



BSI Standards Publication

## UHV AC transmission systems

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Part 201: UHV AC substation design

## National foreword

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## TECHNICAL SPECIFICATION



**UHV AC transmission systems –  
Part 201: UHV AC substation design**

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CONTENTS

FOREWORD.....	6
1 Scope.....	8
2 Normative references .....	8
3 Terms and definitions .....	9
4 UHV AC substation requirement .....	10
4.1 General requirement.....	10
4.2 System demands .....	10
4.3 Operation and maintenance requirements.....	11
4.4 Construction requirements .....	11
4.5 Site condition.....	11
4.6 Environmental impact.....	12
4.7 Economy.....	12
5 Bus scheme and feeder connection .....	12
5.1 General.....	12
5.2 Scheme at high-voltage side of main transformer.....	13
5.3 Scheme at intermedium-voltage side of main transformer.....	14
5.4 Scheme at low-voltage side of main transformer .....	14
5.5 System neutral earthing mode of a UHV AC substation.....	15
6 Selection of equipment and conductors .....	16
6.1 General.....	16
6.1.1 Voltage.....	16
6.1.2 Rated current.....	16
6.1.3 Rated frequency .....	16
6.2 Basic requirements .....	16
6.2.1 Electrical requirements .....	16
6.2.2 Mechanical requirements .....	17
6.2.3 Environmental conditions.....	17
6.3 Transformer .....	18
6.4 UHV shunt reactor and neutral-earthing reactor .....	19
6.5 UHV switchgear .....	19
6.6 UHV circuit breaker.....	20
6.7 UHV disconnector .....	20
6.8 UHV earthing switch for maintenance .....	21
6.9 High speed earthing switch.....	22
6.10 UHV current transformer .....	22
6.11 UHV voltage transformer.....	22
6.12 UHV surge arrester.....	23
6.13 Reactive power compensation device for low voltage side of UHV transformer .....	23
6.14 UHV bushing.....	23
6.15 UHV insulator .....	24
6.16 UHV conductor.....	24
6.16.1 General .....	24
6.16.2 Conductor type .....	24
6.16.3 Selection of current-carrying capacity (cross-section).....	25
6.16.4 Corona and radio interference .....	25
6.16.5 Mechanical strength.....	26

7	Equipment layout.....	26
7.1	General requirement of equipment layout.....	26
7.1.1	General .....	26
7.1.2	Optimization of substation layout .....	26
7.1.3	Seismic performance .....	26
7.1.4	Construction, serviceability and reliability and failure response ability.....	26
7.2	Minimum clearances .....	27
7.2.1	Normal environmental conditions .....	27
7.2.2	Minimum clearances in air-voltage range .....	27
7.3	Electromagnetic environment.....	27
7.3.1	Electrostatic induction mitigation design .....	27
7.3.2	Magnetic induction mitigation design .....	28
7.3.3	Audible noise mitigation design .....	28
7.4	Selection of switchgear equipment.....	29
7.5	Switchgear Installations layout.....	29
7.5.1	General .....	29
7.5.2	Location arrangement of switchgear .....	29
7.5.3	Basic arrangement of surge arresters .....	30
7.5.4	Optimal gas-insulated busbar (GIB) layout and length .....	30
7.5.5	Utilization of working space for substations .....	30
7.6	Protection against direct lightning strike.....	31
7.7	Earthing systems .....	31
7.7.1	General considerations .....	31
7.7.2	Multiple point earthing method for GIS .....	32
7.8	Seismic design.....	33
7.8.1	General .....	33
7.8.2	Basic seismic design .....	33
7.8.3	Special seismic performance for UHV AC substation equipment .....	34
8	Control, protection and communication.....	35
8.1	General.....	35
8.2	Control system.....	35
8.3	Relay protection.....	36
8.3.1	General .....	36
8.3.2	Duplicate configuration of UHV AC equipment relay protection .....	36
8.3.3	UHV transformer protection .....	36
8.4	Communication .....	37
8.5	Electromagnetic compatibility requirements for control and protection equipment.....	37
9	DC and AC auxiliary power supply system.....	38
9.1	General.....	38
9.2	DC power supply system.....	38
9.3	AC auxiliary power supply system.....	38
9.4	AC uninterruptible power supply (UPS) system .....	39
10	UHV gantry, support and foundation design.....	39
10.1	UHV gantry and support design .....	39
10.1.1	General .....	39
10.1.2	Load and combination of loads .....	39
10.1.3	Detailing requirements.....	40
10.2	GIS or MTS foundation design .....	41

