



7754

Oudezijds Voorburgwal 87
1012EL Amsterdam
construction calculation



Rev. 1.2
Date 24/05/2022

construction calculation

Kpn Project

		Allinq Fahrenheitstraat 27-29 3846 BM Harderwijk		
		Structural Engineering Dynamica ingenieursbureau Kwekerijweg 2-C 3709 JA Zeist		
StructuralEngineer	Modelleur	Rev.	Date	Reference
ing. S. el Boujjoufi	M.Yaddas (BSc)	1.0	20/04/21	
ing. S. el Boujjoufi		1.1	03/06/21	
ing. S. el Boujjoufi	A. Khyi (MSc)	1.2	24/05/22	

Date	Checked	Paraph
24/05/2022	ing. A. Azaroual	

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1.0 ConclusionCalculation Antenna pole 1: 2x A144521R01v06 + 10x RRU

UC pole Ø139,7*8 0,36 < 1,0 (ok)
UC wallbracket K100/10 0,37 < 1,0 (ok)
UC anchors pole 0,65 < 1,0 (ok)
Controle concretewall 200mm 0,37 < 1,0 (ok)

Rotation antennas: 0,57 < 1,0 degrees (ok)

Deflection top pole: 0,73% < 8,0% (ok)

	U.C. strength		U.C. rotation		U.C. Deflection	
Pole 1	0,65	OK	0,57	Ok	0,09	Ok

Calculation Antenna pole 2: 1x AOC4518R8v06

UC antenna tube Ø60,3*4 0,10 < 1,0 (ok)
UC bracket L70/7 0,27 < 1,0 (ok)

Rotation antennas: 0,04 < 1,0 degrees (ok)

Deflection top pole: 0,12% < 8,0% (ok)

	U.C. strength		U.C. rotation		U.C. Deflection	
Pole 2	0,27	OK	0,04	Ok	0,01	Ok

Calculation Equipmentframe:

UC Equipmentframe 0,38 < 1,0 (ok)

Roof construction see chapter 7.0

2.0 Project preferences

2.1 Project description

Two new antenna poles will be placed on the wall of the penthouse.

S1 and S2 will be calculated with antennas (A144521R0v06) and S3 with AOC4518R8v06 and each sector with 5 RRUs

For pole 1 the rru's will be fixed on the pole and for S1 5 rrus will be placed on a standard ballastframe the cabinet on the existing frame.

For one sector

Glas+DC cables total or thicker depending on the existing	x
# RRU's	5

2.2 Antenna Decision Tree & Reinforcement

nvt

2.3 Antenna configuration

calculated			
Type	number	ABH/DCH	Pole
A144521R0v06	2	26,50	1
AOC4518R8v06	1	22,60	2

2.4 Equipment configuration

Type	number	Calculated	Position
RRU5509t	6	6	on pole and ballastframe
RRU5301	6	6	on pole and ballastframe
RRU5502	3	3	on pole and ballastframe

MTS9304A	1	1	on frame
TP48200A	2	2	on frame

VF

2.5 References

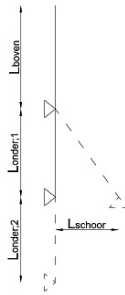
Description	company	revision
Drawing		1.0
tss output		

2.6 Assumptions

none

3.0 Construction Schemes

	Diameter	Thickness	Verjonging	Thickness	L _{above} (m)	L _{below;1} (m)	L _{below;2} (m)	L _{below;3} (m)	Bracing	L _{bracing} (m)
Pole 1	Ø 139,7	8			4,40	1,50	0,26			
Pole 2	Ø 60,3	4			0,35	0,61	0,77	0,84		



4.0 Construction preferences

4.1 Loadcombinations and coefficients

Consequence Classes **CC2**
Reliability Classes **RC2**

Ultimate Limit State (ULS)

Blijvende en tijdelijke ontwerp-situaties	Blijvende belastingen		Voorspanning	Dominante veranderlijke belasting (*)	Tegelijkertijd optredende Veranderlijk belastingen (*)	
	Ongunstig	Gunstig			Belangrijkste (indien aanwezig)	Andere
(Vgl. 6.10a)	$\gamma_{G,sup} G_{k,j,sup}$	$\gamma_{G,inf} G_{k,j,inf}$	γ_P		$\gamma_{Q,1} \psi_{0,1} Q_{k,1}$	$\gamma_{Q,i} \psi_{0,i} Q_{k,i}$
(Vgl. 6.10b)	$\xi \gamma_{G,sup} G_{k,j,sup}$	$\gamma_{G,inf} G_{k,j,inf}$	γ_P	$\gamma_{Q,1} Q_{k,1}$		$\gamma_{Q,i} \psi_{0,i} Q_{k,i}$

Table A1.2(B) NEN-EN 1990

	ξ	$\gamma_{G,sup}$	$\gamma_{G,inf}$	$\gamma_{Q,1}$
Vgl 6.10a	nvt	1,35	0,9	1,5
Vgl 6.10b	0,89	1,20	0,9	1,5

Serviceability Limit State (SLS)

Combinatie	Blijvende belastingen G_k		Veranderlijke belastingen Q_k	
	Ongunstig	Gunstig	Overheersende	Andere
Karakteristiek	$G_{k,j,sup}$	$G_{k,j,inf}$	$Q_{k,1}$	$\psi_{0,i} Q_{k,i}$
Frequent	$G_{k,j,sup}$	$G_{k,j,inf}$	$\psi_{1,1} Q_{k,1}$	$\psi_{2,i} Q_{k,i}$
Quasi-blijvend	$G_{k,j,sup}$	$G_{k,j,inf}$	$\psi_{2,1} Q_{k,1}$	$\psi_{2,i} Q_{k,i}$

Table A1.4 NEN-EN 1990

	wind	snow	building	office	roof
ψ_0	0	0	0,4	0,5	0
ψ_1	0,2	0,2	0,5	0,5	0
ψ_2	0	0	0,3	0,3	0

γ_g	γ_q
1,00	1,00

4.2 reference period

Ultimate Limit State Buildingconstructions 50 years

variable action buildings

$$\psi_t = \left\{ 1 + \frac{1 - \psi_0}{9} \ln \left(\frac{t}{t_0} \right) \right\} = \begin{array}{cccc} \text{house} & \text{office} & \text{roof} & \text{wind} \\ 1,00 & 1,00 & 1,00 & 1,00 \end{array}$$

Ultimate Limit State Antennaconstructions 15 years

Windload

t =	15 years	(referentieperiode)
p =	0,064 --	(art.4.2 Basiswaarden NEN-EN 1991-1-4)
c _{prob} =	0,924 --	(art.4.2 Basiswaarden NEN-EN 1991-1-4)
V _{b,t}	24,95 m/s	(afh. van referentieperiode van t jaren)
V _{m,t}	22,63 m/s	(afh. van referentieperiode van t jaren)
n =	0,500 --	(Tabel NB.2 NEN-EN 1991-1-4:20011/NB:2011)
K =	0,234 --	(Tabel NB.2 NEN-EN 1991-1-4:20011/NB:2011)
p _{w,t} =	0,87 kN/m ²	
ψ _t = p _{w,t} /p _w =	0,85 --	(A1.1 NEN-EN 1990)

Serviceability Limit State Rotation/Deflection Antennaconstruction 15 years

$$\psi_t = \left\{ 1 + \frac{1 - \psi_0}{9} \ln \left(\frac{t}{t_0} \right) \right\} = \begin{array}{c} \text{wind} \\ 0,87 \end{array}$$

4.3 Permissible antenna rotation and deflection

Maximum allowable rotation antenna 1,00 degrees

Maximum allowable rotation dish 0,50 degrees

Maximum allowable deflection top pole 8%

4.4 Regulations

Document	Titel
NEN-EN 1990+NB	Eurocode: Grondslagen van het constructief ontwerp
NEN-EN 1991-1-1+NB	Eurocode 1: Belastingen op constructies - Deel 1-1: Algemene belastingen -
NEN-EN 1991-1-3+NB	Eurocode 1: Belastingen op constructies - Deel 1-3: Sneeuwbelasting
NEN-EN 1991-1-4+NB	Eurocode 1: Belastingen op constructies - Deel 1-4: Windbelasting
NEN-EN 1992-1-1+NB	Eurocode 2: Ontwerp en berekening van betonconstructies - Deel 1-1: Algemene regeles en regels voor gebouwen
NEN-EN 1993-1-1+NB	Eurocode 3: Ontwerp en berekening van staalconstructies - Deel 1-1: Algemene regeles en regels voor gebouwen
NEN-EN 1993-1-8+NB	Eurocode 3: Ontwerp en berekening van staalconstructies - Deel 1-8: Ontwerp en berekening van verbindingen
NEN-EN 1993-3-1+NB	Eurocode 3: Ontwerp en berekening van staalconstructies - Deel 3-1: Torens, masten en schoorstenen-Torens en masten
NEN-EN 1993-3-2+NB	Eurocode 3: Ontwerp en berekening van staalconstructies - Deel 3-2: Torens, masten en schoorstenen-Schoorstenen
NEN-EN 1995-1-1+NB	Eurocode 5: Ontwerp en berekening van houtconstructies
NEN-EN 1996-1-1+NB	Eurocode 6: Ontwerp en berekening van constructies van metselwerk
NEN-EN 1997-1-1+NB	Eurocode 7 Geo technische ontwerp
NEN 8700	Beoordeling constructieve veiligheid van een bestaand bouwwerk bij verbouw en afkeuren – Grondslagen'
NEN 8701	Beoordeling van de constructieve veiligheid een bestaand bouwwerk bij verbouwen en afkeuren - Belastingen
NEN 2767	Conditiemeting van gebouwen, de methodiek

4.5 Materials

	$f_{y,rep}$ N/mm ²	$f_{u,rep}$ N/mm ²	E_{rep} N/mm ²	ρ_{staal} kN/m ³	
Steel:	S235JRG2	235	360	210000	78,5

	$f_{y,b}$ N/mm ²	$f_{u,b}$ N/mm ²		
Bolts:	8.8	640	800	Nordlock
Anchors:	4.6	240	400	Nordlock

	f_{ck}	f_{cd}	f_{ctd}	f_{ctm}	E_{cm}	ρ kN/m ³	
concrete	C20/25	20	13,3	1,03	2,21	30000	24

	$f_{m,0,rep}$	$f_{t,0,rep}$	$f_{t,90,rep}$	$f_{c,0,rep}$	$f_{c,90,rep}$	$f_{v,0,rep}$	$E_{0,ser,rep}$	$E_{0,u,rep}$	
Wood	C18	18	11	0,5	18	2,2	2	9000	6000

Masonry	Brick	15	N/mm ²
	Sandstone	CS16	N/mm ²
	Mortar	M5-10	N/mm ²

5.0 Loads

5.1 wind load

Environment: bebouwd
Wind zone: 2

$h_{max} = 29,1$ m
 $h_{min} = 7,0$ m
 $Z_0 = 0,500$ m
 $Z_{min} = 7,0$ m
 $k_r = 0,22$ --
 $c_r = 0,91$ --
 $c_0 = 1$ --
 $V_b = 27$ m/s
 $V_m = 24,5$ m/s
 $I_v = 0,25$ --
 $p_w = 1,02$ kN/m²

5.2 Force Coefficient C_f & $C_s C_d$ factor

article 7.9.2 NEN-EN 1991-1-4

$$C_f = C_{f,0} \cdot \psi_\lambda$$

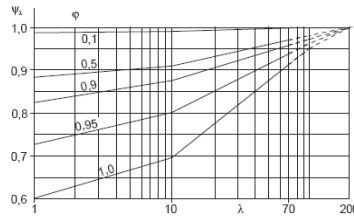
$$b_{pole} = 139,7 \text{ mm}$$

$$L = 4,40 \text{ m}$$

(≤ 15 , for $L \geq 15$ m zie table 7.16)

ψ_λ art. 7.13

table 7.16: $\lambda = 31$ --> fig. 7.3 $\psi_\lambda = 0,83$
 $\phi = 1$



$c_{f,0}$ figure 7.28

$$k = 0,05 \text{ (ruwheidshoogte smooth steel table 7.13)}$$

$$k/b = 0,36$$

$$Re = b \cdot V(ze) / \nu \text{ (Reynolds number)}$$

$$V(ze) = \sqrt{\frac{2 \cdot qp}{\rho}} = 12,78 \text{ m/s}^2 \quad qp = 1,02 \text{ kN/m}^2$$

$$\rho = 1,25 \text{ kG/m}^3$$

$$\nu = 0,000015 \text{ m}^2/\text{s}$$

$$b = 0,1397 \text{ m (Diameter off the pole)}$$

$$Re = 119027 \text{ (Reynolds number)}$$

$$Re < 1,7 \cdot 10^5 \quad c_{f,0} = 1,2$$

$$1,7 \cdot 10^5 < Re < 4,0 \cdot 10^5 \quad c_{f,0} = \frac{0,11}{(Re/10^6)^{1,4}} = -$$

$$Re > 4,0 \cdot 10^5 \quad c_{f,0} = 1,2 + \frac{0,18 \cdot \log(10 \cdot k/b)}{1 + 0,4 \cdot \log(Re/10^6)} = -$$

$$c_{f,0} = 1,20 \text{ (} \geq 0,4 \text{)}$$

$$C_f = C_{f,0} \cdot \psi_\lambda = 1,00$$

$$C_s C_d = 1,00 \text{ art. 6.2 NEN-EN 1991-1-4}$$

5.3 Force Coefficient C_f for a cabinet

Dimensions cabinet h (m) b (m) d (m)
 1,50 **0,65** **0,65**

article 7.6 NEN-EN 1991-1-4:2005

$C_f = C_{f,0} \cdot \psi_{\lambda} \cdot \psi_r$

ψ_r determined with fig 7.24

$\psi_r = 1,00$

ψ_{λ} determined with art. 7.13

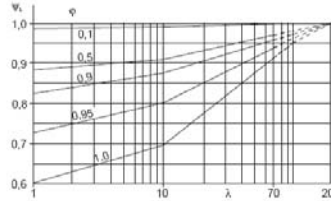
$\psi_{\lambda} = 0,67$

tabel 7.16: l = h = <15m $\lambda = 4,62$

$C_{f,0}$ determined with fig. 7.23

d/b = 1,00	0,1 < d/b ≤ 0,2	$C_{f,0} = 2,0$	-
	0,2 < d/b ≤ 0,4	$C_{f,0} = 0,875(d/b - 0,2) + 2,00 =$	-
$C_{f,0} = 2,10$	0,6 < d/b ≤ 0,7	$C_{f,0} = 0,50(d/b - 0,6) + 2,35 =$	-
	0,7 < d/b ≤ 1,0	$C_{f,0} = -1,00(d/b - 0,7) + 2,40 =$	2,10
	1,0 < d/b ≤ 2,0	$C_{f,0} = -0,45(d/b - 1,0) + 2,10 =$	-
	2,0 < d/b ≤ 5,0	$C_{f,0} = -0,217(d/b - 2,0) + 1,65 =$	-
	5 < d/b ≤ 10	$C_{f,0} = -0,02d/b + 1,0 =$	-
	d/b > 10	$C_{f,0} =$	-

$C_f = C_{f,0} \cdot \psi_{\lambda} \cdot \psi_r = 1,41$



5.4 Force Coefficient C_f for feeders

Dimensions h (m) b (m) d (m)
 5,00 **0,10** **0,10**

article 7.6 NEN-EN 1991-1-4:2005

$C_f = C_{f,0} \cdot \psi_{\lambda} \cdot \psi_r$

ψ_r determined with fig 7.24

$\psi_r = 1,00$

ψ_{λ} determined with art. 7.13

$\psi_{\lambda} = 0,92$

tabel 7.16: l = h = <15m $\lambda = 70,00$

$C_{f,0}$ volgens art. 7.9.: $C_{f,0} = 1,20$

$C_f = C_{f,0} \cdot \psi_{\lambda} \cdot \psi_r = 1,10$

5.5 Antenna loads

The antenna windloads will be determined with the documentation off the supplier (wind tunnel research)

With the given wind load and wind speed the effective surface will be calculated.

$$\text{Wind pression } (p_w) = 1/2 * 1,25 * (v_w/3,6)^2$$

$$\text{effectieve surface } A_{\text{eff}} = F_{(N)} / P$$

$$F_{\text{antenna,rep}} : 1 \text{ antenna } \quad \gamma_{\text{SLS,q}} \times p_w \times A_{\text{eff,rear}} =$$

$$2 \text{ antennas } \quad \gamma_{\text{SLS,q}} \times p_w \times A_{\text{eff,rear}} + (A_{\text{eff,frontal}} + A_{\text{eff,lateral}}) / 2 =$$

$$3 \text{ antennas } \quad \gamma_{\text{SLS,q}} \times p_w \times (A_{\text{eff,rear}} + A_{\text{eff,frontal}} + A_{\text{eff,lateral}}) =$$

antenna type	number	Pole	H (mm)	B (mm)	D (mm)	G (kg)	G+5kg	F Frontal (N)	F Lateral (N)	F Rear (N)
A144521R0v06	2	1	2550	499	206	55	60	945	495,00	1235
A _{eff,frontal(m2)}	A _{eff,lateral(m2)}	A _{eff,rear(m2)}	V wind(km/h)	P Nm2	F rear:rep kN	bracket	F lateral:rep kN	bracket	F frontal:rep kN	bracket
0,87	0,46	1,14	150	1085	1,84	0,46	-	-	-	-
antenna type	number	Pole	H (mm)	B (mm)	D (mm)	G (kg)	G+5kg	F Frontal (N)	F Lateral (N)	F Rear (N)
AOC4518R8v06	1	2	2099	449	196	43	48	615	375,00	810
A _{eff,frontal(m2)}	A _{eff,lateral(m2)}	A _{eff,rear(m2)}	V wind(km/h)	P Nm2	F rear:rep kN	bracket	F lateral:rep kN	bracket	F frontal:rep kN	bracket
0,57	0,35	0,75	150	1085	0,76	0,38	0,35	0,18	0,58	0,29

5.6 Dish load

Dish type	number	Pole	C _f	A _{eff(m2)}	F _{dish:rep kN}
nvt	-	-	1,50	-	-

5.7 Windload antenna pole/support

Paal	D (mm)	C _{f,paal}	B _{ladder}	B _{feeders}	C _f	q wind kN/m ²
1	139,7	1,00	100	100	1,10	0,37
1	60,3	1,00	0	80	1,10	0,15

5.8 Loads RRU, Diplexers, MHA etc.

Type	aantal	Paal	H (mm)	B (mm)	D (mm)	G (kg)	C _f	F _{frontal:rep kN}	F _{lateral:rep kN}
RRU5509t	6	-	480	356	140	26	1,45	0,25	0,10
Type	aantal	Paal	H (mm)	B (mm)	D (mm)	G (kg)	C _f	F _{frontal:rep kN}	F _{lateral:rep kN}
RRU5301	6	-	400	300	100	15	1,45	0,18	0,06
Type	aantal	Paal	H (mm)	B (mm)	D (mm)	G (kg)	C _f	F _{frontal:rep kN}	F _{lateral:rep kN}
RRU5502	3	-	480	356	140	25	1,45	0,25	0,10

5.9 Cabinet loads

Type	number	H (mm)	B (mm)	D (mm)	G (kN)	q _{eg,rep kN/m²}
MTS9304A	1	1500	650	650	320	2,46
		C _f	F _{frontal:rep kN}	M _{frontal:rep kNm}	q _{wind:rep kN/m²}	
		1,41	1,40	1,05	+/-1,62	
Type	number	H (mm)	B (mm)	D (mm)	G (kN)	q _{eg,rep kN/m²}
TP48200A	2	1600	700	650	296	2,11
		C _f	F _{frontal:rep kN}	M _{frontal:rep kNm}	q _{wind:rep kN/m²}	
		1,41	1,61	1,29	+/-1,98	

5.10 Fall Load

F _{vallast:rep} =	6,00 kN
e =	0,20 m
M _{vallast:rep} =	1,20 kN
F _{person:rep} =	1,50 kN (150KG)

6.0 Calculation

For the computer calculations see annex 1

6.1 Calculation Antenna pole 1: 2x A144521R01v06 + 10x RRU

UC pole Ø139,7*8 0,36 < 1,0 (ok)
UC wallbracket K100/10 0,37 < 1,0 (ok)

Rotation antennas: 0,010 radial = 0,57 degrees < 1,0 degrees (ok)

Deflection top pole: 32 mm 0,73% < 8,0% (ok)
H_{pole}= 4400 mm

M16 5.8 chemical anchors , 80m glued (minimal assumption)

M16 P1
L= 80
L_{table}= 125
N_{Rd}= 11,20
V_{Rd}= 19,97

N_{Ed}= 10,00
M_{Ed}= 1,90
a= 0,20
n= 4
N_{Ed,total}= 7,25
V_{Ed}= 31,69

0,65 < 1,0 (ok)

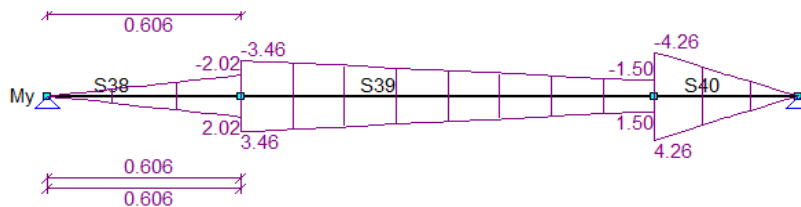
Design resistance: concrete C 20/25 - f_{ca,table} = 25 N/mm² - typical embedment depth (load values are valid for single anchor)

Anchor size	M8	M10	M12	M16	M20	M24	M27	M30
Embedment depth h _{ef} = h _{use} [mm]	80	90	110	125	170	210	240	270
Base material thickness h = h _{min} [mm]	110	120	140	161	218	266	300	340
Spacing s [mm]	40	50	60	80	100	120	135	150
Tensile N_{Rd}: double anchor, no edge effects, min. spacing (s = s_{min})								
HIT-V 5.8 [kN]	9,9	11,3	16,3	17,5	28,2	39,4	47,9	56,5
HIT-V 8.8 [kN]								
HIT-V-R [kN]								
HIT-V-HCR [kN]								
Shear V_{Rd}: double anchor, no edge effects, min. spacing (s = s_{min}), without lever arm								
HIT-V 5.8 [kN]	7,2	12,0	16,8	31,2	48,8	70,4	92,0	112,0
HIT-V 8.8 [kN]	12,0	18,4	27,2	45,7	72,4	100,5	120,9	140,7
HIT-V-R [kN]	8,3	12,8	19,2	35,3	55,1	79,5	98,3	58,8
HIT-V-HCR [kN]	12,0	18,4	27,2	45,7	72,4	70,9	92,0	112,0

UC anchors pole

Controle concretwall 200mm

d= 200 mm
Forces in wall



A_{req}= 69 mm²
A_{min}= 188 mm² minimum reinforcement 6-150

u.c. = 0,37 < 1,0 (ok)

6.2 Calculation Antenna pole 2: 1x AOC4518R8v06

UC antenna tube Ø60,3*4 0,10 < 1,0 (ok)
UC bracket L70/7 0,27 < 1,0 (ok)

Rotation antennas: 0,001 radial = 0,04 degrees < 1,0 degrees (ok)

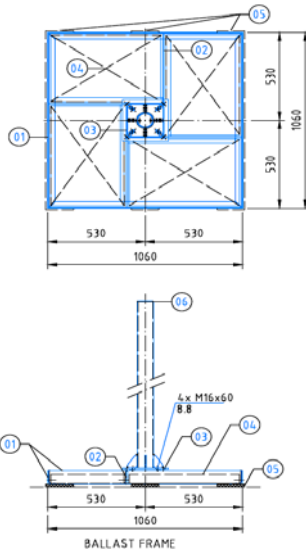
Deflection top pole: 0 mm 0,12% < 8,0% (ok)
H_{pole}= 345 mm

6.3 Calculation Equipmentframe:

UC Equipmentframe 0,38 < 1,0 (ok)

