

Project: Nieuwbouw staalframe loods

i.o.v. [redacted]

a.d. [redacted]

[redacted]

Opdrachtgever: Q-loods
Component 110
1446 WP Purmerend

Onderdeel: Berekening staalframeloods

Datum: 19-11-2025

Voorschriften: EN 1991 belastingen op constructies
EN 1992 ontwerp en berekeningen van betonconstructies
EN 1993 ontwerp en berekeningen van staalconstructies
EN 1994 ontwerp en berekeningen van houtconstructies
EN 1996 ontwerp en berekeningen van metselwerkconstructies
EN 1997 Geotechnisch ontwerp



Gecontroleerd

datum: 04-12-2025

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Alle opdrachten worden aanvaard, tenzij uitdrukkelijk anders is overeengekomen, volgens de bepalingen, genoemd in de 'regeling van de verhouding tussen opdrachtgever en adviserend ingenieur' (r.v.o.i. 2001) gedeponeed ter griffie van de arrondissementsrechtbank te 's-Gravenhage.

Uitgangpunten berekening

gebruiksklasse	:	E		EN 1991-1-1 Tabel 6.1
ontwerplevensduurklasse	:	2 (15 jaar)		EN 1990/NB art. A1.1
gevolgklasse	:	CC1	geringe gevolgen	EN 1990/NB Tabel B1
betroikbaarheidsklasse	:	RC1	normale veiligheid	EN 1990 Tabel B2
belastingsreductie door levensduur	:	0,87	($\psi_0 = 0 \psi_1 = 1,0$)	EN 1990 NB art. A1.1

belastingfactoren

γ_G	=	1,08	[permanent]
γ_Q	=	1,35	[veranderlijk]

belastingen**dak**

dakplaten	$P_{G,k}$	=	0,10 kN/m ²
staalframe	$P_{G,k}$	=	0,10 kN/m ²
permanente belasting	$P_{G,k}$	=	0,20 kN/m ²
zonnepanelen	$P_{G,k}$	=	0,15 kN/m ²

sneeuwbelasting

$S = \mu_i S_k$	S_k	=	0,70
	μ_1	=	0,8
	S	=	0,56 kN/m ²
			$\psi_0 = 0 \psi_1 = 0,2 \psi_2 = 0$

begane grondvloer

betonvloer h=180 mm	=	4,32 kN/m ²	
permanente belasting	=	4,32 kN/m ²	
veranderlijk	=	5,00 kN/m ²	$\psi_0 = 1,0 \psi_1 = 0,9 \psi_2 = 0,8$

windbelasting**windgebied III onboud**

h	=	5,5 m	$\psi_0 = 0 \psi_1 = 0,2 \psi_2 = 0$
$v_{b,0}$	=	24,5 m/s	windsnelheid
Q_k	=	0,55 kN/m ²	

afmeting

L	=	7,0 m	overspanning
d	=	10,0 m	lengte gebouw
α	=	30 °	dakhelling
h_1	=	3,30 m	goothoogte
h_2	=	5,50 m	hoogte totaal



situatie

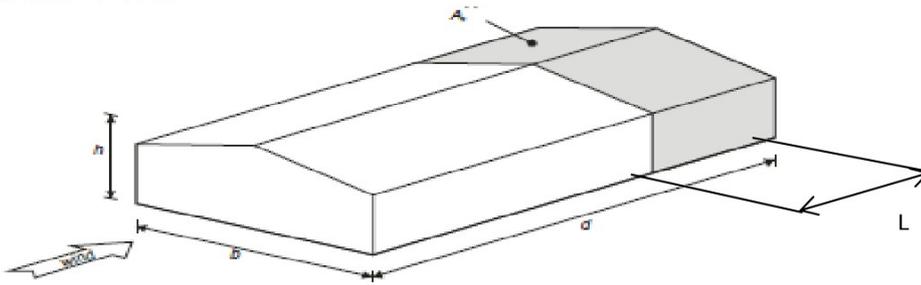
NEN EN 1991-14 table 7.1

$$h/d = 5,50/10 = 0,55$$

$$D \rightarrow C_{pe,10} = 0,80$$

$$E \rightarrow C_{pe,10} = 0,50$$

EN 1991-1-4 7.6



EN 1991-1-4 figure 7.22

$$4h = 4 \cdot 5,50 = 22,0 \text{ m}$$

$$2b = 2 \cdot 7 = 14,0 \text{ m}$$

$$L = 10-14 = -4,0 \text{ m} \rightarrow \text{geen wrijvingslengte}$$

belastingcombinaties

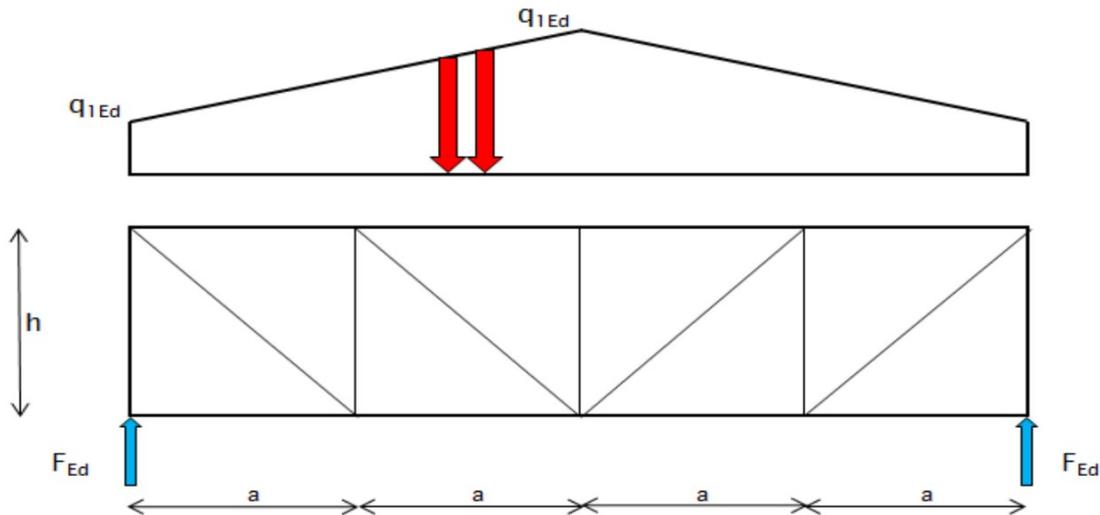
$$6.10a \quad 0,9 [1,35 + \sum 1,5 \psi_{0,i} Q_{k,i}] = 1,22 G_{kj;sup} + \sum 1,35 \psi_{0,i} Q_{k,i} \quad i \geq 1$$

$$6.10b \quad 0,9 [1,2G + 1,5 Q_{k,i} + \sum 1,5 \psi_{0,i} Q_{k;1}] = 1,08G + 1,35 Q_{k,i} + \sum 1,35 \psi_{0,i} Q_{k;1} \quad i > 1$$

Overzicht constructie, zie tekening **Finish Building**

Berekening verbanden in de langsggevels bij wind loodrecht op de kopgevels

Berekening verbanden dak bij wind loodrecht op de constructie



principe windverbanden dak

a	=	1,75 m	
h	=	2,00 m	
l _{diagonaal}	=	2,7 m	lengte diagonaal

T.b.v. de verbanden wordt worden berekend op winddruk + onderdruk, de berekening is gebaseerd op 1 verband met op trek belaste diagonale. Eventuele wrijving en windzuiging kunnen ruimschoots worden opgenomen door de overige verbanden.

windbelasting

γ_Q	=	1,35	
C_p	=	(0,8 + 0,3)	= 1,1
Q_{1Ed}	=	$0,55 \cdot 1,1 \cdot 1,65 \cdot 1,35 \cdot 0,87$	= 1,17 kN/m ¹
Q_{2Ed}	=	$0,55 \cdot 1,1 \cdot 2,8 \cdot 1,35 \cdot 0,87$	= 1,99 kN/m ¹

oplegreacties in de langsggevel

$$F_{Ed} = 2 \cdot 1,75 \cdot 1,17 + 2 \cdot 1,75 \cdot 0,5 \cdot (1,99 - 1,17) = 5,53 \text{ kN}$$

trekkracht in diagonalen

$$N_{tEd} = 5,53 \cdot 2,7/2 = 7,5 \text{ kN} \quad \text{trekkracht in diagonaal}$$

Controle trekstang , netto drsn maatgevend met 2 x 50 x 1,5 mm (zijvlakken C-profiel)

trekkracht per zijde

$$N_{tEd} = 3,73 \text{ kN}$$

axiale trek EN 1993-1-1 6.2.3

d_o	=	12,0 mm	$f_{y,d}$	=	320 N/mm ²
t	=	1,50 mm	f_u	=	510 N/mm ²
b	=	50,0 mm	γ_{M0}	=	1,0
			γ_{M2}	=	1,25

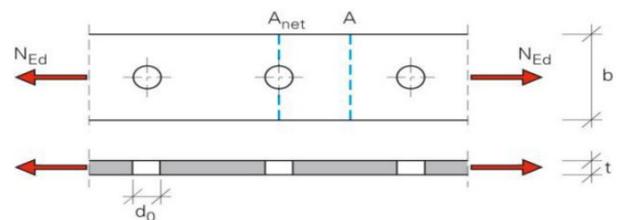
A	=	$50 \cdot 1,5$	=	75,0 mm ²
A_{net}	=	$(50 - 13) \cdot 1,5$	=	55,5 mm ²

$$N_{pl,Rd} = 75 \cdot 320 / 1,0 \cdot 10^{-3} = 24,0 \text{ kN} \quad (6.6)$$

$$N_{u,Rd} = 0,9 \cdot 55,5 \cdot 510 / 1,25 = 20,4 \text{ kN} \quad (6.7)$$

$$N_{u,Rd} = 20,4 \text{ kN}$$

$$u.c. = 3,73 / 20,4 = 0,18 < 1,0$$



maatgevende toelaatbare belasting per zijde

windbelasting $\gamma_Q = 1,35$

$$C_p = (0,8 + 0,3) = 1,1$$

$$Q_{1Ed} = 0,55 \cdot 1,1 \cdot 2 \cdot 1,35 = 1,63 \text{ kN/m}^1$$

oplegreacties in de langsggevel

$$F_{Ed} = 1,63 \cdot 4 = 6,5 \text{ kN}$$

trekkracht in diagonalen

$$N_{tEd} = 6,52 \cdot 3,1 / 2,5 = 8,1 \text{ kN} \quad \text{trekkracht in diagonaal}$$

Verbanden in de langsggevels, voorgevels maatgevend:

$$n = 2 \quad (\text{aantal beschikbare verbanden per langsggevel})$$

(veilige benadering, er worden praktisch meer verbanden aangebracht)

oplegreactie uit windverband dak:

$$F_{Ed} = 6,52 \text{ kN} \quad \text{totaal belasting}$$

$$F_{Ed} = 3,26 \text{ kN} \quad \text{belasting per verband}$$

geometrie verbanden:

$$h = 1,60 \text{ m}$$

$$b = 0,8 \text{ m} \quad \text{maatgevende breedte}$$

$$l_{\text{diagonaal}} = 1,8 \text{ m} \quad \text{lengte diagonaal}$$

trek/drukkracht in diagonalen

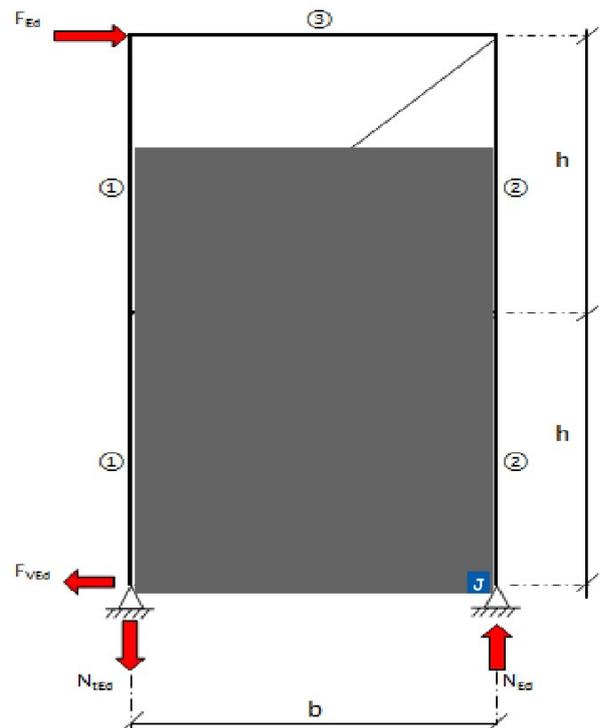
$$N_{tEd} = 3,26 \cdot 1,8 / 0,8 = 7,3 \text{ kN}$$

verbanden praktisch uitvoeren met minimaal C150/50/15/1,5**oplegreacties op de fundering**

$$N_{tEd} = 3,26 \cdot 1,6 / 0,8 + 3,26 \cdot 1,6 / 0,8 = 13,04 \text{ kN}$$

$$N_{Ed} = 3,26 \cdot 1,6 / 0,8 + 3,26 \cdot 1,6 / 0,8 = 13,04 \text{ kN}$$

$$F_{VEd} = 3,26 \text{ kN}$$

**berekening gordingen**

geometrie

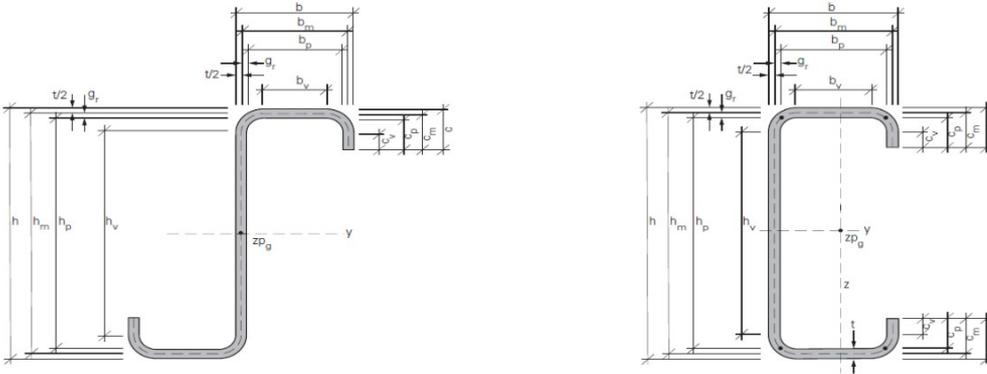
overspanningen	afstand tussen de kipsteunen	
$L_1 = 2500 \text{ mm}$	$l_a = 2500 \text{ mm}$	bij drukkende belasting
$L_2 = 2500 \text{ mm}$	$l_a = 2500 \text{ mm}$	bij trekkende belasting

profiel afmetingen gordingen

variabelen	symbol	waarde (mm)
hoogte lijf	h	150,0
breedte flens	b	45,0
breedte lip	c	15,0
profiel dikte	$t = t_{\text{cor}}$	1,5
inwendige afrondingstraal	r	3,0

afgeleide profielmaten gording

symbool	waarde (mm)	symbool	waarde (mm)
h_m	147	c_v	10,5
h_v	141	c_p	13,2
h_p	146	r_m	3,8
b_m	44	g_r	1,1
b_v	36	L_r	5,9
b_p	41	e_{rc}	2,39
c_m	14		

**materiaaleigenschappen gording**

variabelen	symbool	waarde	eenheid
staalkwaliteit	-	S320 GD Z	-
vloegrens	f_{yb}	320,00	N/mm ²
elasticiteitsmodulus	E	210000	N/mm ²
poisson factor	ν	0,30	-
materiaalfactoren	γ_{M0}, γ_{M1}	1,00	-

belasting op de ligger

$$b = 2,20 \text{ m} \quad \text{belastingbreedte } (1,25 * 1,75 = 2,2 \text{ m})$$

B.C. 1 perament + veranderlijk

$$\begin{aligned} q_{G,k} &= 0,35 * 2,2 &= 0,77 \text{ kN/m}^1 & \text{permanent + zonnepanelen} \\ q_{Q,k} &= 0,56 * 2,2 * 0,87 &= 1,07 \text{ kN/m}^1 & \text{veranderlijk} \\ q_k &= &= 1,84 \text{ kN/m}^1 & \text{karakteristiek} \\ q_{Ed} &= 1,08 * 0,77 + 1,35 * 1,07 &= 2,44 \text{ kN/m}^1 & \text{rekenwaarde} \end{aligned}$$

Doorbuiging

$$\delta = 5/384 * 1,84 * 2500^4 / (210000 * 1248424) = 3,57 \text{ mm} \downarrow \text{ doorbuiging}$$

B.C. 2 permanent (gunstig werkend) + wind

$$\begin{aligned} q_{G,k} &= 0,35 * 2,2 &= 0,77 \text{ kN/m}^1 \downarrow & \text{permanent} \\ q_{Q,k} &= 0,55 * 2,2 * 1,7 * 0,87 &= 1,79 \text{ kN/m}^1 \uparrow & \text{wind, zuiging + overdruk} \\ q_k &= &= -1,020 \text{ kN/m}^1 & \text{karakteristiek} \\ q_{Ed} &= 0,9 * 0,77 - 1,35 * 1,79 &= -1,72 \text{ kN/m}^1 & \text{rekenwaarde} \end{aligned}$$

Doorbuiging

$$\delta = 5/384 * -1,02 * 2500^4 / (210000 * 1248424) = -1,98 \text{ mm} \uparrow \text{ doorbuiging}$$

roofcladding

$$\begin{aligned} t_{nom} &= 0,75 \text{ mm} & a &= 22,5 \text{ mm} \\ b_r &= 100,0 \text{ mm} & b_{mod} &= 22,5 \text{ mm} & \text{dukkende belasting} \\ & & b_{mod} &= 90,0 \text{ mm} & \text{trekkende belasting} \end{aligned}$$

eigenschappen niet gereduceerde doorsnede

variabele	symbool	waarde	eenheid
traagheidsmoment t.o.v. y-as	$I_{a,v}$	1268032	mm ⁴
centrifugaal moment	$I_{a,vz}$	0	mm ⁴
afstand d.c. t.o.v. buitenkant lijf	e	25,0	mm

eigenschappen effectieve doorsnede bepaald

variabele	symbool	waarde	eenheid
effectief traagheidsmoment	$I_{\text{eff},y}$	1248424	mm ⁴
effectief weerstandsmoment (drukzijde)	$W_{\text{eff},y,\text{com}}$	16489,7	mm ³
effectief weerstandsmoment (trekzijde)	$W_{\text{eff},y,\text{ten}}$	16804,6	mm ³

eigenschappen elastisch ondersteunde ligger

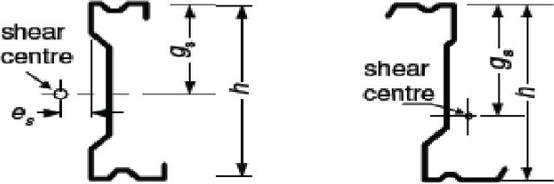
variabele	symbool	waarde	eenheid
oppervlak	A_{fz}	180,0	mm ²
afstand hartlijn lip tot zwaartepunt	Y_{fz}	20,0	mm
traagheidsmoment z-as	I_{fz}	143987,0	mm ⁴
weerstandsmoment betrokken op de lip	$W_{fz,\text{lip}}$	3246,0	mm ³
weerstandsmoment betrokken op lijf	$W_{fz,\text{lijf}}$	4661,0	mm ³
traagheidsstraal	i_{fz}	17,3	mm

Control perlins according EN 1993-1-3

Factor k_{h0}

$$q_{h,Ed} = k_h q_{Ed} \quad \dots (10.4)$$

(4) The coefficient k_h should be obtained as indicated in figure 10.3 for common types of cross-section.

 $k_{h0} = \frac{ht(b^2 + 2cb - 2c^2b/h)}{4I_y}$ <p>Simple symmetrical Z section</p>	 $k_{h0} = \frac{I_{yz}}{I_y} \frac{g_s}{h}$ <p>Z, C or Σ sections</p>
<p>a) k_{h0} factor for lateral load on free bottom flange. (k_{h0} corresponds to loading in the shear centre)</p>	

$$\begin{aligned}
 k_{h0} &= 0,0 & = & \\
 k_h &= k_{h0} + (e/h) & = & 0+(25/150) & = & 0,167 \text{ bij drukkende belasting} \\
 k_h &= k_{h0} + (e + a/h) & = & 0+[(25+22,5)/150] & = & 0,317 \text{ bij trekkende belasting}
 \end{aligned}$$

rotation stiffness C_d (EN 1993-1-3 10.1.5.2)

$$\begin{aligned}
 C_D &= 1 / [1/C_{D,A} + 1/C_{D,C}] \\
 C_{D,A} &= C_{100} k_{ba} k_t k_{bR} k_A k_{bT}
 \end{aligned}$$

NEN-EN 1993-1-3

$$\begin{aligned}
 C_{100} &= 5200 \text{ Nmm/mm} & \text{presieur} \\
 C_{100} &= 2600 \text{ Nmm/mm} & \text{tension}
 \end{aligned}$$

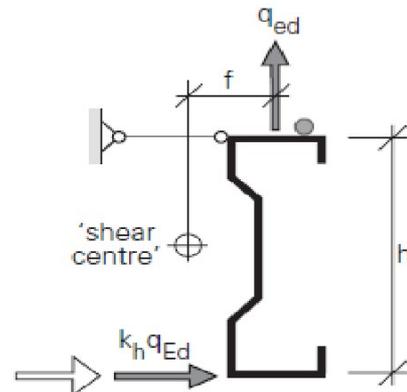
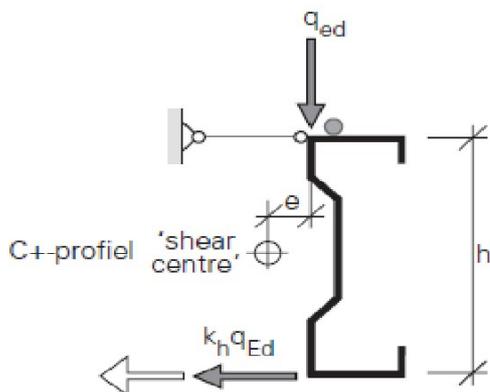
$$\begin{aligned}
 k_{ba} &= [b_a / 100]^2 & = & (45/100)^2 & = & 0,203 \\
 t_{nom} &= 0,75 \text{ mm} & & & & \\
 k_t &= (t_{nom}/0,75)^{1,1} & = & (0,75/0,75)^{1,1} & = & 1,0 \\
 k_b &= 100,0 \text{ mm} & & & & \\
 k_{bR} &= 185/b_r & = & 185/250 & = & 0,74 \\
 K_A &= 1,0 & = & & = & 1,0 & \text{trekkende belasting} \\
 K_A &= 1+(A-1)*0,08 & = & 1+(1,5-1)*0,08 & = & 1,04 & \text{drukkende belasting} \\
 b_T &= b_{T,max} & = & \sqrt{(b_{t,max} / b_t)} & = & 0,632
 \end{aligned}$$

drukkende belasting

$$\begin{aligned}
 C_{D,A} &= C_{100} k_{ba} k_t k_{bR} k_A k_{bT} & = & 5200*0,203*1*0,74*1,04*0,632 & = & 513 \text{ Nmm/mm} \\
 b_{mod} &= & & & = & 22,5 \text{ mm} \\
 1/K &= 4 [1-v^2] h^2 [h_d+b_{mod}] / (E_t^3) + h^2/C_D \\
 1/K &= 4[1-0,3^2]*150^2*[150+22,5]/(210000*1,5^3)+150^2/513 & = & 63,793 \text{ mm}^2/\text{N} \\
 K &= & = & 0,01568 \text{ N/mm}^2 \\
 I_a &= 2500 \text{ mm} \\
 R &= K I_a^4 / [\pi^4 E I_{fz}] & = & 0,2080
 \end{aligned}$$

trekkende belasting

$$\begin{aligned}
 C_{D,A} &= C_{100} k_{ba} k_t k_{bR} k_A k_{bT} & = & 2600*0,203*1*0,74*1*5200,632 & = & 247 \text{ Nmm/mm} \\
 b_{mod} &= & = & 90,0 \text{ mm} \\
 1/K &= 4 [1-v^2] h^2 [h_d+b_{mod}] / (E_t^3) + h^2/C_D \\
 1/K &= 4[1-0,3^2]*150^2*[150+90]/(210000*1,5^3)+150^2/247 & = & 118,8 \text{ mm}^2/\text{N} \\
 K &= & = & 0,00842 \text{ N/mm}^2 \\
 I_a &= 2500 \text{ mm} \\
 R &= K I_a^4 / [\pi^4 E I_{fz}] & = & 0,1117
 \end{aligned}$$



drukkende belasting

$$\begin{aligned}
 q_{v,Ed} &= 2,44 \quad \text{kN/m}^1 \\
 k_h &= 0,1667 \\
 q_{h,Ed} &= k_h q_{E;d} = 2,44 * 0,1667 = 0,4067 \\
 l &= 2,5 \text{ m} \\
 l_a &= 2,5 \text{ m}
 \end{aligned}$$

trekkende belasting

$$\begin{aligned}
 q_{v,Ed} &= -1,72 \quad \text{kN/m}^1 \\
 k_h &= 0,3167 \\
 q_{h,Ed} &= k_h q_{E;d} = -1,7235 * 0,3167 = -0,546 \\
 l &= 2,5 \text{ m} \\
 l_a &= 2,5 \text{ m}
 \end{aligned}$$

section	$M_{v,Ed}$ [kNm]	$M_{0,fz,Ed}$ [kNm]	κ_R	$M_{fz,Ed}$ [kNm]
A	1,906	-	-	-

section	$M_{v,Ed}$ [kNm]	$M_{0,fz,Ed}$ [kNm]	κ_R	$M_{fz,Ed}$ [kNm]
A	-1,346	-0,427	0,9572	-0,408

$$I_{fz} = \eta_1 l_a [1 + \eta_2 R^{\eta_3}]^{\eta_4}$$

pressure			tensile		
	intermediate span	endspan		endspan	intermediate span
η_1	= 0,694	0,515	η_1	= 0,800	0,515
η_2	= 5,450	1,260	η_2	= 6,750	1,260
η_3	= 1,270	0,868	η_3	= 1,490	0,868
η_4	= -0,168	-0,242	η_4	= -0,155	-0,242
l_a	= 2500	2500	l_a	= 2500	2500
R	= 0,208	0,208	R	= 0,112	0,112
I_{fz} (mm)	= 1580,6	1203,3	I_{fz} (mm)	= 1930,2	1234,9
λ_1	= 80,48	80,48	λ_1	= 80,48	80,48
i_{fz}	= 17,3	17,3	i_{fz}	= 17,3	17,3
λ_{fz}	= 1,135	0,864	λ_{fz}	= 1,386	0,887
α_{LT}	= 0,34	0,34	α_{LT}	= 0,34	0,34
$\lambda_{LT,0}$	= 0,40	0,40	$\lambda_{LT,0}$	= 0,40	0,40
β	= 0,75	0,75	β	= 0,75	0,75
Φ_{LT}	= 1,108	0,859	Φ_{LT}	= 1,388	0,878
χ_{LT}	= 0,617	0,781	χ_{LT}	= 0,479	0,768
$1 / \lambda_{fz}^2$	= 0,776	1,339	$1 / \lambda_{fz}^2$	= 0,520	1,271

controle spanning in de gording**drukkende belasting**

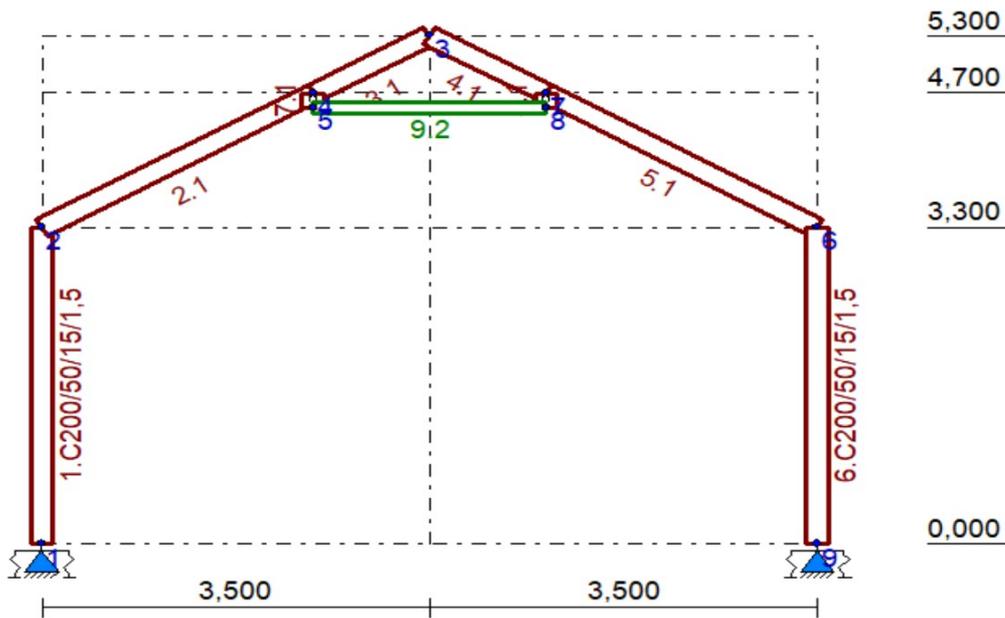
$$\begin{aligned}
 M_{v,Ed} &= 1,906 \text{ kNm} \\
 W_{\text{eff},Y,\text{com}} &= 16490 \text{ mm}^3 \\
 \sigma_{\text{max},Ed} &= M_{v,Ed} / W_{\text{eff},Y,\text{com}} = 1,906 * 10^6 / 16489,7 \\
 \sigma_{\text{max},Ed} &= 115,6 \text{ N/mm}^2 < 320,0 \text{ N/mm}^2 \text{ u.c.} = 0,36 \leq 1,0 \text{ voldoet}
 \end{aligned}$$

trekkende belasting

$$\begin{aligned}
 M_{v,Ed} &= 1,346 \text{ kNm} & W_{\text{eff},Y,\text{corr}} &= 16490 \text{ mm}^3 \\
 M_{fz,Ed} &= 0,427 \text{ kNm} & W_{fz,\text{lif}} &= 4661 \text{ mm}^3 \\
 & & \chi_{LT} &= 0,781 \\
 \sigma_{\text{max},Ed} &= 1 / \chi_{LT} [M_{v,Ed} / W_{\text{eff},Y,\text{com}}] + M_{fz,Ed} / W_{fz,\text{lif}} \\
 \sigma_{\text{max},Ed} &= 1 / 0,781 * [1,346 * 10^6 / 16489,7] + 0,4265625 * 10^6 / 4661 \\
 \sigma_{\text{max},Ed} &= 196,0 \text{ N/mm}^2 < 320,0 \text{ N/mm}^2 \text{ u.c.} = 0,61 \leq 1,0 \text{ voldoet}
 \end{aligned}$$

berekening overige tussenspanen

as D maatgevend i.v.m. belasting uit as C



geometrie

-spanen worden opgebouwd uit 2 C-profielen rug aan rug (onderling gekoppeld);

-belastingbreedte $b = (2,5 + 1,5) / 2 = m$

-belastingbreedte per C-profiel $b = 1 m$

- belasting op de constructie:

$$q_{G,k} = 0,15 \cdot 1,2 = 0,18 \text{ kN/m}^1 \quad \text{permanent belasting}$$

$$q_{G,k} = 0,15 \cdot 1,2 = 0,18 \text{ kN/m}^1 \quad \text{zonnepanelen}$$

$$F_{Q,k} = 1,26 \text{ kN} \quad \text{belasting in de nok (belasting uit as C)}$$

Wind en sneeuwbelasting wordt door het raamwerkprogramma gegenereerd.

Zie voor berekening as B bijlage A 1 blad 33 t/m 62

maatgevende staafkrachten van de spanen

dakliggers

$$M_{Ed} = 6,9 \text{ kNm}$$

$$N_{Ed} = 3,5 \text{ kN}$$

kolommen

$$M_{Ed} = 6,9 \text{ kNm}$$

$$N_{Ed} = 6,9 \text{ kN}$$

horizontaal onder de nok

$$N_{tEd} = 3,9 \text{ kN}$$

controle dakliggers, controle druk + buiging
kolom maatgevend

profiel eigenschappen								
h	=	200,0 mm	f_{yb}	=	350 N/mm ²	$I_{eff,y}$	=	247,0 10 ⁴ mm ⁴
b	=	50,00 mm	E	=	2,10 *10 ⁵ N/mm ²	e	=	7,5 mm
c	=	15,00 mm	v	=	0,30	$W_{eff,y,corr}$	=	23354 mm ³
t _{nom}	=	1,50 mm	G	=	81000 N/mm ²	$W_{eff,y,ten}$	=	26343,1 mm ³
t	=	1,50 mm	γ_M	=	1,0	$W_{eff,y,min}$	=	23354,0 mm ³
A	=	476 mm ²	$A_{eff,c}$	=	437 mm ²	I_t	=	371,3 mm ⁴
i _y	=	59 mm ²	I _y	=	247 10 ⁴ mm ⁴	I_w	=	2534 *10 ⁶ mm ⁶
i _z	=	19 mm ²	I _z	=	101 10 ⁴ mm ⁴			

$$M_{Ed} = 6,90 \text{ kNm}$$

$$N_{Ed} = 2,10 \text{ kN}$$

$$L_{cr,y} = 3000 \text{ mm}$$

$$L_{cr,z} = 1650 \text{ mm}$$

$$L_{kip} = 1650 \text{ mm}$$

$$\Delta M_{yEd} = e_{Ny} N_{Ed} \quad \text{dubble symmetric} \rightarrow e_{Ny} = 0$$

$$e_{Ny} = 0 \text{ mm} \quad \Delta M_{yEd} = 0 \text{ kNm}$$

$$N_{Ed} / N_{cRd} + [M_{yEd} + \Delta M_{yEd}] M_{cvRd,com} = 0,858 < 1 \rightarrow \text{OK}$$

Buckling resistance check

$$N_{Ed} / [\chi_y (N_{rk} / \gamma_{M1})] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} (M_{yRk} / \gamma_{M1})]$$

$$\text{met } \gamma_{M1} = 1,0 \rightarrow$$

$$N_{Ed} / [\chi_y N_{rk}] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} M_{yRk}]$$

$$N_{rk} = f_{yb} A_{eff} = 152,8 \text{ kN}$$

$$M_{yRk} = f_{yb} W_{eff,y,min} = 8,2 \text{ kNm}$$

$$\Delta M_{yEd} = 0 \text{ kNm}$$

$$\alpha_y = 0,21$$

$$\alpha_z = 0,34$$

$$\bar{\lambda} = \sqrt{ A_{eff} f_{yb} / N_{cr} = L_{cr} / i \sqrt{ [(A_{eff} / A) / \lambda_1] } }$$

$$\chi = 1 / [\phi + \sqrt{ (\phi - \bar{\lambda}^2) }]$$

$$\phi = 0,5 [1 + \alpha (\bar{\lambda} - 0,2) + \bar{\lambda}^2]$$

$$\lambda_1 = \pi \sqrt{ E / f_{yb} } = 76,95$$

$$\bar{\lambda}_y = L_{cr,y} / i_y \sqrt{ [A_{eff} / A] / \lambda_1} \quad \bar{\lambda}_y = 0,638$$

$$\bar{\lambda}_z = L_{cr,z} / i_z \sqrt{ [A_{eff} / A] / \lambda_1} \quad \bar{\lambda}_z = 1,110$$

$$\phi_y = 0,750 \quad \chi_y = 0,875$$

$$\phi_z = 1,270 \quad \chi_z = 0,529$$

$$N_{crT} = 1 / i_o^2 [G I_t + \pi^2 E I_w / L_T^2] \quad L_T = 3000 \text{ mm}$$

$$i_o^2 = i_y^2 + i_z^2 + y_o^2 + z_o^2 \quad y_o^2 = 0 \text{ mm}$$

$$z_o^2 = 0 \text{ mm}$$

$$\begin{aligned}
 i_o^2 &= 3764,5 \text{ mm}^2 \\
 N_{crT} &= 162,98 \text{ kN} \\
 \lambda_T &= \sqrt{[A_{eff} f_{yb} / N_{crT}]} = 0,968 & \alpha_T &= 0,34 \\
 & & \phi_T &= 1,099 \\
 & & \chi_T &= 0,617
 \end{aligned}$$

$$\begin{aligned}
 \lambda_{LT} &= \sqrt{[W_{effy,min} f_{yb} / M_{cr}]} = 0,345 \\
 C_1 &= 1,77 \\
 M_{cr} &= C_1 * \pi^2 E I_z / L^2 * \sqrt{[I_w / I_z + L^2 G I_t / (\pi^2 E I_z)]} = 68,69 \text{ kNm} \\
 \alpha_{LT} &= 0,34 \\
 \phi_T &= 0,584 \\
 \chi_{LT} &= 0,947
 \end{aligned}$$

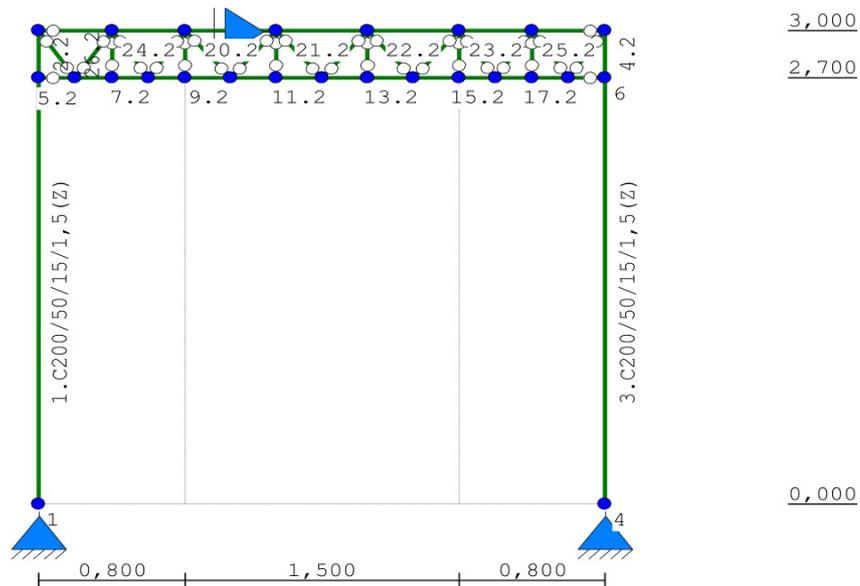
determination of interaction factors k_{yy} and k_{zy} 4.4.2 table 4.7 and 4.8

$$\begin{aligned}
 N_{cr,y} &= 1880 \text{ kN} & \mu_y &= 1,000 \\
 N_{cr,z} &= 769 \text{ kN} & \mu_z &= 0,999 \\
 C_{m,y,0} &= 1,00003 \\
 \epsilon_y &= 61,43 & \alpha_{LT} &= 1,000 \\
 C_{m,y} &= 1,00000 \\
 C_{m,LT} &= 1,008 & k_{yy} &= 1,009 \\
 & & k_{zy} &= 1,008
 \end{aligned}$$

Buckling resistance check

$$\begin{aligned}
 N_{Ed} / [\chi_y (N_{rk} / \gamma_{M1})] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} (M_{yRk} / \gamma_{M1})] &= 0,912 < 1,0 \quad \text{oke} \\
 N_{Ed} / [\chi_z (N_{rk} / \gamma_{M1})] + k_{zy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} (M_{yRk} / \gamma_{M1})] &= 0,921 < 1,0 \quad \text{oke}
 \end{aligned}$$

Berekening vakwerk in as 2 boven de gevelopeningen



geometrie

oplegreactie uit spanten (2 x oplegreactie uit halfspant)

$$\begin{aligned}
 F_{Gk} &= 0,78 * 2 & = & 1,56 \text{ kN} & \text{permanent} \\
 F_{Qk} &= 1,1 * 2 & = & 2,20 \text{ kN} & \text{sneeuw} \\
 F_{Qk} &= -0,76 * 2 & = & -1,52 \text{ kN} & \text{wind}
 \end{aligned}$$

Zie voor berekening bijlage A blad 97t/m 113

Controle profielen, onder en bovenregel maatgevend:

profielgegevens								
h	=	150,0 mm	f_{yb}	=	350 N/mm ²	$I_{eff,y}$	=	131,0 10 ⁴ mm ⁴
b	=	50,00 mm	E	=	2,10 *10 ⁵ N/mm ²	e	=	10 mm
c	=	15,00 mm	v	=	0,30	$W_{eff,y,corr}$	=	17216,0 mm ³
t _{nom}	=	1,50 mm	G	=	81000 N/mm ²	$W_{eff,y,ten}$	=	17820,0 mm ³
t	=	1,50 mm	γ_M	=	1,0	$W_{eff,y,min}$	=	17216,0 mm ³
A	=	396 mm ²	$A_{eff,c}$	=	382 mm ²	I_t	=	315,0 mm ⁴
i_y	=	58 mm	I_y	=	131 10 ⁴ mm ⁴	I_w	=	1458 *10 ⁶ mm ⁶
i_z	=	16 mm	I_z	=	93 10 ⁴ mm ⁴			

$$M_{Ed} = 1,56 \text{ kNm}$$

$$N_{Ed} = 15,60 \text{ kN}$$

$$L_{cr,y} = 3100 \text{ mm} \quad L_{cr,z} = 500 \text{ mm}$$

$$L_{kip} = 500 \text{ mm}$$

$$\Delta M_{yEd} = e_{Ny} N_{Ed} \quad \text{dubble symmetric} \rightarrow e_{Ny} = 0$$

$$e_{Ny} = 10 \text{ mm} \quad \Delta M_{yEd} = 0,16 \text{ kNm}$$

$$N_{Ed} / N_{cRd} + [M_{yEd} + \Delta M_{yEd}] M_{cvRd,com} = 0,401 < 1 \rightarrow \text{OK}$$

Buckling resistance check

$$N_{Ed} / [\chi_y (N_{rk} / \gamma_{M1})] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} (M_{yRk} / \gamma_{M1})]$$

$$\text{met } \gamma_{M1} = 1,0 \rightarrow$$

$$N_{Ed} / [\chi_y N_{rk}] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} M_{yRk}]$$

$$N_{rk} = f_{yb} A_{eff} = 133,7 \text{ kN}$$

$$M_{yRk} = f_{yb} W_{eff,y,min} = 6,0 \text{ kNm}$$

$$\Delta M_{yEd} = 0 \text{ kNm}$$

$$\alpha_y = 0,21$$

$$\alpha_z = 0,34$$

$$\bar{\lambda} = \sqrt{A_{eff} f_{yb} / N_{cr} = L_{cr} / i \sqrt{[(A_{eff} / A) / \lambda_1]}}$$

$$\chi = 1 / [\phi + \sqrt{(\phi - \bar{\lambda}^2)}]$$

$$\phi = 0,5 [1 + \alpha (\bar{\lambda} - 0,2) + \bar{\lambda}^2]$$

$$\lambda_1 = \pi \sqrt{E / f_{yb}} = 76,95$$

$$\bar{\lambda}_y = L_{cr,y} / i_y \sqrt{[A_{eff} / A] / \lambda_1} \quad \bar{\lambda}_y = 0,682$$

$$\bar{\lambda}_z = L_{cr,z} / i_z \sqrt{[A_{eff} / A] / \lambda_1} \quad \bar{\lambda}_z = 0,399$$

$$\phi_y = 0,783 \quad \chi_y = 0,856$$

$$\phi_z = 0,613 \quad \chi_z = 0,927$$

$$N_{crT} = 1 / i_o^2 [G I_t + \pi^2 E I_w / L_T^2] \quad L_T = 3100 \text{ mm}$$

$$i_o^2 = i_y^2 + i_z^2 + y_o^2 + z_o^2 \quad y_o^2 = 0 \text{ mm}$$

$$z_o^2 = 0 \text{ mm}$$

$$i_o^2 = 3620,0 \text{ mm}^2$$

$$N_{crT} = 93,90 \text{ kN}$$

$$\bar{\lambda}_T = \sqrt{[A_{eff} f_{yb} / N_{crT}]} = 1,193$$

$$\alpha_T = 0,34$$

$$\phi_T = 1,381$$

$$\chi_T = 0,482$$

$$\begin{aligned} \bar{\lambda}_{LT} &= \sqrt{[W_{\text{effy,min}} f_{yb} / M_{cr}]} = 0,106 \\ C_1 &= 1,77 \\ M_{cr} &= C_1 * \pi^2 E I_z / L^2 * \sqrt{[I_w / I_z + L^2 G I_t / (\pi^2 E I_z)]} = 540,89 \text{ kNm} \\ \alpha_{LT} &= 0,34 \\ \phi_T &= 0,490 \\ \chi_{LT} &= 1,034 \end{aligned}$$

determination of interaction factors k_{yy} and k_{zy} 4.4.2 table 4.7 and 4.8

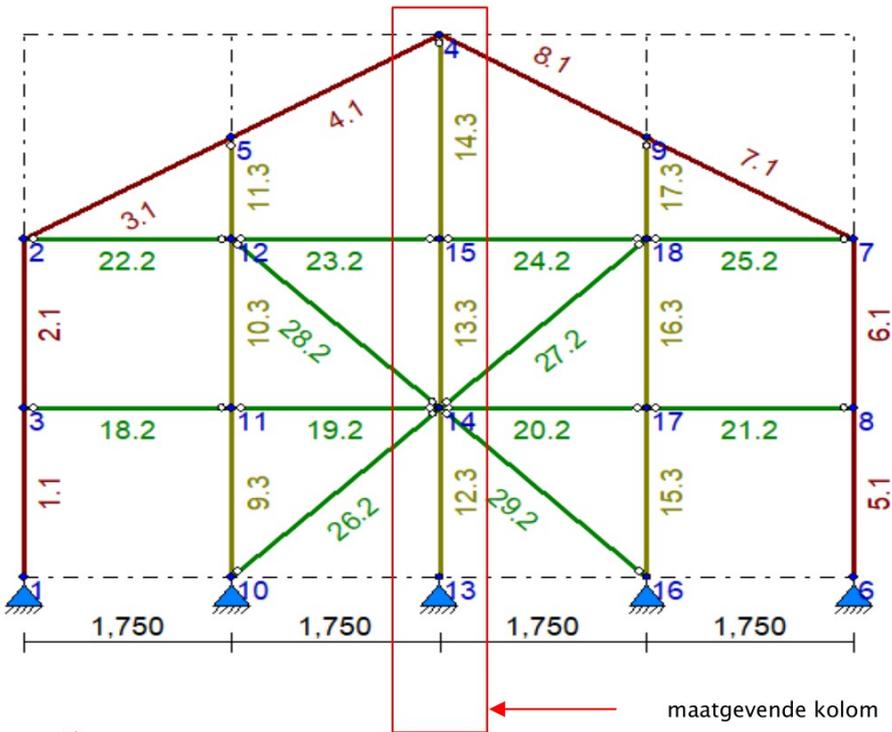
$$\begin{aligned} N_{cr,y} &= 10861 \text{ kN} & \mu_y &= 1,000 \\ N_{cr,z} &= 7710 \text{ kN} & \mu_z &= 1,000 \\ C_{my,o} &= 1,00004 \\ \varepsilon_y &= 2,22 & \alpha_{LT} &= 1,000 \\ C_{my} &= 1,00002 \\ C_{mLT} &= 1,096 & k_{yy} &= 1,097 \\ & & k_{zy} &= 1,097 \end{aligned}$$

Buckling resistance check

$$\begin{aligned} N_{Ed} / [\chi_y (N_{rk} / \gamma_{M1})] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{LT} (M_{yRk} / \gamma_{M1})] &= 0,440 < 1,0 \quad \text{oke} \\ N_{Ed} / [\chi_z (N_{rk} / \gamma_{M1})] + k_{zy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{LT} (M_{yRk} / \gamma_{M1})] &= 0,430 < 1,0 \quad \text{oke} \end{aligned}$$

Berekening kopgevels

as A maatgevend



geometrie

-belasting breedte $b = 1,75 \text{ m}$

-belasting op de constructie:

$q_{G,k}$	=	$0,2 \cdot 1,2$	=	$0,24 \text{ kN/m}^1$	permanent belasting dak + zonnepanelen
$q_{G,k}$	=	$0,15 \cdot 1,2$	=	$0,18 \text{ kN/m}^1$	permanent belasting dak + zonnepanelen
$F_{q,k}$	=		=	$1,26 \text{ kN}$	windbelasting uit het dak uit as B

Wind en sneeuwbelasting wordt door het raamwerkprogramma gegenereerd.

