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Safety for conveyor belts for winter sport or leisure use

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EESTI STANDARDI EESSÕNA

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ICS 91.140.90

English Version

Safety for conveyor belts for winter sport or leisure use

Sécurité des tapis roulants pour les activités de sports
d'hiver ou de loisirsSicherheit von Bandförderern für Wintersport- oder
Freizeitaktivitäten

This European Standard was approved by CEN on 3 September 2011.

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.

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Foreword

This document (EN 15700:2011) has been prepared by Technical Committee CEN/TC 242 "Safety requirements for passenger transportation by cable", the secretariat of which is held by AFNOR.

This European Standard shall be awarded the status of national standard, either by publication of an identical text or by endorsement, at the latest by April 2012, and conflicting national standards shall be withdrawn at the latest by April 2012.

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.

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

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Introduction

This European Standard is a type C standard as stated in EN ISO 12100:2010.

The travelators covered and the range of hazardous phenomena and situations and dangerous events covered are indicated in the scope of this document.

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 travelators that have been designed and built according to the provisions of this type C standard.

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1 Scope

This European Standard is applicable for travelators for leisure or winter sports use.

These requirements are applicable to travelators for the transport of passengers wearing snow-sliding devices or pedestrians wearing ski boots or heavy boots who may be carrying their snow-sliding devices for winter sports activities. For other uses, users shall wear suitable (enclosed and solid) footwear for travelators.

NOTE Snow-sliding devices include seated ski equipment for handicapped people.

This European Standard has been prepared on the basis of the automatic operation of these installations with no staff permanently present at the actual installation.

It covers requirements relating to the prevention of accidents and the safety of workers.

This European Standard covers all the significant hazards, hazardous situations and hazardous events specific to travelators, for leisure or winter sports activities, when they are used in conformity with the application for which they are intended, as well as for inappropriate applications which could be reasonably foreseeable by the manufacturer (see Clause 4).

This European Standard does not apply either to moving walks as specified in EN 115 or to loading bands as specified in EN 1907.

This European Standard does not apply to travelators manufactured prior to the date of its publication as an EN.

2 Normative references

The following reference 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 115-1, *Safety of escalators and moving walks — Part 1: Construction and installation*

EN 619:2002, *Continuous handling equipment and systems — Safety and EMC requirements for equipment for mechanical handling of unit loads*

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

EN 981, *Safety of machinery — System of auditory and visual danger and information signals*

EN 1037, *Safety of machinery — Prevention of unexpected start-up*

EN 1088, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

EN 1907:2005, *Safety requirements for cableway installations designed to carry persons — Terminology*

EN 1993-1-1, *Eurocode 3: Design of steel structures — Part 1-1: General rules and rules for buildings*

EN 60204-1, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

EN 60204-11, *Safety of machinery — Electrical equipment of machines — Part 11: Requirements for HV equipment for voltages above 1 000 V a.c. or 1 500 V d.c. and not exceeding 36 kV*

EN 60947-5-1, *Low-voltage switchgear and control gear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices*

EN 61496-1, *Safety of machinery — Electro-sensitive protection equipment — Part 1: General requirements and tests*

EN 61508-1, *Functional safety of electrical/electronic/programmable electronic safety-related systems — Part 1: General requirements (IEC 61508-1:2010)*

EN ISO 7731, *Ergonomics — Danger signals for public and work areas — Auditory danger signals (ISO 7731:2003)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13849-1, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-2:2006)*

EN ISO 13849-2, *Safety of machinery — Safety-related parts of control systems — Part 2: Validation (ISO 13849-2:2003)*

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

EN ISO 13857, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010, EN 1907:2005, EN 619:2002 and the following apply.

3.1

travelator

continuous transport installation used for leisure or winter sporting activities, comprising an electrically driven moving belt on which the passengers are transported standing up

NOTE This belt may be either continuous or modular

3.2

drum

continuous belt travelator component used to drive or return the belt

3.3

wheel

modular belt travelator component used to drive or return the belt

3.4

safety function

all the operations intended to recognize the occurrence of certain states or specific events constituting a dangerous situation. These operations initiate the processes intended to reduce the risks, in particular stopping the installation. A safety function starts by recognizing the conditions and evaluating the physical parameters on the travelator. It ends with initiating the process or with the completion of what has been initiated