BS EN 10088-1:2023

BSI Standards Publication

Stainless steels

Part 1: List of stainless steels

National foreword

This British Standard is the UK implementation of EN 10088-1:2023. It supersedes BS EN 10088-1:2014, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/105, Steels for Heat Treatment, Alloy Steels, Free-Cutting Steels and Stainless Steels.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Stainless steels - Part 1: List of stainless steels

Aciers inoxydables - Partie 1 : Liste des aciers inoxydables

Nichtrostende Stähle - Teil 1: Verzeichnis der nichtrostenden Stähle

This European Standard was approved by CEN on 6 November 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN 10088-1:2023) has been prepared by Technical Committee CEN/TC 459 "ECISS - European Committee for Iron and Steel Standardization[1]", 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of an identical text or by endorsement, at the latest by June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

This document supersedes EN 10088-1:2014.

In comparison with the previous edition, the following technical modifications have been made:

a) addition of austenitic grades 1.4420 (also part 2), 1.4678 (2), 1.4681 (3), 1.4391 (3), 1.4382 (2), 1.4682 (2), austenitic-ferritic (duplex) grades 1.4637 (2), 1.4670 (3), ferritic grades 1.4622 (2), 1.4106 (3), 1.4114 (3), 1.4045 (3), martensitic grade 1.4060 (2), 1.4037 (3);

b) change in chemical composition: austenitic grades 1.4310 (2, 3), 1.4404 (2, 3), 1.4529 (2, 3), ferritic grade 1.4003 (2, 3), 1.4521(2), martensitic grades 1.4028 (2, 3), 1.4116 (2, 3);

c) removal: austenitic grades 1.4319 (2, 3), 1.4537 (2, 3), austenitic-ferritic (duplex) grade 1.4655 (2).

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

— *Part 1: List of stainless steels*;

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

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

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

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

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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[1] Through its sub-committee SC 5 "Steels for heat treatment, alloy steels, free-cutting steels and stainless steels", (secretariat: DIN).

Introduction

The European Committee for Standardization (CEN) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning ten steel grades, given in Clause 4, Annex A, Annex B and Annex E and which is claimed to be relevant for the following clause(s) of this document:

Clauses: Clause 4, Annex A, Annex B and Annex E

CEN takes no position concerning the evidence, validity and scope of these patent rights. The holders of these patents right have assured CEN that they are willing to negotiate licences, under reasonable and non-discriminatory terms and conditions, with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with CEN.

Information may be obtained from:

Grade 1.4662, 1.4637

Outokumpu Stainless AB

SE-77480 Avesta, Sweden

Grade 1.4420, 1.4622

Outokumpu Oyj

FI-00180, Helsinki, Salmisaarenranta 11, Finland

Grade 1.4062, 1.4669, 1.4670

Ugitech

F-73403 Ugine Cedex, France

Grade 1.4062, 1.4669

Industeel

F-71200 Creusot, 56 Rue Clemenceau, France

Grade 1.4646, 1.4611, 1.4613

Acciai Speciali Terni

I-05100 Terni, Italy

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1 Scope

This document lists the chemical composition of stainless steels, which are subdivided in accordance with their main properties into corrosion resistant steels, heat resistant steels and creep resistant steels (see Annex C) and specified in the European Standards given in Table 1.

Table 1 — Overview of material standards for stainless steels

Stainless steels		
Corrosion resistant steels	**Heat resistant steels**	**Creep resistant steels**
EN 10028-7		EN 10028-7
EN 10088-2		
EN 10088-3		
EN 10088-4		
EN 10088-5		
	EN 10095	
EN 10151		
EN 10216-5		EN 10216-5
EN 10217-7		
EN 10222-5		EN 10222-5
EN 10250-4		
EN 10263-5		
EN 10264-4	EN 10264-4	
EN 10269		EN 10269
EN ISO 6931-1		
EN 10272		
EN 10296-2		
EN 10297-2		
		EN 10302
EN 10312		

Reference data on some physical properties are given in Annex E, Tables E.1 to E.8.

Empirical formulae for steel grade microstructure classification and pitting resistance ranking are given in Annex D.

NOTE 1 A matrix that shows which steels are included in which standard is given in Annex B.

NOTE 2 Valve steels are specified in EN 10090.

NOTE 3 Steel castings are specified in various European Standards (see Bibliography).

NOTE 4 Tool steels are specified in EN ISO 4957.

NOTE 5 Welding consumables are specified in various European Standards (see Bibliography).