Non-destructive testing of welds - Phased array ultrasonic testing (PAUT) - Acceptance levels (ISO 19285:2017)



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# EUROPEAN STANDARD

NORME EUROPÉENNE

# RD **EN ISO 19285**

EUROPÄISCHE NORM

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#### **English Version**

# Non-destructive testing of welds - Phased array ultrasonic testing (PAUT) - Acceptance levels (ISO 19285:2017)

Essais non destructifs des assemblages soudés -Technique ultrasons multi-éléments (PAUT) - Niveaux d'acceptation (ISO 19285:2017) Zerstörungsfreie Prüfung von Schweißverbindungen -Ultraschallprüfungen mit Phased-Arrays (PAUT) -Zulässigkeitsgrenzen (ISO 19285:2017)

This European Standard was approved by CEN on 4 June 2017.

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

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## **European foreword**

This document (EN ISO 19285:2017) 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of an identical text or by endorsement, at the latest by March 2018, and conflicting national standards shall be withdrawn at the latest by March 2018.

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The text of ISO 19285:2017 has been approved by CEN as EN ISO 19285:2017 without any modification.

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#### Foreword

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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 <a href="www.iso.org/directives">www.iso.org/directives</a>).

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

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 — Phased array ultrasonic testing (PAUT) — Acceptance levels

## 1 Scope

This document specifies acceptance levels for the phased array ultrasonic testing technique (PAUT) of full penetration welds in ferritic steels of minimum thickness of 6 mm which correspond to the quality levels of ISO 5817.

These acceptance levels are applicable to indications classified in accordance with ISO 13588.

#### 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 5577, Non-destructive testing — *Ultrasonic testing* — *Vocabulary* 

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

ISO 11666, Non-destructive testing of welds — Ultrasonic testing — Acceptance levels

ISO 13588, Non-destructive testing of welds — Ultrasonic testing — Use of automated phased array technology

ISO 15626, Non-destructive testing of welds — Time-of-flight diffraction technique (TOFD) — Acceptance levels

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

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5577 and ISO 13588 apply.

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

- ISO Online browsing platform: available at <a href="http://www.iso.org/obp">http://www.iso.org/obp</a>
- IEC Electropedia: available at <a href="http://www.electropedia.org/">http://www.electropedia.org/</a>

### 4 Symbols

- *h* height
- $h_{\rm g}$  sum of the heights of the individual indications plus the distance between them
- l length
- $l_{\sigma}$  sum of the lengths of the individual indications plus the distance between them
- t thickness