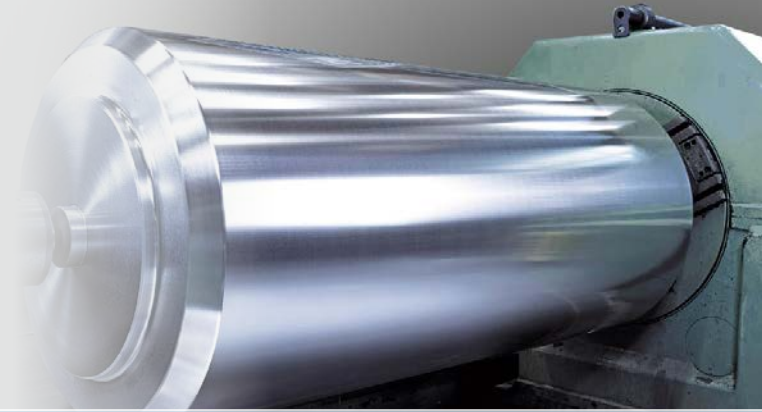


Visualisation of the measuring results



Non-contact roundness measurement for rollers

In the production of tapes and films, the high speeds of up to 2700m/min that are used today lead to an increased vibration tendency in the roller stands. Even smallest μm range irregularities in the rolling contour lead to cross-grooves on the rolled material and thus clearly reduce the quality of the product.

For quality assurance, a high-precision roundness measuring system for rollers is required, in which an eddy-current sensor measures the surface contour of the roller. Ambient conditions such as dust or oil must not affect the measurements. The angular position of roundness errors and the accumulation and periodicity of circularity errors can be documented using a computer.

Requirements for the measurement system

- Measuring range: $1000\mu\text{m}$
- Accuracy: 0.2%
- Resolution: $1\mu\text{m}$
- Band width: 10kHz (-3dB)

Ambient conditions

- Temperature: approx. 24°C
- Surrounding: industry hall, dust, oil

Reasons for choosing the system

The eddy-current sensors measure reliably, accurately, and non-contact. They are wear-free and require no maintenance. Dirt, dust, moisture, oil, and dielectric materials in the measuring gap are not detected.