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EFFECTS OF COUPLE STRESS FLUID AND AN ENDOSCOPE ON PERISTALTIC TRANSPORT THROUGH A POROUS MEDIUM

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Abstract

The peristaltic transport of couple stress fluid, porous medium with variable viscosity through the gap between coaxial tubes has been studied. Where outer tube is non-uniform sinusoidal wave traveling down in wall and inner tube is rigid. The relation between viscosity, pressure gradient and friction force on inner and outer tubes have been obtained in terms of couple stress parameter through a porous medium. The numerical solution of pressure gradient, outer friction, inner friction and flow rate are shown graphically.

Key Words: Peristaltic transport, Couple Stress fluid, Porous Media, Viscosity parameter.

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