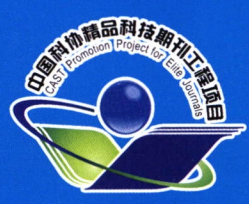


中文核心期刊 中国科技核心期刊 中国科学引文数据库收录期刊 中文科技期刊数据库收录期刊  
SCOPUS数据库收录期刊 美国《金属文摘》收录期刊 美国《剑桥科学文摘》收录期刊 美国《  
日本科学技术文献速报收录期刊



ISSN 0449-749X  
CN 11-2118/TF



3

2021 Vol.56  
钢铁材料专刊

钢

铁

IRON & STEEL



中 国 金 属 学 会  
钢 铁 研 究 总 院 主 办  
北京钢研柏苑出版有限责任公司

## 目 次

### 综合论述

#### 合金元素对 Cr-Mo 钢第二类回火脆性影响研究综述

..... 李小兵, 董 鑫, 邢炜伟, 陈 波, 刘 奎, 马颖澈	1
H13 型热作模具钢表面改性技术研究进展 .....	李绍宏, 何文超, 张 旭, 李东辉, 肖茂果 13

### 钢铁材料

临界退火中锰钢的组织性能和变形行为 .....	王 帅, 陈伟健, 赵征志, 赵小龙 23
退火温度对超薄取向硅钢织构及磁性能的影响 .....	张 波, 孟 利, 张 宁, 何承绪, 马 光, 胡卓越 29
锰对高氮超级马氏体不锈钢组织与性能的影响 .....	庞 阳, 邹德宁, 吕 香, 李苗苗, 闫星宇 34
热轧钛微合金化高强钢低温冲击韧性的控制 .....	杨跃标, 李宗强, 邓 深, 樊 雷, 刘清友, 赵征志 41
回火温度对改进型 T23 钢冲击吸收功的影响 .....	周任远, 朱丽慧, 柯志刚, 李世贤, 翟国丽, 宋 明 51
耐候钢锈层及其稳定化处理现状 .....	林鹏飞, 杨忠民, 陈 颖, 李昭东 58
氮含量对高氮不锈钢硬化和软化特性的影响 .....	宁小智, 邢长军, 雍歧龙, 吴 林 66
硅对铁素体耐热不锈钢组织与性能的影响 .....	张英波, 邹德宁, 王泉生, 张晓明, 李雨浓 71
高塑性应变比 Ti-IF 钢组织性能及析出相 .....	韩 贇, 邱木生, 邹 英, 王 刚 77
超大型集装箱船用特厚止裂钢的发展 .....	王红涛, 田 勇, 叶其斌, 王昭东, 王国栋 84
特厚 EH47 止裂钢板及焊接热影响区的组织性能 .....	刘东升, 程丙贵, 罗 咪, 曲锦波 92
电子束熔炼对高速钢碳化物的影响 .....	孙满意, 谭 毅, 王以霖, 庄辛鹏, 张 峰, 王轶农 103
锻态奥氏体基低密度钢的低温高速冲击力学行为 .....	王 萍, 黄华钦, 李 翔, 谢 谦, 侯清宇, 黄贞益 111
缺口对渗氮 CrNiW 钢超高周疲劳特性的影响 .....	孙振铎, 侯东勃, 李 伟, 张明洋 120
38MnSiVS 非调质钢的相变模型 .....	张 雄, 余 伟, 王云龙 130
Fe-C 合金凝固枝晶形貌及特性参数的相场模拟 .....	夏 勇, 沈厚发, 刘华松, 王 璞, 唐海燕, 张家泉 137
钙处理对稀土在大线能量焊接 HAZ 中作用的影响 .....	谢毓敏, 宋明明, 门超奇, 朱航宇, 马国军, 薛正良 146
镍夹层厚度对 316L/EH40 复合界面特性影响 .....	金贺荣, 张钊瑞, 韩氏峰, 宜亚丽, 赵丁选 154

### 征稿及征订启事

..... (12)(164)

