

DESIGN AND DEVELOPMENT OF AN AUTOMATIC EGG FRYER

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ABSTRACT

The title of this project is Design and Development of an Automatic Egg Fryer. This project tries to address the issue of designing a home appliance system to automatically fry the egg to facilitate the disabled person, elders and kids. It also incorporates with special switches for adding salt and pepper according to personal preference. Thus, it is designed to simplify the complicated and risky process while frying an egg with gas stove in order to increase the values of our product according to the market demands.

This project can be divided into five parts; the transferring unit, locomotive unit, the control system, pneumatic unit and the induction cooker. The project will be carried out by using Programmable Logic Controller. The control system acts as the brain of the whole system; it receives the input from electrical component such as switches and interprets an output signal to the other units in the project. Transferring unit which is the conveyor responsible for the egg transferring process through the egg cracking and heating part. Locomotive unit comprises of motors that will be driving force of the egg cracker gears and also a motor drive circuitry which enables the transferring unit to control the movements of the motor. The pneumatic unit is controlled by solenoid valve which is used to crack the egg shell from top position. Finally the induction cooker causes the particles of the egg holding stovetop to vibrate and the egg is fried with high magnetic frequency.

The expected outcome of the project is to design a fully automatically egg fryer which is initiated by placing an egg at the open, select the salt or pepper with switches and run the machine with one start button, finally, egg is served on the dish. Current supply through a DC converter motivates the whole product. And we name our product as “Clack Evolution” which clack is simulated as sound of cracking eggs.