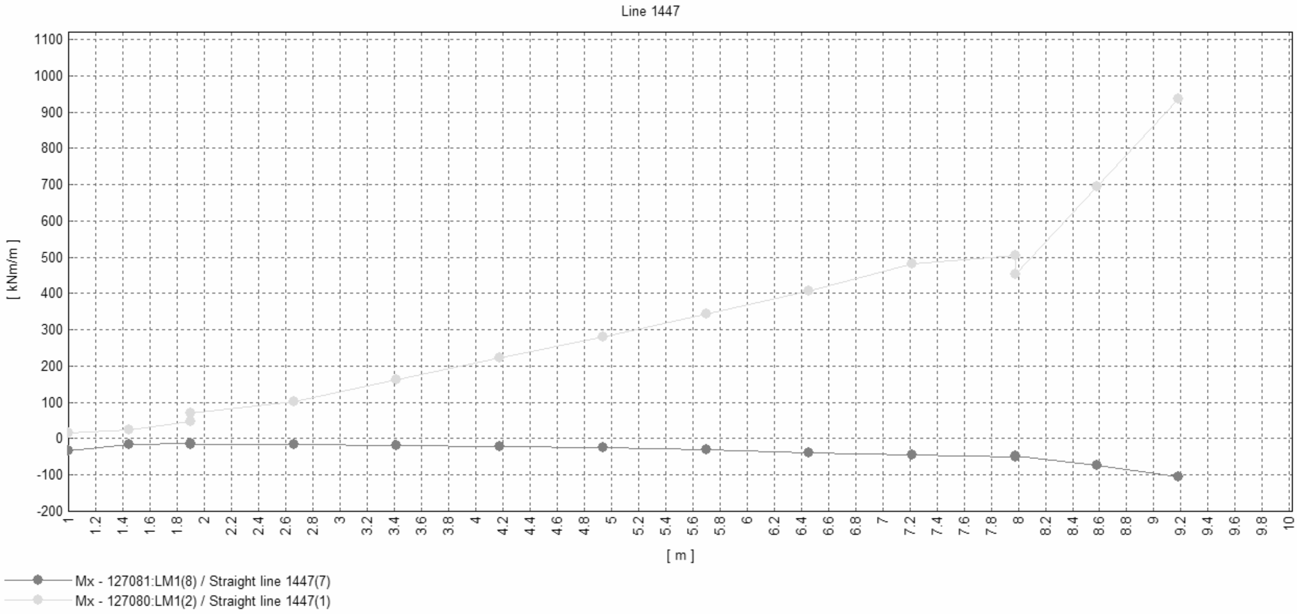
11.1.1 Contour

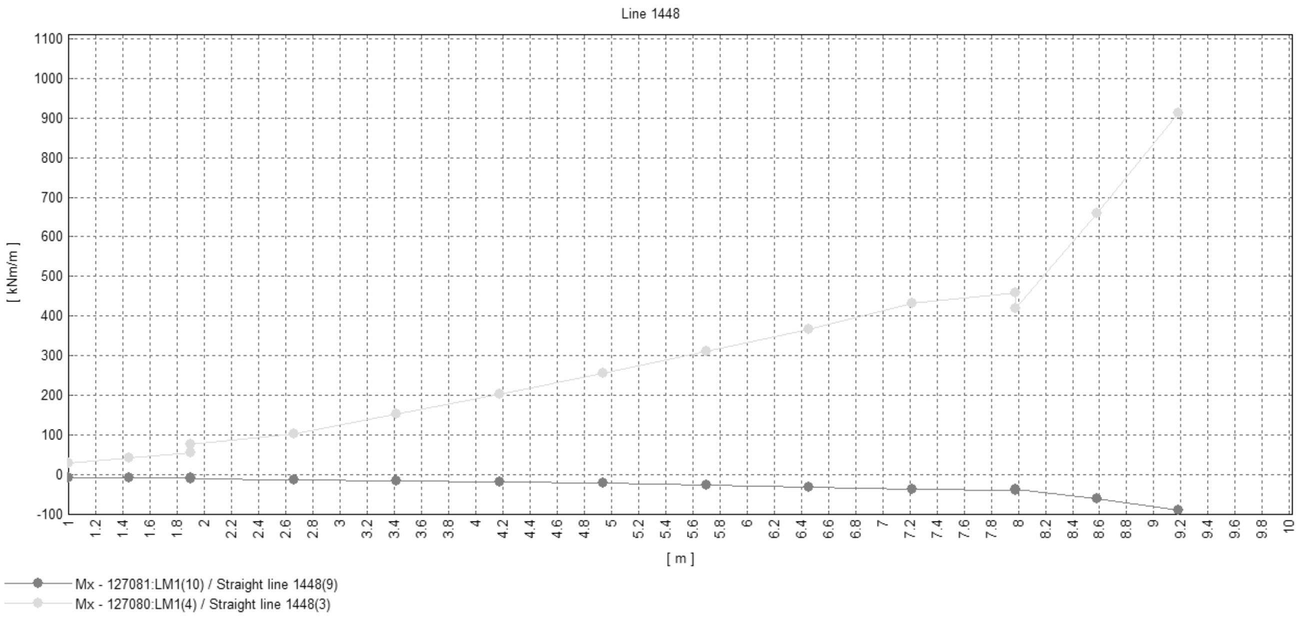


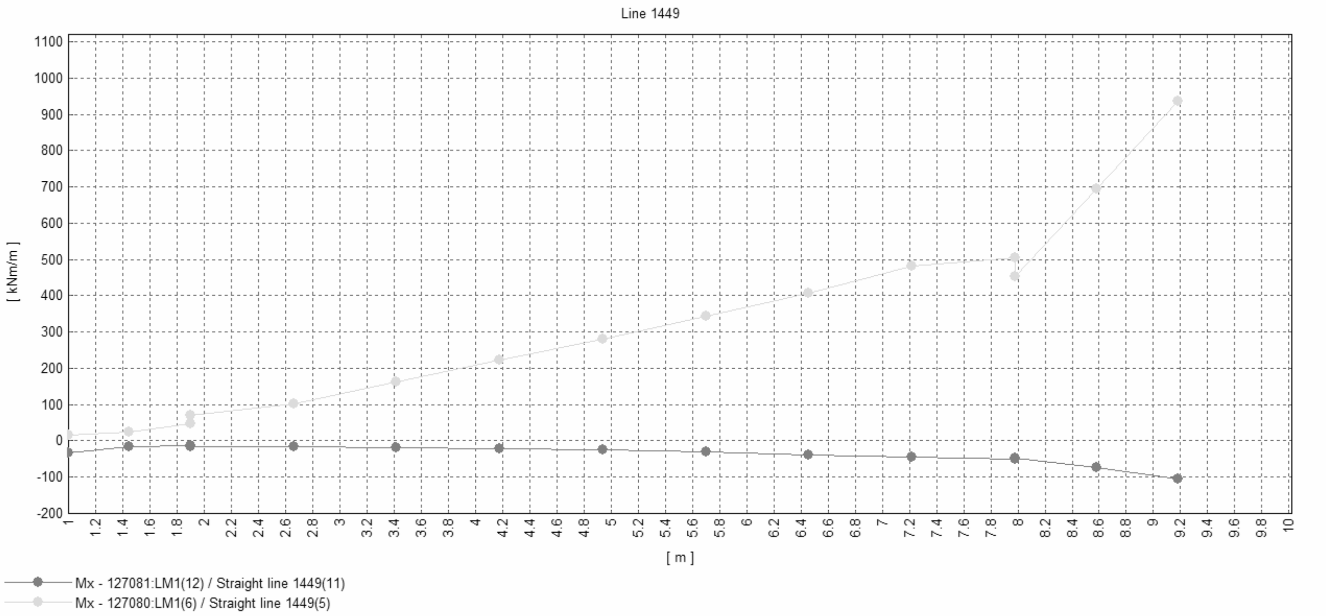


Enveloping on: Mx
LM1 (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)
-179.339
-159.412
-139.486
-119.559
-99.6326
-79.7061
-59.7796
-39.853
-19.9265
Maximum -6.06152 at node 1513 of element 1420 (133305:Inf4 - Thick shell ~ Characteristic (Min))
Minimum -185.4 at node 1722 of element 1672 (133305:Inf4 - Thick shell ~ Characteristic (Min))
L1447
L1448
L1449

11.1.2 Diagram







Line 1449
[kNm/m]
[m]
Mx - 127081:LM1(12) / Straight line 1449(11)
Mx - 127080:LM1(6) / Straight line 1449(5)

11.1.3 Table

Line 1447:

s	Max Mx	Min Mx
0	17	-32
0.9	70	-15
1.66	102	-17
2.42	162	-19
3.18	221	-22
3.94	281	-26
4.70	343	-31
5.46	408	-38
6.22	481	-46
6.98	504	-51
7.58	696	-75
8.18	935	-105
m	kNm/m	kNm/m

Line 1448:

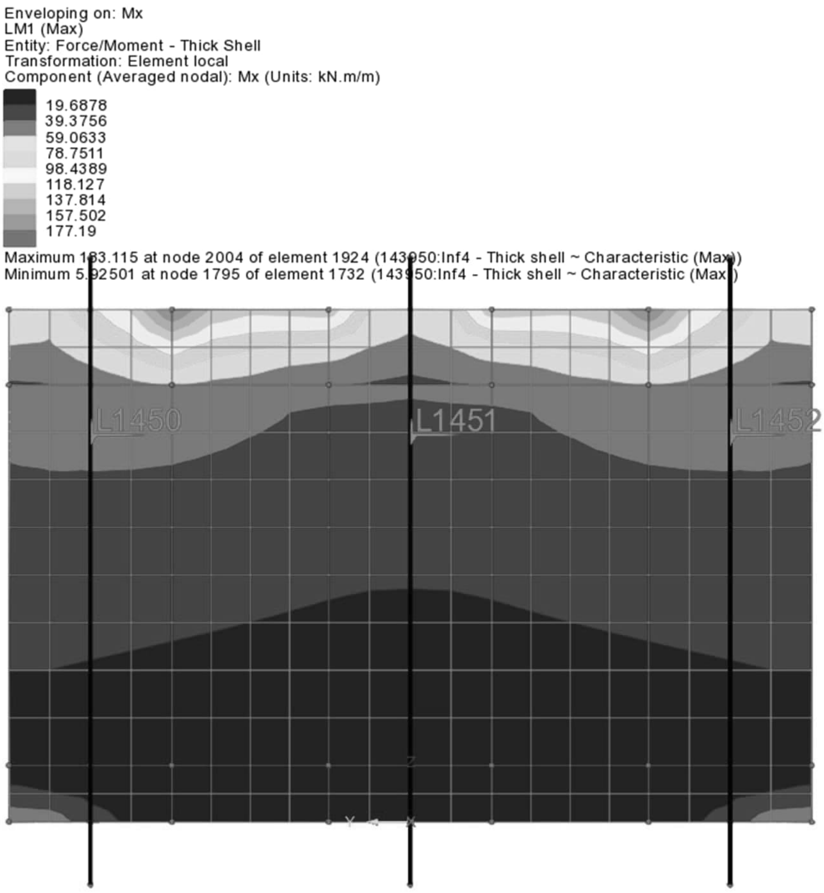
s	Max Mx	Min Mx
0	29	-9
0.9	76	-10
1.66	104	-12
2.42	153	-14
3.18	204	-18
3.94	257	-21
4.70	310	-26
5.46	367	-31
6.22	432	-36
6.98	460	-40
7.58	658	-60
8.18	912	-90
m	kNm/m	kNm/m

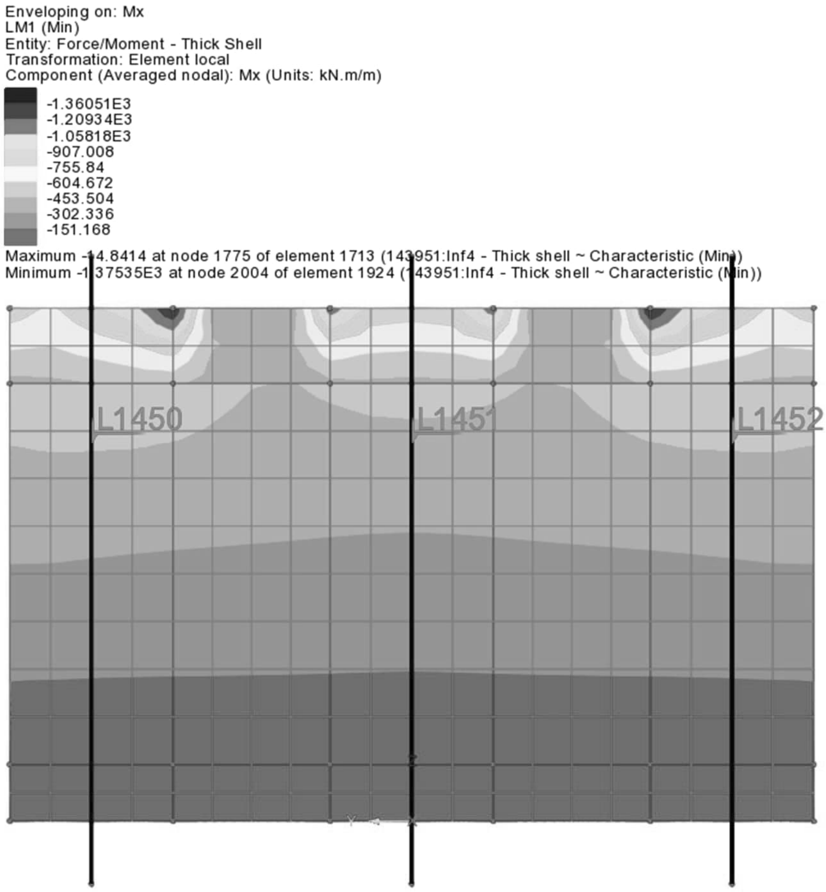
Line 1449:

s	Max Mx	Min Mx
0	17	-32
0.9	70	-15
1.66	102	-17
2.42	162	-19
3.18	221	-22
3.94	281	-26
4.70	343	-31
5.46	408	-38
6.22	481	-46
6.98	504	-51
7.58	696	-75
8.18	935	-105
m	kNm/m	kNm/m

11.2 ABUTEMENT 2

11.2.1 Contour





Enveloping on: Mx
LM1 (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)
-1.36051E3
-1.20934E3
-1.05818E3
-907.008
-755.84
-604.672
-453.504
-302.336
-151.168
Maximum -14.8414 at node 1775 of element 1713 (143951:Inf4 - Thick shell ~ Characteristic (Min))
Minimum -1.37535E3 at node 2004 of element 1924 (143951:Inf4 - Thick shell ~ Characteristic (Min))
L1450
L1451
L1452

11.2.2 Digram

Compare abutement 1.

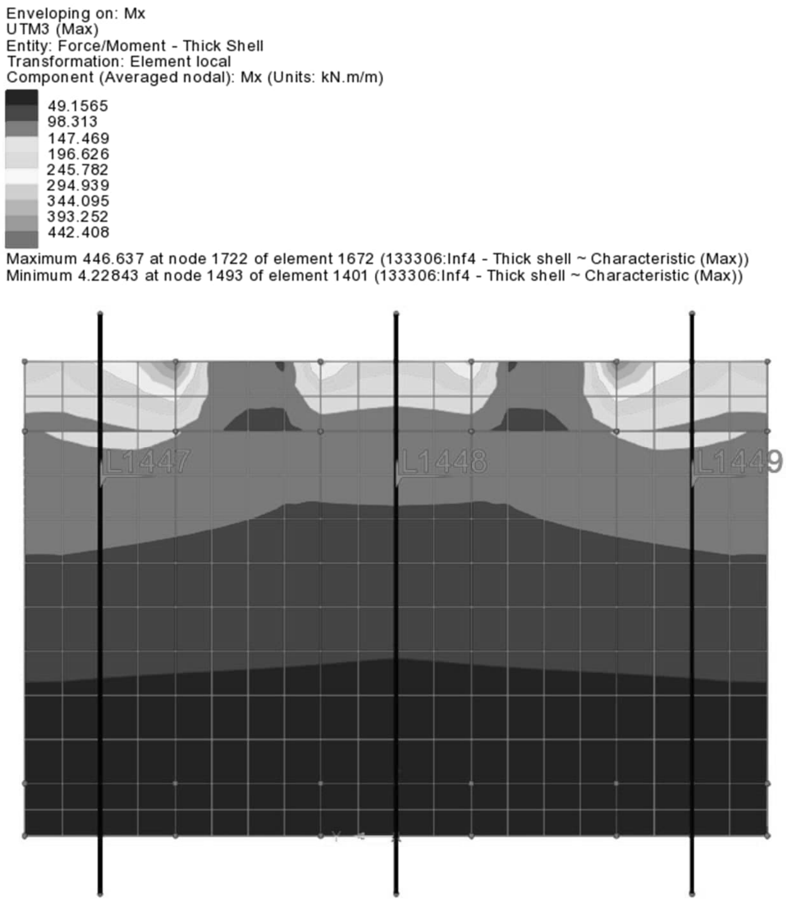
11.2.3 Table

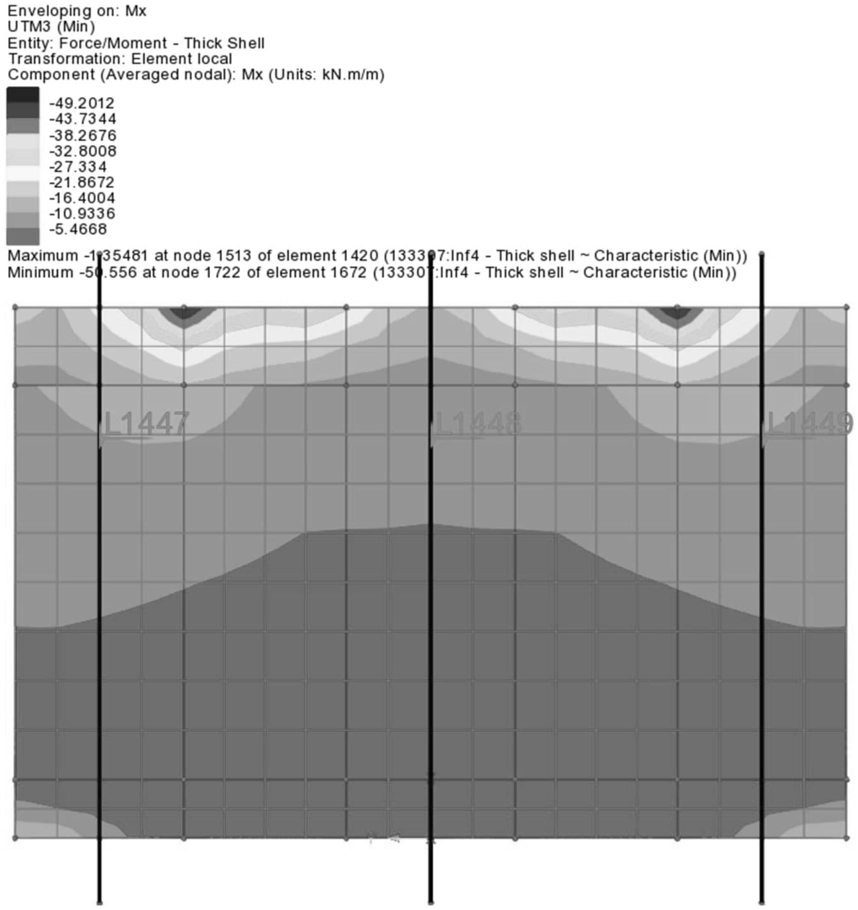
Compare abutement 1.

12. UTM 3 – Max/Min Mx

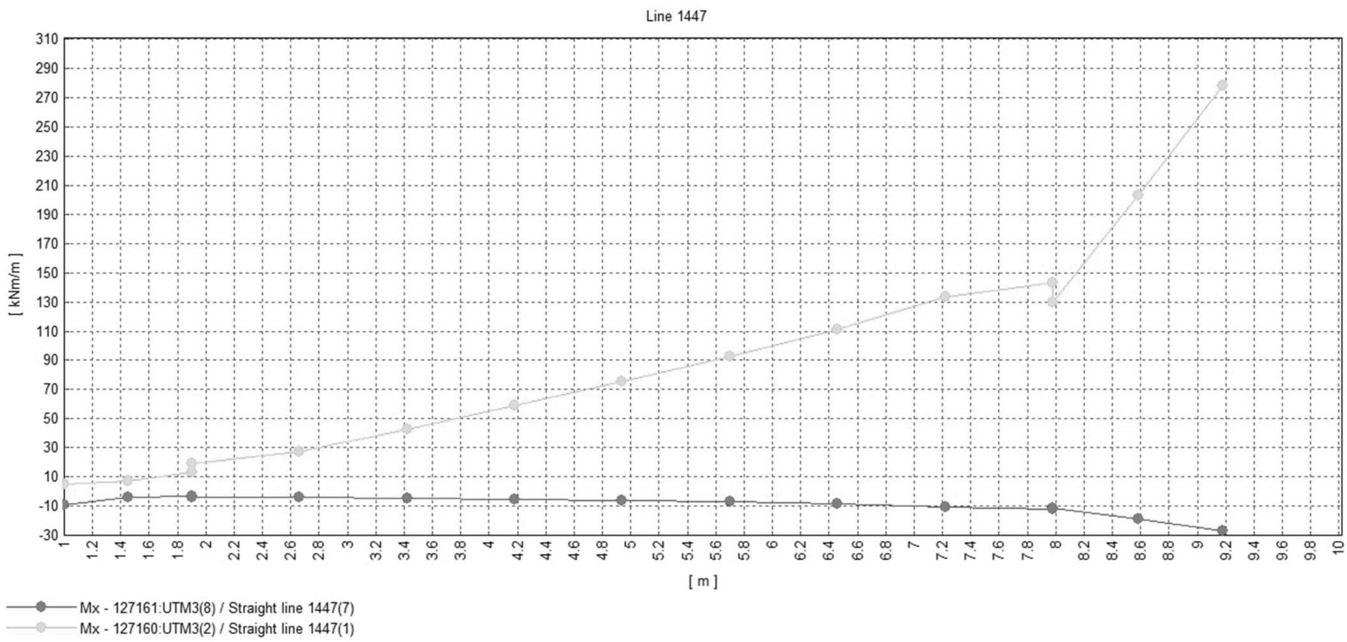
12.1 ABUTEMENT 1

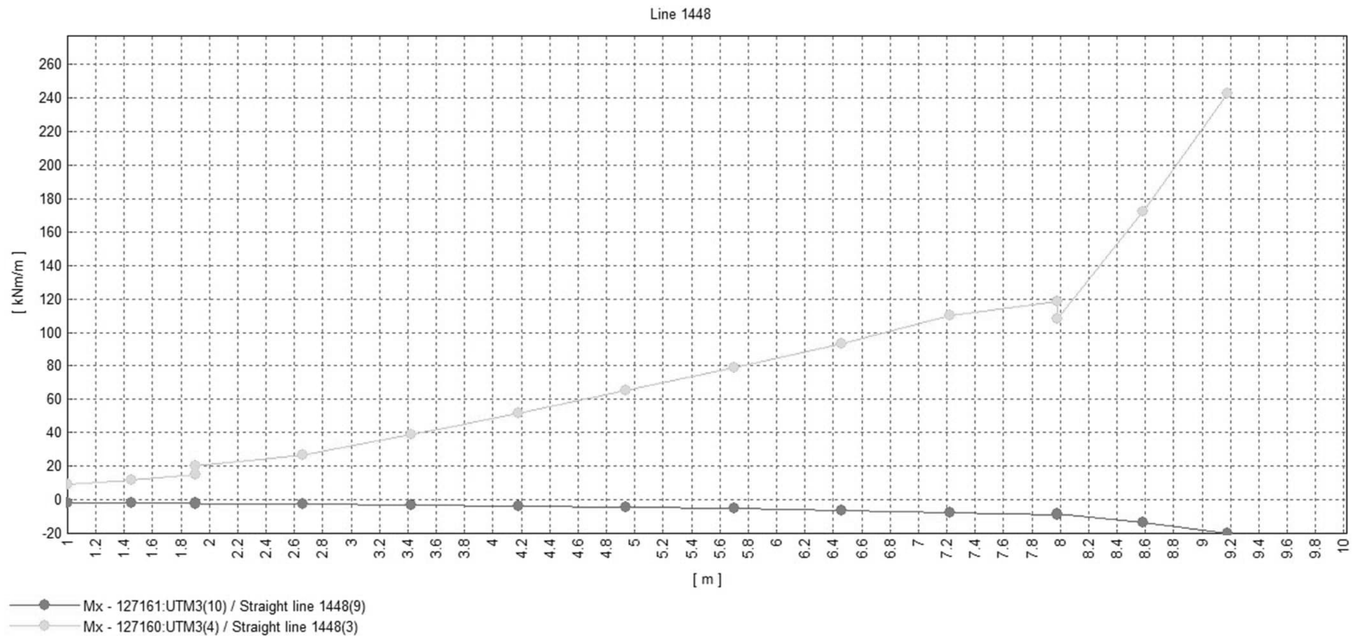
12.1.1 Contour

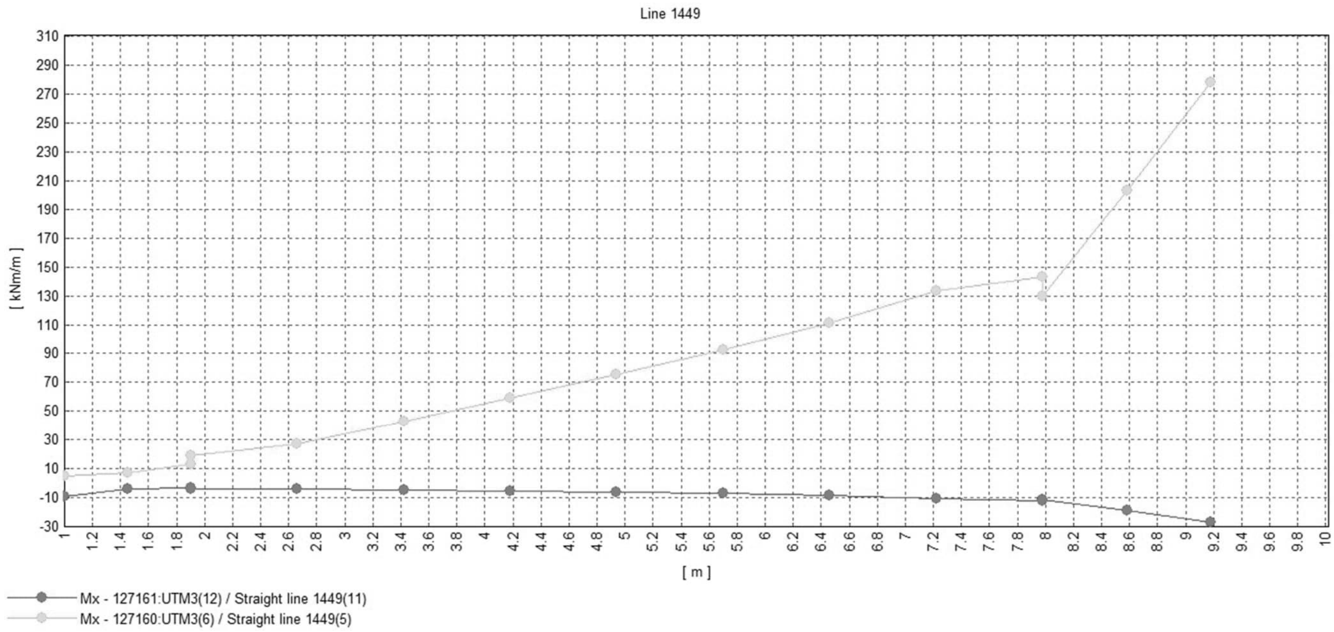



Enveloping on: Mx
UTM3 (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)
-49.2012
-43.7344
-38.2676
-32.8008
-27.334
-21.8672
-16.4004
-10.9336
-5.4668
Maximum -1 35481 at node 1513 of element 1420 (1333 7:Inf4 - Thick shell ~ Characteristic (Min))
Minimum -5 .556 at node 1722 of element 1672 (13330 :Inf4 - Thick shell ~ Characteristic (Min))
L1447
L1448
L1449

12.1.2 Diagram






Line 1449
310
290
270
250
230
210
190
170
150
130
110
90
70
50
30
10
-10
-30
[kNm/m]
1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10
[m]
Mx - 127161:UTM3(12) / Straight line 1449(11)
Mx - 127160:UTM3(6) / Straight line 1449(5)

12.1.3 Table

Line 1447:

s	Max Mx	Min Mx
0	5	-9
0.9	19	-4
1.66	27	-4
2.42	43	-5
3.18	59	-5
3.94	75	-6
4.70	92	-7
5.46	111	-9
6.22	134	-11
6.98	143	-12
7.58	203	-19
8.18	279	-27
m	kNm/m	kNm/m

Line 1448:

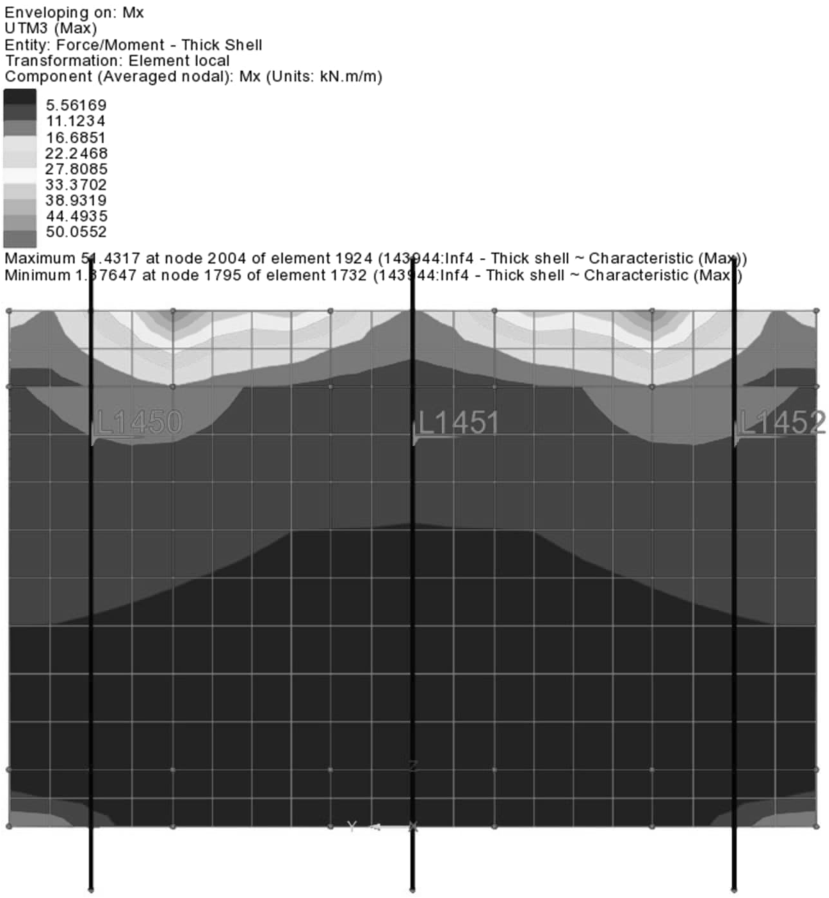
s	Max Mx	Min Mx
0	33	-20
0.9	9	-25
1.66	14	-36
2.42	22	-58
3.18	32	-75
3.94	44	-89
4.70	59	-101
5.46	76	-109
6.22	95	-114
6.98	100	-104
7.58	140	-124
8.18	186	-149
m	kNm/m	kNm/m

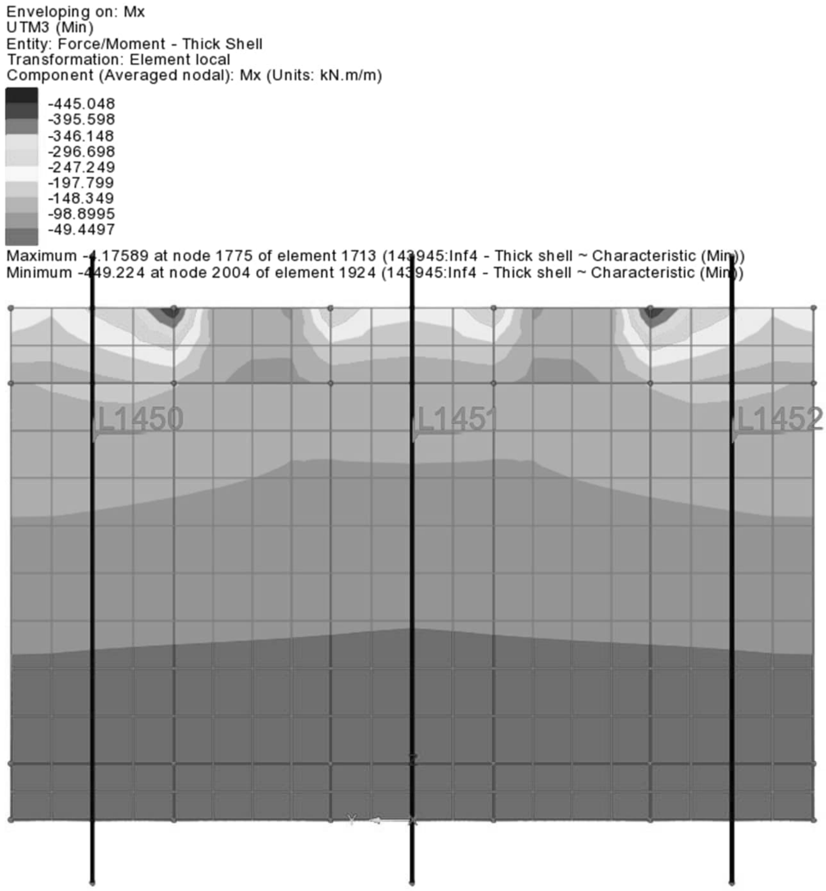
Line 1449:

s	Max Mx	Min Mx
0	5	-9
0.9	19	-4
1.66	27	-4
2.42	43	-5
3.18	59	-5
3.94	75	-6
4.70	92	-7
5.46	111	-9
6.22	134	-11
6.98	143	-12
7.58	203	-19
8.18	279	-27
m	kNm/m	kNm/m

12.2 ABUTEMENT 2

12.2.1 Contour





Enveloping on: Mx
UTM3 (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Mx (Units: kN.m/m)
-445.048
-395.598
-346.148
-296.698
-247.249
-197.799
-148.349
-98.8995
-49.4497
Maximum -4.17589 at node 1775 of element 1713 (143945:Inf4 - Thick shell ~ Characteristic (Min))
Minimum -449.224 at node 2004 of element 1924 (143945:Inf4 - Thick shell ~ Characteristic (Min))
L1450
L1451
L1452

12.2.2 Digram

Compare abutement 1.

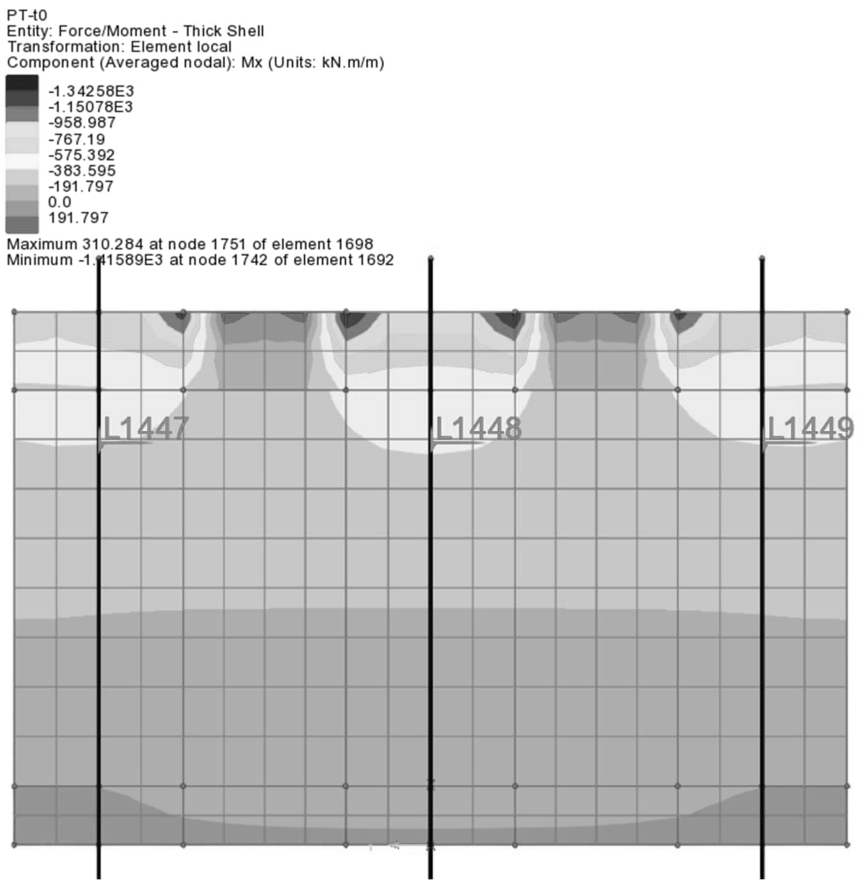
12.2.3 Table

Compare abutement 1.

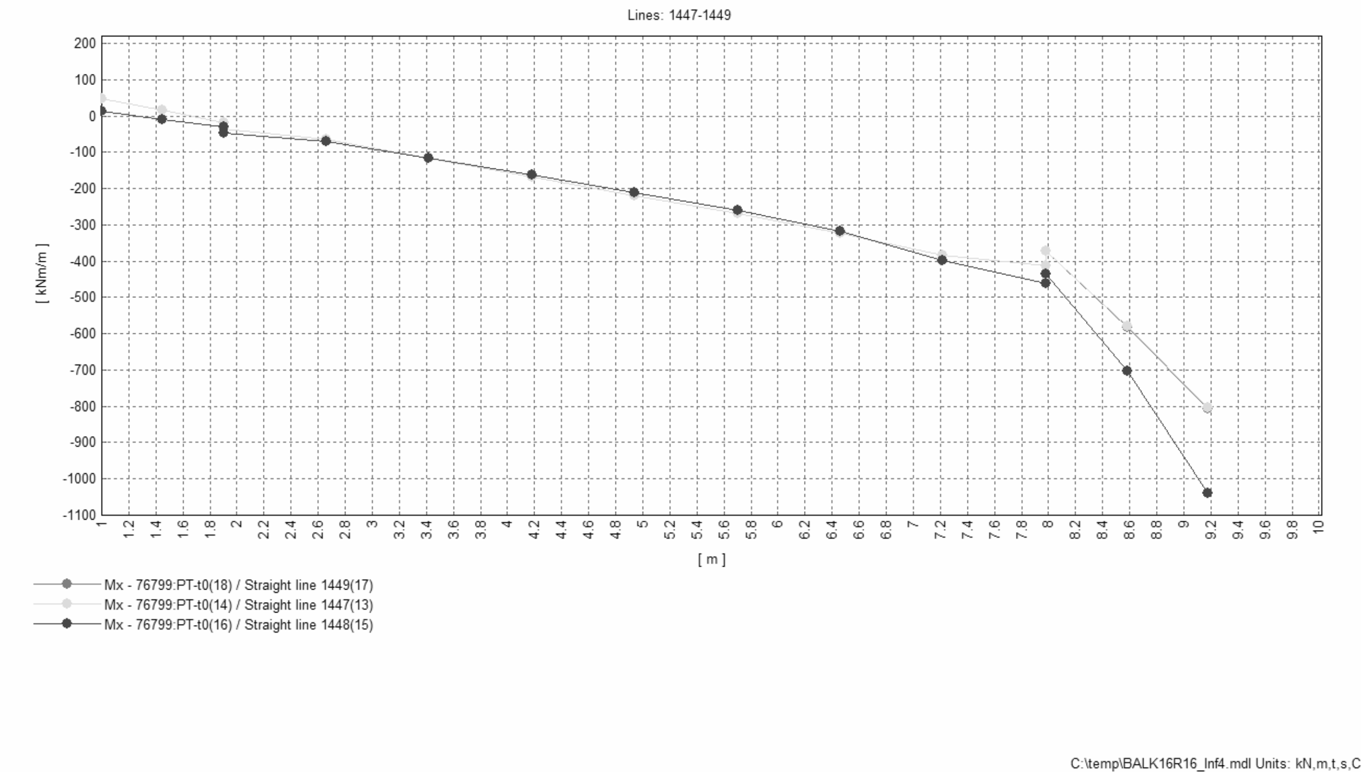
13. PRESTRESS - Mx

13.1 ABUTEMENT 1

13.1.1 Contour



13.1.2 Diagram



13.1.3 Table

Line 1447:

s	Mx
0	48
0.9	-37
1.66	-64
2.42	-117
3.18	-169
3.94	-219
4.70	-270
5.46	-322
6.22	-384
6.98	-411
7.58	-580
8.18	-804
m	kNm/m

Line 1448:

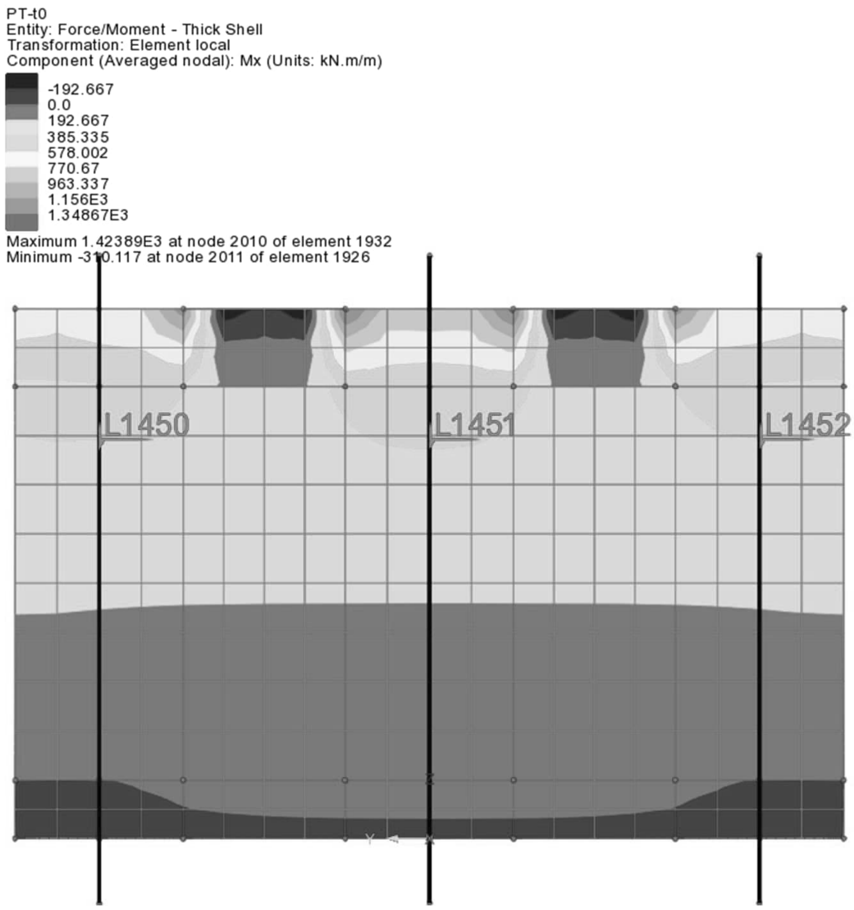
s	Mx
0	12
0.9	-47
1.66	-72
2.42	-117
3.18	-164
3.94	-211
4.70	-261
5.46	-317
6.22	-398
6.98	-463
7.58	-704
8.18	-1041
m	kNm/m

Line 1449:

s	Mx
0	48
0.9	-37
1.66	-64
2.42	-117
3.18	-169
3.94	-220
4.70	-270
5.46	-323
6.22	-385
6.98	-412
7.58	-581
8.18	-806
m	kNm/m

13.2 ABUTEMENT 2

13.2.1 Contour



13.2.2 Diagram

Compare abutement 1.

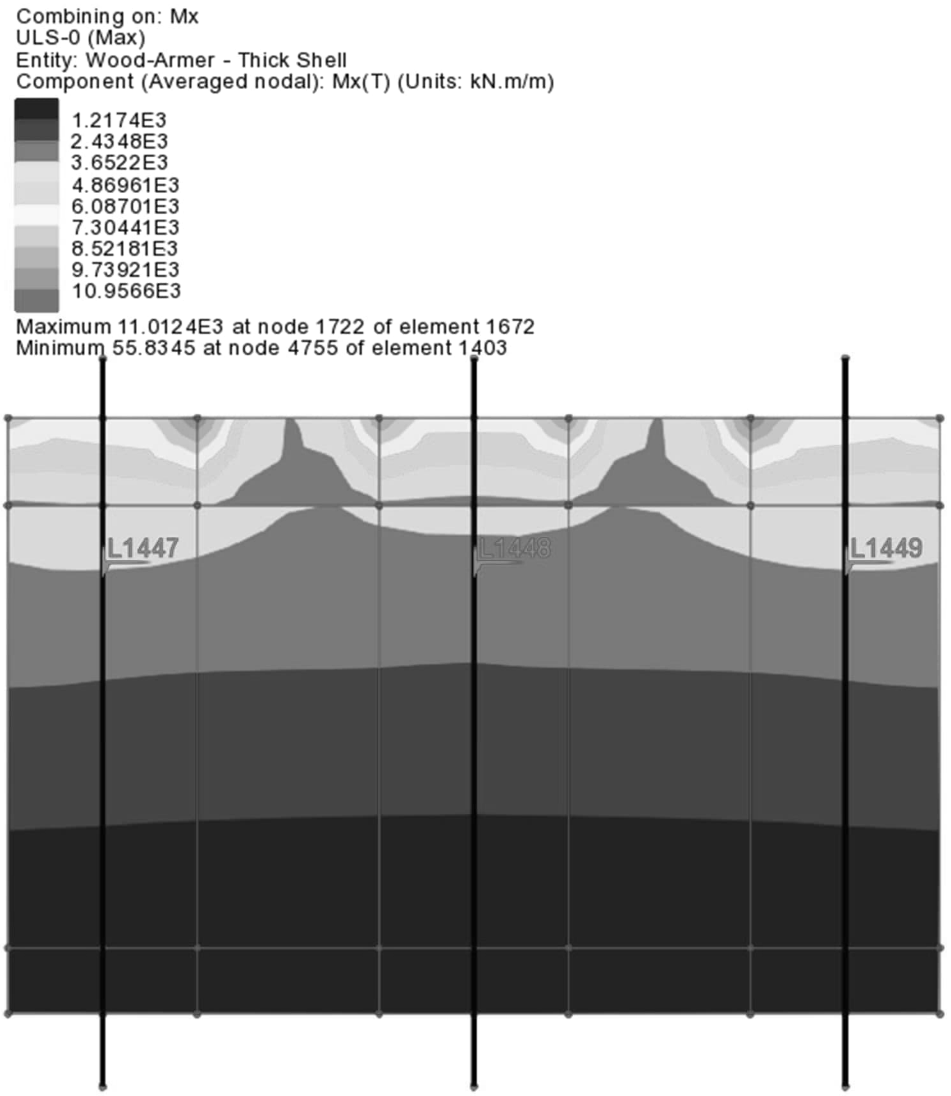
13.2.3 Table

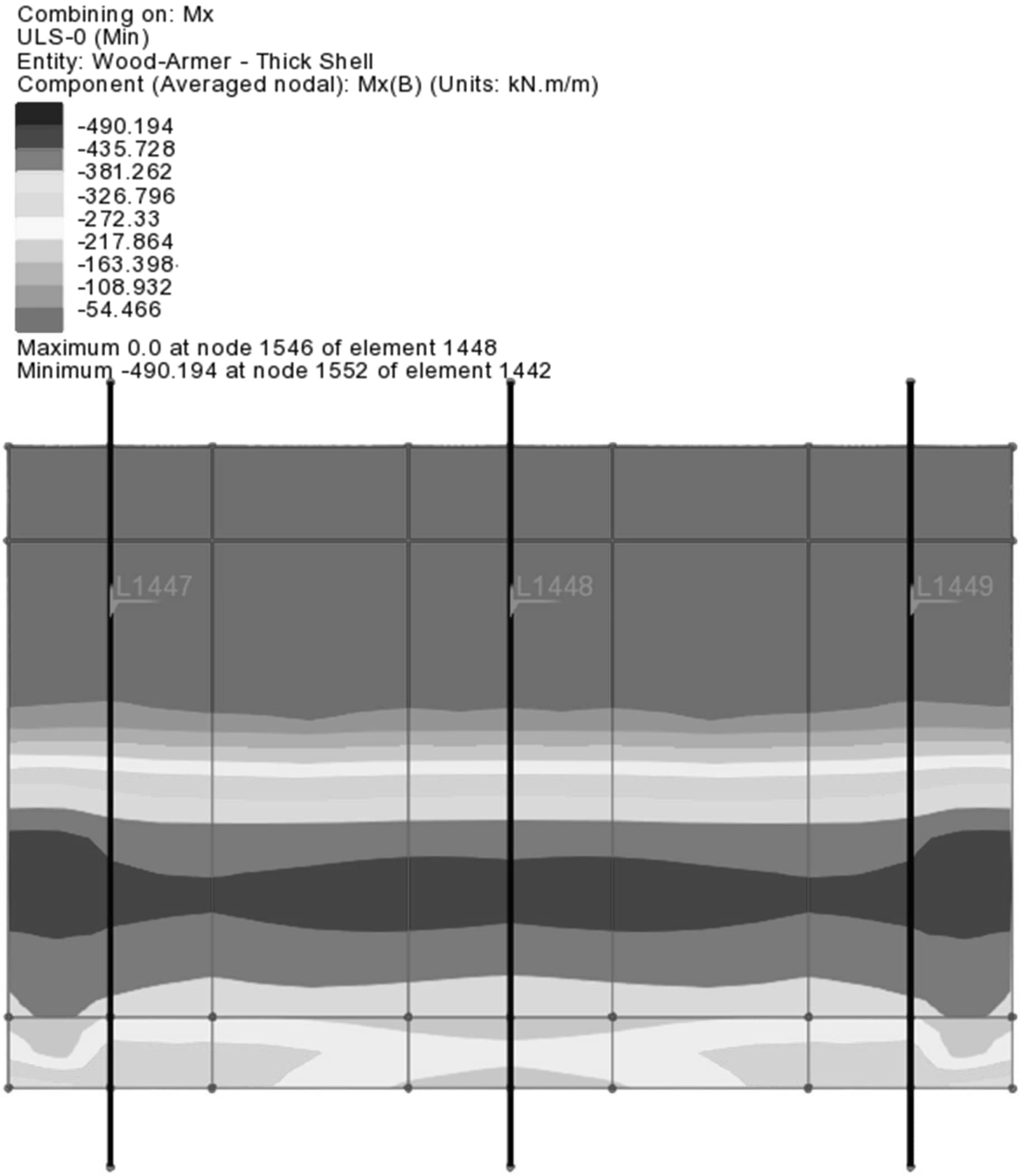
Compare abutement 1.

14. ULS-0: Min Mx(B)/Max Mx(T)

14.1 ABUTEMENT 1

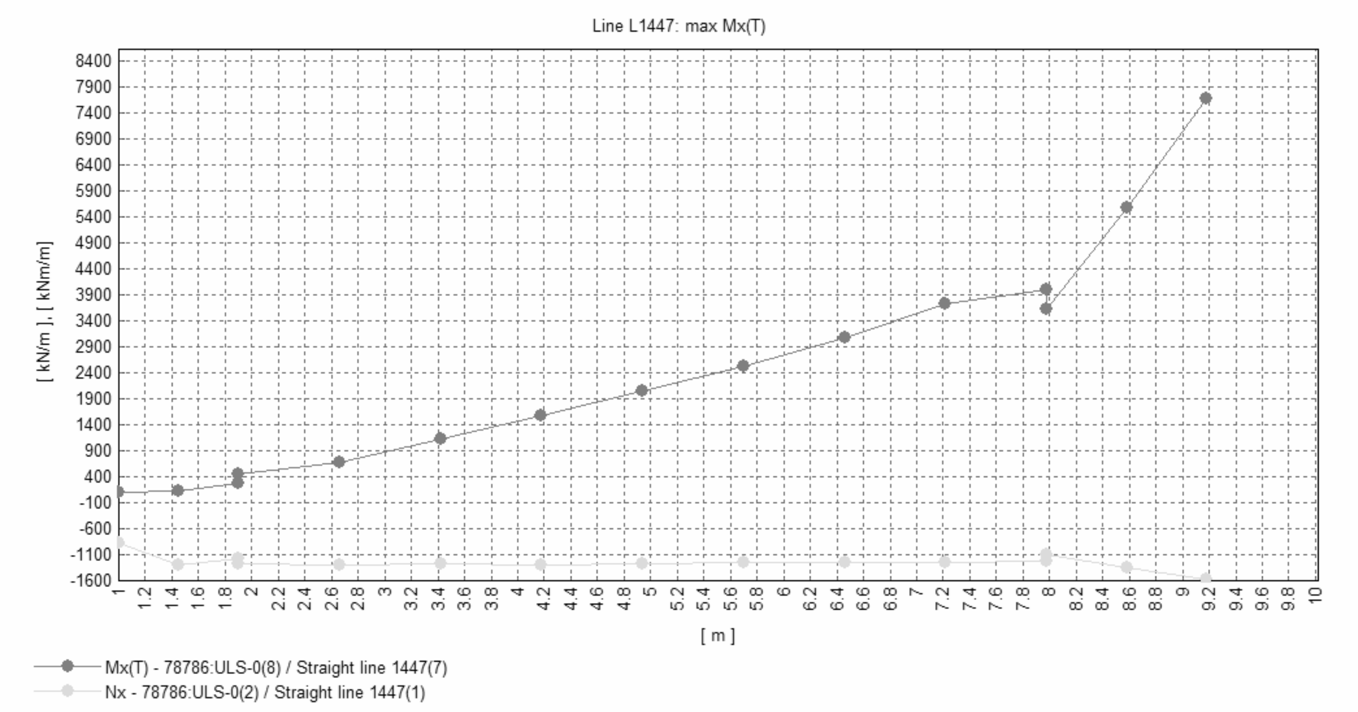
14.1.1 Contour

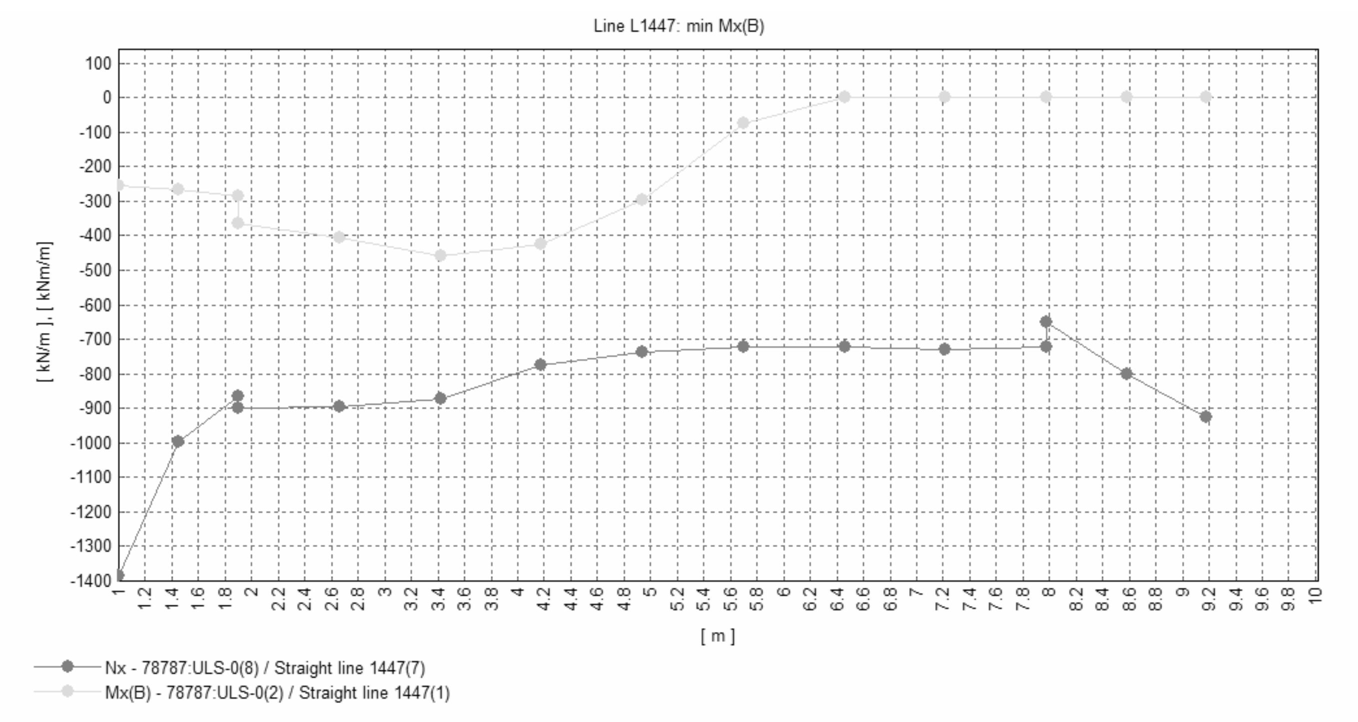


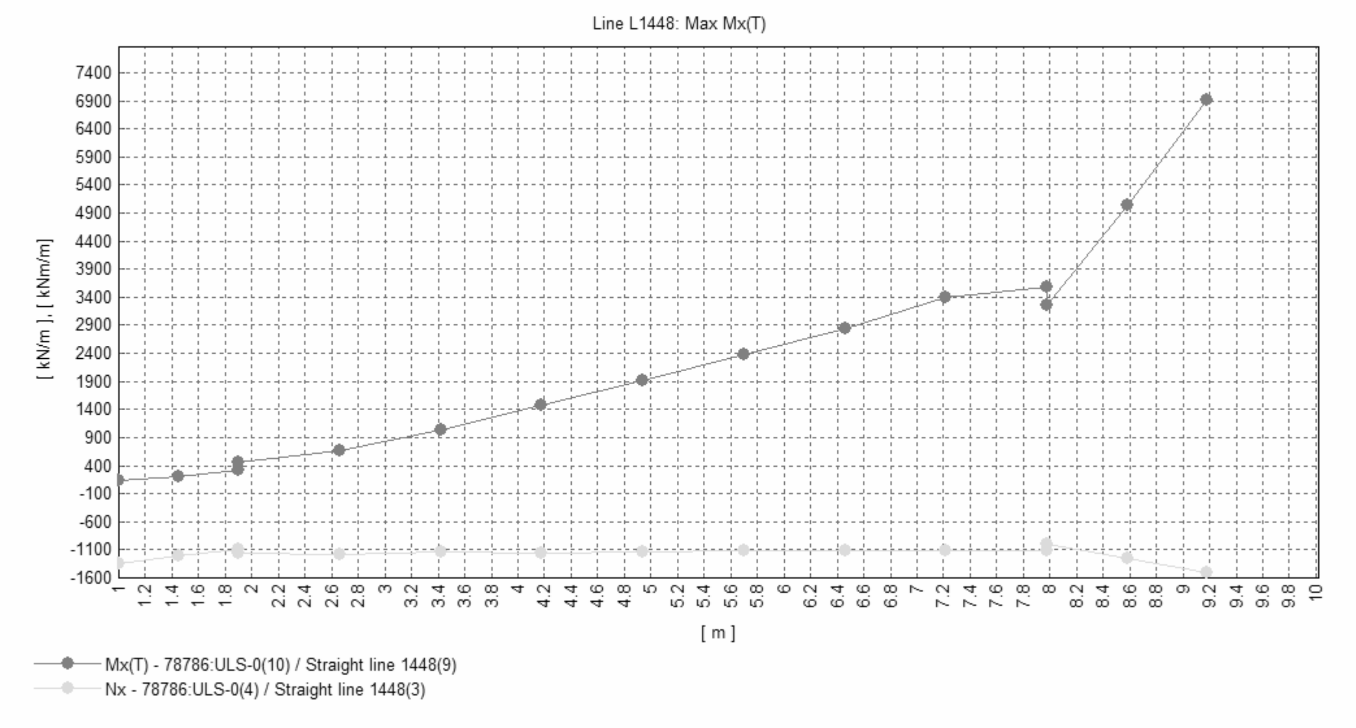


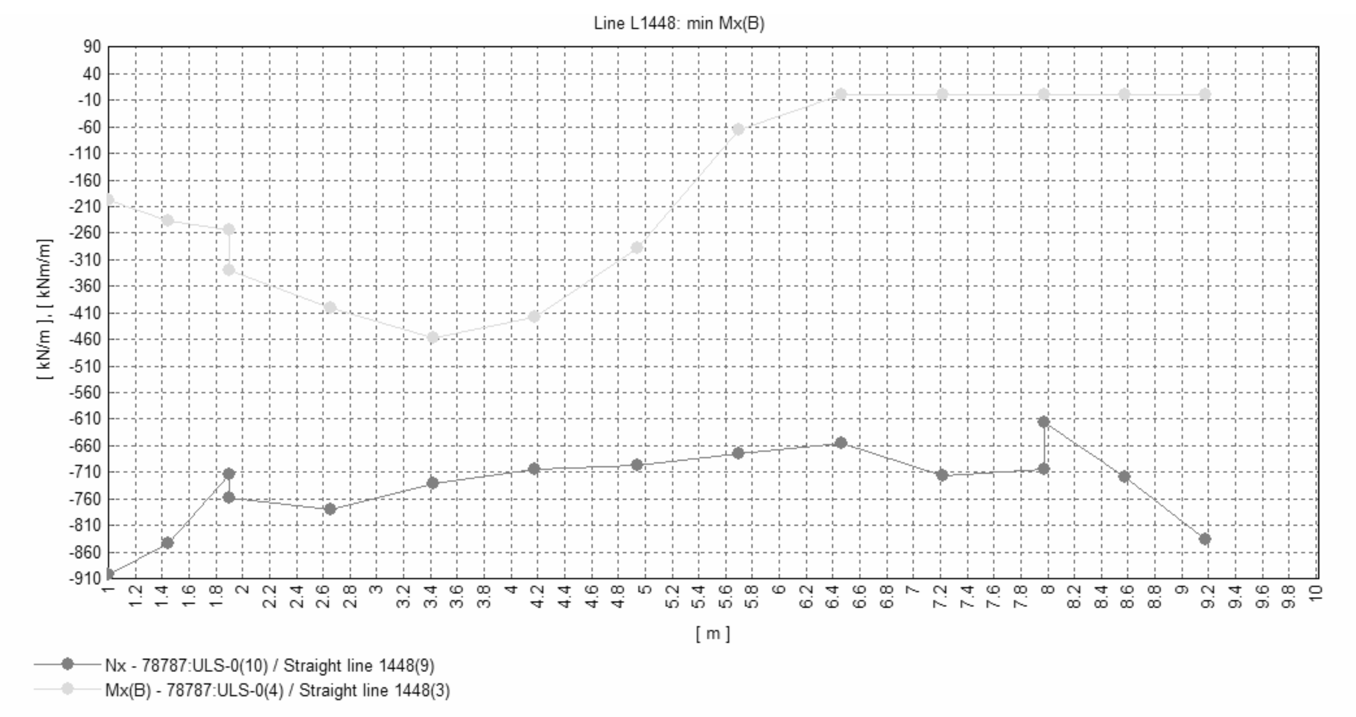
Combining on: Mx
ULS-0 (Min)
Entity: Wood-Armer - Thick Shell
Component (Averaged nodal): Mx(B) (Units: kN.m/m)
-490.194
-435.728
-381.262
-326.796
-272.33
-217.864
-163.398
-108.932
-54.466
Maximum 0.0 at node 1546 of element 1448
Minimum -490.194 at node 1552 of element 1442
L1447
L1448
L1449

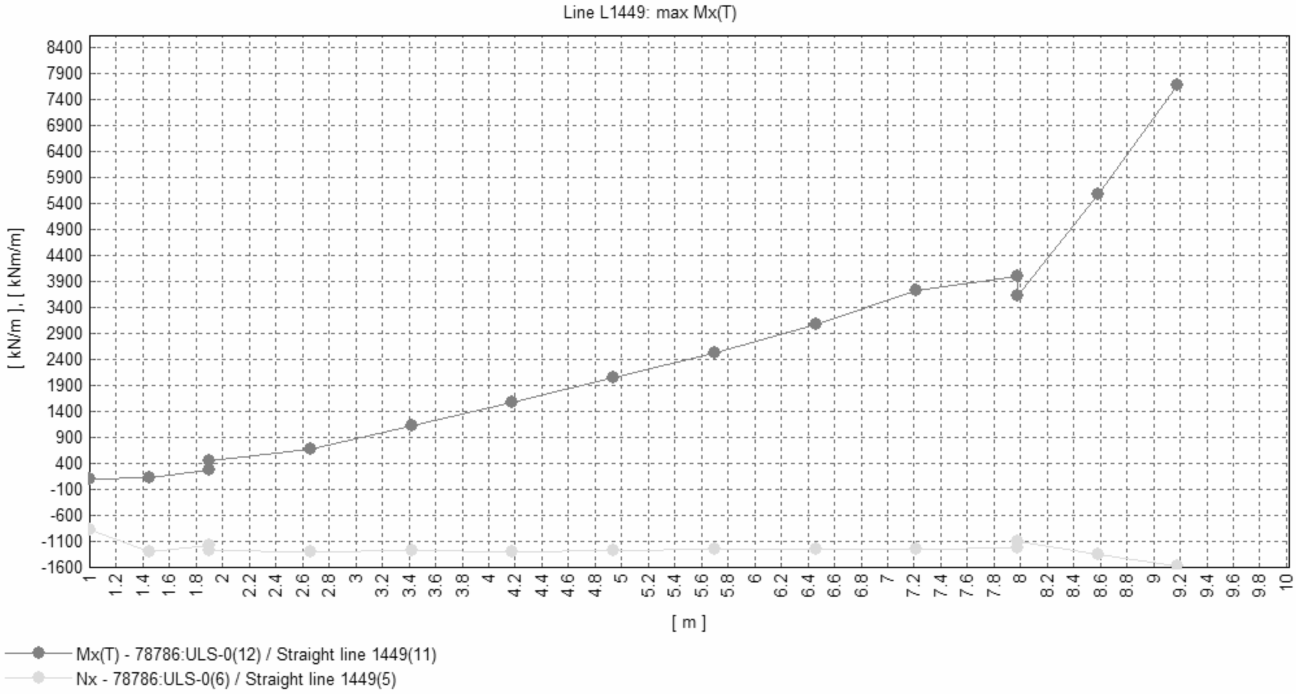
14.1.2 Diagram

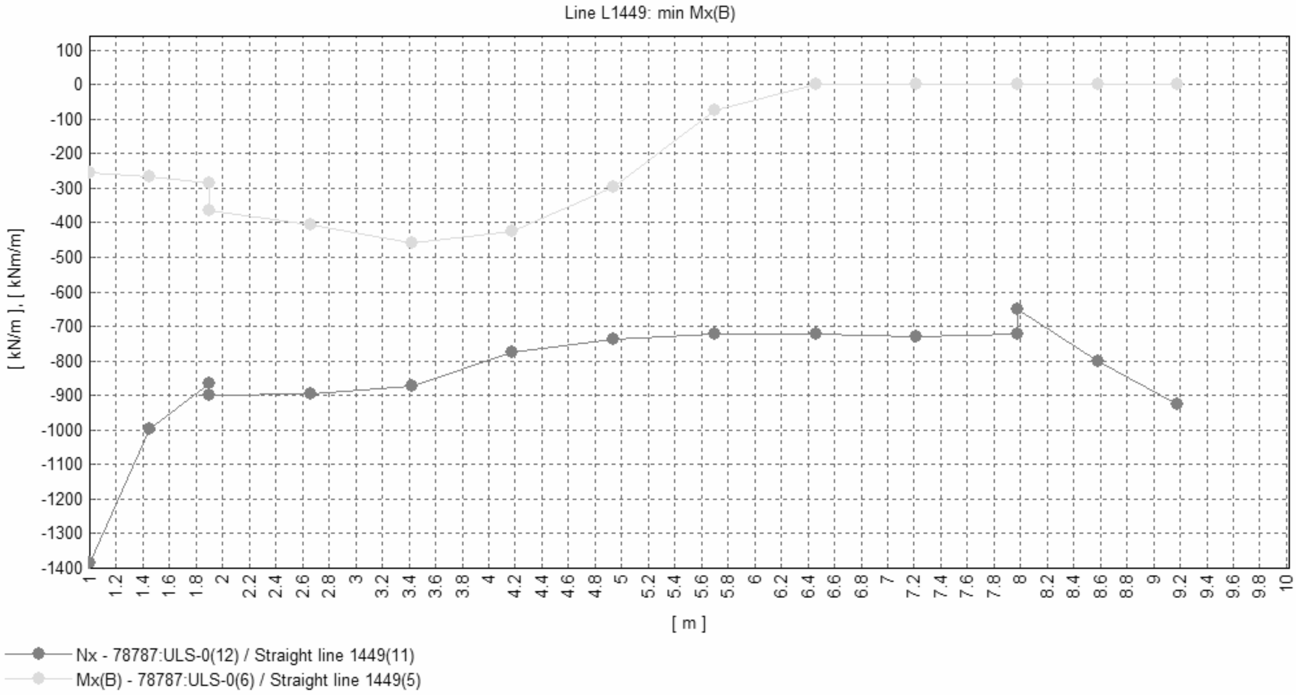





Line L1448: Max Mx(T)
[kN/m], [kNm/m]
[m]
Mx(T) - 78786:ULS-0(10) / Straight line 1448(9)
Nx - 78786:ULS-0(4) / Straight line 1448(3)


Line L1448: min Mx(B)
[kN/m], [kNm/m]
[m]
Nx - 78787:ULS-0(10) / Straight line 1448(9)
Mx(B) - 78787:ULS-0(4) / Straight line 1448(3)


Line L1449: max Mx(T)
[kN/m], [kNm/m]
[m]
Mx(T) - 78786:ULS-0(12) / Straight line 1449(11)
Nx - 78786:ULS-0(6) / Straight line 1449(5)


Line L1449: min Mx(B)
[kN/m], [kNm/m]
[m]
Nx - 78787:ULS-0(12) / Straight line 1449(11)
Mx(B) - 78787:ULS-0(6) / Straight line 1449(5)

14.1.3 Tables

Line 1447:

s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	110	-864	-256	-1386
0.90	439	-1280	-365	-899
1.66	672	-1312	-406	-894
2.42	1128	-1271	-460	-874
3.18	1585	-1311	-426	-776
3.94	2052	-1278	-298	-736
4.70	2518	-1252	-73	-721
5.46	3073	-1245	0	-723
6.22	3734	-1245	0	-730
6.98	3997	-1232	0	-720
7.58	5571	-1357	0	-803
8.18	7692	-1575	0	-927
m	kNm/m	kN/m	kNm/m	kN/m

Line 1448:

s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	130	-1356	-197	-902
0.90	454	-1153	-330	-757
1.66	660	-1174	-401	-781
2.42	1047	-1143	-457	-731
3.18	1468	-1168	-419	-704
3.94	1910	-1144	-287	-697
4.70	2368	-1123	-65	-675
5.46	2851	-1110	0	-656
6.22	3404	-1118	0	-717
6.98	3583	-1122	0	-703
7.58	5040	-1257	0	-718
8.18	6921	-1509	0	-837
m	kNm/m	kNm/m	kNm/m	kN/m

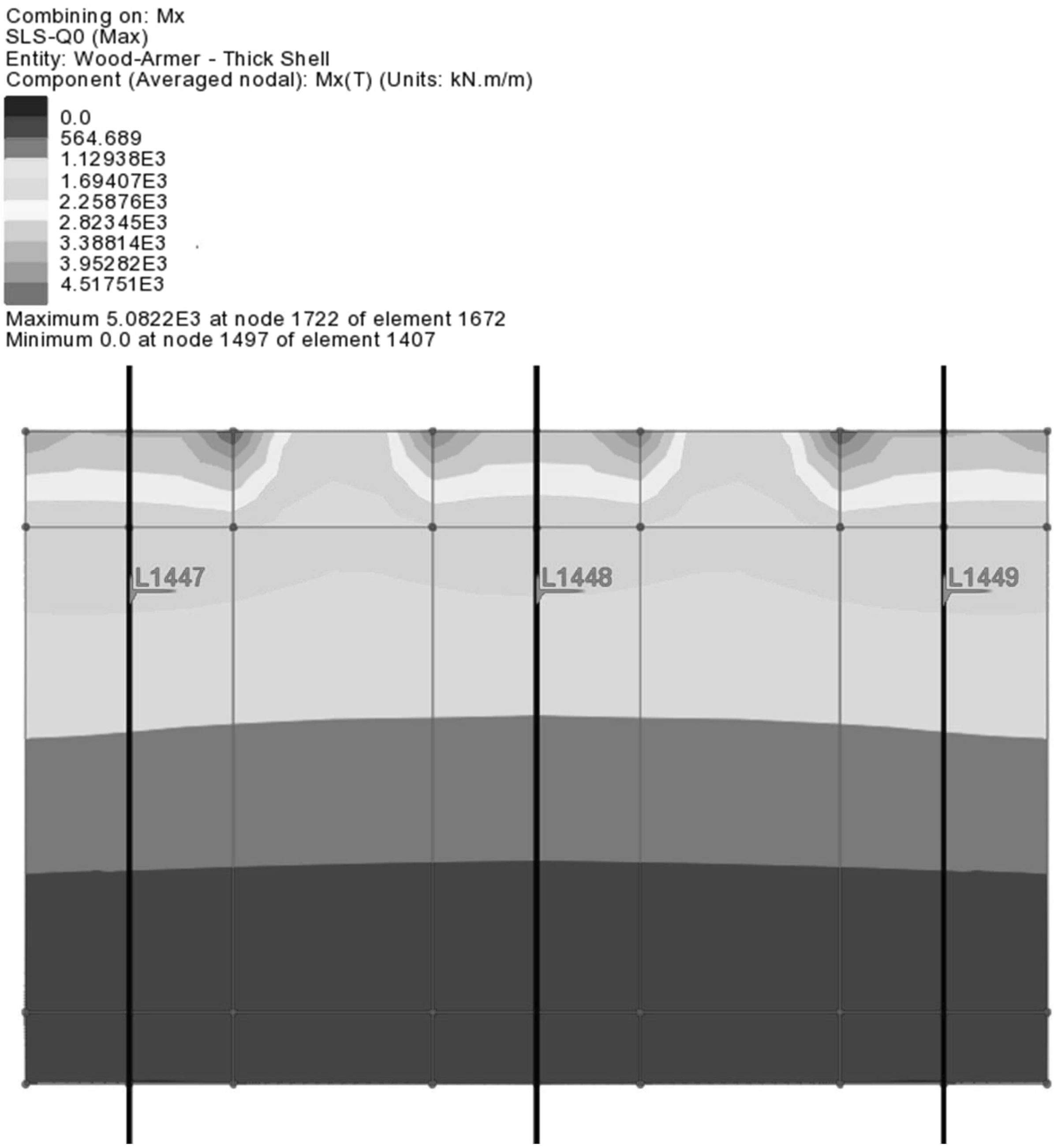
Line 1449:

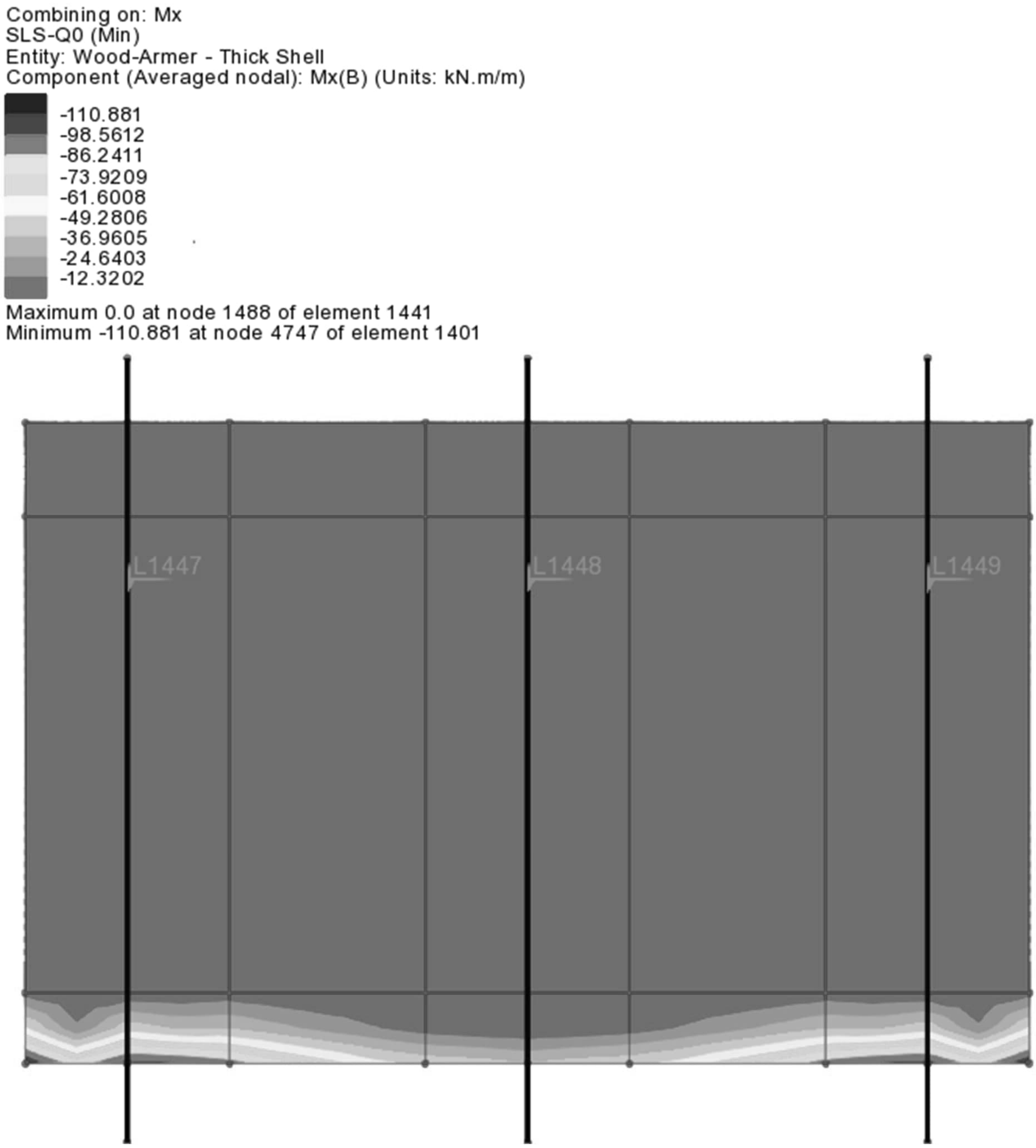
s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	110	-864	-256	-1386
0.90	439	-1280	-365	-899
1.66	672	-1312	-406	-894
2.42	1128	-1271	-460	-874
3.18	1585	-1311	-426	-776
3.94	2052	-1278	-298	-736
4.70	2518	-1252	-73	-721
5.46	3073	-1245	0	-723
6.22	3734	-1245	0	-730
6.98	3997	-1232	0	-720
7.58	5571	-1357	0	-803
8.18	7692	-1575	0	-927
m	kNm/m	kNm/m	kNm/m	kN/m

15. SLS-Q0: Min Mx(B)/Max Mx(T)

15.1 ABUTEMENT 1

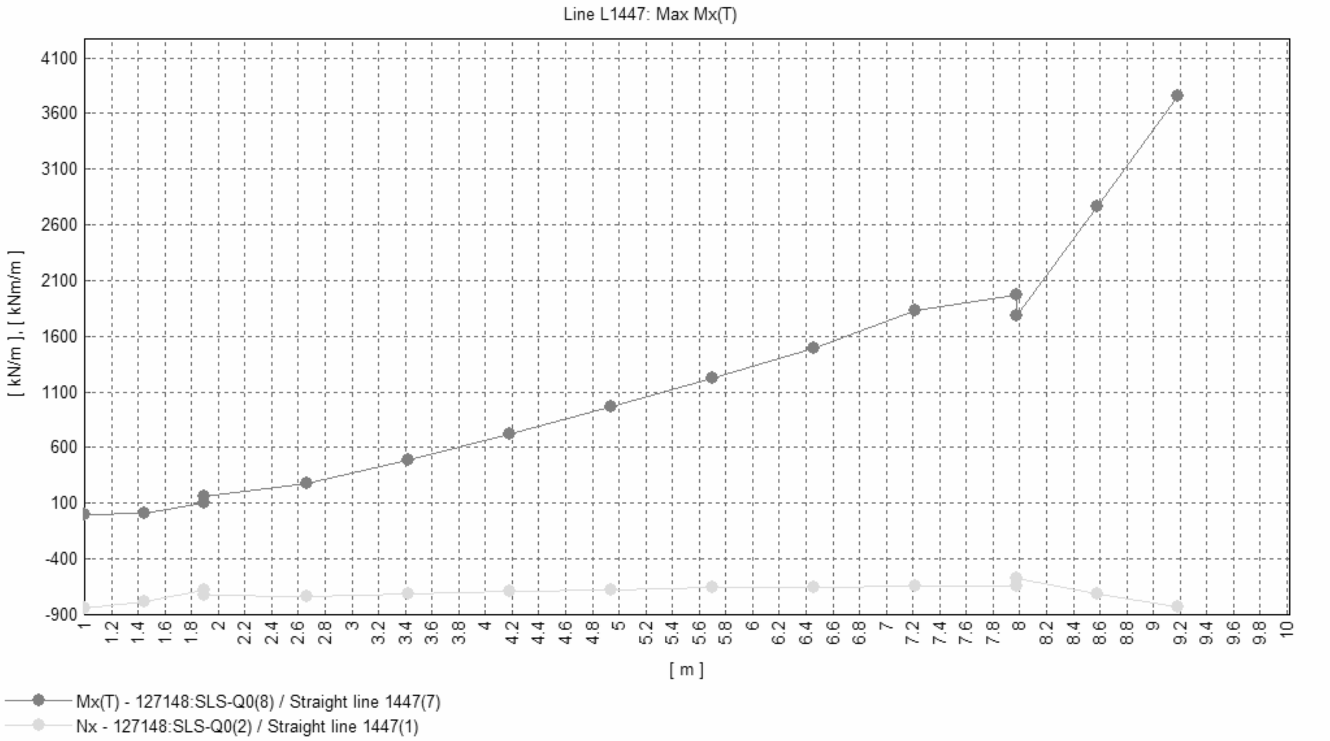
15.1.1 Contour

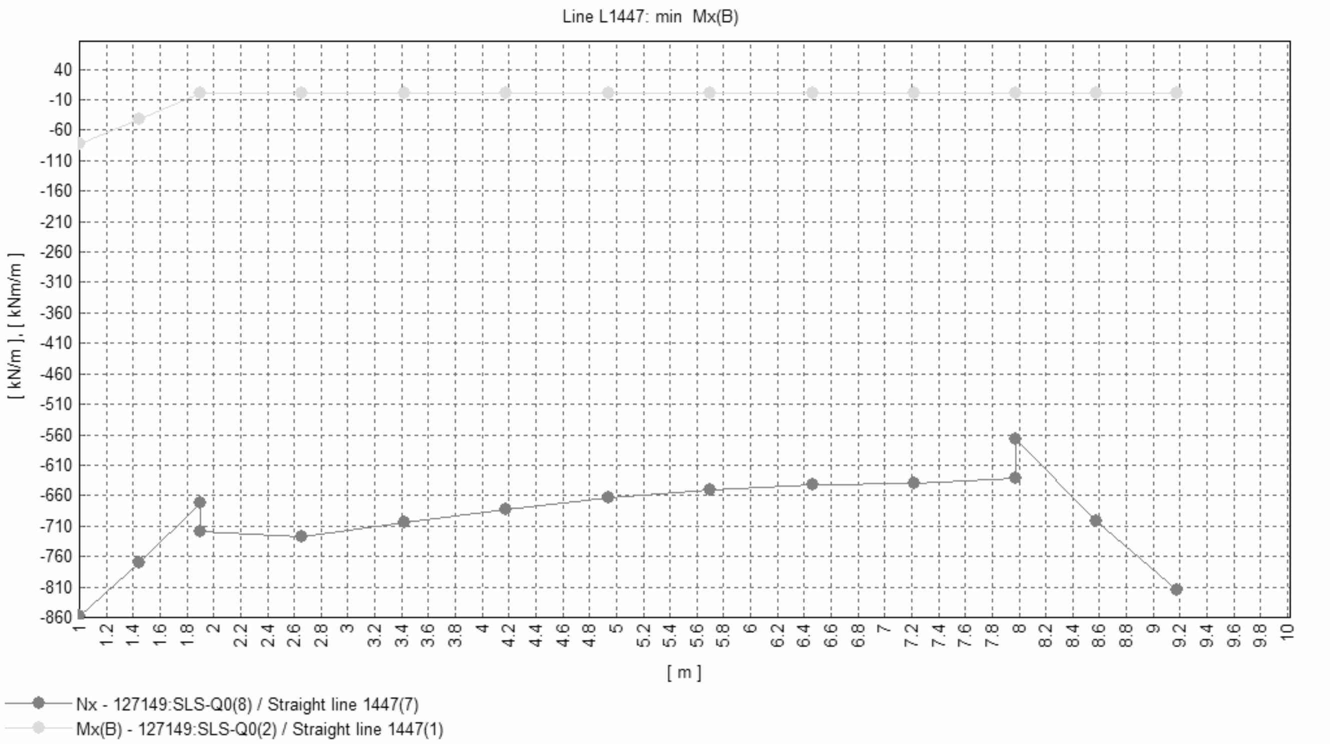




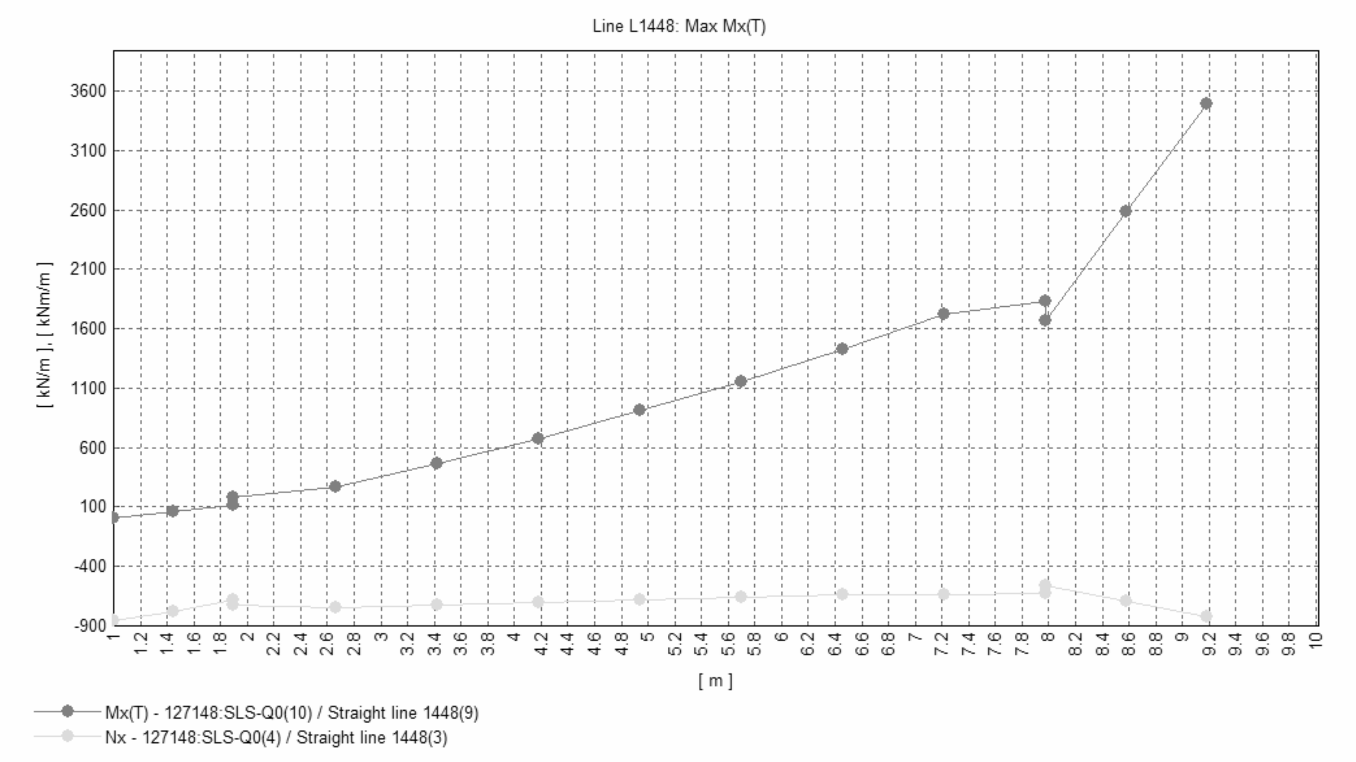
Combining on: Mx
SLS-Q0 (Min)
Entity: Wood-Armer - Thick Shell
Component (Averaged nodal): Mx(B) (Units: kN.m/m)
-110.881
-98.5612
-86.2411
-73.9209
-61.6008
-49.2806
-36.9605
-24.6403
-12.3202
Maximum 0.0 at node 1488 of element 1441
Minimum -110.881 at node 4747 of element 1401
L1447
L1448
L1449

15.1.2 Diagram

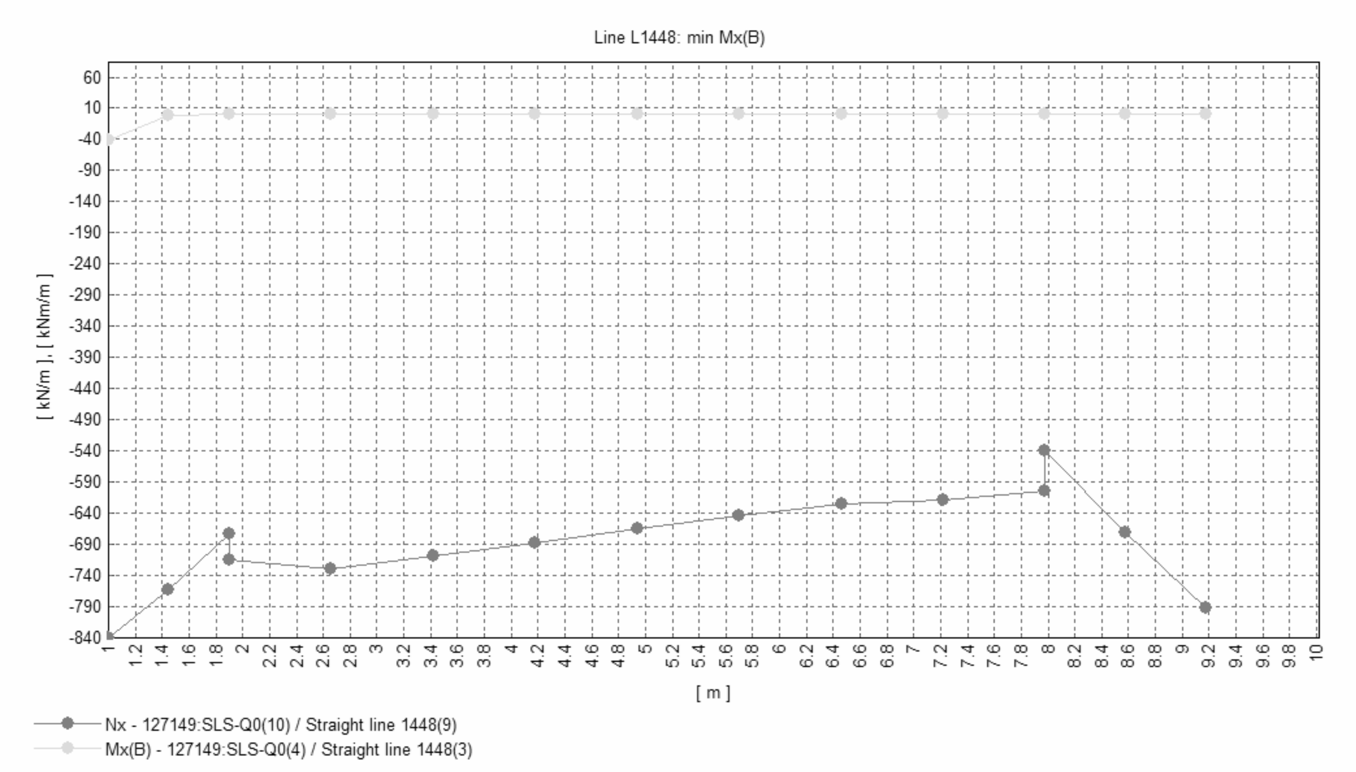




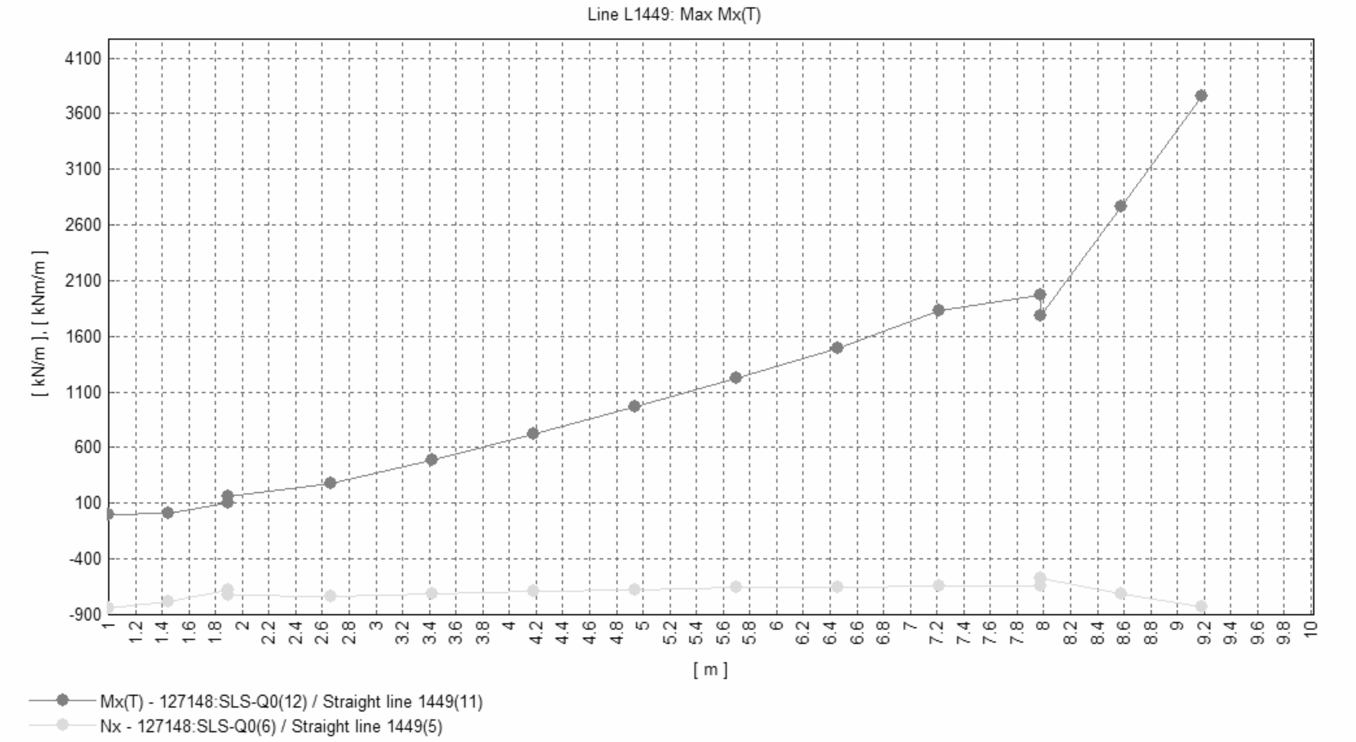
C:\temp\BALK18R18_Inf4.mdl Units: kN,m,t,s,C



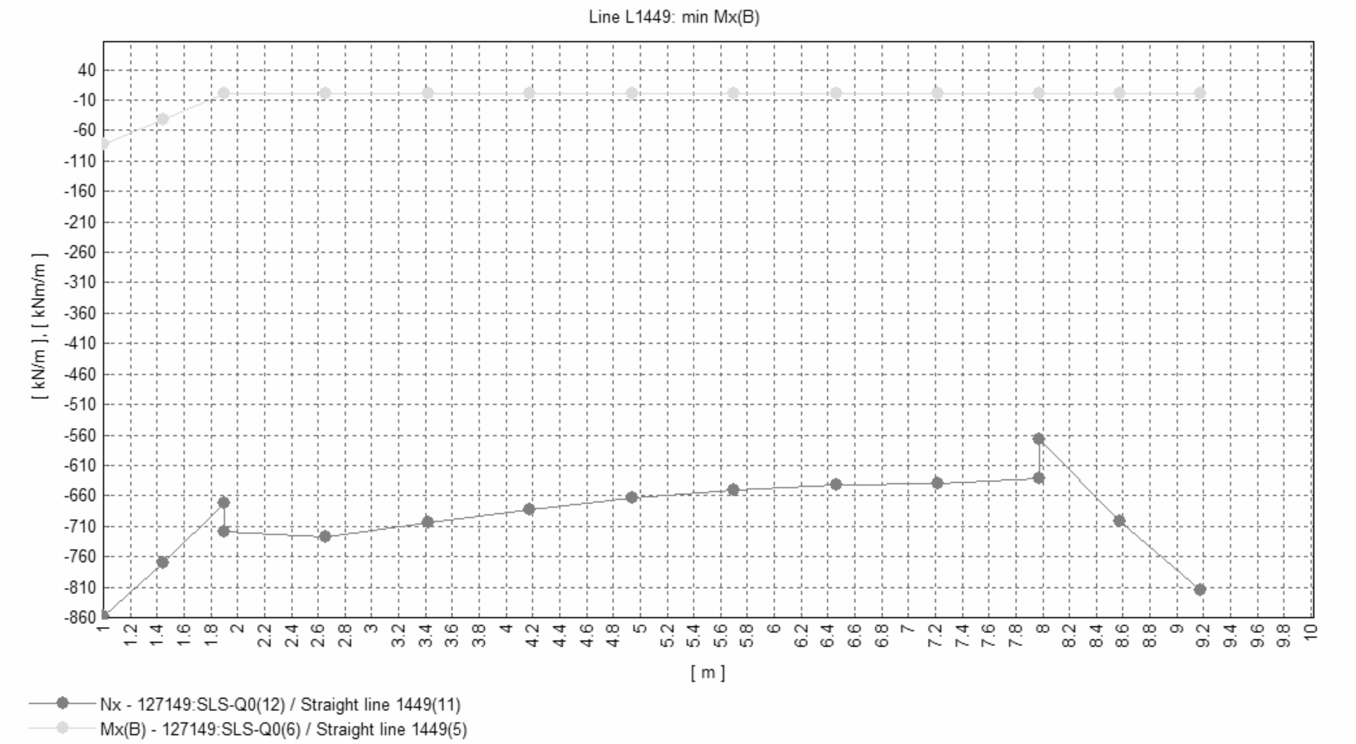
Line L1448: Max Mx(T)
[kN/m], [kNm/m]
[m]
Mx(T) - 127148:SLS-Q0(10) / Straight line 1448(9)
Nx - 127148:SLS-Q0(4) / Straight line 1448(3)



Line L1448: min Mx(B)
[kN/m], [kNm/m]
[m]
Nx - 127149:SLS-Q0(10) / Straight line 1448(9)
Mx(B) - 127149:SLS-Q0(4) / Straight line 1448(3)



Line L1449: Max Mx(T)
[kN/m], [kNm/m]
[m]
Mx(T) - 127148:SLS-Q0(12) / Straight line 1449(11)
Nx - 127148:SLS-Q0(6) / Straight line 1449(5)



Line L1449: min Mx(B)
[kN/m], [kNm/m]
[m]
Nx - 127149:SLS-Q0(12) / Straight line 1449(11)
Mx(B) - 127149:SLS-Q0(6) / Straight line 1449(5)

15.1.3 Tables

Line 1447:

s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	0	-847	-82	-858
0.90	162	-731	0	-719
1.66	275	-739	0	-727
2.42	490	-716	0	-705
3.18	724	-693	0	-683
3.94	972	-673	0	-664
4.70	1228	-658	0	-650
5.46	1491	-650	0	-642
6.22	1829	-648	0	-641
6.98	1972	-641	0	-632
7.58	2763	-710	0	-702
8.18	3754	-828	0	-815
m	kNm/m	kN/m	kNm/m	kN/m

Line 1448:

s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	10	-857	-41	-839
0.90	180	-730	0	-715
1.66	274	-745	0	-729
2.42	463	-726	0	-709
3.18	677	-705	0	-688
3.94	911	-682	0	-665
4.70	1159	-660	0	-643
5.46	1425	-643	0	-625
6.22	1725	-636	0	-618
6.98	1831	-624	0	-605
7.58	2586	-693	0	-670
8.18	3490	-823	0	-792
m	kNm/m	kN/m	kNm/m	kN/m

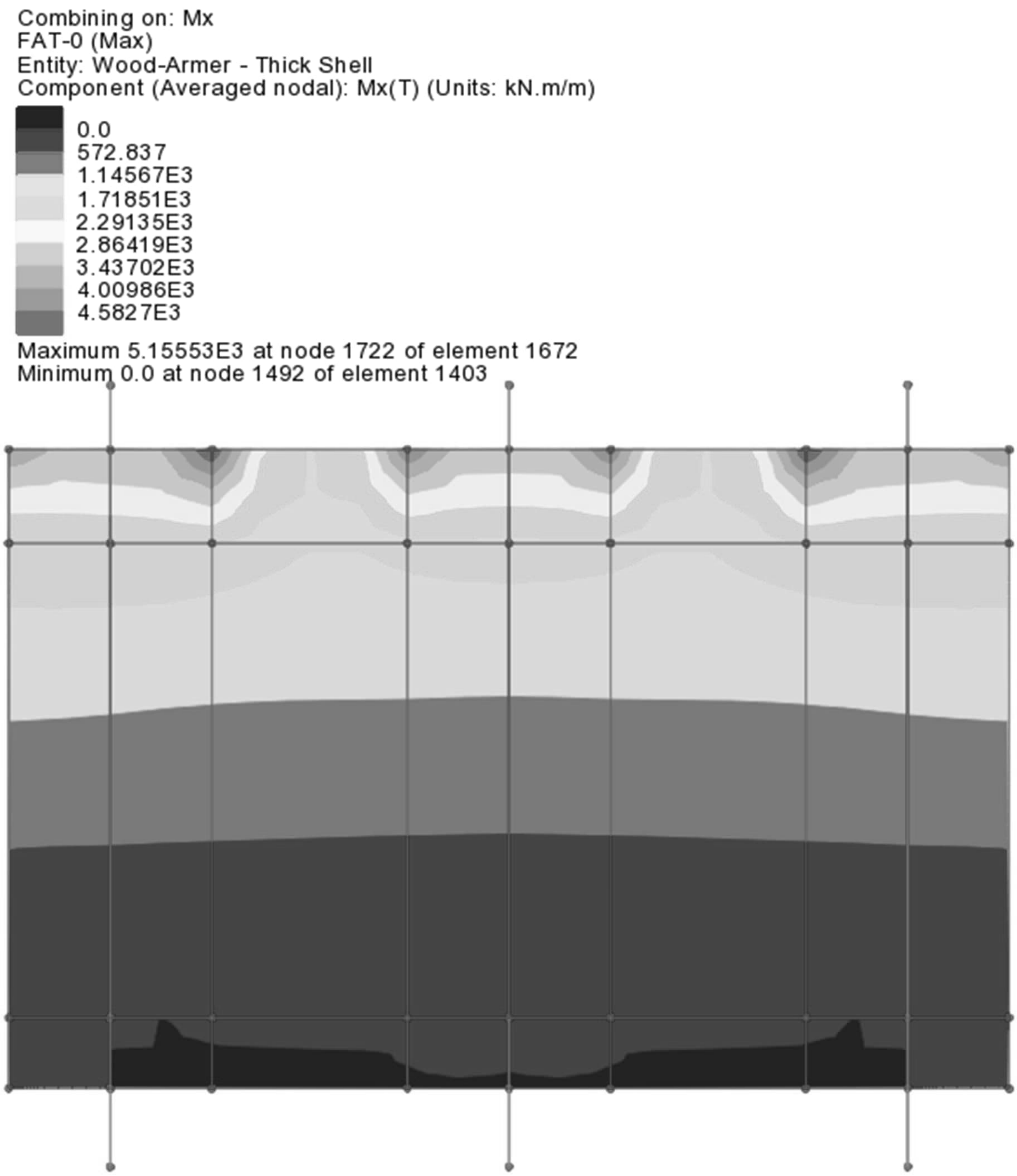
Line 1449:

