

IS
Cl



QK2208994

机械管理开发

MECHANICAL MANAGEMENT AND DEVELOPMENT

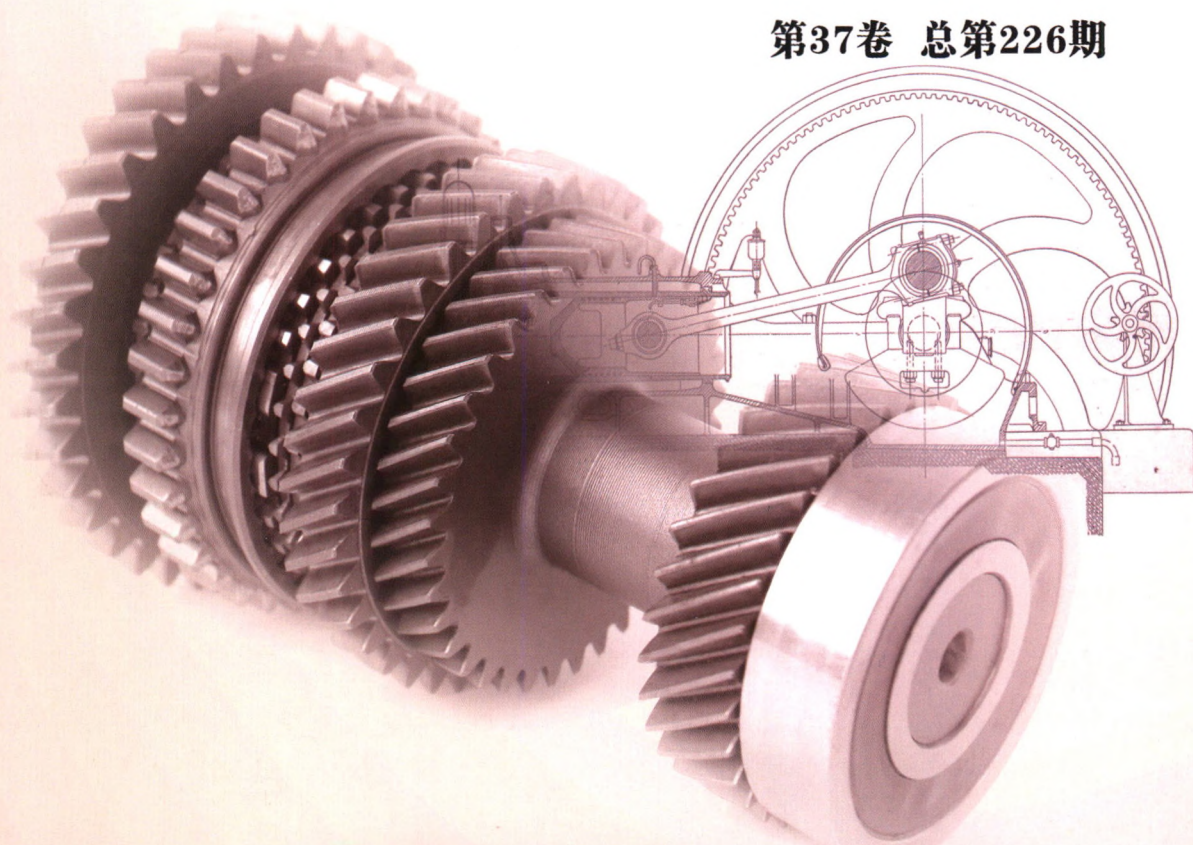
主管单位：山西省工业和信息化厅

编辑出版：山西经济和信息化出版传媒中心

山西省一级（优秀）期刊

2022年第2期

第37卷 总第226期



- 中国核心期刊（遴选）数据库收录期刊
- 中国期刊全文数据库全文收录期刊
- 中国学术期刊网络出版总库全文收录期刊
- 中国学术期刊综合评价数据库来源期刊
- 中国学术期刊（光盘版）全文收录期刊
- 中文科技期刊数据库（维普网）收录期刊
- 万方数据—数字化期刊群全文上网期刊

