



中国精品科技期刊

ISSN 0253-360X

CODEN HHPAD2

焊
接
学
报

二
〇
一
九
年

第
四
十
卷

第
七
期

焊接学报

TRANSACTIONS OF THE CHINA WELDING INSTITUTION



中国机械工程学会主办



第40卷 第7期

Vol.40 No.7

2019

焊接学报

第 40 卷 第 7 期

2019 年 7 月 25 日出版

目 次

高频交变磁场对大电流 GMAW 熔滴过渡和飞溅率的影响	樊 丁, 杨文艳, 肖 磊, 等	(1)
焊接结构学中的热 - 力耦合问题简析	王 苹, 刘 永, 常荷茜, 等	(6)
氩等离子体紫外光 A 和 B 辐射属性计算	王 飞, 李 桓, Cressault Yann, 等	(12)
Al ₂ O ₃ /Ti 生物相容连接接头微观组织及力学性能	林盼盼, 林铁松, 何 鹏, 等	(16)
航空发动机叶片 MPAW 修复传热建模及冷却方法	龚 淼, 戴士杰, 贾 鹏, 等	(24)
双丝三电弧焊中熔滴过渡及焊缝成形机理	郑 佳, 李亮玉, 钟 蒲, 等	(31)
铆钉对 TA1 与 1420 自冲铆接工艺及失效行为的影响	张先炼, 何晓聪, 曾 凯	(37)
温度对 SA508-III 钢焊缝金属断裂韧度的影响	李相清, 丁振宇, 包士毅, 等	(44)
铝合金 T 形接头静止轴肩搅拌摩擦焊接及组织性能分析	郝云飞, 马建波, 毕煌圣, 等	(48)
6N01S-T5 铝合金高速激光 -MIG 复合焊接工艺	王 伟, 王 浩, 陈 辉, 等	(55)
42CrMo 钢活塞激光 -MAG 复合焊接热裂纹试验	陈根余, 张 焱, 雷 燃	(61)
Ar 与 H ₂ 混合气体保护下 GTAW 电弧特性数值模拟	刘政军, 李宇航, 苏允海	(67)
基于网格激光线的横向焊接焊缝下塌检测方法	王齐胜, 高延峰	(72)
基于缺口应力法的 IIW 多轴疲劳准则分析	胡 鑫, 严仁军, 谌 伟, 等	(77)
基于结构光的焊点智能识别算法设计	朱齐丹, 王彦柯, 朱 伟, 等	(82)
考虑多裂纹的焊趾裂纹扩展行为的数值仿真分析	余 茜, 魏国前, 李山山, 等	(88)

新型双脉冲 MIG 焊接电源	钟启明, 谢芳祥, 王振民	(94)
基于有限元的激光增材过程熔化热积累模拟	唐 琪, 陈静青, 陈 鹏, 等	(100)
镍基合金焊丝 GTAW 熔敷金属凝固偏析行为	郭 泉, 徐 锴, 霍树斌, 等	(105)
高强 Al-Mg 合金钨极氩弧双丝增材制造工艺与组织性能	何 杰, 冯曰海, 张 林, 等	(109)
激光熔覆高铬铁基合金的组织形成机制及对显微硬度的影响	尹 燕, 潘存良, 赵 超, 等	(114)
TC4 厚壁管全位置 PAW 工艺及接头性能分析	郭春富, 刘帛炎, 董春林, 等	(121)
WC 和 Al ₂ O ₃ 对氩弧熔覆 FeAlCoCrCuTi _{0.4} 高熵合金涂层组织和耐冲蚀性能影响	董世知, 孟 旭, 马 壮, 等	(127)
压痕应变法应力计算函数和低合金钢力学性能的关系	陈 静, 阚 盈, 姜云禄, 等	(133)
疲劳裂纹扩展过程中焊接残余应力重分布测试	王 强, 闫忠杰, 刘雪松, 等	(139)
超级双相不锈钢多层多道焊接接头组织及腐蚀性能	高站起, 荆洪阳, 徐连勇, 等	(143)
水下湿法手工自蔓延焊接技术	韩凤起, 李志尊, 孙立明, 等	(149)
一种 Ti-6Al-4V 功能梯度网状结构的设计与压缩性能	邵世友, 李 东, 曾春杰, 等	(156)
英文摘要		(I)

