



SINTAVIA

SINTAVIA'S MECHANICAL TESTING LABORATORY IS ISO17025/ANAB ACCREDITED



FATIGUE TESTING

Tests include ambient and high temperature component fatigue testing, fatigue crack growth rate, fatigue toughness testing, fracture toughness, low cycle and high cycle fatigue testing per ASTM E466.



CHARPY IMPACT TESTING

The Charpy impact test involves striking notched specimens with a swinging weight or pendulum at a series of temperatures to measuring the amount of energy absorbed by the material during fracture per ASTM E23.



CREEP/STRESS RUPTURE TESTING

Creep is high temperature progressive deformation at constant stress. A creep test involves a tensile specimen under a constant load maintained at a constant temperature per ASTM E139.



TENSILE TESTING

Ambient and high temperature tensile testing measures both ultimate strength and yield strength, or the point at which plastic deformation begins per ASTM E8.



SPECIMEN MANUFACTURING

Critical tensile threading tolerances are achieved using in-house Computer Numerical Controlled (CNC) lathe machining to ASTM E8 or customer requirements.



METALLOGRAPHIC EVALUATION

Analysis to locate and characterize voids or impurities, or to observe damaged or degraded areas in failure analysis investigations. Evaluations include grain size per ASTM E112, microstructure per ASTM E407, macro etch and micro etch per ASTM E340 and E381, and porosity evaluation.



MICRO HARDNESS TESTING

Micro-hardness via Vickers and Knoop per ASTM E384 and E92 and Shore via ASTM E2240.



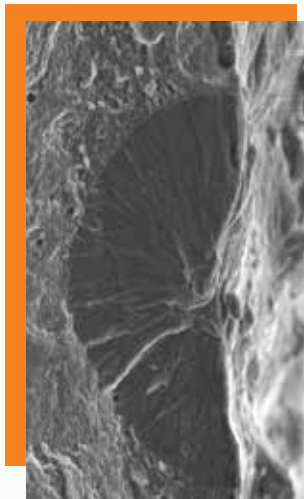
SAMPLE PREPARATION

Samples are prepared for evaluation using techniques to section, mount, grind, polish and etch per ASTM E3, E407 and other internally developed methods.



HARDNESS TESTING

Hardness testing via Rockwell A, B, C per ASTM E18, and Superficial Rockwell 30N, 30T per ASTM E18.



FAILURE ANALYSIS TESTING

Failure analysis testing, including the determination of origin of failure, failure mode and type of corrosive attack, root cause determination / contributing factors, material anomalies / features, mechanical damage, geometric influence, and remaining life assessment.



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