

عنوان مقاله:

Unsteady/Steady Hydromagnetic Flow of Reactive Viscous Fluid in a Vertical Channel with Thermal Diffusion and Temperature Dependent Properties

محل انتشار:

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خلاصه مقاله:

The problem of unsteady as well as steady hydromagnetic natural convection and mass transfer flow of viscous reactive, incompressible and electrically conducting fluid between two vertical walls in the presence of uniform magnetic field applied normal to the flow region is studied. Thermal diffusion, temperature dependent variable viscosity and thermal conductivity are assumed to exist within the channel. The governing partial differential equations are solved numerically using implicit finite difference scheme. Results of the computations for velocity, temperature, concentration, skin friction, rate of heat and mass transfer are presented graphically to study the hydrodynamic behavior of fluid in the channel.

کلمات کلیدی:

Thermal diffusion, variable thermal conductivity, variable viscosity, Natural convection, Heat transfer, Mass transfer

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