INTERNATIONAL STANDARD

ISO

1013

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Coke — Determination of bulk density in a large container

Coke — Détermination de la masse volumique en vrac dans un récipient de grandes dimensions

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 1013 was prepared by Technical Committee ISO/TC 27, *Solid mineral fuels*, Subcommittee SC 3, *Coke*.

This second edition cancels and replaces the first edition (ISO 1013:1975), which has been technically revised.

Introduction

The bulk density of coke depends upon its physical characteristics, e.g. apparent relative density, shape and size of the coke particles, and upon the dimensions of the container. If the container is sufficiently large, its actual dimensions will have a negligible effect on the value obtained in a determination of bulk density. The method described in this International Standard is based on the use of any suitable large container, possibly that in which the coke is delivered, such as a wagon or skip. The determination of bulk density of coke in a small container (of specified dimensions) is described in ISO 567.

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Coke — Determination of bulk density in a large container

1 Scope

This International Standard specifies a method for the determination of the bulk density of coke in a large container such as a wagon or skip.

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 567:1995, *Coke — Determination of bulk density in a small container.*

ISO 579:1981, *Coke — Determination of total moisture content.*

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1 bulk density: The mass of a portion of a solid mineral fuel divided by the volume of the container which is filled by that portion under specified conditions.

4 Principle

A weighed container of known volume is filled with coke and the increase in mass is determined.

5 Apparatus

5.1 Container, such as a wagon or skip, capable of holding at least 3 t of the coke.

5.2 Weighing machine, capable of weighing the container and its contents to an accuracy of 0,2 %.

6 Procedure

Weigh the empty container (5.1) on the weighing machine (5.2). Measure the internal dimensions of the container to the nearest 1 cm and calculate its capacity.

NOTE 1 If the container is already fully charged, it should be weighed with the coke first, then be weighed empty and then be measured.

With the container on a level surface, carefully charge the coke into it until pieces of coke project above the top of the container across the whole surface.

Slide a straightedge across the top of the container and remove any pieces of coke which obstruct its passage. Weigh the charged container.

7 Expression of results

The bulk density in a large container (ρ_l) of the coke, in kilograms per cubic metre, on a dry basis, is given by the equation:

$$\rho_l = \frac{m_2 - m_1}{V} \times \frac{100 - M}{100}$$

where

m_1 is the mass, in kilograms, of the empty container;