

目次

CONTENTS

《制造技术与机床》2022年第05期(总第719期) No.05.2022 Total Issue No.719

1 | 国内外动态 / Information at Home and Abroad

工业机器人 / Industrial Robot

- 5 | 考虑制造误差的工业机器人精度可靠性分析/李国发 韩良晟 何佳龙 王继利**
Accuracy reliability analysis of industrial robots considering manufacturing errors/LI Guofa, HAN Liangsheng, HE Jialong, WANG Jili
- 12 | 基于机器人逆运动学的磨削姿态优化方法/徐源 尹绪伟 吴超群**
Optimization of grinding posture based on inverse kinematics of robot/XU Yuan, YIN Xuwei, WU Chaoqun
- 19 | 基于改进 A*算法的 AGV 转运机器人路径规划研究/石英托 陈华 张连新 孙鹏飞 裴培 李代杨**
Research on path planning of AGV transport robot based on improved A* algorithm/SHI Yingtuo, CHEN Hua, ZHANG Lianxin, SUN Pengfei, PEI Pei, LI Daiyang
- 23 | 基于最优时间间隔的足式机器人足端轨迹规划/辛玉红 章永年**
Generation of foot-end trajectory of legged robot based on optimal time interval/XIN Yuhong, ZHANG Yongnian

切削加工 / Cutting Processing

- 29 | 干式切削环境污染采集方法与影响分析研究/王杨敏 刘前军 潘一 徐国达 孙宇昕 何彦 王禹林**
Study on collection method and influence analysis of environmental pollution in dry cutting/WANG Yangmin, LIU Qianjun, PAN Yi, XU Guoda, SUN Yuxin, HE Yan, WANG Yulin
- 36 | 旋风硬铣削加工技术及其在精密滚珠丝杠加工中的应用/宋现春 孙悦 庄利军 庄然 郭英杰**
Cyclone milling technology and its application in precision ball screw machining/SONG Xianchun, SUN Yue, ZHUANG Lijun, ZHUANG Ran, GUO Yingjie
- 42 | 基于 Kriging-MIGA 算法的薄壁件铣削参数优化/韩军 曹龙凯 徐睿 姚晟 熊凤生**
Optimization of milling parameters of thin-walled parts based on Kriging-MIGA algorithm/HAN Jun, CAO Longkai, XU Rui, YAO Sheng, XIONG Fengsheng

智能制造 / Intelligent Manufacturing

- 47 | 基于改进遗传算法的多目标柔性作业调度研究/李长云 谷鹏飞 林多**
Research on multi-objective flexible job scheduling based on improved genetic algorithm/LI Changyun, GU Pengfei, LIN Duo
- 53 | 飞机数字化制孔法矢找正技术应用对比研究/汪东明 蒋智华**
Comparative study on application of normal alignment technology in aircraft digital drilling/WANG Dongming, JIANG Zhihua

- 59** | 双位胶片智能上料系统优化设计及纠偏与运动规划研究/徐晓华 吕勇 蒋桂平 张政泼
Optimal design of double position films intelligent feeding system and the research of its deviation correction and motion planning/XU Xiaohua, LV Yong, JIANG Guiping, ZHANG Zhengpo

设计与研究 / Design and Research

- 66** | 高压大电流压电陶瓷恒流驱动电路设计/黄俊媛 张伟 蒋布辉
Design of constant current drive circuit for high voltage and high current piezoceramics/HUANG Junyuan, ZHANG Wei, JIANG Buhui
- 72** | 基于虚拟仿真技术的悬膜中空玻璃装配生产线设计/李乃峥 孙江宏 何雪萍 何宇凡 高锋
Design of suspended membrane insulating glass assembly line based on virtual simulation technology/LI Naizheng, SUN Jianghong, HE Xueping, HE Yufan, GAO Feng
- 77** | 锥形转子磁力耦合器调速机理研究/葛研军 刘述良 王建帅
Study on speed-regulation mechanism of cone-rotor magnetic coupler/GE Yanjun, LIU Shuliang, WANG Jianshuai
- 84** | 非回转体锥形工件夹具设计及同轴度分析/徐秋松 朱祥龙 董志刚 康仁科 张连鑫
Design and co-axiality analysis of non-rotating conical workpiece fixture/XU Qiusong, ZHU Xianglong, DONG Zhigang, KANG Renke, ZHANG Lianxin
- 89** | 直线电机复合分层抗干扰控制方法研究/陈柯 侯明 刘云龙
Research on compound layered anti-disturbance control method of linear motor/CHEN Ke, HOU Ming, LIU Yunlong
- 95** | 搅拌摩擦焊环缝焊接的并缝伸缩内撑夹具设计/杨中宝 张杰 张艳丰 王卫鑫 房浩弟 孝本康
Design of inner support fixture with joint expansion for circumferential welding of friction stir welding/YANG Zhongbao, ZHANG Jie, ZHANG Yanfeng, WANG Weixin, FANG Haodi, XIAO Benkang

