

Non-destructive testing — Ultrasonic examination —

Part 1: General principles

The European Standard EN 583-1:1998, with the incorporation of amendment A1:2003, has the status of a British Standard

ICS 19.100

Confirmed December 2008

National foreword

This British Standard is the official English language version of EN 583-1:1998, including amendment A1:2003.

The UK participation in its preparation was entrusted by Technical Committee WEE/46, Non-destructive testing, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled International Standards Correspondence Index, or by using the Find facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 10, an inside back cover and a back cover.

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Amendments issued since publication

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English version

Non-destructive testing — Ultrasonic examination — Part 1: General principles

(includes amendment A1:2003)

Essais non destructifs — Contrôle
ultrasonore — Partie 1: Principes généraux
(inclut l'amendement A1:2003)

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This European Standard was approved by CEN on 14 October 1998.
Amendment A1 was approved by CEN on 20 November 2003.

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CEN

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Documents

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 138, Non-destructive testing, the Secretariat of which is held by AFNOR.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this standard.

This standard consists of the following parts:

EN 583-1, *Non-destructive testing — Ultrasonic examination — Part 1: General principles.*

EN 583-2, *Non-destructive testing — Ultrasonic examination — Part 2: Sensitivity and range setting.*

EN 583-3, *Non-destructive testing — Ultrasonic examination — Part 3: Transmission technique.*

EN 583-4, *Non-destructive testing — Ultrasonic examination — Part 4: Examination for imperfections perpendicular to the surface.*

EN 583-5, *Non-destructive testing — Ultrasonic examination — Part 5: Characterization and sizing of imperfections.*

ENV 583-6, *Non-destructive testing — Ultrasonic examination — Part 6: Time-of-flight diffraction technique as a method for detection and sizing of imperfections.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Foreword to amendment 1

This document EN 583-1:1998/A1:2003 has been prepared by Technical Committee CEN/TC 138, Non-destructive testing, the Secretariat of which is held by AFNOR.

This amendment to the European standard EN 583-1:1998 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This standard defines the general principles required for the ultrasonic examination of industrial products that permit the transmission of ultrasound.

The specific conditions of application and use of ultrasonic examination, which depend on the type of product examined, are described in documents which could include:

- product standards;
- specifications;
- codes;
- contractual documents;
- written procedures.

Unless otherwise specified in the referencing documents the minimum requirements of this standard are applicable.

This standard does not define:

- extent of examination and scanning plans;
- acceptance criteria.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 473, *Qualification and certification of NDT personnel — General principles*.

EN 27963, *Welds in steel — Calibration block No. 2 for ultrasonic examination of welds*. (ISO 7963:1985).

prEN 583-2, *Non-destructive testing — Ultrasonic examination — Part 2: Sensitivity and range setting*¹⁾

EN 583-3, *Non-destructive testing — Ultrasonic examination — Part 3: Transmission technique*.

prEN 12223, *Non-destructive testing — Ultrasonic examination — Specification for calibration block No. 1*¹⁾.

prEN 12668-1, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 1: Instruments*¹⁾.

prEN 12668-2, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 2: Probes*¹⁾.

prEN 12668-3, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 3: Combined equipment*¹⁾.

3 Qualification and certification of personnel

The examination shall be performed by personnel qualified in accordance with EN 473.

The requirements for qualification and certification shall be specified in the product standards and/or other applicable documents.

¹⁾ In preparation.