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Mechanical properties of corrosion-resistant stainless-steel fasteners - Part 4: Tapping screws (ISO 3506-4:2003)

Mechanische Eigenschaften von Verbindungselementen aus nichtrostenden Stählen - Teil 4: Blechschrauben (ISO 3505-4:2003)

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21.060.10 Sorniki, vijaki, stebelni vijaki Bolts, screws, studs

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EUROPEAN STANDARD

NORME EUROPÉENNE

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Mechanical properties of corrosion-resistant stainless-steel fasteners - Part 4: Tapping screws (ISO 3506-4:2003)

Caractéristiques mécaniques des éléments de fixation en acier inoxydable résistant à la corrosion - Partie 4: Vis à tôle (ISO 3506-4:2003)

Mechanische Eigenschaften von Verbindungselementen aus nichtrostenden Stählen - Teil 4: Blechschrauben (ISO 3506-4:2003)

This European Standard was approved by CEN on 21 March 2003.

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Foreword

This document (EN ISO 3506-4:2003) has been prepared by Technical Committee ISO/TC 2 "Fasteners" in collaboration with Technical Committee CEN/TC 185 "Threaded and non-threaded mechanical fasteners and accessories", 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of an identical text or by endorsement, at the latest by October 2003, and conflicting national standards shall be withdrawn at the latest by October 2003.

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

Endorsement notice

The text of ISO 3506-4:2003 has been approved by CEN as EN ISO 3506-4:2003 without any modifications.

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NOTE Normative references to International Standards are listed in Annex ZA (normative).

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Annex ZA
(normative)

Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

Publication	Year	Title	EN	Year
ISO 3651-1	1998	Determination of resistance to intergranular corrosion of stainless steels - Part 1: Austenitic and ferritic-austenitic (duplex) stainless steels - Corrosion test in nitric acid medium by measurement of loss in mass (Huey test)	EN ISO 3651-1	1998
ISO 3651-2	1998	Determination of resistance to intergranular corrosion of stainless steels - Part 2: Ferritic, austenitic and ferritic-a ustenitic (duplex) stainless steels - Corrosion test in media containing sulfuric acid	EN ISO 3651-2	1998
ISO 6507-1	1997	Metallic materials - Vickers hardness test - Part 1: Test method	EN ISO 6507-1	1997
ISO 8044	1999	Corrosion of metals and alloys - Basic terms and definitions	EN ISO 8044	1999
ISO 16048	2003	Passivation of corrosion-resistant stainless-steel fasteners	EN ISO 16048	2003

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INTERNATIONAL STANDARD

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Mechanical properties of corrosion-resistant stainless-steel fasteners —

Part 4: Tapping screws

Caractéristiques mécaniques des éléments de fixation en acier inoxydable résistant à la corrosion —

Partie 4: Vis à tôle

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 3506-4 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 1, *Mechanical properties of fasteners*.

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

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— *Part 1: Bolts, screws and studs*

— *Part 2: Nuts*

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— *Part 3: Set screws and similar fasteners not under tensile stress*

— *Part 4: Tapping screws*

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Introduction

In the preparation of this part of ISO 3506 special attention has been given to the fundamentally different property characteristics of stainless steel fastener grades compared with those of carbon steel and low-alloy steel fasteners. Ferritic and austenitic stainless steels are strengthened only by cold working and consequently the components do not have as homogeneous a condition as hardened and tempered parts. These special features have been recognized in the elaboration of property classes and the test procedures for mechanical properties.

The primary objective of this part of ISO 3506 is to ensure that corrosion-resistant austenitic, martensitic and ferritic stainless steel tapping screws will form mating threads in materials such as aluminium into which they are normally driven without deforming their own thread and without breaking during assembly or service. Selection of the steel group should be based on the intended application.

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