ABSTRACT

Nowadays, use of washing machine is mandatory in every dweling house. The Washing Machine which be used in dweling house when turn on the value of rotary speed is big directly so that make electricity cost more expensive. Therefore, in this final project the writer will make the value of speed of rotation of induction motor in washing machine is little in first and then increase gradually so that the electricity cost is more cheap.

Input in system is AC source as big as 220 volt. AC source from PLN its frequency cannot be changed. In order to changed frequency's AC source can be changed, the AC Source must be converter do DC Source by using Rectifier. After AC source changed into DC source, it is necessary to flstenning DC form which still exist riak by using capacitor. After that, DC source be converted again to AC source by using inverter. The value of rotary speed motor is determined by frequency by using microcontroller ATMega 8535.

The result which has been done on inverter circuit 200 watt to washing machine 170 watt is rotary motor speed can turn riding base on changed frequency. But, when at a frequency maximum (50 hz) washing machine isn't reached rotary speed maximum. When inverter was tested to different load (fan and lamp) 120 watt, bright level and rotary speed fan were changed based change frequency so can be concluded that this inverter has lost level 27%.

Keywords : *Inverter, Washing Machine, Microcontroller*