SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY DALEVILLE
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Daleville, IN 47334
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CHEMICAL

Valid To: August 31, 2028 Certificate Number: 0174.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests focusing on but not limited to Aerospace Materials:

| **Test(s):** | **Test Method(s):** |
|---|---|
| | |
| Spectroscopy | |
| ICP - (Ag, Al, Ar, As, Au, B, Ba, Be, Bi, C, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Hg, Ho, I, In, Ir, K, La, Li, Lu, Mg, Mn, Mo, N, Na, Nb, Nd, Ni, Os, P, Pb, Pd, Pr, Pt, Rb, Re, Rh, Ru, S, Sb, Sc, Se, Si, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr) | ASTM E1479, ASTM E2594, ASTM E2371, ASTM E3061, ASTM E3515, ASTM E1473, ASTM A751; CTP 3101[1, 2] |
| | |
| Atomic Absorption - Graphite Furnace (Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Ce, Cl, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Hg, Ho, In, Ir, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, Os, P, Pb, Pd, Pr, Pt, Rb, Re, Rh, Ru, S, Sb, Sc, Se, Si, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr) | ASTM E1184, ASTM A751, ASTM E1473; CTP 3096-2[2] |
| | |
| Optical Emission - (Al, As, B, Be, Bi, C, Cd, Ce, Co, Cr, Cu, Fe, Hf, Mg, Mn, Mo, N, Nb, Ni, P, Pb, S, Sb, Si, Sn, Ta, Te, Ti, V, W, Y, Zn, Zr) | ASTM E415, ASTM E1086, ASTM E1251, ASTM A751, ASTM E1473; CTP 3094[2] |
| | |
| X-ray Analysis - (Ag, Al, As, B, Ba, Be, Bi, Co, Cr, Cu, Fe, Ga, Hf, La, Mg, Mn, Mo, Nb, Ni, P, Pb, Rh, Ru, S, Si, Sn, Sr, Ta, Ti, V, W, Y, Zn, Zr) | ASTM E322, ASTM E539, ASTM E572, ASTM A751, ASTM E1085, ASTM E1621, ASTM E1473; CTP 3093[2] |
| | |
| Combustion / Inert Gas Fusion | |
| Combustion (LECO) (C, S) | ASTM E1019, ASTM E1941, ASTM A751, ASTM E1473; CTP 3098[2] |
| | |

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| Test(s): | Test Method(s): |
|---|---|
| | |
| Inert Gas Analysis (LECO) (H, N, O) | ASTM E1019, ASTM E1409, ASTM E1447, ASTM A751, ASTM E1473; CTP 3097[2], CTP 3008-1[2] |
| | |
| Wet Chemistry | |
| Gravimetric | ASTM E478, ASTM E1473; CTP 3024[2] |
| | |
| Electrochemical Deposition | ASTM E53; CTP 3024[2] |
| | |
| Physical Properties | |
| Density | ASTM B311; CTP 3030-1[2] |
| | |
| Coating Weight | ASTM B137-95, ASTM A90/A90M; CTP 3068[2], CTP 3069[2] |
| | |
| Mercurous Nitrate | ASTM B154; PTP 1044[2] |

[1]This standard is a specification and is used to support the ICP test methods on the Lab's scope.

[2]In-House Test Method.

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# Accredited Laboratory

A2LA has accredited

## ELEMENT MATERIALS TECHNOLOGY DALEVILLE

*Daleville, IN*

for technical competence in the field of

## Chemical 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 29th day of July 2026.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0174.01
Valid to August 31, 2028

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

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SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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9301 Innovation Dr., Suite 175
Daleville, IN 47334
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MECHANICAL

Valid To: August 31, 2028 Certificate Number: 0174.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests focusing on but not limited to Aerospace Materials:

| **Test(s):** | **Test Method(s):** |
|---|---|
| | |
| Physical Properties: | |
| Bend | ASTM A370, ASTM E290, ASTM E190 |
| | |
| Coating and Plating Adhesion | ASTM B571 (Less Sec. 6 & 10), ASTM C633, ASTM E290, ASTM F1147, ASTM D3359; Federal Test Method Standard 141, Method "Adhesion (Wet) Tape Test" |
| | |
| Creep, Stress Rupture (200 - 2010) °F | ASTM E139, ASTM E292 |
| | |
| End Quench Hardenability - Jominy | ASTM A255; SAE J406 |
| | |
| Hardness Testing | |
| Rockwell (A, B, C, E, F) | ASTM A370, ASTM E18; Bell Helicopter BPS 4467 |
| Rockwell Superficial (15N, 30N, 45N, 15T, 30T, 45T) | ASTM A370, ASTM E18; Bell Helicopter BPS 4467 |
| Brinell Hardness (500, 1000, 3000 Kg) | ASTM A370, ASTM E10 |
| Microhardness | |
| Vickers (50, 100, 200, 300, 500, 1000g) | ASTM B578, ASTM E92, ASTM E384; NASM 1312-6; ISO 6507-1 |
| Knoop (25, 50, 100, 200, 300, 500, 1000g) | ASTM B578, ASTM E92, ASTM E384; NASM 1312-6; ISO 6507-1 |
| | |
| Hydrogen Embrittlement | ASTM F519 |
| | |
| Impact Testing | |
| Charpy Impact (-150 - 100) °F | ASTM A370, ASTM A923, ASTM E23 |
| Izod Impact (Room Temperature) | ASTM E23 |

