

ABSTRACT

One of the most important aspects in the cultivation of ornamental shrimp is water temperature must be kept at the optimum temperature for the shrimp breeding. Generally, the optimal water temperature for ornamental shrimp habitat is 22-25 °C. Heat from the environment can enter through the glass and the water surface, so that it becomes a cooling load. In this study, which is used to decrease the water temperature was cold thermoelectric side. The cooling load of glass aquarium is 19.16 watt, with a size of 30cm×20cm×25cm, thickness 6 mm and the maximum volume of water 6.6 liters and uses 18 watt water pump. The result is a tool that has been created can absorb heat as much as 18,87 watt and decrease water temperature to 24°C for about four hours by using one thermoelectric. If using two thermoelectric, thermoelectric each can absorb heat as much as 12,06 watt and decrease water temperature to 24°C for about 115 minutes. If using three thermoelectric, thermoelectric each can absorb heat as much as 9,32 watt and decrease water temperature to 24 ° C for about eighty minutes. It can be concluded that in fact, this tool simply using one thermoelectric, but the process will be faster if using a thermoelectric much more

Keywords: chiller, thermoelectric, cooling load.