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SOMKIT CHAIRAT: TEMPERATURE AND HUMIDITY CONTROL USING HEAT FROM THE CONDENSER OF AN AIR CONDITIONER FOR ENERGY SAVING. THESIS ADVISOR: ASSIST. PROF. RICHAKORN CHIRAKALWASAN,117 pp. ISBN 974 - 333 - 395 - 9.

The purpose of this research is to conduct heat energy from a condenser (reheat coil) to reduce relative humidity in the room, where its relative humidity is controlled precisely in order to save energy. By installing the reheat coil, whose size is 30% of condenser, in the fan coil unit of 30,000 Btu/hr split type air conditioner and the experiment was performed at the minimum room sensible heat ratio of 0.50

The experiment indicated that the heat energy from the reheat coil could reduce relative humidity about 10% ~ 15% RH also COP of the unit using condenser reheat system increased about 5% from the COP of the normal unit. Moreover, the increased cost of the condenser reheat system compared with the conventional electric reheat system can be compensated with electric heater energy saving cost after using this unit 2 years.

ภาควิชา ....วิศวกรรมเครื่องกล..... ลายมือชื่อนิสิต .....

สาขาวิชา ...วิศวกรรมเครื่องกล..... ลายมือชื่ออาจารย์ที่ปรึกษา .....

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