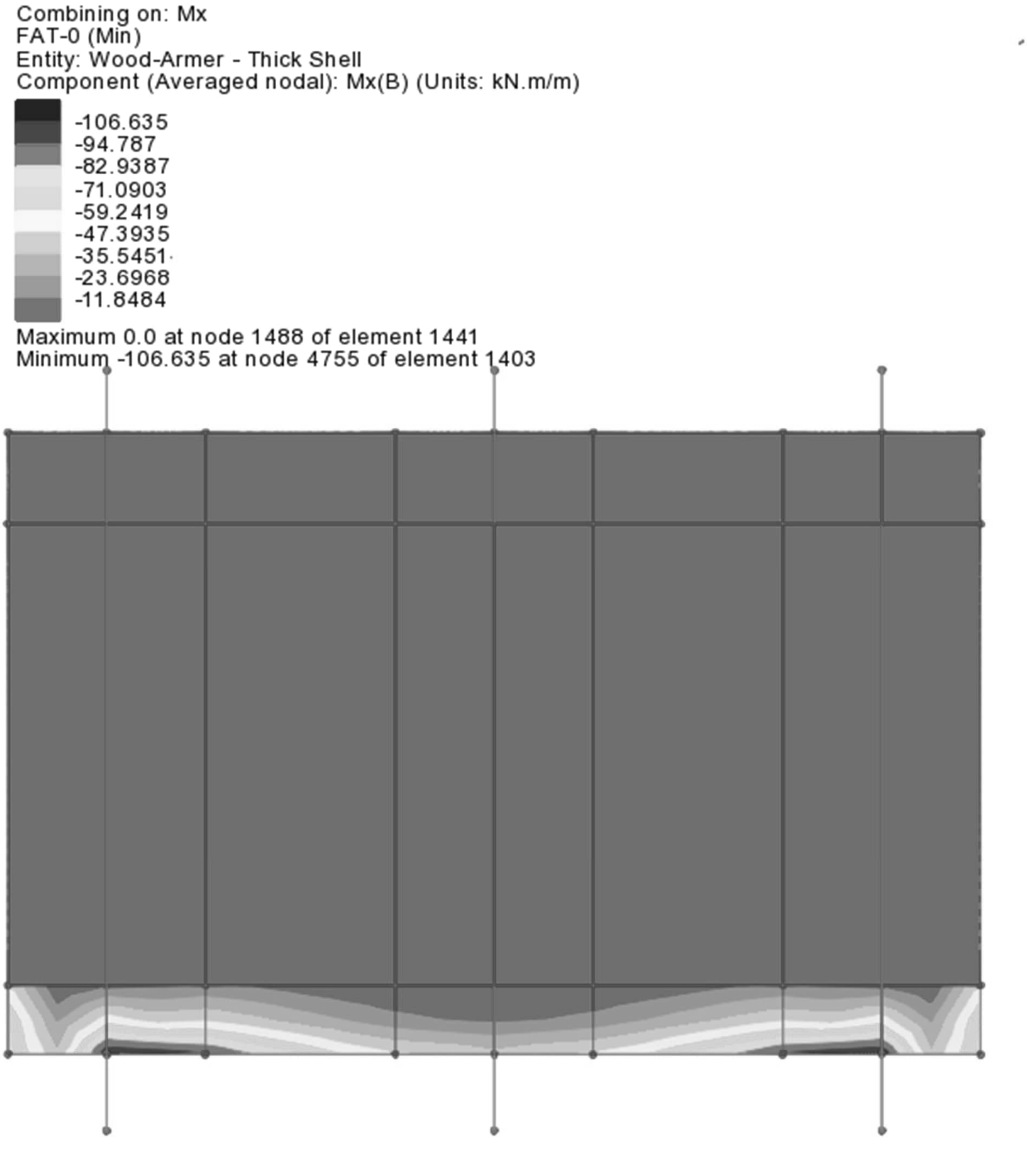
s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	0	-847	-82	-858
0.90	162	-731	0	-719
1.66	275	-739	0	-727
2.42	490	-716	0	-705
3.18	724	-693	0	-683
3.94	972	-673	0	-664
4.70	1228	-658	0	-650
5.46	1491	-650	0	-642
6.22	1829	-648	0	-641
6.98	1972	-641	0	-632
7.58	2763	-710	0	-702
8.18	3754	-828	0	-815
m	kNm/m	kN/m	kNm/m	kN/m

16. FAT-0: Min Mx)/Max Mx(T)

16.1 ABUTEMENT 1

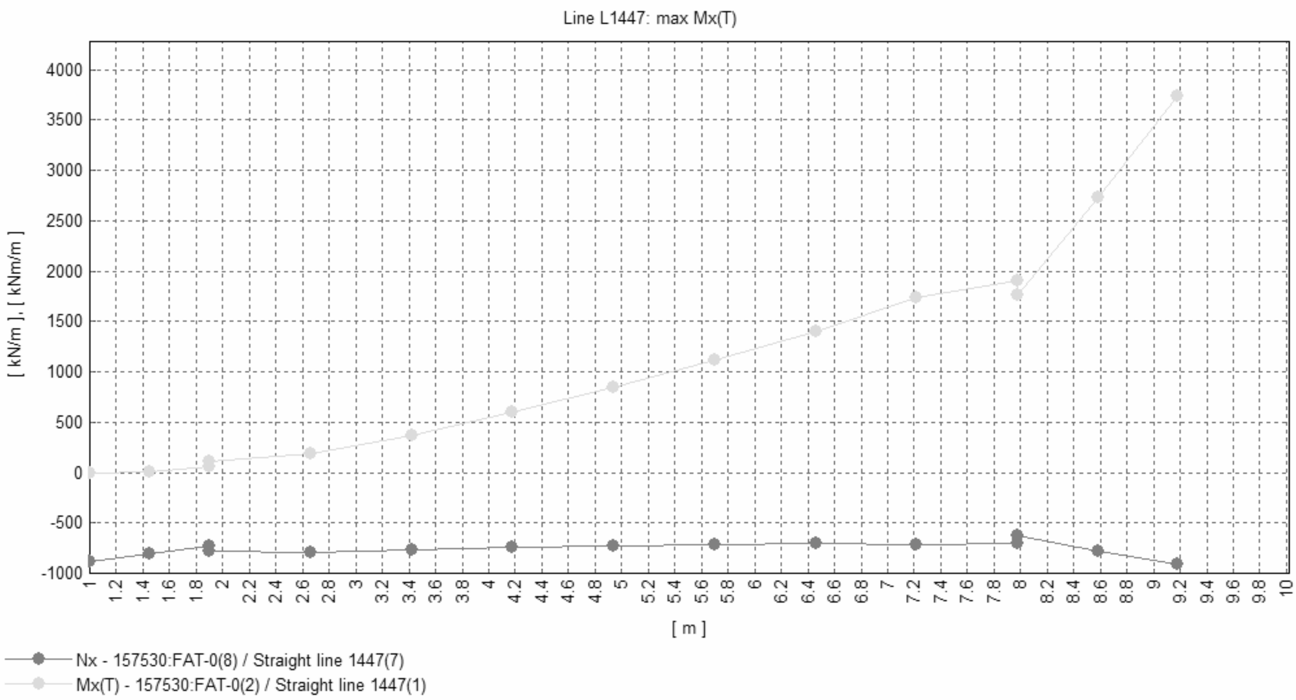
16.1.1 Contour

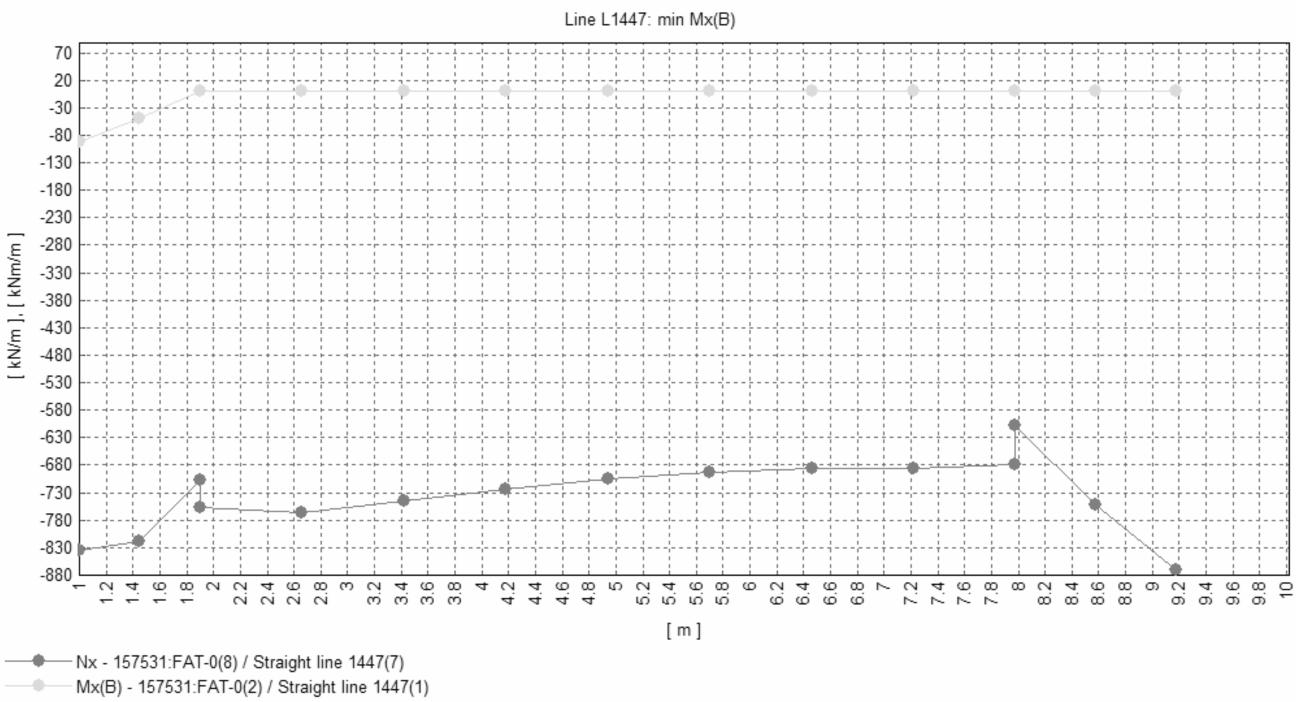


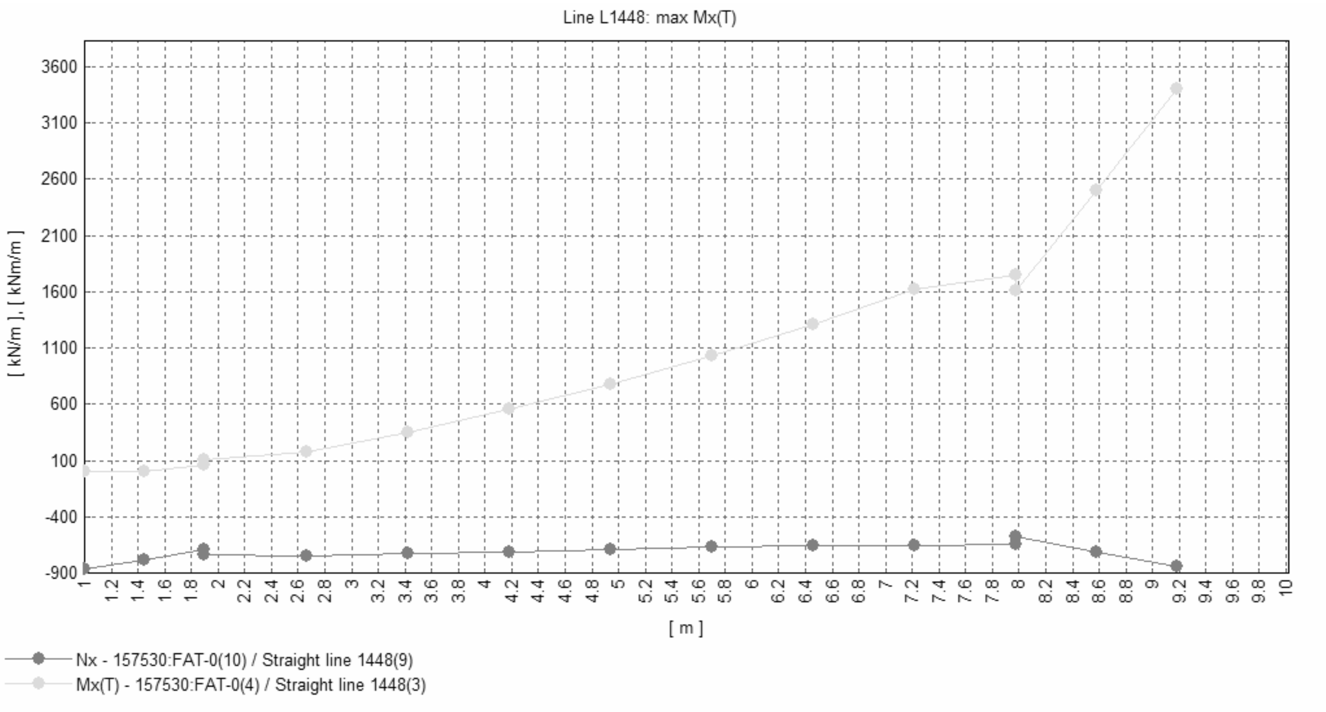


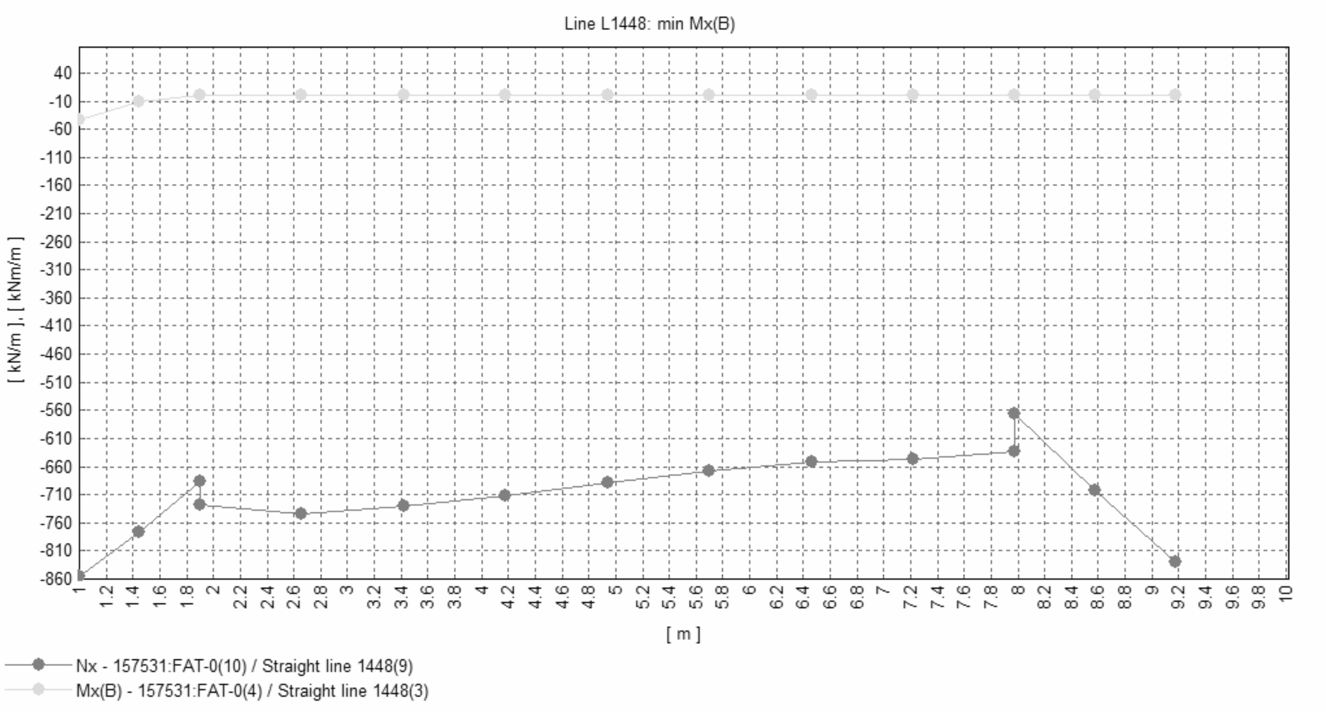
Combining on: Mx
FAT-0 (Min)
Entity: Wood-Armer - Thick Shell
Component (Averaged nodal): Mx(B) (Units: kN.m/m)
-106.635
-94.787
-82.9387
-71.0903
-59.2419
-47.3935
-35.5451
-23.6968
-11.8484
Maximum 0.0 at node 1488 of element 1441
Minimum -106.635 at node 4755 of element 1403

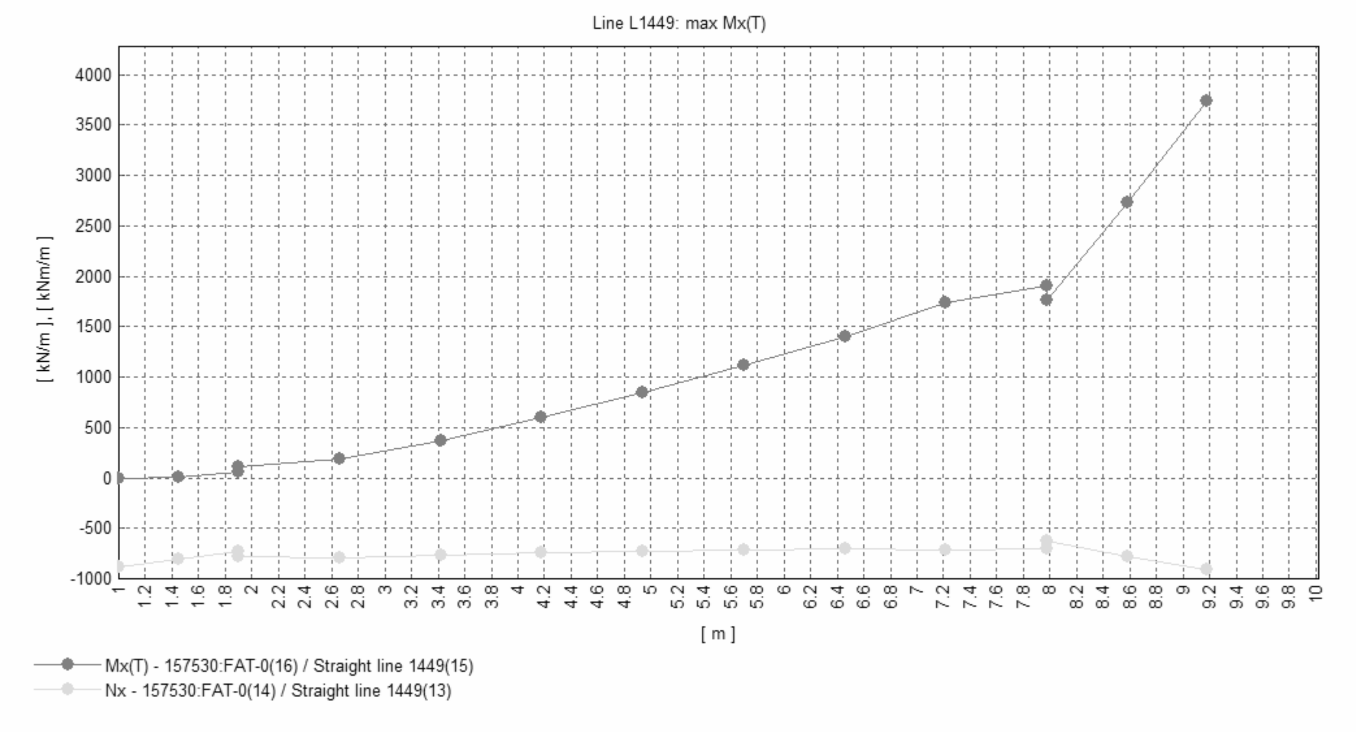
16.1.2 Diagram



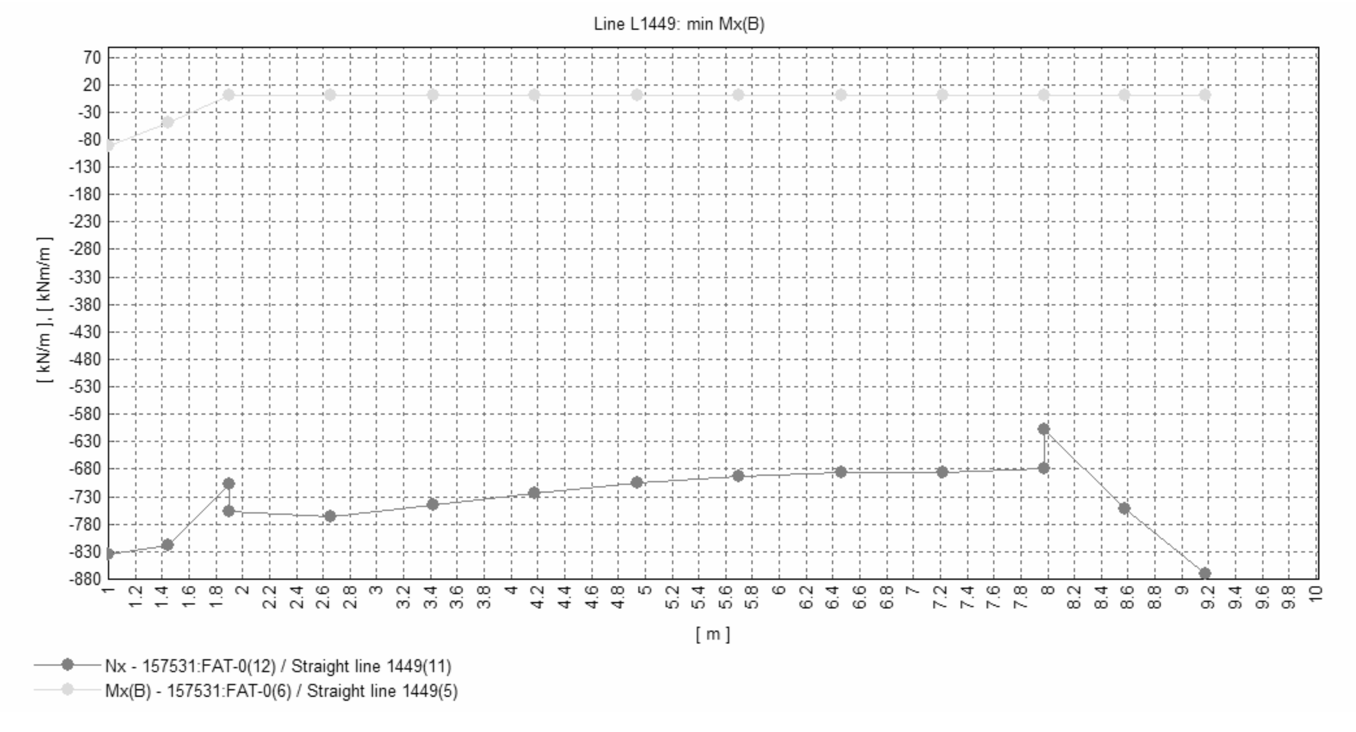



Line L1448: max Mx(T)
[kN/m], [kNm/m]
[m]
Nx - 157530:FAT-0(10) / Straight line 1448(9)
Mx(T) - 157530:FAT-0(4) / Straight line 1448(3)


Line L1448: min Mx(B)
[kN/m], [kNm/m]
[m]
Nx - 157531:FAT-0(10) / Straight line 1448(9)
Mx(B) - 157531:FAT-0(4) / Straight line 1448(3)



Line L1449: max Mx(T)
[kN/m], [kNm/m]
[m]
Mx(T) - 157530:FAT-0(16) / Straight line 1449(15)
Nx - 157530:FAT-0(14) / Straight line 1449(13)



Line L1449: min Mx(B)
[kN/m], [kNm/m]
[m]
Nx - 157531:FAT-0(12) / Straight line 1449(11)
Mx(B) - 157531:FAT-0(6) / Straight line 1449(5)

16.1.3 Tables

Line 1447:

s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	0	-886	-91	-836
0.90	109	-781	0	-758
1.66	188	-787	0	-767
2.42	370	-766	0	-745
3.18	595	-741	0	-723
3.94	846	-722	0	-705
4.70	1114	-710	0	-692
5.46	1398	-704	0	-686
6.22	1733	-710	0	-686
6.98	1910	-702	0	-678
7.58	2731	-778	0	-752
8.18	3733	-906	0	-871
m	kNm/m	kN/m	kNm/m	kN/m

Line 1148:

s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	0	-867	-43	-855
0.90	103	-735	0	-729
1.66	181	-750	0	-743
2.42	350	-729	0	-731
3.18	553	-716	0	-711
3.94	783	-695	0	-690
4.70	1032	-674	0	-669
5.46	1304	-658	0	-653
6.22	1617	-652	0	-647
6.98	1747	-640	0	-634
7.58	2505	-711	0	-702
8.18	3399	-843	0	-830
m	kNm/m	kN/m	kNm/m	kN/m

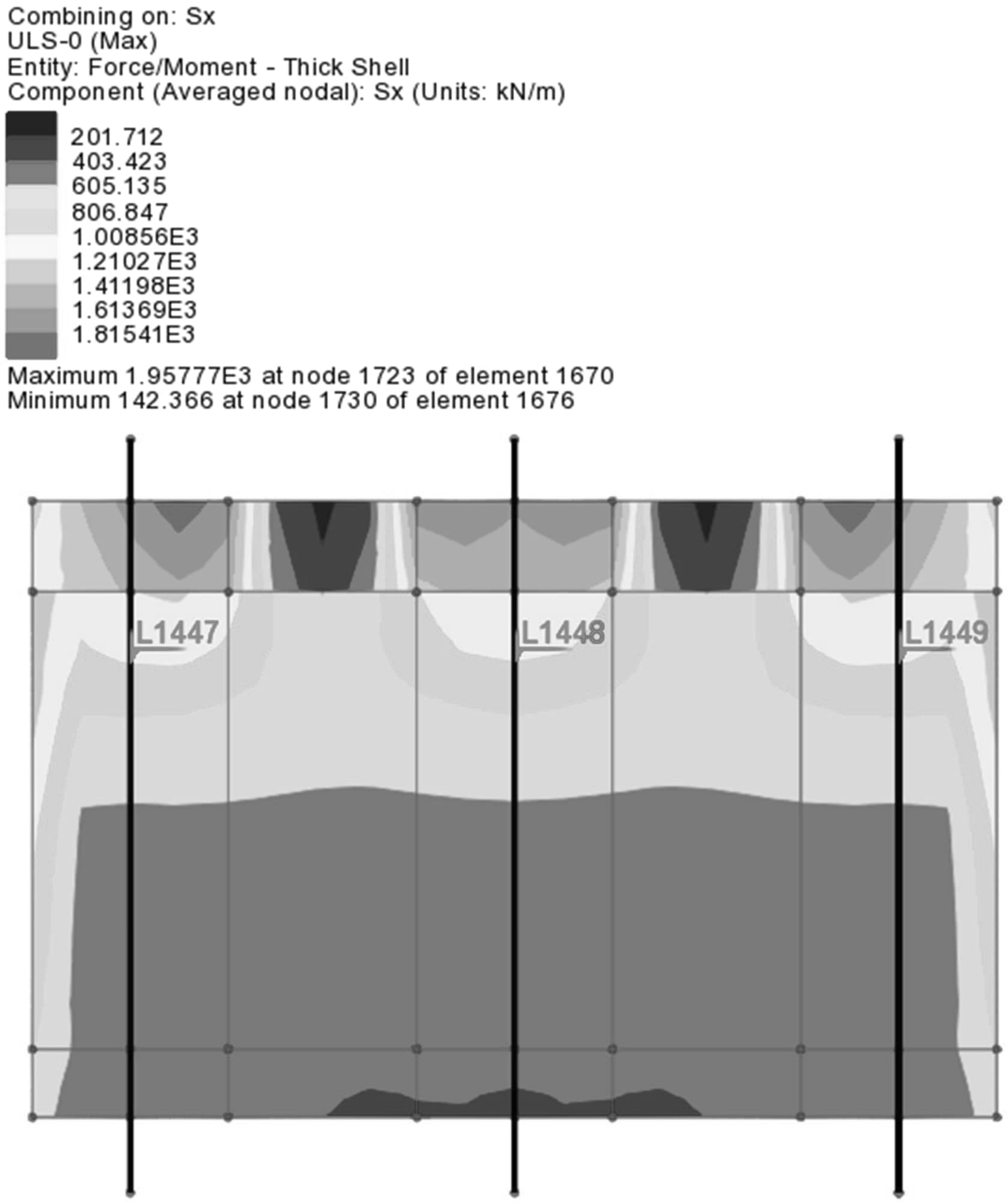
Line 1449 :

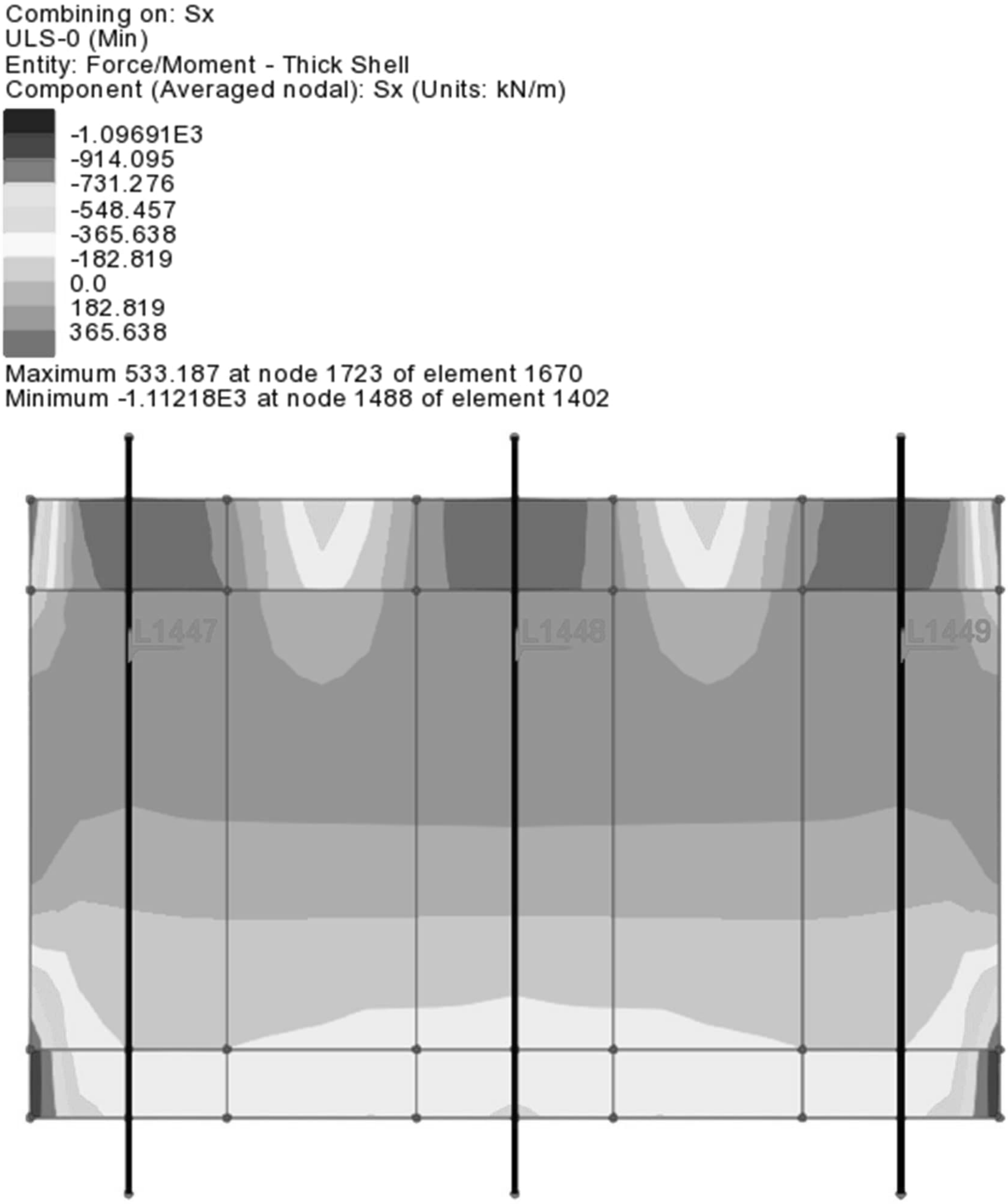
s	Max Mx(T)	Nx	Min Mx(B)	Nx
0	0	-867	-43	-855
0.90	103	-735	0	-729
1.66	181	-750	0	-743
2.42	350	-729	0	-731
3.18	553	-716	0	-711
3.94	783	-695	0	-690
4.70	1032	-674	0	-669
5.46	1304	-658	0	-653
6.22	1617	-652	0	-647
6.98	1747	-640	0	-634
7.58	2505	-711	0	-702
8.18	3399	-843	0	-830
m	kNm/m	kN/m	kNm/m	kN/m

17. ULS-0: Min Sx/Max Sx

17.1 ABUTEMENT 1

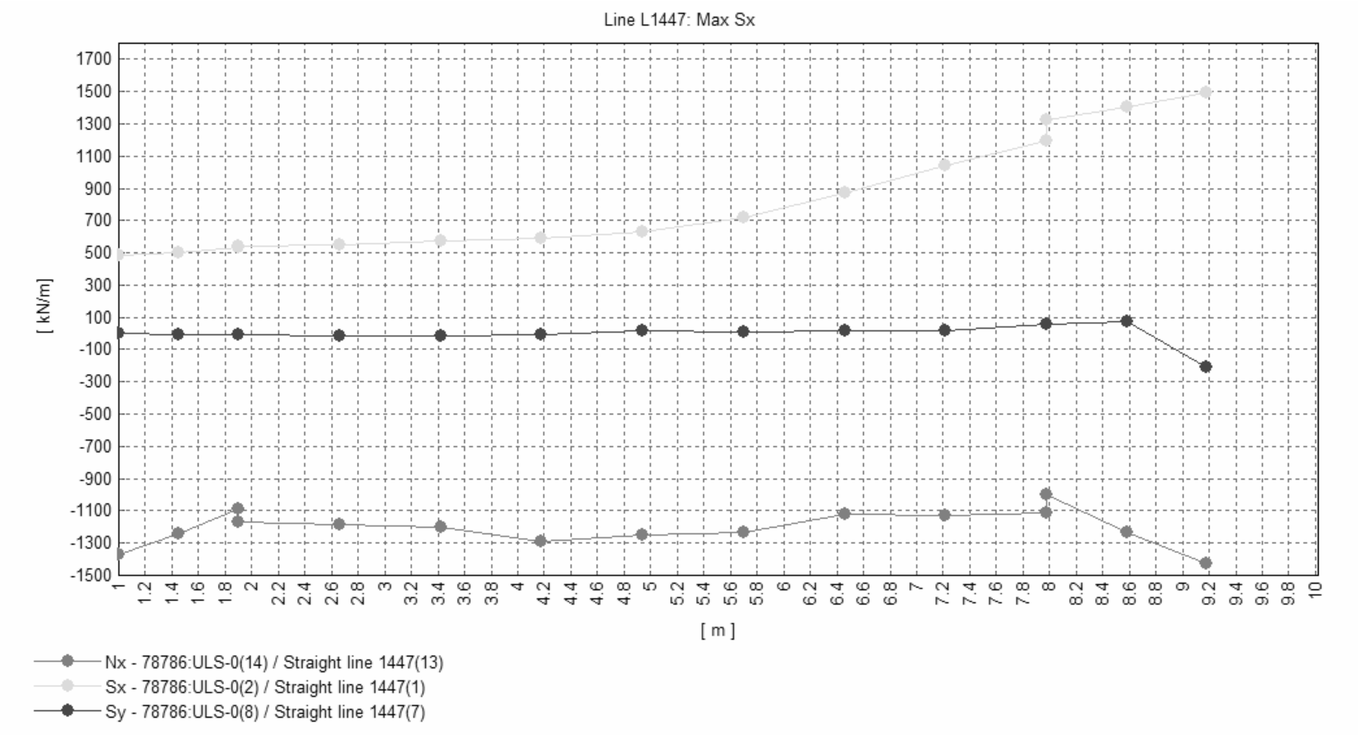
17.1.1 Contour

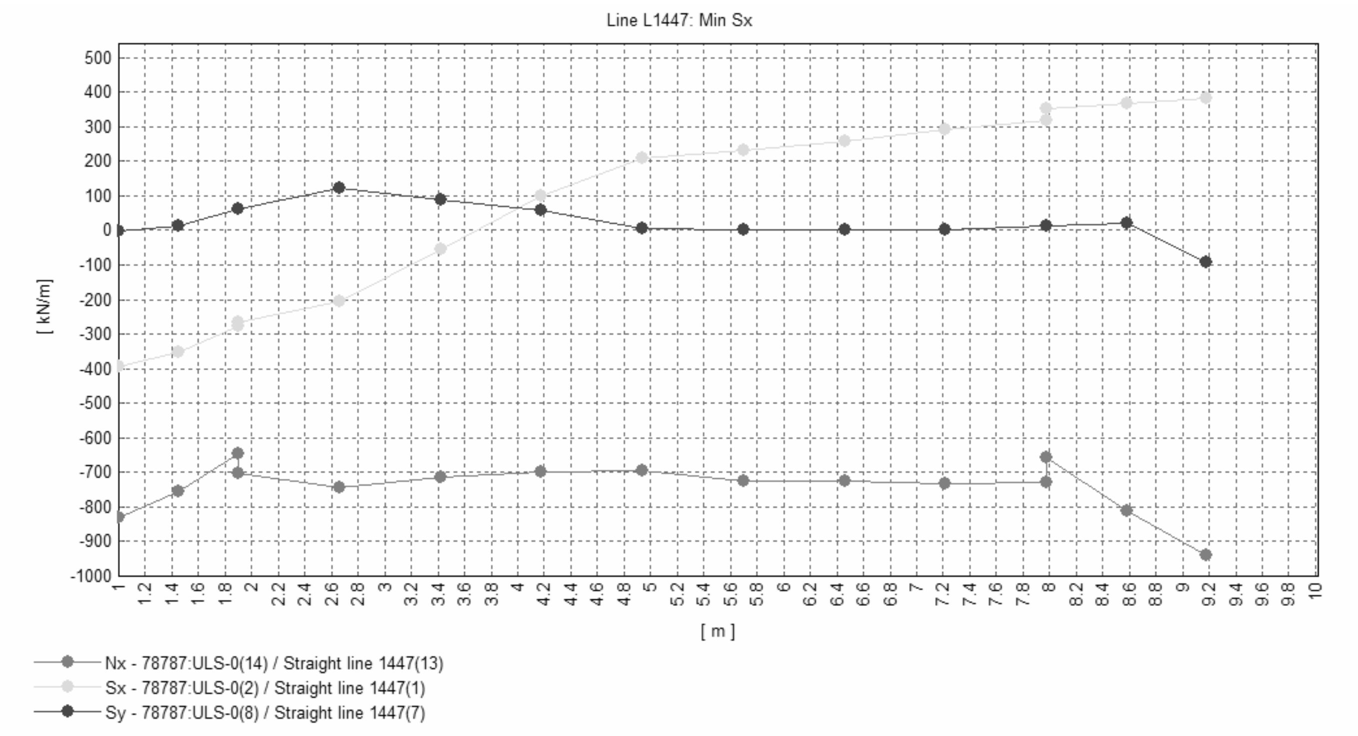


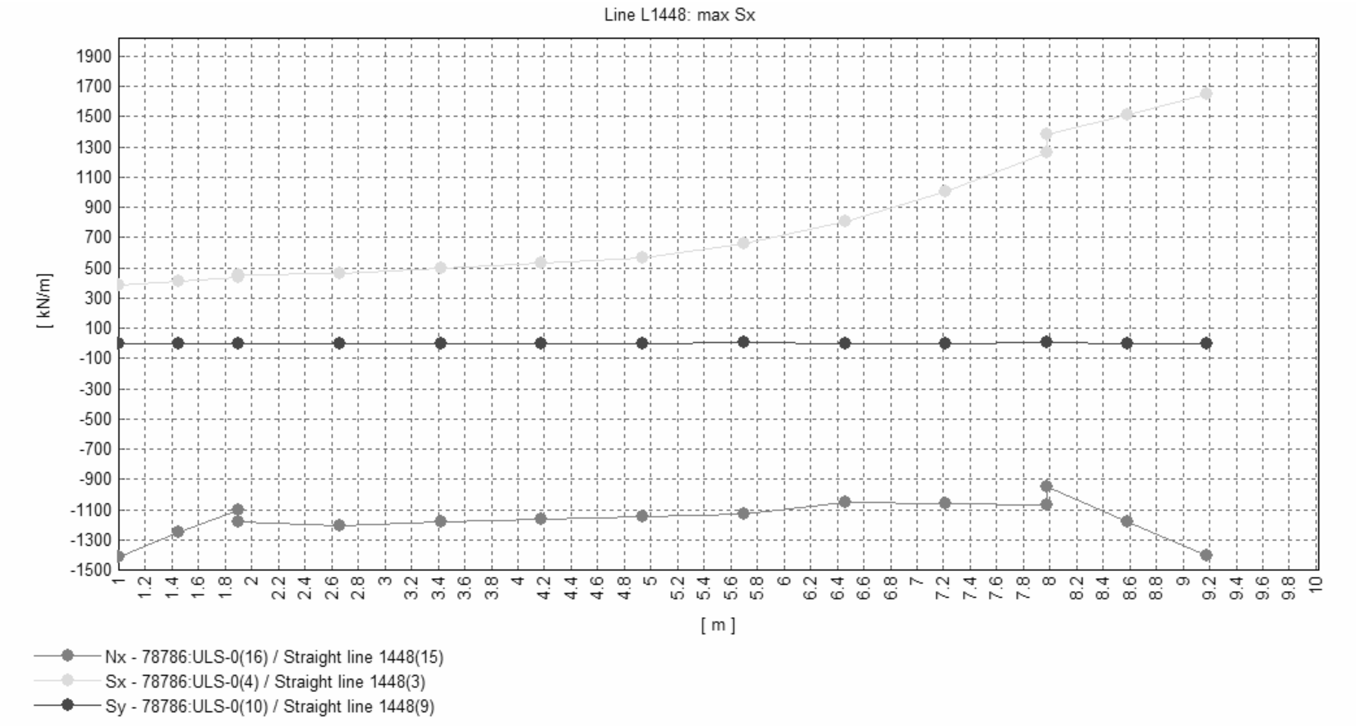


Combining on: Sx
ULS-0 (Min)
Entity: Force/Moment - Thick Shell
Component (Averaged nodal): Sx (Units: kN/m)
-1.09691E3
-914.095
-731.276
-548.457
-365.638
-182.819
0.0
182.819
365.638
Maximum 533.187 at node 1723 of element 1670
Minimum -1.11218E3 at node 1488 of element 1402
L1447
L1448
L1449

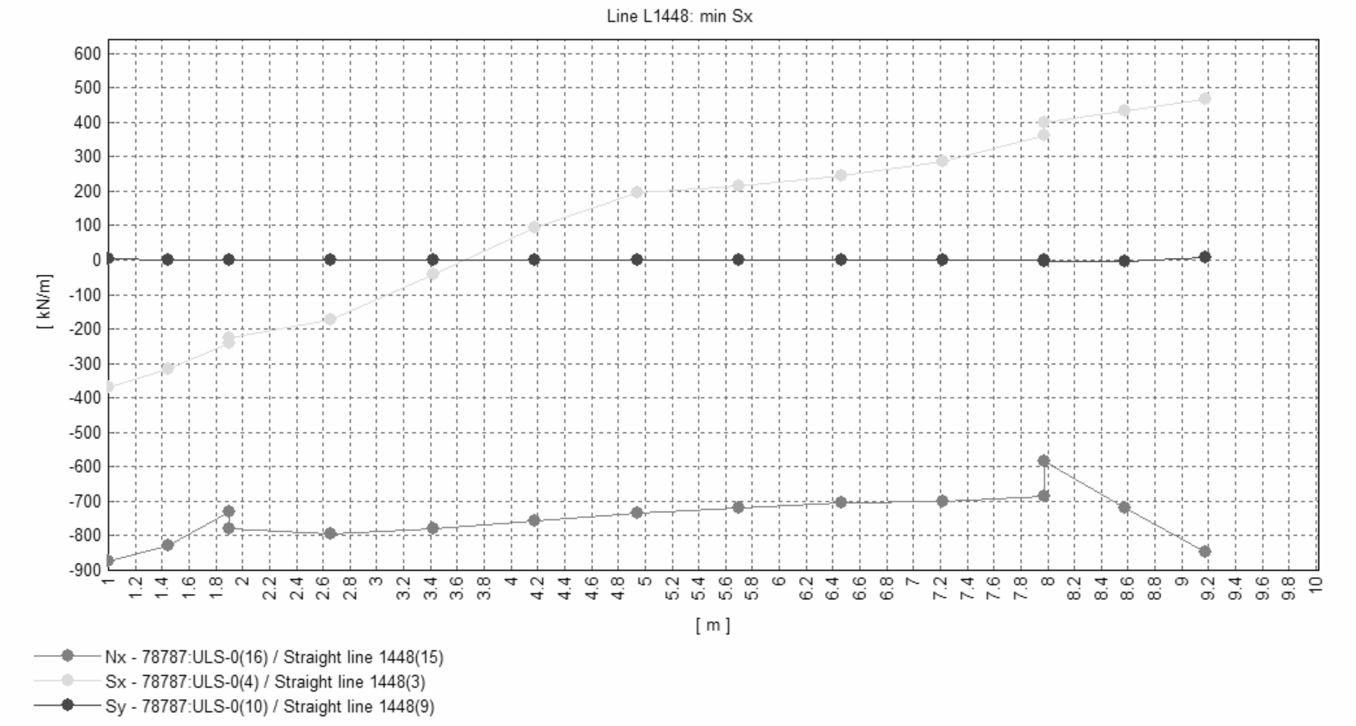
17.1.2 Diagram



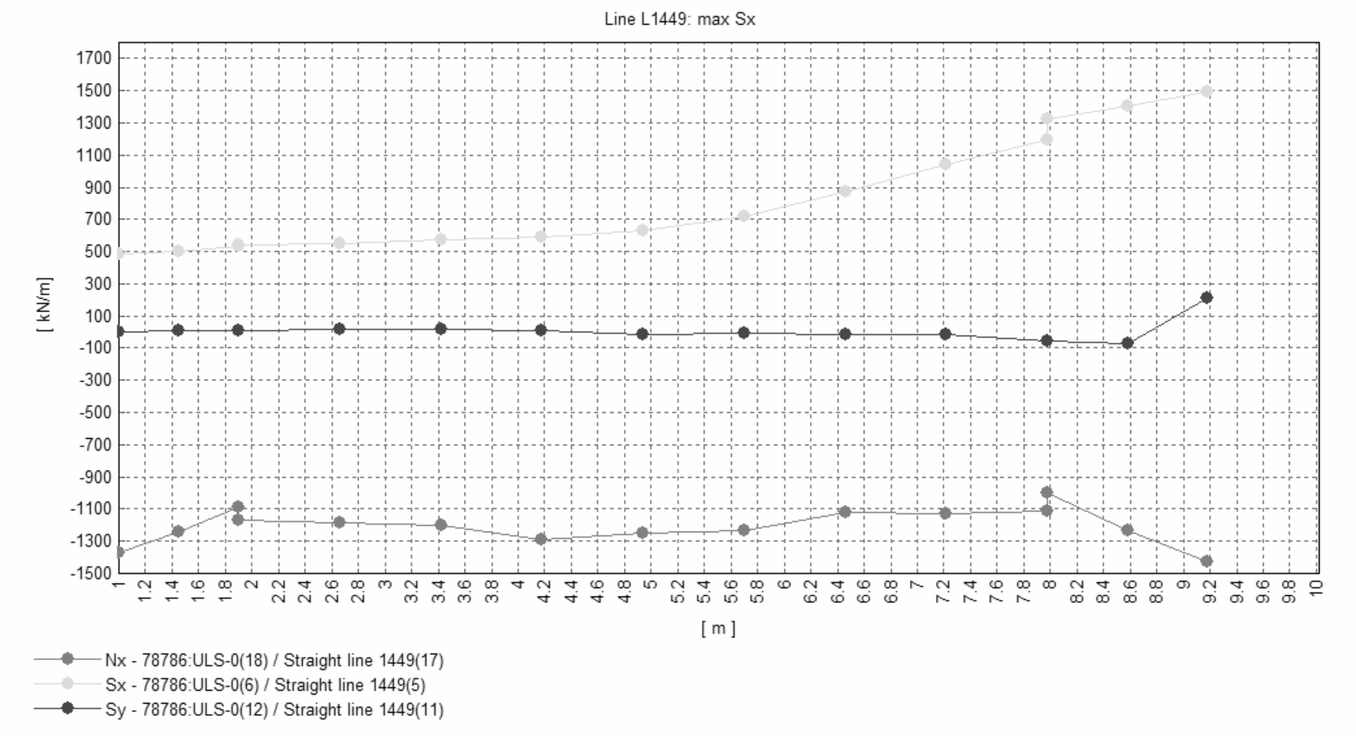




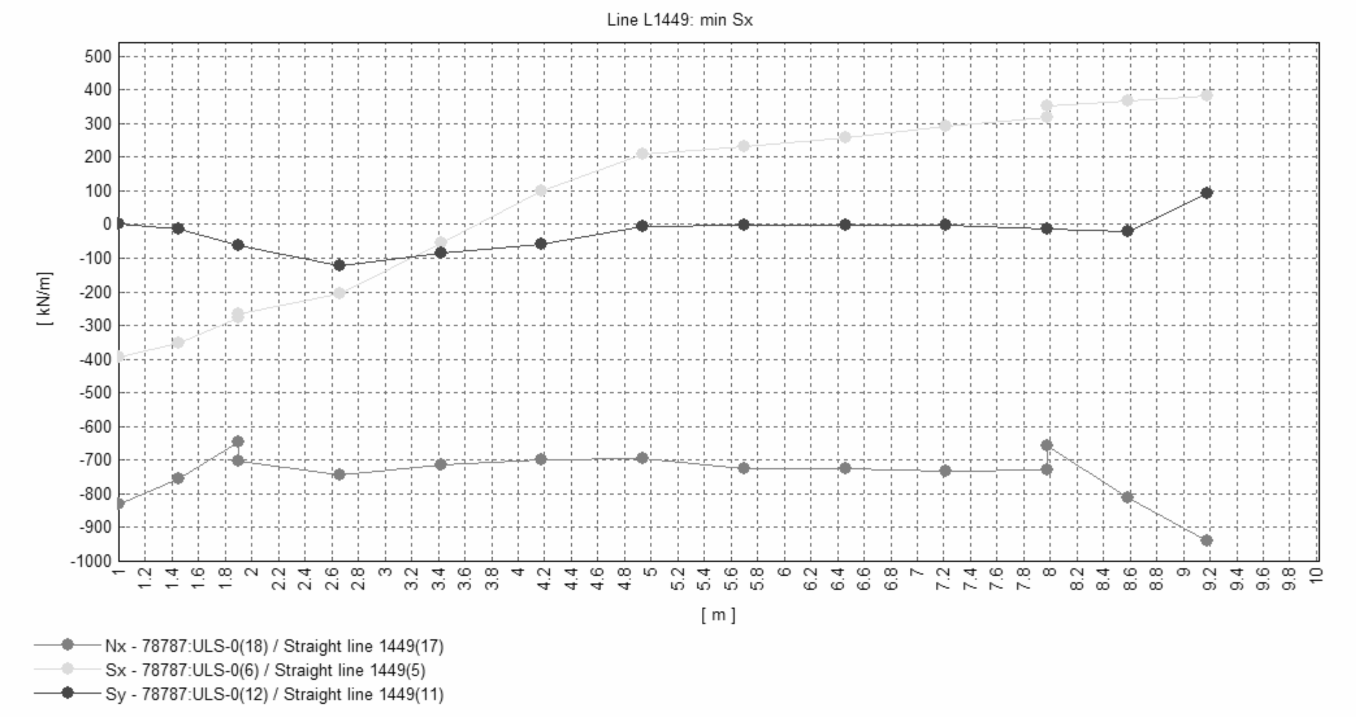
Line L1448: max Sx
[kN/m]
[m]
Nx - 78786:ULS-0(16) / Straight line 1448(15)
Sx - 78786:ULS-0(4) / Straight line 1448(3)
Sy - 78786:ULS-0(10) / Straight line 1448(9)



Line L1448: min Sx
[kN/m]
[m]
Nx - 78787:ULS-0(16) / Straight line 1448(15)
Sx - 78787:ULS-0(4) / Straight line 1448(3)
Sy - 78787:ULS-0(10) / Straight line 1448(9)



Line L1449: max Sx
[kN/m]
[m]
Nx - 78786:ULS-0(18) / Straight line 1449(17)
Sx - 78786:ULS-0(6) / Straight line 1449(5)
Sy - 78786:ULS-0(12) / Straight line 1449(11)



Line L1449: min Sx
[kN/m]
[m]
Nx - 78787:ULS-0(18) / Straight line 1449(17)
Sx - 78787:ULS-0(6) / Straight line 1449(5)
Sy - 78787:ULS-0(12) / Straight line 1449(11)

17.1.3 Tables

Line 1447:

s	Max Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	483	1	-1369	483
0.9	540	-5	-1168	540
1.7	551	-15	-1186	551
2.4	573	-16	-1204	573
3.2	593	-8	-1291	593
3.9	627	17	-1250	627
4.7	720	9	-1233	720
5.5	869	19	-1121	869
6.2	1045	14	-1126	1045
7.0	1198	57	-1117	1200
7.6	1407	74	-1231	1409
8.2	1490	-208	-1429	1505
0	483	1	-1369	483
m	kN/m	kN/m	kN/m	kN/m

s	Min Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	-394	-2	-830	394
0.9	-267	62	-704	274
1.7	-206	122	-742	239
2.4	-56	87	-716	104
3.2	100	58	-698	116
3.9	209	6	-693	209
4.7	232	2	-725	232
5.5	258	1	-726	258
6.2	292	1	-733	292
7.0	317	13	-729	317
7.6	368	22	-811	369
8.2	0	0	0	0
0	-394	-2	-830	394
m	kN/m	kN/m	kN/m	kN/m

Line 1448:

s	Max Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	388	-1	-1410	388
0.9	450	0	-1180	450
1.7	466	1	-1208	466
2.4	500	1	-1185	500
3.2	533	1	-1167	533
3.9	568	2	-1147	568
4.7	661	2	-1129	661
5.5	809	2	-1053	809
6.2	1009	2	-1065	1009
7.0	1266	3	-1073	1266
7.6	1515	2	-1179	1515
8.2	1649	-5	-1407	1649
0	388	-1	-1410	388
m	kN/m	kN/m	kN/m	kN/m

s	Min Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	-369	2	-875	369
0.9	-226	0	-779	226
1.7	-175	0	-796	175
2.4	-43	0	-779	43
3.2	94	0	-757	94
3.9	194	-1	-733	194
4.7	216	-1	-717	216
5.5	243	-1	-704	243
6.2	287	-1	-700	287
7.0	362	-1	-684	362
7.6	431	-3	-721	431
8.2	0	0	0	0
0	-369	2	-875	369
m	kN/m	kN/m	kN/m	kN/m

Line 1449:

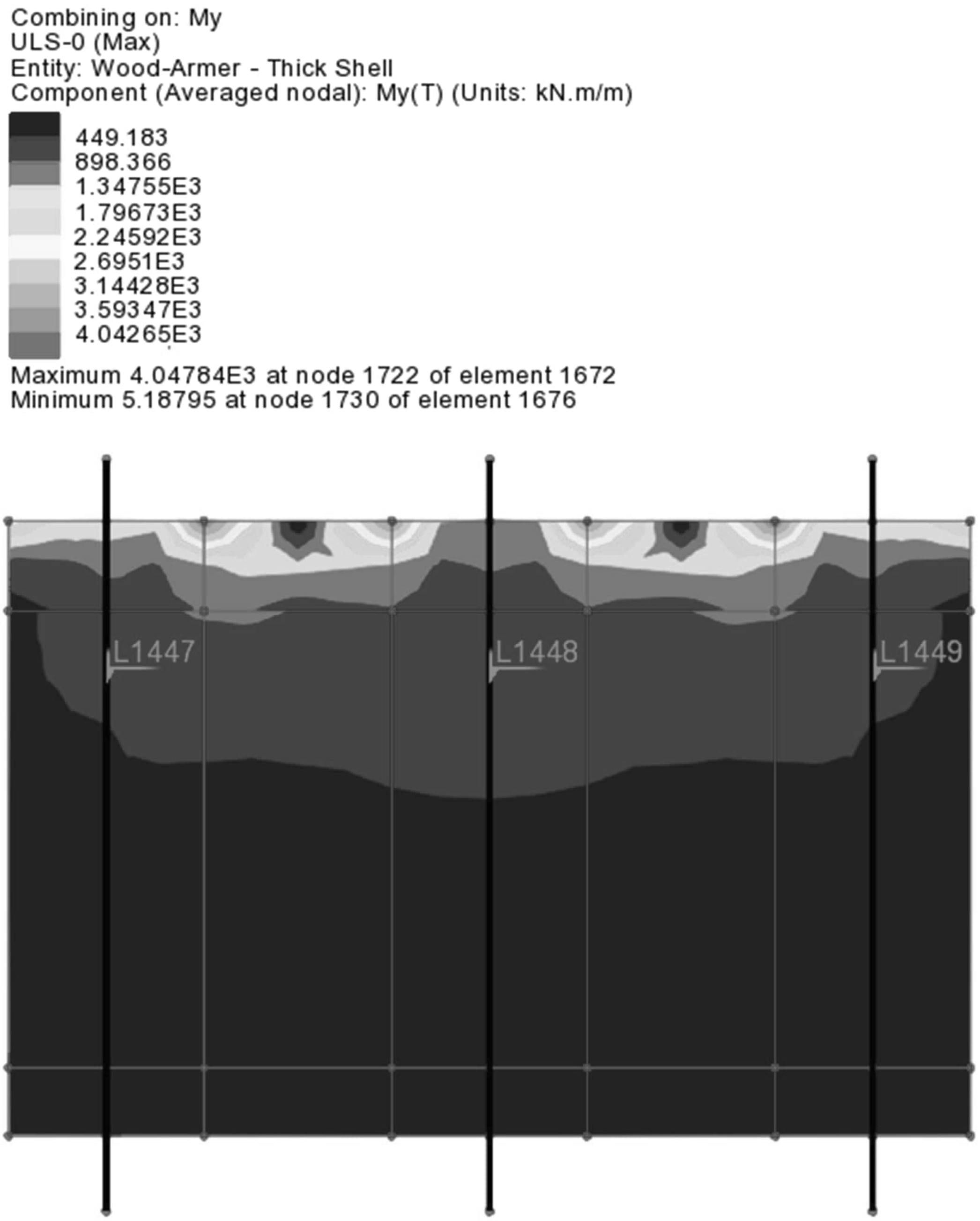
s	Max Sx	Sy	Nx	$\sqrt{Sx^2 + Sy^2}$
0	483	-1	-1369	483
0.9	540	5	-1168	540
1.7	551	15	-1186	551
2.4	573	16	-1204	573
3.2	593	8	-1291	593
3.9	627	-17	-1250	627
4.7	720	-9	-1233	720
5.5	869	-19	-1121	869
6.2	1045	-14	-1126	1045
7.0	1198	-57	-1117	1200
7.6	1407	-74	-1231	1409
8.2	1490	208	-1429	1505
0	483	-1	-1369	483
m	kN/m	kN/m	kN/m	kN/m

s	Min Sx	Sy	Nx	$\sqrt{Sx^2 + Sy^2}$
0	-394	2	-830	394
0.9	-267	-62	-704	274
1.7	-206	-122	-742	239
2.4	-56	-87	-716	104
3.2	100	-58	-698	116
3.9	209	-6	-693	209
4.7	232	-2	-725	232
5.5	258	-1	-726	258
6.2	292	-1	-733	292
7.0	317	-13	-729	317
7.6	368	-22	-811	369
8.2	0	0	0	0
0	-394	2	-830	394
m	kN/m	kN/m	kN/m	kN/m

18. ULS-0: Min My(B)/Max My(T)

18.1 ABUTEMENT 1

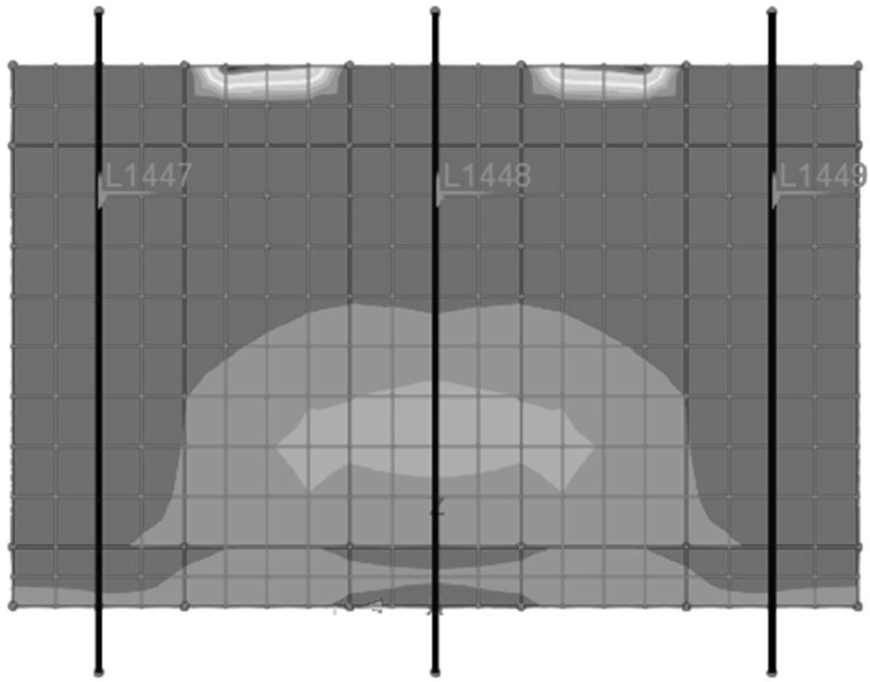
18.1.1 Contour



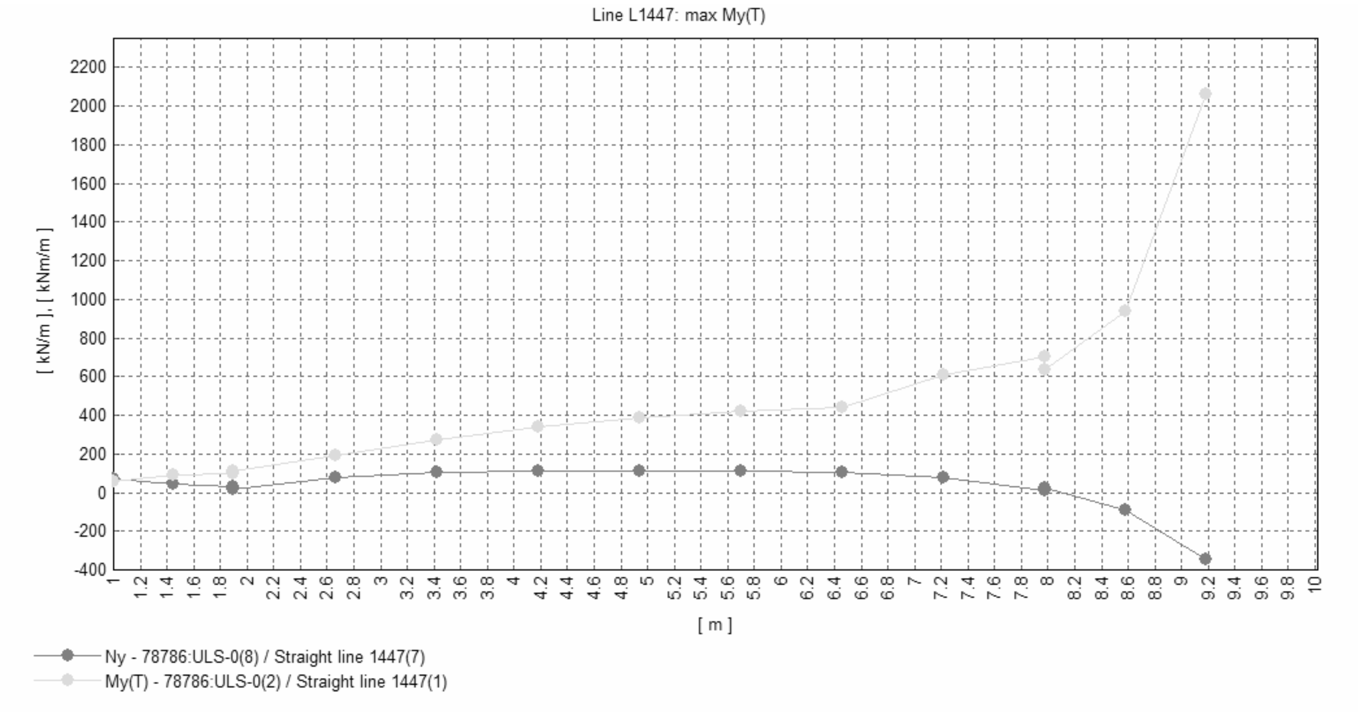
Combining on: My
ULS-0 (Min)
Entity: Wood-Armer - Thick Shell
Component (Averaged nodal): My(B) (Units: kN.m/m)

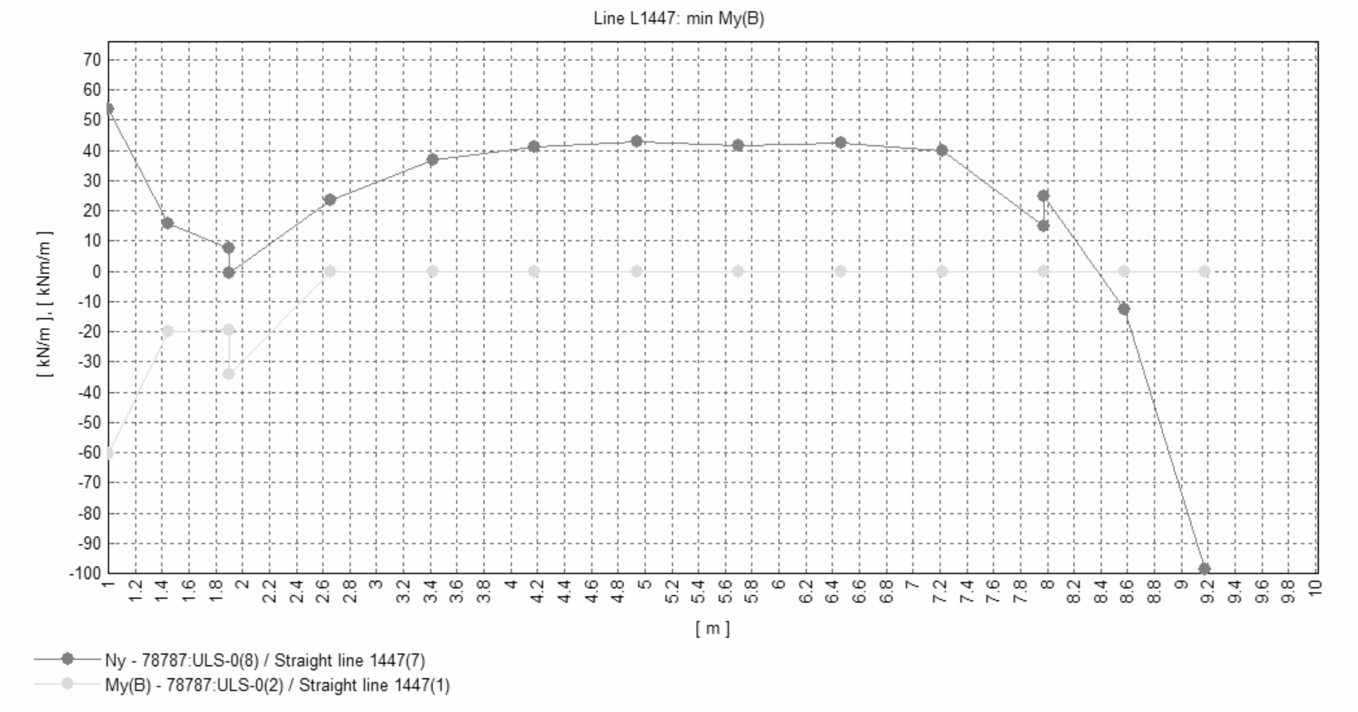
-433.446
-385.286
-337.125
-288.964
-240.804
-192.643
-144.482
-96.3214
-48.1607

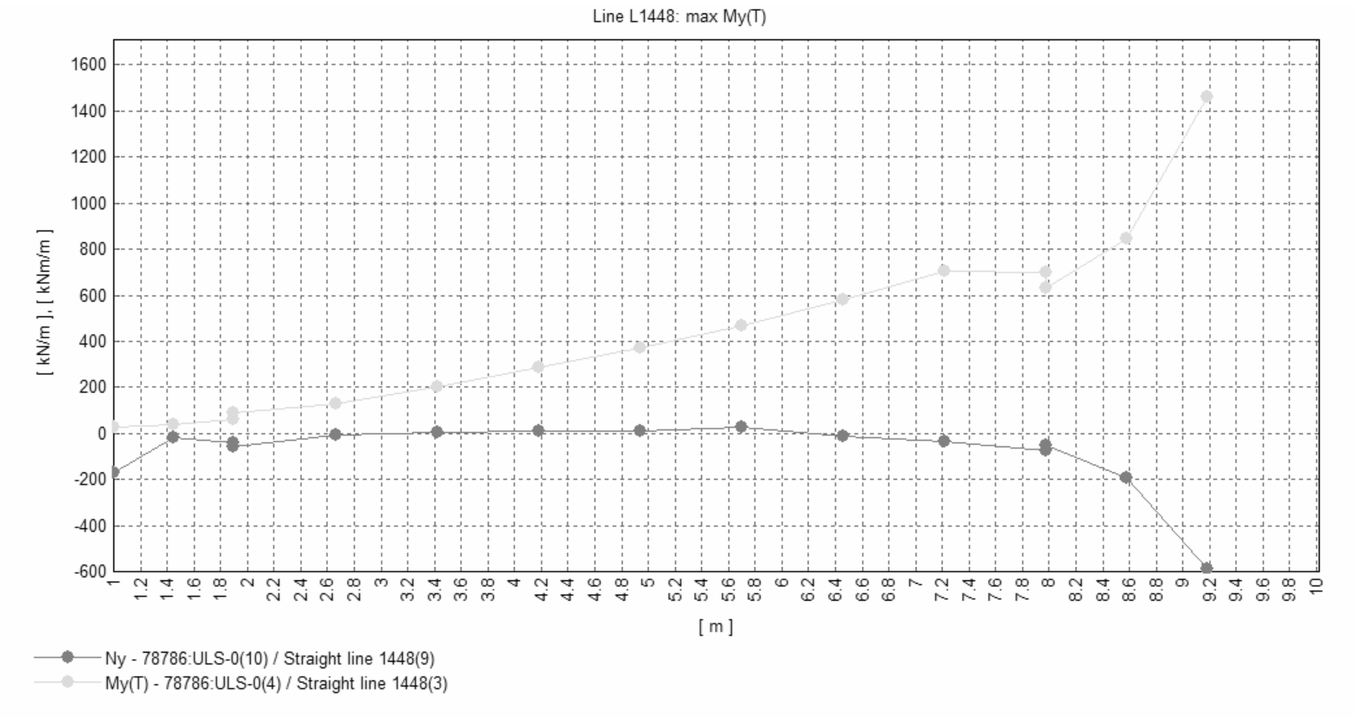
Maximum 0.0 at node 1488 of element 1402
Minimum -433.446 at node 1731 of element 1674

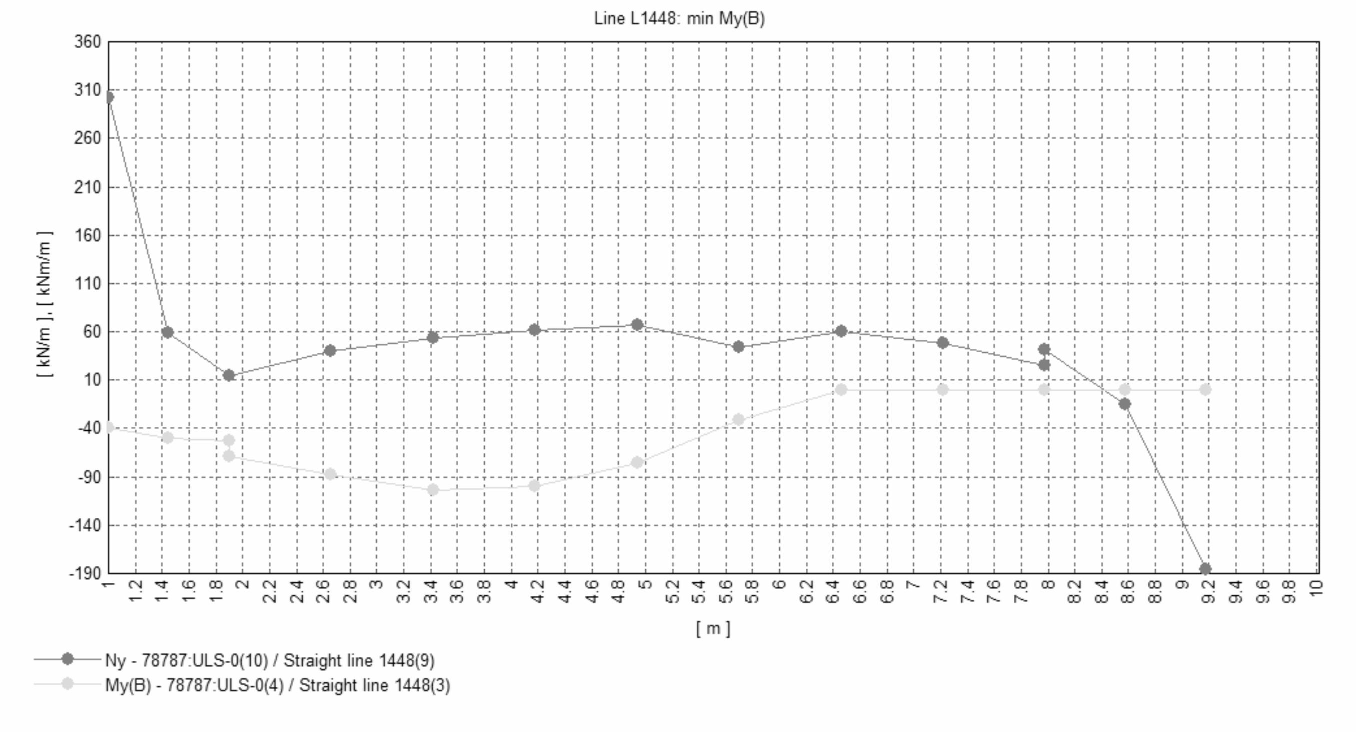


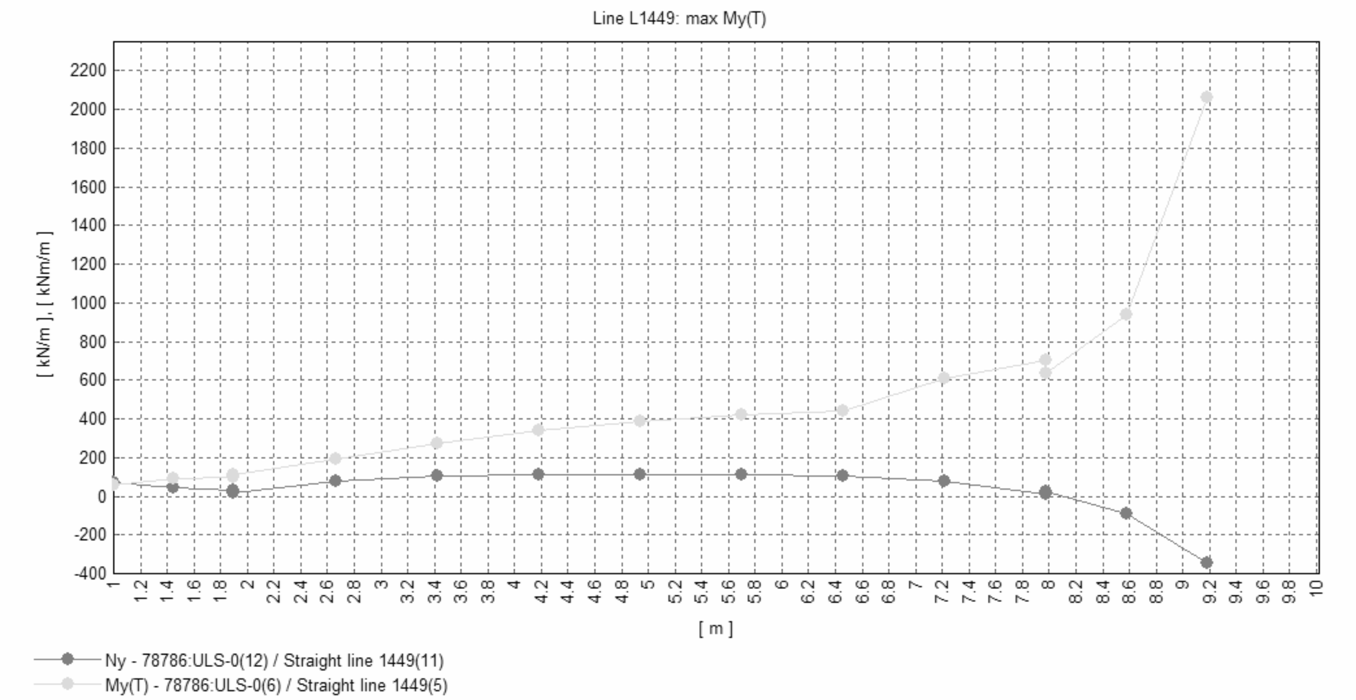
18.1.2 Diagram



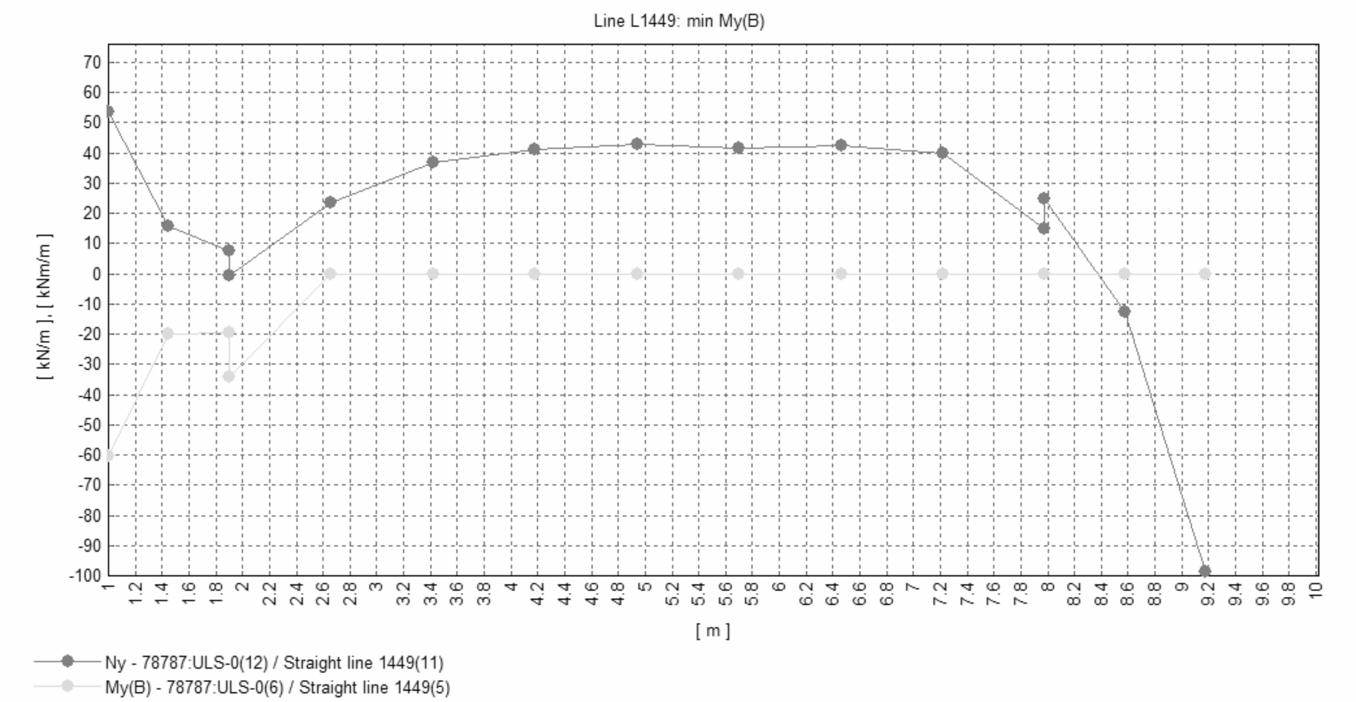



Line L1448: max My(T)
[kN/m], [kNm/m]
[m]
Ny - 78786:ULS-0(10) / Straight line 1448(9)
My(T) - 78786:ULS-0(4) / Straight line 1448(3)


Line L1448: min My(B)
[kN/m], [kNm/m]
[m]
Ny - 78787:ULS-0(10) / Straight line 1448(9)
My(B) - 78787:ULS-0(4) / Straight line 1448(3)



Line L1449: max My(T)
[kN/m], [kNm/m]
[m]
Ny - 78786:ULS-0(12) / Straight line 1449(11)
My(T) - 78786:ULS-0(6) / Straight line 1449(5)



Line L1449: min My(B)
[kN/m], [kNm/m]
[m]
Ny - 78787:ULS-0(12) / Straight line 1449(11)
My(B) - 78787:ULS-0(6) / Straight line 1449(5)

18.1.3 Tables

Line 1447:

s	Max My(T)	Ny	Min My(B)	Ny
0	59	68	-60	54
0.9	108	20	-34	-1
1.7	190	75	0	23
2.4	274	102	0	37
3.2	338	111	0	41
3.9	383	113	0	43
4.7	421	111	0	42
5.5	439	106	0	42
6.2	609	75	0	40
7.0	701	8	0	15
7.6	939	-91	0	-13
8.2	2059	-349	0	-98
m	kNm/m	kN/m	kNm/m	kN/m

Line 1448:

s	Max My(T)	Ny	Min My(B)	Ny
0	26	-170	-40	302
0.9	89	-56	-69	14
1.7	129	-5	-88	39
2.4	204	7	-104	53
3.2	284	13	-100	62
3.9	372	11	-76	67
4.7	468	25	-31	44
5.5	579	-13	0	60
6.2	702	-37	0	48
7.0	697	-77	0	25
7.6	844	-194	0	-15
8.2	1459	-591	0	-185
m	kNm/m	kNm/m	kNm/m	kN/m

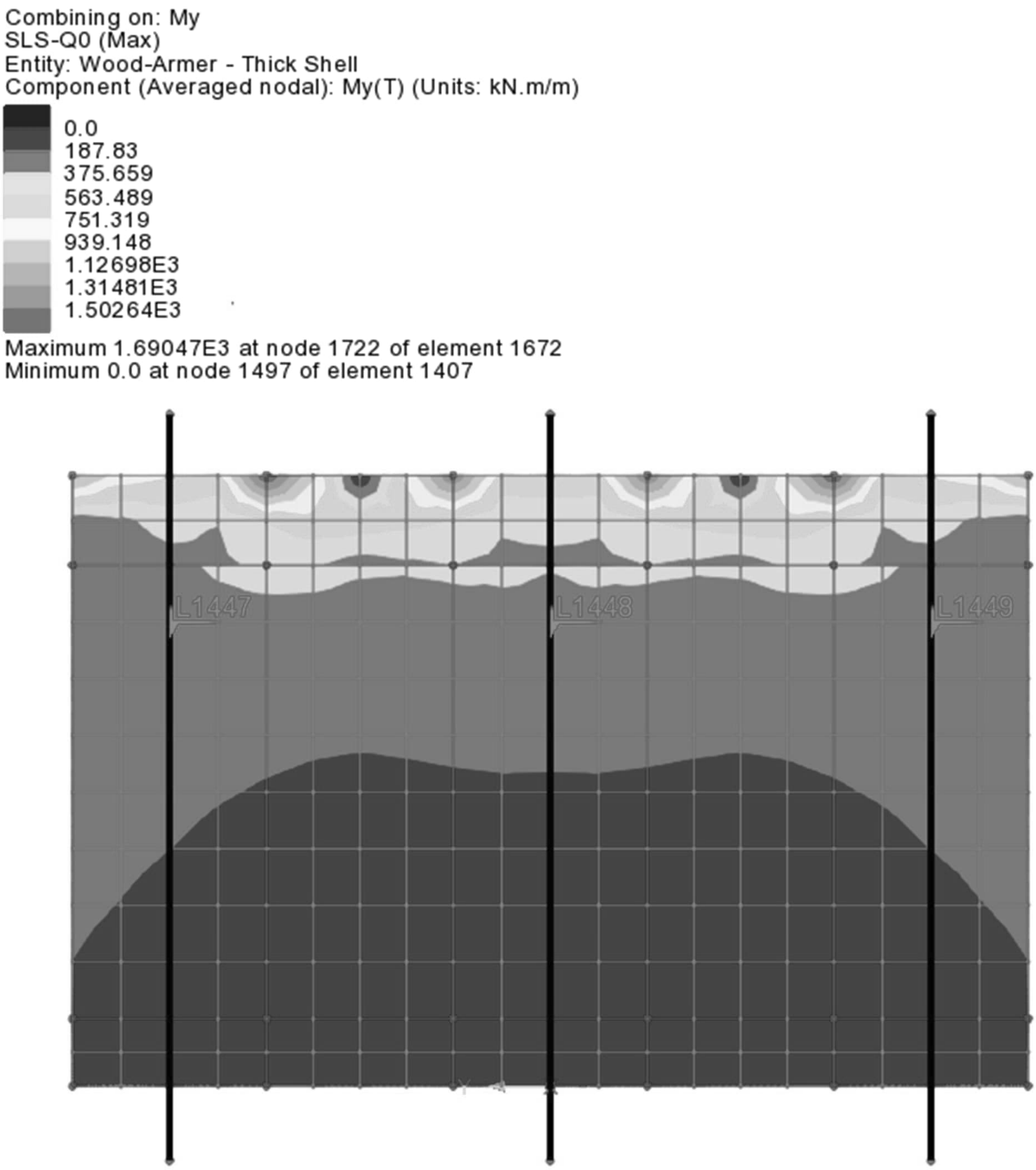
Line 1449:

s	Max My(T)	Ny	Min My(B)	Ny
0	59	68	-60	54
0.9	108	20	-34	-1
1.7	190	75	0	23
2.4	274	102	0	37
3.2	338	111	0	41
3.9	383	113	0	43
4.7	421	111	0	42
5.5	439	106	0	42
6.2	609	75	0	40
7.0	701	8	0	15
7.6	939	-91	0	-13
8.2	2059	-349	0	-98
m	kNm/m	kNm/m	kNm/m	kN/m

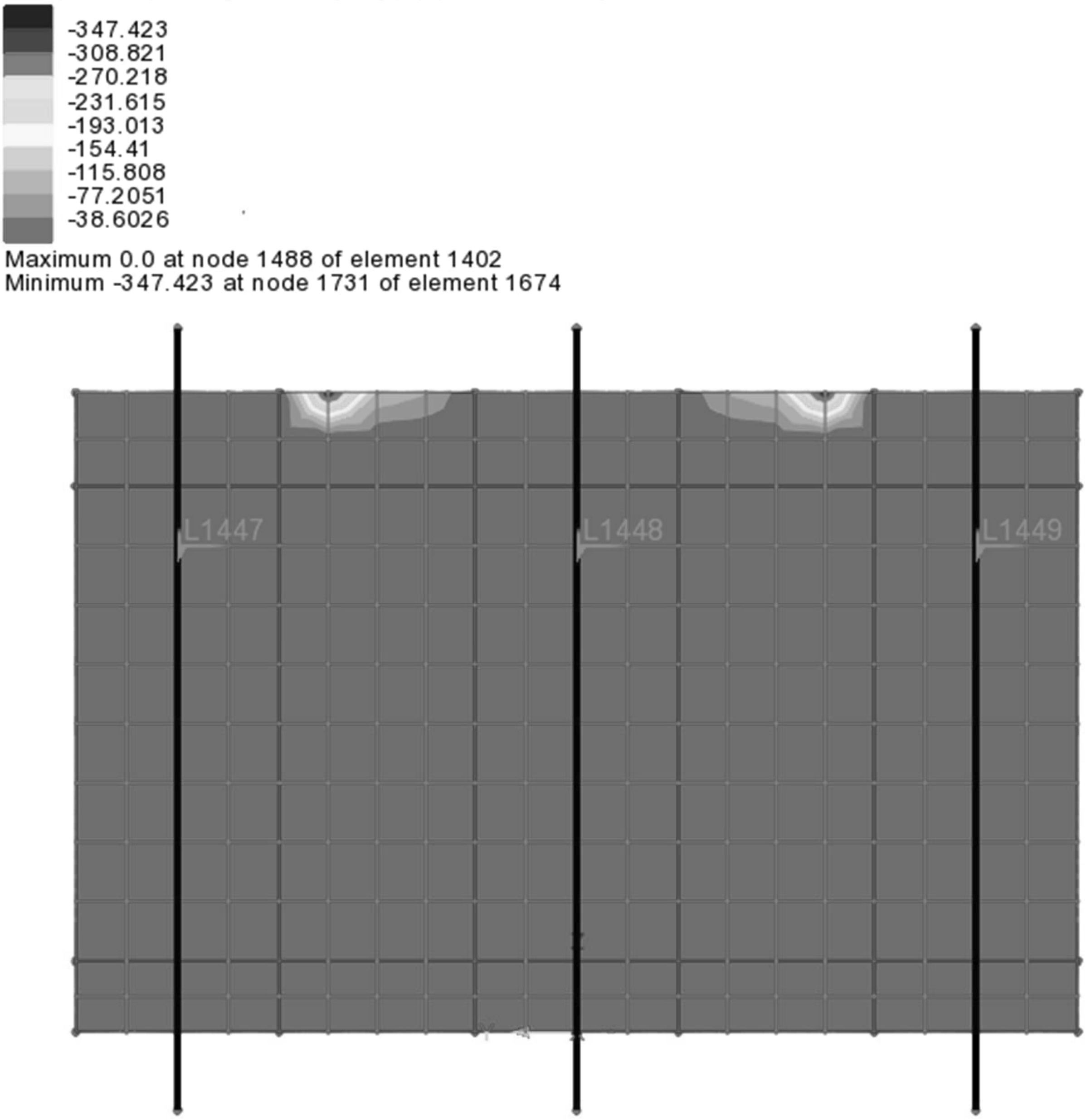
19. SLS-Q0: Min My(B)/Max My(T)

19.1 ABUTEMENT 1

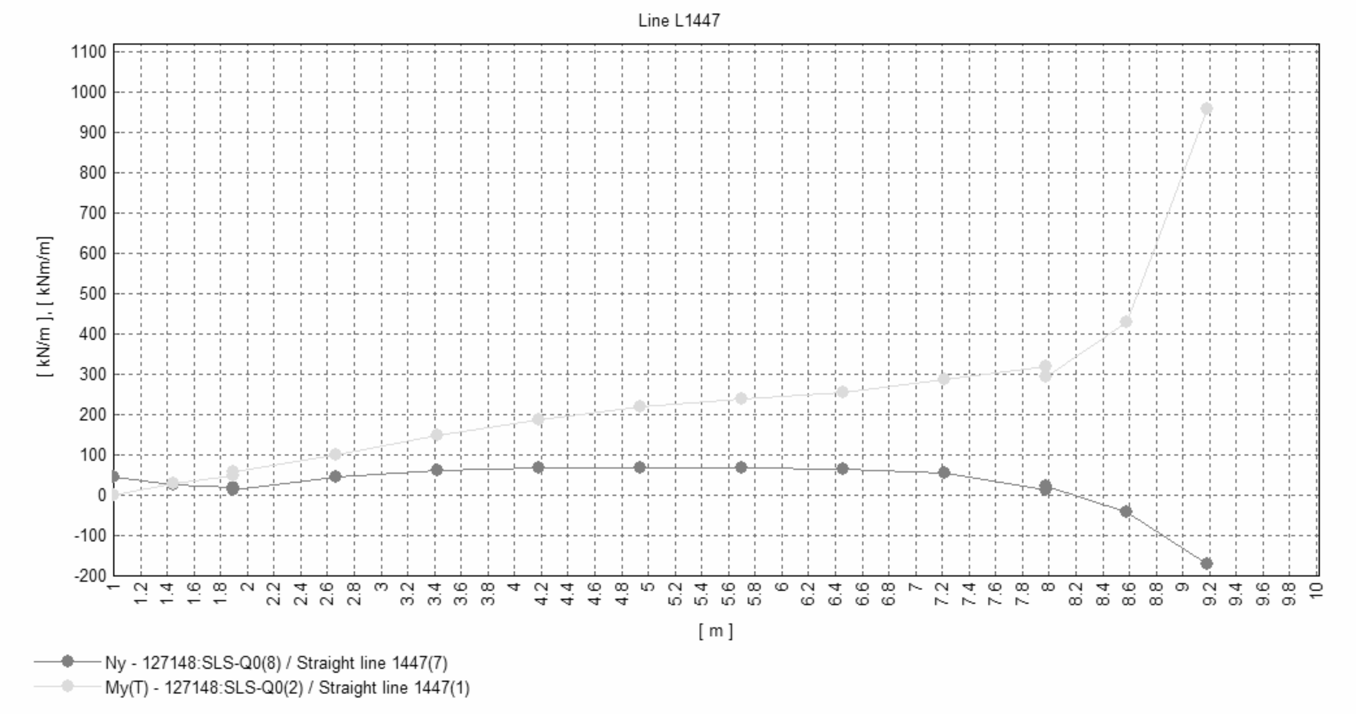
19.1.1 Contour

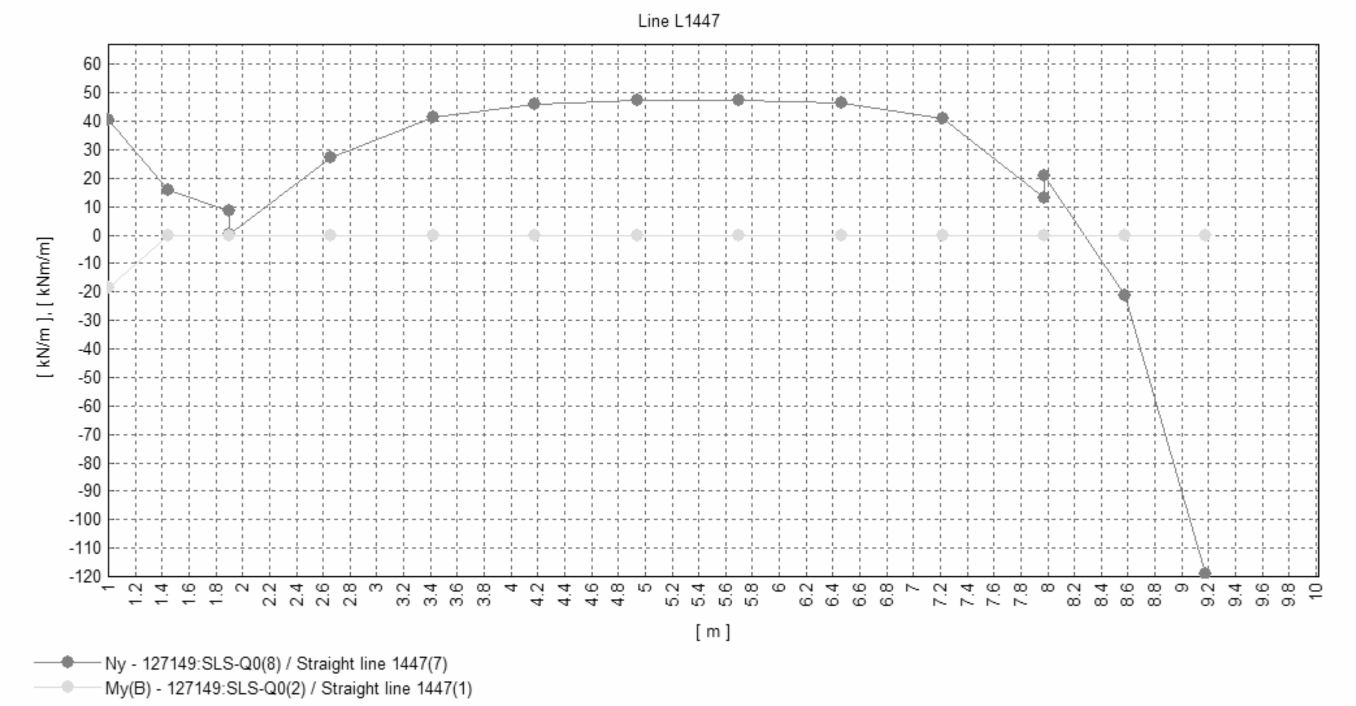


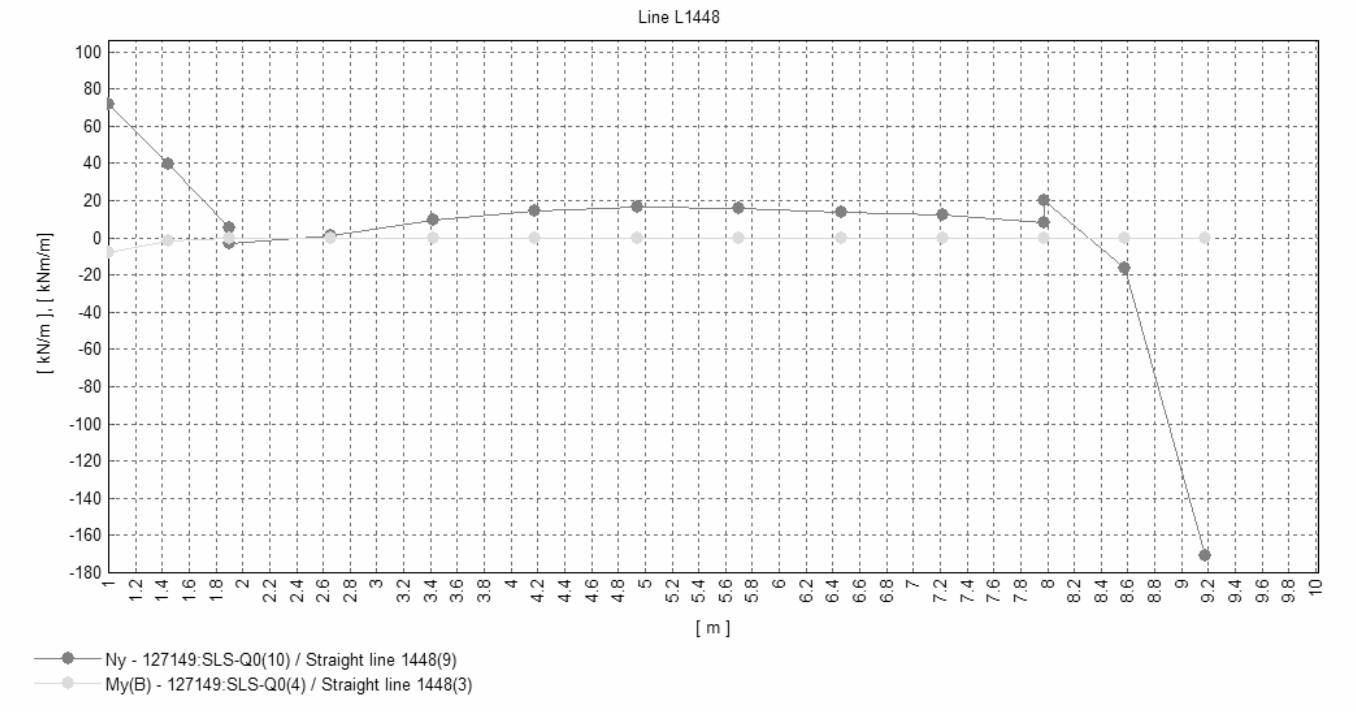
Combining on: My
SLS-Q0 (Min)
Entity: Wood-Armer - Thick Shell
Component (Averaged nodal): My(B) (Units: kN.m/m)

