



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

METCUT RESEARCH INC.
3980 Rosslyn Drive
Cincinnati, OH 45209
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MECHANICAL

Valid To: June 30, 2026

Certificate Number: 0296.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above as well as the one satellite laboratory location listed below to perform the following types of tests on metallic and nonmetallic materials:

Mechanical Testing Capabilities

Load, Strain and / or Stroke control, uniaxial to 15 axis multi-axial.
Load Capacity: 2 lbs (1000g) to 200,000 lbs. (890kN)
Strain Capacity: (+/- .5 to +/- 20) %
Frequency Capacity: Indefinite hold to 80Hz
Temperature Capability: -320°F (-196°C) to 2600°F (1427°C)

Test Name (Specific Methods)

Test Method(s)

Physical Testing

Compression	ASTM E9, E209
Fatigue Crack Growth	ASTM E647
Flat Bending Fatigue	ASTM E466
Fracture Toughness	ASTM E399, E1820
High Cycle Fatigue	ASTM E466; GE: E50TF148
Low Cycle Fatigue	ASTM E606; GE: E50TF148
Rotating Bar Bending Fatigue	ISO 1143
Tensile – RT	ASTM B557, E8/E8M
Tensile – ET	ASTM E21
Young's Modulus & Shear Modulus	ASTM E1875

Specimen Preparation

Conventional Machining	Metcut MRI Series 200 Procedures; GE: P1TF79
Electron Discharge Machining	Metcut MRI Series 200 Procedures; GE: P1TF79
Low-Stress Grinding & Polish	Metcut MRI Series 200 Procedures; GE: P1TF79
Inertia Welding (Less than 1.0 in)	Metcut MRI Series 200 Procedures; GE: P1TF79

Structural Testing within the following envelope: STR-100 and customer requirements

Load, Strain and / or Displacement control
Uniaxial to 27 axis axis-controlled loading
Load Capacity Tension: 2 lbs (1000g) to 200,000 lbs (890kN)
Load Capacity Compression: 600,000 lbs. (2668kN)
Strain Capacity: (+/- .2 to +/- 20) %, 1-300 channels
Pressure: 150000 psi, Static & Dynamic
Strong Floor: 22' by 82'
Strong Wall: to 16'
Actuator Displacement: ≤ 36"
Frequency Capacity: Indefinite hold to 80Hz
Temperature Capability: -320°F (-196°C) to 2600°F (1427°C)

Metallography Lab
1775 Carillon Blvd.
Cincinnati, OH 45240

Test Name (Specific Methods)

Test Method

Physical Testing

Creep/Stress Rupture

ASTM E139, E292

Metallography

Case Depth

ASTM B934, F2328/F2328M

Hardness – Rockwell (B, C, 15N, 15Y)

ASTM E18

Inclusion Content

ASTM E45 (Method A)

Microhardness

Knoop (500 gf)

ASTM E384/E92

Vickers (100, 300, 500 gf)

ASTM E384/E92

Met. Preparation & Evaluation

ASTM E3; GE: P29TF25

Macroetching/Microetching

ASTM E340, E381, E407

Grain Size

ASTM E112, E1181, E930; GE: E50TF133

Depth of Decarb

ASTM E1077; SAE J419, J423

Alpha Case (Titanium)

AMS 2380; GE: P3TF19

IGA & Pitting for Aircraft Chemical Processes

ASTM F2111

Metallographic Inspection of Turbine

GE: P29TF34

Blades/Vanes

PM Density Measurement

ASTM B311

Surface Integrity Acceptability

GE: P29TF73

Coatings Testing & Evaluation

Bond Strength of Thermal Sprayed Coatings

GE: E50TF60; ASTM C633

Hoffman Scratch Test

GE: E50TF61

Met. Prep. & Eval. Of Thermal Sprayed

GE: E50TF65

Lap Shear Bond Strength of Thermal Sprayed

GE: E50TF66

Room Temp. Erosion Test Method for Coatings

GE: E50TF121



Test Name (Specific Methods)

Test Method

Failure Analysis

Fractography
Macroscopic and Microscopic Analysis
Scanning Electronic Microscopy (SEM)
Energy Dispersive Spectroscopy (EDS)
Failure Analysis

ASM Handbook (Volumes 7, 9-12)
ASM Handbook (Volumes 7, 9-12)
ASTM F1372
ASTM E1508
Using the methods listed on this and other scopes
in accordance with the AMS Handbook Volume
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Chemical Analysis

Optical Emission Spectroscopy (OES)

Iron-Based Alloy

(Al, As, B, Bi, C, Ce, Co, Cr, Cu, Fe, Mg, Mo,
Mn, N, Nb, Ni, P, Pb, S, Si, Sn, Ti, V, W)

ASTM 415, E1086, E1999

Nickel-Based Alloy

(Al, As, B, C, Co, Cr, Cu, Fe, Mg, Mn,
Mo, N, Nb, Ni, P, S, Si, Sn, Ti, V, W)

ASTM E3047

Cobalt-Based

(Al, C, Co, Cr, Fe, Mn, Mo, N,
Nb, Ni, Si, Ti, V, W)

MRI 700.13

Titanium-Based

(Al, C, Cr, Fe, Mo, N, Ni, Si, Sn, V)

ASTM E2994

Aluminum-Based Alloy

(Al, B, Cr, Cu, Fe, Mg, Mn, Ni, Pb, Si, Sn, Ti, V,
Zn, Zr)

ASTM E1251

Copper-Based Alloys

(Ag, C, Cu, Fe, Mn, Ni, Pb, Sb, Si, Sn, Zn)

MRI 700.13





Accredited Laboratory

A2LA has accredited

METCUT RESEARCH INC.

Cincinnati, OH

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).



Presented this 26th day of June 2024.

A blue ink signature of Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0296.01
Valid to June 30, 2026

For the types of tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.