DOI: 10.31081/1681-309X-2025-0-1-7-19 Specialty 161. U.D.C. 662.74

OVERVIEW OF STANDARDS FOR COAL AND COKE SAMPLING

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The article discusses the main stages of testing solid fuels, in particular hard coal and coke, including sample collection, preparation and examination. The importance of obtaining a representative sample that corresponds to the average composition of the entire fuel and is sufficient in weight for accurate measurements is emphasised. It is determined that the heterogeneity of the composition of solid fuels complicates the process of taking a representative sample, which is critical for the accuracy of research. The main stages of obtaining an analytical sample used to determine the chemical and physical characteristics of fuel are described. Special attention is paid to the importance of compliance with the requirements of standards during sample collection and preparation.

An overview of the main national and international regulations on sampling and preparation of solid fuels is provided, as well as the scope and key provisions of each standard. The aspects of the importance of the stage of sampling and preparation of solid fuel samples that affect the accuracy of the results of studies of its properties are considered. The main types of samples are listed; requirements for samples, covering the mass and number of spot samples; sampling methods; general requirements for the design of mechanical samplers and sample preparation equipment.

The author analyses a number of current Ukrainian regulatory documents and points out the need for their harmonisation with international standards to improve the accuracy of the sampling process. The aspects of the importance of the stage of sampling and preparation of solid fuel samples that affect the accuracy of the results of studies of its properties are considered. The article considers the requirements for determining the systematic error of testing hard coal, anthracite or coke, the sequence of testing and calculation and the criteria for evaluating the test results are presented.

The necessity of checking mechanical samplers to determine the presence or absence of a systematic sampling error is noted. The importance of participating in international standardisation is highlighted, which allows for continuous improvement of sampling and sample preparation methods.

Keywords: sampling, sample preparation, solid fuel, coal, coal coke, point sample, mechanical sampler, systematic error.

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Manuscript received 2025/01/11
Accepted for publication 2025/05/06
Published 2025/07/15