EA MLA Signatory
Český institut pro akreditaci, o.p.s.
(Czech Accreditation Institute)
Hájkova 2747/22, Žižkov, 130 00 Praha 3

issues

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

CERTIFICATE OF ACCREDITATION

No. **217/2026**

SVUM Testing s.r.o.
with registered office Tovární 2053, 250 88 Čelákovice
Company Registration No. 14257688

for the Testing Laboratory No. **1792**
Testing Laboratory for Material Properties

Scope of accreditation:

Testing of mechanical and fatigue characteristics, metallography, chemical analysis of structural materials, non-destructive testing, creep testing, and chemical analysis of ferroalloys 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 abovementioned Accredited Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Accredited 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.: 28/2026 of 13/01/2026, and/or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **19/09/2028**

Prague: 30/04/2026

Český institut pro akreditaci, o.p.s. «CAI»

Signed in the Czech original:
Jan Velíšek on 30/04/2026

Jan Velíšek
Director of the Department
of Testing and Calibration Laboratories
Czech Accreditation Institute

This translation of the Czech original has been issued by: Andrea Muzikářová

The Appendix is an integral part of
Certificate of Accreditation No: 217/2026 of 30/04/2026

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

SVUM Testing s.r.o.
CAB number 1792, Testing Laboratory for Material Properties
Tovární 2053, 250 88 Čelákovice

Testing laboratory locations:

1. **ZL 30** Tovární 2053, 250 88 Čelákovice
2. **ZL 31** Tovární 2053, 250 88 Čelákovice
3. **ZL 12** Areál UVR, Mníšek pod Brdy 600, 252 10 Mníšek pod Brdy

Detailed information on activities within the scope of accreditation (determined analytes) is given in the section "Specification of the scope of accreditation".

Tests:

Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
1	**Tests of mechanical properties**			
1.1[1]	Static tensile test	ČSN EN ISO 6892-1; ASTM E8/E8M; ČSN EN ISO 6892-2; ASTM E21; ČSN EN ISO 15630-1, cl. 5; ASTM E 111	Metallic materials	-
1.2[1]	Static tensile test	ČSN EN ISO 4136; ČSN EN ISO 9018; ČSN EN ISO 17660-1, cl. 14.2; ČSN EN ISO 17660-2, cl. 14; ČSN EN ISO 15630-2, cl. 5; ČSN EN ISO 14555, cl. 11.4, 12.4; ČSN EN ISO 15614-1, cl. 7.4.1; ČSN EN ISO 15614-2, cl. 7.4.2; ČSN EN ISO 15614-5, cl. 7.4.2; ČSN EN ISO 15614-11, cl. 7.4.1	Welded joints	-
1.3[1]	Static tensile test	ČSN EN 13261, cl. 4.2.1, Annex A.1; EN 13261, cl. 4.2.1, Annex A.1; ČSN EN 13262, cl. 4.2.1; EN 13262, cl. 4.2.1	Railway wheels and axles	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
1.4[1]	Static tensile test	ČSN EN 15566, cl. 3.7, 3.8, 4.1, 7.1, Annex A.2.1, A.2.4, E.3.2, E.3.5, E.6.1.2.2.4, E.6.3.4, F.4.4.1 to F.4.4.3, F.8.5.3.2 to F.8.5.3.4, G.1.4; EN 15566, cl. 3.7, 3.8, 4.1, 7.1, Annex A.2.1, A.2.4, E.3.2, E.3.5, E.6.1.2.2.4, E.6.3.4, F.4.4.1 to F.4.4.3, F.8.5.3.2 to F.8.5.3.4, G.1.4; UIC 833:2015, cl. 2.2.3.1, 4.3.1.1, 4.3.2, 4.3.3.2.2, 4.3.4.2.3, 4.4.1; IRS 80833 – Ed. 1, cl. 2.2.3.1, 4.3.1.1, 4.3.2, 4.3.3.2.2, 4.3.4.2.3, 4.4.1	Railway vehicles	-
1.5[1]	Impact bend test	ČSN EN ISO 148-1; ASTM E23	Metallic materials	-
1.6[1]	Impact bend test	ČSN EN ISO 9016; ČSN EN ISO 15614-1, cl. 7.4.4; ČSN EN ISO 15614-11, cl. 7.4.3	Welded joints	-
1.7[1]	Impact bend test	ČSN EN 15566, Annex E.3.3, E.6.1.2.2.5, F.4.3, F.8.5.2.4; EN 15566, Annex E.3.3, E.6.1.2.2.5, F.4.3, F.8.5.2.4	Railway vehicles	-
1.8[1]	Impact bend test	ČSN EN 13261, cl. 4.2.2, Annex A.1; EN13261, cl. 4.2.2, Annex A.1; ČSN EN 13262, cl. 4.2.3; EN 13262, cl. 4.2.3	Railway wheels and axles	-
1.9[1]	Hardness test	ČSN EN ISO 6506-1; ČSN EN ISO 6507-1; ČSN EN ISO 6508-1, scale A, B, C	Metallic materials	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
1.10[1]	Hardness test	ČSN EN ISO 9015-1; ČSN EN ISO 9015-2; ČSN EN ISO 15614-1, cl. 7.4.5; ČSN EN ISO 15614-7, cl. 7.4.3, 7.5.2; ČSN EN ISO 15614-11, cl. 7.4.4	Welded joints	-
1.11[1]	Hardness test	ČSN EN 14587-1, cl. 5.4.8, Annex E; EN 14587-1, cl. 5.4.8, Annex E; ČSN EN 14587-2, cl. 5.4.8, Annex E; EN 14587-2, cl. 5.4.8, Annex E; ČSN EN 14587-3, cl. 10.4.11, Annex F; EN 14587-3, cl. 10.4.11, Annex F	Rails	-
1.12[1]	Hardness test	ČSN EN 15566, Annex E.3.4, E.6.1.2.2.6, F.4.2, F.8.5.2.3; EN 15566, Annex E.3.4, E.6.1.2.2.6, F.4.2, F.8.5.2.3	Railway vehicles	-
1.13[1]	Hardness test	ČSN EN 13262, cl. 4.2.2, 4.3; EN 13262, cl. 4.2.2, 4.3	Railway wheels and axles	-
1.14[1]	Bend test	ČSN EN ISO 7438; ČSN EN ISO 15630-1, cl. 6	Metallic materials	-
1.15[1]	Bend test	ČSN EN ISO 5173; ČSN EN ISO 17660-1, cl. 14.4; ČSN EN ISO 15630-2, cl. 6; ČSN EN ISO 14555, cl. 11.3, 12.3; ČSN EN ISO 15614-1, cl. 7.4.2; ČSN EN ISO 15614-2, cl. 7.4.3; ČSN EN ISO 15614-5, cl. 7.4.3; ČSN EN ISO 15614-7, cl. 7.4.4, 7.5.2; ČSN EN ISO 15614-11, cl. 7.4.2	Welded joints	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
1.16[1]	Bend test	ČSN EN 14587-1, cl. 5.4.5, Annex A and B; EN 14587-1, cl. 5.4.5, Annex A and B; ČSN EN 14587-2, cl. 5.4.5, Annex A and B; EN 14587-2, cl. 5.4.5, Annex A and B; ČSN EN 14587-3, cl. 10.4.7, Annex B and C; EN 14587-3, cl. 10.4.7, Annex B and C	Rails	-
1.17[1]	Fracture test	ČSN EN ISO 9017; ČSN EN ISO 15614-2, cl. 7.4.4	Welded joints	-
1.18[1]	Determination of fracture toughness	ČSN ISO 12135; ČSN EN ISO 12737; ASTM E399; ASTM E1820	Metallic materials	-
1.19[1]	Determination of fracture toughness	ČSN EN 13262 cl. 4.2.5; EN 13262, cl. 4.2.5	Railway wheels and axles	-
1.20[1]	Determining the depth of decarburization and the thickness of surface-hardened layers	ČSN EN ISO 18203; ČSN EN ISO 3887	Non-alloy and low-alloy steels	-
