

生产环境智能监控系统研究与实现

摘 要

随着社会的快速发展，人们越来越重视生产环境质量。在这个信息透明的时代，人们向安全舒适的工作环境报告的水平也越来越高。因此，对生产环境质量进行监测是非常重要的。通过了解报警、照明灯具亮度、气室浓度、排风机风量控制、喷雾干燥阀开闭、隔离阀的温湿度监控，本文在总结现有单片机和传感器技术的基础上，深入研究和实现了一个智能化的生产环境监控系统。本文记录了进行研究的大致方案，通过对单片机的选择以及对各个模块的选择和设计，整体电路被设计出来且绘制出 PCB 板的图，生产环境的智能监控要求已经能够初步进行实现。在此基础上，本文了城市住区生产环境中的多维因素，包括内外部环境（包括生产设施、生产人口、生产文化和制度环境）。

关键词：单片机；传感器；PCB；模块；监控

ABSTRACT

With the rapid development of society, people pay more and more attention to the quality of production environment. In this era of information transparency, people report to a safe and comfortable working environment at a higher level. Therefore, it is very important to monitor the quality of production environment. By understanding the brightness of the alarm, luminaire, air chamber concentration, air volume control of the exhaust blower, the opening and closing of the spray drying valve and the temperature and humidity monitoring of the isolation valve, this paper has thoroughly studied and implemented an intelligent production environment monitor system based on the summary of the existing SCM and sensor technology. This paper records the general scheme of the research, through the selection of single-chip microcomputer and the selection and design of each module, the overall circuit is designed and the PCB diagram is drawn, and the intelligent monitoring requirements of the production environment can be achieved preliminarily. On this basis, this paper discusses the multi-dimensional factors in the production environment of urban settlements, including the internal and external environment (including production facilities, production population, production culture and institutional environment); yes. It reminds you of the necessity of strengthening the research of production environment and promoting the sustainable development of urban settlements.

Keywords: SCM; sensor; PCB; Sensor module; Monitor

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