Zie voor berekening bijlage A blad 63 t/m 96

controle gevelkolommen

belastingbreedte gevel	b	=	$1,75 \text{ m}$	maatgevende kolom
belasting oppervlak dak	b	=	$1,20 \text{ m}$	
	L	=	$2,2 \text{ m}$	
kolomhoogte	h	=	$3,6 \text{ m}$	

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$c_{pi} = 0,20$ overdruk

$c_{pi} = -0,30$ onderdruk

B.G. 1: wind loodrecht op langsgewel ($\theta = 0^\circ$)

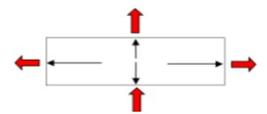
$c_{pe,10} = -1,2$ windzuiging dak, tabel 7.3a zone H

$c_{pe,10} = -1,1$ windzuiging gevel, tabel 7.1 zone B

winddruk + overdruk maatgevend

$c_{pe} = -1,4 \uparrow$ windvormfactor dak

$c_{pe} = -1,3 \leftarrow$ windvormfactor gevel



wind $\theta = 0^\circ$

B.G. 2: wind loodrecht op kopgevel ($\theta = 90^\circ$)

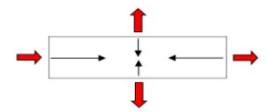
$c_{pe,10} = -1,2 \uparrow$ windzuiging dak, tabel 7.3b

$c_{pe,10} = 1,0 \rightarrow$ winddruk gevel, tabel 7.1 zone D

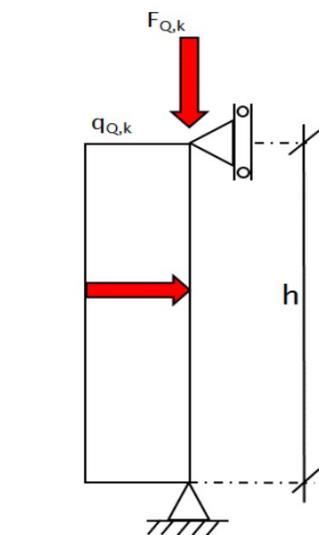
winddruk + onderdruk maatgevend

$c_{pe} = -1,5 \uparrow$ windvormfactor dak

$c_{pe} = 1,3 \leftarrow$ windvormfactor gevel



wind $\theta = 90^\circ$



geometrie

B.C.1; permanent + wind loodrecht op de langsgewel, belasting op de constructie:

$$\begin{aligned}
 F_{G,k} &= 0,3 \cdot 1,2 \cdot 2,2 &= & 0,8 \text{ kN} && \text{dak} \\
 F_{G,k} &= 0,2 \cdot 1,75 \cdot 3,6 &= & \underline{1,3} \text{ kN} && \text{gevel} \\
 F_{G,k} &= &= & 2,1 \text{ kN} && \text{totaal permanent} \\
 \\
 F_{Q,k} &= 0,55 \cdot -1,4 \cdot 1,2 \cdot 2,2 &= & -2,0 \text{ kN} && \text{windzuiging dak} \\
 F_{Q,k} &= &= & \underline{11,6} \text{ kN} && \text{reactie kracht uit windverband of schijfwerking} \\
 F_{Q,k} &= &= & 9,6 \text{ kN} && \text{totaal veranderlijk} \\
 \\
 F_{Ed} &= 1,08 \cdot 2,1 + 1,35 \cdot 9,6 &= & 15,2 \text{ kN} \\
 \\
 q_{Q,k} &= 0,55 \cdot 0,87 \cdot 1,3 \cdot 1,75 &= & 1,1 \text{ kN/m}^1 \\
 q_{Ed} &= 1,35 \cdot 1,1 &= & 1,49 \text{ kN/m}^1 \\
 \\
 M_{Ed} &= 1/8 \cdot 1,485 \cdot 3,6^2 &= & 2,4 \text{ kNm}
 \end{aligned}$$

B.C.2; permanent + wind loodrecht op de kopgevel, belasting op de constructie:

$$\begin{aligned}
 F_{G,k} &= 0,3 \cdot 1,2 \cdot 2,2 &= & 0,8 \text{ kN} && \text{dak} \\
 F_{G,k} &= 0,2 \cdot 1,75 \cdot 3,6 &= & \underline{1,3} \text{ kN} && \text{gevel} \\
 F_{G,k} &= &= & 2,1 \text{ kN} && \text{totaal permanent} \\
 \\
 F_{Q,k} &= 0,55 \cdot -1,5 \cdot 1,2 \cdot 2,2 &= & -2,2 \text{ kN} && \text{windzuiging dak} \\
 F_{Q,k} &= &= & \underline{0,0} \text{ kN} && \text{reactie kracht uit windverband of schijfwerking} \\
 F_{Q,k} &= &= & -2,2 \text{ kN} && \text{totaal veranderlijk} \\
 \\
 F_{Ed} &= 0,9 \cdot 2,1 + 1,35 \cdot -2,2 &= & -1,1 \text{ kN} \\
 \\
 q_{Q,k} &= 0,55 \cdot 0,87 \cdot 1,3 \cdot 1,75 &= & 1,1 \text{ kN/m}^1 \\
 q_{Ed} &= 1,35 \cdot 1,1 &= & 1,49 \text{ kN/m}^1 \\
 \\
 M_{Ed} &= 1/8 \cdot 1,485 \cdot 3,6^2 &= & 2,4 \text{ kNm}
 \end{aligned}$$

profiel 2 x C150/50/15 t = 1,5 mm

$$\begin{aligned}
 I_{eff,y} &= 262 \quad *10^4 \text{ mm}^4 \\
 W_{eff,y} &= 34432 \quad \text{mm}^3 \quad \text{weerstandsmoment op basis van de effectieve doorsnede}
 \end{aligned}$$

$$\begin{aligned}
 \sigma_{Ed} &= M_{Ed} / W_{eff,y} = 2,4 \cdot 10^6 / (34432 \cdot 10^3) = 69,7 \text{ N/mm}^2 < 320 \text{ N/mm}^2 \\
 \text{doorbuiging} \quad W_{max} &< 0,004 L \\
 W_2 + W_3 &< 0,004 L
 \end{aligned}$$

$$\begin{aligned}
 W_1 &= 5 q_{G,k} l^4 / (384 E I_y) = 5 \cdot 0 \cdot (3,6 \cdot 10^3)^4 / (384 \cdot 210000 \cdot 262 \cdot 10^4) = 0,00 \text{ mm} \\
 W_2 &= &= & 0,00 \text{ mm} \\
 W_3 &= 5 q_{q,k} l^4 / (384 E I_y) = 5 \cdot 1,1 \cdot (3,6 \cdot 10^3)^4 / (384 \cdot 210000 \cdot 262 \cdot 10^4) = 4,37 \text{ mm} \quad \text{veranderlijk} \\
 W_c &= &= & 0,0 \text{ mm} \quad \text{zeeg} \\
 \\
 W_{tot} &= W_1 + W_2 + W_3 = 0,00 + 0,00 + 4,37 = 4,4 \text{ mm} \\
 W_2 + W_3 &= &= & 4,4 - 0,00 = 4,4 \text{ mm} < 0,004 \cdot 3,6 \cdot 10^3 = 14,4 \text{ mm} \\
 W_{max} &= W_{tot} - W_c = 4,4 - 0 = 4,4 \text{ mm} < 0,004 \cdot 3,6 \cdot 10^3 = 14,4 \text{ mm}
 \end{aligned}$$

profiel eigenschappen			
h	=	150,0 mm	$f_{yb} = 320 \text{ N/mm}^2$
b	=	50,00 mm	$E = 2,10 \cdot 10^5 \text{ N/mm}^2$
c	=	15,00 mm	$v = 0,30$
t _{nom}	=	1,50 mm	$G = 81000 \text{ N/mm}^2$
t	=	1,50 mm	$\gamma_M = 1,0$
A	=	396 mm ²	$A_{eff,c} = 382 \text{ mm}^2$
i _y	=	58 mm ²	$I_y = 131 \cdot 10^4 \text{ mm}^4$
i _z	=	16 mm ²	$I_z = 93 \cdot 10^4 \text{ mm}^4$
			$I_{eff,y} = 131,0 \cdot 10^4 \text{ mm}^4$
			$e = 10 \text{ mm}$
			$W_{eff,y,corr} = 17216,0 \text{ mm}^3$
			$W_{eff,y,ten} = 17820,0 \text{ mm}^3$
			$W_{eff,y,min} = \boxed{17216,0} \text{ mm}^3$
			$I_t = 315,0 \text{ mm}^4$
			$I_w = 1458 \cdot 10^6 \text{ mm}^6$

$$\begin{aligned}
 M_{Ed} &= 1,20 \text{ kNm} && \text{moment per stijl} \\
 N_{Ed} &= 7,61 \text{ kN} && \text{normaalkracht per stijl} \\
 L_{cr,y} &= 3600 \text{ mm} && L_{cr,z} = 2000 \text{ mm} \\
 L_{kip} &= 2000 \text{ mm} \\
 \Delta M_{yEd} &= e_{Ny} N_{Ed} && \text{dubble symmetric} \rightarrow e_{Ny} = 0 \\
 e_{Ny} &= 0 \text{ mm} && \Delta M_{yEd} = 0 \text{ kNm} \\
 N_{Ed} / N_{cRd} + [M_{yEd} + \Delta M_{yEd}] M_{cvRd.com} &= 0,280 < 1 \rightarrow \text{OK}
 \end{aligned}$$

Buckling resistance check

$$N_{Ed} / [\chi_y (N_{rk} / \gamma_{M1})] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} (M_{yRk} / \gamma_{M1})]$$

$$\text{met } \gamma_{M1} = 1,0 \rightarrow$$

$$N_{Ed} / [\chi_y N_{rk}] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} M_{yRk}]$$

$$\begin{aligned}
 N_{rk} &= f_{yb} A_{eff} = 122,2 \text{ kN} \\
 M_{yRk} &= f_{yb} W_{eff,y,min} = 5,5 \text{ kNm}
 \end{aligned}$$

$$\begin{aligned}
 \Delta M_{yEd} &= 0 \text{ kNm} \\
 \alpha_y &= 0,21 \\
 \alpha_z &= 0,34 \\
 \bar{\lambda} &= \sqrt{ A_{eff} f_{yb} / N_{cr} = L_{cr} / i \sqrt{ [(A_{eff} / A) / \lambda_1] }
 \end{aligned}$$

$$\begin{aligned}
 \chi &= 1 / [\phi + \sqrt{ (\phi - \bar{\lambda}^2) }] \\
 \phi &= 0,5 [1 + \alpha (\bar{\lambda} - 0,2) + \bar{\lambda}^2]
 \end{aligned}$$

$$\lambda_1 = \pi \sqrt{ E / f_{yb} } = 80,48$$

$$\begin{aligned}
 \bar{\lambda}_y &= L_{cr,y} / i_y \sqrt{ [A_{eff} / A] / \lambda_1} && \bar{\lambda}_y = 0,757 \\
 \bar{\lambda}_z &= L_{cr,z} / i_z \sqrt{ [A_{eff} / A] / \lambda_1} && \bar{\lambda}_z = 1,525
 \end{aligned}$$

$$\begin{aligned}
 \phi_y &= 0,845 && \chi_y = 0,819 \\
 \phi_z &= 1,889 && \chi_z = 0,333
 \end{aligned}$$

$$N_{crT} = 1 / i_o^2 [G I_t + \pi^2 E I_w / L_T^2] \quad L_T = 3600 \text{ mm}$$

$$\begin{aligned}
 i_o^2 &= i_y^2 + i_z^2 + y_o^2 + z_o^2 && y_o^2 = 0 \text{ mm} \\
 & && z_o^2 = 0 \text{ mm}
 \end{aligned}$$

$$i_o^2 = 3620,0 \text{ mm}^2$$

$$N_{crT} = 71,45 \text{ kN}$$

$$\begin{aligned}
 \bar{\lambda}_T &= \sqrt{ [A_{eff} f_{yb} / N_{crT}] } = 1,308 && \alpha_T = 0,34 \\
 & && \phi_T = 1,544 \\
 & && \chi_T = 0,423
 \end{aligned}$$

$$\bar{\lambda}_{LT} = \sqrt{ [W_{eff,y,min} f_{yb} / M_{cr}] } = 0,401$$

$$C_1 = 1,77$$

$$M_{cr} = C_1 \pi^2 E I_z / L^2 \sqrt{ [I_w / I_z + L^2 G I_t / (\pi^2 E I_z)] } = 34,34 \text{ kNm}$$

$$\alpha_{LT} = 0,34$$

$$\phi_T = 0,614$$

$$\chi_{LT} = 0,926$$

determination of interaction factors k_{yy} and k_{zy} 4.4.2 table 4.7 and 4.8

$N_{cr,y}$	=	679	kN	μ_y	=	0,998
$N_{cr,z}$	=	482	kN	μ_z	=	0,989
$C_{my,o}$	=	1,00034				
ε_y	=	3,50		α_{LT}	=	1,000
C_{my}	=	1,00012				
C_{mLT}	=	1,066		k_{yy}	=	1,076
				k_{zy}	=	1,067

Buckling resistance check

$$N_{Ed} / [\chi_y (N_{rk} / \gamma_{M1})] + k_{yy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} (M_{yRk} / \gamma_{M1})] = 0,330 < 1,0 \quad \text{voldoet}$$

$$N_{Ed} / [\chi_z (N_{rk} / \gamma_{M1})] + k_{zy} [M_{yEd} + \Delta M_{yEd}] / [\chi_{Lt} (M_{yRk} / \gamma_{M1})] = 0,439 < 1,0 \quad \text{voldoet}$$

Technosoft Raamwerken release 6.82a

constructie as B

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanen as B en C
 Dimensies....: kN;m;rad (tenzij anders aangegeven)

Belastingbreedte.: 0.875
 Rekenmodel.....: 2e-orde-elastisch.
 Theorieën voor de bepaling van de krachtsverdeling:

- 1) Losse belastinggevallen:
Lineaire-elasticiteitstheorie
- 2) Uiterste grenstoestand:
Geometrisch niet lineair alle staven.
Fysisch lineair alle staven.
- 3) Gebruiksgrenstoestand:
Geometrisch niet lineair alle staven.
Fysisch lineair alle staven.

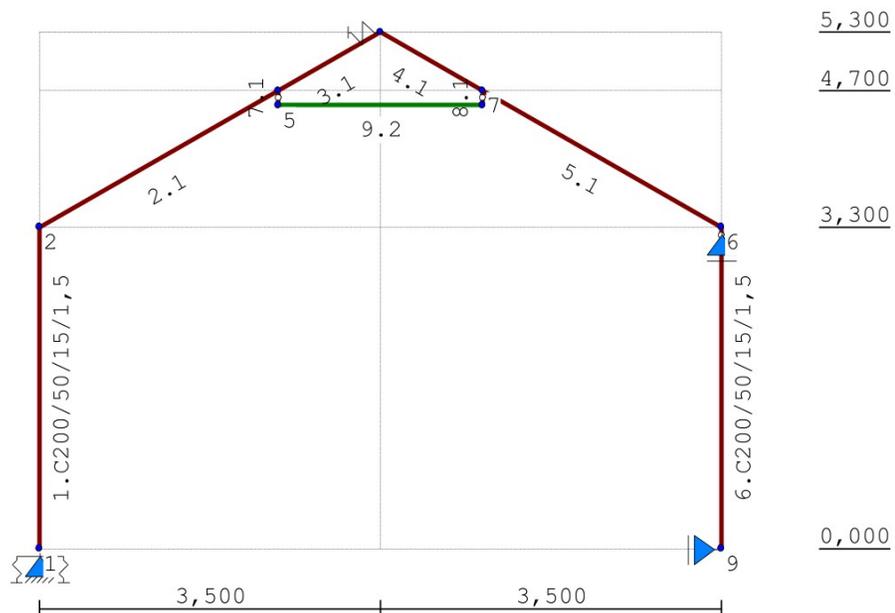
Maximum aantal iteraties.....: 50
 Max.deellengte kolommen/wanden: 0.500 Max.deellengte balken/vloeren: 0.500
 Max. X-verplaatsing in UGT.....: 0.500 Max. Z-verplaatsing in UGT....: 0.250

Gunstige werking van de permanente belasting wordt automatisch verwerkt.

Toegepaste normen volgens Eurocode met Nederlandse NB

Belastingen	NEN-EN 1990:2002	C2:2010,A1:2019	NB:2019 (nl)
	NEN-EN 1991-1-1:2002	C1/C11:2019	NB:2019 (nl)
	NEN-EN 1991-1-3:2003	C1:2009	NB:2011 (nl)
	NEN-EN 1991-1-4:2005	C2:2011	NB:2011 (nl)

GEOMETRIE



Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanen as B en C

STRAMIENLIJNEN

Nr.	Naam	X	Z-min	Z-max
1		0.000	0.000	5.300
2		7.000	0.000	5.300
3		3.500	0.000	5.300

NIVEAUS

Nr.	Z	X-min	X-max
1	0.000	0.000	7.000
2	3.300	0.000	7.000
3	5.300	0.000	7.000
4	4.700	0.000	7.000

MATERIALEN

Mt	Kwaliteit	E-modulus[N/mm2]	S.G.	Pois.	Uitz. coëff
1	S235	210000	78.5	0.30	1.2000e-05

PROFIELEN [mm]

Prof.	Omschrijving	Materiaal	Oppervlak	Traagheid	Vormf.
1	C200/50/15/1,5	1:S235	2.2800e+03	2.4692e+06	0.00
2	C100/50/15/1,5	1:S235	3.3600e+02	5.1700e+05	0.00

PROFIELEN vervolg [mm]

Prof.	Staaftype	Breedte	Hoogte	e	Type	b1	h1	b2	h2
1	0:Normaal	50	200	100.0					
2	0:Normaal	50	100	25.0					

KNOPEN

Knoop	X	Z	Knoop	X	Z
1	0.000	0.000	6	7.000	3.300
2	0.000	3.300	7	4.550	4.700
3	3.500	5.300	8	4.550	4.550
4	2.450	4.700	9	7.000	0.000
5	2.450	4.550			

STAVEN

St.	ki	kj	Profiel	Aansl.i	Aansl.j	Lengte	Opm.
1	1	2	1:C200/50/15/1,5	NDM	NDM	3.300	
2	2	4	1:C200/50/15/1,5	NDM	NDM	2.822	
3	4	3	1:C200/50/15/1,5	NDM	NDM	1.209	
4	3	7	1:C200/50/15/1,5	NDM	NDM	1.209	
5	7	6	1:C200/50/15/1,5	NDM	NDM	2.822	
6	9	6	1:C200/50/15/1,5	NDM	ND	3.300	
7	4	5	1:C200/50/15/1,5	NDM	ND	0.150	
8	7	8	1:C200/50/15/1,5	NDM	ND	0.150	
9	5	8	2:C100/50/15/1,5	NDM	NDM	2.100	

VASTE STEUNPUNTEN

Nr.	knoop	Kode	XZR	1=vast	0=vrij	Hoek
1	1	110				0.00
2	6	010				0.00
3	9	100				0.00

VEREN

Veer	Knoop	Richting	Hoek	Veerwaarde	Type	Ondergrens	Bovengrens
1	1	3:Rotatie	0.00	2.500e+01	Normaal	-1.000e+10	1.000e+10

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanten as B en C

VEREN

Veer	Knoop	Richting	Hoek	Veerwaarde	Type	Ondergrens	Bovengrens
2	3	1:X-transl.	0.00	2.500e+01	Normaal	-1.000e+10	1.000e+10

BELASTINGGENERATIE ALGEMEEN.

Betrouwbaarheidsklasse.....	1	Referentieperiode.....	15
Gebouwdiepte.....	10.00	Gebouwhoogte.....	5.50
Niveau aansl.terrein.....	0.00	E.g. scheid.w. [kN/m2]:	0.00

WIND

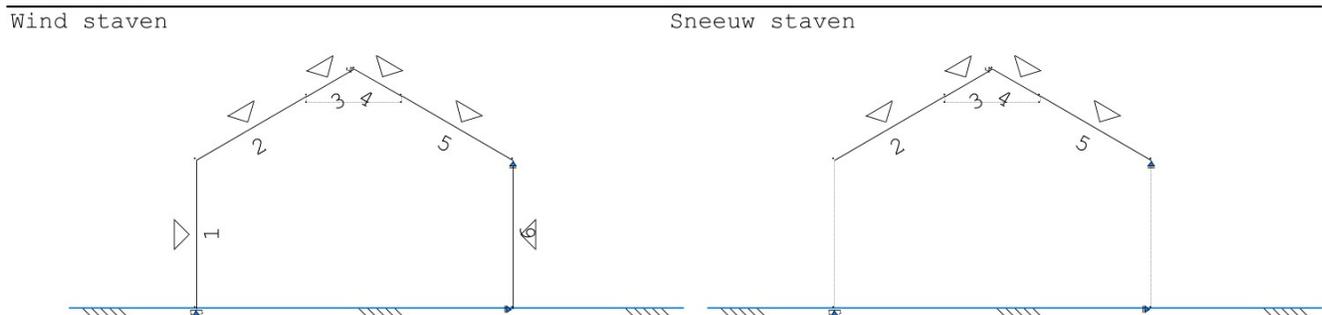
Terrein categorie ...[4.3.2]....: Onbebouwd			
Windgebied	3	Vb,0 ..[4.2].....	24.500
Referentie periode wind.....	15.00	Vb(p)..[4.2].....	22.458
K	[4.2].....	n	[4.2].....
Positie spant in het gebouw....	2.000	Kr	[4.3.2].....
z0	[4.3.2]....	Zmin ..[4.3.2].....	4.000
Co wind van links ..[4.3.3]....	1.000	Co wind van rechts....	1.000
Co wind loodrecht ..[4.3.3]....	1.000		
Cpi wind van links ..[7.2.9]....	0.200	-0.300	
Cpi windloodrecht ...[7.2.9]....	0.200	-0.300	
Cpi wind van rechts .[7.2.9]....	0.200	-0.300	
Cfr windwrijving[7.5].....	0.040		

SNEEUW

Sneeuwbelasting (sk) 50 jaar :	0.70
Sneeuwbelasting (sn) n jaar :	0.53

STAAFTYPEN

Type	staven
1:Vloer.	: 9
4:Wand / kolom.	: 7,8
5:Linker gevel.	: 1
6:Rechter gevel.	: 6
7:Dak.	: 2-5

LASTVELDEN

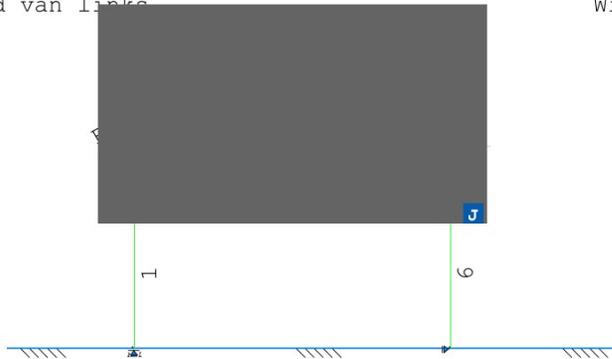
Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanten as B en C

WIND DAKTYPES

Nr.	Staaftype	reductie bij wind van links	reductie bij wind van rechts	Cpe volgens art:
1	1 Gevel	1.000	1.000	7.2.2
2	2-3 Zadeldak	1.000	1.000	7.2.5
3	4-5 Zadeldak	1.000	1.000	7.2.5
4	6 Gevel	1.000	1.000	7.2.2

WIND ZONES

Wind van links Wind van rechts

**WIND VAN LINKS ZONES**

Nr.	Staaftype	Positie	Lengte	Zone
1	1	0.000	3.300	D
2	2-3	0.000	1.000	F/G
3	2-3	1.000	3.031	H
4	4-5	0.000	1.000	J
5	4-5	1.000	3.031	I
6	6	0.000	3.300	E

Wind indexen

Index	CsCd	Cpe/Cpi	qp	breedte	reductie	Qw	Zone	Hoek(en)
Qw1		0.300	0.471	0.875		-0.124	-i	
Qw2		-0.300	0.471	0.875		0.124	-i	
Qw3	1.00	0.800	0.471	0.875		-0.329	D	
Qw4	1.00	0.690	0.471	0.875		-0.284	F	29.7
Qw5	1.00	0.396	0.471	0.875		-0.163	H	29.7
Qw6	1.00	-0.510	0.471	0.875		0.210	J	29.7
Qw7	1.00	-0.400	0.471	0.875		0.165	I	29.7
Qw8	1.00	0.500	0.471	0.875		-0.206	E	
Qw9		-0.200	0.471	0.875		0.082	+i	
Qw10		0.200	0.471	0.875		-0.082	+i	
Qw11	1.00	-0.508	0.471	0.875		0.209	F	29.7
Qw12	1.00	-0.202	0.471	0.875		0.083	H	29.7
Qw13	1.00	-0.800	0.471	0.875		0.329	B	
Qw14	1.00	0.800	0.471	0.875		-0.329	B	
Qw15	1.00	-0.796	0.471	0.875		0.328	H	29.7
Qw16	1.00	-0.500	0.471	0.875		0.206	C	
Qw17	1.00	0.500	0.471	0.875		-0.206	C	
Qw18	1.00	-0.500	0.471	0.875		0.206	I	29.7

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanten as B en C

SNEEUW DAKTYPEN

Staaft	artikel
2-3	5.3.3 Zadeldak
4-5	5.3.3 Zadeldak

Sneeuw indexen

Index	art	μ	s_k	red. posfac	breedte	Q_s	hoek	
Qs1	5.3.3	0.800	0.53	1.00		0.875	0.368	29.7
Qs2	5.3.3	0.400	0.53	1.00		0.875	0.184	29.7

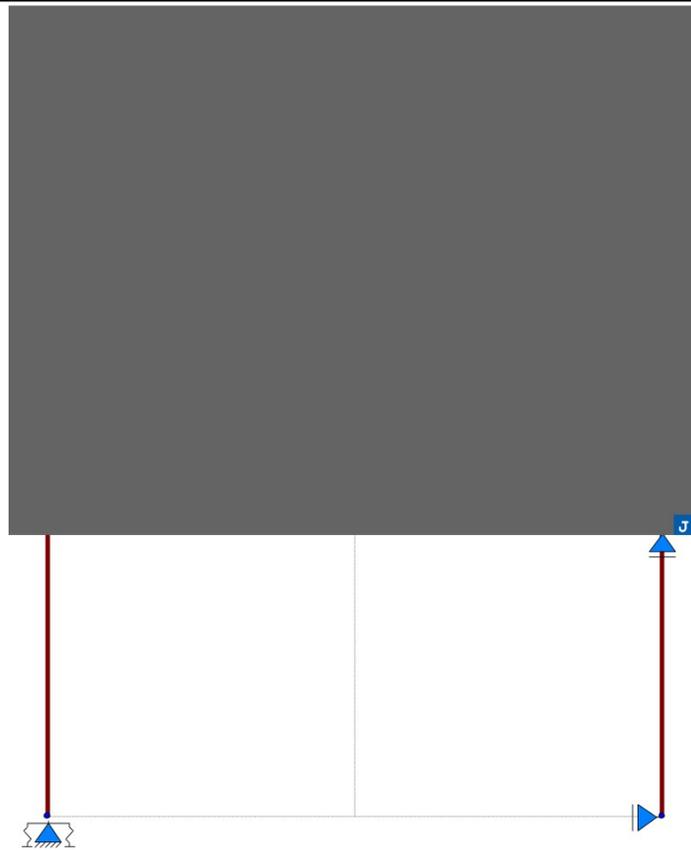
BELASTINGGEVALLEN

B.G.	Omschrijving	Type
	1 permanent	EGZ=0.00
	1 Permanente belasting	1
g	2 Wind van links onderdruk A	7
g	3 Wind van links overdruk A	8
g	4 Wind van links onderdruk B	9
g	5 Wind van links overdruk B	10
g	6 Wind van links onderdruk C	37
g	7 Wind van links overdruk C	38
g	8 Wind van links onderdruk D	39
g	9 Wind van links overdruk D	40
g	10 Wind loodrecht onderdruk A	15
g	11 Wind loodrecht overdruk A	16
g	12 Wind loodrecht onderdruk B	45
g	13 Wind loodrecht overdruk B	46
g	14 Sneeuw A	22
g	15 Sneeuw B	23
g	16 Sneeuw C	33
g	= gegenereerd belastinggeval	

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanen as B en C

BELASTINGEN

B.G:1 permanent



STAAFBELASTINGEN

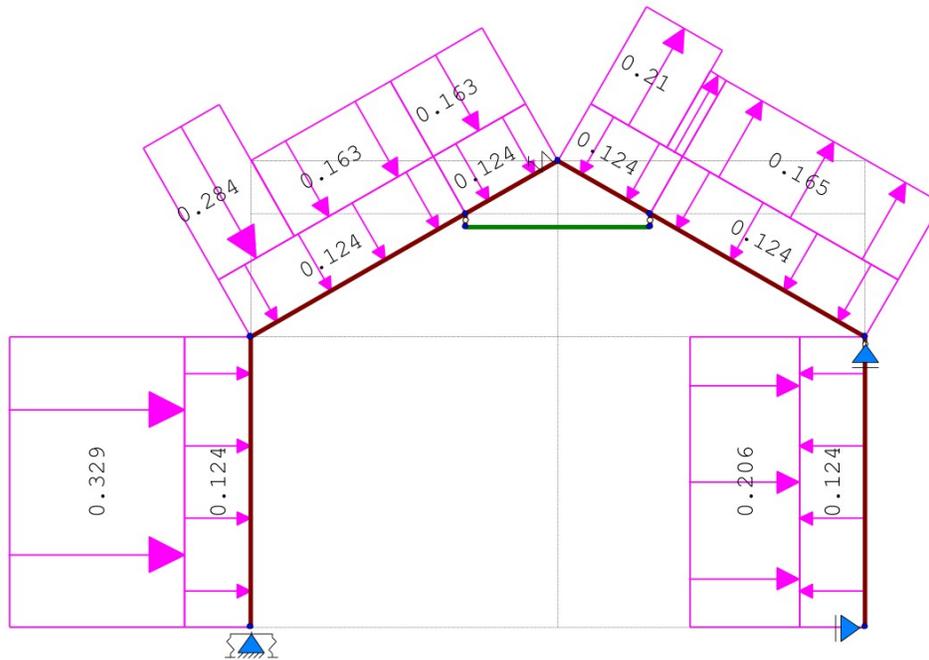
B.G:1 permanent

Staal	Type	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
2	5:QZGloaal	-0.13	-0.13	0.000	0.000			
3	5:QZGloaal	-0.13	-0.13	0.000	0.000			
4	5:QZGloaal	-0.13	-0.13	0.000	0.000			
5	5:QZGloaal	-0.13	-0.13	0.000	0.000			
2	5:QZGloaal	-0.13	-0.13	0.500	0.000			
3	5:QZGloaal	-0.13	-0.13	0.000	0.500			
4	5:QZGloaal	-0.13	-0.13	0.500	0.000			
5	5:QZGloaal	-0.13	-0.13	0.000	0.500			

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

BELASTINGEN

B.G:2 Wind van links onderdruk A

**STAAFBELASTINGEN**

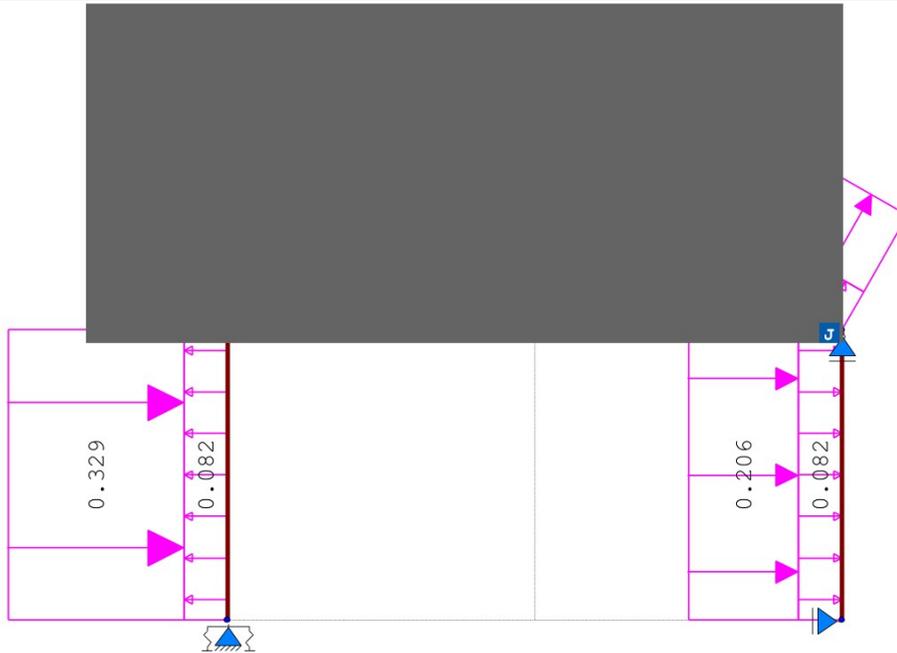
B.G:2 Wind van links onderdruk A

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.12	0.12	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw4	-0.28	-0.28	0.000	1.822	0.00	0.20	0.00
1	1:QZLokaal	Qw5	-0.16	-0.16	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.16	-0.16	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw6	0.21	0.21	0.000	0.209	0.00	0.20	0.00
4	1:QZLokaal	Qw7	0.16	0.16	1.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw7	0.16	0.16	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: tussenspanten as B en C

BELASTINGEN

B.G:3 Wind van links overdruk A



STAAFBELASTINGEN

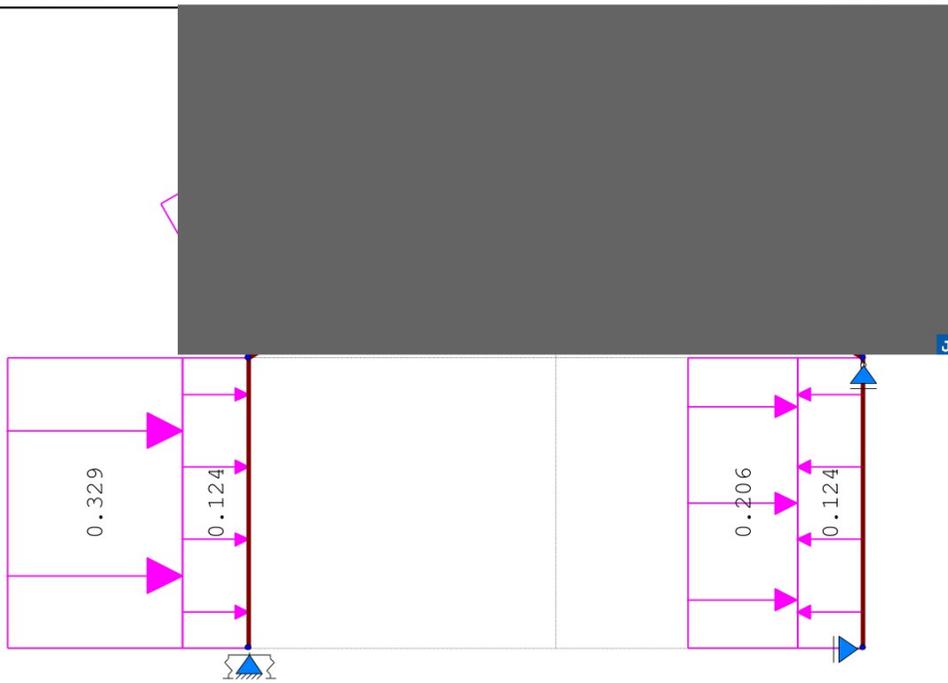
B.G:3 Wind van links overdruk A

Staal	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.08	-0.08	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw4	-0.28	-0.28	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw5	-0.16	-0.16	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.16	-0.16	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw6	0.21	0.21	0.000	0.209	0.00	0.20	0.00
4	1:QZLokaal	Qw7	0.16	0.16	1.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw7	0.16	0.16	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

BELASTINGEN

B.G:4 Wind van links onderdruk B



STAAFBELASTINGEN

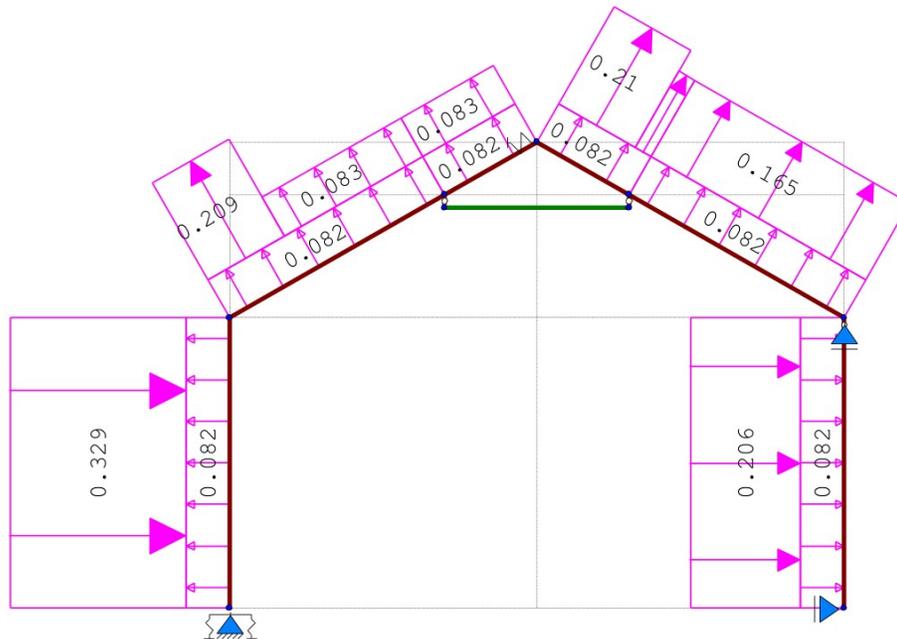
B.G:4 Wind van links onderdruk B

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.12	0.12	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw11	0.21	0.21	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw12	0.08	0.08	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.08	0.08	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw6	0.21	0.21	0.000	0.209	0.00	0.20	0.00
4	1:QZLokaal	Qw7	0.16	0.16	1.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw7	0.16	0.16	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

BELASTINGEN

B.G:5 Wind van links overdruk B



STAAFBELASTINGEN

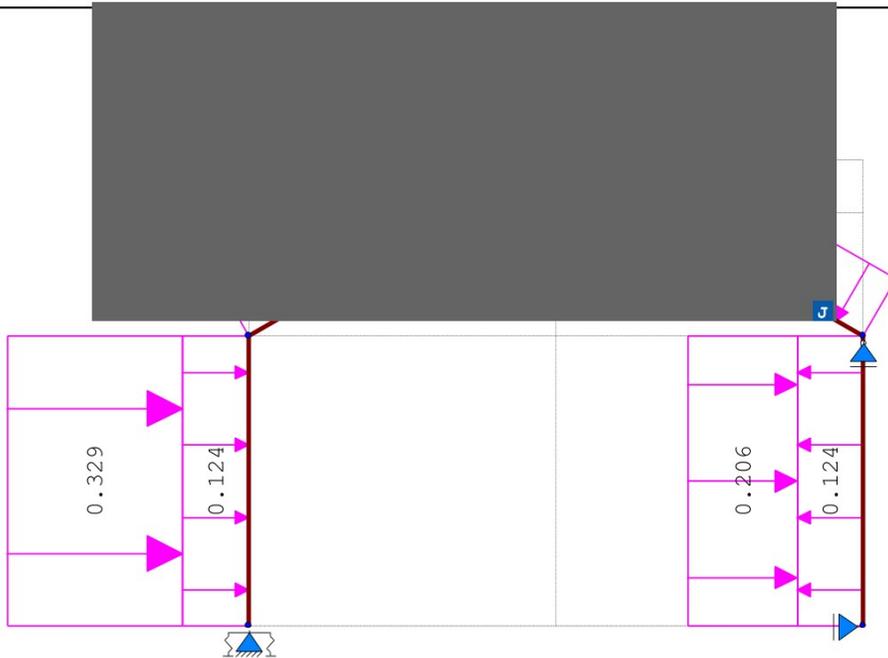
B.G:5 Wind van links overdruk B

Staal	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.08	-0.08	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw11	0.21	0.21	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw12	0.08	0.08	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.08	0.08	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw6	0.21	0.21	0.000	0.209	0.00	0.20	0.00
4	1:QZLokaal	Qw7	0.16	0.16	1.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw7	0.16	0.16	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

BELASTINGEN

B.G:6 Wind van links onderdruk C



STAAFBELASTINGEN

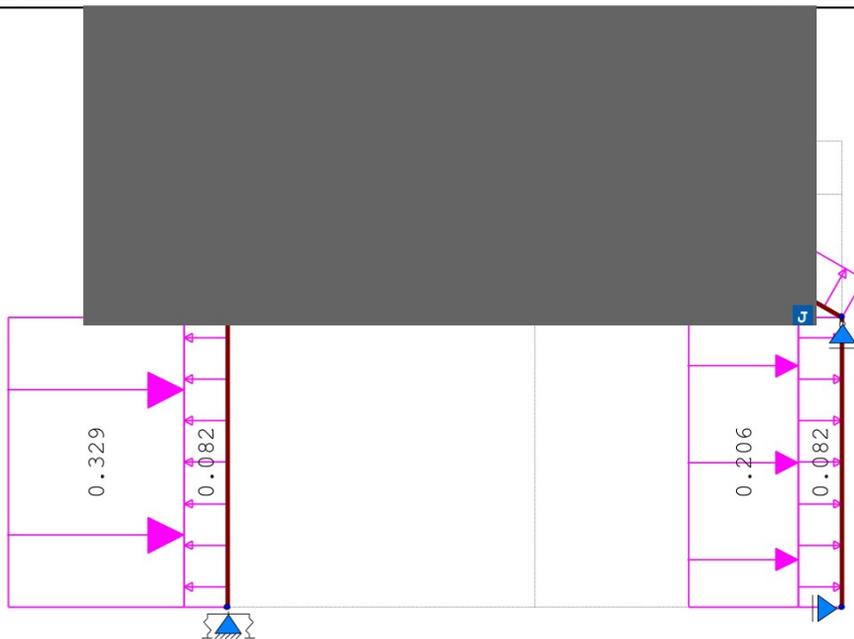
B.G:6 Wind van links onderdruk C

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.12	0.12	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw4	-0.28	-0.28	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw5	-0.16	-0.16	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.16	-0.16	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

BELASTINGEN

B.G:7 Wind van links overdruk C



STAAFBELASTINGEN

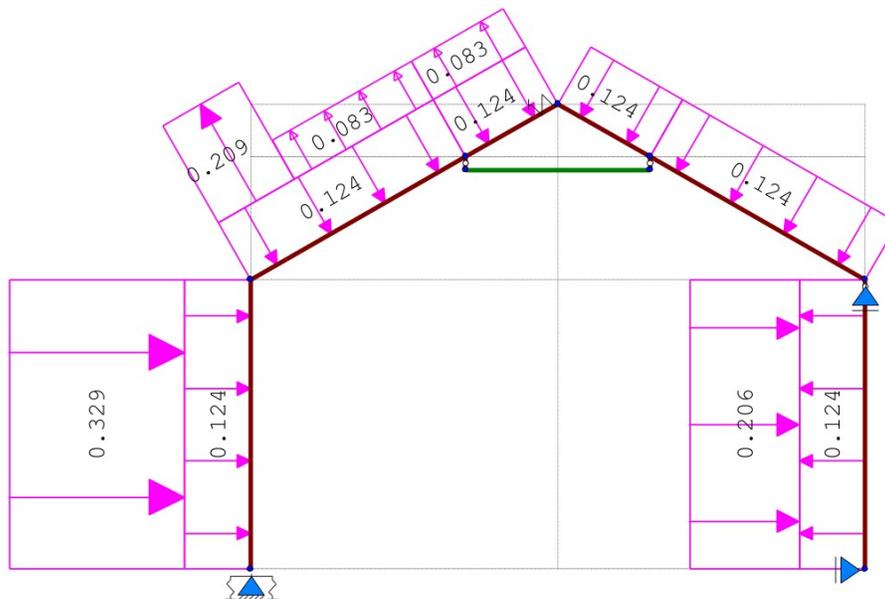
B.G:7 Wind van links overdruk C

Staaftype	Type	Index	q1/p/m	q2	A	B	Ψ_0	Ψ_1	Ψ_2
1	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.08	-0.08	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw4	-0.28	-0.28	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw5	-0.16	-0.16	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.16	-0.16	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: tussenspanten as B en C

