

QK2204061

64

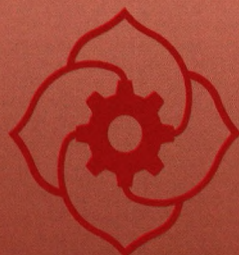
7G

CODEN:CRXAAK

材料热处理学报

CAILIAO RECHULI XUEBAO

TRANSACTIONS OF MATERIALS AND HEAT TREATMENT



CMES

中国机械工程学会主办

第43卷 第1期

Vol.43 No.1

2022

ISSN 1009-6264



9 771009 626225

0.1

目 次

综述

梯度结构钢铁材料的研究进展 杨晓松,孙田浩,邓想涛,彭思远,王 麒,王昭东(1)

复合材料

铝与氮化硼的反应机理及其复合材料的组织和性能
..... 杨思尧,李树丰,张 鑫,刘 磊,潘 登,高丽娜,张亚锷,李 波(10)

烧结温度对 $Al_3Zr/2024Al$ 多孔复合材料的组织与压缩性能的影响
..... 徐 琨,代文兰,刘 念,张文昌,龙 威,周小平(20)

碳纳米管含量对 TiAl 基合金微观组织及室温力学性能的影响
..... 刘炳义,汪振华,罗 跃,方群兵,王 跃(28)

碳含量及固溶温度对镍基合金复合板耐蚀性及冲击韧性的影响
..... 胡 映,丁文红,明亚飞,吴梦先,雷小玲,李天妹(36)

有色金属合金材料

Sn 元素对 Mg-1Zn-0.3Zr-1Y 生物镁合金组织和性能的影响 龚 圆,贺俊光,文九巴,田培梧(46)

固溶时效处理对快速凝固 LAZ941-0.5Y 镁锂合金组织和硬度的影响
..... 李甜甜,李丽华,顾永军,李 谦,黄金亮(54)

$Dy_{30}Cu_{70}$ 合金晶界扩散对烧结 Nd-Fe-B 磁体组织和磁性能的影响
..... 饶 强,李 骞,梁珍葵,吴 涛,周锦睿,李忠恺,罗军明,黄有林(61)

热等静压处理温度对一种高性能粉末高温合金组织和性能的影响
..... 黄国超,张绪虎,姚草根,徐桂华,王 冰,孟 烁(68)

黑色金属合金材料

循环热冲压过程中高热导率模具钢的摩擦磨损行为 李奇颖,吴博雅,杨子帅,黎军硕(75)

回火温度对 C61 齿轮钢显微组织和力学性能的影响
..... 梁晓东,吕加伟,闫 浩,赵子君,王馨缘,孟佳明,王 旭(84)

Mn 含量对热轧 TWIP 钢组织性能的影响	崔潇文,张贵杰,林绍峰(92)
0.3 mm 厚的高强无取向电工钢的退火组织与性能	
.....	彭宇凡,王子豪,宋新莉,黄昌虎,李兆振,贾涓(99)
Sn 对含铜取向硅钢脱碳退火后的组织、织构与抑制剂的影响	
.....	张慧敏,张程远,吴忠旺,贾宇巍,赵小龙,罗晓阳,任慧平(106)
固溶温度对 316LN 奥氏体不锈钢微观组织和高温力学性能的影响	
.....	程丹丹,熊毅,马云飞,武永丽,任凤章(113)
时效温度对 GX40CrNiSi25-12 奥氏体耐热钢析出相的影响	李杰,胡建文,陆子彤(121)
一步淬火-配分处理对 20CrMnTi 钢组织及摩擦磨损性能的影响	代桂林,刘洋,李国平(131)
淬火温度对冷轧辊用 MC3 钢组织与性能的影响	
.....	何臻毅,程永奇,陈宇航,麦兴广,林灿鑫,鲁一田(140)

材料表面改性

Ti ₃ SiC ₂ 含量对 Q235B 钢表面激光熔覆 Fe 基耐磨涂层性能的影响	张慧,庞铭(148)
富 Cu 相对双相不锈钢堆焊层电化学腐蚀及点蚀性能的影响	
.....	郭林坡,包晔峰,谢秉铤,柳昱,王子睿,曹冲,许楠,宋元宁(157)
热处理温度对 Ni-W-P/TiO ₂ 复合镀层微观结构及性能的影响	
.....	苏鹏,刘豪,王小红,龙武,蒋焰罡,李子硕,王强(166)

