



中文核心期刊 中国科技核心期刊 RCCSE 中国核心学术期刊

ISSN



2/TD

煤矿安全[®]

Safety in Coal Mines

智慧矿山多系统传感层设备融合关键技术研究
基于中性区特征的沿空掘巷煤柱宽度分析与实践
人工冻结斜井洛河组砂岩解冻后蠕变模型试验研究
基于薄板理论的孤岛工作面基本顶变形规律及破断距研究



7

2022

第53卷 第7期
2022年7月出版

ISSN 1003-496X



煤科集团沈阳研究院有限公司 主管 煤科集团沈阳研究院有限公司 主办

万方数据

目次

试验·研究

- 基于低温氮吸附和压汞法的焦煤孔隙结构研究 戚灵灵,周晓庆,彭信山,王兆丰,代菊花(1)
- 低阶煤高温燃烧特性参数实验研究 杨梦单,张雷林(7)
- 带式输送机转载点气水喷雾降尘效果试验研究 薛文涛,侯茂森,霍中刚,凡永鹏,郝晋伟,杨伟东,宋鑫,涂琦(14)
- 二氧化碳致裂对煤孔隙结构影响的试验研究 郭亚玲,江泽标,彭鑫,扶祥祥,吴少康,权西平,杨希法(20)
- 煤粉沉积对支撑剂充填裂缝导流能力的影响 周洋(27)
- 不同氧气体积分数下风化煤自燃特性研究 宋双林(32)
- 不同氧气条件下煤自燃参数特征研究 刘东(38)
- 尺寸与形状效应下煤岩组合体力学特性与声发射特征分析 张雪媛,马昊宾,许健飞,都平平(45)
- 胶结充填材料性能研究及配比优化 许健飞,张罗斌,郭亚奔(52)
- 不同条件下燃煤颗粒物的粒径分布研究 黄靖维,任万兴,康增辉(58)
- 王坡煤矿碎软煤层高压氮气定向钻进试验研究 孙永新,张杰,马强,黄寒静,张亚洲,王建强(64)
- 圆孔障碍物对压力重叠影响的实验研究 马云龙(70)
- 人工冻结斜井洛河组砂岩解冻后蠕变模型试验研究 任建喜,易归,陈旭,曹西太郎(74)

应用·创新

- 袁大滩煤矿覆岩破坏规律及顶板水害防治对策 刘瑞瑞,刘洋,方刚,梁向阳,黄浩,刘晨光(82)
- 冲击地压煤矿井上下微震联合监测技术 杜涛涛(92)
- 基于可控源音频大地电磁法的陷落柱精细探测 任辰锋,程久龙,刘彬,辛成涛,程鹏,张钰琪,姜成麟(99)
- “横切-纵爆”复合卸压机制研究与应用 司瑞江,赵璐璐,张广辉,左杰海,许利军,张奥泽,焦阳,李东亮(105)
- 密集钻孔弱化底分层顶板沿空留巷技术 李东印,张景轩,郑立军,王伸,王文,黄祖军(111)

设计·开发

- 智慧矿山多系统传感层设备融合关键技术 陈杰(119)
- ZGZS1000水封阻火泄爆装置设计 黄克海(126)

- 矿用跨区域协同控制技术及装备研究 周代勇(131)
- 矿用智能传感器自主定位研究 柏思忠(135)
- 高瓦斯碎软煤层“钻-护-测”一体化新技术 王小龙,刘京科(141)
- 新型棘轮式二级定位钻具内切割器研制及其在近水平定向钻孔中的应用 魏宏超,姚宁平,豆旭谦,张金宝(147)
- 阶梯型矿灯反光杯的设计及效果研究 张宇佳(153)

分析·探讨

- 基于分子模拟方法的温度对软硬无烟煤吸附甲烷特性的影响研究 许江涛(158)
- 深井 6.8 m 大采高大断面沿空掘巷窄煤柱宽度及围岩控制研究 孙东飞,尚 奇(166)
- 冲击高应力膨胀破碎软岩大变形巷道控制机理研究 毕 颖,赵政文(174)
- 三软厚煤层工作面回撤通道稳定性控制研究 方珍珠,王 林,昌李宁,贾后省(181)
- 深部巷道薄厚组合壳支护适用性模拟分析 孙利辉,宋家乐,贺庆丰,丁 斌,彭世龙,熊怀鑫,杨贤达,杨本生(189)
- 相邻综采工作面采空区覆岩压力分布特征研究 戴文琦(195)
- 基于薄板理论的孤岛工作面基本顶变形规律及破断距研究 宋彦琦,杨敏健,马宏发,郑俊杰,申付新(201)
- 基于中性区特征的沿空掘巷煤柱宽度分析与实践 张守宝,何基源,宋云玮,何 潇,张振宇,李东东,李焱志,郭 明(208)
- 重复采动下陡岩变形破坏特征分析 唐建新,李 伟,张择靖,杜维毅,郑英建(215)
- 厚层黄土基底排土场边坡稳定性研究 李芳玮,王 东(221)
- 双弱层烧变岩边坡失稳模式研究 李 伟(227)
- 安家岭矿端帮煤开采边坡稳定性分析与控制 侯成恒(235)

