

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ANALYTICAL PROCESS LABORATORIES, INC. 8222 West Calumet Road Milwaukee, WI 53223 Joseph Worzala Phone: 414 355 3909

MECHANICAL

Valid To: September 30, 2025

Certificate Number: 0431.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on <u>metals and fasteners</u>:

Test:

Bend Test

Fasteners: Tension & Proof (Axial and Wedge)

Hardness: Brinell (500 & 3000 Kg)

Microhardness (Knoop 500 g) Rockwell (B, C, 30N, 30T, E, 15N) Macro Vickers (10 Kg)

Impact (V-notch and U-notch) -320 °F, -150° F to RT

Metallographic Evaluation: Case Depth Depth of Decarburization (Microscopic & Microhardness) Evaluation of Graphite in Fe Castings Inclusion Content Grain Size (Comparison Method) Macroetch Microetch Photography using SEM (Qualitative) Plating Thickness Plating Mass per Unit Area Preparation Microstructure

Test Method(s)1:

ASTM E190, A370

ASTM F606/606M

ASTM E10, E110, A370, F606/606M; ISO 6506-1 ASTM E384, F606/606M ASTM E18, F606/606M ASTM E92, F606/606M

ASTM E23, A370; DIN 10045-1(*Withdrawn 2010*); ISO 148-1; JIS-Z-2242

SAE J423 ASTM E1077

ASTM A247 ASTM E45 (Method A) ASTM E112 (Sections 10 and 13) ASTM E340, E381 ASTM E407 APL 83 ASTM B487 ASTM B767, A90 ASTM E3 ASM Metals Handbook, Vol. 9

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Test:

Physical Properties/NDT: Density Electrical Conductivity

Tensile

Test Method(s)1:

ASTM B311 ASTM E1004

ASTM A370, E8/E8M, B557; DIN 10002-1(*Withdrawn 2009*); ISO 6892-1; JIS-Z-2241

Weld Operator and Weld Procedure Qualifications (Tensile, Bend, Impact, Macroetch)

Failure Analysis

ASTM A488/A488M; ASME Section IX; AWS B4.0, D1.1; NAVSEA S9074-AQ-G1B-10/248

Using the methods listed above (and on Scope of Accreditation 0431.03) in accordance with the ASM Handbook Volume 11

¹When 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

ANALYTICAL PROCESS LABORATORIES, INC.

Milwaukee, WI

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 1st day of November 2023.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council Certificate Number 0431.02 Valid to September 30, 2025

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