

ISSN 1000-6753 CN 11-2188/TM 半月刊 SEMIMONTHLY

电工技术学根

TRANSACTIONS OF CHINA ELECTROTECHNICAL SOCIETY



中国电工技术学会主办

2020年 第2期

第 35 卷 Vol.35 No.2

ISSN 1000-6753



电工技术学报

2020年 第35卷 第2期

目 次

电工理论与新技术 215 无线电能传输系统共振机理及共振点分布特性研究 …… 廖志娟 孙 跃 叶兆虹 225 基于突触可塑性的自适应脉冲神经网络在高斯白噪声刺激下的抗扰功能研究(英) ------郭 磊 刘东钊 黄凤荣 于洪丽 电机与电器 双轴励磁同步电机同步电抗随运行工况的变化规律…………许国瑞 胡一平 罗应立 刘晓芳 246 王云冲 沈建新 255 永磁同步电机参数误差补偿-三矢量模型预测电流控制秦艳忠 陈炜 耿 强 永磁直线伺服系统的自适应改进 Elman 神经网络积分反推控制 赵希梅 付东学 金洋洋 266 274 一种改进的磁悬浮轴承开关功率放大器数字单周期控制………… 李诗文 邓智泉 刘程子 李克翔 混合型真空限流断路器短燃弧短间隙下的介质强度恢复试验研究 284 付 雪 庄劲武 柯其琛 曹云东 刘炜 电力电子 300 新型通用混合型直流断路器用 IGBT 测试平台及测试分析 邓二平 应晓亮 张传云 赵志斌 黄永章 310 一种符合欧姆定律的 IGBT 等效电阻模型 贾英杰 罗毅飞 肖 75 刘宾礼 黄永乐 318 基于短路电流法的温差发电最大功率点跟踪控制 …………… 王 军 阎铁生 陈 亮 黄涛 呼爱国 电力系统 袁志昌 吴爱军 田宝烨 郭佩乾 337 勇 王姿雅 焦世青 采用滑动窗口及多重加噪比堆栈降噪自编码的风电机组状态异常检测方法 李 剑 陈伟根 孙 鹏 359 哲 刘慧媛 刘玮 敖健永 372 一种适用于同步相量测量装置校准器的高精度相量测量方法 ……... 许苏迪 刘灏 毕天姝 钱 程 张 锋 赵其娟 冯 涛 赵冠琨 毕天姝 383 孙士云 范小红 海世芳 王 杨 高电压与绝缘 复合绝缘横担界面特性检测研究现状……………………………… 刘云鹏 李 乐 张铭嘉 力等 环氧树脂针-板缺陷在指数衰减脉冲和正弦电压作用下的局部放电特性 欧阳文敏 435 高空核爆电磁脉冲激励下架空输配电线路绝缘子闪络情况分析…………张汉花 邹 至. 田蓓 吴玫蓉 444 气体绝缘组合电器中微米量级金属粉尘运动和放电特征…………张连根 路士杰 李成榕 崔博源 吴昱怡

TRANSACTIONS OF CHINA ELECTROTECHNICAL SOCIETY

2020 Vol.35 No.2

Contents

213	Research on Resonance Mechanism and Resonant Point Distribution Characteristic of Magnetic Coupling whereas
	Power Transfer Systems Liao Zhijuan Sun Yue Ye Zhaohong Tang Chunsen Ge Xuejian
225	Research on Disturbance Rejection of Adaptive Spiking Neural Network Based on Synaptic Plasticity under
	White Gaussian Noise Guo Lei Liu Dongzhao Huang Fengrong Yu Hongli
236	The Variation Law of Synchronous Reactance along with the Operation Condition of
	Dual-Excited Synchronous Generator
246	Direct Torque Control-Space Vector Modulation Control Strategy of Synchronous Reluctance Motor Based on
	Maximum Torque Per-Ampere
255	Three-Vector Model Predictive Current Control Strategy for Permanent Magnet Synchronous Motor Drives with
	Parameter Error Compensation — Qin Yanzhong Yan Yan Chen Wei Geng Qiang
266	Adaptive Modified Elman Neural Network Integral Backstepping Control for Permanent Magnet Linear Servo System Zhao Ximei Fu Dongxue Jin Yangyang
274	An Improved Digital One-Cycle Control Algorithm for Switching Power Amplifier in Magnetic Bearings
274284	Li Shiwen Deng Zhiquan Cao Xin Liu Chengzi Li Kexiang
	Experimental Study on Vacuum Dielectric Recovery of Hybrid Current Limiting Circuit Breaker with Short Arcing Time
202	and Short Gap Liu Siqi Shen Bing Zhuang Jinwu Fu Xue Ke Qichen
292	The Natural Vibration Characteristics of Reed Relay Zhang Gaoting Cao Yundong Liu Wei
300	Novel General-Purpose IGBT Test Platform for Hybrid DC Circuit Breakers and Analysis
	Deng Erping Ying Xiaoliang Zhang Chuanyun Zhao Zhibin Huang Yongzhang
310	An Equivalent Electrical Resistance Model of IGBT Suitable for Ohm's Law
	Jia Yingjie Luo Yifei Xiao Fei Liu Binli Huang Yongle
318	
	Wang Jun Yan Tiesheng Chen Liang Huang Tao Aiguo Patrick Hu
330	Research on Control Strategy for Maximum Power Transmission in Doubly-Fed Hybrid DC System
	Ding Hailong Yuan Zhichang Wu Aijun Tian Baoye Guo Peiqian
337	A Comprehensive Inertia Control Method for Improving the Dynamic Characteristics of Hybrid AC-DC Microgrid
	Shi Jingrong Li Yong He Li Wang Ziya Jiao Shiqing
346	A Method for Detecting Anomaly Conditions of Wind Turbines Using Stacked Denoising Autoencoders with
	Sliding Window and Multiple Noise Ratios
359	Study on Fault Characteristics and Its Related Impact Factors of Photovoltaic Generator
	Xu Kehan Zhang Zhe Liu Huiyuan Liu Wei Ao Jianyong
372	• •
	Xu Sudi Liu Hao Bi Tianshu Qian Cheng Zhang Feng
383	High-Frequency Fault Component Distance Protection for Flexible DC Distribution System
	Jia Ke Zhao Qijuan Feng Tao Zhao Guankun Bi Tianshu
395	Doubly-Fed Wind Farm Outgoing Transformer Differential Protection Based on Excitation Inductance Calculation
	Sun Dejuan Sun Shiyun Fan Xiaohong Hai Shifang Wang Yang
408	Research Status of Interface Detection for Composite Cross-Arm
	Liu Yunpeng Li Le Zhang Mingjia Liu Lei Tang Li et al
425	Partial Discharge Characteristics of Epoxy Resin Needle-Plate Defect under Exponential Decay Pulse
	and Sinusoidal Voltage
435	Flashover Possibility Analysis of Overhead Power Transmission and Distribution Line Insulators with
	the Excitation of High Altitude Electromagnetic PulseZhang Hanhua Zou Jun Tian Bei Wu Meirong
444	Movement and Discharge Characteristics of Micron-Scale Metal Dust in Gas Insulated Switchgear
	Zhang Liangen Lu Shijie Li Chengrong Cui Boyuan Wu Yuvi