



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 3459 : 2021

(JISF)

Stainless steel pipes

ICS 23.040.10 ; 77.140.75

Reference number : JIS G 3459 : 2021 (E)

PROTECTED BY COPYRIGHT

20 S

Date of Establishment: 1962-03-01

Date of Revision: 2021-04-20

Date of Public Notice in Official Gazette: 2021-04-20

Developed by: The Japan Iron and Steel Federation

Investigated by: The Japan Iron and Steel Federation, Standardization
Center

JIS G 3459 : 2021, First English edition published in 2021-12

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 Terms and definitions	2
4 Symbols of grade	2
5 Manufacturing method	3
6 Chemical composition	5
7 Mechanical properties	6
7.1 Tensile strength, proof stress and elongation	6
7.2 Flattening resistance or guided bend resistance of weld	8
8 Austenitic grain size	9
9 Hydraulic test characteristics or non-destructive test characteristics	9
10 Dimensions, unit mass and dimensional tolerances	10
10.1 Dimensions and unit mass	10
10.2 Dimensional tolerances	17
10.3 Weld bead height	18
11 Appearance	18
12 Supplementary quality requirements	19
13 Tests	19
13.1 Chemical analysis	19
13.2 Mechanical tests	19
13.3 Austenitic grain size test	21
13.4 Hydraulic test characteristics or non-destructive test characteristics	21
14 Inspection and reinspection	22
14.1 Inspection	22
14.2 Reinspection	22
15 Marking	22
16 Report	23
Annex JA (normative) Supplementary quality requirements	24
Annex JB (informative) Comparison table between JIS and corresponding International Standards	28

Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry based on the provision of Article 14, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act in response to a proposal for revision of Japanese Industrial Standard with a draft being attached, submitted by The Japan Iron and Steel Federation (JISF), an accredited standards development organization. This edition replaces the previous edition (**JIS G 3459:2020**), which has been technically revised.

However, **JIS G 3459: 2020** 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 19 April 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:

— Name: NIPPON STEEL Stainless Steel Corporation

— Address: 1-8-2 Marunouchi, Chiyoda-ku, Tokyo-to

Symbol of grade	Title of invention	Patent number	Registration date of establishment of patent right
SUS821L1TP	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 is 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 pipes

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 9329-4** : 1997, Edition 1, and **ISO 9330-6** : 1997, Edition 1, with some modifications of the technical contents.

Annex JA is unique to **JIS** and not given in the corresponding International Standard. The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standards. A list of modifications with the explanations is given in Annex JB.

1 Scope

This Standard specifies requirements for the stainless steel pipes (hereafter referred to as pipes) used for piping for corrosion resistance, low temperature service, elevated temperature service, fire-fighting service or the like.

NOTE 1 This Standard generally applies to pipes of outside diameter 10.5 mm (nominal diameter 6A or 1/8B) to 660.4 mm (nominal diameter 650A or 26B) (see **10.1**).

NOTE 2 The International Standards corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 9329-4 : 1997 *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 4 : Austenitic stainless steels*

ISO 9330-6 : 1997 *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 6 : Longitudinally welded austenitic stainless steel tubes* (Overall evaluation : MOD)

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

2 Normative references

Part or all of the provisions of the following standards, 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 0201 *Glossary of terms used in iron and steel (Heat treatment)*

JIS G 0202 *Glossary of terms used in iron and steel (Testing)*

JIS G 0203 *Glossary of terms used in iron and steel (Products and quality)*

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

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