International Standard

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Coal — Size analysis by sieving

Charbon — Analyse granulométrique par tamisage

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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 document 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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This document was prepared by Technical Committee ISO/TC 27, *Coal and coke*, Subcommittee SC 1, *Coal preparation: Terminology and performance.*

This fourth edition cancels and replaces the third edition (ISO 1953:2015), which has been technically revised.

The main changes are as follows:

— size analysis of coal greater than 90 mm was removed from Table 1;

— instructions provided for air drying and equilibrating different coals (examples are high rank coal, low rank coal and lignite). Advice provided for air drying at enhanced temperatures has also been added;

— additional test report items were included;

— Gy's formula was not suitable to determine minimum masses for sizing at various nominal top sizes and for precision calculations in Table 1 and has been removed.

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.

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Introduction

Size analysis involves the separation of a sample of coal into size fractions with defined limits. In the methods described in this document the results are expressed in terms of the percentage mass of coal remaining on sieves of different aperture sizes. This information can be of use in several applications, including the following:

a) determining the size analysis of coals exported and imported internationally;

b) assessing the yields of products from run-of-mine coals;

c) providing design data for coal preparation plants;

d) checking that products from screening plants are within the required limits;

e) assessing the performance of coal-crushing plants;

f) selecting coals for processes and equipment.

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Coal — Size analysis by sieving

1 Scope

This document specifies reference methods for the size analysis of coal by manual sieving (wet or dry), using test sieves of aperture sizes between 90 mm and 45 µm. A guide to sampling is given in Annex A.

This document is applicable to all coals. It is not applicable to coke.

In the case of pulverized coal which has been ground so that a high proportion passes through the test sieve of the smallest aperture size, the methods of this document determine only the mass fraction oversize expressed as a percent.

2 Normative references

The following documents are referred to in the text in such a way that some or all 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 1213-1, *Coal and coke — Vocabulary — Part 1: Terms relating to coal preparation*

ISO 1213-2, *Coal and coke — Vocabulary — Part 2: Terms relating to sampling, testing and analysis*

ISO 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 3310-2, *Test sieves — Technical requirements and testing — Part 2: Test sieves of perforated metal plate*

ISO 13909-2, *Coal and coke — Mechanical sampling — Part 2: Sampling of coal from moving streams*

ISO 13909-4, *Coal and coke — Mechanical sampling — Part 4: Preparation of test samples of coal*

ISO 13909-7, *Coal and coke — Mechanical sampling — Part 7: Methods for determining the precision of sampling, sample preparation and testing*

ISO 18283, *Coal and coke — Manual sampling*

3 Terms and Definitions

For the purposes of this document, the terms and definitions given in ISO 1213-1 and ISO 1213-2 apply.

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

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

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

4 Apparatus

The usual laboratory apparatus and the following shall be used.

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