

**The Appendix is an integral part of
Certificate of Accreditation No. 616/2021 of 24/11/2021**

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

ŽĐAS, a.s.
Laboratories Department
Strojírenská 675/6, Žďár nad Sázavou 1, 591 01 Žďár nad Sázavou

Tests:

Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
1	Brinell hardness test	SOP MECH 01 (ČSN EN ISO 6506-1, ČSN EN ISO 6506-4)	Metals
2	Vickers hardness test	SOP MECH 02 (ČSN EN ISO 6507-1, ČSN EN ISO 6507-4, ČSN EN ISO 9015-1)	Metals
3	Rockwell hardness test	SOP MECH 03 (ČSN EN ISO 6508-1, stupnice C)	Metals
4	Impact test	SOP MECH 04 (ČSN EN ISO 148-1, ČSN EN ISO 9016, ASTM E23, ASTM A370, GOST 9454)	Metals
5	Tensile test at room temperature	SOP MECH 05 (ČSN EN ISO 6892-1, ČSN EN ISO 4136, ASTM A370, GOST 1497)	Metals
6	Tensile test at temperatures higher than room temperature	SOP MECH 06 (ČSN EN ISO 6892-2, GOST 9651)	Metals
7	Hardenability test	SOP MECH 07 (ČSN EN ISO 642, ASTM A255)	Metals
8	Bend test	SOP MECH 09 (ČSN EN ISO 7438, ČSN EN ISO 5173, GOST 14019)	Metals
9	Determination of C, Mn, Si, P, S, Cu, Ni, Cr, Mo, V, Ti, W, Nb, Al, Co, Zr, B, As, Sn by optical emission vacuum spectrometry on ARL 4460	SOP CHEM 01 (ASTM E415, ASTM E1009, ASTM E1086, ASTM E1999)	Steel, cast iron
10	Determination of C, Mn, Si, P, S, Cu, Ni, Cr, Mo, V, Ti, W, Nb, Al, Co, Zr, B, As, Sn by optical emission vacuum spectrometry on ARL 3460	SOP CHEM 02 (ASTM E415, ASTM E1009, ASTM E1086, ASTM E1999)	Steel, cast iron

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Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
11	Determination of carbon and sulphur by IR method after combustion in induction furnace	SOP CHEM 03 (ČSN EN ISO 15350)	Steel, cast iron
12	Determination of nitrogen by TC method and oxygen by IR method after melting the sample in inert gas	SOP CHEM 04 (ČSN 42 0540, ČSN EN ISO 15351)	Steel, cast iron
13	Determination of hydrogen by IR method after melting the sample in inert gas	SOP CHEM 08 (ČSN 42 0529)	Steel, cast iron
14	Determination of specific mass activity of ⁶⁰ Co by gamma-ray spectrometry with NaI(Tl) detector	SOP CHEM 06 (instructions: RT-50 laboratory gamma spectrum analyzer with evaluation program LabCenter)	Steel, cast iron
15	Determination of secondary/austenitic grain size	SOP_METG_01 (ČSN EN ISO 643 - Chapter 7.1.2, Chapter 7.2.1, ASTM E 112 - Chapter 10, Chapter 14, GOST 5639, DIN 50 601 - Chapter 7.1, Chapter 7.2.1)	Steel
16	Determination of the content of non-metallic intrusions in steel	SOP METG 02 (ČSN ISO 4967, ASTM E 45, DIN 50 602, GOST 1778)	Steel
17	Determination of macrostructure of welded joint	SOP METG 04 (ČSN EN ISO 17639)	Steel

¹ asterisk at the ordinal number identifies the tests, which the Laboratory is qualified to carry out outside the permanent laboratory premises

² if the document identifying the test procedure is dated, only these specific procedures are used. If the document identifying the test procedure is not dated, the latest edition of the specified procedure is used (including any changes)

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Abbreviations and explanations:

SOP	Internal testing procedure (Standard Operating Procedure)
ASTM	American Society for Testing and Materials
DIN	Deutsches Institut für Normung
GOST	Russian Technical Standard
ARL	Testing Equipment Manufacturer
TC	Thermal Conductivity (method)
IR	Infrared Spectroscopy
⁶⁰ Co	Radioactive isotope of cobalt