

摘 要

智能家用机械手是一个具有多个层次和多个组件的庞大电气，机械、微电子，单片机的综合系统，机械手行为变量与系统布局参数之间的干系一般被用于反应智能家用机械手的设计系统模型。大部分的情形下，智能家用机械手的表示形式多种多样，大都以 AT89C51 单片机为核心计算机程序进行图表、数据集、数学方程、映射等形式的收集。采用 L298 电机控制芯片系统作为机械手的优化与控制部分，分析智能家用机械手系统的行为特征与系统结构之间的关系。所以，PWM 技术是必须要采用的技术手段。PWM 技术不仅可以在分析离散事件动态系统(DEDS)时更详尽地研究动态系统的平均性能和稳定性。与此同时，它还可以考虑智能机械手系统中的各运动因素的活动轨迹，更加便于优化机械手的运动状态和智能化。

关键字：智能家用机械手，AT89C51 单片机，PWM 技术，电机控制

ABSTRACT

Intelligent home manipulator is a huge integrated system of electrical, mechanical, microelectronic and single-chip microcomputer with multiple layers and components. The relationship between behavior variables and system layout parameters is generally used to reflect the design system model of intelligent home manipulator. In most cases, the intelligent home robot in a variety of forms, AT89C51 as the core of the computer program, charts, data sets, mathematical equations, mapping and other forms. The development of the turning center has just solved the capital market 's only choice to pursue the highest benefits. The turning center is set up with high efficiency and intelligent automation among all kinds of single-action machine tools. Turning centers can complete many or even all production processes at once. The investment of human capital is greatly reduced, and the reduction of work clamping greatly increases the production efficiency of production operations. In order to complete multiple machining processes in one clamping of the machine tool, the turning center is required to have an efficient tool library of the turning center. This design focuses on the research and design of a high-efficiency and low-cost cutting center tool magazine in line with the domestic market. Therefore, PWM technology must be adopted. PWM technology can not only analyze the average performance and stability of discrete event dynamic system (DEDS) in more detail. At the same time, it can also consider the motion trajectory of each movement factor in the intelligent manipulator system, which is more convenient to optimize the motion state and intelligence of the manipulator.

Key Words: Smart home manipulator, AT89C51, PWM technology, motor control

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