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Hard coal and coke — Manual sampling

Houille et coke — Échantillonnage manuel

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Contents

Page

Foreword

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ISO 18283 was prepared by Technical Committee ISO/TC 27, *Solid mineral fuels*, Subcommittee SC 4, *Sampling*.

This first edition of ISO 18283 cancels and replaces ISO 1988:1975 and ISO 2309:1980, which have been technically revised.

Introduction

Mechanical sampling from moving streams is the preferred method for sampling fuels. However, often mechanical facilities are not available. Moreover, for sized coal or coke, mechanical sampling can be a problem because of (size) degradation by the sampling system.

The fundamental requirements of sampling are that all particles of the fuel in the lot are accessible to the sampling instrument and that each individual particle has an equal probability of being selected and included in the sample.

When sampling manually, conditions are often far from ideal. The methods described in this International Standard are intended to obtain the most representative sample that can be achieved. Manual sampling should only be applied if no possibility for mechanical sampling exists.

The purpose of taking and preparing a sample of fuel is to provide a test sample that, when analysed, provides test results representative of the lot sampled.

The first stage of sampling, known as primary sampling, is the taking from positions distributed over the entire lot of an adequate number of fuel portions known as primary increments. The primary increments are then combined into a sample, either “as taken” or after having been divided, in order to reduce the mass of the sample to a manageable size. From this sample, the required number and types of test samples are prepared by a series of processes jointly known as sample preparation.

In devising a sampling procedure, it is also essential to guard against bias in the taking of increments. Bias can arise from

a) incorrect location/timing of increments,

b) incorrect delimitation and extraction of increments,

c) loss of integrity of increments after extraction.

Methods for measuring bias are described in this International Standard.