



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

IMR TEST LABS - CHARLESTON
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MECHANICAL

Valid To: August 31, 2012

Certificate Number: 1140.05

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on adhesives, aluminum alloys, brass and bronze, cables, carbon, steel, cast iron, ceramics, coatings, composites, copper alloys, electronics, elastomers, fasteners, labels, low alloys, titanium alloys, zinc alloys, thermal spray, oil and oil products for the following industries: aerospace, automotive, nuclear, medical device, consumer products and industrial goods, metal production, general manufacturing, utilities, petrochemical and power generation.

<u>Test</u>	<u>Test Method</u>
Tensile (Room temperature) 60,000 pounds	ASTM A370, E8, F606; DIN 10002, 1559, 10293
Young's Modulus	ASTM E111
Compression	MEC-008
Hardness	
Brinell	ASTM E10, E110
Rockwell (HRA, HRBW, HRC, 15N, 30N, 45N, 15TW, 30TW, 45TW)	ASTM E18
Pencil Hardness	ASTM D3363
Microhardness (Knoop and Vickers)	ASTM E384, B578
Metallography	
Case Depth	SAE J423
Coating Thickness	ASTM B487, B748
Discontinuities	ASTM F788, F812
Orientation of Microstructure	ASTM E1268
Depth of Decarburization	ASTM E1077
Grain Size	ASTM E112, E930, B390
Inclusion Content	ASTM E45
Macroetching	ASTM E340, E381
Microstructure	ASTM A247, B276; ISO 945, ASM Metals Handbook, Section 9, ASTM E562
Determination of Volume Fraction	ASTM E562
Preparation of Samples	ASTM E3
Microetching	ASTM E407
Photomicrography	ASTM E883

(A2LA Cert No. 1140.05) 08/31/2010

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Test

Intergranular Corrosion
Coating Weight
Failure Analysis**
Specific Gravity
Kinematic Viscosity
Weld Testing (Includes Welder and Procedure Qualifications)

Bend Testing

Environmental Simulation

Salt Spray, CASS & Accelerated Corrosion

Humidity, Condensation/Water Fog

Cyclic Corrosion

Coating Testing and Evaluation

UV

Coating Adhesion

Test Method

ASTM A262, Practice A
ASTM A90, A924, B767
ASTM E620, E678, E860, E1188
ASTM D891, D1429
ASTM D445, D446
AWS D1.1, D1.2, D1.6, D17.1;
MIL STD 1595A; ASME Section IX; ISO 5817, ABS Rules for Welding Part 2; NAVSEA S9074-AQ-G1B-010/248
ASTM E190, E290

ASTM B117, B368, G85 (Except A4);
DIN 50021, AA 0324, AA-P 184, HES D6501, ISO 9227

ASTM D1735; GM4465P, ISO 6270-2, ASTM D2247, DIN 50017, AA-P 224, AA 0213, ISO 4628-3

AA 0224, AA-P 175, GMW 14872, ISO 11997-1, VDA 621-415L, GM 9540P

AA-P 194, DBL 7381, DBL 7391, DBL 7399, DBL 8451, DBL 8461, GS 90010, GS 90011, ISO 4628-2, ISO 4628-2, D609, D610, D714, D1654

ASTM D4587, ASTM G154 Cycle 1-7; ISO 11507 Method A, ISO 4892 Cycle 1,2,6; DIN EN 927

AA 0180, AA-P 177, GM 9071P, ASTM D3359, ISO 2409

Dimensional Testing

Parameter	Range	CMC* (\pm)	Technique	Standards
Torque	(0 to 100) ft-lb	0.3 %	Torque meter	ANSI B107.14
	(100 to 300) ft-lb	0.3 %		
	(0 to 100) ft-lb	0.3 %		
	(240 to 1200) ft-lb	4.7 %		
Linear	(0 to 6) in	250 μ in	Micrometer	MIL-STD-120
	(0 to 6) in	650 μ in	Calipers	
	(0 to 12) in	600 μ in		
	(0 to 12) in	600 μ in	Comparator	
	(0 to 18) in	500 μ in	Height gage	

*Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine measurements of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific measurement performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific measurement.

**Failure Analysis using the test methods listed above, referencing the ASM handbook, ASTM E620, E678, E860, and E1188.



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The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

IMR TEST LABS - CHARLESTON

Charleston, SC

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 31st day of August 2010.





Peter Abney

President & CEO
For the Accreditation Council
Certificate Number 1140.05
Valid to August 31, 2012

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