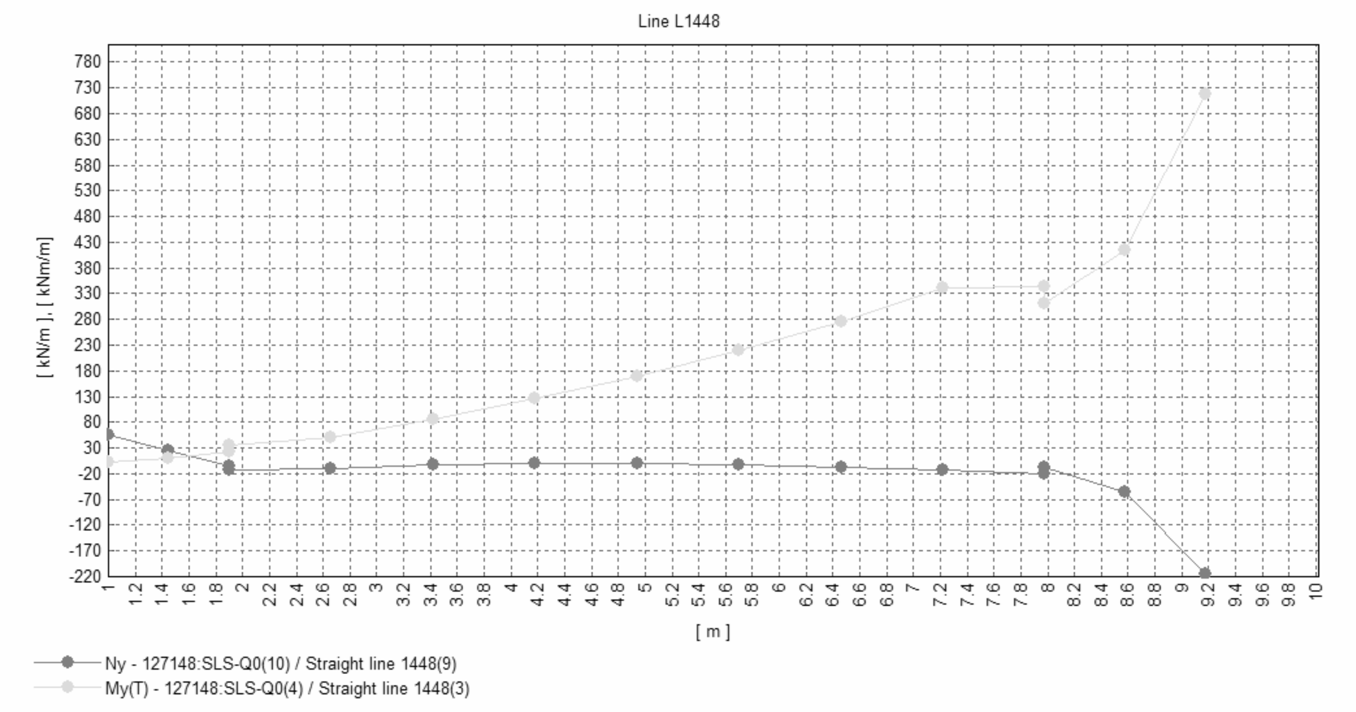


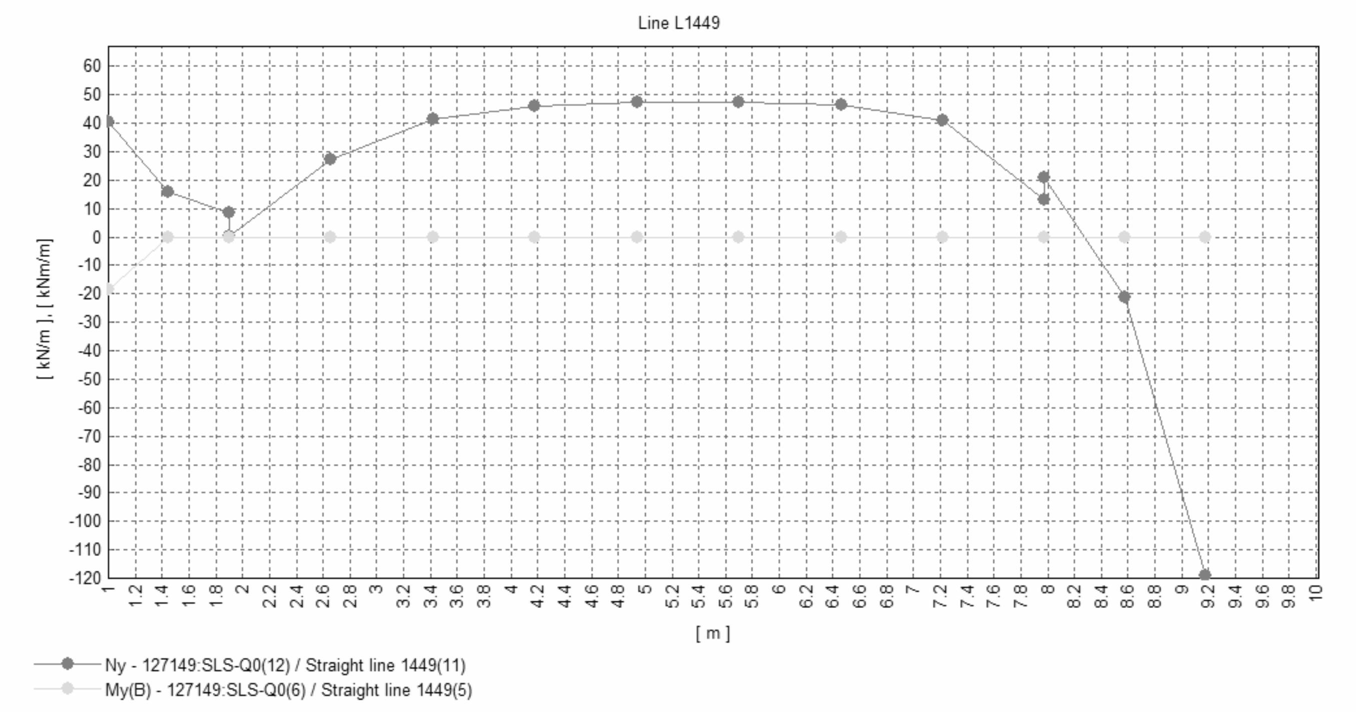
19.1.2 Diagram

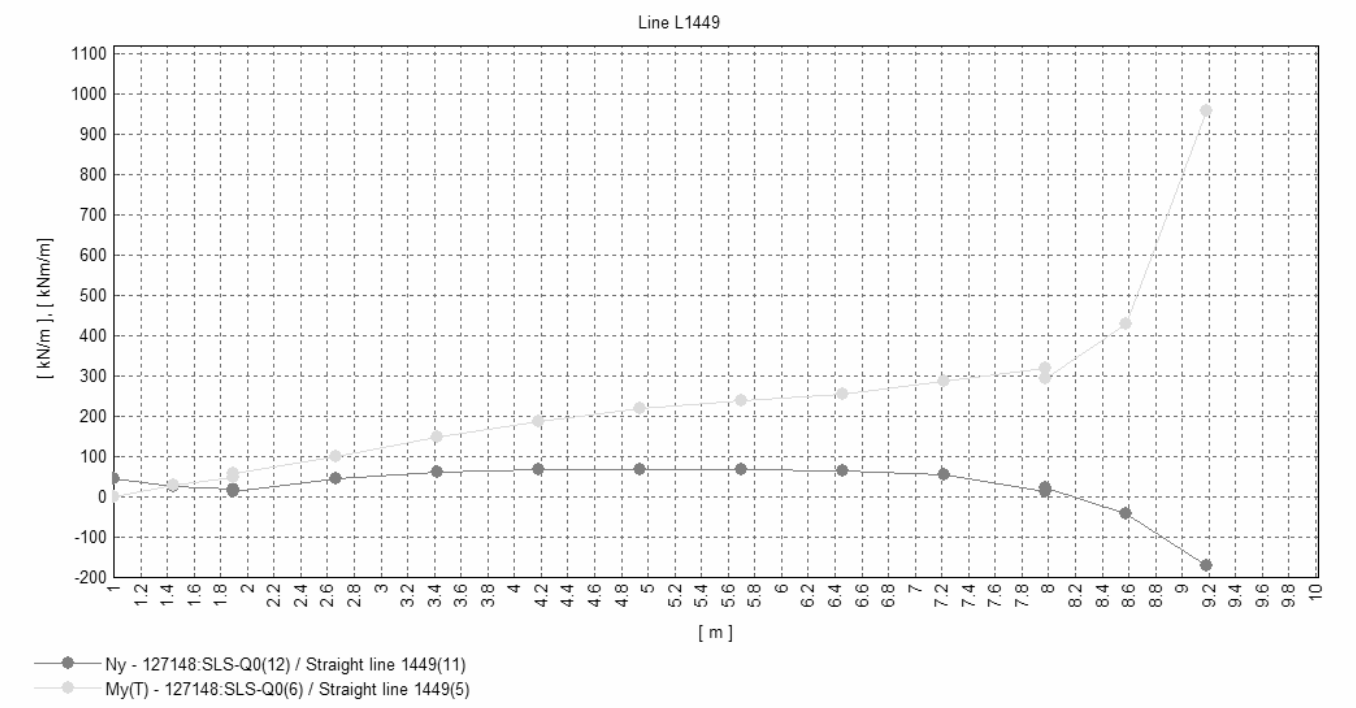





Line L1448
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
[kN/m], [kNm/m]
1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10
[m]
Ny - 127149:SLS-Q0(10) / Straight line 1448(9)
My(B) - 127149:SLS-Q0(4) / Straight line 1448(3)


Line L1448
780
730
680
630
580
530
480
430
380
330
280
230
180
130
80
30
-20
-70
-120
-170
-220
[kN/m], [kNm/m]
1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10
[m]
Ny - 127148:SLS-Q0(10) / Straight line 1448(9)
My(T) - 127148:SLS-Q0(4) / Straight line 1448(3)


Line L1449
[kN/m], [kNm/m]
[m]
Ny - 127149:SLS-Q0(12) / Straight line 1449(11)
My(B) - 127149:SLS-Q0(6) / Straight line 1449(5)


Line L1449
[kN/m], [kNm/m]
[m]
Ny - 127148:SLS-Q0(12) / Straight line 1449(11)
My(T) - 127148:SLS-Q0(6) / Straight line 1449(5)

19.1.3 Tables

Line 1447:

s	Max My(T)	Ny	Min My(B)	Ny
0	0	47	-18	41
0.9	57	12	0	0
1.7	101	45	0	27
2.4	149	61	0	41
3.2	189	67	0	46
3.9	219	68	0	47
4.7	240	68	0	47
5.5	255	66	0	46
6.2	287	57	0	41
7.0	321	14	0	13
7.6	429	-41	0	-21
8.2	958	-172	0	-119
m	kNm/m	kN/m	kNm/m	kN/m

Line 1448:

s	Max My(T)	Ny	Min My(B)	Ny
0	2	56	-8	72
0.9	35	-13	0	-3
1.7	52	-10	0	1
2.4	86	-3	0	9
3.2	126	1	0	15
3.9	170	1	0	17
4.7	219	-3	0	16
5.5	277	-8	0	14
6.2	342	-13	0	12
7.0	343	-20	0	8
7.6	415	-55	0	-16
8.2	718	-214	0	-171
m	kNm/m	kNm/m	kNm/m	kN/m

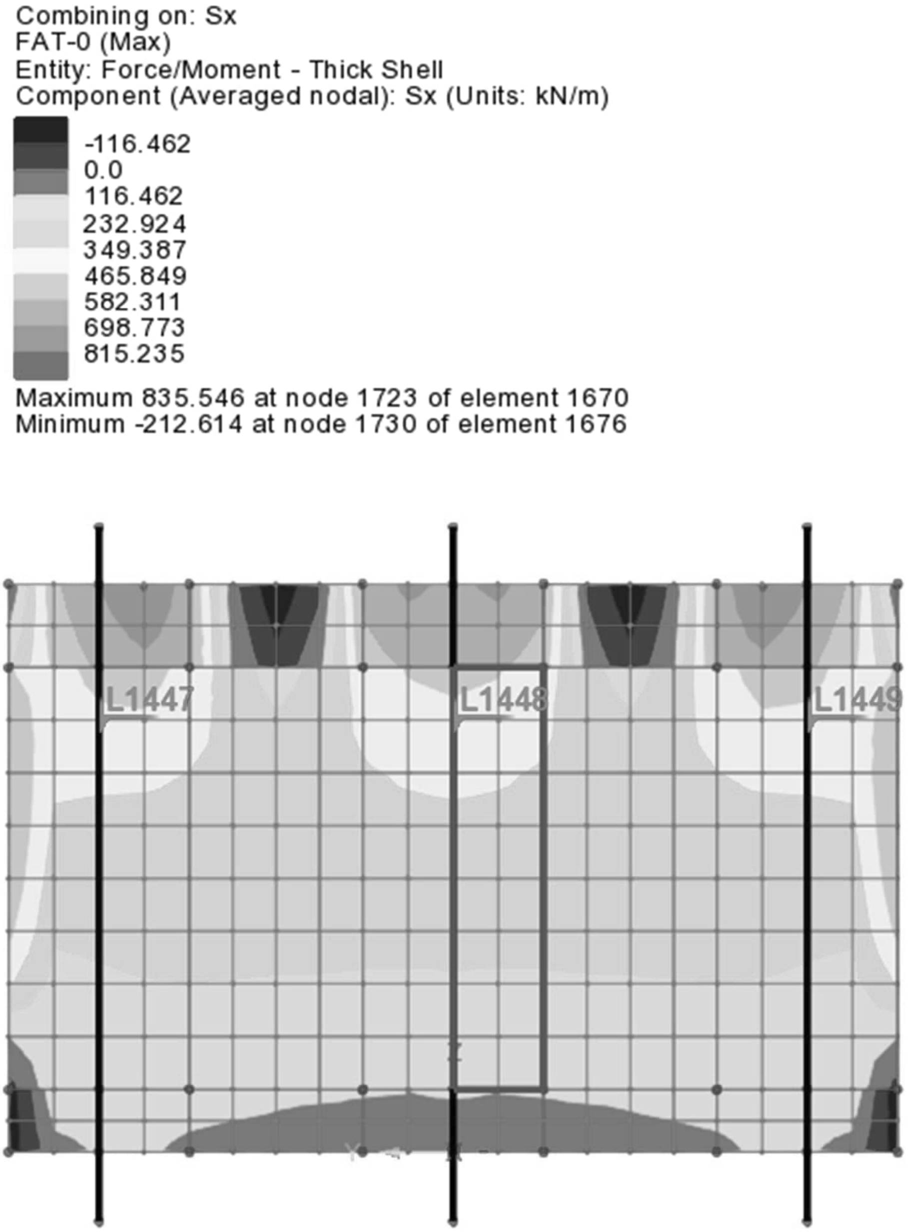
Line 1449:

s	Max My(T)	Ny	Min My(B)	Ny
0	0	47	-18	41
0.9	57	12	0	0
1.7	101	45	0	27
2.4	149	61	0	41
3.2	189	67	0	46
3.9	219	68	0	47
4.7	240	68	0	47
5.5	255	66	0	46
6.2	287	57	0	41
7.0	321	14	0	13
7.6	429	-41	0	-21
8.2	958	-172	0	-119
m	kNm/m	kNm/m	kNm/m	kN/m

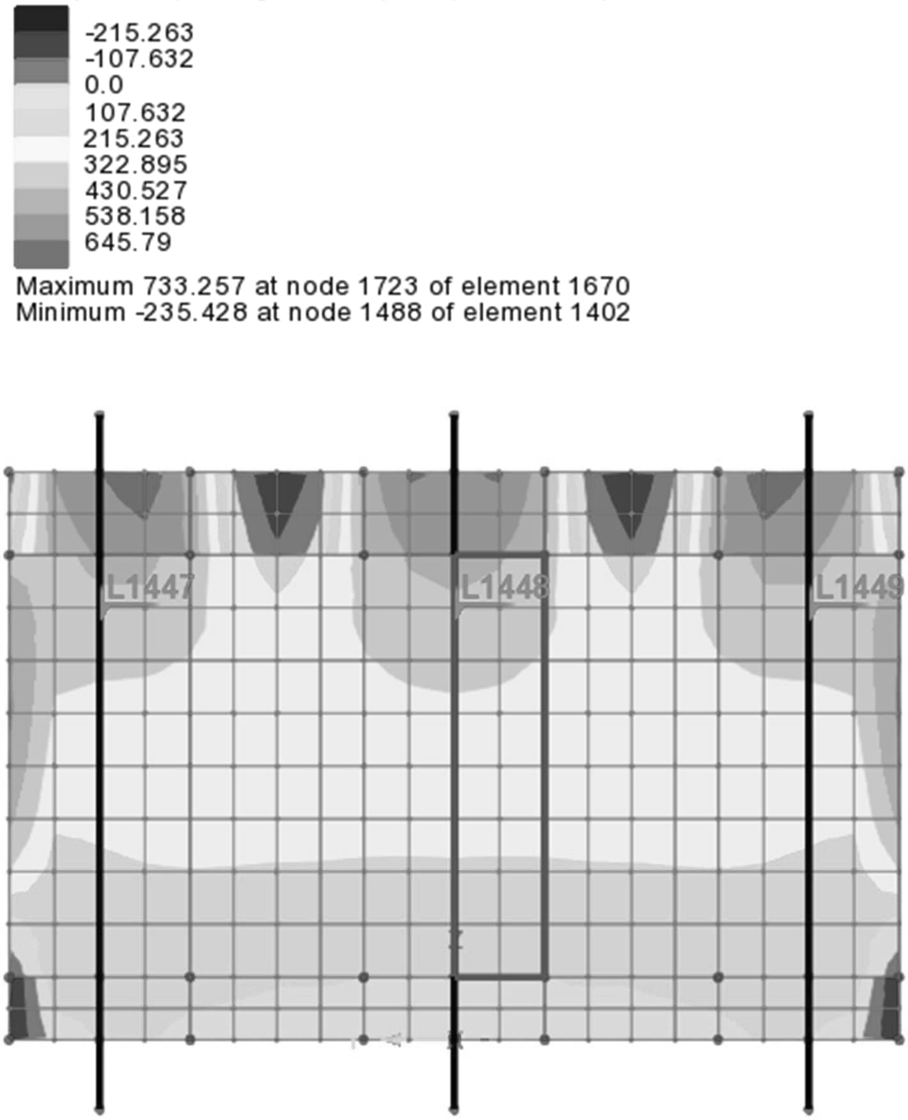
20. FAT-0: Min Sx/Max Sx

20.1 ABUTEMENT 1

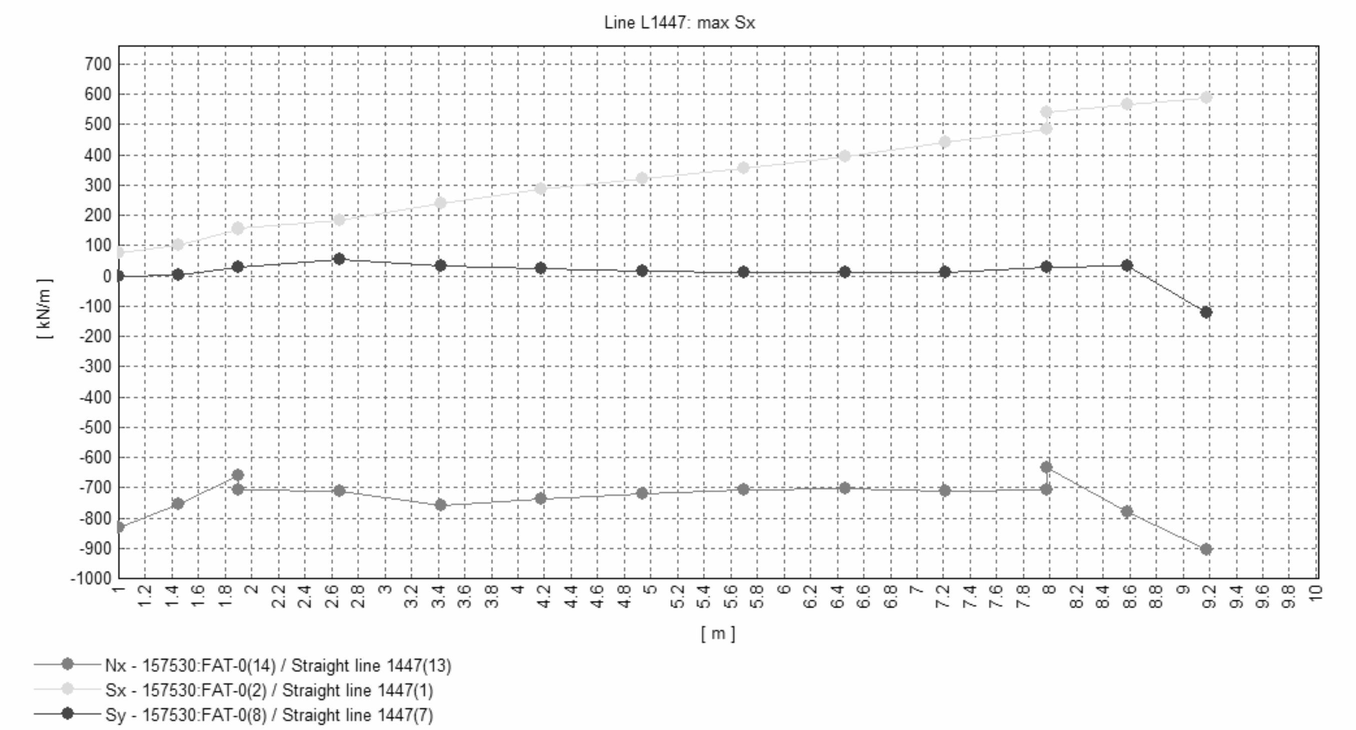
20.1.1 Contour

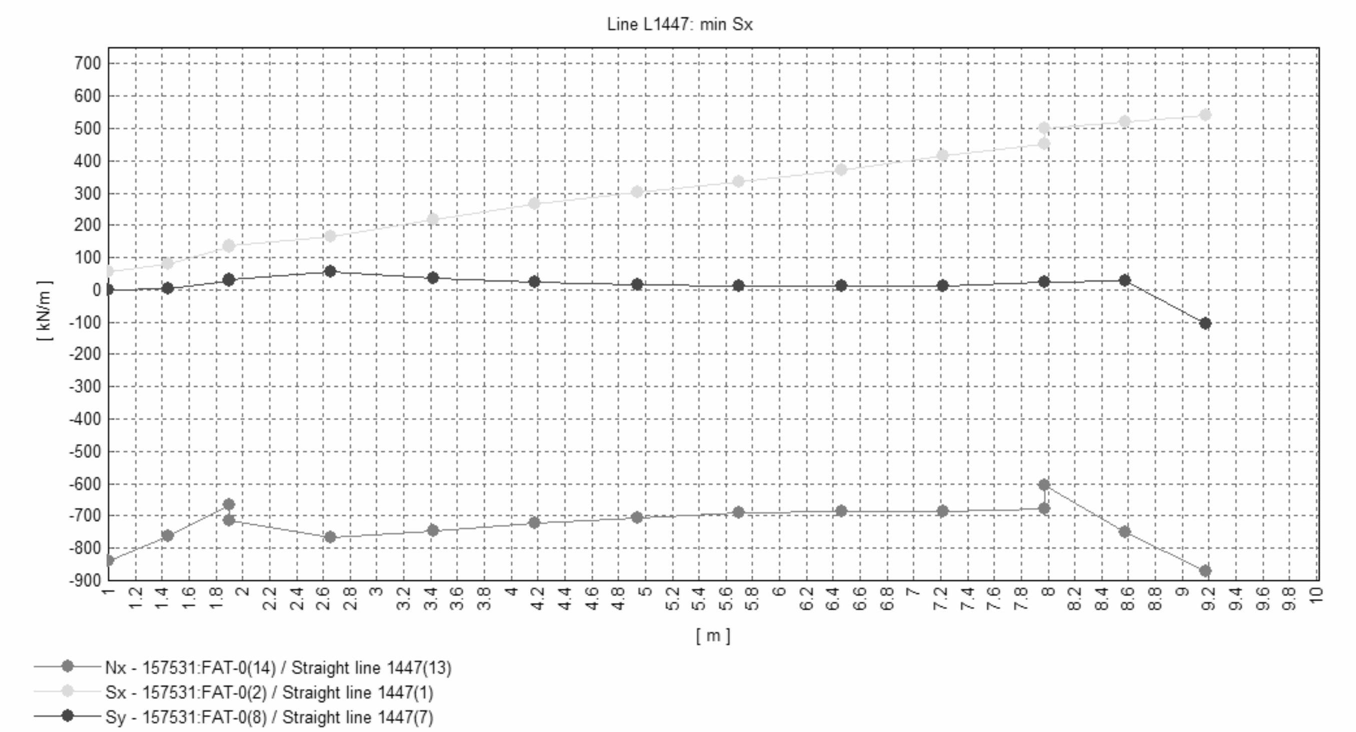


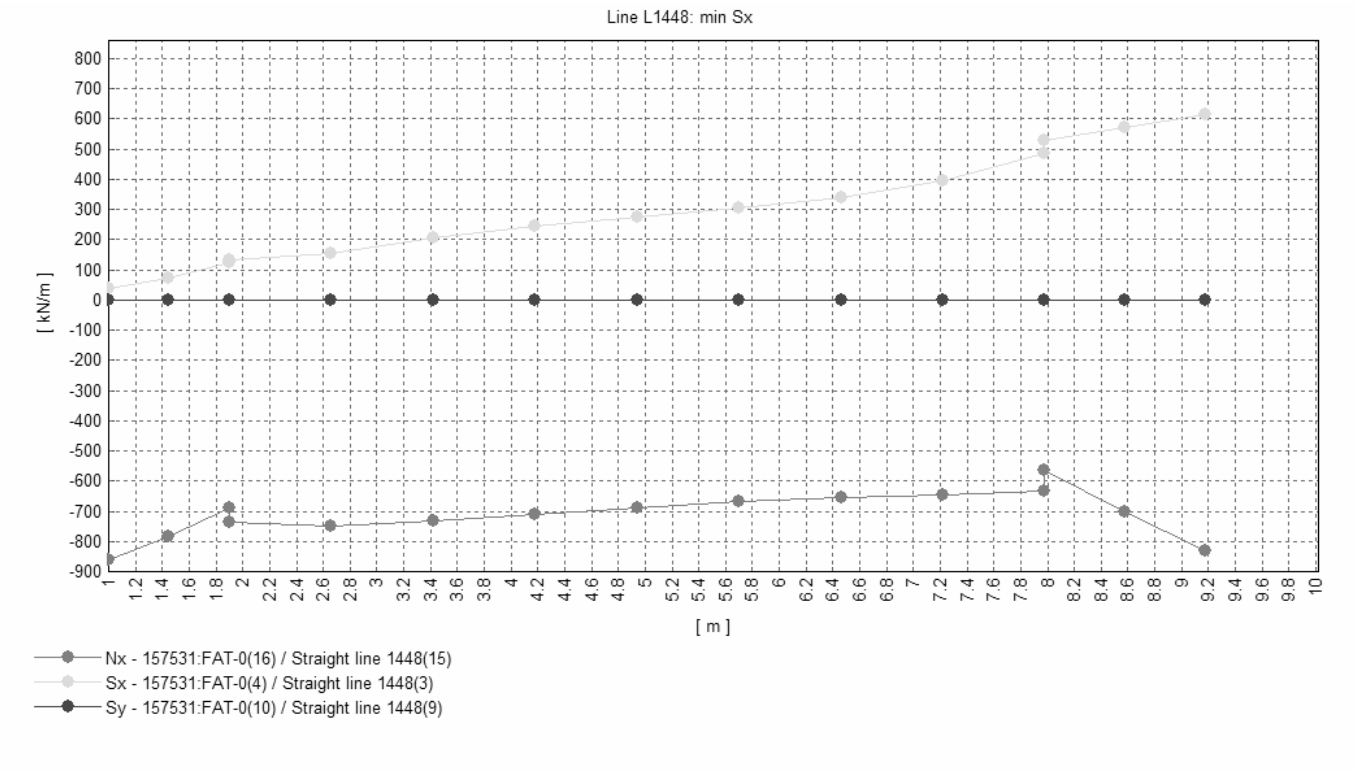
Combining on: Sx
FAT-0 (Min)
Entity: Force/Moment - Thick Shell
Component (Averaged nodal): Sx (Units: kN/m)

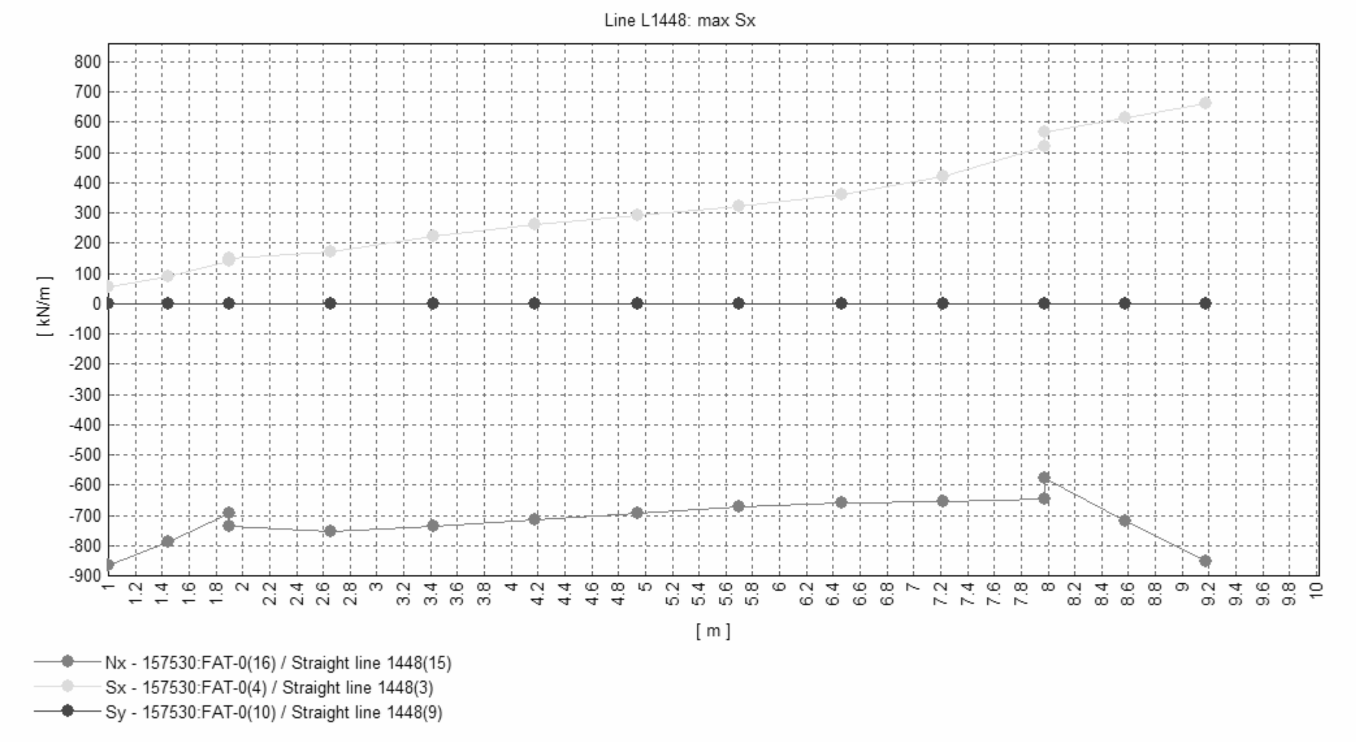


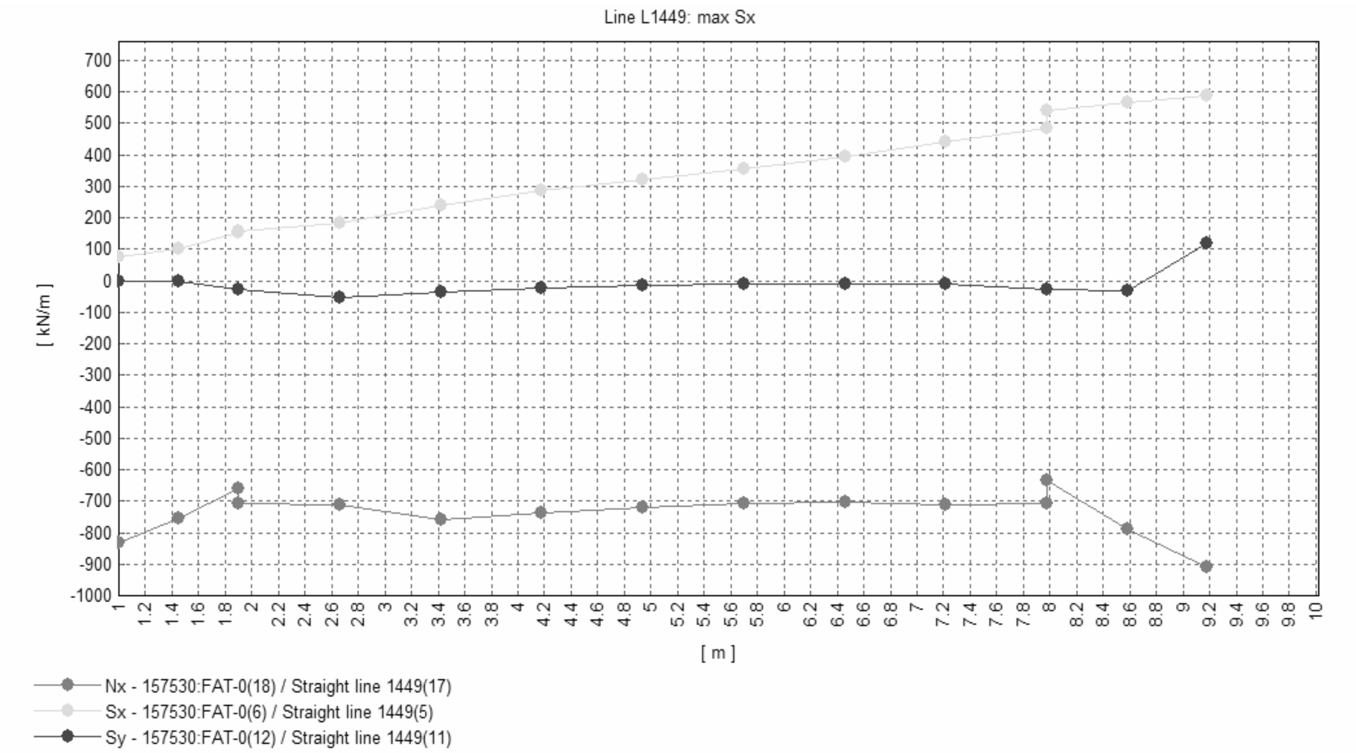
20.1.2 Diagram



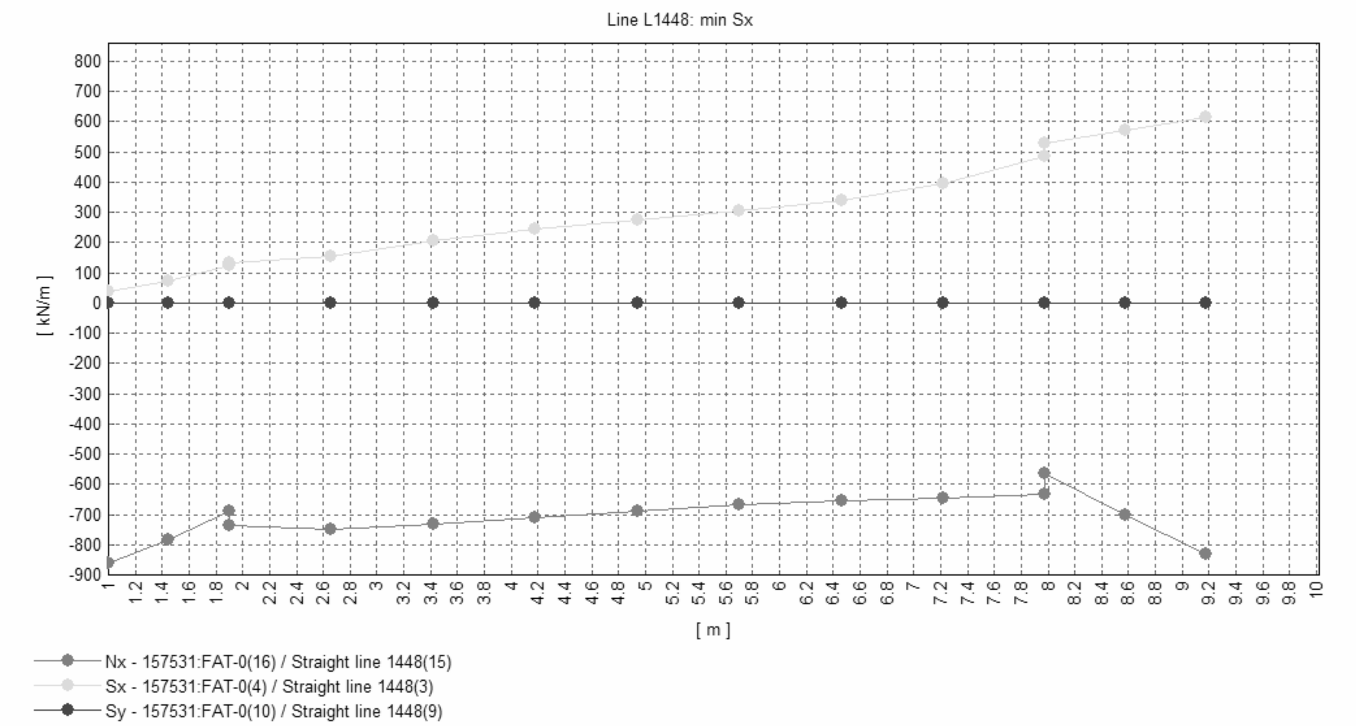



Line L1448: min Sx
[kN/m]
[m]
Nx - 157531:FAT-0(16) / Straight line 1448(15)
Sx - 157531:FAT-0(4) / Straight line 1448(3)
Sy - 157531:FAT-0(10) / Straight line 1448(9)


Line L1448: max Sx
[kN/m]
[m]
Nx - 157530:FAT-0(16) / Straight line 1448(15)
Sx - 157530:FAT-0(4) / Straight line 1448(3)
Sy - 157530:FAT-0(10) / Straight line 1448(9)



Line L1449: max Sx
700
600
500
400
300
200
100
0
-100
-200
-300
-400
-500
-600
-700
-800
-900
-1000
[kN/m]
1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10
[m]
Nx - 157530:FAT-0(18) / Straight line 1449(17)
Sx - 157530:FAT-0(6) / Straight line 1449(5)
Sy - 157530:FAT-0(12) / Straight line 1449(11)



Line L1448: min Sx
800
700
600
500
400
300
200
100
0
-100
-200
-300
-400
-500
-600
-700
-800
-900
[kN/m]
1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6 5.8 6 6.2 6.4 6.6 6.8 7 7.2 7.4 7.6 7.8 8 8.2 8.4 8.6 8.8 9 9.2 9.4 9.6 9.8 10
[m]
Nx - 157531:FAT-0(16) / Straight line 1448(15)
Sx - 157531:FAT-0(4) / Straight line 1448(3)
Sy - 157531:FAT-0(10) / Straight line 1448(9)

20.1.3 Tables

Line 1447:

s	Max Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	76	0	-832	76
0.9	158	29	-706	161
1.7	185	54	-714	193
2.4	240	35	-759	242
3.2	286	23	-737	287
3.9	322	15	-719	322
4.7	355	10	-706	356
5.5	393	9	-704	393
6.2	442	9	-710	442
7.0	487	27	-706	487
7.6	564	33	-783	565
8.2	590	-120	-906	602
m	kN/m	kN/m	kN/m	kN/m

s	Min Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	54	0	-840	54
0.9	137	30	-713	140
1.7	164	57	-767	174
2.4	219	36	-745	222
3.2	265	25	-723	266
3.9	301	17	-705	301
4.7	333	12	-692	334
5.5	369	11	-686	369
6.2	414	13	-686	414
7.0	450	23	-678	451
7.6	519	27	-752	520
8.2	0	0	0	0
m	kN/m	kN/m	kN/m	kN/m

Line 1448:

s	Max Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	56	0	-866	56
0.9	149	0	-739	149
1.7	172	0	-754	172
2.4	222	0	-735	222
3.2	264	0	-715	264
3.9	294	1	-693	294
4.7	324	1	-674	324
5.5	361	1	-660	361
6.2	421	0	-657	421
7.0	521	-1	-648	521
7.6	616	-1	-717	616
m	kN/m	kN/m	kN/m	kN/m

s	Min Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	39	0	-862	39
0.9	131	0	-735	131
1.7	155	0	-750	155
2.4	204	0	-731	204
3.2	246	0	-711	246
3.9	275	0	-690	275
4.7	304	0	-669	304
5.5	339	-1	-653	339
6.2	394	-1	-647	394
7.0	485	-1	-634	485
7.6	572	-1	-702	572
m	kN/m	kN/m	kN/m	kN/m

Line 1449:

s	Max Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	76	0	-832	76
0.9	158	-29	-706	161
1.7	185	-54	-714	193
2.4	240	-35	-759	242
3.2	286	-23	-737	287
3.9	322	-15	-719	322
4.7	355	-10	-706	356
5.5	393	-9	-704	393
6.2	442	-9	-710	442
7.0	487	-27	-706	487
7.6	564	-33	-787	565
8.2	590	121	-912	602
m	kN/m	kN/m	kN/m	kN/m

s	Min Sx	Sy	Nx	$\sqrt{Sx^2+Sy^2}$
0	54	0	-840	54
0.9	137	-30	-713	140
1.7	164	-57	-767	174
2.4	219	-36	-745	222
3.2	265	-25	-723	266
3.9	301	-17	-705	301
4.7	333	-12	-692	334
5.5	369	-11	-686	369
6.2	414	-13	-686	414
7.0	450	-23	-678	451
7.6	519	-27	-752	520
8.2	0	0	0	0
m	kN/m	kN/m	kN/m	kN/m

Model Units: kN,m,t,s,C
Report Units: kN,m,t,s,C

Model Title: System 1
Model File: System 1

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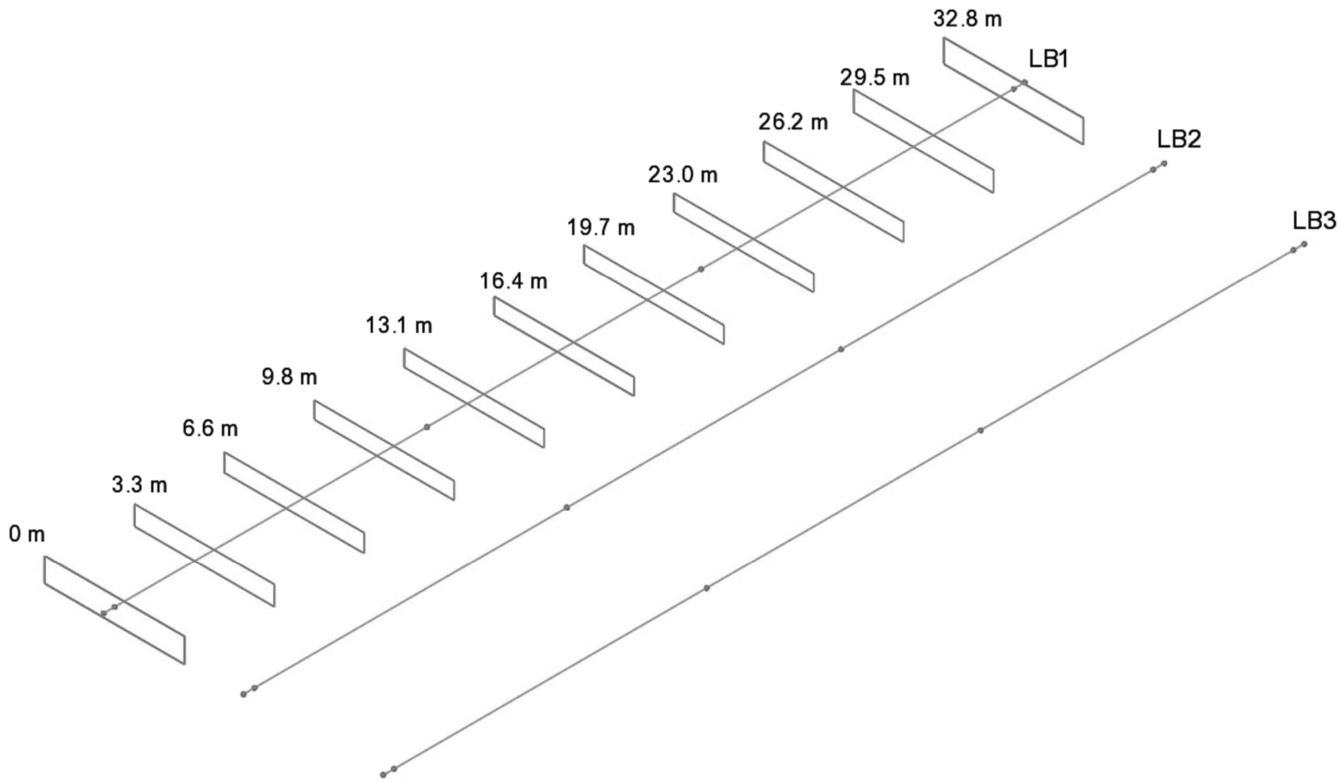
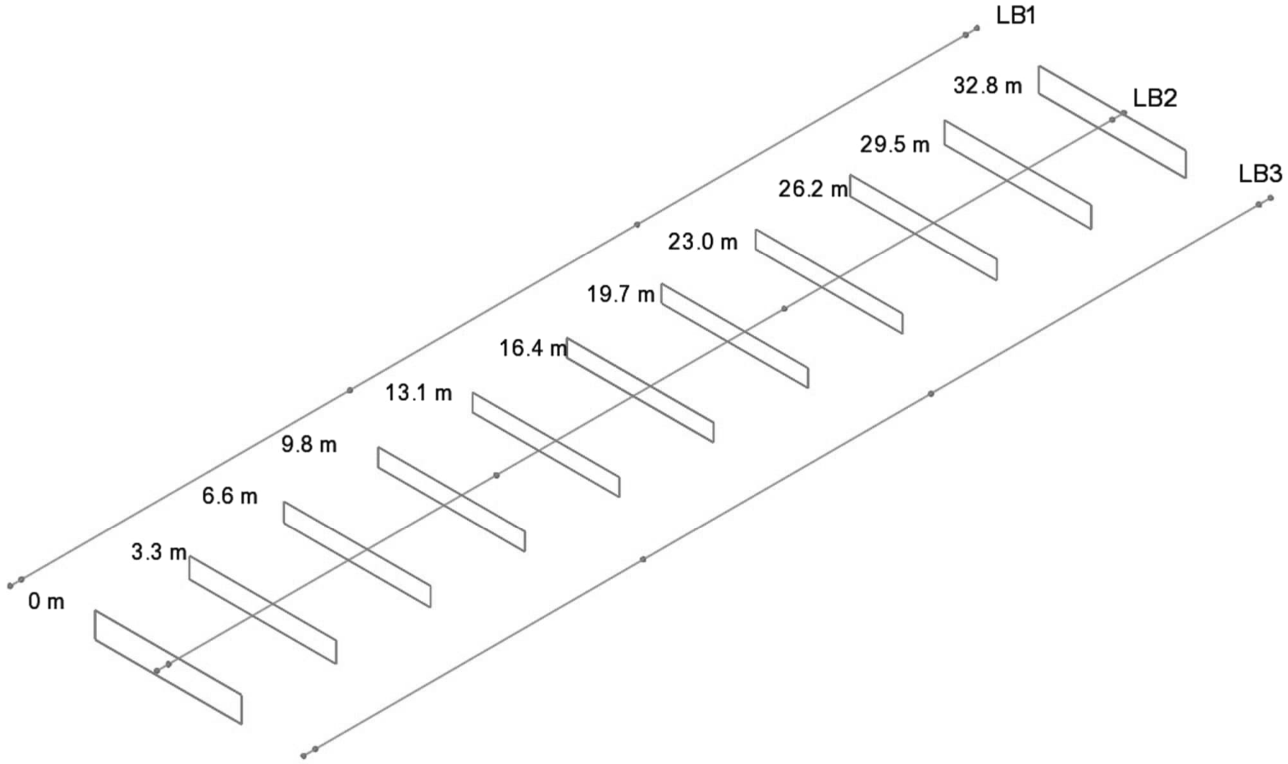
1. Principle "Slice beam/shell resultants"

Resultants for equivalent forces are determed along distances seen below along beam LB1, LB2 and LB 3.

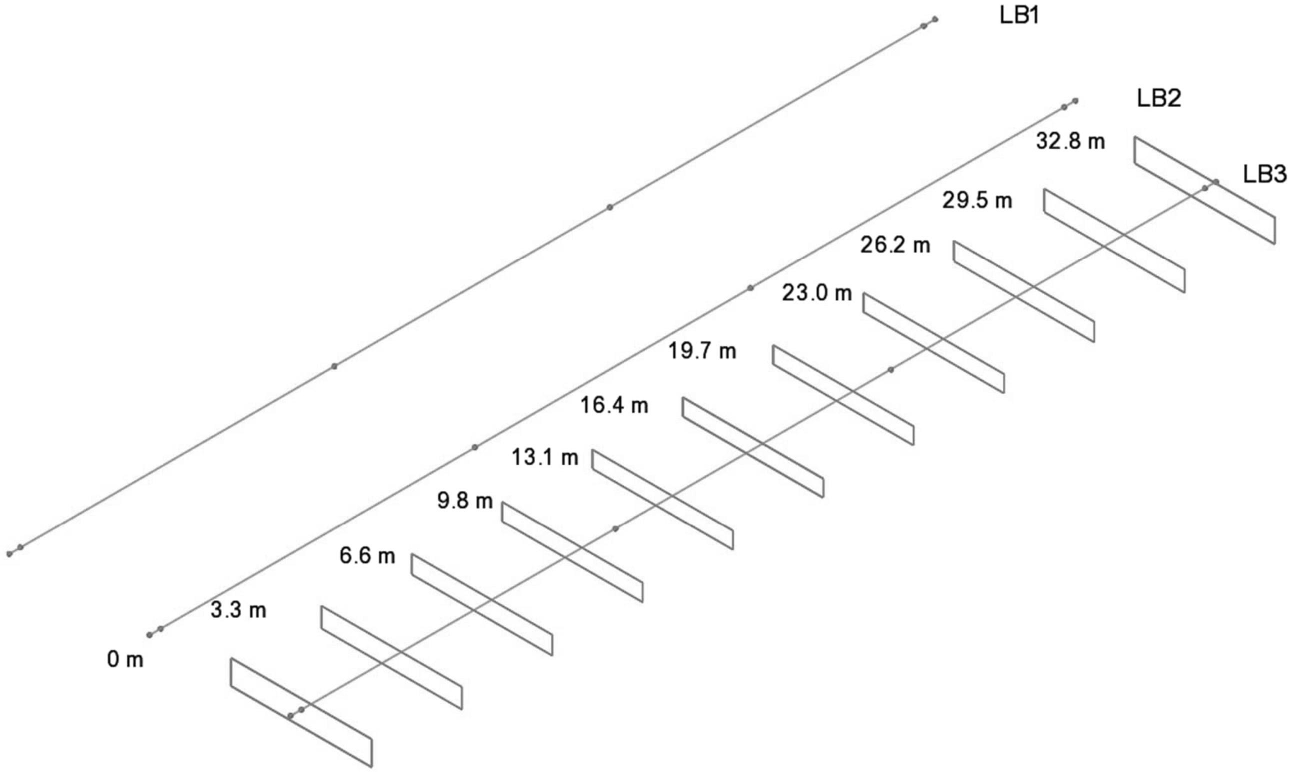
1.1 Beam LB 1



1.2 Beam LB 2

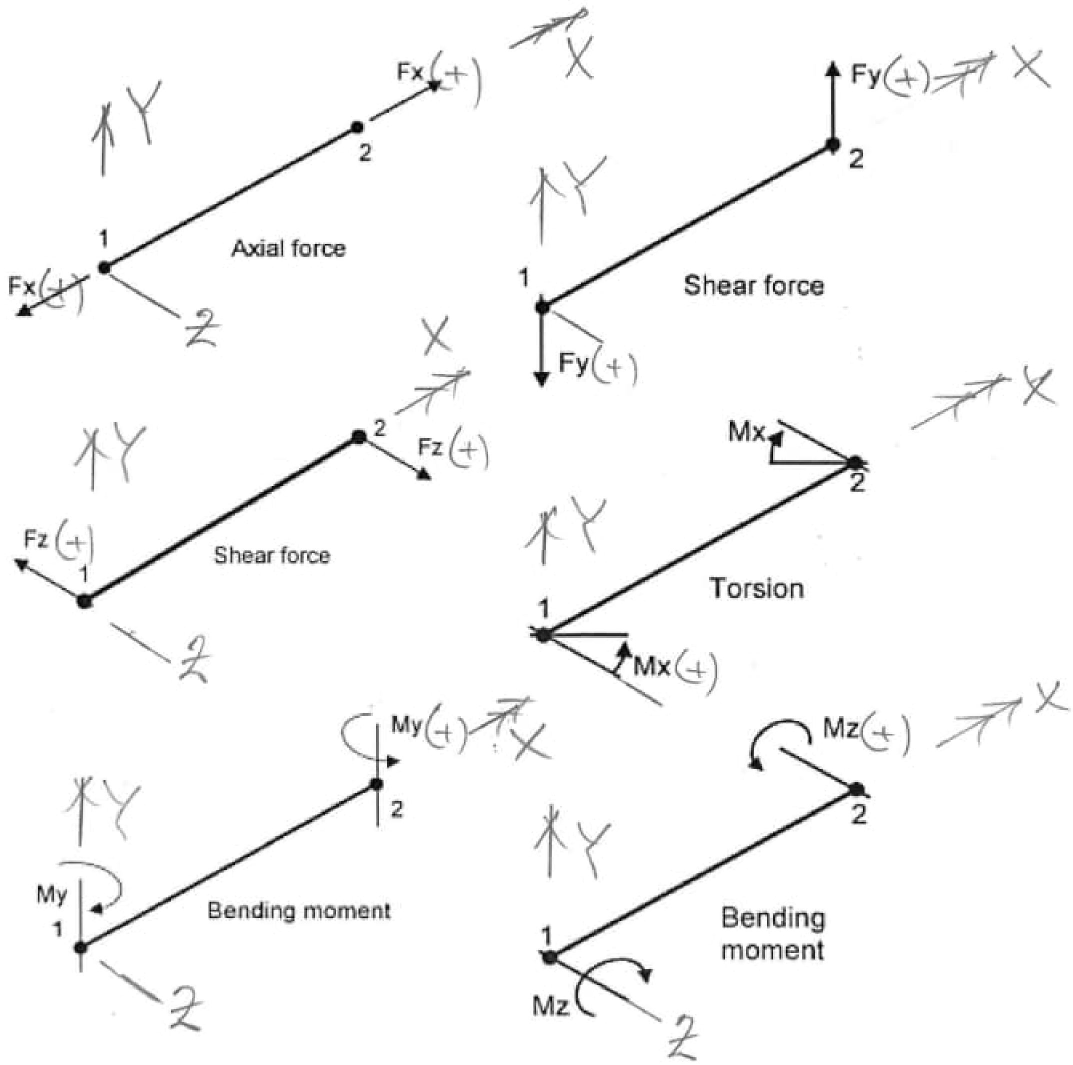


1.3 Beam LB 3



2. Sign convention

Principle sign conventions (see Element reference manual – Appendix D):



3. EGEN

3.1 Diagram

Diagram – Fz:

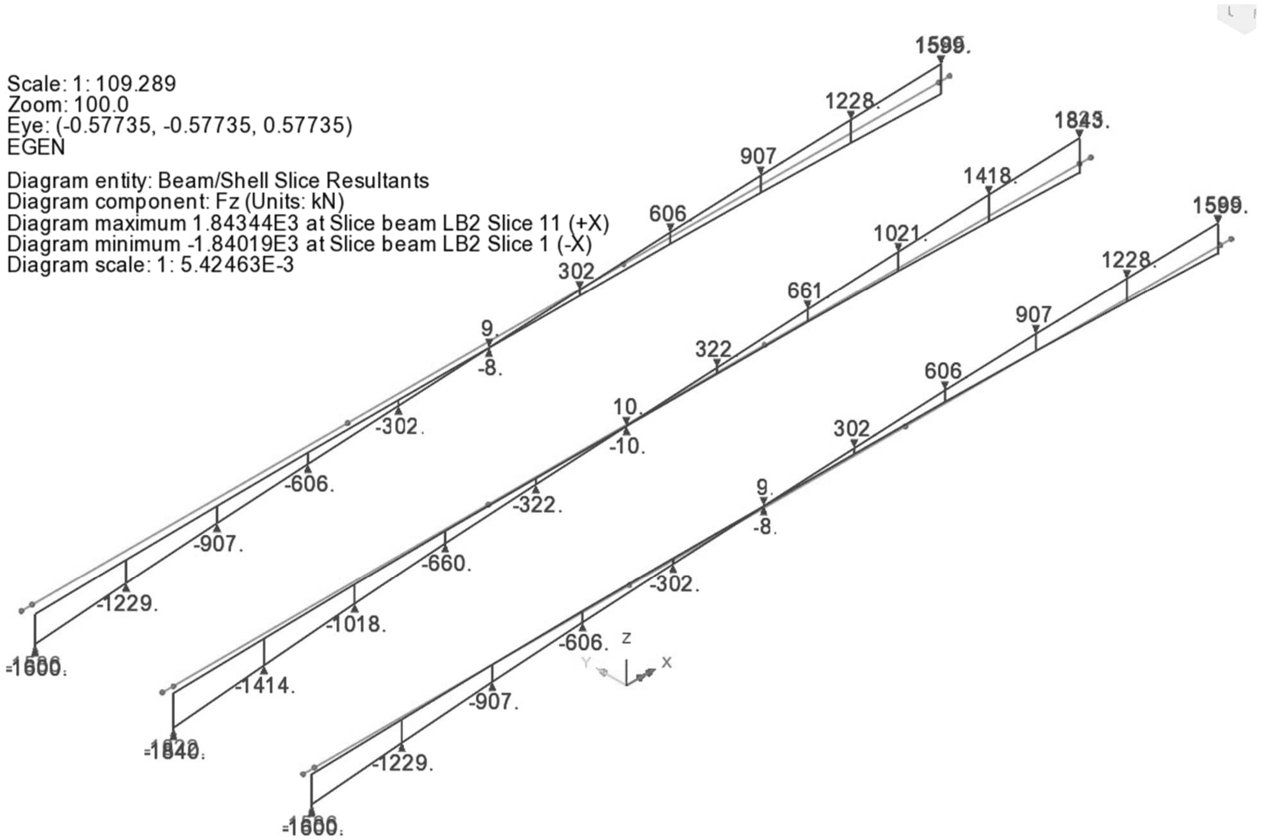
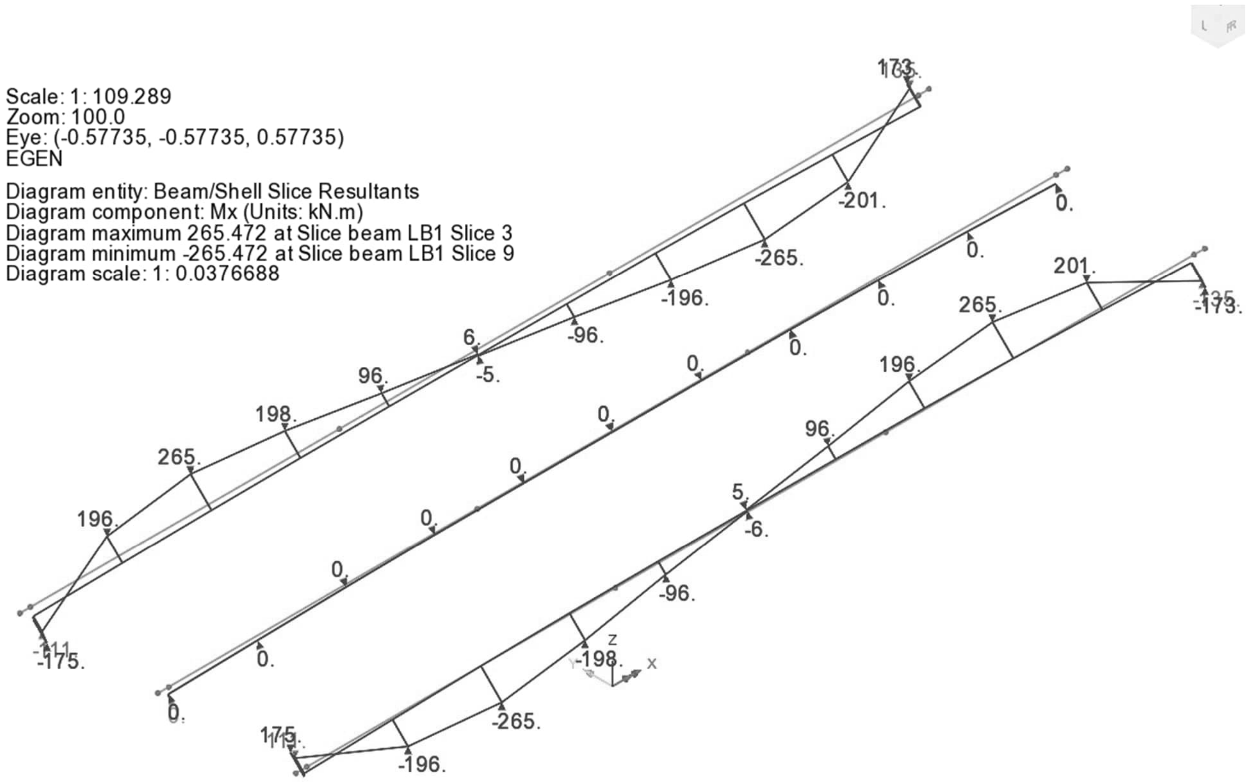
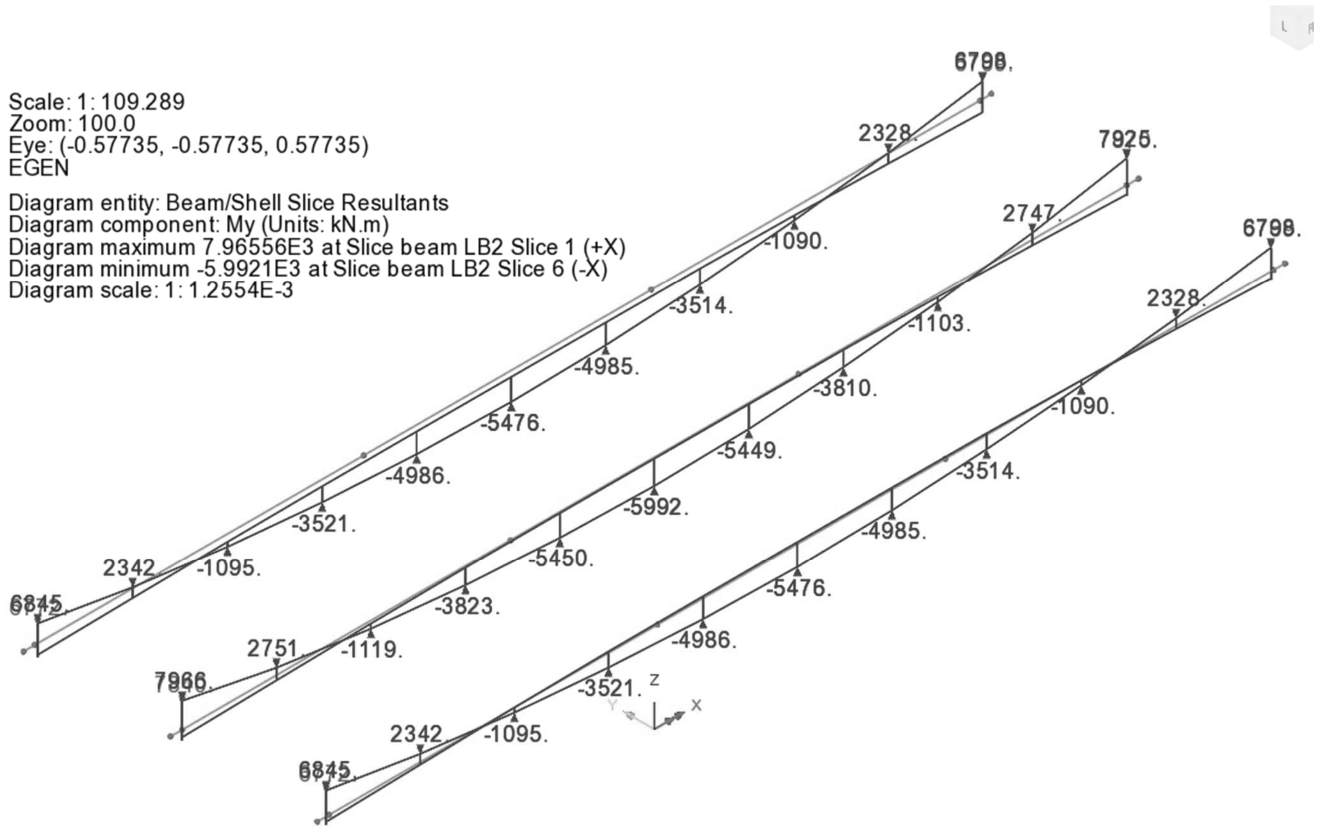


Diagram – Mx:



Scale: 1: 109.289
Zoom: 100.0
Eye: (-0.57735, -0.57735, 0.57735)
EGEN
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum 265.472 at Slice beam LB1 Slice 3
Diagram minimum -265.472 at Slice beam LB1 Slice 9
Diagram scale: 1: 0.0376688
173.
-201.
-265.
-196.
-96.
6.
-5.
96.
198.
265.
196.
-175.
0.
201.
265.
196.
96.
5.
-6.
-96.
-198.
-265.
-196.
175.
-173.
Z
X

Diagram – My:



Scale: 1: 109.289
Zoom: 100.0
Eye: (-0.57735, -0.57735, 0.57735)
EGEN
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 7.96556E3 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -5.9921E3 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 1.2554E-3
2328.
-1090.
-3514.
-4985.
-5476.
-4986.
-3521.
2342.
-1095.
2747.
-1103.
-3810.
-5449.
-5992.
-5450.
-3823.
2751.
-1119.
2328.
-1090.
-3514.
-4985.
-5476.
-4986.
-3521.
2342.
-1095.
Z
X
Y

3.2 Tabell

LB1: EGEN

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-780	-493	-1586	-111	6845	257
3.3	-13.1	5.0	8.0	-749	75	-1229	196	2342	-463
6.6	-9.8	5.0	8.1	-750	337	-908	266	-1095	322
9.8	-6.6	5.0	8.1	-714	318	-606	198	-3521	1363
13.1	-3.3	5.0	8.1	-667	167	-302	97	-4986	2080
16.4	0.0	5.0	8.1	-649	13	-8	6	-5476	2310
16.4	0.0	5.0	8.1	-649	-13	9	-5	-5476	2310
19.7	3.3	5.0	8.1	-666	-166	302	-96	-4985	2080
23.0	6.6	5.0	8.1	-712	-317	606	-196	-3514	1363
26.2	9.8	5.0	8.1	-747	-337	907	-266	-1090	320
29.5	13.1	5.0	8.0	-746	-76	1228	-201	2328	-462
32.8	16.4	5.0	7.9	-777	492	1585	135	6798	253
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: EGEN

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-1340	0	-1822	0	7966	0
3.3	-13.1	0	8.0	-1403	0	-1414	0	2751	0
6.6	-9.8	0	8.1	-1400	0	-1018	0	-1119	0
9.8	-6.6	0	8.1	-1473	0	-660	0	-3823	0
13.1	-3.3	0	8.1	-1566	0	-322	0	-5450	0
16.4	0.0	0	8.1	-1603	0	-10	0	-5992	0
16.4	0.0	0	8.1	-1603	0	10	0	-5992	0
19.7	3.3	0	8.1	-1568	0	323	0	-5449	0
23.0	6.6	0	8.1	-1477	0	661	0	-3810	0
26.2	9.8	0	8.1	-1407	0	1021	0	-1104	0
29.5	13.1	0	8.0	-1409	0	1418	0	2747	0
32.8	16.4	0	7.9	-1348	0	1825	0	7925	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EGEN

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-780	493	-1586	111	6845	-257
3.3	-13.1	-5	8.0	-749	-75	-1229	-196	2342	463
6.6	-9.8	-5	8.1	-750	-337	-908	-266	-1095	-322
9.8	-6.6	-5	8.1	-714	-318	-606	-198	-3521	-1363
13.1	-3.3	-5	8.1	-667	-167	-302	-97	-4986	-2080
16.4	0.0	-5	8.1	-649	-13	-8	-6	-5476	-2310
16.4	0.0	-5	8.1	-649	13	9	5	-5476	-2310
19.7	3.3	-5	8.1	-666	166	302	96	-4985	-2080
23.0	6.6	-5	8.1	-712	317	606	196	-3514	-1363
26.2	9.8	-5	8.1	-747	337	907	266	-1090	-320
29.5	13.1	-5	8.0	-746	76	1228	201	2328	462
32.8	16.4	-5	7.9	-777	-492	1585	-135	6798	-253
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

4. Result BELAGG

4.1 Diagram

Diagram – Fz:

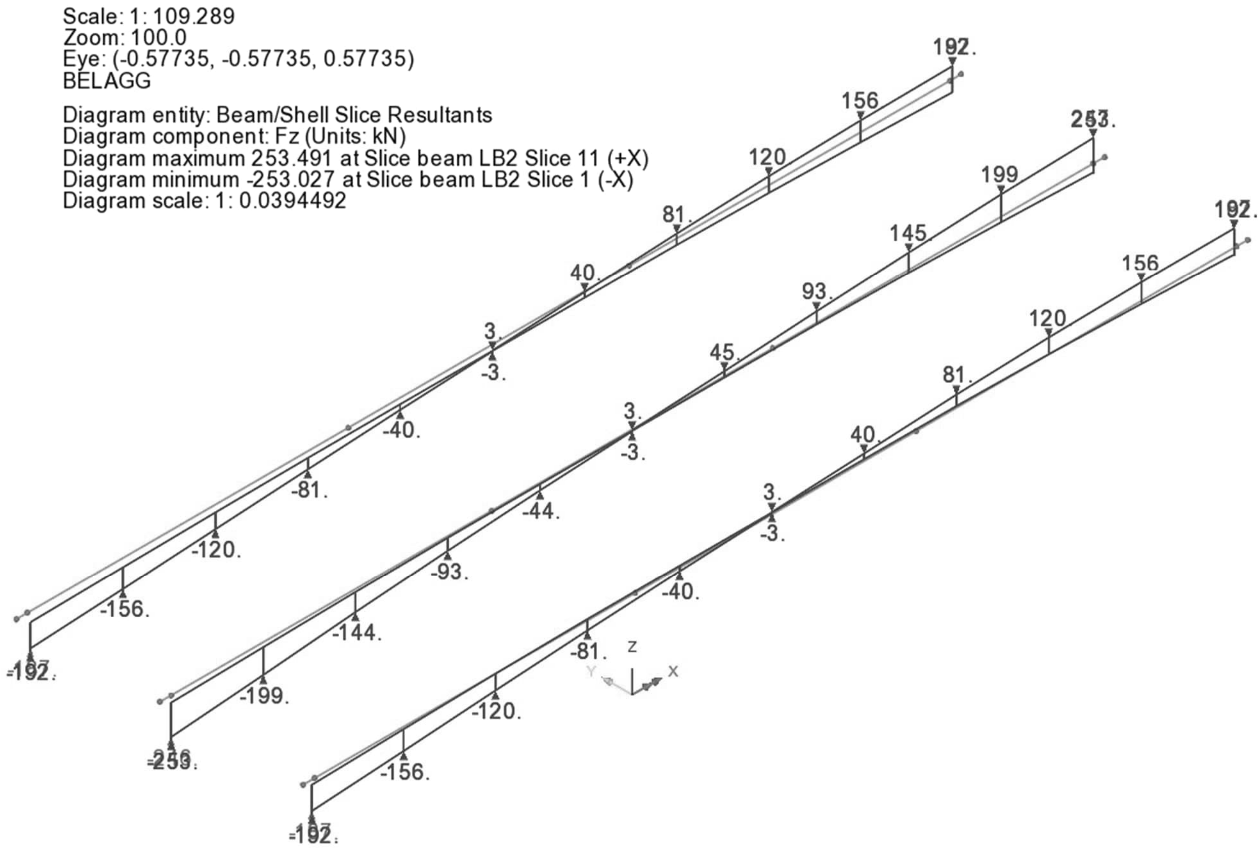
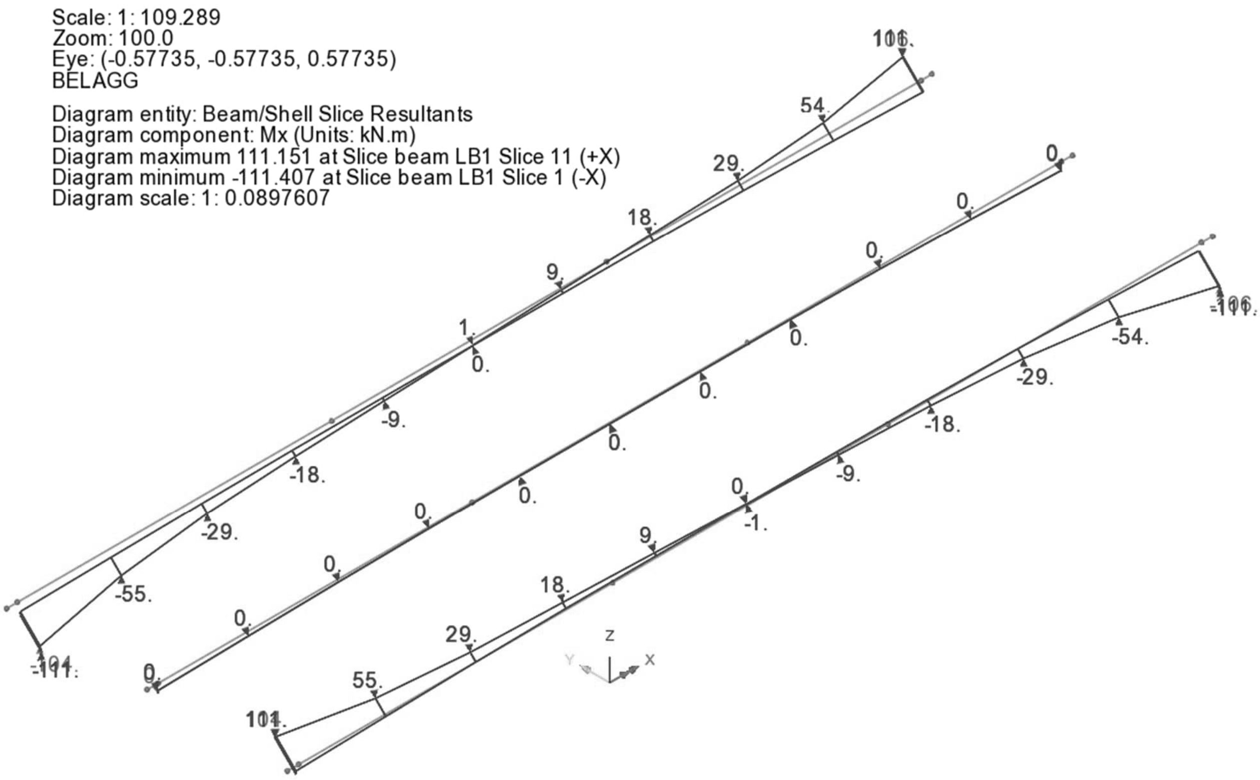
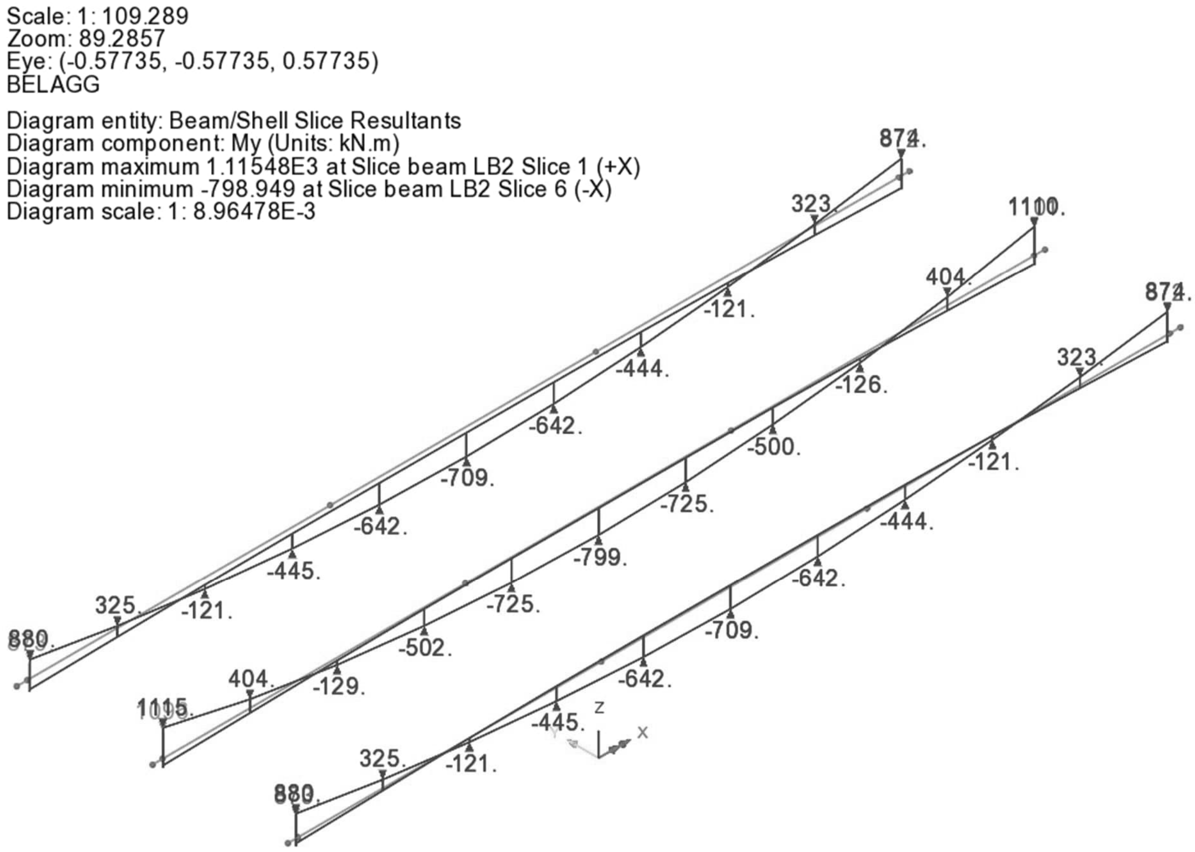


Diagram – Mx:



Scale: 1: 109.289
Zoom: 100.0
Eye: (-0.57735, -0.57735, 0.57735)
BELAGG
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum 111.151 at Slice beam LB1 Slice 11 (+X)
Diagram minimum -111.407 at Slice beam LB1 Slice 1 (-X)
Diagram scale: 1: 0.0897607
Z
Y
X

Diagram – My:



Scale: 1: 109.289
Zoom: 89.2857
Eye: (-0.57735, -0.57735, 0.57735)
BELAGG
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 1.11548E3 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -798.949 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 8.96478E-3

4.2 Tabell

LB1: BELAGG

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-81	-49	-187	-104	880	-28
3.3	-13.1	5.0	8.0	-82	14	-156	-55	325	-70
6.6	-9.8	5.0	8.1	-88	43	-120	-29	-121	49
9.8	-6.6	5.0	8.1	-90	39	-81	-18	-445	191
13.1	-3.3	5.0	8.1	-87	21	-40	-9	-642	286
16.4	0.0	5.0	8.1	-86	2	-3	-1	-709	317
16.4	0.0	5.0	8.1	-86	-2	3	1	-709	317
19.7	3.3	5.0	8.1	-87	-20	40	9	-642	286
23.0	6.6	5.0	8.1	-89	-39	81	18	-444	191
26.2	9.8	5.0	8.1	-87	-42	120	30	-121	49
29.5	13.1	5.0	8.0	-81	-14	156	54	323	-70
32.8	16.4	5.0	7.9	-80	49	187	106	875	-30
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: BELAGG

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-203	0	-246	0	1116	0
3.3	-13.1	0	8.0	-202	0	-199	0	404	0
6.6	-9.8	0	8.1	-189	0	-144	0	-129	0
9.8	-6.6	0	8.1	-186	0	-93	0	-502	0
13.1	-3.3	0	8.1	-191	0	-44	0	-725	0
16.4	0.0	0	8.1	-194	0	-3	0	-799	0
16.4	0.0	0	8.1	-194	0	4	0	-799	0
19.7	3.3	0	8.1	-192	0	45	0	-725	0
23.0	6.6	0	8.1	-188	0	93	0	-500	0
26.2	9.8	0	8.1	-191	0	145	0	-126	0
29.5	13.1	0	8.0	-204	0	199	0	404	0
32.8	16.4	0	7.9	-205	0	247	0	1110	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: BELAGG

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-81	49	-187	104	880	28
3.3	-13.1	-5	8.0	-82	-14	-156	55	325	70
6.6	-9.8	-5	8.1	-88	-43	-120	29	-121	-49
9.8	-6.6	-5	8.1	-90	-39	-81	18	-445	-191
13.1	-3.3	-5	8.1	-87	-21	-40	9	-642	-286
16.4	0.0	-5	8.1	-86	-2	-3	1	-709	-317
16.4	0.0	-5	8.1	-86	2	3	-1	-709	-317
19.7	3.3	-5	8.1	-87	20	40	-9	-642	-286
23.0	6.6	-5	8.1	-89	39	81	-18	-444	-191
26.2	9.8	-5	8.1	-87	42	120	-30	-121	-49
29.5	13.1	-5	8.0	-81	14	156	-54	323	70
32.8	16.4	-5	7.9	-80	-49	187	-106	875	30
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

5. Result PT-t0

5.1 Diagram

Diagram – Fx:

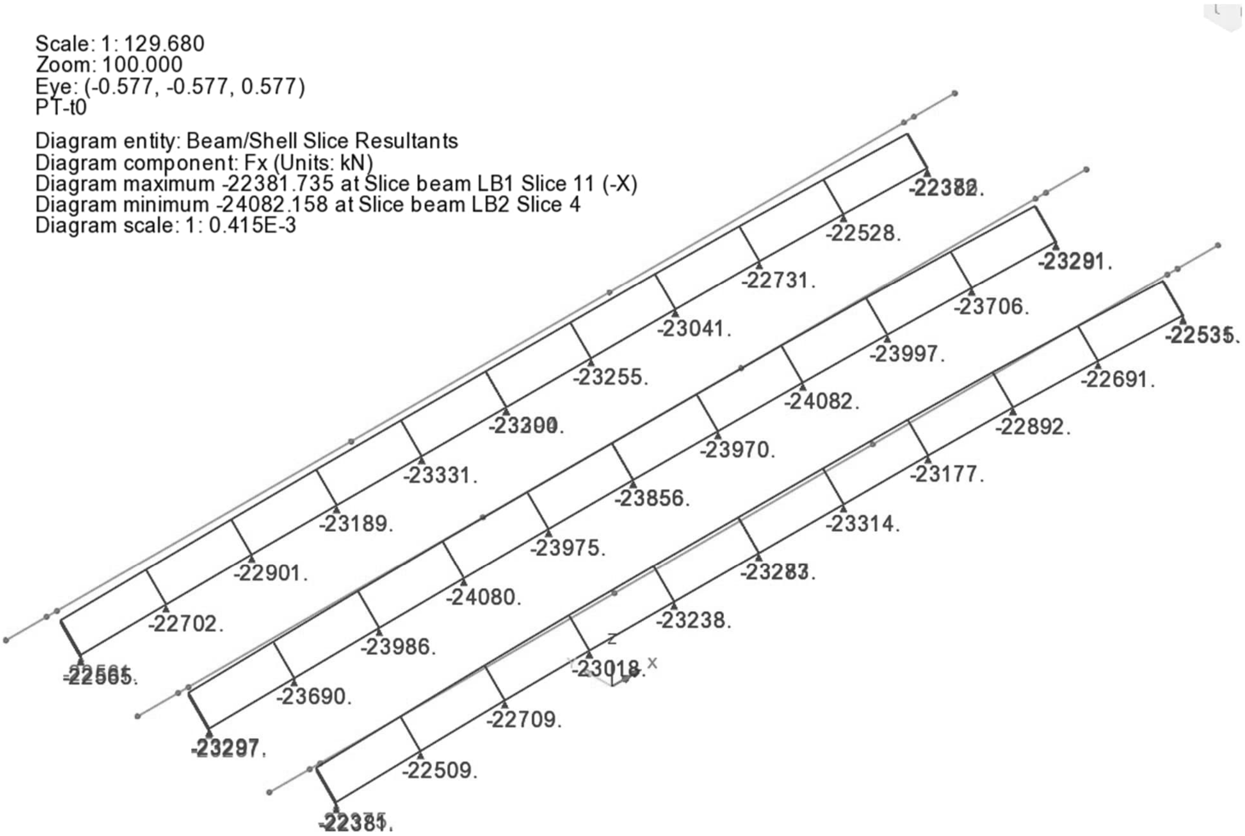


Diagram – Fz:

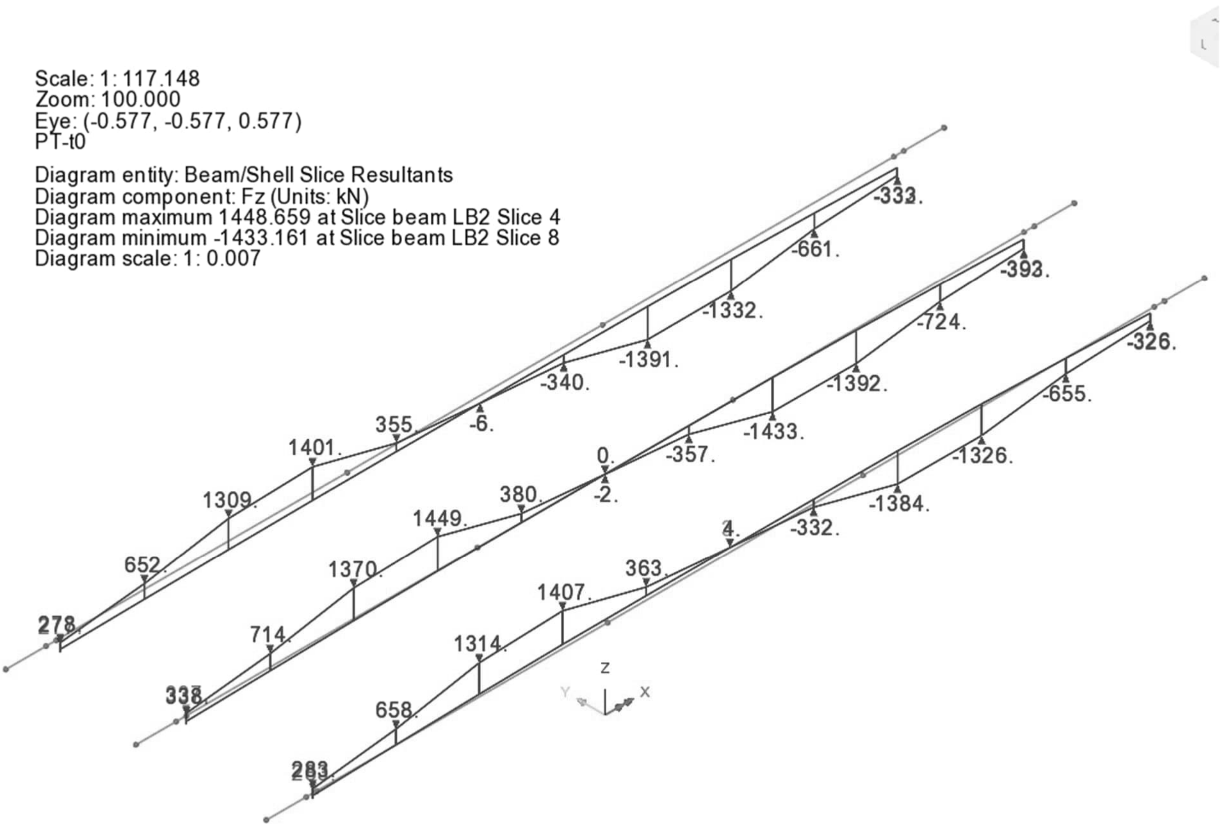
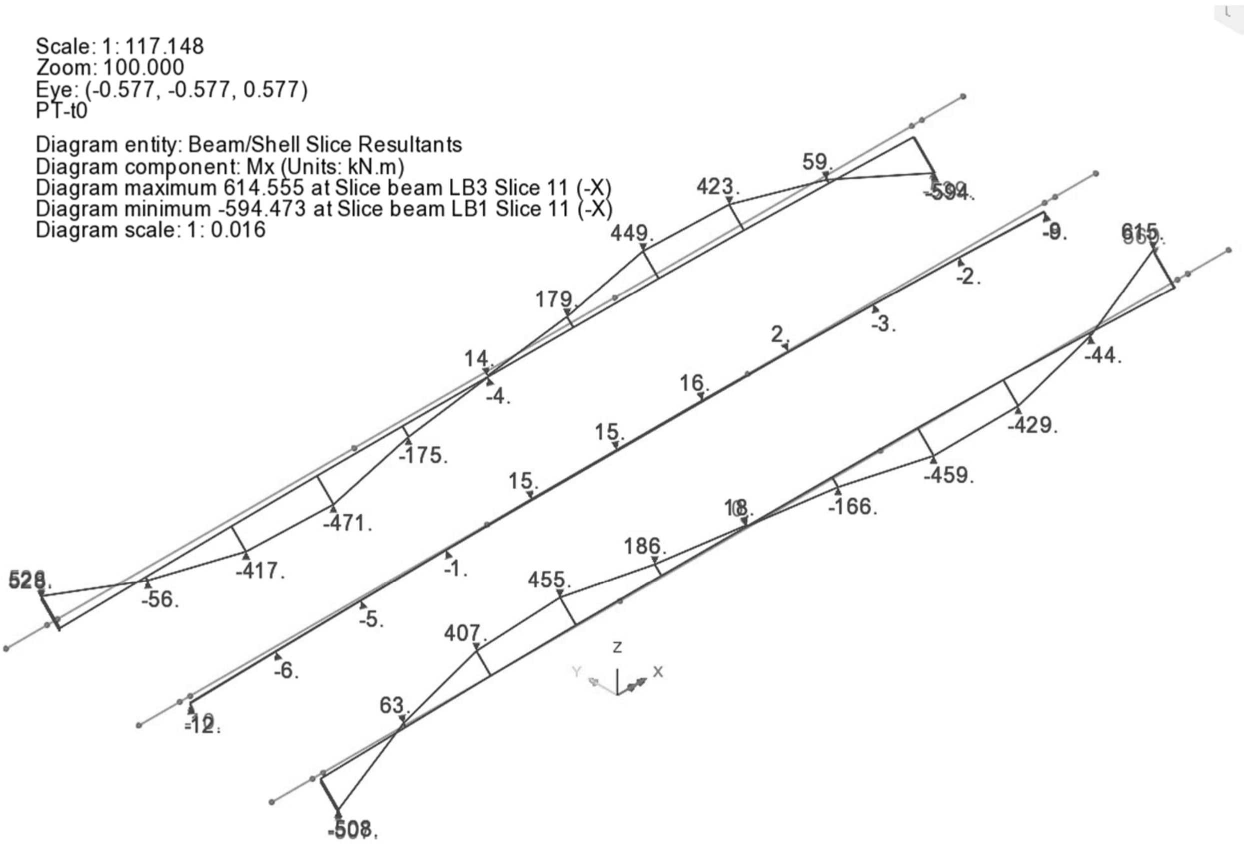
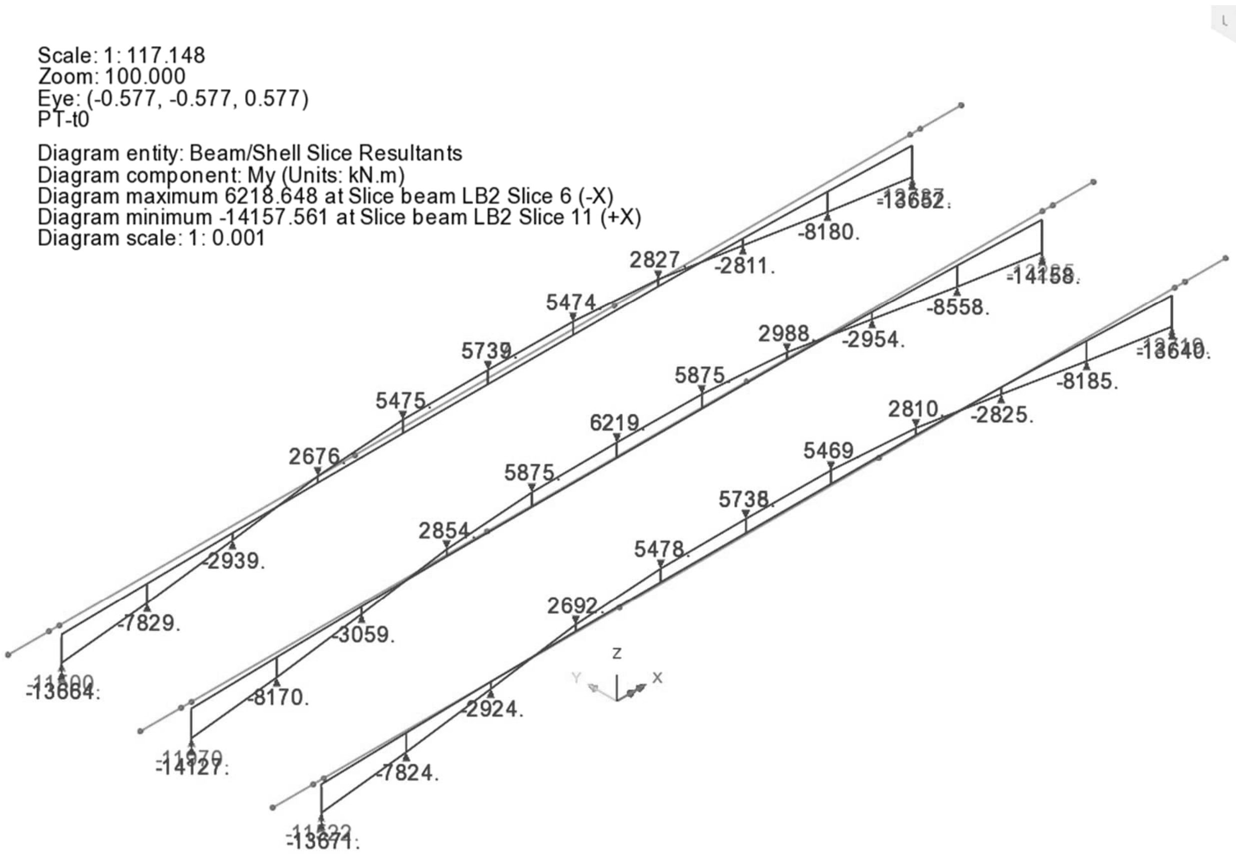

Scale: 1: 117.148
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
PT-t0
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Fz (Units: kN)
Diagram maximum 1448.659 at Slice beam LB2 Slice 4
Diagram minimum -1433.161 at Slice beam LB2 Slice 8
Diagram scale: 1: 0.007
278.
652.
1309.
1401.
355.
-6.
-340.
-1391.
-1332.
-661.
-333.
338.
714.
1370.
1449.
380.
0.
-2.
-357.
-1433.
-1392.
-724.
-393.
283.
658.
1314.
1407.
363.
4.
-332.
-1384.
-1326.
-655.
-326.
Z
Y
X

Diagram – Mx:



Scale: 1: 117.148
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
PT-t0
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum 614.555 at Slice beam LB3 Slice 11 (-X)
Diagram minimum -594.473 at Slice beam LB1 Slice 11 (-X)
Diagram scale: 1: 0.016

Diagram – My:



Scale: 1: 117.148
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
PT-t0
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 6218.648 at Slice beam LB2 Slice 6 (-X)
Diagram minimum -14157.561 at Slice beam LB2 Slice 11 (+X)
Diagram scale: 1: 0.001
-13652.
-8180.
2827.
-2811.
5474.
5739.
5475.
2676.
-2939.
-7829.
-13664.
-14158.
-8558.
2988.
-2954.
5875.
6219.
5875.
2854.
-3059.
-8170.
-14127.
-13640.
-8185.
2810.
-2825.
5469.
5738.
5478.
2692.
-2924.
-7824.
-13671.
Z
Y
X

5.2 Tabell

LB1: PT-T0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-22561	1101	278	596	-11540	449
3.3	-13.1	5.0	8.0	-22702	192	652	-20	-7860	1808
6.6	-9.8	5.0	8.1	-22901	-427	1309	-420	-3068	896
9.8	-6.6	5.0	8.1	-23189	-585	1401	-481	2613	-993
13.1	-3.3	5.0	8.1	-23331	-291	355	-180	5555	-2249
16.4	0.0	5.0	8.1	-23300	-32	-6	-4	5837	-2570
16.4	0.0	5.0	8.1	-23294	5	-5	14	5840	-2578
19.7	3.3	5.0	8.1	-23255	262	-340	185	5556	-2239
23.0	6.6	5.0	8.1	-23041	569	-1391	460	2764	-907
26.2	9.8	5.0	8.1	-22731	452	-1332	427	-2945	942
29.5	13.1	5.0	8.0	-22529	-158	-661	50	-8236	1960
32.8	16.4	5.0	7.9	-22376	-1133	-333	-650	-12718	603
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: PT-T0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-23297	-17	337	-1	-12010	-2
3.3	-13.1	0	8.0	-23690	-7	714	0	-8208	-30
6.6	-9.8	0	8.1	-23986	2	1370	-5	-3194	-35
9.8	-6.6	0	8.1	-24080	13	1449	-2	2788	-63
13.1	-3.3	0	8.1	-23976	22	380	15	5959	-24
16.4	0.0	0	8.1	-23856	23	0	15	6325	5
16.4	0.0	0	8.1	-23856	23	-2	15	6325	-10
19.7	3.3	0	8.1	-23970	22	-357	15	5960	19
23.0	6.6	0	8.1	-24082	13	-1433	0	2924	61
26.2	9.8	0	8.1	-23997	2	-1392	-3	-3093	32
29.5	13.1	0	8.0	-23706	-6	-724	1	-8619	27
32.8	16.4	0	7.9	-23291	-15	-392	-1	-13223	-10
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: PT-T0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-22375	-1084	283	-565	-11544	-545
3.3	-13.1	-5	8.0	-22509	-185	658	33	-7853	-1872
6.6	-9.8	-5	8.1	-22709	425	1314	410	-3055	-949
9.8	-6.6	-5	8.1	-23018	572	1407	465	2628	865
13.1	-3.3	-5	8.1	-23238	269	363	193	5557	2220
16.4	0.0	-5	8.1	-23277	9	3	19	5838	2573
16.4	0.0	-5	8.1	-23283	-28	4	0	5835	2565
19.7	3.3	-5	8.1	-23314	-284	-332	-172	5550	2256
23.0	6.6	-5	8.1	-23177	-582	-1384	-470	2749	1029
26.2	9.8	-5	8.1	-22892	-455	-1326	-432	-2957	-891
29.5	13.1	-5	8.0	-22691	163	-655	-35	-8242	-1902
32.8	16.4	-5	7.9	-22531	1148	-326	680	-12716	-548
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

6. Result KRYMP

6.1 Diagram

Diagram – Fz:

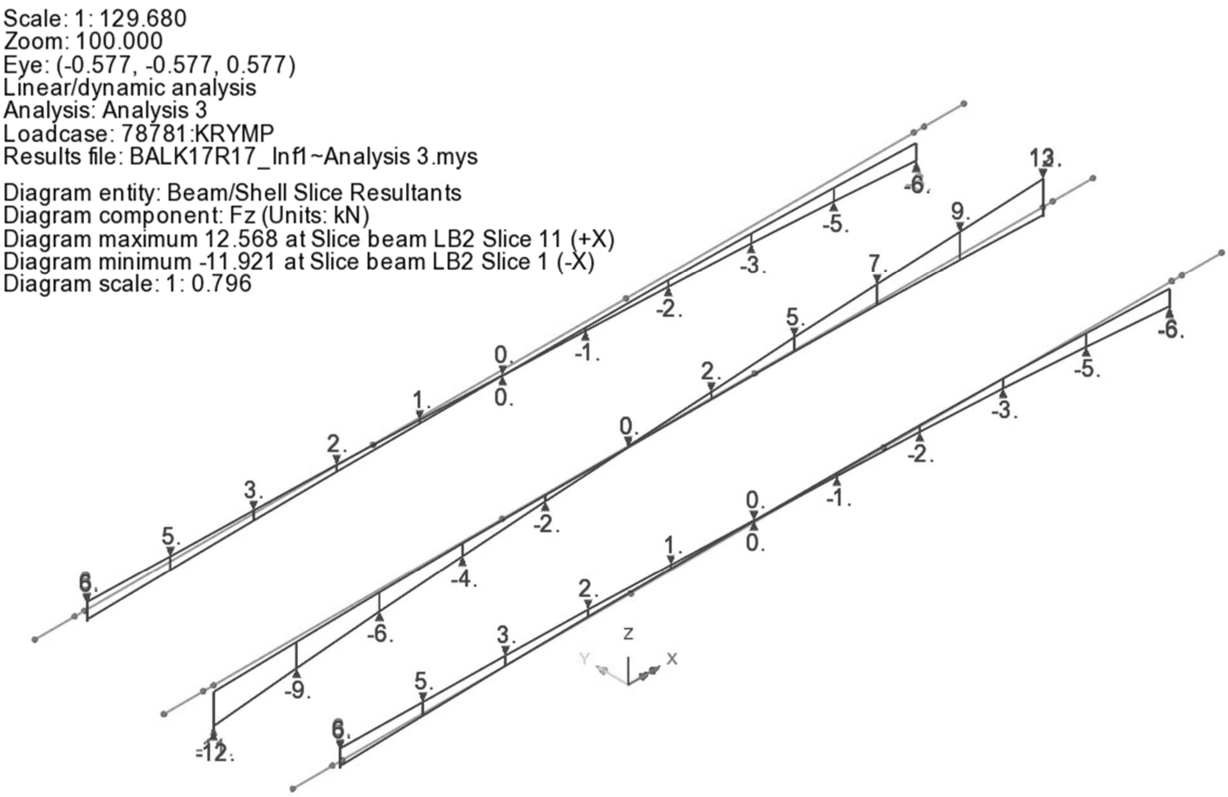


Diagram – Mx:

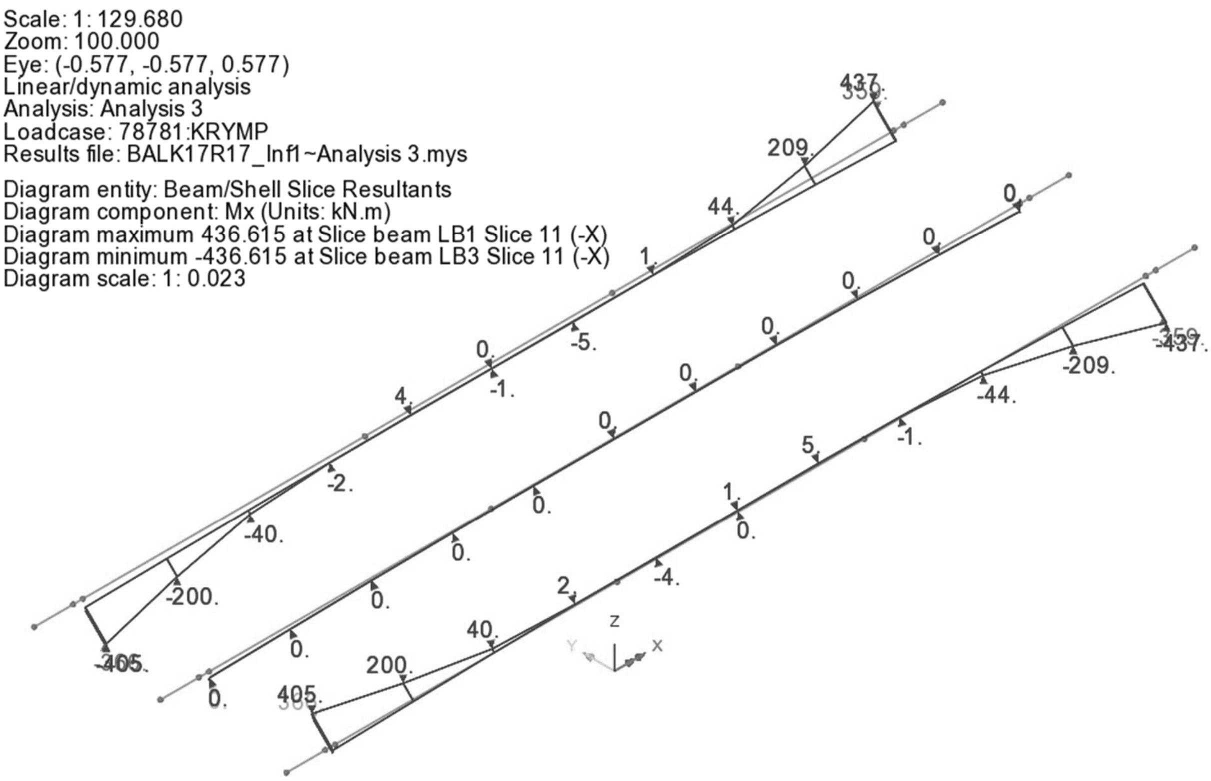
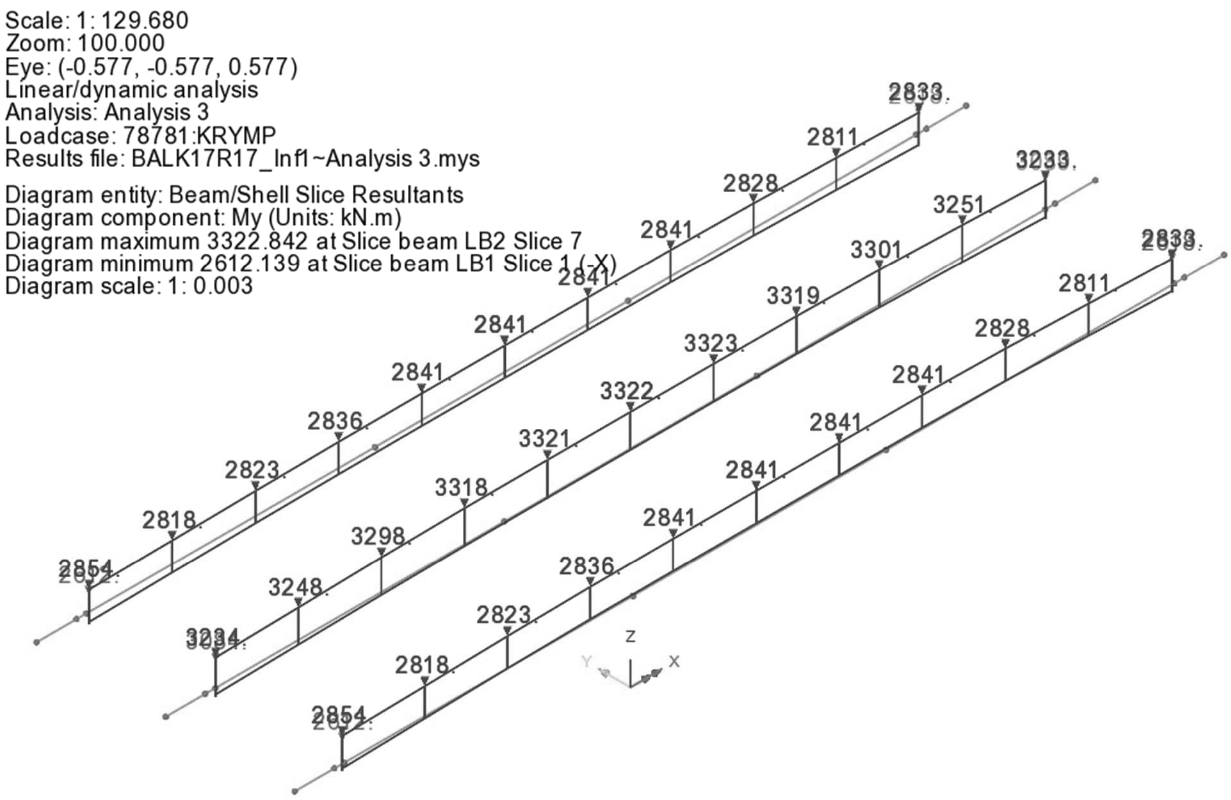

Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 3
Loadcase: 78781:KRYMP
Results file: BALK17R17_Inf1~Analysis 3.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum 436.615 at Slice beam LB1 Slice 11 (-X)
Diagram minimum -436.615 at Slice beam LB3 Slice 11 (-X)
Diagram scale: 1: 0.023

Diagram – My:



Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 3
Loadcase: 78781:KRYMP
Results file: BALK17R17_Inf1~Analysis 3.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 3322.842 at Slice beam LB2 Slice 7
Diagram minimum 2612.139 at Slice beam LB1 Slice 1 (-X)
Diagram scale: 1: 0.003
2854
2818
2823
2836
2841
2841
2841
2841
2828
2811
2833
3234
3248
3298
3318
3321
3322
3323
3319
3301
3251
3233
2854
2818
2823
2836
2841
2841
2841
2841
2828
2811
2833
Z
Y
X

6.2 Tabell

LB1: KRYMP

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-501	-722	6	-405	2854	151
3.3	-13.1	5.0	8.0	-565	-420	5	-200	2818	-1590
6.6	-9.8	5.0	8.1	-651	-122	3	-40	2823	-2223
9.8	-6.6	5.0	8.1	-705	-31	2	-2	2836	-2323
13.1	-3.3	5.0	8.1	-726	-4	1	4	2841	-2322
16.4	0.0	5.0	8.1	-731	-1	0	0	2841	-2314
16.4	0.0	5.0	8.1	-731	-1	0	-1	2841	-2314
19.7	3.3	5.0	8.1	-726	2	-1	-5	2841	-2327
23.0	6.6	5.0	8.1	-704	30	-2	1	2841	-2337
26.2	9.8	5.0	8.1	-650	131	-3	44	2828	-2227
29.5	13.1	5.0	8.0	-562	423	-5	209	2811	-1570
32.8	16.4	5.0	7.9	-497	710	-6	437	2833	150
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: KRYMP

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-123	0	-11	0	3234	0
3.3	-13.1	0	8.0	5	0	-9	0	3248	0
6.6	-9.8	0	8.1	177	0	-6	0	3298	0
9.8	-6.6	0	8.1	285	0	-4	0	3318	0
13.1	-3.3	0	8.1	328	0	-2	0	3321	0
16.4	0.0	0	8.1	337	0	0	0	3322	0
16.4	0.0	0	8.1	337	0	0	0	3322	0
19.7	3.3	0	8.1	328	0	2	0	3323	0
23.0	6.6	0	8.1	284	0	5	0	3319	0
26.2	9.8	0	8.1	174	0	7	0	3301	0
29.5	13.1	0	8.0	-1	0	9	0	3251	0
32.8	16.4	0	7.9	-131	0	12	0	3233	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: KRYMP

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-501	722	6	405	2854	-151
3.3	-13.1	-5	8.0	-565	420	5	200	2818	1590
6.6	-9.8	-5	8.1	-651	122	3	40	2823	2223
9.8	-6.6	-5	8.1	-705	31	2	2	2836	2323
13.1	-3.3	-5	8.1	-726	4	1	-4	2841	2322
16.4	0.0	-5	8.1	-731	1	0	0	2841	2314
16.4	0.0	-5	8.1	-731	1	0	1	2841	2314
19.7	3.3	-5	8.1	-726	-2	-1	5	2841	2327
23.0	6.6	-5	8.1	-704	-30	-2	-1	2841	2337
26.2	9.8	-5	8.1	-650	-131	-3	-44	2828	2227
29.5	13.1	-5	8.0	-562	-423	-5	-209	2811	1570
32.8	16.4	-5	7.9	-497	-710	-6	-437	2833	-150
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

7. Result STOD 1Z

7.1 Diagram

Diagram – Fz:

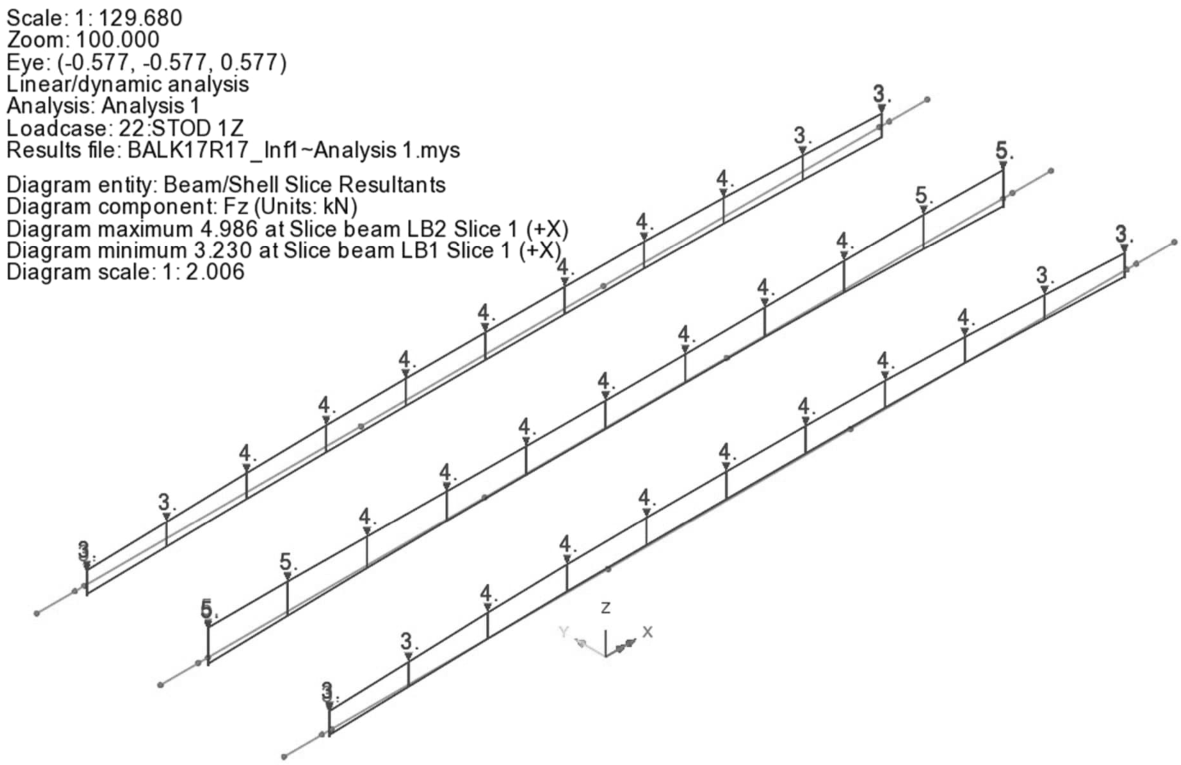
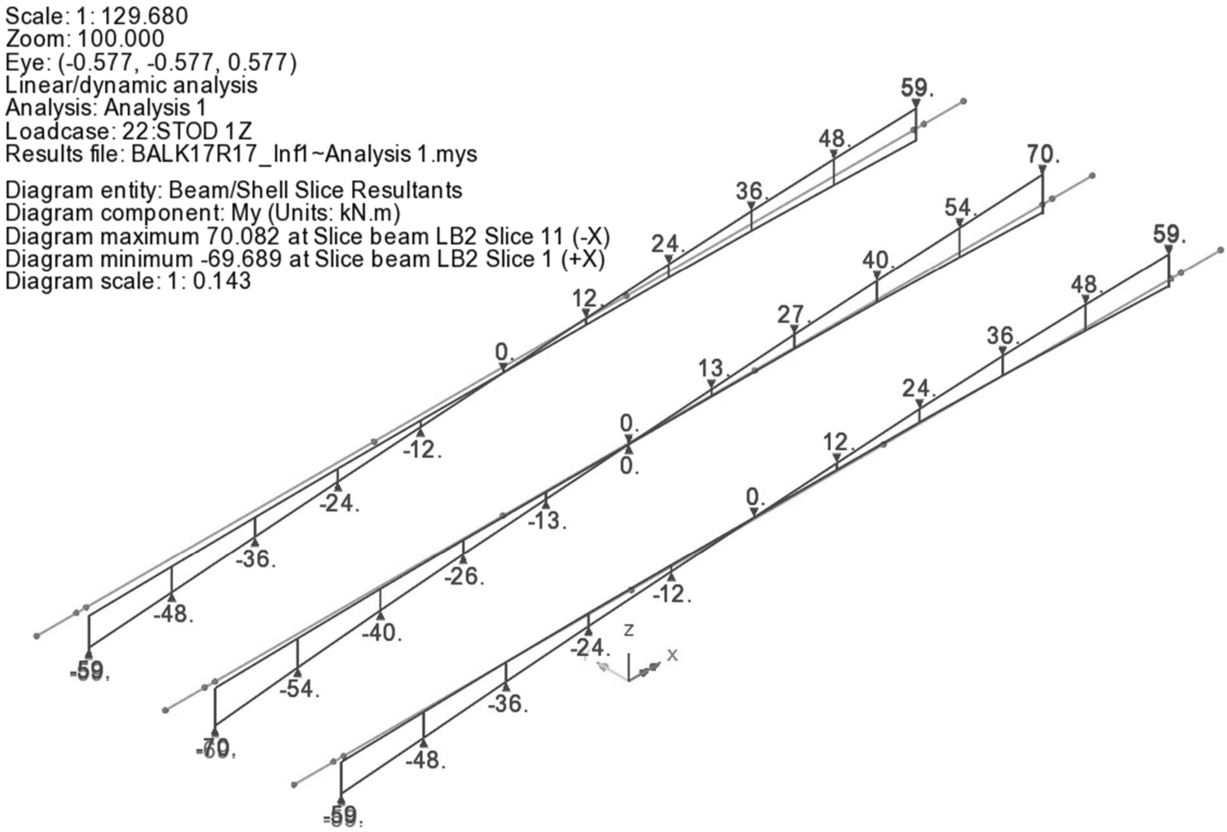


Diagram – My:


Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 1
Loadcase: 22:STOD 1Z
Results file: BALK17R17_Inf1~Analysis 1.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 70.082 at Slice beam LB2 Slice 11 (-X)
Diagram minimum -69.689 at Slice beam LB2 Slice 1 (+X)
Diagram scale: 1: 0.143
59.
48.
36.
24.
12.
0.
-12.
-24.
-36.
-48.
-59.
70.
54.
40.
27.
13.
0.
0.
-13.
-26.
-40.
-54.
-70.
59.
48.
36.
24.
12.
0.
-12.
-24.
-36.
-48.
-59.
Z
X

7.2 Tabell

LB1: STOD 1Z

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	0	6	3	3	-59	0
3.3	-13.1	5.0	8.0	0	2	3	0	-48	13
6.6	-9.8	5.0	8.1	1	0	4	-1	-36	14
9.8	-6.6	5.0	8.1	1	-1	4	-1	-24	11
13.1	-3.3	5.0	8.1	1	-2	4	-1	-12	5
16.4	0.0	5.0	8.1	0	-2	4	-1	0	0
16.4	0.0	5.0	8.1	0	-2	4	-1	0	0
19.7	3.3	5.0	8.1	-1	-2	4	-1	12	-5
23.0	6.6	5.0	8.1	-1	-1	4	-1	24	-11
26.2	9.8	5.0	8.1	-1	0	4	-1	36	-14
29.5	13.1	5.0	8.0	0	2	3	0	48	-13
32.8	16.4	5.0	7.9	0	6	3	3	59	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: STOD 1Z

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	1	0	5	0	-70	0
3.3	-13.1	0	8.0	0	0	5	0	-54	0
6.6	-9.8	0	8.1	-1	0	4	0	-40	0
9.8	-6.6	0	8.1	-2	0	4	0	-26	0
13.1	-3.3	0	8.1	-1	0	4	0	-13	0
16.4	0.0	0	8.1	0	0	4	0	0	0
16.4	0.0	0	8.1	0	0	4	0	0	0
19.7	3.3	0	8.1	1	0	4	0	13	0
23.0	6.6	0	8.1	2	0	4	0	27	0
26.2	9.8	0	8.1	1	0	4	0	40	0
29.5	13.1	0	8.0	0	0	5	0	54	0
32.8	16.4	0	7.9	-1	0	5	0	70	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: STOD 1Z

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	0	-6	3	-3	-59	0
3.3	-13.1	-5	8.0	0	-2	3	0	-48	-13
6.6	-9.8	-5	8.1	1	0	4	1	-36	-14
9.8	-6.6	-5	8.1	1	1	4	1	-24	-11
13.1	-3.3	-5	8.1	1	2	4	1	-12	-5
16.4	0.0	-5	8.1	0	2	4	1	0	0
16.4	0.0	-5	8.1	0	2	4	1	0	0
19.7	3.3	-5	8.1	-1	2	4	1	12	5
23.0	6.6	-5	8.1	-1	1	4	1	24	11
26.2	9.8	-5	8.1	-1	0	4	1	36	14
29.5	13.1	-5	8.0	0	-2	3	0	48	13
32.8	16.4	-5	7.9	0	-6	3	-3	59	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

8. Result STOD 2Z

8.1 Diagram

Diagram – Fz:

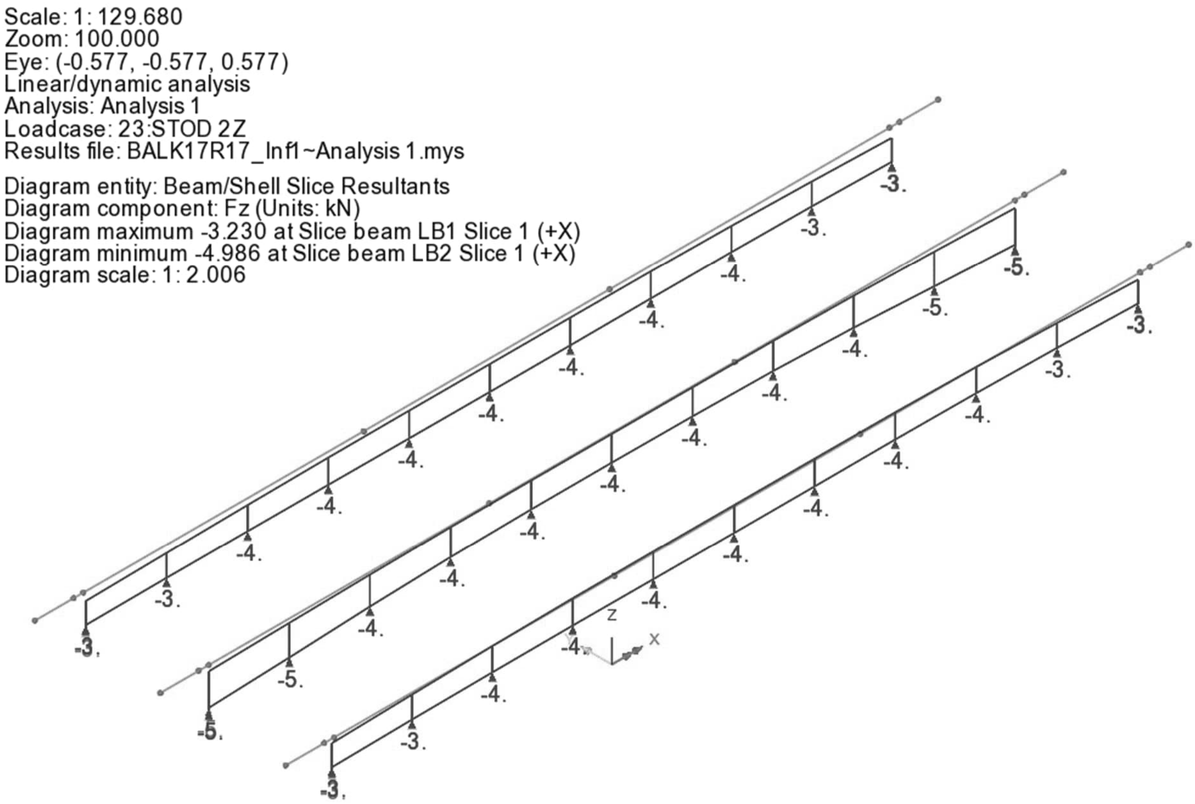
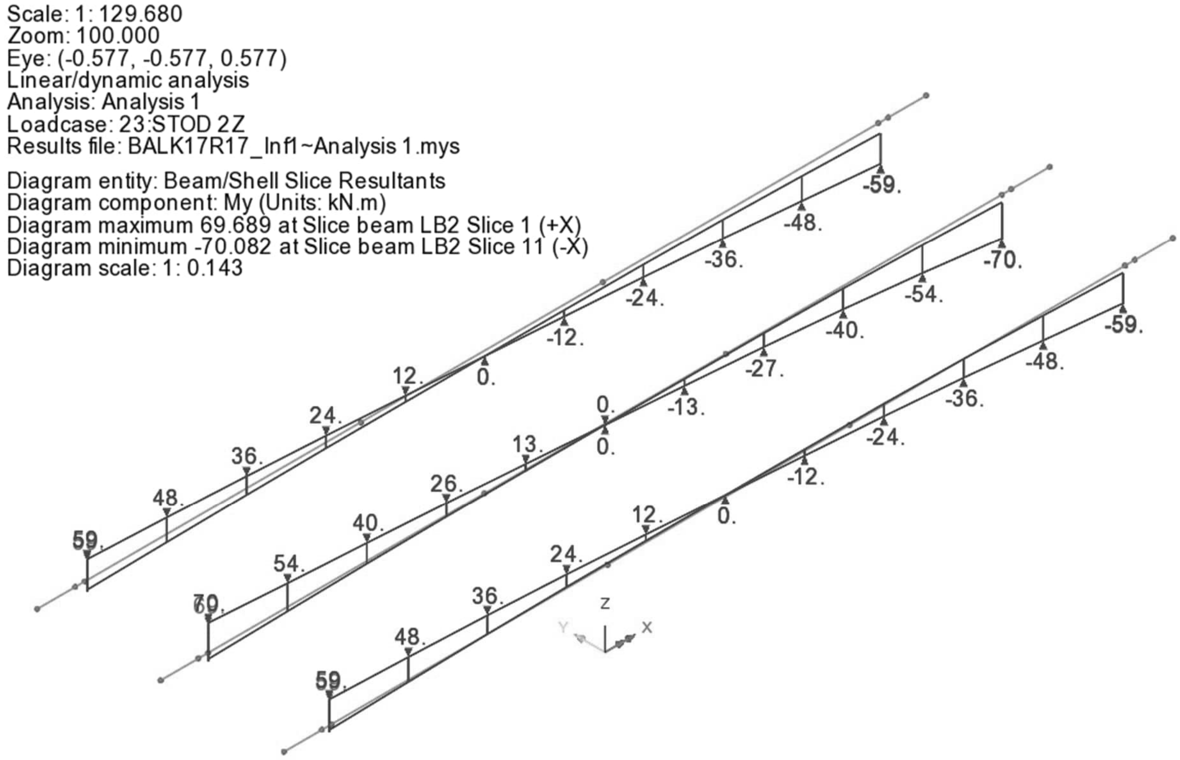


Diagram – My:



Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 1
Loadcase: 23:STOD 2Z
Results file: BALK17R17_Inf1~Analysis 1.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 69.689 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -70.082 at Slice beam LB2 Slice 11 (-X)
Diagram scale: 1: 0.143
59.
48.
36.
24.
12.
0.
-12.
-24.
-36.
-48.
-59.
70.
54.
40.
26.
13.
0.
-13.
-27.
-40.
-54.
-70.
Z
Y
X

8.2 Tabell

LB1: STOD 2Z

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	0	-6	-3	-3	59	0
3.3	-13.1	5.0	8.0	0	-2	-3	0	48	-13
6.6	-9.8	5.0	8.1	-1	0	-4	1	36	-14
9.8	-6.6	5.0	8.1	-1	1	-4	1	24	-11
13.1	-3.3	5.0	8.1	-1	2	-4	1	12	-5
16.4	0.0	5.0	8.1	0	2	-4	1	0	0
16.4	0.0	5.0	8.1	0	2	-4	1	0	0
19.7	3.3	5.0	8.1	1	2	-4	1	-12	5
23.0	6.6	5.0	8.1	1	1	-4	1	-24	11
26.2	9.8	5.0	8.1	1	0	-4	1	-36	14
29.5	13.1	5.0	8.0	0	-2	-3	0	-48	13
32.8	16.4	5.0	7.9	0	-6	-3	-3	-59	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: STOD 2Z

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-1	0	-5	0	70	0
3.3	-13.1	0	8.0	0	0	-5	0	54	0
6.6	-9.8	0	8.1	1	0	-4	0	40	0
9.8	-6.6	0	8.1	2	0	-4	0	26	0
13.1	-3.3	0	8.1	1	0	-4	0	13	0
16.4	0.0	0	8.1	0	0	-4	0	0	0
16.4	0.0	0	8.1	0	0	-4	0	0	0
19.7	3.3	0	8.1	-1	0	-4	0	-13	0
23.0	6.6	0	8.1	-2	0	-4	0	-27	0
26.2	9.8	0	8.1	-1	0	-4	0	-40	0
29.5	13.1	0	8.0	0	0	-5	0	-54	0
32.8	16.4	0	7.9	1	0	-5	0	-70	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: STOD 2Z

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	0	6	-3	3	59	0
3.3	-13.1	-5	8.0	0	2	-3	0	48	13
6.6	-9.8	-5	8.1	-1	0	-4	-1	36	14
9.8	-6.6	-5	8.1	-1	-1	-4	-1	24	11
13.1	-3.3	-5	8.1	-1	-2	-4	-1	12	5
16.4	0.0	-5	8.1	0	-2	-4	-1	0	0
16.4	0.0	-5	8.1	0	-2	-4	-1	0	0
19.7	3.3	-5	8.1	1	-2	-4	-1	-12	-5
23.0	6.6	-5	8.1	1	-1	-4	-1	-24	-11
26.2	9.8	-5	8.1	1	0	-4	-1	-36	-14
29.5	13.1	-5	8.0	0	2	-3	0	-48	-13
32.8	16.4	-5	7.9	0	6	-3	3	-59	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

9. Result STOD 1X+

9.1 Diagram

Diagram – Fz:

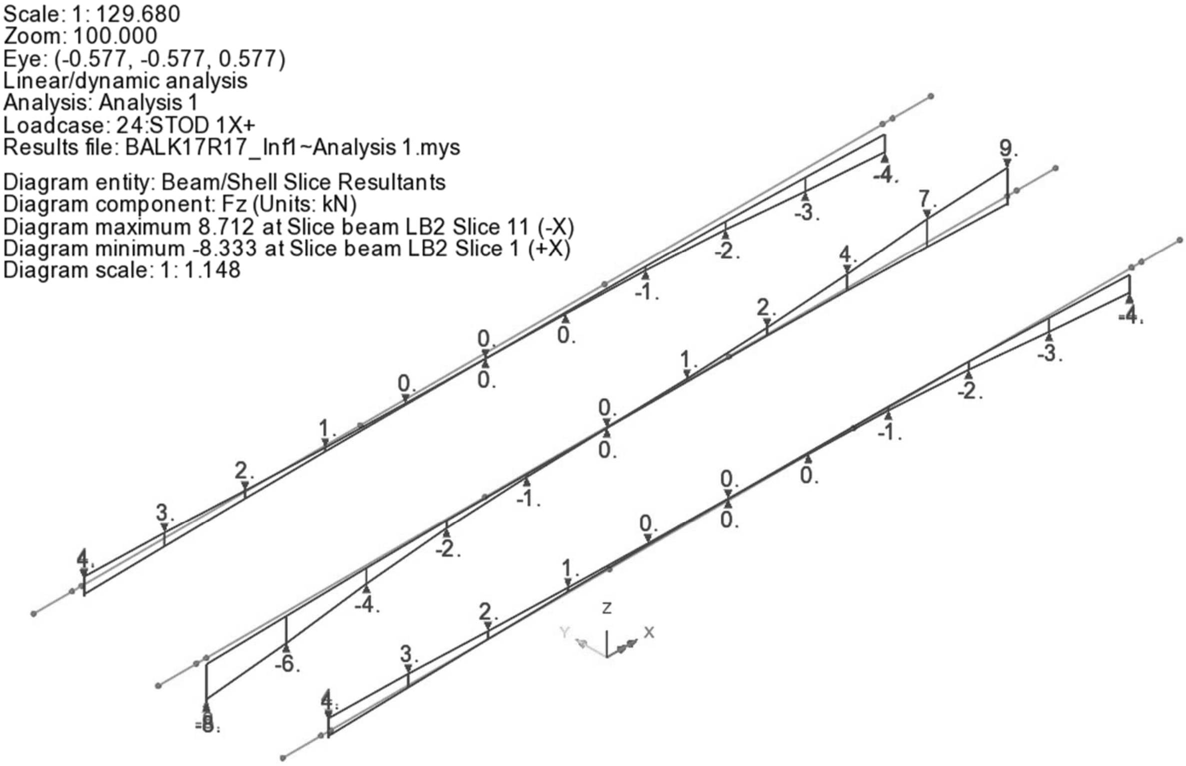
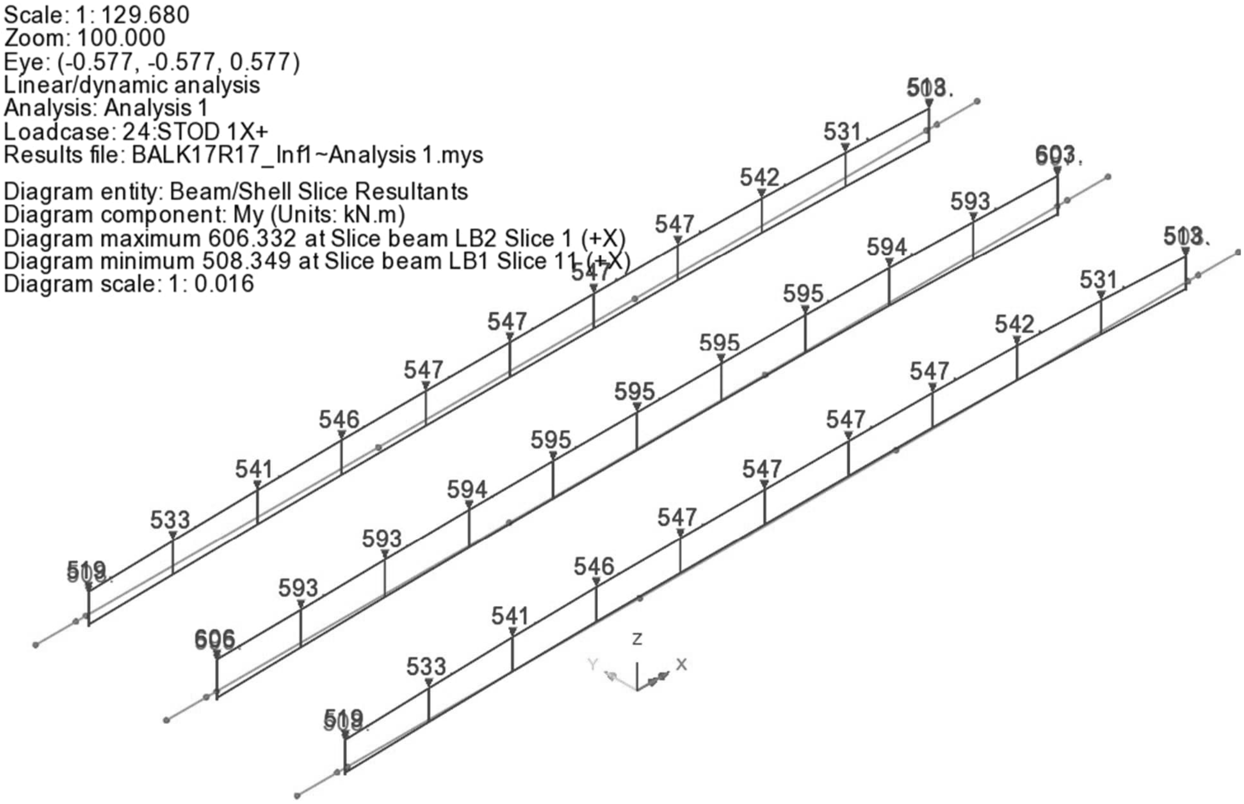


Diagram – My:


Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 1
Loadcase: 24:STOD 1X+
Results file: BALK17R17_Inf1~Analysis 1.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 606.332 at Slice beam LB2 Slice 1 (+X)
Diagram minimum 508.349 at Slice beam LB1 Slice 11 (+X)
Diagram scale: 1: 0.016
519
533
541
546
547
547
547
547
542
531
508
606
593
593
594
595
595
595
595
594
593
603
519
533
541
546
547
547
547
547
542
531
508
Z
Y
X

9.2 Tabell

LB1: STOD 1X+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-90	-62	4	-30	519	-7
3.3	-13.1	5.0	8.0	-97	-37	3	-15	533	-145
6.6	-9.8	5.0	8.1	-109	-19	2	-7	541	-205
9.8	-6.6	5.0	8.1	-118	-9	1	-3	546	-228
13.1	-3.3	5.0	8.1	-123	-2	0	-1	547	-234
16.4	0.0	5.0	8.1	-124	0	0	0	547	-234
16.4	0.0	5.0	8.1	-124	0	0	0	547	-234
19.7	3.3	5.0	8.1	-123	2	0	1	547	-234
23.0	6.6	5.0	8.1	-118	9	-1	3	547	-229
26.2	9.8	5.0	8.1	-109	20	-2	7	542	-205
29.5	13.1	5.0	8.0	-96	37	-3	15	531	-145
32.8	16.4	5.0	7.9	-90	61	-4	33	513	-8
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: STOD 1X+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-90	0	-8	0	606	0
3.3	-13.1	0	8.0	-78	0	-6	0	593	0
6.6	-9.8	0	8.1	-53	0	-4	0	593	0
9.8	-6.6	0	8.1	-35	0	-2	0	594	0
13.1	-3.3	0	8.1	-25	0	-1	0	595	0
16.4	0.0	0	8.1	-22	0	0	0	595	0
16.4	0.0	0	8.1	-22	0	0	0	595	0
19.7	3.3	0	8.1	-25	0	1	0	595	0
23.0	6.6	0	8.1	-35	0	2	0	595	0
26.2	9.8	0	8.1	-53	0	4	0	594	0
29.5	13.1	0	8.0	-78	0	7	0	593	0
32.8	16.4	0	7.9	-91	0	9	0	603	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: STOD 1X+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-90	62	4	30	519	7
3.3	-13.1	-5	8.0	-97	37	3	15	533	145
6.6	-9.8	-5	8.1	-109	19	2	7	541	205
9.8	-6.6	-5	8.1	-118	9	1	3	546	228
13.1	-3.3	-5	8.1	-123	2	0	1	547	234
16.4	0.0	-5	8.1	-124	0	0	0	547	234
16.4	0.0	-5	8.1	-124	0	0	0	547	234
19.7	3.3	-5	8.1	-123	-2	0	-1	547	234
23.0	6.6	-5	8.1	-118	-9	-1	-3	547	229
26.2	9.8	-5	8.1	-109	-20	-2	-7	542	205
29.5	13.1	-5	8.0	-96	-37	-3	-15	531	145
32.8	16.4	-5	7.9	-90	-61	-4	-33	513	8
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

10. Result STOD 2X+

10.1 Diagram

Diagram – Fz:

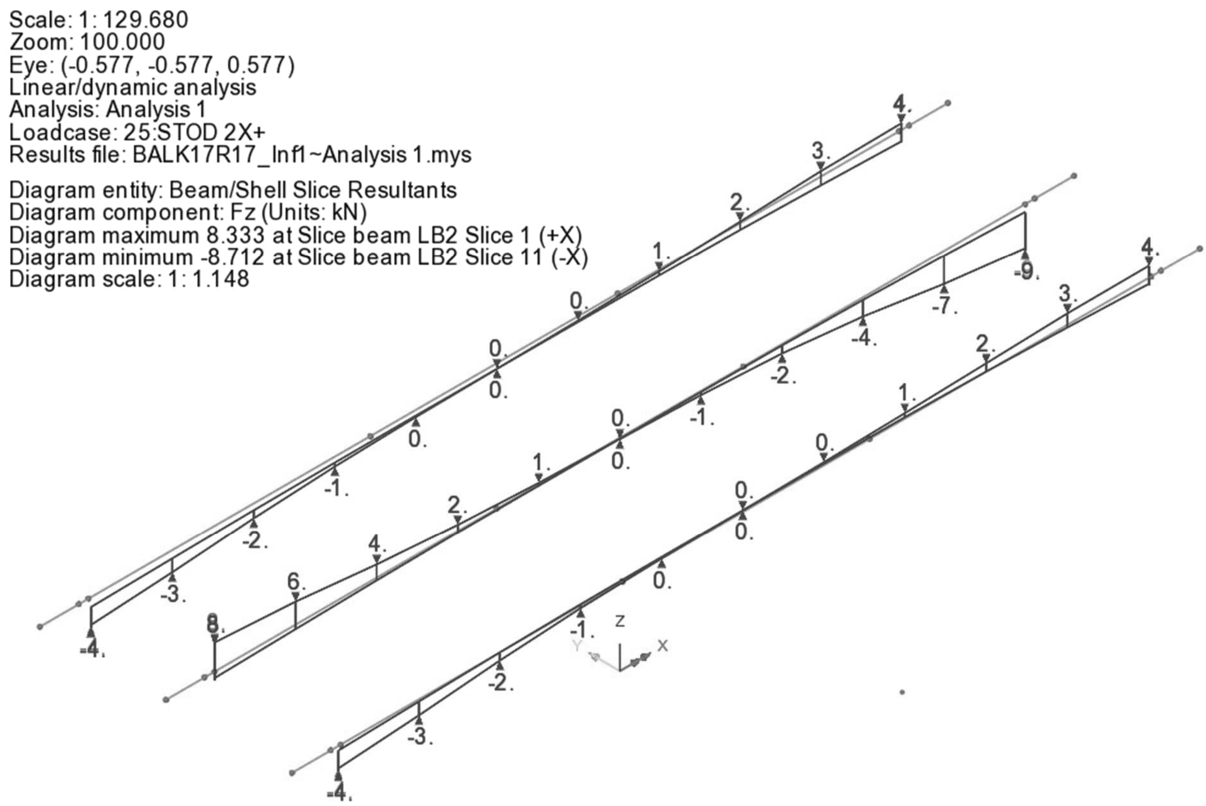
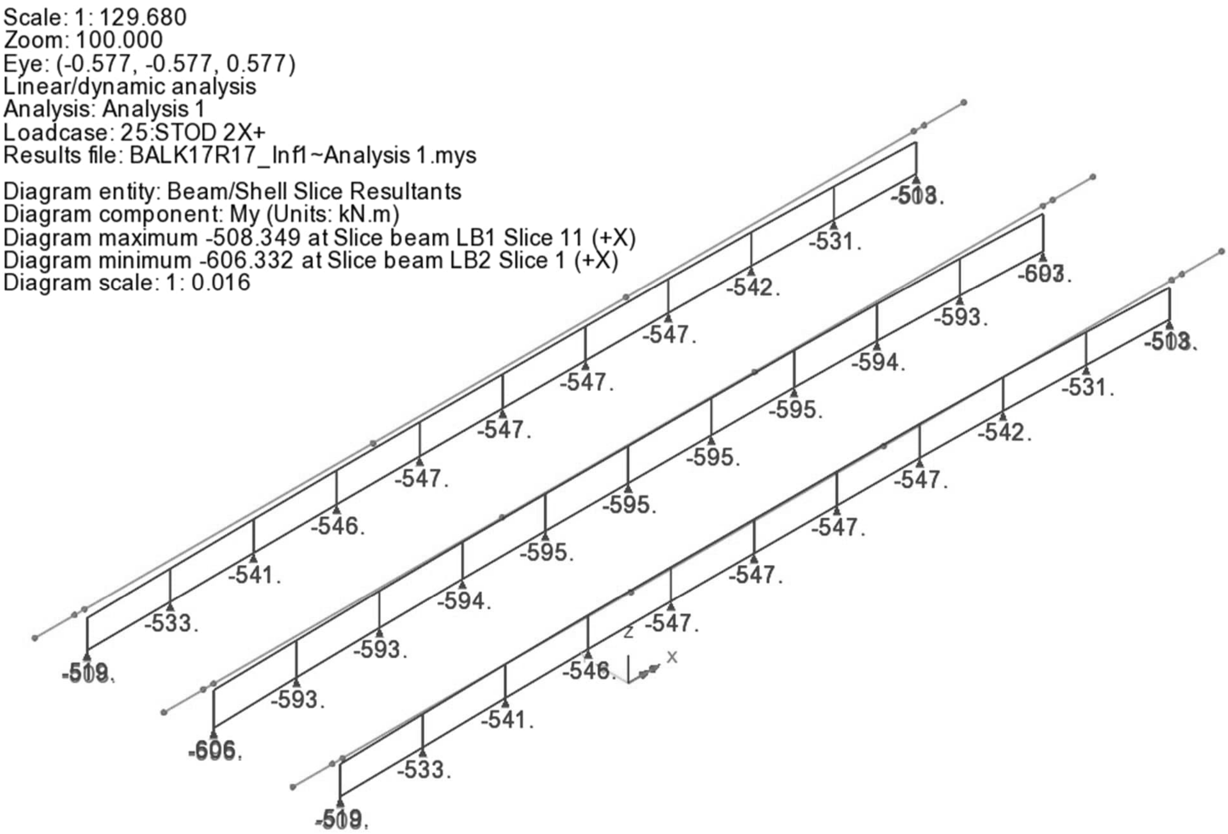


Diagram – My:


Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 1
Loadcase: 25:STOD 2X+
Results file: BALK17R17_Inf1~Analysis 1.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum -508.349 at Slice beam LB1 Slice 11 (+X)
Diagram minimum -606.332 at Slice beam LB2 Slice 1 (+X)
Diagram scale: 1: 0.016
-509.
-533.
-541.
-546.
-547.
-547.
-547.
-547.
-542.
-531.
-508.
-606.
-593.
-593.
-594.
-595.
-595.
-595.
-595.
-594.
-593.
-603.
-509.
-533.
-541.
-546.
-547.
-547.
-547.
-547.
-542.
-531.
-508.
Z
X

10.2 Tabell

LB1: STOD 2X+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	90	62	-4	30	-519	7
3.3	-13.1	5.0	8.0	97	37	-3	15	-533	145
6.6	-9.8	5.0	8.1	109	19	-2	7	-541	205
9.8	-6.6	5.0	8.1	118	9	-1	3	-546	228
13.1	-3.3	5.0	8.1	123	2	0	1	-547	234
16.4	0.0	5.0	8.1	124	0	0	0	-547	234
16.4	0.0	5.0	8.1	124	0	0	0	-547	234
19.7	3.3	5.0	8.1	123	-2	0	-1	-547	234
23.0	6.6	5.0	8.1	118	-9	1	-3	-547	229
26.2	9.8	5.0	8.1	109	-20	2	-7	-542	205
29.5	13.1	5.0	8.0	96	-37	3	-15	-531	145
32.8	16.4	5.0	7.9	90	-61	4	-33	-513	8
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: STOD 2X+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	90	0	8	0	-606	0
3.3	-13.1	0	8.0	78	0	6	0	-593	0
6.6	-9.8	0	8.1	53	0	4	0	-593	0
9.8	-6.6	0	8.1	35	0	2	0	-594	0
13.1	-3.3	0	8.1	25	0	1	0	-595	0
16.4	0.0	0	8.1	22	0	0	0	-595	0
16.4	0.0	0	8.1	22	0	0	0	-595	0
19.7	3.3	0	8.1	25	0	-1	0	-595	0
23.0	6.6	0	8.1	35	0	-2	0	-595	0
26.2	9.8	0	8.1	53	0	-4	0	-594	0
29.5	13.1	0	8.0	78	0	-7	0	-593	0
32.8	16.4	0	7.9	91	0	-9	0	-603	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: STOD 2X+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	90	-62	-4	-30	-519	-7
3.3	-13.1	-5	8.0	97	-37	-3	-15	-533	-145
6.6	-9.8	-5	8.1	109	-19	-2	-7	-541	-205
9.8	-6.6	-5	8.1	118	-9	-1	-3	-546	-228
13.1	-3.3	-5	8.1	123	-2	0	-1	-547	-234
16.4	0.0	-5	8.1	124	0	0	0	-547	-234
16.4	0.0	-5	8.1	124	0	0	0	-547	-234
19.7	3.3	-5	8.1	123	2	0	1	-547	-234
23.0	6.6	-5	8.1	118	9	1	3	-547	-229
26.2	9.8	-5	8.1	109	20	2	7	-542	-205
29.5	13.1	-5	8.0	96	37	3	15	-531	-145
32.8	16.4	-5	7.9	90	61	4	33	-513	-8
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

11. Result JTEMP+

11.1 Diagram

Diagram – Fz:

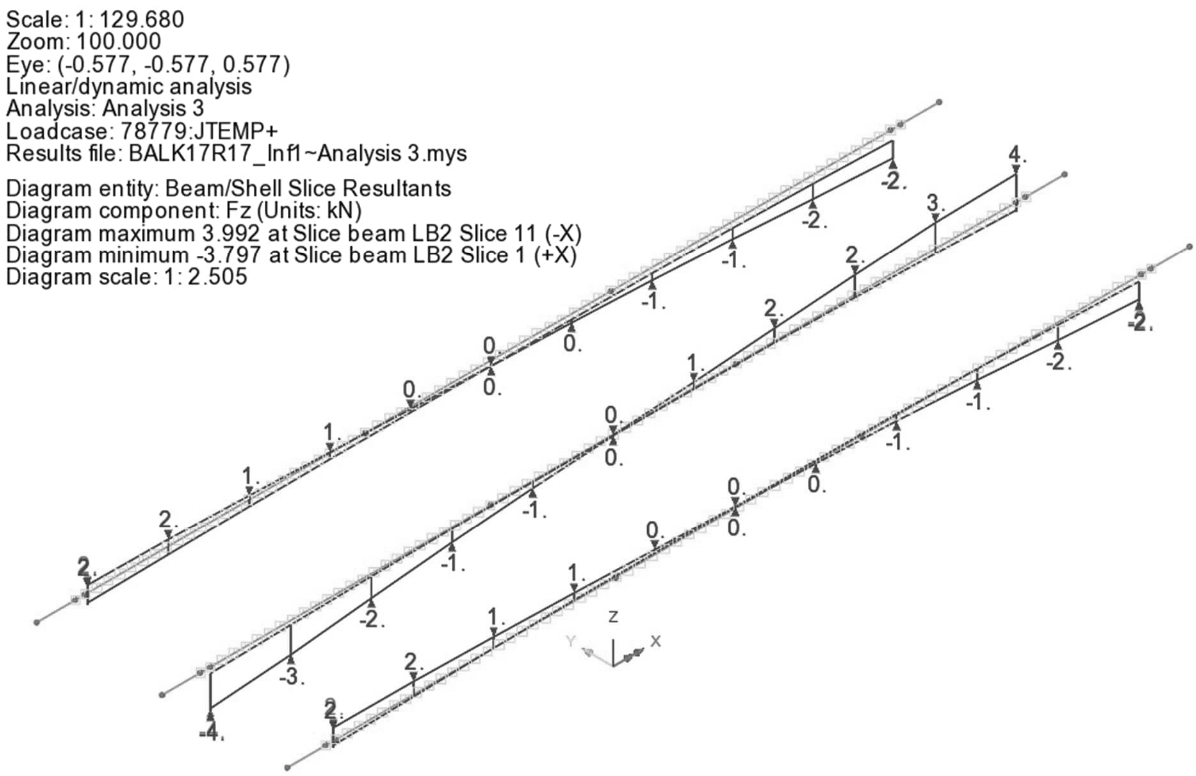
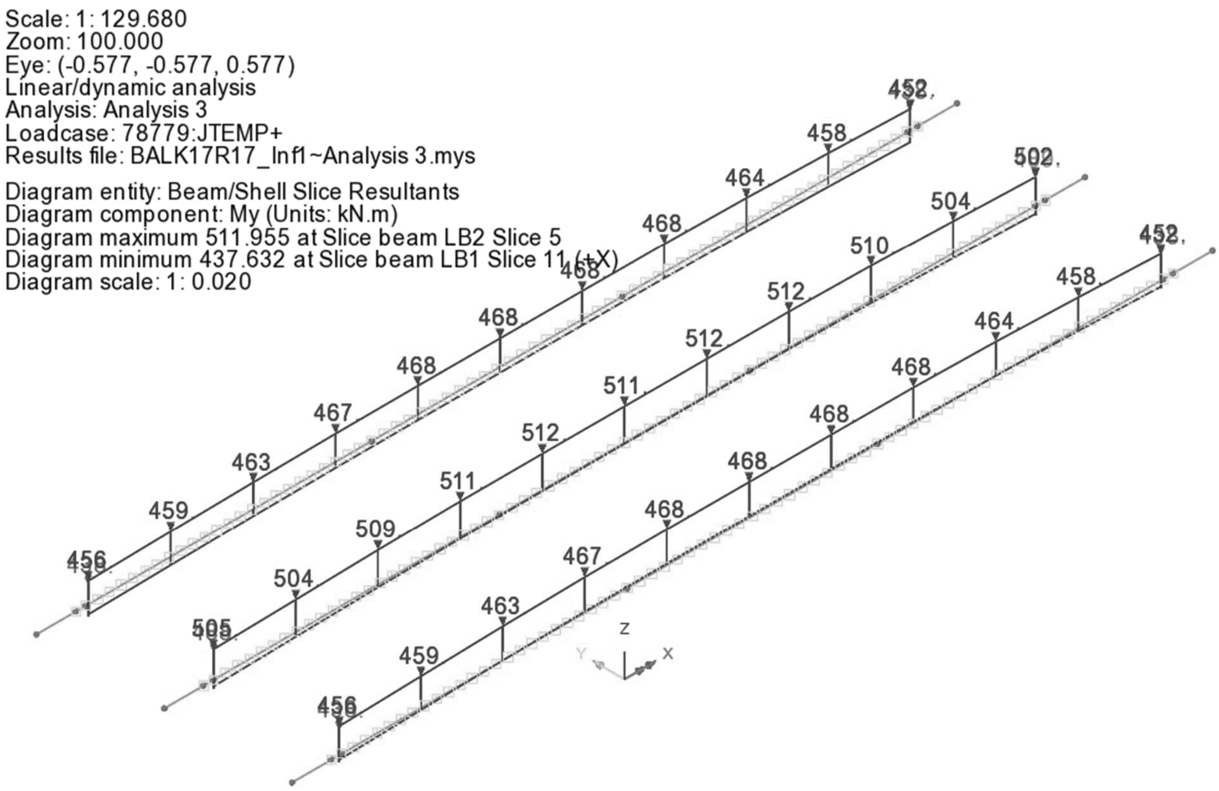


Diagram – My:



Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 3
Loadcase: 78779:JTEMP+
Results file: BALK17R17_Inf1~Analysis 3.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 511.955 at Slice beam LB2 Slice 5
Diagram minimum 437.632 at Slice beam LB1 Slice 11 (+X)
Diagram scale: 1: 0.020
459
463
467
468
468
468
468
464
458
504
509
511
512
511
512
512
510
504
459
463
467
468
468
468
468
464
458
Z
Y
X

11.2 Tabell

LB1: JTEMP+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-75	-67	2	-40	456	66
3.3	-13.1	5.0	8.0	-82	-45	2	-24	459	-99
6.6	-9.8	5.0	8.1	-93	-20	1	-10	464	-176
9.8	-6.6	5.0	8.1	-101	-8	1	-4	467	-202
13.1	-3.3	5.0	8.1	-106	-2	0	-1	468	-207
16.4	0.0	5.0	8.1	-107	0	0	0	468	-206
16.4	0.0	5.0	8.1	-107	0	0	0	468	-206
19.7	3.3	5.0	8.1	-106	2	0	1	468	-207
23.0	6.6	5.0	8.1	-101	8	-1	4	468	-202
26.2	9.8	5.0	8.1	-93	21	-1	10	464	-176
29.5	13.1	5.0	8.0	-82	45	-2	25	458	-99
32.8	16.4	5.0	7.9	-74	67	-2	43	452	65
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2:JTEMP+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-84	0	-4	0	505	0
3.3	-13.1	0	8.0	-69	0	-3	0	504	0
6.6	-9.8	0	8.1	-47	0	-2	0	509	0
9.8	-6.6	0	8.1	-30	0	-2	0	512	0
13.1	-3.3	0	8.1	-22	0	-1	0	512	0
16.4	0.0	0	8.1	-20	0	0	0	511	0
16.4	0.0	0	8.1	-20	0	0	0	511	0
19.7	3.3	0	8.1	-22	0	1	0	512	0
23.0	6.6	0	8.1	-31	0	2	0	512	0
26.2	9.8	0	8.1	-47	0	3	0	510	0
29.5	13.1	0	8.0	-70	0	3	0	504	0
32.8	16.4	0	7.9	-85	0	4	0	502	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: JTEMP+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-75	67	2	40	456	-66
3.3	-13.1	-5	8.0	-82	45	2	24	459	99
6.6	-9.8	-5	8.1	-93	20	1	10	464	176
9.8	-6.6	-5	8.1	-101	8	1	4	467	202
13.1	-3.3	-5	8.1	-106	2	0	1	468	207
16.4	0.0	-5	8.1	-107	0	0	0	468	206
16.4	0.0	-5	8.1	-107	0	0	0	468	206
19.7	3.3	-5	8.1	-106	-2	0	-1	468	207
23.0	6.6	-5	8.1	-101	-8	-1	-4	468	202
26.2	9.8	-5	8.1	-93	-21	-1	-10	464	176
29.5	13.1	-5	8.0	-82	-45	-2	-25	458	99
32.8	16.4	-5	7.9	-74	-67	-2	-43	452	-65
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

12. Result OTEMP 1+

12.1 Diagram

Diagram – Fz:

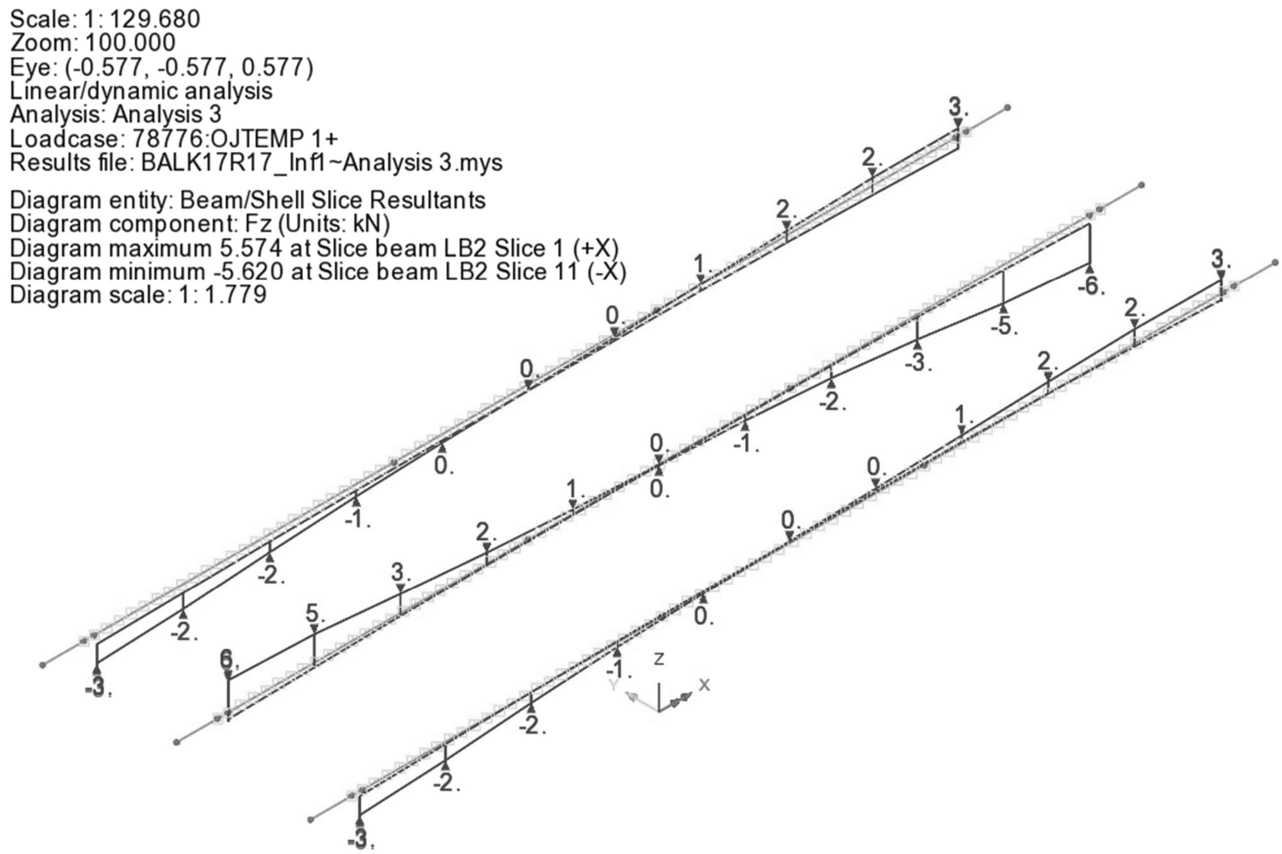
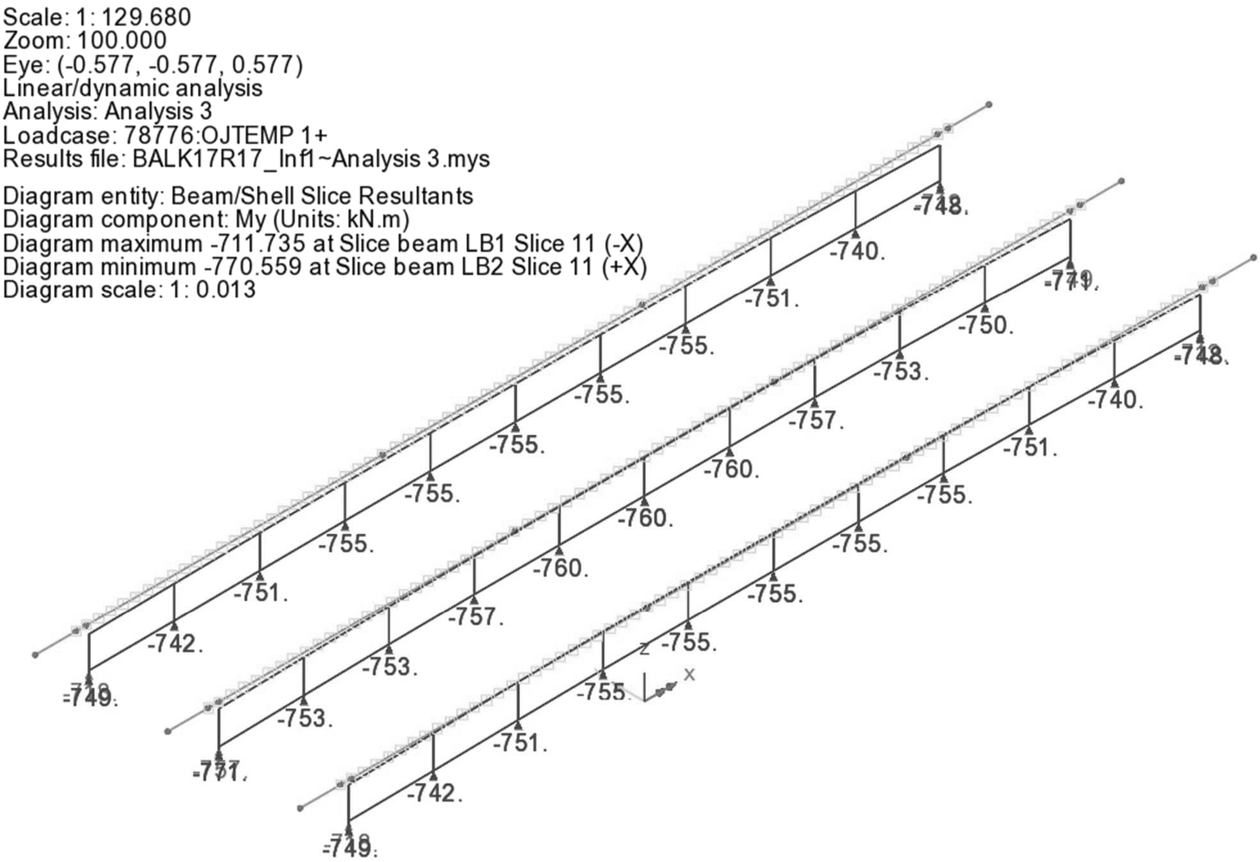


Diagram – My:



Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 3
Loadcase: 78776:OJTEMP 1+
Results file: BALK17R17_Inf1~Analysis 3.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum -711.735 at Slice beam LB1 Slice 11 (-X)
Diagram minimum -770.559 at Slice beam LB2 Slice 11 (+X)
Diagram scale: 1: 0.013

12.2 Tabell

LB1: OJTEMP 1+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	74	-50	-3	-38	-718	-74
3.3	-13.1	5.0	8.0	72	9	-2	-2	-742	-147
6.6	-9.8	5.0	8.1	77	36	-2	13	-752	-71
9.8	-6.6	5.0	8.1	85	22	-1	8	-755	9
13.1	-3.3	5.0	8.1	92	7	0	2	-755	41
16.4	0.0	5.0	8.1	94	0	0	0	-755	45
16.4	0.0	5.0	8.1	94	-1	0	0	-755	45
19.7	3.3	5.0	8.1	92	-7	0	-2	-755	41
23.0	6.6	5.0	8.1	85	-23	1	-8	-755	9
26.2	9.8	5.0	8.1	77	-36	2	-13	-751	-72
29.5	13.1	5.0	8.0	72	-9	3	1	-740	-148
32.8	16.4	5.0	7.9	73	51	3	41	-712	-74
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: OJTEMP 1+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	138	0	6	0	-757	0
3.3	-13.1	0	8.0	141	0	5	0	-753	0
6.6	-9.8	0	8.1	132	0	3	0	-753	0
9.8	-6.6	0	8.1	116	0	2	0	-757	0
13.1	-3.3	0	8.1	102	0	1	0	-760	0
16.4	0.0	0	8.1	98	0	0	0	-760	0
16.4	0.0	0	8.1	98	0	0	0	-760	0
19.7	3.3	0	8.1	103	0	-1	0	-760	0
23.0	6.6	0	8.1	116	0	-2	0	-758	0
26.2	9.8	0	8.1	133	0	-3	0	-753	0
29.5	13.1	0	8.0	142	0	-5	0	-750	0
32.8	16.4	0	7.9	139	0	-6	0	-749	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: OJTEMP 1+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	74	50	-3	38	-718	74
3.3	-13.1	-5	8.0	72	-9	-2	2	-742	147
6.6	-9.8	-5	8.1	77	-36	-2	-13	-752	71
9.8	-6.6	-5	8.1	85	-22	-1	-8	-755	-9
13.1	-3.3	-5	8.1	92	-7	0	-2	-755	-41
16.4	0.0	-5	8.1	94	0	0	0	-755	-45
16.4	0.0	-5	8.1	94	1	0	0	-755	-45
19.7	3.3	-5	8.1	92	7	0	2	-755	-41
23.0	6.6	-5	8.1	85	23	1	8	-755	-9
26.2	9.8	-5	8.1	77	36	2	13	-751	72
29.5	13.1	-5	8.0	72	9	3	-1	-740	148
32.8	16.4	-5	7.9	73	-51	3	-41	-712	74
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

13. Result OTEMP 2+

13.1 Diagram

Diagram – Fz:

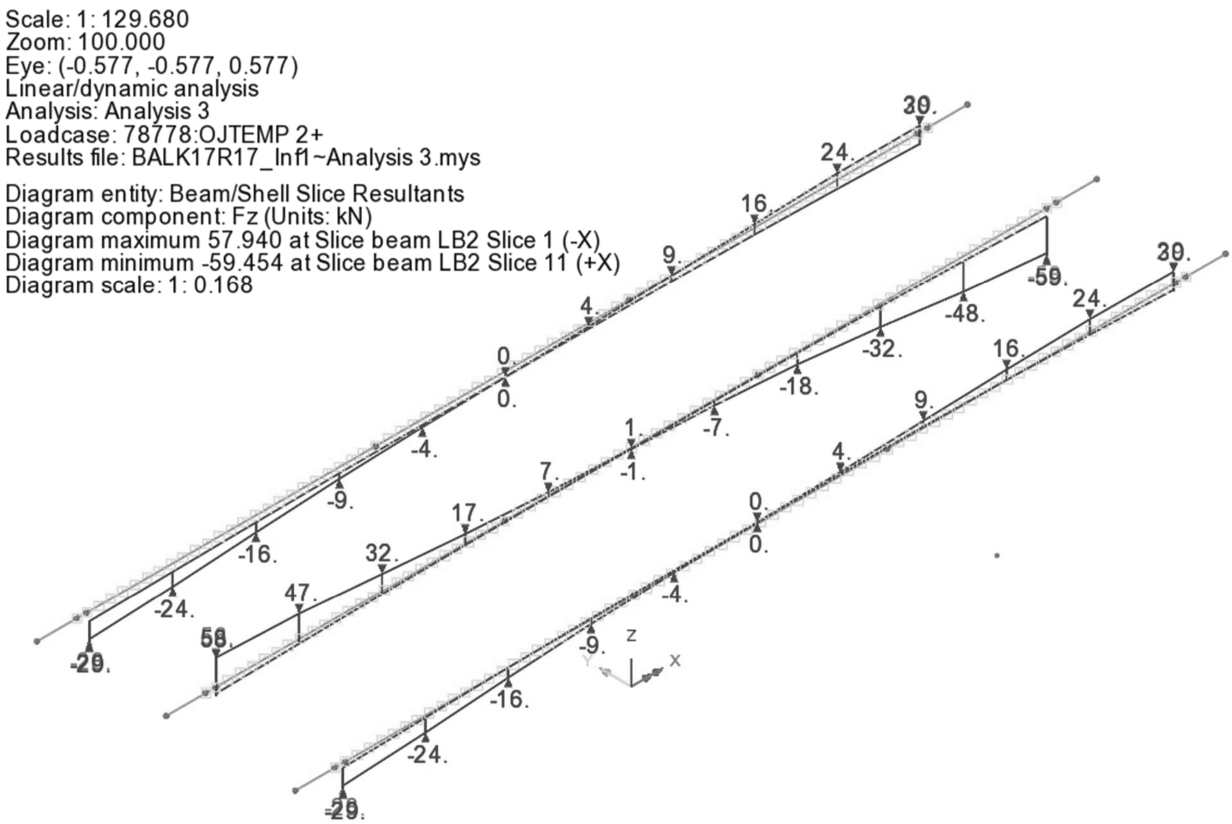
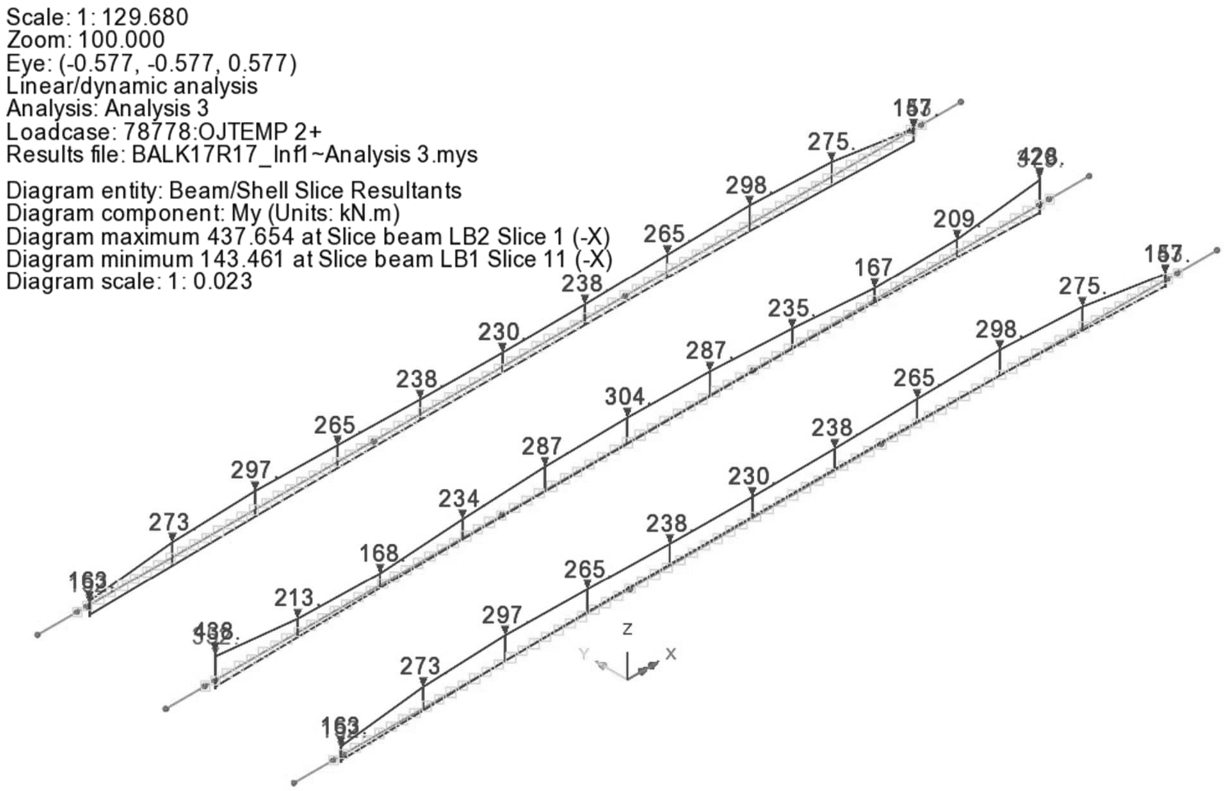


Diagram – My:


Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 3
Loadcase: 78778:OJTEMP 2+
Results file: BALK17R17_Inf1~Analysis 3.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 437.654 at Slice beam LB2 Slice 1 (-X)
Diagram minimum 143.461 at Slice beam LB1 Slice 11 (-X)
Diagram scale: 1: 0.023
273
297
265
238
230
238
265
298
275
213
168
234
287
304
287
235
167
209
273
297
265
238
230
238
265
298
275
Z
Y
X

13.2 Tabell

LB1: OJTEMP 2+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-416	1656	-28	899	163	-1733
3.3	-13.1	5.0	8.0	-144	405	-24	137	274	629
6.6	-9.8	5.0	8.1	33	-61	-16	-82	297	537
9.8	-6.6	5.0	8.1	53	-96	-9	-71	265	171
13.1	-3.3	5.0	8.1	36	-45	-4	-31	238	-28
16.4	0.0	5.0	8.1	28	-3	0	-1	230	-81
16.4	0.0	5.0	8.1	28	3	0	3	230	-81
19.7	3.3	5.0	8.1	36	44	4	33	238	-29
23.0	6.6	5.0	8.1	53	95	9	73	265	168
26.2	9.8	5.0	8.1	33	61	16	85	298	531
29.5	13.1	5.0	8.0	-142	-402	24	-138	275	621
32.8	16.4	5.0	7.9	-417	-1649	29	-981	144	-1712
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: OJTEMP+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	707	0	56	0	352	0
3.3	-13.1	0	8.0	162	0	47	0	213	0
6.6	-9.8	0	8.1	-190	0	32	0	168	0
9.8	-6.6	0	8.1	-232	0	17	0	234	0
13.1	-3.3	0	8.1	-197	0	7	0	287	0
16.4	0.0	0	8.1	-182	0	1	0	304	0
16.4	0.0	0	8.1	-182	0	-1	0	304	0
19.7	3.3	0	8.1	-197	0	-7	0	287	0
23.0	6.6	0	8.1	-231	0	-18	0	235	0
26.2	9.8	0	8.1	-190	0	-32	0	167	0
29.5	13.1	0	8.0	159	0	-48	0	209	0
32.8	16.4	0	7.9	708	0	-58	0	379	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: OJTEMP+

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-416	-1656	-28	-899	163	1733
3.3	-13.1	-5	8.0	-144	-405	-24	-137	274	-629
6.6	-9.8	-5	8.1	33	61	-16	82	297	-537
9.8	-6.6	-5	8.1	53	96	-9	71	265	-171
13.1	-3.3	-5	8.1	36	45	-4	31	238	28
16.4	0.0	-5	8.1	28	3	0	1	230	81
16.4	0.0	-5	8.1	28	-3	0	-3	230	81
19.7	3.3	-5	8.1	36	-44	4	-33	238	29
23.0	6.6	-5	8.1	53	-95	9	-73	265	-168
26.2	9.8	-5	8.1	33	-61	16	-85	298	-531
29.5	13.1	-5	8.0	-142	402	24	138	275	-621
32.8	16.4	-5	7.9	-417	1649	29	981	144	1712
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

14. Result JORD

14.1 Diagram

Diagram – Fz:

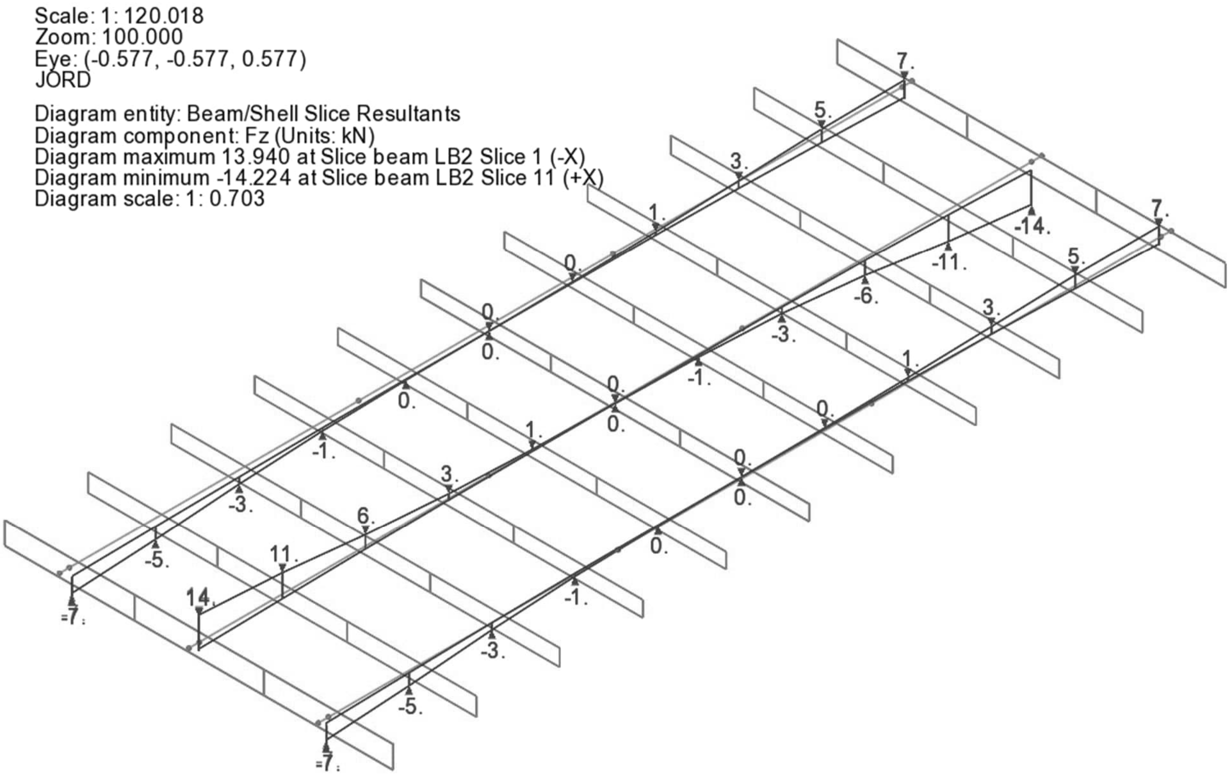
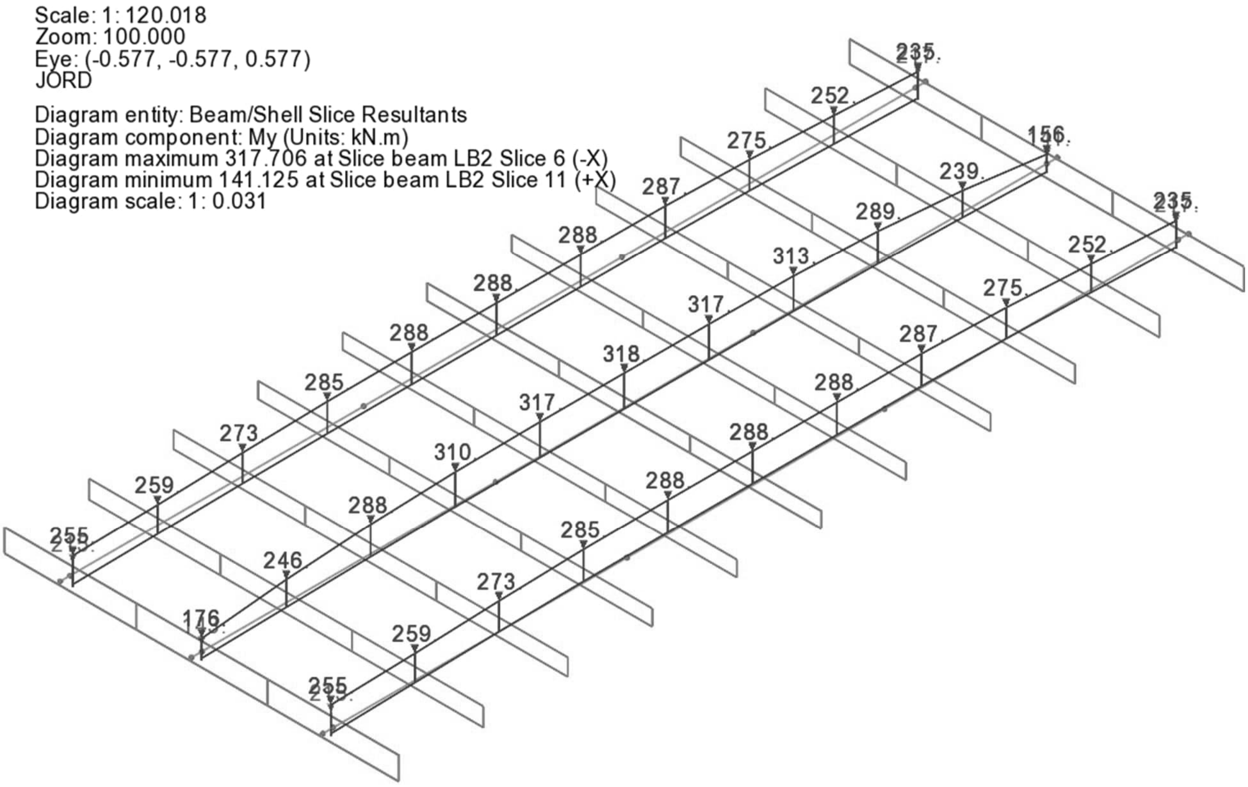


Diagram – My:



Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
JORD
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 317.706 at Slice beam LB2 Slice 6 (-X)
Diagram minimum 141.125 at Slice beam LB2 Slice 11 (+X)
Diagram scale: 1: 0.031
235
252
275
287
288
288
288
285
273
259
255
156
239
289
313
317
318
317
310
288
246
176
235
252
275
287
288
288
288
285
273
259
255

14.2 Tabell

LB1: JORD

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-401	18	-7	-7	255	-166
3.3	-13.1	5.0	8.0	-407	11	-5	-8	259	-105
6.6	-9.8	5.0	8.1	-403	2	-3	-7	273	-103
9.8	-6.6	5.0	8.1	-398	0	-1	-4	285	-116
13.1	-3.3	5.0	8.1	-396	0	0	-1	288	-123
16.4	0.0	5.0	8.1	-395	0	0	0	288	-124
16.4	0.0	5.0	8.1	-395	0	0	0	288	-124
19.7	3.3	5.0	8.1	-396	-1	0	1	288	-123
23.0	6.6	5.0	8.1	-398	0	1	4	287	-117
26.2	9.8	5.0	8.1	-403	-2	3	7	275	-103
29.5	13.1	5.0	8.0	-408	-10	5	8	252	-103
32.8	16.4	5.0	7.9	-402	-18	7	6	235	-165
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: JORD

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-342	0	14	0	176	0
3.3	-13.1	0	8.0	-330	0	11	0	246	0
6.6	-9.8	0	8.1	-338	0	6	0	288	0
9.8	-6.6	0	8.1	-348	0	3	0	310	0
13.1	-3.3	0	8.1	-352	0	1	0	317	0
16.4	0.0	0	8.1	-354	0	0	0	318	0
16.4	0.0	0	8.1	-354	0	0	0	318	0
19.7	3.3	0	8.1	-352	0	-1	0	317	0
23.0	6.6	0	8.1	-347	0	-3	0	313	0
26.2	9.8	0	8.1	-337	0	-6	0	290	0
29.5	13.1	0	8.0	-329	0	-11	0	239	0
32.8	16.4	0	7.9	-340	0	-14	0	156	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: JORD

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-401	-18	-7	7	255	166
3.3	-13.1	-5	8.0	-407	-11	-5	8	259	105
6.6	-9.8	-5	8.1	-403	-2	-3	7	273	103
9.8	-6.6	-5	8.1	-398	0	-1	4	285	116
13.1	-3.3	-5	8.1	-396	0	0	1	288	123
16.4	0.0	-5	8.1	-395	0	0	0	288	124
16.4	0.0	-5	8.1	-395	0	0	0	288	124
19.7	3.3	-5	8.1	-396	1	0	-1	288	123
23.0	6.6	-5	8.1	-398	0	1	-4	287	117
26.2	9.8	-5	8.1	-403	2	3	-7	275	103
29.5	13.1	-5	8.0	-408	10	5	-8	252	103
32.8	16.4	-5	7.9	-402	18	7	-6	235	165
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

15. Result DELTA-P

15.1 Diagram

Diagram – Fz:

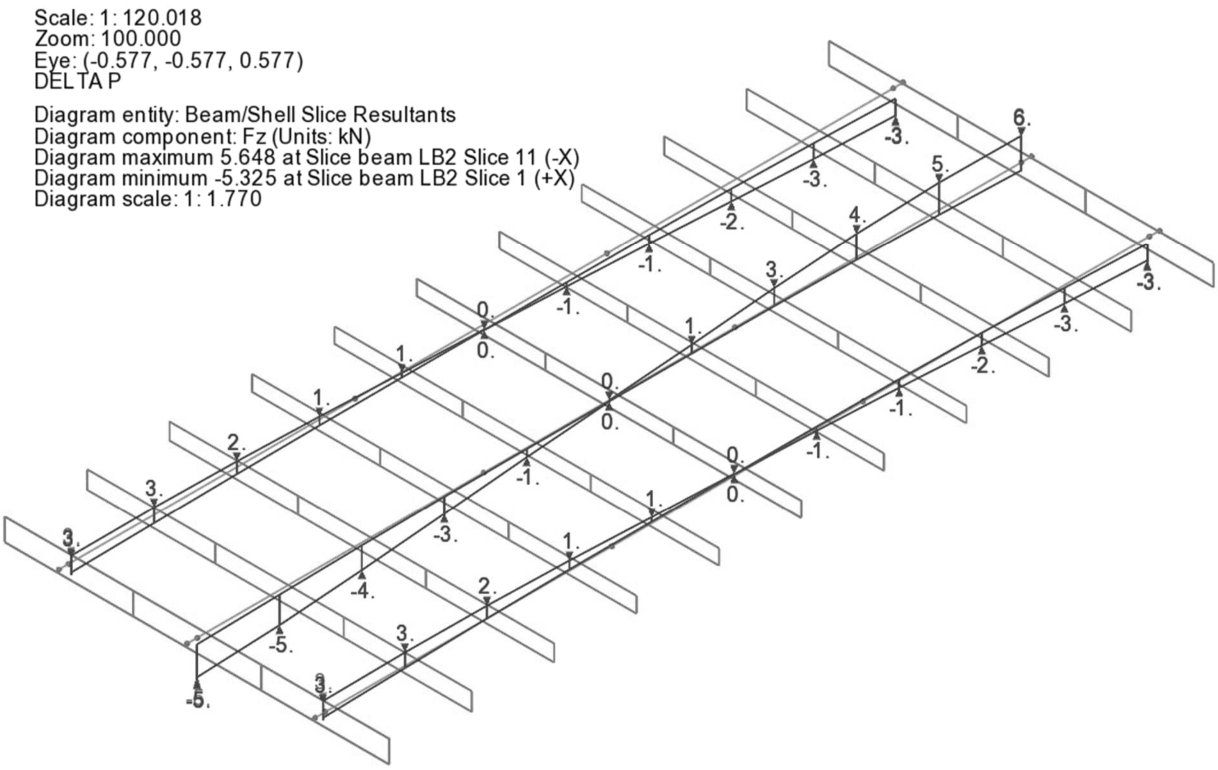
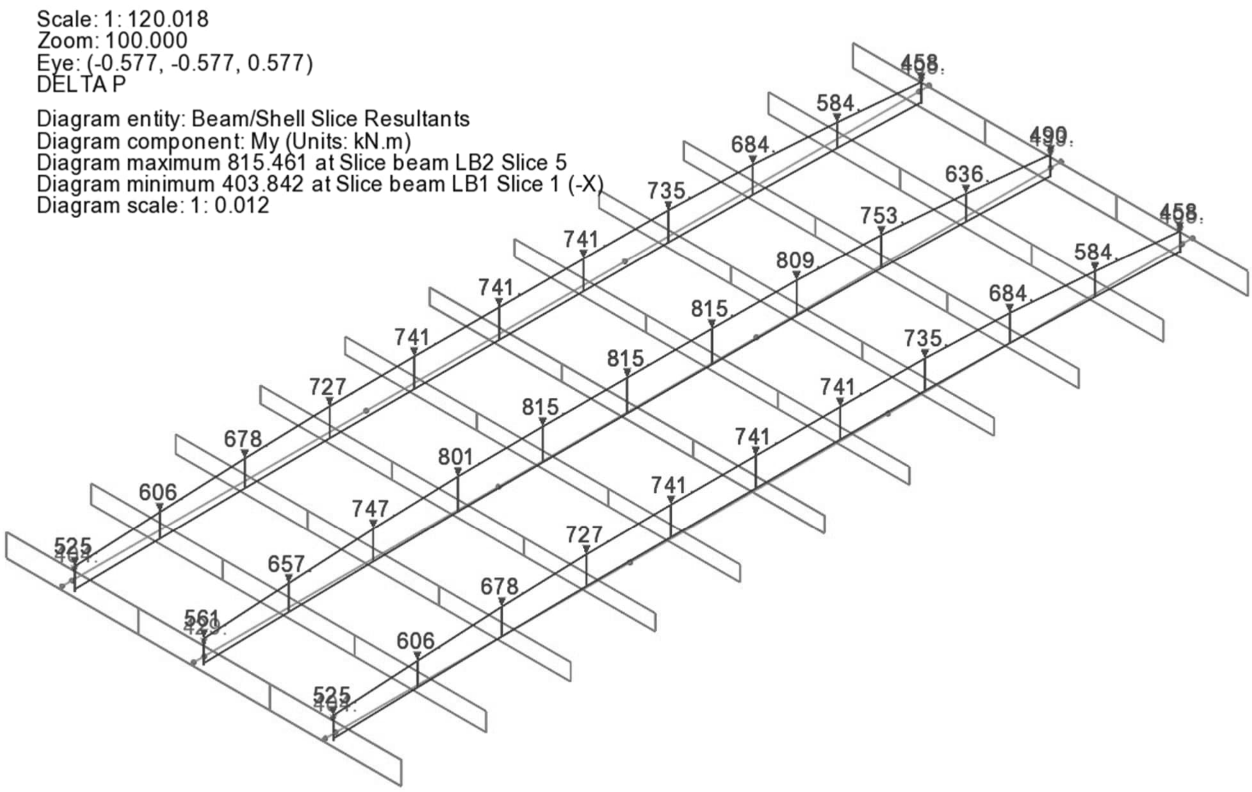


Diagram – My:



Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
DELTA P
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 815.461 at Slice beam LB2 Slice 5
Diagram minimum 403.842 at Slice beam LB1 Slice 1 (-X)
Diagram scale: 1: 0.012
458
584
684
735
741
741
741
727
678
606
525
490
636
753
809
815
815
815
801
747
657
561
458
584
684
735
741
741
741
727
678
606
525

15.2 Tabell

LB1: DELTA-P

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-1216	-73	3	-43	525	53
3.3	-13.1	5.0	8.0	-1233	-60	3	-31	606	-134
6.6	-9.8	5.0	8.1	-1257	-37	2	-17	678	-249
9.8	-6.6	5.0	8.1	-1274	-18	1	-8	727	-307
13.1	-3.3	5.0	8.1	-1283	-6	1	-2	741	-324
16.4	0.0	5.0	8.1	-1286	-1	0	0	741	-326
16.4	0.0	5.0	8.1	-1286	0	0	0	741	-326
19.7	3.3	5.0	8.1	-1283	5	-1	2	742	-325
23.0	6.6	5.0	8.1	-1274	18	-1	7	735	-310
26.2	9.8	5.0	8.1	-1257	38	-2	17	684	-249
29.5	13.1	5.0	8.0	-1233	60	-3	32	584	-130
32.8	16.4	5.0	7.9	-1216	71	-3	45	458	52
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: DELTA-P

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-1397	0	-5	0	561	0
3.3	-13.1	0	8.0	-1363	0	-5	0	657	0
6.6	-9.8	0	8.1	-1315	0	-4	0	747	0
9.8	-6.6	0	8.1	-1282	0	-3	0	801	0
13.1	-3.3	0	8.1	-1263	0	-1	0	815	0
16.4	0.0	0	8.1	-1258	0	0	0	815	0
16.4	0.0	0	8.1	-1258	0	0	0	815	0
19.7	3.3	0	8.1	-1263	0	2	0	816	0
23.0	6.6	0	8.1	-1281	0	3	0	809	0
26.2	9.8	0	8.1	-1315	0	4	0	753	0
29.5	13.1	0	8.0	-1363	0	5	0	636	0
32.8	16.4	0	7.9	-1398	0	6	0	490	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: DELTA-P

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-1216	73	3	43	525	-53
3.3	-13.1	-5	8.0	-1233	60	3	31	606	134
6.6	-9.8	-5	8.1	-1257	37	2	17	678	249
9.8	-6.6	-5	8.1	-1274	18	1	8	727	307
13.1	-3.3	-5	8.1	-1283	6	1	2	741	324
16.4	0.0	-5	8.1	-1286	1	0	0	741	326
16.4	0.0	-5	8.1	-1286	0	0	0	741	326
19.7	3.3	-5	8.1	-1283	-5	-1	-2	742	325
23.0	6.6	-5	8.1	-1274	-18	-1	-7	735	310
26.2	9.8	-5	8.1	-1257	-38	-2	-17	684	249
29.5	13.1	-5	8.0	-1233	-60	-3	-32	584	130
32.8	16.4	-5	7.9	-1216	-71	-3	-45	458	-52
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

16. Result OVER 1

16.1 Diagram

Diagram – Fz:

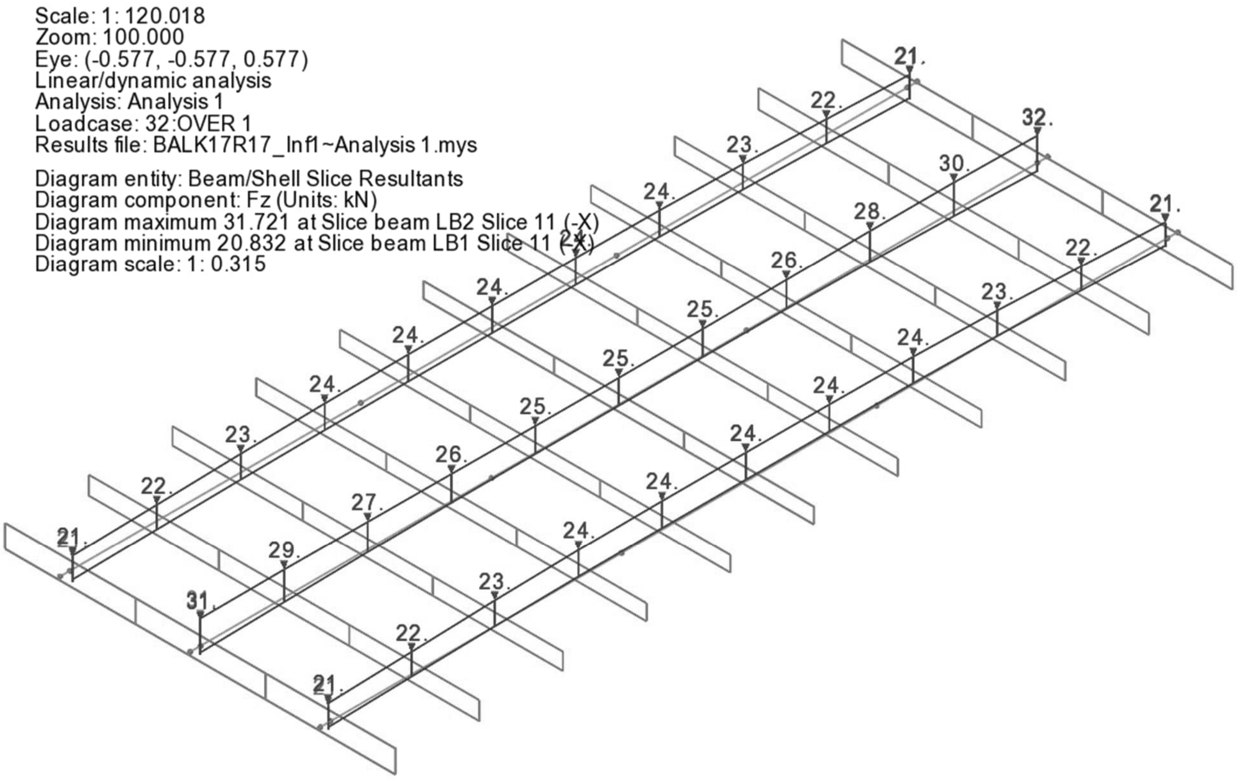
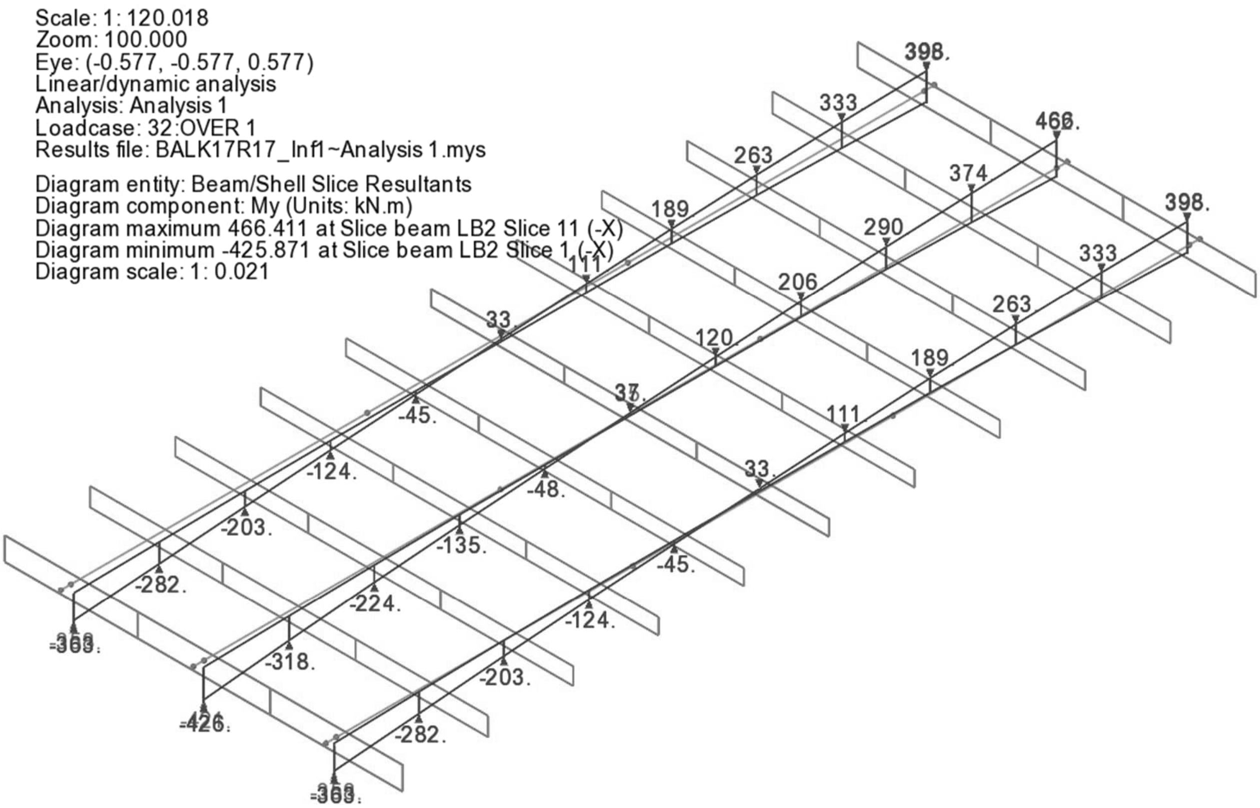


Diagram – My:


Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 1
Loadcase: 32:OVER 1
Results file: BALK17R17_Inf1~Analysis 1.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 466.411 at Slice beam LB2 Slice 11 (-X)
Diagram minimum -425.871 at Slice beam LB2 Slice 1 (-X)
Diagram scale: 1: 0.021
398.
333
263
189
111
33.
-45.
-124.
-203.
-282.
466.
374
290
206
120
37.
-48.
-135.
-224.
-318.
-426.
398.
333
263
189
111
33.
-45.
-124.
-203.
-282.

16.2 Tabell

LB1: OVER 1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-60	34	21	14	-358	8
3.3	-13.1	5.0	8.0	-60	11	22	1	-282	76
6.6	-9.8	5.0	8.1	-57	-3	23	-4	-203	79
9.8	-6.6	5.0	8.1	-57	-10	24	-6	-124	54
13.1	-3.3	5.0	8.1	-60	-13	24	-6	-45	20
16.4	0.0	5.0	8.1	-63	-13	24	-6	33	-13
16.4	0.0	5.0	8.1	-64	-13	24	-6	34	-16
19.7	3.3	5.0	8.1	-67	-12	24	-6	111	-49
23.0	6.6	5.0	8.1	-68	-9	24	-6	189	-81
26.2	9.8	5.0	8.1	-67	0	23	-3	263	-101
29.5	13.1	5.0	8.0	-61	17	22	4	333	-87
32.8	16.4	5.0	7.9	-59	41	21	20	398	-1
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: OVER 1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-69	0	31	0	-421	0
3.3	-13.1	0	8.0	-70	0	29	0	-318	0
6.6	-9.8	0	8.1	-75	0	27	0	-224	0
9.8	-6.6	0	8.1	-75	0	26	0	-135	0
13.1	-3.3	0	8.1	-70	0	25	0	-48	0
16.4	0.0	0	8.1	-63	0	25	0	35	0
16.4	0.0	0	8.1	-62	0	25	0	37	0
19.7	3.3	0	8.1	-56	0	25	0	121	0
23.0	6.6	0	8.1	-53	0	26	0	206	0
26.2	9.8	0	8.1	-57	0	28	0	290	0
29.5	13.1	0	8.0	-67	0	30	0	374	0
32.8	16.4	0	7.9	-71	0	32	0	466	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: OVER 1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-60	-34	21	-14	-358	-8
3.3	-13.1	-5	8.0	-60	-11	22	-1	-282	-76
6.6	-9.8	-5	8.1	-57	3	23	4	-203	-79
9.8	-6.6	-5	8.1	-57	10	24	6	-124	-54
13.1	-3.3	-5	8.1	-60	13	24	6	-45	-20
16.4	0.0	-5	8.1	-63	13	24	6	33	13
16.4	0.0	-5	8.1	-64	13	24	6	34	16
19.7	3.3	-5	8.1	-67	12	24	6	111	49
23.0	6.6	-5	8.1	-68	9	24	6	189	81
26.2	9.8	-5	8.1	-67	0	23	3	263	101
29.5	13.1	-5	8.0	-61	-17	22	-4	333	87
32.8	16.4	-5	7.9	-59	-41	21	-20	398	1
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

17. Result OVER 2

17.1 Diagram

Diagram – Fz:

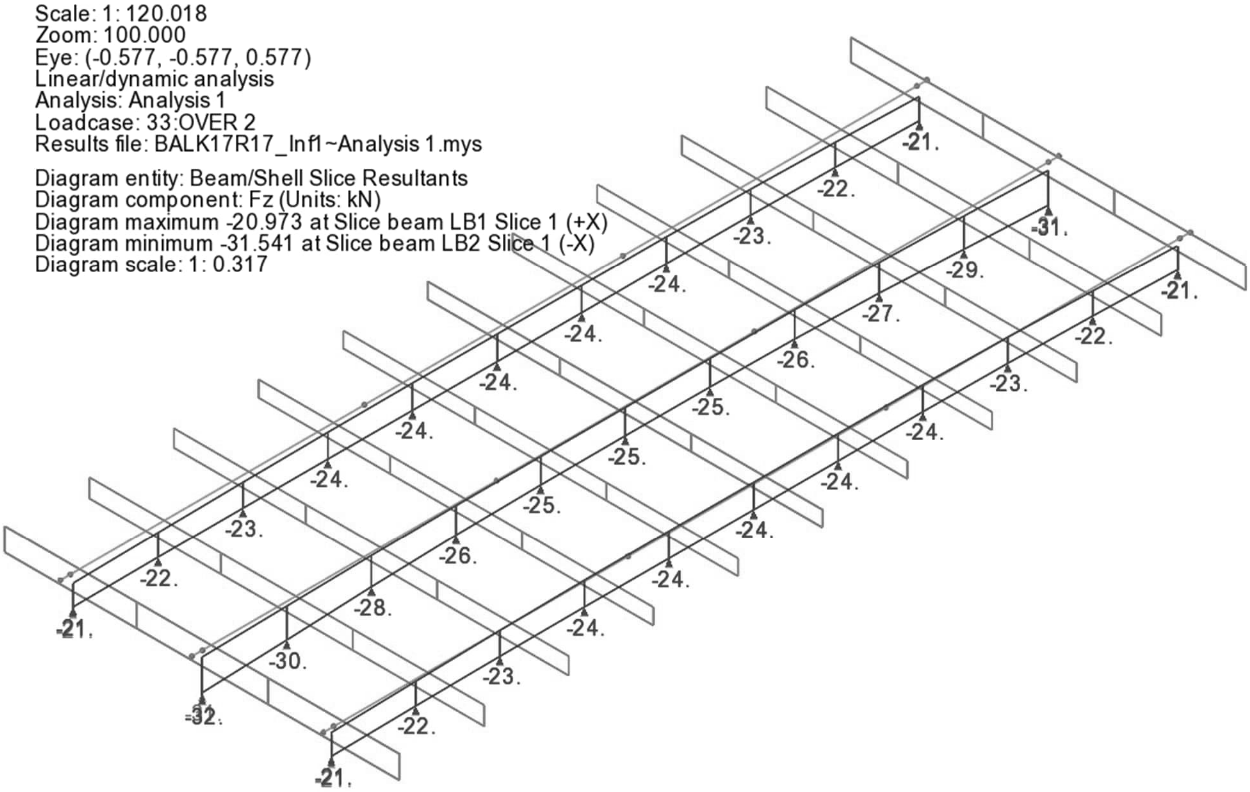
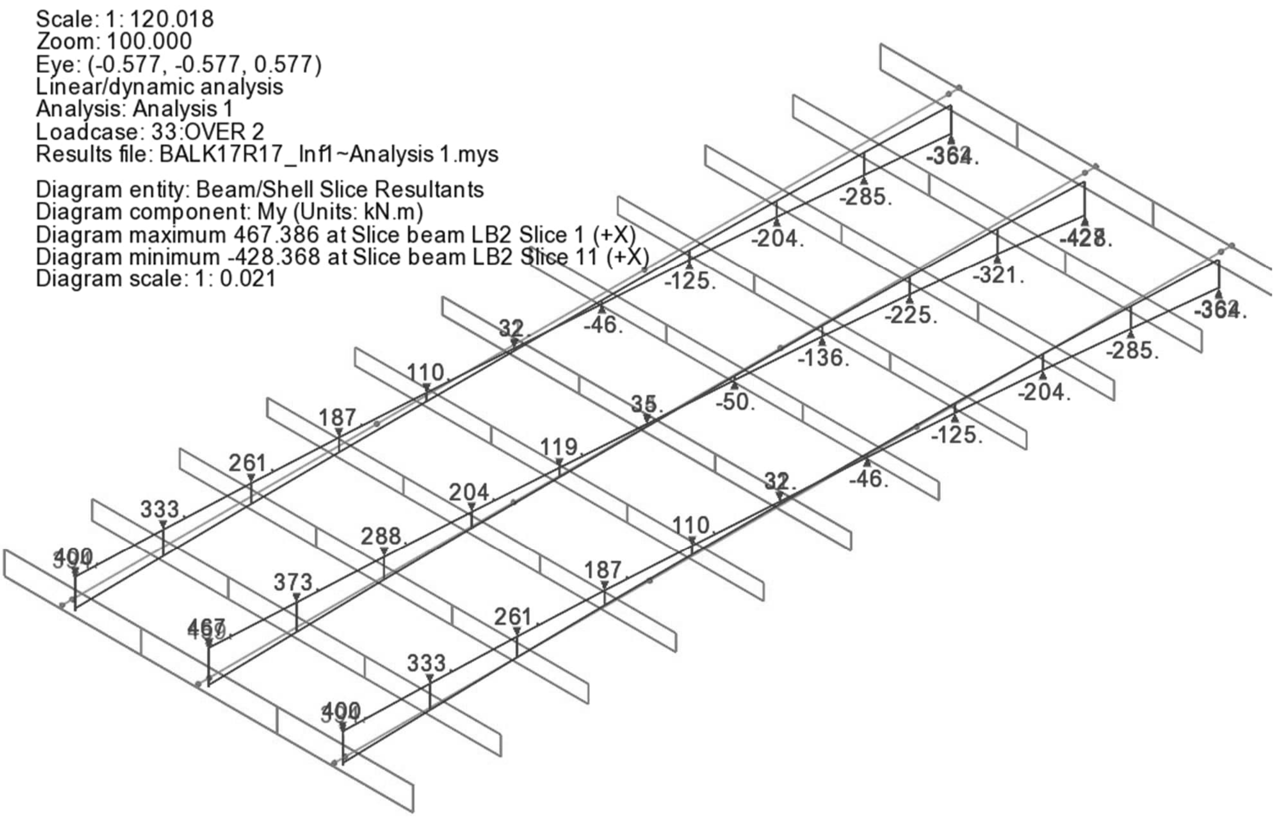


Diagram – My:


Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Linear/dynamic analysis
Analysis: Analysis 1
Loadcase: 33:OVER 2
Results file: BALK17R17_Inf1~Analysis 1.mys
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 467.386 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -428.368 at Slice beam LB2 Slice 11 (+X)
Diagram scale: 1: 0.021
400.
333.
261.
187.
110.
32.
-46.
-125.
-204.
-285.
-364.
467.
373.
288.
204.
119.
35.
-50.
-136.
-225.
-321.
-428.
400.
333.
261.
187.
110.
32.
-46.
-125.
-204.
-285.
-364.

