

TELECOM POWER TECHNOLOGY

通信电源技术

中国普天信息产业股份有限公司主管 武汉普天文化传媒发展有限公司出版

ISSN 1009-3664 CN 42-1380/TN

3 半月刊 2020.2.10



本公司官网



本刊数字期刊

- P15 通信电源设备的使用与维护关键技术研究
- P60 电网通信设备评价办法改进和完善研究
- P76 轨道交通通信和信号电源合设方案
- P128 通信直流配电系统中高阻配电应用分析





TONGXIN DIANYUAN JISHU

通信电源技术

TELECOM POWER TECHNOLOGY

半月刊 1984年创刊 2020年第37卷 第3期 总第195期

目 次

中国学术期刊综合评价数据库统计源期刊
中国核心期刊(遴选)数据库收录期刊
中国学术期刊(光盘版)收录期刊
工业和信息化部优秀科技期刊

研制开发

- 基于环网的就地化分布式母线保护研究.....董贝,林朝阳,张尧,丁毅(1)
基于大数据及人工智能的大电网智能调控系统框架.....李金讯,颜清,吴秋佳(5)
末端一体化接入光缆解决方案.....李展安,李名君,李云霞,王玉磊(8)
一种高精度DAC芯片的设计.....刘锡锋,王津飞,陆佳莉(11)
能源互联网中区块链技术应用研究.....杨俊峰(13)
通信电源设备的使用与维护关键技术研究.....考持盛,陈林山(15)
孤网运行状态下储能系统容量配置研究.....王卫国,朱俊飞,丁朝辉(17)
锂电池无迹卡尔曼滤波SOC估算方法研究.....高文哲,黄涛(19)
电力系统自动化中智能技术的应用研究.....戴皓(21)
输电导线覆冰舞动动力特性研究.....邓友晶,陈永宏(23)
基于云架构的雪亮工程平台设计.....陆欣,刘红卫,于磊(25)
家庭智能防火防盗系统设计.....洪长平(28)
同期电量平衡状态监测与辅助分析.....马亚军,李华,於建林(30)
基于CMDB的信息系统故障根因定位技术的研究.....闫祎颖,何云瑞,陈亮,王宁,李扬,郑思远(33)
使用局部放电记录法监测IGBT模块绝缘参数的研究.....宁波,高歌,高宽红,束成(36)
高压断路器操动机构性能非接触检测技术的研究.....闫站正,周华(38)
基于生成对抗网络的红外图像电力设备超分辨算法研究.....严利雄,刘晓华,李茗,司马朝进,刘志鹏(40)
供电营业厅的智能管控技术研究.....毛倩倩,潘琼,司冬梅,孔旭峰(44)
基于配网四区主站和PMS系统的停电研判技术.....毛以平,毛靖斐,司徒佳波,董博(46)
电力调度自动化电子值班系统研究.....杜娟,郝丽萍,申国华,杨芳林,雷鸣(48)
基于直流电容惯性控制的PMSG系统.....胡俊,胡为兵,江卫华(50)
一种封闭容器油滴检漏的装置.....廖和福(52)
分布式光伏/储能一体化并网技术研究及开发.....孙广庆,张赛娜,杨海,任艳栋(54)
基于数学形态学的故障行波测距方法研究.....张世现,余波江,张绍迅(56)
电网通信设备评价办法改进和完善研究.....侯捷(60)
关于琼州海峡500kV海底电缆保护区海上无线通信系统的研究.....王宁,李晓骏,陈政,高东明,曾剑(62)

