

ABSTRACT

Packaging Work Station, named Packing Plant Indarung PPI, is the latest work station in PT. Semen Padang the products be in before those are distributed. Continuity and speed for packaging process are so much influential to PPI system to supply the high demand for packaged cements. This is showed by the long queue for trucks. Therefore, it is important to monitor and control the packaging process to guarantee that every step of the processes continue well. Nevertheless, there are some weaknesses on the existing system, such as manual monitoring and controlling, manual process to get packages which results long time to cover lack of packages, partly inspection for packaged cements, and manual data data collection.

Based on the existing system, a monitoring and controlling system for Packing Indarung will have been designed based Human Machine Interface (HMI), and also a design of a database for data collection process.

There were several steps which had been done to solve the problem. Marginally, they were initialitation phase, observation phase, designing phase, test and design analyze phase, and conclusion and suggestion phase . Initialitation phase involved the problem formulation and goal identification. In observation phase, study of book and field study were done, and continued to analyze existing systems to know it better. Next in designing phase, designing process was done involved programming the *Programmable Logic Controller* (PLC), designing Human Machine Interface (HMI) system, designing database, integration between HMI and PLC and database. Then was test and design analyze phase, where system was analyzed if the system and the goal were compatible, or whether this system was feasible to implement. Then a conclusion and suggestion were made.

This research results that the application of this design is able to monitor and control work station in real-time and also be able to give urgent information which is required by operator. This application has ability to connect with database which can be used in making workstation report of packaging process.

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