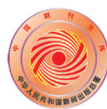


金属矿山

ISSN 1001-1250
CN 34-1055/TD
CODEN JIKUFY



JINSHU KUANGSHAN

METAL MINE

7

2022
(总第553期)

中国百强科技期刊 | 国家期刊奖百种重点期刊 | 中国期刊方阵双百期刊 | 中国精品科技期刊

美国CA、CSA收录期刊 | 全国中文核心期刊 | 中国科技核心期刊 | 日本JST收录期刊

主办单位：中钢集团马鞍山矿山研究总院股份有限公司

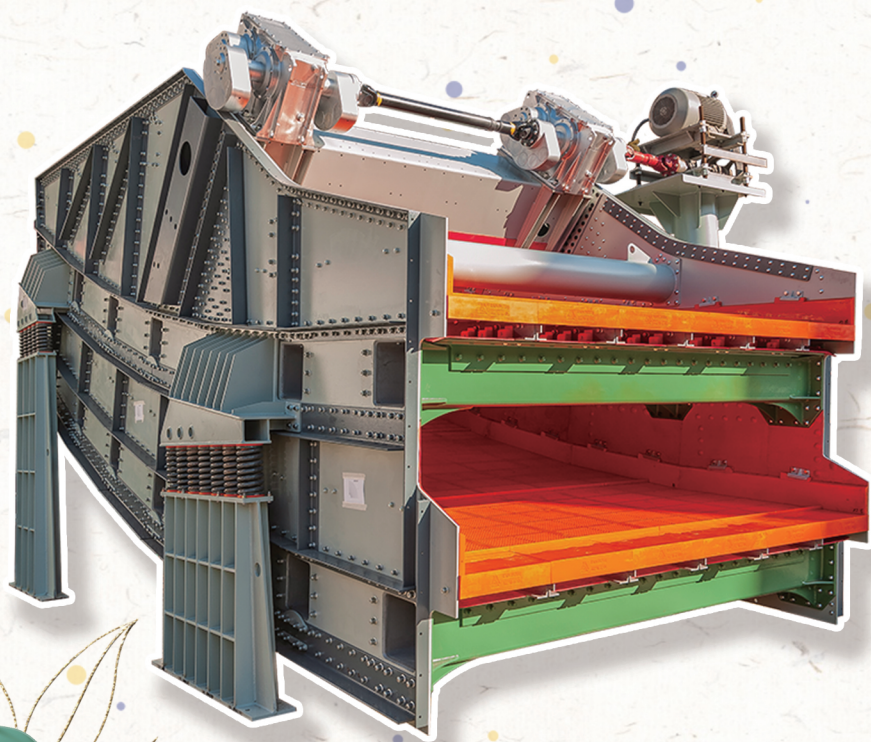
中国金属学会

编辑出版：《金属矿山》编辑部

广告



陆凯科技创建于1997年，是国内领先的高效筛分技术与装备制造公司。公司拥有以细粒筛分装备、重型筛分装备、旋流分级技术及装备、耐磨筛网制品为核心的选矿工艺全流程的筛分装备服务体系。公司产品和服务已广泛应用于首钢矿业、鞍钢矿业、河钢矿业、马钢矿业、中国黄金、山东黄金、云锡集团、国家能源、开滦集团、冀中能源、山东能源、VALE、JSC APATIT、ROY HILL等知名矿山企业。



高效 节能 可靠

ISSN 1001-1250



TANGSHAN OFFICE

地址：河北省唐山市国家高新技术产业园区

火炬路208号

Tel: (86)315-3853380/3853381

E-mail: landsky@lk-t.com.cn

BEIJING OFFICE

地址：北京市海淀区中关村苏州街长远天地

B2座12A07

Tel: (86)10-82610633/82618600

Fax: (86)10-82613002

E-mail: bjlandsky_xs@126.com

·“矿山爆破理论与新技术进展”专题·

· 矿物工程 ·

· 安全与环保 ·

· 综合利用 ·

细粒级金属尾砂的综合利用及在矿山充填中存在的问题和对策	刘娟红	周在波	(240)
钢渣中非稳定性物质微观结构和性能的研究现状与展望	李恩硕	胡晨光	苏 航
	付佳伟		(250)
选冶固废制备陶瓷技术研究现状与展望	张云昊	柴轶凡	安胜利
	武佳毅	王艺慈	(259)

