Maritime works –

Part 4: Code of practice for design of fendering and mooring systems

Publishing and copyright information

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Contents

List of figures

List of tables

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 46, an inside back cover and a back cover.

Foreword

Publishing information

This part of BS 6349 is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 June 2014. It was prepared by Technical Committee CB/502, *Maritime works*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This part of BS 6349 supersedes BS 6349-4:1994, which is withdrawn.

Relationship with other publications

BS 6349 is published in the following parts [1)]:

- Part 1-1: *General – Code of practice for planning and design for operations*;
- Part 1-2: *General – Code of practice for assessment of actions*; [2)]
- Part 1-3: *General – Code of practice for geotechnical design*;
- Part 1-4: *General – Code of practice for materials*;
- Part 2: *Code of practice for the design of quay walls, jetties and dolphins*;
- Part 3: *Code of practice for the design of shipyards and sea locks*;
- Part 4: *Code of practice for design of fendering and mooring systems*;
- Part 5: *Code of practice for dredging and land reclamation*;
- Part 6: *Design of inshore moorings and floating structures*;
- Part 7: *Guide to the design and construction of breakwaters*;
- Part 8: *Code of practice for the design of Ro-Ro ramps, linkspans and walkways*.

Information about this document

This is a full revision of the standard, and introduces the following principal changes:

- reduction of informative content, with informative guidance separated from recommendations;
- general updating to reflect latest practice;
- change in definitions of berthing mode and navigation conditions.

Use of this document

As a code of practice, this part of BS 6349 takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

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1) A new part 9 is in preparation.
2) In preparation.

Presentational conventions

The provisions in this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Section 1: General

1 Scope

This part of BS 6349 gives recommendations and guidance on the design of fendering systems and layouts, mooring devices and mooring system layouts, principally for commercial vessels with a minimum displacement of 1 000 t.

NOTE Some of the provisions in this part of BS 6349 might be applicable to other type of vessels such as naval vessels, provided that the particular vessel characteristics and berthing/mooring procedures are taken into account.

2 Normative references

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

Standards publications

ASTM F2192/05, *Standard test method for determining and reporting the berthing energy and reaction of marine fenders*

BS 6349-1:2000, *Maritime structures – Part 1: Code of practice for general criteria*

BS 6349-1-1:2013, *Maritime works – Part 1-1: General – Code of practice for planning and design for operations*

BS 6349-1-4, *Maritime works – Part 1-4: General – Code of practice for materials*

BS 6349-2, *Maritime works – Part 2: Code of practice for the design of quay walls, jetties and dolphins*

BS EN 1993 (all parts), *Eurocode 3 – Design of steel structures*

BS EN 1995 (all parts), *Eurocode 5 – Design of timber structures*

BS EN 60079-10-1, *Explosive atmospheres – Part 10-1: Classification of areas – Explosive gas atmospheres*

BS ISO 17357 (all parts), *Ships and marine technology – Floating pneumatic rubber fenders*

Other publications

[N1] US ARMY CORPS OF ENGINEERS (USACE), NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC), AIR FORCE CIVIL ENGINEER CENTER (HQ AFCEC) and NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA). *Unified facilities guide specifications – Division 35: Waterway and marine construction – Section 35.59.13.16: Marine fenders*. USACE/NAVFAC, 2011. [3)]

[N2] EUROPEAN ORGANISATION FOR TECHNICAL APPROVALS. *Design of bonded anchors*. TR 029. Brussels: EOTA, 2007.

[3)] Available from http://www.wbdg.org/ccb/DOD/UFGS/UFGS%2035%2059%2013.16.pdf [last accessed 25 June 2014].