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(JFRI/JSA)

**Mechanical properties of corrosion-resistant stainless steel fasteners—  
Part 4: Tapping screws**

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In the event of any doubts arising as to the contents,  
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## Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Research Institute for Screw Threads and Fasteners (JFRI)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently, **JIS B 1054-4**:2006 is replaced with this Standard.

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Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or a utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or the utility model rights.

**JIS B 1054** series consists of the following 4 parts under the general title “*Mechanical properties of corrosion-resistant stainless steel fasteners*”:

*Part 1: Bolts, screws and studs*

*Part 2: Nuts*

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

*Part 4: Tapping screws*

# Mechanical properties of corrosion-resistant stainless steel fasteners— Part 4: Tapping screws

## Introduction

This Japanese Industrial Standard has been prepared based on the second edition of **ISO 3506-4** published in 2009 without any modifications of the technical contents.

Annex JA in this Standard is not contained in the corresponding International Standard.

## 1 Scope

This Standard specifies the mechanical properties of tapping screws made of austenitic, martensitic and ferritic steel grades of corrosion-resistant stainless steels, when tested over an ambient temperature range of 10 °C to 35 °C. Properties vary at higher or lower temperatures.

It applies to tapping screws with threads from ST2.2 up to and including ST8, in accordance with **JIS B 1007**.

It does not apply to screws with special properties, such as weldability.

**NOTE :** The designation system of this Standard can be used for sizes outside the limits given in this clause (e.g.  $d > ST8$ ), provided that all applicable mechanical and physical requirements of the hardness classes are met.

This Standard does not define corrosion or oxidation resistance in particular environments. However, some information on materials for particular environments is given in Annex C. Regarding definitions of corrosion and corrosion resistance, see **ISO 8044**.

The aim of this Standard is the classification of corrosion-resistant stainless steel tapping screws into hardness classes.

Corrosion and oxidation performances and mechanical properties for use at elevated or sub-zero temperatures can be agreed on between the user and the manufacturer in each particular case. Annex D shows how the risk of intergranular corrosion at elevated temperatures depends on the carbon content.

All austenitic stainless steel fasteners are normally non-magnetic in the annealed condition; after cold working, some magnetic properties can be evident (see Annex E).

**NOTE :** The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows:

ISO 3506-4:2009 *Mechanical properties of corrosion-resistant stainless steel fasteners—Part 4: Tapping screws* (IDT)

The symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.