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Coke (greater than 20 mm in size) — Determination of mechanical strength

Coke (dimension supérieure à 20 mm) — Détermination de la cohésion

Reference number
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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document 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 556:1980), which has been technically revised. The main changes compared to the previous edition are as follows:

a) The sample of coke used for Micum and Irsid tests may be analysed with a bottom size greater than 20 mm (e.g. 40 mm or 60 mm) and should the starting bottom size of coke used be different from 20 mm, it is to be stated in the test report.

b) Addition of a new set of tables specifying:

   1) Sample, test conditions and results for Micum and Irsid tests.

   2) Dimensions of the cylindrical steel drum for Micum and Irsid tests.

   3) Suitable set of sieves.

c) In reporting coke Micum and/or Irsid results, it is required to specify if a single determination or a duplicate determination was made and if a full or half Micum drum was used.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Coke (greater than 20 mm in size) — Determination of mechanical strength

1 Scope

This document specifies a method for the determination of the mechanical strength of coke having a particle size greater than 20 mm.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 728, *Coke (nominal top size greater than 20 mm) — Size analysis by sieving*

ISO 18283, *Hard coal and coke — Manual sampling*

ISO 13909-6, *Hard coal and coke — Mechanical sampling — Part 6: Coke — Preparation of test samples*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

A sample of coke greater than 20 mm in size (Micum and Irsid tests) and of known size distribution is subjected to mechanical stresses in a rotating drum. If desired, a sample of coke may also be analysed with a bottom size greater than 20 mm (e.g. 40 mm or 60 mm). Should the starting bottom size of coke used be different from 20 mm, it shall be stated in the test report.

The degree of breakdown of the coke is evaluated by a process of sieving and size analysis after 100 drum revolutions (Micum test) and, if desired, after a total of 500 drum revolutions (Irsid test). Micum and Irsid tests may be performed on the same coke sample.

Table 1 lists sample and test conditions as well as results in conducting Micum, Irsid and half Micum/half Irsid tests.

Table 1 — Sample, test conditions and results for Micum and Irsid tests

Indicator	Index	Unit of measurement	Test Method		
			Micum	Irsid	Half Micum or Half Irsid
Sample	Size	mm	>20, >40, >60	>20, >40, >60	>20, >40, >60
	Amount	kg	50 ± 0,5	50 ± 0,5	25 ± 0,25
	Moisture	%	<3	<3	<3