7.0 Calculation Building structure (connections, walls, roof ..)Ballastframe

**Het standaard ballastframe met vier tegels is voldoende stabiel.





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Oudezijds Voorburgwal 87
1012EL Amsterdam
construction calculation



Rev. 1.2
Date 24/05/2022

8.0 Annex

Annex 1

Computercalculations

Pole 1			
Project name	KPN7754	Project number	
Part description	Pole 1	Structural engineer	
Client		Units	m, kN, kNm

PIC. GEOMETRIE RAAMWERK



MEMBERS

Member	Node B	Node E	X-B	Y-B	Z-B	X-E	Y-E	Z-E	Length	Section	Posi
S30	K12	K18	0,000	0,150	-0,346	0,000	0,150	-0,606	0,260	P1	0,000 - L(0,;
S31	K18	K24	0,000	0,150	-0,606	0,000	0,150	-1,900	1,294	P1	0,000 - L(1,;
S35	K24	K49	0,000	0,150	-1,900	0,000	0,150	-6,346	4,446	P1	0,000 - L(4,;
S36	K50	K24	0,000	0,000	-1,900	0,000	0,150	-1,900	0,150	P3	0,000 - L(0,;
S37	K51	K18	0,000	0,000	-0,606	0,000	0,150	-0,606	0,150	P3	0,000 - L(0,;
S38	K52	K51	0,000	0,000	0,000	0,000	0,000	-0,606	0,606	P2	0,000 - L(0,;
S39	K51	K50	0,000	0,000	-0,606	0,000	0,000	-1,900	1,294	P2	0,000 - L(1,;
S40	K50	K53	0,000	0,000	-1,900	0,000	0,000	-2,350	0,450	P2	0,000 - L(0,;
-	-	-	m	m	m	m	m	m	m	-	

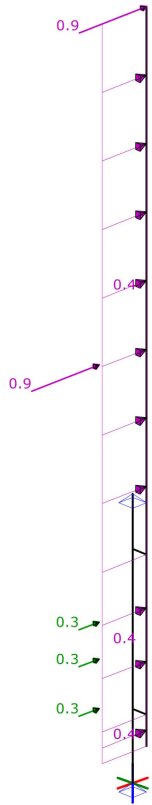
SECTIONS

Section	Section Name	Area	It	Iy	Iz	Material	Angle
P1	N139.7/8	3.3100e-03	1.4406e-05	7.2029e-06	7.2029e-06	S235H(EN10210-1)	0,0
P2	R200x1500	3.0000e-01	3.6640e-03	5.6250e-02	1.0000e-03	C20/25	0,0
P3	KW100/10	3.5517e-03	7.2900e-06	4.7431e-06	4.7431e-06	S235H(EN10210-1)	0,0
-	-	m2	m4	m4	m4	-	°

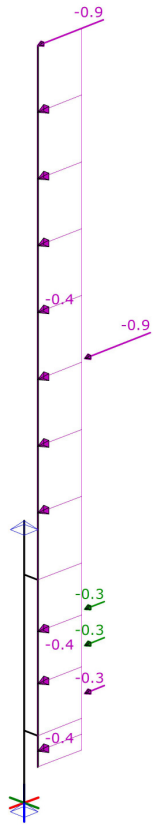
SECTION SHAPES

Section	Tapered	hB	hE	tf	tw	tf2	B	b1	b2	Castellate	Height
P2	No	1,500	1,500	0,0000	0,0000	0,0000	0,200	0,000	0,000	No	0,000
-	-	m	m	m	m	m	m	m	m	-	m

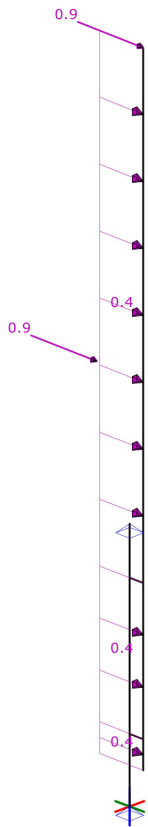
PIC. LASTEN B.G.2 WIND X



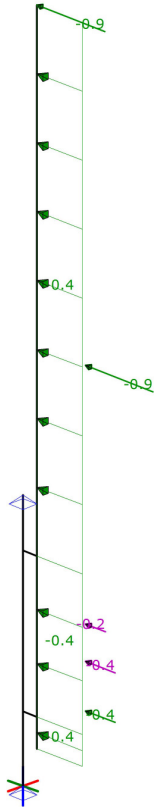
PIC. LASTEN B.G.3 WIND -X



PIC. LASTEN B.G.4 WIND Y



PIC. LASTEN B.G.5 WIND -Y



FUNDAMENTEEL LOADS COMBINATIONS (TABLE)

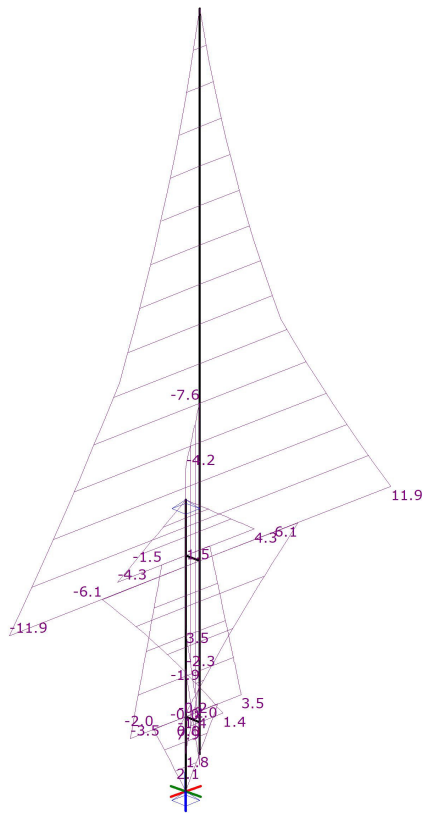
L.C.	Description	Fu.C.1	Fu.C.2	Fu.C.3	Fu.C.4	Fu.C.5	Fu.C.6	Fu.C.7	Fu.C.8	
B.G.1	Permanent	1.35	1.20	1.20	0.90	0.90	1.20	1.20	0.90	
B.G.2	Wind X	-	1.27	-	-1.27	-	-	-	-	
B.G.3	Wind -X	-	-	1.27	-	-1.27	-	-	-	
B.G.4	Wind Y	-	-	-	-	-	1.27	-	-1.27	
B.G.5	Wind -Y	-	-	-	-	-	-	1.27	-	
L.C.	Description	Fu.C.9								
B.G.1	Permanent	0.90								
B.G.2	Wind X	-								
B.G.3	Wind -X	-								
B.G.4	Wind Y	-								
B.G.5	Wind -Y	-1.27								

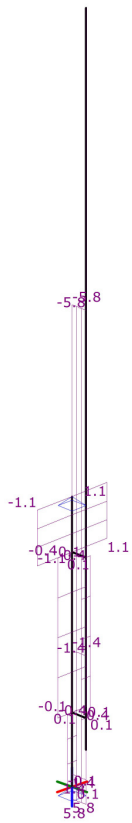
KARAKTERISTIEK LOADS COMBINATIONS (TABLE)

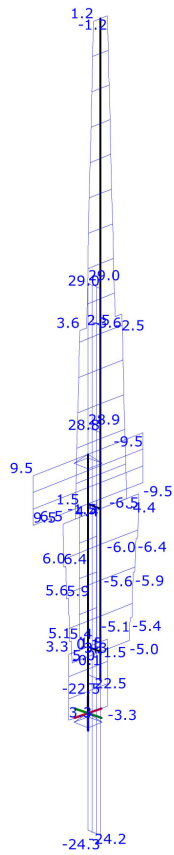
L.C.	Description	Ka.C.(w1)	Ka.C.1	Ka.C.2	Ka.C.3	Ka.C.4
B.G.1	Permanent	1.00	1.00	1.00	1.00	1.00
B.G.2	Wind X	-	0.87	-	-	-
B.G.3	Wind -X	-	-	0.87	-	-
B.G.4	Wind Y	-	-	-	0.87	-
B.G.5	Wind -Y	-	-	-	-	0.87

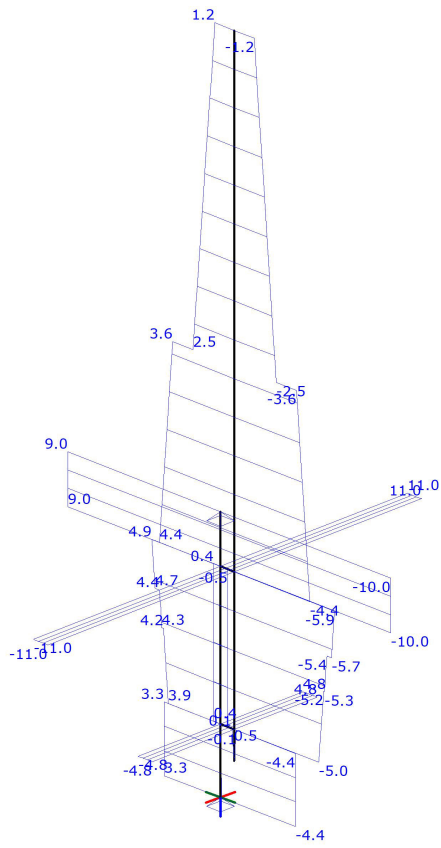
ANALYSIS ASSUMPTIONS

Linear Elastic Analysis performed









Pole 1

Member	LComb	Value	Mb	Mmax	xMmax	Me	x-M0	x-M0
		Mz	0.07	0.12	0.200	-0.14	0.158	0.200
	Fu.C.6	My	0.00			0.00	0.000	0.000
		Mz	2.04	-2.26	0.900	-4.30	0.438	0.000
	Fu.C.7	My	0.00			0.00	0.000	0.000
		Mz	-1.71	2.16	0.900	4.04	0.453	0.000
	Fu.C.8	My	0.00			0.00	0.000	0.000
		Mz	-1.87	2.21	0.900	3.95	0.431	0.000
	Fu.C.9	My	0.00			0.00	0.000	0.000
		Mz	1.87	-2.17	0.900	-4.36	0.455	0.000
S35	Fu.C.1	My	0.00			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.2	My	-11.86			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.3	My	11.86			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.4	My	11.86			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.5	My	-11.81			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.6	My	0.00			0.00	0.000	0.000
		Mz	-11.86			0.00	0.000	0.000
	Fu.C.7	My	0.00			0.00	0.000	0.000
		Mz	11.86			0.00	0.000	0.000
	Fu.C.8	My	0.00			0.00	0.000	0.000
		Mz	11.81			0.00	0.000	0.000
	Fu.C.9	My	0.00			0.00	0.000	0.000
		Mz	-11.81			0.00	0.000	0.000
S36	Fu.C.1	My	-0.43			0.21	0.100	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.2	My	-0.38			0.19	0.100	0.000
		Mz	1.51			-0.14	0.138	0.000
	Fu.C.3	My	-0.38			0.19	0.100	0.000
		Mz	-1.51			0.14	0.138	0.000
	Fu.C.4	My	-0.28			0.14	0.100	0.000
		Mz	-1.51			0.14	0.138	0.000
	Fu.C.5	My	-0.28			0.14	0.100	0.000
		Mz	1.51			-0.13	0.138	0.000
	Fu.C.6	My	-4.19			-7.56	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.7	My	3.48			7.82	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.8	My	3.51			7.86	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.9	My	-4.13			-7.45	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
S37	Fu.C.1	My	-0.33			0.10	0.113	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.2	My	-0.29			0.09	0.113	0.000
		Mz	-0.59			0.14	0.122	0.000
	Fu.C.3	My	-0.29			0.09	0.113	0.000
		Mz	0.59			-0.14	0.122	0.000
	Fu.C.4	My	-0.22			0.07	0.113	0.000
		Mz	0.59			-0.14	0.122	0.000
	Fu.C.5	My	-0.22			0.07	0.113	0.000
		Mz	-0.59			0.13	0.122	0.000
	Fu.C.6	My	-2.27			2.05	0.079	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.7	My	1.65			-1.73	0.073	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.8	My	1.75			-1.88	0.072	0.000
		Mz	0.00			0.00	0.000	0.000
	Fu.C.9	My	-2.16			1.88	0.080	0.000
		Mz	0.00			0.00	0.000	0.000
S38	Fu.C.1	My	0.00			0.00	0.000	0.000

Pole 1

Member	LComb	Value	Mb	Mmax	xMmax	Me	x-M0	x-M0
		Mz	0.00			-0.42	0.000	0.000
	Fu.C.2	My	0.00			-2.02	0.000	0.000
		Mz	0.00			-0.37	0.000	0.000
	Fu.C.3	My	0.00			2.02	0.000	0.000
		Mz	0.00			-0.37	0.000	0.000
	Fu.C.4	My	0.00			2.02	0.000	0.000
		Mz	0.00			-0.28	0.000	0.000
	Fu.C.5	My	0.00			-2.01	0.000	0.000
		Mz	0.00			-0.28	0.000	0.000
	Fu.C.6	My	0.00			0.00	0.000	0.000
		Mz	0.00			-2.68	0.000	0.000
	Fu.C.7	My	0.00			0.00	0.000	0.000
		Mz	0.00			1.53	0.000	0.000
	Fu.C.8	My	0.00			0.00	0.000	0.000
		Mz	0.00			2.02	0.000	0.000
	Fu.C.9	My	0.00			0.00	0.000	0.000
		Mz	0.00			-2.17	0.000	0.000
S39	Fu.C.1	My	0.00			0.00	0.000	0.000
		Mz	-0.09			-0.12	0.000	0.000
	Fu.C.2	My	-3.46			-1.50	0.000	0.000
		Mz	-0.08			-0.10	0.000	0.000
	Fu.C.3	My	3.46			1.50	0.000	0.000
		Mz	-0.08			-0.10	0.000	0.000
	Fu.C.4	My	3.46			1.50	0.000	0.000
		Mz	-0.06			-0.08	0.000	0.000
	Fu.C.5	My	-3.45			-1.50	0.000	0.000
		Mz	-0.06			-0.08	0.000	0.000
	Fu.C.6	My	0.00			0.00	0.000	0.000
		Mz	-0.41			0.13	0.974	0.000
	Fu.C.7	My	0.00			0.00	0.000	0.000
		Mz	-0.12			-0.56	0.000	0.000
	Fu.C.8	My	0.00			0.00	0.000	0.000
		Mz	0.27			-0.31	0.598	0.000
	Fu.C.9	My	0.00			0.00	0.000	0.000
		Mz	-0.01			0.38	0.049	0.000
S40	Fu.C.1	My	0.00			0.00	0.000	0.000
		Mz	0.31			0.00	0.000	0.000
	Fu.C.2	My	4.26			0.00	0.000	0.000
		Mz	0.27			0.00	0.000	0.000
	Fu.C.3	My	-4.26			0.00	0.000	0.000
		Mz	0.27			0.00	0.000	0.000
	Fu.C.4	My	-4.26			0.00	0.000	0.000
		Mz	0.21			0.00	0.000	0.000
	Fu.C.5	My	4.24			0.00	0.000	0.000
		Mz	0.21			0.00	0.000	0.000
	Fu.C.6	My	0.00			0.00	0.000	0.000
		Mz	4.32			0.00	0.000	0.000
	Fu.C.7	My	0.00			0.00	0.000	0.000
		Mz	-4.04			0.00	0.000	0.000
	Fu.C.8	My	0.00			0.00	0.000	0.000
		Mz	-3.82			0.00	0.000	0.000
	Fu.C.9	My	0.00			0.00	0.000	0.000
		Mz	4.50			0.00	0.000	0.000
-	-	-	kNm	kNm	m	kNm	m	m

FU.C. MEMBER FORCES (NX, VY, VZ, MX)

Member	LComb	TC	Nmax Value	Vb	Vmax	Ve	Mxb	Mxe
S30	Fu.C.1	T	0.09 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.2	T	0.08 Vz	0.00	-0.12	-0.12	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.3	T	0.08 Vz	0.00	0.12	0.12	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.4	T	0.06 Vz	0.00	0.12	0.12	0.00	0.00

Pole 1

Member	LComb	TC	Nmax Value	Vb	Vmax	Ve	Mxb	Mxe
			Vy	0.00	0.00	0.00		
	Fu.C.5	T	0.06 Vz	0.00	-0.12	-0.12	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.6	T	0.08 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	0.00	-0.12	-0.12		
	Fu.C.7	T	0.08 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	0.00	0.12	0.12		
	Fu.C.8	T	0.06 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	0.00	0.12	0.12		
	Fu.C.9	T	0.06 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	0.00	-0.12	-0.12		
S31	Fu.C.1	C	-2.77 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-0.66	-0.66	-0.66		
	Fu.C.2	C	-2.46 Vz	-4.97	-6.54	-6.54	0.14	0.14
			Vy	-0.59	-0.59	-0.59		
	Fu.C.3	C	-2.46 Vz	4.97	6.54	6.54	-0.14	-0.14
			Vy	-0.59	-0.59	-0.59		
	Fu.C.4	C	-1.85 Vz	4.97	6.54	6.54	-0.14	-0.14
			Vy	-0.44	-0.44	-0.44		
	Fu.C.5	C	-1.85 Vz	-4.95	-6.51	-6.51	0.13	0.13
			Vy	-0.44	-0.44	-0.44		
	Fu.C.6	C	-28.73 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-4.96	-5.58	-5.58		
	Fu.C.7	T	26.06 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	2.99	4.87	4.87		
	Fu.C.8	T	26.88 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	3.91	4.52	4.52		
	Fu.C.9	C	-26.86 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-4.01	-5.89	-5.89		
S35	Fu.C.1	C	-3.18 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.2	C	-2.83 Vz	4.44	4.44	1.17	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.3	C	-2.83 Vz	-4.44	-4.44	-1.17	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.4	C	-2.12 Vz	-4.44	-4.44	-1.17	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.5	C	-2.12 Vz	4.43	4.43	1.17	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.6	C	-2.83 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	4.44	4.44	1.17		
	Fu.C.7	C	-2.83 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-4.44	-4.44	-1.17		
	Fu.C.8	C	-2.12 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-4.43	-4.43	-1.17		
	Fu.C.9	C	-2.12 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	4.43	4.43	1.17		
S36	Fu.C.1	T	0.66 Vz	4.30	4.30	4.24	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.2	T	0.59 Vz	3.82	3.82	3.77	-5.76	-5.76
			Vy	-10.98	-10.98	-10.98		
	Fu.C.3	T	0.59 Vz	3.82	3.82	3.77	5.76	5.76
			Vy	10.98	10.98	10.98		
	Fu.C.4	T	0.44 Vz	2.86	2.86	2.83	5.76	5.76
			Vy	10.98	10.98	10.98		
	Fu.C.5	T	0.44 Vz	2.86	2.86	2.83	-5.74	-5.74
			Vy	-10.94	-10.94	-10.94		
	Fu.C.6	T	10.02 Vz	-22.45	-22.50	-22.50	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.7	C	-9.32 Vz	28.93	28.93	28.88	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.8	C	-8.95 Vz	29.03	29.03	29.00	0.00	0.00
			Vy	0.00	0.00	0.00		
	Fu.C.9	T	10.31 Vz	-22.15	-22.19	-22.19	0.00	0.00
			Vy	0.00	0.00	0.00		
S37	Fu.C.1	C	-0.66 Vz	2.92	2.92	2.86	0.00	0.00
			Vy	0.00	0.00	0.00		

Pole 1

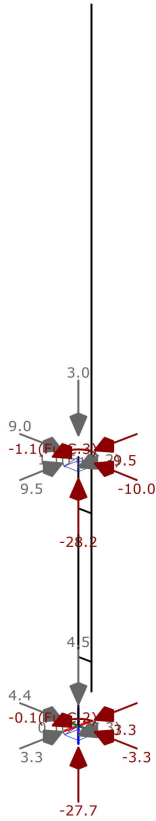
Member	LComb	TC	Nmax Value	Vb	Vmax	Ve	Mxb	Mxe
S37	Fu.C.2	C	-0.59 Vz	2.59	2.59	2.54	1.44	1.44
			Vy	4.85	4.85	4.85		
	Fu.C.3	C	-0.59 Vz	2.59	2.59	2.54	-1.44	-1.44
			Vy	-4.85	-4.85	-4.85		
	Fu.C.4	C	-0.44 Vz	1.94	1.94	1.91	-1.44	-1.44
			Vy	-4.85	-4.85	-4.85		
	Fu.C.5	C	-0.44 Vz	1.94	1.94	1.91	1.44	1.44
			Vy	4.83	4.83	4.83		
	Fu.C.6	C	-4.84 Vz	28.87	28.87	28.82	0.00	0.00
Vy			0.00	0.00	0.00			
Fu.C.7	T	2.87 Vz	-22.52	-22.57	-22.57	0.00	0.00	
		Vy	0.00	0.00	0.00			
Fu.C.8	T	3.79 Vz	-24.23	-24.26	-24.26	0.00	0.00	
		Vy	0.00	0.00	0.00			
Fu.C.9	C	-3.89 Vz	26.96	26.96	26.92	0.00	0.00	
		Vy	0.00	0.00	0.00			
S38	Fu.C.1	C	-14.88 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-0.69	-0.69	-0.69		
	Fu.C.2	C	-13.23 Vz	-3.33	-3.33	-3.33	-0.15	-0.15
			Vy	-0.61	-0.61	-0.61		
	Fu.C.3	C	-13.23 Vz	3.33	3.33	3.33	0.15	0.15
			Vy	-0.61	-0.61	-0.61		
	Fu.C.4	C	-9.92 Vz	3.33	3.33	3.33	0.15	0.15
			Vy	-0.46	-0.46	-0.46		
	Fu.C.5	C	-9.92 Vz	-3.32	-3.32	-3.32	-0.15	-0.15
Vy			-0.46	-0.46	-0.46			
Fu.C.6	C	-27.70 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	-4.42	-4.42	-4.42			
Fu.C.7	T	6.05 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	2.53	2.53	2.53			
Fu.C.8	T	8.58 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	3.34	3.34	3.34			
Fu.C.9	C	-23.70 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	-3.58	-3.58	-3.58			
S39	Fu.C.1	T	7.27 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-0.02	-0.02	-0.02		
	Fu.C.2	T	6.46 Vz	1.52	1.52	1.52	0.44	0.44
			Vy	-0.02	-0.02	-0.02		
	Fu.C.3	T	6.46 Vz	-1.52	-1.52	-1.52	-0.44	-0.44
			Vy	-0.02	-0.02	-0.02		
	Fu.C.4	T	4.85 Vz	-1.52	-1.52	-1.52	-0.44	-0.44
			Vy	-0.02	-0.02	-0.02		
	Fu.C.5	T	4.85 Vz	1.51	1.51	1.51	0.44	0.44
Vy			-0.02	-0.02	-0.02			
Fu.C.6	T	18.27 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	0.42	0.42	0.42			
Fu.C.7	C	-16.47 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	-0.34	-0.34	-0.34			
Fu.C.8	C	-15.65 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	-0.45	-0.45	-0.45			
Fu.C.9	T	16.09 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	0.30	0.30	0.30			
S40	Fu.C.1	T	16.12 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-0.69	-0.69	-0.69		
	Fu.C.2	T	14.33 Vz	-9.47	-9.47	-9.47	-1.07	-1.07
			Vy	-0.61	-0.61	-0.61		
	Fu.C.3	T	14.33 Vz	9.47	9.47	9.47	1.07	1.07
			Vy	-0.61	-0.61	-0.61		
	Fu.C.4	T	10.75 Vz	9.47	9.47	9.47	1.07	1.07
			Vy	-0.46	-0.46	-0.46		
	Fu.C.5	T	10.75 Vz	-9.43	-9.43	-9.43	-1.07	-1.07
Vy			-0.46	-0.46	-0.46			
Fu.C.6	C	-4.19 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	-9.60	-9.60	-9.60			
Fu.C.7	T	28.16 Vz	0.00	0.00	0.00	0.00	0.00	
		Vy	8.98	8.98	8.98			
Fu.C.8	T	25.16 Vz	0.00	0.00	0.00	0.00	0.00	

