

EXACT SOLUTION OF AN OSCILLATORY FREE CONVECTIVE MHD FLOW IN A ROTATING VERTICAL CHANNEL

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Abstract

An analysis of an oscillatory free convective flow of a viscous incompressible and electrically conducting fluid in a vertical channel is carried out. The two plates are subjected to a constant injection and suction. A uniform magnetic field is applied in the direction normal to the plates. The entire system rotates about the axis normal to the plates with uniform angular velocity Ω . For small and large rotations the dependence of the steady and unsteady resultant velocities and their phase differences on various parameters are discussed in detail.

Key Words : *Oscillatory, Rotating, Vertical channel, MHD.*

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