

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

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#### MECHANICAL

Valid To: January 31, 2026

Certificate Number: 2949.01

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 tests on steel, stainless steel, cast iron, copper alloys, aluminum, nickel & cobalt alloys, titanium, miscellaneous metals, forgings, castings, machined components, billets, bars, ingot, powdered metals, fasteners, chain, and cable:

#### Test:

### **Test Methods:**

Physical Testing: Bend Testing (Less Tubing)

Compression Density

Flattening / Flaring Hardness Testing Brinell Hardness (500 kgf, 3000 kgf) Rockwell (A, B, C, F, 15N, 30N, 30T)

Impact (Charpy) (-423 to +1000)°F Jominy Proof (No Cone Proof) Shear, Single & Double Stress Rupture Tensile Ambient Temperature to 1800 °F Tensile (Axial / Wedge) ASME Sec IX; ASTM A370, A489, D790, E190; AWS B2.1/B2.1M, D1.1/D1.1M, D1.5/D1.5M ASTM E9 ASTM B311, B328-96(2003)e1 (Withdrawn 2009); MPIF Standard 42 ASTM A530/A530M, A1016/A1016M

ASTM E10 ASTM E18; MIL-STD-1312-6 (Withdrawn 1997, replaced by NASM 1312-6); NASM 1312-6 ASTM A370, E23; AWS D1.5/D1.5M ASTM A255 ASTM F606/F606M ASME QW196; NASM 1312-13 ASTM E139, E292 ASTM A370, D638/D638M, E8/E8M, E21, F606/F606M

ASTM A370, F606/F606M

(A2LA Cert. No. 2949.01) 12/14/2023

Page 1 of 3

## Test:

Metallographic Evaluation:

Preparation Conductivity Decarburization Case Depth Ferrite Rating Grain Size (Comparison Method Only) Inclusion Rating / Cleanliness

Intergranular Attack Macroetch

Microhardness

Knoop (100-1000g) Vickers (100-1000g)

Microstructure

Microstructure

Microstructure in Cast Iron Graphite Evaluation Permeability

Pitting and Crevice Corrosion and Intergranular Corrosion Photomicrograph

SEM (Semi-quantitative, Material Identification) Weld Operator and Procedure Qualification Testing (less Radiography)

Nondestructive Testing Methods:

Liquid Penetrant Examination Visible Fluorescent

Magnetic Particle Examination Yoke – Visible (Dry) Bench (Fluorescent)

## **Test Methods:**

ASTM E3 AMS 2658 ASTM E1077, ASTM F2328 SAE J423 AMS 2315; ASTM E562 ASTM E112 ASTM E45 Methods A & D; SAE J422; SAE AMS2301, AMS2303

ASTM A262 Methods A & E

ASTM A561, A604/A604M, E340, E381; AWS D1.1/D1.1M ASTM E384, E92

ASTM E1268; ASM Metals Handbook, Volume 9 ASTM A247 ASTM A342/A342M Method 3 ASTM G28, G48

ASTM E883 ASTM E1508 ASME Sec IX; AWS D1.1/D1.1M, D1.2/D1.2M, D1.5/D1.5M, D11.2

ASTM E165/E165M, E1417/E1417M; MIL-STD-6866 (Canceled 1996, Replaced by ASTM E1417), MIL-STD-271F (Canceled 1998, Replaced by NAVSEA T9074-AS-GIB-010/271) ASTM E709, E1444/E1444M; MIL-STD-271F (Canceled 1998, Replaced by NAVSEA T9074-AS-GIB-010/271), MIL-STD-1949 (Canceled 1993, Replaced by ASTM E1444)

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# Test:

#### **Test Methods:**

Physical Testing: Compression Brinell Hardness (500 kgf, 3000 kgf) Rockwell (B, C, 15N, 30N, 30T) Impact (Charpy) -320°F to Ambient Tensile Ambient Temperature

Metallographic Evaluation: Preparation Decarburization Case Depth Ferrite Rating Grain Size (Comparison Method Only) Inclusion Rating / Cleanliness Microhardness Vickers (100g, 500g, 1000g) Microstructure Microstructure in Cast Iron Graphite Weld Operator and Procedure Qualification Testing (Tensile and Charpy Only) ASTM E9 ASTM E10 ASTM E18 ASTM A370, E23; AWS D1.5/D1.5M ASTM A370, E8/E8M

ASTM E3 ASTM E1077; SAE J121 SAE J423 AMS 2315; ASTM E562 ASTM E112 ASTM E45 Methods A & D; SAE J422 ASTM E384, E92

ASTM E1268; ASM Metals Handbook, Volume 9 ASTM A247 ASME Sec IX; AWS D1.1/D1.1M, D1.2/D1.2M, D1.5/D1.5M, D11.2

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# **Accredited Laboratory**

A2LA has accredited

# MODERN INDUSTRIES, INC.

Erie, PA

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 14<sup>th</sup> day of December 2023.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council Certificate Number 2949.01 Valid to January 31, 2026