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Solids circulation in circulating fluidized beds with low riser aspect ratio
and varying total solids inventory

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Keywords

circulating fluidized bed; solids circulation; solids entrainment; solids elutriation; dense bottom bed

Highlights

- Underlying mechanisms for solids circulation in CFB units are analysed
- Solids entrainment increases with gas velocity as long as a dense bed is maintained
- Without dense bed, the solids entrainment increases with riser pressure drop
- Exit backflow of solids is enhanced by higher gas velocity and solids concentration
- Highly-resolved measurement data on vertical solids concentration is given

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