设计应用

- 动环集中运维管理平台应用探析.....任帅(64)
电网供配电自动化系统及技术的应用研究.....刘志峰(68)
智能化变电站电气二次设计的要点分析.....曾小园(70)
火力发电厂继电保护技术改造方法研究.....卢潘辉(72)
水电厂与开关站间保护信息传递方式研究应用.....肖闻,李炜,李能昌(74)
轨道交通通信和信号电源合设方案.....王小军(76)
基于IPSec协议的VPN安全网关的设计与实现.....胡天麟(78)
储能技术在电气工程领域中的运用及发展趋势.....孔令时(80)
智能探针系统.....李少华(82)
模块化UPS的特质及应用.....吕燕华,杨万青(84)
无线传感器网络研究现状与应用.....苗沛然(87)
红外热成像技术在高压输电设备故障诊断中的运用.....邵山,邱晓明,杨阳(89)
基于NB-IoT技术的变电站电缆沟综合环境实时动态监测系统技术研究应用.....陶然兵,周慧,李佩玉,李莉萍,范怡琛(91)
数据加密技术应用在计算机网络信息安全中的应用.....伍永峰(93)
电力通信线路存在的主要问题及对策.....谢详华(95)
电力计量装置的异常原因与监测分析.....颜芳红(97)
微波铁氧体器件在现代电子设备中的应用.....杨天颖(99)
电气自动化中节能设计技术的应用.....邹林峰(101)
人工智能技术在电力自动化中的应用.....林庆瑞,黄燕珊(103)
集成电路的电磁兼容性与设计.....晏张平(105)
电气工程自动化技术在电力系统运行中的应用.....胡浙东(107)
太阳能电源系统在大坝灌区的应用.....郭华富(109)
电力系统中电气自动化控制技术的运用.....王晓彤(111)
铝型材折叠式光缆接续工作台的研制.....余林文(113)
基于GPRS的废气治理设备远程控制系统的开发与应用.....冯业钧,周任文,汤剑飞,冯伟杰,潘康华,周仁立,冯肇霖(115)
同步电机数字励磁系统在磷矿球磨机的应用与研究.....苏红生,李高桥(118)
储能系统在火力发电厂联合调频应用.....刘强(120)
智能铁路时空信息云平台应用研究.....李顺成,祝晓红(123)
铝型材折叠式电动飞机的研制.....江泽,罗勇,杨会涛(126)
通信直流传配电系统中高阻配电应用分析.....黄保哲(128)
泛在电力物联网的边缘节点感知自适应数据处理方法分析.....崔孟阳,王会琳,薛保星,高晓丽(131)
高压开关柜局部放电带电检测技术的应用.....李智勇,周华(133)
基于Nmap&Nessus的漏洞扫描.....王凯,李志超,王荣昌,高文清,王微雅,王灵(135)
变电二次设备的状态检修技术管理研究.....陈忠敏(137)
电网信息物理系统网络安全风险分析与防护对策.....覃岩岩,王宁,郭舒扬(139)
变电站巡视中的图像识别技术应用.....尹雁和,贾子然,曾毅豪,罗力涛(141)
可视化技术在电力调度自动化中的应用.....刘丽(143)
风力发电自动化控制系统中智能化技术的运用.....于锦春(145)
电气自动化技术在海洋石油生产作业中的应用.....张鹏(147)
低压线路漏电故障定位仪的设计.....姚毅杰,张森(149)
微机电系统集成设计方法与实现技术分析.....范方贵(151)

主管单位：中国普天信息产业股份有限公司
主办单位：武汉普天电源有限公司
编辑出版：武汉普天文化传媒发展有限公司
印刷单位：廊坊市博林印务有限公司

编委会主任：宋绍曾
编委会副主任：黄秀军 程勇 雷志鸿 程刚
编委会委员（按姓氏笔划排序）：

王殿魁 工业与信息化部通信电源专业情报网 秘书长
孙研 中国移动通信集团公司网络部综合处 副处长
李占师 中国电源学会 副秘书长
李建兵 解放军信息工程大学 副教授
朱忠尼 空军预警学院 教授
刘群 湖北工业大学 教授
刘希禹 中讯邮电咨询设计院 教授级高工
阮新波 华中科技大学 教授,博导
吴雷 江南大学 副教授
张占松 广东工业大学 教授
张谷勋 武汉国测数字公司 总工
张清泉 中讯邮电咨询设计院 教授级高工
杨世忠 中国电信集团公司网络运行维护中心高级业务督导
陈坚 华中科技大学 教授
陈祖新 武汉软件工程职业学院 副教授
陈秋麟 台湾大学电机系 教授
陈道炼 青岛大学 教授,博导
邹云屏 华中科技大学 教授
吴正国 海军工程大学 教授
余岳辉 华中科技大学 教授
何湘宁 浙江大学 教授
罗方林 新加坡南洋理工大学 教授
林维明 福州大学 教授,博导
范敦浩 武汉普天通信设备有限公司 高工
侯福平 中国电信通信电源维护技术支撑中心 主任
桂长清 中船总公司712研究所 研究员
康勇 华中科技大学 教授,博导
秦娟英 武汉理工大学 教授
黄悦华 三峡大学 教授
谢运祥 华南理工大学 教授
熊兰英 通信标准化协会 主席

