



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

METALLURGICAL ASSOCIATES, INC.  
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Waukesha, WI 53186  
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MECHANICAL

Valid To: April 30, 2018

Certificate Number: 1529.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on the following products and materials: aircraft components, automotive components, coatings, fasteners, metals and alloys, plastics, pipes, valves and fittings, pressure vessels, rubber and rubber products, and tools.

**Test**

**Test Methods**

Microscopy

Light Microscopy  
SEM (Scanning Electron Microscopy)  
Energy-Dispersive Spectroscopy

ASTM E883  
ASM Handbook Volume 12 (p.166-178)  
ASTM E1508

Hardness

Rockwell (A, B, C, F, N, and T)  
Brinell (500kg and 3000 kg)  
Leeb Hardness<sup>1</sup>  
Microhardness  
(Vickers, Knoop) (200 gm and 500 gm)

ASTM B294, E18  
ASTM E10  
ASTM A956  
ASTM B578, E384

Metallographic evaluation

Preparation  
Grain Size  
Graphite Microstructures  
Depth of Decarburization (Optical, microhardness)  
Macroetch<sup>1</sup>  
Microetch<sup>1</sup>  
Susceptibility to Intergranular Attacks  
Case Depth (Optical, microhardness)  
Inclusion Content  
Field Replicas<sup>1</sup>  
Discontinuities  
Coating Thickness

ASTM B665, E3  
ASTM B390 (Withdrawn 2006)<sup>2</sup>, E112  
ASTM A247  
ASTM E1077; SAE J121, J419  
ASTM E340  
ASTM E407  
ASTM A262, Method A  
SAE J423  
ASTM E45, Methods A and D  
ASTM E1351  
SAE J122, J123, J1061  
ASTM B487

**Test**

Failure Analysis

**Test Methods**

Using the methods listed above in accordance with ASM Handbook Volume 11

<sup>1</sup> This laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests.

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 This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.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

**METALLURGICAL ASSOCIATES, INC.**

*Waukesha, WI*

for technical competence in the field of

**Mechanical 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 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 8 January 2009).



Presented this 22<sup>nd</sup> day of June 2016.

A handwritten signature in blue ink, appearing to read "J. C. Burt".

Senior Director of Quality and Communications  
For the Accreditation Council  
Certificate Number 1529.01  
Valid to April 30, 2018

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