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Zahteve za kakovost pri talilnem varjenju kovinskih materialov – 6. del: Smernice za izvajanje ISO 3834 (ISO/TR 3834-6:2007)

Quality requirements for fusion welding of metallic materials - Part 6: Guidelines on implementing ISO 3834 (ISO/TR 3834-6:2007)

Qualitätsanforderungen für das Schmelzschweißen von metallischen Werkstoffen - Teil 6: Richtlinie zur Einführung von ISO 3834 (ISO/TR 3834-6:2007)

Exigences de qualité en soudage par fusion des matériaux métalliques - Partie 6: Lignes directrices pour la mise en application de l'ISO 3834 (ISO/TR 3834-6:2007)

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This Technical Report was approved by CEN on 13 February 2007. It has been drawn up by the Technical Committee CEN/TC 121.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (CEN ISO/TR 3834-6:2007) has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

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TECHNICAL REPORT

ISO/TR 3834-6

First edition
2007-02-15

Quality requirements for fusion welding of metallic materials —

Part 6: Guidelines on implementing ISO 3834

Exigences de qualité en soudage par fusion des matériaux métalliques —

Partie 6: Lignes directrices pour la mise en application de l'ISO 3834

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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.

Quality requirements for fusion welding of metallic materials —

Part 6:
Guidelines on implementing ISO 3834

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

4 Using ISO 3834

4.1 General

ISO 3834-1 provides criteria for the selection and use of ISO 3834 as a whole. The following subclauses identify different ways whereby the manufacturer may select or be required to adopt ISO 3834.

4.2 Product standards

Where product standards require control of fusion welding, ISO 3834 should be used to organize those welding activities.

Product standards where compliance with ISO 3834 is required include EN 1090, EN 12732, EN 12952, EN 13445 and EN 15085.

4.3 Purchasers and users

Purchasers and users of welded products may specify in contract documents that manufacturers demonstrate their competence by compliance with ISO 3834.

4.4 Quality management systems in accordance with ISO 9001

Since ISO 9001 does not include specific requirements for welding activities, ISO 3834-2, ISO 3834-3 and ISO 3834-4 should be used.

4.5 Quality management systems other than ISO 9001

For welding activities in quality management systems other than ISO 9001 that do not include specific requirements for welding activities, ISO 3834-2, ISO 3834-3 and ISO 3834-4 should be used.

4.6 Manufacturers

Whenever manufacturers wish to give evidence of their competence in fusion welding activities, the appropriate part of ISO 3834 should be used.

5 Incorporating ISO 3834 in product standards

An important group of users of ISO 3834 is the committees that draft product standards at the international, regional and national levels. ISO 3834-2, ISO 3834-3 and ISO 3834-4 provide a range of quality requirements for welding. Committees drafting product standards are encouraged to select a part, or parts, of ISO 3834 that provide the appropriate quality requirements for the products to be manufactured, taking account of the selection criteria given in ISO 3834-1:2005, Clause 5. Each part of ISO 3834 is designed to provide a complete set of quality requirements; additional requirements should not need to be specified unless very compelling reasons exist. In case of doubt, or where additional requirements are being considered, consultation with ISO/TC 44/SC 10 is recommended.