

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Product Evaluation Systems, LLC 637 Donohoe Road Latrobe, PA 15650

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document. The current scope of accreditation can be verified at <u>www.anab.org</u>.



Jason Stine, Vice President Expiry Date: 27 December 2026 Certificate Number: AT-1504

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. 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).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Product Evaluation Systems, LLC 637 Donohoe Road

637 Donohoe Road Latrobe, PA 15650 Nathan Peffer Phone: 724 834 8848 nathan@pes-testing.com www.PES-Testing.com

TESTING

Valid to: December 27, 2026

Certificate Number: AT-1504

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or <mark>Test T</mark> echnique	Items, Materials or Product Tested	Key Equipment or Technology
Tensile Strength, Elongation, Yield Point, Yield Strengh	ASTM E8, A370, B557, D638, E111, E132, F606, NASM 1312-8, ISO 6892-1, ISO 6892-2	Various Metals	Test Frame
Elevated Temperature Tensile Strength, Elongation, Yield Point, Yield Strength	ASTM E21	Various Metals	Test Frame
Compression Testing	ASTM E9	Various Metals	Test Frame
Rockwell Hardness Testing: HRA, HRB, HRC, HR15N, HR30N, HR15T, HR30T	ASTM E18, E92, A370, E384, NASM 1312-6	Various Metals	Hardness Tester
Brinell Hardness Testing	ASTM E10, A370	Various Metals	Hardness Tester
Charpy Impact Testing	ASTM E23, A370, ISO 148-1	Various Metals	Impact Tester
Bend Testing	ASTM E290 and E190	Various Metals	Bend Fixture
Fracture Toughness Testing	ASTM E399, E1820, and B645	Various Metals	Servo-Hydraulic Frame
Double Shear Testing	NASM 1312-13	Various Metals	Test Frame
Fatigue Testing	ASTM E466, E606 and E647	Various Metals	Servo-Hydraulic Frame
Creep / Stress Testing	ASTM E139 and E292	Various Metals	Creep/Stress Machine
Drop Weight Test	ASTM E208	Various Metals	Drop Weight Tester
Transverse Rupture Strength	ASTM B406	Various Metals	Test Frame and Fixture





Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Pr <mark>o</mark> duct Tested	Key Equipment or Technology
Jominy	ASTM A255	Various Metals	Jominy Fixture
Heat Treating / Pre-Test Conditioning	AMS 2750	Various Metals	Furnaces & Conditioning Ovens
Weld Qualification Testing and Inspection	ASME IX, AWS D1.1, 1.2, 1.3, 1.4, 1.5, 1.6, API 1104	Various Metals	Various

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Carbide Microstructure	ASTM B390, <mark>B276</mark> and B657	Carbides	Optical Microscopes and Image Analysis Software
Depth of Decarburization and Carburization	ASTM E2, E3, E384, E1077, F2328 and SAE J121	Various Metals	Optical Microscopes and Image Analysis Software
Effective Case Depth	ASTM E384	Various Metals	Optical Microscopes and Image Analysis Software
Metallography (inclusion rating)	ASTM E45, E562, E1245 and ISO 4967	Various Metals	Optical Microscopes and Image Analysis Software
Grain Size	ASTM E112, E1181, E930 and GE E50TF133	Various Metals and Carbides	Optical Microscopes and Image Analysis Software
IGA/IGO Plating Thickness	ASTM B487	Various Metals	Optical Microscopes and Image Analysis Software
Alpha Case	GE P3TF19, GE P3TF32 and PES M-033	Titanium	Optical Microscopes and Image Analysis Software
Macroetching Examination	ASTM E3, E340, A604, E381 AMS 2643, ETTC 3	Various Metals	Visual Inspection, Acid Baths and Hot Plates
Microetching / Identification of Microstructures	ASTM E3, E407, ISO 20160, ETTC 2, ASM Metals Handbook, Vol. 9	Various Metals and Carbides	Various
Blue Etch Anodize and Inspection	AMS 2642	Titanium	Visual Inspection, Power supply and acid bath
Microhardness	ASTM E384	Various Metals	Knoop and Vickers Hardness
Acid Based Corrosion Testing	ASTM A262, A763, G28, G48, A923, SEP 1877 and DIN 50914, ISO 3651-2 Part 2	Various Metals	Visual Inspection, Acid Baths and Hot Plates





Chemical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Chemical Analysis of Elements	ASTM A751, ASTM E415, E1086, E1251, E2209, E3047	Various Metals	Arc Spark OES
Chemical Analysis of Elements	ASTM E1277, E2371, E2594, E3061, PES C-016	Various Metals and Carbides	ICP-OES
Chemical Analysis of Nitrogen Oxygen	ASTM E1019, E1409, E2575	Various Metals and Carbides	Combustion Analyzer
Chemical Analysis of Carbon Sulfur	ASTM E1019, E1941	Various Metals and Carbides	Combustion Analyzer
Chemical Analysis of Hydrogen	ASTM E1447, E2792	Various Metals	Combustion Analyzer
Density	ASTM B311	Various Metals and Carbides	Analytical Balance, Various
Coating Weight	ASTM <mark>A90, A4</mark> 28	Various Metals	Various
Wet Chemistry	ASTM C1 <mark>14, C1218 and C1</mark> 152	Concrete	Various

Non-Destructive Testing

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Liquid Penetrant Inspection (Method A, Type D)	ASTM E1417, ASTM E165/E165M, ASTM E1209	Various Metals	Water Washable Fluorescent
Magnetic Particle Inspection	ASTM E1444, ASTM E709 and AMS 2300, AMS 2301, AMS 2303, AMS 2304	Various Metals	Wet Fluorescent

Note:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1504.

Jason Stine, Vice President



