



SCOPE OF ACCREDITATION TO ISO/IEC 17025:20

ELEMENT MATERIALS TECHNOLOGY CHICAGO
194 Internationale Boulevard
Glendale Heights, IL 60139
Jeff Romain Phone: 630 221 0385 x76237
E-mail: : jeff.romain@element.com

MECHANICAL

Valid to: June30, 2026

Certificate Number 0104.02

In recognition of the successful completion of the A2LA evaluation process accreditation is granted to this laboratory to perform failure analysis and the following tests on the following products: forgings; castings;

tool and die, consumer and construction industries.

<u>Test</u>	<u>Test Method(s)</u>
<u>Metals</u>	
), D3359
Bend Test	ASME (Section IX); ASTM A370, E190E290; BS EN 9102000; BS EN ISO 5173
Coating Thickness	ASTM B748
Corrosion Test	
Salt Spray	ASTM B117, B537; NASM 1312
Humidity	ASTM D1735, D2247; NASM 1312
Intergranular Corrosion	ASTM A262, A763, G28G46, G48
Eddy Current Conductivity Measurement	ASTM E1004
Fastener Proof Load (400,000 lbs Max Capacity) Internal and External Threads and Cone Method)	ASTM A370, F606F606M; SAE J1216
Fastener Axial Tensile & Wedge Tensile	ASTM F606/F606M

<u>Test</u>	<u>Test Method(s)</u>
<u>Metals(continued)</u>	
Fillet Fracture Test	AWS B2.1/B2.1M, D1.1/D1.1M, D1.3/D1.3M, D14.1/14.1M;ASME (SectionIX); MIL -STD 15951998
Hardenability	ASTM A255
Hardness	
Rockwell (A, B, C, E, F15N, 30N, 45N, 15T, 30T, 45T)	ASTM A370, A623, B294, E18, F606/606M; NASM 13126
Brinell (500 and 3000kgf)	ASTM A370, E10
Microhardness-Knoop and Vickers (25 to 1000) gf	ASTM E384; NASM 13126
Macrohardness Vickers (5 and 10kgf)	ASTM E92
Heat Treat (Raw Material)	AMS 2750
Impact Testing(Charpy and Izod) (-320 to 450)°F	ASTM A370, E23; BS EN ISO 1481; BS EN 10045-1 :2001
Metallographic Evaluation	
Alpha Case	ASTM F136; SOP 021-S007
Case Depth	ASTM F2328 SAE J423
Delta Ferrite Determination	AMS 2315
Depth of Decarburization	ASTM E1077, F2328 SAE J1212013, J419
Discontinuities (Surface)	ASTM F788, F812 ISO 6157; SAE J122, J1232012, J1061
Grain Size	ASTM E112, E930, E1181
Inclusions in Steel	ASTM E45 (Method A&D), E1245; SAE J422
Macroetch	ASTM A561, A604/A604M E381, E340; ASME (SectionIX)
Microetch	ASTM E407
Microstructure Evaluation	ASTM A247, A892, E1268; ASM Metals HBK, Vol. 9
Plating Thickness	ASTM B487
Preparation	ASTM E3
Volume Fraction by Point Count	ASTM E562, A800/A800M
Passivation Testing	ASTM A380/A380M, A967/A967M, F1089
Peel	ASME (SectionIX)
Powder Characterization	
Apparent Density (Carney)	ASTM B417
Apparent Density (Hall)	ASTM B212
Apparent Density (Scott)	ASTM B329
Carney Flow Rate	ASTM B964
Flow Rate (Hall)	ASTM B213
Metal Powder Sampling	ASTM B215
Particle Size Distribution by Sieve	ASTM B214
Tap Density	ASTM B527
Volume of Apparent Density	ASTM B873

Test

Test Method(s)

Metals(continued)

SEM/EDS

ASTM B748,E1508

Shear- Single

ASTM F606/F606M

Shear- Double

ASTM B769;NASM 131213

Stress Rupture

ASTM E139, E292

Surface Roughnes



Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY CHICAGO

Glendale Heights, IL

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*



Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0104.02
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For the tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.