



Component Metallography (Replica Technology)

Mobile microstructure investigations
with the replica technology
www.siempelkamp-dresden.com

Intelligent engineering
for future generation



Siempelkamp

Prüf- & Gutachter-Gesellschaft

Method

On-site evaluation of the microstructure and creep damage of pipes, boiler components and their welds using the replica method

Preparation and evaluation of microstructure replicas based on VGB standards VGB-S-509-00 and VGB-S-517-00-2014-11-DE-EN as well as ISO 3057

On-site analysis of the current state of the examined components and offering statements regarding the further operation of the plant as well as other in-service inspections

In addition, mobile hardness tests, geometric measurements, surface crack tests and ultrasonic tests

Technology

Preparation by grinding, polishing and etching with grinding machines (micro motors with flexible shafts) or electrolytically

Sputtering of the replicas and on-site examination for creep damage or other abnormalities using a microscope

Direct evaluation of the results together with the customer enabled by the mobile metallography laboratory

Fast and on-site documentation, including evaluation of the results in the event of damage

Application

Assessment of creep damage and remaining service life of components from power plants, refineries, process technology, mechanical and plant engineering etc.

In-service inspections during plant shutdowns and turnarounds to record the development of damage and to classify findings according to assessment classes

Reference sample investigation and archiving for later plant inspections

Assessment of structural changes in case of fire damage, corrosion, embrittlement and cracking



Do you still have questions?
We have the answers

As a DAkkS accredited testing laboratory and from TÜV SÜD Industry Service approved testing laboratory, we offer you our expertise in mobile component metallography. We are co-author of the VGB standard VGB-S-517-00-2014-11-DE-EN and have many years of experience in the preparation, examination and evaluation of microstructure replicas of all metallic materials. We have compiled more information on our services for you here:



Siempelkamp Prüf- und Gutachter-Gesellschaft mbH
01099 Dresden | Germany
+49 (0)351 - 824 93 - 20
spg@siempelkamp.com



Siempelkamp
Prüf- & Gutachter-Gesellschaft