

Abstract

Energy cannot be separated from the community. In the future, energy use will increase. The amount of energy that is increasingly limited encourage the human being to develop alternative energy by using the use of solar to produce heat energy.

Finned absorber solar collector is the implement that harness the power of solar energy to produce maximum heat that is used to heat or warm the food which usually need to be drained. The absorber was modified in which the fin plates are mounted on a flat plate that aims to increase the amount of heat energy absorbed and generated on absorber. The material used was alumunium. Absorber was used in the container or the drawer that was made to keep food that will be heated. The hot fluid produced by absorber was flowed the container by using a small blower. The speed of blower was controlled by adaptor with the variation from 3 m/s to 9 m/s.

The result of efficiency was 15% to 30%. By using a finned absorber solar collector, the food gets more heat than the direct warming and the food are protected inside the container. Factors that affect the level of efficiency was the design of the absorber and weather conditions.

Key words : *finned absorber, solar collector, heat loss, efficiency*