DESIGN OF BOTTLE COVERS AND SORTING SYSTEMS BASED ON COLOR LABELS USING THE ARDUINO MEGA-BASED TCS34725 SENSOR

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ABSTRACT

Today's industry uses a lot of automated systems in the production process, especially industries engaged in making drinks, in carrying out the process requires a capping and sorting process so that the product can continue to be produced automatically. The benefit of this tool is to help ease the work of small and medium business workers who use a manual bottle closing and sorting system. For this reason, a bottle closure and sorting tool based on label color was made. This tool uses a stepper motor that requires 5 turns with 1000 steps to close the bottle. Servo motors are also used in the sorting section because when the TCS34725 color sensor detects green with light intensity reaching >3 (G - R) and >10 (G - B) when detecting bottle labels, the servo lever will move 115º to sort the bottles. Based on the test data, the accuracy rate during the bottle closing and sorting process is 40%.

***Keywords** : Stepper, Servo, TCS34725*