

Australian/New Zealand Standard

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**Metallic flanges**

**Part 1: Steel flanges**

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME/1, Pressure Equipment. It was approved on behalf of the Council of Standards Australia on 19 July 1995 and on behalf of the council of Standards New Zealand on 24 October 1995. It was published on 5 December 1995.

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## **Metallic flanges**

### **Part 1: Steel flanges**

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/1 on Pressure Equipment. It is identical with and has been reproduced from ISO 7005-1:1992, *Metallic flanges, Part 1: Steel flanges*.

The objective of this Standard is to provide designers, manufacturers and users with an international Standard for flanges for use in pressure applications.

This Joint Standard is one of the following series that applies to metallic flanges.

## AS/NZS

- 4331 Metallic flanges
- 4331.1 Part 1: Steel flanges
- 4331.2 Part 2: Cast iron flanges
- 4331.3 Part 3: Copper alloy and composite flanges

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

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annex to which they apply. A 'normative' annex is an integral part of a Standard, whereas an 'informative' annex is only for information and guidance.

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References to international Standards should be replaced by equivalent Australian Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO		AS	
7	Pipe threads where pressure-tight joints are made on the threads	1722	Pipe threads of Whitworth form
7-1:1982	Part 1: Designation, dimensions and tolerances	1722.1	Part 1: Sealing pipe threads
7-2:1982	Part 2: Verification by means of limit gauges	1722.1	Part 1: Sealing pipe threads
261:1973	ISO general purpose metric screw threads—General plan	1721	General purpose metric screw threads
887*	Plain washers for metric bolts, screws and nuts for general purposes—General plan	—	

\* To be published (Revision of ISO 887:1983).

ISO		AS
6708:1980	Pipe components— Definition of nominal size	—
7268:1983	Pipe components— Definition of nominal pressure	—
7483:1991	Dimensions of gaskets for use with flanges to ISO 7005	—
ANSI/ASME		—
B1.20.1:1983	Pipe threads, general purpose (inch)	

Equivalent National Material Standards may be substituted for those specified in this Standard.

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## CONTENTS

	<i>Page</i>
<b>Section 1: General</b> .....	1
1.1 Scope .....	1
1.2 Normative references .....	1
1.3 Definitions .....	2
1.4 Designation of types, components and facings .....	2
<b>Section 2: General requirements</b> .....	3
2.1 Pressure/temperature ratings .....	3
2.2 Materials and bolting .....	3
2.3 Repairs .....	3
2.4 Dimensions .....	3
2.5 Facings .....	4
2.6 Spot-facing or back-facing .....	5
2.7 Tolerances .....	5
2.8 Marking .....	5
2.9 Inspection and test .....	6
2.10 Information to be supplied by the purchaser .....	6
<b>Section 3: Dimensions</b> .....	11
<b>Section 4: Tolerances</b> .....	47

