NELA

Smart Sensors

For System Integration and Plant Engineering

We seamlessly integrate customized sensor systems for precise dimensional accuracy and surface inspections, form and position tolerances and thread evaluation. These systems are designed for a smooth integration into production and assembly lines.

Our sensors with camera and lighting enable immediate implementation via standard interfaces. Our customized inspection programs ensure efficient use.

Quality is Everything

Surface Inspection

Inspection of all surfaces on top and bottom side as well as all lateral surfaces of the parts to detect previously defined defects. Different sensors with appropriate optical and illuminative components will be used to achieve the best possible contrast. (Example: reflected light)
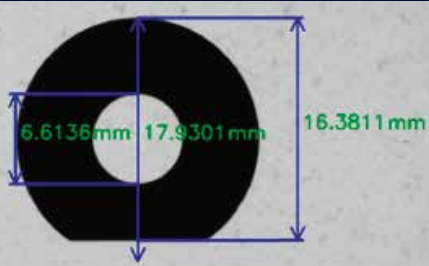
Lateral Inspection

Customised surface sensors for top/bottom faces and lateral surfaces ensure high-precision detection of component inhomogeneities.
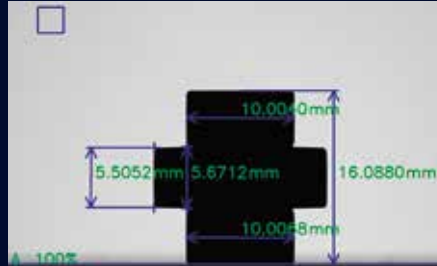
Shape from Shading - SFS

Shape from shading is a drift and curvature measuring 3D-method which can be used for shiny or inhomogeneous surfaces. In the example, chatter marks are made visible with shape from shading technology.
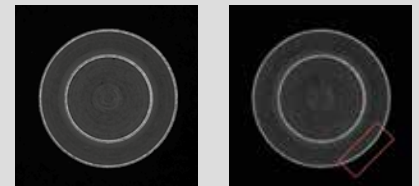
Dimensional Inspection

Inspection of all visible geometrical characteristics such as, for example, inner and outer diameter.

Height Control

Measurement on up to 4 projection points to guarantee highly precise measurement results with tight tolerances. For instance, inclined upper edges can be detected with this method.

Edge Detection

Different types of illumination are used to optimally recognise specific surface defects.
Example: Defect evaluation with dark field illumination.

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see. control. automate.

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