



IEC/TC or SC 28	Secretariat China	Date 2008-02
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Title of TC INSULATION CO-ORDINATION

A. Background

A1 Date of creation:

- 1939

A2 Scope:
For power systems with nominal voltage above 1000 V a.c. and 1500 V d.c., to prepare International Standards regarding:

- A set of definitions used for insulation standardization and co-ordination.
- The basic principles of insulation co-ordination.
- The fields of application.
- The specification of a series of standard insulation levels (without regard to any particular type of equipment).
- A full statement of the tests to be included in the specification of the equipment to meet the insulation levels to be used in relation to the possibilities of overvoltage protective devices.
- Recommendations for the minimum clearance distance in air between live parts.
- An application guide for the users of electrical equipment recommending the insulation levels to be used in relation to the possibilities of overvoltage protective devices.

A3 Working Groups:

- MT05: Maintenance of IEC 60071-1
- MT06: Maintenance of IEC 60071-2
- MT07; Maintenance of IEC 60071-5
- MT08: Maintenance of IEC 60071-4

A4 Total publications: 4

- IEC 60071-1 (2006-01) Ed.8.0: Insulation Co-ordination – Part 1: Definitions, principles and rules.
- IEC 60071-2 (1996-12) Ed.3.0: Insulation Co-ordination – Part 2: Application guide.
- IEC 60071-4 TR (2004-04) Ed.1.0: Insulation Co-ordination – Part 4: Guide to the calculation and modeling of electrical networks
- IEC 60071-5 TS (2002-06) Ed.1.0: Insulation Co-ordination – Part 5: Procedures for high-voltage direct current (HVDC) converter stations.

A5 Published in last 3years: 1

A6 Total work in Progress: 4 items (3 maintenance and 1 new standard)

A7 Members:
P-members (17)
AT, CA, CN, CZ, EG, FR, DE, IN, IT, JP, KR, MX, RU, ZA, ES, SE, GB
O-members (19)
AU, BE, BG, DK, FI, GR, HU, IE, NL, NZ, NO, PL, PT, RO, CS, SG, SK, CH, UA

A8 Liaisons:

- The corresponding liaisons are mainly: IEC SC 17C: High-voltage switchgear and controlgear assemblies
- IEC TC 42: High-voltage testing techniques

- CIGRE A3: High-voltage equipment
 - CIGRE C4: System technical performance
- Contacts with IEEE Surge Protective Devices Committee – Subcommittee 3.4, which deals with insulation coordination within IEEE.

B. Environment

B.1 Business environment

Influence from trade development is presently experienced from the worldwide development of UHV system in AC as well as in DC, The present work of TC 28 is determined by this development.

B.2 Market demand

TC 28 is a Committee preparing horizontal standards. The standards on insulation co-ordination must be a reference for the Apparatus Committees, which have to elaborate Apparatus Standards on the same common basis. TC 28 has to integrate the evolution of the techniques, which can be used to control the overvoltages, the evolution of the technology of overvoltage limiting devices and the evolution of the test methods.

However, TC 28 behaves as an Apparatus committee as far as atmospheric air insulation is concerned.

No competing standard is known.

For AC systems, only maintenance of existing standards is necessary. Developing work is done in the field of UHV.

For DC systems up to UHV range, it is a developing standardization area.

B.3 Trends in technology and trade

For AC systems the trends foreseen in the development in UHV transmission systems.

Future work of the TC will be necessary to cover the demands of this development for AC as well as for DC systems.

B.4 Ecological environment

No effect

C. Work programme

C.1 Current work

The present program consists essentially:

- To standardize UHV insulation levels for AC systems
- To prepare a new IS on Insulation co-ordination on HVDC including UHV
- To prepare revision of IEC 60071-2 to include corrections, altitude correction and other subjects.

C.2 Resources/infrastructure needed

No needs

C.3 Safety aspects (only for committees which do not have a reference to safety in their scope)

D. Future work

To bring up-to-date regularly the AC and DC insulation co-ordination taking into account the evolution of the techniques which can be used to control the overvoltages, the evolution of the technology of overvoltage limiting devices and the evolution of the test methods.

E. Maintenance cycle

Publication no.	Date of publication	Review date	Maintenance result date	Responsibility (Maintenance Team)
IEC 60071-1 Ed.8	01/2006	03/2010	2012	MT 05
IEC 60071-2 Ed.3	12/1996	12/2008	2010	MT 06
IEC 60071-4 TR Ed.1	04/2004	12/2008	2010	MT 08
IEC 60071-5 TS Ed.1	06/2002	-	2008	MT 07

Name or signature of the secretary

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