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10. LIST OF FIGURES

Fig. 3. 10. Schematic of the D. C. power supply system for the heater probes.

Fig. 3.11. Detailed schematic of the temperature measuring system.

Fig. 3.12. Schematic of the 0.305 m diameter slurry bubble column along with air supply loop, temperature and pressure measuring circuits. (1) air compressor, (2) refrigerator drier, (3) oilscer filter, (4) pressure regulator valve, (5) rotameters, (6) pressure gauge, (7) gate valves, (8) one-way valve, (9) liquid drain, (10) conical section, (11) bubble-cap distributor plate, (12) perforated plate distributor, (13) stainless steel wire cloth, (14) metal inserts, (15) glass column, (16) diverger section, (17) trap bottles, (18) purgemeters, (19) manometers, (20) pressure sensor, (21) pressure monitor, (22) on-off valve, (23) data acquisition system, (24) computer, (25) key-board, (26) disc drive, (27) monitor, (28) printer, and (29) plotter.

Fig. 3.13A. Design details of the bottom end assembly of the 0.305 m diameter slurry bubble column. (1) gas inlet pipe, (2) Teflon coated nut, (3) liquid drain adapter, (4) liquid drain, (5) gaskets, (6) flanges., (7) soft inserts, (8) conical glass section, (9) bubble cap distributor plate, (10) cylindrical holder, (11) perforated plate distributor, (12) stainless steel wire cloth, (13) spacer studs, (14) locating pins, and (15) metal insert. All dimensions are in mm.

Fig. 3.13B. Arrangement of the bubble-caps on the distributor plate. All dimensions are in mm.

Fig. 3.13C. Design details of the perforated gas distributor plate for the 0.305 m diameter slurry bubble column. (1) perforated distributor, (2) stainless steel wire cloth, (3) bottom conical section, (4) flange, (5) gasket, (6) metal insert., (7) soft inserts, and (8) glass column. All dimensions are in mm.

Fig. 3.13D. Design details of the diverger section at the top end of the 0. 305 m diameter slurry bubble column. (1) stainless steel perforated plate, (2) diverger section, (3) gaskets, (4) flange, and (5) glass column. All dimensions are in mm.

Fig. 3.14. (A) Three-arm locating clamp, (B) single heat transfer probe, (C) orientation of thermocouples for the 0.305 m diameter bubble column. All dimensions are in mm. (A): (1) ring clamp, (2) screw, (3) radial arms, (4) Teflon rounded cap, (5) column surface, (6) telescopic arms (7) spring, (8) locking pin, and (9) front end of the telescopic arm.

Fig. 3.15. Design details of the radial thermocouple probe. (1) copper-constantan thermocouples, (2) thermocouple well, (3) Silicone rubber, (4) ceramic tube, (5) column wall, and (6) swagelock connector. All dimensions are in mm.

Fig. 3.16. Design details of the radial thermocouple probe. (1) copper-constantan thermocouples, (2) thermocouple well, (3) Silicone rubber, (4) stainless steel, (5)

Fig. 4.32. Influence of slurry concentration on heat transfer coefficient for particles of mean diameter (A) 50 μm, (B) 119 μm, and (C) 143 μm.

Fig. 4.33. Dependence of heat transfer coefficient on air velocity and particle diameter in the slurry.

Fig. 4.34. Dependence of heat transfer coefficient on air velocity and slurry concentration for particles of different sizes.

Fig. 4.35. Dependence of heat transfer coefficient on particle diameter in the slurry as a function of air velocity.

Fig. 4.36. Dependence of heat transfer coefficient on air velocity and particle diameter for slurries of (A) 10 weight percent, and (B) 30 weight percent.

Fig. 4.37. Dependence of heat transfer coefficient on air velocity, particle diameter and slurry concentration.

Fig. 4.38. Dependence of heat transfer coefficient for nitrogen-Therminol-red iron oxide on nitrogen velocity and slurry concentration as determined in a bubble column equipped with heat transfer probes of different diameters and a seven-tube bundle.

