A STUDY OF MASS TRANSFER ON HYDROMAGNETIC FREE CONVECTIVE NON-NEWTONIAN FLOW

Noushima Humera Ghouri Dept. of Mathematics, Taibah University Kingdom of Saudia Arabia E-mail: noushimahg@yahoo.com Rafiuddin Dept. of Humanities and Applied Sci, CVR College of Engg and Tech. Ibrahimpatnam, Hyderabad, INDIA S. Mustafa Dept.of Mathematics Muffakham Jah College of Engg and Tech. Hyderabad, INDIA

ABSTARCT

The problem concern with mass transfer on free convective two dimensional unsteady flow of a non-Newtonian incompressible fluid through a porous medium bounded by an infinite vertical porous plate subjected to a uniform suction is presented under the influence of a uniform transverse magnetic field. Approximate solutions for velocity distribution ,fluctuating parts of the velocity profiles, amplitude and phase lead of the skin friction at the plate has been found by using perturbation technique. The effects of various parameters has been studied, discussed numerically and shown graphically. And numerical values of coefficient of skin friction for various values of physical parameters are presented.

Key words : Mass transfer, Free convection , Walters liquid model B.