

RANCANG BANGUN MESIN PENCAMPUR CAT OTOMATIS MENGUNAKAN PLC DAN HMI

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ABSTRACT

Today, the industrial world in colouring or painting cannot be separated from the modern tools system. Many industries use a programmable logic controller (PLC), an electronic device to control a production process. The colours needed are very diverse; this is one of the problems faced by manufacturers. Three primary colours can be used to create colors other than the primary colour. The primary colours include red, green, and blue or Red, Green, Blue (R G B). Human Machine Interface (HMI) is a link between industrial systems controlled by PLCs and operators. HMI functions as a monitoring medium for industrial processes and as a control medium. The PLC used in this study is the Outseal PLC Shield which is programmed using the Outseal Studio application, and the HMI used is the HMI Modbus. PLC is used as the central control of the system, while HMI is used for colour selection. The system will run when one of the colour panels on the HMI is pressed. There are three primary colours used, namely red, green and blue. Each selected colour on the HMI has a mixture of two colours, filling the mixed colour with a timer that needs 3 seconds. Furthermore, after filling is complete then continues to a delay timer of 5 seconds for the can closing process after that the mixing process with the motor runs for 5 seconds. In the system test, the results show that the colour is correct. The cans' volume corresponds to the specified standard of 140 ML. During the paint colour filling process, the HMI panel indicators, the closing timer, and mixing interrupt successfully.

Keywords: PLC, HMI, Color, Outseal