Pole 1

Member	LComb	TC	Nmax Value	Vb	Vmax	Ve	Mxb	Mxe
			Vy	8.50	8.50	8.50		
	Fu.C.9	C	-6.06 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-10.01	-10.01	-10.01		
-	-	-	kN -	kN	kN	kN	kNm	kNm

PIC. FU.C. OPLEGREACTIES ENVELOPE

Fundamenteel Loads Combinations



FU.C. SUPPORT REACTIONS

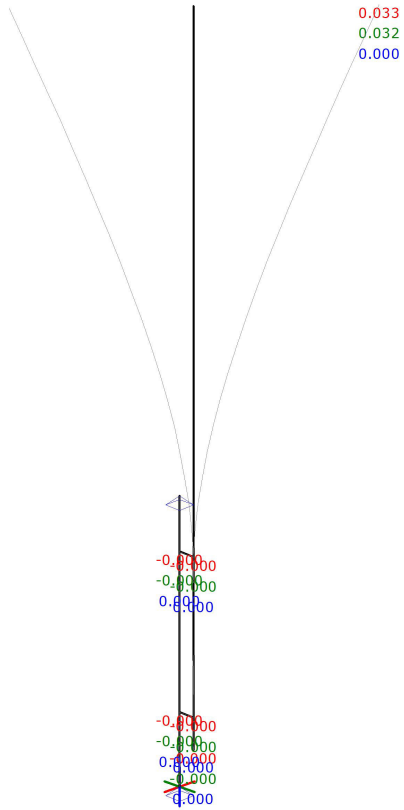
LComb	Support	Node	X	Y	Z	Mx	My	Mz
Fu.C.1	O1	K52	0.00	0.69	-14.88	0.00	0.00	0.00
Fu.C.1	O2	K53	0.00	-0.69	-16.12	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	-31.01			
	Sum Loads		0.00	0.00	31.01			
Fu.C.2	O1	K52	3.33	0.61	-13.23	0.00	0.00	-0.15
Fu.C.2	O2	K53	-9.47	-0.61	-14.33	0.00	0.00	1.07
	Sum Reactions		-6.13	0.00	-27.56			
	Sum Loads		6.13	0.00	27.56			
Fu.C.3	O1	K52	-3.33	0.61	-13.23	0.00	0.00	0.15
Fu.C.3	O2	K53	9.47	-0.61	-14.33	0.00	0.00	-1.07
	Sum Reactions		6.13	0.00	-27.56			
	Sum Loads		-6.13	0.00	27.56			
Fu.C.4	O1	K52	-3.33	0.46	-9.92	0.00	0.00	0.15
Fu.C.4	O2	K53	9.47	-0.46	-10.75	0.00	0.00	-1.07
	Sum Reactions		6.13	0.00	-20.67			
	Sum Loads		-6.13	0.00	20.67			
Fu.C.5	O1	K52	3.32	0.46	-9.92	0.00	0.00	-0.15
Fu.C.5	O2	K53	-9.43	-0.46	-10.75	0.00	0.00	1.07
	Sum Reactions		-6.11	0.00	-20.67			
	Sum Loads		6.11	0.00	20.67			
Fu.C.6	O1	K52	0.00	4.42	-27.70	0.00	0.00	0.00
Fu.C.6	O2	K53	0.00	-9.60	0.14	0.00	0.00	0.00

Pole 1

LComb	Support	Node	X	Y	Z	Mx	My	Mz
	Sum Reactions		0.00	-5.18	-27.56			
	Sum Loads		0.00	5.18	27.56			
Fu.C.7	O1	K52	0.00	-2.53	0.60	0.00	0.00	0.00
Fu.C.7	O2	K53	0.00	8.98	-28.16	0.00	0.00	0.00
	Sum Reactions		0.00	6.45	-27.56			
	Sum Loads		0.00	-6.45	27.56			
Fu.C.8	O1	K52	0.00	-3.34	4.49	0.00	0.00	0.00
Fu.C.8	O2	K53	0.00	8.50	-25.16	0.00	0.00	0.00
	Sum Reactions		0.00	5.16	-20.67			
	Sum Loads		0.00	-5.16	20.67			
Fu.C.9	O1	K52	0.00	3.58	-23.70	0.00	0.00	0.00
Fu.C.9	O2	K53	0.00	-10.01	3.03	0.00	0.00	0.00
	Sum Reactions		0.00	-6.43	-20.67			
	Sum Loads		0.00	6.43	20.67			
-	-	-	kN	kN	kN	kNm	kNm	kNm

L.C. SUPPORT REACTIONS

L.C.	Support	Node	X	Y	Z	Mx	My	Mz
B.G.1	O1	K52	0.00	0.51	-11.02	0.00	0.00	0.00
B.G.1	O2	K53	0.00	-0.51	-11.94	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	-22.97			
	Sum Loads		0.00	0.00	22.97			
B.G.2	O1	K52	2.61	0.00	0.00	0.00	0.00	-0.12
B.G.2	O2	K53	-7.42	0.00	0.00	0.00	0.00	0.84
	Sum Reactions		-4.81	0.00	0.00			
	Sum Loads		4.81	0.00	0.00			
B.G.3	O1	K52	-2.61	0.00	0.00	0.00	0.00	0.12
B.G.3	O2	K53	7.42	0.00	0.00	0.00	0.00	-0.84
	Sum Reactions		4.81	0.00	0.00			
	Sum Loads		-4.81	0.00	0.00			
B.G.4	O1	K52	0.00	2.99	-11.35	0.00	0.00	0.00
B.G.4	O2	K53	0.00	-7.05	11.35	0.00	0.00	0.00
	Sum Reactions		0.00	-4.06	0.00			
	Sum Loads		0.00	4.06	0.00			
B.G.5	O1	K52	0.00	-2.46	10.85	0.00	0.00	0.00
B.G.5	O2	K53	0.00	7.52	-10.85	0.00	0.00	0.00
	Sum Reactions		0.00	5.06	0.00			
	Sum Loads		0.00	-5.06	0.00			
-	-	-	kN	kN	kN	kNm	kNm	kNm



KA.C. NODAL DISPLACEMENTS

Node	LComb	X	Y	Z	Xr	Yr	Zr
K12	Ka.C.(w1)	0.0000	0.0000	0.0000	-0.012e-03	0.000e-03	-0.000e-03
	Ka.C.1	0.0001	0.0000	0.0000	-0.012e-03	0.252e-03	-0.025e-03
	Ka.C.2	-0.0001	0.0000	0.0000	-0.012e-03	-0.252e-03	0.025e-03
	Ka.C.3	0.0000	0.0000	0.0000	-0.016e-03	-0.000e-03	-0.000e-03
	Ka.C.4	0.0000	0.0000	0.0000	0.002e-03	0.000e-03	-0.000e-03
K18	Ka.C.(w1)	0.0000	0.0000	0.0000	-0.012e-03	0.000e-03	-0.000e-03
	Ka.C.1	0.0000	0.0000	0.0000	-0.012e-03	0.251e-03	-0.025e-03
	Ka.C.2	0.0000	0.0000	0.0000	-0.012e-03	-0.251e-03	0.025e-03
	Ka.C.3	0.0000	0.0000	0.0000	-0.017e-03	-0.000e-03	-0.000e-03
	Ka.C.4	0.0000	0.0000	0.0000	0.003e-03	0.000e-03	-0.000e-03
K24	Ka.C.(w1)	0.0000	0.0000	0.0000	-0.014e-03	0.000e-03	-0.000e-03
	Ka.C.1	0.0000	0.0000	0.0000	-0.014e-03	-1.002e-03	0.078e-03
	Ka.C.2	0.0000	0.0000	0.0000	-0.014e-03	1.002e-03	-0.078e-03
	Ka.C.3	0.0000	0.0000	0.0000	-0.613e-03	0.000e-03	0.000e-03
	Ka.C.4	0.0000	0.0000	0.0000	0.577e-03	-0.000e-03	-0.000e-03
K49	Ka.C.(w1)	0.0000	0.0001	0.0000	-0.014e-03	0.000e-03	-0.000e-03
	Ka.C.1	0.0333	0.0001	0.0000	-0.014e-03	-10.105e-03	0.078e-03
	Ka.C.2	-0.0333	0.0001	0.0000	-0.014e-03	10.105e-03	-0.078e-03
	Ka.C.3	0.0000	0.0316	0.0001	-9.716e-03	0.000e-03	0.000e-03
	Ka.C.4	0.0000	-0.0314	0.0000	9.679e-03	-0.000e-03	-0.000e-03
K50	Ka.C.(w1)	0.0000	0.0000	0.0000	-0.003e-03	-0.000e-03	-0.000e-03
	Ka.C.1	0.0000	0.0000	0.0000	-0.003e-03	-0.001e-03	0.007e-03
	Ka.C.2	0.0000	0.0000	0.0000	-0.003e-03	0.001e-03	-0.007e-03
	Ka.C.3	0.0000	0.0000	0.0000	-0.008e-03	-0.000e-03	0.000e-03
	Ka.C.4	0.0000	0.0000	0.0000	-0.002e-03	-0.000e-03	-0.000e-03

Pole 1

Node	LComb	X	Y	Z	Xr	Yr	Zr
K51	Ka.C.(w1)	0.0000	0.0000	0.0000	0.001e-03	0.000e-03	-0.000e-03
	Ka.C.1	0.0000	0.0000	0.0000	0.001e-03	0.001e-03	-0.001e-03
	Ka.C.2	0.0000	0.0000	0.0000	0.001e-03	-0.001e-03	0.001e-03
	Ka.C.3	0.0000	0.0000	0.0000	-0.003e-03	0.000e-03	-0.000e-03
	Ka.C.4	0.0000	0.0000	0.0000	0.009e-03	0.000e-03	-0.000e-03
K52	Ka.C.(w1)	0.0000	0.0000	0.0000	0.004e-03	0.000e-03	0.000e-03
	Ka.C.1	0.0000	0.0000	0.0000	0.004e-03	0.001e-03	0.000e-03
	Ka.C.2	0.0000	0.0000	0.0000	0.004e-03	-0.001e-03	0.000e-03
	Ka.C.3	0.0000	0.0000	0.0000	0.016e-03	0.000e-03	0.000e-03
	Ka.C.4	0.0000	0.0000	0.0000	-0.001e-03	0.000e-03	0.000e-03
K53	Ka.C.(w1)	0.0000	0.0000	0.0000	-0.001e-03	-0.000e-03	0.000e-03
	Ka.C.1	0.0000	0.0000	0.0000	-0.001e-03	-0.000e-03	0.000e-03
	Ka.C.2	0.0000	0.0000	0.0000	-0.001e-03	0.000e-03	0.000e-03
	Ka.C.3	0.0000	0.0000	0.0000	0.015e-03	-0.000e-03	0.000e-03
	Ka.C.4	0.0000	0.0000	0.0000	-0.022e-03	-0.000e-03	0.000e-03
-	-	m	m	m	rad	rad	rad

KA.C. EXTREME DEFLECTIONS

Member	LComb	Node Begin				Member			Node End		
		X	Y	Z	Z' dist	Z'	Y' dist	Y'	X	Y	Z
S31	Ka.C.1	0,000	0,000	0,000	0.808	-0.0002	0.301	0.0000	0,000	0,000	0,000
S31	Ka.C.2	0,000	0,000	0,000	0.808	0.0002	0.301	0.0000	0,000	0,000	0,000
S31	Ka.C.3	0,000	0,000	0,000	0.000	0.0000	0.869	-0.0001	0,000	0,000	0,000
S31	Ka.C.4	0,000	0,000	0,000	0.000	0.0000	0.873	0.0001	0,000	0,000	0,000
S36	Ka.C.1	0,000	0,000	0,000	0.000	0.0000	0.061	0.0000	0,000	0,000	0,000
S36	Ka.C.2	0,000	0,000	0,000	0.000	0.0000	0.061	0.0000	0,000	0,000	0,000
S36	Ka.C.3	0,000	0,000	0,000	0.078	0.0000	0.000	0.0000	0,000	0,000	0,000
S36	Ka.C.4	0,000	0,000	0,000	0.080	0.0000	0.000	0.0000	0,000	0,000	0,000
S38	Ka.C.3	0,000	0,000	0,000	0.000	0.0000	0.350	0.0000	0,000	0,000	0,000
S39	Ka.C.4	0,000	0,000	0,000	0.000	0.0000	0.711	0.0000	0,000	0,000	0,000
S40	Ka.C.3	0,000	0,000	0,000	0.000	0.0000	0.190	0.0000	0,000	0,000	0,000
S40	Ka.C.4	0,000	0,000	0,000	0.000	0.0000	0.190	0.0000	0,000	0,000	0,000
-	-	m	m	m	m	m	m	m	m	m	m

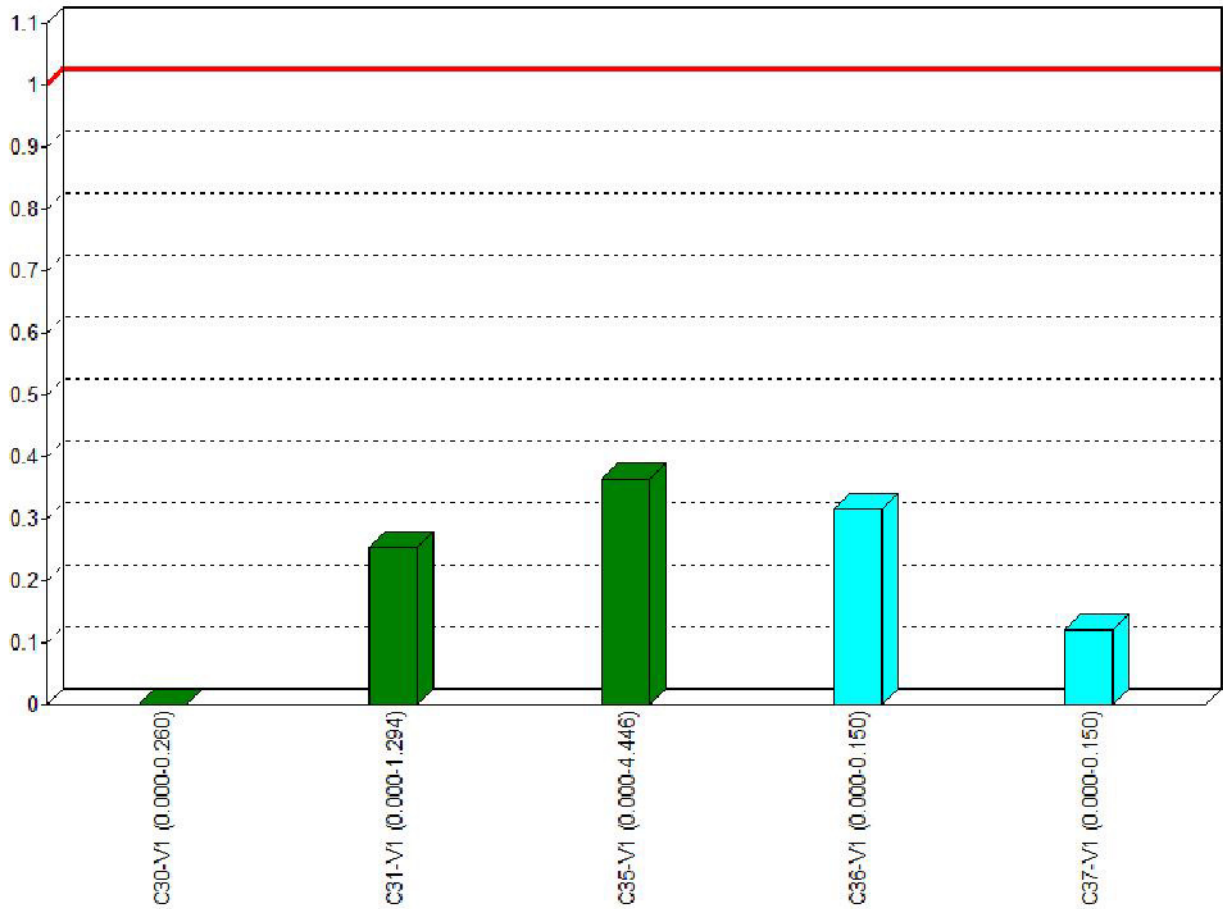
PIC. STAALCONTROLE



SM DEF.

Structural member	Member (s)
C30	S30
C31	S31
C35	S35
C36	S36
C37	S37

PIC. STEEL UC CHART



UNITY CHECK NEN-EN1993-1-1:2016/NB:2016

Field	Check Type	Combination	Formula	UC max
C30-V1 (0.000-0.260)	Cross	Fu.C.2	NEN-EN1993-1-1(NB.33)	0,00
C30-V1 (0.000-0.260)	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00
C31-V1 (0.000-1.294)	Cross	Fu.C.2	NEN-EN1993-1-1(6.1)	0,25
C31-V1 (0.000-1.294)	Stab.	Fu.C.2	NEN-EN1993-1-1(6.46)	0,00
C31-V1 (0.000-1.294)	Stab.	Fu.C.2	NEN-EN1993-1-1(6.46)	0,00
C31-V1 (0.000-1.294)	Stab.	Fu.C.2	NEN-EN1993-1-1(6.61&6.62)	0,09
C31-V1 (0.000-1.294)	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00
C35-V1 (0.000-4.446)	Cross	Fu.C.2	NEN-EN1993-1-1(NB.33)	0,36
C35-V1 (0.000-4.446)	Stab.	Fu.C.2	NEN-EN1993-1-1(6.46)	0,01
C35-V1 (0.000-4.446)	Stab.	Fu.C.2	NEN-EN1993-1-1(6.46)	0,01
C35-V1 (0.000-4.446)	Stab.	Fu.C.2	NEN-EN1993-1-1(6.61&6.62)	0,17
C35-V1 (0.000-4.446)	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00
C36-V1 (0.000-0.150)	Cross	Fu.C.2	NEN-EN1993-1-1(6.1)	0,31
C36-V1 (0.000-0.150)	Stab.	Fu.C.8	NEN-EN1993-1-1(6.46)	0,01
C36-V1 (0.000-0.150)	Stab.	Fu.C.8	NEN-EN1993-1-1(6.46)	0,01
C36-V1 (0.000-0.150)	Stab.	Fu.C.8	NEN-EN1993-1-1(6.61&6.62)	0,23
C36-V1 (0.000-0.150)	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00
C37-V1 (0.000-0.150)	Cross	Fu.C.6	NEN-EN1993-1-1(6.17)	0,12
C37-V1 (0.000-0.150)	Stab.	Fu.C.6	NEN-EN1993-1-1(6.46)	0,01
C37-V1 (0.000-0.150)	Stab.	Fu.C.6	NEN-EN1993-1-1(6.46)	0,01
C37-V1 (0.000-0.150)	Stab.	Fu.C.6	NEN-EN1993-1-1(6.61&6.62)	0,04
C37-V1 (0.000-0.150)	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00

EXTREME UNITY CHECK NEN-EN1993-1-1:2016/NB:2016

Field	Check Type	Combination	Formula	UC max
C30-V1 (0.000-0.260)	Cross	Fu.C.2	NEN-EN1993-1-1(NB.33)	0,00
C31-V1 (0.000-1.294)	Cross	Fu.C.2	NEN-EN1993-1-1(6.1)	0,25
C35-V1 (0.000-4.446)	Cross	Fu.C.2	NEN-EN1993-1-1(NB.33)	0,36
C36-V1 (0.000-0.150)	Cross	Fu.C.2	NEN-EN1993-1-1(6.1)	0,31
C37-V1 (0.000-0.150)	Cross	Fu.C.6	NEN-EN1993-1-1(6.17)	0,12

UNITY CHECK FOR STRUCTURAL MEMBERS NEN-EN1993-1-1:2016/NB:2016

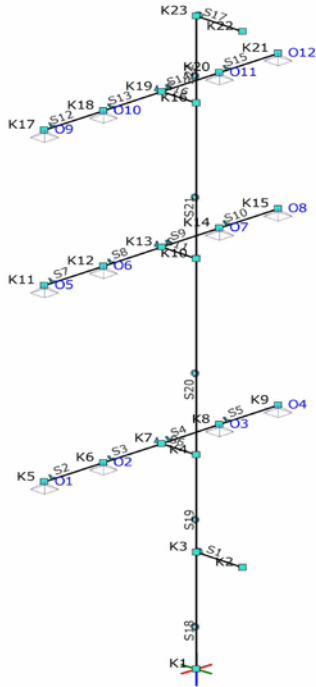
Label	Check Type	Combination	Formula	UC max
C30	Cross	Fu.C.2	NEN-EN1993-1-1(NB.33)	0,00
	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00
C31	Cross	Fu.C.2	NEN-EN1993-1-1(6.1)	0,25
	Stab.	Fu.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Fu.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Fu.C.2	NEN-EN1993-1-1(6.61&6.62)	0,09
	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00
C35	Cross	Fu.C.2	NEN-EN1993-1-1(NB.33)	0,36
	Stab.	Fu.C.2	NEN-EN1993-1-1(6.46)	0,01
	Stab.	Fu.C.2	NEN-EN1993-1-1(6.46)	0,01
	Stab.	Fu.C.2	NEN-EN1993-1-1(6.61&6.62)	0,17
	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00
C36	Cross	Fu.C.2	NEN-EN1993-1-1(6.1)	0,31
	Stab.	Fu.C.8	NEN-EN1993-1-1(6.46)	0,01
	Stab.	Fu.C.8	NEN-EN1993-1-1(6.46)	0,01
	Stab.	Fu.C.8	NEN-EN1993-1-1(6.61&6.62)	0,23
	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00
C37	Cross	Fu.C.6	NEN-EN1993-1-1(6.17)	0,12
	Stab.	Fu.C.6	NEN-EN1993-1-1(6.46)	0,01
	Stab.	Fu.C.6	NEN-EN1993-1-1(6.46)	0,01
	Stab.	Fu.C.6	NEN-EN1993-1-1(6.61&6.62)	0,04
	Lat.Buck.	Fu.C.9	NEN-EN1993-1-1(6.54)	0,00

EXTREME UNITY CHECK FOR STRUCTURAL MEMBERS NEN-EN1993-1-1:2016/NB:2016

Label	Check Type	Combination	Formula	UC max
C30	Cross	Fu.C.2	NEN-EN1993-1-1(NB.33)	0,00
C31	Cross	Fu.C.2	NEN-EN1993-1-1(6.1)	0,25
C35	Cross	Fu.C.2	NEN-EN1993-1-1(NB.33)	0,36
C36	Cross	Fu.C.2	NEN-EN1993-1-1(6.1)	0,31
C37	Cross	Fu.C.6	NEN-EN1993-1-1(6.17)	0,12

Pole 2			
Project name	KPN7754	Project number	
Part description	Pole 2	Structural engineer	
Client		Units	m, kN, kNm

