

1
(总第 245 期)
2023

连铸

CONTINUOUS CASTING

诚信 创新 增长 高效

MCC 中冶京诚

创新提升价值 精诚铸造未来

连铸系统的咨询

承包供货

海水淡化

EPC 技术改造

提供方坯连

连铸机

技术及装备

连铸技术及装备

承建



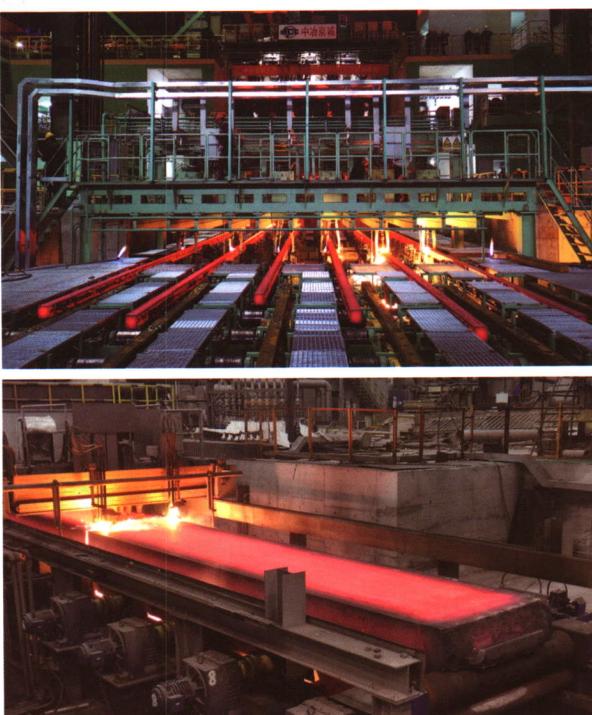
方坯: 100×100~410×530mm

圆坯: Ø100~Ø1300mm

板坯: 150~460×600~3250mm

连铸系统全方位方案解决专家

A Comprehensive-Solution Expert for Continuous Casting Machine



中冶京诚工程技术有限公司
地 址: 北京市北京经济技术开发区建安街7号
邮 政 编 码: 100176
联 系 电 话: 010-67835288, 87229211

公司网址: www.ceri.com.cn
电子邮箱: lggy@ceri.com.cn
houxiaolin@ceri.com.cn
传 真: 010-67835857

广告

连铸

LIANZHU

(双月刊) 1982 年创刊

2023 年 第 1 期

(总第 245 期)

2023 年 2 月出版

目 次

连铸工艺

板坯连铸结晶器电磁搅拌流场模拟	卢海彪, 张辉琪, 钟云波, 任维丽, 雷作胜	1
电磁搅拌对液态夹杂物聚并及去除行为的影响规律	李向龙, 孙群, 屈天鹏, 王德永	10
SWRH72B-S 绞线钢连铸小方坯凝固温度场数值模拟	张小伟, 白晓路, 石磊, 康欣蕾, 张超杰, 张立强	18
气幕挡墙对中间包流场和夹杂物去除的影响	左小坦, 赵立, 张亚兵, 张旭彬, 王强强	24
感应加热时钢坯物理性能对温度场的影响	姜滔, 肖红, 刘勇, 蒋晓奇	31

铸坯质量

52CrMoV4 弹簧扁钢连铸坯内部裂纹产生机理及预防	杨奇军, 杨庚朝, 刘建, 王旭冀, 赵阳	41
齿轮钢 20CrMnTiH 淬透性/宏观偏析控制	范斌, 刘利, 张时雨, 刘宁宁, 刘晓明, 王强	47
HRB400 热轧带肋钢筋铸坯质量缺陷原因分析及优化	李解, 张鲲, 李强, 张康晖, 皇祝平	55
包晶钢 15CrMoG 方坯表面缺陷分析与改进	林鹏, 张洪才, 左辉, 许正周, 翟万里	61
Mn13 高锰钢连铸坯冷却过程中碳化物的析出特征	林鸿亮, 尚秀玲, 施斌卿	66
非稳态浇注对帘线钢洁净度的影响	牛帅, 邓伟, 王得炯, 胡志勇, 王凯民, 王宇航, 唐海燕	74

