

- 甘 肃 省 优 秀 科 技 期 刊
- 《中国期刊全文数据库》全文收录期刊
- 《中国学术期刊综合评价数据库》统计源期刊
- 《万方数据——数字化期刊群》收录期刊
- 《中国核心期刊(遴选)数据库》收录期刊
- 《中文科技期刊数据库(全文版)》收录期刊

《甘肃冶金》第五届编辑委员会

主 任: 杨 斌

副 主 任: (以姓氏笔划为序)

王军辉 石 玗 孙波涛

李尚勇 李 勇 张得教

张国胜 拓 钊 殷国栋

董红健 谢叶明

委 员: (以姓氏笔划为序)

王军辉 王贤来 王长征

石 玗 闫克峰 杨 斌

余江鸿 李尚勇 李 勇

张得教 张国胜 张宏昆

汪友元 陈体军 拓 钊

周俊烈 赵俊天 郭小芳

殷国栋 董红健 谢叶明

韩要权 粟渝军 窦旭东

《甘肃冶金》主管单位:

甘肃省冶金有色工业协会

《甘肃冶金》主办单位:

甘肃省金属学会

西北矿冶研究院

《甘肃冶金》理事单位:

白银有色集团股份有限公司

酒泉钢铁(集团)有限责任公司

兰州有色冶金设计研究院有限公司

甘肃土木工程科学研究院有限公司

甘肃省有色金属地质勘查局

甘肃省有色地质调查院

兰州理工大学

金川集团股份有限公司

中国铝业西北铝加工分公司

中国铝业股份有限公司兰州分公司

中国铝业股份有限公司连城分公司

甘肃省铁合金协会

(以上排名不分先后)

目 次

试验研究

选铁尾渣铜、钴、硫综合回收工艺研究及半工业调试 ... 李健民,杨 林,柏亚林,刘 坤(1)
酒钢肃南宏兴矿业铜尾矿中有价元素回收试验研究

... 王彩虹,杨云虎,张丽丽,朱霞丽,王 倩(6)
酒钢镜铁山矿选矿工艺流程分析及优化研究

... 张丽丽,孙洪硕,何 跃,王 倩,朱霞丽(11)
镜铁山式铁矿选矿过程中 K₂O 含量走向分析 ... 钟志刚,王 红,刘 升(16)

某铅锌矿铅精矿降铅及提高伴生金、银综合回收试验研究 ... 彭贵熊,巩明辉,李法坤(20)
低品位氧化铜原矿槽浸提铜工艺试验研究

... 李俞良,殷勤生,王宏伟,刘瑛鑫,何乃勇,牛振华(25)
酒钢烧结机低价循环资源利用实践 ... 陈文康,熊 涛,武万明,谢 勤,方 源(29)

优化配料结构在酒钢本部烧结机的应用 ... 王 宵(32)
高硅金属化球团冶金性能研究与分析 ... 陈得贵,雷鹏飞,吴振中(35)

转炉水冷烟道开裂漏水原因分析 ... 李珊珊,李桂英,王 涛(39)
冲渣水余热在高炉脱湿鼓风方面的应用 ... 高 林,李俊堂,徐礼镜,孙明玮(42)

高炉富氧大喷煤操作实践与性能优化研究 ... 胡慕凯(45)
可持续能源下高炉炼铁工艺的节能与环保优化研究 ... 许传流(49)

酒钢本部高炉炉料冶金性能试验及研究 ... 谢 勤,张国波(52)
炼铁高炉本体煤气跑冒治理实践与应用 ... 熊保林,赵建宇,王 辉,路连军,李建伟(56)

酒钢 4#高炉冷却壁破损原因分析及对策 ... 杨玉成,聂 波(59)
提钒转炉耐材损毁原因及炉衬维护探讨 ... 杨 军,富志生(63)

精炼钢水造渣分级管控的研究与应用 ... 晁增武,李 洁,慕进文,杨 刚,杨新龙(67)
侧吹熔炼生产镍阳极板试验研究 ... 杜 蓉,冯 强(72)

亚硫酸钠对铜电解液中砷、锑杂质离子脱除影响的研究
... 李银丽,李彦龙,程 亮,刘瑛鑫,何乃勇(75)

