



# CERTIFICATE OF ACCREDITATION

## ANSI National Accreditation Board

11617 Coldwater Road, Fort Wayne, IN 46845 USA

This is to certify that

### **Torque & Tension Laboratory and Consulting**

**A subsidiary of Aztech Locknut Company**

**2675 White Oak Circle  
Aurora, IL 60502**

has been assessed by ANAB and meets the requirements of international standard

## **ISO/IEC 17025:2017**

while demonstrating technical competence in the field of

## **TESTING**

Refer to the accompanying Scope of Accreditation for information regarding the types of activities to which this accreditation applies

AT-1662

Certificate Number



ANAB Approval

Certificate Valid Through: 05/08/2020  
Version No. 007 Issued: 07/26/2019



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, 2020**

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
Sample Preparation	ASTM E3	Fasteners	Cut Off Saw, Polishing Table and Mounting
Case Depth	SAE J78, J423	Fasteners	Micro-Hardness Tester and Microscope
Optical Microscopy	ASTM E883	Fasteners	Metallograph
Banding / Orientations in Microstructures	ASTM E1268, A247	Fasteners	Metallograph
Determine Inclusions in Steel	SAE J422	Fasteners	Metallograph
Depth of Decarburization	ASTM E1077 F2328 / F2328M SAE J419	Fasteners	Metallograph
Surface Discontinuities	ASTM F812, F788	Fasteners	Stereo Scope Metallograph
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

**Mechanical**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Clamp Load	ASTM F606, F606M ASME B18.16M 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
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.

**Chemical**

Test Method	Test Specification(s)	Range	Comments
Micro-Etching	ASTM E 407	Fasteners	Nital Etchant



**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)	0.000 in (0.011 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)	0.0016 in (0.039 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Linear	Optical Comparator	Up to 7 in (Up to 178 mm)	0.0016 in (0.040 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Linear	Digital Height Gage	Up to 4 in (Up to 100 mm)	0.002 in (Up to 0.05 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)	0.002 in (0.05 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)	0.002 in (0.05 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)	0.001in or 0.03 mm	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Angle	Optical Comparator	(0 to 360) degree	2 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)	0.002 in (0.05 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Radius	Optical Comparator	Up to 0.025 in (Up to 6 mm)	0.001 in (0.03 mm)	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	Segmented Ring Gages	(0.25-08) in to (1-14) in	0.000 8 in	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	0.000 8 in (0.02 mm)	Internal procedures based on IFI Standards, Mil-Standard 120 and Customer Specifications
Threads	Go – No Go Cylindrical Plug Gages	0.133 6 in to 1.16 in	0.000 8 in	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.



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Vice President