



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

JIS Z 2256 : 2010

(JISF)

**Metallic materials — Hole expanding test**

---

ICS 77.040.10

Reference number : JIS Z 2256 : 2010 (E)

PROTECTED BY COPYRIGHT

Z 2256 : 2010

Date of Establishment: 2010-10-20

Date of Public Notice in Official Gazette: 2010-10-20

Investigated by: Japanese Industrial Standards Committee  
Standards Board  
Technical Committee on Iron and Steel

---

JIS Z 2256 : 2010, First English edition published in 2011-02

Translated and published by: Japanese Standards Association  
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

---

In the event of any doubts arising as to the contents,  
the original JIS is to be the final authority.

© JSA 2011

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

PROTECTED BY COPYRIGHT

HN  
**Documents**  
Document Sharing Hub

## Contents

|                                                                                                        | Page |
|--------------------------------------------------------------------------------------------------------|------|
| Introduction .....                                                                                     | 1    |
| 1 Scope .....                                                                                          | 1    |
| 2 Normative reference .....                                                                            | 1    |
| 3 Terms and definitions .....                                                                          | 2    |
| 4 Symbols and designations .....                                                                       | 2    |
| 5 Principle .....                                                                                      | 2    |
| 6 Apparatus .....                                                                                      | 4    |
| 6.1 General .....                                                                                      | 4    |
| 6.2 Testing machine .....                                                                              | 4    |
| 6.3 Testing tools .....                                                                                | 4    |
| 7 Test piece .....                                                                                     | 4    |
| 8 Test .....                                                                                           | 6    |
| 9 Calculation of test result .....                                                                     | 7    |
| 10 Test report .....                                                                                   | 8    |
| Annex JA (informative) Comparison table between JIS and the corresponding International Standard ..... | 9    |

## Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee to the proposal for establishment 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.

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

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

# Metallic materials — Hole expanding test

## Introduction

This Japanese Industrial Standard has been prepared based on the first edition of ISO 16630 published in 2009 with some modifications of the technical contents.

The portions given dotted underlines are the matters in which the contents of the original International Standard have been modified. A list of modifications with the explanations is given in Annex JA.

## 1 Scope

This Standard specifies the test method of hole expansion in sheet metallic materials with a thickness range mainly of 1.2 mm to 6.0 mm and a width of not less than 90 mm.

NOTE 1 This test is normally applicable to the sheet and strip, and is used to assess the suitability of the product for forming flanges.

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

ISO 16630 : 2009 *Metallic materials — Sheet and strip — Hole expanding test* (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.

**Warning :** Persons conducting the test by using this Standard should be familiar with normal laboratory practice. This Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this Standard to establish appropriate safety and health practices.

## 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this Standard. The most recent edition of the standard (including amendments) listed below shall be applied.

JIS Z 8401 *Guide to the rounding of numbers*

NOTE : Corresponding International Standard : ISO 31-0 *Quantities and units — Part 0 : General principles* (MOD)