INTERNATIONAL STANDARD

ISO 4305

Third edition
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Mobile cranes — Determination of stability

Grues mobiles — Détermination de la stabilité

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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. 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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 96, *Cranes*, Subcommittee SC 6, *Mobile cranes*.

This third edition cancels and replaces the second edition (ISO 4305:1991), which has been technically revised.

Mobile cranes — Determination of stability

1 Scope

This International Standard specifies the conditions to be taken into consideration when verifying the stability of a mobile crane by calculation, assuming that the crane is operating on a firm and level surface (up to 1 % gradient).

It applies to mobile cranes as defined in ISO 4306-2, i.e. appliances mounted on wheels (tires) or crawlers, with or without outriggers with the exception of loader cranes.

2 Normative references

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

ISO 4302, *Cranes — Wind load assessment*

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

ISO 4306-2, *Cranes — Vocabulary — Part 2: Mobile cranes*

ISO 4310:2009, *Cranes — Test code and procedures*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4306-2 (except for boom, fly jib and mast mounted boom) apply.

3.1
fixed-length boom
boom of fixed operating length, the length of which can be varied by the addition or removal of inserts, but cannot be varied during the operating cycle

[SOURCE: ISO 4306-2:2012, 4.1, modified — The phrase “which length” has been changed to read “the length of which”.]

3.2
lattice boom
fixed-length boom of trussed construction

[SOURCE: ISO 4306-2:2012, 4.1.1]

3.3
telescoping boom
boom consisting of a base section from which one or more boom sections are telescoped for additional length

[SOURCE: ISO 4306-2:2012, 4.2]

3.4
mast-mounted boom
assembly comprising a boom mounted at or near the top of a vertical or almost vertical mast member

Note 1 to entry: The angle of the boom to mast may be changed during operation.