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Specification for

Cast roller fairleads

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Foreword

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.

The purpose of this standard is to provide a design of cast roller fairleads for mooring and warping duties on board ship. The standard is based on relevant recommendations arising from mooring investigations carried out on behalf of UK shipowners and the roller fairleads are intended to be used in connection with other marine British Standards developed for mooring equipment, such as deck machinery and Panama type fairleads.

The mooring investigations recommend that the working surface diameters of roller fairleads should conform with:

- 1) Four times the rope diameter when used with natural fibre.
- 2) Four times the rope diameter or as recommended by the rope manufacturer for synthetic fibre ropes.
- 3) Twelve times the rope diameter when used with steel cored wire rope.

The diameters of roller fairleads resulting from the application of these bending ratios have been marginally adjusted to approximate to an appropriate series of preferred numbers.

The diameter of the centre pins has been determined from the loading imposed by the minimum breaking load of the rope, when making an angle of lap of 180° for Type A fairleads and an angle of lap of 90° for Type B fairleads. The extreme fibre stress of the pin does not exceed 90 % of the yield stress of the material under the imposed loading. The retaining plate is capable of withstanding the vertical component resulting from loading imposed by the minimum breaking load of the rope when operating at a fleet angle of not more than 10°, the stress induced not exceeding 90 % of the yield point stress of the material.

This standard does not include roller fairleads for use with fibre cored wire ropes, for which a bending ratio of 18 : 1 is recommended.

This standard makes reference to the following British Standards:

BS 499, *Welding terms and symbols*.

BS 499-2, *Symbols for welding*.

BS 592, *Carbon steel castings for general purposes*.

BS 1134, *Method for the assessment of surface texture*.

BS 1400, *Copper alloy ingots and copper and copper alloy castings*.

BS 1452, *Grey iron castings*.

BS 1486, *Lubricating nipples*.

BS 1486-1, *Lubricating nipples and adaptors for use on machinery and vehicles*.

BS 1502, *Steels for fired and unfired pressure vessels. Sections and bars*.

BS 1503, *Steels for fired and unfired pressure vessels. Forgings*.

BS 1737, *Jointing materials and compounds for water, town gas and low-pressure steam installations*.

BS 3100, *Steel castings for general engineering purposes*.

BS 3692, *ISO metric precision hexagon bolts, screws and nuts*.

BS 4183, *Machine screws and machine screw nuts — metric series*.

BS 4360, *Weldable structural steels*.

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 to iv, pages 1 to 8, 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.