

Mittepurustav katsetamine. Ultraheli uurimine. Osa 1: Üldpõhimõtted

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 583-1:1999 sisaldab Euroopa standardi EN 583-1:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 583-1:1999 consists of the English text of the European standard EN 583-1:1998.</p> <p>This document is endorsed on 23.11.1999 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This standard defines the general principles required for the ultrasonic examination of industrial products that permit the transmission of ultrasound.</p>	<p>Scope: This standard defines the general principles required for the ultrasonic examination of industrial products that permit the transmission of ultrasound.</p>
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ICS 19.100

Võtmesõnad: adjustment, equipment, generalities, industrial products, non-destructive tests, preparation, ultrasonic tests

ICS 19.100

Descriptors: Non-destructive testing, ultrasonic testing.

English version

Non-destructive testing
Ultrasonic examination
Part 1: General principles

Essais non destructifs – Contrôle ultra-
sonore – Principes généraux

Zerstörungsfreie Prüfung – Ultraschall-
prüfung – Allgemeine Grundsätze

This European Standard was approved by CEN on 1998-10-14.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

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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 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 May 1999, and conflicting national standards shall be withdrawn at the latest by May 1999.

This European Standard 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).

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.

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 ¹⁾	Non-destructive testing - Ultrasonic examination - Part 2: Sensitivity and range setting
EN 583-3	Non-destructive testing - Ultrasonic examination - Part 3: Transmission technique
prEN 12223 ¹⁾	Non-destructive testing - Ultrasonic examination - Specification for calibration block No. 1
prEN 12668-1 ¹⁾	Non-destructive testing - Characterization and verification of ultrasonic examination equipment - Part 1: Instruments
prEN 12668-2 ¹⁾	Non-destructive testing - Characterization and verification of ultrasonic examination equipment - Part 2: Probes
prEN 12668-3 ¹⁾	Non-destructive testing - Characterization and verification of ultrasonic examination equipment - Part 3: Combined equipment

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.

4 Information required prior to examination

Prior to examination the following information shall be available, as applicable:

- purpose of examination;
- qualification and certification of personnel;
- environmental conditions and state of examination object;
- requirement for a written examination procedure;
- any special requirements for preparation of scanning surface;
- examination volume;
- examination sensitivity and method of setting-up sensitivity;
- requirements for evaluation and recording level;
- acceptance criteria;
- extent of examination including scanning plan;
- requirements for a written examination report.

¹⁾ In preparation