

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 3124 : 2015

(JISF)

**High strength steel plates for pressure
vessel for intermediate and moderate
temperature service**

ICS 77.140.30 ; 77.140.50

Reference number : JIS G 3124 : 2015 (E)

PROTECTED BY COPYRIGHT

9 5

G 3124 : 2015

Date of Establishment: 1983-11-01

Date of Revision: 2015-05-20

Date of Public Notice in Official Gazette: 2015-05-20

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Metal and Inorganic Materials

JIS G 3124 : 2015, First English edition published in 2015-09

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 2015

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 |
|-----|--|------|
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Classification, symbols and applicable thicknesses | 1 |
| 4 | Manufacturing method and heat treatment | 2 |
| 4.1 | Manufacturing method | 2 |
| 4.2 | Heat treatment and symbols of heat treatment | 2 |
| 5 | Chemical composition | 3 |
| 5.1 | Heat analysis values | 3 |
| 5.2 | Carbon equivalent | 4 |
| 5.3 | Product analysis values | 4 |
| 6 | Mechanical properties | 4 |
| 6.1 | Tensile properties at ordinary temperature | 4 |
| 6.2 | Tensile properties at elevated temperature | 4 |
| 6.3 | Bendability | 6 |
| 6.4 | Charpy absorbed energy | 6 |
| 7 | Shape, dimensions, mass and their tolerances | 7 |
| 8 | Appearance | 8 |
| 9 | Tests | 8 |
| 9.1 | Chemical analysis | 8 |
| 9.2 | Mechanical tests | 8 |
| 10 | Inspection | 10 |
| 11 | Reinspection | 11 |
| 12 | Marking | 11 |
| 13 | Report | 11 |

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 The Japan Iron and Steel Federation (JISF) 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 3124 : 2009** is replaced with this Standard.

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

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

High strength steel plates for pressure vessel for intermediate and moderate temperature service

1 Scope

This Japanese Industrial Standard specifies the high strength hot rolled steel plates to be used for boilers and pressure vessels for intermediate and moderate temperature services (hereafter referred to as "steel plates").

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 0567 *Method of elevated temperature tensile test for steels and heat-resisting alloys*

JIS G 3193 *Dimensions, mass and permissible variations of hot rolled steel plates, sheets and strips*

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*

JIS Z 2248 *Metallic materials — Bend test*

3 Classification, symbols and applicable thicknesses

The steel plates are classified into three classes, and their symbols and applicable thicknesses are as given in Table 1.