AS 1035—1983

Australian Standard®

STEEL LADDERS FOR SHIPS

VERTICAL LADDERS

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PREFACE

This edition of the standard was prepared by the Association's Committee on Shipbuilding, to supersede AS 1035—1971. There are minor technical changes to the standard, some minor corrections and updating of references to Australian standards; some editorial rearrangement has also been carried out.

A requirement has been added to restrict to 6000 mm the vertical distance of ladders between landings. Also all reference to imperial units has been omitted.

Users of this standard should also note that in addition to observing the requirements of the standard, they should at the same time ensure compliance with such statutory requirements, rules and regulations as may be applicable to the individual ship concerned.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
STEEL LADDERS FOR SHIPS—VERTICAL LADDERS

1 SCOPE. This standard specifies requirements for vertical steel ladders for installation in ships. These ladders are for use at an inclination from 70 to 90 degrees to the horizontal, where the rungs and stiles are essentially parallel to the supporting structure.

The ladders are used in all areas of ships. Examples are in all machinery spaces, in holds, tanks and on deckhouses and masts.

NOTES:

1. Handrails, cages and landings are specified in AS 1657, SAA Code for Fixed Platforms, Walkways, Stairways and Ladders, and AS 1986, Guard Rails, Stanchions and Storm Rails for Ships (for other than Machinery Spaces).
2. Inclined steel ladders for ships machinery spaces are specified in AS 1036.
3. Inclined steel ladders other than for ships machinery spaces are specified in AS 1037.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1101 Graphical Symbols for General Engineering
Part 3—Symbols for Welding

AS 1204 Structural Steels—Ordinary Weldable Grades

AS 1554 SAA Structural Steel Welding Code
Part 1—Welding of Steel Structures

3 CLASSIFICATION. The ladders shall be classified by a type code according to the shape of the rungs, the orientation of square rungs and the number of rungs, as follows:

(a) The first letter indicates the shape of the cross-section: those with circular cross-section shall be Type R and those with square cross-section shall be Type S.

(b) The second letter, applicable to Type S ladders only, indicates the orientation of the square cross-section: those in which a diagonal of the square is vertical shall be indicated by D and those in which two faces of the square are vertical shall be indicated by F.

(c) The final symbol is a number which shall be 1 for ladders with steps formed by a single rung and 2 for ladders where each step is formed by two rungs.

Table 1 illustrates the various classified types in this standard.

TABLE 1

LADDER TYPES

Shape of cross-section of rungs	Types	
	Number of rungs per step	
	1	2
Circular (round)	R1	R2
Square —		
Diagonal vertical	SD1	SD2
Face vertical	SF1	SF2

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

4.1 Shall and Should—'shall' is taken to be mandatory and 'should' is taken to be advisory.

4.2 Ladder—a structure with steps attached to stiles, for ascending and descending from one level to another.

4.3 Stile—a vertical or sloping member of a ladder onto which the rungs are mounted. Stiles usually occur in pairs. The terms 'side rail' and 'stringer' are synonymous with the term 'stile'.

4.4 Step—a horizontal member of a ladder consisting of one or two rungs.

4.5 Rung—a steel bar whose cross-section is either circular or square, used in the construction of a step.

4.6 Rise—the vertical distance between the tops of adjacent steps.

5 MATERIAL. The material used in the construction of the ladder shall be hot-rolled structural grade low carbon (mild) steel, suitable for welding and complying with AS 1204. The material shall be supplied in flats, rounds and squares as required.

NOTE: The purchaser should so specify if he requires material other than that specified above.

6 SHAPE AND DIMENSIONS. Ladders shall conform to the shape and dimensions shown in Figs 1 and 2. Dimensions *w* (width between stiles) and *b* (breadth of stiles) shall be as indicated in Table 2 for the designated size.

TABLE 2

DESIGNATED SIZE OF LADDERS

Designation of size	Width between stiles, *w* mm	Breadth of stiles, *b*, mm	
		1 rung	2 rung
250	250	50	—
300	300	65	75
350	350	65	75
400	400	—	75

Ladders should be installed so that the rise from the deck, landing or platform to the bottom step is equal to the rise of each step in the ladder.

The maximum vertical distance of a ladder between landings shall not exceed 6000 mm.

The length of the stiles may be calculated as shown in Appendix A.

Stiles shall be attached to the supporting structure at points not greater than 2 m apart. On long ladders, one or more intermediate attachment lugs shall be provided so that the spacing of the attachment points to the supporting structure shall not be more than 2 m. The spacing of the attachment points should also be equal