Pengujian Lemari Pendingin dengan Photovoltaic dan menggunakan Dua Jenis Refrigeran Hidrokarbon

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Abstrak

Two things that become world concern are energy crisis and environmental problem, Refrigerator is one of the causes of the problems either direct or indirect. Refrigerator uses electricity source that comes front fossil fuel as indirect cause of energy crisis and environmental' problem which contributes to ozone depletion and global warming by using the refrigerant. Therefore we need a solution that can answer the problems. The solution is photovoltaic refrigerator .system with hydrocarbon refrigerant. This system uses photovoltaic module connected to the inverter. The function of inverter is to convert i2 Volt DC electric voltage from photovoltaic module into 220 Volt A C electric voltage, The refrigerant are hydrocarbon R-600a and HC-134 which charged at 20 bar pressure. The experiment shows that the inverter which suitable for refrigerator is pure sine wave inverter type and the alternative refrigerant is R-600a. Refrigerator with photovoltaic module can be used until 21.5 hours without charging.