Alumiinium ja alumiiniumisulamid. Tõmbetoorikud. Osa 1: Kontrolli ja tarnimise üldnõuded ja tehnilised tingimused

Aluminium and aluminium alloys - Drawing stock - Part 1: General requirements and technical conditions for inspection and delivery



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1715- 1:2000 sisaldab Euroopa standardi EN 1715-1:1997 ingliskeelset teksti.	This Estonian standard EVS-EN 1715- 1:2000 consists of the English text of the European standard EN 1715-1:1997.
Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

Käsitlusala:

See Euroopa standardi EN 1715 osa määrab kindlaks mittelegeeritud alumiiniumist ja alumiiniumisulamitest tõmbetoorikute üldkarakteristikud. Nimetatud toorikuid tarnitakse rullides, kusjuures ühe rulli kaal on vahemikus 1 t kuni 3 t ning toorikud on toodetud tavalisel tööstuslikul meetodil.

Scope:

ICS 77.150.10

Võtmesõnad: alumiinium, alumiiniumisulamid, keemiline koostis, kontroll, kvaliteet, mehaanilised omadused, mõõtmed, mõõtmetolerantsid, märgistus, pakend (pakkimine), tarnimine, tehnilised andmed, tõmbetoorik, tähistus

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 1715-1

September 1997

ICS 77.150.10

Descriptors: Aluminium, wire.

English version

Aluminium and aluminium alloys - Drawing stock

Part 1: General requirements and technical conditions for inspection and delivery

Aluminium et alliages d'aluminium – Fil machine – Partie 1: Exigences générales et conditions techniques de contrôle et de livraison Aluminium und Aluminiumlegierungen – Vordraht – Teil 1: Allgemeine Anforderungen und technische Lieferbedingungen

This European Standard was approved by CEN on 1997-08-21.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization Comité Européen de Normalisation Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Contents

1 Scope 2 Normative references 3 Definitions 3.1 drawing stock 3.2 cast. 3.3 manufacturing batch 3.4 delivery batch 4 Orders or tenders 5 Requirements 5.1 Production and manufacturing processes 5.2 Quality control 5.3 Families of aluminium and aluminium alloys used 5.4 Technical specifications 6 Product inspection and test methods 6.1 Analysis of chemical composition 6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance 6.5 Other tests	
3 Definitions 3.1 drawing stock 3.2 cast 3.3 manufacturing batch 3.4 delivery batch 4 Orders or tenders 5 Requirements 5.1 Production and manufacturing processes 5.2 Quality control 5.3 Families of aluminium and aluminium alloys used 5.4 Technical specifications 6 Product inspection and test methods 6.1 Analysis of chemical composition 6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance	
3.1 drawing stock 3.2 cast	
3.2 cast	5 6 6 7 7 7 7
3.3 manufacturing batch	6 6 7 7 7 7
3.4 delivery batch 4 Orders or tenders 5 Requirements 5.1 Production and manufacturing processes 5.2 Quality control 5.3 Families of aluminium and aluminium alloys used 5.4 Technical specifications 6 Product inspection and test methods 6.1 Analysis of chemical composition 6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance	67777
7 Production and manufacturing processes 5.1 Production and manufacturing processes 5.2 Quality control 5.3 Families of aluminium and aluminium alloys used 5.4 Technical specifications 6 Product inspection and test methods 6.1 Analysis of chemical composition 6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance	6 7 7 7 7
5.1 Production and manufacturing processes 5.2 Quality control 5.3 Families of aluminium and aluminium alloys used 5.4 Technical specifications 6 Product inspection and test methods 6.1 Analysis of chemical composition 6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance	7 7 9
5.1 Production and manufacturing processes 5.2 Quality control 5.3 Families of aluminium and aluminium alloys used 5.4 Technical specifications 6 Product inspection and test methods 6.1 Analysis of chemical composition 6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance	7 7 9
5.2 Quality control 5.3 Families of aluminium and aluminium alloys used 5.4 Technical specifications 6 Product inspection and test methods 6.1 Analysis of chemical composition 6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance	7 9
5.3 Families of aluminium and aluminium alloys used	9
5.4 Technical specifications 6 Product inspection and test methods 6.1 Analysis of chemical composition 6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance	9 13
6.1 Analysis of chemical composition	
6.1 Analysis of chemical composition	
6.2 Thermal treatment control 6.3 Mechanical properties 6.4 Surface appearance	
6.3 Mechanical properties	
6.4 Surface appearance	
6.5 Other tests	14
	14
7 Delivery documents and inspection documents	14
7.1 Certificate of mass and analysis	
7.2 Inspection documents	14
8 Marking	15
9 Packaging transport and storage	16
9.1 Packaging	16
9.2 Transport and storage	16
10 Disputes	17
Annex A (normative) Rules for rounding	47
Packaging transport and storage 9.1 Packaging 9.2 Transport and storage 10 Disputes Annex A (normative) Rules for rounding	

