EESTI STANDARD EVS-EN 13107:2004

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Safety requirements for cableway installations designed to carry persons - Civil engineering works

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 13107:2004 sisaldab Euroopa standardi EN 13107:2004 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 13107:2004 consists of the English text of the European standard EN 13107:2004. 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 civil engineering works for installations for passenger transportation by rope. It is essential that its requirements are met by taking into account the various types of installations and their environment.	**Scope:** This European Standard specifies the safety requirements applicable to civil engineering works for installations for passenger transportation by rope. It is essential that its requirements are met by taking into account the various types of installations and their environment.

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Safety requirements for cableway installations designed to carry persons - Civil engineering works

Prescriptions de sécurité pour les installations à câbles transportant des personnes - Ouvrages de génie civil

Sicherheitsanforderungen für Seilbahnen für den Personenverkehr - Bauwerke

This European Standard was approved by CEN on 12 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.

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Foreword

This document (EN 13107:2004) 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 Directive(s).

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

This European Standard forms part of the standards programme adopted by CEN Technical Board in relation to safety requirements for passenger transportation by rope. 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
4) Safety requirements for cableway installations designed to carry persons - Ropes
5) Safety requirements for cableway installations designed to carry persons - Tensioning devices
6) Safety requirements for cableway installations designed to carry persons - Drive systems and other mechanical equipment
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
13) Safety requirements for cableway installations designed to carry persons - Quality assurance

This series of standards form a complete set with regard to the design, manufacture, production, maintenance and operation of all installations for passenger transportation by rope.

In respect to ski-tows the drafting of this European Standard 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 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.

1 Scope

This document specifies the safety requirements applicable to civil engineering works for installations for passenger transportation by rope. It is essential that its requirements are met by taking into account the various types of installations and their environment.

It includes requirements relating to the prevention of accidents and the protection of workers.

It does not apply to installations for transportation of goods by rope nor to inclined lifts.

This document is applicable to:

— new cableways ;

— alterations of existing cableways as far as the safety of civil engineering works or part of it is involved.

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*.

ENV 1090-2, *Execution of steel structures - Part 2: Supplementary rules for cold formed thin gauge components and sheeting*.

EN 1537, *Execution of special geotechnical work - Ground anchors*.

EN 1709, *Safety requirements for cableway installations designed to carry persons - Pre-commissioning inspection, maintenance, operational inspection and checks.*

prEN 1907:2004, *Safety requirements for cableway installations designed to carry persons – 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*.

ENV 1991-1:1994, *Eurocode 1 : Basis of design and actions on structures - Part 1 : Basis of design*.

EN 1991-1-1, *Eurocode 1: Basis of design and actions on structures - Part 1-1: Actions on structures - Densities, self-weight and imposed loads*.

EN 1991-1-2, *Eurocode 1: Actions on structures - Part 1-2: General actions - Actions on structures exposed to fire.*

EN 1991-1-3, *Eurocode 1 - Actions on structures - Part 1-3: General actions - Snow loads*.

EN 1991-1-5, *Eurocode 1 : Basis of design and actions on structures - Part 1-5 : Actions on structures - Thermal actions.*

EN 1991-2*, Eurocode 1: Actions on structures - Part 2: Traffic loads on bridges*.

ENV 1991-2-4, *Eurocode 1 : Basis of design and actions on structures - Part 2-4 : Actions on structures - Wind actions.*

ENV 1991-2-6, *Eurocode 1 : Basis of design and actions on structures - Part 2-6 : Actions on structures - Actions during execution*.

ENV 1991-2-7, *Eurocode 1 : Basis of design and actions on structures - Part 2-7 : Actions on structures - Accidental actions due to impact and explosions*.

ENV 1991-4, *Eurocode 1 : Basis of design and actions on structures - Part 4 : Actions in silos and tanks*.

ENV 1991-5, *Eurocode 1 : Basis of design and actions on structures - Part 5 : Actions induced by cranes and machinery.*

ENV 1992-1-1, *Eurocode 2 : Design of concrete structures - Part 1: General rules and rules for buildings*.

ENV 1992-2, *Eurocode 2 : Design of concrete structures - Part 2 : Concrete bridges*.

ENV 1992-3, *Eurocode 2 : Design of concrete structures - Part 3 : Concrete foundations*.

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

ENV 1993-2, *Eurocode 3: Design of steel structures - Part 2: Steel bridges.*

ENV 1993-3-1, *Eurocode 3 : Design of steel structures - Part 3-1 : Towers, masts and chimneys - Towers and masts*.

ENV 1994-2, *Eurocode 4 : Design of composite steel and concrete structures - Part 2 : Composite bridges*.

ENV 1995, *Eurocode 5 : Design of timber structures*.

ENV 1996, *Eurocode 6 : Design of masonry structures*.

ENV 1997, *Eurocode 7 : Geotechnical design*.

ENV 1997-1, *Eurocode 7 : Geotechnical design - Part 1 : General rules*.

ENV 1998, *Eurocode 8 : Design provisions for earthquake resistance of structures*.

ENV 1998-3, *Eurocode 8 : Design provisions for earthquake resistance of structures - Part 3 : Towers, masts and chimneys*.

ENV 1999, *Eurocode 9 : Design of aluminium structures*.

EN 12223, *Non-destructive testing - Ultrasonic examination - Specification for calibration block No. 1*

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 fixings*.

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 : Inspection, 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 requirements – 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 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*.

ENV 13670-1, *Execution of concrete structures - Part 1: Common*.

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 cableway installations designed to carry persons – Carriers - Part 3 : Fatigue testing*.

ISO 1000, *SI units and recommendations for the use of their multiples and of certain other units*.

ISO 12494, *Atmospheric icing of structures*.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 1907:2004 and in ENV 1991-1:1994 apply. Some definitions are listed in B.1.

4 Symbols and abbreviations

4.1 SI units

4.1.1 SI units shall be used in accordance with ISO 1000.