



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

ELEMENT MATERIALS TECHNOLOGY CHICAGO A DIVISION OF EXOVA INC.

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CHEMICAL

Valid to: June 30, 2020

Certificate Number: 0104.01

In recognition of the successful completion of the A2LA evaluation process (including compliance to R223 – Specific Requirements – GE Aviation S-400 Accreditation Program), accreditation is granted to this laboratory to perform the following tests on the following products: forgings; castings; powder metal; threaded fasteners; sheets; weldments of materials including aluminum and aluminum alloys, brass and bronze, copper and copper alloys; carbon steel; low alloy steel; silicon electric steel; stainless steel; cemented carbides; ingot iron; wrought iron; cast iron; ductile iron, titanium; magnesium; tool steels; zinc coating, cadmium coating, zinc base for the automotive, railroad, aerospace, nuclear, medical, agricultural, electronic, power generation, tool and die, consumer and construction industries.

**Test**

**Test Method(s)**

Inductively Coupled Plasma (ICP)

ASTM E1479, E1277, E2371, E2594

Steel, Stainless Steel, Tool Steel, Alloys of Aluminum, Cobalt, Copper, Magnesium, Nickel, Titanium, and Zinc based material, Cast Iron (Ag, Al, Au, B, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Dy, Fe, Hf, Ga, Gd, In, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Pt, Re, S, Sb, Se, Si, Sn, Sr, Ta, Te, Ti, Tl, V, W, Y, Yb, Zn, Zr)

Combustion / LECO (C, S)

ASTM E1019, E1941

Inert Gas Fusion / LECO (N<sub>2</sub>, O<sub>2</sub>, H<sub>2</sub>)

ASTM E1019, E1409, E1447, E2792

Electrolytic Chemistry (Cu)

ASTM E53<sup>1</sup>

Density and Porosity

ASTM B328 (2009)<sup>2</sup>, B962, B963, D792

Coating Weight Determination (Al, Pb, PO<sub>4</sub>, Sn, Zn)

ASTM A90/A90M, A309 (2015)<sup>2</sup> (Method D), A428/A428M, B137, B767

SEM/EDS (Semi Quantitative)

ASTM E1508

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**Test**

**Test Method(s)**

Optical Emission Spectroscopy (OES)

ASTM E415, E1086, E1251, E1999, E2209

Carbon and Low Alloy Steel

(Al, As, B, C, Co, Cr, Cu, Mn, Mo, Nb, Ni, P, S, Sb, Si, Sn, Ti, V, W, Zr)

Stainless Steel

(Al, B, C, Co, Cr, Cu, Mn, Mo, N, Nb, Ni, P, S, Si, Sn, Ti, Ta, V, W)

Aluminum Alloys

(B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, In, Li, Mg, Mn, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn, Zr)

Nickel Alloys

(Al, B, C, Co, Cr, Cu, Fe, Mn, Mo, Nb, Ni, P, S, Si, Ta, Ti, V, W, Zr)

Copper Alloys

(Ag, Al, As, B, Be, Bi, C, Cd, Co, Cr, Cu, Fe, Mn, Mg, Ni, P, Pb, S, Sb, Se, Si, Sn, Te, Ti, Zn, Zr)

Zinc Alloys

(Al, Cd, Cr, Cu, Fe, In, Mg, Mn, Ni, Pb, Si, Sn)

Cobalt Alloys

(Al, C, Cr, Cu, Fe, Mn, Mo, Ni, P, S, Si, V, W)

<sup>1</sup> This method can also be used for copper concentrations less than the ASTM E53 minimum Copper (Cu) purity range of 99.75 – 99.95%.

<sup>2</sup> This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.



## *Accredited Laboratory*

A2LA has accredited

# **ELEMENT MATERIALS TECHNOLOGY CHICAGO A DIVISION OF EXOVA INC.**

*Glendale Heights, IL*

for technical competence in the field of

## **Chemical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of R223 – Specific Requirements – GE Aviation S-400 Accreditation Program. 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 August 2018.

A handwritten signature in black ink, appearing to read "L. S. ...", positioned above a horizontal line.

President and CEO  
For the Accreditation Council  
Certificate Number 104.01  
Valid to June 30, 2020

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