INTERNATIONAL STANDARD

ISO 799

Third edition
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Ships and marine technology — Pilot ladders

Navires et technologie maritime — Échelles de pilote

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 799 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 1, *Lifesaving and fire protection*.

This third edition cancels and replaces the second edition (ISO 799:1986), of which it constitutes a complete revision in order to take into account new designs and manufacturing methods for pilot ladders which have entered the market since 1986.

Introduction

This International Standard is intended to supplement existing IMO requirements for pilot ladders. Since IMO instruments do not include specific requirements for prototype testing of pilot ladders for approval, the tests included in this standard are in excess of the existing IMO requirements. The inclusion of these tests was considered necessary in order to provide a means of ensuring conformance of pilot ladders with the performance requirements prescribed in IMO instruments and in this International Standard.

Ships and marine technology — Pilot ladders

1 Scope

This International Standard specifies requirements for a ship's pilot ladder which is provided to enable a maritime pilot to embark and disembark a ship safely along a vertical portion of the ship's hull. It is applicable to merchant ships which embark and disembark maritime pilots with the ship underway. National maritime safety administrations are urged to accept ladders complying with this International Standard on their ships, as complying fully with the requirements of the 1974 International Convention for the Safety of Life at Sea (SOLAS), as amended.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 209-1:1989, *Wrought aluminium and aluminium alloys — Chemical composition and form of products — Part 1: Chemical composition*

ISO 877:1994, *Plastics — Methods of exposure to direct weathering, to weathering using glass-filtered daylight, and to intensified weathering by daylight using Fresnel mirrors*

ISO 1181:1990, *Ropes — Manila and sisal — Specification*

ISO 1461:1999, *Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods*

3 Materials

3.1 Wooden parts

Each wooden part shall be made of hardwood (ash, oak, elm, beech or teak) free from knots.

3.2 Side ropes

3.2.1 Each side rope shall be mildew-resistant manila rope meeting ISO 1181:1990, Quality 1, or a spun thermoset polyester rope with a polypropylene core of a colour that contrasts with the spun polyester. Each side rope shall have a breaking strength of at least 24 kN, and a nominal diameter of 18 mm (57 mm circumference).

3.2.2 Alternative side ropes of synthetic material may be used if they

a) meet the breaking strength and size requirements of 3.2.1,

b) are at least as resistant to elongation under load as the standard ropes described in 3.2.1,

c) have an exterior surface suitable for grasping with bare hands, similar to manila or spun polyester,

d) are of a thermoset polymer, resistant to deterioration from ultraviolet light, and

e) provide a visual indication of excessive wear, similar to the spun polyester/polypropylene construction described in 3.2.1.

3.3 Metallic materials

3.3.1 Each metal fastener shall be made of material which is inherently corrosion-resistant, or treated to be corrosion-resistant.

3.3.2 Each ferrous metal part, which is not stainless steel, shall be coated in accordance with ISO 1461.

3.3.3 Each stainless steel part shall be of a marine grade alloy with a corrosion resistance at least equal to grade 316[1)].

3.3.4 Each aluminium part shall be 5254 or 5652 alloy, or other grade containing not more than 0,06 % copper, in accordance with ISO 209-1.

3.3.5 Metals in contact with each other shall be galvanically compatible, or insulated to prevent galvanic corrosion in a marine environment.

3.4 Mechanical fastening devices

Each mechanical fastening device securing a part of a ladder shall have a locking mechanism to prevent the device from loosening.

3.5 Plastic materials

Each plastic material shall be of a type that retains at least 30 % of its original tensile strength and at least 80 % of its original impact strength when subjected to the one-year outdoor weathering test described in Method A of ISO 877:1994.

3.6 Quality of materials

Each part of a ladder shall be free of splinters, burrs, sharp edges, corners, projections, or other defects that could injure a person using the ladder.

