

CORE CONSTRUCTIES

Statische Berekening

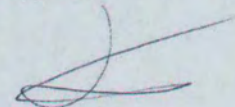
Project: Willemsparkweg 220 Amsterdam
Onderdeel: Doorbraken
Opdrachtgever: Structure Engineering
T.a.v. [redacted]
Van L. Stirumplein 18III
1051BE Amsterdam
Projectnummer: 17021
Datum: 26-03-2017
Gewijzigd:

Behoort bij besluit d.d.:

- 6 APR. 2018

X Gemeente
X Amsterdam
X

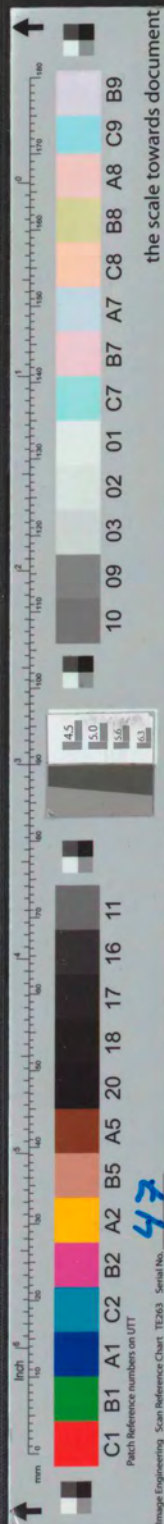
Opgesteld:



Ir. [redacted]

15 MRT 2018

3 4 5 3 5 9 9



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1 Inleiding

1.1 Algemeen

Het pand aan Willemsparkweg 220 Amsterdam wordt verbouwd.

Het pand wordt voorzien van een funderingsherstel. De gehele dragende tussenmuur wordt op alle verdiepingen vervangen door een staalconstructie. Op het bestaande dak wordt een dakterras met dakhuisje geplaatst. Er worden een aantal nieuwe badkamers geplaatst op verschillende verdiepingen, een deel van de begane grondvloer wordt vervangen.

In dit document worden de constructieve aspecten van de staalconstructie t.p.v. de tussenmuur beschouwd.

1.2 Wijzigingen

N.v.t.

2 Aangehouden belastingen

permanent

vloeren (gemiddeld)	= 1,00kN/m ²
plat dak	= 0,60kN/m ²
schuin dak	= 0,80kN/m ²
dak+dakterras	= 0,90kN/m ²
HSB	= 1,00kN/m ²
balustrade	= 0,50kN/m ¹
mw	= 20,0kN/m ³
beton	= 25,0kN/m ³

veranderlijk

vloeren	= 2,55kN/m ² (incl 0,80kN/m ² lichte scheidingswanden)
dakterras	= 2,50kN/m ²

3 Materialen

hout binnen	C18
hout buiten	C24 geïmpregneerd
staal	S235
bouten	8.8
beton	C20/25
wapening	B500A

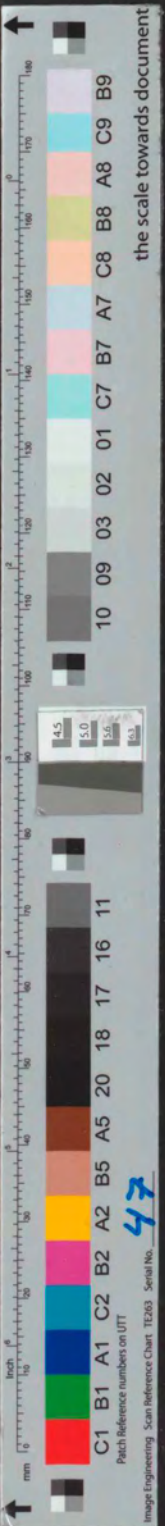
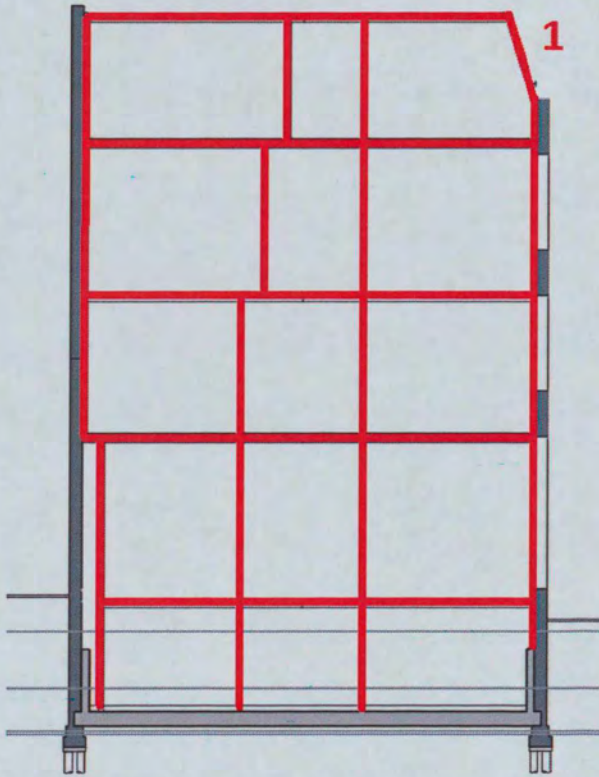
4 Algemene rekenmethodes

Berekeningen conform Eurocodes.

Gevolgklasse CC2, verbouw



5 Doorsnede met posnummers



6 Beschikbare informatie

6.1 Algemeen

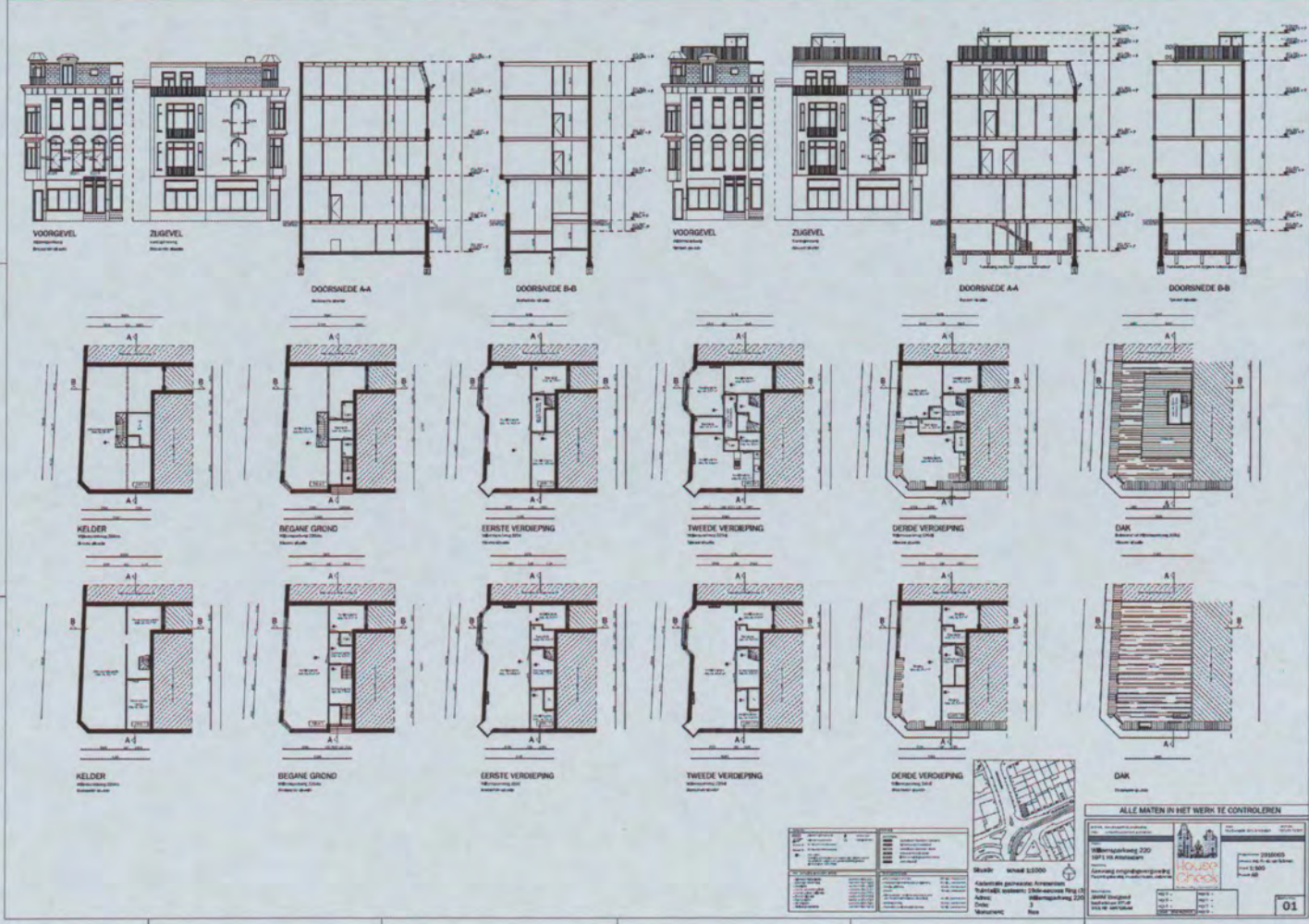
Voor het bepalen van de statische berekening is gebruik gemaakt van de volgende informatie:

- Tekeningen House Check bouwkundig adviesbureau 2016065 d.d. 20-04-2016
- Principe tekeningen Structure Engineering CO-17014-rev0
- Inmetingen/locatiebezoek/foto's Structure Engineering

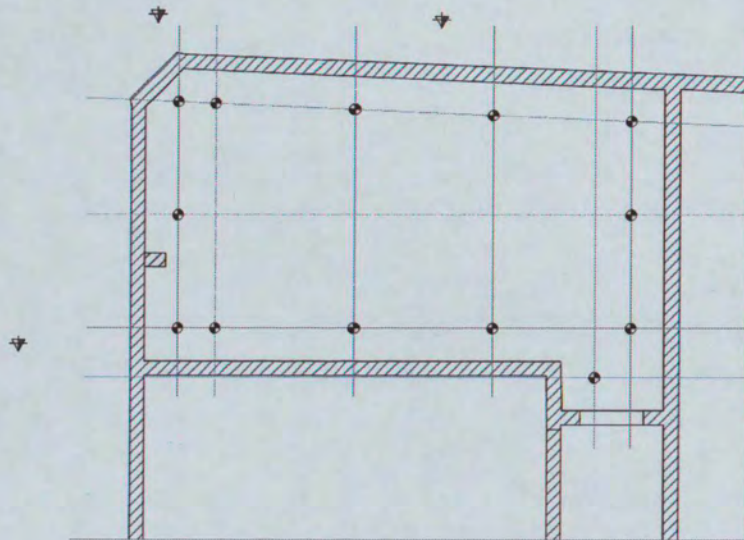


6.2 Tekeningen

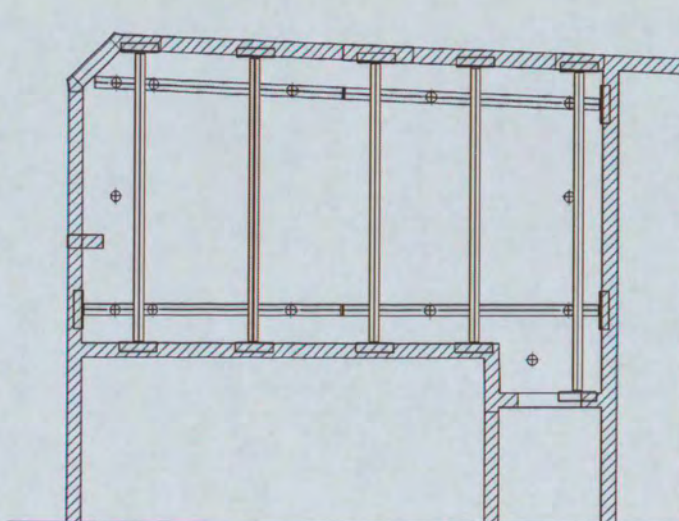
6.2.1 House Check bouwkundig adviesbureau



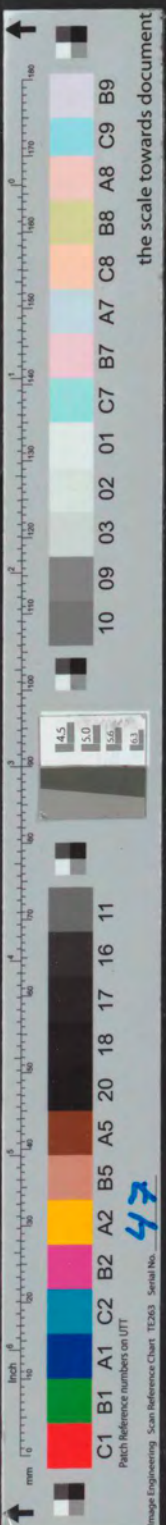
6.2.2 Structure Engineering



Palenplan

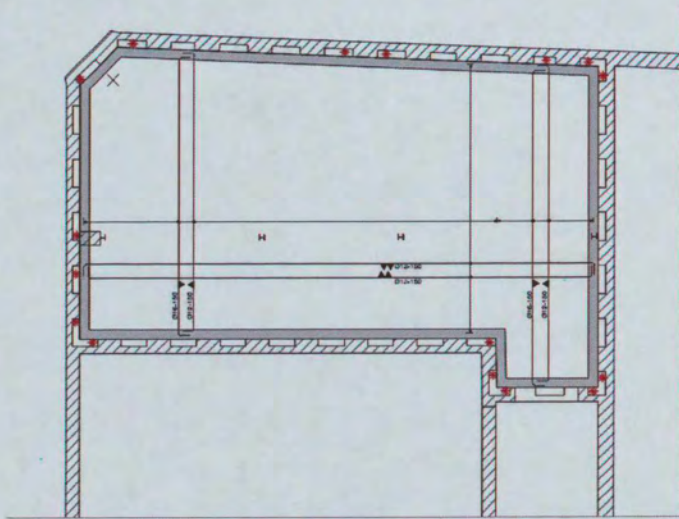


Tafelconstructie

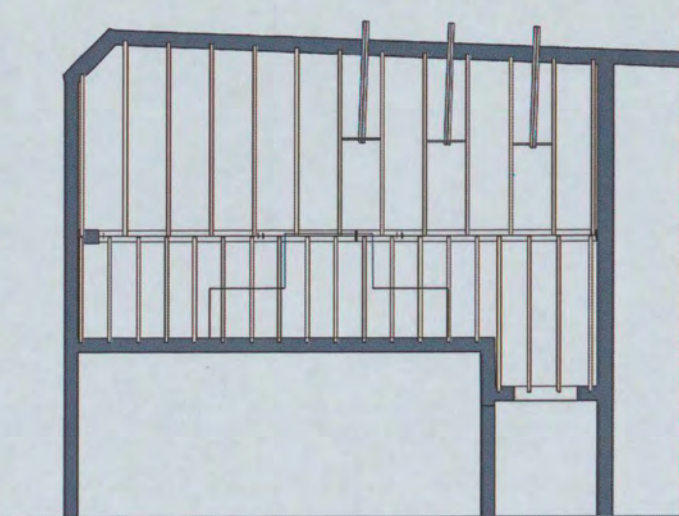


CORE CONSTRUCTIES

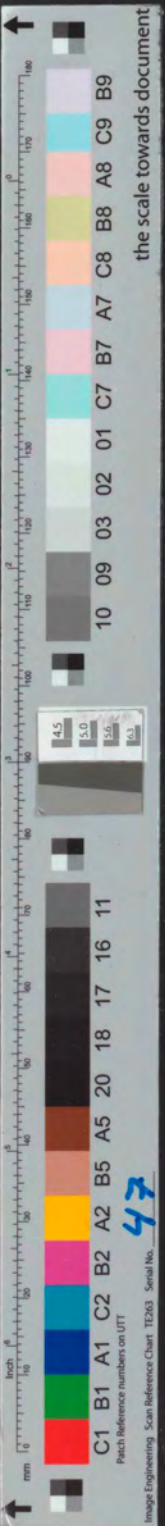
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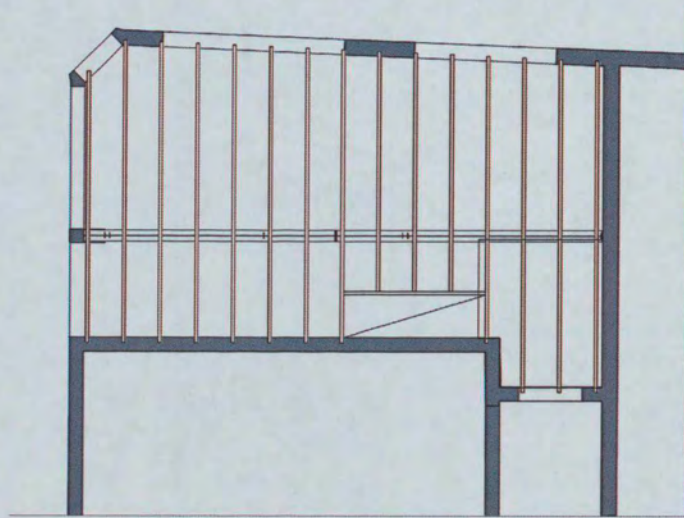


Betonvloer

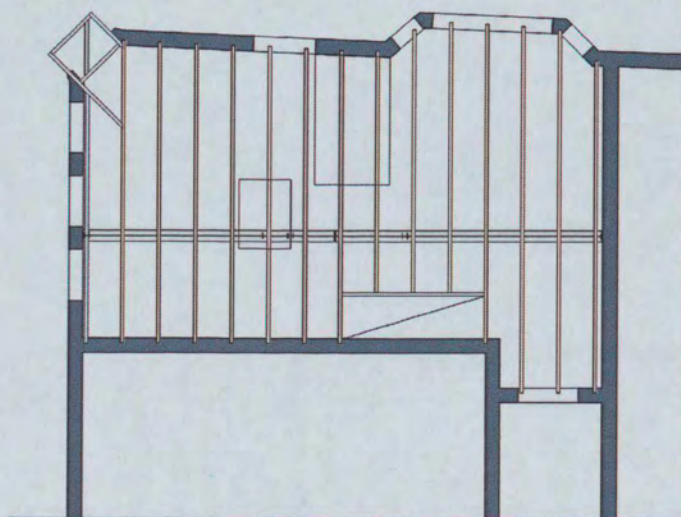


Begane grondvloer





1^e verdieping



2^e verdieping

↑

mm

↑

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5 6.0

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch reference numbers on UTT

47

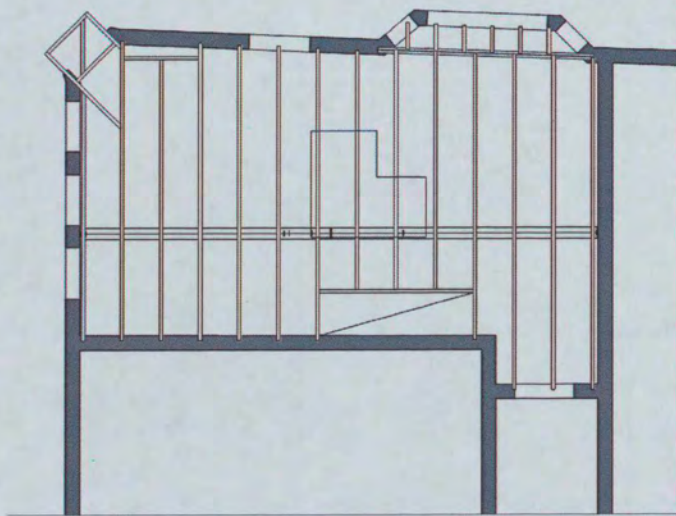
↑

Inch

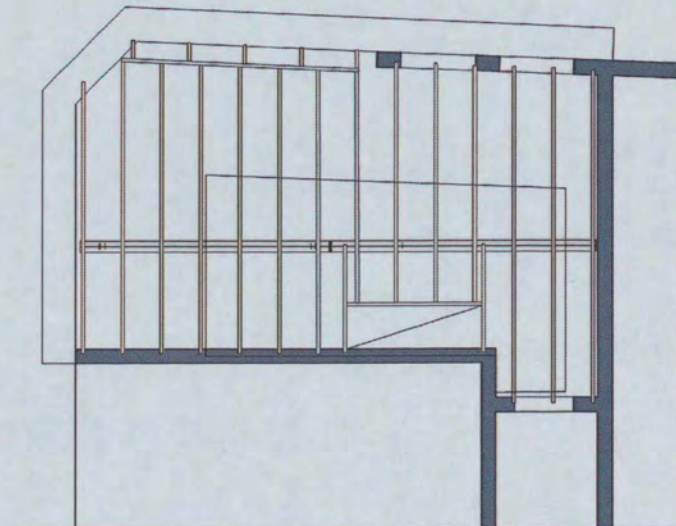
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

the scale towards document

Image Engineering Scan Reference Chart TE263 Serial No.



3^e verdieping



Daklaag

↑ mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

↑ Inch 0 1 2 3 4 5 6 7 8 9 10

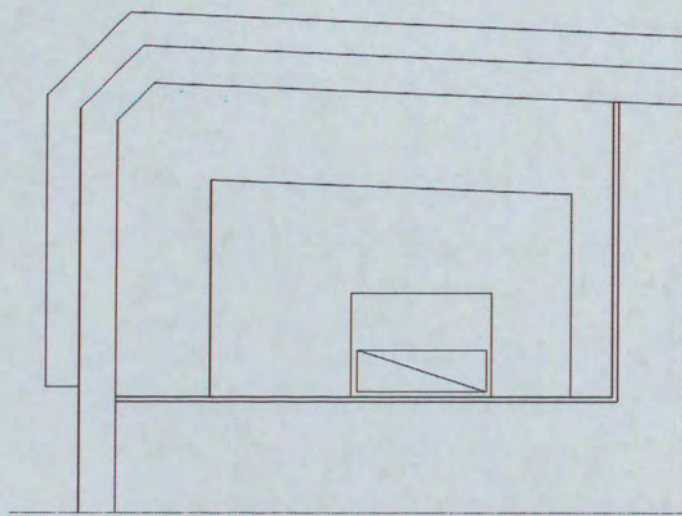
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5 6.0

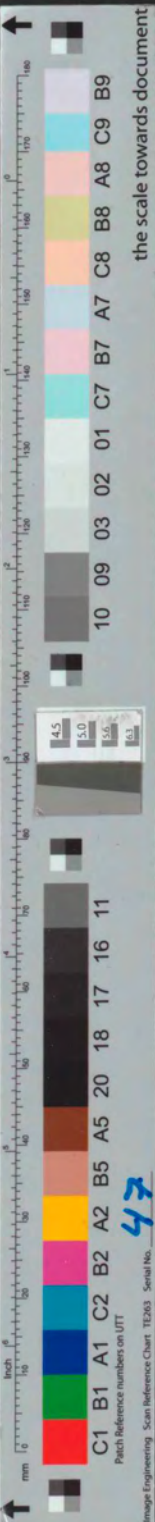
C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

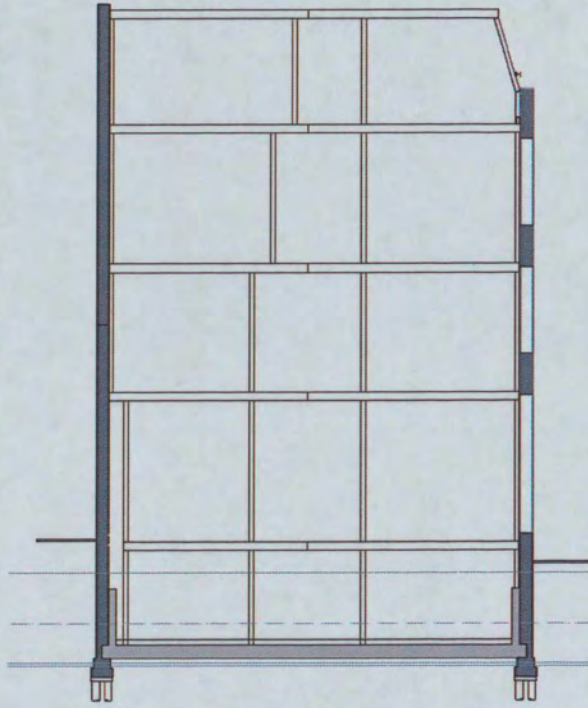
Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document

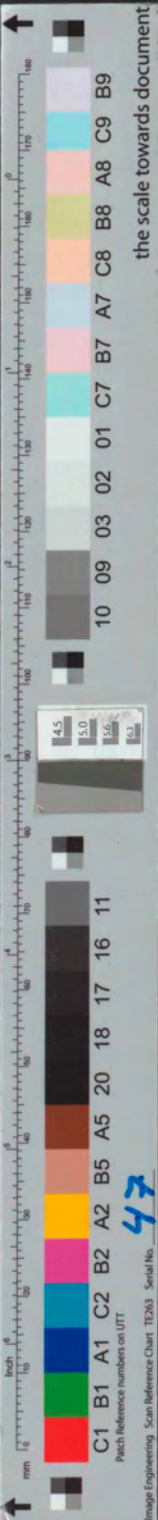


Dakterras met dakhuisje





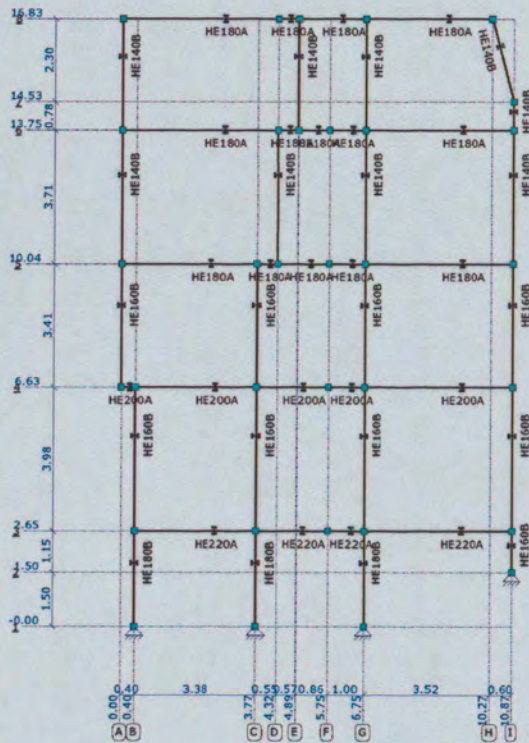
Doorsnede



7 Statische berekening

7.1 Pos 1

7.1.1 Geometrie



7.1.2 Belastingen

Permanent

q1 _{pb;rep}	dak	5/8x6,2x0,60	= 2,33kN/m
q2 _{pb;rep}	dak+dakterras	5/8x6,2x0,90	= 3,49kN/m
q3 _{pb;rep}	dak+dakterras	5/8x6,9x0,90	= 3,88kN/m
q4 _{pb;rep}	vloer	5/8x6,2x1,00	= 3,88kN/m
q5 _{pb;rep}	vloer	5/8x6,9x1,0	= 4,31kN/m
q6 _{pb;rep}	gevel dakhuisje	2,4x1,00	= 2,40kN/m
F1 _{pb;rep}	dak dakhuisje	1/4x2,2x3,0x0,60	= 0,99kN
	Gevel dakhuisje	1/2x2,2x2,4x1,00	= 2,64kN
	TOTAAL		= 3,63kN

Veranderlijk

q1 _{vb;rep}	dak		= n.v.t.
q2 _{vb;rep}	dak+dakterras	5/8x6,2x2,50	= 9,69kN/m (extreem)
	dak+dakterras	0,4x5/8x6,2x2,50	= 3,88kN/m (momentaan)
q3 _{vb;rep}	dak+dakterras	5/8x6,9x2,50	= 10,78kN/m (extreem)
	dak+dakterras	0,4x5/8x6,9x2,50	= 4,31kN/m (momentaan)
q4 _{vb;rep}	vloer	5/8x6,2x2,55	= 9,88kN/m (extreem)
	vloer	0,4x5/8x6,2x2,55	= 3,95kN/m (momentaan)
q5 _{vb;rep}	vloer	5/8x6,9x2,55	= 11,00kN/m (extreem)



	vloer	0,4x5/8x6,9x2,55	= 4,40kN/m (momentaan)
$q_{6, vb, rep}$			= n.v.t.
$F_{1, vb, rep}$			= n.v.t.
Wind			
$F_{1, vb, rep}$	wind druk	4,8m ² x0,85x0,8x0,79	= 2,6kN
	Wind zuiging	4,8m ² x0,85x0,7x0,79	= 2,3kN
$F_{2, vb, rep}$	wind druk	10,5m ² x0,85x0,8x0,79	= 5,6kN
	Wind zuiging	10,5m ² x0,85x0,7x0,79	= 4,9kN
$F_{3, vb, rep}$	wind druk	11,0m ² x0,85x0,8x0,79	= 5,9kN
	Wind zuiging	11,0m ² x0,85x0,7x0,79	= 5,2kN
$F_{4, vb, rep}$	wind druk	11,4m ² x0,85x0,8x0,79	= 6,1kN
	Wind zuiging	11,4m ² x0,85x0,7x0,79	= 5,4kN
$F_{5, vb, rep}$	wind druk	6,2m ² x0,85x0,8x0,79	= 3,3kN
	Wind zuiging	6,2m ² x0,85x0,7x0,79	= 2,9kN

Windgebied	II	
Terreincategorie	bebouwd	
Hoogte bouwwerk z	14.18	m
z0	0.5	m
zmin	7	m
lv(z)	0.30	
kr	0.22	
Cr	0.75	
C0	1	
v,b,0	27	m/s
vm(z)	20.16	m/s
qp(z)	0.79	kN/m ²

7.1.3 Toegepaste maatregel

Zie geometrie

7.1.4 Uiterste grenstoestand

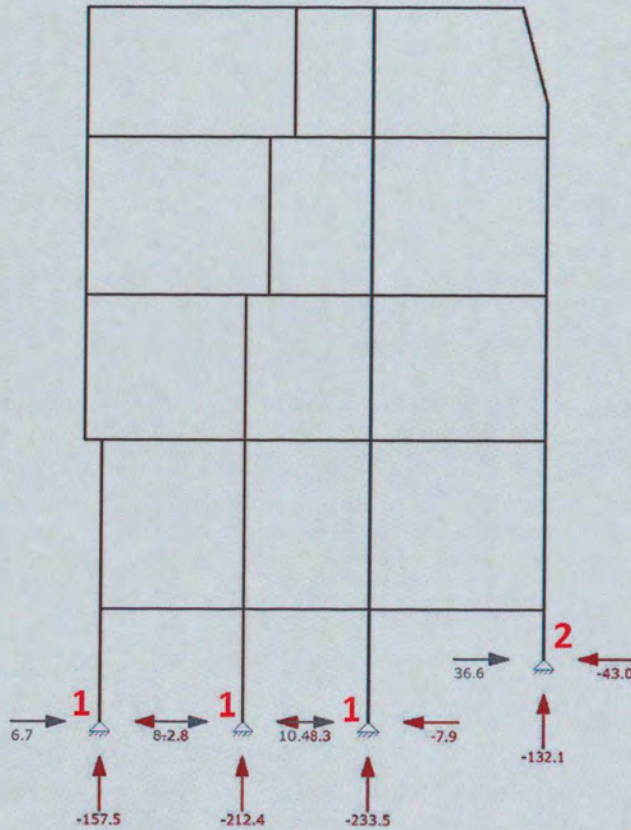
UC Drsn = 0,63, zie uitvoer MatrixFrame >> AKKOORD
 UC Kip/stab = 0,73, zie uitvoer MatrixFrame >> AKKOORD

7.1.5 Bruikbaarheids grenstoestand

UC δ_{max} = 0,47, zie uitvoer MatrixFrame >> AKKOORD (doorbuiging vloeren/dak)
 UC δ_{max} = 1,28, zie uitvoer MatrixFrame >> NAGENOEG AKKOORD (horizontale verplaatsing)
 UC δ_3 = 0,21, zie uitvoer MatrixFrame >> AKKOORD (scheurvoelig)



7.1.6 Opleggingen

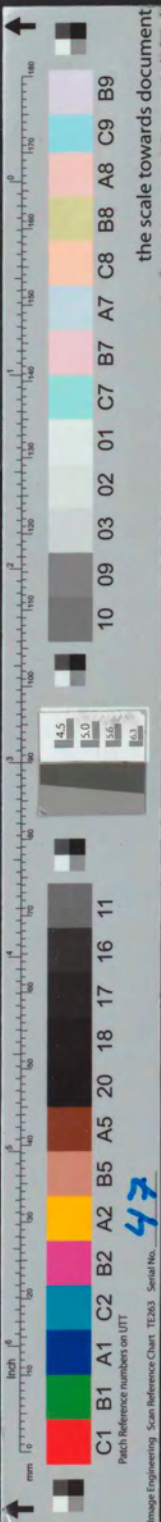


7.1.6.1 Oplegging 1

HEB180 opleggen op nieuwe kelderbak met voetplaat 220.220.15 en verankeren met 2 chemische ankers M16.

7.1.6.2 Oplegging 2

HEB160 opleggen op nieuwe kelderbak met voetplaat 180.180.15 en verankeren met 4 chemische ankers M16.



7.1.7 Verbindingen

7.1.7.1 Ligger HEA180 – kolom HEB140

Alle verbindingen: Rondom lassen, minimaal $1/2t_r$ mm aanhouden. Ligger voorzien van verticale schetsplaat boven flens kolom. Ligger voorzien van diagonaal schetsplaat. Aan buitenzijde lasplaat toepassen. Alle platen 10mm.

Conrole maatgevende las

M_d		= 25,6kNm
$F_{s,d}$	25,6/0,14	= 182,9kN
τ_d	$182,9 \times 10^3 / (2 \times 140 \times 6)$	= 108,9N/mm ² >> AKKOORD

7.1.7.2 Ligger HEA180/HEA200 – kolom HEB160

Alle verbindingen: Rondom lassen, minimaal $1/2t_r$ mm aanhouden. Ligger voorzien van verticale schetsplaten boven flenzen kolom. Ligger voorzien van diagonale schetsplaat boven kolom. Alle platen 15mm.

Conrole maatgevende las

M_d		= 38,3kNm
$F_{s,d}$	38,3/0,16	= 239,4kN
τ_d	$239,4 \times 10^3 / (2 \times 160 \times 6,5)$	= 115,1N/mm ² >> AKKOORD

7.1.7.3 Ligger HEA220 – kolom HEB160/HEB180

Alle verbindingen: Rondom lassen, minimaal $1/2t_r$ mm aanhouden. Ligger voorzien van verticale schetsplaten boven flenzen kolom. Ligger voorzien van diagonale schetsplaat boven kolom. Alle platen 15mm.

Conrole maatgevende las

M_d		= 49,4kNm
$F_{s,d}$	49,4/0,16	= 308,8kN
τ_d	$308,8 \times 10^3 / (2 \times 160 \times 6,5)$	= 148,5N/mm ² >> AKKOORD

7.1.7.4 Ligger HEA180 – ligger HEA180

Verbinden aan aansluitend ligger met kopplaat, d=10mm en 4 bouten M16. Boven en onder flens lastplaat aanbrengen, L= minimaal hoogte ligger.

$F_{v,Ed/bout}$	41,1/4	= 10,4kN
$F_{v,Rd}$	$(0,6 \times 800 \times 157) / 1,25 \times 10^{-3}$	= 60,3kN >> AKKOORD
$F_{b,Rd}$	$(2,5 \times 235 \times 10 \times 16) / 1,25 \times 10^{-3}$	= 75,2kN >> AKKOORD

Conrole maatgevende las

M_d		= 10,5kNm
$F_{s,d}$	10,5/0,18	= 58,3kN
τ_d	$58,3 \times 10^3 / (2 \times 180 \times 5)$	= 32,4N/mm ² >> AKKOORD

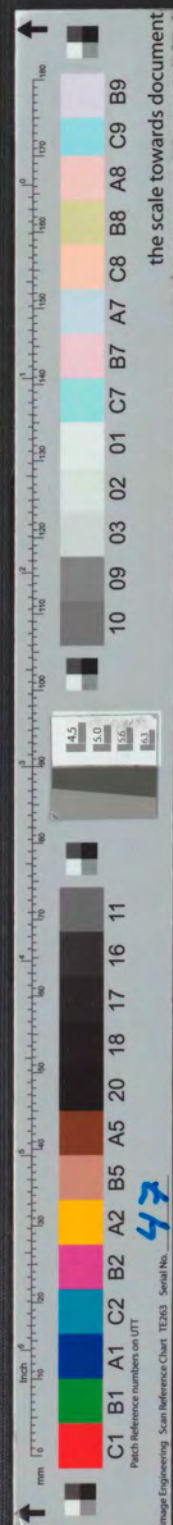
7.1.7.5 Ligger HEA200 – ligger HEA200

Verbinden aan aansluitend ligger met kopplaat, d=10mm en 4 bouten M16. Boven en onder flens lastplaat aanbrengen, L= minimaal hoogte ligger.

$F_{v,Ed/bout}$	23,0/4	= 5,8kN
$F_{v,Rd}$	$(0,6 \times 800 \times 157) / 1,25 \times 10^{-3}$	= 60,3kN >> AKKOORD
$F_{b,Rd}$	$(2,5 \times 235 \times 10 \times 16) / 1,25 \times 10^{-3}$	= 75,2kN >> AKKOORD

Conrole maatgevende las

M_d		= 11,1kNm
$F_{s,d}$	11,1/0,20	= 55,5kN
τ_d	$55,5 \times 10^3 / (2 \times 200 \times 5)$	= 27,8N/mm ² >> AKKOORD



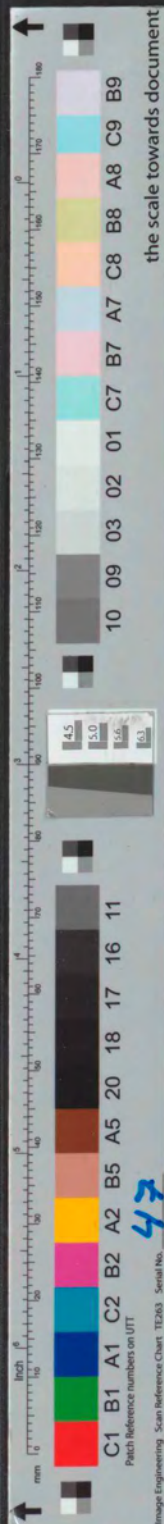
7.1.7.6 Ligger HEA220 – ligger HEA220

Verbinden aan aansluitend ligger met kopplaat, d=10mm en 4 bouten M16. Boven en onder flens lastplaat aanbrengen, L= minimaal hoogte ligger.

$F_{v,Ed/bout}$	20,3/4	= 5,1kN
$F_{v,Rd}$	$(0,6 \times 800 \times 157) / 1,25 \times 10^{-3}$	= 60,3kN >> AKKOORD
$F_{b,Rd}$	$(2,5 \times 235 \times 10 \times 16) / 1,25 \times 10^{-3}$	= 75,2kN >> AKKOORD

Conrole maatgevende las

M_d		= 7,9kNm
$F_{s,d}$	7,9/0,22	= 35,9kN
τ_d	$35,9 \times 10^3 / (2 \times 220 \times 5)$	= 16,3N/mm ² >> AKKOORD

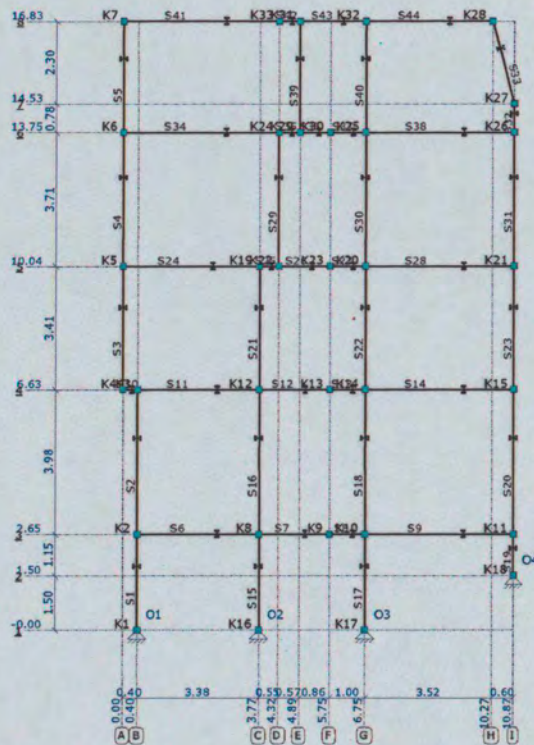


8 Bijlagen

8.1 Bijlage uitraai MatrixFrame berekening Pos 1

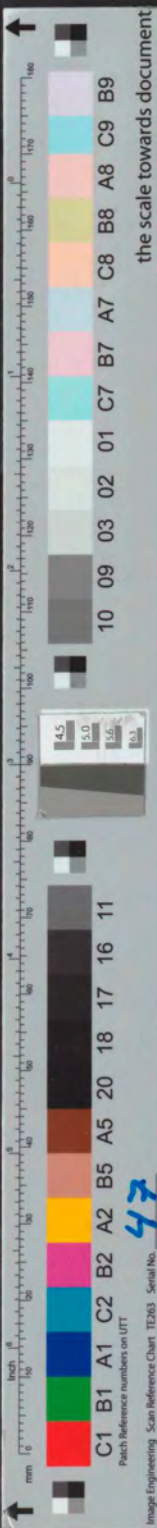
8.1.1 Portaal

AFB. GEOMETRIE RAAMWERK



STAVEN

StAAF	Knoop B	Scharnier B	Knoop E	Profiel	X-B	Z-B	X-E	Z-E	Lengte
S1	K1	NVM	K2	P13	0.400	0.000	0.400	-2.650	2.650
S2	K2	NVM	K3	P12	0.400	-2.650	0.400	-6.625	3.975
S3	K4	NVM	K5	P12	0.000	-6.625	0.000	-10.035	3.410
S4	K5	NVM	K6	P11	0.000	-10.035	0.000	-13.745	3.710
S5	K6	NVM	K7	P11	0.000	-13.745	0.000	-16.830	3.085
S6	K2	NVM	K8	P14	0.400	-2.650	3.775	-2.650	3.375
S7	K8	NVM	K9	P14	3.775	-2.650	5.750	-2.650	1.975
S8	K9	NVM	K10	P14	5.750	-2.650	6.745	-2.650	0.995
S9	K10	NVM	K11	P14	6.745	-2.650	10.865	-2.650	4.120
S10	K4	NVM	K3	P10	0.000	-6.625	0.400	-6.625	0.400
S11	K3	NVM	K12	P10	0.400	-6.625	3.775	-6.625	3.375
S12	K12	NVM	K13	P10	3.775	-6.625	5.750	-6.625	1.975
S13	K13	NVM	K14	P10	5.750	-6.625	6.745	-6.625	0.995
S14	K14	NVM	K15	P10	6.745	-6.625	10.865	-6.625	4.120
S15	K16	NVM	K8	P13	3.775	0.000	3.775	-2.650	2.650
S16	K8	NVM	K12	P12	3.775	-2.650	3.775	-6.625	3.975
S17	K17	NVM	K10	P13	6.745	0.000	6.745	-2.650	2.650
S18	K10	NVM	K14	P12	6.745	-2.650	6.745	-6.625	3.975
S19	K18	NVM	K11	P12	10.865	-1.500	10.865	-2.650	1.150



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

Staaft	Knoop	Scharnier	Knoop	Profiel	X-B	Z-B	X-E	Z-E	Lengte	
S20	K11	NVM	NVM	K15	P12	10.865	-2.650	10.865	-6.625	3.975
S21	K12	NVM	NVM	K19	P12	3.775	-6.625	3.775	-10.035	3.410
S22	K14	NVM	NVM	K20	P12	6.745	-6.625	6.745	-10.035	3.410
S23	K15	NVM	NVM	K21	P12	10.865	-6.625	10.865	-10.035	3.410
S24	K5	NVM	NVM	K19	P9	0.000	-10.035	3.775	-10.035	3.775
S25	K19	NVM	NVM	K22	P9	3.775	-10.035	4.320	-10.035	0.545
S26	K22	NVM	NVM	K23	P9	4.320	-10.035	5.750	-10.035	1.430
S27	K23	NVM	NVM	K20	P9	5.750	-10.035	6.745	-10.035	0.995
S28	K20	NVM	NVM	K21	P9	6.745	-10.035	10.865	-10.035	4.120
S29	K22	NVM	NVM	K24	P11	4.320	-10.035	4.320	-13.745	3.710
S30	K20	NVM	NVM	K25	P11	6.745	-10.035	6.745	-13.745	3.710
S31	K21	NVM	NVM	K26	P11	10.865	-10.035	10.865	-13.745	3.710
S32	K26	NVM	NVM	K27	P11	10.865	-13.745	10.865	-14.525	0.780
S33	K27	NVM	NVM	K28	P11	10.865	-14.525	10.265	-16.830	2.382
S34	K6	NVM	NVM	K24	P9	0.000	-13.745	4.320	-13.745	4.320
S35	K24	NVM	NVM	K29	P9	4.320	-13.745	4.890	-13.745	0.570
S36	K29	NVM	NVM	K30	P9	4.890	-13.745	5.750	-13.745	0.860
S37	K30	NVM	NVM	K25	P9	5.750	-13.745	6.745	-13.745	0.995
S38	K25	NVM	NVM	K26	P9	6.745	-13.745	10.865	-13.745	4.120
S39	K29	NVM	NVM	K31	P11	4.890	-13.745	4.890	-16.830	3.085
S40	K25	NVM	NVM	K32	P11	6.745	-13.745	6.745	-16.830	3.085
S41	K7	NVM	NVM	K33	P9	0.000	-16.830	4.320	-16.830	4.320
S42	K33	NVM	NVM	K31	P9	4.320	-16.830	4.890	-16.830	0.570
S43	K31	NVM	NVM	K32	P9	4.890	-16.830	6.745	-16.830	1.855
S44	K32	NVM	NVM	K28	P9	6.745	-16.830	10.265	-16.830	3.520
-	-	-	-	-	-	m	m	m	m	m

PROFIELEN

Profiel	Profielnaam	Oppervlakte	Iy Materiaal	Hoek
P9	HE180A	4.5251e-03	2.5103e-05 S235	0
P10	HE200A	5.3831e-03	3.6922e-05 S235	0
P11	HE140B	4.2956e-03	1.5092e-05 S235	0
P12	HE160B	5.4251e-03	2.4920e-05 S235	0
P13	HE180B	6.5251e-03	3.8311e-05 S235	0
P14	HE220A	6.4341e-03	5.4097e-05 S235	0
-	-	m2	m4	o

MATERIALEN

Materiaal	Dichtheid	E-Modulus	Uitzettingcoeff
S235	78.50	2.1000e+08	12.0000e-06
-	kN/m3	kN/m2	C°m

OPLEGGINGEN

Oplegging	Knoop	Yr	HoekYr
O1	K1	vast	vrij
O2	K16	vast	vrij
O3	K17	vast	vrij
O4	K18	vast	vrij
-	-	kN/m	kNmrad

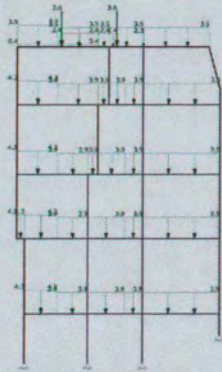
BELASTINGSGEVALLEN TYPEN

Oplegg. Psi2	Staven Cprob	B.G.Type	Gunstig/Ong. Element	Niveau Veld	Psi0	Psi1
B.G.1	Permanent	Permanent	-	N.v.t.	N.v.t.	
B.G.2	Verdeelde veranderlijke belasting	Verdeelde 1.00 veranderlijke belasting	-	Cat. A) Vloeren	1	1
B.G.3	Verdeelde veranderlijke belasting	Verdeelde 1.00 veranderlijke belasting	-	Cat. A) Vloeren	2	1
B.G.4	Verdeelde veranderlijke belasting	Verdeelde 1.00 veranderlijke belasting	-	Cat. A) Vloeren	3	1
B.G.5	Verdeelde veranderlijke belasting	Verdeelde 1.00 veranderlijke belasting	-	Cat. A) Vloeren	4	1

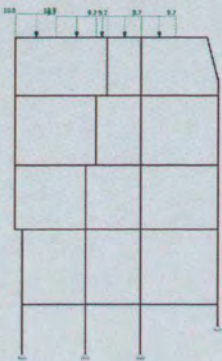


	belasting	veranderlijke belasting					
B.G.6 0.50	Verdeelde veranderlijke belasting 0.30	Verdeelde 1.00	-	Cat. A) Vloeren	5	2	0.40
B.G.7 0.20	Wind links	veranderlijke belasting Windbelasting 1.00	-		N.v.t.	N.v.t.	
B.G.8 0.20	Wind rechts	Windbelasting 1.00	-		N.v.t.	N.v.t.	
Oplegg. Psi2 B.G.9 (Assymetrisch)	Staven Cprob Kniklengte	B.G.Type Kniklengte	Gunstig/Ong. Element		Niveau Veld	Psi0	Psi1
					N.v.t.	N.v.t.	
B.G.10 (Symmetrisch)	Kniklengte	Kniklengte			N.v.t.	N.v.t.	

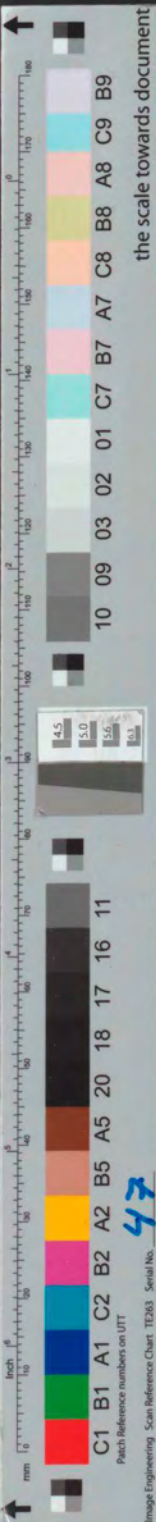
AFB. LASTEN B.G.1 PERMANENT

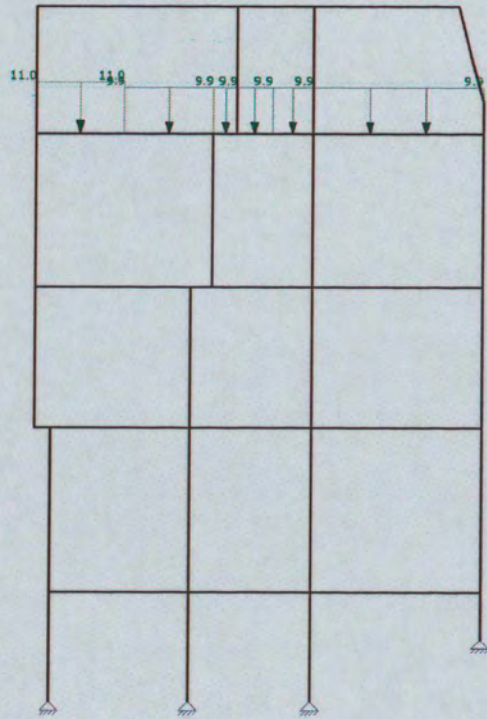


AFB. LASTEN B.G.2 VERDEELDE VERANDERLIJKE BELASTING



AFB. LASTEN B.G.3 VERDEELDE VERANDERLIJKE BELASTING





AFB. LASTEN B.G.4 VERDEELDE VERANDERLIJKE BELASTING

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

↑

Inch 0 1 2 3 4 5 6 7 8 9 10

4.5 5.0 5.5 6.0 6.5

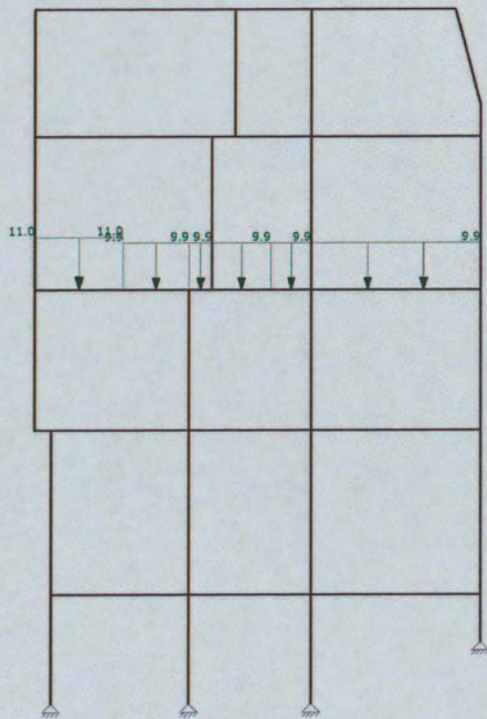
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C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

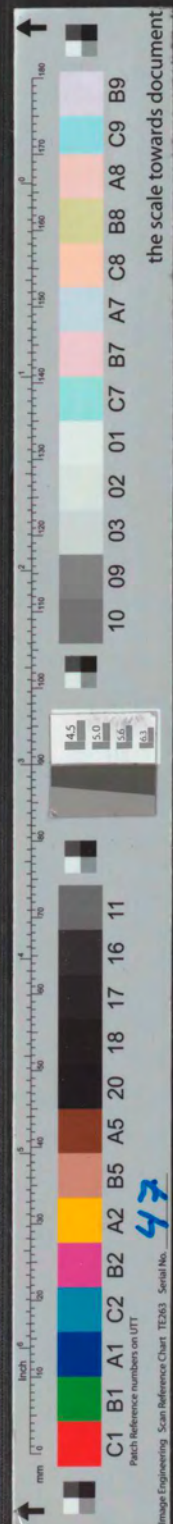
Patch Reference numbers on UTT

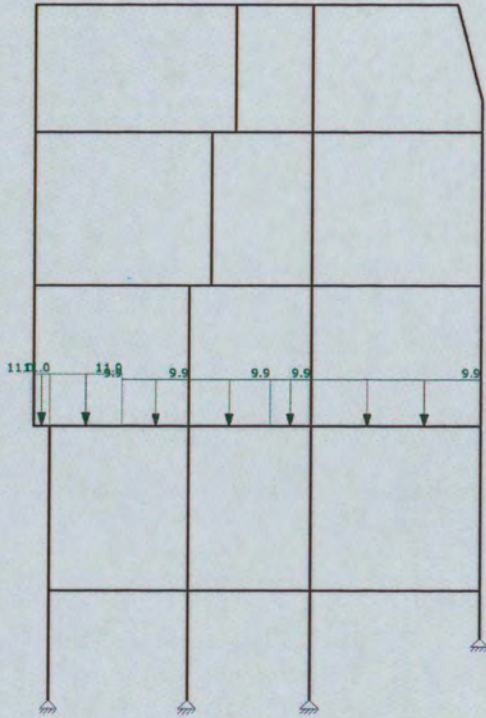
Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



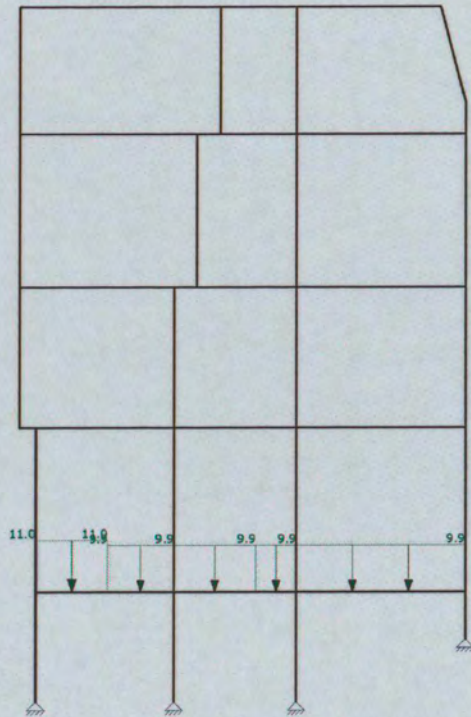
AFB. LASTEN B.G.5 VERDEELDE VERANDERLIJKE BELASTING





AFB. LASTEN B.G.6 VERDEELDE VERANDERLIJKE BELASTING





AFB. LASTEN B.G.7 WIND LINKS

↑

mm
 1400
1350
1300
1250
1200
1150
1100
1050
1000
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0

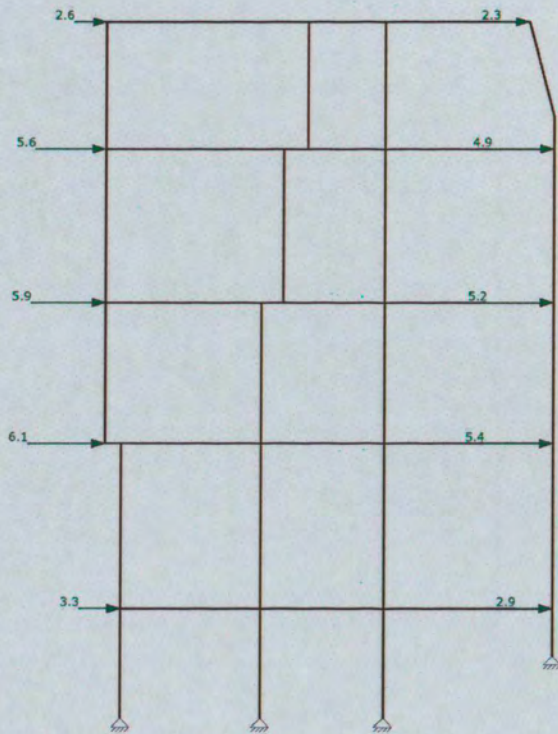
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10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5 6.3

Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No. 47
 the scale towards document



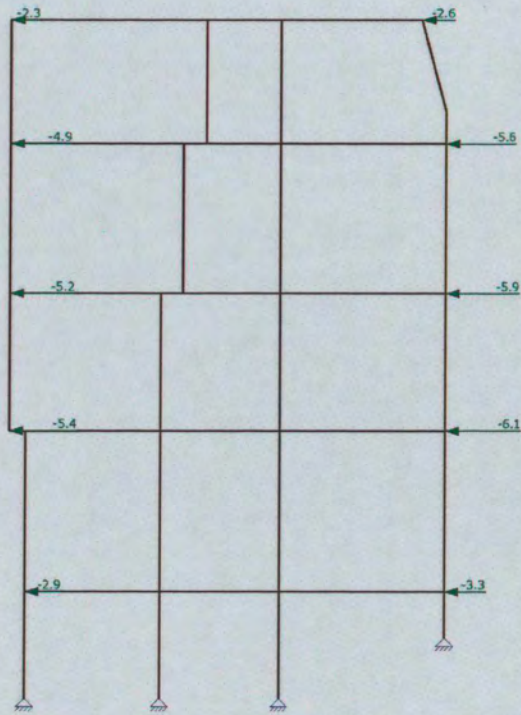
AFB. LASTEN B.G.8 WIND RECHTS

↑

↑

the scale towards document

Image Engineering Scan Reference Chart TE263 Serial No. 47



AFB. LASTEN B.G.9 KNIKLENGTE (ASSYMETRISCH)

↑

mm 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

inch 1 2 3 4 5 6 7 8 9 10

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

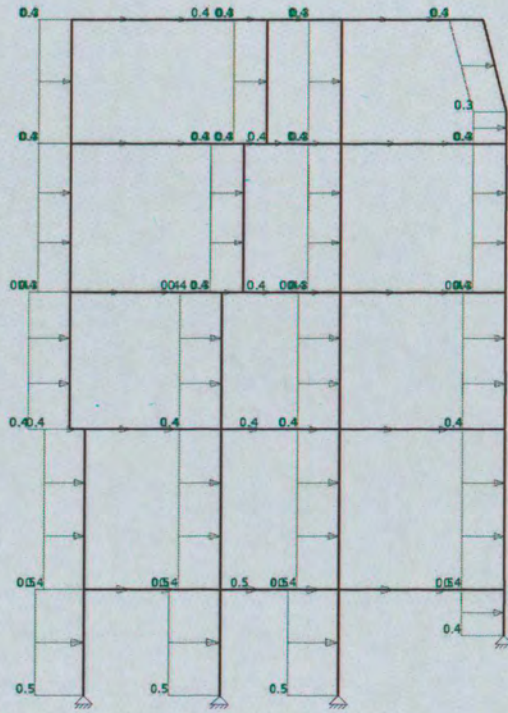
4.5 5.0 5.5 6.0

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT

Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. LASTEN B.G.10 KNIKLENGTE (SYMMETRISCH)

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

↑

Inch 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

14.5 15.0 15.5 16.0

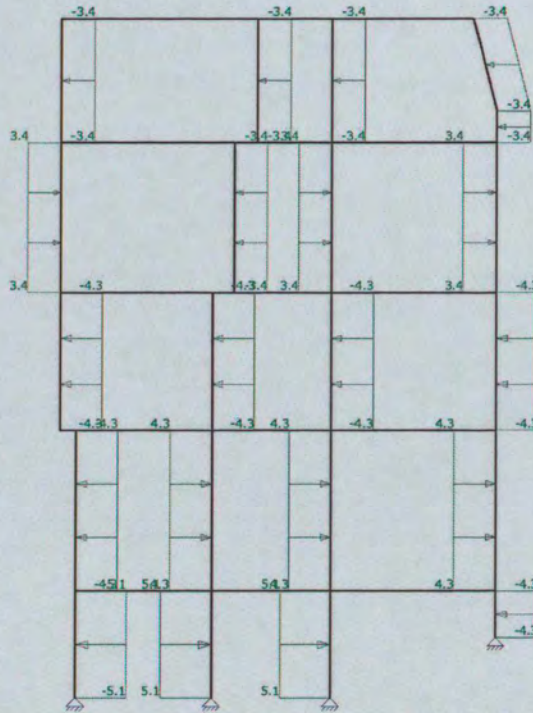
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Patch Reference numbers on UTT

47

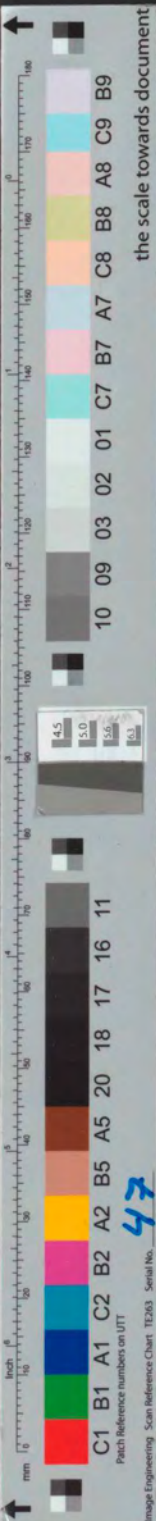
Image Engineering Scan Reference Chart TE263 Serial No.

the scale towards document



FUNDAMENTEEL BELASTINGSCOMBINATIES (TABEL)

B.G.	Omschrijving	Fu.C.1	Fu.C.2	Fu.C.3	Fu.C.4	Fu.C.5	Fu.C.6
Fu.C.7	Fu.C.8						
B.G.1	Permanent	1.15	1.15	1.15	1.15	1.15	1.15
B.G.2	Verdeelde veranderlijke belasting	1.30	1.30	1.30	0.52	0.52	0.52
B.G.3	Verdeelde veranderlijke belasting	0.52	0.52	0.52	1.30	1.30	0.52
B.G.4	Verdeelde veranderlijke belasting	1.30	0.52	0.52	1.30	0.52	1.30
B.G.5	Verdeelde veranderlijke belasting	0.52	1.30	0.52	0.52	1.30	0.52
B.G.6	Verdeelde veranderlijke belasting	0.52	0.52	1.30	0.52	0.52	1.30
B.G.7	Wind links	-	-	-	-	-	-
B.G.8	Wind rechts	-	-	-	-	-	-
B.G.9	Kniklengte (Assymetrisch)	-	-	-	-	-	-
B.G.10	Kniklengte (Symmetrisch)	-	-	-	-	-	-
B.G.	Omschrijving	Fu.C.9	Fu.C.10	Fu.C.11	Fu.C.12	Fu.C.13	Fu.C.14
Fu.C.15	Fu.C.16						
B.G.1	Permanent	1.15	1.15	1.15	1.15	1.30	1.15
B.G.2	Verdeelde veranderlijke						



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

belasting	0.52	0.52	0.52	0.52	0.52	1.30	0.52	0.52
B.G.3	Verdeelde veranderlijke							
belasting	0.52	0.52	0.52	0.52	0.52	0.52	1.30	0.52
B.G.4	Verdeelde veranderlijke							
belasting	1.30	0.52	0.52	0.52	0.52	0.52	0.52	1.30
B.G.5	Verdeelde veranderlijke							
belasting	0.52	1.30	0.52	0.52	0.52	0.52	0.52	0.52
B.G.6	Verdeelde veranderlijke							
belasting	1.30	1.30	0.52	0.52	0.52	0.52	0.52	0.52
B.G.7	Wind							
links	-	-	1.40	-	-	-	-	-
B.G.8	Wind							
rechts	-	-	-	1.40	-	-	-	-
B.G.9	Kniklengte							
(Assymetrisch)	-	-	-	-	-	-	-	-
-								
B.G.10	Kniklengte							
(Symmetrisch)	-	-	-	-	-	-	-	-
-								
B.G.	Omschrijving	Fu.C.17	Fu.C.18					
B.G.1	Permanent	1.15	1.15					
B.G.2	Verdeelde veranderlijke belasting	0.52	0.52					
B.G.3	Verdeelde veranderlijke belasting	0.52	0.52					
B.G.4	Verdeelde veranderlijke belasting	0.52	0.52					
B.G.5	Verdeelde veranderlijke belasting	1.30	0.52					
B.G.6	Verdeelde veranderlijke belasting	0.52	1.30					
B.G.7	Wind links	-	-					
B.G.8	Wind rechts	-	-					
B.G.9	Kniklengte (Assymetrisch)	-	-					
B.G.10	Kniklengte (Symmetrisch)	-	-					

KARAKTERISTIEK BELASTINGSCOMBINATIES (TABEL)

B.G.	Omschrijving	Ka.C.(w1)	Ka.C.1	Ka.C.2	Ka.C.3	Ka.C.4		
Ka.C.5	Ka.C.6	Ka.C.7						
B.G.1	Permanent	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00								
B.G.2	Verdeelde veranderlijke							
belasting	-	0.40	1.00	0.40	0.40	0.40	0.40	0.40
B.G.3	Verdeelde veranderlijke							
belasting	-	0.40	0.40	1.00	0.40	0.40	0.40	0.40
B.G.4	Verdeelde veranderlijke							
belasting	-	0.40	0.40	0.40	1.00	0.40	0.40	0.40
B.G.5	Verdeelde veranderlijke							
belasting	-	0.40	0.40	0.40	0.40	1.00	0.40	0.40
B.G.6	Verdeelde veranderlijke							
belasting	-	0.40	0.40	0.40	0.40	0.40	1.00	0.40
B.G.7	Wind							
links	-	-	-	-	-	-	-	1.00
B.G.8	Wind							
rechts	-	-	-	-	-	-	-	-
B.G.9	Kniklengte							
(Assymetrisch)	-	-	-	-	-	-	-	-
-								
B.G.10	Kniklengte							
(Symmetrisch)	-	-	-	-	-	-	-	-
-								
B.G.	Omschrijving	Ka.C.8						
B.G.1	Permanent	1.00						
B.G.2	Verdeelde veranderlijke belasting	0.40						
B.G.3	Verdeelde veranderlijke belasting	0.40						
B.G.4	Verdeelde veranderlijke belasting	0.40						
B.G.5	Verdeelde veranderlijke belasting	0.40						
B.G.6	Verdeelde veranderlijke belasting	0.40						
B.G.7	Wind links	-						



B.G.8	Wind rechts	1.00
B.G.9	Kniklengte (Assymetrisch)	-
B.G.10	Kniklengte (Symmetrisch)	-

FREQUENT BELASTINGSCOMBINATIES (TABEL)

B.G. Fr.C.7	Omschrijving	Fr.C.(w1)	Fr.C.1	Fr.C.2	Fr.C.3	Fr.C.4	Fr.C.5	Fr.C.6
B.G.1 1.00	Permanent	1.00	1.00	1.00	1.00	1.00	1.00	1.00
B.G.2 belasting	Verdeelde veranderlijke	0.50	0.30	0.30	0.30	0.30	0.30	0.30
B.G.3 belasting	Verdeelde veranderlijke	0.30	0.50	0.30	0.30	0.30	0.30	0.30
B.G.4 belasting	Verdeelde veranderlijke	0.30	0.30	0.50	0.30	0.30	0.30	0.30
B.G.5 belasting	Verdeelde veranderlijke	0.30	0.30	0.30	0.50	0.30	0.30	0.30
B.G.6 belasting	Verdeelde veranderlijke	0.30	0.30	0.30	0.30	0.50	0.30	0.30
B.G.7	Wind	-	-	-	-	-	0.20	-
B.G.8	Wind	-	-	-	-	-	-	0.20
B.G.9	Kniklengte (Assymetrisch)	-	-	-	-	-	-	-
B.G.10	Kniklengte (Symmetrisch)	-	-	-	-	-	-	-

QUASI-PERMANENT BELASTINGSCOMBINATIES (TABEL)

B.G.	Omschrijving	Qu.C.1
B.G.1	Permanent	1.00
B.G.2	Verdeelde veranderlijke belasting	0.30
B.G.3	Verdeelde veranderlijke belasting	0.30
B.G.4	Verdeelde veranderlijke belasting	0.30
B.G.5	Verdeelde veranderlijke belasting	0.30
B.G.6	Verdeelde veranderlijke belasting	0.30
B.G.7	Wind links	-
B.G.8	Wind rechts	-
B.G.9	Kniklengte (Assymetrisch)	-
B.G.10	Kniklengte (Symmetrisch)	-

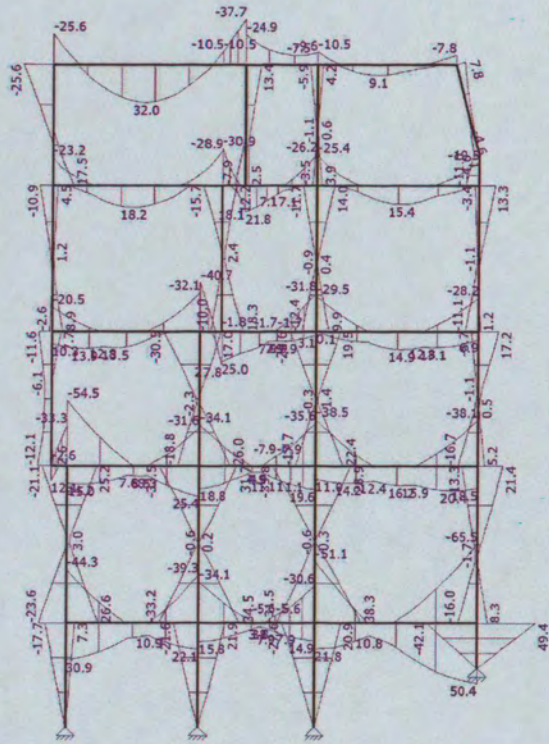
UITGANGSPUNTEN VAN DE ANALYSE

Lineaire Elastische Analyse uitgevoerd

AFB. FU.C. MOMENT (MY) OMHULLENDE

Fundamenteel Belastingcombinaties





AFB. FU.C. DWARSKRACHT (VZ) OMHULLENDE

Fundamenteel Belastingscombinaties

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500

↑

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

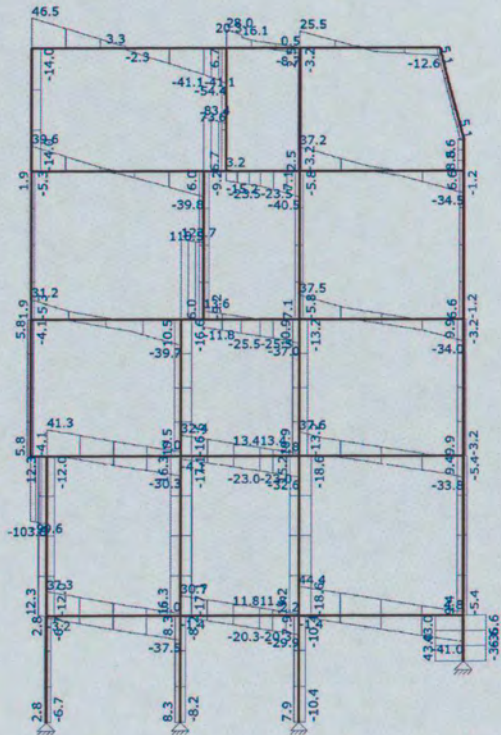
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Patch Reference numbers on UTT

4.5 5.0 5.5 6.0

Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. FU.C. NORMAALKRACHT (NX) OMHULLENDE

Fundamenteel Belastingscombinaties

↑ mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

↑ Inch 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

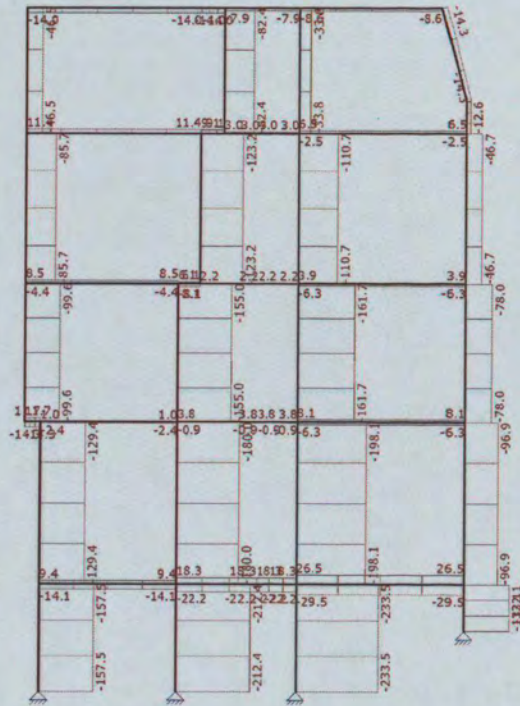
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Patch Reference numbers on UTT

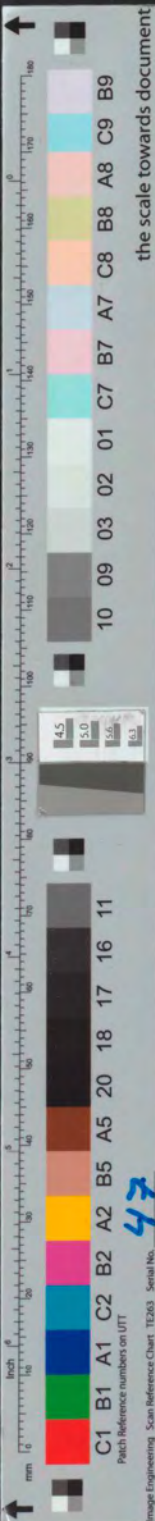
Image Engineering Scan Reference Chart TEX63 Serial No. 47

the scale towards document



FU.C. STAAFKRACHTEN

Staal	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S1	Fu.C.1	0.00			-5.65	0.000	0.000 D	-146.33	-2.13	-2.13	-2.13
	Fu.C.2	0.00			-5.85	0.000	0.000 D	-144.35	-2.21	-2.21	-2.21
	Fu.C.3	0.00			-4.90	0.000	0.000 D	-145.26	-1.85	-1.85	-1.85
	Fu.C.4	0.00			-9.34	0.000	0.000 D	-141.74	-3.52	-3.52	-3.52
	Fu.C.5	0.00			-5.81	0.000	0.000 D	-143.90	-2.19	-2.19	-2.19
	Fu.C.6	0.00			-4.86	0.000	0.000 D	-144.81	-1.83	-1.83	-1.83
	Fu.C.7	0.00			-9.30	0.000	0.000 D	-141.29	-3.51	-3.51	-3.51
	Fu.C.8	0.00			-5.06	0.000	0.000 D	-142.83	-1.91	-1.91	-1.91
	Fu.C.9	0.00			-9.50	0.000	0.000 D	-139.31	-3.58	-3.58	-3.58
	Fu.C.10	0.00			-8.55	0.000	0.000 D	-140.21	-3.22	-3.22	-3.22
	Fu.C.11	0.00			7.31	0.000	0.000 D	-60.65	2.76	2.76	2.76
	Fu.C.12	0.00			-17.75	0.000	0.000 D	-157.51	-6.70	-6.70	-6.70
	Fu.C.13	0.00			-5.54	0.000	0.000 D	-115.92	-2.09	-2.09	-2.09
	Fu.C.14	0.00			-5.46	0.000	0.000 D	-127.94	-2.06	-2.06	-2.06
	Fu.C.15	0.00			-5.42	0.000	0.000 D	-127.48	-2.04	-2.04	-2.04
	Fu.C.16	0.00			-5.62	0.000	0.000 D	-125.50	-2.12	-2.12	-2.12
	Fu.C.17	0.00			-4.67	0.000	0.000 D	-126.41	-1.76	-1.76	-1.76
	Fu.C.18	0.00			-9.10	0.000	0.000 D	-122.89	-3.43	-3.43	-3.43
S2	Fu.C.1	0.78			4.61	0.000	0.000 D	-129.36	0.96	0.96	0.96
	Fu.C.2	0.50			5.28	0.000	0.000 D	-127.36	1.20	1.20	1.20
	Fu.C.3	2.13			1.17	0.000	0.000 D	-128.12	-0.24	-0.24	-0.24
	Fu.C.4	2.67			2.72	0.000	0.000 D	-111.10	0.01	0.01	0.01
	Fu.C.5	0.59			5.06	0.000	0.000 D	-126.90	1.13	1.13	1.13
Staal	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S2	Fu.C.6	2.21			0.95	0.000	0.000 D	-127.66	-0.32	-0.32	-0.32
	Fu.C.7	2.75			2.50	0.000	0.000 D	-110.64	-0.06	-0.06	-0.06



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

	Fu.C.8	1.94		1.62	0.000	0.000	D	-125.66	-0.08	-0.08	-0.08	
	Fu.C.9	2.48		3.17	0.000	0.000	D	-108.64	0.17	0.17	0.17	
	Fu.C.10	4.11		-0.94	3.236	0.000	D	-109.39	-1.27	-1.27	-1.27	
	Fu.C.11	-23.56		25.19	1.921	0.000	D	-63.84	12.26	12.26	12.26	
	Fu.C.12	26.58		-21.15	2.214	0.000	D	-120.23	-12.01	-12.01	-12.01	
	Fu.C.13	1.60		2.16	0.000	0.000	D	-97.84	0.14	0.14	0.14	
	Fu.C.14	1.10		3.43	0.000	0.000	D	-110.93	0.58	0.58	0.58	
	Fu.C.15	1.19		3.21	0.000	0.000	D	-110.47	0.51	0.51	0.51	
	Fu.C.16	0.91		3.87	0.000	0.000	D	-108.47	0.74	0.74	0.74	
	Fu.C.17	2.54		-0.23	3.641	0.000	D	-109.23	-0.70	-0.70	-0.70	
	Fu.C.18	3.08		1.32	0.000	0.000	D	-92.21	-0.44	-0.44	-0.44	
S3	Fu.C.1	-9.59		1.04	3.076	0.000	D	-99.55	3.12	3.12	3.12	
	Fu.C.2	-7.33		-5.12	0.000	0.000	D	-97.47	0.65	0.65	0.65	
	Fu.C.3	-5.06		-1.91	0.000	0.000	D	-82.93	0.92	0.92	0.92	
	Fu.C.4	-7.24		-1.04	0.000	0.000	D	-82.53	1.82	1.82	1.82	
	Fu.C.5	-7.65		-3.80	0.000	0.000	D	-97.06	1.13	1.13	1.13	
	Fu.C.6	-5.38		-0.60	0.000	0.000	D	-82.52	1.40	1.40	1.40	
	Fu.C.7	-7.56		0.27	3.291	0.000	D	-82.12	2.30	2.30	2.30	
	Fu.C.8	-3.12		-6.75	0.000	0.000	D	-80.43	-1.07	-1.07	-1.07	
	Fu.C.9	-5.30		-5.88	0.000	0.000	D	-80.04	-0.17	-0.17	-0.17	
	Fu.C.10	-3.02		-2.68	0.000	0.000	D	-65.50	0.10	0.10	0.10	
	Fu.C.11	-12.07		7.67	2.085	0.000	D	-55.54	5.79	5.79	5.79	
	Fu.C.12	2.57		-11.56	0.621	0.000	D	-74.70	-4.15	-4.15	-4.15	
	Fu.C.13	-5.07		-2.05	0.000	0.000	D	-69.27	0.89	0.89	0.89	
	Fu.C.14	-7.01		-1.11	0.000	0.000	D	-82.54	1.73	1.73	1.73	
	Fu.C.15	-7.33		0.21	3.317	0.000	D	-82.13	2.21	2.21	2.21	
	Fu.C.16	-5.07		-5.95	0.000	0.000	D	-80.04	-0.26	-0.26	-0.26	
	Fu.C.17	-2.80		-2.75	0.000	0.000	D	-65.50	0.01	0.01	0.01	
	Fu.C.18	-4.97		-1.88	0.000	0.000	D	-65.11	0.91	0.91	0.91	
S4	Fu.C.1	3.82		-5.72	1.485	0.000	D	-85.69	-2.57	-2.57	-2.57	
	Fu.C.2	4.69		-2.18	2.532	0.000	D	-67.63	-1.85	-1.85	-1.85	
	Fu.C.3	2.15		-1.46	2.207	0.000	D	-67.89	-0.97	-0.97	-0.97	
	Fu.C.4	2.37		-1.49	2.278	0.000	D	-67.74	-1.04	-1.04	-1.04	
	Fu.C.5	7.00		-8.17	1.712	0.000	D	-67.02	-4.09	-4.09	-4.09	
	Fu.C.6	4.46		-7.45	1.389	0.000	D	-67.29	-3.21	-3.21	-3.21	
	Fu.C.7	4.68		-7.48	1.428	0.000	D	-67.14	-3.28	-3.28	-3.28	
	Fu.C.8	5.33		-3.91	2.139	0.000	D	-49.22	-2.49	-2.49	-2.49	
	Fu.C.9	5.55		-3.94	2.170	0.000	D	-49.07	-2.56	-2.56	-2.56	
	Fu.C.10	3.01		-3.22	1.792	0.000	D	-49.34	-1.68	-1.68	-1.68	
	Fu.C.11	-2.59		4.47	1.362	0.000	D	-46.68	1.90	1.90	1.90	
	Fu.C.12	8.93		-10.92	1.669	0.000	D	-51.68	-5.35	-5.35	-5.35	
	Fu.C.13	3.33		-3.37	1.845	0.000	D	-52.40	-1.81	-1.81	-1.81	
	Fu.C.14	2.34		-1.48	2.272	0.000	D	-67.74	-1.03	-1.03	-1.03	
	Fu.C.15	4.65		-7.47	1.423	0.000	D	-67.13	-3.27	-3.27	-3.27	
	Fu.C.16	5.52		-3.93	2.167	0.000	D	-49.07	-2.55	-2.55	-2.55	
	Fu.C.17	2.98		-3.21	1.786	0.000	D	-49.33	-1.67	-1.67	-1.67	
	Fu.C.18	3.20		-3.24	1.844	0.000	D	-49.18	-1.74	-1.74	-1.74	
S5	Fu.C.1	17.48		-25.60	1.252	0.000	D	-46.46	-13.97	-13.97	-13.97	
	Fu.C.2	12.24		-24.23	1.035	0.000	D	-46.10	-11.82	-11.82	-11.82	
	Fu.C.3	12.93		-24.62	1.063	0.000	D	-46.26	-12.17	-12.17	-12.17	
	Fu.C.4	12.76		-24.47	1.057	0.000	D	-46.20	-12.07	-12.07	-12.07	
	Fu.C.5	14.29		-16.50	1.431	0.000	D	-27.57	-9.98	-9.98	-9.98	
	Fu.C.6	14.98		-16.89	1.450	0.000	D	-27.73	-10.33	-10.33	-10.33	
	Fu.C.7	14.80		-16.74	1.448	0.000	D	-27.66	-10.23	-10.23	-10.23	
	Fu.C.8	9.74		-15.52	1.190	0.000	D	-27.37	-8.19	-8.19	-8.19	
	Fu.C.9	9.56		-15.37	1.183	0.000	D	-27.31	-8.08	-8.08	-8.08	
	Fu.C.10	10.25		-15.76	1.216	0.000	D	-27.47	-8.43	-8.43	-8.43	
	Fu.C.11	11.51		-15.08	1.335	0.000	D	-27.34	-8.62	-8.62	-8.62	
	Fu.C.12	8.65		-16.12	1.077	0.000	D	-27.47	-8.03	-8.03	-8.03	
Staaft	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
S5	Fu.C.13	10.78			-16.77	1.207	0.000	D	-29.31	-8.93	-8.93	-8.93
	Fu.C.14	12.76			-24.47	1.057	0.000	D	-46.20	-12.07	-12.07	-12.07



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 Patch Reference numbers on UTT
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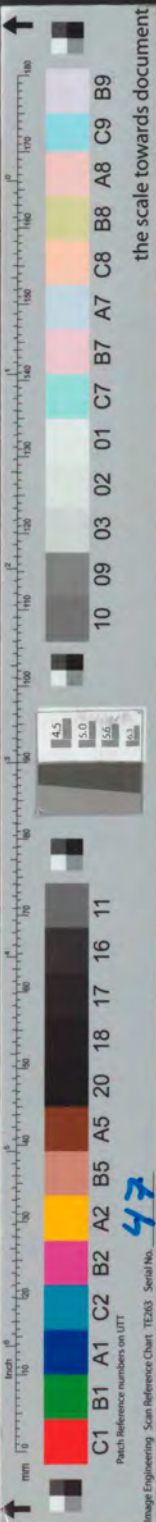
CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

	Fu.C.15	14.80			-16.74	1.448	0.000 D	-27.66	-10.22	-10.22	-10.22
	Fu.C.16	9.56			-15.37	1.183	0.000 D	-27.31	-8.08	-8.08	-8.08
	Fu.C.17	10.26			-15.75	1.217	0.000 D	-27.47	-8.43	-8.43	-8.43
	Fu.C.18	10.08			-15.61	1.210	0.000 D	-27.40	-8.33	-8.33	-8.33
S6	Fu.C.1	-6.43	7.06	1.590	-8.57	0.440	2.784 D	-3.10	16.98	-17.34	-17.34
	Fu.C.2	-6.36	7.16	1.591	-8.43	0.433	2.795 D	-3.41	16.99	-17.32	-17.32
	Fu.C.3	-7.03	6.73	1.605	-8.60	0.483	2.772 D	-1.61	17.14	-17.17	-17.17
	Fu.C.4	-12.01	12.37	1.591	-15.77	0.458	2.768 D	-3.54	30.64	-31.23	-31.23
	Fu.C.5	-6.40	7.14	1.592	-8.45	0.436	2.793 D	-3.32	17.00	-17.31	-17.31
	Fu.C.6	-7.07	6.70	1.606	-8.62	0.486	2.771 D	-1.52	17.15	-17.16	-17.16
	Fu.C.7	-12.05	12.34	1.591	-15.78	0.459	2.767 D	-3.45	30.65	-31.22	-31.22
	Fu.C.8	-7.00	6.80	1.608	-8.48	0.479	2.782 D	-1.83	17.17	17.17	-17.14
	Fu.C.9	-11.98	12.44	1.592	-15.64	0.456	2.773 D	-3.76	30.67	-31.20	-31.20
	Fu.C.10	-12.65	12.01	1.600	-15.81	0.484	2.760 D	-1.96	30.82	-31.05	-31.05
	Fu.C.11	30.87			-39.33	2.127	0.000 D	-14.13	-3.19	-37.50	-37.50
	Fu.C.12	-44.33			22.07	1.520	0.000 T	9.37	37.28	37.28	2.97
	Fu.C.13	-7.14	7.29	1.597	-9.14	0.462	2.775 D	-2.23	18.08	-18.30	-18.30
	Fu.C.14	-6.56	6.98	1.593	-8.59	0.449	2.780 D	-2.64	17.01	-17.30	-17.30
	Fu.C.15	-6.60	6.96	1.593	-8.60	0.452	2.779 D	-2.55	17.02	-17.30	-17.30
	Fu.C.16	-6.53	7.06	1.595	-8.47	0.446	2.790 D	-2.86	17.03	-17.28	-17.28
	Fu.C.17	-7.21	6.62	1.609	-8.64	0.496	2.767 D	-1.06	17.18	17.18	-17.13
	Fu.C.18	-12.18	12.26	1.593	-15.80	0.465	2.765 D	-2.99	30.68	-31.18	-31.18
S7	Fu.C.1	-9.72	2.11	1.570	1.33	0.907	0.000 D	-2.30	15.08	15.08	-3.89
	Fu.C.2	-9.76	2.01	1.566	1.21	0.918	0.000 D	-2.36	15.03	15.03	-3.93
	Fu.C.3	-9.36	2.34	1.561	1.52	0.863	0.000 D	-1.23	14.99	14.99	-3.97
	Fu.C.4	-16.11	3.54	1.507	1.64	0.867	0.000 D	-3.00	26.08	26.08	-8.10
	Fu.C.5	-9.71	2.03	1.564	1.22	0.913	0.000 D	-2.34	15.02	15.02	-3.94
	Fu.C.6	-9.32	2.37	1.560	1.54	0.858	0.000 D	-1.21	14.98	14.98	-3.99
	Fu.C.7	-16.06	3.56	1.506	1.66	0.864	0.000 D	-2.98	26.06	26.06	-8.12
	Fu.C.8	-9.35	2.26	1.555	1.42	0.869	0.000 D	-1.27	14.93	14.93	-4.03
	Fu.C.9	-16.10	3.46	1.503	1.54	0.871	0.000 D	-3.04	26.02	26.02	-8.16
	Fu.C.10	-15.70	3.80	1.501	1.85	0.839	0.000 D	-1.91	25.98	25.98	-8.20
	Fu.C.11	15.77			-5.63	1.677	0.000 D	-22.19	-1.35	-20.31	-20.31
	Fu.C.12	-34.10			7.89	1.427	0.000 T	18.32	30.74	30.74	11.78
	Fu.C.13	-9.72	2.21	1.530	1.20	0.872	0.000 D	-1.76	15.58	15.58	-4.53
	Fu.C.14	-9.47	2.08	1.551	1.22	0.892	0.000 D	-1.99	14.89	14.89	-4.07
	Fu.C.15	-9.42	2.11	1.550	1.24	0.887	0.000 D	-1.97	14.88	14.88	-4.08
	Fu.C.16	-9.46	2.00	1.545	1.12	0.899	0.000 D	-2.03	14.84	14.84	-4.13
	Fu.C.17	-9.06	2.34	1.541	1.43	0.843	0.000 D	-0.90	14.79	14.79	-4.17
	Fu.C.18	-15.81	3.54	1.495	1.55	0.855	0.000 D	-2.66	25.88	25.88	-8.30
S8	Fu.C.1	1.33			-7.29	0.259	0.000 D	-2.30	-3.89	-13.44	-13.44
	Fu.C.2	1.21			-7.46	0.238	0.000 D	-2.36	-3.93	-13.48	-13.48
	Fu.C.3	1.52			-7.18	0.285	0.000 D	-1.23	-3.97	-13.53	-13.53
	Fu.C.4	1.64			-14.99	0.171	0.000 D	-3.00	-8.10	-25.33	-25.33
	Fu.C.5	1.22			-7.45	0.240	0.000 D	-2.34	-3.94	-13.50	-13.50
	Fu.C.6	1.54			-7.18	0.287	0.000 D	-1.21	-3.99	-13.54	-13.54
	Fu.C.7	1.66			-14.99	0.173	0.000 D	-2.98	-8.12	-25.34	-25.34
	Fu.C.8	1.42			-7.34	0.267	0.000 D	-1.27	-4.03	-13.58	-13.58
	Fu.C.9	1.54			-15.15	0.161	0.000 D	-3.04	-8.16	-25.38	-25.38
	Fu.C.10	1.85			-14.88	0.188	0.000 D	-1.91	-8.20	-25.42	-25.42
	Fu.C.11	-5.63			-30.59	0.000	0.000 D	-22.19	-20.31	-29.87	-29.87
	Fu.C.12	7.89			14.86	0.000	0.000 T	18.32	11.78	11.78	2.22
	Fu.C.13	1.20			-8.34	0.214	0.000 D	-1.76	-4.53	-14.66	-14.66
	Fu.C.14	1.22			-7.58	0.235	0.000 D	-1.99	-4.07	-13.62	-13.62
	Fu.C.15	1.24			-7.58	0.237	0.000 D	-1.97	-4.08	-13.64	-13.64
	Fu.C.16	1.12			-7.74	0.216	0.000 D	-2.03	-4.13	-13.68	-13.68
	Fu.C.17	1.43			-7.47	0.263	0.000 D	-0.90	-4.17	-13.72	-13.72
	Fu.C.18	1.55			-15.27	0.160	0.000 D	-2.66	-8.30	-25.52	-25.52
S9	Fu.C.1	-14.74	9.49	2.246	-7.37	0.841	3.652 D	-1.43	21.57	21.57	-17.99
Staaft	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve
S9	Fu.C.2	-14.73	9.59	2.251	-7.19	0.837	3.664 D	-1.82	21.61	21.61	-17.95
	Fu.C.3	-14.50	9.10	2.217	-8.29	0.840	3.594 T	0.18	21.29	21.29	-18.27



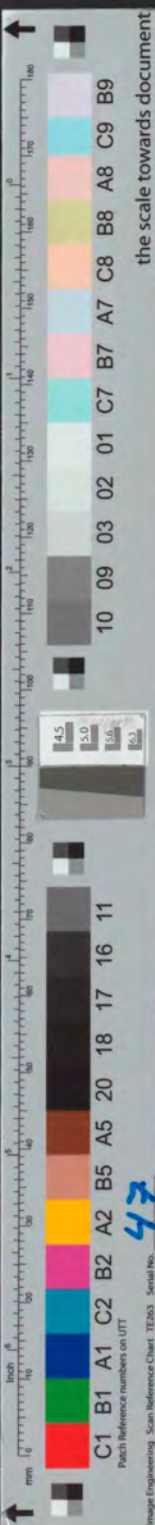
	Fu.C.4	-26.49	17.22	2.248	-13.12	0.837	3.658	D	-3.14	38.90	38.90	-32.41
	Fu.C.5	-14.73	9.56	2.250	-7.23	0.838	3.661	D	-1.75	21.60	21.60	-17.96
	Fu.C.6	-14.50	9.07	2.216	-8.33	0.841	3.591	T	0.25	21.28	21.28	-18.28
	Fu.C.7	-26.50	17.19	2.247	-13.17	0.837	3.657	D	-3.06	38.89	38.89	-32.42
	Fu.C.8	-14.49	9.17	2.220	-8.15	0.838	3.603	D	-0.13	21.32	21.32	-18.24
	Fu.C.9	-26.49	17.30	2.249	-12.99	0.836	3.663	D	-3.45	38.93	38.93	-32.38
	Fu.C.10	-26.26	16.80	2.231	-14.09	0.837	3.624	D	-1.45	38.61	38.61	-32.70
	Fu.C.11	21.79			-65.47	1.989	0.000	D	-29.50	-1.40	-40.96	-40.96
	Fu.C.12	-51.09			50.36	1.347	0.000	T	26.54	44.40	44.40	4.84
	Fu.C.13	-15.54	9.99	2.239	-8.01	0.838	3.640	D	-1.28	22.80	22.80	-19.15
	Fu.C.14	-14.69	9.47	2.243	-7.44	0.839	3.648	D	-1.36	21.54	21.54	-18.02
	Fu.C.15	-14.69	9.44	2.242	-7.48	0.840	3.645	D	-1.28	21.53	21.53	-18.03
	Fu.C.16	-14.69	9.54	2.247	-7.30	0.837	3.657	D	-1.67	21.57	21.57	-17.99
	Fu.C.17	-14.45	9.06	2.213	-8.40	0.840	3.586	T	0.33	21.25	21.25	-18.31
	Fu.C.18	-26.45	17.18	2.245	-13.24	0.836	3.654	D	-2.98	38.86	38.86	-32.45
S10	Fu.C.1	9.59			-31.08	0.096	0.000	D	-3.12	-99.55	-103.83	-103.83
	Fu.C.2	7.33			-32.51	0.075	0.000	D	-0.65	-97.47	-101.74	-101.74
	Fu.C.3	5.06			-29.65	0.061	0.000	D	-0.92	-82.93	-90.63	-90.63
	Fu.C.4	7.24			-26.63	0.087	0.000	D	-1.82	-82.53	-86.80	-86.80
	Fu.C.5	7.65			-32.03	0.078	0.000	D	-1.13	-97.06	-101.33	-101.33
	Fu.C.6	5.38			-29.17	0.065	0.000	D	-1.40	-82.52	-90.22	-90.22
	Fu.C.7	7.56			-26.15	0.091	0.000	D	-2.30	-82.12	-86.40	-86.40
	Fu.C.8	3.12			-30.59	0.039	0.000	T	1.07	-80.43	-88.13	-88.13
	Fu.C.9	5.30			-27.57	0.066	0.000	T	0.17	-80.04	-84.31	-84.31
	Fu.C.10	3.02			-24.71	0.046	0.000	D	-0.10	-65.50	-73.20	-73.20
	Fu.C.11	12.07			-11.00	0.213	0.000	D	-14.33	-55.54	-59.81	-59.81
	Fu.C.12	-2.57			-33.31	0.000	0.000	T	11.71	-74.70	-78.97	-78.97
	Fu.C.13	5.07			-23.55	0.073	0.000	D	-0.89	-69.27	-73.80	-73.80
	Fu.C.14	7.01			-26.86	0.084	0.000	D	-1.73	-82.54	-86.81	-86.81
	Fu.C.15	7.33			-26.38	0.089	0.000	D	-2.21	-82.13	-86.40	-86.40
	Fu.C.16	5.07			-27.80	0.063	0.000	T	0.26	-80.04	-84.31	-84.31
	Fu.C.17	2.80			-24.94	0.042	0.000	D	-0.01	-65.50	-73.21	-73.21
	Fu.C.18	4.97			-21.92	0.076	0.000	D	-0.91	-65.11	-69.38	-69.38
S11	Fu.C.1	-26.47	4.28	2.461	0.27	1.520	0.000	D	-2.15	25.53	25.53	-8.78
	Fu.C.2	-27.23	3.74	2.470	-0.19	1.589	3.353	T	0.55	25.62	25.62	-8.69
	Fu.C.3	-28.48	8.04	1.966	-9.14	1.035	2.930	D	-1.16	37.49	37.49	-24.38
	Fu.C.4	-23.91	3.87	2.331	-1.36	1.440	3.229	D	-1.80	24.29	24.29	-10.02
	Fu.C.5	-26.97	3.88	2.465	-0.09	1.568	3.364	D	0.00	25.57	25.57	-8.74
	Fu.C.6	-28.22	8.20	1.963	-9.04	1.023	2.937	D	-1.72	37.44	37.44	-24.43
	Fu.C.7	-23.65	4.02	2.326	-1.26	1.419	3.241	D	-2.36	24.24	24.24	-10.07
	Fu.C.8	-28.97	7.62	1.969	-9.50	1.061	2.907	T	0.99	37.53	37.53	-24.34
	Fu.C.9	-24.40	3.47	2.335	-1.72	1.491	3.185	T	0.35	24.33	24.33	-9.98
	Fu.C.10	-25.65	8.37	1.892	-10.67	0.948	2.875	D	-1.37	36.19	36.19	-25.67
	Fu.C.11	14.19	14.96	0.378	-31.62	2.054	0.000	D	-2.06	4.04	-30.28	-30.28
	Fu.C.12	-54.46			25.38	1.689	0.000	D	-0.30	41.26	41.26	6.95
	Fu.C.13	-21.39	4.21	2.163	-3.27	1.269	3.072	D	-0.75	24.04	24.04	-12.34
	Fu.C.14	-23.43	3.94	2.313	-1.47	1.415	3.219	D	-1.15	24.12	24.12	-10.20
	Fu.C.15	-23.17	4.09	2.308	-1.38	1.394	3.231	D	-1.70	24.07	24.07	-10.25
	Fu.C.16	-23.93	3.54	2.317	-1.83	1.465	3.176	T	1.00	24.16	24.16	-10.16
	Fu.C.17	-25.18	8.52	1.882	-10.78	0.930	2.874	D	-0.71	36.02	36.02	-25.85
	Fu.C.18	-20.61	3.87	2.179	-3.00	1.295	3.076	D	-1.35	22.82	22.82	-11.49
S12	Fu.C.1	-8.11	2.69	1.500	1.61	0.751	0.000	T	2.92	14.41	14.41	-4.56
	Fu.C.2	-7.32	3.40	1.494	2.29	0.653	0.000	T	3.25	14.34	14.34	-4.62
	Fu.C.3	-13.99	4.39	1.457	2.07	0.745	0.000	T	2.50	25.23	25.23	-8.96
	Fu.C.4	-7.81	2.99	1.500	1.91	0.711	0.000	T	1.99	14.40	14.40	-4.56
	Fu.C.5	-7.47	3.24	1.494	2.13	0.672	0.000	T	3.20	14.34	14.34	-4.62
	Fu.C.6	-14.15	4.23	1.457	1.91	0.758	0.000	T	2.45	25.22	25.22	-8.96
	Fu.C.7	-7.96	2.83	1.500	1.75	0.731	0.000	T	1.94	14.40	14.40	-4.56
	Fu.C.8	-13.35	4.94	1.454	2.59	0.698	0.000	T	2.78	25.16	25.16	-9.02
Staaft	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
S12	Fu.C.9	-7.17	3.54	1.493	2.42	0.635	0.000	T	2.26	14.34	14.34	-4.63
	Fu.C.10	-13.84	4.53	1.457	2.21	0.734	0.000	T	1.52	25.22	25.22	-8.96



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

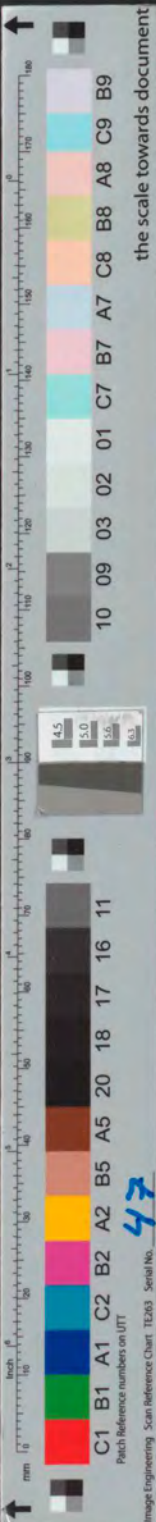
	Fu.C.11	18.84		-7.92	1.602	0.000	T	3.78	-4.07	-23.03	-23.03	
	Fu.C.12	-34.14		11.05	1.309	0.000	D	-0.85	32.36	32.36	13.40	
	Fu.C.13	-8.11	2.94	1.473	1.65	0.714	0.000	T	2.09	15.00	15.00	-5.11
	Fu.C.14	-7.80	2.81	1.487	1.67	0.722	0.000	T	2.46	14.28	14.28	-4.69
	Fu.C.15	-7.96	2.65	1.487	1.51	0.743	0.000	T	2.41	14.28	14.28	-4.69
	Fu.C.16	-7.16	3.36	1.480	2.18	0.644	0.000	T	2.74	14.21	14.21	-4.75
	Fu.C.17	-13.84	4.36	1.450	1.97	0.741	0.000	T	1.99	25.10	25.10	-9.09
	Fu.C.18	-7.66	2.95	1.486	1.80	0.702	0.000	T	1.48	14.27	14.27	-4.69
S13	Fu.C.1	1.61			-7.67	0.275	0.000	T	2.92	-4.56	-14.11	-14.11
	Fu.C.2	2.29			-7.06	0.360	0.000	T	3.25	-4.62	-14.17	-14.17
	Fu.C.3	2.07			-15.41	0.195	0.000	T	2.50	-8.96	-26.18	-26.18
	Fu.C.4	1.91			-7.39	0.314	0.000	T	1.99	-4.56	-14.12	-14.12
	Fu.C.5	2.13			-7.22	0.340	0.000	T	3.20	-4.62	-14.17	-14.17
	Fu.C.6	1.91			-15.57	0.182	0.000	T	2.45	-8.96	-26.18	-26.18
	Fu.C.7	1.75			-7.55	0.293	0.000	T	1.94	-4.56	-14.12	-14.12
	Fu.C.8	2.59			-14.96	0.234	0.000	T	2.78	-9.02	-26.24	-26.24
	Fu.C.9	2.42			-6.93	0.376	0.000	T	2.26	-4.63	-14.18	-14.18
	Fu.C.10	2.21			-15.28	0.206	0.000	T	1.52	-8.96	-26.19	-26.19
	Fu.C.11	-7.92			-35.59	0.000	0.000	T	3.78	-23.03	-32.58	-32.58
	Fu.C.12	11.05			19.63	0.000	0.000	D	-0.85	13.40	13.40	3.85
	Fu.C.13	1.65			-8.47	0.258	0.000	T	2.09	-5.11	-15.24	-15.24
	Fu.C.14	1.67			-7.75	0.277	0.000	T	2.46	-4.69	-14.24	-14.24
	Fu.C.15	1.51			-7.91	0.255	0.000	T	2.41	-4.69	-14.24	-14.24
	Fu.C.16	2.18			-7.29	0.342	0.000	T	2.74	-4.75	-14.30	-14.30
	Fu.C.17	1.97			-15.64	0.184	0.000	T	1.99	-9.09	-26.31	-26.31
	Fu.C.18	1.80			-7.62	0.295	0.000	T	1.48	-4.69	-14.25	-14.25
S14	Fu.C.1	-13.54	8.88	2.161	-9.54	0.801	3.521	T	1.19	20.75	20.75	-18.81
	Fu.C.2	-13.94	8.28	2.151	-10.33	0.838	3.465	T	3.54	20.66	20.66	-18.90
	Fu.C.3	-24.76	16.10	2.173	-16.70	0.809	3.537	T	1.71	37.61	37.61	-33.70
	Fu.C.4	-13.60	8.48	2.145	-10.26	0.816	3.473	T	0.49	20.59	20.59	-18.97
	Fu.C.5	-13.91	8.40	2.156	-10.13	0.833	3.478	T	3.08	20.70	20.70	-18.86
	Fu.C.6	-24.73	16.22	2.175	-16.51	0.806	3.544	T	1.25	37.65	37.65	-33.66
	Fu.C.7	-13.57	8.59	2.149	-10.06	0.811	3.487	T	0.03	20.63	20.63	-18.93
	Fu.C.8	-25.13	15.62	2.170	-17.29	0.826	3.513	T	3.59	37.56	37.56	-33.75
	Fu.C.9	-13.98	7.99	2.139	-10.85	0.849	3.429	T	2.38	20.54	20.54	-19.02
	Fu.C.10	-24.79	15.81	2.166	-17.22	0.814	3.518	T	0.55	37.49	37.49	-33.82
	Fu.C.11	11.01	14.24	0.819	-38.06	2.541	0.000	T	8.06	7.87	-31.69	-31.69
	Fu.C.12	-38.52	20.36	3.502	18.52	1.443	0.000	D	-6.31	33.63	33.63	-5.93
	Fu.C.13	-14.58	9.18	2.160	-10.37	0.817	3.503	T	1.45	22.00	22.00	-19.95
	Fu.C.14	-13.66	8.71	2.159	-9.76	0.812	3.506	T	1.51	20.73	20.73	-18.83
	Fu.C.15	-13.63	8.83	2.163	-9.56	0.807	3.519	T	1.05	20.77	20.77	-18.79
	Fu.C.16	-14.03	8.23	2.153	-10.34	0.844	3.462	T	3.39	20.68	20.68	-18.88
	Fu.C.17	-24.85	16.05	2.174	-16.72	0.812	3.536	T	1.56	37.63	37.63	-33.68
	Fu.C.18	-13.70	8.42	2.146	-10.28	0.822	3.471	T	0.35	20.61	20.61	-18.95
S15	Fu.C.1	0.00			0.17	0.000	0.000	D	-204.04	0.07	0.07	0.07
	Fu.C.2	0.00			0.25	0.000	0.000	D	-207.87	0.10	0.10	0.10
	Fu.C.3	0.00			0.07	0.000	0.000	D	-205.68	0.03	0.03	0.03
	Fu.C.4	0.00			0.20	0.000	0.000	D	-206.04	0.07	0.07	0.07
	Fu.C.5	0.00			0.23	0.000	0.000	D	-210.44	0.09	0.09	0.09
	Fu.C.6	0.00			0.05	0.000	0.000	D	-208.25	0.02	0.02	0.02
	Fu.C.7	0.00			0.17	0.000	0.000	D	-208.62	0.07	0.07	0.07
	Fu.C.8	0.00			0.13	0.000	0.000	D	-212.08	0.05	0.05	0.05
	Fu.C.9	0.00			0.25	0.000	0.000	D	-212.45	0.09	0.09	0.09
	Fu.C.10	0.00			0.07	0.000	0.000	D	-210.26	0.03	0.03	0.03
	Fu.C.11	0.00			21.89	0.000	0.000	D	-147.99	8.26	8.26	8.26
	Fu.C.12	0.00			-21.65	0.000	0.000	D	-172.73	-8.17	-8.17	-8.17
	Fu.C.13	0.00			0.13	0.000	0.000	D	-170.75	0.05	0.05	0.05
	Fu.C.14	0.00			0.16	0.000	0.000	D	-180.91	0.06	0.06	0.06
	Fu.C.15	0.00			0.13	0.000	0.000	D	-183.48	0.05	0.05	0.05
Staf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
S15	Fu.C.16	0.00			0.21	0.000	0.000	D	-187.31	0.08	0.08	0.08
	Fu.C.17	0.00			0.03	0.000	0.000	D	-185.13	0.01	0.01	0.01



