



SLOVENSKI STANDARD SIST EN ISO 9934-2:2015

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Nadomešča:

SIST EN ISO 9934-2:2004

Neporušitveno preskušanje - Preskušanje z magnetnimi delci - 2. del: Sredstva za preiskave (ISO 9934-2:2015)

Non-destructive testing - Magnetic particle testing - Part 2: Detection media (ISO 9934-2:2015)

Zerstörungsfreie Prüfung - Magnetpulverprüfung - Teil 2: Prüfmittel (ISO 9934-2:2015)

Essais non destructifs - Magnétoscopie - Partie 2: Produits magnétoscopiques (ISO 9934-2:2015)

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9934-2

September 2015

ICS 19.100

Supersedes EN ISO 9934-2:2002

English Version

**Non-destructive testing - Magnetic particle testing - Part 2:
Detection media (ISO 9934-2:2015)**

Essais non destructifs - Magnétoscopie - Partie 2:
Produits indicateurs (ISO 9934-2:2015)

Zerstörungsfreie Prüfung - Magnetpulverprüfung - Teil
2: Prüfmittel (ISO 9934-2:2015)

This European Standard was approved by CEN on 10 July 2015.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN ISO 9934-2:2015) has been prepared by Technical Committee CEN/TC 138 “Non-destructive testing”, the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 135 “Non-destructive testing”.

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of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

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.

This document supersedes EN ISO 9934-2:2002.

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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Endorsement notice

The text of ISO 9934-2:2015 has been approved by CEN as EN ISO 9934-2:2015 without any modification.

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INTERNATIONAL STANDARD

ISO
9934-2

Second edition
2015-09-01

Non-destructive testing — Magnetic particle testing —

Part 2: Detection media

Essais non destructifs — Magnétoscopie —

Partie 2: Produits indicateurs

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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 (see 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 (see 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.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

ISO 9934-2 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing*, in collaboration with ISO/TC 135, *Non-destructive testing*, Subcommittee SC 2, *Surface methods*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 9934-2:2002), which has been technically revised.

ISO 9934 consists of the following parts under the general title *Non-destructive testing — Magnetic particle testing*:

- *Part 1: General principle*
- *Part 2: Detection media*
- *Part 3: Equipment*

Non-destructive testing — Magnetic particle testing —

Part 2: Detection media

1 Scope

This part of ISO 9934 specifies the significant properties of magnetic particle testing products (including magnetic ink, powder, carrier liquid, contrast aid paints) and the methods for checking their properties.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2160, *Petroleum products — Corrosiveness to copper — Copper strip test*

ISO 2591-1, *Test sieving — Part 1: Methods using test sieves of woven wire cloth and perforated metal plate*

ISO 3059, *Non-destructive testing — Penetrant testing and magnetic particle testing — Viewing conditions*

ISO 3104, *Petroleum products — Transparent and opaque liquids — Determination of kinematic viscosity and calculation of dynamic viscosity*

ISO 4316, *Surface active agents — Determination of pH of aqueous solutions — Potentiometric method*

ISO 9934-1, *Non-destructive testing — Magnetic particle testing — Part 1: General principle*

ISO 9934-3, *Non-destructive testing — Magnetic particle testing — Part 3: Equipment*

ISO 12707, *Non-destructive testing — Terminology — Terms used in magnetic particle testing*

EN 1330-1, *Non-destructive testing — Terminology — Part 1: List of general terms*

EN 1330-2, *Non-destructive testing — Terminology — Part 2: Terms common to the non-destructive testing methods*

EN 1330-7, *Non-destructive testing — Terminology — Part 7: Terms used in magnetic particle testing*

EN 10083-2, *Quenched and tempered steels — Part 2: Technical delivery conditions for non-alloy steels*

EN 10204, *Metallic products — Types of inspection documents*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1330-1, EN 1330-2, EN 1330-7, ISO 12707, and the following apply.

3.1

batch

quantity of material produced during one manufacturing operation having uniform properties throughout and with a unique identifying number or mark

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4 Safety precautions

The materials used in magnetic particle inspection and those used in their testing include chemicals that can be harmful, flammable, and/or volatile. All necessary precautions should be observed. All relevant regulations, including national and local regulations pertaining to health and safety, anti-pollution requirements, etc., shall be observed.

5 Classification

5.1 General

The magnetic particle materials covered by this specification shall be classified as follows.

5.2 Magnetic inks

Magnetic inks shall consist of finely divided coloured or fluorescent magnetic particles in a suitable carrier liquid. They shall form a uniform suspension when agitated.

Magnetic inks can be produced from products supplied as concentrates, including paste and powders, or ready for use.

5.3 Powders

Powders for the dry technique shall consist of finely divided coloured or fluorescent magnetic particles.

6 Testing and test certificate

6.1 Type testing and batch testing

Type testing and batch testing of magnetic particle materials shall be carried out in accordance with the requirements of ISO 9934-1, ISO 9934-2, and ISO 9934-3.

Type testing is carried out in order to demonstrate suitability of a product for the intended use. Batch testing is carried out in order to demonstrate conformity of the characteristics of a batch to the product type specified.

The supplier shall provide a test certificate showing compliance with this International Standard having used the methods detailed. This certificate shall include results obtained and tolerances allowed.

If any changes are made to the detection media, then a new type test shall be performed.

6.2 In-service testing

In-service testing is carried out to demonstrate the continued performance of the detection media.

7 Requirements and test methods

7.1 Performance

7.1.1 Type testing and batch testing

Type testing and batch testing shall be carried out according to [Annex A](#) using the reference blocks type 1 or type 2 as described in [Annex B](#).