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Industrial trucks — Specifications for indicator lights for container handling and grappler arm operations

Chariots de manutention — Spécifications relatives aux voyants lumineux pour la manutention de conteneurs et les opérations de bras de grappin

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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 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 110, *Industrial trucks*, Subcommittee SC 2, *Safety of powered industrial trucks*.

This second edition cancels and replaces the first edition (ISO 15871:2000), which has been technically revised.

The main change compared to the previous edition is that the minimum luminous intensity for other types of light sources has been added, e.g. LED, expressed in cd (candela).

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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Industrial trucks — Specifications for indicator lights for container handling and grappler arm operations

1 Scope

This document specifies requirements for indicator lights to show the status of freight-container-handling spreaders and grappler arms.

It is applicable to:

a) container-handling spreaders with twistlocks for handling unladen and/or laden freight containers;

b) grappler (bottom lift) arms for handling semi-trailers and swap bodies;

when fitted to:

— counterbalance lift trucks, with masts, as defined in ISO 5053-1:2015, 3.3;

— rough terrain trucks, with masts, as defined in ISO 5053-1:2015, 3.7;

— non-stacking low-lift straddle carriers, as defined in ISO 5053-1:2015, 3.18;

— stacking high-lift straddle carriers, as defined in ISO 5053-1:2015, 3.19;

— variable-reach trucks, as defined in ISO 5053-1:2015, 3.20;

— rough-terrain variable-reach trucks, as defined in ISO 5053-1:2015, 3.21;

— variable-reach container handlers, “reach stackers”, as defined in ISO 5053-1:2015, 3.23;

— counterbalance container handlers, as defined in ISO 5053-1:2015, 3.24.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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
light “on”
“on”
illumination from the indicator continuous with respect to time and at full output

3.2
light “flashing”
“flashing"
illumination from the indicator nominally equally divided between the conditions of *light "on"* (3.1) and *light "off"* (3.3)

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3.3
light “off”
“off”
no illumination from the indicator

3.4
non-reflective shield
device to minimize stray light from an unrelated source that would make the indicator light simulate an unintended "on” condition

3.5
clamped
<grappler arm> with load-engaging part in full horizontal contact with the load

3.6
seated
<grappler arm> with load-engaging part in full vertical contact with the load

3.7
fully up
<grappler arm> raised to its highest position to provide clearance over the top of the load

3.8
fully down
<grappler arm> completely lowered and ready to engage the load

4 Requirements

4.1 General

To minimize the number of lights required, three conditions of the light are employed: “off”, “flashing” and “on”.

4.2 Freight-container-handling spreaders

4.2.1 General

See 4.4.1 for location of indicator lights. See Table 1 for a tabular presentation of 4.2.2 and 4.2.3.

4.2.2 Twistlocks located in the freight container

When all the twistlocks are fully located in the freight container corner pockets, orange light O shall be “on”. When the freight container is lifted, this light shall go “off”.

4.2.3 Twistlocks locked/unlocked

When all the twistlocks are fully unlocked, the red light R shall be “on".

In any intermediate position of the twistlocks, the red light R may be "flashing". Provision of this "flashing” red light is optional.

When all the twistlocks are fully locked in the freight container corner pockets, the green light G shall be “on”.

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