CONTENTS

Background and New Thinking about Intelligent Blasting	WANG Xuguang WU Chunping	(2)
Study Prospect of Precision Blasting Technology in Open-pit Deep Hole Bench ...	XIE Xianqi HUANG Xiaowu YAO Yingkang HE Li WU Yue	(7)
Gas Explosion Study on Load Characteristics and Action Effect in Pipe Gallery		
.....	ZHONG Dongwang LI Tengfei HE Li YANG Zhilong CHEN Jiangwei	(19)
Application of Digital Electronic Detonator in Blasting Excavation of Rock Roadway in High Gas Mine		
.....	YANG Renshu BAO Zhouqi WANG Yanbing HU Shaoyin XIE Ping HE Zhihao	(27)
Explosion Energy Conversion Mechanism of Green Blasting	ZHOU Guisong ZHONG Dongwang	(35)
Study and Development on Wireless Remote Intelligent Initiation System Based on LoRa Internet of Things		
.....	LI Pingfeng ZHANG Jinlian XU Zhenyang ZHANG Bingbing YANG Fei LI Xin	(42)
Study on Pore Pressure of Discharge Head of Liquid CO ₂ Phase Change Cracker		
.....	WANG Wei LI Yadong ZHENG Yongxiang YIN Chao LI Chaobo LU Xiaoxi ZHOU Xingyu	(50)
Experimental Study on On-site Mixed Emulsion Explosive in Underground Roadways Excavation Blasting		
.....	HAO Yafei XUE Li ZHANG Xiaoyong YANG Minhui XIAO Qingsong	(58)
Experimental Study and Numerical Simulation on Micro-difference Time of Cutting Hole of Electronic Detonator in Rock Roadway Blasting		
.....	LI Hongwei HUANG Xinxu WU Lihui YANG Saiqun GUAN Yueqiang WU Yanmeng	(64)
Influence Mechanism and Application of Delay Interval on Rock Breaking by Blasting		
.....	ZHANG Xiliang YI Haibao HAN Han LI Erbao WANG Yu YANG Haitao ZHOU Jian	(73)
Blasting Powder Rate Control Technique in Aggregate Mines	YE Haiwang LI Xingwang YUAN Erjun LEI Tao	(80)
Directional Demolition of Mine Landslide Dangerous Rock Mass Emergency Removal Method by Throwing Blasting		
.....	HU Bin JIA Yalan LI Jing WEI Erjian MA Liyao	(89)
Grey Correlation Analysis of Vibration Reduction Effect of Damping Hole Parameters		
.....	DUAN Baofu ZHANG Zhengxin ZHANG Chunwu SUN Zongjun	(97)
Blasting Process Optimization Based on Grade Control Model in Open-pit Uranium Mine		
.....	CAI Xingqi DONG Wenming TAN Qiren YU Zhi BI Lin	(105)
Study on Propagation Characteristics of Axial Detonation Wave of Mining Linear Charges		
.....	MIAO Yusong GUO Jian CHEN Xiang WANG Hailiang ZHANG Yiping SUN Bowen	(113)
Study on the Optimization Design of Blasting Parameters and Three-dimensional Visualization of Mine Roadway Excavation		
.....	ZHU Quanjie ZHANG Zhen LIANG Juan ZHANG Jiaofu LIU Xiaohui WANG Zhishuai	(120)
Test of Underwater Drilling Blasting Damage Monitoring Based on Piezoelectric Signal		
.....	SI Jianfeng QIAN Bo ZHONG Dongwang HE Li CHEN Jiangwei	(128)
Dynamic Damage and Energy Dissipation of Broken Red Sandstone Considering Mesoscopic Characteristics		
.....	XU Zhenyang ZHANG Jiuyang WANG Xuesong GUO Lianjun LIU Xin	(136)
Prediction of Blasting Vibration Velocity of Mines Based on Particle Swarm-least Squares Support Vector Machine Model		
