SVENSK STANDARD SS-EN 62271-204

Fastställd	Utgåva	Sida	Ansvarig kommitté
2012-09-12	1	1 (1+55)	SEK TK 17AC

Kopplingsapparater för spänning över 1 kV – Del 204: Styva gasisolerade transmissionsledningar för märkspänning över 52 kV

High-voltage switchgear and controlgear – Part 204: Rigid gas-insulated transmission lines for rated voltage above 52 kV

Som svensk standard gäller europastandarden EN 62271-204:2011. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62271-204:2011.

Nationellt förord

Europastandarden EN 62271-204:2011

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62271-204, First edition, 2011 - High-voltage switchgear and controlgear - Part 204: Rigid gas-insulated transmission lines for rated voltage above 52 kV**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 29.130.10

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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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.

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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 62271-204

September 2011

ICS 29.130.10

English version

High-voltage switchgear and controlgear - Part 204: Rigid gas-insulated transmission lines for rated voltage above 52 kV

(IEC 62271-204:2011)

Appareillage à haute tension -
Part 204: Lignes de transport rigides à isolation gazeuse de tension assignée supérieure à 52 kV
(CEI 62271-204:2011)

Hochspannungs-Schaltgeräte und -Schaltanlagen -
Teil 204: Starre gasisolierte Übertragungsleitungen für Bemessungsspannungen über 52 kV
(IEC 62271-204:2011)

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 62271-204:2011 E

SEK Svensk Elstandard

Foreword

The text of document 17C/510/FDIS, future edition 1 of IEC 62271-204, prepared by SC 17C, "High-voltage switchgear and controlgear assemblies", of IEC TC 17, "Switchgear and controlgear" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62271-204:2011.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2012-05-30
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2014-08-30

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62271-204:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

[1] IEC 60071-1 NOTE Harmonized as EN 60071-1.

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 60050-151	-	International Electrotechnical Vocabulary (IEV) - Part 151: Electrical and magnetic devices	-	-
IEC 60050-441	1984	International Electrotechnical Vocabulary (IEV) - Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 60060-1	-	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	-
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60229	2007	Tests on cable oversheaths which have a special protective function and are applied by extrusion	EN 60229	2008
IEC 60270	-	High-voltage test techniques - Partial discharge measurements	EN 60270	-
IEC 60287-3-1	1995	Electric cables - Calculation of the current rating - Part 3: Sections on operating conditions - Section 1: Reference operating conditions and selection of cable type	-	-
IEC 60376	-	Specification of technical grade sulfur hexafluoride (SF_6) for use in electrical equipment	EN 60376	-
IEC 60480	-	Guidelines for the checking and treatment of sulphur hexafluoride (SF_6) taken from electrical equipment and specification for its re-use	EN 60480	-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 62271-1	2007	High-voltage switchgear and controlgear - Part 1: Common specifications	EN 62271-1	2008
IEC 62271-203	201X[1)]	High-voltage switchgear and controlgear - Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV	EN 62271-203	201X[1)]
IEC/TR 62271-303	-	High-voltage switchgear and controlgear - Part 303: Use and handling of sulphur hexafluoride (SF6)	CLC/TR 62271-303	-

[1)] To be published.

Publication	Year	Title	EN/HD	Year
ISO/IEC Guide 51	-	Safety aspects - Guidelines for their inclusion in standards	-	-

CONTENTS

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 204: Rigid gas-insulated transmission lines for rated voltage above 52 kV

1 General

1.1 Scope

This part of IEC 62271 applies to rigid HV gas-insulated transmission lines (GIL) in which the insulation is obtained, at least partly, by a non-corrosive insulating gas, other than air at atmospheric pressure, for alternating current of rated voltages above 52 kV, and for service frequencies up to and including 60 Hz.

It is intended that this international standard be used where the provisions of IEC 62271-203 do not cover the application of GIL (see NOTE 3).

At each end of the HV gas-insulated transmission line, a specific element may be used for the connection between the HV gas-insulated transmission line and other equipment like bushings, power transformers or reactors, cable boxes, metal-enclosed surge arresters, voltage transformers or GIS, covered by their own specification.

Unless otherwise specified, the HV gas-insulated transmission line is designed to be used under normal service conditions.

NOTE 1 In this international standard, the term "HV gas-insulated transmission line" is abbreviated to "GIL".

NOTE 2 In this international standard, the word "gas" means gas or gas mixture, as defined by the manufacturer.

NOTE 3 Examples of GIL applications are given:

- where all or part of the HV gas-insulated transmission line is directly buried; or
- where the HV gas-insulated transmission line is located, wholly or partly, in an area accessible to public; or
- where the HV gas-insulated transmission line is long and the typical gas compartment length exceeds the common practice of GIS technology.

1.2 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 60050-151, *International Electrotechnical Vocabulary (IEV) – Part 151: Electrical and magnetic devices*

IEC 60050-441:1984, *International Electrotechnical Vocabulary (IEV) – Chapter 441: Switchgear, controlgear and fuses*

IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60229:2007, *Electric cables – Tests on extruded oversheaths with a special protective function*

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

IEC 60287-3-1:1995, *Electric cables – Calculation of the current rating – Part 3-1: Sections on operating conditions – Reference operating conditions and selection of cable type*

IEC 60376, *Specification of technical grade sulfur hexafluoride (SF_6) for use in electrical equipment*

IEC 60480, *Guidelines for the checking and treatment of sulfur hexafluoride (SF_6) taken from electrical equipment and specification or its re-use*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 62271-1:2007, *High-voltage switchgear and controlgear – Part 1: Common specifications*

IEC 62271-203:2011, *High-voltage switchgear and controlgear – Part 203:Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV*[2]

IEC 62271-303, *High-voltage switchgear and controlgear – Part 303:Use and handling of sulphur hexafluoride (SF_6)*

ISO/IEC Guide 51, *Safety aspects – Guidelines for their inclusion in standards*

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2 To be published.