

江西省优秀科技期刊  
中国期刊全文数据库收录期刊  
中国学术期刊(光盘版)全文收录期刊  
中国核心期刊(遴选)数据库收录期刊  
中国学术期刊综合评价数据库统计源期刊

万方数据——数字化期刊群全文入网期刊  
中国煤炭数字图书馆全文收录核心期刊  
中国煤炭技术与设备网入网期刊  
煤炭科技论文数据库收录期刊  
中文科技期刊数据库收录期刊

ISSN 1006-2572  
CN 36-1121/TD

# 江西煤炭科技

# 4

## JIANGXI COAL SCIENCE & TECHNOLOGY 2013



ISSN 1006-2572



江西省煤炭学会  
江西省煤炭集团公司  
江西省煤炭经济研究会  
江西省煤炭工业科研所

主办

## Contents

### Colliery Safety

- Analysis on Outburst Danger of Main Minable Coal Seams in Yongan Colliery ..... Zhu Yuncang, Xie Xionggang(1)  
Application of Pressurized Water Isolated Wall in Fire Prevention of Working Face ..... Pan Zhaoyun, Zhang Peng(4)  
Study on Design Optimization of Safety Door of Coal Mine Refuge Chamber Based on Finite Element Analysis ..... Wu Dasheng(7)  
Gas Prevention Technology of Raise Tunneling on Steeply Inclined Outburst Seam Section .....  
..... Liu Yong, Xiao Huaidong, Peng Xianlin, et al(11)  
Application of Integrated Outburst Prevention Technology in Deep Mining of Yangou Colliery ..... Chen Yanzhou, Dai Guoxun(13)  
Existing Problems and Countermeasures of Gas Prevention in Yanmazhuang Colliery ..... Deng Zhongju, Wang Jianhe(15)  
Discussion on Confined Water Treatment Experience of West 5th Mining Area, Shanxi Colliery .....  
..... Xiong Guofu, Luo Shungen, Fu Guiping, et al(17)  
Discussion on Application of Monitoring and Supervisory System for Regional Power Outage Security Network ..... Li Sufen(20)  
Optimization Design of Air—return Way of Rail—raise Hoist House ..... Wang Yong (22)  
Troubleshooting of Mining Explosion—proof Electric Apparatus Based on FTA ..... Wang Qinghai(24)

### Technology & Experience

- Study on Characteristics and Support Technology of Soft—rock Roadway Deformation in Jianxin Colliery ..... Hu Shenghui(26)  
Practice on Frozen Construction of Deep Alluvium in Hongdunzi Mining Area ..... Chen Fenghai, Zhang Bujun, Zhang Lin(30)  
Research on Reinforcement Technology of Surface Grouting for Deep Broken Soft Rock Roadway .....  
..... Jiang Mingming, Zhan Jinming, Ge Haijun(33)  
Practice on Many Level Chang Winch Construction in Shaft of Metal Mines ..... Liu Ning, Guo Baoguo, Zhang Pinfeng(36)  
Application of Parallel Single Order of Different Depth Cut in Air Shaft, West Qujiang ..... Pi Yunsheng(39)  
Application of Bolt—grouting Compound Support in Roadway through Seam ..... Zhang Fei, Xu Jianwen(42)  
Application of Anchor Connector in Top—coal Caving Region of Roadway ..... Jia Qingniu (44)  
Study on Support Technology of Floor Heave Prevention in Lingbei Coal Mine ..... Yang Guangdong(47)  
Practice on Safety Mining at Repeated Mining Face in Dongfanghong Colliery ..... Dai Guoxun, Wang Nianping(49)  
Application of Mining Slide “Suspend” Canopy Hydraulic Support ..... Huang Ling(51)  
Application of Excel in Survey Calculation of Conductor and CAD Drawing in Coal Mines ..... Wang Fusheng(53)  
Application of High Density Resistivity Method in Expressway Subgrade Detection ..... Liao Jingyun(57)  
Application of Low—altitude Digital Aerial Photogrammetry in Land Consolidation ..... Mao Zhifang, Zheng Hui(60)  
Discussion on Quality Control of Annual Land Use Change Survey Data ..... Liu kaihong, Xu Guixing(63)  
Discussion on Multimedia Display of Spatial Data ..... Qi Shan, Xie Meixiu, Jiang Meng(66)  
Discussion on Problems of Anti—jamming of Shearer in Operation Close Circuit in Gaoshan Colliery ..... Fan Guanjun(69)  
Application of Mechanical Cleaning Water Sump Technology in Yanjiang Colliery ..... Hua Xiaoyin, Ye Dibao(71)  
Application of Gas Drainage Technology with Towing Pipe in Goaf ..... Hao Leigang(73)  
Experience of Comprehensive Outburst Prevention at 31621 Mining Face of Xiancha Colliery ..... Wu Huiyuan, Luo Xianrong (76)

