Australian Standard™

Coal preparation

Part 4: Flowsheets and symbols

This Australian Standard was prepared by Committee MN/1, Coal and Coke. It was approved on behalf of the Council of Standards Australia on 4 September 1998 and published on 5 January 1999.

The following interests are represented on Committee MN/1:

Australasian Institute of Mining and Metallurgy

Australian Coal Association

Australian Coal Preparation Society

Australian Institute of Energy

Bureau of Steel Manufacturers of Australia

Coalfield Geology Council of New South Wales

CSIRO, Division of Energy Technology

Department of Mines and Energy, Queensland

Electricity Supply Association of Australia

Institution of Engineers, Australia

Minerals Council of Australia

Royal Australian Chemical Institute

University of Newcastle

University of New South Wales

University of Queensland

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PREFACE

This Standard was prepared by the Standards Australia Committee MN/1, Coal and Coke to supersede AS 1414—1990, *Flowsheets and symbols relating to coal preparation plant*. Its purpose is to provide principles relating to the preparation of flowsheets for coal preparation plant. In the preparation of this Standard cognizance was taken of ISO 924:1989, *Coal preparation plant—Principles and conventions for flowsheets* and ISO 561:1989, *Coal preparation plant—Graphical symbols*. Minor modifications have been made to ISO conventions to conform with established Australian practice.

The objective of this revision is to delete unused symbols, revise some symbols and provide symbols for equipment that has come into use since the previous edition.

The term ‘informative’ has been used in this Standard to define the application of the Appendices to which it applies. An informative appendix is for guidance and information only.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out recommended principles and drawing conventions for flowsheets and symbols relating to coal preparation plant.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
2418 Coal and coke—Glossary of terms

ISO
561 Coal preparation plant—Graphical symbols

1.3 DEFINITIONS For the purpose of the Standard, the definitions in AS 2418 and those below apply.

1.3.1 Coal preparation—collectively, physical and mechanical processes applied to coal to make it suitable for a given application.

1.3.2 Capacities

1.3.2.1 *Design capacity*—the rate of feed, defined by limits expressing the extent and duration of load variations, at which specific items of plant subject to a performance guarantee have to operate continuously and give the guaranteed results on a particular quality of feed.

1.3.2.2 *Mechanical maximum capacity*—the highest rate of feed at which specific items of equipment, not subject to performance guarantees, will function on the type and quality of feed for which they are supplied.

1.3.2.3 *Nominal capacity*—a notional figure, expressed in mass per hour, used in the title of a flowsheet and in general descriptions of a plant, applying to the plant as a whole and to the specific project under consideration.

1.3.2.4 *Operational capacities*—figures given on a flowsheet to indicate quantities per unit time passing various points in the plant, taking account of fluctuations in the rate of supply and composition (as to size and impurity content) and the balance of the circuits.

1.3.2.5 *Peak design capacity*—a rate of feed, in excess of the design capacity, which specific items of plant will accept for short periods without necessarily fulfilling the performance guarantees given for them.

NOTE: Further information on the capacity definitions is given in Appendix A.

1.3.3 Flowsheets

1.3.3.1 *Balanced flowsheet*—a specialized process flowsheet indicating the operational capacities at various points in the plant.