BELASTINGEN

B.G:8 Wind van links onderdruk D

**STAAFBELASTINGEN**

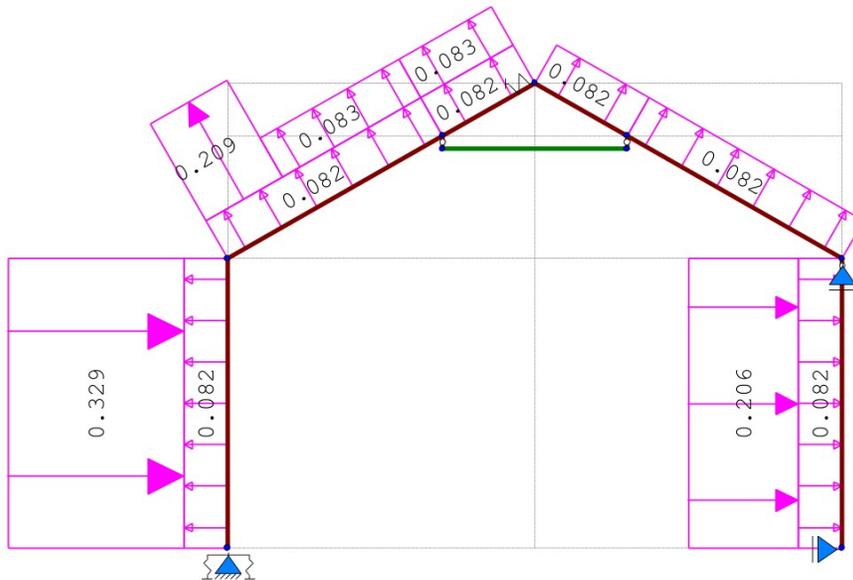
B.G:8 Wind van links onderdruk D

Staat	Type	Index	q1/p/m	q2	A	B	Ψ_0	Ψ_1	Ψ_2
1	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.12	0.12	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw11	0.21	0.21	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw12	0.08	0.08	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.08	0.08	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanen as B en C

BELASTINGEN

B.G:9 Wind van links overdruk D

**STAAFBELASTINGEN**

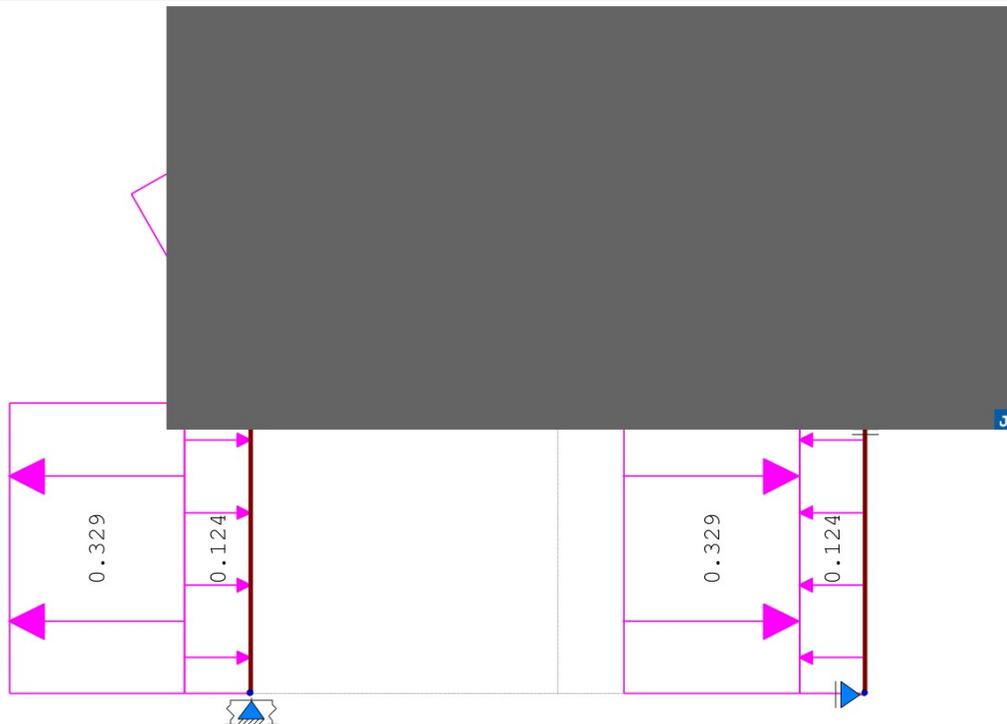
B.G:9 Wind van links overdruk D

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.08	-0.08	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw11	0.21	0.21	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw12	0.08	0.08	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.08	0.08	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

BELASTINGEN

B.G:10 Wind loodrecht onderdruk A



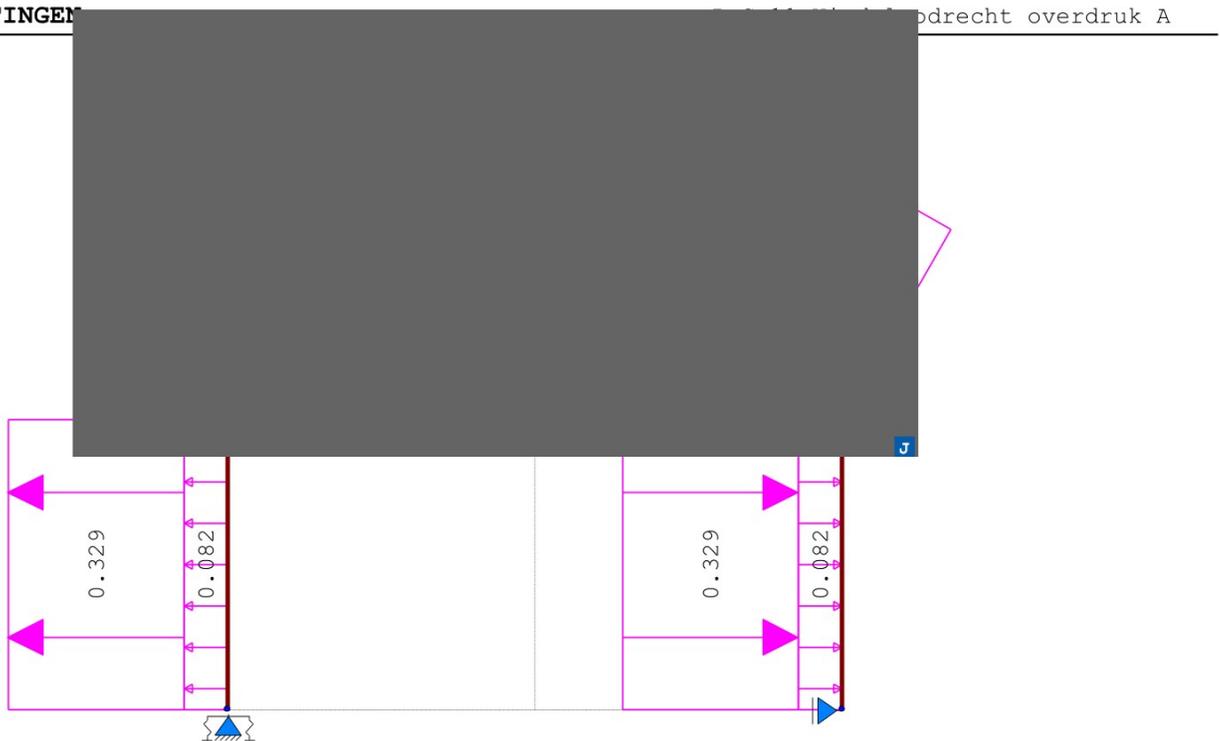
STAAFBELASTINGEN

B.G:10 Wind loodrecht onderdruk A

Staaft	Type	Index	q1/p/m	q2	A	B	Ψ_0	Ψ_1	Ψ_2
1	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.12	0.12	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw13	0.33	0.33	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw14	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw15	0.33	0.33	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw15	0.33	0.33	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw15	0.33	0.33	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw15	0.33	0.33	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

BELASTINGEN



STAAFBELASTINGEN

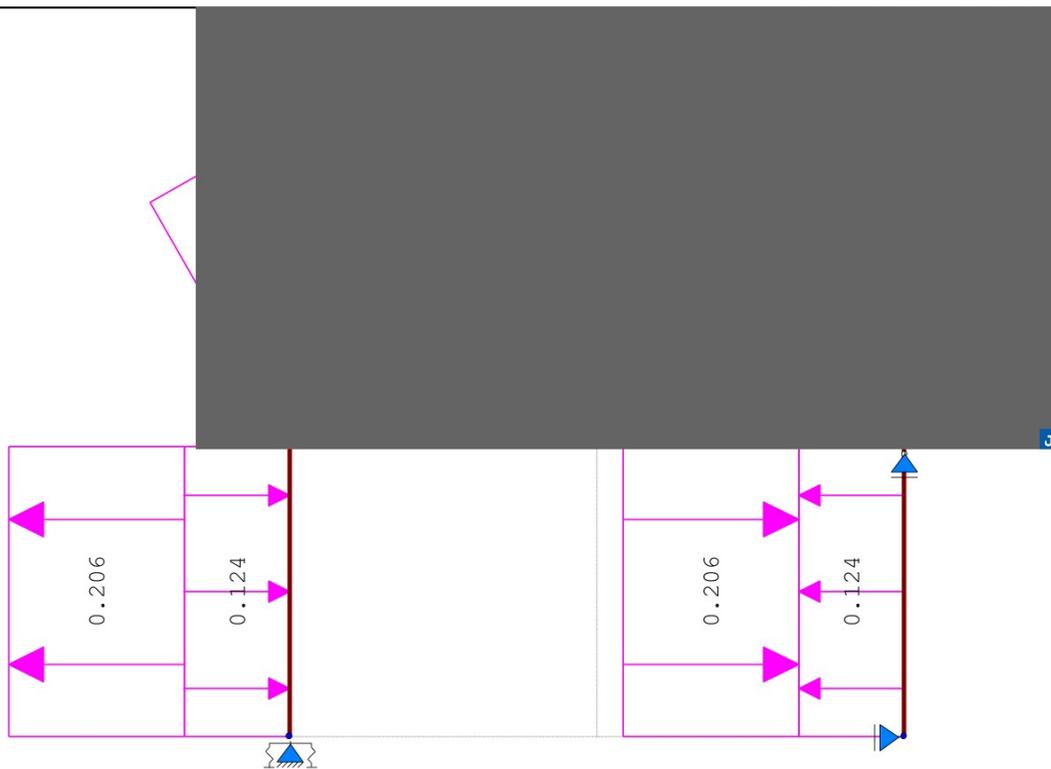
B.G:11 Wind loodrecht overdruk A

Staaft	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.08	-0.08	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw13	0.33	0.33	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw14	-0.33	-0.33	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw15	0.33	0.33	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw15	0.33	0.33	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw15	0.33	0.33	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw15	0.33	0.33	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanten as B en C

BELASTINGEN

B.G:12 Wind loodrecht onderdruk B



STAAFBELASTINGEN

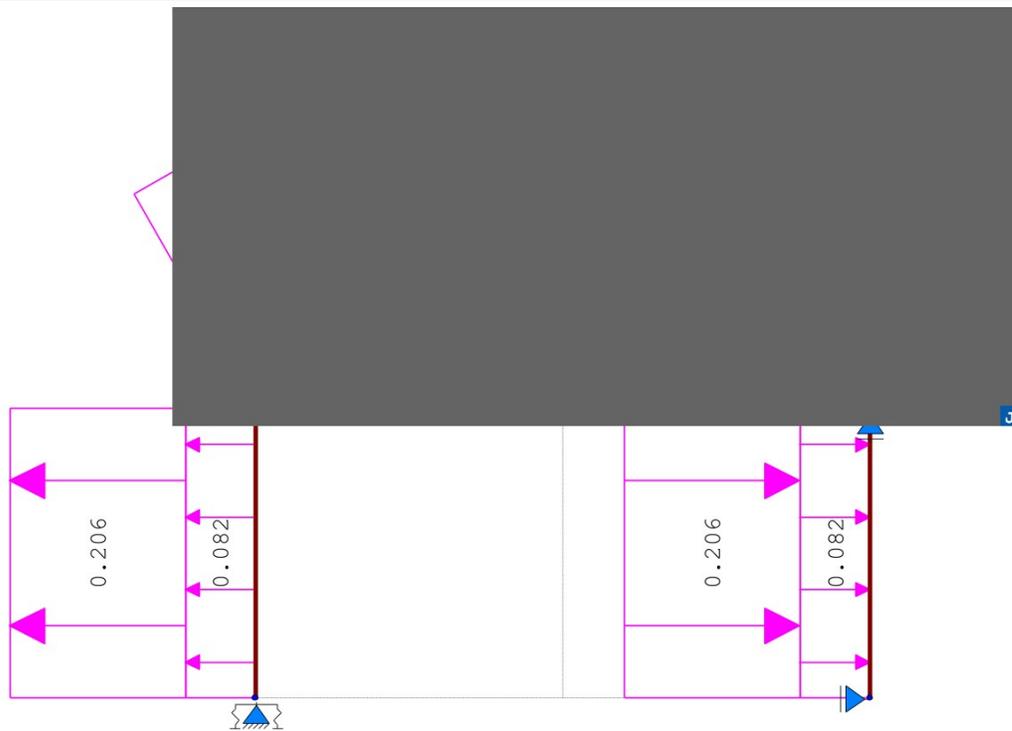
B.G:12 Wind loodrecht onderdruk B

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.12	-0.12	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.12	0.12	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw16	0.21	0.21	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw17	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw18	0.21	0.21	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw18	0.21	0.21	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw18	0.21	0.21	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw18	0.21	0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

BELASTINGEN

B.G:13 Wind loodrecht overdruk B



STAAFBELASTINGEN

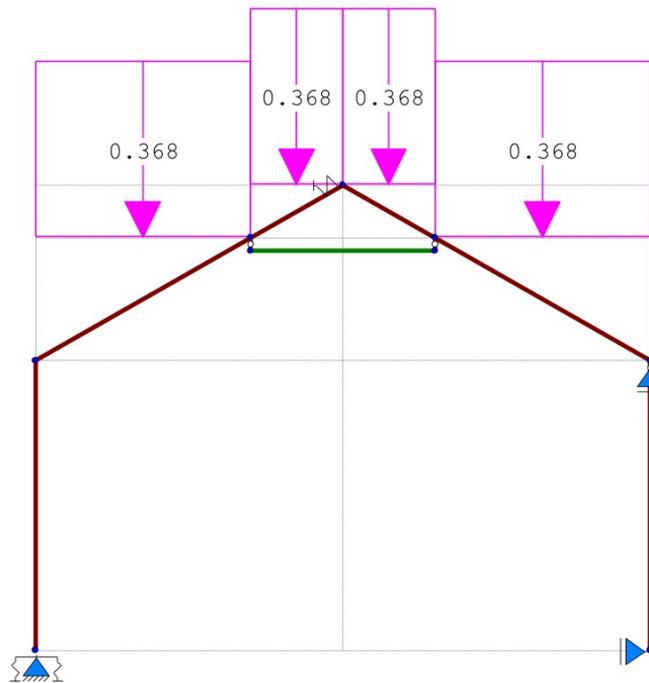
B.G:13 Wind loodrecht overdruk B

Staat	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.08	0.08	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.08	-0.08	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw16	0.21	0.21	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw17	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw18	0.21	0.21	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw18	0.21	0.21	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw18	0.21	0.21	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw18	0.21	0.21	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanen as B en C

BELASTINGEN

B.G:14 Sneeuw A

**STAAFBELASTINGEN**

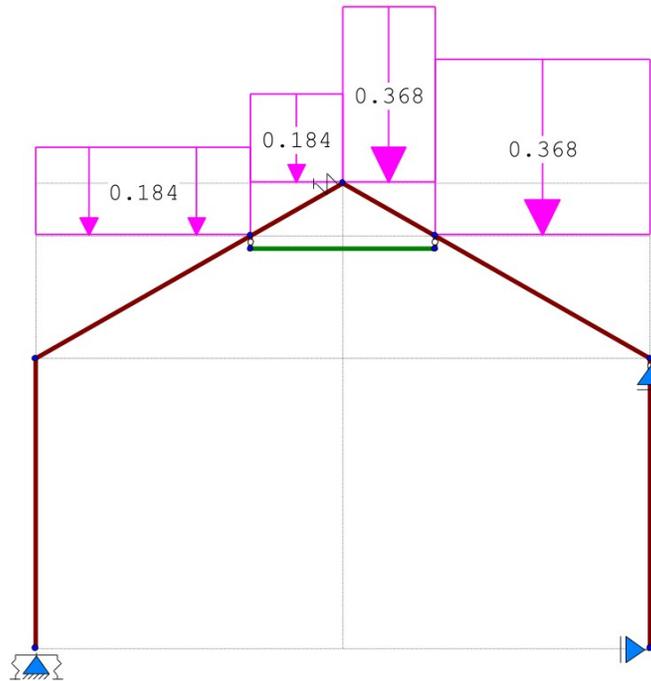
B.G:14 Sneeuw A

Staaftype	Type	Index	q1/p/m	q2	A	B	Ψ_0	Ψ_1	Ψ_2
2	3:QZgeProj.	Qs1	-0.37	-0.37	0.000	0.000	0.00	0.20	0.00
3	3:QZgeProj.	Qs1	-0.37	-0.37	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs1	-0.37	-0.37	0.000	0.000	0.00	0.20	0.00
5	3:QZgeProj.	Qs1	-0.37	-0.37	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d.
 Onderdeel....: tussenspanen as B en C

BELASTINGEN

B.G:15 Sneeuw B



STAAFBELASTINGEN

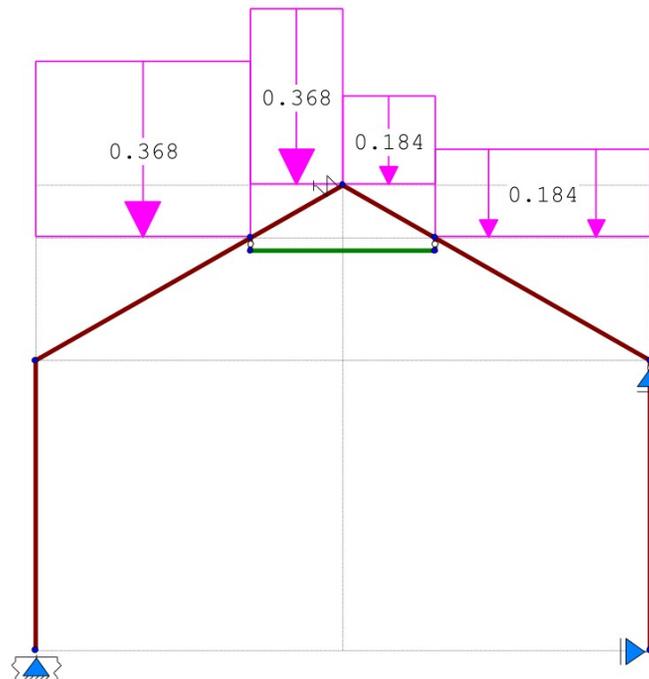
B.G:15 Sneeuw B

Staaftype	Type	Index	q1/p/m	q2	A	B	Ψ_0	Ψ_1	Ψ_2
2	3:QZgeProj.	Qs2	-0.18	-0.18	0.000	0.000	0.00	0.20	0.00
3	3:QZgeProj.	Qs2	-0.18	-0.18	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs1	-0.37	-0.37	0.000	0.000	0.00	0.20	0.00
5	3:QZgeProj.	Qs1	-0.37	-0.37	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanen as B en C

BELASTINGEN

B.G:16 Sneeuw C

**STAAFBELASTINGEN**

B.G:16 Sneeuw C

StAAF	Type	Index	q1/p/m	q2	A	B	Ψ_0	Ψ_1	Ψ_2
2	3:QZgeProj.	Qs1	-0.37	-0.37	0.000	0.000	0.00	0.20	0.00
3	3:QZgeProj.	Qs1	-0.37	-0.37	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs2	-0.18	-0.18	0.000	0.000	0.00	0.20	0.00
5	3:QZgeProj.	Qs2	-0.18	-0.18	0.000	0.000	0.00	0.20	0.00

REACTIES 1e orde

Kn.	B.G.	X	Z	M
1	1	0.18	1.06	-0.01
1	2	-1.26	0.82	-0.35
1	3	-1.00	0.04	-0.33
1	4	-1.13	-0.05	-0.23
1	5	-0.87	-0.83	-0.20
1	6	-1.09	1.06	-0.29
1	7	-0.83	0.27	-0.26
1	8	-0.96	0.19	-0.16
1	9	-0.71	-0.60	-0.14
1	10	0.26	-0.78	0.02
1	11	0.51	-1.57	0.05
1	12	0.10	-0.32	0.01
1	13	0.36	-1.10	0.03
1	14	0.25	1.48	-0.02
1	15	0.18	0.94	-0.01
1	16	0.19	1.28	-0.01

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanten as B en C

REACTIES		1e orde		
Kn.	B.G.	X	Z	M
3	1	-0.18		
3	2	-1.11		
3	3	-1.03		
3	4	-0.62		
3	5	-0.54		
3	6	-0.93		
3	7	-0.84		
3	8	-0.44		
3	9	-0.36		
3	10	0.08		
3	11	0.17		
3	12	0.03		
3	13	0.12		
3	14	-0.25		
3	15	-0.18		
3	16	-0.19		
6	1		0.78	
6	2		0.10	
6	3		-0.55	
6	4		-0.11	
6	5		-0.76	
6	6		0.48	
6	7		-0.17	
6	8		0.28	
6	9		-0.38	
6	10		-0.65	
6	11		-1.30	
6	12		-0.26	
6	13		-0.91	
6	14		1.10	
6	15		0.99	
6	16		0.66	
9	1	0.00		
9	2	-0.14		
9	3	-0.48		
9	4	-0.14		
9	5	-0.48		
9	6	-0.14		
9	7	-0.48		
9	8	-0.14		
9	9	-0.48		
9	10	-0.34		
9	11	-0.68		
9	12	-0.14		
9	13	-0.48		
9	14	0.00		
9	15	0.00		
9	16	0.00		

BEREKENINGSTATUS

Controlerende berekening

B.C. Iteratie Status

1 3 Nauwkeurigheid bereikt

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanen as B en C

BEREKENINGSTATUS

Controlerende berekening

B.C.	Iteratie	Status
2	3	Nauwkeurigheid bereikt
3	3	Nauwkeurigheid bereikt
4	3	Nauwkeurigheid bereikt
5	3	Nauwkeurigheid bereikt
6	3	Nauwkeurigheid bereikt
7	3	Nauwkeurigheid bereikt
8	3	Nauwkeurigheid bereikt
9	3	Nauwkeurigheid bereikt
10	3	Nauwkeurigheid bereikt
11	3	Nauwkeurigheid bereikt
12	3	Nauwkeurigheid bereikt
13	3	Nauwkeurigheid bereikt
14	3	Nauwkeurigheid bereikt
15	3	Nauwkeurigheid bereikt
16	3	Nauwkeurigheid bereikt
17	3	Nauwkeurigheid bereikt
18	3	Nauwkeurigheid bereikt
19	3	Nauwkeurigheid bereikt
20	3	Nauwkeurigheid bereikt
21	3	Nauwkeurigheid bereikt
22	3	Nauwkeurigheid bereikt
23	3	Nauwkeurigheid bereikt
24	3	Nauwkeurigheid bereikt
25	3	Nauwkeurigheid bereikt
26	3	Nauwkeurigheid bereikt
27	3	Nauwkeurigheid bereikt
28	2	Nauwkeurigheid bereikt
29	3	Nauwkeurigheid bereikt
30	3	Nauwkeurigheid bereikt
31	3	Nauwkeurigheid bereikt
32	3	Nauwkeurigheid bereikt
33	3	Nauwkeurigheid bereikt
34	3	Nauwkeurigheid bereikt
35	3	Nauwkeurigheid bereikt
36	3	Nauwkeurigheid bereikt
37	3	Nauwkeurigheid bereikt
38	3	Nauwkeurigheid bereikt
39	3	Nauwkeurigheid bereikt
40	3	Nauwkeurigheid bereikt
41	3	Nauwkeurigheid bereikt
42	3	Nauwkeurigheid bereikt
43	3	Nauwkeurigheid bereikt
44	3	Nauwkeurigheid bereikt
45	3	Nauwkeurigheid bereikt
46	3	Nauwkeurigheid bereikt

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanen as B en C

BEREKENINGSTATUS

Controlerende berekening

B.C. Iteratie Status

47	3	Nauwkeurigheid bereikt
48	3	Nauwkeurigheid bereikt

BELASTINGCOMBINATIES

BC	Type				
1	Fund.	1.22	$G_{k,1}$		
2	Fund.	0.90	$G_{k,1}$		
3	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,2}$
4	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,3}$
5	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,4}$
6	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,5}$
7	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,6}$
8	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,7}$
9	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,8}$
10	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,9}$
11	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,10}$
12	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,11}$
13	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,12}$
14	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,13}$
15	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,14}$
16	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,15}$
17	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,16}$
18	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,2}$
19	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,3}$
20	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,4}$
21	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,5}$
22	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,6}$
23	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,7}$
24	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,8}$
25	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,9}$
26	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,10}$
27	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,11}$
28	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,12}$
29	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,13}$
30	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,14}$
31	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,15}$
32	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,16}$
33	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,2}$
34	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,3}$
35	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,4}$
36	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,5}$
37	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,6}$
38	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,7}$
39	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,8}$
40	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,9}$
41	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,10}$
42	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,11}$

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspannten as B en C

BELASTINGCOMBINATIES

BC Type				
43 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,12}$
44 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,13}$
45 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,14}$
46 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,15}$
47 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,16}$
48 Blij.	1.00	$G_{k,1}$		

GUNSTIGE WERKING PERMANENTE BELASTINGEN

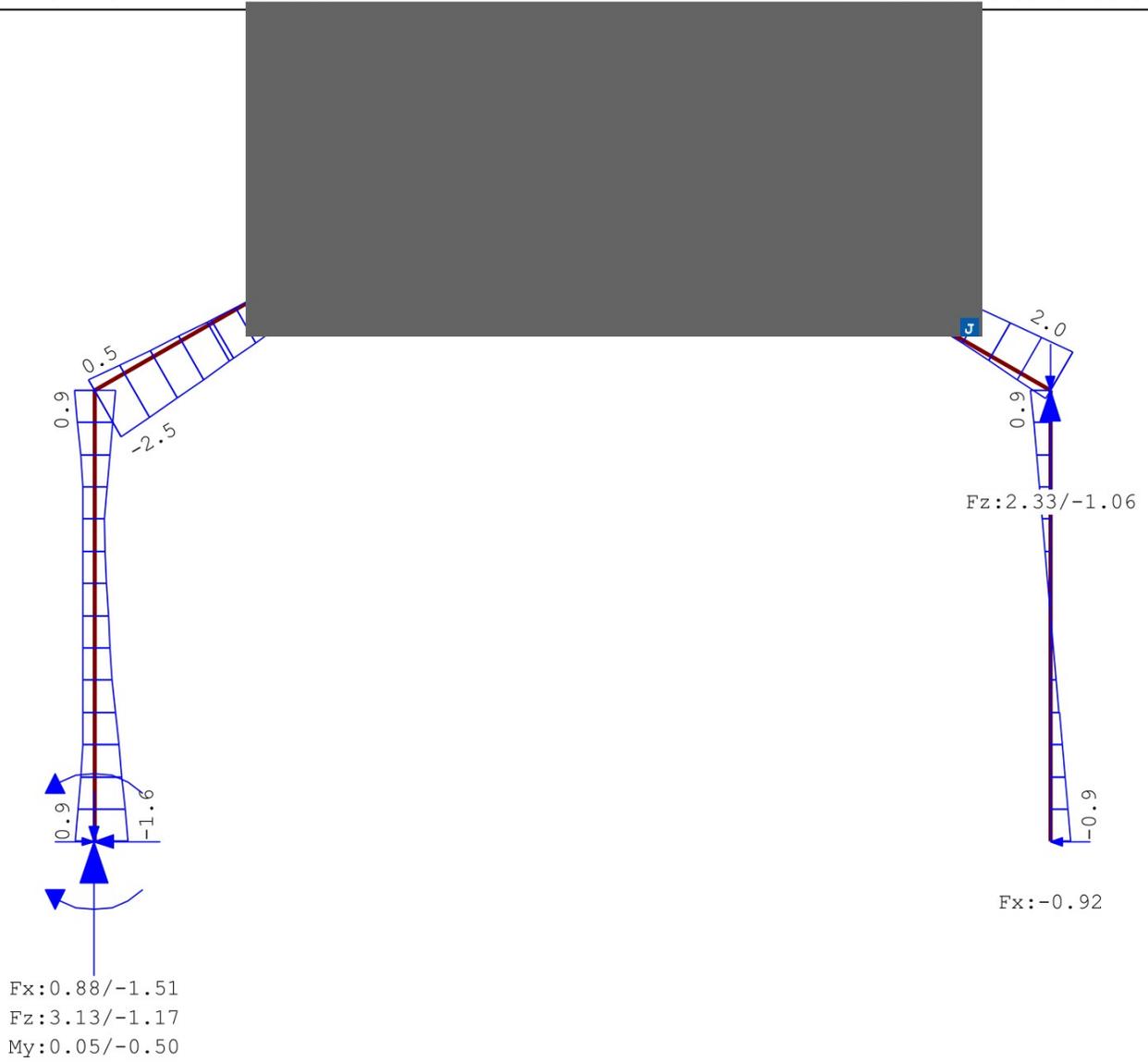
BC Staven met gunstige werking	
1	Geen
2	Alle staven de factor:0.90
3	Geen
4	Geen
5	Geen
6	Geen
7	Geen
8	Geen
9	Geen
10	Geen
11	Geen
12	Geen
13	Geen
14	Geen
15	Geen
16	Geen
17	Geen
18	Alle staven de factor:0.90
19	Alle staven de factor:0.90
20	Alle staven de factor:0.90
21	Alle staven de factor:0.90
22	Alle staven de factor:0.90
23	Alle staven de factor:0.90
24	Alle staven de factor:0.90
25	Alle staven de factor:0.90
26	Alle staven de factor:0.90
27	Alle staven de factor:0.90
28	Alle staven de factor:0.90
29	Alle staven de factor:0.90
30	Alle staven de factor:0.90
31	Alle staven de factor:0.90
32	Alle staven de factor:0.90

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanen as B en C

DWARSKRACHTEN

2e orde

Fundamentele combinatie

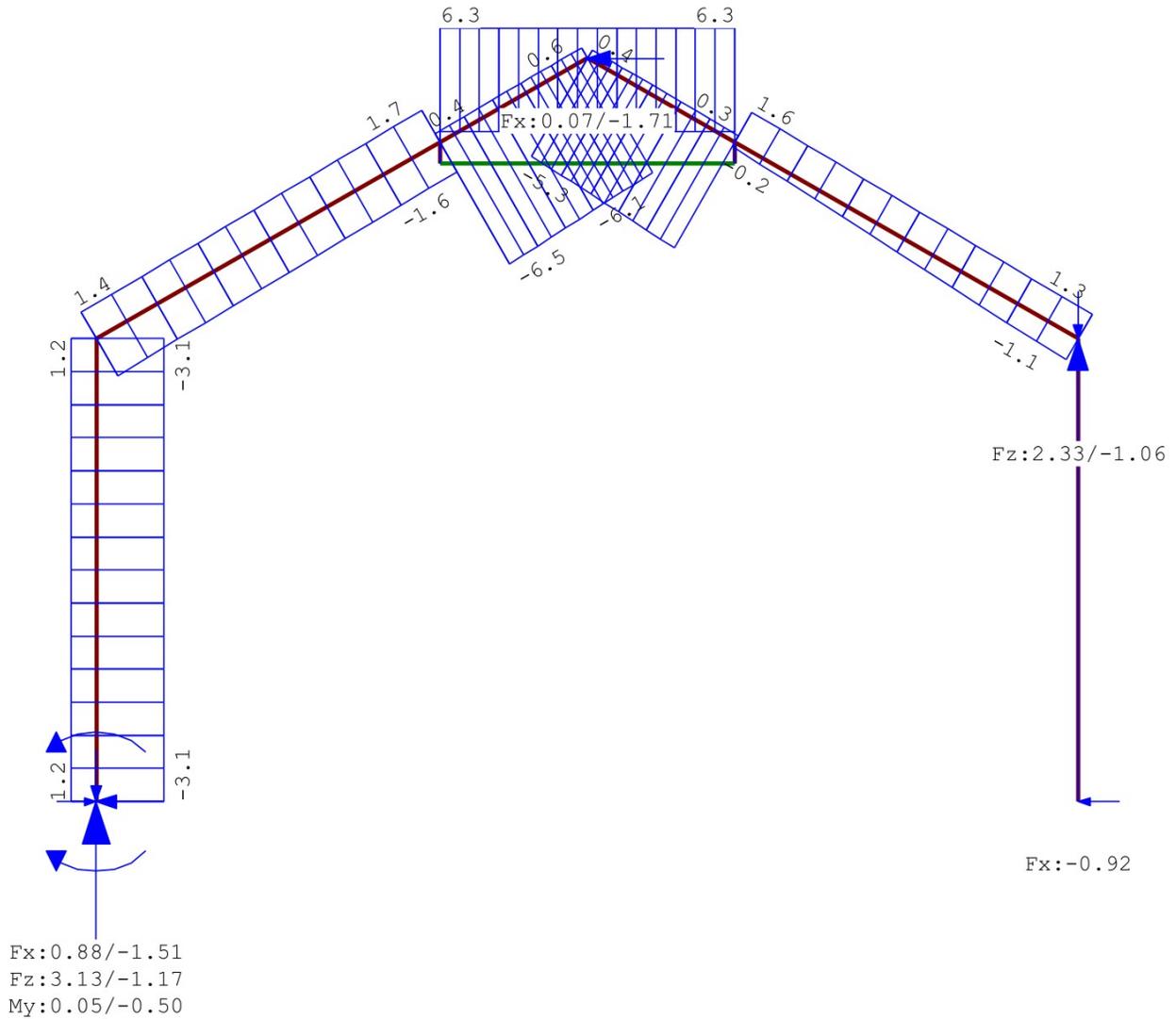


Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspanten as B en C

NORMAALKRACHTEN

2e orde

Fundamentele combinatie



STAAFKRACHTEN

2e orde

Fundamentele combinatie

St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj							
			Min	BC	Min	BC	Min	BC						
1	1		-3.14	15	1.17	27	-1.55	18	0.88	12	-0.05	27	0.50	3
1	0.236		-3.14	15	1.17	27	-1.41	18	0.75	12	-0.01	24	0.20	4
1	2.357		-3.14	15	1.17	27	-0.46	27	0.52	15	-1.46	18	1.28	15
1	2.593		-3.14	15	1.17	27	-0.59	27	0.52	15	-1.52	19	1.40	15
1	2		-3.14	15	1.17	27	-0.98	27	0.92	9	-1.68	19	1.77	15

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanten as B en C

St.		Kn.	Pos.	2e orde				Fundamentele combinatie							
				NXi/NXj		DZi/DZj		MYi/MYj							
				Min BC	Max BC	Min BC	Max BC	Min BC	Max BC						
2	2			-2.00	15	1.43	27	-2.47	15	0.53	27	-1.68	19	1.77	15
2		0.964		-1.83	7	1.52	27	-1.94	15	0.14	27	-2.49	3	0.04	27
2		1.429		-1.76	7	1.57	27	-1.65	15	-0.02	27	-2.89	3	0.07	27
2		1.964		-1.69	7	1.63	27	-1.31	15	-0.07	21	-3.16	3	0.00	27
2		2.125		-1.67	7	1.65	27	-1.21	15	-0.07	21	-3.20	3	-0.04	27
2		2.357		-1.64	7	1.68	27	-1.07	15	-0.04	18	-3.26	3	-0.11	27
2	4			-1.58	7	1.73	27	-0.78	15	0.24	18	-3.24	3	-0.31	27
3	4			-6.52	15	0.45	27	0.22	27	2.63	3	-2.50	3	-0.08	27
3		0.717		-6.26	15	0.53	27	-0.03	27	3.09	3	-0.45	3	0.00	27
3		0.876		-6.22	15	0.54	27	-0.10	27	3.17	3	-0.04	19	0.35	16
3	3			-6.12	15	0.56	27	-0.26	27	3.34	3	-0.09	27	1.33	15
4	3			-5.26	15	0.45	27	-3.47	15	0.32	27	-0.09	27	1.33	15
4		0.333		-5.35	15	0.43	27	-3.31	15	0.17	27	-0.01	27	0.45	3
4		0.618		-5.44	15	0.41	27	-3.15	15	0.05	27	-0.71	15	0.02	19
4		0.736		-5.48	15	0.39	27	-3.08	15	0.01	27	-1.09	15	0.03	27
4		1.169		-5.64	15	0.34	27	-2.80	15	-0.14	27	-2.36	15	0.00	27
4	7			-5.66	15	0.34	27	-2.78	15	-0.15	27	-2.47	15	-0.00	27
5	7			-0.22	7	1.62	27	0.03	24	0.72	4	-3.41	15	-0.23	27
5		0.455		-0.35	15	1.57	27	0.18	2	0.68	4	-3.20	15	0.00	27
5		0.464		-0.36	15	1.56	27	0.18	2	0.67	4	-3.19	15	0.00	27
5		0.929		-0.52	15	1.51	27	0.25	27	0.91	15	-2.83	15	0.16	27
5		1.857		-0.84	15	1.40	27	-0.07	27	1.49	15	-1.72	15	0.24	27
5	6			-1.13	15	1.32	27	-0.46	27	2.03	15	0.00	24	0.00	3
6	9			-0.00	15	0.01	4	-0.92	27	0.00	1	0.00	1	0.00	1
6		1.886		-0.00	15	0.01	4	0.00	1	0.13	27	-0.74	27	0.00	1
6	6			-0.00	15	0.01	4	0.00	1	0.92	27	0.00	3	0.00	28
7	4			-0.01	3	-0.00	27	1.48	27	6.29	15	-0.94	15	-0.22	27
7	5			-0.01	3	-0.00	27	1.48	27	6.29	15	0.00	3	0.00	7
8	7			-0.01	15	-0.00	27	-6.29	15	-1.48	27	0.22	27	0.94	15
8	8			-0.01	15	0.00	27	-6.29	15	-1.48	27	0.00	7	0.00	19
9	5			1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	8			1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1

St.		Kn.	Pos.	2e orde				Fundamentele combinatie							
				NXi/NXj		DZi/DZj		MYi/MYj							
				Min BC	Max BC	Min BC	Max BC	Min BC	Max BC						
1	1			-3.14	15	1.17	27	-1.55	18	0.88	12	-0.05	27	0.50	3
1		0.330		-3.14	15	1.17	27	-1.35	18	0.70	12	-0.11	24	0.24	4
1		0.660		-3.14	15	1.17	27	-1.15	18	0.55	15	-0.44	20	0.40	12
1		0.990		-3.14	15	1.17	27	-0.94	18	0.53	15	-0.74	20	0.56	15
1		1.320		-3.14	15	1.17	27	-0.77	19	0.53	15	-1.01	18	0.74	15
1		1.650		-3.14	15	1.17	27	-0.65	19	0.53	15	-1.22	18	0.91	15
1		1.980		-3.14	15	1.17	27	-0.54	19	0.52	15	-1.37	18	1.08	15
1		2.310		-3.14	15	1.17	27	-0.46	27	0.52	15	-1.45	18	1.26	15
1		2.640		-3.14	15	1.17	27	-0.62	27	0.54	15	-1.53	19	1.43	15
1		2.970		-3.14	15	1.17	27	-0.80	27	0.71	9	-1.62	19	1.60	15
1	2			-3.14	15	1.17	27	-0.98	27	0.92	9	-1.68	19	1.77	15

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: tussenspanen as B en C

TUSSENpunTEN KRACHTEN			2e orde				Fundamentele combinatie			
St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj		BC	BC
			Min	Max	Min	Max	Min	Max		
2	2		-2.00	1.43	-2.47	0.53	-1.68	1.77	15	15
2	0.282		-1.94	1.45	-2.33	0.40	-1.91	1.11	7	15
2	0.564		-1.88	1.47	-2.18	0.28	-2.12	0.48	7	15
2	0.847		-1.84	1.50	-2.01	0.18	-2.36	0.10	7	16
2	1.129		-1.80	1.53	-1.83	0.08	-2.63	0.05	7	27
2	1.411		-1.77	1.57	-1.66	-0.02	-2.87	0.07	7	27
2	1.693		-1.73	1.60	-1.48	-0.06	-3.03	0.04	7	27
2	1.975		-1.69	1.63	-1.30	-0.07	-3.16	-0.00	7	27
2	2.257		-1.65	1.67	-1.13	-0.05	-3.23	-0.08	7	27
2	2.540		-1.61	1.70	-0.95	0.07	-3.25	-0.18	7	27
2	4		-1.58	1.73	-0.78	0.24	-3.24	-0.31	7	27
3	4		-6.52	0.45	0.22	2.63	-2.50	-0.08	15	27
3	0.121		-6.48	0.46	0.18	2.71	-2.17	-0.06	15	27
3	0.242		-6.43	0.48	0.13	2.79	-1.84	-0.04	15	27
3	0.363		-6.39	0.49	0.09	2.87	-1.50	-0.03	15	27
3	0.484		-6.35	0.51	0.05	2.95	-1.15	-0.02	15	27
3	0.605		-6.30	0.52	0.01	3.02	-0.78	-0.02	15	27
3	0.726		-6.26	0.53	-0.04	3.10	-0.42	0.02	15	27
3	0.847		-6.23	0.54	-0.09	3.16	-0.11	0.29	15	16
3	0.967		-6.19	0.55	-0.15	3.22	-0.04	0.61	15	15
3	1.088		-6.16	0.55	-0.20	3.28	-0.06	0.97	15	15
3	3		-6.12	0.56	-0.26	3.34	-0.09	1.33	15	15
4	3		-5.26	0.45	-3.47	0.32	-0.09	1.33	15	15
4	0.121		-5.29	0.44	-3.41	0.27	-0.06	0.93	15	15
4	0.242		-5.33	0.43	-3.35	0.21	-0.02	0.64	15	3
4	0.363		-5.36	0.43	-3.29	0.16	-0.05	0.39	15	3
4	0.484		-5.40	0.42	-3.23	0.10	-0.32	0.20	15	19
4	0.605		-5.44	0.41	-3.16	0.06	-0.68	0.04	15	19
4	0.726		-5.48	0.39	-3.09	0.02	-1.05	0.03	15	27
4	0.847		-5.52	0.38	-3.01	-0.03	-1.42	0.03	15	27
4	0.967		-5.57	0.36	-2.93	-0.07	-1.78	0.02	15	27
4	1.088		-5.61	0.35	-2.85	-0.11	-2.13	0.01	15	27
4	7		-5.66	0.34	-2.78	-0.15	-2.47	-0.00	15	27
5	7		-0.22	1.62	0.03	0.72	-3.41	-0.23	7	27
5	0.282		-0.30	1.59	0.12	0.69	-3.28	-0.09	15	27
5	0.564		-0.39	1.55	0.20	0.73	-3.11	0.04	15	27
5	0.847		-0.49	1.52	0.24	0.87	-2.90	0.13	15	27
5	1.129		-0.58	1.49	0.18	1.04	-2.62	0.19	15	27
5	1.411		-0.68	1.45	0.08	1.22	-2.32	0.24	15	27
5	1.693		-0.78	1.42	-0.01	1.39	-1.94	0.24	15	27
5	1.975		-0.87	1.39	-0.11	1.57	-1.52	0.23	15	27
5	2.257		-0.97	1.36	-0.21	1.74	-1.06	0.18	15	27
5	2.540		-1.05	1.34	-0.33	1.89	-0.54	0.10	15	27
5	6		-1.13	1.32	-0.46	2.03	0.00	0.00	15	3
6	9		-0.00	0.01	-0.92	0.00	0.00	0.00	15	1
6	0.330		-0.00	0.01	-0.73	0.00	-0.26	0.00	15	1
6	0.660		-0.00	0.01	-0.55	0.00	-0.47	0.00	15	1
6	0.990		-0.00	0.01	-0.37	0.00	-0.63	0.00	15	1
6	1.320		-0.00	0.01	-0.18	0.00	-0.72	0.00	15	1
6	1.650		-0.00	0.01	-0.00	0.00	-0.74	0.00	15	1

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel.....: tussenspanten as B en C

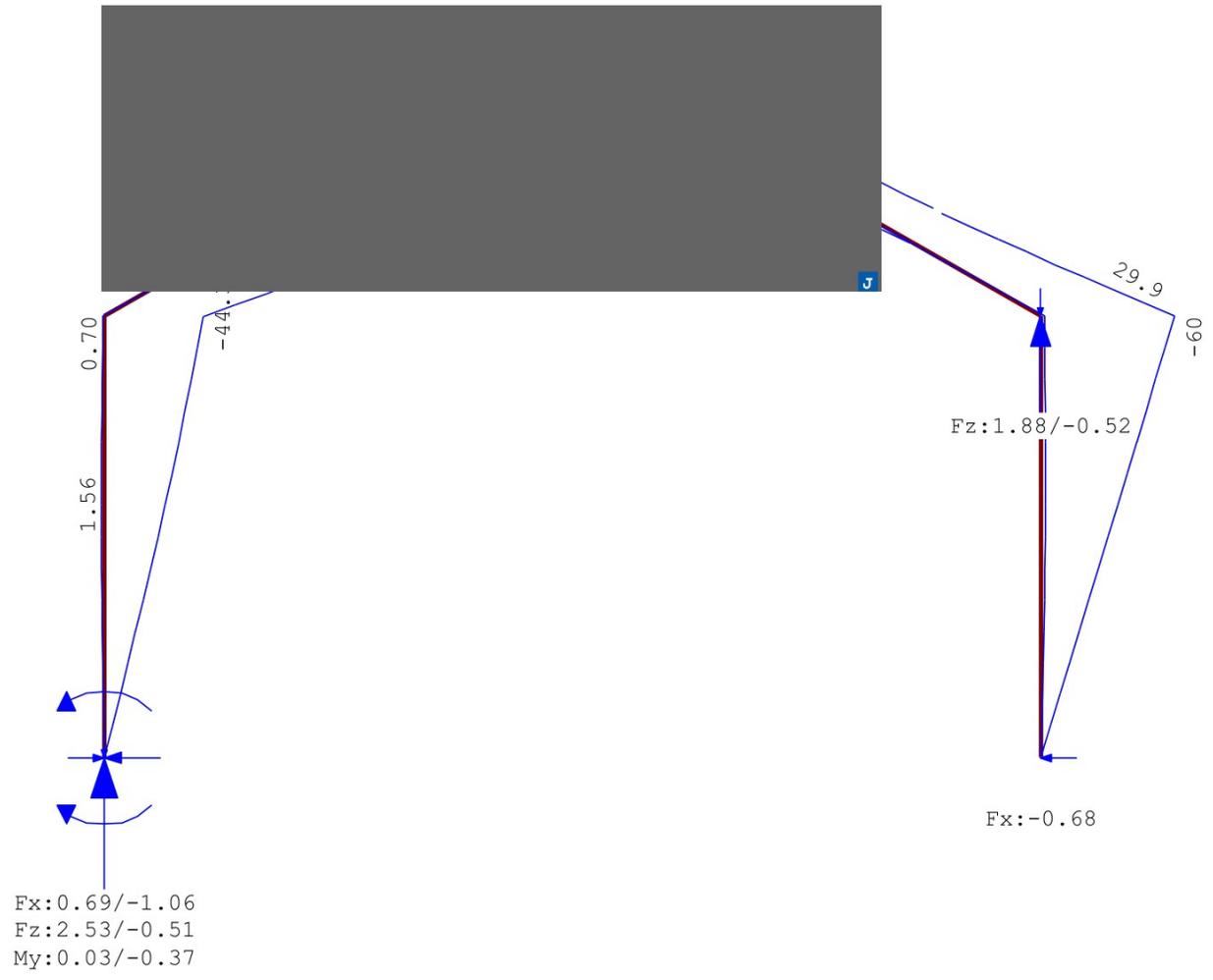
TUSSENpunTEN KRACHTEN			2e orde				Fundamentele combinatie							
St.	Kn.	Pos.	NXi/NXj			DZi/DZj			MYi/MYj					
			Min	BC	Max	BC	Min	BC	Max	BC	Min	BC	Max	BC
6	1.980		-0.00	15	0.01	4	0.00	1	0.18	27	-0.72	27	0.00	1
6	2.310		-0.00	15	0.01	4	0.00	1	0.37	27	-0.63	27	0.00	1
6	2.640		-0.00	15	0.01	4	0.00	1	0.55	27	-0.47	27	0.00	1
6	2.970		-0.00	15	0.01	4	0.00	1	0.73	27	-0.26	27	0.00	1
6	6		-0.00	15	0.01	4	0.00	1	0.92	27	0.00	3	0.00	28
7	4		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.94	15	-0.22	27
7	0.015		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.85	15	-0.20	27
7	0.030		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.75	15	-0.18	27
7	0.045		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.66	15	-0.16	27
7	0.060		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.57	15	-0.13	27
7	0.075		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.47	15	-0.11	27
7	0.090		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.38	15	-0.09	27
7	0.105		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.28	15	-0.07	27
7	0.120		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.19	15	-0.04	27
7	0.135		-0.01	3	-0.00	27	1.48	27	6.29	15	-0.09	3	-0.02	7
7	5		-0.01	3	-0.00	27	1.48	27	6.29	15	0.00	3	0.00	7
8	7		-0.01	15	-0.00	27	-6.29	15	-1.48	27	0.22	27	0.94	15
8	0.015		-0.01	15	-0.00	27	-6.29	15	-1.48	27	0.20	27	0.85	15
8	0.030		-0.01	15	-0.00	27	-6.29	15	-1.48	27	0.18	27	0.75	15
8	0.045		-0.01	15	0.00	27	-6.29	15	-1.48	27	0.16	27	0.66	15
8	0.060		-0.01	15	0.00	27	-6.29	15	-1.48	27	0.13	27	0.57	15
8	0.075		-0.01	15	0.00	27	-6.29	15	-1.48	27	0.11	27	0.47	15
8	0.090		-0.01	15	0.00	27	-6.29	15	-1.48	27	0.09	27	0.38	15
8	0.105		-0.01	15	0.00	27	-6.29	15	-1.48	27	0.07	27	0.28	15
8	0.120		-0.01	15	0.00	27	-6.29	15	-1.48	27	0.04	27	0.19	15
8	0.135		-0.01	15	0.00	27	-6.29	15	-1.48	27	0.02	7	0.09	19
8	8		-0.01	15	0.00	27	-6.29	15	-1.48	27	0.00	7	0.00	19
9	5		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	0.210		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	0.420		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	0.630		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	0.840		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	1.050		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	1.260		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	1.470		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	1.680		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	1.890		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1
9	8		1.48	27	6.29	15	-0.00	4	0.00	28	0.00	1	0.00	1

REACTIES		2e orde			Fundamentele combinatie	
Kn.	X-min	X-max	Z-min	Z-max	M-min	M-max
1	-1.51	0.88	-1.17	3.13	-0.50	0.05
3	-1.71	0.07				
6			-1.06	2.33		
9	-0.92	0.00				

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: tussenspanen as B en C

OMHULLENDE VAN DE KARAKTERISTIEKE COMBINATIES

VERPLAATSINGEN 2e orde [mm] Karakteristieke combinatie



Technosoft Raamwerken release 6.82a**tussenpsant as D**

Project.....: staalframe loods a.d. XXXXXXXXXX 
 Onderdeel....: tussenpsanten as D
 Dimensies....: kN;m;rad (tenzij anders aangegeven)

Belastingbreedte.: 1.000
 Rekenmodel.....: 2e-orde-elastisch.
 Theorieën voor de bepaling van de krachtsverdeling:
 1) Losse belastinggevallen:
 Lineaire-elasticiteitstheorie
 2) Uiterste grenstoestand:
 Geometrisch niet lineair alle staven.
 Fysisch lineair alle staven.
 3) Gebruiksgrenstoestand:
 Geometrisch niet lineair alle staven.
 Fysisch lineair alle staven.

