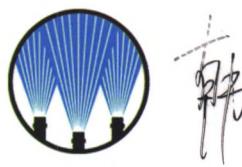
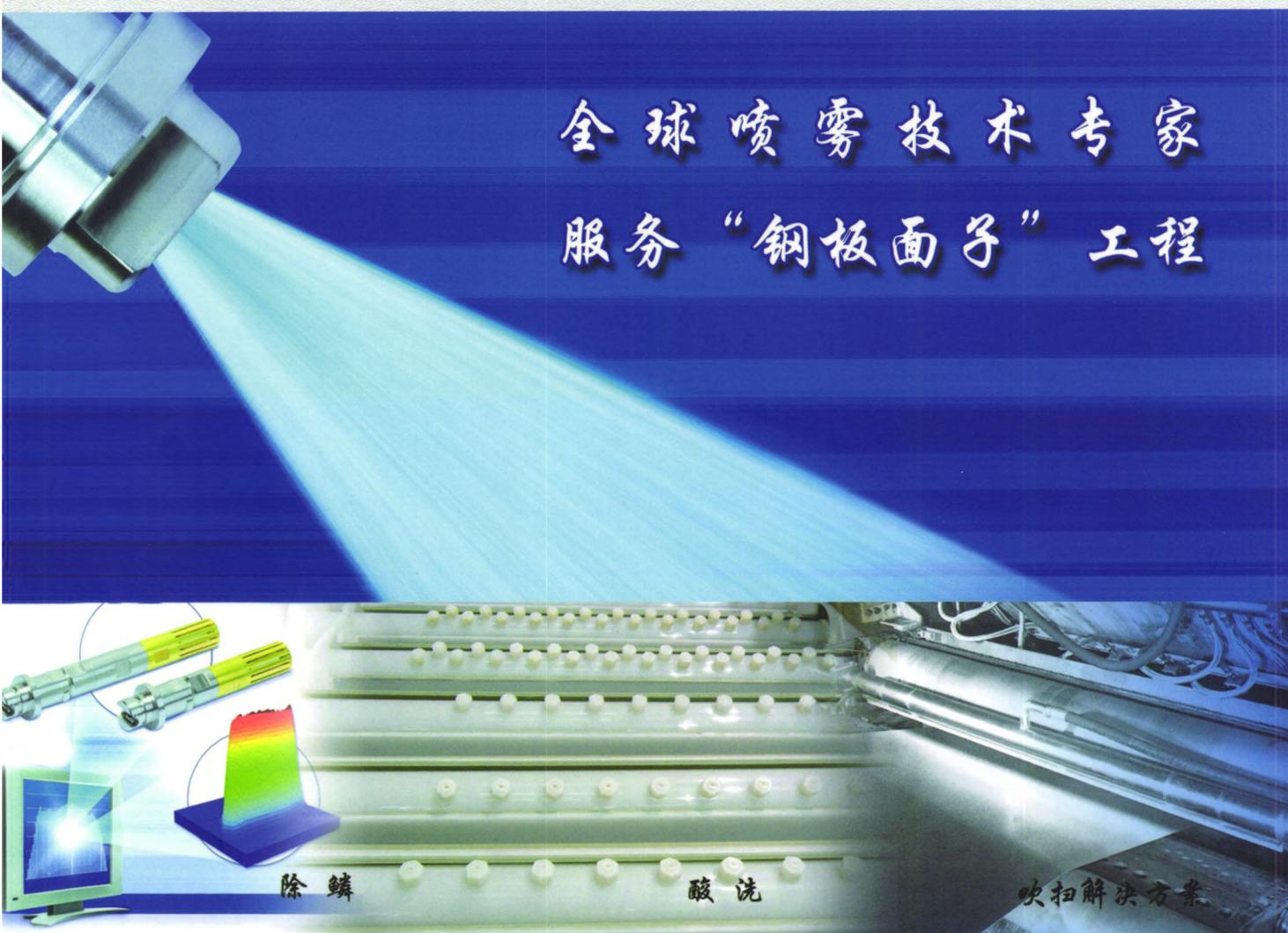


1
2017

ISSN 1003-9996
CN11-2466/TF Vol.34

轧钢

全球喷雾技术专家
服务“钢板面子”工程



Spraying Systems Co.[®]

