

عنوان مقاله:

Particles trajectory simulation in closed horizontal channels by Eulerian-Lagrangian approach

محل انتشار:

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خلاصه مقاله:

In this paper the trajectory of thin solid particles in air flow while passing a lab channel with a rectangular cross-section, have been simulated. Here we have used the Eulerian-Lagrangian method for modeling the two-phase flow, and the numerical solutions to governing equations have been made through a finite volume method. In Lagrangian calculations which are based on particle dynamics, the effects of any forces such as lifting, drag, and et cetera have been included. An second power upwind discreting approach has been used for the numerical solution of momentum equations, kinetic energy, dissipation rate and turbulence models; also the coupled calculations of pressure-velocity have been done through SIMPLEC algorithm. Comparison of the results obtained from lab data, indicate that the choose of parameters and turbulence model (Reynolds stress) is more suitable for dilute particle-fluid flow modeling inside closed channels.

کلمات کلیدی:

Two-phase modeling, Eulerian-Lagrangian approach, Particle Trajectory

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