ABSTRACT

Water is the main requirement for humans. In everyday life people use clean water in various ways, such as for drinking, bathing, washing, cooking, and others. Regional Water Company (PDAM) Sangatta is a Water Treatment Plant located in Sangatta East Kutai, East Kalimantan. At the end of 2010 PDAM Sangatta experience some problems. Crucial problems faced by PDAM Sangatta include a small water discharge, and poor water quality. This problem causes the people around PDAM Sangatta experience shortages of clean water. Poor water quality is one reason the occurrence of operator errors that work is influenced by water treatment which is still manual.

In this study will be designed the automation of processing clean water using PLC and SCADA in PDAM Sangatta. By doing automation is expected reduce errors caused by operators who experience burnout, exhaustion and so forth.

The study began by conducting initial study phase, design phase and implementation phase, analysis phase, and testing. System design starts with the creation automation program using the CX-Programmer. Once it is done designing Human Machine Interface using the Intouch application, for programmable logic control as the control center to work in accordance with the desired scenario, the first incorporated an algorithm that was created earlier. Once it is done the integration and automation of communication programs, databases, Human Machine Interface, and Programmable Logic Control into an automation system of processing clean water.

Keywords

Automation systems, PDAM water treatment, PLC, SCADA