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Numerical Simulation of The Forced Convective Nanofluid Flow Through an Annulus Sector Duct

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Highlights

- Effects of Lorentz force and power law index, on the magneto hydrodynamic (MHD) electrically conducting power law fluid is discussed.
- The effect of Lorentz force due to Hartman number, Ha , and power law index, n , on the quantities of interest such as dimensionless velocity, temperature, friction factor and Nusselt number are discussed for different configuration geometry both for pseudoplastic and dilatant fluids.
- It has been observed that MHD and power law index has direct relationship with the heat transfer coefficient and friction factor.
- Furthermore, limiting case results obtained in this study, are comparable with the literature

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