

Article Abstract

Title:	Unsteady flow of a dusty fluid between two parallel plates bounded above by porous medium
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Abstract:	The purpose of the present paper is to study an unsteady laminar flow of an incompressible conducting viscous dusty fluid between two infinitely non-conducting parallel plates, where above plate is bounded by porous medium. The flow is influenced by pulsatile pressure gradient, uniform magnetic field which is applied perpendicular to the plates and due to oscillations of the plates under the effect of porosity of porous medium. The governing systems of partial differential equations are solved using finite difference scheme. The effect of permeability of porous medium on the motion in the fluid phase and in the dust phase has been discussed. The effect of magnetic field on the velocity profiles of both fluid and dust phase have been investigated.
Keywords:	Dusty Fluid, pulsatile pressure gradient, Porous medium, Oscillating plates.