WWW.TELPOWER.COM



CONTENTS

Manufacture & Development

- Research on Local Distributed Bus Protection Based on Ring Network DONG Bei, LIN Chao-yang, ZHANG Yao, DING Yi(1)
Intelligent Control System Framework of Large Power Grid Based on Big Data and Artificial Intelligence LI Jin-xun, YAN Qing, WU Qiu-jia(5)
End Integration Access Optical Cable Solution LI Zhan-an, LI Ming-jun, LI Yun-xia, WANG Yu-lei(8)
Design of a High Precision DAC Chip LIU Xi-feng, WANG Jin-fei, LU Jia-li(11)
Application Research of Block Chain Technology in Energy Internet YANG Jun-feng(13)
Research on the Key Technology of Using and Maintaining Communication Power Equipment KAO Chi-sheng, CHEN Lin-shan(15)
Research on Capacity Allocation of Energy Storage System in Isolated State WANG Wei-guo, ZHU Jun-fei, DING Chao-hui(17)
Research on SOC Estimation Method of Unscented Kalman Filter for Lithium Battery GAO Wen-zhe, HUANG Tao(19)
Application of Intelligent Technology in Power System Automation DAI Zhe(21)
Study on the Dynamic Characteristics of Ice-covered Transmission Wire DENG You-jing, CHEN Yong-hong(23)
Design of Xueliang Engineering Platform Based on Cloud Architecture LU Xin, LIU Hong-wei, YU Lei(25)
Home Intelligent Fire and Anti-theft System Design HONG Chang-ping(28)
Monitoring and Auxiliary Analysis of the State of Electricity Balance in the Same Period MA Ya-jun, LI Hua, YU Jian-lin(30)
Research on CMDB-based Fault Location Technology of Information System YAN Yi-ying, HE Yun-rui, CHEN Liang, WANG Ning, LI Yang, ZHENG Si-yuan(33)
Study on Insulation Parameters Monitoring of IGBT Module Using Partial Discharge Recording Method NING Bo, GAO Ge, GAO Kuang-hong, SU Cheng(36)
Study on Non-contact Testing Technology for Operating Mechanism of High Voltage Circuit Breaker YAN Zhan-zheng, ZHOU Hua(38)
Research on Infrared Images Super-resolution Algorithm on Power Equipment Based on Generative Adversarial Network YAN Li-xiong, LIU Xiao-hua, LI Ming, SIMA Zhao-jin, LIU Zhi-peng(40)
Research on Intelligent Control Technology of Power Supply Business Hall MAO Qian-qian, PAN Zhe-qiong, SI Dong-mei, KONG Xu-feng(44)
Research on Judgment Technology of Power Outage Based on Four Area Main Station and PMS System of Distribution Network MAO Yi-ping, MAO Jing-fei, SITU Jia-bo, DONG Bo(46)
Research on Electronic Duty System of Power Dispatching Automation DU Juan, HAO Li-ping, SHEN Guo-hua, YANG Fang-lin, LEI Ming(48)
PMSC System Based on DC Capacitance Inertial Control HU Jun, HU Wei-bing, JIANG Wei-hua(50)
Device for Leak Detection of Closed Container Oil Droplets LIAO He-fu(52)
Research and Development of Distributed Photovoltaic/Energy Storage Integrated Grid Connection Technology SUN Guang-qing, ZHANG Sai-na, YANG Hai, REN Yan-dong(54)
Research on Fault Traveling Wave Location Method Based on Mathematical Morphology ZHANG Shi-xian, YU Bo-jiang, ZHANG Shao-xun(56)
Research on the Improvement and Perfection of the Evaluation Method of Power Network Communication Equipment HOU Jie(60)
Research on the Marine Wireless Communication System in the 500 kV Submarine Cable Protection Area of QiongZhou Strait WANG Ning, LI Xiao-jun, CHEN Zheng, GAO Dong-ming, ZENG Jian(62)
- Design Application**
- Analysis on the Application of Power and Environment Centralized Monitoring Management Platform ... REN Shuai(64)
Research on Application of Power Supply and Distribution Automation System and Technology LIU Zhi-feng(68)
Key Points of Secondary Electrical Design of Intelligent Substation ZENG Xiao-yuan(70)
Research on Improvement Method of Relay Protection Technology in Thermal Power Plant LU Pan-hui(72)
Research and Application of Protection Information Transfer between Hydropower Plant and Switch Station XIAO Chuang, LI Wei, LI Neng-chang(74)