连铸设备

水口结构对薄板坯初始凝固行为的影响	张剑君, 王子超, 刘青, 窦坤	82
30 t 对称四流小圆坯中间包结构优化	刘宇航, 宋景凌, 朱庆桂, 李恒华, 牛亮, 杨树峰	89
大方坯连铸结晶器水口优化模拟探究	周晨阳, 黄军, 张亚竹, 王舒皓, 张恒	97

技术交流

中间包板间密封不良的原因分析和改进	曾立, 刘航, 梅宁, 刘延强, 肖华生, 杨春宝	106
钢包滑板油缸自动装拆系统的开发及应用	刘长伟, 刘永军, 袁淳安, 陈超, 付军	112
异型坯连铸机 Q235B 生产实践及工艺	宁英衣	118

征稿启事

..... (88, 124)

CONTINUOUS CASTING

No. 1 (245 in all)

(Bimonthly)

February 2023

CONTENTS

Continuous Casting Technology

Simulation of flow field in a slab continuous casting with in-mold electromagnetic stirring	LU Hai-biao, ZHANG Hui-qi, ZHONG Yun-bo, REN Wei-li, LEI Zuo-sheng	1
Effect of electromagnetic stirring on the aggregation and removal of liquid inclusions in continuous casting mold	LI Xiang-long, SUN Qun, QU Tian-peng, WANG De-yong	10
Numerical simulation of solidification temperature field of SWRH72B-S wire steel continuous casting billet ...	ZHANG Xiao-wei, BAI Xiao-lu, SHI Lei, KANG Xin-lei, ZHANG Chao-jie, ZHANG Li-qiang	18
Effect of gas curtain in tundish on flow field and inclusions removal	ZUO Xiao-tan, ZHAO Li, ZHANG Ya-bing, ZHANG Xu-bin, WANG Qiang-qiang	24
Influence of billet physical properties on temperature field during induction heating	JIANG Tao, XIAO Hong, LIU Yong, JIANG Xiao-qi	31

Strand Quality

Mechanism and prevention of internal crack generation of 52CrMoV4 continuous casting slab for spring flat steel	YANG Qi-jun, YANG Geng-chao, LIU Jian, WANG Xu-ji, ZHAO Yang	41
Gear steel 20CrMnTiH hardenability/macro segregation control	FAN Bin, LIU Li, ZHANG Shi-yu, LIU Ning-ning, LIU Xiao-ming, WANG Qiang	47
Analysis and optimization of quality defects of HRB400 ribbed steel bar	LI Jie, ZHANG Kun, LI Qiang, ZHANG Kang-hui, HUANG Zhu-ping	55
Analysis and improvement of surface defects of peritectic steel 15CrMoG billet	LIN Peng, ZHANG Hong-cai, ZUO Hui, XU Zheng-zhou, ZHAI Wan-li	61
Precipitation characteristics of the carbides for Mn13 high manganese steel slab during cooling	LIN Hong-liang, SHANG Xiu-ling, SHI Bin-qing	66
Effect of unsteady casting condition on cleanliness of tire cord steel	NIU Shuai, DENG Wei, WANG De-jiong, HU Zhi-yong, WANG Kai-min, WANG Yu-hang, TANG Hai-yan	74

Continuous Casting Equipment

Influence of SEN configuration on initial solidification in CSP thin slab	ZHANG Jian-jun, WANG Zi-chao, LIU Qing, DOU Kun	82
Structural optimization of tundish for 30 t symmetrical four-flow small round billet	LIU Yu-hang, SONG Jing-ling, ZHU Qing-gui, LI Heng-hua, NIU Liang, YANG Shu-feng	89
Study on the optimization simulation of submerged entry nozzle in mold during bloom continuous casting	ZHOU Chen-yang, HUANG Jun, ZHANG Ya-zhu, WANG Shu-hao, ZHANG Heng	97

Technology Exchange

Cause analysis and improvement of poor sealing between slide surface of tundish	ZENG Li, LIU Hang, MEI Ning, LIU Yan-qiang, XIAO Hua-sheng, YANG Chun-bao	106
Automation transformation and optimization of the assembly and disassembly system of the ladle slide plate oil cylinder	LIU Chang-wei, LIU Yong-jun, YUAN Chun-an, CHEN Chao, FU Jun	112
Practice and process research of Q235B on beam blank caster	NING Ying-yi	118