.....	HE Li LIU Yihe LI Linna CHEN Jiangwei YAO Yingkang LIU Changbang	(145)
Study on Dust-settling Technology of Explosive Water Mist Field for Trench Blasting in Open-pit Mine		
.....	HUANG Yiwai WANG Desheng GUO Bin LI Yonghua WANG Hongfei DING Ke	(151)
Study on the Technology of Intercepting and Reducing Dust by Explosion Water Mist Field in Open Bench Blasting		
.....	MA Chao WANG Desheng GUO Bin LI Yonghua WANG Hongfei DING Ke	(158)
Experimental Study on Direct Reduction for a Carbon-containing Magnetite Concentrate		
.....	ZHU Chaobo HUANG Zili YANG Fu YUAN Chenguang LIU Chuyu HUANG Tao XIAO Shuo	(164)
Experiment Study on Synchronous Iron Extraction of Pre-oxidation and Heat-retaining Reduction for a Cyanide Tailings		
.....	ZHAO Lingbo ZHAO Bing GAO Peng DONG Zaizheng	(170)
Effect of Fine Hematite on Adsorption Properties of Starch with Quartz and Its Mechanism Research		
.....	ZHANG Lunxu SUN Boyuan JIN Dan MA Yiwu	(175)
Purification Experiments Research of a Low-grade Sedimentary Sepiolite	HOU Kai ZHENG Chenghui ZHANG Junhua YANG Huaming	(181)
Study on the Reaction Mechanism of Fluorite and Calcite Flotation Separation by Carboxymethyl Cellulose		
.....	MA Qiang LI Yubiao LI Wanqing YANG Xu	(187)
Experimental Study on Beneficiation of a High Mud Accumulation Type Bauxite in Southwestern District		
.....	DOU Zengwen	(193)
Experimental and Mechanism Research on Coagulation Settlement of Bauxite Ore Dressing Slime		
.....	WEI Qiaoquan CHENG Guanwen ZHANG Yuling ZHANG Zhenglin HUANG Zhenyi NONG Guowu	(198)
Process Mineralogy Research of a High Sulfur and Low Grade Lead-zinc Ore in Yunnan		
.....	LÜ Chao ZHANG Jing YANG Lin ZHANG Shuguang	(206)
Effect of Grinding Process Parameters of Stirring Mill on Particle Size Characteristics of Products		
.....	LI Guofeng LI Chunnan LI Yanfeng LIU Liwei	(212)
Study on Preparation and Preventing Leakage Mechanism of Dense Pre-hydrated Geosynthetic Clay Liner		
.....	LIAO Min GUAN Junfan ZHENG Changwen LI Yin YANG Chengliang DING Ding	(219)
Application of Bifunctional Bacterial Flora in the Remediation of Butyl Xanthate and Cd Compound Contamination Soil in Metal Mining Areas		
.....	LIN Hai QIN Kangjia DONG Yingbo LI Bing HOU Xuewen TANG Yalu	(225)
The Performance and Influencing Factors of Degradation of Atrazine with Pyrite-activated Persulfate		
.....	TU Zhihong ZHOU Shu WU Qi XIAO Qudong SONG Bo HE Huijun LIU Chongmin LIU Jie DANG Zhi	(233)
Comprehensive Utilization of Ultra-fine Metal Tailings and Its Problems and Countermeasures in the Application of Backfill Materials		
.....	LIU Juanhong ZHOU Zaibo	(240)
Research Status and Prospect of the Microstructure and Properties of Unstable Substance in Steel Slag		
.....	LI Enshuo HU Chenguang SU Hang FU Jiawei	(250)
Research Status and Prospects of Ceramsite Preparation Technology Using Selecting and Smelting Solid Waste		
.....	ZHANG Yunhao CHAI Yifan AN Shengli WU Jiayi WANG Yici	(259)