ISSN 1003-773X



9 771003 773222

定价：人民币20元

万方数据

目次

·设计理论与方法·

超声磨削加工表面分形维数计算方法* 冯珂,黄卓(1)

矿井通风监测控制系统的可靠性分析 赵健(4)

重卡变速箱关键部件的改进 李敬杰(7)

液压支架协同方案设计 鲍江峰(9)

18106工作面支护技术研究 张妙生(12)

无人机电力电缆安全巡检关键技术开发与应用 田志平(14)

卡轨车轨道制动方案设计及试验研究 张俊杰(17)

49419工作面巷道掘进支护方案设计 李强(19)

国产大型低污染柴油机单轨吊在综掘工作面的设计与应用 郑爱午(22)

悬臂式掘进机硬岩截割部的设计分析 闫阳(24)

煤矿对旋轴流式通风机的改进设计探析 李春潮(26)

单相电压型PWM逆变器谐波抑制方法* 丰胜成,郭继成,沈少峰,范军朝,孙强(28)

复杂地质巷道掘进围岩支护参数优化 冯开辉(30)

·机械分析与设计·

某乘用车下支臂模态和强度分析 田国富,高志彤(33)

重介质旋流器及在选煤厂的应用 刘永光(36)

铸焊结构中部槽中板焊接应力分析* 朱秀光,穆润青,张彦斌,张彩霞(38)

采煤机传动系统变负载工况下的截割响应特性分析 班鹏程(42)

回风巷锚杆支护及数值模拟问题探讨 郭亮(45)

渐开线花键拉刀加工工艺优化设计 李佳(48)

综采智能化工作面液压系统反渗透水处理装置的应用分析 冀明星(50)

不同工况条件下矿用带式输送机滚筒轴的结构强度分析 张宏建(53)

宽厚板轧机主传动万向节裂纹分析与优化 张宇轩,龙剑群(55)

MG700/2160WD型采煤机振动截割系统仿真分析 王成志(58)

液压支架关键零部件锻造工艺的改进研究 郭融(61)

采煤机滚筒螺旋叶片使用中的磨损性能研究 温智(63)

不同锚杆支护方案对煤巷围岩应力的影响分析 胡瀚超(66)

采煤机调高油缸的优化改进研究 卢金强(68)

关于ZY86400/25.5/55型液压支架掩护梁结构优化的研究 曹建东(71)

采煤机扭矩轴卸荷槽数值模拟分析 王修永,沈家宇(73)

煤巷快速掘进工艺及临时支护工艺的改进 张记华(76)

考虑受力均衡性的采煤机截割滚筒优化研究 赵鹏(78)

千米定向钻机关键技术的研究与应用 刘兆宇(81)

不同工况下采煤机牵引部行走轮疲劳寿命的分析 闫春斌(83)

采动影响下大断面煤巷失稳机理与支护技术研究 崔瑞军(85)

不同煤层参数对采煤机截齿结构性能的影响研究 麻琪(87)

不同截线距参数对掘进机截割性能的影响研究 孙亚鹏(90)

