

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 3115 : 2022

(JISF)

**Steel plates for pressure vessels for
intermediate temperature service**

ICS 77.140.30 ; 77.140.50

Reference number : JIS G 3115 : 2022 (E)

G 3115 : 2022

Date of Establishment: 1968-11-01

Date of Revision: 2022-05-22

Date of Public Notice in Official Gazette: 2022-03-22

Developed by: The Japan Iron and Steel Federation

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

JIS G 3115 : 2022, First English edition published in 2023-01

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

PROTECTED BY COPYRIGHT

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Symbol of grade and applicable thickness	2
5 Manufacturing method and heat treatment	3
5.1 Manufacturing method	3
5.2 Heat treatment of steel plates	3
5.3 Specification of heat treatment	3
5.4 Heat treatment of test pieces	3
5.5 Symbol of heat treatment	3
6 Chemical composition	4
7 Weldability	5
7.1 General requirements for weldability	5
7.2 Carbon equivalent	5
7.3 Weld-crack sensitivity composition	6
8 Mechanical properties	7
8.1 Yield point or proof stress, tensile strength, elongation and bendability	7
8.2 Charpy absorbed energy	9
9 Shape, dimensions, mass and tolerances	10
10 Appearance	11
11 Tests	11
11.1 Chemical analysis	11
11.2 Mechanical tests	11
12 Inspection	13
13 Reinspection	13
14 Marking	13
15 Report	13
Annex JA (informative) Comparison table between JIS and corresponding International Standards	15

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 3115** : 2016), which has been technically revised.

However, **JIS G 3115** : 2016 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 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.

Steel plates for pressure vessels for intermediate temperature service

Introduction

This Japanese Industrial Standard has been prepared based on ISO 9328-1 : 2018, Edition 4, ISO 9328-3 : 2018, Edition 4, ISO 9328-5 : 2018, Edition 4 and ISO 9328-6 : 2018, Edition 3 with some modifications of the technical contents.

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 JA.

1 Scope

This Standard specifies requirements for hot rolled steel plates (hereafter referred to as steel plates) with improved weldability, to be used for pressure vessels, equipment for high pressure service (excluding those to be used for high and low temperature services).

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

ISO 9328-1 : 2018 *Steel flat products for pressure purposes — Technical delivery conditions — Part 1 : General requirements*

ISO 9328-3 : 2018 *Steel flat products for pressure purposes — Technical delivery conditions — Part 3 : Weldable fine grain steels, normalized*

ISO 9328-5 : 2018 *Steel flat products for pressure purposes — Technical delivery conditions — Part 5 : Weldable fine grain steels, thermo-mechanically rolled*

ISO 9328-6 : 2018 *Steel flat products for pressure purposes — Technical delivery conditions — Part 6 : Weldable fine grain steels, quenched and tempered (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)*