



BSI Standards Publication

Magnetic materials

Part 6: Methods of measurement of the magnetic properties of magnetically soft metallic and powder materials at frequencies in the range 20 Hz to 100 kHz by the use of ring specimens

National foreword

This British Standard is the UK implementation of EN IEC 60404-6:2018+A1:2021. It is identical to IEC 60404-6:2018, incorporating corrigendum November 2018 and amendment 1:2021. It supersedes BS EN IEC 60404-6:2018, which is withdrawn.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by IEC corrigendum November 2018 is indicated in the text by AC1 AC1.

The UK participation in its preparation was entrusted to Technical Committee ISE/108, Magnetic Alloys and Steels.

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

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Amendments/corrigenda issued since publication

Date	Text affected
31 December 2018	Implementation of IEC corrigendum November 2018
30 September 2021	Implementation of IEC amendment 1:2021 with CENELEC endorsement A1:2021: first sentence of the Scope amended

English Version

Magnetic materials - Part 6: Methods of measurement of the magnetic properties of magnetically soft metallic and powder materials at frequencies in the range 20 Hz to 100 kHz by the use of ring specimens
(IEC 60404-6:2018)

Matériaux magnétiques - Partie 6: Méthodes de mesure des propriétés magnétiques des matériaux métalliques et des matériaux en poudre magnétiquement doux, aux fréquences comprises entre 20 Hz et 100 kHz, sur des éprouvettes en forme de tore
(IEC 60404-6:2018)

Magnetische Werkstoffe - Teil 6: Verfahren zur Messung der magnetischen Eigenschaften weichmagnetischer und pulverförmiger Werkstoffe bei Frequenzen im Bereich 20 Hz bis 100 kHz mit Hilfe von Ringproben
(IEC 60404-6:2018)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 68/595/FDIS, future edition 3 of IEC 60404-6, prepared by IEC/TC 68 "Magnetic alloys and steels" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60404-6:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-03-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-06-29

This document supersedes EN 60404-6:2003.

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The text of the International Standard IEC 60404-6:2018 was approved by CENELEC as a European Standard without any modification.

European foreword to amendment A1

The text of document 68/669/CDV, future IEC 60404-6/AMD1, prepared by IEC/TC 68 "Magnetic alloys and steels" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60404-6:2018/A1:2021.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-121	-	International Electrotechnical Vocabulary - (IEV) - Part 121: Electromagnetism	-	-
IEC 60050-221	-	International Electrotechnical Vocabulary - (IEV) - Chapter 221: Magnetic materials and components	-	-
IEC 60404-2	-	Magnetic materials - Part 2: Methods of measurement of the magnetic properties of electrical steel sheet and strip by means of an Epstein frame	EN 60404-2	-
IEC 60404-4	-	Magnetic materials - Part 4: Methods of measurement of d.c. magnetic properties of magnetically soft materials	EN 60404-4	-
IEC 60404-8-6	-	Magnetic materials - Part 8-6: Specifications for individual materials - Soft magnetic metallic materials	EN 60404-8-6	-
IEC 60404-8-9	-	Magnetic materials - Part 8: Specification for individual materials - Section 9: Standard specification for sintered soft magnetic materials	-	-
IEC 62044-3	-	Cores made of soft magnetic materials - Measuring methods - Part 3: Magnetic properties at high excitation level	EN 62044-3	-
ISO/IEC Guide 98-3	-	Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MAGNETIC MATERIALS –

Part 6: Methods of measurement of the magnetic properties of magnetically soft metallic and powder materials at frequencies in the range 20 Hz to 100 kHz by the use of ring specimens

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International Standard IEC 60404-6 has been prepared by IEC technical committee 68: Magnetic alloys and steels.

This third edition cancels and replaces the second published in 2003. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) adaption to modern measurement and evaluation methods, in particular the introduction of the widely spread digital sampling method for the acquisition and evaluation of the measured data;
- b) limitation of the frequency range up to 100 kHz;