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## MHD mixed convection from a vertical cylinder embedded in a porous medium

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**Abstract:** MHD mixed convection flow about a vertical cylinder embedded in a porous medium is considered using non-Darcian model. Variable heat transfer boundary condition is incorporated. A transformation that enable solving for the entire mixed convection regime is introduced. Results are obtained using a finite difference scheme. The effect of the applied magnetic field on the heat transfer coefficient and on the wall shear stress is presented for the entire mixed convection regime including pure forced and pure natural convection limits. The magnetic field is found to have different behavior in the forced convection dominated regime other than that in natural convection dominated regime.