SVENSK STANDARD SS-EN 62155

Fastställd	Utgåva	Sida	Ingår i
2003-12-15	1	1 (1+52)	SEK Område 36

Svenska Elektriska Kommissionen, SEK

Isolatorer – Trycksatta och icke trycksatta ihåliga isolatorer av keramik eller glas för elektrisk utrustning med märkspänning över 1000 V

Hollow pressurized and unpressurized ceramic and glass insulators for use in electrical equipment with rated voltage greater than 1000 V

Som svensk standard gäller europastandarden EN 62155:2003. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62155:2003.

Nationellt förord

Europastandarden EN 62155:2003

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62155, First edition, 2003 - Hollow pressurized and unpressurized ceramic and glass insulators for use in electrical equipment with rated voltage greater than 1000 V**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare utgiven svensk standard SS-IEC 233, utgåva 1, 1984 och SS-EN 61264, utgåva 1, 1999, gäller ej fr o m 2006-05-01.

ICS 29.080.10

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. *Telefax*: 08 - 444 14 30
E-post: sek@sekom.se. *Internet*: www.sekom.se

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

Svenska Elektriska Kommissionen, SEK, 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 **EN 62155**

NORME EUROPÉENNE

EUROPÄISCHE NORM August 2003

ICS 29.080.10 Supersedes HD 329 S1:1977 & EN 61264:1998

English version

Hollow pressurized and unpressurized ceramic and glass insulators for use in electrical equipment with rated voltages greater than 1 000 V
(IEC 62155:2003, modified)

Isolateurs creux avec ou sans pression interne, en matière céramique ou en verre, pour utilisation dans des appareillages prévus pour des tensions nominales supérieures à 1 000 V
(CEI 62155:2003, modifiée)

Druckbeanspruchte und drucklose Hohlisolatoren aus keramischem Werkstoff und Glas für Anwendungen in elektrischen Betriebsmitteln mit Nennspannungen über 1 000 V
(IEC 62155:2003, modifiziert)

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 62155:2003 E

Foreword

The text of document 36C/143/FDIS, future edition 1 of IEC 62155, 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 62155 on 2003-05-01.

A draft amendment, prepared by Reporting Secretariat SR 36C, was submitted to the formal vote and was approved by CENELEC for inclusion into EN 62155 on 2003-05-01.

This European Standard supersedes HD 329 S1:1977, EN 61264:1998 and its corrigendum July 2000.

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) 2004-03-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-05-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annex ZA is normative and annexes A to D and ZB are informative.
Annexes ZA and ZB have been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 62155:2003 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 standard indicated:

ISO 9001	NOTE	Harmonized as EN ISO 9001:1994, which is superseded by EN ISO 9001:2000 (ISO 9001:2000) (not modified)
ISO 9002	NOTE	Harmonized as EN ISO 9002:1994 (not modified)
ISO 9003	NOTE	Harmonized as EN ISO 9003:1994 (not modified)
IEC 60672-1	NOTE	Harmonized as EN 60672-1:1995 (not modified)
ISO 9004	NOTE	Harmonized as EN ISO 9004:2000 (not modified)
IEC 60273	NOTE	Harmonized as HD 578 S1:1992 (not modified)
IEC 60437	NOTE	Harmonized as EN 60437:1997 (not modified)
IEC 60507	NOTE	Harmonized as EN 60507:1993 (not modified)

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Annex ZA
(normative)

