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SUBJECT: Cocurrent Three-Phase Fluidized Bed, Part 2  
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ABSTRACT

Operating characteristics and gas-liquid mass transfer have been examined in a cocurrent three-phase fluidized bed using an air-carbon dioxide gas mixture, water, and three packings. Minimum fluidization velocities were determined, but correlation of the volume fraction of each phase with packing characteristics was only successful for the solids due to scatter in the data. Several improvements are suggested. The concentration profile for 4x8 mesh alumina beads approximated a plug flow model, and the  $K_L a$  was about twice that for 0.25-in. Plexiglas spheres whose profile approached a CSTR model. The  $K_L a$  and the degree of dispersion for a bubble column at similar flow conditions were between values found for the columns containing alumina and Plexiglas packings.

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