INTERNATIONAL STANDARD

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Hardmetals — Determination of silicon in cobalt metal powders using graphite-furnace atomic absorption

Métaux durs — Dosage du silicium dans les poudres métalliques de cobalt par absorption atomique à four graphite

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 17352 was prepared by Technical Committee ISO/TC 119, *Powder metallurgy*, Subcommittee SC 4, *Sampling and testing methods for hardmetals*.

In this corrected version of ISO 17352:2008, the edition number on the cover page has been corrected from “Second” to “First”.

Hardmetals — Determination of silicon in cobalt metal powders using graphite-furnace atomic absorption

1 Scope

This International Standard specifies a test method, using graphite-furnace atomic absorption, to determine the mass fraction of silicon in cobalt metal powder with varying compositions within the range of 5 µg/g to 40 µg/g.

2 Principle

This test method for the chemical analysis of cobalt metal powder is to be used to determine traces of silicon. It is assumed that all those who use this test method will be trained analysts capable of performing common laboratory procedures skilfully and safely. It is expected that all the work will be performed in a properly equipped laboratory.

3 Reagents

Reagents of the highest purity and only double-distilled water or their equivalents shall be used.

3.1 **Nitric acid**, ρ = 1,4 g/ml.

3.2 **Hydrochloric acid**, ρ = 1,15 g/ml.

3.3 **Cobalt powder**, purity > 99,9 % by mass.

3.4 **Si solution**, 1,000 g/l.