UNSTEADY MHD ACCELERATING FLOW PAST A WEDGE WITH THERMAL RADIATION AND INTERNAL HEAT GENERATION/ABSORPTION

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Abstract

This paper analyses the unsteady MHD laminar boundary layer flow of an incompressible electrically conducting fluid over a wedge in the presence of thermal radiation and internal heat generation/absorption effects. The nonlinear partial differential equations governing the self-similar accelerating flow are transformed into nonlinear ordinary differential equations through similarity transformations. Numerical results of the resulting equations are obtained using the Keller-box method. The effect of the governing parameters on the velocity and temperature profiles and also on the local skin friction coefficient and Nusselt number is computed and presented graphically. The numerical results have been compared with those reported in the literature, the agreement being excellent.

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