从锑烟灰中分离锑、银的试验研究 ... 马琳亭(78)
一种铝电解槽极距的测算方法 ... 滕国春(81)

500 kA 铝电解槽节能降耗技术研究 ... 崔振军,程久元,杨成亮(85)
树脂吸附法提取镓的解吸试验研究 ... 刘瑛鑫,马 福,王宏伟,何乃勇,牛振华,鲁兴武(90)

GCr15 轴承钢套圈开裂失效分析 ... 柯 炜,马昂昂(93)
汽油机 EGR 用超纯铁素体 J444E 不锈钢高温性能研究

... 李玉峰,王长波,潘吉祥,靳塞特(97)
钛含量对 443 超纯铁素体不锈钢凝固组织的影响 ... 黄泽骅(102)

氮对 07Cr18Ni11Nb 不锈钢组织和性能影响
... 刘天增,李具仓,潘吉祥,梁 瑞,孟 强(106)

厚大铸钢件的气孔缺陷分析及预防措施 ... 马丽斌,张景滔,袁兴鹏(111)
SUS430/Q355/SUS430 不锈钢-碳钢复合板非真空试制开发 ... 唐 东,王宝君(114)

景泰县三眼井铜矿地质特征及找矿标志 ... 李鹏善(118)
甘肃省舟曲县博峪峰园子金矿找矿标志及地质条件分析

... 张 峰,马世芳,李 涛,齐艳妮,张栋飞,张 涛(122)
新疆托克逊县库米什北金钨多金属矿地质特征及成因探讨 ... 田琴琴(126)

新疆吐木亚-帕西木金成矿带地质特征及成矿规律 ... 李 兴(130)

应用技术

电感耦合等离子体发射光谱同时测定锌冶炼渣中钙、铁、锌三种金属元素的研究
... 金 龙,王 卓,杨卓融,张文强,李永莉(134)

铜冶炼过程含重金属粉尘沉降对土壤环境的影响预测 ... 李文臣,黄天龙,高正娇(138)

