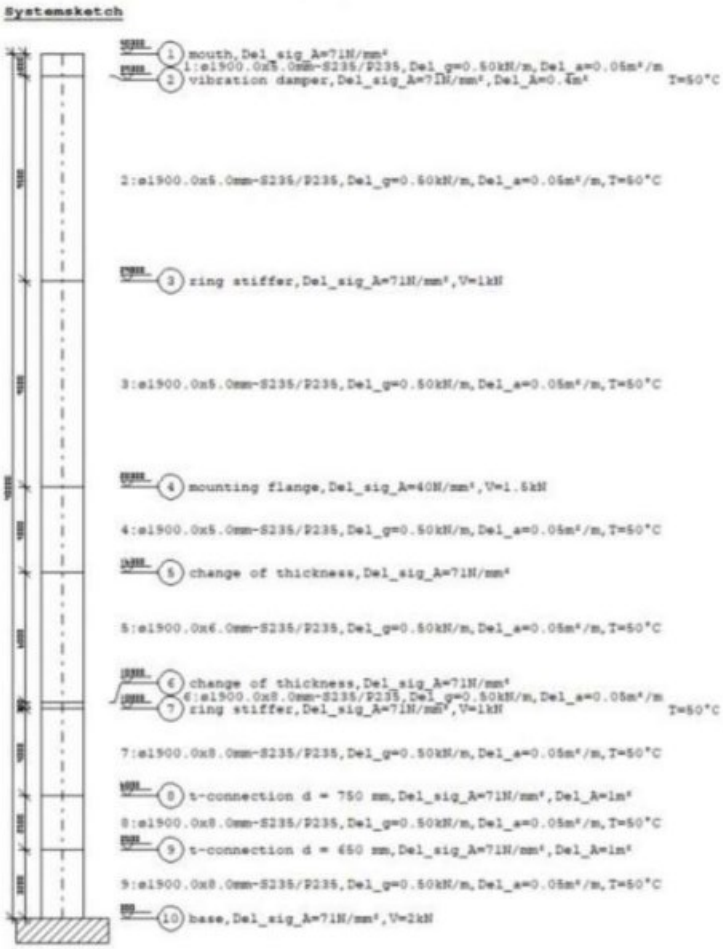
D230085008

Addendum behorend bij de rapportage "Fundatie t.b.v. RTO (Constructieberekening Fundatie)" (document 1)

In paragraaf 3.2.2. zijn de belastings berekeningen voor de schoorsteen opgenomen.

De aangehouden belastingen uit schoorsteen t.b.v. berekening fundatie zijn in het Engels gesteld, in dit addendum is voor de gebruikte termen een Nederlandse vertaling opgenomen.



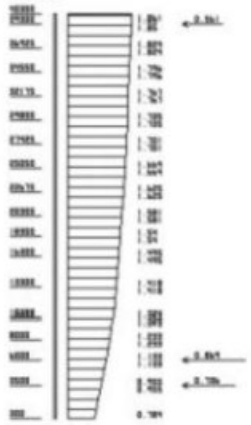
Engels	Nederlands
Systemsketch	Systeemschets
Mouth	Mond
Vibration damper	Trillingdemper
Ring stiffer	Ring verstijver
Mounting flange	Montage – of bevestingsflens
Change of thickness	Verandering van de dikte
t-connection	T stuk of verbinding
Base	Basis

Material properties

Tube	Material	T	E	f_y	f_y / γ_{y1}
-	-	°C	N/mm²	N/mm²	N/mm²
1	S235/P235	50	208125	235.00	213.64
2	S235/P235	50	208125	235.00	213.64
3	S235/P235	50	208125	235.00	213.64
4	S235/P235	50	208125	235.00	213.64
5	S235/P235	50	208125	235.00	213.64
6	S235/P235	50	208125	235.00	213.64
7	S235/P235	50	208125	235.00	213.64
8	S235/P235	50	208125	235.00	213.64
9	S235/P235	50	208125	235.00	213.64

Loading case 1: Gustload - static according to [3]

