SLOVENSKI STANDARD
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Neporušitveno preskušanje zvarnih spojev - Ultrazvočno preskušanje - Stopnje sprejemljivosti (ISO/DIS 11666:2026)

Non-destructive testing of welds - Ultrasonic testing - Acceptance levels (ISO/DIS 11666:2026)

Zerstörungsfreie Prüfung von Schweißverbindungen - Ultraschallprüfung - Zulässigkeitsgrenzen (ISO/DIS 11666:2026)

Essais non destructifs des assemblages soudés - Contrôle par ultrasons - Niveaux d'acceptation (ISO/DIS 11666:2026)

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25.160.40	Varjeni spoji in vari	Welded joints and welds

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ISO/DIS 11666

Non-destructive testing of welds — Ultrasonic testing — Acceptance levels

Essais non destructifs des assemblages soudés — Contrôle par ultrasons — Niveaux d'acceptation

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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 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).

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).

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 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*.

This third edition cancels and replaces the second edition (ISO 11666:2018), which has been technically revised.

The main changes compared to the previous edition are as follows:

— this document has been editorially revised;

— the normative reference ISO 5817 has been dated;

— Clause 5 and 6.5 have been described in more detail.

Requests for official interpretations of any aspect of this document should be directed to the Secretariat of ISO/TC 44/SC 5 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

Non-destructive testing of welds — Ultrasonic testing — Acceptance levels

1 Scope

This document specifies two ultrasonic acceptance levels known as acceptance level 2 (AL 2) and acceptance level 3 (AL 3) for full penetration welded joints in ferritic steels, in accordance with the quality levels of ISO 5817.

These acceptance levels are applicable to testing carried out in accordance with ISO 17640.

This document applies to the testing of fusion-welded joints in metallic materials with low sound attenuation (especially that due to scatter) with thicknesses from 8 mm to 100 mm. It is primarily intended for use on full penetration welded joints where both the welded and parent materials are ferritic. It can also be used for other types of welds, materials and thicknesses, provided the tests have been performed with necessary consideration of the geometry and acoustic properties of the component, and an adequate sensitivity can be employed to enable the acceptance levels of this document to be applied.

The nominal frequency of probes used in this document is between 2 MHz and 5 MHz, unless attenuation or requirements for higher resolution call for other frequencies. It is important to consider the use of these acceptance levels in conjunction with frequencies outside this range carefully.

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 5817, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections*

ISO 17640, *Non-destructive testing of welds — Ultrasonic testing — Techniques, testing levels, and assessment*

ISO 23279, *Non-destructive testing of welds — Ultrasonic testing — Characterization of discontinuities in welds*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5577 apply.

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

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

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

4 Determination of discontinuity length

The length of a discontinuity shall be determined by measuring the distance along the length over which the echo amplitude is above the evaluation level, using the fixed-amplitude level technique specified in Annex B.