

110 kV-transmission line "V557" (Senergos)

2S 248(M167/R91-228) -17,7mmØ

Tower no.	R HJ	1	2	3	4	5	6	7	8	9	10	11	14	T
Tower type	T	T	S	S	S	S	T	S	S	T	T	S	9	S
Span length [m]	64,0	200,0	401,0	397,0	326,0	152,0	319,0	403,0	175,0	207,0	149,0			
Every Day Stress [MPa]	21,24	57,12	57,12	57,12	57,12	57,12	57,08	57,08	57,08	53,80	57,08			

Tower no.	11	12	13	14	15	16	17	18	19	20	21	22	8	T
Tower type	S	S	S	S	T	S	S	S	S	T	S	S	15	S
Span length [m]	374,0	392,0	329,0	298,0	199,0	345,0	354,0	392,0	399,0	208,0	194,0			
Every Day Stress [MPa]	57,08	57,08	57,08	57,08	57,33	57,33	57,33	57,33	57,33	57,07	57,07			

Tower no.	22	23	24	25	26	27	28	29	30	31	32	33	2	T
Tower type	S	S	S	S	S	S	S	S	S	S	S	T	10	S
Span length [m]	188,0	175,0	208,0	189,0	188,0	180,0	197,0	195,0	193,0	172,0	142,0			
Every Day Stress [MPa]	57,07	57,07	57,07	57,07	57,07	57,07	57,07	57,07	57,07	57,07	57,07			

Tower no.	33	34	35	36	37	38	39	40	41	42	43	44	2	T
Tower type	T	S	S	S	S	S	S	S	S	S	S	S	12	S
Span length [m]	146,0	134,0	142,0	243,0	239,0	171,0	161,0	205,0	210,0	161,0	173,0			
Every Day Stress [MPa]	53,12	53,12	53,12	53,12	53,12	53,12	53,12	53,12	53,12	53,12	53,12			

Tower no.	44	45	46	47	48	49	50	51	52	53	54	55	8	T
Tower type	S	T	S	S	S	S	S	S	T	S	S	S	7	S
Span length [m]	169,0	182,0	188,0	163,0	202,0	173,0	208,0	150,0	169,0	207,0	209,0			
Every Day Stress [MPa]	53,12	52,84	52,84	52,84	52,84	52,84	52,84	52,84	53,05	53,05	53,05			

Damper B853002A03 (Tension tower): 34 pieces
 Damper B 161003A05 (Suspension tower): 53 pieces

T Tension tower
 S Suspension tower

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Tower no.	55	56	57	58	59	60	61	62	63	64	65	66	4	T
Tower type	S	S	S	S	S	T	S	S	S	S	S	S	9	S
Span length [m]	175,0	192,0	197,0	172,0	170,0	203,0	200,0	183,0	167,0	150,0	170,0			
Every Day Stress [MPa]	53,05	53,05	53,05	53,05	53,05	52,83	52,83	52,83	52,83	52,83	52,83			

Tower no.	66	67	68	69	70	71	72	73	74	75	76	77	8	T
Tower type	S	S	S	T	S	S	S	S	S	S	T	S	7	S
Span length [m]	188,0	193,0	179,0	175,0	201,0	198,0	200,0	199,0	197,0	182,0	199,0			
Every Day Stress [MPa]	52,83	52,83	52,83	53,30	53,30	53,30	53,30	53,30	53,30	53,30	56,50			

Tower no.	77	78	79	80	81	82	83						4	T
Tower type	S	S	S	S	S	T	T						6	S
Span length [m]	204,0	189,0	387,0	381,0	191,0	97,0								
Every Day Stress [MPa]	56,50	56,50	56,50	56,50	56,50	46,48								

Damper B853002A03 (Tension tower): 16 pieces
 Damper B161003A05 (Suspension tower): 22 pieces

