

Australian Standard<sup>®</sup>

**Non-destructive testing—Ultrasonic  
testing of fusion welded joints in carbon  
and low alloy steel**

**STANDARDS**  
Australia



This Australian Standard® was prepared by Committee MT-007, Non-destructive Testing of Metals and Materials. It was approved on behalf of the Council of Standards Australia on 10 May 2007.

This Standard was published on 12 July 2007.

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The following are represented on Committee MT-007:

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  - Australian Industry Group
  - Australian Institute for Non-Destructive Testing
  - ANSTO
  - Australian Pipeline Industry Association
  - Bureau of Steel Manufacturers of Australia
  - Engineers Australia
  - National Association of Testing Authorities Australia
  - TestSafe Australia
  - Victorian WorkCover Authority
  - Welding Technology Institute of Australia
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This Standard was issued in draft form for comment as DR 06720.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through public comment period.

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STANDARDS AUSTRALIA

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**RECONFIRMATION**

**OF**

**AS 2207—2007**

**Non-destructive testing—Ultrasonic testing of fusion welded joints in carbon and low alloy steel**

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Technical Committee MT-007 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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WorkSafe Victoria

## NOTES

Australian Standard<sup>®</sup>

**Non-destructive testing—Ultrasonic  
testing of fusion welded joints in carbon  
and low alloy steel**

Originated as AS B261.1—1968 and AS B260.1A—1968.  
Previous edition AS 2207—1994.  
Fourth edition 2007.

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Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia  
ISBN 0 7337 8278 7

## PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/New Zealand Committee MT-007, Non-destructive Testing of Metals and Materials. This Standard supersedes AS 2207—1994, *Non-destructive testing—Ultrasonic testing of fusion welded joints in carbon and low alloy steel*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify the qualifications of personnel for non-destructive testing procedures used for ultrasonic testing.

The objective of this edition is to introduce new methods and procedures for ultrasonic testing of fusion welded steels.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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## STANDARDS AUSTRALIA

## Australian Standard

**Non-destructive testing—Ultrasonic testing of fusion welded joints in carbon and low alloy steel**

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard sets out methods and requirements for the manual ultrasonic testing of full or partial penetration fusion welded joints in carbon and low alloy ferritic steels, 6 mm or greater in thickness, using A-scan presentation and employing four sensitivity levels.

This Standard does not cover the testing of stainless steel.

It does not cover the testing of longitudinal welds when—

- (a) the radius of curvature of fabrications is less than 125 mm; or
- (b) for tubular fabrications having an outside diameter exceeding 250 mm, the ratio of thickness to outside diameter exceeds 0.22.

NOTE: Advice and recommendations on information to be supplied by the purchaser at the time of enquiry or order are contained in the purchasing guidelines set out in Appendix A.

**1.2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

## AS

- |        |  |
|--------|--|
| 1101   | Graphical symbols for general engineering  |
| 1101.3 | Part 3: Welding and non-destructive examination  |
| 1171   | Non-destructive testing—Magnetic particle testing of ferromagnetic products, components and structures |
| 1929   | Non-destructive testing—Glossary of terms  |
| 2083   | Calibration blocks and their methods of use in ultrasonic testing                                      |
| 2812   | Welding, brazing and cutting of metals—Glossary of terms   |
| 3998   | Non-destructive testing—Qualification and certification of personnel                                   |

**1.3 DEFINITIONS**

For the purpose of this Standard, the terms and definitions given in AS 1929 apply. For reference to welding terms, symbols and notation, refer to AS 2812 and AS 1101.3.