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Hot rolled products of non-alloy structural steels. Technical delivery conditions

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 10025:2000 sisaldab Euroopa standardi EN 10025:1990 + A1:1993 ingliskeelset teksti.	This Estonian standard EVS-EN 10025:2000 consists of the English text of the European standard EN 10025:1990 + A1:1993.
Standard on kinnitatud Eesti Standardikeskuse 23.11.1999 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 23.11.1999 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 77.140.01

keemiline koostis, konstruktsiooniteras, kontroll, kuumvaltsitud tooted, kvaliteediklassid, legeerimata teras, markeerimine, mehaanilised katsed, mehaanilised omadused, raud- ja terastooted, spetsifikatsioonid, tähistamine

EUROPEAN STANDARD
NORME EUROPEENNE
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Descriptors: Iron- and steel products, structural steels, unalloyed steels, hot rolled products, quality classes, designations, specifications, chemical composition, mechanical properties, mechanical tests, inspection, marking

English version

Hot rolled products of non-alloy structural steels - Technical delivery conditions (includes amendment A1:1993)

Produits laminés à chaud en aciers de construction non alliés - Conditions techniques de livraison (inclut l'amendement A1:1993)

Warmgewalzte Erzeugnisse aus unlegierten Baustählen - Technische Lieferbedingungen (enthält Änderung A1:1993)

This European Standard including Amendment A1 was approved by CEN on 1993-08-10. 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 including Amendment A1 exists in the 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.

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CEN

European Committee for Standardization
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Contents list

Foreword

This European Standard has been drawn up by ECISS/TC 10 "Structural steel - qualities" whose secretariat is held by NNI.

This document established by the secretariat of ECISS/TC 10 incorporates the text of EN 10025:1990 with the text of the amendment A1:1993. This amendment was prepared on request of CEN/TC 121 "Welding" and CEN/TC 135 "Execution of steel structures". It also incorporates the new designations according to EN 10027 parts 1 and 2, IC 10 and the corrigendum dated July 1991.

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 February 1994, and conflicting national standards shall be withdrawn at the latest by February 1994.

According to the Common CEN/CENELEC Rules, the following countries are bound to implement this European Standard:
Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

1.1 This European Standard specifies requirements for long products and flat products of hot rolled non-alloy, base and quality steels in the grades and qualities given in tables 2 and 3 (chemical composition) and 5 and 6 (mechanical properties) in the usual delivery condition as given in 7.2.

The steels specified in this European Standard are intended for use in welded, bolted and riveted structures, for service at ambient temperatures (subject to the restrictions described in 7.5.1). They are not intended to be heat treated except products delivered in the delivery condition N. Stress relief annealing is permitted. Products delivered in N condition may be normalized and hot formed after delivery (see clause 3).

NOTE 1: Semi-finished products which are to be converted to rolled finished products conforming to this European Standard should be the subject of special agreement at the time of the enquiry and order. The chemical composition can also be agreed at the time of enquiry and order, however the values should be within the limits of table 2.

NOTE 2: For certain grades and product forms suitability for particular applications may be specified at the time of the enquiry and order (see 7.5.3, 7.5.4 and table 7).

1.2 This European Standard does not apply to coated products and products for which other EURONORMS exist or European Standards dealing with steels for general structural applications are being prepared:
- semi-finished products for forging in general purpose structural steel - (see EURONORM 30);
- weldable fine grain structural steel - (see EN 10113 part 1 - 3);
- structural steels with improved atmospheric corrosion resistance - (see EN 10155);
- plates and wide flats made of weldable fine-grained structural steels in the quenched and tempered condition - (see prEN 10137 part 1 - 3) [1]);
- flat products in high yield strength steels for cold forming - wide flats, sheet/plate, wide and narrow strip - (see prEN 10149) [1]);
- steels for shipbuilding - normal and high strength qualities - (see EURONORM 156);
- hot finished structural hollow sections (EN 10210-1).

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited

1) Draft is under discussion.

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.

