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State-of-the-art in HVDC technology (review of 46th CIGRE Session reports).

Review of papers made by Study Committee B4 «HVDC and power electronics» during 46th CIGRE Session is given. Key topics of discussions were: mutual interactions between HVDC and AC power transmissions, systems with multiple DC infeed, control of embedded YVDC power transmissions, grid backbone structure change from synchronous to asynchronous with use of HVDC back-to-backs, HVDC power transmission containing both LCC and VSC, DC grid control and protection issues, improving MMC structure.

Key words: high voltage direct current power transmission, HVDC back-to-back, hybrid HVDC power transmissions, Multi-infeed Interaction Factor, asynchronous structure, voltage source converter, modular multilevel converter, offshore windfarm, direct current grid.

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