


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames TW18 3HR

 <p>UKAS TESTING</p> <p>1136</p> <p>Accredited to ISO/IEC 17025:2017</p>	<h3>SPS Technologies Limited</h3> <p>Issue No: 022 Issue date: 04 March 2021</p>	
	<p>TJ Brooks Division 191 Barkby Road Troon Industrial Area Leicester LE4 9HX</p>	<p>Contact: Mr K Noworol Tel: +44 (0)116274 4806 E-Mail: knoworol@spstech.com Website: spstech.com</p>
<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FASTENERS:METAL METALS, ALLOYS and METAL PRODUCTS	<u>Corrosion Tests</u>	
	Salt spray	ASTM B117-18
	<u>Mechanical Tests</u>	
Metals and alloys	Tensile at ambient temperature (Forces 5 to 400 kN)	BS EN ISO 6892-1 :2016 (Method B) BS 4A4:Part 1:Section 1:1966 (Withdrawn)
Nuts, bolts and assemblies	Tensile at ambient temperature (Forces up to 1200 kN)	NASM 1312-8 Rev 2 (2011) NAM 1312-108 Rev 1(1997)
Bolts	Shear at ambient temperature (Forces up to 1200 kN)	NASM 1312-13 Rev 2 (2013) NAM 1312-113 Rev 1 (2012)
	Fatigue at ambient temperature (Forces max from 1 to 450 kN)	NASM 1312-11 Rev 2 (2017) NAM 1312-111- Rev 1 (2013)
Nuts	Torque (up to 600 Nm)	Documented In-House Methods Laboratory Instruction LI 05 based on ISO 7481-2000BS 2A 295:2000 ISO 7481:2000 Clauses 3.3, 3.8 and 3.9 ISO 8642-2008BS ISO 8642:2008 Clauses 3.3, 3.7 and 3.8
Nuts and Bolts	Stress durability	Documented In-House Method, Laboratory Instruction LI 41



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Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
FASTENERS:METAL METALS, ALLOYS and METAL PRODUCTS (cont'd)	<u>Mechanical Tests</u> (cont'd)	
Bolts	Recess torque	Documented In-House Method Laboratory Instruction LI 46 NASM 1312-25 Ed 1 (2012)
Metal fasteners	Hardness: Vickers (HV30) Rockwell (HRC)	BS EN ISO 6507-1:2018 BS EN ISO 6508-1:2016 ASTM E18-19
Titanium alloy fasteners	Hydrogen determination	Documented In-House Method Laboratory Instruction LI 16
Titanium alloys Low alloy steels Stainless steels Ni-base alloys	Metallographic determination of:- Grain size Grain flow Surface contamination Thread defects Overheating	ASTM E112-13 Documented In-House Methods Laboratory Instruction LI 07 Laboratory Instruction LI 09 Laboratory Instruction LI 20
Nuts, bolts and machined components	<u>Dimensional Tests</u> Length (to ± 0.025 mm) Thread major and minor diameters, simple and effective diameters (to ± 0.005 mm) Angle (to $\pm 1^\circ$) Radii (to ± 0.05 mm) Surface texture (to $0.2 \mu\text{m RA}$) Coating thickness	Documented In-House Methods: Inspection instructions II 01 to II 09, II 11 to II 30 and II 32 to II 65 ANSI/ASME B1.3M Ed 7 2012 FED-STD-H28/2 Ed B (2006) FED-STD-H28/20 Ed B (1994) Documented In-House Method: Inspection Instruction II 09 Documented In-House Methods: Inspection Instruction II 10

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