Quality requirements for fusion welding of metallic materials - Part 6: Guidelines on implementing ISO 3834 series (ISO 3834-6:2024)

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 3834-6:2024 sisaldab Euroopa standardi EN ISO 3834-6:2024 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 3834-6:2024 consists of the English text of the European standard EN ISO 3834-6:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 13.03.2024.	Date of Availability of the European standard is 13.03.2024.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Quality requirements for fusion welding of metallic materials - Part 6: Guidelines on implementing ISO 3834 series (ISO 3834-6:2024)

Exigences de qualité en soudage par fusion des matériaux métalliques - Partie 6: Lignes directrices pour la mise en application de la série ISO 3834 (ISO 3834-6:2024)

Qualitätsanforderungen für das Schmelzschweißen von metallischen Werkstoffen - Teil 6: Richtlinie zur Einführung der Normenreihe ISO 3834 (ISO 3834-6:2024)

This European Standard was approved by CEN on 13 January 2024.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 3834-6:2024) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2024, and conflicting national standards shall be withdrawn at the latest by September 2024.

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

This document supersedes CEN ISO/TR 3834-6:2007.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 3834-6:2024 has been approved by CEN as EN ISO 3834-6:2024 without any modification.

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 10, *Quality management in the field of welding*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This document cancels and replaces ISO/TR 3834-6:2007, which has been technically revised.

The main changes are as follows:

— document changed from a Technical Report to an International Standard;

— references to IIW and IAB removed;

— Clause 11 updated to address visual testing of welds;

— text aligned with ISO 14731.

A list of all parts in the ISO 3834 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

Introduction

Welding is a special process in that it is not always possible to verify the final result 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. The ISO 3834 series deals with quality requirements in welding and has been prepared in order to identify those controls and procedures.

The ISO 3834 series 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, the ISO 3834 series can be used independently of ISO 9001.

The ISO 3834 series 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.

One of the aims of the ISO 3834 series is to specify 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 the ISO 3834 series 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.

The ISO 3834 series 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 series can serve as a basis for these purposes, as well as for the demonstration of performance by those manufacturers implementing it.

Other International Standards covering resistance welding and thermal spraying include the ISO 14554 series and ISO 14922, respectively.

Quality requirements for fusion welding of metallic materials —

Part 6: Guidelines on implementing the ISO 3834 series

1 Scope

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

This document does not provide additional requirements to those in ISO 3834-1 to ISO 3834-5.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Abbreviated terms

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

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

5 Using the ISO 3834 series

5.1 General

ISO 3834-1 provides criteria for the selection and use of the ISO 3834 series. The following subclauses identify different ways that the manufacturer can select or be required to adopt a part of ISO 3834.