回采巷道松软破碎围岩注浆加固与支护技术研究	王 洋(92)
破碎顶板大断面煤巷支护技术研究	郭 忍(95)
断链保护装置在刮板输送机上的应用分析	武日刚(97)
不同叶片结构的离心通风机性能对比研究	张 璟(99)
采煤机截割滚筒自适应调高技术研究	李江斌(101)
不同帮锚杆参数对煤巷支护效果的影响研究	田建杰(104)
锚杆支护参数对巷道变形的影响分析	黄成龙(106)
机械加工工艺对零件加工精度的影响分析	潘长旺(109)
采煤机滚筒螺旋叶片磨损分析及其结构参数优化	赵云亮(111)
选煤厂带式输送机综合保护装置改进研究	张建风(114)
采煤机不同变速控制方式的对比分析	景 智(116)
不同结构形式分流叶片对通风机安全作用的影响分析	张泽君(118)
皮带机防撕裂保护装置的设计探析	原 峰(120)
液压支架不同参数对液压支架移架速度的影响研究	宋化刚(122)
采煤机运动参数对截割部行星减速器疲劳寿命的影响分析	张 军(124)
不同锚杆支护效果对煤巷围岩位移的对比分析	李百林(126)
49709 皮带巷工作面支护技术的研究	李 帅(129)
矿井采煤机截割滚筒性能分析研究	李金键(132)
·测试与诊断技术·	
机械设备的可靠性及故障诊断方法研究	李绍炀(135)
离心式空气压缩机故障诊断系统设计	剧江涛(138)
基于深度学习的煤矿机电设备检测技术研究	王 静(140)
·实践与应用·	
矿井回采工作面智能化技术应用分析	杜国凯(143)
CAN 数据总线在液压支架电液控制系统中的应用研究	梁里鹏(145)
千米钻机在煤矿瓦斯抽采中的应用分析	肖一凡(148)
无轨胶轮车在煤矿辅助运输中的应用研究	付建华(150)
西门子 PLC 与变频技术在煤矿皮带输送机控制系统中的应用研究	吴晓霞(152)
复杂地质条件下 EBZ200H 机组的改进及应用	王泰功(155)
坚硬岩层巷道快速掘进技术研究	雷 胖(157)
矿用隔爆开关开盖断电装置应用分析	申光玉(159)
基于新型逻辑阀控制的支架精准推移技术研究	张光辉(161)
坪上煤业斜井运输安全系统改造研究	栗 晋(163)
易燃煤层工作面设备回撤期间正压通风防灭火技术	张亚龙(165)
掘进机旋转喷雾降尘装置设计及应用	邴永辉(167)
煤电厂汽轮机回热系统的优化	郭小龙(169)
矿用掘进机自适应智能控制掘进工艺的应用研究	祁世龙(171)
小煤柱工作面应力区顺槽围岩控制技术的应用	周利峰(173)
快速换装站在新景矿辅助运输中的应用	康松松(176)

某选煤厂矸石入仓系统改造	尹学辉(178)
应力区综采工作面快速回撤工艺研究	石 凯(180)
煤矿带式输送机的节能技术研究分析	曹发亮(182)
锚注支护技术在沿空留巷工作面超前支护中的应用	梁 杰(184)
双网支护技术在煤矿巷道支护中的应用研究	姜 慧(186)
坚硬岩层巷道快速掘进技术研究	裴 浩(189)
锚杆锚索联合支护技术在巷道支护中的应用	柳 阳(191)
下山斜巷过陷落柱区支护技术应用	彭海巍(194)
无极绳绞车多尾轮布置在掘进工作面辅助运输中的应用研究	成绍刚(196)
大功率定向钻探机性能试验研究	尚泽龙(198)
煤电厂给水泵的变频改造研究	代昱鹏(200)
综放工作面支架挡煤装置设计及应用分析	杨健忠(203)
皮带运输机中集中控制系统的应用	段善普(205)
沿空掘巷围岩稳定性数值模拟及联合控制分析	张志文(207)
选煤厂集中控制系统优化改造	欧阳子文(209)
回采巷掘进工作面支护优化及应用	张 磊(211)
回采工作面液压支架顶板支护稳定性研究	高 翔(214)
断层破碎带高冒顶板巷道支护技术研究	武汇集(216)
采空区探放水施工技术应用分析	徐 宁(218)
·自动化技术与设计·	
矿用一氧化碳传感器的优化监测方法	常文娟(220)
采煤机智能监控系统设计与应用研究	黄 强(223)
线摩擦钢芯带式输送机电气控制系统的软硬件设计	高立强(225)
采煤机新型冲击截齿结构及其控制系统研究	张红兵(228)
基于 PLC 的采煤机智能控制系统设计	刘晓鹏(230)
矿用带式输送机常见故障分析及预警系统的设计研究	姚艳明(233)
煤矿主通风机可靠性维护管理系统的研究	郑晨晨(235)
深基坑人工作业智能装备的设计及其工程应用	张庆华,严逸凡,王云洁,张雄伟(238)
选煤厂煤泥压滤智能控制系统设计与应用	王建美(240)
火电厂气力输灰程控系统设计分析	宋新元(243)
矿井提升机变频调速控制系统研究	王 伟(245)
矿用无轨胶轮车失速保护系统的应用研究	王振华(247)
采掘工作面刮板输送机自动张紧装置控制系统研究	黄智军(250)
矿用自动校正一氧化碳传感器的设计	宋 玉(252)
民航机场行李分拣系统的优化研究	查丕进(255)
多电机驱动带式输送机协调控制系统研究	李晋凯(257)
煤矿供热锅炉自动监控系统的设计	张 峰(260)
综采工作面智能监控系统研究	马海俊(262)

