

## **Terastoodete määratlus**

Definition of steel products

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 10079:2004 sisaldab Euroopa standardi EN 10079:1992 ingliskeelset teksti.

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**Definition of steel products**

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Begriffsbestimmungen für Stahlerzeugnisse

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## Foreword

This European Standard was prepared by ECISS/TC 6b 'Definition and classification of steel products', the Secretariat of which is held by AFNOR.

This European Standard was established on the basis of the following documents:

EURONORM 79-82 Definition and classification of steel products by shape and dimension  
ISO 6929 : 1987 Steel products; definition and classification

Given the various classification systems existing in Europe (e.g. the Customs Cooperation Council and that in EURO-NORM 79-82), it was agreed by ECISS/TC 6b at its third and fourth meetings that this European Standard should deal only with definitions for steel products and abandon the concept of classification. It is for each organization (e.g. statistics, customs) to organize their own classifications according to their specific requirements.

At its last meeting in June 1990, ECISS/TC 6b agreed on the text of this European Standard, which was adopted by COCOR in December 1990 for submission to CEN for Formal Vote. France, Belgium, Germany, Italy, Luxembourg, Netherlands and the United Kingdom were represented at this meeting.

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

## 1 Scope

This European Standard defines steel products according to:

- a) their shape and dimensions;
- b) their appearance and surface condition.

NOTE 1: Although the products are generally defined independently of their end uses or manufacturing processes, it has been necessary sometimes to make reference to these criteria.

NOTE 2: All dimensions given in this European Standard are nominal.

NOTE 3: Annex C indicates the definition procedures of the ECSC Treaty and the Statistical Office of the European Communities and of the Harmonized Commodity Description and Coding System.

## 2 Normative references

See annexes A and B.

## 3 Liquid steel<sup>1)</sup>

Steel in the liquid state is ready for pouring and obtained from the melting of raw materials.

NOTE: A distinction is made between liquid steel for pouring into ingot moulds or for continuous casting, and liquid steel for castings.

## 4 Ingots and semi-finished products<sup>2)</sup>

### 4.1 Ingots

Ingots are products obtained by pouring liquid steel into moulds of a shape appropriate to the subsequent processing<sup>3)</sup> into semi-finished products, or flat or long products, generally by hot rolling or forging.

The shape generally resembles a truncated pyramid or truncated cone; the side surfaces may be corrugated, and the corners more or less rounded.

Depending on the subsequent conversion requirements, ingots may be dressed and/or hot scarfed or cropped without altering their status as ingots.

According to the cross section, a distinction is made between the following:

**4.1.1** ingots having a cross section which may be square, rectangular (of width up to twice the thickness), polygonal, round, oval or shaped according to the profile to be rolled, and

**4.1.2** slab ingots of rectangular cross section of width twice the thickness or over.

### 4.2 Semi-finished products<sup>4)</sup>

Semi-finished products are products obtained by:

- continuous casting, which may or may not be followed by rolling, forging or cutting;
- pressure casting;
- rolling, forging or cutting of ingots,

and generally intended for conversion into flat or long products by hot rolling or forging, or for the manufacture of forgings.

The cross sections may be of various shapes (see 4.2.1 to 4.2.5); the cross-sectional dimensions are constant along the length, with wider tolerances than those for the corresponding flat or long products, and with corners more or less rounded.

The side surfaces are sometimes slightly convex or concave, retaining<sup>5)</sup> rolling, forging or continuous casting marks, and may be partly or totally dressed to remove surface defects (e.g. by cutting tool, torch or grinding).

NOTE: Semi-finished products are defined in 4.2.1 to 4.2.5 according to shape, cross-sectional dimensions and use.

### 4.2.1 Semi-finished products of square cross section

Semi-finished products with sides <sup>+</sup>) of 50 mm or over.

NOTE: This dimension may be less for certain types of high-alloy steel (e.g. high-speed steels).

### 4.2.2 Semi-finished products of rectangular cross section

Semi-finished products of cross-sectional area 2 500 mm<sup>2</sup> or over, of width up to twice the thickness.

### 4.2.3 Flat semi-finished products

Products of thickness generally 50 mm or over, of width twice the thickness or over.

### 4.2.4 Round semi-finished products<sup>5)</sup>

Continuously cast or forged semi-finished products of circular cross section.

### 4.2.5 Blanks for sections

Blanks for sections are semi-finished products intended for the manufacture of sections which have been preformed for that purpose. The cross-sectional area is generally over 2 500 mm<sup>2</sup>.

NOTE: In many countries, the long products in question are obtained by rolling semi-finished products of square or rectangular cross section.

## 5 Flat products

### 5.1 Definition

Flat products have an almost rectangular cross section, the width being much greater than the thickness. The surfaces are generally smooth, except for certain products (e.g. floor plates), which show a regularly raised or indented surface pattern.

### 5.2 Uncoated flat products

Flat products without any coating or surface treatment.

NOTE: Flat products which have received a simple coating for the purpose of protection from corrosion or mechanical damage (e.g. passivation, organic coatings, paper, oil, lacquer, etc.) are defined as uncoated flat products.

### 5.2.1 Hot rolled uncoated flat products

Flat products manufactured by hot rolling semi-finished products, more rarely by hot rolling ingots.

NOTE: Hot rolled flat products include those which have been given a very light cold rolling pass, normally less than 5% reduction, known as a 'skin pass' or 'dressing pass'.

#### 5.2.1.1 Wide flat

Flat product of width over 150 mm up to and including 1250 mm and thickness generally over 4 mm, always supplied in lengths, i.e. not coiled. A special requirement is that

<sup>1)</sup> See annex C, 1.1.

<sup>2)</sup> See annex C, 1.2 and 1.3.

<sup>3)</sup> In the case of ingots remelted by the vacuum arc or electroslag process, the products are obtained by melting, in a mould of appropriate shape, steel electrodes that have been previously cast, forged or rolled.

<sup>4)</sup> See annex C, 1.4 and 2.1.

<sup>5)</sup> See annex C, 1.3 and 2.1.2.