3.7 Rope seizing

Seizing, if used, shall consist of two- or three-ply marline of minimum breaking strength 800 N, or other suitable material of equivalent strength.

4 Construction

4.1 Each ladder shall have two side ropes on each side. Each step in the ladder shall be supported by each side rope.

4.2 The side ropes shall

a) be continuous from the top of the ladder to the bottom, and

b) not be painted or otherwise coated or covered.

1) See Iron & Steel Society (ISS) publication *Stainless Steels*, available from Iron & Steel Society, 186 Thorn Hill Road, Warrendale, PA 15090-7528, USA, or http://www.iss.org.

4.3 Unless a special arrangement is needed to secure the ladder to an accommodation ladder, powered pilot hoist, or other custom installation, the ends of the side ropes shall be finished as follows.

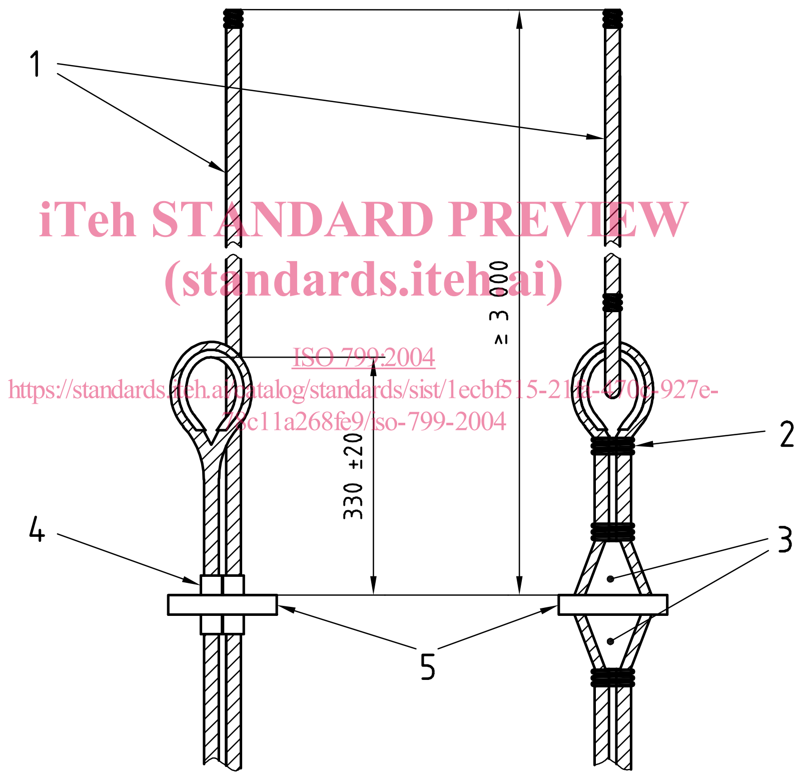
a) The top end of one or both of the side ropes on each side shall terminate just above the top step in a single eye splice or thimble large enough to accommodate at least two passes of side rope.

b) The top end of one side rope on each side of the ladder shall extend at least 3 m beyond the top ladder step, or an extension service rope shall be fitted to each side rope eye splice or thimble by means of an eye splice or shackle, as shown in Figure 1. The diameter of an extension service rope shall be at least the diameter of the side ropes.

c) The side ropes shall not have fittings or form loops at the bottom of the ladder that can be used to attach additional ladder sections or tripping lines.

d) The ends of each side rope which do not terminate in a splice or fitting, shall be served or otherwise treated to prevent fraying.

Dimensions in millimetres



Key

1 extension service rope
2 rope seizing (typical)
3 step fixture
4 mechanical clamping device
5 step

Figure 1 — Alternative extension service rope arrangements at top of ladder

4.4 Each side rope shall pass through a hole in each step. If the hole is in the form of a slot, the slot shall be in the longer edges of the steps. The centre of each hole shall be at least 50 mm from the end of the step. Alternative arrangements are shown in Figure 2.