Experimental study on a single-slope single-basin solar still with air at different velocities

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**ABSTRACT**

A single-slope single-basin solar still has been experimentally investigated with hot atmospheric air injected through the copper pipe placed in the still at different velocities. The experiments were conducted in the months of August and September 2016 under the Indian climatic conditions. Experiments were done for different velocities of air such as 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5 and 5 m/s. The freshwater productivity with 3.5 m/s of air was higher than the other velocities of air. The productivity of 3.5 m/s of air flowing was 10.78% more than the conventional still. The variations of Reynold’s number, Nusselt number and friction factor with the air velocity have also been obtained.

**Keywords:** Solar still; Productivity; Air; Velocity