The Joint Scheme of Rail Transit Communication and Signal Power Supply WANG Xiao-jun(76)
Design and Implementation of VPN Security Gateway Based on IPsec Protocol HU Tian-lin(78)
Application and Development Trend of Energy Storage Technology in the Field of Electrical Engineering KONG Ling-shi(80)
Intelligent Probe System LIN Shao-hua(82)
Characteristics and Application of Modular UPS LV Yan-hua, YANG Wan-qing(84)
Research Status and Application of Wireless Sensor Network MIAO Pei-ran(87)
The Application of Infrared Thermal Imaging in Fault Diagnosis of High Voltage Transmission Equipment SHAO Shan, QIU Xiao-ming, YANG Yang(89)
Research and Application of Real-time Dynamic Monitoring System for Integrated Environment of Cable Trench in Substation Based on NB-IoT Technology TAO Ran-bing, ZHOU Hui, LI Pei-yu, LI Li-ping, Fan Yi-chen(91)
Application of Data Encryption Technology in Computer Network Information Security WU Yong-feng(93)
The Main Problems Existing in Power Communication Lines and Countermeasures XIE Xiang-hua(95)
Analysis of Abnormal Causes and Monitoring of Power Metering Device YAN Fang-hong(97)
Application of Microwave Ferrite Devices in Modern Electronic Equipment YANG Tian-ying(99)
Application of Energy-saving Design Technology in Electrical Automation ZOU Lin-feng(101)
The Application of Artificial Intelligence Technology in Power Automation LIN Qing-rui, HUANG Yan-shan(103)
Electromagnetic Compatibility and Design of Integrated Circuits YAN Zhang-ping(105)
The Application of Electrical Engineering Automation Technology in Power System Operation HU Zhe-dong(107)
Application of Solar Power System in Daguanba Irrigation District GUO Hua-fu(109)
Application of Electrical Automation Control Technology in Power System WANG Xiao-tong(111)
Research and Development of Aluminum Profile Folding Type Fiber Optic Cable Connecting Table YU Lin-wen(113)
Development and Application of Remote Control System for Waste Gas Treatment Equipment Based on GPRS FENG Ye-jun, ZHOU Ren-wen, TANG Jian-fei, FENG Wei-jie, PAN Kang-hua, ZHOU Ren-li, FENG Zhao-lin(115)
Application and Research of Synchronous Motor Digital Excitation System in Phosphate Ore Ball Mill SU Hong-sheng, LI Gao-qiao(118)
Application of Energy Storage System in Joint Frequency Regulation of Thermal Power Plant LIU Liang(120)
Research on Application of Intelligent Railway Spatial and Temporal Information Cloud Platform LI Shun-cheng, ZHU Xiao-hong(123)
Development of Folding Electric Flying Car with Aluminum Profile JIANG Ze, LUO Yong, YANG Hui-tao(126)
Analysis of High-resistance Power Distribution Application in Communication DC Distribution System HUANG Bao-zhe(128)
Analysis of Edge Node Perceptive Adaptive Data Processing Method in Ubiquitous Power Internet of Things CUI Meng-yang, WANG Hui-lin, XUE Bao-xing, GAO Xiao-li(131)
Application of Partial Discharge Live Detection Technology for High Voltage Switchgear LI Zhi-yong, ZHOU Hua(133)
Vulnerability Scanning Based on Nmap&Nessus WANG Kai, LI Zhi-chao, WANG Rong-chang, GAO Wen-qing, WANG Wei-ya, WANG Jiong(135)
Research on Status Maintenance Technology Management of Secondary Substation Equipment CHEN Zhong-min(137)
Network Security Risk Analysis and Protection Measures of Power Network Information Physical System QIN Yan-yan, WANG Ning, GUO Shu-yang(139)
Application of Image Recognition Technology in Substation Patrol YIN Yan-he, JIA Zi-ran, ZENG Yi-hao, LUO Li-tao(141)
Application of Visualization Technology in Power Dispatching Automation LIU Li(143)
Application of Intelligent Technology in Automatic Control System of Wind Power Generation YU Jin-chun(145)

Telecom Power Technology

Vol. 37 No. 3 (Serial No.195)

February 2020

Supervised:

China Potevio Co.,Ltd.