斯普瑞喷雾系统（上海）有限公司

400-88-77729

www.spray.com.cn

marketing@spray.com.cn

轧 钢

ZHA GANG

2017 年 第 34 卷 第 1 期

2017 年 2 月出版

双月刊 1984 年创刊 总第 211 期



敬请关注《轧钢》微信订阅号

目 次

· 专家论坛 ·

近年我国轧制技术的发展、现状和前景 王国栋(1)

· 研究与开发 ·

中厚板轧后冷却圆形喷嘴射流冲击行为分析 韩毅, 贾维维, 张田, 王丙兴, 王昭东(9)

热模拟方法确定 A537 钢临界冷速的研究 路士平, 王卫华, 李家鼎(13)

低合金高强钢 HSLA380 再结晶温度的研究 李黎, 李敏, 江自然, 黄聪, 周焕能, 贾冬梅(16)

SSP 定宽机轧制过程中锤头的应力应变分析 宁林新, 解家英, 张利君, 王凤琴, 王文广(20)

冷连轧过程弯辊力模型研究与开发 陈金山, 王君, 朱涛, 曹勇(24)

棒线材热轧温度场预报系统的开发及应用 陈忠轩, 朱凤泉, 陈其伟, 朱国辉, 杨树宝, 余延庆(29)

115RE 钢轨开发难点及应对措施研究 王代文, 沈飞, 邓长富, 冯伟(35)

钢纤维用盘条表面氧化铁皮的控制研究 史园园, 郑宏伟(40)

圆盘剪切机理分析及应用探讨 蔡检平, 苏泽, 王海平(43)

· 设计与改造 ·

冷硬薄带钢板形矫直工艺及设备 刘首跃, 魏义新(46)

酸洗机组废边卷取机设计 夏金霖(51)

· 综 述 ·

节约型高强韧不锈钢及其薄带连铸制备技术 刘振宇, 赵岩, 刘鑫, 曹光明, 李成刚, 王国栋(53)

· 轧钢自动化 ·

热轧带钢质量在线控制技术研究 王宁宁, 侯彬, 宋和川, 周莲莲, 刘亚星, 王瑞(59)

一种热轧带钢平整分卷线张力控制工艺 白晓婧, 肖军(63)

· 钢材深加工 ·

低屈服强度微碳钢冷轧带钢的生产实践 于洋, 王畅, 王林, 胡燕慧, 陈瑾, 王明哲(66)

ERW 焊接 J55 石油套管用热轧带钢的研制 同波, 宿成, 王建钢, 陈佳璐(70)

· 革新与交流 ·

09MnNiDR 高韧性低温钢板的试制 高照海, 唐郑磊, 许少普, 李忠波, 符可义, 王英杰(73)

连铸坯锻轧工艺对核电用特厚钢板内部质量和力学性能的影响

..... 颜秉宇, 王永才, 孙殿东, 胡海洋, 王爽, 王勇(77)

桥梁板 Q420qD-Z25 生产实践 郑磊, 付中原(81)

薄规格中厚板中边浪控制措施 潘海波, 陈子刚, 张宏昌, 范晓龙(84)

普碳冷轧带钢表面清洁度再提高 张勇, 张松岩, 关立凯, 张昕, 付中华(87)

GCr15 盘条裂纹产生原因分析和研究 戈春刚, 尹永海, 王明元(91)

· 轧钢信息 ·

(8, 12, 15, 23, 34, 69, 92)

STEEL ROLLING

Vol. 34 No. 1 2017 February 2017

Bimonthly Started Publication in 1984 Total No. 211

CONTENTS

• Specialist Forum •

- Development, current situation and prospect of Chinese steel rolling technology in recent years WANG Guo-dong(1)

• Research & Development •

- The round nozzle jet impact behavior analysis for plate controlled cooling after controlled rolling HAN Yi, JIA Wei-wei, ZHANG Tian, WANG Bing-xing, WANG Zhao-dong(9)

- Study of critical cooling rate of A537 steel by thermal simulation method LU Shi-ping, WANG Wei-hua, LI Jia-ding(13)

- Research on recrystallization temperature of high strength low alloy steel of HSLA380

- LI Li, LI Min, JIANG Zi-ran, HUANG Cong, ZHOU Huan-neng, JIA Dong-mei(16)

- Analysis on the stress and strain of hammer during the SSP slab sizing presses

- NING Lin-xin, XIE Jia-ying, ZHANG Li-jun, WANG Feng-qin, WANG Wen-guang(20)

- Study and development on models of bending force for tandem cold rolling process

- CHEN Jin-shan, WANG Jun, ZHU Tao, CAO Yong(24)

