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Guide for

Assessing coke screening plant

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Cooperating organizations

The Solid Fuel Standards Committee, under whose direction this British Standard was prepared, consists of representatives from the following:

- Association of British Solid Fuel Appliances Manufacturers
- Association of Consulting Engineers
- British Carbonization Research Association*
- British Cast Iron Research Association
- British Ironfounders' Association
- Chamber of Coal Traders
- Chartered Institution of Building Services
- Coke Oven Managers' Association*
- Combustion Engineering Association
- Consumer Standards Advisory Committee of BSI
- Council of Ironfoundry Associations
- Department of Energy (Energy Technology)
- Domestic Solid Fuel Appliances Approval Scheme
- Electricity Supply Industry in England and Wales
- Health and Safety Executive
- Heating and Ventilating Contractors' Association
- Institute of Energy
- Low Temperature Coal Distillers' Association of Great Britain Ltd.
- National Coal Board*
- Society of British Gas Industries
- Solid Smokeless Fuels Federation
- Women's Solid Fuel Council

The organizations marked with an asterisk in the above list were directly represented on the Technical Committee entrusted with the preparation of this British Standard.

The British Standard, having been prepared under the direction of the Solid Mineral Fuels Standards Committee, was published under the authority of the Board of BSI and comes into effect on 31 May 1982

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Contents

	Page
Cooperating organizations	Inside front cover
Foreword	ii
1 Scope	1
2 References	1
3 Definitions	1
4 General	2
5 Description of methods	2
6 Provision and presentation of technical information	4
Appendix A Number of increments for moisture sample	6
Appendix B Typical report	6
Appendix C Example of calculation of input data	9
Table 1 — Number of increments for ± 1 % precision	6
Publications referred to	Inside back cover

Foreword

This British Standard has been prepared under the direction of the Solid Mineral Fuels Standards Committee and supersedes the 1969 edition, which is therefore withdrawn. The main technical change from the previous edition concerns the efficiency of screening and the opportunity has been taken to align it with BS 1016-18, which has superseded BS 1293 and BS 2074.

This standard gives guidance on the testing of new coke screening plants or plants where major alterations have been carried out, and to show the effectiveness with which the specified coke is separated into the required size fractions. In coke screening practice, the required size fractions or grades refer to coke at the outlet of storage hoppers or at the end of a boom loader or at other such points where coke is finally discharged from the plant, and therefore the tests will normally include the effect on the coke of the passage through the hopper. The procedure of sampling directly underneath the screens may be permitted as long as the fact is noted and its implications realized.

For the purposes of this standard, main screening plants are considered to consist of the screens, storage hoppers, anti-breakage devices and debreezing screens, together with inter-connecting conveyors and chutes. Mobile screening plants are those which are commonly used to remove undersize material from graded coke after ground storage.

Clause 4 gives guidance on methods of assessing the effectiveness with which a screen separates coke into the required sizes. Clause 5 gives a description of how the test is to be carried out and clause 6 some procedures for obtaining the required technical data for evaluating the plant. Appendix A shows the number of increments to be collected for moisture determination, Appendix B sets out the way in which the results should be recorded and Appendix C gives a method for calculating input data when testing mobile plant.

This standard requires frequent reference to BS 1016-18 and BS 1017-2 and it is based on the assumption that the relevant requirements of these standards are complied with.

This standard is intended for application at coke ovens but would be equally applicable to any coke producing plant or manufactured fuel works.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard provides guidance on assessing coke screening plants, both new and those to which major alterations have been carried out, including mobile plants. It describes methods that can be used to satisfy buyer and seller that the plant is capable of meeting the requirements agreed between them and to indicate the effectiveness of separation of the specified coke into required fractions.

2 References

The titles of the publications referred to in this standard are listed on the inside back cover.

3 Definitions

For the purposes of this British Standard the following definitions apply:

3.1 Sampling terms¹⁾

3.1.1 sample

a number of increments grouped together for analysis and testing to provide information about the unit of coke from which the increments are taken

3.1.2 subsample

part of a sample when the sample has been collected in two or more parts, each part being analysed separately. Each subsample is composed of evenly-spaced increments

3.1.3 increment

the quantity of coke collected by a single operation of a sampling instrument

3.2 Coke terms¹⁾

3.2.1 screening; screens

the commercial operation of separating coke into sizes or grades, using screens for that purpose

3.2.2 sieving; sieves

the laboratory or test operation of size analysis, using sieves for that purpose

NOTE All references in this standard to sieves and sieving should be interpreted as references to sieves which comply with the requirements of BS 410.

3.2.3 grading

see *screening*

3.2.4 size analysis

the size characteristics of a sample of coke as determined by a laboratory sieving procedure

3.2.5 graded coke (sized coke)

coke that has been separated between specified size limits by screening

3.2.6 oversize

the percentage by mass of coke whose size is larger than a specified upper size limit

3.2.7 undersize

the percentage by mass of coke whose size is smaller than a specified lower size limit

3.2.8 large coke

coke that does not pass through the largest screen in use

3.2.9 breeze

coke that will pass through the smallest screen in use

3.2.10 input coke

the coke fed to a commercial screen or a series of screens

3.2.11 rated input

the quantity (t/h) for which a screen or series of screens is designed

3.2.12 throughput

the quantity (t/h) fed to a screen or series of screens during a specified period

3.2.13 output coke or product

the coke obtained from a screen or a series of screens

¹⁾ When BS 1017-2:1960 is revised, it is intended to adopt the terms in that revision.