INTERNATIONAL STANDARD

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Third edition
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Cranes — Limiting and indicating devices —

Part 1: General

Appareils de levage à charge suspendue — Limiteurs et indicateurs —

Partie 1: Généralités

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 8, *Jib cranes*.

This third edition cancels and replaces the second edition (ISO 10245-1:2008), which has been technically revised.

The main changes compared to the previous edition are as follows:

— this document has been updated to be consistent with ISO 10245-2, ISO 10245-3, ISO 10245-4 and ISO 10245-5;

— Clause 3 has been revised to be consistent with ISO 4306-1;

— the definition and requirements of event recorder and data logger have been included in this document, consistently with the requirements of ISO 10245-2, ISO 10245-3, ISO 10245-4 and ISO 10245-5;

— Formula (1) has been revised to be consistent with ISO 8686-1 for indirect and direct acting limiters;

— the term “rated capacity limiter” has been supplemented to include the term “load limiter” for clarification.

A list of all parts in the ISO 10245 series can be found on the ISO website.

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.

Cranes — Limiting and indicating devices —

Part 1: General

1 Scope

This document specifies general requirements for limiting and indicating devices for cranes that are applicable to loads and motions, performance and environment. These devices restrict operation and/or provide the operator or other persons with operational information.

The specific requirements for the various types of crane are given in the other parts of the ISO 10245 series.

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

ISO 9927-1, *Cranes — Inspections — Part 1: General*

ISO 10245-2, *Cranes — Limiting and indicating devices — Part 2: Mobile cranes*

ISO 10245-3, *Cranes — Limiting and indicating devices — Part 3: Tower cranes*

ISO 10245-4, *Cranes — Limiting and indicating devices — Part 4: Jib cranes*

ISO 10245-5, *Cranes — Limiting and indicating devices — Part 5: Overhead travelling and portal bridge cranes*

3 Terms and definitions

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

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

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

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

3.1
anti-collision device
device used to prevent cranes or parts of cranes from colliding with a fixed load-lifting attachment or other crane(s) when they are manoeuvred simultaneously in the same space

Note 1 to entry: A *working space limiter* (3.17) can perform the function of an anti-collision device in certain applications.

3.2
configuration
combination and position of structural members, counterweights, support or outrigger position, hook block reeving and similar items assembled, positioned and erected in accordance with manufacturers' instructions and ready for operation

3.3
control station position limiter
device used on cranes having a control station that can be moved by powered movement to different positions, to prevent movement of the control station beyond specified limits

3.4
derricking limiter
device used to prevent the raising or lowering of a jib, boom, fly jib, "A-frame" or mast beyond specified limits

3.5
hoisting limiter
device used to prevent either the fixed load-lifting attachment from being raised such that it inadvertently strikes the crane structure or any other specified upper limitation of the load-lifting attachment from being exceeded

3.6
indicator
device that provides warnings and/or data to facilitate the competent control of the crane within its design parameters

3.7
lowering limiter
device used to ensure that the minimum engagement of the lifting medium

EXAMPLE The minimum number of turns of rope on the hoist drum, is maintained at all times during operation, mechanical device designed to prevent the chain from running out of engagement with the driving mechanism.

3.8
motion limiter
limiting device which initiates either the stopping and/or restriction of designated crane motion

Note 1 to entry: See the examples given in 4.5.1.1.

3.9
performance limiter
device that prevents a design performance characteristic from being exceeded

Note 1 to entry: See the examples given in 4.5.2.1.

3.10
rated capacity
maximum net load or, for mobile cranes, hoist medium load that the crane is designed to lift for a given crane *configuration* (3.2) and load location during normal operation

3.11
rated capacity indicator
indicating device that automatically provides acoustic and/or visual warnings

Note 1 to entry: For particular crane types, reference should be made to ISO 10245-2, ISO 10245-3, ISO 10245-4 or ISO 10245-5 for details.

Note 2 to entry: See 4.4.1.2 a).