



Computation of dilute phase Pneumatic conveying in pipes and jets

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | The book deals with the numerical simulations of turbulent dilute phase, pneumatic conveying (i.e. gas-solid flows) in pipes and free jets using Euler-Euler model. This book emphasizes the understanding of the basics of gas-solid flows. Pipe flow simulations are performed incorporating kinetic theory of granular flows (KTGF) and accounting for four-way coupling. The effect of major parameters like gas Reynolds number, particle properties, and solids loading ratio on fully developed pressure drop and acceleration length in horizontal and vertical pipes have been investigated and empirical correlations are developed for them. The free jet has been simulated neglecting inter-particle collisions (two-way coupling). Modulation of flow field and turbulence of the gas phase in the presence of solid particles has been discussed in depth. The complete mathematical modeling for the four-way coupling and two-way coupling has been covered in a lucid way for the easy understanding of the readers. This book will definitely help the beginners having research interest in two-phase flows. | Format: Paperback | Language/Sprache: english | 128 pp.



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