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Refractory products — Classification of dense, shaped acid-resisting products

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*Produits réfractaires — Classification des produits façonnés denses
résistant à l'acide*

ISO 10080:1990

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INTERNATIONAL

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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.

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.

International Standard ISO 10080 was prepared by Technical Committee ISO/TC 33, *Refractories*.

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Refractory products — Classification of dense, shaped acid-resisting products

1 Scope

This International Standard establishes a classification of dense, shaped acid-resisting refractory products.

It concerns products complying with the classification criteria for refractory products defined in ISO 1109.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1109:1975, *Refractory products — Classification of dense shaped refractory products*.

ISO 5017:1988, *Dense shaped refractory products — Determination of bulk density, apparent porosity and true porosity*.

ISO 8890:1988, *Dense shaped refractory products — Determination of resistance to sulfuric acid*.

3 Classification

The products shall be subdivided according to two criteria:

- resistance to sulfuric acid;
- apparent porosity.

3.1 Acid-resistance

3.1.1 Determine acid-resistance in accordance with ISO 8890.

3.1.2 Distinguish three groups according to loss of mass:

- Group 1: loss of mass less than or equal to 2 %.
- Group 2: loss of mass between 2 % and less than or equal to 4 %.
- Group 3: loss of mass between 4 % and 7 %.

3.2 Apparent porosity

3.2.1 Determine apparent porosity in a test carried out in accordance with ISO 5017.

3.2.2 Classify each group into two sub-groups as a function of apparent porosity. The division between these two sub-groups was established by trials on bricks of standard shape.

- Sub-group A: apparent porosity less than or equal to 15 %.
- Sub-group B: apparent porosity greater than 15 %.

4 Designation of products

Designate the acid-resistant product by the number of the group in which it is classified as a function of the loss in mass during the test, followed by the letter designating the sub-group in which it is classified as a function of the apparent porosity.

EXAMPLE

A product of high alumina content could be designated as 1 A, indicating a loss of mass in the acid-resistance test of less than or equal to 2 % and an apparent porosity of less than or equal to 15 %.

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