Fig. 4.39. Dependence of h_W on the nature of internals.

Fig. 4.40. Influence of nitrogen velocity and solids concentration on heat transfer coefficient for the nitrogen-Therminol-magnetite (36.6 μm) system for three probes.

Fig. 4.41. Effect of particle diameter on heat transfer coefficient for the 31.8 mm probe at solids concentrations in weight percent of (A): 15, (B): 30, and (C): 50.

Fig. 4.42. Effect of probe diameter on heat transfer coefficient at different solids concentrations in weight percent of (A): 0, (B): 15, (C): 30, and (D): 50.

Fig. 4.43. Variation of average air holdup with air velocity and initial water column height.

Fig. 4.44. Variation of air holdup in different sections of the larger column with air velocity.

Fig. 4.45. Influence of configuration of internals on air holdup as a function of air velocity and temperature.

Fig. 4.46. Influence of bubble column diameter and internals on air holdup at 297K as a function of air velocity.

Fig. 4.47. Variation of air holdup with decreasing superficial air velocity for the air-water system at four temperatures. □ SET 1, ■ SET 2, O SET 3, ● SET 4.

Fig. 4.48. Dependence of air holdup on air velocity and temperature for the column with thirty-seven tube bundle and air-water system.

Fig. 4.49. Variation of nitrogen holdup with increasing (O , □ , Δ) and decreasing (● , ■ , ▲) velocity at different temperatures and solids concentration.

Fig. 4.50. Dependence of air holdup on air velocity, temperature and slurry concentration.

Fig. 4.51. Dependence of air holdup as a function of air velocity and temperature on solids concentration, and its comparison with the predictions of different correlations. The concentrations of glass beads (d_p = 14.3 μm) in the slurry is (A) five (52 kg/m^3), (B) ten (110 kg/m^3), and (C) twenty (249K kg/m^3) weight percent.

Fig. 4.52. Dependence of air holdup on air velocity and temperature for (A) 90 μm, (B) 50 μm, and (C) 50-90 μm, average size powders. Experimental data are also compared with the predictions of different correlations.

Fig. 4.53. Variation of air holdup for the air-water-glass bead system with decreasing superficial air velocity and temperature for slurries of 125 μm particles at two concentrations.

Fig. 4.54. Variation of air holdup for the air-water-glass bead system with decreasing superficial air velocity and temperature for slurries of 212 μm particles at two concentrations.

Fig. 4.55. Variation of air holdup for the air-water-glass bead system with decreasing superficial air velocity and temperature for the large column with thirty-seven tube bundle.

Fig. 4.56. Effect of particle diameter on air holdup at different temperatures for two slurry concentrations.

Fig. 4.57. Effect of slurry concentration on air holdup at different temperatures and slurry particle sizes.

Fig. 4.58. Dependence of air holdup on air velocity, temperature, particles size and slurry concentration.

Fig. 4.59. Effect of temperature on nitrogen holdup at different solids concentrations in the slurry. 0 = 298K, □ = 328K, Δ = 378K, ● =428K, + = 473K, ■ = 523K.

Fig. 4.60. Radial temperature profile at various air velocities.

Fig. 4.61. Variation of heat transfer coefficient with time at different air velocities for lower (A), middle (B) and upper (C) regions of the column.

Fig. 4.62. Variation of heat transfer coefficient with air velocity for different regions of the column at 297K.

Fig. 4.63. Dependence of heat transfer coefficient with temperature, air velocity and tube bundle configuration.

Fig. 4.64. Variation of heat transfer coefficient with decreasing air velocity for air-water system at four locations in the column and at four temperatures. □ Probe 1, ■ Probe 2, ○ Probe 3, ● Probe 4.

Fig. 4.65. Dependence of heat transfer coefficient on thermal flux as a function of gas velocity and column temperature: (A) probe-1 and (B) probe-3.

Fig. 4.66. Axial and radial variation of h_W with U_g at different temperatures. Solids concentration = 0 wt%.

