## **ABSTRACT**

In the era of modern industrial technology and electronic information growing more rapidly. Progress is encouraging companies to get the effective and efficient in improving productivity. One of them is by applying the automation system to the production floor. To be able to implement automation systems needed Progammable Logic Controllers (PLC) as the brains of the system. However, if the relatively high complexity of the plant to control and plant monitoring system needs (Supervisory Control and Data Acquisition) SCADA. SCADA system has many advantages for the companies that use it.

In the SCADA system design process Bottled Drinking Water (bottled water) of 19 liters using Wonderware Intouch Software is furnished as Active Factory reporting offline automatically and periodically in PT ABC. The manufacturing process starts from the process of filtering, after the bottling process toward consisting of Washing, Filling and capping, the reporting process using Generic Data Grid that can be displayed directly by Microsoft Excel for easy data retrieval company in the event, user, and alarms that can later be used as a reference in handling existing problems during the production process. Once the design is complete, testing will be made before the Plant Simulator is applied to real conditions.

Based on the research that has been done, it can be concluded that the SCADA system design process Bottled Water 19 liters which comes as Active Factory reporting offline automatically and periodically has been successfully designed. With the SCADA system is expected to provide solutions to the existing problems in this PT ABC. By leveraging Active Factory and Generic Data Grid can allow a user to PT ABC in making real-time and historical reports in the form of Microsoft Excel files and can be printed as proof of production activities.

**Keywords**: SCADA, HMI, Active Factory, Generic Data Grid.