采煤工作面综合自动化系统研究	杜 伟(264)
选煤厂浮选自动化控制装置系统设计研究	朱 坤(266)
煤矿井下带式输送机运煤系统巡检机器人研究	陈晓鹏(269)
矿用液压支架控制器的设计与实现	樊鹏飞(271)
基于 DSP 的电牵引采煤机电控系统研究	王 伟(273)
基于物联网技术的井下无人值守变电所智能巡检研究	贾艺栋(276)
矿用胶轮车调度系统设计	王 斌(278)
采煤机自动化电磁调速控制系统的研究	宋宇奇(281)
基于 PLC 的真空离子镀膜机控制系统设计	张羽洲(283)
选煤厂通风变频控制系统设计	王志国(285)
带式输送机模糊节能控制系统的设计及应用	荆文杰(288)
采煤机自适应调高控制系统的性能分析	吴贝强(290)
·专题与综述·	
煤矿机械自动化的应用及发展趋势分析	吴 珺(292)
典型航标件智能存储领用管理系统设计研究*	李海澄(296)
某核电厂核反应堆冷却剂泵电机可靠性提升	薛军军,陈晓斌,肖 骥,李春秋,詹华德(299)
机械 CAD/CAM 技术课程教学改革与创新探析*	黄仕银(302)
大导程螺纹链车削加工刀具理论分析	何小虎,尚 琪,赵金宁,王尊义(304)
激光熔覆再制造技术及其在机车车辆中的应用	廖芳蓉(306)
自动化技术在机械设计制造中的应用实践	张 菊(308)
人工神经网络算法在发动机燃油流量计算中的应用	汪 阳,周 伟,杨少锋,王兴海(310)
高速铣削加工应用及技术研究	张 佳(312)
三维数字化工艺设计系统在机械制造中的应用	吴 昊,江 洁(314)
激光熔覆技术在液压支架立柱再制造中的应用探讨*	田 萌(317)
·经验交流·	
煤矿通风机常见故障及对策措施研究	侯思捷(319)
煤矿机械传动齿轮损坏原因及解决方式探讨	高国斌(322)
洗煤厂加压过滤系统常见问题及解决措施分析	郭瑞娟(324)
离心压缩机故障分析及其维修策略研究	王 鹏(327)
煤矿井下液压支架快速拆装技术的优化研究	党泽夏(329)
截割电机常见故障分析及其预防措施研究	张宏彬(331)
提升矿井无轨胶轮车爬坡能力探析	王森良(333)
煤矿井下运输机械设备的安全管理分析	郭 伟(336)
竖井井筒电缆安装方法研究	邵启飞(338)
浅槽重介分选机应用中的主要问题分析及解决措施研究	李 阳(340)
综采工作面快速安拆技术探析	牛 峰(342)
煤矿掘进支护中存在问题及解决措施分析	孙 乐(344)

