

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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