

**Pidevtoimega teisaldusseadmed ja süsteemid. Pealmaa-pruunsöekaevetööl kasutatavate pidevtoimega seadmete üldised ohutusnõuded**

Continuous handling equipment and systems -  
General safety requirements for continuous handling  
equipment for opencast lignite mining

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14658:2005 sisaldab Euroopa standardi EN 14658:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 22.06.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14658:2005 consists of the English text of the European standard EN 14658:2005.</p> <p>This document is endorsed on 22.06.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This European Standard applies to mechanical continuous handling equipment used in opencast lignite mines and the particular mechanical continuous handling equipment used: - to convey lignite or overburden from opencast mines; - to convey residuals and tailings from lignite processing to opencast mines; - to convey lignite, overburden or lignite treatment processing residuals and tailings from one opencast mine to another.</p>	<p><b>Scope:</b> This European Standard applies to mechanical continuous handling equipment used in opencast lignite mines and the particular mechanical continuous handling equipment used: - to convey lignite or overburden from opencast mines; - to convey residuals and tailings from lignite processing to opencast mines; - to convey lignite, overburden or lignite treatment processing residuals and tailings from one opencast mine to another.</p>
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**Võtmesõnad:** accident prevention, bulk materials, continuous conveyors, definition, hazards

ICS 53.040.10

English version

## Continuous handling equipment and systems - General safety requirements for continuous handling equipment for opencast lignite mining

Equipements et systèmes de manutention continue -  
Prescriptions générales de sécurité aux équipements de  
manutention continue pour les mines de lignite à ciel ouvert

Stetigförderer und Systeme - Allgemeine Sicherheits-  
Anforderungen an Stetigförderer im Braunkohlentagebau

This European Standard was approved by CEN on 25 March 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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## Foreword

This European Standard (EN 14658:2005) has been prepared by Technical Committee CEN/TC 148 "Continuous handling equipment and systems - Safety", the secretariat of which is held by AFNOR.

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 2005, and conflicting national standards shall be withdrawn at the latest by November 2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association (EFTA) and supports essential requirements of EU directives.

For relationship with EU Directives, see informative annex ZA which is an integral part of this standard.

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 the United Kingdom.

## Introduction

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

The machinery concerned and the hazards covered are indicated in the scope of this European Standard.

In the preparation of this standard, it has been assumed that:

- discussions have taken place between the manufacturer and the user concerning particular conditions for the use and the site of use of the machinery, with regard to health and safety;
- only experts will operate, clean, check, maintain, inspect and repair the machinery and adapt it to the changeable requirements of opencast mining;
- the machinery components are kept in a good state of repair and working order so that the required characteristics related to health and safety are maintained despite wear and tear;
- the place of installation is adequately illuminated;
- the place of installation allows safe use of the machinery;
- the design of the loadbearing elements ensures safe operation of the machinery in the required load range and during testing;
- all parts of the machinery not subject to specific requirements:
  - a) are made from materials of adequate strength and durability and of suitable quality;
  - b) function in a sound manner mechanically;
  - c) have been designed in accordance with standard engineering practice and calculation methods, taking account of all failure modes and appropriate safety factors.

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 mechanical continuous handling equipment used in opencast lignite mines and the particular mechanical continuous handling equipment used:

- to convey lignite or overburden from opencast mines;
- to convey residuals and tailings from lignite processing to opencast mines;
- to convey lignite, overburden or lignite treatment processing residuals and tailings from one opencast mine to another.

This standard applies to continuous handling equipment operating in delimited site areas that are off-limits to the public and accessible only to authorized persons.

It specifies the safety requirements for stationary, mobile and shiftable continuous handling equipment designed to transport bulk goods by continuous movement from a loading point to a discharge point.

The standard considers the significant hazards that arise during the use, movement and shifting of continuous handling equipment, as well as the measures for eliminating or reducing these hazards provided the continuous handling equipment is used as intended and the remaining risk is foreseen and taken into account by the manufacturer. A complete list of all the hazards specified in EN 1050 is given in Annex A (normative).

The requirements of this standard do not apply to equipment and systems manufactured and put into operation before the publication date of this standard.

This standard does not cover:

- a) safety requirements of wireless remote control systems;
- b) hazards generated by noise;
- c) hazards generated by vibration;
- d) hazards generated by explosion;
- e) hazards generated by electromagnetic interference (EMC).

**NOTE** Directive 94/9/EC concerning equipment and protective systems intended for use in potentially explosive atmospheres and Directive 89/336/EEC relating to electromagnetic compatibility may be applicable to equipment or components covered by this European Standard. This Standard is not intended to provide means of complying with the essential health and safety requirements of the above Directives.

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

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

EN 418, *Safety of machinery — Emergency stop equipment, functional aspects — Principles for design*

EN 457, *Safety of machinery — Auditory danger signals — General requirements, design and testing (ISO 7731:1986, modified)*

EN 811, *Safety of machinery — Safety distances to prevent danger zones being reached by the lower limbs.*

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

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

EN 1050:1996, *Safety of machinery — Principles for risk assessment*

EN 60204-1, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:1997)*

EN 60204-11, *Safety of machinery — Electrical equipment of machines — Part 11: General requirements for HV equipment for voltages above 1 000 V a.c. or 1 500 V d.c. and not exceeding 36 kV (IEC 60204-11:2000)*

EN 60947-5-1, *Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices (IEC 60947-5-1:2003)*

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 14122-1, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of a fixed means of access between two levels (ISO 14122-1:2001)*

EN ISO 14122-2, *Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2:2001)*

EN ISO 14122-3, *Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001)*

EN ISO 14122-4, *Safety of machinery — Permanent means of access to machines and industrial plants — Part 4: Fixed ladders (ISO 14122-4: 2004)*

### 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN ISO 12100-1:2003, EN ISO 12100-2:2003 and the following terms and definitions apply.

#### 3.1

##### **delimited operating site**

area delimited by man-made or natural barriers (embankments, dams, distances, etc.) from public areas and accessible only to authorized persons

#### 3.2

##### **scraper**

device used to distribute the material handled or to remove adherent residual materials

#### 3.3

##### **discharge point**

unloading point of continuous handling equipment