



Thermal Radiation and Dufour Effects on MHD Flow of Continuously Moving Vertical Surface with Heat Source

D. RAJU

Department of Mathematics, Vidya Jyothi Institute of Technology (A), Aziz Nagar Gate, C.B.Post, Hyderabad, Telangana-500 075.

Email: 20122102india@gmail.com

Abstract

Thermal radiation effects arise as a consequence of enthalpy changes due to phase transitions and chemical reaction. These particles touch various organic materials such as tissue damage may and probably will be done. In general the influence of thermal radiation occur when unstable nuclei of atoms decay and release particles. In this paper we investigate the Dufour effects on MHD viscous flow past a porous vertical surface in the presence of thermal radiation and radiation absorption. Using non-dimensional quantities, the governing partial differential equations are converted into ordinary differential equations and them solved analytically by using regular perturbation technique. The results for various flow parameters on fluid velocity, temperature and concentrations as well as the skin coefficient are presented and discussed with graphically.

Keywords: Dufour number, MHD, Viscous fluid, thermal radiation, porous medium, radiation absorption.

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