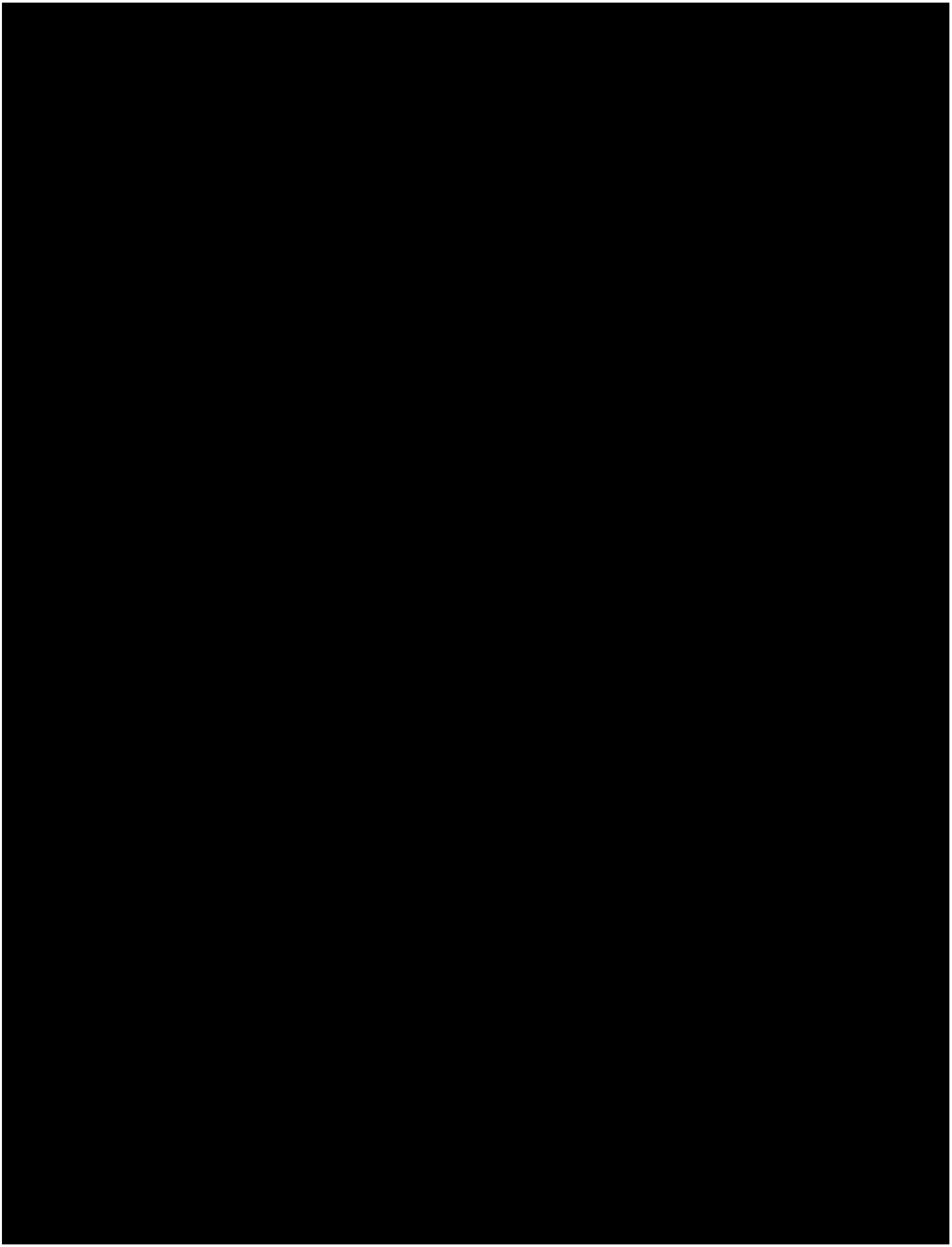
Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 60672-3	1997	Ceramic and glass-insulating materials Part 3: Specifications for individual materials	EN 60672-3	1997
IEC 60694	1996	Common specifications for high-voltage switchgear and controlgear standards	EN 60694 + corr. May	1996 1999
IEC 60865-1	1993	Short-circuit currents - Calculation of effects Part 1: Definitions and calculation methods	EN 60865-1	1993
IEC 61166	1993	High-voltage alternating current circuit-breakers - Guide for seismic qualification of high-voltage alternating current circuit-breakers	EN 61166	1993
IEC 61463	1996	Bushings - Seismic qualification	-	-
IEC 62271-100	2001	High-voltage switchgear and controlgear Part 100: High-voltage alternating-current circuit-breakers	EN 62271-100	2001
ISO 1460	1992	Metallic coatings - Hot dip galvanized coatings on ferrous metals - Gravimetric determination of the mass per unit area	EN ISO 1460	1994
ISO 1461	1999	Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods	EN ISO 1461	1999
ISO 1463	1982	Metallic and oxide coatings - Measurement of coating thickness - Microscopical method	EN ISO 1463	1994
ISO 2064	1996	Metallic and other inorganic coatings - Definitions and conventions concerning the measurement of thickness	EN ISO 2064	2000
ISO 2178	1982	Non-magnetic coatings on magnetic substrates - Measurement of coating thickness - Magnetic method	EN ISO 2178	1995