CONTENTS

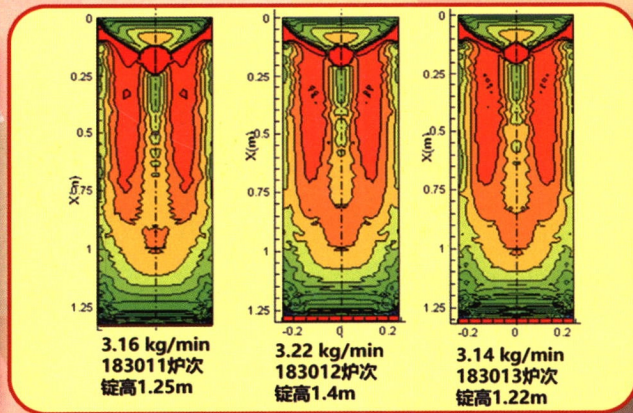
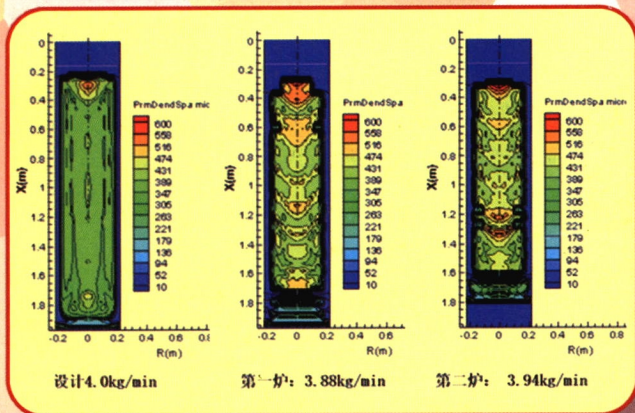
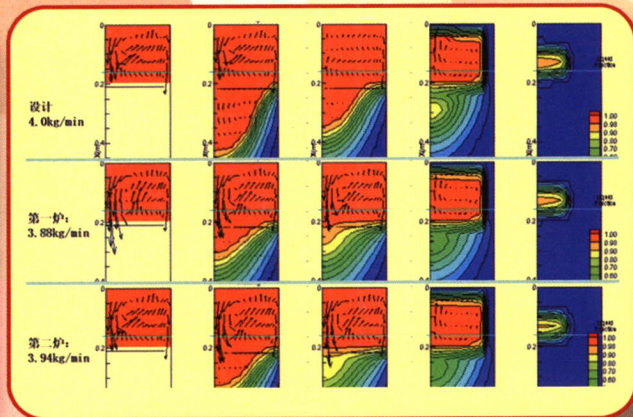
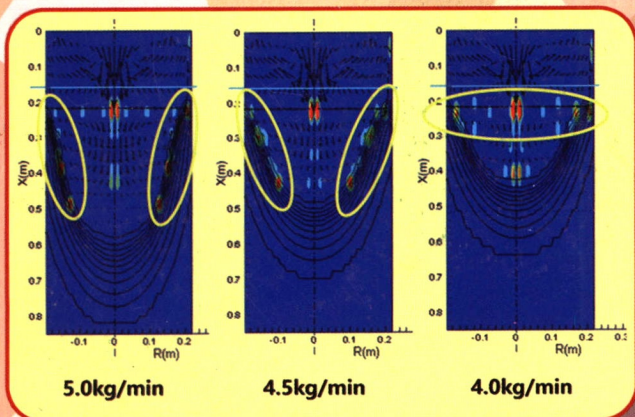
**Technical Reviews**

- Effect of alloying elements addition on the secondary tempering brittleness of Cr-Mo steels review  
 ..... LI Xiao-bing, DONG Xin, XING Wei-wei, CHEN Bo, LIU Kui, MA Ying-che 1
- Research progress on surface treatment technologies of H13 hot work die steel  
 ..... LI Shao-hong, HE Wen-chao, ZHANG Xu, LI Dong-hui, XIAO Mao-guo 13

