

《中国学术期刊(光盘版)》

《中国期刊网(光盘版)》上网期刊

ISSN 1006-7345

《中国学术期刊综合评价数据库》

万方数据——数字化期刊群上网期刊

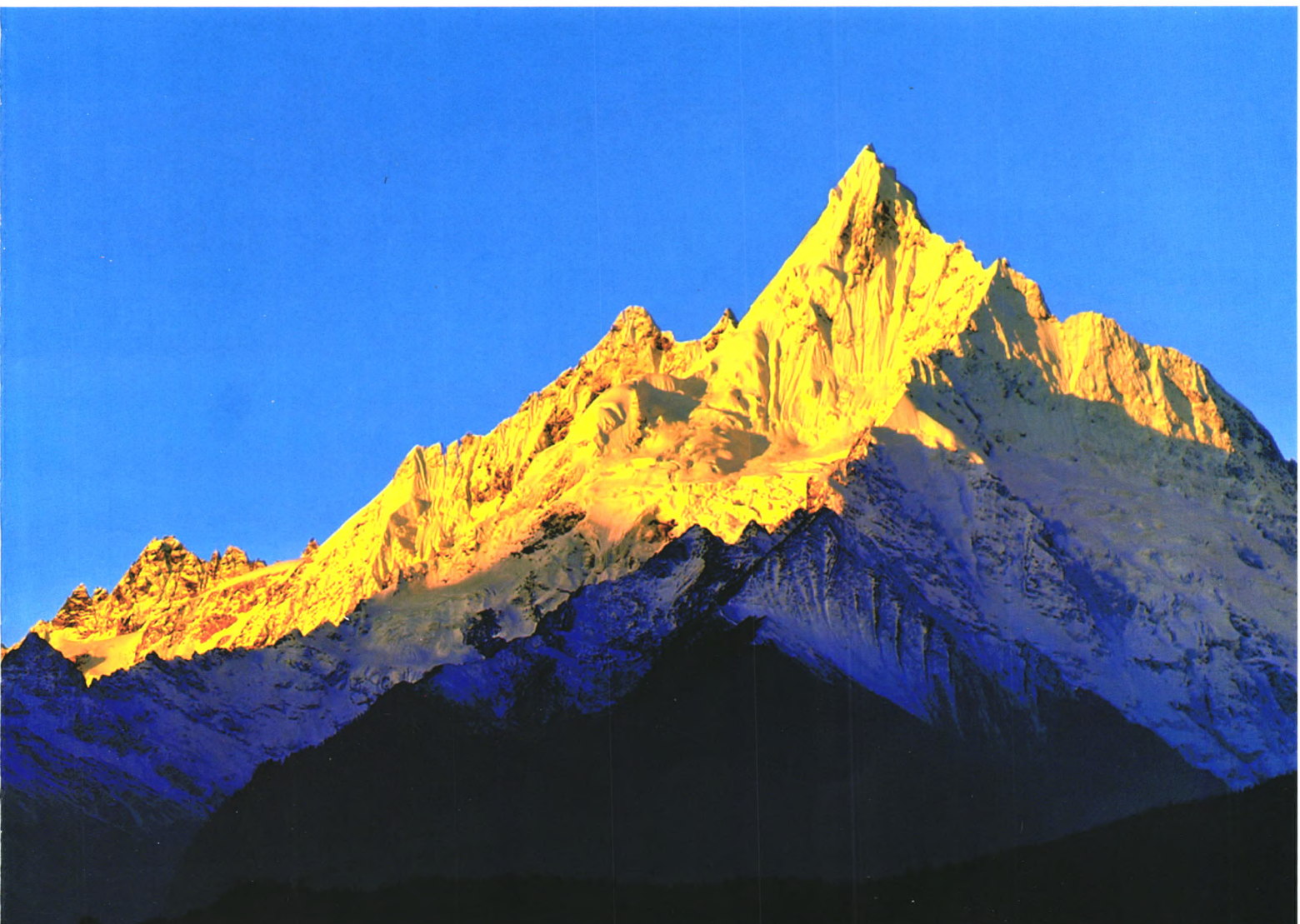
CN53-1117/TM

云南电力技术

YUNNAN ELECTRIC POWER

第41卷 增刊 VOL.41

云南电网公司技术专家论文专刊



ISSN 1006-7345



增刊 531117201301

万方数据

云南电网公司主管
云南省电机工程学会主办

增刊

2013

《云南电力技术》
编辑委员会

名誉主任委员 廖泽龙
主任委员 杨卓
副主任委员 邹立峰
叶锋
吴毅
苏振东

委员(按姓氏笔划)

