



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CARPENTER TECHNOLOGY CORPORATION<sup>1</sup>

101 West Bern St.  
Reading, PA 19601  
Bob Kemmerer Phone: 610 208 2576

MECHANICAL

Valid To: July 31, 2019

Certificate Number: 3155.01

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 at the location listed above as well as the two satellite laboratory locations listed below to perform the following tests on metals, metal alloys, and metal fasteners:

<u>Test</u>	<u>Test Methods</u>
<u>Mechanical Testing</u>	
Bend	ASTM E290 (Method A, B, C)
Charpy Impact (-112 °F to RT)	ASTM E23
Coefficient of Linear Thermal Expansion (CLTE)	ASTM E228
Fracture Toughness	ASTM E399
Hardness:	
Brinell (10 mm – 3000 kg; 2.5 mm – 187.5 kg)	ASTM E10; EN ISO 6506-1
Rockwell (A, B, C, 15N, 30N, 15T, 30T)	ASTM E18; EN ISO 6508-1
Knoop and Vickers	ASTM E384, E92
Micro (300, 500 g)	
Macro (10 kg)	
Stress Rupture / Creep Rupture (400 to 1600) °F	ASTM E139, E292
Tensile:	
Elevated Temperature (400 to 1600) °F	ASTM E21
Room Temperature	ASTM E8/E8M
<u>Metallographic Evaluation</u>	
Decarburization	ASTM E1077
Delta Ferrite	AMS 2315
Grain Size	ASTM E930, E112, E1181; GE E50TF133
Inclusion Content / Microcleanliness	ASTM E45 (Method A, D, E)
Intergranular Attack	ASTM A262 (Practice A, B, E), G28 (Method A, B); ISO 3651-2 (Method A)
Intergranular Corrosion	ASTM A262 (Practice A)
Macroetch	ASTM A604, E340, E381
Pitting / Crevice Corrosion	ASTM A923 (Method C), G48 (Method A)

<sup>1</sup> This accreditation covers testing performed at the main laboratory listed above, and the following satellite laboratories listed on page two.

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Shalmet  
116 Pinedale Industrial Road  
Orwisburg, PA 17961

<u>Test</u>	<u>Test Methods</u>
<u>Mechanical Testing</u>	
Hardness:	
Brinell (3000 kg)	ASTM E10
Rockwell (B, C)	ASTM E18
Tensile:	
Room Temperature	ASTM E8/E8M

Carpenter Focus Facility  
22110 Thomas L. Hammons Road  
Tanner, AL 35671

<u>Test</u>	<u>Test Methods</u>
<u>Mechanical Testing</u>	
Charpy Impact (-112 °F to RT)	ASTM E23
Fracture Toughness	ASTM E399
Hardness:	
Brinell (10 mm – 3000 kg)	ASTM E10
Rockwell (B, C)	ASTM E18
Stress Rupture / Creep Rupture (400 to 1600) °F	ASTM E139, E292
Tensile:	
Elevated Temperature (400 to 1600) °F	ASTM E21
Room Temperature	ASTM E8/E8M
<u>Metallographic Evaluation</u>	
Decarburization	ASTM E1077
Delta Ferrite	AMS 2315
Grain Size	ASTM E930, E112, E1181
Inclusion Content / Microcleanliness	ASTM E45
Intergranular Corrosion	ASTM A262 (Practice A)
Macroetch	ASTM A604, E340, E381



## *Accredited Laboratory*

A2LA has accredited

# CARPENTER TECHNOLOGY CORPORATION

*Reading, PA*

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 29<sup>th</sup> day of August 2017.

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

President and CEO  
For the Accreditation Council  
Certificate Number 3155.01  
Valid to July 31, 2019

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