

## **EVALUATION OF PERFORMANCE OF WINDOW AIR CONDITIONER BY AUGMENTATION OF HEAT TRANSFER PREOCES IN A CONDENSER USING EVAPORATIVE COOLING**

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### **Abstract**

Coefficient of performance improvement and reduction of energy consumption of an window air conditioning system when retrofitted with evaporative cooling in the condenser of window air conditioner is reviewed in this paper. The condensing unit is retrofitted with a cellulose corrugated pad. It doesn't require either any change in refrigeration system or requires minimum changes. The evaporative cooled condenser can exchange heat with the cooled ambient air cooled with evaporative cooling which is much lower in temperature than atmospheric air. By application of evaporative air cooling it is possible to exchange more heat than the unwetted exchanger. In this paper a window air conditioner is introduce by putting two cooling pads in the both sides of the air conditioner and injecting water on them in order to cool down the air before it passing over the condenser.

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