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Journal Name:	Asian Research Journal of Mathematics
Manuscript Number:	Ms_ARJOM_43604
Title of the Manuscript:	Entropy Generation Analysis of a Reactive MHD Third Grade Fluid in a Cylindrical Pipe with Radially Applied Magnetic Field and Hall Current
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Model is nice Introduction part is so weak. Add recent papers to introduction part. Add reference for mathematical model. Write down brief conclusions only, ie., Modify conclusions Give the validation of the results. It is important. Krishna and Gangadhar Reddy [1] discussed the unsteady MHD free convection in a boundary layer flow of an electrically conducting fluid through porous medium subject to uniform transverse magnetic field over a moving infinite vertical plate in the presence of heat source and chemical reaction. Krishna and Subba Reddy [2] have investigated the simulation on the MHD forced convective flow through stumpy permeable porous medium (oil sands, sand) using Lattice Boltzmann method. Krishna and Jyothi [3] discussed the Hall effects on MHD Rotating flow of a visco-elastic fluid through a porous medium over an infinite oscillating porous plate with heat source and chemical reaction. Reddy et al.[4] investigated MHD flow of viscous incompressible nano-fluid through a saturating porous medium. Recently, Krishna et al. [5-8] discussed the MHD flows of an incompressible and electrically conducting fluid in planar channel. Veera Krishna et al. [9] discussed heat and mass transfer on unsteady MHD oscillatory flow of blood through porous arteriole. The effects of radiation and Hall current on an unsteady MHD free convective flow in a vertical channel filled with a porous medium have been studied by Veera Krishna et al. [10]. The heat generation/absorption and thermo-diffusion on an unsteady free convective MHD flow of radiating and chemically reactive second grade fluid near an infinite vertical plate through a porous medium and taking the Hall current into account have been studied by Veera Krishna and Chamkha [11]. Veera Krishna et al. [12] discussed the heat and mass transfer on unsteady, MHD oscillatory flow of second-grade fluid through a porous medium between two vertical plates under the influence of fluctuating heat source/sink, and chemical reaction. Veera Krishna et al. [13] investigated the heat and mass transfer on MHD free convective flow over an infinite non-conducting vertical flat porous plate. Veera Krishna and Jyothi [14] discussed the effect of heat and mass transfer on free convective rotating flow of a visco-elastic incompressible electrically conducting fluid past a vertical porous plate with time dependent oscillatory permeability and suction in presence of a uniform transverse magnetic field and heat source. Veera Krishna and Subba Reddy [15] investigated the transient MHD flow of a reactive second grade fluid through a porous medium between two infinitely long horizontal parallel plates. References: 1. Veera Krishna.M., M.Gangadhar Reddy, MHD Free Convective Boundary Layer Flow through Porous medium Past a Moving Vertical Plate with Heat Source and Chemical Reaction, Materials Today: Proceedings, vol. 5, pp. 91–98, 2018. https://doi.org/10.1016/j.matpr.2017.11.058. 2. Veera Krishna.M., G.Subba Reddy, MHD Forced Convective flow of Non-Newtonian fluid through Stumpy Permeable Porous medium, Materials Today: Proceedings, vol. 5, pp. 175–183, 2018. https://doi.org/10.1016/j.matpr.2017.11.069. 3. Veera Krishna.M., Kamboji Jyothi, Hall effects on MHD Rotating flow of a Visco-	



