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Neutrals; 6.5 Shunt Reactors with Earthed Neutrals; 6.6 Re-Ignitions; 6.7 Unloaded Transformer Switching; 6.8 Discussion; 6.9 Summary; Bibliography; 7 Capacitive Load Switching; 7.1 General; 7.2 Shunt Capacitor Banks; 7.2.1 Energization; 7.2.2 De-Energization; 7.2.3 Outrush; 7.3 Transmission Lines; 7.4 Cables; 7.5 Summary; Bibliography; 8 Circuit Breaker Type Testing; 8.1 Introduction 8.2 Circuit Breaker Interrupting Time8.3 Inherent Transient Recovery Voltages; 8.4 Inductive Load Switching; 8.5 Capacitive Current Switching; Bibliography; Appendix A: Differential Equations; Bibliography; Appendix B: Principle of Duality; Appendix C: Useful Formulae; Appendix D: Euler's Formula; Bibliography; Appendix E: Asymmetrical Current-Calculating Areas Under Curves; Appendix F: Shunt Reactor Switching: First-Pole-to-Clear Circuit Representation; Appendix G: Special Case: Interrupting Small Capacitive Currents; Bibliography; Appendix H: Evolution of Transient Recovery Voltages H.1 IntroductionH.2 TRVs: Terminal Faults; H.3 Terminal Fault TRV Standardization; H.4 Short-Line Fault; H.5 Inductive and Capacitive Load Current Switching; H.6 Terminal Fault TRV Calculation; H.6.1 Pole Factor Calculation; H.6.2 Transient Calculation; Bibliography; Index

Sommario/riassunto

Provides an original, detailed and practical description of current interruption transients, origins, and the circuits involved, and how they can be calculated Current Interruption Transients Calculationis a comprehensive resource for the understanding, calculation and analysis of the transient recovery voltages (TRVs) and related re-ignition or re-striking transients associated with fault current interruption and the switching of inductive and capacitive load currents in circuits. This book provides an original, detailed and practical description of current interruption