

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

TSP / USB LABORATORY<sup>1</sup>  
12895 South Main Street  
Houston, TX 77035  
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MECHANICAL

Valid To: June 30, 2010

Certificate Number: 0929.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on fasteners and metals and alloys:

**Test**

**Test Methods**

Hardness

Rockwell (B & C)

Brinell

Tensile (axial , tension testing, total extension at fracture, wedge, yield)

Proof (internally and externally threaded)

Discontinuities

Impact

Plating thickness

Metallographic evaluation:

Macroetch

Decarburization

Grain size

ASTM A370, E18, F606, F606M

ASTM A370, E10, F606, F606M

ASTM A370, F606, F606M;

SAE J429

ASTM A370, F606, F606M;

SAE J429, J995

ASTM F788, F812; SAE J122, J123

ASTM A370, A540, E23

ASTM B499

ASTM E340, E381

ASTM E1077; SAE J419, J121

ASTM E112

**Chemical**

Optical Emission Spectroscopy on Steel,  
Stainless Steel and Nickel Base Alloys

ASTM E415, E1086

I. Dimensional Testing

Parameter	Range	Best Uncertainty* ( $\pm$ )	Technique	Standards
Angle	0° to 360°	1 °	Optical comparator	MIL-STD-120
Radius	(0 to 0.650) in	0.002 in	Optical comparator	MIL-STD-120

<sup>1</sup> This accreditation covers testing performed at the main laboratory listed above, and at the satellite laboratory indicated.

Threads –  Systems 21 & 22	(¼ to 4) in	0.0005 in	Tri- Rolls	ASME B1.3M
	(¼ to 3 ¼) in	N/A	Ring Gages	ANSI/ASME B1.2
	(¼ to 3) in	N/A	Plug Gages	FED-STD-H28/20
	(0 to 4) in	0.0006 in	Pitch Micrometers	AS 8879
Linear	(0 to 4) in	0.001 in	Optical Comparator	MIL-STD-120
	(0 to 6) in	0.0005 in	Micrometer	MIL-STD-120
	(0 to 12) in	0.001 in	Calipers	MIL-STD-120
	(0 to 24) in	0.0015 in	Height Gage	MIL-STD-120
	(0 to 20) in	(12 + 38L) in	Gagemaker Micrometer	MIL-STD-120

\*“Best Uncertainty” is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine inspections of nearly ideal measurement standards with nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The best uncertainty of a specific test performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s test piece, to the environment (if the dimensional testing is performed in the field) and to influences from the circumstances of the specific test.

TSP / USB LABORATORY  
3303 W. 12th Street  
Houston, TX 77008  
Phone: 713 230 2500

**Test**

Hardness  
Rockwell (B & C)  
Discontinuities  
Plating thickness

**Test Methods**

ASTM A370, E18, F606, F606M  
ASTM F788, F812; SAE: J122, J123  
ASTM B499

## II. Dimensional Testing

Parameter	Range	Best Uncertainty* ( $\pm$ )	Technique	Standards
Angle	0° to 360°	1 °	Optical comparator	MIL-STD-120
Radius	(0 to 0.650) in	0.002 in	Optical comparator	MIL-STD-120
Threads – Systems 21	( $\frac{1}{4}$ to 3 $\frac{1}{4}$ ) in ( $\frac{1}{4}$ to 3) in (0 to 4) in	N/A N/A 0.0006 in	Ring Gages Plug Gages Pitch Micrometers	ANSI/ASME B1.2 FED-STD-H28/20
Linear	(0 to 4) in (0 to 6) in (0 to 12) in (0 to 18) in	0.001 in 0.0005 in 0.001 in 0.0015 in	Optical Comparator Micrometer Calipers Height Gage	MIL-STD-120 MIL-STD-120 MIL-STD-120 MIL-STD-120

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