

GRINDAIX TEST METHOD

Grinding burn test - Metallography

Your advantages:

- Neutral damage assessment
- Certified / accredited test laboratory
- All destructive / non-destructive testing methods
- Fast processing
- Professional metallography
- High level of expertise in the field of production engineering with regard to on causes of damage and damage mechanisms



In consultation with our customers, we discuss possible causes of origin, test procedures, detection methods and material-related special features.

Our many years of expertise in the field of materials and production engineering enable us to provide you with concrete information on the type of occurrence of thermal overstressing of materials **AND** the corresponding measures for future damage prevention in your production processes.

In addition, we offer you an equally comprehensive range of options for implementing automated test procedures in your production.

Destructive material testing methods

Procedure	Abbreviation	Principle	typical faults
Nitrile etching *	NE	chemical	tempering zones, new hardening zones
Metallography	MET	Microstructure grindings, microscopy	tempering zones, new hardening zones
residual stress measurements **	EGS	radiographic	Tensile residual stresses
Microhardness profile test	MHV	mechanical	Hardness increases

*Nital etching: Incl. preparation of reference standards and diagnostic equipment for your own analysis

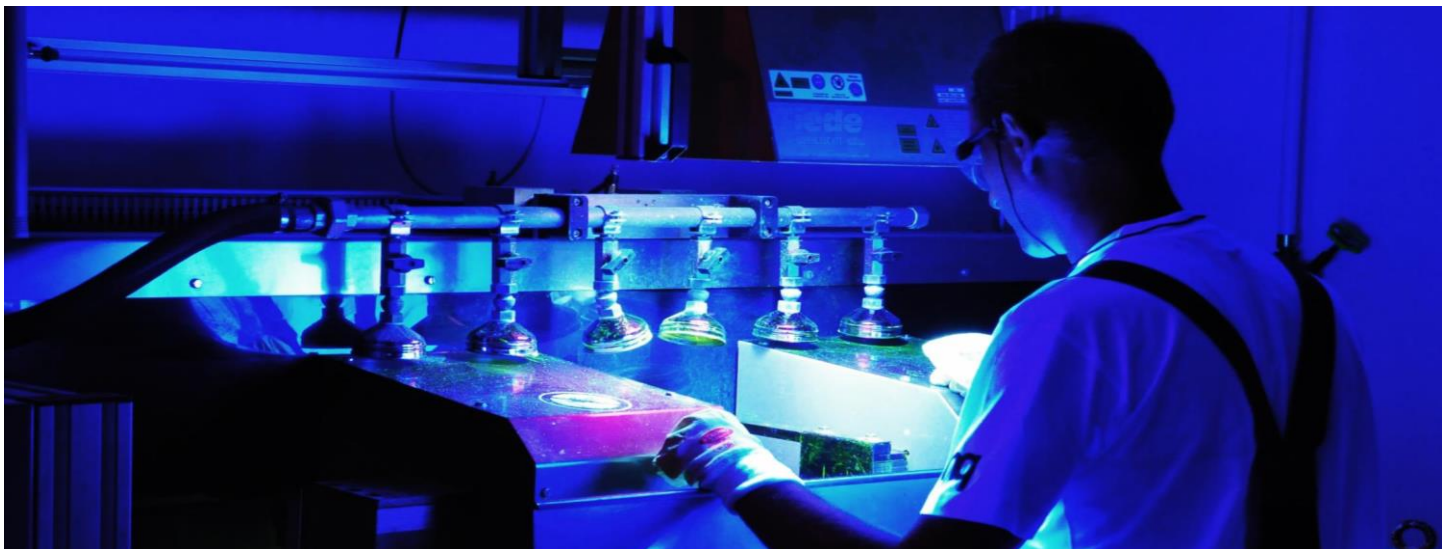
** Residual stress measurement: incl. Barkhausen noise, eddy current test method, ...

Check grinding burn and avoid grinding burn - we can do both!

Whether at your site or in the test laboratory - we provide you with the professional and neutral expertise for the analysis of thermal edge zone damage.

In exclusive cooperation with our partner IMQ (Ingenieurbetrieb für Materialprüfung, Qualitätssicherung und Schweißtechnik) GmbH we analyse your components for thermal edge zone damage.

We would be pleased to advise you on the selection of a test procedure. We look forward to your enquiry.



The non-destructive material testing method

Procedure	Abbreviation	Dynamics	Principle	Space for interaction	Basis	typical faults
Radiographic testing	RT	dynamic	electro-magnetic	Volume	EN444, EN13068, EN16016	foreign inclusions, pores, cracks, lack of bonding
Penetration test	PT		mechanical	Surface	EN571-1	Pores, cracks (must be open to the surface)
magneto-inductive method		static	magnetic	Surface	ISO 2178	cracks, hardening depth, nitriding depth
Magnetic particle testing	MT	static	magnetic	Surface	ISO 9934	Pores, cracks (only for ferromagnetic material)
Visual inspection	VT		optical	Surface	EN 13018, DGZfP leaflet B06	optically visible surface irregularities
Ultrasonic testing	UT	dynamic	mechanical	Volume	EN583, DGZfP leaflet B04	cracks, lack of bonding, pores, inclusions
Eddy current testing	ET	static	electrical	Surface	ISO 15549	cracks, surface defects



Your professional partner
around all Lubricoolant system questions

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In close cooperation with our partner company img
(img - engineering company for materials testing, quality assurance
and welding technology GmbH)