ICS 19.100 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2025

STN	**Nedeštruktívne skúšanie Skúšanie ultrazvukom Prechodová technika (ISO 16823: 2025)**	**STN EN ISO 16823** 01 5019

Non-destructive testing - Ultrasonic testing - Through-transmission technique (ISO 16823:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/25

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Oznámením tejto normy sa ruší
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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN ISO 16823

January 2025

ICS 19.100 Supersedes EN ISO 16823:2014

English Version

Non-destructive testing - Ultrasonic testing - Through-transmission technique (ISO 16823:2025)

Essais non destructifs - Contrôle par ultrasons - Technique par transmission (ISO 16823:2025)

Zerstörungsfreie Prüfung - Ultraschallprüfung - Durchschallungstechnik (ISO 16823:2025)

This European Standard was approved by CEN on 17 May 2024.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 16823:2025 E

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European foreword

This document (EN ISO 16823:2025) has been prepared by Technical Committee ISO/TC 135 "Non-destructive testing" in collaboration with 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of an identical text or by endorsement, at the latest by July 2025, and conflicting national standards shall be withdrawn at the latest by July 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 16823:2014.

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Endorsement notice

The text of ISO 16823:2025 has been approved by CEN as EN ISO 16823:2025 without any modification.

International Standard

ISO 16823

Non-destructive testing — Ultrasonic testing — Through-transmission technique

Essais non destructifs — Contrôle par ultrasons — Technique par transmission

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 3, *Ultrasonic testing,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 16823:2012), which has been technically revised.

The main changes are as follows:

— normative references have been updated;

— figures have been improved;

— terminology has been aligned throughout the whole document.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The following documents are linked:

ISO 16810, *Non-destructive testing — Ultrasonic testing — General principles*

ISO 16811, *Non-destructive testing — Ultrasonic testing — Sensitivity and range setting*

ISO 16823, *Non-destructive testing — Ultrasonic testing — Through transmission technique*

ISO 16826, *Non-destructive testing — Ultrasonic testing — Testing for discontinuities perpendicular to the surface*

ISO 16827, *Non-destructive testing — Ultrasonic testing — Characterization and sizing of discontinuities*

ISO 16828, *Non-destructive testing — Ultrasonic testing — Time-of-flight diffraction technique as a method for detection and sizing of discontinuities*

International Standard **ISO 16823:2025(en)**

Non-destructive testing — Ultrasonic testing — Through-transmission technique

1 Scope

This document specifies the principles of ultrasonic through-transmission techniques.

Through-transmission techniques can be used for:

— detection of discontinuities;

— determination of sound attenuation.

The general principles required for the use of ultrasonic testing of industrial products are described in ISO 16810.

The through-transmission technique is used for the testing of flat products, e.g. plates and sheets.

Further, it can be used for tests, for example:

— where the shape, dimensions or orientation of possible discontinuities are unfavourable for direct reflection;

— of materials with high sound attenuation;

— on thin test objects.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2400, *Non-destructive testing — Ultrasonic testing — Specification for calibration block No. 1*[1)]

ISO 5577, *Non-destructive testing — Ultrasonic testing — Vocabulary*

ISO 7963, *Non-destructive testing — Ultrasonic testing — Specification for calibration block No. 2*[1)]

ISO 16810, *Non-destructive testing — Ultrasonic testing — General principles*

ISO 22232-1, *Non-destructive testing — Characterization and verification of ultrasonic test equipment — Part 1: Instruments*

ISO 22232-2, *Non-destructive testing — Characterization and verification of ultrasonic test equipment — Part 2: Probes*

1) It is intended to replace the term “calibration block“ by "standard block“ during the next revision of the standard.