

Methods for

Analysis and testing of coal and coke —

Part 104: Proximate analysis —

Section 104.3 Determination of volatile
matter content

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Solid Mineral Fuels Standards Policy Committee (SFC/-) to Technical Committee SFC/3, upon which the following bodies were represented:

- British Cement Association
- British Coal Corporation
- British Gas plc
- British Steel Industry
- Department of Trade and Industry (Standards and Quality Policy Unit, Quality, Design and Education Division)
- Electricity Supply Industry in United Kingdom
- GAMBICA (BEAMA Ltd.)
- Institute of British Foundrymen
- Institute of Petroleum
- Power Generation Contractors' Association (BEAMA Ltd.)

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Foreword

This Section of BS 1016 has been prepared under the direction of the Solid Mineral Fuels Standards Policy Committee. Part 104 is a revision of the 1973 editions of BS 1016-3 and BS 1016-4, which are superseded and withdrawn. This Section replaces clause 5 in BS 1016-3:1973 and clause 5 in BS 1016-4:1973, from which the principal change, in both cases, is the cooling in an atmosphere of nitrogen instead of in a desiccator.

Part 104 is a further Part numbered under a scheme for rationalizing and restructuring BS 1016. The new series, when complete, will begin with Part 100, which will include a general introduction. The earlier series of Parts is as follows, with the new Part numbers (which will be given to revisions when they are published) in parentheses.

- *Part 1: Total moisture of coal (Part 101);*
- *Part 2: Total moisture of coke (Part 102);*
- *Part 5: Gross calorific value of coal and coke (Part 105);*
- *Part 6: Ultimate analysis of coal (Part 106);*
- *Part 7: Ultimate analysis of coke (Part 106);*
- *Part 8: Chlorine in coal and coke (Part 106);*
- *Part 9: Phosphorus in coal and coke (Part 106);*
- *Part 10: Arsenic in coal and coke (Part 106);*
- *Part 11: Forms of sulphur in coal (Part 106);*
- *Part 12: Caking and swelling properties of coal (Part 107);*
- *Part 13: Tests special to coke (Part 108);*
- *Part 14: Analysis of coal ash and coke ash (Part 114);*
- *Part 15: Fusibility of coal ash and coke ash (Part 113);*
- *Part 16: Methods for reporting results (Part 100);*
- *Part 17: Size analysis of coal (Part 109);*
- *Part 18: Size analysis of coke (Part 110);*
- *Part 20: Determination of Hardgrove grindability index of hard coal (Part 112);*
- *Part 21: Determination of moisture-holding capacity of hard coal (Part 103).*

The following Parts in the new series have been published.

- *Part 104: Proximate analysis;*
- *Part 111: Determination of abrasion index of coal.*

Part 104 is divided into four Sections as follows.

- *Section 104.1: Determination of moisture content of the general analysis sample of coal;*
- *Section 104.2: Determination of moisture content of the general analysis sample of coke;*
- *Section 104.3: Determination of volatile matter content;*
- *Section 104.4: Determination of ash.*

This Section is related to ISO 562:1981, published by the International Organization for Standardization (ISO). The principal difference is that ISO 562 specifies cooling in a desiccator instead of cooling in an atmosphere of nitrogen.

There may be alternative methods for carrying out this determination which are more rapid and/or less labour-intensive than the reference method described in this Section of BS 1016. Work is in hand on the preparation of a standard for the validation of such alternative methods. It is important to demonstrate that an alternative method is free from bias when compared to this reference method, and will give levels of repeatability and reproducibility which are the same as or better than those quoted for the reference method (see clause 9).

WARNING NOTE. This British Standard does not necessarily detail all the precautions necessary to comply with the requirements of the Health and Safety at Work etc. Act 1974 or the Control of Substances Hazardous to Health Regulations 1988. Attention should be paid to any appropriate precautions and the method should be operated only by trained personnel.

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 to iv, pages 1 to 6, 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.