SVENSK STANDARD SS-EN 61462

Fastställd	Utgåva	Sida	Ansvarig kommitté
2008-04-28	1	1 (1+40)	SEK TK 36

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Isolatorer – Trycksatta och icke trycksatta ihåliga isolatorer av kompositmaterial för elektrisk utrustning med märkspänning över 1000 V – Definitioner, provningsmetoder och villkor för godkännande

Composite hollow insulators – Pressurized and unpressurized insulators for use in electrical equipment with rated voltage greater than 1000 V – Definitions, test methods, acceptance criteria and design recommendations

Som svensk standard gäller europastandarden EN 61462:2007. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61462:2007.

Nationellt förord

Europastandarden EN 61462:2007

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61462, First edition, 2007 - Composite hollow insulators - Pressurized and unpressurized insulators for use in electrical equipment with rated voltage greater than 1000 V - Definitions, test methods, acceptance criteria and design recommendations**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 29.080.10

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61462

October 2007

ICS 29.080.10

English version

Composite hollow insulators - Pressurized and unpressurized insulators for use in electrical equipment with rated voltage greater than 1 000 V - Definitions, test methods, acceptance criteria and design recommendations

(IEC 61462:2007)

Isolateurs composites creux - Isolateurs avec ou sans pression interne pour utilisation dans des appareillages électriques de tensions nominales supérieures à 1 000 V - Définitions, méthodes d'essais, critères d'acceptation et recommandations de conception (CEI 61462:2007)

Verbundhohlisolatoren - Druckbeanspruchte und drucklose Isolatoren für den Einsatz in elektrischen Betriebsmitteln mit Bemessungsspannungen über 1 000 V - Begriffe, Prüfverfahren, Annahmekriterien und Konstruktionsempfehlungen (IEC 61462:2007)

This European Standard was approved by CENELEC on 2007-10-01. 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: rue de Stassart 35, B - 1050 Brussels

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Ref. No. EN 61462:2007 E

SEK Svensk Elstandard

Foreword

The text of document 36C/167/FDIS, future edition 1 of IEC 61462, prepared by SC 36C, Insulators for substations, of IEC TC 36, Insulators, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61462 on 2007-10-01.

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)	2008-07-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-10-01

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 61462:2007 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60507	NOTE	Harmonized as EN 60507:1993 (not modified).
IEC 60694	NOTE	Harmonized as EN 60694:1996 (not modified).
IEC 61006	NOTE	Harmonized as EN 61006:1993 (not modified).
IEC 61166	NOTE	Harmonized as EN 61166:1993 (not modified).
IEC 62271-100	NOTE	Harmonized as EN 62271-100:2001 (not modified).

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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 60060-1	– [1)]	High-voltage test techniques - Part 1: General definitions and test requirements	HD 588.1 S1	1991 [2)]
IEC 60068-2-17	– [1)]	Environmental testing - Part 2: Tests - Test Q: Sealing	EN 60068-2-17	1994 [2)]
IEC 60168	– [1)]	Tests on indoor and outdoor post insulators of ceramic material or glass for systems with nominal voltages greater than 1 kV	EN 60168	1994 [2)]
IEC 62155 (mod)	– [1)]	Hollow pressurized and unpressurized ceramic and glass insulators for use in electrical equipment with rated voltages greater than 1 000 V	EN 62155	2003 [2)]
IEC 62217	– [1)]	Polymeric insulators for indoor and outdoor use with a nominal voltage > 1 000 V - General definitions, test methods and acceptance criteria	EN 62217 + corr. December	2006 [2)] 2006
ISO 1101	– [1)]	Geometrical Product Specifications (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out	EN ISO 1101	2005 [2)]
ISO 3452	Series	Non-destructive testing - Penetrant inspection - General principles	EN ISO 3452	Series

[1)] Undated reference.

[2)] Valid edition at date of issue.

CONTENTS

COMPOSITE HOLLOW INSULATORS –

PRESSURIZED AND UNPRESSURIZED INSULATORS FOR USE IN ELECTRICAL EQUIPMENT WITH RATED VOLTAGE GREATER THAN 1 000 V – DEFINITIONS, TEST METHODS, ACCEPTANCE CRITERIA AND DESIGN RECOMMENDATIONS

1 Scope and object

This International Standard applies to composite hollow insulators consisting of a load-bearing insulating tube made of resin impregnated fibres, a housing (outside the insulating tube) made of elastomeric material (for example silicone or ethylene-propylene) and metal fixing devices at the ends of the insulating tube. Composite hollow insulators as defined in this standard are intended for general use (unpressurized) or for use with a permanent gas pressure (pressurized). They are intended for use in both outdoor and indoor electrical equipment operating on alternating current with a rated voltage greater than 1 000 V and a frequency not greater than 100 Hz or for use in direct current equipment with a rated voltage greater than 1 500 V.

The object of this standard is:

– to define the terms used;
– to prescribe test methods;
– to prescribe acceptance criteria.

This standard does not prescribe impulse voltage or power frequency voltage type tests, nor does it prescribe pollution tests because the withstand voltages are not characteristics of the hollow insulator itself, but of the apparatus of which it ultimately forms a part.

All the tests in this standard, apart from the thermal-mechanical test, are performed at normal ambient temperature. This standard does not prescribe tests that may be characteristic of the apparatus of which the hollow insulator ultimately forms a part. Further technical input is required in this area.

NOTE 1 "Pressurized" means a permanent gas or liquid pressure greater than 0,05 MPa (0,5 bar) gauge. The gas can be dry air or inert gases, for example sulphur hexafluoride, nitrogen, or a mixture of such gases.

NOTE 2 "Unpressurized" means a gas or liquid pressure smaller than or equal to 0,05 MPa (0,5 bar) gauge.

NOTE 3 Composite hollow insulators are intended for use in electrical equipment, such as, but not limited to

- circuit-breakers,
- switch-disconnectors,
- disconnectors,
- earthing switches,
- instrument- and power transformers,
- bushings.

Additional testing defined by the relevant IEC equipment committee may be required.