Contents

Test & Research

- Study on Comprehensive Recovery Process of Cu, Co and S from Tailings of Iron Separation and Semi-Industrial Commissioning LI Jianmin, YANG Lin, BAI Yalin, LIU Kun(1)
- Experimental Study on Recovery of Valuable Elements from Copper Tailings of Sunan Hongxing Mine of Jiusteel WANG Caihong, YANG Yunhu, ZHANG Lili, ZHU Xiali, WANG Qian(6)
- Analysis and Optimization of Beneficiation Process Flow of Jingtieshan Mine in Jiusteel ZHANG Lili, SUN Hongshuo, HE Yue, WANG Qian, ZHU Xiali(11)
- Trend Analysis of Potassium Oxide Content in the Beneficiation Process of Jingtieshan Type Iron Ore ZHONG Zhigang, WANG Hong, LIU Sheng(16)
- Experimental Study on Zn Reduction and Comprehensive Recovery of Associated Au and Ag in Lead Concentrate of a Lead-Zinc Mine PENG Guixiong, GONG Minghui, LI Fakun(20)
- Experimental Study on the Process of Extracting Copper from Low Grade Copper Oxide Ore by Tank LI Yuliang, YIN Qinsheng, WANG Hongwei, LIU Yingxin, HE Naiyong, NIU Zhenhua(25)
- Practice of Recycling Resource Utilization in Sintering Machine of Jiusteel CHEN Wenkang, XIONG Tao, WU Wanming, XIE Qin, FANG Yuan(29)
- Application of Optimizing Batching Structure in Sintering Machine of Jiusteel WANG Xiao(32)
- Research and Analysis of Metallurgical Properties of High Silicon Metallized Pellets CHEN Degui, LEI Pengfei, WU Zhenzhong(35)
- Cause Analysis of Water Leakage in Water Cooling Flue of Converter LI Shanshan, LI Guiying, WANG Tao(39)
- Application of Residual Heat from Slugging Water to Blast Furnace Dehumidification GAO Lin, LI Juntang, XU Lijing, SUN Mingwei(42)
- Study on Operation Practice and Performance Optimization of Large Oxygen-Enriched Coal Injection in Blast Furnace HU Mukai(45)
- Study on Energy Saving and Environmental Protection Optimization of Blast furnace Ironmaking Process under Sustainable Energy XU Chuanliu(49)
- Test and Research on Metallurgical Properties of Blast Furnace Charge in Jiusteel XIE Qin, ZHANG Guobo(52)
- Practice and Application of Gas Escape Control in Blast Furnace Body of Ironmaking XIONG Baolin, ZHAO Jianyu, WANG Hui, LU Lianjun, LI Jianwei(56)
- Cause Analysis and Countermeasure of Cooling Wall Damage of 4# Blast Furnace in Jiusteel YANG Yucheng, NIE Bo(59)
- Discussion on the Cause of Damage of Resistant Material and the Maintenance of Lining of Converter for Extracting Vanadium YANG Jun, FU Zhisheng(63)
- Research and Application on Classification Control of Slag Formation in Refined Molten Steel CHAO Zengwu, LI Jie, MU Jinwen, YANG Gang, YANG Xinlong(67)
- Experimental Study on Production of Nickel Anode Plate by Side-Blowing Smelting DU Rong, FENG Qiang(72)
- Study on the Effect of Sodium Sulfite on the Removal of As and Sb Impurity Ions from Copper Electrolyte LI Yinli, LI Yanlong, CHENG Liang, LIU Yingxin, HE Naiyong(75)
- Experimental Study on Separation of Sb and Ag from Antimony Ash MA Linting(78)
- A method for Calculating the Pole Distance of an Aluminum Electrolytic Cell TENG Guochun(81)
- Research on Energy Saving and Consumption Reduction Technology of 500 kA Aluminum Electrolytic Cell CUI Zhenjun, CHENG Jiuyuan, YANG Chengliang(85)
- Experimental Study on Desorption of Ga Extraction by Resin Adsorption LIU Yingxin, MA Fu, WANG Hongwei, HE Naiyong, NIU Zhenhua, LU Xingwu(90)
- Cracking Failure Analysis of GCr15 Bearing Steel Ring KE Wei, MA Angang(93)
- Research on High Temperature Performance of Ultrapure Ferrite J444E Stainless Steel for EGR in Gasoline Engine LI Yufeng, WANG Changbo, PAN Jixiang, JIN Saite(97)
- Effect of Ti Content on Solidification Structure of 443 Ultra-Pure Ferritic Stainless Steel HUANG Zehua(102)
- Effect of Nitrogen on Microstructure and Properties of 07Cr18Ni11Nb Stainless Steel LIU Tianzhang, LI Jucang, PAN Jixiang, LIANG Rui, MENG Qiang(106)
- Analysis and Preventive Measures of Porosity Defects in Thick and Large Steel Castings MA Libin, ZHANG Jingtao, YUAN Xingpeng(111)
- SUS430/Q355/SUS430 Stainless Steel-Carbon Steel Composite Plate Non-Vacuum Development TANG Dong, WANG Baojun(114)
- Geological Characteristics and Prospecting Signs of Sanyanjing Copper Mine in Jingtai County LI Pengshan(118)
- Prospecting Mark and Geological Condition Analysis of Fengtian Gold Deposit in Boyu, Zhouqu County, Gansu Province ZHANG Feng, MA Shifang, LI Tao, QI Yanni, ZHANG Dongfei, ZHANG Tao(122)
- Geological Characteristics and Genesis of Kumishi North Gold Tungsten Polymetallic Deposit in Toksun County, Xinjiang TIAN Qinqin(126)
- Geological Characteristics and Metallogenic Regularity of the Tumuya-Paximu Gold Metallogenic Belt in Xinjiang ... LI Xing(130)

Application & Technology

- Simultaneous Determination of Ca, Fe and Zn in Zinc Smelting Slag by Inductively Coupled Plasma Emission Spectrometry JIN Long, WANG Zhuo, YANG Zhuo Rong, ZHANG Wenqiang, LI Yongli(134)
- Prediction of the Influence of Heavy Metal Dust Deposition on Soil Environment During Copper Smelting LI Wenchen, HUANG Tianlong, GAO Zhengjiao(138)