Publication	Year	Title	EN/HD	Year
ISO 4287	1997	Geometrical Product Specifications (GPS) - Surface texture: Profile method - Terms, definitions and surface texture parameters	EN ISO 4287	1998



CONTENTS

HOLLOW PRESSURIZED AND UNPRESSURIZED CERAMIC AND GLASS INSULATORS FOR USE IN ELECTRICAL EQUIPMENT WITH RATED VOLTAGES GREATER THAN 1000 V

1 Scope and object

1.1 General

This standard is applicable to

– ceramic and glass hollow insulators intended for general use in electrical equipment;
– ceramic hollow insulators intended for use with a permanent gas pressure in switchgear and controlgear.

These insulators are intended for indoor and outdoor use in electrical equipment, operating on alternating current with a rated voltage greater than 1000 V and a frequency not greater than 100 Hz or for use in direct-current equipment with a rated voltage of greater than 1500 V.

The hollow insulators are intended for use in electrical equipment, for example:

– circuit-breakers,
– switch-disconnectors,
– disconnectors,
– earthing switches,
– instrument transformers,
– surge arresters,
– bushings,
– cable sealing ends,
– capacitors.

It is not the object of this standard to prescribe dielectric type tests because the withstand voltages are not characteristics of the hollow insulator itself but of the apparatus of which it ultimately forms a part.

1.2 Hollow insulators or hollow insulator bodies intended for general use

Hollow insulators or insulator bodies of ceramic material or glass, intended for use

– without pressure;
– with permanent pressure ≤50 kPa gauge;
– with permanent gas pressure >50 kPa gauge in combination with an internal volume < 1 l (1000 cm^3);
– with permanent hydraulic pressure.

The object of this standard is to define

– the terms used;
– the mechanical and dimensional characteristics of hollow insulators and hollow insulator bodies;
– the electrical soundness of the wall;
– the conditions under which the specified values of these characteristics are verified;
– the methods of test;
– the acceptance criteria.

1.3 Ceramic hollow insulators intended for use with permanent gas pressure

Hollow insulators or hollow insulator bodies with their fixing devices, intended for use with permanent gas pressure: permanent gas pressure >50 kPa gauge in combination with an internal volume ≥1 l (1 000 cm^3).

NOTE 1 The gas can be dry air, inert gases, for example, SF_6 or nitrogen or a mixture of such gases.

The object of this standard is to define

– the terms used;
– the mechanical and dimensional characteristics of hollow insulators and hollow insulator bodies;
– the electrical soundness of the wall;
– the conditions under which the specified values of these characteristics are verified;
– the methods of test;
– the acceptance criteria;
– design rules;
– test procedures and test values.

NOTE 2 Hollow insulators or hollow insulator bodies are usually integrated into electrical equipment which is electrically type tested as required by the equipment standard.

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 60672-3:1997, *Ceramic and glass insulating materials – Part 3: Specifications for individual materials*

IEC 60694:1996, *Common specifications for high-voltage switchgear and controlgear standards*

IEC 60865-1:1993, *Short-circuit currents – Calculation of effects – Part 1: Definitions and calculation methods*

IEC 61166:1993, *High-voltage alternating current circuit-breakers – Guide for seismic qualification of high-voltage alternating current circuit-breakers*

IEC 61463:1996, *Bushings – Seismic qualification*