马志华 王平 龙海军
吉德志 宇美荣 曲聪
张虹 李仁杰 李文云
朱永平 束洪春 杨坤丽
杨东 肖玲 邵益华
周海 周兴东 周建峰
周丹 郑易谷 张丽群
赵雪林 郭朝晖 黄文载
熊志全 戴绍钧
主 编 曹昆南
副 主 编 冯彦剑
黄 星(常务)
责任编辑 张征容
编 辑 殷 兰 梁 宁
潘 侃
英文翻译 司大军

云南电力技术(双月刊)

主管单位 云南电网公司
主办单位 云南省电机工程学会
云南电力试验研究院(集团)有限公司电力研究院
编辑 《云南电力技术》编辑部
发行 (昆明经济技术开发区云大西路中段云电科技园)
邮编:650217
电话:0871-6345098 6345102
网址:Http://yndljs.cnjournals.cn
印刷:云南民大印务有限公司
国内统一刊号:CN 53-1117/TM
国际标准刊号:ISSN 1006-7345
出版日期:2013年3月
封面照片:勇攀高峰 蓝光/摄

目 次

电网规划及运行

多特性小水电群大规模接入关键技术 赵斌(1)
调速系统对孤网稳定性影响研究 司大军(4)
含燃气冷热电联供的智能微网应用 苏适(8)
云南外送通道的输电优先顺序研究 肖友强(12)
电网运行风险评估方法 王兴刚 赵爽 周俊东等(16)
地区电网稳定控制与高频切机方案优化 张丹 吴琛 李玲芳(19)
汽轮机 DEH 控制特性引发电网低频振荡的分析 朱涛(22)
智能电网下电力系统的稳定控制 胡燕玲(25)
火电机组功率振荡分析 张杰 刘友宽 陈建鑫等(27)

输变电技术

输变电设备风险计算方法研究 陈永琴 王致(31)
风力发电项目导线型式选择探讨 杨坤池(33)
变压器绕组径向几何电容量与绕组状态的关系 何彪(35)
变压器有载分接开关运行检修 韦瑞峰(38)
SVG 应用于电网电能质量综合治理研究 覃日升 魏承志(40)
220kV 及以下线路耐张塔引流线长度计算 张捍民(45)
110kV 及以上高压电缆线路的设计 李久程(49)

高电压技术

盘形悬式绝缘子绝缘性能的检测与判定 李小建 徐肖伟 孙伟忠等(53)
UHF 波形及频谱检测法在局放检测中的应用 王科(57)
500kV 变电站断路器误动分析 马红升 刘振松(62)
并联电容补偿装置的过电流分析 孙建华 郭小保(66)
雷电分析和 35kV 进线档防雷设计 赖炬强(69)

配电与用电

全寿命周期成本理论在配网接线经济性计算中的应用 阮永丽(73)
以可靠性为中心的配电网检修 张建(76)
浅谈合环倒电与最大需量叠加 夏光明(79)
带电 10kV 线路单回直线杆耐张杆的研究 杨伟辉(82)

继电保护及自动化

一起 EMS 系统典型数据跳变分析 陈飞 方波(85)
SIMATIC-TDC 与 CP-10 串补控制保护系统保护逻辑对比 于辉(87)
桥型接线厂站继电保护的配置及设计 李本瑜(91)
智能微网设计集成技术研究 严玉廷 苏适(95)
省地县网电压无功多级协调控制 李晓松(101)
防止线路电流互感器饱和和电流速断保护拒动 黑毅 黑颖颖(104)
电力无线专网通信的快速自愈馈线自动化 杨家全(107)
链路显示及图形拼接在智能防误操作系统的应用 王琳(111)
水电站技术改造方案研究 黄滇生(115)
浅谈变电站综合自动化数字通信系统 马恩宁(122)

电力信息化

基于动态规则的 SOA 集成平台研究 徐兵元 周兴东 胡永华等(126)
高精度灾害天气预测技术在电力安全中的应用 罗学礼(130)
昆明供电局营配一体化信息平台建设 雷筠(134)
虚拟化技术在电网调度中的应用 丁士明 赵莹 薛永军(137)
基于 GIS 的配网生产管理系统应用 赵子鼎(142)
宽带载波与 EPON 混合组网实现智能小区通讯 张建伟(146)
基于调度数据网的远动通信模式 白翠芝(149)
主变压器温度监测仪表应用 王红梅(153)
电力企业移动安全接入平台构筑 余琳(156)