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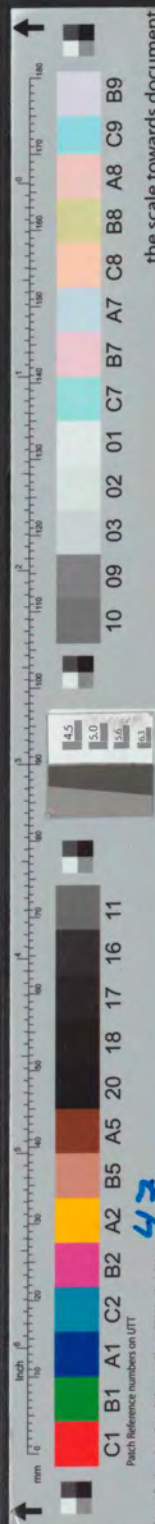
S16	Fu.C.18	0.00			0.16	0.000	0.000	D	-185.49	0.06	0.06	0.06	
	Fu.C.1	1.33			-1.58	1.816	0.000	D	-171.63	-0.73	-0.73	-0.73	
	Fu.C.2	1.58			-2.21	1.656	0.000	D	-175.52	-0.95	-0.95	-0.95	
	Fu.C.3	0.83			-0.56	2.374	0.000	D	-173.52	-0.35	-0.35	-0.35	
	Fu.C.4	0.54			-1.32	1.152	0.000	D	-148.74	-0.47	-0.47	-0.47	
	Fu.C.5	1.50			-2.04	1.681	0.000	D	-178.11	-0.89	-0.89	-0.89	
	Fu.C.6	0.75			-0.39	2.607	0.000	D	-176.11	-0.29	-0.29	-0.29	
	Fu.C.7	0.46			-1.15	1.129	0.000	D	-151.33	-0.40	-0.40	-0.40	
	Fu.C.8	1.00			-1.02	1.965	0.000	D	-180.01	-0.51	-0.51	-0.51	
	Fu.C.9	0.70			-1.78	1.126	0.000	D	-155.23	-0.62	-0.62	-0.62	
	Fu.C.10	-0.04			-0.13	0.000	0.000	D	-153.23	-0.02	-0.02	-0.02	
	Fu.C.11	-33.20			31.68	2.034	0.000	D	-111.84	16.32	16.32	16.32	
	Fu.C.12	34.52			-33.52	2.017	0.000	D	-144.96	-17.12	-17.12	-17.12	
	Fu.C.13	0.70			-0.98	1.661	0.000	D	-136.86	-0.42	-0.42	-0.42	
	Fu.C.14	1.04			-1.33	1.736	0.000	D	-148.71	-0.60	-0.60	-0.60	
Fu.C.15	0.95			-1.17	1.788	0.000	D	-151.31	-0.53	-0.53	-0.53		
Fu.C.16	1.20			-1.79	1.594	0.000	D	-155.20	-0.75	-0.75	-0.75		
Fu.C.17	0.45			-0.15	3.007	0.000	D	-153.20	-0.15	-0.15	-0.15		
Fu.C.18	0.16			-0.90	0.602	0.000	D	-128.42	-0.27	-0.27	-0.27		
S17	Fu.C.1	0.00			-3.30	0.000	0.000	D	-229.49	-1.24	-1.24	-1.24	
	Fu.C.2	0.00			-3.46	0.000	0.000	D	-227.96	-1.30	-1.30	-1.30	
	Fu.C.3	0.00			-2.83	0.000	0.000	D	-229.24	-1.07	-1.07	-1.07	
	Fu.C.4	0.00			-6.55	0.000	0.000	D	-229.78	-2.47	-2.47	-2.47	
	Fu.C.5	0.00			-3.42	0.000	0.000	D	-231.65	-1.29	-1.29	-1.29	
	Fu.C.6	0.00			-2.80	0.000	0.000	D	-232.92	-1.06	-1.06	-1.06	
	Fu.C.7	0.00			-6.52	0.000	0.000	D	-233.46	-2.46	-2.46	-2.46	
	Fu.C.8	0.00			-2.95	0.000	0.000	D	-231.40	-1.12	-1.12	-1.12	
	Fu.C.9	0.00			-6.68	0.000	0.000	D	-231.94	-2.52	-2.52	-2.52	
	Fu.C.10	0.00			-6.05	0.000	0.000	D	-233.21	-2.28	-2.28	-2.28	
	Fu.C.11	0.00			20.88	0.000	0.000	D	-188.79	7.88	7.88	7.88	
	Fu.C.12	0.00			-27.61	0.000	0.000	D	-163.99	-10.42	-10.42	-10.42	
	Fu.C.13	0.00			-3.57	0.000	0.000	D	-187.47	-1.35	-1.35	-1.35	
	Fu.C.14	0.00			-3.35	0.000	0.000	D	-201.10	-1.26	-1.26	-1.26	
	Fu.C.15	0.00			-3.32	0.000	0.000	D	-204.78	-1.25	-1.25	-1.25	
Fu.C.16	0.00			-3.47	0.000	0.000	D	-203.26	-1.31	-1.31	-1.31		
Fu.C.17	0.00			-2.85	0.000	0.000	D	-204.53	-1.07	-1.07	-1.07		
Fu.C.18	0.00			-6.57	0.000	0.000	D	-205.07	-2.48	-2.48	-2.48		
S18	Fu.C.1	4.15			-4.24	1.965	0.000	D	-194.48	-2.11	-2.11	-2.11	
	Fu.C.2	3.82			-3.51	2.070	0.000	D	-192.87	-1.84	-1.84	-1.84	
	Fu.C.3	4.48			-5.37	1.808	0.000	D	-194.43	-2.48	-2.48	-2.48	
	Fu.C.4	4.95			-4.33	2.120	0.000	D	-165.55	-2.33	-2.33	-2.33	
	Fu.C.5	3.86			-3.65	2.044	0.000	D	-196.55	-1.89	-1.89	-1.89	
	Fu.C.6	4.52			-5.50	1.794	0.000	D	-198.11	-2.52	-2.52	-2.52	
	Fu.C.7	4.99			-4.46	2.099	0.000	D	-169.23	-2.38	-2.38	-2.38	
	Fu.C.8	4.19			-4.77	1.859	0.000	D	-196.50	-2.26	-2.26	-2.26	
	Fu.C.9	4.66			-3.73	2.207	0.000	D	-167.62	-2.11	-2.11	-2.11	
	Fu.C.10	5.33			-5.59	1.940	0.000	D	-169.18	-2.75	-2.75	-2.75	
	Fu.C.11	-31.50			28.89	2.073	0.000	D	-160.33	15.19	15.19	15.19	
	Fu.C.12	38.33			-35.77	2.056	0.000	D	-121.82	-18.64	-18.64	-18.64	
	Fu.C.13	3.62			-3.65	1.981	0.000	D	-150.01	-1.83	-1.83	-1.83	
	Fu.C.14	3.76			-3.77	1.984	0.000	D	-165.94	-1.89	-1.89	-1.89	
	Fu.C.15	3.80			-3.90	1.961	0.000	D	-169.62	-1.94	-1.94	-1.94	
Fu.C.16	3.47			-3.18	2.076	0.000	D	-168.01	-1.67	-1.67	-1.67		
Fu.C.17	4.14			-5.03	1.793	0.000	D	-169.56	-2.31	-2.31	-2.31		
Fu.C.18	4.61			-3.99	2.129	0.000	D	-140.69	-2.16	-2.16	-2.16		
S19	Fu.C.1	0.00			3.81	0.000	0.000	D	-102.15	3.31	3.31	3.31	
	Fu.C.2	0.00			3.93	0.000	0.000	D	-101.83	3.42	3.42	3.42	
	Fu.C.3	0.00			3.33	0.000	0.000	D	-101.84	2.89	2.89	2.89	
	Fu.C.4	0.00			6.81	0.000	0.000	D	-101.02	5.92	5.92	5.92	
Staaft	B.C.		Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
	S19	Fu.C.5	0.00			3.91	0.000	0.000	D	-114.84	3.40	3.40	3.40
	Fu.C.6	0.00				3.30	0.000	0.000	D	-114.85	2.87	2.87	2.87



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	Fu.C.7	0.00		6.79	0.000	0.000	D	-114.03	5.90	5.90	5.90	
	Fu.C.8	0.00		3.42	0.000	0.000	D	-114.52	2.98	2.98	2.98	
	Fu.C.9	0.00		6.91	0.000	0.000	D	-113.71	6.01	6.01	6.01	
	Fu.C.10	0.00		6.30	0.000	0.000	D	-113.72	5.48	5.48	5.48	
	Fu.C.11	0.00		49.43	0.000	0.000	D	-132.14	42.98	42.98	42.98	
	Fu.C.12	0.00		-42.08	0.000	0.000	D	-35.34	-36.59	-36.59	-36.59	
	Fu.C.13	0.00		3.90	0.000	0.000	D	-89.10	3.39	3.39	3.39	
	Fu.C.14	0.00		3.75	0.000	0.000	D	-86.44	3.26	3.26	3.26	
	Fu.C.15	0.00		3.73	0.000	0.000	D	-99.46	3.24	3.24	3.24	
	Fu.C.16	0.00		3.85	0.000	0.000	D	-99.13	3.35	3.35	3.35	
	Fu.C.17	0.00		3.25	0.000	0.000	D	-99.14	2.82	2.82	2.82	
	Fu.C.18	0.00		6.73	0.000	0.000	D	-98.32	5.86	5.86	5.86	
S20	Fu.C.1	-3.56		3.91	1.895	0.000	D	-84.16	1.88	1.88	1.88	
	Fu.C.2	-3.26		3.08	2.042	0.000	D	-83.88	1.59	1.59	1.59	
	Fu.C.3	-4.96		7.23	1.617	0.000	D	-83.56	3.07	3.07	3.07	
	Fu.C.4	-6.31		4.77	2.263	0.000	D	-68.61	2.79	2.79	2.79	
	Fu.C.5	-3.32		3.24	2.012	0.000	D	-96.88	1.65	1.65	1.65	
	Fu.C.6	-5.03		7.40	1.609	0.000	D	-96.57	3.13	3.13	3.13	
	Fu.C.7	-6.38		4.93	2.241	0.000	D	-81.62	2.85	2.85	2.85	
	Fu.C.8	-4.73		6.57	1.663	0.000	D	-96.28	2.84	2.84	2.84	
	Fu.C.9	-6.08		4.11	2.371	0.000	D	-81.33	2.56	2.56	2.56	
	Fu.C.10	-7.78		8.26	1.928	0.000	D	-81.02	4.04	4.04	4.04	
	Fu.C.11	-16.04		21.40	1.703	0.000	D	-91.19	9.42	9.42	9.42	
	Fu.C.12	8.28		-13.32	1.523	0.000	D	-40.19	-5.43	-5.43	-5.43	
	Fu.C.13	-4.11		4.28	1.948	0.000	D	-69.96	2.11	2.11	2.11	
	Fu.C.14	-3.69		3.89	1.934	0.000	D	-68.42	1.91	1.91	1.91	
	Fu.C.15	-3.75		4.05	1.912	0.000	D	-81.43	1.96	1.96	1.96	
	Fu.C.16	-3.45		3.23	2.054	0.000	D	-81.14	1.68	1.68	1.68	
	Fu.C.17	-5.16		7.38	1.635	0.000	D	-80.83	3.15	3.15	3.15	
	Fu.C.18	-6.51		4.92	2.263	0.000	D	-65.88	2.87	2.87	2.87	
S21	Fu.C.1	6.80		-13.00	1.171	0.000	D	-148.44	-5.81	-5.81	-5.81	
	Fu.C.2	4.92		-7.52	1.350	0.000	D	-152.49	-3.65	-3.65	-3.65	
	Fu.C.3	4.30		-9.39	1.070	0.000	D	-123.91	-4.01	-4.01	-4.01	
	Fu.C.4	5.13		-9.38	1.206	0.000	D	-124.32	-4.26	-4.26	-4.26	
	Fu.C.5	5.34		-8.61	1.305	0.000	D	-155.03	-4.09	-4.09	-4.09	
	Fu.C.6	4.71		-10.48	1.057	0.000	D	-126.46	-4.46	-4.46	-4.46	
	Fu.C.7	5.55		-10.47	1.181	0.000	D	-126.86	-4.70	-4.70	-4.70	
	Fu.C.8	2.84		-5.00	1.234	0.000	D	-130.50	-2.30	-2.30	-2.30	
	Fu.C.9	3.67		-4.99	1.445	0.000	D	-130.91	-2.54	-2.54	-2.54	
	Fu.C.10	3.05		-6.87	1.048	0.000	D	-102.34	-2.91	-2.91	-2.91	
	Fu.C.11	-18.77		16.96	1.791	0.000	D	-85.63	10.48	10.48	10.48	
	Fu.C.12	26.00		-30.49	1.569	0.000	D	-119.55	-16.57	-16.57	-16.57	
	Fu.C.13	3.86		-7.25	1.185	0.000	D	-109.52	-3.26	-3.26	-3.26	
	Fu.C.14	5.00		-9.34	1.189	0.000	D	-124.24	-4.20	-4.20	-4.20	
	Fu.C.15	5.41		-10.43	1.165	0.000	D	-126.79	-4.65	-4.65	-4.65	
	Fu.C.16	3.54		-4.95	1.422	0.000	D	-130.83	-2.49	-2.49	-2.49	
	Fu.C.17	2.91		-6.82	1.020	0.000	D	-102.26	-2.85	-2.85	-2.85	
	Fu.C.18	3.75		-6.81	1.210	0.000	D	-102.66	-3.10	-3.10	-3.10	
S22	Fu.C.1	1.62		0.31	0.000	0.000	D	-159.62	-0.38	-0.38	-0.38	
	Fu.C.2	3.36		-3.91	1.576	0.000	D	-158.04	-2.13	-2.13	-2.13	
	Fu.C.3	3.98		-1.77	2.361	0.000	D	-130.64	-1.69	-1.69	-1.69	
	Fu.C.4	1.89		-0.98	2.244	0.000	D	-130.85	-0.84	-0.84	-0.84	
	Fu.C.5	3.04		-2.99	1.720	0.000	D	-161.68	-1.77	-1.77	-1.77	
	Fu.C.6	3.66		-0.84	2.773	0.000	D	-134.28	-1.32	-1.32	-1.32	
	Fu.C.7	1.57		-0.05	3.296	0.000	D	-134.48	-0.48	-0.48	-0.48	
	Fu.C.8	5.40		-5.07	1.760	0.000	D	-132.70	-3.07	-3.07	-3.07	
	Fu.C.9	3.31		-4.28	1.487	0.000	D	-132.91	-2.22	-2.22	-2.22	
	Fu.C.10	3.93		-2.13	2.210	0.000	D	-105.50	-1.78	-1.78	-1.78	
	Fu.C.11	-17.71		19.50	1.623	0.000	D	-119.88	10.91	10.91	10.91	
Staal	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
S22	Fu.C.12	22.39			-22.58	1.698	0.000	D	-92.04	-13.19	-13.19	-13.19
	Fu.C.13	2.46			-1.60	2.065	0.000	D	-112.77	-1.19	-1.19	-1.19



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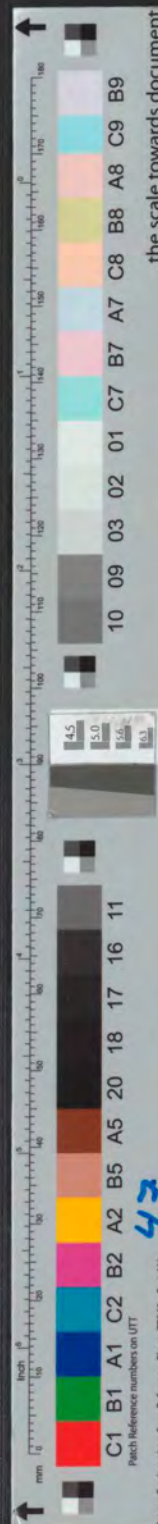
S23	Fu.C.14	2.14			-1.08	2.268	0.000	D	-130.97	-0.94	-0.94	-0.94
	Fu.C.15	1.82			-0.15	3.148	0.000	D	-134.61	-0.58	-0.58	-0.58
	Fu.C.16	3.56			-4.38	1.530	0.000	D	-133.03	-2.33	-2.33	-2.33
	Fu.C.17	4.18			-2.23	2.223	0.000	D	-105.63	-1.88	-1.88	-1.88
	Fu.C.18	2.09			-1.44	2.016	0.000	D	-105.83	-1.03	-1.03	-1.03
	Fu.C.1	-5.64			4.84	1.835	0.000	D	-65.35	3.07	3.07	3.07
	Fu.C.2	-7.24			10.26	1.411	0.000	D	-64.98	5.13	5.13	5.13
	Fu.C.3	-9.47			6.82	1.983	0.000	D	-49.86	4.78	4.78	4.78
	Fu.C.4	-5.49			5.71	1.672	0.000	D	-49.64	3.28	3.28	3.28
	Fu.C.5	-6.88			9.24	1.456	0.000	D	-78.02	4.73	4.73	4.73
	Fu.C.6	-9.11			5.80	2.084	0.000	D	-62.91	4.37	4.37	4.37
	Fu.C.7	-5.13			4.69	1.781	0.000	D	-62.69	2.88	2.88	2.88
	Fu.C.8	-10.72			11.22	1.666	0.000	D	-62.53	6.43	6.43	6.43
	Fu.C.9	-6.73			10.11	1.363	0.000	D	-62.31	4.94	4.94	4.94
	Fu.C.10	-8.96			6.67	1.955	0.000	D	-47.20	4.58	4.58	4.58
	Fu.C.11	-16.66			17.17	1.680	0.000	D	-59.49	9.92	9.92	9.92
	Fu.C.12	5.20			-5.73	1.623	0.000	D	-34.26	-3.20	-3.20	-3.20
	Fu.C.13	-6.09			6.07	1.707	0.000	D	-50.00	3.57	3.57	3.57
S24	Fu.C.14	-5.86			5.79	1.716	0.000	D	-49.59	3.42	3.42	3.42
	Fu.C.15	-5.50			4.77	1.827	0.000	D	-62.64	3.01	3.01	3.01
	Fu.C.16	-7.11			10.19	1.401	0.000	D	-62.26	5.07	5.07	5.07
	Fu.C.17	-9.34			6.75	1.979	0.000	D	-47.15	4.72	4.72	4.72
	Fu.C.18	-5.35			5.64	1.661	0.000	D	-46.93	3.22	3.22	3.22
	Fu.C.1	-2.78	6.22	1.298	-25.16	0.219	2.379	T	5.69	13.86	-24.72	-24.72
	Fu.C.2	-9.81	13.31	1.549	-31.88	0.374	2.739	T	2.50	29.84	-39.73	-39.73
	Fu.C.3	-4.06	6.52	1.408	-22.01	0.303	2.518	T	1.90	15.03	-23.55	-23.55
	Fu.C.4	-3.42	6.83	1.385	-22.28	0.254	2.522	T	2.86	14.79	-23.79	-23.79
	Fu.C.5	-10.80	12.62	1.560	-32.13	0.415	2.717	T	5.22	30.03	-39.54	-39.54
	Fu.C.6	-5.06	5.80	1.426	-22.27	0.384	2.473	T	4.61	15.23	-23.35	-23.35
	Fu.C.7	-4.41	6.11	1.404	-22.53	0.334	2.478	T	5.57	14.99	-23.60	-23.60
	Fu.C.8	-12.09	13.20	1.620	-28.99	0.450	2.809	T	1.43	31.21	-38.36	-38.36
	Fu.C.9	-11.44	13.46	1.608	-29.25	0.426	2.807	T	2.39	30.97	-38.60	-38.60
	Fu.C.10	-5.69	6.54	1.513	-19.39	0.407	2.629	T	1.78	16.16	-22.42	-22.42
	Fu.C.11	10.26	13.93	0.829	-31.02	2.447	0.000	D	-4.37	8.85	-29.73	-29.73
	Fu.C.12	-20.49	4.33	2.156	-8.29	1.256	3.103	T	8.48	23.02	23.02	-15.56
	Fu.C.13	-5.38	7.18	1.490	-20.92	0.363	2.625	T	2.69	16.87	-24.05	-24.05
Fu.C.14	-3.45	6.81	1.386	-22.28	0.257	2.521	T	2.76	14.80	-23.78	-23.78	
Fu.C.15	-4.44	6.09	1.404	-22.53	0.337	2.476	T	5.48	15.00	-23.59	-23.59	
Fu.C.16	-11.47	13.44	1.608	-29.25	0.427	2.807	T	2.29	30.98	-38.59	-38.59	
S25	Fu.C.17	-5.73	6.52	1.514	-19.39	0.410	2.628	T	1.68	16.17	-22.41	-22.41
	Fu.C.18	-5.08	6.80	1.492	-19.65	0.363	2.630	T	2.64	15.93	-22.65	-22.65
	Fu.C.1	-38.16			27.84	0.312	0.000	D	-0.12	123.72	123.72	118.48
	Fu.C.2	-39.39			19.49	0.359	0.000	D	-1.15	112.75	112.75	103.32
	Fu.C.3	-31.40			21.87	0.318	0.000	D	-2.12	100.36	100.36	95.13
	Fu.C.4	-31.66			21.70	0.320	0.000	D	-1.40	100.53	100.53	95.30
	Fu.C.5	-40.74			19.63	0.363	0.000	T	1.13	115.49	115.49	106.06
	Fu.C.6	-32.75			22.02	0.322	0.000	T	0.16	103.10	103.10	97.87
	Fu.C.7	-33.00			21.85	0.324	0.000	T	0.88	103.27	103.27	98.04
	Fu.C.8	-33.99			13.66	0.383	0.000	D	-0.87	92.14	92.14	82.71
	Fu.C.9	-34.24			13.49	0.385	0.000	D	-0.15	92.30	92.30	82.87
	Fu.C.10	-26.25			15.88	0.335	0.000	D	-1.13	79.92	79.92	74.68
	Fu.C.11	-14.05			14.99	0.257	0.000	T	6.11	55.90	55.90	50.67
	Fu.C.12	-38.78			16.47	0.380	0.000	D	-8.08	103.98	103.98	98.75
	Fu.C.13	-28.17			16.90	0.336	0.000	D	-0.57	85.47	85.47	79.93
	Fu.C.14	-31.61			21.71	0.320	0.000	D	-1.44	100.46	100.46	95.23
	Fu.C.15	-32.96			21.86	0.324	0.000	T	0.83	103.20	103.20	97.97
	Fu.C.16	-34.20			13.50	0.385	0.000	D	-0.20	92.24	92.24	82.80
Fu.C.17	-26.21			15.88	0.335	0.000	D	-1.17	79.85	79.85	74.61	
Fu.C.18	-26.46			15.72	0.338	0.000	D	-0.45	80.01	80.01	74.78	
Staal	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
S26	Fu.C.1	21.31			4.73	0.000	0.000	T	2.20	-4.72	-18.45	-18.45
	Fu.C.2	13.21	14.24	0.345	4.04	0.000	0.000	T	1.76	5.96	-18.79	-18.79



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	Fu.C.3	15.42			3.88	0.000	0.000	T	0.86	-1.21	-14.94	-14.94
	Fu.C.4	15.36			3.56	0.000	0.000	T	1.53	-1.39	-15.12	-15.12
	Fu.C.5	15.35	16.06	0.286	4.73	0.000	0.000	T	2.08	4.95	-19.80	-19.80
	Fu.C.6	17.56			4.57	0.000	0.000	T	1.18	-2.22	-15.95	-15.95
	Fu.C.7	17.50			4.25	0.000	0.000	T	1.85	-2.40	-16.13	-16.13
	Fu.C.8	9.46	11.53	0.489	3.88	0.000	0.000	T	0.74	8.47	-16.28	-16.28
	Fu.C.9	9.40	11.39	0.479	3.56	0.000	0.000	T	1.42	8.29	-16.46	-16.46
	Fu.C.10	11.62	11.68	0.116	3.39	0.000	0.000	T	0.52	1.12	-12.61	-12.61
	Fu.C.11	24.98			-1.67	1.364	0.000	T	0.11	-11.77	-25.51	-25.51
	Fu.C.12	-1.79	7.90	1.421	7.90	0.138	0.000	T	1.08	13.64	13.64	-0.09
	Fu.C.13	12.44	12.48	0.088	3.31	0.000	0.000	T	1.16	0.89	-13.67	-13.67
	Fu.C.14	15.38			3.58	0.000	0.000	T	1.48	-1.39	-15.12	-15.12
	Fu.C.15	17.52			4.27	0.000	0.000	T	1.80	-2.40	-16.13	-16.13
	Fu.C.16	9.42	11.40	0.479	3.58	0.000	0.000	T	1.36	8.29	-16.46	-16.46
	Fu.C.17	11.63	11.70	0.116	3.41	0.000	0.000	T	0.46	1.12	-12.61	-12.61
	Fu.C.18	11.58	11.62	0.097	3.09	0.000	0.000	T	1.14	0.93	-12.80	-12.80
S27	Fu.C.1	4.73			-18.38	0.241	0.000	T	2.20	-18.45	-28.01	-28.01
	Fu.C.2	4.04			-23.22	0.197	0.000	T	1.76	-18.79	-36.01	-36.01
	Fu.C.3	3.88			-15.74	0.241	0.000	T	0.86	-14.94	-24.49	-24.49
	Fu.C.4	3.56			-16.24	0.220	0.000	T	1.53	-15.12	-24.67	-24.67
	Fu.C.5	4.73			-23.53	0.218	0.000	T	2.08	-19.80	-37.02	-37.02
	Fu.C.6	4.57			-16.05	0.265	0.000	T	1.18	-15.95	-25.50	-25.50
	Fu.C.7	4.25			-16.55	0.246	0.000	T	1.85	-16.13	-25.69	-25.69
	Fu.C.8	3.88			-20.89	0.214	0.000	T	0.74	-16.28	-33.50	-33.50
	Fu.C.9	3.56			-21.39	0.196	0.000	T	1.42	-16.46	-33.69	-33.69
	Fu.C.10	3.39			-13.91	0.246	0.000	T	0.52	-12.61	-22.17	-22.17
	Fu.C.11	-1.67			-31.80	0.000	0.000	T	0.11	-25.51	-35.06	-35.06
	Fu.C.12	7.90			3.06	0.000	0.000	T	1.08	-0.09	-9.64	-9.64
	Fu.C.13	3.31			-15.33	0.224	0.000	T	1.16	-13.67	-23.80	-23.80
	Fu.C.14	3.58			-16.22	0.221	0.000	T	1.48	-15.12	-24.67	-24.67
	Fu.C.15	4.27			-16.53	0.247	0.000	T	1.80	-16.13	-25.68	-25.68
	Fu.C.16	3.58			-21.37	0.197	0.000	T	1.36	-16.46	-33.68	-33.68
	Fu.C.17	3.41			-13.89	0.247	0.000	T	0.46	-12.61	-22.17	-22.17
	Fu.C.18	3.09			-14.39	0.223	0.000	T	1.14	-12.80	-22.35	-22.35
S28	Fu.C.1	-15.58	7.10	2.174	-11.08	0.957	3.390	T	0.75	20.87	20.87	-18.69
	Fu.C.2	-25.80	14.81	2.166	-18.22	0.858	3.475	D	-1.41	37.50	37.50	-33.81
	Fu.C.3	-14.80	7.35	2.148	-11.32	0.910	3.385	D	-2.36	20.62	20.62	-18.94
	Fu.C.4	-14.84	7.68	2.166	-10.65	0.901	3.431	D	-0.71	20.79	20.79	-18.76
	Fu.C.5	-26.29	14.36	2.168	-18.62	0.879	3.456	T	0.40	37.52	37.52	-33.79
	Fu.C.6	-15.29	6.90	2.150	-11.73	0.951	3.349	D	-0.55	20.64	20.64	-18.91
	Fu.C.7	-15.33	7.23	2.168	-11.06	0.941	3.395	T	1.10	20.82	20.82	-18.74
	Fu.C.8	-25.51	14.61	2.153	-18.87	0.854	3.453	D	-2.71	37.27	37.27	-34.04
	Fu.C.9	-25.55	14.94	2.163	-18.20	0.849	3.477	D	-1.06	37.44	37.44	-33.87
	Fu.C.10	-14.54	7.48	2.142	-11.30	0.894	3.390	D	-2.01	20.57	20.57	-18.99
	Fu.C.11	0.07	8.75	1.344	-28.23	2.695	0.000	T	3.92	12.91	-26.65	-26.65
	Fu.C.12	-29.46	13.14	2.979	6.89	1.324	0.000	D	-6.27	28.60	28.60	-10.96
	Fu.C.13	-15.59	8.20	2.162	-11.31	0.893	3.431	D	-0.74	22.01	22.01	-19.94
	Fu.C.14	-14.89	7.65	2.167	-10.67	0.905	3.429	D	-0.87	20.80	20.80	-18.76
	Fu.C.15	-15.38	7.20	2.169	-11.08	0.944	3.393	T	0.94	20.82	20.82	-18.73
	Fu.C.16	-25.60	14.91	2.164	-18.22	0.851	3.476	D	-1.22	37.45	37.45	-33.86
	Fu.C.17	-14.60	7.45	2.143	-11.32	0.897	3.388	D	-2.17	20.57	20.57	-18.98
	Fu.C.18	-14.64	7.78	2.161	-10.65	0.888	3.433	D	-0.52	20.75	20.75	-18.81
S29	Fu.C.1	6.54			-2.04	2.827	0.000	D	-123.21	-2.31	-2.31	-2.31
	Fu.C.2	6.28			-4.50	2.161	0.000	D	-97.36	-2.91	-2.91	-2.91
	Fu.C.3	6.45			-4.59	2.167	0.000	D	-96.34	-2.98	-2.98	-2.98
	Fu.C.4	6.34			-4.54	2.161	0.000	D	-96.69	-2.93	-2.93	-2.93
	Fu.C.5	4.29			0.76	0.000	0.000	D	-101.11	-0.95	-0.95	-0.95
	Fu.C.6	4.46			0.67	0.000	0.000	D	-100.09	-1.02	-1.02	-1.02
	Fu.C.7	4.35			0.72	0.000	0.000	D	-100.44	-0.98	-0.98	-0.98
StaaF	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
S29	Fu.C.8	4.20			-1.79	2.603	0.000	D	-74.24	-1.61	-1.61	-1.61
	Fu.C.9	4.09			-1.74	2.604	0.000	D	-74.59	-1.57	-1.57	-1.57



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 Opdrachtgever: Structure Engineering
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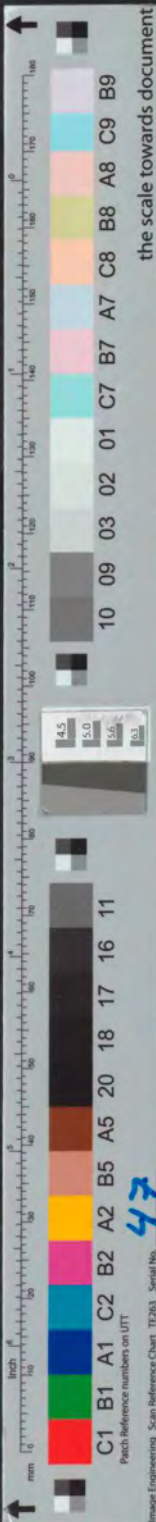
	Fu.C.10	4.26			-1.83	2.596	0.000	D	-73.57	-1.64	-1.64	-1.64
	Fu.C.11	-10.00			12.25	1.667	0.000	D	-62.44	6.00	6.00	6.00
	Fu.C.12	18.26			-15.74	1.993	0.000	D	-85.11	-9.16	-9.16	-9.16
	Fu.C.13	4.45			-1.94	2.583	0.000	D	-79.03	-1.72	-1.72	-1.72
	Fu.C.14	6.33			-4.53	2.163	0.000	D	-96.62	-2.93	-2.93	-2.93
	Fu.C.15	4.34			0.74	0.000	0.000	D	-100.37	-0.97	-0.97	-0.97
	Fu.C.16	4.08			-1.72	2.609	0.000	D	-74.52	-1.56	-1.56	-1.56
	Fu.C.17	4.25			-1.81	2.601	0.000	D	-73.50	-1.63	-1.63	-1.63
	Fu.C.18	4.14			-1.76	2.602	0.000	D	-73.85	-1.59	-1.59	-1.59
S30	Fu.C.1	-2.49			1.46	2.341	0.000	D	-110.74	1.06	1.06	1.06
	Fu.C.2	-1.33			2.52	1.282	0.000	D	-84.54	1.04	1.04	1.04
	Fu.C.3	-2.71			3.00	1.762	0.000	D	-85.53	1.54	1.54	1.54
	Fu.C.4	-2.38			2.83	1.696	0.000	D	-85.38	1.40	1.40	1.40
	Fu.C.5	-0.23			-0.56	0.000	0.000	D	-87.15	-0.09	-0.09	-0.09
	Fu.C.6	-1.60			-0.08	0.000	0.000	D	-88.13	0.41	0.41	0.41
	Fu.C.7	-1.28			-0.25	0.000	0.000	D	-87.98	0.28	0.28	0.28
	Fu.C.8	-0.45			0.98	1.159	0.000	D	-61.93	0.39	0.39	0.39
	Fu.C.9	-0.12			0.82	0.475	0.000	D	-61.78	0.25	0.25	0.25
	Fu.C.10	-1.50			1.29	1.993	0.000	D	-62.77	0.75	0.75	0.75
	Fu.C.11	-12.38			13.96	1.744	0.000	D	-71.91	7.10	7.10	7.10
	Fu.C.12	9.94			-11.68	1.706	0.000	D	-53.80	-5.83	-5.83	-5.83
	Fu.C.13	-1.34			1.27	1.902	0.000	D	-66.96	0.70	0.70	0.70
	Fu.C.14	-2.41			2.84	1.704	0.000	D	-85.49	1.41	1.41	1.41
	Fu.C.15	-1.30			-0.24	0.000	0.000	D	-88.10	0.29	0.29	0.29
	Fu.C.16	-0.14			0.82	0.555	0.000	D	-61.90	0.26	0.26	0.26
	Fu.C.17	-1.52			1.30	2.003	0.000	D	-62.89	0.76	0.76	0.76
	Fu.C.18	-1.20			1.13	1.907	0.000	D	-62.74	0.63	0.63	0.63
S31	Fu.C.1	-6.24			7.94	1.633	0.000	D	-46.67	3.82	3.82	3.82
	Fu.C.2	-7.96			5.84	2.139	0.000	D	-31.16	3.72	3.72	3.72
	Fu.C.3	-4.50			4.45	1.866	0.000	D	-30.93	2.41	2.41	2.41
	Fu.C.4	-4.95			4.59	1.926	0.000	D	-30.88	2.57	2.57	2.57
	Fu.C.5	-9.38			9.65	1.829	0.000	D	-44.23	5.13	5.13	5.13
	Fu.C.6	-5.93			8.25	1.551	0.000	D	-43.99	3.82	3.82	3.82
	Fu.C.7	-6.37			8.39	1.602	0.000	D	-43.95	3.98	3.98	3.98
	Fu.C.8	-7.64			6.16	2.055	0.000	D	-28.49	3.72	3.72	3.72
	Fu.C.9	-8.09			6.30	2.086	0.000	D	-28.44	3.88	3.88	3.88
	Fu.C.10	-4.64			4.90	1.804	0.000	D	-28.21	2.57	2.57	2.57
	Fu.C.11	-11.06			13.29	1.685	0.000	D	-32.85	6.56	6.56	6.56
	Fu.C.12	1.16			-3.35	0.956	0.000	D	-23.30	-1.22	-1.22	-1.22
	Fu.C.13	-5.24			5.25	1.853	0.000	D	-30.07	2.83	2.83	2.83
	Fu.C.14	-4.88			4.55	1.920	0.000	D	-30.84	2.54	2.54	2.54
	Fu.C.15	-6.31			8.35	1.596	0.000	D	-43.90	3.95	3.95	3.95
	Fu.C.16	-8.02			6.26	2.084	0.000	D	-28.40	3.85	3.85	3.85
	Fu.C.17	-4.57			4.87	1.797	0.000	D	-28.16	2.54	2.54	2.54
	Fu.C.18	-5.01			5.00	1.857	0.000	D	-28.12	2.70	2.70	2.70
S32	Fu.C.1	-11.01			-4.34	0.000	0.000	D	-12.59	8.55	8.55	8.55
	Fu.C.2	-6.43			-1.41	0.000	0.000	D	-12.02	6.43	6.43	6.43
	Fu.C.3	-7.03			-1.82	0.000	0.000	D	-12.04	6.68	6.68	6.68
	Fu.C.4	-6.91			-1.75	0.000	0.000	D	-12.00	6.61	6.61	6.61
	Fu.C.5	-9.69			-4.24	0.000	0.000	D	-9.71	7.00	7.00	7.00
	Fu.C.6	-10.29			-4.64	0.000	0.000	D	-9.73	7.25	7.25	7.25
	Fu.C.7	-10.17			-4.57	0.000	0.000	D	-9.70	7.18	7.18	7.18
	Fu.C.8	-5.71			-1.71	0.000	0.000	D	-9.16	5.13	5.13	5.13
	Fu.C.9	-5.59			-1.65	0.000	0.000	D	-9.13	5.05	5.05	5.05
	Fu.C.10	-6.19			-2.05	0.000	0.000	D	-9.15	5.31	5.31	5.31
	Fu.C.11	-6.21			-1.35	0.000	0.000	D	-10.20	6.23	6.23	6.23
	Fu.C.12	-5.86			-2.61	0.000	0.000	D	-7.95	4.16	4.16	4.16
	Fu.C.13	-6.41			-2.05	0.000	0.000	D	-9.94	5.59	5.59	5.59
	Fu.C.14	-6.89			-1.75	0.000	0.000	D	-11.98	6.59	6.59	6.59
Staaft	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
S32	Fu.C.15	-10.15			-4.57	0.000	0.000	D	-9.67	7.16	7.16	7.16
	Fu.C.16	-5.57			-1.64	0.000	0.000	D	-9.10	5.04	5.04	5.04



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S33	Fu.C.17	-6.17			-2.05	0.000	0.000	D	-9.13	5.29	5.29	5.29	
	Fu.C.18	-6.05			-1.98	0.000	0.000	D	-9.09	5.22	5.22	5.22	
	Fu.C.1	-4.34			7.82	0.850	0.000	D	-14.33	5.11	5.11	5.11	
	Fu.C.2	-1.41			6.20	0.442	0.000	D	-13.25	3.20	3.20	3.20	
	Fu.C.3	-1.82			6.36	0.529	0.000	D	-13.33	3.43	3.43	3.43	
	Fu.C.4	-1.75			6.29	0.518	0.000	D	-13.28	3.37	3.37	3.37	
	Fu.C.5	-4.24			6.06	0.980	0.000	D	-11.16	4.32	4.32	4.32	
	Fu.C.6	-4.64			6.23	1.017	0.000	D	-11.24	4.56	4.56	4.56	
	Fu.C.7	-4.57			6.15	1.016	0.000	D	-11.19	4.50	4.50	4.50	
	Fu.C.8	-1.71			4.61	0.646	0.000	D	-10.16	2.65	2.65	2.65	
	Fu.C.9	-1.65			4.53	0.635	0.000	D	-10.11	2.59	2.59	2.59	
	Fu.C.10	-2.05			4.69	0.724	0.000	D	-10.19	2.83	2.83	2.83	
	Fu.C.11	-1.35			6.90	0.389	0.000	D	-11.44	3.46	3.46	3.46	
	Fu.C.12	-2.61			2.22	1.286	0.000	D	-8.74	2.03	2.03	2.03	
	Fu.C.13	-2.05			4.87	0.707	0.000	D	-11.02	2.90	2.90	2.90	
Fu.C.14	-1.75			6.26	0.520	0.000	D	-13.26	3.36	3.36	3.36		
Fu.C.15	-4.57			6.12	1.018	0.000	D	-11.16	4.49	4.49	4.49		
Fu.C.16	-1.64			4.50	0.637	0.000	D	-10.08	2.58	2.58	2.58		
Fu.C.17	-2.05			4.66	0.726	0.000	D	-10.16	2.82	2.82	2.82		
Fu.C.18	-1.98			4.59	0.718	0.000	D	-10.11	2.76	2.76	2.76		
S34	Fu.C.1	-23.21	16.76	2.037	-28.90	0.718	3.415	T	11.39	39.24	-39.77	-39.77	
	Fu.C.2	-14.42	7.26	2.015	-18.60	0.849	3.229	T	9.97	21.52	-22.29	-22.29	
	Fu.C.3	-14.40	7.51	2.025	-18.11	0.840	3.261	T	11.20	21.63	-22.19	-22.19	
	Fu.C.4	-14.25	7.48	2.017	-18.35	0.834	3.249	T	11.03	21.54	-22.27	-22.27	
	Fu.C.5	-22.46	17.95	2.049	-27.22	0.683	3.476	T	5.89	39.45	-39.55	-39.55	
	Fu.C.6	-22.43	18.20	2.054	-26.73	0.679	3.492	T	7.12	39.56	39.56	-39.44	
	Fu.C.7	-22.28	18.17	2.050	-26.96	0.676	3.486	T	6.95	39.47	-39.53	-39.53	
	Fu.C.8	-13.65	8.70	2.046	-16.43	0.770	3.379	T	5.69	21.85	-21.97	-21.97	
	Fu.C.9	-13.50	8.67	2.038	-16.66	0.764	3.367	T	5.52	21.76	-22.06	-22.06	
	Fu.C.10	-13.48	8.91	2.048	-16.17	0.756	3.397	T	6.75	21.87	-21.95	-21.95	
	Fu.C.11	-7.04	10.47	1.811	-20.64	0.411	3.253	T	2.68	19.34	-24.47	-24.47	
	Fu.C.12	-19.57	7.88	2.278	-12.14	1.053	3.559	T	9.54	24.21	24.21	-19.61	
	Fu.C.13	-14.15	9.39	2.039	-17.43	0.751	3.383	T	7.12	23.09	-23.37	-23.37	
	Fu.C.14	-14.24	7.49	2.017	-18.34	0.833	3.250	T	11.04	21.54	-22.28	-22.28	
	Fu.C.15	-22.27	18.18	2.050	-26.95	0.676	3.486	T	6.96	39.47	-39.53	-39.53	
Fu.C.16	-13.49	8.67	2.038	-16.65	0.763	3.368	T	5.53	21.76	-22.06	-22.06		
Fu.C.17	-13.47	8.92	2.048	-16.16	0.755	3.398	T	6.76	21.87	-21.95	-21.95		
Fu.C.18	-13.32	8.89	2.039	-16.39	0.749	3.386	T	6.59	21.78	-22.04	-22.04		
S35	Fu.C.1	-30.95			13.80	0.386	0.000	T	9.08	83.44	83.44	73.58	
	Fu.C.2	-23.11			18.12	0.314	0.000	T	7.06	75.06	75.06	69.59	
	Fu.C.3	-22.71			18.00	0.313	0.000	T	8.22	74.15	74.15	68.68	
	Fu.C.4	-22.89			17.97	0.314	0.000	T	8.09	74.41	74.41	68.94	
	Fu.C.5	-26.45			5.82	0.459	0.000	T	4.94	61.56	61.56	51.69	
	Fu.C.6	-26.05			5.70	0.460	0.000	T	6.10	60.65	60.65	50.78	
	Fu.C.7	-26.24			5.67	0.461	0.000	T	5.97	60.91	60.91	51.04	
	Fu.C.8	-18.21			10.02	0.360	0.000	T	4.08	52.27	52.27	46.79	
	Fu.C.9	-18.40			9.99	0.362	0.000	T	3.95	52.53	52.53	47.06	
	Fu.C.10	-18.00			9.87	0.361	0.000	T	5.11	51.62	51.62	46.14	
	Fu.C.11	-8.39			11.69	0.228	0.000	T	8.68	37.97	37.97	32.50	
	Fu.C.12	-27.88			7.90	0.440	0.000	T	0.38	65.50	65.50	60.03	
	Fu.C.13	-19.37			10.70	0.360	0.000	T	5.40	55.66	55.66	49.86	
	Fu.C.14	-22.87			17.95	0.314	0.000	T	8.11	74.34	74.34	68.87	
	Fu.C.15	-26.21			5.65	0.461	0.000	T	5.99	60.84	60.84	50.97	
Fu.C.16	-18.37			9.97	0.362	0.000	T	3.97	52.46	52.46	46.98		
Fu.C.17	-17.97			9.85	0.361	0.000	T	5.13	51.55	51.55	46.07		
Fu.C.18	-18.16			9.81	0.363	0.000	T	5.00	51.81	51.81	46.33		
S36	Fu.C.1	19.03			5.45	0.000	0.000	T	3.05	-8.35	-23.23	-23.23	
	Fu.C.2	21.67			7.07	0.000	0.000	T	1.77	-12.84	-21.10	-21.10	
	Fu.C.3	21.77			6.82	0.000	0.000	T	2.83	-13.26	-21.51	-21.51	
StAAF	B.C.		Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D	Nmax	Vb	Vmax	Ve	
	S36	Fu.C.4	21.71			6.85	0.000	0.000	T	2.71	-13.15	-21.41	-21.41
	Fu.C.5	9.74				2.64	0.000	0.000	T	0.95	-0.81	-15.70	-15.70



	Fu.C.6	9.84			2.39	0.000	0.000	T	2.01	-1.22	-16.11	-16.11
	Fu.C.7	9.78			2.42	0.000	0.000	T	1.88	-1.12	-16.00	-16.00
	Fu.C.8	12.48			4.02	0.000	0.000	T	0.73	-5.72	-13.97	-13.97
	Fu.C.9	12.42			4.04	0.000	0.000	T	0.61	-5.61	-13.87	-13.87
	Fu.C.10	12.53			3.79	0.000	0.000	T	1.67	-6.03	-14.28	-14.28
	Fu.C.11	19.61			2.96	0.000	0.000	T	1.93	-15.23	-23.48	-23.48
	Fu.C.12	5.37	5.92	0.338	4.62	0.000	0.000	T	0.18	3.25	-5.01	-5.01
	Fu.C.13	13.55			4.12	0.000	0.000	T	1.68	-6.59	-15.35	-15.35
	Fu.C.14	21.73			6.83	0.000	0.000	T	2.71	-13.19	-21.44	-21.44
	Fu.C.15	9.80			2.40	0.000	0.000	T	1.88	-1.15	-16.04	-16.04
	Fu.C.16	12.43			4.03	0.000	0.000	T	0.61	-5.65	-13.90	-13.90
	Fu.C.17	12.54			3.78	0.000	0.000	T	1.67	-6.06	-14.32	-14.32
	Fu.C.18	12.48			3.81	0.000	0.000	T	1.54	-5.96	-14.21	-14.21
S37	Fu.C.1	5.45			-26.24	0.217	0.000	T	3.05	-23.23	-40.46	-40.46
	Fu.C.2	7.07			-18.68	0.313	0.000	T	1.77	-21.10	-30.66	-30.66
	Fu.C.3	6.82			-19.34	0.297	0.000	T	2.83	-21.51	-31.07	-31.07
	Fu.C.4	6.85			-19.20	0.300	0.000	T	2.71	-21.41	-30.96	-30.96
	Fu.C.5	2.64			-21.54	0.155	0.000	T	0.95	-15.70	-32.92	-32.92
	Fu.C.6	2.39			-22.20	0.138	0.000	T	2.01	-16.11	-33.33	-33.33
	Fu.C.7	2.42			-22.07	0.141	0.000	T	1.88	-16.00	-33.23	-33.23
	Fu.C.8	4.02			-14.64	0.263	0.000	T	0.73	-13.97	-23.53	-23.53
	Fu.C.9	4.04			-14.51	0.267	0.000	T	0.61	-13.87	-23.43	-23.43
	Fu.C.10	3.79			-15.17	0.245	0.000	T	1.67	-14.28	-23.84	-23.84
	Fu.C.11	2.96			-25.16	0.123	0.000	T	1.93	-23.48	-33.04	-33.04
	Fu.C.12	4.62			-5.12	0.589	0.000	T	0.18	-5.01	-14.56	-14.56
	Fu.C.13	4.12			-16.19	0.248	0.000	T	1.68	-15.35	-25.48	-25.48
	Fu.C.14	6.83			-19.25	0.299	0.000	T	2.71	-21.44	-31.00	-31.00
	Fu.C.15	2.40			-22.12	0.139	0.000	T	1.88	-16.04	-33.26	-33.26
	Fu.C.16	4.03			-14.56	0.265	0.000	T	0.61	-13.90	-23.46	-23.46
	Fu.C.17	3.78			-15.22	0.244	0.000	T	1.67	-14.32	-23.87	-23.87
	Fu.C.18	3.81			-15.09	0.247	0.000	T	1.54	-14.21	-23.77	-23.77
S38	Fu.C.1	-25.43	14.61	2.151	-18.95	0.852	3.450	T	4.73	37.23	37.23	-34.08
	Fu.C.2	-14.89	6.81	2.126	-12.28	0.935	3.317	T	2.71	20.41	20.41	-19.14
	Fu.C.3	-15.15	7.10	2.153	-11.48	0.937	3.369	T	4.27	20.67	20.67	-18.89
	Fu.C.4	-15.21	7.06	2.154	-11.49	0.941	3.367	T	4.04	20.68	20.68	-18.88
	Fu.C.5	-24.02	15.08	2.126	-19.34	0.805	3.446	T	1.87	36.79	36.79	-34.52
	Fu.C.6	-24.28	15.37	2.140	-18.54	0.808	3.473	T	3.43	37.05	37.05	-34.26
	Fu.C.7	-24.34	15.33	2.141	-18.56	0.810	3.472	T	3.20	37.06	37.06	-34.25
	Fu.C.8	-13.73	7.58	2.107	-11.87	0.850	3.364	T	1.41	20.23	20.23	-19.33
	Fu.C.9	-13.79	7.55	2.108	-11.88	0.855	3.362	T	1.18	20.24	20.24	-19.32
	Fu.C.10	-14.05	7.83	2.135	-11.09	0.858	3.412	T	2.74	20.50	20.50	-19.06
	Fu.C.11	-7.68	7.21	1.761	-19.50	0.535	2.987	T	6.53	16.91	-22.65	-22.65
	Fu.C.12	-20.74	9.77	2.521	-2.50	1.094	3.948	D	-2.46	24.20	24.20	-15.35
	Fu.C.13	-15.13	8.24	2.143	-11.66	0.870	3.415	T	2.76	21.82	21.82	-20.13
	Fu.C.14	-15.26	7.07	2.156	-11.44	0.943	3.370	T	4.05	20.71	20.71	-18.85
	Fu.C.15	-24.38	15.34	2.142	-18.51	0.811	3.474	T	3.21	37.08	37.08	-34.23
	Fu.C.16	-13.84	7.55	2.111	-11.83	0.857	3.365	T	1.19	20.27	20.27	-19.29
	Fu.C.17	-14.10	7.83	2.137	-11.04	0.860	3.415	T	2.74	20.52	20.52	-19.04
	Fu.C.18	-14.16	7.80	2.139	-11.05	0.864	3.413	T	2.52	20.53	20.53	-19.02
S39	Fu.C.1	-5.23			13.40	0.866	0.000	D	-81.93	6.04	6.04	6.04
	Fu.C.2	-3.55			12.78	0.670	0.000	D	-82.43	5.29	5.29	5.29
	Fu.C.3	-3.77			12.86	0.700	0.000	D	-81.93	5.39	5.39	5.39
	Fu.C.4	-3.75			12.87	0.696	0.000	D	-82.09	5.39	5.39	5.39
	Fu.C.5	-3.92			8.40	0.981	0.000	D	-52.50	3.99	3.99	3.99
	Fu.C.6	-4.14			8.48	1.012	0.000	D	-52.00	4.09	4.09	4.09
	Fu.C.7	-4.11			8.49	1.007	0.000	D	-52.16	4.09	4.09	4.09
	Fu.C.8	-2.46			7.87	0.736	0.000	D	-52.51	3.35	3.35	3.35
	Fu.C.9	-2.44			7.88	0.729	0.000	D	-52.67	3.34	3.34	3.34
	Fu.C.10	-2.66			7.95	0.774	0.000	D	-52.17	3.44	3.44	3.44
Staaft	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D		Nmax	Vb	Vmax	Ve
S39	Fu.C.11	-7.92			12.90	1.173	0.000	D	-47.72	6.75	6.75	6.75
	Fu.C.12	2.53			3.13	0.000	0.000	D	-56.78	0.20	0.20	0.20



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

	Fu.C.13	-2.85			8.61	0.767	0.000	D	-56.45	3.71	3.71	3.71
	Fu.C.14	-3.78			12.90	0.699	0.000	D	-82.05	5.40	5.40	5.40
	Fu.C.15	-4.14			8.52	1.010	0.000	D	-52.12	4.10	4.10	4.10
	Fu.C.16	-2.47			7.90	0.734	0.000	D	-52.63	3.36	3.36	3.36
	Fu.C.17	-2.69			7.98	0.778	0.000	D	-52.13	3.46	3.46	3.46
	Fu.C.18	-2.67			7.99	0.772	0.000	D	-52.29	3.45	3.45	3.45
S40	Fu.C.1	0.65			-1.27	1.049	0.000	D	-33.06	-0.62	-0.62	-0.62
	Fu.C.2	-1.27			-0.97	0.000	0.000	D	-33.47	0.10	0.10	0.10
	Fu.C.3	-1.19			-0.89	0.000	0.000	D	-33.79	0.10	0.10	0.10
	Fu.C.4	-1.17			-0.95	0.000	0.000	D	-33.73	0.07	0.07	0.07
	Fu.C.5	1.92			-1.20	1.899	0.000	D	-17.44	-1.01	-1.01	-1.01
	Fu.C.6	1.99			-1.11	1.979	0.000	D	-17.76	-1.01	-1.01	-1.01
	Fu.C.7	2.02			-1.18	1.948	0.000	D	-17.70	-1.03	-1.03	-1.03
	Fu.C.8	0.07			-0.82	0.255	0.000	D	-18.17	-0.29	-0.29	-0.29
	Fu.C.9	0.10			-0.88	0.308	0.000	D	-18.11	-0.32	-0.32	-0.32
	Fu.C.10	0.17			-0.80	0.552	0.000	D	-18.43	-0.31	-0.31	-0.31
	Fu.C.11	-3.52			4.18	1.410	0.000	D	-21.96	2.50	2.50	2.50
	Fu.C.12	3.93			-5.91	1.233	0.000	D	-15.03	-3.19	-3.19	-3.19
	Fu.C.13	0.21			-0.94	0.553	0.000	D	-19.67	-0.37	-0.37	-0.37
	Fu.C.14	-1.16			-0.95	0.000	0.000	D	-33.79	0.07	0.07	0.07
	Fu.C.15	2.02			-1.18	1.949	0.000	D	-17.76	-1.04	-1.04	-1.04
	Fu.C.16	0.10			-0.88	0.320	0.000	D	-18.17	-0.32	-0.32	-0.32
	Fu.C.17	0.18			-0.80	0.562	0.000	D	-18.49	-0.32	-0.32	-0.32
	Fu.C.18	0.20			-0.86	0.586	0.000	D	-18.43	-0.34	-0.34	-0.34
S41	Fu.C.1	-25.60	31.47	2.360	-10.32	0.632	4.049	D	-13.97	46.46	46.46	-40.71
	Fu.C.2	-24.23	32.01	2.360	-10.47	0.599	4.047	D	-11.82	46.10	46.10	-41.06
	Fu.C.3	-24.62	32.00	2.360	-10.17	0.607	4.054	D	-12.17	46.26	46.26	-40.90
	Fu.C.4	-24.47	32.00	2.360	-10.30	0.604	4.051	D	-12.07	46.20	46.20	-40.97
	Fu.C.5	-16.50	19.40	2.360	-6.33	0.689	4.050	D	-9.98	27.57	27.57	-25.10
	Fu.C.6	-16.89	19.39	2.360	-6.02	0.702	4.062	D	-10.33	27.73	27.73	-24.94
	Fu.C.7	-16.74	19.38	2.360	-6.16	0.697	4.057	D	-10.23	27.66	27.66	-25.01
	Fu.C.8	-15.52	19.92	2.360	-6.18	0.647	4.059	D	-8.19	27.37	27.37	-25.30
	Fu.C.9	-15.37	19.92	2.360	-6.31	0.642	4.054	D	-8.08	27.31	27.31	-25.36
	Fu.C.10	-15.76	19.91	2.360	-6.01	0.656	4.066	D	-8.43	27.47	27.47	-25.20
	Fu.C.11	-15.08	20.28	2.360	-5.89	0.627	4.073	D	-12.26	27.34	27.34	-25.33
	Fu.C.12	-16.12	19.53	2.360	-6.39	0.674	4.049	D	-4.81	27.47	27.47	-25.21
	Fu.C.13	-16.77	21.49	2.360	-6.58	0.653	4.062	D	-8.93	29.31	29.31	-27.21
	Fu.C.14	-24.47	32.00	2.360	-10.30	0.604	4.051	D	-12.07	46.20	46.20	-40.97
	Fu.C.15	-16.74	19.38	2.360	-6.16	0.697	4.057	D	-10.22	27.66	27.66	-25.01
	Fu.C.16	-15.37	19.92	2.360	-6.31	0.642	4.054	D	-8.08	27.31	27.31	-25.36
	Fu.C.17	-15.75	19.91	2.360	-6.01	0.655	4.066	D	-8.43	27.47	27.47	-25.20
	Fu.C.18	-15.61	19.90	2.360	-6.14	0.650	4.061	D	-8.33	27.40	27.40	-25.27
S42	Fu.C.1	-10.32			-37.32	0.000	0.000	D	-13.97	-40.71	-54.04	-54.04
	Fu.C.2	-10.47			-37.68	0.000	0.000	D	-11.82	-41.06	-54.39	-54.39
	Fu.C.3	-10.17			-37.28	0.000	0.000	D	-12.17	-40.90	-54.24	-54.24
	Fu.C.4	-10.30			-37.45	0.000	0.000	D	-12.07	-40.97	-54.30	-54.30
	Fu.C.5	-6.33			-23.21	0.000	0.000	D	-9.98	-25.10	-34.13	-34.13
	Fu.C.6	-6.02			-22.81	0.000	0.000	D	-10.33	-24.94	-33.97	-33.97
	Fu.C.7	-6.16			-22.98	0.000	0.000	D	-10.23	-25.01	-34.03	-34.03
	Fu.C.8	-6.18			-23.17	0.000	0.000	D	-8.19	-25.30	-34.32	-34.32
	Fu.C.9	-6.31			-23.34	0.000	0.000	D	-8.08	-25.36	-34.38	-34.38
	Fu.C.10	-6.01			-22.95	0.000	0.000	D	-8.43	-25.20	-34.23	-34.23
	Fu.C.11	-5.89			-22.90	0.000	0.000	D	-12.26	-25.33	-34.35	-34.35
	Fu.C.12	-6.39			-23.33	0.000	0.000	D	-4.81	-25.21	-34.23	-34.23
	Fu.C.13	-6.58			-24.89	0.000	0.000	D	-8.93	-27.21	-37.04	-37.04
	Fu.C.14	-10.30			-37.45	0.000	0.000	D	-12.07	-40.97	-54.30	-54.30
	Fu.C.15	-6.16			-22.98	0.000	0.000	D	-10.22	-25.01	-34.03	-34.03
	Fu.C.16	-6.31			-23.34	0.000	0.000	D	-8.08	-25.36	-34.39	-34.39
	Fu.C.17	-6.01			-22.95	0.000	0.000	D	-8.43	-25.20	-34.23	-34.23
Staf	B.C.	Mb	Mmax	xMmax	Me	x-M0	x-M0 T/D		Nmax	Vb	Vmax	Ve
S42	Fu.C.18	-6.14			-23.12	0.000	0.000	D	-8.33	-25.27	-34.29	-34.29
S43	Fu.C.1	-23.92	-6.65	1.361	-8.68	0.000	0.000	D	-7.93	27.89	27.89	-8.20

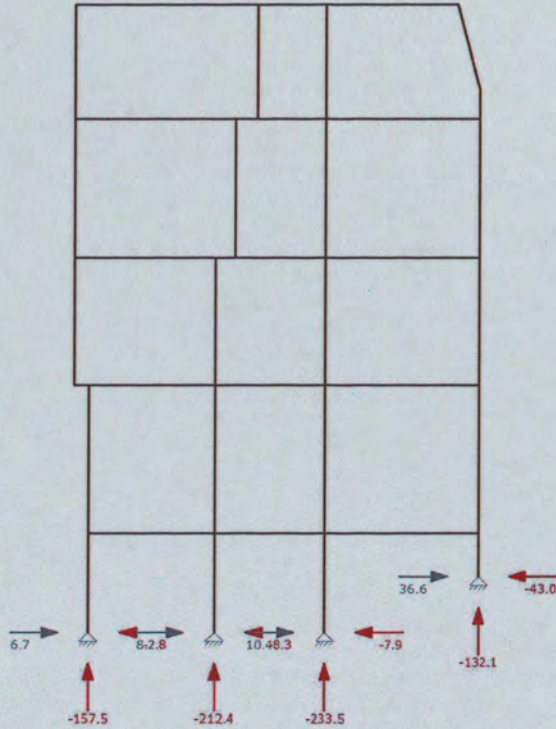


	Fu.C.2	-24.89	-7.41	1.370	-9.36	0.000	0.000	D	-6.53	28.04	28.04	-8.05
	Fu.C.3	-24.43	-7.41	1.350	-9.53	0.000	0.000	D	-6.78	27.70	27.70	-8.39
	Fu.C.4	-24.58	-7.44	1.355	-9.51	0.000	0.000	D	-6.68	27.79	27.79	-8.30
	Fu.C.5	-14.80	-3.44	1.447	-4.19	0.000	0.000	D	-5.99	18.38	18.38	-3.69
	Fu.C.6	-14.34	-3.46	1.409	-4.36	0.000	0.000	D	-6.24	18.04	18.04	-4.03
	Fu.C.7	-14.49	-3.48	1.419	-4.34	0.000	0.000	D	-6.14	18.13	18.13	-3.94
	Fu.C.8	-15.30	-4.21	1.426	-5.04	0.000	0.000	D	-4.84	18.19	18.19	-3.88
	Fu.C.9	-15.46	-4.23	1.436	-5.02	0.000	0.000	D	-4.74	18.28	18.28	-3.78
	Fu.C.10	-15.00	-4.25	1.399	-5.19	0.000	0.000	D	-4.99	17.94	17.94	-4.13
	Fu.C.11	-10.00	-4.50	0.893	-8.69	0.000	0.000	D	-5.51	13.37	13.37	-8.70
	Fu.C.12	-20.20			-1.85	0.000	0.000	D	-4.61	22.55	22.55	0.48
	Fu.C.13	-16.28	-4.71	1.404	-5.68	0.000	0.000	D	-5.21	19.41	19.41	-4.31
	Fu.C.14	-24.56	-7.47	1.353	-9.56	0.000	0.000	D	-6.66	27.75	27.75	-8.34
	Fu.C.15	-14.47	-3.51	1.415	-4.39	0.000	0.000	D	-6.12	18.09	18.09	-3.98
	Fu.C.16	-15.43	-4.26	1.432	-5.07	0.000	0.000	D	-4.72	18.25	18.25	-3.82
	Fu.C.17	-14.97	-4.28	1.394	-5.24	0.000	0.000	D	-4.97	17.91	17.91	-4.16
	Fu.C.18	-15.13	-4.30	1.405	-5.22	0.000	0.000	D	-4.87	18.00	18.00	-4.07
S44	Fu.C.1	-9.95	8.64	1.496	-7.82	0.476	2.820	D	-8.55	24.85	24.85	-12.59
	Fu.C.2	-10.33	9.12	1.530	-6.20	0.483	2.949	D	-6.43	25.42	25.42	-12.02
	Fu.C.3	-10.42	9.00	1.529	-6.36	0.488	2.934	D	-6.68	25.40	25.40	-12.04
	Fu.C.4	-10.46	9.01	1.531	-6.29	0.490	2.940	D	-6.61	25.43	25.43	-12.00
	Fu.C.5	-5.39	5.05	1.518	-6.06	0.463	2.783	D	-7.00	13.75	13.75	-9.71
	Fu.C.6	-5.47	4.93	1.516	-6.23	0.472	2.761	D	-7.25	13.72	13.72	-9.73
	Fu.C.7	-5.52	4.94	1.520	-6.15	0.476	2.769	D	-7.18	13.76	13.76	-9.70
	Fu.C.8	-5.86	5.43	1.579	-4.61	0.484	2.945	D	-5.13	14.29	14.29	-9.16
	Fu.C.9	-5.90	5.44	1.583	-4.53	0.487	2.953	D	-5.05	14.33	14.33	-9.13
	Fu.C.10	-5.99	5.32	1.580	-4.69	0.496	2.931	D	-5.31	14.31	14.31	-9.15
	Fu.C.11	-4.50	5.20	1.464	-6.90	0.392	2.716	D	-3.01	13.26	13.26	-10.20
	Fu.C.12	-7.75	5.53	1.713	-2.22	0.608	3.217	D	-7.80	15.51	15.51	-7.95
	Fu.C.13	-6.62	5.69	1.604	-4.87	0.514	2.958	D	-5.59	15.36	15.36	-9.94
	Fu.C.14	-10.51	8.99	1.532	-6.26	0.492	2.941	D	-6.59	25.46	25.46	-11.98
	Fu.C.15	-5.57	4.92	1.522	-6.12	0.480	2.771	D	-7.16	13.78	13.78	-9.67
	Fu.C.16	-5.95	5.42	1.585	-4.50	0.491	2.955	D	-5.04	14.35	14.35	-9.10
	Fu.C.17	-6.03	5.30	1.583	-4.66	0.500	2.933	D	-5.29	14.33	14.33	-9.13
	Fu.C.18	-6.08	5.31	1.586	-4.59	0.503	2.941	D	-5.22	14.36	14.36	-9.09
-	-		kNm	kNm	m	kNm	m	m	kN	kN	kN	kN

AFB. FU.C. OPLEGREACTIES OMHULLENDE

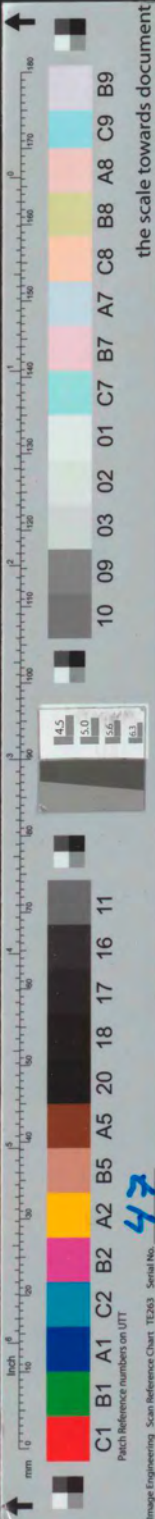
Fundamenteel Belastingscombinaties





FU.C. OPLEGREACTIES

B.C.	Oplegging	Knoop	X	Z	My
Fu.C.1	O1	K1	2.13	-146.33	0.00
	O2	K16	-0.07	-204.04	0.00
	O3	K17	1.24	-229.49	0.00
	O4	K18	-3.31	-102.15	0.00
	Som Reacties			0.00	-682.01
	Som Lasten		0.00	682.01	
Fu.C.2	O1	K1	2.21	-144.35	0.00
	O2	K16	-0.10	-207.87	0.00
	O3	K17	1.30	-227.96	0.00
	O4	K18	-3.42	-101.83	0.00
	Som Reacties			0.00	-682.01
	Som Lasten		0.00	682.01	
Fu.C.3	O1	K1	1.85	-145.26	0.00
	O2	K16	-0.03	-205.68	0.00
	O3	K17	1.07	-229.24	0.00
	O4	K18	-2.89	-101.84	0.00
	Som Reacties			0.00	-682.01
	Som Lasten		0.00	682.01	
Fu.C.4	O1	K1	3.52	-141.74	0.00
	O2	K16	-0.07	-206.04	0.00
	O3	K17	2.47	-229.78	0.00
	O4	K18	-5.92	-101.02	0.00
	Som Reacties			0.00	-678.58
	Som Lasten		0.00	678.58	
B.C.	Oplegging	Knoop	X	Z	My
Fu.C.5	O1	K1	2.19	-143.90	0.00



	O2	K16	-0.09	-210.44	0.00
	O3	K17	1.29	-231.65	0.00
	O4	K18	-3.40	-114.84	0.00
	Som Reacties		0.00	-700.83	
	Som Lasten		0.00	700.83	
Fu.C.6	O1	K1	1.83	-144.81	0.00
	O2	K16	-0.02	-208.25	0.00
	O3	K17	1.06	-232.92	0.00
	O4	K18	-2.87	-114.85	0.00
	Som Reacties		0.00	-700.83	
	Som Lasten		0.00	700.83	
Fu.C.7	O1	K1	3.51	-141.29	0.00
	O2	K16	-0.07	-208.62	0.00
	O3	K17	2.46	-233.46	0.00
	O4	K18	-5.90	-114.03	0.00
	Som Reacties		0.00	-697.40	
	Som Lasten		0.00	697.40	
Fu.C.8	O1	K1	1.91	-142.83	0.00
	O2	K16	-0.05	-212.08	0.00
	O3	K17	1.12	-231.40	0.00
	O4	K18	-2.98	-114.52	0.00
	Som Reacties		0.00	-700.83	
	Som Lasten		0.00	700.83	
Fu.C.9	O1	K1	3.58	-139.31	0.00
	O2	K16	-0.09	-212.45	0.00
	O3	K17	2.52	-231.94	0.00
	O4	K18	-6.01	-113.71	0.00
	Som Reacties		0.00	-697.40	
	Som Lasten		0.00	697.40	
Fu.C.10	O1	K1	3.22	-140.21	0.00
	O2	K16	-0.03	-210.26	0.00
	O3	K17	2.28	-233.21	0.00
	O4	K18	-5.48	-113.72	0.00
	Som Reacties		0.00	-697.40	
	Som Lasten		0.00	697.40	
Fu.C.11	O1	K1	-2.76	-60.65	0.00
	O2	K16	-8.26	-147.99	0.00
	O3	K17	-7.88	-188.79	0.00
	O4	K18	-42.98	-132.14	0.00
	Som Reacties		-61.88	-529.58	
	Som Lasten		61.88	529.58	
Fu.C.12	O1	K1	6.70	-157.51	0.00
	O2	K16	8.17	-172.73	0.00
	O3	K17	10.42	-163.99	0.00
	O4	K18	36.59	-35.34	0.00
	Som Reacties		61.88	-529.58	
	Som Lasten		-61.88	529.58	
Fu.C.13	O1	K1	2.09	-115.92	0.00
	O2	K16	-0.05	-170.75	0.00
	O3	K17	1.35	-187.47	0.00
	O4	K18	-3.39	-89.10	0.00
	Som Reacties		0.00	-563.23	
	Som Lasten		0.00	563.23	
Fu.C.14	O1	K1	2.06	-127.94	0.00
	O2	K16	-0.06	-180.91	0.00
	O3	K17	1.26	-201.10	0.00
	O4	K18	-3.26	-86.44	0.00
	Som Reacties		0.00	-596.39	
	Som Lasten		0.00	596.39	
Fu.C.15	O1	K1	2.04	-127.48	0.00
	O2	K16	-0.05	-183.48	0.00
	O3	K17	1.25	-204.78	0.00
	O4	K18	-3.24	-99.46	0.00
B.C.	Oplegging	Knoop	X	Z	My
	Som Reacties		0.00	-615.21	



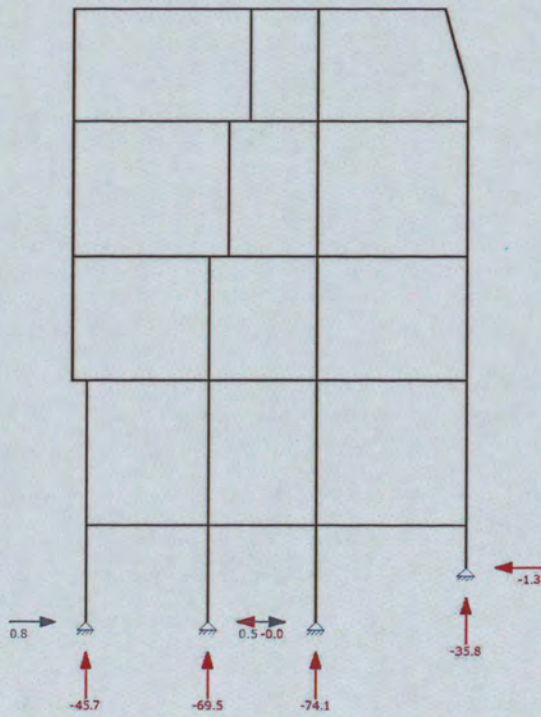
the scale towards document

Image Engineering Scan Reference Chart TE263 Serial No. 47

Som Lasten			0.00	615.21	
Fu.C.16	O1	K1	2.12	-125.50	0.00
	O2	K16	-0.08	-187.31	0.00
	O3	K17	1.31	-203.26	0.00
	O4	K18	-3.35	-99.13	0.00
Som Reacties			0.00	-615.21	
Som Lasten			0.00	615.21	
Fu.C.17	O1	K1	1.76	-126.41	0.00
	O2	K16	-0.01	-185.13	0.00
	O3	K17	1.07	-204.53	0.00
	O4	K18	-2.82	-99.14	0.00
Som Reacties			0.00	-615.21	
Som Lasten			0.00	615.21	
Fu.C.18	O1	K1	3.43	-122.89	0.00
	O2	K16	-0.06	-185.49	0.00
	O3	K17	2.48	-205.07	0.00
	O4	K18	-5.86	-98.32	0.00
Som Reacties			0.00	-611.77	
Som Lasten			0.00	611.77	
-	-	-	kN	kN	kNm

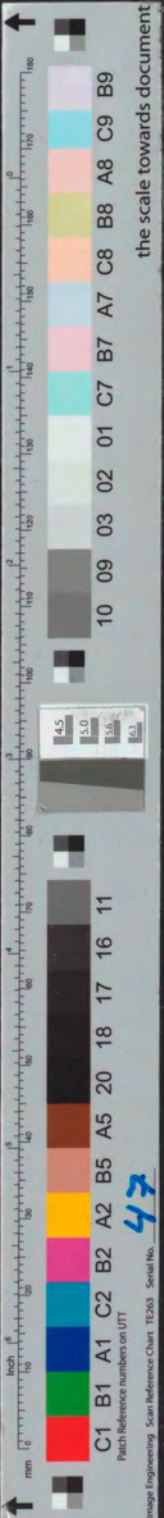
AFB. B.G.1: PERMANENT OPLEGREACTIES

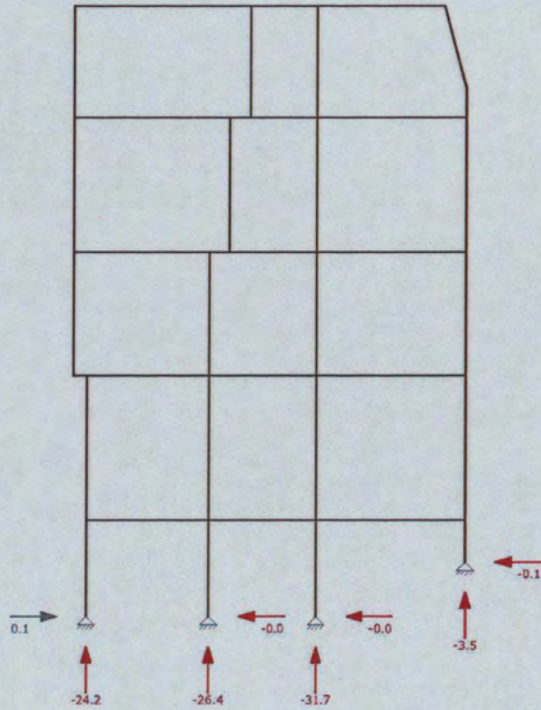
Belastingsgevallen



AFB. B.G.2: VERDEELDE VERANDERLIJKE BELASTING OPLEGREACTIES

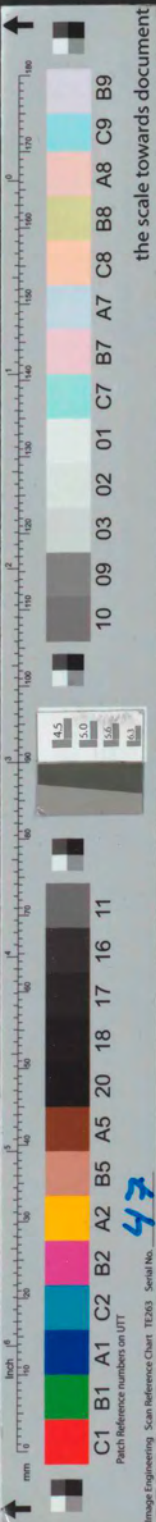
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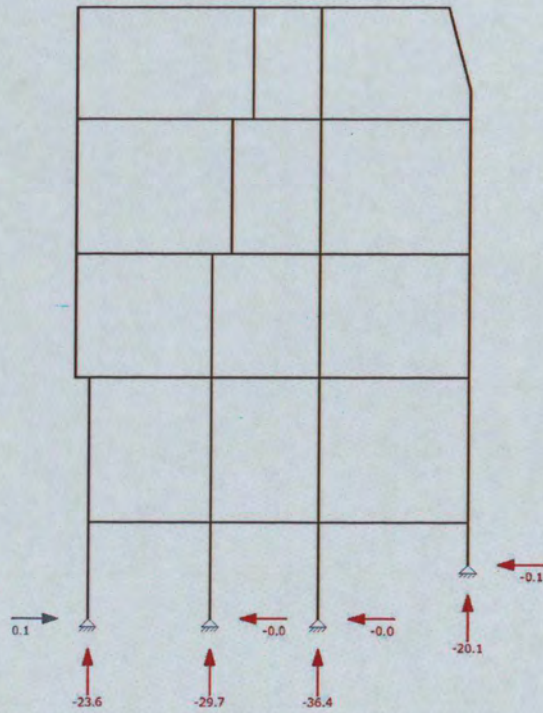




AFB. B.G.3: VERDEELDE VERANDERLIJKE BELASTING OPLEGREACTIES

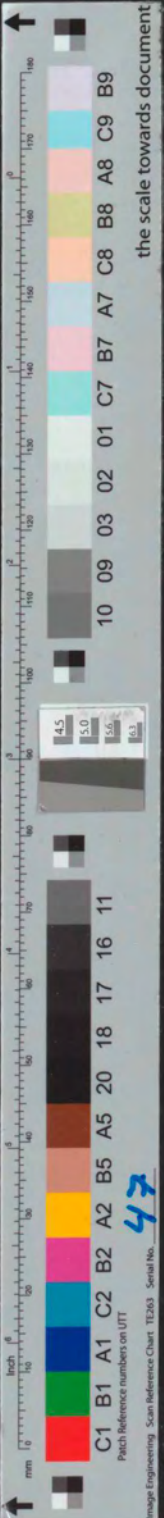
Belastingsgevallen

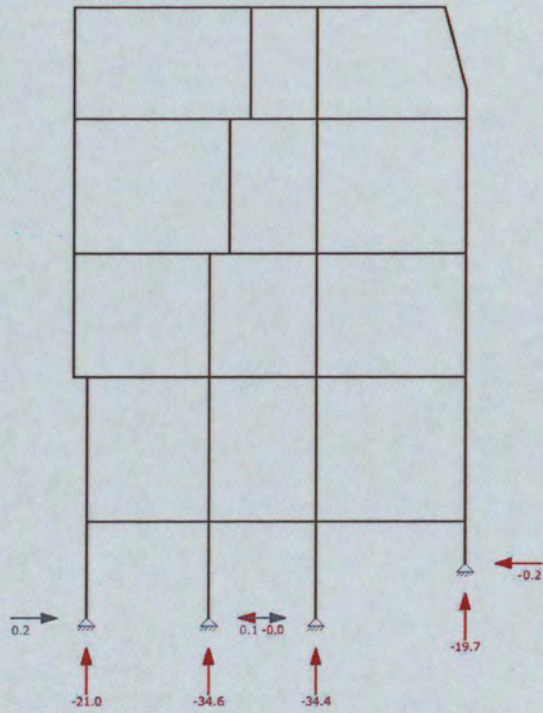




AFB. B.G.4: VERDEELDE VERANDERLIJKE BELASTING OPLEGREACTIES

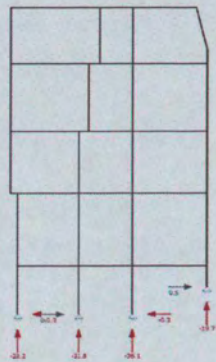
Belastingsgevallen





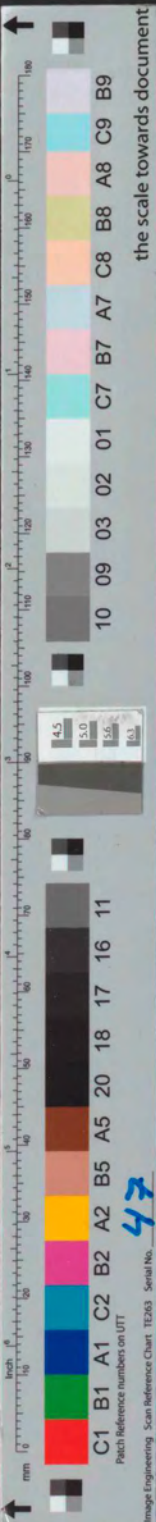
AFB. B.G.5: VERDEELDE VERANDERLIJKE BELASTING OPLEGREACTIES

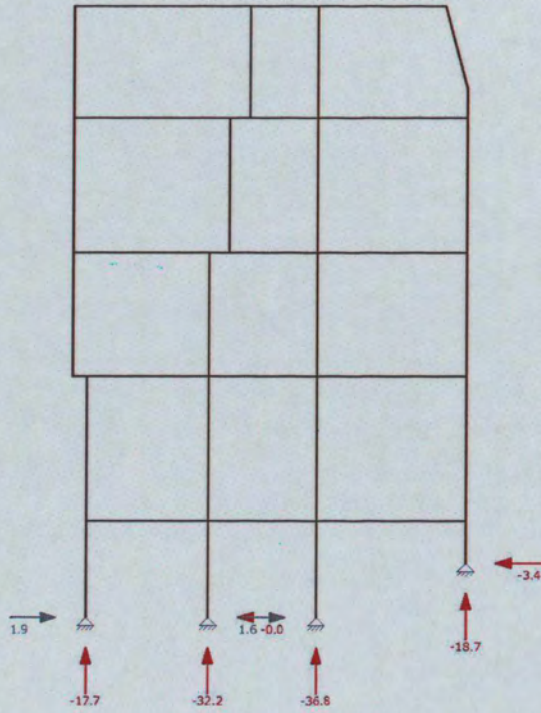
Belastingsgevallen



AFB. B.G.6: VERDEELDE VERANDERLIJKE BELASTING OPLEGREACTIES

Belastingsgevallen





AFB. B.G.7: WIND LINKS OPLEGREACTIES

Belastingsgevallen

↑

the scale towards document

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

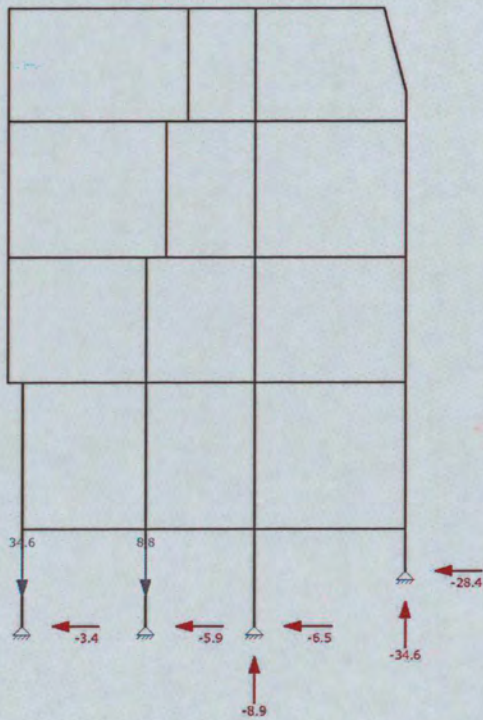
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C1 B1 A1 C2 B2 A2 C3 B3 A3 C4 B4 A4 C5 B5 A5 C6 B6 A6 C7 B7 A7 C8 B8 A8 C9 B9 C10 B10 A10

Patch Reference numbers on IJT

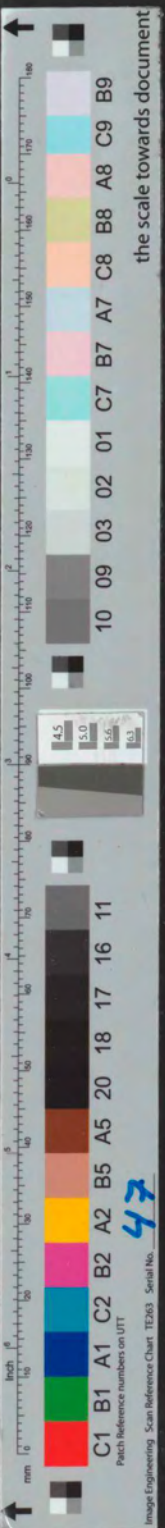
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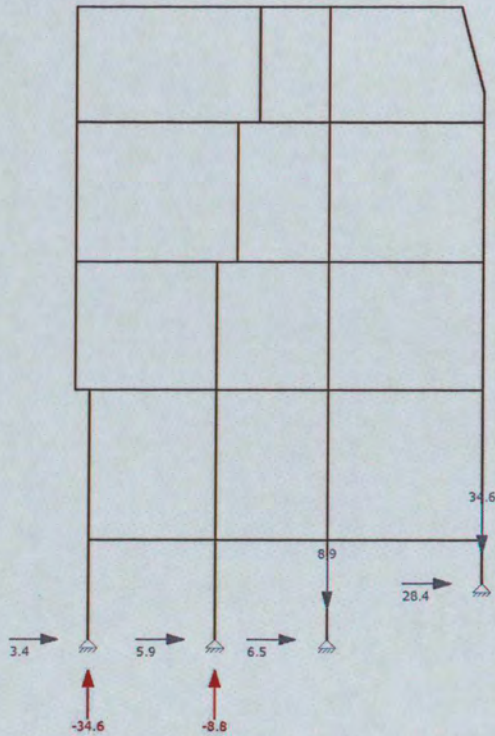
Image Engineering Scan Reference Chart TE263 Serial No.



AFB. B.G.8: WIND RECHTS OPLEGREACTIES

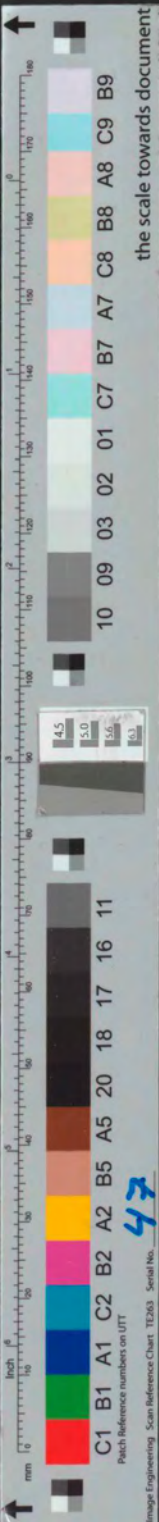
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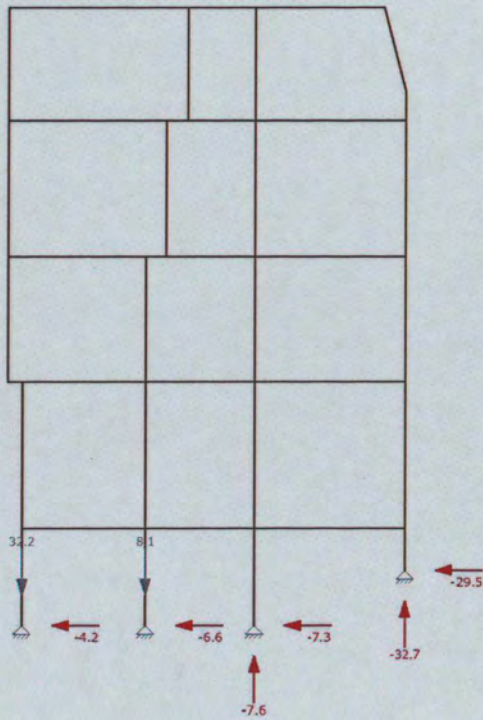




AFB. B.G.9: KNIKLENGTE (ASSYMETRISCH) OPLEGREACTIES

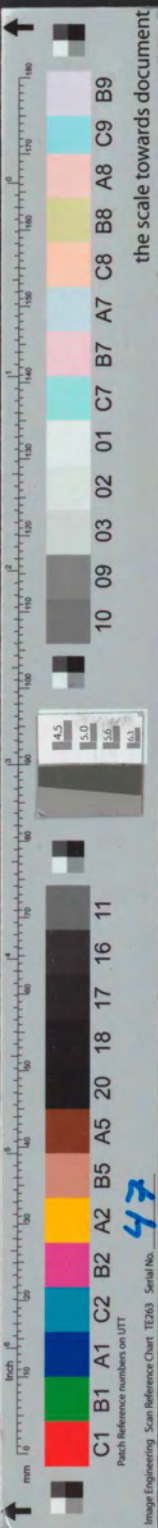
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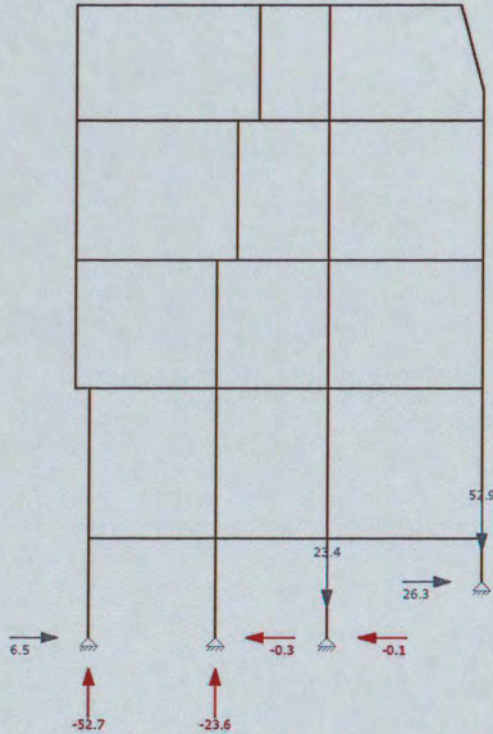




AFB. B.G.10: KNIKLENGTE (SYMMETRISCH) OPLEGREACTIES

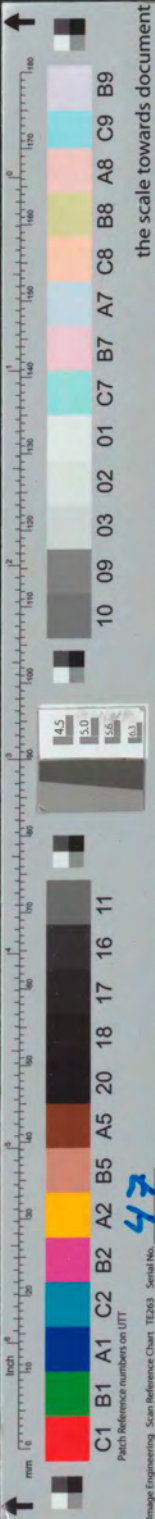
Belastingsgevallen





B.G. OPLEGREACTIES

B.C.	Oplegging	Knoop	X	Z	My
B.G.1	01	K1	0.81	-45.68	0.00
	02	K16	-0.02	-69.53	0.00
	03	K17	0.51	-74.06	0.00
	04	K18	-1.30	-35.84	0.00
	Som Reacties			0.00	-225.11
Som Lasten			0.00	225.11	
B.G.2	01	K1	0.12	-24.17	0.00
	02	K16	-0.02	-26.35	0.00
	03	K17	-0.01	-31.67	0.00
	04	K18	-0.09	-3.46	0.00
	Som Reacties			0.00	-85.65
Som Lasten			0.00	85.65	
B.G.3	01	K1	0.09	-23.59	0.00
	02	K16	-0.01	-29.65	0.00
	03	K17	-0.03	-36.40	0.00
	04	K18	-0.06	-20.14	0.00
	Som Reacties			0.00	-109.78
Som Lasten			0.00	109.78	
B.G.4	01	K1	0.19	-21.05	0.00
	02	K16	-0.05	-34.56	0.00
	03	K17	0.05	-34.44	0.00
	04	K18	-0.20	-19.72	0.00
	Som Reacties			0.00	-109.78
Som Lasten			0.00	109.78	
B.C.	Oplegging	Knoop	X	Z	My
B.G.5	01	K1	-0.27	-22.21	0.00



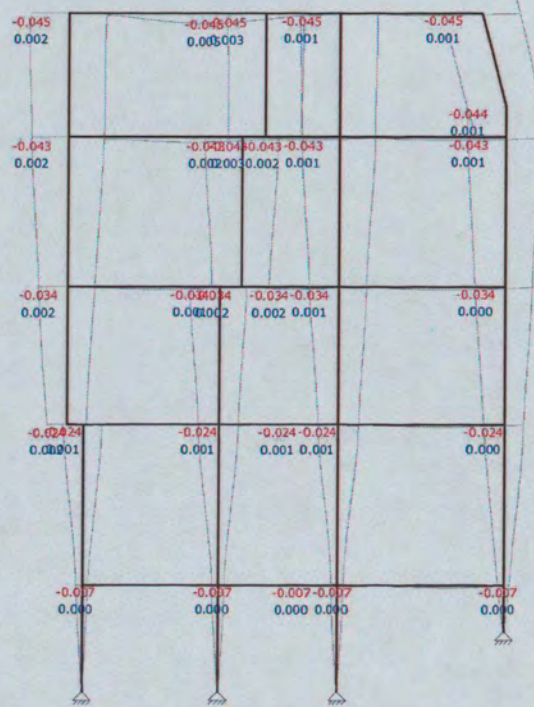
47

	O2	K16	0.04	-31.76	0.00
	O3	K17	-0.25	-36.08	0.00
	O4	K18	0.48	-19.73	0.00
	Som Reacties		0.00	-109.78	
	Som Lasten		0.00	109.78	
B.G.6	O1	K1	1.88	-17.69	0.00
	O2	K16	-0.02	-32.22	0.00
	O3	K17	1.55	-36.77	0.00
	O4	K18	-3.41	-18.69	0.00
	Som Reacties		0.00	-105.38	
	Som Lasten		0.00	105.38	
B.G.7	O1	K1	-3.38	34.59	0.00
	O2	K16	-5.87	8.83	0.00
	O3	K17	-6.54	-8.86	0.00
	O4	K18	-28.42	-34.57	0.00
	Som Reacties		-44.20	0.00	
	Som Lasten		44.20	0.00	
B.G.8	O1	K1	3.38	-34.59	0.00
	O2	K16	5.87	-8.84	0.00
	O3	K17	6.53	8.86	0.00
	O4	K18	28.42	34.57	0.00
	Som Reacties		44.20	0.00	
	Som Lasten		-44.20	0.00	
B.G.9	O1	K1	-4.17	32.15	0.00
	O2	K16	-6.59	8.13	0.00
	O3	K17	-7.29	-7.56	0.00
	O4	K18	-29.53	-32.73	0.00
	Som Reacties		-47.58	0.00	
	Som Lasten		47.58	0.00	
B.G.10	O1	K1	6.49	-52.72	0.00
	O2	K16	-0.33	-23.55	0.00
	O3	K17	-0.08	23.42	0.00
	O4	K18	26.32	52.86	0.00
	Som Reacties		32.41	0.00	
	Som Lasten		-32.41	0.00	
-	-	-	kN	kN	kNm

AFB. KA.C. VERPLAATSINGEN OMHULLENDE

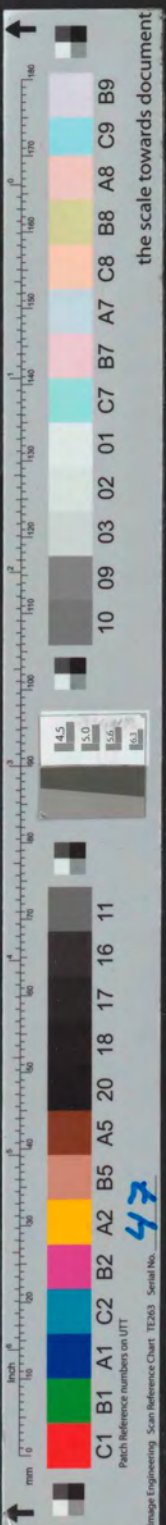
Karakteristiek Belastingscombinaties





KA.C. KNOOPVERPLAATSINGEN

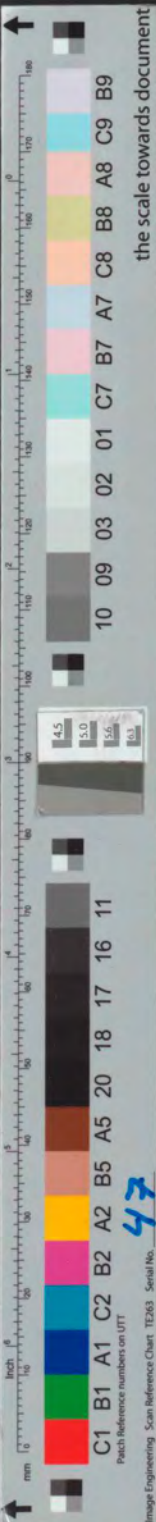
Knoop	B.C.	X	Z	Yr
K1	Ka.C.(w1)	0.0000	0.0000	0.196e-03
	Ka.C.1	0.0000	0.0000	0.392e-03
	Ka.C.2	0.0000	0.0000	0.407e-03
	Ka.C.3	0.0000	0.0000	0.403e-03
	Ka.C.4	0.0000	0.0000	0.415e-03
	Ka.C.5	0.0000	0.0000	0.354e-03
	Ka.C.6	0.0000	0.0000	0.674e-03
	Ka.C.7	0.0000	0.0000	-2.671e-03
K2	Ka.C.(w1)	-0.0002	0.0001	-0.156e-03
	Ka.C.1	-0.0004	0.0002	-0.310e-03
	Ka.C.2	-0.0004	0.0002	-0.325e-03
	Ka.C.3	-0.0004	0.0002	-0.323e-03
	Ka.C.4	-0.0004	0.0002	-0.336e-03
	Ka.C.5	-0.0004	0.0002	-0.277e-03
	Ka.C.6	-0.0007	0.0002	-0.520e-03
	Ka.C.7	0.0064	0.0001	-1.899e-03
K3	Ka.C.(w1)	-0.0006	0.0002	0.411e-03
	Ka.C.1	-0.0013	0.0004	0.788e-03
	Ka.C.2	-0.0014	0.0005	1.063e-03
	Ka.C.3	-0.0014	0.0005	1.025e-03
	Ka.C.4	-0.0014	0.0005	1.128e-03
	Ka.C.5	-0.0013	0.0005	0.462e-03
	Ka.C.6	-0.0017	0.0005	0.830e-03
Knoop	B.C.	X	Z	Yr
K3	Ka.C.7	0.0216	0.0003	-1.316e-03



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

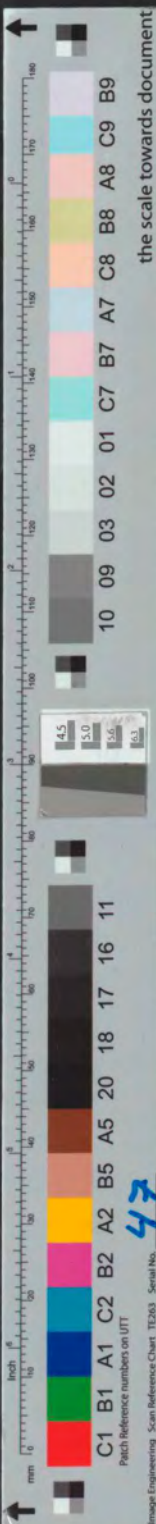
Knoop	B.C.	X	Z	Yr
K4	Ka.C.8	-0.0241	0.0006	2.892e-03
	Ka.C.(w1)	-0.0006	0.0004	0.594e-03
	Ka.C.1	-0.0013	0.0009	1.149e-03
	Ka.C.2	-0.0014	0.0011	1.472e-03
	Ka.C.3	-0.0014	0.0010	1.418e-03
	Ka.C.4	-0.0014	0.0011	1.594e-03
	Ka.C.5	-0.0013	0.0008	0.912e-03
	Ka.C.6	-0.0017	0.0009	1.182e-03
K5	Ka.C.7	0.0216	-0.0002	-1.295e-03
	Ka.C.8	-0.0241	0.0019	3.593e-03
	Ka.C.(w1)	-0.0008	0.0005	-0.320e-03
	Ka.C.1	-0.0017	0.0010	-0.633e-03
	Ka.C.2	-0.0019	0.0013	-0.668e-03
	Ka.C.3	-0.0019	0.0012	-0.472e-03
	Ka.C.4	-0.0021	0.0013	-1.273e-03
	Ka.C.5	-0.0018	0.0010	-0.583e-03
K6	Ka.C.6	-0.0021	0.0011	-0.640e-03
	Ka.C.7	0.0308	-0.0001	-2.544e-03
	Ka.C.8	-0.0342	0.0021	1.278e-03
	Ka.C.(w1)	-0.0006	0.0006	-0.233e-03
	Ka.C.1	-0.0012	0.0012	-0.650e-03
	Ka.C.2	-0.0013	0.0015	-0.271e-03
	Ka.C.3	-0.0013	0.0015	-1.733e-03
	Ka.C.4	-0.0014	0.0015	-0.547e-03
K7	Ka.C.5	-0.0013	0.0011	-0.677e-03
	Ka.C.6	-0.0016	0.0012	-0.647e-03
	Ka.C.7	0.0404	0.0001	-1.752e-03
	Ka.C.8	-0.0428	0.0023	0.452e-03
	Ka.C.(w1)	-0.0006	0.0007	-1.762e-03
	Ka.C.1	-0.0010	0.0013	-2.893e-03
	Ka.C.2	-0.0010	0.0016	-4.831e-03
	Ka.C.3	-0.0010	0.0015	-2.633e-03
K8	Ka.C.4	-0.0013	0.0015	-2.896e-03
	Ka.C.5	-0.0011	0.0012	-2.910e-03
	Ka.C.6	-0.0015	0.0013	-2.893e-03
	Ka.C.7	0.0427	0.0002	-3.317e-03
	Ka.C.8	-0.0448	0.0023	-2.469e-03
	Ka.C.(w1)	-0.0002	0.0001	0.085e-03
	Ka.C.1	-0.0004	0.0003	0.170e-03
	Ka.C.2	-0.0004	0.0003	0.179e-03
K9	Ka.C.3	-0.0004	0.0003	0.175e-03
	Ka.C.4	-0.0004	0.0003	0.185e-03
	Ka.C.5	-0.0004	0.0003	0.148e-03
	Ka.C.6	-0.0007	0.0003	0.292e-03
	Ka.C.7	0.0064	0.0002	-0.686e-03
	Ka.C.8	-0.0072	0.0003	1.026e-03
	Ka.C.(w1)	-0.0002	0.0001	0.023e-03
	Ka.C.1	-0.0004	0.0003	0.043e-03
K10	Ka.C.2	-0.0004	0.0003	0.038e-03
	Ka.C.3	-0.0004	0.0003	0.038e-03
	Ka.C.4	-0.0004	0.0003	0.038e-03
	Ka.C.5	-0.0004	0.0003	0.048e-03
	Ka.C.6	-0.0007	0.0003	0.084e-03
	Ka.C.7	0.0063	0.0002	0.315e-03
	Ka.C.8	-0.0072	0.0004	-0.229e-03
	Ka.C.(w1)	-0.0002	0.0001	-0.068e-03
K11	Ka.C.1	-0.0004	0.0003	-0.141e-03
	Ka.C.2	-0.0004	0.0003	-0.134e-03
	Ka.C.3	-0.0004	0.0003	-0.133e-03
	Ka.C.4	-0.0004	0.0003	-0.142e-03
	Ka.C.5	-0.0004	0.0003	-0.112e-03
	Ka.C.6	-0.0007	0.0003	-0.292e-03
	Ka.C.7	0.0063	0.0003	-0.791e-03
	Ka.C.8	-0.0072	0.0003	0.509e-03
K11	Ka.C.(w1)	-0.0002	0.0000	0.295e-03



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

	Ka.C.2	-0.0004	0.0001	0.610e-03
	Ka.C.3	-0.0004	0.0001	0.604e-03
	Ka.C.4	-0.0005	0.0001	0.621e-03
	Ka.C.5	-0.0004	0.0001	0.530e-03
	Ka.C.6	-0.0007	0.0001	1.043e-03
	Ka.C.7	0.0063	0.0001	-2.840e-03
	Ka.C.8	-0.0071	0.0000	4.025e-03
K12	Ka.C.(w1)	-0.0006	0.0003	0.049e-03
	Ka.C.1	-0.0013	0.0006	0.090e-03
	Ka.C.2	-0.0014	0.0007	0.087e-03
	Ka.C.3	-0.0014	0.0007	0.109e-03
	Ka.C.4	-0.0014	0.0007	0.008e-03
	Ka.C.5	-0.0013	0.0007	0.234e-03
	Ka.C.6	-0.0017	0.0007	0.071e-03
	Ka.C.7	0.0216	0.0006	-1.109e-03
	Ka.C.8	-0.0241	0.0007	1.288e-03
K13	Ka.C.(w1)	-0.0006	0.0004	0.055e-03
	Ka.C.1	-0.0013	0.0007	0.106e-03
	Ka.C.2	-0.0014	0.0008	0.098e-03
	Ka.C.3	-0.0014	0.0008	0.089e-03
	Ka.C.4	-0.0014	0.0009	0.132e-03
	Ka.C.5	-0.0013	0.0008	0.174e-03
	Ka.C.6	-0.0017	0.0008	0.110e-03
	Ka.C.7	0.0216	0.0004	0.454e-03
	Ka.C.8	-0.0241	0.0010	-0.243e-03
K14	Ka.C.(w1)	-0.0006	0.0004	-0.075e-03
	Ka.C.1	-0.0013	0.0007	-0.148e-03
	Ka.C.2	-0.0014	0.0008	-0.139e-03
	Ka.C.3	-0.0014	0.0008	-0.164e-03
	Ka.C.4	-0.0014	0.0008	-0.057e-03
	Ka.C.5	-0.0013	0.0008	-0.375e-03
	Ka.C.6	-0.0017	0.0007	-0.114e-03
	Ka.C.7	0.0216	0.0007	-1.500e-03
	Ka.C.8	-0.0241	0.0006	1.204e-03
K15	Ka.C.(w1)	-0.0006	0.0001	0.317e-03
	Ka.C.1	-0.0013	0.0003	0.641e-03
	Ka.C.2	-0.0014	0.0003	0.672e-03
	Ka.C.3	-0.0014	0.0003	0.694e-03
	Ka.C.4	-0.0014	0.0003	0.559e-03
	Ka.C.5	-0.0013	0.0003	1.182e-03
	Ka.C.6	-0.0017	0.0003	0.583e-03
	Ka.C.7	0.0216	0.0004	-1.380e-03
	Ka.C.8	-0.0241	0.0002	2.662e-03
K16	Ka.C.(w1)	0.0000	0.0000	0.077e-03
	Ka.C.1	0.0000	0.0000	0.154e-03
	Ka.C.2	0.0000	0.0000	0.158e-03
	Ka.C.3	0.0000	0.0000	0.157e-03
	Ka.C.4	0.0000	0.0000	0.158e-03
	Ka.C.5	0.0000	0.0000	0.143e-03
	Ka.C.6	0.0000	0.0000	0.271e-03
	Ka.C.7	0.0000	0.0000	-3.263e-03
	Ka.C.8	0.0000	0.0000	3.571e-03
K17	Ka.C.(w1)	0.0000	0.0000	0.154e-03
	Ka.C.1	0.0000	0.0000	0.311e-03
	Ka.C.2	0.0000	0.0000	0.316e-03
	Ka.C.3	0.0000	0.0000	0.313e-03
	Ka.C.4	0.0000	0.0000	0.323e-03
	Ka.C.5	0.0000	0.0000	0.274e-03
	Ka.C.6	0.0000	0.0000	0.566e-03
	Ka.C.7	0.0000	0.0000	-3.191e-03
	Ka.C.8	0.0000	0.0000	3.813e-03
K18	Ka.C.(w1)	0.0000	0.0000	0.131e-03
	Ka.C.1	0.0000	0.0000	0.263e-03
	Ka.C.2	0.0000	0.0000	0.274e-03
	Ka.C.3	0.0000	0.0000	0.270e-03
Knoop	B.C.	X	Z	Yr
K18	Ka.C.4	0.0000	0.0000	0.277e-03