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	elastic Fluid through a Porous medium Over an Infinite Oscillating Porous Plate with Heat source and Chemical reaction, <i>Materials Today: Proceedings</i>, vol. 5, pp. 367–380, 2018. https://doi.org/10.1016/j.matpr.2017.11.094. 4. Reddy.B.S.K, M. Veera Krishna , K.V.S.N. Rao, R. Bhuvana Vijaya, HAM Solutions on MHD flow of nano-fluid through saturated porous medium with Hall effects, <i>Materials Today: Proceedings</i>, vol. 5, pp. 120–131, 2018. https://doi.org/10.1016/j.matpr.2017.11.062. 5. VeeraKrishna.M., B.V.Swarnalathamma, Convective Heat and Mass Transfer on MHD Peristaltic Flow of Williamson Fluid with the Effect of Inclined Magnetic Field,” <i>AIP Conference Proceedings</i>, vol. 1728, p. 020461, 2016. DOI: 10.1063/1.4946512 6. Swarnalathamma. B. V., M. Veera Krishna, Peristaltic hemodynamic flow of couple stress fluid through a porous medium under the influence of magnetic field with slip effect <i>AIP Conference Proceedings</i>, vol. 1728, p. 020603, 2016. DOI: 10.1063/1.4946654. 7. VeeraKrishna.M., M.Gangadhar Reddy MHD free convective rotating flow of Visco-elastic fluid past an infinite vertical oscillating porous plate with chemical reaction, <i>IOP Conf. Series: Materials Science and Engineering</i>, vol. 149, p. 012217, 2016 DOI: 10.1088/1757-899X/149/1/012217. 8. VeeraKrishna.M., G.Subba Reddy Unsteady MHD convective flow of Second grade fluid through a porous medium in a Rotating parallel plate channel with temperature dependent source, <i>IOP Conf. Series: Materials Science and Engineering</i>, vol. 149, p. 012216, 2016. DOI: 10.1088/1757-899X/149/1/012216. 9. Veera Krishna.M., B.V.Swarnalathamma and J. Prakash, “Heat and mass transfer on unsteady MHD Oscillatory flow of blood through porous arteriole, <i>Applications of Fluid Dynamics, Lecture Notes in Mechanical Engineering</i>, vol. XXII, pp. 207-224, 2018. Doi: 10.1007/978-981-10-5329-0_14. 10. Veera Krishna.M, G.Subba Reddy, A.J.Chamkha, “Hall effects on unsteady MHD oscillatory free convective flow of second grade fluid through porous medium between two vertical plates,” <i>Physics of Fluids</i>, vol. 30, 023106 (2018); doi: 10.1063/1.5010863 11. Veera Krishna.M, A.J.Chamkha, Hall effects on unsteady MHD flow of second grade fluid through porous medium with ramped wall temperature and ramped surface concentration, <i>Physics of Fluids</i> 30, 053101 (2018), doi: https://doi.org/10.1063/1.5025542 12. Veera Krishna.M., K.Jyothi, A.J.Chamkha, Heat and mass transfer on unsteady, magnetohydrodynamic, oscillatory flow of second-grade fluid through a porous medium between two vertical plates, under the influence of fluctuating heat source/sink, and chemical reaction, <i>Int. Jour. of Fluid Mech. Res.</i>, vol. 45, no. 5, pp. 1-19, 2018b. DOI: 10.1615/InterJFluidMechRes.2018024591. 13. Veera Krishna.M., M.Gangadhara Reddy, A.J.Chamkha, Heat and mass transfer on MHD free convective flow over an infinite non-conducting vertical flat porous plate, <i>Int. Jour. of Fluid Mech. Res.</i>, vol. 45, no. 5, pp. 1-25, 2018c. DOI: 10.1615/InterJFluidMechRes.2018025004. 14. Veera Krishna.M., K.Jyothi, Heat and mass transfer on MHD rotating flow of a visco-elastic fluid through porous medium with time dependent oscillatory permeability, <i>J. Anal.</i>, vol. 25, no. 2, pp. 1-19, 2018. https://doi.org/10.1007/s41478-018-0099-0. 15. Veera Krishna.M., Subba Reddy.G., Unsteady MHD reactive flow of second grade fluid through porous medium in a rotating parallel plate channel, <i>J. Anal.</i>, vol. 25, no. 2, pp. 1-19, 2018. https://doi.org/10.1007/s41478-018-0108-3. Finally, I recommended this manuscript after minor revision.	
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Minor REVISION comments		
Optional/General comments		

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