



ISSN 1004-0609
CN 43-1238/TG
CODEN ZYJXFK

中国有色金属学报

The Chinese Journal of Nonferrous Metals

September 2022

Volume 32 Number 9

中国科学技术协会 主管
中国有色金属学会 主办

目 次

材料科学与工程

断续时效对Al-Zn-Mg-Cu铝合金厚板力学性能和局部耐腐蚀性能的影响

..... 郑许, 唐建国, 张勇, 陈明扬, 刘胜胆, 朱玉涛, 何克准, 张新明(2495)

Al/Cu复合材料制备工艺及界面组织演变研究现状 关杰仁, 王秋平(2510)

大型镁合金锥形壳体显微组织与力学性能不均匀性

..... 刘文林, 靳宇斐, 韩宇翔, 陈汉, 刘楚明, 陈志永(2521)

挤压-剪切薄壁中空镁合金型材成形过程物理场及微观组织

..... 田野, 胡红军, 干松林, 张丁非, 戴庆伟, 欧忠文(2533)

相机壳体用含RE、Sr和AlTiB压铸镁合金工艺优选及组织性能

..... 张亚琴, 张德平, 张景怀, 李柏顺, 李慧(2545)

铝/铜异种金属双面搅拌摩擦焊接成形及接头力学性能

..... 唐九兴, 吴明孝, 石磊, 武传松, 杨威, 高嵩(2556)

铜包钢棒多辊固-液铸轧复合工艺布流区界面传热行为 季策, 黄华贵, 杨家辉(2568)

腐蚀对2024铝合金板材力学性能的影响 王冠, 吴妍, 寇琳媛, 张沛, 邹泽坤, 朱学军(2580)

轧制火次对EB熔炼TC4钛合金显微组织、组织和力学性能的影响

..... 王伟, 宫鹏辉, 史亚鸣, 张浩泽, 张晓锋, 王快社(2595)

CMT电弧增材制造TC4钛合金的显微组织与力学性能 李长富, 郑鉴深, 周思雨, 杨光, 王向明(2609)

Ti-Al-Mo-V-Cr体系关键四元系700℃和800℃相平衡的实验研究

..... 乔慧, 张宇, 胡标, 李凯, 刘树红, 杜勇(2620)

铸态高Nb-TiAl合金高温蠕变变形及断裂机制

..... 肖树龙, 梁振泉, 赵浩, 郭应飞, 郑云飞, 徐丽娟, 薛祥, 田竟, 陈玉勇(2633)

挤压态新型镍基粉末高温合金的热变形行为

..... 任帅, 张华, 于子超, 刘伟, 刘志凌, 周鑫, 黄海亮, 张尚洲, 朱礼龙, 江亮(2647)

新型镍基粉末高温合金包覆挤压数值模拟与工艺窗口优化

..... 温红宁, 金俊松, 滕庆, 杨贺阳, 龚攀, 魏青松, 王新云, 肖磊, 马向东, 杨金龙(2664)

(Pd, Mo)掺杂对钒基固溶体结构和氢渗透性能的影响

..... 王仲民, 吴晨曦, 张艳丽, 龙乾新, 王凤, 乔涛, 黄志民, 杜勇(2680)
多级结构FeS@Ni₃S₂/NF催化电极的一步水热法制备及析氧行为..... 王虎虎, 艾桃桃, 包维维(2691)

冶金工程·矿业工程·化学化工

废线路板破碎分选产物的工艺矿物学..... 刘伟锋, 胡晓丽, 张杜超, 陈霖, 杨天足(2703)

赤泥转型-碱溶提铝过程钛的矿相转化 王玲, 周晨晨, 范燕青, 马保中, 王成彦, 傅昕(2714)

不锈钢尘泥球团预还原-熔炼回收有价金属 陈青月, 潘建, 朱德庆, 郭正启, 杨聪聪, 丑建磊(2726)

常压-氧压联合浸出锌置换渣中的镓和锗

..... 罗金华, 饶帅, 季凯, 曹洪杨, 刘志强, 王东兴, 袁祥奕, 段丽娟(2741)

分散剂强化细粒级含钒页岩的钒浸出及作用机理 张占兵, 胡佩伟, 谢忠诚, 胡超(2753)

