

煤矿安全

MEIKUANG ANQUAN

月刊(1970年创刊)

2011年5月

第42卷第5期(总第439期)

主管单位 Competent Authority

煤炭科学研究总院沈阳研究院
Shenyang Branch of CCRl

主办单位 Sponsor

煤炭科学研究总院沈阳研究院
Shenyang Branch of CCRl

主编 罗海珠
Chief Editor LUO Hai-zhu

副主编 梁绍权
Deputy Chief Editor LIANG Shao-quan

编辑部主任 王福厚
Editorial Director WANG Fu-hou

广告发行主管 刘明智
Advertisement & Distribution LIU Ming-zhi

出版单位 《煤矿安全》编辑部
Publisher Editorial Office of
(SAFETY IN COAL MINES)

地址 辽宁省抚顺市经济
开发区滨河路11号

Address No.11 of Binhe Road, Fushun
Economic Developing-area, Liaoning, China

邮政编码 Post code 113122

Tel (0413)6616988 6616987 6616981

E-Mail mkaq@163.com(稿件 manuscript)
mkaqgg@163.com(广告 advertisement)

Website mkaq.chinajournal.net.cn

发行范围 公开发行
Issuer Public Offering

发行单位 《煤矿安全》编辑部
或全国各地邮局

Subscribe(to) Editorial Office of SAFETY IN
COAL MINES or Local Post Offices

邮发代号 Postal Distribution Code 8-293

印刷单位 煤炭科学研究总院抚
顺分院胶版印刷厂

Printed by Office Printing Factory of
Fushun Branch of CCRl

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

企业法人营业执照注册号
Business License No. 210400000026129

商标注册证 NO.1144537
Trademark Registered Certificate

出版日期 每月10日
Publishing Date the 10th day of each month

定价 Price ¥18.00

本刊广告总代理 北京嘉诚禾力
广告有限公司

Advertisement Agency Beijing Jucheng He Li
Advertisement CO., Ltd.

Tel (010)51638371

目次

试验·研究

基于致裂理论的初始释放瓦斯膨胀预测模型
体积应力及孔隙压力对型煤渗透率影响的实验研究
外在水分对煤低温氧化特性的阻化作用研究
煤炭自燃特性试验与应用研究
水力致裂弱胶坚硬顶板现场试验研究
煤矿膏体充填材料力学变形性能的试验研究
煤矿粉尘浓度传感器及检测系统的研究

石庆礼,杨胜强,蒋承林,等(1)
李波波,袁梅,马科伟,等(5)
郭小云,王德明,李金帅(9)
孙凯,张建业,卞朝东(12)
孙兴林,龚林名,张士斌,等(16)
何利辉,贾尚昆,陈超群,等(20)
黄成玉,赵立永,张全柱,等(24)

技术·创新

张小核井下邻近层卸压范围考察
竖井揭煤冲煤扫孔加速瓦斯排放技术
提高底板岩巷穿层钻孔瓦斯抽放效果的技术措施
常村煤矿注氮均压灭火技术
基于格子 Boltzmann 的矿井巷道突水计算机仿真
深孔控制水压爆破工艺技术
一种改进的震源扫描算法微震定位
软弱围岩巷道底臌控制技术
下导矿 1311(1)工作面深部煤巷锚杆强化支护

孙留涛,李增华,杨永良,等(28)
李培庆,程远平,王亮,等(31)
马永成(34)
王平(37)
王伟,黄光球(40)
汪开旺,李守国,张兴华,等(44)
张瑞红,林大超,乔兰(48)
舒建,杜泽生,吴庆友,等(52)
赵一鸣,张农,邢西贵(55)

设计·开发

沈海山 WSN 路由算法设计
矩阵式分频调速节能装置的设计与实现
井下人员定位管理系统的信息采集与处理
矿用断电控制器的电路设计
新型采区无转载单轨辅助运输系统
基于 PLC 技术的矿井提升机综合保护控制系统设计
矿井电机车全数字无线语音通讯设计
一种新型风门闭锁装置的设计
基于 PLC 的煤矿救灾自动风门监控系统设计

汪正东,张中,李海森,等(57)
于水娟,刘淮霞,陈珍萍,等(60)
王春,华钢,朱艾春,等(63)
赵建贵(67)
郑庆新,吕清华,沈兆振(70)
白生成(72)
张传书,王健新,章振海,等(75)
史俊伟,崔功刚,谭晓松(78)
苗双涛,蒋曙光,邵昊(80)