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

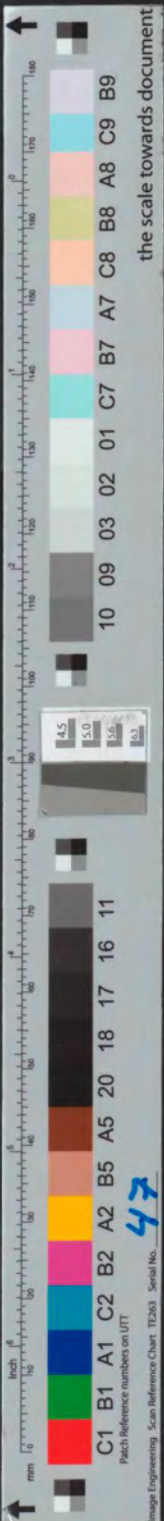
	Ka.C.5	0.0000	0.0000	0.237e-03
	Ka.C.6	0.0000	0.0000	0.456e-03
	Ka.C.7	0.0000	0.0000	-6.760e-03
	Ka.C.8	0.0000	0.0000	7.287e-03
K19	Ka.C.(w1)	-0.0008	0.0005	-0.472e-03
	Ka.C.1	-0.0017	0.0009	-0.760e-03
	Ka.C.2	-0.0019	0.0010	-1.060e-03
	Ka.C.3	-0.0019	0.0010	-1.208e-03
	Ka.C.4	-0.0021	0.0011	-0.404e-03
	Ka.C.5	-0.0018	0.0010	-0.806e-03
	Ka.C.6	-0.0021	0.0009	-0.757e-03
	Ka.C.7	0.0308	0.0008	-1.646e-03
	Ka.C.8	-0.0342	0.0010	0.126e-03
K20	Ka.C.(w1)	-0.0008	0.0005	0.054e-03
	Ka.C.1	-0.0017	0.0009	0.067e-03
	Ka.C.2	-0.0019	0.0011	0.142e-03
	Ka.C.3	-0.0019	0.0011	0.269e-03
	Ka.C.4	-0.0021	0.0011	-0.246e-03
	Ka.C.5	-0.0018	0.0011	0.129e-03
	Ka.C.6	-0.0021	0.0010	0.062e-03
	Ka.C.7	0.0308	0.0010	-1.054e-03
	Ka.C.8	-0.0342	0.0008	1.189e-03
K21	Ka.C.(w1)	-0.0008	0.0002	0.311e-03
	Ka.C.1	-0.0017	0.0004	0.638e-03
	Ka.C.2	-0.0019	0.0004	0.653e-03
	Ka.C.3	-0.0019	0.0005	0.510e-03
	Ka.C.4	-0.0021	0.0005	1.330e-03
	Ka.C.5	-0.0018	0.0004	0.533e-03
	Ka.C.6	-0.0021	0.0004	0.654e-03
	Ka.C.7	0.0308	0.0005	-1.263e-03
	Ka.C.8	-0.0342	0.0002	2.539e-03
K22	Ka.C.(w1)	-0.0008	0.0009	-0.663e-03
	Ka.C.1	-0.0017	0.0016	-1.189e-03
	Ka.C.2	-0.0019	0.0019	-1.457e-03
	Ka.C.3	-0.0019	0.0020	-1.652e-03
	Ka.C.4	-0.0021	0.0017	-1.215e-03
	Ka.C.5	-0.0018	0.0017	-1.219e-03
	Ka.C.6	-0.0021	0.0016	-1.187e-03
	Ka.C.7	0.0308	0.0018	-1.646e-03
	Ka.C.8	-0.0342	0.0013	-0.731e-03
K23	Ka.C.(w1)	-0.0008	0.0009	0.470e-03
	Ka.C.1	-0.0017	0.0016	0.817e-03
	Ka.C.2	-0.0019	0.0019	0.993e-03
	Ka.C.3	-0.0019	0.0021	1.093e-03
	Ka.C.4	-0.0021	0.0017	0.886e-03
	Ka.C.5	-0.0018	0.0018	0.822e-03
	Ka.C.6	-0.0021	0.0016	0.815e-03
	Ka.C.7	0.0308	0.0015	1.194e-03
	Ka.C.8	-0.0342	0.0017	0.441e-03
K24	Ka.C.(w1)	-0.0005	0.0010	-0.171e-03
	Ka.C.1	-0.0012	0.0018	-0.058e-03
	Ka.C.2	-0.0013	0.0022	-0.588e-03
	Ka.C.3	-0.0013	0.0023	0.690e-03
	Ka.C.4	-0.0014	0.0019	-0.096e-03
	Ka.C.5	-0.0012	0.0019	-0.064e-03
	Ka.C.6	-0.0016	0.0019	-0.060e-03
	Ka.C.7	0.0404	0.0020	-0.571e-03
	Ka.C.8	-0.0427	0.0016	0.456e-03
K25	Ka.C.(w1)	-0.0005	0.0006	0.117e-03
	Ka.C.1	-0.0012	0.0012	0.037e-03
	Ka.C.2	-0.0013	0.0014	0.342e-03
	Ka.C.3	-0.0013	0.0014	-0.418e-03
	Ka.C.4	-0.0014	0.0013	0.067e-03
	Ka.C.5	-0.0012	0.0013	0.035e-03
	Ka.C.6	-0.0016	0.0012	0.040e-03
Knoop	B.C.	X	Z	Yr
K25	Ka.C.7	0.0404	0.0013	-0.392e-03



CORE CONSTRUCTIES

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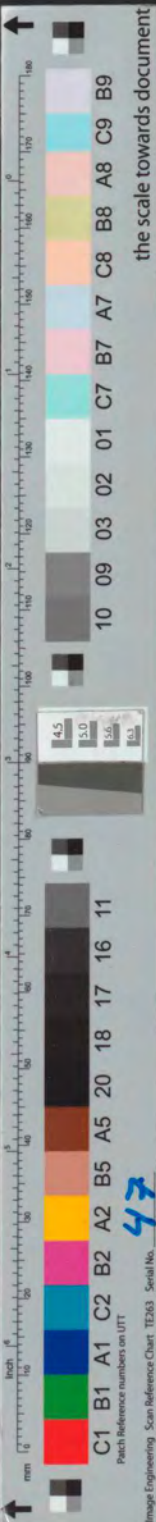
K26	Ka.C.8	-0.0427	0.0010	0.466e-03
	Ka.C.(w1)	-0.0005	0.0003	0.276e-03
	Ka.C.1	-0.0012	0.0005	0.643e-03
	Ka.C.2	-0.0013	0.0005	0.500e-03
	Ka.C.3	-0.0013	0.0006	1.426e-03
	Ka.C.4	-0.0014	0.0006	0.533e-03
	Ka.C.5	-0.0012	0.0005	0.662e-03
	Ka.C.6	-0.0016	0.0005	0.645e-03
	Ka.C.7	0.0404	0.0006	-0.335e-03
K27	Ka.C.8	-0.0427	0.0003	1.621e-03
	Ka.C.(w1)	-0.0006	0.0003	-0.097e-03
	Ka.C.1	-0.0013	0.0005	-0.158e-03
	Ka.C.2	-0.0013	0.0005	-0.360e-03
	Ka.C.3	-0.0017	0.0006	-0.010e-03
	Ka.C.4	-0.0015	0.0006	-0.193e-03
	Ka.C.5	-0.0014	0.0005	-0.159e-03
	Ka.C.6	-0.0017	0.0005	-0.158e-03
	Ka.C.7	0.0410	0.0006	-1.096e-03
K28	Ka.C.8	-0.0436	0.0003	0.780e-03
	Ka.C.(w1)	-0.0006	0.0003	0.478e-03
	Ka.C.1	-0.0011	0.0004	0.655e-03
	Ka.C.2	-0.0011	0.0005	1.011e-03
	Ka.C.3	-0.0011	0.0005	0.504e-03
	Ka.C.4	-0.0013	0.0005	0.699e-03
	Ka.C.5	-0.0012	0.0005	0.664e-03
	Ka.C.6	-0.0015	0.0005	0.663e-03
	Ka.C.7	0.0426	0.0002	0.514e-03
K29	Ka.C.8	-0.0448	0.0007	0.796e-03
	Ka.C.(w1)	-0.0005	0.0012	-0.280e-03
	Ka.C.1	-0.0012	0.0021	-0.395e-03
	Ka.C.2	-0.0013	0.0028	-0.783e-03
	Ka.C.3	-0.0013	0.0023	-0.139e-03
	Ka.C.4	-0.0014	0.0022	-0.437e-03
	Ka.C.5	-0.0012	0.0022	-0.393e-03
	Ka.C.6	-0.0016	0.0021	-0.398e-03
	Ka.C.7	0.0404	0.0024	-0.460e-03
K30	Ka.C.8	-0.0427	0.0017	-0.331e-03
	Ka.C.(w1)	-0.0005	0.0011	0.515e-03
	Ka.C.1	-0.0012	0.0018	0.792e-03
	Ka.C.2	-0.0013	0.0025	1.175e-03
	Ka.C.3	-0.0013	0.0019	0.852e-03
	Ka.C.4	-0.0014	0.0020	0.762e-03
	Ka.C.5	-0.0012	0.0019	0.796e-03
	Ka.C.6	-0.0016	0.0019	0.790e-03
	Ka.C.7	0.0404	0.0020	1.094e-03
K31	Ka.C.8	-0.0427	0.0016	0.490e-03
	Ka.C.(w1)	-0.0006	0.0013	1.143e-03
	Ka.C.1	-0.0011	0.0022	1.760e-03
	Ka.C.2	-0.0011	0.0030	2.794e-03
	Ka.C.3	-0.0010	0.0025	1.661e-03
	Ka.C.4	-0.0013	0.0023	1.762e-03
	Ka.C.5	-0.0011	0.0023	1.750e-03
	Ka.C.6	-0.0015	0.0023	1.759e-03
	Ka.C.7	0.0427	0.0025	1.578e-03
K32	Ka.C.8	-0.0448	0.0019	1.942e-03
	Ka.C.(w1)	-0.0006	0.0006	-0.147e-03
	Ka.C.1	-0.0011	0.0012	-0.239e-03
	Ka.C.2	-0.0011	0.0015	-0.479e-03
	Ka.C.3	-0.0010	0.0015	-0.133e-03
	Ka.C.4	-0.0013	0.0014	-0.256e-03
	Ka.C.5	-0.0011	0.0013	-0.228e-03
	Ka.C.6	-0.0015	0.0012	-0.237e-03
	Ka.C.7	0.0427	0.0013	-0.210e-03
K33	Ka.C.8	-0.0448	0.0011	-0.268e-03
	Ka.C.(w1)	-0.0006	0.0022	1.912e-03
Knoop	B.C.	X	Z	Yr
K33	Ka.C.1	-0.0011	0.0037	3.030e-03



Ka.C.2	-0.0010	0.0053	4.816e-03
Ka.C.3	-0.0010	0.0039	2.926e-03
Ka.C.4	-0.0013	0.0038	3.048e-03
Ka.C.5	-0.0011	0.0038	3.007e-03
Ka.C.6	-0.0015	0.0037	3.029e-03
Ka.C.7	0.0427	0.0039	2.830e-03
Ka.C.8	-0.0448	0.0034	3.229e-03
-	-	m	m
-	-	m	rad

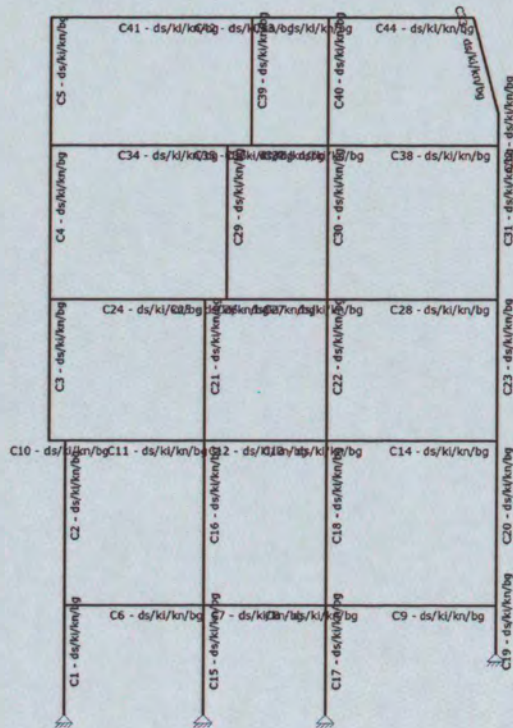
KA.C. EXTREME DOORBUIGINGEN

Staaf	B.C.	Knoop Begin		Staaf Z'afst	Knoop Eind Z'	Knoop Begin	Knoop Eind
S1	Ka.C.7	0.000	0.000	1.530	0.0003	0.006	0.000
S1	Ka.C.8	0.000	0.000	1.530	-0.0007	-0.007	0.000
S2	Ka.C.8	-0.007	0.000	1.062	0.0014	-0.024	0.001
S3	Ka.C.4	-0.001	0.001	1.722	-0.0012	-0.002	0.001
S4	Ka.C.4	-0.002	0.001	1.048	0.0005	-0.001	0.001
S4	Ka.C.8	-0.034	0.002	2.763	-0.0008	-0.043	0.002
S5	Ka.C.2	-0.001	0.001	2.074	-0.0021	-0.001	0.002
S6	Ka.C.7	0.006	0.000	1.093	0.0010	0.006	0.000
S7	Ka.C.7	0.006	0.000	0.833	0.0003	0.006	0.000
S7	Ka.C.8	-0.007	0.000	0.685	-0.0003	-0.007	0.000
S8	Ka.C.7	0.006	0.000	0.558	-0.0001	0.006	0.000
S8	Ka.C.8	-0.007	0.000	0.517	0.0001	-0.007	0.000
S9	Ka.C.7	0.006	0.000	3.144	-0.0012	0.006	0.000
S9	Ka.C.8	-0.007	0.000	2.681	0.0027	-0.007	0.000
S10	Ka.C.8	-0.024	0.002	0.229	0.0000	-0.024	0.001
S11	Ka.C.7	0.022	0.000	1.043	0.0007	0.022	0.001
S11	Ka.C.8	-0.024	0.001	0.764	-0.0010	-0.024	0.001
S12	Ka.C.7	0.022	0.001	0.805	0.0004	0.022	0.000
S12	Ka.C.8	-0.024	0.001	0.638	-0.0004	-0.024	0.001
S13	Ka.C.7	0.022	0.000	0.553	-0.0002	0.022	0.001
S13	Ka.C.8	-0.024	0.001	0.516	0.0002	-0.024	0.001
S14	Ka.C.5	-0.001	0.001	2.147	0.0021	-0.001	0.000
S15	Ka.C.7	0.000	0.000	1.530	0.0009	0.006	0.000
S15	Ka.C.8	0.000	0.000	1.530	-0.0009	-0.007	0.000
S16	Ka.C.7	0.006	0.000	0.887	-0.0013	0.022	0.001
S16	Ka.C.8	-0.007	0.000	0.868	0.0013	-0.024	0.001
S17	Ka.C.7	0.000	0.000	1.530	0.0008	0.006	0.000
S17	Ka.C.8	0.000	0.000	1.530	-0.0011	-0.007	0.000
S18	Ka.C.7	0.006	0.000	0.924	-0.0013	0.022	0.001
S18	Ka.C.8	-0.007	0.000	0.906	0.0015	-0.024	0.001
S19	Ka.C.7	0.000	0.000	0.664	0.0006	0.006	0.000
S19	Ka.C.8	0.000	0.000	0.664	-0.0005	-0.007	0.000
S20	Ka.C.7	0.006	0.000	2.891	0.0012	0.022	0.000
S20	Ka.C.8	-0.007	0.000	2.747	-0.0009	-0.024	0.000
S21	Ka.C.8	-0.024	0.001	2.554	-0.0011	-0.034	0.001
S22	Ka.C.7	0.022	0.001	2.604	0.0006	0.031	0.001
S22	Ka.C.8	-0.024	0.001	2.687	-0.0006	-0.034	0.001
S23	Ka.C.4	-0.001	0.000	2.440	0.0005	-0.002	0.000
S23	Ka.C.5	-0.001	0.000	0.949	-0.0004	-0.002	0.000
S24	Ka.C.4	-0.002	0.001	1.650	0.0019	-0.002	0.001
S25	Ka.C.7	0.031	0.001	0.428	0.0000	0.031	0.002
S25	Ka.C.8	-0.034	0.001	0.187	-0.0001	-0.034	0.001
S26	Ka.C.7	0.031	0.002	0.614	0.0005	0.031	0.001
S27	Ka.C.7	0.031	0.001	0.575	-0.0003	0.031	0.001
S27	Ka.C.8	-0.034	0.002	0.448	0.0001	-0.034	0.001
S28	Ka.C.4	-0.002	0.001	2.146	0.0028	-0.002	0.000
S29	Ka.C.8	-0.034	0.001	0.924	0.0013	-0.043	0.002
S30	Ka.C.7	0.031	0.001	2.822	0.0009	0.040	0.001
Staaf	B.C.	Knoop Begin		Staaf Z'afst	Knoop Eind Z'	Knoop Begin	Knoop Eind



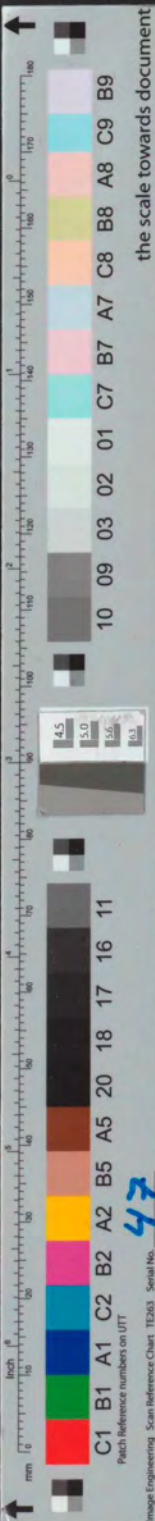
S30	Ka.C.8	-0.034	0.001	2.785	-0.0008	-0.043	0.001
S31	Ka.C.4	-0.002	0.000	0.982	-0.0007	-0.001	0.001
S31	Ka.C.7	0.031	0.000	2.778	0.0009	0.040	0.001
S32	Ka.C.3	-0.001	0.001	0.365	-0.0001	-0.002	0.001
S33	Ka.C.7	0.041	0.001	1.451	0.0005	0.043	0.000
S34	Ka.C.3	-0.001	0.001	2.090	0.0038	-0.001	0.002
S35	Ka.C.3	-0.001	0.002	0.216	-0.0001	-0.001	0.002
S35	Ka.C.7	0.040	0.002	0.417	0.0000	0.040	0.002
S36	Ka.C.2	-0.001	0.003	0.396	0.0002	-0.001	0.002
S37	Ka.C.7	0.040	0.002	0.603	-0.0002	0.040	0.001
S38	Ka.C.3	-0.001	0.001	2.127	0.0029	-0.001	0.001
S39	Ka.C.2	-0.001	0.003	1.925	0.0015	-0.001	0.003
S40	Ka.C.7	0.040	0.001	2.333	0.0002	0.043	0.001
S40	Ka.C.8	-0.043	0.001	2.165	-0.0004	-0.045	0.001
S41	Ka.C.2	-0.001	0.002	2.257	0.0081	-0.001	0.005
S42	Ka.C.2	-0.001	0.005	0.312	-0.0001	-0.001	0.003
S43	Ka.C.2	-0.001	0.003	0.818	-0.0007	-0.001	0.001
S44	Ka.C.2	-0.001	0.001	1.676	0.0013	-0.001	0.000
-	-	m	m	m	m	m	m

AFB. STAALCONTROLE



SAMENSTELLING CONSTRUCTIEDELEN

Constructiedeel	Staaf/staven
C1	S1
C2	S2
C3	S3
C4	S4



C5	S5
C6	S6
C7	S7
C8	S8
C9	S9
C10	S10
C11	S11
C12	S12
C13	S13
C14	S14
C15	S15
C16	S16
C17	S17
C18	S18
C19	S19
C20	S20
C21	S21
C22	S22
C23	S23
C24	S24
C25	S25
C26	S26
C27	S27
C28	S28
C29	S29
C30	S30
C31	S31
C32	S32
C33	S33
C34	S34
C35	S35
C36	S36
C37	S37
C38	S38
C39	S39
C40	S40
C41	S41
C42	S42
C43	S43
C44	S44

KNIKLENGTEGEGEVENS

Staaf	Profiel	Lokale Y-as				Lokale Z-as			
		Lsys	methode	Lbuc	Lbuc/Lsys	methode	Lbuc	Lbuc/	
Lsys									
C1 - V1 (0.000-2.650)	P13	2.650	Ongeschoord	13.382	5.05	Cons. gesch.	2.650	1.00	
C2 - V1 (0.000-3.975)	P12	3.980	Ongeschoord	5.798	1.46	Cons. gesch.	3.975	1.00	
C3 - V1 (0.000-3.410)	P12	3.410	Ongeschoord	7.752	2.27	Cons. gesch.	3.410	1.00	
C4 - V1 (0.000-3.710)	P11	3.710	Ongeschoord	14.629	3.94	Cons. gesch.	3.710	1.00	
C5 - V1 (0.000-3.085)	P11	3.090	Ongeschoord	4.570	1.48	Cons. gesch.	3.085	1.00	
C6 - V1 (0.000-3.375)	P14	3.380	Ongeschoord	5.586	1.66	Cons. gesch.	3.375	1.00	
C7 - V1 (0.000-1.975)	P14	1.980	Ongeschoord	5.282	2.67	Cons. gesch.	1.975	1.00	
C8 - V1 (0.000-0.995)	P14	1.000	Ongeschoord	2.107	2.12	Cons. gesch.	0.995	1.00	
C9 - V1 (0.000-4.120)	P14	4.120	Ongeschoord	9.062	2.20	Cons. gesch.	4.120	1.00	
C10 - V1 (0.000-0.400)	P10	0.400	Ongeschoord	1.303	3.26	Cons. gesch.	0.400	1.00	
C11 - V1 (0.000-3.375)	P10	3.380	Ongeschoord	7.366	2.18	Cons. gesch.	3.375	1.00	

Staaf	Profiel	Lokale Y-as				Lokale Z-as			
		Lsys	methode	Lbuc	Lbuc/Lsys	methode	Lbuc	Lbuc/	
Lsys									



CORE CONSTRUCTIES

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C12 - V1 (0.000-1.975) P10	1.980	Ongeschoord	4.244	2.15	Cons. gesch.	1.975	1.00
C13 - V1 (0.000-0.995) P10	1.000	Ongeschoord	2.041	2.05	Cons. gesch.	0.995	1.00
C14 - V1 (0.000-4.120) P10	4.120	Ongeschoord	8.558	2.08	Cons. gesch.	4.120	1.00
C15 - V1 (0.000-2.650) P13	2.650	Ongeschoord	6.025	2.27	Cons. gesch.	2.650	1.00
C16 - V1 (0.000-3.975) P12	3.980	Ongeschoord	5.798	1.46	Cons. gesch.	3.975	1.00
C17 - V1 (0.000-2.650) P13	2.650	Ongeschoord	6.125	2.31	Cons. gesch.	2.650	1.00
C18 - V1 (0.000-3.975) P12	3.980	Ongeschoord	5.798	1.46	Cons. gesch.	3.975	1.00
C19 - V1 (0.000-1.150) P12	1.150	Ongeschoord	2.771	2.41	Cons. gesch.	1.150	1.00
C20 - V1 (0.000-3.975) P12	3.980	Ongeschoord	6.038	1.52	Cons. gesch.	3.975	1.00
C21 - V1 (0.000-3.410) P12	3.410	Ongeschoord	7.163	2.10	Cons. gesch.	3.410	1.00
C22 - V1 (0.000-3.410) P12	3.410	Ongeschoord	5.156	1.51	Cons. gesch.	3.410	1.00
C23 - V1 (0.000-3.410) P12	3.410	Ongeschoord	4.974	1.46	Cons. gesch.	3.410	1.00
C24 - V1 (0.000-3.775) P9	3.780	Ongeschoord	8.582	2.27	Cons. gesch.	3.775	1.00
C25 - V1 (0.000-0.545) P9	0.550	Ongeschoord	1.343	2.46	Cons. gesch.	0.545	1.00
C28 - V1 (0.000-4.120) P9	4.120	Ongeschoord	6.010	1.46	Cons. gesch.	4.120	1.00
C29 - V1 (0.000-3.710) P11	3.710	Ongeschoord	6.537	1.76	Cons. gesch.	3.710	1.00
C30 - V1 (0.000-3.710) P11	3.710	Ongeschoord	5.412	1.46	Cons. gesch.	3.710	1.00
C31 - V1 (0.000-3.710) P11	3.710	Ongeschoord	5.412	1.46	Cons. gesch.	3.710	1.00
C32 - V1 (0.000-0.780) P11	0.780	Ongeschoord	1.793	2.30	Cons. gesch.	0.780	1.00
C33 - V1 (0.000-2.382) P11	2.380	Ongeschoord	4.816	2.02	Cons. gesch.	2.382	1.00
C38 - V1 (0.000-4.120) P9	4.120	Ongeschoord	6.010	1.46	Cons. gesch.	4.120	1.00
C39 - V1 (0.000-3.085) P11	3.090	Ongeschoord	4.500	1.46	Cons. gesch.	3.085	1.00
C40 - V1 (0.000-3.085) P11	3.090	Ongeschoord	5.510	1.79	Cons. gesch.	3.085	1.00
C41 - V1 (0.000-4.320) P9	4.320	Ongeschoord	7.785	1.80	Cons. gesch.	4.320	1.00
C42 - V1 (0.000-0.570) P9	0.570	Ongeschoord	1.701	2.99	Cons. gesch.	0.570	1.00
C43 - V1 (0.000-1.855) P9	1.860	Ongeschoord	2.997	1.62	Cons. gesch.	1.855	1.00
C44 - V1 (0.000-3.520) P9	3.520	Ongeschoord	5.134	1.46	Cons. gesch.	3.520	1.00
-	-	m	-	m	-	m	-

KIPSTEUNENGEVEENS

Staaf Aangrijphoogte	Profiel	Begin:	Eind:	Kipsteunen boven	Kipsteunen onder
C1 - V1 (0.000-2.650) P13		Gesteund	Gesteund		Centrum
C2 - V1 (0.000-3.975) P12		Gesteund	Gesteund		Centrum
C3 - V1 (0.000-3.410) P12		Gesteund	Gesteund		Centrum
C4 - V1 (0.000-3.710) P11		Gesteund	Gesteund		Centrum
C5 - V1 (0.000-3.085) P11		Gesteund	Gesteund		Centrum
C6 - V1 (0.000-3.375) P14		Gesteund	Gesteund		Centrum
C7 - V1 (0.000-1.975) P14		Gesteund	Gesteund		Centrum
C8 - V1 (0.000-0.995) P14		Gesteund	Gesteund		Centrum
C9 - V1 (0.000-4.120) P14		Gesteund	Gesteund		Centrum
C10 - V1 (0.000-0.400) P10		Gesteund	Gesteund		Centrum
C11 - V1 (0.000-3.375) P10		Gesteund	Gesteund		Centrum
C12 - V1 (0.000-1.975) P10		Gesteund	Gesteund		Centrum
C13 - V1 (0.000-0.995) P10		Gesteund	Gesteund		Centrum
C14 - V1 (0.000-4.120) P10		Gesteund	Gesteund		Centrum
C15 - V1 (0.000-2.650) P13		Gesteund	Gesteund		Centrum
C16 - V1 (0.000-3.975) P12		Gesteund	Gesteund		Centrum
C17 - V1 (0.000-2.650) P13		Gesteund	Gesteund		Centrum
C18 - V1 (0.000-3.975) P12		Gesteund	Gesteund		Centrum
C19 - V1 (0.000-1.150) P12		Gesteund	Gesteund		Centrum
C20 - V1 (0.000-3.975) P12		Gesteund	Gesteund		Centrum
C21 - V1 (0.000-3.410) P12		Gesteund	Gesteund		Centrum

Staaf Aangrijphoogte	Profiel	Begin:	Eind:	Kipsteunen boven	Kipsteunen onder



C22 - V1 (0.000-3.410) P12	Gesteund	Gesteund	Centrum
C23 - V1 (0.000-3.410) P12	Gesteund	Gesteund	Centrum
C24 - V1 (0.000-3.775) P9	Gesteund	Gesteund	Centrum
C25 - V1 (0.000-0.545) P9	Gesteund	Gesteund	Centrum
C26 - V1 (0.000-1.430) P9	Gesteund	Gesteund	Centrum
C27 - V1 (0.000-0.995) P9	Gesteund	Gesteund	Centrum
C28 - V1 (0.000-4.120) P9	Gesteund	Gesteund	Centrum
C29 - V1 (0.000-3.710) P11	Gesteund	Gesteund	Centrum
C30 - V1 (0.000-3.710) P11	Gesteund	Gesteund	Centrum
C31 - V1 (0.000-3.710) P11	Gesteund	Gesteund	Centrum
C32 - V1 (0.000-0.780) P11	Gesteund	Gesteund	Centrum
C33 - V1 (0.000-2.382) P11	Gesteund	Gesteund	Centrum
C34 - V1 (0.000-4.320) P9	Gesteund	Gesteund	Centrum
C35 - V1 (0.000-0.570) P9	Gesteund	Gesteund	Centrum
C36 - V1 (0.000-0.860) P9	Gesteund	Gesteund	Centrum
C37 - V1 (0.000-0.995) P9	Gesteund	Gesteund	Centrum
C38 - V1 (0.000-4.120) P9	Gesteund	Gesteund	Centrum
C39 - V1 (0.000-3.085) P11	Gesteund	Gesteund	Centrum
C40 - V1 (0.000-3.085) P11	Gesteund	Gesteund	Centrum
C41 - V1 (0.000-4.320) P9	Gesteund	Gesteund	Centrum
C42 - V1 (0.000-0.570) P9	Gesteund	Gesteund	Centrum
C43 - V1 (0.000-1.855) P9	Gesteund	Gesteund	Centrum
C44 - V1 (0.000-3.520) P9	Gesteund	Gesteund	Centrum
-	-	-	-

DOORBUIGINGGEGEVENS

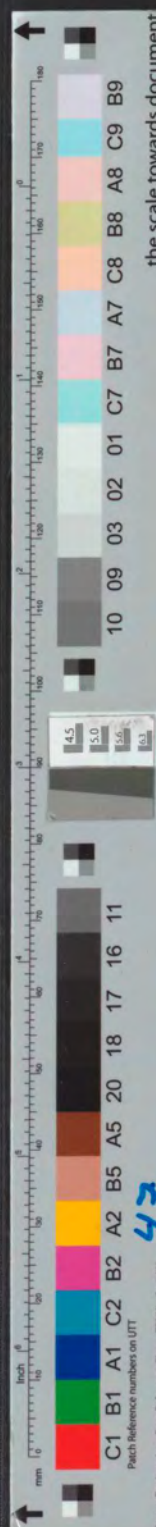
Staaf U;eind	Constructietype Eis U;bij	Toetsing	Zeeg Y'	Zeeg Z'	Zeegvorm	Eis
C1 - V1 (0.000-2.650) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C2 - V1 (0.000-3.975) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C3 - V1 (0.000-3.410) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C4 - V1 (0.000-3.710) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C5 - V1 (0.000-3.085) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C6 - V1 (0.000-3.375) 0	Vloer 0	Scheurvorming 3-Punt	L/250	L/500		
C7 - V1 (0.000-1.975) 0	Vloer 0	gevoelige wanden Scheurvorming 3-Punt	L/250	L/500		
C8 - V1 (0.000-0.995) 0	Vloer 0	gevoelige wanden Scheurvorming 3-Punt	L/250	L/500		
C9 - V1 (0.000-4.120) 0	Vloer 0	gevoelige wanden Scheurvorming 3-Punt	L/250	L/500		
C10 - V1 (0.000-0.400) 0	Vloer overstek 0	gevoelige wanden Scheurvorming 3-Punt	L/250	L/500		
C11 - V1 (0.000-3.375) 0	Vloer 0	gevoelige wanden Scheurvorming 3-Punt	L/250	L/500		
C12 - V1 (0.000-1.975) 0	Vloer 0	gevoelige wanden Scheurvorming 3-Punt	L/250	L/500		
C13 - V1 (0.000-0.995) 0	Vloer 0	gevoelige wanden Scheurvorming 3-Punt	L/250	L/500		
C14 - V1 (0.000-4.120) 0	Vloer 0	gevoelige wanden Scheurvorming 3-Punt	L/250	L/500		



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Staf U;eind	Constructietype Eis U;bij	Toetsing	Zeeg Y'	Zeeg Z'	Zeegvorm	Eis
C15 - V1 (0.000-2.650) bouwlaag	Kolom 3-Punt	gevoelige wanden 1 H/300				N/B
C16 - V1 (0.000-3.975) bouwlaag	Kolom 3-Punt	1 H/300				N/B
C17 - V1 (0.000-2.650) bouwlaag	Kolom 3-Punt	1 H/300				N/B
C18 - V1 (0.000-3.975) bouwlaag	Kolom 3-Punt	1 H/300				N/B
C20 - V1 (0.000-3.975) bouwlaag	Kolom 3-Punt	1 H/300				N/B
C21 - V1 (0.000-3.410) bouwlaag	Kolom 3-Punt	1 H/300				N/B
C22 - V1 (0.000-3.410) bouwlaag	Kolom 3-Punt	1 H/300				N/B
C23 - V1 (0.000-3.410) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C24 - V1 (0.000-3.775) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C25 - V1 (0.000-0.545) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C26 - V1 (0.000-1.430) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C27 - V1 (0.000-0.995) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C28 - V1 (0.000-4.120) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C29 - V1 (0.000-3.710) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C30 - V1 (0.000-3.710) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C31 - V1 (0.000-3.710) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C32 - V1 (0.000-0.780) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C33 - V1 (0.000-2.382) L/250	Dak	Algemeen	0	0	3-Punt	L/250
C34 - V1 (0.000-4.320) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C35 - V1 (0.000-0.570) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C36 - V1 (0.000-0.860) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C37 - V1 (0.000-0.995) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C38 - V1 (0.000-4.120) 0	Vloer 0	Scheurvorming 3-Punt gevoelige wanden	L/250	L/500		
C39 - V1 (0.000-3.085) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C40 - V1 (0.000-3.085) bouwlaag	Kolom 3-Punt	1 H/300			N/B	
C41 - V1 (0.000-4.320) L/250	Dak	Algemeen	0	0	3-Punt	L/250
C42 - V1 (0.000-0.570) L/250	Dak	Algemeen	0	0	3-Punt	L/250



C43 - V1 (0.000-1.855) L/250	Dak	Algemeen	0	0	3-Punt	L/250
C44 - V1 (0.000-3.520) L/250	Dak	Algemeen	0	0	3-Punt	L/250
-	-	-	mm	mm	-	-

STAALTOETS RESULTATEN MET PROFIELGEGEVENS NEN-EN1993-1-1:2009/NB:2011

Uitgangspunten berekening voor staalcontrole

Alpha;cr = 15.71 > 10;

Profielgegevens staaf C1-V1 (0.000-2.650)

HE180B	Analyse	Staal S235	fyd(toegepast) = 235 N/mm2
h = 180.0 mm	A = 6.53e-03 m2	Wy;el = 425.7e-06 m3	Wy;pl =
481.4e-06 m3			
b = 180.0 mm	Iy = 383.1e-07 m4	Wz;el = 151.4e-06 m3	Wz;pl =
231.0e-06 m3			
tf = 14.0 mm	Iz = 136.3e-07 m4	Aw;y;el = 5.23e-03 m2	Aw;y;pl =
5.23e-03 m2			
tw = 8.5 mm	Massa/m = 51.2 kg/m	Aw;z;el = 2.02e-03 m2	Aw;z;pl =
2.02e-03 m2			
r = 15.0 mm		It = 421.6e-09 m4	Iwa = 937.5e-10
m6			

Doorsnedetoetsing C1-V1 (0.000-2.650)

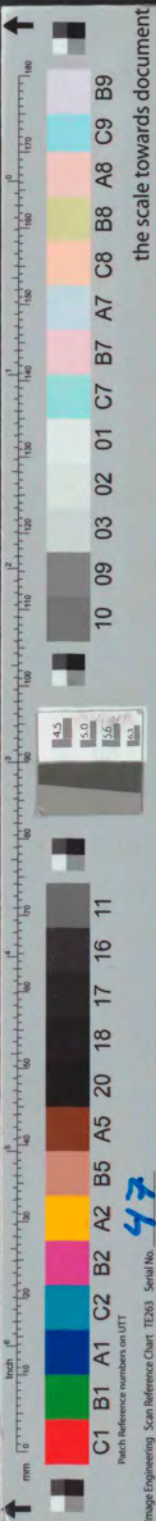
Maatgevende combinatie: Fu.C.12 op 2.650 m	Profielklasse = 1	
N;Ed = -157.5 kN	Vy;Ed = 0.0 kN	My;Ed = -17.7 kNm
	Vz;Ed = -6.7 kN	Mz;Ed = 0.0 kNm
N;Rd = 1,533.4 kN	Vy;Rd = 710.0 kN	MyRd = 113.1 kNm
	Vz;Rd = 274.6 kN	MzRd = 54.3 kNm
NEN-EN1993-1-1(6.12): UC = 0.16 < 1		

Kiptoetsing C1-V1 (0.000-2.650)

Equi. profiel: HE180B	Instab. curve Kip:a		
Maatgevende combinatie: Bi.C.1			
Aangrijphoogte van de last: 0.000 m vanaf hart profiel			
Kipsteun bovenflens: N.v.t.			
Kipsteun onderflens: N.v.t.			
Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
0.000			
Tabel gebruikt NB 6.1	M = -3.7kN/m	MBeta = 0.0	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 2.650 m	lst = 2.650 m
Lsys = 2.650 m	Lg = 2.650 m	S = 0.760 m	Iwa = 9.3746e-08
m6			
C1 = 1.75	C2 = 0.00 (tabel)	C2(toegepast) = 0.00	C = 7.40
Mcr = 872.0 kNm	kred = 1.0	Lam-rel = 0.36	Profielklasse 1
Chi;LT(Bi.C.1) = 0.96	M;Ed = 0.0 kNm		UC(y) = 0.00
Chi;LT,Z = 1.00	lkip = 2.650 m		UC(z) = 0.00
My;begin = 0.0 kNm	My;eind = -3.7 kNm		
NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip NVT, i.v.m. geen buiging			

Stabiliteitstoetsing C1-V1 (0.000-2.650)

Maatgevende combinatie: Fu.C.12			
N;Ed = -157.5 kN	Nb;Rd;y = 365.2 kN	Nb;Rd;z = 1,188.4 kN	
Methode Y = Ongeschoord	Ca(y) = 5.000	Cb(y) = 5.000	Lknik Y = 13.382
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 2.650
m			
Xy = 0.24		Knikcurve: B	



Xz = 0.78
 NEN-EN1993-1-1(6.46): UC = 0.43 < 1

Knikcurve: C

Buiging & Druk C1-V1 (0.000-2.650)

Maatgevende combinatie: Fu.C.12 Kipgevoelig Ja
 N;Ed = -157.5 kN My;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm
 My = -17.7 kNm My;Psi = 0.0 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm
 Cmy = 0.60 Cmz = 0.90
 Kyy = 0.807 Kyz = 0.585
 Ksi;y = 0.24 Ksi;z = 0.78
 NEN-EN1993-1-1(6.61&6.62): UC = 0.56 < 1

Profielklasse = 1
 Mz;Ed = 0.0 kNm
 Delta;Mz;Ed = 0.0 kNm
 My;s = -8.9 kNm
 Mz;s = 0.0 kNm
 CmLT = 0.90
 Kzy = 0.987 Kzz = 0.976
 Ksi;LT = 0.96

Doorbuigingstoetsing X C1-V1 (0.000-2.650)

Constructietype : Kolom
 u;i;3 = -7.2 mm (Ka.C.8)
 Limiet u;i;max = H/300 = 8.8 mm
 UC(u;i;max) = 0.8
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.82<1

Toets type: 1 bouwlaag
 Limiet u;max = N/B = 0.0 mm

Profielgegevens staaf C2-V1 (0.000-3.975)

HE160B Analyse
 h = 160.0 mm A = 5.43e-03 m2
 354.0e-06 m3
 b = 160.0 mm Iy = 249.2e-07 m4
 170.0e-06 m3 Iz = 889.2e-08 m4
 tf = 13.0 mm
 4.35e-03 m2 Massa/m = 42.6 kg/m
 tw = 8.0 mm
 1.76e-03 m2
 r = 15.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 311.5e-06 m3 Wy;pl =
 Wz;el = 111.2e-06 m3 Wz;pl =
 Aw;y;el = 4.35e-03 m2 Aw;y;pl =
 Aw;z;el = 1.76e-03 m2 Aw;z;pl =
 It = 312.4e-09 m4 Iwa = 479.4e-10

Doorsnedetoetsing C2-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12 op 0.000 m
 N;Ed = -120.2 kN Vy;Ed = 0.0 kN
 Vz;Ed = -12.0 kN
 N;Rd = 1,274.9 kN Vy;Rd = 590.6 kN
 Vz;Rd = 238.7 kN
 NEN-EN1993-1-1(6.12): UC = 0.32 < 1

Profielklasse = 1
 My;Ed = 26.6 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 83.2 kNm
 MzRd = 39.9 kNm

Kiptoetsing C2-V1 (0.000-3.975)

Equi. profiel: HE160B
 Maatgevende combinatie: Fu.C.12

Instab. curve Kip:a

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

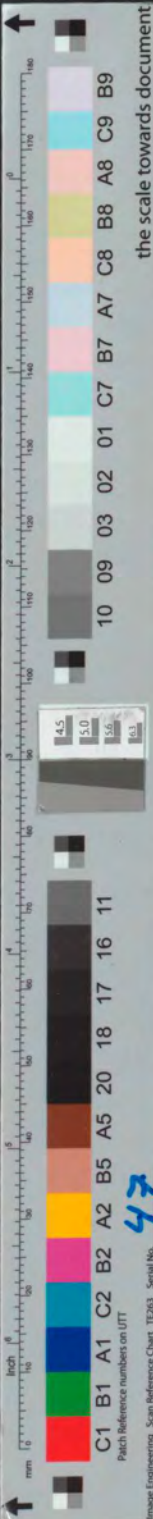
Kipsteun bovenflens: N.v.t.

Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund Beperk. eind: Gesteund
 0.000 b-eff(Begin) = 0.000 b-eff(Eind) =

Tabel gebruikt NB 6.1 M = 26.6kN/m MBeta = -21.1
 Bovenflens maatgevend Xb;lst = 0.000 m Xe;lst = 3.975 m
 Lsys = 3.975 m Lg = 3.975 m S = 0.632 m Iwa = 4.7943e-08

m6 C1 = 2.30 C2 = 0.00 (tabel) C2(toegepast) = 0.00 C = 8.08
 Mcr = 441.0 kNm kred = 1.0 Lam-rel = 0.43 Profielklasse 1



Chi;LT(Fu.C.12) = 0.94 M;Ed = 26.6 kNm UC(y) = 0.34
 Chi;LT,Z = 1.00 Ikip = 3.975 m⁴ UC(z) = 0.00
 My;begin = 26.6 kNm My;eind = -21.1 kNm
 NEN-EN1993-1-1(6.54): UC = 0.34 < 1

Stabiliteitstoetsing C2-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12

N;Ed = -120.2 kN Nb;Rd;y = 834.0 kN Nb;Rd;z = 655.3 kN
 Methode Y = Ongeschoord Ca(y) = 0.250 Cb(y) = 0.250 Lknik Y = 5.798
 m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 3.975
 m
 Xy = 0.65 Knikcurve: B
 Xz = 0.51 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.18 < 1

Buiging & Druk C2-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12

N;Ed = -120.2 kN Kipgevoelig Ja Profielklasse = 1
 My;Ed = 26.6 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = 26.6 kNm My;Psi = -21.1 kNm My;s = 2.7 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 CmY = 0.40 CmZ = 0.90 CmLT = 0.90
 Kyy = 0.441 Kyz = 0.679 Kzy = 0.972 Kzz = 1.131
 Ksi;y = 0.65 Ksi;z = 0.51 Ksi;LT = 0.94
 NEN-EN1993-1-1(6.61&6.62): UC = 0.51 < 1

Doorbuigingstoetsing X C2-V1 (0.000-3.975)

Constructietype : Kolom

u;i;3 = -16.9 mm (Ka.C.8)
 Limiet u;i;max = H/300 = 13.3 mm
 UC(u;i;max) = 1.3

Toets type: 1 bouwlaag

Limiet u;max = N/B = 0.0 mm

NEN-EN1993-1-1(6.61&6.62): UC = 1.27 > 1

Profielgegevens staaf C3-V1 (0.000-3.410)

HE160B Analyse Staal S235 fyd(toegepast) = 235 N/mm²
 h = 160.0 mm A = 5.43e-03 m² Wy;el = 311.5e-06 m³ Wy;pl =
 354.0e-06 m³
 b = 160.0 mm Iy = 249.2e-07 m⁴ Wz;el = 111.2e-06 m³ Wz;pl =
 170.0e-06 m³
 tf = 13.0 mm Iz = 889.2e-08 m⁴ Aw;y;el = 4.35e-03 m² Aw;y;pl =
 4.35e-03 m²
 tw = 8.0 mm Massa/m = 42.6 kg/m Aw;z;el = 1.76e-03 m² Aw;z;pl =
 1.76e-03 m²
 r = 15.0 mm It = 312.4e-09 m⁴ Iwa = 479.4e-10
 m⁶

Doorsnedetoetsing C3-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.11 op 0.000 m

N;Ed = -55.5 kN Vy;Ed = 0.0 kN Profielklasse = 1
 Vz;Ed = 5.8 kN My;Ed = -12.1 kNm
 N;Rd = 1,274.9 kN Vy;Rd = 590.6 kN Mz;Ed = 0.0 kNm
 Vz;Rd = 238.7 kN MyRd = 83.2 kNm
 MzRd = 39.9 kNm

NEN-EN1993-1-1(6.12): UC = 0.15 < 1

Kiptoetsing C3-V1 (0.000-3.410)



Equi. profiel: HE160B
 Maatgevende combinatie: Fu.C.12
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund 0.000 Beperk. eind: Gesteund
 Tabel gebruikt NB 6.1 M = -11.6kN/m
 Onderflens maatgevend Xb;lst = 0.000 m
 Lsys = 3.410 m Lg = 3.410 m
 C1 = 2.00 C2 = 0.00 (tabel)
 Mcr = 462.5 kNm kred = 1.0
 Chi;LT(Fu.C.12) = 0.95 M;Ed = 11.6 kNm
 Chi;LT,Z = 1.00 lkip = 3.410 m
 My;begin = 2.6 kNm My;eind = -11.6 kNm
 NEN-EN1993-1-1(6.54): UC = 0.15 < 1

Instab. curve Kip:a
 b-eff(Begin) = 0.000 b-eff(Eind) =
 MBeta = 2.6
 Xe;lst = 3.410 m Ist = 3.410 m
 S = 0.632 m Iwa = 4.7943e-08
 C2(toegepast) = 0.00 C = 7.27
 Lam-rel = 0.42 Profielklasse 1
 UC(y) = 0.15
 UC(z) = 0.00

Stabiliteitstoetsing C3-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.2
 N;Ed = -97.5 kN Nb;Rd;y = 597.3 kN Nb;Rd;z = 767.2 kN
 Methode Y = Ongeschoord Ca(y) = 0.250 Cb(y) = 5.000 Lknik Y = 7.752
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 3.410
 Xy = 0.47 Knikcurve: B
 Xz = 0.60 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.16 < 1

Buiging & Druk C3-V1 (0.000-3.410)

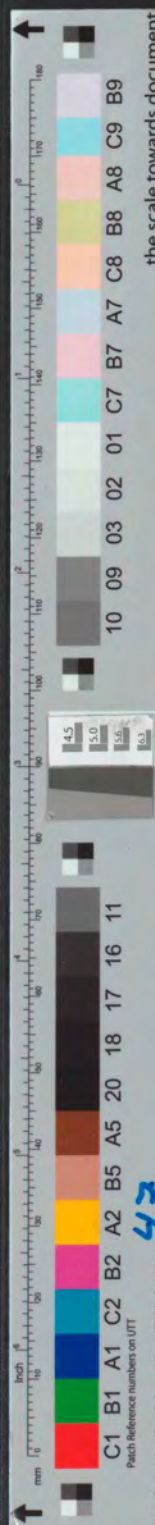
Maatgevende combinatie: Fu.C.2 Kipgevoelig Ja Profielklasse = 1
 N;Ed = -97.5 kN My;Ed = 11.6 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = -7.3 kNm My;Psi = -5.1 kNm My;s = -6.2 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 CmY = 0.88 Cmz = 0.90 CmLT = 0.90
 Kyy = 0.994 Kyz = 0.622 Kzy = 0.982 Kzz = 1.036
 Ksi;y = 0.47 Ksi;z = 0.60 Ksi;LT = 0.91
 NEN-EN1993-1-1(6.61&6.62): UC = 0.26 < 1

Doorbuigingstoetsing X C3-V1 (0.000-3.410)

Constructietype : Kolom Toets type: 1 bouwlaag
 u;i;3 = -10.1 mm (Ka.C.8)
 Limiet u;i;max = H/300 = 11.4 mm Limiet u;max = N/B = 0.0 mm
 UC(u;i;max) = 0.9
 NEN-EN1990/NB A1.4.2: UC = 0.89 < 1

Profielgegevens staaf C4-V1 (0.000-3.710)

HE140B Analyse Staal S235 fyd(toegepast) = 235 N/mm2
 h = 140.0 mm A = 4.30e-03 m2 Wy;el = 215.6e-06 m3 Wy;pl =
 245.4e-06 m3 Iy = 150.9e-07 m4 Wz;el = 785.2e-07 m3 Wz;pl =
 b = 140.0 mm Iz = 549.7e-08 m4 Aw;y;el = 3.48e-03 m2 Aw;y;pl =
 119.8e-06 m3 Massa/m = 33.7 kg/m Aw;z;el = 1.31e-03 m2 Aw;z;pl =
 tf = 12.0 mm
 3.48e-03 m2
 tw = 7.0 mm
 1.31e-03 m2



r = 12.0 mm
 m6
 It = 200.6e-09 m⁴
 Iwa = 224.8e-10

Doorsnedetoetsing C4-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.12 op 3.710 m
 N;Ed = -51.7 kN
 Vy;Ed = 0.0 kN
 Vz;Ed = -5.3 kN
 N;Rd = 1,009.5 kN
 Vy;Rd = 472.6 kN
 Vz;Rd = 177.4 kN
 NEN-EN1993-1-1(6.12): UC = 0.19 < 1

Profielklasse = 1
 My;Ed = -10.9 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 57.7 kNm
 MzRd = 28.1 kNm

Kiptoetsing C4-V1 (0.000-3.710)

Equi. profiel: HE140B
 Maatgevende combinatie: Fu.C.12
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund
 Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 6.1
 Onderflens maatgevend
 Lsys = 3.710 m
 m6
 C1 = 2.30
 Mcr = 292.8 kNm
 Chi;LT(Fu.C.12) = 0.94
 Chi;LT,Z = 1.00
 My;begin = 8.9 kNm
 NEN-EN1993-1-1(6.54): UC = 0.20 < 1

Instab. curve Kip: a
 b-eff(Begin) = 0.000
 b-eff(Eind) =
 MBeta = 8.9
 Xe;lst = 3.710 m
 S = 0.540 m
 Ist = 3.710 m
 Iwa = 2.2479e-08
 C2 = 0.00 (tabel)
 kred = 1.0
 M;Ed = 10.9 kNm
 lkip = 3.710 m
 My;eind = -10.9 kNm
 C2 (toegepast) = 0.00
 Lam-rel = 0.44
 C = 7.94
 Profielklasse 1
 UC(y) = 0.20
 UC(z) = 0.00

Stabiliteitstoetsing C4-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.1
 N;Ed = -85.7 kN
 Methode Y = Ongeschoord
 m
 Methode Z = Cons. gesch.
 m
 Xy = 0.13
 Xz = 0.48
 NEN-EN1993-1-1(6.46): UC = 0.67 < 1

Nb;Rd;y = 128.5 kN
 Ca(y) = 4.729
 Ca(z) = N/B

Nb;Rd;z = 486.5 kN
 Cb(y) = 2.107
 Cb(z) = N/B

Lknik Y = 14.629
 Lknik Z = 3.710

Knikcurve: B
 Knikcurve: C

Buiging & Druk C4-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.1
 N;Ed = -85.7 kN
 My = -5.7 kNm
 Mz = 0.0 kNm
 Cmy = 0.40
 Kyy = 0.613
 Ksi;y = 0.13
 NEN-EN1993-1-1(6.61&6.62): UC = 0.73 < 1

Kipgevoelig Ja
 My;Ed = 10.9 kNm
 Delta;My;Ed = 0.0 kNm
 My;Psi = 3.8 kNm
 Mz;Psi = 0.0 kNm
 Cmz = 0.90
 Kyz = 0.673
 Ksi;z = 0.48

Profielklasse = 1
 Mz;Ed = 0.0 kNm
 Delta;Mz;Ed = 0.0 kNm
 My;s = -1.0 kNm
 Mz;s = 0.0 kNm
 CmLT = 0.90
 Kzy = 0.973
 Ksi;LT = 0.94

Kzz = 1.122

Doorbuigingstoetsing X C4-V1 (0.000-3.710)

Constructietype : Kolom
 u;i;3 = 9.6 mm (Ka.C.7)
 Limiet u;i;max = H/300 = 12.4 mm
 UC(u;i;max) = 0.8

Toets type: 1 bouwlaag
 Limiet u;max = N/B = 0.0 mm



NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.77 < 1

Profielgegevens staaf C5-V1 (0.000-3.085)

HE140B	Analyse	Staal S235	fyd(toegepast) = 235 N/mm ²
h = 140.0 mm	A = 4.30e-03 m ²	Wy;el = 215.6e-06 m ³	Wy;pl =
245.4e-06 m ³			
b = 140.0 mm	Iy = 150.9e-07 m ⁴	Wz;el = 785.2e-07 m ³	Wz;pl =
119.8e-06 m ³			
tf = 12.0 mm	Iz = 549.7e-08 m ⁴	Aw;y;el = 3.48e-03 m ²	Aw;y;pl =
3.48e-03 m ²			
tw = 7.0 mm	Massa/m = 33.7 kg/m	Aw;z;el = 1.31e-03 m ²	Aw;z;pl =
1.31e-03 m ²			
r = 12.0 mm		It = 200.6e-09 m ⁴	Iwa = 224.8e-10
m6			

Doorsnedetoetsing C5-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.1 op 3.085 m	Profielklasse = 1	
N;Ed = -46.5 kN	Vy;Ed = 0.0 kN	My;Ed = -25.6 kNm
	Vz;Ed = -14.0 kN	Mz;Ed = 0.0 kNm
N;Rd = 1,009.5 kN	Vy;Rd = 472.6 kN	MyRd = 57.7 kNm
	Vz;Rd = 177.4 kN	MzRd = 28.1 kNm

NEN-EN1993-1-1(6.12): UC = 0.44 < 1

Kiptoetsing C5-V1 (0.000-3.085)

Equi. profiel: HE140B	Instab. curve Kip:a		
Maatgevende combinatie: Bi.C.1			
Aangrijphoogte van de last: 0.000 m vanaf hart profiel			
Kipsteun bovenflens: N.v.t.			
Kipsteun onderflens: N.v.t.			
Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
0.000			
Tabel gebruikt NB 6.1	M = -11.6 kN/m	MBeta = 7.4	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 3.085 m	lst = 3.085 m
Lsys = 3.085 m	Lg = 3.085 m	S = 0.540 m	Iwa = 2.2479e-08
m6			
C1 = 2.30	C2 = 0.00 (tabel)	C2(toegepast) = 0.00	C = 8.25
Mcr = 365.5 kNm	kred = 1.0	Lam-rel = 0.40	Profielklasse 1
Chi;LT(Bi.C.1) = 0.95	M;Ed = 7.4 kNm		UC(y) = 0.00
Chi;LT,Z = 1.00	lkip = 3.085 m		UC(z) = 0.00
My;begin = 7.4 kNm	My;eind = -11.6 kNm		
NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4			

Stabiliteitstoetsing C5-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.1			
N;Ed = -46.5 kN	Nb;Rd;y = 718.1 kN	Nb;Rd;z = 594.2 kN	
Methode Y = Ongeschoord	Ca(y) = 0.250	Cb(y) = 0.279	Lknik Y = 4.570
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 3.085
m			
Xy = 0.71		Knikcurve: B	
Xz = 0.59		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.08 < 1			

Buiging & Druk C5-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.1	Kipgevoelig Ja	Profielklasse = 1
N;Ed = -46.5 kN	My;Ed = 7.4 kNm	Mz;Ed = 0.0 kNm
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm
My = -25.6 kNm	My;Psi = 17.5 kNm	My;s = -4.1 kNm



Mz = 0.0 kNm
 Cm_y = 0.40
 K_{yy} = 0.416
 K_{si};y = 0.71
 NEN-EN1993-1-1(6.61&6.62): UC = 0.54 < 1

Mz;Psi = 0.0 kNm
 Cm_z = 0.90
 K_{yz} = 0.592
 K_{si};z = 0.59

Mz;s = 0.0 kNm
 Cm_{LT} = 0.90
 K_{zy} = 0.989
 K_{si};LT = 0.95

K_{zz} = 0.987

Doorbuigingstoetsing X C5-V1 (0.000-3.085)

Constructietype : Kolom
 u_i;3 = 2.4 mm (Ka.C.7)
 Limiet u_i;max = H/300 = 10.3 mm
 UC(u_i;max) = 0.2
 NEN-EN1990/NB A1.4.2: UC = 0.23 < 1

Toets type: 1 bouwlaag
 Limiet u_i;max = N/B = 0.0 mm

Profielgegevens staaf C6-V1 (0.000-3.375)

HE220A Analyse
 h = 210.0 mm A = 6.43e-03 m²
 568.5e-06 m³
 b = 220.0 mm I_y = 541.0e-07 m⁴
 270.6e-06 m³
 t_f = 11.0 mm I_z = 195.5e-07 m⁴
 5.12e-03 m² Massa/m = 50.5 kg/m
 t_w = 7.0 mm
 2.07e-03 m²
 r = 18.0 mm
 m₆

Staal S235 f_{yd}(toegepast) = 235 N/mm²
 W_y;e_l = 515.2e-06 m³ W_y;p_l =
 W_z;e_l = 177.7e-06 m³ W_z;p_l =
 A_w;y;e_l = 5.12e-03 m² A_w;y;p_l =
 A_w;z;e_l = 2.07e-03 m² A_w;z;p_l =
 I_t = 284.6e-09 m⁴ I_{wa} = 193.3e-09

Doorsnedetoetsing C6-V1 (0.000-3.375)

Maatgevende combinatie: Fu.C.12 op 0.000 m
 N;Ed = 9.4 kN V_y;Ed = 0.0 kN
 V_z;Ed = 37.3 kN
 N;Rd = 1,512.0 kN V_y;Rd = 694.4 kN
 V_z;Rd = 280.5 kN
 NEN-EN1993-1-1(6.12): UC = 0.33 < 1

Profielklasse = 1
 M_y;Ed = -44.3 kNm
 M_z;Ed = 0.0 kNm
 M_yRd = 133.6 kNm
 M_zRd = 63.6 kNm

Kiptoetsing C6-V1 (0.000-3.375)

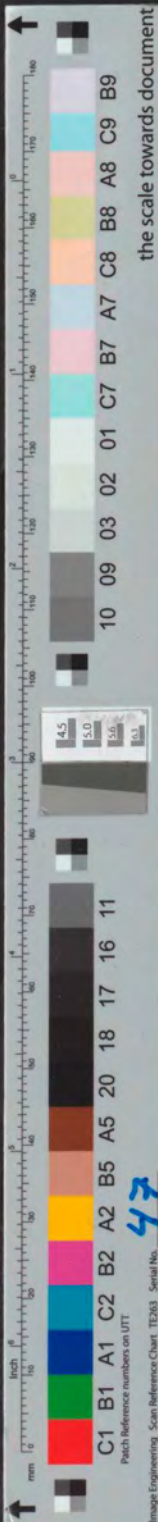
Equi. profiel: HE220A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund
 0.000 = 0.0kN/m
 Tabel gebruikt NB 8.1 X_b;l_{st} = 0.000 m
 Bovenflens maatgevend L_g = 3.375 m
 L_{sys} = 3.375 m
 m₆
 C1 = 2.30 C2 = 1.55 (tabel) C2 (toegepast) = 0.00 C = 11.49
 M_{cr} = 1,046.0 kNm kred = 1.0 Lam-rel = 0.36 Profielklasse 1
 Chi;LT(Bi.C.1) = 0.96 M;Ed = 4.9 kNm UC(y) = 0.00
 Chi;LT,Z = 1.00 I_{kip} = 3.375 m UC(z) = 0.00
 M_y;begin = -4.8 kNm M_y;eind = -6.1 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Instab. curve Kip:a

b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 X_e;l_{st} = 3.375 m l_{st} = 3.375 m
 S = 1.329 m I_{wa} = 1.9327e-07

Stabiliteitstoetsing C6-V1 (0.000-3.375)

Maatgevende combinatie: Fu.C.11
 N;Ed = -14.1 kN N_b;Rd;y = 1,227.6 kN N_b;Rd;z = 1,140.3 kN
 Methode Y = Ongeschoord Ca(y) = 0.543 Cb(y) = 0.250 L_knik Y = 5.586



m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 3.375
 m
 Xy = 0.81 Knikcurve: B
 Xz = 0.75 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.01 < 1

Buiging & Druk C6-V1 (0.000-3.375)

Maatgevende combinatie: Fu.C.11 Kipgevoelig Ja Profielklasse = 1
 N;Ed = -14.1 kN My;Ed = 4.9 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = -39.3 kNm My;Psi = 30.9 kNm My;s = 10.3 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 CmY = 0.40 Cmz = 0.90 CmLT = 0.90
 Kyy = 0.402 Kyz = 0.545 Kzy = 0.999 Kzz = 0.908
 Ksi;y = 0.81 Ksi;z = 0.75 Ksi;LT = 0.96
 NEN-EN1993-1-1(6.61&6.62): UC = 0.32 < 1

Doorbuigingstoetsing Z' C6-V1 (0.000-3.375)

Constructietype : Vloer Toets type: Scheurvorming gevoelige wanden
 w;c = 0.0 mm Zeegvorm 3-Punt
 w;1 = 0.2 mm (x = 1.633 mm; Fr.C.(w1)) w;2 = 0.0 mm
 w;3 = 0.2 mm (x = 1.633 mm; Qu.C.1) w;3 = 0.3 mm (x = 1.632 mm; Fr.C.5)
 w;tot; = 0.4 mm (w;2+w;3) = 0.3 mm
 w;max = 0.4 mm
 Limiet w;max = L/250 = 13.5 mm Limiet (w;2+w;3) = L/500 = 6.8 mm
 UC(w;max) = 0.0 UC(w;2+w;3) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.04 < 1

Doorbuigingstoetsing Z" C6-V1 (0.000-3.375)

Constructietype : Vloer Toets type: Scheurvorming gevoelige wanden
 w;c = 0.0 mm Zeegvorm 3-Punt
 w;1 = 0.2 mm (x = 1.633 mm; Fr.C.(w1)) w;2 = 0.0 mm
 w;3 = 0.2 mm (x = 1.633 mm; Qu.C.1) w;3 = 0.3 mm (x = 1.632 mm; Fr.C.5)
 w;tot; = 0.4 mm (w;2+w;3) = 0.3 mm
 w;max = 0.4 mm Limiet (w;2+w;3) = L/500 = 6.8 mm
 Limiet w;max = L/250 = 13.5 mm UC(w;2+w;3) = 0.0
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.04 < 1

Profielgegevens staaf C7-V1 (0.000-1.975)

HE220A Analyse Staal S235 fyd(toegepast) = 235 N/mm2
 h = 210.0 mm A = 6.43e-03 m2 Wy;el = 515.2e-06 m3 Wy;pl =
 568.5e-06 m3
 b = 220.0 mm Iy = 541.0e-07 m4 Wz;el = 177.7e-06 m3 Wz;pl =
 270.6e-06 m3
 tf = 11.0 mm Iz = 195.5e-07 m4 Aw;y;el = 5.12e-03 m2 Aw;y;pl =
 5.12e-03 m2 Massa/m = 50.5 kg/m Aw;z;el = 2.07e-03 m2 Aw;z;pl =
 tw = 7.0 mm
 2.07e-03 m2 It = 284.6e-09 m4 Iwa = 193.3e-09
 r = 18.0 mm
 m6

Doorsnedetoetsing C7-V1 (0.000-1.975)

Maatgevende combinatie: Fu.C.12 op 0.000 m Profielklasse = 1
 N;Ed = 18.3 kN Vy;Ed = 0.0 kNm My;Ed = -34.1 kNm



N;Rd = 1,512.0 kN
 Vz;Ed = 30.7 kN
 Vy;Rd = 694.4 kN
 Vz;Rd = 280.5 kN
 Mz;Ed = 0.0 kNm
 MyRd = 133.6 kNm
 MzRd = 63.6 kNm

NEN-EN1993-1-1(6.12): UC = 0.26 < 1

Kiptoetsing C7-V1 (0.000-1.975)

Equi. profiel: HE220A

Maatgevende combinatie: Bi.C.1

Instab. curve Kip:a

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Kipsteun bovenflens: N.v.t.

Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund
 0.000

Beperk. eind: Gesteund

b-eff(Begin) = 0.000

b-eff(Eind) =

Tabel gebruikt NB 8.1

= 0.0kN/m

= 0.0

Bovenflens maatgevend

Xb;lst = 0.000 m

Xe;lst = 1.975 m

lst = 1.975 m

Lsys = 1.975 m

Lg = 1.975 m

S = 1.329 m

Iwa = 1.9327e-07

m6

C1 = 2.30

C2 = 1.55 (tabel)

C2(toegepast) = 0.00

C = 16.90

Mcr = 2,627.7 kNm

kred = 1.0

Lam-rel = 0.23

Profielklasse 1

Chi;LT(Bi.C.1) = 0.99

M;Ed = 1.5 kNm

UC(y) = 0.00

Chi;LT,Z = 1.00

lkip = 1.975 m

UC(z) = 0.00

My;begin = -6.5 kNm

My;eind = 0.8 kNm

NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Stabiliteitstoetsing C7-V1 (0.000-1.975)

Maatgevende combinatie: Fu.C.11

N;Ed = -22.2 kN

Nb;Rd;y = 1,255.4 kN

Nb;Rd;z = 1,371.4 kN

Methode Y = Ongeschoord

Ca(y) = 2.685

Cb(y) = 0.721

Lknik Y = 5.282

m

Methode Z = Cons. gesch.

Ca(z) = N/B

Cb(z) = N/B

Lknik Z = 1.975

m

Xy = 0.83

Knikcurve: B

Xz = 0.91

Knikcurve: C

NEN-EN1993-1-1(6.46): UC = 0.02 < 1

Buiging & Druk C7-V1 (0.000-1.975)

Maatgevende combinatie: Fu.C.11

Kipgevoelig Ja

Profielklasse = 1

N;Ed = -22.2 kN

My;Ed = 1.5 kNm

Mz;Ed = 0.0 kNm

Delta;My;Ed = 0.0 kNm

Delta;Mz;Ed = 0.0 kNm

My = 15.8 kNm

My;Psi = -5.6 kNm

My;s = 9.8 kNm

Mz = 0.0 kNm

Mz;Psi = 0.0 kNm

Mz;s = 0.0 kNm

Cmy = 0.69

Cmz = 0.90

CmLT = 0.90

Kyy = 0.700

Kyz = 0.541

Kzy = 0.982

Kzz = 0.902

Ksi;y = 0.83

Ksi;z = 0.91

Ksi;LT = 0.99

NEN-EN1993-1-1(6.61&6.62): UC = 0.13 < 1

Doorbuigingstoetsing Z' C7-V1 (0.000-1.975)

Constructietype : Vloer

Toets type: Scheurvorming gevoelige wanden

w;c = 0.0 mm

Zeegvorm 3-Punt

w;1 = 0.0 mm (x = 0.396 mm; Fr.C.(w1))

w;2 = 0.0 mm

w;3 = 0.0 mm (x = 0.396 mm; Qu.C.1)

w;3 = -0.1 mm (x = 0.658 mm; Fr.C.7)

w;tot; = 0.0 mm

(w;2+w;3) = -0.1 mm

w;max = 0.0 mm

Limiet (w;2+w;3) = L/500 = 4.0 mm

Limiet w;max = L/250 = 7.9 mm

UC(w;2+w;3) = 0.0

UC(w;max) = 0.0

NEN-EN1990/NB A1.4.2: UC = 0.02<1



Doorbuigingstoetsing Z" C7-V1 (0.000-1.975)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.0 mm (x = 0.396 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.396 mm; Qu.C.1)
 w;tot; = 0.0 mm
 w;max = 0.0 mm
 Limiet w;max = L/250 = 7.9 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02 < 1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = -0.1 mm (x = 0.563 mm; Fr.C.7)
 (w;2+w;3) = -0.1 mm
 Limiet (w;2+w;3) = L/500 = 4.0 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C8-V1 (0.000-0.995)

HE220A Analyse
 h = 210.0 mm A = 6.43e-03 m2
 568.5e-06 m3
 b = 220.0 mm Iy = 541.0e-07 m4
 270.6e-06 m3 Iz = 195.5e-07 m4
 tf = 11.0 mm
 5.12e-03 m2
 tw = 7.0 mm Massa/m = 50.5 kg/m
 2.07e-03 m2
 r = 18.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 515.2e-06 m3 Wy;pl =
 Wz;el = 177.7e-06 m3 Wz;pl =
 Aw;y;el = 5.12e-03 m2 Aw;y;pl =
 Aw;z;el = 2.07e-03 m2 Aw;z;pl =
 It = 284.6e-09 m4 Iwa = 193.3e-09

Doorsnedetoetsing C8-V1 (0.000-0.995)

Maatgevende combinatie: Fu.C.11 op 0.995 m
 N;Ed = -22.2 kN Vy;Ed = 0.0 kN
 Vz;Ed = -29.9 kN
 N;Rd = 1,512.0 kN Vy;Rd = 694.4 kN
 Vz;Rd = 280.5 kN
 NEN-EN1993-1-1(6.12): UC = 0.23 < 1

Profielklasse = 1
 My;Ed = -30.6 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 133.6 kNm
 MzRd = 63.6 kNm

Kiptoetsing C8-V1 (0.000-0.995)

Equi. profiel: HE220A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inkle. begin: Gesteund Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 8.1 = 0.0kN/m
 Bovenflens maatgevend Xb;lst = 0.000 m
 Lsys = 0.995 m Lg = 0.995 m
 m6
 C1 = 2.30 C2 = 1.55 (tabel)
 Mcr = 9,620.6 kNm kred = 1.0
 Chi;LT(Bi.C.1) = 1.00 M;Ed = 0.8 kNm
 Chi;LT,Z = 1.00 lkip = 0.995 m
 My;begin = 0.8 kNm My;eind = -5.6 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Instab. curve Kip:a

b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 Xe;lst = 0.995 m Ist = 0.995 m
 S = 1.329 m Iwa = 1.9327e-07
 C2(toegepast) = 0.00 C = 31.16
 Lam-rel = 0.20 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00

Stabiliteitstoetsing C8-V1 (0.000-0.995)

Maatgevende combinatie: Fu.C.11
 N;Ed = -22.2 kN Nb;Rd;y = 1,488.0 kN Nb;Rd;z = 1,512.0 kN
 Methode Y = Ongeschoord Ca(y) = 1.604 Cb(y) = 0.355 Lknik Y = 2.107
 m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 0.995



m

Xy = 0.98
 Xz = 1.00

NEN-EN1993-1-1(6.46): UC = 0.01 < 1

Knikcurve: B
 Knikcurve: C

Buiging & Druk C8-V1 (0.000-0.995)

Maatgevende combinatie: Fu.C.11 Kipgevoelig Ja
 N;Ed = -22.2 kN My;Ed = 0.8 kNm
 Delta;My;Ed = 0.0 kNm

My = -30.6 kNm My;Psi = -5.6 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm
 Cmy = 0.64 Cmz = 0.90
 Kyy = 0.643 Kyz = 0.538
 Ksi;y = 0.98 Ksi;z = 1.00

NEN-EN1993-1-1(6.61&6.62): UC = 0.20 < 1

Profielklasse = 1
 Mz;Ed = 0.0 kNm
 Delta;Mz;Ed = 0.0 kNm

My;s = -16.9 kNm
 Mz;s = 0.0 kNm
 CmLT = 0.90
 Kzy = 0.792
 Ksi;LT = 1.00

Kzz = 0.897

Doorbuigingstoetsing Z' C8-V1 (0.000-0.995)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.0 mm (x = 0.630 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.630 mm; Qu.C.1)
 w;tot; = 0.0 mm
 w;max = 0.0 mm
 Limiet w;max = L/250 = 4.0 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.0 mm (x = 0.542 mm; Fr.C.6)

(w;2+w;3) = 0.0 mm
 Limiet (w;2+w;3) = L/500 = 2.0 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C8-V1 (0.000-0.995)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.0 mm (x = 0.630 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.630 mm; Qu.C.1)
 w;tot; = 0.0 mm
 w;max = 0.0 mm
 Limiet w;max = L/250 = 4.0 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.0 mm (x = 0.580 mm; Fr.C.6)

(w;2+w;3) = 0.0 mm
 Limiet (w;2+w;3) = L/500 = 2.0 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C9-V1 (0.000-4.120)

HE220A Analyse
 h = 210.0 mm A = 6.43e-03 m2
 568.5e-06 m3
 b = 220.0 mm Iy = 541.0e-07 m4
 270.6e-06 m3 Iz = 195.5e-07 m4
 tf = 11.0 mm
 5.12e-03 m2 Massa/m = 50.5 kg/m
 tw = 7.0 mm
 2.07e-03 m2
 r = 18.0 mm

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 515.2e-06 m3 Wy;pl =

Wz;el = 177.7e-06 m3 Wz;pl =

Aw;y;el = 5.12e-03 m2 Aw;y;pl =

Aw;z;el = 2.07e-03 m2 Aw;z;pl =

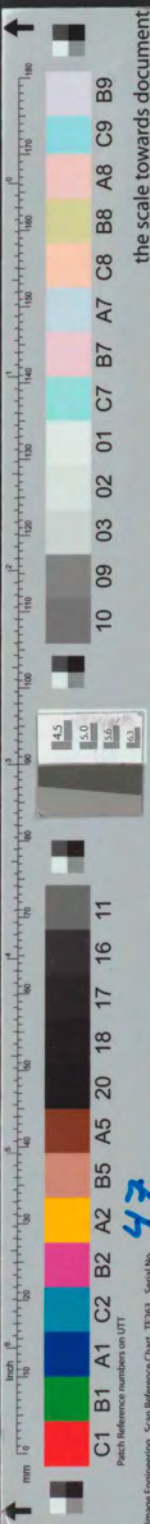
It = 284.6e-09 m4 Iwa = 193.3e-09

m6

Doorsnedetoetsing C9-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.11 op 4.120 m
 N;Ed = -29.5 kN Vy;Ed = 0.0 kN
 Vz;Ed = -41.0 kN
 N;Rd = 1,512.0 kN Vy;Rd = 694.4 kN
 Vz;Rd = 280.5 kN

Profielklasse = 1
 My;Ed = -65.5 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 133.6 kNm
 MzRd = 63.6 kNm



NEN-EN1993-1-1(6.12): UC = 0.49 < 1

Kiptoetsing C9-V1 (0.000-4.120)

Equi. profiel: HE220A
 Maatgevende combinatie: Fu.C.11
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund
 Beperk. eind: Gesteund
 b-eff(Begin) = 0.000
 b-eff(Eind) =
 0.000
 Tabel gebruikt NB 8.1 = 0.0kN/m = 0.0
 Onderflens maatgevend Xb;lst = 0.000 m Xe;lst = 4.120 m Ist = 4.120 m
 Lsys = 4.120 m Lg = 4.120 m S = 1.329 m Iwa = 1.9327e-07
 m6
 C1 = 2.30 C2 = 1.55 (tabel) C2(toegepast) = 0.00 C = 10.29
 Mcr = 766.9 kNm kred = 1.0 Lam-rel = 0.42 Profielklasse 1
 Chi;LT(Fu.C.11) = 0.95 M;Ed = 65.5 kNm UC(y) = 0.52
 Chi;LT,Z = 1.00 lkip = 4.120 m UC(z) = 0.00
 My;begin = 21.8 kNm My;eind = -65.5 kNm
 NEN-EN1993-1-1(6.54): UC = 0.52 < 1

Stabiliteitstoetsing C9-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.11
 N;Ed = -29.5 kN Nb;Rd;y = 853.1 kN Nb;Rd;z = 1,005.0 kN
 Methode Y = Ongeschoord Ca(y) = 3.446 Cb(y) = 0.250 Lknik Y = 9.062
 m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 4.120
 m
 Xy = 0.56 Knikcurve: B
 Xz = 0.66 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.03 < 1

Buiging & Druk C9-V1 (0.000-4.120)

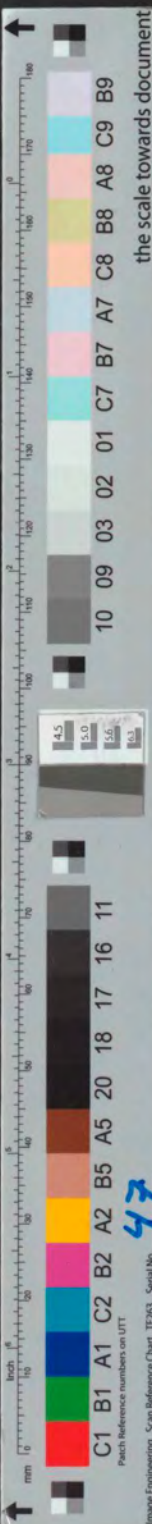
Maatgevende combinatie: Fu.C.11 Kipgevoelig Ja Profielklasse = 1
 N;Ed = -29.5 kN My;Ed = 65.5 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = -65.5 kNm My;Psi = 21.8 kNm My;s = -1.5 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 CmY = 0.40 CmZ = 0.90 CmLT = 0.90
 Kyy = 0.411 Kyz = 0.556 Kzy = 0.996 Kzz = 0.926
 Ksi;y = 0.56 Ksi;z = 0.66 Ksi;LT = 0.95
 NEN-EN1993-1-1(6.61&6.62): UC = 0.54 < 1

Doorbuigingstoetsing Z' C9-V1 (0.000-4.120)

Constructietype : Vloer Toets type: Scheurvorming gevoelige wanden
 w;c = 0.0 mm Zeegvorm 3-Punt
 w;1 = 0.4 mm (x = 2.190 mm; Fr.C.(w1)) w;2 = 0.0 mm
 w;3 = 0.3 mm (x = 2.190 mm; Qu.C.1) w;3 = 0.7 mm (x = 2.497 mm; Fr.C.7)
 w;tot; = 0.8 mm
 w;max = 0.8 mm (w;2+w;3) = 0.7 mm
 Limiet w;max = L/250 = 16.5 mm Limiet (w;2+w;3) = L/500 = 8.2 mm
 UC(w;max) = 0.0 UC(w;2+w;3) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.08 < 1

Doorbuigingstoetsing Z'' C9-V1 (0.000-4.120)

Constructietype : Vloer Toets type: Scheurvorming gevoelige wanden



w;c = 0.0 mm
 w;1 = 0.4 mm (x = 2.190 mm; Fr.C.(w1))
 w;3 = 0.3 mm (x = 2.190 mm; Qu.C.1)
 w;tot; = 0.8 mm
 w;max = 0.8 mm
 Limiet w;max = L/250 = 16.5 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.08<1

Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.7 mm (x = 2.718 mm; Fr.C.7)
 (w;2+w;3) = 0.7 mm
 Limiet (w;2+w;3) = L/500 = 8.2 mm
 UC(w;2+w;3) = 0.1

Profielgegevens staaf C10-V1 (0.000-0.400)

HE200A Analyse
 h = 190.0 mm A = 5.38e-03 m2
 429.5e-06 m3
 b = 200.0 mm Iy = 369.2e-07 m4
 203.8e-06 m3 Iz = 133.6e-07 m4
 tf = 10.0 mm
 4.28e-03 m2
 tw = 6.5 mm Massa/m = 42.3 kg/m
 1.81e-03 m2
 r = 18.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 388.6e-06 m3 Wy;pl =
 Wz;el = 133.6e-06 m3 Wz;pl =
 Aw;y;el = 4.28e-03 m2 Aw;y;pl =
 Aw;z;el = 1.81e-03 m2 Aw;z;pl =
 It = 209.8e-09 m4 Iwa = 108.0e-09

Doorsnedetoetsing C10-V1 (0.000-0.400)

Maatgevende combinatie: Fu.C.1 op 0.400 m
 N;Ed = -3.1 kN Vy;Ed = 0.0 kN
 Vz;Ed = -103.8 kN
 N;Rd = 1,265.0 kN Vy;Rd = 580.4 kN
 Vz;Rd = 245.3 kN
 NEN-EN1993-1-1(6.17): UC = 0.42 < 1

Profielklasse = 1
 My;Ed = -31.1 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 100.9 kNm
 MzRd = 47.9 kNm

Kiptoetsing C10-V1 (0.000-0.400)

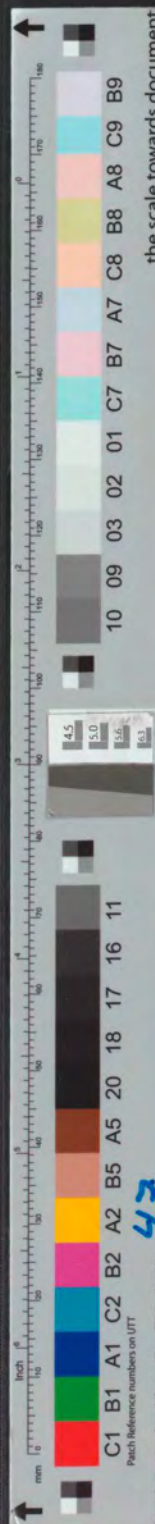
Equi. profiel: HE200A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inkleem. begin: Gesteund Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 8.1 = 0.0kN/m
 Bovenflens maatgevend Xb;lst = 0.000 m
 Lsys = 0.400 m Lg = 0.400 m
 m6
 C1 = 2.30 C2 = 1.55 (tabel)
 Mcr = 35,997.9 kNm kred = 1.0
 Chi;LT(Bi.C.1) = 1.00 M;Ed = 3.5 kNm
 Chi;LT,Z = 1.00 lkip = 0.400 m
 My;begin = 3.5 kNm My;eind = -15.9 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Instab. curve Kip:a

b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 Xe;lst = 0.400 m lst = 0.400 m
 S = 1.157 m Iwa = 1.0800e-07
 C2(toegepast) = 0.00 C = 66.04
 Lam-rel = 0.20 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00

Stabiliteitstoetsing C10-V1 (0.000-0.400)

Maatgevende combinatie: Fu.C.2
 N;Ed = -0.6 kN Nb;Rd;y = 1,265.0 kN Nb;Rd;z = 1,265.0 kN
 Methode Y = Ongeschoord Ca(y) = 2.790 Cb(y) = 1.487 Lknik Y = 1.303
 m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 0.400
 m
 Xy = 1.00 Knikcurve: B
 Xz = 1.00 Knikcurve: C



NEN-EN1993-1-1(6.46): UC = 0.00 < 1

Buiging & Druk C10-V1 (0.000-0.400)

Maatgevende combinatie: Fu.C.2	Kipgevoelig Ja	Profielklasse = 1
N;Ed = -0.6 kN	My;Ed = 3.5 kNm	Mz;Ed = 0.0 kNm
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm
My = -32.5 kNm	My;Psi = 7.3 kNm	My;s = -12.4 kNm
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm
Cmy = 0.50	Cmz = 0.90	CmLT = 0.90
Kyy = 0.505	Kyz = 0.540	Kzy = 0.686
Ksi;y = 1.00	Ksi;z = 1.00	Kzz = 0.900

NEN-EN1993-1-1(6.61&6.62): UC = 0.22 < 1

Doorbuigingstoetsing Z' C10-V1 (0.000-0.400)

Constructietype : Vloer overstek	Toets type: Scheurvorming gevoelige wanden
w;c = 0.0 mm	Zeegvorm 3-Punt
w;1 = 0.2 mm (x = 0.000 mm; Fr.C.(w1))	w;2 = 0.0 mm
w;3 = 0.2 mm (x = 0.000 mm; Qu.C.1)	w;3 = 0.3 mm (x = 0.000 mm; Fr.C.7)
w;tot; = 0.4 mm	
w;max = 0.4 mm	(w;2+w;3) = 0.3 mm
Limiet w;max = L/250 = 3.2 mm	Limiet (w;2+w;3) = L/500 = 1.6 mm
UC(w;max) = 0.1	UC(w;2+w;3) = 0.2

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.21 < 1

Doorbuigingstoetsing Z" C10-V1 (0.000-0.400)

Constructietype : Vloer overstek	Toets type: Scheurvorming gevoelige wanden
w;c = 0.0 mm	Zeegvorm 3-Punt
w;1 = 0.2 mm (x = 0.000 mm; Fr.C.(w1))	w;2 = 0.0 mm
w;3 = 0.2 mm (x = 0.000 mm; Qu.C.1)	w;3 = 0.3 mm (x = 0.000 mm; Fr.C.7)
w;tot; = 0.4 mm	
w;max = 0.4 mm	(w;2+w;3) = 0.3 mm
Limiet w;max = L/250 = 3.2 mm	Limiet (w;2+w;3) = L/500 = 1.6 mm
UC(w;max) = 0.1	UC(w;2+w;3) = 0.2

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.21 < 1

Profielgegevens staaf C11-V1 (0.000-3.375)

HE200A	Analyse	Staal S235	fyd(toegepast) = 235 N/mm2
h = 190.0 mm	A = 5.38e-03 m2	Wy;el = 388.6e-06 m3	Wy;pl =
429.5e-06 m3		Wz;el = 133.6e-06 m3	Wz;pl =
b = 200.0 mm	Iy = 369.2e-07 m4	Aw;y;el = 4.28e-03 m2	Aw;y;pl =
203.8e-06 m3		Aw;z;el = 1.81e-03 m2	Aw;z;pl =
tf = 10.0 mm	Iz = 133.6e-07 m4	It = 209.8e-09 m4	Iwa = 108.0e-09
4.28e-03 m2	Massa/m = 42.3 kg/m		
tw = 6.5 mm			
1.81e-03 m2			
r = 18.0 mm			

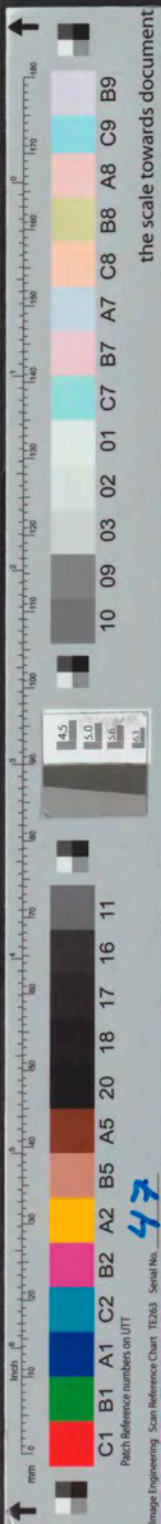
m6

Doorsnedetoetsing C11-V1 (0.000-3.375)

Maatgevende combinatie: Fu.C.12 op 0.000 m	Profielklasse = 1
N;Ed = -0.3 kN	My;Ed = -54.5 kNm
	Mz;Ed = 0.0 kNm
N;Rd = 1,265.0 kN	MyRd = 100.9 kNm
	MzRd = 47.9 kNm
Vy;Ed = 0.0 kN	
Vz;Ed = 41.3 kN	
Vy;Rd = 580.4 kN	
Vz;Rd = 245.3 kN	

NEN-EN1993-1-1(6.12): UC = 0.54 < 1

Kiptoetsing C11-V1 (0.000-3.375)



Equi. profiel: HE200A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund
 Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 8.1
 Bovenflens maatgevend
 Lsys = 3.375 m
 m6
 C1 = 2.30
 Mcr = 685.9 kNm
 Chi;LT(Bi.C.1) = 0.96
 Chi;LT,Z = 1.00
 My;begin = -14.4 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Instab. curve Kip:a
 b-eff(Begin) = 0.000
 = 0.0
 Xe;lst = 3.375 m
 S = 1.157 m
 C2 = 1.55 (tabel)
 kred = 1.0
 M;Ed = 2.8 kNm
 lkip = 3.375 m
 My;eind = -2.1 kNm

b-eff(Eind) =
 = 0.0
 Ist = 3.375 m
 Iwa = 1.0800e-07
 C = 10.62
 Lam-rel = 0.38
 C = 10.62
 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00

Stabiliteitstoetsing C11-V1 (0.000-3.375)

Maatgevende combinatie: Fu.C.12
 N;Ed = -0.3 kN
 Methode Y = Ongeschoord
 m
 Methode Z = Cons. gesch.
 m
 Xy = 0.63
 Xz = 0.71
 NEN-EN1993-1-1(6.46): UC = 0.00 < 1

Nb;Rd;y = 798.1 kN
 Ca(y) = 3.195
 Nb;Rd;z = 899.9 kN
 Cb(y) = 0.250
 Lknik Y = 7.366
 Ca(z) = N/B
 Cb(z) = N/B
 Lknik Z = 3.375
 Knikcurve: B
 Knikcurve: C

Buiging & Druk C11-V1 (0.000-3.375)

Maatgevende combinatie: Fu.C.12
 N;Ed = -0.3 kN
 My = -54.5 kNm
 Mz = 0.0 kNm
 Cmz = 0.40
 Kyy = 0.400
 Ksi;y = 0.63
 NEN-EN1993-1-1(6.61&6.62): UC = 0.56 < 1

Kipgevoelig Ja
 My;Ed = 2.8 kNm
 Delta;My;Ed = 0.0 kNm
 My;Psi = 25.4 kNm
 Mz;Psi = 0.0 kNm
 Cmz = 0.90
 Kyz = 0.540
 Ksi;z = 0.71

Profielklasse = 1
 Mz;Ed = 0.0 kNm
 Delta;Mz;Ed = 0.0 kNm
 My;s = 0.0 kNm
 Mz;s = 0.0 kNm
 CmLT = 0.90
 Kzy = 1.000
 Ksi;LT = 0.96
 Kzz = 0.900

Doorbuigingstoetsing Z' C11-V1 (0.000-3.375)

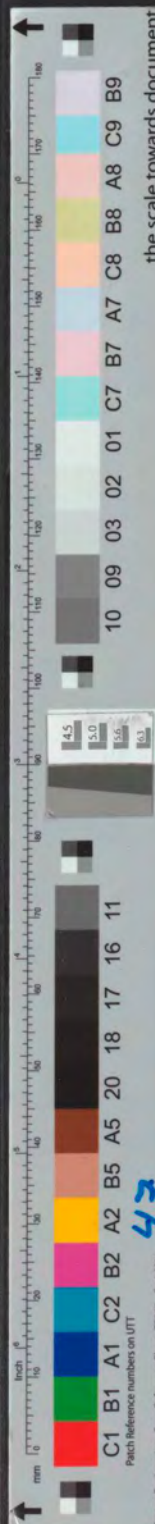
Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = -0.1 mm (x = 0.559 mm; Fr.C.(w1))
 w;3 = -0.1 mm (x = 0.559 mm; Qu.C.1)
 w;tot; = -0.2 mm
 w;max = -0.2 mm
 Limiet w;max = L/250 = 13.5 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.03<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = -0.2 mm (x = 0.675 mm; Fr.C.7)
 (w;2+w;3) = -0.2 mm
 Limiet (w;2+w;3) = L/500 = 6.8 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C11-V1 (0.000-3.375)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = -0.1 mm (x = 0.559 mm; Fr.C.(w1))
 w;3 = -0.1 mm (x = 0.559 mm; Qu.C.1)
 w;tot; = -0.2 mm

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = -0.2 mm (x = 0.675 mm; Fr.C.7)



w;max = -0.2 mm
 Limiet w;max = L/250 = 13.5 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.03 < 1

(w;2+w;3) = -0.2 mm
 Limiet (w;2+w;3) = L/500 = 6.8 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C12-V1 (0.000-1.975)

HE200A	Analyse	Staal S235	f _{yd} (toegepast) = 235 N/mm ²
h = 190.0 mm	A = 5.38e-03 m ²	W _{y;el} = 388.6e-06 m ³	W _{y;pl} =
429.5e-06 m ³	I _y = 369.2e-07 m ⁴	W _{z;el} = 133.6e-06 m ³	W _{z;pl} =
b = 200.0 mm	I _z = 133.6e-07 m ⁴	A _{w;y;el} = 4.28e-03 m ²	A _{w;y;pl} =
203.8e-06 m ³		A _{w;z;el} = 1.81e-03 m ²	A _{w;z;pl} =
t _f = 10.0 mm	Massa/m = 42.3 kg/m	I _t = 209.8e-09 m ⁴	I _{wa} = 108.0e-09
4.28e-03 m ²			
tw = 6.5 mm			
1.81e-03 m ²			
r = 18.0 mm			
m6			

Doorsnedetoetsing C12-V1 (0.000-1.975)

Maatgevende combinatie: Fu.C.12 op 0.000 m	Profielklasse = 1	
N;Ed = -0.9 kN	V _{y;Ed} = 0.0 kN	M _{y;Ed} = -34.1 kNm
	V _{z;Ed} = 32.4 kN	M _{z;Ed} = 0.0 kNm
N;Rd = 1,265.0 kN	V _{y;Rd} = 580.4 kN	M _{y;Rd} = 100.9 kNm
	V _{z;Rd} = 245.3 kN	M _{z;Rd} = 47.9 kNm
NEN-EN1993-1-1(6.12): UC = 0.34 < 1		

Kiptoetsing C12-V1 (0.000-1.975)

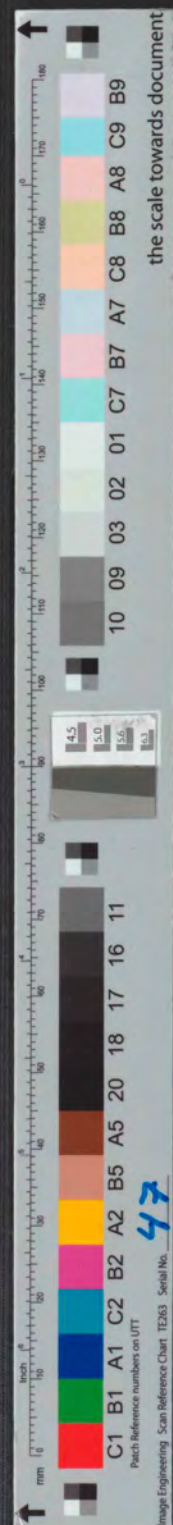
Equi. profiel: HE200A	Instab. curve Kip:a		
Maatgevende combinatie: Bi.C.1			
Aangrijphoogte van de last: 0.000 m vanaf hart profiel			
Kipsteun bovenflens: N.v.t.			
Kipsteun onderflens: N.v.t.			
Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
0.000		= 0.0	
Tabel gebruikt NB 8.1	= 0.0kN/m	= 0.0	
Bovenflens maatgevend	X _{b;lst} = 0.000 m	X _{e;lst} = 1.975 m	lst = 1.975 m
Lsys = 1.975 m	L _g = 1.975 m	S = 1.157 m	I _{wa} = 1.0800e-07
m6			
C1 = 2.30	C2 = 1.55 (tabel)	C2(toegepast) = 0.00	C = 15.13
M _{cr} = 1,670.5 kNm	k _{red} = 1.0	Lam-rel = 0.25	Profielklasse 1
Chi;LT(Bi.C.1) = 0.99	M;Ed = 2.0 kNm		UC(y) = 0.00
Chi;LT,Z = 1.00	I _{kip} = 1.975 m		UC(z) = 0.00
M _{y;begin} = -5.4 kNm	M _{y;eind} = 1.1 kNm		
NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4			

Stabiliteitstoetsing C12-V1 (0.000-1.975)

Maatgevende combinatie: Fu.C.12			
N;Ed = -0.9 kN	N _{b;Rd;y} = 1,092.2 kN	N _{b;Rd;z} = 1,120.2 kN	
Methode Y = Ongeschoord	Ca(y) = 0.934	Cb(y) = 0.626	Lknik Y = 4.244
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 1.975
m			
X _y = 0.86		Knikcurve: B	
X _z = 0.89		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.00 < 1			

Buiging & Druk C12-V1 (0.000-1.975)

Maatgevende combinatie: Fu.C.12	Kipgevoelig Ja	Profielklasse = 1
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N;Ed = -0.9 kN	My;Ed = 2.0 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = -34.1 kNm	My;Psi = 11.1 kNm	My;s = -6.9 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.40	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.400	Kyz = 0.540	Kzy = 1.000	Kzz = 0.900
Ksi;y = 0.86	Ksi;z = 0.89	Ksi;LT = 0.99	
NEN-EN1993-1-1(6.61&6.62): UC = 0.34 < 1			

Doorbuigingstoetsing Z' C12-V1 (0.000-1.975)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.0 mm (x = 1.325 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 1.325 mm; Qu.C.1)
 w;tot; = 0.1 mm
 w;max = 0.1 mm
 Limiet w;max = L/250 = 7.9 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02 < 1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.1 mm (x = 0.823 mm; Fr.C.6)
 (w;2+w;3) = 0.1 mm
 Limiet (w;2+w;3) = L/500 = 4.0 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C12-V1 (0.000-1.975)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.0 mm (x = 1.325 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 1.325 mm; Qu.C.1)
 w;tot; = 0.1 mm
 w;max = 0.1 mm
 Limiet w;max = L/250 = 7.9 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02 < 1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.1 mm (x = 0.823 mm; Fr.C.6)
 (w;2+w;3) = 0.1 mm
 Limiet (w;2+w;3) = L/500 = 4.0 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C13-V1 (0.000-0.995)

HE200A Analyse
 h = 190.0 mm A = 5.38e-03 m²
 429.5e-06 m³
 b = 200.0 mm Iy = 369.2e-07 m⁴
 203.8e-06 m³ Iz = 133.6e-07 m⁴
 tf = 10.0 mm
 4.28e-03 m² Massa/m = 42.3 kg/m
 tw = 6.5 mm
 1.81e-03 m²
 r = 18.0 mm
 m⁶

Staal S235 fyd(toegepast) = 235 N/mm²
 Wy;el = 388.6e-06 m³ Wy;pl =
 Wz;el = 133.6e-06 m³ Wz;pl =
 Aw;y;el = 4.28e-03 m² Aw;y;pl =
 Aw;z;el = 1.81e-03 m² Aw;z;pl =
 It = 209.8e-09 m⁴ Iwa = 108.0e-09

Doorsnedetoetsing C13-V1 (0.000-0.995)

Maatgevende combinatie: Fu.C.11 op 0.995 m
 N;Ed = 3.8 kN Vy;Ed = 0.0 kN
 Vz;Ed = -32.6 kN
 N;Rd = 1,265.0 kN Vy;Rd = 580.4 kN
 Vz;Rd = 245.3 kN
 NEN-EN1993-1-1(6.12): UC = 0.35 < 1

Profielklasse = 1
 My;Ed = -35.6 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 100.9 kNm
 MzRd = 47.9 kNm

Kiptoetsing C13-V1 (0.000-0.995)

Equi. profiel: HE200A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Instab. curve Kip:a



Kipsteun bovenflens: N.v.t.

Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund 0.000	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
Tabel gebruikt NB 8.1	= 0.0kN/m	= 0.0	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 0.995 m	lst = 0.995 m
Lsys = 0.995 m	Lg = 0.995 m	S = 1.157 m	Iwa = 1.0800e-07
m6			
C1 = 2.30	C2 = 1.55 (tabel)	C2(toegepast) = 0.00	C = 27.36
Mcr = 5,995.6 kNm	kred = 1.0	Lam-rel = 0.20	Profielklasse 1
Chi;LT(Bi.C.1) = 1.00	M;Ed = 1.1 kNm		UC(y) = 0.00
Chi;LT,Z = 1.00	kip = 0.995 m		UC(z) = 0.00
My;begin = 1.1 kNm	My;eind = -5.7 kNm		
NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4			

Stabiliteitstoetsing C13-V1 (0.000-0.995)

Maatgevende combinatie: Fu.C.12

N;Ed = -0.9 kN	Nb;Rd;y = 1,236.9 kN	Nb;Rd;z = 1,256.8 kN	
Methode Y = Ongeschoord	Ca(y) = 1.243	Cb(y) = 0.376	Lknik Y = 2.041
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 0.995
m			
Xy = 0.98		Knikcurve: B	
Xz = 0.99		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.00 < 1			

Buiging & Druk C13-V1 (0.000-0.995)

Maatgevende combinatie: Fu.C.12

N;Ed = -0.9 kN	Kipgevoelig Ja	Profielklasse = 1	
	My;Ed = 1.1 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = 19.6 kNm	My;Psi = 11.1 kNm	My;s = 16.5 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.87	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.874	Kyz = 0.540	Kzy = 0.813	Kzz = 0.900
Ksi;y = 0.98	Ksi;z = 0.99	Ksi;LT = 1.00	
NEN-EN1993-1-1(6.61&6.62): UC = 0.17 < 1			

Doorbuigingstoetsing Z' C13-V1 (0.000-0.995)

Constructietype : Vloer

w;c = 0.0 mm	Toets type: Scheurvorming gevoelige wanden
w;1 = 0.0 mm (x = 0.641 mm; Fr.C.(w1))	Zeegvorm 3-Punt
w;3 = 0.0 mm (x = 0.641 mm; Qu.C.1)	w;2 = 0.0 mm
w;tot; = 0.0 mm	w;3 = -0.1 mm (x = 0.554 mm; Fr.C.6)
w;max = 0.0 mm	(w;2+w;3) = -0.1 mm
Limiet w;max = L/250 = 4.0 mm	Limiet (w;2+w;3) = L/500 = 2.0 mm
UC(w;max) = 0.0	UC(w;2+w;3) = 0.0
NEN-EN NEN-EN1990/NB A1.4.2: UC = 0.03<1	

Doorbuigingstoetsing Z" C13-V1 (0.000-0.995)

Constructietype : Vloer

w;c = 0.0 mm	Toets type: Scheurvorming gevoelige wanden
w;1 = 0.0 mm (x = 0.641 mm; Fr.C.(w1))	Zeegvorm 3-Punt
w;3 = 0.0 mm (x = 0.641 mm; Qu.C.1)	w;2 = 0.0 mm
w;tot; = 0.0 mm	w;3 = -0.1 mm (x = 0.580 mm; Fr.C.6)
w;max = 0.0 mm	(w;2+w;3) = -0.1 mm
Limiet w;max = L/250 = 4.0 mm	Limiet (w;2+w;3) = L/500 = 2.0 mm
UC(w;max) = 0.0	UC(w;2+w;3) = 0.0



NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.03 < 1

Profielgegevens staaf C14-V1 (0.000-4.120)

HE200A	Analyse	Staal S235 fyd(toegepast) = 235 N/mm ²	
h = 190.0 mm	A = 5.38e-03 m ²	Wy;el = 388.6e-06 m ³	Wy;pl =
429.5e-06 m ³			
b = 200.0 mm	Iy = 369.2e-07 m ⁴	Wz;el = 133.6e-06 m ³	Wz;pl =
203.8e-06 m ³			
tf = 10.0 mm	Iz = 133.6e-07 m ⁴	Aw;y;el = 4.28e-03 m ²	Aw;y;pl =
4.28e-03 m ²			
tw = 6.5 mm	Massa/m = 42.3 kg/m	Aw;z;el = 1.81e-03 m ²	Aw;z;pl =
1.81e-03 m ²			
r = 18.0 mm		It = 209.8e-09 m ⁴	Iwa = 108.0e-09
m6			

Doorsnedetoetsing C14-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.12 op 0.000 m	Profielklasse = 1
N;Ed = -6.3 kN	My;Ed = -38.5 kNm
	Mz;Ed = 0.0 kNm
N;Rd = 1,265.0 kN	MyRd = 100.9 kNm
	MzRd = 47.9 kNm

NEN-EN1993-1-1(6.12): UC = 0.38 < 1

Kiptoetsing C14-V1 (0.000-4.120)

Equi. profiel: HE200A	Instab. curve Kip: a
Maatgevende combinatie: Fu.C.12	
Aangrijphoogte van de last: 0.000 m vanaf hart profiel	
Kipsteun bovenflens: N.v.t.	
Kipsteun onderflens: N.v.t.	
Inklem. begin: Gesteund	b-eff(Begin) = 0.000
0.000	b-eff(Eind) =
Tabel gebruikt NB 8.1	= 0.0
Onderflens maatgevend	Xe;lst = 4.120 m
Lsys = 4.120 m	S = 1.157 m
m6	Iwa = 1.0800e-07
C1 = 2.30	C2(toegepast) = 0.00
Mcr = 509.9 kNm	Lam-rel = 0.44
Chi;LT(Fu.C.12) = 0.94	C = 9.63
Chi;LT,Z = 1.00	UC(y) = 0.41
My;begin = -38.5 kNm	UC(z) = 0.00

NEN-EN1993-1-1(6.54): UC = 0.41 < 1

Stabiliteitstoetsing C14-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.12	
N;Ed = -6.3 kN	Nb;Rd;y = 676.8 kN
Methode Y = Ongeschoord	Ca(y) = 2.115
m	Nb;Rd;z = 773.8 kN
	Cb(y) = 0.250
Methode Z = Cons. gesch.	Ca(z) = N/B
m	Cb(z) = N/B
Xy = 0.54	Lknik Y = 8.558
Xz = 0.61	Lknik Z = 4.120
NEN-EN1993-1-1(6.46): UC = 0.01 < 1	Knikcurve: B
	Knikcurve: C

Buiging & Druk C14-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.12	Kipgevoelig Ja	Profielklasse = 1
N;Ed = -6.3 kN	My;Ed = 38.5 kNm	Mz;Ed = 0.0 kNm
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm
My = -38.5 kNm	My;Psi = 18.5 kNm	My;s = 10.4 kNm



Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 Cmy = 0.40 Cmz = 0.90 CmLT = 0.90
 Kyy = 0.403 Kyz = 0.545 Kzy = 0.999 Kzz = 0.909
 Ksi;y = 0.54 Ksi;z = 0.61 Ksi;LT = 0.94
 NEN-EN1993-1-1(6.61&6.62): UC = 0.41 < 1

Doorbuigingstoetsing Z' C14-V1 (0.000-4.120)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.6 mm (x = 2.139 mm; Fr.C.(w1))
 w;3 = 0.4 mm (x = 2.139 mm; Qu.C.1)
 w;tot; = 1.0 mm
 w;max = 1.0 mm
 Limiet w;max = L/250 = 16.5 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.09<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.8 mm (x = 2.167 mm; Fr.C.4)
 (w;2+w;3) = 0.8 mm
 Limiet (w;2+w;3) = L/500 = 8.2 mm
 UC(w;2+w;3) = 0.1

Doorbuigingstoetsing Z" C14-V1 (0.000-4.120)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.6 mm (x = 2.139 mm; Fr.C.(w1))
 w;3 = 0.4 mm (x = 2.139 mm; Qu.C.1)
 w;tot; = 1.0 mm
 w;max = 1.0 mm
 Limiet w;max = L/250 = 16.5 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.09<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.8 mm (x = 2.143 mm; Fr.C.4)
 (w;2+w;3) = 0.8 mm
 Limiet (w;2+w;3) = L/500 = 8.2 mm
 UC(w;2+w;3) = 0.1

Profielgegevens staaf C15-V1 (0.000-2.650)

HE180B	Analyse	Staal S235 fyd(toegepast) = 235 N/mm2	
h = 180.0 mm	A = 6.53e-03 m2	Wy;el = 425.7e-06 m3	Wy;pl =
481.4e-06 m3			
b = 180.0 mm	Iy = 383.1e-07 m4	Wz;el = 151.4e-06 m3	Wz;pl =
231.0e-06 m3			
tf = 14.0 mm	Iz = 136.3e-07 m4	Aw;y;el = 5.23e-03 m2	Aw;y;pl =
5.23e-03 m2			
tw = 8.5 mm	Massa/m = 51.2 kg/m	Aw;z;el = 2.02e-03 m2	Aw;z;pl =
2.02e-03 m2			
r = 15.0 mm		It = 421.6e-09 m4	Iwa = 937.5e-10
m6			

Doorsnedetoetsing C15-V1 (0.000-2.650)

Maatgevende combinatie: Fu.C.11 op 2.650 m
 N;Ed = -148.0 kN Vy;Ed = 0.0 kN My;Ed = 21.9 kNm
 Vz;Ed = 8.3 kN Mz;Ed = 0.0 kNm

N;Rd = 1,533.4 kN Vy;Rd = 710.0 kN MyRd = 113.1 kNm
 Vz;Rd = 274.6 kN MzRd = 54.3 kNm

NEN-EN1993-1-1(6.12): UC = 0.19 < 1

Kiptoetsing C15-V1 (0.000-2.650)

Equi. profiel: HE180B
 Maatgevende combinatie: Bi.C.1 Instab. curve Kip:a
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund b-eff(Begin) = 0.000 b-eff(Eind) =



0.000

Tabel gebruikt NB 6.1	M = 0.1kN/m	MBeta = 0.0	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 2.650 m	Ist = 2.650 m
Lsys = 2.650 m	Lg = 2.650 m	S = 0.760 m	Iwa = 9.3746e-08
m6			
C1 = 1.75	C2 = 0.00 (tabel)	C2(toegepast) = 0.00	C = 7.40
Mcr = 872.0 kNm	kred = 1.0	Lam-rel = 0.36	Profielklasse 1
Chi;LT(Bi.C.1) = 0.96	M;Ed = 0.1 kNm		UC(y) = 0.00
Chi;LT,Z = 1.00	lkip = 2.650 m		UC(z) = 0.00
My;begin = 0.0 kNm	My;eind = 0.1 kNm		
NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4			

Stabiliteitstoetsing C15-V1 (0.000-2.650)

Maatgevende combinatie: Fu.C.12

N;Ed = -172.7 kN	Nb;Rd;y = 1,075.3 kN	Nb;Rd;z = 1,188.4 kN	
Methode Y = Ongeschoord	Ca(y) = 5.000	Cb(y) = 0.250	Lknik Y = 6.025
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 2.650
m			
Xy = 0.70		Knikcurve: B	
Xz = 0.78		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.16 < 1			

Buiging & Druk C15-V1 (0.000-2.650)

Maatgevende combinatie: Fu.C.12

N;Ed = -172.7 kN	Kipgevoelig Ja	Profielklasse = 1	
	My;Ed = 0.1 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = -21.6 kNm	My;Psi = 0.0 kNm	My;s = -10.8 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.60	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.661	Kyz = 0.590	Kzy = 0.986	Kzz = 0.983
Ksi;y = 0.70	Ksi;z = 0.78	Ksi;LT = 0.96	
NEN-EN1993-1-1(6.61&6.62): UC = 0.34 < 1			

Doorbuigingstoetsing X C15-V1 (0.000-2.650)

Constructietype : Kolom

u;i;3 = -7.2 mm (Ka.C.8)	Toets type: 1 bouwlaag
Limiet u;i;max = H/300 = 8.8 mm	Limiet u;i;max = N/B = 0.0 mm
UC(u;i;max) = 0.8	
NEN-EN NEN-EN1990/NB A1.4.2: UC = 0.82 < 1	

Profielgegevens staaf C16-V1 (0.000-3.975)

HE160B	Analyse	Staal S235 fyd(toegepast) = 235 N/mm2	
h = 160.0 mm	A = 5.43e-03 m2	Wy;el = 311.5e-06 m3	Wy;pl =
354.0e-06 m3			
b = 160.0 mm	Iy = 249.2e-07 m4	Wz;el = 111.2e-06 m3	Wz;pl =
170.0e-06 m3			
tf = 13.0 mm	Iz = 889.2e-08 m4	Aw;y;el = 4.35e-03 m2	Aw;y;pl =
4.35e-03 m2			
tw = 8.0 mm	Massa/m = 42.6 kg/m	Aw;z;el = 1.76e-03 m2	Aw;z;pl =
1.76e-03 m2			
r = 15.0 mm		It = 312.4e-09 m4	Iwa = 479.4e-10
m6			

Doorsnedetoetsing C16-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12 op 0.000 m

N;Ed = -145.0 kN	Vy;Ed = 0.0 kN	Profielklasse = 1
		My;Ed = 34.5 kNm



N;Rd = 1,274.9 kN
 Vz;Ed = -17.1 kN
 Vy;Rd = 590.6 kN
 Vz;Rd = 238.7 kN
 Mz;Ed = 0.0 kNm
 MyRd = 83.2 kNm
 MzRd = 39.9 kNm
 NEN-EN1993-1-1(6.12): UC = 0.41 < 1

Kiptoetsing C16-V1 (0.000-3.975)

Equi. profiel: HE160B

Maatgevende combinatie: Fu.C.12

Instab. curve Kip: a

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Kipsteun bovenflens: N.v.t.

Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund

Beperk. eind: Gesteund

b-eff(Begin) = 0.000

b-eff(Eind) =

0.000

Tabel gebruikt NB 6.1

M = 34.5kN/m

MBeta = -33.5

Bovenflens maatgevend

Xb;lst = 0.000 m

Xe;lst = 3.975 m

Ist = 3.975 m

Lsys = 3.975 m

Lg = 3.975 m

S = 0.632 m

Iwa = 4.7943e-08

m6

C1 = 2.30

C2 = 0.00 (tabel)

C2(toegepast) = 0.00

C = 8.08

Mcr = 441.0 kNm

kred = 1.0

Lam-rel = 0.43

Profielklasse 1

Chi;LT(Fu.C.12) = 0.94

M;Ed = 34.5 kNm

UC(y) = 0.44

Chi;LT,Z = 1.00

lkip = 3.975 m

UC(z) = 0.00

My;begin = 34.5 kNm

My;eind = -33.5 kNm

NEN-EN1993-1-1(6.54): UC = 0.44 < 1

Stabiliteitstoetsing C16-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12

N;Ed = -145.0 kN

Nb;Rd;y = 834.0 kN

Nb;Rd;z = 655.3 kN

Lknik Y = 5.798

Methode Y = Ongeschoord

Ca(y) = 0.250

Cb(y) = 0.250

m

Methode Z = Cons. gesch.

Ca(z) = N/B

Cb(z) = N/B

Lknik Z = 3.975

m

Xy = 0.65

Knikcurve: B

Xz = 0.51

Knikcurve: C

NEN-EN1993-1-1(6.46): UC = 0.22 < 1

Buiging & Druk C16-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12 Kipgevoelig Ja

Profielklasse = 1

N;Ed = -145.0 kN

My;Ed = 34.5 kNm

Mz;Ed = 0.0 kNm

Delta;My;Ed = 0.0 kNm

Delta;Mz;Ed = 0.0 kNm

My = 34.5 kNm

My;Psi = -33.5 kNm

My;s = 0.5 kNm

Mz = 0.0 kNm

Mz;Psi = 0.0 kNm

Mz;s = 0.0 kNm

Cmy = 0.40

Cmz = 0.90

CmLT = 0.90

Kyy = 0.449

Kyz = 0.707

Kzy = 0.966

Kzz = 1.179

Ksi;y = 0.65

Ksi;z = 0.51

Ksi;LT = 0.94

NEN-EN1993-1-1(6.61&6.62): UC = 0.65 < 1

Doorbuigingstoetsing X C16-V1 (0.000-3.975)

Constructietype : Kolom

Toets type: 1 bouwlaag

u;3 = -16.9 mm (Ka.C.8)

Limiet u;3;max = H/300 = 13.3 mm

Limiet u;max = N/B = 0.0 mm

UC(u;3;max) = 1.3

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 1.27 > 1

Profielgegevens staaf C17-V1 (0.000-2.650)

HE180B

Analyse

Staal S235 fyd(toegepast) = 235 N/mm2

h = 180.0 mm

A = 6.53e-03 m2

Wy;el = 425.7e-06 m3

Wy;pl =

481.4e-06 m3



b = 180.0 mm 231.0e-06 m3	Iy = 383.1e-07 m4	Wz;el = 151.4e-06 m3	Wz;pl =
tf = 14.0 mm 5.23e-03 m2	Iz = 136.3e-07 m4	Aw;y;el = 5.23e-03 m2	Aw;y;pl =
tw = 8.5 mm 2.02e-03 m2	Massa/m = 51.2 kg/m	Aw;z;el = 2.02e-03 m2	Aw;z;pl =
r = 15.0 mm m6		It = 421.6e-09 m4	Iwa = 937.5e-10

Doorsnedetoetsing C17-V1 (0.000-2.650)

Maatgevende combinatie: Fu.C.12 op 2.650 m

N;Ed = -164.0 kN	Vy;Ed = 0.0 kN	My;Ed = -27.6 kNm
	Vz;Ed = -10.4 kN	Mz;Ed = 0.0 kNm
N;Rd = 1,533.4 kN	Vy;Rd = 710.0 kN	MyRd = 113.1 kNm
	Vz;Rd = 274.6 kN	MzRd = 54.3 kNm

NEN-EN1993-1-1(6.12): UC = 0.24 < 1

Profielklasse = 1

My;Ed = -27.6 kNm
Mz;Ed = 0.0 kNm
MyRd = 113.1 kNm
MzRd = 54.3 kNm

Kiptoetsing C17-V1 (0.000-2.650)

Equi. profiel: HE180B

Maatgevende combinatie: Bi.C.1

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Kipsteun bovenflens: N.v.t.

Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund
0.000

Tabel gebruikt NB 6.1

Bovenflens maatgevend

Lsys = 2.650 m

m6

C1 = 1.75

Mcr = 872.0 kNm

Chi;LT(Bi.C.1) = 0.96

Chi;LT,Z = 1.00

My;begin = 0.0 kNm

NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip NVT, i.v.m. geen buiging

Beperk. eind: Gesteund

M = -2.4kN/m

Xb;lst = 0.000 m

Lg = 2.650 m

C2 = 0.00 (tabel)

kred = 1.0

M;Ed = 0.0 kNm

lkip = 2.650 m

My;eind = -2.4 kNm

Instab. curve Kip:a

b-eff(Begin) = 0.000

MBeta = 0.0

Xe;lst = 2.650 m

S = 0.760 m

C2(toegepast) = 0.00

Lam-rel = 0.36

b-eff(Eind) =

lst = 2.650 m

Iwa = 9.3746e-08

C = 7.40

Profielklasse 1

UC(y) = 0.00

UC(z) = 0.00

Stabiliteitstoetsing C17-V1 (0.000-2.650)

Maatgevende combinatie: Fu.C.12

N;Ed = -164.0 kN

Methode Y = Ongeschoord

m

Methode Z = Cons. gesch.

m

Xy = 0.69

Xz = 0.78

NEN-EN1993-1-1(6.46): UC = 0.15 < 1

Nb;Rd;y = 1,061.8 kN

Ca(y) = 5.000

Ca(z) = N/B

Nb;Rd;z = 1,188.4 kN

Cb(y) = 0.275

Cb(z) = N/B

Knikcurve: B

Knikcurve: C

Lknik Y = 6.125

Lknik Z = 2.650

Buiging & Druk C17-V1 (0.000-2.650)

Maatgevende combinatie: Fu.C.12

N;Ed = -164.0 kN

My = -27.6 kNm

Mz = 0.0 kNm

Cmy = 0.60

Kyy = 0.660

Ksi;y = 0.69

NEN-EN1993-1-1(6.61&6.62): UC = 0.39 < 1

Kipgevoelig Ja

My;Ed = 0.0 kNm

Delta;My;Ed = 0.0 kNm

My;Psi = 0.0 kNm

Mz;Psi = 0.0 kNm

Cmz = 0.90

Kyz = 0.587

Ksi;z = 0.78

Profielklasse = 1

Mz;Ed = 0.0 kNm

Delta;Mz;Ed = 0.0 kNm

My;s = -13.8 kNm

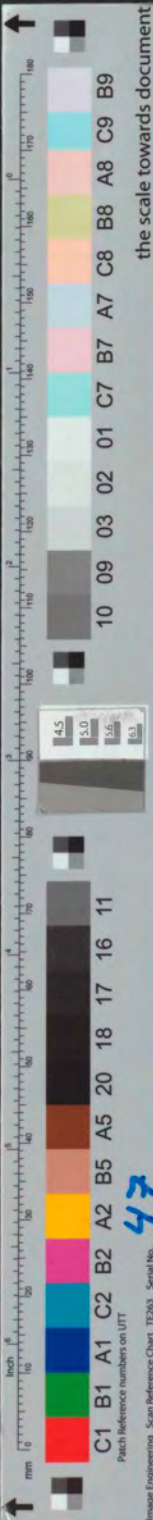
Mz;s = 0.0 kNm

CmLT = 0.90

Kzy = 0.987

Ksi;LT = 0.96

Kzz = 0.979



Doorbuigingstoetsing X C17-V1 (0.000-2.650)

Constructietype : Kolom
 $u; i; 3 = -7.2 \text{ mm (Ka.C.8)}$
 $\text{Limiet } u; i; \text{max} = H/300 = 8.8 \text{ mm}$
 $\text{UC}(u; i; \text{max}) = 0.8$
 $\text{NEN-EN|NEN-EN1990/NB A1.4.2: UC} = 0.81 < 1$

Toets type: 1 bouwlaag
 $\text{Limiet } u; \text{max} = N/B = 0.0 \text{ mm}$

Profielgegevens staaf C18-V1 (0.000-3.975)

HE160B Analyse
 $h = 160.0 \text{ mm}$
 $354.0e-06 \text{ m}^3$
 $b = 160.0 \text{ mm}$
 $170.0e-06 \text{ m}^3$
 $tf = 13.0 \text{ mm}$
 $4.35e-03 \text{ m}^2$
 $tw = 8.0 \text{ mm}$
 $1.76e-03 \text{ m}^2$
 $r = 15.0 \text{ mm}$
 m^6

Staal S235 $f_{yd}(\text{toegepast}) = 235 \text{ N/mm}^2$
 $Wy;el = 311.5e-06 \text{ m}^3$
 $Wz;el = 111.2e-06 \text{ m}^3$
 $Aw; y; el = 4.35e-03 \text{ m}^2$
 $Aw; z; el = 1.76e-03 \text{ m}^2$
 $It = 312.4e-09 \text{ m}^4$
 $Wy;pl =$
 $Wz;pl =$
 $Aw; y; pl =$
 $Aw; z; pl =$
 $Iwa = 479.4e-10$

Doorsnedetoetsing C18-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12 op 0.000 m
 $N; Ed = -121.8 \text{ kN}$
 $N; Rd = 1,274.9 \text{ kN}$
 $Vy; Ed = 0.0 \text{ kN}$
 $Vz; Ed = -18.6 \text{ kN}$
 $Vy; Rd = 590.6 \text{ kN}$
 $Vz; Rd = 238.7 \text{ kN}$
 $\text{NEN-EN1993-1-1(6.12): UC} = 0.46 < 1$

Profielklasse = 1
 $My; Ed = 38.3 \text{ kNm}$
 $Mz; Ed = 0.0 \text{ kNm}$
 $MyRd = 83.2 \text{ kNm}$
 $MzRd = 39.9 \text{ kNm}$

Kiptoetsing C18-V1 (0.000-3.975)

Equi. profiel: HE160B
 Maatgevende combinatie: Fu.C.12
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklemp. begin: Gesteund
 Beperk. eind: Gesteund
 Tabel gebruikt NB 6.1
 Bovenflens maatgevend
 $L_{sys} = 3.975 \text{ m}$
 m^6
 $C1 = 2.30$
 $M_{cr} = 441.0 \text{ kNm}$
 $Chi; LT(Fu.C.12) = 0.94$
 $Chi; LT, Z = 1.00$
 $My; begin = 38.3 \text{ kNm}$
 $\text{NEN-EN1993-1-1(6.54): UC} = 0.49 < 1$

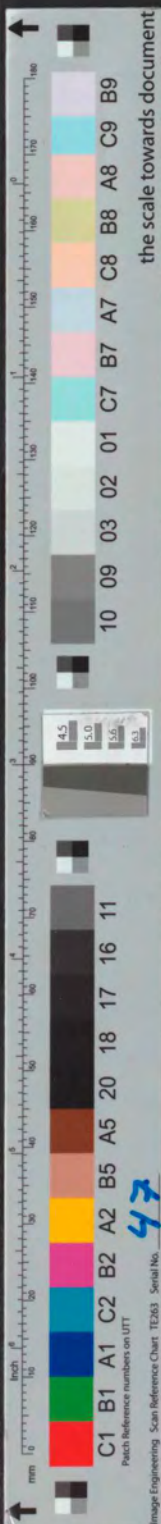
Instab. curve Kip:a

$b\text{-eff}(\text{Begin}) = 0.000$
 $b\text{-eff}(\text{Eind}) =$
 $MBeta = -35.8$
 $Xe; lst = 3.975 \text{ m}$
 $S = 0.632 \text{ m}$
 $lst = 3.975 \text{ m}$
 $Iwa = 4.7943e-08$
 $C2(\text{toegepast}) = 0.00$
 $Lam\text{-rel} = 0.43$
 $C = 8.08$
 Profielklasse 1
 $UC(y) = 0.49$
 $UC(z) = 0.00$

Stabiliteitstoetsing C18-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12
 $N; Ed = -121.8 \text{ kN}$
 Methode Y = Ongeschoord
 Methode Z = Cons. gesch.
 $Xy = 0.65$
 $Xz = 0.51$

$Nb; Rd; y = 834.0 \text{ kN}$
 $Ca(y) = 0.250$
 $Ca(z) = N/B$
 $Nb; Rd; z = 655.3 \text{ kN}$
 $Cb(y) = 0.250$
 $Cb(z) = N/B$
 $L_{knik} Y = 5.798$
 $L_{knik} Z = 3.975$
 Knikcurve: B
 Knikcurve: C



NEN-EN1993-1-1(6.46): UC = 0.19 < 1

Buiging & Druk C18-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.12	Kipgevoelig Ja	Profielklasse = 1
N;Ed = -121.8 kN	My;Ed = 38.3 kNm	Mz;Ed = 0.0 kNm
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm
My = 38.3 kNm	My;Psi = -35.8 kNm	My;s = 1.3 kNm
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm
Cmy = 0.40	Cmz = 0.90	CmLT = 0.90
Kyy = 0.442	Kyz = 0.681	Kzy = 0.971
Ksi;y = 0.65	Ksi;z = 0.51	Kzz = 1.134
NEN-EN1993-1-1(6.61&6.62): UC = 0.66 < 1		

Doorbuigingstoetsing X C18-V1 (0.000-3.975)

Constructietype : Kolom Toets type: 1 bouwlaag
 u;i;3 = -16.9 mm (Ka.C.8)

Limiet u;i;max = H/300 = 13.3 mm Limiet u;i;max = N/B = 0.0 mm

UC(u;i;max) = 1.3

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 1.28 > 1

Profielgegevens staaf C19-V1 (0.000-1.150)

HE160B	Analyse	Staal S235	fyd(toegepast) = 235 N/mm2
h = 160.0 mm	A = 5.43e-03 m2	Wy;el = 311.5e-06 m3	Wy;pl =
354.0e-06 m3			
b = 160.0 mm	Iy = 249.2e-07 m4	Wz;el = 111.2e-06 m3	Wz;pl =
170.0e-06 m3			
tf = 13.0 mm	Iz = 889.2e-08 m4	Aw;y;el = 4.35e-03 m2	Aw;y;pl =
4.35e-03 m2			
tw = 8.0 mm	Massa/m = 42.6 kg/m	Aw;z;el = 1.76e-03 m2	Aw;z;pl =
1.76e-03 m2			
r = 15.0 mm		It = 312.4e-09 m4	Iwa = 479.4e-10
m6			

Doorsnedetoetsing C19-V1 (0.000-1.150)

Maatgevende combinatie: Fu.C.11 op 1.150 m	Profielklasse = 1
N;Ed = -132.1 kN	My;Ed = 49.4 kNm
	Mz;Ed = 0.0 kNm
N;Rd = 1,274.9 kN	MyRd = 83.2 kNm
	MzRd = 39.9 kNm

NEN-EN1993-1-1(6.12): UC = 0.59 < 1

Kiptoetsing C19-V1 (0.000-1.150)

Equi. profiel: HE160B		Instab. curve Kip:a
Maatgevende combinatie: Bi.C.1		
Aangrijphoogte van de last: 0.000 m vanaf hart profiel		
Kipsteun bovenflens: N.v.t.		
Kipsteun onderflens: N.v.t.		
Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000
0.000		b-eff(Eind) =
Tabel gebruikt Fig. NB.32	M = 2.6kN/m	MBeta = 0.0
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 1.150 m
Lsys = 1.150 m	Lg = 1.150 m	S = 0.632 m
m6		Iwa = 4.7943e-08
C1 = 1.80	C2 = 0.00 (tabel)	C2(toegepast) = 0.00
Mcr = 2,130.6 kNm	kred = 1.0	Lam-rel = 0.20
Chi;LT(Bi.C.1) = 1.00	M;Ed = 2.6 kNm	C = 11.29
		Profielklasse 1
		UC(y) = 0.00



Chi;LT,Z = 1.00 Ikip = 1.150 m UC(z) = 0.00
 My;begin = 0.0 kNm My;eind = 2.6 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Stabiliteitstoetsing C19-V1 (0.000-1.150)

Maatgevende combinatie: Fu.C.11
 N;Ed = -132.1 kN Nb;Rd;y = 1,162.5 kN Nb;Rd;z = 1,208.5 kN
 Methode Y = Ongeschoord Ca(y) = 5.000 Cb(y) = 0.342 Lknik Y = 2.771
 m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 1.150
 m
 Xy = 0.91 Knikcurve: B
 Xz = 0.95 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.11 < 1

Buiging & Druk C19-V1 (0.000-1.150)

Maatgevende combinatie: Fu.C.11 Kipgevoelig Ja Profielklasse = 1
 N;Ed = -132.1 kN My;Ed = 2.6 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = 49.4 kNm My;Psi = 0.0 kNm My;s = 24.7 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 Cmy = 0.60 Cmz = 0.90 CmLT = 0.90
 Kyy = 0.616 Kyz = 0.540 Kzy = 0.902 Kzz = 0.900
 Ksi;y = 0.91 Ksi;z = 0.95 Ksi;LT = 1.00
 NEN-EN1993-1-1(6.61&6.62): UC = 0.65 < 1

Profielgegevens staaf C20-V1 (0.000-3.975)

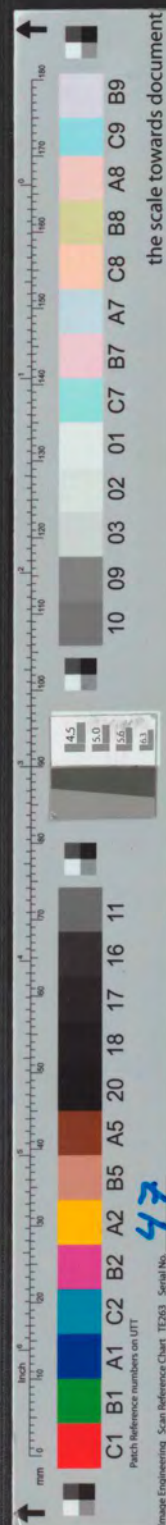
HE160B Analyse Staal S235 fyd(toegepast) = 235 N/mm2
 h = 160.0 mm A = 5.43e-03 m2 Wy;el = 311.5e-06 m3 Wy;pl =
 354.0e-06 m3
 b = 160.0 mm Iy = 249.2e-07 m4 Wz;el = 111.2e-06 m3 Wz;pl =
 170.0e-06 m3
 tf = 13.0 mm Iz = 889.2e-08 m4 Aw;y;el = 4.35e-03 m2 Aw;y;pl =
 4.35e-03 m2
 tw = 8.0 mm Massa/m = 42.6 kg/m Aw;z;el = 1.76e-03 m2 Aw;z;pl =
 1.76e-03 m2
 r = 15.0 mm It = 312.4e-09 m4 Iwa = 479.4e-10
 m6

Doorsnedetoetsing C20-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.11 op 3.975 m Profielklasse = 1
 N;Ed = -91.2 kN Vy;Ed = 0.0 kN My;Ed = 21.4 kNm
 Vz;Ed = 9.4 kN Mz;Ed = 0.0 kNm
 N;Rd = 1,274.9 kN Vy;Rd = 590.6 kN MyRd = 83.2 kNm
 Vz;Rd = 238.7 kN MzRd = 39.9 kNm
 NEN-EN1993-1-1(6.12): UC = 0.26 < 1

Kiptoetsing C20-V1 (0.000-3.975)

Equi. profiel: HE160B
 Maatgevende combinatie: Fu.C.11 Instab. curve Kip:a
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund b-eff(Begin) = 0.000 b-eff(Eind) =
 0.000
 Tabel gebruikt NB 6.1 M = 21.4kN/m MBeta = -16.0
 Bovenflens maatgevend Xb;lst = 0.000 m Xe;lst = 3.975 m lst = 3.975 m



Lsys = 3.975 m m6	Lg = 3.975 m	S = 0.632 m	Iwa = 4.7943e-08
C1 = 2.30	C2 = 0.00 (tabel)	C2(toegepast) = 0.00	C = 8.08
Mcr = 441.0 kNm	kred = 1.0	Lam-rel = 0.43	Profielklasse 1
Chi;LT(Fu.C.11) = 0.94	M;Ed = 21.4 kNm		UC(y) = 0.27
Chi;LT,Z = 1.00	Ikip = 3.975 m		UC(z) = 0.00
My;begin = -16.0 kNm	My;eind = 21.4 kNm		
NEN-EN1993-1-1(6.54): UC = 0.27 < 1			

Stabiliteitstoetsing C20-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.11

N;Ed = -91.2 kN	Nb;Rd;y = 803.1 kN	Nb;Rd;z = 655.3 kN	
Methode Y = Ongeschoord	Ca(y) = 0.328	Cb(y) = 0.250	Lknik Y = 6.038
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 3.975
Xy = 0.63		Knikcurve: B	
Xz = 0.51		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.14 < 1			

Buiging & Druk C20-V1 (0.000-3.975)

Maatgevende combinatie: Fu.C.11

N;Ed = -91.2 kN	Kipgevoelig Ja	Profielklasse = 1	
My = 21.4 kNm	My;Ed = 21.4 kNm	Mz;Ed = 0.0 kNm	
Mz = 0.0 kNm	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
Cmy = 0.40	My;Psi = -16.0 kNm	My;s = 2.7 kNm	
Kyy = 0.434	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Ksi;y = 0.63	Cmz = 0.90	CmLT = 0.90	
	Kyz = 0.645	Kzy = 0.979	Kzz = 1.075
	Ksi;z = 0.51	Ksi;LT = 0.94	
NEN-EN1993-1-1(6.61&6.62): UC = 0.41 < 1			

Doorbuigingstoetsing X C20-V1 (0.000-3.975)

Constructietype : Kolom

Toets type: 1 bouwlaag

u;i;3 = -17.0 mm (Ka.C.8)	
Limiet u;i;max = H/300 = 13.3 mm	Limiet u;i;max = N/B = 0.0 mm
UC(u;i;max) = 1.3	

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 1.28 > 1

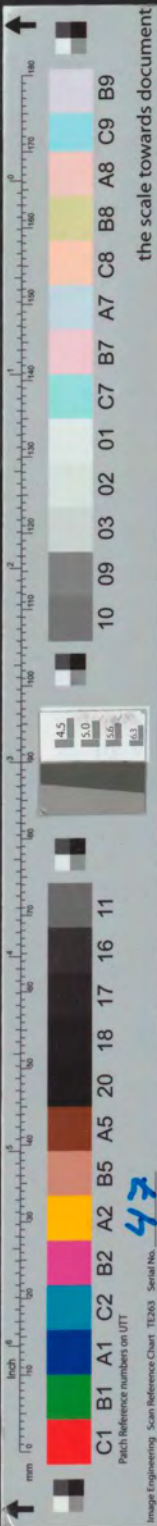
Profielgegevens staaf C21-V1 (0.000-3.410)

HE160B	Analyse	Staal S235	f _{yd} (toegepast) = 235 N/mm ²
h = 160.0 mm	A = 5.43e-03 m ²	Wy;el = 311.5e-06 m ³	Wy;pl =
354.0e-06 m ³		Wz;el = 111.2e-06 m ³	Wz;pl =
b = 160.0 mm	Iy = 249.2e-07 m ⁴	Aw;y;el = 4.35e-03 m ²	Aw;y;pl =
170.0e-06 m ³	Iz = 889.2e-08 m ⁴	Aw;z;el = 1.76e-03 m ²	Aw;z;pl =
tf = 13.0 mm		It = 312.4e-09 m ⁴	Iwa = 479.4e-10
4.35e-03 m ²	Massa/m = 42.6 kg/m		
tw = 8.0 mm			
1.76e-03 m ²			
r = 15.0 mm			
m6			

Doorsnedetoetsing C21-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.12 op 3.410 m

N;Ed = -119.5 kN	Vy;Ed = 0.0 kN	Profielklasse = 1
	Vz;Ed = -16.6 kN	My;Ed = -30.5 kNm
		Mz;Ed = 0.0 kNm
N;Rd = 1,274.9 kN	Vy;Rd = 590.6 kN	MyRd = 83.2 kNm



Vz;Rd = 238.7 kN MzRd = 39.9 kNm

NEN-EN1993-1-1(6.12): UC = 0.37 < 1

Kiptoetsing C21-V1 (0.000-3.410)

Equi. profiel: HE160B

Maatgevende combinatie: Bi.C.1

Instab. curve Kip:a

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Kipsteun bovenflens: N.v.t.

Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
0.000			
Tabel gebruikt NB 6.1	M = -5.0kN/m	MBeta = 2.6	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 3.410 m	Ist = 3.410 m
Lsys = 3.410 m	Lg = 3.410 m	S = 0.632 m	Iwa = 4.7943e-08
m6			
C1 = 2.30	C2 = 0.00 (tabel)	C2(toegepast) = 0.00	C = 8.36
Mcr = 532.2 kNm	kred = 1.0	Lam-rel = 0.40	Profielklasse 1
Chi;LT(Bi.C.1) = 0.95	M;Ed = 2.6 kNm		UC(y) = 0.00
Chi;LT,Z = 1.00	lkip = 3.410 m		UC(z) = 0.00
My;begin = 2.6 kNm	My;eind = -5.0 kNm		
NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4			

Stabiliteitstoetsing C21-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.12

N;Ed = -119.5 kN	Nb;Rd;y = 663.3 kN	Nb;Rd;z = 767.2 kN	
Methode Y = Ongeschoord	Ca(y) = 0.250	Cb(y) = 2.302	Lknik Y = 7.163
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 3.410
m			
Xy = 0.52		Knikcurve: B	
Xz = 0.60		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.18 < 1			

Buiging & Druk C21-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.12

N;Ed = -119.5 kN	Kipgevoelig Ja	Profielklasse = 1	
	My;Ed = 2.6 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = -30.5 kNm	My;Psi = 26.0 kNm	My;s = -2.2 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.40	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.458	Kyz = 0.640	Kzy = 0.978	Kzz = 1.067
Ksi;y = 0.52	Ksi;z = 0.60	Ksi;LT = 0.95	
NEN-EN1993-1-1(6.61&6.62): UC = 0.53 < 1			

Doorbuigingstoetsing X C21-V1 (0.000-3.410)

Constructietype : Kolom

u;i;3 = -10.1 mm (Ka.C.8)

Limiet u;i;max = H/300 = 11.4 mm

UC(u;i;max) = 0.9

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.89<1

Toets type: 1 bouwlaag

Limiet u;i;max = N/B = 0.0 mm

Profielgegevens staaf C22-V1 (0.000-3.410)

HE160B	Analyse	Staal S235 fyd(toegepast) = 235 N/mm2	
h = 160.0 mm	A = 5.43e-03 m2	Wy;el = 311.5e-06 m3	Wy;pl =
354.0e-06 m3			
b = 160.0 mm	Iy = 249.2e-07 m4	Wz;el = 111.2e-06 m3	Wz;pl =
170.0e-06 m3			



tf = 13.0 mm	Iz = 889.2e-08 m4	Aw;y;el = 4.35e-03 m2	Aw;y;pl =
4.35e-03 m2			
tw = 8.0 mm	Massa/m = 42.6 kg/m	Aw;z;el = 1.76e-03 m2	Aw;z;pl =
1.76e-03 m2			
r = 15.0 mm		It = 312.4e-09 m4	Iwa = 479.4e-10
m6			

Doorsnedetoetsing C22-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.12 op 3.410 m	Profielklasse = 1	
N;Ed = -92.0 kN	Vy;Ed = 0.0 kN	My;Ed = -22.6 kNm
	Vz;Ed = -13.2 kN	Mz;Ed = 0.0 kNm
N;Rd = 1,274.9 kN	Vy;Rd = 590.6 kN	MyRd = 83.2 kNm
	Vz;Rd = 238.7 kN	MzRd = 39.9 kNm
NEN-EN1993-1-1(6.12): UC = 0.27 < 1		

Kiptoetsing C22-V1 (0.000-3.410)

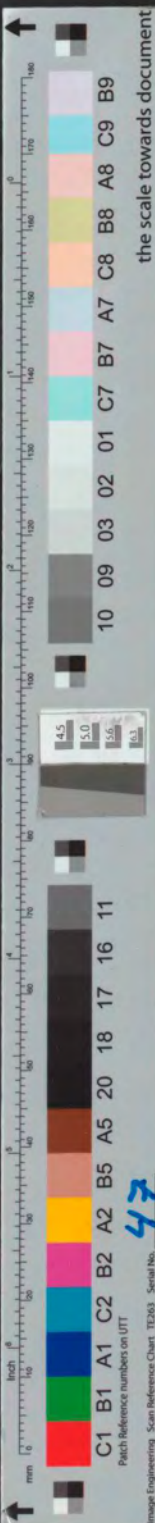
Equi. profiel: HE160B	Instab. curve Kip:a		
Maatgevende combinatie: Fu.C.6			
Aangrijphoogte van de last: 0.000 m vanaf hart profiel			
Kipsteun bovenflens: N.v.t.			
Kipsteun onderflens: N.v.t.			
Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
0.000			
Tabel gebruikt NB 6.1	M = 3.7kN/m	MBeta = -0.8	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 3.410 m	lst = 3.410 m
Lsys = 3.410 m	Lg = 3.410 m	S = 0.632 m	Iwa = 4.7943e-08
m6			
C1 = 2.01	C2 = 0.00 (tabel)	C2(toegepast) = 0.00	C = 7.30
Mcr = 464.4 kNm	kred = 1.0	Lam-rel = 0.42	Profielklasse 1
Chi;LT(Fu.C.6) = 0.95	M;Ed = 3.7 kNm		UC(y) = 0.05
Chi;LT,Z = 1.00	lkip = 3.410 m		UC(z) = 0.00
My;begin = 3.7 kNm	My;eind = -0.8 kNm		
NEN-EN1993-1-1(6.54): UC = 0.05 < 1			

Stabiliteitstoetsing C22-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.12			
N;Ed = -92.0 kN	Nb;Rd;y = 915.7 kN	Nb;Rd;z = 767.2 kN	
Methode Y = Ongeschoord	Ca(y) = 0.318	Cb(y) = 0.250	Lknik Y = 5.156
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 3.410
m			
Xy = 0.72		Knikcurve: B	
Xz = 0.60		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.12 < 1			

Buiging & Druk C22-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.12	Kipgevoelig Ja	Profielklasse = 1	
N;Ed = -92.0 kN	My;Ed = 3.7 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = -22.6 kNm	My;Psi = 22.4 kNm	My;s = -0.1 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.40	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.425	Kyz = 0.617	Kzy = 0.983	Kzz = 1.029
Ksi;y = 0.72	Ksi;z = 0.60	Ksi;LT = 0.95	
NEN-EN1993-1-1(6.61&6.62): UC = 0.40 < 1			



Doorbuigingstoetsing X C22-V1 (0.000-3.410)

Constructietype : Kolom
 u;i;3 = -10.1 mm (Ka.C.8)
 Limiet u;i;max = H/300 = 11.4 mm
 UC(u;i;max) = 0.9
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.89<1

Toets type: 1 bouwlaag
 Limiet u;max = N/B = 0.0 mm

Profielgegevens staaf C23-V1 (0.000-3.410)

HE160B	Analyse	Staal S235	fyd(toegepast) = 235 N/mm2
h = 160.0 mm	A = 5.43e-03 m2	Wy;el = 311.5e-06 m3	Wy;pl =
354.0e-06 m3			
b = 160.0 mm	Iy = 249.2e-07 m4	Wz;el = 111.2e-06 m3	Wz;pl =
170.0e-06 m3			
tf = 13.0 mm	Iz = 889.2e-08 m4	Aw;y;el = 4.35e-03 m2	Aw;y;pl =
4.35e-03 m2			
tw = 8.0 mm	Massa/m = 42.6 kg/m	Aw;z;el = 1.76e-03 m2	Aw;z;pl =
1.76e-03 m2			
r = 15.0 mm		It = 312.4e-09 m4	Iwa = 479.4e-10
m6			

Doorsnedetoetsing C23-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.11 op 3.410 m
 N;Ed = -59.5 kN Vy;Ed = 0.0 kN My;Ed = 17.2 kNm
 Vz;Ed = 9.9 kN Mz;Ed = 0.0 kNm
 N;Rd = 1,274.9 kN Vy;Rd = 590.6 kN MyRd = 83.2 kNm
 Vz;Rd = 238.7 kN MzRd = 39.9 kNm

Profielklasse = 1
 NEN-EN1993-1-1(6.12): UC = 0.21 < 1

Kiptoetsing C23-V1 (0.000-3.410)

Equi. profiel: HE160B
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklembegin: Gesteund Beperk. eind: Gesteund b-eff(Begin) = 0.000 b-eff(Eind) = 0.000

Tabel gebruikt NB 6.1 M = -4.1kN/m MBeta = 4.1
 Bovenflens maatgevend Xb;lst = 0.000 m Xe;lst = 3.410 m Ist = 3.410 m
 Lsys = 3.410 m Lg = 3.410 m S = 0.632 m Iwa = 4.7943e-08

C1 = 2.30 C2 = 0.00 (tabel) C2(toegepast) = 0.00 C = 8.36
 Mcr = 532.2 kNm kred = 1.0 Lam-rel = 0.40 Profielklasse 1
 Chi;LT(Bi.C.1) = 0.95 M;Ed = 4.1 kNm UC(y) = 0.00
 Chi;LT,Z = 1.00 lkip = 3.410 m UC(z) = 0.00
 My;begin = -4.1 kNm My;eind = 4.1 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

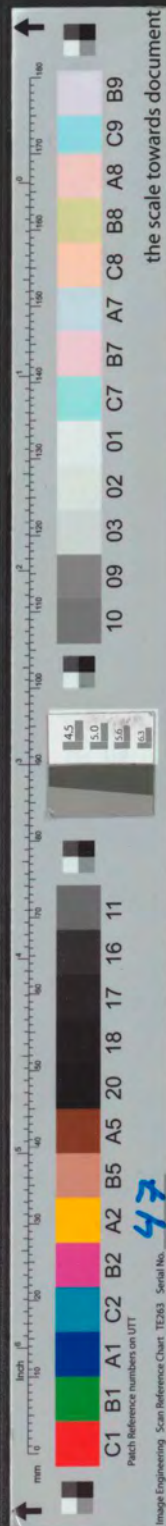
Stabiliteitstoetsing C23-V1 (0.000-3.410)

Maatgevende combinatie: Fu.C.11
 N;Ed = -59.5 kN Nb;Rd;y = 938.1 kN Nb;Rd;z = 767.2 kN
 Methode Y = Ongeschoord Ca(y) = 0.250 Cb(y) = 0.250 Lknik Y = 4.974

Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 3.410

Xy = 0.74 Knikcurve: B
 Xz = 0.60 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.08 < 1

Buiging & Druk C23-V1 (0.000-3.410)



Maatgevende combinatie: Fu.C.11 Kipgevoelig Ja Profielklasse = 1

N;Ed = -59.5 kN My;Ed = 4.1 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm

My = 17.2 kNm My;Psi = -16.7 kNm My;s = 0.3 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 Cmy = 0.40 Cmz = 0.90 CmLT = 0.90
 Kyy = 0.415 Kyz = 0.590 Kzy = 0.989 Kzz = 0.983
 Ksi;y = 0.74 Ksi;z = 0.60 Ksi;LT = 0.95

NEN-EN1993-1-1(6.61&6.62): UC = 0.29 < 1

Doorbuigingstoetsing X C23-V1 (0.000-3.410)

Constructietype : Kolom Toets type: 1 bouwlaag

u;i;3 = -10.1 mm (Ka.C.8)
 Limiet u;i;max = H/300 = 11.4 mm
 UC(u;i;max) = 0.9
 NEN-EN1990/NB A1.4.2: UC = 0.89 < 1

Profielgegevens staaf C24-V1 (0.000-3.775)

HE180A	Analyse	Staal S235 fyd(toegepast) = 235 N/mm2
h = 171.0 mm	A = 4.53e-03 m2	Wy;el = 293.6e-06 m3 Wy;pl =
324.9e-06 m3		
b = 180.0 mm	Iy = 251.0e-07 m4	Wz;el = 102.7e-06 m3 Wz;pl =
156.5e-06 m3		
tf = 9.5 mm	Iz = 924.6e-08 m4	Aw;y;el = 3.61e-03 m2 Aw;y;pl =
3.61e-03 m2		
tw = 6.0 mm	Massa/m = 35.5 kg/m	Aw;z;el = 1.45e-03 m2 Aw;z;pl =
1.45e-03 m2		
r = 15.0 mm		It = 148.0e-09 m4 Iwa = 602.1e-10
m6		

Doorsnedetoetsing C24-V1 (0.000-3.775)

Maatgevende combinatie: Fu.C.5 op 3.775 m Profielklasse = 1

N;Ed = 5.2 kN Vy;Ed = 0.0 kNm My;Ed = -32.1 kNm
 Vz;Ed = -39.5 kNm Mz;Ed = 0.0 kNm
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kNm MyRd = 76.3 kNm
 Vz;Rd = 196.3 kNm MzRd = 36.8 kNm

NEN-EN1993-1-1(6.12): UC = 0.42 < 1

Kiptoetsing C24-V1 (0.000-3.775)

Equi. profiel: HE180A
 Maatgevende combinatie: Fu.C.5 Instab. curve Kip:a

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund Beperk. eind: Gesteund b-eff(Begin) = 0.000 b-eff(Eind) =

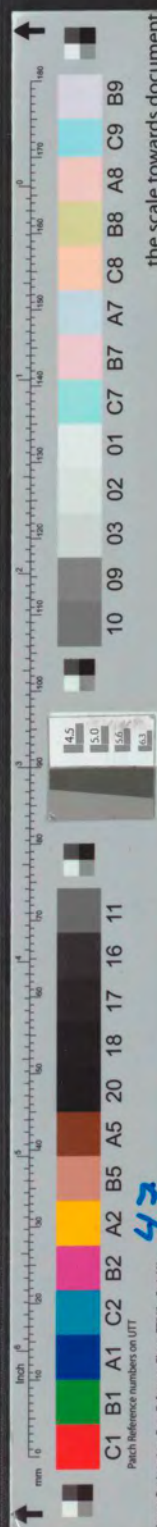
0.000

Tabel gebruikt NB 8.1 = 0.0kN/m = 0.0
 Onderflens maatgevend Xb;lst = 0.000 m Xe;lst = 3.775 m lst = 3.775 m
 Lsys = 3.775 m Lg = 3.775 m S = 1.029 m Iwa = 6.0211e-08

m6

C1 = 2.30 C2 = 1.55 (tabel) C2(toegepast) = 0.00 C = 9.51
 Mcr = 383.8 kNm kred = 1.0 Lam-rel = 0.45 Profielklasse 1
 Chi;LT(Fu.C.5) = 0.94 M;Ed = 32.1 kNm UC(y) = 0.45
 Chi;LT,Z = 1.00 lkip = 3.775 m UC(z) = 0.00
 My;begin = -10.8 kNm My;eind = -32.1 kNm

NEN-EN1993-1-1(6.54): UC = 0.45 < 1



Stabiliteitstoetsing C24-V1 (0.000-3.775)

Maatgevende combinatie: Fu.C.11

N;Ed = -4.4 kN Nb;Rd;y = 493.1 kN Nb;Rd;z = 644.9 kN
 Methode Y = Ongeschoord Ca(y) = 5.000 Cb(y) = 0.250 Lknik Y = 8.582
 m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 3.775
 m
 Xy = 0.46 Knikcurve: B
 Xz = 0.61 Knikcurve: C

NEN-EN1993-1-1(6.46): UC = 0.01 < 1

Buiging & Druk C24-V1 (0.000-3.775)

Maatgevende combinatie: Fu.C.11

N;Ed = -4.4 kN My;Ed = 32.1 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = -31.0 kNm My;Psi = 10.3 kNm My;s = 7.9 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 CmY = 0.40 CmZ = 0.90 CmLT = 0.90
 Kyy = 0.403 Kyz = 0.544 Kzy = 0.999 Kzz = 0.907
 Ksi;y = 0.46 Ksi;z = 0.61 Ksi;LT = 0.94
 NEN-EN1993-1-1(6.61&6.62): UC = 0.44 < 1

Doorbuigingstoetsing Z' C24-V1 (0.000-3.775)

Constructietype : Vloer

w;c = 0.0 mm Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;1 = 0.4 mm (x = 1.502 mm; Fr.C.(w1))
 w;2 = 0.0 mm
 w;3 = 0.3 mm (x = 1.502 mm; Qu.C.1)
 w;3 = 0.7 mm (x = 1.580 mm; Fr.C.3)
 w;tot; = 0.7 mm
 w;max = 0.7 mm (w;2+w;3) = 0.7 mm
 Limiet w;max = L/250 = 15.1 mm Limiet (w;2+w;3) = L/500 = 7.6 mm
 UC(w;max) = 0.0 UC(w;2+w;3) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.09<1

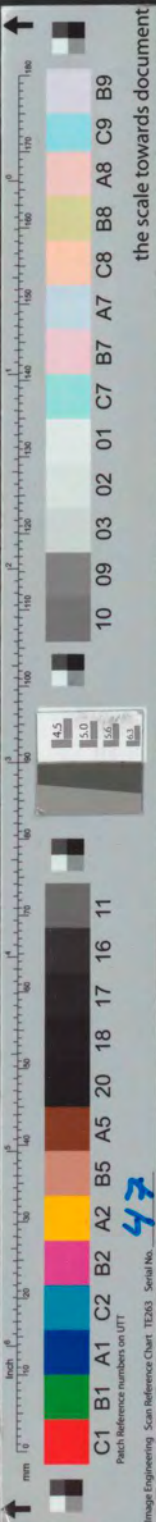
Doorbuigingstoetsing Z" C24-V1 (0.000-3.775)

Constructietype : Vloer

w;c = 0.0 mm Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;1 = 0.4 mm (x = 1.502 mm; Fr.C.(w1))
 w;2 = 0.0 mm
 w;3 = 0.3 mm (x = 1.502 mm; Qu.C.1)
 w;3 = 0.7 mm (x = 1.714 mm; Fr.C.3)
 w;tot; = 0.7 mm
 w;max = 0.7 mm (w;2+w;3) = 0.7 mm
 Limiet w;max = L/250 = 15.1 mm Limiet (w;2+w;3) = L/500 = 7.6 mm
 UC(w;max) = 0.0 UC(w;2+w;3) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.09<1

Profielgegevens staaf C25-V1 (0.000-0.545)

HE180A Analyse Staal S235 fyd(toegepast) = 235 N/mm2
 h = 171.0 mm A = 4.53e-03 m2 Wy;el = 293.6e-06 m3 Wy;pl =
 324.9e-06 m3 Iy = 251.0e-07 m4 Wz;el = 102.7e-06 m3 Wz;pl =
 b = 180.0 mm Iz = 924.6e-08 m4 Aw;y;el = 3.61e-03 m2 Aw;y;pl =
 156.5e-06 m3 Massa/m = 35.5 kg/m Aw;z;el = 1.45e-03 m2 Aw;z;pl =
 tf = 9.5 mm It = 148.0e-09 m4 Iwa = 602.1e-10
 3.61e-03 m2
 tw = 6.0 mm
 1.45e-03 m2
 r = 15.0 mm



m6

Doorsnedetoetsing C25-V1 (0.000-0.545)

Maatgevende combinatie: Fu.C.1 op 0.000 m

Nx;Ed = -0.1 kN

Vy;Ed = 0.0 kN

Profielklasse = 1

My;Ed = -38.2 kNm

a1 = 0.244

Vz;Ed = 123.7 kN

Mz;Ed = 0.0 kNm

a2 = 0.228

Nc;Rd = 1,063.4 kN

Vy;Rd = 490.2 kN

My;Rd = 76.3 kNm

p = 0.068

Vz;Rd = 196.3 kN

Mz;Rd = 36.8 kNm

q = 0.800

NVy;Rd = 1,040.4 kN

NVz;Rd = 1,063.4 kN

MV;y;Rd = 75.0 kNm

MV;z;Rd = 36.8

kNm

NEN-EN1993-1-1(6.17): UC = 0.63 < 1

Kiptoetsing C25-V1 (0.000-0.545)

Equi. profiel: HE180A

Maatgevende combinatie: Bi.C.1

Instab. curve Kip:a

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Kipsteun bovenflens: N.v.t.

Kipsteun onderflens: N.v.t.

0.000

Beperk. eind: Gesteund

b-eff(Begin) = 0.000

b-eff(Eind) =

Tabel gebruikt NB 8.1

= 0.0kN/m

= 0.0

Bovenflens maatgevend

Xb;lst = 0.000 m

Xe;lst = 0.545 m

lst = 0.545 m

Lsys = 0.545 m

Lg = 0.545 m

S = 1.029 m

Iwa = 6.0211e-08

m6

C1 = 2.30

C2 = 1.55 (tabel)

C2 (toegepast) = 0.00

C = 43.45

Mcr = 12,144.0 kNm

kred = 1.0

Lam-rel = 0.20

Profielklasse 1

Chi;LT(Bi.C.1) = 1.00

M;Ed = 11.7 kNm

UC(y) = 0.00

Chi;LT,Z = 1.00

lkip = 0.545 m

UC(z) = 0.00

My;begin = -19.2 kNm

My;eind = 11.7 kNm

NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Stabiliteitstoetsing C25-V1 (0.000-0.545)

Maatgevende combinatie: Fu.C.12

N;Ed = -8.1 kN

Nb;Rd;y = 1,063.4 kN

Nb;Rd;z = 1,063.4 kN

Lknik Y = 1.343

Methode Y = Ongeschoord

Ca(y) = 0.909

Cb(y) = 1.244

m

Methode Z = Cons. gesch.

Ca(z) = N/B

Cb(z) = N/B

Lknik Z = 0.545

m

Xy = 1.00

Knikcurve: B

Xz = 1.00

Knikcurve: C

NEN-EN1993-1-1(6.46): UC = 0.01 < 1

Buiging & Druk C25-V1 (0.000-0.545)

Maatgevende combinatie: Fu.C.12

Kipgevoelig Ja

Profielklasse = 1

N;Ed = -8.1 kN

My;Ed = 11.7 kNm

Mz;Ed = 0.0 kNm

Delta;My;Ed = 0.0 kNm

Delta;Mz;Ed = 0.0 kNm

My = -38.8 kNm

My;Psi = 16.5 kNm

My;s = -10.8 kNm

Mz = 0.0 kNm

Mz;Psi = 0.0 kNm

Mz;s = 0.0 kNm

Cmy = 0.42

Cmz = 0.90

CmLT = 0.90

Kyy = 0.423

Kyz = 0.539

Kzy = 0.728

Kzz = 0.898

Ksi;y = 1.00

Ksi;z = 1.00

Ksi;LT = 1.00

NEN-EN1993-1-1(6.61&6.62): UC = 0.38 < 1

Doorbuigingstoetsing Z' C25-V1 (0.000-0.545)

Constructietype : Vloer

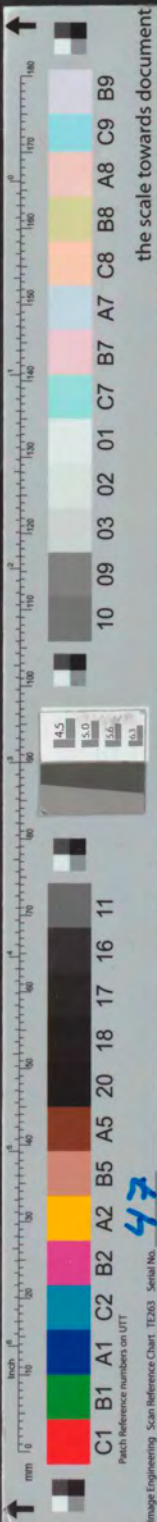
Toets type: Scheurvorming gevoelige wanden

w;c = 0.0 mm

Zeegvorm 3-Punt

w;1 = 0.0 mm (x = 0.165 mm; Fr.C.(w1))

w;2 = 0.0 mm



w;3 = 0.0 mm (x = 0.165 mm; Qu.C.1)
 w;tot; = 0.0 mm
 w;max = 0.0 mm
 Limiet w;max = L/250 = 2.2 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02<1

w;3 = 0.0 mm (x = 0.182 mm; Fr.C.3)
 (w;2+w;3) = 0.0 mm
 Limiet (w;2+w;3) = L/500 = 1.1 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C25-V1 (0.000-0.545)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.0 mm (x = 0.165 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.165 mm; Qu.C.1)
 w;tot; = 0.0 mm
 w;max = 0.0 mm
 Limiet w;max = L/250 = 2.2 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.0 mm (x = 0.176 mm; Fr.C.3)
 (w;2+w;3) = 0.0 mm
 Limiet (w;2+w;3) = L/500 = 1.1 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C26-V1 (0.000-1.430)

HE180A Analyse
 h = 171.0 mm A = 4.53e-03 m2
 324.9e-06 m3
 b = 180.0 mm Iy = 251.0e-07 m4
 156.5e-06 m3 Iz = 924.6e-08 m4
 tf = 9.5 mm
 3.61e-03 m2 Massa/m = 35.5 kg/m
 tw = 6.0 mm
 1.45e-03 m2
 r = 15.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 293.6e-06 m3 Wy;pl =
 Wz;el = 102.7e-06 m3 Wz;pl =
 Aw;y;el = 3.61e-03 m2 Aw;y;pl =
 Aw;z;el = 1.45e-03 m2 Aw;z;pl =
 It = 148.0e-09 m4 Iwa = 602.1e-10

Doorsnedetoetsing C26-V1 (0.000-1.430)

Maatgevende combinatie: Fu.C.11 op 0.000 m
 N;Ed = 0.1 kN Vy;Ed = 0.0 kN
 Vz;Ed = -11.8 kN
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kN
 Vz;Rd = 196.3 kN
 NEN-EN1993-1-1(6.12): UC = 0.33 < 1

Profielklasse = 1
 My;Ed = 25.0 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 76.3 kNm
 MzRd = 36.8 kNm

Kiptoetsing C26-V1 (0.000-1.430)

Equi. profiel: HE180A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund
 0.000 = 0.0kN/m
 Tabel gebruikt NB 8.1 Xb;lst = 0.000 m
 Bovenflens maatgevend Lg = 1.430 m
 m6
 C1 = 2.30 C2 = 1.55 (tabel)
 Mcr = 1,902.1 kNm kred = 1.0
 Chi;LT(Bi.C.1) = 1.00 M;Ed = 8.6 kNm
 Chi;LT,Z = 1.00 lkip = 1.430 m
 My;begin = 8.6 kNm My;eind = 2.2 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Instab. curve Kip:a

b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 Xe;lst = 1.430 m lst = 1.430 m
 S = 1.029 m Iwa = 6.0211e-08
 C2(toegepast) = 0.00 C = 17.85
 Lam-rel = 0.20 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00

Doorbuigingstoetsing Z' C26-V1 (0.000-1.430)



Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.2 mm (x = 0.663 mm; Fr.C.(w1))
 w;3 = 0.1 mm (x = 0.663 mm; Qu.C.1)
 w;tot; = 0.3 mm
 w;max = 0.3 mm
 Limiet w;max = L/250 = 5.7 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.06<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.2 mm (x = 0.675 mm; Fr.C.2)
 (w;2+w;3) = 0.2 mm
 Limiet (w;2+w;3) = L/500 = 2.9 mm
 UC(w;2+w;3) = 0.1

Doorbuigingstoetsing Z" C26-V1 (0.000-1.430)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.2 mm (x = 0.663 mm; Fr.C.(w1))
 w;3 = 0.1 mm (x = 0.663 mm; Qu.C.1)
 w;tot; = 0.3 mm
 w;max = 0.3 mm
 Limiet w;max = L/250 = 5.7 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.06<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.2 mm (x = 0.715 mm; Fr.C.2)
 (w;2+w;3) = 0.2 mm
 Limiet (w;2+w;3) = L/500 = 2.9 mm
 UC(w;2+w;3) = 0.1

Profielgegevens staaf C27-V1 (0.000-0.995)

HE180A Analyse
 h = 171.0 mm A = 4.53e-03 m²
 324.9e-06 m³
 b = 180.0 mm I_y = 251.0e-07 m⁴
 156.5e-06 m³ I_z = 924.6e-08 m⁴
 t_f = 9.5 mm
 3.61e-03 m² Massa/m = 35.5 kg/m
 t_w = 6.0 mm
 1.45e-03 m²
 r = 15.0 mm
 m₆

Staal S235 f_{yd}(toegepast) = 235 N/mm²
 W_y;e_l = 293.6e-06 m³ W_y;p_l =
 W_z;e_l = 102.7e-06 m³ W_z;p_l =
 A_w;y;e_l = 3.61e-03 m² A_w;y;p_l =
 A_w;z;e_l = 1.45e-03 m² A_w;z;p_l =
 I_t = 148.0e-09 m⁴ I_{wa} = 602.1e-10

Doorsnedetoetsing C27-V1 (0.000-0.995)

Maatgevende combinatie: Fu.C.11 op 0.995 m
 N;E_d = 0.1 kN V_y;E_d = 0.0 kN
 V_z;E_d = -35.1 kN
 N;R_d = 1,063.4 kN V_y;R_d = 490.2 kN
 V_z;R_d = 196.3 kN
 NEN-EN1993-1-1(6.12): UC = 0.42 < 1

Profielklasse = 1
 M_y;E_d = -31.8 kNm
 M_z;E_d = 0.0 kNm
 M_yR_d = 76.3 kNm
 M_zR_d = 36.8 kNm

Kiptoetsing C27-V1 (0.000-0.995)

Equi. profiel: HE180A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund
 0.000 = 0.0kN/m
 Tabel gebruikt NB 8.1 X_b;l_{st} = 0.000 m
 Bovenflens maatgevend L_{sys} = 0.995 m L_g = 0.995 m
 m₆
 C1 = 2.30 C2 = 1.55 (tabel)
 M_{cr} = 3,759.1 kNm k_{red} = 1.0
 Ch_i;LT(Bi.C.1) = 1.00 M;E_d = 2.2 kNm
 Ch_i;LT,Z = 1.00 I_{kip} = 0.995 m

Instab. curve Kip:a

b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 X_e;l_{st} = 0.995 m l_{st} = 0.995 m
 S = 1.029 m I_{wa} = 6.0211e-08
 C2(toegepast) = 0.00 C = 24.55
 Lam-rel = 0.20 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00



My;begin = 2.2 kNm My;eind = -10.4 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Doorbuigingstoetsing Z' C27-V1 (0.000-0.995)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = -0.1 mm (x = 0.626 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.626 mm; Qu.C.1)
 w;tot; = -0.1 mm
 w;max = -0.1 mm
 Limiet w;max = L/250 = 4.0 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.03<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = -0.1 mm (x = 0.604 mm; Fr.C.6)
 (w;2+w;3) = -0.1 mm
 Limiet (w;2+w;3) = L/500 = 2.0 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C27-V1 (0.000-0.995)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = -0.1 mm (x = 0.626 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.626 mm; Qu.C.1)
 w;tot; = -0.1 mm
 w;max = -0.1 mm
 Limiet w;max = L/250 = 4.0 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.03<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = -0.1 mm (x = 0.580 mm; Fr.C.6)
 (w;2+w;3) = -0.1 mm
 Limiet (w;2+w;3) = L/500 = 2.0 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C28-V1 (0.000-4.120)

HE180A Analyse
 h = 171.0 mm A = 4.53e-03 m2
 324.9e-06 m3
 b = 180.0 mm Iy = 251.0e-07 m4
 156.5e-06 m3 Iz = 924.6e-08 m4
 tf = 9.5 mm
 3.61e-03 m2 Massa/m = 35.5 kg/m
 tw = 6.0 mm
 1.45e-03 m2
 r = 15.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 293.6e-06 m3 Wy;pl =
 Wz;el = 102.7e-06 m3 Wz;pl =
 Aw;y;el = 3.61e-03 m2 Aw;y;pl =
 Aw;z;el = 1.45e-03 m2 Aw;z;pl =
 It = 148.0e-09 m4 Iwa = 602.1e-10

Doorsnedetoetsing C28-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.12 op 0.000 m
 N;Ed = -6.3 kN Vy;Ed = 0.0 kN
 Vz;Ed = 28.6 kN
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kN
 Vz;Rd = 196.3 kN
 NEN-EN1993-1-1(6.12): UC = 0.39 < 1

Profielklasse = 1
 My;Ed = -29.5 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 76.3 kNm
 MzRd = 36.8 kNm

Kiptoetsing C28-V1 (0.000-4.120)

Equi. profiel: HE180A
 Maatgevende combinatie: Fu.C.12
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inkleem. begin: Gesteund Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 8.1 = 0.0kN/m
 Onderflens maatgevend Xb;lst = 0.000 m
 Lsys = 4.120 m Lg = 4.120 m
 m6

Instab. curve Kip:a
 b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 Xe;lst = 4.120 m lst = 4.120 m
 S = 1.029 m Iwa = 6.0211e-08



C1 = 2.30	C2 = 1.55 (tabel)	C2(toegepast) = 0.00	C = 9.18
Mcr = 339.5 kNm	kred = 1.0	-Lam-rel = 0.47	Profielklasse 1
Chi;LT(Fu.C.12) = 0.93	M;Ed = 29.5 kNm		UC(y) = 0.41
Chi;LT,Z = 1.00	lkip = 4.120 m		UC(z) = 0.00
My;begin = -29.5 kNm	My;eind = 6.9 kNm		
NEN-EN1993-1-1(6.54): UC = 0.41 < 1			

Stabiliteitstoetsing C28-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.12

N;Ed = -6.3 kN	Nb;Rd;y = 730.9 kN	Nb;Rd;z = 592.6 kN	
Methode Y = Ongeschoord	Ca(y) = 0.250	Cb(y) = 0.250	Lknik Y = 6.010
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 4.120
m			
Xy = 0.69		Knikcurve: B	
Xz = 0.56		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.01 < 1			

Buiging & Druk C28-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.12

N;Ed = -6.3 kN	Kipgevoelig Ja	Profielklasse = 1	
	My;Ed = 29.5 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = -29.5 kNm	My;Psi = 6.9 kNm	My;s = 9.1 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.40	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.402	Kyz = 0.548	Kzy = 0.998	Kzz = 0.913
Ksi;y = 0.69	Ksi;z = 0.56	Ksi;LT = 0.93	
NEN-EN1993-1-1(6.61&6.62): UC = 0.42 < 1			

Doorbuigingstoetsing Z' C28-V1 (0.000-4.120)

Constructietype : Vloer

w;c = 0.0 mm
 w;1 = 0.7 mm (x = 2.151 mm; Fr.C.(w1))
 w;3 = 0.5 mm (x = 2.151 mm; Qu.C.1)
 w;tot; = 1.2 mm
 w;max = 1.2 mm
 Limiet w;max = L/250 = 16.5 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.12<1

Toets type: Scheurvorming gevoelige wanden

Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 1.0 mm (x = 2.148 mm; Fr.C.3)
 (w;2+w;3) = 1.0 mm
 Limiet (w;2+w;3) = L/500 = 8.2 mm
 UC(w;2+w;3) = 0.1

Doorbuigingstoetsing Z" C28-V1 (0.000-4.120)

Constructietype : Vloer

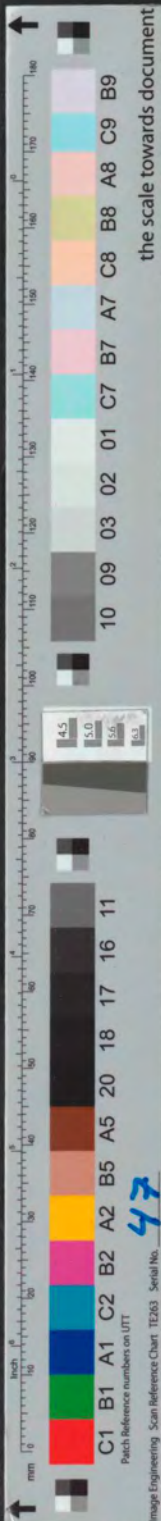
w;c = 0.0 mm
 w;1 = 0.7 mm (x = 2.151 mm; Fr.C.(w1))
 w;3 = 0.5 mm (x = 2.151 mm; Qu.C.1)
 w;tot; = 1.2 mm
 w;max = 1.2 mm
 Limiet w;max = L/250 = 16.5 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.12<1

Toets type: Scheurvorming gevoelige wanden

Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 1.0 mm (x = 2.148 mm; Fr.C.3)
 (w;2+w;3) = 1.0 mm
 Limiet (w;2+w;3) = L/500 = 8.2 mm
 UC(w;2+w;3) = 0.1

Profielgegevens staaf C29-V1 (0.000-3.710)

HE140B	Analyse	Staal S235	fyd(toegepast) = 235 N/mm2
h = 140.0 mm	A = 4.30e-03 m2	Wy;el = 215.6e-06 m3	Wy;pl =
245.4e-06 m3			
b = 140.0 mm	Iy = 150.9e-07 m4	Wz;el = 785.2e-07 m3	Wz;pl =



119.8e-06 m3
 tf = 12.0 mm
 3.48e-03 m2
 tw = 7.0 mm
 1.31e-03 m2
 r = 12.0 mm
 m6

Iz = 549.7e-08 m4
 Massa/m = 33.7 kg/m

Aw;y;el = 3.48e-03 m2
 Aw;z;el = 1.31e-03 m2
 It = 200.6e-09 m4
 Iwa = 224.8e-10

Aw;y;pl =
 Aw;z;pl =

Doorsnedetoetsing C29-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.12 op 0.000 m
 N;Ed = -85.1 kN
 N;Rd = 1,009.5 kN

Vy;Ed = 0.0 kN
 Vz;Ed = -9.2 kN
 Vy;Rd = 472.6 kN
 Vz;Rd = 177.4 kN

Profielklasse = 1
 My;Ed = 18.3 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 57.7 kNm
 MzRd = 28.1 kNm

NEN-EN1993-1-1(6.12): UC = 0.32 < 1

Kiptoetsing C29-V1 (0.000-3.710)

Equi. profiel: HE140B
 Maatgevende combinatie: Fu.C.12
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund
 Beperk. eind: Gesteund

Instab. curve Kip:a
 b-eff(Begin) = 0.000
 b-eff(Eind) =

Tabel gebruikt NB 6.1
 Bovenflens maatgevend
 Lsys = 3.710 m
 m6

M = 18.3kN/m
 Xb;lst = 0.000 m
 Lg = 3.710 m

MBeta = -15.7
 Xe;lst = 3.710 m
 S = 0.540 m
 Iwa = 2.2479e-08

C1 = 2.30
 Mcr = 292.8 kNm
 Chi;LT(Fu.C.12) = 0.94
 Chi;LT,Z = 1.00
 My;begin = 18.3 kNm
 NEN-EN1993-1-1(6.54): UC = 0.34 < 1

C2 = 0.00 (tabel)
 kred = 1.0
 M;Ed = 18.3 kNm
 lkip = 3.710 m
 My;eind = -15.7 kNm

C2(toegepast) = 0.00
 Lam-rel = 0.44
 C = 7.94
 Profielklasse 1
 UC(y) = 0.34
 UC(z) = 0.00

Stabiliteitstoetsing C29-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.12
 N;Ed = -85.1 kN
 Methode Y = Ongeschoord
 m

Nb;Rd;y = 497.0 kN
 Ca(y) = 0.767

Nb;Rd;z = 486.5 kN
 Cb(y) = 0.250
 Lknik Y = 6.537

Methode Z = Cons. gesch.
 Ca(z) = N/B
 Cb(z) = N/B
 Lknik Z = 3.710

Xy = 0.49
 Xz = 0.48
 NEN-EN1993-1-1(6.46): UC = 0.17 < 1

Knikcurve: B
 Knikcurve: C

Buiging & Druk C29-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.12
 N;Ed = -85.1 kN

Kipgevoelig Ja
 My;Ed = 18.3 kNm
 Delta;My;Ed = 0.0 kNm

Profielklasse = 1
 Mz;Ed = 0.0 kNm
 Delta;Mz;Ed = 0.0 kNm

My = 18.3 kNm
 Mz = 0.0 kNm
 Cmy = 0.40
 Kyy = 0.455
 Ksi;y = 0.49
 NEN-EN1993-1-1(6.61&6.62): UC = 0.50 < 1

My;Psi = -15.7 kNm
 Mz;Psi = 0.0 kNm
 Cmz = 0.90
 Kyz = 0.672
 Ksi;z = 0.48

My;s = 1.3 kNm
 Mz;s = 0.0 kNm
 CmLT = 0.90
 Kzy = 0.973
 Ksi;LT = 0.94

Kzz = 1.120



Doorbuigingstoetsing X C29-V1 (0.000-3.710)

Constructietype : Kolom
 u;3 = 9.6 mm (Ka.C.7)
 Limiet u;3max = H/300 = 12.4 mm
 UC(u;3max) = 0.8
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.78 < 1

Toets type: 1 bouwlaag
 Limiet u;max = N/B = 0.0 mm

Profielgegevens staaf C30-V1 (0.000-3.710)

HE140B	Analyse	Staal S235	fyd(toegepast) = 235 N/mm ²
h = 140.0 mm	A = 4.30e-03 m ²	Wy;el = 215.6e-06 m ³	Wy;pl =
245.4e-06 m ³		Wz;el = 785.2e-07 m ³	Wz;pl =
b = 140.0 mm	Iy = 150.9e-07 m ⁴	Aw;y;el = 3.48e-03 m ²	Aw;y;pl =
119.8e-06 m ³	Iz = 549.7e-08 m ⁴	Aw;z;el = 1.31e-03 m ²	Aw;z;pl =
tf = 12.0 mm		It = 200.6e-09 m ⁴	Iwa = 224.8e-10
3.48e-03 m ²	Massa/m = 33.7 kg/m		
tw = 7.0 mm			
1.31e-03 m ²			
r = 12.0 mm			
m6			

Doorsnedetoetsing C30-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.11 op 3.710 m	Profielklasse = 1
N;Ed = -71.9 kN	My;Ed = 14.0 kNm
	Mz;Ed = 0.0 kNm
N;Rd = 1,009.5 kN	MyRd = 57.7 kNm
	MzRd = 28.1 kNm
NEN-EN1993-1-1(6.12): UC = 0.24 < 1	

Kiptoetsing C30-V1 (0.000-3.710)

Equi. profiel: HE140B
 Maatgevende combinatie: Fu.C.11
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inkleem. begin: Gesteund Beperk. eind: Gesteund

b-eff(Begin) = 0.000	b-eff(Eind) =
Tabel gebruikt NB 6.1	MBeta = -12.4
Bovenflens maatgevend	Xe;lst = 3.710 m
Lsys = 3.710 m	S = 0.540 m
m6	Ist = 3.710 m
C1 = 2.30	Iwa = 2.2479e-08
Mcr = 292.8 kNm	C = 7.94
Chi;LT(Fu.C.11) = 0.94	Lam-rel = 0.44
Chi;LT,Z = 1.00	Profielklasse 1
My;begin = -12.4 kNm	UC(y) = 0.26
NEN-EN1993-1-1(6.54): UC = 0.26 < 1	UC(z) = 0.00

Stabiliteitstoetsing C30-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.11

N;Ed = -71.9 kN	Nb;Rd;y = 620.6 kN	Nb;Rd;z = 486.5 kN	
Methode Y = Ongeschoord	Ca(y) = 0.250	Cb(y) = 0.250	Lknik Y = 5.412
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 3.710
m			
Xy = 0.61		Knikcurve: B	
Xz = 0.48		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.15 < 1			

Buiging & Druk C30-V1 (0.000-3.710)



Maatgevende combinatie: Fu.C.11 Kipgevoelig Ja Profielklasse = 1

N;Ed = -71.9 kN	My;Ed = 14.0 kNm Delta;My;Ed = 0.0 kNm	Mz;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm	
My = 14.0 kNm Mz = 0.0 kNm Cmy = 0.40 Kyy = 0.436 Ksi;y = 0.61 NEN-EN1993-1-1(6.61&6.62): UC = 0.40 < 1	My;Psi = -12.4 kNm Mz;Psi = 0.0 kNm Cmz = 0.90 Kyz = 0.652 Ksi;z = 0.48	My;s = 0.8 kNm Mz;s = 0.0 kNm CmLT = 0.90 Kzy = 0.977 Ksi;LT = 0.94	Kzz = 1.086

Doorbuigingstoetsing X C30-V1 (0.000-3.710)

Constructietype : Kolom Toets type: 1 bouwlaag
 u;i;3 = 9.6 mm (Ka.C.7)
 Limiet u;i;max = H/300 = 12.4 mm Limiet u;i;max = N/B = 0.0 mm
 UC(u;i;max) = 0.8
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.78 < 1

Profielgegevens staaf C31-V1 (0.000-3.710)

HE140B	Analyse	Staal S235 fyd(toegepast) = 235 N/mm2	
h = 140.0 mm	A = 4.30e-03 m2	Wy;el = 215.6e-06 m3	Wy;pl =
245.4e-06 m3		Wz;el = 785.2e-07 m3	Wz;pl =
b = 140.0 mm	Iy = 150.9e-07 m4	Aw;y;el = 3.48e-03 m2	Aw;y;pl =
119.8e-06 m3	Iz = 549.7e-08 m4	Aw;z;el = 1.31e-03 m2	Aw;z;pl =
tf = 12.0 mm	Massa/m = 33.7 kg/m	It = 200.6e-09 m4	Iwa = 224.8e-10
3.48e-03 m2			
tw = 7.0 mm			
1.31e-03 m2			
r = 12.0 mm			
m6			

Doorsnedetoetsing C31-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.11 op 3.710 m Profielklasse = 1

N;Ed = -32.8 kN	Vy;Ed = 0.0 kN	My;Ed = 13.3 kNm
	Vz;Ed = 6.6 kN	Mz;Ed = 0.0 kNm
N;Rd = 1,009.5 kN	Vy;Rd = 472.6 kN	MyRd = 57.7 kNm
	Vz;Rd = 177.4 kN	MzRd = 28.1 kNm

NEN-EN1993-1-1(6.12): UC = 0.23 < 1

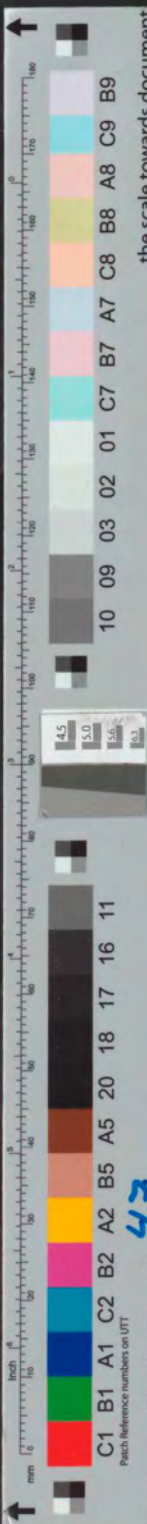
Kiptoetsing C31-V1 (0.000-3.710)

Equi. profiel: HE140B Instab. curve Kip:a

Maatgevende combinatie: Fu.C.11
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
0.000			
Tabel gebruikt NB 6.1	M = 13.3kN/m	MBeta = -11.1	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 3.710 m	lst = 3.710 m
Lsys = 3.710 m	Lg = 3.710 m	S = 0.540 m	Iwa = 2.2479e-08
m6			
C1 = 2.30	C2 = 0.00 (tabel)	C2(toegepast) = 0.00	C = 7.94
Mcr = 292.8 kNm	kred = 1.0	Lam-rel = 0.44	Profielklasse 1
Chi;LT(Fu.C.11) = 0.94	M;Ed = 13.3 kNm		UC(y) = 0.24
Chi;LT,Z = 1.00	lkip = 3.710 m		UC(z) = 0.00
My;begin = -11.1 kNm	My;eind = 13.3 kNm		

NEN-EN1993-1-1(6.54): UC = 0.24 < 1



Stabiliteitstoetsing C31-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.11

N;Ed = -32.8 kN	Nb;Rd;y = 620.6 kN	Nb;Rd;z = 486.5 kN	
Methode Y = Ongeschoord	Ca(y) = 0.250	Cb(y) = 0.250	Lknik Y = 5.412
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 3.710
m			
Xy = 0.61		Knikcurve: B	
Xz = 0.48		Knikcurve: C	

NEN-EN1993-1-1(6.46): UC = 0.07 < 1

Buiging & Druk C31-V1 (0.000-3.710)

Maatgevende combinatie: Fu.C.11

N;Ed = -32.8 kN	Kipgevoelig Ja	Profielklasse = 1	
	My;Ed = 13.3 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = 13.3 kNm	My;Psi = -11.1 kNm	My;s = 1.1 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.40	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.416	Kyz = 0.591	Kzy = 0.990	Kzz = 0.985
Ksi;y = 0.61	Ksi;z = 0.48	Ksi;LT = 0.94	
NEN-EN1993-1-1(6.61&6.62): UC = 0.31 < 1			

Doorbuigingstoetsing X C31-V1 (0.000-3.710)

Constructietype : Kolom

u_i;3 = 9.6 mm (Ka.C.7)

Limiet u_i;max = H/300 = 12.4 mm

UC(u_i;max) = 0.8

NEN-EN1990/NB A1.4.2: UC = 0.78 < 1

Toets type: 1 bouwlaag

Limiet u_i;max = N/B = 0.0 mm

Profielgegevens staaf C32-V1 (0.000-0.780)

HE140B	Analyse	Staal S235 fyd(toegepast) = 235 N/mm2	
h = 140.0 mm	A = 4.30e-03 m2	Wy;el = 215.6e-06 m3	Wy;pl =
245.4e-06 m3			
b = 140.0 mm	Iy = 150.9e-07 m4	Wz;el = 785.2e-07 m3	Wz;pl =
119.8e-06 m3			
tf = 12.0 mm	Iz = 549.7e-08 m4	Aw;y;el = 3.48e-03 m2	Aw;y;pl =
3.48e-03 m2			
tw = 7.0 mm	Massa/m = 33.7 kg/m	Aw;z;el = 1.31e-03 m2	Aw;z;pl =
1.31e-03 m2			
r = 12.0 mm		It = 200.6e-09 m4	Iwa = 224.8e-10
m6			

Doorsnedetoetsing C32-V1 (0.000-0.780)

Maatgevende combinatie: Fu.C.1 op 0.000 m

N;Ed = -12.6 kN	Vy;Ed = 0.0 kN	Profielklasse = 1	
	Vz;Ed = 8.6 kN	My;Ed = -11.0 kNm	
N;Rd = 1,009.5 kN	Vy;Rd = 472.6 kN	Mz;Ed = 0.0 kNm	
	Vz;Rd = 177.4 kN	MyRd = 57.7 kNm	
		MzRd = 28.1 kNm	

NEN-EN1993-1-1(6.12): UC = 0.19 < 1

Kiptoetsing C32-V1 (0.000-0.780)

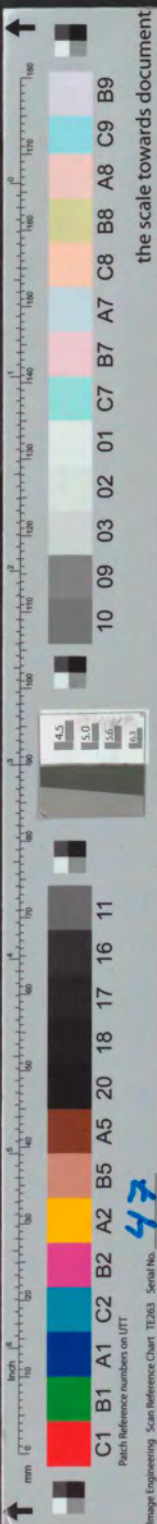
Equi. profiel: HE140B

Maatgevende combinatie: Bi.C.1

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Kipsteun bovenflens: N.v.t.

Instab. curve Kip:a



Kipsteun onderflens: N.v.t.
 Inklembegin: Gesteund
 0.000
 Tabel gebruikt NB 6.1
 Bovenflens maatgevend
 Lsys = 0.780 m
 m6
 C1 = 1.46
 Mcr = 1,924.5 kNm
 Chi;LT(Bi.C.1) = 1.00
 Chi;LT,Z = 1.00
 My;begin = -4.3 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip NVT, i.v.m. geen buiging

Beperk. eind: Gesteund
 M = -4.3kN/m
 Xb;lst = 0.000 m
 Lg = 0.780 m
 C2 = 0.00 (tabel)
 kred = 1.0
 M;Ed = 0.0 kNm
 lkip = 0.780 m
 My;eind = -1.3 kNm

b-eff(Begin) = 0.000
 MBeta = -1.3
 Xe;lst = 0.780 m
 S = 0.540 m
 C2(toegepast) = 0.00
 Lam-rel = 0.20

b-eff(Eind) =
 lst = 0.780 m
 Iwa = 2.2479e-08
 C = 10.98
 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00

Stabiliteitstoetsing C32-V1 (0.000-0.780)

Maatgevende combinatie: Fu.C.1

N;Ed = -12.6 kN
 Nb;Rd;y = 965.0 kN
 Nb;Rd;z = 992.9 kN

Methode Y = Ongeschoord
 m
 Methode Z = Cons. gesch.
 m
 Xy = 0.96
 Xz = 0.98
 NEN-EN1993-1-1(6.46): UC = 0.01 < 1

Ca(y) = 0.266
 Cb(y) = 5.000
 Lknik Y = 1.793
 Ca(z) = N/B
 Cb(z) = N/B
 Lknik Z = 0.780
 Knikcurve: B
 Knikcurve: C

Buiging & Druk C32-V1 (0.000-0.780)

Maatgevende combinatie: Fu.C.1

N;Ed = -12.6 kN
 My;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm
 My = -11.0 kNm
 Mz = 0.0 kNm
 Crmy = 0.76
 Kyy = 0.759
 Ksi;y = 0.96
 NEN-EN1993-1-1(6.61&6.62): UC = 0.17 < 1

Kipgevoelig Ja
 My;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm
 My;Psi = -4.3 kNm
 Mz;Psi = 0.0 kNm
 Cmz = 0.90
 Kyz = 0.539
 Ksi;z = 0.98

Profielklasse = 1
 Mz;Ed = 0.0 kNm
 Delta;Mz;Ed = 0.0 kNm
 My;s = -7.7 kNm
 Mz;s = 0.0 kNm
 CmLT = 0.90
 Kzy = 0.832
 Ksi;LT = 1.00
 Kzz = 0.898

Doorbuigingstoetsing X C32-V1 (0.000-0.780)

Constructietype : Kolom

u;i;3 = -0.9 mm (Ka.C.8)

Limiet u;i;max = H/300 = 2.6 mm

UC(u;i;max) = 0.3

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.34 < 1

Toets type: 1 bouwlaag

Limiet u;max = N/B = 0.0 mm

Profielgegevens staaf C33-V1 (0.000-2.382)

HE140B
 h = 140.0 mm
 245.4e-06 m3
 b = 140.0 mm
 119.8e-06 m3
 tf = 12.0 mm
 3.48e-03 m2
 tw = 7.0 mm
 1.31e-03 m2
 r = 12.0 mm
 m6

Analyse
 A = 4.30e-03 m2
 Iy = 150.9e-07 m4
 Iz = 549.7e-08 m4
 Massa/m = 33.7 kg/m

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 215.6e-06 m3
 Wy;pl =
 Wz;el = 785.2e-07 m3
 Wz;pl =
 Aw;y;el = 3.48e-03 m2
 Aw;y;pl =
 Aw;z;el = 1.31e-03 m2
 Aw;z;pl =
 It = 200.6e-09 m4
 Iwa = 224.8e-10

Doorsnedetoetsing C33-V1 (0.000-2.382)



Maatgevende combinatie: Fu.C.1 op 2.382 m
 N;Ed = -14.3 kN
 N;Rd = 1,009.5 kN
 Vy;Ed = 0.0 kN
 Vz;Ed = 5.1 kN
 Vy;Rd = 472.6 kN
 Vz;Rd = 177.4 kN
 NEN-EN1993-1-1(6.12): UC = 0.14 < 1

Profielklasse = 1
 My;Ed = 7.8 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 57.7 kNm
 MzRd = 28.1 kNm

Kiptoetsing C33-V1 (0.000-2.382)

Equi. profiel: HE140B

Maatgevende combinatie: Bi.C.1

Instab. curve Kip:a

Aangrijphoogte van de last: 0.000 m vanaf hart profiel

Kipsteun bovenflens: N.v.t.

Kipsteun onderflens: N.v.t.

Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
0.000			
Tabel gebruikt NB 6.1	M = 3.3kN/m	MBeta = -1.3	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 2.382 m	lst = 2.382 m
Lsys = 2.382 m	Lg = 2.382 m	S = 0.540 m	Iwa = 2.2479e-08
m6			
C1 = 2.21	C2 = 0.00 (tabel)	C2(toegepast) = 0.00	C = 8.53
Mcr = 489.7 kNm	kred = 1.0	Lam-rel = 0.34	Profielklasse 1
Chi;LT(Bi.C.1) = 0.97	M;Ed = 3.3 kNm		UC(y) = 0.00
Chi;LT,Z = 1.00	lkip = 2.382 m		UC(z) = 0.00
My;begin = -1.3 kNm	My;eind = 3.3 kNm		
NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4			

Stabiliteitstoetsing C33-V1 (0.000-2.382)

Maatgevende combinatie: Fu.C.1

N;Ed = -14.3 kN	Nb;Rd;y = 690.0 kN	Nb;Rd;z = 725.9 kN	
Methode Y = Ongeschoord	Ca(y) = 1.743	Cb(y) = 0.250	Lknik Y = 4.816
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 2.382
m			
Xy = 0.68		Knikcurve: B	
Xz = 0.72		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.02 < 1			

Buiging & Druk C33-V1 (0.000-2.382)

Maatgevende combinatie: Fu.C.1

N;Ed = -14.3 kN	Kipgevoelig Ja	Profielklasse = 1	
	My;Ed = 3.3 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = 7.8 kNm	My;Psi = -4.3 kNm	My;s = 1.7 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.40	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.406	Kyz = 0.549	Kzy = 0.998	Kzz = 0.915
Ksi;y = 0.68	Ksi;z = 0.72	Ksi;LT = 0.97	
NEN-EN1993-1-1(6.61&6.62): UC = 0.16 < 1			

Doorbuigingstoetsing Z' C33-V1 (0.000-2.382)

Constructietype : Dak

Toets type: Algemeen

w;c = 0.0 mm

Zeegvorm 3-Punt

w;1 = 0.2 mm (x = 1.451 mm; Ka.C.(w1))

w;2 = 0.0 mm

w;3 = 0.3 mm (x = 1.451 mm; Ka.C.7)

w;tot; = 0.5 mm

(w;2+w;3) = 0.3 mm

w;max = 0.5 mm

Limiet (w;2+w;3) = L/250 = 9.5 mm

Limiet w;max = L/250 = 9.5 mm



UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.05 < 1

UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C33-V1 (0.000-2.382)

Constructietype : Dak
 w;c = 0.0 mm
 w;1 = -0.7 mm (x = 1.451 mm; Ka.C.(w1))
 w;3 = -1.3 mm (x = 1.451 mm; Ka.C.7)
 w;tot; = -2.0 mm
 w;max = -2.0 mm
 Limiet w;max = L/250 = 9.5 mm
 UC(w;max) = 0.2
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.21 < 1

Toets type: Algemeen
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 (w;2+w;3) = -1.3 mm
 Limiet (w;2+w;3) = L/250 = 9.5 mm
 UC(w;2+w;3) = 0.1

Profielgegevens staaf C34-V1 (0.000-4.320)

HE180A Analyse
 h = 171.0 mm A = 4.53e-03 m2
 324.9e-06 m3
 b = 180.0 mm Iy = 251.0e-07 m4
 156.5e-06 m3
 tf = 9.5 mm Iz = 924.6e-08 m4
 3.61e-03 m2
 tw = 6.0 mm Massa/m = 35.5 kg/m
 1.45e-03 m2
 r = 15.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 293.6e-06 m3 Wy;pl =
 Wz;el = 102.7e-06 m3 Wz;pl =
 Aw;y;el = 3.61e-03 m2 Aw;y;pl =
 Aw;z;el = 1.45e-03 m2 Aw;z;pl =
 It = 148.0e-09 m4 Iwa = 602.1e-10

Doorsnedetoetsing C34-V1 (0.000-4.320)

Maatgevende combinatie: Fu.C.1 op 4.320 m
 N;Ed = 11.4 kN Vy;Ed = 0.0 kN
 Vz;Ed = -39.8 kN
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kN
 Vz;Rd = 196.3 kN
 NEN-EN1993-1-1(6.12): UC = 0.38 < 1

Profielklasse = 1
 My;Ed = -28.9 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 76.3 kNm
 MzRd = 36.8 kNm

Kiptoetsing C34-V1 (0.000-4.320)

Equi. profiel: HE180A
 Maatgevende combinatie: Fu.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inkleem. begin: Gesteund Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 8.1 = 0.0kN/m
 Onderflens maatgevend Xb;lst = 0.000 m
 Lsys = 4.320 m Lg = 4.320 m
 m6
 C1 = 2.30 C2 = 1.55 (tabel)
 Mcr = 318.2 kNm kred = 1.0
 Chi;LT(Fu.C.1) = 0.93 M;Ed = 28.9 kNm
 Chi;LT,Z = 1.00 lkip = 4.320 m
 My;begin = -23.2 kNm My;eind = -28.9 kNm
 NEN-EN1993-1-1(6.54): UC = 0.41 < 1

Instab. curve Kip:a
 b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 Xe;lst = 4.320 m Ist = 4.320 m
 S = 1.029 m Iwa = 6.0211e-08
 C2(toegepast) = 0.00 C = 9.02
 Lam-rel = 0.49 Profielklasse 1
 UC(y) = 0.41
 UC(z) = 0.00

Doorbuigingstoetsing Z' C34-V1 (0.000-4.320)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.7 mm (x = 2.070 mm; Fr.C.(w1))

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm



w;3 = 0.8 mm (x = 2.070 mm; Qu.C.1)
 w;tot; = 1.5 mm
 w;max = 1.5 mm
 Limiet w;max = L/250 = 17.3 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.17<1

w;3 = 1.4 mm (x = 2.080 mm; Fr.C.2)
 (w;2+w;3) = 1.4 mm
 Limiet (w;2+w;3) = L/500 = 8.6 mm
 UC(w;2+w;3) = 0.2

Doorbuigingstoetsing Z" C34-V1 (0.000-4.320)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.7 mm (x = 2.070 mm; Fr.C.(w1))
 w;3 = 0.8 mm (x = 2.070 mm; Qu.C.1)
 w;tot; = 1.5 mm
 w;max = 1.5 mm
 Limiet w;max = L/250 = 17.3 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.17<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 1.4 mm (x = 2.080 mm; Fr.C.2)
 (w;2+w;3) = 1.4 mm
 Limiet (w;2+w;3) = L/500 = 8.6 mm
 UC(w;2+w;3) = 0.2

Profielgegevens staaf C35-V1 (0.000-0.570)

HE180A Analyse
 h = 171.0 mm A = 4.53e-03 m2
 324.9e-06 m3
 b = 180.0 mm Iy = 251.0e-07 m4
 156.5e-06 m3 Iz = 924.6e-08 m4
 tf = 9.5 mm
 3.61e-03 m2 Massa/m = 35.5 kg/m
 tw = 6.0 mm
 1.45e-03 m2
 r = 15.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 293.6e-06 m3 Wy;pl =
 Wz;el = 102.7e-06 m3 Wz;pl =
 Aw;y;el = 3.61e-03 m2 Aw;y;pl =
 Aw;z;el = 1.45e-03 m2 Aw;z;pl =
 It = 148.0e-09 m4 Iwa = 602.1e-10

Doorsnedetoetsing C35-V1 (0.000-0.570)

Maatgevende combinatie: Fu.C.1 op 0.000 m
 N;Ed = 9.1 kN Vy;Ed = 0.0 kN
 Vz;Ed = 83.4 kN
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kN
 Vz;Rd = 196.3 kN

Profielklasse = 1
 My;Ed = -30.9 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 76.3 kNm
 MzRd = 36.8 kNm

NEN-EN1993-1-1(6.17): UC = 0.42 < 1

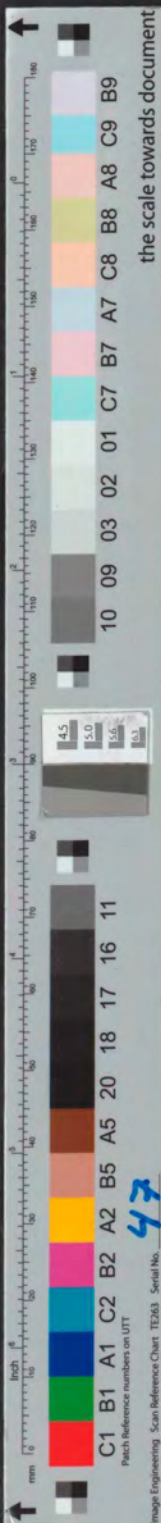
Kiptoetsing C35-V1 (0.000-0.570)

Equi. profiel: HE180A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 8.1 = 0.0kN/m
 Bovenflens maatgevend Xb;lst = 0.000 m
 Lsys = 0.570 m Lg = 0.570 m
 m6
 C1 = 2.30 C2 = 1.55 (tabel)
 Mcr = 11,116.5 kNm kred = 1.0
 Chi;LT(Bi.C.1) = 1.00 M;Ed = 7.7 kNm
 Chi;LT,Z = 1.00 Ikip = 0.570 m
 My;begin = -13.2 kNm My;eind = 7.7 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Instab. curve Kip:a

b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 Xe;lst = 0.570 m lst = 0.570 m
 S = 1.029 m Iwa = 6.0211e-08
 C2(toegepast) = 0.00 C = 41.59
 Lam-rel = 0.20 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00

Doorbuigingstoetsing Z' C35-V1 (0.000-0.570)



Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.0 mm (x = 0.175 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.175 mm; Qu.C.1)
 w;tot; = 0.0 mm
 w;max = 0.0 mm
 Limiet w;max = L/250 = 2.3 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.0 mm (x = 0.237 mm; Fr.C.2)
 (w;2+w;3) = 0.0 mm
 Limiet (w;2+w;3) = L/500 = 1.1 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C35-V1 (0.000-0.570)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.0 mm (x = 0.175 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.175 mm; Qu.C.1)
 w;tot; = 0.0 mm
 w;max = 0.0 mm
 Limiet w;max = L/250 = 2.3 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.02<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.0 mm (x = 0.237 mm; Fr.C.2)
 (w;2+w;3) = 0.0 mm
 Limiet (w;2+w;3) = L/500 = 1.1 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C36-V1 (0.000-0.860)

HE180A Analyse
 h = 171.0 mm A = 4.53e-03 m2
 324.9e-06 m3
 b = 180.0 mm Iy = 251.0e-07 m4
 156.5e-06 m3 Iz = 924.6e-08 m4
 tf = 9.5 mm
 3.61e-03 m2 Massa/m = 35.5 kg/m
 tw = 6.0 mm
 1.45e-03 m2
 r = 15.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 293.6e-06 m3 Wy;pl =
 Wz;el = 102.7e-06 m3 Wz;pl =
 Aw;y;el = 3.61e-03 m2 Aw;y;pl =
 Aw;z;el = 1.45e-03 m2 Aw;z;pl =
 It = 148.0e-09 m4 Iwa = 602.1e-10

Doorsnedetoetsing C36-V1 (0.000-0.860)

Maatgevende combinatie: Fu.C.3 op 0.000 m
 N;Ed = 2.8 kN Vy;Ed = 0.0 kN
 Vz;Ed = -13.3 kN
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kN
 Vz;Rd = 196.3 kN
 NEN-EN1993-1-1(6.12): UC = 0.29 < 1

Profielklasse = 1
 My;Ed = 21.8 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 76.3 kNm
 MzRd = 36.8 kNm

Kiptoetsing C36-V1 (0.000-0.860)

Equi. profiel: HE180A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 8.1 = 0.0kN/m
 Bovenflens maatgevend Xb;lst = 0.000 m
 Lsys = 0.860 m Lg = 0.860 m
 m6
 C1 = 2.30 C2 = 1.55 (tabel)
 Mcr = 4,976.5 kNm kred = 1.0
 Chi;LT(Bi.C.1) = 1.00 M;Ed = 9.6 kNm
 Chi;LT,Z = 1.00 lkip = 0.860 m

Instab. curve Kip:a

b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 Xe;lst = 0.860 m Ist = 0.860 m
 S = 1.029 m Iwa = 6.0211e-08
 C2(toegepast) = 0.00 C = 28.09
 Lam-rel = 0.20 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00



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My;begin = 9.6 kNm My;eind = 2.9 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4

Doorbuigingstoetsing Z' C36-V1 (0.000-0.860)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.1 mm (x = 0.396 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.396 mm; Qu.C.1)
 w;tot; = 0.1 mm
 w;max = 0.1 mm
 Limiet w;max = L/250 = 3.4 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.04<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.1 mm (x = 0.396 mm; Fr.C.1)
 (w;2+w;3) = 0.1 mm
 Limiet (w;2+w;3) = L/500 = 1.7 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C36-V1 (0.000-0.860)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = 0.1 mm (x = 0.396 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.396 mm; Qu.C.1)
 w;tot; = 0.1 mm
 w;max = 0.1 mm
 Limiet w;max = L/250 = 3.4 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.03<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = 0.1 mm (x = 0.430 mm; Fr.C.1)
 (w;2+w;3) = 0.1 mm
 Limiet (w;2+w;3) = L/500 = 1.7 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C37-V1 (0.000-0.995)

HE180A	Analyse
h = 171.0 mm	A = 4.53e-03 m ²
324.9e-06 m ³	
b = 180.0 mm	Iy = 251.0e-07 m ⁴
156.5e-06 m ³	
tf = 9.5 mm	Iz = 924.6e-08 m ⁴
3.61e-03 m ²	
tw = 6.0 mm	Massa/m = 35.5 kg/m
1.45e-03 m ²	
r = 15.0 mm	
m6	

Staal S235 fyd(toegepast) = 235 N/mm ²	
Wy;el = 293.6e-06 m ³	Wy;pl =
Wz;el = 102.7e-06 m ³	Wz;pl =
Aw;y;el = 3.61e-03 m ²	Aw;y;pl =
Aw;z;el = 1.45e-03 m ²	Aw;z;pl =
It = 148.0e-09 m ⁴	Iwa = 602.1e-10

Doorsnedetoetsing C37-V1 (0.000-0.995)

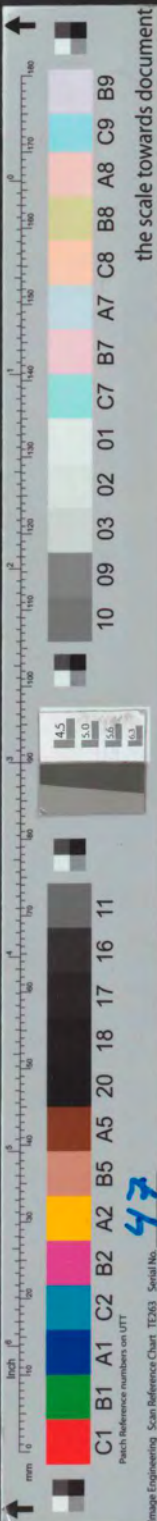
Maatgevende combinatie: Fu.C.1 op 0.995 m	Profielklasse = 1
N;Ed = 3.0 kN	My;Ed = -26.2 kNm
	Mz;Ed = 0.0 kNm
N;Rd = 1,063.4 kN	MyRd = 76.3 kNm
	MzRd = 36.8 kNm
NEN-EN1993-1-1(6.12): UC = 0.34 < 1	

Kiptoetsing C37-V1 (0.000-0.995)

Equi. profiel: HE180A
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.

