

Australian/New Zealand Standard™

**Quality requirements for fusion welding
of metallic materials**

**Part 5: Documents with which it is
necessary to conform to claim
conformity to the quality requirements of
AS/NZS ISO 3834.2, AS/NZS ISO 3834.3
or AS/NZS ISO 3834.4**



AS/NZS ISO 3834.5:2008

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WD-003, Welding of Structures. It was approved on behalf of the Council of Standards Australia on 1 August 2008 and on behalf of the Council of Standards New Zealand on 6 August 2008.

This Standard was published on 22 September 2008.

The following are represented on Committee WD-003:

AUSTROADS

Australian Chamber of Commerce and Industry
Australian Industry Group
Bureau of Steel Manufacturers of Australia
Engineers Australia
New Zealand Heavy Engineering Research Association
New Zealand Non-Destructive Testing Association
Steel Reinforcement Institute of Australia
University of Sydney
Welding Technology Institute of Australia

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 08115.

Australian/New Zealand Standard™

**Quality requirements for fusion welding
of metallic materials**

**Part 5: Documents with which it is
necessary to conform to claim
conformity to the quality requirements of
AS/NZS ISO 3834.2, AS/NZS ISO 3834.3
or AS/NZS ISO 3834.4**

First published as AS/NZS ISO 3834.5:2008.

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 8905 6

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WD-003, Welding of Structures.

The objective of this AS/NZS ISO 3834 series is to specify quality requirements for fusion welding of metallic materials and to provide guidance on quality management systems for fabrication, manufacture, construction and maintenance using such processes and materials.

This Standard is identical with, and has been reproduced from, ISO 3834:2005, *Quality requirements for fusion welding of metallic materials, Part 5: Documents with which it is necessary to conform to claim conformity to the quality requirements of ISO 3834-2, ISO 3834-3 or ISO 3834-4.*

This Standard is one of a series dealing with quality requirements for welding purposes. The series consists of the following Standards:

AS/NZS ISO

- 3834 Quality requirements for fusion welding of metallic materials
- 3834.1 Part 1: Criteria for the selection of the appropriate level of quality requirements
- 3834.2 Part 2: Comprehensive quality requirements
- 3834.3 Part 3: Standards quality requirements
- 3834.4 Part 4: Elementary quality requirements
- 3834.5 Part 5: Documents with which it is necessary to conform to claim conformity to the quality requirements of AS/NZS ISO 3834.2, AS/NZS ISO 3834.3 or AS/NZS ISO 3834.4 (this Standard)

Clause 2.1 of this Standard provides for the use of Australian, New Zealand or other Standards as equivalents to the ISO Standards referenced in Clause 2.2. Application Standards, such as those listed below, provide technically equivalent conditions, to those required by the ISO Standards. Typical application Standards include the following:

- (a) For welding steel structures (e.g. structural steels, stainless steels, steel studs, reinforcing bars, sheet steels) to Australian or New Zealand Standards, see AS/NZS 1554, *Structural steel welding*, Parts 1 to 7.
- (b) For welding aluminium structures, see AS/NZS 1665, *Welding of aluminium structures*.
- (c) For welding pressure equipment to Australian or New Zealand Standards, see AS 4458, *Pressure equipment manufacture*.
- (d) For welding pipelines, see AS 2885.2, *Pipelines—Gas and liquid petroleum—Welding*.

Where compliance with AS/NZS ISO 9001 involving welding is also required, reference should be made to AS/NZS ISO 3834.1 where guidance is given on elements to be considered for a quality management system to complement AS/NZS ISO 3834.2, 3 and 4.

As this Standard is reproduced from an international Standard, its number does not appear on each page of text and its identity is shown only on the cover and title page.