Fig. 4.67. Variation of heat transfer coefficient with gas velocity and temperature for (A) probe-1, and (B) probe-3.

Fig. 4.68. Variation of heat transfer coefficient with air velocity, temperature and slurry concentration.

Fig. 4.69. Dependence of heat transfer coefficient on air velocity, temperature and slurry concentration for powders of mean diameter (A) 143.3μm, (B) 90 μm, (C) 50μm, and (D) 50-143 μm.

Fig. 4.70. Variation of heat transfer coefficient for the air-water-glass bead system with superficial air velocity and temperature for heat transfer probes 1 and 3 and slurries of 125 μm particles at two concentrations.

Fig. 4.71. Variation of heat transfer coefficient for air-water-glass bead system with superficial air velocity and temperature for heat transfer probes 1 and 3 and slurries of 212 μm particles at two concentrations.

Fig. 4.72. Variation of heat transfer coefficient for (A) air-water and (B) air-water-glass bead systems with superficial air velocity and temperature for heat transfer probes 1 and 3.

Fig. 4.73. Effect of particle diameter on heat transfer coefficient at different temperatures for two slurry concentrations and heat transfer probe 3.

Fig. 4.74. Effect of slurry concentrations on heat transfer coefficient at different temperatures and slurry particle sizes for heat transfer probe 3.

Fig. 4.75. Dependence of heat transfer coefficient on air velocity, temperature, particle size and slurry concentration. (A) 50 μm and 3 wt %; (B) 90 μm, 5 and 10 wt %.

Fig. 4.76. Axial and radial variation of h_W with U_g at different temperatures. Solids concentration = 15 wt %.

Fig. 4.77. Axial and radial variation of h_W with U_g at different temperatures. Solids concentration = 30 wt %.

Fig. 4.78. Axial and radial variation of heat transfer coefficient with nitrogen velocity at different temperatures. Solids conc. = 40 weight percent. ○ = probe 1, □ = probe 2, △ = probe 3, + = probe 4.

Fig. 4.79. Variation of heat transfer coefficient (probe 1) with nitrogen velocity and solids concentration at different temperatures. ○ = 0 wt%, □ = 15 wt%, △ =30 wt%, ● = 40 wt%.

Fig. 4.80. Effect of temperature on heat transfer coefficient at different solids concentrations in the slurry. ○ = 298K, □ = 328K, △ = 378K, + = 428K, ● = 473K, ■ = 523K.

Fig. 5.1. Comparison of experimental and computed air holdup values for the air-water system as a function of superficial air velocity at 309K.

Fig. 5.2. Parity plot for gas holdup.

Fig. 5.3. Bubble size frequency distribution in the 10.8 cm diameter bubble column for the air-water system. Air velocity = 3.2 cm/s.

Fig. 5.4. Histogram of bubble-size distribution in the 10.8 cm diameter bubble column for the air-water system. Air velocity = 3.2 cm/s.

Fig. 5.5. Histogram of the bubble-size distribution in the 30.5 cm diameter bubble column for the air-water system. Air velocity = 3.2 cm/s.

Fig. 5.6. Bubble size frequency distribution in the 30.5 cm diameter bubble column for the air-water system. Air-velocity = 3.6 cm/s.

Fig. 5.7. Bubble size frequency distribution in the 30.5 cm diameter bubble column for the air-water system. Air velocity = 5.8 cm/s.

Fig. 5.8. Bubble size frequency distribution in the 30.5 cm diameter bubble column for the air-water system. Air velocity = 9.2 cm/s.

coefficient on the basis of the proposed correlation.

Fig. 6.23. Comparison of averaged heat transfer coefficient values as a function of air velocity with the predictions of different correlations at (A) 297, (B) 323, and (C) 343K.

Fig. 6.24. Comparison of experimental heat transfer coefficients with the predictions of different models for the air-water-glass bead system, (1-Experimental, 2-Deckwer, 3-Suh and Deckwer, 4-Kim et al., 5-Pandit and Joshi).

