SLOVENSKI STANDARD
SIST EN 13796-2:2017

01-junij-2017

Nadomešča:
SIST EN 13796-2:2005

Varnostne zahteve za žičniške naprave za prevoz oseb - Vozila - 2. del: Preskusi zdrsa prižemk

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

Sicherheitsanforderungen für Seilbahnen für den Personenverkehr - Fahrzeuge - Teil 2: Klemmenabziehversuch

Prescriptions de sécurité pour les installations à câbles transportant des personnes - Véhicules - Partie 2: Essai de résistance au glissement des attaches

Ta slovenski standard je istoveten z: **EN 13796-2:2017**

ICS:

45.100	Oprema za žičnice	Cableway equipment

SIST EN 13796-2:2017 **en,fr,de**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13796-2

March 2017

ICS 45.100

Supersedes EN 13796-2:2005

English Version

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

Prescriptions de sécurité pour les installations à câbles transportant des personnes - Véhicules - Partie 2 : Essai de résistance au glissement des attaches

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This European Standard was approved by CEN on 8 December 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.

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

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Ref. No. EN 13796-2:2017 E

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European Foreword

This document (EN 13796-2:2017) 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 September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

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

This document replaces EN 13796-2:2005.

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 the EU Directive(s) 2000/9/EC.

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

EN 13796 comprises the following parts under the general title *Safety requirements for cableway installations designed to carry persons – Carriers*:

— *Part 1: Grips, carrier trucks, on-board brakes, cabins, chairs, carriages, maintenance carrier, tow-hangers*

— *Part 2: Slipping resistance test for grips*

— *Part 3: Fatigue testing*

There are no fundamental changes in this new edition of EN 13796-2.

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:

— EN 1907, *Safety requirements for cableway installations designed to carry persons — Terminology*

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

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

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

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

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

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

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

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

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

— 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*

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

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of Serbia, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, The Former Yugoslav Republic of Macedonia, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the safety requirements applicable to carriers for cableway installations designed to carry persons. It is applicable to the various types of installations and takes into account their environment.

This European Standard describes the requirements to be met when testing the slipping resistance of grips clamped

— on the haulage or carrying hauling rope of carriers of monocable or bicable aerial ropeways with fixed or detachable grips, covered by EN 13796-1;

— on the towing rope of ski-tows with fixed grips, covered by EN 13796-1.

It does not apply to installations for the transportation of goods nor to lifts.

2 Normative references

The following documents, in whole or in part, are referenced in the normal manner for 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 applies (including any amendments).

EN 1907, *Safety requirements for cableway installations designed to carry persons – Terminology*

EN 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*

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025)*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 1907 and EN 13796-1 apply.

4 Symbols and abbreviations

—	F_{lab}	Slipping resistance force determined experimentally in the laboratory	(kN)
—	F_{max}	Maximum slipping resistance force	(kN)
—	F_{theo}	Calculated slipping resistance force	(kN)
—	l_{gtot}	Total slipping length	(m)

5 General

The corresponding risk factors and safety measures to be taken into consideration in this standard appear in EN 13796-1.

It is recommended that the tests are carried out by a qualified test laboratory that respects the provisions set out in EN ISO/IEC 17025.

NOTE This does not mean that the test laboratory requires the approval or authorisation of third parties.

The test will make it possible to validate the field of use of the grip proposed by the manufacturer.

6 Parts to be tested

The geometry and the materials of the test piece shall be identical to the series-produced components. Their production methods shall be equivalent. In particular, the test piece shall be galvanized if it is planned that the series-produced component will be.

7 Information to be provided by the manufacturer

The manufacturer shall supply the following information and documents to the test laboratory:

— general description of the grip;

— production drawings of the grip;

— descriptions and explanations required to understand the above-mentioned drawings and the mode of operation of the grip;

— field of use of the grip, including F_{theo};

— declaration of conformity certifying that the grip supplied for the test corresponds to the operating manual specified in EN 13796-1.

The test piece shall be identified by a mark.

8 Examination prior to the test

The test laboratory shall verify at least by a visual examination that the test piece complies with the documentation supplied by the manufacturer.

The procedure and the result of the examination shall be included in the test report.

9 Test requirements

The test consists of subjecting a grip clamped on a rope to an increasing tensile force until it starts to slip, while recording the change in its resistance to slipping.

— whatever the field of use of the grip, the test shall be carried out on a parallel-lay galvanized rope. If the field of use of the grip specifies several nominal machining diameters for the jaws corresponding to as many nominal rope diameters, the test shall be carried out only on the largest diameter;

— the rope shall be subjected to a tensile force corresponding to 1/6 of its breaking load;

— the grip shall be attached according to the conditions specified by the manufacturer;

— the equipment used to transmit the force shall allow controlled and gradual application;

— the equipment for measuring the slipping resistance force shall enable a continuous permanent record to be made of the applied force as a function of time;

— the tensile force on the grip shall be applied so that the resultant of the slipping force coincides with the axis of the rope;

— the force on the grip shall be applied progressively until slipping starts and shall be maintained to cause a minimum slippage of at least 5 mm;

— the test shall be carried out 10 times. The total slipping length l_{gtot} shall be at least:

$$l_{gtot} \geq \frac{pitch\ of\ strands}{number\ of\ strands} \frac{in\ the\ rope}{} [m] \quad (1)$$

These tests may be carried out successively without opening the grip.

10 Slipping resistance force

The slipping resistance force F_{lab} is equal to the mean of the maximum values F_{max} obtained in the 10 tests:

$$F_{lab} = \frac{\Sigma F_{max}}{10} \quad (2)$$

11 Conclusion of the test

11.1 Evaluation of test results

The test is regarded as satisfactory if F_{lab} is greater than F_{theo} and no movement of any wire making up the test rope is observed in the zone affected by the slipping of the grip.

11.2 Test report

The procedures and results shall be included in a test report.

The test report shall meet the requirements of EN ISO/IEC 17025.