# Effect of Couple Stresses on the MHD of a Non-Newtonian Unsteady Flow between Two Parallel Porous Plates

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In this paper the MHD of a Non-Newtonian unsteady flow of an incompressible fluid under the effect of couple stresses and a uniform external magnetic field is analysed by using the Eyring Powell model. In the first approximation the solution is obtained by using the Mathematica computational program with assuming a pulsatile pressure gradient in the direction of the motion. In the second order approximation a numerical solution of the non-linear partial differential equation is obtained by using a finite difference method. The effects of different parameters are discussed with the help of graphs in the two cases.

*Key words:* Magnetohydrodynamic (MHD); Couple Stresses; Non-Newtonian; Porous Plates.