

dimension and Autocorrelation were used to investigate chaos. Chaotic behavior was observed under several operating conditions. An optimal filling ratio and minimum thermal resistance were found for better thermal performance of the pulsating heat pipe.

NOMENCLATURE

- α_q : Void Fraction of phase q
 v_q : Velocity of phase q (m/s)
 ρ_q : Density of phase q (kg/m³)
 μ : Dynamic viscosity (kg/m.s)
 k_{eff} : Effective thermal Conductivity (W/m.K)
 g : Gravity acceleration (m/s²)
 f : Frequency (Hz)

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