Instab. curve Kip:a

Inklem. begin: Gesteund 0.000	Beperk. eind: Gesteund	b-eff(Begin) = 0.000	b-eff(Eind) =
Tabel gebruikt NB 8.1	= 0.0kN/m	= 0.0	
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 0.995 m	lst = 0.995 m
Lsys = 0.995 m	Lg = 0.995 m	S = 1.029 m	Iwa = 6.0211e-08
m6			



C1 = 2.30	C2 = 1.55 (tabel)	C2 (toegepast) = 0.00	C = 24.55
Mcr = 3,759.1 kNm	kred = 1.0	Lam-rel = 0.20	Profielklasse 1
Chi;LT(Bi.C.1) = 1.00	M;Ed = 2.9 kNm		UC(y) = 0.00
Chi;LT,Z = 1.00	lkip = 0.995 m		UC(z) = 0.00
My;begin = 2.9 kNm	My;eind = -11.1 kNm		
NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip N/B, ivm Lambda;LT <= 0.4			

Doorbuigingstoetsing Z' C37-V1 (0.000-0.995)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = -0.1 mm (x = 0.635 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.635 mm; Qu.C.1)
 w;tot; = -0.1 mm
 w;max = -0.1 mm
 Limiet w;max = L/250 = 4.0 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.03<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = -0.1 mm (x = 0.624 mm; Fr.C.2)
 (w;2+w;3) = -0.1 mm
 Limiet (w;2+w;3) = L/500 = 2.0 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C37-V1 (0.000-0.995)

Constructietype : Vloer
 w;c = 0.0 mm
 w;1 = -0.1 mm (x = 0.635 mm; Fr.C.(w1))
 w;3 = 0.0 mm (x = 0.635 mm; Qu.C.1)
 w;tot; = -0.1 mm
 w;max = -0.1 mm
 Limiet w;max = L/250 = 4.0 mm
 UC(w;max) = 0.0
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.03<1

Toets type: Scheurvorming gevoelige wanden
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 w;3 = -0.1 mm (x = 0.580 mm; Fr.C.2)
 (w;2+w;3) = -0.1 mm
 Limiet (w;2+w;3) = L/500 = 2.0 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C38-V1 (0.000-4.120)

HE180A	Analyse
h = 171.0 mm	A = 4.53e-03 m ²
324.9e-06 m ³	Iy = 251.0e-07 m ⁴
b = 180.0 mm	Iz = 924.6e-08 m ⁴
156.5e-06 m ³	Massa/m = 35.5 kg/m
tf = 9.5 mm	
3.61e-03 m ²	
tw = 6.0 mm	
1.45e-03 m ²	
r = 15.0 mm	
m6	

Staal S235	f _{yd} (toegepast) = 235 N/mm ²
Wy;el = 293.6e-06 m ³	Wy;pl =
Wz;el = 102.7e-06 m ³	Wz;pl =
Aw;y;el = 3.61e-03 m ²	Aw;y;pl =
Aw;z;el = 1.45e-03 m ²	Aw;z;pl =
It = 148.0e-09 m ⁴	Iwa = 602.1e-10

Doorsnedetoetsing C38-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.1 op 0.000 m	Profielklasse = 1
N;Ed = 4.7 kN	My;Ed = -25.4 kNm
	Mz;Ed = 0.0 kNm
N;Rd = 1,063.4 kN	MyRd = 76.3 kNm
	MzRd = 36.8 kNm
NEN-EN1993-1-1(6.12): UC = 0.33 < 1	

Kiptoetsing C38-V1 (0.000-4.120)

Equi. profiel: HE180A	Instab. curve Kip:a
Maatgevende combinatie: Fu.C.1	
Aangrijphoogte van de last: 0.000 m vanaf hart profiel	
Kipsteun bovenflens: N.v.t.	
Kipsteun onderflens: N.v.t.	
Inklem. begin: Gesteund	Beperk. eind: Gesteund
0.000	b-eff(Begin) = 0.000
Tabel gebruikt NB 8.1	= 0.0kN/m
	b-eff(Eind) =
	= 0.0



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Onderflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 4.120 m	lst = 4.120 m
Lsys = 4.120 m m6	Lg = 4.120 m	S = 1.029 m	Iwa = 6.0211e-08
C1 = 2.30	C2 = 1.55 (tabel)	C2(toegepast) = 0.00	C = 9.18
Mcr = 339.5 kNm	kred = 1.0	Lam-rel = 0.47	Profielklasse 1
Chi;LT(Fu.C.1) = 0.93	M;Ed = 25.4 kNm		UC(y) = 0.36
Chi;LT,Z = 1.00	lkip = 4.120 m		UC(z) = 0.00
My;begin = -25.4 kNm	My;eind = -18.9 kNm		
NEN-EN1993-1-1(6.54): UC = 0.36 < 1			

Stabiliteitstoetsing C38-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.12

N;Ed = -2.5 kN	Nb;Rd;y = 730.9 kN	Nb;Rd;z = 592.6 kN	
Methode Y = Ongeschoord	Ca(y) = 0.250	Cb(y) = 0.250	Lknik Y = 6.010
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 4.120
Xy = 0.69		Knikcurve: B	
Xz = 0.56		Knikcurve: C	
NEN-EN1993-1-1(6.46): UC = 0.00 < 1			

Buiging & Druk C38-V1 (0.000-4.120)

Maatgevende combinatie: Fu.C.12

N;Ed = -2.5 kN	Kipgevoelig Ja	Profielklasse = 1	
	My;Ed = 25.4 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = -20.7 kNm	My;Psi = -2.5 kNm	My;s = 8.8 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.44	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.439	Kyz = 0.543	Kzy = 0.999	Kzz = 0.905
Ksi;y = 0.69	Ksi;z = 0.56	Ksi;LT = 0.93	
NEN-EN1993-1-1(6.61&6.62): UC = 0.30 < 1			

Doorbuigingstoetsing Z' C38-V1 (0.000-4.120)

Constructietype : Vloer

w;c = 0.0 mm	Toets type: Scheurvorming gevoelige wanden
w;1 = 0.6 mm (x = 2.136 mm; Fr.C.(w1))	Zeegvorm 3-Punt
w;3 = 0.6 mm (x = 2.136 mm; Qu.C.1)	w;2 = 0.0 mm
w;tot; = 1.2 mm	w;3 = 1.1 mm (x = 2.132 mm; Fr.C.2)
w;max = 1.2 mm	(w;2+w;3) = 1.1 mm
Limiet w;max = L/250 = 16.5 mm	Limiet (w;2+w;3) = L/500 = 8.2 mm
UC(w;max) = 0.1	UC(w;2+w;3) = 0.1
NEN-EN NEN-EN1990/NB A1.4.2: UC = 0.13<1	

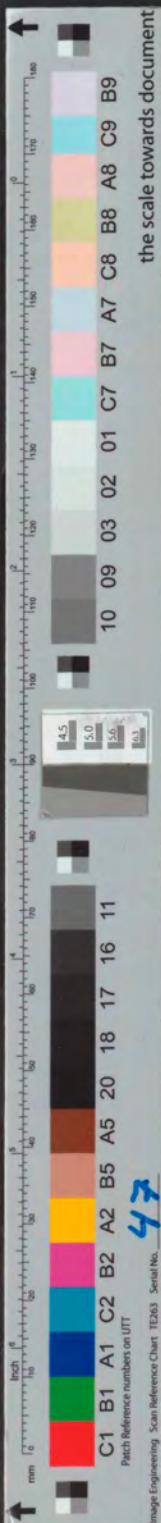
Doorbuigingstoetsing Z" C38-V1 (0.000-4.120)

Constructietype : Vloer

w;c = 0.0 mm	Toets type: Scheurvorming gevoelige wanden
w;1 = 0.6 mm (x = 2.136 mm; Fr.C.(w1))	Zeegvorm 3-Punt
w;3 = 0.6 mm (x = 2.136 mm; Qu.C.1)	w;2 = 0.0 mm
w;tot; = 1.2 mm	w;3 = 1.1 mm (x = 2.132 mm; Fr.C.2)
w;max = 1.2 mm	(w;2+w;3) = 1.1 mm
Limiet w;max = L/250 = 16.5 mm	Limiet (w;2+w;3) = L/500 = 8.2 mm
UC(w;max) = 0.1	UC(w;2+w;3) = 0.1
NEN-EN NEN-EN1990/NB A1.4.2: UC = 0.13<1	

Profielgegevens staaf C39-V1 (0.000-3.085)

HE140B	Analyse	Staal S235 fyd(toegepast) = 235 N/mm2
h = 140.0 mm	A = 4.30e-03 m2	Wy;el = 215.6e-06 m3 Wy;pl =



245.4e-06 m3			
b = 140.0 mm	Iy = 150.9e-07 m4	Wz;el = 785.2e-07 m3	Wz;pl =
119.8e-06 m3			
tf = 12.0 mm	Iz = 549.7e-08 m4	Aw;y;el = 3.48e-03 m2	Aw;y;pl =
3.48e-03 m2			
tw = 7.0 mm	Massa/m = 33.7 kg/m	Aw;z;el = 1.31e-03 m2	Aw;z;pl =
1.31e-03 m2			
r = 12.0 mm		It = 200.6e-09 m4	Iwa = 224.8e-10
m6			

Doorsnedetoetsing C39-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.1 op 3.085 m		Profielklasse = 1
N;Ed = -81.9 kN	Vy;Ed = 0.0 kN	My;Ed = 13.4 kNm
	Vz;Ed = 6.0 kN	Mz;Ed = 0.0 kNm
N;Rd = 1,009.5 kN	Vy;Rd = 472.6 kN	MyRd = 57.7 kNm
	Vz;Rd = 177.4 kN	MzRd = 28.1 kNm

NEN-EN1993-1-1(6.12): UC = 0.23 < 1

Kiptoetsing C39-V1 (0.000-3.085)

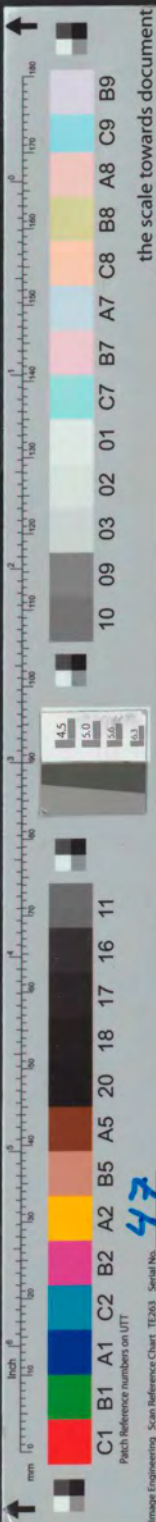
Equi. profiel: HE140B		Instab. curve Kip:a
Maatgevende combinatie: Fu.C.1		
Aangrijphoogte van de last: 0.000 m vanaf hart profiel		
Kipsteun bovenflens: N.v.t.		
Kipsteun onderflens: N.v.t.		
Inklem. begin: Gesteund	Beperk. eind: Gesteund	b-eff(Begin) = 0.000
0.000		b-eff(Eind) =
Tabel gebruikt NB 6.1	M = 13.4kN/m	MBeta = -5.2
Bovenflens maatgevend	Xb;lst = 0.000 m	Xe;lst = 3.085 m
Lsys = 3.085 m	Lg = 3.085 m	S = 0.540 m
m6		Iwa = 2.2479e-08
C1 = 2.21	C2 = 0.00 (tabel)	C2(toegepast) = 0.00
Mcr = 350.4 kNm	kred = 1.0	Lam-rel = 0.41
Chi;LT(Fu.C.1) = 0.95	M;Ed = 13.4 kNm	C = 7.91
Chi;LT,Z = 1.00	lkip = 3.085 m	Profielklasse 1
My;begin = -5.2 kNm	My;eind = 13.4 kNm	UC(y) = 0.24
		UC(z) = 0.00

Stabiliteitstoetsing C39-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.1		
N;Ed = -81.9 kN	Nb;Rd;y = 726.1 kN	Nb;Rd;z = 594.2 kN
Methode Y = Ongeschoord	Ca(y) = 0.250	Cb(y) = 0.250
m		Lknik Y = 4.500
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B
m		Lknik Z = 3.085
Xy = 0.72		Knikcurve: B
Xz = 0.59		Knikcurve: C
NEN-EN1993-1-1(6.46): UC = 0.14 < 1		

Buiging & Druk C39-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.1	Kipgevoelig Ja	Profielklasse = 1
N;Ed = -81.9 kN	My;Ed = 13.4 kNm	Mz;Ed = 0.0 kNm
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm
My = 13.4 kNm	My;Psi = -5.2 kNm	My;s = 4.1 kNm
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm
Cmy = 0.44	Cmz = 0.90	CmLT = 0.90
Kyy = 0.474	Kyz = 0.632	Kzy = 0.981
Ksi;y = 0.72	Ksi;z = 0.59	Ksi;LT = 0.95
NEN-EN1993-1-1(6.61&6.62): UC = 0.38 < 1		Kzz = 1.053



Doorbuigingstoetsing X C39-V1 (0.000-3.085)

Constructietype : Kolom
 $u; j; 3 = 2.3 \text{ mm (Ka.C.7)}$
 $\text{Limiet } u; j; \text{max} = H/300 = 10.3 \text{ mm}$
 $UC(u; j; \text{max}) = 0.2$
 NEN-EN|NEN-EN1990/NB A1.4.2: $UC = 0.22 < 1$

Toets type: 1 bouwlaag
 $\text{Limiet } u; \text{max} = N/B = 0.0 \text{ mm}$

Profielgegevens staaf C40-V1 (0.000-3.085)

HE140B Analyse
 $h = 140.0 \text{ mm}$
 $A = 4.30e-03 \text{ m}^2$
 $245.4e-06 \text{ m}^3$
 $b = 140.0 \text{ mm}$
 $119.8e-06 \text{ m}^3$
 $tf = 12.0 \text{ mm}$
 $3.48e-03 \text{ m}^2$
 $tw = 7.0 \text{ mm}$
 $1.31e-03 \text{ m}^2$
 $r = 12.0 \text{ mm}$
 m^6

Staal S235 $f_{yd}(\text{toegepast}) = 235 \text{ N/mm}^2$
 $W_{y;el} = 215.6e-06 \text{ m}^3$
 $W_{y;pl} =$
 $I_{y;el} = 150.9e-07 \text{ m}^4$
 $I_{z;el} = 549.7e-08 \text{ m}^4$
 $W_{z;el} = 785.2e-07 \text{ m}^3$
 $W_{z;pl} =$
 $A_{w;y;el} = 3.48e-03 \text{ m}^2$
 $A_{w;y;pl} =$
 $A_{w;z;el} = 1.31e-03 \text{ m}^2$
 $A_{w;z;pl} =$
 $I_t = 200.6e-09 \text{ m}^4$
 $I_{wa} = 224.8e-10$

Doorsnedetoetsing C40-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.12 op 3.085 m
 $N;Ed = -15.0 \text{ kN}$
 $N;Rd = 1,009.5 \text{ kN}$
 $V_{y;Ed} = 0.0 \text{ kN}$
 $V_{z;Ed} = -3.2 \text{ kN}$
 $V_{y;Rd} = 472.6 \text{ kN}$
 $V_{z;Rd} = 177.4 \text{ kN}$
 NEN-EN1993-1-1(6.12): $UC = 0.10 < 1$

Profielklasse = 1
 $M_{y;Ed} = -5.9 \text{ kNm}$
 $M_{z;Ed} = 0.0 \text{ kNm}$
 $M_{yRd} = 57.7 \text{ kNm}$
 $M_{zRd} = 28.1 \text{ kNm}$

Kiptoetsing C40-V1 (0.000-3.085)

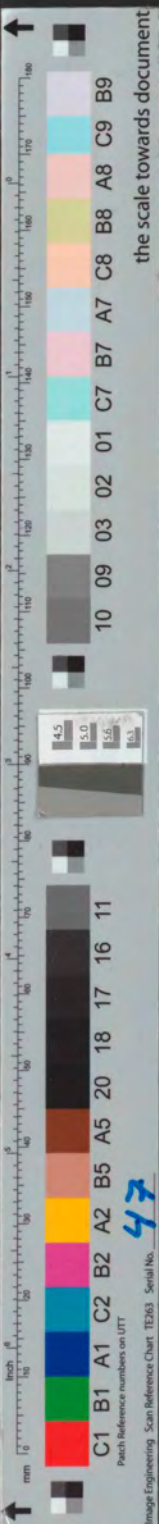
Equi. profiel: HE140B
 Maatgevende combinatie: Fu.C.2
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund
 0.000
 Tabel gebruikt NB 6.1
 Onderflens maatgevend
 $L_{sys} = 3.085 \text{ m}$
 m^6
 $C1 = 1.12$
 $M_{cr} = 178.2 \text{ kNm}$
 $Chi;LT(Fu.C.2) = 0.90$
 $Chi;LT,Z = 1.00$
 $My;begin = -1.3 \text{ kNm}$
 NEN-EN1993-1-1(6.54): $UC = 0.02 < 1$

Instab. curve Kip:a
 $b\text{-eff}(\text{Begin}) = 0.000$
 $b\text{-eff}(\text{Eind}) =$
 $M_{Beta} = -1.0$
 $X_{e;lst} = 3.085 \text{ m}$
 $S = 0.540 \text{ m}$
 $I_{st} = 3.085 \text{ m}$
 $I_{wa} = 2.2479e-08$
 $C = 4.02$
 Profielklasse 1
 $UC(y) = 0.02$
 $UC(z) = 0.00$

Stabiliteitstoetsing C40-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.12
 $N;Ed = -15.0 \text{ kN}$
 Methode Y = Ongeschoord
 Methode Z = Cons. gesch.
 $X_y = 0.60$
 $X_z = 0.59$

$N_b;R_d;y = 609.2 \text{ kN}$
 $Ca(y) = 0.827$
 $Ca(z) = N/B$
 $N_b;R_d;z = 594.2 \text{ kN}$
 $Cb(y) = 0.250$
 $Cb(z) = N/B$
 $L_{knik Y} = 5.510$
 $L_{knik Z} = 3.085$
 Nikcurve: B
 Nikcurve: C



NEN-EN1993-1-1(6.46): UC = 0.03 < 1

Buiging & Druk C40-V1 (0.000-3.085)

Maatgevende combinatie: Fu.C.12	Kipgevoelig Ja	Profielklasse = 1
N;Ed = -15.0 kN	My;Ed = 1.3 kNm	Mz;Ed = 0.0 kNm
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm
My = -5.9 kNm	My;Psi = 3.9 kNm	My;s = -1.0 kNm
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm
Cmy = 0.40	Cmz = 0.90	CmLT = 0.90
Kyy = 0.408	Kyz = 0.557	Kzy = 0.996
Ksi;y = 0.60	Ksi;z = 0.59	Kzz = 0.928
		Ksi;LT = 0.95

NEN-EN1993-1-1(6.61&6.62): UC = 0.13 < 1

Doorbuigingstoetsing X C40-V1 (0.000-3.085)

Constructietype : Kolom	Toets type: 1 bouwlaag
u;i;3 = 2.3 mm (Ka.C.7)	
Limiet u;i;max = H/300 = 10.3 mm	Limiet u;i;max = N/B = 0.0 mm
UC(u;i;max) = 0.2	
NEN-EN NEN-EN1990/NB A1.4.2: UC = 0.22<1	

Profielgegevens staaf C41-V1 (0.000-4.320)

HE180A	Analyse	Staal S235	f _{yd} (toegepast) = 235 N/mm ²
h = 171.0 mm	A = 4.53e-03 m ²	Wy;el = 293.6e-06 m ³	Wy;pl =
324.9e-06 m ³		Wz;el = 102.7e-06 m ³	Wz;pl =
b = 180.0 mm	Iy = 251.0e-07 m ⁴	Aw;y;el = 3.61e-03 m ²	Aw;y;pl =
156.5e-06 m ³	Iz = 924.6e-08 m ⁴	Aw;z;el = 1.45e-03 m ²	Aw;z;pl =
tf = 9.5 mm		It = 148.0e-09 m ⁴	Iwa = 602.1e-10
3.61e-03 m ²	Massa/m = 35.5 kg/m		
tw = 6.0 mm			
1.45e-03 m ²			
r = 15.0 mm			
m6			

Doorsnedetoetsing C41-V1 (0.000-4.320)

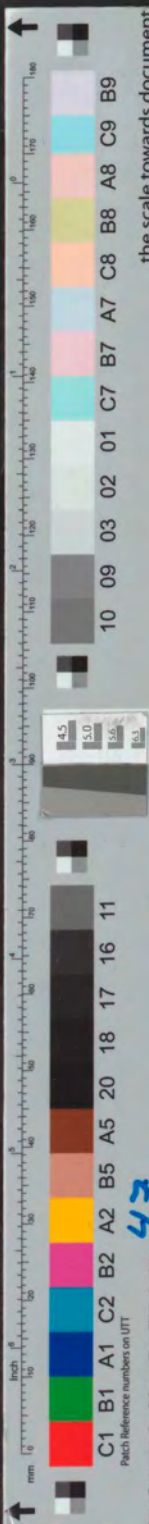
Maatgevende combinatie: Fu.C.2 op 2.360 m	Profielklasse = 1
N;Ed = -11.8 kN	My;Ed = 0.0 kNm
	Mz;Ed = 0.0 kNm
N;Rd = 1,063.4 kN	MyRd = 76.3 kNm
	MzRd = 36.8 kNm

NEN-EN1993-1-1(6.12): UC = 0.42 < 1

Kiptoetsing C41-V1 (0.000-4.320)

Equi. profiel: HE180A	Instab. curve Kip:a
Maatgevende combinatie: Fu.C.2	
Aangrijphoogte van de last: 0.000 m vanaf hart profiel	
Kipsteun bovenflens: N.v.t.	
Kipsteun onderflens: N.v.t.	
Inklem. begin: Gesteund	Beperk. eind: Gesteund
0.000	
Tabel gebruikt NB 8.1	= 0.0kN/m
Bovenflens maatgevend	Xb;lst = 0.000 m
Lsys = 4.320 m	Lg = 4.320 m
m6	
C1 = 2.30	C2 = 1.55 (tabel)
Mcr = 318.2 kNm	kred = 1.0
Chi;LT(Fu.C.2) = 0.93	M;Ed = 32.0 kNm

b-eff(Begin) = 0.000	b-eff(Eind) =
= 0.0	
Xe;lst = 4.320 m	Ist = 4.320 m
S = 1.029 m	Iwa = 6.0211e-08
C2(toegepast) = 0.00	C = 9.02
Lam-rel = 0.49	Profielklasse 1
	UC(y) = 0.45



Chi;LT,Z = 1.00 lkip = 4.320 m UC(z) = 0.00
 My;begin = -24.2 kNm My;eind = -10.5 kNm
 NEN-EN1993-1-1(6.54): UC = 0.45 < 1

Stabiliteitstoetsing C41-V1 (0.000-4.320)

Maatgevende combinatie: Fu.C.3

N;Ed = -12.2 kN Nb;Rd;y = 561.0 kN Nb;Rd;z = 563.4 kN
 Methode Y = Ongeschoord Ca(y) = 0.327 Cb(y) = 0.695 Lknik Y = 7.785
 m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 4.320
 m
 Xy = 0.53 Knikcurve: B
 Xz = 0.53 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.02 < 1

Buiging & Druk C41-V1 (0.000-4.320)

Maatgevende combinatie: Fu.C.3

Kipgevoelig Ja Profielklasse = 1
 N;Ed = -12.2 kN My;Ed = 32.0 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = -24.6 kNm My;Psi = -10.2 kNm My;s = 31.3 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 CmY = 0.91 Cmz = 0.90 CmLT = 0.90
 Kyy = 0.926 Kyz = 0.556 Kzy = 0.997 Kzz = 0.927
 Ksi;y = 0.53 Ksi;z = 0.53 Ksi;LT = 0.93
 NEN-EN1993-1-1(6.61&6.62): UC = 0.47 < 1

Doorbuigingstoetsing Z' C41-V1 (0.000-4.320)

Constructietype : Dak

Toets type: Algemeen

w;c = 0.0 mm Zeegvorm 3-Punt
 w;1 = 3.1 mm (x = 2.257 mm; Ka.C.(w1)) w;2 = 0.0 mm
 w;3 = 5.0 mm (x = 2.257 mm; Ka.C.2)
 w;tot; = 8.1 mm
 w;max = 8.1 mm (w;2+w;3) = 5.0 mm
 Limiet w;max = L/250 = 17.3 mm Limiet (w;2+w;3) = L/250 = 17.3 mm
 UC(w;max) = 0.5 UC(w;2+w;3) = 0.3
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.47 < 1

Doorbuigingstoetsing Z" C41-V1 (0.000-4.320)

Constructietype : Dak

Toets type: Algemeen

w;c = 0.0 mm Zeegvorm 3-Punt
 w;1 = 3.2 mm (x = 2.257 mm; Ka.C.(w1)) w;2 = 0.0 mm
 w;3 = 5.0 mm (x = 2.257 mm; Ka.C.2)
 w;tot; = 8.1 mm
 w;max = 8.1 mm (w;2+w;3) = 5.0 mm
 Limiet w;max = L/250 = 17.3 mm Limiet (w;2+w;3) = L/250 = 17.3 mm
 UC(w;max) = 0.5 UC(w;2+w;3) = 0.3
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.47 < 1

Profielgegevens staaf C42-V1 (0.000-0.570)

HE180A Analyse Staal S235 fyd(toegepast) = 235 N/mm2
 h = 171.0 mm A = 4.53e-03 m2 Wy;el = 293.6e-06 m3 Wy;pl =
 324.9e-06 m3
 b = 180.0 mm Iy = 251.0e-07 m4 Wz;el = 102.7e-06 m3 Wz;pl =
 156.5e-06 m3
 tf = 9.5 mm Iz = 924.6e-08 m4 Aw;y;el = 3.61e-03 m2 Aw;y;pl =
 3.61e-03 m2



tw = 6.0 mm Massa/m = 35.5 kg/m Aw;z;el = 1.45e-03 m2 Aw;z;pl =
 1.45e-03 m2 r = 15.0 mm It = 148.0e-09 m4 Iwa = 602.1e-10
 m6

Doorsnedetoetsing C42-V1 (0.000-0.570)

Maatgevende combinatie: Fu.C.2 op 0.570 m Profielklasse = 1
 N;Ed = -11.8 kN Vy;Ed = 0.0 kN My;Ed = -37.7 kNm
 Vz;Ed = -54.4 kN Mz;Ed = 0.0 kNm
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kN MyRd = 76.3 kNm
 Vz;Rd = 196.3 kN MzRd = 36.8 kNm
 NEN-EN1993-1-1(6.12): UC = 0.49 < 1

Kiptoetsing C42-V1 (0.000-0.570)

Equi. profiel: HE180A Instab. curve Kip:a
 Maatgevende combinatie: Bi.C.1
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund b-eff(Begin) = 0.000 b-eff(Eind) =
 0.000 = 0.0kN/m = 0.0
 Tabel gebruikt NB 8.1 Xb;lst = 0.000 m Xe;lst = 0.570 m Ist = 0.570 m
 Bovenflens maatgevend Lg = 0.570 m S = 1.029 m Iwa = 6.0211e-08
 m6 C1 = 2.30 C2 = 1.55 (tabel) C2(toegepast) = 0.00 C = 41.59
 Mcr = 11,116.5 kNm kred = 1.0 Lam-rel = 0.20 Profielklasse 1
 Chi;LT(Bi.C.1) = 1.00 M;Ed = 0.0 kNm UC(y) = 0.00
 Chi;LT,Z = 1.00 lkip = 0.570 m UC(z) = 0.00
 My;begin = -4.5 kNm My;eind = -17.3 kNm
 NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip NVT, i.v.m. geen buiging

Stabiliteitstoetsing C42-V1 (0.000-0.570)

Maatgevende combinatie: Fu.C.2
 N;Ed = -11.8 kN Nb;Rd;y = 1,047.1 kN Nb;Rd;z = 1,063.4 kN
 Methode Y = Ongeschoord Ca(y) = 5.000 Cb(y) = 0.810 Lknik Y = 1.701
 m Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 0.570
 m Xy = 0.98 Knikcurve: B
 Xz = 1.00 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.01 < 1

Buiging & Druk C42-V1 (0.000-0.570)

Maatgevende combinatie: Fu.C.2 Kipgevoelig Ja Profielklasse = 1
 N;Ed = -11.8 kN My;Ed = 0.0 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = -37.7 kNm My;Psi = -10.5 kNm My;s = -23.1 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 Cmy = 0.69 Cmz = 0.90 CmLT = 0.90
 Kyy = 0.691 Kyz = 0.538 Kzy = 0.734 Kzz = 0.897
 Ksi;y = 0.98 Ksi;z = 1.00 Ksi;LT = 1.00
 NEN-EN1993-1-1(6.61&6.62): UC = 0.37 < 1

Doorbuigingstoetsing Z' C42-V1 (0.000-0.570)

Constructietype : Dak Toets type: Algemeen
 w;c = 0.0 mm Zeegvorm 3-Punt



w;1 = -0.1 mm (x = 0.312 mm; Ka.C.(w1))
 w;3 = -0.1 mm (x = 0.312 mm; Ka.C.2)
 w;tot; = -0.1 mm
 w;max = -0.1 mm
 Limiet w;max = L/250 = 2.3 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.06 < 1

w;2 = 0.0 mm
 (w;2+w;3) = -0.1 mm
 Limiet (w;2+w;3) = L/250 = 2.3 mm
 UC(w;2+w;3) = 0.0

Doorbuigingstoetsing Z" C42-V1 (0.000-0.570)

Constructietype : Dak
 w;c = 0.0 mm
 w;1 = -0.1 mm (x = 0.312 mm; Ka.C.(w1))
 w;3 = -0.1 mm (x = 0.312 mm; Ka.C.2)
 w;tot; = -0.1 mm
 w;max = -0.1 mm
 Limiet w;max = L/250 = 2.3 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.06 < 1

Toets type: Algemeen
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 (w;2+w;3) = -0.1 mm
 Limiet (w;2+w;3) = L/250 = 2.3 mm
 UC(w;2+w;3) = 0.0

Profielgegevens staaf C43-V1 (0.000-1.855)

HE180A Analyse
 h = 171.0 mm A = 4.53e-03 m2
 324.9e-06 m3
 b = 180.0 mm Iy = 251.0e-07 m4
 156.5e-06 m3 Iz = 924.6e-08 m4
 tf = 9.5 mm
 3.61e-03 m2 Massa/m = 35.5 kg/m
 tw = 6.0 mm
 1.45e-03 m2
 r = 15.0 mm
 m6

Staal S235 fyd(toegepast) = 235 N/mm2
 Wy;el = 293.6e-06 m3 Wy;pl =
 Wz;el = 102.7e-06 m3 Wz;pl =
 Aw;y;el = 3.61e-03 m2 Aw;y;pl =
 Aw;z;el = 1.45e-03 m2 Aw;z;pl =
 It = 148.0e-09 m4 Iwa = 602.1e-10

Doorsnedetoetsing C43-V1 (0.000-1.855)

Maatgevende combinatie: Fu.C.2 op 0.000 m
 N;Ed = -6.5 kN Vy;Ed = 0.0 kN
 Vz;Ed = 28.0 kN
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kN
 Vz;Rd = 196.3 kN
 NEN-EN1993-1-1(6.12): UC = 0.33 < 1

Profielklasse = 1
 My;Ed = -24.9 kNm
 Mz;Ed = 0.0 kNm
 MyRd = 76.3 kNm
 MzRd = 36.8 kNm

Kiptoetsing C43-V1 (0.000-1.855)

Equi. profiel: HE180A
 Maatgevende combinatie: Bi.C.1

Instab. curve Kip:a

Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund

b-eff(Begin) = 0.000 b-eff(Eind) =
 = 0.0
 Xe;lst = 1.855 m lst = 1.855 m
 S = 1.029 m Iwa = 6.0211e-08

Tabel gebruikt NB 8.1 = 0.0kN/m
 Bovenflens maatgevend Xb;lst = 0.000 m
 Lsys = 1.855 m Lg = 1.855 m
 m6
 C1 = 2.30 C2 = 1.55 (tabel)
 Mcr = 1,191.9 kNm kred = 1.0
 Chi;LT(Bi.C.1) = 0.99 M;Ed = 0.0 kNm
 Chi;LT,Z = 1.00 lkip = 1.855 m
 My;begin = -11.4 kNm My;eind = -4.0 kNm

C2(toegepast) = 0.00 C = 14.51
 Lam-rel = 0.25 Profielklasse 1
 UC(y) = 0.00
 UC(z) = 0.00



NEN-EN1993-1-1(6.54): UC = 0.00 < 1 Kip NVT, i.v.m. geen buiging

Stabiliteitstoetsing C43-V1 (0.000-1.855)

Maatgevende combinatie: Fu.C.2

N;Ed = -6.5 kN	Nb;Rd;y = 972.6 kN	Nb;Rd;z = 933.2 kN	
Methode Y = Ongeschoord	Ca(y) = 0.474	Cb(y) = 0.250	Lknik Y = 2.997
m			
Methode Z = Cons. gesch.	Ca(z) = N/B	Cb(z) = N/B	Lknik Z = 1.855
m			
Xy = 0.91		Knikcurve: B	
Xz = 0.88		Knikcurve: C	

NEN-EN1993-1-1(6.46): UC = 0.01 < 1

Buiging & Druk C43-V1 (0.000-1.855)

Maatgevende combinatie: Fu.C.2

N;Ed = -6.5 kN	Kipgevoelig Ja	Profielklasse = 1	
	My;Ed = 0.0 kNm	Mz;Ed = 0.0 kNm	
	Delta;My;Ed = 0.0 kNm	Delta;Mz;Ed = 0.0 kNm	
My = -24.9 kNm	My;Psi = -9.4 kNm	My;s = -9.0 kNm	
Mz = 0.0 kNm	Mz;Psi = 0.0 kNm	Mz;s = 0.0 kNm	
Cmy = 0.49	Cmz = 0.90	CmLT = 0.90	
Kyy = 0.491	Kyz = 0.541	Kzy = 1.000	Kzz = 0.902
Ksi;y = 0.91	Ksi;z = 0.88	Ksi;LT = 0.99	

NEN-EN1993-1-1(6.61&6.62): UC = 0.34 < 1

Doorbuigingstoetsing Z' C43-V1 (0.000-1.855)

Constructietype : Dak

w;c = 0.0 mm	Toets type: Algemeen
w;1 = -0.3 mm (x = 0.818 mm; Ka.C.(w1))	Zeegvorm 3-Punt
w;3 = -0.4 mm (x = 0.818 mm; Ka.C.2)	w;2 = 0.0 mm
w;tot; = -0.7 mm	
w;max = -0.7 mm	(w;2+w;3) = -0.4 mm
Limiet w;max = L/250 = 7.4 mm	Limiet (w;2+w;3) = L/250 = 7.4 mm
UC(w;max) = 0.1	UC(w;2+w;3) = 0.1

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.09 < 1

Doorbuigingstoetsing Z'' C43-V1 (0.000-1.855)

Constructietype : Dak

w;c = 0.0 mm	Toets type: Algemeen
w;1 = -0.3 mm (x = 0.818 mm; Ka.C.(w1))	Zeegvorm 3-Punt
w;3 = -0.4 mm (x = 0.818 mm; Ka.C.2)	w;2 = 0.0 mm
w;tot; = -0.7 mm	
w;max = -0.7 mm	(w;2+w;3) = -0.4 mm
Limiet w;max = L/250 = 7.4 mm	Limiet (w;2+w;3) = L/250 = 7.4 mm
UC(w;max) = 0.1	UC(w;2+w;3) = 0.1

NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.09 < 1

Profielgegevens staaf C44-V1 (0.000-3.520)

HE180A	Analyse	Staal S235	fyd(toegepast) = 235 N/mm2
h = 171.0 mm	A = 4.53e-03 m2	Wy;el = 293.6e-06 m3	Wy;pl =
324.9e-06 m3			
b = 180.0 mm	Iy = 251.0e-07 m4	Wz;el = 102.7e-06 m3	Wz;pl =
156.5e-06 m3			
tf = 9.5 mm	Iz = 924.6e-08 m4	Aw;y;el = 3.61e-03 m2	Aw;y;pl =
3.61e-03 m2			
tw = 6.0 mm	Massa/m = 35.5 kg/m	Aw;z;el = 1.45e-03 m2	Aw;z;pl =
1.45e-03 m2			
r = 15.0 mm		It = 148.0e-09 m4	Iwa = 602.1e-10



m6

Doorsnedetoetsing C44-V1 (0.000-3.520)

Maatgevende combinatie: Fu.C.14 op 0.000 m
 N;Ed = -6.6 kN Vy;Ed = 0.0 kN My;Ed = -10.5 kNm
 Vz;Ed = 25.5 kN Mz;Ed = 0.0 kNm
 N;Rd = 1,063.4 kN Vy;Rd = 490.2 kN MyRd = 76.3 kNm
 Vz;Rd = 196.3 kN MzRd = 36.8 kNm

NEN-EN1993-1-1(6.12): UC = 0.14 < 1

Kiptoetsing C44-V1 (0.000-3.520)

Equi. profiel: HE180A
 Maatgevende combinatie: Fu.C.14
 Aangrijphoogte van de last: 0.000 m vanaf hart profiel
 Kipsteun bovenflens: N.v.t.
 Kipsteun onderflens: N.v.t.
 Inklem. begin: Gesteund Beperk. eind: Gesteund b-eff(Begin) = 0.000 b-eff(Eind) =
 0.000
 Tabel gebruikt NB 8.1 = 0.0kN/m = 0.0
 Onderflens maatgevend Xb;lst = 0.000 m Xe;lst = 3.520 m Ist = 3.520 m
 Lsys = 3.520 m Lg = 3.520 m S = 1.029 m Iwa = 6.0211e-08
 m6
 C1 = 2.30 C2 = 1.55 (tabel) C2 (toegepast) = 0.00 C = 9.81
 Mcr = 424.5 kNm kred = 1.0 Lam-rel = 0.42 Profielklasse 1
 Chi;LT(Fu.C.14) = 0.95 M;Ed = 10.5 kNm UC(y) = 0.15
 Chi;LT,Z = 1.00 lkip = 3.520 m UC(z) = 0.00
 My;begin = -10.5 kNm My;eind = -6.3 kNm
 NEN-EN1993-1-1(6.54): UC = 0.15 < 1

Stabiliteitstoetsing C44-V1 (0.000-3.520)

Maatgevende combinatie: Fu.C.14
 N;Ed = -6.6 kN Nb;Rd;y = 812.6 kN Nb;Rd;z = 684.7 kN
 Methode Y = Ongeschoord Ca(y) = 0.250 Cb(y) = 0.250 Lknik Y = 5.134
 m
 Methode Z = Cons. gesch. Ca(z) = N/B Cb(z) = N/B Lknik Z = 3.520
 m
 Xy = 0.76 Knikcurve: B
 Xz = 0.64 Knikcurve: C
 NEN-EN1993-1-1(6.46): UC = 0.01 < 1

Buiging & Druk C44-V1 (0.000-3.520)

Maatgevende combinatie: Fu.C.14 Kipgevoelig Ja Profielklasse = 1
 N;Ed = -6.6 kN My;Ed = 10.5 kNm Mz;Ed = 0.0 kNm
 Delta;My;Ed = 0.0 kNm Delta;Mz;Ed = 0.0 kNm
 My = -10.5 kNm My;Psi = -6.3 kNm My;s = 8.6 kNm
 Mz = 0.0 kNm Mz;Psi = 0.0 kNm Mz;s = 0.0 kNm
 CmY = 0.75 Cmz = 0.90 CmLT = 0.90
 Kyy = 0.755 Kyz = 0.546 Kzy = 0.999 Kzz = 0.909
 Ksi;y = 0.76 Ksi;z = 0.64 Ksi;LT = 0.95
 NEN-EN1993-1-1(6.61&6.62): UC = 0.15 < 1

Doorbuigingstoetsing Z' C44-V1 (0.000-3.520)

Constructietype : Dak Toets type: Algemeen
 w;c = 0.0 mm Zeegvorm 3-Punt
 w;1 = 0.5 mm (x = 1.676 mm; Ka.C.(w1)) w;2 = 0.0 mm
 w;3 = 0.8 mm (x = 1.676 mm; Ka.C.2)



w;tot; = 1.3 mm
 w;max = 1.3 mm
 Limiet w;max = L/250 = 14.1 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.09<1

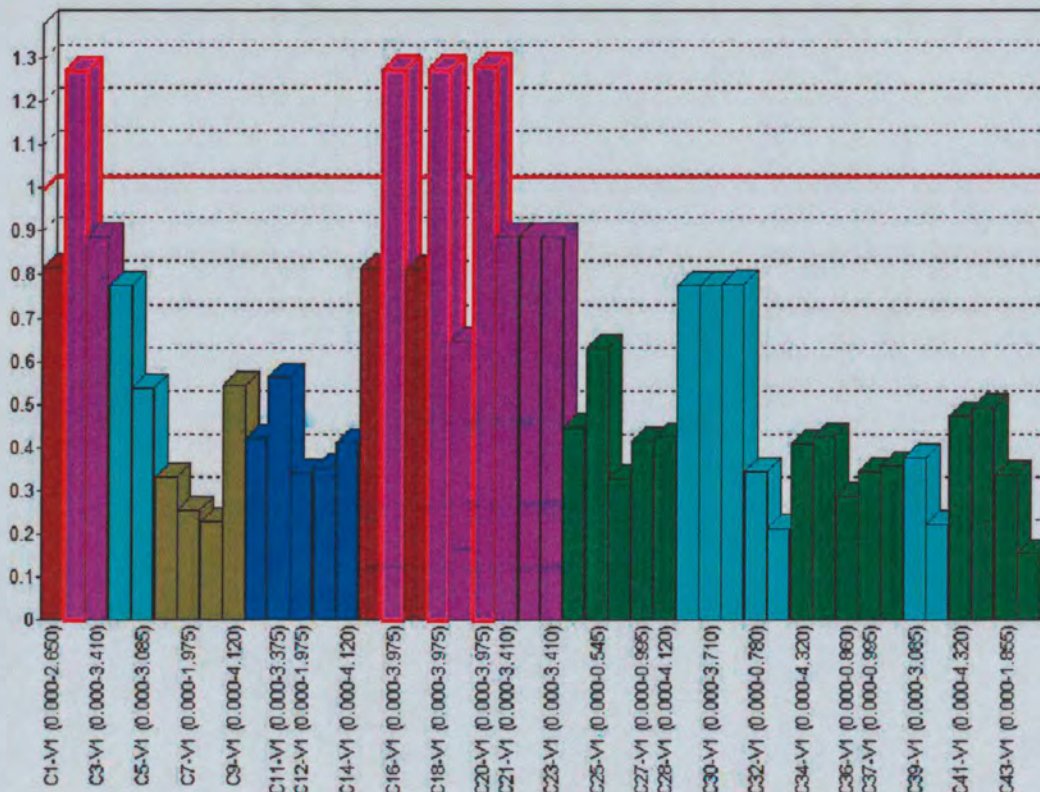
(w;2+w;3) = 0.8 mm
 Limiet (w;2+w;3) = L/250 = 14.1 mm
 UC(w;2+w;3) = 0.1

Doorbuigingstoetsing Z" C44-V1 (0.000-3.520)

Constructietype : Dak
 w;c = 0.0 mm
 w;1 = 0.5 mm (x = 1.676 mm; Ka.C.(w1))
 w;3 = 0.8 mm (x = 1.676 mm; Ka.C.2)
 w;tot; = 1.3 mm
 w;max = 1.3 mm
 Limiet w;max = L/250 = 14.1 mm
 UC(w;max) = 0.1
 NEN-EN|NEN-EN1990/NB A1.4.2: UC = 0.09<1

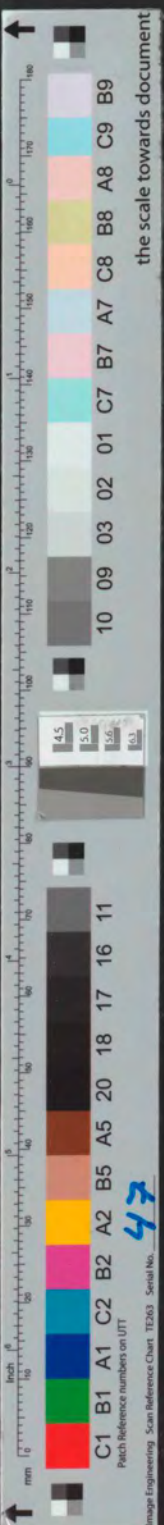
Toets type: Algemeen
 Zeegvorm 3-Punt
 w;2 = 0.0 mm
 (w;2+w;3) = 0.8 mm
 Limiet (w;2+w;3) = L/250 = 14.1 mm
 UC(w;2+w;3) = 0.1

AFB. STAAL UC DIAGRAM



UNITY CHECK NEN-EN1993-1-1:2009/NB:2011

Veld	Toetsing	Combinatie	Artikel	UC max
C1-V1 (0.000-2.650)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.16
C1-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.43
Veld	Toetsing	Combinatie	Artikel	UC max
C1-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.13



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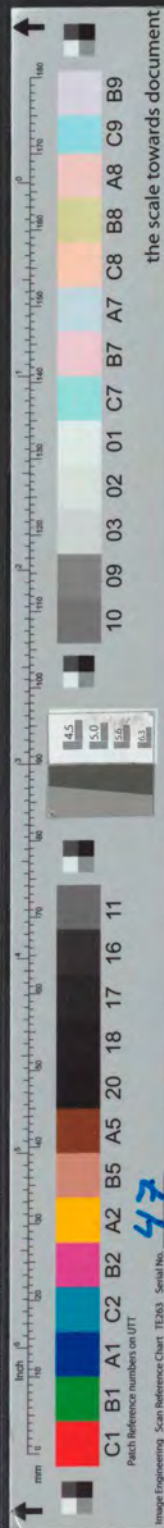
C1-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.56
C1-V1 (0.000-2.650)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C1-V1 (0.000-2.650)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	0.82
C2-V1 (0.000-3.975)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.32
C2-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.14
C2-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.18
C2-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.51
C2-V1 (0.000-3.975)	Kiptoetsing	Fu.C.12	NEN-EN1993-1-1(6.54)	0.34
C2-V1 (0.000-3.975)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	1.27
C3-V1 (0.000-3.410)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.15
C3-V1 (0.000-3.410)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.46)	0.16
C3-V1 (0.000-3.410)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.46)	0.13
C3-V1 (0.000-3.410)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.61&6.62)	0.26
C3-V1 (0.000-3.410)	Kiptoetsing	Fu.C.12	NEN-EN1993-1-1(6.54)	0.15
C3-V1 (0.000-3.410)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	0.89
C4-V1 (0.000-3.710)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.19
C4-V1 (0.000-3.710)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.67
C4-V1 (0.000-3.710)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.18
C4-V1 (0.000-3.710)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.61&6.62)	0.73
C4-V1 (0.000-3.710)	Kiptoetsing	Fu.C.12	NEN-EN1993-1-1(6.54)	0.20
C4-V1 (0.000-3.710)	Doorbuigingstoetsing	Ka.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.77
C5-V1 (0.000-3.085)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.12)	0.44
C5-V1 (0.000-3.085)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.06
C5-V1 (0.000-3.085)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.08
C5-V1 (0.000-3.085)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.61&6.62)	0.54
C5-V1 (0.000-3.085)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C5-V1 (0.000-3.085)	Doorbuigingstoetsing	Ka.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.23
C6-V1 (0.000-3.375)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.33
C6-V1 (0.000-3.375)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.01
C6-V1 (0.000-3.375)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.01
C6-V1 (0.000-3.375)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.32
C6-V1 (0.000-3.375)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C6-V1 (0.000-3.375)	Doorbuigingstoetsing	Fr.C.5	NEN-EN NEN-EN1990/NB A1.4.2	0.04
C7-V1 (0.000-1.975)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.26
C7-V1 (0.000-1.975)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.02
C7-V1 (0.000-1.975)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.02
C7-V1 (0.000-1.975)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.13
C7-V1 (0.000-1.975)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C7-V1 (0.000-1.975)	Doorbuigingstoetsing	Fr.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.02
C8-V1 (0.000-0.995)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.23
C8-V1 (0.000-0.995)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.01
C8-V1 (0.000-0.995)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.01
C8-V1 (0.000-0.995)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.20
C8-V1 (0.000-0.995)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C8-V1 (0.000-0.995)	Doorbuigingstoetsing	Fr.C.6	NEN-EN NEN-EN1990/NB A1.4.2	0.02
C9-V1 (0.000-4.120)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.49
C9-V1 (0.000-4.120)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.03
C9-V1 (0.000-4.120)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.03
C9-V1 (0.000-4.120)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.54
C9-V1 (0.000-4.120)	Kiptoetsing	Fu.C.11	NEN-EN1993-1-1(6.54)	0.52
C9-V1 (0.000-4.120)	Doorbuigingstoetsing	Fr.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.08
C10-V1 (0.000-0.400)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.17)	0.42
Veld	Toetsing	Combinatie	Artikel	UC max
C10-V1 (0.000-0.400)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.46)	0.00



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Veld	Toetsing	Combinatie	Artikel	UC max
C10-V1 (0.000-0.400)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.46)	0.00
C10-V1 (0.000-0.400)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.61&6.62)	0.22
C10-V1 (0.000-0.400)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C10-V1 (0.000-0.400)	Doorbuigingstoetsing	Fr.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.21
C11-V1 (0.000-3.375)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.54
C11-V1 (0.000-3.375)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.00
C11-V1 (0.000-3.375)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.00
C11-V1 (0.000-3.375)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.56
C11-V1 (0.000-3.375)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C11-V1 (0.000-3.375)	Doorbuigingstoetsing	Fr.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.03
C12-V1 (0.000-1.975)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.34
C12-V1 (0.000-1.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.00
C12-V1 (0.000-1.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.00
C12-V1 (0.000-1.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.34
C12-V1 (0.000-1.975)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C12-V1 (0.000-1.975)	Doorbuigingstoetsing	Fr.C.6	NEN-EN NEN-EN1990/NB A1.4.2	0.02
C13-V1 (0.000-0.995)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.35
C13-V1 (0.000-0.995)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.00
C13-V1 (0.000-0.995)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.00
C13-V1 (0.000-0.995)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.17
C13-V1 (0.000-0.995)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C13-V1 (0.000-0.995)	Doorbuigingstoetsing	Fr.C.6	NEN-EN NEN-EN1990/NB A1.4.2	0.03
C14-V1 (0.000-4.120)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.38
C14-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.01
C14-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.01
C14-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.41
C14-V1 (0.000-4.120)	Kiptoetsing	Fu.C.12	NEN-EN1993-1-1(6.54)	0.41
C14-V1 (0.000-4.120)	Doorbuigingstoetsing	Fr.C.4	NEN-EN NEN-EN1990/NB A1.4.2	0.09
C15-V1 (0.000-2.650)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.19
C15-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.16
C15-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.15
C15-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.34
C15-V1 (0.000-2.650)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C15-V1 (0.000-2.650)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	0.82
C16-V1 (0.000-3.975)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.41
C16-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.17
C16-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.22
C16-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.65
C16-V1 (0.000-3.975)	Kiptoetsing	Fu.C.12	NEN-EN1993-1-1(6.54)	0.44
C16-V1 (0.000-3.975)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	1.27
C17-V1 (0.000-2.650)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.24
C17-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.15
C17-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.14
C17-V1 (0.000-2.650)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.39
C17-V1 (0.000-2.650)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C17-V1 (0.000-2.650)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	0.81
C18-V1 (0.000-3.975)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.46
C18-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.15
C18-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.19
C18-V1 (0.000-3.975)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.66
C18-V1 (0.000-3.975)	Kiptoetsing	Fu.C.12	NEN-EN1993-1-1(6.54)	0.49
C18-V1 (0.000-3.975)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	1.28
C19-V1 (0.000-1.150)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.59



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C19-V1 (0.000-1.150)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.11
C19-V1 (0.000-1.150)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.11
C19-V1 (0.000-1.150)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.65
C19-V1 (0.000-1.150)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C20-V1 (0.000-3.975)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.26
C20-V1 (0.000-3.975)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.11
C20-V1 (0.000-3.975)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.14
C20-V1 (0.000-3.975)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.41
C20-V1 (0.000-3.975)	Kiptoetsing	Fu.C.11	NEN-EN1993-1-1(6.54)	0.27
C20-V1 (0.000-3.975)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	1.28
C21-V1 (0.000-3.410)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.37
C21-V1 (0.000-3.410)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.18
C21-V1 (0.000-3.410)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.16
C21-V1 (0.000-3.410)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.53
C21-V1 (0.000-3.410)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C21-V1 (0.000-3.410)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	0.89
C22-V1 (0.000-3.410)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.27
C22-V1 (0.000-3.410)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.10
C22-V1 (0.000-3.410)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.12
C22-V1 (0.000-3.410)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.40
C22-V1 (0.000-3.410)	Kiptoetsing	Fu.C.6	NEN-EN1993-1-1(6.54)	0.05
C22-V1 (0.000-3.410)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	0.89
C23-V1 (0.000-3.410)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.21
C23-V1 (0.000-3.410)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.06
C23-V1 (0.000-3.410)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.08
C23-V1 (0.000-3.410)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.29
C23-V1 (0.000-3.410)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C23-V1 (0.000-3.410)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	0.89
C24-V1 (0.000-3.775)	Doorsnede	Fu.C.5	NEN-EN1993-1-1(6.12)	0.42
C24-V1 (0.000-3.775)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.01
C24-V1 (0.000-3.775)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.01
C24-V1 (0.000-3.775)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.44
C24-V1 (0.000-3.775)	Kiptoetsing	Fu.C.5	NEN-EN1993-1-1(6.54)	0.45
C24-V1 (0.000-3.775)	Doorbuigingstoetsing	Fr.C.3	NEN-EN NEN-EN1990/NB A1.4.2	0.09
C25-V1 (0.000-0.545)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.17)	0.63
C25-V1 (0.000-0.545)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.01
C25-V1 (0.000-0.545)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.01
C25-V1 (0.000-0.545)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.38
C25-V1 (0.000-0.545)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C25-V1 (0.000-0.545)	Doorbuigingstoetsing	Fr.C.3	NEN-EN NEN-EN1990/NB A1.4.2	0.02
C26-V1 (0.000-1.430)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.33
C26-V1 (0.000-1.430)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C26-V1 (0.000-1.430)	Doorbuigingstoetsing	Fr.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.06
C27-V1 (0.000-0.995)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.42
C27-V1 (0.000-0.995)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C27-V1 (0.000-0.995)	Doorbuigingstoetsing	Fr.C.6	NEN-EN NEN-EN1990/NB A1.4.2	0.03
C28-V1 (0.000-4.120)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.39
C28-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.01
C28-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.01
C28-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.42
C28-V1 (0.000-4.120)	Kiptoetsing	Fu.C.12	NEN-EN1993-1-1(6.54)	0.41
C28-V1 (0.000-4.120)	Doorbuigingstoetsing	Fr.C.3	NEN-EN NEN-EN1990/NB A1.4.2	0.12
Veld	Toetsing	Combinatie	Artikel	UC max
C29-V1 (0.000-3.710)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.32



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C29-V1 (0.000-3.710)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.17
C29-V1 (0.000-3.710)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.17
C29-V1 (0.000-3.710)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.50
C29-V1 (0.000-3.710)	Kiptoetsing	Fu.C.12	NEN-EN1993-1-1(6.54)	0.34
C29-V1 (0.000-3.710)	Doorbuigingstoetsing	Ka.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.78
C30-V1 (0.000-3.710)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.24
C30-V1 (0.000-3.710)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.12
C30-V1 (0.000-3.710)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.15
C30-V1 (0.000-3.710)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.40
C30-V1 (0.000-3.710)	Kiptoetsing	Fu.C.11	NEN-EN1993-1-1(6.54)	0.26
C30-V1 (0.000-3.710)	Doorbuigingstoetsing	Ka.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.78
C31-V1 (0.000-3.710)	Doorsnede	Fu.C.11	NEN-EN1993-1-1(6.12)	0.23
C31-V1 (0.000-3.710)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.05
C31-V1 (0.000-3.710)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.46)	0.07
C31-V1 (0.000-3.710)	Stabiliteit	Fu.C.11	NEN-EN1993-1-1(6.61&6.62)	0.31
C31-V1 (0.000-3.710)	Kiptoetsing	Fu.C.11	NEN-EN1993-1-1(6.54)	0.24
C31-V1 (0.000-3.710)	Doorbuigingstoetsing	Ka.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.78
C32-V1 (0.000-0.780)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.12)	0.19
C32-V1 (0.000-0.780)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.01
C32-V1 (0.000-0.780)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.01
C32-V1 (0.000-0.780)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.61&6.62)	0.17
C32-V1 (0.000-0.780)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C32-V1 (0.000-0.780)	Doorbuigingstoetsing	Ka.C.8	NEN-EN NEN-EN1990/NB A1.4.2	0.34
C33-V1 (0.000-2.382)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.12)	0.14
C33-V1 (0.000-2.382)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.02
C33-V1 (0.000-2.382)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.02
C33-V1 (0.000-2.382)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.61&6.62)	0.16
C33-V1 (0.000-2.382)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C33-V1 (0.000-2.382)	Doorbuigingstoetsing	Ka.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.21
C34-V1 (0.000-4.320)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.12)	0.38
C34-V1 (0.000-4.320)	Kiptoetsing	Fu.C.1	NEN-EN1993-1-1(6.54)	0.41
C34-V1 (0.000-4.320)	Doorbuigingstoetsing	Fr.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.17
C35-V1 (0.000-0.570)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.17)	0.42
C35-V1 (0.000-0.570)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C35-V1 (0.000-0.570)	Doorbuigingstoetsing	Fr.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.02
C36-V1 (0.000-0.860)	Doorsnede	Fu.C.3	NEN-EN1993-1-1(6.12)	0.29
C36-V1 (0.000-0.860)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C36-V1 (0.000-0.860)	Doorbuigingstoetsing	Fr.C.1	NEN-EN NEN-EN1990/NB A1.4.2	0.04
C37-V1 (0.000-0.995)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.12)	0.34
C37-V1 (0.000-0.995)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C37-V1 (0.000-0.995)	Doorbuigingstoetsing	Fr.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.03
C38-V1 (0.000-4.120)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.12)	0.33
C38-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.00
C38-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.00
C38-V1 (0.000-4.120)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.30
C38-V1 (0.000-4.120)	Kiptoetsing	Fu.C.1	NEN-EN1993-1-1(6.54)	0.36
C38-V1 (0.000-4.120)	Doorbuigingstoetsing	Fr.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.13
C39-V1 (0.000-3.085)	Doorsnede	Fu.C.1	NEN-EN1993-1-1(6.12)	0.23
C39-V1 (0.000-3.085)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.11
C39-V1 (0.000-3.085)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.46)	0.14
C39-V1 (0.000-3.085)	Stabiliteit	Fu.C.1	NEN-EN1993-1-1(6.61&6.62)	0.38
C39-V1 (0.000-3.085)	Kiptoetsing	Fu.C.1	NEN-EN1993-1-1(6.54)	0.24
Veld	Toetsing	Combinatie	Artikel	UC max
C39-V1 (0.000-3.085)	Doorbuigingstoetsing	Ka.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.22



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C40-V1 (0.000-3.085)	Doorsnede	Fu.C.12	NEN-EN1993-1-1(6.12)	0.10
C40-V1 (0.000-3.085)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.02
C40-V1 (0.000-3.085)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.46)	0.03
C40-V1 (0.000-3.085)	Stabiliteit	Fu.C.12	NEN-EN1993-1-1(6.61&6.62)	0.13
C40-V1 (0.000-3.085)	Kiptoetsing	Fu.C.2	NEN-EN1993-1-1(6.54)	0.02
C40-V1 (0.000-3.085)	Doorbuigingstoetsing	Ka.C.7	NEN-EN NEN-EN1990/NB A1.4.2	0.22
C41-V1 (0.000-4.320)	Doorsnede	Fu.C.2	NEN-EN1993-1-1(6.12)	0.42
C41-V1 (0.000-4.320)	Stabiliteit	Fu.C.3	NEN-EN1993-1-1(6.46)	0.02
C41-V1 (0.000-4.320)	Stabiliteit	Fu.C.3	NEN-EN1993-1-1(6.46)	0.02
C41-V1 (0.000-4.320)	Stabiliteit	Fu.C.3	NEN-EN1993-1-1(6.61&6.62)	0.47
C41-V1 (0.000-4.320)	Kiptoetsing	Fu.C.2	NEN-EN1993-1-1(6.54)	0.45
C41-V1 (0.000-4.320)	Doorbuigingstoetsing	Ka.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.47
C42-V1 (0.000-0.570)	Doorsnede	Fu.C.2	NEN-EN1993-1-1(6.12)	0.49
C42-V1 (0.000-0.570)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.46)	0.01
C42-V1 (0.000-0.570)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.46)	0.01
C42-V1 (0.000-0.570)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.61&6.62)	0.37
C42-V1 (0.000-0.570)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C42-V1 (0.000-0.570)	Doorbuigingstoetsing	Ka.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.06
C43-V1 (0.000-1.855)	Doorsnede	Fu.C.2	NEN-EN1993-1-1(6.12)	0.33
C43-V1 (0.000-1.855)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.46)	0.01
C43-V1 (0.000-1.855)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.46)	0.01
C43-V1 (0.000-1.855)	Stabiliteit	Fu.C.2	NEN-EN1993-1-1(6.61&6.62)	0.34
C43-V1 (0.000-1.855)	Kiptoetsing	Bi.C.1	NEN-EN1993-1-1(6.54)	0.00
C43-V1 (0.000-1.855)	Doorbuigingstoetsing	Ka.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.09
C44-V1 (0.000-3.520)	Doorsnede	Fu.C.14	NEN-EN1993-1-1(6.12)	0.14
C44-V1 (0.000-3.520)	Stabiliteit	Fu.C.14	NEN-EN1993-1-1(6.46)	0.01
C44-V1 (0.000-3.520)	Stabiliteit	Fu.C.14	NEN-EN1993-1-1(6.46)	0.01
C44-V1 (0.000-3.520)	Stabiliteit	Fu.C.14	NEN-EN1993-1-1(6.61&6.62)	0.15
C44-V1 (0.000-3.520)	Kiptoetsing	Fu.C.14	NEN-EN1993-1-1(6.54)	0.15
C44-V1 (0.000-3.520)	Doorbuigingstoetsing	Ka.C.2	NEN-EN NEN-EN1990/NB A1.4.2	0.09

GEWICHT STAALCONSTRUCTIE

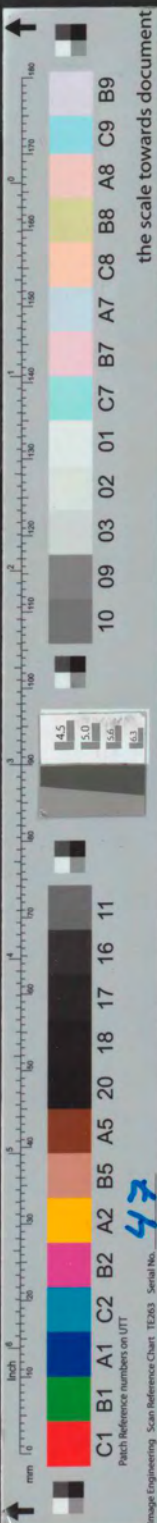
Staaft	Profiel	Lsys	Massa
C29-V1 (0.000-3.710)	HE140B	3.710	125.103
C30-V1 (0.000-3.710)	HE140B	3.710	125.103
C31-V1 (0.000-3.710)	HE140B	3.710	125.103
C32-V1 (0.000-0.780)	HE140B	0.780	26.302
C33-V1 (0.000-2.382)	HE140B	2.382	80.316
C39-V1 (0.000-3.085)	HE140B	3.085	104.028
C40-V1 (0.000-3.085)	HE140B	3.085	104.028
C4-V1 (0.000-3.710)	HE140B	3.710	125.103
C5-V1 (0.000-3.085)	HE140B	3.085	104.028
Subtotaal:	HE140B	27.257	919.115
C16-V1 (0.000-3.975)	HE160B	3.975	169.285
C18-V1 (0.000-3.975)	HE160B	3.975	169.285
C19-V1 (0.000-1.150)	HE160B	1.150	48.975
C20-V1 (0.000-3.975)	HE160B	3.975	169.285
C21-V1 (0.000-3.410)	HE160B	3.410	145.223
C22-V1 (0.000-3.410)	HE160B	3.410	145.223
C23-V1 (0.000-3.410)	HE160B	3.410	145.223
C2-V1 (0.000-3.975)	HE160B	3.975	169.285
C3-V1 (0.000-3.410)	HE160B	3.410	145.223
Subtotaal:	HE160B	30.690	1,307.006
C24-V1 (0.000-3.775)	HE180A	3.775	134.097
C25-V1 (0.000-0.545)	HE180A	0.545	19.360
C26-V1 (0.000-1.430)	HE180A	1.430	50.797



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

C27-V1 (0.000-0.995)	HE180A	0.995	35.345
C28-V1 (0.000-4.120)	HE180A	4.120	146.352
C34-V1 (0.000-4.320)	HE180A	4.320	153.457
C35-V1 (0.000-0.570)	HE180A	0.570	20.248
C36-V1 (0.000-0.860)	HE180A	0.860	30.549
C37-V1 (0.000-0.995)	HE180A	0.995	35.345
C38-V1 (0.000-4.120)	HE180A	4.120	146.352
C41-V1 (0.000-4.320)	HE180A	4.320	153.457
C42-V1 (0.000-0.570)	HE180A	0.570	20.248
C43-V1 (0.000-1.855)	HE180A	1.855	65.894
C44-V1 (0.000-3.520)	HE180A	3.520	125.039
Subtotaal:	HE180A	31.995	1,136.538
C15-V1 (0.000-2.650)	HE180B	2.650	135.739
C17-V1 (0.000-2.650)	HE180B	2.650	135.739
C1-V1 (0.000-2.650)	HE180B	2.650	135.739
Subtotaal:	HE180B	7.950	407.218
C10-V1 (0.000-0.400)	HE200A	0.400	16.903
C11-V1 (0.000-3.375)	HE200A	3.375	142.619
C12-V1 (0.000-1.975)	HE200A	1.975	83.459
C13-V1 (0.000-0.995)	HE200A	0.995	42.046
C14-V1 (0.000-4.120)	HE200A	4.120	174.101
Subtotaal:	HE200A	10.865	459.128
C6-V1 (0.000-3.375)	HE220A	3.375	170.464
C7-V1 (0.000-1.975)	HE220A	1.975	99.753
C8-V1 (0.000-0.995)	HE220A	0.995	50.255
C9-V1 (0.000-4.120)	HE220A	4.120	208.092
Subtotaal:	HE220A	10.465	528.565
Totaal:		119.222	4,757.569
		m	kg



8.1.2 Oplegging 1

SV18 (NEN-EN 1993-1-8:2009/NB:2011)

ALGEMEEN

Verbindings type	Voetplaatverbinding	(b = 180, h = 180, Ft = 14.0, Wt = 8.5)
Kolom	HE180B	
Materiaal	S235	
Raamwerk	Statisch bepaald	
Horizontale stijfheid	Geschoord raamwerk	
Milieu	Niet corrosief	
Laskwaliteit	S235	

VERBINDINGSONDERDELEN

	Breedte	Hoogte	Dikte	Las (h)
	mm	mm	mm	mm
Plaat	220	220	15.0	6

ANKERS: M16

Sterkte	5.6 (Gerold)
Afstand	100 mm
d;g;nom	18 mm
	Afstand Totale afstand
Randafstand boutrij 1	110 110
	mm mm

FUNDERING

Hoogte	350.00 mm	voegdikte	30.00 mm
d1	280.00 mm	b1	280.00 mm
d2	280.00 mm	b2	280.00 mm
d	280.00 mm	b	280.00 mm
Materiaal	C30/37		

BELASTINGEN

Fu.C.1; Knoop K17	N;3;Ed	229.49 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.24
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

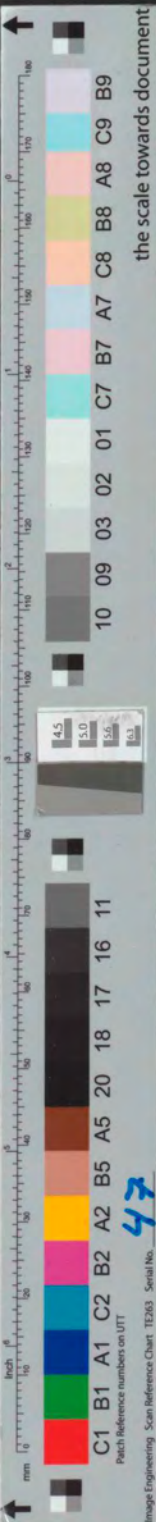
Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
89.86	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

BELASTINGEN

Fu.C.2; Knoop K17	N;3;Ed	227.96 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.30
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
89.55	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN



BELASTINGEN

Fu.C.3; Knoop K17 N;3;Ed 229.24 kN M;3;Ed 0.00 kNm V;3;Ed 1.07
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle F;v;Rd
 bouten) 89.81 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.4; Knoop K17 N;3;Ed 229.78 kN M;3;Ed 0.00 kNm V;3;Ed 2.47
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle F;v;Rd
 bouten) 89.92 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.5; Knoop K17 N;3;Ed 231.65 kN M;3;Ed 0.00 kNm V;3;Ed 1.29
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle F;v;Rd
 bouten) 90.29 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.6; Knoop K17 N;3;Ed 232.92 kN M;3;Ed 0.00 kNm V;3;Ed 1.06
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle F;v;Rd
 bouten) 90.54 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.7; Knoop K17 N;3;Ed 233.46 kN M;3;Ed 0.00 kNm V;3;Ed 2.46
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15



mm	172.80			kN		
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
90.65	kN					
Trekcapaciteit (B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.8; Knoop K17	N;3;Ed	231.40 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.12
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd			Kopplaat; t = 15		
mm	172.80			kN		
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
90.24	kN					
Trekcapaciteit (B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.9; Knoop K17	N;3;Ed	231.94 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.52
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd			Kopplaat; t = 15		
mm	172.80			kN		
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
90.35	kN					
Trekcapaciteit (B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.10; Knoop K17	N;3;Ed	233.21 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.28
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

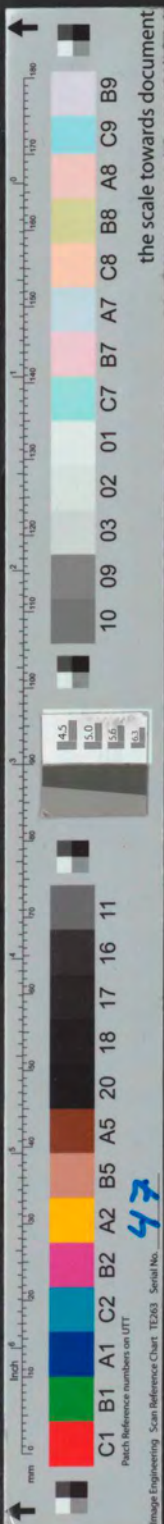
Stuikweerstand	F;b;Rd			Kopplaat; t = 15		
mm	172.80			kN		
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
90.60	kN					
Trekcapaciteit (B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.11; Knoop K17	N;3;Ed	188.79 kN	M;3;Ed	0.00 kNm	V;3;Ed	7.88
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd			Kopplaat; t = 15		
mm	172.80			kN		
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
81.72	kN					
Trekcapaciteit (B;p;Rd)	min(F;t;Rd,					kN
	56.52					



BELASTINGEN

Fu.C.12; Knoop K17 N;3;Ed 163.99 kN M;3;Ed 0.00 kNm V;3;Ed 10.42 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 76.76 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.13; Knoop K17 N;3;Ed 187.47 kN M;3;Ed 0.00 kNm V;3;Ed 1.35 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 81.45 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.14; Knoop K17 N;3;Ed 201.10 kN M;3;Ed 0.00 kNm V;3;Ed 1.26 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 84.18 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.15; Knoop K17 N;3;Ed 204.78 kN M;3;Ed 0.00 kNm V;3;Ed 1.25 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 84.92 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.16; Knoop K17 N;3;Ed 203.26 kN M;3;Ed 0.00 kNm V;3;Ed 1.31 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4



Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN		
84.61			
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52		kN

BELASTINGEN

Fu.C.17; Knoop K17 kN	N;3;Ed	204.53 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.07
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN		
84.87			
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52		kN

BELASTINGEN

Fu.C.18; Knoop K17 kN	N;3;Ed	205.07 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.48
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN		
84.97			
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52		kN

BELASTINGEN

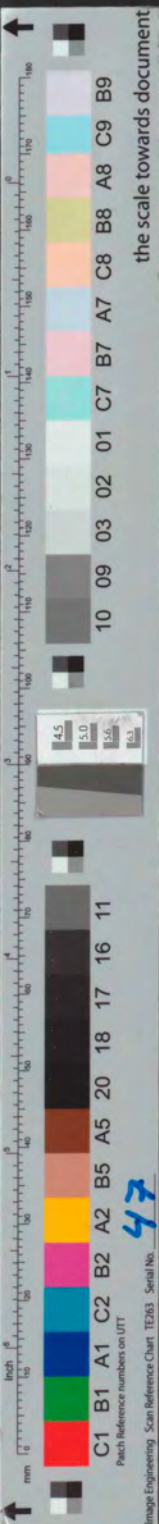
Bi.C.1; Knoop K17 kN	N;3;Ed	126.67 kN	M;3;Ed	0.00 kNm	V;3;Ed	0.90
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN		
69.29			
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52		kN

OVERZICHT CONTROLES PER BELASTINGSGEVAL

Fu.C.1; Knoop
K17
Ok
Fu.C.2; Knoop
K17
Ok
Fu.C.3; Knoop
K17
Ok
Fu.C.4; Knoop
K17

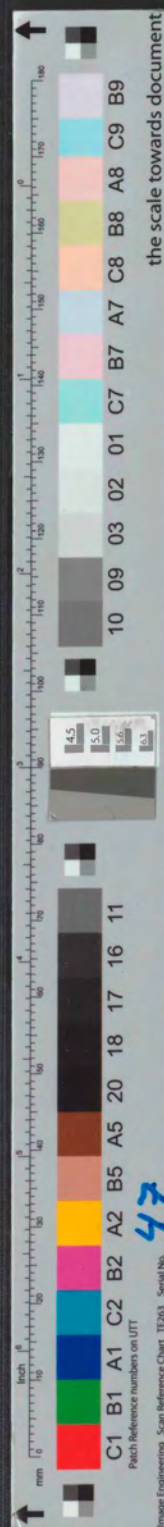


Ok
Fu.C.5; Knoop
K17
Ok
Fu.C.6; Knoop
K17
Ok
Fu.C.7; Knoop
K17
Ok
Fu.C.8; Knoop
K17
Ok
Fu.C.9; Knoop
K17
Ok
Fu.C.10; Knoop
K17
Ok
Fu.C.11; Knoop
K17
Ok
Fu.C.12; Knoop
K17
Ok
Fu.C.13; Knoop
K17
Ok
Fu.C.14; Knoop
K17
Ok
Fu.C.15; Knoop
K17
Ok
Fu.C.16; Knoop
K17
Ok
Fu.C.17; Knoop
K17
Ok
Fu.C.18; Knoop
K17
Ok
Bi.C.1; Knoop
K17
Ok

SV18 (NEN-EN 1993-1-8:2009/NB:2011)

ALGEMEEN

Verbindings type	Voetplaatverbinding	
Kolom	HE180B	(b = 180, h = 180, Ft = 14.0, Wt = 8.5)
Materiaal	S235	
Raamwerk	Statisch bepaald	
Horizontale stijfheid	Geschoord raamwerk	
Milieu	Niet corrosief	
Laskwaliteit	S235	



VERBINDINGSONDERDELEN

	Breedte	Hoogte	Dikte	Las (h)
Plaat	220 mm	220 mm	15.0 mm	6 mm

ANKERS: M16

Sterkte	5.6 (Gerold)		
Afstand	100 mm		
d;g;nom	18 mm		
	Afstand	Totale afstand	
Randafstand boutrij 1	110 mm	110 mm	

FUNDERING

Hoogte	350.00 mm	voegdikte	30.00 mm
d1	280.00 mm	b1	280.00 mm
d2	280.00 mm	b2	280.00 mm
d	280.00 mm	b	280.00 mm
Materiaal	C30/37		

BELASTINGEN

Fu.C.1; Knoop K17 kN	N;3;Ed	229.49 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.24
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	89.86 kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	56.52	kN

BELASTINGEN

Fu.C.2; Knoop K17 kN	N;3;Ed	227.96 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.30
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	89.55 kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	56.52	kN

BELASTINGEN

Fu.C.3; Knoop K17 kN	N;3;Ed	229.24 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.07
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	89.81 kN	
Trekcapaciteit	min(F;t;Rd,		



B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.4; Knoop K17 N;3;Ed 229.78 kN M;3;Ed 0.00 kNm V;3;Ed 2.47 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 89.92 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.5; Knoop K17 N;3;Ed 231.65 kN M;3;Ed 0.00 kNm V;3;Ed 1.29 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 90.29 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.6; Knoop K17 N;3;Ed 232.92 kN M;3;Ed 0.00 kNm V;3;Ed 1.06 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 90.54 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.7; Knoop K17 N;3;Ed 233.46 kN M;3;Ed 0.00 kNm V;3;Ed 2.46 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 90.65 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.8; Knoop K17 N;3;Ed 231.40 kN M;3;Ed 0.00 kNm V;3;Ed 1.12 kN



BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
90.24	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

BELASTINGEN

Fu.C.9; Knoop K17	N;3;Ed	231.94 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.52
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
90.35	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

BELASTINGEN

Fu.C.10; Knoop K17	N;3;Ed	233.21 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.28
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
90.60	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

BELASTINGEN

Fu.C.11; Knoop K17	N;3;Ed	188.79 kN	M;3;Ed	0.00 kNm	V;3;Ed	7.88
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

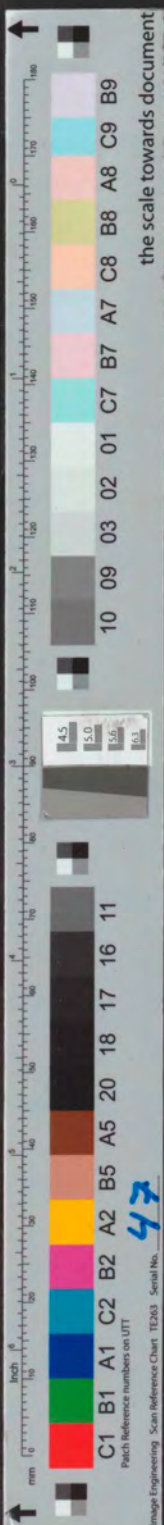
Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
81.72	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

BELASTINGEN

Fu.C.12; Knoop K17	N;3;Ed	163.99 kN	M;3;Ed	0.00 kNm	V;3;Ed	10.42
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
76.76	kN	
Trekcapaciteit	min(F;t;Rd,	



B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.13; Knoop K17 N;3;Ed 187.47 kN M;3;Ed 0.00 kNm V;3;Ed 1.35 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 81.45 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.14; Knoop K17 N;3;Ed 201.10 kN M;3;Ed 0.00 kNm V;3;Ed 1.26 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 84.18 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.15; Knoop K17 N;3;Ed 204.78 kN M;3;Ed 0.00 kNm V;3;Ed 1.25 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 84.92 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

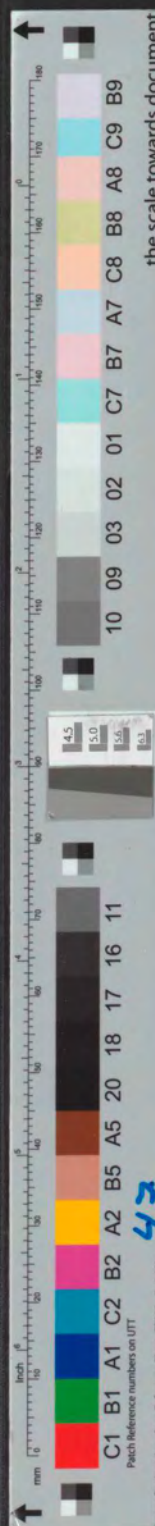
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 84.61 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.17; Knoop K17 N;3;Ed 204.53 kN M;3;Ed 0.00 kNm V;3;Ed 1.07 kN



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Image Engineering Scan Reference Chart TE263 Serial No. 47

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
84.87	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

BELASTINGEN

Fu.C.18; Knoop K17	N;3;Ed	205.07 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.48
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
84.97	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

BELASTINGEN

Bl.C.1; Knoop K17	N;3;Ed	126.67 kN	M;3;Ed	0.00 kNm	V;3;Ed	0.90
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
69.29	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

OVERZICHT CONTROLES PER BELASTINGSGEVAL

Fu.C.1; Knoop
K17
Ok

Fu.C.2; Knoop
K17
Ok

Fu.C.3; Knoop
K17
Ok

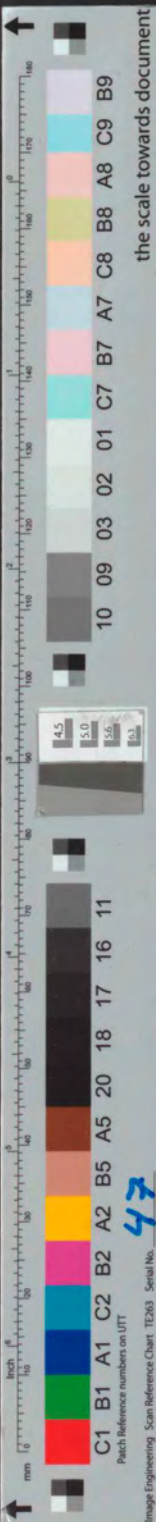
Fu.C.4; Knoop
K17
Ok

Fu.C.5; Knoop
K17
Ok

Fu.C.6; Knoop
K17
Ok

Fu.C.7; Knoop
K17
Ok

Fu.C.8; Knoop



K17
 Ok
 Fu.C.9; Knoop
 K17
 Ok
 Fu.C.10; Knoop
 K17
 Ok
 Fu.C.11; Knoop
 K17
 Ok
 Fu.C.12; Knoop
 K17
 Ok
 Fu.C.13; Knoop
 K17
 Ok
 Fu.C.14; Knoop
 K17
 Ok
 Fu.C.15; Knoop
 K17
 Ok
 Fu.C.16; Knoop
 K17
 Ok
 Fu.C.17; Knoop
 K17
 Ok
 Fu.C.18; Knoop
 K17
 Ok
 Bi.C.1; Knoop
 K17
 Ok

SV18 (NEN-EN 1993-1-8:2009/NB:2011)

ALGEMEEN

Verbindings type	Voetplaatverbinding	
Kolom	HE180B	(b = 180, h = 180, Ft = 14.0, Wt = 8.5)
Materiaal	S235	
Raamwerk	Statisch bepaald	
Horizontale stijfheid	Geschoord raamwerk	
Milieu	Niet corrosief	
Laskwaliteit	S235	

VERBINDINGSONDERDELEN

	Breedte	Hoogte	Dikte	Las (h)
	mm	mm	mm	mm
Plaat	220	220	15.0	6

ANKERS: M16

Sterkte	5.6 (Gerold)	
Afstand	100 mm	
d;g;nom	18 mm	
	Afstand	Totale afstand
Randafstand boutrij 1	110	110



47

mm mm

TUSSENAFSTANDEN VOLGENS NEN-EN 1993-1-8 TABEL 3.3

	Evenwijdig aan kracht		Loodrecht op kracht	
	minimaal	maximaal	minimaal	maximaal
Randafstand	22	Ongelimiteerd	22	Ongelimiteerd
Tussenafstand	40	200	43	200
	mm	mm	mm	mm

FUNDERING

Hoogte	350.00 mm	voegdikte	30.00 mm
d1	280.00 mm	b1	280.00 mm
d2	280.00 mm	b2	280.00 mm
d	280.00 mm	b	280.00 mm
Materiaal	C30/37		

BELASTINGEN

Fu.C.1; Knoop K17 kN	N;3;Ed	229.49 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.24
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd		
89.86	kN		
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	56.52	kN

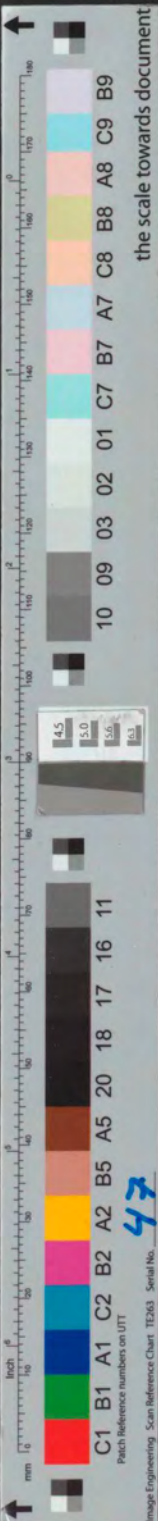
LASSEN

Lijf

Laslengte					
304.00					mm
Schuifspanning parallel met de as van de las				Tau;2 N/mm ²	
0.68					
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed			1.18	N/mm ²
Reken capaciteit las Gamma;M2)				f;u / (Beta;w *	
360.00					N/mm ²
Toegestane trekspanning Gamma;M2)				0.9 * f;u /	
0.00					N/mm ²

Flens

Laslengte					
321.50					mm
Schuifspanning loodrecht op de as van de las				Tau;1 N/mm ²	
-42.06					
Axiale spanning loodrecht op de keel				Sigma;1 N/mm ²	
-42.06					
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed			84.12	N/mm ²
Reken capaciteit las Gamma;M2)				f;u / (Beta;w *	
360.00					N/mm ²
Toegestane trekspanning Gamma;M2)				0.9 * f;u /	
259.20					N/mm ²



STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie				Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00	-
Rekenwaarde druksterkte van de fundering beton	20.00		f;cd N/mm ²	
Geconcentreerde weerstandskracht	568.00		F;Rdu kN	1
Rekenwaarde voor de druksterkte	13.33		f;jd N/mm ²	
Toegevoegde stuik breedte	36.36		c mm	
	206.38		F;c;Rd1 kN	
			F;c;Rd2 85.86	kN
	206.38		F;c;Rd3 kN	
	498.62		N;j;Rd kN	
Betondrukzone	4.74		Sigma;s;d N/mm ²	
Minimale voetplaatdikte	5.00		t;min mm	

WRIJVINGSWEERSTAND

C;fd	0.20	-
F;f;Rd	45.90	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.18 /	
360.00		0.00	Ok
Lassen flens		84.12 /	
360.00		0.23	Ok
	N3 / N;j;Rd <= 1	229.49 /	
498.62	0.46	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.74 /	
13.33	0.36	Ok	
	V3 / F;v;Rd <= 1	1.24 /	
89.86	0.01	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	

BELASTINGEN



Fu.C.2; Knoop K17 N;3;Ed 227.96 kN M;3;Ed 0.00 kNm V;3;Ed 1.30
 kN

BOUWGRENSEWERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN		
89.55			
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52		kN

LASSEN

Lijf

Laslengte			mm
304.00			
Schuifspanning parallel met de as van de las		Tau;2 N/mm ²	
0.71			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	1.24	N/mm ²
Reken capaciteit las Gamma;M2)		f;u / (Beta;w *	N/mm ²
360.00			
Toegestane trekspanning Gamma;M2		0.9 * f;u /	N/mm ²
0.00			

Flens

Laslengte			mm
321.50			
Schuifspanning loodrecht op de as van de las		Tau;1 N/mm ²	
-41.78			
Axiale spanning loodrecht op de keel		Sigma;1 N/mm ²	
-41.78			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	83.56	N/mm ²
Reken capaciteit las Gamma;M2)		f;u / (Beta;w *	N/mm ²
360.00			
Toegestane trekspanning Gamma;M2		0.9 * f;u /	N/mm ²
259.20			

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen	
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm ²	
20.00			
Geconcentreerde weerstandskracht		F;Rdu kN	1
568.00			
Rekenwaarde voor de			



druksterkte	f;jd	
13.33	N/mm ²	
Toegevoegde stuik		
breedte	c	
36.36	mm	
	F;c;Rd1	
206.38	kN	
	F;c;Rd2	
	85.86	kN
	F;c;Rd3	
206.38	kN	
	N;j;Rd	
498.62	kN	
Betondrukzone	Sigma;s;d	
4.71	N/mm ²	
Minimale		
voetplaatdikte	t;min	
5.00	mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
45.59	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.24 /	
360.00		0.00	Ok
Lassen flens		83.56 /	
360.00		0.23	Ok
	N3 / N;j;Rd <= 1	227.96 /	
498.62	0.46	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.71 /	
13.33	0.35	Ok	
	V3 / F;v;Rd <= 1	1.30 /	
89.55	0.01	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	

BELASTINGEN

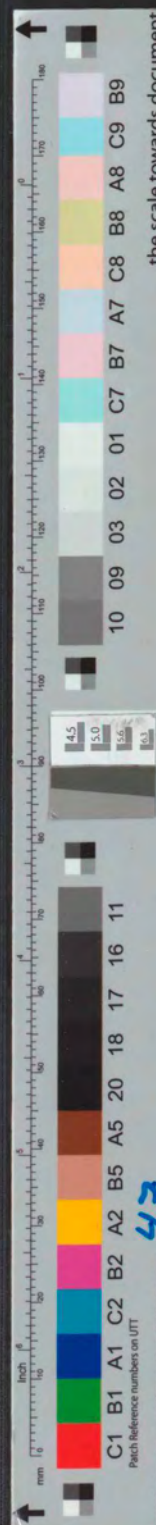
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kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
89.81	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf	
Laslengte	
304.00	mm
Schuifspanning parallel met de as van de	
las	Tau;2



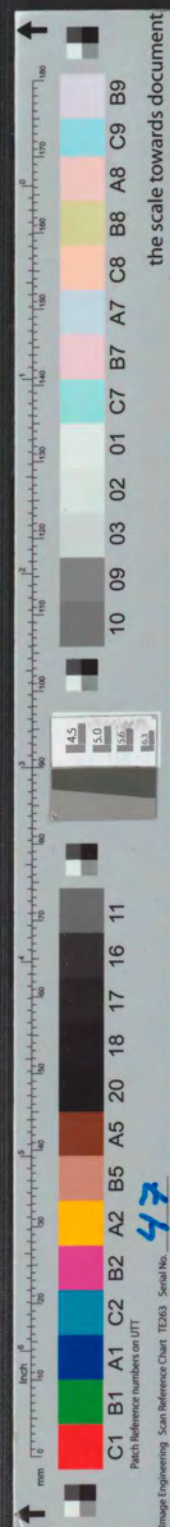
0.59			N/mm ²
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
Reken capaciteit las Gamma;M2)	Sigma;HH,Ed	1.01	N/mm ²
Toegestane trekspanning Gamma;M2		f;u / (Beta;w * 360.00	N/mm ²
		0.9 * f;u /	
		0.00	N/mm ²
Flens			
Laslengte			mm
321.50			
Schuifspanning loodrecht op de as van de las		Tau;1	
-42.02		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-42.02		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
Reken capaciteit las Gamma;M2)	Sigma;HH,Ed	84.03	N/mm ²
Toegestane trekspanning Gamma;M2		f;u / (Beta;w * 360.00	N/mm ²
		0.9 * f;u /	
		259.20	N/mm ²

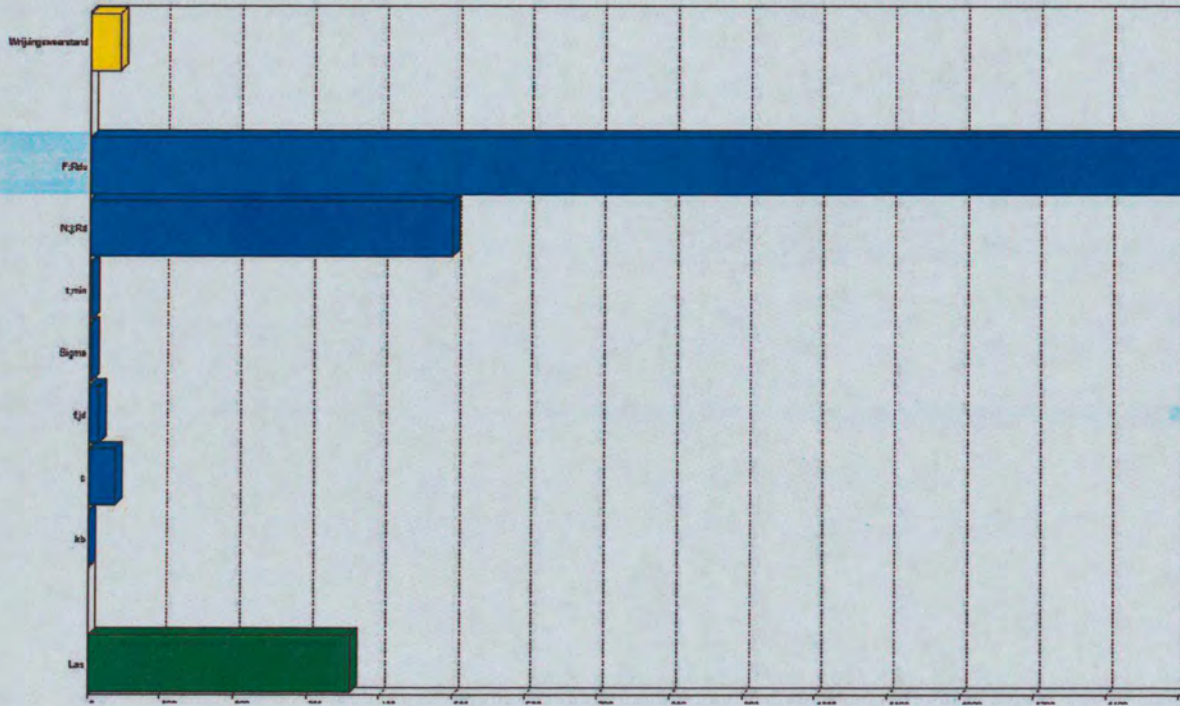
STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

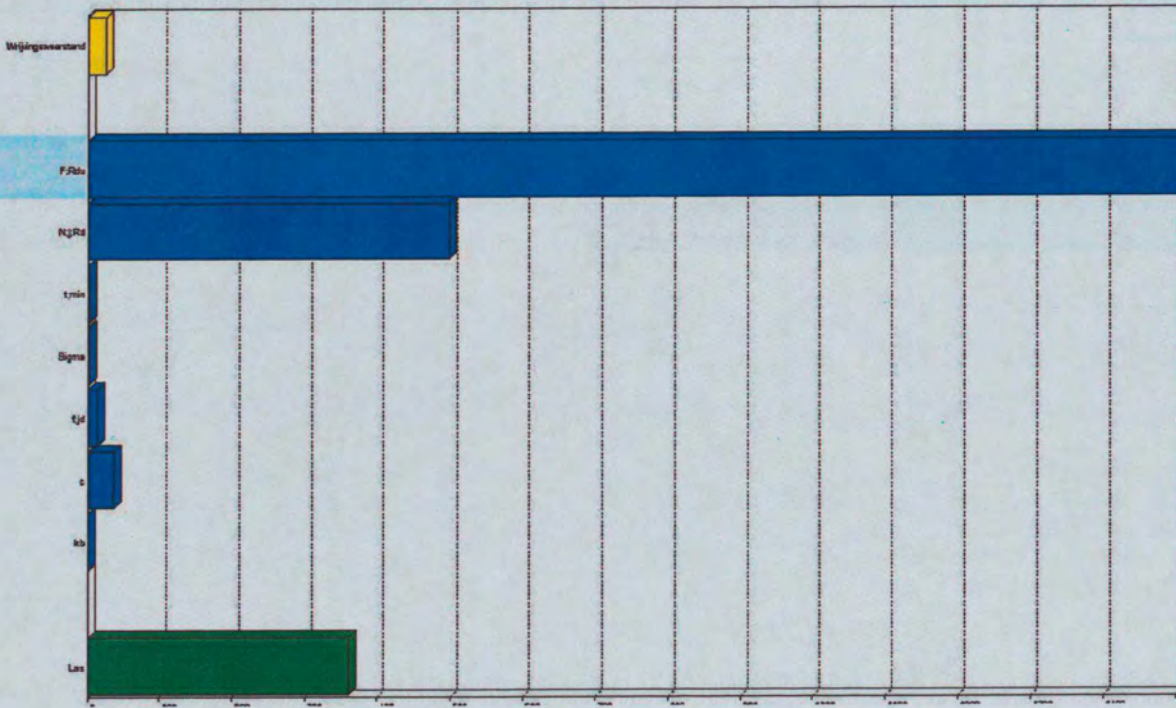
Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd	
20.00		N/mm ²	
Geconcentreerde weerstandskracht		F;Rdu	1
568.00		kN	
Rekenwaarde voor de druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik breedte		c	
36.36		mm	
206.38		F;c;Rd1	
		kN	
		F;c;Rd2	
		85.86	kN
		F;c;Rd3	
206.38		kN	
		N;j;Rd	
		kN	
498.62		Sigma;s;d	
Betondrukzone		N/mm ²	
4.74			
Minimale voetplaatdikte		t;min	
5.00		mm	





AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC19





AFB. SV18 UNITYCHECK GRAFIEK FU.C.1

↑

mm 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000

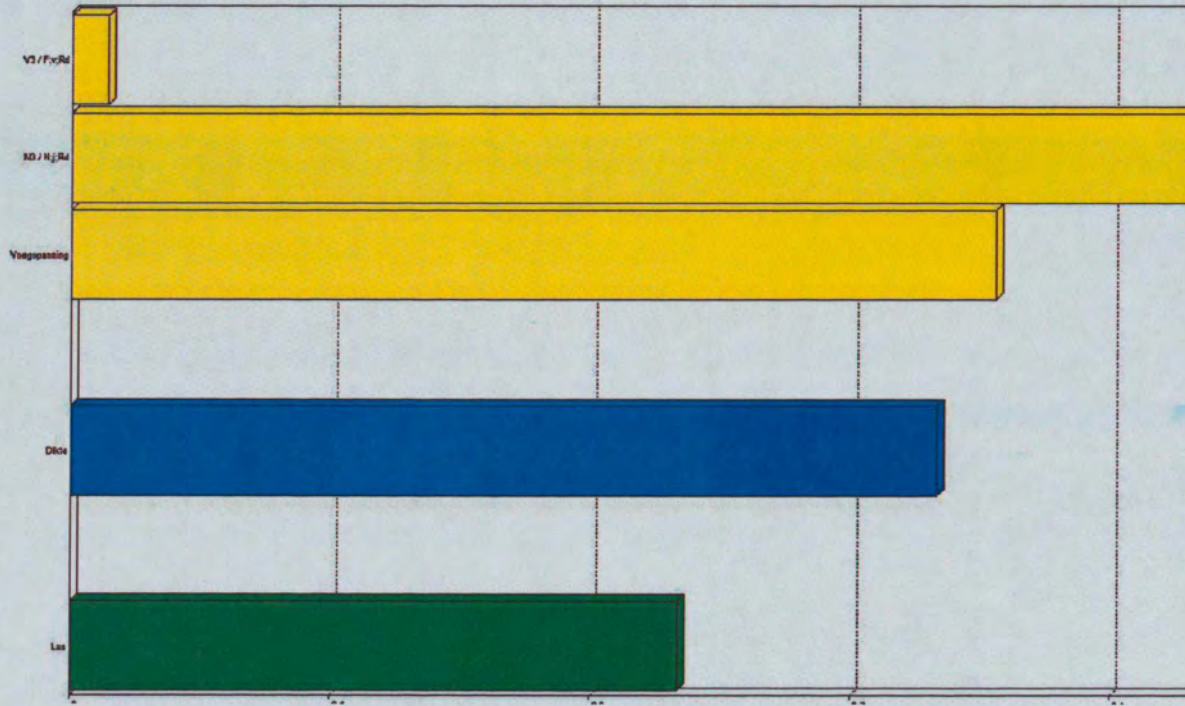
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4.5 5.0 5.5

C1 B1 A1 C2 B2 A2 B5 A5 C20 B20 A20 B18 A18 C17 B17 A17 C16 B16 A16 C11 B11 A11

Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV18 UNITYCHECK GRAFIEK FU.C.2

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180

↑

inch 0 1 2 3 4 5 6 7 8 9 10

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4.5 5.0 5.5 6.0 6.5

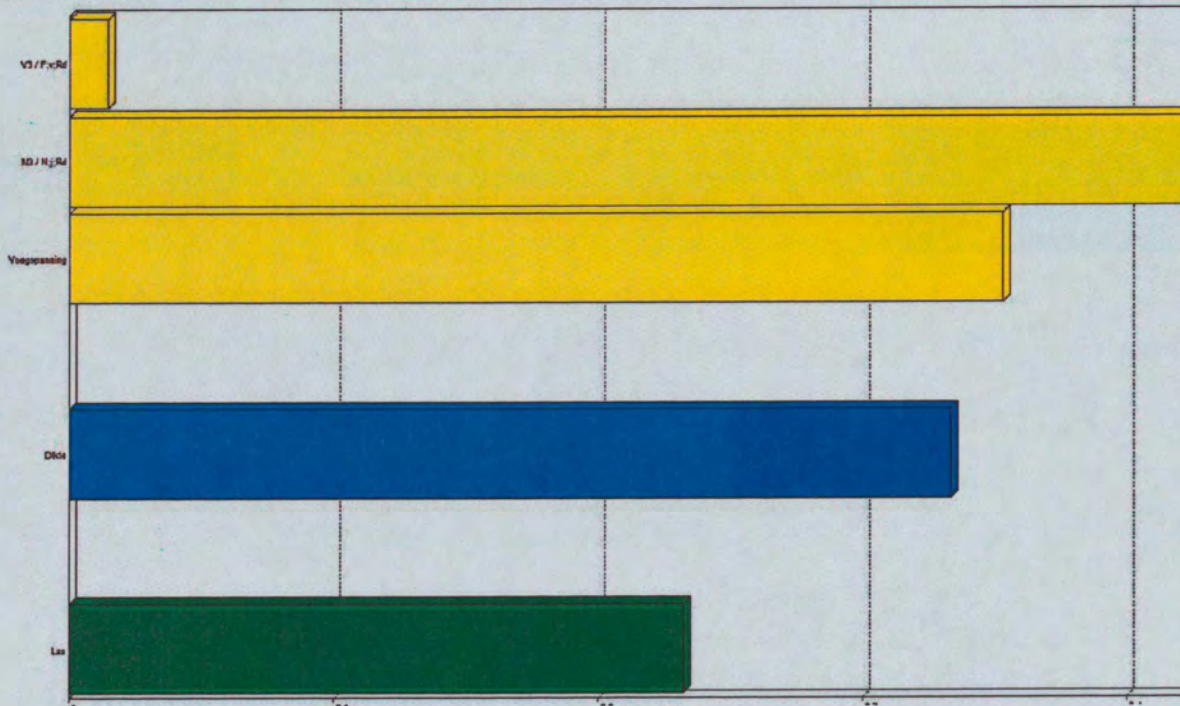
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Patch Reference numbers on UTT

47

Image Engineering Scan Reference Chart TE263 Serial No.

the scale towards document



AFB. SV18 UNITYCHECK GRAFIEK FU.C.3

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↑ Inch 0 1 2 3 4 5 6 7 8 9 10

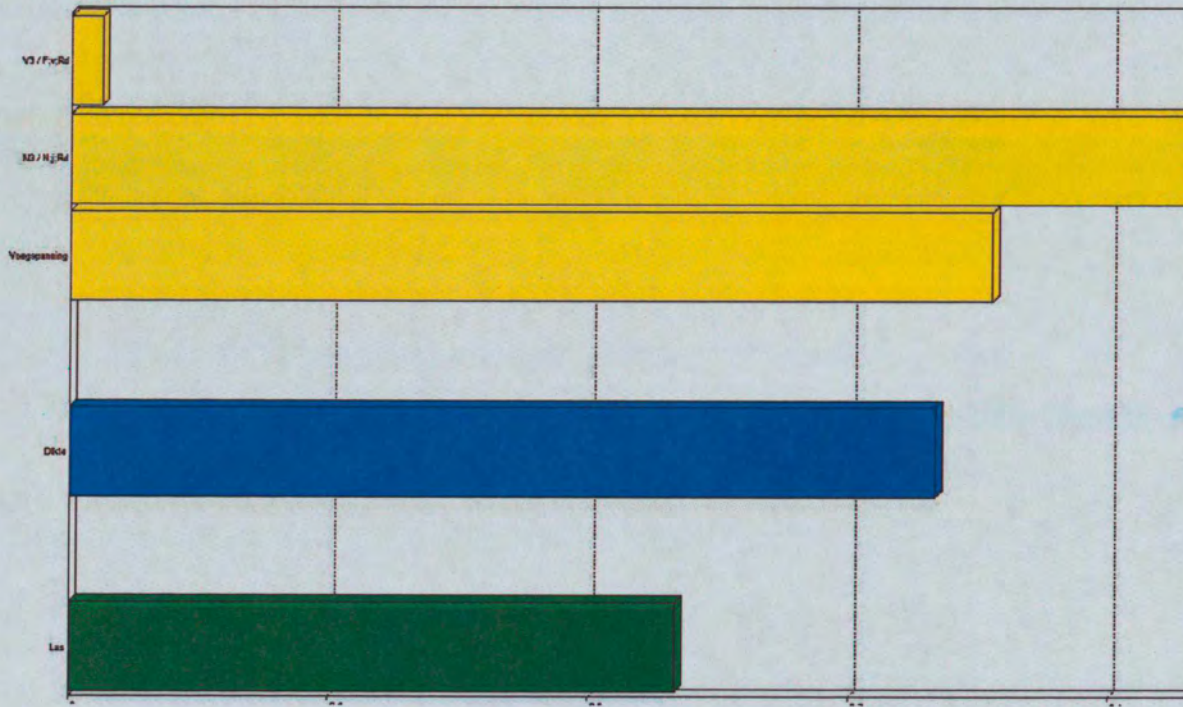
4.5 5.0 5.5 6.0

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV18 UNITYCHECK GRAFIEK FU.C.4

↑

mm 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800 820 840 860 880 900 920 940 960 980 1000

Inch 1 2 3 4 5 6 7 8 9 10 11 12

4.5 5.0 5.5 6.0 6.5

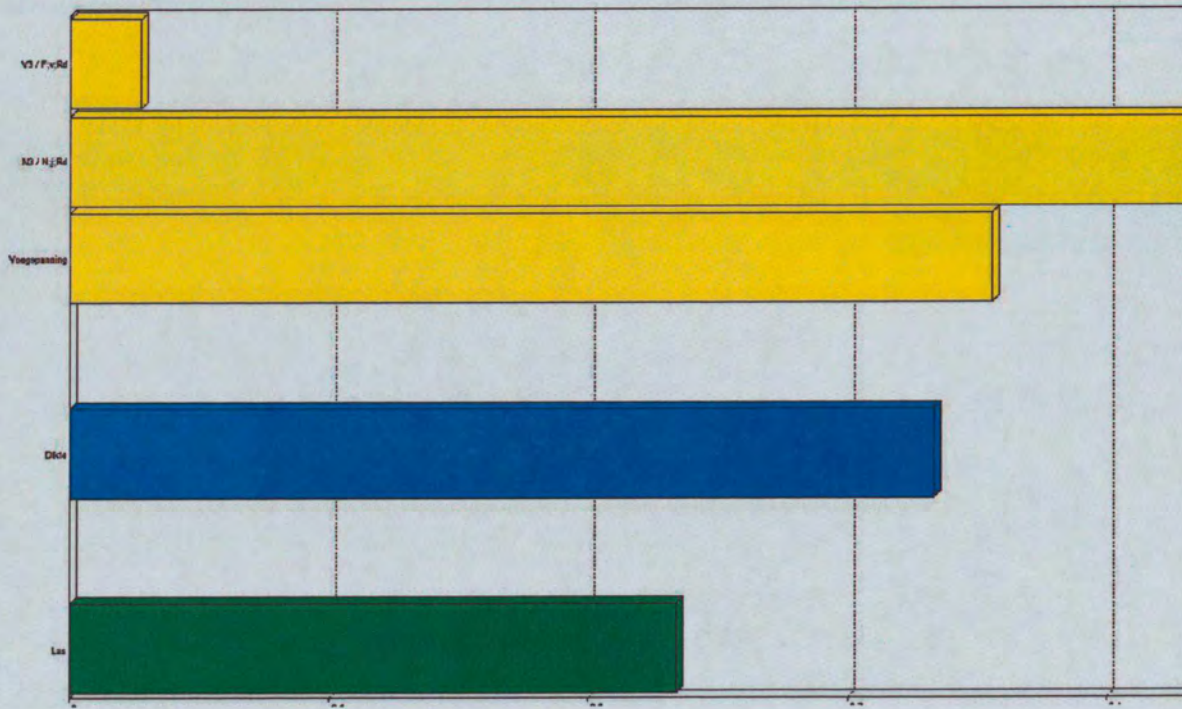
C1 B1 A1 C2 B2 A2 B3 A3 B4 A4 B5 A4 B5 A5 B6 A5 B6 A6 B7 A6 B7 A7 B8 A7 B8 A8 B9 A8 B9

Patch reference numbers on UTT

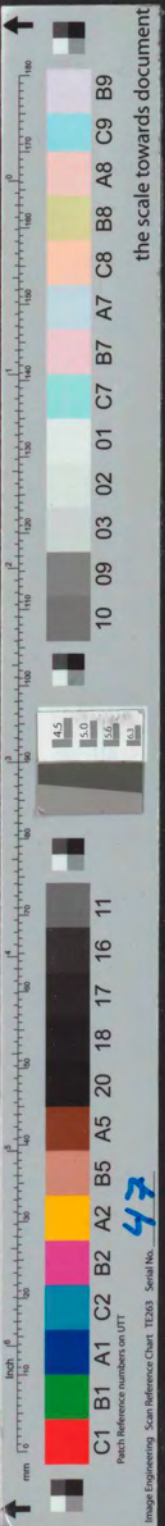
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

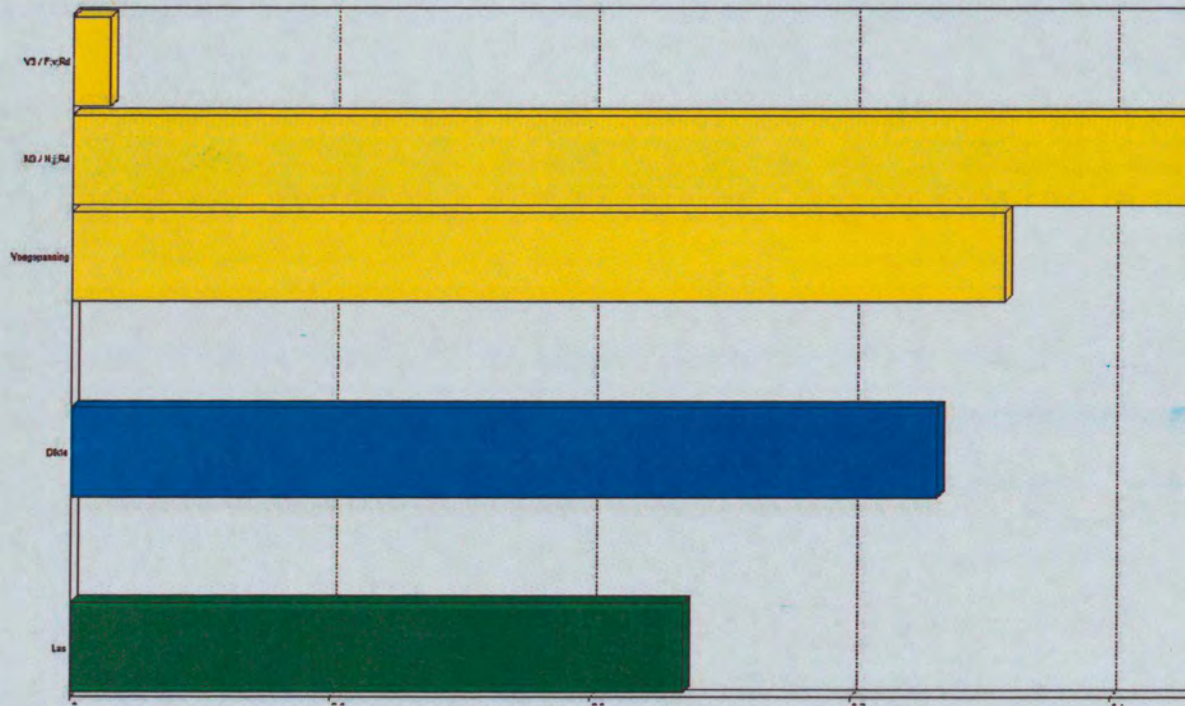
↑ the scale towards document

Image Engineering Scan Reference Chart TEX263 Serial No. 47



AFB. SV18 UNITYCHECK GRAFIEK FU.C.5





AFB. SV18 UNITYCHECK GRAFIEK FU.C.6

↑

mm 10 20 30 40 50 60 70 80 90 100
 Inch 1 2 3 4 5 6 7 8 9 10

C1 B1 A1 C2 B2 A2 C3 B3 A3 C4 B4 A4 C5 B5 A5 C6 B6 A6 C7 B7 A7 C8 B8 A8 C9 B9
 Patch Reference numbers on UTT

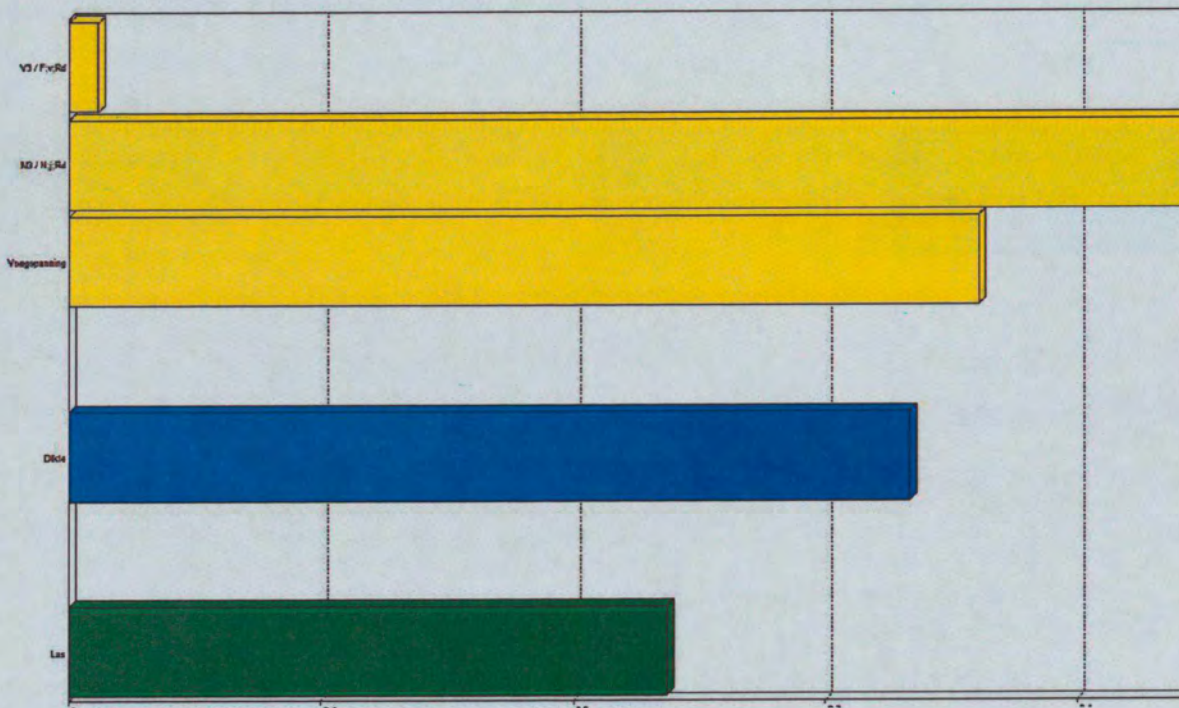
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9
 the scale towards document

4.5 5.0 5.5 6.0

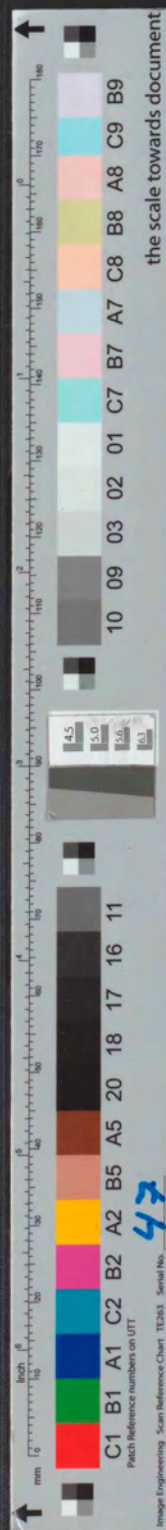
11 16 17 18 20

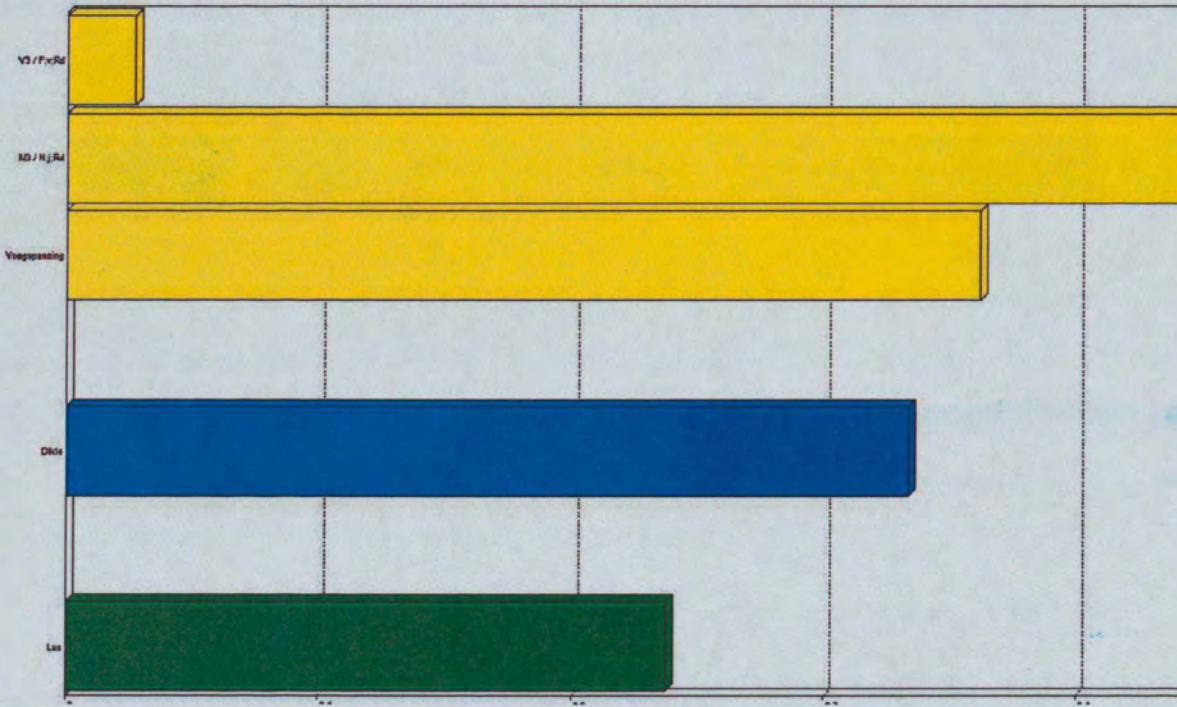
47

Image Engineering Scan Reference Chart TE263 Serial No.

