Non-destructive testing - Ultrasonic examination - Part 2: Sensitivity and range setting

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EVS   **EESTI STANDARDIKESKUS**

EESTI STANDARDI EESSÕNA   **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 583-2:2001 sisaldab Euroopa standardi EN 583-2:2001 ingliskeelset teksti.	This Estonian standard EVS-EN 583-2:2001 consists of the English text of the European standard EN 583-2:2001.
Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

Käsitlusala: This part of the standard specifies the general rules for setting the timebase range and sentitivity (i.e. gain adjustment) of a manually operated ultrasonic flaw detector with A-scan display in order that reproducible measurements may be made of the location and echo height of a reflector.	**Scope:** This part of the standard specifies the general rules for setting the timebase range and sentitivity (i.e. gain adjustment) of a manually operated ultrasonic flaw detector with A-scan display in order that reproducible measurements may be made of the location and echo height of a reflector.

ICS 19.100

Võtmesõnad: longitudina, non-destructive, non-destructive testing, nondestructive tests, probe, pulse repetition frequency, sensitivity, test equipment, test specifications, test techniques, testing, transverse waves, ultrasonic frequencies, ultrasonic testing, ultrasonics

EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 583-2

January 2001

English version

Non-destructive testing
Ultrasonic examination
Part 2: Sensitivity and range setting

Essais non destructifs – Contrôle
ultrasonore – Partie 2: Réglage de la
sensibilité et de la base de temps

Zerstörungsfreie Prüfung –
Ultraschallprüfung –
Teil 2: Empfindlichkeits- und
Entfernungsjustierung

This European Standard was approved by CEN on 2001-01-05.

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.

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 Management Centre 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

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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 July 2001, and conflicting national standards shall be withdrawn at the latest by July 2001.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association . This European Standard is considered to be a supporting standard to those application and product standards which in themselves support an essential safety requirement of a New Approach Directive and which make reference to this European 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 discontinuities perpendicular to the surface	
EN 583-5,	Non-destructive testing - Ultrasonic examination - Part 5: Characterisation and sizing of discontinuities	
ENV 583-6,	Non-destructive testing - Ultrasonic examination - Part 6: Time-Of-Flight Diffraction Technique as a method for detection and sizing of discontinuities.	

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 part of the standard specifies the general rules for setting the timebase range and sensitivity (i. e. gain adjustment) of a manually operated ultrasonic flaw detector with A-scan display in order that reproducible measurements may be made of the location and echo height of a reflector.

It is applicable to techniques employing a single contact probe with either a single or twin transducers, but excludes immersion technique and techniques employing more than one probe.

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 12223   Non-destructive testing - Ultrasonic examination - Specification for calibration block No. 1

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

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

3   General

3.1   Quantities and symbols

A full list of the quantities and symbols used throughout this part of the standard is given in annex A.

3.2   Test objects, reference blocks and reference reflectors

Requirements for geometrical features of test object, reference blocks and reference reflectors in general are contained in annex B.

3.3   Categories of test objects

The requirements for range and sensitivity setting will depend on the geometrical form of the test object. Five categories of test objects are defined in Table 1.