

可降解植物纤维餐具除边机设计 Design of Degradable Plant Fiber Tableware Trim Cutter

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摘要: 从确定设计技术参数、设计技术路线、关键结构设计计算等方面研究了全自动植物纤维餐具除边机。采用气缸驱动回转盘间歇转动的五工位设计、行星齿轮布置结构、柔性仿形除边刮刀等装置,实现制品在转盘公转换位和自转运动中完成全自动除边过程。应用Pro/E软件对除边机整机三维实体进行模拟。工作循环采用全自动闭环反馈控制,并在样机上验证控制系统的准确度。试验结果表明,除边机适用于植物纤维餐具行业。 An automatic edge trim cutter machine of plant fiber tableware was studied based on designing parameters, technology route and key structure design calculation. The machine was designed with five forming stations driven by air cylinder, planetary gear structure, flexible profile modeling blade edge devices. The edge removing process was done during the turntable revolution and the product's self-rotation. Pro/E software was used to simulate the 3-D entities of trim cutter machine. The working cycle was automatic closed-loop feedback controlled and validated in order to verify the accuracy of the machine. The results show that the trim cutter can be used in plant fiber tableware industry.

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