STANDARD **10060**

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Dense, shaped refractory products — Test methods for products containing carbon

Produits réfractaires façonnés denses — Méthodes d'essai pour les produits contenant du carbone

Reference number
ISO 10060:1993(E)

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 10060 was prepared by Technical Committee ISO/TC 33, *Refractories*.

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Dense, shaped refractory products — Test methods for products containing carbon

1 Scope

This International Standard specifies test methods for refractory products containing residual carbon (see 7.3), the remainder being essentially sintered or fused doloma, magnesia or a mixture of these substances.

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 5014:1986, *Refractory products — Determination of modulus of rupture at ambient temperature.*

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

ISO 8841:1991, *Dense, shaped refractory products — Determination of permeability to gases.*

ISO 10059-1:1992, *Dense, shaped refractory products — Determination of cold compressive strength — Part 1: Referee test without packing.*

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 pitch-bonded refractory: An unfired refractory shape which has been produced by pressing a mixture of graded aggregate and pitch.

NOTE 1 The term "tar" may be used as an alternative to pitch.

3.2 pitch-bonded tempered refractory: A pitch-bonded refractory shape which has been heated to a relatively low temperature (up to 800 °C).

3.3 resin-bonded refractory: An unfired refractory shape which has been produced by pressing a mixture of graded aggregate and resin.

3.4 resin-bonded tempered refractory: A resin-bonded refractory shape which has been heated to a relatively low temperature (up to 800 °C).

3.5 pitch-impregnated refractory: A refractory shape which has been impregnated by liquid pitch after forming. Such a shape may be either a fired product or one of the carbon-containing shapes defined in 3.1 to 3.4.

3.6 carbonization: The process of removing volatile components from test pieces of a refractory which has been either bonded or impregnated with carbonaceous material such as pitch (tar) or resin, so as to retain the residual carbon.

3.7 anti-oxidant: Metallic element or other substance added to the carbon-containing shapes defined in 3.1 to 3.4, in order to improve their resistance to oxidation.

4 Principle

Determination of physical properties of products containing carbon, both before and after the removal of volatile components by carbonization.