<b>Annexes</b>	<i>Page</i>
<b>A</b> Bevel for specified wall thicknesses from 5 mm to 22 mm inclusive and greater than 22 mm . . . . .	49
<b>B</b> Acceptable bevel designs for unequal wall thicknesses (pipeline applications) . . . . .	50
<b>C</b> Recommended bevel for equal wall thicknesses $t$ the end of the flange hub from 5 mm to 22 mm inclusive and greater than 22 mm (pipeline applications) . . .	51
<b>D</b> Guidance on flange materials . . . . .	52
<b>E</b> Guidance on pressure/temperature ratings . . . . .	62
<b>F</b> Design criteria (pipeline applications) . . . . .	78
<b>G</b> Bibliography . . . . .	79
 <b>Tables</b>	
<b>1</b> Surface finish for facings types A, B and E/F (large) . . . . .	5
<b>2</b> Surface finish values for facings types C/D, E/F (small), G/H and J . . . . .	5
<b>3</b> Synoptic table . . . . .	11
<b>4</b> Dimensions of flange facings for PN 2,5, PN 6, PN 10, PN 16, PN 25 and PN 40	15
<b>5</b> Dimensions of flange facings up to nominal size DN 900 for PN 20, PN 50, PN 110, PN 150, PN 260 and PN 420 . . . . .	17
<b>6</b> Dimensions of flange facings for nominal sizes DN 950 to DN 1 500 for PN 20, PN 50, PN 110 and PN 150 . . . . .	17
<b>7</b> Dimensions of ring-joint facings . . . . .	19
<b>8</b> Dimensions of PN 2,5 flanges . . . . .	23
<b>9</b> Dimensions of PN 6 flanges . . . . .	25
<b>10</b> Dimensions of PN 10 flanges . . . . .	27
<b>11</b> Dimensions of PN 16 flanges . . . . .	29
<b>12</b> Dimensions of PN 20 flanges . . . . .	31
<b>13</b> Dimensions of PN 25 flanges . . . . .	33
<b>14</b> Dimensions of PN 40 flanges . . . . .	35
<b>15</b> Dimensions of PN 50 flanges . . . . .	37
<b>16</b> Dimensions of PN 110 flanges . . . . .	39
<b>17</b> Dimensions of PN 150 flanges . . . . .	41
<b>18</b> Dimensions of PN 260 flanges . . . . .	43
<b>19</b> Dimensions of PN 420 flanges . . . . .	45
<b>20</b> Tolerances . . . . .	47
<b>21</b> Minimum hub radius after back-facing . . . . .	48

	<i>Page</i>
<b>D.1</b> Basic properties and reference standards for materials used for PN 2,5, PN 6, PN 10, PN 16, PN 25 and PN 40 flanges . . . . .	53
<b>D.2</b> Reference standards for materials used for PN 20, PN 50, PN 110, PN 150, PN 260 and PN 420 flanges . . . . .	57
<b>D.3</b> Materials applicable to tables 12, 15, 16 and 17 covering PN 20, PN 50, PN 110 and PN 150 flanges types 05 and 11 in the size range DN 300 and larger for pipeline applications . . . . .	60
<b>E.1</b> Pressure/temperature (P/T) ratings for flanges made using material groups 1E0 to 6E0 . . . . .	63
<b>E.2</b> Pressure/temperature (P/T) ratings for flanges made using material groups 7E0 to 9E0 . . . . .	64
<b>E.3</b> Pressure/temperature (P/T) ratings for flanges made using austenitic stainless steels (based on 0,2% proof stress), material groups 10E0 to 15E0 . . . . .	65
<b>E.4</b> Pressure/temperature (P/T) ratings for flanges made using austenitic stainless steels (based on 1% proof stress), material groups 10E0 to 15E0 . . . . .	66
<b>E.5</b> Pressure/temperature (P/T) ratings for flanges made using group 1A1 materials . . . . .	67
<b>E.6</b> Pressure/temperature (P/T) ratings for flanges made using group 1A2 materials . . . . .	67
<b>E.7</b> Pressure/temperature (P/T) ratings for flanges made using group 1A3 materials . . . . .	68
<b>E.8</b> Pressure/temperature (P/T) ratings for flanges made using group 1A4 materials . . . . .	68
<b>E.9</b> Pressure/temperature (P/T) ratings for flanges made using group 1A5 materials . . . . .	69
<b>E.10</b> Pressure/temperature (P/T) ratings for flanges made using group 1A7 materials . . . . .	69
<b>E.11</b> Pressure/temperature (P/T) ratings for flanges made using group 1A9 materials . . . . .	70
<b>E.12</b> Pressure/temperature (P/T) ratings for flanges made using group 1A10 materials . . . . .	70
<b>E.13</b> Pressure/temperature (P/T) ratings for flanges made using group 1A13 materials . . . . .	71
<b>E.14</b> Pressure/temperature (P/T) ratings for flanges made using group 1A14 materials . . . . .	71
<b>E.15</b> Pressure/temperature (P/T) ratings for flanges made using group 2A1 materials . . . . .	72
<b>E.16</b> Pressure/temperature (P/T) ratings for flanges made using group 2A2 materials . . . . .	73
<b>E.17</b> Pressure/temperature (P/T) ratings for flanges made using group 2A3 materials . . . . .	73
<b>E.18</b> Pressure/temperature (P/T) ratings for flanges made using group 2A4 materials . . . . .	74
<b>E.19</b> Pressure/temperature (P/T) ratings for flanges made using group 2A5 materials . . . . .	75



