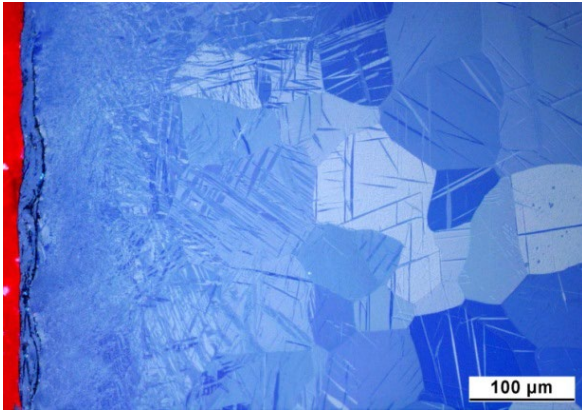


Damage and material analysis

Materialography / Metallography

Materialography comprises the qualitative and quantitative description and evaluation of the material structure using microscopic methods. Depending on the customer's requirements and the problem at hand, our experienced specialists can draw on a wide range of materialographic analysis options and use their knowledge to expertly interpret and assess the results. Microstructural analyses can also be carried out on components on site using ambulatory metallography.



Pure titanium structure with oxygen-enriched edge zone



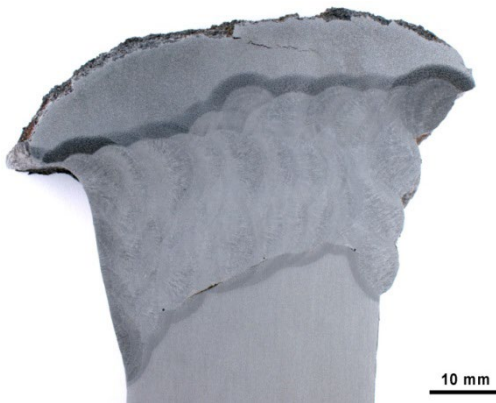
Ambulant metallography on a stationary gas turbine

Methods

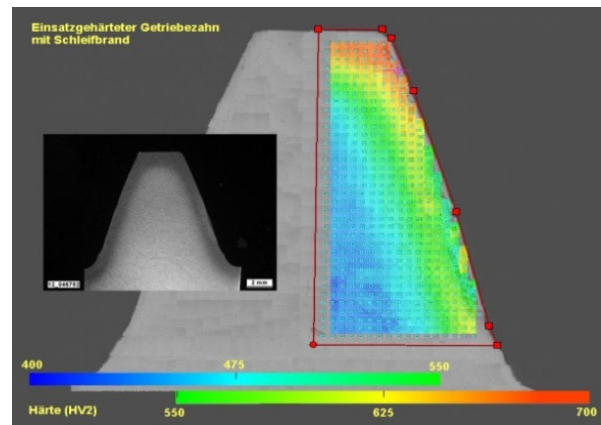
- Micro- and macrosection preparation of metals, ceramics, plastics and composite materials
- Various etching techniques and formulations
- Modern light microscopy and photography
- HB, HR, HV hardness tests, including HV microhardness

Our services

- Supporting work for damage analyses
- Assistance with production problems
- Assessment of heat treatments
- Support with material optimisation
- Characterisation of materials and coatings
- Residual service life analysis of high-temperature materials
- Component metallography / ambulatory metallography on site



Macrosection of a large multi-layer weld



Hardness mapping of a case-hardened gear tooth with grinding burn

Specialities

- Grinding preparation of thin layers and the smallest components
- HF-containing etching agents for titanium alloys, for example
- Hardness mapping (Vickers micro hardness tester)
- Ambulatory metallography

Delivery time

The delivery time for materialography work is usually 2-5 days from receipt of the sample. For more demanding analyses, a delivery date will be agreed by arrangement