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| Test(s): | Test Method(s): |
|---|---|
| | |
| Physical Properties (cont): | |
| Tension/ Tensile | |
| Elevated Temperature Tension / Tensile (150 - 2010) °F | ASTM E21; ISO 6892-2; EN 2002-2 |
| Tensile (60K max) | ASTM A370, ASTM B557/B557M, ASTM E8/E8M, ASTM E345, ASTM F1147; ISO 6892-1; EN 2002-1 |
| | |
| Specimen Conditioning (Heat Treat) (-150 - 2150) °F | MTP 2070[1] |
| | |
| Shear Test | AWS B4.0; AWS D17.2/D17.2M |
| | |
| Metallographic Evaluations: | |
| Alpha Case | PTP 1007[1]; GEAE P3TF19; P3TF32; PW MCLM E142 |
| | |
| Bond Integrity / Oxide Content / Cracking | PTP 1060[1]; GEPG P16B-AG11; PW MCLM E53 |
| | |
| Case Depth | ARP 1820; SAE J423 |
| | |
| Coating / Plating Thickness | ASTM B487; ASTM B748 |
| | |
| Corrosion and Exfoliation Corrosion Susceptibility | ASTM A262 (Practice A, E); ASTM A763 (Practice W); ASTM A923; ASTM G28 (Method A); ASTM G34; ASTM G110; ASTM F2111; PTP 1048[1]; PTP 1026[1] |
| | |
| Depth of Decarburization | AMS-H-6875; ASTM E1077, ASTM F2328; SAE J419 |
| | |
| Electrical Conductivity by Eddy Current | ASTM E1004 |
| | |
| Grain Size | ASTM E112, ASTM E883, ASTM E930, ASTM E1181 |
| | |
| Image Analysis (Second Phase Analysis) | ASTM E1245; SAE AMS 2315; PTP 1009[1] |
| | |
| Inclusion Content | ASTM E45; SAE J422 |
| | |
| Macroetching | ASTM A604, ASTM E340, ASTM E381 |
| | |
| Microetching | ASTM E407 |
| | |

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| **Test(s):** | **Test Method(s):** |
|---|---|
| | |
| Metallographic Evaluations (cont): | |
| Microstructure Evaluation | ASM Metals Handbook (Volume 7, 8th Edition); NAS 4002, 4004; PTP 1010[1]; FTP 4004[1] |
| | |
| Preparation | ASTM E3 |
| | |
| pH of Aqueous Solutions | ASTM E70 |
| | |
| Recast / Re-melt | PTP 1049[1] |
| | |
| Surface Finish | SAE J448; ASME B46.1 |
| | |
| Visual / Microscopic Metallurgy | GE P3TF3l; PTP 1055[1] |
| | |
| SEM / EDS | ASTM B748, ASTM E1508 |
| | |
| Failure Analysis | ASM Handbook Volumes 11 and 12 |
| | |
| Thermoelectric Sorting of Conductive Materials | ASTM E977 |
| | |
| Welder Certification / Weld Procedure Testing | Using the methods listed above in accordance with:<br>ASME Section IX; AWS: AWS B2.1/B2.1M, AWS B4.0, D1.1/D1.1M, D1.2/D1.2M, D1.3/D1.3M, D1.5/D1.5M, D1.6/D1.6M, D9.1/D9.1M, D10.9/D10.9M, D17.1/D17.1M, D17.2/D17.2M, D20.1/D20.1M<br>MIL-STD-248D (Withdrawn 1997); NAVSEA S 9074-AQ-GIB-010/248 |
| | |
| Environmental Simulation: | |
| Salt Spray | ASTM B117, D1654; NASM 1312-1; GM4298P (Superseded 2010) |
| | |
| Humidity | ASTM D2247 |
| | |
| Water Fog Test | ASTM D1735 |

[1]In-House Test Method.

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Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0174.02
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