

## ABSTRACTION

Along this time, in gas station, process monitoring and measuring of fuel inventory is still manually done. The other side, the business competition between gas station more complicated, this condition makes the owner of gas station need to get information of inventory easier and also need to make processing time of inventory measurement faster. This problem become the reasons of this final work that called "Designing of Fuel Inventory Monitoring System By Using Programmable Logic Controller (PLC) in Division I SPBU (SPBU 34.40303) PT. MA'SOEM Bandung".

In planning this system, there are five steps in dealing with problem. First step is preliminary step which is committed to give direction, simplify the finish, focus on study for next research. Based on formulation in preliminary step, it continues with identification of existing system to find out the weakness so that there will be improvement to make a new system. For planning a new system, there are many elements to be committed namely identification of system's need, the necessity of information, and the necessity of hardware also software. After identification of system's need, there will be planning of process to give a view of all functions in system so that simplify program. Steps after planning is test the system whether it is proper to process or not. From that test, there must be a conclusion of the planning system.

This final work consists of some chapters namely, Chapter one about background, purpose, benefit, and limitation of final work's research. Chapter two about literature study of inventory, information system, automation system, database, and human machine interface(HMI). Chapter three about conceptual model and formulation of problem. Chapter four as the core of final work about The planning of system that will be continued with analysis of system in Chapter five. The last Chapter is Chapter six contains conclusion and suggestion of final work.

From this research, it can be concluded that the designed system has succeeded in visualising the controlling of fuel inventory by measuring volume accurately appropriate with volume's changes in underground storage tank and able to make record of volume's inventory, volume of sales, and obtained revenue.

Key words : Inventory, PLC, and HMI.

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