高杂质离子型稀土浸矿过程中硫酸铵用量参照依据

..... 张朔, 秦磊, 王观石, 罗嗣海, 彭陈亮, 邓国强(2764)

Na₂CO₃对红土镍矿的H₂还原影响规律与作用机理 白亚东, 杨颂, 刘守军, 刘兴阳, 齐升(2774)

含钛高炉渣构建具有土壤修复功效的缓释肥料

..... 叶瑞雪, 季益龙, 刘秉林, 代兵, 吕辉鸿, 何孝军, 冉松林, 雷昭(2787)

高温处理后含铜矽卡岩的动态力学特性及损伤破碎特征

..... 王春, 熊宏威, 舒荣华, 薛文越, 胡慢谷, 张攀龙, 雷彬彬(2801)

胶莱盆地郭城-崖子断裂带金矿集区剥蚀程度及深部找矿潜力 陈原林, 李欢, 郑朝阳, 李大兜(2819)

湘南黄沙坪铜多金属矿床-256 m中段构造地球化学特征及找矿预测

..... 雷镇, 陶思源, 李波, 王新富, 向佐朋, 楚翔凯, 刘凤平, 邓安平, 宗志宏, 钱勇敢(2835)

投稿须知 (2856)

责任编辑：龙怀中，何学锋，李艳红

[期刊基本参数] CN 43-1238/TG*1991*m*A4*361*zh*P*¥80.0*720*27*2022-09

CONTENTS

Materials Science and Engineering

- Effect of interrupt aging on mechanical properties and local corrosion resistance of Al-Zn-Mg-Cu alloy thick plate ZHENG Xu, TANG Jian-guo, ZHANG Yong, CHEN Ming-yang, LIU Sheng-dan, ZHU Yu-tao, HE Ke-zhun, ZHANG Xin-ming(2495)
- Research progress of preparation technique and interface microstructure evolution of Al/Cu composite materials GUAN Jie-ren, WANG Qiu-ping(2510)
- Inhomogeneity of microstructure and mechanical property of large magnesium alloy conical shell LIU Wen-lin, JIN Yu-fei, HAN Yu-xiang, CHEN Han, LIU Chu-ming, CHEN Zhi-yong(2521)
- Physical field and microstructure of extrusion-shear thin-walled hollow magnesium alloy profiles during forming TIAN Ye, HU Hong-jun, GAN Song-lin, ZHANG Ding-fei, DAI Qing-wei, OU Zhong-wen(2533)
- Process optimization, microstructure and properties analysis of die casting Mg alloy containing RE, Sr and AlTiB for camera shell... ZHANG Ya-qin, ZHANG De-ping, ZHANG Jing-huai, LI Bai-shun, LI Hui(2545)
- Aluminum/copper dissimilar metal double-sided friction stir welding formation and mechanical properties of joint TANG Jiu-xing, WU Ming-xiao, SHI Lei, WU Chuan-song, YANG Wei, GAO Song(2556)
- Interfacial heat transfer behavior in delivery zone of multi-roll solid-liquid cast-rolling bonding process for copper cladding steel bars JI Ce, HUANG Hua-gui, YANG Jia-hui(2568)
- Effect of corrosion on mechanical properties of 2024 aluminum alloy WANG Guan, WU Yan, KOU Lin-yuan, ZHANG Pei, ZOU Ze-kun, ZHU Xue-jun(2580)
- Influence of hot rolling process on microstructure, microtexture and mechanical properties of Ti-6Al-4V alloy fabricated by electron beam cold hearth melting WANG Wei, GONG Peng-hui, SHI Ya-ming, ZHANG Hao-ze, ZHANG Xiao-feng, WANG Kuai-she(2595)
- Microstructure and mechanical properties of CMT wire arc additive manufactured Ti-6Al-4V titanium alloy LI Chang-fu, ZHENG Jian-shen, ZHOU Si-yu, YANG Guang, WANG Xiang-ming(2609)
- Experimental investigation of phase equilibria in Ti-Al-Mo-V-Cr key quaternary systems at 700 °C and 800 °C QIAO Hui, ZHANG Yu, HU Biao, LI Kai, LIU Shu-hong, DU Yong(2620)
- Elevated temperature creep deformation and rupture mechanisms of as-cast high Nb-containing TiAl alloy XIAO Shu-long, LIANG Zhen-quan, ZHAO Hao, GUO Ying-fei, ZHENG Yun-fei, XU Li-juan, XUE Xiang, TIAN Jing, CHEN Yu-yong(2633)
- Thermal deformation behavior of a new extruded nickel-base powder superalloy REN Shuai, ZHANG Hua, YU Zi-chao, LIU Wei, LIU Zhi-ling, ZHOU Xin, HUANG Hai-liang, ZHANG Shang-zhou, ZHU Li-long, JIANG Liang(2647)
- Numerical simulation and processing window optimization on cladding extrusion of novel nickel-based powder superalloy WEN Hong-ning, JIN Jun-song, TENG Qing, YANG He-yang, GONG Pan, WEI Qing-song, WANG Xin-yun, XIAO Lei, MA Xiang-dong, YANG Jin-long(2664)

