## Alumiinium ja alumiiniumsulamid. Ehituskonstrutsioonitooted. Tehnilised kontrolli- ja tarnetingimused

Aluminium and aluminium alloys - Structural products for construction works - Technical conditions for inspection and delivery



#### **EESTI STANDARDI EESSÕNA**

#### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN
15088:2006 sisaldab Euroopa standardi
EN 15088:2005 ingliskeelset teksti.

Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 15088:2006 consists of the English text of the European standard EN 15088:2005.

This document is endorsed on 27.02.2006 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 European Standard specifies requirements for semi-finished products and castings of aluminium and aluminium alloys for load-bearing structural construction works (Construction works covers building and civil engineering works).

#### Scope:

This European Standard specifies requirements for semi-finished products and castings of aluminium and aluminium alloys for load-bearing structural construction works (Construction works covers building and civil engineering works).

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Võtmesõnad:

## EUROPEAN STANDARD NORME EUROPÉENNE

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#### **English Version**

# Aluminium and aluminium alloys - Structural products for construction works - Technical conditions for inspection and delivery

Aluminium et alliages d'aluminium - Produits pour applications de structure pour construction - Conditions techniques de contrôle et de livraison

Aluminium und Aluminiumlegierungen - Erzeugnisse für Tragwerksanwendungen - Technische Lieferbedingungen

This European Standard was approved by CEN on 12 May 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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



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

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#### **Foreword**

This document (EN 15088:2005) has been prepared by Technical Committee CEN/TC 132 "Aluminium and aluminium alloys", 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 June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

This document has been prepared under the mandate M 120 given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Construction Products Directive CPD 89/106/EEC.

For relationship with EU Construction Products Directive CPD, see informative Annex ZA, which is an integral part of this document and which it becomes a harmonized European Standard.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 14 "General Support" to prepare the following standard :

— EN 15088 "Aluminium and aluminium alloys — Structural products for construction works — Technical conditions for inspection and delivery".

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

#### Introduction

This European Standard is an "umbrella" standard which gives the regulatory requirements to enable manufacturers or their agents to affix CE marking, in accordance with Directive 89/106/EEC (Construction Products Directive CPD) to products within the scope of this European Standard. It is intended to be used in conjunction with other referenced material/ product standards (see Figure 1).

A manufacturer who has no knowledge of its final destination may sell a product to a stockist. It is the responsibility of the manufacturer, that the product complies with the conditions of CE marking for the stated intended use included as part of the CE marking. If the stockist resells the product for another intended use or changes the product in a way, he in effect becomes a new manufacturer. Consequently, he becomes responsible for the appropriate CE marking of the product that he places on the market. Therefore, irrespective of current terminology in terms of regulatory marking there will only ever be two parties, the seller (the manufacturer) and the buyer (the purchaser).

Products CE marked in accordance with this harmonized European Standard can be presumed to have the performances stated with the CE marking. This does not replace the responsibility on the designer to ensure that the final structural product made of aluminium as a whole is correctly designed and its components meet the necessary performance values depending on the design, especially in view of fatigue design.

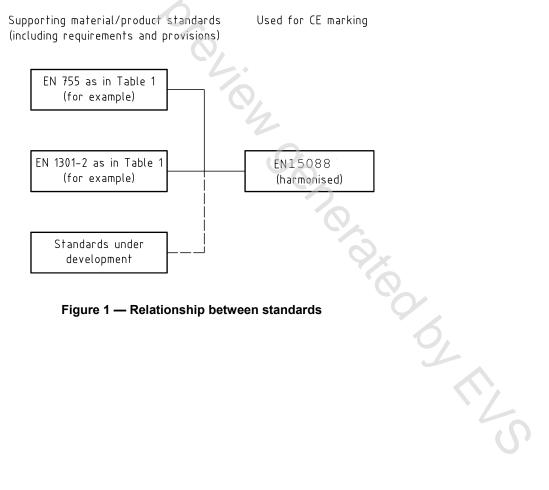


Figure 1 — Relationship between standards

#### 1 Scope

This European Standard specifies requirements for semi-finished products and castings of aluminium and aluminium alloys for load-bearing structural construction works (Construction works covers building and civil engineering works).

It also specifies requirements for evaluation of conformity and the test methods to be used.

It does not apply to products after machining or joining operations (e.g. bolting, welding of elements), which can be found in other European Standards, e.g. prEN 1090-1.

#### 2 Normative references

The following referenced documents are indispensable for the application 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 485-1, Aluminium and aluminium alloys — Sheet, strip and plate — Part 1: Technical conditions for inspection and delivery.

EN 485-2, Aluminium and aluminium alloys — Sheet, strip and plate — Part 2: Mechanical properties.

EN 485-3, Aluminium and aluminium alloys — Sheet, strip and plate — Part 3: Tolerances on dimensions and form for hot-rolled products.

EN 485-4, Aluminium and aluminium alloys — Sheet, strip and plate — Part 4: Tolerances on shape and dimensions for cold-rolled products.

EN 515, Aluminium and aluminium alloys - Wrought products - Temper designations.

EN 573-3, Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 3: Chemical composition.

EN 586-1, Aluminium and aluminium alloys — Forgings — Part 1: Technical conditions for inspection and delivery.

