

中、英文摘要参考样例

【例 1】

摘要:【目的】为了提高防锈铝合金加工质量和效率,通过对防锈铝合金 ALMn1Cu 进行系统的高速铣削加工试验研究了切削参数对表面粗糙度的影响。

【方法和过程】根据析因试验的方差分析结果得到了切削参数中影响表面粗糙度的显著性影响因素,并采用最小二乘回归法建立了基于切削参数的表面粗糙度预测模型。在预测模型的基础上建立了以最大加工过效率为优化目标的切削参数优化模型,运用遗传优化算法对切削参数进行了优化计算,【结果】得到了不同表面粗糙度技术要求下较优的切削参数组合。【结论】应用优化结果对某新型雷达上功能件进行了加工实验,将加工效率提高了近两倍。

关键词: 高速铣削; 表面粗糙度; 铝合金; 切削参数; 遗传算法

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Abstract:【目的】In order to improve the machined surface quality and processing efficiency of the anti-rust aluminum alloy, a series of cutting experiments for ALMn1Cu is conducted to study the effect of the cutting parameters on the surface roughness in high-speed milling. 【方法和过程】According to the analysis result of variance of factorial experiments, the cutting parameters significantly influencing the surface roughness are presented. The predictive mathematic model of surface roughness based on the cutting parameters is established by using the least-squares regression method. An optimization model of cutting parameters leading to maximum material removal rate is built according to the predictive mathematic model of surface roughness, and the genetic algorithm is employed to 【结果】find the optimum cutting parameters in the different ranges of surface roughness values. 【结论】The processing efficiency of the ALMn1Cu functional parts of a new type of radar in machining experiment increases by two times utilizing the research results.

Key words: high-speed milling; surface roughness; aluminum alloy; cutting parameters; genetic algorithm

【例 2】

摘要: 【目的】为了提高传感器仿真中虚拟摄像机仿真真实度, 该文在标定算法线形模型的基础上, 提出一种基于标定技术的虚拟摄像机仿真方法。【方法和过程】该方法利用标定参数推导仿真摄像机参数, 建立虚拟摄像机和真实摄像机之间的对应关系, 使仿真模型可以在硬件加速的渲染管线上运行。同时通过引入凹凸纹理映射和多次渲染技术, 【结果】实现了对摄像机镜头线形畸变和非线性畸变的模拟, 提高了仿真的真实度。【结论】实验结果证明, 该方法不仅能够生成和真实摄像机结果高度相似的仿真结果, 而且能够模拟各类畸变, 渲染帧速率较高, 符合实时仿真系统的需要。

关键词: 摄像机标定; 镜头畸变; 传感器仿真; 凹凸纹理映射

Abstract: 【目的】To increase the reality of a virtual camera in sensor simulation, this paper proposes a camera simulation method based on a linear calibration model. 【方法和过程】The method derives simulation camera parameters from calibration parameters to establish relationship between virtual cameras and real cameras, and enables simulation to be performed on a hardware accelerating pipeline. By introducing bump mapping and multi-pass rendering technology, 【结果】the method is able to simulate linear and non-linear lens distortion, enhancing the reality of simulations. 【结论】The experimental results prove that the method can not only generate simulation results highly similar to the results of a real camera but also simulate various distortions with high frame rates and is effective for real-time simulation system.

Key words: camera calibration; lens distortion; sensor simulation; bump mapping