

Non-destructive testing of welds —

Part 1: Evaluation of welded joints in steel, nickel, titanium and their alloys by radiography — Acceptance levels

The European Standard EN 12517-1:2006 has the status of a
British Standard

ICS 25.160.40

National foreword

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 15 and a back cover.

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2006

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ISBN 0 580 48044 5

Amendments issued since publication

Amd. No.	Date	Comments

English Version

Non-destructive testing of welds - Part 1: Evaluation of welded joints in steel, nickel, titanium and their alloys by radiography - Acceptance levels

Essais non destructifs des assemblages soudés - Partie 1:
Évaluation par radiographie des assemblage soudés en
acier, nickel, titane et leurs alliages - Niveaux d'acceptation

Zerstörungsfreie Prüfung von Schweißverbindungen - Teil
1: Bewertung von Schweißverbindungen in Stahl, Nickel,
Titan und ihren Legierungen mit Durchstrahlung -
Zulässigkeitsgrenzen

This European Standard was approved by CEN on 6 February 2006.

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Foreword

This document (EN 12517-1:2006) has been prepared by 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of an identical text or by endorsement, at the latest by September 2006, and conflicting national standards shall be withdrawn at the latest by September 2006.

This document supersedes EN 12517:1998.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

EN 12517 comprises a series of European Standards for industrial radiographic films which is made up of the following:

EN 12517-1 Non-destructive testing of welds – Part 1: Evaluation of welded joints in steel, nickel, titanium and their alloys by radiography – Acceptance levels

EN 12517-2 Non-destructive testing of welds – Part 2: Evaluation of welded joints in aluminium and its alloys by radiography – Acceptance levels

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1 Scope

This document specifies acceptance levels for indications from imperfections in butt welds of steel, nickel, titanium and their alloys detected by radiographic testing. If agreed, the acceptance levels may be applied to other types of welds or materials.

The acceptance levels may be related to welding standards, application standards, specifications or codes. This European Standard assumes that the radiographic testing has been carried out in accordance with EN 1435.

When assessing whether a weld meets the requirements specified for a weld quality level, the sizes of imperfections permitted by standards are compared with the dimensions of indications revealed by a radiograph made of the weld.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1435, *Non-destructive examination of welds — Radiographic examination of welded joints*

EN ISO 5817, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections (ISO 5817:2003)*

EN ISO 6520-1, *Welding and allied processes — Classification of geometric imperfections in metallic materials — Part 1: Fusion welding (ISO 6520-1:1998)*

3 Radiographic technique

Depending on the weld quality level, radiographic technique A or B in accordance with EN 1435 is used as shown in Table 1.

Table 1 – Radiographic testing

Quality levels in accordance with EN ISO 5817	Testing techniques and classes in accordance with EN 1435	Acceptance levels in accordance with EN 12517
B	B	1
C	B ^a	2
D	A	3
^a However, the minimum number of exposure for circumferential weld testing may correspond to the requirements of class A of EN 1435.		