

**The Appendix is an integral part of  
Certificate of Accreditation No. 76/2022 of 14/02/2022**

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

**Vysoká škola báňská - Technická univerzita Ostrava**  
Testing Laboratories of the Rock Research Centre, Faculty of Mining and Geology  
17. listopadu 2172/15, 708 00 Ostrava-Poruba

**Testing laboratory locations:**

- 1. Laboratory of physical and technological properties of rocks**  
VŠB - Technical University of Ostrava, 17. listopadu 2172/15, 708 00 Ostrava-Poruba
- 2. Laboratory petrographic analysis**  
VŠB - Technical University of Ostrava, 17. listopadu 2172/15, 708 00 Ostrava-Poruba
- 3. Laboratory mechanical properties of rocks**  
VŠB - Technical University of Ostrava, 17. listopadu 2172/15, 708 00 Ostrava-Poruba

*The Laboratory provides expert opinions and interpretations of test results.*

Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Test object
1 <sup>2</sup>	Petrographic analysis of stone and aggregates	PP 1 (ČSN EN 12326-2, ČSN EN 12407, ČSN 72 11153)	Slate, aggregates, stone
2 <sup>2</sup>	Determination of mineral phases by X-ray analysis	PP 2 (ČSN EN 13925-1, ČSN EN 13925-2, Inorganic database of diffraction data PDF – 2, Release 2011, Diffract plus prof. TOPAS STRUCTURAL database.)	Polycrystalline and amorphous materials
3 <sup>1</sup>	Determination of particle size distribution	PP 3 (ČSN EN 933-1)	Aggregates
4 <sup>2</sup>	Determination of particle shape	PP 4 (ČSN EN 933-4, ČSN EN 933-5)	Aggregates
5 <sup>2</sup>	Determination of various aggregate particles	PP 5 (ČSN 72 1180)	Aggregates
6 <sup>2</sup>	Determination of stone weather resistance	PP 6 (ČSN 72 1159)	Stone
7 <sup>2</sup>	Determination of thermal and weathering properties of aggregates	PP 7 (ČSN EN 1367-2)	Aggregates
8 <sup>2</sup>	Assessment of fines - Methylene blue test	PP 8 (ČSN EN 933-9)	Aggregates

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9 <sup>2</sup>	Determination of temperature change resistance	PP 9 (ČSN EN 12326-2 art. 15)	Slate
10 <sup>1</sup>	Determination of real density and apparent density, and of total and open porosity	PP 10 (ČSN EN 1936, ČSN EN 1097-6)	Stone, aggregates
11 <sup>1</sup>	Determination of water absorption at atmospheric pressure	PP 11 (ČSN EN 12326-2, chap. 11, ČSN EN 13755, ČSN EN 1097-6)	Slate, stone, aggregates
12 <sup>1</sup>	Determination of stone and aggregate moisture content by drying in a drier	PP 12 (ČSN EN 1097-5)	Stone, aggregates
13 <sup>1</sup>	Determination of Aggregate resistance to by Los Angeles method	PP 13 (ČSN EN 1097-2, chap. 1-5, ČSN EN 13450)	Aggregates
14 <sup>1</sup>	Determination of stone and aggregate frost resistance	PP 14 (ČSN EN 12326-2, chap. 12, ČSN EN 12371, ČSN EN 1367-1)	Slate, stone, aggregates
15 <sup>1</sup>	Determination of abrasion resistance	PP 15 (ČSN EN 1341, ČSN EN 1338, Annex G)	Stone, concrete
16 <sup>3</sup>	Determination of compressive strength rocks and concrete	PP 16 (ČSN EN 1926, ČSN EN 12390-3, chap. 10, ČSN EN 12504-1, chap. 4.3)	Stone, concrete
17 <sup>3</sup>	Determination of the flexural strength under concentrated load test	PP 17 (ČSN EN 12372, ČSN EN 12326-2, ČSN EN 1341)	Stone, slate, slabs of natural stone
18 <sup>1</sup>	Determination of loose bulk density	PP 29 (ČSN EN 1097-3)	Aggregates
19 <sup>2</sup>	Determination of elements by use of WD XRF spectrometry <sup>3)</sup>	PP 19 (ČSN EN 15309)	Stone, aggregates, soils, waste, sediments

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Ordinal number <sup>1</sup>	Test procedure/method name	Test procedure/method identification <sup>2</sup>	Test object
20 <sup>1</sup>	Determination of the resistance to wear (micro-Deval).	PP 20 (ČSN EN 1097-1)	Aggregates
21 <sup>1</sup>	Assessment of fines - Sand equivalent test	PP 21 (ČSN EN 933-8)	Aggregates
22 <sup>2</sup>	Determination of the ratio of elements and electron image by microprobe with EDX and WDA detectors	PP 22 (Reed S.J.B. [2010]: Electron microprobe analysis and scanning electron microscopy in geology. [Cambridge Univ. Press, 212 pp.]	Polycrystalline and amorphous materials

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

<sup>2</sup> 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)

<sup>3</sup> range of determined parameters for test no. 19: Al, As, Ba, Ca, Ce, Cl, Cr, Cu, Fe, K, La, Mg, Mn, Nb, Nd, Ni, P, Pb, S, Si, Sn, Sr, Ti, V, Y, Zn, Zr

**Sampling:**

Ordinal number	Sampling procedure name	Sampling procedure identification <sup>1</sup>	Sampled object
1 <sup>1,2,3</sup>	Sampling of stone, aggregates, polycrystalline and amorphous materials	PP 111 (ČSN EN 932-1, ČSN 72 1152)	Stone, aggregate, slate, polycrystalline and amorphous materials

<sup>1</sup> if the document identifying the sampling procedure is dated, only these specific procedures are used. If the document identifying the sampling procedure is not dated, the latest edition of the specified procedure is used (including any changes)

**Explanatory notes:**

<sup>1,2,3</sup> Superscript at the ordinal number corresponds to the workplace carrying out the test / sampling.

PP – Working Procedure  
X-Ray Analysis – X-ray Analysis  
EDX – Energy Dispersive Detector  
WDA – Wavelength Dispersive Analysis  
WD XRF – Wavelength Dispersive X-ray Fluorescence