SLOVENSKI STANDARD
SIST EN 15056:2007+A1:2009

01-julij-2009

Dvigala (žerjavi) - Zahteve za kontejnerska prijemala

Cranes - Requirements for container handling spreaders

Krane - Anforderungen an Spreader zum Umschlag von Containern

Appareils de levage à charge suspendue - Prescriptions pour les spreaders manutentionnant des conteneurs

Ta slovenski standard je istoveten z: **EN 15056:2006+A1:2009**

ICS:

53.020.20 Dvigala Cranes

SIST EN 15056:2007+A1:2009 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 15056:2006+A1

May 2009

ICS 53.020.20

Supersedes EN 15056:2006

English Version

Cranes - Requirements for container handling spreaders

Appareils de levage à charge suspendue - Prescriptions pour les spreaders manutentionnant des conteneurs

Krane - Anforderungen an Spreader zum Umschlag von Containern

This European Standard was approved by CEN on 28 August 2006 and includes Amendment 1 approved by CEN on 24 April 2009.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 15056:2006+A1:2009: E

Contents

Page

Foreword

This document (EN 15056:2006+A1:2009) 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 November 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2009-04-24.

This document supersedes EN 15056:2006.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1] 〈A1〉.

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).

[A1] For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. 〈A1〉

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

This standard is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this standard.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

1 Scope

This European Standard specifies safety requirements for spreaders used with cranes designed for the purpose of handling ISO containers based on ISO 668 including other lengths such as 45 ft. The connection between the spreader and the container is by the use of twistlocks that engage into the container's upper corner castings.

The standard deals with all significant hazards, hazardous situations and events relevant to container handling spreaders, when used as intended and under conditions foreseen by the manufacturer (see Clause 4).

The spreader is interfaced to the crane's control and safety system.

This European Standard does not cover the following types of spreaders:

— hand operated spreaders (without external power supply);

— bottom lift grapple spreaders used for swapbodies and road trailers.

This European Standard does not deal with the lifting of persons.

This European Standard is applicable to spreaders which are manufactured after the date of approval by CEN of this standard.

2 Normative references

The following referenced documents are indispensable for the application 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.

〚A1〛 *deleted text* 〚A1〛

EN 982, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

EN 1050, *Safety of machinery — Principles for risk assessment*

EN 12644-1, *Cranes — Information for use and testing — Part 1: Instructions*

EN 13001-1, *Cranes — General design — Part 1: General principles and requirements*

EN 13001-2, *Cranes — General design — Part 2: Load actions*

CEN/TS 13001-3-1, *Cranes — General design — Part 3-1: Limit states and proof of competence of steel structures*

EN 13135-2, *Cranes — Equipment — Part 2: Non-electrotechnical equipment*

EN 60204-32, *Safety of machinery — Electrical equipment of machines — Part 32: Requirements for hoisting machines (IEC 60204-32:1998)*

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2:2003, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles (ISO 12100-2:2003)*

[A1] EN ISO 13850:2006, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)* [A1]

ISO 668, *Series 1 freight containers — Classification, dimensions and ratings*

3 Terms, definitions and terminology

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100-1:2003 and the following apply.

3.1.1
fixed length spreader
lifting device for handling ISO containers of one size

3.1.2
telescopic spreader
lifting device for handling ISO containers of several sizes

3.1.3
mid frame
middle section of a telescopic spreader

3.1.4
telescopic beam
extending frame of a telescopic spreader which slides in and out of the mid frame

3.1.5
end beam
outer end beam of a telescopic spreader extending frame

3.1.6
telescopic motion
adjusting the length of the spreader to different container sizes

3.1.7
tare weight
spreader's own weight in operation

3.1.8
twistlock
rotating locking device for connecting a spreader to a container corner casting (Figure 2)

3.1.9
fixed twistlock
twistlock that does not float to adapt to holes deviating from nominal dimensions

3.1.10
floating twistlock
twistlock that will float around its vertical axis

3.1.11
mechanical blockading
action of mechanically blocking the twistlock in order to prevent unsafe rotation

3.1.12
single lift operation
lifting one container with one spreader

3.1.13
twin lift operation
lifting two containers with one spreader

3.1.14
expandable twin lift
twin lift operation with the ability to expand or retract two containers from each other

3.1.15
ship to shore handling
lifting of containers by a crane from the ship to the land and vice versa

3.1.16
yard handling
the lifting, transporting and stacking of containers by a crane within a container terminal

3.1.17
telescopic beam lock
mechanical lock to prevent telescopic motion of the telescopic beam

3.1.18
flipper (gather guide)
guidance device to align the spreader to a container which can be moved from the “in-use” position to a safe, stored position manually or by remote control

3.1.19
lock(ed)
twistlock locked in corner castings to ensure safe lifting of the container

3.1.20
unlock(ed)
twistlock unlocked in corner castings to ensure safe removal from the container

3.1.21
land(ed)
spreader landed correctly with all twistlocks in the corner castings

3.1.22
landing pin(s)
mechanical device(s) with electrical indicatation on correct landing of the spreader on the container

3.1.23
headblock
part of the crane to which the spreader is attached

3.1.24
headblock connection
connection between the spreader and the headblock

3.1.25
manual mode (of control)
control of a spreader by a crane operator

3.1.26
automatic mode (of control)
control of a spreader by an automated system

3.1.27
twin unit
additional twistlock housings and mechanism fitted to a single lift spreader that enables it to perform twinlift operations

3.1.28
fixed guide
guidance device to align the spreader to a container which is non retractable (see 3.1.18)

3.1.29
twin lift interlock device
device to prevent lifting two containers in single lift operation

3.2 Terminology

The terms that are used in this standard for the main parts of a spreader are indicated in Figure 1.