



# SLOVENSKI STANDARD

## SIST EN 14502-2:2005

01-november-2005

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X j ] [ U b ^ c n r g d i y U b ^

Cranes - Equipment for the lifting of persons - Part 2: Elevating control stations

Krane - Einrichtungen zum Heben von Personen - Teil 2: Höhenverstellbare Steuerstände

Appareils de levage a charge suspendue - Equipements pour le levage de personnes -  
Partie 2: Cabines éleables

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Ta slovenski standard je istoveten z: EN 14502-2:2005

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**ICS:**

53.020.20      Dvigala      Cranes

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 14502-2**

September 2005

ICS 53.020.30

English Version

## Cranes - Equipment for the lifting of persons - Part 2: Elevating control stations

Appareils de levage à charge suspendue - Equipements pour le levage de personnes - Partie 2: Cabines éleables

Krane - Einrichtungen zum Heben von Personen - Teil 2: Höhenverstellbare Steuerstände

This European Standard was approved by CEN on 19 May 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This European Standard (EN 14502-2:2005) 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 March 2006, and conflicting national standards shall be withdrawn at the latest by March 2006.

This European Standard 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 European Standard.

This European Standard is one part of EN 14502. The other part is:

EN 14502-1: Suspended baskets.

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

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## Introduction

This European Standard has been prepared as a harmonized standard to provide one means for elevating control stations to conform to the relevant essential health and safety requirements of the Machinery Directive 98/37/EC.

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

The machinery concerned and the extent to which hazards, hazardous situations and 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 B standard, 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.

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## 1 Scope

This European Standard specifies additional requirements for the design of elevating control stations on cranes.

General requirements for control stations on cranes are specified in EN 13557.

This European Standard also specifies requirements for the driving mechanism, the supporting and suspension system and for safety devices for the elevating control station.

This European Standard does not cover hazards which could occur during transport, erection, commissioning, modification, maintenance, de-commissioning or disposal.

This European Standard does not apply to control stations which will move with a load or a load lifting attachment.

This European Standard does not apply to lifts for crane drivers.

This European Standard does not deal with noise hazards because noise due to the movement of the elevating control station is negligible compared to the noise due to the normal operation of the crane.

NOTE Noise hazards are dealt within the appropriate European Standard for specific crane types.

The significant hazards covered by this European Standard are identified in Clause 4.

This European Standard is not applicable to elevating control stations which are manufactured before the date of publication by CEN.

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## EN 14502-2:2005 (E)

**2 Normative references**

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 349:1993, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

EN 818-7, *Short link chain for lifting purposes — Safety — Part 7: Fine tolerance hoist chain, Grade T (Types T, DAT and DT)*

EN 953:1997, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

EN 982:1996, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

EN 12077-2:1999, *Cranes safety — Requirements for health and safety — Part 2: Limiting and indicating devices*

EN 13411-3, *Terminations for steel wire ropes — Safety — Part 3: Ferrules and ferrule-securing*

EN 13411-4, *Terminations for steel wire ropes — Safety — Part 4: Metal and resin socketing*

EN 13411-6, *Terminations for steel wire ropes — Safety — Part 6: Asymmetric wedge socket*

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

EN 13586:2004, *Cranes — Access*

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EN 60204-32:1999, *Safety of machinery — Electrical equipment of machines — Part 32: Requirements for hoisting machines*

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)*



### 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN ISO 12100-1:2003, EN 13557:2003 and the following apply.

#### 3.1

##### **elevating control station**

control station where the operator can vary his/her elevated position.

NOTE An elevating control station can consist of a cabin or a cabin and a platform.

#### 3.2

##### **maximum operating speed**

maximum speed measured during upward and downward travel of the elevating control station with its rated capacity

#### 3.3

##### **rated capacity**

load that the elevating control station is designed to support

#### 3.4

##### **safety gear**

device intended to stop the descent of the elevating control station under emergency conditions, e.g. breaking of a suspension wire rope or failure of a hoist

#### 3.5

##### **slack rope**

##### **chain limiter**

device to automatically prevent dangers from slack rope/chain situations

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#### 4 List of significant hazards

Table 1 identifies all the significant hazards, hazardous situations and events, as far as they are dealt with in this European Standard, identified by risk assessment as significant for this type of machinery and which require action to eliminate or reduce the risk.

Table 1 — List of significant hazards and associated requirements

N°	Hazards	Relevant clause(s) in this European Standard
1.1	Crushing hazard	5.2.1, 5.2.2,
1.2	Shearing hazard	5.2.3, 5.4.7,
1.3	Cutting or severing hazard	5.6.1.3
1.4	Entanglement hazard	
1.5	Drawing-in or trapping hazard	
1.6	Impact hazard	
1.9	High pressure fluid injection or ejection hazard	5.6.6
2	Electrical hazards	5.2.5
3	Thermal hazards	5.2.1
8.3	Neglected use of personal protection equipment	5.2.2
8.6	Human error, human behaviour	5.2.1, 5.4.4, 5.7
13	Failure of power supply	5.4.6
15	Errors of fitting	5.6.4.2, 5.6.5
19	Slip, trip and fall of persons (related to machinery)	5.2.1, 5.2.2, 5.4.7

Table 1 (continued)

N°	Hazards	Relevant clause(s) in this European Standard
21.1	Fall of persons during access (or at/from) the work position	5.2.2, 5.4.3, 5.4.4, 5.4.7
21.2	Exhaust gases/lack of oxygen at the work position	5.2.1
21.3	Fire (flammability of the cab, lack of extinguishing means)	5.2.1, 5.2.2
21.4	Mechanical hazards at work position : c) fall of objects, penetration by objects	5.2.1, 5.4.5
21.5	Insufficient visibility	5.2.1, 5.5.4
21.7	Inadequate seating	5.2.1
21.9	Vibration at work position	5.2.1
21.10	Insufficient means for evacuation/emergency exit	5.2.1, 5.2.2, 5.4.6
22.1	Inadequate location of manual controls	5.2.1, 5.5.1, 5.5.4
22.2	Inadequate design of manual controls and their mode of operation	5.2.1, 5.4.8, 5.5
24	Due to power force and to transmission of power between machines	5.6.1
25.1	Unauthorized start-up/use	5.2.1, 5.5.3
27.4	Insufficient mechanical strength of parts	5.2.1, 5.2.2, 5.3
27.5	Inadequate design of pulleys, drums	5.6.3.3
27.6	Inadequate selection of chain, ropes, lifting accessories and their inadequate integration into the machine	5.6.3.2, 5.6.3.3, 5.6.4
27.8	Abnormal condition of assembly/testing/use/maintenance	5.6.3.2.7, 5.6.4, 5.6.5, 5.6.6.12, 5.8, 7
34.1	Inadequate mechanical strength – inadequate working coefficients	5.3, 5.6.1.9, 5.6.2.1, 5.6.3.1.1, 5.6.3.2, 5.6.4.3, 5.6.4.4, 5.6.5.1, 5.6.6.
34.4	Overspeed of person carrier	5.2.4, 5.4.1, 5.8.3
35	Falling from person carrier	5.2.4, 5.2.5, 5.4.2, 5.4.4
NOTE	Numbering of hazards is in accordance with Annex A of EN 1050:1996.	