



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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MECHANICAL

Valid To: December 31, 2021

Certificate Number: 3977.01

In recognition of the successful completion of the A2LA Accreditation Program, accreditation is granted to this laboratory to perform the following types of tests on metals, plastics, and rubber:

<u>Test:</u>	<u>Test Methods:</u>
<u>Mechanical Testing</u>	
Brinell Hardness (187.5/500/1500/3000kg)	ASTM E10; AREMA MRE
Portable Hardness (UCI) ²	ASTM A1038
Macro-Vickers (1-30kg)	ASTM E92
Microhardness (HK 500g; HV25-1000g)	ASTM E384, E92
Rockwell Hardness (HRA, HRBW, HRC, HRRW)	ASTM A370, E18, F606/606M; ASME Section II A SA370, SAE J1216; AREMA MRE
Tensile/Tension (-40 F to 400 F <= 1350 kN)	ASTM A370, A770, B557, E8/E8M, F606/606M, JIS 2241; ASME Section II A SA370, ASME Section IX QB/QW-150, SAE J1216, GMW 3335
n-Value (Strain Hardening Exponent)	ASTM E646
r-Value (Plastic Strain Ratio)	ASTM E517
Coefficient of Friction	ASTM D1894
Bend	ASTM A370; ASME Section II A SA370, ASME Section IX QB/QW-160
Impact (Charpy)	ASTM A370, E23; ASME Section II A SA370, ASME Section VIII UG-84
Notch Toughness	ASME Section IX, QW-170

<u>Test:</u>	<u>Test Methods:</u>
<u>Mechanical Testing (cont.)</u>	
Ductility (Bend)	ASTM E290
Adhesion (Tape Test)	ASTM D3359
Coating Weight	ASTM A428, A90
Feritescope ²	EN/ISO 17655, AWS A4.2M
Weld and Braze Evaluation and Qualification	ASME IX; CSA W47.1, W47.2; API 1104; AWS D1.1/D1.1M, D1.2/D1.2M, D1.3/D1.3M, D1.4/D1.4M, D1.5/D1.5M, D1.6/D1.6M, D1.7/D1.7M, D1.8/D1.8M, D1.9/D1.9M, D9.1/D9.1M, D14.1/D14.1M, D14.3/D14.3M, D14.4/D14.4M, D14.6/D14.6M, D15.1/D15.1M, D17.1/D17.1M, B2.1/B2.1M, B2.2/B2.2M; ISO 15614-1; BS EN287-1, 287-2, 288-3, 288-4,1321; ASTM A488; MIL-STD-248D; NAVSEA S9074-AQ-GIB-010; ANSI/AASHTO/AWS D1.5M/D1.5; NACE MR0175/ISO15156-1, 15156-2, 15156-3; MIL-STD 1595, 2219, 1261
<u>Corrosion/ Environmental Testing</u>	
Pitting and Crevice Corrosion Resistance	ASTM G48, A923, G46, G78, G150
Immersion Corrosion	ASTM G31, G44
Stress Corrosion Cracking	ASTM G1, G28, G30, G35, G36, G37, G38, G39, G47, G49, G58, G64, G67, G123
Microbiological Corrosion	NACE TM 212
Atmospheric Corrosion	ASTM G50, G84, G101
Galvanic Corrosion	ASTM G71
Exfoliation Corrosion	ASTM G66
Humidity	ASTM G60
Salt Spray	ASTM B117, G85

<u>Test:</u>	<u>Test Methods:</u>
<u>Metallography</u>	
Preparation of Specimens	ASTM E3
In-situ Metallography ²	ASTM E1351
Case Depth	SAE J423
Decarburization	SAE J419
Microstructure	ASTM A247, A923, G82; AREMA MRE
Microetch	ASTM E407
Macroetch	ASTM A604, A561, E340, E381; AREMA MRE
Surface Discontinuities	ASTM F788, F812. ISO 6157-1. SAE J123, J1061
Inclusion Content	ASTM E45 (Method A), SAE J422
Intergranular Attack	ASTM A262
Average Grain Size	ASTM E112 (Chart Comparison)
Volume Fraction by Systematic Manual Point Count	ASTM E562
Coating Thickness by Cross Section	ASTM B487
<u>Non Destructive Testing</u>	
Visual Inspection (VT) ²	ASME V
Ultrasonic Inspection (UT) ² Contact - Straight & Angled beam	ASME V
Magnetic Particle Inspection (MT) ² Yoke & Prod - Visible & Fluorescent, Wet & Dry	ASME V, ASTM E709
Magnetic Flux Leakage (MFL) ²	ASME V
<u>Non-Metallic Testing</u>	
Flexural Properties of Plastics and Electrical Insulating Materials	ASTM D790
Tensile	ASTM D412, D638
Flammability	CMVSS 302; FMVSS 302; ISO 3795
Durometer Hardness	ASTM D2240 (Types A&D Only)
Specific Gravity (Relative Density)	ASTM D792

<u>Test:</u>	<u>Test Methods:</u>
<u>Failure Analysis</u>	
SEM Analysis	EAS-SEM-02-W001
Failure Analysis	ASTM E860, E1020, E1188, E1492, ASM Handbook 11 and the test methods listed on scopes 3977.01 & 3977.04

I. Dimensional Testing³:

Parameter/Equipment	Range	Comment
Linear ⁴ Work piece Measurement	Up to 1 in Up to 6 in	Micrometer Caliper

¹ This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.

² This laboratory meets A2LA R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories for these tests or calibrations.

³ This laboratory offers commercial dimensional testing service only.

⁴ This test is not equivalent to that of a calibration.

The laboratory is accredited for the test methods listed above. The accredited test methods are used in determining compliance with the material specifications listed below; however, the inclusion of these material specifications on this Scope does not confer laboratory accreditation to the material specifications. Inclusion of these material specifications 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.

ASTM A653M, ASTM D618, CSA G40.20, CSA G40.21, CSA Z245.1, CSA Z245.11, CSA Z245.12, CSA Z245.15, GM 255M, 260M, 275M, 280M, 284M, 286M, 290M, 300M, 301M, 305M, 455M, 456M, 500M, 510M, ISO 898 Part 1, JIS B 1051 Part 1, SAE J429, J1199, API 5CT, API 5C7, API 5D, API 5L, API 5LC, API 5LS, API 5LX, API 6A, API 7, API 7K, API 7-1, API 9A, API 11B, API 12C, API 510, API 570, API 650, API 653.





Accredited Laboratory

A2LA has accredited

ACUREN GROUP INC.

Oakville, Ontario, Canada

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *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 April 2017).



Presented this 18th day of December 2019.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3977.01
Valid to December 31, 2021

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