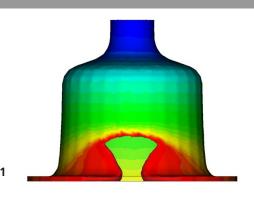
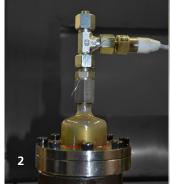


FRAUNHOFER-INSTITUT FÜR BETRIEBSFESTIGKEIT UND SYSTEMZUVERLÄSSIGKEIT LBF







- 1 Filling study: Injection molding analysis of the MultiTester
- 2 Internal pressure testing device for the MultiTester
- 3 Tested MultiTester (internal pressure)

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NEW TEST SPECIMEN FOR INTERNAL PRESSURE:

FROM INJECTION-MOLDING SIMULATION TO COMPONENT-TESTSTING

Fraunhofer LBF's Department of Lightweight Structures has designed the "MultiTester", a new type of specimen for internal pressure testing. Using the MultiTester, the entire process chain for engineering plastics can be investigated. This includes flow balancing, material characterization, and componentlike testing.

The MultiTester's modular design allows the characterization of unreinforced and reinforced plastics with respect to many different mechanical properties. Among these are:

- Fiber orientation,
- Weld line strength,
- Influence of process parameters during injection molding
- Various types of loading (static, dynamic and cyclic)

 Environmental factors such as temperature, humidity, media and aging.

The MultiTester also enables validation and calibration of multi-axial material models for numerical simulations.