Effects of (Pd, Mo) doping on structure and hydrogen permeation properties of V solid solutions

..... WANG Zhong-min, WU Chen-xi, ZHANG Yan-li, LONG Qian-xin, WANG Feng,
QIAO Tao, HUANG Zhi-min, DU Yong(2680)

One-step hydrothermal preparation and oxygen evolution behavior of multilevel structure FeS@Ni₃S₂/NF

catalytic electrode..... WANG Hu-hu, AI Tao-tao, BAO Wei-wei(2691)

Metallurgical Engineering, Mine Engineering, Chemistry and Chemical Engineering

Process mineralogy of waste printed circuit board crushing and sorting products

..... LIU Wei-feng, HU Xiao-li, ZHANG Du-chao, CHEN Lin, YANG Tian-zu(2703)

Mineral phase transformation of titanium during red mud modifying and alkaline leaching for aluminum

..... WANG Ling, ZHOU Chen-chen, FAN Yan-qing, MA Bao-zhong, WANG Cheng-yan, FU Xin(2714)

Recovery of valuable metals from stainless steel dust and sludge pellets by pre-reduction-smelting

..... CHEN Qing-yue, PAN Jian, ZHU De-qing, GUO Zheng-qi, YANG Cong-cong, CHOU Jian-lei(2726)

Gallium and germanium leaching from zinc refinery residues through combining atmospheric leaching with

oxygen pressure leaching LUO Jin-hua, RAO Shuai, JI Kai, CAO Hong-yang, LIU Zhi-qiang,

WANG Dong-xing, YUAN Xiang-yi, DUAN Li-juan(2741)

Leaching of vanadium from fine-grained vanadium-bearing shale with dispersant and its mechanism

..... ZHANG Zhan-bing, HU Pei-wei, XIE Zhi-cheng, HU Chao(2753)

Reference basis of ammonium sulfate dosage during leaching process of high impurity ionic rare earth

..... ZHANG Shuo, QIN Lei, WANG Guan-shi, LUO Si-hai, PENG Chen-liang, DENG Guo-qiang(2764)

Influence law and mechanism of Na₂CO₃ on H₂ reduction of laterite nickel ore

..... BAI Ya-dong, YANG Song, LIU Shou-jun, LIU Xing-yang, QI Sheng(2774)

Slow-release fertilizer with soil remediation function constructed from titanium-bearing blast furnace slag

..... YE Rui-xue, JI Yi-long, LIU Bing-lin, DAI Bing, LÜ Hui-hong, HE Xiao-jun,
RAN Song-lin, LEI Zhao(2787)

Dynamic mechanical characteristic and damage-fracture behavior of deep copper-bearing skarn after

high temperature treatment WANG Chun, XIONG Hong-wei, SHU Rong-hua, XUE Wen-yue,

HU Man-gu, ZHANG Pan-long, LEI Bin-bin(2801)

Denudation degree and deep prospecting potential of gold deposits in Guocheng-Yazi fault zone, Jiaolai basin

..... CHEN Yuan-lin, LI Huan, ZHENG Chao-yang, LI Da-dou(2819)

Tectono-geochemistry characteristics and prospecting prediction of -256 m level tunnel of Huangshaping copper polymetallic deposit in Southern Hunan

..... LEI Zhen, TAO Si-yuan, LI Bo, WANG Xin-fu, XIANG Zuo-peng, CHU Xiang-kai,
LIU Feng-ping, DENG An-ping, ZONG Zhi-hong, QIAN Yong-gan(2835)