SLOVENSKI STANDARD

SIST EN 60404-5:2008

01-januar-2008

Nadomeġļ a:

SIST EN 10332:2003

Magnetni materiali - 5. del: Materiali za permanentne (magnetno trde) magnete - Metode za meritve magnetnih lastnosti (IEC 60404-5:1993 + A1:2007)

Magnetic materials - Part 5: Permanent magnet (magnetically hard) materials - Methods of measurement of magnetic properties (IEC 60404-5:1993 + A1:2007)

Magnetische Werkstoffe - Teil 5: Dauermagnetwerkstoffe (hartmagnetische Werkstoffe) - Verfahren zur Messung der magnetischen Eigenschaften (IEC 60404-5:1993 + A1:2007)

Magnetische Werkstoffe - Teil 5: Dauermagnetwerkstoffe (hartmagnetische Werkstoffe) - Verfahren zur Messung der magnetischen Eigenschaften (IEC 60404-5:1993 + A1:2007)

Ta slovenski standard je istoveten z: **EN 60404-5:2007**

ICS:

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities
29.030	Magnetni materiali	Magnetic materials

SIST EN 60404-5:2008 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60404-5

October 2007

ICS 17.220.20; 29.030

Supersedes EN 10332:2003

English version

Magnetic materials - Part 5: Permanent magnet (magnetically hard) materials - Methods of measurement of magnetic properties

(IEC 60404-5:1993 + A1:2007)

Matériaux magnétiques -
Partie 5: Aimants permanents
(magnétiques durs) -
Méthodes de mesure
des propriétés magnétiques
(CEI 60404-5:1993 + A1:2007)

Magnetische Werkstoffe -
Teil 5: Dauermagnetwerkstoffe
(hartmagnetische Werkstoffe) -
Verfahren zur Messung
der magnetischen Eigenschaften
(IEC 60404-5:1993 + A1:2007)

This European Standard was approved by CENELEC on 2007-10-01. CENELEC 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 Central Secretariat or to any CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 60404-5:2007 E

Foreword

The text of the International Standard IEC 60404-5:1993 + A1:2007, prepared by IEC TC 68, Magnetic alloys and steels, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60404-5 on 2007-10-01 without any modification.

This European Standard supersedes EN 10332:2003 (published by CEN).

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2008-10-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-10-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60404-5:1993 + A1:2007 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60050-121	– [1)]	International Electrotechnical Vocabulary (IEV) - Part 121: Electromagnetism	–	–
IEC 60050-151	– [1)]	International Electrotechnical Vocabulary (IEV) - Part 151: Electrical and magnetic devices	–	–
IEC 60050-221	– [1)]	International Electrotechnical Vocabulary (IEV) - Chapter 221: Magnetic materials and components	–	–
IEC 60404-8-1	– [1)]	Magnetic materials - Part 8-1: Specifications for individual materials - Magnetically hard materials	–	–

[1)] Undated reference.

NORME INTERNATIONALE
INTERNATIONAL STANDARD

CEI
IEC
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Deuxième édition
Second edition
1993-10

Matériaux magnétiques –

Partie 5:
Aimants permanents (magnétiques durs) – Méthodes de mesure des propriétés magnétiques

Magnetic materials –

Part 5:
Permanent magnet (magnetically hard) materials – Methods of measurement of magnetic properties

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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Pour prix, voir catalogue en vigueur
For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MAGNETIC MATERIALS –

Part 5: Permanent magnet (magnetically hard) materials – Methods of measurement of magnetic properties

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

International Standard IEC 404-5 has been prepared by IEC technical committee 68: Magnetic alloys and steels.

This second edition cancels and replaces the first edition published in 1982 and constitutes a technical revision.

The text of this standard is based on the following documents:

DIS	Report on voting
68(CO)85	68(CO)88

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

Annex A forms an integral part of this standard.

IEC 404 consists of the following parts, under the general title: *Magnetic materials.*

– Part 1: 1979, Classification

– Part 2: 1978, Methods of measurement of magnetic, electrical and physical properties of magnetic sheet and strip

– Part 3: 1992, Methods of measurement of the magnetic properties of magnetic sheet and strip by means of a single sheet tester

– Part 4: 1982, Methods of measurement of the d.c. magnetic properties of solid steels

– Part 5: 1993, Permanent magnet (magnetically hard) materials – Methods of measurements of magnetic properties

– Part 6: 1986, Methods of measurement of the magnetic properties of isotropic nickel-iron soft magnetic alloys, types E1, E3 and E4

– Part 7: 1982, Method of measurement of the coercivity of magnetic materials in an open magnetic circuit

– Part 8: Specifications for individual materials

– Part 9: 1987, Methods of determination of the geometrical characteristics of magnetic steel sheet and strip

– Part 10: 1988, Methods of measurement of magnetic properties of magnetic steel sheet and strip at medium frequencies

– Part 11: 1991, Method of test for the determination of surface insulation resistance of magnetic sheet and strip

– Part 12: 1992, Guide to methods of assessment of temperature capability of interlaminar insulation coatings

MAGNETIC MATERIALS –

Part 5: Permanent magnet (magnetically hard) materials – Methods of measurement of magnetic properties

1 General

1.1 *Scope*

The purpose of this part of IEC 404 is to define the method of measurement of the magnetic flux density, magnetic polarization and the magnetic field strength and also the determination of the demagnetization curve and recoil line of permanent magnet materials, such as those specified in IEC 404-8-1, the properties of which are presumed homogeneous throughout their volume.

The performance of a magnetic system is not only dependent on the properties of the permanent magnet material but also on the dimensions of the system, the air-gap and other elements of the magnetic circuit. The methods described in this standard refer to the measurement of the magnetic properties in a closed magnetic circuit simulating a ring.

1.2 *Normative references*

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 404. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 404 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 50(121): 1978, *International Electrotechnical Vocabulary (IEV) – Chapter 121: Electromagnetism*

IEC 50(151): 1978, *International Electrotechnical Vocabulary (IEV) – Chapter 151: Electrical and magnetic devices*

IEC 50(221): 1990, *International Electrotechnical Vocabulary (IEV) – Chapter 221: Magnetic materials and components*

IEC 404-8-1: 1986, *Magnetic materials – Part 8: Specifications for individual materials – Section One: Standard specifications for magnetically hard materials*

2 Definitions

The definitions relating to the various terms used in this part of IEC 404 are defined in IEC 50(121), IEC 50(151) and IEC 50(221).