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MHD AND THERMAL DISPERSION EFFECTS ON RADIATION AND MIXED CONVECTION HEAT FLOW IN A NON-DARCY POROUS MEDIUM

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Abstract

In this paper, the magnetic and thermal dispersion effect on mixed convection heat transfer with radiation from a vertical flat plate is considered. The plate is embedded in a Non - Darcy (Forchheimer flow model) porous medium and buoyancy is aiding and opposing the uniform free stream. The radiation heat flux is approximated with the Rosseland approximation. The plate is permeable and the suction/injection velocity is assumed to have power function. The effect of magnetic parameter and thermal dispersion parameter on the velocity and temperature is studied numerically through graphs for aiding and opposing flow.

Key Words : MHD, Radiation effects, Mixed Convection, Non-Darcy Porous medium, Thermal Dispersion effects