As this Standard is reproduced from an international standard, the following applies:

- (i) Its number appears on the cover and title page while the international standard number appears only on the cover
- (ii) In the source text 'ISO 3834-5' should read 'AS/NZS ISO 3834.5'.
- (ii) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian or Australian/New Zealand Standard</i>	
ISO		AS/NZS	
9606	Approval testing of welders Fusion welding	2980	Qualifications of welders for fusion welding of steels
9606-1	Part 1: Steels	3992	Pressure equipment—Welding and brazing qualification
		AS	
9712	Non-destructive testing—Qualification and certification of personnel	3998	Non-destructive testing—Qualification and certification of personnel
		AS ISO	
13916	Welding—Guidance on the measurement of preheating temperature, interpass temperature and preheat maintenance temperature	13916	Welding—Guidance on the measurement of preheating temperature, interpass temperature and preheat maintenance temperature
		AS/NZS	
14555	Welding—Arc stud welding of metallic materials	1554 1554.2	Structural steel welding Part 2: Stud welding (steel studs to steel)
14732	Welding personnel—Approval testing of welding operators for fusion welding and of resistance weld setters for fully mechanized and automatic welding of metallic materials	2980	Qualifications of welders for fusion welding of steels
		AS	
17636	Non-destructive testing of welds—Radiographic testing of fusion-welded joints	2177	Non-destructive testing—Radiography of welded butt joints in metal
		AS	
17637	Non-destructive testing of welds Visual testing of fusion-welded joints	3978	Non-destructive testing—Visual inspection of metal products and components
17638	Non-destructive testing of welds Magnetic particle testing	1171	Non-destructive testing—Magnetic particle testing of ferromagnetic products, components and structures
17639	Destructive tests on welds in metallic materials—Macroscopic and microscopic examination of welds	2205 2205.5.1	Methods for destructive testing of welds in metal Method 5.1: Macro metallographic test for cross-section examination
17640	Non-destructive testing of welds—Ultrasonic testing of welded joints	2207	Non-destructive testing—Ultrasonic testing of fusion-welded joints in carbon and low alloy steel

ISO/TR			
17663	Welding—Guidelines for quality requirements for heat treatment in connection with welding and allied processes	4458	Pressure equipment—Manufacture

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

CONTENTS

	<i>Page</i>
1 Scope	1
2 Documents with which it is necessary to conform to claim conformity to the quality requirements of ISO 3834-2, ISO 3834-3 or ISO 3834-4	1
Annex A (informative) Guidelines on qualification/education scheme for personnel dealing with welding coordination and inspection	7
Bibliography	8

AUSTRALIAN/NEW ZEALAND STANDARD

Quality requirements for fusion welding of metallic materials**Part 5:**

Documents with which it is necessary to conform to claim conformity to the quality requirements of AS/NZS ISO 3834.2, AS/NZS ISO 3834.3 or AS/NZS ISO 3834.4

1 Scope

This part of ISO 3834 specifies the documents with which it is necessary to conform to claim conformity to the quality requirements of ISO 3834-2, ISO 3834-3 or ISO 3834-4. It can only be used in conjunction with ISO 3834-2, ISO 3834-3 or ISO 3834-4.

2 Documents with which it is necessary to conform to claim conformity to the quality requirements of ISO 3834-2, ISO 3834-3 or ISO 3834-4**2.1 General**

To claim conformity to the quality requirements of ISO 3834-2, ISO 3834-3 or ISO 3834-4, a manufacturer is required to conform either to the ISO documents listed in 2.2 or to other documents that provide technically equivalent conditions, when these documents are referenced in the product standards for the products being made by the manufacturer.

It is the responsibility of the manufacturer to demonstrate technically equivalent conditions when documents other than those specified in 2.2 are employed. Certificates issued following assessment by independent certification organizations, or claims of compliance by a manufacturer with any part of ISO 3834, shall clearly identify the documents used by the manufacturer.

2.2 ISO documents

The following ISO documents are indispensable for the application of ISO 3834-2, ISO 3834-3 or ISO 3834-4, as specified in 2.1. The latest edition of the referenced document (including any amendments) applies.

ISO 9606-1, *Approval testing of welders — Fusion welding — Part 1: Steels*

ISO 9606-2, *Qualification test of welders — Fusion welding — Part 2: Aluminium and aluminium alloys*

ISO 9606-3, *Approval testing of welders — Fusion welding — Part 3: Copper and copper alloys*

ISO 9606-4, *Approval testing of welders — Fusion welding — Part 4: Nickel and nickel alloys*

ISO 9606-5, *Approval testing of welders — Fusion welding — Part 5: Titanium and titanium alloys, zirconium and zirconium alloys*

ISO 9712, *Non-destructive testing — Qualification and certification of personnel*



The remainder of this document
is available for purchase online at

➤ www.saiglobal.com/shop ◀

SAI Global also carries a wide range of publications from a wide variety of Standards Publishers:



Click on the logos to search the database online.