
**Ships and marine technology —
Marine cranes — Operation and
maintenance requirements**

*Navires et technologie maritime — Grues marines — Exigences
d'exploitation et de maintenance*

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Foreword

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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 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee 8, *Ships and marine technology*, Subcommittee 4, *Outfitting and deck machinery*.

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.

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Ships and marine technology — Marine cranes — Operation and maintenance requirements

1 Scope

This document specifies the operation and maintenance requirements of marine cranes, including electro-hydraulic cylinder luffing cranes, electro-hydraulic wire rope luffing cranes and electric wire rope luffing cranes.

This document is applicable to the following types of marine cranes operating in harbour or sheltered water conditions:

- deck cranes mounted on ships for handling equipment, cargo or containers in harbour or sheltered water conditions;
- floating cranes mounted on barges or pontoons for handling loads in harbour or sheltered water conditions;
- grab cranes mounted on ships, barges or pontoons for operating in harbour or sheltered water conditions;
- engine room, stores cranes, etc. mounted on ships for handling equipment and stores in harbour or sheltered water conditions.

For other marine cranes not covered by the above descriptions or for other environmental conditions this document can be referred.

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 3828, *Shipbuilding and marine structures — Deck machinery — Vocabulary and symbols*

ISO 4306-1, *Cranes — Vocabulary — Part 1: General*

ILO C152. *Occupational Safety and Health (Dock Work) Convention, 1979*

3 Terms and definitions

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

3.1

manufacturer certificate

certificate issued by a marine crane manufacturer to confirm that the marine crane has been designed, manufactured and tested as required by the design standards and the requirements of the purchaser

Note 1 to entry: Suitable quality control according to quality management systems should also be confirmed.

3.2

competent organisation

organisation which carries out the approval, examination, testing and certification of marine cranes, such as Classification Societies

**3.3
harbour or sheltered water conditions**

water conditions where the ship will not experience significant motion due to wave action and where the significant wave height is not greater than 0,6 m

**3.4
administration**

flag state or competent authority under which jurisdiction the ship is registered and which authorises the *competent organisation* (3.2)

**3.5
inspection**

activity which is to be performed by the crane operator before and/or after crane operation and for the purposes of effective maintenance in order to ensure that the crane is in correct working condition as required by the manufacturer's instructions for use

4 Basic requirements

4.1 Documentation

The following documents shall be available throughout the lifetime of the marine crane.

- Manufacturer certificate.
- Instructions for use.
- Maintenance and repair records.
- "Register of Ships' Lifting Appliances and Cargo handling gear" according to Model Form and Certificates as required by Article 25(2) of ILO C152, if any.
- Certificates of Test and Thorough Examination of Lifting Appliances, Loose Gear and Wire rope according to Model Form and Certificates as required by Article 25(2) of ILO C152, if any.
- Certificates in addition, or different to, those required by ILO C152 as required by the Administration, if any.

The instructions for use shall contain the following information as a minimum:

- installation and commissioning instructions;
- general arrangement plans and schematics of electrical, hydraulic and pneumatic arrangements;
- instructions for safe operation;
- instructions for inspection before and after operations;
- instructions for out-of-service condition of the crane;
- instructions related to safe lifting of personnel (if applicable);
- operational limitations;
- information concerning the safe working load (SWL) of the crane and load-capacity chart;
- regular inspection instructions;
- identification of components;
- maintenance instructions;
- spare part lists;