



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 3422-2 : 2003

(JLWA/JSA)

**Specification and qualification of
welding procedures for metallic
materials—Welding procedure test—
Part 2 : Arc welding of aluminium
and its alloys**

ICS 25.160.10; 77.150.10

Reference number : JIS Z 3422-2 : 2003 (E)

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 according to the proposal of establishing a Japanese Industrial Standard from The Japan Light Metal Welding and Construction Association (JLWA)/Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

This Standard has been made based on **ISO/FDIS 15614-2 : 2001** *Specification and qualification of welding procedures for metallic materials—Welding procedure test—Part 2 : Arc welding of aluminium and its alloys* for the purposes of making it easier to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of an International Standard which is based on Japanese Industrial Standard.

Date of Establishment: 2003-10-20

Date of Public Notice in Official Gazette: 2003-10-20

Investigated by: Japanese Industrial Standards Committee

Standards Board

Technical Committee on Welding

JIS Z 3422-2 : 2003, First English edition published in 2004-02

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.

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Printed in Japan

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Specification and qualification of welding procedures for metallic materials— Welding procedure test— Part 2 : Arc welding of aluminium and its alloys

Introduction This Japanese Industrial Standard has been prepared based on ISO/FDIS 15614-2 : 2001 *Specification and qualification of welding procedures for metallic materials—Welding procedure test—Part 2 : Arc welding of aluminium and its alloys* with some modifications of the technical contents.

Portions underlined with dots are the matters in which the contents of original International Standard have been modified. The table of modifications is shown as Annex 3 (informative) with the explanations.

All new welding procedure qualifications are to be in accordance with this Standard from the date of this issue. However, this Standard does not invalidate previous welding procedure qualifications made to former national standards or specifications providing the intent of the technical requirements is satisfied and the previous procedure qualifications are relevant to the application and production work on which they are to be employed. Also, where additional tests have to be carried out to make the qualification technically equivalent, it is only necessary to do the additional tests on a test piece which should be made in accordance with this Standard.

1 Scope This Standard specifies how a preliminary welding procedure specification (hereafter referred to as “pWPS”) is qualified by welding procedure tests. This Standard applies to the arc welding of wrought and cast aluminium and its alloys. In this Standard the term aluminium stands for aluminium and for aluminium alloys. This Standard does not apply to finishing welding of aluminium castings. The principles of this Standard may be applied to other fusion welding processes or other welding applications if required by the design specification.

- Information 1** This Standard is a part of a series of standards. It defines the conditions for the execution of welding procedure qualification tests (hereafter referred to as “WPQT”) and the limits of validity of a qualified welding procedure for all practical welding operations within the range of essential variables listed in clause 8.
- 2 Arc welding is covered by the following processes in accordance with appropriate standards:
- metal inert gas welding (MIG welding);
 - tungsten inert gas welding (TIG welding);
 - plasma arc welding.
- 3 In this Standard, “appropriate standards” mean standards agreed between the parties concerned such as Japanese Industrial Standards, International Standards and Overseas non-national Standards. Examples are shown in Annex 2.