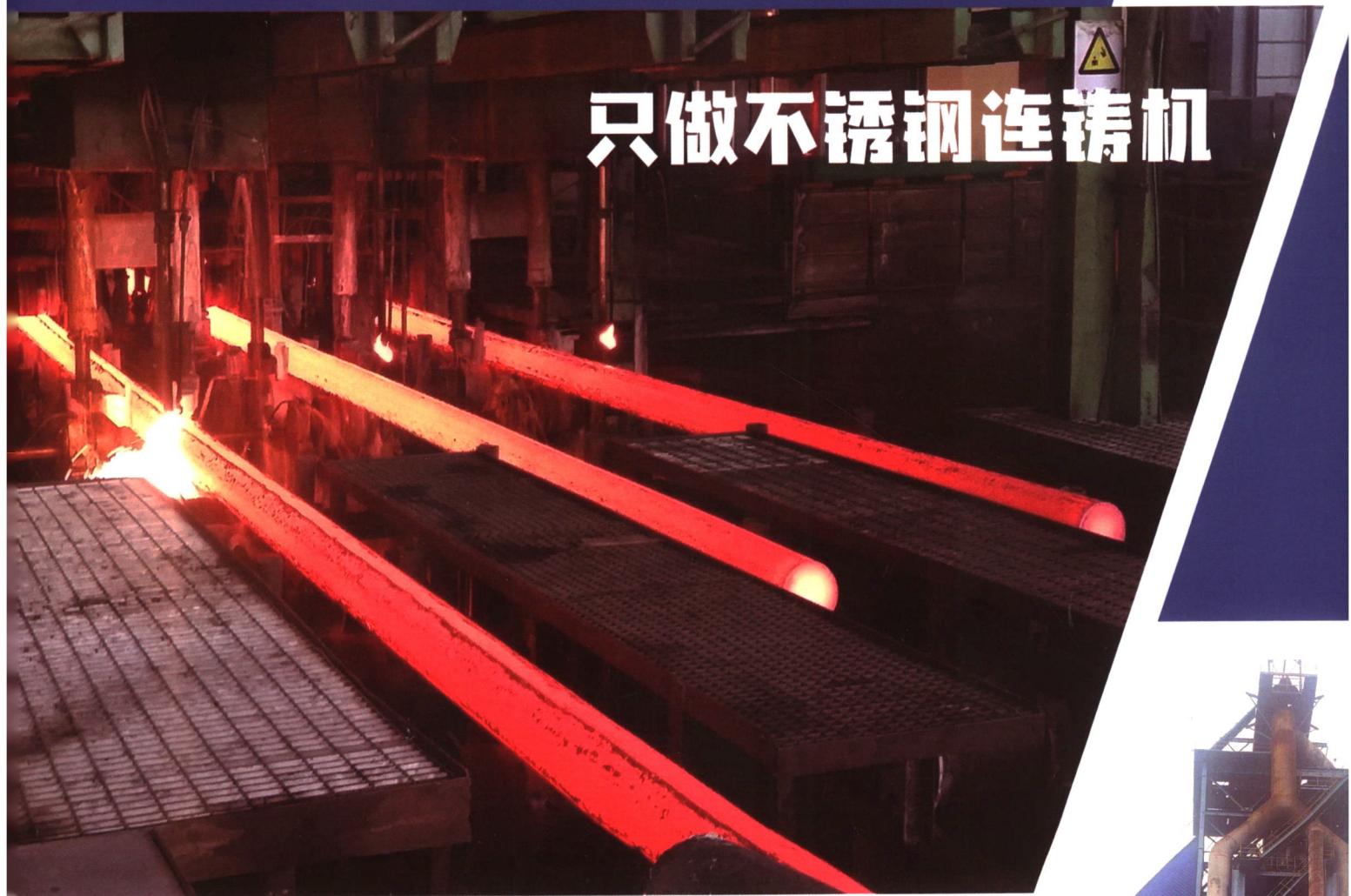
Contribution Wanted

..... (88,124)



20年行业经验
20 years of industry experience
400-800-4139

只做不锈钢连铸机



湖北中钢联冶金工程有限公司

Hubei Central Steel Union Metallurgical Engineering Co.,Ltd.

地 址：武汉市江汉区江兴路17号中信大楼516

研发中心：武汉市黄陂区卓尔总部基地G10栋

电 话：027-83595419 传 真：027-83595747

邮 箱：csu@csu.net.cn 网 址：www.csu.net.cn

