

EFFECT OF DUSTY FLUID ON MHD FREE CONVECTION FLOW THROUGH POROUS MEDIUM BY AN OSCILLATING POROUS PLATE IN PRESENCE OF CHEMICAL REACTION, HEAT SOURCE AND CONSTANT SUCTION

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ABSTRACT

Effects of dusty fluid on MHD free convection flow through porous medium by an oscillating porous plate in presence of chemical reaction, heat source and constant suction is investigated. The dimensionless governing equations are solved using oscillatory flow conditions. The results are obtained for velocity profile for both components, heat profile, mass concentration profile and shearing stress for different parameters like Schmidt number, time, magnetic parameter, porous parameter, dusty parameter etc. The flow characteristics are discussed and shown by means of graphs and table.

KEYWORDS: Heat Transfer, Mass Transfer, Oscillatory Flow, MHD, Chemical Reaction, Heat Source and Porous Medium