

## 煤矿安全

MEIKUANG ANQUAN

月刊(1970年创刊)

2010年第8期

第41卷(总第430期)

主管单位

煤炭科学研究总院沈阳研究院

主办单位

煤炭科学研究总院沈阳研究院

中国煤炭工业劳动保护科学技术学会

主 编 罗海珠  
副 主 编 梁绍权  
编辑部主任 王福厚  
广告主管 刘明智  
发行主管 刘明智

出版单位 《煤矿安全》编辑部  
地 址 辽宁省抚顺市经济开发区  
顺大街北段9号  
邮政编码 113122  
电 话 (0413)6616988 6616981  
传 真 (0413)6616987 6616881  
电子信箱 mkaq@163.com(稿件)  
mkaqgg@163.com(广告)  
网 址 mkaq.chinajournal.net.cn  
发行范围 国内发行  
发行单位 《煤矿安全》编辑部  
或全国各地邮局  
邮发代号 8-293  
印刷单位 煤炭科学研究总院沈阳  
研究院胶版印刷厂

刊 号 ISSN 1003-496X  
CN 21-1232/TD  
广告经营许可证号 2104004000017  
商标注册证 第1144537号

出版日期 每月10日  
定 价 15.00元

本刊广告总代理 北京嘉诚永力  
广告有限公司  
电 话 010-51638371

### 试验研究

碳纤维分子筛吸附分离瓦斯组分的分子模拟研究.....干水利,葛岭梅(1)  
高压气幕风速的试验研究.....贾进彪,谭允桢,程高峰,等(6)  
淮南矿区13煤层自然发火标志气体研究.....朱云辉,程功林,方良才,等(9)  
动态冰浆制取的仿真研究.....王 伟,李红阳,王长彬(13)  
大采深厚煤层条带开采覆岩及煤柱移动变形规律研究.....王庆林,柴华彬,张彦宾(17)

### 技术经验

顶板走向钻孔抽放瓦斯参数优化及应用.....梁加红,宋成长(20)  
缓斜特厚煤层石门揭煤区域综合防突技术.....刘 震,李增华,杨永良,等(23)  
模糊综合评判确定煤与瓦斯突出预测敏感指标.....陈国红,孟贤正,黄旭超,等(27)  
智能排放瓦斯装置在局部通风中的应用.....刘继勇(30)  
龙冈矿N1301综放面调向期间煤层自燃的防治技术.....李长杰,李 伟,韩 力,等(32)  
可控循环通风技术在低瓦斯煤矿中的应用.....杨绪祥,张成良(36)  
黄沙矿112123工作面出水钻孔封堵技术.....周晓路,刘义永,李 冲(39)  
基于安全价值工程的煤矿通风系统方案优选.....马中飞,闫正波,姚 帅(41)  
煤层巷道松动圈测定技术及应用.....孙 波(45)  
大倾角综采工作面回采技术的实践.....周明弘,田发成,李长安(48)  
高压水力压裂技术在冲击地压防治中的应用.....张新科(51)  
巨厚煤层低位放顶煤提高顶煤采出率的技术措施.....毛增雪,于 峰,李 磊(53)  
宁庄矿二、煤层带压开采技术.....王焕忠(56)  
隔爆型网门电控装置智能监控系统.....陈 伟(58)  
PLC在井下带式输送机监控系统中的应用.....于丹丹,刘 章,李 鑫,等(61)  
煤矿井下人员定位系统上位机软件的设计与实现.....王 春,华 钢,朱艾春,等(64)  
斜巷提升运输防跑车安全门系统的设计及应用.....吴晓红,杨红涛,林小军(67)  
煤矿安全监控系统抗电磁干扰的研究.....冯利国,王国辉,李鑫宝,等(70)  
基于Internet的矿井安全监控系统设计.....朱高中(73)  
光纤传感器在煤矿安全监控系统中的应用.....戴 峻(77)  
基于WebGIS的煤矿远程安全监控系统.....刘玉芳,宋金星,侯玉亨(81)  
模糊综合评判理论在二次测爆仪控制系统中的应用.....叶 宁,张 东,李仲强,等(84)  
人工神经网络在矿井监测监控数据中的预测研究.....马科伟,袁 梅,李波波(88)  
煤矿井下信息高速公路的搭建.....杨 波,崔宏明,李延增,等(91)  
基于LDMCIC的井下多媒体传感器网络图像传输.....涂晓军,文金朝(94)

