Di Felice, R.

A relationship for the wall effect on the settling velocity of a sphere at any flow regime.

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Summary: By using a fluid dynamic analogy between a single particle in a tube and a multiparticle suspension previously derived, a relationship for the wall effect on the terminal settling velocity of a single particle in a cylindrical tube is obtained. Unlike previous relationships, this one is valid for any flow regime, from viscous to fully inertial, and it is in good agreement with experimental evidence.

MSC:

76Txx Multiphase and multicomponent flows

Keywords:

terminal settling velocity; wall effect; viscous flow; inertial flow

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