DESIGN AND BUILDING OF CLOTHES CONVEYOR OVERHEAD CONTROL SYSTEM USING OMRON CP1E-NA20DR-A PLC WITH WEINVIEW HUMAN MACHINE INTERFACE (HMI) USER INTERFACE

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ABSTRACT

In general, managing clothes can be done by hanging them or by folding them. Likewise, in clothing stores there are clothes hanging and folded. When a buyer wants a model that is not on a hanger and is still stored and stacked, the seller has to search to the bottom of the stack which makes this less effective. Based on these problems, researchers created an overhead conveyor control system to manage clothes. The overhead conveyor uses a chain with hooks to hang clothes. The clothes follow the track created. The system uses an OMRON CP1E-NA20DR-A PLC as controller, HMI as monitor and controller, inductive proximity sensor as input, and 12V DC motor as output. The tests carried out include testing the suitability of searching for clothing models, testing the closest steps to the destination number, testing the hanger condition indicator, and testing the system's work activity history. The results of the tests carried out show that the control system works with a percentage of 100% working well.

Keywords: Overhead Conveyor, Human Machine Interface (HMI), Inductive Proximity Sensor, Testing