

#### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

## ACUREN GROUP INC. 12271 Horseshoe Way

Richmond, BC, Canada V7A 4V4

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#### **MECHANICAL**

Valid To: December 31, 2023 Certificate Number: 3977.03

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 <u>metals</u>:

Test:	Test Methods <sup>1</sup> :
Chemical Analysis	
Chemical Analysis of Alloys with Optical Emission Spectroscopy (OES) (Base Metals: Al, Co, Cu, Fe, Pb, Ni, and Ti)	ASTM E1009, E415, E485, E1999, E1806, E227, E1251, E2371, E3047; BS EN15079
Scanning Electron Microscopy (EDXA)	ASTM E1508
Mechanical Testing	
Brinell Hardness (500/3000kg)	ASTM E10
Macro-Vickers (1-10kg)	ASTM E92
Microhardness (HV 100 -1000g)	ASTM E384, E92
Rockwell Hardness (HRBW, HRC, HR15N, HR15TW, HR30TW)	ASTM A370, E18, F606/F606M
Tensile/Tension (Room Temperature, <= 120 klbs)	ASTM A370, A1061, B557, E8/E8M, F606M; ASME Section IX QB/QW-150; EN10002-1; ASME Section II A SA 370; Lloyd's Rules Section 2, ABS Section 2
Bend	ASTM A370; ASME SA-370, ASME Section IX QB/QW-160; CSA W47.1; ASTM E290; CSA Z662 – Section 7, Lloyd's Rules Section 2, ABS Section 2
Impact (Charpy)	ASTM A370, E23; ASME SA-370, ASME Section VIII UG-84, CSA W47.1-09, Lloyd's Rules Section 2, ABS, Section 2

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Test:	Test Methods <sup>1</sup> :
Mechanical Testing (continued)	
Notch Toughness	ASME Section IX, QW-170
Nick Break	CSA Z-662 Section 7; API 1104; AWS B4.0 Section 6
Ductility (Bend)	ASTM E290; ASTM E190
Feritscope	EN/ISO 17655; AWS A4.2M
Weld and Braze Evaluation and Qualification	ASME SECTION IX Part QW and QB; CSA W47.1, W47.2, W59.1, W59.2; API 1104; AWS D1.1/D1.1M Section 4, D1.2/D1.2M Section 3, D1.4/D1.4M Section 6, D1.5/D1.5M Section 5, D1.6/D1.6M Section 6, D1.7/D1.7M Section 4, D1.8 Sections 5 & 6, D1.9/D1.9M Section 3, D14.1/D14.1M Section 9, D14.4/D14.4M Section 7, D14.6/D14.6M Section 6, D15.1/D15.1M Sections 10 - 12, D17.1/D17.1M Section 5, B2.1/B2.1M Sections 4 - 5, B2.2/B2.2M Sections 4 - 5; ISO 15614-1; BS EN287-1, 287-2, 288-3, 288-4; ASTM A488; MIL-STD-248D; NAVSEA S9074-AQ-GIB-010; ANSI/AASHTO/AWS D1.5 Section 5; NACE MR0175/ISO15156-1, 15156-2, 15156-3; MIL-STD 1595A, 2219, 1261; Lloyd's Rules, ABS
Corrosion/ Environmental Testing	
Pitting and Crevice Corrosion Resistance	ASTM G48, A923
Immersion Corrosion	ASTM G31
Intergranular Attack – Stainless Steel	ASTM A262
Metallography	
Preparation of Specimens	ASTM E3
Case Depth	AGMA2004
Microstructure	ASTM A247
Microetch	ASTM E407
Macroetch	ASTM A604, A561, E340, E381

Test:	Test Methods 1:
Metallography (continued)	
Inclusion Content	ASTM E45 (Excluding Macroscopic Method), SAE J422
Average Grain Size	ASTM E112 (Excluding Shepherd Fracture Grain Size Method)
Volume Fraction by Systematic Manual Point Count	ASTM E562
Volume Fraction by Image Analysis	ASTM E1245
Coating Thickness by Cross Section	ASTM B487
Failure Analysis	ASTM E860, E1020, E1188, E1492, ASM Handbook 11, and the test methods listed on this Scope

#### **Dimensional Testing** <sup>2</sup>:

Parameter	Range	Technique/ Method
Linear <sup>3</sup> Work piece Measurement	Up to 1 in Up to 6 in	Micrometer Caliper

<sup>&</sup>lt;sup>1</sup> When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA *R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories*.

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 Z245.11, CSA Z245.11, CSA Z245.12, CSA Z245.15, 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 650, Lloyd's rules, ABS rules, DNV rules.

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<sup>&</sup>lt;sup>2</sup> This laboratory offers commercial dimensional testing service only.

<sup>&</sup>lt;sup>3</sup> This test is not equivalent to that of a calibration.



# **Accredited Laboratory**

A2LA has accredited

## **ACUREN GROUP INC.**

Richmond, BC, 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 19th day of January 2022.

Vice President, Accreditation Services For the Accreditation Council Certificate Number 3977.03

Valid to December 31, 2023