SLOVENSKI STANDARD
SIST HD 22.2 S3:1998/A1:2003

01-februar-2003

Cables of rated voltage up to and including 450/750 V and having cross-linked insulation - Part 2: Test methods

Cables of rated voltages up to and including 450/750 V and having cross-linked insulation -- Part 2: Test methods

Starkstromleitungen mit vernetzter Isolierhlle fr Nennspannungen bis 450/750 V -- Teil 2: Prfverfahren

Conducteurs et cbles isols avec des matriaux rticuls de tension assigne au plus gale 450/750 V -- Partie 2: Mthodes d'essais

Ta slovenski standard je istoveten z: **HD 22.2 S3:1997/A1:2002**

ICS:

29.060.20 Kabli Cables

SIST HD 22.2 S3:1998/A1:2003 **en**

HARMONIZATION DOCUMENT **HD 22.2 S3/A1**

DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT November 2002

ICS 29.060.20

English version

Cables of rated voltages up to and including 450/750 V and having cross-linked insulation Part 2: Test methods

Conducteurs et câbles isolés avec des matériaux réticulés de tension assignée au plus égale à 450/750 V
Partie 2: Méthodes d'essais

Starkstromleitungen mit vernetzter Isolierhülle für Nennspannungen bis 450/750 V
Teil 2: Prüfverfahren

This amendment A1 modifies the Harmonization Document HD 22.2 S3:1997; it was approved by CENELEC on 2002-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this amendment on a national level.

Up-to-date lists and bibliographical references concerning such national implementation may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German).

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and 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. HD 22.2 S3:1997/A1:2002 E

Foreword

This amendment to the Harmonization Document HD 22.2 S3:1997 was prepared by the Technical Committee CENELEC TC 20, Electric cables.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A1 to HD 22.2 S3:1997 on 2002-09-01.

The following dates were fixed:

- latest date by which the existence of the amendment has to be announced at national level (doa) 2003-03-01
- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-09-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2003-09-01

Title

Amend the title to read:

Cables of rated voltages up to and including 450/750 V and having cross-linked insulation - Part 2: Test methods

Contents

Amend item 1.12 to read:

Solderability tests for plain conductors

Subclause 1.1

Amend paragraph 1 to read:

HD 22 applies to rigid and flexible cables, sheathed and unsheathed, and insulated with cross-linked material, of rated voltages U_o/U up to and including 450/750 V used in power installations.

In paragraph 2, line 2

Delete "HD 405 and EN 60811" and *insert* "the common test methods for cables given in EN 50265, EN 50266, EN 50267, EN 50268 and EN 60811".

Subclause 1.12

Amend the heading to read:

Solderability test for plain conductors

Subclause 1.12.2

At the end of the first paragraph add:

For samples normally aged without the conductor in place follow the test procedure indicated in the third paragraph, using samples having the conductor in place.

Subclause 2.2

Delete the second paragraph and insert the following:

"A voltage shall be applied between conductor(s) and groups of conductors in such a way that the insulation on each core is tested against all adjacent cores. The voltage shall be increased gradually to the specified value on each occasion."

Delete the fourth paragraph and insert the following:

A voltage shall be applied between conductor(s) and groups of conductors in such a way that the insulation on each core is tested against all adjacent cores and the metallic layer. The voltage shall be increased gradually to the specified value on each occasion."

Subclause 2.4.1

Add a new paragraph 6 to read:

None of the resulting values shall be below the minimum insulation resistance value prescribed in the particular specifications.

Delete the note at the end of the subclause.

Subclause 2.4.2

In the note at the end of the subclause delete "IEC 93" *and insert* "HD 429".

Subclause 3.4.2

Delete the text and insert the following:

(NOTE The requirements have been transferred to 5.6.3.3 of Part 1).

Subclause 3.5.3

At the end of the subclause insert the following:

NOTE In order to prevent the tensioning weight reaching the top of its guide and either hitting an end-stop or rising clear of the guide, it is strongly recommended that the following sample preparation should be carried out:

a) the three twists should be set in the sample and temporarily secured with adhesive tape before presenting the sample to the equipment;

b) the ends of the sample should be located in the fixing clamps and the adhesive tape should then be removed;

c) the fixing clamps should be slowly moved apart to ensure that the sample achieves a straight orientation when the clamps are fully extended, with the tensioning weight still in the guide and satisfying the 50 mm lift specified in 3.5.4 of HD 22.2. When the fully extended position is reached, the tensioning weight should not make contact with any end-stop positioned in the guide;

d) if this straight orientation is not achieved, up to 30 slow test cycles should be performed during which the sample should be manipulated so that the twists are distributed more evenly over the sample length and so that a knot does not occur during the initial phase of the test procedure.

Subclause 3.5.4

Delete the last paragraph

(NOTE Requirements have been transferred to 5.6.3.4 of Part 1).

Subclause 3.5.5

Delete the text and insert the following:

(Note The requirements have been transferred to 5.6.3.4 of Part 1).

Table D

Amend the table to read as follows:

TABLE D

Tensile force exerted by the weight

Nominal cross-sectional area of conductor mm²	Tensile force (N) exerted by the weight for cords having:	
	2 cores	3 cores
0,75	15	20
1,0	20	25
1,5	25	30

Subclause 8.1

Delete paragraph 1.

Subclause 8.2.2

Amend the final phrase of the subclause to read:

mass of block m = (1 000 ± 50) g.

Annex A

Delete "HD 405" *and its title and insert:*

EN 50265	Series	Common test methods for cables under fire conditions – Test for resistance to vertical flame propagation for a single insulated conductor or cable

Add additional references:

EN 50266	Series	Common test methods for cables under fire conditions – Test for vertical flame spread of vertically-mounted bunched wires or cables
EN 50267	Series	Common test methods for cables under fire conditions – Tests on gases evolved during combustion of materials from cables
EN 50268	Series	Common test methods for cables under fire conditions – Measurement of smoke density of cables burning under defined conditions

Annex D

Delete the existing table in D.3 and replace with the following:

Conductor cross-section mm^2	**Insulation thickness** mm	**Conductor diameter (d)** mm	**Overall diameter** mm	**R** MΩ.km	**R (rounded)** MΩ.km
1,5	0,7	1,45	2,85	0,01077	0,010
35	1,2	7,0	9,4	0,004699	0,0046
50	1,4	8,2	11,0	0,004682	0,0046