

TRANSPORT PHENOMENA & FLUID MECHANICS

气固循环流化床提升管环核区颗粒质量传递系数的估计

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摘要 Based on analysis of energy dissipation in the core region of gas-solid fluidized bed risers, a simplified model for determination of core-annulus solids mass transfer coefficient was developed according to turbulent diffusion mechanism of particles. The simulation results are consistent with published experimental data. Core-annulus solids mass transfer coefficient decreases with increasing particle size, particle density and solids circulation rate, but generally increases with increasing superficial gas velocity and riser diameter. In the upper dilute region of gas-solid fluidized bed risers, core-annulus solids mass transfer coefficient was found to change little with the axial coordinate in the bed.

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Prediction of Core-Annulus Solids Mass Transfer Coefficient in Gas-Solid Fluidized Bed Risers

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Key words [solids mass transfer coefficient](#); [core-annulus structure](#); [turbulent diffusion](#); [gas-solid fluidization](#)

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