注:带★号的为基金资助论文

期刊基本参数: CN 14-1134/TH*1986*m*A4*346*zh*P*¥ 20.00*5000*145*2022-02

CONTENTS

•The Theory and Approaches of the Design•

Computation Method of Fractal Features of Surface Topography in Ultrasonic Vibration-Assisted Grinding	Feng Ke, Huang Zhuo(1)
Reliability Analysis of Mine Ventilation Monitoring Control System	Zhao Jian(4)
Improvement of Key Components of Heavy Truck Transmission	Li Jingjie(7)
Hydraulic Support Synergistic Solution Design	Bao Jiangfeng(9)
Study on the Support Technology of 18106 Working Face	Zhang Miaosheng(12)
Key Technology Development and Application of Safety Inspection of Power Cables by UAV ...	Tian Zhiping(14)
Design and Experimental Study of Rail Braking Scheme for Truck Railcar	Zhang Junjie(17)
49419 Working Face Roadway Excavation Support Scheme Design	Li Qiang(19)
Design and Application of Domestic Low Pollution Heavy Load and High Power Monorail Crane in Fully Mechanized Mining Preparation Face	Zheng Aiwu(22)
Design Analysis of Hard Rock Cutting Section of Cantilever Type Roadheader	Yan Yang(24)
Exploration of Improved Design of Counter-rotating Axial Flow Ventilator in Coal Mines	Li Chunchao(26)
Single-phase Voltage PWM Inverter Harmonic Suppression Method	Feng Shengcheng, Guo Jicheng, Shen Shaofeng, Fan Junchao, Sun Qiang(28)
Optimization of Rock Support Parameters in Complex Geological Roadway Excavation	Feng Kaihui(30)
•The Machinery Analysis and Design•	
Analysis of the Modality and Strength of the Lower Arm of a Passenger Car	Tian Guofu, Gao Zhitong(33)
Principle of Heavy Media Cyclone and Its Application in a Coal Processing Plant	Liu Yongguang(36)
Welding Stress Analysis of Middle Groove Plate in Cast Welded Structure	Zhu Xiuguang, Mu Runqing, Zhang Yanbin, Zhang Caixia(38)
Analysis of Cut-off Response Characteristics of Coal Mining Machine Drive System under Variable Load Conditions	Ban Pengcheng(42)
Discussion on Anchor Support and Numerical Simulation of Return Airway	Guo Liang(45)
Involute Spline Broach Machining Process Optimization Design	Li Jia(48)
Application of Reverse Osmosis Water Treatment Device for Hydraulic System of Intelligent Working Face in General Mining	Ji Mingxing(50)
Structural Strength Analysis of Mining Belt Conveyor Roller Shaft under Different Working Conditions	Zhang Hongjian(53)
Analysis of Cracking and Optimization Countermeasures for Main Drive Universal Joints in Wide Plate Mills	Zhang Yuxuan, Long Jianqun (55)
Simulation Analysis of Vibration Cutting System of MG700/2160WD Shearer	Wang Chengzhi(58)
Research on the Improvement of Forging Process of Key Components of Hydraulic Support	Guo Rong(61)
Study on the Wear Performance of Coal Mining Machine Drum Spiral Blades in Use	Wen Zhi(63)
Influence of Different Anchor Support Effects on the Surrounding Rock Stress in Coal Shaft ...	Hu Hanchao(66)
Optimization and Improvement Study of Coal Mining Machine Height Adjustment Cylinder	Lu Jinqiang(68)
Study on the Optimization and Improvement of the Structure of ZY86400/25.5/55 Hydraulic Bracket Cover Beam	Cao Jiandong(71)
Numerical Simulation Analysis of Coal Mining Machine Torque Shaft Unloading Chute	Wang Xiuyong, Shen Jiayu(73)
Improvement of Rapid Coal Tunneling Process and Temporary Support Process	Zhang Jihua(76)
Research on Optimization of Shearer Cutting Drum Considering Force Balance	Zhao Peng(78)
Research and Application of Key Technology of Kilometer Directional Drilling Rig	Liu Zhaoyu(81)
Analysis of the Influence of Fatigue Life of Walking Gear of Coal Mining Machine Traction Section under Different Working Conditions	Yan Chunbin(83)
Research on Destabilization Mechanism and Support Technology of Large Section Coal Tunnel under the Influence of Mining Movement	Cui Ruijun(85)
Influence of Different Coal Seam Parameters on the Structural Performance of Coal Mining Machine Cut-off Teeth	Ma Qi(87)
Influence of Different Cut-off Distance Parameters on the Cutting Performance of a Roadheader ...	Sun Yapeng(90)
Research on Grouting Reinforcement and Support Technology for Loose and Fractured Rocks in Back Mining Roads	Wang Yang(92)
Research on the Support Technology of Large Section Coal Tunnel with Broken Roof	Guo Ren(95)
Application of Broken Chain Protection Device on a Scraper Conveyor	Wu Rigang(97)
A Comparative Study of Different Function Centrifugal Ventilators	Zhang Jing(99)
Adaptive Height Adjustment Technology of Coal Mining Machine Cutting Drum	Li Jiangbin(101)
Study on the Effect of Different Gang Anchor Parameters on the Support Effect of Coal Tunnel ·	Tian Jianjie(104)
Analysis of the Influence of Anchor Support Parameters on Roadway Deformation	Huang Chenglong(106)
Analysis of the Influence of Machining Process on the Machining Accuracy of Parts Based on Machining Process	Pan Changwang (109)
Analysis of Coal Mining Machine Drum Spiral Blade Wear and Its Structural Parameter Optimization	Zhao Yunliang(111)
Research on Improvement of Comprehensive Protection Device of Belt Conveyor in Coal Processing Plant	Zhang Jianfeng(114)

