عنوان مقاله:

The Thermal Effect of Nanofluids at Jeffery- Hamel flow with different wall angles by AGM

محل انتشار:

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خلاصه مقاله:

The novelty of the present paper is investigating the effects of Al_2O_3 and MoS_2 nanoparticles in water and Ethylene glycol($C_2H_6O_2$) as a base fluid respectively at Jeffery- Hamel flow with it the dependence on different wall angles which is solved by Akbari- Ganji method for the first time. The methods used for solving in this paper is Akbar-Ganji method which solves the governing equations in a semi-deductive way and the Numerical method that operates on the basis of The Runge-Kutta. The privileging conditions of the problem are such that there is non-slip condition at the walls without heat flux. Dimensionless parameters and the other ones calculated in this study are normalized velocity and temperature, skin friction coefficient, Reynolds and Eckert number, volume fraction. The effect of nanofluids and wall angle in constant Ec number on heat transfer is much more important than and the rest of the effects respectively and also the effect of Eckert number increases with higher wall angle while the wall angle is the most influential factor in the normalized velocity

کلمات کلیدی:

AGM,Jeffery,Hamel flow,nanoparticles, nanofluid.

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