2.1 General standards

EN 10020		Definition and classification of grades of steel
EN 10021		General technical delivery requirements for steel and iron products
EN 10027-1		Designation systems for steels -- Part 1: Steel names principal symbols
EN 10027-2		Designation systems for steels -- Part 2: Numerical system
EN 10079		Definitions of steel products
EN 10163		Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections -- Part 1: General requirements; Part 2: Plates and wide flats; Part 3: Sections
EN 10164		Steel products with improved deformation properties perpendicular to the surface of the product -- Technical delivery conditions
EN 10204		Metallic products -- Types of inspection documents
prEN 10052	[1]	Vocabulary of heat treatment terms for ferrous products
EURONORM 162 (1981)	[2]	Cold-rolled sections -- Technical conditions of delivery
EURONORM 168 (1986)	[2]	Iron and steel products -- Inspection documents -- Contents
ECSC IC 2 (1983)	[2]	Weldable fine-grained structural steels -- Recommendations for processing, in particular for welding
ECISS IC 10		Designation systems for steel -- Additional symbols for steel names

2.2 Standards on dimensions and tolerances

EN 10029		Hot-rolled plates 3 mm thick or above -- Tolerances on dimensions, shape and mass
EN 10051		Continuously hot-rolled uncoated sheet and strip of non-alloy and alloy steels -- Tolerances on dimensions and shape
prEN 10024	[1]	Taper flange I sections -- Tolerances on shape and dimensions
prEN 10034	[1]	Structural steel I and H sections -- Tolerances on shape and dimensions

1) Draft is under discussion.
2) Until these EURONORMS are transformed into European Standards, they can either be implemented or reference made to the corresponding national standards, the list of which is given in Annex B to this European Standard.

prEN 10048	[1]	Hot rolled narrow steel strip -- Tolerances on dimensions and shape
prEN 10055	[1]	Hot-rolled steel equal flange tees with radiused root and toes -- Dimensions and tolerances on shape and dimensions
prEN 10056-2	[1]	Structural steel equal and unequal leg angles -- Part 2: Tolerances on shape and dimensions
prEN 10067	[1]	Hot rolled bulb flats -- Dimensions and tolerances on shape and dimensions
EURONORM 17 (1970)	[2]	Non-alloy base steel wire rod for cold drawing -- Dimensions and tolerances
EURONORM 19 (1957)	[2]	IPE beams: parallel-flanged beams
EURONORM 24 (1962)	[2] [3]	Standard beams and channel sections -- Tolerances
EURONORM 53 (1962)	[2]	Wide-flanged beams with parallel flanges
EURONORM 54 (1980)	[2]	Small hot-rolled steel channels
EURONORM 56 (1977)	[2] [4]	Hot-rolled equal angles (with radiused root and toes)
EURONORM 57 (1978)	[2] [4]	Hot-rolled unequal angles (with radiused root and toes)
EURONORM 58 (1978)	[2]	Hot-rolled flats for general purposes
EURONORM 59 (1978)	[2]	Hot-rolled square bars for general purposes
EURONORM 60 (1977)	[2]	Hot-rolled round bars for general purposes
EURONORM 61 (1982)	[2]	Hot-rolled steel hexagons
EURONORM 65 (1980)	[2]	Hot-rolled round steel bars for screws and rivets
EURONORM 66 (1967)	[2]	Hot-rolled half-rounds and flattened half-rounds
EURONORM 91 (1981)	[2]	Hot-rolled wide flats - Tolerances on dimensions, shape and mass

2.3 **Standards on testing**

EN 10002-1		Metallic materials -- Tensile testing -- Part 1: method of test (at ambient temperature)
EN 10045-1		Metallic materials -- Charpy impact test -- Part 1: Test method
EURONORM 18 (1979)	[2]	Selection and preparation of samples and test pieces for steel and iron and steel products
EURONORM 103 (1971)	[2]	Microscopic determination of the ferritic and austenitic grain size of steel
ISO 2566/1 (1984)		Steel -- Conversion of elongation values -- Part 1: Carbon and low alloy steels

1) Draft is under discussion.
2) Until these EURONORMS are transformed into European Standards, they can either be implemented or reference made to the corresponding national standards, the list of which is given in Annex B to this European Standard.
3) EURONORM 24 is added because it contains channel sections.
4) EURONORM 56 and 57 are added because they contain the nominal dimensions.