应用·实践

高瓦斯煤层群突出煤层组异地揭煤法
新型水泥石浆浆材料的防灭火性能测定
浅埋深回采工作面 CO 气体超限的治理措施
矿用固化泡沫灭火技术的成功应用
集中式机械制冷系统在矿井热害治理中的应用
落地式摩擦提升机更换主提升绳方法与步骤
蚁群神经网络传感器故障识别法在二次测爆装置中的应用

吴爱军,蒋承林,程国军,等(83)
刘鑫,肖盼,邓军,等(87)
姜仁生,陈衍宽,张亮(90)
王文彬,贺延军(93)
王永胜,王保齐,于晓波(96)
谢小展(99)

王国防,叶宁,邹德东,等(102)

分析·探讨

寺河煤矿 2301s 工作面瓦斯涌出参数测试与分析
钻孔瓦斯涌出初速度的影响因素与突出预测敏感性分析
杨庄煤矿煤层瓦斯涌出主控因素分析
长平煤矿 3 号煤层瓦斯赋存规律分析
高产高效工作面瓦斯综合治理技术研究现状
采空区高位钻场与高抽巷瓦斯抽放方法对比及实例分析
皖北矿区五沟煤矿与瓦斯突出危险区划分
采空区漏风对煤自燃危险性的影响
汝箕沟煤田火区裂隙介质形渗流探析
热管换热器回收矿井回风余热的可行性分析
保护层卸压开采时空演化规律的数值模拟
近水平层状顶板冒落过程数值分析
平朔 2 号井工矿陷落社内巷道变形分析与治理
煤矿井下监控系统在线检测技术的探讨
煤矿安全监测系统在线校准方法
6 kV 封闭式干式变压器箱门实现联锁功能的研讨
防煤格棚结构对压力损失的影响
矿井斜井运输事故的调查分析与对策

温永言(106)
孙炳兴(109)
王润,李曼,唐一博,等(113)
杨宏民,王松,陈向军,等(117)
李保东(120)
李晓军(122)
焦殿志(126)
王东江,杨胜强,刘松,等(129)
陈晓坤,徐佳,张辛亥(133)
张培朝,辛嵩(136)
杨威,林柏泉,屈永安,等(140)
李常文(144)
张德琦,王子君,杨晓晨,等(147)
付文俊,何明刚(151)
刘绍宗,王五一,张金亮,等(153)
许长志,孙丽艳,靳聪(157)
范江朝,李宝林,张健全,等(161)
孙百存,姜广臣,赵国超(164)

监察·管理

煤矿小面积大灾模型及系统动力学分析
模糊综合评价在瓦斯事故预警管理中的应用
PCPR 煤矿安全体系的研究与应用
2007-2010 年我国煤矿瓦斯事故统计分析
国内外煤矿生产安全管理经验及启示
煤矿安全管理中的组织结构探讨
煤矿安全生产事故的致因分析
鲁西煤矿机电设备本质安全化的创新管理

陈静,曹庆贵,刘音(167)
黄冬梅,秦忠诚,刘业娇(170)
李亚东,蒋曙光,邵昊,等(173)
安明杰,杜泽生,张连军(177)
胡文国(180)
汤海龙(184)
丁名雄(187)
丁振国,聂玉国(190)

国外煤矿安全信息

物玛玛中央区矿用通风系统分析(23)综合抽放煤层瓦斯方法(51)安装和运转 31.5M2 矿用通风机(54)碎石堆最大允许喷出物的计算方法(69)减少运输车辆停工时间(105)开采高瓦斯煤层过程中抽取和利用矿井甲烷工艺的工艺规程(166)完善顿巴斯中央区各矿井的通风系统(186)关于开采煤层时发生高温机理的问题(192)

SAFETY in COAL MINES

Monthly (Started in 1970)

May 2011

Vol.42, No.5 (Total 439)

