

CONFIRMED
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Specification for

Marine guardrails, stanchions, etc. —

**Part 1: Guardrails for merchant ships
(excluding passenger ships)**

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Foreword

This Part of this British Standard has been prepared under the authority of the Shipbuilding and Marine Industry Standards Committee and is based on a proposal of the British Ship Research Association.

It forms Part 1 of BS MA 40 “*Marine guardrails, stanchions etc.*” and deals with guardrails and stanchions for merchant ships excluding passenger ships. Other Parts are as follows.

- *Part 2: Gates and portable guardrail sections for merchant ships (excluding passenger ships);*
- *Part 3: Storm rails (exterior).*

Certification. Attention is drawn to the certification facilities described on the inside back cover of this standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date	Comments

This British Standard, having been approved by the Shipbuilding and Marine Industry Standards Committee, was published under the authority of the Executive Board on 30 April 1975

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The following BSI references relate to the work on this standard:
Committee reference SME/2
Draft for comment 73/34145

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NOTE Users of this British Standard: Marine Series, should note that while 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.

1 Scope

This Part of BS MA 40 specifies dimensions, materials, quality of manufacture and finish for guardrails and stanchions which are fitted on exposed freeboard and superstructure decks of merchant ships to prevent personnel falling overboard or to lower decks and also for handrails at ladder positions.

2 References

This standard makes reference to the following British Standards.

BS 499, *Welding terms and symbols — Part 2: Symbols for welding.*

BS 729, *Hot dip galvanized coatings on iron and steel articles.*

BS 1387, *Steel tubes and tubulars suitable for screwing to BS 21 pipe threads.*

BS 4190, *ISO metric black hexagon bolts, screws and nuts.*

BS 4320, *Metal washers for general engineering purposes.*

BS 4360, *Weldable structural steels.*

3 Definitions

For the purposes of this Part of BS MA 40, the following definitions apply.

3.1

guardrail

a construction comprising stanchions, rails, top rails and stays (see Figure 3 and Figure 5)

3.2

stanchions

the principal vertical structural members of a guardrail system

3.3

toprail

the uppermost rail in a series of rails (may be of wood, steel or other suitable materials, e.g. PVC)

3.4

stay

a secondary structural support attached to stanchions and deck

4 Materials

The materials for the manufacture of individual components shall be as shown in Table 1.

5 Design, construction and installation

5.1 Principal dimensions

5.1.1 The height of the top rails shall be a minimum of 1 000 mm. This dimension shall be measured from the top of the top rail to the deck at a point vertically below the inner edge of the top rail, or, if the deck has a waterway, to the top of the deck plank or covering next to the waterway.

5.1.2 The opening below the lowest course of rails shall be a maximum of 230 mm, measured from the underside of the rail to the deck or waterway bar, where fitted (see Figure 1 and Figure 2).

5.1.3 The opening between the upper courses shall be a maximum of 380 mm (see Figure 1 and Figure 2).

5.1.4 The maximum distance between stanchions shall be 1 500 mm.

5.1.5 The dimensions of guardrails, stanchions etc., constructed in accordance with this British Standard shall be as set out in Figure 1 to Figure 7.

Table 1 — Components and materials of guardrails

Ref. No.	Item	Material	BS No.	Remarks
1	Stanchions	Steel	BS 4360	Grade 43A. See 5.2
2	Stays	Steel	BS 4360	Grade 43A. See 5.4
3 ^a	Toprail, tube	Steel	BS 1387	Medium quality. See 5.3.1
	Toprail, wood	Teak or other suitable hardwood	—	See 5.3.2
4	Rails	Steel	BS 4360	Grade 43A. See 5.3.3
5	Washers	Brass	BS 4320	Form E, M12
6	Nuts	Brass	—	M12
7	Bolts	Steel	BS 4190	M12
8	Screws, coach	Brass	—	

NOTE Ship quality steel may be used in place of BS 4360, grade 43A.

^a See 5.3.3