

159c Particle Velocity Measurements in a Circulating Fluidized Bed

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In this investigation a fiber-optic probe is used to measure particle velocities as a function of radial position in a cold flow circulating fluidized bed (CFCFB) in operation at the National Energy Technology Laboratory (NETL). Measurements were taken at three different axial heights and under nine separate operating conditions using nominal 800 micron cork particles. Experimental results were compared to predictions from the Eulerian-Eulerian models MFI (Multiphase Flow with Interphase eXchanges; www.mfi.org) and the commercial code Fluent. Mesh resolution, solids boundary conditions, and granular temperature models are evaluated against the experimental data.