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~~Terminology for~~ High-voltage direct current (HVDC) transmission – Vocabulary

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~~TERMINOLOGY FOR~~ HIGH-VOLTAGE DIRECT CURRENT (HVDC) TRANSMISSION – VOCABULARY

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International Standard IEC 60633 has been prepared by subcommittee 22F: Power electronics for electrical transmission and distribution systems, of IEC technical committee 22: Power electronic systems and equipment.

This third edition cancels and replaces the second edition published in 1998, Amendment 1:2009 and Amendment 2:2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) 40 terms and definitions have been amended and 31 new terms and definitions have been added mainly on converter units and valves, converter operating conditions, HVDC systems and substations and HVDC substation equipment;
b) a new Figure 13 on capacitor commutated converter configurations has been added.

The text of this International Standard is based on the following documents:

CDV	Report on voting
22F/480/CDV	22F/491A/RVC

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

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~~TERMINOLOGY FOR~~ HIGH-VOLTAGE DIRECT CURRENT (HVDC) TRANSMISSION – VOCABULARY

1 Scope

This document defines terms for high-voltage direct current (HVDC) power transmission systems and for HVDC substations using electronic power converters for the conversion from AC to DC or vice versa.

This document is applicable to HVDC substations with line commutated converters, most commonly based on three-phase bridge (double way) connections (see Figure 2) in which unidirectional electronic valves, for example semiconductor valves, are used. For the thyristor valves, only the most important definitions are included in this document. A more comprehensive list of HVDC valve terminology is given in IEC 60700-2.

2 Normative references

~~The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.~~

~~IEC 60027 (all parts), *Letter symbols to be used in electrical technology*~~

~~IEC 60050-551:1998, *International Electrotechnical Vocabulary – Part 551: Power electronics*~~

~~IEC 60146-1-1:1991, *General requirements and line commutated convertors – Part 1-1: Specifications of basic requirements*~~

~~IEC 60617-5:1996, *Graphical symbols for diagrams – Part 5: Semiconductors and electron tubes*~~

~~IEC 60617-6:1996, *Graphical symbols for diagrams – Part 6: Production and conversion of electrical energy*~~

There are no normative references in this document.

IEC 60633

Edition 3.0 2019-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

High-voltage direct current (HVDC) transmission – Vocabulary

Transport d'énergie en courant continu à haute tension (CCHT) – Vocabulaire



IEC 60633:2019-04(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HIGH-VOLTAGE DIRECT CURRENT (HVDC) TRANSMISSION – VOCABULARY

FOREWORD

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TRANSPORT D'ÉNERGIE EN COURANT CONTINU À HAUTE TENSION (CCHT) – VOCABULAIRE

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Cette troisième édition annule et remplace la deuxième édition parue en 1998, l'Amendement 1:2009 et l'Amendement 2:2015. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) 40 termes et définitions ont été modifiés et 31 nouveaux termes et définitions ont été ajoutés principalement pour les unités de conversion et les valves, les conditions de fonctionnement du convertisseur, les systèmes et postes CCHT et les équipements des postes CCHT;

b) une nouvelle Figure 13 portant sur les configurations à convertisseurs commutés a été ajoutée.

Le texte de cette Norme internationale est issu des documents suivants:

CDV	Rapport de vote
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TRANSPORT D'ÉNERGIE EN COURANT CONTINU À HAUTE TENSION (CCHT) – VOCABULAIRE

1 Domaine d’application

Le présent document définit les termes relatifs aux systèmes de transport de puissance en courant continu à haute tension (CCHT), et aux postes CCHT utilisant des convertisseurs électroniques de puissance pour la conversion du courant alternatif en courant continu ou inversement.

Le présent document est applicable aux postes CCHT avec des convertisseurs commutés par le réseau, fondés le plus souvent sur le schéma en pont triphasé (deux voies) (voir Figure 2) dans lequel des valves électroniques unidirectionnelles, comme les valves à semiconducteurs, sont utilisées. Pour les valves à thyristors, seules les définitions les plus importantes sont incluses dans le présent document. Une liste plus complète de la terminologie des valves CCHT est donnée dans l’IEC 60700-2.

2 Références normatives

Le présent document ne contient aucune référence normative.