EN 586-2, Aluminium and aluminium alloys — Forgings — Part 2: Mechanical properties and additional property requirements.

EN 586-3, Aluminium and aluminium alloys — Forgings — Part 3: Tolerances on dimensions and form.

EN 754-1, Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 1: Technical conditions for inspection and delivery.

EN 754-2, Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 2: Mechanical properties.

EN 754-3, Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 3: Round bars, tolerances on dimensions and form.

EN 754-4, Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 4: Square bars, tolerances on dimensions and form.

EN 754-5, Aluminium and aluminium alloys — Cold drawn rod/bar and tube – Part 5: Rectangular bars, tolerances on dimensions and form.

EN 754-6, Aluminium and aluminium alloys — Cold drawn rod/bar and tube — Part 6: Hexagonal bars, tolerances on dimensions and form.

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- EN 754-7, Aluminium and aluminium alloys Cold drawn rod/bar and tube Part 7: Seamless tubes, tolerances on dimensions and form.
- EN 754-8, Aluminium and aluminium alloys Cold drawn rod/bar and tube Part 8: Porthole tubes, tolerances on dimensions and form.
- EN 755-1, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 1: Technical conditions for inspection and delivery.
- EN 755-2, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 2: Mechanical properties.
- EN 755-3, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 3: Round bars, tolerances on dimensions and form.
- EN 755-4, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 4: Square bars, tolerances on dimensions and form.
- EN 755-5, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 5: Rectangular bars, tolerances on dimensions and form.
- EN 755-6, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 6: Hexagonal bars, tolerances on dimensions and form.
- EN 755-7, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 7: Seamless tubes, tolerances on dimensions and form.
- EN 755-8, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 8: Porthole tubes, tolerances on dimensions and form.
- EN 755-9, Aluminium and aluminium alloys Extruded rod/bar, tube and profiles Part 9: Profiles, tolerances on dimensions and form.
- prEN 1090-3, Technical requirements for the execution of aluminium structures.
- EN 1301-1, Aluminium and aluminium alloys Drawn wire Part 1: Technical conditions for inspection and delivery.
- EN 1301-2, Aluminium and aluminium alloys Drawn wire Part 2: Mechanical properties.
- EN 1301-3, Aluminium and aluminium alloys Drawn wire Part 3: Tolerances on dimensions.
- EN 1386, Aluminium and aluminium alloys Tread plate Specifications.
- EN 1396, Aluminium and aluminium alloys Coil coated sheet and strip for general applications Specifications.
- EN 1559-1, Founding Technical conditions of delivery Part 1: General.
- EN 1559-4, Founding Technical conditions of delivery Part 4: Additional requirements for aluminium alloy castings.
- EN 1592-1, Aluminium and aluminium alloys HF seam welded tubes Part 1: Technical conditions for inspection and delivery.
- EN 1592-2, Aluminium and aluminium alloys HF seam welded tubes Part 2: Mechanical properties.
- EN 1592-3, Aluminium and aluminium alloys HF seam welded tubes Part 3: Tolerances on dimensions and form for circular tubes.

EN 1592-4, Aluminium and aluminium alloys — HF seam welded tubes — Part 4: Tolerances on dimensions and form for square, rectangular and shaped tubes.

EN 1706, Aluminium and aluminium alloys — Castings — Chemical composition and mechanical properties.

prEN 1999-1-1, Eurocode 9: Design of aluminium structures — Part 1-1: General rules

prEN 1999-1-3, Eurocode 9: Design of aluminium structures — Part 1-3: Additional rules for structures susceptible to fatigue.

prEN 1999-1-4, Eurocode 9: Design of aluminium structures — Part 1-4: Supplementary rules for trapezoidal sheeting.

EN 10204, Metallic products — Types of inspection documents.

EN 12020-1, Aluminium and aluminium alloys — Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 — Part 1: Technical conditions for inspection and delivery.

EN 12020-2, Aluminium and aluminium alloys — Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 — Part 2: Tolerances on dimensions and form.

EN 12258-1:1998, Aluminium and aluminium alloys — Terms and definitions — Part 1: General terms.

EN 13920-1, Aluminium and aluminium alloys — Scrap — Part 1: General requirements, sampling and tests.

EN ISO 1519, Paints and varnishes — Bend test (cylindrical mandrel) (ISO 1519:2002).

EN ISO 9001:2000, Quality management systems — Requirements (ISO 9001:2000).

ISO 8062, Castings — System of dimensional tolerances and machining allowances.

#### 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 12258-1:1998 and the following apply.

#### 3.1

#### casting

unwrought product at or near finished shape, formed by solidification of the metal in a mould

[EN 12258-1:1998]

#### 3.2

#### construction works

this term covers both buildings and civil engineering works; it is also referred to as the "works"

[Commission Guidance Paper L concerning the Construction Products Directive 89/106/EEC]

#### 3.3

#### construction product (under the CPD)

product which is produced for incorporation in a permanent manner in the works and placed as such on the market and is subject to building regulations

[Interpretative Document Essential Requirement 1 to the Construction Products Directive 89/106/EEC]

#### 3.4

#### harmonized standard

standard, which contains an Annex ZA and enables the affixing of CE marking under the Construction Products Directive (CPD)