



SCOPE OF ACCREDITATION TO ISO/IEC 17025:20

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MECHANICAL

Valid To: February 28, 2025

Certificate Number 5669.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests: ~~on~~ UURXV DQG QRQ IHUURXV ZHOGV SRO\PHUV HODVWRPHUV PHWDOOLF DQG QRQ PHWDO

| Test:                                  | Test Method(s):  |
|--|--|
| Corrosion:                             |  |
| Salt Spray (Fog) Testing               | \$ 6 7 0 % <del>9250</del> ;<br>EL-M-OP-CT-AUH-MD002   |
| Susceptibility to Intergranular Attack | ASTM G28 Method A<br>ASTM A262 Practices A, B, C & E   |
| Pitting Resistance                     | ASTM G48 Methods A, C & E<br>ASTM A923 Method C  |
| Sulfide Stress Cracking (SSC)          | NACE TM0177;<br>NACE TM0316;<br>ASTM G39<br>EFC 16<br>BS EN ISO 15156-2;<br>EL-M-OP-CO-AUH-MD009 |
| Hydrogen Induced Cracking (HIC)        | NACE TM0284<br>BS EN ISO 15156-2;<br>EL-M-OP-CO-AUH-MD007  |
| Full Ring Ovalisation                  | BS 8701(Excluding Non Destructive Tests)<br>EL-M-OP-   |

| Test:   | Test Method(s):  |
|---|--|
| Vickers (5, 10 and 30 kgf<br>Vickers Micro-indentation<br>(0.1, 0.3, 0.5 and 1.0 kgf) | BS EN ISO 6507; ;<br>ASTM E92<br>ASTM E384   |
| Shore A & D   | ASTM D2240<br>ISO 868  |
| Mechanical  |  |
| Bend  | BS EN ISO 7438<br>BS 4449:1988 (Withdrawn)<br>ASTM A615/A615M;<br>ISO 6935-2;<br>BS EN ISO 15630-1;<br>ASTM E290<br>DVS 2203-5 |
| Charpy Impact including Lateral Expansion<br>and Shear Fracture Appearance            | BS EN ISO 1481;<br>ASTM E23<br>ASTM A370;  |

| Test:   | Test Method(s):   |
|---|---|
| Rebend  | BS 4449:1997 (Withdrawn)<br>BS 4449;<br>BS EN ISO 15630-1:2002 (Withdrawn)<br>BS EN ISO 15630-1:2010 (Withdrawn)<br>BS EN ISO 15630-1;<br>ISO 69352   |
| Shear test  | ASTM A264/A264M;<br>ASTM A265/A265M   |
| Fatigue   | BS 4449:1997 Amd't1 (Withdrawn)<br>BS 4449:2005+A2:2009;<br>BS 4449;<br>BS EN ISO 15630-1:2002 (Withdrawn)<br>BS EN ISO 15630-1:2010 (Withdrawn)<br>BS EN ISO 15630-1;<br>BS 6744;<br>ISO 69352   |
| Projected Rib Area (Geometry)   | BS 4449:1997 Amd't1 (Withdrawn)<br>BS 4449;<br>BS EN ISO 15630-1:2002 (Withdrawn)<br>BS EN ISO 15630-1:2010 (Withdrawn)<br>BS EN ISO 15630-1;<br>ASTM A615/A615M<br>ISO 69352   |
| Loading<br>Up to 1000 kN  | BS EN 1241;<br>BS EN 1433   |
| Welding: Bend, Fillet Weld Fracture and Nib Break, Hardness, Impact, Tensile, Macro and Microstructure and CTOD testing in accordance with specific welding codes | BS EN ISO 5173<br>BS EN ISO 9017<br>BS EN ISO 9015;<br>BS EN ISO 9016<br>BS EN ISO 4136<br>BS EN ISO 5178<br>BS EN ISO 17639;<br>BS 4515-1;<br>BS 4515-2;<br>BS EN ISO 15614-1;<br>BS EN ISO 15614-2;<br>BS EN 2871;<br>BS EN ISO 9606;<br>BS EN ISO 9606;<br>ASME IX;<br>API 1104;<br>AWS D1.1/D1.1M;<br>BS 7448-2:1997 (withdrawn)<br>BS EN ISO 15653;<br>BS EN ISO 13847;<br>ISO 5817;<br>ASTM E340<br>ASTM E190 |

| Test:  | Test Method(s):  |
|--|--|
| Metallurgical:                                       |  |
| Phase Volume Fraction                                | ASTM E562<br>EL-M-OP-MET-AUH-MD008                                   |
| Grain Size (By Comparison)                           | ASTM E112<br>EL-M-OP-MET-AUH-MD007                                   |
| Micro preparation and examination                    | ASTM E3;<br>ASTM E407  |
| Inclusion count                                      | ASTM E45<br>EL-M-OP-MET-AUH-MD005                                    |
| Degree of banding and Orientation of microstructures | ASTM E1268   |
| Replication of microstructures                       | ASTM E1351<br>EL-M-OP-MET-AUH-MD009                                  |
| Detecting Detrimental Intermetallic Phase            | ASTM A923 Method A   |
| Coatings   |  |
| Adhesive Lap Shear                                   | ISO 218093 Annex J;<br>EN 12068;<br>ASTM D 1002                      |
| Holiday Detection                                    | ISO 218093 annex C<br>ISO 21809-1 Annex B;<br>ASTM G62<br>ASTM A 775 |
| Cathodic Disbondment Test                            | ISO 218093 Annex G<br>ISO 21809-1 Annex H;<br>ISO 21809-2 Annex A.   |

| Test:                                 | Test Method(s):  |
|---------------------------------------|--|
| Adhesion test                         | ASTM D4541;<br>ISO 4624;<br>ISO 2409;<br>ASTM D3359  |
| PeelStrengthTest                      | ISO 218093 Annex H<br>ISO 21809-1 Annex C<br>EN 12068  |
| Thickness                             | ISO 2808 method 7C<br>ASTM B499<br>ASTM A775;<br>ASTM D7091;<br>ISO 21809-1 Annex A;<br>ISO 218093 Annex B |
| Environmental Simulation              |  |
| Fluorescent Ultraviolet Light Testing | ASTM G154  |



Abu Dhabi, UAE



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