1. Record Nr. UNINA9910847092203321 Autore Yang Qingxin **Titolo** The Proceedings of the 18th Annual Conference of China Electrotechnical Society: Volume IV Singapore: ,: Springer Singapore Pte. Limited, , 2024 Pubbl/distr/stampa ©2024 981-9713-51-X **ISBN** Edizione [1st ed.] Descrizione fisica 1 online resource (891 pages) Collana Lecture Notes in Electrical Engineering Series; ; v.1165 Altri autori (Persone) LiZewen LuoAn 621.3 Disciplina Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Intro -- Contents -- Large Signal Stability Analysis Method of DC Nota di contenuto Microgrid Clusters Based on Input-to-State Stability Theory -- 1 Introduction -- 2 Large Signal Modeling of DCMGCs -- 3 Derivation of Large Signal Stability Criterion Based on ISS Theory -- 3.1 ISS-Lyapunov Function Analysis Inside the DCMGs -- 3.2 ISS-Lyapunov Function Analysis Adjacent DCMGs -- 4 Simulation Verification -- 5 Conclusion -- References -- Characteristics Analysis of Integrated Linear Motor Combined Propulsion Levitation and Guidance Used for Superconducting Electrodynamic Suspension Train -- 1 Introduction

Microgrid Clusters Based on Input-to-State Stability Theory -- 1
Introduction -- 2 Large Signal Modeling of DCMGCs -- 3 Derivation
of Large Signal Stability Criterion Based on ISS Theory -- 3.1 ISSLyapunov Function Analysis Inside the DCMGs -- 3.2 ISS-Lyapunov
Function Analysis Adjacent DCMGs -- 4 Simulation Verification -- 5
Conclusion -- References -- Characteristics Analysis of Integrated
Linear Motor Combined Propulsion Levitation and Guidance Used
for Superconducting Electrodynamic Suspension Train -- 1 Introduction
-- 2 PLG System Topology and Working Principle -- 2.1 PLG System
Topology -- 2.2 PLG System Working Principle -- 3 PLG System
Comprehensive Performance Calculation Model -- 3.1 PLG System
Equivalent Circuit Model -- 3.2 Six-Degree-of-Freedom
Electromagnetic Load Calculation Model of PLG System Suspension
Frame -- 3.3 Stiffness Calculation Model of PLG System Suspension
Frame -- 3.4 Model Verification -- 4 Analysis of PLG System
Characteristics -- 4.1 Model Parameters -- 4.2 Analysis of Lift-to-Drag
Ratio and Stiffness Characteristics of the System -- 4.3 Analysis
of Traction Characteristics -- 4.4 Electromagnetic Disturbance
Characteristics of SC Coils -- 5 Conclusions -- References -Simulation and Research on Short Circuit Breaking Arc Characteristics
of Micro Circuit Breaker -- 1 Introduction -- 2 Short Circuit Breaking

