SLOVENSKI STANDARD
SIST EN 1709:2019

01-julij-2019

Nadomešča:
SIST EN 1709:2005

Varnostne zahteve za žičniške naprave za prevoz oseb – Prevzemni pregled, navodila za vzdrževanje, pregledi in kontrole obratovanja

Safety requirements for cableway installations designed to transport persons - Precommissioning inspection and instructions for maintenance and operational inspection
and checks

Sicherheitsanforderungen an Seilbahnen für die Personenbeförderung - Erprobung und Anleitungen für die Instandhaltung und die Betriebskontrollen

Prescriptions de sécurité pour les installations à câbles transportant des personnes - Examen probatoire et instructions pour la maintenance et les contrôles en exploitation

Ta slovenski standard je istoveten z: **EN 1709:2019**

ICS:

45.100	Oprema za žičnice	Cableway equipment

SIST EN 1709:2019 **en,de,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1709

May 2019

ICS 45.100

Supersedes EN 1709:2004

English Version

Safety requirements for cableway installations designed to transport persons - Precommissioning inspection and instructions for maintenance and operational inspection and checks

Prescriptions de sécurité pour les installations à câbles transportant des personnes - Examen probatoire et instructions pour la maintenance et les contrôles en exploitation

Sicherheitsanforderungen an Seilbahnen für die Personenbeförderung - Erprobung und Anleitungen für die Instandhaltung und die Betriebskontrollen

This European Standard was approved by CEN on 15 January 2019.

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Ref. No. EN 1709:2019 E

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European foreword

This document (EN 1709:2019) has been prepared by Technical Committee CEN/TC 242 “Safety requirements for cableway installations designed to carry persons”, 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of an identical text or by endorsement, at the latest by November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1709:2004.

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 Regulation (EU) 2016/424.

For the relationship with Regulation (EU) 2016/424, see informative Annex ZA, which is an integral part of this document.

The main changes with respect to the previous edition are listed below:

a) 4.2.2 h) was added due to the unsuitability of one procedure.

b) The classification of Clause 5 has been changed in order to implement the term “precommissioning inspection” consistently with 3.1.

c) Clause 5 has been changed in order to clarify the differences between the two categories of documents (documents by which the planned configuration of the installation is established, and documents which the suppliers have to provide to the controller).

d) 5.2 has been deleted, as it is already included in the modified 5.1.

e) 5.3 g) was inserted.

f) The order of the list in 5.3 was adapted to the Regulation (EU) 2016/424 and to Section 6.

g) In the last paragraph of 5.3, the independent competent person has been deleted, as this is a matter for the national members.

h) In 5.3 m) the pre-commissioning inspection has been deleted because it conflicts with the title and the performance of recovery exercises as determined in national regulations and/or in EN 1909.

i) The final paragraph of 5.4 has been deleted as it is already covered in EN 12397.

j) In 6.1, the requirements for documenting maintenance work have been combined and extended in one place.

k) 6.1.1 (new 6.1.2) has been changed, as, in accordance with 5.5, suppliers are required to provide instructions for maintenance.

l) 6.1.4 was inserted, so that Annex ZA is still possible.

m) The definition of inspection in 6.3.1 has been supplemented with information concerning the time requirements. This definition is now not the same as the term “inspection” in EN 1907.

n) The requirements in 6.3.1 for civil engineering works are generally applicable and have been expanded to include all parts of the installation.

o) In 6.3.2 and 6.3.5, the visual inspection of screws and rivets for tightness has been changed to cover loose and missing elements, and the visual inspection with regard to deformation has been extended to include all components.

p) In 6.3.3, a), c), i), k) and parts of m) have been omitted and a stipulation of switching cabinet cleanliness requirements included. The order of the list was adapted to Regulation (EU) 2016/424.

q) In 6.3.5, the order of the lists has been changed to comply with Regulation (EU) 2016/424 and a clause concerning mobile evacuation equipment has been included.

r) 6.3.5.2 has been supplemented with detailed requirements for timber structures and for the terrain in the vicinity of the civil engineering works.

s) Most of the requirements for funicular railways originally included in 6.3.6 are generally applicable and have been extended to include all cableway systems. In order to create a comprehensible qualitative difference with respect to the annual inspections in accordance with 6.3.5.2, inspection by a competent person was introduced for the multiannual inspection of engineering structures (tunnels, galleries, bridges) and ground anchors.

t) The intervals and the inspection methodology were changed in 6.3.7.

u) The requirements relating to the civil engineering works in 6.4 have been omitted, as they repeat similar requirements in this Standard.

v) 6.5 has been deleted without replacement.

w) The terms and organization of Clause 7 have been revised. In addition, it was decided that the supplier’s instructions in accordance with 5.5 shall include the stated operational inspections.

x) Clause 8 has been deleted, as it is already covered in other areas of the Standard.

y) The scope of the Standard was changed from “Maintenance and operational inspections” to “Instructions for maintenance and operational inspections”.