17.2 Tabell

LB1: OVER 2

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-59	-41	-21	-18	400	-1
3.3	-13.1	5.0	8.0	-61	-17	-22	-4	333	-87
6.6	-9.8	5.0	8.1	-67	0	-23	3	261	-100
9.8	-6.6	5.0	8.1	-68	9	-24	6	187	-80
13.1	-3.3	5.0	8.1	-67	12	-24	6	110	-48
16.4	0.0	5.0	8.1	-64	13	-24	6	32	-15
16.4	0.0	5.0	8.1	-63	13	-24	6	31	-12
19.7	3.3	5.0	8.1	-60	13	-24	6	-46	21
23.0	6.6	5.0	8.1	-57	10	-24	6	-125	54
26.2	9.8	5.0	8.1	-57	3	-23	5	-204	79
29.5	13.1	5.0	8.0	-60	-11	-22	-1	-285	77
32.8	16.4	5.0	7.9	-60	-34	-21	-16	-362	9
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: OVER 2

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0	-16.4	0	8.0	-71	0	-31	0	467	0
3.3	-13.1	0	8.0	-67	0	-30	0	373	0
6.6	-9.8	0	8.1	-56	0	-28	0	288	0
9.8	-6.6	0	8.1	-53	0	-26	0	204	0
13.1	-3.3	0	8.1	-56	0	-25	0	119	0
16.4	0.0	0	8.1	-62	0	-25	0	35	0
16.4	0.0	0	8.1	-63	0	-25	0	34	0
19.7	3.3	0	8.1	-70	0	-25	0	-50	0
23.0	6.6	0	8.1	-75	0	-26	0	-136	0
26.2	9.8	0	8.1	-74	0	-27	0	-225	0
29.5	13.1	0	8.0	-69	0	-29	0	-321	0
32.8	16.4	0	7.9	-69	0	-31	0	-427	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: OVER 2

Distance	X	Y	Z	Fx	Fy	Fz	Mx	My	Mz
0.0	-16.4	-5	7.9	-59	41	-21	18	400	1
3.3	-13.1	-5	8.0	-61	17	-22	4	333	87
6.6	-9.8	-5	8.1	-67	0	-23	-3	261	100
9.8	-6.6	-5	8.1	-68	-9	-24	-6	187	80
13.1	-3.3	-5	8.1	-67	-12	-24	-6	110	48
16.4	0.0	-5	8.1	-64	-13	-24	-6	32	15
16.4	0.0	-5	8.1	-63	-13	-24	-6	31	12
19.7	3.3	-5	8.1	-60	-13	-24	-6	-46	-21
23.0	6.6	-5	8.1	-57	-10	-24	-6	-125	-54
26.2	9.8	-5	8.1	-57	-3	-23	-5	-204	-79
29.5	13.1	-5	8.0	-60	11	-22	1	-285	-77
32.8	16.4	-5	7.9	-60	34	-21	16	-362	-9
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

18. Result EG A

18.1 Diagram

Diagram – Max/Min Fz:

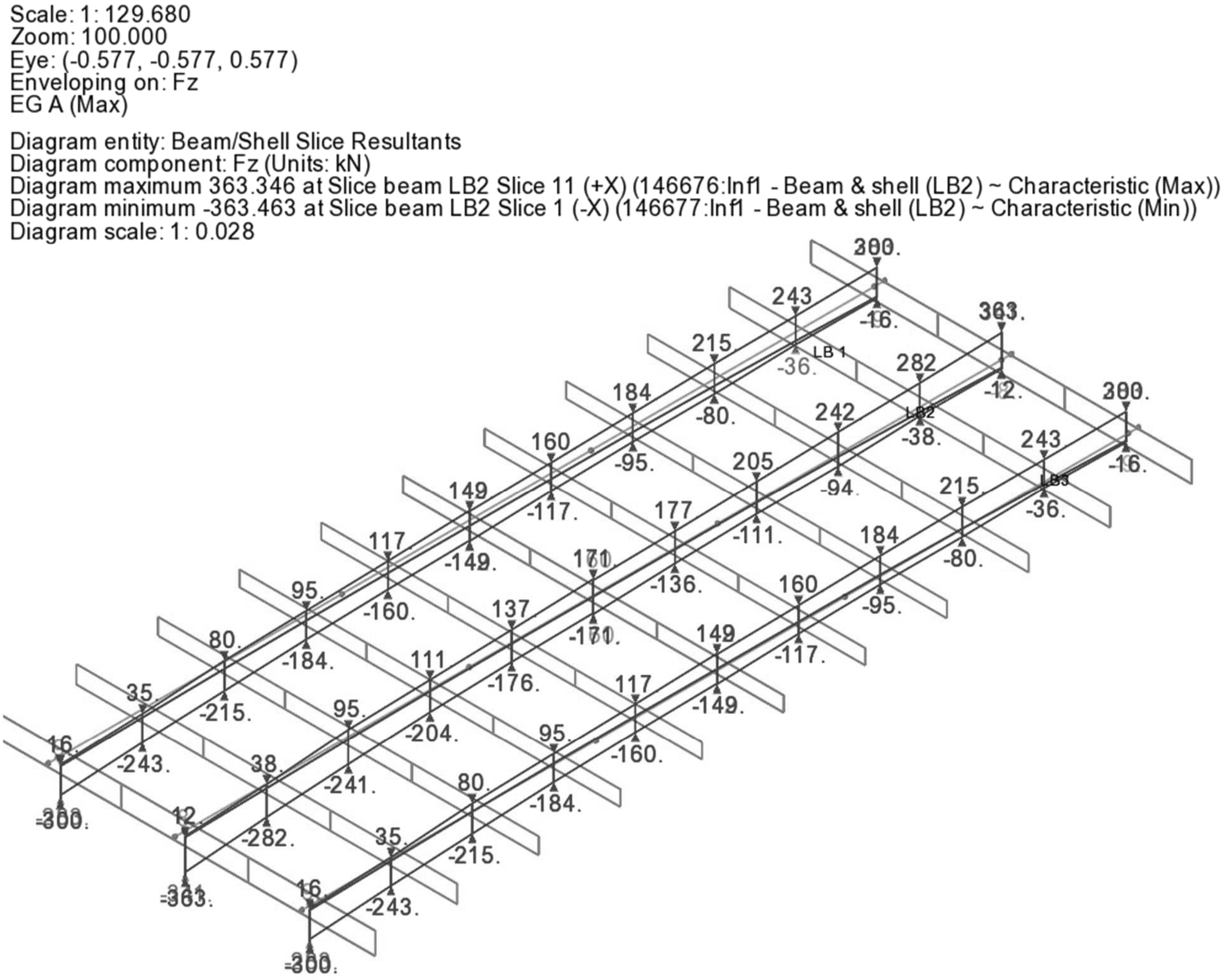


Diagram – Max/Min Mx:

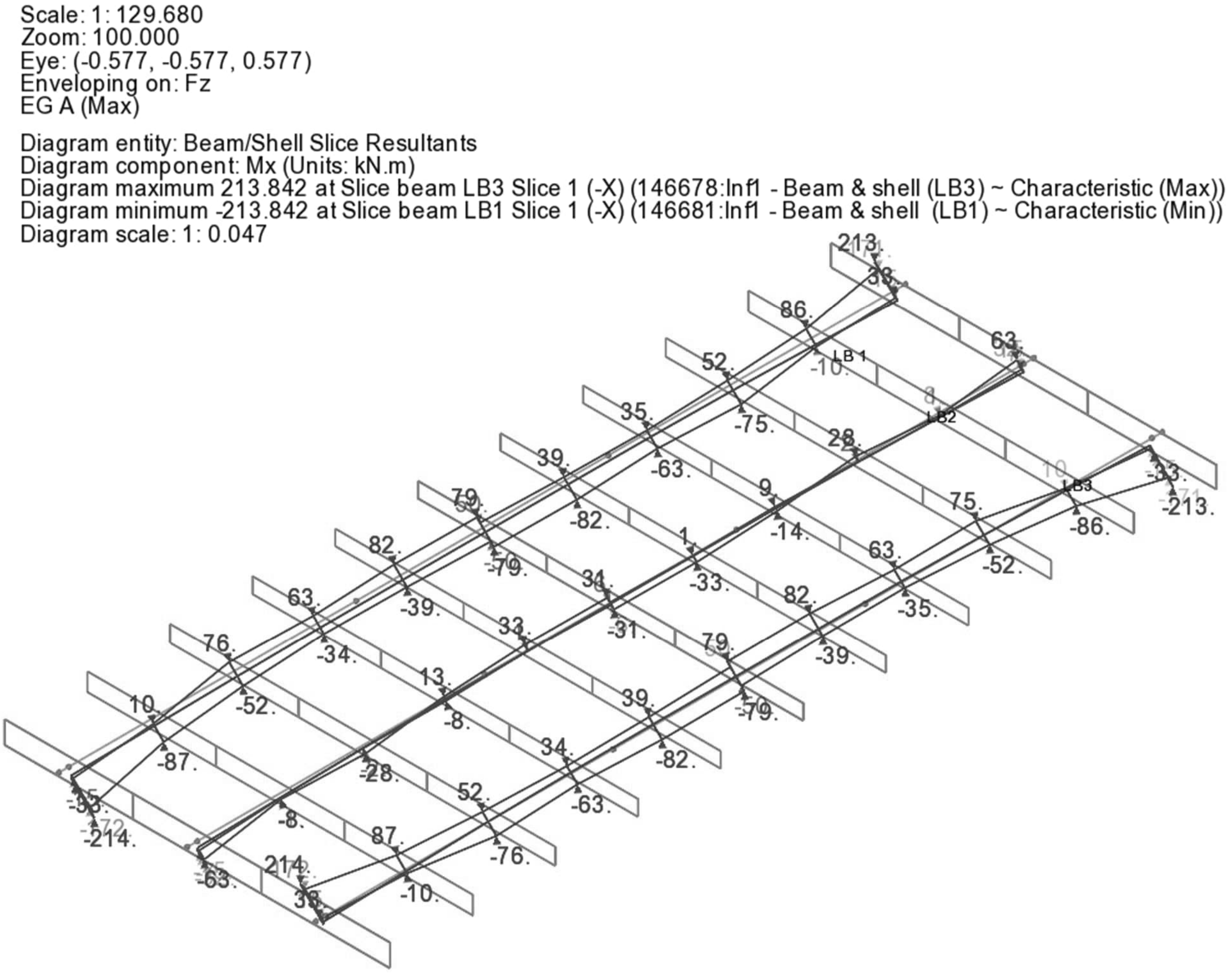
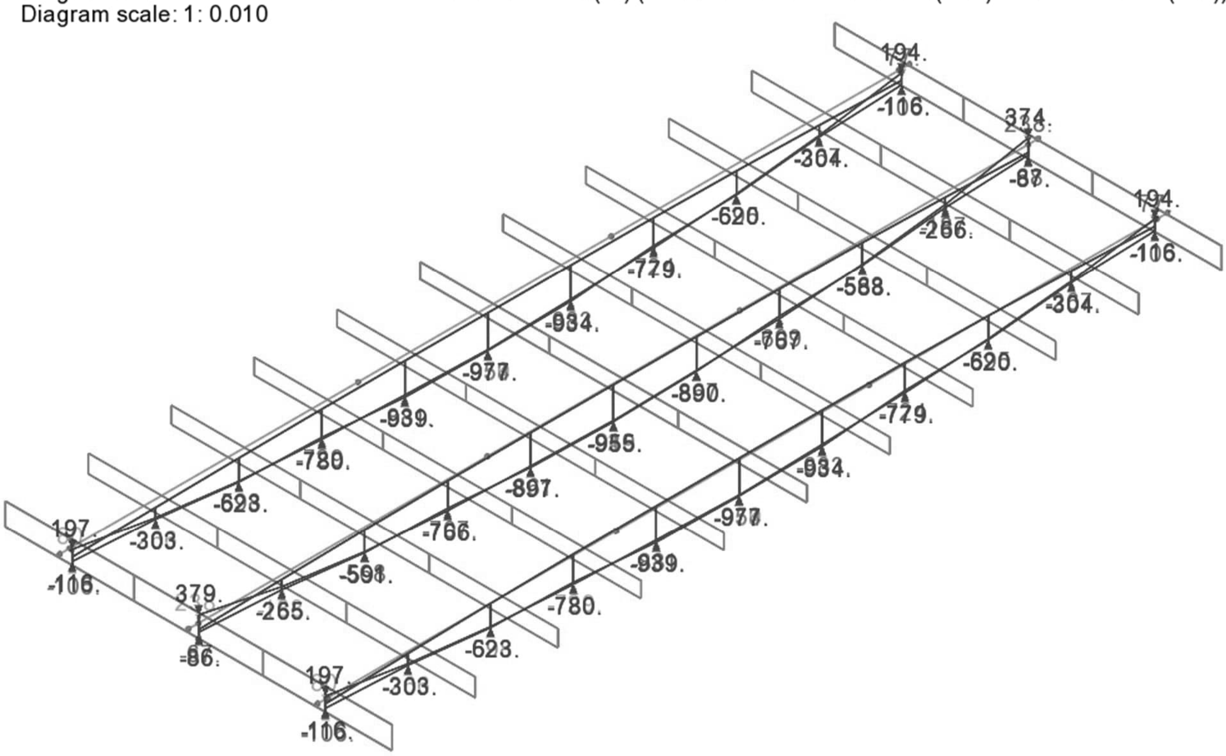


Diagram – Max/Min My:

Scale: 1: 129.680
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Enveloping on: Fz
EG A (Max)

Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 378.551 at Slice beam LB2 Slice 1 (+X) (146676:Inf1 - Beam & shell (LB2) ~ Characteristic (Max))
Diagram minimum -977.262 at Slice beam LB3 Slice 6 (-X) (146679:Inf1 - Beam & shell (LB3) ~ Characteristic (Min))
Diagram scale: 1: 0.010



18.2 Tabell

18.2.1 Max/Min Fz

LB2: EG A

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	0	8.0	6	-16	12	-63	-67	-25
3.3	-13.1	0	8.0	-21	0	38	-8	-265	4
6.6	-9.8	0	8.1	-23	0	95	-28	-591	11
9.8	-6.6	0	8.1	-31	0	111	13	-707	-12
13.1	-3.3	0	8.1	-44	4	137	33	-897	-9
16.4	0.0	0	8.1	-50	0	171	31	-955	-18
16.4	0.0	0	8.1	-53	1	160	6	-926	-18
19.7	3.3	0	8.1	-63	1	177	1	-867	-20
23.0	6.6	0	8.1	-79	5	205	9	-767	-14
26.2	9.8	0	8.1	-93	2	242	2	-563	-9
29.5	13.1	0	8.0	-101	1	282	1	-187	2
32.8	16.4	0	7.9	-73	-2	341	15	374	7
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: EG A

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	16	-12	16	15	-116	25
3.3	-13.1	-5.0	8.0	-2	-6	35	-10	-303	-68
6.6	-9.8	-5.0	8.1	-4	-12	80	-76	-623	-141
9.8	-6.6	-5.0	8.1	-8	0	95	-63	-729	-193
13.1	-3.3	-5.0	8.1	-20	0	117	-82	-939	-257
16.4	0.0	-5.0	8.1	-29	9	149	-79	-977	-277
16.4	0.0	-5.0	8.1	-29	21	142	-50	-954	-285
19.7	3.3	-5.0	8.1	-35	33	160	-39	-883	-267
23.0	6.6	-5.0	8.1	-40	43	184	-35	-779	-238
26.2	9.8	-5.0	8.1	-34	46	215	-52	-595	-155
29.5	13.1	-5.0	8.0	-29	38	243	-86	-267	-70
32.8	16.4	-5.0	7.9	-12	12	283	-171	194	24
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG A

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	16	12	16	-15	-116	-25
3.3	-13.1	5.0	8.0	-2	6	35	10	-303	68
6.6	-9.8	5.0	8.1	-4	12	80	76	-623	141
9.8	-6.6	5.0	8.1	-8	0	95	63	-729	193
13.1	-3.3	5.0	8.1	-20	0	117	82	-939	257
16.4	0.0	5.0	8.1	-29	-9	149	79	-977	277
16.4	0.0	5.0	8.1	-29	-21	142	50	-954	285
19.7	3.3	5.0	8.1	-35	-33	160	39	-883	267
23.0	6.6	5.0	8.1	-40	-43	184	35	-779	238
26.2	9.8	5.0	8.1	-34	-46	215	52	-595	155
29.5	13.1	5.0	8.0	-29	-38	243	86	-267	70
32.8	16.4	5.0	7.9	-12	-12	283	171	194	-24
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: EG A

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	0	8.0	-74	2	-341	-15	379	7
3.3	-13.1	0	8.0	-99	-1	-282	-1	-188	2
6.6	-9.8	0	8.1	-87	-2	-241	-2	-568	-9
9.8	-6.6	0	8.1	-74	-5	-204	-8	-766	-15
13.1	-3.3	0	8.1	-60	1	-176	2	-861	20
16.4	0.0	0	8.1	-51	-1	-160	-7	-919	-18
16.4	0.0	0	8.1	-48	0	-171	-31	-949	-18
19.7	3.3	0	8.1	-44	-4	-136	-33	-890	-9
23.0	6.6	0	8.1	-34	0	-111	-14	-699	-12
26.2	9.8	0	8.1	-27	0	-94	28	-588	11
29.5	13.1	0	8.0	-20	0	-38	8	-267	4
32.8	16.4	0	7.9	7	16	-12	63	-68	-25
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: EG A

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-14	-11	-283	173	197	21
3.3	-13.1	-5.0	8.0	-29	-37	-243	87	-266	-70
6.6	-9.8	-5.0	8.1	-34	-47	-215	52	-598	-154
9.8	-6.6	-5.0	8.1	-39	-43	-184	34	-780	-237
13.1	-3.3	-5.0	8.1	-35	-33	-160	39	-881	-264
16.4	0.0	-5.0	8.1	-28	-21	-142	50	-950	-282
16.4	0.0	-5.0	8.1	-28	-9	-149	79	-973	-274
19.7	3.3	-5.0	8.1	-20	0	-117	82	-934	-254
23.0	6.6	-5.0	8.1	-8	-1	-95	63	-724	-193
26.2	9.8	-5.0	8.1	-4	12	-80	75	-620	-142
29.5	13.1	-5.0	8.0	-1	6	-36	10	-304	-68
32.8	16.4	-5.0	7.9	16	12	-16	-15	-116	26
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG A

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	-14	11	-284	-173	197	-21
3.3	-13.1	5.0	8.0	-29	37	-243	-87	-266	70
6.6	-9.8	5.0	8.1	-34	47	-215	-52	-598	154
9.8	-6.6	5.0	8.1	-39	43	-184	-34	-780	237
13.1	-3.3	5.0	8.1	-35	33	-160	-39	-881	264
16.4	0.0	5.0	8.1	-28	21	-142	-50	-950	282
16.4	0.0	5.0	8.1	-28	9	-149	-79	-973	274
19.7	3.3	5.0	8.1	-20	0	-117	-82	-934	254
23.0	6.6	5.0	8.1	-8	1	-95	-63	-724	193
26.2	9.8	5.0	8.1	-4	-12	-80	-75	-620	142
29.5	13.1	5.0	8.0	-1	-6	-36	-10	-304	68
32.8	16.4	5.0	7.9	16	-12	-16	15	-116	-26
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

18.2.2 Max/Min Mx

LB2: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	0	8.0	-33	-17	-162	349	279	264
3.3	-13.1	0	8.0	-54	-17	-140	340	-35	50
6.6	-9.8	0	8.1	-62	-18	-119	312	-268	-44
9.8	-6.6	0	8.1	-76	-23	-99	266	-421	-96
13.1	-3.3	0	8.1	-76	-19	-90	230	-588	-114
16.4	0.0	0	8.1	-51	-15	45	235	-943	-26
16.4	0.0	0	8.1	-51	-15	-45	233	-943	30
19.7	3.3	0	8.1	-76	-19	90	228	-581	116
23.0	6.6	0	8.1	-77	-22	99	264	-414	97
26.2	9.8	0	8.1	-63	-18	119	310	-262	45
29.5	13.1	0	8.0	-54	-18	140	338	-33	-48
32.8	16.4	0	7.9	-31	-18	162	347	277	-269
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	-5.0	7.9	-4	-10	-239	276	285	91
3.3	-13.1	-5.0	8.0	-14	-27	-106	209	-88	-24
6.6	-9.8	-5.0	8.1	-39	-30	-96	188	-303	-136
9.8	-6.6	-5.0	8.1	-56	-19	-77	165	-470	-221
13.1	-3.3	-5.0	8.1	-58	-11	-39	135	-523	-247
16.4	0.0	-5.0	8.1	-54	5	-2	137	-515	-244
16.4	0.0	-5.0	8.1	-57	8	-18	157	-597	-257
19.7	3.3	-5.0	8.1	-50	21	22	160	-492	-216
23.0	6.6	-5.0	8.1	-29	27	63	157	-91	-35
26.2	9.8	-5.0	8.1	-36	24	76	178	59	-2
29.5	13.1	-5.0	8.0	-55	4	82	186	250	-20
32.8	16.4	-5.0	7.9	-91	-35	79	167	475	-184
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0.0	-16.4	5.0	7.9	-89	-35	-79	168	476	182
3.3	-13.1	5.0	8.0	-54	4	-82	185	246	20
6.6	-9.8	5.0	8.1	-36	24	-76	178	54	3
9.8	-6.6	5.0	8.1	-29	27	-63	158	-96	37
13.1	-3.3	5.0	8.1	-51	21	-22	159	-495	218
16.4	0.0	5.0	8.1	-58	8	18	157	-600	260
16.4	0.0	5.0	8.1	-55	5	2	137	-518	247
19.7	3.3	5.0	8.1	-58	-10	37	135	-537	253
23.0	6.6	5.0	8.1	-55	-19	77	165	-467	222
26.2	9.8	5.0	8.1	-38	-29	96	188	-302	137
29.5	13.1	5.0	8.0	-12	-28	106	209	-89	24
32.8	16.4	5.0	7.9	-1	-11	239	271	281	-95
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	0	8.0	-33	17	-162	-346	279	-264
3.3	-13.1	0	8.0	-54	17	-140	-337	-35	-50
6.6	-9.8	0	8.1	-62	18	-119	-309	-268	44
9.8	-6.6	0	8.1	-76	23	-99	-264	-421	96
13.1	-3.3	0	8.1	-76	19	-90	-228	-588	114
16.4	0.0	0	8.1	-51	15	45	-233	-943	26
16.4	0.0	0	8.1	-51	15	-45	-235	-943	-30
19.7	3.3	0	8.1	-76	19	90	-231	-581	-116
23.0	6.6	0	8.1	-77	22	99	-266	-414	-97
26.2	9.8	0	8.1	-63	18	119	-312	-262	-45
29.5	13.1	0	8.0	-54	18	140	-341	-33	48
32.8	16.4	0	7.9	-31	18	162	-350	277	269
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	-5.0	7.9	-89	35	-79	-168	476	-182
3.3	-13.1	-5.0	8.0	-54	-4	-82	-185	246	-20
6.6	-9.8	-5.0	8.1	-36	-24	-76	-178	54	-3
9.8	-6.6	-5.0	8.1	-29	-27	-63	-158	-96	-37
13.1	-3.3	-5.0	8.1	-51	-21	-22	-159	-495	-218
16.4	0.0	-5.0	8.1	-58	-8	18	-157	-600	-260
16.4	0.0	-5.0	8.1	-55	-5	2	-137	-518	-247
19.7	3.3	-5.0	8.1	-58	10	37	-135	-537	-253
23.0	6.6	-5.0	8.1	-55	19	77	-165	-467	-222
26.2	9.8	-5.0	8.1	-38	29	96	-188	-302	-137
29.5	13.1	-5.0	8.0	-12	28	106	-209	-89	-24
32.8	16.4	-5.0	7.9	-1	11	239	-276	281	95
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0.0	-16.4	5.0	7.9	-4	10	-239	-272	285	-91
3.3	-13.1	5.0	8.0	-14	27	-106	-209	-88	24
6.6	-9.8	5.0	8.1	-39	30	-96	-188	-303	136
9.8	-6.6	5.0	8.1	-56	19	-77	-165	-470	221
13.1	-3.3	5.0	8.1	-58	11	-39	-135	-523	247
16.4	0.0	5.0	8.1	-54	-5	-2	-137	-515	244
16.4	0.0	5.0	8.1	-57	-8	-18	-157	-597	257
19.7	3.3	5.0	8.1	-50	-21	22	-160	-492	216
23.0	6.6	5.0	8.1	-29	-27	63	-157	-91	35
26.2	9.8	5.0	8.1	-36	-24	76	-178	59	2
29.5	13.1	5.0	8.0	-55	-4	82	-186	250	20
32.8	16.4	5.0	7.9	-91	35	79	-167	475	184
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

18.2.3 Max/Min My

LB2: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-208	6	-155	12	864	21
3.3	-13.1	0	8.0	-168	1	-102	12	456	9
6.6	-9.8	0	8.1	-117	0	-64	7	196	4
9.8	-6.6	0	8.1	6	0	-12	11	71	1
13.1	-3.3	0	8.1	18	0	-6	7	43	0
16.4	0.0	0	8.1	16	0	-6	7	23	-1
16.4	0.0	0	8.1	16	0	6	-7	23	-1
19.7	3.3	0	8.1	18	0	6	-7	43	0
23.0	6.6	0	8.1	5	0	12	-5	71	-1
26.2	9.8	0	8.1	-119	0	65	-7	197	4
29.5	13.1	0	8.0	-170	-1	104	-12	456	9
32.8	16.4	0	7.9	-212	-6	156	-13	860	22
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-107	46	-133	-35	799	-86
3.3	-13.1	-5.0	8.0	-84	4	-94	-71	454	65
6.6	-9.8	-5.0	8.1	-68	-14	-61	-74	210	59
9.8	-6.6	-5.0	8.1	-29	-11	-28	-100	71	23
13.1	-3.3	-5.0	8.1	9	-3	-7	-49	41	16
16.4	0.0	-5.0	8.1	10	0	1	62	21	3
16.4	0.0	-5.0	8.1	10	3	4	-44	21	4
19.7	3.3	-5.0	8.1	9	3	7	50	42	16
23.0	6.6	-5.0	8.1	-29	11	29	99	72	23
26.2	9.8	-5.0	8.1	-68	14	62	73	210	59
29.5	13.1	-5.0	8.0	-84	-4	95	70	454	65
32.8	16.4	-5.0	7.9	-107	-46	133	33	794	-87
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0.0	-16.4	5.0	7.9	-107	-46	-133	35	799	86
3.3	-13.1	5.0	8.0	-84	-4	-94	71	454	-65
6.6	-9.8	5.0	8.1	-68	14	-61	74	210	-59
9.8	-6.6	5.0	8.1	-29	11	-28	100	71	-23
13.1	-3.3	5.0	8.1	9	3	-7	49	41	-16
16.4	0.0	5.0	8.1	10	0	1	-62	21	-3
16.4	0.0	5.0	8.1	10	-3	4	44	21	-4
19.7	3.3	5.0	8.1	9	-3	7	-50	42	-16
23.0	6.6	5.0	8.1	-29	-11	29	-99	72	-23
26.2	9.8	5.0	8.1	-68	-14	62	-73	210	-59
29.5	13.1	5.0	8.0	-84	4	95	-70	454	-65
32.8	16.4	5.0	7.9	-107	46	133	-33	794	87
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	13	0	6	-3	-88	-3
3.3	-13.1	0	8.0	-45	0	-40	-16	-428	1
6.6	-9.8	0	8.1	-61	-6	-116	94	-673	-12
9.8	-6.6	0	8.1	-74	-1	-186	-17	-899	-16
13.1	-3.3	0	8.1	-81	0	121	31	-1024	-19
16.4	0.0	0	8.1	-82	0	160	-31	-1058	19
16.4	0.0	0	8.1	-82	0	-160	30	-1058	19
19.7	3.3	0	8.1	-82	0	-121	-32	-1023	-19
23.0	6.6	0	8.1	-77	1	186	17	-895	-16
26.2	9.8	0	8.1	-65	6	116	-94	-669	-12
29.5	13.1	0	8.0	-44	0	39	16	-428	1
32.8	16.4	0	7.9	13	0	-7	3	-88	-3
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	17	-1	9	48	-129	23
3.3	-13.1	-5.0	8.0	-11	-20	-34	0	-448	-94
6.6	-9.8	-5.0	8.1	-21	-36	-195	46	-685	-175
9.8	-6.6	-5.0	8.1	-35	-28	-168	58	-902	-252
13.1	-3.3	-5.0	8.1	-42	-7	107	-57	-1020	-307
16.4	0.0	-5.0	8.1	-45	5	143	-67	-1049	-322
16.4	0.0	-5.0	8.1	-45	-5	-143	68	-1049	-322
19.7	3.3	-5.0	8.1	-42	6	-107	57	-1019	-307
23.0	6.6	-5.0	8.1	-35	27	168	-58	-899	-252
26.2	9.8	-5.0	8.1	-21	36	194	-45	-682	-176
29.5	13.1	-5.0	8.0	-11	21	33	1	-450	-94
32.8	16.4	-5.0	7.9	17	1	-10	-47	-129	23
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG A

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0.0	-16.4	5.0	7.9	17	1	9	-48	-129	-23
3.3	-13.1	5.0	8.0	-11	20	-34	0	-448	94
6.6	-9.8	5.0	8.1	-21	36	-195	-46	-685	175
9.8	-6.6	5.0	8.1	-35	28	-168	-58	-902	252
13.1	-3.3	5.0	8.1	-42	7	107	57	-1020	307
16.4	0.0	5.0	8.1	-45	-5	143	67	-1049	322
16.4	0.0	5.0	8.1	-45	5	-143	-68	-1049	322
19.7	3.3	5.0	8.1	-42	-6	-107	-57	-1019	307
23.0	6.6	5.0	8.1	-35	-27	168	58	-899	252
26.2	9.8	5.0	8.1	-21	-36	194	45	-682	176
29.5	13.1	5.0	8.0	-11	-21	33	-1	-450	94
32.8	16.4	5.0	7.9	17	-1	-10	47	-129	-23
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

19. Result EG B

19.1 Diagram

Diagram – Max/Min Fz:

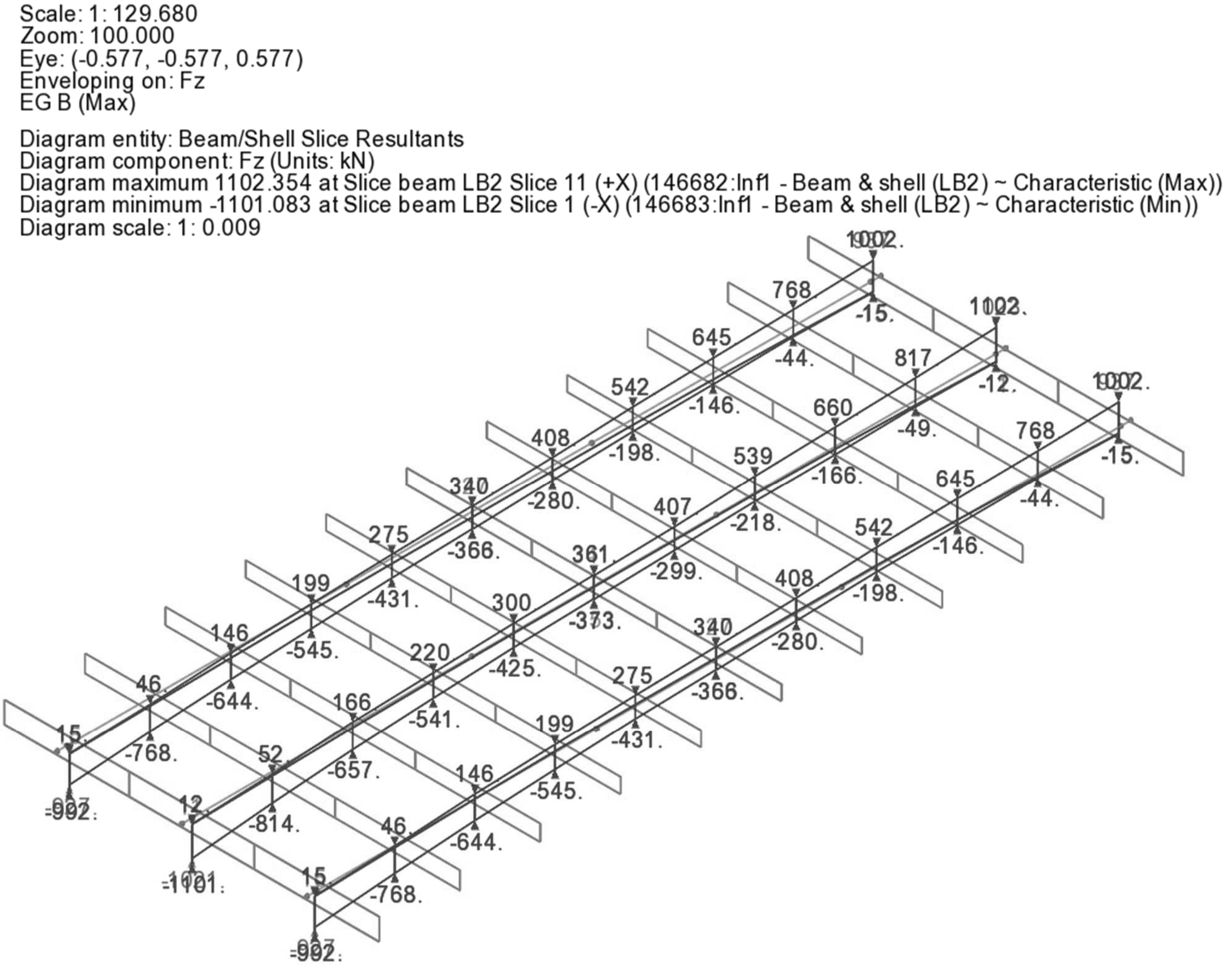


Diagram – Max/Min Mx:

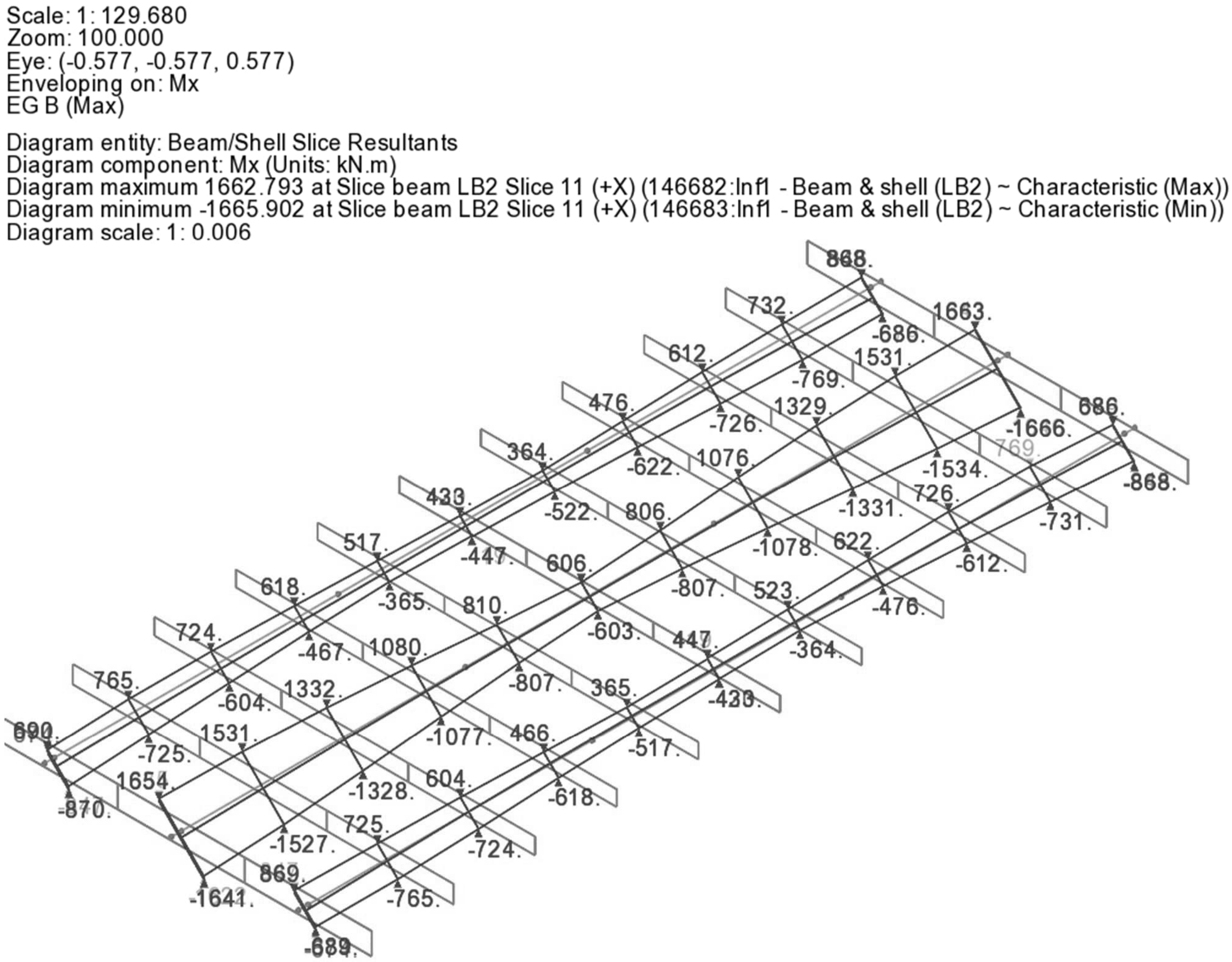
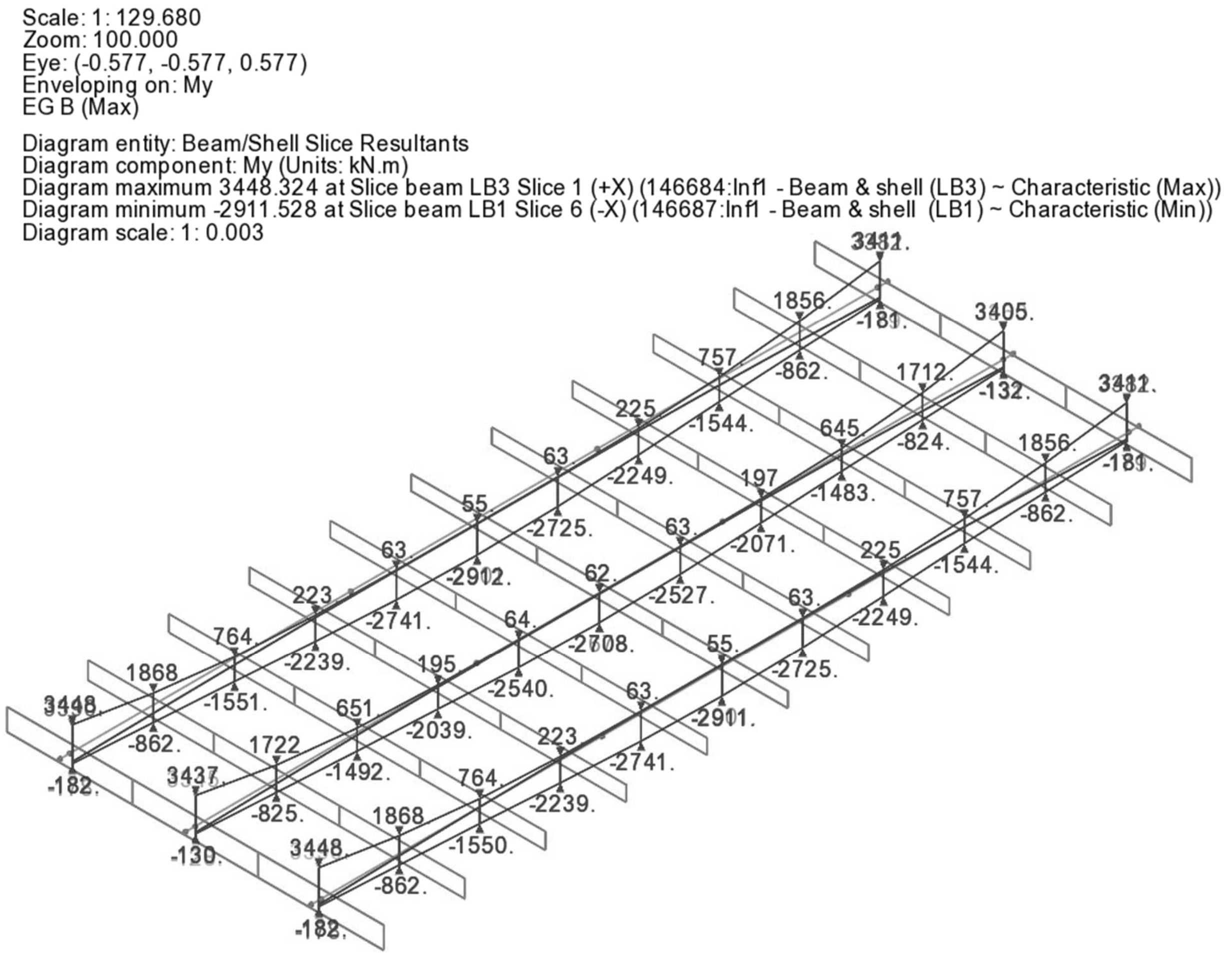


Diagram – Max/Min My:



19.2 Tabell

19.2.1 Max/Min Fz

LB2: EG B

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	0	8.0	34	-21	12	-79	-65	-39
3.3	-13.1	0	8.0	-1	0	52	-11	-372	6
6.6	-9.8	0	8.1	-43	-2	166	-42	-1055	24
9.8	-6.6	0	8.1	-81	3	220	29	-1364	-32
13.1	-3.3	0	8.1	-119	3	300	37	-1822	-39
16.4	0.0	0	8.1	-145	4	361	28	-1832	-44
16.4	0.0	0	8.1	-162	4	341	6	-1807	-43
19.7	3.3	0	8.1	-267	-5	407	28	-1696	40
23.0	6.6	0	8.1	-397	5	539	-32	-1503	-36
26.2	9.8	0	8.1	-540	5	660	-59	-609	-12
29.5	13.1	0	8.0	-693	4	817	-73	776	27
32.8	16.4	0	7.9	-737	2	1023	-55	2879	97
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1:EG B

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	34	-15	16	77	-181	62
3.3	-13.1	-5.0	8.0	14	-7	46	-21	-402	-99
6.6	-9.8	-5.0	8.1	6	4	146	-104	-1133	-289
9.8	-6.6	-5.0	8.1	-8	36	199	-100	-1464	-421
13.1	-3.3	-5.0	8.1	-37	58	275	-111	-1949	-577
16.4	0.0	-5.0	8.1	-63	81	340	50	-1986	-612
16.4	0.0	-5.0	8.1	-68	95	327	95	-1965	-592
19.7	3.3	-5.0	8.1	-126	130	408	205	-1821	-583
23.0	6.6	-5.0	8.1	-198	175	542	247	-1522	-469
26.2	9.8	-5.0	8.1	-243	164	645	299	-617	-209
29.5	13.1	-5.0	8.0	-299	85	768	250	775	-96
32.8	16.4	-5.0	7.9	-342	-42	937	-75	2537	-416
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG B

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	34	15	16	-77	-181	-62
3.3	-13.1	5.0	8.0	14	7	46	21	-402	99
6.6	-9.8	5.0	8.1	6	-4	146	104	-1133	289
9.8	-6.6	5.0	8.1	-8	-36	199	100	-1464	421
13.1	-3.3	5.0	8.1	-37	-58	275	111	-1949	577
16.4	0.0	5.0	8.1	-63	-81	340	-50	-1986	612
16.4	0.0	5.0	8.1	-68	-95	327	-95	-1965	592
19.7	3.3	5.0	8.1	-126	-130	408	-205	-1821	583
23.0	6.6	5.0	8.1	-198	-175	542	-247	-1522	469
26.2	9.8	5.0	8.1	-243	-164	645	-299	-617	209
29.5	13.1	5.0	8.0	-299	-85	768	-250	775	96
32.8	16.4	5.0	7.9	-342	42	937	75	2537	416
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: EG B

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	0.0	8.0	-727	-2	-1021	55	2902	96
3.3	-13.1	0.0	8.0	-677	-4	-814	72	770	27
6.6	-9.8	0.0	8.1	-523	-5	-657	59	-623	-13
9.8	-6.6	0.0	8.1	-426	-4	-541	36	-1542	-35
13.1	-3.3	0.0	8.1	-353	4	-425	-32	-1709	37
16.4	0.0	0.0	8.1	-279	-4	-353	13	-1896	-41
16.4	0.0	0.0	8.1	-265	-4	-373	-9	-1922	-40
19.7	3.3	0.0	8.1	-124	-3	-299	-37	-1813	-39
23.0	6.6	0.0	8.1	-90	-3	-218	-29	-1354	-32
26.2	9.8	0.0	8.1	-48	2	-166	42	-1052	25
29.5	13.1	0.0	8.0	3	0	-49	10	-350	6
32.8	16.4	0.0	7.9	38	21	-12	79	-67	-44
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1:EG B

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-399	73	-927	-10	2705	-482
3.3	-13.1	-5.0	8.0	-299	-84	-768	-245	771	-92
6.6	-9.8	-5.0	8.1	-244	-164	-644	-300	-629	-208
9.8	-6.6	-5.0	8.1	-194	-168	-545	-230	-1641	-487
13.1	-3.3	-5.0	8.1	-161	-144	-431	-186	-1842	-589
16.4	0.0	-5.0	8.1	-115	-110	-353	-116	-2049	-624
16.4	0.0	-5.0	8.1	-108	-96	-366	-71	-2070	-649
19.7	3.3	-5.0	8.1	-59	-60	-280	-20	-1975	-581
23.0	6.6	-5.0	8.1	-8	-37	-199	99	-1457	-421
26.2	9.8	-5.0	8.1	6	-4	-146	104	-1131	-290
29.5	13.1	-5.0	8.0	15	6	-44	14	-379	-92
32.8	16.4	-5.0	7.9	35	15	-15	-76	-180	63
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG B

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	-399	-73	-927	10	2705	482
3.3	-13.1	5.0	8.0	-299	84	-768	245	771	92
6.6	-9.8	5.0	8.1	-244	164	-644	300	-629	208
9.8	-6.6	5.0	8.1	-194	168	-545	230	-1641	487
13.1	-3.3	5.0	8.1	-161	144	-431	186	-1842	589
16.4	0.0	5.0	8.1	-115	110	-353	116	-2049	624
16.4	0.0	5.0	8.1	-108	96	-366	71	-2070	649
19.7	3.3	5.0	8.1	-59	60	-280	20	-1975	581
23.0	6.6	5.0	8.1	-8	37	-199	-99	-1457	421
26.2	9.8	5.0	8.1	6	4	-146	-104	-1131	290
29.5	13.1	5.0	8.0	15	-6	-44	-14	-379	92
32.8	16.4	5.0	7.9	35	-15	-15	76	-180	-63
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

19.2.2 Max/Min Mx

LB2: EG B

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	0	8.0	-436	-23	-599	1635	2370	1543
3.3	-13.1	0	8.0	-470	-43	-520	1531	816	450
6.6	-9.8	0	8.1	-466	-56	-430	1332	-278	-23
9.8	-6.6	0	8.1	-451	-57	-340	1080	-1008	-260
13.1	-3.3	0	8.1	-428	-53	-244	810	-1342	-320
16.4	0.0	0	8.1	-333	-48	-165	606	-1357	-355
16.4	0.0	0	8.1	-365	-54	-38	606	-1544	159
19.7	3.3	0	8.1	-421	-55	242	806	-1306	311
23.0	6.6	0	8.1	-457	-58	341	1076	-1006	268
26.2	9.8	0	8.1	-472	-57	432	1329	-276	34
29.5	13.1	0	8.0	-471	-44	521	1532	841	-453
32.8	16.4	0	7.9	-428	-29	609	1644	2311	-1567
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1:EG B

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	-5.0	7.9	-41	-14	-446	847	1704	434
3.3	-13.1	-5.0	8.0	-86	-78	-390	725	394	97
6.6	-9.8	-5.0	8.1	-180	-97	-331	604	-648	-340
9.8	-6.6	-5.0	8.1	-248	-91	-262	466	-1340	-675
13.1	-3.3	-5.0	8.1	-174	-79	-123	365	-934	-458
16.4	0.0	-5.0	8.1	-106	25	130	419	-999	-419
16.4	0.0	-5.0	8.1	-114	28	74	447	-1492	-504
19.7	3.3	-5.0	8.1	-140	62	166	523	-1408	-517
23.0	6.6	-5.0	8.1	-147	106	318	622	-698	-228
26.2	9.8	-5.0	8.1	-183	97	360	726	84	-28
29.5	13.1	-5.0	8.0	-266	17	403	769	1021	-87
32.8	16.4	-5.0	7.9	-414	-145	414	686	2197	-761
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG B

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0.0	-16.4	5.0	7.9	-408	-143	-422	690	2203	752
3.3	-13.1	5.0	8.0	-261	18	-410	765	987	89
6.6	-9.8	5.0	8.1	-182	98	-369	724	20	43
9.8	-6.6	5.0	8.1	-155	105	-309	618	-700	250
13.1	-3.3	5.0	8.1	-143	59	-157	517	-1368	509
16.4	0.0	5.0	8.1	-111	27	-132	433	-1042	348
16.4	0.0	5.0	8.1	-106	23	-122	420	-959	407
19.7	3.3	5.0	8.1	-167	-89	137	364	-1150	600
23.0	6.6	5.0	8.1	-246	-96	276	476	-1263	642
26.2	9.8	5.0	8.1	-179	-101	343	612	-593	323
29.5	13.1	5.0	8.0	-76	-82	393	732	354	-82
32.8	16.4	5.0	7.9	-43	-17	445	846	1718	-443
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: EG B

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	0	8.0	-439	19	-587	-1622	2392	-1545
3.3	-13.1	0	8.0	-470	43	-520	-1527	816	-450
6.6	-9.8	0	8.1	-466	56	-430	-1328	-278	23
9.8	-6.6	0	8.1	-451	57	-340	-1077	-1008	260
13.1	-3.3	0	8.1	-428	53	-244	-807	-1342	320
16.4	0.0	0	8.1	-333	48	-165	-603	-1357	355
16.4	0.0	0	8.1	-338	47	-61	-603	-1383	-107
19.7	3.3	0	8.1	-421	55	242	-807	-1306	-311
23.0	6.6	0	8.1	-457	58	341	-1078	-1006	-268
26.2	9.8	0	8.1	-472	57	432	-1331	-276	-34
29.5	13.1	0	8.0	-471	44	521	-1534	841	453
32.8	16.4	0	7.9	-428	29	609	-1646	2311	1567
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1:EG B

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	-5.0	7.9	-408	143	-422	-690	2203	-752
3.3	-13.1	-5.0	8.0	-261	-18	-410	-765	987	-89
6.6	-9.8	-5.0	8.1	-182	-98	-369	-724	20	-43
9.8	-6.6	-5.0	8.1	-155	-105	-309	-618	-700	-250
13.1	-3.3	-5.0	8.1	-143	-59	-157	-517	-1368	-509
16.4	0.0	-5.0	8.1	-111	-27	-132	-433	-1042	-348
16.4	0.0	-5.0	8.1	-106	-23	-122	-420	-959	-407
19.7	3.3	-5.0	8.1	-167	89	137	-364	-1150	-600
23.0	6.6	-5.0	8.1	-246	96	276	-476	-1263	-642
26.2	9.8	-5.0	8.1	-179	101	343	-612	-593	-323
29.5	13.1	-5.0	8.0	-76	82	393	-731	354	82
32.8	16.4	-5.0	7.9	-35	16	444	-845	1714	445
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG B

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0.0	-16.4	5.0	7.9	-48	15	-447	-847	1709	-432
3.3	-13.1	5.0	8.0	-86	78	-390	-725	394	-97
6.6	-9.8	5.0	8.1	-180	97	-331	-604	-648	340
9.8	-6.6	5.0	8.1	-248	91	-262	-467	-1340	675
13.1	-3.3	5.0	8.1	-174	79	-123	-365	-934	458
16.4	0.0	5.0	8.1	-106	-25	130	-419	-999	419
16.4	0.0	5.0	8.1	-114	-28	74	-447	-1492	504
19.7	3.3	5.0	8.1	-139	-62	164	-522	-1407	517
23.0	6.6	5.0	8.1	-147	-106	318	-622	-698	228
26.2	9.8	5.0	8.1	-183	-97	360	-726	84	28
29.5	13.1	5.0	8.0	-266	-17	403	-769	1021	87
32.8	16.4	5.0	7.9	-414	145	414	-686	2197	761
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

19.2.3 Max/Min My

LB2: EG B

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-896	9	-692	85	3437	113
3.3	-13.1	0	8.0	-729	0	-436	92	1722	43
6.6	-9.8	0	8.1	-495	-1	-267	66	651	17
9.8	-6.6	0	8.1	-159	0	-90	12	195	4
13.1	-3.3	0	8.1	43	0	-1	-2	64	1
16.4	0.0	0	8.1	42	0	-1	1	62	-1
16.4	0.0	0	8.1	42	0	-1	1	62	0
19.7	3.3	0	8.1	26	0	9	-12	63	1
23.0	6.6	0	8.1	-160	0	91	-12	197	4
26.2	9.8	0	8.1	-502	0	271	-54	645	17
29.5	13.1	0	8.0	-739	-1	444	-79	1712	41
32.8	16.4	0	7.9	-907	-8	685	-86	3405	114
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1:EG B

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-516	170	-628	-343	3448	-612
3.3	-13.1	-5.0	8.0	-361	5	-436	-478	1868	155
6.6	-9.8	-5.0	8.1	-263	-67	-275	-440	764	171
9.8	-6.6	-5.0	8.1	-97	-38	-96	-146	223	74
13.1	-3.3	-5.0	8.1	15	-5	-11	-79	63	22
16.4	0.0	-5.0	8.1	27	0	-1	6	55	21
16.4	0.0	-5.0	8.1	27	0	-1	5	55	22
19.7	3.3	-5.0	8.1	15	5	11	91	63	21
23.0	6.6	-5.0	8.1	-97	38	96	145	225	74
26.2	9.8	-5.0	8.1	-263	70	285	442	758	166
29.5	13.1	-5.0	8.0	-356	-5	429	475	1856	153
32.8	16.4	-5.0	7.9	-514	-167	624	329	3411	-609
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG B

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0.0	-16.4	5.0	7.9	-516	-170	-628	343	3448	612
3.3	-13.1	5.0	8.0	-361	-5	-436	478	1868	-155
6.6	-9.8	5.0	8.1	-263	67	-275	440	764	-171
9.8	-6.6	5.0	8.1	-97	38	-96	146	223	-74
13.1	-3.3	5.0	8.1	15	5	-11	79	63	-22
16.4	0.0	5.0	8.1	27	0	-1	-6	55	-21
16.4	0.0	5.0	8.1	27	0	-1	-5	55	-22
19.7	3.3	5.0	8.1	15	-5	11	-91	63	-21
23.0	6.6	5.0	8.1	-97	-38	96	-145	225	-74
26.2	9.8	5.0	8.1	-263	-70	285	-442	757	-166
29.5	13.1	5.0	8.0	-356	5	429	-475	1856	-153
32.8	16.4	5.0	7.9	-514	167	624	-329	3411	609
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: EG B

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	19	0	7	-5	-130	-5
3.3	-13.1	0	8.0	-140	-3	-316	26	-825	-3
6.6	-9.8	0	8.1	-134	-2	-181	38	-1492	-29
9.8	-6.6	0	8.1	-301	-2	-353	9	-2039	-49
13.1	-3.3	0	8.1	-349	-1	-16	37	-2540	-57
16.4	0.0	0	8.1	-381	0	90	-17	-2708	57
16.4	0.0	0	8.1	-386	6	-79	-160	-2678	-72
19.7	3.3	0	8.1	-401	0	-55	-60	-2527	-56
23.0	6.6	0	8.1	-319	2	353	-11	-2071	-51
26.2	9.8	0	8.1	-146	2	182	-38	-1483	-29
29.5	13.1	0	8.0	-143	3	316	-26	-824	-3
32.8	16.4	0	7.9	20	0	-10	4	-132	-4
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1:EG B

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	35	-16	12	80	-182	65
3.3	-13.1	-5.0	8.0	-33	-72	-298	-37	-862	-277
6.6	-9.8	-5.0	8.1	-28	-68	-202	-88	-1551	-419
9.8	-6.6	-5.0	8.1	-119	-92	-334	-34	-2239	-661
13.1	-3.3	-5.0	8.1	-136	-34	-21	-49	-2741	-850
16.4	0.0	-5.0	8.1	-154	11	90	13	-2911	-920
16.4	0.0	-5.0	8.1	-156	20	18	159	-2901	-904
19.7	3.3	-5.0	8.1	-159	54	-22	195	-2725	-858
23.0	6.6	-5.0	8.1	-106	88	338	14	-2249	-668
26.2	9.8	-5.0	8.1	-28	68	202	88	-1544	-421
29.5	13.1	-5.0	8.0	-33	72	297	39	-862	-279
32.8	16.4	-5.0	7.9	35	16	-14	-78	-181	65
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: EG B

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0.0	-16.4	5.0	7.9	35	16	12	-80	-182	-65
3.3	-13.1	5.0	8.0	-33	72	-298	37	-862	277
6.6	-9.8	5.0	8.1	-28	68	-202	88	-1551	419
9.8	-6.6	5.0	8.1	-119	92	-334	34	-2239	661
13.1	-3.3	5.0	8.1	-136	34	-21	49	-2741	850
16.4	0.0	5.0	8.1	-154	-11	90	-13	-2912	920
16.4	0.0	5.0	8.1	-156	-20	18	-159	-2901	904
19.7	3.3	5.0	8.1	-159	-54	-22	-195	-2725	858
23.0	6.6	5.0	8.1	-106	-88	338	-14	-2249	668
26.2	9.8	5.0	8.1	-28	-68	202	-88	-1544	421
29.5	13.1	5.0	8.0	-33	-72	297	-39	-862	279
32.8	16.4	5.0	7.9	35	-16	-14	78	-181	-65
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

20. Result LM 1

20.1 Diagram

Diagram – Max/Min Fz:

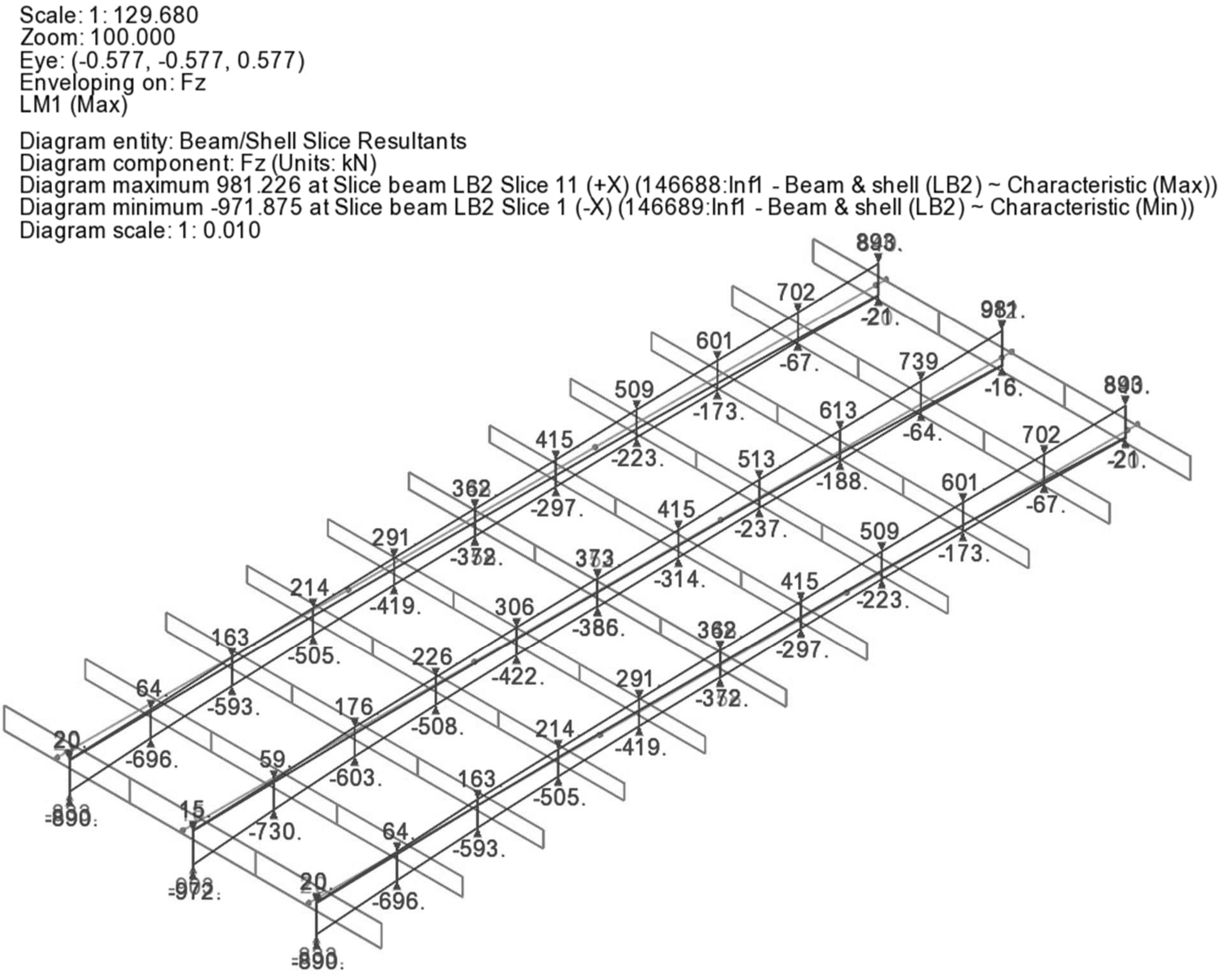


Diagram – Max/Min Mx:

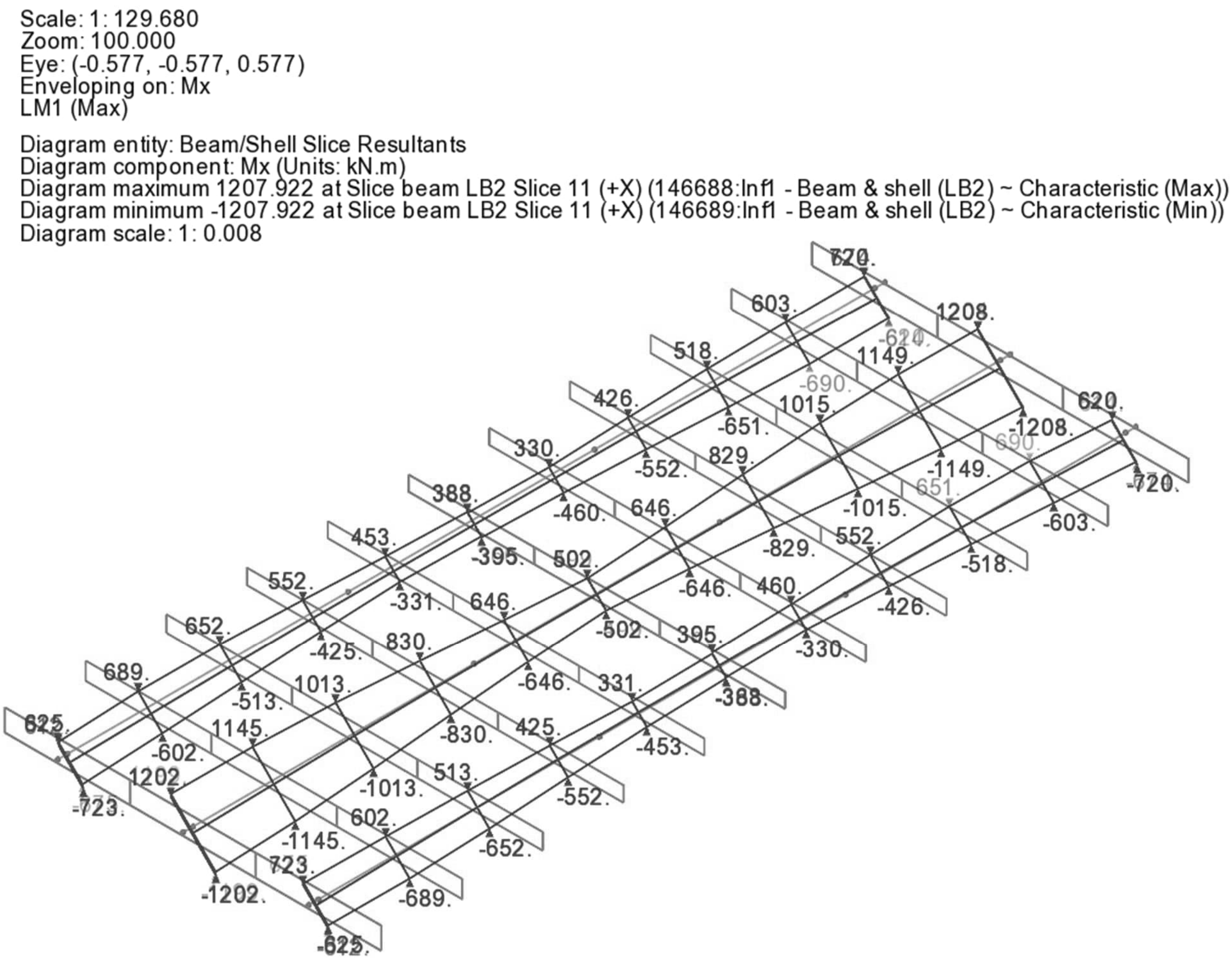
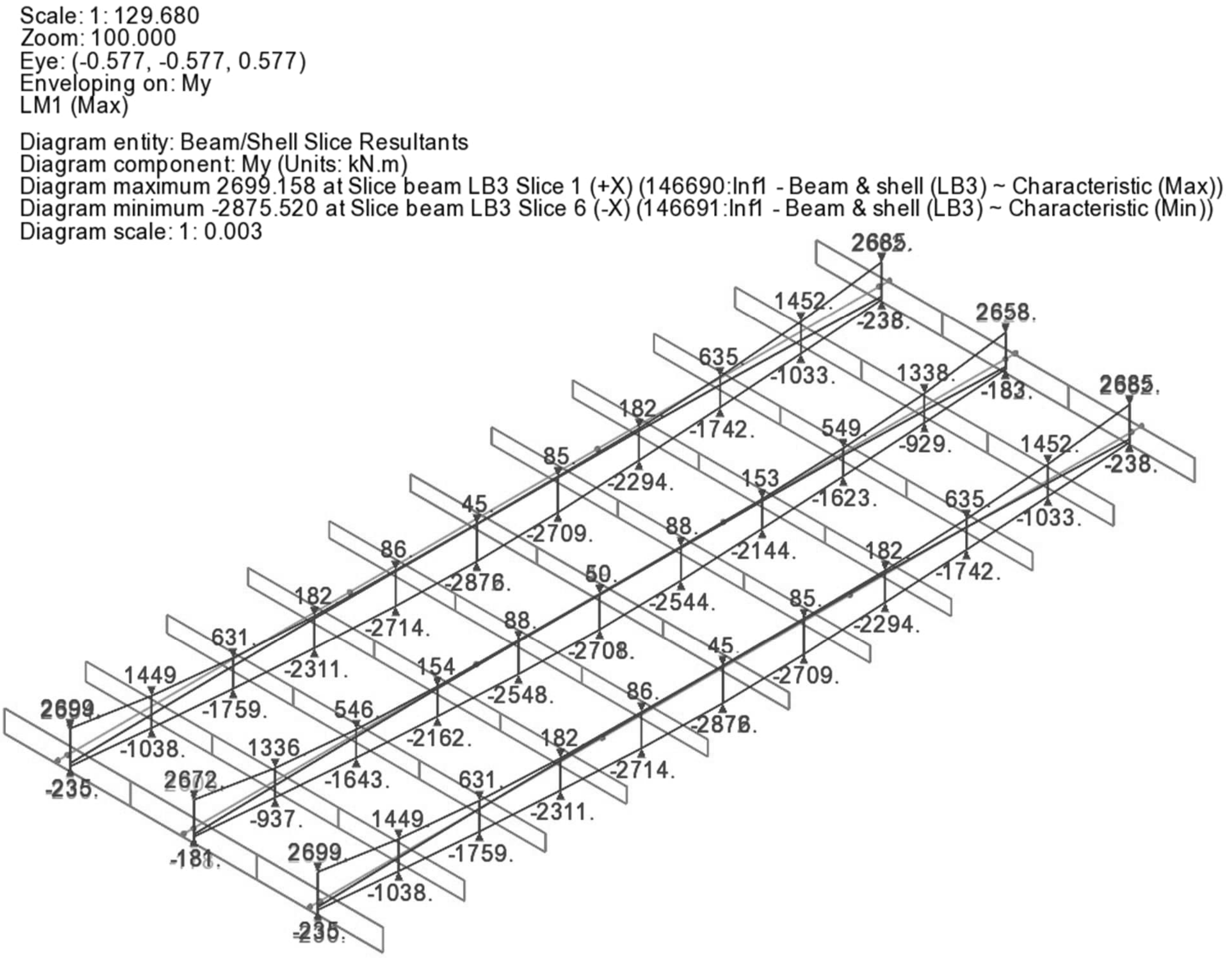


Diagram – Max/Min My:



20.2 Tabell

20.2.1 Max/Min Fz

LB2: LM1

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	0	8.0	27	5	15	55	-180	60
3.3	-13.1	0	8.0	-40	0	60	-20	-523	-6
6.6	-9.8	0	8.1	-58	3	176	-50	-1159	-3
9.8	-6.6	0	8.1	-89	4	226	-42	-1473	-4
13.1	-3.3	0	8.1	-129	3	306	-69	-1980	-5
16.4	0.0	0	8.1	-164	3	373	-76	-2058	2
16.4	0.0	0	8.1	-178	3	352	-53	-2003	-3
19.7	3.3	0	8.1	-221	3	415	-57	-1870	4
23.0	6.6	0	8.1	-269	3	514	-87	-1783	0
26.2	9.8	0	8.1	-346	3	613	-90	-1100	-7
29.5	13.1	0	8.0	-424	-8	739	104	-21	8
32.8	16.4	0	7.9	-405	20	912	-142	1682	43
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: LM1

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	43	-20	20	89	-234	73
3.3	-13.1	-5.0	8.0	18	-9	64	39	-551	-54
6.6	-9.8	-5.0	8.1	-1	-4	163	-104	-1292	-299
9.8	-6.6	-5.0	8.1	-10	27	215	-81	-1611	-431
13.1	-3.3	-5.0	8.1	-39	44	291	-77	-2146	-598
16.4	0.0	-5.0	8.1	-64	71	362	-24	-2225	-646
16.4	0.0	-5.0	8.1	-71	90	348	25	-2187	-641
19.7	3.3	-5.0	8.1	-97	118	415	90	-2039	-616
23.0	6.6	-5.0	8.1	-117	130	509	122	-1933	-536
26.2	9.8	-5.0	8.1	-134	143	601	158	-1192	-321
29.5	13.1	-5.0	8.0	-165	97	702	104	-129	-183
32.8	16.4	-5.0	7.9	-202	-12	840	-120	1433	-259
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: LM1

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	5.0	7.9	43	20	20	-89	-234	-73
3.3	-13.1	5.0	8.0	18	9	64	-39	-551	54
6.6	-9.8	5.0	8.1	-1	4	163	104	-1292	299
9.8	-6.6	5.0	8.1	-10	-27	215	81	-1611	431
13.1	-3.3	5.0	8.1	-39	-44	291	77	-2146	598
16.4	0.0	5.0	8.1	-64	-71	362	24	-2225	646
16.4	0.0	5.0	8.1	-71	-90	348	-25	-2187	641
19.7	3.3	5.0	8.1	-97	-118	415	-90	-2039	616
23.0	6.6	5.0	8.1	-117	-130	509	-122	-1933	536
26.2	9.8	5.0	8.1	-134	-143	601	-158	-1192	321
29.5	13.1	5.0	8.0	-165	-97	702	-104	-129	183
32.8	16.4	5.0	7.9	-202	12	840	120	1433	259
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: LM1

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	0	8.0	-414	-19	-903	140	1751	41
3.3	-13.1	0	8.0	-407	-6	-730	97	-44	-22
6.6	-9.8	0	8.1	-325	1	-603	86	-1124	-20
9.8	-6.6	0	8.1	-253	-2	-508	-87	-1791	11
13.1	-3.3	0	8.1	-207	-3	-422	59	-1912	4
16.4	0.0	0	8.1	-168	-3	-365	55	-2045	-3
16.4	0.0	0	8.1	-156	-3	-386	87	-2112	2
19.7	3.3	0	8.1	-127	-3	-314	77	-2026	-5
23.0	6.6	0	8.1	-95	-4	-237	45	-1513	-3
26.2	9.8	0	8.1	-66	-2	-188	57	-1217	-4
29.5	13.1	0	8.0	-32	1	-64	-18	-461	4
32.8	16.4	0	7.9	28	-6	-16	-58	-181	64
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: LM1

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-208	13	-833	107	1499	-273
3.3	-13.1	-5.0	8.0	-161	-94	-696	-85	-168	-172
6.6	-9.8	-5.0	8.1	-137	-148	-593	-170	-1125	-310
9.8	-6.6	-5.0	8.1	-118	-137	-505	-134	-1857	-522
13.1	-3.3	-5.0	8.1	-93	-111	-420	-74	-2085	-619
16.4	0.0	-5.0	8.1	-68	-83	-358	-7	-2231	-644
16.4	0.0	-5.0	8.1	-62	-62	-372	42	-2276	-646
19.7	3.3	-5.0	8.1	-38	-35	-297	94	-2191	-598
23.0	6.6	-5.0	8.1	-11	-22	-223	94	-1652	-438
26.2	9.8	-5.0	8.1	-2	10	-173	121	-1348	-309
29.5	13.1	-5.0	8.0	21	7	-67	-47	-502	-46
32.8	16.4	-5.0	7.9	49	17	-21	-96	-182	96
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: LM1

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-208	-13	-833	-107	1499	273
3.3	-13.1	5.0	8.0	-161	94	-696	85	-168	172
6.6	-9.8	5.0	8.1	-137	148	-593	170	-1125	310
9.8	-6.6	5.0	8.1	-118	137	-505	134	-1857	522
13.1	-3.3	5.0	8.1	-93	111	-420	74	-2085	619
16.4	0.0	5.0	8.1	-68	83	-358	7	-2231	644
16.4	0.0	5.0	8.1	-62	62	-372	-42	-2276	646
19.7	3.3	5.0	8.1	-38	35	-297	-94	-2191	598
23.0	6.6	5.0	8.1	-11	22	-223	-94	-1652	438
26.2	9.8	5.0	8.1	-2	-10	-173	-121	-1348	309
29.5	13.1	5.0	8.0	21	-7	-67	47	-502	46
32.8	16.4	5.0	7.9	49	-17	-21	96	-182	-96
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

20.2.2 Max/Min Mx

LB2: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	0	8.0	-217	-20	-441	1199	1455	1160
3.3	-13.1	0	8.0	-246	-42	-401	1145	259	293
6.6	-9.8	0	8.1	-273	-53	-336	1013	-542	-81
9.8	-6.6	0	8.1	-295	-57	-268	830	-1024	-258
13.1	-3.3	0	8.1	-292	-52	-207	646	-1326	-301
16.4	0.0	0	8.1	-270	-50	-156	502	-1416	-350
16.4	0.0	0	8.1	-271	-51	151	499	-1380	348
19.7	3.3	0	8.1	-302	-55	205	646	-1315	308
23.0	6.6	0	8.1	-299	-55	269	829	-1052	272
26.2	9.8	0	8.1	-275	-51	339	1015	-568	97
29.5	13.1	0	8.0	-243	-43	405	1149	229	-280
32.8	16.4	0	7.9	-214	-23	444	1204	1444	-1174
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	-5.0	7.9	-19	-51	-370	675	963	296
3.3	-13.1	-5.0	8.0	-65	-85	-331	602	35	-39
6.6	-9.8	-5.0	8.1	-132	-90	-283	513	-734	-374
9.8	-6.6	-5.0	8.1	-174	-80	-232	425	-1206	-603
13.1	-3.3	-5.0	8.1	-147	-43	-101	331	-1375	-627
16.4	0.0	-5.0	8.1	-120	25	64	366	-1329	-573
16.4	0.0	-5.0	8.1	-124	36	60	395	-1457	-538
19.7	3.3	-5.0	8.1	-132	61	117	460	-1324	-525
23.0	6.6	-5.0	8.1	-104	94	232	552	-503	-142
26.2	9.8	-5.0	8.1	-150	85	278	651	61	-32
29.5	13.1	-5.0	8.0	-224	14	335	690	860	-84
32.8	16.4	-5.0	7.9	-361	-126	366	620	1885	-695
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	5.0	7.9	-355	-123	-363	625	1889	686
3.3	-13.1	5.0	8.0	-223	13	-333	689	863	82
6.6	-9.8	5.0	8.1	-145	88	-284	652	39	35
9.8	-6.6	5.0	8.1	-100	97	-238	552	-521	145
13.1	-3.3	5.0	8.1	-135	57	-117	453	-1280	517
16.4	0.0	5.0	8.1	-128	31	-63	388	-1405	528
16.4	0.0	5.0	8.1	-122	23	-64	363	-1319	572
19.7	3.3	5.0	8.1	-149	-47	105	330	-1344	618
23.0	6.6	5.0	8.1	-170	-84	236	426	-1179	595
26.2	9.8	5.0	8.1	-127	-93	288	518	-718	372
29.5	13.1	5.0	8.0	-59	-86	331	603	17	47
32.8	16.4	5.0	7.9	-12	-53	367	674	930	-304
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	0	8.0	-217	20	-441	-1199	1455	-1160
3.3	-13.1	0	8.0	-246	42	-401	-1145	259	-293
6.6	-9.8	0	8.1	-273	53	-336	-1013	-542	81
9.8	-6.6	0	8.1	-295	57	-268	-830	-1024	258
13.1	-3.3	0	8.1	-292	52	-207	-646	-1326	301
16.4	0.0	0	8.1	-270	50	-156	-502	-1416	350
16.4	0.0	0	8.1	-271	51	151	-499	-1380	-348
19.7	3.3	0	8.1	-302	55	205	-646	-1315	-308
23.0	6.6	0	8.1	-299	55	269	-829	-1052	-272
26.2	9.8	0	8.1	-275	51	339	-1015	-568	-97
29.5	13.1	0	8.0	-243	43	405	-1149	229	280
32.8	16.4	0	7.9	-214	23	444	-1204	1444	1174
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	-5.0	7.9	-355	123	-363	-625	1889	-686
3.3	-13.1	-5.0	8.0	-223	-13	-333	-689	863	-82
6.6	-9.8	-5.0	8.1	-145	-88	-284	-652	39	-35
9.8	-6.6	-5.0	8.1	-100	-97	-238	-552	-521	-145
13.1	-3.3	-5.0	8.1	-135	-57	-117	-453	-1280	-517
16.4	0.0	-5.0	8.1	-128	-31	-63	-388	-1405	-528
16.4	0.0	-5.0	8.1	-122	-23	-64	-363	-1319	-572
19.7	3.3	-5.0	8.1	-149	47	105	-330	-1344	-618
23.0	6.6	-5.0	8.1	-170	84	236	-426	-1179	-595
26.2	9.8	-5.0	8.1	-127	93	288	-518	-718	-372
29.5	13.1	-5.0	8.0	-59	86	331	-603	17	-47
32.8	16.4	-5.0	7.9	-12	53	367	-674	930	304
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	5.0	7.9	-19	51	-370	-675	963	-296
3.3	-13.1	5.0	8.0	-65	85	-331	-602	35	39
6.6	-9.8	5.0	8.1	-132	90	-283	-513	-734	374
9.8	-6.6	5.0	8.1	-174	80	-232	-425	-1206	603
13.1	-3.3	5.0	8.1	-147	43	-101	-331	-1375	627
16.4	0.0	5.0	8.1	-120	-25	64	-366	-1329	573
16.4	0.0	5.0	8.1	-124	-36	60	-395	-1457	538
19.7	3.3	5.0	8.1	-132	-61	117	-460	-1324	525
23.0	6.6	5.0	8.1	-104	-94	232	-552	-503	142
26.2	9.8	5.0	8.1	-150	-85	278	-651	61	32
29.5	13.1	5.0	8.0	-224	-14	335	-690	860	84
32.8	16.4	5.0	7.9	-361	126	366	-620	1885	695
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

20.2.3 Max/Min My

LB2: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-667	19	-535	-75	2672	-32
3.3	-13.1	0	8.0	-528	3	-324	-38	1336	-2
6.6	-9.8	0	8.1	-346	0	-185	18	547	-1
9.8	-6.6	0	8.1	-13	0	-38	12	154	1
13.1	-3.3	0	8.1	38	0	-12	-30	88	-1
16.4	0.0	0	8.1	34	0	11	23	49	-1
16.4	0.0	0	8.1	35	0	11	23	50	3
19.7	3.3	0	8.1	36	0	12	32	88	-1
23.0	6.6	0	8.1	-19	0	40	13	153	-1
26.2	9.8	0	8.1	-359	0	194	19	549	1
29.5	13.1	0	8.0	-541	-4	337	39	1338	0
32.8	16.4	0	7.9	-678	-19	538	76	2659	-33
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-400	145	-502	-302	2699	-479
3.3	-13.1	-5.0	8.0	-278	10	-322	-393	1449	131
6.6	-9.8	-5.0	8.1	-207	-48	-201	-339	631	152
9.8	-6.6	-5.0	8.1	-84	-29	-77	-283	182	53
13.1	-3.3	-5.0	8.1	18	-7	-15	-114	86	32
16.4	0.0	-5.0	8.1	22	-1	2	123	45	7
16.4	0.0	-5.0	8.1	22	6	8	-86	45	10
19.7	3.3	-5.0	8.1	18	7	15	109	85	32
23.0	6.6	-5.0	8.1	-88	31	81	287	182	52
26.2	9.8	-5.0	8.1	-209	49	207	348	635	150
29.5	13.1	-5.0	8.0	-279	-9	327	390	1452	131
32.8	16.4	-5.0	7.9	-402	-142	512	294	2685	-486
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	5.0	7.9	-400	-145	-502	302	2699	479
3.3	-13.1	5.0	8.0	-278	-10	-322	393	1449	-131
6.6	-9.8	5.0	8.1	-207	48	-201	339	631	-152
9.8	-6.6	5.0	8.1	-84	29	-77	283	182	-53
13.1	-3.3	5.0	8.1	18	7	-15	114	86	-32
16.4	0.0	5.0	8.1	22	1	2	-123	45	-7
16.4	0.0	5.0	8.1	22	-6	8	86	45	-10
19.7	3.3	5.0	8.1	18	-7	15	-109	85	-32
23.0	6.6	5.0	8.1	-88	-31	81	-287	182	-52
26.2	9.8	5.0	8.1	-209	-49	207	-348	635	-150
29.5	13.1	5.0	8.0	-279	9	327	-390	1452	-131
32.8	16.4	5.0	7.9	-402	142	512	-294	2685	486
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	26	-1	5	1	-181	-1
3.3	-13.1	0	8.0	-139	-4	-368	27	-937	-20
6.6	-9.8	0	8.1	-168	-1	-214	10	-1643	-16
9.8	-6.6	0	8.1	-219	0	-159	37	-2162	-12
13.1	-3.3	0	8.1	-262	0	-77	13	-2548	10
16.4	0.0	0	8.1	-261	0	16	-31	-2708	-12
16.4	0.0	0	8.1	-261	0	-7	24	-2701	-11
19.7	3.3	0	8.1	-264	0	79	10	-2544	-10
23.0	6.6	0	8.1	-227	-9	180	-3	-2144	-9
26.2	9.8	0	8.1	-171	-1	198	10	-1623	16
29.5	13.1	0	8.0	-126	-3	323	18	-929	20
32.8	16.4	0	7.9	27	1	-13	2	-183	-1
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	44	-21	15	93	-235	75
3.3	-13.1	-5.0	8.0	-35	-71	-351	20	-1038	-255
6.6	-9.8	-5.0	8.1	-44	-81	-213	-91	-1759	-420
9.8	-6.6	-5.0	8.1	-78	-63	-161	-86	-2311	-618
13.1	-3.3	-5.0	8.1	-109	-56	-86	-104	-2714	-779
16.4	0.0	-5.0	8.1	-109	-18	11	-44	-2876	-834
16.4	0.0	-5.0	8.1	-109	11	-4	27	-2872	-835
19.7	3.3	-5.0	8.1	-108	48	85	89	-2709	-780
23.0	6.6	-5.0	8.1	-77	63	167	51	-2294	-618
26.2	9.8	-5.0	8.1	-40	73	194	79	-1742	-419
29.5	13.1	-5.0	8.0	-31	66	312	-21	-1033	-249
32.8	16.4	-5.0	7.9	45	21	-18	-88	-238	75
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: LM1

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	5.0	7.9	44	21	15	-93	-235	-75
3.3	-13.1	5.0	8.0	-35	71	-351	-20	-1038	255
6.6	-9.8	5.0	8.1	-44	81	-213	91	-1759	420
9.8	-6.6	5.0	8.1	-78	63	-161	86	-2311	618
13.1	-3.3	5.0	8.1	-109	56	-86	104	-2714	779
16.4	0.0	5.0	8.1	-109	18	11	44	-2876	834
16.4	0.0	5.0	8.1	-109	-11	-4	-27	-2872	835
19.7	3.3	5.0	8.1	-108	-48	85	-89	-2709	780
23.0	6.6	5.0	8.1	-77	-63	167	-51	-2294	618
26.2	9.8	5.0	8.1	-40	-73	194	-79	-1742	419
29.5	13.1	5.0	8.0	-31	-66	312	21	-1033	249
32.8	16.4	5.0	7.9	45	-21	-18	88	-238	-75
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

21. Result UTM 3

21.1 Diagram

Diagram – Max/Min Fz:

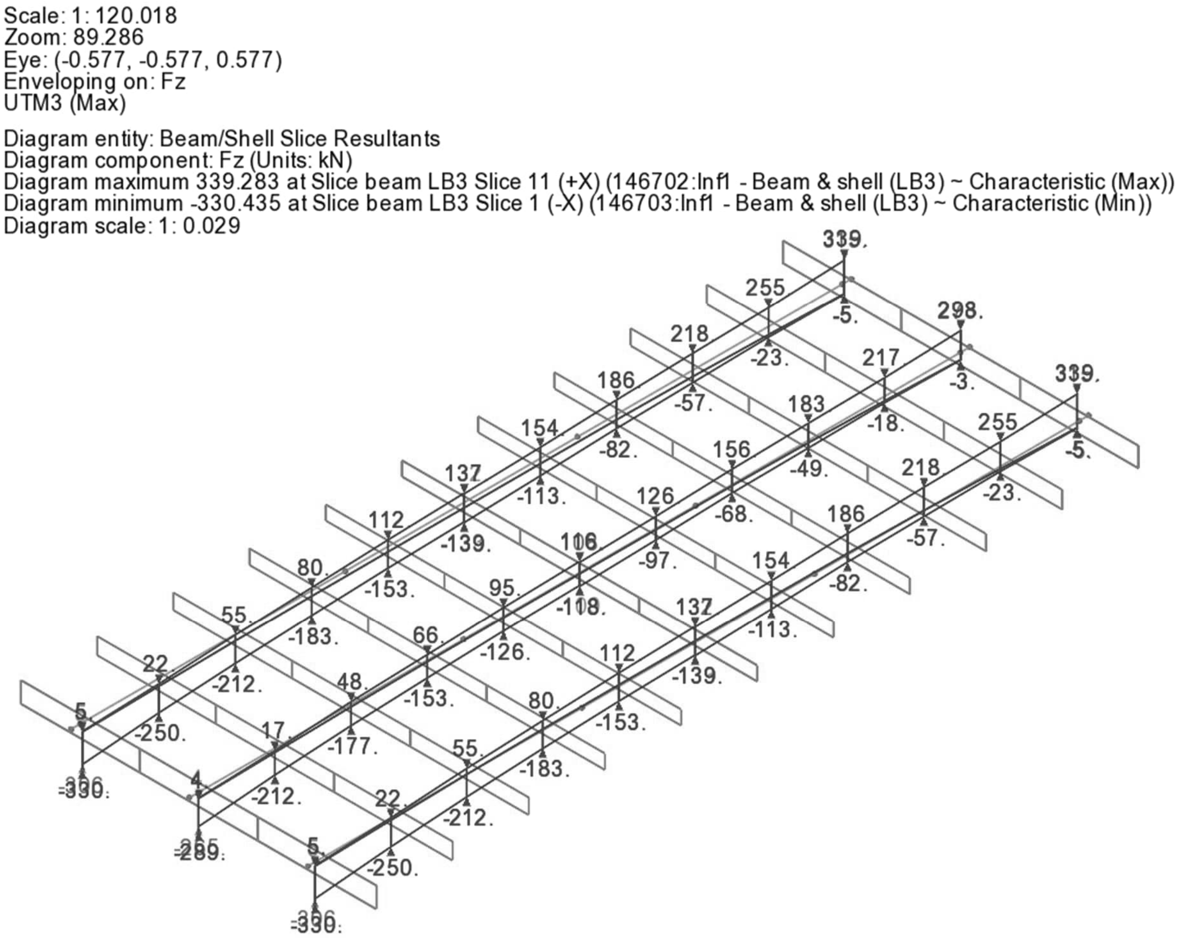


Diagram – Max/Min Mx:

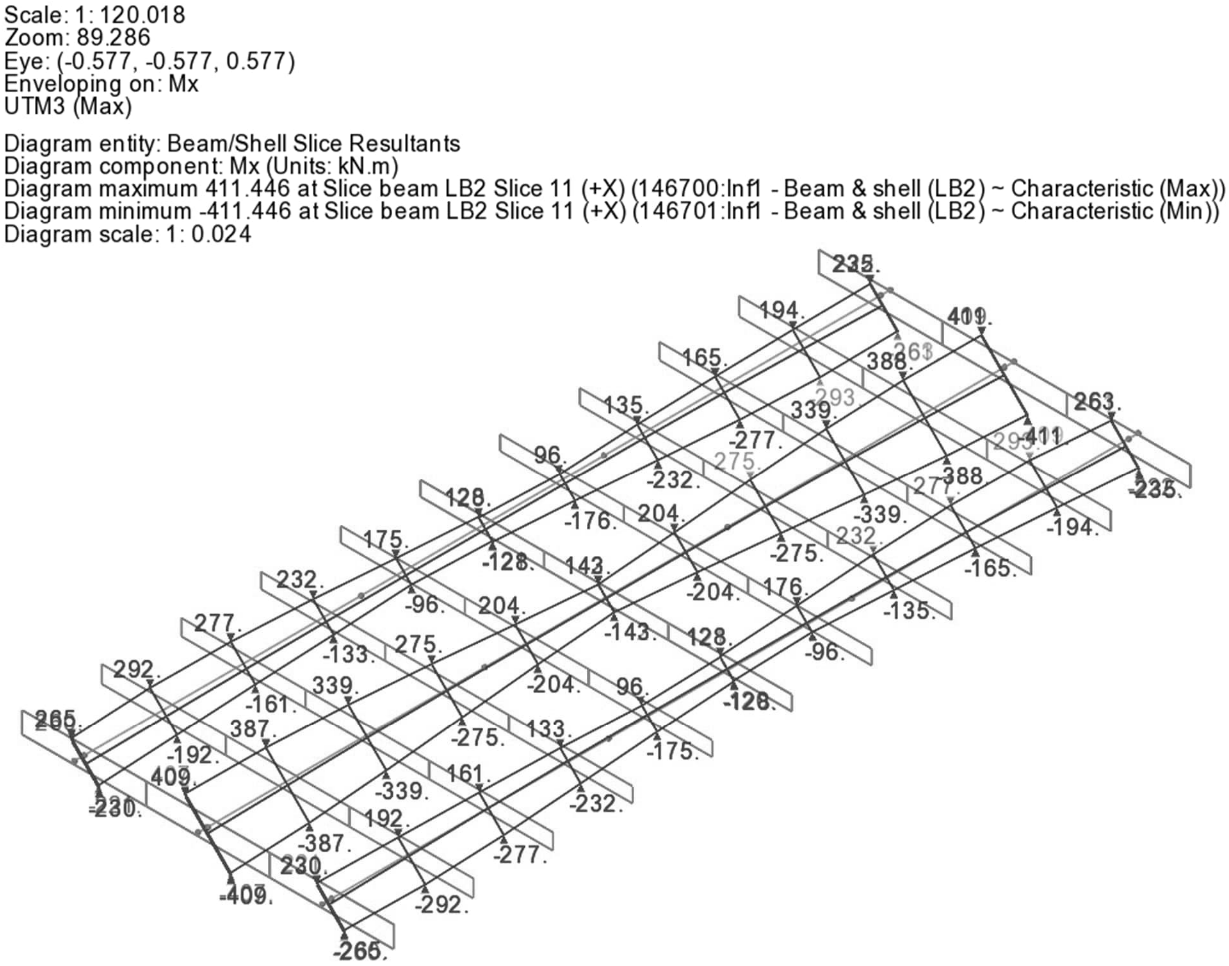
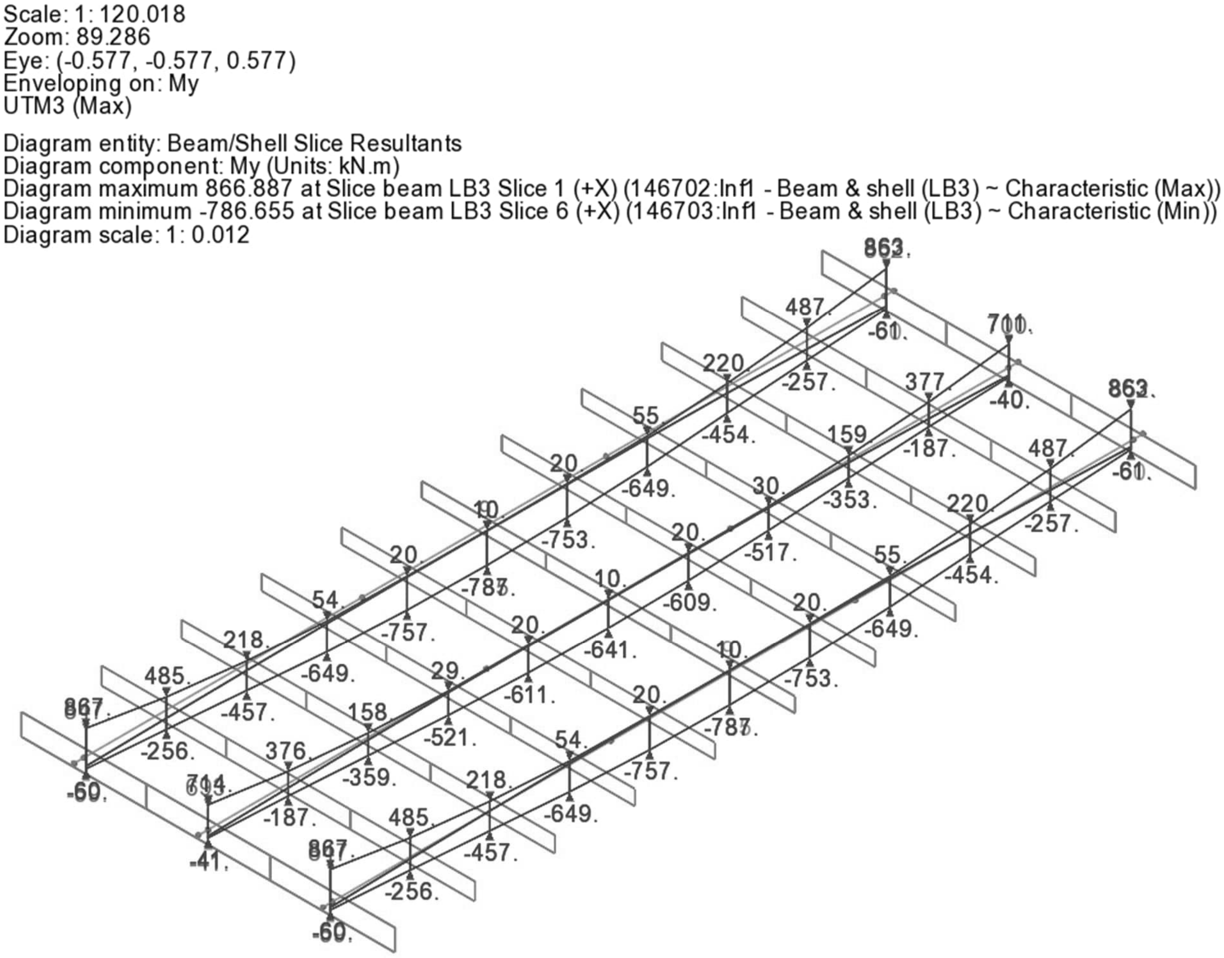


Diagram – Max/Min My:



21.2 Tabell

21.2.1 Max/Min Fz

LB2: UTM3

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	0	8.0	6	3	4	27	-41	29
3.3	-13.1	0	8.0	-7	1	17	-17	-105	-26
6.6	-9.8	0	8.1	-3	6	48	-42	-265	-55
9.8	-6.6	0	8.1	-18	10	67	-49	-389	-64
13.1	-3.3	0	8.1	-41	9	95	-86	-555	-82
16.4	0.0	0	8.1	-55	9	116	-116	-567	-73
16.4	0.0	0	8.1	-59	12	108	-106	-553	-85
19.7	3.3	0	8.1	-73	12	126	-134	-498	-69
23.0	6.6	0	8.1	-86	10	156	-176	-475	-74
26.2	9.8	0	8.1	-112	13	183	-203	-284	-52
29.5	13.1	0	8.0	-143	19	217	-221	-3	-8
32.8	16.4	0	7.9	-146	33	274	-235	450	117
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: UTM3

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	12	-5	5	28	-61	22
3.3	-13.1	-5.0	8.0	3	-1	22	6	-155	-13
6.6	-9.8	-5.0	8.1	12	-7	56	-3	-352	-27
9.8	-6.6	-5.0	8.1	11	4	80	8	-495	-78
13.1	-3.3	-5.0	8.1	5	14	112	33	-687	-125
16.4	0.0	-5.0	8.1	-3	26	137	81	-690	-142
16.4	0.0	-5.0	8.1	-6	30	132	98	-682	-128
19.7	3.3	-5.0	8.1	-16	40	154	150	-608	-125
23.0	6.6	-5.0	8.1	-24	47	186	194	-577	-95
26.2	9.8	-5.0	8.1	-41	48	219	235	-341	-56
29.5	13.1	-5.0	8.0	-69	26	255	227	-4	-77
32.8	16.4	-5.0	7.9	-101	-15	315	131	502	-225
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: UTM3

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	5.0	7.9	12	5	5	-28	-61	-22
3.3	-13.1	5.0	8.0	3	1	22	-6	-155	13
6.6	-9.8	5.0	8.1	12	7	56	3	-352	27
9.8	-6.6	5.0	8.1	11	-4	80	-8	-495	78
13.1	-3.3	5.0	8.1	5	-14	112	-33	-687	125
16.4	0.0	5.0	8.1	-3	-26	137	-81	-690	142
16.4	0.0	5.0	8.1	-6	-30	132	-98	-682	128
19.7	3.3	5.0	8.1	-16	-40	154	-150	-608	125
23.0	6.6	5.0	8.1	-24	-47	186	-194	-577	95
26.2	9.8	5.0	8.1	-41	-48	219	-235	-341	56
29.5	13.1	5.0	8.0	-69	-26	255	-227	-4	77
32.8	16.4	5.0	7.9	-101	15	315	-131	502	225
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: UTM3

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	0	8.0	-141	-32	-265	227	446	113
3.3	-13.1	0	8.0	-137	-18	-212	216	-13	-8
6.6	-9.8	0	8.1	-106	-13	-178	198	-296	-53
9.8	-6.6	0	8.1	-82	-10	-153	173	-484	-76
13.1	-3.3	0	8.1	-72	-12	-126	133	-507	-71
16.4	0.0	0	8.1	-60	-11	-109	107	-562	-87
16.4	0.0	0	8.1	-56	-9	-118	118	-577	-75
19.7	3.3	0	8.1	-43	-8	-97	87	-565	-83
23.0	6.6	0	8.1	-21	-10	-68	50	-397	-65
26.2	9.8	0	8.1	-6	-6	-49	43	-272	-57
29.5	13.1	0	8.0	-6	-1	-18	18	-112	-28
32.8	16.4	0	7.9	6	-3	-4	-30	-40	33
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: UTM3

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-98	15	-306	-128	495	-220
3.3	-13.1	-5.0	8.0	-67	-26	-250	-224	-17	-77
6.6	-9.8	-5.0	8.1	-39	-48	-213	-234	-356	-57
9.8	-6.6	-5.0	8.1	-23	-46	-183	-193	-590	-95
13.1	-3.3	-5.0	8.1	-16	-40	-154	-148	-620	-126
16.4	0.0	-5.0	8.1	-6	-30	-133	-96	-694	-129
16.4	0.0	-5.0	8.1	-3	-25	-139	-78	-701	-143
19.7	3.3	-5.0	8.1	4	-14	-113	-31	-698	-126
23.0	6.6	-5.0	8.1	11	-3	-82	-5	-504	-79
26.2	9.8	-5.0	8.1	11	8	-57	6	-361	-28
29.5	13.1	-5.0	8.0	3	1	-23	-4	-164	-14
32.8	16.4	-5.0	7.9	12	5	-5	-27	-61	22
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: UTM3

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	5.0	7.9	-98	-15	-306	128	495	220
3.3	-13.1	5.0	8.0	-67	26	-250	224	-17	77
6.6	-9.8	5.0	8.1	-39	48	-213	234	-356	57
9.8	-6.6	5.0	8.1	-23	46	-183	193	-590	95
13.1	-3.3	5.0	8.1	-16	40	-154	148	-620	126
16.4	0.0	5.0	8.1	-6	30	-133	96	-694	129
16.4	0.0	5.0	8.1	-3	25	-139	78	-701	143
19.7	3.3	5.0	8.1	4	14	-113	31	-698	126
23.0	6.6	5.0	8.1	11	3	-82	5	-504	79
26.2	9.8	5.0	8.1	11	-8	-57	-6	-361	28
29.5	13.1	5.0	8.0	3	-1	-23	4	-164	14
32.8	16.4	5.0	7.9	12	-5	-5	27	-61	-22
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