Maximum aantal iteraties.....: 50
 Max.deellengte kolommen/wanden: 0.500 Max.deellengte balken/vloeren: 0.500
 Max. X-verplaatsing in UGT.....: 0.500 Max. Z-verplaatsing in UGT....: 0.250

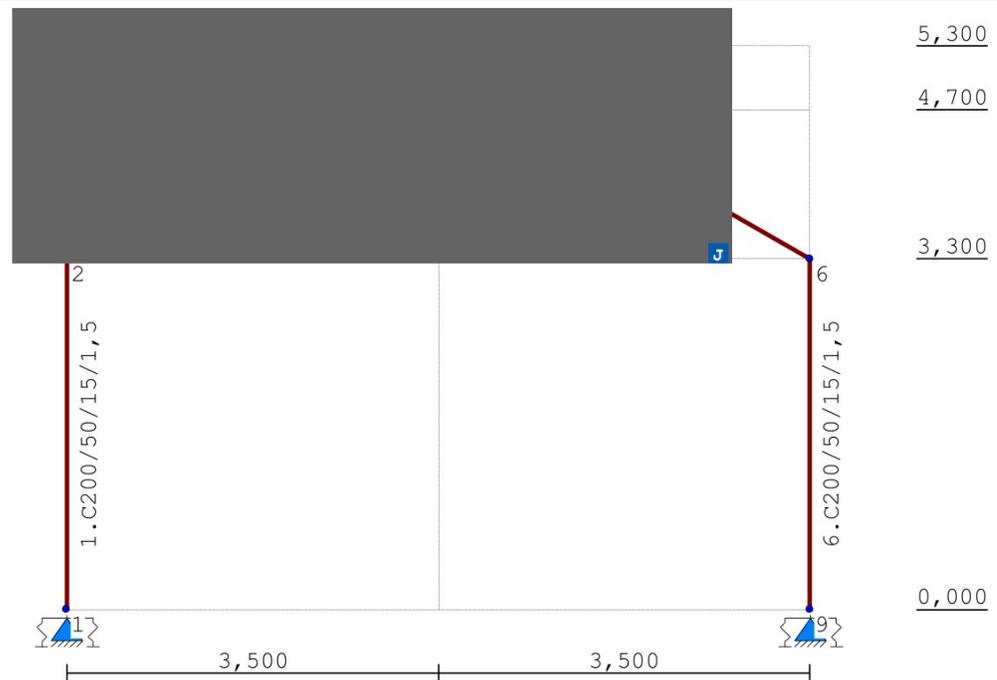
Gunstige werking van de permanente belasting wordt automatisch verwerkt.

Toegepaste normen volgens Eurocode met Nederlandse NB

Belastingen	NEN-EN 1990:2002	C2:2010,A1:2019	NB:2019(nl)
	NEN-EN 1991-1-1:2002	C1/C11:2019	NB:2019(nl)
	NEN-EN 1991-1-3:2003	C1:2009	NB:2011(nl)
	NEN-EN 1991-1-4:2005	C2:2011	NB:2011(nl)

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanten as D

GEOMETRIE



STRAMIENLIJNEN

Nr.	Naam	X	Z-min	Z-max
1		0.000	0.000	5.300
2		7.000	0.000	5.300
3		3.500	0.000	5.300

NIVEAUS

Nr.	Z	X-min	X-max
1	0.000	0.000	7.000
2	3.300	0.000	7.000
3	5.300	0.000	7.000
4	4.700	0.000	7.000

MATERIALEN

Mt	Kwaliteit	E-modulus[N/mm2]	S.G.	Pois.	Uitz. coëff
1	S235	210000	78.5	0.30	1.2000e-05

PROFIELEN [mm]

Prof.	Omschrijving	Materiaal	Oppervlak	Traagheid	Vormf.
1	C200/50/15/1,5	1:S235	2.2800e+03	2.4692e+06	0.00
2	C100/50/15/1,5	1:S235	3.3600e+02	5.1700e+05	0.00

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanen as D

PROFIELEN vervolg [mm]

Prof.	Staaftype	Breedte	Hoogte	e	Type	b1	h1	b2	h2
1	0:Normaal	50	200	100.0					
2	0:Normaal	50	100	25.0					

KNOPEN

Knoop	X	Z	Knoop	X	Z
1	0.000	0.000	6	7.000	3.300
2	0.000	3.300	7	4.550	4.700
3	3.500	5.300	8	4.550	4.550
4	2.450	4.700	9	7.000	0.000
5	2.450	4.550			

STAVEN

St.	ki	kj	Profiel	Aansl.i	Aansl.j	Lengte	Opm.
1	1	2	1:C200/50/15/1,5	NDM	NDM	3.300	
2	2	4	1:C200/50/15/1,5	NDM	NDM	2.822	
3	4	3	1:C200/50/15/1,5	NDM	NDM	1.209	
4	3	7	1:C200/50/15/1,5	NDM	NDM	1.209	
5	7	6	1:C200/50/15/1,5	NDM	NDM	2.822	
6	9	6	1:C200/50/15/1,5	NDM	NDM	3.300	
7	4	5	1:C200/50/15/1,5	NDM	ND	0.150	
8	7	8	1:C200/50/15/1,5	NDM	ND	0.150	
9	5	8	2:C100/50/15/1,5	NDM	NDM	2.100	

VASTE STEUNPUNTEN

Nr.	knoop	Kode	XZR 1=vast 0=vrij	Hoek
1	1	110		0.00
2	9	110		0.00

VEREN

Veer	Knoop	Richting	Hoek	Veerwaarde	Type	Ondergrens	Bovengrens
1	1	3:Rotatie	0.00	2.500e+01	Normaal	-1.000e+10	1.000e+10
2	9	3:Rotatie	0.00	2.500e+01	Normaal	-1.000e+10	1.000e+10

BELASTINGGENERATIE ALGEMEEN.

Betrouwbaarheidsklasse.....:	1	Referentieperiode.....:	15
Gebouwdiepte.....:	10.00	Gebouwhoogte.....:	5.50
Niveau aansl.terrein.....:	0.00	E.g. scheid.w. [kN/m2]:	0.00

WIND

Terrein categorie ...[4.3.2]....:	Onbebouwd		
Windgebied	3	Vb,0 ..[4.2].....:	24.500
Referentie periode wind.....:	15.00	Vb(p) ..[4.2].....:	22.458
K	[4.2].....:	0.280	n
Positie spant in het gebouw....:	5.000	Kr	[4.3.2].....:
z0	[4.3.2]....:	0.200	Zmin ..[4.3.2].....:
			4.000

Project.....: staalframe loods a.d. **J**
 Onderdeel....: tussenspanen as D

WIND

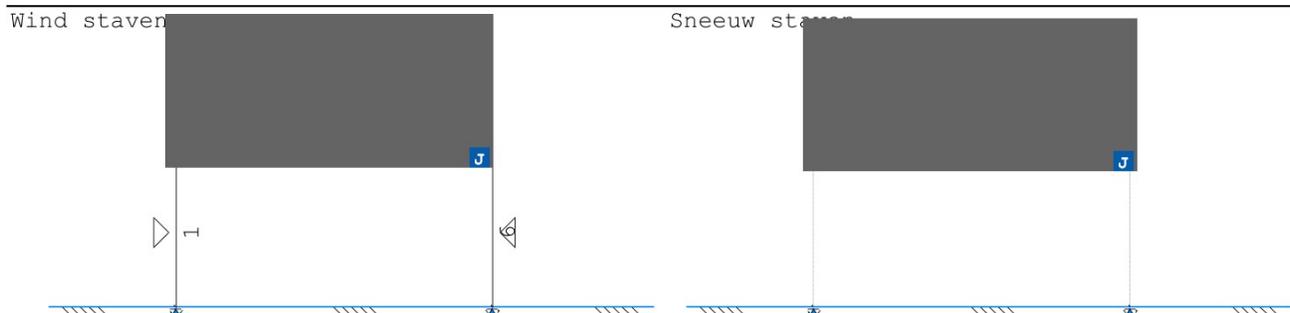
Co wind van links ..[4.3.3]....	1.000	Co wind van rechts....	1.000
Co wind loodrecht ..[4.3.3]....	1.000		
Cpi wind van links ..[7.2.9]....	0.200	-0.300	
Cpi windloodrecht ...[7.2.9]....	0.200	-0.300	
Cpi wind van rechts .[7.2.9]....	0.200	-0.300	
Cfr windwrijving[7.5].....	0.040		

SNEEUW

Sneeuwbelasting (sk) 50 jaar :	0.70
Sneeuwbelasting (sn) n jaar :	0.53

STAAFTYPEN

Type	staven
1:Vloer.	: 9
4:Wand / kolom.	: 7,8
5:Linker gevel.	: 1
6:Rechter gevel.	: 6
7:Dak.	: 2-5

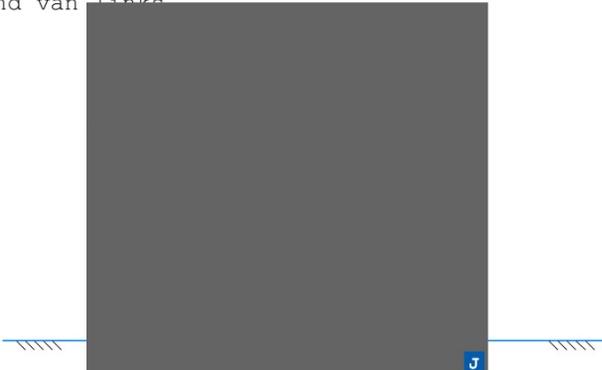
LASTVELDEN**WIND DAKTYPES**

Nr.	StAAF Type	reductie bij wind van links	reductie bij wind van rechts	Cpe volgens art:
1	1 Gevel	1.000	1.000	7.2.2
2	2-3 Zadeldak	1.000	1.000	7.2.5
3	4-5 Zadeldak	1.000	1.000	7.2.5
4	6 Gevel	1.000	1.000	7.2.2

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanten as D

WIND ZONES

Wind van links J Wind van rechts



WIND VAN LINKS ZONES

Nr.	StAAF	Positie	Lengte	Zone
1	1	0.000	3.300	D
2	2-3	0.000	1.000	F/G
3	2-3	1.000	3.031	H
4	4-5	0.000	1.000	J
5	4-5	1.000	3.031	I
6	6	0.000	3.300	E

Wind indexen

Index	CsCd	Cpe/Cpi	qp	breedte	reductie	Qw	Zone	Hoek(en)
Qw1		0.300	0.471	1.000		-0.141	-i	
Qw2		-0.300	0.471	1.000		0.141	-i	
Qw3	1.00	0.800	0.471	1.000		-0.377	D	
Qw4	1.00	0.690	0.471	1.000		-0.325	G	29.7
Qw5	1.00	0.396	0.471	1.000		-0.186	H	29.7
Qw6	1.00	-0.510	0.471	1.000		0.240	J	29.7
Qw7	1.00	-0.400	0.471	1.000		0.188	I	29.7
Qw8	1.00	0.500	0.471	1.000		-0.235	E	
Qw9		-0.200	0.471	1.000		0.094	+i	
Qw10		0.200	0.471	1.000		-0.094	+i	
Qw11	1.00	-0.506	0.471	1.000		0.238	G	29.7
Qw12	1.00	-0.202	0.471	1.000		0.095	H	29.7
Qw13	1.00	-0.800	0.471	1.000		0.377	B	
Qw14	1.00	0.800	0.471	1.000		-0.377	B	
Qw15	1.00	-0.500	0.471	1.000		0.235	I	29.7

SNEEUW DAKTYPEN

StAAF	artikel
2-3	5.3.3 Zadeldak
4-5	5.3.3 Zadeldak

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanen as D

Sneeuw indexen

Index	art	μ	s_k	red. posfac	breedte	Q_s	hoek
Qs1	5.3.3	0.800	0.53	1.00	1.000	0.421	29.7
Qs2	5.3.3	0.400	0.53	1.00	1.000	0.210	29.7

BELASTINGGEVALLEN

B.G.	Omschrijving	Type
	1 permanent	EGZ=0.00 1 Permanente belasting
g*	2 Wind van links onderdruk A	7
g*	3 Wind van links overdruk A	8
g	4 Wind van links onderdruk B	9
g	5 Wind van links overdruk B	10
g	6 Wind van links onderdruk C	37
g	7 Wind van links overdruk C	38
g	8 Wind van links onderdruk D	39
g	9 Wind van links overdruk D	40
g	10 Wind loodrecht onderdruk A	15
g	11 Wind loodrecht overdruk A	16
g	12 Sneeuw A	22
g	13 Sneeuw B	23
g	14 Sneeuw C	33

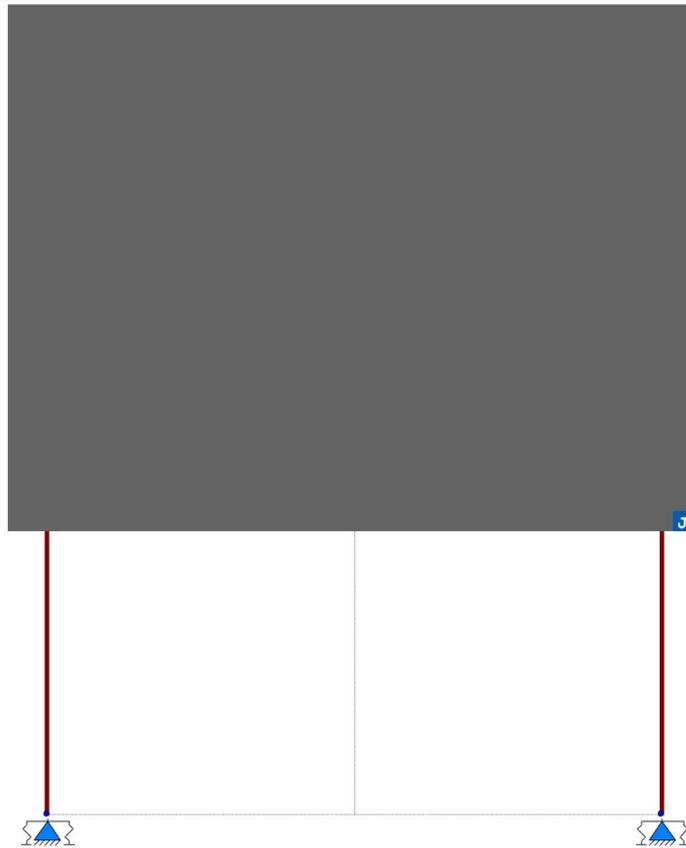
g = gegenereerd belastinggeval

* = belastinggeval bevat 1 of meer handmatig toegevoegde en/of gewijzigde lasten

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanten as D

BELASTINGEN

B.G:1 permanent



STAAFBELASTINGEN

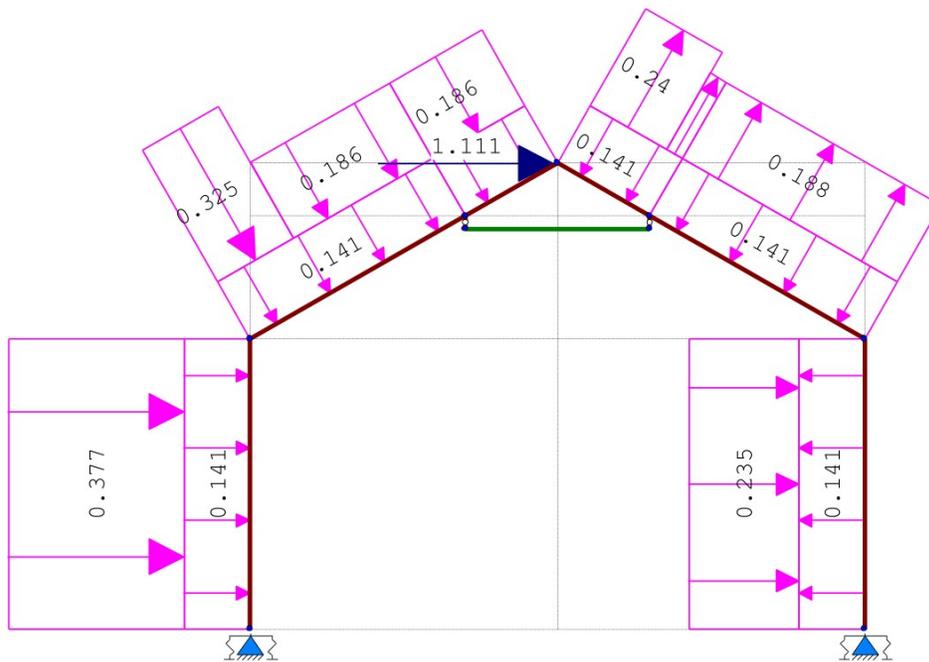
B.G:1 permanent

Staafl	Type	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
2	5:QZGloaal	-0.15	-0.15	0.000	0.000			
3	5:QZGloaal	-0.15	-0.15	0.000	0.000			
4	5:QZGloaal	-0.15	-0.15	0.000	0.000			
5	5:QZGloaal	-0.15	-0.15	0.000	0.000			
2	5:QZGloaal	-0.15	-0.15	0.500	0.000			
3	5:QZGloaal	-0.15	-0.15	0.000	0.500			
4	5:QZGloaal	-0.15	-0.15	0.500	0.000			
5	5:QZGloaal	-0.15	-0.15	0.000	0.500			

Project.....: staalframe loods a.d.
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:2 Wind van links onderdruk A



KNOOPBELASTINGEN

B.G:2 Wind van links onderdruk A

Last	Knoop	Richting	waarde	ψ_0	ψ_1	ψ_2	Opm.
1	3	X	1.111	0.00	0.20	0.00	*

Opmerkingen

[*] Deze belasting is handmatig toegevoegd of gewijzigd.

STAAFBELASTINGEN

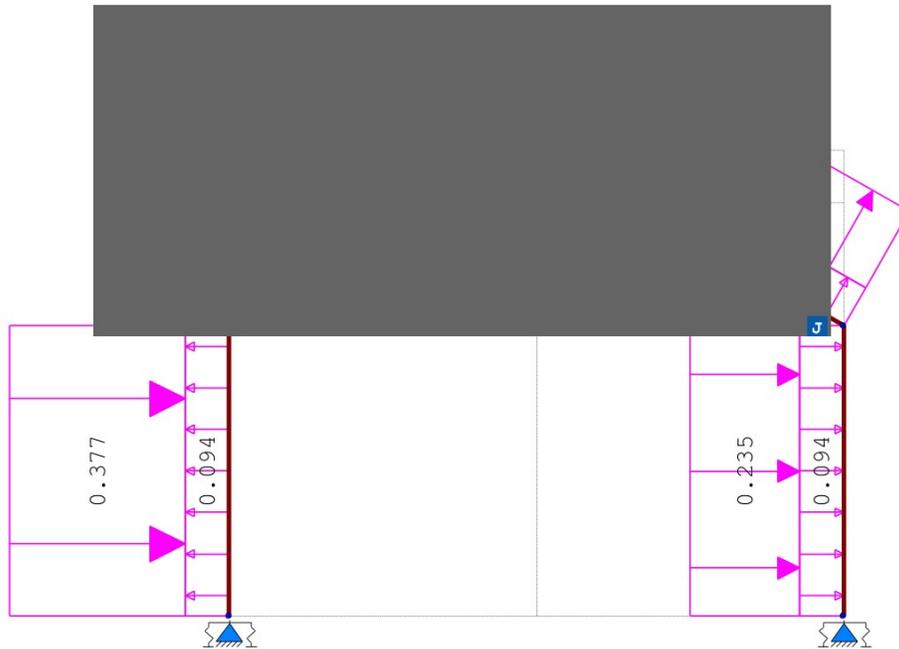
B.G:2 Wind van links onderdruk A

Staat	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw4	-0.32	-0.32	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw5	-0.19	-0.19	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw6	0.24	0.24	0.000	0.209	0.00	0.20	0.00
4	1:QZLokaal	Qw7	0.19	0.19	1.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw7	0.19	0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d.
 Onderdeel.....: tussenspanen as D

BELASTINGEN

B.G:3 Wind van links overdruk A



KNOOPBELASTINGEN

B.G:3 Wind van links overdruk A

Last	Knoop	Richting	waarde	ψ_0	ψ_1	ψ_2	Opm.
1	3	X	1.110	0.00	0.20	0.00	*

Opmerkingen

[*] Deze belasting is handmatig toegevoegd of gewijzigd.

STAAFBELASTINGEN

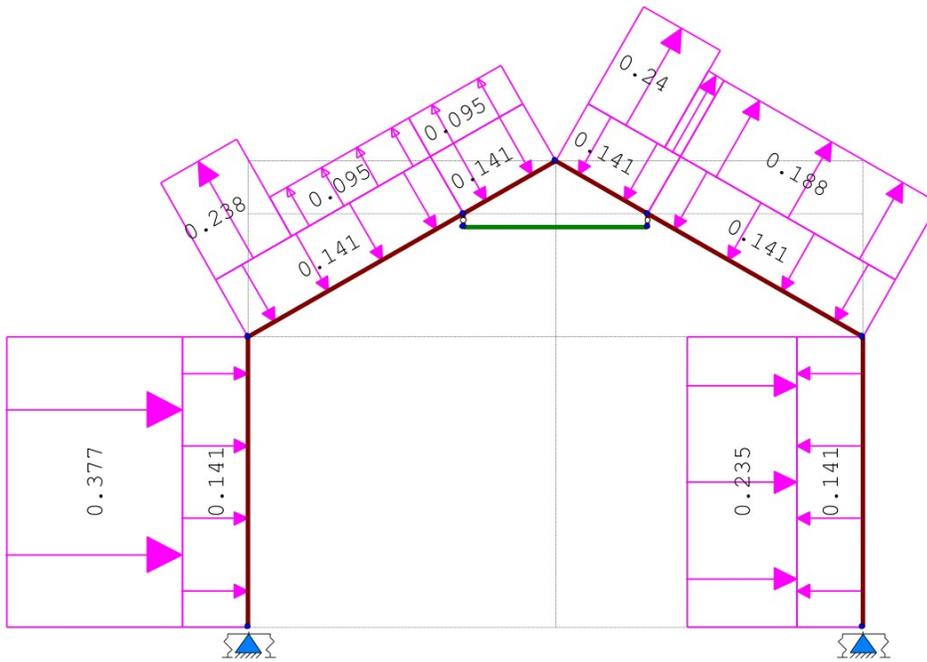
B.G:3 Wind van links overdruk A

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw4	-0.32	-0.32	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw5	-0.19	-0.19	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw6	0.24	0.24	0.000	0.209	0.00	0.20	0.00
4	1:QZLokaal	Qw7	0.19	0.19	1.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw7	0.19	0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:4 Wind van links onderdruk B



STAAFBELASTINGEN

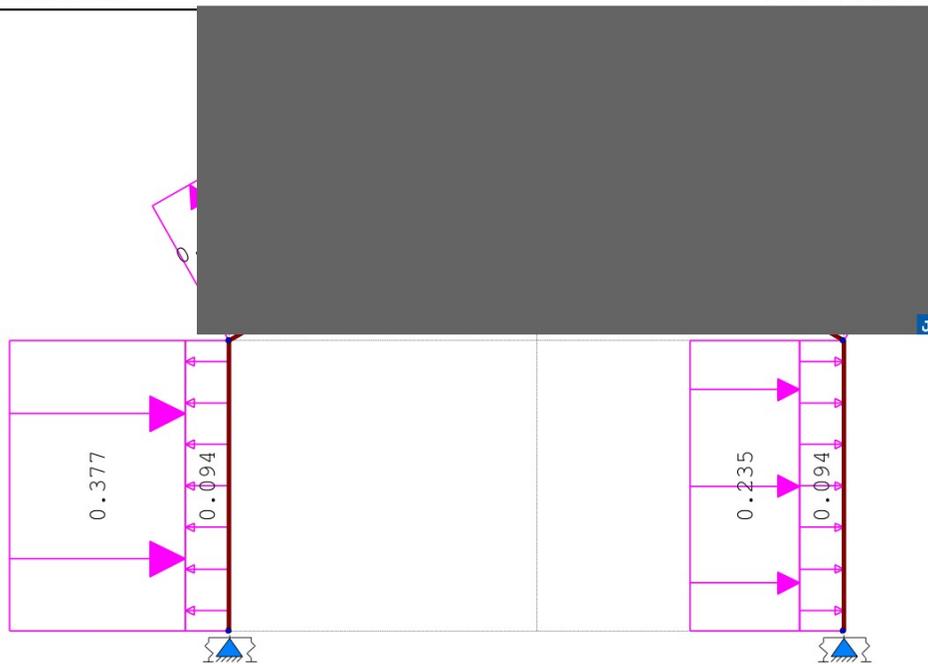
B.G:4 Wind van links onderdruk B

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw11	0.24	0.24	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw12	0.10	0.10	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.10	0.10	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw6	0.24	0.24	0.000	0.209	0.00	0.20	0.00
4	1:QZLokaal	Qw7	0.19	0.19	1.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw7	0.19	0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:5 Wind van links overdruk B



STAAFBELASTINGEN

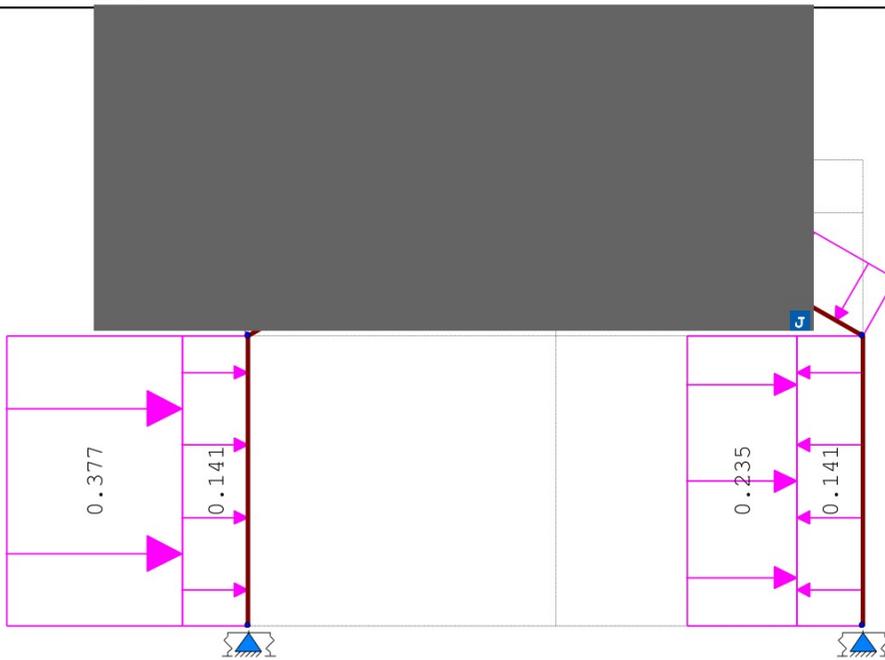
B.G:5 Wind van links overdruk B

Staal	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw11	0.24	0.24	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw12	0.10	0.10	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.10	0.10	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw6	0.24	0.24	0.000	0.209	0.00	0.20	0.00
4	1:QZLokaal	Qw7	0.19	0.19	1.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw7	0.19	0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:6 Wind van links onderdruk C



STAAFBELASTINGEN

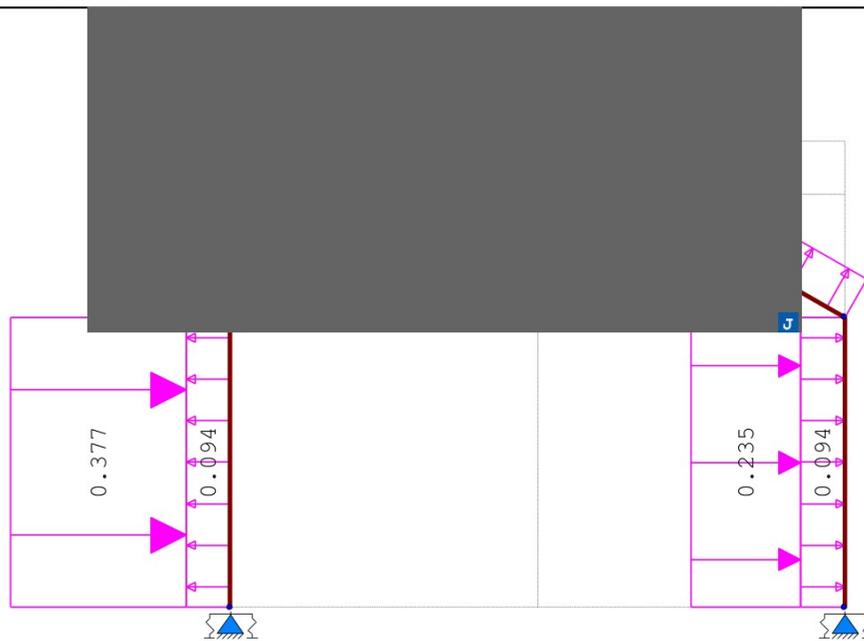
B.G:6 Wind van links onderdruk C

Staal	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw4	-0.32	-0.32	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw5	-0.19	-0.19	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:7 Wind van links overdruk C



STAAFBELASTINGEN

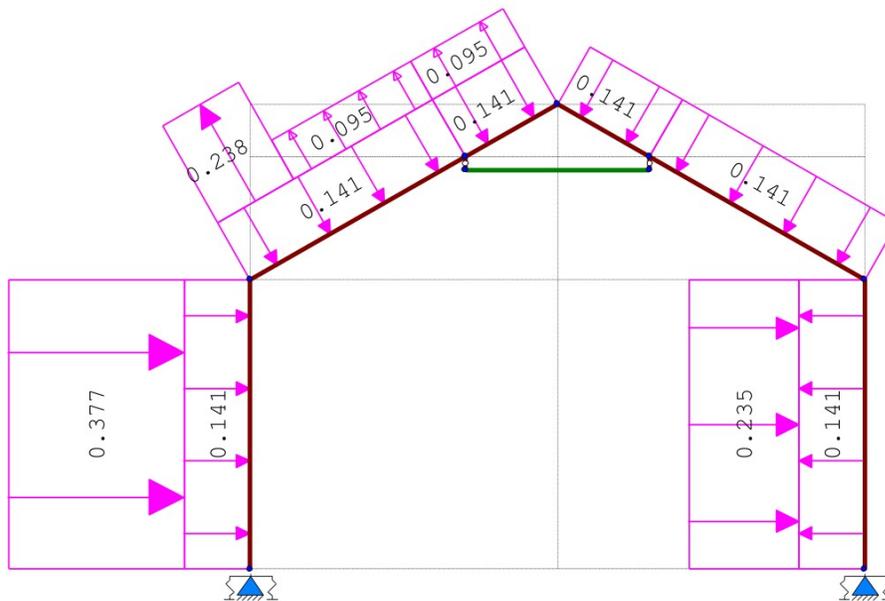
B.G:7 Wind van links overdruk C

Staal	Type	Index	q1/p/m	q2	A	B	Ψ_0	Ψ_1	Ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw4	-0.32	-0.32	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw5	-0.19	-0.19	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d.
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:8 Wind van links onderdruk D

**STAAFBELASTINGEN**

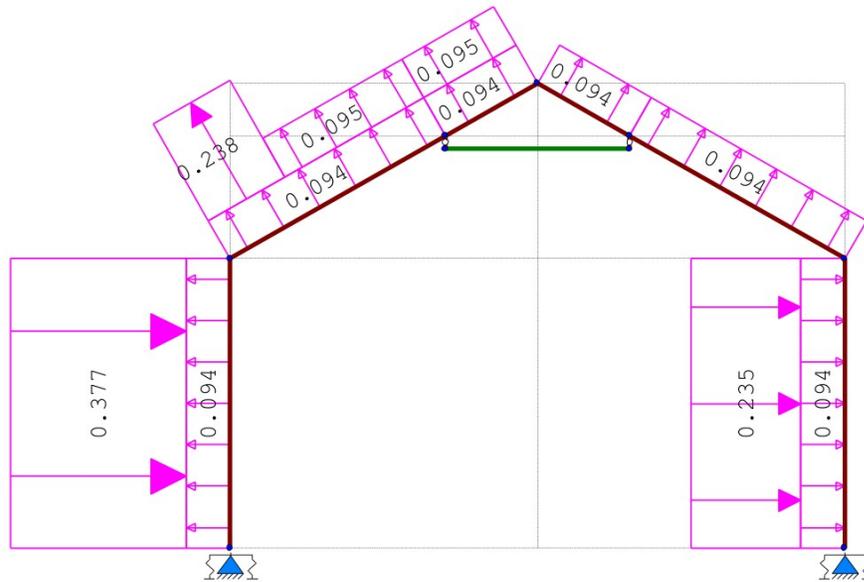
B.G:8 Wind van links onderdruk D

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw11	0.24	0.24	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw12	0.10	0.10	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.10	0.10	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d.
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:9 Wind van links overdruk D



STAAFBELASTINGEN

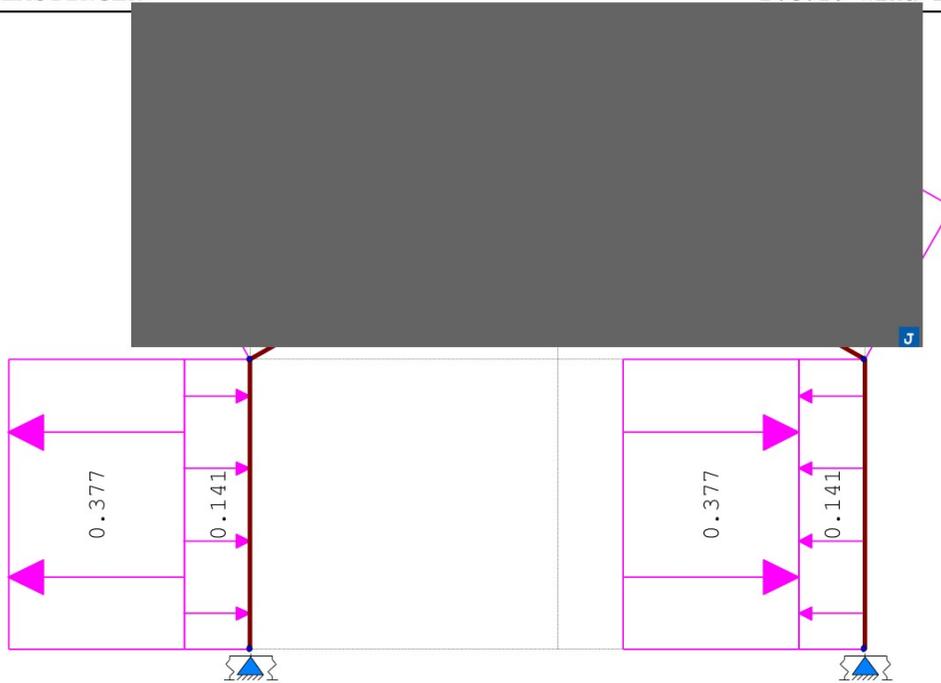
B.G:9 Wind van links overdruk D

StAAF	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw11	0.24	0.24	0.000	1.822	0.00	0.20	0.00
2	1:QZLokaal	Qw12	0.10	0.10	1.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.10	0.10	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanen as D

BELASTINGEN

B.G:10 Wind loodrecht onderdruk A



STAAFBELASTINGEN

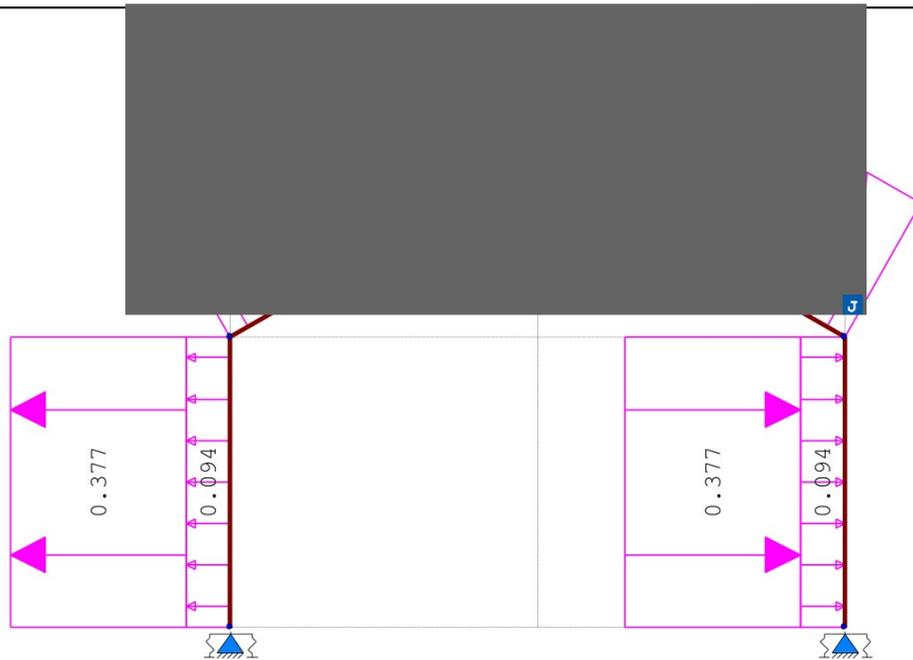
B.G:10 Wind loodrecht onderdruk A

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw13	0.38	0.38	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw14	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw15	0.24	0.24	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw15	0.24	0.24	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw15	0.24	0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw15	0.24	0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:11 Wind loodrecht overdruk A



STAAFBELASTINGEN

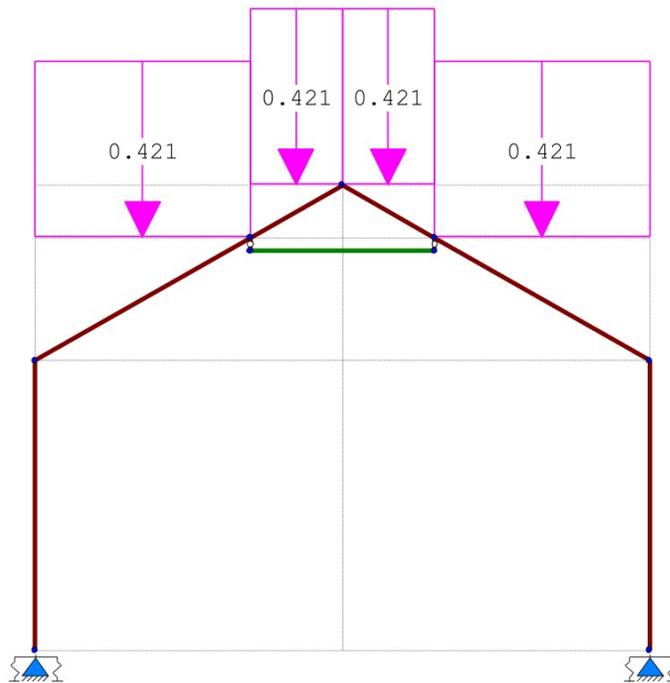
B.G:11 Wind loodrecht overdruk A

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw13	0.38	0.38	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw14	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw15	0.24	0.24	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw15	0.24	0.24	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw15	0.24	0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw15	0.24	0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d.
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:12 Sneeuw A

