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عنوان مقاله:

Numerical Computation of Laminar and Turbulent Flows inside Rectangular Cavities using Random Vortex Method

محل انتشار:

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خلاصه مقاله:

Vortex methods rely principally on a discretization of the continuous two-dimensional time dependent vorticity field into a large number of vortex ‘’blobs’’, whose position and strength determine the underlying velocity field. In this paper, numerical results for a complex flow in cavity is studied for Reynolds numbers of 50 and 50000 using Random Vortex Method. The code was written for two cavities with different ratios of length to height which generation of primary and secondary eddies was observed. We know that available numerical methods for turbulent flows are very complex and very time consuming. By using Random Vortex Method, there is no limitation for Reynolds number and we can generalize our program for any Reynolds number

کلمات کلیدی:

random vortex, cavity, flow field, twodimensionalturbulent

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