



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

**JIS Z 3320** : 2012

(JWES)

**Flux cored wires for gas shielded  
and self-shielded metal arc welding  
of atmospheric corrosion resisting  
steel**

---

ICS 25.160.20

Reference number : **JIS Z 3320 : 2012 (E)**

Date of Establishment: 1987-10-01

Date of Revision: 2012-03-21

Date of Public Notice in Official Gazette: 2012-03-21

Investigated by: Japanese Industrial Standards Committee  
Standards Board  
Technical Committee on Welding

---

JIS Z 3320:2012, First English edition published in 2014-06

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 2014

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

KA/AT

## Contents

	Page
Introduction.....	1
1 Scope.....	1
2 Normative references .....	1
3 Terms and definitions .....	3
4 Classification and designation .....	3
5 Quality .....	7
5.1 Dimensions and tolerances thereof of wires and conditions of products .....	7
5.2 Mechanical properties of deposited metal or welded joint .....	7
5.3 Chemical composition of deposited metal .....	7
5.4 Applicable welding position of wire .....	8
5.5 Hydrogen content of deposited metal .....	8
6 Test methods .....	8
6.1 Determination method of lot .....	8
6.2 Tensile test and impact test on deposited metal in multi-run welding .....	9
6.3 Tensile test on welded joint of single-run welding.....	11
6.4 Chemical analysis on deposited metal .....	11
6.5 Fillet weld test .....	11
6.6 Hydrogen content test on deposited metal .....	12
7 Inspection method .....	12
8 Designation of product.....	12
9 Packaging.....	13
10 Marking.....	13
10.1 Marking on product.....	13
10.2 Marking on packaging .....	13
Annex JA (informative) Comparison table between JIS and corresponding International Standard .....	14

## 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 Welding Engineering Society (JWES) 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 Z 3320:2007** 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.

# Flux cored wires for gas shielded and self-shielded metal arc welding of atmospheric corrosion resisting steel

## Introduction

This Japanese Industrial Standard has been prepared based on the first edition of **ISO 17632** published in 2004 with some modifications of the technical contents. **ISO 17632** is a combined standard of **EN 758** and the standard used around the Pacific Rim. Either or both of the standards may be applied to the specific global markets. According to this, this Standard gives requirements of flux cored wires of atmospheric corrosion resisting steel referred from the parts corresponding to the standards used in Pacific Rim (**ISO 17632** System B) in the text.

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

## 1 Scope

This Standard specifies the flux cored wires for gas shielded and self-shielded metal arc welding of atmospheric corrosion resisting steel (hereafter referred to as “wires”).

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

ISO 17632:2004 *Welding consumables—Tubular cored electrodes for gas shielded and non-gas shielded metal arc welding of non-alloy and fine grain steels—Classification* (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

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 0321 *Product analysis and its tolerance for wrought steel*

JIS G 3101 *Rolled steels for general structure*

JIS G 3106 *Rolled steels for welded structure*

JIS G 3114 *Hot-rolled atmospheric corrosion resisting steels for welded structure*

JIS G 3140 *Higher yield strength steel plates for bridges*

JIS Z 3001-1 *Welding and allied processes—Vocabulary—Part 1: General*

JIS Z 3001-2 *Welding and allied processes—Vocabulary—Part 2: Welding processes*