

<b>STN</b>	<b>Zváranie</b> <b>Požiadavky na kvalitu na tepelné spracovanie</b> <b>v súvislosti so zváraním a príbuznými procesmi</b> <b>(ISO 17663: 2023)</b>	<b>STN</b> <b>EN ISO 17663</b>  05 0101
------------	---	--

Welding - Quality requirements for heat treatment in connection with welding and allied processes (ISO 17663:2023)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/23

Obsahuje: EN ISO 17663:2023, ISO 17663:2023

Oznámením tejto normy sa ruší  
STN EN ISO 17663 (05 0101) z decembra 2009

**137216**



EUROPEAN STANDARD

EN ISO 17663

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2023

ICS 25.160.01

Supersedes EN ISO 17663:2009

English Version

## Welding - Quality requirements for heat treatment in connection with welding and allied processes (ISO 17663:2023)

Soudage - Exigences de qualité relatives au traitement thermique associé au soudage et aux techniques connexes (ISO 17663:2023)

Schweißen - Qualitätsanforderungen zur Wärmebehandlung beim Schweißen und bei verwandten Prozessen (ISO 17663:2023)

This European Standard was approved by CEN on 4 May 2023.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

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

**EN ISO 17663:2023 (E)**

<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

## **European foreword**

This document (EN ISO 17663:2023) 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 DIN.

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 November 2023, and conflicting national standards shall be withdrawn at the latest by November 2023.

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 EN ISO 17663:2009.

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 17663:2023 has been approved by CEN as EN ISO 17663:2023 without any modification.



# INTERNATIONAL STANDARD

# ISO 17663

Second edition  
2023-04

---

---

## **Welding — Quality requirements for heat treatment in connection with welding and allied processes**

*Soudage — Exigences de qualité relatives au traitement thermique  
associé au soudage et aux techniques connexes*



Reference number  
ISO 17663:2023(E)

© ISO 2023

**ISO 17663:2023(E)****COPYRIGHT PROTECTED DOCUMENT**

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland



# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Review of requirements and technical review</b> .....	<b>2</b>
4.1 General.....	2
4.2 Review of requirements.....	2
4.3 Technical review.....	3
<b>5 Subcontracting</b> .....	<b>3</b>
<b>6 Personnel</b> .....	<b>3</b>
<b>7 Inspection and testing</b> .....	<b>4</b>
7.1 General.....	4
7.2 Non-destructive testing.....	4
7.3 Destructive testing.....	4
<b>8 Equipment for heat treatment</b> .....	<b>4</b>
8.1 Production and testing equipment.....	4
8.2 Description of facilities.....	4
8.3 Suitability of equipment.....	5
8.4 Verification of heat treatment equipment.....	5
8.4.1 General.....	5
8.4.2 Measurement of the uniformity of furnace temperature.....	5
8.4.3 Validation of setting and recording devices.....	6
8.5 New equipment.....	6
8.6 Maintenance.....	6
<b>9 Heat treatment activities</b> .....	<b>6</b>
9.1 General.....	6
9.2 Heat treatment parameters.....	6
9.3 Heat treatment procedure specification.....	7
9.4 Work instructions.....	7
9.5 Number of measuring points.....	7
9.6 Guidance for local post-weld heat treatment of welds in pipe work.....	8
<b>10 Heat treatment record</b> .....	<b>9</b>
<b>11 Non-conformity and corrective actions</b> .....	<b>9</b>
<b>12 Quality records</b> .....	<b>10</b>
<b>Annex A (informative) Example of local heat treatment</b> .....	<b>11</b>
<b>Bibliography</b> .....	<b>12</b>

# ISO 17663:2023(E)

## 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 documents 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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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](http://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 second edition cancels and replaces the first edition (ISO 17663:2009), which has been technically revised.

The main changes are as follows:

- normative references updated;
- arc stud welding added in [9.5](#);
- [Figure A.1](#) revised.

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](http://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>.

# Welding — Quality requirements for heat treatment in connection with welding and allied processes

## 1 Scope

This document provides quality requirements for heat treatment in air or controlled atmospheres carried out in workshops and on site in connection with welding and forming. It applies mainly to ferritic steels but can be used for other materials as appropriate.

This document provides guidance for manufacturers that perform heat treatment or produce heat-treated products or components. This document can also be used as a basis for assessing the manufacturer in respect to its heat treatment capability.

The fulfilment of a requirement can be waived where justification can be provided that a specific requirement is not applicable to a specific process. This document is intended to be a flexible framework to provide:

- specific requirements for heat treatment by manufacturers in order to have a quality system in accordance with ISO 9001;
- specific requirements for heat treatment in specifications which require the manufacturer to have a quality system other than ISO 9001;
- specific guidance for a manufacturer developing a quality control system for heat treatment;
- specific guidance for post-weld heat treatment for manufacturers adopting ISO 3834-2 or ISO 3834-3;
- detailed requirements for specifications, regulations or product standards that require control of heat treatment activities.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 4885, *Ferrous materials — Heat treatments — Vocabulary*

ISO 13916, *Welding — Measurement of preheating temperature, interpass temperature and preheat maintenance temperature*

IEC 60584-1, *Thermocouples — Part 1: EMF specifications and tolerances*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**