Charged by:

Wuhan Putian Power Supply Co.,Ltd.

Edited and Published by:

Wuhan Putian Culture Media Development Co.,Ltd.

Post Code: 430223

Tel: 027-87922692, 87922693

Fax: 027-87922692

Published by: Langfang Bolin Printing Co.,Ltd.

Subscription: Domestic & Foreign

Publisher & Chief editor: LI JUN

Executive Chief Editor: SONG Hou-zhi

Deputy Editor-in-chief: ZENG Wei

Executive Editor: WANG Qian

Publication Number: ISSN 1009-3664 CN 42-1380/TN

Advertising Operation License: 4201004000338

Issuing Date: February 10, 2020

Price: 30.00 Yuan RMB



TONGXIN DIANYUAN JISHU

通信电源技术

TELECOM POWER TECHNOLOGY

半月刊 1984 年创刊 2020 年第 37 卷 第 3 期 总第 195 期

通信电源技术

TELECOM POWER TECHNOLOGY

半月刊 1984 年创刊 2020 年第 37 卷 第 3 期 总第 195 期

目 次

中国学术期刊综合评价数据库统计源期刊
中国核心期刊（遴选）数据库收录期刊
中国学术期刊（光盘版）收录期刊
工业和信息化部优秀科技期刊

基于大数据技术的分布式光伏服务管理平台研究与设计 ······ 马 阔, 金一瑜, 宏振航, 楼省吾, 蒋榆桐 (153)

通信技术

- 通信传输线路的设计及施工研究 ······ 曾义 (155)
OTN 技术在光纤传输接入网络中的应用 ······ 蒋大鹏 (158)
5G 时代通信局站蓄电池组使用与维护 ······ 李培龙 (160)
配网中电力通信技术混合组网 ······ 邓文坤, 王竹松 (162)
通信设备带电绝缘维护技术与应用研究 ······ 李莲, 王诗雅, 王庆伟, 余红杰, 崔华 (164)
现代信息通信工程中传输技术的应用分析 ······ 韦祖华 (166)
OTN 技术在光纤传输接入网络中的设计与应用探究 ······ 龙玲, 谭本良 (169)
电力通信系统电源运行维护及故障处置探究 ······ 吕志超 (171)
智能电网信息通信架构演进研究 ······ 牛军, 牛鹏程 (173)
UHF 频段卫星通信系统干扰检测技术研究 ······ 吴旦 (175)
铁路通信光缆维护要点分析与故障处理 ······ 周震 (177)
基于有线通信的光纤接入网技术及实施要点分析 ······ 谭晓 (179)
人工智能在军事通信中的应用 ······ 王振义, 邹力 (181)
OTN 技术在传输网络中的应用分析 ······ 苏林峰, 郑博, 万琰, 李杰锋 (183)
物联网分布式拒绝服务攻击流量检测研究概述 ······ 韩长江, 丁俊芳 (185)
通信电源技术的发展与应用分析 ······ 蔡安辉 (187)
传输技术在信息通信工程中的应用 ······ 李奕杨, 符祎, 刘晚娟 (189)
物联网技术与 LTE 无线通信技术探究 ······ 蔡剑 (191)
计算机通信的安全现状及防护策略 ······ 范冰山 (193)
基于 5G 边缘网络的视频 CDN 业务分流方案探讨 ······ 洪一帆 (195)
信息管理系统中计算机通信软件的运用策略研究 ······ 王铭志 (197)
计算机网络通信协议验证技术的有机运用 ······ 王文韬 (199)
计算机通信技术在人工智能领域的有效应用 ······ 文虎程 (201)
网络安全协议在计算机通信技术中的应用 ······ 杨啸 (203)
计算机网络通信安全中数据加密技术的作用及应用 ······ 张子杰 (205)
大数据时代计算机远程网络通信技术发展趋势研究 ······ 郑成刚 (207)
通信大数据可视化的研究 ······ 陈中 (209)
通信传输网络发展规划的思路 ······ 宋丽军 (212)
5G 基站的开关电源设计方案 ······ 袁宏谋 (214)
通信线路工程施工组织设计编制常见问题分析 ······ 张瑞斌 (216)

