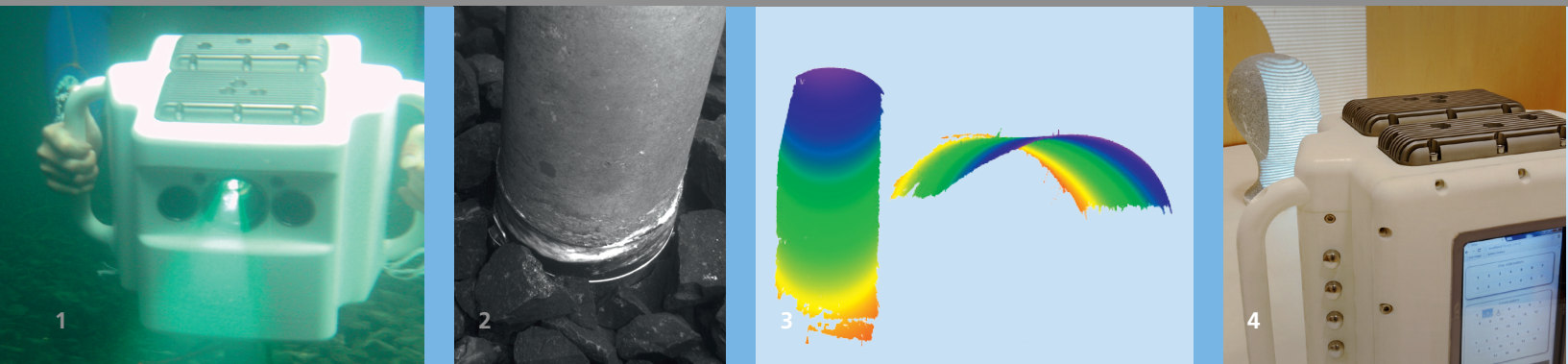




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- 1 3D-Scanner in underwater use.
- 2 Pipe measurement in a water basin.
- 3 3D measurement data in false color presentation.
- 4 Projection of fringes in the laboratory, view from backside with display.

HANDHELD OPTICAL 3D SCANNER FOR UNDERWATER USE

Fraunhofer Institute for Applied Optics and Precision Engineering IOF

Albert-Einstein-Straße 7
07745 Jena, Germany

Director
Prof. Dr. Andreas Tünnermann

Head of Business Unit Photonic Sensors and Measuring Systems
Prof. Dr. Gunther Notni

Contact
Dr. Peter Kühmstedt
Phone +49 3641 807-230
peter.kuehmstedt@iof.fraunhofer.de

www.iof.fraunhofer.de

Measurement principle

- High-speed image projection and data acquisition
- Fringe projection using phase shifting
- Determination of 3D measurement points using the ray based camera model for consideration of refraction effects

System Parameters

- Measurement field: 250 x 200 mm²
- Camera resolution: 1600 x 1200 Pixel
- Working distance: 500 mm
- Resolution lateral: 150 µm
- Measurement uncertainty: 200 µm
- Data acquisition time: 0.4 s
- Maximal diving depth: 40 m
- Sensor weight: 11 kg

Our Offer

- 3D data acquisition under water
- Development of sensors according to the Specific requirements
- Manufacturing of sensors

Features

- Under water scanning system
- Handheld operation and quick data acquisition
- Unconstraint sensor placement
- Power supply and data transfer using one cable
- Easy handling using eight control keys and the backside of the housing
- Built-in 7"-monitor for display of the user interface and measurement results
- Built-in computer unit for control and data analysis
- Suitable also for outdoor use under extreme wheather conditions