Tänavavalgustuspostid. Osa 7. Nõuded fiibersarrusega polümeerkomposiidist tänavavalgustuspostidele

Lighting columns - Part 7: Specification for fibre reinforced polymer composite lighting columns

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 40-7:2003 sisaldab Euroopa standardi EN 40-7:2002 ingliskeelset teksti. Käesolev dokument on jõustatud 18.02.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 40-7:2003 consists of the English text of the European standard EN 40-7:2002. This document is endorsed on 18.02.2003 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 part of EN 40 specifies the performance requirements for fibre reinforced polymer composite lighting columns for which the main intended use is road lighting. It includes materials and test methods. The composite materials concidered are those constructed from a fibrous reinforcing material that is suspended in a matrix of resin material. It applies to post top columns not exceeding 20 m height for post top laterns and columns with brackets not exceeding 18 m height for side entry lanterns	**Scope:** This part of EN 40 specifies the performance requirements for fibre reinforced polymer composite lighting columns for which the main intended use is road lighting. It includes materials and test methods. The composite materials concidered are those constructed from a fibrous reinforcing material that is suspended in a matrix of resin material. It applies to post top columns not exceeding 20 m height for post top laterns and columns with brackets not exceeding 18 m height for side entry lanterns

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Võtmesõnad: acceptance testing, conformity tests, lamp posts, pole-top lanterns, polymeric materials, polymers, road lighting, side entry luminaires, specification, steel towers, steels, stress, testing, welded joints, welding, welding processes, wind loading, wind pressure

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Lighting columns - Part 7: Requirements for fibre reinforced polymer composite lighting columns

Candélabres - Partie 7: Spécifications pour les candélabres en composite renforcés de fibres

Lichtmaste - Teil 7: Anforderungen an Lichtmaste aus faserverstärtem Polymerverbundstoff

This European Standard was approved by CEN on 7 November 2002.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document EN 40-7:2002 has been prepared by Technical Committee CEN/TC 50 "Lighting columns and spigots", the secretariat of which is held by BSI.

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 June 2003, and conflicting national standards shall be withdrawn at the latest by September 2004.

This document supersedes CR 40-7:1984.

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 part of EN 40 is the seventh in a series of specifications and requirements for lighting columns. The Parts in the series are:

Part 1: *Definitions and terms.*

Part 2: *General requirements and dimensions.*

Part 3: *Design and verification.*

3.1 *Specification for characteristic loads.*

3.2 *Verification by testing.*

3.3 *Verification by calculation.*

Part 4: *Requirements for reinforced and prestressed concrete lighting columns.*

Part 5: *Requirements for steel lighting columns.*

Part 6: *Requirements for aluminium lighting columns.*

Part 7: *Requirements for fibre reinforced polymer composite lighting columns*.

Annexes A and D are informative. Annexes B, C and E are normative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard : Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This part of this European Standard specifies the performance requirements for fibre reinforced polymer composite lighting columns for which the main intended use is road lighting. It includes materials and test methods. The composite materials considered are those constructed of a resin matrix reinforced by a high strength fibrous material. It applies to post top columns not exceeding 20 m height for post top lanterns and columns with brackets not exceeding 18 m height for side entry lanterns.

This European Standard specifies the classes of performance related to the essential requirements of resistance to horizontal (wind) loads, and performance under vehicle impact (passive safety) in application of Essential Requirement No 4 Safety in Use measured according to the corresponding test methods included in this European Standard or available in separate European Standards.

It provides for the evaluation of conformity of the product to this European Standard.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 40-1:1991 *Lighting columns - Part 1: Definitions and terms.*

prEN 40-2:1991, *Lighting columns - Part 2: General requirements and dimensions.*

EN 40-3-1, *Lighting columns - Part 3-1: Design and verification - Specification for characteristic loads.*

EN 40-3-2, *Lighting columns - Part 3-2: Design and verification - Verification by testing.*

prEN 40-3-3:1996, *Lighting columns - Part 3-3: Design and verification - Verification by calculation.*

EN 12767, *Passive safety of support structures for road equipment - Requirements and test methods.*

EN 50102, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code).*

EN ISO 527-4, *Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and orthotopic fibre-reinforced plastic composites (ISO 527-4:1997).*

EN ISO 527-5, *Plastics - Determination of tensile properties - Part 5: Test conditions for unidirectional fibre-reinforced plastic composites (ISO 527-5:1997).*

EN ISO 14125, *Fibre-reinforced plastic composites - Determination of flexural properties (ISO 14125:1998).*

EN ISO 14129, *Fibre-reinforced plastic composites - Determination of the in-plane shear stress/shear strain response, including the in-plane shear modulus and strength, by the +/- 45° tension test method (ISO 14129:1997).*

3 Terms and definitions

For the purposes of this European Standard the terms and definitions given in EN 40-1:1991 apply.