

# **SLOVENSKI STANDARD**

## **SIST EN ISO 17662:2016**

**01-julij-2016**

**Nadomešča:**

**SIST EN ISO 17662:2005**

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**Varjenje - Umerjanje, preverjanje in validacija opreme za varjenje, vključno s pomožnimi dejavnostmi (ISO 17662:2016)**

Welding - Calibration, verification and validation of equipment used for welding, including ancillary activities (ISO 17662:2016)

Schweißen - Kalibrierung, Verifizierung und Validierung von Einrichtungen einschließlich ergänzender Tätigkeiten, die beim Schweißen verwendet werden (ISO 17662:2016)

Soudage - Étalonnage, vérification et validation du matériel utilisé pour le soudage, y compris pour les procédés connexes (ISO 17662:2016)

**Ta slovenski standard je istoveten z: EN ISO 17662:2016**

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**ICS:**

25.160.30	Varilna oprema	Welding equipment
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**SIST EN ISO 17662:2016**

**en,fr,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 17662**

March 2016

ICS 25.160.30

Supersedes EN ISO 17662:2005

English Version

**Welding - Calibration, verification and validation of  
equipment used for welding, including ancillary activities  
(ISO 17662:2016)**

Soudage - Étalonnage, vérification et validation du matériel utilisé pour le soudage, y compris pour les procédés connexes (ISO 17662:2016)

Schweißen - Kalibrierung, Verifizierung und Validierung von Einrichtungen einschließlich ergänzender Tätigkeiten, die beim Schweißen verwendet werden (ISO 17662:2016)

This European Standard was approved by CEN on 23 January 2016.

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.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN ISO 17662:2016) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 "Welding" 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 September 2016, and conflicting national standards shall be withdrawn at the latest by September 2016.

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

This document supersedes EN ISO 17662:2005.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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### Endorsement notice

The text of ISO 17662:2016 has been approved by CEN as EN ISO 17662:2016 without any modification.

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# INTERNATIONAL STANDARD

**ISO  
17662**

Second edition  
2016-03-01

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## **Welding — Calibration, verification and validation of equipment used for welding, including ancillary activities**

*Soudage — Étalonnage, vérification et validation du matériel utilisé  
pour le soudage, y compris pour les procédés connexes*

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c0f9874d72b1/sist-en-iso-17662-2016](https://standards.iteh.ai/catalog/standards/sist/9c5884c9-9e56-43bb-bdf4-c0f9874d72b1/sist-en-iso-17662-2016)



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## ISO 17662:2016(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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](http://www.iso.org/foreword)

The committee responsible for this document is ISO/TC 44, *Welding and allied processes*, Subcommittee SC 10, *Quality management in the field of welding*.

This second edition cancels and replaces the first edition (ISO 17662:2005), which has been technically revised.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 10 via your national standards body. A complete listing of these bodies can be found at [www.iso.org](http://www.iso.org).

# Welding — Calibration, verification and validation of equipment used for welding, including ancillary activities

## 1 Scope

This International Standard specifies requirements for calibration, verification and validation of equipment used for

- control of process variables during fabrication, and
- control of the properties of equipment used for welding or welding allied processes

where the resulting output cannot be readily or economically documented by subsequent monitoring, inspection and testing. This involves process variables influencing the fitness-for-purpose and in particular the safety of the fabricated product.

NOTE 1 This International Standard is based on the lists of process variables stated in International Standards for specification of welding procedures, in particular, but not exclusively in the ISO 15609- series. Future revisions of these International Standards can result in addition or deletion of parameters considered necessary to specify.

Some guidance is, in addition, given in [Annex B](#) as regards requirements for calibration; verification and validation as part of acceptance testing of equipment used for welding or allied processes.

Requirements to calibrate, verify and validate as part of inspection, testing, non-destructive testing or measuring of final welded products performed in order to verify confirm product compliance are outside the scope of the present International Standard.

The subject of this International Standard is limited to calibration, verification and validation of equipment after installation, as part of the workshops' and site operations for maintenance and/or operation.

It needs to be stressed that this International Standard has nothing to do with manufacture and installation of equipment for welding. Requirements for new equipment are formulated in directives and product codes (standards), as necessary.

[Annex C](#) provides information when other parties are involved in calibration, verification and validation activities.

## 2 Normative references

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

ISO 669, *Resistance welding — Resistance welding equipment — Mechanical and electrical requirements*

ISO 5171, *Gas welding equipment — Pressure gauges used in welding, cutting and allied processes*

ISO 5172:2006, *Gas welding equipment — Blowpipes for gas welding, heating and cutting — Specifications and tests*

ISO 5826, *Resistance welding equipment — Transformers — General specifications applicable to all transformers*

## ISO 17662:2016(E)

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**3.1**  
**accuracy class**  
 class of measuring instruments or measuring systems that meets stated metrological requirements that are intended to keep measurement errors or instrumental measurement uncertainties within specified limits under specified operating conditions

[SOURCE: ISO/IEC Guide 99:2007, 4.25]

**3.2**  
**accuracy of measurement**  
 closeness of agreement between a measured quantity value and a true quantity value of a measurand

Note 1 to entry: The term *measurand* is defined by the VIM (ISO/IEC Guide 99:2007, 2.3) as a “quantity intended to be measured”.

[SOURCE: ISO/IEC Guide 99:2007, 2.13, modified — Note 1 to entry has been added.]

**3.3**  
**calibration**  
 set of operations that establish, under specified conditions, the relationship between values of quantities indicated by a measuring instrument or measuring system, or values represented by a material measure or a reference material, and the corresponding values realized by standards

**3.4**  
**measurement**  
 process of experimentally obtaining one or more quantity values that can reasonably be attributed to a quantity

[SOURCE: ISO/IEC Guide 99:2007, 2.1]

**3.5**  
**measuring instrument**  
 device used for making measurements, alone or in conjunction with one or more supplementary devices

[SOURCE: ISO/IEC Guide 99:2007, 3.1]

**3.6**  
**material measure**  
 device intended to reproduce or supply, in a permanent manner during its use, one or more known values of a given quantity

**3.7**  
**measuring system**  
 set of one or more measuring instruments and often other devices, including any reagent and supply, assembled and adopted to give information used to generate measured quantity values within specified intervals for quantities of specified kinds

[SOURCE: ISO/IEC Guide 99:2007, 3.2]

**3.8**  
**repeatability (of results of measurements)**  
 closeness of the agreement between the results of successive measurements of the same measurement carried out under the same conditions of measurement