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DIN EN 13001-1

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ICS 53.020.20

Supersedes
DIN EN 13001-1:2009-12 and
DIN EN 13001-1 Corrigendum 1:
2010-06

Cranes –
General design –
Part 1: General principles and requirements;
English version EN 13001-1:2015,
English translation of DIN EN 13001-1:2015-06

Krane –
Konstruktion allgemein –
Teil 1: Allgemeine Prinzipien und Anforderungen;
Englische Fassung EN 13001-1:2015,
Englische Übersetzung von DIN EN 13001-1:2015-06

Appareils de levage à charge suspendue –
Conception générale –
Partie 1: Principes généraux et prescriptions;
Version anglaise EN 13001-1:2015,
Traduction anglaise de DIN EN 13001-1:2015-06

Document comprises 37 pages

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A comma is used as the decimal marker.

National foreword

This standard includes safety requirements.

This document (EN 13001-1:2015) has been prepared by Technical Committee CEN/TC 147 “Cranes — Safety” (Secretariat: BSI, United Kingdom).

The responsible German body involved in its preparation was the *DIN-Normenausschuss Maschinenbau* (DIN Standards Committee Mechanical Engineering), Working Committees NA 060-22-10-21 AK *Konstruktion – allgemein (SpA CEN/TC 147/WG 2 u. SpA ISO/TC 96/SC 10)* and NA 060-22-10 AA *Lenkungsausschuss Krane und Hebezeuge* of Section *Krane und Hebezeuge*. Representatives of manufacturers and users of cranes and lifting appliances, and of the employers’ liability insurance associations contributed to this standard.

It should be noted that the term “crane” as in this standard includes all machines for cyclic lifting, or cyclic lifting and handling, of loads suspended on hooks or other load lifting attachments. This means that this standard applies to all other equipment, such as winches, which meets this definition.

This standard contains specifications meeting the essential requirements set out in Annex I of the “Machinery Directive”, Directive 2006/42/EC, and which apply to machines that are either first placed on the market or commissioned within the EEA. This standard serves to facilitate proof of compliance with the essential requirements of that directive.

Once this standard is cited in the Official Journal of the European Union, it is deemed a “harmonized” standard and thus, a manufacturer applying this standard may assume compliance with the requirements of the Machinery Directive (“presumption of conformity”).

The European Standards referred to in Clause 2 and in the Bibliography of the EN have been published as the corresponding DIN EN or DIN EN ISO Standards with the same number.

Where the International Standards referred to are not also DIN ISO Standards with the same number, there are no national standards available.

Amendments

This standard differs from DIN EN 13001-1:2009-12 and DIN EN 13001-1 Corrigendum 1:2010-06 as follows:

a) Subclause 4.2.7.2 “Allowable stress method” has been rendered more precise: For cranes or portions of cranes where all masses act only unfavourably (see EN 13001-2) and with a linear relationship between load actions and load effects, the allowable stress method is applicable for the proof of competence calculation (see first paragraph). Figure 1 “Layout of the proof calculation” has been changed accordingly;

b) Subclause 4.3.3 “Average linear or angular displacements” has been rendered more precise: Formula (2) has been added to calculate the average displacement from the average linear or angular displacements;

c) Subclause 4.4.4 “Classification of stress histories” has been rendered more precise: in Table 3, column “Classes” has been divided up into “Hoisting”, “Traversing (Trolley)” and “Travelling (Crane)”;

d) Annex B (informative) “Discreet and continuous distributions” has been added.

Previous editions

DIN EN 13001-1: 2005-04, 2009-12
DIN EN 13001-1 Corrigendum 1: 2006-11, 2010-06

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13001-1

April 2015

ICS 53.020.20

Supersedes EN 13001-1:2004+A1:2009

English Version

Cranes - General design - Part 1: General principles and requirements

Appareils de levage à charge suspendue - Conception générale - Partie 1: Principes généraux et prescriptions

Krane - Konstruktion allgemein - Teil 1: Allgemeine Prinzipien und Anforderungen

This European Standard was approved by CEN on 16 February 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 13001-1:2015) has been prepared by Technical Committee CEN/TC 147 “Cranes - Safety”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13001-1:2004+A1:2009.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

The major changes in this revision are in 4.2.7.2, 4.3.3 and 4.4.4. Annex B has been added.

This European Standard is one part of EN 13001. The parts are the following ones:

— *Part 1: General principles and requirements*;

— *Part 2: Load actions*;

— *Part 3-1: Limit States and proof competence of steel structure*;

— *Part 3-2: Limit states and proof of competence of wire ropes in reeving systems*;

— *Part 3-3: Limit states and proof of competence of wheel/rail contacts*;

— *Part 3-4: Limit states and proof of competence of machinery* [currently at Enquiry stage];

— *Part 3-5: Limit states and proof of competence of forged hooks* [Technical Specification].

For the relationship with other European Standards for cranes, see Annex A.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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