工艺与制造 / Technology and Manufacture

- 99** | FDM 3D 打印机喷头温度场仿真及实验研究/于仙 尤晓萍 董其缘 孙满乾
Thermal simulation and test research on nozzle of FDM 3D printer/YU Xian, YOU Xiaoping, DONG Qiyuan, SUN Manqian
- 105** | 数控加工中多约束进给率规划算法研究/金鑫 刘其广 吕杰 徐飞飞 孙晓楠
Research on feedrate planning algorithm with multi-constraints for CNC machining/JIN Xin, LIU Qiguang, LV Jie, XU Feifei, SUN Xiaonan
- 112** | 基于最佳铣削温度的 Ti40 阻燃钛合金铣削工艺优化/吕东升 王保升
Technology optimization of milling Ti40 burn resistant titanium alloy based on the optimal milling temperature/LV Dongsheng, WANG Baosheng
- 117** | 基于谐波频率点能量占比指标的铣刀磨损监测/何周杰 胡秋 马小龙
Milling cutter wear monitoring based on the energy ratio of the harmonic frequency/HE Zhoujie, HU Qiu, MA Xiaolong
- 123** | 90°弯头管件 T 模设计/于进杰 饶攀 孙宽 马胜 蒋梦麒
Tandem mold design for 90° elbow pipe fittings/YU Jinjie, RAO Pan, SUN Kuan, MA Sheng, JIANG Mengqi

检测与质量 / Test and Quality

- 128** | 基于 1DCNN-LSTM 神经网络的 Ti-48Al-2Cr-2Nb 微铣削表面粗糙度预测/
王志勇 马轩 杜金金
Surface roughness prediction for Ti-48Al-2Cr-2Nb micro-milling based on 1DCNN-LSTM
neural network/WANG Zhiyong, MA Xuan, DU Jinjin
- 134** | 螺旋桨检测机电一体化建模仿真技术研究/张震 张辉 王玉 高兆楼
张春燕 方喜峰
Research on mechatronics modeling and simulation technology for propeller inspection/
ZHANG Zhen, ZHANG Hui, WANG Yu, GAO Zhaolou, ZHANG Chunyan, FANG Xifeng
- 141** | 机床用基于加性分解 PMSM 的滑模控制/刘慧博 陈豪鑫
Sliding mode control based on additive decomposition PMSM for machine tool/LIU Huibo,
CHEN Haoxin
- 146** | 基于改进 FMECA 的洗衣机滚筒装配线可靠性研究/白颖 姚琪
Reliability research of washing machine drum assembly line based on improved FMECA/
BAI Ying, YAO Qi
- 152** | 采用扩展滑模观测器的数控机床永磁同步电机鲁棒控制方法/李涛
Robust control method for permanent magnet synchronous motor for NC machine tool
using extended sliding mode observer/LI Tao

功能部件 / Function Units

- 159** | 磁流变夹具的薄壁件加工装夹性能分析与优化/石楠楠 赵梓伊 杨敏
朱海华 骆立巍 江小辉
Analysis and optimization of the clamping performance of thin-walled workpiece of
magnetorheological fixture/SHI Nannan, ZHAO Ziyi, YANG Min, ZHU Haihua, LUO Liwei,
JIANG Xiaohui
- 164** | 基于 Unity3D 的机床加工系统设计与实现/殷民艇 董磊 张星 石瑞敏
Design and implementation of machine tool machining system based on Unity3D/
YIN Minting, DONG Lei, ZHANG Xing, SHI Ruimin
- 169** | 自动车床转塔刀架凸轮机构的参数化设计及仿真/王智森 韦洪新 汪兆栋
Parametric design and simulation of cam mechanism in turret tool holder of automatic lathe/
WANG Zhisen, WEI Hongxin, WANG Zhaodong
- 175** | 基于 Levenberg Marquardt 的数控机床主轴负载振动的非线性拟合/林海森
邹朝圣 廖妮兰 廖城鸿
Nonlinear fitting of spindle load vibration of NC machine tool based on Levenberg Marquardt/
LIN Haisen, ZOU Chaosheng, LIAO Nilan, LIAO Chenghong

更正 | 163

投稿须知 | 180