### 问题探讨

井筒(石门)揭煤防突措施的探讨.....曹霖林(98)  
基于层次分析与模糊综合评判的突出危险程度预测.....李军涛(101)  
瓦斯抽放系统联网的必要性和可行性探讨.....兀帅东,李国旗,张新科(105)  
基于微震监测技术的煤与瓦斯突出预报分析.....杨国强,王庆利,王忠鑫(108)  
采空区岩石摩擦引燃引爆瓦斯初探.....杨天斌,谷建军(111)  
一起特别重大瓦斯煤尘爆炸事故分析.....李永怀,蔡周全(114)  
防治煤与瓦斯突出瓦斯爆炸事故应注意的问题浅析.....袁 野(117)  
水力压裂技术提高低透气性煤层瓦斯抽放量浅析.....王国鸿,徐 赞(120)  
南山矿孤岛煤柱并采冲击地压特征分析.....刘晓斐,王云刚,高亚明,等(122)  
复杂地质条件下岩石巷道层位选择.....范 杰,吕国生,皮大峰(125)  
厚煤层大采高综采工作面长度合理性分析.....张涛伟,吴学明,陈占扬,等(128)  
五沟煤矿地质特征及层间滑动对10煤层的影响.....李学富(131)  
大倾角综采工作面“R-S-F”稳定性分析.....焦 健,张志恒,周 翔(135)  
榆神府矿区开采沉陷的灰色关联分析及其回归预计.....宋世杰,赵晓光,刘 源,等(138)  
导线在安全截流量条件下的过热故障的处理与分析.....霍大勇,王 萍(141)

### 安全监察与管理

井弹理论在煤矿安全管理中的应用.....杨建民,任 燕,安 宇(143)  
煤矿安全文化建设水平的二级模糊综合评价.....王玉娥,季经纬,郝耀华,等(147)  
矿工违章行为分类及控制模式研究.....王 丹,沈玉志(151)  
治理理论视野下的煤矿安全监管解读及其建构.....王 华(154)  
加强安全培训 预防煤矿安全事故.....汪永芝,吴健斌(158)

# CONTENTS

## Test and Research

- Molecular Simulation Research of Absorption and Separation of Gases on Carbon Fiber Molecular Sieve..... WANG Shui-li, GE Ling-mei(1)  
Experimental Study on Air Velocity of High Pressure Air Curtain..... JIA Jin-biao, TAN Yun-zhen, CHENG Gao-feng, et al(6)  
Research on the Significant Gas of Spontaneous Combustion in No.13 Coal Seam of Huainan Coal Mining Area..... ZHU Yu-hui, CHENG Gong-lin, FANG Liang-cai, et al(9)  
Research on the Simulation of Dynamic Ice Slurry Generator..... WANG Wei, LI Hong-yang, WANG Chang-bin(13)  
Study on the role of Movement and Displacement with Rock and Coal Pillar under Great Depth and Thick Seam with Strip-partial Mining..... WANG Qing-lin, CHAI Hua-bin, ZHANG Yan-bin(17)

