

**ANALYTICAL STUDY OF MHD ON LAMINAR MIXED
CONVECTION OF NEWTONIAN FLUID
BETWEEN VERTICAL PARALLEL
PLATES THROUGH CHANNEL**

PAWAN PREET KAUR¹, S. P. AGRAWAL² AND ANIL KUMAR³

¹ Department of Applied Mathematics, Lyallpur Khalsa College Engineering Jalandhar Punjab, India

² Department of Civil Engineering, World Institute of Technology Sohna, Gurgaon, India

³ Department of Applied Mathematics, World Institute of Technology Sohna, Gurgaon, India

Abstract

This study investigates MHD mixed convection flow in a two parallel-plates vertical channel with reference to laminar, thermal and hydrodynamical developing flow of Newtonian fluid. The boundaries are considered to be isothermal with equal temperatures. The governing equations are solved numerically. Also, their dependence upon certain material parameters have been studied. Velocity, temperature, pressure gradient and Nusselt number profiles have also been presented.

Keywords MHD, Mixed convection, Non-Newtonian fluid, Parallel-plates channel