SLOVENSKI STANDARD
SIST EN 12408:2005

01-januar-2005

Varnostne zahteve za žičniške naprave za prevoz oseb – Zagotavljanje kakovosti

Safety requirements for cableway installations designed to carry persons - Quality assurance

Sicherheitsanforderungen für Seilbahnen für den Personenverkehr - Qualitätssicherung

Prescriptions de sécurité pour les installations à câbles transportant des personnes - Assurance de la qualité

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Ta slovenski standard je istoveten z: **EN 12408:2004**

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ICS:

03.120.99	Drugi standardi v zvezi s kakovostjo	Other standards related to quality
45.100	Oprema za žičnice	Cableway equipment

SIST EN 12408:2005 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English version

Safety requirements for cableway installations designed to carry persons - Quality assurance

Prescriptions de sécurité pour les installations à câbles transportant des personnes - Assurance de la qualité

Sicherheitsanforderungen für Seilbahnen für den Personenverkehr - Qualitätssicherung

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.

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

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

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Foreword

This document (EN 12408:2004) 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 contains a bibliography.

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.

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.

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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.

Together these form a series of standards regarding design, production, maintenance and operation of 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 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,

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Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This document specifies the safety requirements applicable to quality assurance for cableway installations designed to carry persons.

It sets out provisions for the procedures for quality assurance which supplement the requirements of the other standards cited in the foreword. It is applicable to the different cableway systems.

This document applies to suppliers of cableway installations designed to carry persons or of safety components for cableway installations designed to carry persons, regardless of whether or not they maintain a quality management system conforming to EN ISO 9001 certified by a certification body accredited in accordance with EN 45012.

The provisions of clause 4 apply in all cases.

In addition, if quality management systems are used, reference shall be made to EN ISO 9001.

For the case of suppliers who do not maintain any quality management system in accordance with EN ISO 9001, the provisions of this document are to be regarded as minimum requirements.

The requirements relating to the traceability of safety components, which are applicable to all suppliers, are intended to facilitate the recall or the investigation of components which threaten to endanger safety.

The requirements in this document are intended to ensure quality and do not replace the technical requirements in standards EN 1709, EN 1908, EN 1909, EN 12927-1, EN 12927-2, EN 12927-3, EN 12927-4, EN 12927-5, EN 12927-6, EN 12927-7, EN 12927-8, EN 12929-1, EN 12929-2, EN 12930, EN 12397, EN 13107, EN 13223, EN 13243, prEN 13796-1, prEN 13796-2 and prEN 13796-3, but supplement them.

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This document is not applicable either to cableways for goods transport or to inclined lifts.

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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.

prEN 1907:2004, *Safety requirements for passenger transportation by rope — Terminology.*

3 Terms and definitions

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

3.1
process (of production, assembly, installation, inspection, testing)
set of all the resources such as personnel, materials, products, operative methods or practices required for the production, assembly, installation, inspection and testing of components

3.2
documentation (of production, assembly, installation, inspection, testing)
set of all the documents in which the production, assembly, installation, inspection and testing procedures are described in full detail

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3.3
reference designation (of a production, assembly, installation, inspection, testing process)
title and reference number or other reference referring to the relevant documents of the production, assembly, installation, inspection or testing procedure

3.4
traceability document
document tracing the history of the implementation of all or part of a production, assembly, installation, inspection or testing procedure, and documenting all the results and observations

3.5
specification
document defining all the particular requirements that have to be met for procurement, production, assembly, installation, inspection, testing and, where appropriate, maintenance

3.6
safety component
any basic component, set of components, subassembly or complete assembly of equipment and any device incorporated in the installation for the purpose of ensuring a safety function and identified by the safety analysis, the failure of which endangers the safety or health of persons, be they users, operating personnel or third parties

NOTE In view of the volume of documentation which may be required for ensuring traceability, it is desirable to distinguish two classes of safety components and to apply different rules to them as a function of their importance for the safety of the installation.

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3.6.1
class 1 safety component
any basic component, set of components, subassembly or complete assembly of equipment and any device incorporated in the installation for the purpose of ensuring a safety function and identified by the safety analysis, the failure of which by itself endangers the safety or health of persons, be they users, operating personnel or third parties

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3.6.2
class 2 safety component
any basic component, set of components, subassembly or complete assembly of equipment and any device incorporated in the installation for the purpose of ensuring a safety function and identified by the safety analysis, the failure of which in conjunction with the failure of another component (second fault), endangers the safety or health of persons, be they users, operating personnel or third parties

3.7
traceability in production
ability, based on the identification of a component, to locate all the specifications and traceability documents relating to the component

3.8
traceability for recall
ability, based on the identification of a component, to determine its location

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3.9
quality plan
document defining, for the purposes of quality assurance, all the specific requirements for operational procedures, resources and the sequence to be maintained of the activities connected with the design, construction and commissioning of for passenger transportation by rope or with the production, inspection, transportation and installation of Class 1 and 2 safety components

4 Requirements for quality assurance systems

4.1 Product identification and traceability

4.1.1 For Class 1 safety components, traceability in production and for recall shall be ensured.

Traceability documents concerning these components shall be prepared in such a way that it is possible to identify the origin of the processed materials and of the personnel involved in the individual production stages, the inspection and in the assembly and installation. Here, the reference designations of the production and, if appropriate, of the assembly and installation processes shall also be given.

4.1.2 For Class 2 safety components, the specifications shall state whether traceability is to be ensured; it shall also be stated whether and to what extent this traceability covers production and/or recall.

4.1.3 The supplier shall introduce documented procedures which shall be kept continuously updated to ensure that:

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— all components whose traceability is to be ensured receive an identification that remains applicable under normal use;

— this identification is recorded in the relevant technical documents and these documents are carefully stored;

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— possible non-conformities are avoided during transportation or delivery.

4.2 Control of the production, installation and customer service processes

The supplier shall keep available all documents required for assembly and installation. These documents include:

— an assembly plan explaining the various assembly work and the reference to the processes to be used in conformity with the standard requirements to be met during this work;

— a test plan describing in detail the tests to be carried out during assembly;

— a model for the traceability documents which shall, in particular, also provide exact dates and times (details of when assembly work and inspections were carried out).

5 Additional requirements

5.1 General

The following additional requirements are applicable to suppliers who do not maintain a quality management system conforming to EN ISO 9001 certified by a certification body accredited in accordance with EN 45012.

For Class 1 safety components and for those Class 2 safety components for which traceability is to be ensured, a quality plan shall be prepared. It shall contain at least the following information: