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- 2 Micrograph of the laser weld line
- 3 S/N-curve

NEW TEST SPECIMEN FOR PLASTICS JOINING TECHNOLOGY

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/multiweldtester

Fraunhofer LBF's Department of Lightweight Structures has designed the "MultiWeldTester", a new type of specimen for the investigation of laser welds.

Using the MultiWeldTester, laser welds can be subjected to multi-axial loading as well as a large variety of ambient conditions.

The MultiWeldTester's modular design allows to study the sensitivity of laser weld properties with respect to many different influences, such as:

- Laser weld process,
- Laser weld process parameter,
- Weld line geometry,
- Multi-axial loading at the weld line such as tension, torsion and internal pressure,

- Various types of loading (static, dynamic, and cyclic),
- Environmental factors such as temperature, humidity, medium and aging.

The MultiWeldTester also enables estimation and calibration of multi-axial material models for numerical simulation.

