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Australian Standard®

Non-destructive testing—Ultrasonic testing of carbon and low alloy steel plate and universal sections—Test methods and quality classification

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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 8 December 2006.
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- Australasian Aerospace Non-destructive Testing Committee
- Australian Industry Group
- Australian Institute for Non-Destructive Testing
- ANSTO
- Australian Pipeline Association
- Bureau of Steel Manufacturers of Australia
- Engineers Australia
- Industrial Research Limited
- NATA
- New Zealand Non-Destructive Testing Association
- TestSafe Australia
- Victoria WorkCover
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RECONFIRMATION

OF
AS 1710—2007
Non-destructive testing—Ultrasonic testing of carbon and low alloy steel plate and universal sections—Test methods and quality classification

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Australian Standard®

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standard New Zealand Committee MT-007, Non-destructive Testing of Metals and Materials, at the request of industry. This Standard supersedes AS 1710—1986, *Non-destructive testing—Ultrasonic testing of carbon and low alloy steel plate—Test methods and quality classification.*

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

The objective of this edition is to introduce new methods and procedures for ultrasonic testing of steels and to specify a method for examining universal beams.

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 carbon and low alloy steel plate and universal sections—Test methods and quality classification

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies the methods for the ultrasonic manual testing of carbon and low alloy wrought steel plate of uniform thickness, in the range 5 mm to 180 mm inclusive, and universal sections using A-scan presentation. It also classifies plate quality and defines one quality for universal sections (Level 1) in determining freedom from discontinuities.

NOTE: For guidance for the information to be supplied with the enquiry and order, refer to Appendix A.

1.2 APPLICATION

This Standard applies to the testing of steel plate and universal sections for general internal quality, using methods which specify scanning in a designated scanning system. The procedures described in this Standard enable the test operator to detect 'laminar' and 'inclusion cluster' type discontinuities. It also defines universal sections in terms of freedom from discontinuities. Section 5 allows the specifications of three quality levels for the body of the plate and one quality level for the edge zone.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard.

AS

1929 Non-destructive testing—Glossary of terms

2083 Calibration blocks and their methods of use in ultrasonic testing

3998 Non-destructive testing—Qualification and certification of personnel

4635 Non-destructive testing—Qualification of personnel for limited applications of non-destructive testing

1.4 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 1929 and the following apply:

1.4.1 Discontinuity indications

The appearance of an echo on the flaw detector screen (using 'A' scan presentation) between the surface position and the back echo position or a reduction of the original back echo.

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