



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

STURBRIDGE METALLURGICAL SERVICES INC.

8 Picker Road
 Sturbridge, MA 01566
 Susan Jett Phone: 508-347-5288

MECHANICAL

Valid to: January 31, 2019

Certificate Number: 3929.01

In recognition of the successful completion of the A2LA evaluation process (including compliance to R223 – Specific Requirements – GE Aviation S-400 Accreditation Program), accreditation is granted to this laboratory to perform the following tests on metals, coatings, wire, and other components.

<u>Test Technology</u>	<u>Test Method(s)</u>
Bend Testing	AWS D17.1/D17.1M
Rockwell Hardness (A, B, C, N, T, Y Scales)	ASTM E18
Micro-Hardness	
Knoop (10, 25, 50, 100, 200, 300, 500, 1,000 gm)	ASTM E384, B578
Vickers (10, 25, 50, 100, 200, 300, 500, 1,000 gm)	ASTM E384, B578
Salt Fog	ASTM B117
Tensile (20 – 60,000) lbf	ASTM E8/E8M, C633
Taber Abrasion	ASTM D4060; MIL-STD-8625
Wet Tape Adhesion	MIL-A-8625, MIL-DTL-5541; FED-STD-141
Coating Weight	MIL-A-8625, MIL-DTL-5541
Metallography ¹ (Using Optical and Keyence Digital Microscopy)	ASM Handbook Volume 9
Sample Preparation	ASTM E3, E1920
Field Metallography Replicas ¹	ASTM E1351
Grain Size	ASTM E112 (Comparison and Intercept Methods), E930, E1181, E1382; GE E50TF133
Inclusion Content	ASTM E45 (Methods A and D)
Systematic Point Count	ASTM E562
Coating Thickness by Microscopical Examination	ASTM B487
Microetching	ASTM E407
Macroetching	ASTM E340
Alloy Depletion	SOP 1017
Alpha Case	SOP 1024
Decarburization	ASTM E1077

Test Technology

Carburization
Intergranular Attack
Thermal Spray Coatings
SEM / EDS

Weld Procedure/Welder Qualification

Failure Analysis

Chemical

X-ray Fluorescence (XRF)¹

Optical Emission Spectroscopy (OES) (Al, As, C, Co, Cr, Cu, Fe, Mn, Mo, N, Nb, Ni, P, S, Sb, Si, Sn, Ti, V, Zr)

Determination of Carbon and Sulfur

Determination of Oxygen, Nitrogen, and Hydrogen

Test Method(s)

ASTM E1077; SAE J423
ASTM F2111
ASTM E2109, E562
SOP 1200 – 1205; ASTM E1508;
ASM Handbook Volume 12
(Scanning Electron Microscope
Section)

Using the methods listed above in
accordance with AWS 17.1/D17.1M

Using the methods listed above in
accordance with ASM Handbook
Volume 11

ASTM E1476, E572, E1085, E539,
E2465, SOP 1022

ASTM E1086, E415, E2994

ASTM E1019

ASTM E1019, E1409, E1447

¹ This laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests.





Accredited Laboratory

A2LA has accredited

STURBRIDGE METALLURGICAL SERVICES INC.

Sturbridge, MA

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of R223 – Specific Requirements – GE Aviation S-400 Accreditation Program. 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 8 January 2009*).



Presented this 19th day of December 2016.

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 3929.01
Valid to January 31, 2019

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