

**This Appendix is an integral part of
Certificate of Accreditation No. 102/2017 of 21/02/2017**

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

Exova s.r.o.

Exova

Podnikatelská 1183/39, 301 00 Plzeň - Skvrňany

The Laboratory is qualified to update standards identifying the test procedures.

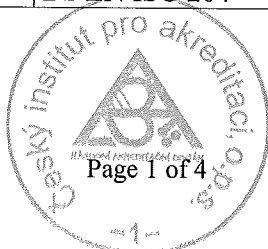
The laboratory has a flexible scope of accreditation permitted as detailed in the Annex.

Updated list of activities provided within the flexible scope of accreditation is available from the Laboratory Manager.

The laboratory provides opinions and interprets test results.

Tests:

Ordinal number	Test procedure / method name	Test procedure / method identification	Tested object
1 Mechanical testing			
1.1	Tensile test at ambient temperature	ME-M01-0 ME-M01-1 ASTM E8/E8M ASTM A370, Section Tensile test BS 4A4 Part 1 Section 1:1966* BS EN 2002-1 BS EN 10002-1:2001* BS EN 6892-1 ASTM B557	Metallic materials
1.2	Tensile test at elevated temperature	ME-M01-0 ME-M01-2 ASTM E21 ASTM A370, Section Tensile test BS 4A4 Part 1 Section 2:1967* BS EN 2002-2 BS EN 10002-5: 1992* BS EN ISO 6892-2	Metallic materials
1.3	Tensile test at low temperature	ME-M01-0 Appendix F BS EN ISO 6892-3	Metallic materials
1.4	Uniaxial creep test in tension	ME-CRE02A ASTM E139 BS 4A4: Part 1 Section 3:1967* BS EN 2002-005, Section 17 BS EN 10291: 2000* BS EN ISO 204	Metallic materials
1.5	Stress rupture test	ME-CRE02 ASTM E139 ASTM E292 BS 4A4: Part 1 Section 3:1967* BS EN 2002-005, Section 16 BS EN 10291: 2000* BS EN ISO 204	Metallic materials



**This Appendix is an integral part of
Certificate of Accreditation No. 102/2017 of 21/02/2017**

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

Exova s.r.o.

Exova

Podnikatelská 1183/39, 301 00 Plzeň - Skvrňany

Ordinal number	Test procedure / method name	Test procedure / method identification	Tested object
1.6	Brinell hardness test	E-E-OP-AS-ME-PL-MD002 ASTM E10 BS EN ISO 6506-1	Metallic materials
1.7	Rockwell hardness test	E-E-OP-AS-ME-PL-MD001 ASTM E18 BS EN ISO 6508-1	Metallic materials
1.8	Vickers hardness test	E-E-OP-AS-ME-PL-MD003 ASTM E92-82(2003)* ASTM E384 BS EN ISO 6507-1	Metallic materials
1.9	Impact test	E-E-OP-AS-ME-PL-MD004 E-E-OP-AS-ME-PL-MD006 E-E-OP-AS-ME-PL-MD007 ASTM E23 ASTM A370, Section Charpy impact testing BS 131 part 1 BS EN 10045-1:1990* BS EN ISO 148-1	Metallic materials
1.10	Bend test	BS EN ISO 7438	Metallic materials
1.11	Tensile test of ropes	ME-M01-1 Appendix D BS EN 12385-1+A1	Steel wire ropes
1.12	Tensile test of chains	ME-M01-1 Appendix E BS EN 818-1+A1	Short link chains for lifting purposes
1.13	Tensile test of slings	ME-M01-1 Appendix E BS EN 1677-1+A1	Components for slings
1.14	Fatigue test	E-E-OP-AS-FAT-PL-MD002 E-E-OP-AS-FAT-PL-MD003 BS 3518-1 BS 3518-3 BS 7270 ASTM E466 ASTM E606/606M	Metallic materials
1.15	Fracture toughness test	P-FT02 ASTM E399 ASTM E561 BMS 7-323	Metallic materials
1.16	Stress Relaxation in tension	ASTM E328, Section A	Metallic materials
1.17	Isothermal Stress Relaxation in tension	EX-AE-OP-MEC-PL-MD010 (BS 5896, BS ISO 15630-3, ASTM A416/A416M, ASTM E328) BS EN ISO 15630, Section 8 ASTM A416/ A416M	Prestressing steel and steel for the reinforcement and prestressing of concrete

**This Appendix is an integral part of
Certificate of Accreditation No. 102/2017 of 21/02/2017**

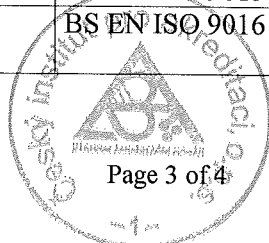
Accredited entity according to ČSN EN ISO/IEC 17025:2005:

Exova s.r.o.

