

### Correlation on transport velocity in an inclined fluidized bed

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The effect of angle on transport velocity of Geldart's A, B, C and D particles (22  $\mu\text{m}$  ~872  $\mu\text{m}$  in mean diameter) was investigated in an inclined fluidized bed (0.05 m-i.d. and 1 m in height) made of plexi glass. The transport velocity was measured by using the emptying time method. The transport velocity ( $u_{tr}$ ) increased with decreasing the riser angle from the horizontal plane. The effect of angle depended on Archimedes number. The vertical component of measured transport velocity ( $u_{tr}$ ) decreased after an initial increase and a maximum for an angle ( $\Theta_{max}$ ) as the angle increased. Correlations for predicting the angular effect were proposed successfully.