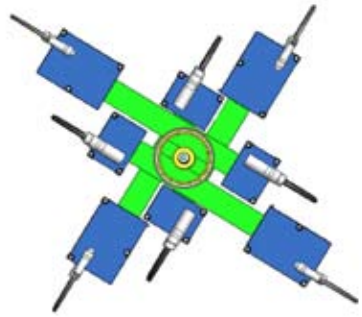

Optical measurement of pulleys

Pulleys must meet high quality standards. Given the high torques and rotational speeds involved, any deviations in the pulley's geometry would rapidly lead to defects in the shaft bearings. Dimensional stability and centricity are the decisive quality factors. That is why pulleys are subjected to extensive testing after manufacture.

Measurement technology service provider QS-Grimm GmbH has developed a measuring system for the quality inspection of pulleys. In a number of testing stations, the system tests all the pulleys' quality criteria. A measuring station consists of four optoCONTROL 2500 optical micrometers, which perform the geometrical measurements and check the diameter on two levels. Two sensors each record the tip diameter on a plane to the left and right of the pulley. Due to the rapid calculation by the sensors on one plane, the diameter of the tip can be determined to a high accuracy with a resolution of 0.1µm.

Benefits to the customer:

- Slim design
- High accuracy and sampling rate
- High depth of field

Measuring system requirements:

- Measuring range: 31 to 78mm
- Accuracy: ± 3µm
- Resolution: 0.1µm

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