



BSI Standards Publication

**Non-destructive testing — Automated ultrasonic testing — Selection and application of systems**

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## National foreword

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**Non-destructive testing — Automated  
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application of systems**

*Essais non destructifs — Contrôle automatisé par ultrasons —  
Sélection et application des systèmes*



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# Contents

	Page
<b>Foreword</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Basic system description</b> .....	<b>2</b>
4.1 Systems.....	2
4.2 System schematic.....	3
4.3 Levels of automation.....	5
<b>5 Examination of technical objectives and conditions of the testing</b> .....	<b>6</b>
5.1 Test task.....	6
5.2 Other important conditions.....	6
5.2.1 General.....	6
5.2.2 Scanning density, test speed, extent and coverage of testing.....	6
5.2.3 Environment.....	7
5.2.4 Material properties.....	7
5.2.5 Complex component geometry.....	8
5.3 Test data.....	8
5.4 Reference blocks.....	8
<b>6 Components and features of an automated test system</b> .....	<b>8</b>
6.1 General.....	8
6.2 Test mechanics and positioning system.....	9
6.2.1 General.....	9
6.2.2 Grade of mechanisation/automation required.....	9
6.2.3 Test object.....	9
6.2.4 Scale of testing.....	9
6.2.5 Test speed/speed along the scanning path.....	10
6.2.6 Precision of positioning.....	10
6.2.7 Coupling.....	10
6.2.8 Additional system requirements.....	10
6.2.9 Health and safety requirements.....	10
6.3 Coupling techniques.....	11
6.3.1 General.....	11
6.3.2 Selection of couplant with regard to the testing environment.....	11
6.3.3 Selection of couplant with regard to the ultrasonic requirements.....	11
6.3.4 Liquid couplants.....	12
6.3.5 Gaseous couplants.....	12
6.3.6 Solid couplants.....	12
6.4 Probes.....	12
6.4.1 General.....	12
6.4.2 Piezo-electric probes.....	13
6.4.3 Electro-magnetic ultrasonic probes (EMAT).....	17
6.4.4 Laser ultrasonics.....	18
6.4.5 Special requirements for probes and cable connections.....	18
6.5 Testing of electronics and signal digitization.....	20
6.5.1 Transmission and reception system.....	20
6.5.2 Digitization.....	20
6.6 Data acquisition, processing and storage.....	23
6.6.1 General.....	23
6.6.2 Hardware.....	23
6.6.3 Software.....	23
6.6.4 Probe position and orientation.....	23
6.6.5 Data acquisition and data reduction.....	23

6.6.6	Data storage.....	25
6.7	Presentation and evaluation of data.....	25
6.7.1	Presentation of data.....	25
6.7.2	Evaluation of data.....	25
6.8	System check.....	26
<b>7</b>	<b>Execution of test.....</b>	<b>26</b>
7.1	System set-up.....	26
7.2	Performing the test.....	27
7.3	Management of NDT data.....	27
	<b>Bibliography.....</b>	<b>28</b>

## 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 documents 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](http://www.iso.org/directives)).

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For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 3, *Ultrasonic testing*.

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# Non-destructive testing — Automated ultrasonic testing — Selection and application of systems

## 1 Scope

The information in this document covers all kinds of ultrasonic testing on components or complete manufactured structures for either correctness of geometry, for material properties (quality or defects), and for fabrication methodology (e.g. weld testing).

This document enables the user, along with a customer specification, or a given test procedure or any standard or regulation to select:

- ultrasonic probes, probe systems and controlling sensors;
- manipulation systems including controls;
- electronic sub-systems for the transmission and reception of ultrasound;
- systems for data storage and display;
- systems and methods for evaluation and assessment of test results.

With regard to their performance, this document also describes procedures for the verification of the performance of the selected test system.

This includes

- tests during the manufacturing process of products (stationary testing systems), and
- tests with mobile systems.

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

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5577 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>