Experimental Investigation with Different Inclination Angles on Copper Oscillating Heat Pipes Performance Using Fe2O3 / Kerosene under Magnetic Field

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Abstract : This paper presents the result of an experimental investigation regarding the use of Fe2O3 nanoparticles added to Kerosene as a working fluid, under magnetic field for Copper Oscillating Heat pipe with inclination angle of 0°(horizontal), 15°, 30°, 45°, 60°, 75°, and 90° (vertical). The following were examined; measure the temperature distribution and heat transfer rate on Oscillating Heat Pipe (OHP), with magnetic field under different angles. Results showed that the addition of Fe2O3 nanoparticles under magnetic field improved thermal performance of OHP especially in 75°.

Keywords : copper oscillating heat pipe, Fe2O3, magnetic field, inclination angles

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