

## **Performance Analysis of Solar Air Heater with Half Perforated Baffled Absorber Plate**

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The paper presents a performance analysis of solar air heater having half-perforated baffled absorber plate. A mathematical model is used for the performance evaluation, depending upon the parameters like ambient temperature, collector area, mass flow rate of air, overall heat loss coefficient, etc. It can be said that in the steady state condition with isotropic and homogeneous plate and the thin glass plate with high thermal conductivity, the half perforations suitably moderate the air flow causing the mean temperature of the plate to decrease which increases the overall efficiency of the plate and hence the heat transfer.

**Keywords:** Solar energy, Perforations, Thermal conductivity