## عنوان مقاله:

Flow Control and Heat Transfer in a Squared Room Applying Thin Obstacles at Walls

## محل انتشار:

بیست و پنجمین همایش سالانه مهندسی مکانیک (سال: 1396)

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## خلاصه مقاله:

This paper aims at simulating and selecting an appropriatesimple air-conditioning system (inlet and outlet) for a squareroom based on the fluid mechanics and heat transfercharacteristics. Three different outlets have beeninvestigated at different corner of the room under constantinlet position for all three cases. It is shown than anappropriate selection of outlet can affects the results of theheat circulation, considerably. Later, a couple of rectangulararrangement obstacles have been proposed in the best caseof the study in order to improve the mixing and heat transfercharacteristics more considerably. The effect of theobstacles heights and the gap between the them on the flowcontrol and mixing time are also investigated, showing thatthe position and the geometry of these .obstacles can be veryinfluential

## کلمات کلیدی:

Equilibrium temperature, Mixing time, Outletflow positioning, Obstacle, Obstacles positioning