BS EN ISO 2178:2016



BSI Standards Publication

Non-magnetic coatings on magnetic substrates — Measurement of coating thickness — Magnetic method

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee STI/33, Electrodeposited and related coatings.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Nichtmagnetische Überzüge auf magnetischen Grundmetallen - Messen der Schichtdicke - Magnetverfahren (ISO 2178:2016)

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European foreword

This document (EN ISO 2178:2016) has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" in collaboration with Technical Committee CEN/TC 262 “Metallic and other inorganic coatings” the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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Endorsement notice

The text of ISO 2178:2016 has been approved by CEN as EN ISO 2178:2016 without any modification

Contents

Page

Foreword ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Principle of measurement ... **2**
4.1 Basic principle of all magnetic measurement methods ... 2
4.2 Magnetic pull-off method ... 2
4.3 Magnetic inductive principle ... 3
4.4 Magnetic flux gauge ... 5

5 Factors affecting measurement accuracy ... **6**
5.1 Basic influence of the coating thickness ... 6
5.2 Magnetic properties of the base metal ... 6
5.3 Electrical properties of the coating materials ... 7
5.4 Geometry: base metal thickness ... 7
5.5 Edge effect ... 7
5.6 Geometry: surface curvature ... 7
5.7 Surface roughness ... 8
5.8 Cleanliness: lift-off effect ... 8
5.9 Probe pressure ... 8
5.10 Probe tilt ... 8
5.11 Temperature effects ... 9
5.12 External electromagnetic fields ... 9

6 Calibration and adjustment of the instrument ... **9**
6.1 General ... 9
6.2 Thickness reference standards ... 9
6.3 Methods of adjustment ... 10

7 Measurement procedure and evaluation ... **10**
7.1 General ... 10
7.2 Number of measurements and evaluation ... 11

8 Uncertainty of the results ... **11**
8.1 General remarks ... 11
8.2 Uncertainty of the calibration of the instrument ... 12
8.3 Stochastic errors ... 13
8.4 Uncertainties caused by factors summarized in Clause 5 ... 13
8.5 Combined uncertainty, expanded uncertainty and final result ... 14

9 Precision ... **14**
9.1 General ... 14
9.2 Repeatability (r) ... 14
9.3 Reproducibility limit (R) ... 15

10 Test report ... **15**

Annex A (informative) **Basic principle of all measurement methods** ... **17**

Annex B (informative) **Basic performance requirements for coating thickness gauges which are based on the magnetic method described in this International Standard** ... **19**

Annex C (informative) **Examples of experimental estimation of factors affecting the measurement** ... **21**

Annex D (informative) **Example of uncertainty estimation (see Clause 8)** ... **26**

Annex E (informative) **Basics of the determination of the uncertainty of a measurement of the used measurement method corresponding to ISO/IEC Guide 98-3** ... **29**

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Annex F (informative) **Table of the student factor** **31**
Annex G (informative) **Details on precision** **32**
Bibliography **37**

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Foreword

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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).

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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

The committee responsible for this document is ISO/TC 107, *Metallic and other inorganic coatings.*

This third edition cancels and replaces the second edition (ISO 2178:1982), which has been technically revised.

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INTERNATIONAL STANDARD **ISO 2178:2016(E)**

Non-magnetic coatings on magnetic substrates — Measurement of coating thickness — Magnetic method

1 Scope

This International Standard specifies a method for non-destructive measurements of the thickness of non-magnetizable coatings on magnetizable base metals.

The measurements are tactile and non-destructive on typical coatings. The probe or an instrument with integrated probe is placed directly on the coating to be measured. The coating thickness is displayed on the instrument.

In this International Standard the term "coating" is used for material such as, for example, paints and varnishes, electroplated coatings, enamel coatings, plastic coatings, powder coatings, claddings.

NOTE This method can also be applied to the measurement of magnetizable coatings on non-magnetizable base metals or other materials (see ISO 2361).

2 Normative references

The following documents, in whole or in part, are normatively referenced in 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 2064, *Metallic and other inorganic coatings — Definitions and conventions concerning the measurement of thickness*

ISO 4618, *Paints and varnishes — Terms and definitions*

ISO 5725-1:1994, *Accuracy (trueness and precision) of measurement methods and results — Part 1: General principles and definitions*

ISO/IEC Guide 98-3, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2064 and ISO 4618 and the following apply.

3.1
adjustment of a measuring system
set of operations carried out on a measuring system so that it provides prescribed indications corresponding to given values of a quantity to be measured

Note 1 to entry: Adjustment of a measuring system can include zero adjustment, offset adjustment, and span adjustment (sometimes called gain adjustment).

Note 2 to entry: Adjustment of a measuring system should not be confused with calibration, which is a prerequisite for adjustment.

Note 3 to entry: After an adjustment of a measuring system, the measuring system shall usually be recalibrated.

Note 4 to entry: Colloquially the term "calibration" is frequently but falsely used instead of the term "adjustment". In the same way, the terms "verification" and "checking" are often used instead of the correct term "calibration".

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