Comparative Analysis of Different Variable Speed Control Methods for Coal Mining Machines	Jing Zhi(116)
Analysis of the Influence of Different Structural Forms of Shunt Blades on the Safety Role of Ventilation Fans	Zhang Zejun(118)
Exploration of the Design of Anti-tear Protection Device of Belt Machine	Yuan Feng(120)
Research on the Effect of Different Working Conditions on the Speed of Hydraulic Bracket Moving Frame	Song Huagang(122)
Analysis of the Influence of Coal Mining Machine Motion Parameters on the Fatigue Life of Planetary Reducer in Cut-off Section	Zhang Jun(124)
Comparative Analysis of the Effect of Different Anchor Support on the Displacement of Coal Tunnel Surrounding Rock	Li Bailin(126)
Research on 49709 Belt Lane Working Face Support Technology	Li Shuai(129)
Research on the Performance Analysis of Coal Mining Machine Cut-off Drum in Use	Li Jinjian(132)
·The Test and Diagnose Technology·	
Research on Reliability and Fault Diagnosis Methods in Mechanical Equipment	Li Shaoyang(135)
Design of Fault Diagnosis System for Centrifugal Air Compressors	Ju Jiangtao(138)
Research on Electromechanical Equipment Based on Deep Learning	Wang Jing(140)
·The Practice and Application·	
Application of Intelligent Technology in Mine Back Mining Working Face	Du Guokai(143)
Research on CAN Data Bus in Electro-hydraulic Control System of Hydraulic Support	Liang Lipeng(145)
Application of Kilometer Drilling Rig in Coal Mine Gas Extraction	Xiao Yifan(148)
Application of Trackless Rubber Wheeled Vehicle in Coal Mine Auxiliary Transportation	Fu Jianhua(150)
Application of Siemens PLC and Frequency Conversion Technology in Coal Mine Belt Conveyor Control System	Wu Xiaoxia(152)
EBZ200H Unit Improved Application under Complex Geological Conditions	Wang Taigong(155)
Rapid Roadway Tunneling Technology for Hard Rock Formations	Lei Pang(157)
Application of Mining Explosion-proof Switch Open Cover Disconnect Device	Shen Guangyu(159)
Research on Precise Nudging Technology of Stent Based on New Logic Valve Control	Zhang Guanghui(161)
Study on the Modification of Transportation Safety System of Slanting Shaft in Pingshang Coal Industry ...	Li Jin(163)
Positive Pressure Ventilation Anti-fire Fighting Technology during Equipment Retraction at Working Face of Spontaneous Combustion Prone Coal Seam	Zhang Yalong(165)
Design and Application of Rotary Spray Dust Reduction Device for Roadheading Machine ...	Bing Yonghui(167)
Optimization of Turbine Reheat System in Coal Power Plant	Guo Xiaolong(169)
Application of Adaptive Intelligent Control Tunnelling Process for Mining Roadheader	Qi Shilong(171)
