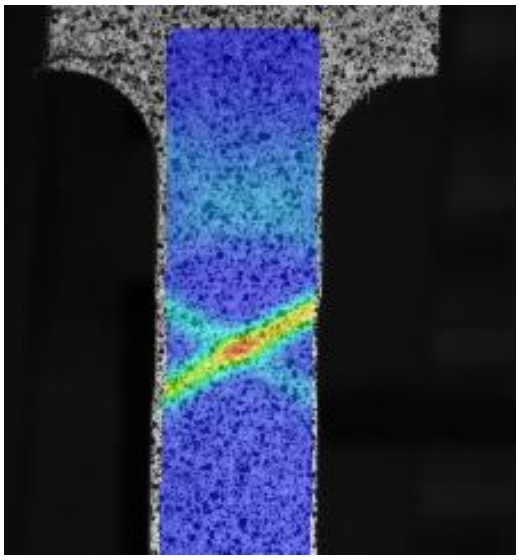
Damage and material analysis
Dynamic mechanical tests

Experimental tests lead to a better understanding of mechanical issues and reduce development costs. The knowledge gained from dynamic mechanical tests of test bodies, components and entire assemblies flows into the development and further development of systems or contributes to the processing of damage cases.

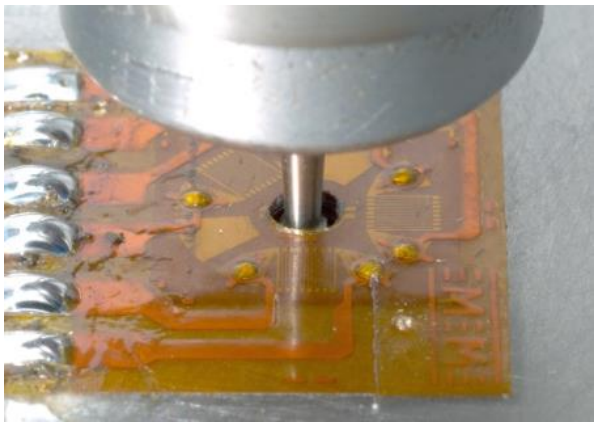
Problem solution through dynamic mechanical testing

- Experimental analysis of a variety of materials, including elastomers, polymers and composites
- Strength verification, the following load types are possible: alternating load, tensile load, compression load, any load spectrum
- Failure analysis combined with specific tests of materials and components
- Statistical evaluation according to: ASTM-STP731, ISO3800-1993, Hück/IABG

Performance of fatigue tests



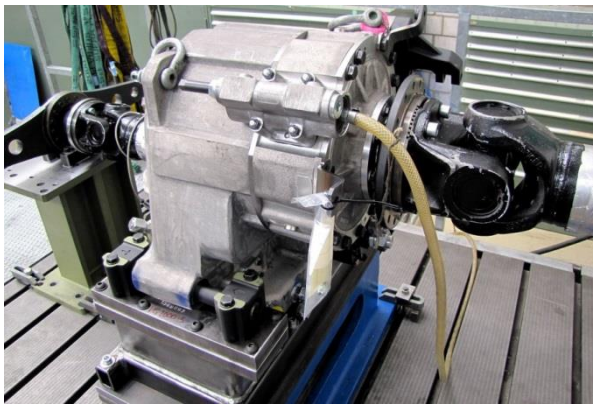
Surface strains of a tensile specimen, determined with optical 3D strain measurement technology



Determination of residual stresses with the borehole method

Our specialities

- Performance of static and dynamic tests using strain gauges
- Component tests or material tests depending on suitability with high frequency pulsator (up to 200Hz) or servo-hydraulic (up to 30Hz)
- A test field of 3m * 4m is available for component tests
- Flexural fatigue strength for material tests with rotary bending machines (up to 200Hz and up to 850°C)
- Material tests HCF and LCF(up to 850 °C)
- Creep tests
- Create Wöhler diagram and Smith diagram
- Sample preparation
- Experimental stress and strain analyses
- (strain gauges, optical 3D strain measurement, residual stress measurements using the borehole method)



Component fatigue - gearbox under test

Qualitech AG
Accredited test centre

Tel. +41 62 889 69 69 | qualitech@qualitech.ch
www.qualitech.ch

Headquarters:
Almuesenacherstrasse 3, 5506 Mägenwil

Subsidiaries:
8404 Winterthur | 9423 Altenrhein | 2555 Brügg