

China Metallurgy

中国冶金

中国金属学会会刊
中文核心期刊
中国科技核心期刊
第五届中国精品科技期刊

美国《化学文摘（CA）》收录期刊
入选中国科协“产业发展服务项目”
入选“中国精品科技期刊顶尖学术论文（F5000）”
入选《科技期刊世界影响力指数（WJCI）报告》

2022 Vol.32 12 (卷终)

第二十一卷
THM
出钢口清理机械手

践行钢厂无人化的未来
技术保护人类

BSE
源自钢厂服务钢厂

目 次

技术综述

- 铁矿粉烧结基础特性之同化性研究进展 单长冬, 张建良, 刘征建, 王耀祖, 牛乐乐 1
等离子体氢还原铁氧化物的研究进展 宋晓然, 刘征建, 张建良, 宗燕兵, 王耀祖 7

专题研究

- 基于改进小波-TCN 的高炉铁水钒含量预测系统 王坤明, 刘小杰, 李欣, 李红伟, 张淑会, 陈树军 15
铁钢工序界面铁水温降预测系统的开发与应用 李孟贤, 黄军, 安洪宝, 邓旭阳, 陈国军, 张永杰 25
Ti₂AlNb 合金锭真空自耗过程宏观偏析的数值模拟 韩静静, 任能, 李军, 周毅, 黄旭, 李金富 32
复合铸轧工艺参数对 Kiss 点的耦合影响 许志强, 陈启发, 杨庭松, 王海军, 郭仕鹏 40
冷却速率对 N06625 合金凝固过程微观偏析的影响 张海宝, 刘福斌, 李花兵, 耿鑫, 姜周华 48
冷轧带钢板形目标曲线设定模型研究与应用 王鹏飞, 金树仁, 徐浩, 李旭 57
退火工艺对 GH4169 合金带材组织和力学性能的影响 宋艳丽, 安军靖, 王惠生, 刘双娟, 张龙, 梁田 66

生产技术

- 烧结混合料水含量自动控制系统开发与应用 秦雪刚, 石江山, 李昭蓉, 李涛, 谢鑫, 刘泽谦 72
低镍铁水冶炼 1Cr14Mn10NiCuN 不锈钢生产工艺优化 史彩霞, 游香米 78
真空自耗炉的锰、铜、氮易挥发元素含量控制 岳俊英, 侯栋, 王德永, 刘代润, 崔斌, 孙海关 83
MCCR 产线低碳钢高拉速技术研究与应用 王皓, 王国连, 马硕, 王胜东, 唐萍, 刘延强 88
基于粗轧镰刀弯的精轧跑偏预控模型及应用 司小明 98
600 MPa 级高强钢热轧卷取工艺研究及应用 张亮亮, 于洋, 李晓军, 史震 106
基于深度学习的圆钢表面缺陷检测系统 邓能辉, 侯睿, 叶俊明 113

冶金科技英才

- 庞建明 (122)

冶金科学技术奖

- 钢-轧过程产品质量智能管控技术与平台 (123)
含碲高端特殊钢冶金工艺技术的开发和应用 (124)

征订启事

- 优秀编委 (125)
优秀审稿专家、优秀论文名单 (126)

CONTENTS

Summarization of Technology

- Research progress on assimilation property in basic sintering characteristics of iron ore powder SHAN Chang-dong, ZHANG Jian-liang, LIU Zheng-jian, WANG Yao-zu, NIU Le-le 1
Research progress of plasma hydrogen reduction of iron oxides SONG Xiao-ran, LIU Zheng-jian, ZHANG Jian-liang, ZONG Yan-bing, WANG Yao-zu 7

Monographic Study

- Prediction system for vanadium content of molten iron in BF based on improved wavelet-TCN WANG Kun-ming, LIU Xiao-jie, LI Xin, LI Hong-wei, ZHANG Shu-hui, CHEN Shu-jun 15
Development and application of hot metal temperature drop prediction system for iron and steel process interface LI Meng-xian, HUANG Jun, AN Hong-bao, DENG Xu-yang, CHEN Guo-jun, ZHANG Yong-jie 25
Numerical simulation of macrosegregation in vacuum arc remelting process of Ti₂AlNb alloy ingot HAN Jing-jing, REN Neng, LI Jun, ZHOU Yi, HUANG Xu, LI Jin-fu 32
Coupling effect for technological parameters of compound casting and rolling on Kiss points XU Zhi-qiang, CHEN Qi-fa, YANG Ting-song, WANG Hai-jun, GUO Shi-peng 40
Effect of cooling rate on microsegregation during solidification of N06625 alloy ZHANG Hai-bao, LIU Fu-bin, LI Hua-bing, GENG Xin, JIANG Zhou-hua 48
Research and application of flatness target curve setting model for cold-rolled steel strip WANG Peng-fei, JIN Shu-ren, XU Hao, LI Xu 57
Effect of annealing process on microstructure and mechanical properties of GH4169 alloy strip SONG Yan-li, AN Jun-jing, WANG Hui-sheng, LIU Shuang-juan, ZHANG Long, LIAO Tian 66

Production Technology

- Development and application of automatic control system for water content of sintering mixture QIN Xue-gang, SHI Jiang-shan, LI Zhao-rong, LI Tao, XIE Xin, LIU Ze-qian 72
Optimization of production process for smelting 1Cr14Mn10NiCuN stainless steel with low nickel hot metal SHI Cai-xia, YOU Xiang-mi 78
Content control of Mn, Cu and N volatile elements in vacuum arc remelting furnace YUE Jun-ying, HOU Dong, WANG De-yong, LIU Dai-run, CUI Bin, SUN Hai-guan 83
Research and application on high casting speed technology of low-carbon steel MCCR line WANG Hao, WANG Guo-lian, MA Shuo, WANG Sheng-dong, TANG Ping, LIU Yan-qiang 88
Precontrol model and application of finish rolling deviation based on roughing slab camber SI Xiao-ming 98
Research and application of hot rolling coiling process for 600 MPa high strength steel ZHANG Liang-liang, YU Yang, LI Xiao-jun, SHI Zhen 106
Round steel surface defect detection system based on deep learning DENG Neng-hui, HOU Rui, YE Jun-ming 113

Metallurgy Talent

- PANG Jian-ming (122)

Metallurgical Science and Technology Award

- (123)(124)

Subscription Announcement

- (71)(112)

Lists of Excellent Editorial Board Members, Experts, and Papers

- 万方数据 (125)(126)