



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Torque & Tension Laboratory and Consulting
A subsidiary of Aztech Locknut Company
2675 White Oak Circle
Aurora, IL 60502

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 08 May 2022

Certificate Number: AT-1662



This laboratory 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 (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Torque & Tension Laboratory and Consulting

A subsidiary of Aztech Locknut Company

2675 White Oak Circle

Aurora, IL 60502

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TESTING

Valid to: **May 8, 2022**

Certificate Number: **AT-1662**

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Hardness (Rockwell B,C,F, 15N,30N)	ASTM E18, F606 ASME B18.16.1M NASM 1312-6 SAE J417	Fasteners	Rockwell Hardness Tester
Micro-Hardness	ASTM E384, E3 SAE J423	Fasteners	Micro-Hardness Tester
Proof Load	ASTM F606, F606M ASME B18.16M IFI 100/107 2002 & 2007 SAE J995 ISO 2320	Fasteners	Skidmore - Wilhelm Tester (7 500 to 300 000) lb
Clamp Load	ASTM F606, F606M ASME B18.16M ASME B18.16.6 IFI 100/107 SAE J995	Fasteners	Skidmore - Wilhelm Tester Torque Tester (7 500 to 300 000) lb
Prevailing Torque Strength	ASME B18.16M DIN 267 PT 15 IFI 100/107 ISO 2320	Fasteners	Automated Torque Tester Hand Torque Wrenches (0 to 2 200) ft-lb
Torque Tension	IFI 101	Fasteners	Automated Torque Tester Hand Torque Wrenches (0 to 2 200) ft-lb

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Torsional Strength	ASME B18.6.3 Sec 4.11.3, DIN 7513 Sec 5.2.2, DIN EN ISO 2702 Sec 6.2.2	Fasteners	Hand Torque Wrenches (0 to 2 200) ft-lb
Hydrogen Embrittlement	SAE USCAR-7	Fasteners	Dial Torque Wrench (0 to 2 200) ft-lb
Plating Thickness/Coverage	ASTM B568, B487	Fasteners	Fischer X-Ray Visual Inspection
Cyclic Vibration	NASM-STD-1312-7	Fasteners	Vibration Tester (1/4 to 5/8) in
Magnetic Permeability	ASTM A342 / A342M	Fasteners	Magnetic Permeability Tester 1.01 Mu to 2.5 Mu
Surface Texture	ASME B46.1	Fasteners	Surface Analyzer 0 – 125 Ra or equivalent in other scales.

Dimensional Inspection / Measurement

Description of PT Item/Artifact	Properties Measured	Range of Property	Expanded Uncertainty of PT Item / Artifact (+/-)	Procedure for Establishing Assigned Value
Linear	Dial Micrometer	Up to 2 in (Up to 50 mm)	0.000235 in (0.0596 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Linear	Dial or Digital Caliper	Up to 6 in (up to 152 mm)	0.00253 in (0.0642 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Linear	Optical Comparator	Up to 7 in (Up to 178 mm)	0.011 in (0.279 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications



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Dimensional Inspection / Measurement

Description of PT Item/Artifact	Properties Measured	Range of Property	Expanded Uncertainty of PT Item / Artifact (+/-)	Procedure for Establishing Assigned Value
Linear	Digital Height Gage	Up to 4 in (Up to 100 mm)	0.0031 in (0.079 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Linear	Digital or Dial Indicator	Up to 2 in (Up to 50 mm)	0.00100 in (0.0260 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Linear	Dial Countersink Gage	Up to 4 in (Up to 100 mm)	0.0091 in (0.232 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Linear Concentricity	Optical Comparator	Up to 6 in (Up to 152 mm)	0.0038in (0.279 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Angle	Optical Comparator	(0 to 360) degree	1.45 degrees	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Angularity of Bearing Surface Full Indicator Movement (FIM)	Dial Indicator	(0 to 0.5 inch) (0 to 15 mm)	0.00102 in (0.0260 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Radius	Optical Comparator	Up to 1.75 in (Up to 44 mm)	0.02600 in (0.660 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Threads	Segmented Ring Gages	(0.25-08) in to (1-14) in	342 μin (8.70 μm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Threads	Go – No Go Threaded Plug Gages	(40-40) UN to (3-12 & 3-4.5) UN M3 x 0.5 to M33 x 3.50	89.4 μin (2.27 μm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications

Dimensional Inspection / Measurement

Description of PT Item/Artifact	Properties Measured	Range of Property	Expanded Uncertainty of PT Item / Artifact (+/-)	Procedure for Establishing Assigned Value
Threads	Go – No Go Cylindrical Plug Gages	0.133 6 in to 1.16 in	101 μ m (2.56 μ m)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Surface Roughness	Surface Roughness Tester	13.5 to 119.6 μ m	3.1 μ m (0.0787 μ m)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications

Notes:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1662.
2. Calibration and Measurement Capabilities (Expanded Uncertainties) are based on approximately a 95% confidence interval using a coverage of k=2.



R. Douglas Leonard Jr., VP, PILR SBU