### Topic Exposition

- Study on Response Characteristics of Electrical Parameters of Mine Water Content Abnormal Body .....  
..... Guo Xinqiang, Qiu Zhanlin, Luo Cheng, et al(78)  
Study on Numerical Simulation of Soft Rock Roadway in Kilometer Deep Shaft ..... Zheng Lin(81)  
Mechanism Research and Support Control of Erosion—Control for Roadway ..... Li Haiyan(84)  
Application of Mine Pressure Observation in Coal Face ..... Chen Shushan1, Tang Zhengzheng1, Guo Junjie(87)  
Function of Prestress in Bolt Support ..... Gao Liping(90)

Analysis of Strata Behavior Regularity in Shallow—buried Roadway under Deep and Hard Roof .....	Liu Xu(93)
Research and Application of Capsule Sealing Technology .....	Yang Qijun,Xue Quezhang,Shi Zhiliang(96)
Research and Application of Roadway Horizon in Kilometer—deep Mine .....	Zhang Fujun,Su Sheng,Zhang Yanhui(99)
Design Calculation of Ventilation System .....	Wang Xuefeng(101)
Study on Optimization of Ventilation System in Transition Period of Baishan Colliery .....	Ji Min,Liu Min,Shi Hengwei(104)
Application of Comprehensive Mechanical Mining in Thin Coal Seam .....	Xiao Haibin(106)
Analysis of Mining Technology and Techniques .....	Wang Guisheng(109)
Analysis of Green Mining Technology and Development Prospect .....	Gao Yongge,Chang Meng,Lu Quandu,et al(111)
Water Drainage in Shaft Sump of Auxiliary Shaft in Yangou Colliery .....	Ye Dibao,Hua Xiaoyin(113)
Discussion on Construction Methods for Gas Pipeline Crossing River .....	Yu Yingchao(115)
Application of Presplitting Blasting Top—collapsing Technology in Hard Roof of Fully Mechanized Coal Face .....	Zhou Yulong(118)
Practice on Blast Weakening in Hard Roof at Fully Mechanized Mining Face .....	Liu Hongtai(120)
Measurement Analysis of Strata Behavior Regularity at Large—mining—height Fully Mechanized Working Face .....	..... Zhang Guoping(122)
Environmental Risks and Control in Mine Production .....	Duan Wei(125)
Practical Research on Coal Roadway Support Technology on Large Section of Fully Mechanized Coal Face .....	Tian Shulong(127)

