Australian Standard™

Flanges for pipes, valves and fittings

This Australian Standard was prepared by Committee ME/1, Pressure Equipment. It was approved on behalf of the Council of Standards Australia on 17 September 1999 and published on 17 January 2000.

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Flanges for pipes, valves and fittings

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(being endorsement of BS 10.1—1928 without amendment).
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/1, Pressure Equipment Standard to supersede AS 2129—1994.

This Standard is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard. Consensus means general agreement by all interested parties. Consensus includes an attempt to remove all objections and implies much more than the concept of a simple majority, but not necessarily unanimity. It is consistent with this meaning that a member may be included in the Committee list and yet not be in full agreement with all clauses of this Standard.

This Standard is derived from the British inch series flange Standard BS 10:1962, *Flanges and bolting for pipes, valves and fittings*. BS 10 was made obsolescent in 1970, however, it is still called up in British pressure equipment Standards. A 1992 survey of Australian industry showed that flanges in accordance with AS 2129 were still in great demand. As a result it was determined that AS 2129 should be revised and updated rather than being made obsolescent.

It is anticipated flanges to AS 2129 will remain in use for at least 50 years, particularly for replacement flanges. Consideration should be given to the use of alternative flanges, such as those to AS/NZS 4331, *Metallic flanges* (series), BS 4504, *Circular flanges for pipes valves and fittings*, (*PN designated*), ANSI/ASME B16.5, *Pipe flanges and flanged fittings*, and AS 4087, *Metallic flanges for waterworks purposes*.

The main changes in this edition are as follows:

(a) Incorporation of Amendment No. 1 to the 1994 edition.

(b) Deletion of Table C which is now covered in AS 4087.

(c) Updated referenced documents.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

The term ‘normative’ has been used in this Standard to define the application of the Appendices. A ‘normative’ appendix is an integral part of this Standard.

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STANDARDS AUSTRALIA

Australian Standard

Flanges for pipes, valves and fittings

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for circular flanges of nominal sizes DN 15 to DN 3000, inclusive, and their bolting for use on pipes, valves, fittings and other pressure-retaining equipment containing fluid at pressures up to 19 300 kPa and at temperatures in the range −200°C to +525°C.

These flanges are manufactured from carbon steel, carbon-manganese steel, alloy steel, stainless steel, grey iron, malleable iron, ductile cast iron*, or copper alloy.

This Standard is applicable to flanges for water, steam, compressed air, chemical and petroleum plants, hydraulic piping and where other Standards require compliance with this Standard.

This Standard is not intended to apply to flanges for water or waste water covered by AS 4087.

Flanges R, S and T are designated obsolescent and are not recommended for use in new equipment. They are retained to provide for the servicing of existing equipment that is expected to have a long working life. For new equipment, flanges R, S and T should be replaced with flanges to AS/NZS 4331, Parts 1 to 3, ANSI B16.5 or BS 4504 (series).

The history of AS 2129 flanges (and its predecessor BS 10) and the future use of these flanges is given in the Preface.

1.2 OBJECTIVE The objective of this Standard is to provide guidance to manufacturers and users on the materials, manufacturing requirements and dimensions of circular flanges for use with existing or new equipment.

1.3 APPLICATION

1.3.1 Flanges Flanges shall comply with the relevant requirements of this Section and with the specific requirements of the following Sections, as appropriate:

Section 2—Temperature/Pressure Ratings.

Section 3—Materials.

Section 4—Manufacturing Requirements and Dimensions.

Section 5—Marking and Material Certificates.

Section 6—Dimensions of Flanges.

1.3.2 Bolting Bolting for flanges shall comply with the requirements of Appendix A.

1.3.3 Assembly The assembly of flanged joints shall comply with the requirements of Appendix B.

1.4 REFERENCED DOCUMENTS The documents referred to in this Standard are listed, with titles, in Appendix C.

* Alternative names for ductile cast iron are ‘spheroidal graphite iron’, ‘SG iron’, and ‘nodular graphite iron’.

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