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ABSTRACT

Aim of the paper is to examine the influences of radiation, heat generation, Ohmic heating and viscous dissipation on steady flow of a viscous incompressible electrically conducting fluid in the presence of uniform transverse magnetic field and variable free stream near a stagnation point on a stretching non-conducting isothermal sheet. The governing equations of continuity, momentum, and energy are transformed into ordinary differential equations and solved numerically by shooting method alongside with Runge-Kutta sixth order. The velocity and temperature profiles are extensively discussed numerically and presented with the aid of graphs. Skin-friction coefficient and the Nusselt number at the sheet are derived, discussed and their numerical values for various values of physical parameters are compared with the existing literature in tabular form and there are perfect agreements.

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