- Development and application of temperature field prediction system for wire and bar hot rolling

- CHEN Zhong-xuan, ZHU Feng-quan, CHEN Qi-wei, ZHU Guo-Hui, YANG Shu-bao, YU Yan-qing(29)

- Research on the difficulties and countermeasures of development of 115RE rail

- WANG Dai-wen, SHEN Fei, DENG Chang-fu, FENG Wei(35)

- Research on the controlling of surface oxide scale of wire coil for steel fibre SHI Yuan-yuan, ZHENG Hong-wei(40)

- Analysis of cutting principle of trimmer and discussion on its application CAI Jian-ping, SU Ze, WANG Hai-ping(43)

• Design & Reformation •

- Leveling process and equipment for cold-hardened thin strip shape LIU Shou-yue, WEI Yi-Xin(46)

- Design and research of scrap baller for continuous pickling line XIA Jin-lin(51)

• Overview •

- Development of cost-saving high strength stainless steels by twin-roll strip casting technology

- LIU Zhen-yu, ZHAO Yan, LIU Xin, CAO Guang-ming, LI Cheng-gang, WANG Guo-dong(53)

• Automation of Steel Rolling •

- Research on the quality online control technology for hot rolled strip

- WANG Ning-ning, HOU Bin, SONG He-chuan, ZHOU Lian-lian, LIU Ya-xing, WANG Rui(59)

- A tension controlling method for hot rolling skin pass line BAI Xiao-jing, XIAO Jun(63)

• Deep Working of Steel Products •

- Production practice of low yield strength micro-carbon cold-rolled sheet

- YU Yang, WANG Chang, WANG Lin, HU Yan-hui, CHEN Jin, WANG Ming-zhe(66)

- Development of hot rolled strip for ERW welded J55 oil pipe YAN Bo, SU Cheng, WANG Jian-gang, CHEN Jia-yao(70)

• Innovation & Interflowing •

- Development of high toughness and low temperature 09MnNiDR steel plate

- GAO Zhao-hai, TANG Zheng-lei, XU Shao-pu, LI Zhong-bo, FU Ke-yi, WANG Ying-jie(73)

- Effect of combined forging and rolling technology for continuous casting slab on quality and mechanical properties of nuclear power ultra-heavy plate

- YAN Bing-yu, WANG Yong-cai, SUN Dian-dong, HU Hai-yang, WANG Shuang, WANG Yong(77)

- Production practice of Q420qd-Z25 bridge steel plate ZHENG Lei, FU Zhong-yuan(81)

- Control measures for edge and middle wave of thin gauge plate

- PAN Hai-bo, CHEN Zi-gang, ZHANG Hong-chang, FAN Xiao-long(84)

- Further measures for improving strip surface cleanliness in cold rolling line

- ZHANG Yong, ZHANG Song-yan, GUAN Li-kai, ZHANG Xin, FU Zhong-hua(87)

- Analysis and research on crack of GCr15 bearing steel wire rod GE Chun-gang, KUANG Yong-hai, WANG Ming-yuan(91)

- ### • Steel Rolling Informations • (8, 12, 15, 23, 34, 69, 92)



SKF新一代轧机四列圆锥滚子轴承，轻松应对各种工况！

完全互换，承载力相同

该款轴承和原有轴承完全相同的外形尺寸。在不对中、扭转和冲击载荷下更强，同时具有更高的承载能力以及更好的抗磨损能力。

更多选择，随时升级

客户随时可以采用标准化的密封组件升级：用新设计开式轴承替代原有开式轴承，或者用新设计的密封轴承替代开式轴承。

更强密封

易于安装，减少润滑剂泄漏。唇口摩擦运行温度更低，密封寿命更长。同时提升化学及热稳定性，保证更高的滑动速度，更强的抗扭曲和不对中能力。其中的无唇口弹簧设计将减少弹簧失效的风险。



THE POWER OF KNOWLEDGE ENGINEERING

® SKF是SKF集团的注册商标 | © SKF 集团 2016
www.skf.com.cn



客户收益：

- 更强的轴承密封保护
- 更高可靠性
- 适应各种的润滑方式
- 更少的润滑脂消耗
- 更少的维护工作量
- 更长的使用寿命
- 更低的总运行成本

SKF[®]

国内刊号：CN11-2466/TF 邮发代号：82-869

广告许可证：京海工商广字第8276号 定价：20元
万方数据

ISSN 1003-9996



9 771003 999172