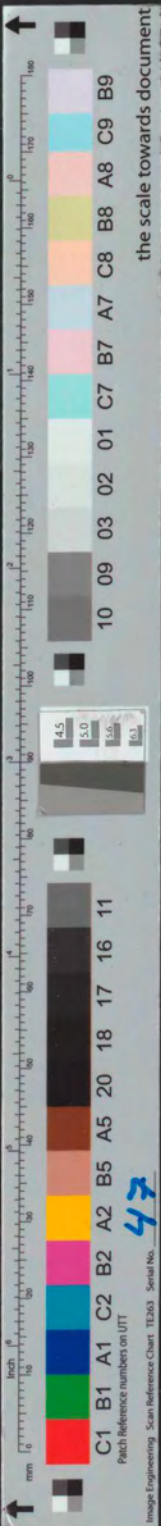


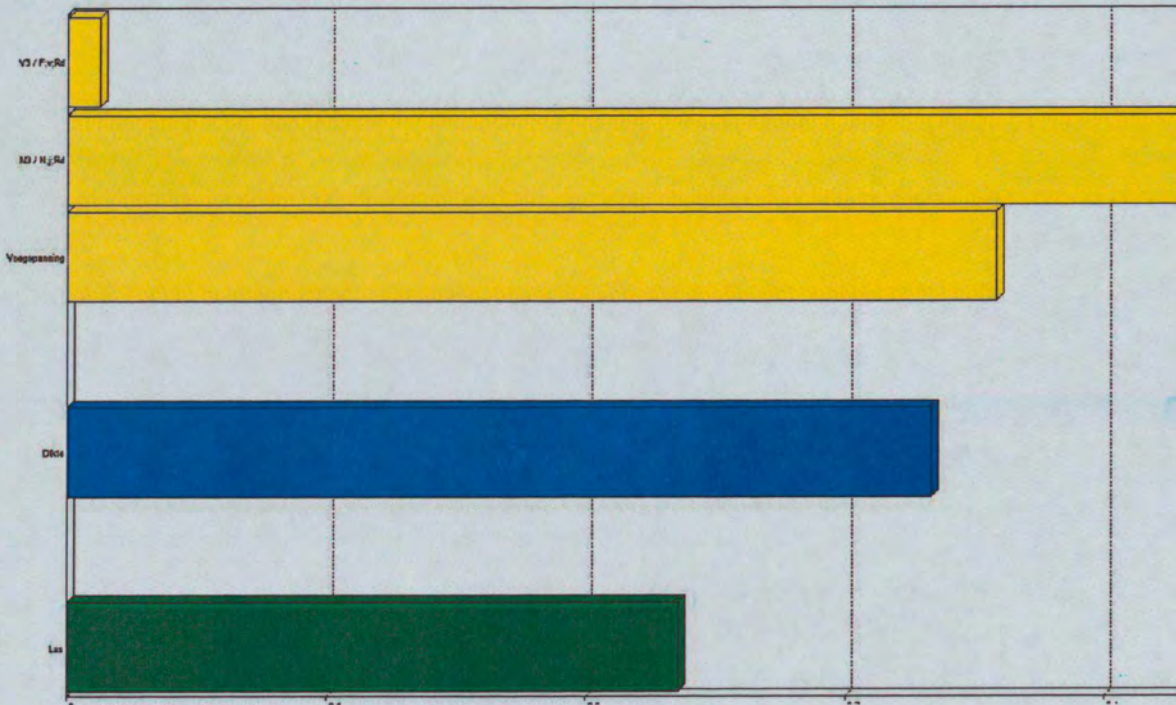
AFB. SV18 UNITYCHECK GRAFIEK FU.C.7





AFB. SV18 UNITYCHECK GRAFIEK FU.C.8





AFB. SV18 UNITYCHECK GRAFIEK FU.C.9

mm 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000

inch 0 1 2 3 4 5 6 7 8 9 10

4.5 5.0 5.5 6.0

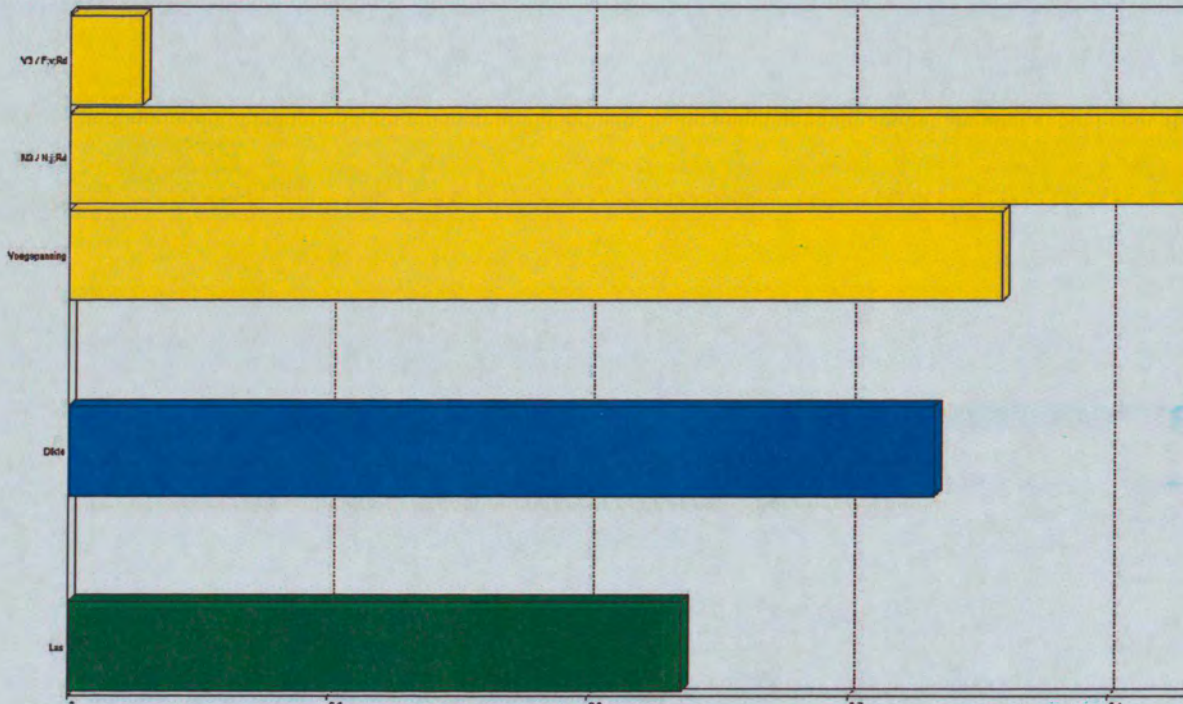
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

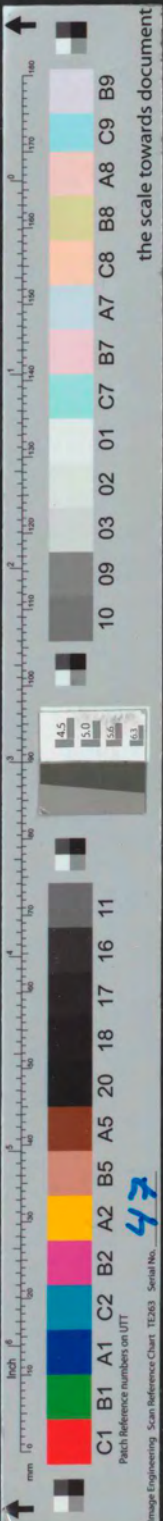
Patch Reference numbers on UTT

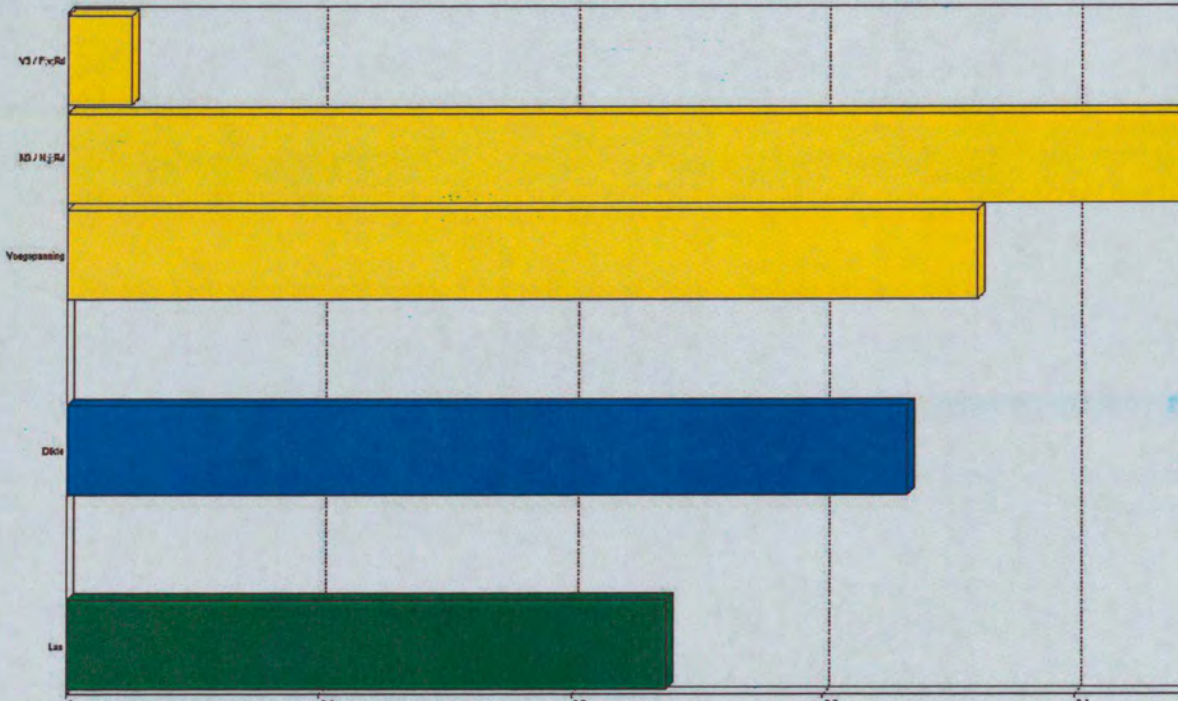
Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document

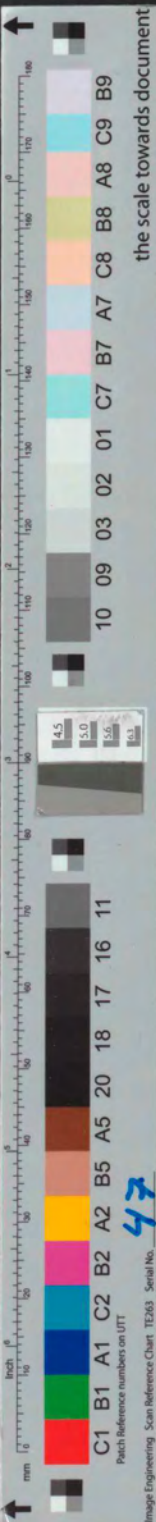


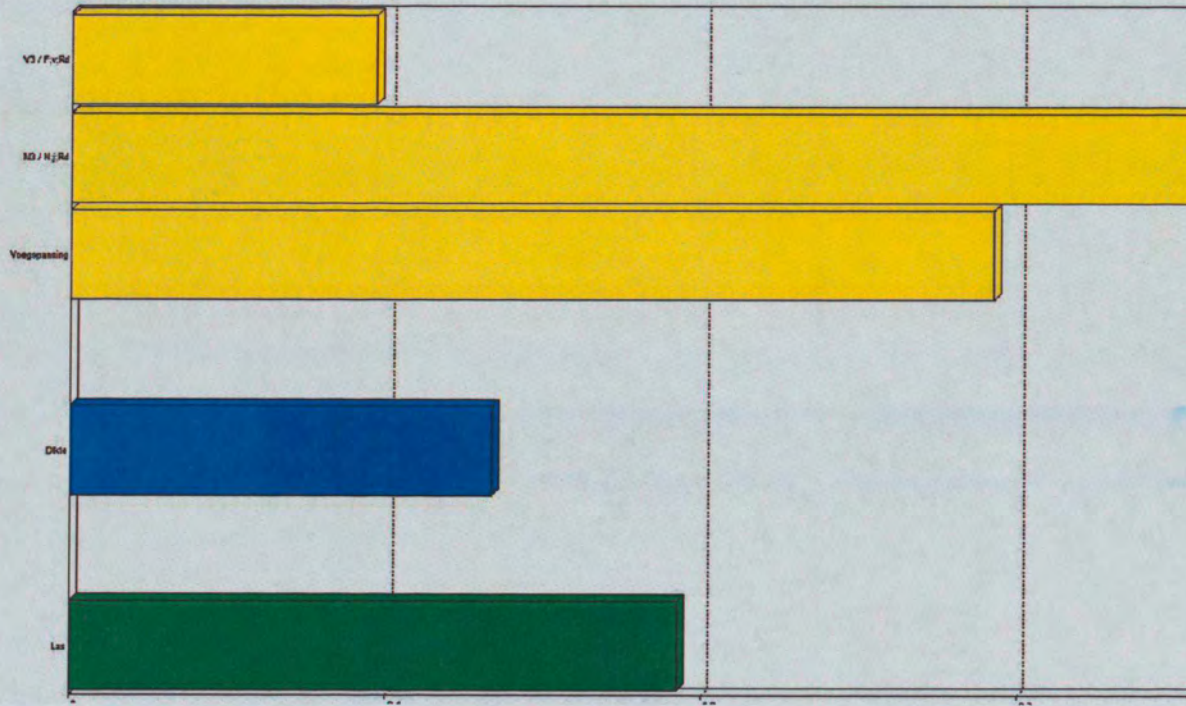
AFB. SV18 UNITYCHECK GRAFIEK FU.C.10



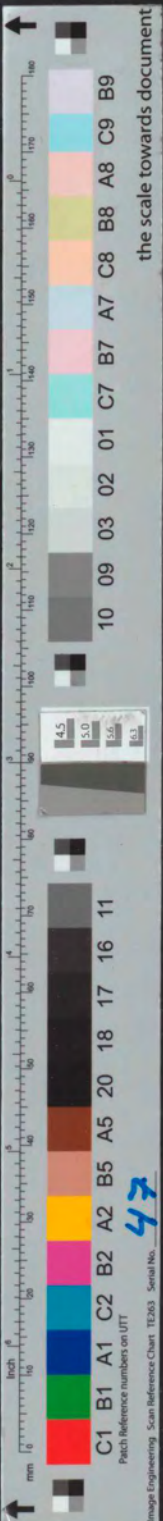


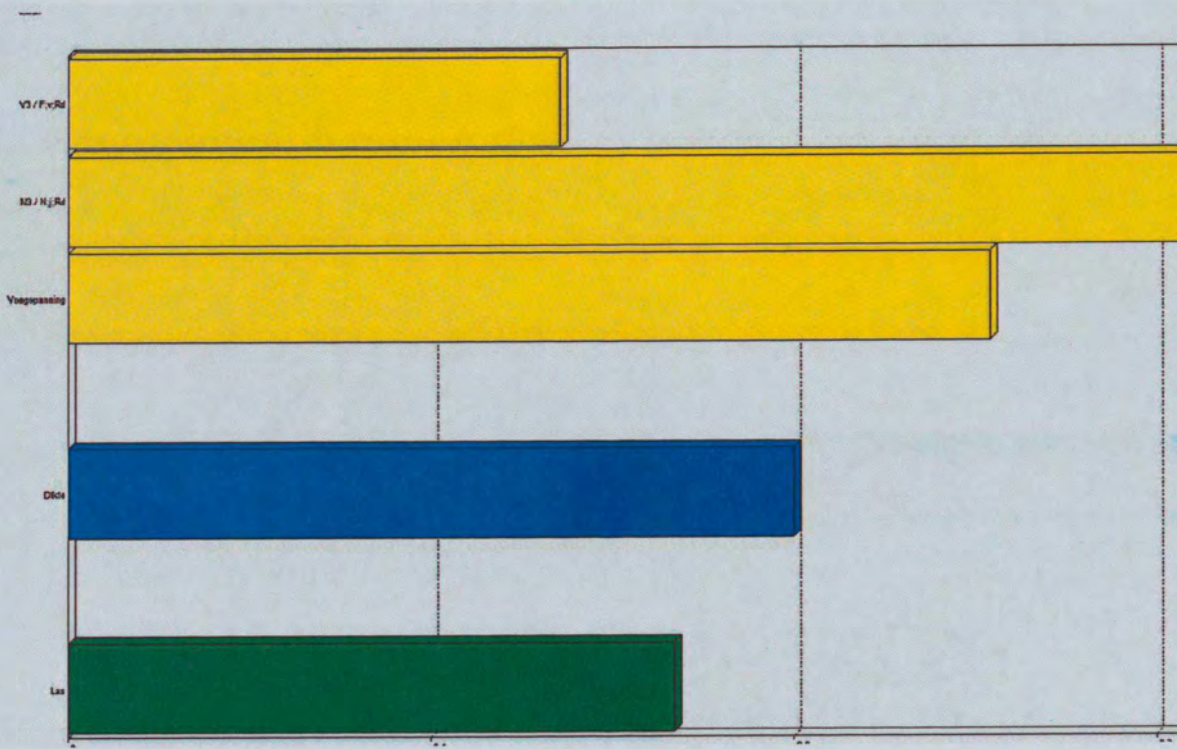
AFB. SV18 UNITYCHECK GRAFIEK FU.C.11





AFB. SV18 UNITYCHECK GRAFIEK FU.C.12





AFB. SV18 UNITYCHECK GRAFIEK FU.C.13

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

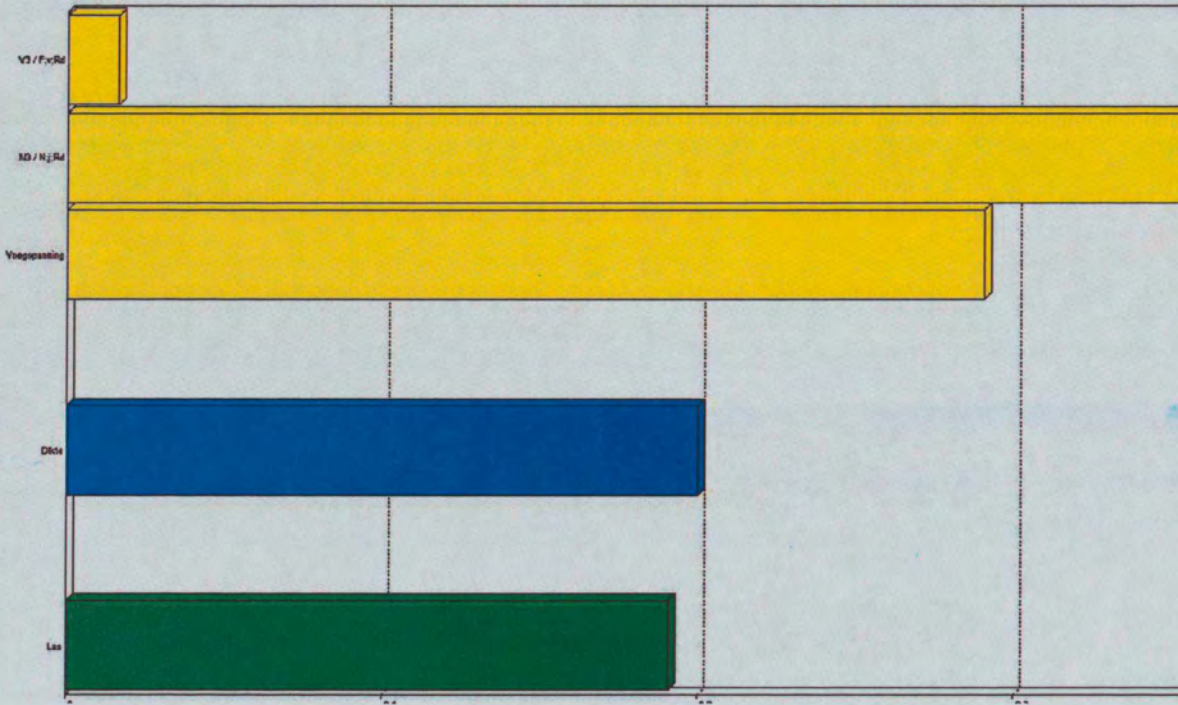
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5

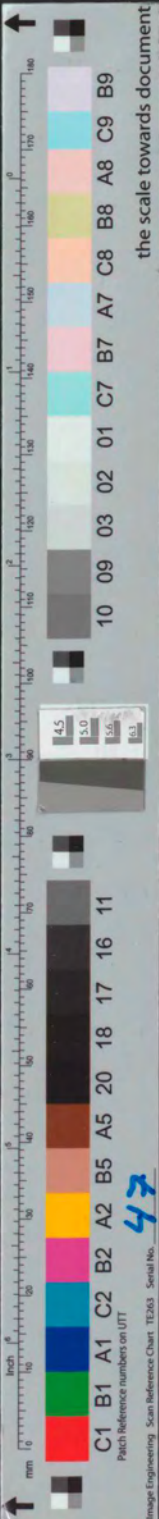
C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

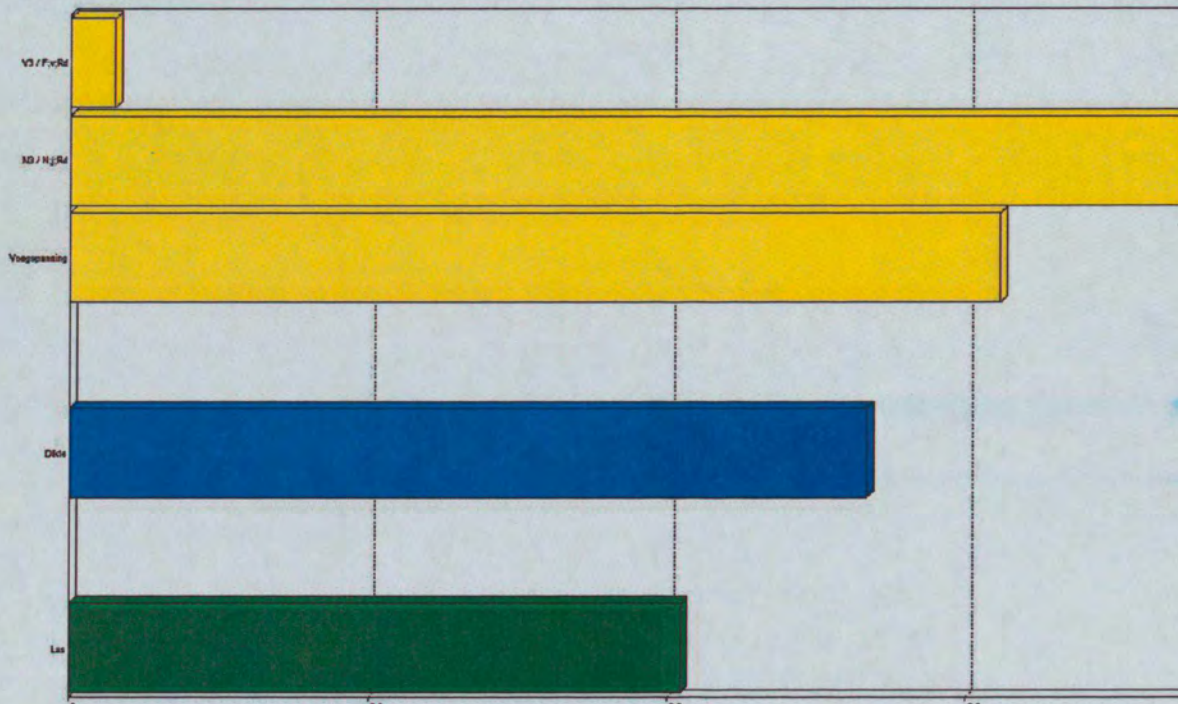
Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TEX3 Serial No. 47

the scale towards document

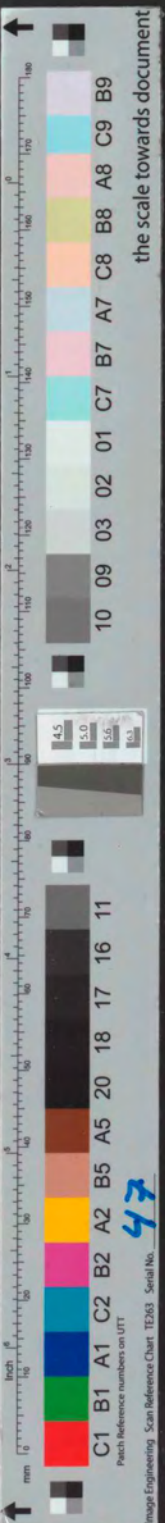


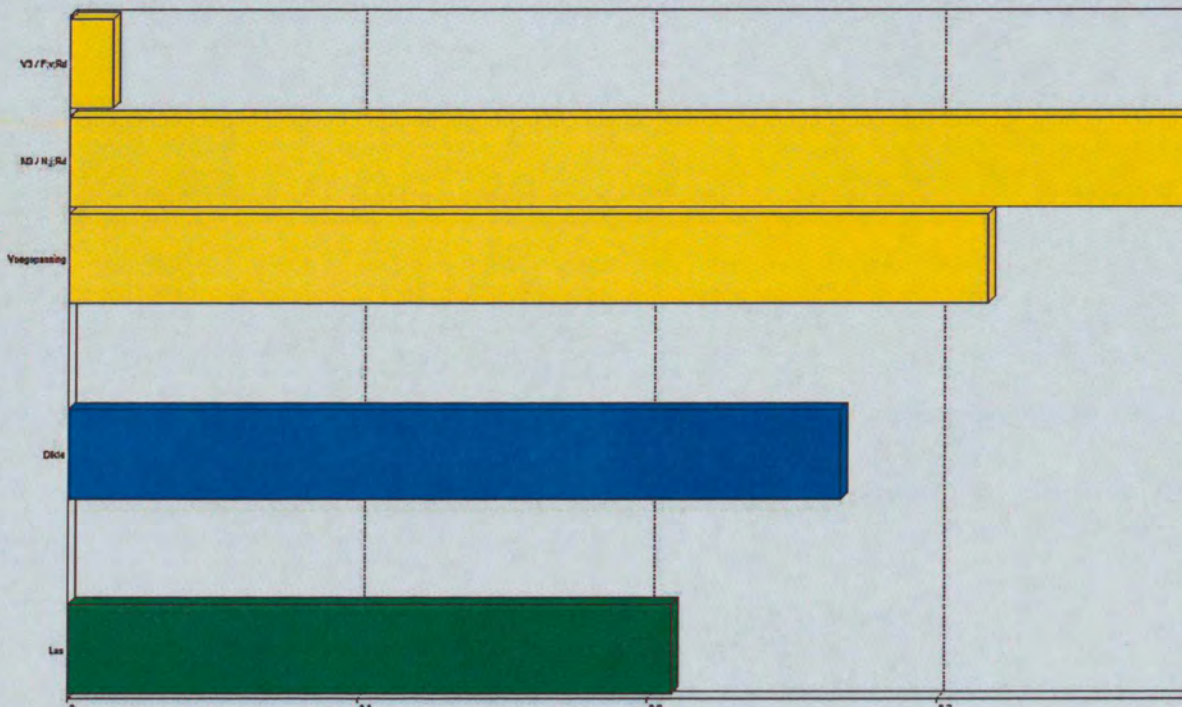
AFB. SV18 UNITYCHECK GRAFIEK FU.C.14



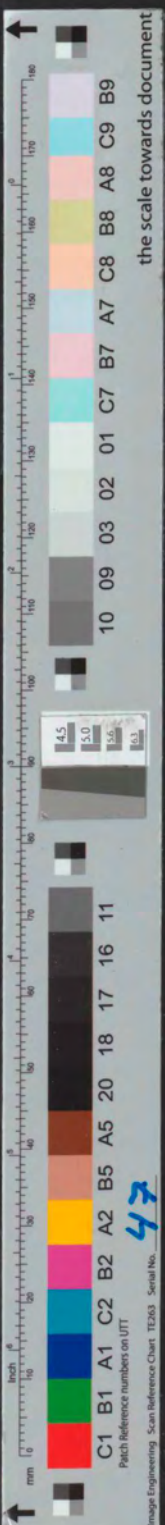


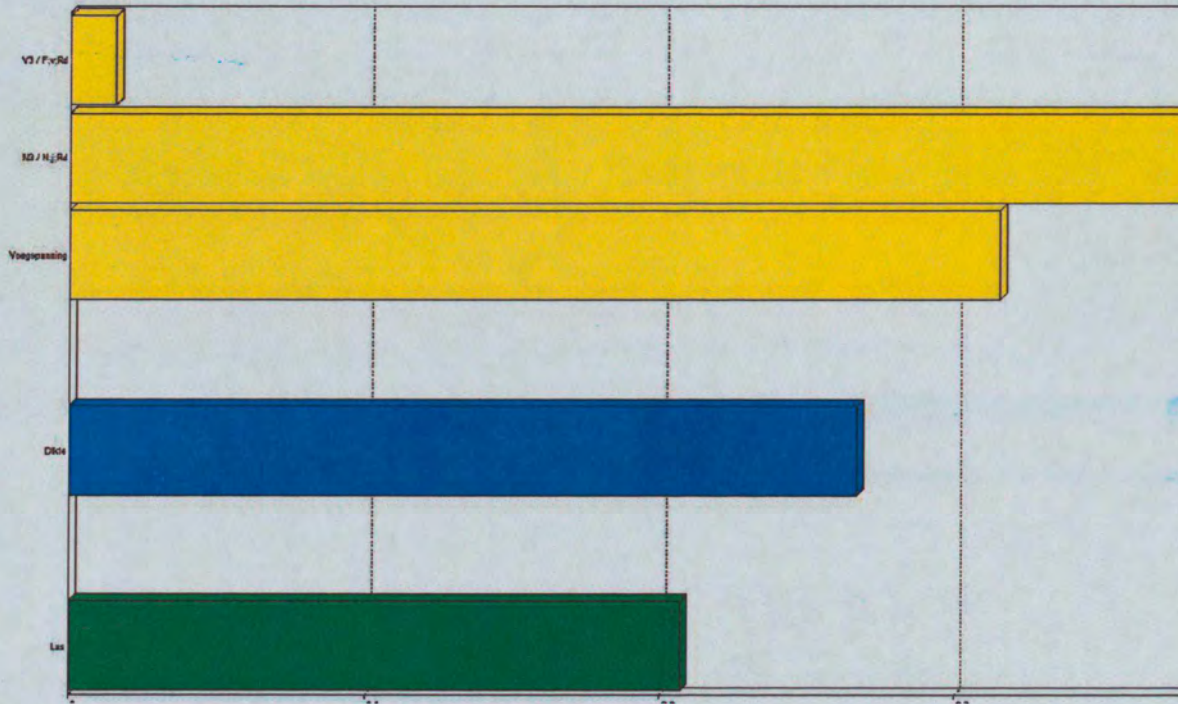
AFB. SV18 UNITYCHECK GRAFIEK FU.C.15





AFB. SV18 UNITYCHECK GRAFIEK FU.C.16





AFB. SV18 UNITYCHECK GRAFIEK FU.C.17

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

inch 0 1 2 3 4 5 6 7 8 9 10

C1 B1 A1 C2 B2 A2 C3 B3 A3 C4 B4 A4 C5 B5 A5 C6 B6 A6 C7 B7 A7 C8 B8 A8 C9 B9

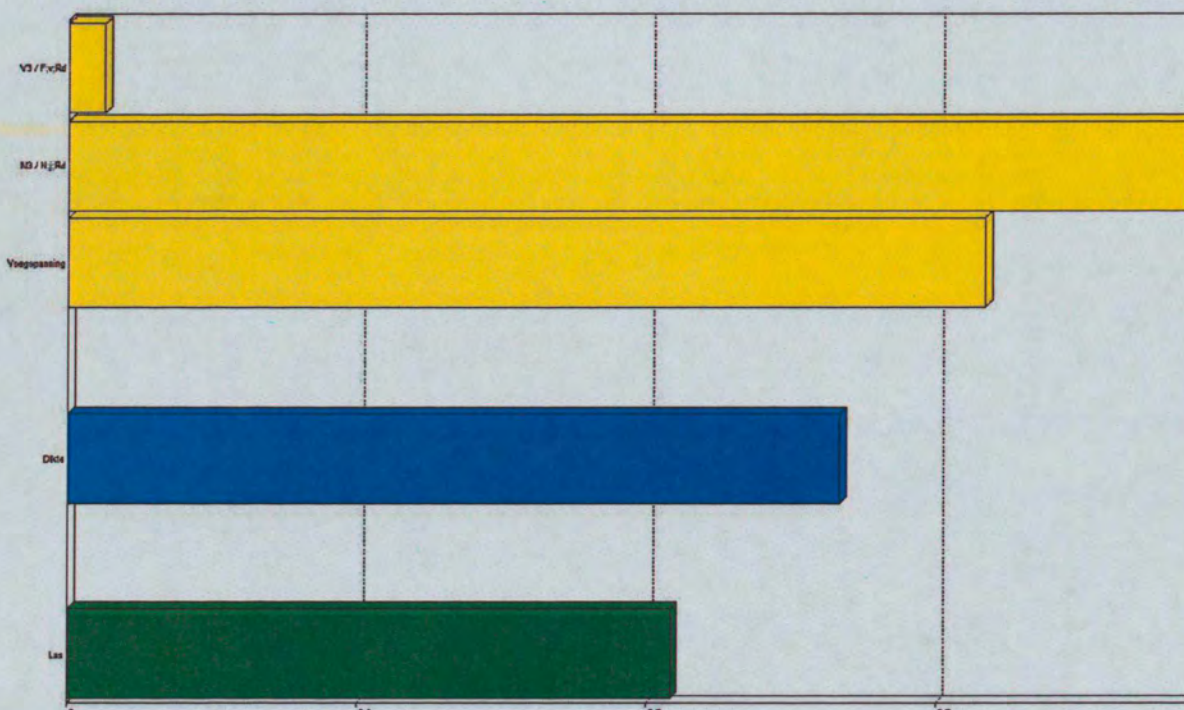
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5 6.0

↑

the scale towards document

Image Engineering Scan Reference Chart TE263 Serial No. 47



AFB. SV18 UNITYCHECK GRAFIEK FU.C.18

↑

mm

inch

4.5 5.0 5.5 6.3

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

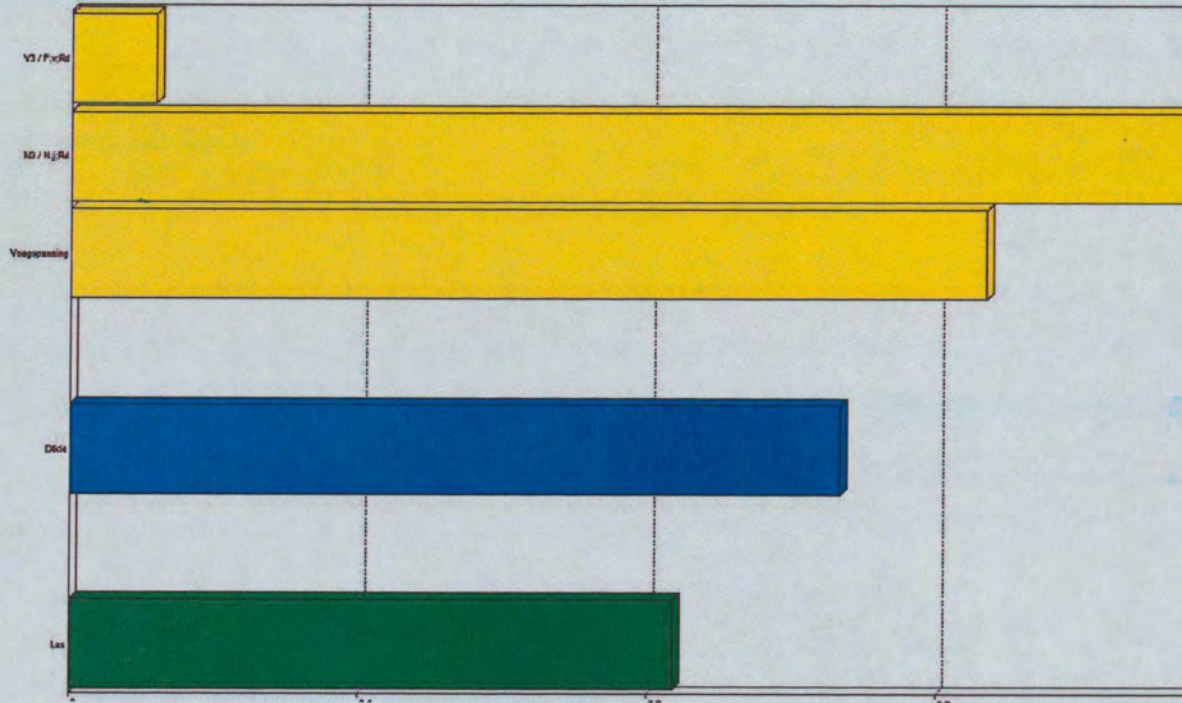
Patch Reference numbers on UTT

47

Image Engineering Scan Reference Chart T3263 Serial No.

↑

the scale towards document



AFB. SV18 UNITYCHECK GRAFIEK BI.C.1

↑

mm

↑

the scale towards document

C1 B1 A1 C2 B2 A2 C3 B3 A3 C4 B4 A4 C5 B5 A5 C6 B6 A6 C7 B7 A7 C8 B8 A8 C9 B9

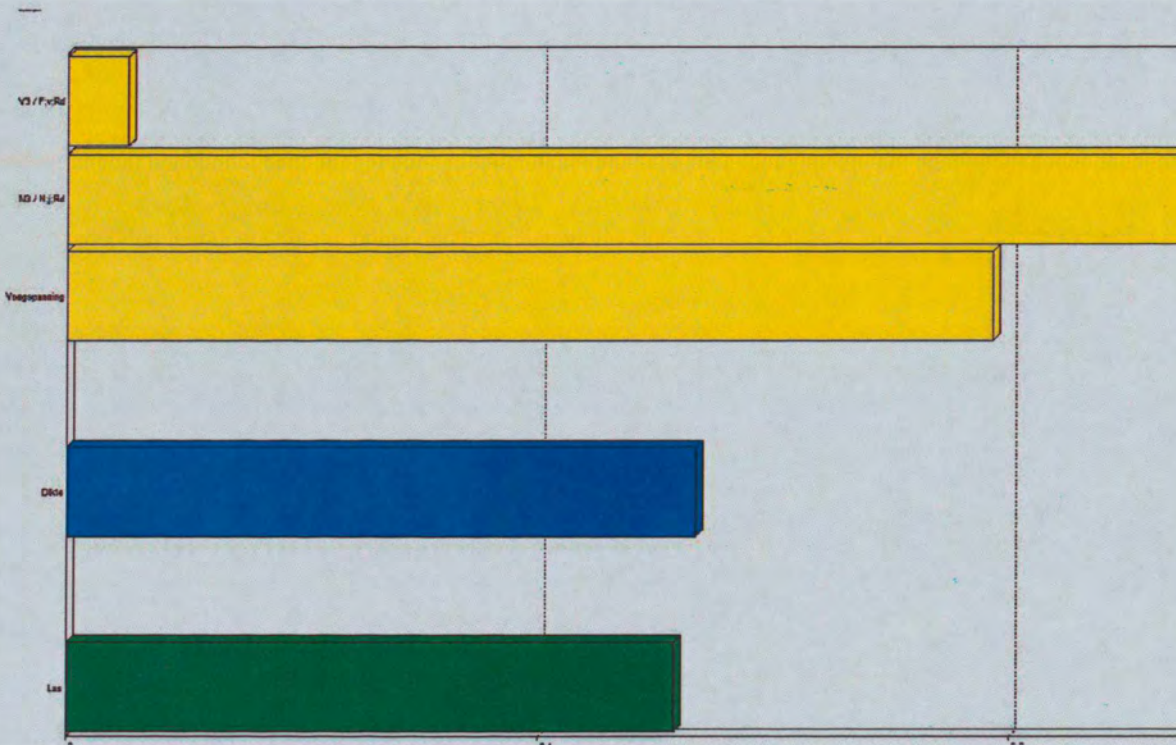
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5

11 16 17 18 20

47

Image Engineering Scan Reference Chart TE263 Serial No.



↑

mm 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

↑

Inch 1/2 1 1 1/2 2 2 1/2 3 4 5 6 8 10

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5 6.0 6.5

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT

47

Image Engineering Scan Reference Chart TE263 Serial No.

the scale towards document

8.1.3 Oplegging 2

SV24 (NEN-EN 1993-1-8:2009/NB:2011)

ALGEMEEN

Verbindings type	Voetplaatverbinding	
Kolom	HE160B	(b = 160, h = 160, Ft = 13.0, Wt = 8.0)
Materiaal	S235	
Raamwerk	Statisch bepaald	
Horizontale stijfheid	Geschoord raamwerk	
Milieu	Niet corrosief	
Laskwaliteit	S235	

VERBINDINGSONDERDELEN

	Breedte	Hoogte	Dikte	Las (h)
Plaat	180	180	15.0	6
	mm	mm	mm	mm

ANKERS: M16

Sterkte	5.6 (Gerold)	
Afstand	90 mm	
d;g;nom	18 mm	
	Afstand	Totale afstand
Randafstand boutrij 1	90	90
	mm	mm

FUNDERING

Hoogte	600.00 mm	voegdikte	10.00 mm
d1	200.00 mm	b1	200.00 mm
d2	200.00 mm	b2	200.00 mm
d	200.00 mm	b	200.00 mm
Materiaal	C30/37		

BELASTINGEN

Fu.C.1; Knoop K18 kN	N;3;Ed	102.15 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.31
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

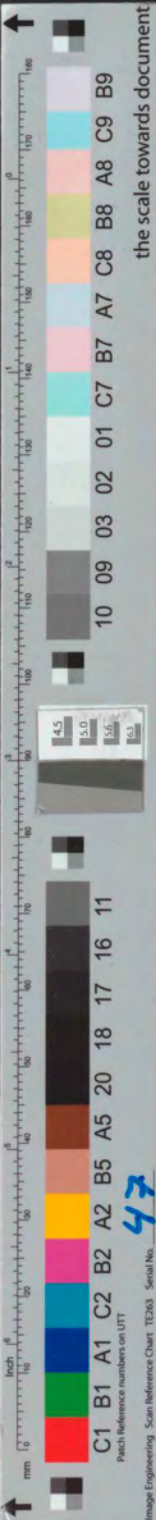
Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	64.39	kN
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	56.52	kN

BELASTINGEN

Fu.C.2; Knoop K18 kN	N;3;Ed	101.83 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.42
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	64.33	kN
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	56.52	kN



BELASTINGEN

Fu.C.3; Knoop K18 N;3;Ed 101.84 kN M;3;Ed 0.00 kNm V;3;Ed 2.89 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm F;b;Rd 172.80 Kopplaat; t = 15 kN
 Dwarskrachtcapaciteit (voor alle bouten) 64.33 F;v;Rd kN
 Trekcapaciteit B;p;Rd min(F;t;Rd, 56.52 kN

BELASTINGEN

Fu.C.4; Knoop K18 N;3;Ed 101.02 kN M;3;Ed 0.00 kNm V;3;Ed 5.92 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm F;b;Rd 172.80 Kopplaat; t = 15 kN
 Dwarskrachtcapaciteit (voor alle bouten) 64.16 F;v;Rd kN
 Trekcapaciteit B;p;Rd min(F;t;Rd, 56.52 kN

BELASTINGEN

Fu.C.5; Knoop K18 N;3;Ed 114.84 kN M;3;Ed 0.00 kNm V;3;Ed 3.40 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm F;b;Rd 172.80 Kopplaat; t = 15 kN
 Dwarskrachtcapaciteit (voor alle bouten) 66.93 F;v;Rd kN
 Trekcapaciteit B;p;Rd min(F;t;Rd, 56.52 kN

BELASTINGEN

Fu.C.6; Knoop K18 N;3;Ed 114.85 kN M;3;Ed 0.00 kNm V;3;Ed 2.87 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

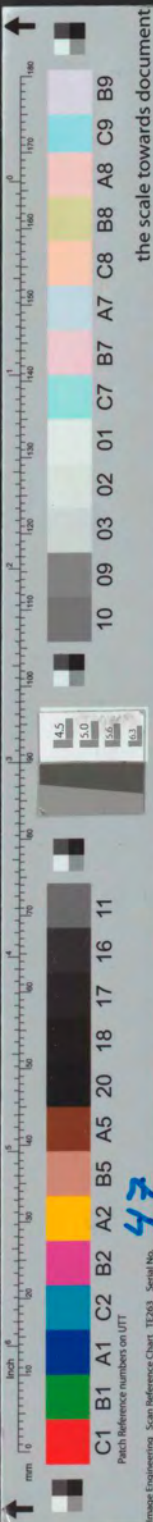
Stuikweerstand mm F;b;Rd 172.80 Kopplaat; t = 15 kN
 Dwarskrachtcapaciteit (voor alle bouten) 66.93 F;v;Rd kN
 Trekcapaciteit B;p;Rd min(F;t;Rd, 56.52 kN

BELASTINGEN

Fu.C.7; Knoop K18 N;3;Ed 114.03 kN M;3;Ed 0.00 kNm V;3;Ed 5.90 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm F;b;Rd 172.80 Kopplaat; t = 15 kN



Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
66.77	kN					
Trekcapaciteit B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.8; Knoop K18	N;3;Ed	114.52 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.98
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd					
172.80	kN					
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
66.86	kN					
Trekcapaciteit B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.9; Knoop K18	N;3;Ed	113.71 kN	M;3;Ed	0.00 kNm	V;3;Ed	6.01
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd					
172.80	kN					
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
66.70	kN					
Trekcapaciteit B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.10; Knoop K18	N;3;Ed	113.72 kN	M;3;Ed	0.00 kNm	V;3;Ed	5.48
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

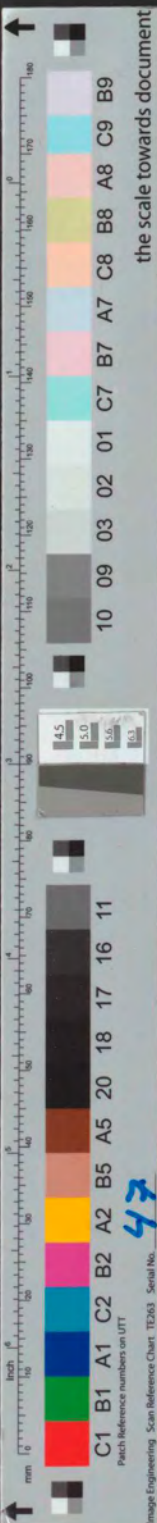
Stuikweerstand mm	F;b;Rd					
172.80	kN					
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
66.70	kN					
Trekcapaciteit B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.11; Knoop K18	N;3;Ed	132.14 kN	M;3;Ed	0.00 kNm	V;3;Ed	42.98
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd					
172.80	kN					
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
70.39	kN					
Trekcapaciteit B;p;Rd)	min(F;t;Rd,					kN
	56.52					



BELASTINGEN

Fu.C.12; Knoop K18 N;3;Ed 35.34 kN M;3;Ed 0.00 kNm V;3;Ed 36.59 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle bouten) F;v;Rd
 51.03 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.13; Knoop K18 N;3;Ed 89.10 kN M;3;Ed 0.00 kNm V;3;Ed 3.39 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle bouten) F;v;Rd
 61.78 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.14; Knoop K18 N;3;Ed 86.44 kN M;3;Ed 0.00 kNm V;3;Ed 3.26 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle bouten) F;v;Rd
 61.25 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.15; Knoop K18 N;3;Ed 99.46 kN M;3;Ed 0.00 kNm V;3;Ed 3.24 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle bouten) F;v;Rd
 63.85 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.16; Knoop K18 N;3;Ed 99.13 kN M;3;Ed 0.00 kNm V;3;Ed 3.35 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN



Dwarskrachtcapaciteit (voor alle
 bouten)
 63.79
 Trekcapaciteit
 B;p;Rd)

F;v;Rd
 kN
 min(F;t;Rd,
 56.52

kN

BELASTINGEN

Fu.C.17; Knoop K18 N;3;Ed 99.14 kN M;3;Ed 0.00 kNm V;3;Ed 2.82
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm F;b;Rd 172.80 Kopplaat; t = 15 kN

Dwarskrachtcapaciteit (voor alle
 bouten)
 63.79
 Trekcapaciteit
 B;p;Rd)

F;v;Rd
 kN
 min(F;t;Rd,
 56.52

kN

BELASTINGEN

Fu.C.18; Knoop K18 N;3;Ed 98.32 kN M;3;Ed 0.00 kNm V;3;Ed 5.86
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm F;b;Rd 172.80 Kopplaat; t = 15 kN

Dwarskrachtcapaciteit (voor alle
 bouten)
 63.62
 Trekcapaciteit
 B;p;Rd)

F;v;Rd
 kN
 min(F;t;Rd,
 56.52

kN

BELASTINGEN

Bl.C.1; Knoop K18 N;3;Ed 60.37 kN M;3;Ed 0.00 kNm V;3;Ed 2.28
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm F;b;Rd 172.80 Kopplaat; t = 15 kN

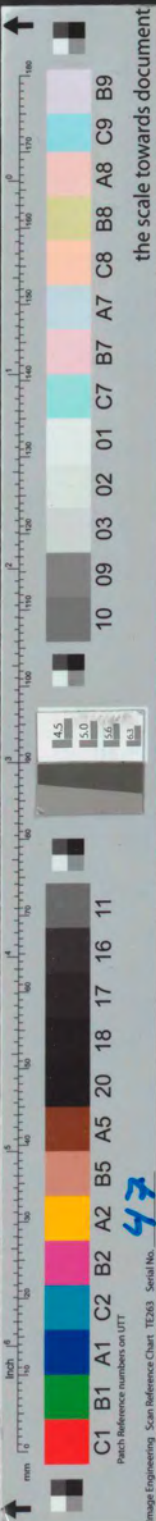
Dwarskrachtcapaciteit (voor alle
 bouten)
 56.03
 Trekcapaciteit
 B;p;Rd)

F;v;Rd
 kN
 min(F;t;Rd,
 56.52

kN

OVERZICHT CONTROLES PER BELASTINGSGEVAL

Fu.C.1; Knoop
 K18
 Ok
 Fu.C.2; Knoop
 K18
 Ok
 Fu.C.3; Knoop
 K18
 Ok
 Fu.C.4; Knoop
 K18
 Ok



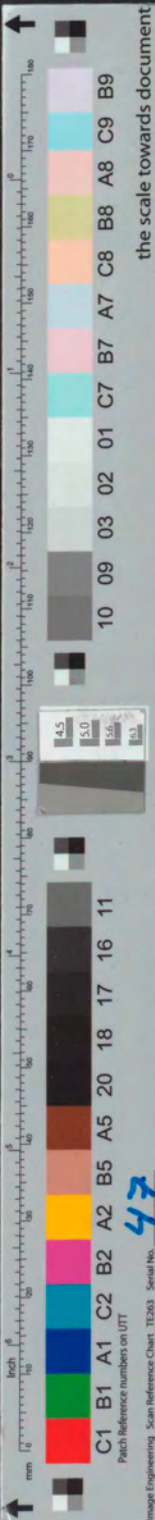
Fu.C.5; Knoop
K18
Ok
Fu.C.6; Knoop
K18
Ok
Fu.C.7; Knoop
K18
Ok
Fu.C.8; Knoop
K18
Ok
Fu.C.9; Knoop
K18
Ok
Fu.C.10; Knoop
K18
Ok
Fu.C.11; Knoop
K18
Ok
Fu.C.12; Knoop
K18
Ok
Fu.C.13; Knoop
K18
Ok
Fu.C.14; Knoop
K18
Ok
Fu.C.15; Knoop
K18
Ok
Fu.C.16; Knoop
K18
Ok
Fu.C.17; Knoop
K18
Ok
Fu.C.18; Knoop
K18
Ok
Bi.C.1; Knoop
K18
Ok

SV24 (NEN-EN 1993-1-8:2009/NB:2011)

ALGEMEEN

Verbindings type	Voetplaatverbinding	
Kolom	HE160B	(b = 160, h = 160, Ft = 13.0, Wt = 8.0)
Materiaal	S235	
Raamwerk	Statisch bepaald	
Horizontale stijfheid	Geschoord raamwerk	
Milieu	Niet corrosief	
Laskwaliteit	S235	

VERBINDINGSONDERDELEN



	Breedte	Hoogte	Dikte	Las (h)
Plaat	180	180	15.0	6
	mm	mm	mm	mm

ANKERS: M16

Sterkte	5.6 (Gerold)		
Afstand	90 mm		
d;g;nom	18 mm		
	Afstand	Totale afstand	
Randafstand boutrij 1	90	90	
	mm	mm	

FUNDERING

Hoogte	600.00 mm	voegdikte	10.00 mm
d1	200.00 mm	b1	200.00 mm
d2	200.00 mm	b2	200.00 mm
d	200.00 mm	b	200.00 mm
Materiaal	C30/37		

BELASTINGEN

Fu.C.1; Knoop K18	N;3;Ed	102.15 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.31
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd		Kopplaat; t = 15
mm	172.80		kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd		
64.39	kN		
Trekcapaciteit	min(F;t;Rd,		
B;p;Rd)	56.52		kN

BELASTINGEN

Fu.C.2; Knoop K18	N;3;Ed	101.83 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.42
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

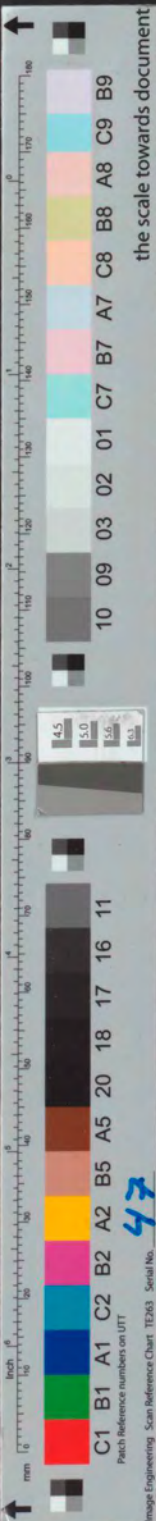
Stuikweerstand	F;b;Rd		Kopplaat; t = 15
mm	172.80		kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd		
64.33	kN		
Trekcapaciteit	min(F;t;Rd,		
B;p;Rd)	56.52		kN

BELASTINGEN

Fu.C.3; Knoop K18	N;3;Ed	101.84 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.89
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd		Kopplaat; t = 15
mm	172.80		kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd		
64.33	kN		
Trekcapaciteit	min(F;t;Rd,		
B;p;Rd)	56.52		kN



BELASTINGEN

Fu.C.4; Knoop K18 N;3;Ed 101.02 kN M;3;Ed 0.00 kNm V;3;Ed 5.92
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 64.16 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.5; Knoop K18 N;3;Ed 114.84 kN M;3;Ed 0.00 kNm V;3;Ed 3.40
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 66.93 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.6; Knoop K18 N;3;Ed 114.85 kN M;3;Ed 0.00 kNm V;3;Ed 2.87
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 66.93 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.7; Knoop K18 N;3;Ed 114.03 kN M;3;Ed 0.00 kNm V;3;Ed 5.90
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

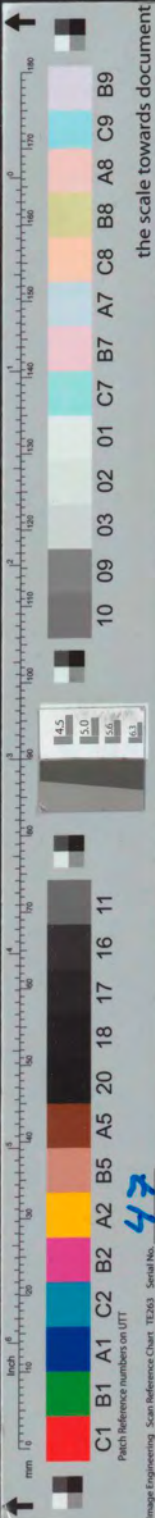
Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 66.77 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.8; Knoop K18 N;3;Ed 114.52 kN M;3;Ed 0.00 kNm V;3;Ed 2.98
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15



mm	172.80	kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd		
66.86	kN		
Trekcapaciteit B;p;Rd)	min(F;t;Rd,		kN
	56.52		

BELASTINGEN

Fu.C.9; Knoop K18	N;3;Ed	113.71 kN	M;3;Ed	0.00 kNm	V;3;Ed	6.01
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
66.70	kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	
	56.52	kN

BELASTINGEN

Fu.C.10; Knoop K18	N;3;Ed	113.72 kN	M;3;Ed	0.00 kNm	V;3;Ed	5.48
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
66.70	kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	
	56.52	kN

BELASTINGEN

Fu.C.11; Knoop K18	N;3;Ed	132.14 kN	M;3;Ed	0.00 kNm	V;3;Ed	42.98
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

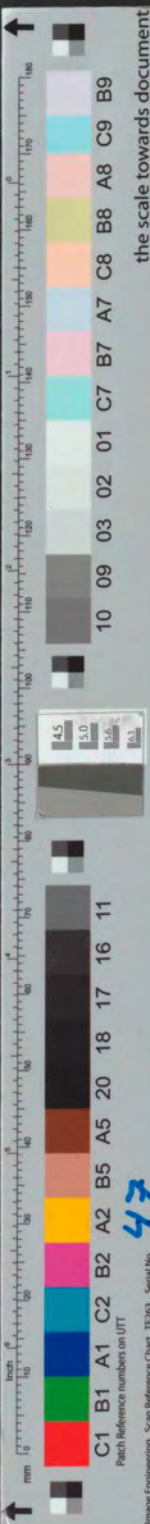
Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
70.39	kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	
	56.52	kN

BELASTINGEN

Fu.C.12; Knoop K18	N;3;Ed	35.34 kN	M;3;Ed	0.00 kNm	V;3;Ed	36.59
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
51.03	kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	
	56.52	kN



BELASTINGEN

Fu.C.13; Knoop K18 N;3;Ed 89.10 kN M;3;Ed 0.00 kNm V;3;Ed 3.39
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 61.78 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.14; Knoop K18 N;3;Ed 86.44 kN M;3;Ed 0.00 kNm V;3;Ed 3.26
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 61.25 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.15; Knoop K18 N;3;Ed 99.46 kN M;3;Ed 0.00 kNm V;3;Ed 3.24
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 63.85 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.16; Knoop K18 N;3;Ed 99.13 kN M;3;Ed 0.00 kNm V;3;Ed 3.35
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

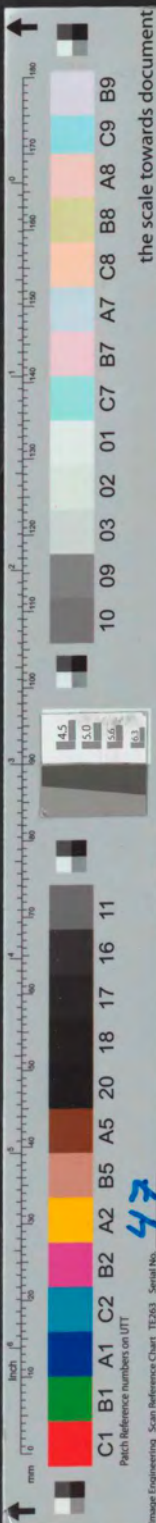
Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 63.79 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

BELASTINGEN

Fu.C.17; Knoop K18 N;3;Ed 99.14 kN M;3;Ed 0.00 kNm V;3;Ed 2.82
 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15



mm	172.80	kN				
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd					
63.79	kN					
Trekcapaciteit (B;p;Rd)	min(F;t;Rd,					kN
	56.52					

BELASTINGEN

Fu.C.18; Knoop K18	N;3;Ed	98.32 kN	M;3;Ed	0.00 kNm	V;3;Ed	5.86
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
63.62	kN	
Trekcapaciteit (B;p;Rd)	min(F;t;Rd,	
	56.52	kN

BELASTINGEN

Bi.C.1; Knoop K18	N;3;Ed	60.37 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.28
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
56.03	kN	
Trekcapaciteit (B;p;Rd)	min(F;t;Rd,	
	56.52	kN

OVERZICHT CONTROLES PER BELASTINGSGEVAL

Fu.C.1; Knoop K18
Ok

Fu.C.2; Knoop K18
Ok

Fu.C.3; Knoop K18
Ok

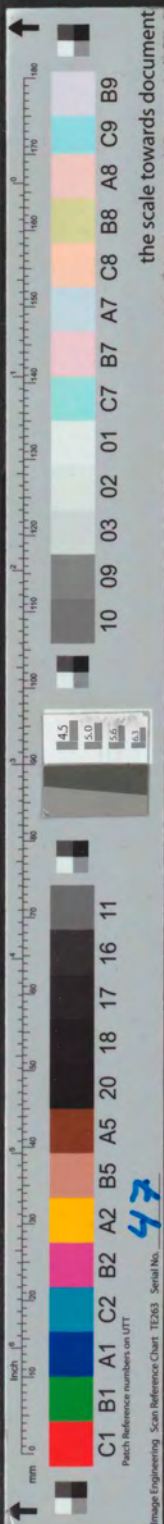
Fu.C.4; Knoop K18
Ok

Fu.C.5; Knoop K18
Ok

Fu.C.6; Knoop K18
Ok

Fu.C.7; Knoop K18
Ok

Fu.C.8; Knoop K18
Ok



Fu.C.9; Knoop
 K18
 Ok
 Fu.C.10; Knoop
 K18
 Ok
 Fu.C.11; Knoop
 K18
 Ok
 Fu.C.12; Knoop
 K18
 Ok
 Fu.C.13; Knoop
 K18
 Ok
 Fu.C.14; Knoop
 K18
 Ok
 Fu.C.15; Knoop
 K18
 Ok
 Fu.C.16; Knoop
 K18
 Ok
 Fu.C.17; Knoop
 K18
 Ok
 Fu.C.18; Knoop
 K18
 Ok
 Bi.C.1; Knoop
 K18
 Ok

SV24 (NEN-EN 1993-1-8:2009/NB:2011)

ALGEMEEN

Verbindings type	Voetplaatverbinding	
Kolom	HE160B	(b = 160, h = 160, Ft = 13.0, Wt = 8.0)
Materiaal	S235	
Raamwerk	Statisch bepaald	
Horizontale stijfheid	Geschoord raamwerk	
Millieu	Niet corrosief	
Laskwaliteit	S235	

VERBINDINGSONDERDELEN

	Breedte	Hoogte	Dikte	Las (h)
Plaat	180	180	15.0	6
	mm	mm	mm	mm

ANKERS: M16

Sterkte	5.6 (Gerold)		
Afstand	90 mm		
d;g;nom	18 mm		
	Afstand	Totale afstand	
Randafstand boutrij 1	90	90	
	mm	mm	



TUSSENAFSTANDEN VOLGENS NEN-EN 1993-1-8 TABEL 3.3

	Evenwijdig aan kracht		Loodrecht op kracht	
	minimaal	maximaal	minimaal	maximaal
Randafstand	22	Ongelimiteerd	22	Ongelimiteerd
Tussenafstand	40	200	43	200
	mm	mm	mm	mm

FUNDERING

Hoogte	600.00 mm	voegdikte	10.00 mm
d1	200.00 mm	b1	200.00 mm
d2	200.00 mm	b2	200.00 mm
d	200.00 mm	b	200.00 mm
Materiaal	C30/37		

BELASTINGEN

Fu.C.1; Knoop K18 kN	N;3;Ed	102.15 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.31
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BOUTGRENSWERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd		
64.39	kN		
Trekcapaciteit B;p;Rd)	min(F;t;Rd,	56.52	kN

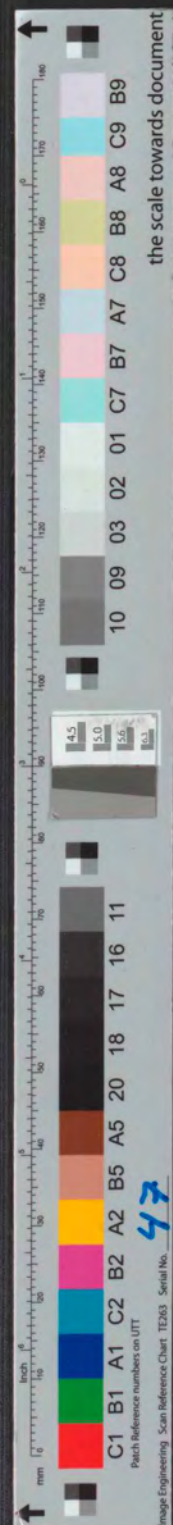
LASSEN

Lijf

Laslengte				
268.00				mm
Schuifspanning parallel met de as van de las			Tau;2 N/mm ²	
2.06				
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed		3.57	N/mm ²
Reken capaciteit las Gamma;M2)			f;u / (Beta;w *	
360.00			360.00	N/mm ²
Toegestane trekspanning Gamma;M2			0.9 * f;u /	
0.00			0.00	N/mm ²

Flens

Laslengte				
282.00				mm
Schuifspanning loodrecht op de as van de las			Tau;1 N/mm ²	
-21.35				
Axiale spanning loodrecht op de keel			Sigma;1 N/mm ²	
-21.35				
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed		42.69	N/mm ²
Reken capaciteit las Gamma;M2)			f;u / (Beta;w *	
360.00			360.00	N/mm ²
Toegestane trekspanning Gamma;M2			0.9 * f;u /	
259.20			259.20	N/mm ²



STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00
Rekenwaarde druksterkte van de fundering beton			f;cd N/mm ²
20.00			
Geconcentreerde weerstandskracht			F;Rdu kN
800.00			
Rekenwaarde voor de druksterkte			f;jd N/mm ²
13.33			
Toegevoegde stuik breedte			c mm
36.36			
142.46			F;c;Rd1 kN
			F;c;Rd2 65.95
			F;c;Rd3 kN
142.46			N;j;Rd kN
350.87			Sigma;s;d N/mm ²
Betondrukzone			
3.15			
Minimale voetplaatdikte			t;min mm
2.00			

WRIJVINGSWEERSTAND

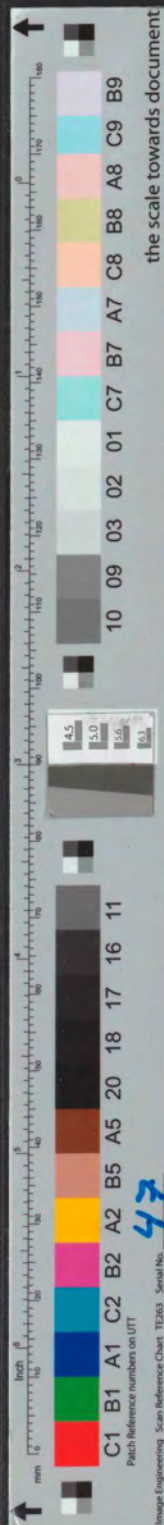
C;fd		
0.20		
F;f;Rd		
20.43		kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf			3.57 /	
360.00			0.01	Ok
Lassen flens			42.69 /	
360.00			0.12	Ok
		N3 / N;j;Rd <= 1	102.15 /	
350.87		0.29	Ok	
Voegspanning		Sigma;s;d / f;jd <= 1	3.15 /	
13.33		0.24	Ok	
		V3 / F;v;Rd <= 1	3.31 /	
64.39		0.05	Ok	
Voetplaatdikte		t;min / t <= 1	2.00 /	
15.00		0.13	Ok	

BELASTINGEN

Fu.C.2; Knoop K18	N;3;Ed	101.83 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.42
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kN

BOUWGRENSEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
64.33	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf

Laslengte			
268.00			mm
Schuifspanning parallel met de as van de las		Tau;2	
2.13		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
	Sigma;HH,Ed	3.68	N/mm ²
Rekencapaciteit las		f;u / (Beta;w *	
Gamma;M2)		360.00	N/mm ²
Toegestane trekspanning		0.9 * f;u /	
Gamma;M2		0.00	N/mm ²

Flens

Laslengte			
282.00			mm
Schuifspanning loodrecht op de as van de las		Tau;1	
-21.28		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-21.28		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
	Sigma;HH,Ed	42.55	N/mm ²
Rekencapaciteit las		f;u / (Beta;w *	
Gamma;M2)		360.00	N/mm ²
Toegestane trekspanning		0.9 * f;u /	
Gamma;M2		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1	
	(Ac1/Ac0)½	1.00
Rekenwaarde druksterkte van de fundering beton		f;cd
20.00		N/mm ²
Geconcentreerde weerstandskracht		F;Rdu
800.00		kN
Rekenwaarde voor de druksterkte		f;jd



13.33		N/mm ²	
Toegevoegde stuik			
breedte	c	mm	
36.36	F;c;Rd1	kN	
142.46	F;c;Rd2	65.95	kN
	F;c;Rd3		
142.46	kN		
	N;j;Rd		
350.87	kN		
Betondrukzone	Sigma;s;d		
3.14	N/mm ²		
Minimale			
voetplaatdikte	t;min		
2.00	mm		

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
20.37	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		3.68 /	
360.00		0.01	Ok
Lassen flens		42.55 /	
360.00		0.12	Ok
	N3 / N;j;Rd <= 1	101.83 /	
350.87	0.29	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.14 /	
13.33	0.24	Ok	
	V3 / F;v;Rd <= 1	3.42 /	
64.33	0.05	Ok	
Voetplaatdikte	t;min / t <= 1	2.00 /	
15.00	0.13	Ok	

BELASTINGEN

Fu.C.3; Knoop K18	N;3;Ed	101.84 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.89
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BOUTGREN斯WEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
64.33	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		
268.00		mm
Schuifspanning parallel met de as van de		
las	Tau;2	
1.80	N/mm ²	



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Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	3.11	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w *	
Toegepaste trekspanning Gamma;M2		360.00	N/mm ²
		0.9 * f;u /	
		0.00	N/mm ²
Flens			
Laslengte			mm
282.00			
Schuifspanning loodrecht op de as van de las		Tau;1	
-21.28		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-21.28		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	42.56	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w *	
Toegepaste trekspanning Gamma;M2		360.00	N/mm ²
		0.9 * f;u /	
		259.20	N/mm ²

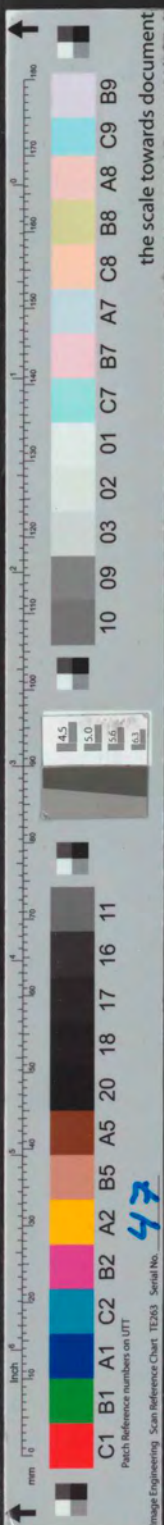
STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen	
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd	
20.00		N/mm ²	
Geconcentreerde weerstandskracht		F;Rdu	
800.00		kN	
Rekenwaarde voor de druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik breedte		c	
36.36		mm	
142.46		F;c;Rd1	
		kN	
		F;c;Rd2	
		65.95	kN
		F;c;Rd3	
142.46		kN	
		N;j;Rd	
350.87		kN	
Betondrukzone		Sigma;s;d	
3.14		N/mm ²	
Minimale voetplaatdikte		t;min	
2.00		mm	

WRIJVINGSWEERSTAND



C;fd
 0.20 -
 F;f;Rd
 20.37 kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf 360.00		3.11 / 0.01	Ok
Lassen flens 360.00		42.56 / 0.12	Ok
350.87	N3 / N;j;Rd <= 1	101.84 / 0.29	Ok
Voegspanning 13.33	Sigma;s;d / f;j;d <= 1	3.14 / 0.24	Ok
64.33	V3 / F;v;Rd <= 1	2.89 / 0.04	Ok
Voetplaatdikte 15.00	t;min / t <= 1	2.00 / 0.13	Ok

BELASTINGEN

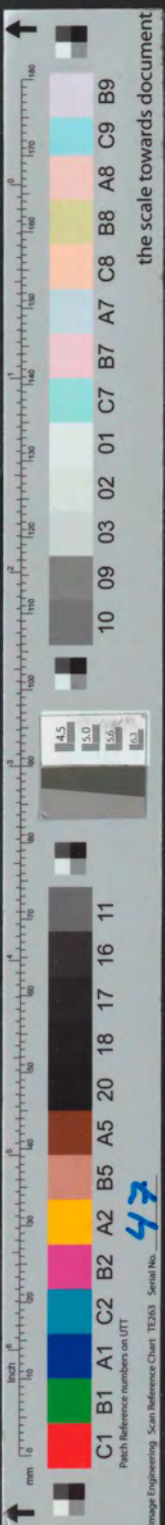
Fu.C.4; Knoop K18 kN	N;3;Ed	101.02 kN	M;3;Ed	0.00 kNm	V;3;Ed	5.92
-------------------------	--------	-----------	--------	----------	--------	------

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52	kN

LASSEN

Lijf Laslengte 268.00			mm
Schuifspanning parallel met de as van de las		Tau;2 N/mm ²	
3.68			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	6.38	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w * 360.00	N/mm ²
Toegestane trekspanning Gamma;M2)		0.9 * f;u / 0.00	N/mm ²
Flens Laslengte 282.00			mm
Schuifspanning loodrecht op de as van de las		Tau;1 N/mm ²	
-21.11			
Axiale spanning loodrecht op de keel		Sigma;1 N/mm ²	
-21.11			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	42.22	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w * 360.00	N/mm ²



Toegestane trekspanning $0.9 \cdot f;u /$
 Gamma;M2 259.20 N/mm²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

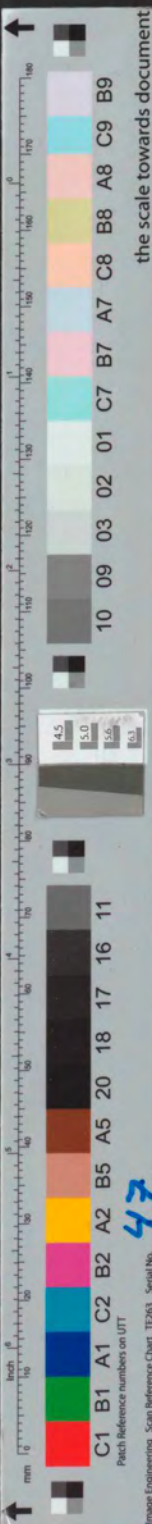
Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0)½	1.00
Rekenwaarde druksterkte van de fundering beton			f;cd N/mm ²
20.00			
Geconcentreerde weerstandskracht			F;Rdu kN
800.00			
Rekenwaarde voor de druksterkte			f;jd N/mm ²
13.33			
Toegevoegde stuik breedte			c mm
36.36			
142.46			F;c;Rd1 kN
			F;c;Rd2 65.95
			F;c;Rd3 kN
142.46			N;j;Rd kN
350.87			Sigma;s;d N/mm ²
Betondrukzone			
3.12			t;min mm
Minimale voetplaatdikte			
2.00			

WRIJVINGSWEERSTAND

C;fd		
0.20		
F;f;Rd		
20.20		kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf			6.38 /	
360.00			0.02	Ok
Lassen flens			42.22 /	
360.00			0.12	Ok
		N3 / N;j;Rd <= 1	101.02 /	
350.87		0.29	Ok	
Voegspanning		Sigma;s;d / f;jd <= 1	3.12 /	
13.33		0.23	Ok	
		V3 / F;v;Rd <= 1	5.92 /	
64.16		0.09	Ok	
Voetplaatdikte		t;min / t <= 1	2.00 /	
15.00		0.13	Ok	



BELASTINGEN

Fu.C.5; Knoop K18 kN	N;3;Ed	114.84 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.40
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	66.93	kN
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52		kN

LASSEN

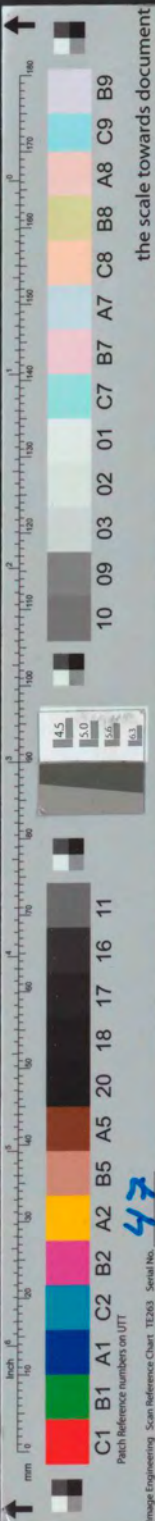
Lijf			
Laslengte			
268.00			mm
Schuifspanning parallel met de as van de las			
2.11		Tau;2	N/mm ²
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	3.66	N/mm ²
Reken capaciteit las Gamma;M2)		f;u / (Beta;w *	
360.00		360.00	N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u /	
0.00		0.00	N/mm ²
Flens			
Laslengte			
282.00			mm
Schuifspanning loodrecht op de as van de las			
-24.00		Tau;1	N/mm ²
Axiale spanning loodrecht op de keel			
-24.00		Sigma;1	N/mm ²
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	47.99	N/mm ²
Reken capaciteit las Gamma;M2)		f;u / (Beta;w *	
360.00		360.00	N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u /	
259.20		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½	1.00
Rekenwaarde druksterkte van de fundering		
beton		f;cd
20.00		N/mm ²
Geconcentreerde		



weerstandskracht		F;Rdu	
800.00		kN	
Rekenwaarde voor de			
druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik			
breedte		c	
36.36		mm	
		F;c;Rd1	
142.46		kN	
		F;c;Rd2	
		65.95	kN
		F;c;Rd3	
142.46		kN	
		N;j;Rd	
350.87		kN	
Betondrukzone		Sigma;s;d	
3.54		N/mm ²	
Minimale			
voetplaatdikte		t;min	
1.00		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
22.97	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		3.66 /	
360.00		0.01	Ok
Lassen flens		47.99 /	
360.00		0.13	Ok
	N3 / N;j;Rd <= 1	114.84 /	
350.87	0.33	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.54 /	
13.33	0.27	Ok	
	V3 / F;v;Rd <= 1	3.40 /	
66.93	0.05	Ok	
Voetplaatdikte	t;min / t <= 1	1.00 /	
15.00	0.07	Ok	

BELASTINGEN

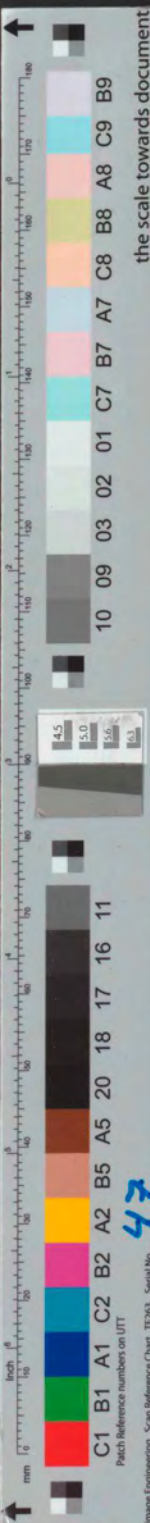
Fu.C.6; Knoop K18	N;3;Ed	114.85 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.87
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Doorskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
66.93	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf
 Laslengte



268.00				mm
Schuifspanning parallel met de as van de las			Tau;2	
1.79			N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8			
Reken capaciteit las	Sigma;HH,Ed	3.09		N/mm ²
Gamma;M2)		f;u / (Beta;w *		
Toegepaste trekspanning		360.00		N/mm ²
Gamma;M2		0.9 * f;u /		
		0.00		N/mm ²

Flens

Laslengte

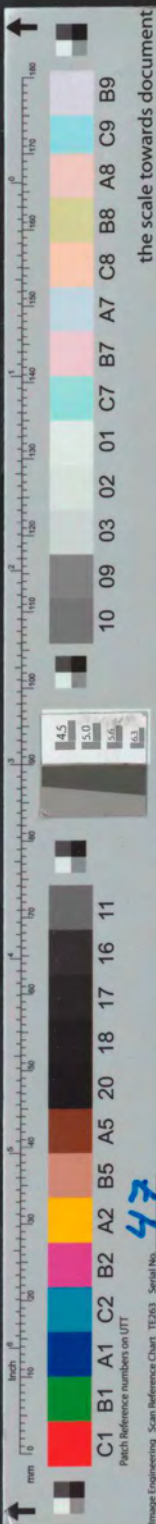
282.00				mm
Schuifspanning loodrecht op de as van de las			Tau;1	
-24.00			N/mm ²	
Axiale spanning loodrecht op de keel			Sigma;1	
-24.00			N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8			
Reken capaciteit las	Sigma;HH,Ed	48.00		N/mm ²
Gamma;M2)		f;u / (Beta;w *		
Toegepaste trekspanning		360.00		N/mm ²
Gamma;M2		0.9 * f;u /		
		259.20		N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1		
Rekenwaarde druksterkte van de fundering beton	(Ac1/Ac0) ^{1/2}	1.00	-
20.00		f;c;d	
Geconcentreerde weerstandskracht		N/mm ²	
800.00		F;Rdu	
Rekenwaarde voor de druksterkte		kN	
13.33		f;j;d	
Toegevoegde stuik breedte		N/mm ²	
36.36		c	
		mm	
142.46		F;c;Rd1	
		kN	
		F;c;Rd2	
		65.95	kN
		F;c;Rd3	
		kN	
		N;j;Rd	
		kN	
350.87		Sigma;s;d	
Betondrukzone		N/mm ²	
3.54			
Minimale			



voetplaatdikte t;min
 1.00 mm

WRIJVINGSWEERSTAND

C;fd
 0.20 -
 F;f;Rd
 22.97 kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		3.09 /	
360.00		0.01	Ok
Lassen flens		48.00 /	
360.00		0.13	Ok
	N3 / N;j;Rd <= 1	114.85 /	
350.87	0.33	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.54 /	
13.33	0.27	Ok	
	V3 / F;v;Rd <= 1	2.87 /	
66.93	0.04	Ok	
Voetplaatdikte	t;min / t <= 1	1.00 /	
15.00	0.07	Ok	

BELASTINGEN

Fu.C.7; Knoop K18 N;3;Ed 114.03 kN M;3;Ed 0.00 kNm V;3;Ed 5.90 kN

BOUWGRENSEWERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
66.77	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		mm
268.00		
Schuifspanning parallel met de as van de las		
3.67		
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	
Reken capaciteit las	Sigma;HH,Ed	6.36 N/mm ²
Gamma;M2)	f;u / (Beta;w *	360.00 N/mm ²
Toegestane trekspanning	0.9 * f;u /	
Gamma;M2	0.00	N/mm ²
Flens		
Laslengte		mm
282.00		
Schuifspanning loodrecht op de as van de las		
-23.83		
Axiale spanning loodrecht op de keel		
-23.83		
Huber-Hencky-Von Mises	NEN-EN 1993-1-8	



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

(4.1)	Sigma;HH,Ed	47.66	N/mm ²
Rekencapaciteit las	f;u / (Beta;w *		
Gamma;M2)		360.00	N/mm ²
Toegestane trekspanning	0.9 * f;u /		
Gamma;M2		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

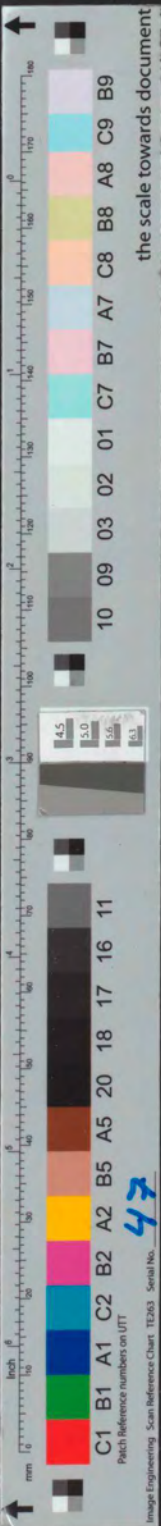
Projectie		Kort niet overlappen	
Vergrotingsfactor	NEN-EN1992-1-1		
(6.63)	(Ac1/Ac0) ^{1/2}	1.00	-
Rekenwaarde druksterkte van de fundering			
beton		f;cd	
20.00		N/mm ²	
Geconcentreerde			
weerstandskracht		F;Rdu	
800.00		kN	
Rekenwaarde voor de			
druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik			
breedte		c	
36.36		mm	
		F;c;Rd1	
142.46		kN	
		F;c;Rd2	
		65.95	kN
		F;c;Rd3	
142.46		kN	
		N;j;Rd	
350.87		kN	
Betondrukzone		Sigma;s;d	
3.52		N/mm ²	
Minimale			
voetplaatdikte		t;min	
1.00		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
22.81	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		6.36 /	
360.00		0.02	Ok
Lassen flens		47.66 /	
360.00		0.13	Ok
	N3 / N;j;Rd <= 1	114.03 /	
350.87	0.33	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.52 /	
13.33	0.26	Ok	
	V3 / F;v;Rd <= 1	5.90 /	
66.77	0.09	Ok	



Voetplaatdikte t;min / t <= 1 1.00 /
 15.00 0.07 Ok

BELASTINGEN

Fu.C.8; Knoop K18 N;3;Ed 114.52 kN M;3;Ed 0.00 kNm V;3;Ed 2.98
 kN

BOUWGRENSEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 66.86 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

LASSEN

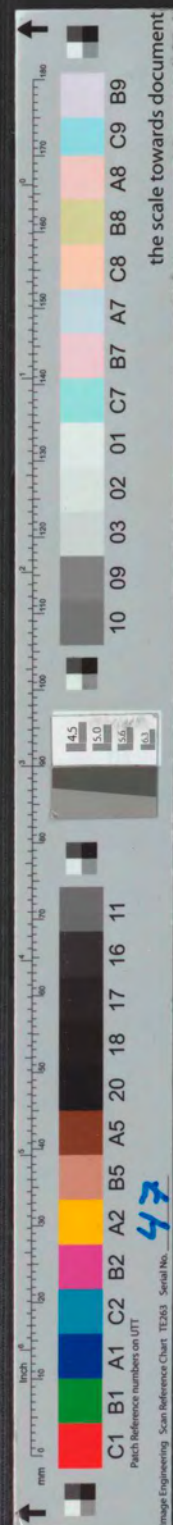
Lijf
 Laslengte 268.00 mm
 Schuifspanning parallel met de as van de
 las Tau;2
 1.85 N/mm²
 Huber-Hencky-Von Mises NEN-EN 1993-1-8
 (4.1) Sigma;HH,Ed 3.21 N/mm²
 Rekencapaciteit las f;u / (Beta;w *
 Gamma;M2) 360.00 N/mm²
 Toegestane trekspanning 0.9 * f;u /
 Gamma;M2 0.00 N/mm²
Flens
 Laslengte 282.00 mm
 Schuifspanning loodrecht op de as van de
 las Tau;1
 -23.93 N/mm²
 Axiale spanning loodrecht op de
 keel Sigma;1
 -23.93 N/mm²
 Huber-Hencky-Von Mises NEN-EN 1993-1-8
 (4.1) Sigma;HH,Ed 47.86 N/mm²
 Rekencapaciteit las f;u / (Beta;w *
 Gamma;M2) 360.00 N/mm²
 Toegestane trekspanning 0.9 * f;u /
 Gamma;M2 259.20 N/mm²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie Kort niet overlappen
 Vergrotingsfactor NEN-EN1992-1-1
 (6.63) (Ac1/Ac0)^{1/2} 1.00 -
 Rekenwaarde druksterkte van de fundering f;cd
 beton



20.00		N/mm ²	
Geconcentreerde			
weerstandskracht		F;Rdu	
800.00		kN	
Rekenwaarde voor de			
druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik			
breedte		c	
36.36		mm	
		F;c;Rd1	
142.46		kN	
		F;c;Rd2	
		65.95	kN
		F;c;Rd3	
142.46		kN	
		N;j;Rd	
350.87		kN	
Betondrukzone		Sigma;s;d	
3.53		N/mm ²	
Minimale			
voetplaatdikte		t;min	
1.00		mm	

WRIJVINGSWEERSTAND

C;fd		
0.20		-
F;f;Rd		
22.90		kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		3.21 /	
360.00		0.01	Ok
Lassen flens		47.86 /	
360.00		0.13	Ok
	N3 / N;j;Rd <= 1	114.52 /	
350.87	0.33	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.53 /	
13.33	0.27	Ok	
	V3 / F;v;Rd <= 1	2.98 /	
66.86	0.04	Ok	
Voetplaatdikte	t;min / t <= 1	1.00 /	
15.00	0.07	Ok	

BELASTINGEN

Fu.C.9; Knoop K18	N;3;Ed	113.71 kN	M;3;Ed	0.00 kNm	V;3;Ed	6.01
kN						

BOUTGRENSEWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
66.70	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN



Lijf

Laslengte				
268.00				mm
Schuifspanning parallel met de as van de las			Tau;2	
3.74			N/mm ²	
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8		
Reken capaciteit las		Sigma;HH,Ed	6.47	N/mm ²
Gamma;M2)			f;u / (Beta;w *	
Toegestane trekspanning			360.00	N/mm ²
Gamma;M2			0.9 * f;u /	
			0.00	N/mm ²

Flens

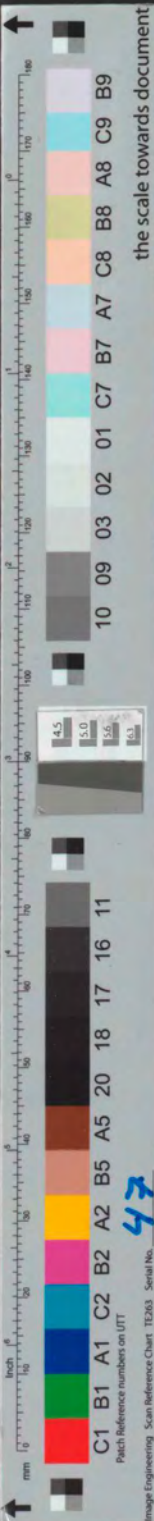
Laslengte				
282.00				mm
Schuifspanning loodrecht op de as van de las			Tau;1	
-23.76			N/mm ²	
Axiale spanning loodrecht op de keel			Sigma;1	
-23.76			N/mm ²	
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8		
Reken capaciteit las		Sigma;HH,Ed	47.52	N/mm ²
Gamma;M2)			f;u / (Beta;w *	
Toegestane trekspanning			360.00	N/mm ²
Gamma;M2			0.9 * f;u /	
			259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie				Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0)½	1.00	
Rekenwaarde druksterkte van de fundering beton			f;cd	
20.00			N/mm ²	
Geconcentreerde weerstandskracht			F;Rdu	
800.00			kN	
Rekenwaarde voor de druksterkte			f;jd	
13.33			N/mm ²	
Toegevoegde stuik breedte			c	
36.36			mm	
			F;c;Rd1	
142.46			kN	
			F;c;Rd2	
			65.95	kN
			F;c;Rd3	
142.46			kN	
			N;j;Rd	
350.87			kN	
Betondrukzone			Sigma;s;d	



3.51 N/mm²
 Minimale
 voetplaatdikte t;min
 1.00 mm

WRIJVINGSWEERSTAND

C;fd
 0.20 -
 F;f;Rd
 22.74 kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		6.47 /	
360.00		0.02	Ok
Lassen flens		47.52 /	
360.00		0.13	Ok
	N3 / N;j;Rd <= 1	113.71 /	
350.87	0.32	Ok	
Voegspanning	Sigma;s;d / f;j;d <= 1	3.51 /	
13.33	0.26	Ok	
	V3 / F;v;Rd <= 1	6.01 /	
66.70	0.09	Ok	
Voetplaatdikte	t;min / t <= 1	1.00 /	
15.00	0.07	Ok	

BELASTINGEN

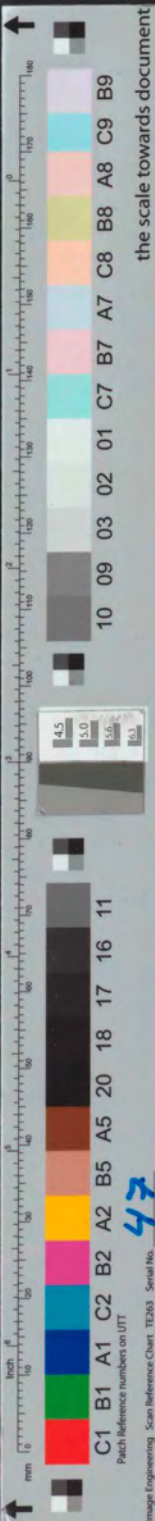
Fu.C.10; Knoop K18 N;3;Ed 113.72 kN M;3;Ed 0.00 kNm V;3;Ed 5.48 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
66.70	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		mm
268.00		
Schuifspanning parallel met de as van de		
las	Tau;2	
3.41	N/mm ²	
Huber-Hencky-Von Mises	NEN-EN 1993-1-8	
(4.1)	Sigma;HH,Ed	5.91 N/mm ²
Reken capaciteit las	f;u / (Beta;w *	
Gamma;M2)	360.00	N/mm ²
Toegestane trekspanning	0.9 * f;u /	
Gamma;M2	0.00	N/mm ²
Flens		
Laslengte		mm
282.00		
Schuifspanning loodrecht op de as van de		
las	Tau;1	
-23.76	N/mm ²	
Axiale spanning loodrecht op de		



keel -23.76			Sigma;1 N/mm ²	
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8		
Rekencapaciteit las Gamma;M2)		Sigma;HH,Ed	47.52	N/mm ²
Toegepaste trekspanning Gamma;M2			f;u / (Beta;w * 360.00	N/mm ²
			0.9 * f;u / 259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen	
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0)½	1.00	-
Rekenwaarde druksterkte van de fundering beton			f;cd	
20.00			N/mm ²	
Geconcentreerde weerstandskracht			F;Rdu	
800.00			kN	
Rekenwaarde voor de druksterkte			f;jd	
13.33			N/mm ²	
Toegevoegde stuik breedte			c	
36.36			mm	
142.46			F;c;Rd1	
			kN	
			F;c;Rd2	
			65.95	kN
			F;c;Rd3	
			kN	
142.46			N;j;Rd	
			kN	
350.87			Sigma;s;d	
Betondrukzone			N/mm ²	
3.51				
Minimale voetplaatdikte			t;min	
1.00			mm	

WRIJVINGSWEERSTAND

	C;fd	
	0.20	-
	F;f;Rd	
	22.74	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		5.91 /	
360.00		0.02	Ok
Lassen flens		47.52 /	
360.00		0.13	Ok
	N3 / N;j;Rd <= 1	113.72 /	
350.87	0.32	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.51 /	



13.33	0.26	Ok
	$V3 / F;v;Rd \leq 1$	5.48 /
66.70	0.08	Ok
Voetplaatdikte	$t; \min / t \leq 1$	1.00 /
15.00	0.07	Ok

BELASTINGEN

Fu.C.11; Knoop K18	N;3;Ed	132.14 kN	M;3;Ed	0.00 kNm	V;3;Ed	42.98
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
70.39	kN	
Trekcapaciteit	$\min(F;t;Rd,$	
B;p;Rd)	56.52	kN

LASSEN

Lijf

Laslengte			
268.00			mm
Schuifspanning parallel met de as van de las		Tau;2	
26.73		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
Reken capaciteit las	Sigma;HH,Ed	46.30	N/mm ²
Gamma;M2)		$f;u / (\text{Beta};w *$	
Toegestane trekspanning		360.00	N/mm ²
Gamma;M2)		$0.9 * f;u /$	
		0.00	N/mm ²

Flens

Laslengte			
282.00			mm
Schuifspanning loodrecht op de as van de las		Tau;1	
-27.61		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-27.61		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
Reken capaciteit las	Sigma;HH,Ed	55.22	N/mm ²
Gamma;M2)		$f;u / (\text{Beta};w *$	
Toegestane trekspanning		360.00	N/mm ²
Gamma;M2)		$0.9 * f;u /$	
		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie Kort niet overlappen



Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm ²	
20.00			
Geconcentreerde weerstandskracht		F;Rdu kN	
800.00			
Rekenwaarde voor de druksterkte		f;jd N/mm ²	
13.33			
Toegevoegde stuik breedte		c mm	
36.36			
142.46		F;c;Rd1 kN	
		F;c;Rd2 65.95	kN
142.46		F;c;Rd3 kN	
350.87		N;j;Rd kN	
Betondrukzone		Sigma;s;d N/mm ²	
4.08			
Minimale voetplaatdikte		t;min mm	
3.00			

WRIJVINGSWEERSTAND

C;fd	-
0.20	
F;f;Rd	kN
26.43	

EINDCONTROLE VOETPLAAT EN KOLOM

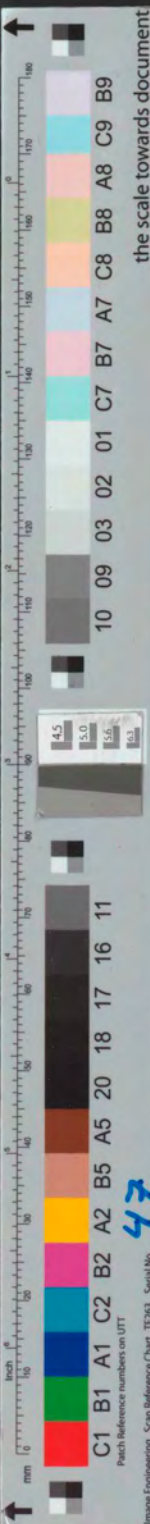
Lassen lijf		46.30 /	
360.00		0.13	Ok
Lassen flens		55.22 /	
360.00		0.15	Ok
	N3 / N;j;Rd <= 1	132.14 /	
350.87	0.38	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.08 /	
13.33	0.31	Ok	
	V3 / F;v;Rd <= 1	42.98 /	
70.39	0.61	Ok	
Voetplaatdikte	t;min / t <= 1	3.00 /	
15.00	0.20	Ok	

BELASTINGEN

Fu.C.12; Knoop K18	N;3;Ed	35.34 kN	M;3;Ed	0.00 kNm	V;3;Ed	36.59
kN						

BOUWGRENSEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
51.03	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN



LASSEN

Lijf

Laslengte				
268.00				mm
Schuifspanning parallel met de as van de las				
22.76			Tau;2	N/mm ²
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8		
Reken capaciteit las (Gamma;M2)		Sigma;HH,Ed	39.42	N/mm ²
Toegestane trekspanning			f;u / (Beta;w *	
Gamma;M2			360.00	N/mm ²
			0.9 * f;u /	
			0.00	N/mm ²

Flens

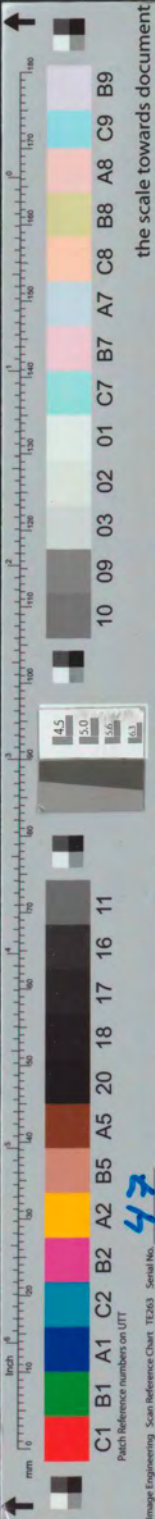
Laslengte				
282.00				mm
Schuifspanning loodrecht op de as van de las				
-7.39			Tau;1	N/mm ²
Axiale spanning loodrecht op de keel				
-7.39			Sigma;1	N/mm ²
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8		
Reken capaciteit las (Gamma;M2)		Sigma;HH,Ed	14.77	N/mm ²
Toegestane trekspanning			f;u / (Beta;w *	
Gamma;M2			360.00	N/mm ²
			0.9 * f;u /	
			259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0)½	1.00
Rekenwaarde druksterkte van de fundering beton			f;cd
20.00			N/mm ²
Geconcentreerde weerstandskracht			F;Rdu
800.00			kN
Rekenwaarde voor de druksterkte			f;jd
13.33			N/mm ²
Toegevoegde stuik breedte			c
36.36			mm
			F;c;Rd1
142.46			kN
			F;c;Rd2
			65.95
			F;c;Rd3
			kN



142.46		kN
		N;j;Rd
350.87		kN
Betondrukzone		Sigma;s;d
1.09		N/mm ²
Minimale		
voetplaatdikte	t;min	
3.00	mm	

WRIJVINGSWEERSTAND

C;fd	-
0.20	
F;f;Rd	
7.07	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		39.42 /	
360.00		0.11	Ok
Lassen flens		14.77 /	
360.00		0.04	Ok
	N3 / N;j;Rd <= 1	35.34 /	
350.87	0.10	Ok	
Voegspanning	Sigma;s;d / f;j;d <= 1	1.09 /	
13.33	0.08	Ok	
	V3 / F;v;Rd <= 1	36.59 /	
51.03	0.72	Ok	
Voetplaatdikte	t;min / t <= 1	3.00 /	
15.00	0.20	Ok	

BELASTINGEN

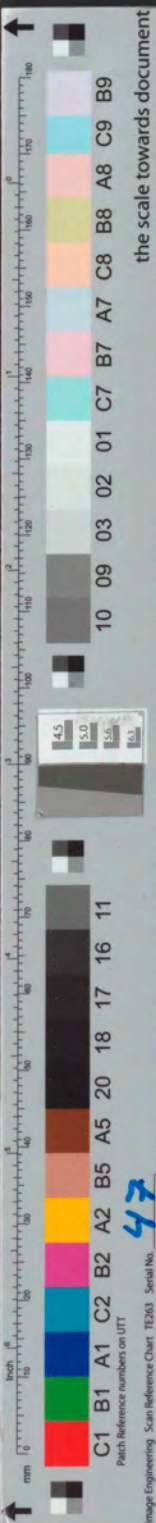
Fu.C.13; Knoop K18	N;3;Ed	89.10 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.39
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
61.78	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		mm
268.00		
Schuifspanning parallel met de as van de		
las	Tau;2	
2.11	N/mm ²	
Huber-Hencky-Von Mises	NEN-EN 1993-1-8	
(4.1)	Sigma;HH,Ed	3.65
Rekencapaciteit las	f;u / (Beta;w *	N/mm ²
Gamma;M2)	360.00	N/mm ²
Toegestane trekspanning	0.9 * f;u /	
Gamma;M2	0.00	N/mm ²
Flens		
Laslengte		mm
282.00		



Schuifspanning loodrecht op de as van de las				Tau;1	
-18.62				N/mm ²	
Axiale spanning loodrecht op de keel				Sigma;1	
-18.62				N/mm ²	
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8			
Reken capaciteit las Gamma;M2)		Sigma;HH,Ed	37.24		N/mm ²
Toegepaste trekspanning Gamma;M2			f;u / (Beta;w *		
			360.00		N/mm ²
			0.9 * f;u /		
			259.20		N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

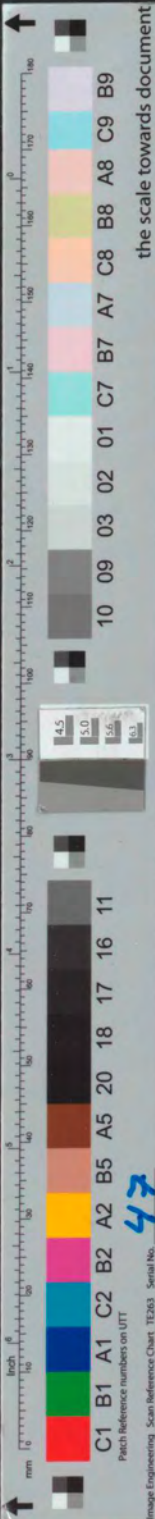
Projectie				Kort niet overlappen	
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0)½	1.00		-
Rekenwaarde druksterkte van de fundering beton			f;cd		
20.00			N/mm ²		
Geconcentreerde weerstandskracht			F;Rdu		
800.00			kN		
Rekenwaarde voor de druksterkte			f;jd		
13.33			N/mm ²		
Toegevoegde stuik breedte			c		
36.36			mm		
142.46			F;c;Rd1		
			kN		
			F;c;Rd2		kN
			65.95		
142.46			F;c;Rd3		
			kN		
			N;j;Rd		
350.87			kN		
Betondrukzone			Sigma;s;d		
2.75			N/mm ²		
Minimale voetplaatdikte			t;min		
1.00			mm		

WRIJVINGSWEERSTAND

C;fd		
0.20		-
F;f;Rd		
17.82		kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		3.65 /	
360.00		0.01	Ok
Lassen flens		37.24 /	



360.00			0.10	Ok
		N3 / N;j;Rd <= 1	89.10 /	
350.87		0.25	Ok	
Voegspanning		Sigma;s;d / f;jd <= 1	2.75 /	
13.33		0.21	Ok	
		V3 / F;v;Rd <= 1	3.39 /	
61.78		0.05	Ok	
Voetplaatdikte		t;min / t <= 1	1.00 /	
15.00		0.07	Ok	

BELASTINGEN

Fu.C.14; Knoop K18	N;3;Ed	86.44 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.26
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

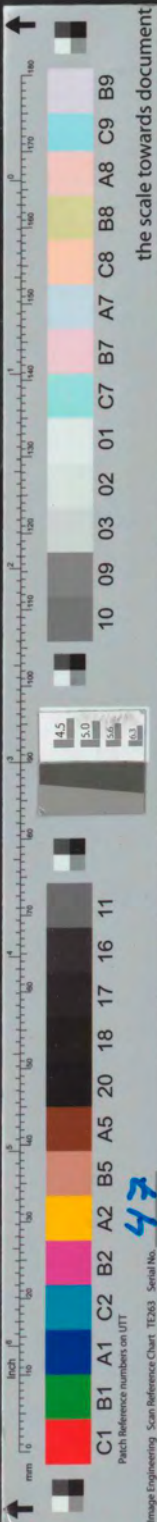
Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
61.25	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf			
Laslengte			mm
268.00			
Schuifspanning parallel met de as van de las		Tau;2	
2.03		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
Reken capaciteit las	Sigma;HH,Ed	3.52	N/mm ²
Gamma;M2)		f;u / (Beta;w *	
Toegestane trekspanning		360.00	N/mm ²
Gamma;M2		0.9 * f;u /	
		0.00	N/mm ²
Flens			
Laslengte			mm
282.00			
Schuifspanning loodrecht op de as van de las		Tau;1	
-18.06		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-18.06		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
Reken capaciteit las	Sigma;HH,Ed	36.13	N/mm ²
Gamma;M2)		f;u / (Beta;w *	
Toegestane trekspanning		360.00	N/mm ²
Gamma;M2		0.9 * f;u /	
		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²



VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm ²	
20.00			
Geconcentreerde weerstandskracht		F;Rdu kN	
800.00			
Rekenwaarde voor de druksterkte		f;jd N/mm ²	
13.33			
Toegevoegde stuik breedte		c mm	
36.36		F;c;Rd1 kN	
142.46		F;c;Rd2 65.95	kN
142.46		F;c;Rd3 kN	
350.87		N;j;Rd kN	
Betondrukzone		Sigma;s;d N/mm ²	
2.67			
Minimale voetplaatdikte		t;min mm	
1.00			

WRIJVINGSWEERSTAND

C;fd	-
0.20	
F;f;Rd	kN
17.29	

EINDCONTROLE VOETPLAAT EN KOLOM

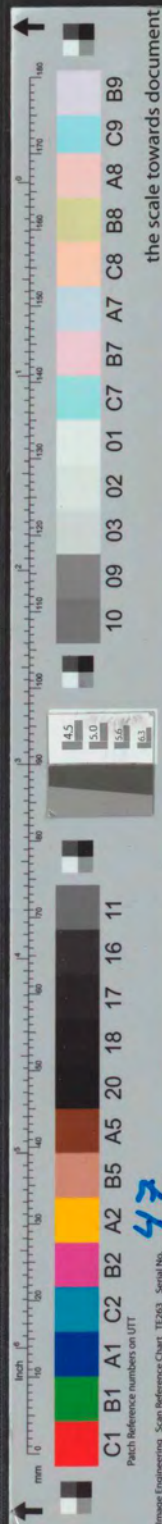
Lassen lijf		3.52 /	
360.00		0.01	Ok
Lassen flens		36.13 /	
360.00		0.10	Ok
	N3 / N;j;Rd <= 1	86.44 /	
350.87	0.25	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	2.67 /	
13.33	0.20	Ok	
	V3 / F;v;Rd <= 1	3.26 /	
61.25	0.05	Ok	
Voetplaatdikte	t;min / t <= 1	1.00 /	
15.00	0.07	Ok	

BELASTINGEN

Fu.C.15; Knoop K18	N;3;Ed	99.46 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.24

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	



63.85	kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52	kN

LASSEN

Lijf

Laslengte		
268.00		mm
Schuifspanning parallel met de as van de las	Tau;2	
2.02	N/mm ²	

Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	3.49	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w * 360.00	N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u / 0.00	N/mm ²

Flens

Laslengte			
282.00		mm	
Schuifspanning loodrecht op de as van de las	Tau;1		
-20.78	N/mm ²		
Axiale spanning loodrecht op de keel	Sigma;1		
-20.78	N/mm ²		
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	41.56	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w * 360.00	N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u / 259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½	1.00
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm ²
20.00		
Geconcentreerde weerstandskracht		F;Rdu kN
800.00		
Rekenwaarde voor de druksterkte		f;jd N/mm ²
13.33		
Toegevoegde stuik breedte		c mm
36.36		F;c;Rd1 kN
142.46		



142.46		F;c;Rd2	
		65.95	kN
350.87		F;c;Rd3	
Betondrukzone		kN	
3.07		N;j;Rd	
Minimale		kN	
voetplaatdikte		Sigma;s;d	
1.00		N/mm ²	
		t;min	
		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
19.89	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		3.49 /	
360.00		0.01	Ok
Lassen flens		41.56 /	
360.00		0.12	Ok
	N3 / N;j;Rd <= 1	99.46 /	
350.87	0.28	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.07 /	
13.33	0.23	Ok	
	V3 / F;v;Rd <= 1	3.24 /	
63.85	0.05	Ok	
Voetplaatdikte	t;min / t <= 1	1.00 /	
15.00	0.07	Ok	

BELASTINGEN

Fu.C.16; Knoop K18	N;3;Ed	99.13 kN	M;3;Ed	0.00 kNm	V;3;Ed	3.35
kN						

BOUTGREN斯WEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
63.79	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		
268.00		mm
Schuifspanning parallel met de as van de las		
2.08		Tau;2
Huber-Hencky-Von Mises		N/mm ²
(4.1)	NEN-EN 1993-1-8	
	Sigma;HH,Ed	3.61
		N/mm ²
Reken capaciteit las		f;u / (Beta;w *
Gamma;M2)		360.00
Toegestane trekspanning		0.9 * f;u /
Gamma;M2		0.00
		N/mm ²



Flens

Laslengte					
282.00					mm
Schuifspanning loodrecht op de as van de las				Tau;1	
-20.71				N/mm ²	
Axiale spanning loodrecht op de keel				Sigma;1	
-20.71				N/mm ²	
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8		41.43	N/mm ²
Rekencapaciteit las (Gamma;M2)		Sigma;HH,Ed		f;u / (Beta;w *	
360.00					N/mm ²
Toegestane trekspanning (Gamma;M2)				0.9 * f;u /	
259.20					N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie				Kort niet overlappen	
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0)½		1.00	-
Rekenwaarde druksterkte van de fundering beton				f;cd	
20.00				N/mm ²	
Geconcentreerde weerstandskracht				F;Rdu	
800.00				kN	
Rekenwaarde voor de druksterkte				f;jd	
13.33				N/mm ²	
Toegevoegde stuik breedte				c	
36.36				mm	
142.46				F;c;Rd1	
				kN	
				F;c;Rd2	
				65.95	kN
				F;c;Rd3	
				kN	
				N;j;Rd	
				kN	
350.87				Sigma;s;d	
Betondrukzone				N/mm ²	
3.06					
Minimale voetplaatdikte				t;min	
1.00				mm	

