

Spojovacie súčiastky Mechanické vlastnosti spojovacích súčiastok z ocelí odolných proti korózii Časť 6: Všeobecné pravidlá na výber nehrdzavejúcich ocelí a zliatin niklu pre spojovacie súčiastky (ISO 3506-6: 2020)

STN EN ISO 3506-6

02 1007

Fasteners - Mechanical properties of corrosion-resistant stainless steel fasteners - Part 6: General rules for the selection of stainless steels and nickel alloys for fasteners (ISO 3506-6:2020)

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/22

Obsahuje: EN ISO 3506-6:2022, ISO 3506-6:2020

135494

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 3506-6

June 2022

ICS 21.060.01

English Version

Fasteners - Mechanical properties of corrosion-resistant stainless steel fasteners - Part 6: General rules for the selection of stainless steels and nickel alloys for fasteners (ISO 3506-6:2020)

Fixations - Caractéristiques mécaniques des fixations en acier inoxydable résistant à la corrosion - Partie 6: Règles générales pour la sélection des aciers inoxydables et des alliages de nickel pour les fixations (ISO 3506-6:2020) Verbindungselemente - Mechanische Eigenschaften von Verbindungselementen aus nichtrostendem Stahl -Teil 6: Allgemeine Regeln für die Auswahl von nichtrostenden Stählen und Nickellegierungen für Verbindungselemente (ISO 3506-6:2020)

This European Standard was approved by CEN on 20 June 2022.

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 CEN-CENELEC Management Centre or to any CEN member.

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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN ISO 3506-6:2022 (E)

Contents	Page
European foreword	2
European foreword	

EN ISO 3506-6:2022 (E)

European foreword

The text of ISO 3506-6:2020 has been prepared by Technical Committee ISO/TC 2 "Fasteners" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 3506-6:2022 by Technical Committee CEN/TC 185 "Fasteners" the secretariat of which is held by BSI.

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 December 2022, and conflicting national standards shall be withdrawn at the latest by December 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 3506-6:2020 has been approved by CEN as EN ISO 3506-6:2022 without any modification.

INTERNATIONAL STANDARD

ISO 3506-6

First edition 2020-04

Fasteners — Mechanical properties of corrosion-resistant stainless steel fasteners —

Part 6:

General rules for the selection of stainless steels and nickel alloys for fasteners

Fixations — Caractéristiques mécaniques des fixations en acier inoxydable résistant à la corrosion —

Partie 6: Règles générales pour la sélection des aciers inoxydables et des alliages de nickel pour les fixations





COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Con	Contents		
Forev	vord		iv
Intro	ductio	on.	v
1	Scon	ne	1
_	-		
2	Normative references		
3		ns and definitions	
4		ips and grades of stainless steels	
	4.1	General	
	4.2	Stainless steel group A (austenitic structure)	
		4.2.1 General	
		4.2.2 Grade A1	
		4.2.4 Grade A3	
		4.2.5 Grade A4	
		4.2.6 Grade A5	
		4.2.7 Grade A8	
	4.3	Stainless steel group C (martensitic structure)	
		4.3.1 General	4
		4.3.2 Grade C1	4
		4.3.3 Grade C3	
		4.3.4 Grade C4	
	4.4	Stainless steel group F (ferritic structure) — Grade F1	
	4.5	Stainless steel group D (austenitic-ferritic structure)	
		4.5.1 General	
		4.5.2 Grades D2 and D4	
	4.6	4.5.3 Grades D6 and D8	
	4.6	Stainless steels and nickel alloys for elevated and high temperatures	
5	Cher	nical composition specifications for stainless steels and nickel alloys	5
6	Resi	stance to stress corrosion cracking	8
7	Resi	stance to pitting and crevice corrosion	9
8	Resi	stance to intergranular corrosion	9
9	Susc	eptibility to formation of intermetallic compounds	11
10	Magnetic permeability properties of stainless steels		
Anne	x A (in	formative) Common designations of stainless steels and nickel alloys used for	
	fasteners		
Biblio	ograpl	ny	20

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 2, Fasteners.

A list of all parts in the ISO 3506 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

When revising ISO 3506-1 and ISO 3506-2, annexes common to several parts have been withdrawn and included in this document in order to avoid uncessery repetition and to ease further revision of parts as necessary (these annexes have also been technically revised). This document replaces:

- ISO 3506-1:2009, Annexes B, C, D, E, G and H, and
- ISO 3506-2:2009, Annexes A, B, C, D, F and G.

The ISO 3506 series consists of the following parts, under the general title *Fasteners — Mechanical* properties of corrosion-resistant stainless steel fasteners:

- Part 1: Bolts, screws and studs with specified grades and property classes
- Part 2: Nuts with specified grades and property classes
- Part 3¹): Set screws and similar fasteners not under tensile stress
- Part 4¹⁾: Tapping screws
- Part 5²): Special fasteners (also including fasteners from nickel alloys) for high temperature applications
- Part 6: General rules for the selection of stainless steels and nickel alloys for fasteners

¹⁾ It is intended to revise ISO 3506-3 and ISO 3506-4 in the future in order to include the reference to ISO 3506-6.

²⁾ Under preparation.

Fasteners — Mechanical properties of corrosion-resistant stainless steel fasteners —

Part 6:

General rules for the selection of stainless steels and nickel alloys for fasteners

1 Scope

This document specifies general rules and provides technical information on stainless steels and their properties, which are relevant when using other parts of the ISO 3506 series. It includes specifications for corrosion-resistant stainless steels and nickel alloys, which are suitable for the manufacture of fasteners.

It applies to austenitic, martensitic, ferritic and duplex (austenitic-ferritic) stainless steel grades and nickel alloys for fasteners, and is intended to be used together with the relevant parts of the ISO 3506 series.

Common designations of stainless steels and nickel alloys used for fasteners are given in Annex A.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 3506-1, Fasteners — Mechanical properties of corrosion-resistant stainless steel fasteners — Part 1: Bolts, screws and studs with specified grades and property classes

ISO 3506-2, Fasteners — Mechanical properties of corrosion-resistant stainless steel fasteners — Part 2: Nuts with specified grades and property classes

ISO 3506-5³⁾, Fasteners — Mechanical properties of corrosion-resistant stainless steel fasteners — Part 5: Special fasteners (also including fasteners from nickel alloys) for high temperature applications

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

³⁾ Under preparation.