CONTENTS

Test·Research

- Research on Expansion Energy in Initial Released Gas Prediction Model Based on Quantification Theory SHI Qing-li, YANG Sheng-qiang, JIANG Cheng-lin, et al(1)
Experimental Study on the Influence of Volume Stresses and Pore Pressures on Coal Samples' Permeability LI Bo-bo, YUAN Mei, MA Ke-wei, et al(5)
Study of the Inhibition Effect of External Moisture on Coal Oxidation in Low Temperature GUO Xiao-yun, WANG De-ming, LI Jin-shuai(9)
Experimental Study and Application on Tendency of Coal Spontaneous Combustion SUN Kai, ZHANG Jian-ye, BIAN Chao-dong(12)
Field Testing and Study on Hydraulic Fracturing to Weaken Hard Roof SUN Xing-lin, DOU Lin-ming, ZHANG Shi-bin, et al(16)
Experimental Study on Mechanical Deformation Properties of Mine Paste Filling Material HE Li-hui, JIA Shang-kun, CHEN Chao-qun, et al(20)
Research of Coal Dust Concentration Sensor and Detection System HUANG Cheng-yu, ZHAO Li-yong, ZHANG Quan-zhu, et al(24)

Technology·Innovation

- Investigative about the Releasing Range of Gas Pressure for Underlying Adjacent Seams in Zhangxiaolou Mine SUN Liu-tao, LI Zeng-hua, YANG Yong-jiang, et al(28)
Accelerating Gas Drainage Technique by Expanding Bore in the Shaft Uncovering Coal LI Pei-qing, CHENG Yuan-ping, WANG Liang, et al(31)
Technique for Improving Gas Drainage Efficiency of Penetration Drainage Boreholes in Floor Rock Drift MA Yong-qing(34)
Extinguishing Fire Technique by Injecting Nitrogen and Balancing Air Pressure of Changcun Mine WANG Ping(37)
Underground Tunnel Water-inrush Simulation Based on Lattice Boltzmann Method WANG Wei, HUANG Guang-qiu(40)
Study on Technology of Deep-hole Hydraulic Pressure Controlling Blast WANG Kai-wang, LI Shou-guo, ZHANG Xing-hua, et al(44)
An Improved Source-scanning Algorithm for Micro-seismic Source Location ZHANG Rui-hong, LIN Da-chao, QIAO Lan(48)
Research on Control Technology of Floor Heave under Soft Surrounding Rock SHU Jian, DU Ze-sheng, WU Qing-he, et al(52)
Deep Coal Roadway Strength Supported by Bolt of 1311(1) Face in Dingji Mine ZHAO Yi-ming, ZHANG Nong, ZHENG Xi-gui(55)

Design·Development

- Design of WSN Routing Algorithm for Monitoring System of Coal Preparation Plant WANG Zheng-dong, ZHANG Shen, LI Hai-sen, et al(57)
Research of Divided-frequency Speed Regulation Based on Matrix in Energy-saving Equipment YU Shui-juan, LIU Huai-xia, CHEN Zhen-ping, et al(60)
The Data Acquisition and Processing of Personnel Tracking Management System of Underground Mine WANG Chun, HUA Gang, ZHU Ai-chun, et al(63)
Circuit Design of Switching Off Controller Used for Mines ZHAO Jian-gui(67)
A New Type Mining Area Non-Transshipment Monorail Auxiliary Transportation System ZHENG Qing-xin, LU Qing-hua, SHEN Zhao-zhen(70)
Design of the Mine Pit Elevator Protective System Based on PLC BAI Sheng-wei(72)
Design of the Total Digital Wireless Voice Communication for Mineral Electric Locomotive ZHANG Chuan-shu, WANG Jian-xin, ZHANG Zhen-hai, et al(75)
Design and Application of A New Type Air Door Blocking Device SHI Jun-wei, CUI Gong-gang, TAN Xiao-song(78)
Monitor and Control System of Coal Mine's Automatic Rescue Doors Base on PLC MIAO Shuang-tao, JIANG Shu-guang, SHAO Hao(80)

Application·Practice

- Coal Uncovering Method of High Gas Gentle Inclined Outburst Seam WU Ai-jun, JIANG Cheng-lin, CHENG Guo-jun, et al(83)
Fire Retarding Performance Measurement and Application of A New Type Cement Grouting Material for Mine LIU Xin, XIAO Yang, DENG Jun, et al(87)
Control Measures of CO Gas Overrun of Shallow Work Face JIANG Ren-sheng, CHEN Yan-kuan, ZHANG Liang(90)
Successful Application of Mine Solidification Foam Fire Retarding WANG Wen-bin, HE Yan-jun(93)
Centralized Mechanical Refrigerator System in the Application of Controlling Thermal Hazard in Mine WANG Yong-sheng, WANG Bao-qi, YU Xiao-bo(96)
Method and Steps of Replacing Main Rope of Floor Type Friction Hoist XIE Xiao-zhan(99)
Application of ACO-BP Sensor Fault Recognition Method in the Secondary Explosion-detector Device WANG Guo-hui, YE Ning, ZOU De-dong, et al(102)

