

Heat Transfer Analysis on the Peristaltic Motion with Slip Effects

Tasawar Hayat^{a,b} and Zaheer Asghar^a

^a Department of Mathematics, Quaid-I-Azam University 45320, Islamabad 44000, Pakistan

^b Department of Mathematics, College of Science, King Saud University, P.O. Box 2455, Riyadh 11451, Saudia Arabia

Reprint requests to T. H.; E-mail: pensy_t@yahoo.com

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The purpose of this paper is to highlight the combined effects of heat transfer and slip characteristics of magnetohydrodynamic (MHD) fluid with variable viscosity in a channel. The slip condition is imposed in terms of shear stress. An analysis is performed to derive the perturbation solution for long wavelength and small Reynolds number assumptions. Expressions of stream function, temperature and heat transfer coefficient are constructed and discussed.

Key words: Heat Transfer; Slip Conditions; Long Wavelength Approximation.