Effect of non-uniform temperature gradient and magnetid field on benard convection in saturated porous medium

ABSTRACT

In this paper, the problem of Bénard convection in a fluid saturated porous medium heated from below with non-uniform temperature gradient under magnetic field is studied. A linear stability analysis is performed to undertake a detail investigation. We found that it is possible to delay the onset of Bénard convection in saturated porous medium with the effect of a cubic state temperature profile and also by increasing the magnetic field.

Keyword: Non-Uniform Temperature; Magnetic Field; Bénard Convection; Porous media