Rock Control Technology for Shunchannel in Stress Zone of Small Coal Column Working Face ...	Zhou Lifeng(173)
Application of Quick Change Station in Auxiliary Transport of Xinjing Mine	Kang Songsong(176)
A Coal Processing Plant Gangue into the Bin System Transformation	Yin Xuehui(178)
Study on Rapid Retraction Process of Comprehensive Mining Face in Stress Area	Shi Kai(180)
Research and Analysis of Energy Saving Technology of Coal Mine Belt Conveyor	Cao Faliang(182)
Application of Anchor Injection Support Technology in Over-Support of Working Face along the Hollow Stay Lane	Liang Jie(184)
Application of Double Net Support Technology in Coal Mine Roadway Support	Jiang Hui(186)
Research on Rapid Roadway Tunneling Technology for Hard Rock Formations	Pei Hao(189)
Application of Combined Anchor Rod and Anchor Cable Support Technology in Roadway Support ...	Liu Yang(191)
Application of Support Technology for Downhill Sloping Lane over Trap Column Area	Peng Haiwei(194)
Application of Multi-Tail Wheel Arrangement of Induction Rope Winch in Auxiliary Transportation of Roadheading Face	Cheng Shaogang(196)
Experimental Study on the Performance of High Power Directional Drilling Rigs	Shang Zelong(198)
Study on Frequency Conversion of Feed Pump in the Coal Power Plant	Dai Yupeng(200)
Design and Application Analysis of Coal Retaining Device for Support at IMD Working Face ...	Yang Jianzhong(203)
Application of Centralized Control System in Belt Conveyor	Duan Shanpu(205)
Numerical Simulation and Joint Control Analysis of the Stability of the Surrounding Rock along the Hollow Boring	Zhang Zhiwen(207)
Optimization of Centralized Control System in Coal Processing Plant	Ouyang Ziwen(209)
Optimization and Application of Support for Working Face of Back Mining Lane Excavation	Zhang Lei(211)
Study on the Stability of Hydraulic Bracket Roof Support in Back Mining Working Face	Gao Xiang(214)
Research on the Support Technology of High Riser Roof Roadway in Fault Broken Zone	Wu Huiji(216)
Application of Water Exploration and Release Construction Technology in Mining Areas	Xu Ning(218)
·Automation Technology and Design·	
Optimized Monitoring Method for Mining Carbon Monoxide Sensors	Chang Wenjuan(220)
Design and Application of Intelligent Monitoring System for a Coal Mining Machine	Huang Qiang(223)
Software and Hardware Design of Electrical Control System of the Belt Conveyor	Gao Liqiang(225)
Research on New Type of Impact Cutter for Coal Mining Machine and Its Control System ...	Zhang Hongbing(228)
PLC-based Intelligent Control System Design for Coal Mining Machine	Liu Xiaopeng(230)
Analysis of Common Failures of Mining Belt Conveyor and Design Research of Early Warning System	Yao Yanming(233)

