



NÁRODNÍ AKREDITAČNÍ ORGÁN

EA MLA Signatory
Český institut pro akreditaci, o.p.s.
Olšanská 54/3, 130 00 Praha 3

issues

according to section 16 of Act No. 22/1997 Coll., on technical requirements for products, as amended

CERTIFICATE OF ACCREDITATION

No. 300/2021

TÜV NORD Czech, s.r.o.
with registered office Českomoravská 2420/15, Libeň, 190 00 Praha 9, Company Registration
No. 45242330

to the Testing Laboratory No. **1060**
Laboratories and Testing Laboratories Brno

Scope of accreditation:

Chemical, metallographic and mechanical tests of materials; chemical and physical tests of solid and liquid fuels, solid biofuels and solid alternative fuels, power and surface water; sampling of solid biofuels to the extent as specified in the appendix to this Certificate.

This Certificate of Accreditation is a proof of Accreditation issued on the basis of assessment of fulfillment of the accreditation criteria in accordance with

ČSN EN ISO/IEC 17025:2018

In its activities performed within the scope and for the period of validity of this Certificate, the Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Body meets the specified accreditation requirements in accordance with the relevant regulations applicable to the activity of an accredited Conformity Assessment Body.

This Certificate of Accreditation replaces, to the full extent, Certificate No.: 216/2020 of 1. 4. 2020, or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **7. 8. 2022**

Prague: 1. 6. 2021




Pavel Nosek
Director of the Department
of Testing and Calibration Laboratories
Czech Accreditation Institute
Public Service Company

**The Appendix is an integral part of
Certificate of Accreditation No. 300/2021 of 01/06/2021**

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

TÜV NORD Czech, s.r.o.
Laboratories and Testing Laboratories Brno
Olomoucká 7/9, 618 00 Brno

The Laboratory provides expert opinions and interprets the test results

Tests:

Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
1	Determination of elements by ICP – OES (Al, As, B, Bi, Cd, Ce, Co, Cr, Cu, Fe, La, Mg, Mn, Mo, Nb, Nd, Ni, P, Pb, S, Sb, Se, Si, Sn, Ta, Te, Ti, V, W, Zn, Zr)	LPP 1 (ČSN EN 10351)	Fe-Ni-Cr-Co alloys
2	Determination of elements by ICP – OES (Ag, Al, Be, Bi, Cd, Ce, Co, Cr, Cu, Fe, Ga, Hg, La, Li, Mg, Mn, Na, Ni, P, Pb, Sb, Si, Sn, Sr, Ti, V, Zn, Zr)	LPP 2 (ČSN EN 14242)	Al-Mg-Zn alloys
3	Determination of elements by ICP – OES (Ag, Al, As, Au, B, Be, Bi, Cd, Co, Cr, Cu, Fe, In, Mg, Mn, Nb, Ni, P, S, Pb, Sb, Se, Si, Sn, Ti, Te, Tl, Zn, Zr)	LPP 3 (ČSN EN 15605)	Cu alloys
4	Determination of elements by ICP – OES (Ag, Al, As, Au, Ba, Bi, Ca, Cd, Cu, Fe, Ga, Hg, In, Na, Ni, P, Pb, S, Sb, Se, Sn, Te, Tl, Zn)	LPP 4 (ENV 13800)	Pb-Sn-Sb alloys
5	Determination of elements by ICP – OES (Al, As, Ba, Ca, Cd, Cl ⁻ , Cr, Cu, Fe, Hg, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Se, Si, Sn, Sr, Ti, Te, Tl, V, W, Zn, Zr)	LPP 5 (ČSN 72 0101, EN ISO 16968, ČSN EN ISO 16968, EN 15411, ČSN EN 15411, EN ISO 11885, ČSN EN ISO 11885)	Silicates, deposits, ash, soils, limestone, products and raw materials containing SiC, graphite, solid biofuels, solid recovered biofuels



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Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
6	Determination of elements by AES with spark discharge (Al, As, B, Bi, C, Ca, Ce, Co, Cr, Cu, Mg, Mn, Mo, Nb, N, Ni, P, Pb, S, Sb, Se, Si, Sn, Ta, Ti, V, W, Zn, Zr)	LPP 6 (ASTM E415-17, ASTM E1086-14, ASTM E1999-18)	Steel Cast iron
7	Determination of carbon content and sulphur by IR absorption after combustion	LPP 7 (ČSN EN ISO 15350)	Fe-Ni-Cr-Co alloys Cu alloys
8	Determination of microstructure of cast iron	LPP 8 (ČSN 42 0461, ČSN EN ISO 945-1:2011, ČSN EN ISO 945-1, GOST 3443, ASTM A 247, ASTM E 562)	Cast iron
9	Metallographic structures of wrought metallurgical products	LPP 9 (ČSN 42 0469, GOST 5640, GOST 8233)	Steel
10	Determination of microstructure of Al alloys	LPP 10 (ČSN 42 0491)	Al alloys
11	Determination of grain size	LPP 11 (ČSN 42 0462, ASTM E 112, ČSN EN ISO 643, GOST 5639, GOST 8233)	Steel and non-ferrous metals
12	Determination of microcleanness	LPP 12 (ČSN ISO 4967, DIN 50 602:1985, GOST 1778)	Steel
13	Measurement of surface layers	LPP 13 (ČSN EN ISO 3887, article 5.2, 5.3, ČSN EN ISO 2064, ČSN EN ISO 1463, ČSN EN ISO 2639, ČSN 42 0448:1985)	Metallic and inorganic materials



