

Summary

In this research the proces of creep of a steel wire rope of Lang lay (16 mm 6*7+KVK) on a traction sheave has been analysed. The wire was tested at four traction ratios (1.25, 1.35, 1.50 and 1.65) and three values of the counterweight, the force S_3 . The wire was tested during hoisting and descending with and without lubrication.

Via an endoscope and a videocamera, making use of a framegrabber, the pictures are stored in a computer. Next the creep and creep velocity are determined with the computer. With a strain gage, which is connected to a datalogger, the force transference in the wire rope is measured during one setting.

The following conclusions can be drawn from the results:

- The creep is bigger with greater traction ratios.
- Lubrication of the wire rope increases the creep.
- When hoisting the creep is bigger than during descending.
- Increasement of the counterweight, the force S_3 , leads to a larger amount of creep, when applying the same traction ratio.
- The creep velocity increases towards the end of the area of creep.
- When hoisting the creep angle is bigger than during descending.
- Lubrication of the wire rope has little effect on the creep angle.
- The effect of the counterweight, the force S_3 , on the creep angle is small.