

# Internal stress analyser Stresstech PRISM

## Technical data

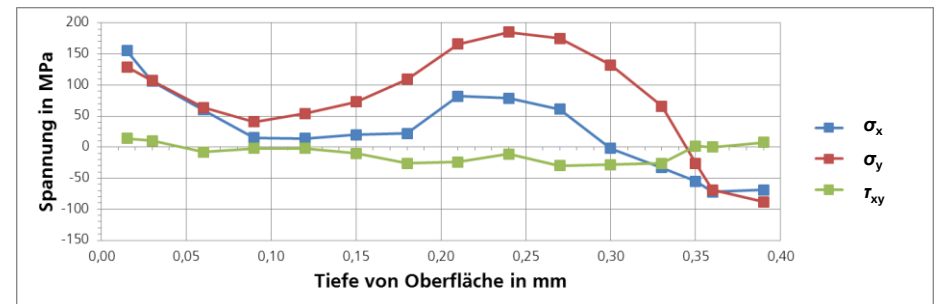
- Measurement of internal stress with the drilled hole method
- Use of ESPI (Electronic Speckle Pattern Interferometry) makes the complicated and time-consuming application of DMS unnecessary
  - Speckle patterns generated by laser radiation and the optical roughness of a sample change and thus allow conclusions to be made concerning stresses
  - Determination of the internal stresses in almost all materials, including those that are difficult to X-ray, such as titanium and plastics
- Fully automatic configuration with software-controlled advance feed
- Evaluation of tension depth profiles with selectable increments within a few minutes
- Use with current drill diameters from 0.4 mm to 3.2 mm allows reproducible depth profile production to within 2 mm
- Variable speed of rotation of the drill unit with regulation for constant holding and precision suspension for exact diameter determination
- Little sample preparation (as a rule, only cleaning) prevents falsification of measuring results

## Fields of use / applications

- Determination of the internal stress state in thermally sprayed and welded samples for correlation with the microstructure and functional properties
- Determination of internal stresses in small parts
- Support when analysing instances of damage



Measuring setup to determine the state of internal stress in thermally sprayed samples. Analysis system consisting of a laser light source, lighting stand, camera unit and electrical high-speed drilling machine



Level stress state ( $\sigma_x$ ,  $\sigma_y$ ,  $\tau_{xy}$ ) of a thermally sprayed sample as depth profile