THE ASSEMBLY OF POTATO STICK MAKER DEVICE USING ELECTRO PNEUMATIC AND PLC

ABSTRACT

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Nowadays, there are many food processing by potatoes which have been developed by multiple of industrial levels. A kind of food processing is potato stick which is using manual method by using a drop of tools so it takes more time, more place, and more human force at the production process.

This final project explained an implementation of electro pneumatic systems as an actuator and using PLC as a system controller at the automated potato stick maker device. This device use conveyor as a device to carry potatoes to the cutter which is moved by 24 Volt of DC motor, and it will be detected by the optical proximity sensor when a potato is on the cutter. The limit switch will control the pneumatic cylinder to press a potato until it has been cut by the cutter when the potato is detected by the sensor.

From the result of the whole system testing, it could be known that air pressure which is used is 6 bar and take 1 minute and 23.46 seconds of time to run on a cycle with 7 time of cutting process. The cut of potatoes which is produced have 1,09 cm x 1,08 cm of thickness and it is depend on potato position at the cutter for size of long.

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