

ABSTRACT

ANALISIS PERFORMA GREEN MEDICAL BOX DENGAN VARIASI PUTARAN MOTOR KOMPRESOR MENGGUNAKAN REFRIGERAN R134a

Erwin Napitupulu

NPM 0606041964

Departemen Teknik Mesin

The contents of fuel-oil are now running low and its prices are becoming more expensive that causes the supply of fuel-oil to the power station in PLN disturbed. Dimmed in district consecutively by the PLN is cause by this event.

Green Medical Box Portable is a storage for the vaccine and other medicine which doesn't need to depend on electricity from PLN. Alternative source of electricity can be used from the sunlight (solar cell) and battery, so if there is any electricity failure then the temperature can still be obtained and the vaksin and other medicine always in good conditioning.

This Green Medical Box Portable have two storages. The volume of the first storage (freezer) is about 20,4 litre which temperature of storage is about -15°C . Whereas the volume of second storage (cooler) is about 45,15 litre which temperature of storage is about 5°C .

The refrigeration system of Green Medical Box portable uses DC (Direct Curent) compressor from Danfoss with BD35K type. The refrigerant that used is R 600a.

Keywords : Green Medical Box Portable, DC Compresor, AEO, EPR, freezer, cooler.