ABSTRACT

Manufacturing Automation Simulation Temperature Setting On Microcontroller Based Frying Banana Chips

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One of the provinces that produce banana chips production, namely the province of Lampung. Judging from manufacture chips especially in the Lampung province is relatively simple compared to banana chips industry other. So to maintain the quality of the banana chips and increasing business competition with fellow banana chips industry other, noteworthy better get in process frying. Therefore it is necessery to do research on manufacturing automation simulation temperature setting on microcontroller based frying banana chips.

In this study the authors uses a temperature sensor type Thermistor NTC, to regulate the temperature of the griddle frying. This study focuses on the temperature setting process banana chips frying. Setting frying temperature starts by measuring the temperature of the griddle, if the temperature of griddle reaches 150 °C then microcontroller will give others to motor DC to lower strainer to the bottom of the griddle frying with a period of time specified, later DC motor will off and the frying process can be done. At the time of the frying process take places to keep the temperature regulator can be temperature of the frying griddle >150 °C the servo motor will move 20° (CW) to shrink valve opening of the gas, and at a temperature < 150 °C the servo motor will move 20° (CCW) to raise valve opening of the gas.

From the research that has been done it could be concluded that the thermistor circuit in wheatstone bridge, LM 324, LM 339, driver servo motor, DC motor, and minimum system circuit in microcontroller that has been made to run well, so it can be applied directly to the appliance frying banana chips.

Keywords : Automation, Temperature Setting, Processing Banana Chips, Thermistor, Microcontroller.