Fig. 6.25. Comparison of heat transfer data with the predictions of different models.

Fig. 6.26. Parity plot for heat transfer coefficient (kW/m^2K). Calculated values are based on Eq. (6.51).

Fig. 6.27. Parity plot for heat transfer coefficient (kW/m^2K). Calculated values are based on Eq. (6.54).

Fig. 6.28. Comparison of experimental and calculated heat transfer coefficient (kW/m^2K) based on Eq. (6).

Fig. 6.29. Comparison of experimental and calculated heat transfer coefficient (kW/m^2K) based on Eq. (7).

Fig. 6.30. Comparison of experimental h_W values with the predictions of four theoretical models for slurries of 46.6 μm average size magnetite particles at concentrations of (A) 107, (B) 167, and (C) 258 kg/m^3.

Fig. 6.31. Parity plot of h_W (kW/m^2K) for air-water-magnetite system: (A) power function, and (B) logarithmic function.

Fig. 6.32. Comparison of averaged experimental heat transfer coefficient with the predictions of different correlations at (A) 297, (B) 323, and (C) 343K.

Fig. 6.33. Correlation of heat transfer data on Eq. (6.51) for (A) air-water, and (B) air-water-magnetite systems.

Fig. 6.34. Comparison of experimental data (□-0%, O-50%) for 19.0 mm probe with the theoretical predictions. A: Deckwer et al. [51], B: Suh and Deckwer [109], C: Kim et al. [107], and D: Pandit and Joshi [106].

Fig. 6.35. Comparison of experimental and computed h_W values according to Eq. (6.51).

11. LIST OF TABLES

Table 4.9. Smoothed heat transfer coefficient and air holdup values for air-water-magnetite system at 308K. Column diameter: 0, 108 m, Internal: 19 mm Single tube, Particle diameters: 35.7, 49, 58, 69, 90.5, 115.5 and 137.5, Solids concentration: 0, 10, 15, 20 and 30 wt%.

Table 4.10. Experimental air holdup values for air-water-magnetite system at 309K. Column diameter: 0.105 m, Internal: Seven-tube bundle, Particle diameters: 35.7, 90.5 and 137.5 μm, Solids concentrations: 10 and 30 wt%.

Table 4.11. Smoothed nitrogen holdup values for nitrogen-Therminol-red iron oxide system at 301-309K. Column diameter: 0.108 m, Internal: 19, 31.8, 50.8 mm single tubes and seven-tube bundle. Particle diameter: 1.7 μm, Solids concentrations: 0, 15, 30 and 50 wt%.

Table 4.12. Experimental values of h_W (kW/m^{2}K) for different electrical power inputs to the heater at a fixed column temperature T_C. Column diameter: 0.108m, Internal: 19 mm single tube. System: Air-water.

Table 4.13. Experimental h_W (kW/m^{2}K) and air holdup values for air-water system in the continuous mode operation at 307$\pm$1K. Column diameter: 0.108 m, Internal: 19 mm single tube.

Table 4.14. Experimental h_W (kW/m^{2}K) and air holdup values at different heater locations for air-water system at 315$\pm$ 1 K. Column diameter: 0.108 m, Internal: Seven-tube bundle.

Table 4.15. Experimental (A) and smoothed (B) h_W (kW/m^{2}K) values for air-water system at 309K. Column diameter: 0.108 m, Internal: 19 mm single tube.

Table 4.16. Experimental h_W (kW/m^{2}K) values for air-water system at 309K. Column diameter: 0.108 m, Internal: Seven-tube bundle.

Table 4.17. Experimental h_W (kW/m^{2}K) values for air-water-red iron oxide and air-water-magnetite systems at 313K. Column diameter: 0.108 m, Internal: 19 mm single tube.

Table 4.18. Experimental h_W (kW/m^{2}K) values for air-water-glass bead values at 315K. Column diameter: 0.109 m, Internal: 19 mm single tube.

