
基于 PLC 的废水处理控制系统的设计

摘要

随着时代的发展，社会的进步，工业化的不断进行。在现代社会中，水的地位和作用越来越大。每个人的学习生活中，工业的发展都离不开宝贵的水资源。这就促使着废水处理这项任务，变得越来越重要。在本课题中，研究者们用可编程控制器来实现废水处理系统作用，因为它功能强大，成本又低，适应性还强，可靠性又高。抗干扰能力也很强，有诸多的优点。设计了废水处理管理系统，模拟达到了预期的目标，实现了废水物理的基本要求。

根据工作原理及其废水处理的要求，通过用西门子 S7-200 进行了废水处理，处理的编程和工作管理。PLC 型号经过选择使用了 CPU226，来进行开发控制。同时使用 STEP 7-Micro / WIN32 来进行编写了废水控制系统程序。最后还进行了仿真调试与测试，仿真和结果基本符合要求。

关键词：废水处理；废水处理 S7-200；控制系统

Abstract

With the development of the times and the progress of society, industrialization continues. In modern society, the status and role of water is getting bigger and bigger. Our study and life, and the development of industry are inseparable from precious water resources. This prompted the task of wastewater treatment to become more and more important. In this topic, we use a programmable controller to achieve the role of wastewater treatment system, because of its powerful function, low cost, strong adaptability and high reliability. The anti-jamming capability is also very strong and has many advantages. The wastewater treatment management system is designed, the simulation achieves the expected goal, and the basic requirements of wastewater physics are achieved.

According to the working principle and the requirements of wastewater treatment, we used Siemens S7-200 for wastewater treatment, treatment programming and work management. We use CPU226 for the PLC model for development control. At the same time using STEP 7-Micro / WIN32 to compile and write a wastewater control system program. Finally, simulation debugging and testing were carried out, and the simulation and results basically met the requirements.

Keywords: wastewater treatment; wastewater treatment S7-200; control system

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