21.2.2 Max/Min Mx

LB2: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	0	8.0	-72	3	-106	407	496	424
3.3	-13.1	0	8.0	-89	-8	-100	387	186	141
6.6	-9.8	0	8.1	-101	-17	-87	339	-70	-1
9.8	-6.6	0	8.1	-106	-19	-70	275	-217	-67
13.1	-3.3	0	8.1	-103	-17	-52	204	-288	-84
16.4	0.0	0	8.1	-94	-15	-37	142	-317	-114
16.4	0.0	0	8.1	-93	-15	37	143	-313	112
19.7	3.3	0	8.1	-107	-18	53	204	-305	95
23.0	6.6	0	8.1	-110	-20	71	275	-232	76
26.2	9.8	0	8.1	-101	-17	87	339	-65	-1
29.5	13.1	0	8.0	-88	-10	101	388	172	-136
32.8	16.4	0	7.9	-72	2	106	409	496	-432
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	-5.0	7.9	-17	-38	-142	221	277	48
3.3	-13.1	-5.0	8.0	-22	-35	-129	192	-17	-56
6.6	-9.8	-5.0	8.1	-39	-35	-115	161	-242	-132
9.8	-6.6	-5.0	8.1	-52	-31	-98	133	-410	-197
13.1	-3.3	-5.0	8.1	-56	-30	-79	96	-459	-214
16.4	0.0	-5.0	8.1	-20	28	65	121	-274	-90
16.4	0.0	-5.0	8.1	-23	30	69	128	-307	-75
19.7	3.3	-5.0	8.1	-36	40	95	176	-285	-83
23.0	6.6	-5.0	8.1	-53	48	122	232	-183	-49
26.2	9.8	-5.0	8.1	-73	44	146	277	40	-14
29.5	13.1	-5.0	8.0	-107	11	161	293	402	-41
32.8	16.4	-5.0	7.9	-167	-51	163	263	862	-299
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	5.0	7.9	-165	-52	-158	265	867	292
3.3	-13.1	5.0	8.0	-105	11	-162	292	394	42
6.6	-9.8	5.0	8.1	-72	44	-147	277	29	16
9.8	-6.6	5.0	8.1	-52	49	-123	232	-191	50
13.1	-3.3	5.0	8.1	-36	40	-96	176	-292	84
16.4	0.0	5.0	8.1	-23	30	-70	128	-313	76
16.4	0.0	5.0	8.1	-21	27	-61	120	-250	85
19.7	3.3	5.0	8.1	-55	-31	79	96	-453	211
23.0	6.6	5.0	8.1	-51	-31	100	135	-404	195
26.2	9.8	5.0	8.1	-37	-35	117	165	-236	131
29.5	13.1	5.0	8.0	-21	-36	131	194	-12	56
32.8	16.4	5.0	7.9	-15	-40	143	222	254	-49
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	0	8.0	-72	-3	-106	-407	496	-424
3.3	-13.1	0	8.0	-89	8	-100	-387	186	-141
6.6	-9.8	0	8.1	-101	17	-87	-339	-70	1
9.8	-6.6	0	8.1	-106	19	-70	-275	-217	67
13.1	-3.3	0	8.1	-103	17	-52	-204	-288	84
16.4	0.0	0	8.1	-94	15	-37	-142	-317	114
16.4	0.0	0	8.1	-93	15	37	-143	-313	-112
19.7	3.3	0	8.1	-107	18	53	-204	-305	-95
23.0	6.6	0	8.1	-110	20	71	-275	-232	-76
26.2	9.8	0	8.1	-101	17	87	-339	-65	1
29.5	13.1	0	8.0	-88	10	101	-388	172	136
32.8	16.4	0	7.9	-72	-2	106	-409	496	432
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	-5.0	7.9	-165	52	-158	-265	867	-292
3.3	-13.1	-5.0	8.0	-105	-11	-162	-292	394	-42
6.6	-9.8	-5.0	8.1	-72	-44	-147	-277	29	-16
9.8	-6.6	-5.0	8.1	-52	-49	-123	-232	-191	-50
13.1	-3.3	-5.0	8.1	-36	-40	-96	-176	-292	-84
16.4	0.0	-5.0	8.1	-23	-30	-70	-128	-313	-76
16.4	0.0	-5.0	8.1	-21	-27	-61	-120	-250	-85
19.7	3.3	-5.0	8.1	-55	31	79	-96	-453	-211
23.0	6.6	-5.0	8.1	-51	31	100	-135	-404	-195
26.2	9.8	-5.0	8.1	-37	35	117	-165	-236	-131
29.5	13.1	-5.0	8.0	-21	36	131	-194	-12	-56
32.8	16.4	-5.0	7.9	-15	40	143	-222	254	49
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	5.0	7.9	-17	38	-142	-221	277	-48
3.3	-13.1	5.0	8.0	-22	35	-129	-192	-17	56
6.6	-9.8	5.0	8.1	-39	35	-115	-161	-242	132
9.8	-6.6	5.0	8.1	-52	31	-98	-133	-410	197
13.1	-3.3	5.0	8.1	-56	30	-79	-96	-459	214
16.4	0.0	5.0	8.1	-20	-28	65	-121	-274	90
16.4	0.0	5.0	8.1	-23	-30	69	-128	-307	75
19.7	3.3	5.0	8.1	-36	-40	95	-176	-285	83
23.0	6.6	5.0	8.1	-53	-48	122	-232	-183	49
26.2	9.8	5.0	8.1	-73	-44	146	-277	40	14
29.5	13.1	5.0	8.0	-107	-11	161	-293	402	41
32.8	16.4	5.0	7.9	-167	51	163	-263	862	299
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

21.2.3 Max/Min My

LB2: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-205	-9	-135	176	714	151
3.3	-13.1	0	8.0	-167	-2	-88	133	376	47
6.6	-9.8	0	8.1	-117	-1	-56	93	158	18
9.8	-6.6	0	8.1	10	0	-3	34	29	0
13.1	-3.3	0	8.1	8	0	-3	32	20	1
16.4	0.0	0	8.1	7	0	3	32	10	-2
16.4	0.0	0	8.1	7	0	3	32	10	3
19.7	3.3	0	8.1	8	0	3	33	20	-1
23.0	6.6	0	8.1	10	0	3	35	30	0
26.2	9.8	0	8.1	-118	1	56	-92	159	18
29.5	13.1	0	8.0	-168	2	88	-133	377	46
32.8	16.4	0	7.9	-212	10	140	-180	711	156
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-165	52	-158	-265	867	-292
3.3	-13.1	-5.0	8.0	-108	7	-103	-258	485	2
6.6	-9.8	-5.0	8.1	-79	-16	-72	-213	218	36
9.8	-6.6	-5.0	8.1	-46	-14	-38	-145	55	10
13.1	-3.3	-5.0	8.1	4	-2	-4	-35	20	7
16.4	0.0	-5.0	8.1	4	-2	-2	30	9	1
16.4	0.0	-5.0	8.1	4	2	2	-31	10	1
19.7	3.3	-5.0	8.1	4	2	4	33	20	8
23.0	6.6	-5.0	8.1	-46	14	38	144	55	9
26.2	9.8	-5.0	8.1	-78	16	71	211	220	36
29.5	13.1	-5.0	8.0	-109	-6	107	264	487	-1
32.8	16.4	-5.0	7.9	-167	-53	156	263	863	-295
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	5.0	7.9	-165	-52	-158	265	867	292
3.3	-13.1	5.0	8.0	-108	-7	-103	258	485	-2
6.6	-9.8	5.0	8.1	-79	16	-72	213	218	-36
9.8	-6.6	5.0	8.1	-46	14	-38	145	55	-10
13.1	-3.3	5.0	8.1	4	2	-4	35	20	-7
16.4	0.0	5.0	8.1	4	2	-2	-30	9	-1
16.4	0.0	5.0	8.1	4	-2	2	31	10	-1
19.7	3.3	5.0	8.1	4	-2	4	-33	20	-8
23.0	6.6	5.0	8.1	-46	-14	38	-144	55	-9
26.2	9.8	5.0	8.1	-78	-16	71	-211	220	-36
29.5	13.1	5.0	8.0	-109	6	107	-264	487	1
32.8	16.4	5.0	7.9	-167	53	156	-263	863	295
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB2: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	6	1	4	6	-42	7
3.3	-13.1	0	8.0	-17	-8	-70	46	-187	-45
6.6	-9.8	0	8.1	-95	7	-98	-129	-359	60
9.8	-6.6	0	8.1	-75	-3	-74	109	-521	-80
13.1	-3.3	0	8.1	-43	-1	2	-9	-611	-89
16.4	0.0	0	8.1	-53	-1	20	-37	-641	-90
16.4	0.0	0	8.1	-55	3	10	-21	-641	-94
19.7	3.3	0	8.1	-44	-1	-14	19	-610	-89
23.0	6.6	0	8.1	-33	3	75	-73	-518	-84
26.2	9.8	0	8.1	-96	4	80	-113	-353	-60
29.5	13.1	0	8.0	-18	9	79	-54	-187	-47
32.8	16.4	0	7.9	6	-1	-3	-7	-40	8
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	12	-5	5	28	-61	22
3.3	-13.1	-5.0	8.0	-1	-11	-80	-12	-256	-23
6.6	-9.8	-5.0	8.1	9	-18	-53	-33	-457	-44
9.8	-6.6	-5.0	8.1	8	-15	-103	-42	-650	-103
13.1	-3.3	-5.0	8.1	6	2	2	7	-757	-139
16.4	0.0	-5.0	8.1	0	13	26	58	-785	-154
16.4	0.0	-5.0	8.1	-2	20	20	78	-787	-143
19.7	3.3	-5.0	8.1	5	-5	-17	-15	-754	-136
23.0	6.6	-5.0	8.1	9	12	82	33	-649	-101
26.2	9.8	-5.0	8.1	7	19	63	36	-454	-45
29.5	13.1	-5.0	8.0	-1	11	90	13	-257	-24
32.8	16.4	-5.0	7.9	12	5	-5	-27	-61	22
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: UTM3

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	5.0	7.9	12	5	5	-28	-61	-22
3.3	-13.1	5.0	8.0	-1	11	-80	12	-256	23
6.6	-9.8	5.0	8.1	9	18	-53	33	-457	44
9.8	-6.6	5.0	8.1	8	15	-103	42	-650	103
13.1	-3.3	5.0	8.1	6	-2	2	-7	-757	139
16.4	0.0	5.0	8.1	0	-13	26	-58	-785	154
16.4	0.0	5.0	8.1	-2	-20	20	-78	-787	143
19.7	3.3	5.0	8.1	5	5	-17	15	-754	136
23.0	6.6	5.0	8.1	9	-12	82	-33	-649	101
26.2	9.8	5.0	8.1	7	-19	63	-36	-454	45
29.5	13.1	5.0	8.0	-1	-11	90	-13	-257	24
32.8	16.4	5.0	7.9	12	-5	-5	27	-61	-22
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

22. Result ULS-0

Diagram - Fz:

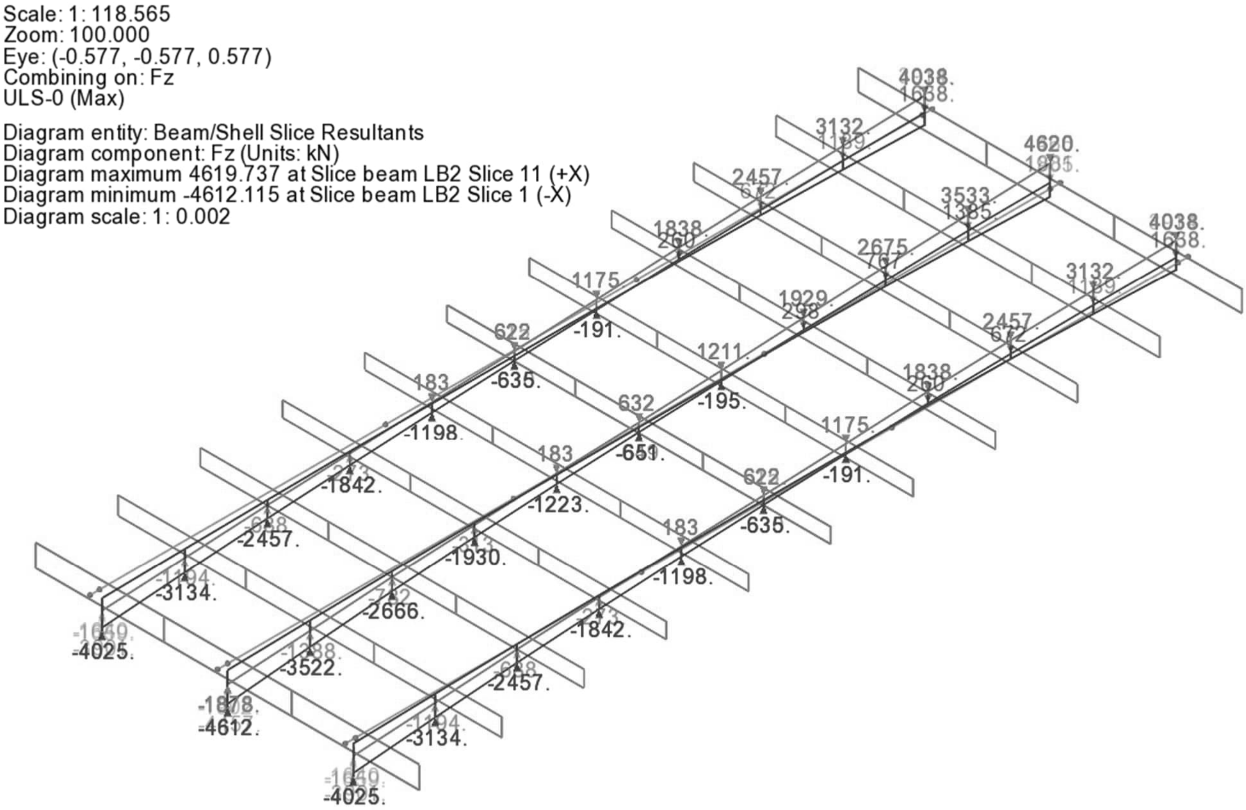
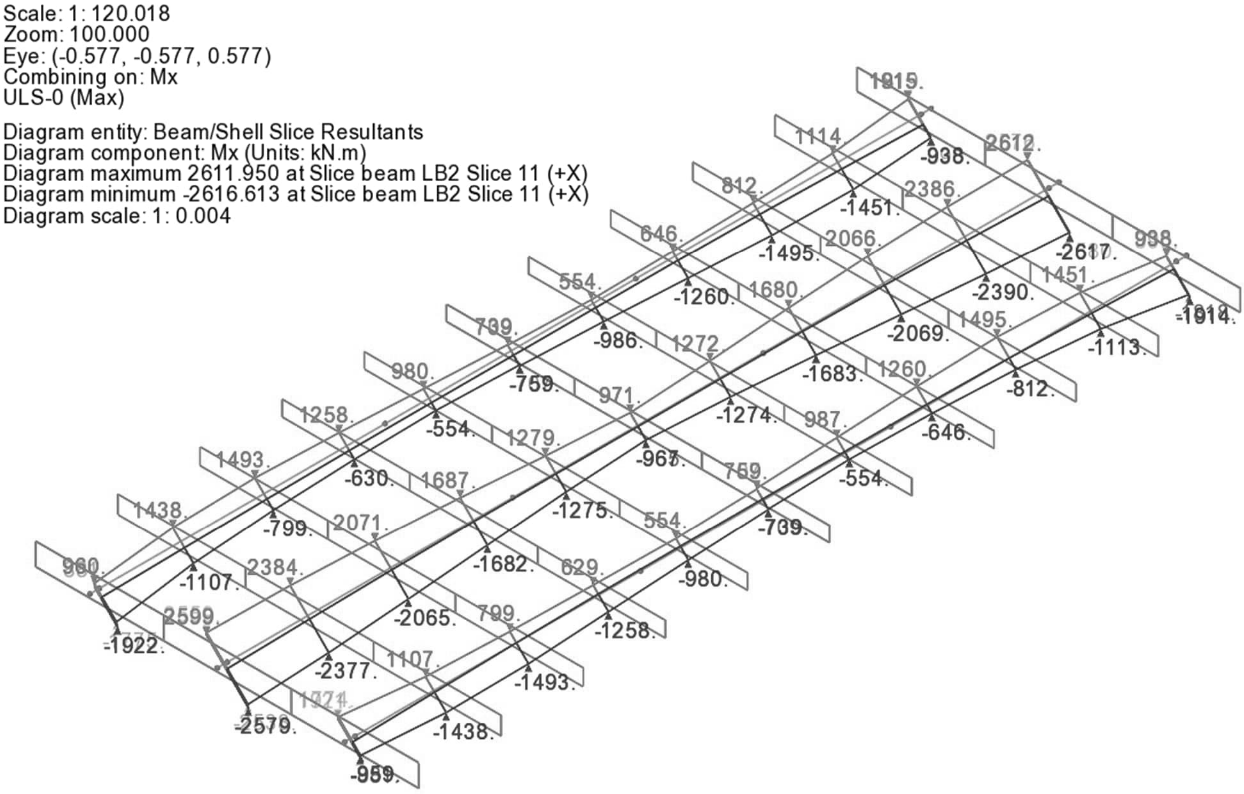


Diagram - Mx:

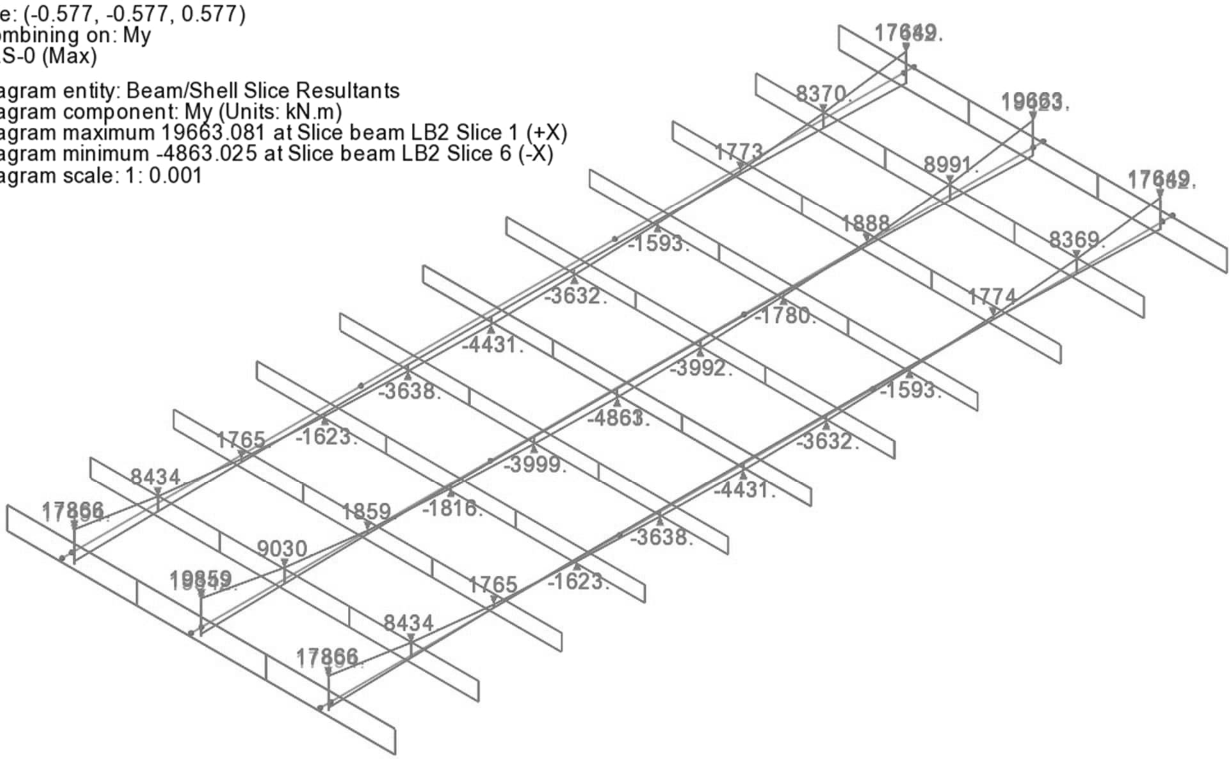


Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: Mx
ULS-0 (Max)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum 2611.950 at Slice beam LB2 Slice 11 (+X)
Diagram minimum -2616.613 at Slice beam LB2 Slice 11 (+X)
Diagram scale: 1: 0.004

Diagram - My:

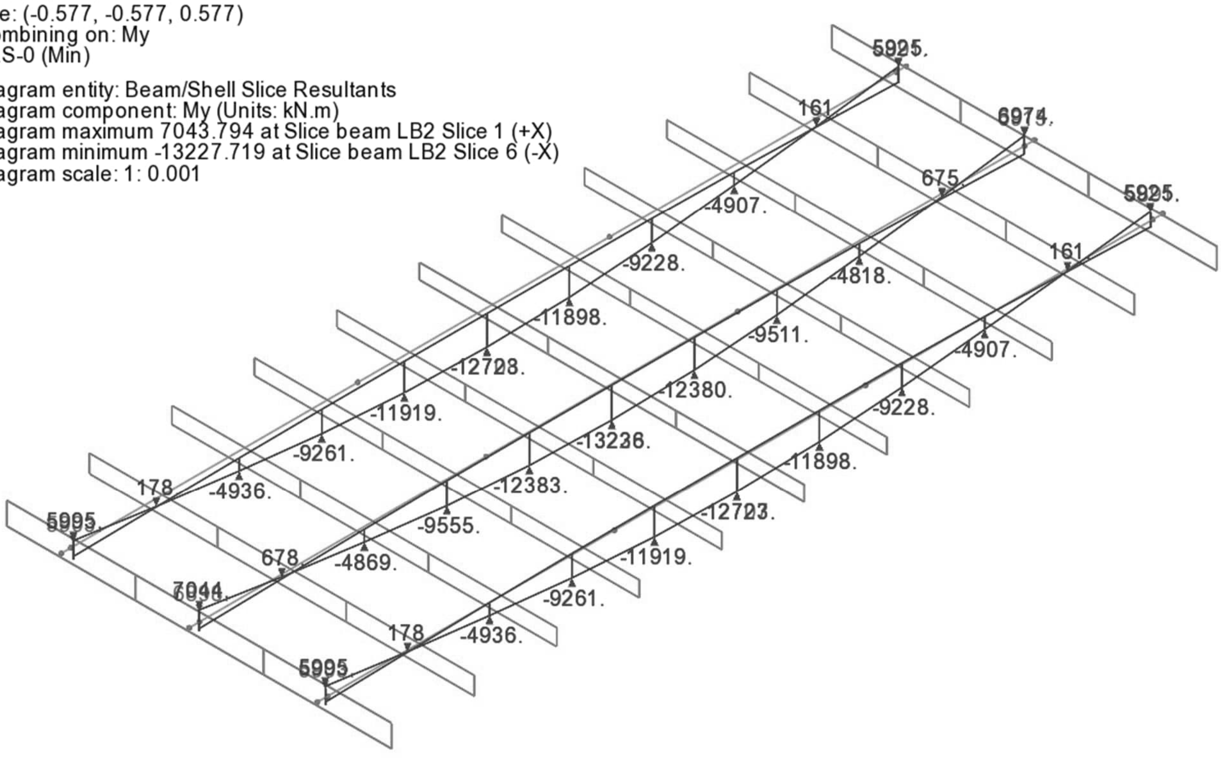
Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
ULS-0 (Max)

Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 19663.081 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -4863.025 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001



Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
ULS-0 (Min)

Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 7043.794 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -13227.719 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001



22.1 Table – Max Fz

LB2: ULS-0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	0	8.0	-1637	88	-1878	80	7047	10
3.3	-13.1	0	8.0	-1857	70	-1388	-15	1304	8
6.6	-9.8	0	8.1	-1964	57	-782	-66	-3503	28
9.8	-6.6	0	8.1	-2132	42	-313	-58	-6707	34
13.1	-3.3	0	8.1	-2312	23	183	-101	-9010	35
16.4	0.0	0	8.1	-2411	6	632	-114	-9458	46
16.4	0.0	0	8.1	-4238	4	632	-80	-11210	45
19.7	3.3	0	8.1	-4260	-15	1211	-87	-9897	53
23.0	6.6	0	8.1	-4424	-34	1929	-53	-6531	-10
26.2	9.8	0	8.1	-4606	-53	2675	-98	-772	19
29.5	13.1	0	8.0	-4975	-72	3533	-126	7583	60
32.8	16.4	0	7.9	-5042	-92	4465	-114	18872	89
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: ULS-0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-2215	491	-1640	314	6796	-112
3.3	-13.1	-5.0	8.0	-2277	-60	-1194	-44	1618	414
6.6	-9.8	-5.0	8.1	-2404	-313	-688	-315	-3011	-741
9.8	-6.6	-5.0	8.1	-2443	-244	-273	-234	-5894	-1965
13.1	-3.3	-5.0	8.1	-2491	-63	183	-145	-8067	-2887
16.4	0.0	-5.0	8.1	-2568	133	615	42	-8476	-3109
16.4	0.0	-5.0	8.1	-1385	195	622	125	-11426	-4453
19.7	3.3	-5.0	8.1	-1508	484	1175	301	-10183	-3954
23.0	6.6	-5.0	8.1	-1774	801	1838	656	-6871	-2521
26.2	9.8	-5.0	8.1	-1942	803	2457	801	-1517	-451
29.5	13.1	-5.0	8.0	-2096	266	3132	551	6059	963
32.8	16.4	-5.0	7.9	-2210	-818	3914	-495	15603	-625
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: ULS-0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	-2215	-491	-1640	-314	6796	112
3.3	-13.1	5.0	8.0	-2277	60	-1194	44	1618	-414
6.6	-9.8	5.0	8.1	-2404	313	-688	315	-3011	741
9.8	-6.6	5.0	8.1	-2443	244	-273	234	-5894	1965
13.1	-3.3	5.0	8.1	-2491	63	183	145	-8067	2887
16.4	0.0	5.0	8.1	-2568	-133	615	-42	-8476	3109
16.4	0.0	5.0	8.1	-1385	-195	622	-125	-11426	4453
19.7	3.3	5.0	8.1	-1508	-484	1175	-301	-10183	3954
23.0	6.6	5.0	8.1	-1774	-801	1838	-656	-6871	2521
26.2	9.8	5.0	8.1	-1942	-803	2457	-801	-1517	451
29.5	13.1	5.0	8.0	-2096	-266	3132	-551	6059	-963
32.8	16.4	5.0	7.9	-2210	818	3914	495	15603	625
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

22.2 Table – Min Fz

LB2: ULS-0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	0	8.0	-5012	-74	-4457	62	19052	190
3.3	-13.1	0	8.0	-4939	-66	-3522	95	7597	27
6.6	-9.8	0	8.1	-4567	-69	-2666	79	-833	-57
9.8	-6.6	0	8.1	-4459	-48	-1930	49	-6625	-96
13.1	-3.3	0	8.1	-4454	-13	-1223	-50	-9663	9
16.4	0.0	0	8.1	-4223	-6	-649	83	-11286	-53
16.4	0.0	0	8.1	-2400	-3	-651	131	-9551	-41
19.7	3.3	0	8.1	-2310	13	-195	118	-9083	-48
23.0	6.6	0	8.1	-2145	31	298	71	-6756	-43
26.2	9.8	0	8.1	-1982	50	767	94	-3577	-37
29.5	13.1	0	8.0	-1848	70	1385	-11	1382	-10
32.8	16.4	0	7.9	-1640	77	1881	-32	6979	117
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: ULS-0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-2302	866	-3901	330	15950	-732
3.3	-13.1	-5.0	8.0	-2102	-264	-3134	-537	6079	972
6.6	-9.8	-5.0	8.1	-1949	-806	-2457	-803	-1551	-453
9.8	-6.6	-5.0	8.1	-1771	-792	-1842	-633	-7067	-2552
13.1	-3.3	-5.0	8.1	-1605	-524	-1198	-447	-9895	-3917
16.4	0.0	-5.0	8.1	-1380	-186	-635	-100	-11497	-4459
16.4	0.0	-5.0	8.1	-2564	-120	-630	-15	-8557	-3111
19.7	3.3	-5.0	8.1	-2487	77	-191	170	-8136	-2887
23.0	6.6	-5.0	8.1	-2441	252	260	253	-5942	-1975
26.2	9.8	-5.0	8.1	-2402	320	672	340	-3085	-755
29.5	13.1	-5.0	8.0	-2269	58	1189	35	1646	419
32.8	16.4	-5.0	7.9	-2205	-489	1638	-345	6718	-83
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: ULS-0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	-2302	-866	-3901	-330	15950	732
3.3	-13.1	5.0	8.0	-2102	264	-3134	537	6079	-972
6.6	-9.8	5.0	8.1	-1949	806	-2457	803	-1551	453
9.8	-6.6	5.0	8.1	-1771	792	-1842	633	-7067	2552
13.1	-3.3	5.0	8.1	-1605	524	-1198	447	-9895	3917
16.4	0.0	5.0	8.1	-1380	186	-635	100	-11497	4459
16.4	0.0	5.0	8.1	-2564	120	-630	15	-8557	3111
19.7	3.3	5.0	8.1	-2487	-77	-191	-170	-8136	2887
23.0	6.6	5.0	8.1	-2441	-252	260	-253	-5942	1975
26.2	9.8	5.0	8.1	-2402	-320	672	-340	-3085	755
29.5	13.1	5.0	8.0	-2269	-58	1189	-35	1646	-419
32.8	16.4	5.0	7.9	-2205	489	1638	345	6718	83
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

22.3 Table – Max Mx

LB2: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	0	8.0	-2562	63	-3041	2559	13142	2343
3.3	-13.1	0	8.0	-2683	9	-2449	2384	4691	726
6.6	-9.8	0	8.1	-3120	-36	-2167	2071	-2208	21
9.8	-6.6	0	8.1	-3305	-59	-1451	1687	-7632	-336
13.1	-3.3	0	8.1	-3311	-75	-757	1279	-9959	-427
16.4	0.0	0	8.1	-3224	-85	-182	971	-10506	-491
16.4	0.0	0	8.1	-3273	-94	42	971	-10782	196
19.7	3.3	0	8.1	-3310	-77	921	1272	-9360	412
23.0	6.6	0	8.1	-2659	-60	1310	1680	-5298	349
26.2	9.8	0	8.1	-2738	-37	1936	2066	-1080	-3
29.5	13.1	0	8.0	-2783	7	2547	2386	5366	-731
32.8	16.4	0	7.9	-2696	55	3155	2576	13902	-2381
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	-5.0	7.9	-2946	931	-3158	1774	15197	567
3.3	-13.1	-5.0	8.0	-2765	-90	-2118	1107	5361	1293
6.6	-9.8	-5.0	8.1	-2802	-481	-1502	799	-1941	-756
9.8	-6.6	-5.0	8.1	-2925	-447	-1037	629	-5578	-2368
13.1	-3.3	-5.0	8.1	-2811	-264	-464	554	-6464	-2773
16.4	0.0	-5.0	8.1	-2682	64	265	707	-7059	-2960
16.4	0.0	-5.0	8.1	-1417	101	208	759	-9959	-4050
19.7	3.3	-5.0	8.1	-1472	384	775	987	-9020	-3705
23.0	6.6	-5.0	8.1	-1571	671	1452	1260	-5546	-2125
26.2	9.8	-5.0	8.1	-1724	675	1956	1495	-571	-226
29.5	13.1	-5.0	8.0	-1714	239	2341	1451	4101	323
32.8	16.4	-5.0	7.9	-1733	-558	2317	938	9782	-1250
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0.0	-16.4	5.0	7.9	-1727	-557	-2329	960	9859	1239
3.3	-13.1	5.0	8.0	-1712	240	-2354	1438	4079	-323
6.6	-9.8	5.0	8.1	-1727	679	-1971	1493	-681	253
9.8	-6.6	5.0	8.1	-1586	671	-1439	1258	-5566	2160
13.1	-3.3	5.0	8.1	-1477	380	-763	980	-8968	3694
16.4	0.0	5.0	8.1	-1392	102	-294	739	-9291	3823
16.4	0.0	5.0	8.1	-2679	60	-252	709	-7005	2944
19.7	3.3	5.0	8.1	-2799	-278	485	554	-6791	2987
23.0	6.6	5.0	8.1	-2919	-455	1058	646	-5448	2317
26.2	9.8	5.0	8.1	-2797	-484	1520	812	-1848	729
29.5	13.1	5.0	8.0	-2745	-96	2121	1114	5257	-1265
32.8	16.4	5.0	7.9	-2943	922	3156	1819	15057	-589
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

22.4 Table – Min Mx

LB2: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	0	8.0	-4385	-70	-3581	-2538	16249	-2346
3.3	-13.1	0	8.0	-4447	-9	-2890	-2377	6289	-726
6.6	-9.8	0	8.1	-3938	36	-1849	-2065	-289	-21
9.8	-6.6	0	8.1	-3854	59	-1339	-1682	-4372	336
13.1	-3.3	0	8.1	-4024	75	-838	-1275	-7027	427
16.4	0.0	0	8.1	-3915	85	-346	-967	-7978	491
16.4	0.0	0	8.1	-3923	84	-159	-965	-8021	-118
19.7	3.3	0	8.1	-4009	77	669	-1274	-7522	-412
23.0	6.6	0	8.1	-4543	60	1486	-1683	-6483	-349
26.2	9.8	0	8.1	-4357	37	2094	-2069	-1359	3
29.5	13.1	0	8.0	-4368	-7	2805	-2390	5649	731
32.8	16.4	0	7.9	-4243	-55	3524	-2580	15063	2381
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	-5.0	7.9	-1727	557	-2329	-959	9859	-1239
3.3	-13.1	-5.0	8.0	-1712	-240	-2354	-1438	4079	323
6.6	-9.8	-5.0	8.1	-1727	-679	-1971	-1493	-681	-253
9.8	-6.6	-5.0	8.1	-1586	-671	-1439	-1258	-5566	-2160
13.1	-3.3	-5.0	8.1	-1477	-380	-763	-980	-8968	-3694
16.4	0.0	-5.0	8.1	-1392	-102	-294	-739	-9291	-3823
16.4	0.0	-5.0	8.1	-2679	-60	-252	-709	-7005	-2944
19.7	3.3	-5.0	8.1	-2799	278	485	-554	-6791	-2987
23.0	6.6	-5.0	8.1	-2919	455	1058	-646	-5448	-2317
26.2	9.8	-5.0	8.1	-2797	484	1520	-812	-1848	-729
29.5	13.1	-5.0	8.0	-2745	96	2121	-1113	5257	1265
32.8	16.4	-5.0	7.9	-2931	-924	3154	-1818	15051	592
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0.0	-16.4	5.0	7.9	-2957	-929	-3160	-1775	15204	-564
3.3	-13.1	5.0	8.0	-2765	90	-2118	-1107	5361	-1293
6.6	-9.8	5.0	8.1	-2802	481	-1502	-799	-1941	756
9.8	-6.6	5.0	8.1	-2925	447	-1037	-630	-5578	2368
13.1	-3.3	5.0	8.1	-2811	264	-464	-554	-6464	2773
16.4	0.0	5.0	8.1	-2682	-64	265	-707	-7059	2960
16.4	0.0	5.0	8.1	-1417	-101	208	-759	-9959	4050
19.7	3.3	5.0	8.1	-1469	-383	773	-986	-9018	3704
23.0	6.6	5.0	8.1	-1571	-671	1452	-1260	-5546	2125
26.2	9.8	5.0	8.1	-1724	-675	1956	-1495	-571	226
29.5	13.1	5.0	8.0	-1714	-239	2341	-1451	4101	-323
32.8	16.4	5.0	7.9	-1733	558	2317	-938	9782	1250
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

22.5 Table – Max My

LB2: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-5268	-82	-3962	101	19859	227
3.3	-13.1	0	8.0	-5019	-79	-2956	122	9030	44
6.6	-9.8	0	8.1	-4475	-54	-1512	59	1859	-15
9.8	-6.6	0	8.1	-4127	-37	-923	8	-1816	-34
13.1	-3.3	0	8.1	-3987	-18	-459	-33	-3999	-43
16.4	0.0	0	8.1	-4082	-1	42	1	-4863	-44
16.4	0.0	0	8.1	-4084	1	68	1	-4861	-44
19.7	3.3	0	8.1	-3991	18	460	34	-3992	-43
23.0	6.6	0	8.1	-4134	37	926	-8	-1780	-34
26.2	9.8	0	8.1	-4491	54	1520	-47	1888	-15
29.5	13.1	0	8.0	-5047	-80	2973	-135	8991	81
32.8	16.4	0	7.9	-5299	-107	3957	-160	19663	115
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-3671	1206	-3438	-80	17866	-1048
3.3	-13.1	-5.0	8.0	-3416	8	-2622	-870	8434	1513
6.6	-9.8	-5.0	8.1	-2990	-409	-1502	-932	1765	592
9.8	-6.6	-5.0	8.1	-3457	-369	-854	-386	-1623	-558
13.1	-3.3	-5.0	8.1	-3329	-216	-433	-246	-3638	-1467
16.4	0.0	-5.0	8.1	-3045	17	42	15	-4431	-1898
16.4	0.0	-5.0	8.1	-3050	46	64	23	-4431	-1892
19.7	3.3	-5.0	8.1	-3329	216	434	241	-3632	-1463
23.0	6.6	-5.0	8.1	-3455	369	854	383	-1593	-551
26.2	9.8	-5.0	8.1	-2986	410	1516	934	1774	588
29.5	13.1	-5.0	8.0	-3404	-8	2610	870	8369	1504
32.8	16.4	-5.0	7.9	-3645	-1198	3429	50	17649	-1072
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0.0	-16.4	5.0	7.9	-3671	-1206	-3438	80	17866	1048
3.3	-13.1	5.0	8.0	-3416	-8	-2622	870	8434	-1513
6.6	-9.8	5.0	8.1	-2990	409	-1502	932	1765	-592
9.8	-6.6	5.0	8.1	-3457	369	-854	386	-1623	558
13.1	-3.3	5.0	8.1	-3329	216	-433	246	-3638	1467
16.4	0.0	5.0	8.1	-3045	-17	42	-15	-4431	1898
16.4	0.0	5.0	8.1	-3050	-46	64	-23	-4431	1892
19.7	3.3	5.0	8.1	-3329	-216	434	-241	-3632	1463
23.0	6.6	5.0	8.1	-3455	-369	854	-383	-1593	551
26.2	9.8	5.0	8.1	-2986	-410	1516	-934	1773	-588
29.5	13.1	5.0	8.0	-3404	8	2610	-870	8370	-1504
32.8	16.4	5.0	7.9	-3645	1198	3429	-50	17649	1072
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

222.6 Table – Min My

LB2: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	-1636	82	-1889	24	7044	-53
3.3	-13.1	0	8.0	-2002	63	-2030	55	678	-14
6.6	-9.8	0	8.1	-2737	59	-1814	24	-4869	13
9.8	-6.6	0	8.1	-2952	41	-1179	61	-9555	26
13.1	-3.3	0	8.1	-3168	20	-532	22	-12383	61
16.4	0.0	0	8.1	-3157	1	-48	-46	-13236	32
16.4	0.0	0	8.1	-3154	-1	-46	35	-13228	32
19.7	3.3	0	8.1	-3174	-16	535	14	-12380	22
23.0	6.6	0	8.1	-2971	-45	1212	-8	-9511	19
26.2	9.8	0	8.1	-2751	-48	1793	8	-4818	52
29.5	13.1	0	8.0	-1988	64	1965	43	675	14
32.8	16.4	0	7.9	-1639	84	1884	30	6974	50
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: ULS-0

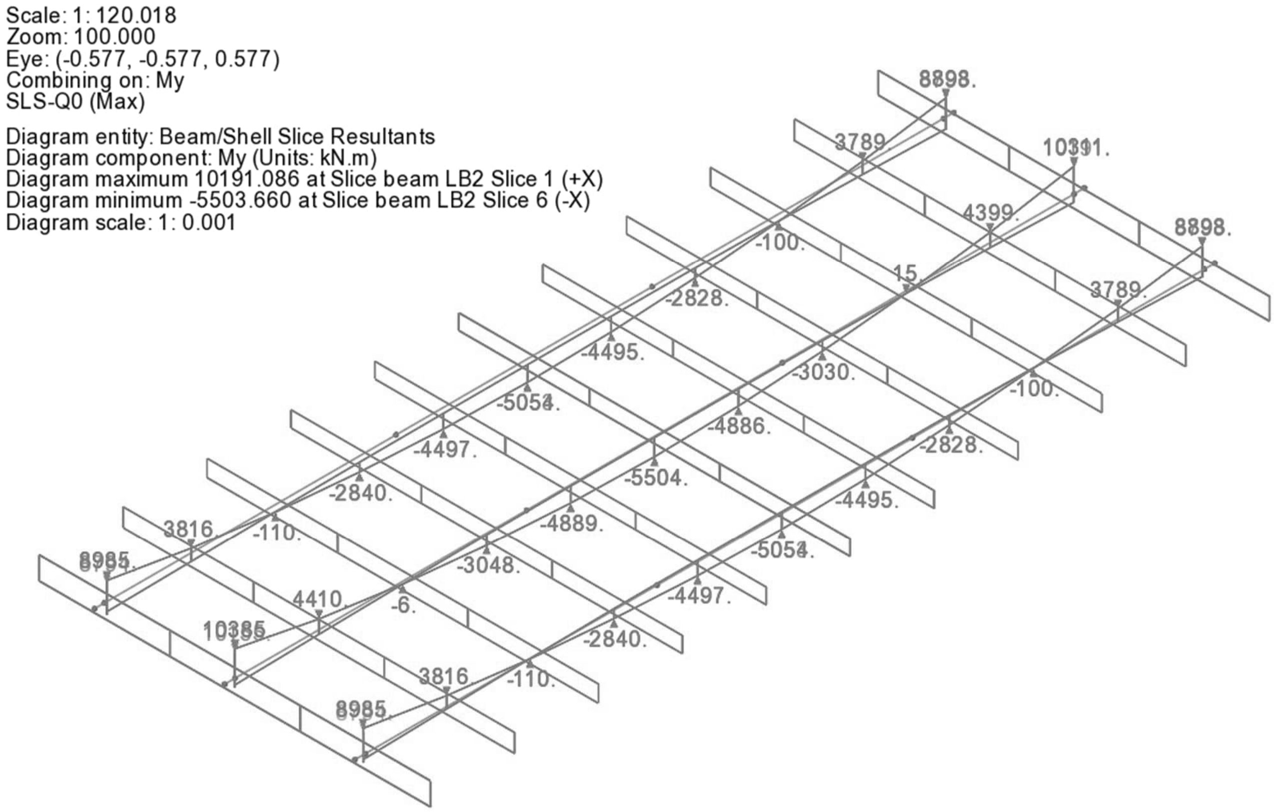
Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	-1020	295	-1659	229	5995	11
3.3	-13.1	-5.0	8.0	-1134	-292	-1829	-89	178	-58
6.6	-9.8	-5.0	8.1	-1456	-679	-1653	-377	-4936	-1399
9.8	-6.6	-5.0	8.1	-1433	-577	-1105	-290	-9261	-3249
13.1	-3.3	-5.0	8.1	-1420	-276	-420	-140	-11919	-4602
16.4	0.0	-5.0	8.1	-1678	-35	65	-1	-12723	-4897
16.4	0.0	-5.0	8.1	-1677	17	-10	229	-12707	-4879
19.7	3.3	-5.0	8.1	-1454	304	355	358	-11898	-4616
23.0	6.6	-5.0	8.1	-1426	576	1113	234	-9228	-3251
26.2	9.8	-5.0	8.1	-1444	666	1625	359	-4907	-1396
29.5	13.1	-5.0	8.0	-1124	285	1770	93	161	-51
32.8	16.4	-5.0	7.9	-1033	-294	1656	-276	5925	51
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

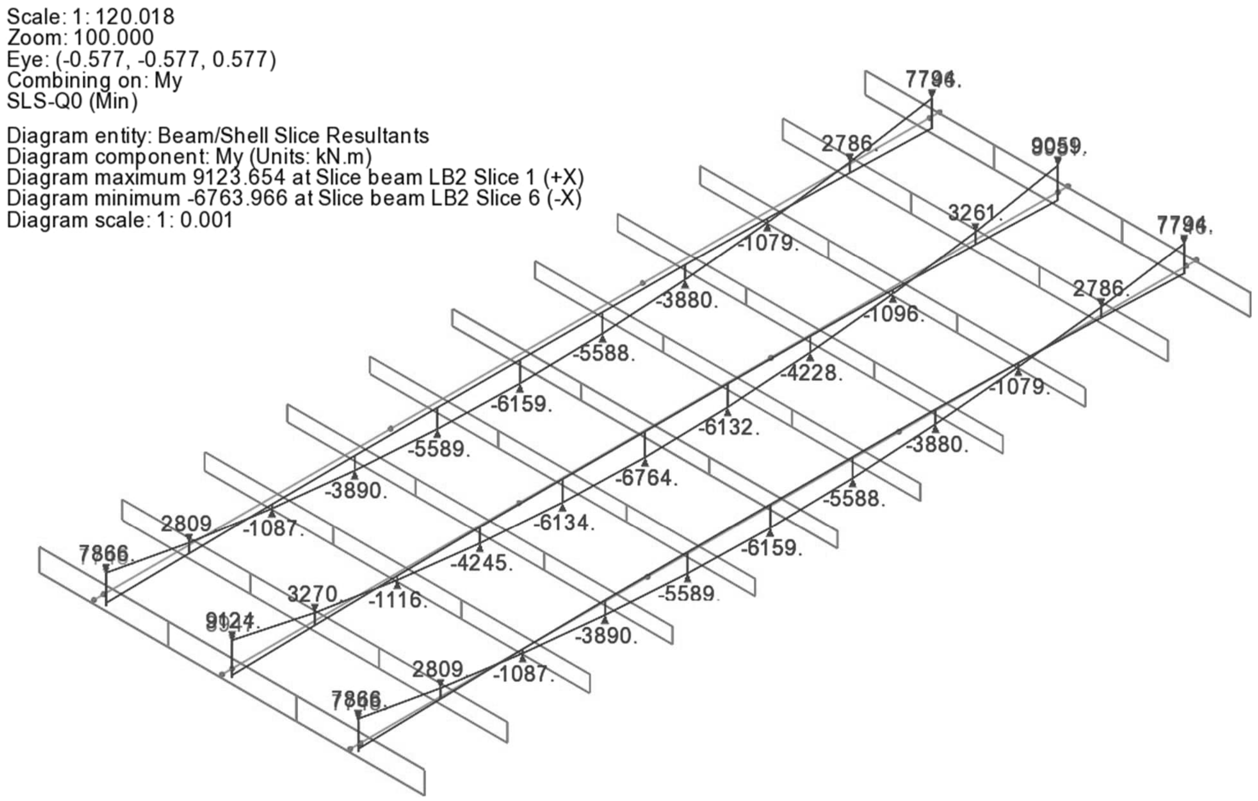
LB3: ULS-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0.0	-16.4	5.0	7.9	-1020	-295	-1659	-229	5995	-11
3.3	-13.1	5.0	8.0	-1134	292	-1829	89	178	58
6.6	-9.8	5.0	8.1	-1456	679	-1653	377	-4936	1399
9.8	-6.6	5.0	8.1	-1433	577	-1105	290	-9261	3249
13.1	-3.3	5.0	8.1	-1420	276	-420	140	-11919	4602
16.4	0.0	5.0	8.1	-1678	35	65	1	-12723	4897
16.4	0.0	5.0	8.1	-1677	-17	-10	-229	-12708	4879
19.7	3.3	5.0	8.1	-1454	-304	355	-358	-11898	4616
23.0	6.6	5.0	8.1	-1426	-576	1113	-234	-9228	3251
26.2	9.8	5.0	8.1	-1444	-666	1625	-359	-4907	1396
29.5	13.1	5.0	8.0	-1124	-285	1770	-93	161	51
32.8	16.4	5.0	7.9	-1033	294	1656	276	5925	-51
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

23. Result SLS-Q0

Diagram - My:





Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
SLS-Q0 (Min)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 9123.654 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -6763.966 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001

23.1 Table – Max My

LB2: SLS-Q0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-2089	0	-2103	0	10385	0
3.3	-13.1	0	8.0	-2103	0	-1642	0	4410	0
6.6	-9.8	0	8.1	-2014	0	-1157	0	-6	0
9.8	-6.6	0	8.1	-2070	0	-751	0	-3048	0
13.1	-3.3	0	8.1	-2163	0	-366	0	-4889	0
16.4	0.0	0	8.1	-2202	0	-13	0	-5504	0
16.4	0.0	0	8.1	-2202	0	14	0	-5504	0
19.7	3.3	0	8.1	-2165	0	367	0	-4887	0
23.0	6.6	0	8.1	-2075	0	753	0	-3030	0
26.2	9.8	0	8.1	-2023	0	1160	0	15	0
29.5	13.1	0	8.0	-2112	0	1646	0	4399	0
32.8	16.4	0	7.9	-2099	0	2107	0	10311	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-Q0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-1545	700	-1817	341	8985	-32
3.3	-13.1	-5.0	8.0	-1538	-6	-1422	-73	3816	1069
6.6	-9.8	-5.0	8.1	-1546	-351	-1030	-217	-110	301
9.8	-6.6	-5.0	8.1	-1518	-348	-688	-175	-2840	-837
13.1	-3.3	-5.0	8.1	-1471	-187	-343	-87	-4497	-1639
16.4	0.0	-5.0	8.1	-1452	-15	-11	-5	-5054	-1901
16.4	0.0	-5.0	8.1	-1452	14	12	4	-5054	-1901
19.7	3.3	-5.0	8.1	-1470	186	343	86	-4495	-1638
23.0	6.6	-5.0	8.1	-1515	348	688	173	-2828	-833
26.2	9.8	-5.0	8.1	-1541	348	1029	215	-101	304
29.5	13.1	-5.0	8.0	-1534	6	1421	75	3789	1061
32.8	16.4	-5.0	7.9	-1540	-696	1816	-374	8898	-27
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-Q0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0.0	-16.4	5.0	7.9	-1545	-700	-1817	-341	8985	32
3.3	-13.1	5.0	8.0	-1538	6	-1422	73	3816	-1069
6.6	-9.8	5.0	8.1	-1546	351	-1030	217	-110	-301
9.8	-6.6	5.0	8.1	-1518	348	-688	175	-2840	837
13.1	-3.3	5.0	8.1	-1471	187	-343	87	-4497	1639
16.4	0.0	5.0	8.1	-1452	15	-11	5	-5054	1901
16.4	0.0	5.0	8.1	-1452	-14	12	-4	-5054	1901
19.7	3.3	5.0	8.1	-1470	-186	343	-86	-4495	1638
23.0	6.6	5.0	8.1	-1515	-348	688	-173	-2828	833
26.2	9.8	5.0	8.1	-1541	-348	1029	-215	-101	-304
29.5	13.1	5.0	8.0	-1534	-6	1421	-75	3789	-1061
32.8	16.4	5.0	7.9	-1540	696	1816	374	8898	27
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

23.2 Table – Min My

LB2: SLS-Q0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	-1865	0	-2052	0	9124	0
3.3	-13.1	0	8.0	-1918	0	-1601	0	3270	0
6.6	-9.8	0	8.1	-1953	0	-1184	0	-1116	0
9.8	-6.6	0	8.1	-2036	0	-768	0	-4245	0
13.1	-3.3	0	8.1	-2142	0	-374	0	-6134	0
16.4	0.0	0	8.1	-2184	0	-14	0	-6764	0
16.4	0.0	0	8.1	-2185	0	14	0	-6764	0
19.7	3.3	0	8.1	-2145	0	375	0	-6132	0
23.0	6.6	0	8.1	-2042	0	770	0	-4228	0
26.2	9.8	0	8.1	-1961	0	1187	0	-1096	0
29.5	13.1	0	8.0	-1924	0	1605	0	3261	0
32.8	16.4	0	7.9	-1873	0	2056	0	9059	0
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-Q0

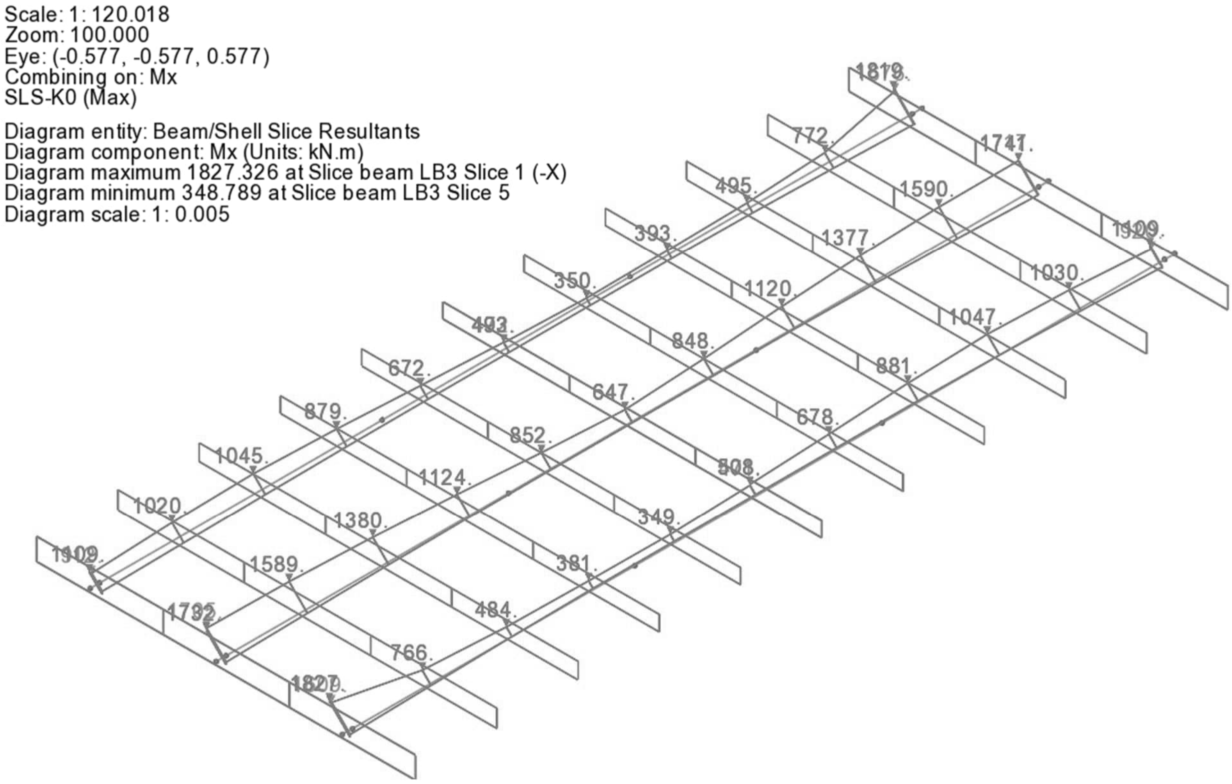
Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	-1243	511	-1781	216	7866	-65
3.3	-13.1	-5.0	8.0	-1216	-108	-1392	-137	2809	606
6.6	-9.8	-5.0	8.1	-1235	-394	-1054	-225	-1087	-323
9.8	-6.6	-5.0	8.1	-1193	-367	-705	-174	-3890	-1526
13.1	-3.3	-5.0	8.1	-1141	-193	-351	-85	-5589	-2352
16.4	0.0	-5.0	8.1	-1119	-15	-12	-5	-6159	-2618
16.4	0.0	-5.0	8.1	-1119	15	13	4	-6159	-2618
19.7	3.3	-5.0	8.1	-1139	192	351	84	-5588	-2352
23.0	6.6	-5.0	8.1	-1191	366	705	172	-3880	-1526
26.2	9.8	-5.0	8.1	-1231	393	1054	225	-1079	-322
29.5	13.1	-5.0	8.0	-1213	109	1390	142	2786	603
32.8	16.4	-5.0	7.9	-1238	-509	1780	-240	7794	-60
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-Q0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0.0	-16.4	5.0	7.9	-1243	-511	-1781	-216	7866	65
3.3	-13.1	5.0	8.0	-1216	108	-1392	137	2809	-606
6.6	-9.8	5.0	8.1	-1235	394	-1054	225	-1087	323
9.8	-6.6	5.0	8.1	-1193	367	-705	174	-3890	1526
13.1	-3.3	5.0	8.1	-1141	193	-351	85	-5589	2352
16.4	0.0	5.0	8.1	-1119	15	-12	5	-6159	2618
16.4	0.0	5.0	8.1	-1119	-15	13	-4	-6159	2618
19.7	3.3	5.0	8.1	-1139	-192	351	-84	-5588	2352
23.0	6.6	5.0	8.1	-1191	-366	705	-172	-3880	1526
26.2	9.8	5.0	8.1	-1231	-393	1054	-225	-1079	322
29.5	13.1	5.0	8.0	-1213	-109	1390	-142	2786	-603
32.8	16.4	5.0	7.9	-1238	509	1780	240	7794	60
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

24. Result SLS-K0

Diagram - Mx:



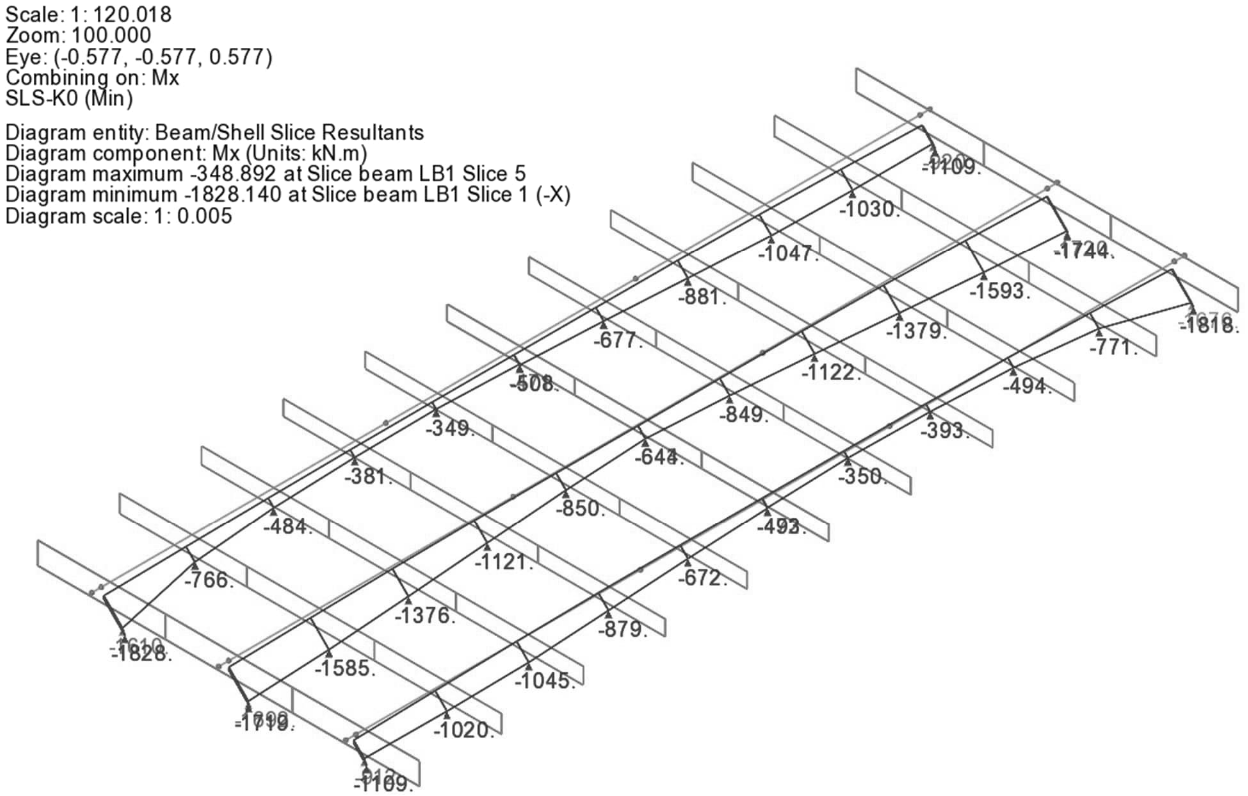
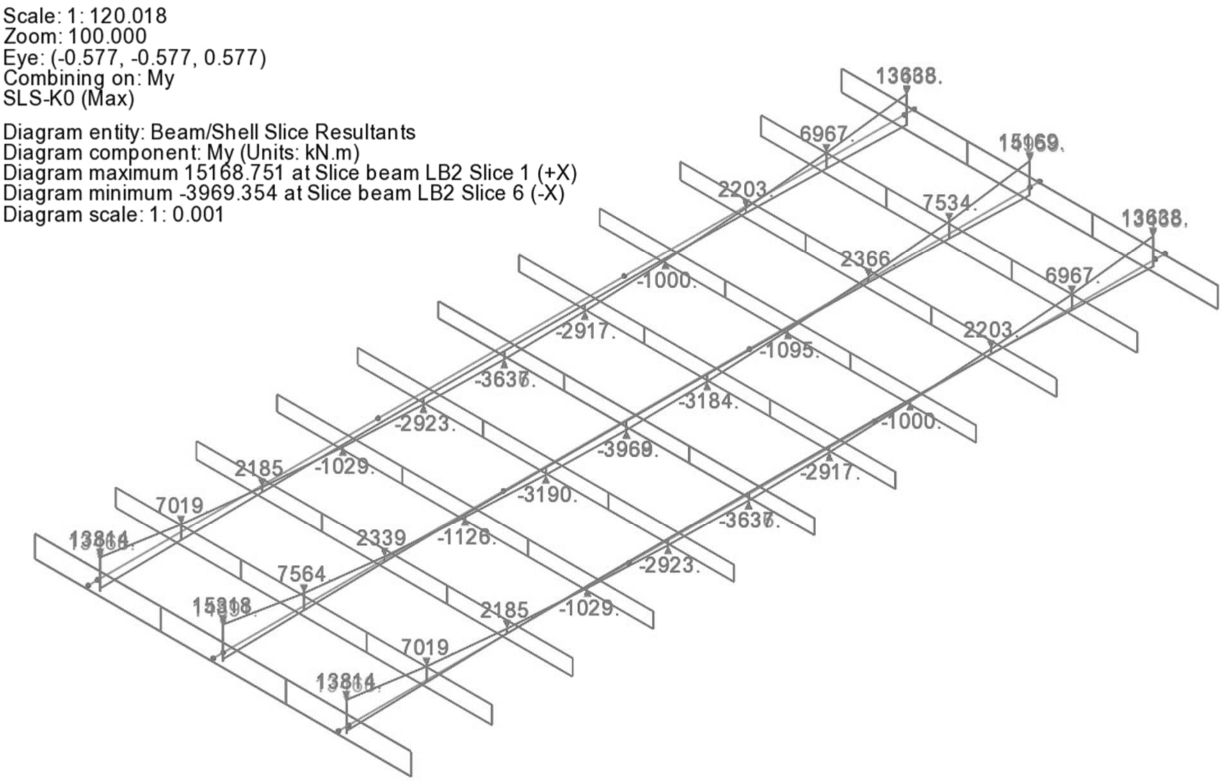
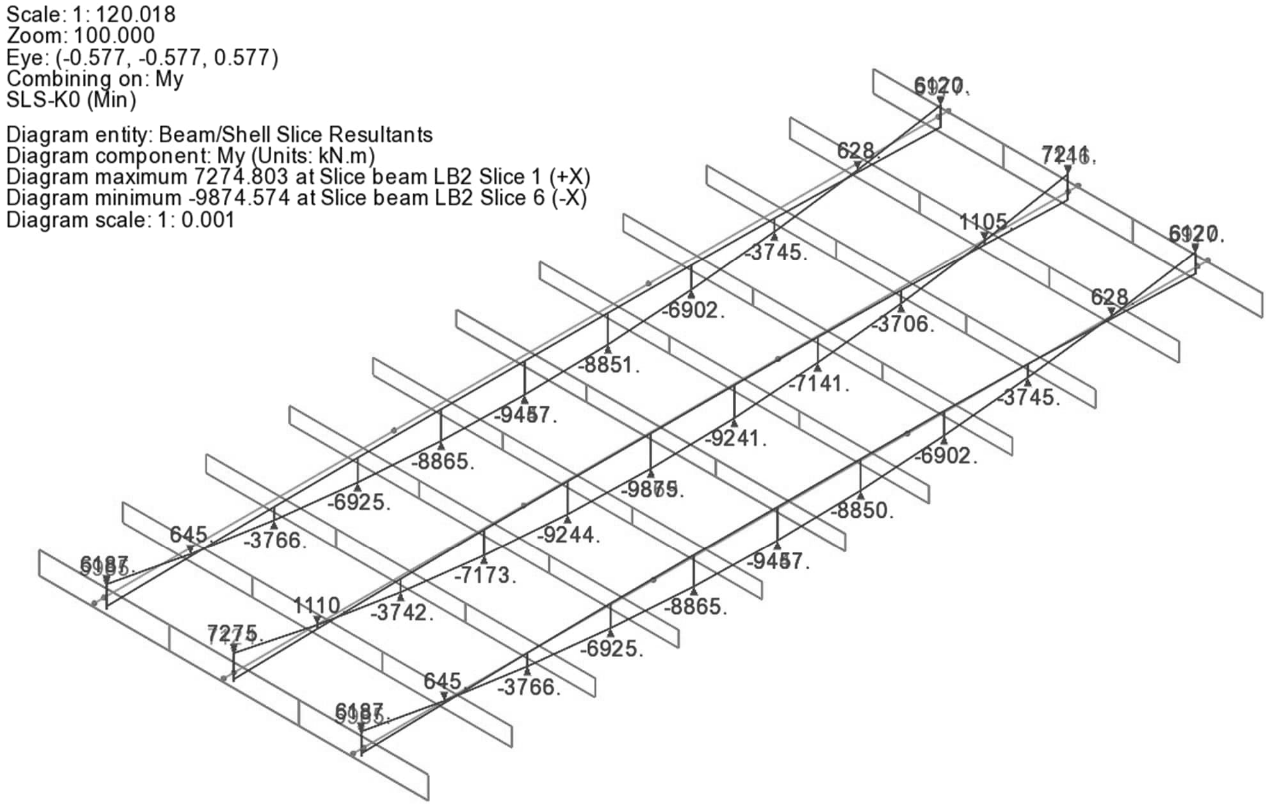

Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: Mx
SLS-K0 (Min)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum -348.892 at Slice beam LB1 Slice 5
Diagram minimum -1828.140 at Slice beam LB1 Slice 1 (-X)
Diagram scale: 1: 0.005
-1109.
-1030.
-1047.
-881.
-677.
-508.
-349.
-381.
-484.
-766.
-1828.
-1744.
-1593.
-1379.
-1122.
-849.
-644.
-850.
-1121.
-1376.
-1585.
-1719.
-1818.
-771.
-494.
-393.
-350.
-493.
-672.
-879.
-1045.
-1020.
-1109.

Diagram - My:



Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
SLS-K0 (Max)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 15168.751 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -3969.354 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001



Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
SLS-K0 (Min)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 7274.803 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -9874.574 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001
628.
-3745.
-6902.
-8851.
-8865.
-6925.
645.
-3766.
1105.
-3706.
-7141.
-9241.
-9244.
-7173.
1110.
-3742.
628
-3745.
-6902.
-8850.
-8865.
-6925.
645.
-3766.

24.1 Table – Max Mx

LB2: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	0	8.0	-2692	42	-2668	1706	11338	1562
3.3	-13.1	0	8.0	-2594	6	-2132	1589	4001	484
6.6	-9.8	0	8.1	-2469	-24	-1568	1381	-1394	14
9.8	-6.6	0	8.1	-2591	-39	-1047	1124	-5335	-224
13.1	-3.3	0	8.1	-2758	-50	-550	852	-6830	-285
16.4	0.0	0	8.1	-2631	-57	-123	647	-6545	-327
16.4	0.0	0	8.1	-2663	-62	30	647	-6729	131
19.7	3.3	0	8.1	-2687	-51	660	848	-5705	275
23.0	6.6	0	8.1	-2598	-40	1122	1120	-3672	233
26.2	9.8	0	8.1	-2604	-24	1644	1377	-23	-2
29.5	13.1	0	8.0	-2630	5	2184	1590	5353	-487
32.8	16.4	0	7.9	-2578	37	2728	1717	12774	-1587
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	-5.0	7.9	-1654	1389	-2279	1609	11518	-143
3.3	-13.1	-5.0	8.0	-1814	119	-1835	766	4906	1638
6.6	-9.8	-5.0	8.1	-1884	-406	-1325	484	-977	-330
9.8	-6.6	-5.0	8.1	-1947	-375	-906	381	-4272	-1630
13.1	-3.3	-5.0	8.1	-1701	-221	-416	349	-6006	-2588
16.4	0.0	-5.0	8.1	-2393	38	174	471	-6111	-2639
16.4	0.0	-5.0	8.1	-1547	69	140	508	-6404	-2435
19.7	3.3	-5.0	8.1	-1312	295	558	678	-6313	-2330
23.0	6.6	-5.0	8.1	-1234	529	1050	881	-4421	-1614
26.2	9.8	-5.0	8.1	-1337	529	1426	1047	-779	-63
29.5	13.1	-5.0	8.0	-1375	341	1742	1030	3015	42
32.8	16.4	-5.0	7.9	-1672	80	2143	920	8951	-213
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0.0	-16.4	5.0	7.9	-1669	84	-2151	912	9032	199
3.3	-13.1	5.0	8.0	-1374	343	-1750	1020	3003	-39
6.6	-9.8	5.0	8.1	-1340	531	-1437	1045	-853	78
9.8	-6.6	5.0	8.1	-1244	529	-1042	879	-4436	1636
13.1	-3.3	5.0	8.1	-1316	292	-550	672	-6278	2324
16.4	0.0	5.0	8.1	-1257	71	-198	493	-6549	2458
16.4	0.0	5.0	8.1	-1378	37	-165	472	-6718	2839
19.7	3.3	5.0	8.1	-1693	-230	430	350	-6224	2731
23.0	6.6	5.0	8.1	-1942	-381	920	393	-4184	1592
26.2	9.8	5.0	8.1	-1880	-407	1337	495	-913	309
29.5	13.1	5.0	8.0	-1801	114	1836	772	4837	-1614
32.8	16.4	5.0	7.9	-1651	1379	2278	1676	11443	121
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

24.2 Table – Min Mx

LB2: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	0	8.0	-3298	-47	-2644	-1692	13004	-1564
3.3	-13.1	0	8.0	-3311	-6	-2129	-1585	5652	-484
6.6	-9.8	0	8.1	-3188	24	-1614	-1377	-52	-14
9.8	-6.6	0	8.1	-3143	39	-1140	-1121	-3778	224
13.1	-3.3	0	8.1	-3249	50	-671	-850	-5991	285
16.4	0.0	0	8.1	-3236	57	-234	-645	-7744	327
16.4	0.0	0	8.1	-3241	56	-102	-643	-7772	-79
19.7	3.3	0	8.1	-3283	51	558	-849	-7250	-275
23.0	6.6	0	8.1	-3255	40	1065	-1122	-5100	-233
26.2	9.8	0	8.1	-3157	24	1539	-1379	-1227	2
29.5	13.1	0	8.0	-3170	-5	2067	-1593	4024	487
32.8	16.4	0	7.9	-3086	-37	2600	-1720	11005	1587
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	-5.0	7.9	-1669	-84	-2151	-912	9032	-199
3.3	-13.1	-5.0	8.0	-1374	-343	-1750	-1020	3003	39
6.6	-9.8	-5.0	8.1	-1340	-531	-1437	-1045	-853	-78
9.8	-6.6	-5.0	8.1	-1244	-529	-1042	-879	-4436	-1636
13.1	-3.3	-5.0	8.1	-1316	-292	-550	-672	-6278	-2324
16.4	0.0	-5.0	8.1	-1257	-71	-198	-493	-6549	-2458
16.4	0.0	-5.0	8.1	-1378	-37	-165	-472	-6718	-2839
19.7	3.3	-5.0	8.1	-1693	230	430	-350	-6224	-2731
23.0	6.6	-5.0	8.1	-1942	381	920	-393	-4184	-1592
26.2	9.8	-5.0	8.1	-1880	407	1337	-494	-913	-309
29.5	13.1	-5.0	8.0	-1801	-114	1836	-771	4837	1614
32.8	16.4	-5.0	7.9	-1643	-1380	2276	-1676	11439	-119
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0.0	-16.4	5.0	7.9	-1662	-1388	-2281	-1610	11523	145
3.3	-13.1	5.0	8.0	-1814	-119	-1835	-766	4906	-1638
6.6	-9.8	5.0	8.1	-1884	406	-1325	-484	-977	330
9.8	-6.6	5.0	8.1	-1947	375	-906	-381	-4272	1630
13.1	-3.3	5.0	8.1	-1701	221	-416	-349	-6006	2588
16.4	0.0	5.0	8.1	-2393	-38	174	-471	-6111	2639
16.4	0.0	5.0	8.1	-1547	-69	140	-508	-6404	2435
19.7	3.3	5.0	8.1	-1311	-294	557	-677	-6312	2330
23.0	6.6	5.0	8.1	-1234	-529	1050	-881	-4421	1614
26.2	9.8	5.0	8.1	-1337	-529	1426	-1047	-779	63
29.5	13.1	5.0	8.0	-1375	-341	1742	-1030	3015	-42
32.8	16.4	5.0	7.9	-1672	-80	2143	-920	8951	213
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

24.3 Table – Max My

LB2: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-4048	-55	-2842	68	15318	151
3.3	-13.1	0	8.0	-3846	-53	-2128	82	7564	30
6.6	-9.8	0	8.1	-3865	-36	-1406	44	2340	-9
9.8	-6.6	0	8.1	-3606	-24	-869	6	-1126	-23
13.1	-3.3	0	8.1	-3519	-12	-427	-24	-3190	-29
16.4	0.0	0	8.1	-3592	-1	24	1	-3969	-30
16.4	0.0	0	8.1	-3593	1	50	1	-3968	-29
19.7	3.3	0	8.1	-3524	12	429	25	-3184	-29
23.0	6.6	0	8.1	-3616	24	872	-6	-1095	-22
26.2	9.8	0	8.1	-3884	36	1413	-35	2366	-9
29.5	13.1	0	8.0	-3867	-54	2140	-90	7534	54
32.8	16.4	0	7.9	-4066	-72	2840	-107	15169	77
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-3031	1010	-2474	68	13814	-641
3.3	-13.1	-5.0	8.0	-2879	93	-1890	-535	7019	1502
6.6	-9.8	-5.0	8.1	-3272	-320	-1271	-558	2185	965
9.8	-6.6	-5.0	8.1	-3155	-348	-801	-317	-1029	-170
13.1	-3.3	-5.0	8.1	-3053	-203	-402	-197	-2923	-1028
16.4	0.0	-5.0	8.1	-2858	6	24	12	-3637	-1401
16.4	0.0	-5.0	8.1	-2861	35	47	20	-3636	-1397
19.7	3.3	-5.0	8.1	-3052	202	403	198	-2917	-1025
23.0	6.6	-5.0	8.1	-3151	346	802	319	-1000	-166
26.2	9.8	-5.0	8.1	-3265	314	1278	563	2203	954
29.5	13.1	-5.0	8.0	-2870	-92	1882	539	6967	1481
32.8	16.4	-5.0	7.9	-3015	-986	2468	-83	13638	-648
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0.0	-16.4	5.0	7.9	-3031	-1010	-2474	-68	13814	641
3.3	-13.1	5.0	8.0	-2879	-93	-1890	535	7019	-1502
6.6	-9.8	5.0	8.1	-3272	320	-1271	558	2185	-965
9.8	-6.6	5.0	8.1	-3155	348	-801	317	-1029	170
13.1	-3.3	5.0	8.1	-3053	203	-402	197	-2923	1028
16.4	0.0	5.0	8.1	-2858	-6	24	-12	-3637	1401
16.4	0.0	5.0	8.1	-2861	-35	47	-20	-3636	1397
19.7	3.3	5.0	8.1	-3052	-202	403	-198	-2917	1025
23.0	6.6	5.0	8.1	-3151	-346	802	-319	-1000	166
26.2	9.8	5.0	8.1	-3265	-314	1278	-563	2203	-954
29.5	13.1	5.0	8.0	-2870	92	1882	-539	6967	-1481
32.8	16.4	5.0	7.9	-3015	986	2468	83	13638	648
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

24.4 Table – Min My

LB2: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	-1620	55	-1933	16	7275	-35
3.3	-13.1	0	8.0	-1889	42	-1878	37	1110	-9
6.6	-9.8	0	8.1	-2027	40	-1323	16	-3742	9
9.8	-6.6	0	8.1	-2193	27	-860	41	-7173	18
13.1	-3.3	0	8.1	-2356	14	-391	15	-9244	41
16.4	0.0	0	8.1	-2355	1	-34	-31	-9875	21
16.4	0.0	0	8.1	-2354	-1	-29	24	-9869	21
19.7	3.3	0	8.1	-2360	-10	393	9	-9241	14
23.0	6.6	0	8.1	-2206	-30	882	-6	-7141	13
26.2	9.8	0	8.1	-2036	-32	1309	5	-3706	34
29.5	13.1	0	8.0	-1882	43	1836	29	1105	9
32.8	16.4	0	7.9	-1624	56	1930	20	7211	33
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-K0

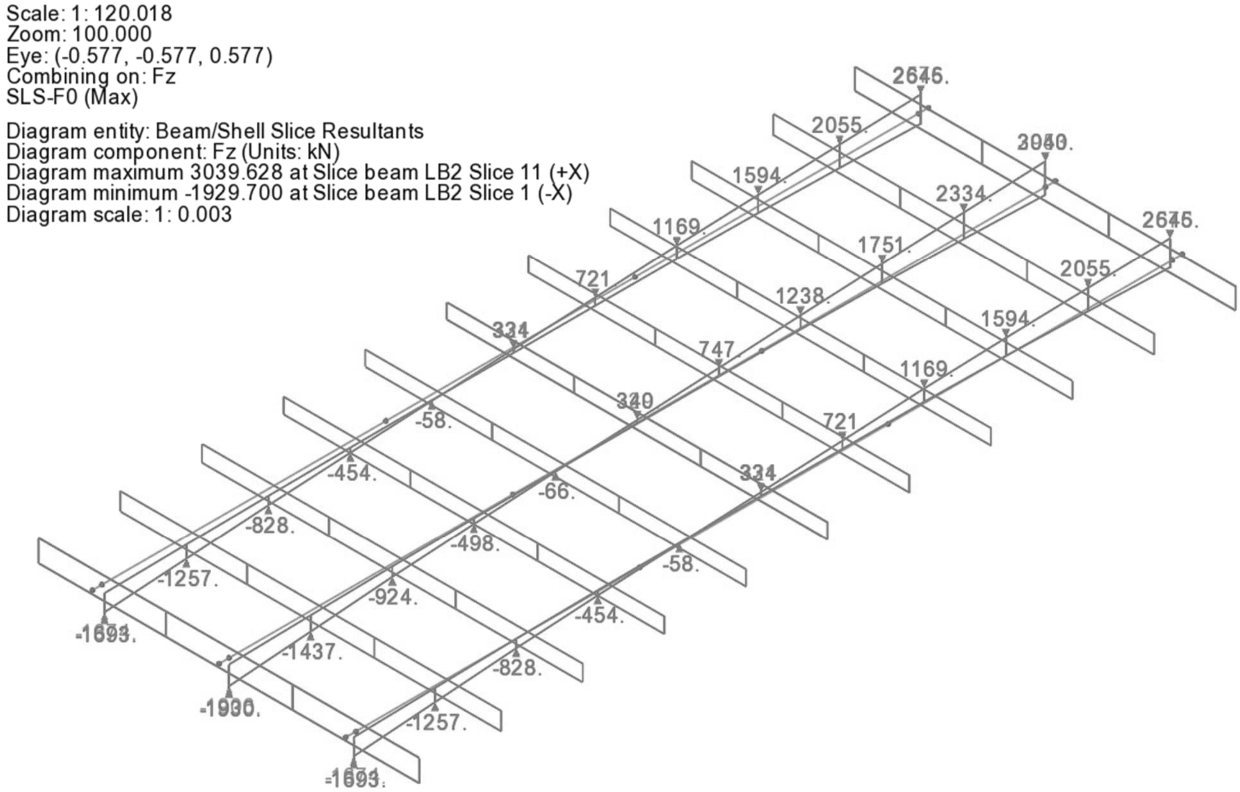
Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	-1025	350	-1694	220	6187	36
3.3	-13.1	-5.0	8.0	-1092	-252	-1679	-117	646	158
6.6	-9.8	-5.0	8.1	-1108	-511	-1208	-281	-3766	-1008
9.8	-6.6	-5.0	8.1	-1082	-431	-807	-214	-6925	-2391
13.1	-3.3	-5.0	8.1	-1064	-206	-315	-103	-8865	-3384
16.4	0.0	-5.0	8.1	-1233	-25	42	-1	-9457	-3608
16.4	0.0	-5.0	8.1	-1232	13	-5	153	-9447	-3596
19.7	3.3	-5.0	8.1	-1086	225	272	248	-8851	-3393
23.0	6.6	-5.0	8.1	-1077	430	813	177	-6902	-2392
26.2	9.8	-5.0	8.1	-1100	503	1189	269	-3745	-1006
29.5	13.1	-5.0	8.0	-1084	247	1639	122	628	162
32.8	16.4	-5.0	7.9	-1033	-349	1692	-258	6120	64
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

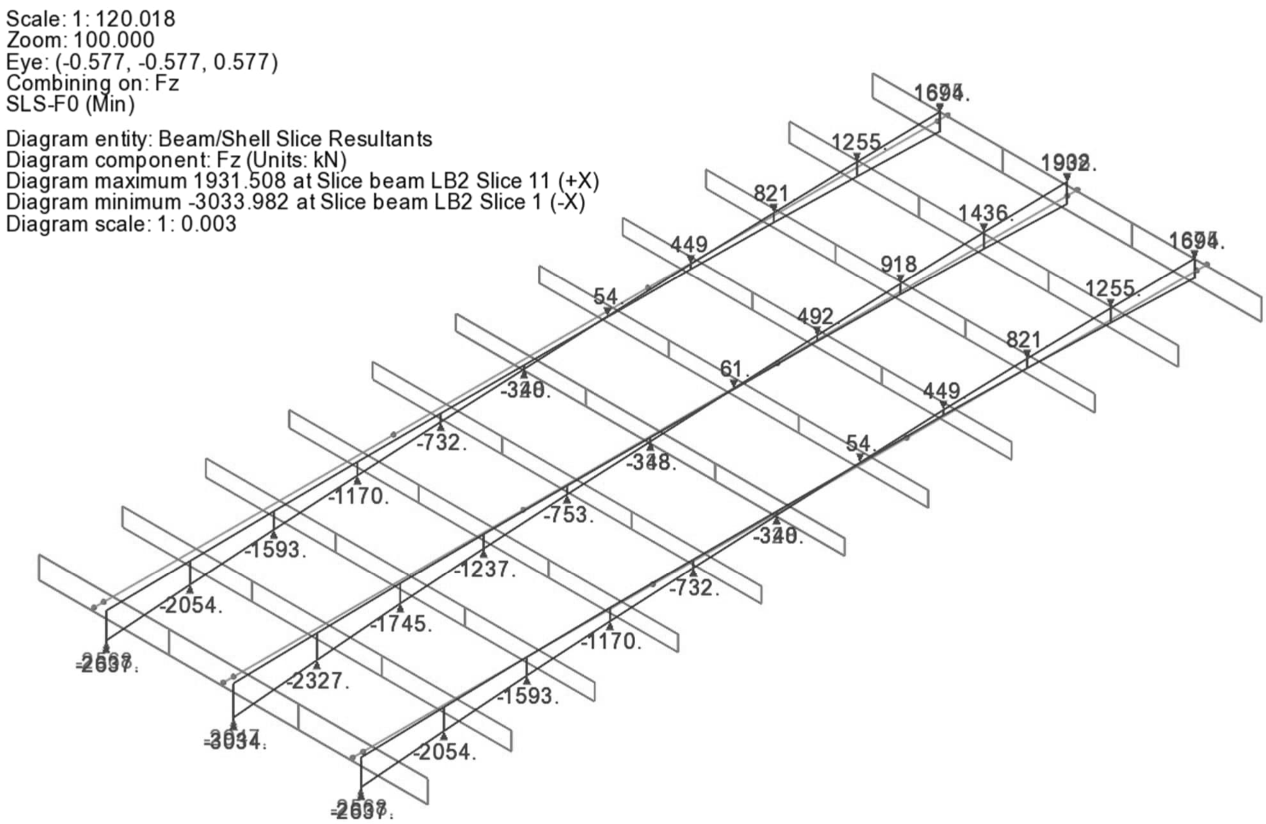
LB3: SLS-K0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0.0	-16.4	5.0	7.9	-1025	-350	-1694	-220	6187	-36
3.3	-13.1	5.0	8.0	-1092	252	-1679	117	646	-158
6.6	-9.8	5.0	8.1	-1108	511	-1208	281	-3766	1008
9.8	-6.6	5.0	8.1	-1082	431	-807	214	-6925	2391
13.1	-3.3	5.0	8.1	-1064	206	-315	103	-8865	3384
16.4	0.0	5.0	8.1	-1233	25	42	1	-9457	3608
16.4	0.0	5.0	8.1	-1232	-13	-5	-153	-9447	3596
19.7	3.3	5.0	8.1	-1086	-225	272	-248	-8851	3393
23.0	6.6	5.0	8.1	-1077	-430	813	-177	-6902	2392
26.2	9.8	5.0	8.1	-1100	-503	1189	-269	-3745	1006
29.5	13.1	5.0	8.0	-1084	-247	1639	-122	628	-162
32.8	16.4	5.0	7.9	-1033	349	1692	258	6120	-64
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

25. Result SLS-F0

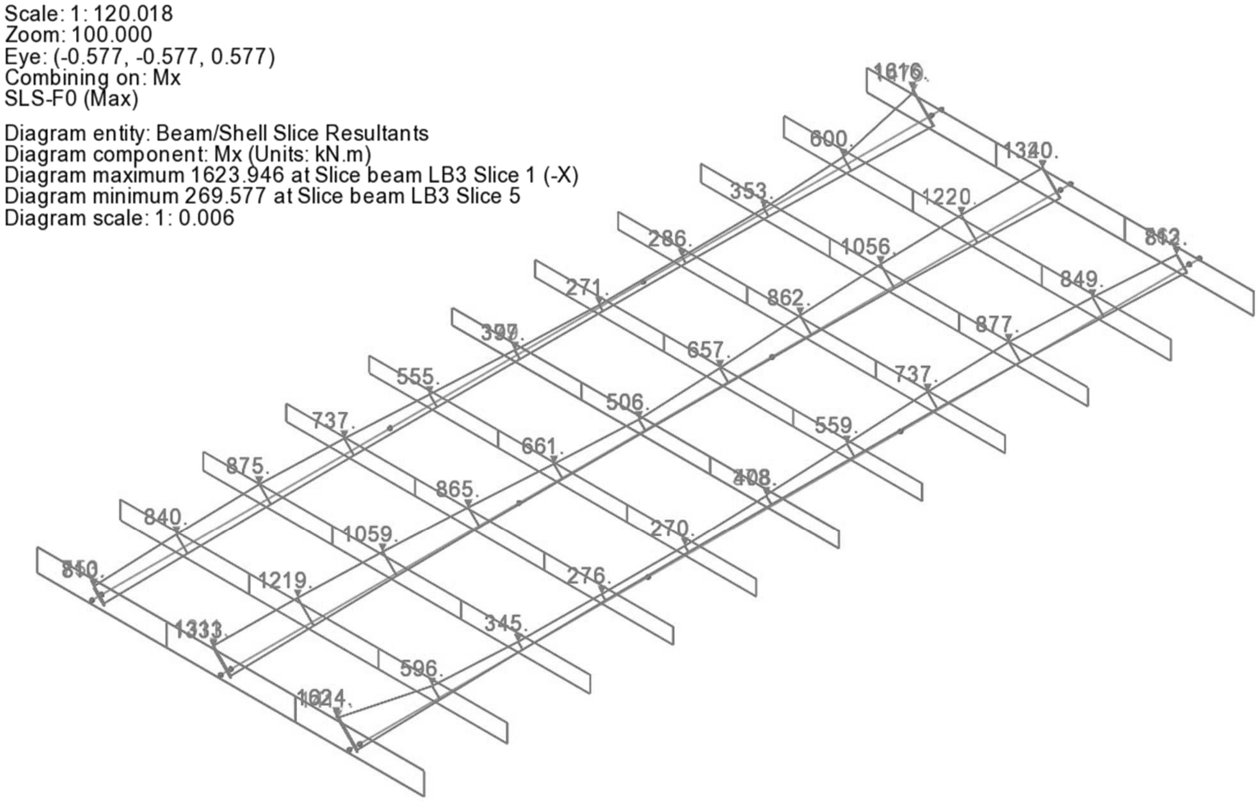
Diagram - Fz:





Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: Fz
SLS-F0 (Min)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Fz (Units: kN)
Diagram maximum 1931.508 at Slice beam LB2 Slice 11 (+X)
Diagram minimum -3033.982 at Slice beam LB2 Slice 1 (-X)
Diagram scale: 1: 0.003
1255.
821
449
54
-732.
-1170.
-1593.
-2054.
1436.
918
492
61.
-348.
-753.
-1237.
-1745.
-2327.
1255.
821
449
54.
-732.
-1170.
-1593.
-2054.

Diagram - Mx:



Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: Mx
SLS-F0 (Max)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum 1623.946 at Slice beam LB3 Slice 1 (-X)
Diagram minimum 269.577 at Slice beam LB3 Slice 5
Diagram scale: 1: 0.006
600.
353.
286.
271.
555.
737.
875.
840.
1220.
1056.
862.
657.
506.
661.
865.
1059.
1219.
849.
877.
737.
559.
270.
276.
345.
596.

Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: Mx
SLS-F0 (Min)

Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum -269.133 at Slice beam LB1 Slice 5
Diagram minimum -1615.529 at Slice beam LB1 Slice 1 (-X)
Diagram scale: 1: 0.006

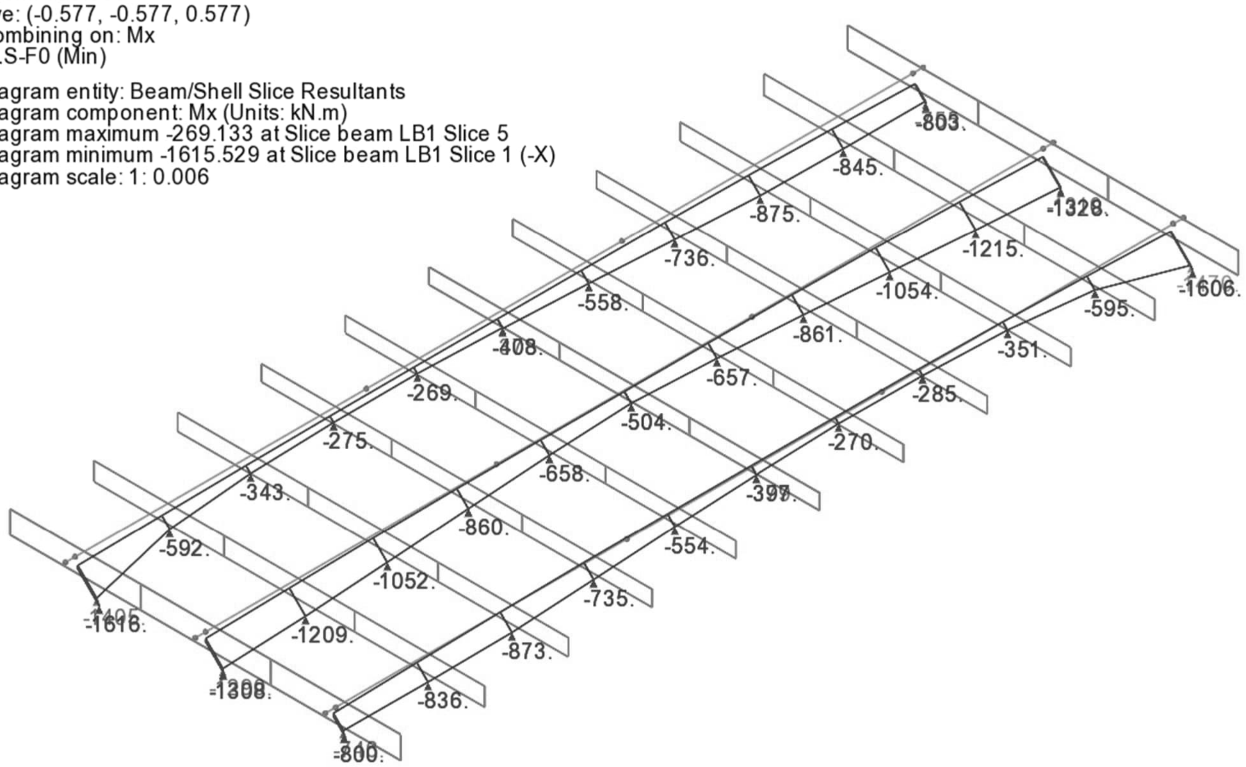
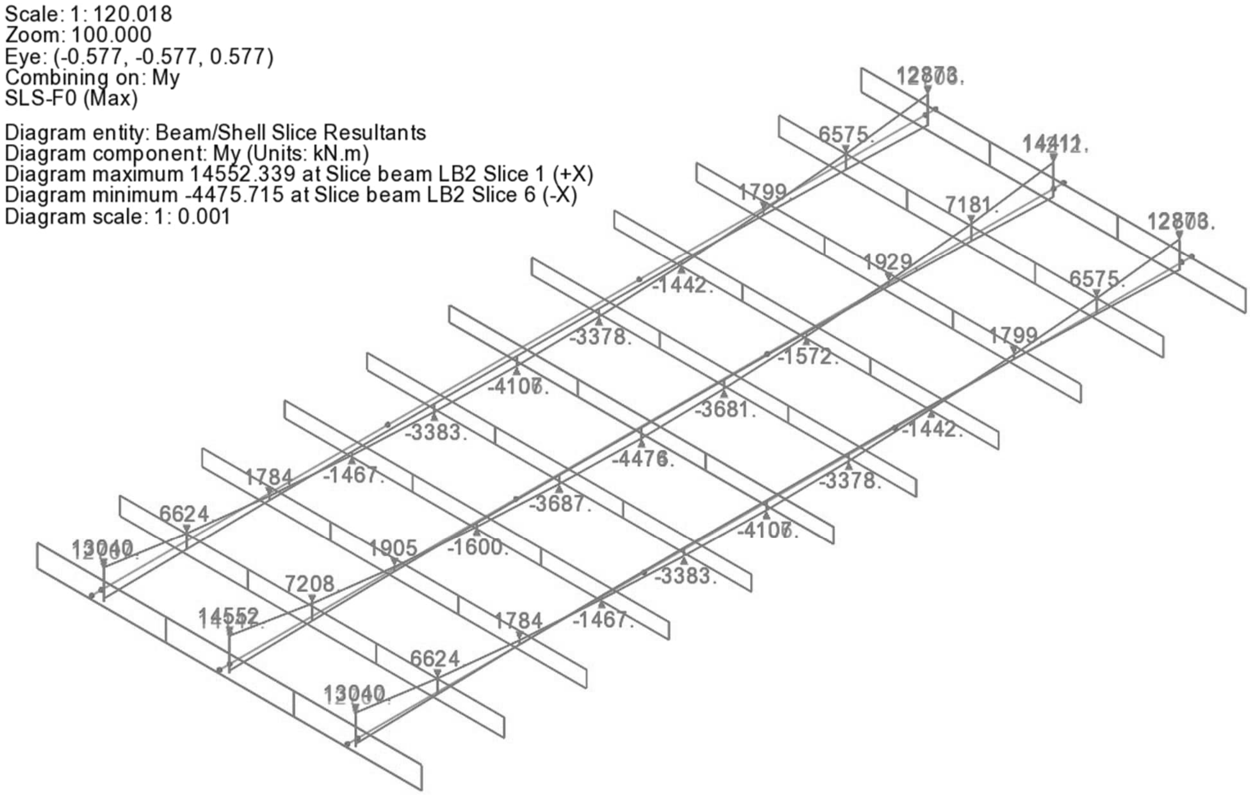
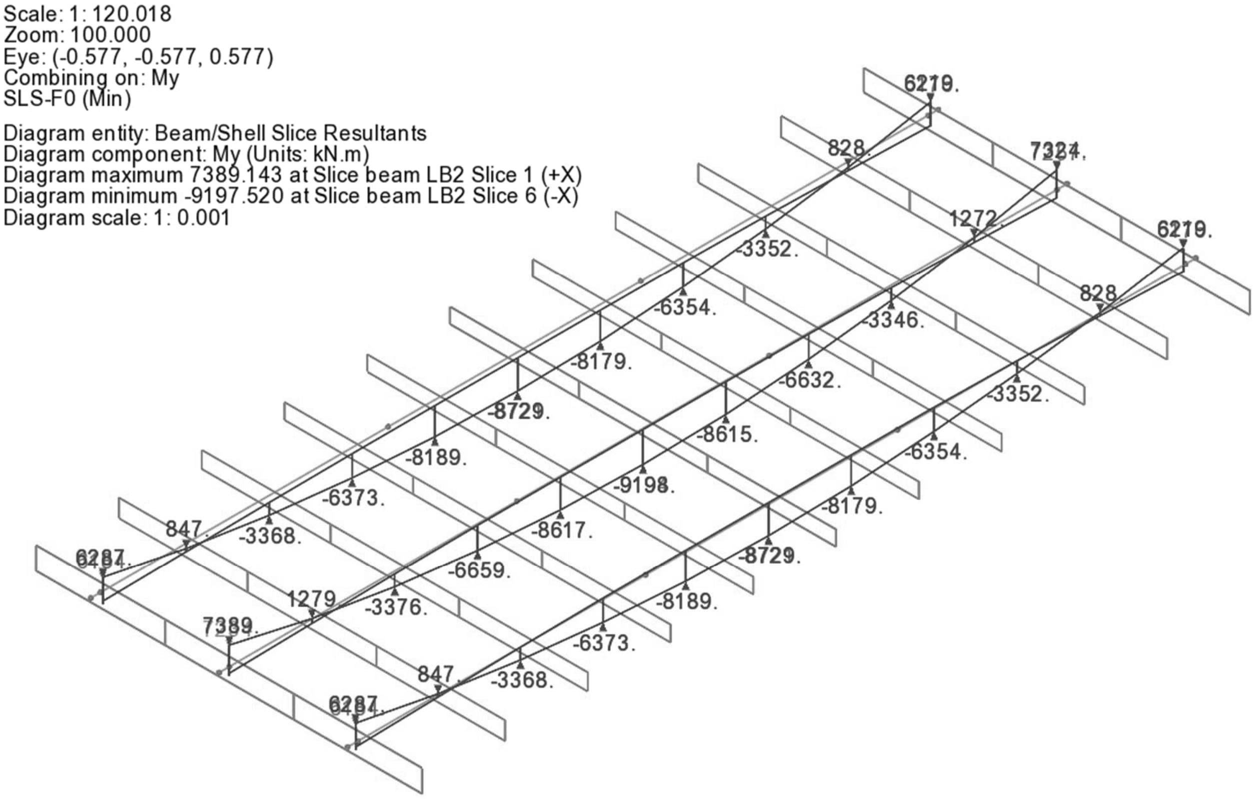


Diagram - My:



Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
SLS-F0 (Max)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 14552.339 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -4475.715 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001



Scale: 1: 120.018
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
SLS-F0 (Min)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 7389.143 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -9197.520 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001
828.
-3352.
-6354.
-8179.
-8189.
-6373.
847.
-3368.
1272.
-3346.
-6632.
-8615.
-8617.
-6659.
1279.
-3376.
828.
-3352.
-6354.
-8179.
-8189.
-6373.
847.
-3368.