PIC. GEOMETRIE RAAMWERK



MEMBERS

Member	Node B	Node E	X-B	Y-B	Z-B	X-E	Y-E	Z-E	Length	Section	Position
S1	K3	K2	0,000	0,000	-0,460	0,000	0,200	-0,460	0,200	P3	0,000 - L(0,200)
S2	K5	K6	-0,500	-0,150	-0,840	-0,250	-0,150	-0,840	0,250	P2	0,000 - L(0,250)
S3	K6	K7	-0,250	-0,150	-0,840	0,000	-0,150	-0,840	0,250	P2	0,000 - L(0,250)
S4	K7	K8	0,000	-0,150	-0,840	0,250	-0,150	-0,840	0,250	P2	0,000 - L(0,250)
S5	K8	K9	0,250	-0,150	-0,840	0,500	-0,150	-0,840	0,250	P2	0,000 - L(0,250)
S6	K7	K4	0,000	-0,150	-0,840	0,000	0,000	-0,840	0,150	P2	0,000 - L(0,150)
S7	K11	K12	-0,500	-0,150	-1,610	-0,250	-0,150	-1,610	0,250	P2	0,000 - L(0,250)
S8	K12	K13	-0,250	-0,150	-1,610	0,000	-0,150	-1,610	0,250	P2	0,000 - L(0,250)
S9	K13	K14	0,000	-0,150	-1,610	0,250	-0,150	-1,610	0,250	P2	0,000 - L(0,250)
S10	K14	K15	0,250	-0,150	-1,610	0,500	-0,150	-1,610	0,250	P2	0,000 - L(0,250)
S11	K13	K10	0,000	-0,150	-1,610	0,000	0,000	-1,610	0,150	P2	0,000 - L(0,150)
S12	K17	K18	-0,500	-0,150	-2,220	-0,250	-0,150	-2,220	0,250	P2	0,000 - L(0,250)
S13	K18	K19	-0,250	-0,150	-2,220	0,000	-0,150	-2,220	0,250	P2	0,000 - L(0,250)
S14	K19	K20	0,000	-0,150	-2,220	0,250	-0,150	-2,220	0,250	P2	0,000 - L(0,250)
S15	K20	K21	0,250	-0,150	-2,220	0,500	-0,150	-2,220	0,250	P2	0,000 - L(0,250)
S16	K19	K16	0,000	-0,150	-2,220	0,000	0,000	-2,220	0,150	P2	0,000 - L(0,150)
S17	K23	K22	0,000	0,000	-2,560	0,000	0,200	-2,560	0,200	P3	0,000 - L(0,200)
S18	K1	K3	0,000	0,000	0,000	0,000	0,000	-0,460	0,460	P1	0,000 - L(0,460)
S19	K3	K4	0,000	0,000	-0,460	0,000	0,000	-0,840	0,380	P1	0,000 - L(0,380)
S20	K4	K10	0,000	0,000	-0,840	0,000	0,000	-1,610	0,770	P1	0,000 - L(0,770)
S21	K10	K16	0,000	0,000	-1,610	0,000	0,000	-2,220	0,610	P1	0,000 - L(0,610)
S22	K16	K23	0,000	0,000	-2,220	0,000	0,000	-2,560	0,340	P1	0,000 - L(0,340)
-	-	-	m	m	m	m	m	m	m	-	-

SECTIONS

Section	Section Name	Area	It	Iy	Iz	Material	Angle
P1	N60.3/4	7.0749e-04	5.6346e-07	2.8173e-07	2.8173e-07	S235H(EN10210-1)	0,0
P2	L 70 x 70 x 7	9.3969e-04	1.4198e-08	4.2298e-07	4.2298e-07	S235	0,0
P3	C100	7.8540e-03	9.8175e-06	4.9087e-06	4.9087e-06	S235	0,0
-	-	m2	m4	m4	m4	-	°

SECTION SHAPES

Pole 2

Pole 2	
Project name	KPN7754
Project number	Structural engineer
Part description	Pole 2
Client	Units
	m, kN, kNm

Section	Tapered	hB	hE	tf	tw	tf2	B	b1	b2	Castellate	Height
P3	No	0,100	0,100	0,0000	0,0000	0,0000	0,100	0,000	0,000	No	0,000
-	-	m	m	m	m	m	m	m	m	-	m

MATERIALS

Material Name	Poison	Density	Youngs mod.	Lin. Exp.
S235H(EN10210-1)	0.30	78.50	2.1000e+08	12.0000e-06
S235	0.30	78.50	2.1000e+08	12.0000e-06
-	-	kN/m3	kN/m2	C°m

SUPPORTS

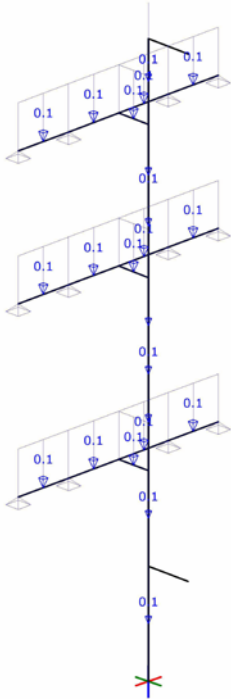
Support	Object	Position		Z	Xr	Yr	Zr	AngleXr	AngleYr	AngleZr	
O1	K5	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O2	K6	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O3	K8	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O4	K9	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O5	K11	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O6	K12	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O7	K14	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O8	K15	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O9	K17	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O10	K18	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O11	K20	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
O12	K21	0,000	Fixed	Fixed	Fixed	Free	Free	Fixed	0	0	0
-	-	m	kN/m	kN/m	kN/m	kNm/rad	kNm/rad	kNm/rad	°	°	°

LOADS CASES TYPES

Label	Description	L.C. Type	Fav./Unfav.	Element	Level	Field	Psi0	Psi1	Psi2	Cprob
B.G.1	Permanent	Permanent actions	-		None	None				
B.G.2	Permanent	Permanent actions	-		None	None				
B.G.3	Wind X	Wind load	-		None	None		0.20		1,00/1,00
B.G.4	Wind Y	Wind load	-		None	None		0.20		1,00/1,00

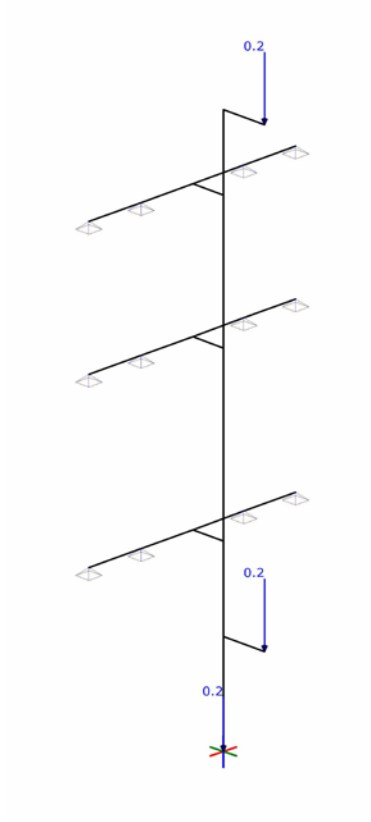
Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

PIC. LASTEN B.G.1 PERMANENT



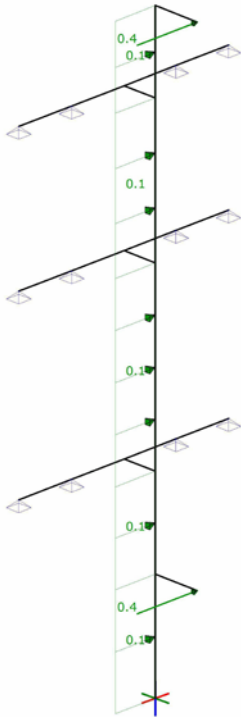
Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

PIC. LASTEN B.G.2 PERMANENT



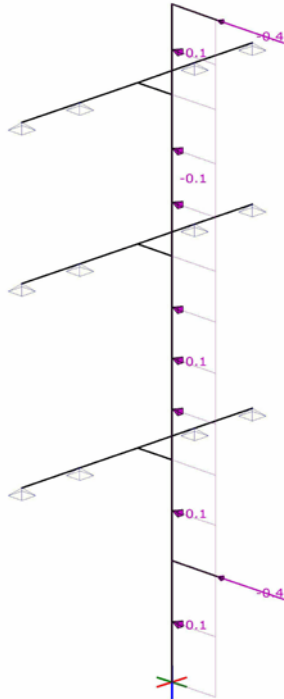
Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

PIC. LASTEN B.G.3 WIND X



Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

PIC. LASTEN B.G.4 WIND Y



PERSISTENT LOADS COMBINATIONS (TABLE)

L.C.	Description	Pe.C.1	Pe.C.2	Pe.C.3	Pe.C.4	Pe.C.5
B.G.1	Permanent	1.35	1.20	1.20	0.90	0.90
B.G.2	Permanent	1.35	1.20	1.20	0.90	0.90
B.G.3	Wind X	0.00	1.27	0.00	-1.27	0.00
B.G.4	Wind Y	0.00	0.00	1.27	0.00	-1.27

CHARACTERISTIC LOADS COMBINATIONS (TABLE)

L.C.	Description	Ch.C.(w1)	Ch.C.1	Ch.C.2
B.G.1	Permanent	1.00	1.00	1.00
B.G.2	Permanent	1.00	1.00	1.00
B.G.3	Wind X	0.00	0.87	0.00
B.G.4	Wind Y	0.00	0.00	0.87

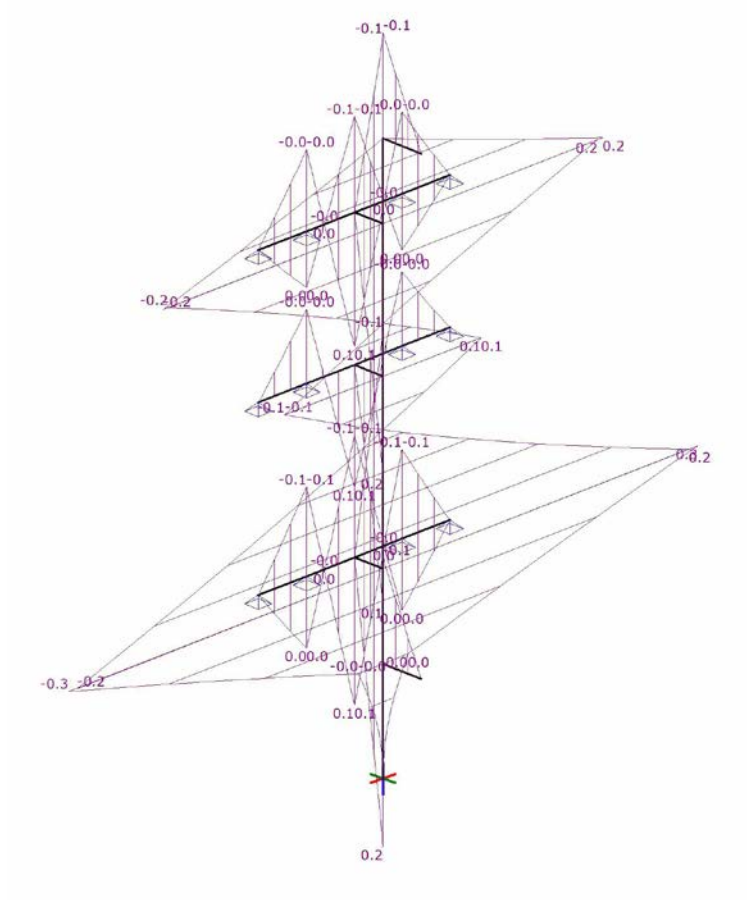
ANALYSIS ASSUMPTIONS

Linear Elastic Analysis performed

Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

PIC. PE.C. MOMENT (MY) ENVELOPE

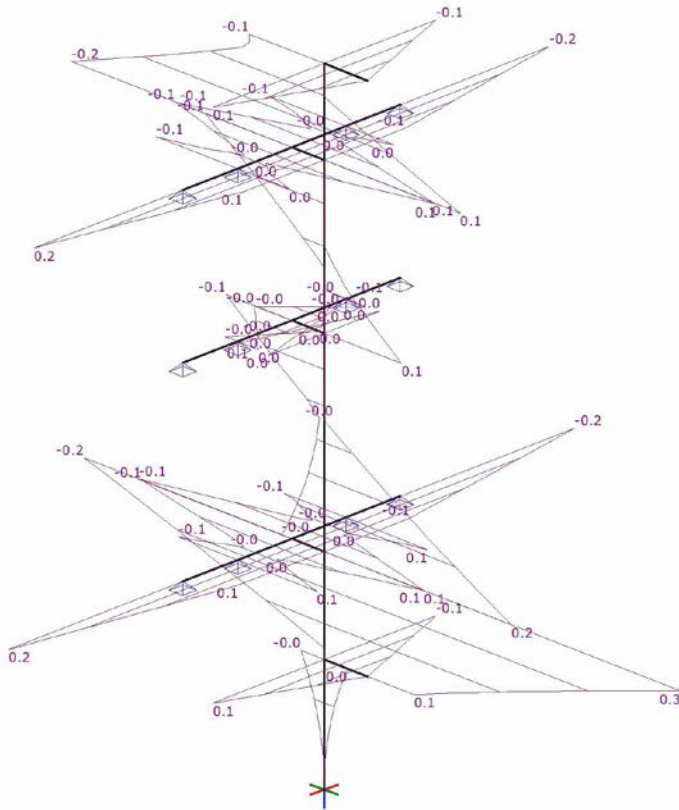
Persistent Loads Combinations



Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

PIC. PE.C. MOMENT (MZ) ENVELOPE

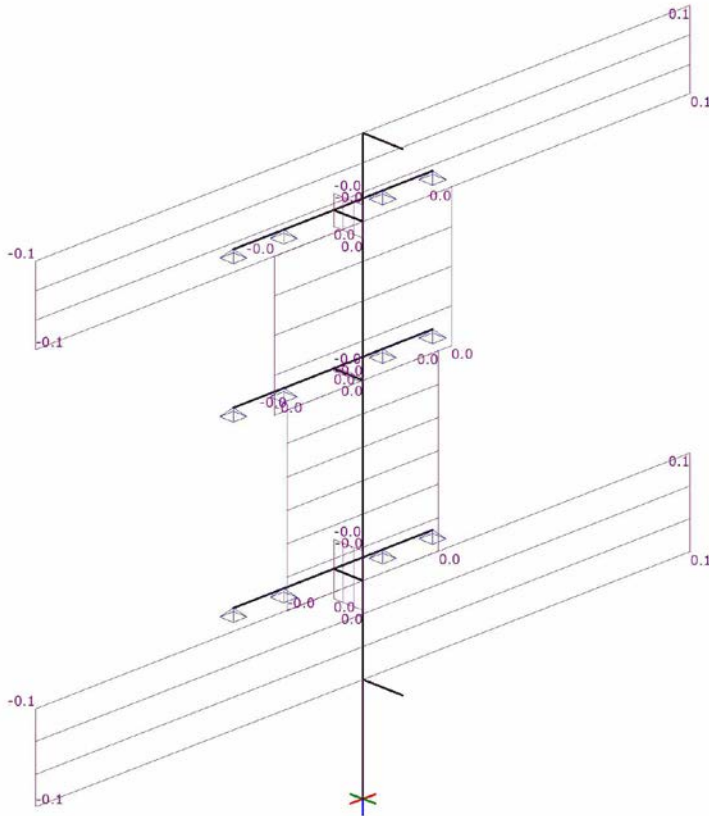
Persistent Loads Combinations



Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

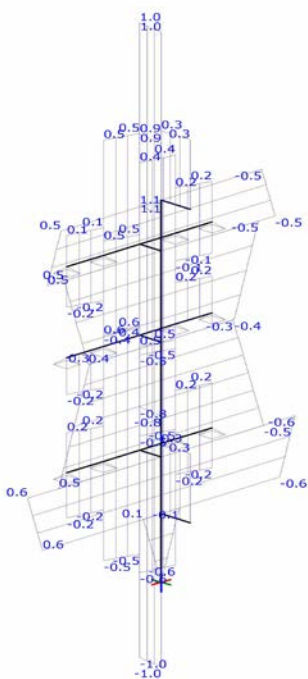
PIC. PE.C. MOMENT (MX) ENVELOPE

Persistent Loads Combinations



PIC. PE.C. DWARSKRACHT (VZ) ENVELOPE

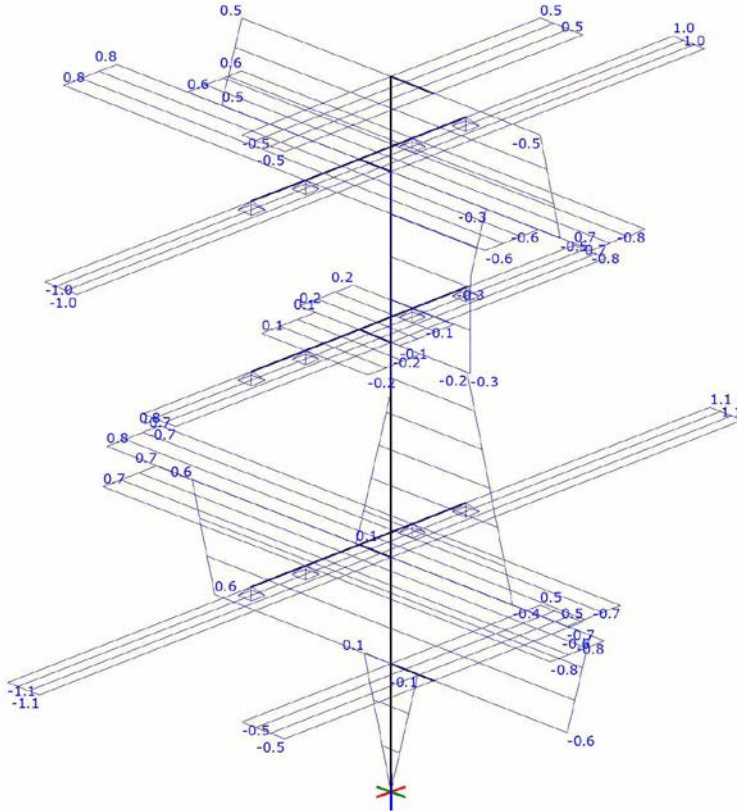
Persistent Loads Combinations



Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

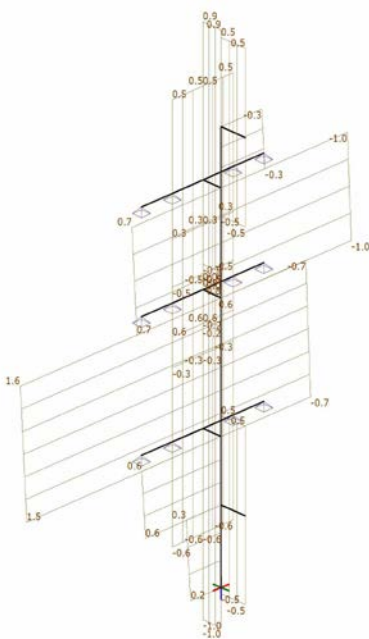
PIC. PE.C. DWARSKRACHT (VY) ENVELOPE

Persistent Loads Combinations



PIC. PE.C. NORMAALKRACHT (NX) ENVELOPE

Persistent Loads Combinations



Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

PE.C. MEMBER FORCES (MY, MZ)

Member	LComb	Value	Mb	Mmax	xMmax	Me	x-M0	x-M0	
S1	Pe.C.1	My	-0.06			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	Pe.C.2	My	-0.06			0.00	0.000	0.000	
		Mz	0.10			0.00	0.000	0.000	
	Pe.C.3	My	-0.06			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	Pe.C.4	My	-0.04			0.00	0.000	0.000	
		Mz	-0.10			0.00	0.000	0.000	
	Pe.C.5	My	-0.04			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	S2	Pe.C.1	My	0.00			-0.01	0.000	0.000
			Mz	0.00			0.00	0.000	0.000
		Pe.C.2	My	0.00			-0.01	0.000	0.000
			Mz	0.00			0.00	0.000	0.000
		Pe.C.3	My	0.00			0.04	0.000	0.000
Mz			0.00			0.00	0.000	0.000	
Pe.C.4		My	0.00			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
Pe.C.5		My	0.00			-0.05	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
S3		Pe.C.1	My	-0.01			0.01	0.092	0.000
			Mz	0.01			-0.01	0.125	0.000
		Pe.C.2	My	-0.01			0.01	0.083	0.000
			Mz	-0.05			0.11	0.078	0.000
		Pe.C.3	My	0.04			-0.07	0.094	0.000
	Mz		0.06			-0.06	0.125	0.000	
	Pe.C.4	My	0.00			0.00	0.115	0.000	
		Mz	0.07			-0.13	0.086	0.000	
	Pe.C.5	My	-0.05			0.09	0.094	0.000	
		Mz	-0.05			0.05	0.125	0.000	
	S4	Pe.C.1	My	0.01			-0.01	0.158	0.000
			Mz	-0.01			0.01	0.125	0.000
		Pe.C.2	My	0.01			-0.01	0.143	0.000
			Mz	-0.13			0.07	0.163	0.000
		Pe.C.3	My	-0.07			0.04	0.156	0.000
Mz			-0.06			0.06	0.125	0.000	
Pe.C.4		My	0.01			-0.01	0.169	0.000	
		Mz	0.11			-0.05	0.170	0.000	
Pe.C.5		My	0.09			-0.05	0.156	0.000	
		Mz	0.05			-0.05	0.125	0.000	
S5		Pe.C.1	My	-0.01			0.00	0.000	0.000
			Mz	0.00			0.00	0.000	0.000
		Pe.C.2	My	-0.01			0.00	0.000	0.000
			Mz	0.00			0.00	0.000	0.000
		Pe.C.3	My	0.04			0.00	0.000	0.000
	Mz		0.00			0.00	0.000	0.000	
	Pe.C.4	My	-0.01			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	Pe.C.5	My	-0.05			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	S6	Pe.C.1	My	0.00			0.02	0.000	0.000
			Mz	0.00			0.00	0.000	0.000
		Pe.C.2	My	0.00			0.01	0.000	0.000
			Mz	0.24			0.07	0.000	0.000
		Pe.C.3	My	0.00			-0.15	0.000	0.000
Mz			0.00			0.00	0.000	0.000	
Pe.C.4		My	0.00			0.01	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	

Pole 2						
Project name		KPN7754		Project number		
Part description		Pole 2		Structural engineer		
Client				Units		
				m, kN, kNm		

S7	Pe.C.5	Mz	-0.24			-0.07	0.000	0.000	
		My	0.00			0.17	0.000	0.000	
	Pe.C.1	Mz	0.00			0.00	0.000	0.000	
		My	0.00			-0.04	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
S8	Pe.C.2	My	0.00			-0.04	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	Pe.C.3	My	0.00			-0.05	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
		My	0.00			-0.03	0.000	0.000	
S9	Pe.C.4	Mz	0.00			0.00	0.000	0.000	
		My	0.00			-0.02	0.000	0.000	
	Pe.C.5	Mz	0.00			0.00	0.000	0.000	
		My	0.00			-0.02	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	S10	Pe.C.1	My	-0.04			0.07	0.093	0.000
			Mz	0.00			0.00	0.125	0.000
		Pe.C.2	My	-0.04			0.06	0.094	0.000
			Mz	0.02			-0.03	0.090	0.000
			My	-0.05			0.07	0.093	0.000
S11	Pe.C.3	Mz	0.00			0.00	0.125	0.000	
		My	-0.03			0.05	0.093	0.000	
	Pe.C.4	Mz	-0.01			0.02	0.076	0.000	
		My	-0.02			0.03	0.093	0.000	
		Mz	0.01			-0.01	0.125	0.000	
S12	Pe.C.1	My	0.07			-0.04	0.157	0.000	
		Mz	0.00			0.00	0.125	0.000	
	Pe.C.2	My	0.06			-0.04	0.157	0.000	
		Mz	0.02			-0.01	0.177	0.000	
		My	0.07			-0.05	0.157	0.000	
S13	Pe.C.3	Mz	0.00			0.00	0.125	0.000	
		My	0.04			-0.03	0.156	0.000	
	Pe.C.4	Mz	-0.03			0.02	0.161	0.000	
		My	0.03			-0.02	0.157	0.000	
		Mz	-0.01			0.01	0.125	0.000	
S14	Pe.C.1	My	-0.04			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	Pe.C.2	My	-0.04			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
		My	-0.05			0.00	0.000	0.000	
S15	Pe.C.3	Mz	0.00			0.00	0.000	0.000	
		My	-0.03			0.00	0.000	0.000	
	Pe.C.4	Mz	0.00			0.00	0.000	0.000	
		My	-0.03			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
S16	Pe.C.5	My	-0.02			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	Pe.C.1	My	0.00			0.13	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
		My	0.00			0.11	0.000	0.000	
S17	Pe.C.2	Mz	-0.06			0.05	0.080	0.000	
		My	0.00			0.14	0.000	0.000	
	Pe.C.3	Mz	0.00			0.00	0.000	0.000	
		My	0.00			0.08	0.000	0.000	
		Mz	0.06			-0.05	0.080	0.000	
S18	Pe.C.4	My	0.00			0.05	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
	Pe.C.5	My	0.00			0.00	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
		My	0.00			-0.01	0.000	0.000	
S19	Pe.C.1	Mz	0.00			0.00	0.000	0.000	
		My	0.00			-0.01	0.000	0.000	
	Pe.C.2	Mz	0.00			0.00	0.000	0.000	
		My	0.00			-0.01	0.000	0.000	
		Mz	0.00			0.00	0.000	0.000	
S20	Pe.C.3	My	0.00			0.00	0.000	0.000	
		Mz	0.00			-0.05	0.000	0.000	
	Mz	0.00			0.00	0.000	0.000		