Loads



Tube	Point	v(z)	q(z)	σ_w	ΔA	Re	c_{cr}	ψ_r	κ	w/W
-	-	m/s	kN/m²	mm	m²/m	-	-	-	-	kN/m/kN
1	above	44.56	1.241	1900.0	0.05	$5.644 \cdot 10^6$	0.885	0.755	1.137	1.861
	below	44.43	1.234	1900.0	0.05	$5.628 \cdot 10^6$	0.885	0.755	1.137	1.850
	N. 2	44.43	1.234		0.40	m²			1.137	0.561
2	above	44.43	1.234	1900.0	0.05	$5.628 \cdot 10^6$	0.885	0.755	1.137	1.850
	below	43.06	1.159	1900.0	0.05	$5.454 \cdot 10^6$	0.883	0.755	1.137	1.735
3	above	43.06	1.159	1900.0	0.05	$5.454 \cdot 10^6$	0.883	0.755	1.137	1.735
	below	41.14	1.058	1900.0	0.05	$5.212 \cdot 10^6$	0.881	0.755	1.137	1.581
4	above	41.14	1.058	1900.0	0.05	$5.212 \cdot 10^6$	0.881	0.755	1.137	1.581
	below	40.04	1.002	1900.0	0.05	$5.072 \cdot 10^6$	0.880	0.755	1.137	1.495
5	above	40.04	1.002	1900.0	0.05	$5.072 \cdot 10^6$	0.880	0.755	1.137	1.495
	below	37.73	0.890	1900.0	0.05	$4.779 \cdot 10^6$	0.877	0.755	1.137	1.324
6	above	37.73	0.890	1900.0	0.05	$4.779 \cdot 10^6$	0.877	0.755	1.137	1.324
	below	37.58	0.882	1900.0	0.05	$4.760 \cdot 10^6$	0.877	0.755	1.137	1.313
7	above	37.58	0.882	1900.0	0.05	$4.760 \cdot 10^6$	0.877	0.755	1.137	1.313
	below	34.97	0.764	1900.0	0.05	$4.429 \cdot 10^6$	0.874	0.755	1.137	1.133
	N. 8	34.97	0.764		1.00	m²			1.137	0.869
8	above	34.97	0.764	1900.0	0.05	$4.429 \cdot 10^6$	0.874	0.755	1.137	1.133

Engels	Nederlands
Material proporties	Materiaal verhoudingen
Tube	Buis
Material	Materiaal
Loading case 1 – Gustload – static according to [3]	Belastings geval 1 – windvlaag of kritische belasting - statisch volgens [3]
Point	Punt
Above	Boven
Below	Onder

Tube	Point	v(z)	q(z)	σ_s	AA	Re	c_{cr}	Ψ_r	κ	w_i/W
-	-	m/s	kN/m²	mm	m²/m	-	-	-	-	kN/m/kN
	below	32.18	0.647	1900.0	0.05	$4.076*10^{6}$	0.870	0.755	1.137	0.955
	N.	9 32.18	0.647		1.00	m²			1.137	0.736
9	above	32.18	0.647	1900.0	0.05	$4.076*10^{6}$	0.870	0.755	1.137	0.955
	below	29.23	0.534	1900.0	0.05	$3.703*10^{6}$	0.866	0.755	1.137	0.784

Inner forces
According to 2nd order theory with 1.60-fold windloads and 1.30-fold deadweight loads and a lateral deviation of 1/333

Tube	N_{above}	V_{above}	M_{above}	N_{below}	V_{below}	M_{below}
-	kN	kN	kNm	kN	kN	kNm
1	0.000	-0.000	0.000	-3.688	2.980	1.507
2	-3.688	3.878	1.507	-38.721	31.266	171.479
3	-40.021	31.270	171.479	-75.054	56.637	594.998
4	-77.004	56.643	594.998	-91.754	66.537	843.680
5	-91.754	66.537	843.680	-117.514	80.187	1287.746
6	-117.514	80.187	1287.746	-119.165	80.824	1312.035
7	-120.465	80.828	1312.035	-142.475	88.753	1653.238
8	-142.475	90.144	1653.238	-156.232	94.362	1884.759
9	-156.232	95.539	1884.759	-173.840	100.046	2198.329

Deformations

Node	v_s	φ_s
-	mm	rad
1	234.583	0.0082954
2	226.287	0.0082952
3	148.071	0.0080745
4	76.107	0.0068344
5	50.710	0.0058045
6	21.204	0.0038975
7	20.047	0.0038095
8	7.381	0.0024726
9	2.420	0.0014744
10	0.000	0.0000000

Support reactions

	at γ_s-fold loads			at 1.00-fold loads		
Node	V	H	M	V	H	M
-	kN	kN	kNm	kN	kN	kNm
10	176.440	99.525	2198.329	135.723	62.203	1373.955

Stressproofs

Tube	above	above	below	below	
-	σ_{xx}	σ_{xs}	σ_{xx}	σ_{xs}	
-	N/mm²	N/mm²	N/mm²	N/mm²	
1	0.000	-0.000	-.017	-.231	≤213.636
2	-.017	-.231	10.891	-13.493	≤213.636
3	10.847	-13.536	39.782	-44.825	≤213.636
4	39.717	-44.891	56.902	-63.067	≤213.636
5	47.496	-52.636	73.127	-79.710	≤213.636
6	55.024	-59.967	56.074	-61.086	≤213.636
7	56.046	-61.113	70.818	-76.810	≤213.636
8	70.818	-76.810	80.865	-87.436	≤213.636
9	80.865	-87.436	94.495	-101.807	≤213.636

Engels	Nederlands
Tube	Buis
Point	Punt
Inner forces	Materiaal
According to 2nd order theory with 1.60 fold windloads and 1.30 fold deadweight loads and a lateral deviation of 1/1/333	Volgens de theorie van de tweede orde met 1,60-voudige windbelasting en 1,30-voudige 'doodgewicht' -belasting en een zijdelingse afwijking van 1/333
Above	Boven
Below	Onder
Deformation	Vervorming
Node	Knooppunt
Support reactions	Steunreacties
Stressproofs	Stressbestendigheid