材料模拟计算

700 MPa 级热轧 TRIP 钢的控制冷却工艺模拟及试验	赵日东,黄华贵,陈雷,高林,杨家辉(175)
NiTi 形状记忆合金的应变补偿物理本构模型	
.....	王俊,王克鲁,鲁世强,李鑫,欧阳德来,邱仟,高鑫,张开铭(184)

CONTENTS

- Research progress of gradient structure steel materials
 YANG Xiao-song, SUN Tian-hao, DENG Xiang-tao, PENG Si-yuan, WANG Qi, WANG Zhao-dong(1)
- Reaction mechanism of aluminum with boron nitride and microstructure and properties of its composites
 YANG Si-yao, LI Shu-feng, ZHANG Xin, LIU Lei, PAN Deng, GAO Li-na, ZHANG Ya-kun, LI Bo(10)
- Effect of sintering temperature on microstructure and compressive properties of Al₃Zr/2024Al porous composites ...
 XU Kun, DAI Wen-lan, LIU Nian, ZHANG Wen-chang, LONG Wei, ZHOU Xiao-ping(20)
- Effect of carbon nanotube content on microstructure and room temperature mechanical properties of TiAl-based alloy
 LIU Bing-yi, WANG Zhen-hua, LUO Yue, FANG Qun-bing, WANG Yue(28)
- Effects of carbon content and solution temperature on corrosion resistance and impact toughness of Ni based alloy composite
 plate HU Ying, DING Wen-hong, MING Ya-fei, WU Meng-xian, LEI Xiao-ling, LI Tian-mei(36)
- Effect of Sn on microstructure and properties of Mg-1Zn-0.3Zr-1Y biological magnesium alloy
 GONG Yuan, HE Jun-guang, WEN Jiu-ba, TIAN Pei-wu(46)
- Effect of solution and aging treatment on microstructure and hardness of rapidly solidified LAZ941-0.5Y magnesium-lithium
 alloy LI Tian-tian, LI Li-hua, GU Yong-jun, LI Qian, HUANG Jin-liang(54)
- Effect of Dy₃₀Cu₇₀ alloy grain boundary diffusion on microstructure and magnetic properties of sintered Nd-Fe-B magnet
 RAO Qiang,
 LI Qian, LIANG Zhen-kui, WU Tao, ZHOU Jing-rui, LI Zhong-kai, LUO Jun-ming, HUANG You-lin(61)
- Effect of hot isostatic pressing treatment temperature on microstructure and properties of a high performance powder metallurgy
 superalloy HUANG Guo-chao, ZHANG Xu-hu, YAO Cao-gen, XU Gui-hua, WANG Bing, MENG Shuo(68)
- Friction and wear behavior of high thermal conductivity die steel during cyclic hot stamping
 LI Qi-ying, WU Bo-ya, YANG Zi-shuai, LI Jun-wan(75)
- Effect of tempering temperature on microstructure and mechanical properties of C61 gear steel
 LIANG Xiao-dong, LÜ Jia-wei, YAN Hao, ZHAO Zi-jun, WANG Xin-yuan, MENG Jia-ming, WANG Xu(84)
- Effect of Mn content on microstructure and properties of hot rolled TWIP steel
 CUI Xiao-wen, ZHANG Gui-jie, LIN Shao-feng(92)