**Materials**

- Microstructure and properties as well as deformation behavior in an incritical annealing medium-Mn steel  
 ..... WANG Shuai, CHEN Wei-jian, ZHAO Zheng-zhi, ZHAO Xiao-long 23
- Effect of recrystallization annealing temperature on texture and magnetic properties of ultra-thin oriented-silicon steel ..... ZHANG Bo, MENG Li, ZHANG Ning, HE Cheng-xu, MA Guang, HU Zhuo-chao 29
- Effect of manganese on microstructure and properties of high nitrogen super martensitic stainless steel  
 ..... PANG Yang, ZOU De-ning, LÜ Xiang, LI Miao-miao, YAN Xing-yu 34
- Low temperature impact toughness controlling for Ti-microalloyed high strength steel  
 ..... YANG Yue-biao, LI Zong-qiang, DENG Shen, FAN Lei, LIU Qing-you, ZHAO Zheng-zhi 41
- Effect of tempering temperature on impact absorbed energy of modified T23 steel  
 ..... ZHOU Ren-yuan, ZHU Li-hui, KE Zhi-gang, LI Shi-xian, ZHAI Guo-li, SONG Ming 51
- Rust layer of weathering steel and its stabilization treatment status  
 ..... LIN Peng-fei, YANG Zhong-min, CHEN Ying, LI Zhao-dong 58
- Effect of nitrogen concentration on hardening and softening properties of high nitrogen stainless steel  
 ..... NING Xiao-zhi, XING Chang-jun, YONG Qi-long, WU Lin 66
- Effect of silicon on microstructure and properties of ferritic heat-resistant steel  
 ..... ZHANG Ying-bo, ZOU De-ning, WANG Quan-sheng, ZHANG Xiao-ming, LI Yu-nong 71
- Precipitates, microstructure and properties of Ti-IF steel with high plastic strain ratio  
 ..... HAN Yun, QIU Mu-sheng, ZOU Ying, WANG Gang 77
- Development of heavy-gauge steel with excellent brittle crack arrest toughness for mega container carriers  
 ..... WANG Hong-tao, TIAN Yong, YE Qi-bin, WANG Zhao-dong, WANG Guo-dong 84
- Microstructures and mechanical properties in ultra-thick EH47 steel plates and heat affected zones  
 ..... LIU Dong-sheng, CHENG Bing-gui, LUO Mi, QU Jin-bo 92
- Effect of electron beam melting on carbide of high speed steel  
 ..... SUN Man-yi, TAN Yi, WANG Yi-lin, ZHUANG Xin-peng, ZHANG Feng, WANG Yi-nong 103
- Mechanical behavior of an as-forged austenite-based low-density steel under high-speed impact loading at cryogenic temperature  
 ..... WANG Ping, HUANG Hua-qin, LI Xiang, XIE Qian, HOU Qing-yu, HUANG Zhen-yi 111
- Influence of notch on fatigue properties of nitrided CrNiW steel in very high cycle regime  
 ..... SUN Zhen-duo, HOU Dong-bo, LI Wei, ZHANG Ming-yang 120
- Phase transformation model of 38MnSiVS non-tempered steel  
 ..... ZHANG Xiong, YU Wei, WANG Yun-long 130
- Dendritic morphology and characteristic parameters during solidification of Fe-C alloy with phase field model ..... XIA Yong, SHEN Hou-fa, LIU Hua-song, WANG Pu, TANG Hai-yan, ZHANG Jia-quan 137
- Influence of Ca treatment on application of rare earth in HAZ during high heat input welding progress  
 ..... XIE Yu-min, SONG Ming-ming, MEN Chao-qi, ZHU Hang-yu, MA Guo-jun, XUE Zheng-liang 146
- Effect of nickel interlayer thickness on characteristics of 316L/EH40 composite interface  
 ..... JIN He-rong, ZHANG Zhao-rui, HAN Min-feng, YI Ya-li, ZHAO Ding-xuan 154
- Contribution Wanted and Subscription Announcement**  
 ..... (12)(164)

对电渣重熔/真空自耗生产过程进行模拟计算，  
可以对钢企现场生产起到很好的指导作用



根据企业业务特点搭建生产大数据平台，  
为生产工艺优化和决策分析提供有力支撑

