

#### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

#### HOWMET RESEARCH CENTER 1500 S. Warner St. Whitehall, MI 49461-1895 Michelle McDonald Phone: 231 894 7586

#### MECHANICAL

Valid To: March 31, 2027

Certificate Number: 2208.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on <u>aircraft components</u>, <u>automotive components</u>, <u>ceramics</u>, <u>coatings</u>, <u>glass and glass products</u>, <u>metals and alloys</u>, <u>and plastics and polymers</u>:

#### Test:

Test Method(s) <sup>1</sup>:

Hardness:

Brinell (Loads (1000, 1500, & 3000) kgf, Ball dia. 10 mm) Rockwell (HRBW, HRC, HREW, HR15N, HR 30N) Microindentation (Knoop, Vickers) (100g, 300g, 500g)	ASTM E10, A370 ASTM E18, A370 ASTM E384
Carburization/Decarburization via the Chord Method	ARP 1820
Room Temp. Tensile (up to 40 000 lb)	ASTM E8/E8M, A370, B557
Elevated Temp. Tensile (up to 40 000 lb., up to 2050 $^{\circ}$ F)	ASTM E21
Stress Rupture/Creep Rupture (up to 2050 °F)	ASTM E139, E292
Metallographic Evaluation:	
Coating Thickness Preparation Grain Size (Comparison Method Only) Microetching Alpha Case IGA/IGO / Casting Mold Reaction/Alloy Depletion Delta Ferrite Heat Treatment Solution/Incipient Melting Measurement Wrought Titanium Microstructure Micro Porosity by Image Analysis and Point Count Oxidation Test	ASTM B487 ASTM E3, E1920 ASTM E112, E930 ASTM E407 MCL III-273 MCL III-251 ASTM E562; MCL III 237.06 ASTM E562; MCL III-274 MCL III-273 MCL III-270, ASTM E562 HRC LM-100

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#### Test:

#### Test Method(s) 1:

Metallographic Evaluation (cont.):

SEM with Energy Dispersive Spectroscopy

Failure Analysis

MCL III-510; ASTM E1508

Using the methods listed above and on Scope of Accreditation 2208.02 in accordance with ASM Handbook Volume 11

Lab Heat Treatment

MCL III-352

<sup>1</sup>When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA *R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories.* 

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# **Accredited Laboratory**

A2LA has accredited

## HOWMET RESEARCH CENTER

Whitehall, MI

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 28<sup>th</sup> day of March 2025.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council Certificate Number 2208.01 Valid to March 31, 2027