

ABSTRACT

Eggs incubator is a tool that can used to incubate the eggs in large numbers in one hatching. The heater that commonly used in conventional eggs incubator is incandescent bulbs. However, incandescent bulbs have a relatively short life time. Based on that case, then we made the eggs incubator by utilizing thermoelectric modules as a heater. This thermoelectric modules has a longer life time is up to 200,000 hours.

Thermoelectric modules is a solid-state energy converter, if this thermoelectric modules is supplied by voltage DC power, then the cold side will absorb heat and then released on the hot side. The temperature of this eggs incubator was controlled by using a thermostat, then the temperature can be stabilized at 38-40°C.

Based on the result of calculation and experiment, to reach temperature of 40°C, the heating load of a simple eggs incubator with TEC1-12706 as a heater is 27,72 watts with lower energy consumption is 10,24 Wh when compared to incandescent bulbs that is 15,565 Wh.

Keyword : *Eggs Incubator, Thermoelectric Modules, TEC1-12706, Thermostat, Energy Consumption*