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Nota di contenuto	Cover; Title Page; Copyright; Dedication; Foreword; Preface; Acronyms; Symbols; Chapter 1: Fundamentals; 1.1 Introduction; 1.2 Rationale Behind MTDC Grids; 1.3 Network Architectures of MTDC Grids; 1.4 Enabling Technologies and Components of MTDC Grids; 1.5 Control Modes in MTDC Grid; 1.6 Challenges for MTDC Grids; 1.7 Configurations of MTDC Converter Stations; 1.8 Research Initiatives on MTDC Grids; 1.9 Focus and Scope of the Monograph; Chapter 2: The Voltage-Sourced Converter (VSC); 2.1 Introduction; 2.2 Ideal Voltage-Sourced Converter; 2.3 Practical Voltage-Sourced Converter; 2.4 Control. 2.5 Simulation2.6 Symbols of the VSC; Chapter 3: Modeling, Analysis, and Simulation of AC-MTDC Grids; 3.1 Introduction; 3.2 MTDC Grid Model; 3.3 AC Grid Model; 3.4 AC-MTDC Load flow Analysis; 3.5 AC-MTDC Grid Model for Nonlinear Dynamic Simulation; 3.6 Small-signal Stability Analysis of AC-MTDC Grid; 3.7 Transient Stability Analysis of AC-MTDC Grid; 3.8 Case Studies; 3.9 Case Study 1: The North Sea

Benchmark System; 3.10 Case Study 2: MTDC Grid Connected to Equivalent AC Systems; 3.11 Case Study 3: MTDC Grid Connected to Multi-machine AC System; Chapter 4: Autonomous Power Sharing. 4.1 Introduction 4.2 Steady-state Operating Characteristics; 4.3 Concept of Power Sharing; 4.4 Power Sharing in MTDC Grid; 4.5 AC-MTDC Grid Load flow Solution; 4.6 Post-contingency Operation; 4.7 Linear Model; 4.8 Case Study; Chapter 5: Frequency Support; 5.1 Introduction; 5.2 Fundamentals of Frequency Control; 5.3 Inertial and Primary Frequency Support from Wind Farms; 5.4 Wind Farms in Secondary Frequency Control (AGC); 5.5 Modified Droop Control for Frequency Support; 5.6 AC-MTDC Load Flow Solution; 5.7 Post-Contingency Operation; 5.8 Case Study; Chapter 6: Protection of MTDC Grids. 6.1 Introduction 6.2 Converter Station Protection; 6.3 DC Cable Fault Response; 6.4 Fault-blocking Converters; 6.5 DC Circuit Breakers; 6.6 Protection Strategies; References; Index; End User License Agreement.

Sommario/riassunto

"Presents a comprehensive modeling framework for MTDC grids which is compatible with the standard AC system modeling for stability studies"--

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