

## **Non-destructive testing - Ultrasonic testing of steel bars**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 10308:2002 sisaldab Euroopa standardi EN 10308:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 16.05.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 10308:2002 consists of the English text of the European standard EN 10308:2001.</p> <p>This document is endorsed on 16.05.2002 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><b>Käsitlusala:</b></p> <p>This European Standard describes the techniques to be used for the manual, pulse-echo, ultrasonic testing of steel bars of diameter or equivalent thickness less or equal to 400 mm or equivalent section.</p>	<p><b>Scope:</b></p> <p>This European Standard describes the techniques to be used for the manual, pulse-echo, ultrasonic testing of steel bars of diameter or equivalent thickness less or equal to 400 mm or equivalent section.</p>
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ICS 77.040.20, 77.140.60

**Võtmesõnad:** detection, dimensional measurements, metal bars, nondestructive tests, specification (, specifications, steel pipes, steels, testing, ultrasonic devices, ultrasonic flaw detector, ultrasonic frequencies, ultrasonic medical apparatus, ultrasonic testing, ultrasonics

ICS 77.040.20; 77.140.60

English version

## Non destructive testing - Ultrasonic testing of steel bars

Essais non destructifs - Contrôle par ultrasons des barres  
en acier

Zerstörungsfreie Prüfung - Ultraschallprüfung von Stäben  
aus Stahl

This European Standard was approved by CEN on 30 September 2001.

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 Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

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



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## Foreword

This European Standard has been prepared by Technical Committee ECISS/TC 2 "Steel - Physico-chemical and 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 2002, and conflicting national standards shall be withdrawn at the latest by May 2002.

Annex A is informative.

This standard includes a Bibliography.

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 European Standard describes the techniques to be used for the manual, pulse-echo, ultrasonic testing of steel bars of diameter or equivalent thickness less or equal to 400 mm or equivalent section. Mechanised, semi-automatic or automatic techniques may be used but should be agreed between the purchaser and the supplier.

## 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 (including amendments).

EN 473, *Non destructive testing - Qualification and certification of NDT personnel – General principles.*

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

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

EN 1330-4, *Non destructive testing - Terminology - Part 4: Terms used in ultrasonic testing.*

EN 12223, *Non-destructive testing - Ultrasonic examination - Specification for calibration block n°1.*

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

EN 12668-2, *Non-destructive testing - Characterization and verification of ultrasonic examination equipment – Part 2: Probes.*

EN 12668-3, *Non-destructive testing - Characterization and verification of ultrasonic examination equipment - Part 3: Combined equipment.*

## 3 Terms and definitions

Definitions for general terms of non-destructive testing can be found in other European Standards, e.g. EN 1330-1 and EN 1330-2. For the purposes of this European Standard, the following terms and definitions given in EN 1330-4 apply, together with the following.

### 3.1

#### **manual testing**

testing by an operator applying an ultrasonic probe, or probes, to the product surface, manually executing the appropriate scanning pattern on the product surface and assessing ultrasonic signal indications on the electronic equipment screen either by direct viewing or by built-in signal amplitude alarm devices

### 3.2

#### **automatic and semi-automatic testing**

testing using a mechanised means of applying the ultrasonic probe or probes to, and executing the appropriate scanning pattern on the flat product surface, together with ultrasonic signal indication evaluation by electronic means

**NOTE** Such testing can be either fully automatic with no operator involvement, or semi-automatic when the operator performs basic equipment operation functions.

A list of equivalent terms in several European languages is given in annex A.