Annealing microstructure and properties of 0.3 mm thickness high strength non-oriented electrical steel	
.....	PENG Yu-fan, WANG Zi-hao, SONG Xin-li, HUANG Chang-hu, LI Zhao-zhen, JIA Juan(99)
Influence of Sn on microstructure, texture and inhibitor of copper bearing oriented silicon steel after decarburization annealing	
.....	ZHANG Hui-min,
	ZHANG Cheng-yuan, WU Zhong-wang, JIA Yu-wei, ZHAO Xiao-long, LUO Xiao-yang, REN Hui-ping(106)
Effect of solution temperature on microstructure and high temperature mechanical properties of 316LN austenitic stainless steel	
.....	CHENG Dan-dan, XIONG Yi, MA Yun-fei, WU Yong-li, REN Feng-zhang(113)
Effect of aging temperature on precipitates of GX40CrNiSi25-12 austenite heat resistant steel	
.....	LI Jie, HU Jian-wen, LU Zi-tong(121)
Effect of one-step quenching-partitioning treatment on microstructure and friction and wear properties of 20CrMnTi steel	
.....	DAI Gui-lin, LIU Yang, LI Guo-ping(131)
Effect of quenching temperature on microstructure and properties of MC3 steel for cold roll	
.....	HE Zhen-yi, CHENG Yong-qi, CHEN Yu-hang, MAI Xing-guang, LIN Can-xin, LU Yi-tian(140)
Effect of Ti ₃ SiC ₂ content on performance of laser cladding Fe-based wear-resistant coating on Q235B steel surface	
.....	ZHANG Hui, PANG Ming(148)
Effect of Cu-rich phase on electrochemical corrosion and pitting properties of duplex stainless steel surfacing layer	
.....	GUO Lin-po,
	BAO Ye-feng, XIE Bing-qi, LIU Yu, WANG Zi-rui, CAO Chong, XU Nan, SONG Qi-ning(157)
Effect of heat treatment temperature on microstructure and properties of Ni-W-P/TiO ₂ composite coating	
.....	SU Peng, LIU Hao, WANG Xiao-hong, LONG Wu, JIANG Yan-gang, LI Zi-shuo, WANG Qiang(166)
Numerical simulation and experimental of controlled cooling process for 700 MPa hot rolled TRIP steel	
.....	ZHAO Ri-dong, HUANG Hua-gui, CHEN Lei, GAO Lin, YANG Jia-hui(175)
Strain compensation physical constitutive model of NiTi shape memory alloy	
	WANG Jun, WANG Ke-lu, LU Shi-qiang, LI Xin, OUYANG De-lai, QIU Qian, GAO Xin, ZHANG Kai-ming(184)

材料热处理学报

TRANSACTIONS OF MATERIALS AND HEAT TREATMENT

第 43 卷第 1 期 总第 259 期 2022 年 1 月 25 日(月刊,1980 年创刊)

Vol. 43 No. 1 January 25, 2022 (Monthly, Started in 1980)

主管单位:中国科学技术协会

主办单位:中国机械工程学会

主 编:周 玉

副 主 编:闫牧夫 顾剑锋 李 俏
石 伟

编辑部主任:付海峰

编辑出版:《材料热处理学报》编辑部

地 址:北京市海淀区学清路 18 号
北京机电研究所院内(100083)

电 话:010-62914115,82415080

传 真:010-62914115

网 址:www.mhtcn.org

电子信箱:clrel@vip.163.com

印 刷:北京科信印刷有限公司

中国标准连续出版物号: $\frac{\text{ISSN } 1009-6264}{\text{CN } 11-4545/\text{TG}}$

CODEN:CRXAAK

国内发行:北京报刊发行局

邮发代号:82-591

国内定价:60 元/册,全年:720 元

Responsible Department:

China Association for Science and Technology

Sponsor: Chinese Mechanical Engineering Society

Chief Editor: ZHOU Yu

Vice Chief Editor: YAN Mu-fu, GU Jian-feng, LI Qiao, SHI Wei

Managing Editor: FU Hai-feng

Edited and Published: Editorial Office of TRANSACTIONS OF
MATERIALS AND HEAT TREATMENT

Address: No. 18, Xueqing Road, Beijing 100083, China

Tel: 86-10-62914115, 82415080

Fax: 86-10-62914115

http: //www.mhtcn.org

E-mail: clrel@vip.163.com

Code No. : $\frac{\text{ISSN } 1009-6264}{\text{CN } 11-4545/\text{TG}}$

CODEN:CRXAAK

Annual Rate: 720 USD (including postage by air)

全国中文核心期刊

中国科技核心期刊

中国科技论文统计与分析用刊

中国科技期刊 ChinaInfo 系统用刊

中国期刊方阵双效期刊

RCCSE 中国权威学术期刊(A⁺)

中国科学引文数据库(CSCD)来源期刊

中国期刊全文数据库(CJFD)用刊

中国期刊网、中国学术期刊全文收录期刊

荷兰 SCOPUS 数据收录期刊

美国《化学文摘》CA 文献源期刊

美国《剑桥科学文摘》CSA 文献源期刊

金属文摘 METADEX 文献源期刊

日本科技情报中心 JICST 文献源期刊

AJ、EMA 等收录期刊



敬请关注本刊微信公众号,可通过公众号查询稿件处理进度及过刊等。