

Thickness monitoring on straightening plants

Optical laser displacement sensors are employed in front of the inlet for panels on straightening plants to prevent damage to the plant. The sensors enable the detection of double sheets and an accurate acquisition of upright edges.

For this task a sensor is mounted above and below the moving panels. Irrespective of the actual position of the panels, the accurate material thickness is obtained by simple coupling of the synchronously measured distance values from both sensors. The sensors are mounted in a protective housing. The glass guard is flushed with oil-free compressed air in order to prevent deposits.

Ambient conditions

- Temperature: Room temperature
- Medium: Harsh ambient
Dirt, scale



Picture: SMS Schloemann-Siemag AG, Düsseldorf

- Measuring range: ± 50 mm
- Accuracy: $\pm 1,5$ mm
- Resolution: 0,10 mm
- Band width: quasi static
- Base distance: 670 mm

Measurement system

- 2 x ILD 2010-500 - Laser-based optical displacement sensor
- 2 x SGH2010 - Protective housing

Further processing depends on requirements:

- Analog or computer-aided system with linearity monitoring.

Reasons for the system selection

- Non-contact and wear-free
- Large base distance with a small measuring spot
- High accuracy even with different steel surfaces.
- Visible laser - Protection Class 2

Principle

