



## SPL Bohumín

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### CERTIFICATE No 04 – 17

#### REFERENCE MATERIAL OF LOW ALLOY STEEL for solid sample spectrometry, combustion and wet-way methods

### SPL LA-3F

**Certified** fully compliant with the ISO Guide 35 definition of Reference Material – with the characterization for determining the property values and their associated uncertainties.

**Intended** for calibration, matrix-match verification and statistical process control of low alloy steel spectrometric analysis from a plane of solid sample. They may not substitute CRM in a statement of metrological traceability, method validation. A single analysis area of at least 4 mm in diameter defines the minimum sample intake. They may be used for combustion and wet-way methods too.

**Manufactured** by casting to a special ingot with discarding of the parts, which have been suspected inhomogenous and the rest has been machined to the samples of the ultimate size.

**Supplied** as discs 37 mm in diameter and 25 mm of standard height, as option is possible up to 50 mm high and on request steel chips for combustion and wet-way methods.

**Homogeneity** (random and trend, within- and between- samples) was tested by various analytical techniques of adequate repeatability. Its uncertainty contribution, when statistically significant, was combined to the ultimate uncertainty statement. The RM are stable by a nature of material.

**Characterised** by inter-laboratory study of the expert laboratories listed below by various spectrometric methods (AES spark, glow discharge, XRF) and alternative methods (combustion, thermoevolution, wet-way) standard methods, with measurements metrological **traceable** to adequate CRM (CZ 2001, 2003 - 2008, BAS, Brammer Standard).

*ARCELORMITTAL a.s., Ostrava, Czechia*

*ENVIFORM a.s., Třinec, Czechia*

*IMŻ Gliwice, Poland*

*LECO INSTRUMENTE PLZEŇ s.r.o., Plzeň, Czechia*

*U. S. STEEL KOŠICE – LABORTEST, Košice, Slovakia*

*VÍTKOVICE TESTING CENTER s.r.o., Ostrava, Czechia*

*ZPS-SLÉVÁRNA, a.s., Zlín, Czechia*

*ŽĎAS a.s., Žďár nad Sázavou, Czechia*