



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY GARY A DIVISION OF EXOVA INC.

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Gary, IN 46402

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MECHANICAL

Valid To: November 30, 2020

Certificate Number: 0188.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on ferrous and non-ferrous metals:

<u>Test</u>	<u>Test Method(s)</u>
Through Thickness Tensile	ASTM A770/A770M
Tensile	ASTM A370, E8/E8M
Formability (N Value)	ASTM E646
Drawability (R Value)	ASTM E517
Bend	ASTM A370, E290
Hardness	
Rockwell (A, B, C, 15N, 30N, 15T, 30T, F, E)	ASTM E18; SAE J429, J995
Brinell (10/3000, 10/500, 10/1500, 5/750)	ASTM E10
Brinell (10/1500, 10/3000)	ISO 6506-1
Microhardness	
(Knoop, Vickers) (50, 100, 200, 300, 500 gf)(1 kgf)	ASTM E384
Macrohardness	
(Vickers) (5, 10 kgf)	ASTM E92
Charpy Impact	ASTM E23; BS EN ISO 148-1
Nil Ductility Transition (Drop Weight)	ASTM E208
Olsen Ductility	ASTM E643
Drop Weight Tear	ASTM E436
Dynamic Tear	ASTM E604
Jominy Hardenability	ASTM A255
Surface Roughness	ANSI/ASME B46.1
Coating Weight	ASTM A90/A90M
<u>Metallographic Evaluation:</u>	
Sample Preparation	ASTM E3
Graphite Microstructure	ASTM A247; ISO 945
Grain Size	ASTM E112, E1181

**Test****Test Method(s)****Metallographic Evaluation (cont'd):**

Inclusion Content	ASTM E45 (Methods A, C, D and E); ISO 4967; DIN 50602 (Methods M and K)
Macroetching	ASTM E340, E381, A604/A604M
Microetching	ASTM E407
Depth of Decarburization	ASTM E1077; SAE J419
Case Depth	SAE J423
Plating Thickness	ASTM B487
Corrosion	ASTM A262 (Practices A, B and E), G28 (Methods A and B)
Image Analysis of 2 <sup>nd</sup> Phase Constituents	ASTM E1245
Manual Point Count of 2 <sup>nd</sup> Phase Constituents	ASTM E562

**Chemical:**

Sample Preparation by Re-Melting	ASTM E1010; Element OP 507 <sup>1</sup>
Combustion (C, S)	ASTM E1019
Inert Gas Fusion (N <sub>2</sub> , O <sub>2</sub> )	ASTM E1019
Inert Gas Fusion (H <sub>2</sub> )	ASTM E1447; Element OP 513 <sup>1</sup>
Optical Emission Spectroscopy	
Carbon and Low Alloy Steel (Al, As, B, C, Co, Cr, Cu, Mn, Mo, Nb, Ni, P, Pb, S, Si, Sn, Ti, V, Zr)	ASTM E415
Stainless Steel (C, Cr, Cu, Mn, Mo, Nb, Ni, P, S, Si, Ti)	ASTM E1086
Aluminum and Aluminum Alloys (Be, Co, Cr, Cu, Fe, Mg, Mn, Ni, P, Pb, Si, Sn, Ti, V, Zn, Zr)	ASTM E1251
Copper and Copper Alloys (Al, As, Be, Bi, Ca, Co, Cr, Fe, Li, Mg, Mn, Ni, P, Pb, S, Sb, Se, Si, Sn, Te, Ti, Zn, Zr)	CHEM, COPPER <sup>2</sup>
Iron (Al, C, Cr, Cu, Mg, Mn, Mo, Ni, P, S, Si, Sn, Ti, V)	ASTM E1999
Brass (Al, Fe, Ni, P, Sn, Zn)	CHEM, COPPER <sup>2</sup>

<sup>1</sup> In-house test method.<sup>2</sup> In-house test method using ASTM E415.



## *Accredited Laboratory*

A2LA has accredited

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

*Gary, IN*

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 26<sup>th</sup> day of February 2019.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 0188.01  
Valid to November 30, 2020

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