

TRANSPORT PHENOMENA & FLUID MECHANICS
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关键词: 颗粒床; 颗粒流; 颗粒堆积
摘要: These experimental studies have been undertaken by means of the "two-phase" approach and the two-phase κ - μ turbulence model. The turbulent fluctuation correction, appearing in the Reynolds time-averaged governing equations, are fully incorporated. The solid phase flow field and solid concentration distribution in baffled stirred tanks, with a standard Rushton impeller are numerically simulated using an improved "two-phase" approach. The two phases is identified as the primary vortex pairs and a recirculation loop with higher solid concentration is observed in the central vortex beneath the impeller. Comparison of the simulation with experimental data on the mean velocities and the turbulence quantities of the solid phase in tank and quite reasonable agreement is observed except for the impeller vortex region. The comparison of liquid phase is presented as well. The predicted solid concentration distribution for these experimental cases with the average solid concentration set to 20% is well found to agree reasonably with the experimental results published in the literature.
关键词: [颗粒床](#), [颗粒流](#), [颗粒堆积](#)

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