

ABSTRACT

The demand of electrical energy, dan the effort for reduce dependence on the use of electrical energy sources which mostly comes from fossil fuels, both from the public and the government is very urgent. One example of using eletricity for heating. As we know, PLN still using fuel such as petroleum, natural gas, coal and others. The materials of this fuel can't be renewed, and one time will definitely out. Because of that, we hace to economize our electricity usage. Alternatives that can be used to save power is DC chopper circuit, so we can get an energy-efficient appliance with this DC chopper.

In this final project will be made of a heater using a DC chopper circuit which can save electricity power consumption. These heaters are generally the same as the general heater. But there are some different from a general heater. So before the ac voltage entrance the heater, , there is a rectifier dan DC Chopper circuit which will go into the heater. The heater is a DC heater.

The test result and analysis indicate that the heater DC supply using boost converter work less well where the efficincy converter is low, and the drop voltage is high. When the DC heater supply using buck converter show that the performance work well. The power consumption when using a buck converter is 45,42 watt hour, while the heater directly powered by power supply is 50,59 watt hour.

Keywords: *DC chopper, DC heaters, rectifiers*