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Beds; 1.0 INTRODUCTION; 2.0 TYPES OF GRIDS; 3.0 GRID DESIGN CRITERIA; 4.0 PARTICLE ATTRITION AT GRIDS; 5.0 EROSION; 6.0 EFFECTS OF TEMPERATURE AND PRESSURE

7.0 PLENUM DESIGN8.0 DESIGN EXAMPLES; NOTATIONS; REFERENCES; Chapter 5. Engineering and Applications of Recirculating and Jetting Fluidized Beds; 1.0 INTRODUCTION; 2.0 RECIRCULATING FLUIDIZED BEDS WITH A DRAFT TUBE; 3.0 JETTING FLUIDIZED BEDS; NOTATIONS; REFERENCES; Chapter 6. Fluidized Bed Coating and Granulation; 1.0 INTRODUCTION; 2.0 COATING OF PARTICLES IN FLUIDIZED BEDS; 3.0 GRANULATION OF FINE POWDERS IN FLUIDIZED BEDS; ACKNOWLEDGMENT; NOTATIONS; REFERENCES; Chapter 7. Attrition in Fluidized Beds and Pneumatic Conveying Lines; 1.0 INTRODUCTION; 2.0 FACTORS AFFECTING ATTRITION

3.0 ASSESSMENT OF ATTRITION4.0 ATTRITION TESTS; 5.0 ATTRITION IN FLUIDIZED BED SYSTEMS; 6.0 ATTRITION IN PNEUMATIC CONVEYING LINES; NOTATIONS; REFERENCES; Chapter 8. Bubbleless Fluidization; 1.0 INTRODUCTION; 2.0 FLUIDIZED LEACHING AND WASHING; 3.0 BUBBLELESS GAS/SOLID CONTACTING; 4.0 DILUTE RAINING FLUIDIZATION; 5.0 FAST FLUIDIZATION; 6.0 SHALLOW FLUID BEDS; 7.0 FLUIDIZATION WITH NO NET FLUID FLOW; 8.0 PARTICLES WHICH QUALIFY FOR BUBBLELESS OPERATION; 9.0 WHY BUBBLING AND NOT PARTICULATE FLUIDIZATION; 10.0 EPILOGUE; NOTATIONS; REFERENCES Chapter 9. Industrial Applications of Three-Phase Fluidization Systems1.0 INTRODUCTION; Part I: Smelting Reduction, Paper Processing, and Chemical Processing; 2.0 SMELTING REDUCTION; 3.0 PAPER PROCESSING; 4.0 CHEMICAL PROCESSING; Part II: Three-Phase Biofluidization; 5.0 BIOLOGICAL APPLICATIONS OF THREE-PHASE FLUIDIZATION; ACKNOWLEDGMENT; NOTATIONS; REFERENCES; Chapter 10. Dense Phase Conveying; 1.0 INTRODUCTION; 2.0 ADVANTAGES OF DENSE PHASE CONVEYING; 3.0 BASIC PHYSICS; 4.0 PULSED PISTON FLOWS; 5.0 VERTICAL FLOW SYSTEMS; 6.0 BOOSTERS; NOTATIONS; REFERENCES

Chapter 11. Design Considerations of Long-Distance Pneumatic Transport and Pipe Branching

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#### Sommario/riassunto

This volume, Fluidization, Solids Handling, and Processing, is the first of a series of volumes on ""Particle Technology"". Particles are important products of chemical process industries spanning the basic and specialty chemicals, agricultural products, pharmaceuticals, paints, dyestuffs and pigments, cement, ceramics, and electronic materials. Solids handling and processing technologies are thus essential to the operation and competitiveness of these industries. Fluidization technology is employed not only in chemical production, it also is applied in coal gasification and combustion for pow

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