SLOVENSKI STANDARD
SIST EN 60703:2009

01-september-2009

Nadomeġļa:
SIST HD 440 S1:2003

Preskusne metode za inġtalacije elektriļ nega ogrevanja z elektronskimi topovi (IEC 60703:2008)

Test methods for electroheating installations with electron guns

Méthodes d'essai des installations électrothermiques comportant des canons à électrons

Ta slovenski standard je istoveten z: EN 60703:2009

ICS:

25.180.10 Elektriļ ne peļ i Electric furnaces

SIST EN 60703:2009 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60703

January 2009

ICS 25.180.10

Supersedes HD 440 S1:1983

English version

Test methods for electroheating installations with electron guns
(IEC 60703:2008)

Méthodes d'essai des installations électrothermiques comportant des canons à électrons
(CEI 60703:2008)

Prüfverfahren für Elektrowärmeanlagen mit Elektronenkanonen
(IEC 60703:2008)

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

Ref. No. EN 60703:2009 E

Foreword

The text of document 27/628/CDV, future edition 2 of IEC 60703, prepared by IEC TC 27, Industrial electroheating equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60703 on 2008-12-01.

This European Standard supersedes HD 440 S1:1983.

The significant changes with respect to HD 440 S1:1983 are as follows:

– EN 60519-7:2008 has been taken into account;

– test requirements have been completed with new items important for testing and acceptance of installations.

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

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60703:2008 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 60050-841	2004	International Electrotechnical Vocabulary (IEV) - Part 841: Industrial electroheat	-	-
IEC 60204-1 (mod)	2005	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1	2006
IEC 60204-11	2000	Safety of machinery - Electrical equipment of machines - Part 11: Requirements for HV equipment for voltages above 1 000 V a.c. or 1 500 V d.c. and not exceeding 36 kV	EN 60204-11	2000
IEC 60398	1999	Industrial electroheating installations - General test methods	EN 60398	1999
IEC 60519-1	2003	Safety in electroheat installations - Part 1: General requirements	EN 60519-1	2003
IEC 60519-7	2008	Safety in electroheat installations - Part 7: Particular requirements for installations with electron guns	EN 60519-7	2008

IEC 60703

Edition 2.0 2008-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Test methods for electroheating installations with electron guns

Méthodes d'essai des installations électrothermiques comportant des canons à électrons

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX N

ICS 25.180.10

ISBN 2-8318-1003-6

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

TEST METHODS FOR ELECTROHEATING INSTALLATIONS WITH ELECTRON GUNS

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.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
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 60703 has been prepared by IEC technical committee 27: Industrial electroheating equipment.

This second edition cancels and replaces the first edition published in 1981 and constitutes a technical revision.

The significant changes with respect to the previous edition are as follows:

– the latest edition of IEC 60519-7 has been taken into account;
– test requirements have been completed with new items important for testing and acceptance of installations.

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

CDV	Report on voting
27/628/CDV	27/648/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.

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.

TEST METHODS FOR ELECTROHEATING INSTALLATIONS WITH ELECTRON GUNS

1 Scope and object

This International Standard applies to electroheating installations comprising one or more electron guns as heating source.

The object of this standard is the standardization of test methods to determine the essential parameters, technical data and characteristics of electroheating installations comprising one or more electron guns.

The standard does not contain a mandatory list of tests and is not restrictive. Tests may be selected from the proposed list. The specification established by agreement between the user and the manufacturer of electroheating installations can supplement these recommendations but should not be in contradiction with them.

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 (IEV) – Part 841: Industrial electroheat*

IEC 60204-1:2005, *Safety of machinery – Electrical equipment of machines – Part 1: General requirements*

IEC 60204-11:2000, *Safety of machinery – Electrical equipment of machines – Part 11: Requirements for HV equipment for voltages above 1 000 V a.c. or 1 500 V d.c. and not exceeding 36 kV*

IEC 60398:1999, *Industrial electroheating installations – General test methods*

IEC 60519-1:2004, *Safety in electroheat installations – Part 1: General requirements*

IEC 60519-7:2008, *Safety in electroheat installations – Part 7: Particular requirements for installations with electron guns*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-841, IEC 60519-7 (some of which are repeated here) and the following apply.

3.1
electron beam
electron flux emitted from one source (cathode or plasma) and moving along the exactly determined tracks at very great velocities

[IEV 841-30-01, modified]