1.21[1]	Determining the thickness	ČSN EN ISO 1463; ČSN EN ISO 2064	Metallic and other inorganic coatings	-
1.22[1]	Mechanical testing	ČSN EN ISO 898-1, cl. 9.1, 9.2, 9.6, 9.7, 9.9, 9.10, 9.11, 9.14; ČSN EN ISO 3506-1, cl. 9.1, 9.3, 9.6	Bolts	-
1.23[1]	Mechanical testing	ČSN EN ISO 898-2, cl. 10.1, 10.2; ČSN EN ISO 3506-2, cl. 10.1, 10.2	Nuts	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
2	**Tests of fatigue properties**			
2.1[1]	Dynamic fatigue test	ČSN 42 0362; ČSN 42 0363; ČSN 42 0368; ASTM E606; ASTM E466; ASTM E468; ČSN ISO 3800; ČSN ISO 12107; ČSN ISO 1143	Metallic materials	-
2.2[1]	Dynamic fatigue test	ZP 01-21 (ČSN EN 13103-1+A1; EN 13103-1+A1; ČSN EN 13260; EN 13260; ČSN EN 13261; EN 13261; ČSN EN 13262; EN 13262) ČSN EN 13103-1+A1, cl. 8; EN 13103-1+A1, cl. 8; ČSN EN 13260, cl. 4.2.2, Annex B; EN 13260, cl. 4.2.2, Annex B; ČSN EN 13261, cl. 4.2.3, Annex B; EN 13261, cl. 4.2.3, Annex B; ČSN EN 13262, cl. 4.2.4, Annex B.3, D.4.4; EN 13262, cl. 4.2.4, Annex B.3, D.4.4	Railway wheels and axles	-
2.3[1]	Dynamic fatigue test	ČSN EN 15566, cl. 3.7, 3.8, 4.1, 4.3, 7.1, Annex A, G.1.5, G.2.3; EN 15566, cl. 3.7, 3.8, 4.1, 4.3, 7.1, Annex A, G.1.5, G.2.3; UIC 833:2015, cl. 2.2.3.2, 4.2.3, 4.3.2, 4.3.4.2.4, 4.4.1; IRS 80833 – Ed. 1, cl. 2.2.3.2, 4.2.3, 4.3.2, 4.3.4.2.4, 4.4.1	Railway vehicles	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
2.4[1]	Dynamic fatigue test	ČSN EN 14587-1, cl. 5.4.9, Annex C and B; EN 14587-1, cl. 5.4.9, Annex C and B; ČSN EN 14587-2, cl. 5.4.9, Annex C and B; EN 14587-2, cl. 5.4.9, Annex C and B; ČSN EN 14587-3, cl. 10.4.8, Annex D and C; EN 14587-3, cl. 10.4.8, Annex D and C	Rails	-
2.5[1]	Measurement of fatigue crack growth rate	ČSN ISO 12108; ASTM E647	Metallic materials	-
2.6[1]	Thermomechanical behaviour test	ČSN EN 13979-1, cl. 4.3, 7.1, 7.2, Annex A, B.1, B.2, J; EN 13979-1, cl. 4.3, 7.1, 7.2, Annex A, B.1, B.2, J	Railway wheels	-
2.7[1]	Performance testing	ČSN EN 12082+A1, cl. 7, Annex A; EN 12082-1, cl. 6; Annex A; EN 12082-2	Axle boxes	-
2.8[1]	Static and dynamic tests	ČSN EN 15551, cl. 5.4, 5.5.2 and table 2, Annex B, D and F; EN 15551, cl. 5.4, 5.5.2 and table 2, Annex B, D and F	Railway vehicle bumper	-
2.9[1]	Static and dynamic tests	ZP 02-09 (ČSN EN 13749+A1; EN 13749+A1; ČSN EN 15827; EN 15827)	Bearing box	-
3	**Metallography and chemical analyses**			
3.1[1]	Determination of grain size	ČSN EN ISO 643; ASTM E112	Steel	-
3.2[1]	Determination of grain size	ČSN 42 0462	Non-ferrous metals	-
3.3[1]	Determination of content of non-metallic inclusions	ČSN ISO 4967	Wrought steel	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
3.4[1]	Microstructure test	ČSN EN ISO 15614-2, cl. 7.4.5, 7.5; ČSN EN ISO 15614-5, cl. 7.4.4, 7.5; ČSN EN ISO 15614-7, cl. 7.4.6; ČSN EN ISO 15614-11, cl. 7.4.5; ČSN EN ISO 17639; ČSN EN ISO 5817; ČSN EN ISO 10042; ČSN EN ISO 6520-1; ČSN EN ISO 13919-1; ČSN EN ISO 13919-2	Welded joints	-
3.5[1]	Microstructure test	ČSN EN 14587-1, cl. 5.4.7, Annex D.2; EN 14587-1, cl. 5.4.7, Annex D.2; ČSN EN 14587-2, cl. 5.4.7, Annex D.2; EN 14587-2, cl. 5.4.7, Annex D.2; ČSN EN 14587-3, cl. 10.4.10, Annex E.2; EN 14587-3, cl. 10.4.10, Annex E.2	Rails	-
3.6[1]	Microstructure test	ČSN EN 13261, cl. 4.3; EN 13261, cl. 4.3; ČSN EN 13262, cl. 4.4.1; EN 13262, cl. 4.4.1	Railway wheels and axles	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
3.7[1]	Macroscopic examination	ČSN EN ISO 14555, cl. 11.5, 12.5; ČSN EN ISO 15614-1, cl. 7.4.3, 7.5; ČSN EN ISO 15614-2, cl. 7.4.5, 7.5; ČSN EN ISO 15614-5, cl. 7.4.4, 7.5; ČSN EN ISO 15614-7, cl. 7.4.2, 7.5.2; ČSN EN ISO 15614-11, cl. 7.4.5; ČSN EN ISO 17639; ČSN EN ISO 5817; ČSN EN ISO 10042; ČSN EN ISO 6520-1; ČSN EN ISO 13919-1; ČSN EN ISO 13919-2	Welded joints	-
