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Safety in electroheat installations -- Part 21: Particular requirements for resistance heating equipment - Heating and melting glass equipment

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Sicherheit in Elektrowärmeanlagen - Teil 21: Besondere Anforderungen an Einrichtungen mit Widerstandserwärmung - Einrichtungen zum Erwärmen und Schmelzen von Glas

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Sécurité dans les installations électrothermiques -- Partie 21 Exigences particulières pour les installations de chauffage par résistance - Installations électrothermiques de fusion de verre

Ta slovenski standard je istoveten z: EN 60519-21:2009

ICS:

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

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60519-21

January 2009

ICS 25.180.10

Supersedes EN 60519-21:1998

English version

**Safety in electroheat installations -
Part 21: Particular requirements for resistance heating equipment -
Heating and melting glass equipment
(IEC 60519-21:2008)**

Sécurité dans les installations
électrothermiques -
Partie 21: Exigences particulières
pour les installations de chauffage
par résistance -
Installations électrothermiques
de fusion de verre
(CEI 60519-21:2008)

Sicherheit in Elektrowärmeanlagen -
Teil 21: Besondere Anforderungen
an Einrichtungen
mit Widerstandserwärmung -
Einrichtungen zum Erwärmen
und Schmelzen von Glas
(IEC 60519-21:2008)

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This European Standard was approved by CENELEC on 2008-12-01. 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: avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 27/630/CDV, future edition 2 of IEC 60519-21, prepared by IEC TC 27, Industrial electroheating equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60519-21 on 2008-12-01.

This European Standard supersedes EN 60519-21:1998.

The significant changes with respect to EN 60519-21:1998 are as follows:

- EN 60519-1:2003 and EN 60519-2:2006 have been taken into account;
- definitions have been brought into line with IEC 60050-841:2004.

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) 2009-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-12-01

This standard is to be used in conjunction with EN 60519-2:2006. It is intended to specify particular requirements for resistance heating and melting glass equipment. This Part 21 supplements or modifies the corresponding clauses of EN 60519-2, so as to convert it into a European Standard.

Where a particular subclause of Part 2 is not mentioned in this Part 21, that subclause applies as far as is reasonable. Where this standard states "addition", "modification" or "replacement", the relevant text of Part 2 is to be adapted accordingly.

NOTE Subclauses and notes which are additional to those in Part 2 are numbered starting from 101.

Endorsement notice

The text of the International Standard IEC 60519-21:2008 was approved by CENELEC as a European Standard without any modification.



IEC 60519-21

Edition 2.0 2008-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Safety in electroheat installations –
Part 21: Particular requirements for resistance heating equipment – Heating and
melting glass equipment**

**Sécurité dans les installations électrothermiques –
Partie 21: Exigences particulières pour les installations de chauffage par
résistance – Installations électrothermiques de fusion de verre**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

H

ICS 25.180.10

ISBN 2-8318-1001-9

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY IN ELECTROHEAT INSTALLATIONS –

**Part 21: Particular requirements
for resistance heating equipment –
Heating and melting glass equipment**

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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International Standard IEC 60519-21 has been prepared by IEC technical committee 27: Industrial electroheating equipment.

This second edition cancels and replaces the first edition published in 1998 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 60519-2:2006 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 60519-2:2006. It is intended to specify particular requirements for resistance heating and melting glass equipment. This Part 21 supplements or modifies the corresponding clauses of IEC 60519-2, so as to convert it into an IEC standard.

Where a particular subclause of Part 2 is not mentioned in this Part 21, that subclause applies as far as is reasonable. Where this standard states "addition", "modification" or "replacement", the relevant text of Part 2 is to be adapted accordingly.

NOTE Subclauses and notes which are additional to those in Part 2 are numbered starting from 101.

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

| | |
|------------|------------------|
| CDV | Report on voting |
| 27/630/CDV | 27/649/RVC |

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.

A list of all parts of 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 21: Particular requirements for resistance heating equipment – Heating and melting glass equipment

1 Scope and object

Replacement:

This part of IEC 60519 is applicable to indirect resistance heating equipment for the heating and melting of glass, operating in voltage bands 1 and 2. These particular requirements also apply to equipment for direct resistance heating and melting of glass by means of current introduced by electrodes passing through the charge to be heated.

The object of this standard is the determination of safety requirements for both indirect and direct resistance heating equipment for the heating and melting of glass.

NOTE Extraction of liquid glass or a similar material at the extraction point is part of the production process and does not constitute part of the operation of the electroheat equipment.

This standard covers the safety aspects of electrical parts also in the case when electrical heating is combined with other means of heating, for example liquid fuel heating.

These requirements do not apply to equipment for direct resistance heating, where, owing to the technology used, IEC 60519-3, IEC 60519-4 and IEC 60519-8 are applicable.

2 Normative references

This Clause of part 2 is applicable.

3 Terms and definitions

This Clause of part 2 applies except as follows:

Addition:

3.101

glass-melting furnace (indirect resistance heating)
furnace in which glass is melted by means of indirect resistance heating

3.102

pot furnace
melting equipment in which the batch is melted by means of indirect electrical heating in vessels called “pots” made of a fire-proof material and placed in the furnace

3.103

filling machine
machine which feeds the batch into the glass furnaces