**STAAFBELASTINGEN**

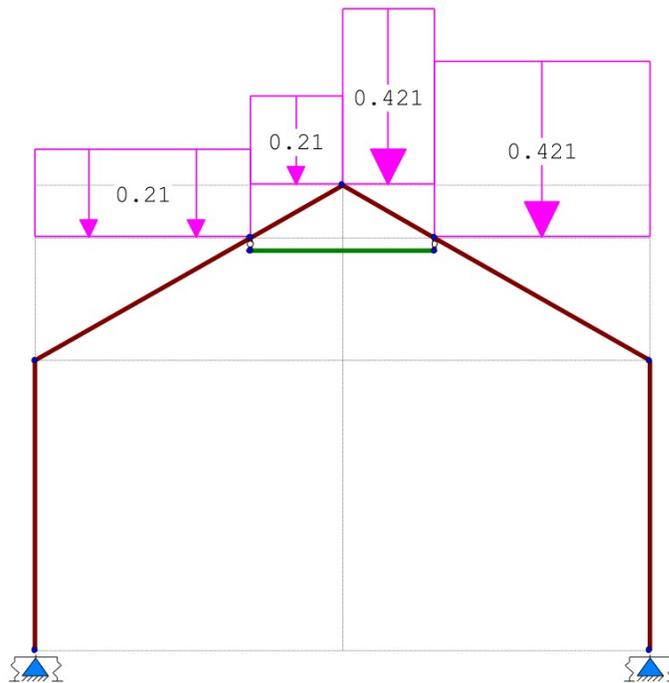
B.G:12 Sneeuw A

Staat	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
2	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
3	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
5	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d.
 Onderdeel.....: tussenspanten as D

BELASTINGEN

B.G:13 Sneeuw B



STAAFBELASTINGEN

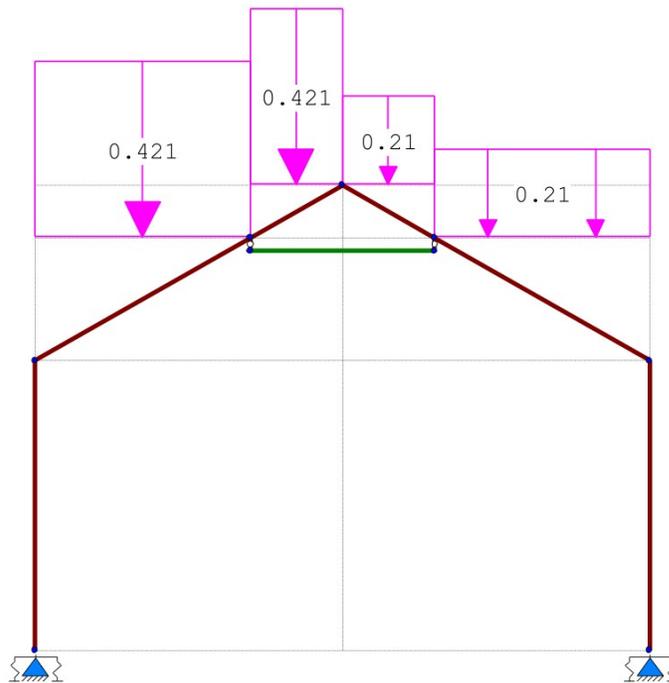
B.G:13 Sneeuw B

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
2	3:QZgeProj.	Qs2	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00
3	3:QZgeProj.	Qs2	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
5	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanten as D

BELASTINGEN

B.G:14 Sneeuw C

**STAAFBELASTINGEN**

B.G:14 Sneeuw C

StAAF	Type	Index	q1/p/m	q2	A	B	Ψ_0	Ψ_1	Ψ_2
2	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
3	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs2	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00
5	3:QZgeProj.	Qs2	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

REACTIES 1e orde

Kn.	B.G.	X	Z	M
1	1	0.23	1.06	0.03
1	2	-2.29	-0.74	-0.65
1	3	-2.01	-1.56	-0.64
1	4	-1.48	-0.55	-0.29
1	5	-1.20	-1.38	-0.28
1	6	-1.47	0.45	-0.33
1	7	-1.19	-0.37	-0.33
1	8	-1.21	-0.15	-0.19
1	9	-0.93	-0.97	-0.18
1	10	0.37	-0.33	0.02
1	11	0.66	-1.15	0.02
1	12	0.31	1.47	0.04
1	13	0.23	0.92	0.04
1	14	0.23	1.29	0.02

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspannten as D

REACTIES		1e orde		
Kn.	B.G.	X	Z	M
9	1	-0.23	1.06	-0.03
9	2	-1.68	1.79	-0.62
9	3	-1.96	0.97	-0.63
9	4	-0.68	0.38	-0.24
9	5	-0.96	-0.44	-0.25
9	6	-0.99	1.31	-0.33
9	7	-1.27	0.49	-0.33
9	8	-0.55	0.68	-0.16
9	9	-0.83	-0.15	-0.17
9	10	-0.37	-0.33	-0.02
9	11	-0.66	-1.15	-0.02
9	12	-0.31	1.47	-0.04
9	13	-0.23	1.29	-0.02
9	14	-0.23	0.92	-0.04

BEREKENINGSTATUS		Controlerende berekening
B.C.	Iteratie	Status
1	3	Nauwkeurigheid bereikt
2	3	Nauwkeurigheid bereikt
3	3	Nauwkeurigheid bereikt
4	3	Nauwkeurigheid bereikt
5	3	Nauwkeurigheid bereikt
6	3	Nauwkeurigheid bereikt
7	3	Nauwkeurigheid bereikt
8	3	Nauwkeurigheid bereikt
9	3	Nauwkeurigheid bereikt
10	3	Nauwkeurigheid bereikt
11	3	Nauwkeurigheid bereikt
12	3	Nauwkeurigheid bereikt
13	3	Nauwkeurigheid bereikt
14	3	Nauwkeurigheid bereikt
15	3	Nauwkeurigheid bereikt
16	3	Nauwkeurigheid bereikt
17	3	Nauwkeurigheid bereikt
18	3	Nauwkeurigheid bereikt
19	3	Nauwkeurigheid bereikt
20	3	Nauwkeurigheid bereikt
21	3	Nauwkeurigheid bereikt
22	3	Nauwkeurigheid bereikt
23	3	Nauwkeurigheid bereikt
24	3	Nauwkeurigheid bereikt
25	3	Nauwkeurigheid bereikt
26	3	Nauwkeurigheid bereikt
27	3	Nauwkeurigheid bereikt
28	3	Nauwkeurigheid bereikt
29	3	Nauwkeurigheid bereikt
30	3	Nauwkeurigheid bereikt
31	3	Nauwkeurigheid bereikt

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanen as D

BEREKENINGSTATUS

Controlerende berekening

B.C. Iteratie Status

32	3	Nauwkeurigheid bereikt
33	3	Nauwkeurigheid bereikt
34	3	Nauwkeurigheid bereikt
35	3	Nauwkeurigheid bereikt
36	3	Nauwkeurigheid bereikt
37	3	Nauwkeurigheid bereikt
38	3	Nauwkeurigheid bereikt
39	3	Nauwkeurigheid bereikt
40	3	Nauwkeurigheid bereikt
41	3	Nauwkeurigheid bereikt
42	3	Nauwkeurigheid bereikt

BELASTINGCOMBINATIES

BC Type

1	Fund.	1.22	$G_{k,1}$		
2	Fund.	0.90	$G_{k,1}$		
3	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,2}$
4	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,3}$
5	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,4}$
6	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,5}$
7	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,6}$
8	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,7}$
9	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,8}$
10	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,9}$
11	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,10}$
12	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,11}$
13	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,12}$
14	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,13}$
15	Fund.	1.08	$G_{k,1}$	+	1.35 $Q_{k,14}$
16	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,2}$
17	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,3}$
18	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,4}$
19	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,5}$
20	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,6}$
21	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,7}$
22	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,8}$
23	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,9}$
24	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,10}$
25	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,11}$
26	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,12}$
27	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,13}$
28	Fund.	0.90	$G_{k,1}$	+	1.35 $Q_{k,14}$
29	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,2}$
30	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,3}$
31	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,4}$
32	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,5}$
33	Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,6}$

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspanen as D

BELASTINGCOMBINATIES

BC Type				
34 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,7}$
35 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,8}$
36 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,9}$
37 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,10}$
38 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,11}$
39 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,12}$
40 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,13}$
41 Kar.	1.00	$G_{k,1}$	+	1.00 $Q_{k,14}$
42 Blij.	1.00	$G_{k,1}$		

GUNSTIGE WERKING PERMANENTE BELASTINGEN

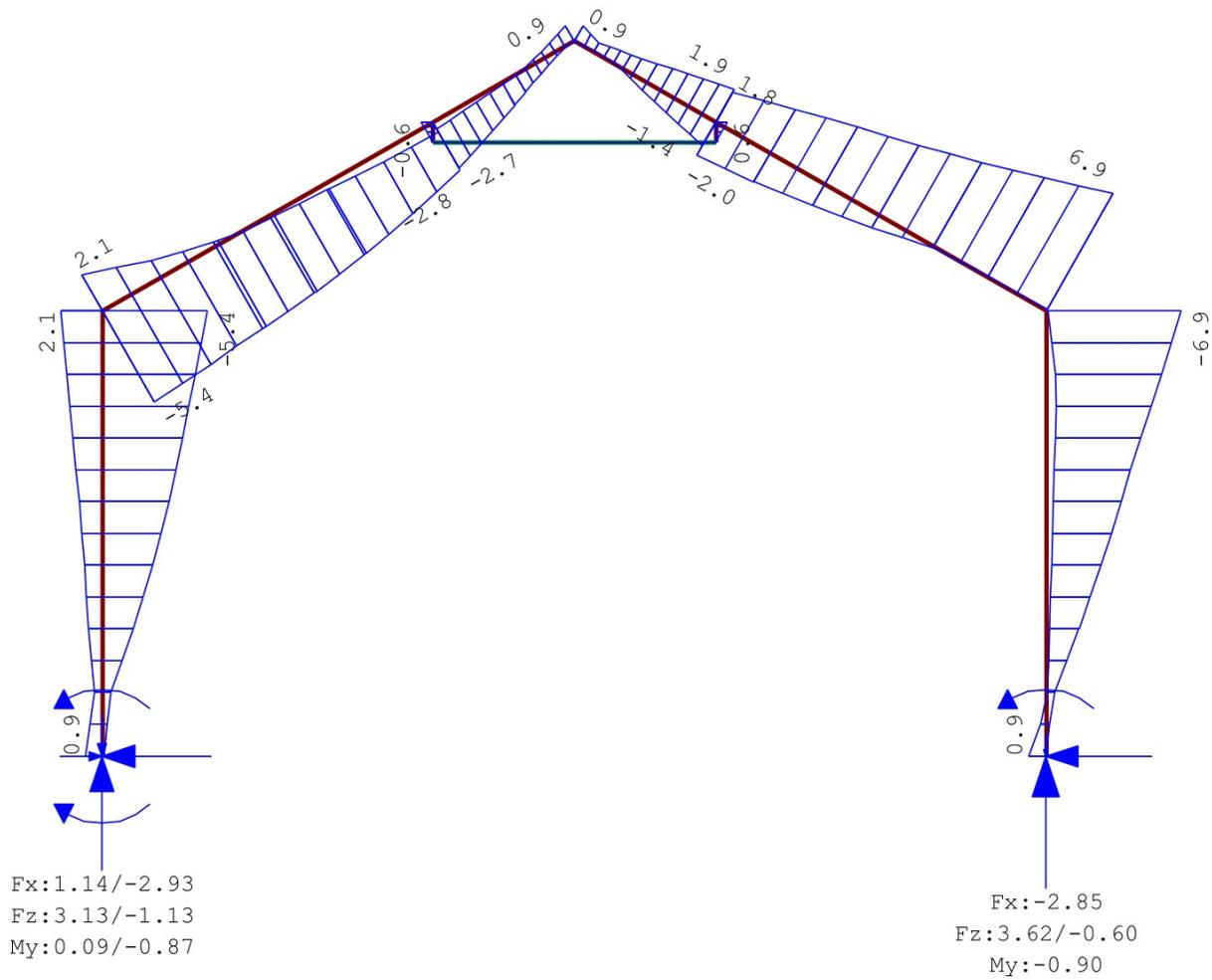
BC Staven met gunstige werking	
1	Geen
2	Alle staven de factor:0.90
3	Geen
4	Geen
5	Geen
6	Geen
7	Geen
8	Geen
9	Geen
10	Geen
11	Geen
12	Geen
13	Geen
14	Geen
15	Geen
16	Alle staven de factor:0.90
17	Alle staven de factor:0.90
18	Alle staven de factor:0.90
19	Alle staven de factor:0.90
20	Alle staven de factor:0.90
21	Alle staven de factor:0.90
22	Alle staven de factor:0.90
23	Alle staven de factor:0.90
24	Alle staven de factor:0.90
25	Alle staven de factor:0.90
26	Alle staven de factor:0.90
27	Alle staven de factor:0.90
28	Alle staven de factor:0.90

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: tussenspanten as D

OMHULLENDE VAN DE FUNDAMENTELE COMBINATIES

MOMENTEN 2e orde

Fundamentele combinatie

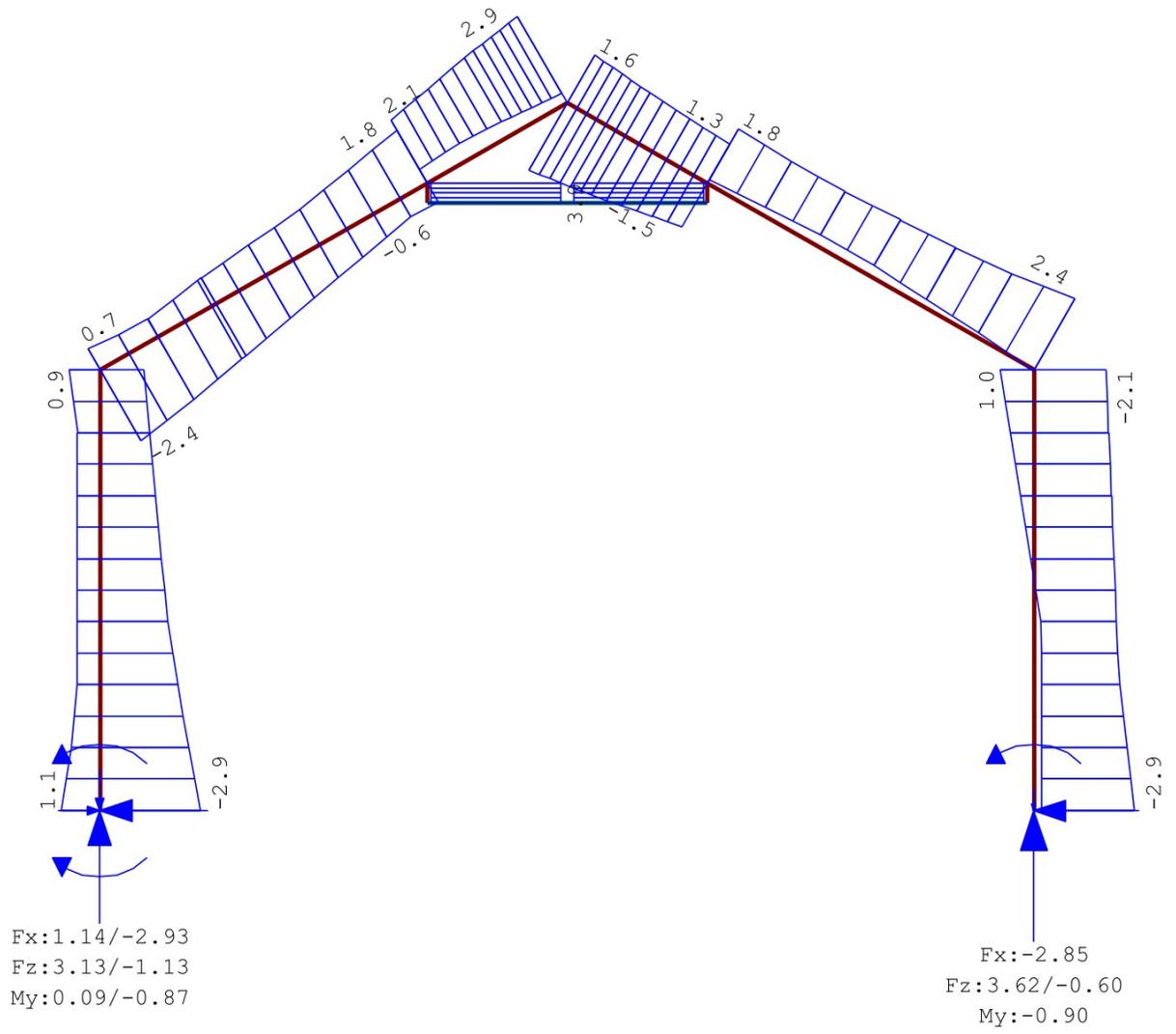


Project.....: staalframe loods a.d.
 Onderdeel.....: tussenspanen as D

DWARSKRACHTEN

2e orde

Fundamentele combinatie

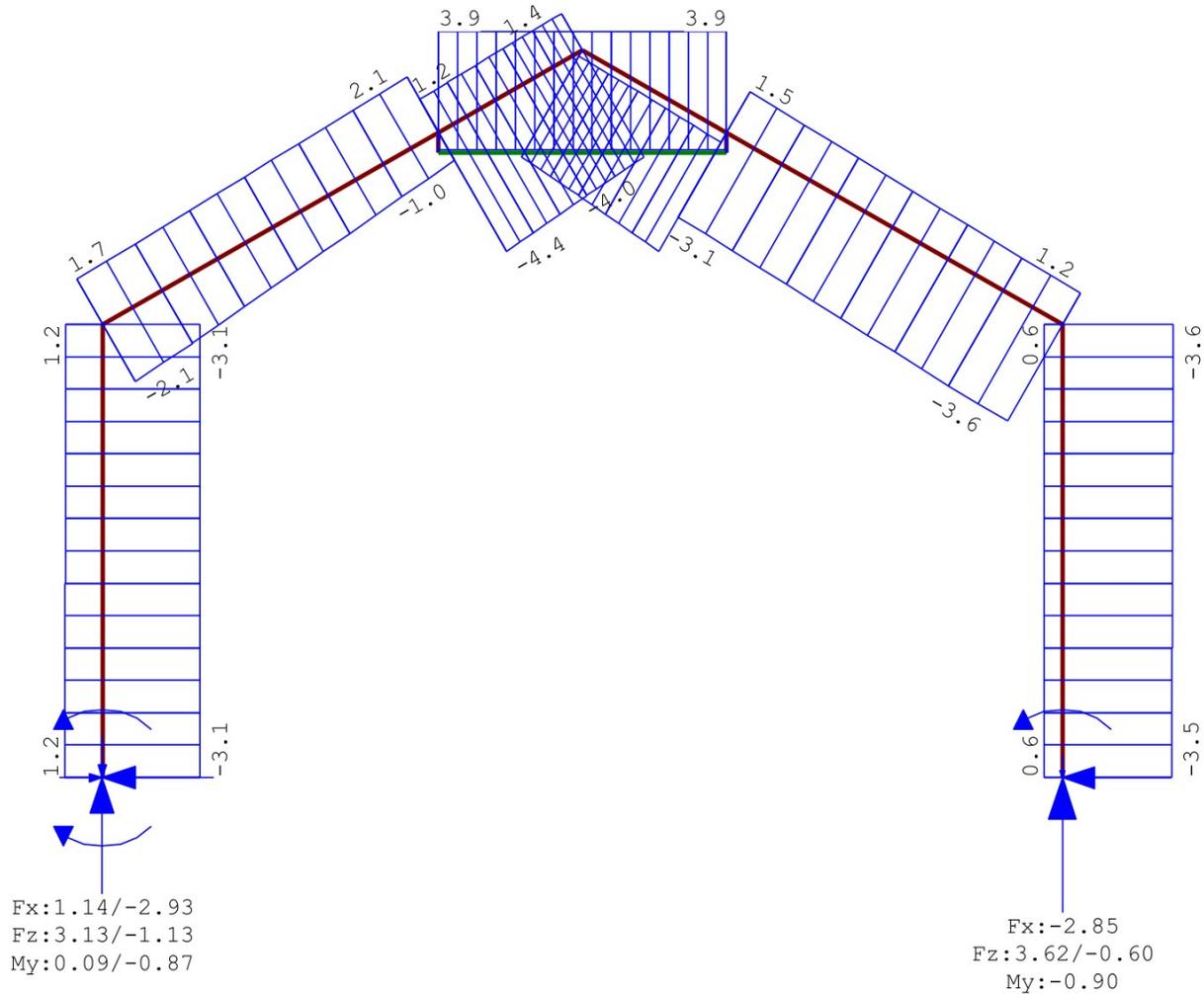


Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: tussenspanten as D

NORMAALKRACHTEN

2e orde

Fundamentele combinatie



STAAFKRACHTEN

2e orde

Fundamentele combinatie

St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj	
			Min BC	Max BC	Min BC	Max BC	Min BC	Max BC
1	1		-3.13	1.21	-2.93	1.13	-0.09	0.87
1		0.471	-3.13	1.21	-2.60	0.84	-0.44	0.40
1		2.829	-3.13	1.20	-1.45	0.67	-4.75	1.82
1	2		-3.13	1.19	-1.27	0.91	-5.39	2.13
2	2		-2.13	1.70	-2.40	0.71	-5.39	2.13
2		0.500	-1.96	1.73	-2.11	0.61	-5.14	1.00
2		1.160	-1.70	1.82	-1.64	0.92	-4.76	0.00
2		2.590	-1.12	2.02	-0.62	1.63	-3.21	-0.56
2	4		-1.03	2.06	-0.65	1.79	-2.83	-0.60

Project.....: staalframe loods a.d. J
 Onderdeel....: tussenspannten as D

STAAFKRACHTEN		2e orde				Fundamentele combinatie								
St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj							
			Min BC	Max BC	Min BC	Max BC	Min BC	Max BC						
3	4		-4.43	13	1.22	17	0.45	2	2.13	3	-2.72	3	-0.43	2
3	0.355		-4.28	13	1.27	17	0.54	2	2.38	3	-1.92	3	-0.23	25
3	0.733		-4.13	13	1.32	17	0.47	25	2.65	3	-0.97	3	0.00	27
3	3		-3.98	13	1.36	17	0.32	25	2.93	3	-0.02	19	0.90	13
4	3		-3.98	13	-0.24	19	-2.27	13	1.63	17	-0.02	19	0.90	13
4	0.021		-3.98	13	-0.24	19	-2.26	13	1.62	17	0.00	19	0.85	13
4	0.167		-4.03	13	-0.25	19	-2.18	13	1.57	17	0.10	25	0.55	3
4	0.358		-4.09	13	-0.26	19	-2.07	13	1.51	17	0.00	25	0.76	3
4	7		-4.43	13	-0.37	19	-1.48	13	1.32	16	-1.40	13	1.91	17
5	7		-3.15	3	1.51	25	0.12	2	1.82	4	-1.98	13	1.76	17
5	0.464		-3.22	3	1.45	25	0.23	2	1.78	4	-1.69	13	2.58	17
5	0.929		-3.30	3	1.39	25	0.34	2	1.79	3	-1.27	14	3.36	17
5	2.107		-3.51	3	1.23	25	0.18	25	2.04	13	0.00	25	5.45	3
5	6		-3.60	3	1.17	25	-0.03	25	2.40	13	0.09	25	6.91	3
6	9		-3.53	3	0.61	25	-2.94	4	-0.21	2	0.03	2	0.90	3
6	0.034		-3.53	3	0.61	25	-2.92	4	-0.21	2	0.00	2	0.81	3
6	0.426		-3.53	3	0.61	25	-2.75	4	-0.21	2	-0.39	4	0.00	2
6	2.593		-3.56	3	0.61	25	-2.22	3	0.55	25	-5.37	3	-0.51	2
6	6		-3.57	3	0.61	25	-2.12	3	1.00	25	-6.91	3	-0.09	25
7	4		-0.00	13	-0.00	18	0.11	18	3.91	13	-0.59	13	-0.02	18
7	5		-0.00	13	-0.00	18	0.11	18	3.91	13	0.00	16	0.00	8
8	7		-0.00	13	0.00	4	-3.91	13	-0.11	18	0.02	18	0.59	13
8	8		-0.00	13	0.00	4	-3.91	13	-0.11	18	0.00	4	0.00	5
9	5		0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9	8		0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1

TUSSEN-PUNTEN KRACHTEN		2e orde				Fundamentele combinatie								
St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj							
			Min BC	Max BC	Min BC	Max BC	Min BC	Max BC						
1	1		-3.13	13	1.21	17	-2.93	16	1.13	12	-0.09	13	0.87	16
1	0.330		-3.13	13	1.21	17	-2.70	16	0.92	12	-0.33	16	0.54	12
1	0.660		-3.13	13	1.21	17	-2.47	16	0.77	12	-0.90	16	0.53	12
1	0.990		-3.13	13	1.21	17	-2.24	16	0.68	13	-1.69	16	0.74	12
1	1.320		-3.13	13	1.21	17	-2.03	17	0.68	13	-2.38	16	0.87	12
1	1.650		-3.13	13	1.21	17	-1.89	17	0.67	13	-3.00	16	1.05	13
1	1.980		-3.13	13	1.20	17	-1.77	17	0.67	13	-3.56	16	1.25	13
1	2.310		-3.13	13	1.20	17	-1.64	17	0.67	13	-4.04	16	1.47	13
1	2.640		-3.13	13	1.20	17	-1.52	17	0.67	13	-4.49	17	1.69	13
1	2.970		-3.13	13	1.19	17	-1.40	17	0.74	13	-4.94	17	1.91	13
1	2		-3.13	13	1.19	17	-1.27	17	0.91	9	-5.39	17	2.13	13
2	2		-2.13	13	1.70	17	-2.40	13	0.71	19	-5.39	17	2.13	13
2	0.282		-2.03	13	1.71	17	-2.24	13	0.62	19	-5.25	17	1.49	13
2	0.564		-1.94	13	1.74	17	-2.07	13	0.63	17	-5.09	17	0.89	13
2	0.847		-1.82	13	1.78	17	-1.87	13	0.79	17	-4.92	17	0.41	14
2	1.129		-1.71	13	1.82	17	-1.67	13	0.91	17	-4.78	3	0.04	27
2	1.411		-1.60	13	1.86	17	-1.47	13	1.01	17	-4.61	3	-0.14	25
2	1.693		-1.48	13	1.90	17	-1.26	13	1.11	17	-4.35	3	-0.25	25

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspannten as D

TUSSENpunTEN KRACHTEN		2e orde				Fundamentele combinatie				
St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj			
			Min	Max	Min	Max	Min	Max		
2	1.975		-1.37	1.94	-1.06	1.23	-4.06	-0.37		
2	2.257		-1.26	1.98	-0.86	1.41	-3.70	-0.49		
2	2.540		-1.14	2.02	-0.66	1.60	-3.29	-0.55		
2	4		-1.03	2.06	-0.65	1.79	-2.83	-0.60		
3	4		-4.43	1.22	0.45	2.13	-2.72	-0.43		
3	0.121		-4.38	1.24	0.48	2.22	-2.46	-0.36		
3	0.242		-4.33	1.26	0.51	2.30	-2.19	-0.29		
3	0.363		-4.28	1.27	0.54	2.39	-1.90	-0.22		
3	0.484		-4.23	1.29	0.53	2.48	-1.61	-0.16		
3	0.605		-4.18	1.31	0.50	2.56	-1.30	-0.09		
3	0.726		-4.13	1.32	0.48	2.65	-0.99	-0.01		
3	0.847		-4.09	1.33	0.44	2.72	-0.68	0.17		
3	0.967		-4.05	1.34	0.40	2.79	-0.40	0.37		
3	1.088		-4.01	1.35	0.36	2.86	-0.14	0.63		
3	3		-3.98	1.36	0.32	2.93	-0.02	0.90		
4	3		-3.98	-0.24	-2.27	1.63	-0.02	0.90		
4	0.121		-4.01	-0.25	-2.20	1.59	0.07	0.64		
4	0.242		-4.05	-0.26	-2.13	1.55	0.07	0.63		
4	0.363		-4.09	-0.26	-2.07	1.51	-0.01	0.77		
4	0.484		-4.13	-0.27	-2.00	1.46	-0.20	0.91		
4	0.605		-4.18	-0.29	-1.91	1.44	-0.42	1.08		
4	0.726		-4.23	-0.30	-1.83	1.41	-0.63	1.25		
4	0.847		-4.28	-0.32	-1.74	1.38	-0.82	1.42		
4	0.967		-4.33	-0.34	-1.66	1.36	-1.02	1.58		
4	1.088		-4.38	-0.35	-1.57	1.33	-1.21	1.75		
4	7		-4.43	-0.37	-1.48	1.32	-1.40	1.91		
5	7		-3.15	1.51	0.12	1.82	-1.98	1.76		
5	0.282		-3.19	1.48	0.19	1.79	-1.81	2.26		
5	0.564		-3.24	1.44	0.25	1.78	-1.60	2.75		
5	0.847		-3.28	1.40	0.32	1.79	-1.34	3.23		
5	1.129		-3.33	1.36	0.34	1.82	-1.04	3.69		
5	1.411		-3.39	1.33	0.33	1.87	-0.72	4.15		
5	1.693		-3.43	1.29	0.27	1.93	-0.31	4.65		
5	1.975		-3.49	1.25	0.21	1.99	-0.04	5.19		
5	2.257		-3.53	1.21	0.15	2.09	0.05	5.75		
5	2.540		-3.57	1.19	0.06	2.24	0.08	6.33		
5	6		-3.60	1.17	-0.03	2.40	0.09	6.91		
6	9		-3.53	0.61	-2.94	-0.21	0.03	0.90		
6	0.330		-3.53	0.61	-2.79	-0.21	-0.28	0.15		
6	0.660		-3.53	0.61	-2.64	-0.21	-0.94	-0.11		
6	0.990		-3.53	0.60	-2.50	-0.21	-1.79	-0.18		
6	1.320		-3.53	0.60	-2.42	-0.20	-2.59	-0.25		
6	1.650		-3.54	0.60	-2.37	-0.05	-3.33	-0.32		
6	1.980		-3.55	0.60	-2.32	0.16	-4.03	-0.39		
6	2.310		-3.55	0.60	-2.28	0.37	-4.74	-0.45		
6	2.640		-3.56	0.61	-2.22	0.58	-5.48	-0.51		
6	2.970		-3.57	0.61	-2.16	0.79	-6.20	-0.37		
6	6		-3.57	0.61	-2.12	1.00	-6.91	-0.09		
7	4		-0.00	-0.00	0.11	3.91	-0.59	-0.02		

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: tussenspannten as D

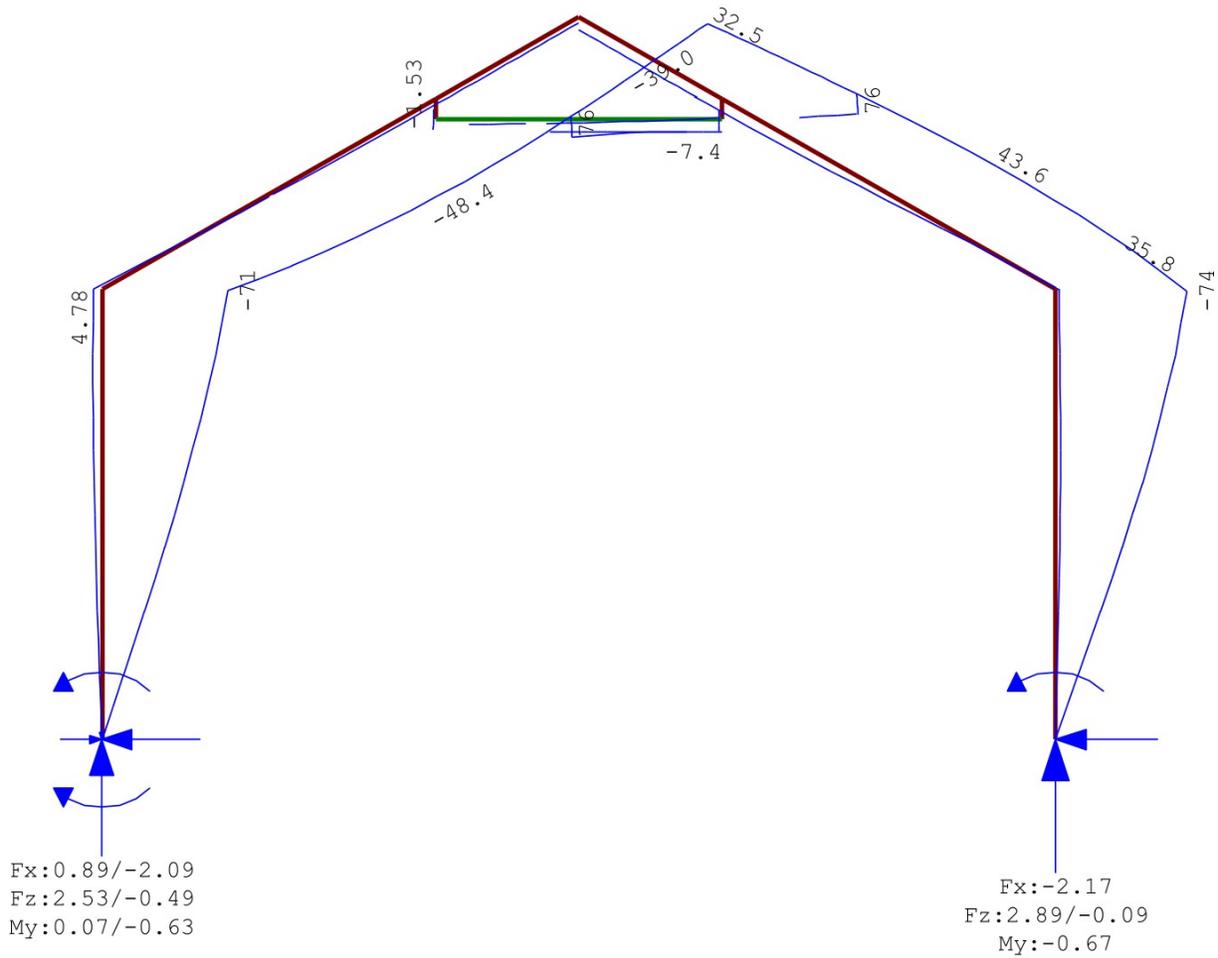
TUSSENpunTEN KRACHTEN		2e orde				Fundamentele combinatie								
St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj							
			Min	Max	Min	Max	Min	Max						
7		0.015	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.53	13	-0.02	18
7		0.030	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.47	13	-0.01	18
7		0.045	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.41	13	-0.01	18
7		0.060	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.35	13	-0.01	18
7		0.075	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.29	13	-0.01	18
7		0.090	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.23	13	-0.01	18
7		0.105	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.18	13	-0.01	18
7		0.120	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.12	13	-0.00	18
7		0.135	-0.00	13	-0.00	18	0.11	18	3.91	13	-0.06	16	-0.00	8
7	5		-0.00	13	-0.00	18	0.11	18	3.91	13	0.00	16	0.00	8
8	7		-0.00	13	0.00	4	-3.91	13	-0.11	18	0.02	18	0.59	13
8		0.015	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.02	18	0.53	13
8		0.030	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.01	18	0.47	13
8		0.045	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.01	18	0.41	13
8		0.060	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.01	18	0.35	13
8		0.075	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.01	18	0.29	13
8		0.090	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.01	18	0.23	13
8		0.105	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.01	18	0.18	13
8		0.120	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.00	18	0.12	13
8		0.135	-0.00	13	0.00	4	-3.91	13	-0.11	18	0.00	4	0.06	5
8	8		-0.00	13	0.00	4	-3.91	13	-0.11	18	0.00	4	0.00	5
9	5		0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		0.210	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		0.420	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		0.630	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		0.840	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		1.050	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		1.260	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		1.470	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		1.680	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9		1.890	0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1
9	8		0.11	18	3.91	13	-0.00	4	0.00	14	0.00	1	0.00	1

REACTIES		2e orde				Fundamentele combinatie	
Kn.	X-min	X-max	Z-min	Z-max	M-min	M-max	
1	-2.93	1.14	-1.13	3.13	-0.87	0.09	
9	-2.85	-0.21	-0.60	3.62	-0.90	-0.03	

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: tussenspanen as D

OMHULLENDE VAN DE KARAKTERISTIEKE COMBINATIES

VERPLAATSINGEN 2e orde [mm] Karakteristieke combinatie



Technosoft Raamwerken release 6.82a**kopgevel as A**

Project.....: staalframe loods a.d. XXXXXXXXXX 
 Onderdeel....: kopgevel as A
 Dimensies....: kN;m;rad (tenzij anders aangegeven)

Belastingbreedte.: 1.000
 Rekenmodel.....: 2e-orde-elastisch.
 Theorieën voor de bepaling van de krachtsverdeling:
 1) Losse belastinggevallen:
 Lineaire-elasticiteitstheorie
 2) Uiterste grenstoestand:
 Geometrisch niet lineair alle staven.
 Fysisch lineair alle staven.
 3) Gebruiksgrenstoestand:
 Geometrisch niet lineair alle staven.
 Fysisch lineair alle staven.

Maximum aantal iteraties.....: 50
 Max.deellengte kolommen/wanden: 0.500 Max.deellengte balken/vloeren: 0.500
 Max. X-verplaatsing in UGT.....: 0.500 Max. Z-verplaatsing in UGT....: 0.250

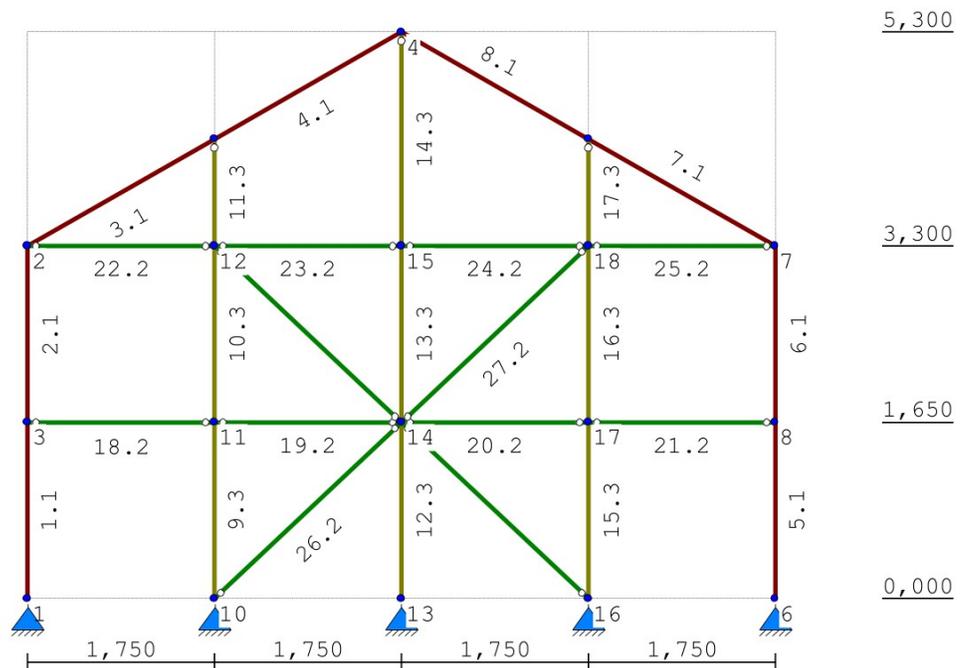
Gunstige werking van de permanente belasting wordt automatisch verwerkt.

Toegepaste normen volgens Eurocode met Nederlandse NB

Belastingen	NEN-EN 1990:2002	C2:2010,A1:2019	NB:2019(nl)
	NEN-EN 1991-1-1:2002	C1/C11:2019	NB:2019(nl)
	NEN-EN 1991-1-3:2003	C1:2009	NB:2011(nl)
	NEN-EN 1991-1-4:2005	C2:2011	NB:2011(nl)

Project.....: staalframe loods a.d.
 Onderdeel....: kopgevel as A

GEOMETRIE



STRAMIENLIJNEN

Nr.	Naam	X	Z-min	Z-max
1		0.000	0.000	5.300
2		3.500	0.000	5.300
3		7.000	0.000	5.300
4		1.750	0.000	5.300
5		5.250	0.000	5.300

NIVEAUS

Nr.	Z	X-min	X-max
1	0.000	0.000	7.000
2	3.300	0.000	7.000
3	5.300	0.000	7.000
4	1.650	0.000	7.000

MATERIALEN

Mt	Kwaliteit	E-modulus[N/mm ²]	S.G.	Pois.	Uitz. coëff
1	S235	210000	78.5	0.30	1.2000e-05

PROFIELEN [mm]

Prof.	Omschrijving	Materiaal	Oppervlak	Traagheid	Vormf.
1	C200/50/15/1,5	1:S235	2.2800e+03	2.4692e+06	0.00
2	C200/50/15/1,5(90)	1:S235	3.3600e+02	1.0100e+05	0.00
3	2XC200/50/15/1,5(90)	1:S235	6.7200e+02	2.0200e+05	0.00

Project.....: staalframe loods a.d. Opwettenseweg 126
 Onderdeel....: kopgevel as A

PROFIELEN vervolg [mm]

Prof.	Staaftype	Breedte	Hoogte	e	Type	b1	h1	b2	h2
1	0:Normaal	50	200	100.0					
2	0:Normaal	200	50	25.0					
3	0:Normaal	200	100	50.0					

KNOPEN

Knoop	X	Z	Knoop	X	Z
1	0.000	0.000	6	7.000	0.000
2	0.000	3.300	7	7.000	3.300
3	0.000	1.650	8	7.000	1.650
4	3.500	5.300	9	5.250	4.300
5	1.750	4.300	10	1.750	0.000
11	1.750	1.650	16	5.250	0.000
12	1.750	3.300	17	5.250	1.650
13	3.500	0.000	18	5.250	3.300
14	3.500	1.650			
15	3.500	3.300			

STAVEN

St.	ki	kj	Profiel	Aansl.i	Aansl.j	Lengte	Opm.
1	1	3	1:C200/50/15/1,5	NDM	NDM	1.650	
2	3	2	1:C200/50/15/1,5	NDM	NDM	1.650	
3	2	5	1:C200/50/15/1,5	NDM	NDM	2.016	
4	5	4	1:C200/50/15/1,5	NDM	NDM	2.016	
5	6	8	1:C200/50/15/1,5	NDM	NDM	1.650	
6	8	7	1:C200/50/15/1,5	NDM	NDM	1.650	
7	7	9	1:C200/50/15/1,5	NDM	NDM	2.016	
8	9	4	1:C200/50/15/1,5	NDM	NDM	2.016	
9	10	11	3:2XC200/50/15/1,5 (90)	NDM	NDM	1.650	
10	11	12	3:2XC200/50/15/1,5 (90)	NDM	NDM	1.650	
11	12	5	3:2XC200/50/15/1,5 (90)	NDM	ND	1.000	
12	13	14	3:2XC200/50/15/1,5 (90)	NDM	NDM	1.650	
13	14	15	3:2XC200/50/15/1,5 (90)	NDM	NDM	1.650	
14	15	4	3:2XC200/50/15/1,5 (90)	NDM	ND	2.000	
15	16	17	3:2XC200/50/15/1,5 (90)	NDM	NDM	1.650	
16	17	18	3:2XC200/50/15/1,5 (90)	NDM	NDM	1.650	
17	18	9	3:2XC200/50/15/1,5 (90)	NDM	ND	1.000	
18	3	11	2:C200/50/15/1,5 (90)	ND	ND	1.750	
19	11	14	2:C200/50/15/1,5 (90)	ND	ND	1.750	
20	14	17	2:C200/50/15/1,5 (90)	ND	ND	1.750	
21	17	8	2:C200/50/15/1,5 (90)	ND	ND	1.750	
22	2	12	2:C200/50/15/1,5 (90)	ND	ND	1.750	
23	12	15	2:C200/50/15/1,5 (90)	ND	ND	1.750	
24	15	18	2:C200/50/15/1,5 (90)	ND	ND	1.750	
25	18	7	2:C200/50/15/1,5 (90)	ND	ND	1.750	
26	10	14	2:C200/50/15/1,5 (90)	ND	ND	2.405	
27	14	18	2:C200/50/15/1,5 (90)	ND	ND	2.405	
28	12	14	2:C200/50/15/1,5 (90)	ND	ND	2.405	
29	14	16	2:C200/50/15/1,5 (90)	ND	ND	2.405	

Project.....: staalframe loods a.d. J
 Onderdeel....: kopgevel as A

VASTE STEUNPUNTEN

Nr.	knoop	Kode	XZR	1=vast	0=vrij	Hoek
1	1	110				0.00
2	6	110				0.00
3	10	110				0.00
4	13	110				0.00
5	16	110				0.00

BELASTINGGENERATIE ALGEMEEN.