Analysis·Discussion

- Measurement and Analysis of Gas Emission Parameters of 2301s Work Face in Sih Mine WEN Yong-yan(106)
Analysis on the Factors Having Impact on Initial Speed of Gas Emission from Borehole and on Sensibility of Gas Outburst Prediction SUN Bing-xing(109)
Analysis of the Main Control Factor of Gas Emission in Yangzhuang Coal Mine WANG Run, LI Man, TANG Yi-bo, et al(113)
Analysis on the Influence Factors to Gas Occurrence of the No.3 Coal Seam in Changping Coal Mine YANG Hong-min, WANG Song, CHEN Xiang-jun, et al(117)
Research Status of Gas Control Technology in High Production and High Efficient Work Face LI Bao-dong(120)
Comparative Analysis Of Methods and Examples on Gas Emission of High Level Drilling Site and High Level Suction Roadway in Gob ZHANG Chuan, WEN Zhi-Jie, HU Shan-chao(122)

- Study on the Regional Prediction of Coal and Gas Outburst Dangerous in Wugou Mine of Wanbei Mine Area JIAO Dian-Zhi(126)
Influence of Air Leakage to Coal Spontaneous Combustion Risk in Gob WANG Dong-jiang, YANG Sheng-qiang, LIU Song, et al(129)
Study on the Fractal Percolation of Fracture Medium in Ruqigou Coal Field Fire Area CHEN Xiao-kun, YANG Gui-jiong, ZHANG Xin-hai, et al(133)
Feasibility Analysis of Heat-pipe Heat Exchanger Recycling Heat in Mine Return Air ZHANG Pei-peng, XIN Song(136)
Numerical Simulation of Space-time Evolution of Pressure Relief in Protective Layer Mining YANG Wei, LIN Bai-quan, QU Yong-an, et al(140)
Numerical Analyzing Falling Process of Horizontal Strata Roof LI Chang-wen(144)
Controlling Expansion Ground Pressure of Sink Pillar Roadway in NO.2 Coal Mine of Pingshuo Coal Company ZHANG De-qi, WANG Zi-jun, YANG Xiao-chen, et al(147)

- Online Detection Technology of Mine Safety Monitoring System FU Wen-jun, HE Ming-gang(151)
Online Calibration Method of Mine Safety Monitoring System LIU Shao-zong, WANG Wu-yi, ZHANG Jin-liang, et al(153)
Discussion of Making Interlock within Power and Box's Door of 6kV Closed Dry-type transformer XU Chang-zhi, SUN Li-yan, JIN Cong(157)
Influence of Fire Arrester Structure on Pressure Loss FAN Jiang-peng, LI Bao-lin, ZHANG Jian-quan, et al(161)
Accident Analysis and Preventive Measures on Mine Inclined Roadway Transport SUN Bai-cun, JIANG Guang-chen, ZHAO Guo-cao(164)

Supervision·Management

- The Model of Personnel Errors in Mine Accident and Analysis of Related System Dynamics CHEN Jing, CAO Qin-gui, LIU Yin(167)
Application of Fuzzy Comprehensive Evaluation on Early Warning Management of Gas Accident HANG Dong-mei, QIN Zhong-cheng, LIU Ye-jiao(170)
Research and Application of PCPR Coal Mine Safety System LI Ya-dong, JIANG Shu-guang, SHAO Hao, et al(173)
2007-2010 Statistical Analysis on Coal Mine Gas Accidents in China AN Ming-yan, DU Ze-sheng, ZHANG Lian-jun(177)
The Experience and Enlightenment of the Domestic and International Coal Mine Production Safety Management HU Wen-guo(180)
Analysis of Organization Structure in Coal Safety Management TANG Hai-long(184)
Analysis of Causes Resulting in Coal Mine Production Accidents DING Ming-xiong(187)
An Innovation System Based on Mechanical & Electrical Equipment Safety Managements in Luxi Mine DING Zhen-guo, NIE Yu-guo(190)