



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Corrosion Testing Services, LLC

895 Ardmore Hwy., Taft, TN 38488

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Mechanical Testing *(As detailed in the supplement)*

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Initial Accreditation Date:

December 8, 2018

Issue Date:

February 03, 2023

Expiration Date:

March 31, 2025

Accreditation No.:

102837

Certificate No.:

L23-88

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjllabs.com



Certificate of Accreditation: Supplement

Corrosion Testing Service, LLC

895 Ardmore Hwy., Taft, TN 38488
 Contact Name: George Waid Phone:931-438-4224

Accreditation is granted to the facility to perform the following testing:

| FIELD OF TEST | ITEMS, MATERIALS OR PRODUCTS TESTED | SPECIFIC TESTS OR PROPERTIES MEASURED | SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED | RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT |
|-------------------------|--|--|--|---|
| Mechanical ^F | Resistance to Cracking Failure of Alloys (Steel & CRA's) | Corrosion Tensile Testing | NACE Test TM0177 Method A/ASTM G49 | Up to 10 000 lbf |
| | | Bent-Beam Stress-Corrosion Test | NACE Test TM0177 Method B | Up to 0.25 in of Deflection |
| | | C-Ring Test | NACE Test TM0177 Method C/ASTM G38 | Up to 2 in of Deflection |
| | | Double Cantilever Beam | NACE Test TM0177 Method D/ASTM G168 | Up to 2 000 lbf |
| | | Testing at Elevated Temperature/Pressure | NACE-TM0177 Methods A, B, C, D ASTM G111 & G58 | D.L. = 5 000 psi D.L. = 600 °F |
| | | Four-Point Bend Testing Material for Oil & Gas | NACE Test TM0177 Methods A, B, C, D and TM0316/ASTM G39 | Up to 1 in of Deflection |
| | | Slow Strain Rate Test for Screening Corrosion-Resistance Alloys (CRA's) for Stress Corrosion Cracking in Sour Oilfield Service | NACE TM0198/ASTM G129 | Up to 10 000 lbf |
| | Cracking Failure of Alloys (Steel) | Hydrogen Induced Cracking | NACE Test TM0284 | Pass/Fail |
| | Resistance to Cracking Failure of Steel | Corrosion Tensile Testing | NACE Test TM0177 Method A/ASTM G49 | Customer Defined |
| | | Bent-Beam Stress-Corrosion Test | NACE Test TM1077 Method B | |
| | | C-Ring Test | NACE Test TM0177 Method C/ASTM G38 | |
| | | Double Cantilever Beam | NACE TM0177 Method D/ASTM 168 | |
| | | Testing at Elevated Temperature/Pressure | NACE Test TM0177 Methods A, B, C & D ASTM G58 & G111 | |
| | | Hydrogen Induced Cracking | NACE- TM0284 | |
| | | Four-Point Bend Testing Material for Oil & Gas | NACE Test TM0177 Methods A, B, C & D and TM0316/ASTM G39 & G58 | Up to 1 in of Deflection |



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|--|--|--|--|---|
| Mechanical ^F | Resistance to Cracking Failure of Steel | Slow Strain Rate Test for Screening Corrosion-Resistance Alloys (CRA's) for Stress Corrosion Cracking in Sour Oilfield Service | NACE TM0198/ASTM G129 | Up to 10 000 lbf |
| | Tensile Strength, Yield Strength, Elongation & Reduction of Area | Tensile Testing of Metals | ASTM A370 ASTM E8 | Load Cell Capabilities Up to 10 000 lbf |
| | Metallic Material Hardness | Hardness Testing | ASTM E18 | 20 HRC to 70 HRC 65 HRB to 100 HRB 40 HRA to 85 HRA |
| Mechanical ^F (Metallurgical) | Metallic Materials | Grain Size | ASTM E112 | Visual Evaluation |

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this testing at its fixed location.