Betrouwbaarheidsklasse.....:	1	Referentieperiode.....:	15
Gebouwdiepte.....:	10.00	Gebouwhoogte.....:	5.50
Niveau aansl.terrein.....:	0.00	E.g. scheid.w. [kN/m2]:	0.00

WIND

Terrein categorie ...[4.3.2]....:	Onbebouwd		
Windgebied	3	Vb,0 ..[4.2].....:	24.500
Referentie periode wind.....:	15.00	Vb(p) ..[4.2].....:	22.458
K	[4.2].....:	0.280	n
Positie spant in het gebouw....:	0.000	Kr	[4.3.2].....:
z0	[4.3.2]....:	0.200	Zmin ..[4.3.2].....:
Co wind van links ..[4.3.3]....:	1.000	Co wind van rechts....:	1.000
Co wind loodrecht ..[4.3.3]....:	1.000		
Cpi wind van links ..[7.2.9]....:	0.200	-0.300	
Cpi windloodrecht ...[7.2.9]....:	0.200	-0.300	
Cpi wind van rechts .[7.2.9]....:	0.200	-0.300	
Cfr windwrijving[7.5].....:	0.040		

SNEEUW

Sneeuwbelasting (sk) 50 jaar :	0.70
Sneeuwbelasting (sn) n jaar :	0.53

STAAFTYPEN

Type	staven
1:Vloer.	: 18-25
4:Wand / kolom.	: 9-17
5:Linker gevel.	: 1,2
6:Rechter gevel.	: 5,6
7:Dak.	: 3,4,7,8
9:Open.	: 26-29

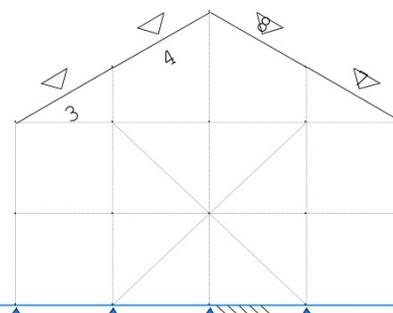
Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel.....: kopgevel as A

LASTVELDEN

Wind staven



Sneeuw staven

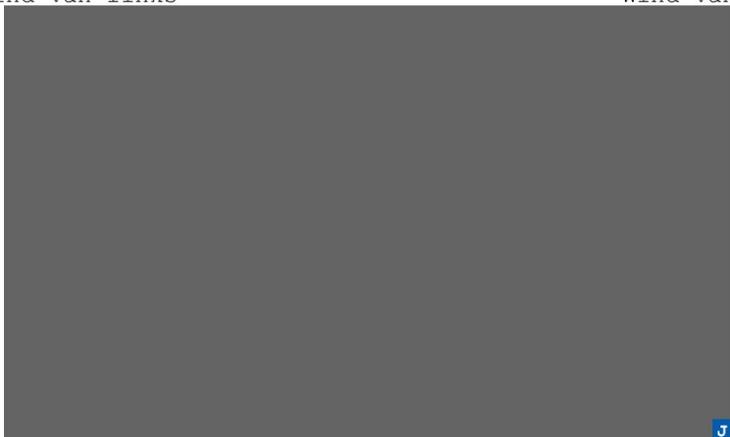
**WIND DAK**

Nr.	Staaftype	reductie bij wind van links	reductie bij wind van rechts	Cpe volgens art:
1	1-2 Gevel	1.000	1.000	7.2.2
2	3-4 Zadeldak	1.000	1.000	7.2.5
3	8-7 Zadeldak	1.000	1.000	7.2.5
4	6-5 Gevel	1.000	1.000	7.2.2

WIND ZONES

Wind van links

Wind van rechts

**WIND VAN LINKS ZONES**

Nr.	Staaftype	Positie	Lengte	Zone
1	1-2	0.000	3.300	D
2	3-4	0.000	1.000	F/G
3	3-4	1.000	3.031	H
4	8-7	0.000	1.000	J
5	8-7	1.000	3.031	I
6	6-5	0.000	3.300	E

Project.....: staalframe loods a.d.
 Onderdeel....: kopgevel as A

Wind indexen

Index	CsCd	Cpe/Cpi	qp	breedte	reductie	Qw	Zone	Hoek(en)
Qw1		0.300	0.471	1.000		-0.141	-i	
Qw2		-0.300	0.471	1.000		0.141	-i	
Qw3	1.00	0.800	0.471	1.000		-0.377	D	
Qw4	1.00	0.690	0.471	1.000		-0.325	F	29.7
Qw5	1.00	0.396	0.471	1.000		-0.186	H	29.7
Qw6	1.00	0.510	0.471	1.000		-0.240	J	29.7
Qw7	1.00	0.400	0.471	1.000		-0.188	I	29.7
Qw8	1.00	0.500	0.471	1.000		-0.235	E	
Qw9		-0.200	0.471	1.000		0.094	+i	
Qw10		0.200	0.471	1.000		-0.094	+i	
Qw11	1.00	-0.508	0.471	1.000		0.239	F	29.7
Qw12	1.00	-0.202	0.471	1.000		0.095	H	29.7

SNEEUW DAKTYPEN

Staaft	artikel
3-4	5.3.3 Zadeldak
8-7	5.3.3 Zadeldak

Sneeuw indexen

Index	art	μ	s_k	red.	posfac	breedte	Q_s	hoek
Qs1	5.3.3	0.800	0.53	1.00		1.000	0.421	29.7
Qs2	5.3.3	0.400	0.53	1.00		1.000	0.210	29.7

BELASTINGGEVALLEN

B.G.	Omschrijving	Type
	1 permanent	EGZ=0.00 1 Permanente belasting
g*	2 Wind van links onderdruk A	7
g*	3 Wind van links overdruk A	8
g	4 Wind van links onderdruk B	9
g	5 Wind van links overdruk B	10
g	6 Wind van links onderdruk C	37
g	7 Wind van links overdruk C	38
g	8 Wind van links onderdruk D	39
g	9 Wind van links overdruk D	40
g	10 Sneeuw A	22
g	11 Sneeuw B	23
g	12 Sneeuw C	33

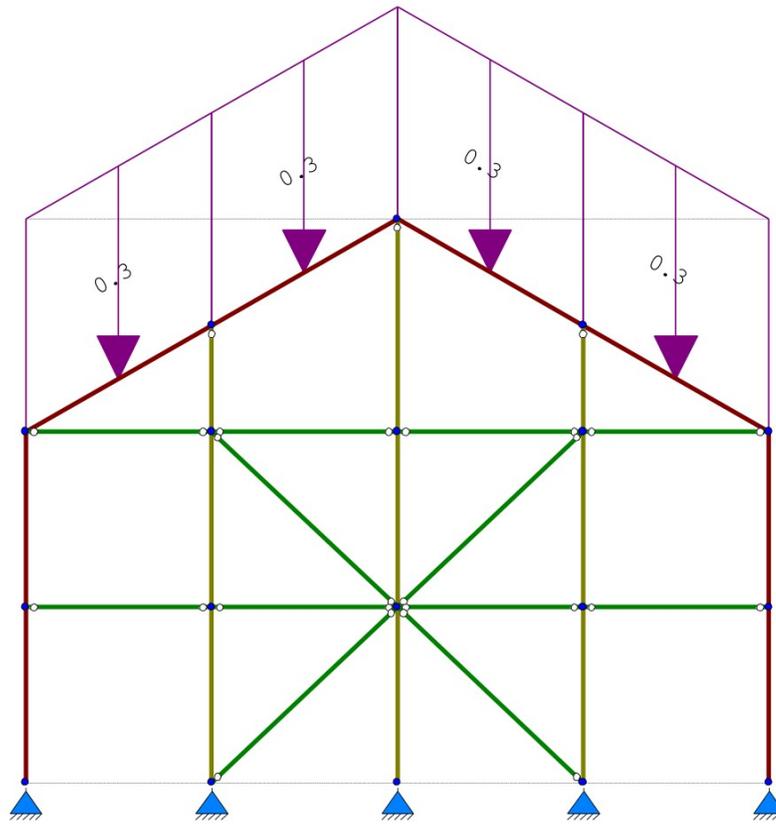
g = gegenereerd belastinggeval

* = belastinggeval bevat 1 of meer handmatig toegevoegde en/of gewijzigde lasten

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: kopgevel as A

BELASTINGEN

B.G:1 permanent



STAAFBELASTINGEN

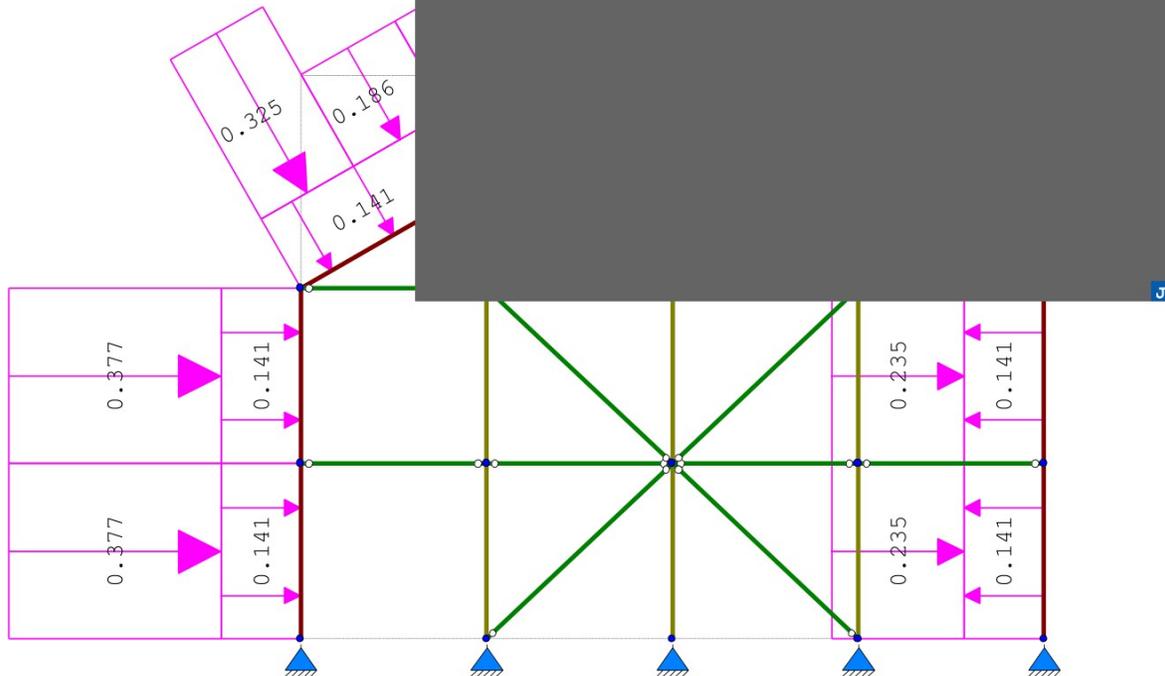
B.G:1 permanent

Staal	Type	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
3	5:QZGloaal	-0.30	-0.30	0.000	0.000			
4	5:QZGloaal	-0.30	-0.30	0.000	0.000			
8	5:QZGloaal	-0.30	-0.30	0.000	0.000			
7	5:QZGloaal	-0.30	-0.30	0.000	0.000			

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

BELASTINGEN

B.G:2 Wind van links onderdruk A



KNOOPBELASTINGEN

B.G:2 Wind van links onderdruk A

Last	Knoop	Richting	waarde	ψ_0	ψ_1	ψ_2	Opm.
1	4	X	1.350	0.00	0.20	0.00	*

Opmerkingen

[*] Deze belasting is handmatig toegevoegd of gewijzigd.

STAAFBELASTINGEN

B.G:2 Wind van links onderdruk A

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
7	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw4	-0.32	-0.32	0.000	1.016	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.19	-0.19	1.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw5	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw6	-0.24	-0.24	1.016	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw7	-0.19	-0.19	0.000	1.000	0.00	0.20	0.00
7	1:QZLokaal	Qw7	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

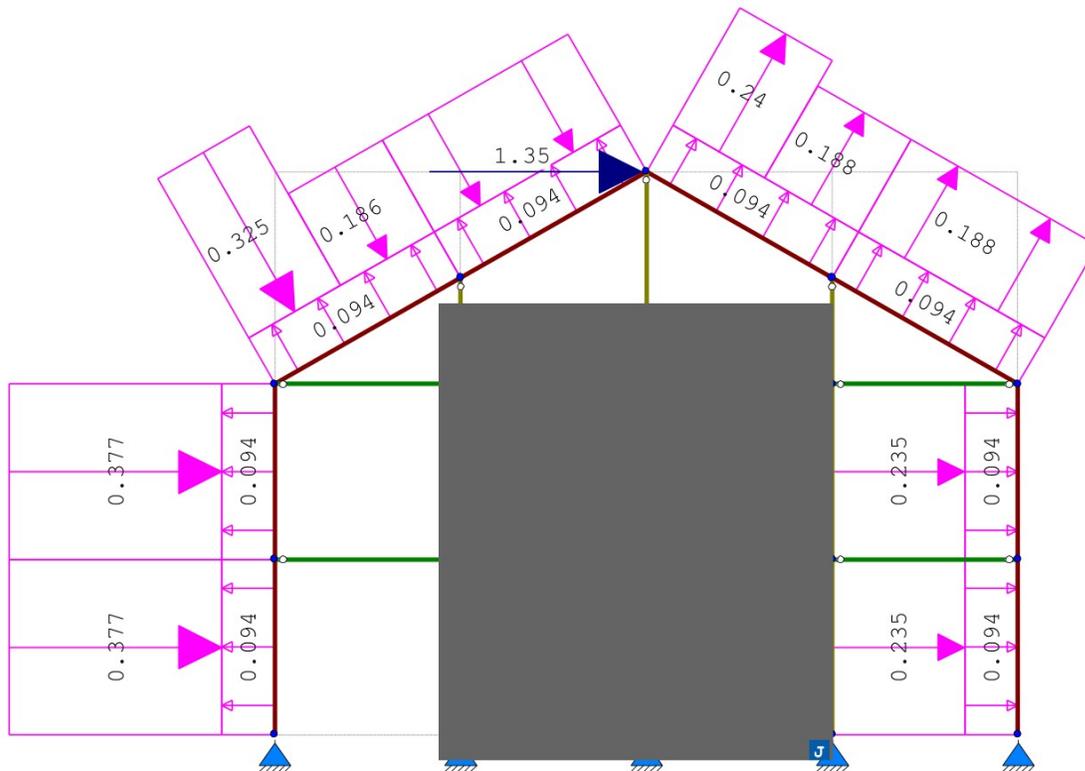
STAAFBELASTINGEN

B.G:2 Wind van links onderdruk A

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

BELASTINGEN

B.G:3 Wind van links overdruk A



KNOOPBELASTINGEN

B.G:3 Wind van links overdruk A

Last	Knoop	Richting	waarde	ψ_0	ψ_1	ψ_2	Opm.
1	4	X	1.350	0.00	0.20	0.00	*

Opmerkingen

[*] Deze belasting is handmatig toegevoegd of gewijzigd.

STAAFBELASTINGEN

B.G:3 Wind van links overdruk A

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
7	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw4	-0.32	-0.32	0.000	1.016	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.19	-0.19	1.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

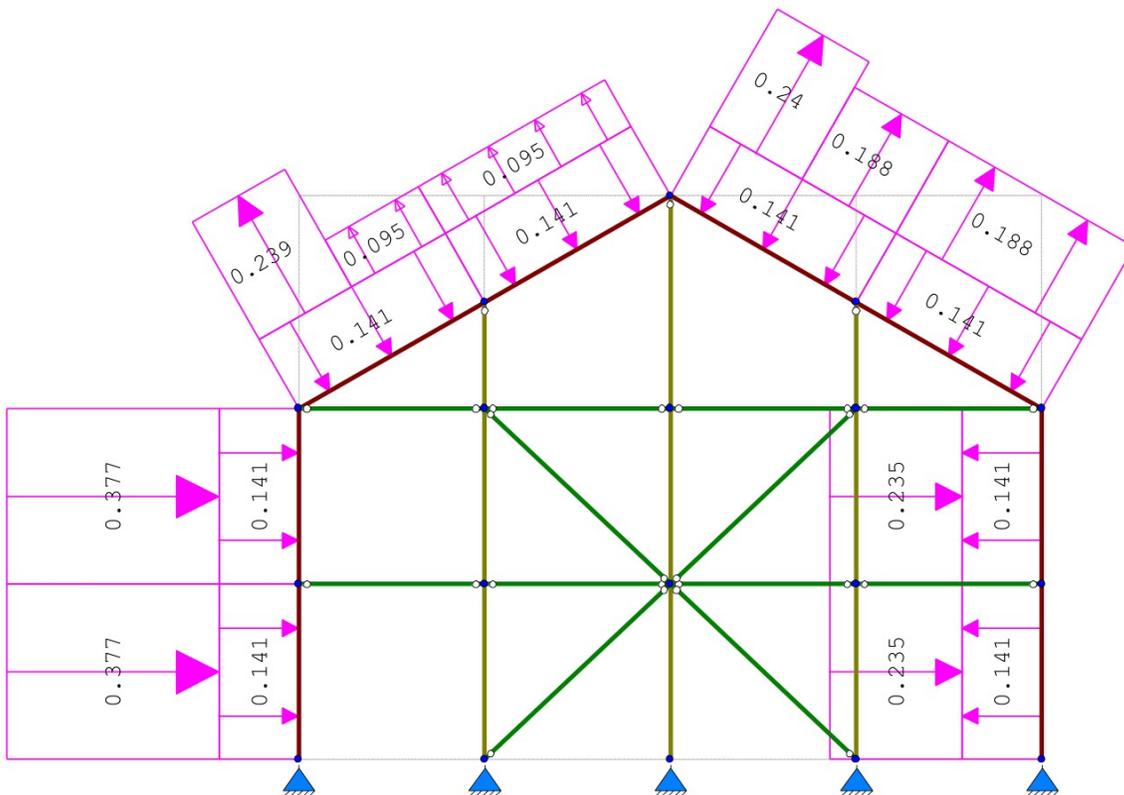
STAAFBELASTINGEN

B.G:3 Wind van links overdruk A

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
4	1:QZLokaal	Qw5	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw6	-0.24	-0.24	1.016	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw7	-0.19	-0.19	0.000	1.000	0.00	0.20	0.00
7	1:QZLokaal	Qw7	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

BELASTINGEN

B.G:4 Wind van links onderdruk B



STAAFBELASTINGEN

B.G:4 Wind van links onderdruk B

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
7	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw11	0.24	0.24	0.000	1.016	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.10	0.10	1.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw12	0.10	0.10	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

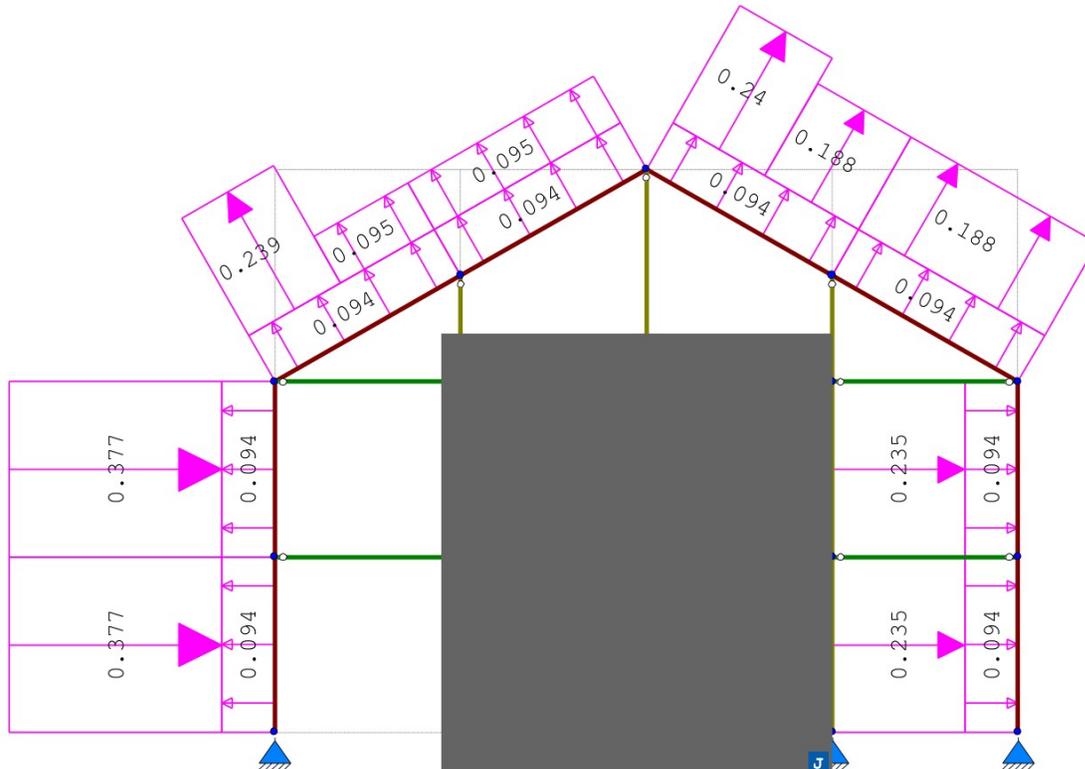
STAAFBELASTINGEN

B.G:4 Wind van links onderdruk B

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
8	1:QZLokaal	Qw6	-0.24	-0.24	1.016	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw7	-0.19	-0.19	0.000	1.000	0.00	0.20	0.00
7	1:QZLokaal	Qw7	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

BELASTINGEN

B.G:5 Wind van links overdruk B



STAAFBELASTINGEN

B.G:5 Wind van links overdruk B

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
7	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw11	0.24	0.24	0.000	1.016	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.10	0.10	1.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw12	0.10	0.10	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw6	-0.24	-0.24	1.016	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw7	-0.19	-0.19	0.000	1.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

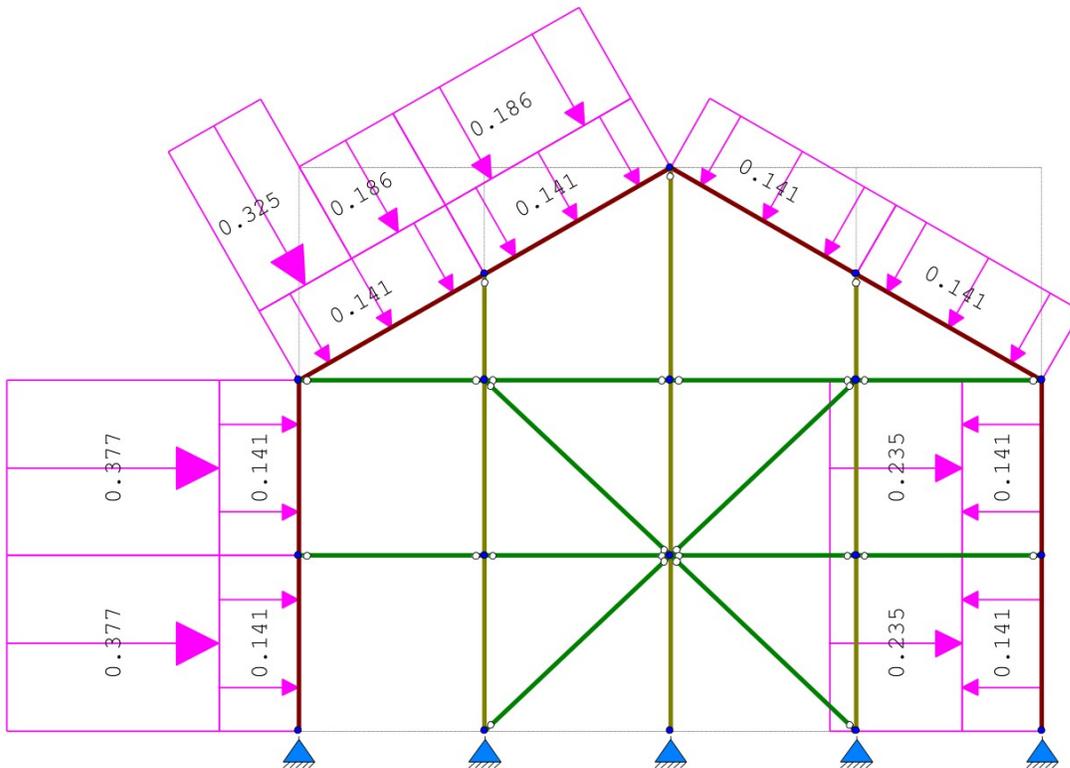
STAAFBELASTINGEN

B.G:5 Wind van links overdruk B

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
7	1:QZLokaal	Qw7	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

BELASTINGEN

B.G:6 Wind van links onderdruk C



STAAFBELASTINGEN

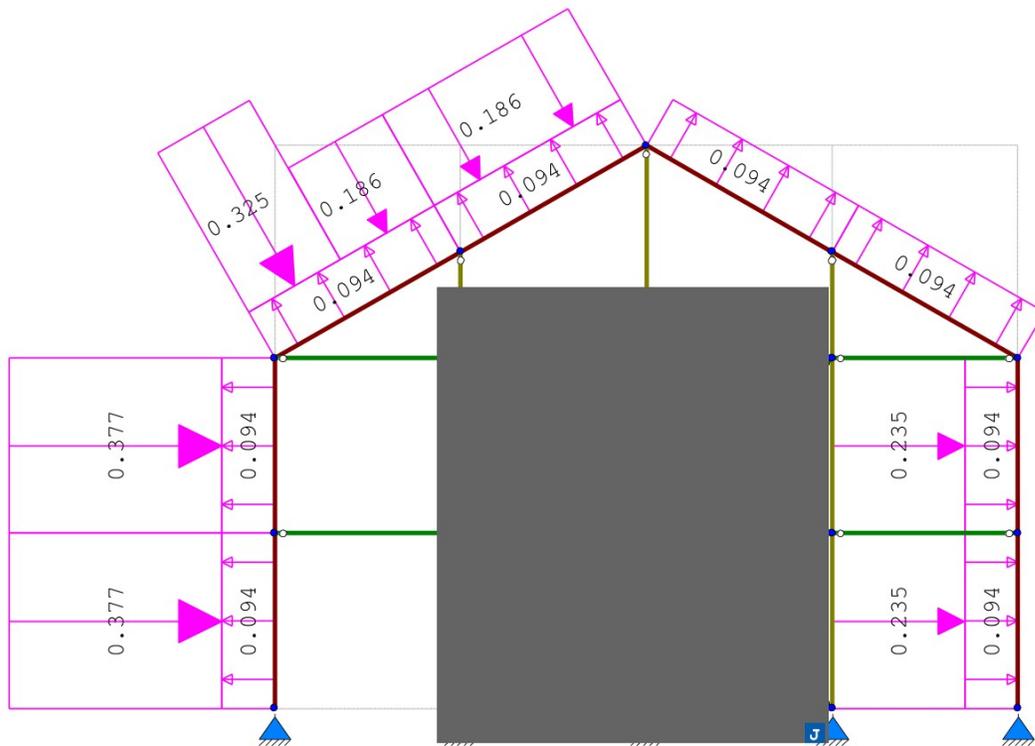
B.G:6 Wind van links onderdruk C

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
7	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw4	-0.32	-0.32	0.000	1.016	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.19	-0.19	1.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw5	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

BELASTINGEN

B.G:7 Wind van links overdruk C

**STAAFBELASTINGEN**

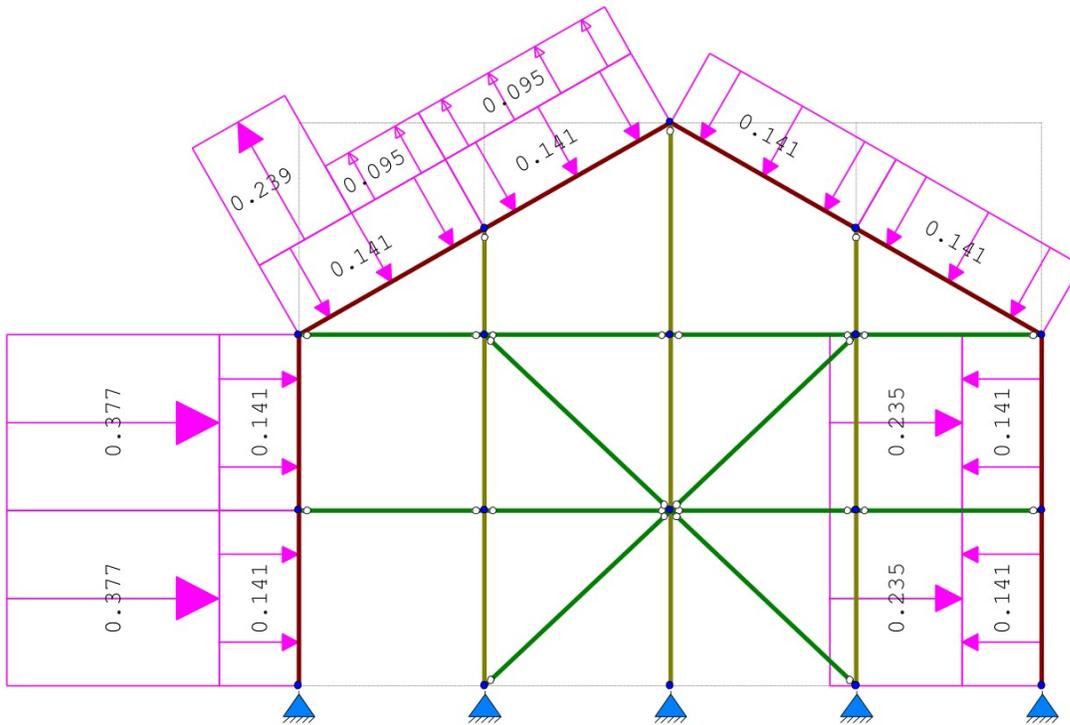
B.G:7 Wind van links overdruk C

Staat	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
7	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw4	-0.32	-0.32	0.000	1.016	0.00	0.20	0.00
3	1:QZLokaal	Qw5	-0.19	-0.19	1.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw5	-0.19	-0.19	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

BELASTINGEN

B.G:8 Wind van links onderdruk D



STAAFBELASTINGEN

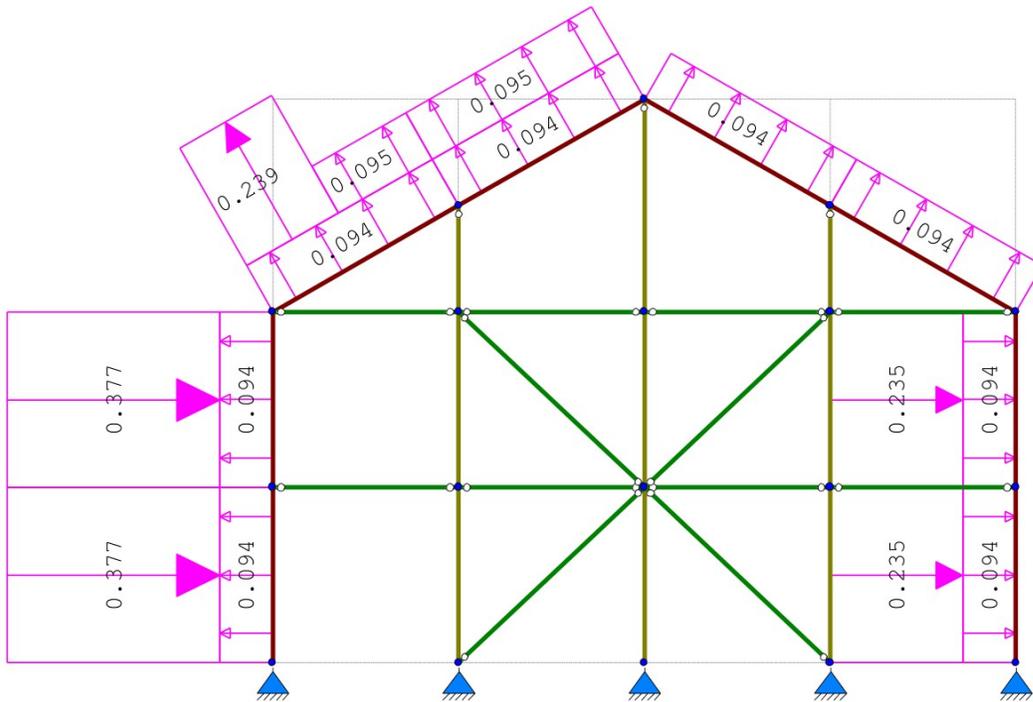
B.G:8 Wind van links onderdruk D

Staaftype	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw1	-0.14	-0.14	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
7	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw2	0.14	0.14	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw11	0.24	0.24	0.000	1.016	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.10	0.10	1.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw12	0.10	0.10	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

BELASTINGEN

B.G:9 Wind van links overdruk D



STAAFBELASTINGEN

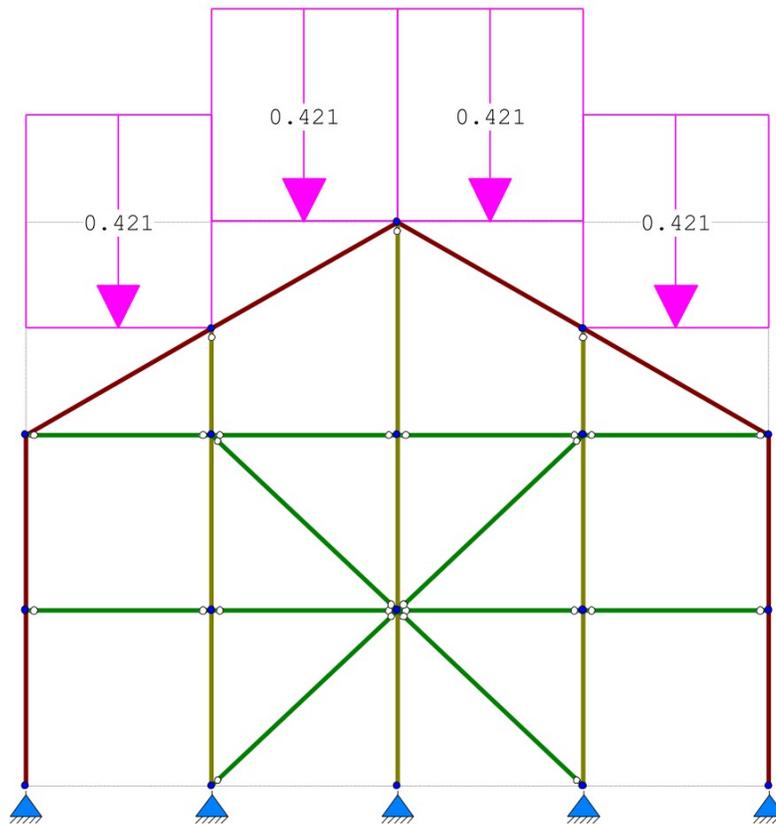
B.G:9 Wind van links overdruk D

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
1	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw9	0.09	0.09	0.000	0.000	0.00	0.20	0.00
8	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
7	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw10	-0.09	-0.09	0.000	0.000	0.00	0.20	0.00
1	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
2	1:QZLokaal	Qw3	-0.38	-0.38	0.000	0.000	0.00	0.20	0.00
3	1:QZLokaal	Qw11	0.24	0.24	0.000	1.016	0.00	0.20	0.00
3	1:QZLokaal	Qw12	0.10	0.10	1.000	0.000	0.00	0.20	0.00
4	1:QZLokaal	Qw12	0.10	0.10	0.000	0.000	0.00	0.20	0.00
6	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00
5	1:QZLokaal	Qw8	-0.24	-0.24	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: kopgevel as A

BELASTINGEN

B.G:10 Sneeuw A



STAAFBELASTINGEN

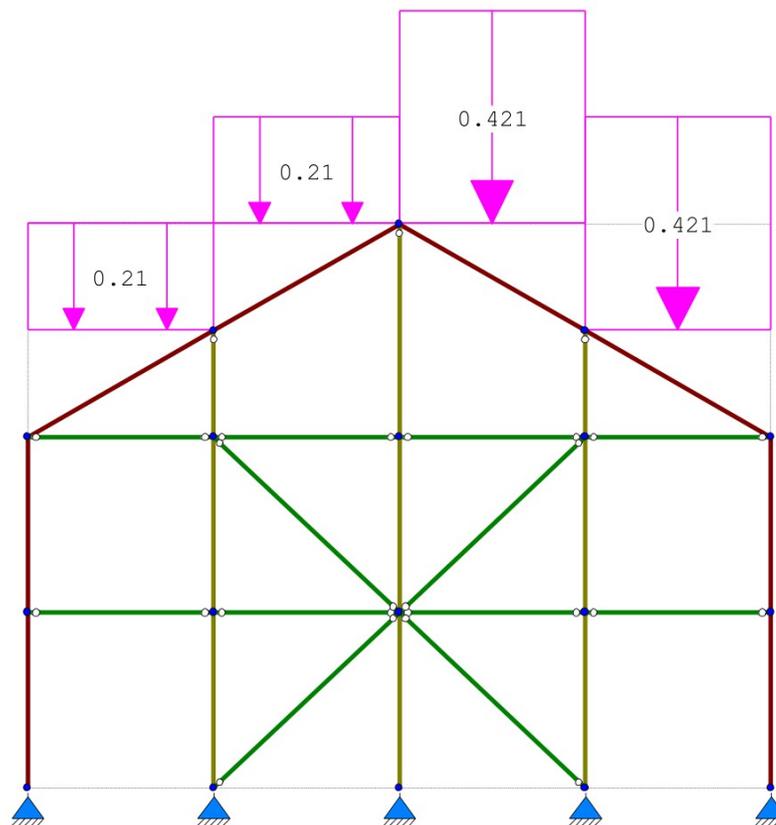
B.G:10 Sneeuw A

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
3	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
7	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
8	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel....: kopgevel as A

BELASTINGEN

B.G:11 Sneeuw B

**STAAFBELASTINGEN**

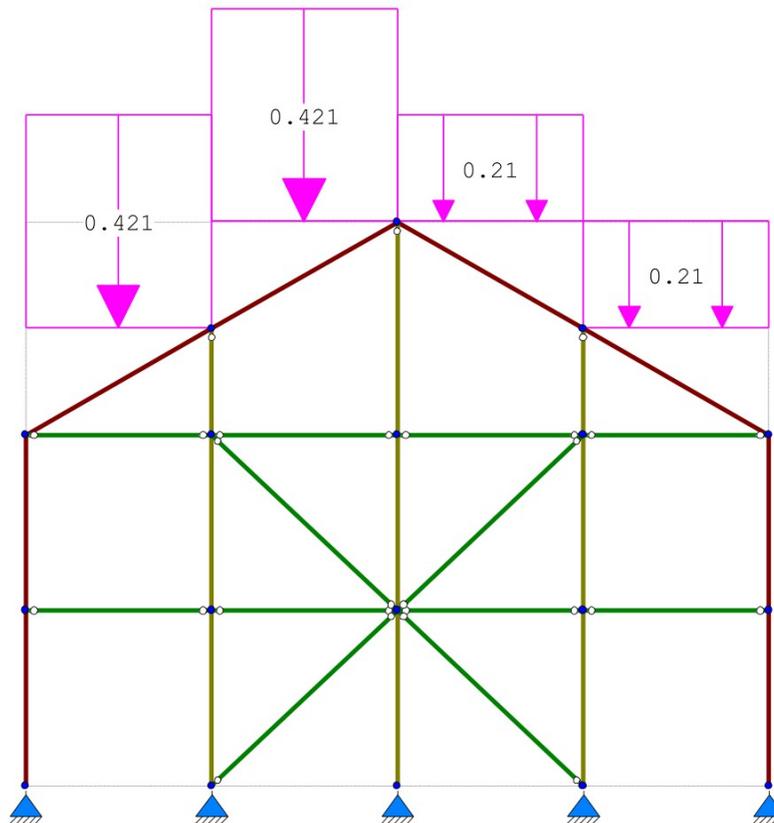
B.G:11 Sneeuw B

Staafl	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
3	3:QZgeProj.	Qs2	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs2	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00
7	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
8	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00

Project.....: staalframe loods a.d. J
 Onderdeel.....: kopgevel as A

BELASTINGEN

B.G:12 Sneeuw C

**STAAFBELASTINGEN**

B.G:12 Sneeuw C

Staat	Type	Index	q1/p/m	q2	A	B	ψ_0	ψ_1	ψ_2
3	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
4	3:QZgeProj.	Qs1	-0.42	-0.42	0.000	0.000	0.00	0.20	0.00
7	3:QZgeProj.	Qs2	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00
8	3:QZgeProj.	Qs2	-0.21	-0.21	0.000	0.000	0.00	0.20	0.00

REACTIES 1e orde

Kn.	B.G.	X	Z	M
1	1	-0.01	0.36	
1	2	-0.35	-0.13	
1	3	-0.19	-0.44	
1	4	-0.35	-0.03	
1	5	-0.18	-0.34	
1	6	-0.36	0.40	
1	7	-0.20	0.09	
1	8	-0.35	0.09	
1	9	-0.19	-0.22	
1	10	-0.01	0.44	
1	11	-0.01	0.25	
1	12	-0.01	0.41	

Project.....: staalframe loods a.d. J
 Onderdeel.....: kopgevel as A

REACTIES		1e orde		
Kn.	B.G.	X	Z	M
6	1	0.01	0.36	
6	2	-0.06	0.65	
6	3	-0.22	0.33	
6	4	-0.07	0.05	
6	5	-0.23	-0.26	
6	6	-0.06	0.31	
6	7	-0.22	-0.00	
6	8	-0.06	0.12	
6	9	-0.23	-0.19	
6	10	0.01	0.44	
6	11	0.01	0.41	
6	12	0.01	0.25	
10	1	0.07	0.64	
10	2	-1.90	-2.24	
10	3	-1.92	-2.67	
10	4	-0.88	-1.08	
10	5	-0.91	-1.51	
10	6	-1.00	-0.69	
10	7	-1.02	-1.13	
10	8	-0.67	-0.76	
10	9	-0.69	-1.20	
10	10	0.09	0.78	
10	11	0.06	0.38	
10	12	0.07	0.79	
13	1	0.00	0.42	
13	2	-0.00	0.05	
13	3	-0.00	-0.10	
13	4	-0.00	-0.06	
13	5	-0.00	-0.20	
13	6	-0.00	0.14	
13	7	-0.00	-0.00	
13	8	-0.00	0.04	
13	9	-0.00	-0.11	
13	10	0.00	0.51	
13	11	0.00	0.38	
13	12	-0.00	0.38	
16	1	-0.07	0.64	
16	2	-1.91	2.73	
16	3	-1.89	2.29	
16	4	-0.86	0.94	
16	5	-0.84	0.50	
16	6	-1.04	1.59	
16	7	-1.02	1.16	
16	8	-0.68	1.03	
16	9	-0.65	0.59	
16	10	-0.09	0.78	
16	11	-0.07	0.79	
16	12	-0.06	0.38	

BEREKENINGSTATUS

Controlerende berekening

B.C.	Iteratie	Status
1	2	Nauwkeurigheid bereikt

Project.....: staalframe loods a.d.
 Onderdeel....: kopgevel as A

BEREKENINGSTATUS

Controlerende berekening

B.C.	Iteratie	Status
2	2	Nauwkeurigheid bereikt
3	2	Nauwkeurigheid bereikt
4	2	Nauwkeurigheid bereikt
5	2	Nauwkeurigheid bereikt
6	2	Nauwkeurigheid bereikt
7	2	Nauwkeurigheid bereikt
8	2	Nauwkeurigheid bereikt
9	2	Nauwkeurigheid bereikt
10	2	Nauwkeurigheid bereikt
11	2	Nauwkeurigheid bereikt
12	2	Nauwkeurigheid bereikt
13	2	Nauwkeurigheid bereikt
14	2	Nauwkeurigheid bereikt
15	2	Nauwkeurigheid bereikt
16	2	Nauwkeurigheid bereikt
17	2	Nauwkeurigheid bereikt
18	2	Nauwkeurigheid bereikt
19	2	Nauwkeurigheid bereikt
20	2	Nauwkeurigheid bereikt
21	2	Nauwkeurigheid bereikt
22	2	Nauwkeurigheid bereikt
23	2	Nauwkeurigheid bereikt
24	2	Nauwkeurigheid bereikt
25	2	Nauwkeurigheid bereikt
26	2	Nauwkeurigheid bereikt
27	2	Nauwkeurigheid bereikt
28	2	Nauwkeurigheid bereikt
29	2	Nauwkeurigheid bereikt
30	2	Nauwkeurigheid bereikt
31	2	Nauwkeurigheid bereikt
32	2	Nauwkeurigheid bereikt
33	2	Nauwkeurigheid bereikt
34	2	Nauwkeurigheid bereikt
35	2	Nauwkeurigheid bereikt
36	2	Nauwkeurigheid bereikt

BELASTINGCOMBINATIES

BC	Type			
1	Fund.	1.22	$G_{k,1}$	
2	Fund.	0.90	$G_{k,1}$	
3	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,2}$
4	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,3}$
5	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,4}$
6	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,5}$
7	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,6}$
8	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,7}$
9	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,8}$

Project.....: staalframe loods a.d. J
 Onderdeel....: kopgevel as A

BELASTINGCOMBINATIES

BC Type				
10	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,9}$
11	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,10}$
12	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,11}$
13	Fund.	1.08	$G_{k,1}$	+ 1.35 $Q_{k,12}$
14	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,2}$
15	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,3}$
16	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,4}$
17	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,5}$
18	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,6}$
19	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,7}$
20	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,8}$
21	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,9}$
22	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,10}$
23	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,11}$
24	Fund.	0.90	$G_{k,1}$	+ 1.35 $Q_{k,12}$
25	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,2}$
26	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,3}$
27	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,4}$
28	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,5}$
29	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,6}$
30	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,7}$
31	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,8}$
32	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,9}$
33	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,10}$
34	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,11}$
35	Kar.	1.00	$G_{k,1}$	+ 1.00 $Q_{k,12}$
36	Blij.	1.00	$G_{k,1}$	

GUNSTIGE WERKING PERMANENTE BELASTINGEN

BC Staven met gunstige werking	
1	Geen
2	Alle staven de factor:0.90
3	Geen
4	Geen
5	Geen
6	Geen
7	Geen
8	Geen
9	Geen
10	Geen
11	Geen
12	Geen
13	Geen
14	Alle staven de factor:0.90
15	Alle staven de factor:0.90
16	Alle staven de factor:0.90
17	Alle staven de factor:0.90
18	Alle staven de factor:0.90

