



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT BROKEN ARROW  
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MECHANICAL

Valid To: September 30, 20

Certificate Number: 1089.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of tests fasteners, metals, alloys, adhesives and sealants, aircraft components, automotive components, coatings, films, packaging; gaskets, seals and packings; composites; plastics and polymers; pipes, hoses, rubber and rubber products.

| <u>Test</u>                  | <u>Test Method(s)</u>  |
|------------------------------|--|
| <u>Metallurgical Testing</u> |  |
| Tension                      | ASME Section IX;BS EN 895:1995 (Withdrawn 2011); EN100024:2001 (Withdrawn 2009); ASTM A370 (Sections 614 |



| <u>Test</u>                             | <u>Test Method(s)</u>   |
|---|---|
| <u>Metallurgical Testing (cont'd)</u>   |   |
| Flare & Flange Test                     | ASTM A370 (Section A.2.5.1.4, A.2.5.1.5), A450/A450M, A1016A/A1016M |
| Nick Breaks                             | API 1104; AWS B4.0  |
| Electrical Conductivity                 | ASTM E1004 EN 20041, EN 20047                                       |
| Visual Examination                      | ASME Section IX   |
| Fillet Weld Fracture                    | ASME Section IX   |
| <u>Tensile Test of Fasteners</u>        |   |
| Axial Tensile (Up to ½ in)              | ASTM A370 (Section A3.2), E8M, F606/F606M; NASM13128                |
| Proof Load (interior & exterior thread) | ASTM A370 (Section A3.2) F606/F606M; NASM-13128                     |
| Wedge Tensile (Up to ½ in)              | ASTM A370 (Section A3.2.1.6), F606/F606M; SAE J429                  |
| <u>Shear Test of Fasteners</u>          |   |
| Double                                  | ASTM B565, F606/F606M; NASM1312-13                                  |
| <u>Torque Tests of Fasteners</u>        |   |
| Threaded Fasteners                      | NASM-131231   |
| Self-Locking Nuts                       | NASM-25027, 85730   |
| <u>Metallographic Evaluation</u>        |   |
| Metallographic Preparation              | ASTM E3   |
| Grain Size                              | ASTM E112, E930, E1382  |
| Macro Etching                           | ASTM E340, E381   |
| Micro Etching<br>Microstructure         | ASTM E407   |



I. Dimensional Testing<sup>3</sup>4



# Accredited Laboratory

A2LA has accredited

## ELEMENT BROKEN ARROW

Broken Arrow, OK

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



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