	<i>Page</i>
<b>E.20</b> Pressure/temperature (P/T) ratings for flanges made using group 2A6 materials .....	76
<b>E.21</b> Pressure/temperature (P/T) ratings for flanges made using group 2A7 materials .....	77
<b>E.22</b> Pressure/temperature (P/T) ratings for pipeline flanges .....	77
 <b>Figures</b>	
<b>1</b> Flanges — Types 01 to 05 .....	7
<b>2</b> Flanges — Types 11 to 15 .....	8
<b>3</b> Flange — Type 21 .....	9
<b>4</b> Ancillary components for flanges — Types 32 to 34 .....	9
<b>5</b> Illustration of flange facings (types A to J) .....	10
<b>6</b> PN 2,5, PN 6, PN 10, PN 16, PN 25 and PN 40 flange facing dimensions .....	14
<b>7</b> PN 20, PN 50, PN 110, PN 150, PN 260 and PN 420 flange facing dimensions ...	16
<b>8</b> Minimum hub radius after back-facing .....	48
<b>A.1</b> Bevel for specified wall thicknesses $t$ .....	49
<b>B.1</b> Acceptable bevel designs for unequal wall thicknesses .....	50
<b>C.1</b> Recommended bevel for equal wall thicknesses $t$ at the end of the flange hub ...	51

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# AUSTRALIAN/NEW ZEALAND STANDARD

## Metallic flanges —

### Part 1: Steel flanges

#### Section 1: General

##### 1.1 Scope

This part of ISO 7005 for a single system of flanges specifies requirements for circular steel flanges in the following PN designations:

Series 1 <sup>1)</sup>	Series 2 <sup>1)</sup>
PN 10	PN 2,5
PN 16	PN 6
PN 20	PN 25
PN 50	PN 40
PN 110	
PN 150	
PN 260	
PN 420	

It specifies the types of steel flanges and their facings, dimensions, tolerances, threading, bolt sizes, flange face surface finish, marking, testing and inspection.

It does not specify pressure/temperature ratings or materials for steel flanges. However, annex D gives guidance on selected materials and annex E gives guidance on the pressure/temperature ratings for some flanges made from the materials listed in annex D.

This part of ISO 7005 does not apply to flanges made from bar stock by turning.

Nor does it apply to flanges of types 11, 12, 13, 14 and 15 made from plate material.

The various gasket types, dimensions, design characteristics and materials used are not within the scope of this part of ISO 7005.

NOTE — Dimensions of gaskets are given in ISO 7483.

##### 1.2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 7005. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 7005 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7-1 : 1982, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Designation, dimensions and tolerances.*

ISO 7-2 : 1982, *Pipe threads where pressure-tight joints are made on the threads — Part 2: Verification by means of limit gauges.*

ISO 261 : 1973, *ISO general purpose metric screw threads — General plan.*

ISO 887: — <sup>1)</sup>, *Plain washers for metric bolts, screws and nuts for general purposes — General plan.*

ISO 6708 : 1980, *Pipe components — Definition of nominal size.*

ISO 7268 : 1983, *Pipe components — Definition of nominal pressure.*

ISO 7483 : 1991, *Dimensions of gaskets for use with flanges to ISO 7005.*

ANSI/ASME B1.20.1 : 1983, *Pipe threads, general purpose (inch).*

\*<sup>1)</sup> Series 1 flanges are the basic flanges; series 2 flanges may have a limited application in the future.

1) To be published. (Revision of ISO 887 : 1983.)



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