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Abstract

Heat pipe is a device that transports heat with minimal temperature drop using the latent heat of fluid in a closed container. In vertical type named as thermosyphon (Wickless), capillary action is replaced by the gravitational force, this condenser is placed above evaporator. In this paper, to investigate the effect of inlet air temperature and the air mass flow rate was studied. The temperature was varied from 100 deg. to 200 deg. by taking a step size of 50 deg. Step Inlet air mass flow rate from evaporator was varied from 0. 03 kg/sec to 0. 09 kg/sec with 0. 03

kg/sec step. Heat pipes were assumed as a solid rod of constant conductivity. Two geometries were made to study the effect no. of rows on the performance of heat pipe heat exchanger. Boundary conditions for both the geometries were kept constant and in second geometry pipes taken in staggerd configuration instead of aligned.

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Index Terms

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Keywords

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