运营探讨

- 任务计算机上电启动异常故障的分析与解决 ······ 曹兴冈 (218)
通信系统对电力系统稳定控制的影响 ······ 徐苏宁 (221)
350 MW 火电机组磨煤机永磁同步电机节能改造性能分析 ······ 王晓楠, 吕艳会 (223)
10 kV 配电网线损异常的原因及降损措施 ······ 曾晓丹 (226)
政府网站集约化建设模式探讨 ······ 陈晓静 (228)
数据中心 UPS 阀控铅酸蓄电池维护测试的建议 ······ 黄坚 (230)
风电场并网对电网电能质量的影响 ······ 李强军 (232)
对广电网供配电设计的相关思考 ······ 戴建云 (234)
电气自动化和电气工程的融合 ······ 何明亮 (236)
广播电视台发射天线技术故障及维护对策 ······ 贾堃 (238)
地铁车站中 EPS 电源应用的若干问题 ······ 贾维聪 (240)
刍议新时期供电公司配电网运维的精益管理策略 ······ 李冰 (242)
物联网技术在智能建筑中的运用 ······ 潘智淳 (244)
多晶硅变电站运行方式改变后功率损失计算 ······ 孙长胜 (246)
10 kV 配电线路运行防雷措施的研究 ······ 梁伟 (248)
电源适配器的传导骚扰超标案例分析 ······ 谭书军 (250)
全固态 10 kW DAM 中波发射机的调试探析 ······ 吐尔迪·麦麦提 (252)
变电站电气安装调试中的故障与处理探讨 ······ 王宝沣 (254)
高压电力电缆故障分析及诊断处理 ······ 王媛 (256)
发变组保护屏出口压板误碰分析与防范 ······ 张林渠, 狄素珍 (258)
鄂西北输电线路防雷工作探讨 ······ 罗敬林 (260)
通信工程施工管理模式创新研究 ······ 赵军 (262)
考虑新能源接入的配电网故障停电恢复预案生成技术研究 ······ 吴昌, 章华, 胡继军, 王邵强, 徐艳琨 (264)
新建专用线引起的通信机房搬迁方案设计 ······ 贾高飞 (266)
某风电场风机变频器 crowbar 故障分析及处理 ······ 颜源, 蔡江潮, 李刚 (268)
电工实验中主要故障排查与维修探讨 ······ 黄涛 (270)
江苏昆山地区光伏组件东西坡安装对发电收益的比较分析 ······ 杨海, 刘英杰, 王德仁, 张靖, 雷鹏飞 (272)
基于 SWOT 分析的电网公司发展能源互联网目标探索 ······ 何平, 姚俊韬, 孙阔, 李桂鑫, 王哲 (274)
高压电气试验技术中存在的问题及解决措施 ······ 张荣 (277)
变电站五防电脑串口通信影响鼠标操作故障分析及解决 ······ 蒙德杰 (279)
水轮机调速系统失电保护设计探析 ······ 肖瑞, 石昀东 (281)
电力企业改革对电网企业配电网规划的影响与对策 ······ 孙以哲, 徐浩, 张超, 邹戈 (283)
公网无信号区域远程抄表问题解决方案 ······ 张捷, 付瑶, 孙汉威, 陈蓉燕, 徐扬 (285)
220 kV 变电站所用电外接电源方案及真空断路器选型的探讨 ······ 赵东辉, 吴昕, 李功军 (287)

期刊基本参数:

CN 42-1380/TN*1984*b*16*288*zh*p*Y 30.00*5000*132*2020-03

社长兼主编：李隽
执行主编：宋厚志 027-87922692
副主编：曾蔚 027-87922693
责任编辑：王倩 027-87922722
广告部：15527273108, 15827105246
通信地址：武汉市东湖新技术开发区大学园路 20 号中国普天科技园
邮政编码：430223
传真：027-87922716
网址：www.tptpower.com
www.whptcm.com
邮箱：ed@tptpower.com 或 ad@tptpower.com
或 txdyjs027@126.com

