



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

**JIS B 1217** : 2018

(JSME/JSA)

**Bolting for use with pipe flanges**

---

ICS 21.060.10; 21.060.20; 23.040.60

Reference number : JIS B 1217 : 2018 (E)

PROTECTED BY COPYRIGHT

19 S

B 1217 : 2018

Date of Establishment: 2009-03-20

Date of Revision: 2018-02-20

Date of Public Notice in Official Gazette: 2018-02-20

Investigated by: Japanese Industrial Standards Committee  
Standards Board for ISO area

---

JIS B 1217 : 2018, First English edition published in 2018-07

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 2018

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

HT/HN

PROTECTED BY COPYRIGHT

## Contents

		Page
Introduction .....		1
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	2
4	Materials, steel grades and property classes of bolts .....	3
4.1	Carbon steel bolt and low alloy steel bolt .....	3
4.2	Stainless steel bolt .....	5
4.3	Aluminium alloy bolt .....	6
5	Materials, steel grades and property classes of nuts .....	6
6	Combination of bolts and nuts .....	7
7	Shapes and dimensions of bolts and nuts .....	8
7.1	Threads of bolts and nuts .....	8
7.2	Shapes and dimensions of bolts .....	9
7.3	Shapes and dimensions of nuts .....	10
8	Surface defects of bolts and nuts .....	10
9	Inspection of bolts and nuts .....	10
10	Designation of bolts and nuts .....	11
10.1	Bolts .....	11
10.2	Nuts .....	12
11	Marking of bolts and nuts .....	13
12	Washers .....	14
Annex A (informative) Nominal length, overall length and thread length of bolts for flanges .....		15
Annex B (informative) Bibliography .....		32

## Foreword

This Japanese Industrial Standard has been 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 Society of Mechanical Engineers (JSME)/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 B 1217:2012** 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.

# Bolting for use with pipe flanges

## Introduction

This Japanese Industrial Standard was established in 2009 and has been revised twice since then. The previous edition was made in 2012, and this revision is to update the contents of this document based on changes in production and use of bolts and nuts that have been made after the introduction of the previous edition.

No corresponding International Standard has been established at this point.

## 1 Scope

This Standard specifies requirements for bolts, nuts and associated parts used for joining the pipe flanges specified in JIS B 2220, JIS B 2239, JIS B 2240 and JIS B 2241 (hereafter referred to as flanges).

For those bolts, nuts, and associated parts that are intended for services at temperatures below the ordinary temperature, the requirements for material, steel grade and property class are to be subject to the agreement between the manufacturer and the purchaser.

NOTE Requirements of this Standard assume the use of right-handed threads.

## 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 B 0101 *Screw threads and fasteners — Vocabulary*

JIS B 0205-4 *ISO general purpose metric screw threads — Part 4 : Basic dimensions*

JIS B 0209-1 *ISO general purpose metric screw threads — Tolerances — Part 1 : Principles and basic data*

JIS B 0209-2 *ISO general purpose metric screw threads — Tolerances — Part 2 : Limits of sizes for general purpose external and internal screw threads — Medium quality*

JIS B 1003 *Fasteners — Ends of parts with external ISO metric thread*

JIS B 1021 *Tolerances for fasteners — Part 1 : Bolts, screws, studs and nuts — Product grades A, B and C*

JIS B 1041 *Fasteners — Surface discontinuities — Part 1 : Bolts, screws and studs for general requirements*

JIS B 1042 *Fasteners — Surface discontinuities — Part 2 : Nuts*