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
$150\ ^0$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
$>150\ ^0$C the servo motor will move 20^0 (CW) to shrink valve opening of the gas,
and at a temperature $< 150\ ^0$C the servo motor will move 20^0 (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.