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 encounteredwhen trying to maintain systemic links and quality in large-scalerenewable energy environments. HDVC can resolve a number of issues,including voltage stability of AC power networks, reducing faultcurrent, and optimal management of electric power, ensuring thetechnology will play an increasingly important role in the electricpower industry. To

address the pressing need for an up-to-date and comprehensivetreatment of the subject, Kim, Sood, Jang, Lim, and Lee havecollaborated to produce this key text and reference. Combiningclassroom-tested materials from North America and Asia, HVDCTransmission compactly summarizes the latest research results, and includes the insights of experts from power systems, powerelectronics, and simulation backgrounds. The authors walk readersthrough basic theory and practical applications, while alsoproviding the broader historical context and future development ofHVDC technology.. Presents case studies covering basic and advanced HVDCdeployments headed by world-renowned experts. Demonstrates how to design, analyze, and maintain HVDC systemsin the field. Provides updates on new HVDC technologies, such as active powerfilters, PWM, VSC, and 800 KV systems. Rounds out readers' understanding with chapters dedicated tothe key areas of simulation and main circuit design. Introduces wind power system interconnection with HVDC. Arms readers with an understanding of future HVDC trendsBalancing theoretical instruction with practicalapplication , HVDC Transmission delivers comprehensiveworking knowledge to power utility engineers, power transmissionresearchers, and advanced undergraduates and postgraduates in powerengineering programs. The book is also a useful reference forengineers and students focused on closely related areas such asrenewable energy and power system planning.