NOMENCLATURE

Nomenclature

κ Permeability of the porous medium

μ Dynamic Viscosity

ρ Density of the fluid

υ Kinematic viscosity

g Gravitational acceleration

β Coefficient of thermal expansion

$\vec{q}$ Velocity vector of the fluid

p Pressure of the fluid

T Temperature

T_w Temperature at the wall

$\vec{F}$ Body force per unit mass

$\vec{j}$ Total electric current density

$\vec{B}$ Magnetic flux

C_p Specific heat at constant pressure

Re Reynolds Number

Pr Prandtl Number

σ Electrical conductivity

μ_e Magnetic permeability

h Half width of the cavity

k Real wave number

L Length of the cavity

R Rayleigh number

u, w Velocities in the x and z direction respectively

α Inclination angle

β Thermal expansion coefficient

ΔT Temperature difference between end wall

$\varepsilon = 2h/L$ Aspect ratio

λ Complex growth rate of perturbations

η Dimensionless temperature gradient along z in the core region

ψ Perturbation stream function

Θ Perturbation temperature

φ, θ Amplitudes of the stream function and temperature perturbations

ω Angular frequency