Pole 2						
Project name		KPN7754		Project number		
Part description		Pole 2		Structural engineer		
Client				Units m, kN, kNm		

S13	Pe.C.4	My	0.00	-0.01	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.5	My	0.00	0.03	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.1	My	-0.01	0.02	0.092	0.000
		Mz	-0.02	0.02	0.125	0.000
	Pe.C.2	My	-0.01	0.01	0.097	0.000
		Mz	-0.07	0.13	0.089	0.000
	Pe.C.3	My	-0.05	0.08	0.094	0.000
		Mz	0.03	-0.03	0.125	0.000
S14	Pe.C.4	My	-0.01	0.01	0.087	0.000
		Mz	0.04	-0.10	0.077	0.000
	Pe.C.5	My	0.03	-0.06	0.094	0.000
		Mz	-0.05	0.05	0.125	0.000
	Pe.C.1	My	0.02	-0.01	0.158	0.000
		Mz	0.02	-0.02	0.125	0.000
	Pe.C.2	My	0.02	-0.01	0.162	0.000
		Mz	-0.10	0.04	0.175	0.000
	Pe.C.3	My	0.08	-0.05	0.156	0.000
		Mz	-0.03	0.03	0.125	0.000
S15	Pe.C.4	My	0.01	-0.01	0.151	0.000
		Mz	0.12	-0.07	0.162	0.000
	Pe.C.5	My	-0.06	0.03	0.156	0.000
		Mz	0.05	-0.05	0.125	0.000
	Pe.C.1	My	-0.01	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.2	My	-0.01	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.3	My	-0.05	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
S16	Pe.C.4	My	-0.01	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.5	My	0.03	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.1	My	0.00	0.03	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.2	My	0.00	0.02	0.000	0.000
		Mz	0.22	0.07	0.000	0.000
	Pe.C.3	My	0.00	0.15	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
S17	Pe.C.4	My	0.00	0.02	0.000	0.000
		Mz	-0.22	-0.07	0.000	0.000
	Pe.C.5	My	0.00	-0.11	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.1	My	-0.06	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.2	My	-0.06	0.00	0.000	0.000
		Mz	0.10	0.00	0.000	0.000
	Pe.C.3	My	-0.06	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
Pe.C.4	My	-0.04	0.00	0.000	0.000	
	Mz	-0.10	0.00	0.000	0.000	
S18	Pe.C.5	My	-0.04	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.1	My	0.00	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.2	My	0.00	-0.02	0.000	0.000
		Mz	0.00	0.00	0.000	0.000
	Pe.C.3	My	0.00	0.00	0.000	0.000
		Mz	0.00	0.00	0.000	0.000

Member	LComb	Value	Mb	Mmax	xMmax	Me	x-M0	x-M0
		Mz	0.00			0.00	0.000	0.000
	Pe.C.4	My	0.00			0.02	0.000	0.000
		Mz	-0.22			-0.07	0.000	0.000
	Pe.C.5	My	0.00			-0.11	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.1	My	-0.06			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.2	My	-0.06			0.00	0.000	0.000
		Mz	0.10			0.00	0.000	0.000
	Pe.C.3	My	-0.06			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.4	My	-0.04			0.00	0.000	0.000
		Mz	-0.10			0.00	0.000	0.000
	Pe.C.5	My	-0.04			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.1	My	0.00			0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.2	My	0.00			-0.02	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.3	My	0.00			0.00	0.000	0.000

Pole 2						
Project name	KPN7754		Project number			
Part description	Pole 2		Structural engineer			
Client			Units	m, kN, kNm		

S19	Pe.C.4	Mz	0.00			0.02	0.000	0.000	
		My	0.00			0.02	0.000	0.000	
	Pe.C.5	Mz	0.00			0.00	0.000	0.000	
		My	0.00			0.00	0.000	0.000	
	Pe.C.1	Mz	0.00			-0.02	0.000	0.000	
		My	0.00			0.00	0.000	0.000	
	S20	Pe.C.2	Mz	0.06			0.06	0.000	0.000
			My	-0.02			-0.25	0.000	0.000
		Pe.C.3	Mz	0.06			0.06	0.000	0.000
			My	0.00			0.00	0.000	0.000
Pe.C.4		Mz	0.08			0.31	0.000	0.000	
		My	0.02			0.25	0.000	0.000	
S21		Pe.C.5	Mz	0.04			0.04	0.000	0.000
			My	0.00			0.00	0.000	0.000
		Pe.C.1	Mz	0.02			-0.21	0.040	0.000
			My	0.00			0.00	0.000	0.000
	Pe.C.2	Mz	0.08			-0.06	0.446	0.000	
		My	-0.24			0.08	0.555	0.000	
	S22	Pe.C.3	Mz	0.07			-0.05	0.446	0.000
			My	0.00			0.00	0.000	0.000
		Pe.C.4	Mz	0.16			-0.08	0.463	0.000
			My	0.24			-0.08	0.555	0.000
Pe.C.5		Mz	0.05			-0.04	0.446	0.000	
		My	0.00			0.00	0.000	0.000	
S22		Pe.C.1	Mz	-0.04	0.00	0.596	-0.01	0.000	0.000
			My	0.00			0.00	0.000	0.000
		Pe.C.2	Mz	0.07			-0.09	0.260	0.000
			My	0.08			-0.17	0.211	0.000
	S22	Pe.C.3	Mz	0.06			-0.08	0.260	0.000
			My	0.00			0.00	0.000	0.000
		Pe.C.4	Mz	0.06			-0.04	0.308	0.000
			My	-0.08			0.17	0.211	0.000
		Pe.C.5	Mz	0.04			-0.06	0.260	0.000
			My	0.00			0.00	0.000	0.000
S22		Pe.C.1	Mz	0.05			-0.10	0.229	0.000
			My	0.00			0.00	0.000	0.000
		Pe.C.2	Mz	-0.06			-0.06	0.000	0.000
			My	-0.18			0.00	0.000	0.000
	Pe.C.3	Mz	-0.06			-0.06	0.000	0.000	
		My	0.00			0.00	0.000	0.000	
	Pe.C.4	Mz	0.12			-0.06	0.223	0.000	
		My	0.18			0.00	0.000	0.000	
	Pe.C.5	Mz	-0.04			-0.04	0.000	0.000	
		My	0.00			0.00	0.000	0.000	
Member	LComb	Value	Mb	Mmax	xMmax	Me	x-M0	x-M0	
-	-	Mz	-0.22			-0.04	0.000	0.000	
			kNm	kNm	m	kNm	m	m	

PE.C. MEMBER FORCES (NX, VY, VZ, MX)

Member	LComb	TC	Nmax	Value	Vb	Vmax	Ve	Mxb	Mxe
S1	Pe.C.1	-	0.00	Vz	0.32	0.32	0.32	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.2	-	0.00	Vz	0.29	0.29	0.29	0.00	0.00
				Vy	-0.48	-0.48	-0.48		
	Pe.C.3	C	-0.48	Vz	0.29	0.29	0.29	0.00	0.00
Pe.C.4	-	0.00	Vz	0.22	0.22	0.22	0.00	0.00	
			Vy	0.48	0.48	0.48			
Pe.C.5	T	0.48	Vz	0.22	0.22	0.22	0.00	0.00	
S2	Pe.C.1	-	0.00	Vy	0.00	0.00	0.00		
				Vz	-0.02	-0.04	-0.04	0.00	0.00

Pole 2							
Project name	KPN7754			Project number			
Part description	Pole 2			Structural engineer			
Client				Units	m, kN, kNm		

				Vy	0.00	0.00	0.00		
	Pe.C.2	-		0.00 Vz	-0.02	-0.04	-0.04	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.3	-		0.00 Vz	0.19	0.19	0.16	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.4	-		0.00 Vz	-0.01	-0.02	-0.02	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.5	-		0.00 Vz	-0.21	-0.23	-0.23	0.00	0.00
S3				Vy	0.00	0.00	0.00		
	Pe.C.1	-		0.00 Vz	0.08	0.08	0.06	0.00	0.00
				Vy	-0.09	-0.09	-0.09		
	Pe.C.2	T		0.57 Vz	0.09	0.09	0.07	0.00	0.00
				Vy	0.65	0.65	0.65		
	Pe.C.3	-		0.00 Vz	-0.46	-0.48	-0.48	0.00	0.00
				Vy	-0.52	-0.52	-0.52		
	Pe.C.4	C		-0.57 Vz	0.04	0.04	0.02	0.00	0.00
				Vy	-0.79	-0.79	-0.79		
	Pe.C.5	-		0.00 Vz	0.59	0.59	0.57	0.00	0.00
S4				Vy	0.38	0.38	0.38		
	Pe.C.1	-		0.00 Vz	-0.06	-0.08	-0.08	0.00	0.00
				Vy	0.09	0.09	0.09		
	Pe.C.2	C		-0.57 Vz	-0.03	-0.05	-0.05	0.00	0.00
				Vy	0.81	0.81	0.81		
	Pe.C.3	-		0.00 Vz	0.48	0.48	0.46	0.00	0.00
				Vy	0.52	0.52	0.52		
	Pe.C.4	T		0.57 Vz	-0.05	-0.07	-0.07	0.00	0.00
				Vy	-0.67	-0.67	-0.67		
	Pe.C.5	-		0.00 Vz	-0.57	-0.59	-0.59	0.00	0.00
S5				Vy	-0.38	-0.38	-0.38		
	Pe.C.1	-		0.00 Vz	0.04	0.04	0.02	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.2	-		0.00 Vz	0.03	0.03	0.01	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.3	-		0.00 Vz	-0.16	-0.19	-0.19	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.4	-		0.00 Vz	0.03	0.03	0.01	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.5	-		0.00 Vz	0.23	0.23	0.21	0.00	0.00
S6				Vy	0.00	0.00	0.00		
	Pe.C.1	C		-0.18 Vz	0.11	0.11	0.10	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.2	C		-0.16 Vz	0.10	0.10	0.09	0.01	0.01
				Vy	-1.13	-1.13	-1.13		
	Pe.C.3	C		-1.04 Vz	-0.97	-0.98	-0.98	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.4	C		-0.12 Vz	0.07	0.07	0.06	-0.01	-0.01
				Vy	1.13	1.13	1.13		
	Pe.C.5	T		0.76 Vz	1.14	1.14	1.13	0.00	0.00
S7				Vy	0.00	0.00	0.00		
	Pe.C.1	-		0.00 Vz	-0.15	-0.18	-0.18	0.00	0.00
				Vy	0.00	0.00	0.00		
Member	LComb	TC		Nmax Value	Vb	Vmax	Ve	Mxb	Mxe
S7	Pe.C.2	-		0.00 Vz	-0.14	-0.16	-0.16	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.3	-		0.00 Vz	-0.17	-0.19	-0.19	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.4	-		0.00 Vz	-0.10	-0.12	-0.12	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.5	-		0.00 Vz	-0.07	-0.08	-0.08	0.00	0.00
S8				Vy	0.00	0.00	0.00		
	Pe.C.1	-		0.00 Vz	0.45	0.45	0.42	0.00	0.00
				Vy	-0.04	-0.04	-0.04		
	Pe.C.2	C		-0.35 Vz	0.39	0.39	0.37	0.00	0.00
				Vy	-0.20	-0.20	-0.20		
	Pe.C.3	-		0.00 Vz	0.49	0.49	0.47	0.00	0.00

Pole 2

Project name		KPN7754		Project number			
Part description		Pole 2		Structural engineer			
Client				Units		m, kN, kNm	

			Vy	0.02	0.02	0.02		
	Pe.C.4	T	0.35 Vz	0.30	0.30	0.28	0.00	0.00
			Vy	0.14	0.14	0.14		
	Pe.C.5	-	0.00 Vz	0.20	0.20	0.19	0.00	0.00
S9			Vy	-0.08	-0.08	-0.08		
	Pe.C.1	-	0.00 Vz	-0.42	-0.45	-0.45	0.00	0.00
			Vy	0.04	0.04	0.04		
	Pe.C.2	T	0.35 Vz	-0.38	-0.40	-0.40	0.00	0.00
			Vy	-0.13	-0.13	-0.13		
	Pe.C.3	-	0.00 Vz	-0.47	-0.49	-0.49	0.00	0.00
			Vy	-0.02	-0.02	-0.02		
	Pe.C.4	C	-0.35 Vz	-0.28	-0.30	-0.30	0.00	0.00
			Vy	0.19	0.19	0.19		
	Pe.C.5	-	0.00 Vz	-0.19	-0.20	-0.20	0.00	0.00
S10			Vy	0.08	0.08	0.08		
	Pe.C.1	-	0.00 Vz	0.18	0.18	0.15	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.2	-	0.00 Vz	0.16	0.16	0.14	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.3	-	0.00 Vz	0.19	0.19	0.17	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.4	-	0.00 Vz	0.12	0.12	0.10	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.5	-	0.00 Vz	0.08	0.08	0.07	0.00	0.00
S11			Vy	0.00	0.00	0.00		
	Pe.C.1	C	-0.08 Vz	0.84	0.84	0.83	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.2	C	-0.07 Vz	0.75	0.75	0.73	0.00	0.00
			Vy	0.70	0.70	0.70		
	Pe.C.3	T	0.04 Vz	0.94	0.94	0.93	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.4	C	-0.05 Vz	0.56	0.56	0.55	0.00	0.00
			Vy	-0.70	-0.70	-0.70		
	Pe.C.5	C	-0.16 Vz	0.37	0.37	0.36	0.00	0.00
S12			Vy	0.00	0.00	0.00		
	Pe.C.1	-	0.00 Vz	-0.03	-0.05	-0.05	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.2	-	0.00 Vz	-0.02	-0.04	-0.04	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.3	-	0.00 Vz	-0.19	-0.21	-0.21	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.4	-	0.00 Vz	-0.02	-0.04	-0.04	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.5	-	0.00 Vz	0.15	0.15	0.13	0.00	0.00
S13			Vy	0.00	0.00	0.00		
	Pe.C.1	-	0.00 Vz	0.11	0.11	0.09	0.00	0.00
			Vy	0.13	0.13	0.13		
	Pe.C.2	T	0.51 Vz	0.09	0.09	0.07	0.00	0.00
			Vy	0.78	0.78	0.78		
	Pe.C.3	-	0.00 Vz	0.54	0.54	0.52	0.00	0.00
			Vy	-0.23	-0.23	-0.23		
	Pe.C.4	C	-0.51 Vz	0.08	0.08	0.07	0.00	0.00
			Vy	-0.58	-0.58	-0.58		
	Pe.C.5	-	0.00 Vz	-0.36	-0.38	-0.38	0.00	0.00
Member	LComb	TC	Nmax Value	Vb	Vmax	Ve	Mxb	Mxe
S14			Vy	0.43	0.43	0.43		
	Pe.C.1	-	0.00 Vz	-0.09	-0.11	-0.11	0.00	0.00
			Vy	-0.13	-0.13	-0.13		
	Pe.C.2	C	-0.51 Vz	-0.09	-0.11	-0.11	0.00	0.00
			Vy	0.55	0.55	0.55		
	Pe.C.3	-	0.00 Vz	-0.52	-0.54	-0.54	0.00	0.00
			Vy	0.23	0.23	0.23		
	Pe.C.4	T	0.51 Vz	-0.05	-0.07	-0.07	0.00	0.00
			Vy	-0.75	-0.75	-0.75		
	Pe.C.5	-	0.00 Vz	0.38	0.38	0.36	0.00	0.00

Pole 2								
Project name			KPN7754			Project number		
Part description			Pole 2			Structural engineer		
Client			Units			m, kN, kNm		

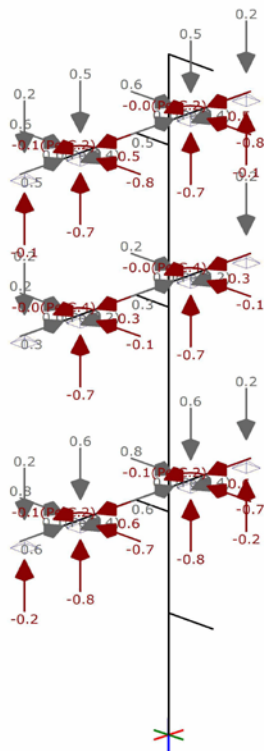
S15	Pe.C.1	-	Vy	-0.43	-0.43	-0.43	0.00	0.00	
			Vz	0.05	0.05	0.03			
	Pe.C.2	-	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.00	0.05	0.03			
	Pe.C.3	-	Vy	0.00	0.00	0.00	0.00	0.00	
Vz			0.00	0.21	0.19				
Pe.C.4	-	Vy	0.00	0.00	0.00	0.00	0.00		
		Vz	0.00	0.03	0.02				
S16	Pe.C.1	T	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.26	0.18	0.16			
	Pe.C.2	T	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.23	0.16	0.14			
	Pe.C.3	C	Vy	-1.01	-1.01	-1.01	0.00	0.00	
Vz			-0.46	1.03	1.02				
Pe.C.4	T	Vy	0.00	0.00	0.00	0.00	0.00		
		Vz	0.17	0.12	0.11				
S17	Pe.C.1	-	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.00	0.32	0.32			
	Pe.C.2	-	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.00	0.29	0.29			
	Pe.C.3	C	Vy	-0.48	-0.48	-0.48	0.00	0.00	
Vz			-0.48	0.29	0.29				
S18	Pe.C.1	T	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.28	0.00	0.00			
	Pe.C.2	T	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.25	0.00	-0.09			
	Pe.C.3	T	Vy	0.00	0.00	0.00	0.00	0.00	
Vz			0.25	0.00	0.00				
S19	Pe.C.1	T	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.63	0.00	-0.09			
	Pe.C.2	T	Vy	0.00	0.00	0.00	-0.10	-0.10	
			Vz	0.56	-0.57	-0.64			
	Pe.C.3	T	Vy	0.00	0.00	0.00	0.00	0.00	
Vz			0.56	0.00	0.00				
S20	Pe.C.1	T	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.42	0.57	0.64			
	Pe.C.2	T	Vy	0.00	0.00	0.00	0.00	0.00	
			Vz	0.42	0.00	0.00			
	Pe.C.3	T	Vy	0.00	0.00	0.00	0.00	0.00	
Vz			0.59	0.00	0.00				
S21	Pe.C.1	C	Vy	-0.57	-0.64	-0.64	0.00	0.00	
			Vz	0.53	-0.18	-0.18			
	Pe.C.2	C	Vy	0.00	0.00	0.00	-0.02	-0.02	
			Vz	1.59	0.49	0.35			
	Pe.C.3	T	Vy	-0.16	-0.16	-0.16	0.00	0.00	
Vz			0.42	0.00	0.00				
Member	LComb	TC	Nmax Value	Vb	Vmax	Ve	Mxb	Mxe	
			S20	Pe.C.4	T	0.39	Vz	-0.49	-0.49
S20	Pe.C.5	C	Vy	-0.12	-0.12	-0.12	0.00	0.00	
			Vz	-0.71	0.00	0.00			
S21	Pe.C.1	C	Vy	0.11	0.11	-0.03	0.00	0.00	
			Vz	-0.24	0.00	0.00			
Pe.C.2	C	Vy	-0.26	-0.26	-0.26	0.03	0.03		
		Vz	-0.21	-0.35	-0.47				

Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units
		m, kN, kNm

			Vy	-0.23	-0.23	-0.23		
	Pe.C.3	T	0.71 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-0.21	-0.21	-0.09		
	Pe.C.4	C	-0.16 Vz	0.35	0.47	0.47	-0.03	-0.03
			Vy	-0.17	-0.17	-0.17		
	Pe.C.5	C	-1.03 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-0.19	-0.31	-0.31		
S22	Pe.C.1	C	-0.35 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	0.00	0.00	0.00		
	Pe.C.2	C	-0.31 Vz	0.55	0.55	0.48	0.10	0.10
			Vy	0.00	0.00	0.00		
	Pe.C.3	C	-0.31 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	-0.55	-0.55	-0.48		
	Pe.C.4	C	-0.23 Vz	-0.55	-0.55	-0.48	-0.10	-0.10
			Vy	0.00	0.00	0.00		
	Pe.C.5	C	-0.23 Vz	0.00	0.00	0.00	0.00	0.00
			Vy	0.55	0.55	0.48		
-	-	-	kN -	kN	kN	kN	kNm	kNm

PIC. PE.C. OPLEGREACTIES ENVELOPE

Persistent Loads Combinations



PE.C. SUPPORT REACTIONS

LComb	Support	Node	X	Y	Z	Mx	My	Mz
Pe.C.1	O1	K5	0.00	0.00	0.02	0.00	0.00	0.00
Pe.C.1	O2	K6	0.00	0.09	-0.12	0.00	0.00	0.01
Pe.C.1	O3	K8	0.00	0.09	-0.12	0.00	0.00	-0.01
Pe.C.1	O4	K9	0.00	0.00	0.02	0.00	0.00	0.00
Pe.C.1	O5	K11	0.00	0.00	0.15	0.00	0.00	0.00
Pe.C.1	O6	K12	0.00	0.04	-0.62	0.00	0.00	0.00
Pe.C.1	O7	K14	0.00	0.04	-0.62	0.00	0.00	0.00

