# Ohutusnõuded inimeste transportimiseks mõeldud köisteepaigaldistele. Käikulaskmiseelne ülevaatus, hooldus, käitusaegne ülevaatus ja kontroll

Safety requirements for cableway installations designed to carry persons - Precommissioning inspection, maintenance, operational inspection and checks



# **EESTI STANDARDI EESSÕNA**

# **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN
1709:2004 sisaldab Euroopa standardi EN
1709:2004 ingliskeelset teksti.

Käesolev dokument on jõustatud 21.12.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 1709:2004 consists of the English text of the European standard EN 1709:2004.

This document is endorsed on 21.12.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

# Käsitlusala:

This European Standard specifies the safety requirements applicable to the precommissioning inspection, maintenance and operational inspections and checks of cableway installations designed to carry persons. This standard is applicable to the various types of installations and takes into account their environment.

# Scope:

This European Standard specifies the safety requirements applicable to the precommissioning inspection, maintenance and operational inspections and checks of cableway installations designed to carry persons. This standard is applicable to the various types of installations and takes into account their environment.

ICS 45.100

Võtmesõnad:

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

**EN 1709** 

October 2004

ICS 45,100

#### **English version**

# Safety requirements for cableway installations designed to carry persons - Precommissioning inspection, maintenance, operational inspection and checks

Prescriptions de sécurité pour les installations à câbles transportant des personnes - Examen probatoire, maintenance, contrôles en exploitatation Sicherheitsanforderungen für Seilbahnen für den Personenverkehr - Erprobung, Instandhaltung, Betriebskontrollen

This European Standard was approved by CEN on 23 August 2004.

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.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

	tents	Page
Forew	ord	4
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4 4.1 4.2 4.2.1 4.2.2	General requirements Application of this standard Safety principles General Hazard scenarios	8 8 8
4.2.3	Safety measures	
5 5.1	Verifications and pre-commissioning inspection	9
5.2 5.3	Submission of verification of the suitability of materials and components  Pre-commissioning inspection	
5.3.1	General	
5.3.2 5.3.3	Verification of conformity of the installation with the submitted documents  Check and operating test of the individual components, their operation with each other and within their local environment	
5.3.4	Operating test	10
5.3.5	Report on the pre-commissioning inspection	
5.4 5.5	Delivery of required documents to the operator  Certification of readiness for acceptance	11 11
6	Maintenance	11
6.1	General	
6.2 6.3	ServicingInspection	
6.3.1	General	
6.3.2	First inspection of construction works	
6.3.3	Monthly inspectionsInspection in the case of intermittent operation	
6.3.4 6.3.5	Annual inspections	
6.3.6	Special multiannual inspections	
6.3.7	Special inspections	16
6.4	Repair	18
6.5	Renewal of construction works	
7	Operational inspections and checks	
7.1 7.2	General  Daily inspection and test run prior to opening to the public	
7.2 7.2.1	General	
7.2.2	Daily inspections	
7.2.3	Daily test run	
7.3	Checks during operation	
7.4	Operational inspections and test runs after exceptional events	
8	Maintenance and operational inspection documentation	20

A (Info. Requirem. carry perso. Annex ZA (informative) Relationship between this European Standard and the Essential 

# **Foreword**

This document (EN 1709:2004) has been prepared by Technical Committee CEN/TC 242 "Safety requirements for passenger transportation by rope", 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 April 2005, and conflicting national standards shall be withdrawn at the latest by April 2005.

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 Directives.

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

This document forms part of the standards programme approved by the CEN Technical Board on safety requirements for cableway installations designed to carry persons. This programme comprises the following standards:

- 1) Safety requirements for cableway installations designed to carry persons Terminology.
- 2) Safety requirements for cableway installations designed to carry persons General requirements.
- 3) Safety requirements for cableway installations designed to carry persons Calculations.
- Safety requirements for cableway installations designed to carry persons Ropes.
- 5) Safety requirements for cableway installations designed to carry persons Tensioning devices.
- Safety requirements for cableway installations designed to carry persons Drive systems and other mechanical devices.
- 7) Safety requirements for cableway installations designed to carry persons Carriers.
- 8) Safety requirements for cableway installations designed to carry persons Electrical equipment other than for drive systems.
- 9) Safety requirements for cableway installations designed to carry persons Civil engineering works.
- 10) Safety requirements for cableway installations designed to carry persons Pre-commissioning inspection, maintenance and operational inspection and checks.
- 11) Safety requirements for cableway installations designed to carry persons Recovery and evacuation.
- 12) Safety requirements for cableway installations designed to carry persons Operation.
- Safety requirements for cableway installations designed to carry persons Quality assurance.

