SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

CONSUMERS ENERGY/LABORATORY SERVICES
Laboratory Services
135 West Trail Street
Jackson, MI 49201
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MECHANICAL

Valid To: July 31, 2020 Certificate Number: 1097.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests and analyses on the following materials and components: metals and alloys, steel, cast iron, aluminum, copper, composite materials, automotive components, coatings, fasteners, pipes, hoses, valves, fittings and pressure vessels.

Test:	Test Method:
General Mechanical:	
Leeb Hardness Test (Type D)	ASTM A956
Tensile (Load Range <= 200k lb)	ASTM A370, B557, E8/E8M
Rockwell Hardness Testing (A, BW, C)	ASTM A370, E18
Rockwell Hardness Testing Superficial (15, 30, 45N & 15, 30, 45T)	ASTM A370, E18
Microindentation Hardness Testing (HV 300 g/500 g)	ASTM E384
Microindentation Hardness Testing (HK 300 g/500 g)	ASTM E384
Brinell Hardness (500 kg, 1500 kg & 3000 kg)	ASTM A370, E10
Bend	API 1104
Metallography/Microscopy:	
Sample Preparation	ASTM E3
Microstructure	ASM Handbook Vol. 9
Microetching	ASTM E407
Scanning Electron Microscopy with EDS	ASTM E1508
Reflected Light Photomicroscopy	ASTM E883
*Field Replica Preparation	ASTM E1351
Failure Analysis	ASM Handbook Vol. 11 9th Ed (Pages 1-20, 22-32, 47-57, 67-792)
PMI:	
*Portable X-Ray Fluorescence (Bi, Co, Cr, Cu, Fe, Mn, Mo, Nb, Ni, Pb, Sb, Se, Si, Sn, Ti, V, W, Zn, Zr)	ASTM E1476 (Sec. 7.1)

*This laboratory meets A2LA *R104- General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests.

5202 Presidents Court, Suite 220 | Frederick, MD 21703-8398 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2LA.org

Accredited Laboratory

A2LA has accredited

CONSUMERS ENERGY/LABORATORY SERVICES

Jackson, MI

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 8th day of August 2018.

President and CEO
For the Accreditation Council
Certificate Number 1097.02
Valid to July 31, 2020

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