عنوان مقاله:

Lattice Boltzmann Simulation of Heat Exchanger Filled by Porous Mediume

محل انتشار:

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خلاصه مقاله:

The lattice boltzmann simulation of the heat transfer and fluid flow in a heat exchanger filled with porous mediume was investigated using Lattice Boltzmann method. The problem consists ofsquare cavity with inlet and outlet thermally insulated ports and three hot fins with constant temperature. The Brinkman-Forchheimer equation was used to simulate the porous domain. The effect of porosity on heat transfer from the fins surfaces was studied at different Reynolds. Bydecreasing of porosity, the heat transfer rate increases and the domain bulk temperature of the fluidincreases at lower time for different Reynolds numbers

کلمات کلیدی:

(force convection, porous mediume, Reynolds number, lattice boltzmann method(LBM

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/340774