



SLOVENSKI STANDARD

SIST EN 12929-2:2015

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Nadomešča:
SIST EN 12929-2:2005

Varnostne zahteve za žičniške naprave za prevoz oseb - Splošne zahteve - 2. del: Dodatne zahteve za dvovrvne nihalne žičnice brez vrvnih zavor

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

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Sicherheitsanforderungen an Seilbahnen für den Personenverkehr - Allgemeine Bestimmungen - Teil 2: Ergänzende Anforderungen an Zweiseil - Pendelbahnen ohne Trageilbremse

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Prescriptions de sécurité pour les installations à câbles destinées au transport de personne - Dispositions générales - Partie 2: Prescriptions complémentaires pour les téléphériques bicâbles à va et vient sans frein de chariot

Ta slovenski standard je istoveten z: EN 12929-2:2015

ICS:

45.100 Oprema za žičnice Cableway equipment

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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 - General requirements - Part 2: Additional requirements for reversible bicable aerial ropeways without carrier truck brakes

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This European Standard was approved by CEN on 18 November 2014.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

[SIST EN 12929-2:2015](http://standards.iteh.ai)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 12929-2:2015) 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 July 2015, and conflicting national standards shall be withdrawn at the latest by July 2015

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

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

This document replaces EN 12929-2:2004.

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 the EU Directive 2000/9/EC.

For the relationship with the EU Directive 2000/9/EC, see informative Annex ZA, which is an integral part of this document.

The following main changes have been made to EN 12929-2:2004:

- In 6.3 the requirement has been removed that stipulates that for the tension safety factor the haul rope loop shall comply with 1,2 times the value of the tension safety factor for haul ropes of bicable reversible aerial ropeways with carrier track brakes in accordance with EN 12930, as the value established from this was only slightly above 4,5. The requirement for the maximum tension safety factor was clarified on the area of the long splicing.
- In 6.4 b) 1), the value for the smallest permissible tension safety factor has been adapted to comply with the state of the art.
- In 6.6 the requirement has been removed that stipulates that the device shall be available for the MRT inspection of the installation, as this is not safety-related.
- The previous Clauses 6.13, 6.14, 6.17, 6.20, 6.22, 6.27, 7.3, 7.7, 7.8, 7.9 and 8.6 have been deleted without replacement, as there was no safety-relevant justifications for supplementary requirements with regard to bicable aerial ropeway with carrier track brakes.
- In 6.13, the alternative has been removed regarding taking into consideration the actually executed transverse sway options.
- In 7.2 the increased requirement on the groove depth of the rollers of the carrier truck has been removed, as the transverse sway movement of the carrier truck was restricted.
- In 7.3 the value for the assumed longitudinal sway has been slightly reduced to the value that is assumed in accordance with EN 12929-1 and the formula adapted.

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- In 7.6 the requirement on the equipment for bringing the cableway system to a standstill from the cabin have been redefined.
- In 8.2 the value for the safety has been reduced, as in 8.1 a redundant execution is required and therefore in the event of a system failure a safety of 1,5 is still provided. The terms and definitions have been adapted to EN 13796-1.
- In 8.4, the terms and definitions have been adapted to EN 13796-1.
- In 8.6 the requirements on the gripping force for reducing the diameter of the haul rope has been modified by 20 %, as the former regulation contained disproportionately high requirements for the execution of the grip.
- In Annex A the A-deviation for Germany has been removed.
- In Annex ZA, the relationships with the basic requirements of the Directive 2000/9/EC have been adapted to the new numbering.

EN 12929 with the generic title “Safety requirements for cable way installations designed to carry persons – General requirements” consists of the following parts:

a) *Part 1: Requirements for all installations*

b) *Part 2: Additional requirements for reversible bicable aerial ropeways without carrier truck brakes*

This document belongs to the standards programme which was ratified by the CEN/TC242. This programme includes the following standards:

- 1) EN 1907 – *Terminology*
- 2) EN 12929 (all parts) – *General requirements*
- 3) EN 12930 *Calculations*
- 4) EN 12927 (all parts) – *Ropes*
- 5) EN 1908 – *Tensioning devices*
- 6) EN 13223 – *Drive systems and other mechanical equipment*
- 7) EN 13796 (all parts) – *Carriers*
- 8) EN 13243 – *Electrical equipment other than for drive systems*
- 9) EN 13107 – *Civil engineering works*
- 10) EN 1709 – *Precommissioning inspection, maintenance, operational inspection and checks*
- 11) EN 1909 – *Recovery and evacuation*
- 12) EN 12397 – *Operation*
- 13) EN 12408 — *Quality assurance*

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Belgium, Bulgaria, Denmark, Germany, the former Yugoslav Republic of Macedonia, Estonia, Finland, France, Greece, Ireland, Iceland, Italy, Croatia, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Norway, Austria, Poland, Portugal, Romania, Sweden, Switzerland, Slovakia, Slovenia, Spain, Czech Republic, Turkey, Hungary, United Kingdom and Cyprus.

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EN 12929-2:2015 (E)**1 Scope**

This European Standard specifies additional safety requirements for bicable reversible aerial ropeways without carrier truck brakes. This document is applicable to the various types of cableway installations and takes into account their environment.

This Part of the EN 12929 contains:

- additional requirements relating to the integrity of the haul rope loop;
- additional requirements intended to prevent specific operational incidents;
- requirements concerning the attachment of the carriers to the haul rope.

This European Standard does not apply to cableway installations for transportation of goods nor to lifts.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1709, *Safety requirements for cableway installations designed to carry persons — Precommissioning inspection, maintenance, operational inspection and checks*

EN 1907, *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*

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

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

EN 12927 (all parts), *Safety requirements for cableway installations designed to carry persons — Ropes*

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

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*

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

3 Terms and definitions

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

4 Symbols and abbreviations

Symbols and abbreviations are explained with the formula to which they apply throughout this document.

5 General requirements

5.1 Application of this Standard

The requirements of this document, together with those of EN 1709, EN 1908, EN 1909, EN 12397, EN 12408, EN 12927 (all parts), EN 12929-1, EN 12930, EN 13107, EN 13223, EN 13243 and EN 13796 (all parts) apply to bi-cable reversible aerial ropeways without carrier truck brakes.

5.2 Safety principles

5.2.1 General

The safety principles in accordance with EN 12929-1 apply.

In addition, the following hazard scenarios and safety measures relative to the scope of this document are to be taken into consideration.

5.2.2 Hazard scenarios

The events listed in Tables 1 and 2 in particular may result in a hazardous situation which may be avoided or limited by means of the safety requirements in this document. Check the completeness of the list of hazard scenarios as per the safety study in accordance with EN 12929-1.

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