

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 3062 : 2009

(JRJI)

**Method and acceptance criteria of
ultrasonic examination for gas
pressure welds of deformed steel
bars for concrete reinforcement**

ICS 25.160.40; 77.040.20; 77.140.15

Reference number : JIS Z 3062 : 2009 (E)

 **Documents**
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Z 3062 : 2009

Date of Establishment: 1988-06-15

Date of Revision: 2009-06-25

Date of Public Notice in Official Gazette: 2009-06-25

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

JIS Z 3062:2009, First English edition published in 2010-05

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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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry, and the Minister of Land, Infrastructure and Transport, through deliberations at the Japanese Industrial Standards Committee as the result of proposal of revision of Japanese Industrial Standard submitted by Japan Reinforcing Bar Joints Institute (JRJI) 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 3062**:1996 is replaced with this Standard.

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Method and acceptance criteria of ultrasonic examination for gas pressure welds of deformed steel bars for concrete reinforcement

1 Scope

This Japanese Industrial Standard specifies the methods of ultrasonic examination and the acceptance criteria of the test results of gas pressure welds of reinforcing deformed steel bars (hereafter referred to as “steel bars”) which are specified in **JIS G 3112**.

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 0801 *Ultrasonic testing of steel plates for pressure vessels*

JIS G 3106 *Rolled steels for welded structure*

JIS G 3112 *Steel bars for concrete reinforcement*

JIS Z 2300 *Terms and definitions of nondestructive testing*

JIS Z 2345 *Standard test blocks for ultrasonic testing*

JIS Z 2350 *Method for measurement of performance characteristics of ultrasonic probes*

JIS Z 2352 *Method for assessing the overall performance characteristics of ultrasonic pulse echo testing instrument*

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in **JIS Z 2300** and the following definitions apply:

3.1 distance between ribs

the distance between the outside surfaces of ribs mutually opposed (see figure 1)

Among the projections on the surface of the steel bars, those parallel to the axis of the steel bars are called “ribs”.

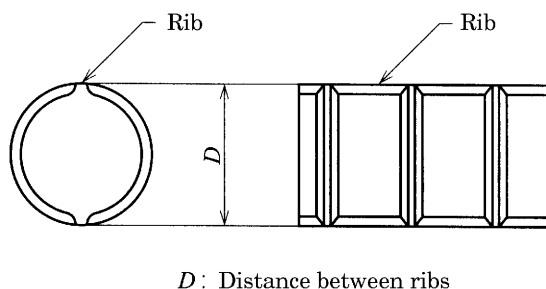


Figure 1 Distance between ribs of steel bars

3.2 transmission scanning

the scanning method in which two probes are arranged on the mutually opposite ribs, and one probe transmits the ultrasonic pulses and the other receives it

3.3 reference level

the maximum value of amplitude of the transmitted pulses obtained by the transmission scanning

3.4 acceptance level

the level specified for performing the judgement of the examination results based on the reference level

3.5 general purpose ultrasonic test instrument

a general purpose ultrasonic test instrument of pulse reflection technique having A-scan display

3.6 exclusive ultrasonic test instrument

an ultrasonic test instrument of pulse reflection technique, which is simplified to examine gas pressure weld of steel bars, exclusively used for this purpose

4 Test engineer

The engineers who ultrasonically examine gas pressure welds of steel bars shall have the knowledge about the principle of ultrasonic examination and gas pressure welds of steel bars, and have the sufficient engineering techniques and experiences of its ultrasonic examination.

5 Functions and performances of ultrasonic test equipment

5.1 Functions and performances of ultrasonic test equipment

The ultrasonic test equipment shall have the following functions and performances.

- a) **Function and performance of general purpose ultrasonic test instrument**
A general purpose ultrasonic test instrument shall have the function and performance described in Annex A.
- b) **Function and performance of exclusive ultrasonic test instrument** An exclusive ultrasonic test instrument shall have the function and performance described in Annex B.