Masked Load

Short term overloading of conductors

Joint taskforce demonstration for general awareness

Van Holsomback

vholsomback@epri.com

Starting position 30 C

Full Load 80 C

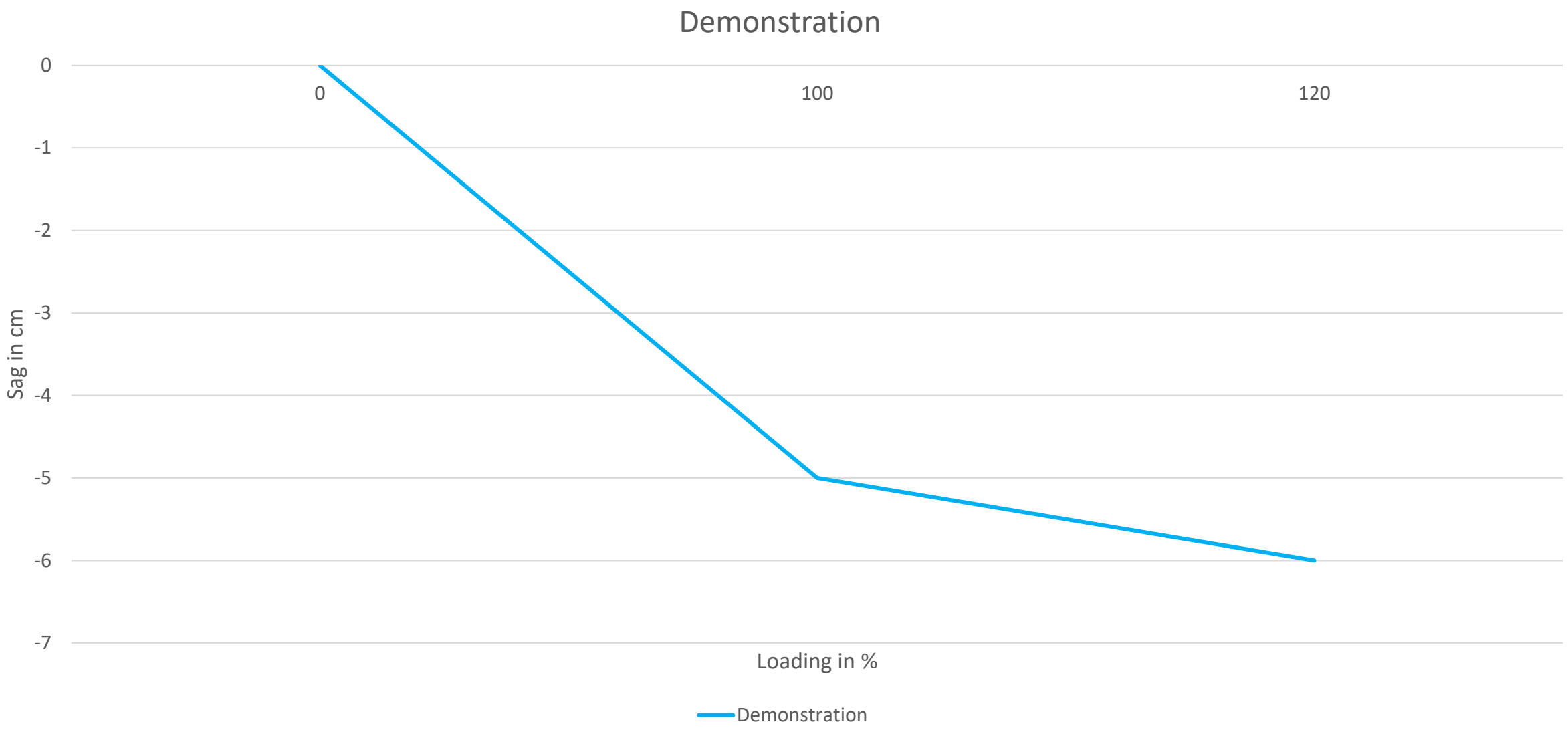
The conductors sag from loading is approximately 5 cm

Full Load 80 C

125% Load/5 min 100 C

The conductors sag from the additional loading is an additional 1 cm

Summary Graph



Summary notes

- This was a demonstration not an experiment.
  - 100 % loading was limited to 10 minutes. A longer duration may have resulted in higher temperatures.
  - Splices are qualified per C119.4 to 93 C. (93 C was exceeded).
  - The conductor was 4/0 ACSR. The temperature of the steel was not measured.
  - AAC conductor may need different testing.
  - Ambient temperature and wind are also important variables.
  - The span length was 9.78 meters
  - The temp was measured with a handheld IR tool.
  - The ambient / solar temperature of the conductor was around 38 C.