25.1 Table – Max Fz

LB2: SLS-F0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	0	8.0	-1639	59	-1906	57	7830	10
3.3	-13.1	0	8.0	-1960	47	-1437	-5	2020	7
6.6	-9.8	0	8.1	-2172	38	-925	-32	-2426	19
9.8	-6.6	0	8.1	-2332	27	-498	-28	-5437	23
13.1	-3.3	0	8.1	-2470	15	-66	-50	-7412	24
16.4	0.0	0	8.1	-2463	3	329	-57	-7145	31
16.4	0.0	0	8.1	-2191	2	340	-40	-7285	30
19.7	3.3	0	8.1	-2185	-11	748	-44	-6359	34
23.0	6.6	0	8.1	-2226	-24	1238	-27	-3981	2
26.2	9.8	0	8.1	-2327	-36	1751	-50	8	16
29.5	13.1	0	8.0	-2679	-49	2334	-66	5729	33
32.8	16.4	0	7.9	-2920	-62	2953	-62	13337	35
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-F0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-1163	1239	-1674	686	7627	-744
3.3	-13.1	-5.0	8.0	-1279	140	-1257	-7	2395	1001
6.6	-9.8	-5.0	8.1	-1435	-345	-828	-285	-1815	53
9.8	-6.6	-5.0	8.1	-1456	-322	-454	-218	-4557	-1249
13.1	-3.3	-5.0	8.1	-1458	-131	-58	-113	-6400	-2162
16.4	0.0	-5.0	8.1	-2263	67	321	46	-6175	-2202
16.4	0.0	-5.0	8.1	-1278	110	334	88	-7571	-3028
19.7	3.3	-5.0	8.1	-1359	299	721	181	-6703	-2689
23.0	6.6	-5.0	8.1	-1514	497	1169	371	-4430	-1756
26.2	9.8	-5.0	8.1	-1633	522	1595	456	-792	-448
29.5	13.1	-5.0	8.0	-1797	339	2055	371	4290	564
32.8	16.4	-5.0	7.9	-1960	47	2576	27	10663	474
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-F0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	-1163	-1239	-1674	-686	7627	744
3.3	-13.1	5.0	8.0	-1279	-140	-1257	7	2395	-1001
6.6	-9.8	5.0	8.1	-1435	345	-828	285	-1815	-53
9.8	-6.6	5.0	8.1	-1456	322	-454	218	-4557	1249
13.1	-3.3	5.0	8.1	-1458	131	-58	113	-6400	2162
16.4	0.0	5.0	8.1	-2263	-67	321	-46	-6175	2202
16.4	0.0	5.0	8.1	-1278	-110	334	-88	-7571	3028
19.7	3.3	5.0	8.1	-1359	-299	721	-181	-6703	2689
23.0	6.6	5.0	8.1	-1514	-497	1169	-371	-4430	1756
26.2	9.8	5.0	8.1	-1633	-522	1595	-456	-792	448
29.5	13.1	5.0	8.0	-1797	-339	2055	-371	4290	-564
32.8	16.4	5.0	7.9	-1960	-47	2576	-27	10663	-474
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

25.2 Table – Min Fz

LB2: SLS-F0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	0	8.0	-2900	-12	-2947	38	13431	80
3.3	-13.1	0	8.0	-2658	-13	-2327	52	5727	19
6.6	-9.8	0	8.1	-2303	-21	-1745	42	-29	-20
9.8	-6.6	0	8.1	-2242	-15	-1237	26	-4032	-38
13.1	-3.3	0	8.1	-2281	-2	-753	-24	-6244	15
16.4	0.0	0	8.1	-2258	-3	-348	41	-8051	-15
16.4	0.0	0	8.1	-2531	-2	-338	66	-7920	-9
19.7	3.3	0	8.1	-2470	2	61	59	-7449	-13
23.0	6.6	0	8.1	-2340	6	492	34	-5452	-11
26.2	9.8	0	8.1	-2183	10	918	45	-2455	-10
29.5	13.1	0	8.0	-1959	16	1436	-10	2047	0
32.8	16.4	0	7.9	-1642	14	1908	-37	7762	59
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-F0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-2015	-5	-2568	-80	10884	411
3.3	-13.1	-5.0	8.0	-1825	-323	-2054	-358	4312	571
6.6	-9.8	-5.0	8.1	-1677	-513	-1593	-456	-814	-441
9.8	-6.6	-5.0	8.1	-1565	-485	-1170	-360	-4534	-1760
13.1	-3.3	-5.0	8.1	-1467	-316	-732	-255	-6561	-2656
16.4	0.0	-5.0	8.1	-1338	-105	-340	-77	-7608	-3015
16.4	0.0	-5.0	8.1	-1433	-60	-328	-30	-6858	-2417
19.7	3.3	-5.0	8.1	-1395	141	54	127	-6435	-2177
23.0	6.6	-5.0	8.1	-1401	333	449	228	-4581	-1268
26.2	9.8	-5.0	8.1	-1392	358	821	299	-1852	32
29.5	13.1	-5.0	8.0	-1249	-125	1255	7	2402	992
32.8	16.4	-5.0	7.9	-1144	-1214	1675	-744	7593	-697
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-F0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	-2015	5	-2568	80	10884	-411
3.3	-13.1	5.0	8.0	-1825	323	-2054	358	4312	-571
6.6	-9.8	5.0	8.1	-1677	513	-1593	456	-814	441
9.8	-6.6	5.0	8.1	-1565	485	-1170	360	-4534	1760
13.1	-3.3	5.0	8.1	-1467	316	-732	255	-6561	2656
16.4	0.0	5.0	8.1	-1338	105	-340	77	-7608	3015
16.4	0.0	5.0	8.1	-1433	60	-328	30	-6858	2417
19.7	3.3	5.0	8.1	-1395	-141	54	-127	-6435	2177
23.0	6.6	5.0	8.1	-1401	-333	449	-228	-4581	1268
26.2	9.8	5.0	8.1	-1392	-358	821	-299	-1852	-32
29.5	13.1	5.0	8.0	-1249	125	1255	-7	2402	-992
32.8	16.4	5.0	7.9	-1144	1214	1675	744	7593	697
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

25.3 Table – Max Mx

LB2: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	0	8.0	-2594	49	-2523	1311	10836	1192
3.3	-13.1	0	8.0	-2487	16	-2007	1219	3871	377
6.6	-9.8	0	8.1	-2351	-12	-1461	1059	-1324	23
9.8	-6.6	0	8.1	-2492	-28	-957	865	-5110	-157
13.1	-3.3	0	8.1	-2664	-39	-484	661	-6503	-203
16.4	0.0	0	8.1	-2560	-47	-77	506	-6198	-240
16.4	0.0	0	8.1	-2584	-52	45	506	-6335	92
19.7	3.3	0	8.1	-2592	-40	604	657	-5354	196
23.0	6.6	0	8.1	-2482	-28	1036	862	-3420	164
26.2	9.8	0	8.1	-2484	-12	1535	1056	46	-13
29.5	13.1	0	8.0	-2509	15	2053	1220	5143	-379
32.8	16.4	0	7.9	-2467	45	2575	1320	12194	-1211
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	-5.0	7.9	-1661	1396	-2173	1411	11172	-225
3.3	-13.1	-5.0	8.0	-1811	139	-1742	596	4872	1639
6.6	-9.8	-5.0	8.1	-1856	-383	-1238	345	-857	-259
9.8	-6.6	-5.0	8.1	-1900	-352	-836	276	-3963	-1471
13.1	-3.3	-5.0	8.1	-1672	-200	-380	270	-5782	-2477
16.4	0.0	-5.0	8.1	-2380	33	146	378	-5855	-2532
16.4	0.0	-5.0	8.1	-1532	64	127	408	-6024	-2305
19.7	3.3	-5.0	8.1	-1290	281	522	559	-5938	-2192
23.0	6.6	-5.0	8.1	-1209	503	976	737	-4207	-1541
26.2	9.8	-5.0	8.1	-1301	504	1341	877	-744	-37
29.5	13.1	-5.0	8.0	-1317	338	1637	849	2708	44
32.8	16.4	-5.0	7.9	-1579	123	2035	763	8334	-35
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0.0	-16.4	5.0	7.9	-1578	125	-2041	753	8414	23
3.3	-13.1	5.0	8.0	-1318	340	-1643	840	2704	-43
6.6	-9.8	5.0	8.1	-1304	506	-1349	875	-802	49
9.8	-6.6	5.0	8.1	-1217	504	-970	737	-4221	1558
13.1	-3.3	5.0	8.1	-1292	279	-515	555	-5913	2187
16.4	0.0	5.0	8.1	-1243	65	-170	397	-6281	2366
16.4	0.0	5.0	8.1	-1364	33	-139	379	-6471	2736
19.7	3.3	5.0	8.1	-1665	-206	391	271	-5946	2584
23.0	6.6	5.0	8.1	-1896	-356	847	286	-3894	1442
26.2	9.8	5.0	8.1	-1852	-383	1247	353	-808	243
29.5	13.1	5.0	8.0	-1800	135	1742	600	4812	-1618
32.8	16.4	5.0	7.9	-1657	1387	2171	1479	11093	205
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

25.4 Table – Min Mx

LB2: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	0	8.0	-3199	-16	-2490	-1290	12320	-1216
3.3	-13.1	0	8.0	-3204	15	-1992	-1209	5384	-370
6.6	-9.8	0	8.1	-3095	36	-1506	-1052	31	-9
9.8	-6.6	0	8.1	-3040	44	-1060	-861	-3485	174
13.1	-3.3	0	8.1	-3152	47	-615	-658	-5631	222
16.4	0.0	0	8.1	-3164	48	-198	-504	-7396	259
16.4	0.0	0	8.1	-3169	48	-92	-504	-7419	-72
19.7	3.3	0	8.1	-3191	48	492	-657	-6933	-214
23.0	6.6	0	8.1	-3165	44	980	-861	-4834	-181
26.2	9.8	0	8.1	-3063	36	1430	-1054	-1145	-1
29.5	13.1	0	8.0	-3076	16	1936	-1215	3824	372
32.8	16.4	0	7.9	-3004	-8	2447	-1310	10433	1234
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	-5.0	7.9	-1587	-105	-2039	-746	8416	-40
3.3	-13.1	-5.0	8.0	-1342	-323	-1641	-836	2706	48
6.6	-9.8	-5.0	8.1	-1344	-494	-1348	-873	-801	-37
9.8	-6.6	-5.0	8.1	-1269	-496	-969	-735	-4221	-1544
13.1	-3.3	-5.0	8.1	-1352	-275	-515	-554	-5913	-2172
16.4	0.0	-5.0	8.1	-1305	-65	-170	-397	-6281	-2351
16.4	0.0	-5.0	8.1	-1302	-32	-139	-379	-6471	-2752
19.7	3.3	-5.0	8.1	-1605	210	392	-270	-5946	-2599
23.0	6.6	-5.0	8.1	-1844	364	847	-285	-3895	-1456
26.2	9.8	-5.0	8.1	-1812	395	1248	-351	-809	-254
29.5	13.1	-5.0	8.0	-1777	-119	1744	-595	4811	1614
32.8	16.4	-5.0	7.9	-1642	-1368	2172	-1470	11088	-187
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0.0	-16.4	5.0	7.9	-1657	-1375	-2176	-1405	11173	209
3.3	-13.1	5.0	8.0	-1788	-122	-1744	-592	4870	-1635
6.6	-9.8	5.0	8.1	-1816	395	-1239	-343	-858	271
9.8	-6.6	5.0	8.1	-1848	360	-837	-275	-3963	1485
13.1	-3.3	5.0	8.1	-1612	204	-381	-269	-5782	2492
16.4	0.0	5.0	8.1	-2317	-33	146	-378	-5854	2548
16.4	0.0	5.0	8.1	-1594	-63	127	-408	-6024	2289
19.7	3.3	5.0	8.1	-1348	-277	520	-558	-5937	2176
23.0	6.6	5.0	8.1	-1261	-496	975	-736	-4206	1527
26.2	9.8	5.0	8.1	-1341	-492	1340	-875	-743	25
29.5	13.1	5.0	8.0	-1341	-322	1635	-845	2709	-49
32.8	16.4	5.0	7.9	-1589	-103	2033	-755	8336	52
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

25.5 Table – Max My

LB2: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-3838	-57	-2676	46	14552	123
3.3	-13.1	0	8.0	-3677	-53	-2025	59	7208	19
6.6	-9.8	0	8.1	-3318	-36	-1408	44	1905	-9
9.8	-6.6	0	8.1	-3080	-24	-872	6	-1600	-23
13.1	-3.3	0	8.1	-3005	-12	-432	-24	-3687	-29
16.4	0.0	0	8.1	-3095	-1	24	1	-4476	-30
16.4	0.0	0	8.1	-3096	1	50	1	-4474	-29
19.7	3.3	0	8.1	-3010	12	433	25	-3681	-29
23.0	6.6	0	8.1	-3089	24	875	-6	-1572	-22
26.2	9.8	0	8.1	-3336	36	1415	-35	1929	-9
29.5	13.1	0	8.0	-3696	-53	2035	-71	7181	44
32.8	16.4	0	7.9	-3854	-69	2676	-85	14411	48
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-2922	973	-2322	159	13040	-469
3.3	-13.1	-5.0	8.0	-2806	93	-1787	-420	6624	1484
6.6	-9.8	-5.0	8.1	-2752	-342	-1277	-581	1784	862
9.8	-6.6	-5.0	8.1	-2627	-360	-807	-335	-1467	-316
13.1	-3.3	-5.0	8.1	-2526	-208	-408	-206	-3383	-1191
16.4	0.0	-5.0	8.1	-2338	6	24	10	-4107	-1569
16.4	0.0	-5.0	8.1	-2341	35	47	19	-4106	-1565
19.7	3.3	-5.0	8.1	-2525	208	408	205	-3378	-1188
23.0	6.6	-5.0	8.1	-2624	359	808	335	-1442	-310
26.2	9.8	-5.0	8.1	-2747	338	1284	584	1799	855
29.5	13.1	-5.0	8.0	-2798	-92	1780	424	6575	1463
32.8	16.4	-5.0	7.9	-2903	-950	2317	-164	12873	-484
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0.0	-16.4	5.0	7.9	-2922	-973	-2322	-159	13040	469
3.3	-13.1	5.0	8.0	-2806	-93	-1787	420	6624	-1484
6.6	-9.8	5.0	8.1	-2752	342	-1277	581	1784	-862
9.8	-6.6	5.0	8.1	-2627	360	-807	335	-1467	316
13.1	-3.3	5.0	8.1	-2526	208	-408	206	-3383	1191
16.4	0.0	5.0	8.1	-2338	-6	24	-10	-4107	1569
16.4	0.0	5.0	8.1	-2341	-35	47	-19	-4106	1565
19.7	3.3	5.0	8.1	-2525	-208	408	-205	-3378	1188
23.0	6.6	5.0	8.1	-2624	-359	808	-335	-1442	310
26.2	9.8	5.0	8.1	-2747	-338	1284	-584	1799	-855
29.5	13.1	5.0	8.0	-2798	92	1780	-424	6575	-1463
32.8	16.4	5.0	7.9	-2903	950	2317	164	12873	484
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

25.6 Table – Min My

LB2: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	-1658	18	-1940	6	7389	-13
3.3	-13.1	0	8.0	-1862	12	-1779	24	1279	-11
6.6	-9.8	0	8.1	-2000	16	-1264	10	-3376	-1
9.8	-6.6	0	8.1	-2153	11	-815	29	-6659	4
13.1	-3.3	0	8.1	-2305	6	-367	11	-8617	20
16.4	0.0	0	8.1	-2290	0	-38	-23	-9198	5
16.4	0.0	0	8.1	-2288	0	-28	18	-9194	5
19.7	3.3	0	8.1	-2308	-3	368	7	-8615	-2
23.0	6.6	0	8.1	-2164	-12	832	-3	-6632	-2
26.2	9.8	0	8.1	-2009	-8	1254	6	-3346	16
29.5	13.1	0	8.0	-1857	13	1749	17	1272	12
32.8	16.4	0	7.9	-1662	19	1938	8	7324	11
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: SLS-F0

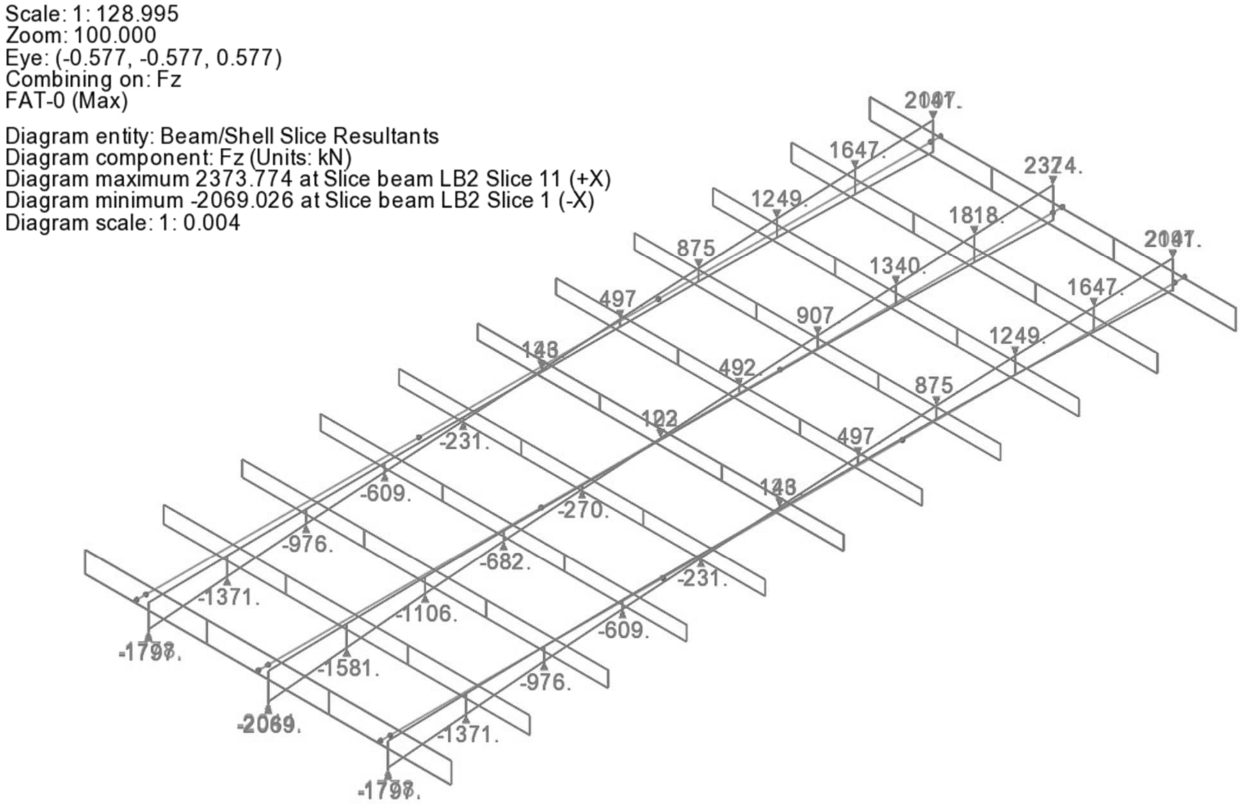
Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	-1066	379	-1698	229	6287	16
3.3	-13.1	-5.0	8.0	-1117	-221	-1585	-113	847	212
6.6	-9.8	-5.0	8.1	-1154	-481	-1149	-245	-3368	-905
9.8	-6.6	-5.0	8.1	-1129	-407	-761	-180	-6373	-2233
13.1	-3.3	-5.0	8.1	-1099	-192	-304	-84	-8189	-3160
16.4	0.0	-5.0	8.1	-1132	-28	20	-5	-8729	-3393
16.4	0.0	-5.0	8.1	-1131	8	-10	113	-8721	-3385
19.7	3.3	-5.0	8.1	-1115	205	272	192	-8179	-3168
23.0	6.6	-5.0	8.1	-1125	406	765	151	-6354	-2234
26.2	9.8	-5.0	8.1	-1147	474	1134	235	-3352	-903
29.5	13.1	-5.0	8.0	-1111	217	1555	118	828	214
32.8	16.4	-5.0	7.9	-1077	-378	1696	-276	6219	50
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: SLS-F0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0.0	-16.4	5.0	7.9	-1066	-379	-1698	-229	6287	-16
3.3	-13.1	5.0	8.0	-1117	221	-1585	113	847	-212
6.6	-9.8	5.0	8.1	-1154	481	-1149	245	-3368	905
9.8	-6.6	5.0	8.1	-1129	407	-761	180	-6373	2233
13.1	-3.3	5.0	8.1	-1099	192	-304	84	-8189	3160
16.4	0.0	5.0	8.1	-1132	28	20	5	-8729	3393
16.4	0.0	5.0	8.1	-1131	-8	-10	-113	-8721	3385
19.7	3.3	5.0	8.1	-1115	-205	272	-192	-8179	3168
23.0	6.6	5.0	8.1	-1125	-406	765	-151	-6354	2234
26.2	9.8	5.0	8.1	-1147	-474	1134	-235	-3352	903
29.5	13.1	5.0	8.0	-1111	-217	1555	-118	828	-214
32.8	16.4	5.0	7.9	-1077	378	1696	276	6219	-50
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

26. Result FAT-0

Diagram - Fz:



Scale: 1: 128.995
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: Fz
FAT-0 (Min)

Diagram entity: Beam/Shell Slice Resultants
Diagram component: Fz (Units: kN)
Diagram maximum 2072.408 at Slice beam LB2 Slice 11 (+X)
Diagram minimum -2361.572 at Slice beam LB2 Slice 1 (-X)
Diagram scale: 1: 0.004

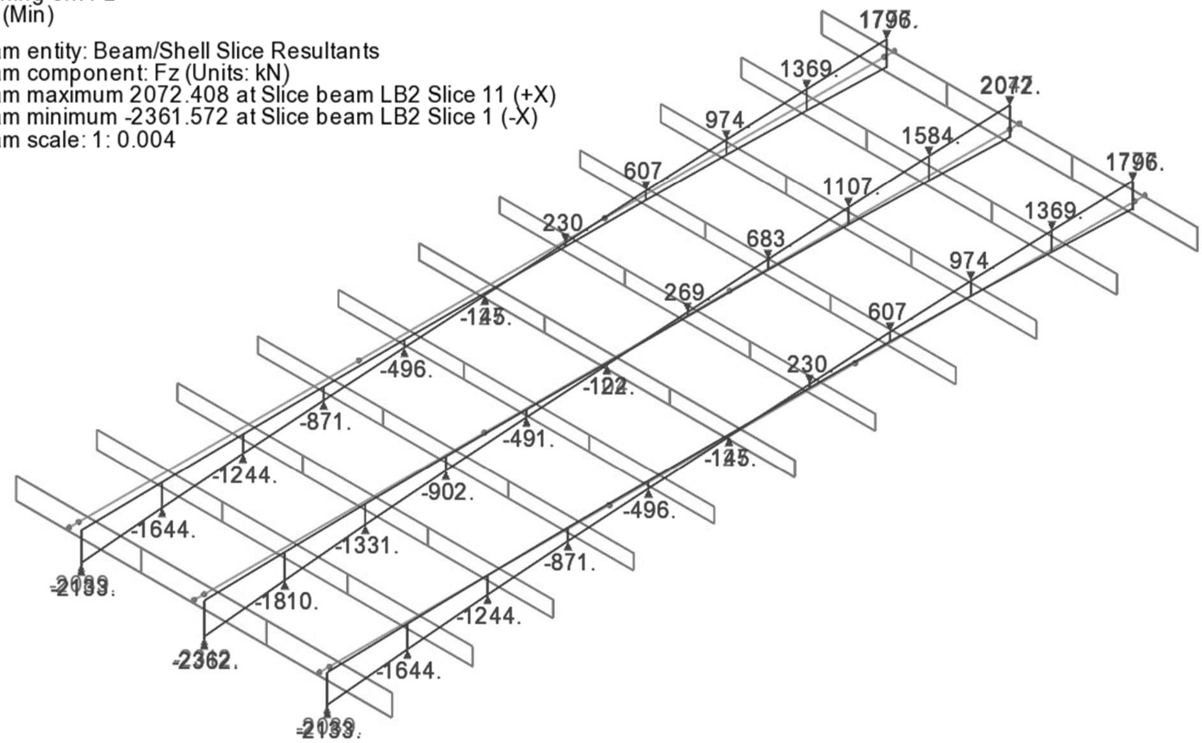
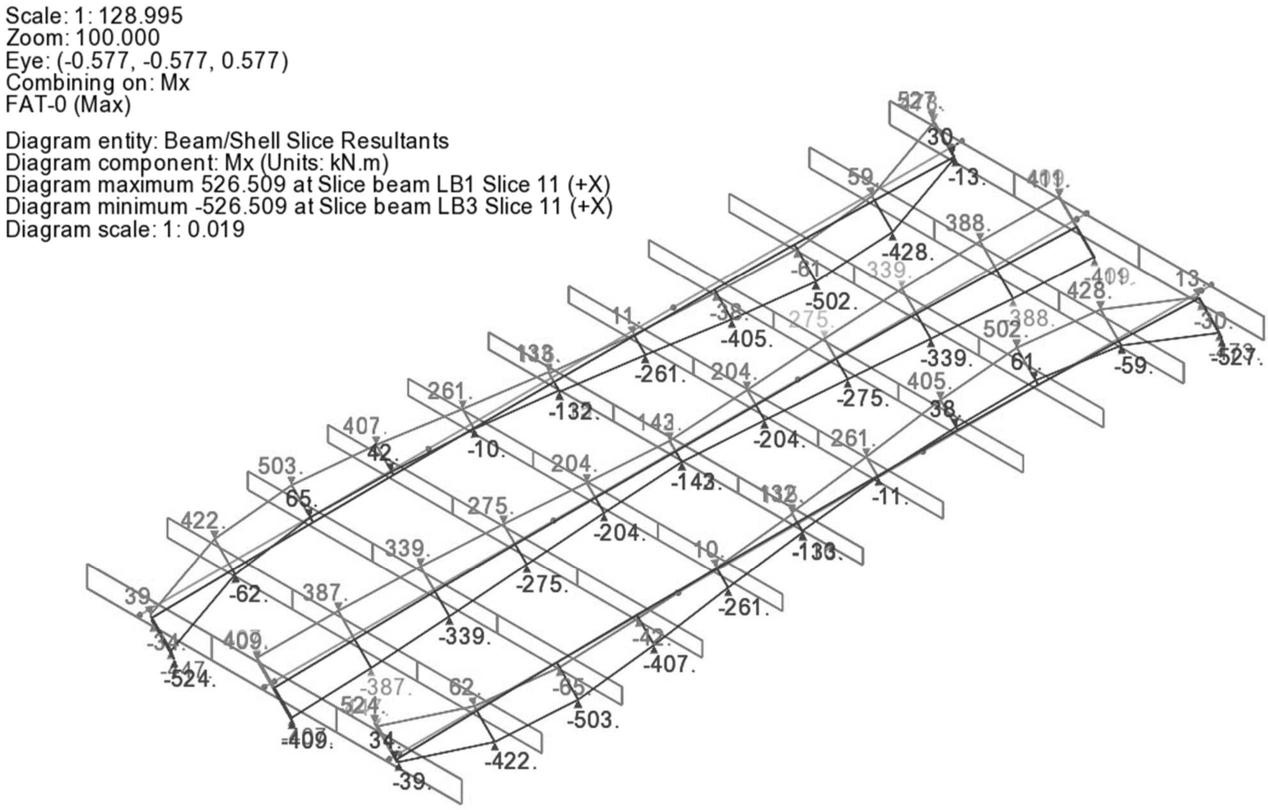
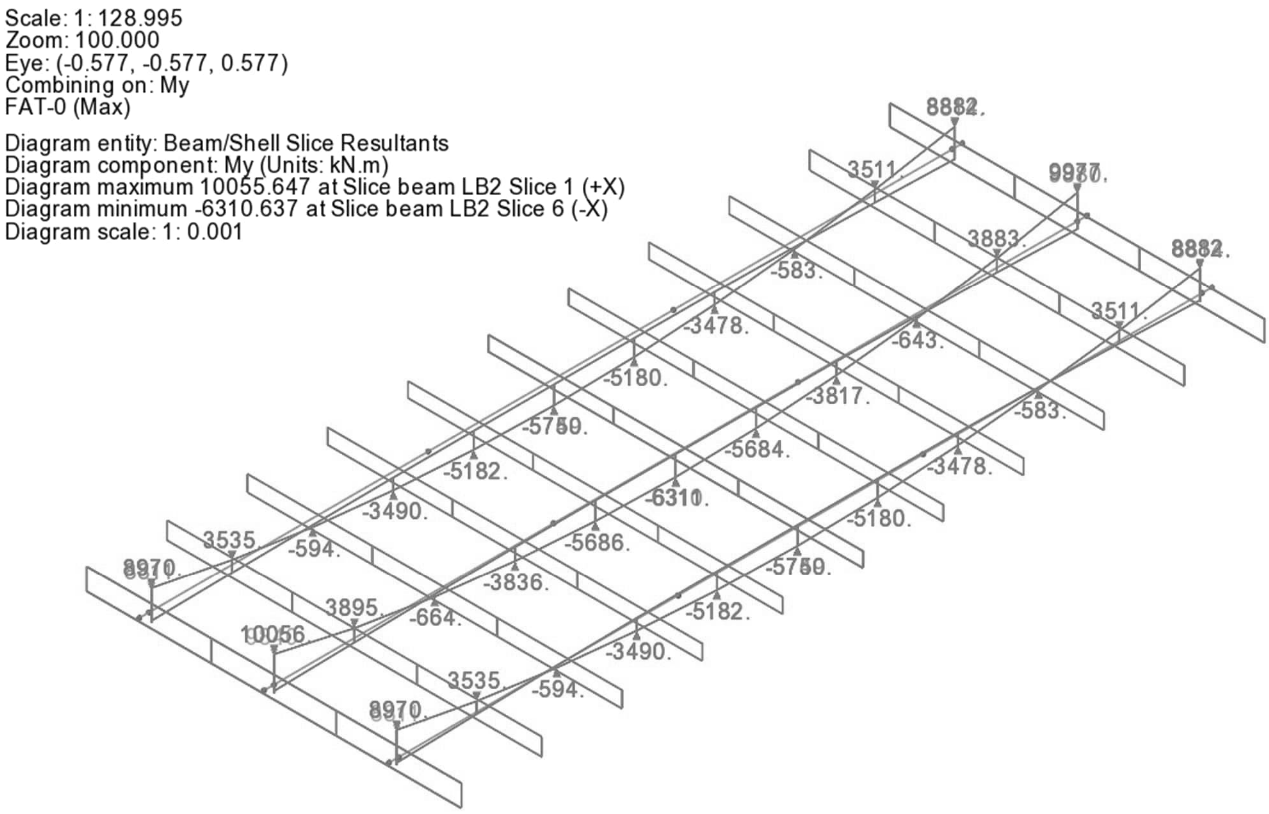


Diagram - Mx:



Scale: 1: 128.995
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: Mx
FAT-0 (Max)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: Mx (Units: kN.m)
Diagram maximum 526.509 at Slice beam LB1 Slice 11 (+X)
Diagram minimum -526.509 at Slice beam LB3 Slice 11 (+X)
Diagram scale: 1: 0.019

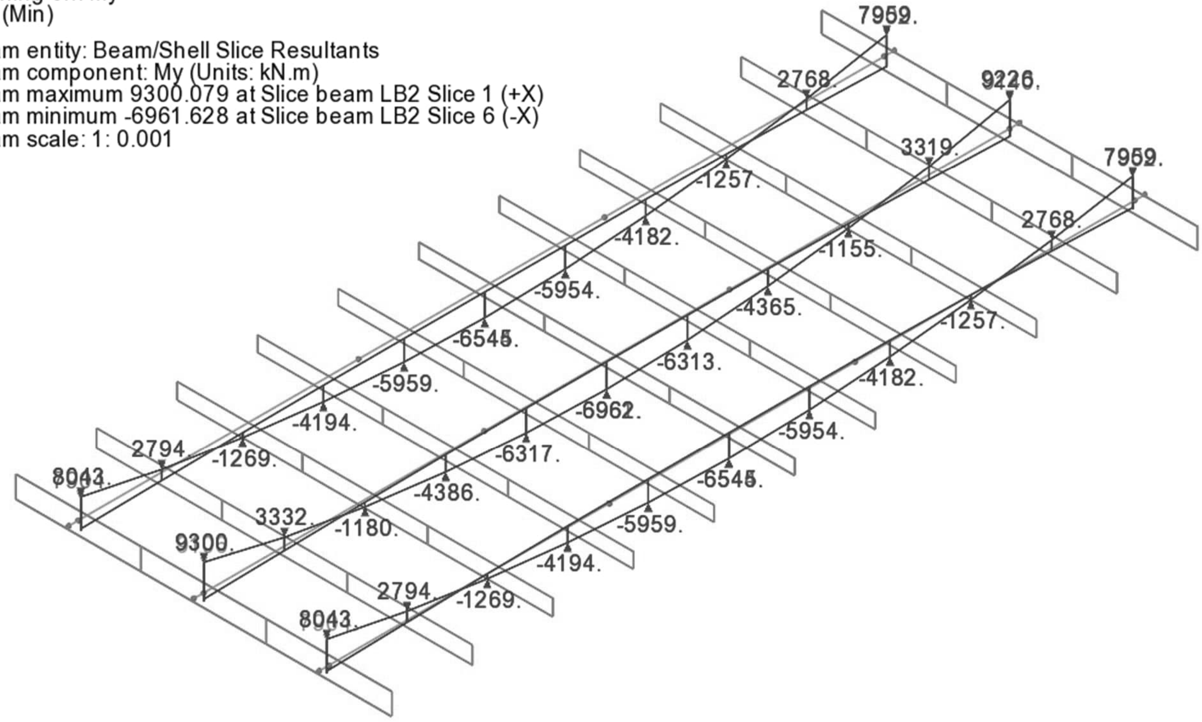
Diagram - My:



Scale: 1: 128.995
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
FAT-0 (Max)
Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 10055.647 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -6310.637 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001

Scale: 1: 128.995
Zoom: 100.000
Eye: (-0.577, -0.577, 0.577)
Combining on: My
FAT-0 (Min)

Diagram entity: Beam/Shell Slice Resultants
Diagram component: My (Units: kN.m)
Diagram maximum 9300.079 at Slice beam LB2 Slice 1 (+X)
Diagram minimum -6961.628 at Slice beam LB2 Slice 6 (-X)
Diagram scale: 1: 0.001



26.1 Table – Max Fz

LB2: FAT-0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	0	8.0	-2043	3	-2044	27	9300	29
3.3	-13.1	0	8.0	-2099	1	-1581	-17	3413	-26
6.6	-9.8	0	8.1	-2092	6	-1106	-42	-1087	-55
9.8	-6.6	0	8.1	-2192	10	-683	-49	-4254	-64
13.1	-3.3	0	8.1	-2319	9	-270	-86	-6261	-82
16.4	0.0	0	8.1	-2375	9	103	-116	-6887	-73
16.4	0.0	0	8.1	-2380	12	122	-106	-6874	-85
19.7	3.3	0	8.1	-2354	12	492	-134	-6202	-69
23.0	6.6	0	8.1	-2265	10	907	-176	-4322	-74
26.2	9.8	0	8.1	-2209	13	1340	-203	-1086	-52
29.5	13.1	0	8.0	-2242	19	1818	-221	3503	-8
32.8	16.4	0	7.9	-2203	33	2324	-235	9717	117
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: FAT-0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-1443	511	-1778	253	8043	39
3.3	-13.1	-5.0	8.0	-1430	-106	-1371	-124	2895	675
6.6	-9.8	-5.0	8.1	-1423	-390	-976	-230	-1164	-246
9.8	-6.6	-5.0	8.1	-1381	-353	-609	-168	-4039	-1460
13.1	-3.3	-5.0	8.1	-1335	-174	-231	-53	-5890	-2310
16.4	0.0	-5.0	8.1	-1322	11	126	76	-6448	-2586
16.4	0.0	-5.0	8.1	-1325	45	143	102	-6441	-2572
19.7	3.3	-5.0	8.1	-1355	228	497	235	-5809	-2309
23.0	6.6	-5.0	8.1	-1414	403	875	368	-4110	-1476
26.2	9.8	-5.0	8.1	-1472	429	1249	460	-1144	-273
29.5	13.1	-5.0	8.0	-1499	132	1647	361	3021	607
32.8	16.4	-5.0	7.9	-1552	-529	2097	-120	8522	-204
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: FAT-0

Distance	X	Y	Z	Fx	Fy	Max Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	-1443	-511	-1778	-253	8043	-39
3.3	-13.1	5.0	8.0	-1430	106	-1371	124	2895	-675
6.6	-9.8	5.0	8.1	-1423	390	-976	230	-1164	246
9.8	-6.6	5.0	8.1	-1381	353	-609	168	-4039	1460
13.1	-3.3	5.0	8.1	-1335	174	-231	53	-5890	2310
16.4	0.0	5.0	8.1	-1322	-11	126	-76	-6448	2586
16.4	0.0	5.0	8.1	-1325	-45	143	-102	-6441	2572
19.7	3.3	5.0	8.1	-1355	-228	497	-235	-5809	2309
23.0	6.6	5.0	8.1	-1414	-403	875	-368	-4110	1476
26.2	9.8	5.0	8.1	-1472	-429	1249	-460	-1144	273
29.5	13.1	5.0	8.0	-1499	-132	1647	-361	3021	-607
32.8	16.4	5.0	7.9	-1552	529	2097	120	8522	204
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

26.2 Table – Max Fz

LB2: FAT-0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	0	8.0	-2190	-32	-2312	227	9788	113
3.3	-13.1	0	8.0	-2230	-18	-1810	216	3505	-8
6.6	-9.8	0	8.1	-2195	-13	-1331	198	-1118	-53
9.8	-6.6	0	8.1	-2256	-10	-902	173	-4349	-76
13.1	-3.3	0	8.1	-2350	-12	-491	133	-6213	-71
16.4	0.0	0	8.1	-2380	-11	-122	107	-6883	-87
16.4	0.0	0	8.1	-2376	-9	-104	118	-6898	-75
19.7	3.3	0	8.1	-2323	-8	269	87	-6269	-83
23.0	6.6	0	8.1	-2200	-10	683	50	-4244	-65
26.2	9.8	0	8.1	-2102	-6	1107	43	-1074	-57
29.5	13.1	0	8.0	-2106	-1	1584	18	3394	-28
32.8	16.4	0	7.9	-2051	-3	2047	-30	9226	33
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: FAT-0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0	-16.4	-5.0	7.9	-1553	530	-2089	97	8598	-203
3.3	-13.1	-5.0	8.0	-1500	-131	-1644	-353	3033	611
6.6	-9.8	-5.0	8.1	-1473	-430	-1244	-460	-1168	-276
9.8	-6.6	-5.0	8.1	-1415	-403	-871	-368	-4134	-1478
13.1	-3.3	-5.0	8.1	-1356	-228	-496	-234	-5822	-2310
16.4	0.0	-5.0	8.1	-1326	-45	-145	-102	-6452	-2573
16.4	0.0	-5.0	8.1	-1322	-11	-127	-74	-6460	-2587
19.7	3.3	-5.0	8.1	-1335	174	230	54	-5899	-2310
23.0	6.6	-5.0	8.1	-1380	353	607	168	-4037	-1460
26.2	9.8	-5.0	8.1	-1420	389	974	231	-1164	-245
29.5	13.1	-5.0	8.0	-1427	107	1369	130	2861	671
32.8	16.4	-5.0	7.9	-1439	-509	1777	-278	7959	43
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: FAT-0

Distance	X	Y	Z	Fx	Fy	Min Fz	Mx	My	Mz
0.0	-16.4	5.0	7.9	-1553	-530	-2089	-97	8598	203
3.3	-13.1	5.0	8.0	-1500	131	-1644	353	3033	-611
6.6	-9.8	5.0	8.1	-1473	430	-1244	460	-1168	276
9.8	-6.6	5.0	8.1	-1415	403	-871	368	-4134	1478
13.1	-3.3	5.0	8.1	-1356	228	-496	234	-5822	2310
16.4	0.0	5.0	8.1	-1326	45	-145	102	-6452	2573
16.4	0.0	5.0	8.1	-1322	11	-127	74	-6460	2587
19.7	3.3	5.0	8.1	-1335	-174	230	-54	-5899	2310
23.0	6.6	5.0	8.1	-1380	-353	607	-168	-4037	1460
26.2	9.8	5.0	8.1	-1420	-389	974	-231	-1164	245
29.5	13.1	5.0	8.0	-1427	-107	1369	-130	2861	-671
32.8	16.4	5.0	7.9	-1439	509	1777	278	7959	-43
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

26.3 Table – Max Mx

LB2: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	0	8.0	-2121	3	-2153	407	9837	424
3.3	-13.1	0	8.0	-2182	-8	-1697	387	3705	141
6.6	-9.8	0	8.1	-2190	-17	-1241	339	-891	-1
9.8	-6.6	0	8.1	-2280	-19	-819	275	-4082	-67
13.1	-3.3	0	8.1	-2381	-17	-417	204	-5994	-84
16.4	0.0	0	8.1	-2414	-15	-50	142	-6638	-114
16.4	0.0	0	8.1	-2413	-15	50	143	-6634	112
19.7	3.3	0	8.1	-2388	-18	419	204	-6009	95
23.0	6.6	0	8.1	-2288	-20	822	275	-4079	76
26.2	9.8	0	8.1	-2197	-17	1244	339	-866	-1
29.5	13.1	0	8.0	-2188	-10	1702	388	3678	-136
32.8	16.4	0	7.9	-2128	2	2157	409	9763	-432
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0	-16.4	-5.0	7.9	-1472	478	-1925	447	8381	65
3.3	-13.1	-5.0	8.0	-1455	-140	-1522	62	3033	632
6.6	-9.8	-5.0	8.1	-1473	-417	-1146	-65	-1055	-351
9.8	-6.6	-5.0	8.1	-1444	-388	-787	-42	-3955	-1580
13.1	-3.3	-5.0	8.1	-1396	-218	-422	10	-5661	-2399
16.4	0.0	-5.0	8.1	-1339	13	54	115	-6033	-2534
16.4	0.0	-5.0	8.1	-1342	44	81	132	-6066	-2519
19.7	3.3	-5.0	8.1	-1375	228	438	261	-5486	-2267
23.0	6.6	-5.0	8.1	-1443	405	811	405	-3716	-1430
26.2	9.8	-5.0	8.1	-1504	425	1177	503	-764	-232
29.5	13.1	-5.0	8.0	-1536	116	1553	428	3427	643
32.8	16.4	-5.0	7.9	-1618	-565	1946	13	8882	-278
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Max Mx	My	Mz
0.0	-16.4	5.0	7.9	-1620	-567	-1941	39	8970	275
3.3	-13.1	5.0	8.0	-1538	116	-1555	422	3444	-646
6.6	-9.8	5.0	8.1	-1506	427	-1178	504	-783	235
9.8	-6.6	5.0	8.1	-1445	405	-812	407	-3735	1432
13.1	-3.3	5.0	8.1	-1376	228	-439	261	-5494	2269
16.4	0.0	5.0	8.1	-1342	45	-81	133	-6071	2520
16.4	0.0	5.0	8.1	-1340	12	-49	116	-6008	2529
19.7	3.3	5.0	8.1	-1394	-218	423	11	-5653	2395
23.0	6.6	5.0	8.1	-1441	-387	788	-38	-3937	1576
26.2	9.8	5.0	8.1	-1468	-416	1148	-61	-1039	348
29.5	13.1	5.0	8.0	-1450	-141	1523	59	3012	-629
32.8	16.4	5.0	7.9	-1466	475	1925	473	8274	-70
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

26.4 Table – Min Mx

LB2: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	0	8.0	-2121	-3	-2153	-407	9837	-424
3.3	-13.1	0	8.0	-2182	8	-1697	-387	3705	-141
6.6	-9.8	0	8.1	-2190	17	-1241	-339	-891	1
9.8	-6.6	0	8.1	-2280	19	-819	-275	-4082	67
13.1	-3.3	0	8.1	-2381	17	-417	-204	-5994	84
16.4	0.0	0	8.1	-2414	15	-50	-142	-6638	114
16.4	0.0	0	8.1	-2413	15	50	-143	-6634	-112
19.7	3.3	0	8.1	-2388	18	419	-204	-6009	-95
23.0	6.6	0	8.1	-2288	20	822	-275	-4079	-76
26.2	9.8	0	8.1	-2197	17	1244	-339	-866	1
29.5	13.1	0	8.0	-2188	10	1702	-388	3678	136
32.8	16.4	0	7.9	-2128	-2	2157	-409	9763	432
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0	-16.4	-5.0	7.9	-1620	567	-1941	-39	8970	-275
3.3	-13.1	-5.0	8.0	-1538	-116	-1555	-422	3444	646
6.6	-9.8	-5.0	8.1	-1506	-427	-1178	-504	-783	-235
9.8	-6.6	-5.0	8.1	-1445	-405	-812	-407	-3735	-1432
13.1	-3.3	-5.0	8.1	-1376	-228	-439	-261	-5494	-2269
16.4	0.0	-5.0	8.1	-1342	-45	-81	-133	-6071	-2520
16.4	0.0	-5.0	8.1	-1340	-12	-49	-116	-6008	-2529
19.7	3.3	-5.0	8.1	-1394	218	423	-11	-5653	-2395
23.0	6.6	-5.0	8.1	-1441	387	788	38	-3937	-1576
26.2	9.8	-5.0	8.1	-1468	416	1148	61	-1039	-348
29.5	13.1	-5.0	8.0	-1450	141	1523	-59	3012	629
32.8	16.4	-5.0	7.9	-1466	-475	1925	-473	8274	70
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Min Mx	My	Mz
0.0	-16.4	5.0	7.9	-1472	-478	-1925	-447	8381	-65
3.3	-13.1	5.0	8.0	-1455	140	-1522	-62	3033	-632
6.6	-9.8	5.0	8.1	-1473	417	-1146	65	-1055	351
9.8	-6.6	5.0	8.1	-1444	388	-787	42	-3955	1580
13.1	-3.3	5.0	8.1	-1396	218	-422	-10	-5661	2399
16.4	0.0	5.0	8.1	-1339	-13	54	-115	-6033	2534
16.4	0.0	5.0	8.1	-1342	-44	81	-132	-6066	2519
19.7	3.3	5.0	8.1	-1375	-228	438	-261	-5486	2267
23.0	6.6	5.0	8.1	-1443	-405	811	-405	-3716	1430
26.2	9.8	5.0	8.1	-1504	-425	1177	-503	-764	232
29.5	13.1	5.0	8.0	-1536	-116	1553	-428	3427	-643
32.8	16.4	5.0	7.9	-1618	565	1946	-13	8882	278
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

26.5 Table – Max My

LB2: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	0	8.0	-2254	-9	-2182	176	10056	151
3.3	-13.1	0	8.0	-2260	-2	-1686	133	3895	47
6.6	-9.8	0	8.1	-2206	-1	-1210	93	-664	18
9.8	-6.6	0	8.1	-2164	0	-752	34	-3836	0
13.1	-3.3	0	8.1	-2271	0	-368	32	-5686	1
16.4	0.0	0	8.1	-2313	0	-10	32	-6311	-2
16.4	0.0	0	8.1	-2313	0	17	32	-6310	3
19.7	3.3	0	8.1	-2272	0	369	33	-5684	-1
23.0	6.6	0	8.1	-2168	0	753	35	-3817	0
26.2	9.8	0	8.1	-2214	1	1213	-92	-643	18
29.5	13.1	0	8.0	-2268	2	1689	-133	3883	46
32.8	16.4	0	7.9	-2268	10	2191	-180	9977	156
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0	-16.4	-5.0	7.9	-1620	567	-1941	-39	8970	-275
3.3	-13.1	-5.0	8.0	-1541	-98	-1496	-388	3535	690
6.6	-9.8	-5.0	8.1	-1514	-399	-1103	-439	-594	-183
9.8	-6.6	-5.0	8.1	-1439	-371	-727	-320	-3490	-1373
13.1	-3.3	-5.0	8.1	-1336	-190	-347	-121	-5183	-2177
16.4	0.0	-5.0	8.1	-1315	-17	-13	24	-5750	-2443
16.4	0.0	-5.0	8.1	-1315	16	14	-27	-5749	-2443
19.7	3.3	-5.0	8.1	-1335	189	347	117	-5180	-2177
23.0	6.6	-5.0	8.1	-1436	370	727	317	-3478	-1372
26.2	9.8	-5.0	8.1	-1509	397	1102	437	-583	-181
29.5	13.1	-5.0	8.0	-1539	99	1499	398	3512	684
32.8	16.4	-5.0	7.9	-1618	-567	1938	13	8883	-274
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	max My	Mz
0.0	-16.4	5.0	7.9	-1620	-567	-1941	39	8970	275
3.3	-13.1	5.0	8.0	-1541	98	-1496	388	3535	-690
6.6	-9.8	5.0	8.1	-1514	399	-1103	439	-594	183
9.8	-6.6	5.0	8.1	-1439	371	-727	320	-3490	1373
13.1	-3.3	5.0	8.1	-1336	190	-347	121	-5183	2177
16.4	0.0	5.0	8.1	-1315	17	-13	-24	-5750	2443
16.4	0.0	5.0	8.1	-1315	-16	14	27	-5749	2443
19.7	3.3	5.0	8.1	-1335	-189	347	-117	-5180	2177
23.0	6.6	5.0	8.1	-1436	-370	727	-317	-3478	1372
26.2	9.8	5.0	8.1	-1509	-397	1102	-437	-583	181
29.5	13.1	5.0	8.0	-1539	-99	1499	-398	3512	-684
32.8	16.4	5.0	7.9	-1618	567	1938	-13	8883	274
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

26.6 Table – Min My

LB2: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	0	8.0	-2043	1	-2044	6	9300	7
3.3	-13.1	0	8.0	-2110	-8	-1667	46	3332	-45
6.6	-9.8	0	8.1	-2184	7	-1252	-129	-1180	60
9.8	-6.6	0	8.1	-2248	-3	-823	109	-4386	-80
13.1	-3.3	0	8.1	-2322	-1	-363	-9	-6317	-89
16.4	0.0	0	8.1	-2373	-1	8	-37	-6962	-90
16.4	0.0	0	8.1	-2375	3	24	-21	-6962	-94
19.7	3.3	0	8.1	-2325	-1	352	19	-6313	-89
23.0	6.6	0	8.1	-2211	3	826	-73	-4365	-84
26.2	9.8	0	8.1	-2193	4	1236	-113	-1155	-60
29.5	13.1	0	8.0	-2118	9	1680	-54	3319	-47
32.8	16.4	0	7.9	-2051	-1	2047	-7	9226	8
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB1: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0	-16.4	-5.0	7.9	-1443	511	-1778	253	8043	39
3.3	-13.1	-5.0	8.0	-1434	-116	-1473	-142	2794	665
6.6	-9.8	-5.0	8.1	-1426	-400	-1084	-260	-1269	-263
9.8	-6.6	-5.0	8.1	-1384	-371	-791	-217	-4194	-1486
13.1	-3.3	-5.0	8.1	-1334	-186	-341	-79	-5959	-2323
16.4	0.0	-5.0	8.1	-1319	-2	14	52	-6544	-2598
16.4	0.0	-5.0	8.1	-1321	34	31	82	-6545	-2586
19.7	3.3	-5.0	8.1	-1334	182	326	70	-5954	-2320
23.0	6.6	-5.0	8.1	-1382	368	771	206	-4182	-1482
26.2	9.8	-5.0	8.1	-1424	400	1094	261	-1257	-262
29.5	13.1	-5.0	8.0	-1431	117	1483	147	2768	661
32.8	16.4	-5.0	7.9	-1439	-509	1777	-278	7959	43
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

LB3: FAT-0

Distance	X	Y	Z	Fx	Fy	Fz	Mx	min My	Mz
0.0	-16.4	5.0	7.9	-1443	-511	-1778	-253	8043	-39
3.3	-13.1	5.0	8.0	-1434	116	-1473	142	2794	-665
6.6	-9.8	5.0	8.1	-1426	400	-1084	260	-1269	263
9.8	-6.6	5.0	8.1	-1384	371	-791	217	-4194	1486
13.1	-3.3	5.0	8.1	-1334	186	-341	79	-5959	2323
16.4	0.0	5.0	8.1	-1319	2	14	-52	-6544	2598
16.4	0.0	5.0	8.1	-1321	-34	31	-82	-6545	2586
19.7	3.3	5.0	8.1	-1334	-182	326	-70	-5954	2320
23.0	6.6	5.0	8.1	-1382	-368	771	-206	-4182	1482
26.2	9.8	5.0	8.1	-1424	-400	1094	-261	-1257	262
29.5	13.1	5.0	8.0	-1431	-117	1483	-147	2768	-661
32.8	16.4	5.0	7.9	-1439	509	1777	278	7959	-43
m	m	m	m	kN	kN	kN	kNm	kNm	kNm

27. DEFORMATIONER

27.1 EGEN: DZ

LB2: EGEN

Distance	X	Y	Z	DZ
0	-16.4	0	8.2	-1
3.3	-13.1	0	8.2	-9
6.7	-9.8	0	8.2	-18
12.9	-3.5	0	8.2	-31
16.4	0	0	8.2	-33
19.9	3.5	0	8.2	-31
26.2	9.8	0	8.2	-18
29.5	13.1	0	8.2	-9
32.8	16.4	0	8.2	-1
m	m	m	m	mm

27.2 BELAGG: DZ

LB2: BELAGG

Distance	X	Y	Z	DZ
0	-16.4	0	8.2	0
3.3	-13.1	0	8.2	-1
6.7	-9.8	0	8.2	-2
12.9	-3.5	0	8.2	-4
16.4	0	0	8.2	-4
19.9	3.5	0	8.2	-4
26.2	9.8	0	8.2	-2
29.5	13.1	0	8.2	-1
32.8	16.4	0	8.2	0
m	m	m	m	mm

27.3 PT-t0: DZ

LB2: PT-T0

Distance	X	Y	Z	DZ
0	-16.4	0	8.2	0
3.3	-13.1	0	8.2	4
6.7	-9.8	0	8.2	10
12.9	-3.5	0	8.2	24
16.4	0	0	8.2	26
19.9	3.5	0	8.2	24
26.2	9.8	0	8.2	10
29.5	13.1	0	8.2	4
32.8	16.4	0	8.2	0
m	m	m	m	mm

Title: Results deck

Model Units: kN,m,t,s,C
Report Units: kN,m,t,s,C

Model Title: System 001
Model File: System 001

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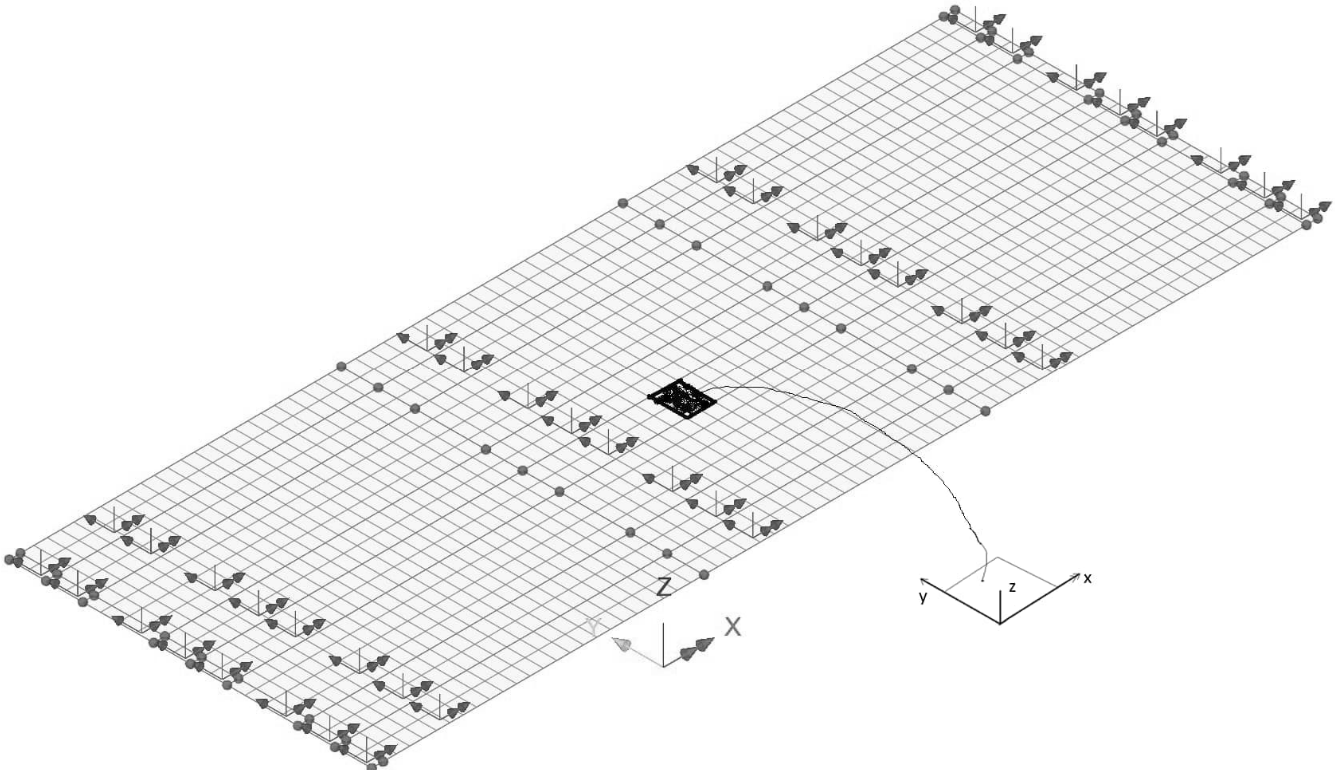
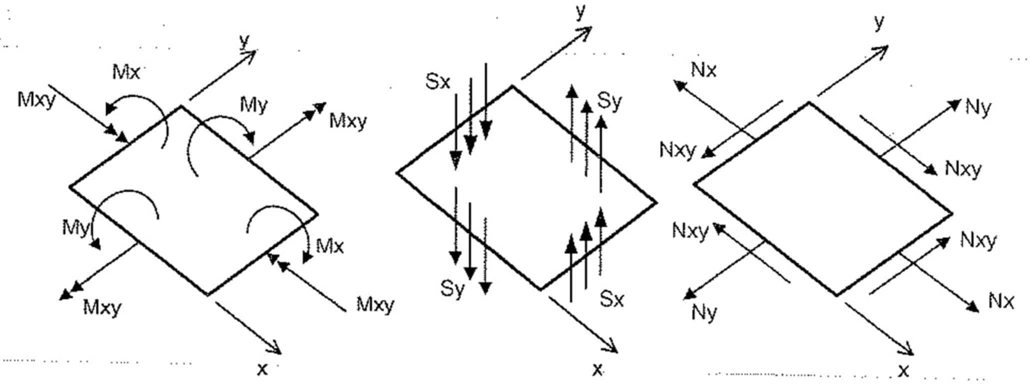
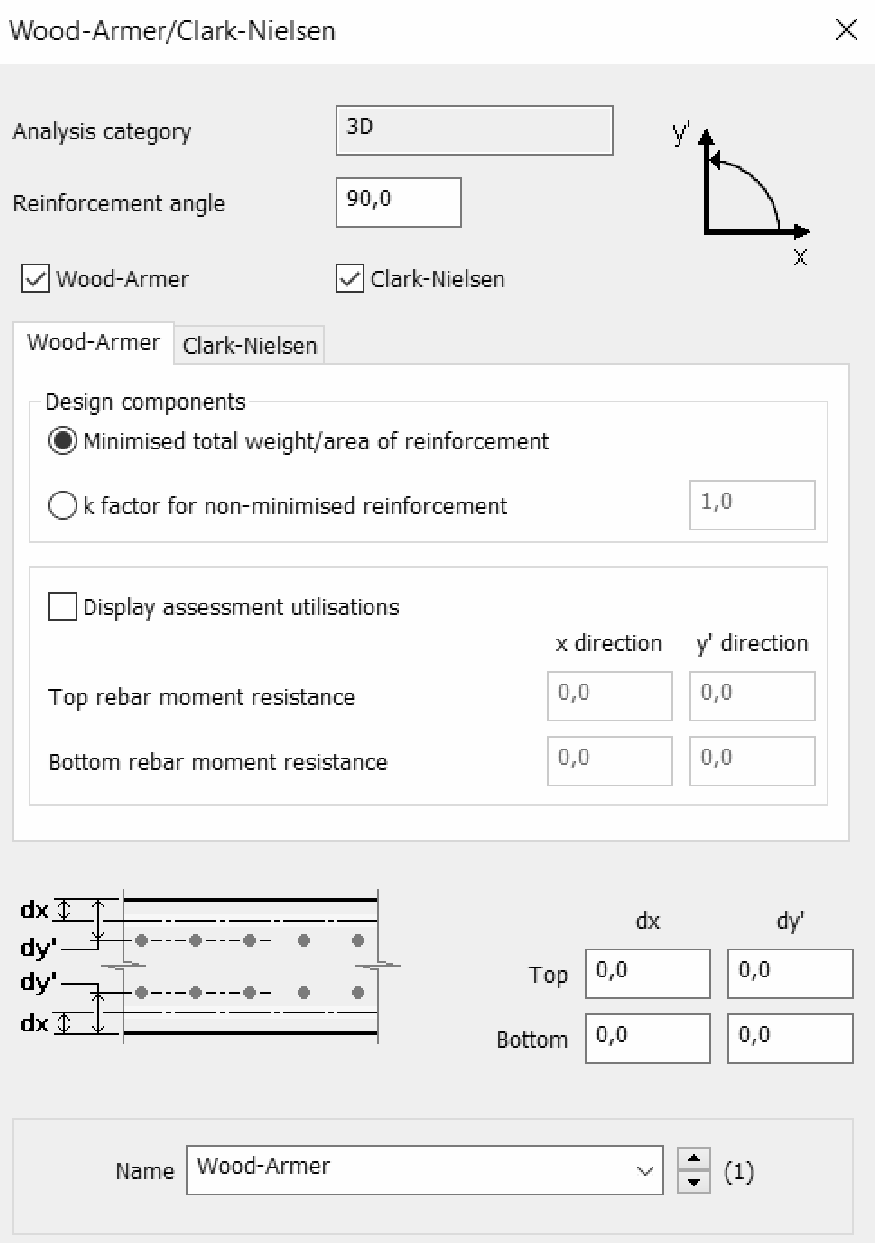
1. Sign convention





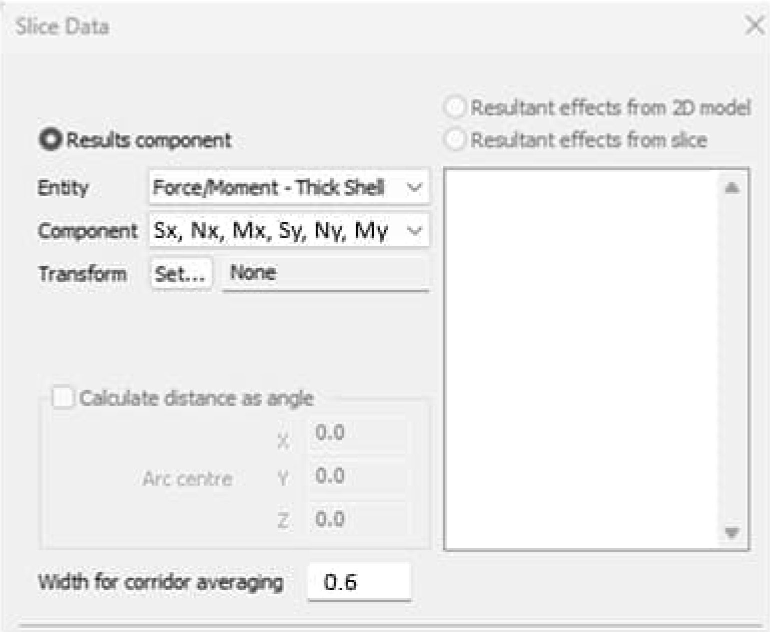
The +ve local z-direction defines the top surface.

2. Wood-Armer



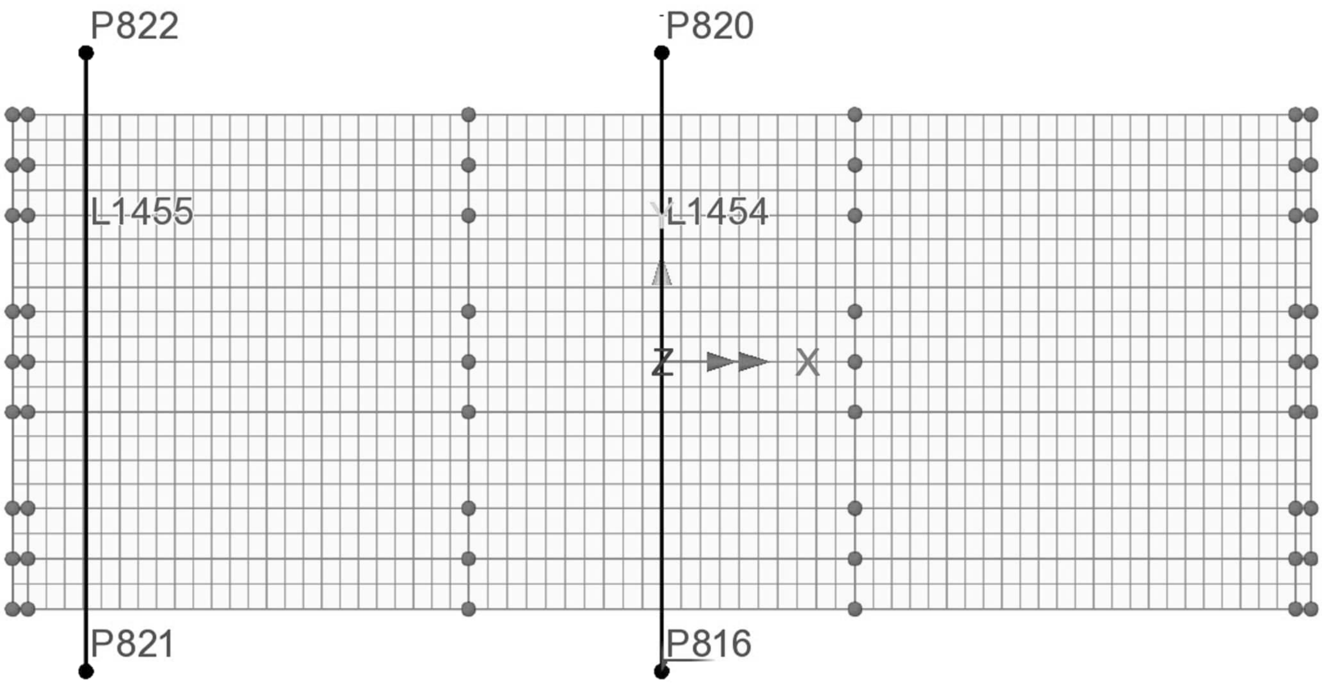
Wood-Armer/Clark-Nielsen
Analysis category
3D
Reinforcement angle
90,0
y'
x
Wood-Armer
Clark-Nielsen
Wood-Armer
Clark-Nielsen
Design components
Minimised total weight/area of reinforcement
k factor for non-minimised reinforcement
1,0
Display assessment utilisations
x direction
y' direction
Top rebar moment resistance
0,0
0,0
Bottom rebar moment resistance
0,0
0,0
dx
dy'
dy'
dx
dx
dy'
Top
0,0
0,0
Bottom
0,0
0,0
Name
Wood-Armer
(1)

3. Slice Data



Remark
Width of corridor is the width over which load effect is averaged (± 0.3 m från resultline).

4. Definition result lines



Points:

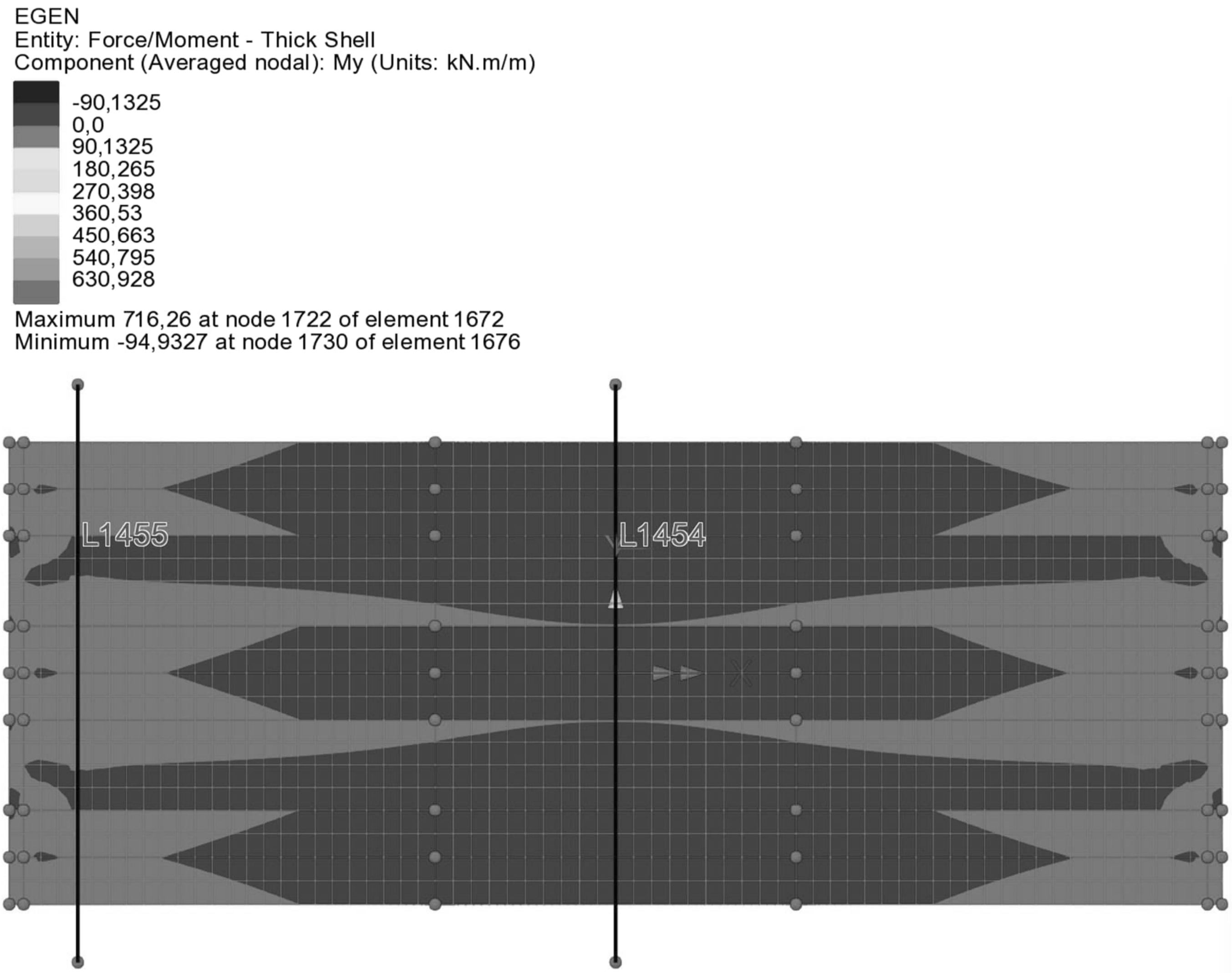
Point	X coordinate	Y coordinate	Z coordinate
816	0	-8.0	10.0
820	0	8.0	10.0
821	-14.9	-8.0	10.0
822	-14.9	8.0	10.0

Lines:

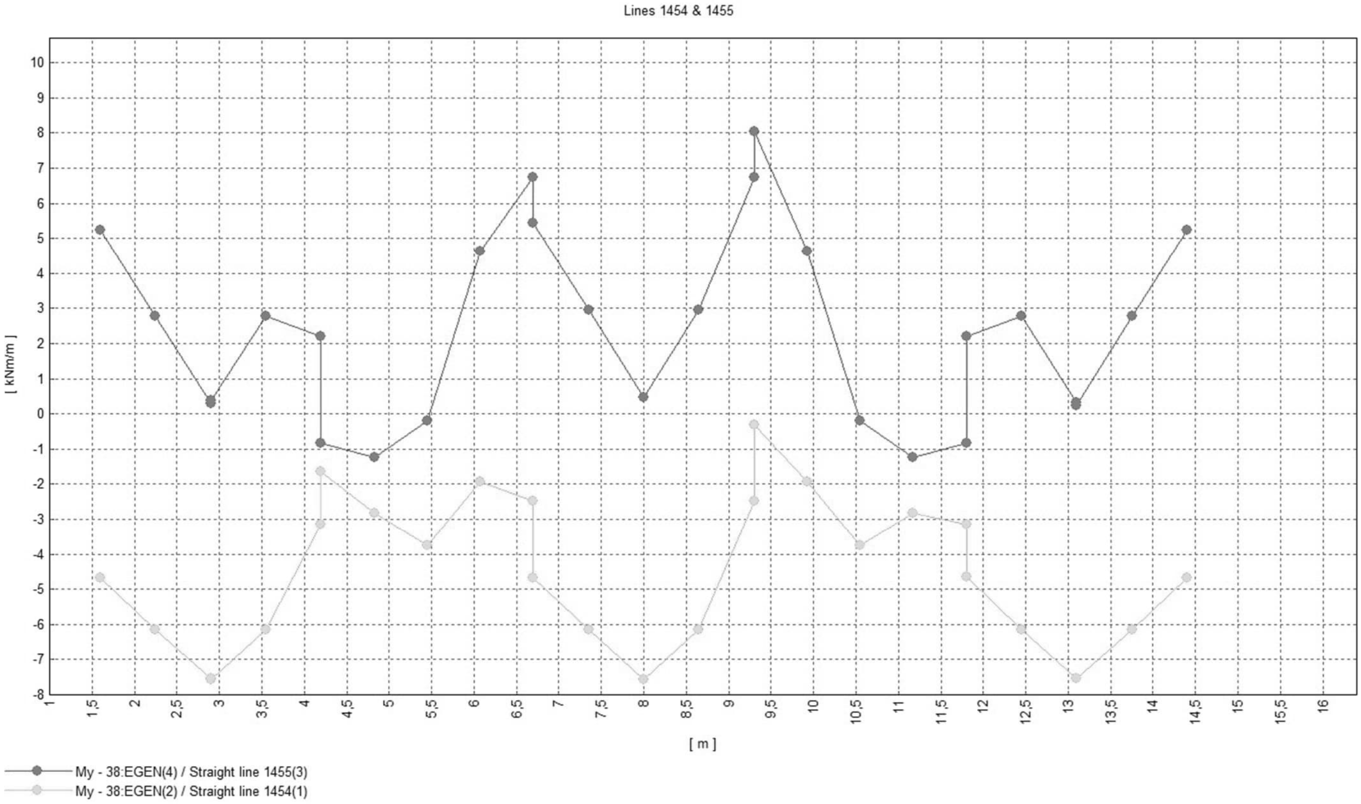
Line	Points
1454	816;820
1455	821;822

5. EGEN - My

5.1 CONTOUR



5.2 DIAGRAM



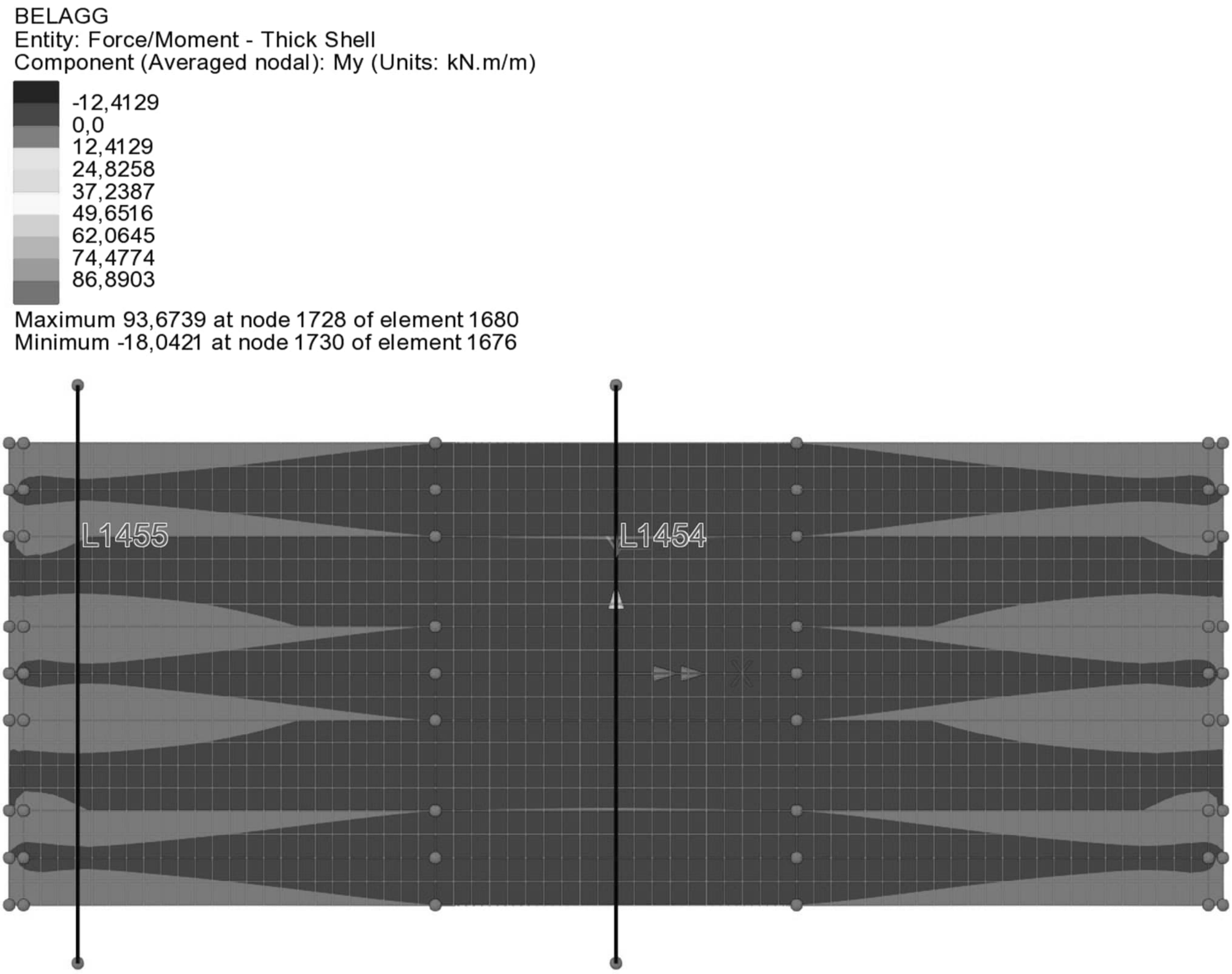
Lines 1454 & 1455
[kNm/m]
[m]
My - 38:EGEN(4) / Straight line 1455(3)
My - 38:EGEN(2) / Straight line 1454(1)

5.3 TABLE

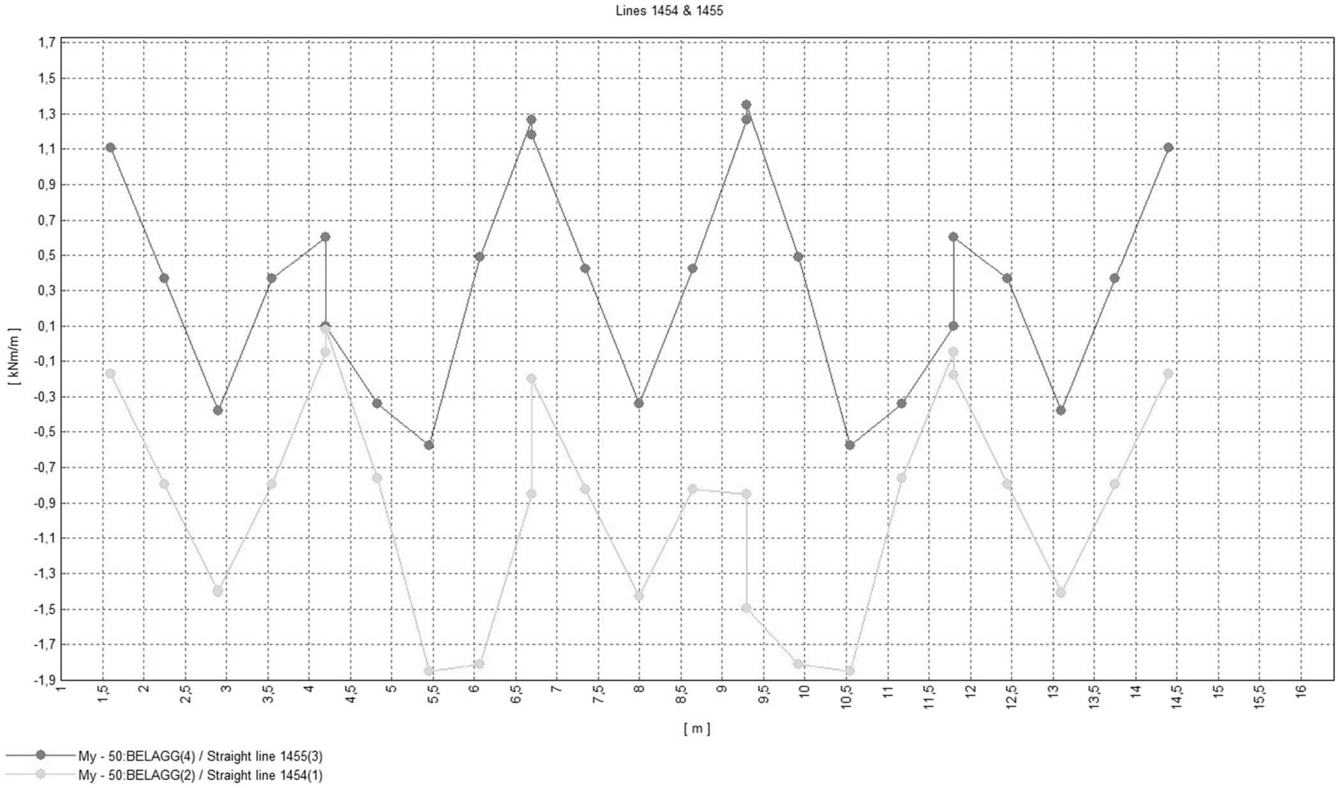
s	L1454: My	L1455:My
0	-5	5
0,7	-6	3
1,3	-8	0
1,3	-8	0
2,0	-6	3
2,6	-3	2
2,6	-2	-1
3,2	-3	-1
3,9	-4	0
4,5	-2	5
5,1	-2	7
5,1	-5	5
5,8	-6	3
6,4	-8	0
6,4	-8	0
7,1	-6	3
7,7	-2	7
7,7	0	8
8,3	-2	5
9,0	-4	0
9,6	-3	-1
10,2	-3	-1
10,2	-5	2
10,9	-6	3
11,5	-8	0
11,5	-8	0
12,2	-6	3
12,8	-5	5
m	kNm/m	kNm/m

6. BELAGG - My

6.1 CONTOUR



6.2 DIAGRAM

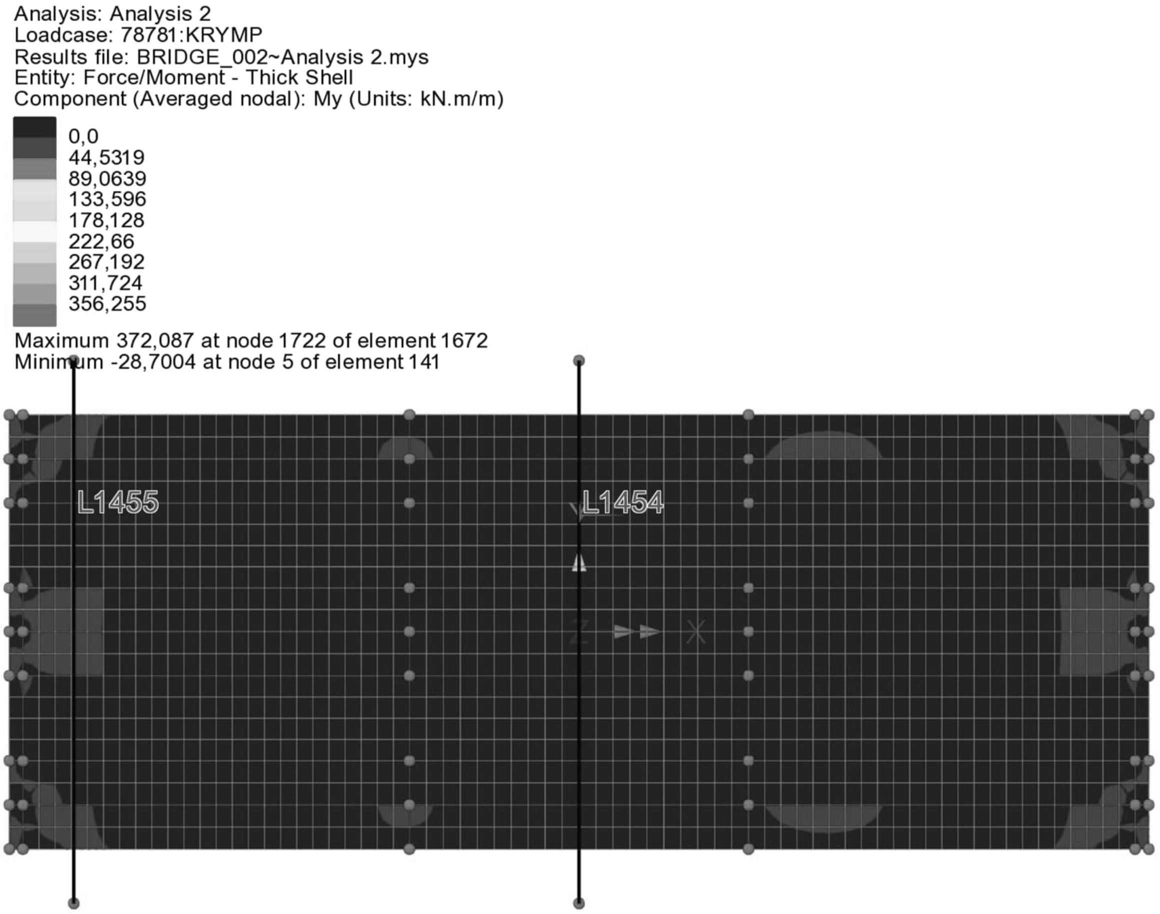

Lines 1454 & 1455
[kNm/m]
[m]
My - 50:BELAGG(4) / Straight line 1455(3)
My - 50:BELAGG(2) / Straight line 1454(1)

6.3 Table

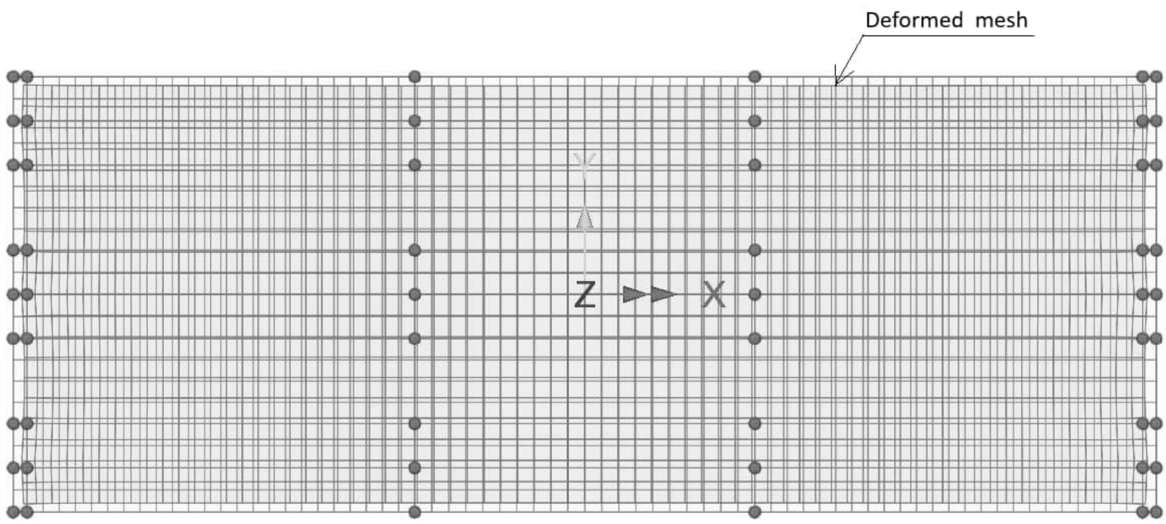
s	L1454: My	L1455:My
0	0	1
0,7	-1	0
1,3	-1	0
1,3	-1	0
2,0	-1	0
2,6	0	1
2,6	0	0
3,2	-1	0
3,9	-2	-1
4,5	-2	0
5,1	-1	1
5,1	0	1
5,8	-1	0
6,4	-1	0
6,4	-1	0
7,1	-1	0
7,7	-1	1
7,7	-1	1
8,3	-2	0
9,0	-2	-1
9,6	-1	0
10,2	0	0
10,2	0	1
10,9	-1	0
11,5	-1	0
11,5	-1	0
12,2	-1	0
12,8	0	1
m	kNm/m	kNm/m

7. KRYMP- My

7.1 CONTOUR

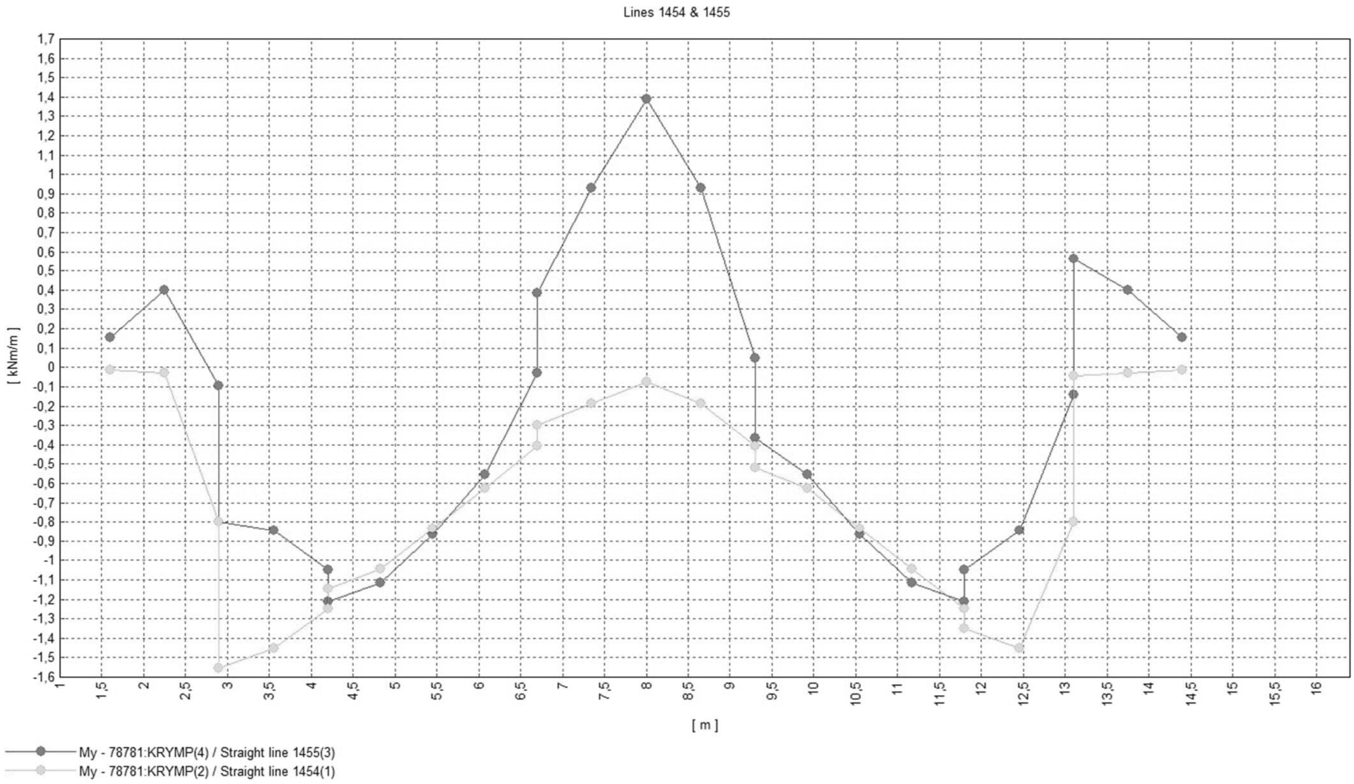


Analysis: Analysis 2
Loadcase: 78781:KRYMP
Results file: BRIDGE_002~Analysis 2.mys
Entity: Force/Moment - Thick Shell
Component (Averaged nodal): My (Units: kN.m/m)
0,0
44,5319
89,0639
133,596
178,128
222,66
267,192
311,724
356,255
Maximum 372,087 at node 1722 of element 1672
Minimum -28,7004 at node 5 of element 141
L1455
L1454
Z
X



Deformed mesh
Y
Z
X

7.2 DIAGRAM



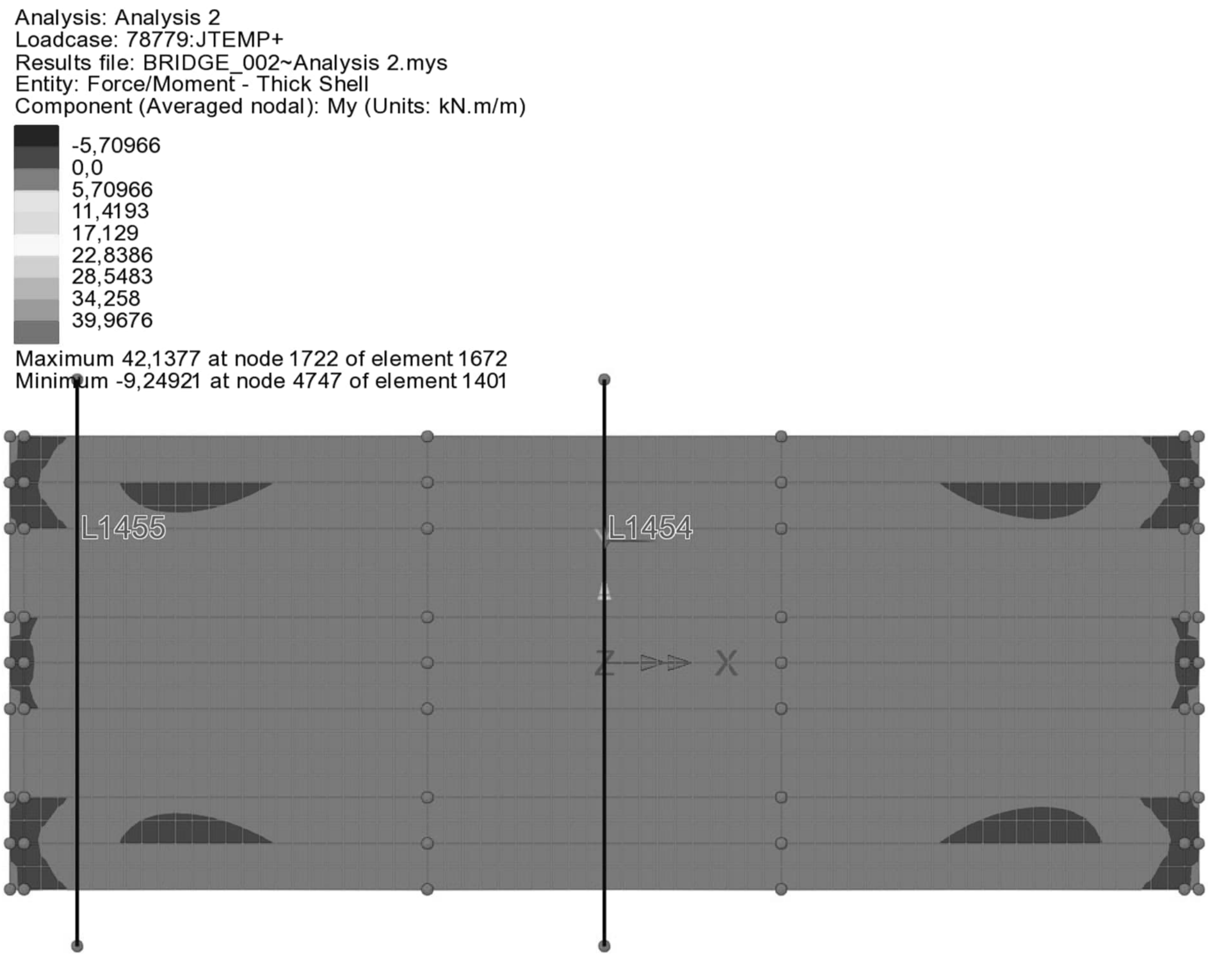
Lines 1454 & 1455
1,7
1,6
1,5
1,4
1,3
1,2
1,1
1
0,9
0,8
0,7
0,6
0,5
0,4
0,3
0,2
0,1
0
-0,1
-0,2
-0,3
-0,4
-0,5
-0,6
-0,7
-0,8
-0,9
-1
-1,1
-1,2
-1,3
-1,4
-1,5
-1,6
[kNm/m]
1
1,5
2
2,5
3
3,5
4
4,5
5
5,5
6
6,5
7
7,5
8
8,5
9
9,5
10
10,5
11
11,5
12
12,5
13
13,5
14
14,5
15
15,5
16
[m]
My - 78781:KRYMP(4) / Straight line 1455(3)
My - 78781:KRYMP(2) / Straight line 1454(1)

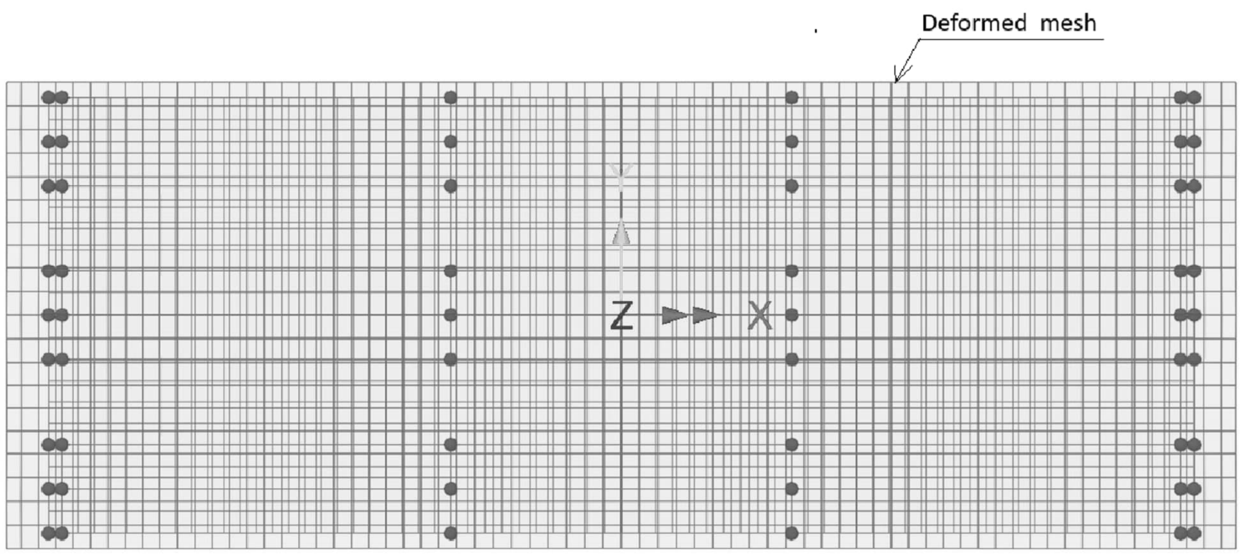
7.3 TABLE

s	L1454: My	L1455:My
0	0	0
0,7	0	0
1,3	-1	0
1,3	-2	-1
2,0	-1	-1
2,6	-1	-1
2,6	-1	-1
3,2	-1	-1
3,9	-1	-1
4,5	-1	-1
5,1	0	0
5,1	0	0
5,8	0	1
6,4	0	1
6,4	0	1
7,1	0	1
7,7	0	0
7,7	-1	0
8,3	-1	-1
9,0	-1	-1
9,6	-1	-1
10,2	-1	-1
10,2	-1	-1
10,9	-1	-1
11,5	-1	0
11,5	0	1
12,2	0	0
12,8	0	0
m	kNm/m	kNm/m

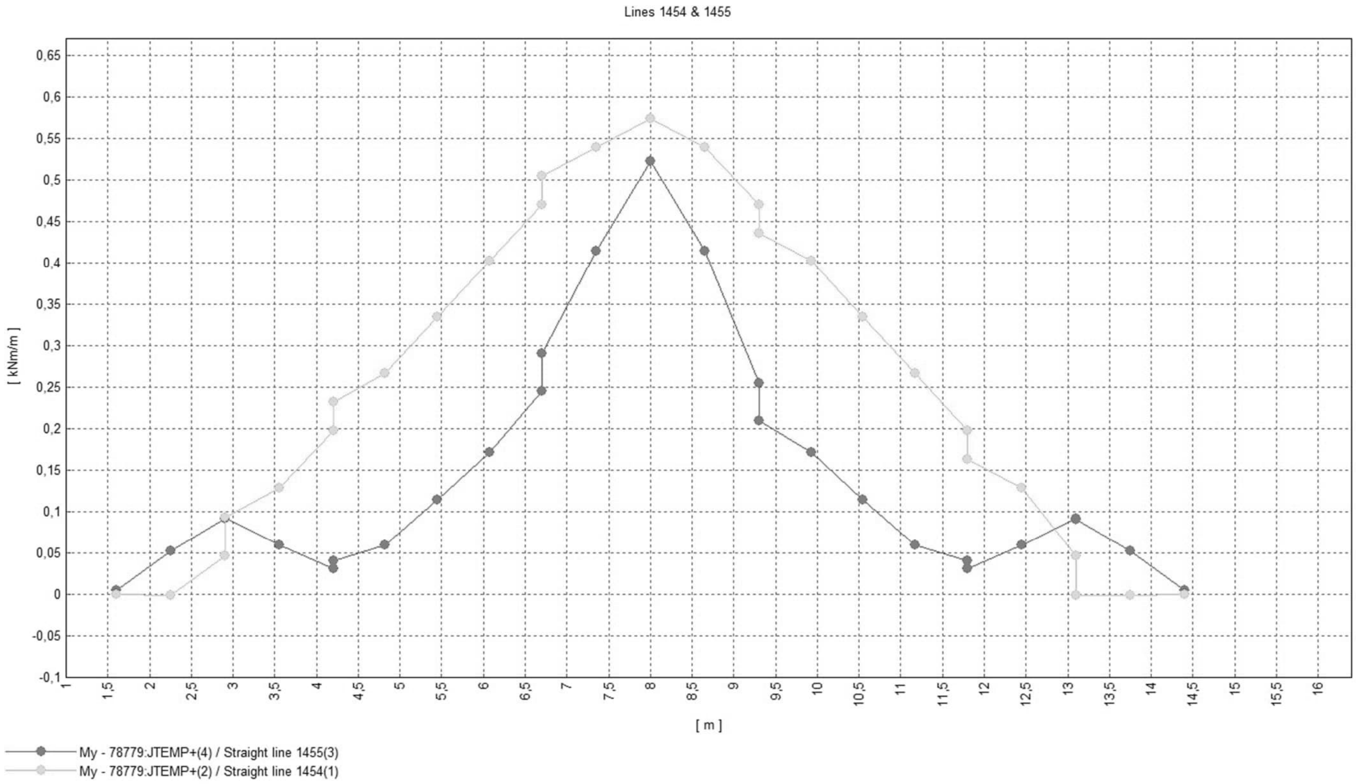
8. JTEMP+ My

8.1 CONTOUR





8.2 DIAGRAM

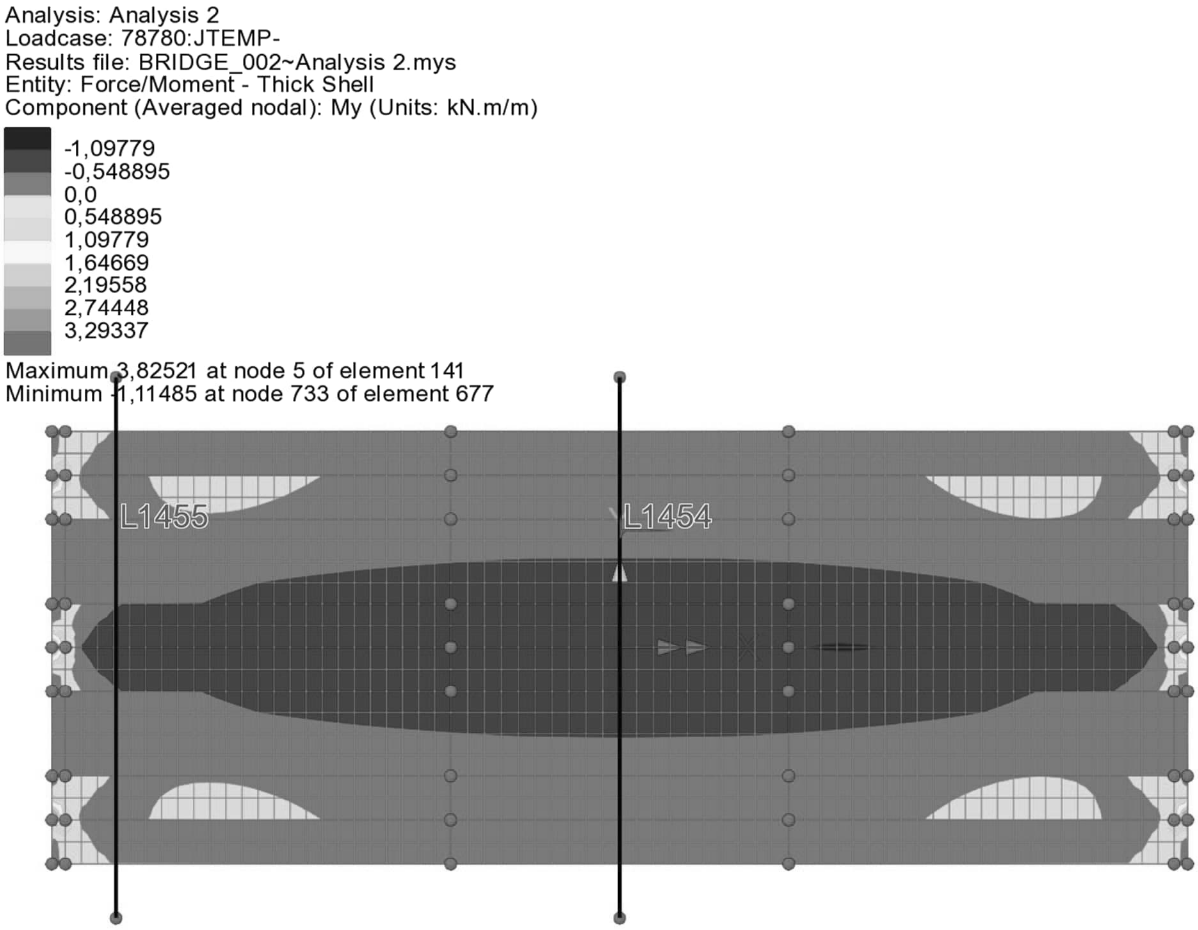

Lines 1454 & 1455
[kNm/m]
0,65
0,6
0,55
0,5
0,45
0,4
0,35
0,3
0,25
0,2
0,15
0,1
0,05
0
-0,05
-0,1
1
1,5
2
2,5
3
3,5
4
4,5
5
5,5
6
6,5
7
7,5
8
8,5
9
9,5
10
10,5
11
11,5
12
12,5
13
13,5
14
14,5
15
15,5
16
[m]
My - 78779:JTEMP+(4) / Straight line 1455(3)
My - 78779:JTEMP+(2) / Straight line 1454(1)

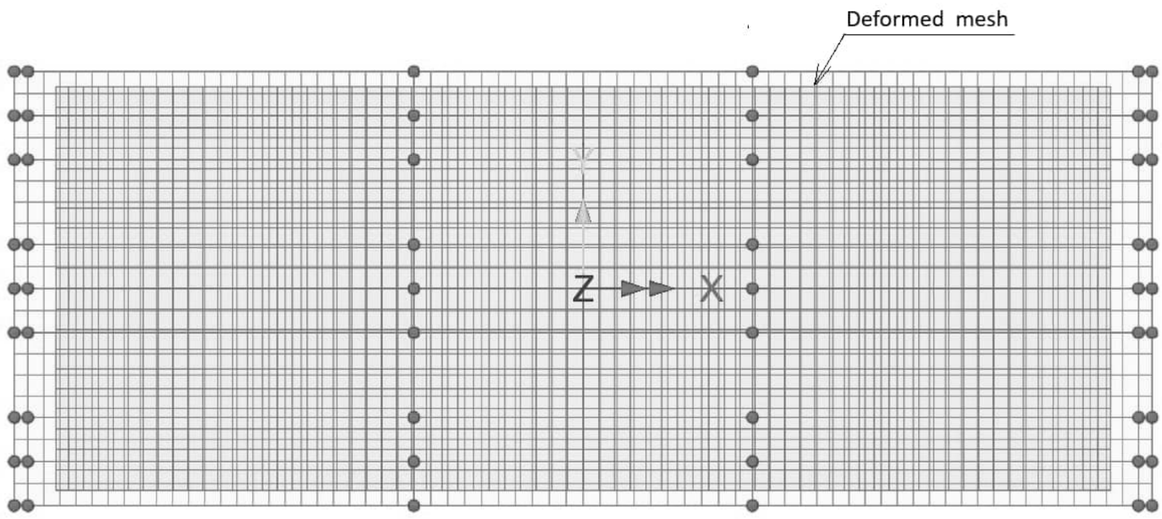
8.3 TABLE

s	L1454: My	L1455:My
0	0	0
0,7	0	0
1,3	0	0
1,3	0	0
2,0	0	0
2,6	0	0
2,6	0	0
3,2	0	0
3,9	0	0
4,5	0	0
5,1	0	0
5,1	1	0
5,8	1	0
6,4	1	1
6,4	1	1
7,1	1	0
7,7	0	0
7,7	0	0
8,3	0	0
9,0	0	0
9,6	0	0
10,2	0	0
10,2	0	0
10,9	0	0
11,5	0	0
11,5	0	0
12,2	0	0
12,8	0	0
m	kNm/m	kNm/m

