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# International Standard



# 5489

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Shipbuilding — Embarkation ladders

*Construction navale — Échelles d'embarcation*

First edition — 1979-11-15

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[ISO 5489:1979](#)

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Descriptors : shipbuilding, embarkation devices, ladders, safety devices, specifications, dimensions, designation, marking.

Price based on 4 pages

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5489 was developed by Technical Committee ISO/TC 8, *Shipbuilding*, and was circulated to the member bodies in July 1978.

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It has been approved by the member bodies of the following countries :

Australia	India	Norway
Austria	Ireland	Poland
Belgium	Italy	Romania
Bulgaria	Japan	Spain
Czechoslovakia	Korea, Dem. P. Rep. of	Sweden
Finland	Korea, Rep. of	United Kingdom
France	Mexico	Yugoslavia
Germany, F. R.	Netherlands	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Brazil  
USSR

# Shipbuilding — Embarkation ladders

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### 1 Scope and field of application

This International Standard specifies requirements for an embarkation ladder which is provided for passengers and crew to gain access to a survival craft in an emergency.

### 2 References

ISO 799, *Shipbuilding — Pilot ladders*.<sup>1)</sup>

ISO 1181, *Three- or four-strand manila and sisal ropes*.

ISO 2262, *Rope thimbles*.

### 3 Dimensions

The dimensions of the assembled embarkation ladder and of the components shall be in accordance with figures 1 and 2.

### 4 Materials

4.1 The materials of components shall be in accordance with the table. Metal parts shall not be used in the embarkation ladder construction, except for item 4.

4.2 Steps shall be made from one piece of hardwood (ash, oak, elm, beech or teak) free from knots, or from other materials having equivalent relative density, strength, durability and buoyancy. The lowest four steps may be made of rubber of sufficient strength and stiffness, or of other suitable material of equivalent characteristics. Steps shall have an efficient non-slip surface.

4.3 The lashing for side ropes shall consist of two- or three-ply marline of minimum breaking strength 800 N, or other suitable material of equivalent strength.

Table — Components and materials

Item	Component	Material	Specification
1	Step	Hardwood	See 4.2
2	Side ropes	Manila	ISO 1181, Quality 1
3	Side rope seizing	Marline	See 4.3
4	Rope thimble	Steel, galvanized	ISO 2262, table 2, nominal size 20

1) In course of revision (ISO/R 799-1968).

## 5 Construction

**5.1** The embarkation ladder shall be assembled in accordance with figure 1 to have an equal step spacing of  $310 \pm 5$  mm.

**5.2** Steps shall be constructed from one piece to the dimensions given in figure 2. Their non-slip upper surfaces shall be provided by either

- a) longitudinal grooving, or
- b) the application of an approved non-slip coating.

**5.3** Side ropes shall have a diameter of 20 mm (circumference 64 mm) and shall be seized together as closely as possible above and below each step by a figure-of-eight racking seizing. The side ropes below the bottom step shall have a double racking seizing as shown in figure 1. A racking seizing shall be applied below the rope thimbles.

**5.4** All rope ends shall be whipped for a distance of 25 mm with waxed sailmaker's twine or equivalent material.

## 6 Designation

Embarkation ladders conforming to this International Standard

shall be designated by the following indications, in the order given :

- number of this International Standard;
- number of steps.

*Example* : The designation for an embarkation ladder consisting of 14 steps is :

### Embarkation ladder ISO 5489 S14

NOTE — The length of an embarkation ladder determined by the designation shall include an allowance for a 15° adverse list.

Spare or additional components shall be designated by reference to the relevant International Standard.

*Example* : The designation for a spare step would be :

### Step ISO 799

Since the steps in ladders to ISO 5489 are identical to those defined in table 1 of ISO 799.

NOTE — However, this should not be confused with ladder identification which is specified in clause 7 below.

Embarkation ladders conforming to this International Standard shall be permanently marked under the two top steps by the number of this International Standard : ISO 5489.

