

专稿 Feature

14 基于调谐质量阻尼器的机器人加工振动抑制

唐小卫 王晨阳 闫蓉 刘楚恒
Vibration Suppression of Robotic Machining Based on Tuned Mass Damper
TANG Xiaowei WANG Chenyang YAN Rong LIU Chuheng

封面文章 Cover Story

22 基于多级卷积与形状增强的蒙皮缺陷检测方法

王珏 卢震宇 张晓巍 孙玉文 朱丽
Skin Defect Detection Method Based on Multilevel Convolution and Shape Enhancement
WANG Jue LU Zhenyu ZHANG Xiaowei SUN Yuwen ZHU Li

论坛 Forum

机器人化智能制造 Robotized Intelligent Manufacturing

32 重载机器人动力学研究现状与进展

李忠群 沈群利 吴文镜 范海路
State of the Art and Prospects in Dynamics of Heavy-Duty Robots
LI Zhongqun SHEN Qunli WU Wenjing FAN Hailu

49 基于机器学习算法的机器人超声滚压表面完整性预测

刘爽 王志钰 胡佳琦
Machine Learning-Based Surface Integrity Prediction for Robotic Ultrasonic Rolling
LIU Shuang WANG Zhiyu HU Jiaqi

61 数字孪生环境下基于改进Mask R-CNN的焊接零件完备性检测方法

刘根 闫新宇 李浩 张玉彦 李琳利 翟中尚 王朋静 杨新宇
Welding Part Completeness Detection Based on Improved Mask R-CNN in Digital Twin Environment
LIU Gen YAN Xinyu LI Hao ZHANG Yuyan LI Linli ZHAI Zhongshang WANG Pengjing YANG Xinyu

71 基于深度学习及声电信号跨模态融合的电弧增材制造异常检测方法

王宏民 覃才 林蔚 郭慧林 潘增喜 宋莹莹
Anomaly Detection Method for Wire Arc Additive Manufacturing Based on Deep Learning and Cross-Modal Fusion of Acoustic and Electrical Signals
WANG Hongmin QIN Cai LIN Wei GUO Huilin PAN Zengxi SONG Yingying

研究论文 Research

- 82 考虑间隙配合的复合材料螺栓接头多尺度渐进损伤分析
王美靖 阮新建 张孟杰 陈力啸 朱伟东
Multi-Scale Progressive Damage Analysis of Composite Bolted Joints With Clearance Fit
WANG Meijing RUAN Xinjian ZHANG Mengjie CHEN Lixiao ZHU Weidong
- 91 基于改进工艺的复合材料预制体单边缝合装置动作规划与试验验证
蔚飞 董九志 陈云军 李锐
Equipment Motion Planning and Experimental Verification of One-Sided Stitching Device for Composite Preform Based on Improved Process
YU Fei DONG Jiuzhi CHEN Yunjun LI Rui
- 100 碳纤维复合材料叠层结构机器人制孔工艺参数优化研究
罗群 林伟 石峰 杜兆才
Research on Parameter Optimization of Robotic Drilling Processes for Carbon Fiber Composite Laminated Structures
LUO Qun LIN Wei SHI Feng DU Zhaocai
- 115 考虑加工弹性变形效应的弱刚性薄壁件铣削稳定性时变预测方法
商宇杰 张臣 胡磊
Time-Varying Prediction Method for Milling Stability of Weakly Rigid Thin-Walled Parts Considering Machining-Induced Elastic Deformation Effects
SHANG Yujie ZHANG Chen HU Lei
- 128 超高转速旋转电极法与气雾化法对EP741NP镍基高温合金粉末特性的影响规律研究
韩志宇 张平祥 赖运金 郑作赞 王琦 相敏 王毅
Influences of SS-PREP and AA Processes on Powder Properties of EP741NP Ni-Based Superalloy
HAN Zhiyu ZHANG Pingxiang LAI Yunjin ZHENG Zuoyun WANG Qi XIANG Min WANG Yi
- 136 面向铸件几何的自适应多特征相似性度量模型研究及应用
张明远 黄勇 刘成亮 沈刚 赵猛 杨宗才 张龙光 吴发平
Research and Application of Adaptive Multi-Feature Similarity Measurement Model for Geometries of Castings
ZHANG Mingyuan HUANG Yong LIU Chengliang SHEN Gang ZHAO Meng
YANG Zongcai ZHANG Longguang WU Faping
- 144 SiC_p/Al复合材料高效切削刀具磨损机制
彭建昊 赵彪 王鹏 余经好 丁文锋
Tool Wear Mechanisms of High-Efficiency Machining of SiC_p/Al Composites
PENG Jianhao ZHAO Biao WANG Peng YU Jinghao DING Wenfeng