Arc Simulation Model -- 2.1 Geometric Model of Micro Circuit Breaker -- 2.2 Simulation Mathematical Model Based on Magnetohydrodynamics -- 3 Simulation Results and Experimental Verification -- 3.1 Simulation Result -- 3.2 Experimental Verification -- 4 Analysis of Influencing Factors -- 4.1 Analysis of the Influence of the Number of Arc Extinguishing Grids -- 4.2 Analysis of the Influence of Vent Length -- 5 Conclusion -- References. Stability Study of Epoxy Resin in Low-Vacuum Environment Applied in Ground Coil Module of High-Speed Flying Train -- 1 Introduction --2 Samples and Experiments -- 2.1 Insulation Material Samples -- 2.2 Experimental Method -- 3 Results and Analysis -- 3.1 Changes in Appearance -- 3.2 Weight Test -- 3.3 Infrared Spectroscopy Test --3.4 Electron Microscopy Scanning Test -- 3.5 Broadband Dielectric Spectroscopy Test -- 3.6 Breakdown Test -- 3.7 Mechanical Tensile Performance Testing -- 3.8 Dynamic Thermal Mechanical Test -- 3.9 Flashover Performance Test -- 3.10 Thermal Conductivity Performance Test -- 4 Conclusion -- References -- Design of Magnetic Circuit Isolation Bi-stable Permanent Magnet Operating Mechanism -- 1 Introduction -- 2 Working Principle Section -- 3 Establishment of Finite Element Model -- 3.1 Model Building -- 3.2 Simulation Results and Analysis -- 4 Instance Verification -- 5 Conclusion -- References -- Distributed Resilient Control Strategy of DC Microgrids Against False Data Injection Attacks (FDIAs) -- 1 Introduction -- 2 Proposed Resilient Secondary Control of DCMGs -- 2.1 Distributed Secondary Control of DCMGs -- 2.2 FDIA Model and Analysis -- 2.3 Distributed Resilient Control Against FDIAs -- 3 MATLAB/Simulink Simulation Verification --3.1 Case 1: Stable Operation of DCMGs -- 3.2 Case 2: Impact of the FDIAs Signals to the DCMG -- 3.3 Case 3: Mitigation of the FDIA by the Proposed Distributed Resilient Control Strategy -- 4 Conclusion -- References -- Large Signal Stability Analysis Based on Takagi-Sugeno Modeling for State Feedback Control of DC Microgrids -- 1 Introduction -- 2 Modeling of DCMGs Based on State Feedback Control -- 3 Large Signal Stability Criterion Based on T-S Modeling of DCMGs -- 4 Simulation Verification -- 5 Conclusion -- References -- Two-Stage Stochastic Optimization of DC Microgrid Clusters. 1 Introduction -- 2 DCMGC Configuration and Control Strategy -- 2.1 DCMGC Configuration -- 2.2 DCMGC Hierarchical Control Strategy -- 3 DCMGC System Model -- 3.1 PV and WT System Model -- 3.2 BESS Model -- 4 Two Stage Stochastic Linear Optimization -- 4.1 General Model Formulation -- 4.2 Objective Function and Constraints -- 5 Simulation -- 6 Conclusion -- References -- Design of Bi-directional Rotary CPS Electromagnetic Operating Mechanism -- 1 Introduction --2 The Working Principle -- 3 Finite Element Simulation Analysis -- 3.1 Simulation Model of Mechanism -- 3.2 Simulation Results and Analysis -- 4 Experimentation -- References -- Study of Optimal Charging Method for Lithium-Ion Batteries Considering Charging Time and Energy Loss -- 1 Introduction -- 2 Battery Model -- 2.1 Equivalent Circuit Model -- 2.2 Thermal Model -- 2.3 Modelling of Coupling --2.4 Model Parameter Identification -- 3 Optimised Charging Method --3.1 Charge Objective Function -- 3.2 Constraint -- 3.3 Optimization Algorithm -- 4 Results and Discussion -- 5 Conclude -- References --Early Warning Strategy for Thermal Runaway of Lithium-Ion Battery Packs -- 1 Introduction -- 2 Experimental Method -- 3 Experiment and Results -- 4 Conclusions -- References -- Multi-load Series Fault Arc Identification Based on PSO-RELM -- 1 Introduction -- 2 Multi-load Series Arc Fault Experimental Program -- 3 The Establishment of Characteristic Quantity Database -- 3.1 Experimental Data -- 3.2 Feature Extraction of Fault Arc -- 4 Fault Arc Detection Model -- 4.1

