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**Neporušitvene preiskave - Oprema za preiskave z vrtinčnimi tokovi - 2. del:
Značilnosti sond in preverjanje (ISO 15548-2:2013)**

Non-destructive testing - Equipment for eddy current examination - Part 2: Probe characteristics and verification (ISO 15548-2:2013)

Zerstörungsfreie Prüfung - Technische Ausrüstung für die Wirbelstromprüfung - Teil 2: Kenngrößen von Sensoren und deren Verifizierung (ISO 15548-2:2013)

Essais non destructifs - Appareillage pour examen par courants de Foucault - Partie 2: Caractéristiques des capteurs et vérifications (ISO 15548-2:2013)

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19.100 Neporušitveno preskušanje Non-destructive testing

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Non-destructive testing - Equipment for eddy current examination - Part 2: Probe characteristics and verification (ISO 15548-2:2013)

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Zerstörungsfreie Prüfung - Technische Ausrüstung für die Wirbelstromprüfung - Teil 2: Kenngrößen von Sensoren und deren Verifizierung (ISO 15548-2:2013)

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Foreword

This document (EN ISO 15548-2:2013) 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of an identical text or by endorsement, at the latest by June 2014, and conflicting national standards shall be withdrawn at the latest by June 2014.

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

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According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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INTERNATIONAL
STANDARD

ISO
15548-2

Second edition
2013-12-01

**Non-destructive testing — Equipment
for eddy current examination —**

**Part 2:
Probe characteristics and verification**

*Essais non destructifs — Appareillage pour examen par courants
de Foucault*

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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 documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 135, *Non-destructive Testing*, Subcommittee SC 4, *Eddy current methods*.

This second edition cancels and replaces the first edition (ISO 15548-2:2008), of which it constitutes a minor revision.

ISO 15548 consists of the following parts, under the general title *Non-destructive testing — Equipment for eddy current examination*:

- Part 1: *Instrument characteristics and verification*
- Part 2: *Probe characteristics and verification*
- Part 3: *System characteristics and verification*

Non-destructive testing — Equipment for eddy current examination —

Part 2: Probe characteristics and verification

1 Scope

This part of ISO 15548 identifies the functional characteristics of a probe and its interconnecting elements and provides methods for their measurement and verification.

The evaluation of these characteristics permits a well-defined description and comparability of eddy current equipment.

By careful choice of the characteristics, a consistent and effective eddy current examination system can be designed for a specific application.

Where accessories are used, these should be characterised using the principles of this part of ISO 15548.

This part of ISO 15548 does not give the extent of verification nor acceptance criteria for the characteristics. These are given in the application documents.

2 Normative references

[SIST EN ISO 15548-2:2014](https://standards.iteh.ai/catalog/standards/sist/c4e0c0f5-a23c-40cc-9419-af1bb194114d/sist-en-iso-15548-2-2014)

The following referenced documents are indispensable for the application 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 12718, *Non-destructive testing — Eddy current testing — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12718 apply.

4 Characteristics of probe and interconnecting elements

4.1 General characteristics

4.1.1 Application

Probes and interconnecting elements are selected to satisfy the requirements of the intended application.

The design is influenced by the instrument with which they are used.

4.1.2 Probe types

The probe is described by the following:

- type of material to be examined, i.e. ferromagnetic or non-ferromagnetic, with high or low conductivity;

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- function, e.g. separate or combined transmit/receive probe;
- family, e.g. coaxial probe, surface probe;
- measurement mode, e.g. absolute, differential;
- purpose of the examination, e.g. detection of discontinuities, sorting or thickness measurement, etc.;
- specific features, e.g. focused, shielded, etc.

4.1.3 Interconnecting elements

They may include the following:

- cables and/or extensions;
- connectors;
- slip rings;
- rotating heads;
- transformers;
- active devices, e.g. multiplexer, amplifier, etc.

4.1.4 Physical characteristics

The following shall be stated among others:

- external size and shape;
- weight;
- information about mechanical mounting;
- model number and serial number;
- material of manufacture of probe housing;
- composition and thickness of facing material;
- presence and purpose of core or shield;
- type of interconnecting elements (see [4.1.3](#));
- orientation mark (direction for maximum sensitivity, see [6.2.3.3](#));
- position mark (electrical centre, see [6.2.3.4](#)).

4.1.5 Safety

The probe and its interconnecting elements shall meet the applicable safety regulations regarding electrical hazard, surface temperature, or explosion.

Normal use of the probe should not create a hazard.

4.1.6 Environmental conditions

The temperature and humidity for normal use, storage and transport should be specified for the probe and its interconnecting elements.