



The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

QC METALLURGICAL LABORATORY

Davenport, IA

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 27th day of July 2009.



A handwritten signature in black ink, reading "Peter Abney", written over a horizontal line.

President & CEO
For the Accreditation Council
Certificate Number 1238.01
Valid to July 31, 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

Q. C. METALLURGICAL LABORATORY
 17048 215th Street
 Davenport, IA 52804
 Todd Bloodsworth Phone: 563 386 7827

MECHANICAL

Valid To: July 31, 2011

Certificate Number: 1238.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following metals (or materials) tests:

<u>Test</u>	<u>Test Methods</u>
<i>Mechanical</i>	
Hardness (Rockwell: B, C)	ASTM E18
Brinell hardness	ASTM E10
Hydrogen embrittlement	ASTM F519
Plastic strain ratio (r value)	ASTM E517
Plating thickness	ASTM B487, B499, B530, D7091
Coating thickness	ASTM B244
Proof (external threaded)	ASTM F606; SAE J429, J1199
Strain hardening exponent (n value)	ASTM E646
Tension (complete, axial)	ASTM E8, A370, F606; SAE J429, J1199
Charpy impact	ASTM E23
Tape adhesion	ASTM D3359
<i>Metallographic evaluation</i>	
Case depth by microhardness	SAE J423
Depth of decarburization	ASTM E1077; SAE J121
Grain size	ASTM E112
Inclusions	ASTM E45 (Method A)
Microhardness (Knoop, Vickers)	ASTM E384
Preparation	ASTM E3
Macro etch	ASTM E381
Microstructure analysis	ASTM E1268; ASM Metals Handbook
<i>Corrosion</i>	
Salt spray	ASTM B117
Susceptibility to intergranular corrosion	ASTM A262 (Method A), (3, 4 and 316 SS only)

Test

Test Methods

Chemical

Spectroscopy

Atomic absorption

Optical emission

Portable x-ray fluorescence

General techniques for obtaining infrared spectra
for qualitative analysis

Standard test methods for rubber-identification by
infrared spectrometry

ASTM E1452 (2005), E1812 (1996), E1024

ASTM E415, E1086, E1251, E1999

ASTM E572

ASTM E1252

ASTM D3677

Failure Analysis

Standard guide for qualitative analysis by
energy-dispersive spectroscopy (EDS, SEM)

Standard guide for reflected-light photomicrography

ASTM E1508 (standard less technique)

ASTM E883