



Design and fabrication of Thermoelectric Air conditioner

The work aims to Design and fabrication and performance testing of Peltier based model for indoor cooling. Thermoelectric cooling provides a promising alternative to conventional technology due to their distinct advantages.

Features:

The objective of this project is to provide completely eco-friendly air-conditioning. The study conducted in the work aims at developing a Peltier module operated air conditioner to achieve the objective of sensible cooling. To carry out above phenomena, the process starts with the cooling of refrigerant that is ethylene glycol in our case, which is filled in a container made of copper sheet and having peltier modules coupled with the water cooled heat sink on the bottom surface of the container. In the container, ethylene glycol is cooled and then it is passed through a helical evaporator with the help of a DC pump. This helical evaporator consists of an exhaust fan which after sucking the ambient air from over the surface of the cooled evaporator, directs in to the space to be cooled.