



Wear measurement of grinding rolls

In the cement and mineral industry, roller mills are used for fine grinding of the raw materials. During the milling process, the rollers are subject to high wear, which strongly reduces the quality of milling at the edges of the rollers. With a laser-optical roller measuring device the necessary regrinding process can be initiated at the right time, and the success of such regrinding can be determined. A protective device with special damping elements and air nozzles protects the laser-optics sensor against vibrations, and keeps the optical system and the beam path free of dust.

Requirements for the measurement system

- Measuring range: 210mm (max.-min. roller radius)
- Accuracy: <1mm
- Resolution: 0.1mm
- Band width: 10kHz (-3dB)

Ambient conditions

- Temperature: 10 - 40°C
- Medium: air, mill dust
- Severe machinery environment with vibration

System configuration optoNCDT

- 2 x ILD2200-210 SPL
- Laser-optical displacement sensor
- (Hard and floating roller)
- Traversing unit
- Sensor protecting and mounting device
- Computer system
- Software

Reasons for choosing the system

- Non contact
- Wear free
- Large stand-off distance with small light spot size
- High accuracy also with different steel surface properties
- Visible laser beam
- Protection class 2