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14	Metallographic tests of welded and soldered joints	LPP 14 (ČSN EN ISO 6520-1, ČSN EN ISO 6520-2, ČSN EN ISO 15614-1, article 7.4.3, ČSN EN ISO 15614-2, article 7.4.5, ČSN EN ISO 15614-5, article 7.4.4, ČSN EN ISO 15614-6, article 8.4.4, ČSN EN ISO 15614-7, article 7.4.2, ČSN EN ISO 15614-8, article 8.1.5, 8.2.5, ČSN EN ISO 15614-12, article 6.2.2, ČSN EN ISO 15614-14, article 7.4.4, ČSN EN ISO 5817, ČSN EN ISO 10042, ASME CODE Section IX QW 183, QW 184, QW 453, GOST 8233, ČSN EN ISO 17639, ČSN EN 12797)	Steel and non-ferrous metals
15	Corrosion resistance test	LPP 15 (ČSN 03 8137, ČSN EN ISO 3651-2, DIN 50914:1996, ASTM G 28, ASTM G 48, Method A ČSN EN ISO 3651-1, ASTM A 262, GOST 6032)	Steel
16	Determination of macrostructure	LPP 16 (ČSN 42 0467, ASTM E 381, GOST 10243)	Steel



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17	Determination of microstructure of metals and alloys	LPP 17 (ČSN 42 0460, ČSN 42 0003, ČSN 42 0466, ASTM E 3, ASTM E 407, ASTM E 562, GOST 8233)	Steel, non-ferrous metals
18	Tensile test	LPP 18 (ČSN EN ISO 6892-1:2010, ČSN EN ISO 6892-1, ČSN EN ISO 6892-2, ČSN EN ISO 5178, ČSN EN ISO 15614-1, article 7.4.1, ČSN EN ISO 4136, ASME CODE Section II SA-370, ASME CODE Section IX QW 150, ASTM E8/E8M, GOST 1497, GOST 10006)	Steel, cast iron, welds, alloys
19	Shear strength test	LPP 19 (ČSN 42 0342)	Steel, cast iron, alloys
20	Heading test	LPP 20 (ČSN 42 0426)	Steel, cast iron, alloys
21	Brinell hardness test	LPP 21-1 (ČSN EN ISO 6506-1, ASME CODE Section II SA-370, ASTM E 10, GOST 9012)	Steel, cast iron, welds, alloys
22	Impact bend test	LPP 22 (ČSN EN ISO 148-1, ČSN EN ISO 15614-1, article 7.4.4, ČSN EN ISO 9016, GOST 9454)	Steel, cast iron, welds, alloys



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Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
23	Bend test	LPP 23 (ČSN EN ISO 7438, ČSN EN ISO 15614-1, article 7.4.2, ČSN EN ISO 5173, ASTM E 190, ASTM E 290, ASME CODE Section II SA-370, ASME CODE Section IX QW 160, GOST 14019)	Steel, cast iron, welds, alloys
24	Technological tests of tubes	LPP 24 (ČSN EN ISO 8492, ČSN EN ISO 8493, ČSN EN ISO 8495, ČSN EN ISO 8496, ASME CODE Section II SA-450, SA-450M, SA-370)	Steel, cast iron, alloys
25	Determination of weight loss by gravimetry	LPP 25 (ČSN 72 0100, ČSN 72 0103, ČSN 72 1610)	Silicates, deposits, sediments, ashes, fly ashes, graphite
26	Determination of moisture and dry matter content by gravimetry	LPP 26 (ČSN 44 1377, ČSN EN 15414-3, ČSN EN ISO 18134-3, ČSN 72 0102)	Solid fuels, solid recovered fuels, solid biofuels, ash, deposits, silicates
27	Determination of ash content by gravimetry	LPP 27 (ČSN ISO 1171, ČSN EN 15403, ČSN EN ISO 18122)	Solid fuels, solid recovered biofuels, solid biofuels
28-42	Reserved		
43	Chemical analysis of SiC by gravimetry	LPP 43 (ČSN EN ISO 21068-1, ČSN EN ISO 21068-2)	Products and raw materials containing SiC
44-60	Reserved		
61*	Determination of ferrite content	LPP 61 (FERITSCOPE FMP30 from FISCHER Instruction Manual)	Steel

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Ordinal number ¹	Test procedure/method name	Test procedure/method identification ²	Tested object
62	Uniaxial creep testing in tension	LPP 62 (ČSN EN ISO 204)	Steel, cast iron, alloys
63	Rockwell hardness test	LPP 21-2 (ČSN EN ISO 6508-1, ASME CODE Section II SA-370, ASTM E 18, GOST 9013)	Steel, cast iron, alloys
64	Vickers hardness test	LPP 21-3 (ČSN EN ISO 6507-1, ČSN EN 23878, ČSN EN ISO 15614-1 article 7.4.5, ČSN EN ISO 9015-1, ASME CODE Section II SA-370; ASTM E 92, GOST 2999)	Steel, cast iron, welds, alloys

¹ asterisk at 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)

Explanations:

LPP	Laboratory Working Procedure
GOST	Russian standard
ASTM	US standard
ASME	Technical Specification of the Association of Mechanical Engineers
ENV	European Pre-standard
ICP – OES	Inductively Coupled Plasma Optical Emission Spectrometry
AES	Atomic Emission Spectrometry

Solid fuels black coal, brown coal, lignite, peat, charcoal, charcoal briquettes

