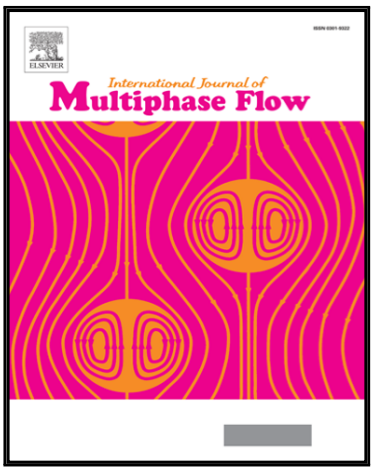

A comprehensive assessment of different wall boundary conditions on the simulation of bubbling fluidized beds

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Highlights

- Three different particle-wall boundary conditions are examined to assess their ability to predict the dynamics of a dense gas-particle flow.
- The predicted dominant mixing regions inside the bed are identified and visualized in order to quantitatively describe the bed performance.
- The more energetic bubbles result in a lower level of granular temperature, a less-expanded bed, and more extensive mixing regions inside the bed.
- Some specific features of the predicted flows differ in a systematic way that can be tracked to the effect of wall boundary condition on the bubble behavior.