



The American Association for Laboratory Accreditation

World Class Accreditation

# *Accredited Laboratory*

A2LA has accredited

## **METALLURGICAL SOLUTIONS INC.**

*Middletown, OH*

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 17th day of December 2009.



  
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Peter Abney

President & CEO  
For the Accreditation Council  
Certificate Number 2037.01  
Valid to February 28, 2011

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



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

METALLURGICAL SOLUTIONS, INC  
2205 Woodside Boulevard  
P.O. Box 42036  
Middletown, OH 45044  
Dr. Brian Joyce Phone: 513 727 1571

MECHANICAL

Valid To: February 28, 2011

Certificate Number: 2037.01

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

<u>Test</u>	<u>Test Methods</u>
Hardness	
Rockwell (B, C, N30 & T30)	ASTM E18, F606
Microindentation Hardness (Vickers)	ASTM E384
Charpy Impact (up to 240 ft-lbs 325 J)	ASTM E23
Tensile	ASTM E8, A370
r-value	
n-value	
Tensile (Axial – Load to 60,000 lbs)	ASTM F606
Bend Test	ASTM E190, E290
Plating Adhesion	ASTM B571
Plating Thickness	ASTM B487
Coating Mass	ASTM A90
Salt Fog	ASTM B117
Metallographic Evaluation	
Preparation	ASTM E3
Inclusion Content	ASTM E45 (method A)
Depth of Decarburization (Carburization)	ASTM E1077
Grain Size	ASTM E112
Microetch / Macroetch	ASTM E381, E407
Reflected Light Photomicroscopy	ASTM E883
SEM Performance	ASTM E986, E620, E678, E860, E2332
Weld Examination	Test Specification/Code <sup>1</sup> : ASME IX, AWS D1.1, AWS D1.2, AWS D1.6, AWS D1.9, AWS D17.1

Test

Test Methods

Chemical

Chemical Analysis of Steel, Stainless Steel,  
Aluminum and Nickel Alloys (C, Mn, P, S, Si, Cr,  
Ni, Mo, B, Ti, Zn, V, Al, Nb, Sn, Pb, Mg)

ASTM A751, E415, E1086, E1251

Combustion Analysis (C/S)

ASTM E1019

<sup>1</sup> *"The laboratory is accredited for the test methods listed above. The accredited test methods are used in determining compliance with the material specifications/codes listed above; however, the inclusion of these material specifications/codes on this Scope does not confer laboratory accreditation to the material specifications. Inclusion of these material specifications/codes on this Scope also does not confer accreditation for every method embedded within the specification. Only the methods listed above on this Scope are accredited."*