



中国科技期刊卓越行动计划集群
中国应用型核心 RCCSE中国核心



ISSN 2095-8676
CN 44-1715/TK
CODEN NFNYJK

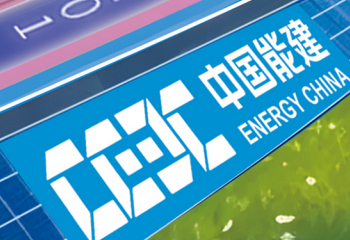
南方能源建设

SOUTHERN ENERGY CONSTRUCTION

2025年1月 第12卷第1期 Vol.12 No.1

— 战略性新兴产业与未来能源专辑 —

创新 绿色 数智 融合



ISSN 2095-8676



主办单位：南方电网数字传媒科技有限公司
中国能源建设集团广东省电力设计研究院有限公司

◆ 高空风力发电

- 计及纵向扰动稳定的高空风电系统建模与稳定运行控制方法 罗必雄, 胡均亮, 杨亚军, 任宗栋, 何亚东 (1)
- 25 MW 级高空风电用摩擦卷扬机设计及优化 牛力钊, 尹阔, 雷崇晖 (12)
- 高空风能电站运维辅助系统研究与设计 何航, 汪少勇, 周家慷, 杨源, 张文望, 林侃 (22)

◆ 能源、交通与气象

- 新型能源体系建设中的气象问题与技术进展 申彦波 (31)
- 极端天气对新型电力系统的影响及应对措施思考 曹辰, 王增平 (43)
- 服务于新型能源体系建设的气象服务保障体系构建思考 朱永昶, 张小锋, 陈正洪, 叶冬, 谭娟, 秦勇, 柳昭辉, 许智棋 (58)
- 海上风电气象服务关键技术及应用分析 王博妮, 王锋, 葛行成, 黄芳, 桑小卓, 张敏 (65)
- 漂浮式海上光伏智能气候预警平台的实践与研究 周程晟, 方世东 (75)

◆ 海上风力发电

- 兆瓦级风力发电机组偏航制动系统摩擦特性试验分析 刘明, 阳雪兵, 张学文, 黄振荣, 卜忠颀 (83)
- 海上风电接入柔直系统的交流故障机理及影响分析 江万里, 王若愚, 李嘉靓, 梁靖仪 (91)
- 海上风电多风场集中送出方式优选方法 刘生 (100)
- 深远海复杂海况下钢管桩清淤工艺的应用研究 陈建均 (109)
- 海上升压站机器人智能巡检系统应用分析 周登科, 程龙, 张亚平, 汤鹏, 顾晟, 郑开元, 何俊生, 张雪 (116)
- 海上风电场选址研究及未来发展前景 李志川, 李星华, 劳景水, 喻志友, 徐伟, 孙见章, 张子健, 李亚 (127)
- 风力发电机组大直径塔筒分片平台设计与校核 兰嘉文, 翟乾俊, 孙仲泽, 万雄斌 (141)
- 锤击过程导致的海上风电大直径单桩结构疲劳损伤特性 陈涛, 丁瑞霖, 郭伟, 余俊辉, 李卫超 (147)
- 基于滑模变结构的双馈风力发电机矢量控制 朱耀明, 张兰红, 陈露露 (160)
- 计及双馈风机无功出力的配电网无功优化 张成, 陈宇, 李灿, 陆良帅, 夏正龙 (168)
- 湍流风场下三风机气动功率优化 陈康, 王蔚源, 涂佳黄 (177)

◆ 信息

- 广告目次 (140)

客座编辑: 李晓宇、曹辰、杨源、刘东华

CONTENTS

◆ High Altitude Wind Energy

- Modeling and Stable Operation Control Method for Airborne Wind Energy System Considering Longitudinal Disturbance Stability LUO Bixiong, HU Junliang, YANG Yajun, REN Zongdong, HE Yadong (1)
- Design and Optimization of Friction Winch for 25 MW Airborne Wind Energy Systems NIU Lizhao, YIN Kuo, LEI Chonghui (12)
- Research and Design of High Altitude Wind Power Station Operation and Maintenance Auxiliary System HE Hang, WANG Shaoyong, ZHOU Jiakang, YANG Yuan, ZHANG Wenjun, LIN Kan (22)

◆ Energy, Transportation and Meteorology

- Meteorological Issues and Technological Progress in the Development of New Energy Systems SHEN Yanbo (31)
- Reflections on the Impact of Extreme Weather on New Power Systems and Countermeasures CAO Chen, WANG Zengping (43)
- Thinking on the Meteorological Services to Ensure the Development of a System for New Energy Sources ZHU Yongchang, ZHANG Xiaofeng, CHEN Zhenghong, YE Dong, TAN Juan, QIN Yong, LIU Zhaohui, XU Zhiqi (58)
- Analysis of Key Technologies and Applications of Meteorological Service for Offshore Wind Power WANG Boni, WANG Feng, GE Hangcheng, HUANG Fang, SANG Xiaozhuo, ZHANG Min (65)
- Practice and Research of Floating Offshore Photovoltaic Intelligent Climate Early Warning Platform ZHOU Chengsheng, FANG Shidong (75)

◆ Offshore Wind Power

- Experimental Analysis on Friction Characteristics of MW Wind Turbine Generator Yaw Braking System LIU Ming, YANG Xuebing, ZHANG Xuewen, HUANG Zhenrong, BU Zhongjie (83)
- AC Fault Mechanism and Impact Analysis of Offshore Wind Power Connected to Flexible and Direct Systems JIANG Wanli, WANG Ruoyu, LI Jiajing, LIANG Jingyi (91)
- Optimization Method for Centralized Transmission of Offshore Wind Power from Multiple Wind Farms LIU Sheng (100)
- Research on Application of Dredging Technology for Steel Pipe Pile Under Complex Sea Conditions in Deep Sea CHEN Jianjun (109)
- Application Analysis of Intelligent Robot Inspection System at Offshore Step-up Substation ZHOU Dengke, CHENG Long, ZHANG Yaping, TANG Peng, GU Sheng, ZHENG Kaiyuan, HE Junsheng, ZHANG Xue (116)
- Study on the Siting of Offshore Wind Farms and Prospects for Future Development LI Zhichuan, LI Xinghua, LAO Jingshui, YU Zhiyou, XU Wei, SUN Jianzhang, ZHANG Zijian, LI Ya (127)
- Design and Verification of Large-Diameter Tower Sharding Platform for Wind Turbine LAN Jiawen, ZHAI Qianjun, SUN Zhongze, WAN Xiongbin (141)
- Fatigue Damage Characteristics of Offshore Wind Power Large-Diameter Monopile Structures During Driving Process CHEN Tao, DING Ruilin, GUO Wei, SHE Junhui, LI Weichao (147)
- Vector Control of Doubly Fed Induction Generator Based on Sliding Mode Variable Structure ZHU Yaoming, ZHANG Lanhong, CHEN Lulu (160)
- Reactive Power Optimization of Distribution Network Considering the Reactive Power Output of Doubly Fed Induction Generator ZHANG Cheng, CHEN Yu, LI Can, LU Liangshuai, XIA Zhenglong (168)
- Optimization of Aerodynamic Power of Three Wind Turbines in Turbulent Wind Farm CHEN Kang, WANG Weiyuan, TU Jiahuang (177)

◆ Information

- Advertisement List (140)