

3D surface metrology

smartWLI CylinderInspector 3D

contactless
highly accurate
speedytec
reliable
compact

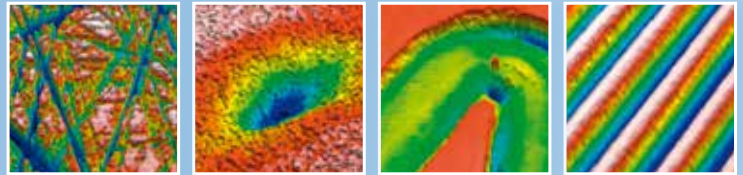


In Cooperation with:



Gesellschaft für Bild- und Signalverarbeitung (GBS) mbH

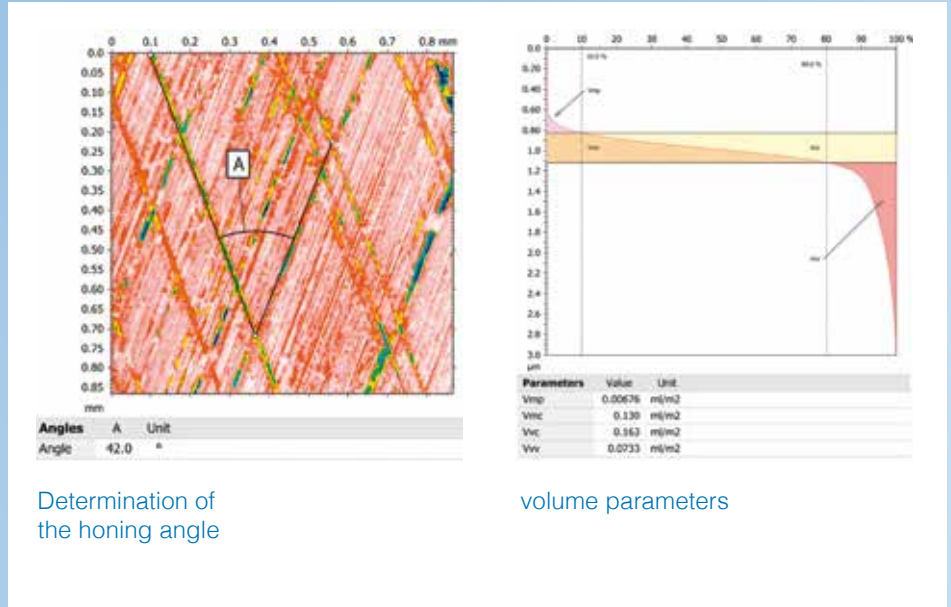




Material Science • Automotive • Micro Systems • Electronics • Solar

Areas of application

- 3D inspection of cylinder surface and cylindrical honing structures
- Comprehensive geometric analysis (lengths, angles, heights & depths, volume, etc.)
- 2D roughness and waviness analysis of components (accord. ISO 16610, 13565, 12085)
- 3D parameters according to ISO 25178 (roughness, functional characteristics: bearing ratio and volume)
- Optimized for use in the development, manufacturing and quality assurance
- Optional software upgrade can add pore analysis



Determination of the honing angle

volume parameters

Measuring head

Camera	Sensor: CCD, interface: GigE, resolution: 1624x1234, framerate: 30fps
Light source	White light - LED

System components

Insertion depth [mm]	~ 188
Cylinder diameter [mm]	70 – 125
Rotation system	manual rotation
Z-measurement system	White light interferometer (WLI) / piezo-actor with 200 µm measurement path
Software	MountainsMap® Imaging Topography including 2D and 3D Advanced Surface Texture Module

Optics

	10x	20x	50x
Magnification	10x	20x	50x
Field of View [mm]	1.37 x 1.04	0.685 x 0.52	0.274 x 0.208
Numerical Aperture	0.3	0.4	0.55
Resolution in Z direction [nm]	< 5	< 5	< 5
Sampling in XY direction [µm]	0.8	0.4	0.16
Lateral optical resolution [µm]	1.20*	0.78*	0.57*
Weight [kg]	~ 12		

* by Rayleigh

Rev.: 03.2016