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Ships and marine technology — Guardrails for cargo ships

Navires et technologie maritime — Garde-corps pour navire de charge

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 8, *Ship design.*

This second edition cancels and replaces the first edition (ISO 5480:1979), which has been technically revised.

The main changes compared to the previous edition are as follows:

— the normative references have been updated;

— the diameter of the lower rails and the toprails have been changed;

— the size of the stays has been changed;

— technical advice has been added as the second paragraph in 5.4.1;

— the guardrails from Figure 1 to Figure 4 have been editorially amended, and guardrails at multipurpose fairlead in Figure 4 have been updated;

— the summation of section modulus has been added as Annex A.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Cargo ships meeting the requirements of this document are deemed to comply with the regulations of the International Convention on Loadlines, 1966 Annex 1, Chapter II, Regulation 25, Paragraphs 2 and 3, as amended by the Protocol of 1988.

NOTE Users of this document are understood to be aware of any other statutory requirements, rules and regulations that can be applicable to the individual ships concerned.

Ships and marine technology — Guardrails for cargo ships

1 Scope

This document specifies dimensions, materials, quality of manufacture and finish for guardrails and stanchions fitted on exposed freeboard and superstructure decks of cargo ships to prevent personnel falling overboard or to lower decks. It is not applicable to guardrails fitted near compasses.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 65, *Carbon steel tubes suitable for screwing in accordance with ISO 7-1*

ISO 887, *Plain washers for metric bolts, screws and nuts for general purposes — General plan*

ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread*

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
guardrail
construction comprising *stanchions* (3.2), *rails* (3.3), *toprails* (3.4) and *stays* (3.5)

Note 1 to entry: See Figure 1 and Figure 4.

3.2
stanchion
principal vertical structural member of a *guardrail* (3.1) system

3.3
rail
horizontal member between *stanchions* (3.2)

3.4
toprail
uppermost *rail* (3.3) in a series of rails

3.5
stay
secondary structural support attached to *stanchions* (3.2) and deck