Foreword

This European Standard 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 March 1998, and conflicting national standards shall be withdrawn at the latest by March 1998.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 4 "Wires and drawing stock" to prepare the following standard:

EN 1715-1 Aluminium and aluminium alloys - Drawing stock - Part 1 : General requirements and technical conditions for inspection and delivery

This standard is part of a set of four standards. The other standards deal with:

EN 1715-2	Aluminium and aluminium alloys - Drawing stock - Part 2 : Specific requirements for electrical applications
EN 1715-3	Aluminium and aluminium alloys - Drawing stock - Part 3 : Specific requirements for mechanical uses (excluding welding)
EN 1715-4	Aluminium and aluminium alloys - Drawing stock - Part 4 : Specific requirements for welding applications

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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This part of EN 1715 specifies the general drawing stock characteristics to be satisfied by unalloyed aluminium and aluminium alloy drawing stock delivered in the form of coils with a unit weight ranging between 1 t and 3 t and obtained by common industrial processes.

It also specifies the technical conditions for inspection and delivery of these products.

These general characteristics and conditions apply to drawing stock intended for the following three main fields of application :

- electrical conductors of aluminium and aluminium alloys;
- wires for general mechanical uses;
- wires for brazing and welding.

The specific requirements to drawing stock for these applications are specified in parts 2, 3 and 4 of EN 1715.

It does not apply to wires which are drawn, but only to drawing stock which is produced by hotworking.

NOTE 1: Manufacture of drawing stock:

two main methods exist for the manufacture of drawing stock :

- continuously Cast Rod - (CCR):

a section is cast continuously in the groove of a wheel, the groove being closed by an endless strip;

the solid and still hot section is rolled in a multistand rolling mill to the required diameter;

the drawing stock rod thus produced is wound continuously to form coils 1 t to 3 t in weight;

- hot rolled Rod - (HRR) :

a wirebar of diameter 100 mm to 150 mm is heated and rolled to the required diameter ;

the coils produced, weighing up to about 100 kg are butt welded together and wound to form coils with unit weight of 1 t to 3 t.

NOTE 2: It is also possible to obtain drawing stock by extrusion.

2 Normative references

40

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.

EN 515	Aluminium and aluminium alloys - Wrought product - Temper designations
EN 573-3	Aluminium and aluminium alloys - Chemical composition and forms of wrought products - Part 3 : Chemical composition
EN 573-4	Aluminium and aluminium alloys - Chemical composition and forms of wrought products - Part 4 : Forms of product
EN 10002-1	Metallic materials - Tensile testing - Part 1 : Method of test (At ambient temperature)
EN 10204	Metallic products - Types of inspection documents
EN 1715-2	Aluminium and aluminium alloys - Drawing stock - Part 2 : Specific requirements for electrical applications
EN 1715-3	Aluminium and aluminium alloys - Drawing stock - Part 3 : Specific requirements for mechanical uses (excluding welding)
EN 1715-4	Aluminium and aluminium alloys - Drawing stock - Part 4 : Specific requirements for welding applications

3 Definitions

For the purposes of this standard, the following definitions apply:

3.1 drawing stock

Intermediate wrought solid product manufactured by hot working with cross-section approximately circular along its entire length, delivered in coils and in a single length, and with a unit weight normally ranging between 1 t and 3 t.

3.2 cast

Quantity of liquid metal in the furnace that has simultaneously undergone the same treatment before continuously casting and rolling or casting into wirebar or extrusion ingot.