# jmp97

## Final

During the Fall 2008 semester I have worked on the Flocculator Research Design Team. Most of the research and analysis has been completed jointly with my research partner, Yong Sheng Khoo. We meet twice a week in the Swanson Computer Lab to work on the weekly tasks. As described by the schedule and the weekly meetings, we have researched turbulence models, developed a UDF function to extract the G-pheta value, created multiple turn geometries, created automatic scripts to generate meshes in GAMBIT (Yong) and set up and run cases in FLUENT. Additionally, since the mid-term, the flo cculation tank geometry has been optimized based on uniformity of energy dissipation, performance parameters have been calculated, sensitivity to Reynolds number has been determined for the optimal geometry and the profile of energy dissipation has been categorized for different geometries. The above results have mainly been a collaborative effort.

Individually, I have examined the development of turbulence models by reading background literature including *Turbulence Modeling for CFD*by Wilcox, and *Fundamentals of Turbulence Modeling* by Chen. Additionally I have looked for the tie in between shear stress and floc particle to relate the resulting shear stress plots to floc sizes.

| Content created by Anonymous |
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| There are no pages at the moment. |