Table 4.19. Smoothed h_W (kW/m^{2}K) values for air-water-glass bead system at 309K. Column diameter: 0.108 m, Internals: 19 mm single tube and seven-tube bundle.

Table 4.20. Smoothed h_W (kW/m^2K) values for air-water-magnetite system at 309K. Column diameter: 0.108 m, Internal: Seven-tube bundle, Particle diameters: 37.5, 90.5 and 137.5 μm, solids concentrationds: 10 and 30 wt%.

Table 4.21. Smoothed h_W (kW/m^2K) values for nitrogen-Therminol-red iron oxide system at 301-309K. Column diameter: 0.108 m, Internals: 19.0, 31.8, 50.8 mm single tubes and seven-tube bundle.

Table 4.22. Smothed h_W (kW/m^2K) values for nitrogen-Therminol-magnetite system at 306K. Column diameter: 0.108 m, Internal: 19.0, 31.8 and 51.8 mm single tubes, Particle diameters: 26.6, 37.7 and 45.5 μm.

Table 4.23. Air holdup values smoothed over-concentration range for air-water and air-water-glass bead systems for different particle diameters and at different temperature levels. Column diameter: 0.305 m, Internal: Seven-tube bundle.

Table 4.24. Smoothed air holdup values for air-water system at different temperature levels. Column diameter: 0.305 m, Internal: Thirty-seven bundle.

Table 4.25. Nitrogen gas holdup values smoothed over the solids concentration range for nitrogen-Therminol-magnetite system at different temperature levels. Column diameter: 0.305 m, Internal: Thirty-seven tube bundle, Particle diameter: 36.0 μm, solids conc. : 0, 15, 30 and 40 wt%.

Table 4.26. Smoothed air holdup and h_W (kW/m^2K) values for air-water-silica sand system at different temperature levels. Column diameter: 0.305m, Internal: Seven-tube bundle.

Table 4..27. Smoothed air holdup values for air-water-glass bead system at different temperature levels. Column diameter: 0.305 m, Internal: Thirty-seven tube bundle.

Table 4.28. Air holdup values smoothed over particle size and the solids concentration range for air-water-magnetite system at different temperature levels. Column diameter: 0.305 m, Internal: Seven-tube bundle. Particle diameters: 50 and 90 μm, Solids concentrations: 3, 5 and 10 wt%.

Table 4.29. Experimental h_W (kW/m^2K) values as a function of power input to the probe at U_g = 0.376 m/s. Column diameter: 0.305 m, Internal: 19 mm single tube, System: Air-water.

Table 4.30. Experimental h_W (kW/m^2K) values in different regions of the 0.305 m bubble column for air-water system at 297 ± 3K. Internal: 19 mm single tube.

Table 4.31. Smoothed h_W (kW/m^2K) values for air-water system at different temperature levels. Column diameter: 0.305 m, Internal: Seven-tube bundle.

Table 4.32. Smoothed h_W (kW/m^2K) values for air-water system at different temperature levels in different regions of the tube bundle. Column diameter: 0.305m, Internal: Thirty-seven tube bundle.

Table 4.33. Smoothed h_W (kW/m^2K) values for nitrogen-Therminol-magnetite system at different temperature levels. Column diameter: 0.305 m, Internal: Thirty-seven tube bundle. Particle diameter: 36.6 μm, Solids concentrations: 0, 15, 30 and 40 wt%.

Table 4.34. Smoothed h_W (kW/m^2K) values for air-water and air-water-silica sand systems at different temperature levels. Column diameter: 0.305 m, Internal: Seven-tube bundle, Particle diameter: 65.0 μm.

Table 4.35. Smoothed h_W (kW/m^2K) values for air-water and air-water-glass bead systems at different temperature levels. Column diameter: 0.305 m, Internal: Seven-tube bundle, Particle diameters: 50, 90 and 143.3 μm.

Table 4.36. Smoothed h_W (kW/m^2K) values for air-water-glass bead system at different temperature levels. Column diameter: 0.305 m, Internal: Thirty-seven tube bundle, Particle diameters: 125, 168 and 212 μm.

