عنوان مقاله:

Effect of Porous Medium Positioning on Heat Transfer of Micro-channel with Jet

محل انتشار:

ماهنامه بین المللی مهندسی, دوره 33, شماره 10 (سال: 1399)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

In this paper, the influence of the locating additive or placing porous-medium film on the heat transfer of a micro-channel by injecting fluid from its lower wall is investigated. The boundary condition slip-walls for the lower and higher walls of the micro-channel and orderly, as insulation and constant temperature is considered, respectively results show that the heat transfer increased with increasing Darcy number and the porous-medium film thickness. The consequences disclosed that the place of the porous-film has a substantial effect on heat transfer. The percentage changes observed for cases such the porous layer in the middle of the micro-channel, near the two upper and lower walls, near the upper wall, near the upper wall and in the form of a rib, along the length of the micro-channel with L /۳ and L/۵ is -۱۴%, ۲.۲۵%, ۵.۴۶%, ۵۵.۵۳%, ۷۰.۵% and ۸۶.۲۷% for nusselt number compared to the porous layer-less state.

کلمات کلیدی:

Micro-channel, Porous media, heat transfer, nano-fluid