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ISO 5489-1979

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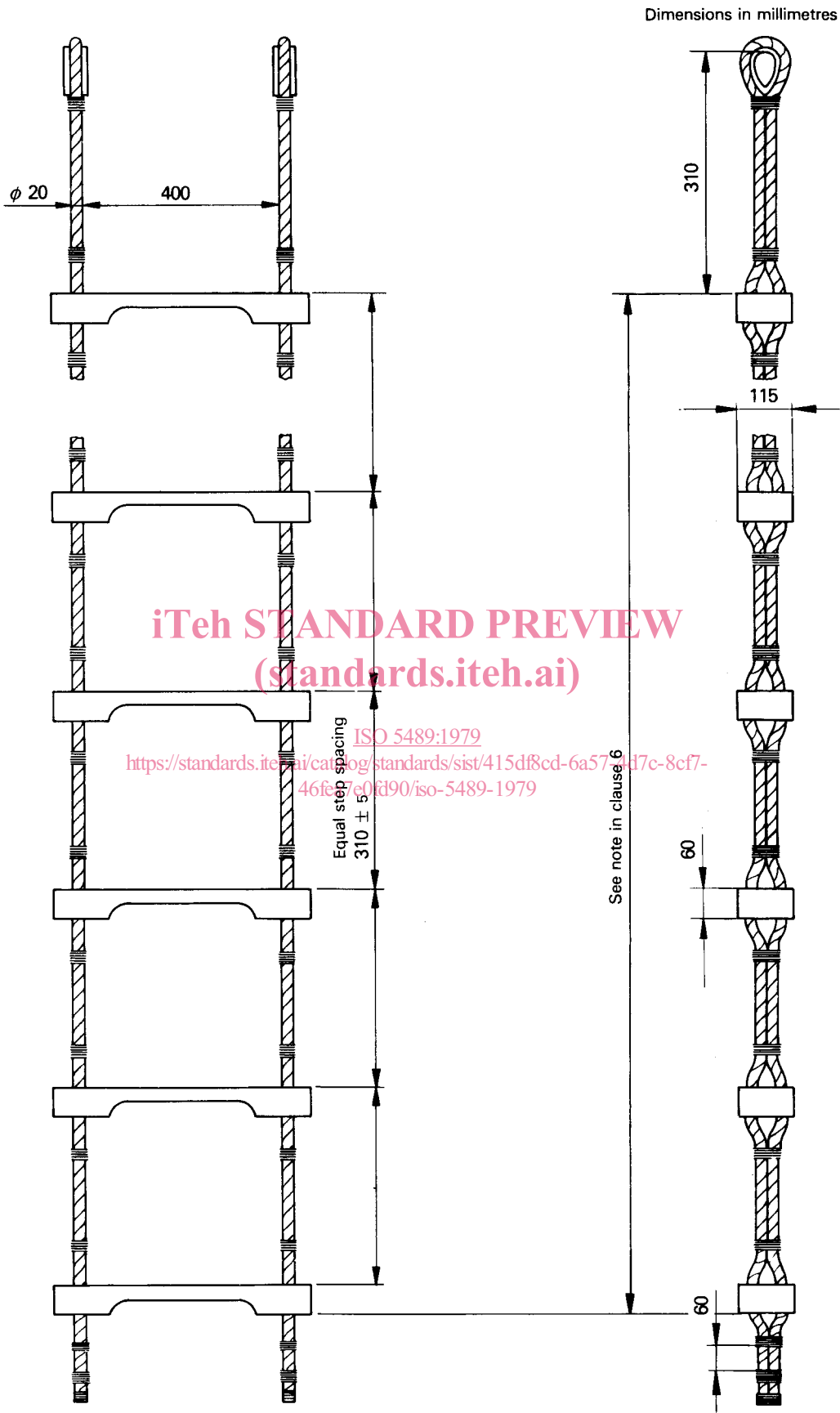
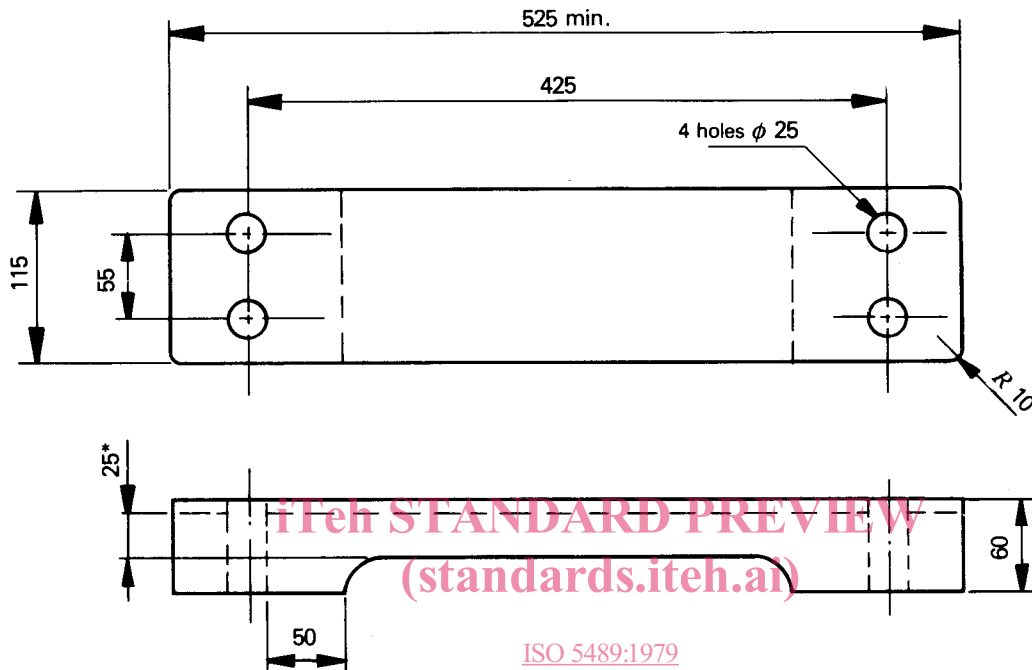


Figure 1 — Assembled embarkation ladder

Dimensions in millimetres



- Excluding the depth of the grooving or non-slip coating. See 5.2.

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Figure 2 — Step

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