Annex A (informative) Load combination of UHV AC equipment .....	43
Annex B (informative) Specification of UHV AC equipment and conductor .....	44
Annex C (informative) 1 000 kV outdoor overhead flexible conductor for UHV AC substations in China .....	46
C.1 General.....	46
C.2 Environmental conditions .....	46
C.3 Current-carrying capacity and thermal stability check.....	46
C.3.1 Current-carrying capacity check.....	46
C.3.2 Thermal stability check .....	47
C.4 Determination of bundle spacing .....	48
C.4.1 General .....	48
C.4.2 Calculation of maximum electric field strength around conductor .....	48
C.5 Corona inception voltage .....	49
C.6 Electric field strength on ground caused by electrostatic induction .....	50
Annex D (informative) Corona noise reduction measures of a UHV AC substation conductor under the rainy condition in Japan .....	52
D.1 Basic concept of corona noise reduction .....	52
D.2 Structure design of UHV AC substation conductor .....	52
D.3 Design criteria of partial discharge on UHV AC substation conductor .....	54
D.4 Corona noise measurement of the entrance in UHV AC test station .....	54
Annex E (informative) Typical examples of items to be considered to select switchgear type .....	56
Annex F (informative) Standards related to seismic design .....	58
F.1 Typical seismic guide and standards.....	58
F.2 Comparison of main items among the seismic standards .....	58
Bibliography.....	59
Figure 1 – Birds eye view of a typical UHV AC substation .....	10
Figure 2 – Double busbar (DB) with or without bus section connection.....	13
Figure 3 – One-and-a-half circuit breaker (OHCB) .....	14
Figure 4 – Two-circuit breaker (2CB) .....	14
Figure 5 – Example diagram of a bus scheme and feeder connection .....	15
Figure 6 – Typical configuration of UHV gas-insulated switchgear and crane location .....	31
Figure 7 – Earthing methods .....	33
Figure 8 – Flow chart for seismic qualification.....	34
Figure 9 – Example of continuous UHV gantry and independent gantry.....	41
Figure 10 – GIS foundation forms .....	42
Figure C.1 – Relationship between maximum electric field strength and bundle spacing .....	49
Figure C.1 – Layout plan of main transformer incoming lines .....	51
Figure D.1 – Conductor design of UHV AC substation.....	53
Table 1 – Comparison of a four-legged reactor and HSES .....	22
Table 2 – Comparison of conductors.....	25
Table A.1 – Example of load combination for UHV AC equipment .....	43
Table B.1 – UHV voltage specification .....	44
Table B.2 – Specification of UHV short-circuit current.....	44

Table B.3 – Noise specification .....	44
Table B.4 – Surge arrester specification applied in different countries .....	45
Table C.1 – Current-carrying capacity of bundle conductor .....	47
Table C.2 – Corona inception voltage of conductor .....	50
Table D.1 – Estimated values of corona noise of UHV AC transmission line.....	53
Table D.2 – Design criteria of partial discharge on UHV AC substation conductor .....	54
Table D.3 – Results of corona noise measurements and average value of corona noise .....	55
Table E.1 – The principal technology designs for substations (CIGRE TB 570) .....	56
Table E.2 – Typical examples of items to be considered to select switchgear type .....	57
Table F.1 – Typical seismic guide and standards .....	58
Table F.2 – Comparison of main items among seismic standards.....	58

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**UHV AC TRANSMISSION SYSTEMS –****Part 201: UHV AC substation design**

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 63042-201, which is a technical specification, has been prepared by IEC technical committee 122: UHV AC transmission systems.

The text of this Technical Specification is based on the following documents:

Enquiry draft	Report on voting
122/64/DTS	122/71A/RVDTS

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 63042 series, published under the general title *UHV AC transmission systems*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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## UHV AC TRANSMISSION SYSTEMS –

### Part 201: UHV AC substation design

#### 1 Scope

This part of 63042, which is a Technical Specification, provides common rules for the design of substations with the highest voltages of AC transmission systems exceeding 800 kV, so as to provide safety and proper functioning for the intended use.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60038:2009, *IEC standard voltages*

IEC 60044 (all parts), *Instrument transformers*

IEC 60059:1999, *IEC standard current ratings*  
IEC 60059:1999/AMD1:2009

IEC 60071-1:2006, *Insulation co-ordination – Part 1: Definitions, principles and rules*  
IEC 60071-1:2006/AMD1:2010

IEC 60071-2, *Insulation co-ordination – Part 2: Application guide*

IEC 60076 (all parts), *Power transformer*

IEC 60068-3-3, *Environmental testing – Part 3: Guidance – Seismic test methods for equipments*

IEC 60137, *Insulated busbarings for alternating voltages above 1000 V*

IEC 60168, *Tests on indoor and outdoor post insulators of ceramic material or glass for systems with nominal voltages greater than 1000 V*

IEC 60196:2009, *IEC standard frequencies*

IEC 60253-26, *Measuring relays and protection equipment – Part 26: Electromagnetic compatibility requirements*

IEC TS 60479-1, *Effects of current on human beings and livestock – Part 1: General aspects*

IEC 60721-2-4, *Classification of environmental conditions – Part 2-4: Environmental conditions appearing in nature – Solar radiation and temperature*

IEC TS 60815 (all parts), *Selection and dimensioning of high-voltage insulators intended for use in polluted conditions*

IEC 60865 (all parts), *Short-circuit currents*