**Problem Probe**

Prediction of Coal Seam Gas Content Based on Support Vector Regression .....	Yang Xiaotong,Wang Lai bin,Zhang Zhong wen(129)
Analysis of Bottleneck in Development of Coal Exploration in Jiangxi Province .....	Xia Weiping,Bai Hui,Song Lusheng(132)
Study on Application of Combined Support Technology in Roadway Roof Broken Zone .....	Dong Dong(135)
Research and Practice on Removal Technology of Hydraulic Support .....	Geng Hong qun,Yao JinGang(137)
Study on Height Prediction of Water Flowing Fractured Zone .....	Hua Weipin1,Xiao Qiufu(139)
Probe into Geologic Age in Antang Group of Jiangxi Province .....	Yin Hongmei(142)
Analysis of Coal Seam Correlation in Liushe Coalfield .....	Lu Yuan,Han Changyun(145)
Discussion on Key Technology of Municipal Database Construction for Land Use in Nanchang City .....	..... Xie Meixiu,Qi Shan,Liu Weihua (148)
Study on Underground Ventilation Monitoring System .....	Wang Xiaorong(151)
Achieving Remote Control and Memory Cutting with Shearer in Fully Mechanized Working Face .....	Shi Lihong(154)
Application of CORS in C—grade GPS Point Survey .....	Sun Liheng,Tao Guoqiang,Mao Zhifang(156)
Analysis of Geothermal Geological Conditions of Linchuan Hot Spring in Fuzhou City .....	Gao Hongyuan,Xia Weiping(159)
Parameters Optimization of Coal Drawing Technique in Large—Mining—Height Fully— mechanized Caving Face with Thick Coal Seam .....	Zhao Tao,Hua Le,Liu Xianzheng(162)
Discuss on Quantitative Identification of Mining Wire Rope Damage .....	Zhang Lijuan(166)
Research on Coal—containing Wastewater Treatment Process Of Power Plant .....	Huang Jialin,Shi Qinghong(168)
Analysis on Floor Failure Characteristics of Goaf on Close Distance Coal Seam Based on UDEC .....	Li ZengLu(171)
Probe into Planning Work of Permanent Prime Farmland .....	Xu Guixing,Liu Kaihong(174)
Application of AutoLISP in Planning and Design of Land Consolidation .....	Zhang Hui,Mao Zhifang(177)

**Managing Management**

Selection of Estimation Method for Coal Resource Reserves .....	Li Jibin,Yin Shaohui(179)
Measures on Improving Mine Recovery in Zhenxing Colliery .....	Wei Yanhua(182)
Analysis of Financial Risks in State—owned Coal Enterprises .....	Chen Hui,Yu Minqiang,Hou Ming(184)
“Two Basic” Safety Construction — — Effective Safeguards of Enterprise Safety Development .....	Li Bingyan(186)
Discussion on Mechanical and Electrical Safety Management in Yangqiao Colliery .....	Zeng Xiangchao(188)
Discussion on Safety Production Management of Mine Construction Enterprises .....	Xiong Geran,Song Jinchang(190)

翻译:彭晓娟,应红雨

Translator: Peng Xiaojuan, Ying Hongyu

# 目次

## 煤矿安全

永安煤矿主采煤层突出危险性分析	朱云仓, 谢雄刚(1)
承压隔水墙在工作面防火工作中的应用	潘兆云, 张鹏(4)
基于有限元分析的煤矿避难硐室安全门设计	吴大胜(7)
急倾斜双突煤层区段上山掘进瓦斯防治技术	刘勇, 肖怀东, 彭先林, 等(11)
综合防突技术在沿沟煤矿深部开采中的应用	陈延周, 戴国勋(13)
演马庄矿瓦斯防治存在的问题及解决对策	邓中举, 王建和(15)
浅谈山西矿西五采区承压水治理	熊国富, 罗顺根, 付贵平, 等(17)
浅谈区域断电安全网络监测监管系统的应用	李素芬(20)
采区轨道上山绞车房回风道优化设计	王勇(22)
基于故障树的矿用防爆电器故障查询	王庆海(24)

## 技术经验

建新煤矿软岩巷道变形特性及支护技术研究	胡圣辉(26)
红墩子矿区深厚冲积层冻结法施工实践	陈凤海, 张步俊, 张林(30)
深厚破碎软岩巷道地面注浆加固技术研究	江明明, 詹金明, 葛海军(33)
金属矿山立井多水平改绞施工实践	刘宁, 郭保国, 张品峰(36)
直眼单阶不同深装药掏槽方式在曲江西风井的应用	皮云生(39)
架喷注锚复合支护在巷道穿煤时的应用	张飞, 徐建文(42)
锚索连接器在巷道高冒区中的应用	贾青牛(44)
灵北矿井防治大巷底鼓支护技术研究	杨广栋(47)
东方红矿复采工作面安全采煤的作法	戴国勋, 王年平(49)
浅谈矿用滑“悬”移顶梁液压支架的应用	黄玲(51)
Excel在矿井导线测量计算和CAD展点绘图中应用	王福胜(53)
高密度电阻率法在高速公路路基勘探中的应用	廖精赞(57)
低空数码航空摄影测量在土地整理中的应用	毛志芳, 郑辉(60)
浅谈年度土地利用变更调查数据质量控制	刘开红, 徐贵兴(63)
浅谈空间数据的多媒体展示	漆珊, 谢梅秀, 江萌(66)
浅谈高山矿采煤机运闭线路中的抗干扰问题	范冠军(69)
机械化清理水仓技术在沿沟煤矿的应用	华晓寅, 叶迪保(71)
采空区拖管瓦斯抽采技术应用研究	郝雷刚(73)
仙槎煤矿31621采面综合防突的几点作法	邬辉元, 罗贤荣(76)

## 专题论述

矿井含水异常体电性参数响应特征研究	郭新强, 邱占林, 罗城, 等(78)
超千米深井软岩巷道支护数值模拟研究	郑琳(81)
巷道防冲机理研究及支护控制	李海燕(84)
矿压观测在采煤工作面的应用	陈韶华, 汤正正, 郭军杰(87)
预应力在锚杆支护中的作用	高利平(90)
浅埋深坚硬顶板下巷道矿压显现规律分析	刘旭(93)
顺层钻孔胶囊封孔技术研究及应用	杨启军, 薛阙章, 石志亮(96)
千米深井巷道层位的研究与应用	张富军, 苏生, 张艳辉(99)
某煤矿矿井通风系统的设计计算	王学锋(101)
百善煤矿转型期通风系统优化研究	姬敏, 刘民, 石恒伟(104)
浅析综合机械化采煤在薄煤层开采中的应用	肖海滨(106)
采煤技术与采煤工艺探析	王贵生(109)
浅析绿色开采技术及发展前景	高永格, 常猛, 卢全督, 等(111)
沿沟煤矿副井井窝排水工艺的改进	叶迪保, 华晓寅(113)
煤气管道穿越河流的施工方法	于影超(115)
预裂爆破放顶技术在坚硬顶板综采面的应用	周玉龙(118)
爆破弱化综采工作面坚硬顶板技术实践研究	刘洪太(120)
大采高综采工作面矿压显现规律实测分析	张国平(122)
矿山生产中的环境风险与防控	段伟(125)
综采工作面大断面全煤巷道支护技术实践研究	田书龙(127)

## 问题探讨

基于支持向量机回归预测煤层瓦斯含量 .....	杨晓彤,王来斌,张忠文(129)
江西省煤炭勘查发展瓶颈分析 .....	夏为平,伯 慧,宋炉生(132)
巷道顶板破碎带联合支护技术研究与应用 .....	董 冬(135)
液压支架拆除工艺技术研究与实践 .....	耿红群,姚金刚(137)
上饶县某煤矿导水裂缝带高度预测研究 .....	华伟斌,肖秋福(139)
江西安塘组地质时代的探讨 .....	殷红梅(142)
流舍井田煤层对比浅析 .....	陆 媛,韩长云(145)
南昌市土地利用市级数据库建设关键技术的探讨 .....	谢梅秀,漆 珊,刘韦华(148)
煤矿井下通风监控系统的研究 .....	王小荣(151)
综采工作面采煤机实现远程控制和记忆截割功能 .....	史莉红(154)
CORS在GPS C级点测量中的应用 .....	孙立恒,陶国强,毛志芳(156)
抚州临川温泉地热地质条件分析 .....	高红远,夏为平(159)
厚煤层大采高综放面放煤工艺参数优化 .....	赵 涛,华 乐,刘宪正(162)
浅谈矿用钢丝绳损伤定量识别 .....	张丽娟(166)
火力发电厂含煤废水处理工艺探讨 .....	黄家林,石庆宏(168)
基于 UDEC 的近距离煤层采空区下底板破坏特征分析 .....	李增禄(171)
永久基本农田划定工作的探讨 .....	徐贵兴,刘开红(174)
AutoLISP 在土地整治规划设计中的应用 .....	郑 辉,毛志芳(177)

