More Precision



Inspection of extruder bores



idiamCONTROL

Applying the idiamcONTROL the diameter of extruder bores can be detected precisely. The wear of the machine which has been generated due to abrasive raw material, temperature and pressure can be controlled without contact. As the system can be applied in every extrusion line, an improved planning of the service intervals is given.

Precise

The idiamCONTROL detects the wear in the bores by non-contact internal inspection. The sensor unit – with integrated capacitive sensors arranged opposite to each other – measures the diameter of the bore. By turning the cross rollers by 40° clockwise or counter-clockwise the bore can be measured in 6 tracks altogether. For exact positioning, the sensor is centred on both ends by spring-loaded rollers. Several metal pins prevent the measuring cylinder from turning.

Robust

The sensors are installed opposite each other and determine the diameter of the system. During this process, the sensor unit is centred on the end of the measurement cylinder via spring-loaded rollers. Metal pins on the measuring cylinder run along the saddle of the two bores and prevent any twisting of the cylinder during the measurement process. The casing bore on a total of six measuring tracks can be measured by turning the cross rollers through 40°.

Touchscreen Panel

The new controller unit equipped with a touch screen displays the measuring results graphically. The measuring signal is shown as a diameter over the complete bore length and any tolerance deviations are immediately displayed. The diameter values of several test cycles can be saved. By comparing the individual diameter values, the extruder wear is calculated. For the data output the device is provided with a USB interface. A calibration control checks the functionality of the measuring system.





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Capacitive systems for extruder bore inspection

MATERIAL PARAMETERS

- For housing diameters 40mm to 180mm
- Diameter versions 8 or 16mm
- · Suitable for all metals

SYSTEM INTEGRATION

The sensor is designed as so-called sensor unit which can be pushed as far as the downstream end of the machine. The sensor is removed - while providing measurement values - on a reinforced cable which is mounted via a special plug on the sensor.

SPECIAL FEATURES

- · Significant reduction in the time required for a customer service engineer
- · Allows the exchange of defective segments
- Suitable for all metals without further calibration
- · Local evaluation options



Diameter: $\emptyset = SA + SB + const.$

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