SLOVENSKI STANDARD
SIST EN 60700-1:2001/A2:2009

01-februar-2009

Tiristorski ventili (elektronke) za visokonapetostni enosmerni prenos (HVDC) elektriļ ne energije - 1. del: Elektriļ no preskuġanje (IEC 60700-1:1998/A2:2008)

Thyristor valves for high voltage direct current (HVDC) power transmission - Part 1: Electrical testing (IEC 60700-1:1998/A2:2008)

Thyristorventile für Hochspannungsgleichstrom-Energieübertragung (HGÜ) - Teil 1: Elektrische Prüfung (IEC 60700-1:1998/A2:2008)

Valves à thyristors pour le transport d'énergie en courant continu à haute tension (CCHT) - Partie 1: Essais électriques (CEI 60700-1:1998/A2:2008)

Ta slovenski standard je istoveten z: **EN 60700-1:1998/A2:2008**

ICS:

29.200	Usmerniki. Pretvorniki. Stabilizirano elektriļ no napajanje	Rectifiers. Convertors. Stabilized power supply
31.080.20	Tiristorji	Thyristors

SIST EN 60700-1:2001/A2:2009 **en,fr**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60700-1/A2

December 2008

ICS 29.200; 31.080.20

English version

Thyristor valves for high voltage direct current (HVDC) power transmission - Part 1: Electrical testing
(IEC 60700-1:1998/A2:2008)

Valves à thyristors pour le transport d'énergie en courant continu à haute tension (CCHT) - Partie 1: Essais électriques
(CEI 60700-1:1998/A2:2008)

Thyristorventile für Hochspannungsgleichstrom-Energieübertragung (HGÜ) - Teil 1: Elektrische Prüfung
(IEC 60700-1:1998/A2:2008)

This amendment A2 modifies the European Standard EN 60700-1:1998; it was approved by CENELEC on 2008-11-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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 60700-1:1998/A2:2008 E

Foreword

The text of document 22F/154/CDV, future amendment 2 to IEC 60700-1:1998, prepared by SC 22F, Power electronics for electrical transmission and distribution systems, of IEC TC 22, Power electronic systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A2 to EN 60700-1:1998 on 2008-11-01.

The following dates were fixed:

– latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2009-08-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2011-11-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of amendment 2:2008 to the International Standard IEC 60700-1:1998 was approved by CENELEC as an amendment to the European Standard without any modification.

Replace *Annex ZA of EN 60700-1:1998 + A1:2003 by:*

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 60060	Series	High-voltage test techniques	HD 588.1 S1 EN 60060	1991 Series
IEC 60060-1	1989	High-voltage test techniques - Part 1: General definitions and test requirements	HD 588.1 S1	1991
IEC 60071-1	-[1)]	Insulation co-ordination - Part 1: Definitions, principles and rules	EN 60071-1	2006[2)]
IEC 60099 (mod)	Series	Surge arresters	EN 60099	Series
IEC 60270	2000	High-voltage test techniques - Partial discharge measurements	EN 60270	2001
IEC 61803	1999	Determination of power losses in high-voltage direct current (HVDC) converter stations	EN 61803	1999
ISO/IEC Guide 25	1990	General requirements for the competence of calibration and testing laboratories	-	-

[1)] Undated reference.
[2)] Valid edition at date of issue.

IEC 60700-1

Edition 1.0 2008-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2
AMENDEMENT 2

Thyristor valves for high voltage direct current (HVDC) power transmission – Part 1: Electrical testing

Valves à thyristors pour le transport d'énergie en courant continu à haute tension (CCHT) – Partie 1: Essais électriques

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX J

ICS 29.200; 31.080.20

ISBN 2-8318-9955-9

FOREWORD

This amendment has been prepared by subcommittee 22F: Power electronics for electrical transmission and distribution systems, of IEC technical committee 22: Power electronic systems and equipment.

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

CDV	Report on voting
22F/154/CDV	22F/164/RVC

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

The committee has decided that the contents of this amendment and the base 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.

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

Page 3

CONTENTS

On page 7, replace the title of Clause 13 by the following:

13 Testing of special features and fault tolerance

Delete Annex C.

Page 11

2 Normative references

Replace the fourth reference by the following:

IEC 60071-1, *Insulation co-ordination – Part 1: Definitions, principles and rules*

Replace the sixth reference by the following:

IEC 60270:2000, *High-voltage test techniques – Partial discharge measurements*

Page 15

3.2 Valve construction terms

Add the following term and definition after 3.2.6 (introduced by Amendment 1):

3.2.7
multiple valve unit
MVU
single physical structure comprising more than one valve with a common mechanical support structure

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4.2 Atmospheric correction

Replace the first dash by the following:

– pressure:

a) If the insulation coordination of the tested part of the thyristor valve is based on standard rated withstand voltages according to IEC 60071-1, correction factors are only applied for altitudes exceeding 1 000 m. Hence, if the altitude of the site a_s at which the equipment will be installed is ≤1 000 m, then the standard atmospheric air pressure (b_0=101,3 kPa) shall be used with no correction for altitude. If a_s >1 000 m, then the standard procedure according to IEC 60060-1 is used except that the reference atmospheric pressure b_0 is replaced by the atmospheric pressure corresponding to an altitude of 1 000 m ($b_{1\,000\text{ m}}$).

b) If the insulation coordination of the tested part of the thyristor valve is not based on standard rated withstand voltages according to IEC 60071-1, then the standard procedure according to IEC 60060-1 is used with the reference atmospheric pressure b_0 (b_0=101,3 kPa);

4.4 Criteria for successful type testing

In the first line, replace "ascertains that" *by* "shows that".

Page 21

4.4.1 Criteria applicable to thyristor levels

*In item c), insert the word "*programme*" at the end of the sentence.*

*In item f), the second dashed item, insert the words "*where applicable*" at the end of the sentence.*

*In item f), the fourth dashed item, insert the words "*where applicable*" at the end of the sentence.*