



Rolling mills / Measuring rolls: Bearingless encoder system MAG withstands permanently extreme environmental conditions in the roll stand

- Designed for high shock and vibration loads, aggressive cooling emulsions
- Tailor-made solution features an installation width of just 10 mm
- Special stainless-steel ring ensure a long service life
- Interference-free speed measurements of the metal strip for optimum drive control



Sensors for strip speed measurement are exposed to extreme ambient conditions in the area of the measuring roll.



Tailor-made MAG system solution with extremely slim design and special stainless steel bandage to protect the MAG pulse wheel.

Task

The actual feedback value of the effective speed of the metal strip is required to effectively regulate the roll stand drives. It is possible to measure this value using suitable sensors located at the drive measuring roller between the stands. Shock and vibration loads as well as aggressive cooling emulsions mean the devices need to withstand extreme environmental conditions. In addition, limited installation space made it necessary to adapt the sensor system. Due to the loads mentioned above a measuring system installed to date was unable to supply interference-free speed signals.

The Hübner Giessen solution

Following discussions with the end customer Johannes Hübner Giessen installed a suitable measuring system with magnetic sensor technology that could be adapted to suit the conditions. The selected MAG 260 consists of a pulse wheel with an outside diameter of 260 mm as well as a scanning head with completely encapsulated electronics sealed to IP67. The bearingless system is unaffected by shock and vibration; it supplies interference-free signals even when exposed to extreme high quantities of aggressive liquids and vapours. Without using the reference pulse it was possible to implement the extremely slim 10 mm design width as needed.

Products

- MAG incremental
- Engineering support

More information: www.huebner-giessen.com/en/applications