AS 2267—1979
UDC 66.041:662.741

Australian Standard 2267—1979

CODE OF PRACTICE FOR CONDUCTING PILOT COKE OVEN TESTS

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

b

THE FOLLOWING INDUSTRIAL, SCIENTIFIC AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Coal Association

Australian Institute of Energy

Australasian Institute of Mining and Metallurgy

Bureau of Steel Manufacturers of Australia

Coal Preparation Societies of NSW and Queensland

Confederation of Australian Industry

Department of Minerals and Energy, Victoria

Department of Mineral Resources and Development

Department of National Development

Electricity Supply Association of Australia

Institution of Engineers of Australia

Joint Coal Board

Queensland Coal Board

Royal Australian Chemical Institute

Universities

This standard, prepared under the direction of Committee CH/15, Coal and Coke, was approved by the Chemical Standards Board on behalf of the Council of the Standards Association of Australia on 4 April 1979, and was published on 1 July 1979.

In order to keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvement to published standards, addressed to the head office of the Association, are welcomed.

This standard was issued in draft form for public review as DR 78092.

AUSTRALIAN STANDARD

CODE OF PRACTICE FOR CONDUCTING PILOT COKE OVEN TESTS

AS 2267—1979

First published 1979

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.

ISBN 0 7262 1697 6

PREFACE

This standard was prepared by the Association's Committee on Coal and Coke under the direction of the Chemical Standards Board.

Pilot coke ovens provide a convenient and relatively inexpensive method for determination of the coke making properties of coals and coal blends. Because they require comparatively small quantities of coal for testing they are particularly useful for studying exploration samples, washery production samples, export grade coal and blends of different coals. They also find use for coke quality control and for investigations of operational parameters at commercial byproduct coke oven batteries.

This standard requires reference to the following standards:

AS 1038	Methods for the Analysis and Testing of Coal and Coke (Metric Units)
AS 1676	Methods for the Sampling of Hard Coal
AS 1898	Methods for the Sampling of Coke
AS K152	Methods for the Analysis and Testing of Coal and Coke
BS 1293	Methods for the Size Analysis of Coal and Coke
ISO 616	Coke—Determination of Shatter Indices
ASTM D291	Test for Cubic Foot Weight of Crushed Bituminous Coal

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
CODE OF PRACTICE FOR CONDUCTING PILOT COKE OVEN TESTS

1 SCOPE. This standard recommends the method of preparing the charge and producing coke in pilot scale coke ovens having widths approximating a commercial byproduct battery oven (e.g. 350 mm to 500 mm), and the methods of preparing such coke for testing.

2 DEFINITIONS. For the purpose of this standard the following definitions apply:

2.1 Coking rate. There are two methods of expressing the coking rate, viz—

(a) width of oven divided by the time between charging and pushing oven, expressed in millimetres per hour (mm/h);

(b) width of oven divided by the time between charging and the attainment of a specific centre of charge temperature (e.g. 900°C, 1000°C).

NOTE: It is a requirement of Clause 10.3 that the method used for expressing the coking rate be reported.

2.2 Bulk density—mass of coal charged divided by the volume of the charge in the oven at the time of charging, expressed in kilograms per cubic metre (kg/m^3). This should be specified as wet or dry basis and the moisture content should also be reported.

2.3 Coking pressure—maximum pressure, expressed in kilopascals (kPa), exerted by the oven charge on the walls of the oven during coking.

2.4 Coal throughput—coal bulk density divided by the time as defined in Clause 2.1(a) or Clause 2.1(b) above, expressed in kilograms per cubic metre hour (kg/m^3.h) on a wet or dry basis.

2.5 Productivity—total mass of coke produced divided by the volume of the charge in the oven at the time of charging, in unit time (i.e. kg/m^3.h) expressed on a dry basis.

3 SAMPLING. Sampling and sample reduction should be carried out as described in AS 1676 and AS 1898 where applicable.

4 PRELIMINARY TESTING. Some preliminary testing of the coal should be carried out prior to the coking test, for the following reasons: