

# 原书缺封面

# Contents

## Colliery Safety

Analysis of Effective Drainage Radius Based on Gas Flow and Gas Pressure ..... Hu Huanliang, Xu Zuolu(1)  
Measurement of Gas Parameter and Related Factor Analysis of Gas Occurrence Rule in Shalin Coalmine ..... Chen Bao(4)  
Causal Analysis and Control of Gas Accumulation at Upper Corner in Fully Mechanized Working Face ..... Jing Xia(7)  
Gas Control Technology in Rapid Excavation of Roadway in Gas Outburst Mines ..... Jin Jingyu, Yu Jianhong(9)  
Construction Practice of Fire Prevention and Extinguishing in 1101 First Coal Face, Xinming Coal Industry Co. ....  
..... Xu Dehua, Wan Yongping(11)  
Application of Regionalization Omni-direction Real-time Monitoring and Warning System  
in Datong Coal Industry Group ..... Yang Hong(13)  
Construction Design of Gas Drainage at High-Gas Fully Mechanized Caving Face ..... Liu Shengli, Gao Xiping(16)  
Automatic Tracking Rendering Technology of Fan's Performance Curve Based on MCGS ..... Shao Changhong(19)  
Discussion on Safety Technology of Pressure Balancing Ventilation in 8105 Face ..... Zhao Xizhong(22)  
Inflammable Thick Seam Mining Face rock burst prevention ..... Xu Deqiang, Wang Suna(25)  
Present Situation and Control Strategies of Water Disaster Factors in Fenxi Colliery ..... Wang Chonglin(28)  
Analysis of Water Disaster and Comprehensive Treatment in Yuelong Colliery ..... Xiao Junxian, Yao Jianda, Zhong Hao(32)

## Technology & Experience

Unequal Strong Yielding Support of Stadding Lower Coal Seam Tunnel Groups  
in Fully Mechanized Caving Face ..... Lu Xihui, Zhang Wen, Ding Shulin, et al(35)  
Chamber Support Technology in Dismantling Erection at Working Face of Deep Well ..... Meng Qingbao, Yang Biao, Ren Jinlong(38)  
A Simple Description of Support Technology of Equipment Remove Gateway in Working Face .....  
..... Li Wen, Wang Jie, Zhu Chengtan(40)  
Application of Grouting Technology in Northern Air Shaft of Fenglong Colliery ..... Zhu Xianbin, Shu Weijun(42)  
Rapid Excavation Technology of Rock Roadway in Gaocheng Colliery ..... Zhao Fenghua(45)  
Design and Application of New Type Laser Positioning Portable Slope Gauge ..... Qiu Jinmin(47)  
Application of Triangulation and Square Grid method in Calculation of Land-leveling Earthwork ..... Mao Zhifang, Liu Kaihong(50)  
Application of Transient Electromagnetic Method in Hydro-geological Exploration in Shihao Colliery ..... Zhang Wentao(54)  
Application of Small-loop Transient Electromagnetic Method in Detecting Undergroud Fire Area .....  
..... Wang Zhili, Lin Jinbo, Liu Lijuan, et al(57)  
Application of Whole Top Beam Combination Suspension Shift Hydraulic Stent in Coal Wall of "Three Soft" Faces .....  
..... Wang Xiangnan, Guo xinjian, Zhao Yuanbo, et al(59)  
Practice on Subsidence Observation in Xingan Salt Pans ..... Yang Xiaohua, Jiang Min, Xu Changege, et al(62)  
Practice on Reinforcement Technology of Surrounding Rock in Roadway with Dynamic-pressure Effect ..... Wang Zhenjiang(64)  
Design and Application of Erosion-control in Heading Face in Spontaneous Thick Seam ..... Fan Yong(68)  
Practice on Dust Suppression with Water Injection in Coal Wall of Large Mining-height Working Face with Soft Seam .....  
..... Song Minggang(71)  
Recovery Practice in Three Soft Coal Seam in Fully Mechanized Face ..... Wang Yanjun(74)  
Application of Automation Drainage System in Coal Mines ..... Zhu Zhongmin(76)  
Practical Application of Waste Heat Recovery Technology of Air Compressor in Liyuan Colliery ..... Cai Xiufan, Li Hongbiao(78)  
Application of EBH35 Boom-type Roadheader in Ultra-outburst Coal Seam ..... Huang Yibin, Peng Yongtao(80)  
Analysis of Electronic Control Fault Treatment of JKD-NT-type Coal Mine Hoist ..... Fang Hua, Huang Chuangwu(82)  
Technical Transformation on Cage Car Retarder in Side-Dump Mine Car ..... Wang Xiaoguang, Wang Weihai, Wang Rongjuan(85)  
Reformation of Ground Power Supply System in Merger and Reorganization Collieries ..... Hao Zhonghuai(87)  
Discussion on Maintenance and Utilization of Vacuum Switch ..... Yang Zongwei, Guo Jian(89)  
Trouble Shooting of Wrong Zero Line Connection ..... Liu Songtao, Lu Yanshan, Liang Chaoyang, et al(92)  
Coal mine 6 kV distribution line lightning protection technology research ..... Yu Xiaosu(94)

Application of Hydraulic Cable Driving System at Fully Mechanized Mining Face .....	Dang Haibo(96)
Probe into Causes of Belt Tearing in Belt Conveyor and its Prevention .....	Zhu Rongtao(98)
Discussion on Vulcanization Technology of Steel Core Rubber Belt .....	Tang Hong,Zhong Yongbin(100)

## Topic Exposition

Design of Gateway Support and Analysis of Strata Behavior Monitoring .....	Lei Jianhua(102)
Study on the Force of Supports during Tunneling and Mining in Small-Pillar Roadway with Thick Seam .....	Guo Dongyu(105)
Study on Numerical Simulation of Bolt-and-cable anchor Combined Support and Short-cable-anchor Support .....	Hu Zhiyun(108)
Study on Strata Movement Rule of Anti-dipped Overlying Strata Area Under Influence of Sliding Structure .....	Hu Yongchao,Tao Wenpeng(112)
Analysis of Hydraulic Support Adaptability at Large Mining-height Working Face with Soft Seam .....	Wang Yanxue(116)
Field Measurement of Pressure Behavior of Gateway at Isolated Fully Mechanized Working Face .....	Jiang Bing(118)
Characteristics of Ground Temperature Distribution and Its Influence Factors in Zhujixi Colliery .....	Fang Liangliang,Wu Lihu(120)
Experience of Coal Exploration Taking Advantage of Geological Structure in Northern Area of Shannan Colliery .....	Yang Bangwu,Wen Xiaolin,Lin Xiaozhong(122)
Solution to Hydrogeological Parameters of Steady Flow Based on Matlab .....	Wu Jiajie,Shi Lina(124)
Study on Control Factors of Upper Taiyuan Formation Limestone Karst Development in Suxian Mining Area .....	Zheng Chen,Wu Jiwen,Shen Shuhao(127)
Rapid Drawing Method of Drilling Simple Hydrogeology Curve Based on Mapgis Platform .....	Liu Difu,Li Xianfei,Chen Kai,et al(132)
Assessment on Transmissibility of Primary Fault in Qinan Colliery .....	Li Yang,Shu Jianjun,Peng Tao(134)
Application Geophysical Prospecting in Engineering Construction of Fuels Transportation .....	Zhan Weirong(138)
Water Prevention and Control Technology in Vertical Shaft Crossing High-Pressure Aquifer .....	Li Weifeng(140)
Application Research on Geophysical Prospecting Technique in Water Control in Yuechang Colliery .....	Han Xiaoli,Duan Jiwei(142)
Application of Encoder in Mine Hoist .....	Huang Chuangwu,Fang Hua(145)
Practice on Maintenance of Volvo Penta TAD1642GE-MJB355 Generator Set .....	Chen Que,Liu Xianqun(147)
Analysis of Illumination Short-circuit Protection in ZBZ <sub>1</sub> -4.0/660 M Comprehensive Protective Device .....	Lu Yanshan,Huang Chao,Miao Shengkun(150)
Discussion on Shelf Design of NC Flame Cutting Machine .....	Guo Cuimian(152)
Discussion on Safety Management of Gas Enterprises .....	Tu Cuihong(154)
Experimental Study on Slime Water Precipitation in Coal Preparation Plant .....	Ding Guangyao,Tang Yichun,Liu Ke,et al(157)

## Problem Probe

Field Measurement of Strata Behavior in Mining Field at Fully Mechanized Working Face .....	Wang Yiqing(160)
Study on Numerical Simulation of Rib Spalling Mechanism of Coal Wall at "Two Soft and One Hard" Fully Mechanized Caving Face .....	Yang Suihan,Qiao Wang(162)
Causes Analysis and Treatment of Rib Fall in Large Mining Height Coal Face in soft Cool seam .....	Wang Hongbing(166)
Field Measurement of Strata Behavior Regularity at Mining Face with Three-soft Coal Seam .....	Sun Pingyong,Li Hongbiao(168)
Distribution Law of Advanced Support Pressure at Large Mining-height Working Face of Xieqiao Colliery .....	Zhu Dan,Zhang Fan(171)
Influence of Anchorage Structure on Gob-side Roadway at Isolated Working Face .....	Ma Zhanyuan(173)
Strata Behavior and Analysis of Overhead Mining in 31810 Working Face, Baiyuan Colliery .....	Long Anqing,Wang Haihua,Huang Zhanyuan(176)
Study on roadway support technology under the condition of extremely fractured surrounding rock .....	Wang Huiran(179)
Probe into Prevention of Roadway Floor Heave in Zhengling Coal Industry Co. ....	Zhao Zhibiao(181)
Design Scheme of Grouting Reinforcement in 703 Lane, Caocun Colliery .....	Hao Mingyin(184)
Efficient Prediction Method of Scouring Zone .....	Chen Dujun,Zhao Zikui(187)
Analysis of Deep Displacement Monitoring Data of Tall Building .....	Zheng Qinhuo,Liu Fang,Liu Ming(189)
Discussion on Setting Centerline and Waistline of Roadway Synchronously in Mine Survey .....	Xie Xiaoping(191)
Treatment of Belt Easy Breaking of Air-conditioning Refrigeration Unit in Anyuan Bus .....	Liu Qirong,Hu Jiang(194)

翻译:彭晓娟,应红雨

Translator: Peng Xiaojuan, Ying Hongyu

# 目次

## 煤矿安全

基于瓦斯流量和瓦斯压力的有效抽采半径分析	胡焕良,徐作卢(1)
杉林井瓦斯参数测定及瓦斯赋存规律分析	陈宝(4)
综采工作面上隅角瓦斯积聚原因分析及治理	景霞(7)
高瓦斯突出矿井煤巷快速掘进瓦斯治理	靳景玉,于建泓(9)
新鸣煤业1101首采面防灭火的施工实践	徐德华,万勇平(11)
区域化全方位实时监测预警系统的应用	杨洪(13)
高瓦斯综放工作面瓦斯抽放工程设计	刘胜利,高新平(16)
基于MCGS的通风机性能曲线自动跟踪绘制	邵长宏(19)
8105工作面均压通风的安全技术	赵希忠(22)
易自燃厚煤层回采工作面冲击矿压的防治	许德强,王素娜(25)
汾西煤矿水害致灾因素现状与防治建议	王崇林(28)
跃龙煤矿水害分析及综合治理研究	肖俊贤,姚荐达,钟昊(32)

## 技术经验

综放面骑跨下位煤层大巷群不等强让压支护	鲁喜辉,张文,丁树林,等(35)
深井工作面回撤吊装硐室支护技术	孟庆保,杨彪,任金龙(38)
工作面回撤通道支护技术简述	李文,王杰,朱成坦(40)
丰龙矿井北翼风井井筒注浆工艺的应用	诸献斌,舒伟君(42)
告成煤矿岩巷快速掘进技术	赵峰华(45)
激光定位便携式新型坡度规的设计及应用	邱金民(47)
“三角网法”和“方格网法”在土方量计算中的应用	毛志芳,刘开红(50)
瞬变电磁法在石壕矿水文地质勘探中的应用	张文涛(54)
小回线瞬变电磁法在地下火区探测中的应用	王志励,林金波,刘丽娟,等(57)
整体顶梁组合悬移支架在“三软”煤层工作面的应用	王向楠,郭新建,赵源波,等(59)
新干盐田沉降观测技术实践	杨晓华,蒋敏,徐昌革,等(62)
动压影响区巷道围岩加固技术实践	王振江(64)
掘进工作面冲击地压的防治	范勇(68)
软煤层大采高工作面煤壁注水降尘实践	宋明刚(71)
“三软”煤层综采工作面回收实践	王艳军(74)
自动化排水系统在矿井中的应用	朱忠敏(76)
空压机余热回收技术在梨园矿的应用	蔡秀凡,李洪彪(78)
EBH35悬臂式掘进机在强突出煤层中的应用	黄义斌,彭勇涛(80)
浅析JKD-NT型矿井提升机电控故障处理	方华,黄传武(82)
应用于侧卸式矿车的罐笼阻车器技术改造	王晓光,王维海,王荣娟(85)
兼并重组煤矿地面供电系统的改造	郝仲怀(87)
浅谈真空开关的维修及使用	杨宗玮,郭健(89)
一起错接零线故障的排除	刘松涛,卢彦山,梁朝阳,等(92)
煤矿6kV配电线路防雷技术研究	余小素(94)
电缆液压拖动系统在综采工作面的应用	党海波(96)
皮带运输机皮带撕裂原因探析及防治	朱荣涛(98)
浅谈钢丝绳芯胶带硫化热补	汤鸿,钟勇彬(100)

## 专题论述

回采巷道支护设计与矿压显现监测分析	雷建华(102)
厚煤层小煤柱巷道采掘交锋前后支护体受力研究	郭东煜(105)
锚杆、锚杆锚索协调与短锚索支护数值模拟研究	胡志云(108)
滑动构造影响下覆岩反倾区岩层移动规律研究	胡永超,陶文朋(112)
软煤层大采高工作面液压支架适应性分析	王衍学(116)
孤岛综采工作面回采巷道矿压实测研究	蒋兵(118)
朱集西煤矿地温分布特征及其影响因素	方亮亮,武立虎(120)
山南井北翼利用构造找煤的做法	杨帮武,温晓林,刘小忠(122)
基于Matlab求解稳定流的水文地质参数	吴家杰,史丽娜(124)
宿县矿区太原组上部灰岩岩溶发育控制因素研究	郑晨,吴基文,沈书豪(127)
基于Magis平台钻孔简易水文曲线速绘方法	刘地福,李贤飞,陈凯,等(132)
祁南煤矿主控断层导水性评价	李阳,束建军,彭涛(134)
物探在西山煤电燃料运输工程施工中的运用	詹卫荣(138)
立井井筒过高压强含水层的防治水技术	李卫峰(140)
物探技术在悦昌煤矿防治水中的应用研究	韩晓丽,段计伟(142)
轴编码器在矿井提升机中的应用	黄传武,方华(145)

Volvo Penta TAD1642GE—MJB355 发电机组维修实践 .....	陈 雀,刘贤群(147)
浅析 ZBZ <sub>1</sub> -4.0/660M 型综合保护装置照明短路保护 .....	卢彦山,黄 超,苗盛坤(150)
浅谈数控火焰切割机料架的设计 .....	郭翠锦(152)
浅谈燃气企业的安全管理 .....	涂翠红(154)
选煤厂煤泥水沉降试验研究 .....	丁光耀,汤义春,刘 珂,等(157)

## 问题探讨

综放工作面采场矿压显现规律实测研究 .....	王益清(160)
“两软一硬”综放面煤壁片帮机理数值模拟研究 .....	杨岁寒,乔 旺(162)
松软煤层大采高工作面煤壁片帮原因分析及治理 .....	王红兵(166)
三软煤层工作面矿压显现规律实测研究 .....	孙平勇,李洪彪(168)
谢桥矿大采高工作面超前支撑压力分布规律 .....	朱 丹,张 帆(171)
孤岛工作面沿空巷道锚固体结构对巷道的影 响 .....	马占元(173)
白源煤矿 31810 工作面跨巷开采矿压显现与分析 .....	龙安清,王海华,黄占源(176)
极破碎围岩条件下巷道支护控制技术研究 .....	王会然(179)
正令煤业巷道底臃防治探索 .....	赵志彪(181)
曹村矿 703 切巷注浆加固设计方案 .....	郝明寅(184)
冲刷带预测的有效方法 .....	陈度军,赵子葵(187)
高层建筑深层位移监测数据分析 .....	郑勤华,刘 放,刘 明(189)
矿山测量中同时给定巷道中腰线方法的探讨 .....	谢小平(191)
安源牌客车空调制冷机组断皮带的处理 .....	刘奇荣,胡 江(194)

## 江西煤炭科技编辑部声明

为适应我国信息化建设,扩大本刊及作者知识信息交流渠道,本刊已和有关数据库合作,其作者文章著作权使用费与本刊稿酬一次性付给(已在论文发表审稿费中扣除)。作者向本刊提交文章发表的行为即视为同意我部上述声明。

### 本刊编辑工作委员会

总 顾 问	李良仕 赵苏启
顾 问	李 松 彭志祥 胡圣辉 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 刘富生 舒桂德 吴庭龙 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)
2014 年第 3 期(总第 143 期)2014 年 8 月出版	No. 3 2014 (Series No. 143) August 2014

主 管	江西煤矿安全监察局	<b>Responsible Institution</b>	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	<b>Sponsor</b>	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	<b>Editorial and Publishing Dept.</b>	Editorial Office of Jiangxi Coal Science & Technology
主 编	郭正义	<b>Chief Editor</b>	Guo Zhengyi
责任编辑	胡中祺	<b>Responsible Editor</b>	Hu Zhongqi
地 址	南昌市北京东路 23 号(330029)	<b>Address</b>	23 Beijing East Street, Nanchang, China (Postcode 330029)
电话/传真	(0791)88326754/87151362	<b>Tel/Fax</b>	(0791)88326754/87151362
电子信箱	jxmtkj@163.com	<b>E-mail</b>	jxmtkj@163.com
印 刷	江西省人大印刷厂	<b>Printed by</b>	Printing House of Jiangxi People's Congress
发行范围	公开发行	<b>Issuing Scope</b>	Public Distribution
订 购 处	《江西煤炭科技》编辑部	<b>Order Office</b>	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	

# 原书缺封底