

ABSTRACTION

In this modern era, the plantation products still able to get a high demand both for primary, secondary, and tertiary humans. In addition to economic function as one source of public revenue and foreign exchange resources, the plantation commodities is also able to function as the rural economy dinamisator (PR PTPN VIII, 2008).

PT. Perkebunan Nusantara VIII (PTPN VIII) is engaged in state-owned plantation sector with business activities include the cultivation of crops, production processing and sale of tea plantation commodities, rubber and oil palm as its main commodity, except that plants Kina, and Cocoa. Companies that have been established since February 14, 1996 It has an area of farming land to 118,510.12 hectares that includes the entire species of plants. In addition, PTPN VIII also has had several mills units, including palm oil factory in increments of 1 unit, 36 units rubber plant, 2 units of quinine factory, 6 units cacao plant, and 1 unit gutta percha factory (KPB PTPN, 2003) . With the existing capacity, the PTPN VIII has become state which provide for foreign exchange income countries, especially in the tea plantation commodities because PTPN VIII is the largest producer of the relevant commodity in Indonesia with 85% of products marketed to several foreign countries and the rest by 15% marketed in the domestic market. As an effort to optimize the business of tea and other national plantation commodities, in the body PTPN VIII conducted a major restructuring by the management.

Writers do research on issues contained in the body of PTPN VIII, especially problems of inefficiency in the plant that might arise with designing control systems and monitors as part of the automation system by using the Soft PLC and Human Machine Interface (HMI), so the company can get an alternative solution for those problems.

Based on the design and analysis results that have been made, it can be concluded that the integration of Human Machine Interface (HMI) and soft PLC program has been successfully designed as well as the data base so that the design of Supervisory Control and Data Acquisition (SCADA) has been successfully designed. SCADA systems and process control monitoring of pelayuan station PT. Perkebunan Nusantara VIII can be done automatically and is also done manually by entering values into variables of pelayuan process parameters. For example the blower, a blower can be controlled automatically or manually. Blower automatically comes on if the sensor has detected a heavy weight that shoots into the Withering Trough. After that, the user or the operator can change the blower speed by entering the value into the HMI application then it will be translated into the Soft PLC program to provide an appropriate reaction to the scenario process.

Keywords: Inefficiency, Automation, Soft PLC, Human Machine Interface (HMI), Supervisory Control and Data Acquisition (SCADA)