Pole 2								
Project name KPN7754			Project number					
Part description Pole 2			Structural engineer					
Client			Units			m, kN, kNm		
Pe.C.1	O8	K15	0.00	0.00	0.15	0.00	0.00	0.00
Pe.C.1	O9	K17	0.00	0.00	0.03	0.00	0.00	0.00
Pe.C.1	O10	K18	0.00	-0.13	-0.16	0.00	0.00	-0.02
Pe.C.1	O11	K20	0.00	-0.13	-0.16	0.00	0.00	0.02
Pe.C.1	O12	K21	0.00	0.00	0.03	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	-1.43			
	Sum Loads		0.00	0.00	1.43			
Pe.C.2	O1	K5	0.00	0.00	0.02	0.00	0.00	0.00
Pe.C.2	O2	K6	-0.57	-0.65	-0.13	0.00	0.00	-0.05
Pe.C.2	O3	K8	-0.57	0.81	-0.09	0.00	0.00	-0.07
Pe.C.2	O4	K9	0.00	0.00	0.01	0.00	0.00	0.00
Pe.C.2	O5	K11	0.00	0.00	0.14	0.00	0.00	0.00
Pe.C.2	O6	K12	0.35	0.20	-0.55	0.00	0.00	0.02
Pe.C.2	O7	K14	0.35	-0.13	-0.56	0.00	0.00	0.01
Pe.C.2	O8	K15	0.00	0.00	0.14	0.00	0.00	0.00
Pe.C.2	O9	K17	0.00	0.00	0.02	0.00	0.00	0.00
Pe.C.2	O10	K18	-0.51	-0.78	-0.14	0.00	0.00	-0.07
Pe.C.2	O11	K20	-0.51	0.55	-0.16	0.00	0.00	-0.04
Pe.C.2	O12	K21	0.00	0.00	0.03	0.00	0.00	0.00
	Sum Reactions		-1.45	0.00	-1.27			
	Sum Loads		1.45	0.00	1.27			
Pe.C.3	O1	K5	0.00	0.00	-0.19	0.00	0.00	0.00
Pe.C.3	O2	K6	0.00	0.52	0.63	0.00	0.00	0.06
Pe.C.3	O3	K8	0.00	0.52	0.63	0.00	0.00	-0.06
Pe.C.3	O4	K9	0.00	0.00	-0.19	0.00	0.00	0.00
Pe.C.3	O5	K11	0.00	0.00	0.17	0.00	0.00	0.00
Pe.C.3	O6	K12	0.00	-0.02	-0.68	0.00	0.00	0.00
Pe.C.3	O7	K14	0.00	-0.02	-0.68	0.00	0.00	0.00
Pe.C.3	O8	K15	0.00	0.00	0.17	0.00	0.00	0.00
Pe.C.3	O9	K17	0.00	0.00	0.19	0.00	0.00	0.00
Pe.C.3	O10	K18	0.00	0.23	-0.75	0.00	0.00	0.03
Pe.C.3	O11	K20	0.00	0.23	-0.75	0.00	0.00	-0.03
Pe.C.3	O12	K21	0.00	0.00	0.19	0.00	0.00	0.00
	Sum Reactions		0.00	1.45	-1.27			
	Sum Loads		0.00	-1.45	1.27			
Pe.C.4	O1	K5	0.00	0.00	0.01	0.00	0.00	0.00
Pe.C.4	O2	K6	0.57	0.79	-0.06	0.00	0.00	0.07
Pe.C.4	O3	K8	0.57	-0.67	-0.10	0.00	0.00	0.05
Pe.C.4	O4	K9	0.00	0.00	0.01	0.00	0.00	0.00
Pe.C.4	O5	K11	0.00	0.00	0.10	0.00	0.00	0.00
Pe.C.4	O6	K12	-0.35	-0.14	-0.42	0.00	0.00	-0.01
Pe.C.4	O7	K14	-0.35	0.19	-0.41	0.00	0.00	-0.02
Pe.C.4	O8	K15	0.00	0.00	0.10	0.00	0.00	0.00
Pe.C.4	O9	K17	0.00	0.00	0.02	0.00	0.00	0.00
Pe.C.4	O10	K18	0.51	0.58	-0.12	0.00	0.00	0.04
Pe.C.4	O11	K20	0.51	-0.75	-0.10	0.00	0.00	0.07
Pe.C.4	O12	K21	0.00	0.00	0.02	0.00	0.00	0.00
	Sum Reactions		1.45	0.00	-0.95			
	Sum Loads		-1.45	0.00	0.95			
Pe.C.5	O1	K5	0.00	0.00	0.21	0.00	0.00	0.00
Pe.C.5	O2	K6	0.00	-0.38	-0.81	0.00	0.00	-0.05
Pe.C.5	O3	K8	0.00	-0.38	-0.81	0.00	0.00	0.05
Pe.C.5	O4	K9	0.00	0.00	0.21	0.00	0.00	0.00
Pe.C.5	O5	K11	0.00	0.00	0.07	0.00	0.00	0.00
Pe.C.5	O6	K12	0.00	0.08	-0.28	0.00	0.00	0.01
Pe.C.5	O7	K14	0.00	0.08	-0.28	0.00	0.00	-0.01
Pe.C.5	O8	K15	0.00	0.00	0.07	0.00	0.00	0.00
Pe.C.5	O9	K17	0.00	0.00	-0.15	0.00	0.00	0.00
Pe.C.5	O10	K18	0.00	-0.43	0.49	0.00	0.00	-0.05
Pe.C.5	O11	K20	0.00	-0.43	0.49	0.00	0.00	0.05
Pe.C.5	O12	K21	0.00	0.00	-0.15	0.00	0.00	0.00
	Sum Reactions		0.00	-1.45	-0.95			
LComb	Support	Node	X	Y	Z	Mx	My	Mz
	Sum Loads		0.00	1.45	0.95			

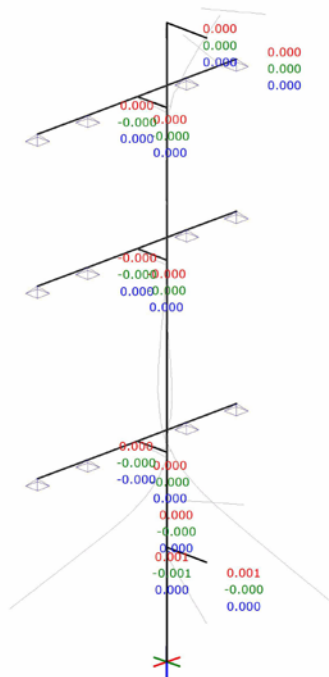
Pole 2		
Project name	KPN7754	Project number
Part description	Pole 2	Structural engineer
Client		Units m, kN, kNm

- - - kN kN kN kNm kNm kNm

L.C. SUPPORT REACTIONS

L.C.	Support	Node	X	Y	Z	Mx	My	Mz
B.G.1	O1	K5	0.00	0.00	0.00	0.00	0.00	0.00
B.G.1	O2	K6	0.00	0.01	-0.06	0.00	0.00	0.00
B.G.1	O3	K8	0.00	0.01	-0.06	0.00	0.00	0.00
B.G.1	O4	K9	0.00	0.00	0.00	0.00	0.00	0.00
B.G.1	O5	K11	0.00	0.00	0.01	0.00	0.00	0.00
B.G.1	O6	K12	0.00	0.00	-0.09	0.00	0.00	0.00
B.G.1	O7	K14	0.00	0.00	-0.09	0.00	0.00	0.00
B.G.1	O8	K15	0.00	0.00	0.01	0.00	0.00	0.00
B.G.1	O9	K17	0.00	0.00	0.01	0.00	0.00	0.00
B.G.1	O10	K18	0.00	-0.01	-0.07	0.00	0.00	0.00
B.G.1	O11	K20	0.00	-0.01	-0.07	0.00	0.00	0.00
B.G.1	O12	K21	0.00	0.00	0.01	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	-0.40			
	Sum Loads		0.00	0.00	0.40			
B.G.2	O1	K5	0.00	0.00	0.01	0.00	0.00	0.00
B.G.2	O2	K6	0.00	0.06	-0.02	0.00	0.00	0.01
B.G.2	O3	K8	0.00	0.06	-0.02	0.00	0.00	-0.01
B.G.2	O4	K9	0.00	0.00	0.01	0.00	0.00	0.00
B.G.2	O5	K11	0.00	0.00	0.10	0.00	0.00	0.00
B.G.2	O6	K12	0.00	0.03	-0.37	0.00	0.00	0.00
B.G.2	O7	K14	0.00	0.03	-0.37	0.00	0.00	0.00
B.G.2	O8	K15	0.00	0.00	0.10	0.00	0.00	0.00
B.G.2	O9	K17	0.00	0.00	0.01	0.00	0.00	0.00
B.G.2	O10	K18	0.00	-0.08	-0.05	0.00	0.00	-0.01
B.G.2	O11	K20	0.00	-0.08	-0.05	0.00	0.00	0.01
B.G.2	O12	K21	0.00	0.00	0.01	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	-0.66			
	Sum Loads		0.00	0.00	0.66			
B.G.3	O1	K5	0.00	0.00	0.00	0.00	0.00	0.00
B.G.3	O2	K6	-0.45	-0.58	-0.02	0.00	0.00	-0.05
B.G.3	O3	K8	-0.45	0.58	0.02	0.00	0.00	-0.05
B.G.3	O4	K9	0.00	0.00	0.00	0.00	0.00	0.00
B.G.3	O5	K11	0.00	0.00	0.00	0.00	0.00	0.00
B.G.3	O6	K12	0.27	0.13	0.00	0.00	0.00	0.01
B.G.3	O7	K14	0.27	-0.13	0.00	0.00	0.00	0.01
B.G.3	O8	K15	0.00	0.00	0.00	0.00	0.00	0.00
B.G.3	O9	K17	0.00	0.00	0.00	0.00	0.00	0.00
B.G.3	O10	K18	-0.40	-0.53	0.01	0.00	0.00	-0.04
B.G.3	O11	K20	-0.40	0.53	-0.01	0.00	0.00	-0.04
B.G.3	O12	K21	0.00	0.00	0.00	0.00	0.00	0.00
	Sum Reactions		-1.14	0.00	0.00			
	Sum Loads		1.14	0.00	0.00			
B.G.4	O1	K5	0.00	0.00	-0.16	0.00	0.00	0.00
B.G.4	O2	K6	0.00	0.34	0.58	0.00	0.00	0.04
B.G.4	O3	K8	0.00	0.34	0.58	0.00	0.00	-0.04
B.G.4	O4	K9	0.00	0.00	-0.16	0.00	0.00	0.00
B.G.4	O5	K11	0.00	0.00	0.03	0.00	0.00	0.00
B.G.4	O6	K12	0.00	-0.04	-0.10	0.00	0.00	-0.01
B.G.4	O7	K14	0.00	-0.04	-0.10	0.00	0.00	0.01
B.G.4	O8	K15	0.00	0.00	0.03	0.00	0.00	0.00
B.G.4	O9	K17	0.00	0.00	0.13	0.00	0.00	0.00
B.G.4	O10	K18	0.00	0.27	-0.47	0.00	0.00	0.03
B.G.4	O11	K20	0.00	0.27	-0.47	0.00	0.00	-0.03
B.G.4	O12	K21	0.00	0.00	0.13	0.00	0.00	0.00
	Sum Reactions		0.00	1.14	0.00			
	Sum Loads		0.00	-1.14	0.00			
-	-	-	kN	kN	kN	kNm	kNm	kNm

Pole 2			
Project name	KPN7754	Project number	
Part description	Pole 2	Structural engineer	
Client		Units	m, kN, kNm



CH.C. NODAL DISPLACEMENTS

Node	LComb	X	Y	Z	Xr	Yr	Zr
K1	Ch.C.(w1)	0.0000	-0.0003	0.0000	-0.474e-03	-0.000e-03	-0.000e-03
	Ch.C.1	0.0010	-0.0003	0.0000	-0.474e-03	1.226e-03	0.795e-03
	Ch.C.2	0.0000	-0.0009	0.0000	-1.280e-03	-0.000e-03	-0.000e-03
K2	Ch.C.(w1)	0.0000	-0.0001	0.0001	-0.478e-03	-0.000e-03	-0.000e-03
	Ch.C.1	0.0006	-0.0001	0.0001	-0.478e-03	1.190e-03	0.801e-03
	Ch.C.2	0.0000	-0.0003	0.0003	-1.249e-03	-0.000e-03	-0.000e-03
K3	Ch.C.(w1)	0.0000	-0.0001	0.0000	-0.474e-03	-0.000e-03	-0.000e-03
	Ch.C.1	0.0004	-0.0001	0.0000	-0.474e-03	1.190e-03	0.795e-03
	Ch.C.2	0.0000	-0.0003	0.0000	-1.244e-03	-0.000e-03	-0.000e-03
K4	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.165e-03	-0.000e-03	-0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.165e-03	0.605e-03	0.243e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.350e-03	-0.000e-03	-0.000e-03
K5	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.175e-03	0.002e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.175e-03	0.002e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.267e-03	-0.014e-03	0.000e-03
K6	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.175e-03	-0.004e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.175e-03	-0.005e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.267e-03	0.028e-03	0.000e-03
K7	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.175e-03	-0.000e-03	-0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.175e-03	0.002e-03	0.059e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.267e-03	-0.000e-03	-0.000e-03
K8	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.175e-03	0.004e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.175e-03	0.004e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.267e-03	-0.028e-03	0.000e-03
K9	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.175e-03	-0.002e-03	0.000e-03
Node	LComb	X	Y	Z	Xr	Yr	Zr
	Ch.C.1	0.0000	0.0000	0.0000	-0.175e-03	-0.002e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.267e-03	0.014e-03	0.000e-03

Pole 2							
Project name	KPN7754			Project number			
Part description	Pole 2			Structural engineer			
Client				Units	m, kN, kNm		

K10	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.059e-03	0.000e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.059e-03	-0.048e-03	-0.018e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.072e-03	0.000e-03	0.000e-03
K11	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.137e-03	0.014e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.137e-03	0.014e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.167e-03	0.017e-03	0.000e-03
K12	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.137e-03	-0.028e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.137e-03	-0.028e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.167e-03	-0.034e-03	0.000e-03
K13	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.137e-03	0.000e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.137e-03	-0.000e-03	-0.013e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.167e-03	0.000e-03	0.000e-03
K14	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.137e-03	0.028e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.137e-03	0.028e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.167e-03	0.034e-03	0.000e-03
K15	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.137e-03	-0.014e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.137e-03	-0.014e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.167e-03	-0.017e-03	0.000e-03
K16	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.147e-03	-0.000e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.147e-03	-0.336e-03	0.223e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.064e-03	-0.000e-03	-0.000e-03
K17	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.163e-03	0.003e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.163e-03	0.003e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.156e-03	0.016e-03	0.000e-03
K18	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.163e-03	-0.006e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.163e-03	-0.006e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.156e-03	-0.033e-03	0.000e-03
K19	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.163e-03	-0.000e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.163e-03	-0.001e-03	0.054e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.156e-03	-0.000e-03	-0.000e-03
K20	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.163e-03	0.006e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.163e-03	0.007e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.156e-03	0.033e-03	0.000e-03
K21	Ch.C.(w1)	0.0000	0.0000	0.0000	-0.163e-03	-0.003e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	-0.163e-03	-0.003e-03	0.000e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.156e-03	-0.016e-03	0.000e-03
K22	Ch.C.(w1)	0.0000	0.0001	0.0001	-0.428e-03	-0.000e-03	0.000e-03
	Ch.C.1	0.0004	0.0001	0.0001	-0.428e-03	-0.673e-03	0.723e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.007e-03	0.000e-03	-0.000e-03
K23	Ch.C.(w1)	0.0000	0.0001	0.0000	-0.423e-03	-0.000e-03	0.000e-03
	Ch.C.1	0.0002	0.0001	0.0000	-0.423e-03	-0.673e-03	0.717e-03
	Ch.C.2	0.0000	0.0000	0.0000	-0.002e-03	0.000e-03	-0.000e-03
-	-	m	m	m	rad	rad	rad

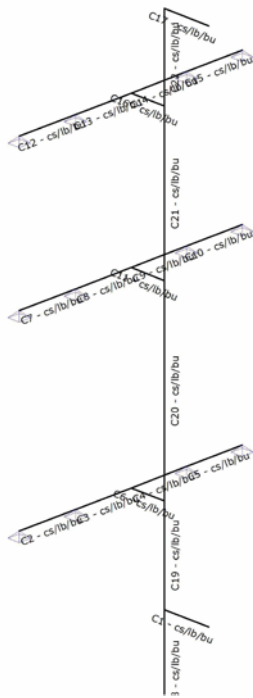
CH.C. EXTREME DEFLECTIONS

Member	LComb	Node Begin			Member				Node End		
					Z' dist	Z'	Y' dist	Y'			
S2	Ch.C.2	0,000	0,000	0,000	0.144	0.0000	0.000	0.0000	0,000	0,000	0,000
S3	Ch.C.1	0,000	0,000	0,000	0.000	0.0000	0.164	0.0000	0,000	0,000	0,000
S3	Ch.C.2	0,000	0,000	0,000	0.173	0.0000	0.000	0.0000	0,000	0,000	0,000
S4	Ch.C.1	0,000	0,000	0,000	0.000	0.0000	0.081	0.0000	0,000	0,000	0,000
S4	Ch.C.2	0,000	0,000	0,000	0.077	0.0000	0.000	0.0000	0,000	0,000	0,000
S5	Ch.C.2	0,000	0,000	0,000	0.106	0.0000	0.000	0.0000	0,000	0,000	0,000
S6	Ch.C.1	0,000	0,000	0,000	0.000	0.0000	0.068	0.0000	0,000	0,000	0,000
S6	Ch.C.2	0,000	0,000	0,000	0.087	0.0000	0.000	0.0000	0,000	0,000	0,000
S7	Ch.C.2	0,000	0,000	0,000	0.145	0.0000	0.000	0.0000	0,000	0,000	0,000
S8	Ch.C.2	0,000	0,000	0,000	0.172	0.0000	0.000	0.0000	0,000	0,000	0,000
S9	Ch.C.2	0,000	0,000	0,000	0.078	0.0000	0.000	0.0000	0,000	0,000	0,000

Pole 2												
Project name	KPN7754					Project number						
Part description	Pole 2					Structural engineer						
Client						Units			m, kN, kNm			

Member	LComb	Node Begin			Member				Node End		
					Z' dist	Z'	Y' dist	Y'			
S10	Ch.C.2	0,000	0,000	0,000	0.105	0.0000	0.000	0.0000	0,000	0,000	0,000
S11	Ch.C.2	0,000	0,000	0,000	0.087	0.0000	0.000	0.0000	0,000	0,000	0,000
S12	Ch.C.2	0,000	0,000	0,000	0.145	0.0000	0.000	0.0000	0,000	0,000	0,000
S13	Ch.C.1	0,000	0,000	0,000	0.000	0.0000	0.170	0.0000	0,000	0,000	0,000
S13	Ch.C.2	0,000	0,000	0,000	0.172	0.0000	0.000	0.0000	0,000	0,000	0,000
S14	Ch.C.1	0,000	0,000	0,000	0.000	0.0000	0.088	0.0000	0,000	0,000	0,000
S14	Ch.C.2	0,000	0,000	0,000	0.078	0.0000	0.000	0.0000	0,000	0,000	0,000
S15	Ch.C.2	0,000	0,000	0,000	0.105	0.0000	0.000	0.0000	0,000	0,000	0,000
S16	Ch.C.1	0,000	0,000	0,000	0.000	0.0000	0.069	0.0000	0,000	0,000	0,000
S16	Ch.C.2	0,000	0,000	0,000	0.087	0.0000	0.000	0.0000	0,000	0,000	0,000
S18	Ch.C.1	0,001	0,000	0,000	0.290	0.0000	0.000	0.0000	0,000	0,000	0,000
S18	Ch.C.2	0,000	-0,001	0,000	0.000	0.0000	0.290	0.0000	0,000	0,000	0,000
S19	Ch.C.1	0,000	0,000	0,000	0.216	0.0000	0.190	0.0000	0,000	0,000	0,000
S19	Ch.C.2	0,000	0,000	0,000	0.000	0.0000	0.208	0.0000	0,000	0,000	0,000
S20	Ch.C.1	0,000	0,000	0,000	0.273	-0.0001	0.216	0.0000	0,000	0,000	0,000
S20	Ch.C.2	0,000	0,000	0,000	0.000	0.0000	0.227	0.0000	0,000	0,000	0,000
S21	Ch.C.1	0,000	0,000	0,000	0.411	0.0000	0.442	0.0000	0,000	0,000	0,000
S21	Ch.C.2	0,000	0,000	0,000	0.000	0.0000	0.125	0.0000	0,000	0,000	0,000
S22	Ch.C.1	0,000	0,000	0,000	0.143	0.0000	0.170	0.0000	0,000	0,000	0,000
S22	Ch.C.2	0,000	0,000	0,000	0.000	0.0000	0.097	0.0000	0,000	0,000	0,000
-	-	m	m	m	m	m	m	m	m	m	m

PIC. STAALCONTROLE



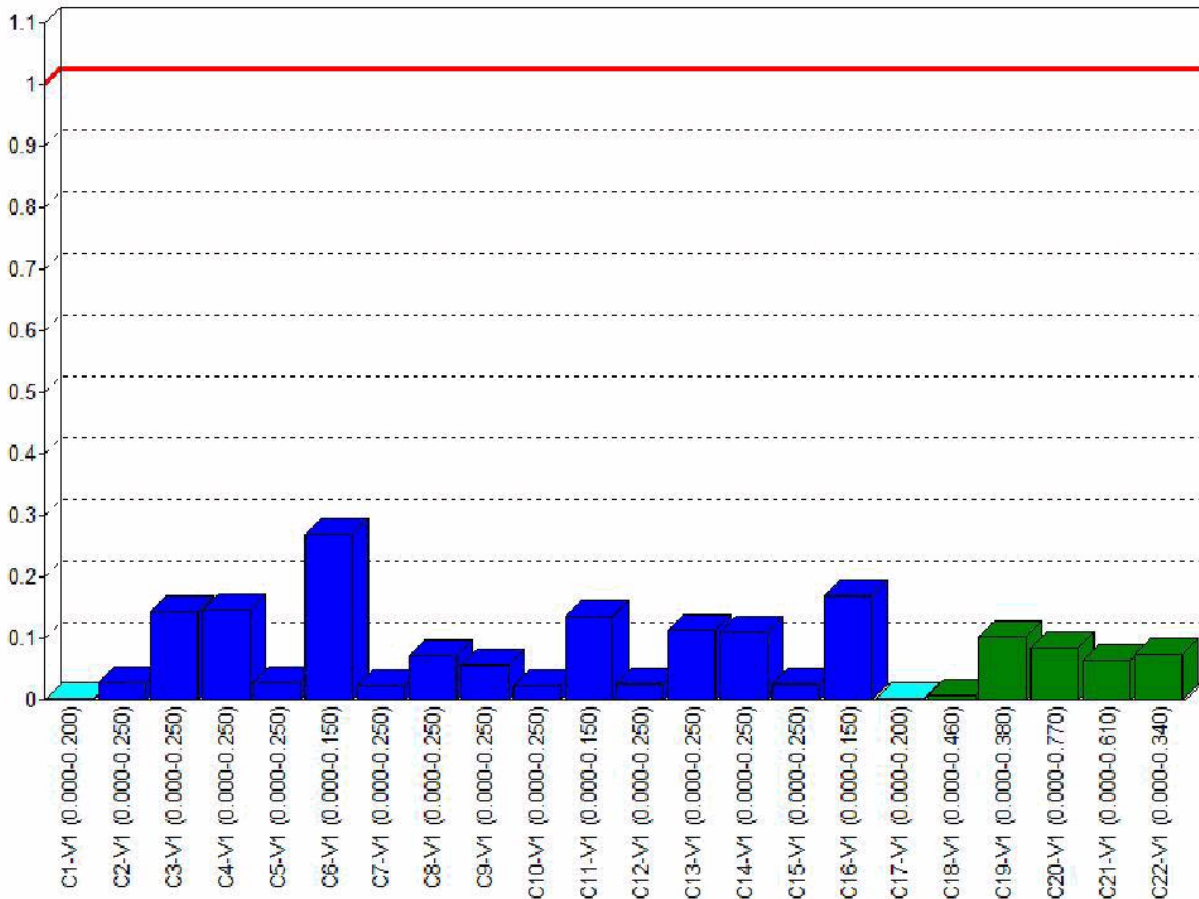
SM DEF.

