ABSTRACTION

PT. Perkebunan Nusantara VIII was Indonesian national company that focusing on cultivating plant, production processing, and a commodity seller such as tea, rubber, and oil palm, this is the main commodity of the company, in addition to quinine and cacao. Sukawana farm is the part of the PTPN VIII that focusing on CTC Black Tea production.

There are five stations in PTPN VIII. One of the stations is Withering Station. The object of this research is Withering Station.

Based on the interview with one of the Sukawana's supervisor that held between January-July 2008, there were several issues concerning efficiency and effectiveness in PTPN VIII production. These issues were: there were still human errors factors that affect the quality of tea in that farm, plant monitoring and controlling that were still manually driven, and human resource efficiency.

This research will give Sukawana Farm alternative solution for problems mentioned above. Designing Supervisory Control and Data Acquisition (SCADA) system and automation are the alternative solution offered by this research to PTPN VIII. The first step to design SCADA system and automatically driven withering process is having better understanding in withering existing process. Analyzing the process and designing the SCADA and automatic system comes next. Hopefully, by converting tea process in Withering Station that was still manually driven into automatically driven will give PTPN VIII better result in tea production process especially in Withering Station.

Results from this research are SCADA system and automation system was successfully designed. In the simulation, Sukawana's supervisor as users for SCADA system can control and monitor withering station from a remote area. PTPN VIII SCADA system can also reports the production data that was doing on the past time or in the present time, so it can be the contribution for the monthly report.

Keywords : Automation, SCADA System, Monitoring and Controlling, Tea Quality.