

Note: To select elevated temperature options, refer to Options (Main Menu) or Loadings Table (Main Menu)

ALUMINUM COMPANY OF AMERICA SAG AND TENSION DATA
 Elevated Temperatures
 1000. Hrs @ 100. Deg C
 100. Hrs @ 125. Deg C
 10. Hrs @ 150. Deg C

Sample Problem
 Elevated Temp Input

Conductor RAIL 954.0 Kcmil 45/ 7 Stranding ACSR
 Cast Rod

Area= .8011 Sq. In Dia= 1.165 In Wt= 1.075 Lb/F RTS= 25900 Lb
 Data from Chart No. 1-955
 English Units

Span= 1000.0 Feet NESC Medium Load Zone
 Creep IS a Factor

Design Points					Final		Initial	
Temp	Ice	Wind	K	Weight	Sag	Tension	Sag	Tension
F	In	Psf	Lb/F	Lb/F	Ft	Lb	Ft	Lb
15.	.25	4.00	.20	1.814	24.11	9430.	21.80	10426.
0.	.00	.00	.00	1.075	19.66	6850.	16.12	8348.
15.	.00	.00	.00	1.075	20.80	6475.*	17.07	7886.
30.	.00	.00	.00	1.075	21.93	6142.	18.05	7456.
60.	.00	.00	.00	1.075	24.15	5582.	20.12	6694.
60.#	.00	.00	.00	1.075	28.32	4765.		
120.	.00	.00	.00	1.075	28.33	4764.	24.34	5537.
120.#	.00	.00	.00	1.075	32.16	4201.		
212.	.00	.00	.00	1.075	34.09	3966.	30.49	4428.
212.#	.00	.00	.00	1.075	37.49	3612.		
257.	.00	.00	.00	1.075	36.67	3691.	33.27	4062.
257.#	.00	.00	.00	1.075	39.72	3412.		
302.	.00	.00	.00	1.075	39.10	3465.	35.90	3768.
302.#	.00	.00	.00	1.075	40.78	3324.		

* Design Condition
 # Creep at Elevated Temperature

Sample Problem
 NESC Medium Loading with Alcoa Limits

Conductor RAIL 954.0 Kcmil 45/ 7 Stranding ACSR
 Cast Rod

Area= .8011 Sq. In Dia= 1.165 In Wt= 1.075 Lb/F RTS= 25900 Lb
 Data from Chart No. 1-955
 English Units

Span= 1000.0 Feet NESC Medium Load Zone
 Creep IS a Factor

Design Points					Final		Initial	
Temp	Ice	Wind	K	Weight	Sag	Tension	Sag	Tension
F	In	Psf	Lb/F	Lb/F	Ft	Lb	Ft	Lb
15.	.25	4.00	.20	1.814	24.11	9430.	21.80	10426.
0.	.00	.00	.00	1.075	19.66	6850.	16.12	8348.
15.	.00	.00	.00	1.075	20.80	6475.*	17.07	7886.
30.	.00	.00	.00	1.075	21.93	6142.	18.05	7456.
60.	.00	.00	.00	1.075	24.15	5582.	20.12	6694.
60.#	.00	.00	.00	1.075	28.32	4765.		
90.	.00	.00	.00	1.075	26.28	5132.	22.23	6060.
90.#	.00	.00	.00	1.075	30.28	4459.		
120.	.00	.00	.00	1.075	28.33	4764.	24.34	5537.
120.#	.00	.00	.00	1.075	32.16	4201.		
212.	.00	.00	.00	1.075	34.09	3966.	30.49	4428.
212.#	.00	.00	.00	1.075	37.49	3612.		
257.	.00	.00	.00	1.075	36.67	3691.	33.27	4062.
257.#	.00	.00	.00	1.075	39.72	3412.		
302.	.00	.00	.00	1.075	39.10	3465.	35.90	3768.
302.#	.00	.00	.00	1.075	40.78	3324.		

* Design Condition
 # Creep at Elevated Temperature