

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 3700 : 2022

(JWES/JSA)

Methods of post-weld heat treatment

ICS 25.160.10

Reference number : JIS Z 3700 : 2022 (E)

Z 3700 : 2022

Date of Establishment: 1980-03-01

Date of Revision: 2022-03-22

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

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Metal and Inorganic

Materials

JIS Z 3700 : 2022, First English edition published in 2022-08

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 2022

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	Terms and definitions	1
4	Classification of base metal types of post-weld heat treatment portion	1
5	Types of post-weld heat treatment method	1
6	Thickness in post-weld heat treatment	2
6.1	Thickness used for determination of heating rate and cooling rate	2
6.2	Thickness used for determination of holding time and soak (and (effective heating width) of post-weld heat treatment	2
7	Temperature and holding time of post-weld heat treatment	2
8	Heating rate and cooling rate of post-weld heat treatment	4
9	Post-weld heat treatment methods	4
9.1	Post-weld heat treatment method by heating in furnace	4
9.2	Post-weld heat treatment method by local heating	5
10	Record	9

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 Welding Engineering Society (JWES)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS Z 3700** : 2009), which has been technically revised.

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 and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, published patent application or utility model rights.

Methods of post-weld heat treatment

1 Scope

This Japanese Industrial Standard specifies the methods of post-weld heat treatment for carbon steels and low alloy steels.

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 0203 *Glossary of terms used in iron and steel (Products and quality)*

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*

JIS Z 3040 *Method of qualification test for welding procedure*

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions, and those given in JIS G 0201, JIS G 0203, JIS Z 3001-1 and JIS Z 3001-2 apply.

3.1

soak band (effective heating width)

range in which the temperature is held at the temperature of post-weld heat treatment in the case of the post-weld heat treatment by local heating

3.2

post-weld heat treatment portion

portion subjected to the post-weld heat treatment

4 Classification of base metal types of post-weld heat treatment portion

The classification of base metal types (P-number and Group number) shall be as given in Attached Table 1 of JIS Z 3040.

5 Types of post-weld heat treatment method

The post-weld heat treatment method shall be either of the following.

- a) **Post-weld heat treatment method by heating in furnace**, in which whole or part of post-weld heat treatment portion is heat-treated in the heating furnace held at the