



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

MSi Testing & Engineering, Inc.
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MECHANICAL

Valid To: December 31, 2010

Certificate Number: 0510.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following fastener, nut, metals testing and analysis:

<u>Test Description</u>	<u>ASTM</u>	<u>SAE</u>	<u>Other</u>
<u>Metallurgical Lab</u>			
Hardness			
Rockwell A, B, C, N, T	E18, F606, F606M	J429	
Brinell	E10		
Microhardness (Knoop & Vickers)	E384, F606, F606M		
Vickers	E92		ISO 6507-1
Jominy Hardenability	A255		
Metallographic Evaluation			
Specimen Preparation	E3		
Macroetch Testing	E381		
Microetching Metals and Alloys	E407		
Grain Size Exam	E112, E1181		
Micro-Cleanliness Rating	E45 (method A, C, D, and E)		ISO 4967 (method A and B); DIN 50602 (method K & L); JIS G 0555
Case Depth		J423	
Discontinuity Exam	A574	J122, J123	ISO 898-1
Decarburization Exam	E1077	J121, J419	
Volume Fraction by Point Count	E562	AMS 2315	
Graphite Microstructure	A247		
SEM/EDS	B748, E766, E1508		MSi Proc. 2000
Salt Spray (fog)	B117	USCAR-1	GM 4298P; ISO 9227

<u>Test Description</u>	<u>ASTM</u>	<u>SAE</u>	<u>Other</u>
Intergranular Attack in Austenitic (SS)	A262 (Practice A & E)		
Pitting and Crevice Corrosion	G48 (method A & B)		
Detrimental Intermetallic Phases in Duplex Stainless Steels	A923		
Intergranular Corrosion in Nickel Chrome Alloys	G28 (method A)		
Inclusion or Second-Phase Content by Automatic Image Analysis	E1245		
Measurements by Optical Microscope Examination	B487		MSi Proc. 0008
Coating Weight (Zn)	A90		
<u>Mechanical Lab</u>			
Tensile Testing (Axial & Wedge)	B557, E8, F606	J429, J995, J1199, J1216	EN 10002-1, EN 10002-2
Proof (Internal & External Threads)	F606	J429, J1199	
Charpy Impact Testing (Type A)	E23		ISO 148-1, -2; EN 10045-1, -2; JIS Z 2202
Bend	A370		AWS B4.0 (Part A)
Steel Cleanliness			AMS 2301, 2304; JIS G 0556
Proof Torque / Drive Torque		J78, J81	
Hydrogen Embrittlement		J78	USCAR-7
Surface Roughness			ASME B46; MSi Procedure 590
<u>Chemical Lab</u>			
Optical Emission Spectroscopy (OES)			
Steel	E415, A751		
Stainless Steel	E1086, A751		
Aluminum	E1251		
Titanium, Copper, Nickel	E1473		MSi Procedure 1002
Cast Iron	E1999, A751		
High Mn Steel	E2209, A751		
Combustion/Absorption Analysis LECO – C / S / N / O	E1019 E1409, E1941		
Fusion Analysis – Titanium & Steel LECO – Hydrogen	E1447		MSi Proc. 1010
Sample Preparation by Re-melt	E1306		
Graphitic Carbon – Cast Iron	E351		
Inductively Coupled Plasma (ICP)	E1479, E2371		MSi 1006
Hexavalent Chrome			ISO 3613; GMW 3034; DX 900359

<u>Test Description</u>	<u>ASTM</u>	<u>SAE</u>	<u>Other</u>
<u>Lead Testing</u>			
Total Lead in Children's Metal Products (Including Children's Metal Jewelry)	E1613		CPSC-CH-E1001-08
Total Lead in Non-Metal Children's Products	E1613		CPSC-CH-E1002-08
Determining Lead in Paint and Other Similar Surface Coatings*	E1613		CPSC-CH-E1003-09, 16 CFR 1303
Preparation of Dried Paint Samples by Hotplate or Microwave Digestion for Subsequent Lead Analysis	E1645		

*Failure analysis using the test methods listed above in accordance with Msi Procedure 5000



THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

MSI TESTING AND ENGINEERING, INC.
Melrose Park, IL

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 January 2009*).



Presented this 10th day of February 2009.

A handwritten signature in cursive script, reading "Peter Abney".

President
For the Accreditation Council
Certificate Number 0510.01
Valid to December 31, 2010

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