



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

MSI TESTING & ENGINEERING, INC.
 1390 N. 25th Avenue
 Melrose Park, IL 60160
 George Prause Phone: 708 343 3444
 george@msi-testing.com

MECHANICAL

Valid To: December 31, 2012

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> |
|---------------------------------|-----------------------------|------------|---|
| Metallurgical Lab | | | |
| 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 |
| Surface Roughness | | | ASME B46; MSi Procedure 590 |
| Weld Procedure and Weld Operator Qualification. | | | QWS B4.0 (Part A-D): D1.1, D1.2, D1.5, D1.6, ASME Section IX, NAVSEA S9074- AQ-GIB-010/248 |



The American Association for Laboratory Accreditation

World Class 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 8 January 2009*).

Presented this 23rd day of February 2011.





Peter Abney

President & CEO
For the Accreditation Council
Certificate Number 0510.01
Valid to December 31, 2012

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