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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).

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For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 8, *Ships and marine technology*, Subcommittee SC 4, *Outfitting and deck machinery*.

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Ships and marine technology — Marine cranes — Test specifications and procedures

1 Scope

This document describes the required tests and the testing procedures for marine cranes of metal construction.

This document is applicable to the following types of marine cranes:

— deck cranes mounted on ships for handling cargo or containers in harbour or sheltered water conditions;

— floating cranes or grab cranes mounted on barges or pontoons for operating in harbour conditions;

— engine room cranes, provision cranes, etc. mounted on ships (including floating docks) for handling equipment and stores in harbour conditions.

NOTE Marine cranes in other types can refer to this document.

This document does not apply to the following:

— minimum ambient operating temperatures below –20 °C;

— maximum ambient operating temperatures above +45 °C;

— loads from accidents or collisions;

— lifting operations below sea level;

— transport, assembly, dismantling and decommissioning of cranes;

— lifting accessories, i.e. any item between the crane and the load;

— lifting operations involving more than one crane;

— hand-powered cranes;

— emergency rescue operations;

— shore-side cargo handling cranes;

— portable cranes on board;

— lifting appliances for lifeboats, liferafts accommodation ladders, and pilot ladders;

— launching appliances for survival craft and rescue boats;

— gangways, accommodation and pilot ladders and their handling appliances.

Cranes defined in this document are intended to comply with the requirements of class societies and flag states. It is also intended that reference be made to ILO and particularly the convention No. 152.

Applicable regulations are those issued by the responsible classification societies and it is intended that national authorities be complied with.

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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 13202, *Cranes — Measurement of velocity and time parameters*

ISO 14518, *Cranes — Requirements for test loads*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3828, ISO 4306-1, ISO 8431 and ISO 19354 and the following apply.

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

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

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

3.1
bench test
test made on the test bench of the manufacturer

4 Test specification and procedure requirements

4.1 General requirements

4.1.1 The test shall be carried out for the marine crane according to specified technical performances and main parameters shall be verified.

4.1.2 The test load of the marine crane shall comply with ISO 14518.

4.1.3 The measurement of the test speed and time parameters of the marine crane shall comply with ISO 13202.

4.1.4 The marine crane components shall be tested according to applicable regulations.

4.1.5 The marine crane shall be tested according to the test program made by the designer.

4.1.6 The test of the crane shall be recorded. The test record shall contain test conclusions and inspection results. The test record shall record equipment nomenclature, serial numbers, main technical parameters, test durations, test loads, load locations, testing procedures and the results for the various conditions of the test. The tester and inspector shall sign their names on the test record. The user or verifier of the crane test shall also sign the test report for approval, when involved in the test.

4.2 Functional test

4.2.1 General

4.2.1.1 The functional test shall be carried out in the factory before the marine crane is sent out from the factory.

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