



Hoist / Motor: Significantly higher switching accuracy at the crane hoist thanks to compact incremental encoder with additional electronic overspeed switch

- Modern replacement solution for mechanical overspeed switches
- Compact design with an incremental output and electronic overspeed switch
- Pre-programmed switching speed
- Easy mechanical and electrical exchangeability



Before: Tacho generator with attached mechanical overspeed switch for speed measurement and monitoring at the hoist of a RMG crane.



After: Significant more precise speed monitoring by the incremental encoder FG 2 with integrated electronic overspeed switch.

Task

A tacho generator and an additionally attached mechanical overspeed switch are responsible for speed measurements and overspeed monitoring at the hoist. Due to its design the mechanical overspeed switch has a switching tolerance of ± 75 rpm, which leads to inaccuracy at the desired switching point. Moreover, the mechanical overspeed switch only reacts to speeds of 700 rpm and above. The signal quality of the tacho generator does not offer the precision required in today's world. The customer wished for a replacement solution that corresponds to current state of the art technology.

The Hübner Giessen solution

Based on the experience gained from previous modernization projects the implemented solution saw the installation of an incremental encoder FG 2 with an integrated electronic overspeed switch (option S). In addition to the incremental position value this compact encoder solution offers a switching speed set ex works. The electronic overspeed switch provides significantly more accurate overspeed monitoring. The switching speed of 2550 rpm was adopted from the previous solution 1:1. Not only is the overall length now distinctly shorter, this solution requires no changes to the existing mechanical interface. The entire conversion was implemented quickly and easily.

Products

- FG 2
- HK 5
- Engineering support