发电技术

电站锅炉燃用劣质烟煤的探讨 赵明 赛俊聪 邱亚林等(159)
基于动态思维进化的机组负荷经济分配 翟伟翔(163)
300MW 机组电除尘器技术改造 陈红 邱亚林 李明亮等(167)
600MW 燃煤火电机组节能诊断方法与降耗策略 沈发荣(170)
汽轮机检修后启动振动故障中的共性问题 彭斌 李燕勇(175)

电气计量

任意波形电源测量互感器伏安特性试验与计算 梁仕斌 刘涛(179)
高海拔地区 SF₆ 密度继电器测量误差 王恩 唐标 翟少磊(182)
通信基站电能计量系统设计 王昕(187)
电测仪表检测及校验技术 熊浩(191)
云南电网技术监督数据分析中心的研究与构建 曹敏 吴毅 叶锋等(194)
500kV 开关站投产延期的过渡方案安全分析 李玲芳 吴琛 张杰(197)
变电站分布式直流接地监测方法及应用 李勇 熊小伏(203)
低电压等级系统单相接地故障 黄伟(206)
35kV 干式空心并联电抗器辨识 崔志刚 谭向宇(209)

CONTENTS

· Power System Planning and Operation ·	
Study on Key Technologies of Grid-connection and Accommodation for Multi-characteristic Large-scale Hydropower Group	ZHAO Bin (1)
Study on Influence of Speed Control System on Isolated Power Grid Stability	SI Dajun (4)
Application on Smart Microgrid of Gas-fired Combined Cooling, Heating and Power System	SU Shi (8)
Study on Priority Order of Electric Power Transmission for Yunnan Outer Transmission Corridor	XIAO Youqiang (12)
The Method of Power Grid Risk Assessment	WANG Xinggong ZHAO Shuang ZHOU Jundong (16)
Optimized Analysis on Coordination of Power Grid Stability Control and High Frequency Generator Tripping Strategies ...	ZHANG Dan WU Chen LI Lingfang (19)
Mechanism Analysis of Power Grid Low-frequency Oscillation Caused by Control Characteristics of DEH in Steam Turbine	ZHU Tao (22)
Discussion on Stability Control of Power System under Smart Grid Environment	HU Yanling (25)
Analysis of Power Oscillation in Thermal Power Units	ZHANG Jie LIU Youkuan CHEN Jianxin (27)
· Transmission Technology ·	
Research of Risk Calculation Method for Power Transmission and Transformation Equipments	CHEN Yongqin WANG Zhi (31)
Discussion on Conductor Selection for Wind Power Projects	YANG Kunchi (33)
Study on Relationship between Radial Capacitance and State of Windings in Transformers	HE Biao (35)
Analysis on Operation and Maintenance of Power Transformer On-load Tap Changer	WEI Ruifeng (38)
Applied Research of SVG in Comprehensive Power Quality Control of Electric Power Grid	QIN Risheng WEI Chengzhi (40)
Computation of Pilot Current Wire Length for 220kV and Its Lower Lines Strain Towers	ZHANG Hanmin (45)
Design of 110kV and above High Voltage Cable Lines	LI Jiucheng (49)
· High Voltage Technique ·	
Detection and Evaluation of Insulation Performances of Disk-shaped and Suspension Insulators	LI Xiaojian (53)
Application of UHF Waveform and Frequency Spectrum Sensing Approach in Partial Discharge Detection	WANG Ke (57)
Causes Analysis of Circuit Breaker Malfunction in 500kV Substation	MA Hongsheng LIU Zhengsong (62)
Analysis of Overcurrent in Shunt Capacitance Compensation Device	SUN Jianhua GUO Xiaobao (66)
Analysis of Lightning Performance and Lightning Protective for 35kV Incoming Lines	LAI Juqiang (69)
· Power Distribution and Consumption ·	
Application of Full Life Cycle Cost Management in Economy Computation of Distribution Network Connection Modes	RUAN Yongli (73)
Application of Reliability-centered Maintenance in Distribution Network Maintenance	ZHANG Jian (76)
Discussion on Closing Loop Operation and Max-power Demand Billing	XIA Guangming (79)
Research of Replacing Linear Pole with Tension Pole on Charged Single Circuit 10kV Line	YANG Weihui (82)
· Relay Protection and Automation ·	
Analysis of a Typical Data Jump Case in EMS	CHEN Fei (85)
Analysis and Research on Comparison of Protection Logics between SIMATIC-TDC and CP-10 FSC Control and Protection Systems	YU hui (87)
Design of Relay Protection Configuration in Bridge Typed Wire Connected Substations and Power Plants	LI Benyu (91)
Research on Integrated Design for Smart Microgrid	YAN Yuting SU Shi (95)
Multi-level Coordinate Reactive Power Control of the Provincial, Prefectural and County Electric Power Grid	LI Xiaosong (101)