刊号：ISSN 1009-3664 CN 42-1380/TN
邮发代号：38-371
广告经营许可证：4201004000338
出版日期：2020 年 2 月 10 日
发行范围：国内外公开发行
总发行：中国邮政集团公司湖北省分公司
订阅处：全国各地邮政局
中国邮政报刊订阅地址：http://bk11185.cn
定 价：30.00 元



CONTENTS

- Application of Electrical Automation Technology in Offshore Oil Production ZHANG Peng(147)
Design of Leakage Fault Location Instrument for Low Voltage Line YAO Yi-jie, ZHANG Sen(149)
Analysis of Microelectromechanical Systems Integrated Design Method and Implementation Technology FAN fang-gui(151)
Research and Design of Distributed Photovoltaic Service Management Platform Based on Big Data Technology MA Chuang, JIN Yi-yu, MI Zhen-hang, LOU Sheng-wu, JIANG Yu-tong(153)

Telecom Technology

- Study on the Design and Construction of Communication Transmission Lines ZENG Yi(155)
Application of OTN in Optical Fiber Transmission Access Network JIANG Da-peng(158)
5G Times Communications Station Battery Use and Maintenance LI Pei-long(160)
Power Communication Technology Mixed Network in Distribution Network QI Wen-kun, WANG Zhu-song(162)
Research on Live Insulation Maintenance Technology and Application of Communication Equipment LI Lian, WANG Shi-ya, WANG Qing-wei, YU Hong-jie, CUI Hua(164)
Application Analysis of Transmission Technology in Modern Information Communication Engineering WEI Zu-hua(166)
Design and Application of OTN Technology in Optical Fiber Transmission Access Network LONG Ling, TAN Ben-liang(169)
Study on Power Supply Operation Maintenance and Fault Disposal of Power Communication System LV Zhi-chao(171)
Research on the Evolution of Intelligent Power Grid Information Communication Architecture NIU Jun, NIU Peng-cheng(173)
Research on Interference Detection Technology of UHF Satellite Communication System WU Dan(175)
Analysis of Maintenance Points and Troubleshooting of Railway Communication Optical Cable ZHOU Yun(177)
Analysis of Optical Fiber Access Network Based on Wired Communication and Implementation Points TAN Xiao(179)
Application of Artificial Intelligence in Military Communication WANG Zhen-yi, ZOU Li(181)
Application Analysis of OTN Technology in Transmission Network SU Lin-feng, ZHENG Bo, WAN Yan, LI Jie-feng(183)
Overview of Distributed Denial of Service Attack Traffic Detection in IoT HAN Chang-jiang, DING Jun-fang(185)
Analysis on the Development and Application of Communication Power Technology CAI An-hui(187)
Application of Transmission Technology in Information and Communication Engineering LI Yi-yang, FU Yi, LIU Xiao-juan(189)
Analysis of Internet of Things Technology and LTE Wireless Communication Technology CAI Jian(191)
Computer Communication Security Status and Protection Strategy FAN Bing-shan(193)
The Discussion of Video CDN Service Distribution Scheme Based on 5G Edge Network HONG Yi-fan(195)
Research on the Application Strategy of Computer Communication Software in Information Management System WANG Ming-zhi(197)
Organic Use of Computer Network Communication Protocol Verification Technology WANG Wen-tao(199)
Effective Application of Computer Communication Technology in Artificial Intelligence WEN Hu-cheng(201)
The Importance and Application of Network Security Protocols in Computer Communication Technology YANG Xiao(203)
The Role and Application of Data Encryption Technology in Computer Network Communication Security ZHANG Zi-jie(205)
Research on Development Trend of Computer Remote Network Communication Technology in Big Data Era Zheng Cheng-gang(207)
Research on Communication Big Data Visualization CHEN Zhong(209)
The Train of Thought of Communication Transmission Network Development Planning SONG Li-jun(212)
The design of switching power supply for 5g base station YUAN Hong-mou(214)
Analysis of common problems in the design and construction of communication line engineering construction organization ZHANG Rui-bin(216)

