AS/NZS ISO 3834.6:2019
ISO/TR 3834-6:2007

AS/NZS ISO 3834.6:2019

Australian/New Zealand Standard™

Quality requirements for fusion welding of metallic materials

Part 6: Guidelines on implementing AS/NZS ISO 3834 series Standards

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AS/NZS ISO 3834.6:2019

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Australasian Corrosion Association
Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Steel Association
Australian Steel Institute
Australian Welding Institute
Austroads
Bureau of Steel Manufacturers of Australia
Energy Networks Australia
Heavy Engineering Research Association, New Zealand
New Zealand Non-Destructive Testing Association
Steel Reinforcement Institute of Australia
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First published as AS/NZS ISO 3834.6:2019.

Preface

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

The objective of this Standard is to provide guidelines for the implementation of requirements given in the other parts of AS/NZS ISO 3834, and is intended to help manufacturers and users select that part of AS/NZS ISO 3834 appropriate to their needs. It is expected that they will already be familiar with AS/NZS ISO 3834 as a whole.

This Standard is identical with, and has been reproduced from, ISO/TR 3834-6:2007, *Quality requirements for fusion welding of metallic materials Part 6: Guidelines on implementing ISO 3834.*

As this document has been reproduced from an International Technical Report, the following applies:

(a) In the source text "this part of ISO 3834" should read "this Australian/New Zealand Standard".

(b) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms "normative" and "informative" are used in Standards to define the application of the annexes to which they apply. A "normative" annex is an integral part of a Standard, whereas an "informative" annex is only for information and guidance.

Contents

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 3834-6 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 10, *Unification of requirements in the field of metal welding*.

ISO/TR 3834 consists of the following parts, under the general title *Quality requirements for fusion welding of metallic materials*:

— *Part 1: Criteria for the selection of the appropriate level of quality requirements*

— *Part 2: Comprehensive quality requirements*

— *Part 3: Standard quality requirements*

— *Part 4: Elementary quality requirements*

— *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*

— *Part 6: Guidelines on implementing ISO 3834* [Technical Report]

Requests for official interpretations of any aspect of this part of ISO 3834 should be directed to the Secretariat of ISO/TC 44/SC 10 via your national standards body, a complete listing of which can be found at http://www.iso.org.

Introduction

Welding is a special process in that the final result may not be able to be verified by testing. The quality of the weld is manufactured into the product, not inspected. This means that welding normally requires continuous control or that specific procedures be followed, or both. ISO 3834 deals with quality requirements in welding and has been prepared in order to identify those controls and procedures.

ISO 3834 is not a quality system standard intended to take the place of ISO 9001, but a useful, additional tool for use when ISO 9001 is applied by manufacturers, in which case the meeting of its requirements needs to be recorded in certificates or documentation. However, ISO 3834 can be used independently of ISO 9001.

ISO 3834 is intended for the fusion welding of metallic materials, and its application is independent of the products manufactured. However, its principles and many of its detailed requirements are also relevant for other welding and welding-related processes.

Among other International Standards covering resistance welding and thermal spraying are ISO 14554 and ISO 14922, respectively.

One of the aims of ISO 3834 is to define requirements in the field of welding so that contracting parties or regulators do not have to do this themselves. A reference to a particular part of ISO 3834 should be sufficient to demonstrate the capabilities of the manufacturer to control welding activities for the type of work being done. This concept also applies to committees responsible for drafting product standards.

ISO 3834 does not in itself require external assessment or certification. However, assessments by customers and certification by independent bodies are growing trends in commercial relations and the standard can serve as a basis for these purposes, as well as for the demonstration of performance by those manufacturers implementing it.

NOTES

Australian/New Zealand Standard

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1 Scope

This part of ISO 3834 gives guidelines for the implementation of requirements given in the other parts of ISO 3834, and is intended to help manufacturers and users select that part of ISO 3834 appropriate to their needs. It is expected that they will already be familiar with ISO 3834 as a whole.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3834-1:2005, *Quality requirements for fusion welding of metallic materials — Part 1: Criteria for the selection of the appropriate level of quality requirements*

ISO 3834-2, *Quality requirements for fusion welding of metallic materials — Part 2: Comprehensive quality requirements*

ISO 3834-3, *Quality requirements for fusion welding of metallic materials — Part 3: Standard quality requirements*

ISO 3834-4, *Quality requirements for fusion welding of metallic materials — Part 4: Elementary quality requirements*

ISO 3834-5, *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*

3 Abbreviated terms

For the purposes of this document, the following abbreviated terms apply.

IWE international welding engineer

IWS international welding specialist

IWT international welding technologist

NDT non-destructive testing

PWHT post-weld heat treatment

pWPS preliminary welding procedure specification

WI work instruction

WPQR welding procedure qualification record

WPS welding procedure specification