Prevention of Current Transformer Saturation and Failure to Trip for Instantaneous Current Protection	HEI Yi HEI Yingdun (104)
Implementation of Fast Self-healing Feeder Automation Based on Private Wireless Electric Power Communication Network	YANG Jiaquan (107)
Application of Link Display and Graphics-splicing Techniques in Graphical Intelligent Anti-false Operating System for Distribution Network	WANG Lin (111)
Research on Technical Reconstruction Scheme for Hydropower Station	HUANG Diansheng (115)
Digital Communication System of Substation Integrated Automation	MA Enning (122)
· Electric Power Informatization ·	
Research of SOA Service Integrated Platform Based on Dynamic Rule	XU Bingyuan ZHOU Xingdong HU Yonghua (126)
Application of High-precision Disastrous Weather Forecast Technology in Power Safety	LUO Xueli (130)
Construction of Integrated Distribution Information Platform in Kunming Power Supply Bureau	LEI Jun (134)
Application of Virtualization Technology in Electric Power Grid Dispatching System	DING Shiming ZHAO Ying XUE Yongjun (137)
Application of GIS-based Distribution Network Production Management System	ZHAO Ziding (142)
AMI Communication Based on Electric Line Broadband Carrier and EPON Hybrid Network	ZHANG Jianwei (146)
Tele-control Communication Mode Based on Electric Power Dispatching Data Network	BAI Cuizhi (149)
Application of Temperature Monitoring Instrument on Main Transformer	WANG Hongmei (153)
Construction of Mobile Security Access Platform for Electric Power Enterprise	YU Lin (156)
· Power Generation Technology ·	
Discussion on Semi-bituminous Coal in Power Plant Boiler	ZHAO Ming SAI Juncong QIU Yalin (159)
Units Economic Load Dispatch Based on Dynamic Mind Evolutionary Algorithm	ZHAI Weixiang (163)
Technical Renovation of Electrostatic Precipitator in 300MW Unit	CHEN Hong QIU Yalin LI Mingliang (167)
Energy Save Diagnosis and Loss Decreasing Strategy 600MW Coal-fired Unit	SHEN Farong (170)
The Commonness of Vibration Operation Faults after Maintenance of Steam Turbine	PENG Bin LI Yanyong (175)
· Electrical Measurement ·	
Test and Computation Method for Volt-ampere Characteristic Measurement of Instrument Transformer Using Arbitrary Waveform Power Supply	LIANG Shibin LIU Tao (179)
Measurement Error Analysis of SF6 Density Relay in High Altitude Area	WANG En TANG Biao ZHAI Shaolei (182)
Design of Electric Energy Metering System for Communication Base Station	WANG Xin (187)
Research of Test and Calibration Technology for Electrical Measuring Instrument	XIONGHao (191)
Research and Construction on Technical Supervisory Data Analysis Center of Yunnan Power Grid	CAO Min WU Yi YE Feng (194)
Safety Analysis of Temporary Transition Program for Extension into Production of 500kV Renhe Switching Station ...	LI Lingfang WU Chen ZHANG Jie (197)
Method and Application of Distributed DC Earthing Inspecting System in Substation	LI Yong XIONG Xiaofu (203)
Single-phase Earth Fault in Low Voltage System	HUANG Wei (206)
Analysis on Operation Situation of 35kV Dry-type Shunt Reactor with Air Core	CUI Zhigang TAN Xiangyu (209)

YUNNAN ELECTRIC POWER (Bimonthly) Vol. 41. Z (Ser. NO. 205), Mar. 2013
(Started in 1973)

Sponsored by:

Yunnan Electric Power Group Co., Ltd.
Yunnan Society for Electrical Engineering

Editor & Publisher:

Editorial Department of YUNNAN
ELECTRIC POWER

Chairman:

Liao Zelong

Chief Editor:

Cao Kunnan

Address:

Yunnan Electric Power Science and Technology Park, Kunming Economic and Technology Development Area, the Middle Section of Yun-xi Road 650217

Tel: 0871-66345098 66345102

Homepage: <http://yndljs.cnjournals.cn>