عنوان مقاله:

Numerical study of fins arrangement and nanofluids effects on three-dimensional natural convection in the cubical enclosure

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خلاصه مقاله:

This investigation is a three dimensional comprehensive heat transfer analysis for partially differentially heated enclosure with the vertical fin mounted on the hot wall. The thermal lattice Boltzmann based on D3Q19 method is utilized to illustrate the effects of vertical fins and nanoparticles on the flow and thermal fields. The effects of Rayleigh number and different arrangement of fins on the fluid flow and heat transfer have been scrutinized. The streamlines and isotherms and Nusselt number along the hot wall are illustrated for 10⁴

کلمات کلیدی:

Cubical enclosure, Lattice Boltzmann Method, nanoparticles effects, natural convection, vertical fins

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