



SLOVENSKI STANDARD

SIST EN 60519-11:2008

01-januar-2008

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SIST EN 60519-11:1999

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Safety in electroheat installations - Part 11: Particular requirements for installations using the effect of electromagnetic forces on liquid metals

Sicherheit in Elektrowärmeanlagen - Teil 11: Besondere Anforderungen an Anlagen, die die Wirkung elektromagnetischer Kräfte auf flüssige Metalle nutzen

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Sécurité dans les installations électrothermiques - Partie 11: Exigences particulières pour les installations utilisant l'effet des forces électromagnétiques sur les métaux liquides

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Ta slovenski standard je istoveten z: EN 60519-11:2007

ICS:

25.180.10 Ò|^dã}^Á^ ã Electric furnaces

SIST EN 60519-11:2008 en,fr,de

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English version

**Safety in electroheat installations -
Part 11: Particular requirements for installations
using the effect of electromagnetic forces on liquid metals
(IEC 60519-11:2007)**

Sécurité dans les installations
électrothermiques -
Partie 11: Exigences particulières
pour les installations utilisant l'effet
des forces électromagnétiques
sur les métaux liquides
(CEI 60519-11:2007)

Sicherheit in Elektrowärmeanlagen -
Teil 11: Besondere Anforderungen
an Anlagen, die die Wirkung
elektromagnetischer Kräfte
auf flüssige Metalle nutzen
(IEC 60519-11:2007)

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08495367d7a94c81-en-60519-11-2008
This European Standard was approved by CENELEC on 2007-09-01. 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

Foreword

The text of document 27/577/FDIS, future edition 2 of IEC 60519-11, prepared by IEC TC 27, Industrial electroheating equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60519-11 on 2007-09-01.

This European Standard supersedes EN 60519-11:1997.

The significant changes with respect to EN 60519-11:1997 are as follows:

- EN 60519-1:2003 and EN 60519-3:2005 have been taken into account;
- definitions have been brought into line with IEC 60050-841:2004.

This standard is to be used in conjunction with EN 60519-1:2003. It is intended to specify particular requirements for installations using the effect of electromagnetic forces on liquid metals.

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) 2008-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2010-09-01

Annex ZA has been added by CENELEC.

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Endorsement notice

<https://standards.iteh.ai/catalog/standards/sist/202e4311-b24f-4829-99aa-60519-11-2007>

The text of the International Standard IEC 60519-11:2007 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-841	2004	International Electrotechnical Vocabulary - Part 841: Industrial electroheat	-	-
IEC 60110-1	1998	Power capacitors for induction heating installations - Part 1: General	EN 60110-1	1998
IEC 60143-1	2004	Series capacitors for power systems - Part 1: General	EN 60143-1	2004
IEC 60364-4-41 (mod)	2005	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock	HD 60364-4-41 + corr. July	2007 2007
IEC 60519-1	2003	Safety in electroheat installations - Part 1: General requirements	EN 60519-1	2003
CISPR 11 (mod)	¹⁾	Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement	EN 55011	2007 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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INTERNATIONAL
STANDARD

IEC
CEI

NORME
INTERNATIONALE

60519-11

Second edition
Deuxième édition
2007-06

Safety in electroheat installations –

Part 11:

**Particular requirements for installations using the
effect of electromagnetic forces on liquid metals**

iTeh STANDARD PREVIEW

Sécurité dans les installations électrothermiques –

Partie 11: SIST EN 60519-11:2008

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**Exigences particulières pour les installations
utilisant l'effet des forces électromagnétiques
sur les métaux liquides**



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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CODE PRIX

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY IN ELECTROHEAT INSTALLATIONS –

Part 11: Particular requirements for installations using the effect of electromagnetic forces on liquid metals

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60519-11 has been prepared by IEC technical committee 27: Industrial electroheating equipment.

This second edition cancels and replaces the first edition published in 1997 and constitutes a technical revision. The significant changes with respect to the previous edition are as follows:

- the latest editions of IEC 60519-1:2003 and IEC 60519-3:2005 have been taken into account;
- definitions have been brought into line with the second edition of IEC 60050-841:2004.

This standard is to be used in conjunction with IEC 60519-1:2003. It is intended to specify particular requirements for installations using the effect of electromagnetic forces on liquid metals.

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

FDIS	Report on voting
27/577/FDIS	27/585/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The list of all parts of the IEC 60519 series, under the general title *Safety in electroheat installations*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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SAFETY IN ELECTROHEAT INSTALLATIONS –

Part 11: Particular requirements for installations using the effect of electromagnetic forces on liquid metals

1 Scope

This part of IEC 60519 applies to installations predominantly using the effect of electromagnetic forces on liquid metals:

- installations for electromagnetic (induction) stirring or transport of liquid metals at low frequencies;
- installations that influence the pouring process by an electromagnetic field;
- parts directly affected by the electromagnetic stirring, transport or pouring installation.

Examples of application:

- stirring devices for casting machines, arc furnaces, ladles, etc.;
- transport of liquid metal for emptying or filling furnaces, launders or moulds;
- devices to transport liquid metal with simultaneous proportioning of the transported quantity, for example, for filling diecasting machines;
- influencing the ingot surface or the pouring stream enhancing crystallization by means of an electromagnetic field during continuous casting;
- sealing of mechanical gaps of melt vessels, for example, in vertical galvanizing line.

This standard consists of

- requirements common to installations using the effect of electromagnetic forces on liquid metals;
- specific requirements for electromagnetic pouring equipment (Annex A);
- specific requirements for electromagnetic equipment with lining (Annex B).

NOTE When applying IEC 60519-1 in conjunction with this standard, the terms "electroheat installation" or "electroheat device" should be replaced by the term "installation using the effect of electromagnetic forces on liquid metals".

2 Normative references

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.

IEC 60050-841:2004, *International Electrotechnical Vocabulary – Part 841: Industrial electroheat*

IEC 60110-1:1998, *Power capacitors for induction heating installations – Part 1: General*