## Technology Experiences

- Parameter Optimization of the Roof Drilling for Gas Drainage and Application..... LIANG Jia-hong, SONG Cheng-zhang(20)  
The Comprehensive Regional Outburst Prevention Technology Research of Uncovering Gently Inclined and Special Thick Seam..... LIU Zhen, LI Zeng-hua, YANG Yong-liang, et al(23)  
Comprehensive Outburst Prevention Technology for the Area of Rock Cross-Cut Coal Uncovering in Gently Inclined and Special Thick Coal Seam..... CHEN Guo-hong, MENG Xian-zheng, HUANG Xu-chao, et al(27)  
The Application of Intelligence Gas Drainage Device in the Local Ventilation..... LIU Ji-yong(30)  
The Prevention Technology of Coal Seam Spontaneous Combustion in N1301 Full-mechanized Caving Face in Longgu Coal Mine..... LI Chang-jie, LI Wei, HAN Li, et al(32)  
The Application of Controlled Circulating Ventilation Technology in Deep and Low Gas of Coal Mine..... YANG Xu-xiang, ZHANG Cheng-liang(36)  
The Sealing Technology for Drilling Water in 112123 Face in Huangsha Coal Mine..... ZHOU Xiao-lu, LIU Yong-yi, LI Chong(39)  
Optimization for Mine Ventilation Systems Based on Safety Value Engineering..... MA Zhong-fei, YAN Zheng-bo, YAO Shuai(41)  
Determination Technology for the Tunnel Loose Circle in Coal Seam and the Application..... SUN Bo(45)  
The Practice of Mining Technology of Large Inclined Angle Full-mechanized Face..... ZHOU Ming-hong, TIAN Fa-cheng, LI Chang-an(48)  
The Application of the High Pressure Hydraulic Fracturing Technology for Prevention of Rock Burst..... ZHANG Xin-ke(51)  
The Technical Measures of Increasing Top Coal's Mining Rate of Low Position Top Caving in Huge Thick Seam..... MAO Zeng-xue, YU Feng, LI Lei(53)  
The Technology of Mining under Pressure in 21 Coal Seam in Ningzhuang Coal Mine..... WANG Huan-zhong(56)  
Explosion-proof Intelligent Monitoring System for Electric Control Device of Valve..... CHEN Wei(58)  
The Application of PLC in Underground Belt Conveyor Monitoring and Controlling System..... YU Dan-dan, LIU Zhang, LI Xin, et al(61)  
The Design and Realization of Host Computer Software of Personnel Tracking System of Underground Mine..... WANG Chun, HUA Gang, ZHU Ai-chun, et al(64)  
The Design and Application of the Anti-Runaway Safety Door System for Inclined Lane Hoisting Transport..... WU Xiao-hong, YANG Hong-tao, LIN Xiao-jun(67)  
Research on Anti-Electromagnetic Interference Technology in Coal Mine Safety Monitoring System..... FENG Li-guo, WANG Guo-hui, LI Xin-bao, et al(70)  
The Design of Mine Safety Monitoring System Based on Internet..... ZHU Gao-zhong(73)  
The Application of the Fiber Sensor in Coal Mine Safety Monitoring System..... DAI Jun(77)  
Remote Monitoring System for Coal Mine Safety Based on WebGIS..... LIU Yu-fang, SONG Jin-xing, HOU Yu-ting(81)  
The Application of Fuzzy Comprehensive Evaluation Theory in the Controlling System of Second-time Explosion Measured Instrument..... YE Ning, ZHANG Dong, LI Zhong-qiang, et al(84)  
The Research on the Prediction of Measured Data on Collieries with Artificial Neural Networks..... MA Ke-wei, YUAN Mei, LI Bo-bo(88)  
Putting up the Information Expressway Ungrounded Coal Mine..... YANG Bo, CUI Hong-ming, LI Yan-zeng, et al(91)  
Study of Long Distance Multi-Node Cooperative Image Compression Transmission in Underground Multimedia Sensor Network..... TU Xiao-jun, WEN Jin-chao(94)