WRIJVINGSWEERSTAND

				C;fd	
				0.20	-
				F;f;Rd	
				19.83	kN

EINDCONTROLE VOETPLAAT EN KOLOM



CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

Lassen lijf		3.61 /	
360.00		0.01	Ok
Lassen flens		41.43 /	
360.00		0.12	Ok
	$N3 / N; j; Rd \leq 1$	99.13 /	
350.87	0.28	Ok	
Voegspanning	$\Sigma; s; d / f; j; d \leq 1$	3.06 /	
13.33	0.23	Ok	
	$V3 / F; v; Rd \leq 1$	3.35 /	
63.79	0.05	Ok	
Voetplaatdikte	$t; min / t \leq 1$	1.00 /	
15.00	0.07	Ok	

BELASTINGEN

Fu.C.17; Knoop K18 N;3;Ed 99.14 kN M;3;Ed 0.00 kNm V;3;Ed 2.82 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15	
mm	172.80	kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd		
63.79	kN		
Trekcapaciteit	min(F;t;Rd,		
B;p;Rd)	56.52		kN

LASSEN

Lijf			
Laslengte			mm
268.00			
Schuifspanning parallel met de as van de las		Tau;2	
1.76		N/mm ²	
Huber-Hencky-Von Mises	NEN-EN 1993-1-8		
(4.1)	Sigma;HH,Ed	3.04	N/mm ²
Rekencapaciteit las		f;u / (Beta;w *	
Gamma;M2)		360.00	N/mm ²
Toegepaste trekspanning		0.9 * f;u /	
Gamma;M2)		0.00	N/mm ²
Flens			
Laslengte			mm
282.00			
Schuifspanning loodrecht op de as van de las		Tau;1	
-20.72		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-20.72		N/mm ²	
Huber-Hencky-Von Mises	NEN-EN 1993-1-8		
(4.1)	Sigma;HH,Ed	41.43	N/mm ²
Rekencapaciteit las		f;u / (Beta;w *	
Gamma;M2)		360.00	N/mm ²
Toegepaste trekspanning		0.9 * f;u /	
Gamma;M2)		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²

Egelantierstraat 33 Utrecht

info@coreconstructies.nl

www.coreconstructies.nl

260



Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0)½	1.00
Rekenwaarde druksterkte van de fundering beton			f;cd N/mm ²
20.00			
Geconcentreerde weerstandskracht			F;Rdu kN
800.00			
Rekenwaarde voor de druksterkte			f;jd N/mm ²
13.33			
Toegevoegde stuik breedte			c mm
36.36			
142.46			F;c;Rd1 kN
			F;c;Rd2 65.95
			F;c;Rd3 kN
142.46			N;j;Rd kN
350.87			Sigma;s;d N/mm ²
Betondrukzone			
3.06			t;min mm
Minimale voetplaatdikte			
1.00			

WRIJVINGSWEERSTAND

C;fd	0.20	-
F;f;Rd	19.83	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf			3.04 /	
360.00			0.01	Ok
Lassen flens			41.43 /	
360.00			0.12	Ok
		N3 / N;j;Rd <= 1	99.14 /	
350.87		0.28	Ok	
Voegspanning		Sigma;s;d / f;jd <= 1	3.06 /	
13.33		0.23	Ok	
		V3 / F;v;Rd <= 1	2.82 /	
63.79		0.04	Ok	
Voetplaatdikte		t;min / t <= 1	1.00 /	
15.00		0.07	Ok	

BELASTINGEN

Fu.C.18; Knoop K18	N;3;Ed	98.32 kN	M;3;Ed	0.00 kNm	V;3;Ed	5.86
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
----------------	--------	------------------



mm	172.80	kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd		
63.62	kN		
Trekcapaciteit	min(F;t;Rd,		
B;p;Rd)	56.52		kN

LASSEN

Lijf

Laslengte				
268.00				mm
Schuifspanning parallel met de as van de las			Tau;2	
3.64			N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8			
	Sigma;HH,Ed	6.31		N/mm ²
Reken capaciteit las		f;u / (Beta;w *		
Gamma;M2)		360.00		N/mm ²
Toegestane trekspanning		0.9 * f;u /		
Gamma;M2		0.00		N/mm ²

Flens

Laslengte				
282.00				mm
Schuifspanning loodrecht op de as van de las			Tau;1	
-20.55			N/mm ²	
Axiale spanning loodrecht op de keel			Sigma;1	
-20.55			N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8			
	Sigma;HH,Ed	41.09		N/mm ²
Reken capaciteit las		f;u / (Beta;w *		
Gamma;M2)		360.00		N/mm ²
Toegestane trekspanning		0.9 * f;u /		
Gamma;M2		259.20		N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1	
Rekenwaarde druksterkte van de fundering		(Ac1/Ac0) ^{1/2}	1.00
beton			f;cd
20.00			N/mm ²
Geconcentreerde weerstandskracht			F;Rdu
800.00			kN
Rekenwaarde voor de druksterkte			f;jd
13.33			N/mm ²
Toegevoegde stuik breedte			c



36.36		mm	
		F;c;Rd1	
142.46		kN	
		F;c;Rd2	
		65.95	kN
		F;c;Rd3	
142.46		kN	
		N;j;Rd	
350.87		kN	
Betondrukzone		Sigma;s;d	
3.03		N/mm ²	
Minimale			
voetplaatdikte		t;min	
1.00		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
19.66	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		6.31 /	
360.00		0.02	Ok
Lassen flens		41.09 /	
360.00		0.11	Ok
	N3 / N;j;Rd <= 1	98.32 /	
350.87	0.28	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.03 /	
13.33	0.23	Ok	
	V3 / F;v;Rd <= 1	5.86 /	
63.62	0.09	Ok	
Voetplaatdikte	t;min / t <= 1	1.00 /	
15.00	0.07	Ok	

BELASTINGEN

Bi.C.1; Knoop K18	N;3;Ed	60.37 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.28
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
56.03	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		mm
268.00		
Schuifspanning parallel met de as van de las		Tau;2
1.42		N/mm ²
Huber-Hencky-Von Mises	NEN-EN 1993-1-8	
(4.1)	Sigma;HH,Ed	2.46
Reken capaciteit las	f;u / (Beta;w *	N/mm ²
Gamma;M2)	360.00	N/mm ²



Toegestane trekspanning Gamma;M2		0.9 * f;u / 0.00	N/mm ²
Flens			
Laslengte 282.00			mm
Schuifspanning loodrecht op de as van de las		Tau;1	
-12.61		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-12.61		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	25.23	N/mm ²
Rekencapaciteit las Gamma;M2)	Sigma;HH,Ed	f;u / (Beta;w *	
Toegestane trekspanning Gamma;M2)		360.00	N/mm ²
Toegestane trekspanning Gamma;M2)		0.9 * f;u / 259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm ²
20.00		
Geconcentreerde weerstandskracht		F;Rdu kN
800.00		
Rekenwaarde voor de druksterkte		f;jd N/mm ²
13.33		
Toegevoegde stuik breedte		c mm
36.36		
142.46		F;c;Rd1 kN
		F;c;Rd2 65.95
		F;c;Rd3 kN
142.46		N;j;Rd kN
350.87		Sigma;s;d N/mm ²
Betondrukzone 1.86		
Minimale voetplaatdikte		t;min mm
3.00		

WRIJVINGSWEERSTAND

C;fd	
0.20	
F;f;Rd	



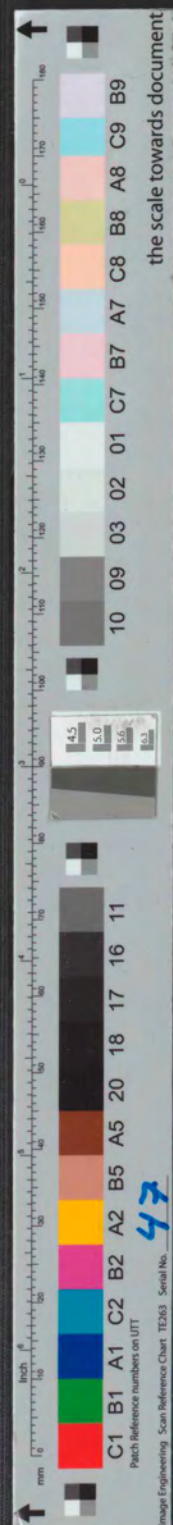
12.07 kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		2.46 /	
360.00		0.01	Ok
Lassen flens		25.23 /	
360.00		0.07	Ok
	$N3 / N; j; Rd \leq 1$	60.37 /	
350.87	0.17	Ok	
Voegspanning	$\Sigma \sigma; s; d / f; jd \leq 1$	1.86 /	
13.33	0.14	Ok	
	$V3 / F; v; Rd \leq 1$	2.28 /	
56.03	0.04	Ok	
Voetplaatdikte	$t; \min / t \leq 1$	3.00 /	
15.00	0.20	Ok	

OVERZICHT CONTROLES PER BELASTINGSGEVAL

Fu.C.1; Knoop
 K18
 Ok
 Fu.C.2; Knoop
 K18
 Ok
 Fu.C.3; Knoop
 K18
 Ok
 Fu.C.4; Knoop
 K18
 Ok
 Fu.C.5; Knoop
 K18
 Ok
 Fu.C.6; Knoop
 K18
 Ok
 Fu.C.7; Knoop
 K18
 Ok
 Fu.C.8; Knoop
 K18
 Ok
 Fu.C.9; Knoop
 K18
 Ok
 Fu.C.10; Knoop
 K18
 Ok
 Fu.C.11; Knoop
 K18
 Ok
 Fu.C.12; Knoop
 K18
 Ok
 Fu.C.13; Knoop
 K18
 Ok
 Fu.C.14; Knoop
 K18
 Ok



Fu.C.15; Knoop
 K18
 Ok
 Fu.C.16; Knoop
 K18
 Ok
 Fu.C.17; Knoop
 K18
 Ok

Fu.C.18; Knoop
 K18
 Ok
 Bl.C.1; Knoop
 K18
 Ok

SV24 (NEN-EN 1993-1-8:2009/NB:2011)

ALGEMEEN

Verbindings type Voetplaatverbinding
 Kolom HE160B (b = 160, h = 160, Ft = 13.0, Wt = 8.0)
 Materiaal S235
 Raamwerk Statisch bepaald
 Horizontale stijfheid Geschoord raamwerk
 Milieu Niet corrosief
 Laskwaliteit S235

VERBINDINGSONDERDELEN

	Breedte	Hoogte	Dikte	Las (h)
Plaat	180	180	15.0	6
	mm	mm	mm	mm

ANKERS: M16

Sterkte	5.6 (Gerold)		
Afstand	90 mm		
d;g;nom	18 mm		
	Afstand	Totale afstand	
Randafstand boutrij 1	90	90	
	mm	mm	

TUSSENAFSTANDEN VOLGENS NEN-EN 1993-1-8 TABEL 3.3

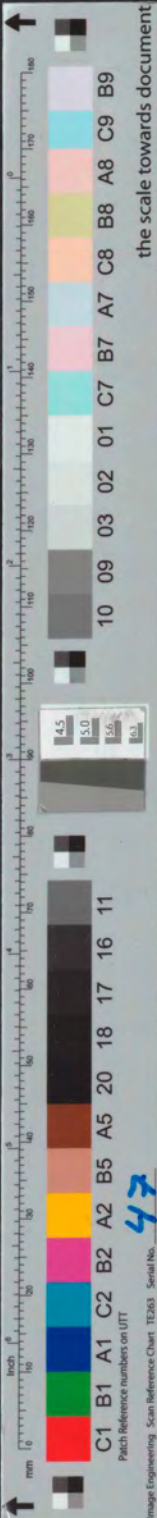
	Evenwijdig aan kracht		Loodrecht op kracht	
	minimaal	maximaal	minimaal	maximaal
Randafstand	22	Ongelimiteerd	22	Ongelimiteerd
Tussenafstand	40	200	43	200
	mm	mm	mm	mm

FUNDERING

Hoogte	600.00 mm	voegdikte	10.00 mm
d1	200.00 mm	b1	200.00 mm
d2	200.00 mm	b2	200.00 mm
d	200.00 mm	b	200.00 mm
Materiaal	C30/37		

BELASTINGEN

Fu.C.12; Knoop K18 kN	N;3;Ed	35.34 kN	M;3;Ed	0.00 kNm	V;3;Ed	36.59
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BOUWGRENSEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN	
51.03		
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52	kN

LASSEN

Lijf

Laslengte			
268.00			mm
Schuifspanning parallel met de as van de las		Tau;2 N/mm ²	
22.76			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	39.42	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w * 360.00	N/mm ²

Toegestane trekspanning
Gamma;M2

		0.9 * f;u / 0.00	N/mm ²
--	--	---------------------	-------------------

Flens

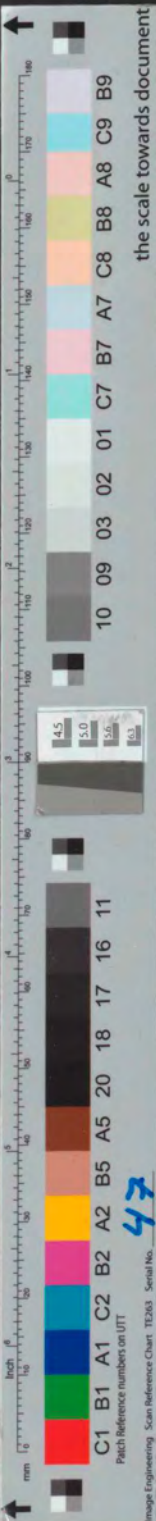
Laslengte			
282.00			mm
Schuifspanning loodrecht op de as van de las		Tau;1 N/mm ²	
-7.39			
Axiale spanning loodrecht op de keel		Sigma;1 N/mm ²	
-7.39			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	14.77	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w * 360.00	N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u / 259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	180.00 mm	59.36 mm	10684.37 mm ²
Lijf	80.72 mm	61.28 mm	4946.61 mm ²
Flens rechts	180.00 mm	59.36 mm	10684.37 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm ²
20.00		
Geconcentreerde weerstandskracht		F;Rdu kN
800.00		
Rekenwaarde voor de druksterkte		f;jd



13.33		N/mm ²	
Toegevoegde stuik			
breedte	c		
36.36	mm		
	F;c;Rd1		
142.46	kN		
	F;c;Rd2		
	65.95	kN	
	F;c;Rd3		
142.46	kN		
	N;j;Rd		
350.87	kN		
Betondrukzone	Sigma;s;d		
1.09	N/mm ²		
Minimale			
voetplaatdikte	t;min		
3.00	mm		

WRIJVINGSWEERSTAND

C;fd		
0.20	-	
F;f;Rd		
7.07	kN	

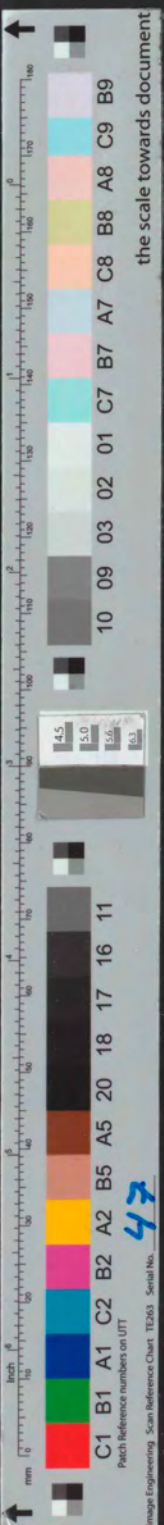
EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		39.42 /	
360.00		0.11	Ok
Lassen flens		14.77 /	
360.00		0.04	Ok
	N3 / N;j;Rd <= 1	35.34 /	
350.87	0.10	Ok	
Voegspanning	Sigma;s;d / f;j;d <= 1	1.09 /	
13.33	0.08	Ok	
	V3 / F;v;Rd <= 1	36.59 /	
51.03	0.72	Ok	
Voetplaatdikte	t;min / t <= 1	3.00 /	
15.00	0.20	Ok	

OVERZICHT CONTROLES PER BELASTINGSGEVAL

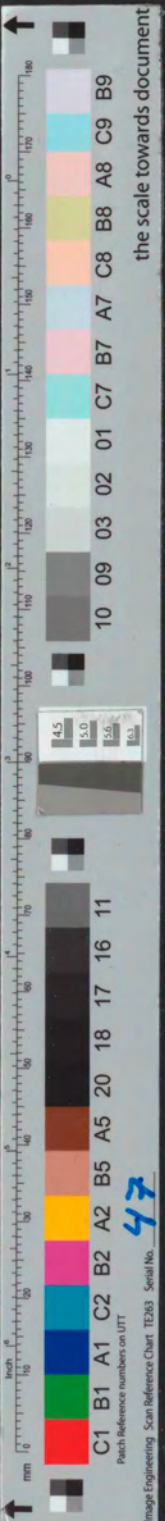
Fu.C.12; Knoop
 K18
 Ok

SV24 VIRTUEEL MODEL





SV24 TEKENING



WRIJVINGSWEERSTAND

C;fd	-
0.20	
F;f;Rd	
45.85	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.01 /	
360.00		0.00	Ok
Lassen flens		84.03 /	
360.00		0.23	Ok
	N3 / N;j;Rd <= 1	229.24 /	
498.62	0.46	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.74 /	
13.33	0.36	Ok	
	V3 / F;v;Rd <= 1	1.07 /	
89.81	0.01	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	

BELASTINGEN

Fu.C.4; Knoop K17	N;3;Ed	229.78 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.47
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
89.92	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

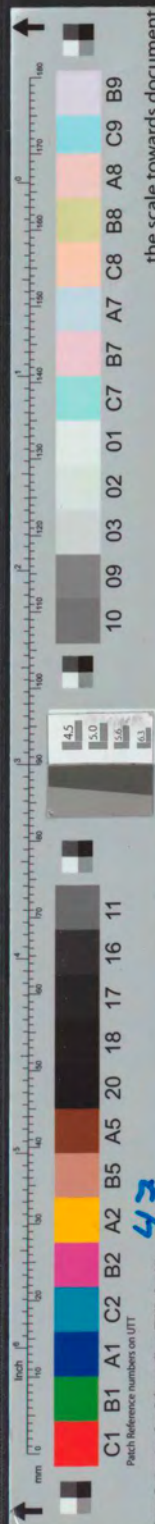
LASSEN

Lijf

Laslengte			
304.00			mm
Schuifspanning parallel met de as van de las		Tau;2	
1.36		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
Reken capaciteit las	Sigma;HH,Ed	2.35	N/mm ²
Gamma;M2)	f;u / (Beta;w *	360.00	N/mm ²
Toegestane trekspanning	0.9 * f;u /		
Gamma;M2	0.00		N/mm ²

Flens

Laslengte			
321.50			mm
Schuifspanning loodrecht op de as van de las		Tau;1	
-42.11		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-42.11		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
Reken capaciteit las	Sigma;HH,Ed	84.23	N/mm ²
	f;u / (Beta;w *		



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 Image Engineering Scan Reference Chart T2363 Serial No.

Gamma;M2)	360.00	N/mm ²
Toegestane trekspanning	0.9 * f _t /	
Gamma;M2	259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

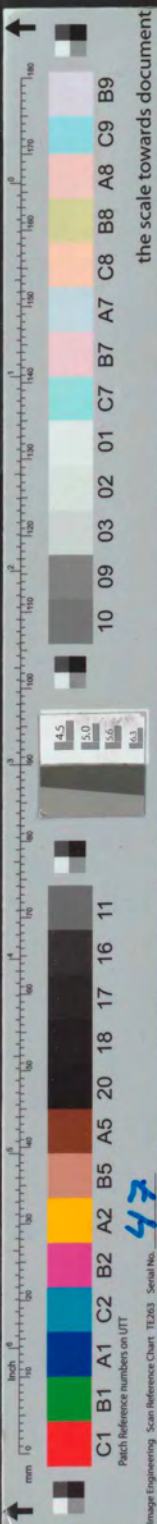
Projectie		Kort niet overlappen	
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00	-
Rekenwaarde druksterkte van de fundering beton		f _t ;cd	
20.00		N/mm ²	
Geconcentreerde weerstandskracht		F _t ;Rdu	1
568.00		kN	
Rekenwaarde voor de druksterkte		f _t ;jd	
13.33		N/mm ²	
Toegevoegde stuik breedte		c	
36.36		mm	
206.38		F _t ;c;Rd1	
		kN	
		F _t ;c;Rd2	
		85.86	kN
		F _t ;c;Rd3	
206.38		kN	
		N _t ;j;Rd	
498.62		kN	
Betondrukzone		Sigma _s ;s;d	
4.75		N/mm ²	
Minimale voetplaatdikte		t;min	
5.00		mm	

WRIJVINGSWEERSTAND

C _t ;fd		-
0.20		
F _t ;f;Rd		
45.96		kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		2.35 /	
360.00		0.01	Ok
Lassen flens		84.23 /	
360.00		0.23	Ok
	N ₃ / N _t ;j;Rd <= 1	229.78 /	
498.62	0.46	Ok	
Voegspanning	Sigma _s ;s;d / f _t ;jd <= 1	4.75 /	
13.33	0.36	Ok	
	V ₃ / F _t ;v;Rd <= 1	2.47 /	
89.92	0.03	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	



BELASTINGEN

Fu.C.5; Knoop K17 N;3;Ed 231.65 kN M;3;Ed 0.00 kNm V;3;Ed 1.29 kN

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand F;b;Rd Kopplaat; t = 15
 mm 172.80 kN
 Dwarskrachtcapaciteit (voor alle
 bouten) F;v;Rd
 90.29 kN
 Trekcapaciteit min(F;t;Rd,
 B;p;Rd) 56.52 kN

LASSEN

Lijf

Laslengte
 304.00 mm
 Schuifspanning parallel met de as van de
 las Tau;2
 0.71 N/mm²
 Huber-Hencky-Von Mises NEN-EN 1993-1-8
 (4.1) Sigma;HH,Ed 1.23 N/mm²
 Rekencapaciteit las f;u / (Beta;w *
 Gamma;M2) 360.00 N/mm²
 Toegestane trekspanning 0.9 * f;u /
 Gamma;M2 0.00 N/mm²

Flens

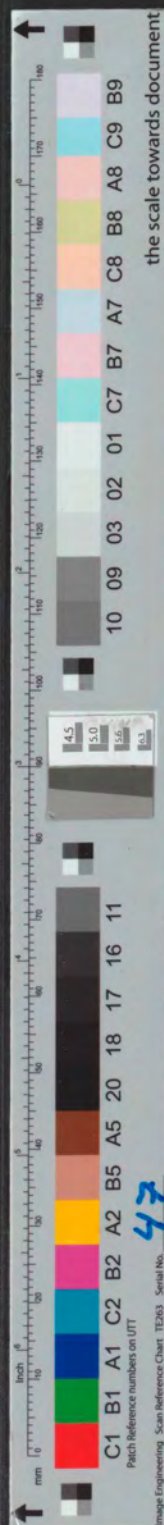
Laslengte
 321.50 mm
 Schuifspanning loodrecht op de as van de
 las Tau;1
 -42.46 N/mm²
 Axiale spanning loodrecht op de
 keel Sigma;1
 -42.46 N/mm²
 Huber-Hencky-Von Mises NEN-EN 1993-1-8
 (4.1) Sigma;HH,Ed 84.92 N/mm²
 Rekencapaciteit las f;u / (Beta;w *
 Gamma;M2) 360.00 N/mm²
 Toegestane trekspanning 0.9 * f;u /
 Gamma;M2 259.20 N/mm²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie Kort niet overlappen
 Vergrotingsfactor NEN-EN1992-1-1
 (6.63) (Ac1/Ac0)^{1/2} 1.00
 Rekenwaarde druksterkte van de fundering
 beton f;cd
 20.00 N/mm²



Geconcentreerde weerstandskracht	F;Rdu	1
568.00	kN	
Rekenwaarde voor de druksterkte	f _j d	
13.33	N/mm ²	
Toegevoegde stuikbreedte	c	
36.36	mm	
206.38	F;c;Rd1	
	kN	
	F;c;Rd2	
	85.86	kN
	F;c;Rd3	
206.38	kN	
	N;j;Rd	
498.62	kN	
Betondrukzone	Sigma;s;d	
4.79	N/mm ²	
Minimale voetplaatdikte	t;min	
5.00	mm	

WRIJVINGSWEERSTAND

C;fd	-
0.20	
F;f;Rd	
46.33	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.23 /	
360.00		0.00	Ok
Lassen flens		84.92 /	
360.00		0.24	Ok
	N3 / N;j;Rd <= 1	231.65 /	
498.62	0.46	Ok	
Voegspanning	Sigma;s;d / f _j d <= 1	4.79 /	
13.33	0.36	Ok	
	V3 / F;v;Rd <= 1	1.29 /	
90.29	0.01	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	

BELASTINGEN

Fu.C.6; Knoop K17	N;3;Ed	232.92 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.06
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
90.54	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf



the scale towards document

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 Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No.

Laslengte			
304.00			mm
Schuifspanning parallel met de as van de las			
0.58			Tau;2 N/mm ²
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed		
Reken capaciteit las			1.00 N/mm ²
Gamma;M2)			f;u / (Beta;w *
Toegestane trekspanning			360.00 N/mm ²
Gamma;M2			0.9 * f;u /
			0.00 N/mm ²

Flens

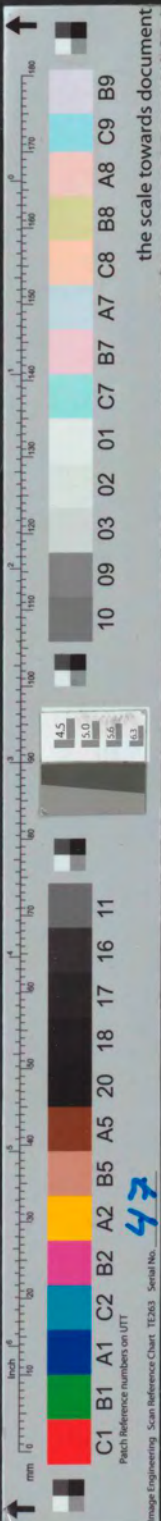
Laslengte			
321.50			mm
Schuifspanning loodrecht op de as van de las			
-42.69			Tau;1 N/mm ²
Axiale spanning loodrecht op de keel			
-42.69			Sigma;1 N/mm ²
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed		
Reken capaciteit las			85.38 N/mm ²
Gamma;M2)			f;u / (Beta;w *
Toegestane trekspanning			360.00 N/mm ²
Gamma;M2			0.9 * f;u /
			259.20 N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½		1.00
Rekenwaarde druksterkte van de fundering beton			f;cd N/mm ²
20.00			
Geconcentreerde weerstandskracht			F;Rdu
568.00			kN
Rekenwaarde voor de druksterkte			f;jd N/mm ²
13.33			
Toegevoegde stuik breedte			c mm
36.36			
206.38			F;c;Rd1 kN
			F;c;Rd2 85.86
			F;c;Rd3 kN
206.38			N;j;Rd kN
498.62			Sigma;s;d N/mm ²
Betondrukzone			
4.81			



Minimale
voetplaatdikte
5.00

t;min
mm

WRIJVINGSWEERSTAND

C;fd
0.20
F;f;Rd
46.58 kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.00 /	
360.00		0.00	Ok
Lassen flens		85.38 /	
360.00		0.24	Ok
	N3 / N;j;Rd <= 1	232.92 /	
498.62	0.47	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.81 /	
13.33	0.36	Ok	
	V3 / F;v;Rd <= 1	1.06 /	
90.54	0.01	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	

BELASTINGEN

Fu.C.7; Knoop K17 N;3;Ed 233.46 kN M;3;Ed 0.00 kNm V;3;Ed 2.46 kN

BOUFGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
90.65	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		mm
304.00		
Schuifspanning parallel met de as van de las		Tau;2 N/mm ²
1.35		
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	
Reken capaciteit las	Sigma;HH,Ed	2.34 N/mm ²
Gamma;M2)	f;u / (Beta;w *	360.00 N/mm ²
Toegestane trekspanning	0.9 * f;u /	0.00 N/mm ²
Gamma;M2		
Flens		
Laslengte		mm
321.50		
Schuifspanning loodrecht op de as van de las		Tau;1 N/mm ²
-42.79		
Axiale spanning loodrecht op de keel		Sigma;1 N/mm ²
-42.79		



Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	85.58	N/mm ²
Reken capaciteit las Gamma;M2	Sigma;HH,Ed	f;u / (Beta;w *	
Toegestane trekspanning Gamma;M2		360.00	N/mm ²
		0.9 * f;u /	
		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen	
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd	
20.00		N/mm ²	
Geconcentreerde weerstandskracht		F;Rdu	1
568.00		kN	
Rekenwaarde voor de druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik breedte		c	
36.36		mm	
206.38		F;c;Rd1	
		kN	
		F;c;Rd2	
		85.86	kN
206.38		F;c;Rd3	
		kN	
		N;j;Rd	
498.62		kN	
Betondrukzone		Sigma;s;d	
4.82		N/mm ²	
Minimale voetplaatdikte		t;min	
5.00		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
46.69	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		2.34 /	
360.00		0.01	Ok
Lassen flens		85.58 /	
360.00		0.24	Ok
	N3 / N;j;Rd <= 1	233.46 /	
498.62	0.47	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.82 /	
13.33	0.36	Ok	
	V3 / F;v;Rd <= 1	2.46 /	



90.65	0.03	Ok
Voetplaatdikte	t;min / t <= 1	5.00 /
15.00	0.33	Ok

BELASTINGEN

Fu.C.8; Knoop K17	N;3;Ed	231.40 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.12
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
90.24	kN	
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52	kN

LASSEN

Lijf

Laslengte				
304.00				mm
Schuifspanning parallel met de as van de las			Tau;2	
0.61			N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8			
Rekencapaciteit las (Gamma;M2)	Sigma;HH,Ed	1.06		N/mm ²
Toegestane trekspanning (Gamma;M2)		f;u / (Beta;w *		
		360.00		N/mm ²
		0.9 * f;u /		
		0.00		N/mm ²

Flens

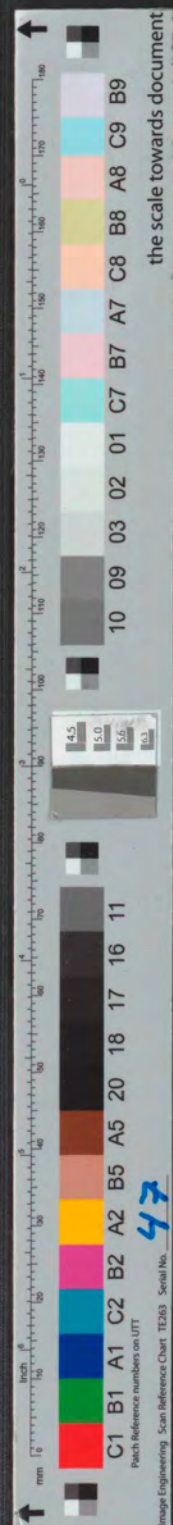
Laslengte				
321.50				mm
Schuifspanning loodrecht op de as van de las			Tau;1	
-42.41			N/mm ²	
Axiale spanning loodrecht op de keel			Sigma;1	
-42.41			N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8			
Rekencapaciteit las (Gamma;M2)	Sigma;HH,Ed	84.82		N/mm ²
Toegestane trekspanning (Gamma;M2)		f;u / (Beta;w *		
		360.00		N/mm ²
		0.9 * f;u /		
		259.20		N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1	
Rekenwaarde druksterkte van de fundering	(Ac1/Ac0) ^{1/2}	1.00



beton		f;cd	
20.00		N/mm ²	
Geconcentreerde weerstandskracht		F;Rdu	1
568.00		kN	
Rekenwaarde voor de druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik breedte		c	
36.36		mm	
		F;c;Rd1	
206.38		kN	
		F;c;Rd2	KN
		85.86	
		F;c;Rd3	
206.38		kN	
		N;j;Rd	
498.62		kN	
Betondrukzone		Sigma;s;d	
4.78		N/mm ²	
Minimale voetplaatdikte		t;min	
5.00		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
46.28	kN

EINDCONTROLE VOETPLAAT EN KOLOM

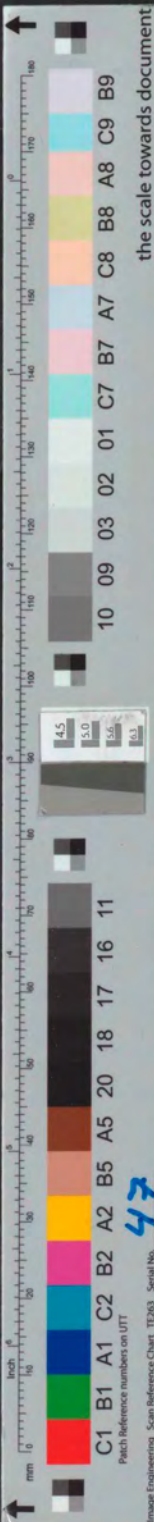
Lassen lijf		1.06 /	
360.00		0.00	Ok
Lassen flens		84.82 /	
360.00		0.24	Ok
	N3 / N;j;Rd <= 1	231.40 /	
498.62	0.46	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.78 /	
13.33	0.36	Ok	
	V3 / F;v;Rd <= 1	1.12 /	
90.24	0.01	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	

BELASTINGEN

Fu.C.9; Knoop K17	N;3;Ed	231.94 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.52
kN						

BOUTGREN斯WEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
90.35	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	KN



Betondrukzone	Sigma;s;d
4.79	N/mm ²
Minimale	
voetplaatdikte	t;min
5.00	mm

WRIJVINGSWEERSTAND

C;fd	-
0.20	
F;f;Rd	kN
46.39	

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		2.39 /	
360.00		0.01	Ok
Lassen flens		85.02 /	
360.00		0.24	Ok
	N3 / N;j;Rd <= 1	231.94 /	
498.62	0.47	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.79 /	
13.33	0.36	Ok	
	V3 / F;v;Rd <= 1	2.52 /	
90.35	0.03	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	

BELASTINGEN

Fu.C.10; Knoop K17	N;3;Ed	233.21 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.28
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
90.60	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		mm
304.00		
Schuifspanning parallel met de as van de		
las	Tau;2	
1.25	N/mm ²	
Huber-Hencky-Von Mises		
(4.1)	NEN-EN 1993-1-8	
Reken capaciteit las	Sigma;HH,Ed	2.17
Gamma;M2)		N/mm ²
Toegestane trekspanning	f;u / (Beta;w *	360.00
Gamma;M2	0.9 * f;u /	N/mm ²
	0.00	N/mm ²
Flens		
Laslengte		mm
321.50		
Schuifspanning loodrecht op de as van de		
las	Tau;1	
-42.74	N/mm ²	



Axiale spanning loodrecht op de keel			Sigma;1	
-42.74			N/mm ²	
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8		
Reken capaciteit las		Sigma;HH,Ed	85.49	N/mm ²
Gamma;M2			f;u / (Beta;w *	
Toegestane trekspanning			360.00	N/mm ²
Gamma;M2			0.9 * f;u /	
			259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen	
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00	-
Rekenwaarde druksterkte van de fundering beton			f;cd	
20.00			N/mm ²	
Geconcentreerde weerstandskracht			F;Rdu	1
568.00			kN	
Rekenwaarde voor de druksterkte			f;jd	
13.33			N/mm ²	
Toegevoegde stuik breedte			c	
36.36			mm	
206.38			F;c;Rd1	
			kN	
			F;c;Rd2	
			85.86	kN
206.38			F;c;Rd3	
			kN	
			N;j;Rd	
498.62			kN	
Betondrukzone			Sigma;s;d	
4.82			N/mm ²	
Minimale voetplaatdikte			t;min	
5.00			mm	

WRIJVINGSWEERSTAND

C;fd			
0.20			-
F;f;Rd			
46.64			kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf			2.17 /	
360.00			0.01	Ok
Lassen flens			85.49 /	
360.00			0.24	Ok
		N3 / N;j;Rd <= 1	233.21 /	
498.62		0.47	Ok	



Voegspanning 13.33	Sigma;s;d / f;jd <= 1	4.82 / Ok
	V3 / F;v;Rd <= 1	2.28 / Ok
90.60	0.03	Ok
Voetplaatdikte 15.00	t;min / t <= 1	5.00 / Ok
	0.33	Ok

BELASTINGEN

Fu.C.11; Knoop K17 kN	N;3;Ed	188.79 kN	M;3;Ed	0.00 kNm	V;3;Ed	7.88
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BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd	172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	81.72	kN
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52		kN

LASSEN

Lijf

Laslengte 304.00			mm
Schuifspanning parallel met de as van de las			
4.32		Tau;2 N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	7.48	N/mm ²
Reken capaciteit las Gamma;M2)		f;u / (Beta;w *	
Toegestane trekspanning Gamma;M2		360.00	N/mm ²
		0.9 * f;u /	
		0.00	N/mm ²

Flens

Laslengte 321.50			mm
Schuifspanning loodrecht op de as van de las			
-34.60		Tau;1 N/mm ²	
Axiale spanning loodrecht op de keel			
-34.60		Sigma;1 N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	69.21	N/mm ²
Reken capaciteit las Gamma;M2)		f;u / (Beta;w *	
Toegestane trekspanning Gamma;M2		360.00	N/mm ²
		0.9 * f;u /	
		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE



Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm ²	
20.00			
Geconcentreerde weerstandskracht		F;Rdu	1
568.00		kN	
Rekenwaarde voor de druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik breedte		c	
36.36		mm	
		F;c;Rd1	
206.38		kN	
		F;c;Rd2	
		85.86	kN
		F;c;Rd3	
206.38		kN	
		N;j;Rd	
498.62		kN	
Betondrukzone		Sigma;s;d	
3.90		N/mm ²	
Minimale voetplaatdikte		t;min	
2.00		mm	

WRIJVINGSWEERSTAND

		C;fd	
		0.20	-
		F;f;Rd	
		37.76	kN

EINDCONTROLE VOETPLAAT EN KOLOM

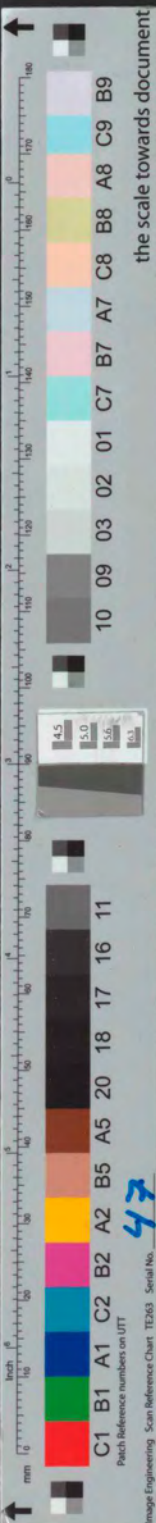
Lassen lijf		7.48 /	
360.00		0.02	Ok
Lassen flens		69.21 /	
360.00		0.19	Ok
	N3 / N;j;Rd <= 1	188.79 /	
498.62		0.38	Ok
Voegspanning	Sigma;s;d / f;jd <= 1	3.90 /	
13.33		0.29	Ok
	V3 / F;v;Rd <= 1	7.88 /	
81.72		0.10	Ok
Voetplaatdikte	t;min / t <= 1	2.00 /	
15.00		0.13	Ok

BELASTINGEN

Fu.C.12; Knoop K17	N;3;Ed	163.99 kN	M;3;Ed	0.00 kNm	V;3;Ed	10.42

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
76.76	kN	
Trekcapaciteit	min(F;t;Rd,	



B;p;Rd) 56.52 kN

LASSEN

Lijf

Laslengte
304.00 mm
 Schuifspanning parallel met de as van de las
5.71
 Tau;2
N/mm²
 Huber-Hencky-Von Mises (4.1) NEN-EN 1993-1-8
 Sigma;HH,Ed 9.89 N/mm²
 Rekencapaciteit las Gamma;M2 f;u / (Beta;w * 360.00 N/mm²
 Toegestane trekspanning Gamma;M2 0.9 * f;u / 0.00 N/mm²

Flens

Laslengte
321.50 mm
 Schuifspanning loodrecht op de as van de las
-30.06
 Tau;1
N/mm²
 Axiale spanning loodrecht op de keel
-30.06
 Sigma;1
N/mm²
 Huber-Hencky-Von Mises (4.1) NEN-EN 1993-1-8
 Sigma;HH,Ed 60.12 N/mm²
 Rekencapaciteit las Gamma;M2 f;u / (Beta;w * 360.00 N/mm²
 Toegestane trekspanning Gamma;M2 0.9 * f;u / 259.20 N/mm²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie Kort niet overlappen
 Vergrotingsfactor NEN-EN1992-1-1
 (Ac1/Ac0)^{1/2} 1.00 -
 Rekenwaarde druksterkte van de fundering beton f;cd
 20.00 N/mm²
 Geconcentreerde weerstandskracht F;Rdu 1
 568.00 kN
 Rekenwaarde voor de druksterkte f;jd
 13.33 N/mm²
 Toegevoegde stuik breedte c
 36.36 mm
 206.38 F;c;Rd1 kN
 F;c;Rd2 85.86 kN



206.38		F;c;Rd3	
		kN	
498.62		N;j;Rd	
Betondrukzone		kN	
3.39		Sigma;s;d	
Minimale		N/mm ²	
voetplaatdikte		t;min	
3.00		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
32.80	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		9.89 /	
360.00		0.03	Ok
Lassen flens		60.12 /	
360.00		0.17	Ok
	N3 / N;j;Rd <= 1	163.99 /	
498.62	0.33	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	3.39 /	
13.33	0.25	Ok	
	V3 / F;v;Rd <= 1	10.42 /	
76.76	0.14	Ok	
Voetplaatdikte	t;min / t <= 1	3.00 /	
15.00	0.20	Ok	

BELASTINGEN

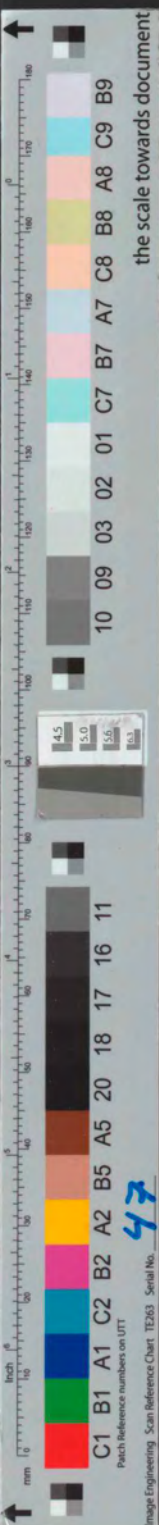
Fu.C.13; Knoop K17	N;3;Ed	187.47 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.35
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
81.45	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		mm
304.00		
Schuifspanning parallel met de as van de las		
0.74		Tau;2
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	N/mm ²
Reken capaciteit las	Sigma;HH,Ed	1.28
Gamma;M2)	f;u / (Beta;w *	N/mm ²
Toegestane trekspanning	360.00	N/mm ²
Gamma;M2	0.9 * f;u /	
Flens	0.00	N/mm ²
Laslengte		



321.50					mm
Schuifspanning loodrecht op de as van de las				Tau;1	
-34.36				N/mm ²	
Axiale spanning loodrecht op de keel				Sigma;1	
-34.36				N/mm ²	
Huber-Hencky-Von Mises (4.1)		NEN-EN 1993-1-8			
Reken capaciteit las		Sigma;HH,Ed	68.72		N/mm ²
Gamma;M2			f;u / (Beta;w *		
360.00					N/mm ²
Toegestane trekspanning			0.9 * f;u /		
Gamma;M2			259.20		N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen	
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0)½	1.00	-
Rekenwaarde druksterkte van de fundering beton			f;cd	
20.00			N/mm ²	
Geconcentreerde weerstandskracht			F;Rdu	1
568.00			kN	
Rekenwaarde voor de druksterkte			f;jd	
13.33			N/mm ²	
Toegevoegde stuik breedte			c	
36.36			mm	
206.38			F;c;Rd1	
			kN	
			F;c;Rd2	
			85.86	kN
			F;c;Rd3	
			kN	
			N;j;Rd	
			kN	
498.62			Sigma;s;d	
Betondrukzone			N/mm ²	
3.87				
Minimale voetplaatdikte			t;min	
3.00			mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
37.49	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.28 /
360.00		0.00 Ok



Lassen flens		68.72 /	
360.00		0.19	Ok
	$N3 / N;j;Rd \leq 1$	187.47 /	
498.62	0.38	Ok	
Voegspanning	$\Sigma\sigma;s;d / f;jd \leq 1$	3.87 /	
13.33	0.29	Ok	
	$V3 / F;v;Rd \leq 1$	1.35 /	
81.45	0.02	Ok	
Voetplaatdikte	$t;min / t \leq 1$	3.00 /	
15.00	0.20	Ok	

BELASTINGEN

Fu.C.14; Knoop K17	N;3;Ed	201.10 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.26
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

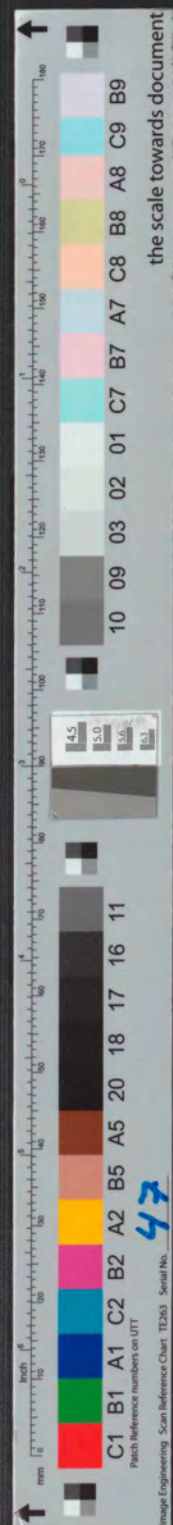
Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
84.18	kN	
Trekcapaciteit	$\min(F;t;Rd,$	
B;p;Rd)	56.52	kN

LASSEN

Lijf			
Laslengte			mm
304.00			
Schuifspanning parallel met de as van de las		$\tau;2$	
0.69		N/mm^2	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
	$\Sigma\sigma;HH,Ed$	1.20	N/mm^2
Reken capaciteit las		$f;u / (\beta;w *$	
Gamma;M2)		360.00	N/mm^2
Toegestane trekspanning		$0.9 * f;u /$	
Gamma;M2		0.00	N/mm^2
Flens			
Laslengte			mm
321.50			
Schuifspanning loodrecht op de as van de las		$\tau;1$	
-36.86		N/mm^2	
Axiale spanning loodrecht op de keel		$\Sigma\sigma;1$	
-36.86		N/mm^2	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8		
	$\Sigma\sigma;HH,Ed$	73.72	N/mm^2
Reken capaciteit las		$f;u / (\beta;w *$	
Gamma;M2)		360.00	N/mm^2
Toegestane trekspanning		$0.9 * f;u /$	
Gamma;M2		259.20	N/mm^2

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²



VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm²	
20.00			
Geconcentreerde weerstandskracht		F;Rdu kN	1
568.00			
Rekenwaarde voor de druksterkte		f;jd N/mm²	
13.33			
Toegevoegde stuik breedte		c mm	
36.36		F;c;Rd1 kN	
206.38		F;c;Rd2 85.86 F;c;Rd3 kN	kN
206.38		N;j;Rd kN	
498.62		Sigma;s;d N/mm²	
Betondrukzone 4.15			
Minimale voetplaatdikte		t;min mm	
4.00			

WRIJVINGSWEERSTAND

C;fd	-
0.20	
F;f;Rd	kN
40.22	

EINDCONTROLE VOETPLAAT EN KOLOM

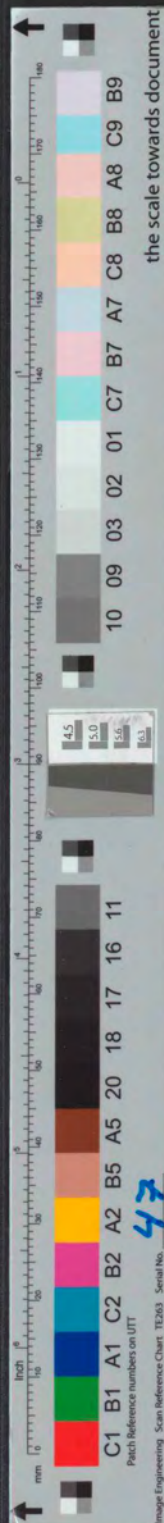
Lassen lijf		1.20 /	
360.00		0.00	Ok
Lassen flens		73.72 /	
360.00		0.20	Ok
	N3 / N;j;Rd <= 1	201.10 /	
498.62	0.40	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.15 /	
13.33	0.31	Ok	
	V3 / F;v;Rd <= 1	1.26 /	
84.18	0.02	Ok	
Voetplaatdikte	t;min / t <= 1	4.00 /	
15.00	0.27	Ok	

BELASTINGEN

Fu.C.15; Knoop K17	N;3;Ed	204.78 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.25
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		



bouten)	F;v;Rd		
84.92	kN		
Trekcapaciteit	min(F;t;Rd,		
B;p;Rd)	56.52		kN

LASSEN

Lijf

Laslengte			
304.00			mm
Schuifspanning parallel met de as van de las		Tau;2	
0.69		N/mm ²	

Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	1.19	N/mm ²
Rekencapaciteit las (Gamma;M2)	Sigma;HH,Ed	f;u / (Beta;w *	
360.00		360.00	N/mm ²
Toegestane trekspanning (Gamma;M2)		0.9 * f;u /	
0.00			N/mm ²

Flens

Laslengte			
321.50			mm
Schuifspanning loodrecht op de as van de las		Tau;1	
-37.53		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-37.53		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	75.07	N/mm ²
Rekencapaciteit las (Gamma;M2)	Sigma;HH,Ed	f;u / (Beta;w *	
360.00		360.00	N/mm ²
Toegestane trekspanning (Gamma;M2)		0.9 * f;u /	
259.20			N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1	1.00	-
Rekenwaarde druksterkte van de fundering beton	(Ac1/Ac0) ^{1/2}		
20.00		f;cd	
Geconcentreerde weerstandskracht		N/mm ²	
568.00		F;Rdu	1
Rekenwaarde voor de druksterkte		kN	
13.33		f;jd	
Toegevoegde stuik breedte		N/mm ²	
36.36		c	
		mm	
		F;c;Rd1	



206.38		kN	
		F;c;Rd2	
		85.86	kN
206.38		F;c;Rd3	
		kN	
498.62		N;j;Rd	
Betondrukzone		kN	
4.23		Sigma;s;d	
Minimale		N/mm ²	
voetplaatdikte		t;min	
4.00		mm	

WRIJVINGSWEERSTAND

C;fd		-
0.20		
F;f;Rd		
40.96		kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.19 /	
360.00		0.00	Ok
Lassen flens		75.07 /	
360.00		0.21	Ok
	N3 / N;j;Rd <= 1	204.78 /	
498.62		0.41	Ok
Voegspanning	Sigma;s;d / f;j;d <= 1	4.23 /	
13.33		0.32	Ok
	V3 / F;v;Rd <= 1	1.25 /	
84.92		0.01	Ok
Voetplaatdikte	t;min / t <= 1	4.00 /	
15.00		0.27	Ok

BELASTINGEN

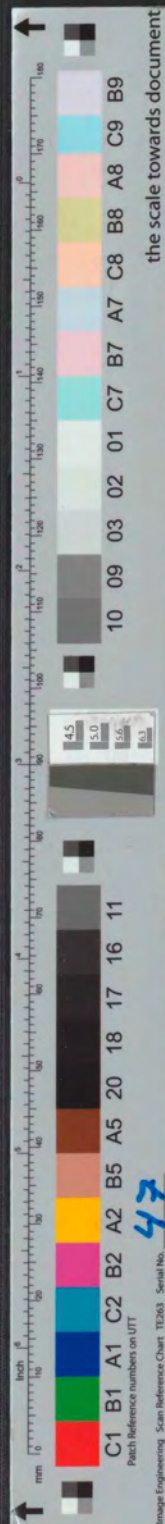
Fu.C.16; Knoop K17	N;3;Ed	203.26 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.31
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
84.61	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		
304.00		mm
Schuifspanning parallel met de as van de		
las		
0.72		
Huber-Hencky-Von Mises	NEN-EN 1993-1-8	
(4.1)	Sigma;HH,Ed	1.24 N/mm ²
Reken capaciteit las		
Gamma;M2)		f;u / (Beta;w *
Toegestane trekspanning		360.00 N/mm ²
		0.9 * f;u /



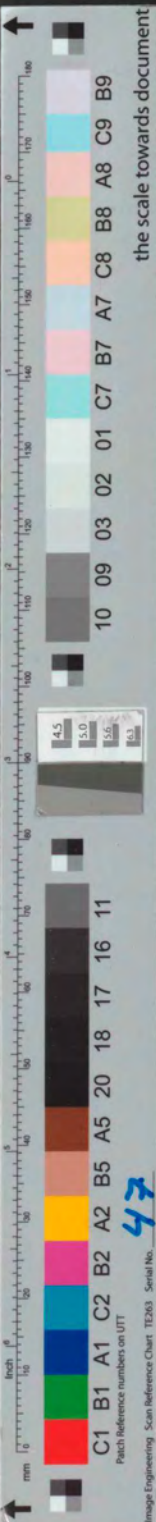
Gamma;M2		0.00	N/mm ²
Flens			
Laslengte			mm
321.50			
Schuifspanning loodrecht op de as van de las		Tau;1	
-37.25		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-37.25		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	74.51	N/mm ²
Rekencapaciteit las (Gamma;M2)	Sigma;HH,Ed	f;u / (Beta;w *	
360.00		360.00	N/mm ²
Toegestane trekspanning (Gamma;M2)		0.9 * f;u /	
259.20		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1	1.00	-
Rekenwaarde druksterkte van de fundering beton	(Ac1/Ac0) ^{1/2}	f;cd	
20.00		N/mm ²	
Geconcentreerde weerstandskracht		F;Rdu	1
568.00		kN	
Rekenwaarde voor de druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik breedte		c	
36.36		mm	
206.38		F;c;Rd1	
		kN	
		F;c;Rd2	
		85.86	kN
		F;c;Rd3	
206.38		kN	
		N;j;Rd	
498.62		kN	
Betondrukzone		Sigma;s;d	
4.20		N/mm ²	
Minimale voetplaatdikte		t;min	
4.00		mm	
WRIJVINGSWEERSTAND		C;fd	
		0.20	-
		F;f;Rd	
		40.65	kN



EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.24 /	
360.00		0.00	Ok
Lassen flens		74.51 /	
360.00		0.21	Ok
	N3 / N;j;Rd <= 1	203.26 /	
498.62	0.41	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.20 /	
13.33	0.31	Ok	
	V3 / F;v;Rd <= 1	1.31 /	
84.61	0.02	Ok	
Voetplaatdikte	t;min / t <= 1	4.00 /	
15.00	0.27	Ok	

BELASTINGEN

Fu.C.17; Knoop K17	N;3;Ed	204.53 kN	M;3;Ed	0.00 kNm	V;3;Ed	1.07
kN						

BOUWGRENSEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle		
bouten)	F;v;Rd	
84.87	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf			
Laslengte			
304.00			mm
Schuifspanning parallel met de as van de			
las		Tau;2	
0.59		N/mm ²	
Huber-Hencky-Von Mises	NEN-EN 1993-1-8		
(4.1)	Sigma;HH,Ed	1.02	N/mm ²
Reken capaciteit las		f;u / (Beta;w *	
Gamma;M2)		360.00	N/mm ²
Toegestane trekspanning		0.9 * f;u /	
Gamma;M2)		0.00	N/mm ²
Flens			
Laslengte			
321.50			mm
Schuifspanning loodrecht op de as van de			
las		Tau;1	
-37.49		N/mm ²	
Axiale spanning loodrecht op de			
keel		Sigma;1	
-37.49		N/mm ²	
Huber-Hencky-Von Mises	NEN-EN 1993-1-8		
(4.1)	Sigma;HH,Ed	74.97	N/mm ²
Reken capaciteit las		f;u / (Beta;w *	
Gamma;M2)		360.00	N/mm ²
Toegestane trekspanning		0.9 * f;u /	
Gamma;M2)		259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
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CORE CONSTRUCTIES

Project: Willemsparkweg 220 Amsterdam
 Onderdeel: Doorbraken
 Opdrachtgever: Structure Engineering
 Projectnummer: 17021
 Versie: 26-03-2017

Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00
Rekenwaarde druksterkte van de fundering beton	20.00		f;cd N/mm ²
Geconcentreerde weerstandskracht	568.00		F;Rdu kN
Rekenwaarde voor de druksterkte	13.33		f;jd N/mm ²
Toegevoegde stuk breedte	36.36		c mm
	206.38		F;c;Rd1 kN
	206.38		F;c;Rd2 85.86 kN
	206.38		F;c;Rd3 kN
	498.62		N;j;Rd kN
Betondrukzone	4.23		Sigma;s;d N/mm ²
Minimale voetplaatdikte	4.00		t;min mm

WRIJVINGSWEERSTAND

C;fd	0.20	-
F;f;Rd	40.91	kN

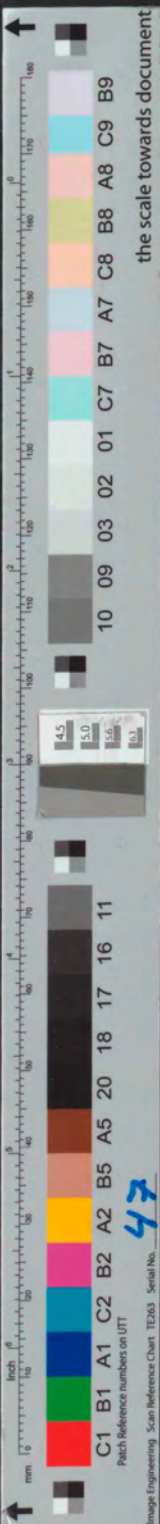
EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		1.02 /	
360.00		0.00	Ok
Lassen flens		74.97 /	
360.00		0.21	Ok
		N3 / N;j;Rd <= 1	204.53 /
498.62		0.41	Ok
Voegspanning		Sigma;s;d / f;jd <= 1	4.23 /
13.33		0.32	Ok
		V3 / F;v;Rd <= 1	1.07 /
84.87		0.01	Ok
Voetplaatdikte		t;min / t <= 1	4.00 /
15.00		0.27	Ok

BELASTINGEN

Fu.C.18; Knoop K17	N;3;Ed	205.07 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.48
kN						

BOUFGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4



Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN	
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN		
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52		kN

LASSEN

Lijf

Laslengte			
304.00			mm
Schuifspanning parallel met de as van de las		Tau;2 N/mm ²	
1.36			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	2.35	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w *	
360.00			N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u /	
0.00			N/mm ²

Flens

Laslengte			
321.50			mm
Schuifspanning loodrecht op de as van de las		Tau;1 N/mm ²	
-37.59			
Axiale spanning loodrecht op de keel		Sigma;1 N/mm ²	
-37.59			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	75.17	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w *	
360.00			N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u /	
259.20			N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie			Kort niet overlappen
Vergrotingsfactor (6.63)		NEN-EN1992-1-1 (Ac1/Ac0) ^{1/2}	1.00
Rekenwaarde druksterkte van de fundering beton			f;cd N/mm ²
20.00			
Geconcentreerde weerstandskracht			F;Rdu kN
568.00			1
Rekenwaarde voor de druksterkte			f;jd N/mm ²
13.33			
Toegevoegde stuik			



breedte		c	
36.36		mm	
		F;c;Rd1	
206.38		kN	
		F;c;Rd2	
		85.86	kN
		F;c;Rd3	
206.38		kN	
		N;j;Rd	
498.62		kN	
Betondrukzone		Sigma;s;d	
4.24		N/mm ²	
Minimale			
voetplaatdikte		t;min	
4.00		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
41.01	kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		2.35 /	
360.00		0.01	Ok
Lassen flens		75.17 /	
360.00		0.21	Ok
	N3 / N;j;Rd <= 1	205.07 /	
498.62	0.41	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.24 /	
13.33	0.32	Ok	
	V3 / F;v;Rd <= 1	2.48 /	
84.97	0.03	Ok	
Voetplaatdikte	t;min / t <= 1	4.00 /	
15.00	0.27	Ok	

BELASTINGEN

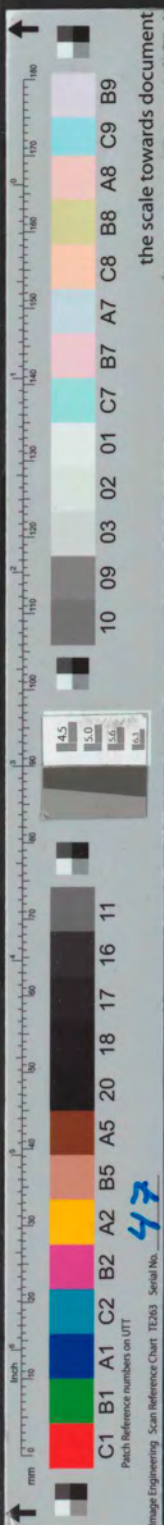
Bi.C.1; Knoop K17	N;3;Ed	126.67 kN	M;3;Ed	0.00 kNm	V;3;Ed	0.90
kN						

BOUTGRENSWEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand	F;b;Rd	Kopplaat; t = 15
mm	172.80	kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd	
69.29	kN	
Trekcapaciteit	min(F;t;Rd,	
B;p;Rd)	56.52	kN

LASSEN

Lijf		
Laslengte		mm
304.00		
Schuifspanning parallel met de as van de las		Tau;2
0.50		N/mm ²
Huber-Hencky-Von Mises	NEN-EN 1993-1-8	
(4.1)	Sigma;HH,Ed	0.86
Reken capaciteit las		f;u / (Beta;w *
		N/mm ²



the scale towards document

Gamma;M2)		360.00	N/mm ²
Toegestane trekspanning		0.9 * f;u /	
Gamma;M2		0.00	N/mm ²
Flens			
Laslengte			mm
321.50			
Schuifspanning loodrecht op de as van de las		Tau;1	
-23.22		N/mm ²	
Axiale spanning loodrecht op de keel		Sigma;1	
-23.22		N/mm ²	
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8	46.43	N/mm ²
Rekencapaciteit las	Sigma;HH,Ed	f;u / (Beta;w *	
Gamma;M2)		360.00	N/mm ²
Toegestane trekspanning		0.9 * f;u /	
Gamma;M2		259.20	N/mm ²

STUIKOPPERVLAKTE

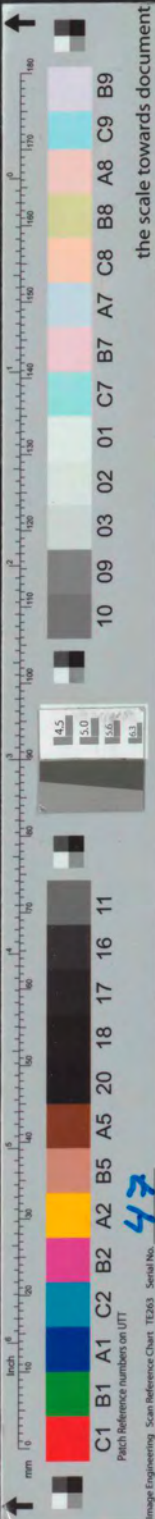
Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen	
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½	1.00	-
Rekenwaarde druksterkte van de fundering beton		f;cd	
20.00		N/mm ²	
Geconcentreerde weerstandskracht		F;Rdu	1
568.00		kN	
Rekenwaarde voor de druksterkte		f;jd	
13.33		N/mm ²	
Toegevoegde stuik breedte		c	
36.36		mm	
206.38		F;c;Rd1	
		kN	
		F;c;Rd2	
		85.86	kN
206.38		F;c;Rd3	
		kN	
		N;j;Rd	
498.62		kN	
Betondrukzone		Sigma;s;d	
2.62		N/mm ²	
Minimale voetplaatdikte		t;min	
2.00		mm	

WRIJVINGSWEERSTAND

C;fd		
0.20		



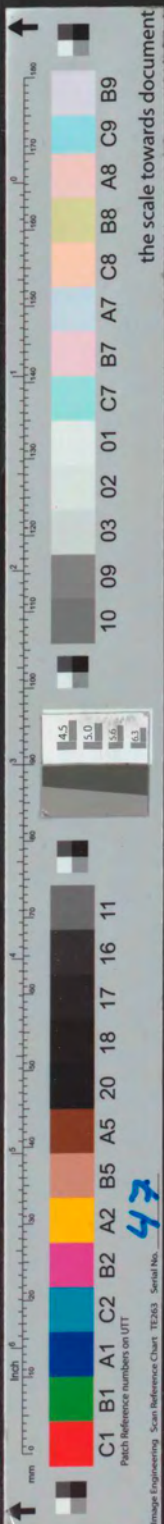
F;f;Rd
 25.33 kN

EINDCONTROLE VOETPLAAT EN KOLOM

Lassen lijf		0.86 /	
360.00		0.00	Ok
Lassen flens		46.43 /	
360.00		0.13	Ok
	N3 / N;j;Rd <= 1	126.67 /	
498.62	0.25	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	2.62 /	
13.33	0.20	Ok	
	V3 / F;v;Rd <= 1	0.90 /	
69.29	0.01	Ok	
Voetplaatdikte	t;min / t <= 1	2.00 /	
15.00	0.13	Ok	

OVERZICHT CONTROLES PER BELASTINGSGEVAL

Fu.C.1; Knoop
 K17
 Ok
 Fu.C.2; Knoop
 K17
 Ok
 Fu.C.3; Knoop
 K17
 Ok
 Fu.C.4; Knoop
 K17
 Ok
 Fu.C.5; Knoop
 K17
 Ok
 Fu.C.6; Knoop
 K17
 Ok
 Fu.C.7; Knoop
 K17
 Ok
 Fu.C.8; Knoop
 K17
 Ok
 Fu.C.9; Knoop
 K17
 Ok
 Fu.C.10; Knoop
 K17
 Ok
 Fu.C.11; Knoop
 K17
 Ok
 Fu.C.12; Knoop
 K17
 Ok
 Fu.C.13; Knoop
 K17
 Ok
 Fu.C.14; Knoop
 K17



the scale towards document

Image Engineering Scan Reference Chart TE263 Serial No. 47

Ok
 Fu.C.15; Knoop
 K17
 Ok
 Fu.C.16; Knoop
 K17
 Ok
 Fu.C.17; Knoop
 K17
 Ok

Fu.C.18; Knoop
 K17
 Ok
 Bi.C.1; Knoop
 K17
 Ok

SV18 (NEN-EN 1993-1-8:2009/NB:2011)

ALGEMEEN

Verbindings type Voetplaatverbinding
 Kolom HE180B (b = 180, h = 180, Ft = 14.0, Wt = 8.5)
 Materiaal S235
 Raamwerk Statisch bepaald
 Horizontale stijfheid Geschoord raamwerk
 Milieu Niet corrosief
 Laskwaliteit S235

VERBINDINGSONDERDELEN

	Breedte	Hoogte	Dikte	Las (h)
Plaat	220	220	15.0	6
	mm	mm	mm	mm

ANKERS: M16

Sterkte	5.6 (Gerold)		
Afstand	100 mm		
d;g;nom	18 mm		
	Afstand	Totale afstand	
Randafstand boutrij 1	110	110	
	mm	mm	

TUSSENAFSTANDEN VOLGENS NEN-EN 1993-1-8 TABEL 3.3

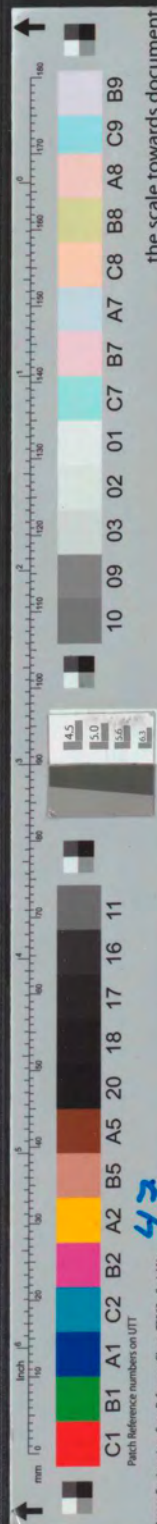
	Evenwijdig aan kracht		Loodrecht op kracht	
	minimaal	maximaal	minimaal	maximaal
Randafstand	22	Ongelimiteerd	22	Ongelimiteerd
Tussenafstand	40	200	43	200
	mm	mm	mm	mm

FUNDERING

Hoogte	350.00 mm	voegdikte	30.00 mm
d1	280.00 mm	b1	280.00 mm
d2	280.00 mm	b2	280.00 mm
d	280.00 mm	b	280.00 mm
Materiaal	C30/37		

BELASTINGEN

Fu.C.7; Knoop K17	N;3;Ed	233.46 kN	M;3;Ed	0.00 kNm	V;3;Ed	2.46
kN						



BOUWGRENSEERSTAND NEN-EN1993-1-8 TABEL 3.4

Stuikweerstand mm	F;b;Rd 172.80	Kopplaat; t = 15 kN
Dwarskrachtcapaciteit (voor alle bouten)	F;v;Rd kN	
90.65		
Trekcapaciteit B;p;Rd)	min(F;t;Rd, 56.52	kN

LASSEN

Lijf

Laslengte			
304.00			mm
Schuifspanning parallel met de as van de las		Tau;2 N/mm ²	
1.35			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	2.34	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w * 360.00	N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u / 0.00	N/mm ²

Flens

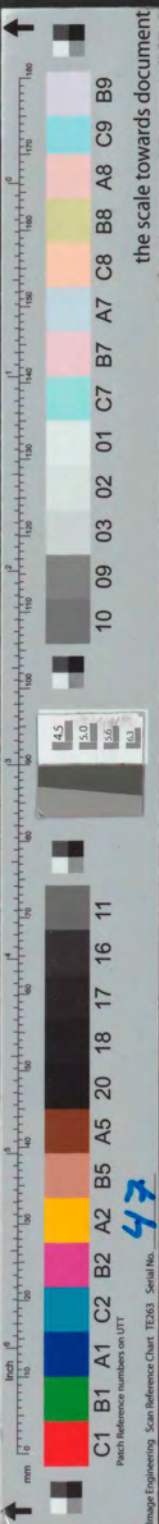
Laslengte			
321.50			mm
Schuifspanning loodrecht op de as van de las		Tau;1 N/mm ²	
-42.79			
Axiale spanning loodrecht op de keel		Sigma;1 N/mm ²	
-42.79			
Huber-Hencky-Von Mises (4.1)	NEN-EN 1993-1-8 Sigma;HH,Ed	85.58	N/mm ²
Rekencapaciteit las Gamma;M2)		f;u / (Beta;w * 360.00	N/mm ²
Toegestane trekspanning Gamma;M2		0.9 * f;u / 259.20	N/mm ²

STUIKOPPERVLAKTE

Stuik	b;eff	l;eff	Oppervlakte
Flens links	220.00 mm	70.36 mm	15478.67 mm ²
Lijf	81.22 mm	79.28 mm	6439.13 mm ²
Flens rechts	220.00 mm	70.36 mm	15478.67 mm ²

VOETPLAAT CONTROLE

Projectie		Kort niet overlappen
Vergrotingsfactor (6.63)	NEN-EN1992-1-1 (Ac1/Ac0)½	1.00
Rekenwaarde druksterkte van de fundering beton		f;cd N/mm ²
20.00		
Geconcentreerde weerstandskracht		F;Rdu kN
568.00		1
Rekenwaarde voor de druksterkte		f;jd



13.33		N/mm ²	
Toegevoegde stuik			
breedte		c	
36.36		mm	
		F;c;Rd1	
206.38		kN	
		F;c;Rd2	
		85.86	kN
		F;c;Rd3	
206.38		kN	
		N;j;Rd	
498.62		kN	
Betondrukzone		Sigma;s;d	
4.82		N/mm ²	
Minimale			
voetplaatdikte		t;min	
5.00		mm	

WRIJVINGSWEERSTAND

C;fd	
0.20	-
F;f;Rd	
46.69	kN

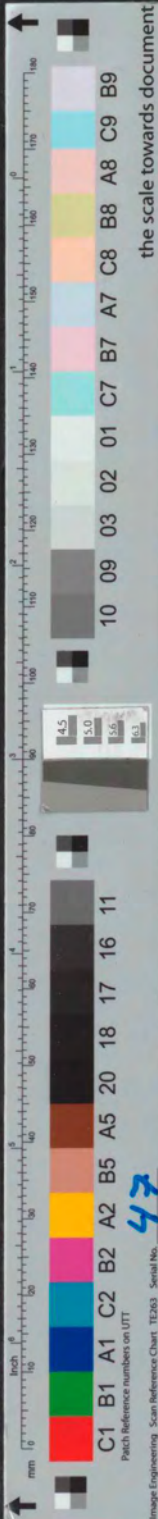
EINDCONTROLE VOETPLAAT EN KOLOM

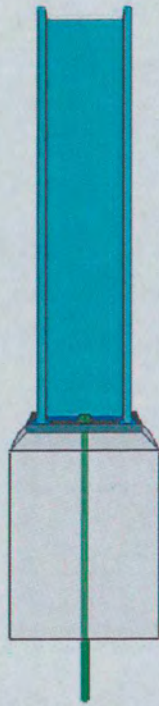
Lassen lijf		2.34 /	
360.00		0.01	Ok
Lassen flens		85.58 /	
360.00		0.24	Ok
	N3 / N;j;Rd <= 1	233.46 /	
498.62	0.47	Ok	
Voegspanning	Sigma;s;d / f;jd <= 1	4.82 /	
13.33	0.36	Ok	
	V3 / F;v;Rd <= 1	2.46 /	
90.65	0.03	Ok	
Voetplaatdikte	t;min / t <= 1	5.00 /	
15.00	0.33	Ok	

OVERZICHT CONTROLES PER BELASTINGSGEVAL

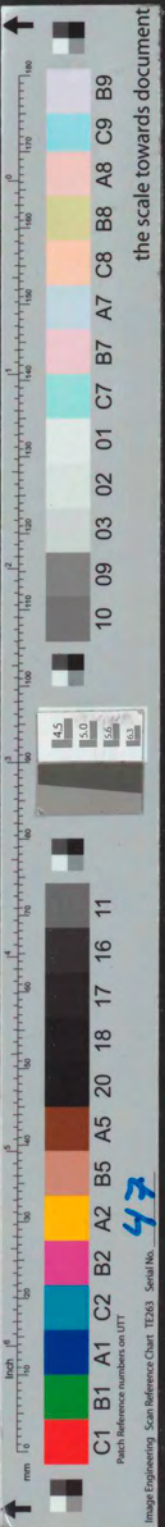
Fu.C.7; Knoop
 K17
 OK

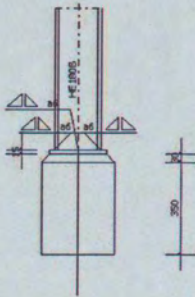
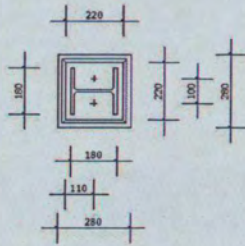
SV18 VIRTUEEL MODEL





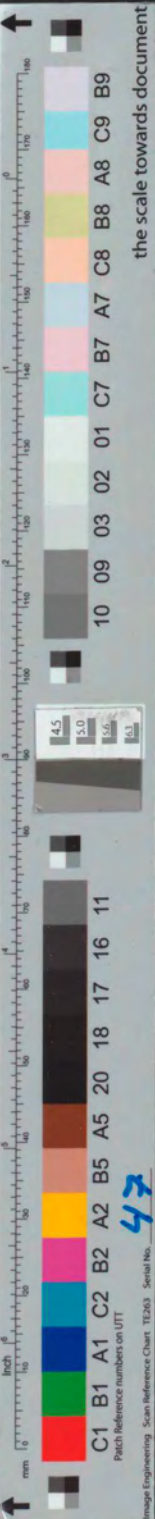
SV18 TEKENING

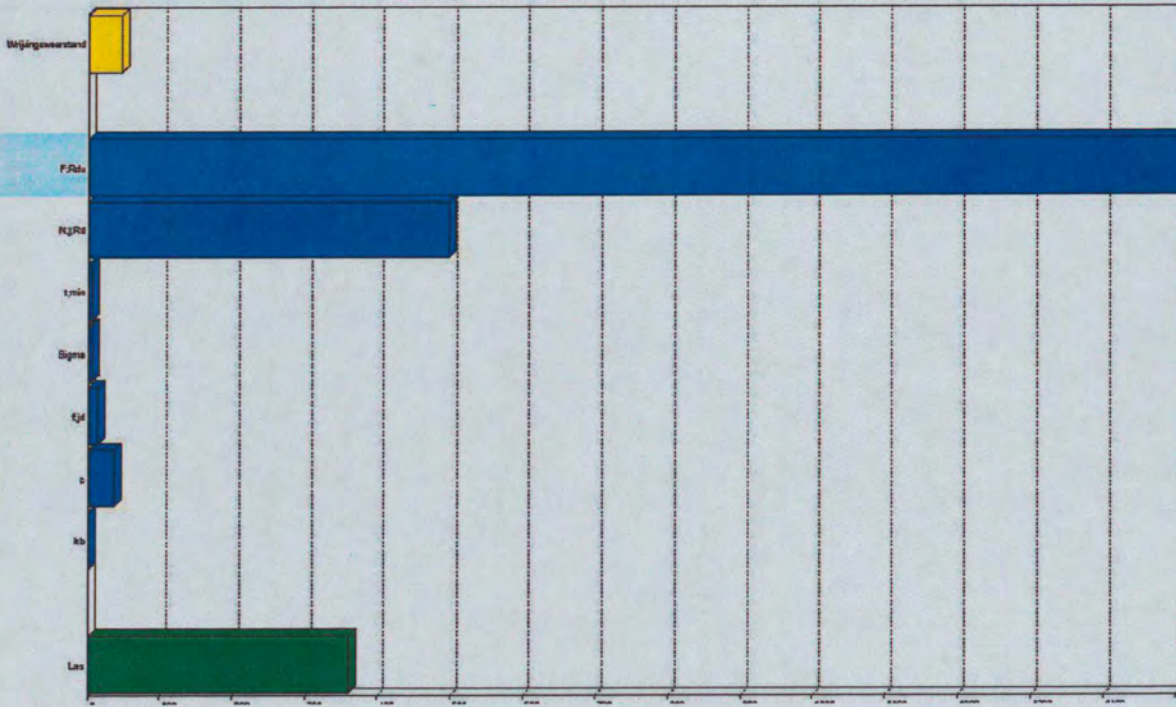




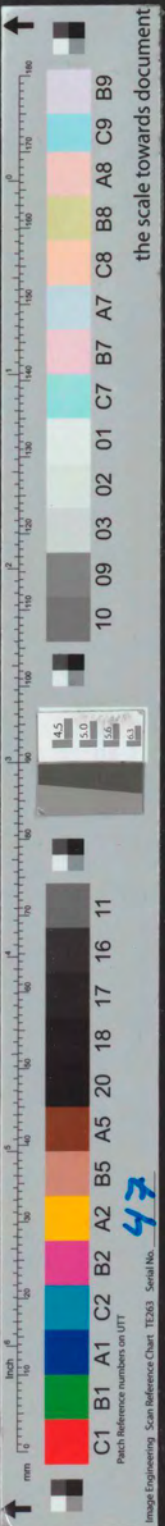
Verbindinggegevens
Kolem: HE1808
Kopplaat: 220x220x15 mm
Bouten: M16, Kwaliteit 5.6, Afstand 100
Maatvoering bout 1 t.o.v bovenzijde kopplaat
Randafstand: 110
Steek:

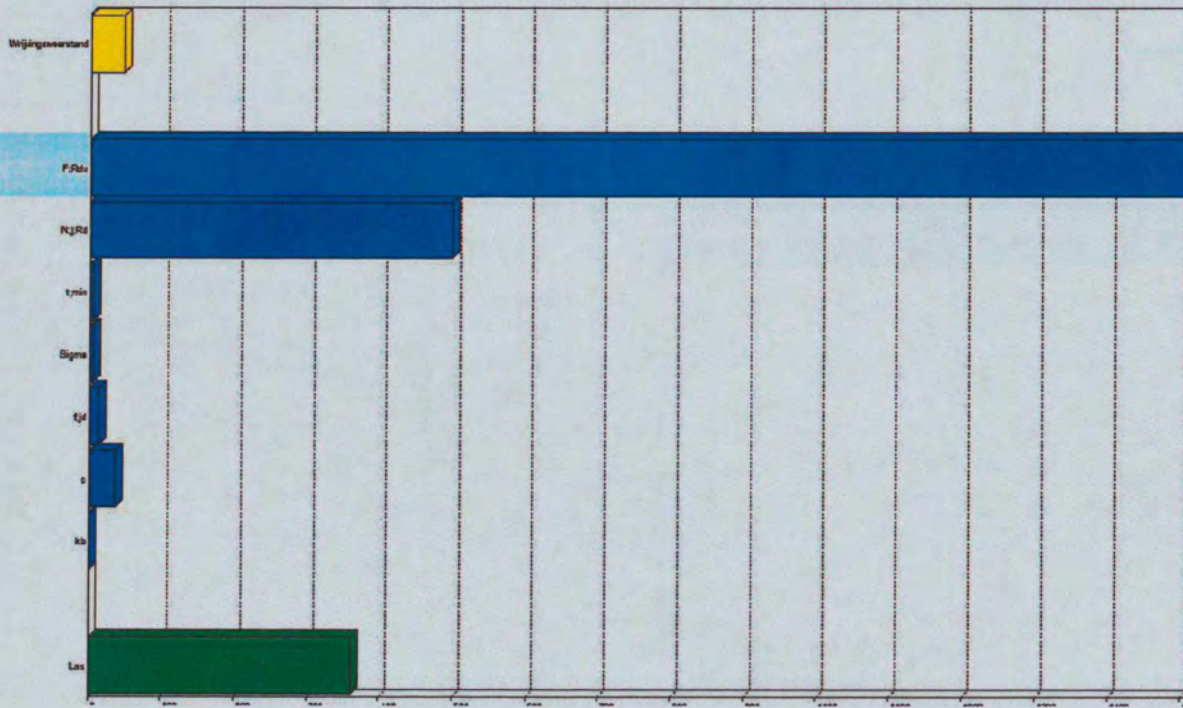
AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC1





AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC2





AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC3

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

inch 0 1 2 3 4 5 6 7 8 9 10

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

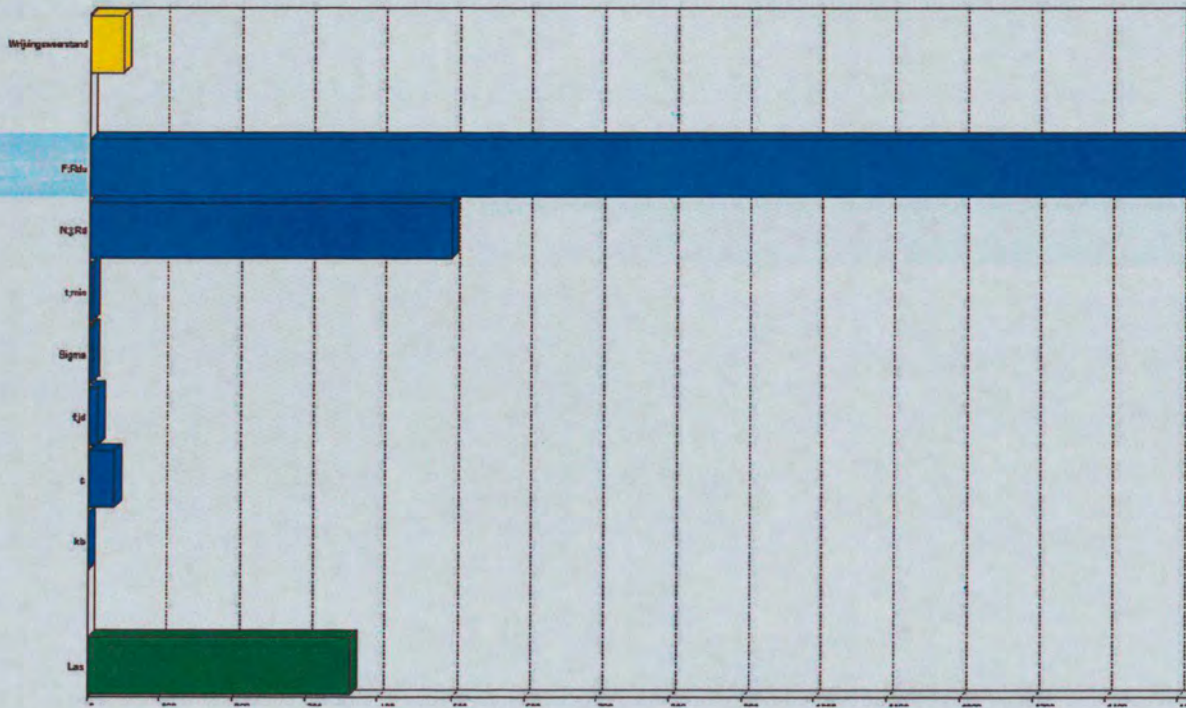
4.5 5.0 5.5 6.0 6.5

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

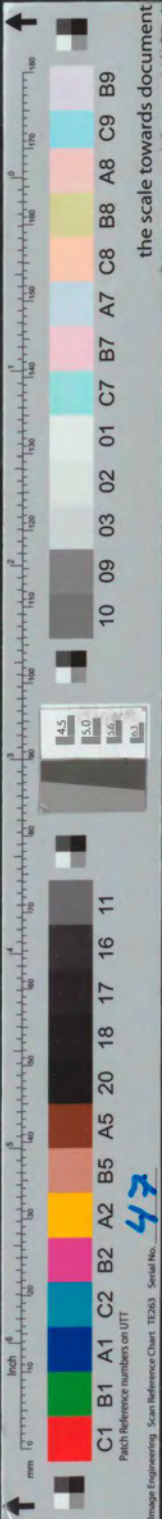
Patch Reference numbers on IFT

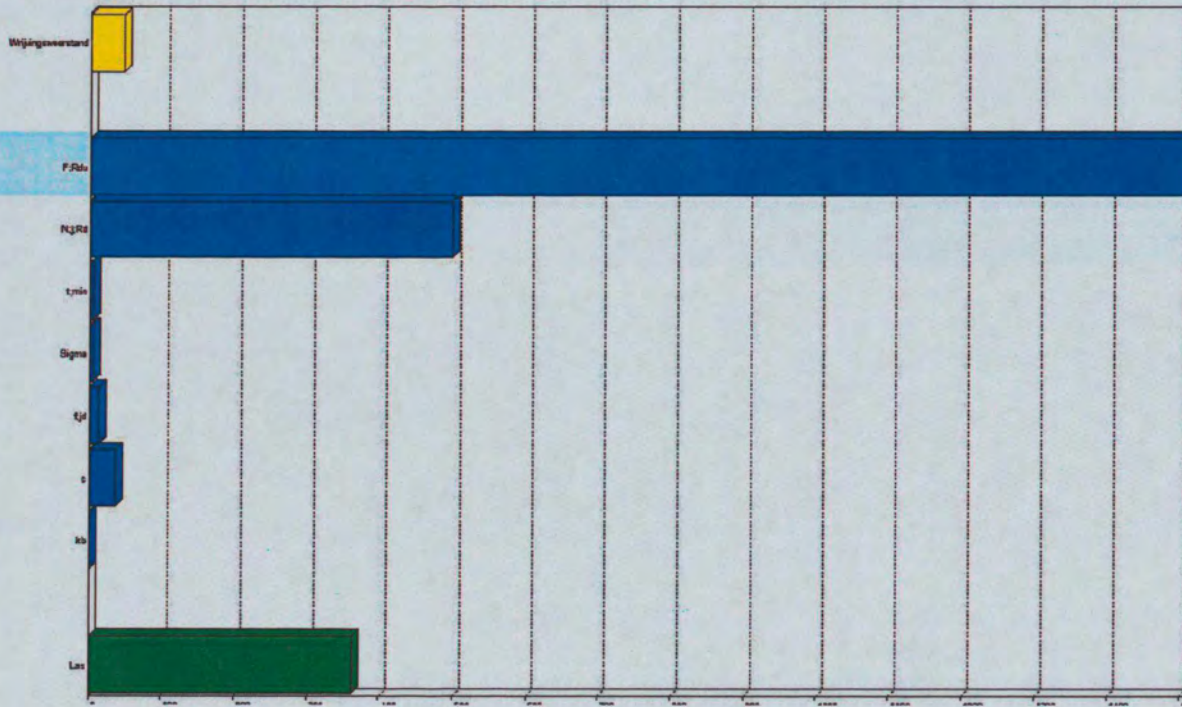
Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document

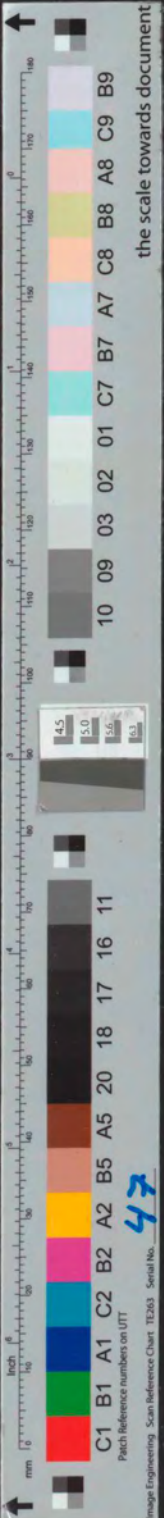


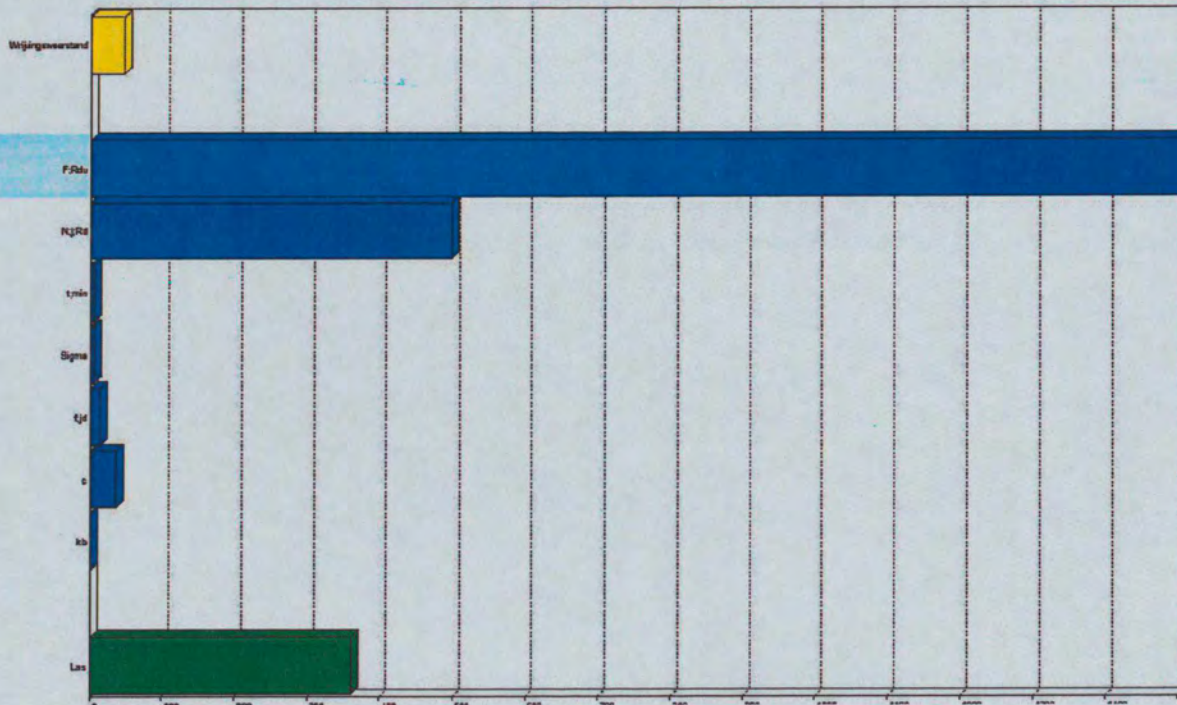
AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC5



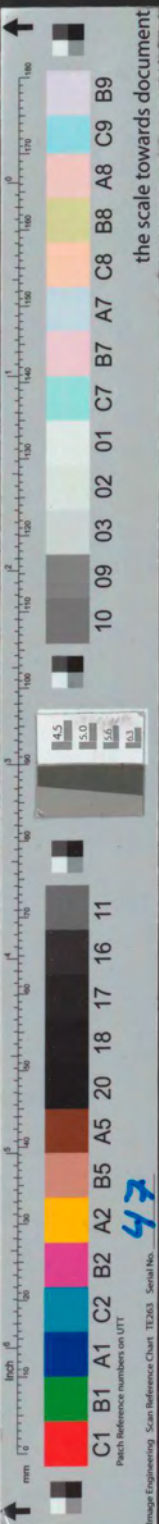


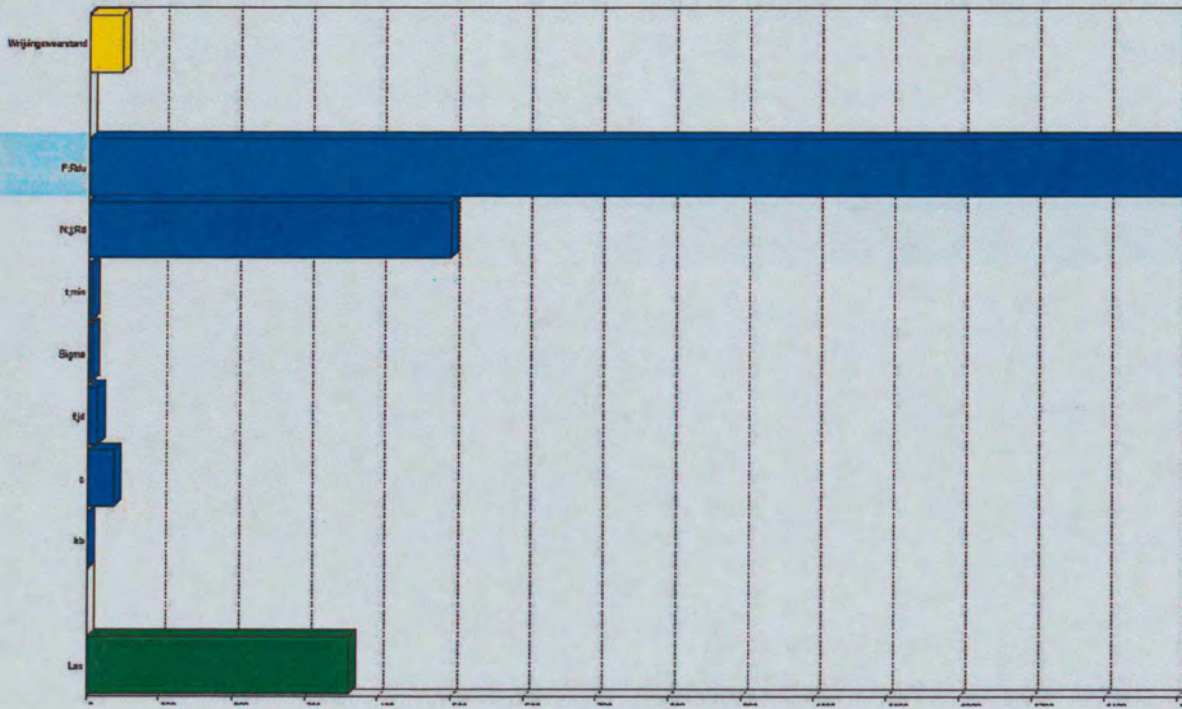
AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC7



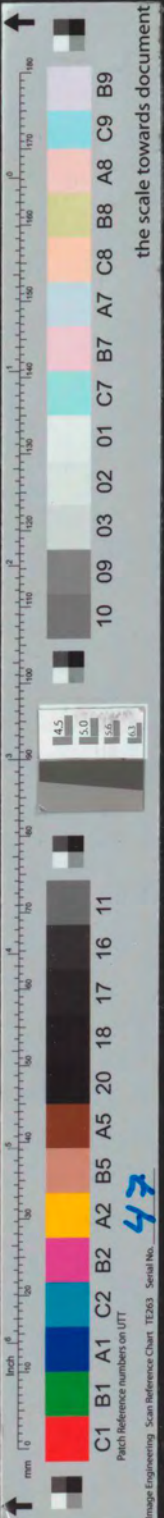


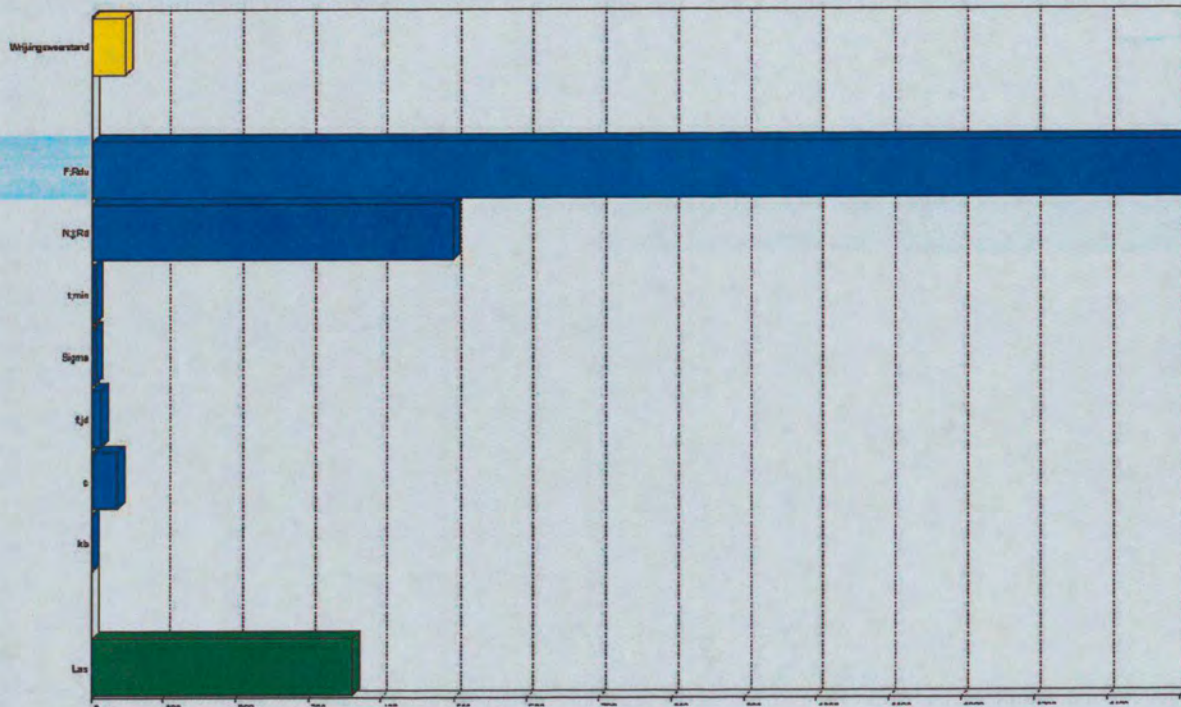
AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC8





AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC9





AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC10

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190

↑

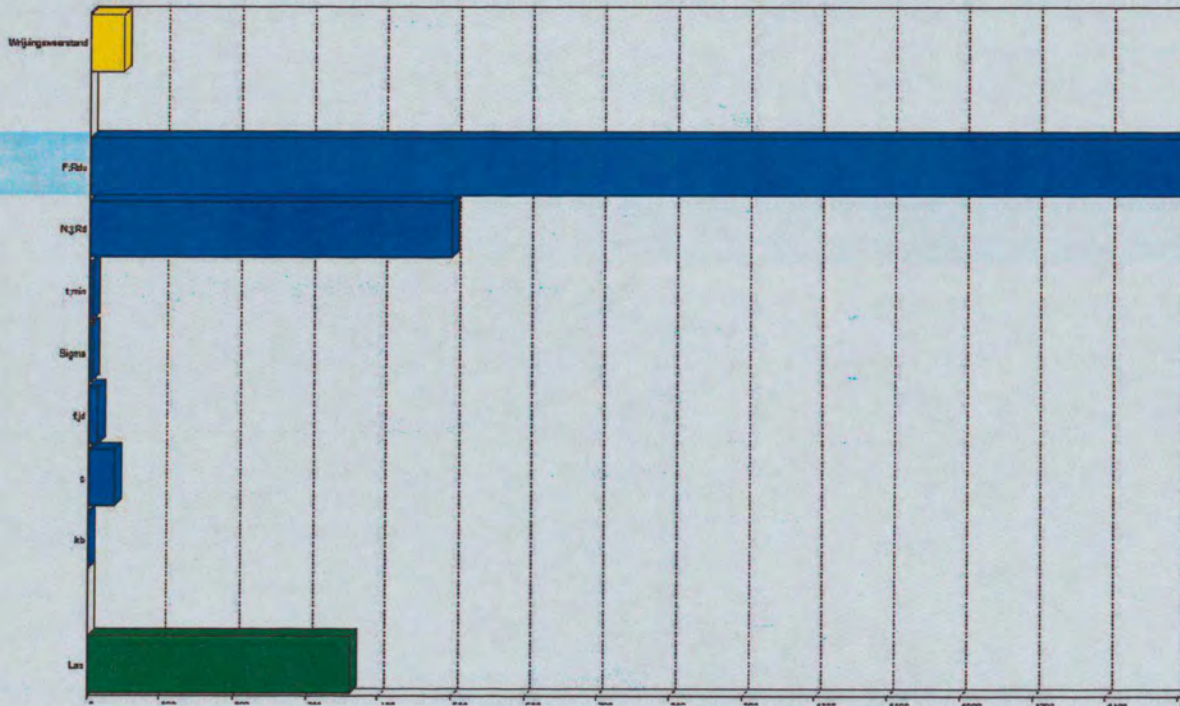
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC11

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

Inch 0 1 2 3 4 5 6 7 8 9 10

↑

4.5 5.0 5.5 6.0 6.5

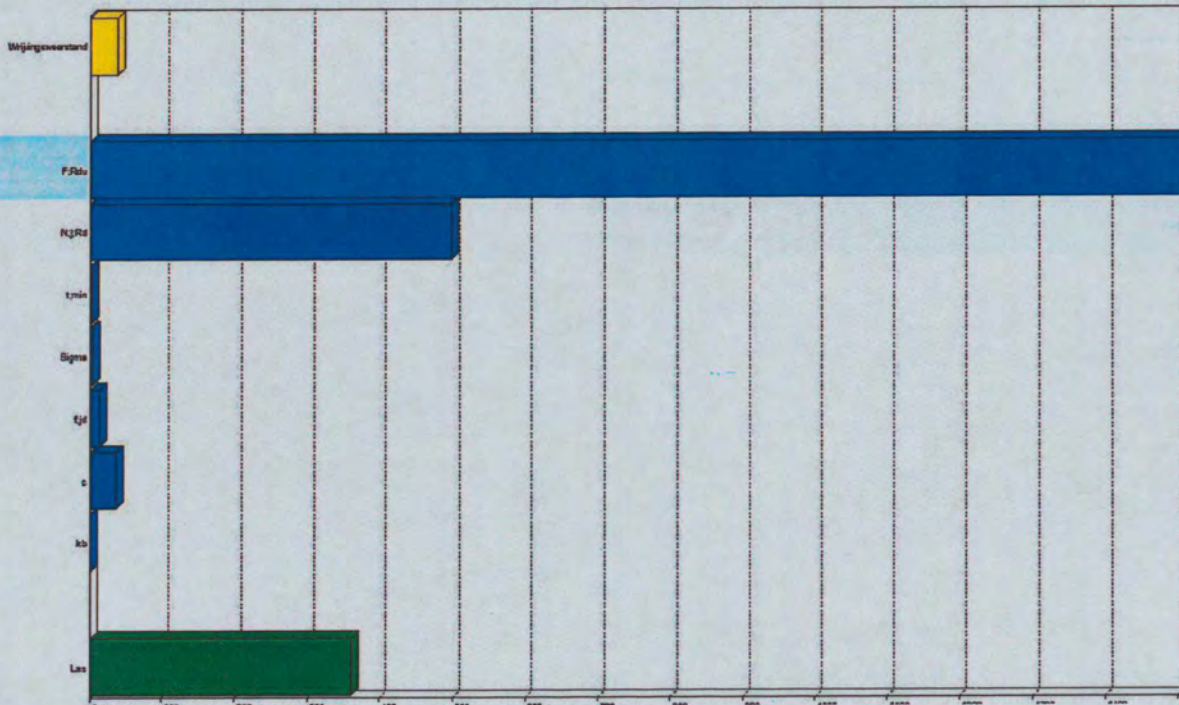
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT

Image Engineering Scan Reference Chart TEX3 Serial No. 47

the scale towards document



AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC12

↑

the scale towards document

↑

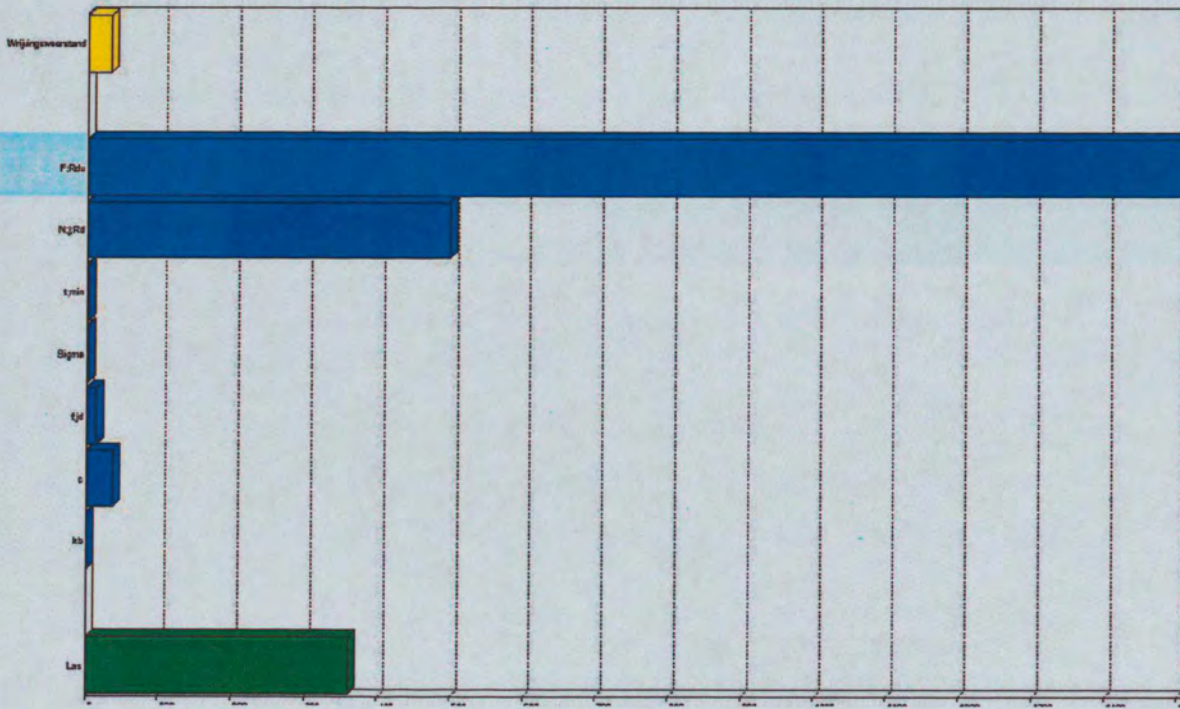
mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

inch 0 1 2 3 4 5 6 7 8 9 10

4.5 5.0 5.5 6.0

10 09 03 02 01 07 08 05 04 06 11 16 17 18 20 A5 A2 B2 C2 A1 B1 A4 B4 C4 A3 B3 C3 A6 B6 C6 A7 B7 C7 A8 B8 C8 A9 B9 C9

Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No. 47



AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC13

↑

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.6 6.3

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

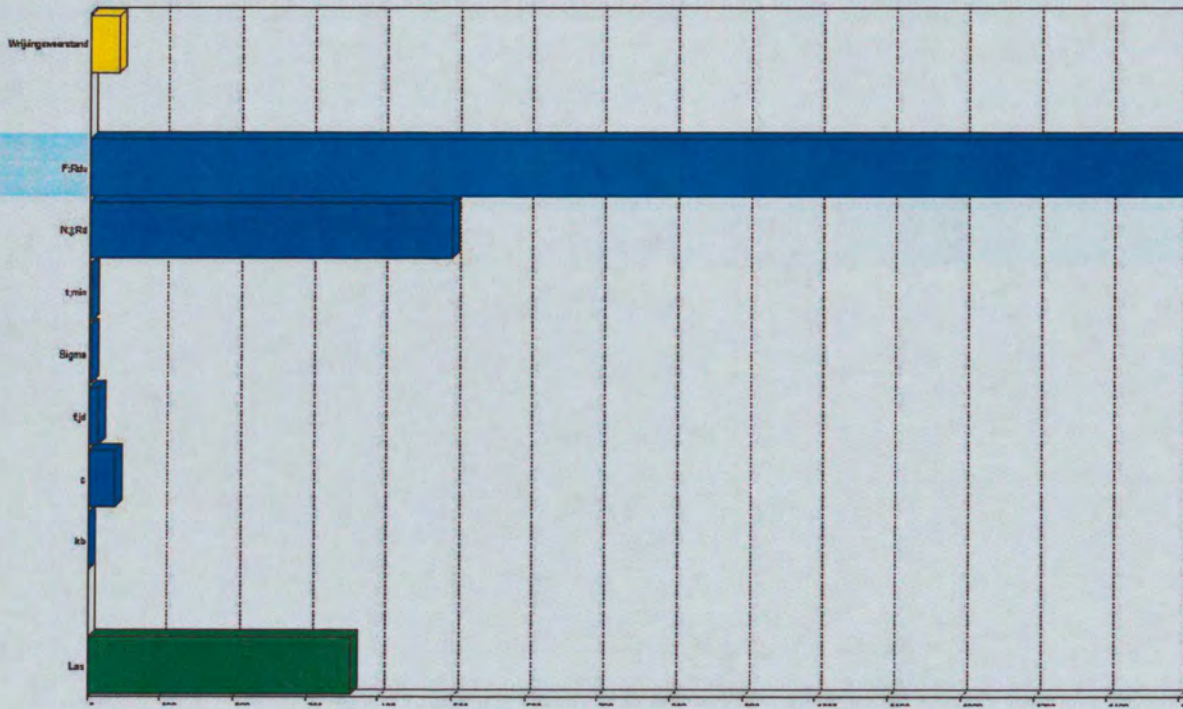
Patch Reference numbers on UTT

47

Image Engineering Scan Reference Chart TEX3 Serial No.

