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Performance of honeycomb double exposure solar still

Kutty Arshad, Balasundaram Janarthanan*, Sengottain Shanmugan

Assistant Professor, Department of Physics, Karpagam University, Coimbatore, India
Tel. +91 422 2611146; email: bjanarthanan2002@yahoo.co.in

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ABSTRACT

A honeycomb double exposure solar still has been designed to enhance the productivity throughout the day. Experiments have been carried out to predict the performance of the proposed still in October 2009, Karpagam University, Coimbatore, India. The concept of transparent honeycomb structure with thin walled glass tube of small aspect ratio (H/D ≈ 1.7) in the basin and also planar reflector for east, west and south facing walls from the outer surface is implemented in this modification. The emphasis is to study the effect of the transparent honeycomb in the basin on the productivity of the still. It has been found that the still receives large amount of radiation and daily output increased by 25% than ordinary double exposure solar still.

Keywords: Passive solar still; Honeycomb; Double Exposure; Thermal analysis

*Corresponding author.