Operation Discussion

- Analysis And Solution About Abnormal Power-on Startup Fault of Task Management Computer CAO Xing-gang(218)
The Influence of Communication System on Power System Stability Control XU Su-ning(221)
Performance Analysis of Permanent Magnet Synchronous Motor for Coal Mill in One 350 MW Thermal Power Plant Energy Saving Retrofit Project WANG Xiao-nan, LV Yan-hui(223)
Reasons for Abnormal Loss of 10 kV Distribution Network and Loss Reduction Measures ZENG Xiao-dan(226)
Discussion on the Intensive Construction Model of the Government Website CHEN Xiao-jing(228)
Suggestions on Maintenance and Test of UPS VRLA Battery in Data Center HUANG Jian(230)
The Impact of Wind Farm Grid Connection on Power Quality LI Qiang-jun(232)
Thinking about Power Supply and Distribution Design of Radio and Television System DAI Jian-yun(234)
Integration of Electrical Automation and Electrical Engineering HE Ming-liang(236)
Technical Failure and Maintenance Countermeasures of Radio and Television Transmitting Antenna JIA Kun(238)
Some Problems of EPS Power Supply Application in Subway Station JIA Wei-cong(240)
On the Lean Management Strategy of Distribution Network Operation and Maintenance of Power Supply Companies in the New Era LI Bing(242)
The Application of Internet of Things Technology in Intelligent Building PAN Zhi-chun(244)
Calculation of Power Loss after Changing Operation Mode of Polysilicon Substation SUN Chang-sheng(246)
Study on Lightning Protection Measures for 10 kV Distribution Line Operation LIANG Wei(248)
Case Study on the Conduction Disturbance of Power Adapter TAN Shu-jun(250)
Debugging of all Solid State 10 kW DAM Medium Wave Transmitter Toudly McGrady(252)
Discussion on Fault and Treatment in Electrical Installation and Debugging of Substation WANG Bao-feng(254)
Fault Analysis and Diagnosis of High Voltage Power Cable WANG Yuan(256)
Analysis and Prevention of False Collision of Pressure Plate at the Outlet of Protection Screen in Generating and Changing Group ZHANG Lin-qu, DI Su-zhen(258)
Discussion on Lightning Protection Work of Transmission Lines in Northwest Hubei LUO Jing-Jn(260)
Innovation Research on Communication Engineering Construction Management Mode ZHAO Jun(262)
Research on Generation Technology of Power Failure Recovery Plan for Distribution Network Considering New Energy Access WU Chang, ZHANG Hua, HU Ji-jun, WANG Shao-qiang, XU Yan-kun(264)
Design of Relocation Scheme of Communication Room Caused by New Special Line JIA Gao-fei(266)
Fault Analysis and Treatment of the Converter Crowbar in a Wind Farm YAN Yuan, CAI Jiang-chao, LI Gang(268)
Discussion on Main Faults Troubleshooting and Maintenance in Electrician Experiment HUANG Tao(270)
Comparative Analysis of the Comprehensive Income of the East and West Slope Installation of Photovoltaic Modules in Kunshan District Jiangsu Province YANG Hai, LIU Ying-jie, WANG De-ren, ZHANG Jing, LEI Peng-fei(272)
Exploration of the Development of Energy Internet Targets by Grid Companies Based on SWOT Analysis HE Ping, YAO Jun-tao, SUN Kuo, LI Gui-xin, WANG Zhe(274)
Problems and Solutions in High Voltage Electrical Test Technology ZHANG Rong(277)
Substation Against Computer Serial Communication Affects the Operation of the Mouse Fault Analysis and Resolution MENG De-jie(279)
Analysis on Design of Power Loss Protection for Hydro-turbine Governing System XIAO Rui, SHI Yun-dong(281)
The Influence of Electric Power Reform on Distribution Network Planning of Power Grid Enterprises and Countermeasures SUN Yi-zhe, XU Hao, ZHANG Chao, ZOU Ge(283)
On the Solution to the Problem of Remote Meter Reading in Public Network Without Signal Area ZHANG Jie, FU Yao, SUN Han-wei, CHEN Rong-yan, XU Yang(285)
Discussion on the Scheme of External Power Supply and the Type Selection of Vacuum Circuit Breaker for 220 kV Substation ZHAO Dong-hui, WU Xin, LI Gong-jun(287)

Telecom Power Technology

Vol. 37 No. 3 (Serial No.195)

February 2020

广告索引

武汉普天文化传媒发展有限公司

刊眼

双良节能系统股份有限公司

封二

通信电源技术期刊简介

封三