Study on Reliable Maintenance Management System of Main Ventilator in Coal Mine	Zheng Chenchen(235)
Design and Engineering Application of Artificial Operation Intelligent Equipment for Deep Excavation	Zhang Qinghua,Yan Yifan,Wang Yunjie, Zhang Xiongwei(238)
Design and Implementation of Intelligent Control System for Coal Slurry Filter Press in Coal Processing Plant	Wang Jianmei(240)
Design Analysis of Pneumatic Ash Conveying Program Control System for Thermal Power Plants	Song Xinyuan(243)
Research on Frequency Conversion Speed Control System of Mine Hoist	Wang Wei (245)
Application of Stall Protection System of Mining Trackless Rubber Wheel Car	Wang Zhenhua(247)
Research on the Control System of Automatic Tensioning Device of Scraper Conveyor in Mining Face	Huang Zhijun(250)
Design of Automatic Calibration Carbon Monoxide Sensor for Mining	Song Yu(252)
Optimization Study of Baggage Sorting System in Civil Airports	Zha Pijin(255)
Research on Coordinated Control System of Multi-Motor Driven Belt Conveyor	Li Jinkai(257)
Design of Automatic Monitoring System for a Coal Mine Heating Boiler	Zhang Feng(260)
Research on Intelligent Monitoring System of Variety Mining Working Face	Ma Haijun(262)
On Integrated Automation System of Coal Mining Working Face	Du Wei(264)
Design of Flotation Automation Control Device System in Coal Processing Plant	Zhu Kun(266)
Research on the Inspection Robot of Coal Transport System of Underground Belt Conveyor in a Coal Mine	Chen Xiaopeng(269)
Design and Implementation of Hydraulic Support Controller for Mining	Fan Pengfei(271)
Design of DSP-based Electric Control System for Electric Traction Coal Mining Machine	Wang Wei(273)
Research on Intelligent Inspection of Underground Unattended Substation based on IOT Technology	Jia Yidong(276)
Design of Mine Rubber Wheeled Vehicle Dispatching System	Wang Bin(278)
Research on Automatic Electromagnetic Speed Control System of Coal Mining Machine	Song Yuqi(281)
PLC-based Control System Design for Vacuum Ion Coating Machine	Zhang Yuzhou(283)
Design of Variable Frequency Control System for Coal Processing Plant Ventilation	Wang Zhiguo(285)
Design and Application of Fuzzy Energy Saving Control System for Belt Conveyor	Jing Wenjie(288)
Performance Analysis of Adaptive Height Adjustment Control System for Coal Mining Machine ..	Wu Beiqiang(290)
•Subjects and Summaries•	
Application and Development Trend of Coal Mine Machinery Automation	Wu Jun(292)
Application of Intelligent Material Cabinet in Aviation Maintenance Standard Parts	Li Haicheng(296)
Reliability Improvement of Coolant Pump Motor for Nuclear Reactor of a Nuclear Power Plant	Xue Junjun, Chen Xiaobin, Xiao Ji, Li Chunqiu, Zhan Huade(299)
Teaching Reform and Innovation of Mechanical CAD / CAM Technology Course	Huang Shiyin(302)
Theoretical Analysis of Tooling for Large-lead Thread Chain Turning	He Xiaohu, Shang Qi, Zhao Jinning, Wang Zunyi(304)
Laser Cladding Remanufacturing Technology and Its Application in the Rolling Stock of Railway	Liao Fangrong(306)
Application Practice of Automation Technology in Machine Design and Manufacturing	Zhang Ju(308)
Application of Artificial Neural Network Algorithm in Fuel Flow Calculation of Engine	Wang Yang, Zhou Wei, Yang Shaofeng, Wang Xinghai(310)
Research on High Speed Milling Applications and Technologies	Zhang Jia(312)
Application of 3D Digital Process Design System in Machine Manufacturing	Wu Hao, Jiang Jie (314)
Application of Laser Cladding Technology in the Remanufacturing of Hydraulic Support Columns	Tian Meng(317)
•The Experience Exchange•	
Research on Common Faults and Countermeasures of Coal Mine Ventilator	Hou Sijie(319)
Talk about the Causes of Damage to the Transmission Gear of Coal Mine Machinery and the Solution	Gao Guobin(322)
Analysis of Common Problems and Countermeasures of Pressurized Filtration System in a Coal Washing Plant	Guo Ruijuan(324)
Centrifugal Compressor Fault Analysis and Its Maintenance Strategy Research	Wang Peng(327)
Optimization Study of Rapid Disassembly and Assembly Technology of Underground Hydraulic Bracket in Coal Mine	Dang Zexia(329)
Analysis of Common Faults of Cut-off Motor and Its Preventive Measures	Zhang Hongbin(331)
Exploration on Improving the Climbing Ability of Mine Trackless Rubber Wheel Car	Wang Senliang(333)
Analysis of Safety Management of Underground Transportation Machinery and Equipment in Coal Mines	Guo Wei(336)
Research on the Installation Method of Vertical Shaft Cable	Shao Qifei(338)
Analysis of the Main Problems in the Application of Shallow Slot Heavy Media Sorter and Research on the Solution Measures	Li Yang (340)
Exploration of Rapid Installation and Dismantling Technology of Header Working Face	Niu Feng(342)
Analysis of Problems and Countermeasures in Coal Mine Excavation Support	Sun Le(344)



实现绿色发展 建设美丽山西

山西省高质量转型发展研究院 宣

地址：太原市上肖墙12号

