عنوان مقاله:

Natural Convection Heat Transfer From Horizontal Cylinders in a Vertical Arra Confined Between Parallel Walls

نویسندگان:

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خلاصه مقاله:

Laminar natural convection from an array of horizontal isothermal cylinders confined between two vertical walls, at low Rayleigh numbers, is investigated by theoretical and numerical methods. The height of the walls is kept constant, however, number of the cylinders and their spacing, the distance between the walls and Rayleigh number have been varied. The optimal spacing (confining walls) and the maximum Nusselt number predicted theoretically are validated by means of numerical simulations. It has been shown that with increasing the number of cylinders or their spacing the optimal spacing will increase. In addition, increasing the Ra number decreases the optimal spacing of the walls.

کلمات کلیدی:

Natural convection, Array of Cylinders, theoretical, Numerical