## 经营管理

煤矿资源储量估算方法的选择 .....	李继斌,尹韶辉(179)
振兴煤矿提高矿井回收率的几项措施 .....	魏艳华(182)
浅析国有煤炭企业财务经营风险 .....	陈 卉,余敏强,侯 明(184)
安全“双基”建设是企业发展的有效保障 .....	李丙炎(186)
浅谈杨桥煤矿的机电安全管理工作 .....	曾祥超(188)
浅谈矿建施工企业安全生产管理 .....	熊革然,宋金长(190)
2013 年总目次 .....	(195)

## 本刊编辑工作委员会

总 顾 问	李良仕 贺爱民
顾 问	李 松 彭志祥 胡圣辉 樊 飞 罗庆贺 徐开云 胡立俭 刘建高 付春生 王正萍 肖华辉 邱文奎 陈宗辉 陈水松
主 任	张慎勇
副 主 任	郭正义
委 员	林国尧 余子兵 兰祖良 蒋 荣 岑代全 舒桂德 江新允 李春发 刘效贤 何家发 刘振春 吴安德 袁安辉 王明贵 项元海 胡中祺
协办单位	萍乡矿业集团有限责任公司 丰城矿务局 江西省煤田地质局 江西新余矿业有限责任公司 乐平矿务局 中鼎国际工程有限责任公司 江西中煤科技有限责任公司 江西工业工程职业技术学院 江西煤矿安全培训中心 江西煤矿矿用产品检验中心 江西众一集团公司 武宁县煤矿 横峰县铺前煤矿
江西煤炭科技 季 刊 (1979 年创刊)	JIANGXI COAL SCIENCE & TECHNOLOGY Quarterly(Started in 1979)
2013 年第 4 期(总第 140 期)2013 年 11 月出版	NO. 4 2013 (Series No. 140) November 2013

主 管	江西煤矿安全监察局	Responsible Institution	Jiangxi Bureau of Colliery Safety Supervision
主 办	江西省煤炭学会 江西省煤炭集团公司 江西省煤炭经济研究会 江西省煤炭工业科研所	Sponsor	Jiangxi Coal Society Jiangxi Coal Group Ltd Jiangxi Coal Economy Association Jiangxi Research Institute of Coal Industry
编辑出版	《江西煤炭科技》编辑部	Editorial and Publishing Dept.	Editorial Office of Jiangxi Coal Science & Technology
主 编	郭正义	Chief Editor	Guo Zhengyi
责任编辑	胡中祺	Responsible Editor	Hu Zhongqi
地 址	南昌市北京东路 23 号(330029)	Address	23 Beijing East Street, Nanchang, China(Postcode 330029)
电话/传真	(0791)88326754/87151362	Tel/Fax	(0791)88326754/87151362
电子信箱	jxmtkj@163.com	E-mail	jxmtkj@163.com
印 刷	江西省人大印刷厂	Printed by	Printing House of Jiangxi People's Congress
发行范围	公开发行	Issuing Scope	Public Distribution
订 购 处	《江西煤炭科技》编辑部	Order Office	Editorial Office of Jiangxi Coal Science & Technology

刊 号	ISSN1006-2572	广告经营许可证号	3600004000039	定 价	12.50 元
Publication No.	CN36-1121/TD	License No. of Advertisin		List Price	