Together these form a series of standards regarding design, production, maintenance and operation of all installations for cableway installations designed to carry persons.

In respect of ski-tows, the drafting of this document has been guided by the works of the International Organisation for transportation by rope (OITAF).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following oc .onia, , Malta, . .ed Kingdoi. 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.

# 1 Scope

This document specifies the safety requirements applicable to the pre-commissioning inspection, maintenance and operational inspections and checks of cableway installations designed to carry persons. This standard is applicable to the various types of installations and takes into account their environment.

It also includes requirements relating to accident prevention and to worker protection.

It does not apply to installations for the transportation of goods by rope or to inclined lifts.

This document does not deal with acceptance tests prior to opening to the public.

The provisions of clause 5 apply to the measures to be taken prior to the initial commissioning and clauses 6 and 7 concern those to be taken during operation.

## 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.

ENV 1090-1, Execution of steel structures - Part 1: General rules and rules for buildings.

prEN 1907:2004, Safety requirements for cableway installations designed to carry person - Terminology.

EN 1908, Safety requirements for cableway installations designed to carry persons - Tensioning devices.

EN 1909, Safety requirements for cableway installations designed to carry persons - Recovery and evacuation.

EN 12397, Safety requirements for cableway installations designed to carry persons - Operation.

EN 12408, Safety requirements for cableway installations designed to carry persons - Quality assurance.

EN 12927-1, Safety requirements for cableway installations designed to carry persons - Ropes - Part 1: Selection criteria for ropes and their end fixings.

EN 12927-2, Safety requirements for cableway installations designed to carry persons - Ropes - Part 2: Safety factors.

EN 12927-3, Safety requirements for cableway installations designed to carry persons - Ropes - Part 3: Long splicing of 6-strand hauling, carrying-hauling and towing ropes.

EN 12927-4, Safety requirements for cableway installations designed to carry persons - Ropes - Part 4: End fixing.

EN 12927-5, Safety requirements for cableway installations designed to carry persons - Ropes - Part 5: Storage, transportation, installation and tensioning.

EN 12927-6, Safety requirements for cableway installations designed to carry persons - Ropes - Part 6: Discard criteria.

EN 12927-7, Safety requirements for cableway installations designed to carry persons - Ropes - Part 7: Calculation, repair and maintenance.

EN 12927-8, Safety requirements for cableway installations designed to carry persons - Ropes - Part 8: Magnetic rope testing (MRT).

EN 12929-1, Safety requirements for cableway installations designed to carry persons - General requirements - Part 1: Requirements applicable to all installations.

EN 12929-2, Safety requirements for cableway installations designed to carry persons - General provisions - Part 2: Additional requirements for reversible bicable aerial ropeways without carrier truck brakes.

EN 12930, Safety requirements for cableway installations designed to carry persons - Calculations.

EN 13107, Safety requirements for cableway installations designed to carry persons - Civil engineering works.

EN 13223, Safety requirements for cableway installations designed to carry persons - Drive systems and other mechanical equipment.

EN 13243, Safety requirements for cableway installations designed to carry persons - Electrical equipment other than for drive systems.

prEN 13796-1, Safety requirements for cableway installations designed to carry persons - Carriers - Part 1: Grips, carrier trucks, on-board brakes, cabins, chairs, carriages, maintenance carriers, tow-hangers.

prEN 13796-2, Safety requirements for cableway installations designed to carry persons - Carriers - Part 2: Slipping resistance tests for grips.

prEN 13796-3, Safety requirements for passenger transportation by rope - Carriers - Part 3: Fatigue testing.

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in prENV 1907:2004 and the following apply.

#### 3.1

## pre-commissioning inspection

all of the operations required for confirming the readiness of the installation for acceptance

#### 3.2

#### inspection

all of the operations intended for ascertaining and assessing the actual condition of an installation and its components

#### 3.3

# operational inspection and checks

operations intended for verifying the good working condition of the installation before and during operation

#### 3.4

#### operating test

operation, of a defined duration, during which the correct working of the installation is tested

#### 3.5

### readiness for acceptance

condition of the installation where the functional and technical safety conditions for acceptance have been fulfilled

#### 3.6

# readiness for operation

condition of the installation where the functional and technical safety conditions to allow passengers to be transported have been fulfilled