Allmaapaigaldistes kasutamiseks mõeldud konveierlindid. Elektri- ja tuleohutuse nõuded KONSOLIDEERITUD TEKST

Conveyor belts for use in underground installations - Electrical and flammability safety requirements CONSOLIDATED TEXT

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 14973:2006+A1:2008 sisaldab Euroopa standardi EN 14973:2006+A1:2008 ingliskeelset teksti.	This Estonian standard EVS-EN 14973:2006+A1:2008 consists of the English text of the European standard EN 14973:2006+A1:2008.
Standard on kinnitatud Eesti Standardikeskuse 20.06.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 20.06.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 09.04.2008.	Date of Availability of the European standard text 09.04.2008.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 13.220.40, 53.040.20

Võtmesõnad:

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14973:2006+A1

April 2008

ICS 13.220.40; 53.040.10

Supersedes EN 14973:2006

English Version

Conveyor belts for use in underground installations - Electrical and flammability safety requirements

Courroies transporteuses pour usage dans les installations souterraines - Exigences de sécurité électrique et protection contre l'inflammabilité

Fördergurte für die Verwendung unter Tage - Elektrische und brandtechnische Sicherheitsanforderungen

This European Standard was approved by CEN on 19 June 2006 and includes Corrigendum 1 issued by CEN on 24 January 2007 and Amendment 1 approved by CEN on 21 February 2008.

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: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 14973:2006+A1:2008: E

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 6

4 Ignition hazard assessment 7

5 Electrical resistance 7

6 Frictional heating 7

7 Resistance to ignition 8

8 Fire propagation 8

9 Marking 9

Annex A (normative) Hazards and risk assessment 11

Annex B (informative) Example of an ignition hazard assessment for a conveyor belt intended for use in a potentially explosive atmosphere 13

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC 14

Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 94/9/EC 15

Annex ZC (informative) A1 Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC A1 16

Bibliography 17

Foreword

This document (EN 14973:2006+A1:2008) has been prepared by CEN /TC 188, "Conveyor belts", 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 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

This document supersedes EN 14973:2006.

This document includes Corrigendum[1] issued by CEN on 24 January 2007 and Amendment 1, approved by CEN on 2008-02-21.

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

The modifications of the related CEN Corrigendum have been implemented at the appropriate places in the text and are indicated by the tags ▌AC〉 〈AC▐.

▌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 EC Directive(s).

For relationship with EC Directives, see informative Annexes ZA, ZB and ZC, which are integral parts of this document. 〈A1▐

These Directives each require a risk assessment to be made to ensure that the equipment meets the essential health and safety requirements of the relevant Directive.

The risk, or probable rate of occurrence of a hazard and the degree of harm that the hazard might cause, will vary depending upon the particular circumstances or site of application. Depending upon the risks judged to be pertinent, the measures taken to ensure a satisfactory level of safety may also vary. Annex A gives practical guidance on the identification of hazards, subsequent risk assessment and how these can be addressed.

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 the United Kingdom.

[1] Applicable to the French version only.

Introduction

This document is a type C standard as stated 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 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 machines that have been designed and built according to the provisions of this type C standard.

The approach taken in this European Standard is to identify the main hazards encountered in underground conveying applications and to specify requirements for conveyor belts that will provide the necessary operational safety. Three Classes are specified, A, B and C, as defined in 3.9 to 3.11.

1 Scope

This European Standard specifies electrical and flammability safety requirements for conveyor belts intended for use in underground installations, in the presence of flammable or non-flammable atmospheres.

Conveyor belts covered by this European Standard and intended for use in flammable atmospheres are intended for use on conveyor belt installations (machinery in mines). The belt is a component, which will be incorporated into the conveyor, which is an equipment of Group I, Category M2, as defined in 3.2.2 of EN 13463-1:2001.

This European Standard is not applicable to light conveyor belts as described in EN 873 nor is it applicable to conveyor belts which are manufactured before the date of publication of this document by CEN.

This European Standard deals with those significant hazards detailed in A.1.

Attention is drawn to Annexes ZA and ZB.

NOTE A summary of the requirements of this European Standard is given in Table 1.

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 1050, *Safety of machinery – Principles for risk assessment.*

EN 1554:1998, *Conveyor belts – Drum friction testing.*

EN 12881-1:2005, *Conveyor belts – Fire simulation flammability testing – Part 1: Propane burner tests.*

EN 12881-2, *Conveyor belts - Fire simulation flammability testing - Part 2: Large-scale fire test.*

EN 13463-1:2001, *Non-electrical equipment for potentially explosive atmospheres – Part 1: Basic method and requirements.*

EN ISO 284, *Conveyor belts - Electrical conductivity - Specification and test method (ISO 284:2003).*

EN ISO 340, *Conveyor belts - Laboratory scale flammability characteristics - Requirements and test method (ISO 340:2004).*

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

prEN ISO 15236-3:2005, *Steel cord conveyor belts - Part 3: Special safety requirements for belts for use in underground installations (ISO/DIS 15236-3:2005).*

prEN ISO 22721:2005, *Conveyor belts - Specification for rubber or plastics covered conveyor belts of textile construction for underground mining (ISO/DIS 22721:2005).*

IEC 60300-3-9, *Dependability management – Part 3: Application guide – Section 9: Risk analysis of technological systems.*