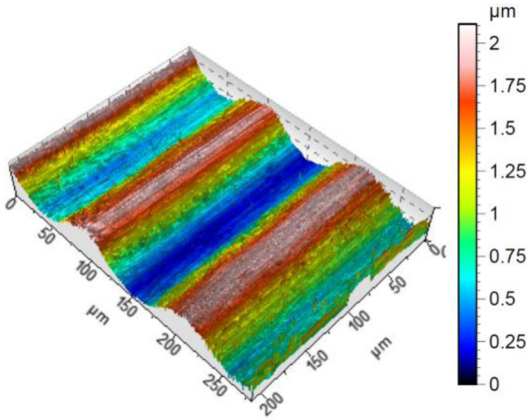
Keyence Laser Microscope

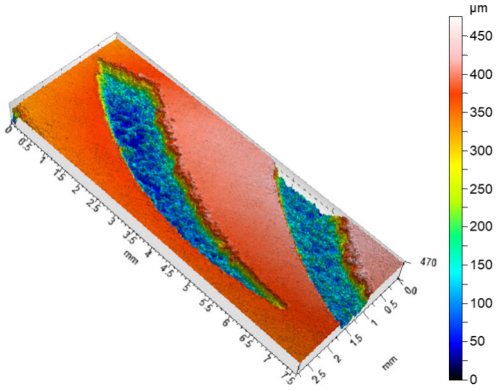
IMA-TechSheet #102030 V1

Universität Stuttgart
Institut für Maschinenelemente

Keyence VK-9710



Picture of a lathe-turned shaft surface



Picture of a structured PTFE sleeve sealing ring

Description:

- 2D and 3D investigation for roughness, profile and surface measurement.
- The laser microscope combines the examination functions of a surface/roughness measuring instrument with the advantages of a scanning electron microscope.
- The measuring process is always contactless, which means that the measuring object remains unchanged.
- Two different light sources available, a white light source (CCD camera) and a short-wave laser light source (violet)
- With the help of the violet laser, the surface of the sample is scanned.
- The optical image (CCD camera) is then projected onto the topography.
- In this way, the topographies can be displayed in real color.

Technical Specifications:

Measuring principle:	Laser Scanning, confocal
Light source	violet (408 nm) semiconductor laser
Vertical resolution	max. 1 nm
Lateral resolution	max. 260 nm

Field of Application:

- 3D roughness parameters according to DIN EN ISO 25178
- 2D roughness parameters for evaluation according to DIN EN ISO 4287 and procedure according to 4288 and VDA 2006
- Measurement of distances, depths, volumes and geometries
- Wear measurements, running track wear of a RSS on a shaft, etc.
- Damage analysis: scratches and flaws