

JAPANESE INDUSTRIAL STANDARD

Translated and Published by Japanese Standards Association

 $JIS \ G \ 4305^{:2012}$

(JSSA/JSA)

Cold-rolled stainless steel plate, sheet and strip

 $\textbf{ICS} \ \ 77.140.20; 77.140.50$

Reference number: JIS G 4305: 2012 (E)

G 4305: 2012

Date of Establishment: 1959-12-01

Date of Revision: 2012-09-20

Date of Public Notice in Official Gazette: 2012-09-20

Investigated by: Japanese Industrial Standards Committee

Standards Board

Technical Committee on Iron and Steel

JIS G 4305: 2012, First English edition published in 2013-03

Translated and published by: Japanese Standards Association 4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

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

© JSA 2013

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 KA/HN

This is a preview. Click here to purchase the full publication.

Contents

	Page
Intro	duction ······ 1
1	Scope
2	Normative references · · · · · · · · · · · · · · · · · · ·
3	Designation of grade2
4	Manufacturing method ····································
5 5.1 5.2	Chemical composition
6 6.1 6.2 6.3 6.4 6.5 6.6	Mechanical properties8General8Mechanical properties of austenitic series8Mechanical properties of austenitic ferritic series10Mechanical properties of ferritic series10Mechanical properties of martensitic series11Mechanical properties of precipitation hardening series13
7	Corrosion resistance ······14
8	Surface finish ······14
9 9.1 9.2 9.3 9.4 9.5 9.6 9.7	Shape, dimensions, mass and tolerances15Standard dimensions15Calculation of mass of plates16Tolerances on thickness17Tolerances on width20Tolerances on length of plates21Flatness of plates21Camber of strip22
10	Appearance ————————————————————————————————————
11 11.1 11.2 11.3	Tests23Chemical analysis23Mechanical tests23Corrosion test24
12	Inspection25
13	Marking25
14	Report25

G 4305: 2012

Annex JA (informative)	Heat treatment of stainless steels27
Annex JB (informative)	Comparison table between JIS and corresponding
	International Standards30

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 Japan Stainless Steel Association (JSSA)/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 G 4305:2010 is replaced with this Standard.

However, **JIS G 4305**:2010 may be applied in the **JIS** mark certification based on the relevant provisions of Article 19 Clause 1, etc. of the Industrial Standardization Law until September 19th, 2013.

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

Being in conformance with this Standard may come under the use of the patent rights held by the following.

Designation of grade	Title of invention	Patent number	(Registration date of establishment of patent right)
SUS315J1 SUS315J2	Austenitic stainless steel excellent in hot workability and corrosion resistance in hot water	No.2602411	1997-01-29
SUS443J1	Ferritic stainless-steel sheet with excellent corrosion resistance and process for producing the same	No.4396676	2009-10-30
SUS445J1	Ferritic stainless steel for heat exchanger	No.2642056	1997-05-02
SUS445J2	Fe-Cr alloy excellent in ridging resistance	No.2737819	1998-01-16
	Ferritic stainless steel sheet excellent in rust resistance and workability	No.3224694	2001-08-24
	Ferritic stainless steel bright annealing material excellent in workability and rust resistance	No.3268927	2002-01-18
	Ferritic stainless steel for exterior material excellent in corrosion resistance	No.3297696	2002-04-19
	Ferritic stainless steel for building material	No.3411084	2003-03-20

The relevant holders of the above-mentioned industrial property rights have indicated to the Japanese Industrial Standards Committee an intention of granting license to anyone under the nondiscriminatory and reasonable conditions, except to the other holders of the industrial property 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.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights as other than mentioned above. The Minister of Economy, Trade and Industry and Japanese Industrial Standards Committee are not responsible for identifying such patent rights.

The "patent rights" as mentioned here include patent right, application for a patent after opening to the public or utility model right.

Cold-rolled stainless steel plate, sheet and strip

JIS G 4305 : 2012

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of ISO 16143-1 published in 2004 and the first editions of ISO 9445-1 and ISO 9445-2 published in 2009 with some modifications of the technical contents.

The portions given continuous sidelines are the matters in which the contents of the corresponding International Standards have been modified. A list of modifications with explanations is given in Annex JB.

1 Scope

This Standard specifies the cold-rolled stainless steel plates and sheets (hereafter referred to as "plates") and cold-rolled stainless steel strip (hereafter referred to as "strip").

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

ISO 16143-1: 2004 Stainless steels for general purposes — Part 1: Flat products

ISO 9445-1: 2009 Continuously cold-rolled stainless steel — Tolerances on dimensions and form — Part 1: Narrow strip and cut lengths

ISO 9445-2: 2009 Continuously cold-rolled stainless steel — Tolerances on dimensions and form — Part 2: Wide strip and sheet/plate (Overall evaluation: MOD)

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**.

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

NOTE: Corresponding International Standard: **ISO 10474**: 1991 Steel and steel products — Inspection documents (IDT)