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CERTIFICATE

0217-CM-20034-14

CERTIFIED REFERENCE MATERIALS CZ 20034

Cast iron for solid-sample spectrometry, CRM set 11 - 17

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page 1 / 6

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Prepared by melting and temperature- and speed-controlled casting to gangs of chill-cast discs, cooled on both vertically positioned plan-parallel sides. This resulted in a fine white (i.e. effectively graphite free) structure required for solid-sample spectrometry, and perfectly matching that of routine foundry samples. The discs of 40 mm in diameter were water-jet separated and their cylindrical surface finished and marked. Layers of about 0.5 mm were machined off from both cooled surfaces to yield discs with a minimum ultimate height of 18 mm.

The composition of seven CRM was designed to cover optimally typical concentration ranges of all metallurgically relevant elements in plain and low-alloy cast iron. Values are graded dynamically and in each CRM they are combined in order to avoid excessive interferences, as well as unfavorable effects on the ultimate structure. The main matrix element, Fe, is kept in a narrow concentration range of 90.2 – 92.7%. Consequently, the CRM do not represent any particular cast iron grades.

The CRM are distributed as a set or individually.

Intended for calibration and validation of methods of cast iron analysis by spectrometry from a plane of solid sample: Atomic Emission Spectrometry with spark, glow-discharge or laser excitation and X-Ray Fluorescence Spectrometry.

An analysis area of at least 4 mm in diameter defines the minimum sample intake.

Production testing and characterization were carried out in accordance with the methodical procedure CORM ČMI 017-MP-C001 and in compliance with the ISO Guides 34, 35.

The producer shall ensure due conditions of storage and distribution and shall monitor the CRM parameters and feed-back from users during the entire validity period.

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