

Thesis Title	Energy Saving in Air Conditioning unit with Single Phase Inverter
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Abstract

The objective of this study to be experimental to energy saving Air Condition unit with Single Phase Inverter that use control speed of the compressor and compare to air conditioning unit which use in a houses. This experimental must design and create the room calorimeter according to Thai Industrial Standard ISO. 1155-2536.

From experimental at the same condition which have control temperature and humidify before enter the fan coil unit must be stated. Which from experimental can see that from compare the relation that display on the 5 chapter. The system that install Inverter that use control speed of the compressor will save energy more than the system that do not install Inverter from experimental at the same condition. This experimentation will fill in the rate of sensible heat 1000 W and latent heat 220 W which this experimentation will control temperature return air before into fan coil unit 21°C. On the experimentation will use time at the 4 hr. Air conditioning unit that have install the Inverter will use net some energy 1.25 kWh. But air conditioning unit that do not install the Inverter will use net some energy 1.74 kWh. From calculation can save energy 28.16% and can control a humidity more than the system that have use in a houses.