This document forms part of a series of European Standards concerning safety requirements for cableway installations designed to transport persons. This series of standards comprises the following documents:

— EN 1907 relating to Terminology;

— EN 12929 (all parts) relating to General requirements;

— EN 12930 relating to Calculations;

— EN 12927 relating to Cables;

— EN 1908 relating to Tensioning devices;

— EN 13223 relating to Drive systems and other mechanical equipment;

— EN 13796 (all parts) relating to Carriers;

— EN 13243 relating to Electrical equipment other than for drive systems;

— EN 13107 relating to Civil engineering works;

— EN 1709 relating to Pre-commissioning inspections and instructions for maintenance and operational inspection and checks;

— EN 1909 relating to Recovery and evacuation;

— EN 12397 relating to Operation;

— EN 12408 relating to Quality control.

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

In respect of ski-tows, the drafting of this document has been guided by the works of the International Organization 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, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document sets the safety requirements that need to be met in relation to pre-commissioning inspections and the instructions for maintenance and operational inspections and checks of cableway installations designed to transport persons. This document is applicable to the various types of cableway installation and takes into account their environment.

It also includes requirements relating to accident prevention and to the protection of workers irrespective of the application of national regulations.

National regulations regarding building laws or regulations or which afford protection to specific groups of people, as well as national regulations regarding testing, acceptance testing prior to starting passenger service, maintenance and operational inspection shall remain unaffected.

It does not apply to cableway installations for the transportation of goods or to lifts.

The provisions of Clause 5 apply to the measures to be taken prior to the commissioning of the installation, and those of Clauses 6 and 7 to the measures to be taken during operation.

This document does not apply to cableway installations designed to transport persons that were manufactured before the publication of this EN standard.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1907, *Safety requirements for cableway installations designed to transport persons — Terminology*

EN 1908, *Safety requirements for cableway installations designed to transport persons — Tensioning devices*

EN 1909, *Safety requirements for cableway installations designed to transport persons — Recovery and evacuation*

EN 12397, *Safety requirements for cableway installations designed to transport persons — Operation*

EN 12408, *Safety requirements for cableway installations designed to transport persons — Quality control*

EN 12927, *Safety requirements for cableway installations designed to carry persons — Ropes*

EN 12929 (all parts), *Safety requirements for cableway installations designed to transport persons — General requirements*

EN 12930, *Safety requirements for cableway installations designed to transport persons — Calculations*

EN 13107, *Safety requirements for cableway installations designed to transport persons — Civil engineering works*

EN 13223, *Safety requirements for cableway installations designed to transport persons — Drive systems and other mechanical equipment*

EN 13243, *Safety requirements for cableway installations designed to transport persons — Electrical equipment other than for drive systems*

EN 13796 (all parts), *Safety requirements for cableway installations designed to transport persons — Carriers*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: go to http://www.electropedia.org/

— ISO Online Browsing Platform: go to http://www.iso.org/obp

3.1
Precommissioning inspection
all of the measures required to confirm the readiness of the installation for acceptance

3.2
Operational inspection and checks
operations intended for verifying the readiness for operation of the installation before and during operation

3.3
Operating test
operation of a defined duration during which the working of the installation is tested

3.4
Readiness for acceptance
condition of the installation where the functional and technical safety conditions for acceptance have been fulfilled

3.5
Readiness for operation
condition of the installation where the functional and technical safety conditions to allow passengers to be transported have been fulfilled

4 General requirements

4.1 Application of this Standard

The requirements of this document, together with those of standards EN 1908, EN 1909, EN 12397, EN 12408, EN 12927, EN 12929 (all parts), EN 12930, EN 13107, EN 13223, EN 13243, EN 13796 (all parts) apply to all cableway installations.

4.2 Safety principles

4.2.1 General

The safety principles formulated in EN 12929-1 shall apply.

In addition, the scope of this document includes the following hazard scenarios and safety measures.

4.2.2 Hazard scenarios

The following events may lead to hazardous situations which may be avoided or limited by the safety requirements of this document:

a) lack of compliance of the physical construction of the installation with the documents presented;

b) defective interaction of individual components with each other and with their local environment;

c) defects as a result of long-term operation, prolonged stoppages or repeated and sustained unfavourable operating conditions;

d) use of insufficient suitably qualified personnel;

e) operation with the installation or its components in a defective condition;

f) lack of measures for maintaining or re-establishing the specified condition of the installation or its components;

g) hazards stemming from the environment;

h) absence, unsuitability or non-compliance of a procedure.

4.2.3 Safety measures

4.2.3.1 General

The following safety measures shall be taken prior to acceptance and during operation in order to eliminate the hazard scenarios listed in 4.2.2.

4.2.3.2 General safety

a) a precommissioning inspection of the installation prior to its acceptance, intended to verify the correct interaction of the components with each other, and of the installation as a whole with its local environment;

b) maintenance work intended to maintain and re-establish the specified condition of the installation and its components;

c) operational inspection and checks intended to verify the readiness for operation of the installation before and during operation.

4.2.3.3 Safety of workers

All work shall be carried out taking the necessary measures for protecting against risks to the safety and health of workers.

5 Precommissioning inspection

5.1 General

The precommissioning inspection includes:

a) verifying the conformity of the installation with the technical documentation and other documents;