监察·管理

- 大数据时代煤矿安全风险治理模式研究 牛莉霞,赵 蕊(241)
- 美国矿用产品 MSHA 认证研究 张素艳(246)
- 露天煤矿高质量安全生产形势分析与对策措施 赵 浩(251)

CONTENTS

Test·Research

Study on pore structure of coking coal based on low-temperature nitrogen adsorption and mercury intrusion method

QI Lingling, ZHOU Xiaoqing, PENG Xinshan, WANG Zhaofeng, DAI Juhua(1)

Experimental study on high temperature combustion characteristic parameters of low rank coal

YANG Mengdan, ZHANG Leilin(7)

Study on dust removing effect of air-water spray at transfer point of belt conveyer

XUE Wentao, HOU Maosen, HUO Zhonggang, FAN Yongpeng, HAO Jinwei, YANG Weidong, SONG Xin, TU Qi(14)

Experimental study on the influence of carbon dioxide cracking on coal pore structure

GUO Yaling, JIANG Zebiao, PENG Xin, FU Xiangxiang, WU Shaokang, QUAN Xiping, YANG Xifa(20)

Influence of pulverized coal deposition on proppant-filled fracture conductivity

ZHOU Yang(27)

Study on spontaneous combustion characteristics of weathered coal under variable oxygen volume fraction

SONG Shuanglin(32)

Research on parameters characteristics of coal spontaneous combustion under different oxygen conditions

LIU Dong(38)

Analysis of mechanical properties and acoustic emission characteristic of coal-rock assembly under the effect of size and shape

ZHANG Xueyuan, MA Haobin, XU Jianfei, DU Pingping(45)

Research on properties of gangue-based cemented filling materials and ratio optimization

XU Jianfei, ZHANG Luobin, GUO Yaben(52)

Study on particle size distribution of coal combustion under different conditions

HUANG Jingwei, REN Wanxing, KANG Zenghui(58)

Experimental study on directional drilling with high pressure nitrogen in soft-fragmentized coal seam of Wangpo Coal Mine

SUN Yongxin, ZHANG Jie, MA Qiang, HUANG Hanjing, ZHANG Yazhou, WANG Jianqiang(64)

Experimental study on the influence of circular hole obstacles on pressure overlap

MA Yunlong(70)

Experimental study on creep failure mechanism of artificially frozen sandstone of Luohe Formation after thawing

REN Jianxi, YI Gui, CHEN Xu, CAO Xitailang(74)

Application·Innovation

Law of overburden failure and roof water damage in Yuandatan Coal Mine

LIU Ruirui, LIU Yang, FANG Gang, LIANG Xiangyang, HUANG Hao, LIU Chenguang(82)

Joint monitoring of surface and underground micro-seismic monitoring technology in rockburst coalmine

DU Taotao(92)

Fine detection of collapse columns based on controlled source audio-frequency magnetotelluric method

REN Chenfeng, CHENG Jiulong, LIU Bin, XIN Chengtao, CHENG Peng, ZHANG Yuqi, JIANG Chenglin(99)

Research and application of combined pressure relief technology of roof hydraulic fracturing and deep hole blasting

SI Ruijiang, ZHAO Lulu, ZHANG Guanghui, ZUO Jiehai, XU Lijun, ZHANG Aoze, JIAO Yang, LI Dongliang(105)

Dense boreholes for weakening bottom layer by cutting roof and pressure relief of gob-side entry retaining

LI Dongyin, ZHANG Jingxuan, ZHENG Lijun, WANG Shen, WANG Wen, HUANG Zujun(111)

Design·Development

Key technology of multi-system sensor layer equipment fusion in intelligent mine

CHEN Jie(119)

Design of ZGZS1000 water sealing fire resistance and explosion venting device

HUANG Kehai(126)

Research on mine-used cross-regional collaborative control technology and equipment ZHOU Daiyong(131)

Research on autonomous positioning of mine intelligent sensor BAI Sizhong(135)

New integrated technology of "drilling-protecting-measuring" borehole in soft-fragmentized coal seam with high gas
WANG Xiaolong, LIU Jingke(141)

