

Hui Zhan, MEng., CFD modelling of liquid-solid circulating fluidized bed, The University of Western Ontario, December 2005 (co-supervised, with C Zhang).

Abstract

The flow in a liquid-solid circulating fluidized bed (LSCFB) was described in terms of a turbulent model for liquid phase and kinetic theory for solid phase. Hydrodynamics Simulations of three flows with different operating parameters were given out using FLUENT 6.2. The computational results of one case agreed with the experimental data. The results of the other two cases showed a reasonable tendency for the different fluid/solid in the same LSCFB. Boundary and relaxation setting techniques involved in the CFD modeling were also discussed.