↑

the scale towards document



AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC15

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

↑

inches 0 1 2 3 4 5 6 7 8 9 10 11 12

4.5 5.0 5.5 6.0 6.5

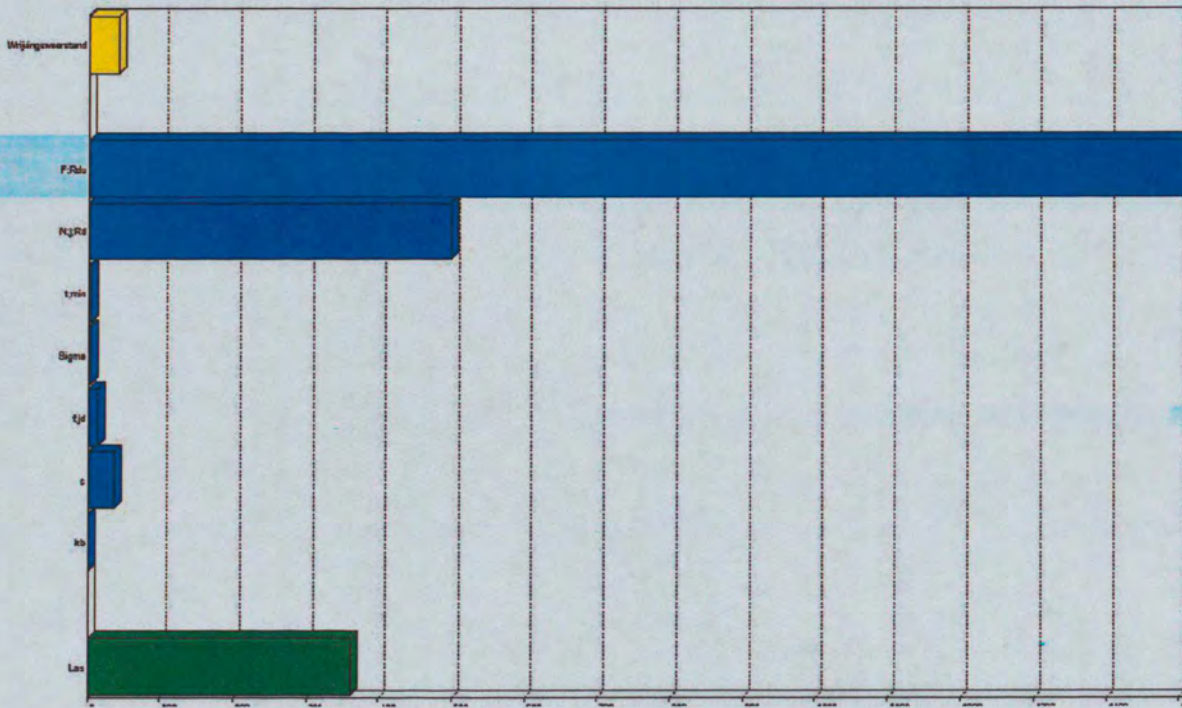
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 A20 18 17 16 11

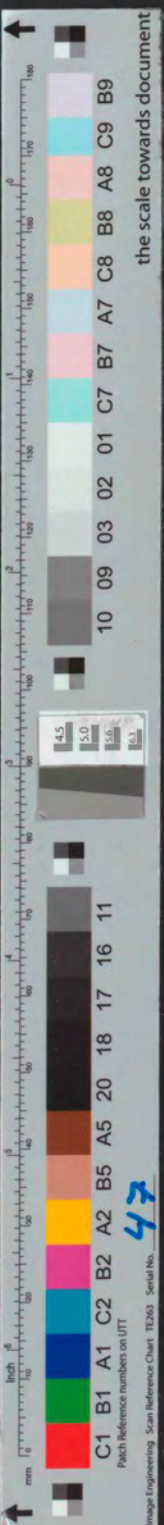
Patch Reference numbers on UTT

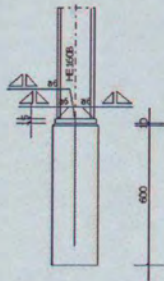
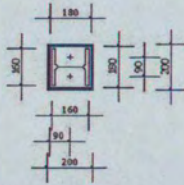
Image Engineering Scan Reference Chart TEX263 Serial No. 47

the scale towards document



AFB. SV18 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC17





Verbindingsgegevens

Kolom: HE160B

Kopplaat: 180x180x15 mm

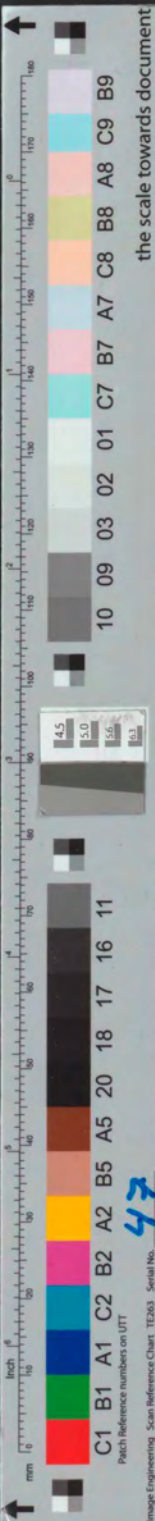
Bouten: M16, Kwalkat 5.6, Afstand 90

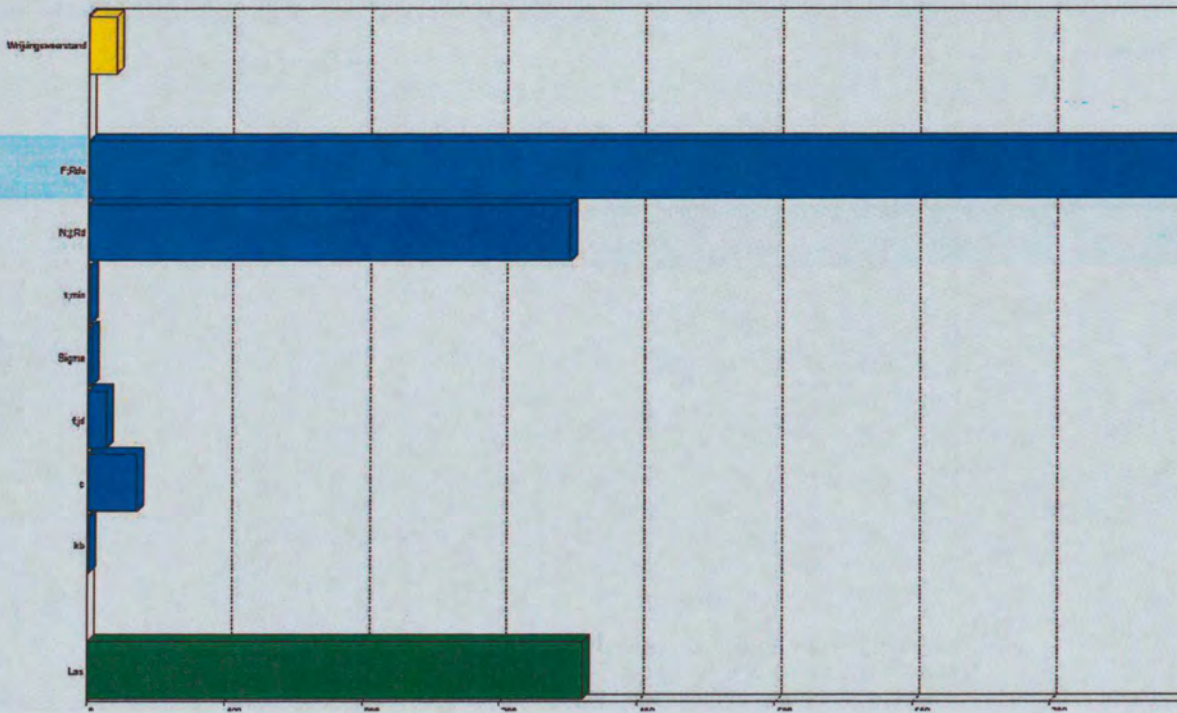
Maatvoering bout 1 t.o.v. bovenzijde kopplaat

Randafstand: 90

Steek:

AFB, SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC1





AFB, SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC3

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

↑

inch 0 1 2 3 4 5 6 7 8 9 10

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5 6.0 6.5

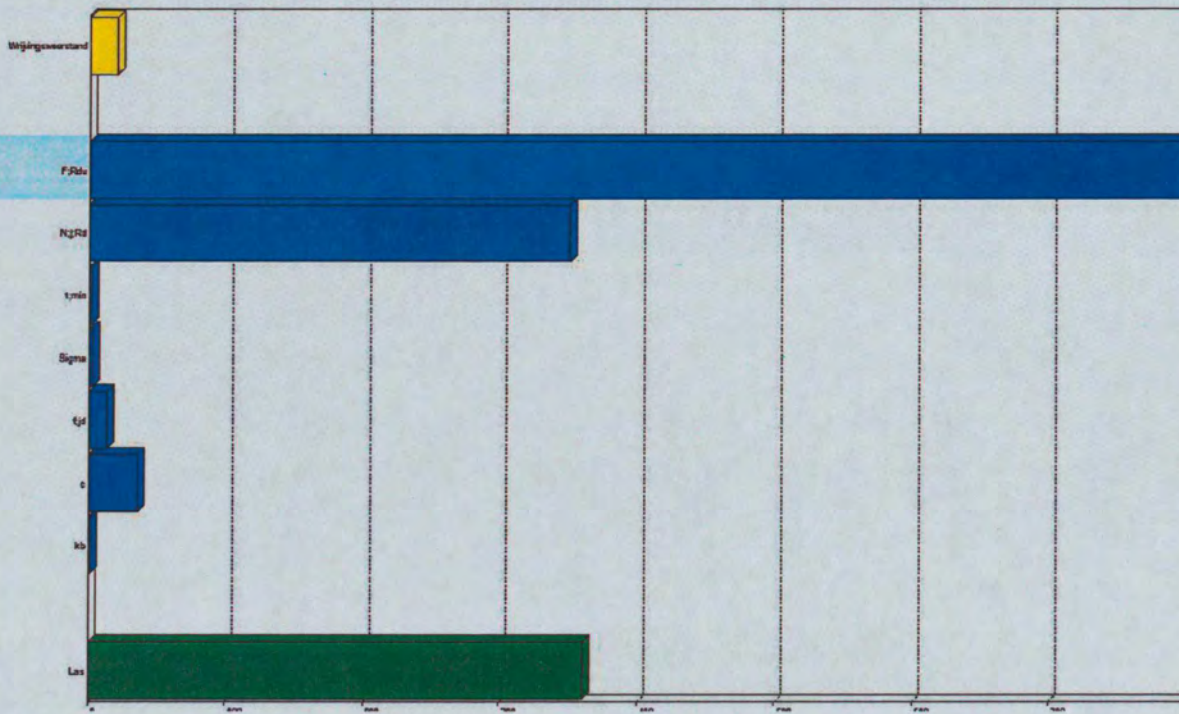
C1 B1 A1 C2 B2 A2 C3 B3 A3 C4 B4 A4 C5 B5 A5 C6 B6 A6 C7 B7 A7 C8 B8 A8 C9 B9

Patch Reference numbers on UTT

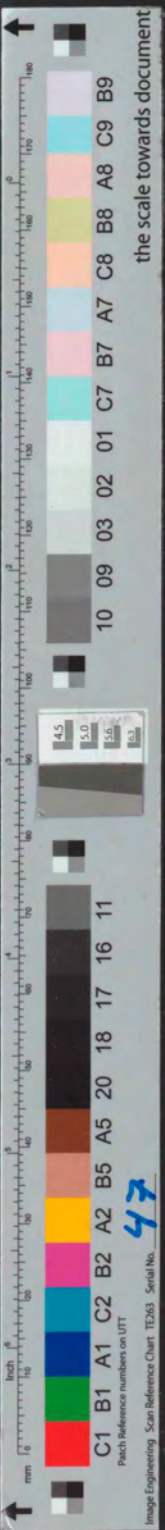
47

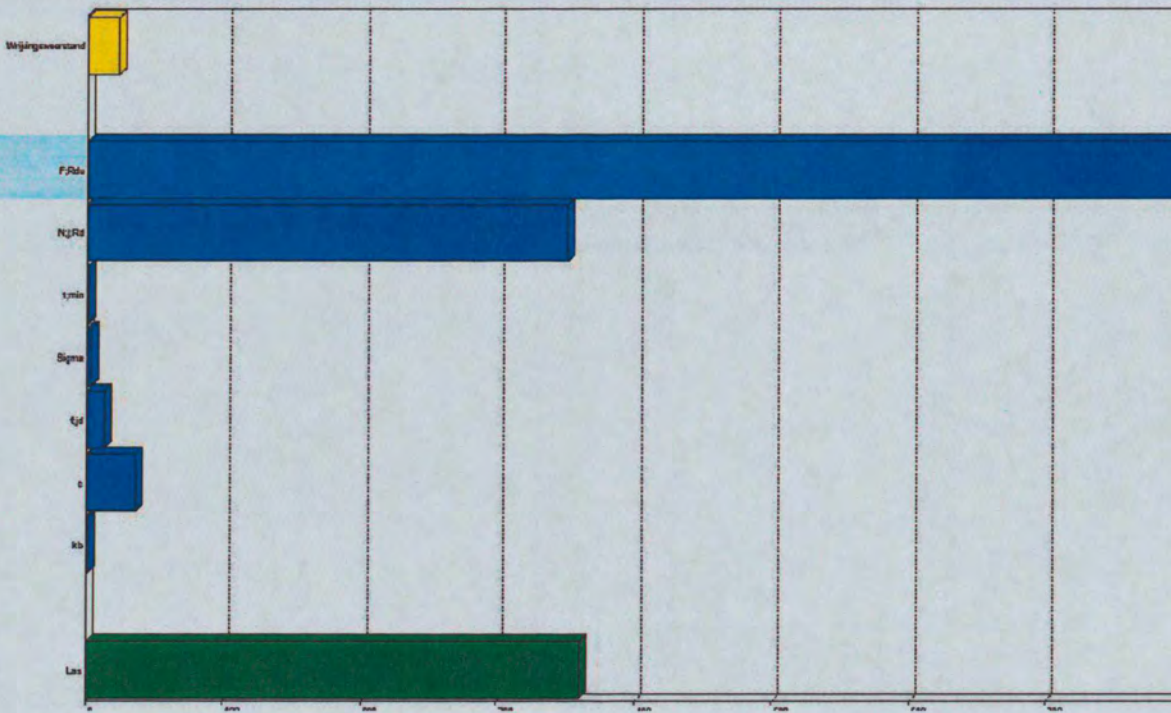
Image Engineering Scan Reference Chart TE263 Serial No.

the scale towards document



AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC4





AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC6

↑

mm 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400

↑

inches 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400

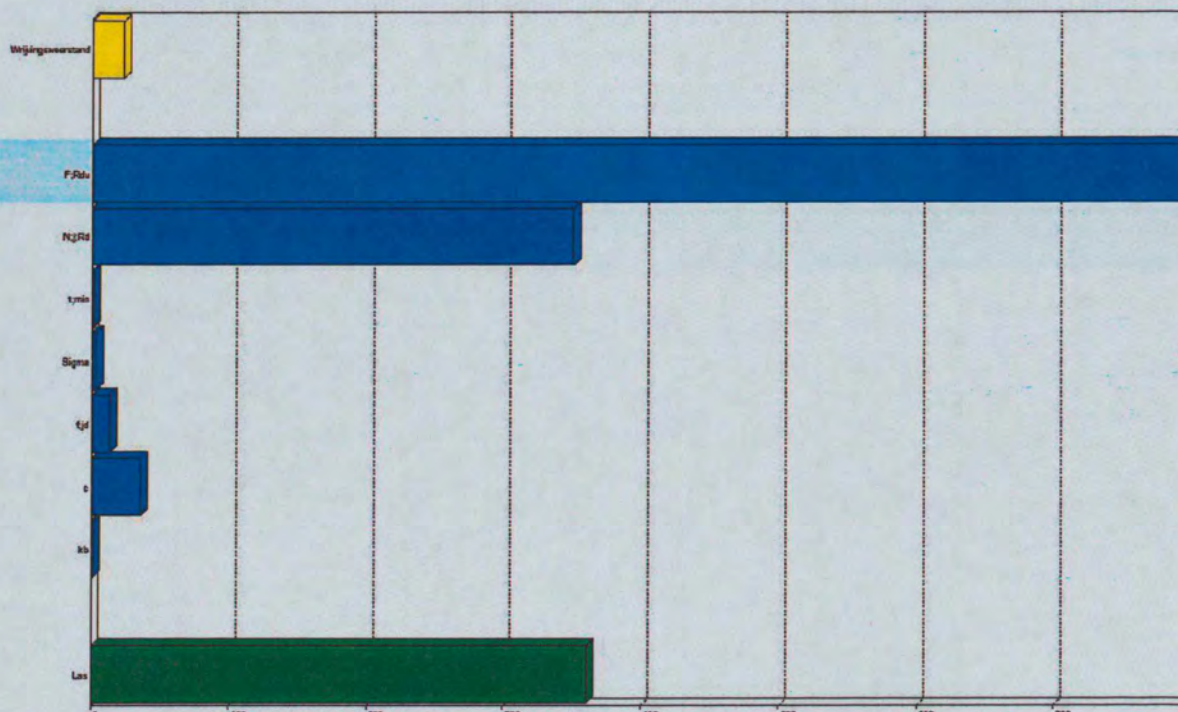
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5 6.0 6.5

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC7

↑

mm 0 10 20 30 40 50 60 70 80 90 100
 Inch 0 1 2 3 4 5 6 7 8 9 10

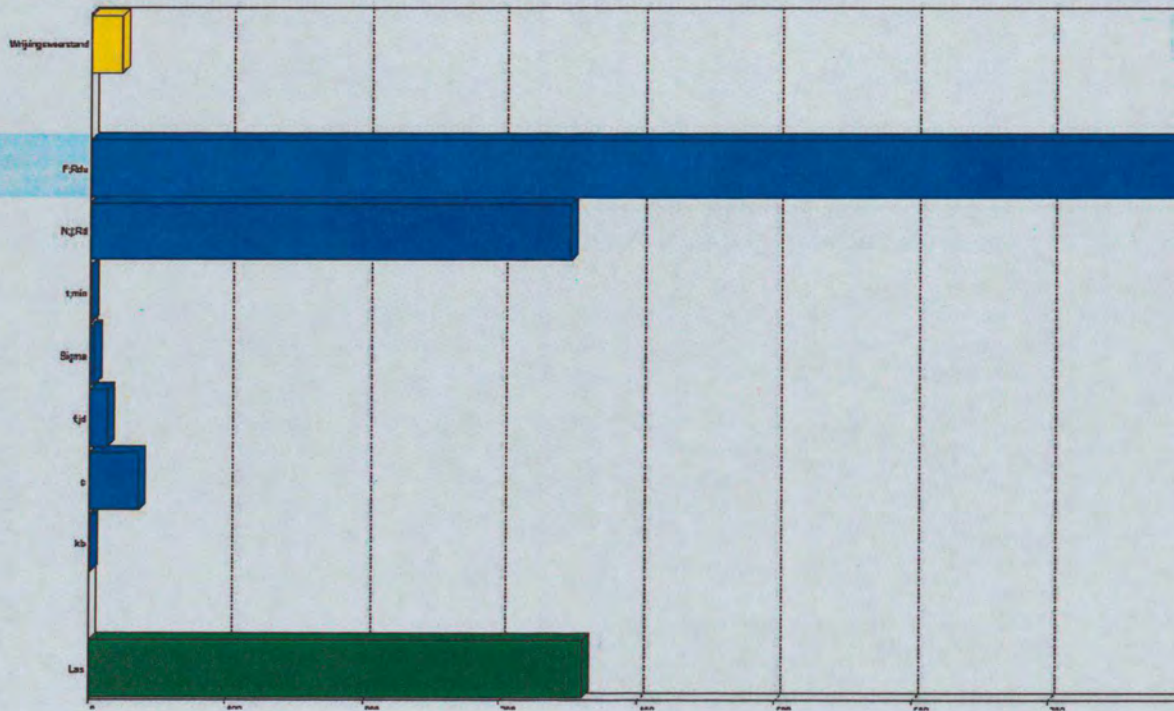
C1 B1 A1 C2 B2 A2 B3 A3 B4 A4 B5 A5 B6 A6 B7 A7 C8 B8 A8 C9 B9
 Patch Reference numbers on UTT

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9
 the scale towards document

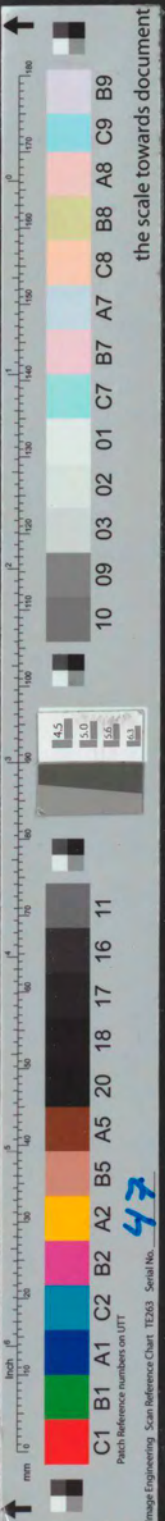
45 46 47 48 49 50 51 52 53

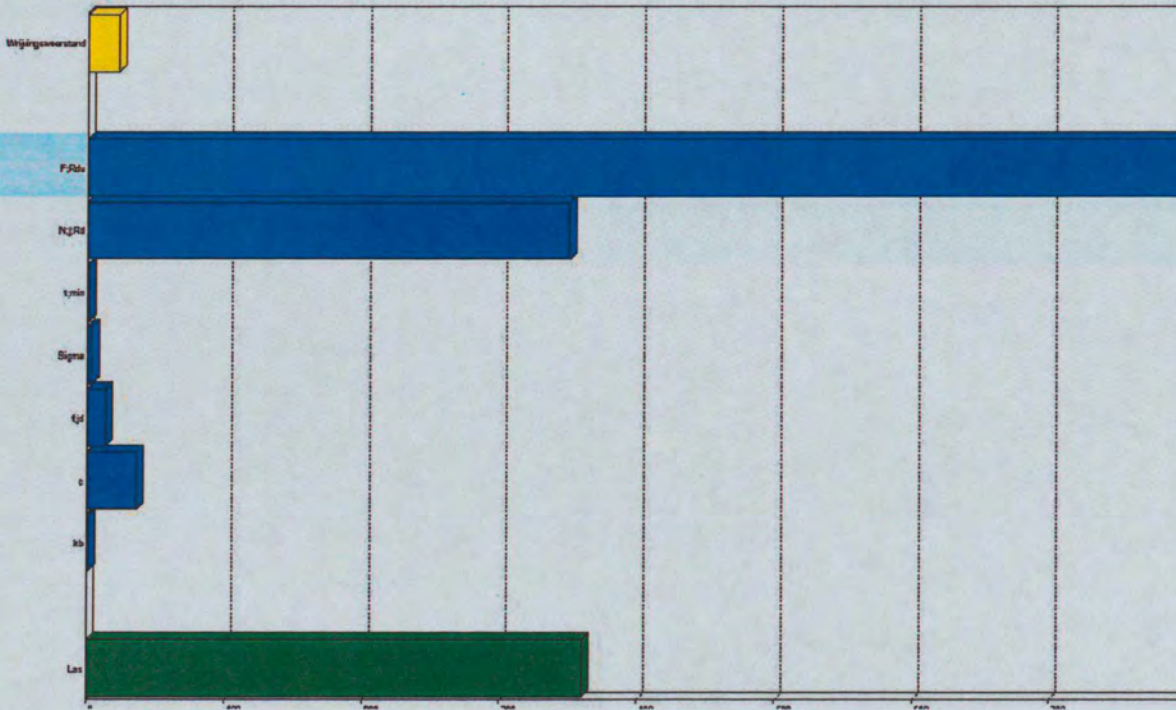
47

Image Engineering Scan Reference Chart TE263 Serial No.



AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC8





AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC9

↑

mm 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

Inch 1/2 1 1 1/2 2 2 1/2 3 3 1/2 4 4 1/2 5 5 1/2 6

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

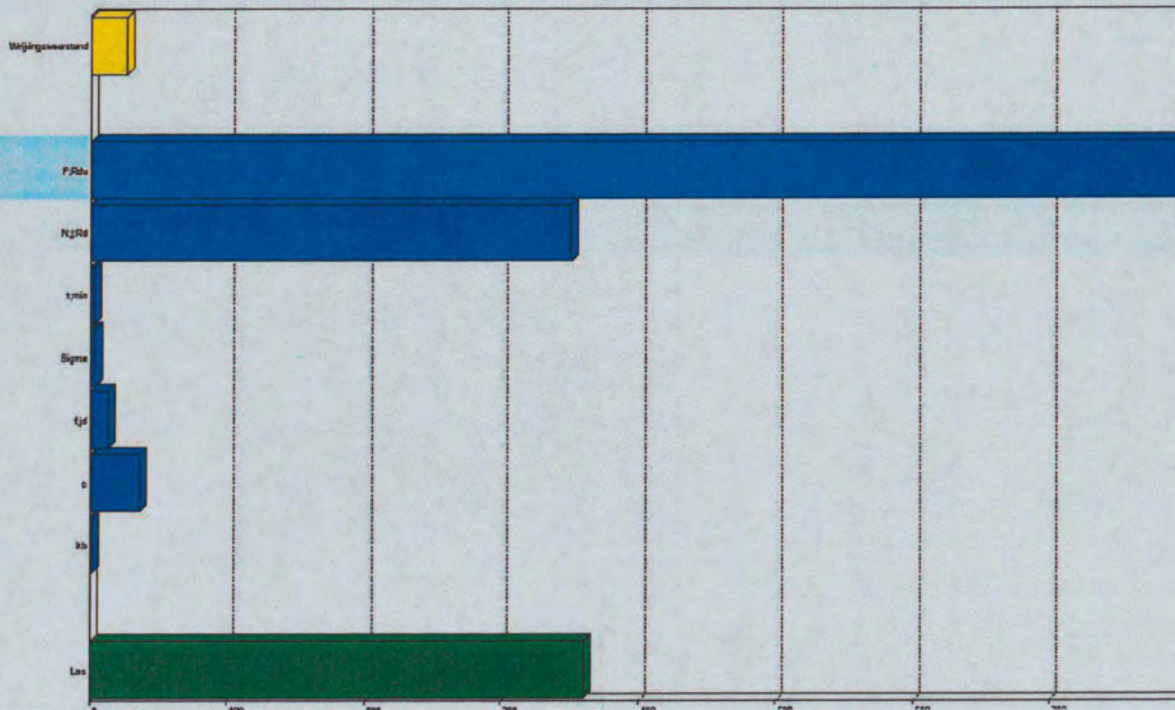
4.5 5.0 5.5 6.0 6.5

C1 B1 A1 C2 B2 A2 B5 A5 A20 18 17 16 11

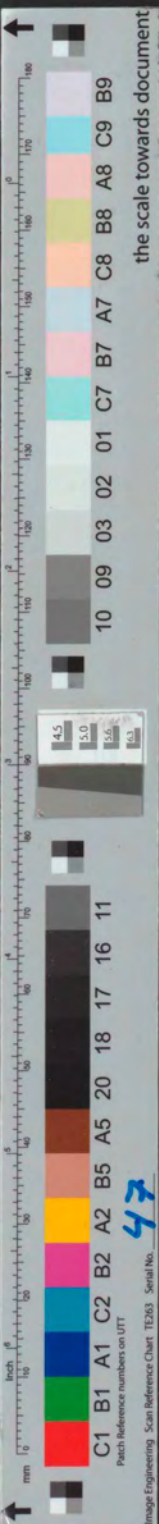
Patch Reference numbers on UTT

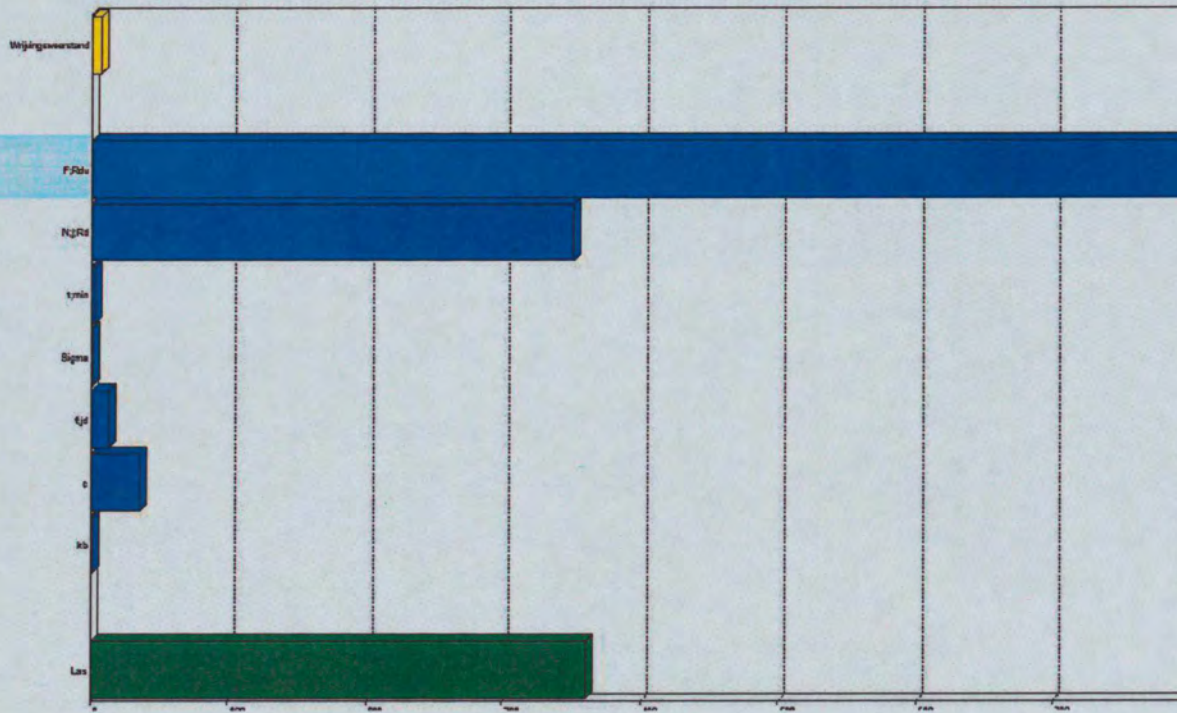
Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document

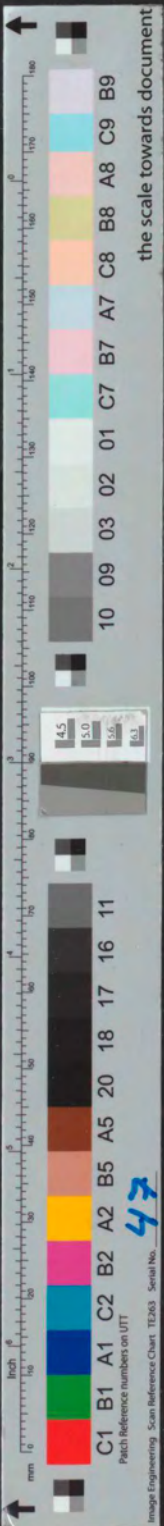


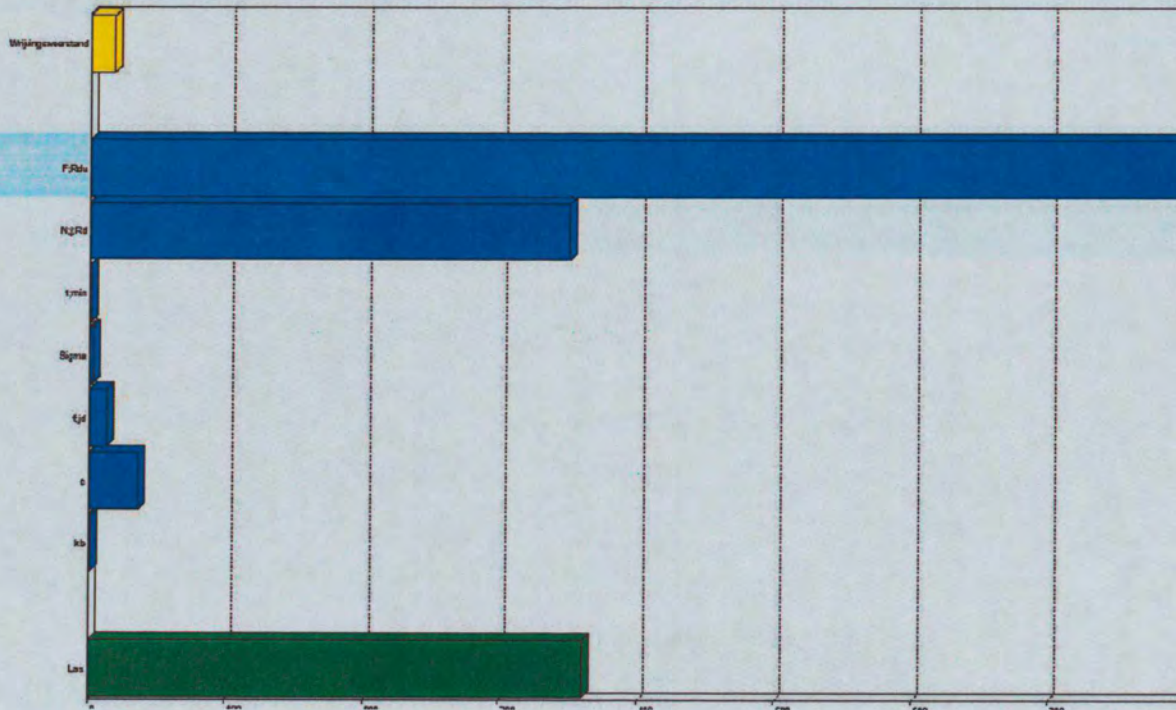
AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC12





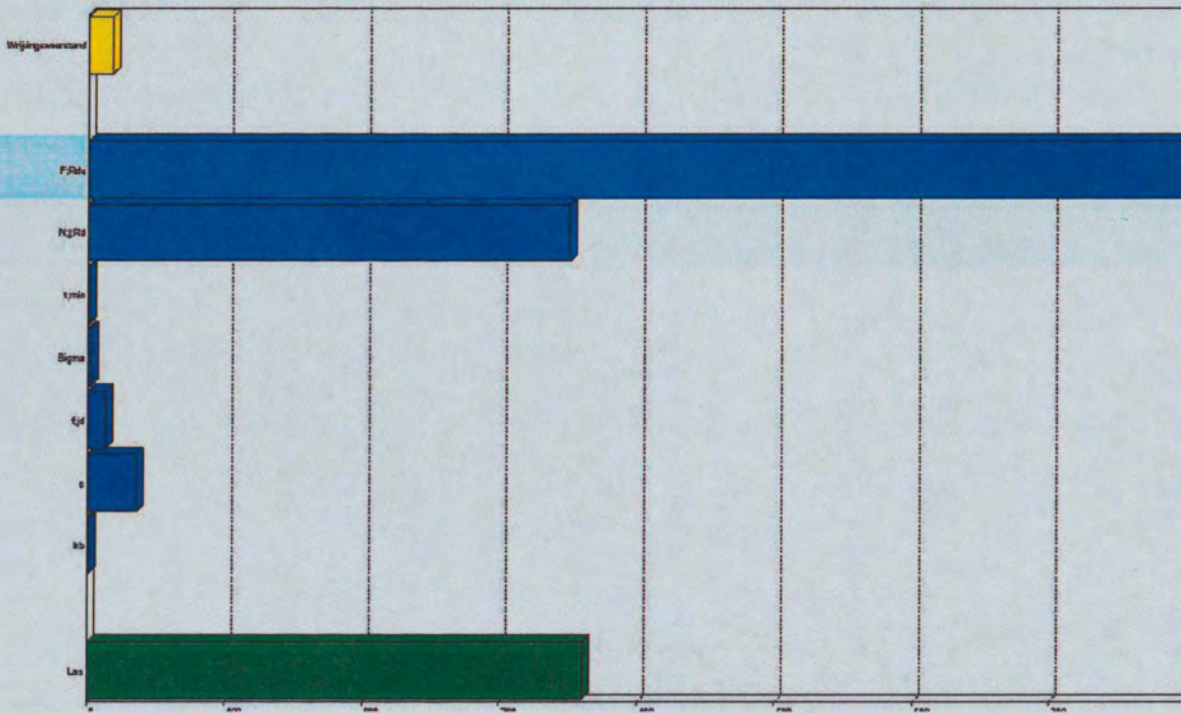
AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC13



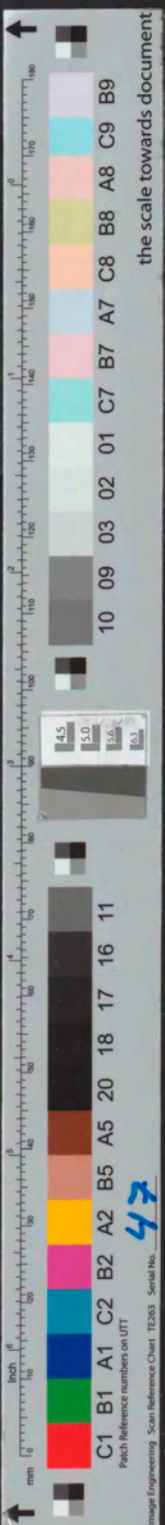


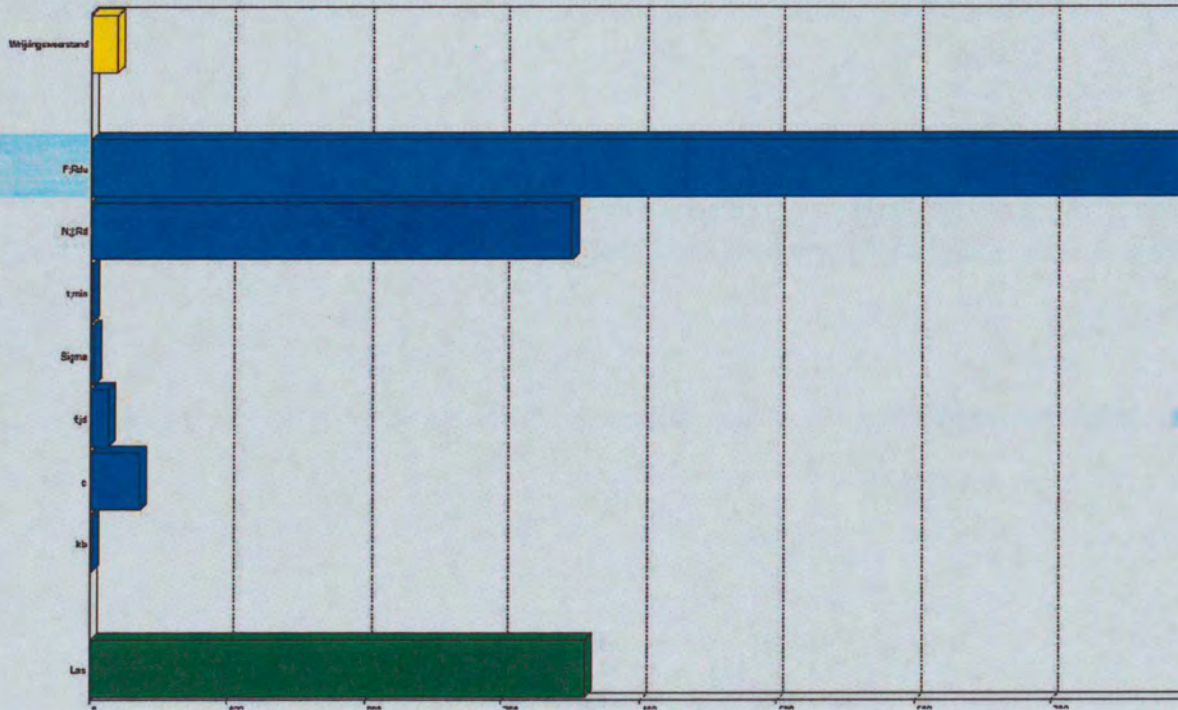
AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC14





AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC15





AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC17

↑ mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

↑ Inch 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

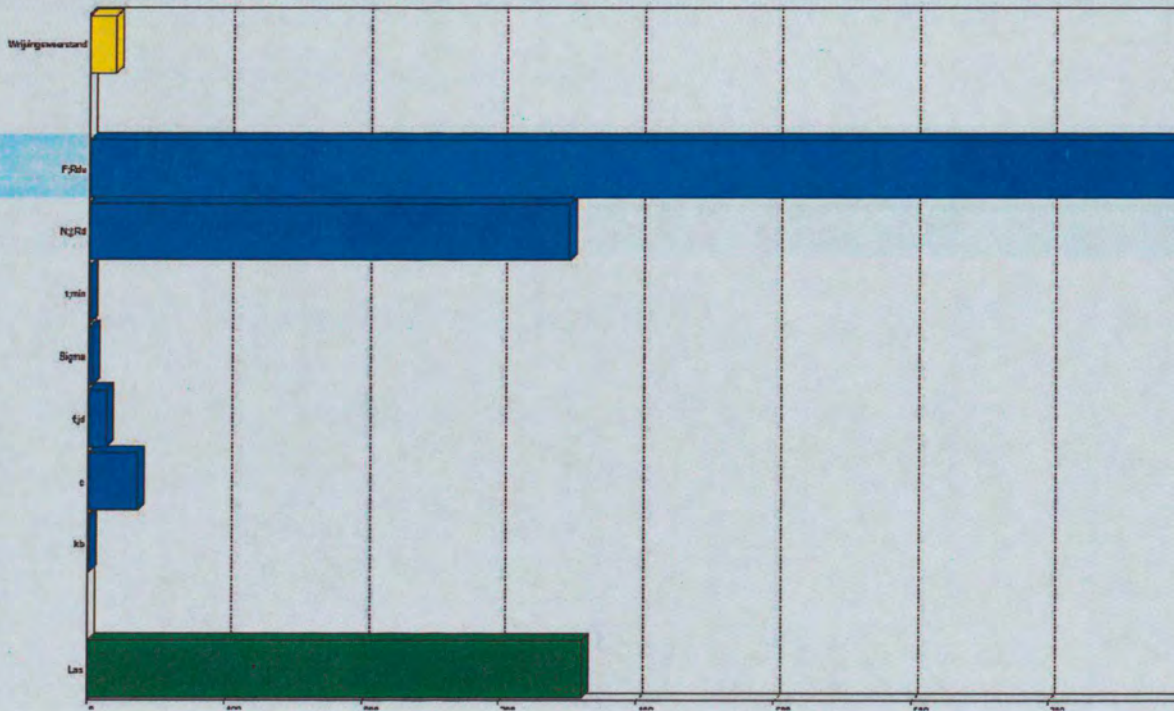
45 15.0 5.8 0.3

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

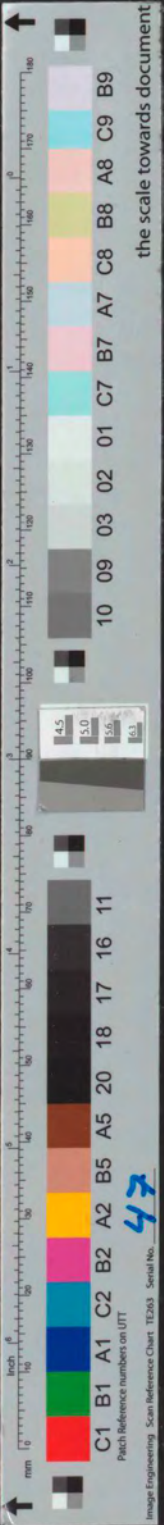
C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

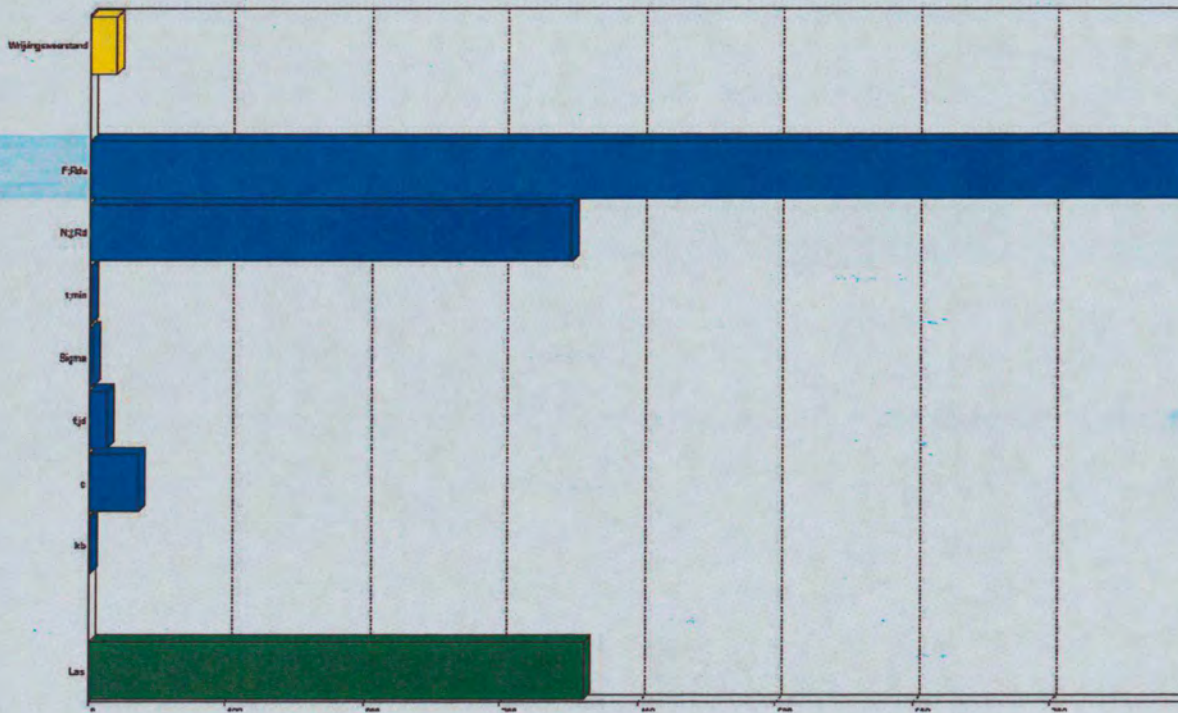
Patch Reference numbers on ITT
 Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document

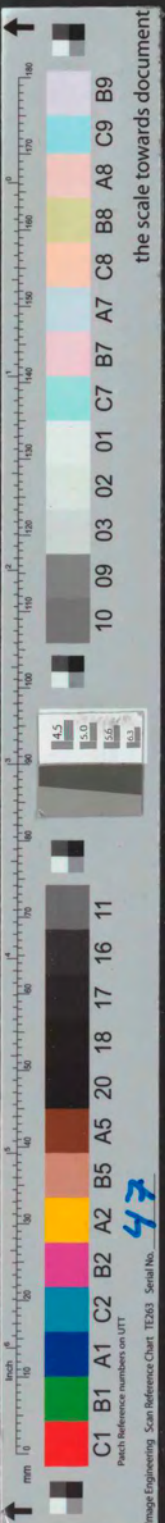


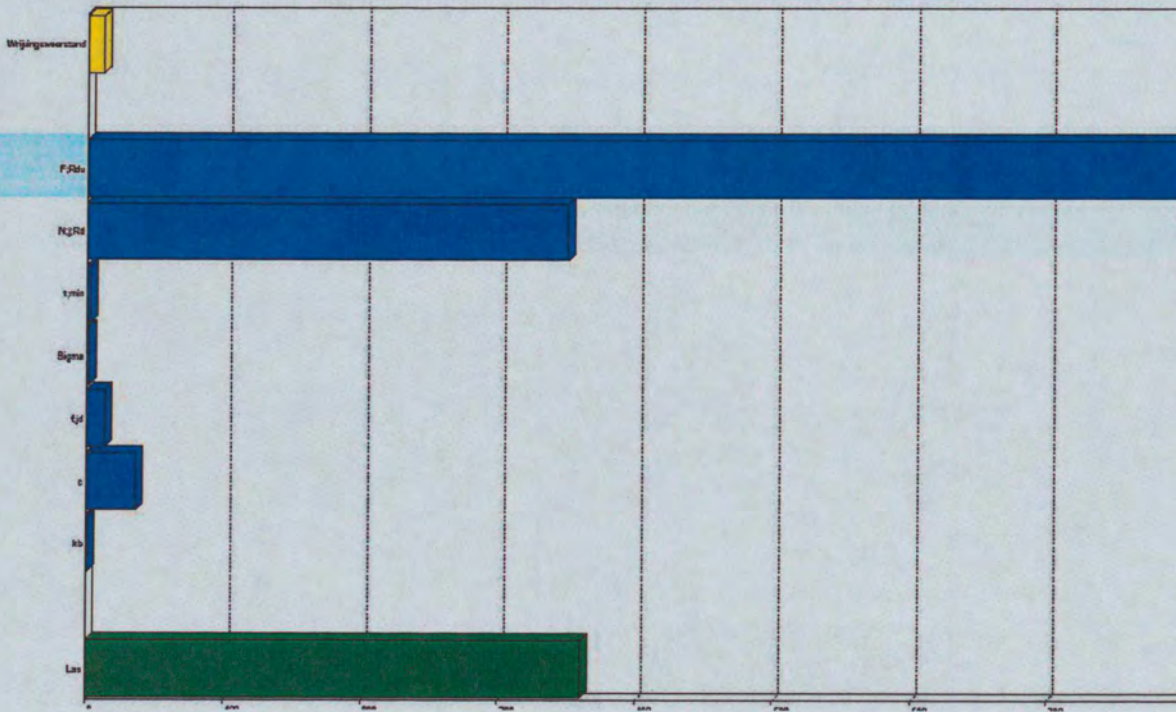
AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC18





AFB. SV24 REKENWAARDE VAN DE WEERSTAND GRAFIEK BC19





AFB. SV24 UNITYCHECK GRAFIEK FU.C.1

↑

mm 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000

↑

inch 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

4.5 5.0 5.5

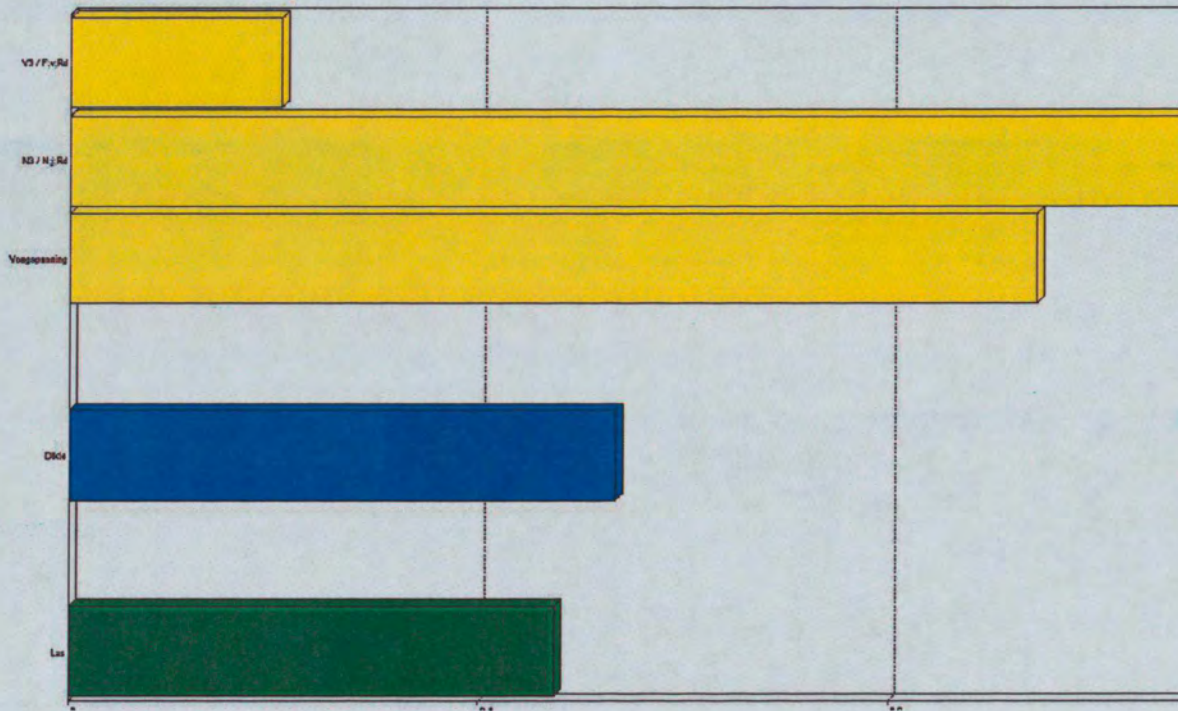
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

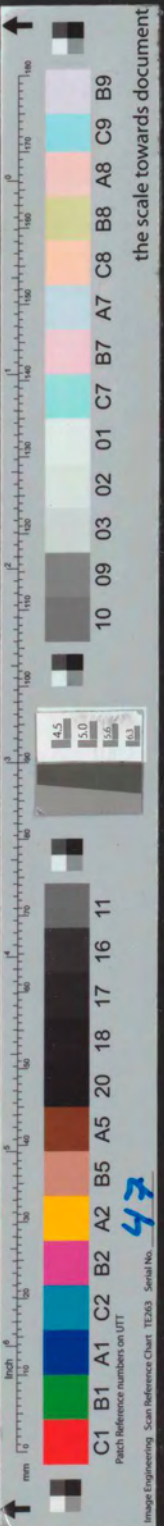
Patch Reference numbers on UTI

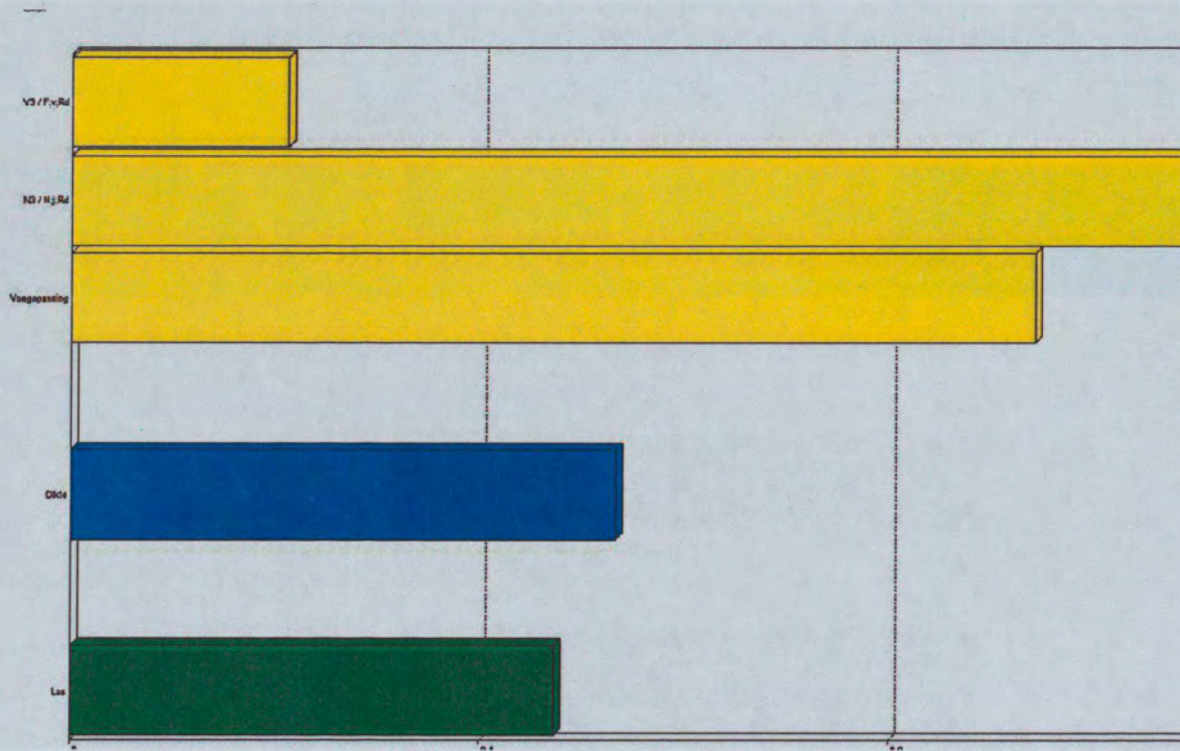
Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV24 UNITYCHECK GRAFIEK FU.C.2





AFB. SV24 UNITYCHECK GRAFIEK FU.C.3

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

inch 0 1 2 3 4 5 6 7 8 9 10

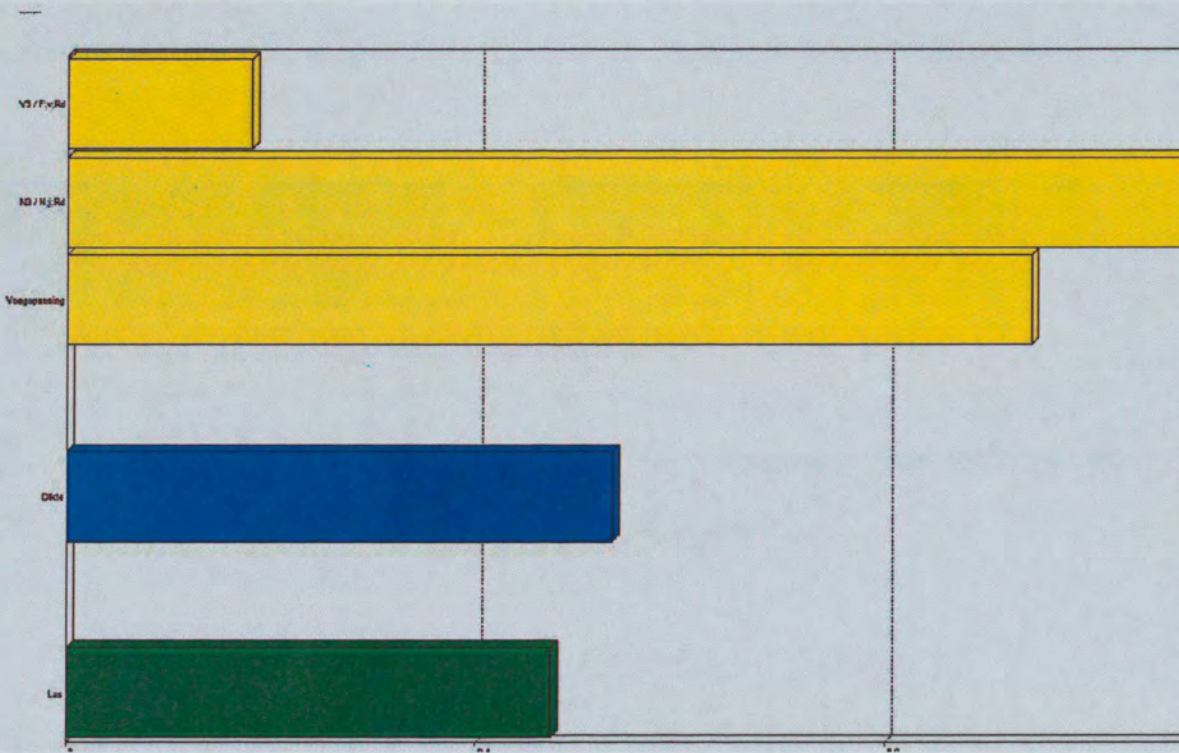
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B3 A3 B4 A4 B5 A5 B6 A6 B7 A6 B8 A8 B9 A9

Patch Reference numbers on UTT

Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV24 UNITYCHECK GRAFIEK FU.C.4

↑

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.6 6.3

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

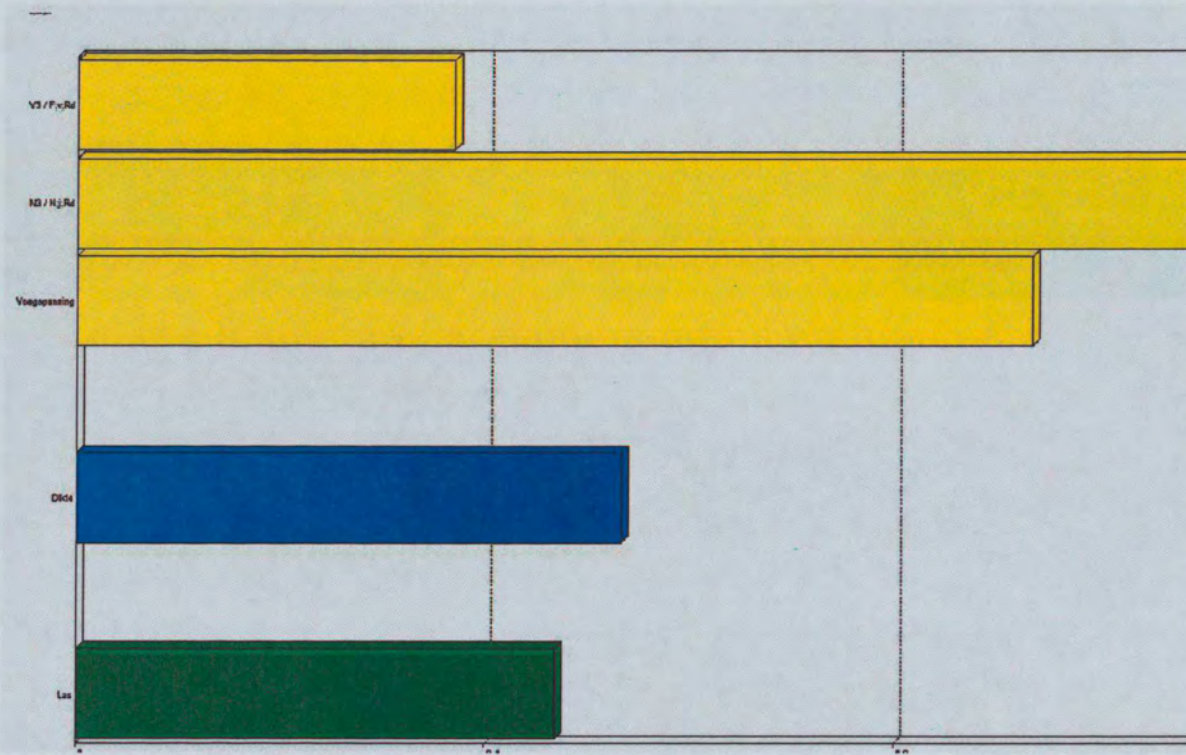
↑

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on IT7

Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV24 UNITYCHECK GRAFIEK FU.C.5

↑

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

4.5 5.0 5.5 6.0

C1 B1 A1 C2 B2 A2 B5 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 A18 A19 A20

Patch Reference numbers on UTT

47

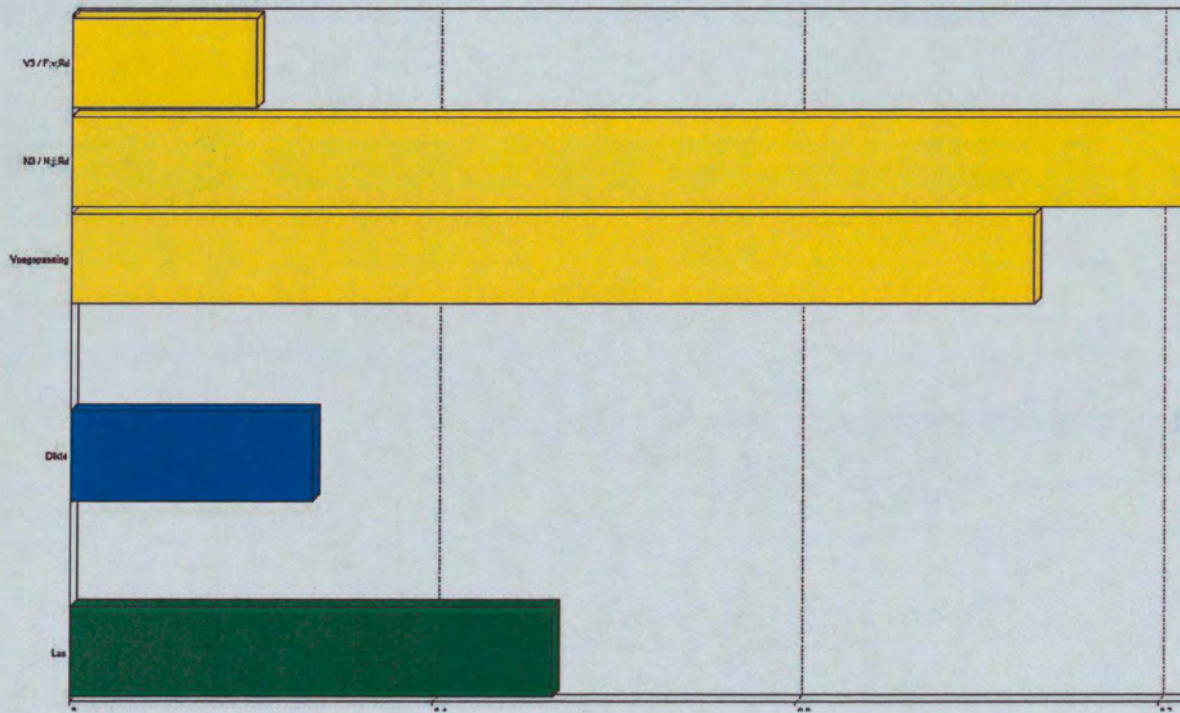
Image Engineering Scan Reference Chart TE263 Serial No.

↑

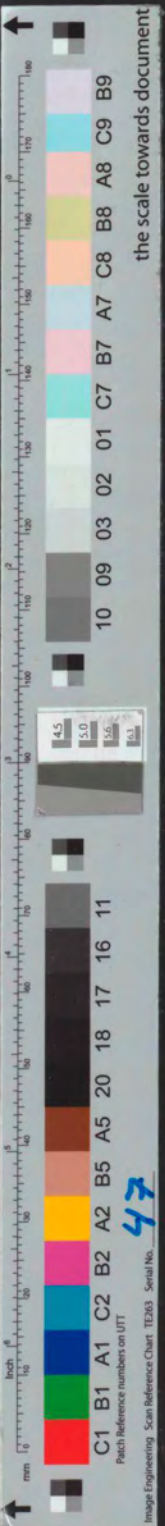
mm 10 20 30 40 50 60 70 80 90 100

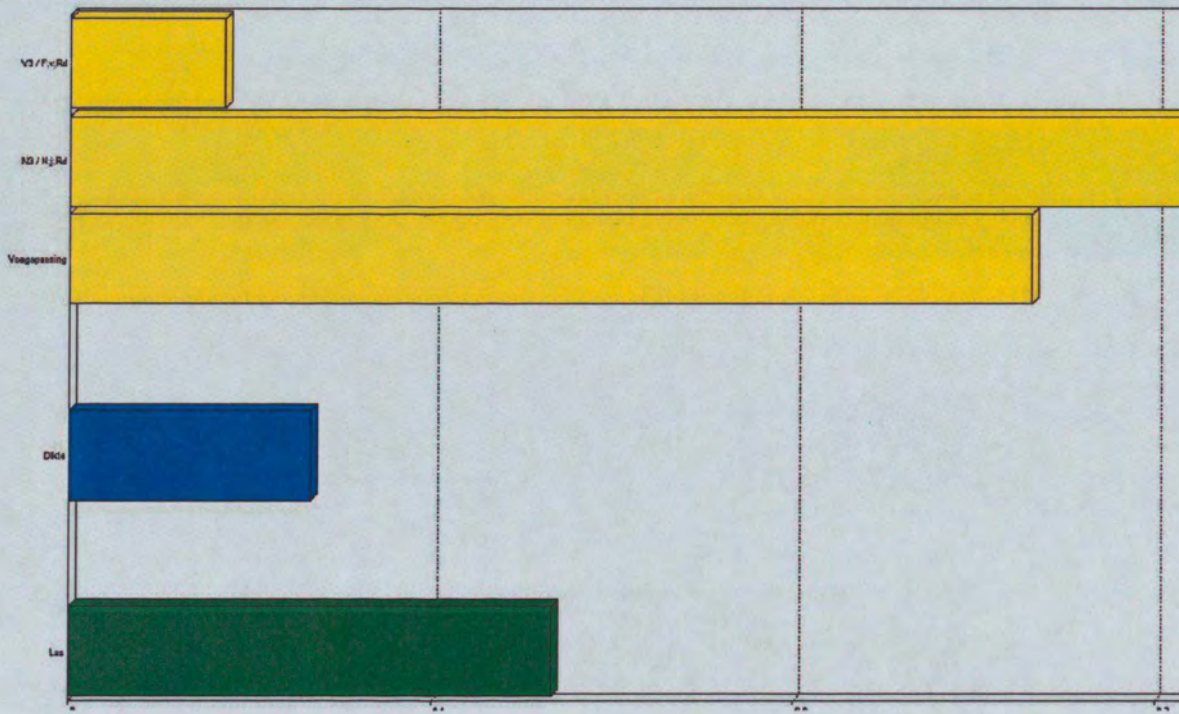
inch 1 2 3 4 5 6 7 8 9 10

the scale towards document

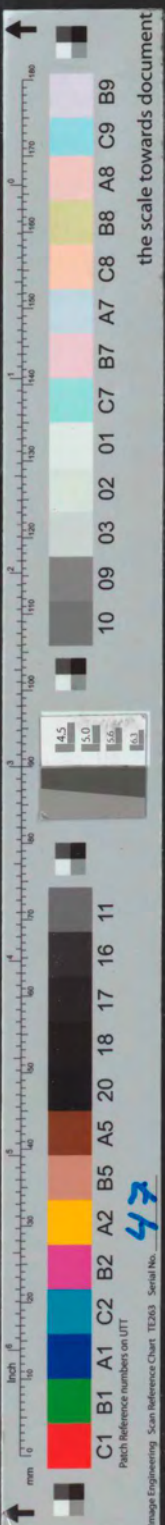


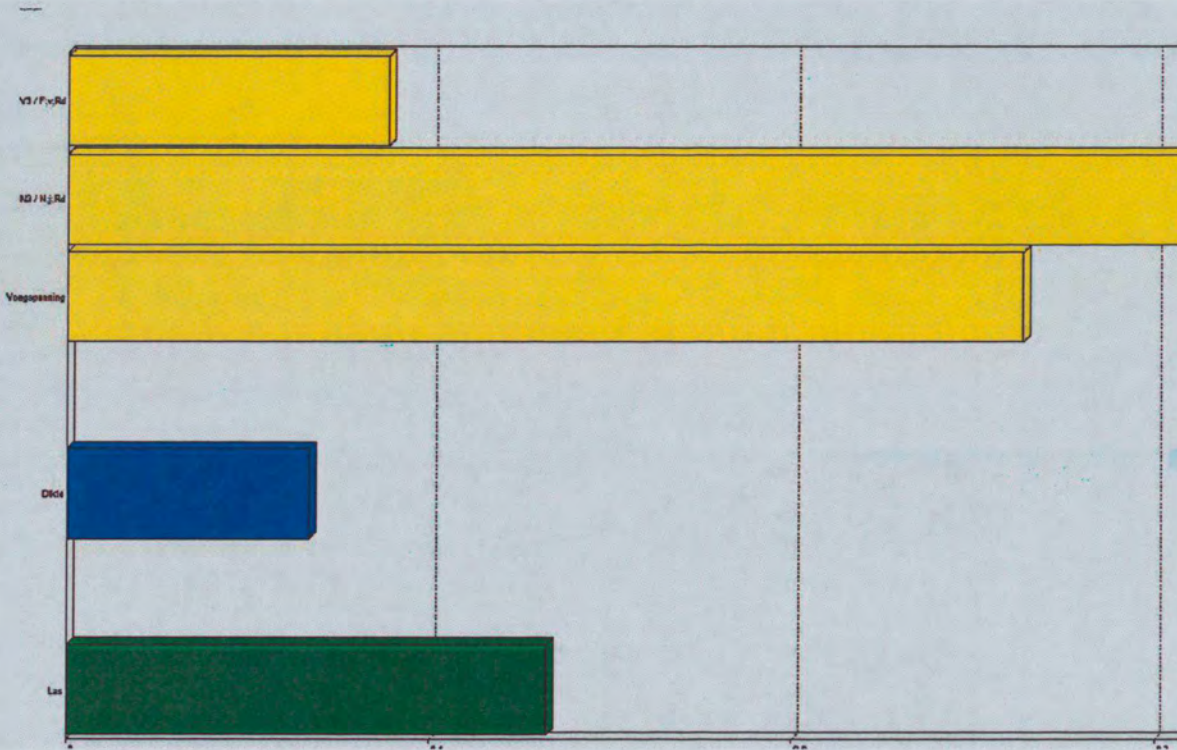
AFB. SV24 UNITYCHECK GRAFIEK FU.C.6



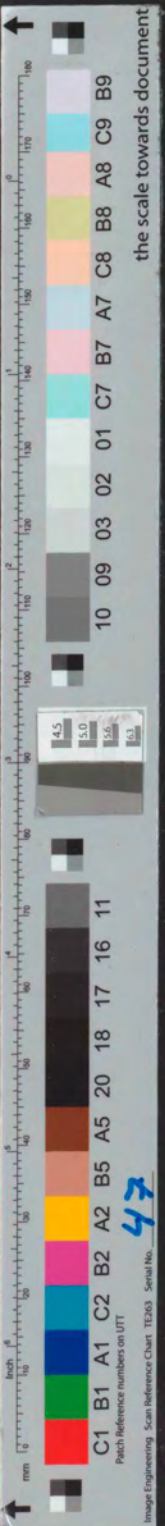


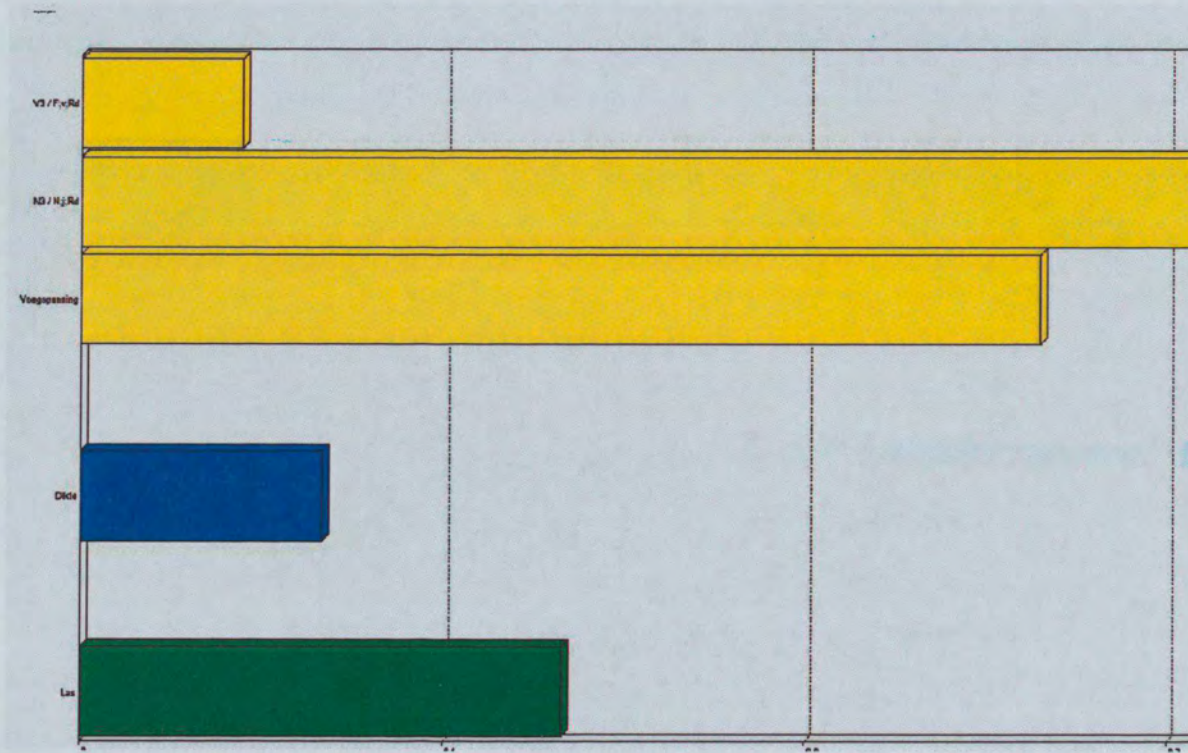
AFB. SV24 UNITYCHECK GRAFIEK FU.C.7



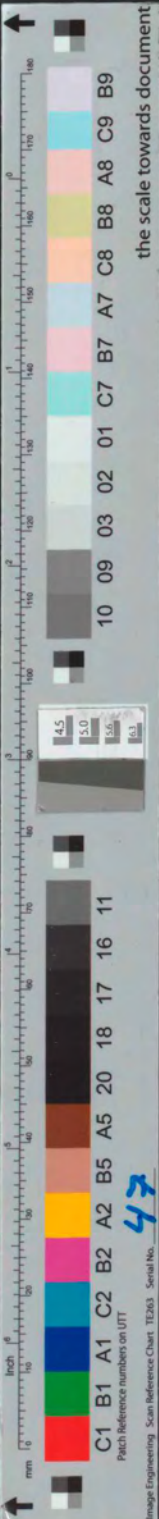


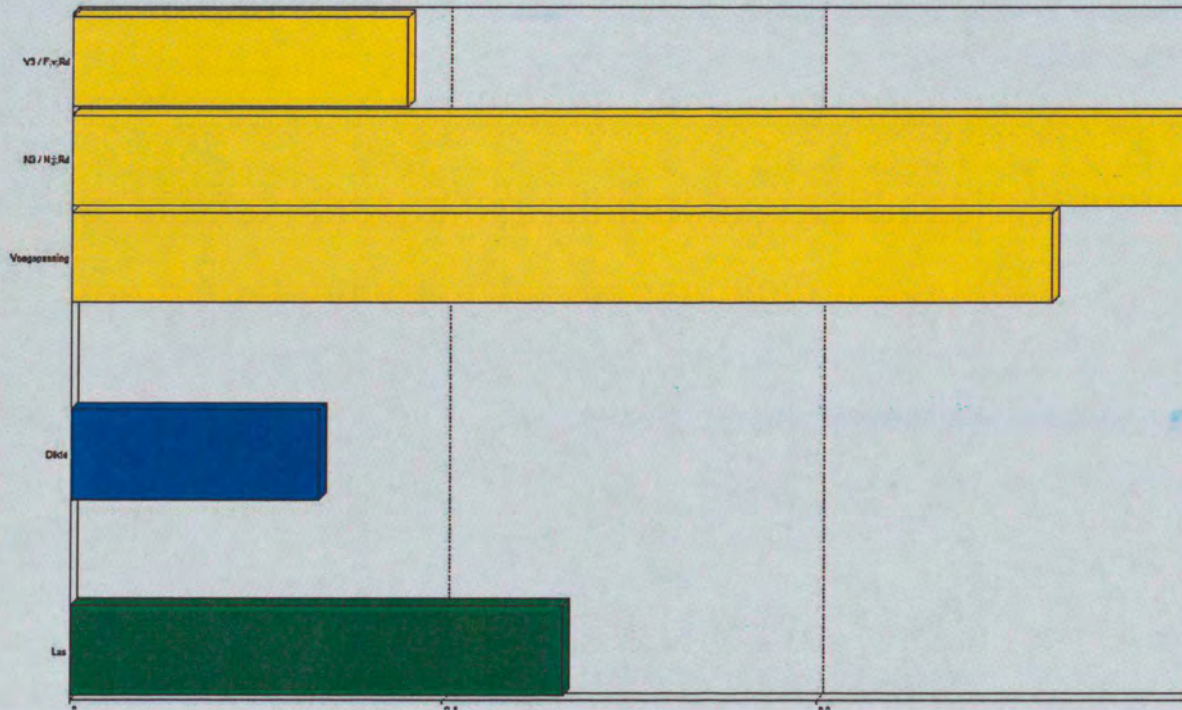
AFB. SV24 UNITYCHECK GRAFIEK FU.C.8





AFB. SV24 UNITYCHECK GRAFIEK FU.C.9





AFB. SV24 UNITYCHECK GRAFIEK FU.C.10

↑

mm 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

inch 0 1 2 3 4 5 6 7 8 9 10

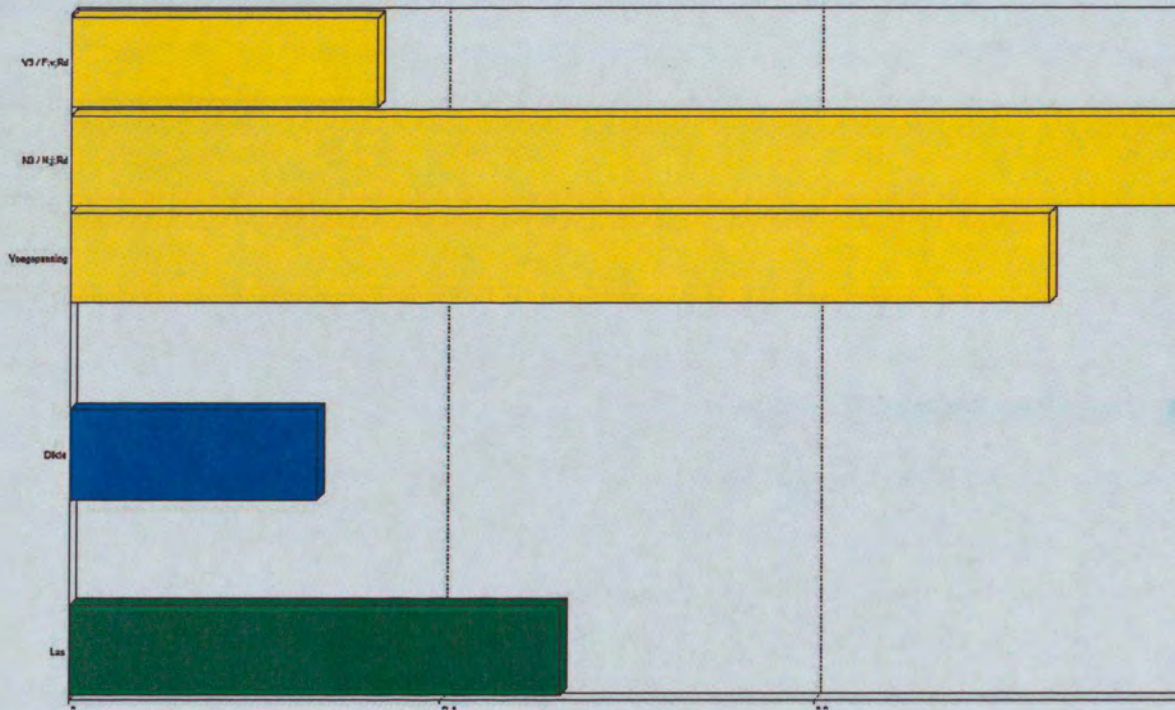
4.5 5.0 5.5 6.0 6.5

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

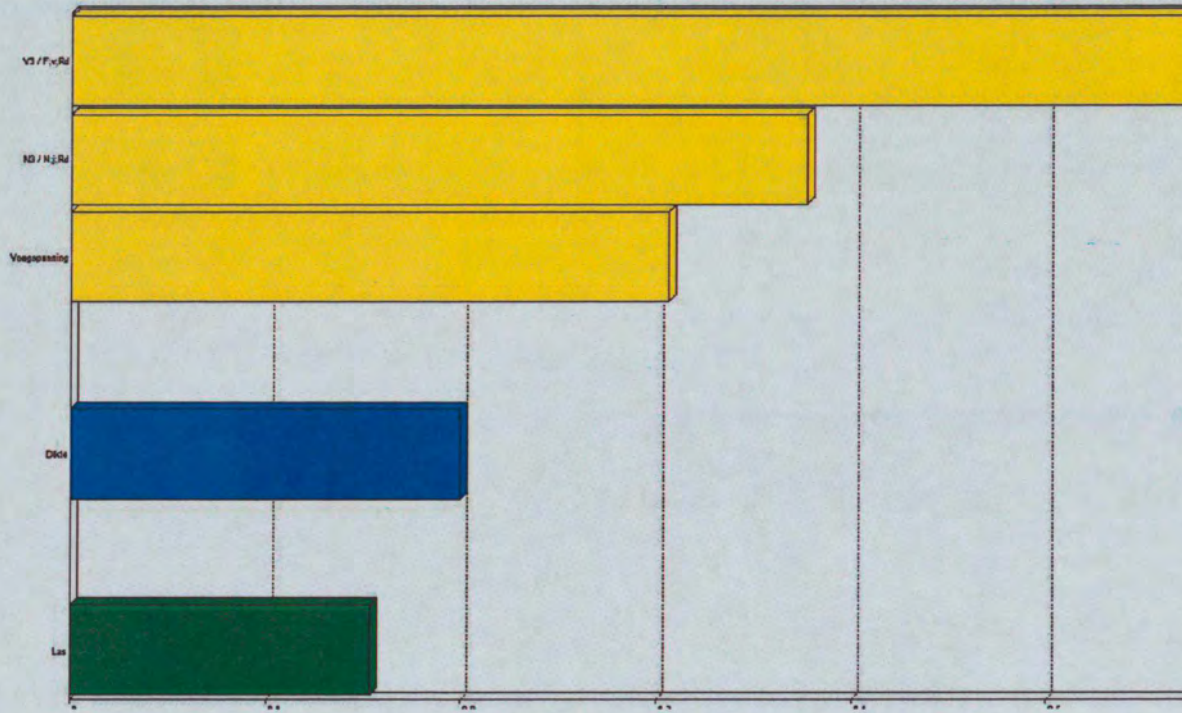
Patch Reference numbers on UTT
 Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document

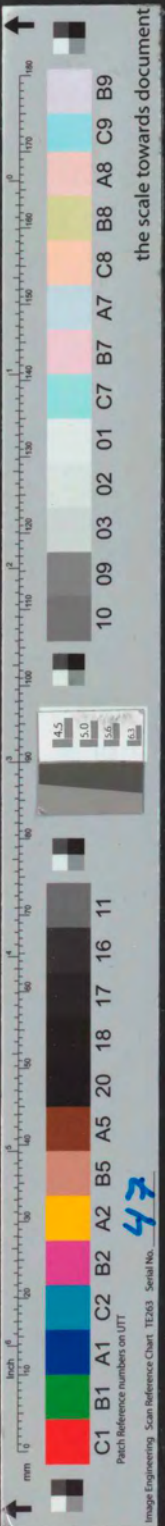


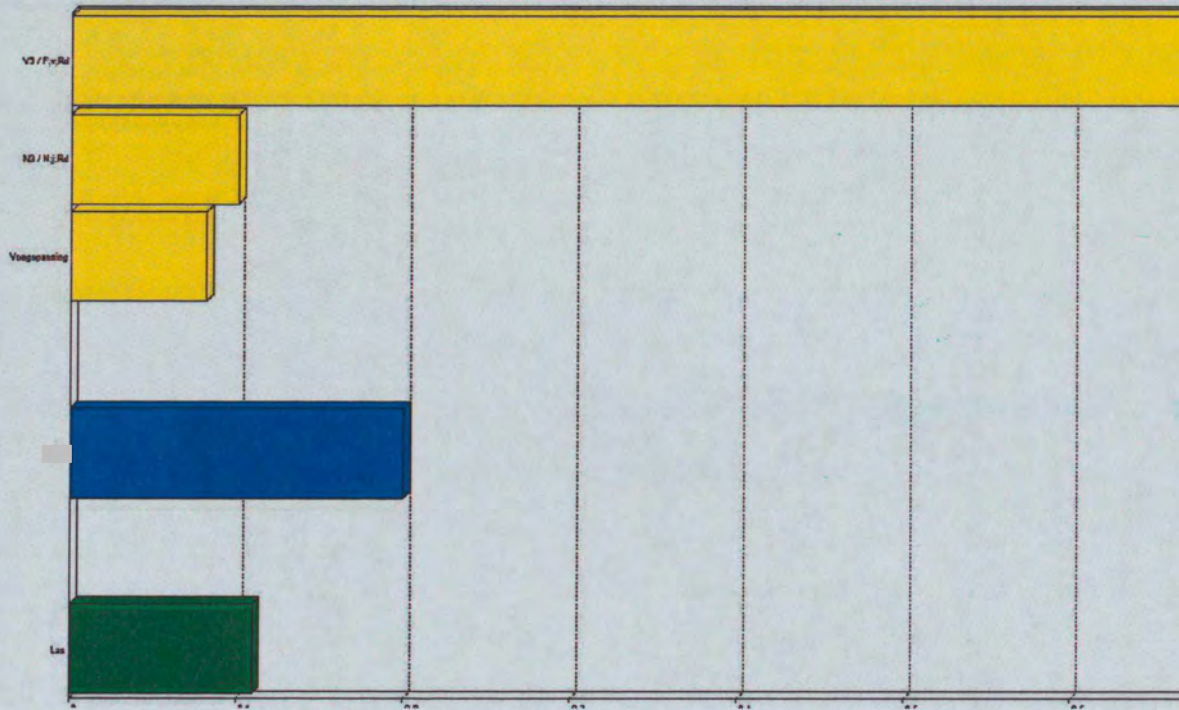
AFB. SV24 UNITYCHECK GRAFIEK FU.C.11





AFB. SV24 UNITYCHECK GRAFIEK FU.C.12





AFB. SV24 UNITYCHECK GRAFIEK FU.C.13

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

↑

Inch 0 1 2 3 4 5 6 7 8 9 10

4.5 5.0 5.5 6.0

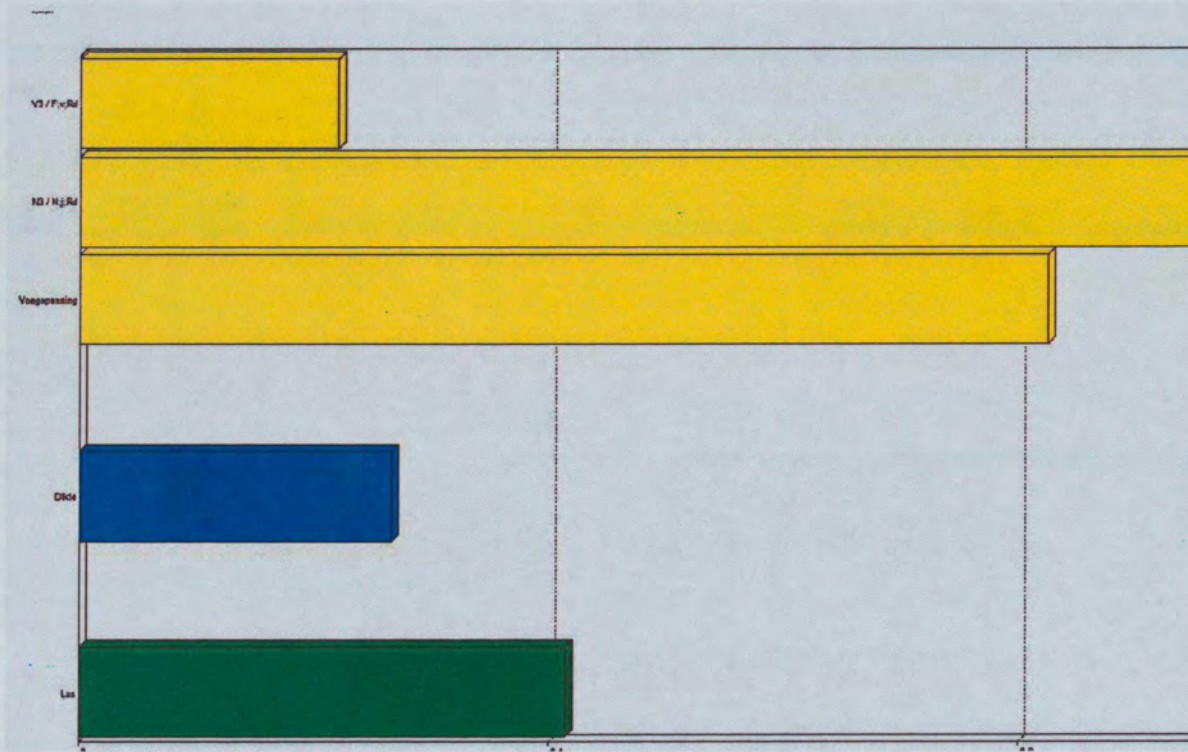
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT

Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV24 UNITYCHECK GRAFIEK FU.C.14

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

inch 0 1 2 3 4 5 6 7 8 9 10

10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

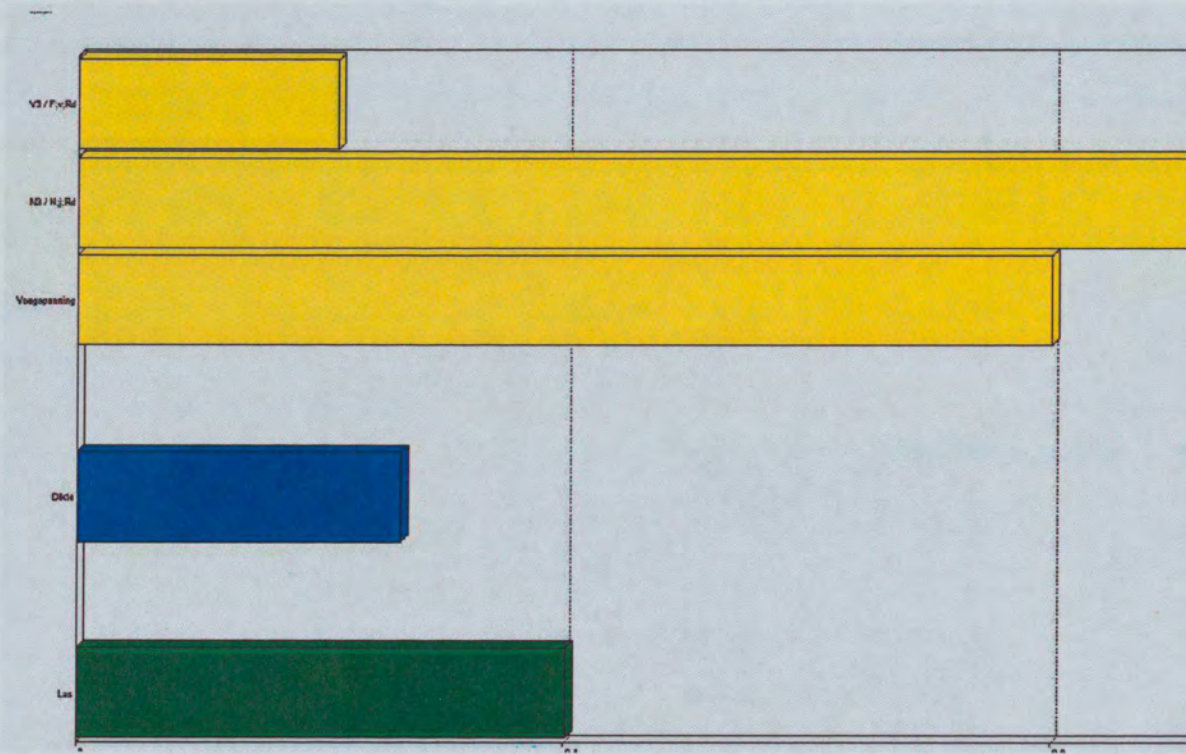
4.5 5.0 5.5 6.0

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT

Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV24 UNITYCHECK GRAFIEK FU.C.15

↑

mm 100 200 300 400 500 600 700 800 900 1000

↑

Inch 1 2 3 4 5 6 7 8 9 10

4.5 5.0 5.5 6.0 6.5

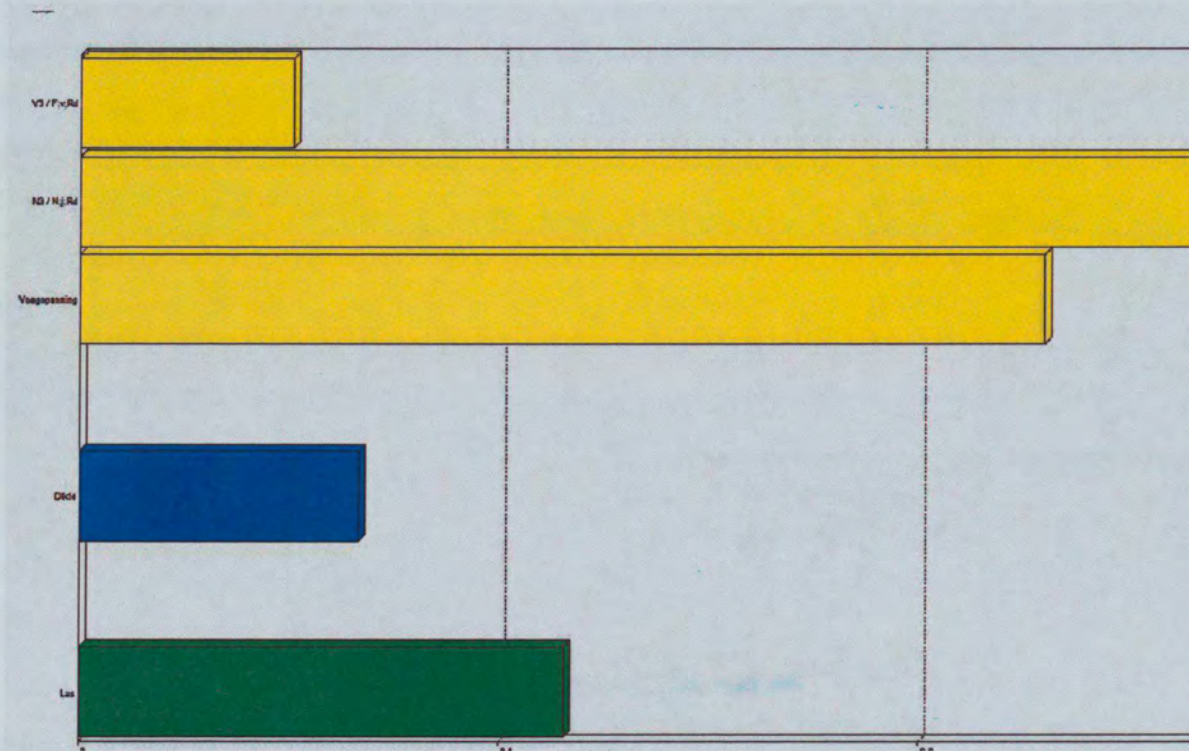
10 09 03 02 01 C7 B7 A7 C8 B8 A8 C9 B9

C1 B1 A1 C2 B2 A2 B5 A5 20 18 17 16 11

Patch Reference numbers on UTT

Image Engineering Scan Reference Chart TE263 Serial No. 47

the scale towards document



AFB. SV24 UNITYCHECK GRAFIEK FU.C.16

↑

mm 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

4.5 5.0 5.5 6.0

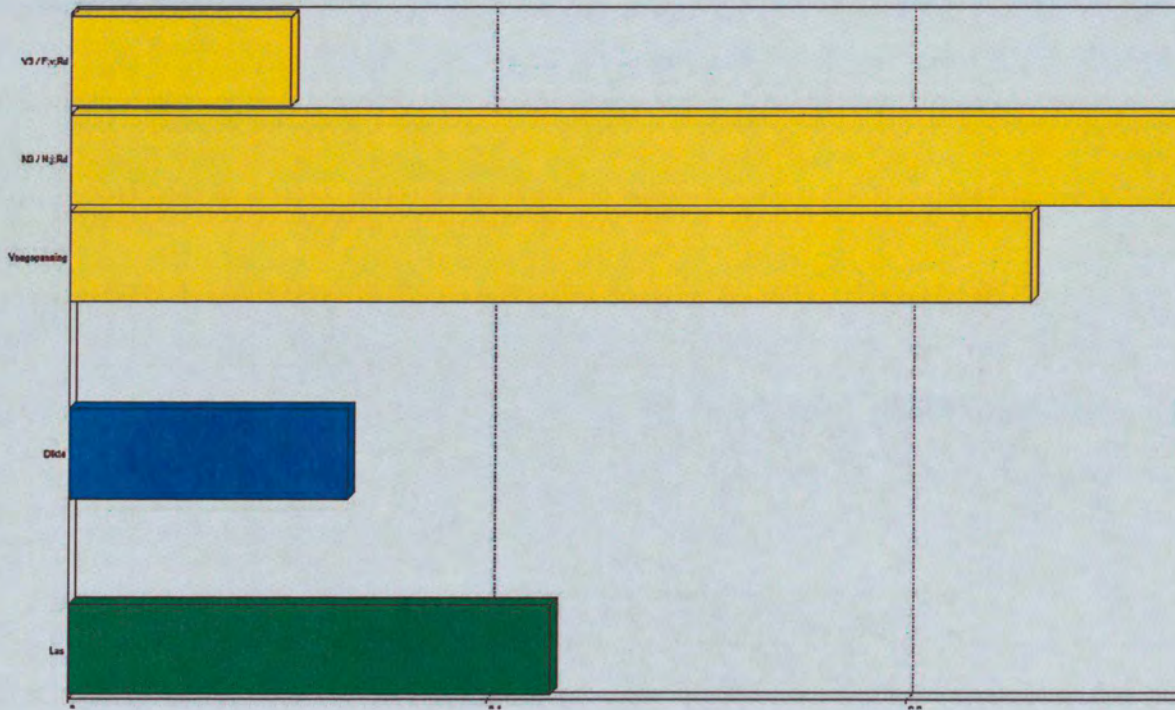
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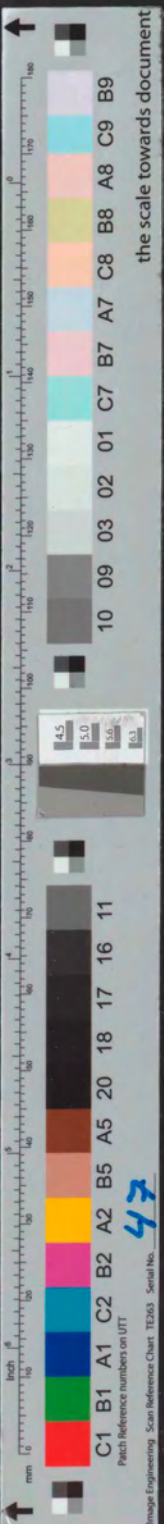
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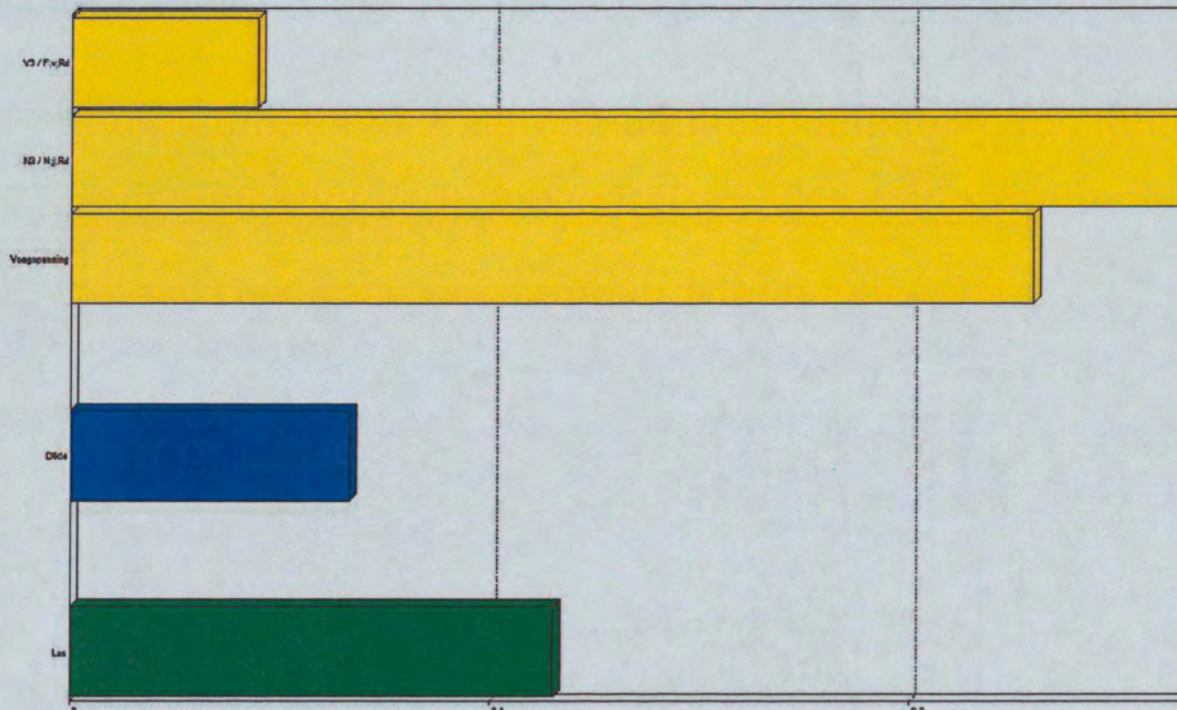
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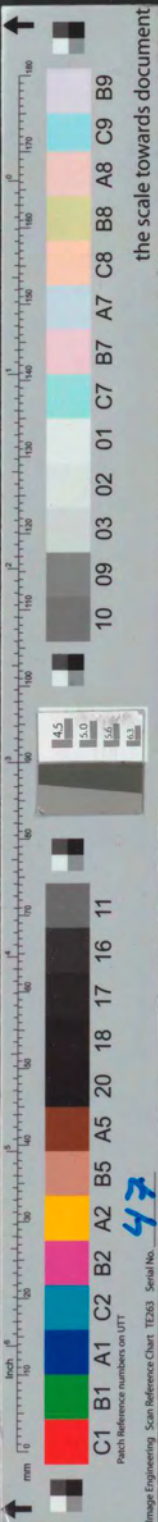


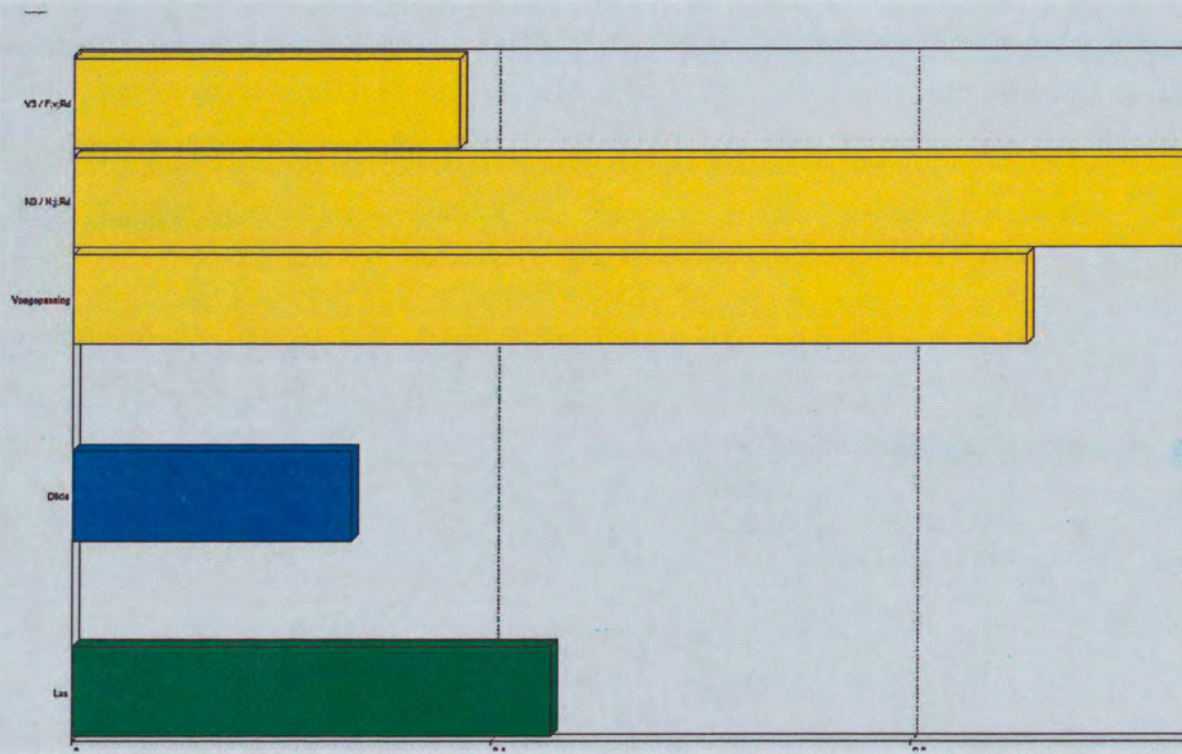
AFB. SV24 UNITYCHECK GRAFIEK FU.C.17





AFB. SV24 UNITYCHECK GRAFIEK FU.C.18





AFB. SV24 UNITYCHECK GRAFIEK B.I.C.1