Development of a new ratchet type two-stage positioning drill internal cutter and its application in near horizontal directional hole
WEI Hongchao, YAO Ningping, DOU Xuqian, ZHANG Jinbao(147)

Design and effect study of stepped reflective cup for miner's lamp ZHANG Yujia(153)

Analysis-Discussion

Influence of temperature on methane adsorption characteristics of soft and hard anthracite based on molecular simulation method
XU Jiangtao(158)

Study on narrow coal pillar width and surrounding rock control of gob-side entry driving with large mining height and section of 6.8 m in deep coal mine
SUN Dongfei, SHANG Qi(166)

Study on control mechanism of large deformation roadway in impact high stress swelling broken soft rock
BI Ying, ZHAO Zhengwen(174)

Research on stability control of withdrawal channel in three-soft thick coal seam face
FANG Zhenzhu, WANG Lin, CHANG Lining, JIA Housheng(181)

Simulation analysis of applicability of thin-thick composite shell supporting structure for deep roadway
SUN Lihui, SONG Jiale, HE Qingfeng, DING Bin, PENG Shilong, XIONG Huaixin, YANG Xianda, YANG Bensheng(189)

Pressure distribution characteristics of overlying strata in adjacent fully mechanized mining face DAI Wenqi(195)

Study on deformation law and breaking span of main roof of isolated working face based on thin plate theory
SONG Yanqi, YANG Minjian, MA Hongfa, ZHENG Junjie, SHEN Fuxin(201)

Analysis and practice of coal pillar width of gob-side entry driving based on neutral zone features
ZHANG Shoubao, HE Jiyuan, SONG Yunwei, HE Xiao, ZHANG Zhenyu, LI Dongdong, LI Yaozhi, GUO Ming(208)

Analysis of deformation and failure characteristics of steep rock under repeated mining
TANG Jianxin, LI Wei, ZHANG Zejing, DU Weiyi, ZHENG Yingjian(215)

Analysis on slope stability of thick loess-based waste dumps LI Fangwei, WANG Dong(221)

Study on instability mode of double weak layer burnt rock slope LI Wei(227)

Analysis and control of slope stability of end wall coal mining in Anjialing Open-pit Mine HOU Chengheng(235)

Supervision-Management

Research on coal mine safety risk management model in the era of big data NIU Lixia, ZHAO Rui(241)

Study on MSHA approval for mining products in the United States ZHANG Suyan(246)

Analysis of development situation and countermeasures of high quality safety in open-pit coal mines ZHAO Hao(251)



煤传媒



煤矿安全

中文核心期刊

中国科技核心期刊

RCCSE中国核心学术期刊

美国《化学文摘》收录期刊

美国《乌利希期刊指南》收录期刊

俄罗斯《文摘杂志》收录期刊

煤矿安全[®]

MEIKUANG ANQUAN

月刊 (1970 年创刊)

第 53 卷 第 7 期 总第 577 期 2022 年 7 月

Safety in Coal Mines

Monthly (Started in 1970)

Vol.53 No.7 (Series No.577) July 2022

主管单位 煤科集团沈阳研究院有限公司
主办单位 煤科集团沈阳研究院有限公司
主 编 梁运涛
副 主 编 王福厚
编辑部主任 陈 洋
出版单位 《煤矿安全》编辑部
地 址 辽宁省沈抚示范区滨河路 11 号
邮政编码 113122
发行范围 公开发行
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 抚顺煤研印刷有限公司
**统一社会
信用代码** 91210400463312350A
商标注册证 第 1144537 号
网 址 www.mkaqzz.com
出版日期 7 月 20 日

Supervisor CCTEG Shenyang Research Institute
Sponsor CCTEG Shenyang Research Institute
Editor-in-Chief LIANG Yuntao
Associate Editor-in-Chief WANG Fuhou
Editorial Director CHEN Yang
Publisher Editorial Office of Safety in Coal Mines
Address No.11 of Binhe Road, Shenfu Demonstration Zone,
Liaoning, China
Post Code 113122
Distribution Range Public Offering
Subscription Editorial Office of Safety in Coal Mines
or Local Post Offices
Subscription Code 8-293
Printed by Fushun Meiyuan Printing Co., Ltd.
Uniform Social Credit Code 91210400463312350A
Trademark Registration Certificate No.1144537
Website www.mkaqzz.com
Publication Date July 20

中国标准连续出版物号: ISSN 1003-496X
CN 21-1232/TD
国内定价: 25.00 元

电 话: (024) 56616988 56616987 56616881
电子邮箱: mkaq@163.com 北京联络处: (010) 64464228