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| Nota di contenuto | About the Editor xv -- List of Contributors xvii -- Preface xix -- About the Companion Website xxi -- 1 Introduction to Transients Analysis of Power Systems with ATP 1 / Juan A. Martinez-Velasco -- 1.1 Overview 1 -- 1.2 The ATP Package 3 -- 1.3 ATP Documentation 5 -- 1.4 Scope of the Book 6 -- References 8 -- 2 Modelling of Power Components for Transients Studies 11 / Juan A. Martinez-Velasco -- 2.1 Introduction 11 -- 2.2 Overhead Lines 12 -- 2.2.1 Overview 12 -- 2.2.2 Multi-conductor Transmission Line Equations and Models 13 -- 2.2.2.1 Transmission Line Equations 13 -- 2.2.2.2 Corona Effect 15 -- 2.2.2.3 Line Constants Routine 15 -- 2.2.3 Transmission Line Towers 16 -- 2.2.4 Transmission Line Grounding 17 -- 2.2.4.1 Introduction 17 -- 2.2.4.2 Low-Frequency Models 17 -- 2.2.4.3 High-Frequency Models 18 -- 2.2.4.4 Treatment of Soil Ionization 20 -- 2.2.5 Transmission Line Insulation 21 -- 2.2.5.1 Voltage-Time Curves 21 -- 2.2.5.2 Integration Methods 22 -- 2.2.5.3 Physical Models 22 -- 2.3 Insulated Cables 23 -- 2.3.1 Overview 23 -- 2.3.2 Insulated Cable Designs 24 -- 2.3.3 Bonding Techniques 25 -- 2.3.4 Material Properties 26 -- 2.3.5 Discussion 27 -- 2.3.6 Cable Constants/Parameters Routines 27 -- 2.4 Transformers 28 -- 2.4.1 Overview 28 -- 2.4.2 Transformer Models for Low-Frequency Transients 31 -- 2.4.2.1 Introduction to Low- |

