

ABSTRACT

Cooling box based thermoelectric is a cooling box utilizing a thermoelectric module as a cooling medium of an insulated box or chamber from the environment. Heatpipes is heat conducting technology technology using special sized pipes and have working fluids in them. The application of TEC module and heatpipes on cooling applications is an environmentally friendly technology, otherwise the shape is small and does not require a complicated installation system makes the combination of these two components as one of the right choice in order to maintain the temperature of the box. Therefore, research and manufacture of cooling box based thermoelectric by heatpipes utilizing as heat release component. This research can keep the air temperature in the cooling box of $\pm 8^{\circ} C$ on temperature in the environment ranging from 26oC. The cooling box can also lower the temperature of 800gr water to $\pm 17^{\circ} C$ within 3600s.

Keywords: *thermoelectric, cooler, heatpipes, Peltier effect, cooling box, water.*