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Registration No. CNAS L3967

Accreditation Criteria: ISO/IEC 17025 and relevant requirements of CNAS

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SCHEDULE 3 ACCREDITED TESTING SCOPE

| № | Test Object | Item/Parameter | | Standard or Method | Note |
|---|------------------------------------|----------------|---|---|--|
| | | № | Item/ Parameter | | |
| 1 | Carbon and low-alloy steel | 1 | C, Si, Mn, P, S, Cr, Ni, Mo, Cu, Al, B, V, Ti | Carbon and low-alloy steel—Determination of multi-element contents—Spark discharge atomic emission spectrometric method (routine method) GB/T 4336-2016 | |
| 2 | Stainless steel | 1 | C, Si, Mn, P, S, Cr, Ni, Mo, Cu, Al, B, V, Ti | Stainless steel-Determination of multi-element contents-Spark discharge atomic emission spectrometric method(Routine method) GB/T 11170-2008 | |
| 3 | Metallic materials and its product | 1 | Tensile testing at room temperature | Metallic materials-Tensile testing-Part 1:Method of test at room temperature ISO 6892-1:2016 | Accredited only for Fm≤1000kN;Rm,A,R _e L,Z,Rp0.2;Method B |
| | | 2 | Bend test | Metallic materials -- Bend test ISO 7438:2016 | Accredited only for Roller type;Fm≤200kN |



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| | | № | Item/ Parameter | | |
| | | 3 | Rockwell hardness | Metallic materials-Rockwell hardness test-Part1:Test method ISO 6508-1:2016 | Accredited only for HRC, HRB |
| | | 4 | Vickers hardness | Metallic material-Vickers hardness test-Part 1:Test method ISO 6507-1:2005 | Accredited only for HV0.1,HV0.2,HV0.3, HV1,HV5, HV10,HV 30 |
| | | 5 | Impact test | Metallic materials-Charpy pendulum impact test-Part 1:Test method ISO 148-1:2016 | Accredited only for KV2,KU2; 0°C~-110°C,room temperature |
| | | 6 | Depth of carburization and hardened cases | Steel-Determination of the thickness of surface-hardened layers ISO 18203:2016 | Accredited only for CHD |
| | | 7 | Metallic Coating thickness | Metallic coatings-Measurement of coating thickness-X-ray Spectrometric methods ISO 3497:2000 | Accredited only for Zn/Fe (0-35µm),Ni/Fe (0-20µm),NiZn/Fe (0-25µm),Cu/Fe (0- |



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| | | № | Item/ Parameter | | |
| | | | | Non-magnetic coatings on magnetic substrates-Measurement of coating thickness-Magnetic method ISO 2178:2016 | 20μm) |
| | | | | Metallic and oxide coatings-Measurement of coating thickness-Microscopical method ISO 1463:2003 | |
| | | 8 | NSS test | Corrosion tests in artificial atmospheres-Salt spray tests ISO 9227:2017 | |
| | | 9 | Surface roughness | Geometrical Product Specifications(GPS)-Surface texture:Profile method Surface roughness parameters and their values GB/T 1031-2009 | Accredited only for Ra/Rz |
| | | | | | |
| 4 | Bolts,screws and studs | 1 | Size | Method of verification for fasteners - Size and geometry - Bolts, screws, studs and nuts JB/T 9151.1-1999 | |
| | | | | Method of verification for fasteners - Size and geometry - Wood screws JB/T 9151.2-1999 | |
| | | | | Method of verification for fasteners - Size and geometry - Tapping screws JB/T 9151.3-1999 | |
| | | 2 | Tensile strength | Mechanical properties of fasteners made of carbon steel and alloy steel – Part 1: Bolts, screws and studs with specified property classes- Coarse thread and fine pitch thread ISO 898-1:2013 9.2 | |
| | | | | Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets ASTM F606/F606M-16 3.4 | |
| | | 3 | Tensile test under wedge loading | Mechanical properties of fasteners made of carbon steel and alloy steel – Part 1: Bolts, screws and studs with specified property classes- Coarse thread and fine pitch thread ISO 898-1:2013 9.1 | |
| | | | | Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets ASTM F606/F606M-16 3.5 | |
| | | 4 | Proof load test | Mechanical properties of fasteners made of carbon steel and alloy steel – Part | |