Structural member	Member (s)
C1	S1
C2	S2
C3	S3
C4	S4
C5	S5

Pole 2			
Project name	KPN7754	Project number	
Part description	Pole 2	Structural engineer	
Client		Units	m, kN, kNm

C6	S6
C7	S7
C8	S8
C9	S9
C10	S10
C11	S11
C12	S12
C13	S13
C14	S14
C15	S15
C16	S16
C17	S17
C18	S18
C19	S19
C20	S20
C21	S21
C22	S22

PIC. STEEL UC CHART



UNITY CHECK NEN-EN1993-1-1:2016/NB:2016

Field	Check Type	Combination	Formula	UC max
C1-V1 (0.000-0.200)	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,00
C1-V1 (0.000-0.200)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
C1-V1 (0.000-0.200)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
C1-V1 (0.000-0.200)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.61&6.62)	0,00

Pole 2

Project name	KPN7754	Project number	
Part description	Pole 2	Structural engineer	
Client		Units	m, kN, kNm

C1-V1 (0.000-0.200)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C2-V1 (0.000-0.250)	Cross	Pe.C.5	NEN-EN1993-1-1(6.42)	0,03
Field	Check Type	Combination	Formula	UC max
C2-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C3-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,07
C3-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
C3-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
C3-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,14
C3-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C4-V1 (0.000-0.250)	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,07
C4-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C4-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C4-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,15
C4-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C5-V1 (0.000-0.250)	Cross	Pe.C.5	NEN-EN1993-1-1(6.42)	0,03
C5-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C6-V1 (0.000-0.150)	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,12
C6-V1 (0.000-0.150)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C6-V1 (0.000-0.150)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C6-V1 (0.000-0.150)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,27
C6-V1 (0.000-0.150)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C7-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,02
C7-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C8-V1 (0.000-0.250)	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,05
C8-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C8-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C8-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,07
C8-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C9-V1 (0.000-0.250)	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,04
C9-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
C9-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
C9-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,06
C9-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C10-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,02
C10-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C11-V1 (0.000-0.150)	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,08
C11-V1 (0.000-0.150)	Stab.	Pe.C.1	NEN-EN1993-1-1(6.46)	0,00
C11-V1 (0.000-0.150)	Stab.	Pe.C.1	NEN-EN1993-1-1(6.46)	0,00
C11-V1 (0.000-0.150)	Stab.	Pe.C.1	NEN-EN1993-1-1(6.61&6.62)	0,14
C11-V1 (0.000-0.150)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C12-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,03
C12-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C13-V1 (0.000-0.250)	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,07
C13-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
C13-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
C13-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,11
C13-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C14-V1 (0.000-0.250)	Cross	Pe.C.4	NEN-EN1993-1-1(6.42)	0,07
C14-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C14-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C14-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,11
C14-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C15-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,03
C15-V1 (0.000-0.250)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00

Pole 2

Project name KPN7754		Project number	
Part description Pole 2		Structural engineer	
Client		Units	m, kN, kNm

C16-V1 (0.000-0.150)	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,11
C16-V1 (0.000-0.150)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
C16-V1 (0.000-0.150)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
C16-V1 (0.000-0.150)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.61&6.62)	0,17
C16-V1 (0.000-0.150)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C17-V1 (0.000-0.200)	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,00

Field	Check Type	Combination	Formula	UC max
C17-V1 (0.000-0.200)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
C17-V1 (0.000-0.200)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
C17-V1 (0.000-0.200)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.61&6.62)	0,00
C17-V1 (0.000-0.200)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C18-V1 (0.000-0.460)	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,01
C18-V1 (0.000-0.460)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C19-V1 (0.000-0.380)	Cross	Pe.C.3	NEN-EN1993-1-1(NB.33)	0,10
C19-V1 (0.000-0.380)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C20-V1 (0.000-0.770)	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,09
C20-V1 (0.000-0.770)	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00
C20-V1 (0.000-0.770)	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00
C20-V1 (0.000-0.770)	Stab.	Pe.C.5	NEN-EN1993-1-1(6.61&6.62)	0,01
C20-V1 (0.000-0.770)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C21-V1 (0.000-0.610)	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,06
C21-V1 (0.000-0.610)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C21-V1 (0.000-0.610)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C21-V1 (0.000-0.610)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,03
C21-V1 (0.000-0.610)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C22-V1 (0.000-0.340)	Cross	Pe.C.5	NEN-EN1993-1-1(NB.33)	0,07
C22-V1 (0.000-0.340)	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00
C22-V1 (0.000-0.340)	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00
C22-V1 (0.000-0.340)	Stab.	Pe.C.5	NEN-EN1993-1-1(6.61&6.62)	0,05
C22-V1 (0.000-0.340)	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00

EXTREME UNITY CHECK NEN-EN1993-1-1:2016/NB:2016

Field	Check Type	Combination	Formula	UC max
C1-V1 (0.000-0.200)	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,00
C2-V1 (0.000-0.250)	Cross	Pe.C.5	NEN-EN1993-1-1(6.42)	0,03
C3-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,14
C4-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,15
C5-V1 (0.000-0.250)	Cross	Pe.C.5	NEN-EN1993-1-1(6.42)	0,03
C6-V1 (0.000-0.150)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,27
C7-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,02
C8-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,07
C9-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,06
C10-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,02
C11-V1 (0.000-0.150)	Stab.	Pe.C.1	NEN-EN1993-1-1(6.61&6.62)	0,14
C12-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,03
C13-V1 (0.000-0.250)	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,11
C14-V1 (0.000-0.250)	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,11
C15-V1 (0.000-0.250)	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,03
C16-V1 (0.000-0.150)	Stab.	Pe.C.3	NEN-EN1993-1-1(6.61&6.62)	0,17
C17-V1 (0.000-0.200)	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,00
C18-V1 (0.000-0.460)	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,01
C19-V1 (0.000-0.380)	Cross	Pe.C.3	NEN-EN1993-1-1(NB.33)	0,10
C20-V1 (0.000-0.770)	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,09
C21-V1 (0.000-0.610)	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,06
C22-V1 (0.000-0.340)	Cross	Pe.C.5	NEN-EN1993-1-1(NB.33)	0,07

Pole 2			
Project name	KPN7754	Project number	
Part description	Pole 2	Structural engineer	
Client		Units	m, kN, kNm

UNITY CHECK FOR STRUCTURAL MEMBERS NEN-EN1993-1-1:2016/NB:2016

Label	Check Type	Combination	Formula	UC max
C1	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,00
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.61&6.62)	0,00
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C2	Cross	Pe.C.5	NEN-EN1993-1-1(6.42)	0,03
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C3	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,07
	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
Label	Check Type	Combination	Formula	UC max
C4	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,14
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,07
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
C5	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,15
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.5	NEN-EN1993-1-1(6.42)	0,03
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C6	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,12
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,27
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C7	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,02
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,05
C8	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,07
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,04
C9	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,06
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,02
C10	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,08
	Stab.	Pe.C.1	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.1	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.1	NEN-EN1993-1-1(6.61&6.62)	0,14
C11	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,03
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,07
	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
C12	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.4	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,11
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.4	NEN-EN1993-1-1(6.42)	0,07
C13	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,11
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C14	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,11
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,03
C15	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.2	NEN-EN1993-1-1(6.42)	0,11
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.61&6.62)	0,17
C16	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00

Pole 2				
Project name	KPN7754		Project number	
Part description	Pole 2		Structural engineer	
Client			Units	m, kN, kNm

C17	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,00
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.3	NEN-EN1993-1-1(6.61&6.62)	0,00
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C18	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,01
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C19	Cross	Pe.C.3	NEN-EN1993-1-1(NB.33)	0,10
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
C20	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,09
	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.5	NEN-EN1993-1-1(6.61&6.62)	0,01
C21	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,06
C22	Stab.	Pe.C.2	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,03
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Cross	Pe.C.5	NEN-EN1993-1-1(NB.33)	0,07
	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00
C22	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00
	Stab.	Pe.C.5	NEN-EN1993-1-1(6.61&6.62)	0,05
	Lat.Buck.	Pe.C.5	NEN-EN1993-1-1(6.54)	0,00
	Stab.	Pe.C.5	NEN-EN1993-1-1(6.46)	0,00

EXTREME UNITY CHECK FOR STRUCTURAL MEMBERS NEN-EN1993-1-1:2016/NB:2016

Label	Check Type	Combination	Formula	UC max
C1	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,00
C2	Cross	Pe.C.5	NEN-EN1993-1-1(6.42)	0,03
C3	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,14
C4	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,15
C5	Cross	Pe.C.5	NEN-EN1993-1-1(6.42)	0,03
C6	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,27
C7	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,02
C8	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,07
C9	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,06
C10	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,02
C11	Stab.	Pe.C.1	NEN-EN1993-1-1(6.61&6.62)	0,14
C12	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,03
C13	Stab.	Pe.C.4	NEN-EN1993-1-1(6.61&6.62)	0,11
C14	Stab.	Pe.C.2	NEN-EN1993-1-1(6.61&6.62)	0,11
C15	Cross	Pe.C.3	NEN-EN1993-1-1(6.42)	0,03
C16	Stab.	Pe.C.3	NEN-EN1993-1-1(6.61&6.62)	0,17
C17	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,00
C18	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,01
C19	Cross	Pe.C.3	NEN-EN1993-1-1(NB.33)	0,10
C20	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,09
C21	Cross	Pe.C.2	NEN-EN1993-1-1(NB.33)	0,06
C22	Cross	Pe.C.5	NEN-EN1993-1-1(NB.33)	0,07

1. Drsn. M+V+T (NEN-EN1992-1-1:2015\NB:2016)

INGEVOERDE GEGEVENS VAN DE DOORSNEDE

PROFIELGEGEVENS: R1000X200

Hoogte	h	200 mm	Breedte	b	1000 mm
Betonkwaliteit		C20/25 -		f;cd	13.3 N/mm ²
				f;ctm	2.21 N/mm ²
Staalkwaliteit		FeB400HWL -		f;yd	348 N/mm ²

DEKKING

		Boven	Onder		
-					
Constructieklasse		S1	S1 -		
Milieuklasse		XC1	XC1 -		
Nabewerkt		Nee	Nee -		
Meetnauwkeurigheid		Normaal	Normaal -		
Minimale dekking	Cmin	15	15 mm		
Dekkingsafwijking	Delta Cafw	5	5 mm		
Nominale dekking	Cnom	20	20 mm		
Toegepaste dekking	Ctoe	20	20 mm		

KRACHTEN

Veldmoment	M'Ed	4.05 kNm	Dwarskracht	V'Ed	27.18 kN
Moment (BGT)	MRep	0.00 kNm			

WAPENINGSDetails

		Boven		Onder	
Basis	A;s	R6-150 -		Basis	A;s R6-150 -
Extra	A;s	- -		Extra	A;s - -
Toegepaste wap.	As,toe	188 mm ²		Toegepaste wap.	As,toe 188 mm ²

WAPENINGSVERDELING

Hoek dwarskrachtwap.		90 °	Hoek drukdiagonaal		45 °
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		Boven		Onder	
Toegepaste wap.	A;sv	R6-150 -		Toegepaste wap.	A;sv R6-150 -
	As,toe	188 mm ²			As,toe 188 mm ²

LANGSWAPENING

Benodigde wap.	As,ben	66 mm ²	Toegepaste wap.	As,toe	188 mm ²
Verhouding wap.	w0	0.11 %	Nuttige hoogte	d	177 mm
Momentcapaciteit	Mu	11.44 kNm	Hoogte drukzone	Xu	7 mm
Xu/d	kx	0.013 -			

VERDEELWAPENING

Toegepaste wap.	Asv;toe	188 mm ²			
Dwarskracht weerstand	V;rdc	75.70 kN	Dwarskracht	V'Ed	27.18 kN

0.2 * As;Toe:	188	>=	38 mm ²		Ok
V'Ed:	27.18	<=	75.70 kN		Ok

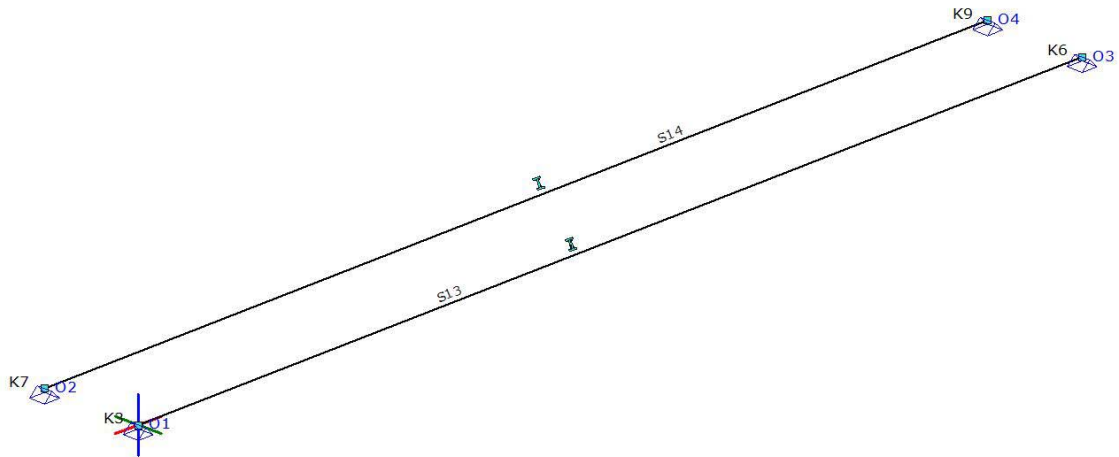
SCHEURCONTROLE

Scheurbreedte	W;k	0.07 mm	Scheurbreedte	W;max	0.40 mm
Max. spanning	Sigma;s	122.0 N/mm ²	Min. oppervl. van wap. staal	As;min	217 mm ²
Diameter	-	6.0 mm	Max. staaf diameter	-	26.5 mm
Hoh-afstand	-	150.0 mm	Max. staafafstand	-	300.0 mm

Scheurv.: Ok

Equipment frame			
Project name	KPN7754	Project number	
Part description	Eq Frame	Structural engineer	
Client		Units	m, kN, kNm

PIC. GEOMETRIE RAAMWERK



MEMBERS

Member	Node B	Node E	X-B	Y-B	Z-B	X-E	Y-E	Z-E	Length	Section	Posi
S13	K3	K6	0,000	0,000	0,000	6,000	0,000	0,000	6,000	P1	0,000 - L(6,0
S14	K9	K7	6,000	-0,600	0,000	0,000	-0,600	0,000	6,000	P1	0,000 - L(6,0
-	-	-	m	m	m	m	m	m	m	-	

SECTIONS

Section	Section Name	Area	It	Iy	Iz	Material	Angle
P1	HE140A	3.1416e-03	8.1298e-08	1.0331e-05	3.8932e-06	S235	0,0
-	-	m ²	m ⁴	m ⁴	m ⁴	-	°

MATERIALS

Material Name	Poison	Density	Youngs mod.	Lin. Exp.
S235	0.30	78.50	2.1000e+08	12.0000e-06
-	-	kN/m ³	kN/m ²	C°m

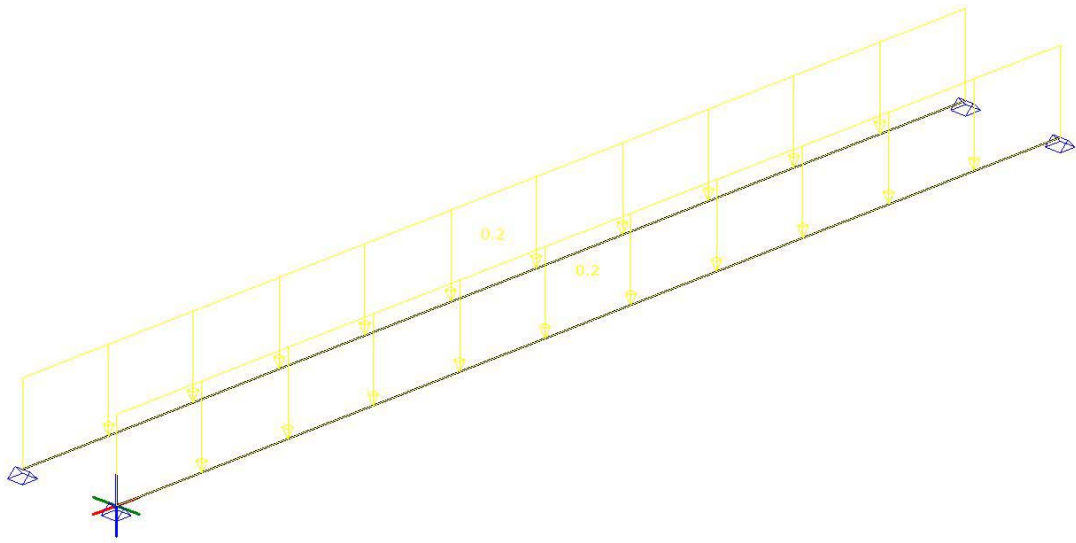
SUPPORTS

Support	Object	Position	X	Y	Z	Xr	Yr	Zr	AngleXr	AngleYr	AngleZr
O1	K3	0,000	Fixed	Fixed	Fixed	Fixed	Free	Fixed	0	0	0
O2	K7	0,000	Fixed	Fixed	Fixed	Fixed	Free	Fixed	0	0	0
O3	K6	0,000	Fixed	Fixed	Fixed	Fixed	Free	Fixed	0	0	0
O4	K9	0,000	Fixed	Fixed	Fixed	Fixed	Free	Fixed	0	0	0
-	-	m	kN/m	kN/m	kN/m	kNm/rad	kNm/rad	kNm/rad	°	°	°

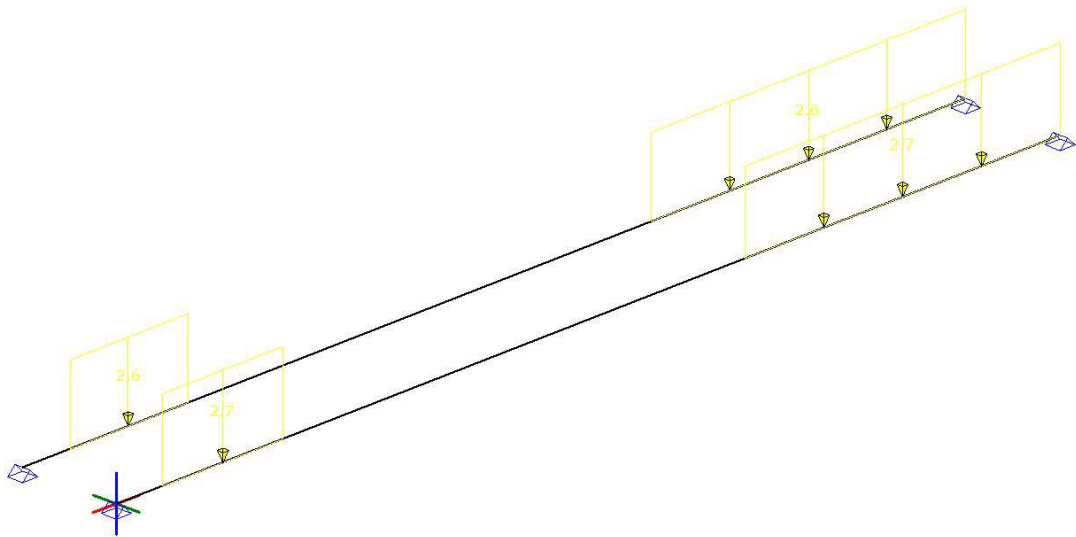
LOADS CASES TYPES

Label	Description	L.C. Type	Fav./Unfav.	Element	Level	Field	Psi0	Psi1	Psi2	Cprob	ULS/SLS
B.G.1	Permanent	Permanent actions	-		None	None					
B.G.2	Permanent	Permanent actions	-		None	None					
B.G.3	Wind Y	Wind load	-		None	None	0.20			1,00/1,00	

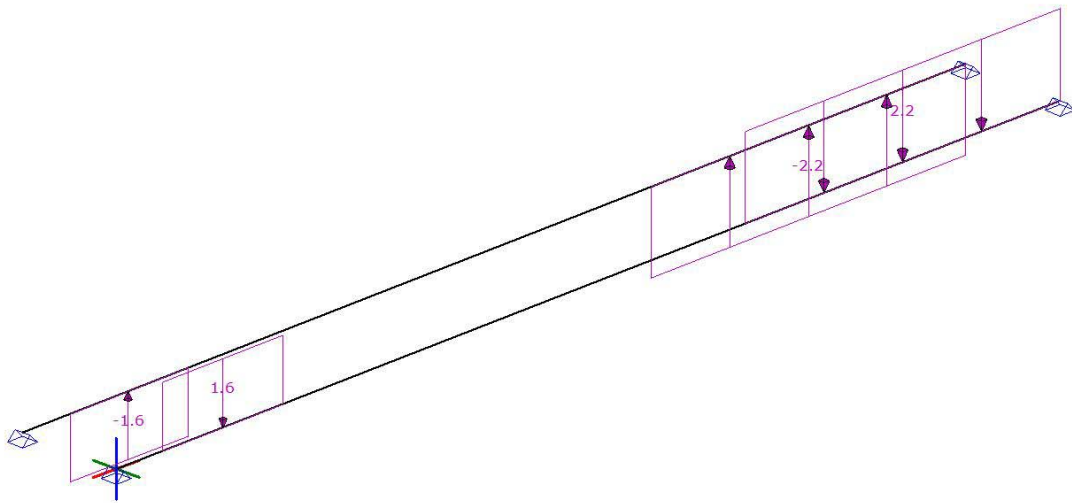
PIC. LASTEN B.G.1 PERMANENT



PIC. LASTEN B.G.2 PERMANENT



PIC. LASTEN B.G.3 WIND Y



PERSISTENT LOADS COMBINATIONS (TABLE)

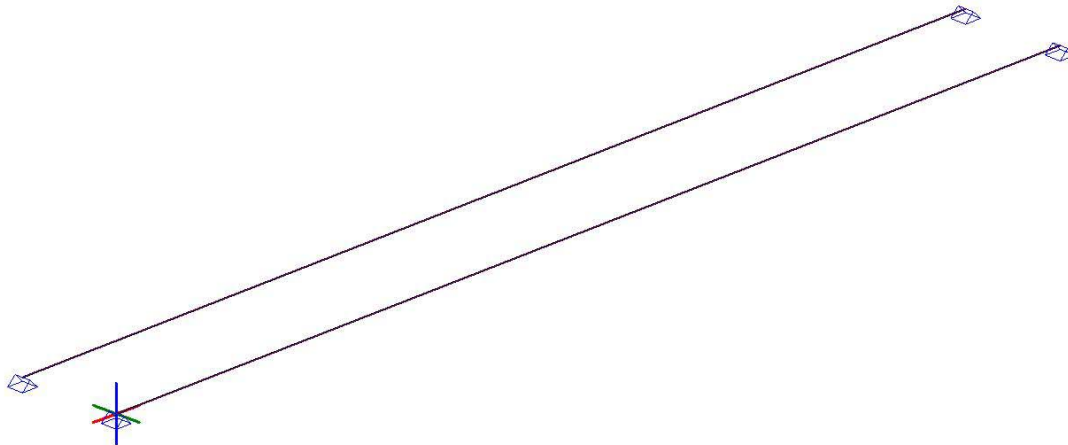
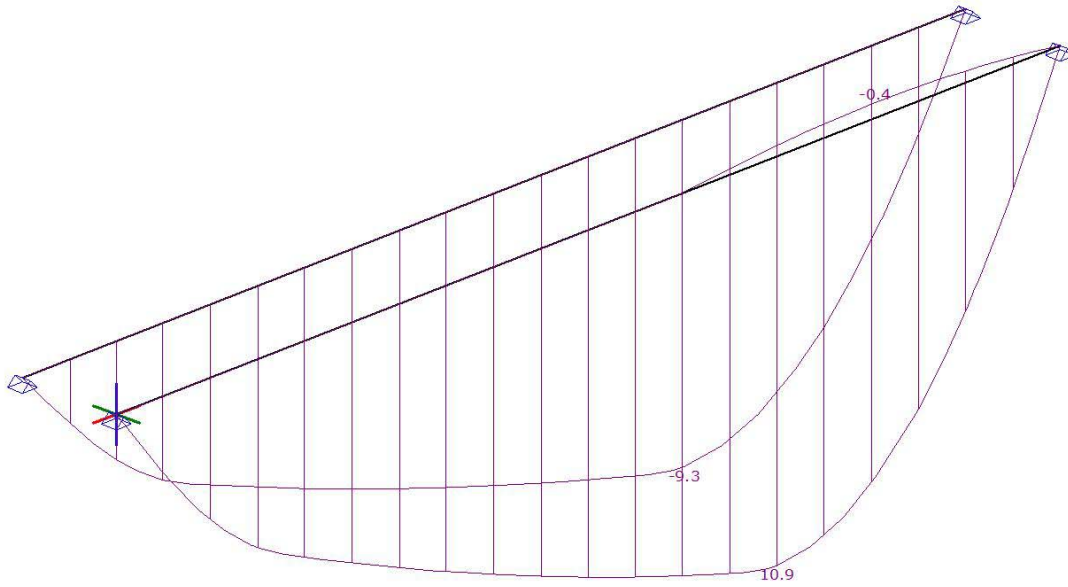
L.C.	Description	Pe.C.1	Pe.C.2	Pe.C.3
B.G.1	Permanent	1.35	1.20	0.90
B.G.2	Permanent	1.35	1.20	0.90
B.G.3	Wind Y	0.00	1.50	-1.50

