

Power Line Systems, Inc. - Portland

Project Name: 'c:\pls\pls_cadd\examples\projects\creep.LOA'

Criteria notes:

NESC Heavy per Rule 250B, Page 148

80 MPH Extreme Wind Loading per Rule 250C, Page 148

Grade B Construction "Method A" per Table 253-1, Page 155 and Table 261-1A, Page 163

Tension Limits per Rule 261H2, Page 161

Insulator Strength Reduction per Rule 277, Page 170 Should be applied to Insulator Strengths

1997 NESC C2-1997 Criteria File for PLS-CADD

Created May 17, 2001

Ruling Span Sag Tension Report

Section #3 '1:Back'

Cable 'c:\wires\nonlinear\acsr\drake_acsr.wir', Ruling span (ft) 1000

Sagging data: Catenary (ft) 9857.19 Condition I Temperature (deg F) 60

Note: Temperature and condition above are program supplied defaults used for automatic sagging.

Weather case for final after creep 60 Deg F

Weather case for final after load Extreme Ice

#	DESCRIPTION	+- WEATHER CASE							+- R.S. INITIAL COND.							+- R.S. FINAL COND.						
		+- CABLE LOAD		+- R.S.		+- R.S.			+- AFTER CREEP		+- R.S.		+- AFTER LOAD			+- R.S.						
		HOR. LOAD	VERT. LOAD	RES. LOAD	MAX. TENS.	HORI. TENS.	% UL	C	R.S. SAG	MAX. TENS.	HORI. TENS.	% UL	C	R.S. SAG	MAX. TENS.	HORI. TENS.	% UL	C	R.S. SAG			
		(lbs/ft)	(lbs)	(lbs)	(ft)	(ft)	(ft)	(lbs)	(lbs)	(lbs)	(ft)	(ft)	(ft)	(lbs)	(lbs)	(lbs)	(ft)	(ft)				
1	NESC Heavy	0.70	2.09	2.51	16151	16103	51	6419	19.48	15864	15815	50	6304	19.84	15078	15026	48	5990	20.88			
2	Extreme Wind	2.36	1.09	2.60	14892	14835	47	5698	21.95	14092	14031	45	5390	23.21	13473	13409	43	5151	24.29			
3	Extreme Ice	0.00	3.72	3.72	18723	18630	59	5014	24.95	18723	18630	59	5014	24.95	18723	18630	59	5014	24.95			
4	Uplift	0.00	1.09	1.09	12947	12935	41	11824	10.57	11135	11122	35	10166	12.30	10124	10109	32	9241	13.53			
5	Maximum Operati	0.00	1.09	1.09	6169	6144	20	5616	22.27	5518	5490	18	5019	24.93	5399	5371	17	4910	25.48			
6	NESC Blowout 6P	0.55	1.09	1.23	11172	11155	35	9097	13.74	9119	9098	29	7420	16.85	8436	8414	27	6861	18.23			
7	No Wind (SWING1	0.00	1.09	1.09	10798	10784	34	9857	12.68	8571	8554	27	7819	15.99	7871	7852	25	7177	17.42			
8	Medium Wind (SW	0.01	1.09	1.09	10798	10784	34	9857	12.68	8571	8554	27	7819	15.99	7871	7852	25	7177	17.42			
9	High Wind (SWIN	0.02	1.09	1.09	10798	10784	34	9855	12.69	8571	8554	27	7817	16.00	7877	7857	25	7181	17.41			
10	GALLOPING (SWIN	0.35	2.09	2.12	14400	14360	46	6764	18.49	13418	13375	43	6300	19.85	12700	12656	40	5961	20.98			
11	GALLOPING (SAG)	0.00	2.09	2.09	14328	14290	45	6825	18.32	13319	13278	42	6342	19.72	12596	12553	40	5995	20.86			
12	-20 Deg F	0.00	1.09	1.09	13684	13673	43	12498	10.00	12174	12162	39	11117	11.25	11071	11057	35	10107	12.37			
13	0 Deg F	0.00	1.09	1.09	12947	12935	41	11824	10.57	11135	11122	35	10166	12.30	10124	10109	32	9241	13.53			
14	30 Deg F	0.00	1.09	1.09	11858	11845	38	10828	11.55	9738	9723	31	8887	14.07	8894	8877	28	8114	15.41			
15	32 Deg F	0.00	2.09	2.09	14328	14290	45	6825	18.32	13319	13278	42	6342	19.72	12596	12553	40	5995	20.86			
16	60 Deg F	0.00	1.09	1.09	10798	10784	34	9857	12.68	8571	8554	27	7819	15.99	7871	7852	25	7177	17.42			
17	90 Deg F	0.00	1.09	1.09	9791	9776	31	8936	13.99	7611	7592	24	6939	18.02	7049	7028	22	6424	19.47			
18	120 Deg F	0.00	1.09	1.09	8865	8848	28	8088	15.46	6835	6813	22	6228	20.08	6382	6359	20	5813	21.52			
19	167 Deg F	0.00	1.09	1.09	7617	7597	24	6944	18.01	6037	6012	19	5495	22.76	5899	5874	19	5369	23.30			
20	212 Deg F	0.00	1.09	1.09	6657	6635	21	6065	20.62	5706	5680	18	5192	24.10	5581	5554	18	5077	24.64			

+- WEATHER CASE	+- INITIAL CONDITION	+- FINAL AFTER CREEP			+- FINAL AFTER LOAD				
+- DESCRIPTION	+- HORIZ. TENSION (lbs)		+- HORIZ. TENSION (lbs)		+- HORIZ. TENSION (lbs)				
+-	+-	+-	+-	+-	+-	+-	+-		
+-	+- TOTAL	CORE	OUTER	+- TOTAL	CORE	OUTER	+- TOTAL	CORE	OUTER
1 NESC Heavy	16103	7900	8202	15815	7995	7820	15026	7985	7041
2 Extreme Wind	14835	7636	7199	14031	7993	6038	13409	8043	5366
3 Extreme Ice	18630	9303	9327	18630	9303	9327	18630	9303	9327
4 Uplift	12935	6194	6741	11122	6278	4844	10109	6186	3923
5 Maximum Operati	6144	4859	1285	5490	5490	0	5371	5371	0
6 NESC Blowout 6P	11155	5740	5416	9098	6189	2910	8414	6216	2197
7 No Wind (SWING1	10784	5551	5233	8554	5990	2564	7852	6011	1841
8 Medium Wind (SW	10784	5551	5233	8554	5990	2564	7852	6011	1841
9 High Wind (SWIN	10784	5551	5233	8554	5990	2564	7857	6013	1844
10 GALLOPING (SWIN	14360	7186	7175	13375	7450	5926	12656	7464	5191
11 GALLOPING (SAG)	14290	7148	7141	13278	7414	5864	12553	7427	5126
12 -20 Deg F	13673	6440	7233	12162	6441	5721	11057	6316	4742
13 0 Deg F	12935	6194	6741	11122	6278	4844	10109	6186	3923
14 30 Deg F	11845	5855	5991	9723	6092	3631	8877	6061	2816
15 32 Deg F	14290	7148	7141	13278	7414	5864	12553	7427	5126
16 60 Deg F	10784	5551	5233	8554	5990	2564	7852	6011	1841
17 90 Deg F	9776	5293	4483	7592	5963	1629	7028	6035	993
18 120 Deg F	8848	5090	3759	6813	6003	810	6359	6115	244
19 167 Deg F	7597	4893	2704	6012	6012	0	5874	5874	0
20 212 Deg F	6635	4837	1798	5680	5680	0	5554	5554	0