



NSAI
Standards

Irish Standard
I.S. EN ISO 9934-3:2015

Non-destructive testing - Magnetic particle testing - Part 3: Equipment (ISO 9934-3:2015)

I.S. EN ISO 9934-3:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

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This document is based on:

EN ISO 9934-3:2015

Published:

2015-09-16

This document was published under the authority of the NSAI and comes into effect on:

2015-10-05

ICS number:

19.100

NOTE: If blank see CEN/CENELEC cover page

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National Foreword

I.S. EN ISO 9934-3:2015 is the adopted Irish version of the European Document EN ISO 9934-3:2015, Non-destructive testing - Magnetic particle testing - Part 3: Equipment (ISO 9934-3:2015)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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EUROPEAN STANDARD

EN ISO 9934-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2015

ICS 19.100

Supersedes EN ISO 9934-3:2002

English Version

Non-destructive testing - Magnetic particle testing - Part 3: Equipment (ISO 9934-3:2015)

Essais non destructifs - Magnétoscopie - Partie 3:
Équipement (ISO 9934-3:2015)

Zerstörungsfreie Prüfung - Magnetpulverprüfung - Teil
3: Geräte (ISO 9934-3:2015)

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

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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.

CEN members are the national standards bodies of 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 United Kingdom.



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EN ISO 9934-3:2015 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 9934-3:2015) 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 9934-3:2002.

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.

Endorsement notice

The text of ISO 9934-3:2015 has been approved by CEN as EN ISO 9934-3:2015 without any modification.

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**INTERNATIONAL
STANDARD**

**ISO
9934-3**

Second edition
2015-09-01

**Non-destructive testing — Magnetic
particle testing —**

**Part 3:
Equipment**

*Essais non destructifs — Magnétoscopie —
Partie 3: Équipement*



Reference number
ISO 9934-3:2015(E)

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Safety requirements	1
4 Types of devices	1
4.1 Portable electromagnets (AC).....	1
4.1.1 General.....	1
4.1.2 Technical data.....	2
4.1.3 Technical requirements.....	3
4.1.4 Additional requirements.....	3
4.2 Current generators.....	3
4.2.1 General.....	3
4.2.2 Technical data.....	4
4.2.3 Technical requirements.....	5
4.3 Magnetic benches.....	5
4.3.1 General.....	5
4.3.2 Technical data.....	5
4.3.3 Technical requirements.....	6
4.3.4 Additional requirements.....	6
4.4 Specialized testing systems.....	6
4.4.1 Technical data.....	7
4.4.2 Technical requirements.....	7
5 UV-A sources	8
5.1 General.....	8
5.2 Technical data.....	8
5.3 Technical requirements.....	8
6 Detection media system	8
6.1 General.....	8
6.2 Technical data.....	8
6.3 Technical requirements.....	9
7 Inspection booth	9
7.1 General.....	9
7.2 Technical data.....	9
7.3 Technical requirements.....	9
8 Demagnetization	10
8.1 General.....	10
8.2 Technical data.....	10
8.3 Technical requirements.....	10
9 Measurements	10
9.1 General.....	10
9.2 Current measurement.....	10
9.3 Magnetic field measurement.....	11
9.3.1 General.....	11
9.3.2 Technical data.....	11
9.3.3 Technical requirements.....	11
9.4 Viewing conditions.....	11
9.5 Verification and calibration of instruments.....	11
Bibliography	12

ISO 9934-3:2015(E)

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 9934-3 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 9934-3:2002), 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 principles*
- *Part 2: Detection media*
- *Part 3: Equipment*

Non-destructive testing — Magnetic particle testing —

Part 3: Equipment

1 Scope

This part of ISO 9934 describes three types of equipment for magnetic particle testing:

- portable or transportable equipment;
- fixed installations;
- specialized testing systems for testing components on a continuous basis, comprising a series of processing stations placed in sequence to form a process line.

Equipment for magnetizing, demagnetizing, illumination, measurement, and monitoring are also described.

This part of ISO 9934 specifies the properties to be provided by the equipment supplier, minimum requirements for application and the method of measuring certain parameters. Where appropriate, measuring and calibration requirements and in-service checks are also specified.

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

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

EN 10250-2, *Open steel die forgings for general engineering purposes — Non-alloy quality and special steels*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

3 Safety requirements

The equipment design shall take into account all international, European, national and local regulations which include health, safety, electrical and environmental requirements.

4 Types of devices

4.1 Portable electromagnets (AC¹)

4.1.1 General

Hand-held portable electromagnets (yokes) produce a magnetic field between the two poles. When testing according to ISO 9934-1, DC¹) electromagnets should only be used if agreed at enquiry and order stages.

1) AC = alternating current, and DC = rectified current.

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