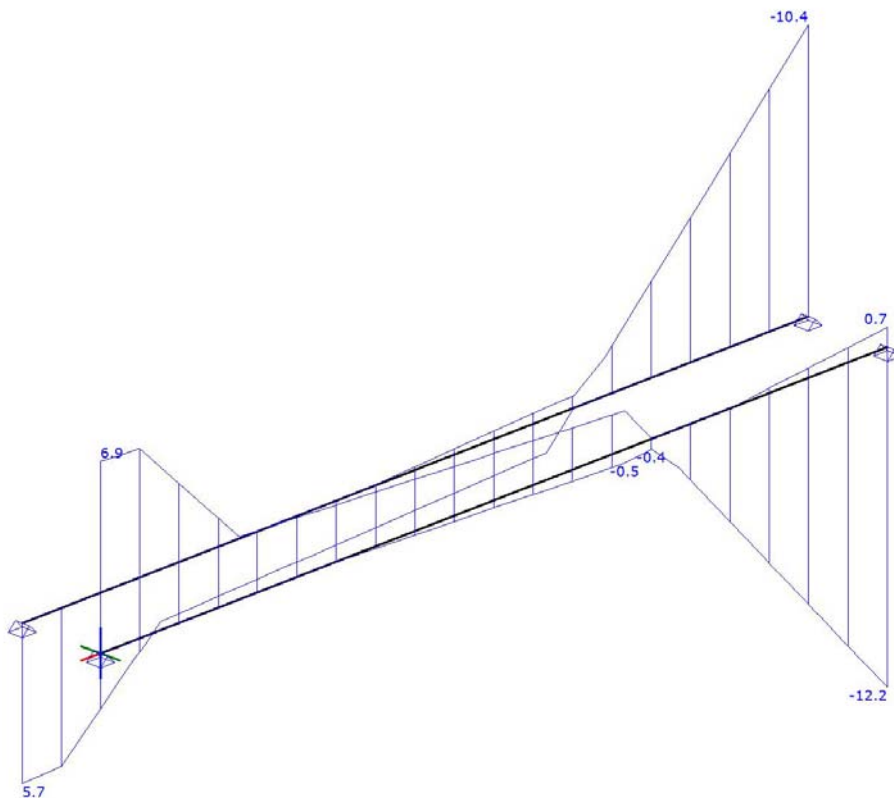
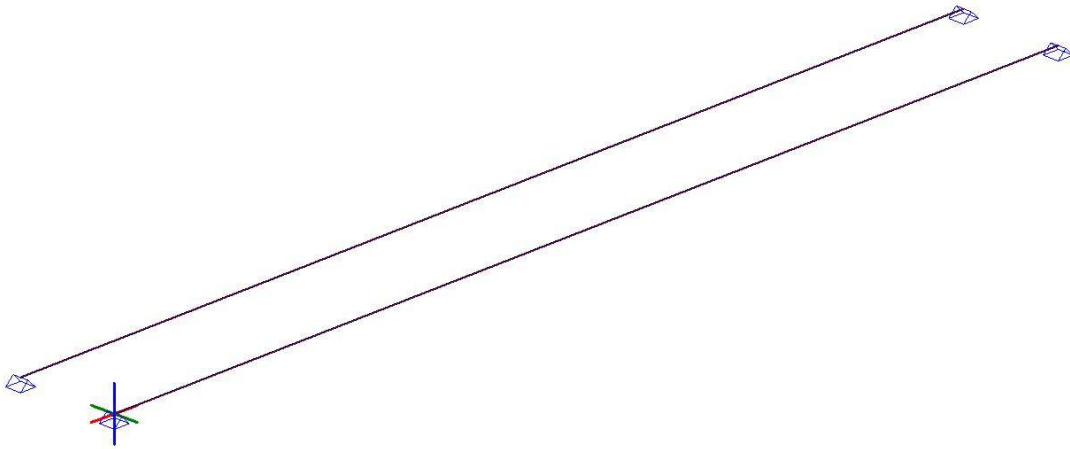
CHARACTERISTIC LOADS COMBINATIONS (TABLE)

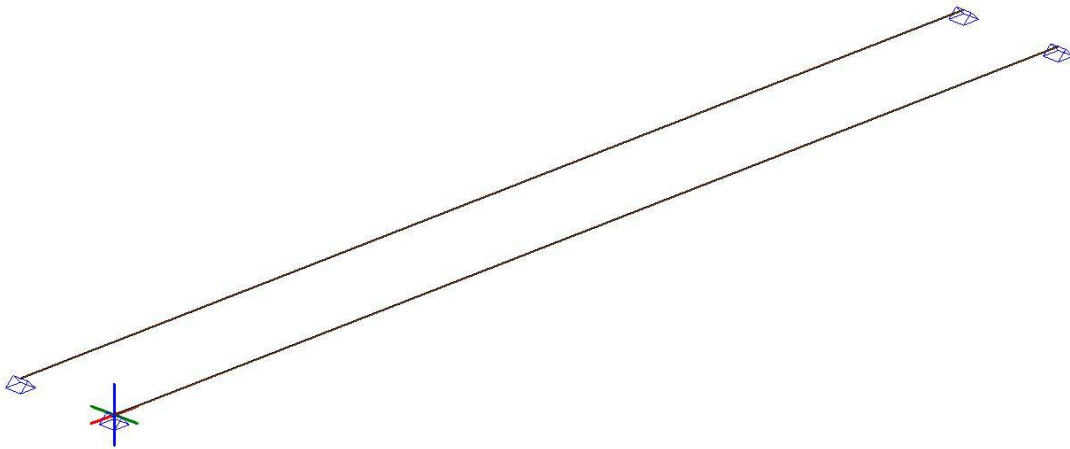
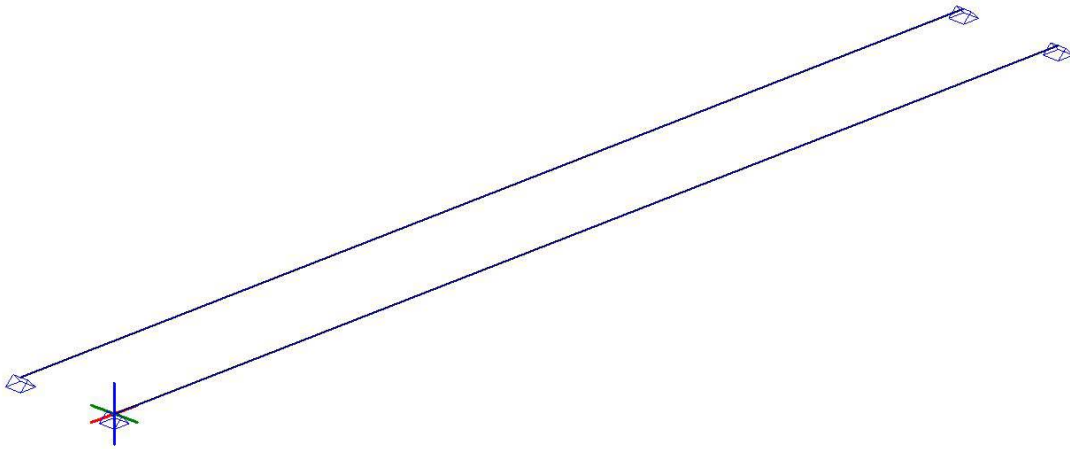
L.C.	Description	Ch.C.(w1)	Ch.C.1
B.G.1	Permanent	1.00	1.00
B.G.2	Permanent	1.00	1.00
B.G.3	Wind Y	0.00	0.87

ANALYSIS ASSUMPTIONS

Linear Elastic Analysis performed







PE.C. MEMBER FORCES (MY, MZ)

Member	LComb	Value	Mb	Mmax	xMmax	Me	x-M0	x-M0
S13	Pe.C.1	My	0.00	6.84	4.142	0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.2	My	0.00	10.92	4.203	0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.3	My	0.00	-0.41	4.828	0.00	3.535	0.000
		Mz	0.00			0.00	0.000	0.000
S14	Pe.C.1	My	0.00	-6.65	1.861	0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.2	My	0.00	-1.41	3.336	0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000
	Pe.C.3	My	0.00	-9.28	1.788	0.00	0.000	0.000
		Mz	0.00			0.00	0.000	0.000

Equipment frame

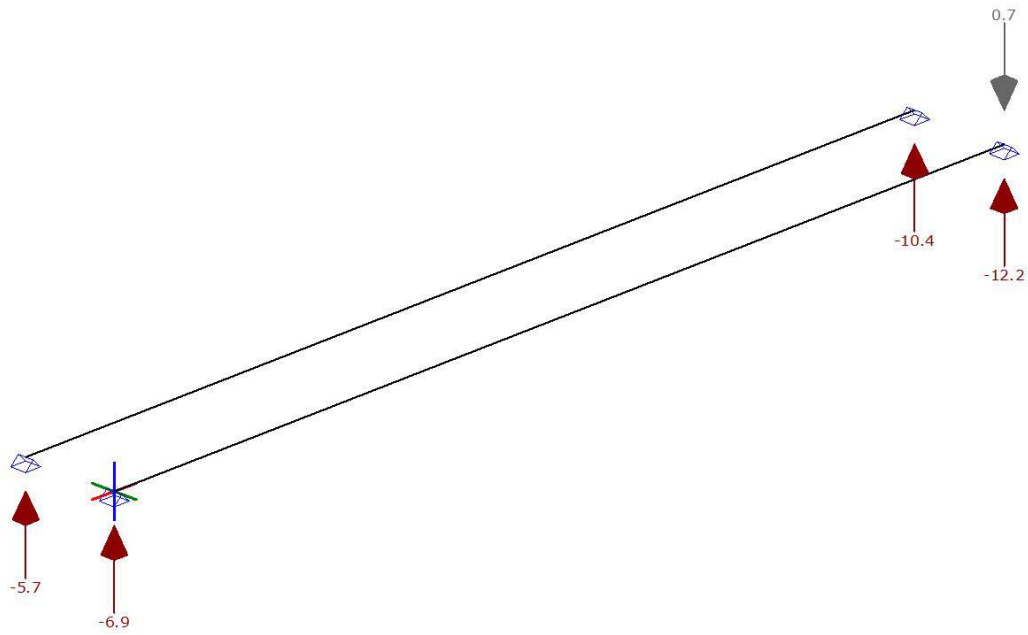
Member	LComb	Value	Mb	Mmax	xMmax	Me	x-M0	x-M0
-	-	Mz	0.00			0.00	0.000	0.000
-	-	-	kNm	kNm	m	kNm	m	m

PE.C. MEMBER FORCES (NX, VY, VZ, MX)

Member	LComb	TC	Nmax	Value	Vb	Vmax	Ve	Mxb	Mxe
S13	Pe.C.1	-	0.00	Vz	4.66	-7.36	-7.36	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.2	-	0.00	Vz	6.86	-12.16	-12.16	0.00	0.00
S14	Pe.C.1	-	0.00	Vz	-7.15	-7.15	4.53	0.00	0.00
				Vy	0.00	0.00	0.00		
	Pe.C.2	-	0.00	Vz	-0.75	1.31	1.31	0.00	0.00
-	-	-	0.00	Vz	-10.38	-10.38	5.74	0.00	0.00
				Vy	0.00	0.00	0.00		
				-	kN	-	kN	kN	kN

PIC. PE.C. OPLEGREACTIES ENVELOPE

Persistent Loads Combinations



PE.C. SUPPORT REACTIONS

LComb	Support	Node	X	Y	Z	Mx	My	Mz
Pe.C.1	O1	K3	0.00	0.00	-4.66	0.00	0.00	0.00
Pe.C.1	O2	K7	0.00	0.00	-4.53	0.00	0.00	0.00
Pe.C.1	O3	K6	0.00	0.00	-7.36	0.00	0.00	0.00
Pe.C.1	O4	K9	0.00	0.00	-7.15	0.00	0.00	0.00
Sum Reactions			0.00	0.00	-23.71			
Sum Loads			0.00	0.00	23.71			
Pe.C.2	O1	K3	0.00	0.00	-6.86	0.00	0.00	0.00
Pe.C.2	O2	K7	0.00	0.00	-1.31	0.00	0.00	0.00
Pe.C.2	O3	K6	0.00	0.00	-12.16	0.00	0.00	0.00
Pe.C.2	O4	K9	0.00	0.00	-0.75	0.00	0.00	0.00
Sum Reactions			0.00	0.00	-21.07			

Equipment frame

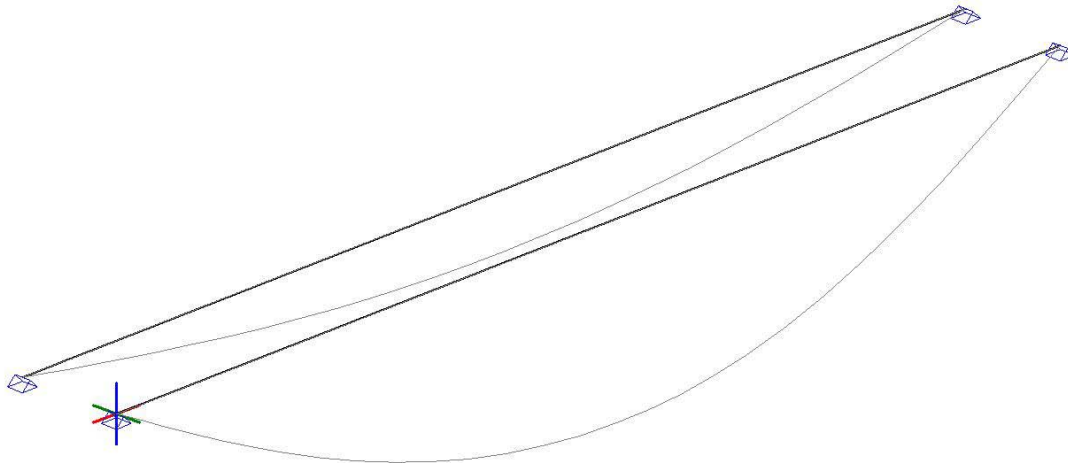
LComb	Support	Node	X	Y	Z	Mx	My	Mz
	Sum Loads		0.00	0.00	21.07			
Pe.C.3	O1	K3	0.00	0.00	-0.39	0.00	0.00	0.00
Pe.C.3	O2	K7	0.00	0.00	-5.74	0.00	0.00	0.00
Pe.C.3	O3	K6	0.00	0.00	0.70	0.00	0.00	0.00
Pe.C.3	O4	K9	0.00	0.00	-10.38	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	-15.80			
	Sum Loads		0.00	0.00	15.80			
-	-	-	kN	kN	kN	kNm	kNm	kNm

L.C. SUPPORT REACTIONS

L.C.	Support	Node	X	Y	Z	Mx	My	Mz
B.G.1	O1	K3	0.00	0.00	-0.74	0.00	0.00	0.00
B.G.1	O2	K7	0.00	0.00	-0.74	0.00	0.00	0.00
B.G.1	O3	K6	0.00	0.00	-0.74	0.00	0.00	0.00
B.G.1	O4	K9	0.00	0.00	-0.74	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	-2.96			
	Sum Loads		0.00	0.00	2.96			
B.G.2	O1	K3	0.00	0.00	-2.71	0.00	0.00	0.00
B.G.2	O2	K7	0.00	0.00	-2.62	0.00	0.00	0.00
B.G.2	O3	K6	0.00	0.00	-4.72	0.00	0.00	0.00
B.G.2	O4	K9	0.00	0.00	-4.56	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	-14.60			
	Sum Loads		0.00	0.00	14.60			
B.G.3	O1	K3	0.00	0.00	-1.81	0.00	0.00	0.00
B.G.3	O2	K7	0.00	0.00	1.81	0.00	0.00	0.00
B.G.3	O3	K6	0.00	0.00	-3.74	0.00	0.00	0.00
B.G.3	O4	K9	0.00	0.00	3.74	0.00	0.00	0.00
	Sum Reactions		0.00	0.00	0.00			
	Sum Loads		0.00	0.00	0.00			
-	-	-	kN	kN	kN	kNm	kNm	kNm

PIC. CH.C. VERPLAATSINGEN ENVELOPE

Characteristic Loads Combinations



CH.C. NODAL DISPLACEMENTS

Node	LComb	X	Y	Z	Xr	Yr	Zr
K3	Ch.C.(w1)	0.0000	0.0000	0.0000	0.000e-03	-4.417e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	0.000e-03	-6.604e-03	0.000e-03
K6	Ch.C.(w1)	0.0000	0.0000	0.0000	0.000e-03	5.097e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	0.000e-03	7.833e-03	0.000e-03

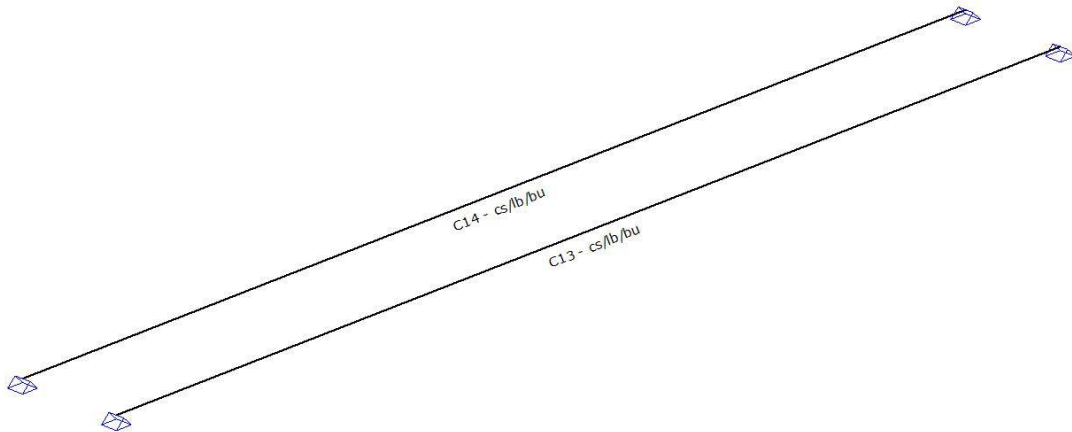
Equipment frame

Node	LComb	X	Y	Z	Xr	Yr	Zr
K7	Ch.C.(w1)	0.0000	0.0000	0.0000	0.000e-03	-4.303e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	0.000e-03	-2.116e-03	0.000e-03
K9	Ch.C.(w1)	0.0000	0.0000	0.0000	0.000e-03	4.961e-03	0.000e-03
	Ch.C.1	0.0000	0.0000	0.0000	0.000e-03	2.225e-03	0.000e-03
-	-	m	m	m	rad	rad	rad

CH.C. EXTREME DEFLECTIONS

Member	LComb	Node Begin				Member				Node End		
		X	Y	Z	Z' dist	Z'	Y' dist	Y'	X	Y	Z	
S13	Ch.C.1	0,000	0,000	0,000	3.187	0.0129	0.000	0.0000	0,000	0,000	0,000	
S14	Ch.C. (w1)	0,000	0,000	0,000	2.843	-0.0083	0.000	0.0000	0,000	0,000	0,000	
-	-	m	m	m	m	m	m	m	m	m	m	

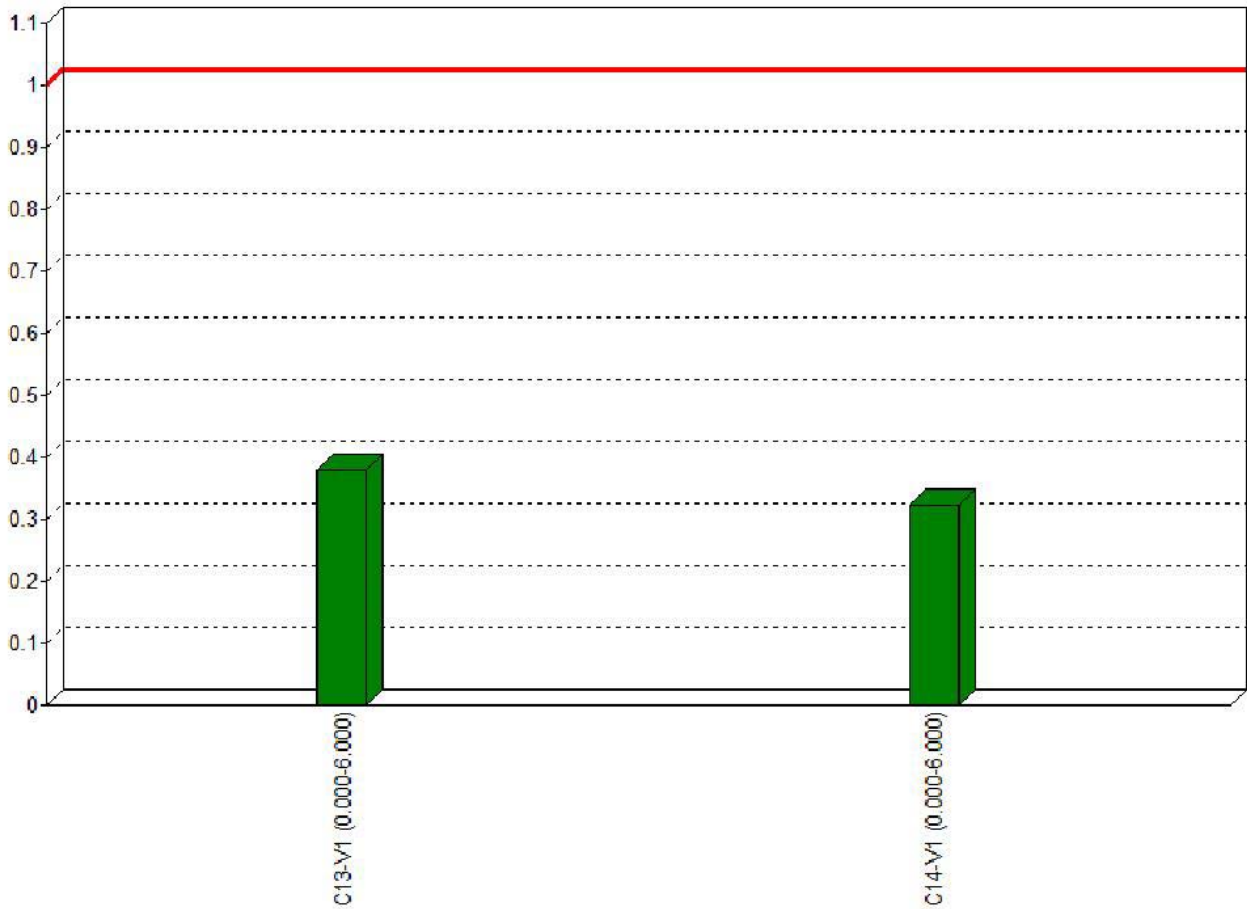
PIC. STAALCONTROLE



SM DEF.

Structural member	Member (s)
C13	S13
C14	S14

PIC. STEEL UC CHART



UNITY CHECK NEN-EN1993-1-1:2016/NB:2016

Field	Check Type	Combination	Formula	UC max
C13-V1 (0.000-6.000)	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,27
C13-V1 (0.000-6.000)	Lat.Buck.	Pe.C.2	NEN-EN1993-1-1(6.54)	0,38
C14-V1 (0.000-6.000)	Cross	Pe.C.3	NEN-EN1993-1-1(6.12)	0,23
C14-V1 (0.000-6.000)	Lat.Buck.	Pe.C.3	NEN-EN1993-1-1(6.54)	0,32

EXTREME UNITY CHECK NEN-EN1993-1-1:2016/NB:2016

Field	Check Type	Combination	Formula	UC max
C13-V1 (0.000-6.000)	Lat.Buck.	Pe.C.2	NEN-EN1993-1-1(6.54)	0,38
C14-V1 (0.000-6.000)	Lat.Buck.	Pe.C.3	NEN-EN1993-1-1(6.54)	0,32

UNITY CHECK FOR STRUCTURAL MEMBERS NEN-EN1993-1-1:2016/NB:2016

Label	Check Type	Combination	Formula	UC max
C13	Cross	Pe.C.2	NEN-EN1993-1-1(6.12)	0,27
	Lat.Buck.	Pe.C.2	NEN-EN1993-1-1(6.54)	0,38
C14	Cross	Pe.C.3	NEN-EN1993-1-1(6.12)	0,23
	Lat.Buck.	Pe.C.3	NEN-EN1993-1-1(6.54)	0,32

EXTREME UNITY CHECK FOR STRUCTURAL MEMBERS NEN-EN1993-1-1:2016/NB:2016

Label	Check Type	Combination	Formula	UC max
C13	Lat.Buck.	Pe.C.2	NEN-EN1993-1-1(6.54)	0,38
C14	Lat.Buck.	Pe.C.3	NEN-EN1993-1-1(6.54)	0,32