

#### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

### METALLURGICAL ENGINEERING SERVICES, INC.

845 E. Arapaho Rd Richardson, TX 75081 Daniel Stolk Phone: 972 480 0033

danstolk@metengr.com

#### **MECHANICAL**

Certificate Number: 3065.01 Valid To: September 30, 2024

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on metals, polymers, fasteners, aerospace components, and coatings:

**Test Technology: Test Methods:** 

#### I. Mechanical Tests

Metallography/Microscopy

Metallographic Preparation ASTM E3 Grain Size ASTM E112, E1382 **Inclusion Rating** ASTM E45, Method A Graphite in Cast Iron ASTM A247 **Plating Coating Thickness** ASTM B487, B748 Case Depth **SAE J423** 

Macroetching ASTM E340, E381 **SEM** ASTM B748, E766

Hardness/Microhardness

Rockwell (HRBW, HRC, HR15N, HR30N, HR15TW, HR30TW) ASTM E18 Brinell – 3000kg ASTM E10 Microhardness Knoop – 500g, Vickers 500g ASTM E384 Durometer Hardness (Shore A, D, and M) **ASTM D2240** 

<u>Test Technology:</u> <u>Test Methods:</u>

I. Mechanical Tests Continued

Uniaxial

Tensile ASTM A370, B557, D412,

D638, E8/E8M

Compression Testing of Metallic Materials at Room Temperature ASTM E9

Flexural Properties of Reinforced Polymers

ASTM D790

Tensile Properties of Polymer Matrix Composite Materials

ASTM D3039

Compressive Properties of Polymer Matrix Composite Materials ASTM D6641

Using Combined Loading Compression (CLC) Fixture

Flexural Properties of Polymer Matric Composite Material ASTM D7264

Pressure Vessels ASME, Section IX

Standard Methods for the Mechanical Testing of Welds AWS B4

Externally and Internally Threaded Fasteners, Washers, Direct ASTM F606/F606M

Tension Indicators, and Rivets

Corrosion

Salt Spray ASTM B117

Drop Weight Tear Test ASTM E436

Failure Analysis (Using the methods listed above and below)

ASM Handbook, Vol. 11

**II. Chemical Tests** 

Portable X-Ray Fluorescence (XFR via XL-PMI): ASTM E572, E1476

(Cr, Cu, Fe, Mg, Mo, Mn, Nb/Cb, Ni, Pb, Sn, V, W, Zn)

**OES** 

Aluminum Alloys (Al, B, Be, Bi, Ca, Cr, Cu, Fe, Ga, Li, Mg, Mn, ASTM E1251

Na, Ni, P, Pb, Sb, Si, Sn, Sr, Ti, V, Zn, Zr)

Steel Alloys (Al, As, B, Bi, C, Ca, Ce, Co, Cr Fe, La, Mn, Mo, Nb, ASTM E415, E1086

Ni, P, Pb, S, Si, Sn, Ti, V, W, Zn, Zr)

EDS ASTM E1508

FTIR ASTM E1252

Combustion Analysis of Carbon ASTM E1019

Proportion of Phases in Portland Cement Clinker ASTM C1365

Page 2 of 2



# **Accredited Laboratory**

A2LA has accredited

## METALLURGICAL ENGINEERING SERVICES, INC.

Richardson, TX

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 2<sup>nd</sup> day of August 2022.

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

Certificate Number 3065.01

Valid to September 30, 2024