



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 4303 : 2021

(JSSA/JSA)

Stainless steel bars

ICS 77.140.20 ; 77.140.60

Reference number : JIS G 4303 : 2021 (E)

Date of Establishment: 1959-12-01

Date of Revision: 2021-03-22

Date of Public Notice in Official Gazette: 2021-03-22

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Metal and Inorganic Materials

JIS G4303 : 2021, First English edition published in 2021-11

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2021

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

HN

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
3 Symbol of grade	2
4 Manufacturing method	3
5 Chemical composition	3
5.1 Heat analysis values	3
5.2 Product analysis values	3
6 Mechanical properties	9
6.1 General	9
6.2 Mechanical properties of austenitic series	9
6.3 Mechanical properties of austenitic-ferritic series	10
6.4 Mechanical properties of ferritic series	11
6.5 Mechanical properties of martensitic series	12
6.6 Mechanical properties of precipitation hardening series	14
7 Corrosion resistance	15
8 Shape, dimensions and tolerances	15
8.1 Standard dimensions	15
8.2 Shape and dimensional tolerances	16
9 Appearance	18
10 Mass	18
11 Tests	19
11.1 Chemical analysis	19
11.2 Mechanical tests	20
11.3 Corrosion test	21
12 Inspection	21
13 Marking	21
14 Report	22
Annex JA (informative) Example of heat treatment conditions for stainless steels	23
Annex JB (informative) Comparison table between JIS and corresponding International Standard	26

Foreword

This Japanese Industrial Standard has been 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 Japan Stainless Steel Association (JSSA)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS G 4303 : 2012**), which has been technically revised.

However, **JIS G 4303 : 2012** may be applied in the **JIS** mark certification based on the relevant provisions of Article 30, paragraph (1), etc. of the Industrial Standardization Act until 21 March 2022.

This **JIS** document is protected by the Copyright Act.

It should be noted that being in conformance with this Standard may come under the use of the patent rights and other rights held by the following:

Symbol of grade	Patent holder	Title of invention	Patent number	Registration date of establishment of patent right
SUS821L1	Nippon Steel & Sumikin Stainless Steel Corporation	Alloy-saving duplex stainless steel with good corrosion resistance and toughness of weld heat affected zone	5345070	23 August 2013

The holder of this patent right and other rights has indicated an intention of granting license to anyone under the nondiscriminatory and reasonable conditions, except to the other relevant holders of the patent rights and other rights related to this Standard who will not grant their licenses under the same conditions.

It should be noted that following this Standard does not always refer to granting a free license.

Some parts of this Standard may conflict with patent rights and other rights other than mentioned above. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights and other rights.

The “patent rights and other rights” as mentioned here include patent right, published patent application or utility model right.

Stainless steel bars

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 16143-2** : 2014, Edition 2, with some modifications of the technical contents.

The vertical lines on both sides indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JB.

1 Scope

This Standard specifies requirements for the hot-worked stainless steel bars (round bars, square bars, hexagonal bars and flat bars, hereafter generically referred to as bars).

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

ISO 16143-2 : 2014 *Stainless steels for general purposes — Part 2 : Corrosion-resistant semi-finished products, bars, rods and sections* (MOD)

In addition, 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**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS G 0320 *Standard test method for heat analysis of steel products*

JIS G 0321 *Product analysis and its tolerance for wrought steel*

JIS G 0404 *Steel and steel products — General technical delivery requirements*

JIS G 0415 *Steel and steel products — Inspection documents*

JIS G 0571 *Method of oxalic acid etching test for stainless steels*

JIS G 0572 *Method of ferric sulfate-sulfuric acid test for stainless steel*

JIS G 0573 *Method of 65 per cent nitric acid test for stainless steels*

JIS G 0575 *Method of copper sulfate-sulfuric acid test for stainless steels*

JIS Z 2241 *Metallic materials — Tensile testing — Method of test at room temperature*

JIS Z 2242 *Method for Charpy pendulum impact test of metallic materials*