

ABSTRAK

Indonesia merupakan Negara beriklim tropis, sehingga mesin pendingin banyak digunakan dalam kehidupan sehari-hari. Hampir di setiap tempat, banyak di temukan mesin-mesin pendingin. *Dispenser* merupakan mesin pendingin yang berfungsi untuk mendinginkan air. Tujuan penelitian ini adalah:

- a) Membuat dispenser.
- b) Mengetahui karakteristik *Dispenser* yang telah dibuat meliputi: kerja kompresor, kalor yang diserap evaporator dan kalor yang dilepaskan densor, COP, efisiensi dan laju aliran massa refigeren.

Penelitian dilakukan di laboratorium. Dispenser bekerja dengan menggunakan siklus kompresi uap. Refigeren yang dipergunakan adalah R134a. Komponen utama meliputi: kompresor, kondensor, evaporator dan pipa kapiler. Daya kompresor PK, ukuran komponen utama yang lain menyesuaikan dengan daya kompresor. Beban pendingin berupa air dengan volume 500 ml. pengambilan data hanya meliputi tekanan kerja evaporator dan tekanan kerja kondensor serta refigeren suhu masuk kompresor dan suhu refigeren keluar kondensor.

Penelitian memberikan hasil :

- a) COP dispenser
- b) Efisiensi dispenser



ABSTRACT

Indonesia is a tropic country that cause so many cooling machines are used in our daily life. Almost in every place, are found so many cooling machines. Dispenser is a cooling machine used to cooling the water. The goal of this research are:

- a) Making a dispenser*
- b) To know the Dispenser characteristic had made which is: compressor work, kalor which absorbed by the evaporator and kalor which released by the densor, COP, the effiencie and the current rate refrigerant mass.*

This research is operated in Sanata Dharma University laboratory. Dispenser works with steam cycle compression. The refrigerant used for this research is R134a. The main components are: compressor, liquefier, evaporator, and capillary pipe. The compressor energy $1/5$ PK, the size of others main components are adapt with the compressor energy. The charge of the cooler in the form of water with volume 500 ml. The interpretation for the datas only the pressure of evaporator and the pressure of liquefier, along with refrigerant temperature in and liquefier refrigerant temperature out.

This research show the results:

- a) COP dispenser*
- b) Dispenser efficiency*

