

Tänavavalgustuspostid. Osa 5: Nõuded terasest tänavavalgustuspostidele

Lighting columns - Part 5: Requirements for steel lighting columns

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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| <p>Käesolev Eesti standard EVS-EN 40-5:2002 sisaldab Euroopa standardi EN 40-5:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.09.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p> | <p>This Estonian standard EVS-EN 40-5:2002 consists of the English text of the European standard EN 40-5:2002.</p> <p>This document is endorsed on 18.09.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p> |
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| <p>Käsitlusala: This European Standard specifies requirements for steel lighting columns. It includes materials and conformity control. It applies to post top columns not exceeding 20 m height for post top lanterns and to columns with brackets not exceeding 18 m height for side entry lanterns. This European Standard specifies performance related to the essential requirements of resistance to horizontal (wind) loads and performance under vehicle impact (passive safety) in support of the 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 products to this European Standard.</p> | <p>Scope: This European Standard specifies requirements for steel lighting columns. It includes materials and conformity control. It applies to post top columns not exceeding 20 m height for post top lanterns and to columns with brackets not exceeding 18 m height for side entry lanterns. This European Standard specifies performance related to the essential requirements of resistance to horizontal (wind) loads and performance under vehicle impact (passive safety) in support of the 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 products to this European Standard.</p> |
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ICS 77.140.01, 93.080.40

Võtmesõnad: acceptance testing, conformity tests, electric cables, lamp posts, pipelines, side entry luminaires, specification, steel products, steel towers, steels, street lighting, structural steel members, stuffing boxes, testing, welded joints, welding, welding processes

English version

Lighting columns - Part 5: Requirements for steel lighting columns

Candélabres d'éclairage public - Partie 5: Exigences pour les candélabres d'éclairage public en acier

Lichtmaste - Teil 5: Anforderungen für Lichtmaste aus Stahl

This European Standard was approved by CEN on 25 February 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 40-5:2002 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 October 2002, and conflicting national standards shall be withdrawn at the latest by January 2004.

This document supersedes EN 40-5:2000.

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 89/106/EEC.

For relationship with EU Directive 89/106/EEC see informative annex ZA which is an integral part of this document.

In this standard the annexes A, B and C are informative and the annex D is normative.

Wherever reference is made to classes, they are considered to be technical classes and not classes according to 3(2) of the Construction Products Directive.

This European Standard is the fifth in a series relating to specifications for lighting columns. At present the Parts of this standard are as follows:

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

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 European Standard specifies requirements for steel lighting columns. It includes materials and conformity control. It applies to post top columns not exceeding 20 m height for post top lanterns and to columns with brackets not exceeding 18 m height for side entry lanterns.

This European Standard specifies performance related to the essential requirements of resistance to horizontal (wind) loads and performance under vehicle impact (passive safety) in support of the 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 products 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).

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| EN 40-1 | Lighting columns - Part 1: Definitions and terms. |
| prEN 40-2:1999 | Lighting columns - Part 2: General requirements and dimensions. |
| EN 40-3-1 | Lighting columns - Design and verification - Part 3-1: Specification for characteristic loads. |
| EN 40-3-2 | Lighting columns - Design and verification - Part 3-2: Verification by testing. |
| prEN 40-3-3 | Lighting columns - Design and verification - Part 3-3: Verification by calculation. |
| EN 288-1 | Specification and approval of welding procedures for metallic materials - Part 1: General rules for fusion welding. |
| EN 288-2 | Specification and approval of welding procedures for metallic materials - Part 2: Welding procedure specification for arc welding. |
| EN 288-3 | Specification and approval of welding procedures for metallic materials - Part 3: Welding procedure tests for arc welding of steels. |

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| EN 288-8 | Specification and approval of welding procedures for metallic materials - Part 8: Approval by a pre-production welding test. |
| EN 571-1 | Non-destructive testing – Penetrant testing – General principles. |
| EN 970 | Non-destructive examination of fusion welds - Visual examination. |
| EN 1011-1 | Welding - Recommendations for welding of metallic materials - Part 1: General guidance for arc welding. |
| EN 1011-2 | Welding - Recommendations for welding of metallic materials - Part 2: Arc welding of ferritic steels. |
| EN 1011-3 | Welding - Recommendations for welding of metallic materials - Part 3: Arc welding of stainless steels. |
| EN 10025 | Hot rolled products of non-alloy structural steels - Technical delivery conditions (includes amendment A1:1993). |
| EN 10088 | Stainless steels. |
| EN 10149-1 | Hot-rolled flat products made of high yield strength steels for cold forming - Part 1: General delivery conditions. |
| EN 10149-2 | Hot-rolled flat products made of high yield strength steels for cold forming - Part 2: Delivery conditions for thermomechanically rolled steels. |
| EN 10204 | Metallic products - Types of inspection documents. |
| EN 10210 | Hot finished structural hollow sections of non-alloy and fine grain structural steels. |
| EN 10219 | Cold formed structural hollow section of non-alloy and fine grain steels. |
| 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 1461 | Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods (ISO 1461:1999). |
| ISO 2063 | Metallic and other inorganic coatings - Thermal spraying - Zinc, aluminium and their alloys. |
| ISO 8501-1 | Preparation of steel substances before application of paints and related products - Visual assessment of surface cleanliness - Part 1: Rust grades and |

preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings.

ISO 9717 Phosphate conversion coatings for metals - Method of specifying requirements.

3 Terms and definitions

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

4 Materials

4.1 Steel

The steel used shall comply with one of the following standards, and be suitable for hot-dip galvanizing when such surface protection is required. Rimming steel shall not be used.

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| Steel sheet and plate: | EN 10025 except grade S185 EN 10149-1 and EN 10149-2 |
| Hot-finished steel tube: | EN 10210 |
| Cold-formed steel tube: | EN 10219 |
| Stainless steels: | EN 10088 |

4.2 Foundation bolts

The minimum mechanical properties of the steel used for foundation bolts shall comply with the requirements of EN 10025 grade S 235 JR

5 Dimensions

Dimensions shall be in accordance with prEN 40-2.

6 Design and design verification

The column shall be designed to sustain safely the dead loads and the wind loads specified in EN 40-3-1.

The structural design of a lighting column shall be verified either by calculation in accordance with prEN 40-3-3 or by testing in accordance with EN 40-3-2.