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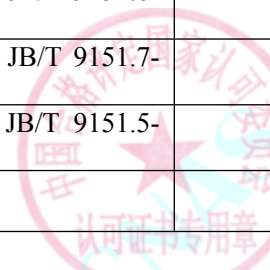
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|---|-------------|----------------|-----------------------------|--|--|
| | | № | Item/ Parameter | | |
| | | | | 1: Bolts, screws and studs with specified property classes- Coarse thread and fine pitch thread ISO 898-1:2013 9.6 | |
| | | | | Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets ASTM F606/F606M-16 3.2.3 | |
| | | 5 | Decarburization test | Mechanical properties of fasteners made of carbon steel and alloy steel – Part 1: Bolts, screws and studs with specified property classes- Coarse thread and fine pitch thread ISO 898-1:2013 9.10 | Metallographic method Accredited only for P<1.25 |
| | | 6 | Head Soundness test | Mechanical properties of fasteners made of carbon steel and alloy steel – Part 1: Bolts, screws and studs with specified property classes- Coarse thread and fine pitch thread ISO 898-1:2013 9.8 | Accredited only for less of M14 |
| | | 7 | Tensile strength,Rm | Mechanical properties of corrosion-resistant stainless steel fasteners-Part 1: Bolt, screw and studs ISO 3506-1:2009 7.2.2 | |
| | | 8 | Elongation after fracture,A | Mechanical properties of corrosion-resistant stainless steel fasteners-Part 1: Bolt, screw and studs ISO 3506-1:2009 7.2.4 | |
| | | 9 | Torsional test | Mechanical properties of fasteners – Part 7: Torsional test and minimum torques for bolts and screws with nominal diameters 1 mm to 10 mm ISO 898-7:1992 | |
| | | | | Heat-treated steel tapping screws– Mechanical properties ISO 2702:2011 6.2.2 | |
| | | | | Mechanical properties of corrosion-resistant stainless steel fasteners-Part 4:Tapping screws ISO 3506-4:2009 6.3 | |
| | | 10 | Metallurgical properties | Drilling screws with tapping screw thread -- Mechanical and functional properties ISO 10666:1999 4.1 | Except for microstructure |



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| | | № | Item/ Parameter | | |
| | | 11 | Mechanical properties | Drilling screws with tapping screw thread -- Mechanical and functional properties ISO 10666:1999 4.2 | |
| | | 12 | Proof torque test | Mechanical properties of corrosion-resistant stainless steel fasteners-Part 3:Set screws and similar fasteners not under tensile stress ISO 3506-3:2009 6.1 | |
| | | 13 | Hardness test | Mechanical properties of corrosion-resistant stainless steel fasteners-Part 3:Set screws and similar fasteners not under tensile stress ISO 3506-3:2009 6.2 | |
| | | 14 | Surface hardness test | Mechanical properties of corrosion-resistant stainless steel fasteners-Part 4:Tapping screws ISO 3506-4:2009 6.1 | |
| | | 15 | Core hardness test | Mechanical properties of corrosion-resistant stainless steel fasteners-Part 4:Tapping screws ISO 3506-4:2009 6.2 | |
| 5 | Nuts | 1 | Size | Method of verification for fasteners-Size and geometry-Bolts, screws, studs and nuts JB/T 9151.1-1999 | |
| | | 2 | Proof load test | Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread ISO 898-2:2012 9.1 Mechanical properties of corrosion-resistant stainless steel fasteners-Part 2:Nuts ISO 3506-2:2009 7.2 | |
| 6 | Washers | 1 | Size | Method of verification for fasteners-Size and geometry-Washers JB/T 9151.4-1999 | |
| 7 | Rivets | 1 | Size | Method of verification for fasteners-Size and geometry-Rivets JB/T 9151.6-1999 | |
| 8 | Rings | 1 | Size | Method of verification for fasteners-Size and geometry-Rings JB/T 9151.7-1999 | |
| 9 | Pins | 1 | Size | Method of verification for fasteners-Size and geometry-Pins JB/T 9151.5-1999 | |
| | | 2 | Shear test | Pins and grooved pins-Shear test ISO 8749:1986 | |



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