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BSI Standards Publication

Fasteners — Mechanical properties of corrosion-resistant stainless steel fasteners

Part 6: General rules for the selection of stainless steels and nickel alloys for fasteners

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National foreword

This British Standard is the UK implementation of EN ISO 3506-6:2022. It is identical to ISO 3506-6:2020. It supersedes BS ISO 3506-6:2020, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee FME/9, Fasteners.

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

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NORME EUROPÉENNE

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EN ISO 3506-6

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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)

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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of an identical text or by endorsement, at the latest by December 2022, and conflicting national standards shall be withdrawn at the latest by December 2022.

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Endorsement notice

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

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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).

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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.

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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 3*[1]*: Set screws and similar fasteners not under tensile stress*

— *Part 4*[1]*: Tapping screws*

— *Part 5*[2]*: 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.

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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 3506-5[3)], *Fasteners — Mechanical properties of corrosion-resistant stainless steel fasteners — Part 5: Special fasteners (also including fasteners from nickel alloys) for high temperature applications*

3 Terms and definitions

For the purpose of this document, terms and definitions specified in ISO 3506-1, ISO 3506-2 and ISO 3506-5 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

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