

# JAPANESE INDUSTRIAL STANDARD

Translated and Published by Japanese Standards Association

 $JIS \ G \ 3460^{:2022}$ 

(JISF)

Steel pipes for low temperature service

**ICS** 23.040.10; 77.140.75

Reference number: JIS G 3460: 2022 (E)

G 3460: 2022

Date of Establishment: 1962-03-01

Date of Revision: 2022-05-20

Date of Public Notice in Official Gazette: 2022-05-20

Developed by: The Japan Iron and Steel Federation

Investigated by: The Japan Iron and Steel Federation, Standardization

Center

JIS G 3460: 2022, First English edition published in 2023-03

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 2023

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

	P	age
Intro	duction ·····	1
1	Scope ····	1
2	Normative references ·····	1
3	Terms and definitions ·····	
4	Symbol of grade ·····	
5	Manufacturing method	
6	Chemical composition ······	
7 7.1 7.2	Mechanical properties  Tensile strength, yield point or proof stress, and elongation  Flattening property	4 4 6
7.3 7.4	Bendability	
8	Selection of hydraulic test characteristics or non-destructive test characteristics	
9 9.1 9.2	Dimensions, unit mass and dimensional tolerances  Outside diameter, wall thickness and unit mass  Dimensional tolerances	9
10	Appearance1	1
11	Supplementary quality requirements ······	2
12 12.1 12.2 12.3 12.4	Tests 1 Chemical analysis 1 Mechanical test 1 Hydraulic test 1 Non-destructive test 1	2 2 5
13 13.1 13.2	Inspection and reinspection 10 Inspection 11 Reinspection 11	6
14	Marking ······1	6
15	Information to be supplied by the purchaser ······1	7
16	Report ······1	
Anne	x JA (normative) Supplementary quality requirements1	8
	x JB (informative) Comparison table between JIS and corresponding	

$\alpha$	346	٠ ٥٠	0.0	00
Ι÷	341	NΙ.	21	レンン

International Standards · · · · · 19

## 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 3460: 2018), which has been technically revised.

However, **JIS G 3460**: 2018 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 May 2023.

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

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, published patent application or utility model rights. The relevant Minister is not responsible for identifying any of such patent rights, published patent application or utility model rights.

Blank

# Steel pipes for low temperature service

JIS G 3460: 2022

#### Introduction

This Japanese Industrial Standard has been prepared based on **ISO 9329-3**: 1997, Edition 1, and **ISO 9330-3**: 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 Standard. A list of modifications with the explanations is given in Annex JB.

### 1 Scope

This Standard specifies requirements for the steel pipes (hereafter referred to as pipes) used for piping at extremely low temperatures of freezing point or under.

- NOTE 1 The dimensional range covered by this Standard is generally outside diameter 10.5 mm (nominal diameter 6A or  $\frac{1}{8}$  B) to 660.4 mm (nominal diameter 650A or 26B) (see Table 9).
- NOTE 2 Austenitic stainless steel pipes specified in **JIS G 3459** [1] and **JIS G 3468** [2] are used as steel pipes for low temperature service.
- NOTE 3 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 9329-3: 1997 Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 3: Unalloyed and alloyed steels with specified low temperature properties

ISO 9330-3: 1997 Welded steel tubes for pressure purposes — Technical delivery conditions — Part 3: Electric resistance and induction welded unalloyed and alloyed steel tubes with specified low temperature properties (overall evaluation: 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

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)