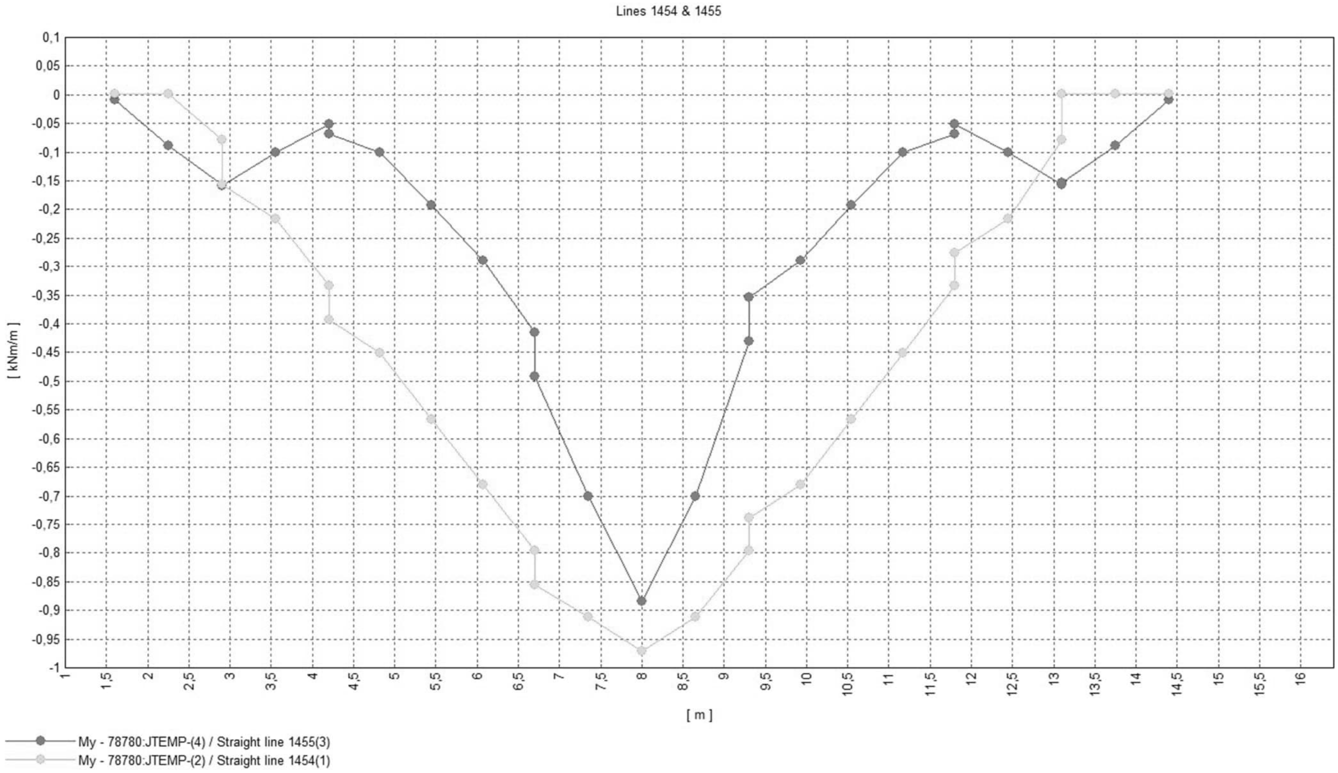
9. JTEMP- My

9.1 CONTOUR





9.2 DIAGRAM

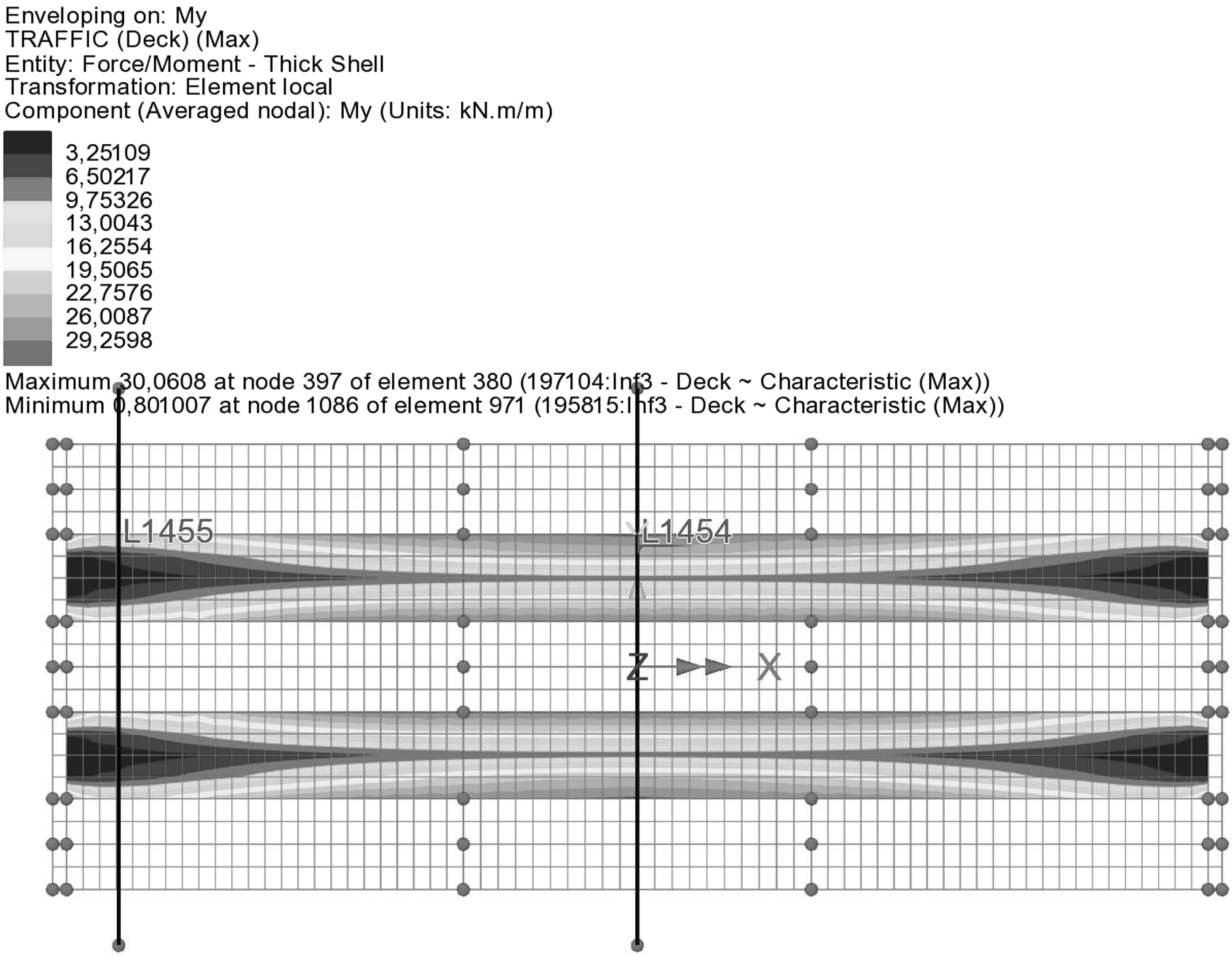

Lines 1454 & 1455
[kNm/m]
[m]
My - 78780:JTEMP-(4) / Straight line 1455(3)
My - 78780:JTEMP-(2) / Straight line 1454(1)

9.3 TABLE

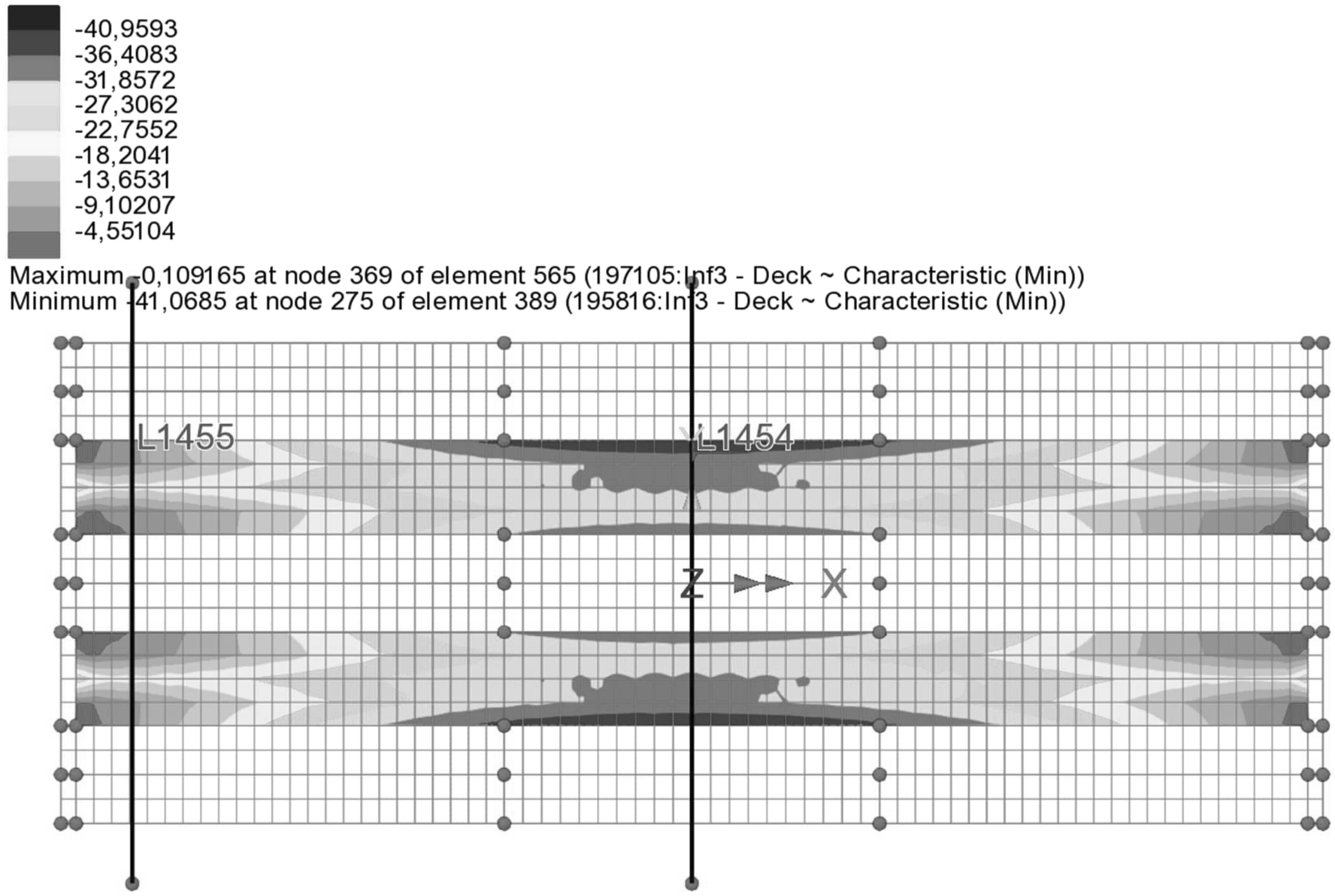
s	L1454: My	L1455:My
0	0	0
0,7	0	0
1,3	0	0
1,3	0	0
2,0	0	0
2,6	0	0
2,6	0	0
3,2	0	0
3,9	-1	0
4,5	-1	0
5,1	-1	0
5,1	-1	0
5,8	-1	-1
6,4	-1	-1
6,4	-1	-1
7,1	-1	-1
7,7	-1	0
7,7	-1	0
8,3	-1	0
9,0	-1	0
9,6	0	0
10,2	0	0
10,2	0	0
10,9	0	0
11,5	0	0
11,5	0	0
12,2	0	0
12,8	0	0
m	kNm/m	kNm/m

10. TRAFFIC Max/Min My

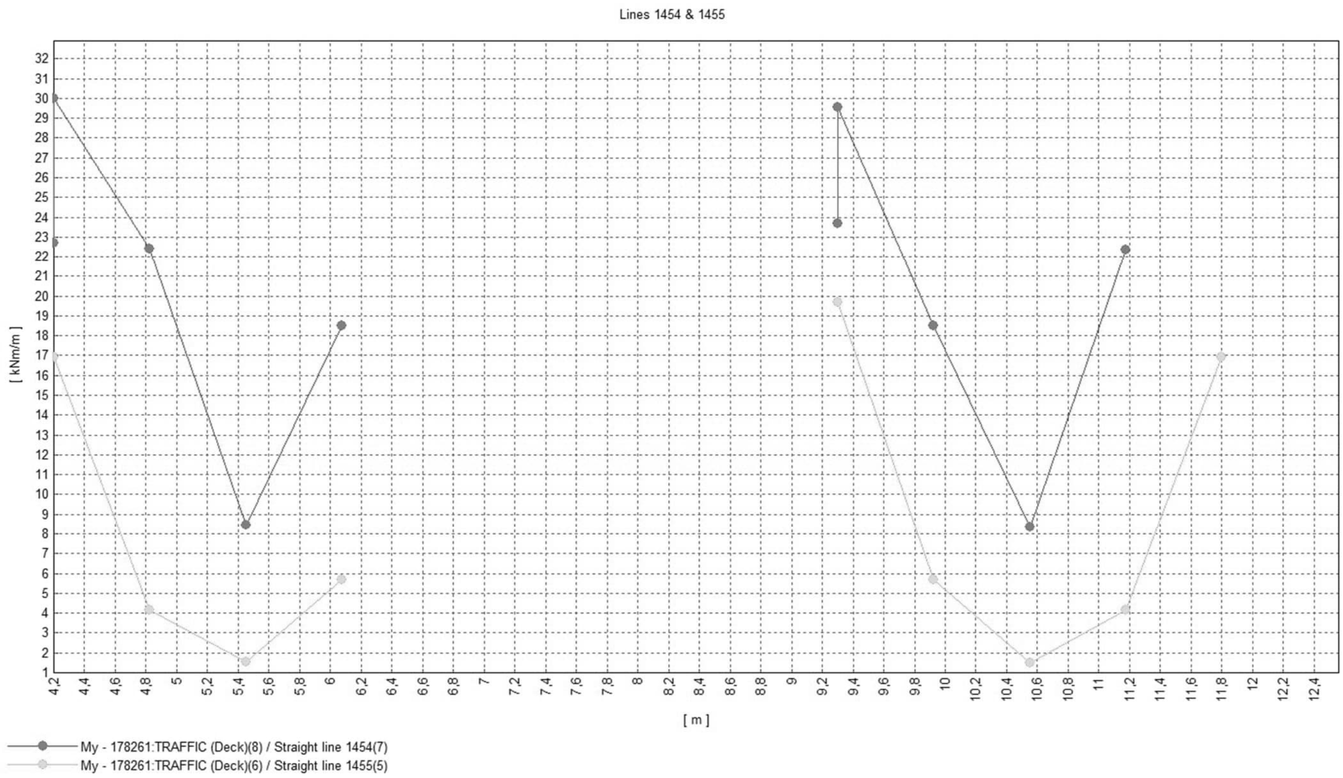
10.1 CONOUR



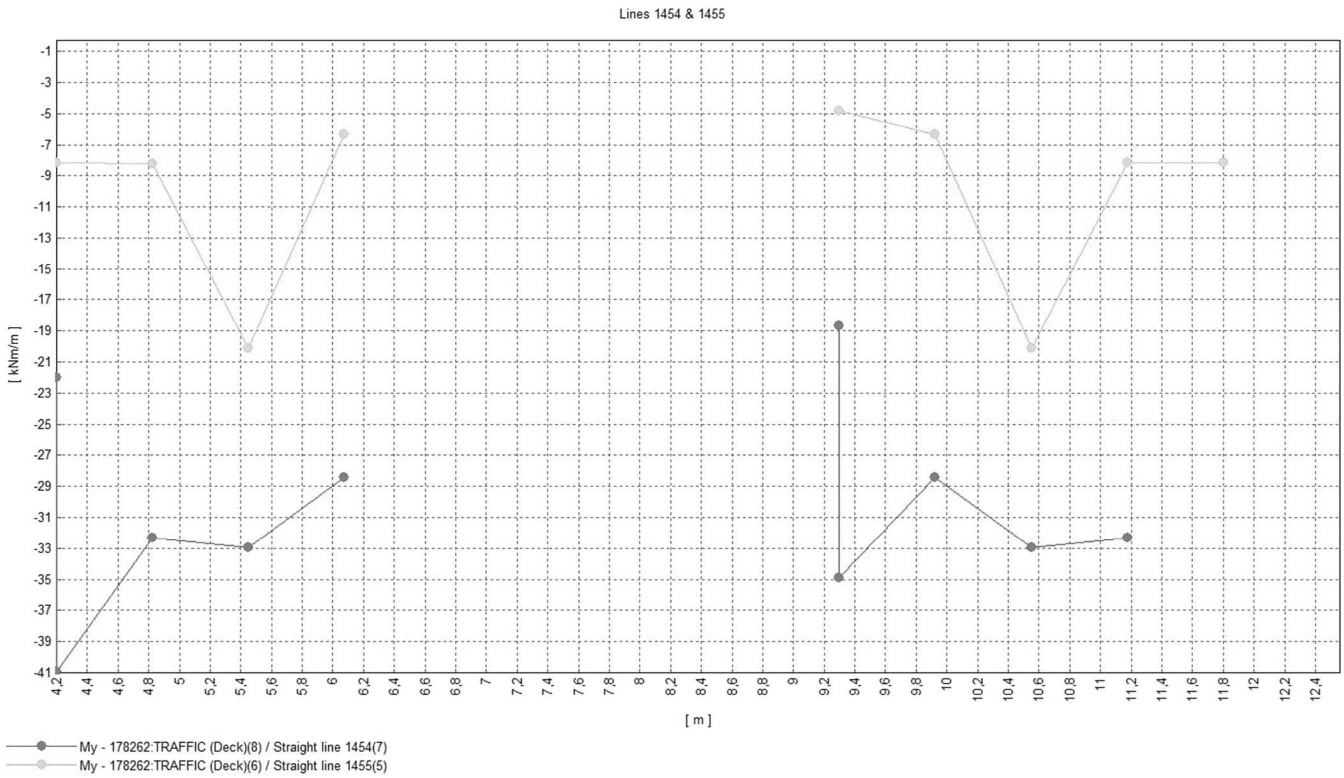
Enveloping on: My
TRAFFIC (Deck) (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): My (Units: kN.m/m)



10.2 DIAGRAM



Lines 1454 & 1455
[kNm/m]
[m]
My - 178261:TRAFFIC (Deck)(8) / Straight line 1454(7)
My - 178261:TRAFFIC (Deck)(6) / Straight line 1455(5)



Lines 1454 & 1455
[kNm/m]
[m]
My - 178262:TRAFFIC (Deck)(8) / Straight line 1454(7)
My - 178262:TRAFFIC (Deck)(6) / Straight line 1455(5)

10.3 TABLE

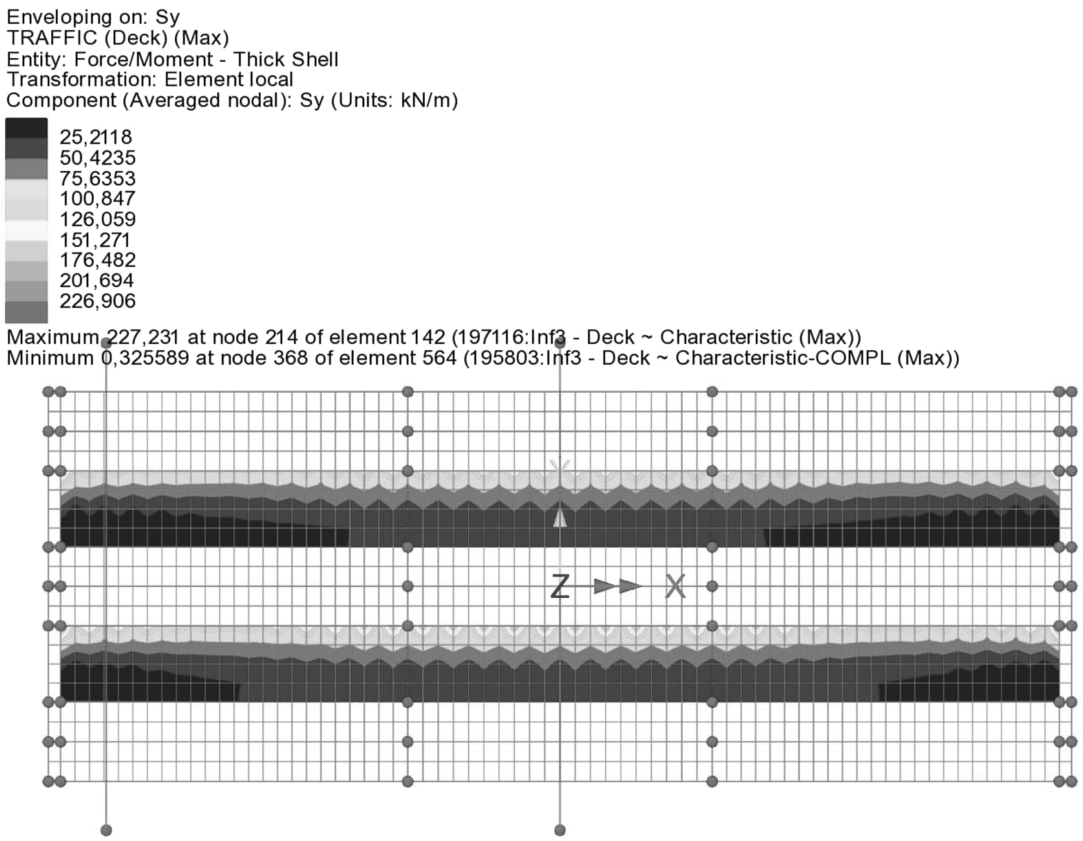
s	L1454: Max My	L1455: Max My
0	N/A	N/A
0,7	N/A	N/A
1,3	N/A	N/A
1,3	N/A	N/A
2,0	N/A	N/A
2,6	N/A	N/A
2,6	30	17
3,2	22	4
3,9	8	2
4,5	18	6
5,1	30	20
5,1	N/A	N/A
5,8	N/A	N/A
6,4	N/A	N/A
6,4	N/A	N/A
7,1	N/A	N/A
7,7	N/A	N/A
7,7	30	20
8,3	18	6
9,0	8	2
9,6	22	4
10,2	30	17
10,2	N/A	N/A
10,9	N/A	N/A
11,5	N/A	N/A
11,5	N/A	N/A
12,2	N/A	N/A
12,8	N/A	N/A
m	kNm/m	kNm/m

s	L1454: Min My	L1455: Min My
0	N/A	N/A
0,7	N/A	N/A
1,3	N/A	N/A
1,3	N/A	N/A
2,0	N/A	N/A
2,6	N/A	N/A
2,6	-41	-8
3,2	-32	-8
3,9	-33	-20
4,5	-28	-6
5,1	-35	-5
5,1	N/A	N/A
5,8	N/A	N/A
6,4	N/A	N/A
6,4	N/A	N/A
7,1	N/A	N/A
7,7	-19	N/A
7,7	-35	-5
8,3	-28	-6
9,0	-33	-20
9,6	-32	-8
10,2	-41	-8
10,2	N/A	N/A
10,9	N/A	N/A
11,5	N/A	N/A
11,5	N/A	N/A
12,2	N/A	N/A
12,8	N/A	N/A
m	kNm/m	kNm/m

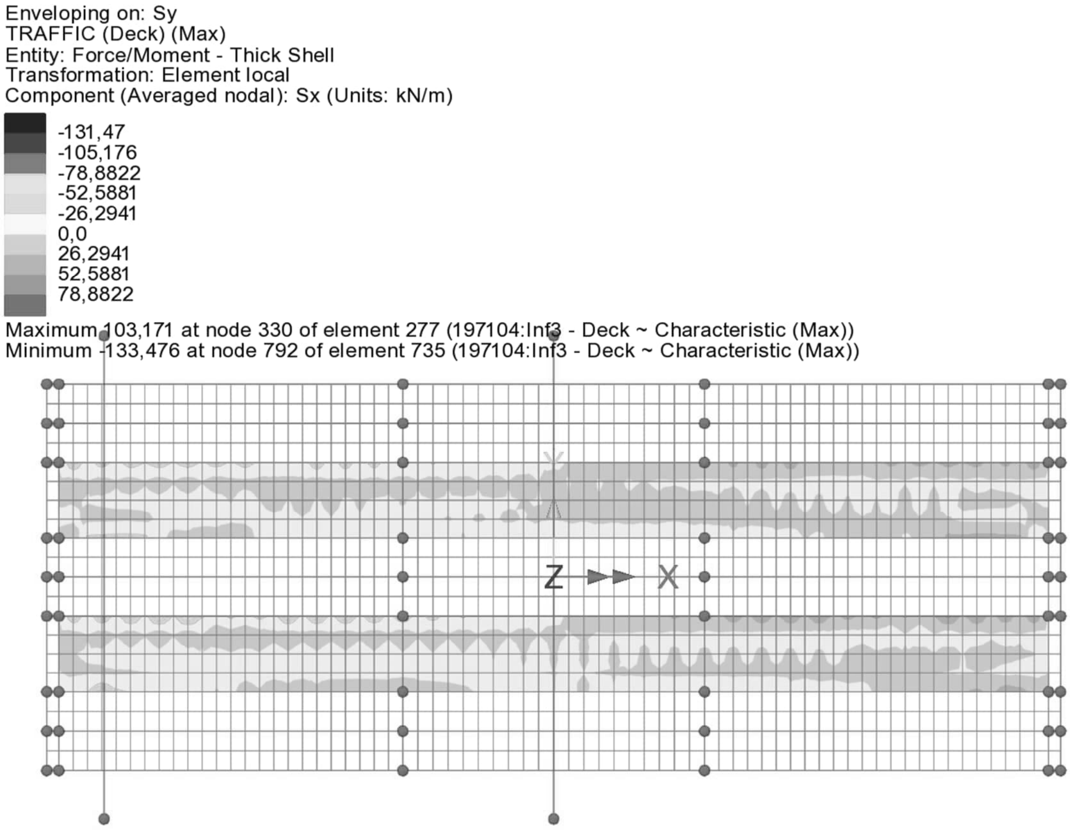
11. TRAFFIC Max/Min Sy

11.1 CONTOUR

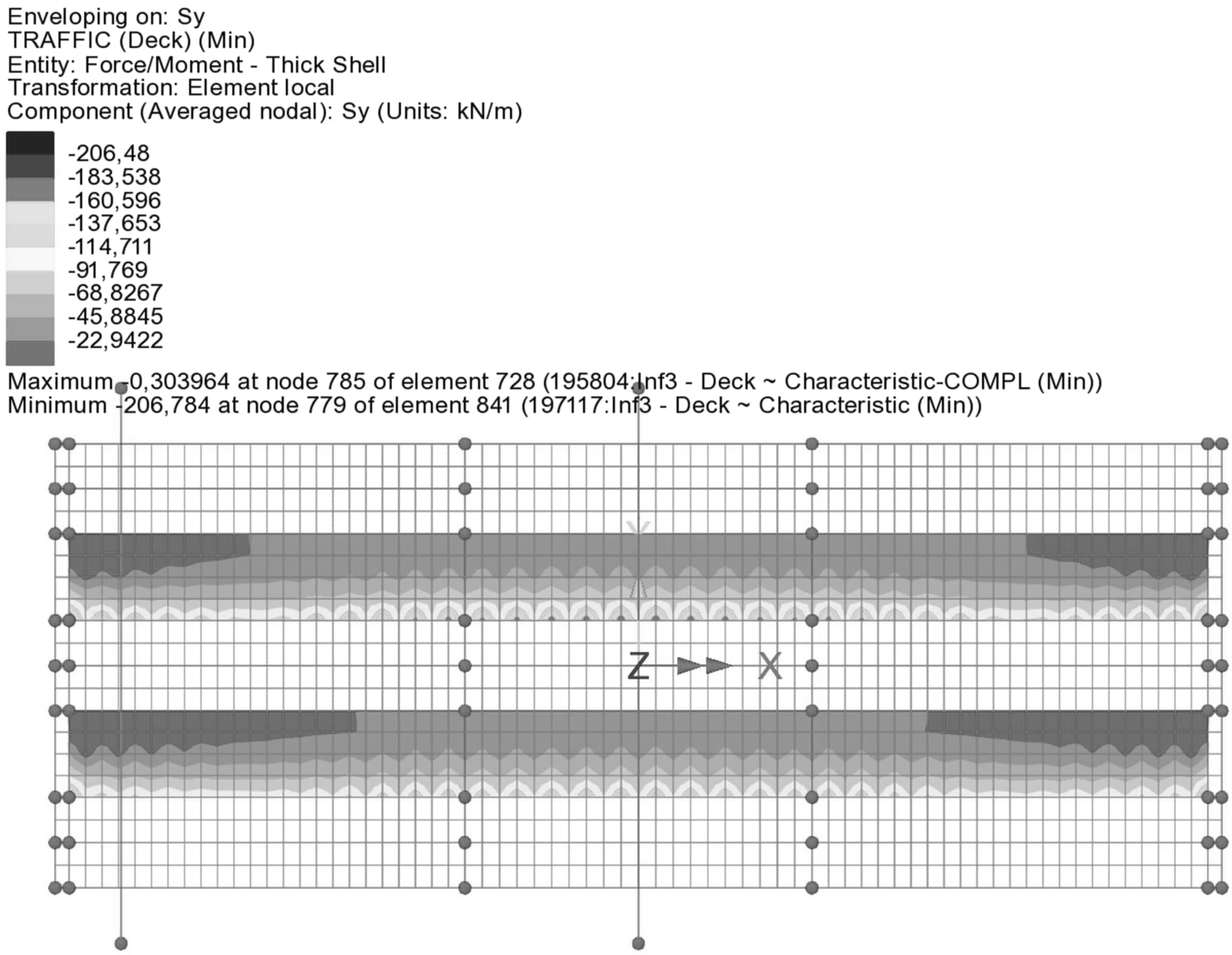
Max Sy:



Sx associated to Max Sy:

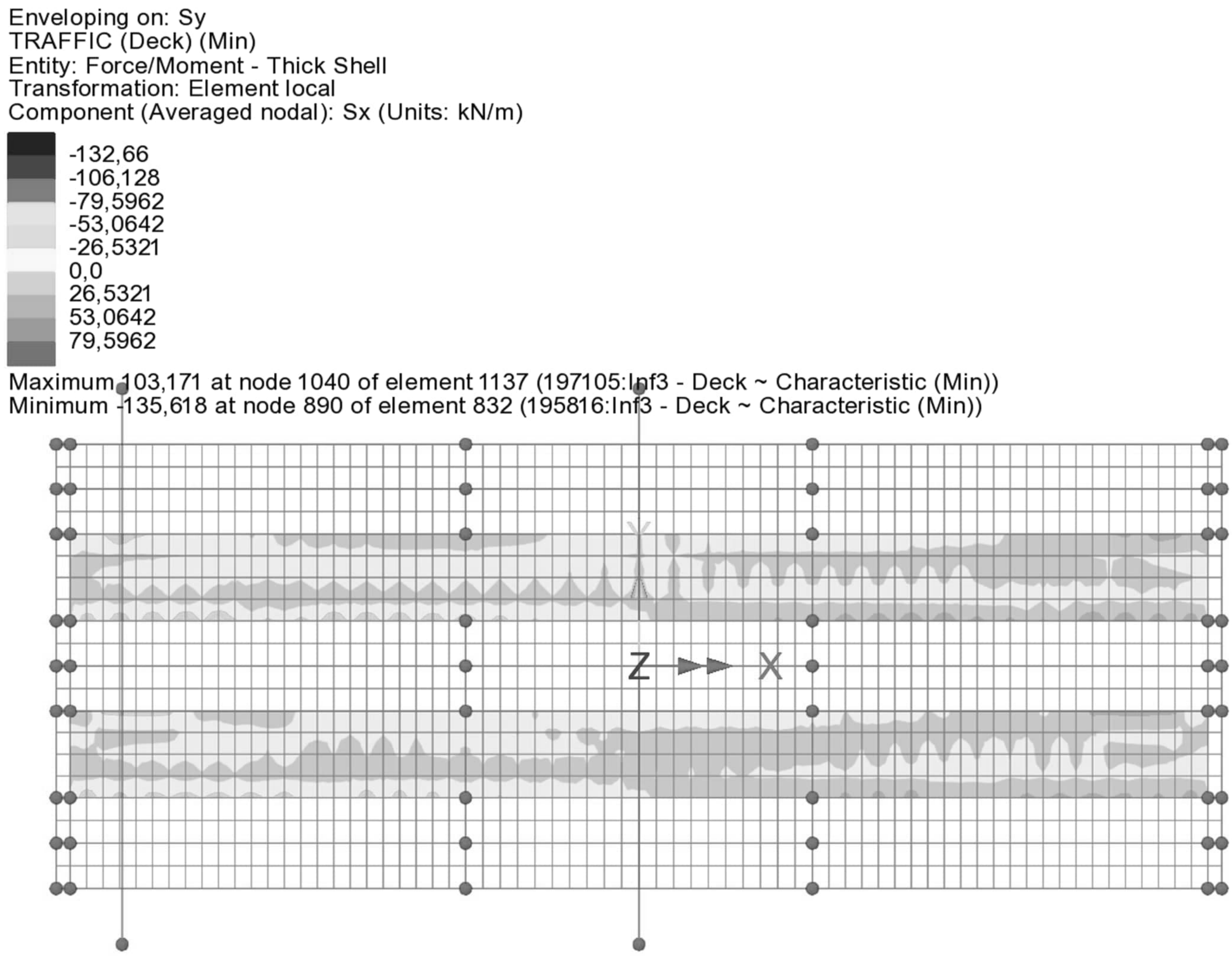


Min Sy:



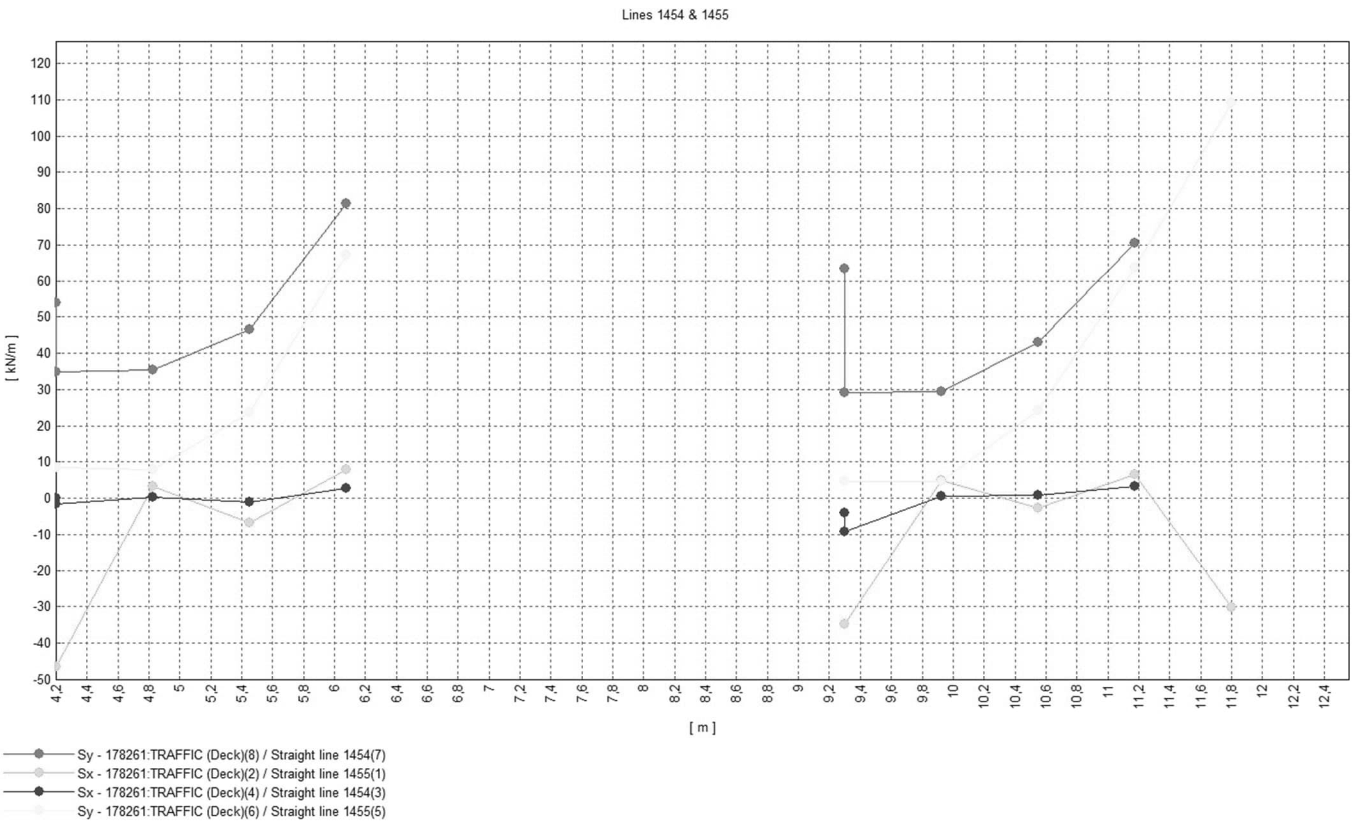
Enveloping on: Sy
TRAFFIC (Deck) (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Sy (Units: kN/m)
-206,48
-183,538
-160,596
-137,653
-114,711
-91,769
-68,8267
-45,8845
-22,9422
Maximum -0,303964 at node 785 of element 728 (195804:Inf3 - Deck ~ Characteristic-COMPL (Min))
Minimum -206,784 at node 779 of element 841 (197117:Inf3 - Deck ~ Characteristic (Min))
Z
X

Sx associated to Min Sy:

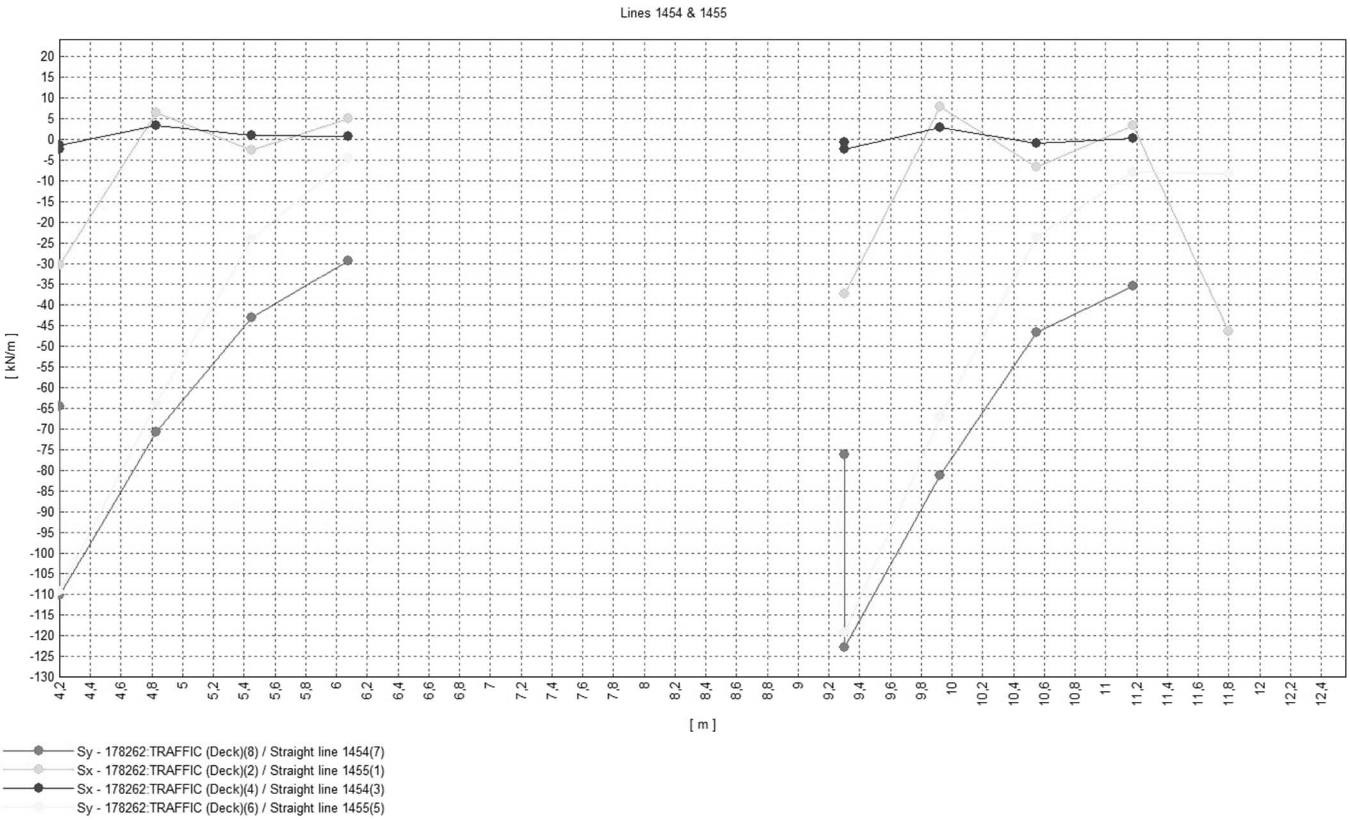


11.2 DIAGRAM

Max Sy & associated Sy:



Min Sy & associated Sy:



1.3 TABLE

Max Sy & associated Sy:

s	L1454: Max Sy	L1454:Sy	$\sqrt{Sx^2 + Sy^2}$
0	N/A	N/A	N/A
0,7	N/A	N/A	N/A
1,3	N/A	N/A	N/A
1,3	N/A	N/A	N/A
2,0	N/A	N/A	N/A
2,6	N/A	N/A	N/A
2,6	35	-2	35
3,2	36	0	36
3,9	47	-1	47
4,5	81	3	81
5,1	N/A	N/A	N/A
5,1	N/A	N/A	N/A
5,8	N/A	N/A	N/A
6,4	N/A	N/A	N/A
6,4	N/A	N/A	N/A
7,1	N/A	N/A	N/A
7,7	N/A	N/A	N/A
7,7	29	-9	31
8,3	29	1	29
9,0	43	1	43
9,6	71	3	71
10,2	N/A	N/A	N/A
10,2	N/A	N/A	N/A
10,9	N/A	N/A	N/A
11,5	N/A	N/A	N/A
11,5	N/A	N/A	N/A
12,2	N/A	N/A	N/A
12,8	N/A	N/A	N/A
m	kN/m	kN/m	kN/m

s	L1455: Max Sy	L1455:Sy	$\sqrt{Sx^2 + Sy^2}$
0	N/A	N/A	N/A
0,7	N/A	N/A	N/A
1,3	N/A	N/A	N/A
1,3	N/A	N/A	N/A
2,0	N/A	N/A	N/A
2,6	N/A	N/A	N/A
2,6	-46	8	47
3,2	3	8	9
3,9	-7	24	25
4,5	8	67	68
5,1	N/A	N/A	N/A
5,1	N/A	N/A	N/A
5,8	N/A	N/A	N/A
6,4	N/A	N/A	N/A
6,4	N/A	N/A	N/A
7,1	N/A	N/A	N/A
7,7	N/A	N/A	N/A
7,7	-35	5	35
8,3	5	5	7
9,0	-3	24	24
9,6	6	64	64
10,2	-30	109	113
10,2	N/A	N/A	N/A
10,9	N/A	N/A	N/A
11,5	N/A	N/A	N/A
11,5	N/A	N/A	N/A
12,2	N/A	N/A	N/A
12,8	N/A	N/A	N/A
m	kN/m	kN/m	kN/m

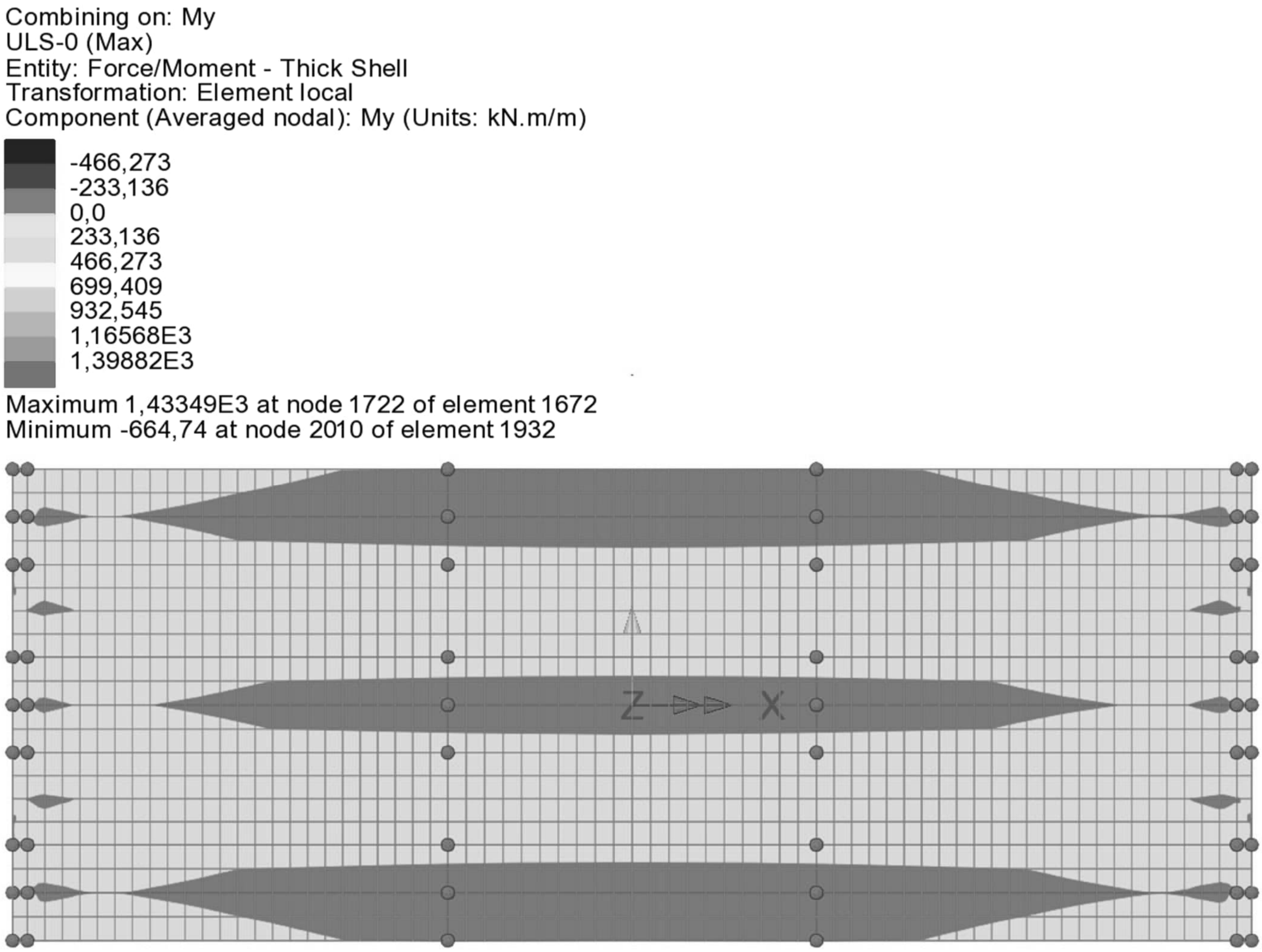
Min Sy & associated Sy:

s	L1454: Min Sy	L1454:Sy	$\sqrt{Sx^2+Sy^2}$
0	N/A	N/A	N/A
0,7	N/A	N/A	N/A
1,3	N/A	N/A	N/A
1,3	N/A	N/A	N/A
2,0	N/A	N/A	N/A
2,6	N/A	N/A	N/A
2,6	-110	-2	110
3,2	-71	3	71
3,9	-43	1	43
4,5	-29	1	29
5,1	N/A	N/A	N/A
5,1	N/A	N/A	N/A
5,8	N/A	N/A	N/A
6,4	N/A	N/A	N/A
6,4	N/A	N/A	N/A
7,1	N/A	N/A	N/A
7,7	N/A	N/A	N/A
7,7	-123	-2	123
8,3	-81	3	81
9,0	-47	-1	47
9,6	-36	0	36
10,2	N/A	N/A	N/A
10,2	N/A	N/A	N/A
10,9	N/A	N/A	N/A
11,5	N/A	N/A	N/A
11,5	N/A	N/A	N/A
12,2	N/A	N/A	N/A
12,8	N/A	N/A	N/A
m	kN/m	kN/m	kN/m

s	L1455: Min Sy	L1455:Sy	$\sqrt{Sx^2+Sy^2}$
0	N/A	N/A	N/A
0,7	N/A	N/A	N/A
1,3	N/A	N/A	N/A
1,3	N/A	N/A	N/A
2,0	N/A	N/A	N/A
2,6	N/A	N/A	N/A
2,6	-109	-30	113
3,2	-64	6	64
3,9	-24	-3	24
4,5	-5	5	7
5,1	N/A	N/A	N/A
5,1	N/A	N/A	N/A
5,8	N/A	N/A	N/A
6,4	N/A	N/A	N/A
6,4	N/A	N/A	N/A
7,1	N/A	N/A	N/A
7,7	N/A	N/A	N/A
7,7	-119	-37	125
8,3	-67	8	68
9,0	-24	-7	25
9,6	-8	3	9
10,2	-8	-46	47
10,2	N/A	N/A	N/A
10,9	N/A	N/A	N/A
11,5	N/A	N/A	N/A
11,5	N/A	N/A	N/A
12,2	N/A	N/A	N/A
12,8	N/A	N/A	N/A
m	kN/m	kN/m	kN/m

12. ULS-0: Max/Min My

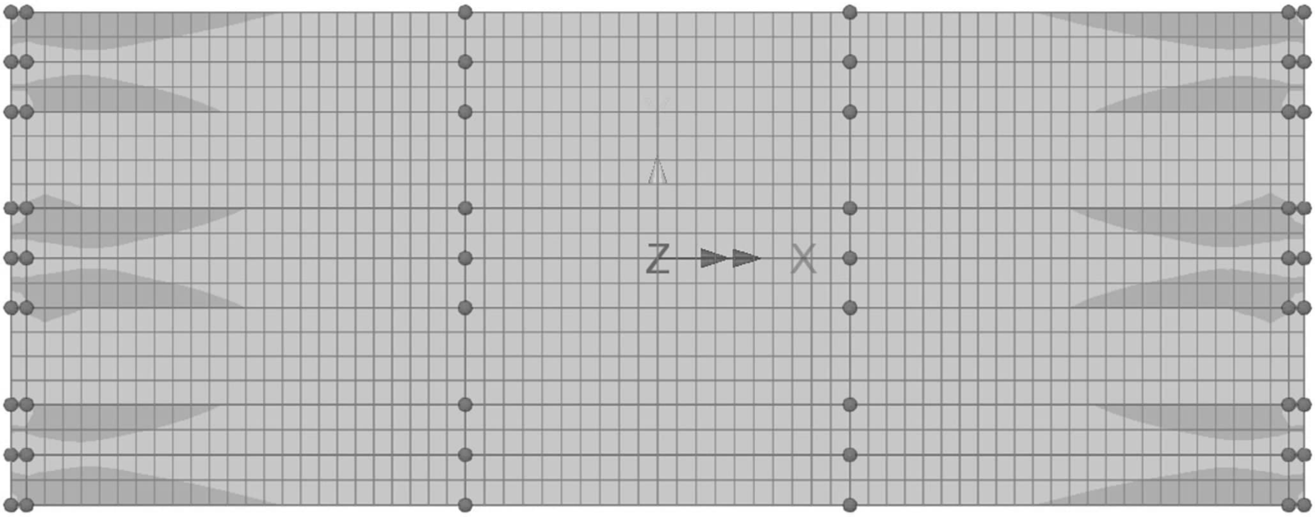
12.1 CONTOUR



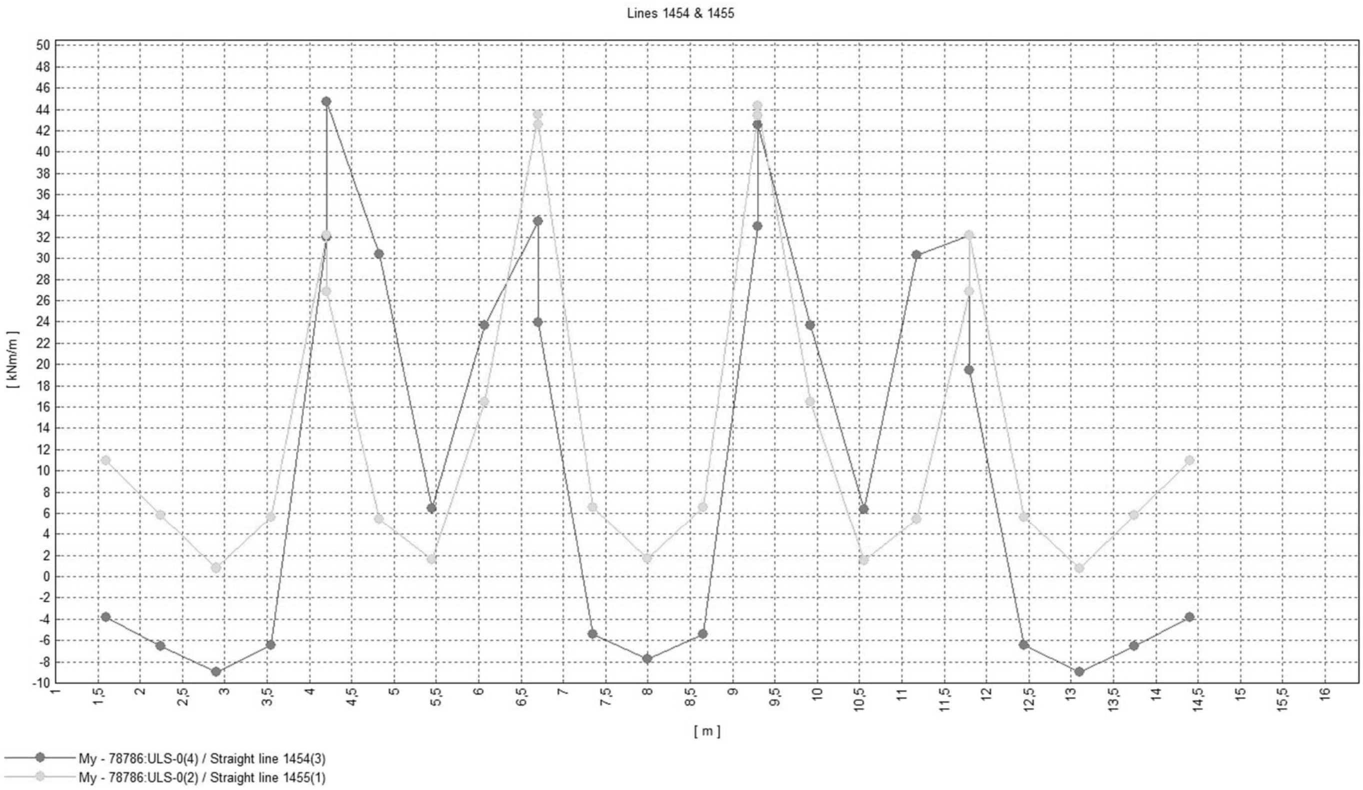
Combining on: My
ULS-0 (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): My (Units: kN.m/m)

-1,39947E3
-1,16623E3
-932,983
-699,737
-466,491
-233,246
0,0
233,246
466,491

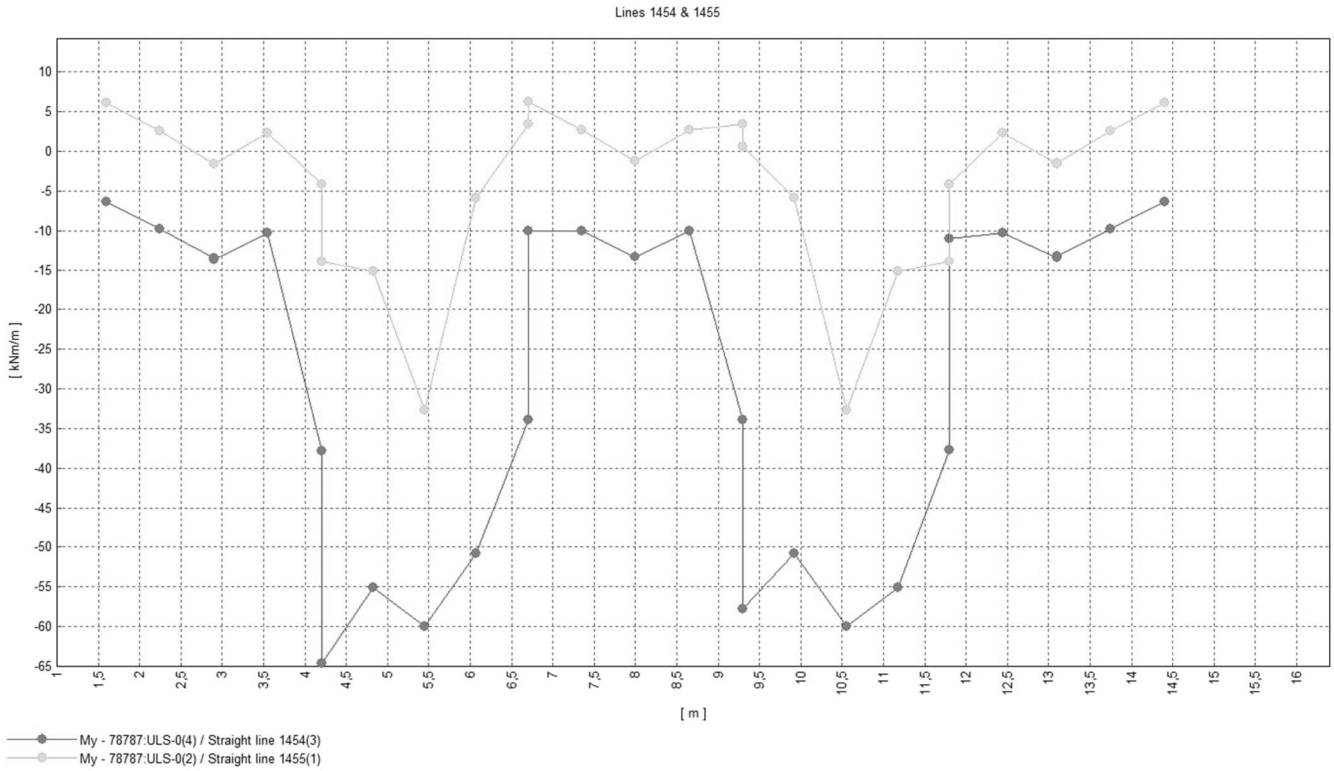
Maximum 659,736 at node 1728 of element 1680
Minimum -1,43948E3 at node 2004 of element 1924



12.2 DIAGRAM



Lines 1454 & 1455
[kNm/m]
[m]
My - 78786:ULS-0(4) / Straight line 1454(3)
My - 78786:ULS-0(2) / Straight line 1455(1)



Lines 1454 & 1455
[kNm/m]
[m]
My - 78787:ULS-0(4) / Straight line 1454(3)
My - 78787:ULS-0(2) / Straight line 1455(1)

12.3 TABLES

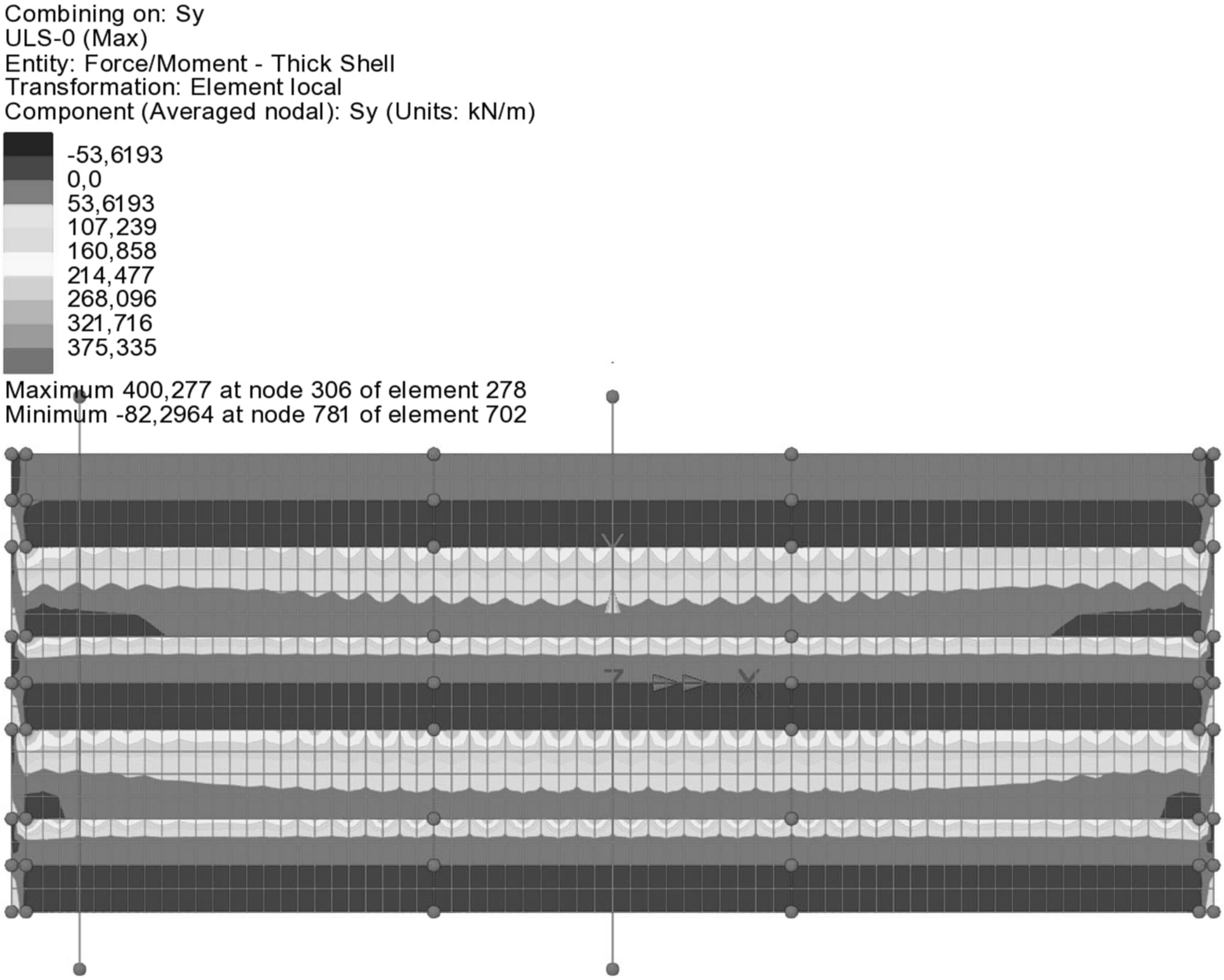
s	L1454: Max My	L1455:Max My
0	N/A	N/A
0,7	N/A	N/A
1,3	N/A	N/A
1,3	N/A	N/A
2,0	N/A	N/A
2,6	N/A	N/A
2,6	45	27
3,2	30	5
3,9	6	2
4,5	24	16
5,1	34	43
5,1	N/A	N/A
5,8	N/A	N/A
6,4	N/A	N/A
6,4	N/A	N/A
7,1	N/A	N/A
7,7	N/A	N/A
7,7	43	44
8,3	24	16
9,0	6	2
9,6	30	5
10,2	32	27
10,2	N/A	N/A
10,9	N/A	N/A
11,5	N/A	N/A
11,5	N/A	N/A
12,2	N/A	N/A
12,8	N/A	N/A
m	kNm/m	kNm/m

s	L1454:Min My	L1455:Min My
0	N/A	N/A
0,7	N/A	N/A
1,3	N/A	N/A
1,3	N/A	N/A
2,0	N/A	N/A
2,6	N/A	N/A
2,6	-65	-14
3,2	-55	-15
3,9	-60	-33
-1,6	-51	-6
5,1	-34	3
5,1	N/A	N/A
5,8	N/A	N/A
6,4	N/A	N/A
6,4	N/A	N/A
7,1	N/A	N/A
7,7	N/A	N/A
7,7	-58	1
8,3	-51	-6
9,0	-60	-33
9,6	-55	-15
10,2	-38	-14
10,2	N/A	N/A
10,9	N/A	N/A
11,5	N/A	N/A
11,5	N/A	N/A
12,2	N/A	N/A
12,8	N/A	N/A
m	kNm/m	kNm/m

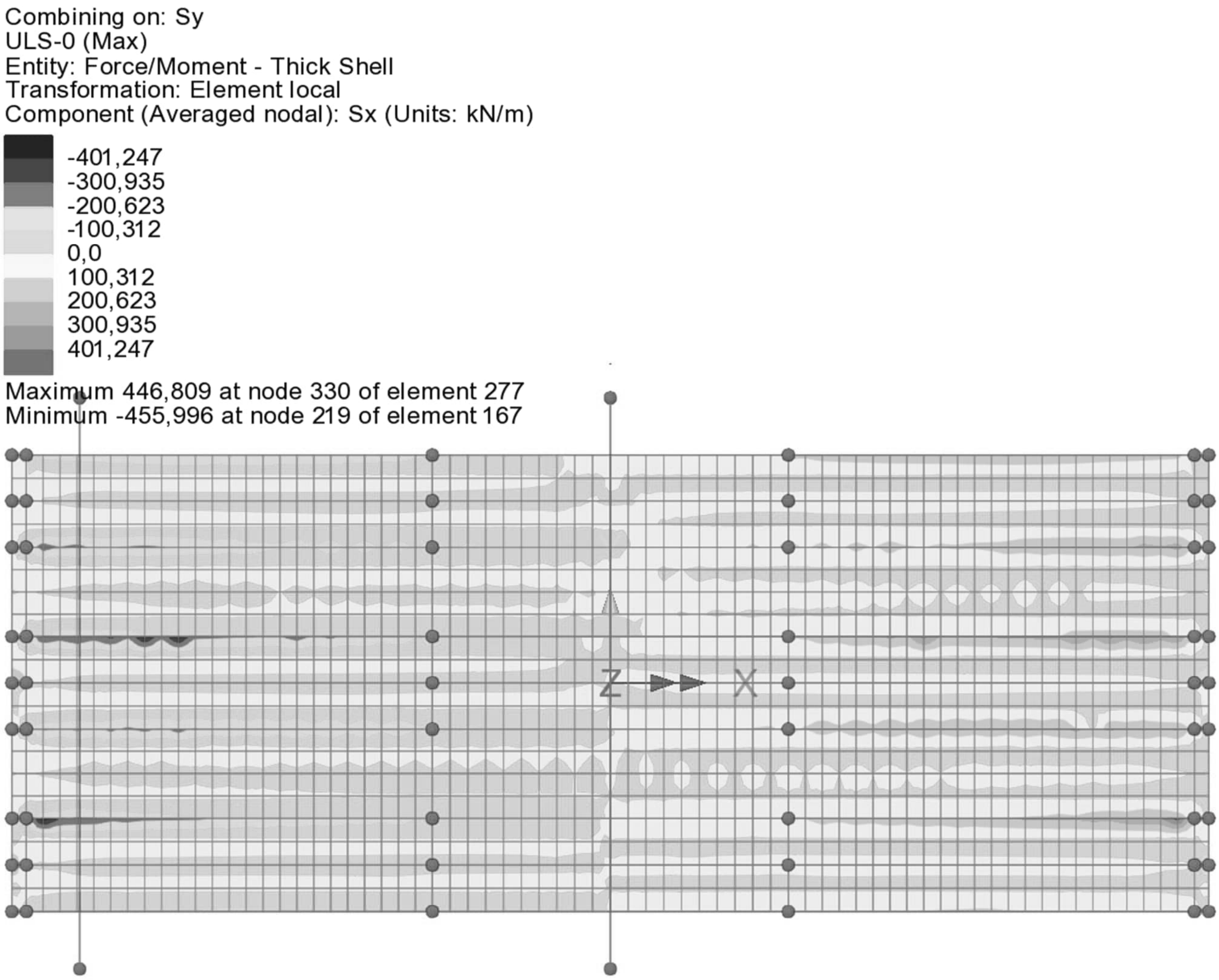
13. ULS-0 Max/Min Sy

13.1 CONTOUR

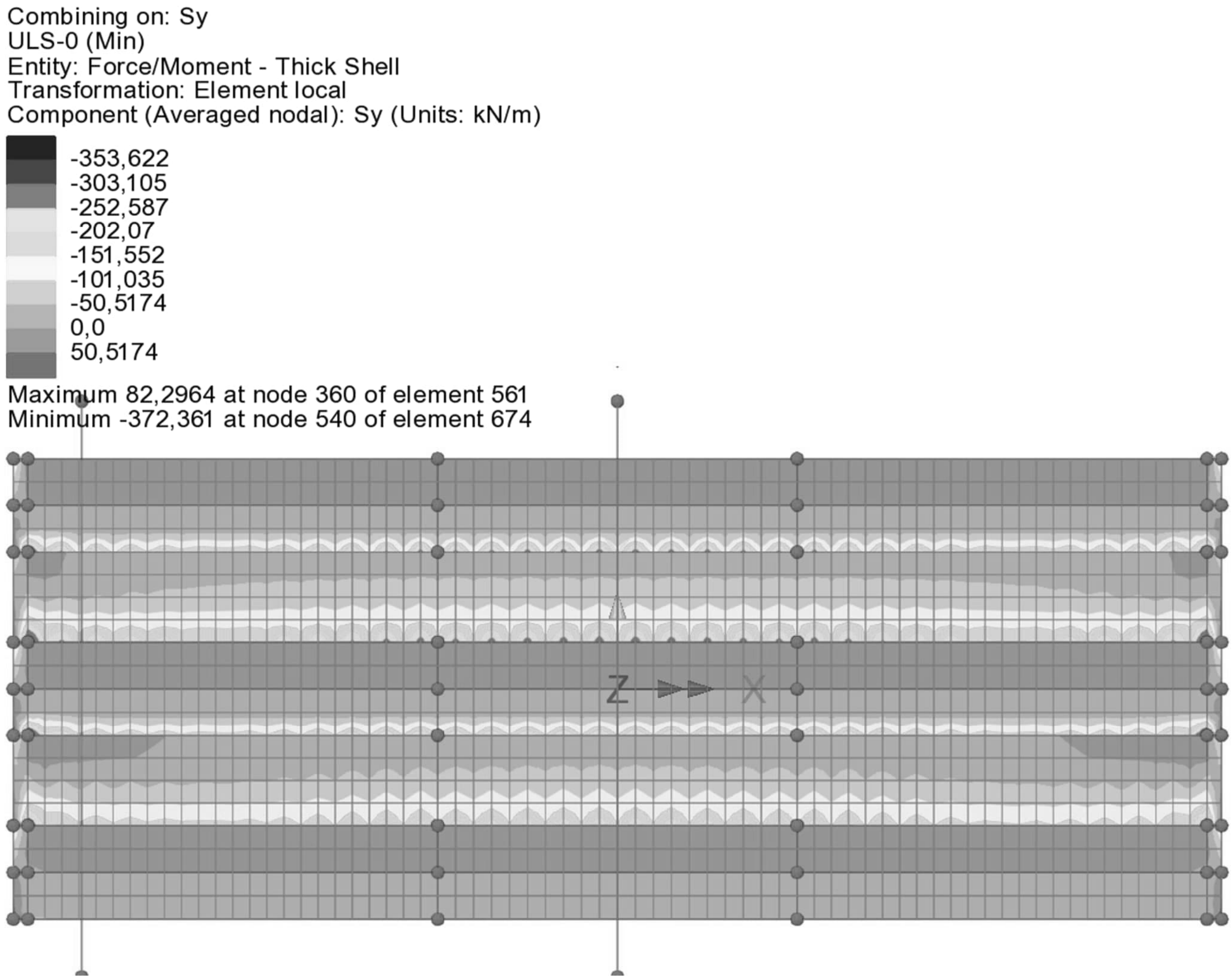
Max Sy:



Sx associated to Max Sy:



Min Sy:

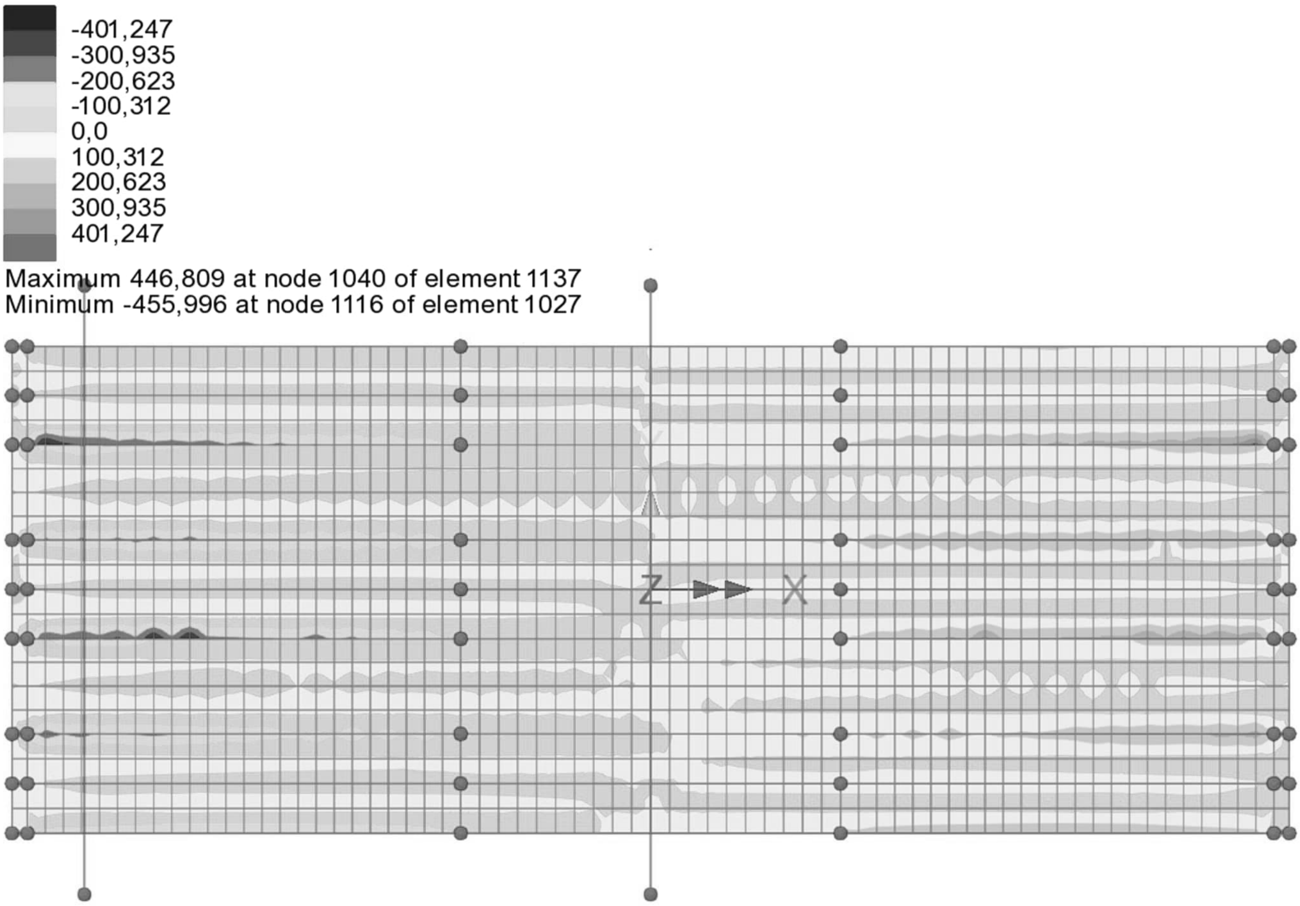

Combining on: Sy
ULS-0 (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Sy (Units: kN/m)
-353,622
-303,105
-252,587
-202,07
-151,552
-101,035
-50,5174
0,0
50,5174
Maximum 82,2964 at node 360 of element 561
Minimum -372,361 at node 540 of element 674
Z
X

Sx associated to Min Sy:

Combining on: Sy
ULS-0 (Min)
Entity: Force/Moment - Thick Shell
Transformation: Element local
Component (Averaged nodal): Sx (Units: kN/m)

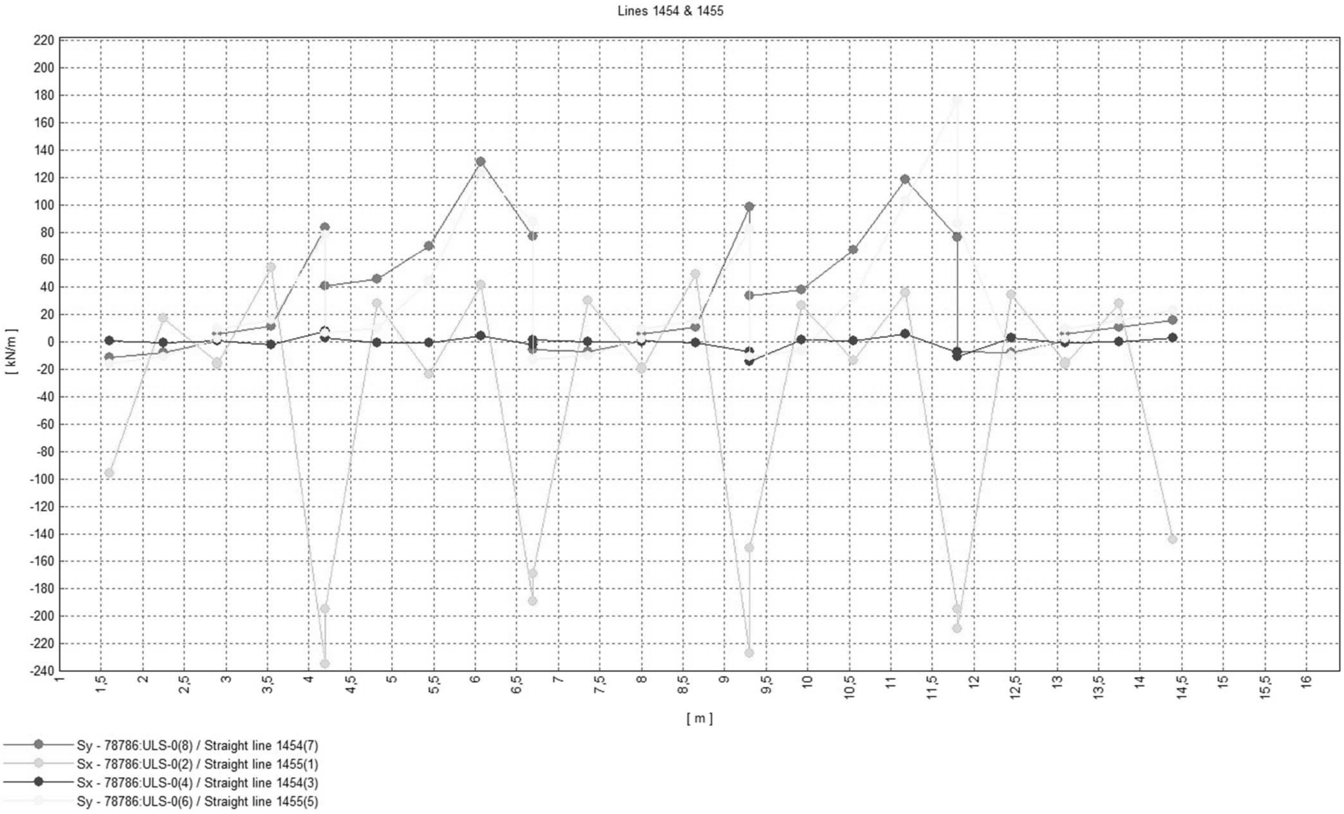
-401,247
-300,935
-200,623
-100,312
0,0
100,312
200,623
300,935
401,247

Maximum 446,809 at node 1040 of element 1137
Minimum -455,996 at node 1116 of element 1027

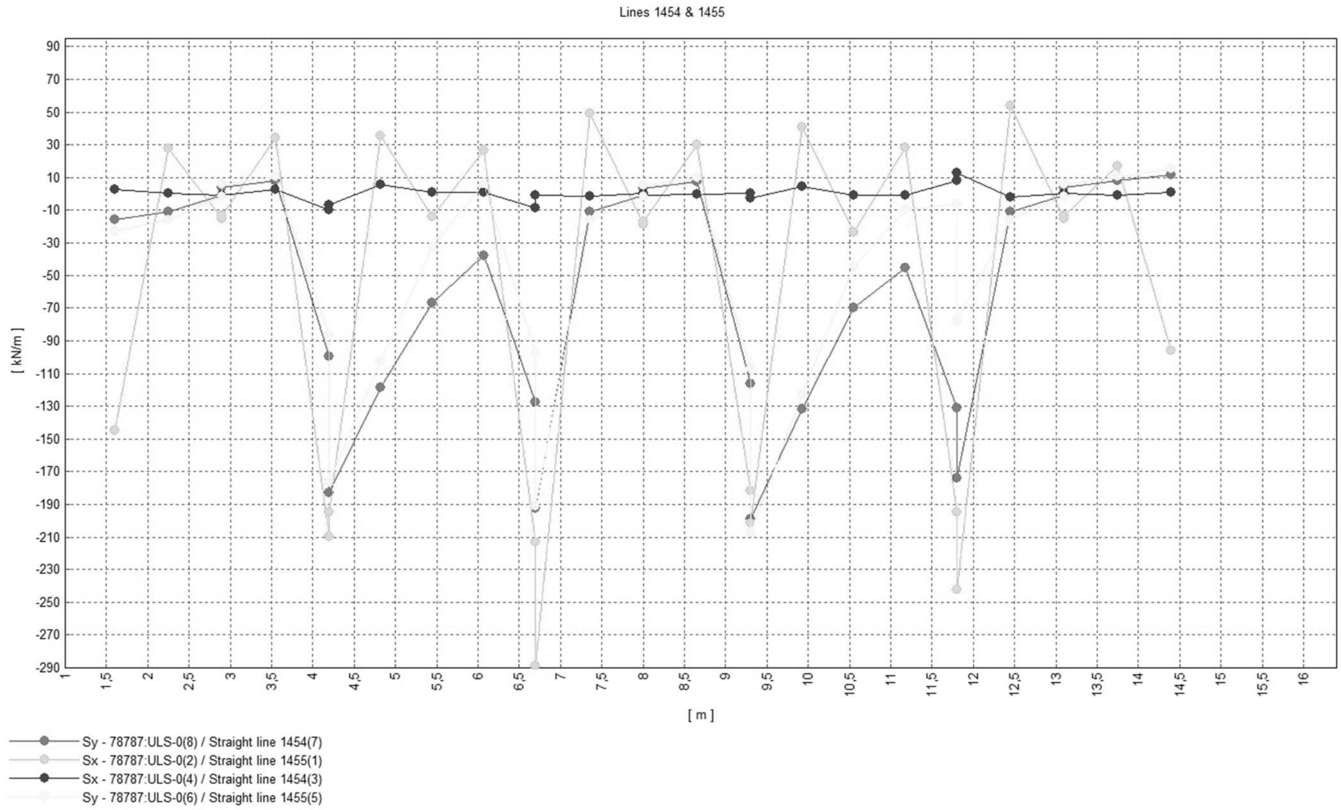


13.2 DIAGRAM

Max Sy & associated Sy:



Min Sy & associated Sy:



13.3 TABLE

Max Sy & associated Sy:

s	L1454: Max Sy	L1454:Sy	$\sqrt{Sx^2 + Sy^2}$
0	-12	1	N/A
0,7	-8	-1	N/A
1,3	1	1	N/A
1,3	6	1	N/A
2,0	11	-2	N/A
2,6	83	8	N/A
2,6	41	3	41
3,2	45	-1	46
3,9	70	-1	70
4,5	132	4	132
5,1	77	-2	77
5,1	-6	1	N/A
5,8	-7	0	N/A
6,4	1	0	N/A
6,4	5	1	N/A
7,1	11	-1	N/A
7,7	98	-7	N/A
7,7	34	-15	37
8,3	38	1	38
9,0	67	1	67
9,6	119	6	119
10,2	76	-8	77
10,2	-7	-11	N/A
10,9	-8	3	N/A
11,5	1	-1	N/A
11,5	5	-1	N/A
12,2	11	0	N/A
12,8	16	3	N/A
m	kN/m	kN/m	kN/m

s	L1455: Max Sy	L1455:Sy	$\sqrt{Sx^2 + Sy^2}$
0	-16	-96	N/A
0,7	-11	17	N/A
1,3	2	-15	N/A
1,3	9	-16	N/A
2,0	15	54	N/A
2,6	78	-235	N/A
2,6	6	-195	195
3,2	10	28	30
3,9	44	-23	50
4,5	123	41	129
5,1	88	-189	208
5,1	-13	-169	N/A
5,8	-10	30	N/A
6,4	2	-18	N/A
6,4	9	-20	N/A
7,1	16	49	N/A
7,7	83	-227	N/A
7,7	-11	-151	151
8,3	-6	26	27
9,0	32	-14	35
9,6	103	36	109
10,2	176	-195	263
10,2	86	-209	N/A
10,9	-10	34	N/A
11,5	2	-15	N/A
11,5	9	-17	N/A
12,2	16	27	N/A
12,8	23	-145	N/A
m	kN/m	kN/m	kN/m

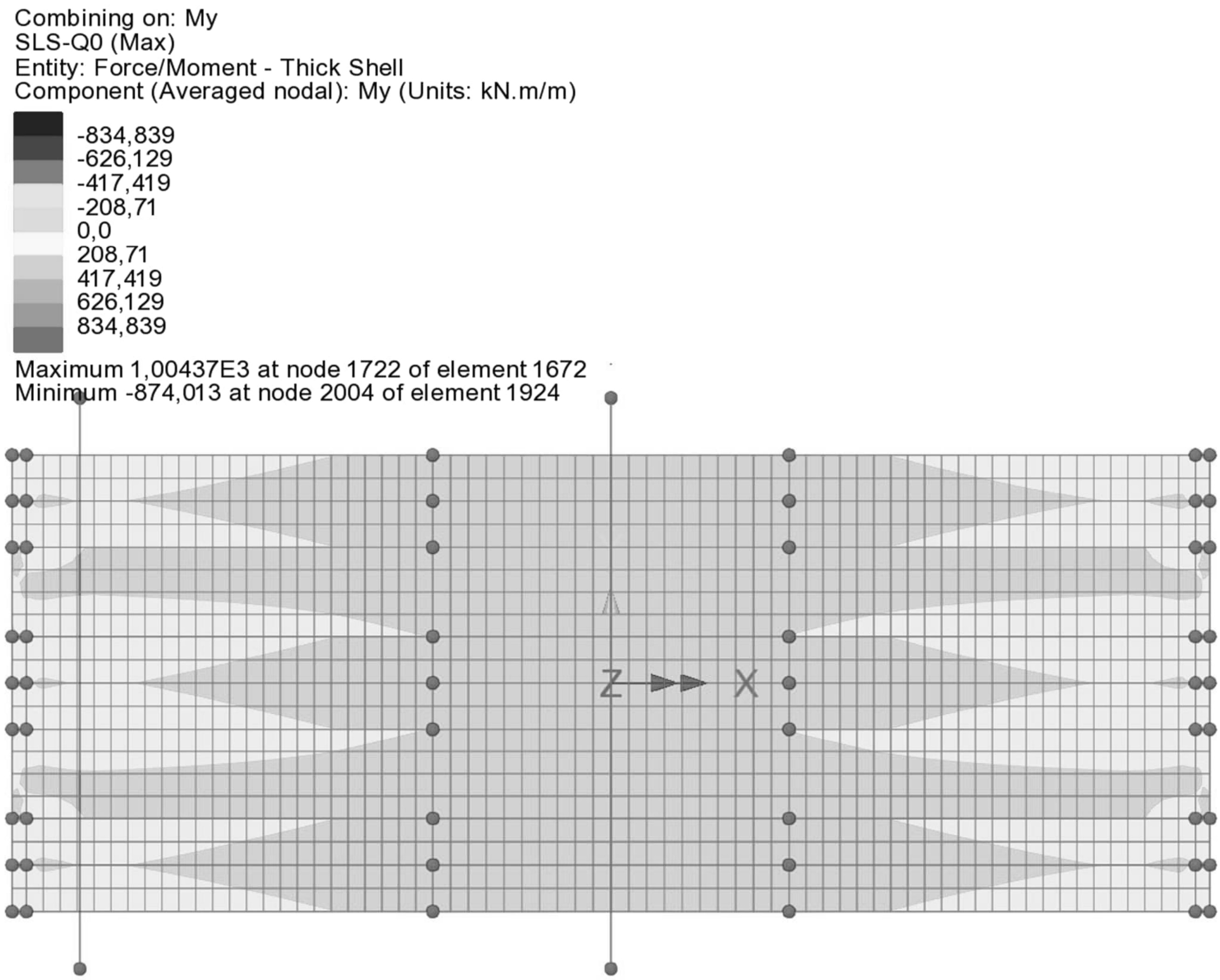
Min Sy & associated Sy:

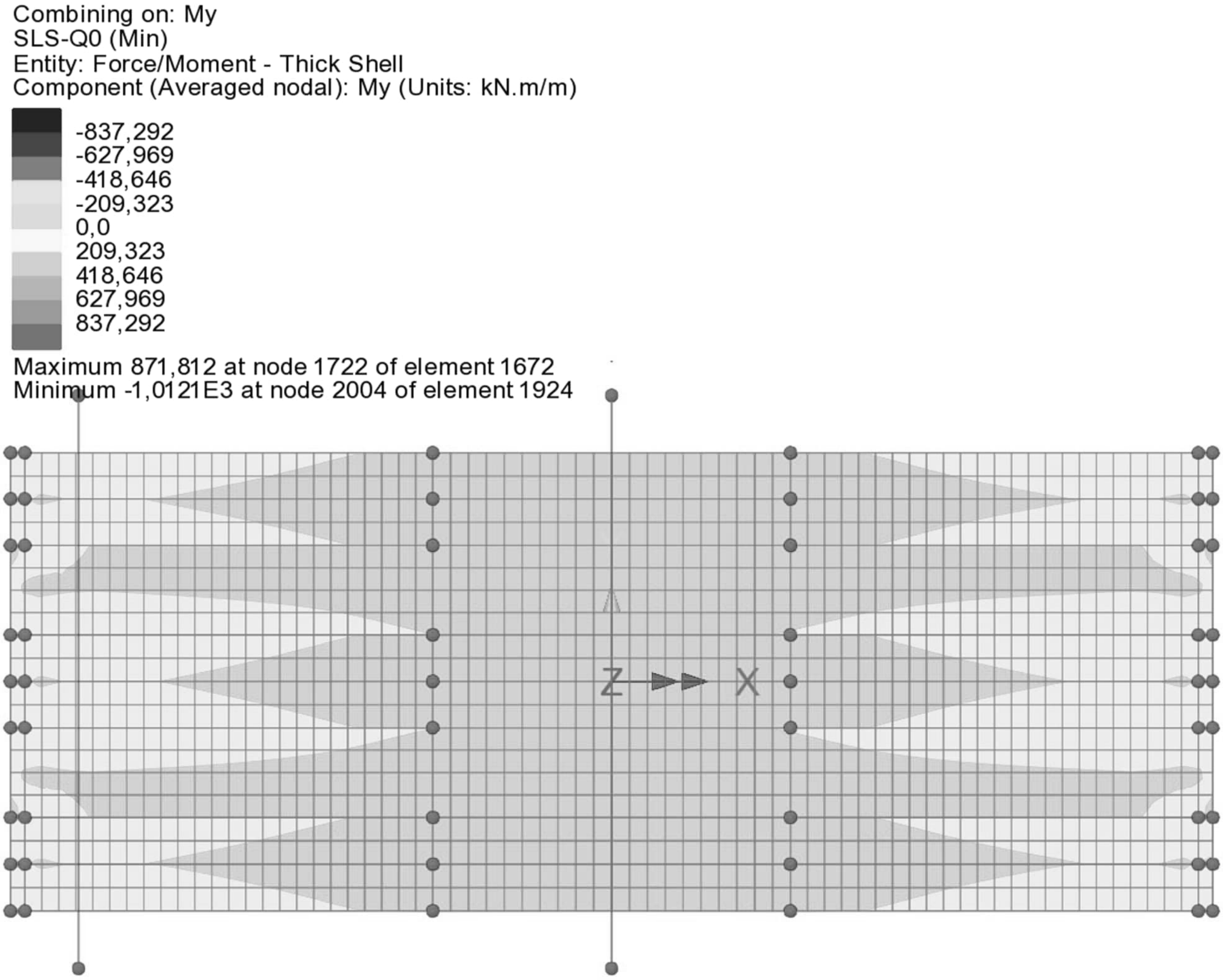
s	L1454: Min Sy	L1454:Sy	$\sqrt{Sx^2+Sy^2}$
0	-16	3	N/A
0,7	-11	0	N/A
1,3	-1	-1	N/A
1,3	4	-1	N/A
2,0	8	3	N/A
2,6	-100	-10	N/A
2,6	-183	-7	183
3,2	-119	6	119
3,9	-67	1	67
4,5	-38	1	38
5,1	-128	-8	128
5,1	-192	-1	N/A
5,8	-11	-1	N/A
6,4	-1	0	N/A
6,4	4	-1	N/A
7,1	7	0	N/A
7,7	-116	1	N/A
7,7	-199	-3	199
8,3	-132	4	132
9,0	-70	-1	70
9,6	-45	-1	46
10,2	-131	8	131
10,2	-174	13	N/A
10,9	-11	-2	N/A
11,5	-1	1	N/A
11,5	4	1	N/A
12,2	8	-1	N/A
12,8	12	1	N/A
m	kN/m	kN/m	kN/m

s	L1455: Min Sy	L1455:Sy	$\sqrt{Sx^2+Sy^2}$
0	-23	-145	N/A
0,7	-16	27	N/A
1,3	-1	-15	N/A
1,3	6	-13	N/A
2,0	10	34	N/A
2,6	-86	-209	N/A
2,6	-176	-195	263
3,2	-103	36	109
3,9	-32	-14	35
4,5	6	26	27
5,1	-98	-213	234
5,1	-191	-289	N/A
5,8	-16	49	N/A
6,4	-2	-19	N/A
6,4	5	-17	N/A
7,1	10	30	N/A
7,7	-107	-182	N/A
7,7	-207	-202	289
8,3	-123	41	129
9,0	-44	-23	50
9,6	-10	28	30
10,2	-6	-195	195
10,2	-78	-243	N/A
10,9	-15	54	N/A
11,5	-2	-15	N/A
11,5	6	-13	N/A
12,2	11	17	N/A
12,8	16	-96	N/A
m	kN/m	kN/m	kN/m

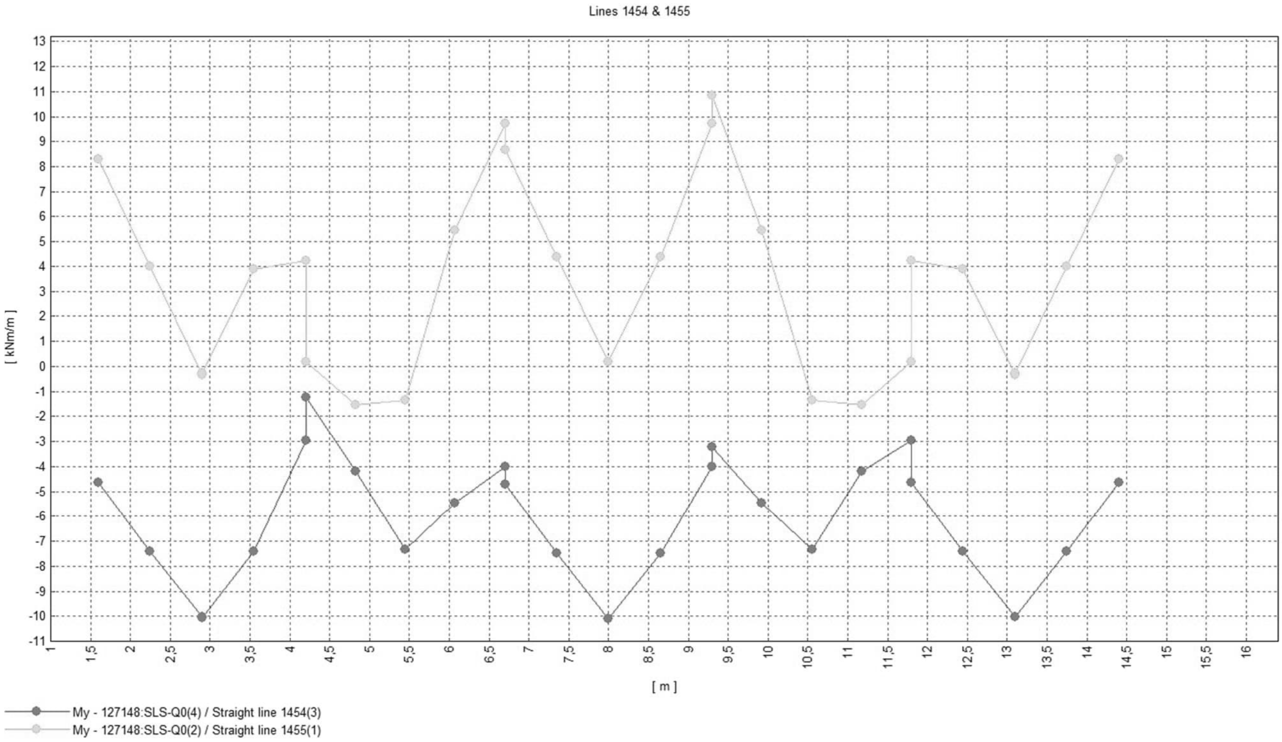
14. SLS-Q0: Max/Min My

14.1 CONTOUR

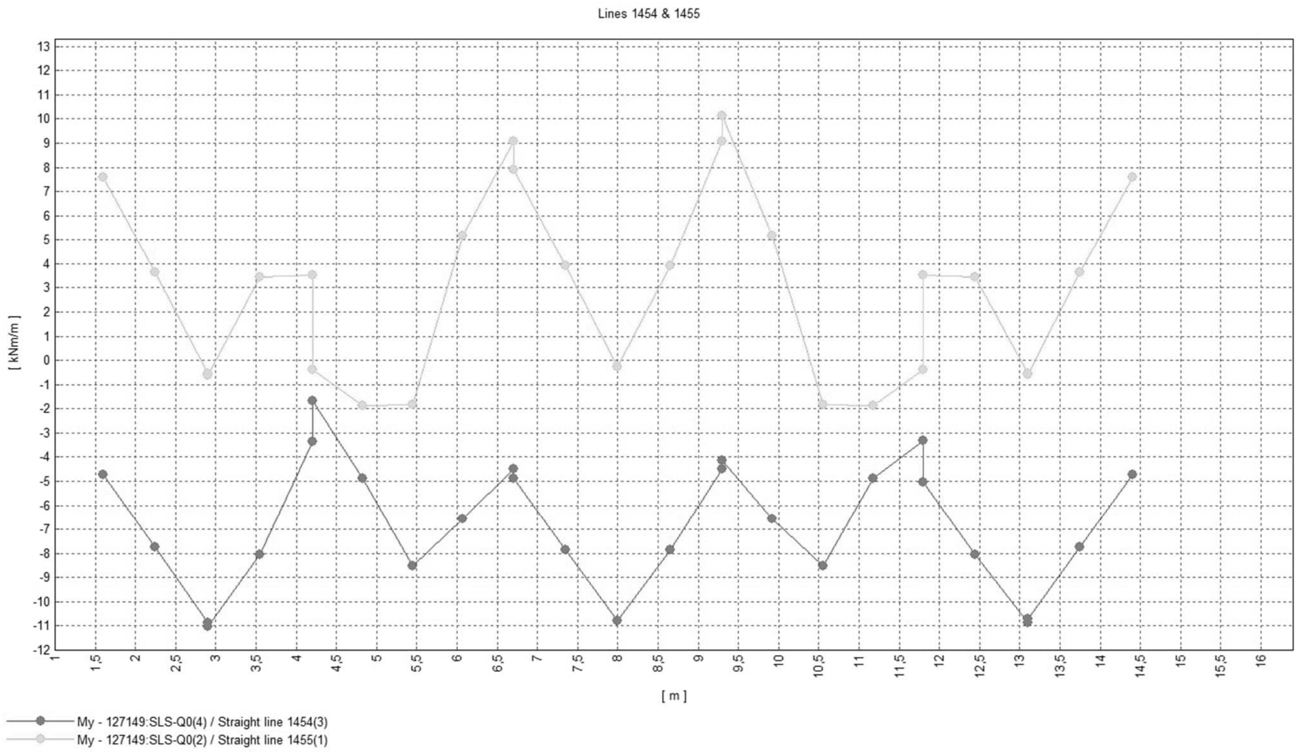



Combining on: My
SLS-Q0 (Min)
Entity: Force/Moment - Thick Shell
Component (Averaged nodal): My (Units: kN.m/m)
-837,292
-627,969
-418,646
-209,323
0,0
209,323
418,646
627,969
837,292
Maximum 871,812 at node 1722 of element 1672
Minimum -1,0121E3 at node 2004 of element 1924
Z
X

14.2 DIAGRAM



Lines 1454 & 1455
[kNm/m]
[m]
My - 127148:SLS-Q0(4) / Straight line 1454(3)
My - 127148:SLS-Q0(2) / Straight line 1455(1)



Lines 1454 & 1455
[kNm/m]
[m]
My - 127149:SLS-Q0(4) / Straight line 1454(3)
My - 127149:SLS-Q0(2) / Straight line 1455(1)

14.3 TABLES

s	L1454: Max My	L1455:Max My
0	N/A	N/A
0,7	N/A	N/A
1,3	N/A	N/A
1,3	N/A	N/A
2,0	N/A	N/A
2,6	N/A	N/A
2,6	-1	0
3,2	-4	-2
3,9	-7	-1
4,5	-5	5
5,1	-4	10
5,1	N/A	N/A
5,8	N/A	N/A
6,4	N/A	N/A
6,4	N/A	N/A
7,1	N/A	N/A
7,7	N/A	N/A
7,7	-3	11
8,3	-5	5
9,0	-7	-1
9,6	-4	-2
10,2	-3	0
10,2	N/A	N/A
10,9	N/A	N/A
11,5	N/A	N/A
11,5	N/A	N/A
12,2	N/A	N/A
12,8	N/A	N/A
m	kNm/m	kNm/m

s	L1454:Min My	L1455:Min My
0	N/A	N/A
0,7	N/A	N/A
1,3	N/A	N/A
1,3	N/A	N/A
2,0	N/A	N/A
2,6	N/A	N/A
2,6	-2	0
3,2	-5	-2
3,9	-9	-2
-1,6	-7	5
5,1	-4	9
5,1	N/A	N/A
5,8	N/A	N/A
6,4	N/A	N/A
6,4	N/A	N/A
7,1	N/A	N/A
7,7	N/A	N/A
7,7	-4	10
8,3	-7	5
9,0	-9	-2
9,6	-5	-2
10,2	-3	0
10,2	N/A	N/A
10,9	N/A	N/A
11,5	N/A	N/A
11,5	N/A	N/A
12,2	N/A	N/A
12,8	N/A	N/A
m	kNm/m	kNm/m