3D-Deformation measurement

IMA-TechSheet #102130 V2

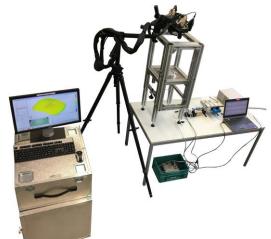




3D-Deformation measurement

Description:

- Measuring system consisting of 2 cameras, illumination unit and computer with evaluation software
- Variable setup due to adjustable distance and angle of the cameras
- Non-contact measuring principle
- 3-dimensional full-surface measurement of surface position and deformation
- Measurement preparation: Application of a speckle pattern on the measurement surface
- Automatic image evaluation consisting of facet detection and tracking, calculation of displacement and deformation



Blow-up test with 3D deformation measurement system



Test flange for static sealing points

Technical Data:

Camera resolution: 1.400 x 1.024 pixels Frame rate: Up to 360 Hz

(full screen 90 Hz)

Measuring area min. 10 x 8 mm (depending on lens): max. 4.000 x 3.000 mm

Available Test Methods:

- Determination of mechanical material properties under biaxial loading in the blow-up test (e.g. for FEM simulation)
- Measurement of the deformation of dynamically loaded sealing points on flanges and housings
- Validation of FEM simulations