

Kraanad. Pöördnoolkraanad

Cranes - Slewing Jib Cranes

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 14985:2007 sisaldab Euroopa standardi EN 14985:2007 ingliskeelset teksti.

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English Version

Cranes - Slewing jib cranes

Appareils de levage à charge suspendue - Grues à flèche
pivotante

Krane - Ausleger-Drehkrane

This European Standard was approved by CEN on 19 March 2007.

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Foreword

This document (EN 14985:2007) 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of an identical text or by endorsement, at the latest by November 2007, and conflicting national standards shall be withdrawn at the latest by November 2007.

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, see informative Annex ZA, which is an integral part of this document.

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 European Standard has been prepared to be a harmonised standard to provide one means for slewing jib cranes to conform with the essential health and safety requirements of the Machinery Directive, as mentioned in Annex ZA.

Absolute safety of cranes cannot be ensured by design alone, as their operation depends on the skill of operators, maintenance personnel and inspectors as well as on the numerous technical parameters relating to the crane and its operating environment, which may have large scatter.

As many of the hazards related to slewing jib cranes relate to their operating environment and use, it is assumed in the preparation of this European Standard that all the relevant information relating to the use and operating environment of the crane has been exchanged between the manufacturer and user (as recommended in

ISO 9374, Parts 1 and 4), covering such issues as, for example:

- clearances;
- requirements concerning protection against hazardous environments;
- processed materials, such as potentially flammable or explosive material (e.g. coal, powder type materials).

This European Standard is a type C standard as stated in EN ISO 12100-1.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this European 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 applies to power operated slewing jib cranes mounted in one position or free to travel on horizontal rails. It does not apply to wall mounted, pillar or workshop jib cranes. This European Standard is not applicable to erection, dismantling operations, or changing the configuration of the crane.

This European Standard gives requirements for all significant hazards, hazardous situations and events relevant to slewing jib cranes, when used as intended and under conditions foreseen by the manufacturer (see Clause 4).

The specific hazards due to potentially explosive atmospheres, ionising radiation, and operation in electromagnetic fields beyond the range of EN 61000-6-2 are not covered by this European Standard.

This European Standard does not include requirements for the lifting of persons.

This European Standard is applicable to slewing jib cranes, which are manufactured after the date of approval by CEN of this European Standard.

This European Standard is not applicable to slewing jib cranes which are manufactured before the date of its publication as EN.

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.

EN 294, *Safety of machinery — Safety distance to prevent danger zones being reached by the upper limbs*

EN 547-1, *Safety of machinery — Human body measurements — Part 1: Principles for determining the dimensions required for openings for whole body access into machinery*

EN 547-2, *Safety of machinery — Human body measurements — Part 2: Principles for determining the dimensions required for access openings*

EN 894-1, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 1: General principles for human interactions with displays and control actuators*

EN 894-2, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*

EN 953, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

EN 10002-1, *Metallic materials — Tensile testing — Part 1: Method of test at ambient temperature*

EN 12077-2:1998, *Cranes safety — Requirements for health and safety — Part 2: Limiting and indicating devices*

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

EN 12644-2, *Cranes — Information for use and testing — Part 2: Marking*

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

EN 13001-2:2004, *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*

CEN/TS 13001-3-2, *Cranes — General design — Part 3-2: Limit states and proof of competence of wire ropes in reeving systems*

EN 13135-1, *Cranes — Safety — Design — Requirements for equipment — Part 1: Electrotechnical equipment*

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

EN 13155, *Cranes — Safety — Non-fixed load lifting attachments*

EN 13557:2003, *Cranes — Controls and control stations*

EN 13586: 2004, *Cranes — Access*

EN 60204-11, *Safety of machinery — Electrical equipment of machines — Part 11: Requirements for HV equipment for voltages above 1000 V a.c. or 1500 V d.c. and not exceeding 36 kV (IEC 60204- 11:2000)*

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

EN 60825-1, *Safety of laser products — Part 1: Equipment classification, requirements and user's guide (IEC 60825-1:1993)*

EN ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 11201, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Engineering method in an essentially free field over a reflecting plane (ISO 11201:1995)*

EN ISO 11688-1, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)*

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)*

EN ISO 13732-1:2006, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces (ISO 13732-1:2006)*

EN ISO 13849-1, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)*

ISO 3864 (all parts), *Graphical symbols - Safety colours and safety signs*

ISO 6336-1, *Calculation of load capacity of spur and helical gears — Part 1: Basic principles, introduction and general influence factors*

ISO 6336-2, *Calculation of load capacity of spur and helical gears — Part 2: Calculation of surface durability (pitting)*

ISO 7752-4, *Cranes — Controls — Layout and characteristics — Part 4: Jib cranes*

ISO 8566-4, *Cranes — Cabins — Part 4: Jib cranes*

ISO 9374-4, *Cranes — Information to be provided — Part 4: Jib cranes*

ISO 12210-4, *Cranes — Anchoring devices for in-service and out-of-service conditions — Part 4: Jib cranes*

ISO 12488-4, *Cranes — Tolerances for wheels and travel and traversing tracks — Part 4: Jib cranes*

FEM 1.001:1998 (all booklets), *Rules for the design of hoisting appliances*

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