Gonz©ilez-Molin -- 5.1 Introduction 139 -- 5.2 Input Data File Using ATP Formats 140 -- 5.3 Some Important Issues 142 -- 5.3.1 Before Simulating the Test Case 142 -- 5.3.1.1 Setting Up a System Model 142 -- 5.3.1.2 Topology Requirements 142 -- 5.3.1.3 Selection of the Time-Step Size and the Simulation Time 143 -- 5.3.1.4 Units 143 -- 5.3.1.5 Output Selection 144 -- 5.3.2 After Simulating the Test Case 144 -- 5.3.2.1 Verifying the Results 144 -- 5.3.2.2 Debugging Suggestions 144 -- 5.4 Introductory Cases. Linear Circuits 145 -- 5.4.1 The Series and Parallel RLC Circuits 145 -- 5.4.2 The Series RLC Circuit: Energization Transient 145 -- 5.4.2.1 Theoretical Analysis 145 -- 5.4.2.2 ATP Implementation 147 -- 5.4.2.3 Simulation Results 148 -- 5.4.3 The Parallel RLC Circuit: De-energization Transient 150 -- 5.4.3.1 Theoretical Analysis 150 -- 5.4.3.2 ATP Implementation 152 -- 5.4.3.3 Simulation Results 153 -- 5.5 Switching of Capacitive Currents 155.
5.5.1 Introduction 155 -- 5.5.2 Switching Transients in Simple Capacitive Circuits o DC Supply 155 -- 5.5.2.1 Energization of a Capacitor Bank 155 -- 5.5.2.2 Energization of a Back-to-Back Capacitor Bank 157 -- 5.5.3 Switching Transients in Simple Capacitive Circuits o AC Supply 159 -- 5.5.3.1 Energization of a Capacitor Bank 159 -- 5.5.3.2 Energization of a Back-to-Back Capacitor Bank 160 -- 5.5.3.3 Reclosing into Trapped Charge 162 -- 5.5.4 Discharge of a Capacitor Bank 164 -- 5.6 Switching of Inductive Currents 168 -- 5.6.1 Introduction 168 -- 5.6.2 Switching of Inductive Currents in Linear Circuits 168 -- 5.6.2.1 Interruption of Inductive Currents 168 -- 5.6.2.2 Voltage Escalation During the Interruption of Inductive Currents 170 -- 5.6.2.3 Current Chopping 172 -- 5.6.2.4 Making of Inductive Currents 175 -- 5.6.3 Switching of Inductive Currents in Nonlinear Circuits 176 -- 5.6.4 Transients in Nonlinear Reactances 178 -- 5.6.4.1 Interruption of an Inductive Current 180 -- 5.6.4.2 Energization of a Nonlinear Reactance 181 -- 5.6.5 Ferroresonance 184 -- 5.7 Transient Analysis of Circuits with Distributed Parameters 187 -- 5.7.1 Introduction 187 -- 5.7.2 Transients in Linear Circuits with Distributed-Parameter Components 187 -- 5.7.2.1 Energization of Lines and Cables 187 -- 5.7.2.2 Transient Recovery Voltage During Fault Clearing 191 -- 5.7.3 Transients in Nonlinear Circuits with Distributed-Parameter Components 195 -- 5.7.3.1 Surge Arrester Protection 195 -- 5.7.3.2 Protection Against Lightning Overvoltages Using Surge Arresters 196 -- References 201 -- Acknowledgement 202 -- To Probe Further 202 -- 6 Calculation of Power System Overvoltages 203 / Juan A. Martinez-Velasco and Ferley Castro-Aranda -- 6.1 Introduction 203 -- 6.2 Power System Overvoltages: Causes and Characterization 204 -- 6.3 Modelling for Simulation of Power System Overvoltages 206 -- 6.3.1 Introduction 206 -- 6.3.2 Modelling Guidelines for Temporary Overvoltages 207 -- 6.3.3 Modelling Guidelines for Slow-Front Overvoltages 208.
6.3.3.1 Lines and Cables 208 -- 6.3.3.2 Transformers 208 -- 6.3.3.3 Switchgear 208 -- 6.3.3.4 Capacitors and Reactors 209 -- 6.3.3.5 Surge Arresters 209 -- 6.3.3.6 Loads 210 -- 6.3.3.7 Power Supply 210 -- 6.3.4 Modelling Guidelines for Fast-Front Overvoltages 210 -- 6.3.4.1 Overhead Transmission Lines 210 -- 6.3.4.2 Substations 212 -- 6.3.4.3 Surge Arresters 213 -- 6.3.4.4 Sources 214 -- 6.3.5 Modelling Guidelines for Very Fast-Front Overvoltages in Gas Insulated Substations 214 -- 6.4 ATP Capabilities for Power System Overvoltage Studies 216 -- 6.5 Case Studies 216 -- 6.5.1 Introduction 216 -- 6.5.2 Low-Frequency Overvoltages 216 -- 6.5.2.1 Case Study 1: Resonance Between Parallel Lines 217 -- 6.5.2.2 Case Study 2: Ferroresonance in a Distribution System 219 -- 6.5.3 Slow-Front Overvoltages 225 --

Sommario/riassunto

"This book is aimed at illustrating how the traditional capabilities and the new software and hardware capabilities can be used to carry out the usual transient studies and making possible new and more complex studies. The topics span an introduction to some advanced applications, involving the creation of custom-made models and tools, and the application of multicore environments for advanced studies. All studies will be supported by practical examples and simulation results. Although an introduction to the electromagnetic transients analysis of power systems is covered, a minimum knowledge on power systems transients is advisable. Part I will cover general aspects of the transient analysis (e.g. modelling guidelines, solution techniques, capabilities of a transients tool). Part II will be dedicated to the usual application of a transient tool (e.g. overvoltages, power quality studies, simulation of power electronics devices) plus an introduction to the transient analysis using the ATP. Part III will illustrate how to expand ATP capabilities and applications by creating new models, library of models, or building open systems for optimum selection of power system component parameters"--