## Issue Discussion

- Discussion on the Outburst Prevention Measures for Shaft or Crosscut..... CAO Yao-lin(98)  
Risk Level Prediction of Outburst Based on Artificial Neural Network and Fuzzy Comprehensive Evaluation..... LI Jun-tao(101)  
Discussion on the Necessity and the Feasibility of Gas Drainage System Network Joined..... WU Shuai-dong, LI Guo-qiang, ZHANG Xin-ke(105)  
The Analysis of Coal and Gas Outburst Prediction Based on Microseismic Monitoring Technology..... YANG Guo-qian, WANG Qing-li, WANG Zhong-xin(108)  
Discussion on Gas Ignition and Blasting for Rock Friction in Gob..... YANG Tian-bin, GU Jian-jun(111)  
The Analysis of an Especially Serious Gas & Coal Dust Explosion Accident..... LI Yong-huai, CAI Zhou-quan(114)  
Discussion on Coal and Gas Outburst and Gas Explosion Prevention..... YUAN Ye(117)  
The Analysis of Improving the Gas Drainage Rate of Low Permeability Coal Seam with Hydraulic Fracturing Technique..... WANG Guo-hong, XU Zan(120)  
Study on Rockburst Characteristics of Gob-surronded Coal Pillar in Nanshan Coal Mine..... LIU Xiao-fei, WANG Yun-gang, CAO Ya-ming, et al(122)  
Discussion on Stratum Selection of Stone Head under Complicated Geological Conditions..... FAN Jie, LU Run-sheng, PI Da-feng(125)  
Analysis of Rationality for Length of Thick Coal Seam and High-mechanized Mining Face with Great Height Mining..... ZHANG Tao-wei, WU Xue-ming, CHEN Zhan-yang, et al(128)  
The Geological Characteristics of Wugou Coal Mine and The Influence of Interlayer-Gliding on IO Coal Seam..... LI Xue-fei(131)  
The Stability Analysis of "R-S-F" System for Large Inclined Angle Full-mechanized Caving Face..... JIAO Jian, ZHANG Zhi-heng, ZHOU Xiang(135)  
Grey Correlative Analysis and Regressive Estimation of Mining Subsidence in Yushenfu Mining Area..... SONG Shi-jie, ZHAO Xiao-guang, LIU Yuan, et al(138)  
Wire Overheat When Current There Less Than Its Safe Carrying Capacities..... HUO Da-yong, WANG Ping(141)

## Safety Supervision and Management

- The Application of "Pressure and Elasticity" Theory on the Coal Mine Safety Management..... YANG Jian-min, REN Yan, AN Yu(143)  
Two-level Fuzzy Comprehensive Evaluation for the Coal Mine Safety Culture Level..... WANG Yu-e, JI Jing-wei, HAO Yao-hua, et al(147)  
The Classification of Miner Violation Behavior and Study on Its Controlling Model..... WANG Dan, SHEN Yu-zhi(151)  
The Interpretation on Coal Mine Safety Supervision and Management under Governance Theory and Its Construction..... WANG Hua(154)  
Strengthening Safety Training to Preventing Safety Accident in Coal Mine..... WANG Yong-zhi, WU Jian-bin(158)

## SAFETY in COAL MINES

Monthly (Started in 1970)

August 2010

Vol.41, No.8 (Total 430)

## Competent Authority

Shenyang Branch of CCRI

## Sponsor

Shenyang Branch of CCRI  
China Coal Industry Institute of  
Labour-Protection Science and Technology

**Chief Editor** LUO Hai-zhu  
**Deputy Chief Editor** LIANG Shao-quan  
**Editorial Director** WANG Fu-hou  
**Advertisement Manager** LIU Ming-zhi  
**Distribution Manager** LIU Ming-zhi  
**Editor and Publisher** Editorial Office of  
《SAFETY in COAL MINES》  
**Address** No.9 Northern Section of  
Shunda Street, Fushun Economic  
Developing-area, Liaoning, China  
**Post code** 113122  
**Tel** 86-413-6616988 6616981  
**Fax** 86-413-6616987 6616881  
**E-Mail** mkaq@163.com (manuscript)  
mkaqgg@163.com (advertisement)

**Website** mkaq.chinajournal.net.cn  
**Issuer** Domestically Distributed  
**Subscribe(to)** Editorial Office of  
《SAFETY in COAL MINES》  
or Local Post Offices  
**Postal Distribution Code** 8-293  
**Printed by** Offset Printing Factory of  
Shenyang Branch of CCRI

**Periodical Registration No.** ISSN 1003-496X  
CN 21-1232/TD

**Advertisement Licence** No.2104004000017

**Trademark Registered**  
**Certificate** No.1144537

**Publishing Date** the 10th day of each  
month  
**Price** 15 yuan

**Advertisement Agency** Beijing Jiacheng

Heli Advertisemeng CO., Ltd.

**Tel** 86-10-51638371