

目 次

综合论述

- 智能制造视野下钢铁企业能源管控系统展望 邓万里 1

原料与炼铁

- 红土镍矿高料层碳热还原试验 于浩博, 姜鑫, 高强健, 王学斌, 梁栋, 沈峰满 10
应用 M-MIVM 预测含钛渣系组元活度 刘振楠, 陶东平, 姚春玲, 刘聪, 张淞源, 黄卉 16

炼钢

- 钙处理对稀土在 C-Mn 钢中作用的影响 谢毓敏, 宋明明, 薛正良, 朱航宇, 徐润生, 刘升 30
镁处理低碳钢中 $MgAl_2O_4$ 夹杂物的聚集行为 曹磊, 金朋亮, 肖远悠, 尚德礼, 刘春伟, 王国承 37
Q345D 钢中含钙类夹杂物的演变和生成机理分析 音正元, 张立峰, 李超, 杨文, 任英 47
通道式感应加热五流中间包流场的水力学模拟 马钰, 唐海燕, 张硕, 张家泉, 肖红, 马志民 57
低碳钢薄板坯高速连铸保护渣研究与优化 朱立光, 袁志鹏, 肖鹏程, 王杏娟, 殷楷, 张杰 65

压力加工

- 2205 不锈钢-碳钢复合带肋钢筋的热轧 刘旭明, 冯光宏, 刘鑫, 张宏亮, 王宝山, 马健 74
数据驱动的热轧带钢边部线状缺陷智能预报模型 王东城, 徐扬欢, 段伯伟, 汪永梅, 刘宏民 82

钢铁材料

- Nb-V 微合金化低钼型 Q345 耐火钢的开发 陈林恒, 王文涛, 李昭东, 崔强, 隋凤利, 张可 91
块状组织细化对贝氏体钢断裂行为的影响 周松波, 胡锋, 尹朝朝, 吴开明 103
极值法在高品质齿轮钢夹杂物评价中的应用 何肖飞, 胡成飞, 徐乐, 王毛球, 时捷 112
新型奥氏体耐热钢 C-HRA-5 原位拉伸断裂机理 杜华云, 戴鑫宇, 卫英慧, 侯利锋, 方旭东, 徐芳泓 118
履带销轴用 1E1158M 钢的奥氏体混晶情况 王欢, 胡佳丽, 张朝磊, 李戬, 苗红生 126

技术交流

- CO/CO₂ 气氛下 Fe-C 合金气固反应脱碳 侯耀斌, 艾立群, 洪陆阔, 孙彩娇, 周美洁, 周玉青 133
热芯大压下轧制连铸坯再加热时的组织遗传性 李海军, 李睿昊, 宫美娜, 王昭东, 王国栋 140

征稿及征订启示

- (9)(145)(146)

CONTENTS**Technical Reviews**

- Prospect of energy management and control system in iron and steel industry under intelligent manufacturing DENG Wan-li 1

Raw Material and Ironmaking

- Experiment on carbothermal reduction of laterite nickel ore in tall pellets bed
..... YU Hao-bo, JIANG Xin, GAO Qiang-jian, WANG Xue-bin, LIANG Dong, SHEN Feng-man 10

- Prediction of component activity of titanium bearing slag system by M-MIV

- LIU Zhen-nan, TAO Dong-ping, YAO Chun-ling, LIU Cong, ZHANG Song-yuan, HUANG Hui 16

Steelmaking

- Influence of Ca treatment on effect of rare earth in C-Mn steel

- XIE Yu-min, SONG Ming-ming, XUE Zheng-liang, ZHU Hang-yu, XU Run-sheng, LIU Sheng 30

- Aggregation behavior of MgAl₂O₄ inclusions in magnesium-treated low carbon steel

- CAO Lei, JIN Peng-liang, XIAO Yuan-you, SHANG De-li, LIU Chun-wei, WANG Guo-cheng 37

- Analysis of evolution and formation mechanism of calcium-containing inclusions of Q345D steel

- YIN Zheng-yuan, ZHANG Li-feng, LI Chao, YANG Wen, REN Ying 47

- Water modelling on a five-strand tundish with channel induction heating for better flow field

- MA Yu, TANG Hai-yan, ZHANG Shuo, ZHANG Jia-quan, XIAO Hong, MA Zhi-min 57

- Research and optimization of mold flux for high speed continuous casting of low carbon steel thin slab

- ZHU Li-guang, YUAN Zhi-peng, XIAO Peng-cheng, WANG Xing-juan, YIN Kai, ZHANG Jie 65

Metal Forming

- Hot rolling of 2205 stainless steel-carbon steel composite rebar

- LIU Xu-ming, FENG Guang-hong, LIU Xin, ZHANG Hong-liang, WANG Bao-shan, MA Jian 74

- Data-driven intelligent prediction model of edge seam defects for hot rolling strip

- WANG Dong-cheng, XU Yang-huan, DUAN Bo-wei, WANG Yong-mei, LIU Hong-min 82

Materials

- Development of Nb-V microalloying and low Mo alloyed Q345 fire-resistant steel

- CHEN Lin-heng, WANG Wen-tao, LI Zhao-dong, CUI Qiang, SUI Feng-li, ZHANG Ke 91

- Effect of refinement of bulk structure on fracture behavior of bainitic steel

- ZHOU Song-bo, HU Feng, YIN Chao-chao, WU Kai-ming 103

- Application of extreme value method in inclusion evaluation of high-quality gear steel

- HE Xiao-fei, HU Cheng-fei, XU Le, WANG Mao-qi, SHI Jie 112

- In-situ tensile fracture mechanism of new type austenitic heat-resistant steel C-HRA-5

- DU Hua-yun, DAI Xin-yu, WEI Ying-hui, HOU Li-feng, FANG Xu-dong, XU Fang-hong 118

- Mixed crystal of austenite grain size in track pins 1E1158M steel

- WANG Huan, HU Jia-li, ZHANG Chao-lei, LI Jian, MIAO Hong-sheng 126

Technology Exchange

- Gas-solid reaction decarburization of Fe-C alloy in CO/CO₂

- HOU Yao-bin, AI Li-qun, HONG Lu-kuo, SUN Cai-jiao, ZHOU Mei-jie, ZHOU Yu-qing 133

- Microstructure inheritance of continuous casting steel deformed by hot-core heavy reduction rolling technology during reheating process

- LI Hai-jun, LI Rui-hao, GONG Mei-na, WANG Zhao-dong, WANG Guo-dong 140

Contribution Wanted and Subscription Announcement

- (9)(145)(146)