Roostevabad terased. Osa 4: Ehituses kasutatavate korrosioonikindlast terasest pleki/lehtede ja riba tehnilised tarnetingimused

Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes





# EESTI STANDARDI EESSÕNA

See Eesti standard EVS-EN 10088-4:2009 sisaldab Euroopa standardi EN 10088-4:2009 ingliskeelset teksti.

Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.

Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.04.2009.

Standard on kättesaadav Eesti Standardikeskusest.

# NATIONAL FOREWORD

This Estonian standard EVS-EN 10088-4:2009 consists of the English text of the European standard EN 10088-4:2009.

This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.

Date of Availability of the European standard is 22.04.2009.

The standard is available from the Estonian Centre for Standardisation.

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ICS 77.140.20, 77.140.50

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# EUROPEAN STANDARD NORME EUROPÉENNE

# EN 10088-4

EUROPÄISCHE NORM

April 2009

ICS 77.140.20; 77.140.50

# **English Version**

# Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes

Aciers inoxydables - Partie 4: Conditions techniques de livraison des tôles et bandes en acier résistant à la corrosion pour usage de construction

Nichtrostende Stähle - Teil 4: Technische Lieferbedingungen für Blech und Band aus korrosionsbeständigen Stählen für das Bauwesen

This European Standard was approved by CEN on 21 February 2009.

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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 CEN Management Centre has the same status as the official versions.

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

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# **Foreword**

This document (EN 10088-4:2009) has been prepared by Technical Committee ECISS/TC 23 "Steels for heat treatment, alloy steels and free-cutting steels - Qualities and dimensions", the secretariat of which is held by DIN.

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 2009, and conflicting national standards shall be withdrawn at the latest by January 2011.

EN 10088, under the general title "Stainless steels", consists of the following parts:

Part 1: List of stainless steels (including a table of European Standards, in which these stainless steels are further specified, see Annex D);

Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes;

Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes;

Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes;

Part 5: Technical delivery conditions for bars, rods, wire, sections and bright products of corrosion resisting steels for construction purposes.

The European Committee for Standardisation (CEN) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning two steel grades.

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Sandvik AB SE-811 81 SANDVIKEN Sweden for grade 1.4477 Outokumpu Stainless AB SE-77480 AVESTA Sweden

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For relationship with EC Directive(s), see informative Annex ZA, which is an integral part of this document.

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



# 1 Scope

The scope of this part of EN 10088 is to specify the technical delivery conditions for hot or cold rolled sheet/plate and strip of standard and special grades of corrosion resisting stainless steels for construction purposes in addition to the general technical delivery conditions specified in EN 10021.

This European Standard does not apply to components manufactured by further processing of the product forms listed above with quality characteristics altered as a result of such further processing.

## 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 10002-1, Metallic materials - Tensile testing - Part 1: Method of test at ambient temperature

EN 10002-5, Metallic materials - Tensile testing - Part 5: Method of testing at elevated temperature

EN 10021, General technical delivery requirements for steel products

EN 10027-1, Designation systems for steels - Part 1: Steel names

EN 10027-2, Designation systems for steels - Part 2: Numerical system

EN 10045-1, Metallic materials - Charpy impact test - Part 1: Test method

EN 10052:1993, Vocabulary of heat treatment terms for ferrous products

EN 10079:2007, Definition of steel products

EN 10088-1:2005, Stainless steels - Part 1: List of stainless steels

EN 10088-2, Stainless steels – Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes

EN 10163-2, Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections - Part 2: Plates and wide flats

EN 10168:2004, Steel products – Inspection documents – List of information and description

EN 10204, Metallic products - Types of inspection documents

CEN/TR 10261, Iron and steel – Review of available methods of chemical analysis

EN 10307, Non-destructive testing - Ultrasonic testing of austenitic and austenitic-ferritic stainless steels flat products of thickness equal to or greater than 6 mm (reflection method)

EN ISO 377, Steel and steel products - Location and preparation of samples and test pieces for mechanical testing (ISO 377:1997)

EN ISO 3651-2, Determination of resistance to intergranular corrosion of stainless steels - Part 2: Ferritic, austenitic and ferritic-austenitic (duplex) stainless steels - Corrosion test in media containing sulphuric acid (ISO 3651-2:1998)

EN ISO 6506-1, Metallic materials - Brinell hardness test - Part 1: Test method (ISO 6506-1:2005)

EN ISO 6507-1, Metallic materials - Vickers hardness test - Part 1: Test method (ISO 6507-1:2005)

EN ISO 6508-1, Metallic materials - Rockwell hardness test - Part 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T) (ISO 6508-1:2005)

EN ISO 9001:2008, Quality management systems - Requirements (ISO 9001:2008)

EN ISO 14284, Steel and iron - Sampling and preparation of samples for the determination of chemical composition (ISO 14284:1996)

# 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

# stainless steels

the definition in EN 10088-1:2005 applies

#### 3.2

# corrosion resisting steels

steels with at least 10,5 % Cr and max. 1,20 % C if their resistance to corrosion is of primary importance

#### 3.3

#### product forms

the definitions in EN 10079:2007 apply

#### 3.4

# types of heat-treatment

the definitions in EN 10052:1993 apply

# 3.5

# standard grades

grades with a relatively good availability and a wider range of application

# 3.6

# special grades

grades for special use and/or with limited availability

# 4 Designation and ordering

## 4.1 Designation of steel grades

The steel names and steel numbers (see Tables 1 to 4) are allocated in accordance with EN 10027-1 and EN 10027-2 respectively.

# 4.2 Order designation

The complete designation for ordering a product according to this European Standard shall contain the following information:

- a) the desired quantity;
- b) the product form (e.g.: strip or sheet/plate);