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: kopgevel as A

GUNSTIGE WERKING PERMANENTE BELASTINGEN

BC Staven met gunstige werking

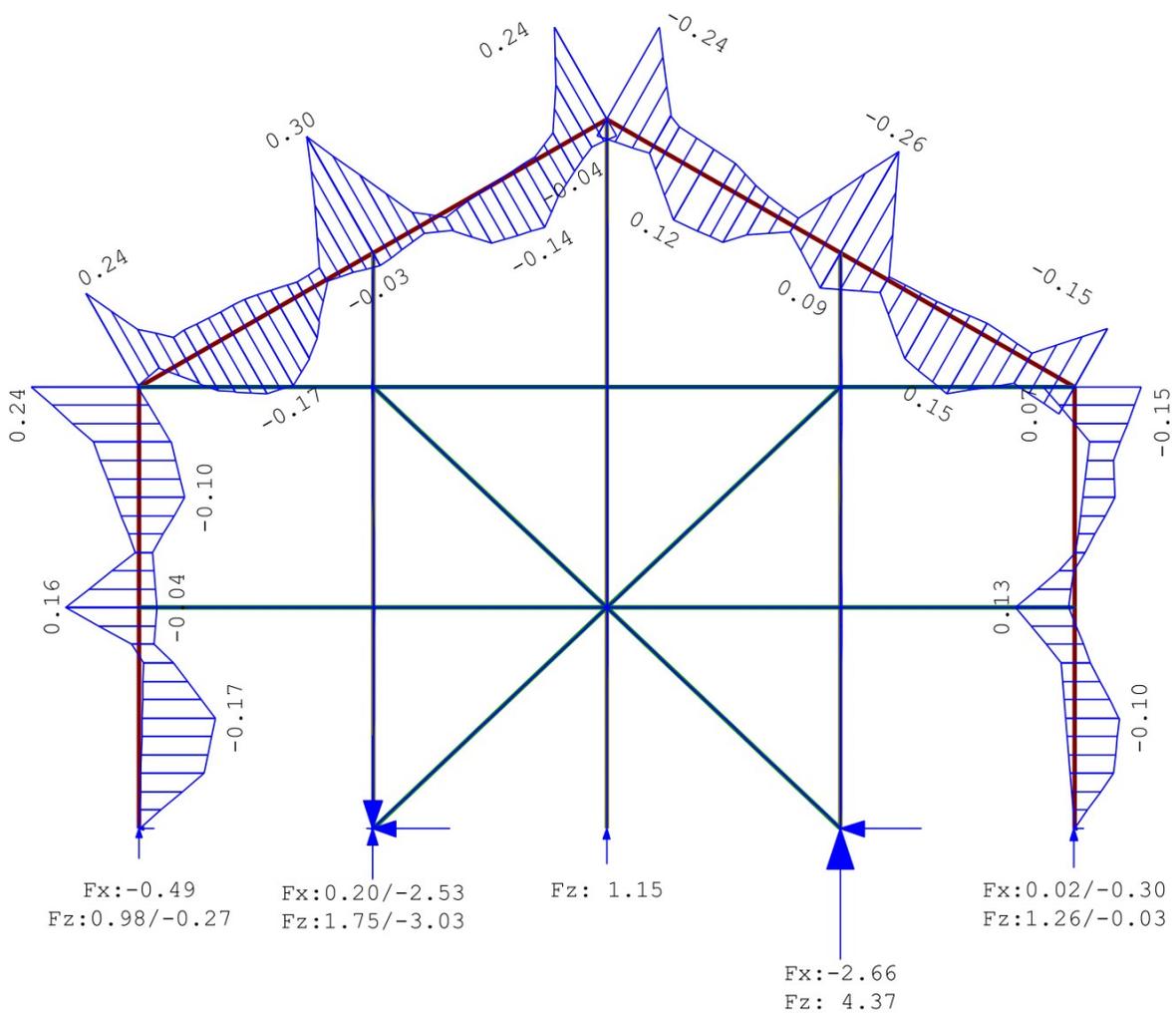
- 19 Alle staven de factor:0.90
- 20 Alle staven de factor:0.90
- 21 Alle staven de factor:0.90
- 22 Alle staven de factor:0.90
- 23 Alle staven de factor:0.90
- 24 Alle staven de factor:0.90

OMHULLENDE VAN DE FUNDAMENTELE COMBINATIES

MOMENTEN

2e orde

Fundamentele combinatie

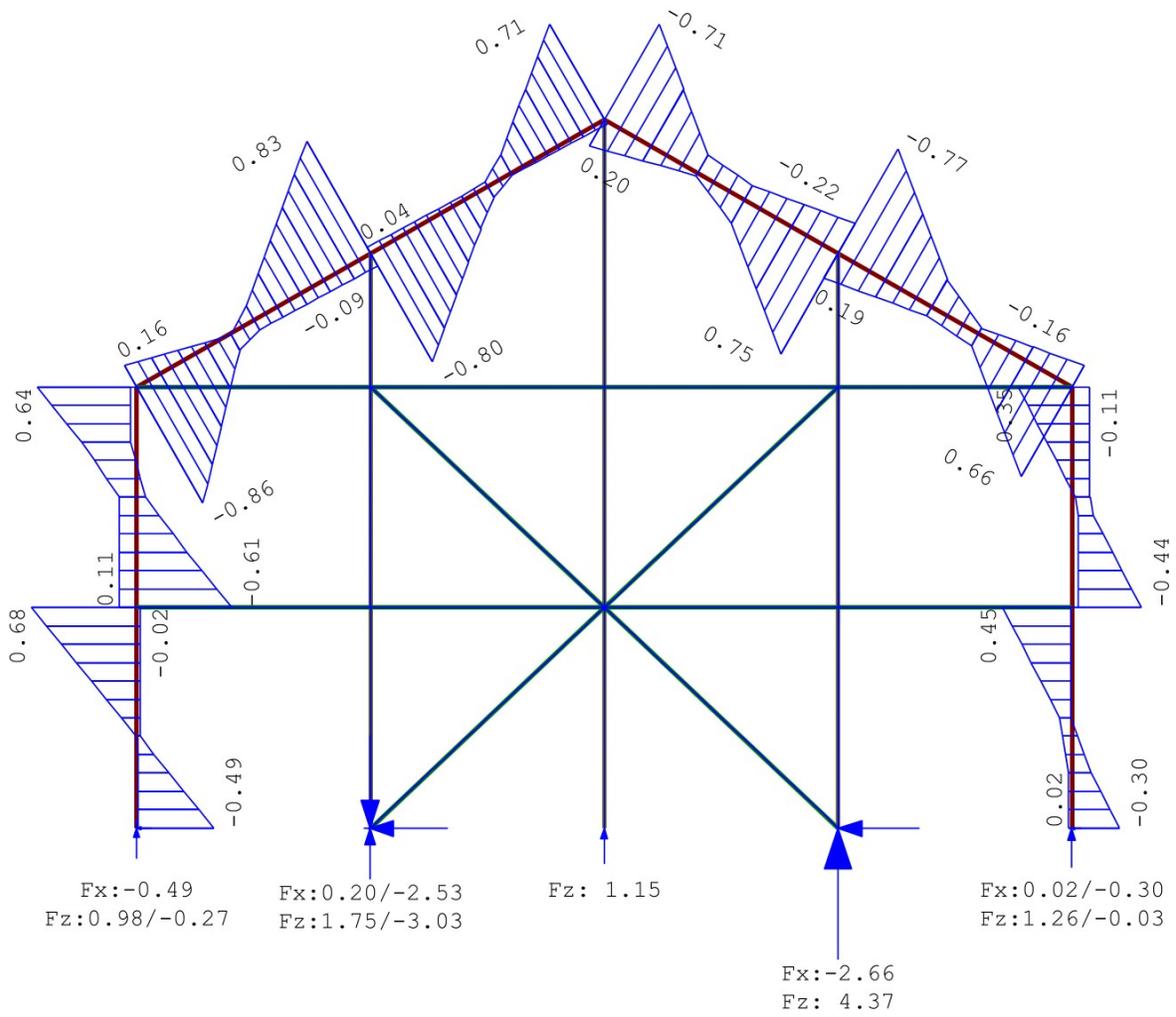


Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

DWARSKRACHTEN

2e orde

Fundamentele combinatie



Project.....: staalframe loods a.d.
 Onderdeel....: kopgevel as A

St.		Kn.	Pos.	2e orde				Fundamentele combinatie						
				NXi/NXj		DZi/DZj		MYi/MYj						
			Min	Max	BC	Min	Max	BC	Min	Max	BC			
2	3		-0.98	11	0.27	15	-0.61	16	0.11	11	-0.04	13	0.16	16
2	0.412		-0.98	11	0.27	15	-0.32	16	0.11	11	-0.03	20	0.01	11
2	0.825		-0.98	11	0.27	15	-0.06	17	0.11	11	-0.10	16	0.06	11
2	1.627		-0.98	11	0.27	15	0.04	2	0.62	7	0.00	17	0.23	7
2	2		-0.98	11	0.27	15	0.04	2	0.64	7	0.00	17	0.24	7
3	2		-0.82	11	1.34	15	-0.86	7	0.16	17	0.00	17	0.24	7
3	0.202		-0.73	11	1.36	15	-0.67	7	0.11	17	0.01	2	0.11	7
3	0.241		-0.72	11	1.37	15	-0.64	7	0.11	17	0.00	2	0.10	7
3	0.403		-0.65	11	1.39	15	-0.49	7	0.07	17	-0.06	11	0.06	20
3	0.500		-0.62	11	1.40	15	-0.40	7	0.05	17	-0.10	14	0.06	21
3	0.806		-0.52	9	1.44	15	-0.12	7	-0.01	15	-0.15	11	0.05	21
3	1.008		-0.49	9	1.47	15	-0.08	20	0.10	4	-0.17	3	0.05	17
3	1.411		-0.42	9	1.52	15	-0.08	21	0.39	3	-0.07	7	0.03	17
3	1.612		-0.39	9	1.55	15	-0.09	21	0.54	3	-0.00	23	0.03	4
3	5		-0.33	20	1.61	4	-0.09	21	0.83	3	-0.03	21	0.30	3
4	5		-0.93	7	1.09	15	-0.80	3	0.04	21	-0.03	21	0.30	3
4	0.403		-0.87	7	1.14	15	-0.51	3	0.03	21	-0.02	20	0.04	4
4	0.557		-0.84	7	1.16	15	-0.40	3	0.03	21	-0.04	13	0.00	21
4	0.605		-0.84	7	1.17	15	-0.36	3	0.03	21	-0.05	13	-0.01	21
4	0.806		-0.80	7	1.20	15	-0.22	3	0.03	21	-0.11	3	-0.00	21
4	1.024		-0.77	7	1.23	15	-0.08	4	0.04	20	-0.13	3	0.00	21
4	1.209		-0.74	7	1.25	15	-0.02	17	0.13	11	-0.14	3	0.00	21
4	1.814		-0.64	7	1.33	15	-0.03	17	0.56	11	-0.04	17	0.12	11
4	4		-0.61	7	1.36	15	-0.03	17	0.71	11	-0.04	17	0.24	11
5	6		-1.26	3	0.03	17	-0.30	17	0.02	12	0.00	1	0.00	1
5	0.825		-1.26	3	0.03	17	0.01	2	0.08	4	-0.10	17	0.02	12
5	1.542		-1.26	3	0.03	17	0.01	2	0.40	4	0.00	2	0.10	4
5	8		-1.26	3	0.03	17	0.01	2	0.45	4	0.01	2	0.13	4
6	8		-1.26	3	0.03	17	-0.44	4	-0.04	2	0.01	2	0.13	4
6	0.282		-1.26	3	0.03	17	-0.32	4	-0.04	2	0.00	20	0.03	4
6	0.402		-1.26	3	0.03	17	-0.26	4	-0.04	2	-0.02	10	0.00	2
6	0.825		-1.26	3	0.03	17	-0.11	11	-0.02	17	-0.09	8	-0.02	2
6	1.100		-1.26	3	0.03	17	-0.11	11	0.10	17	-0.09	7	-0.03	2
6	1.237		-1.26	3	0.03	17	-0.11	11	0.16	17	-0.10	11	-0.03	2
6	1.378		-1.26	3	0.03	17	-0.11	11	0.23	17	-0.12	11	0.00	17
6	7		-1.26	3	0.03	17	-0.11	11	0.35	17	-0.15	11	0.07	17
7	7		-2.09	3	-0.02	21	-0.16	17	0.66	11	-0.15	11	0.07	17
7	0.403		-2.03	3	0.03	21	-0.10	17	0.38	11	-0.02	15	0.06	11
7	0.806		-1.97	3	0.08	21	-0.04	17	0.09	11	-0.03	15	0.15	11
7	1.209		-1.90	3	0.14	21	-0.20	12	0.07	15	-0.01	17	0.13	11
7	1.612		-1.84	3	0.19	21	-0.48	12	0.13	15	-0.01	12	0.03	14
7	9		-1.77	14	0.25	10	-0.77	12	0.19	15	-0.26	12	0.09	15
8	9		-1.95	3	0.23	17	-0.22	15	0.75	12	-0.26	12	0.09	15
8	0.403		-1.89	3	0.28	17	-0.16	15	0.46	12	-0.02	11	0.02	15
8	0.806		-1.82	3	0.34	17	-0.10	15	0.17	12	-0.04	15	0.11	12
8	1.209		-1.76	3	0.39	17	-0.13	11	0.02	17	-0.06	15	0.12	12
8	1.612		-1.69	3	0.44	17	-0.42	11	0.11	17	-0.08	3	0.02	23
8	4		-1.63	3	0.50	17	-0.71	11	0.20	17	-0.24	11	0.04	17

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel.....: kopgevel as A

St.		Kn.	Pos.	2e orde				Fundamentele combinatie							
				NXi/NXj		DZi/DZj		MYi/MYj							
				Min	Max	BC	BC	Min	Max	BC	BC	Min	Max	BC	BC
9	10			-1.59	0.65	13	15	-0.00	9	-0.00	23	0.00	1	0.00	1
9	11			-1.59	0.65	13	15	-0.00	5	-0.00	23	-0.00	9	-0.00	23
10	11			-1.59	0.65	13	15	0.00	2	0.00	7	-0.00	9	-0.00	23
10		0.294		-1.59	0.65	13	15	0.00	2	0.00	7	-0.00	5	0.00	23
10		0.412		-1.59	0.65	13	15	0.00	2	0.00	7	-0.00	5	0.00	23
10	12			-1.59	0.65	13	15	0.00	2	0.00	7	-0.00	15	0.00	7
11	12			-1.87	0.16	3	21	-0.00	7	0.00	15	-0.00	15	0.00	7
11	5			-1.87	0.16	3	21	-0.00	7	0.00	15	0.00	4	0.00	3
12	13			-1.15	-0.11	11	17	-0.00	9	0.00	12	0.00	1	0.00	1
12	14			-1.15	-0.11	11	17	-0.00	21	0.00	23	-0.00	21	0.00	23
13	14			-1.19	-0.24	11	14	-0.00	4	0.00	20	-0.00	21	0.00	23
13	15			-1.19	-0.24	11	14	-0.00	14	0.00	10	-0.00	14	0.00	24
14	15			-1.19	-0.24	11	14	-0.00	24	0.00	14	-0.00	14	0.00	24
14	4			-1.19	-0.24	11	14	-0.00	13	0.00	4	0.00	14	0.00	18
15	16			-1.87	-0.12	3	17	-0.00	17	0.00	12	0.00	1	0.00	1
15	17			-1.87	-0.12	3	17	-0.00	17	0.00	12	-0.00	17	0.00	12
16	17			-1.87	-0.12	3	17	-0.00	12	0.00	17	-0.00	17	0.00	12
16		0.412		-1.87	-0.12	3	17	-0.00	12	0.00	17	-0.00	8	0.00	23
16		0.687		-1.87	-0.12	3	17	-0.00	12	0.00	17	-0.00	4	-0.00	2
16		1.100		-1.87	-0.12	3	17	-0.00	12	0.00	17	-0.00	3	-0.00	17
16		1.126		-1.87	-0.12	3	17	-0.00	12	0.00	17	-0.00	3	0.00	17
16	18			-1.87	-0.12	3	17	-0.00	12	0.00	17	-0.00	3	0.00	17
17	18			-1.75	0.47	12	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17	9			-1.75	0.47	12	15	-0.00	17	0.00	3	0.00	4	0.00	14
18	3			-1.29	0.14	16	11	-0.00	3	0.00	1	0.00	1	0.00	1
18	11			-1.29	0.14	16	11	-0.00	3	0.00	1	0.00	1	0.00	1
19	11			-1.28	0.14	16	11	-0.00	16	0.00	1	0.00	1	0.00	1
19	14			-1.28	0.14	16	11	-0.00	16	0.00	1	0.00	1	0.00	1
20	14			0.05	0.89	2	4	-0.00	4	0.00	7	0.00	1	0.00	1
20	17			0.05	0.89	2	4	-0.00	4	0.00	7	0.00	1	0.00	1
21	17			0.05	0.89	2	4	-0.00	15	0.00	1	0.00	1	0.00	1
21	8			0.05	0.89	2	4	-0.00	15	0.00	1	0.00	1	0.00	1
22	2			-1.89	0.27	14	11	-0.00	14	0.00	10	0.00	1	0.00	1
22	12			-1.89	0.27	14	11	-0.00	14	0.00	10	0.00	1	0.00	1
23	12			0.07	0.43	14	11	-0.00	11	0.00	1	0.00	1	0.00	1
23	15			0.07	0.43	14	11	-0.00	11	0.00	1	0.00	1	0.00	1
24	15			0.08	0.43	14	11	0.00	1	0.00	11	0.00	1	0.00	1
24	18			0.08	0.43	14	11	0.00	1	0.00	11	0.00	1	0.00	1

Project.....: staalframe loods a.d.
 Onderdeel....: kopgevel as A

St.		Kn.		Pos.		2e orde				Fundamentele combinatie			
						NXi/NXj		DZi/DZj		MYi/MYj			
				Min	Max	Min	Max	Min	Max	Min	Max		
25	18	0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1	0.00	1
25	7	0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1	0.00	1
26	10	-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1	0.00	1
26	14	-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1	0.00	1
27	14	-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	18	-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
28	12	-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	14	-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
29	14	-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	16	-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1

St.		Kn.		Pos.		2e orde				Fundamentele combinatie			
						NXi/NXj		DZi/DZj		MYi/MYj			
				Min	Max	Min	Max	Min	Max	Min	Max		
1	1	-0.98	11	0.27	15	-0.49	7	-0.01	2	0.00	1	0.00	1
1	0.165	-0.98	11	0.27	15	-0.38	7	-0.01	2	-0.06	7	-0.00	2
1	0.330	-0.98	11	0.27	15	-0.26	7	-0.01	2	-0.12	7	-0.00	2
1	0.495	-0.98	11	0.27	15	-0.15	7	-0.01	2	-0.15	7	-0.00	2
1	0.660	-0.98	11	0.27	15	-0.04	13	0.00	17	-0.16	7	-0.01	2
1	0.825	-0.98	11	0.27	15	-0.02	13	0.10	16	-0.17	7	-0.01	2
1	0.990	-0.98	11	0.27	15	-0.02	13	0.21	16	-0.13	7	-0.01	2
1	1.155	-0.98	11	0.27	15	-0.02	13	0.33	16	-0.09	7	-0.01	2
1	1.320	-0.98	11	0.27	15	-0.02	13	0.45	16	-0.05	13	0.01	16
1	1.485	-0.98	11	0.27	15	-0.02	13	0.56	16	-0.03	13	0.08	16
1	3	-0.98	11	0.27	15	-0.02	13	0.68	16	-0.04	13	0.16	16
2	3	-0.98	11	0.27	15	-0.61	16	0.11	11	-0.04	13	0.16	16
2	0.165	-0.98	11	0.27	15	-0.49	16	0.11	11	-0.03	13	0.10	16
2	0.330	-0.98	11	0.27	15	-0.38	16	0.11	11	-0.03	20	0.04	11
2	0.495	-0.98	11	0.27	15	-0.27	16	0.11	11	-0.04	20	0.02	11
2	0.660	-0.98	11	0.27	15	-0.16	17	0.11	11	-0.07	16	0.04	11
2	0.825	-0.98	11	0.27	15	-0.06	17	0.11	11	-0.10	16	0.06	11
2	0.990	-0.98	11	0.27	15	-0.02	17	0.21	11	-0.09	16	0.07	11
2	1.155	-0.98	11	0.27	15	0.02	2	0.30	7	-0.08	17	0.09	11
2	1.320	-0.98	11	0.27	15	0.04	2	0.41	7	-0.06	17	0.13	11
2	1.485	-0.98	11	0.27	15	0.04	2	0.52	7	-0.03	17	0.19	7
2	2	-0.98	11	0.27	15	0.04	2	0.64	7	0.00	17	0.24	7
3	2	-0.82	11	1.34	15	-0.86	7	0.16	17	0.00	17	0.24	7
3	0.202	-0.73	11	1.36	15	-0.67	7	0.11	17	0.01	2	0.11	7
3	0.403	-0.65	11	1.39	15	-0.49	7	0.07	17	-0.06	11	0.06	20
3	0.605	-0.59	9	1.42	15	-0.31	7	0.03	17	-0.12	3	0.06	21
3	0.806	-0.52	9	1.44	15	-0.12	7	-0.01	15	-0.15	11	0.05	21
3	1.008	-0.49	9	1.47	15	-0.08	20	0.10	4	-0.17	3	0.05	17
3	1.209	-0.45	9	1.50	15	-0.08	21	0.24	3	-0.13	11	0.04	17
3	1.411	-0.42	9	1.52	15	-0.08	21	0.39	3	-0.07	7	0.03	17
3	1.612	-0.39	9	1.55	15	-0.09	21	0.54	3	-0.00	23	0.03	4
3	1.814	-0.36	20	1.58	4	-0.09	21	0.68	3	-0.01	21	0.16	3
3	5	-0.33	20	1.61	4	-0.09	21	0.83	3	-0.03	21	0.30	3

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: kopgevel as A

TUSSENpunTEN		KRACHTEN		2e orde		Fundamentele combinatie								
St.	Kn.	Pos.	NXi/NXj			DZi/DZj			MYi/MYj					
			Min	BC	Max	BC	Min	BC	Max	BC	Min	BC	Max	BC
4	5		-0.93	7	1.09	15	-0.80	3	0.04	21	-0.03	21	0.30	3
4	0.202		-0.90	7	1.12	15	-0.65	3	0.04	21	-0.03	21	0.17	3
4	0.403		-0.87	7	1.14	15	-0.51	3	0.03	21	-0.02	20	0.04	4
4	0.605		-0.84	7	1.17	15	-0.36	3	0.03	21	-0.05	13	-0.01	21
4	0.806		-0.80	7	1.20	15	-0.22	3	0.03	21	-0.11	3	-0.00	21
4	1.008		-0.77	7	1.22	15	-0.08	4	0.03	20	-0.13	3	-0.00	21
4	1.209		-0.74	7	1.25	15	-0.02	17	0.13	11	-0.14	3	0.00	21
4	1.411		-0.71	7	1.28	15	-0.02	17	0.28	11	-0.10	3	0.01	21
4	1.612		-0.68	7	1.30	15	-0.03	17	0.42	11	-0.06	15	0.03	12
4	1.814		-0.64	7	1.33	15	-0.03	17	0.56	11	-0.04	17	0.12	11
4	4		-0.61	7	1.36	15	-0.03	17	0.71	11	-0.04	17	0.24	11
5	6		-1.26	3	0.03	17	-0.30	17	0.02	12	0.00	1	0.00	1
5	0.165		-1.26	3	0.03	17	-0.23	17	0.02	12	-0.04	1	0.00	1
5	0.330		-1.26	3	0.03	17	-0.16	17	0.02	12	-0.07	17	0.01	12
5	0.495		-1.26	3	0.03	17	-0.10	17	0.03	12	-0.09	17	0.01	12
5	0.660		-1.26	3	0.03	17	-0.04	2	0.06	4	-0.09	17	0.02	12
5	0.825		-1.26	3	0.03	17	0.01	2	0.08	4	-0.10	17	0.02	12
5	0.990		-1.26	3	0.03	17	0.01	2	0.15	4	-0.07	17	0.02	12
5	1.155		-1.26	3	0.03	17	0.01	2	0.23	4	-0.05	17	0.03	12
5	1.320		-1.26	3	0.03	17	0.01	2	0.30	4	-0.03	17	0.05	12
5	1.485		-1.26	3	0.03	17	0.01	2	0.37	4	-0.01	2	0.09	4
5	8		-1.26	3	0.03	17	0.01	2	0.45	4	0.01	2	0.13	4
6	8		-1.26	3	0.03	17	-0.44	4	-0.04	2	0.01	2	0.13	4
6	0.165		-1.26	3	0.03	17	-0.37	4	-0.04	2	0.01	2	0.07	4
6	0.330		-1.26	3	0.03	17	-0.30	4	-0.04	2	-0.01	20	0.02	4
6	0.495		-1.26	3	0.03	17	-0.22	4	-0.04	2	-0.04	8	-0.01	2
6	0.660		-1.26	3	0.03	17	-0.15	4	-0.04	2	-0.06	8	-0.01	2
6	0.825		-1.26	3	0.03	17	-0.11	11	-0.02	17	-0.09	8	-0.02	2
6	0.990		-1.26	3	0.03	17	-0.11	11	0.05	17	-0.09	8	-0.02	2
6	1.155		-1.26	3	0.03	17	-0.11	11	0.13	17	-0.09	7	-0.03	2
6	1.320		-1.26	3	0.03	17	-0.11	11	0.20	17	-0.11	11	-0.01	17
6	1.485		-1.26	3	0.03	17	-0.11	11	0.27	17	-0.13	11	0.03	17
6	7		-1.26	3	0.03	17	-0.11	11	0.35	17	-0.15	11	0.07	17
7	7		-2.09	3	-0.02	21	-0.16	17	0.66	11	-0.15	11	0.07	17
7	0.202		-2.06	3	0.00	21	-0.13	17	0.52	11	-0.08	15	0.06	11
7	0.403		-2.03	3	0.03	21	-0.10	17	0.38	11	-0.02	15	0.06	11
7	0.605		-2.00	3	0.06	21	-0.07	17	0.23	11	-0.02	15	0.11	11
7	0.806		-1.97	3	0.08	21	-0.04	17	0.09	11	-0.03	15	0.15	11
7	1.008		-1.93	3	0.11	21	-0.12	12	0.08	15	-0.02	17	0.14	11
7	1.209		-1.90	3	0.14	21	-0.20	12	0.07	15	-0.01	17	0.13	11
7	1.411		-1.87	3	0.17	21	-0.34	12	0.10	15	-0.01	12	0.08	14
7	1.612		-1.84	3	0.19	21	-0.48	12	0.13	15	-0.01	12	0.03	14
7	1.814		-1.80	14	0.22	10	-0.63	12	0.16	15	-0.13	12	0.06	15
7	9		-1.77	14	0.25	10	-0.77	12	0.19	15	-0.26	12	0.09	15
8	9		-1.95	3	0.23	17	-0.22	15	0.75	12	-0.26	12	0.09	15
8	0.202		-1.92	3	0.25	17	-0.19	15	0.60	12	-0.14	11	0.05	15
8	0.403		-1.89	3	0.28	17	-0.16	15	0.46	12	-0.02	11	0.02	15
8	0.605		-1.85	3	0.31	17	-0.13	15	0.32	12	-0.03	17	0.05	12
8	0.806		-1.82	3	0.34	17	-0.10	15	0.17	12	-0.04	15	0.11	12
8	1.008		-1.79	3	0.36	17	-0.12	11	0.10	17	-0.06	15	0.12	12

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: kopgevel as A

TUSSENpunTEN KRACHTEN			2e orde				Fundamentele combinatie							
St.	Kn.	Pos.	NXi/NXj		DZi/DZj				MYi/MYj					
			Min	Max	BC	BC	Min	Max	BC	BC	Min	Max	BC	BC
8	1.209		-1.76	0.39	3	17	-0.13	0.02	11	17	-0.06	0.12	15	12
8	1.411		-1.72	0.42	3	17	-0.28	0.06	11	17	-0.06	0.07	15	12
8	1.612		-1.69	0.44	3	17	-0.42	0.11	11	17	-0.08	0.02	3	23
8	1.814		-1.66	0.47	3	17	-0.56	0.15	11	17	-0.16	0.03	11	17
8	4		-1.63	0.50	3	17	-0.71	0.20	11	17	-0.24	0.04	11	17
9	10		-1.59	0.65	13	15	-0.00	-0.00	9	23	0.00	0.00	1	1
9	0.165		-1.59	0.65	13	15	-0.00	-0.00	9	23	-0.00	-0.00	9	23
9	0.330		-1.59	0.65	13	15	-0.00	-0.00	9	23	-0.00	-0.00	9	23
9	0.495		-1.59	0.65	13	15	-0.00	-0.00	9	23	-0.00	-0.00	9	23
9	0.660		-1.59	0.65	13	15	-0.00	-0.00	9	23	-0.00	-0.00	9	23
9	0.825		-1.59	0.65	13	15	-0.00	-0.00	9	23	-0.00	-0.00	9	23
9	0.990		-1.59	0.65	13	15	-0.00	-0.00	9	23	-0.00	-0.00	9	23
9	1.155		-1.59	0.65	13	15	-0.00	-0.00	9	23	-0.00	-0.00	9	23
9	1.320		-1.59	0.65	13	15	-0.00	-0.00	5	23	-0.00	-0.00	9	23
9	1.485		-1.59	0.65	13	15	-0.00	-0.00	5	23	-0.00	-0.00	9	23
9	11		-1.59	0.65	13	15	-0.00	-0.00	5	23	-0.00	-0.00	9	23
10	11		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	-0.00	9	23
10	0.165		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	-0.00	9	23
10	0.330		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	5	23
10	0.495		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	5	23
10	0.660		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	15	13
10	0.825		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	15	13
10	0.990		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	15	13
10	1.155		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	15	13
10	1.320		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	15	13
10	1.485		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	15	7
10	12		-1.59	0.65	13	15	0.00	0.00	2	7	-0.00	0.00	15	7
11	12		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.100		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.200		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.300		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.400		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.500		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.600		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.700		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.800		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	0.900		-1.87	0.16	3	21	-0.00	0.00	7	15	-0.00	0.00	15	7
11	5		-1.87	0.16	3	21	-0.00	0.00	7	15	0.00	0.00	4	3
12	13		-1.15	-0.11	11	17	-0.00	0.00	9	12	0.00	0.00	1	1
12	0.165		-1.15	-0.11	11	17	-0.00	0.00	9	12	-0.00	0.00	9	12
12	0.330		-1.15	-0.11	11	17	-0.00	0.00	9	12	-0.00	0.00	9	12
12	0.495		-1.15	-0.11	11	17	-0.00	0.00	9	12	-0.00	0.00	9	12
12	0.660		-1.15	-0.11	11	17	-0.00	0.00	9	12	-0.00	0.00	9	12
12	0.825		-1.15	-0.11	11	17	-0.00	0.00	9	12	-0.00	0.00	9	12
12	0.990		-1.15	-0.11	11	17	-0.00	0.00	21	23	-0.00	0.00	9	12
12	1.155		-1.15	-0.11	11	17	-0.00	0.00	21	23	-0.00	0.00	9	12
12	1.320		-1.15	-0.11	11	17	-0.00	0.00	21	23	-0.00	0.00	20	23
12	1.485		-1.15	-0.11	11	17	-0.00	0.00	21	23	-0.00	0.00	20	23
12	14		-1.15	-0.11	11	17	-0.00	0.00	21	23	-0.00	0.00	21	23

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: kopgevel as A

TUSSENpunTEN		KRACHTEN		2e orde		Fundamentele combinatie								
St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj							
			Min	Max	BC	BC	Min	Max	BC	BC	Min	Max	BC	BC
13	14		-1.19	11	-0.24	14	-0.00	4	0.00	20	-0.00	21	0.00	23
13		0.165	-1.19	11	-0.24	14	-0.00	4	0.00	20	-0.00	17	0.00	23
13		0.330	-1.19	11	-0.24	14	-0.00	4	0.00	20	-0.00	17	0.00	23
13		0.495	-1.19	11	-0.24	14	-0.00	3	0.00	21	-0.00	4	0.00	12
13		0.660	-1.19	11	-0.24	14	-0.00	3	0.00	21	-0.00	4	0.00	12
13		0.825	-1.19	11	-0.24	14	-0.00	3	0.00	21	-0.00	4	0.00	12
13		0.990	-1.19	11	-0.24	14	-0.00	14	0.00	10	-0.00	4	0.00	24
13		1.155	-1.19	11	-0.24	14	-0.00	14	0.00	10	-0.00	3	0.00	24
13		1.320	-1.19	11	-0.24	14	-0.00	14	0.00	10	-0.00	14	0.00	24
13		1.485	-1.19	11	-0.24	14	-0.00	14	0.00	10	-0.00	14	0.00	24
13	15		-1.19	11	-0.24	14	-0.00	14	0.00	10	-0.00	14	0.00	24
14	15		-1.19	11	-0.24	14	-0.00	24	0.00	14	-0.00	14	0.00	24
14		0.200	-1.19	11	-0.24	14	-0.00	24	0.00	14	-0.00	14	0.00	24
14		0.400	-1.19	11	-0.24	14	-0.00	24	0.00	14	-0.00	14	0.00	24
14		0.600	-1.19	11	-0.24	14	-0.00	24	0.00	14	-0.00	4	0.00	13
14		0.800	-1.19	11	-0.24	14	-0.00	24	0.00	14	-0.00	4	0.00	13
14		1.000	-1.19	11	-0.24	14	-0.00	24	0.00	14	-0.00	4	0.00	13
14		1.200	-1.19	11	-0.24	14	-0.00	13	0.00	4	-0.00	4	0.00	13
14		1.400	-1.19	11	-0.24	14	-0.00	13	0.00	4	-0.00	4	0.00	13
14		1.600	-1.19	11	-0.24	14	-0.00	13	0.00	4	-0.00	4	0.00	13
14		1.800	-1.19	11	-0.24	14	-0.00	13	0.00	4	-0.00	4	0.00	13
14	4		-1.19	11	-0.24	14	-0.00	13	0.00	4	0.00	14	0.00	18
15	16		-1.87	3	-0.12	17	-0.00	17	0.00	12	0.00	1	0.00	1
15		0.165	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	1	0.00	1
15		0.330	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
15		0.495	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
15		0.660	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
15		0.825	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
15		0.990	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
15		1.155	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
15		1.320	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
15		1.485	-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
15	17		-1.87	3	-0.12	17	-0.00	17	0.00	12	-0.00	17	0.00	12
16	17		-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	17	0.00	12
16		0.165	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	17	0.00	12
16		0.330	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	17	0.00	12
16		0.495	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	4	-0.00	2
16		0.660	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	4	-0.00	2
16		0.825	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	3	-0.00	2
16		0.990	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	3	-0.00	2
16		1.155	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	3	0.00	17
16		1.320	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	3	0.00	17
16		1.485	-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	3	0.00	17
16	18		-1.87	3	-0.12	17	-0.00	12	0.00	17	-0.00	3	0.00	17
17	18		-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17		0.100	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17		0.200	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17		0.300	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17		0.400	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17		0.500	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17

Project.....: staalframe loods a.d. XXXXXXXXXX J
 Onderdeel....: kopgevel as A

TUSSENpunTEN		KRACHTEN		2e orde		Fundamentele combinatie								
St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj							
			Min	BC	Max	BC	Min	BC	Max	BC	Min	BC	Max	BC
17		0.600	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17		0.700	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17		0.800	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	3	0.00	17
17		0.900	-1.75	12	0.47	15	-0.00	17	0.00	3	-0.00	4	0.00	14
17	9		-1.75	12	0.47	15	-0.00	17	0.00	3	0.00	4	0.00	14
18	3		-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		0.175	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		0.350	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		0.525	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		0.700	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		0.875	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		1.050	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		1.225	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		1.400	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18		1.575	-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
18	11		-1.29	16	0.14	11	-0.00	3	0.00	1	0.00	1	0.00	1
19	11		-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		0.175	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		0.350	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		0.525	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		0.700	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		0.875	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		1.050	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		1.225	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		1.400	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19		1.575	-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
19	14		-1.28	16	0.14	11	-0.00	16	0.00	1	0.00	1	0.00	1
20	14		0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		0.175	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		0.350	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		0.525	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		0.700	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		0.875	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		1.050	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		1.225	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		1.400	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20		1.575	0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
20	17		0.05	2	0.89	4	-0.00	4	0.00	7	0.00	1	0.00	1
21	17		0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		0.175	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		0.350	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		0.525	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		0.700	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		0.875	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		1.050	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		1.225	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		1.400	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21		1.575	0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1
21	8		0.05	2	0.89	4	-0.00	15	0.00	1	0.00	1	0.00	1

Project.....: staalframe loods a.d. JT
 Onderdeel.....: kopgevel as A

TUSSENpunTEN KRACHTEN			2e orde				Fundamentele combinatie					
St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj		Min	BC	Max	BC
			Min	BC	Max	BC	Min	BC				
22	2		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	0.175		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	0.350		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	0.525		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	0.700		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	0.875		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	1.050		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	1.225		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	1.400		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	1.575		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
22	12		-1.89	14	0.27	11	-0.00	14	0.00	10	0.00	1
23	12		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	0.175		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	0.350		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	0.525		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	0.700		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	0.875		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	1.050		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	1.225		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	1.400		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	1.575		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
23	15		0.07	14	0.43	11	-0.00	11	0.00	1	0.00	1
24	15		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	0.175		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	0.350		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	0.525		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	0.700		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	0.875		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	1.050		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	1.225		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	1.400		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	1.575		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
24	18		0.08	14	0.43	11	0.00	1	0.00	11	0.00	1
25	18		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	0.175		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	0.350		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	0.525		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	0.700		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	0.875		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	1.050		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	1.225		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	1.400		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	1.575		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
25	7		0.09	2	1.90	4	-0.00	4	0.00	1	0.00	1
26	10		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1
26	0.241		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1
26	0.481		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1
26	0.722		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1
26	0.962		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1
26	1.203		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1

Project.....: staalframe loods a.d. J
 Onderdeel.....: kopgevel as A

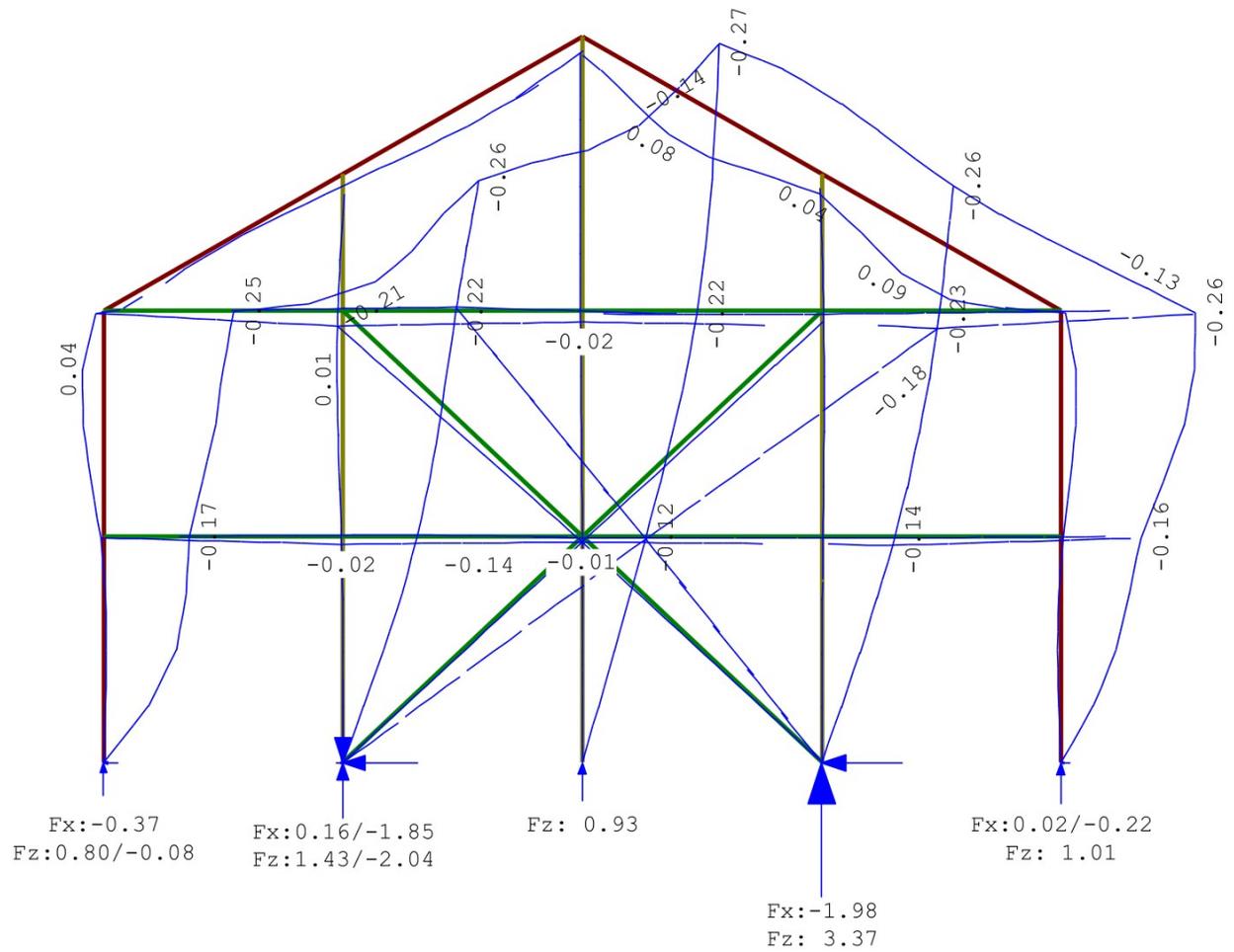
TUSSENpunTEN KRACHTEN					2e orde		Fundamentele combinatie							
St.	Kn.	Pos.	NXi/NXj			DZi/DZj			MYi/MYj					
			Min	BC	Max	BC	Min	BC	Max	BC	Min	BC	Max	BC
26	1.443		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1	0.00	1
26	1.684		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1	0.00	1
26	1.924		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1	0.00	1
26	2.165		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1	0.00	1
26	14		-0.27	11	3.47	15	-0.00	3	0.00	17	0.00	1	0.00	1
27	14		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	0.241		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	0.481		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	0.722		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	0.962		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	1.203		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	1.443		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	1.684		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	1.924		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	2.165		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
27	18		-0.23	11	2.44	15	-0.00	3	0.00	7	0.00	1	0.00	1
28	12		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	0.241		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	0.481		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	0.722		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	0.962		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	1.203		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	1.443		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	1.684		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	1.924		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	2.165		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
28	14		-2.72	3	-0.08	2	0.00	1	0.00	3	0.00	1	0.00	1
29	14		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	0.241		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	0.481		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	0.722		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	0.962		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	1.203		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	1.443		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	1.684		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	1.924		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	2.165		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1
29	16		-3.65	3	-0.09	2	-0.00	17	0.00	3	0.00	1	0.00	1

REACTIES					2e orde		Fundamentele combinatie	
Kn.	X-min	X-max	Z-min	Z-max	M-min	M-max		
1	-0.49	-0.01	-0.27	0.98				
6	-0.30	0.02	-0.03	1.26				
10	-2.53	0.20	-3.03	1.75				
13	-0.00	0.00	0.11	1.15				
16	-2.66	-0.06	0.58	4.37				

Project.....: staalframe loods a.d. XXXXXXXXXX
 Onderdeel....: kopgevel as A

OMHULLENDE VAN DE KARAKTERISTIEKE COMBINATIES

VERPLAATSINGEN 2e orde [mm] Karakteristieke combinatie



Technosoft Raamwerken release 6.82a

Vakwerk in de langsgevel

Project.....: loods a.d. XXXXXXXXXX
 Onderdeel....: vakwerk langsgevel
 Dimensies....: kN;m;rad (tenzij anders aangegeven)

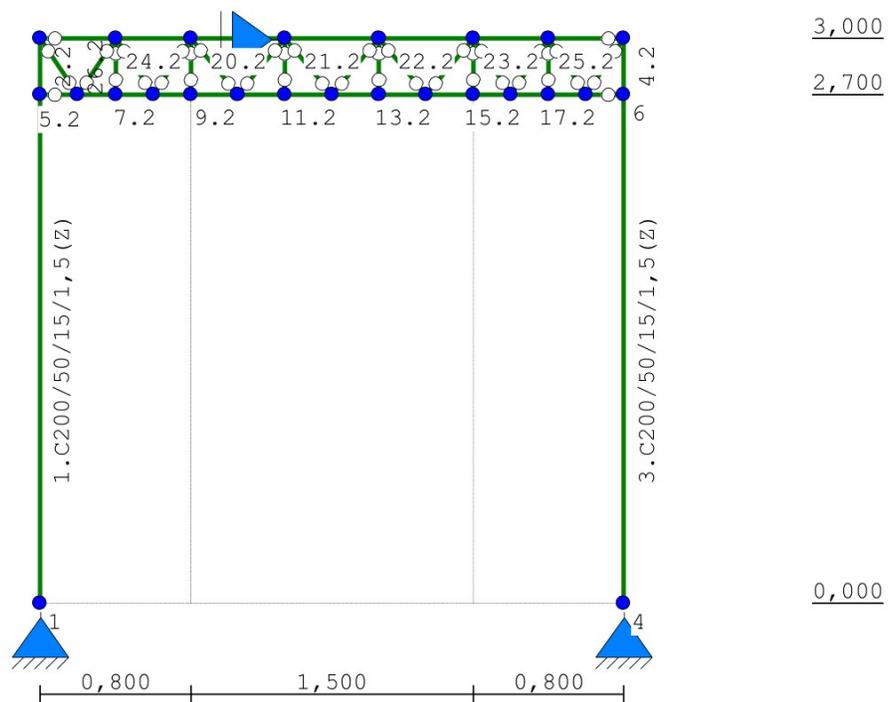
Belastingbreedte.: 1.600
 Theorie voor de bepaling van de krachtsverdeling: Geometrisch lineair.

Gunstige werking van de permanente belasting wordt automatisch verwerkt.