3.8[1]	Macroscopic examination	ČSN EN 14587-1, cl. 5.4.6, Annex D.1; EN 14587-1, cl. 5.4.6, Annex D.1; ČSN EN 14587-2, cl. 5.4.6, Annex D.1; EN 14587-2, cl. 5.4.6, Annex D.1; ČSN EN 14587-3, cl. 10.4.9, Annex E.1; EN 14587-3, cl. 10.4.9, Annex E.1	Rails	-
3.9[1]	Macroscopic examination	ISO 4968	Railway vehicles	-
3.10[1]	Corrosion failure test	ČSN 03 8137	Metals, alloys and metallic coatings	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
3.11[1]	Determination of elements by OES method	ZP 04-31 (SPECTRO CS, spol. s r.o. manual)	Low-alloy steels and products made of them, alloy chromium- and chromium-nickel steels and products made of them	-
4	**Non-destructive testing**			
4.1[1]	Visual testing	ZP 04-01 (ČSN EN 13018; ČSN EN 15566; EN 15566; ČSN EN ISO 17637; ČSN EN 14587-1; EN 14587-1; ČSN EN 14587-2; EN 14587-2; ČSN EN 14587-3; EN 14587-3; ČSN EN 12082+A1; EN 12082+A1; ISO 15243)	Metallic materials, railway vehicles, welded joints	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
4.2[1]	Penetrant testing	ZP 04-02 (ČSN EN ISO 3452-1; ČSN EN 10228-2; ČSN EN 15566; EN 15566; ČSN EN 14587-1; EN 14587-1; ČSN EN 14587-2; EN 14587-2; ČSN EN 14587-3; EN 14587-3; ČSN EN 13261; EN 13261; ČSN EN 13262; EN 13262; UIC 833:2015; IRS 80833 – Ed. 1; ČSN EN 15551; EN 15551; ČSN EN 13749+A1; EN 13749+A1; ČSN EN 13260; EN 13260)	Metallic materials, railway vehicles, welded joints	-
4.3[1]	Ultrasonic testing	ZP 04-03 (ČSN EN ISO 16810; ČSN EN ISO 17640; ČSN EN ISO 13588)	Welded joints	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification[2]	Tested subject	Degrees of freedom[3]
4.4[1]	Magnetic particle testing	ZP 04-04 (ČSN EN ISO 9934-1; ČSN EN 10228-1; ČSN EN 15566; EN 15566; ČSN EN ISO 17638; ČSN EN 14587-1; EN 14587-1; ČSN EN 14587-2; EN 14587-2; ČSN EN 14587-3; EN 14587-3; ČSN EN 15551; EN 15551)	Metallic materials, railway wheels, welded joints	-
5	**Testing of creep and creep crack growth**			
5.1[2]	Uniaxial creep testing in tension	ZP 01-23 (ČSN EN ISO 204; EN ISO 204; ASTM E139)	Metallic materials	-
6	**Chemical analyses**			
6.1[3]	Determination of C and S by analyzer with IR detection after combustion in an induction furnace	ZP 01 (ČSN ISO 4935; ČSN EN ISO 9556; LECO Manual)	Ferroalloys, Ferrovanadium	-
6.2[3]	Determination of V by potentiometric titration	ZP 02 (ISO 6467; ČSN 420553-1)	Ferrovanadium, Vanadium oxide	-
6.3[3]	Determination of Al, Si, Mn, Cu, P by ICP OES method	ZP 03 (ČSN 420553-2; ČSN 420553-3; ČSN 420553-4; ČSN 420553-5; ČSN 420553-7; SPECTRO Manual)	Ferrovanadium	-

[1] asterisk at the ordinal number identifies the tests, which the laboratory is qualified to carry out outside the permanent laboratory premises; the numerical index at the test ordinal number identifies the location carrying out the test (the identification of the locations is given on the first page of this document)

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[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 valid edition of the specified procedure is used (including any changes)

[3] the laboratory does not apply a flexible approach to the scope of accreditation

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)
3.11	Low-alloy steel and products made of them: C, Si, Mn, P, S, Cr, Ni, Mo, Al, Cu, Co, Ti, Nb, V, W, Pb, B, Sb, Sn, Zn, As, Bi, Ta, Ca, Ce, Zr, La, N, Se Alloy chromium- and chromium-nickel steels and products made of them: C, Si, Mn, P, S, Cr, Ni, Mo, Al, Cu, Co, Ti, Nb, V, W, Pb, B, Sb, Sn, As, Bi, Ta, Ca, N, Se

"This document is an appendix to the certificate of accreditation. In case of any discrepancies between the English and Czech versions, the Czech version shall prevail, both for the certificate appendix and the certificate itself. "