

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

ICS 25.160.40

National foreword

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**Non-destructive testing of welds - Time-of-flight diffraction
technique (TOFD) - Acceptance levels**

Essais non destructifs des assemblages soudés -
Technique de diffraction des temps de vol (méthode TOFD)
- Niveaux d'acceptation

Zerstörungsfreie Prüfung von Schweißverbindungen -
Beugungslaufzeittechnik (TOFD) - Zulässigkeitsgrenzen

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Foreword

This document (EN 15617:2009) has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DIN.

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1 Scope

This European standard specifies acceptance levels for the time-of-flight diffraction technique (TOFD) of full penetration welds in ferritic steels from 6 mm up to 300 mm thickness which correspond to the quality levels of EN ISO 5817.

These acceptance levels are applicable to indications classified in accordance with CEN/TS 14751.

2 Normative references

The following referenced documents are indispensable for the application 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.

CEN/TS 14751, *Welding — Use of time-of-flight diffraction technique (TOFD) for examination of welds*

EN ISO 5817, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections (ISO 5817:2003, corrected version:2005, including Technical Corrigendum 1:2006)*

3 Symbols, terms and definitions

3.1 Symbols

h height of an indication (see Figures 1, 2 and 3)

l length of an indication (see Figures 1, 2 and 3)

t nominal wall thickness in accordance with construction drawing or dimension table (see Figures 1, 2 and 3)

3.2 Terms and definitions

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

3.2.1

embedded discontinuity

discontinuity within the volume of the material, separated from the surfaces

3.2.2

surface-breaking discontinuity

discontinuity connected to the near (contact) surface or far (reflecting) surface

4 Relation between quality levels and acceptance levels

Three different acceptance levels are defined. The relation between these acceptance levels and the quality levels as mentioned in EN ISO 5817 are given in Table 1.