

On Exact Solutions for Oscillatory Flows in a Generalized Burgers Fluid with Slip Condition

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An analysis is performed for the slip effects on the exact solutions of flows in a generalized Burgers fluid. The flow modelling is based upon the magnetohydrodynamic (MHD) nature of the fluid and modified Darcy law in a porous space. Two illustrative examples of oscillatory flows are considered. The results obtained are compared with several limiting cases. It has been shown here that the derived results hold for all values of frequencies including the resonant frequency.

Key words: Slip Effects; Exact Solutions; Modified Darcy Law.