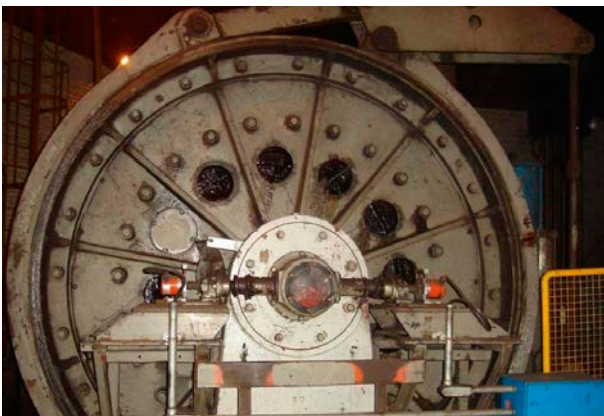


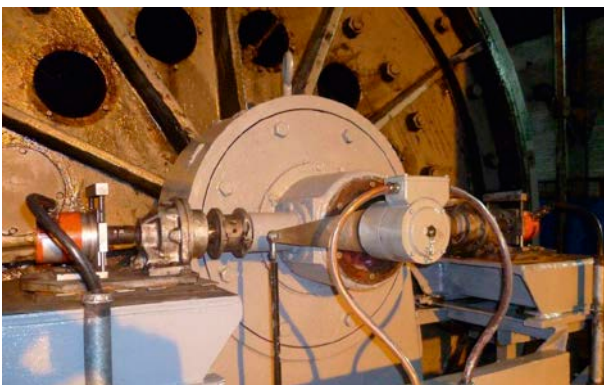


Blast furnace / Skip hoists: Retrofitting an U-ONE provides higher accuracy and improves availability

- Universal encoder system U-ONE replaces inaccurate mechanical components
- Directly attachable compact basic U-ONE unit
- EMC safe signal transmission via fiber optic cable
- Electronic function modules protected in switchboard



Before: The sensors mounted at an intermediate gear can't reach the necessary accuracy for precise positioning.



After: The direct mounted basic unit of the universal encoder system U-ONE® provides precise signals to the electronic modules in the control cabinet.

Task

The blast furnace skip hoist is protected against overspeed on the motor side by a mechanical overspeed switch with integrated speed increasing gear. On the drum side two absolute encoders mounted on a distribution gearbox supply position signals. As part of a modernization project outdated sensors need to be replaced with up-to-date systems. Objectives include simplification of mechanical attachments, elimination of inaccuracies as well as all-round better control response. In addition, susceptibility to EM disturbances is to be reduced and, as a consequence, increase the robustness and availability of the installation.

The Hübner Giessen solution

The universal encoder system U-ONE® is to replace the outdated sensor systems on both the motor and drum sides. Thanks to its modular design it is possible to adapt the system to meet all of the customer requirements. Direct attachment of the basic unit eliminates mechanical inaccuracies resulting from gearbox backlash and supports improved control response. Signal transmission via fiber optic cable eliminates the effects of EMC issues. The EGS module facilitates easy programming of the switching points for overspeed monitoring purposes. The AMS module with SSI interface provides values for position sensing. In addition, the ERC module allows users to conveniently program position switching points without modifying the programming of the PLC.

Products

- UOM 4 L, UO-EM-D2, UO-EM-ERC, UO-EM-EGS4, UO-EM-AMS
- Torque brackets
- Engineering support