DESIGNING AND TESTING AN AUTOMATIC INSPECTION TOOL BASED PLC ON THE BOTTLE OF MINERAL WATER

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ABSTRACT

Nowadays, many industries use Programmable Logic Controller (PLC) as the main control system. PLC has a function to control industrial processes to be more efficient in producing high quality products. Furthermore, the use of sensors to detect the presence of objects in the production process does not rely on someone in direct contact with objects to be produced. The PLC used in this research was the PLC Shield type which was programmed using the Outseal Studio application. There were two types of sensors used such as the Infrared Proximity sensor and the Capacitance sensor. PLC was used as the main control media in the system. The system ran when the push button (PB), start, was pressed, then the packaging was carried through the sensor stop when trying to check the volume in 3 seconds. If the volume of packaging was as desired then the packaging ran to the finish position. If the packaging did not match with what is needed then the package ran to the reject position which was stopped by a sensor and driven by a dc motor. Finally, the system stopped when the push button (PB), stop, was pressed. The testing results showed that the stop, volume, and rejecter packaging sensor readings were accurate.

Keywords: PLC, Sensor, Outseal, Conveyor

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