

1. Record Nr.	UNINA9910877692603321
Titolo	HVDC transmission : power conversion applications in power systems / / Chan-Ki Kim ... [et al.]
Pubbl/distr/stampa	Singapore ; ; Hoboken, NJ, : Wiley, c2009
ISBN	1-282-38212-8 9786612382123 0-470-82297-X 1-61583-598-9 0-470-82296-1
Descrizione fisica	1 online resource (460 p.)
Altri autori (Persone)	KimChan-Ki
Disciplina	621.319/12 621.31912
Soggetti	Electric power transmission - Direct current Electronic apparatus and appliances - Power supply - Direct current High voltages Electric current converters
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Development of HVDC Technology --Power conversion --Harmonics of HVDC and removal -- Control of HVDC converter and system -- Interactions between AC and DC systems --Main circuit design --Fault behavior and protection of HVDC system --Insulation of coordination of HVDC -- practical example of an HVDC system --Other converter configurations for HVDC transmission --Modeling and simulation of HVDC systems -- Present and proposed future installations of HVDC systems -- Trends for HVDC applications.
Sommario/riassunto	HVDC is a critical solution to several major problems encountered when trying to maintain systemic links and quality in large-scale renewable energy environments. HVDC can resolve a number of issues, including voltage stability of AC power networks, reducing fault current, and optimal management of electric power, ensuring the technology will play an increasingly important role in the electric power industry. To

address the pressing need for an up-to-date and comprehensive treatment of the subject, Kim, Sood, Jang, Lim, and Lee have collaborated to produce this key text and reference. Combining classroom-tested materials from North America and Asia, HVDC Transmission compactly summarizes the latest research results, and includes the insights of experts from power systems, power electronics, and simulation backgrounds. The authors walk readers through basic theory and practical applications, while also providing the broader historical context and future development of HVDC technology. Presents case studies covering basic and advanced HVDC deployments headed by world-renowned experts. Demonstrates how to design, analyze, and maintain HVDC systems in the field. Provides updates on new HVDC technologies, such as active power filters, PWM, VSC, and 800 KV systems. Rounds out readers' understanding with chapters dedicated to the key areas of simulation and main circuit design. Introduces wind power system interconnection with HVDC. Arms readers with an understanding of future HVDC trends. Balancing theoretical instruction with practical application, HVDC Transmission delivers comprehensive working knowledge to power utility engineers, power transmission researchers, and advanced undergraduates and postgraduates in power engineering programs. The book is also a useful reference for engineers and students focused on closely related areas such as renewable energy and power system planning.

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