INTERNATIONAL STANDARD

ISO 9519

First edition
1990-11-01

Shipbuilding and marine structures — Rungs for dog-step ladders

Construction navale et structures maritimes — Échelons pour marchepieds

Reference number
ISO 9519:1990(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9519 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*.

This first edition cancels and replaces the first edition of ISO 5487:1981; basically a technical revision of this, it retains the main dimensions of rungs for superstructures (which accord with the ILO Minimum requirements for hold ladders) but extends it, notably in the code letters, more precise material requirements (clause 4), surface finish (5.2) and tolerances (6.3).

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Shipbuilding and marine structures — Rungs for dog-step ladders

1 Scope

This International Standard specifies the types, dimensions, material, manufacture and designation of rungs for dog-step ladders; it also lays down the installation and composition of single rungs forming a dog-step ladder.

Dog-step ladders, formed from single rungs, may only be used where fixed vertical ladders with stringers[1] cannot be installed. Dog-step ladders fitted to the ship's structure should serve only to bridge minor differences in height.

Dog-step ladders as specified in this International Standard may also be fitted to marine structures other than ships to serve equivalent purposes.

NOTE 1 Users of this International Standard should note that they should ensure compliance with such statutory requirements, rules and regulations as may be applicable to the individual ship or marine structure concerned.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard 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 630:1980, *Structural steels*.

ISO 1035-2:1980, *Hot-rolled steel bars — Part 2: Dimensions of square bars*.

ISO 2768-1:1989, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*.

3 Types

Rungs for dog-step ladders are divided into the following two types:

Type A for ship's structure;

Type B for ship's masts.

4 Material

4.1 Semi-finished product

The rungs shall be formed from steel square bars meeting the specification of ISO 1035-2.

4.2 Steel quality

The bars shall be made of steel meeting the specification of ISO 630, grade Fe 360, as the minimum quality.

NOTE 2 Alternatively, ship quality steel may be used provided that it has equivalent mechanical and welding properties.

5 Manufacture

5.1 Defects

Rungs shall be free from defects likely to cause injury to persons using the dog-step ladder.

5.2 Surface finish

Standard finish of rungs shall be raw and without preservation.

1) For example, as specified in ISO 3797:1976, *Shipbuilding — Vertical steel ladders*.

By special agreement only, rungs may be sand-blasted and preserved.

6 Dimensions

The dimensions of rungs shall be in accordance with figure 1 and figure 2 as appropriate.

6.1 Dimensions for type A

Type A rungs shall meet the requirements shown in figure 1.

Where type A rungs are to be installed against insulated walls, the leg-length of the rungs shall be lengthened, preferably to 300 mm. At the same time the clearance between the rung and the insulation surface indicated in figure 3 shall be maintained. If such a type of rung is needed, it shall be given as an element of the designation.

6.2 Dimensions for type B

Type B rungs shall meet the requirements shown in figure 2.

6.3 Tolerances

Tolerances for dimensions in figure 1, figure 2 and figure 3 shall correspond to accuracy grade v (very coarse) given in ISO 2768-1.

7 Mass

The mass of a rung shall be as follows:

type A: ≈ 2,2 kg;

type B: ≈ 0,72 kg.

8 Installation

8.1 Rungs shall be installed in accordance with figure 3. The bottom rung shall be as near as possible to 300 mm above the lower access level.

8.2 Rungs shall be welded to the ship's structure or to the ship's mast in such a way as to support a load of 1 000 N with a safety factor of 1 : 5.

This can be achieved with one all-round fillet weld of 4 mm minimum at the weld-on ends of the rungs.

9 Designation

For reference and ordering purposes, rungs and ladders formed from rungs according to this International Standard shall be designated as given in 9.1 and 9.2.

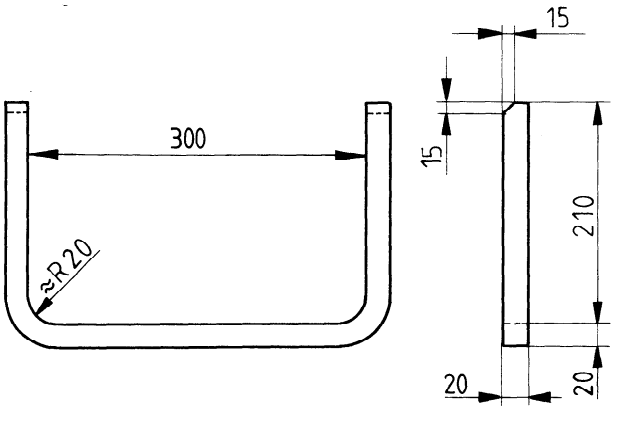
9.1 Elements for designation

The following elements shall be indicated, in the order given:

a) denomination: rung (for a single rung) or ladder (for composition of rungs);

b) number of this International Standard; ISO 9519;

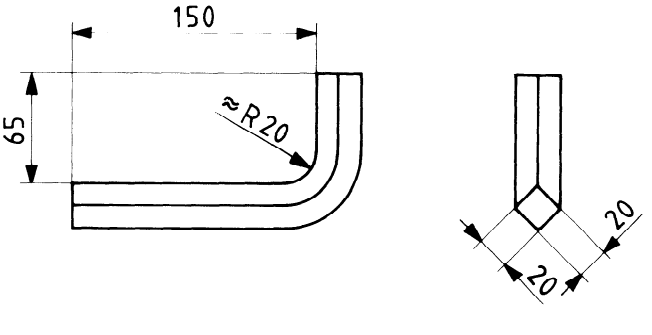
Dimensions in millimetres



Developed length: ≈ 734

Figure 1 — Rung type A

Dimensions in millimetres



Developed length: ≈ 228

Figure 2 — Rung type B

c) type, code letter: A or B (see clause 3);

d) leg length (for insulated walls only): 300 mm or more, as appropriate;

e) number of rungs forming a ladder (for ladder designation, only).