Table 4.37. Smoothed h_W (kW/m^2K) values for air-water and air-water-magnetite systems at different temperature levels. Column diameter: 0.305 m, Internal: Seven-tube bundle. Particle diameters: 50 and 90 μm. Solids concentrations: 3, 5 and 10 wt%.

Table 5.1. Values of $U_{b\infty}$ based on Eq. (5.21) and determined from experimental gas holdup data for air-water and air-water-glass bead systems at 309K in 0.108m bubble column.

Table 5.2. Values of $U_{b\infty}$ based on Eq. (5.21) and determined from experimental gas holdup data for nitrogen-Therminol and nitrogen-Therminol-red iron oxide systems in 0.108 m bubble column at ambient temperature.

Table 5.3. Values of $U_{b\infty}$ based on Eq. (5.21) and determined from experimental gas holdup data for air-water magnetite system in 0.108 m in bubble column equipped with a 19 m tube. The data was measured at 308K for particles in the size range 35.7 - 137.5 μm and slurry concentrations in the range 10 - 30 wt%.

Table 5.4. Values of $U_{b\infty}$ based on Eq.(5.21) and determined from experimental gas holdup data for nitrogen-Therminol-magnetite system for different internals in 0.108 m bubble column at ambient temperature.

Table 6.1. Constants of Eqs. (6.51) and (6.54) as determined from the experimental h_W values for air-water-red iron oxide system at 313K and measured in 0.108 m bubble column equipped with 19 mm heat transfer probe.

Table 6.2. Values of the constants of Eqs. (6.51) and (6.54) as determined from the experiemntal h_W values for three different systems in the temperature range 308 - 316K and measured in 0.108 m bubble column equipped with 19 mm heat transfer probe.

Table 6.3. Global constants of Eqs. (6.51) and (6.52) as determined from the experimental h_W values for air-water-magnetite and air-water-glass bead systmes in the temperature range 308 - 316K and measured in 0.108 m bubble column equipped with 19 mm heat transfer probe.

Table 6.4. Values of the constants of Eqs. (6.51) and (6.54) as determined from the experimental h_W values for air-water and air-water-glass bead systems at 393K and measured in 0.108 m bubble column equipped with a 19 mm single tube and a seven-tube bundle.

Table 6.5. Values of the constants of Eqs. (6.51) and (6.54) as determined from the experimental h_W values for air-water-magnetite system at 308K and measured in 0.108m bubble column equipped with a 19 mm single heat transfer probe.

Table 6.6. Values of the constants of Eq. (6.51) as determined from the experimental h_W values for air water and air-water-magnetite systems and measured in 0.305m bubble column equipped with a seven-tube bundle.

Table 6.7. Values of the constants of Eq. (6.51) as determined from the experimental h_W values for nitrogen-therminol-magnetite system at 306-312K and measured in 0.108m bubble column equipped with three single heat transfer probes.

Table 6.8. Values of the constants of Eqs. (6.51) and (6.64) as determined from the experimental h_W values for air-water and air-water-sand systems at several temperatures and measured in 0.305m bubble column equipped with a seven-tube bundle.

12. ACKNOWLEDGEMENTS

We are grateful to the Department of Energy, Pittsburgh Energy Technology Center, for sponsoring and partly supporting this work; and to the University of Illinois at Chicago for supplementing the DOE financial support which only enabled to bring this comprehensive effort to completion. The valuable assistance rendered by the department workshop in fabricating and erecting the experimental facility is heartily appreciated. This team consisted of Messrs. W. Schindler, A. Sawczuk, G. Scott and J. Sitasz. The meticulous effort of Mr. R. Roszak in typing and organizing this report brought it to its present final form. Mr. George Cinquegrane of Pittsburgh Energy Technology Center very willingly offered his cooperation in timely sorting out all the technical and administrative matters relating to this contract and it is a pleasure to record our appreciation for this much needed assistance.

☆U.S. GOVERNMENT PRINTING OFFICE: 1991 .548-138/40053