عنوان مقاله:

Influence of Wall Properties on the Peristaltic Flow of a Jeffrey Fluid in a Uniform Porous Channel under Heat Transfer

نویسندگان:

G. C. Sankad - *Department of Mathematics, B.L.D.E.A's V. P. DR. P. G.Halakatti College of Engineering and Technolgy,Vijayapur (۵۸۶۱۰۳), Karnataka, India.*

P. S. Nagathan - *Department of Mathematics, B.L.D.E.A's V. P. DR. P. G.Halakatti College of Engineering and Technolgy,Vijayapur (۵۸۶۱۰۳), Karnataka, India.*

خلاصه مقاله:

Incompressible Jeffrey fluid under peristalsis is considered into permeable conduit. Magnetic effect and slip effect are studied for this channel in the existence of wall slip and heat transfer. Time average velocity, heat transfer coefficient and temperature are obtained analytically underneath the presumption of large wavelength approximation and also small Reynolds number. Effects of magnetic number, slip parameter, elasticity parameters and Brinkman number on coefficient of heat transfer and temperature field are graphically discussed. It is observed that in the case of temperature distribution the flow intensity enhances with rise in the Darcy number, while it reduces with enhancement in the Brinkman number and slip parameter.

کلمات کلیدی:

Peristaltic flow, darcy number, jeffrey fluid, complaint walls, slip parameter, heat transfer

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1264421