9.2 Examples of designation

9.2.1 Example for single rung

A rung according to this International Standard, of type A, is designated as follows:

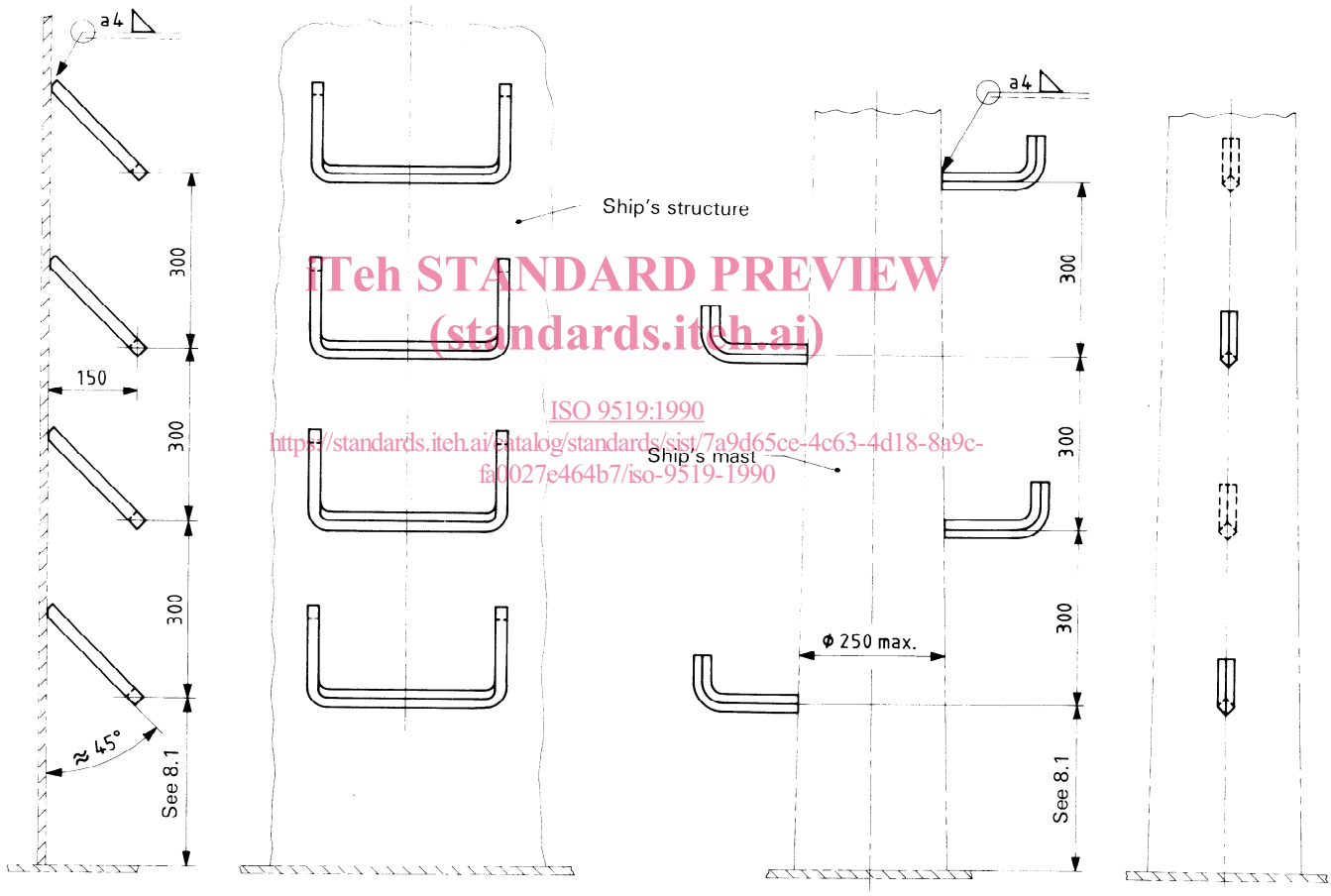
Rung ISO 9519 - A

9.2.2 Example for ladder

A ladder according to this International Standard, formed from rungs of type B, number of rungs 6, is designated as follows:

Ladder ISO 9519 - B6

Dimensions in millimetres



Tolerances: see 6.3.

a) Ladder for ship's structure (formed from rungs type A)

b) Ladder for ship's masts (formed from rungs type B)

Figure 3 — Installation details

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UDC 629.12.046

Descriptors: shipbuilding, ladders, steps (stairs), specifications, dimensions, designation.

Price based on 3 pages