TRANSACTIONS OF THE CHINA WELDING INSTITUTION

Vol. 40 No. 7 July 2019

CONTENTS

Effect of high frequency longitudinal alternating magnetic field on droplet transfer and spatter rate in high current GMAW welding.....	<i>FAN Ding, YANG Wenyan, XIAO Lei, et al</i>	(1)
Brief analyses of thermo-mechanical coupling issue on welding structures	<i>WANG Ping, LIU Yong, CHANG Hexi, et al</i>	(6)
Calculation of radiative properties for argon plasma in ultraviolet A and B	<i>WANG Fei, LI Huan, Cressault Yann, et al</i>	(12)
Microstructure and mechanical property of Al ₂ O ₃ /Ti joint with biocompatibility	<i>LIN Panpan, LIN Tiesong, HE Peng, et al</i>	(16)
Heat transfer modeling and cooling method for aeroengine blade MPAW repair	<i>GONG Miao, DAI Shijie, JIA Peng, et al</i>	(24)
Droplet transfer and weld forming of Tri-arc DE welding	<i>ZHENG Jia, LI Liangyu, ZHONG Pu, et al</i>	(31)
Influence of rivet on process and failure behavior of self-piercing riveting in dissimilar sheets of TA1 and 1420 Al-Li alloys.....	<i>ZHANG Xianlian, HE Xiaocong, ZENG Kai</i>	(37)
Effect of temperature on fracture toughness of SA508-III weld metal	<i>LI Xiangqing, DING Zhenyu, BAO Shiyi, et al</i>	(44)
Analysis of microstructure and mechanical properties of the aluminum alloy T-joint welded by stationary shoulder friction stir welding.....	<i>HAO Yunfei, MA Jianbo, BI Huangsheng, et al</i>	(48)
Investigation on high speed laser-MIG hybrid welding process of 6N01S-T5 aluminum alloy	<i>WANG Wei, WANG Hao, CHEN Hui, et al</i>	(55)
Testing of hot crack using laser-MAG combined welding for 42CrMo steel	<i>CHEN Genyu, ZHANG Yan, LEI Ran</i>	(61)
Numerical simulation of arc characteristics under mixtures of argon and hydrogen in gas tungsten arc welding	<i>LIU Zhengjun, LI Yuhang, SU Yunhai</i>	(67)
Detection of horizontal weld seam collapse based on grid laser lines	<i>WANG Qisheng, GAO Yanfeng</i>	(72)
Research on IIW multiaxial fatigue criterion based on notch stress approach	<i>HU Xin, YAN Renjun, SHEN Wei, et al</i>	(77)

Intelligent recognition algorithm of welding point based on structured light	ZHU Qidan, WANG Yanke, ZHU Wei, et al	(82)
Numerical simulation analysis of crack propagation in weld toe considering multiple cracks	YU Xi, WEI Guoqian, LI Shanshan, et al	(88)
Research of a novel double-pulsed MIG welding power supply	ZHONG Qiming, XIE Fangxiang, WANG Zhenmin	(94)
Finite element simulation of melting heat accumulation in laser additive manufacturing	TANG Qi, CHEN Jingqing, CHEN Peng, et al	(100)
Investigation on the solidification segregation behavior of GTAW nickel alloy deposited metal	GUO Xiao, XU Kai, HUO Shubin, et al	(105)
Research on microstructure and mechanical properties of high strength Al-Mg alloy fabricated by double-wire and gas tungsten arc additive manufacturing process.....	HE Jie, FENG Yuehai, ZHANG Lin, et al	(109)
Formation mechanism of microstructure of laser cladding high chromium Fe-based alloy and its effect on microhardness.....	YIN Yan, PAN Cunliang, ZHAO Chao, et al	(114)
All-position plasma arc welding process for thick TC4 tube and mechanical properties of welded joints	GUO Chunfu, LIU Boyan, DONG Chunlin, et al	(121)
Effects of WC and Al ₂ O ₃ on the microstructure and erosion wear resistance of FeAlCoCrCuTi _{0.4} high-entropy alloy coating by argon arc cladding.....	DONG Shizhi, MENG Xu, MA Zhuang, et al	(127)
Relationship between stress calculation function of indentation strain-gage and mechanical properties of low-alloy steel.....	CHEN Jing, KAN Ying, JIANG Yunlu, et al	(133)
A novel method for evaluation of welding residual stress redistribution during fatigue crack growth	WANG Qiang, YAN Zhongjie, LIU Xuesong, et al	(139)
Research on microstructure and corrosion behavior of multi-pass welded joints of hyper duplex stainless steel	GAO Zhanqi, JING Hongyang, XU Lianyong, et al	(143)
Research on underwater wet manual SHS welding	HAN Fengqi, LI Zhizun, SUN Liming, et al	(149)
Design of a Ti-6Al-4V functionally graded network structure and its compression properties	SHAO Shiyong, LI Dong, ZENG Chunjie, et al	(156)