Exova

Podnikatelská 1183/39, 301 00 Plzeň - Skvrňany

Ordinal number	Test procedure / method name	Test procedure / method identification	Tested object
2 Metallography			
2.1	Inclusion content	E-E-OP-AS-MET-PL-MD004 ASTM E45 ISO 4967 DIN 50602:1985*	Steels
2.2	Grain size	E-E-OP-AS-MET-PL-MD005 ASTM E112 ASTM E1181 ASTM E930 BS EN ISO 643	Steels
2.3	Macrostructure and grain flow	E-E-OP-AS-MET-PL-MD012 ASTM E381	Metallic materials
2.4	Depth of decarburisation and Depth of carburized and hardened cases	E-E-OP-AS-MET-PL-MD007 E-E-OP-AS-MET-PL-MD014 ASTM E1077 BS EN ISO 3887 BS EN ISO 2639	Steels
2.5	Alpha case	E-E-OP-AS-MET-PL-MD009 GE P3TF19	Wrought Ti-alloys
2.6	Phase volume fraction	E-E-OP-AS-MET-PL-MD001 ASTM E562 AMS 2315	Metallic materials
2.7	Microstructure	E-E-OP-AS-MET-PL-MD013	Metallic materials
2.8	Metallographic determination of resistance to intergranular corrosion	E-E-OP-AS-MET-PL-MD016 (ČSN 03 8169:1984*, GOST 6032-2003, meth.AM) ASTM A262, method E GOST 6032-2003, meth. AM ISO 3651-2, method A	Steel
3 Chemical analysis			
3.1	Hydrogen content	E-E-OP-AS-CH-PL-MD001 ASTM E1447	Ti and Ti-alloys
4 Destructive tests on welds			
4.1	Macroscopic and microscopic examination of welds	BS EN ISO 17639	Metallic materials
4.2	Transverse tensile test	BS EN ISO 4136	Metallic materials
4.3	Longitudinal tensile test	BS EN ISO 5178	Metallic materials
4.4	Bend test	E-E-OP-AS-ME-PL-MD009 BS EN ISO 5173	Metallic materials
4.5	Hardness test	E-E-OP-AS-ME-PL-MD003- Appendix I BS EN ISO 9015-1	Metallic materials
4.6	Impact test	BS EN ISO 9016	Metallic materials



**This Appendix is an integral part of
Certificate of Accreditation No. 102/2017 of 21/02/2017**

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

Exova s.r.o.

Exova

Podnikatelská 1183/39, 301 00 Plzeň - Skvrňany

Ordinal number	Test procedure / method name	Test procedure / method identification	Tested object
5 Plastics and composites tests			
5.1	Lap shear	E-E-OP-AS-NM-PL-MD046 ASTM D3163 ASTM D5868	Plastics
5.2	Fatigue test	E-E-OP-AS-NM-PL-MD026 BS ISO 13003 ASTM D3479/D3479M	Plastics
5.3	Tensile strength test	E-E-OP-AS-NM-PL-MD036 BS EN ISO 527-4 BS EN ISO 527-5 ASTM D3039/D3039M	Isotropic and orthotropic fibre-reinforced and unidirectional fibre-reinforced plastic composites
5.4	Uniaxial creep test in tension and Stress rupture test	EX-G-OP-POC-X-SOP20293 (BS EN ISO 899-1, ASTM D2990, ASTM D3039, ASTM D7337)	Continuous and Discontinuous fibre-reinforced polymer matrix composites
6 Testing of textile web lashings and roundslings			
6.1	Tensile test of roundslings	EN 1492-2+A1	Roundslings made of man-made fibres
6.2	Tensile test of webbings and of complete web lashings	EN 12195-2, Section 6.3, 6.4	Web lashing made from man-made fibres

* *withdrawn standard*

Explanations:

E-E-OP-AS, P, ME	Internal procedure
ASTM	American Society for Testing and Materials
BS	British Standard
BMS	Boeing Material Specification
GE P3TF19	GE Aircraft Engines Specification
AMS	Aerospace Material Specification

Annex:

Flexible scope of accreditation

Ordinal numbers of tests
<i>1, 2, 4, 5 and 6</i>

The Laboratory is allowed to modify the test methods listed in the Annex within the specified scope of accreditation provided the measuring principle is observed.

The flexible approach to the scope of accreditation cannot be applied to the tests not included in the Annex.