Regularized Extreme Learning Machine -- 4.2 Particle Swarm Optimization Regularization Extreme Learning Machine -- 4.3 Result Analysis -- 5 Conclusion -- References -- Analysis on an UHV Converter Station AC Filter Circuit Breaker Phase Selection Closing Operation Risk -- 1 Introduction -- 2 AC Filter Configuration. 3 Operation Risk Analysis of AC Filter When Putting into -- 3.1 Filter Arrester Action Voltage Check -- 3.2 Electrical Transient Stress Check of Lightning Arrester for Filter -- 3.3 External Insulation Calculation of Filter Equipment -- 4 Conclusion -- References -- Shape Finding of Ice Covered Wire for Overhead Line Based on Finite Element Analysis -- 1 Introduction -- 2 Catenary Theory Formula Derived -- 3 Simulation and Form-Finding Steps for Transmission Line Conductors in ANSYS Workbench -- 3.1 Basic Assumptions -- 3.2 Simulation of Transmission Lines in ANSYS Workbench -- 3.3 Form-Finding Steps for Transmission Line Conductors -- 4 Case Analysis -- 5 Conclusion -- References -- Diagnosis Method for Eccentric Fault Severity of Permanent Magnet Synchronous Generator Based on Bearing Seat Vibration Characteristics -- 1 Introduction -- 2 Theoretical Analysis --2.1 Magnetic Flux Density -- 2.2 The Vibration Characteristics of the Bearing Seat in Normal and RAGE Conditions -- 3 RAGE Severity Diagnostic Method -- 3.1 Overall Research Strategy -- 3.2 RAGE Severity Diagnostic Method -- 4 Finite Element Analysis -- 4.1 FEA Setup -- 4.2 FEA Results of MPPUA -- 5 Conclusion -- References --Analysis of Electromagnetic Performance of an AUV Wireless Charge Device with New Coil Structure -- 1 Introduction -- 2 Structure of Coil -- 3 Verification by Simulation -- 3.1 Coil Inductance -- 3.2 Circuit Simulation -- 4 Conclusion -- References -- Correlation Analysis of Altitude and Lightning Trip Rate Based on R Language -- 1 Introduction -- 2 Data Sources and Processing -- 2.1 Data Sources --2.2 Data Reduction -- 2.3 Statistical Distribution of Data -- 3 Data Analysis of Altitude and Lightning Trip-Out Rate -- 3.1 Introduction of R Language -- 3.2 Correlation Analysis of Altitude and Lightning Trip-Out Rate. 3.3 Regression Analysis of Altitude and Lightning Trip-Out Rate -- 4

Conclusion -- References -- Analysis of Electromagnetic Performance of a Pulsed HIA with Novel Compensating Winding -- 1 Introduction --2 Basic Structure and Operating Principle -- 2.1 Basic Structure -- 2.2 Operating Principle -- 3 Connection of Winding and External Circuit --3.1 Passive Compensation -- 3.2 Active Feed -- 4 Compensation Effect Comparison -- 4.1 No Load -- 4.2 Passive Compensation -- 4.3 Active Feed -- 5 Conclusion -- References -- Research on Improving of Quality Management of Domestic Motor in Nuclear Power Plant -- 1 Preface -- 2 Motor Defect Case -- 3 Analysis of Common Problems of Motor -- 3.1 Investigation Situation -- 3.2 Expansion Investigation of Multiple Nuclear Power Plant -- 4 Suggested Measures for Quality Management of Domestic Motor -- 4.1 Establish Motor Maintenance Team -- 4.2 Suggestions on In-Service Management of Motor -- 4.3 Suggestions for Motor Manufacturing Stage -- 5 Conclusion --References -- Arc-Fault Unwanted Tripping Survey of Hair Dryers with GB31143-Listed Products -- 1 Introduction -- 2 Platform and Methodology -- 2.1 Arc Fault Tester -- 2.2 Data Acquisition Unit -- 2.3 Hair Dryer Unit -- 2.4 AFDD Products Under Tests -- 2.5 Unwanted Tripping Test -- 3 Results and Analysis -- 3.1 Test Results -- 3.2 Current Waveform Analysis -- 4 Conclusion -- References --Analysis of Repetition Capacitor Charge System Based on Permanent Magnet Excited Homopolar Inductor Alternator -- 1 Introduction -- 2 Block Diagram and Operating Principle of Pulse Power Supply -- 2.1 Block Diagram -- 2.2 Operating Principle -- 3 Capacitor Charging

System Average Value Model -- 4 Verification by Simulation -- 4.1 No-Load Induced Voltage -- 4.2 Charging Current and Voltage -- 5 Conclusion -- References.

Conclusion -- References.
A Study of Multi-microgrid Trading Based on an Improved P2P Two-Way Auction Mechanism.