T Tension tower
S Suspension tower

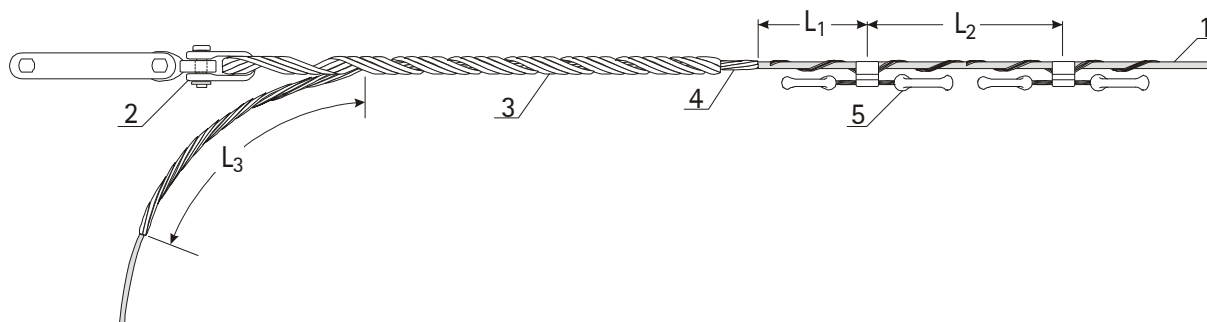
Total:
Damper B853002A03 (Tension tower): 50 pieces
Damper B161003A05 (Suspension tower): 75 pieces

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OPGW : **2S 248(M167/R91-228) -17,7mmØ**
 Customer : **Senergos, a.s.**
 Project : **110 kV-transmission line "V557"**
 Conductor self damping : **Estimated on basis of similar OPGW's**
 Every Day Stress (EDS) : **≤ 57,4 MPa (for 10 °C)**

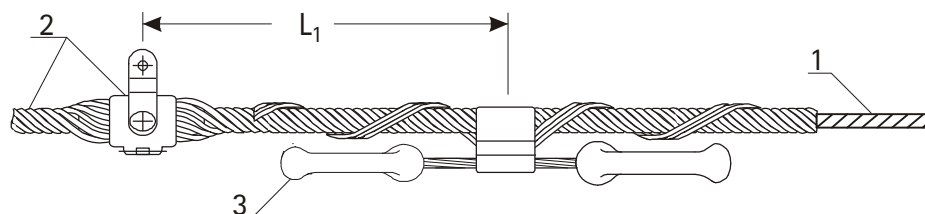
Study:
2020_122
 Date:
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Tension tower:



1....	OPGW/ ADSS.....	
2....	Thimble.....	F02686A02
3....	Dead end.....	AW252152
4....	Protection rods.....	RW193220lis
5....	Vibration damper.....	B853002A03
	with helical rods.....	TW185043
		$L_1 \approx 0,5 \text{ m}$
		$L_2 = 0,6 \text{ m}$
		$L_3 \approx 0,4 \text{ m}$

Suspension tower:

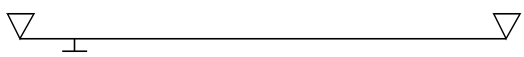

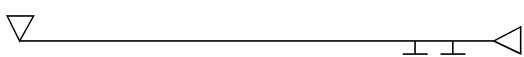

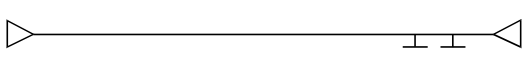
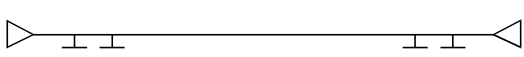





1....	OPGW/ ADSS.....	
2....	Amour grip suspension.	LTA179200/6lis
3....	Vibration damper.....	B161003A05
	with helical rods.....	TW310062
		$L_1 = 0,6 \text{ m}$

The damper locations are only valid for the damper type numbers shown in the drawing. They are not transferrable to other damper types. Ignoring this warning may cause damage of the cable or the damper.

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		max. span length	Damper left	Damper right
	S - S	< 220 m	type 1	-----
	S - S	220 – 404 m	type 1	type 1
	S - T	< 220 m	-----	type 2
	S - T	220 – 404 m	type 1	type 2
	T - T	< 220 m	-----	type 2
	T - T	220 – 404 m	type 2	type 2

Symbols:  suspension (S)  tension (T)  vibration damper

type 1: B853002A03

type 2: B161003A05

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