

UNSTEADY FREE CONVECTION TRANSIENT FLOW OF AN INCOMPRESSIBLE DISSIPATIVE VISCOUS FLUID

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ABSTRACT

This study deals with the unsteady free convective transient flow of an incompressible dissipative viscous fluid past an infinite vertical plate in presence of viscous dissipative heat, under the influence of a uniform transverse magnetic field. The velocity profiles, temperature profiles, skin friction and rate of heat transfer have been discussed with the help of graphs. The problem is governed by a coupled non-linear system of partial differential equation. The exact solutions are not possible hence explicit finite difference method is employed.

KEYWORDS: *Non-Linear System, Velocity Profiles, Field of Engineering*