Toegepaste normen volgens Eurocode (CEN)

Belastingen EN 1990:2002 C2:2010,A1:2019
 EN 1991-1-1:2002 C1/C11:2019

GEOMETRIE



STRAMIENLIJNEN

Nr.	Naam	X	Z-min	Z-max
1		0.000	0.000	3.000
2		0.800	0.000	3.000
3		2.300	0.000	3.000
4		3.100	0.000	3.000

Project.....: loods a.d. XXXXXXXXXX J
 Onderdeel....: vakwerk langsgevel

NIVEAUS

Nr.	Z	X-min	X-max
1	0.000	0.000	3.100
2	2.700	0.000	3.100
3	3.000	0.000	3.100
4	3.000	0.000	3.100

MATERIALEN

Mt	Kwaliteit	E-modulus [N/mm ²]	S.G.	Pois.	Uitz. coëff
1	S235	210000	78.5	0.30	1.2000e-05

PROFIELEN [mm]

Prof.	Omschrijving	Materiaal	Oppervlak	Traagheid	Vormf.
1	C200/50/15/1,5	1:S235	2.2800e+02	2.4692e+04	0.00
2	C200/50/15/1,5 (Z)	1:S235	2.2800e+03	1.0100e+05	0.00
3	2XC200/50/15/1,5 (Z)	1:S235	4.5600e+02	2.0200e+05	0.00

PROFIELEN vervolg [mm]

Prof.	Staaftype	Breedte	Hoogte	e	Type	b1	h1	b2	h2
1	0:Normaal	50	200	100.0					
2	0:Normaal	200	50	25.0					
3	0:Normaal	200	100	50.0					

KNOPEN

Knoop	X	Z	Knoop	X	Z
1	0.000	0.000	6	3.100	2.700
2	0.000	2.700	7	0.200	2.700
3	0.000	3.000	8	0.400	2.700
4	3.100	0.000	9	0.600	2.700
5	3.100	3.000	10	0.800	2.700
11	1.050	2.700	16	2.300	2.700
12	1.300	2.700	17	2.500	2.700
13	1.550	2.700	18	2.700	2.700
14	1.800	2.700	19	2.900	2.700
15	2.050	2.700	20	0.400	3.000
21	0.800	3.000			
22	1.300	3.000			
23	1.800	3.000			
24	2.300	3.000			
25	2.700	3.000			

STAVEN

St.	ki	kj	Profiel	Aansl.i	Aansl.j	Lengte	Opm.
1	1	2	2:C200/50/15/1,5 (Z)	NDM	NDM	2.700	
2	2	3	2:C200/50/15/1,5 (Z)	NDM	NDM	0.300	
3	4	6	2:C200/50/15/1,5 (Z)	NDM	NDM	2.700	
4	6	5	2:C200/50/15/1,5 (Z)	NDM	NDM	0.300	
5	2	7	2:C200/50/15/1,5 (Z)	ND	NDM	0.200	
6	7	8	2:C200/50/15/1,5 (Z)	NDM	NDM	0.200	
7	8	9	2:C200/50/15/1,5 (Z)	NDM	NDM	0.200	
8	9	10	2:C200/50/15/1,5 (Z)	NDM	NDM	0.200	
9	10	11	2:C200/50/15/1,5 (Z)	NDM	NDM	0.250	
10	11	12	2:C200/50/15/1,5 (Z)	NDM	NDM	0.250	

Project.....: loods a.d. XXXXXXXXXX J
 Onderdeel....: vakwerk langsgevel

STAVEN

St.	ki	kj	Profiel	Aansl.i	Aansl.j	Lengte	Opm.
11	12	13	2:C200/50/15/1,5(Z)	NDM	NDM	0.250	
12	13	14	2:C200/50/15/1,5(Z)	NDM	NDM	0.250	
13	14	15	2:C200/50/15/1,5(Z)	NDM	NDM	0.250	
14	15	16	2:C200/50/15/1,5(Z)	NDM	NDM	0.250	
15	16	17	2:C200/50/15/1,5(Z)	NDM	NDM	0.200	
16	17	18	2:C200/50/15/1,5(Z)	NDM	NDM	0.200	
17	18	19	2:C200/50/15/1,5(Z)	NDM	NDM	0.200	
18	19	6	2:C200/50/15/1,5(Z)	NDM	ND	0.200	
19	3	20	2:C200/50/15/1,5(Z)	ND	NDM	0.400	
20	21	22	2:C200/50/15/1,5(Z)	NDM	NDM	0.500	
21	22	23	2:C200/50/15/1,5(Z)	NDM	NDM	0.500	
22	23	24	2:C200/50/15/1,5(Z)	NDM	NDM	0.500	
23	24	25	2:C200/50/15/1,5(Z)	NDM	NDM	0.400	
24	20	21	2:C200/50/15/1,5(Z)	NDM	NDM	0.400	
25	25	5	2:C200/50/15/1,5(Z)	NDM	ND	0.400	
26	20	8	2:C200/50/15/1,5(Z)	ND	ND	0.300	
27	21	10	2:C200/50/15/1,5(Z)	ND	ND	0.300	
28	22	12	2:C200/50/15/1,5(Z)	ND	ND	0.300	
29	23	14	2:C200/50/15/1,5(Z)	ND	ND	0.300	
30	24	16	2:C200/50/15/1,5(Z)	ND	ND	0.300	
31	3	7	2:C200/50/15/1,5(Z)	ND	ND	0.361	
32	7	20	2:C200/50/15/1,5(Z)	ND	ND	0.361	
33	20	9	2:C200/50/15/1,5(Z)	ND	ND	0.361	
34	9	21	2:C200/50/15/1,5(Z)	ND	ND	0.361	
35	21	11	2:C200/50/15/1,5(Z)	ND	ND	0.391	
36	11	22	2:C200/50/15/1,5(Z)	ND	ND	0.391	
37	22	13	2:C200/50/15/1,5(Z)	ND	ND	0.391	
38	13	23	2:C200/50/15/1,5(Z)	ND	ND	0.391	
39	23	15	2:C200/50/15/1,5(Z)	ND	ND	0.391	
40	15	24	2:C200/50/15/1,5(Z)	ND	ND	0.391	
41	24	17	2:C200/50/15/1,5(Z)	ND	ND	0.361	
42	17	25	2:C200/50/15/1,5(Z)	ND	ND	0.361	
43	25	18	2:C200/50/15/1,5(Z)	ND	ND	0.300	
44	25	19	2:C200/50/15/1,5(Z)	ND	ND	0.361	
45	19	5	2:C200/50/15/1,5(Z)	ND	ND	0.361	

VASTE STEUNPUNTEN

Nr.	knoop	Kode	XZR 1=vast 0=vrij	Hoek
1	1	110		0.00
2	4	110		0.00
3	22	100		0.00

Project.....: loods a.d. XXXXXXXXXX J
 Onderdeel....: vakwerk langsgevel

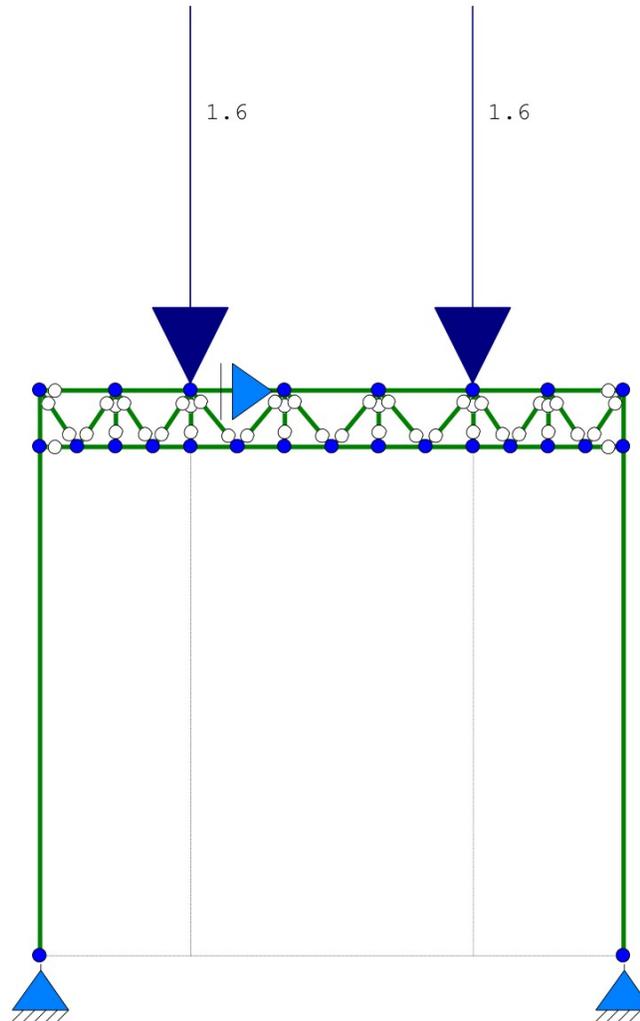
BELASTINGGEVALLEN

B.G.	Omschrijving	Type
1	permanent EGZ=-1.00	1 Permanente belasting
2	wind loodrecht op de kopgevels	7 Wind van links onderdruk A
3	sneeuw	22 Sneeuw A

BELASTINGEN

B.G.:1 permanent

Eigen gewicht van alle staven is meegenomen in berekening. Richting:↓

**KNOOPBELASTINGEN**

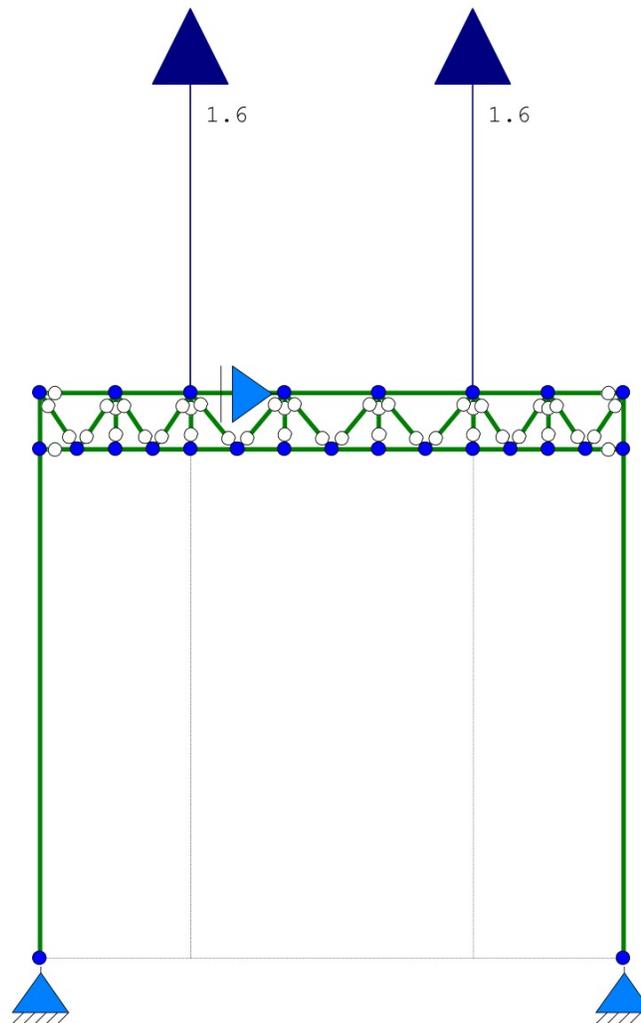
B.G.:1 permanent

Last	Knoop	Richting	waarde	ψ_0	ψ_1	ψ_2
1	21	Z	-1.600			
2	24	Z	-1.600			

Project.....: loods a.d.
 Onderdeel....: vakwerk langsgewel

BELASTINGEN

B.G:2 wind loodrecht op de kopgevels



KNOOPBELASTINGEN

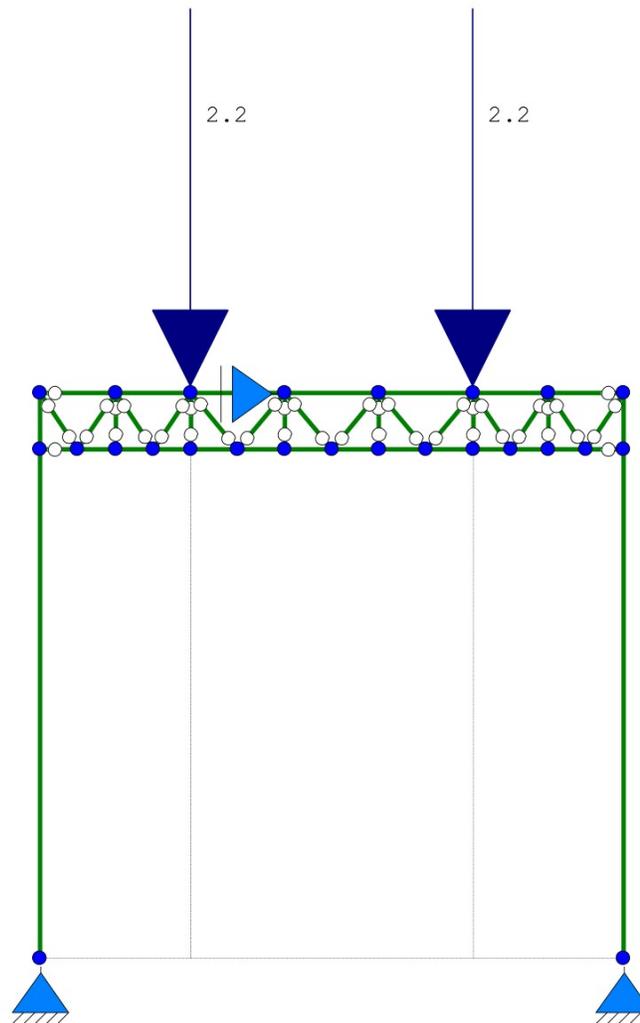
B.G:2 wind loodrecht op de kopgevels

Last	Knoop	Richting	waarde	ψ_0	ψ_1	ψ_2
1	21	Z	1.600	0.60	0.20	0.00
2	24	Z	1.600	0.60	0.20	0.00

Project.....: loods a.d.
 Onderdeel....: vakwerk langsgewel

BELASTINGEN

B.G:3 sneeuw

**KNOOPBELASTINGEN**

B.G:3 sneeuw

Last	Knoop	Richting	waarde	ψ_0	ψ_1	ψ_2
1	21	Z	-2.200	0.00	0.20	0.00
2	24	Z	-2.200	0.00	0.20	0.00

REACTIES

Kn.	B.G.	X	Z	M
1	1	0.00	3.32	
1	2	-0.00	-1.60	
1	3	0.00	2.20	
4	1	-0.00	3.32	
4	2	0.00	-1.60	
4	3	-0.00	2.20	

Project.....: loods a.d. XXXXXXXXXX J
 Onderdeel....: vakwerk langsegevel

REACTIES

Kn.	B.G.	X	Z	M
22	1	-0.00		
22	2	0.00		
22	3	-0.00		

BELASTINGCOMBINATIES

BC	Type					
1	Fund.	1.22	$G_{k,1}$			
2	Fund.	1.00	$G_{k,1}$			
3	Fund.	1.22	$G_{k,1}$	+	1.35 ψ_0	$Q_{k,2}$
4	Fund.	1.03	$G_{k,1}$	+	1.35	$Q_{k,2}$
5	Fund.	1.03	$G_{k,1}$			
6	Fund.	1.03	$G_{k,1}$	+	1.35	$Q_{k,3}$
7	Fund.	1.00	$G_{k,1}$	+	1.35 ψ_0	$Q_{k,2}$
8	Fund.	1.00	$G_{k,1}$	+	1.35	$Q_{k,2}$
9	Fund.	1.00	$G_{k,1}$	+	1.35	$Q_{k,3}$
10	Fund.	1.03	$G_{k,1}$	+	1.35	$Q_{k,3}$ + 1.35 ψ_0 $Q_{k,2}$
11	Fund.	1.00	$G_{k,1}$	+	1.35	$Q_{k,3}$ + 1.35 ψ_0 $Q_{k,2}$
12	Kar.	1.00	$G_{k,1}$	+	1.00	$Q_{k,2}$
13	Kar.	1.00	$G_{k,1}$			
14	Kar.	1.00	$G_{k,1}$	+	1.00	$Q_{k,3}$
15	Kar.	1.00	$G_{k,1}$	+	1.00	$Q_{k,3}$ + 1.00 ψ_0 $Q_{k,2}$
16	Quas.	1.00	$G_{k,1}$			
17	Freq.	1.00	$G_{k,1}$			
18	Freq.	1.00	$G_{k,1}$	+	1.00 ψ_1	$Q_{k,2}$
19	Freq.	1.00	$G_{k,1}$	+	1.00 ψ_1	$Q_{k,3}$
20	Blij.	1.00	$G_{k,1}$			

GUNSTIGE WERKING PERMANENTE BELASTINGEN

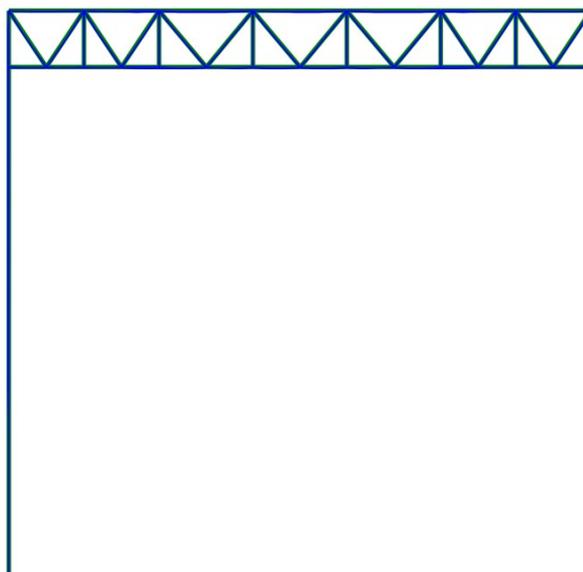
BC	Staven met gunstige werking
1	Geen
2	Alle staven de factor:1.00
3	Geen
4	Geen
5	Geen
6	Geen
7	Alle staven de factor:1.00
8	Alle staven de factor:1.00
9	Alle staven de factor:1.00
10	Geen
11	Alle staven de factor:1.00

Project.....: loods a.d. [REDACTED]
Onderdeel....: vakwerk langsgevel

OMHULLENDE VAN DE FUNDAMENTELE COMBINATIES

MOMENTEN

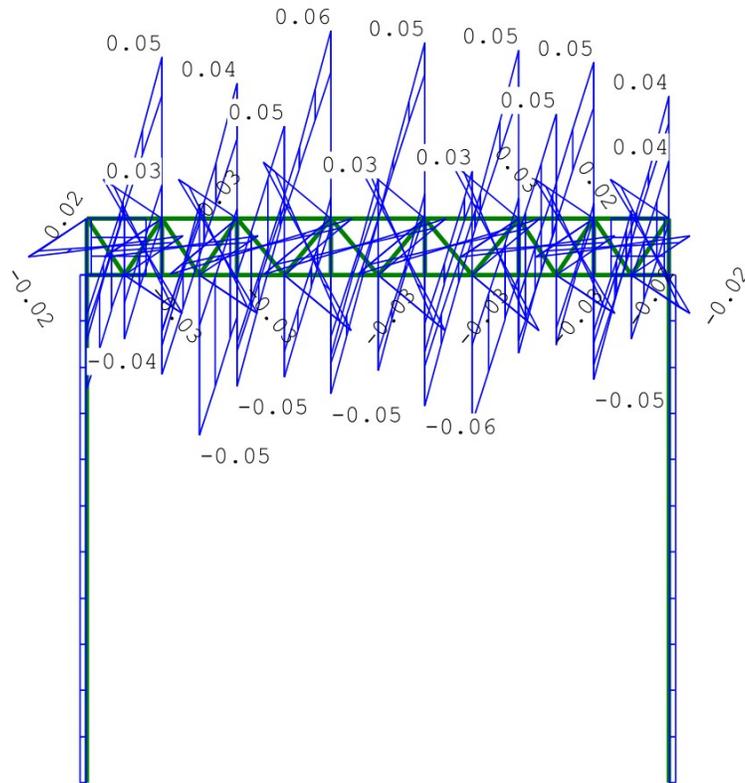
Fundamentele combinatie



Project.....: loods a.d. [redacted]
Onderdeel....: vakwerk langsgevel

DWARSKRACHTEN

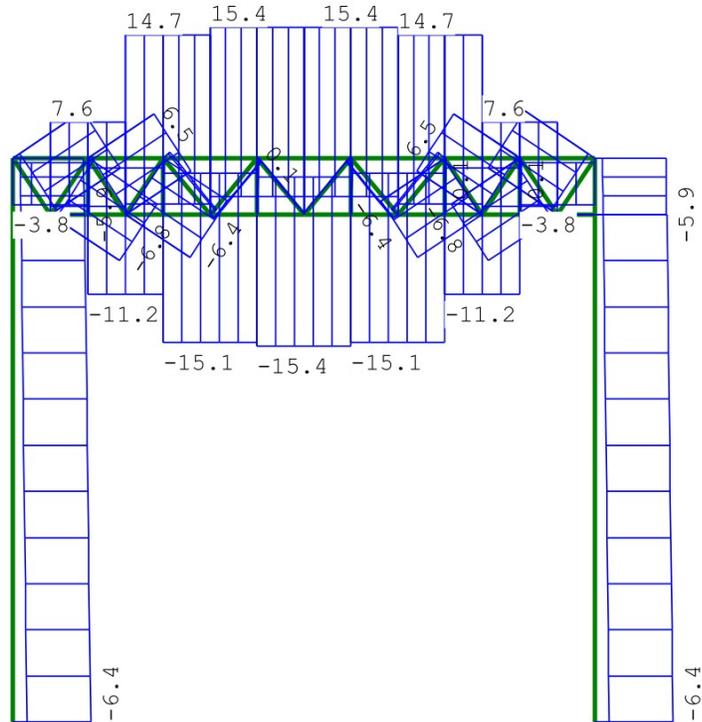
Fundamentele combinatie



Project.....: loods a.d. XXXXXXXXXX
 Onderdeel....: vakwerk langsgewel

NORMAALKRACHTEN

Fundamentele combinatie



STAAFKRACHTEN

Fundamentele combinatie

St.	Kn.	Pos.	NXi/NXj		DZi/DZj		MYi/MYj		Min BC	Max BC
			Min BC	Max BC	Min BC	Max BC	Min BC	Max BC		
1	1		-6.41	6	-1.16	8	0.00	8	0.00	6
1	2		-5.91	6	-0.68	8	0.00	8	0.00	6
2	2		-5.87	6	-0.66	8	-0.02	6	-0.00	8
2	3		-5.82	6	-0.61	8	-0.02	6	-0.00	8
3	4		-6.41	6	-1.16	8	-0.00	6	-0.00	8
3	6		-5.91	6	-0.68	8	-0.00	6	-0.00	8
4	6		-5.87	6	-0.66	8	0.00	8	0.02	6
4	5		-5.82	6	-0.61	8	0.00	8	0.02	6
5	2		-0.02	6	-0.00	8	-0.04	6	-0.02	8
5	0.091		-0.02	6	-0.00	8	-0.02	6	0.00	8
5	0.183		-0.02	6	-0.00	8	-0.00	9	0.02	4
5	0.190		-0.02	6	-0.00	8	-0.00	9	0.02	4
5	7		-0.02	6	-0.00	8	0.00	9	0.02	4

Project.....: loods a.d. XXXXXXXXXX J
 Onderdeel....: vakwerk langsgewel

STAAFKRACHTEN

Fundamentele combinatie

St.	Kn.	Pos.	NXi/NXj		DZi/DZj				MYi/MYj					
			Min	Max	BC	Min	Max	BC	Min	Max	BC	BC		
6	7		0.66	8	7.59	6	-0.02	3	-0.01	9	-0.00	6	0.00	8
6	0.019		0.66	8	7.59	6	-0.02	3	-0.01	9	-0.00	6	0.00	8
6	0.049		0.66	8	7.59	6	-0.01	4	0.00	9	-0.00	6	-0.00	8
6	0.103		0.66	8	7.59	6	0.00	8	0.01	6	-0.00	6	-0.00	8
6	0.188		0.66	8	7.59	6	0.02	8	0.03	6	-0.00	6	0.00	8
6	8		0.66	8	7.59	6	0.02	8	0.03	6	-0.00	6	0.00	8
7	8		0.66	8	7.59	6	-0.02	1	-0.02	8	-0.00	6	0.00	8
7	0.012		0.66	8	7.59	6	-0.02	1	-0.02	8	-0.00	6	0.00	8
7	0.098		0.66	8	7.59	6	-0.00	6	0.00	8	-0.00	6	-0.00	8
7	0.108		0.66	8	7.59	6	-0.00	9	0.00	8	-0.00	6	-0.00	8
7	0.183		0.66	8	7.59	6	0.01	9	0.02	3	-0.00	6	0.00	8
7	9		0.66	8	7.59	6	0.02	9	0.02	3	-0.00	6	0.00	8
8	9		0.88	8	14.72	6	-0.05	6	-0.02	8	-0.00	6	0.00	8
8	0.021		0.88	8	14.72	6	-0.05	6	-0.01	8	-0.00	6	0.00	8
8	0.087		0.88	8	14.72	6	-0.03	6	0.00	8	-0.01	6	-0.00	8
8	0.153		0.88	8	14.72	6	-0.02	6	0.01	8	-0.01	6	0.00	8
8	10		0.88	8	14.72	6	-0.01	9	0.02	4	-0.01	6	0.00	8
9	10		0.88	8	14.72	6	-0.02	4	0.00	9	-0.01	6	0.00	8
9	0.002		0.88	8	14.72	6	-0.02	4	0.00	9	-0.01	6	0.00	8
9	0.038		0.88	8	14.72	6	-0.02	4	0.01	9	-0.01	6	0.00	8
9	0.129		0.88	8	14.72	6	0.00	8	0.02	6	-0.01	6	-0.00	8
9	0.220		0.88	8	14.72	6	0.02	8	0.04	6	-0.00	6	0.00	8
9	11		0.88	8	14.72	6	0.02	8	0.05	6	-0.00	6	0.00	8
10	11		1.50	8	15.39	6	-0.03	1	-0.02	8	-0.00	6	0.00	8
10	0.027		1.50	8	15.39	6	-0.03	1	-0.02	8	-0.00	6	0.00	8
10	0.133		1.50	8	15.39	6	-0.01	6	0.00	8	-0.00	6	-0.00	8
10	0.166		1.50	8	15.39	6	-0.00	9	0.01	4	-0.00	6	-0.00	8
10	0.239		1.50	8	15.39	6	0.01	9	0.02	3	-0.00	6	0.00	8
10	12		1.50	8	15.39	6	0.01	9	0.02	3	-0.00	6	0.00	8
11	12		1.50	8	15.39	6	-0.03	3	-0.02	9	-0.00	6	0.00	8
11	0.011		1.50	8	15.39	6	-0.02	3	-0.02	9	-0.00	6	0.00	8
11	0.107		1.50	8	15.39	6	-0.00	8	0.00	9	-0.01	6	-0.00	8
11	0.118		1.50	8	15.39	6	0.00	8	0.00	6	-0.01	6	-0.00	8
11	0.224		1.50	8	15.39	6	0.02	8	0.02	1	-0.00	6	0.00	8
11	13		1.50	8	15.39	6	0.02	8	0.03	1	-0.00	6	0.00	8
12	13		1.50	8	15.39	6	-0.03	1	-0.02	8	-0.00	6	0.00	8
12	0.026		1.50	8	15.39	6	-0.02	1	-0.02	8	-0.00	6	0.00	8
12	0.132		1.50	8	15.39	6	-0.00	6	0.00	8	-0.01	6	-0.00	8
12	0.143		1.50	8	15.39	6	-0.00	9	0.00	8	-0.01	6	-0.00	8
12	0.239		1.50	8	15.39	6	0.02	9	0.02	3	-0.00	6	0.00	8
12	14		1.50	8	15.39	6	0.02	9	0.03	3	-0.00	6	0.00	8
13	14		1.50	8	15.39	6	-0.02	3	-0.01	9	-0.00	6	0.00	8
13	0.011		1.50	8	15.39	6	-0.02	3	-0.01	9	-0.00	6	0.00	8
13	0.084		1.50	8	15.39	6	-0.01	4	0.00	9	-0.00	6	-0.00	8
13	0.117		1.50	8	15.39	6	0.00	8	0.01	6	-0.00	6	-0.00	8
13	0.223		1.50	8	15.39	6	0.02	8	0.03	1	-0.00	6	0.00	8
13	15		1.50	8	15.39	6	0.02	8	0.03	1	-0.00	6	0.00	8

Project.....: loods a.d. XXXXXXXXXX
 Onderdeel....: vakwerk langsgewel

STAAFKRACHTEN

Fundamentele combinatie

St.	Kn.	Pos.	NXi/NXj			DZi/DZj			MYi/MYj					
			Min	BC	Max	BC	Min	BC	Max	BC	Min	BC	Max	BC
14	15		0.88	8	14.72	6	-0.05	6	-0.02	8	-0.00	6	0.00	8
14		0.030	0.88	8	14.72	6	-0.04	6	-0.02	8	-0.00	6	0.00	8
14		0.121	0.88	8	14.72	6	-0.02	6	0.00	8	-0.01	6	-0.00	8
14		0.212	0.88	8	14.72	6	-0.01	9	0.02	4	-0.01	6	0.00	8
14		0.248	0.88	8	14.72	6	-0.00	9	0.02	4	-0.01	6	0.00	8
14	16		0.88	8	14.72	6	-0.00	9	0.02	4	-0.01	6	0.00	8
15	16		0.88	8	14.72	6	-0.02	4	0.01	9	-0.01	6	0.00	8
15		0.047	0.88	8	14.72	6	-0.01	8	0.02	6	-0.01	6	0.00	8
15		0.113	0.88	8	14.72	6	0.00	8	0.03	6	-0.01	6	-0.00	8
15		0.179	0.88	8	14.72	6	0.01	8	0.05	6	-0.00	6	0.00	8
15	17		0.88	8	14.72	6	0.02	8	0.05	6	-0.00	6	0.00	8
16	17		0.66	8	7.59	6	-0.02	3	-0.02	9	-0.00	6	0.00	8
16		0.017	0.66	8	7.59	6	-0.02	3	-0.01	9	-0.00	6	0.00	8
16		0.092	0.66	8	7.59	6	-0.00	8	0.00	9	-0.00	6	-0.00	8
16		0.102	0.66	8	7.59	6	0.00	8	0.00	6	-0.00	6	-0.00	8
16		0.188	0.66	8	7.59	6	0.02	8	0.02	1	-0.00	6	0.00	8
16	18		0.66	8	7.59	6	0.02	8	0.02	1	-0.00	6	0.00	8
17	18		0.66	8	7.59	6	-0.03	6	-0.02	8	-0.00	6	0.00	8
17		0.012	0.66	8	7.59	6	-0.03	6	-0.02	8	-0.00	6	0.00	8
17		0.097	0.66	8	7.59	6	-0.01	6	0.00	8	-0.00	6	-0.00	8
17		0.151	0.66	8	7.59	6	-0.00	9	0.01	4	-0.00	6	-0.00	8
17		0.181	0.66	8	7.59	6	0.01	9	0.02	3	-0.00	6	0.00	8
17	19		0.66	8	7.59	6	0.01	9	0.02	3	-0.00	6	0.00	8
18	19		-0.02	6	-0.00	8	-0.02	4	-0.00	9	-0.00	6	0.00	8
18		0.010	-0.02	6	-0.00	8	-0.02	4	0.00	9	-0.00	6	0.00	8
18		0.017	-0.02	6	-0.00	8	-0.02	4	0.00	9	-0.00	6	0.00	8
18		0.109	-0.02	6	-0.00	8	0.00	8	0.02	6	-0.00	6	-0.00	8
18	6		-0.02	6	-0.00	8	0.02	8	0.04	6	0.00	6	0.00	8
19	3		-3.81	6	-0.36	8	-0.04	1	-0.03	8	0.00	1	0.00	8
19		0.166	-3.81	6	-0.36	8	-0.00	6	0.00	8	-0.00	1	-0.00	8
19		0.174	-3.81	6	-0.36	8	-0.00	6	0.00	8	-0.00	1	-0.00	8
19		0.332	-3.81	6	-0.36	8	0.03	9	0.04	3	-0.00	6	-0.00	8
19		0.372	-3.81	6	-0.36	8	0.03	9	0.04	3	0.00	9	0.00	4
19	20		-3.81	6	-0.36	8	0.04	9	0.05	3	0.00	9	0.00	4
20	21		-15.12	6	-1.23	8	-0.05	3	-0.04	9	-0.00	6	0.00	8
20		0.079	-15.12	6	-1.23	8	-0.03	3	-0.02	9	-0.01	6	-0.00	8
20		0.215	-15.12	6	-1.23	8	-0.01	4	0.00	9	-0.01	6	-0.00	8
20		0.246	-15.12	6	-1.23	8	0.00	8	0.01	6	-0.01	6	-0.00	8
20		0.413	-15.12	6	-1.23	8	0.03	8	0.04	1	-0.00	6	0.00	8
20	22		-15.12	6	-1.23	8	0.05	8	0.06	1	-0.00	9	0.00	4
21	22		-15.44	6	-1.55	8	-0.05	1	-0.04	8	-0.00	6	0.00	8
21		0.089	-15.44	6	-1.55	8	-0.03	1	-0.03	8	-0.00	6	-0.00	8
21		0.250	-15.44	6	-1.55	8	-0.00	1	0.00	8	-0.01	6	-0.00	8
21		0.411	-15.44	6	-1.55	8	0.03	9	0.03	3	-0.00	6	0.00	8
21	23		-15.44	6	-1.55	8	0.04	9	0.05	3	-0.00	9	0.00	4

Project.....: loods a.d. XXXXXXXXXX J
 Onderdeel....: vakwerk langsgewel

STAAFKRACHTEN

Fundamentele combinatie

St.	Kn.	Pos.	NXi/NXj			DZi/DZj			MYi/MYj					
			Min	BC	Max	BC	Min	BC	Max	BC	Min	BC	Max	BC
22	23		-15.12	6	-1.23	8	-0.06	1	-0.05	8	-0.00	9	0.00	4
22		0.087	-15.12	6	-1.23	8	-0.04	1	-0.03	8	-0.00	6	0.00	8
22		0.254	-15.12	6	-1.23	8	-0.01	6	0.00	8	-0.01	6	-0.00	8
22		0.285	-15.12	6	-1.23	8	-0.00	9	0.01	4	-0.01	6	-0.00	8
22		0.421	-15.12	6	-1.23	8	0.02	9	0.03	3	-0.01	6	-0.00	8
22	24		-15.12	6	-1.23	8	0.04	9	0.05	3	-0.00	6	0.00	8
23	24		-11.20	6	-0.80	8	-0.04	3	-0.02	9	-0.00	6	0.00	8
23		0.106	-11.20	6	-0.80	8	-0.02	3	-0.01	9	-0.01	6	-0.00	8
23		0.139	-11.20	6	-0.80	8	-0.01	4	0.00	9	-0.01	6	-0.00	8
23		0.207	-11.20	6	-0.80	8	0.00	8	0.01	6	-0.00	6	-0.00	8
23		0.308	-11.20	6	-0.80	8	0.02	8	0.03	6	-0.00	6	0.00	8
23		0.378	-11.20	6	-0.80	8	0.03	8	0.04	6	0.00	9	0.00	4
23	25		-11.20	6	-0.80	8	0.03	8	0.05	6	0.00	9	0.00	4
24	20		-11.20	6	-0.80	8	-0.05	6	-0.03	8	0.00	9	0.00	4
24		0.022	-11.20	6	-0.80	8	-0.04	6	-0.03	8	0.00	9	0.00	4
24		0.092	-11.20	6	-0.80	8	-0.03	6	-0.02	8	-0.00	6	0.00	8
24		0.193	-11.20	6	-0.80	8	-0.01	6	0.00	8	-0.00	6	-0.00	8
24		0.261	-11.20	6	-0.80	8	-0.00	9	0.01	4	-0.01	6	-0.00	8
24		0.294	-11.20	6	-0.80	8	0.01	9	0.02	3	-0.01	6	-0.00	8
24	21		-11.20	6	-0.80	8	0.02	9	0.04	3	-0.00	6	0.00	8
25	25		-3.81	6	-0.36	8	-0.05	3	-0.04	9	0.00	6	0.00	4
25		0.029	-3.81	6	-0.36	8	-0.04	3	-0.03	9	0.00	6	0.00	4
25		0.067	-3.81	6	-0.36	8	-0.04	3	-0.03	9	-0.00	6	-0.00	4
25		0.098	-3.81	6	-0.36	8	-0.03	3	-0.02	9	-0.00	6	-0.00	4
25		0.226	-3.81	6	-0.36	8	-0.00	4	0.00	9	-0.00	1	-0.00	8
25		0.234	-3.81	6	-0.36	8	0.00	8	0.00	6	-0.00	1	-0.00	8
25	5		-3.81	6	-0.36	8	0.03	8	0.04	1	0.00	1	0.00	8
26	20		0.09	8	0.11	1	0.00	1	0.00	1	0.00	1	0.00	1
26	8		0.03	8	0.05	1	0.00	1	0.00	1	0.00	1	0.00	1
27	21		0.04	9	0.10	3	0.00	1	0.00	1	0.00	1	0.00	1
27	10		-0.01	9	0.04	4	0.00	1	0.00	1	0.00	1	0.00	1
28	22		0.09	9	0.11	3	0.00	1	0.00	1	0.00	1	0.00	1
28	12		0.03	9	0.05	3	0.00	1	0.00	1	0.00	1	0.00	1
29	23		0.09	9	0.11	3	0.00	1	0.00	1	0.00	1	0.00	1
29	14		0.03	9	0.05	3	0.00	1	0.00	1	0.00	1	0.00	1
30	24		0.04	9	0.10	3	0.00	1	0.00	1	0.00	1	0.00	1
30	16		-0.01	9	0.04	4	0.00	1	0.00	1	0.00	1	0.00	1
31	3		0.68	8	6.94	6	-0.02	1	-0.02	2	0.00	1	0.00	2
31		0.180	0.66	8	6.91	6	0.00	1	0.00	2	-0.00	1	-0.00	2
31	7		0.63	8	6.88	6	0.02	2	0.02	1	0.00	1	0.00	2
32	7		-6.84	6	-0.56	8	-0.02	1	-0.02	2	0.00	1	0.00	2
32		0.180	-6.81	6	-0.53	8	0.00	1	0.00	2	-0.00	1	-0.00	2
32	20		-6.79	6	-0.51	8	0.02	2	0.02	1	0.00	1	0.00	2

Project.....: loods a.d. XXXXXXXXXX J
 Onderdeel....: vakwerk langsgewel

STAAFKRACHTEN

Fundamentele combinatie

St.	Kn.	Pos.	NXi/NXj		DZi/DZj				MYi/MYj					
			Min	Max	BC	BC	Min	Max	BC	BC	Min	Max	BC	BC
33	20		0.28	8	6.53	6	-0.02	1	-0.02	2	0.00	1	0.00	2
33		0.180	0.26	8	6.50	6	0.00	1	0.00	2	-0.00	1	-0.00	2
33	9		0.23	8	6.48	6	0.02	2	0.02	1	0.00	1	0.00	2
34	9		-6.37	6	-0.17	8	-0.02	1	-0.02	2	0.00	1	0.00	2
34		0.180	-6.34	6	-0.14	8	0.00	1	0.00	2	-0.00	1	-0.00	2
34	21		-6.32	6	-0.11	8	0.02	2	0.02	1	0.00	1	0.00	2
35	21		0.59	8	0.73	1	-0.03	1	-0.02	2	0.00	1	0.00	2
35		0.195	0.56	8	0.70	1	0.00	1	0.00	2	-0.00	1	-0.00	2
35	11		0.53	8	0.67	1	0.02	2	0.03	1	0.00	1	0.00	2
36	11		-0.53	3	-0.44	9	-0.03	1	-0.02	2	0.00	1	0.00	2
36		0.195	-0.50	3	-0.41	9	0.00	1	0.00	2	-0.00	1	-0.00	2
36	22		-0.46	3	-0.38	9	0.02	2	0.03	1	0.00	1	0.00	2
37	22		0.10	8	0.13	1	-0.03	1	-0.02	2	0.00	1	0.00	2
37		0.195	0.08	8	0.09	1	0.00	1	0.00	2	-0.00	1	-0.00	2
37	13		0.05	8	0.06	1	0.02	2	0.03	1	0.00	1	0.00	2
38	13		0.05	8	0.06	1	-0.03	1	-0.02	2	0.00	1	0.00	2
38		0.195	0.08	8	0.09	1	0.00	1	0.00	2	-0.00	1	-0.00	2
38	23		0.10	8	0.13	1	0.02	2	0.03	1	0.00	1	0.00	2
39	23		-0.46	3	-0.38	9	-0.03	1	-0.02	2	0.00	1	0.00	2
39		0.195	-0.50	3	-0.41	9	0.00	1	0.00	2	-0.00	1	-0.00	2
39	15		-0.53	3	-0.44	9	0.02	2	0.03	1	0.00	1	0.00	2
40	15		0.53	8	0.67	1	-0.03	1	-0.02	2	0.00	1	0.00	2
40		0.195	0.56	8	0.70	1	0.00	1	0.00	2	-0.00	1	-0.00	2
40	24		0.59	8	0.73	1	0.02	2	0.03	1	0.00	1	0.00	2
41	24		-6.32	6	-0.11	8	-0.02	1	-0.02	2	0.00	1	0.00	2
41		0.180	-6.34	6	-0.14	8	0.00	1	0.00	2	-0.00	1	-0.00	2
41	17		-6.37	6	-0.17	8	0.02	2	0.02	1	0.00	1	0.00	2
42	17		0.23	8	6.48	6	-0.02	1	-0.02	2	0.00	1	0.00	2
42		0.180	0.26	8	6.50	6	0.00	1	0.00	2	-0.00	1	-0.00	2
42	25		0.28	8	6.53	6	0.02	2	0.02	1	0.00	1	0.00	2
43	25		0.09	8	0.11	1	0.00	1	0.00	1	0.00	1	0.00	1
43	18		0.03	8	0.05	1	0.00	1	0.00	1	0.00	1	0.00	1
44	25		-6.79	6	-0.51	8	-0.02	1	-0.02	2	0.00	1	0.00	2
44		0.180	-6.81	6	-0.53	8	0.00	1	0.00	2	-0.00	1	-0.00	2
44	19		-6.84	6	-0.56	8	0.02	2	0.02	1	0.00	1	0.00	2
45	19		0.63	8	6.88	6	-0.02	1	-0.02	2	0.00	1	0.00	2
45		0.180	0.66	8	6.91	6	0.00	1	0.00	2	-0.00	1	-0.00	2
45	5		0.68	8	6.94	6	0.02	2	0.02	1	0.00	1	0.00	2

REACTIES

Fundamentele combinatie

Kn.	X-min	X-max	Z-min	Z-max	M-min	M-max
1	0.00	0.00	1.16	6.41		

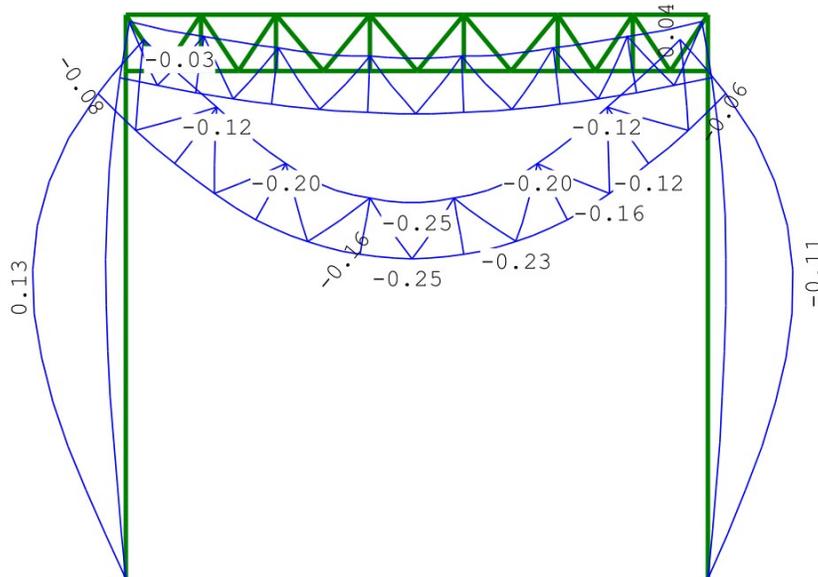
Project.....: loods a.d. XXXXXXXXXX 
Onderdeel....: vakwerk langsgewel

REACTIES					Fundamentele combinatie	
Kn.	X-min	X-max	Z-min	Z-max	M-min	M-max
4	-0.00	-0.00	1.16	6.41		
22	-0.00	-0.00				

Project.....: loods a.d. XXXXXXXXXX
 Onderdeel....: vakwerk langsgevel

OMHULLENDE VAN DE KARAKTERISTIEKE COMBINATIES

VERPLAATSINGEN [mm] Karakteristieke combinatie



VERPLAATSINGEN [mm;rad] Karakteristieke combinatie

Kn.	X-verpl.		Z-verpl.		Rotatie	
	Min	Max	Min	Max	Min	Max
1	0.00	0.00	0.00	0.00	-0.00011	-0.00002
2	-0.04	-0.01	-0.03	-0.01	0.00004	0.00018
3	0.01	0.02	-0.03	-0.01	0.00005	0.00022
4	0.00	0.00	0.00	0.00	0.00002	0.00011
5	-0.04	-0.01	-0.03	-0.01	-0.00022	-0.00005
6	0.00	0.02	-0.03	-0.01	-0.00018	-0.00004
7	-0.04	-0.01	-0.08	-0.02	0.00005	0.00024
8	-0.03	-0.01	-0.12	-0.03	0.00004	0.00021
9	-0.03	-0.01	-0.16	-0.04	0.00004	0.00019
10	-0.03	-0.01	-0.20	-0.04	0.00003	0.00015
11	-0.02	-0.00	-0.23	-0.05	0.00002	0.00009
12	-0.01	-0.00	-0.25	-0.06	0.00001	0.00005
13	-0.01	-0.00	-0.25	-0.06	0.00000	0.00000
14	-0.00	-0.00	-0.25	-0.06	-0.00005	-0.00001
15	0.00	0.01	-0.23	-0.05	-0.00009	-0.00002
16	0.00	0.01	-0.20	-0.04	-0.00015	-0.00003
17	0.00	0.02	-0.16	-0.04	-0.00019	-0.00004
18	0.00	0.02	-0.12	-0.03	-0.00021	-0.00004
19	0.00	0.02	-0.08	-0.02	-0.00024	-0.00005
20	0.00	0.02	-0.12	-0.03	0.00004	0.00021

Project.....: loods a.d. XXXXXXXXXX 
 Onderdeel....: vakwerk langsgewel

Kn.	VERPLAATSINGEN [mm;rad]				Karakteristieke combinatie	
	X-verpl.		Z-verpl.		Rotatie	
	Min	Max	Min	Max	Min	Max
21	0.00	0.01	-0.20	-0.04	0.00004	0.00016
22	0.00	0.00	-0.25	-0.06	0.00001	0.00004
23	-0.01	-0.00	-0.25	-0.06	-0.00004	-0.00001
24	-0.03	-0.01	-0.20	-0.04	-0.00016	-0.00004
25	-0.04	-0.01	-0.12	-0.03	-0.00021	-0.00004

Toelichting grondslagen

In dit document kunt u secties vinden die onleesbaar zijn gemaakt. Deze informatie is achterwege gelaten op basis van de Wet open overheid (Woo). De letter die hierbij is vermeld correspondeert met de bijbehorende grondslag in onderstaand overzicht.

J Art. 5.1 lid 2 sub e

Het belang van de openbaarmaking van deze informatie weegt niet op tegen het belang van de eerbiediging van de persoonlijke levenssfeer van betrokkenen