

# jks33

## Jalal Khalid Siddiqui's Individual Contribution Page

### Fall 2009 Contributions

In the Fall '09, I worked on the Design Team and have been developing an algorithm to size orifices to rapid mix. I have almost finished developing an algorithm that will size the orifices of rapid mix. The functions that will be used to size those orifices are completed. These orifices were sized based on the new configuration where the micro mixing orifices would be before the pipe bend. This would allow for a greater facility of removal. The macro mixing orifices were sized based on our initial assumption of having a minor loss coefficient  $K$  of 1.3 and the equations for minor loss coefficient for submerged orifices. The total head loss through the orifices were said to be 20 - 50 cm maximum and most of them would be from the micro-mixing orifice. With this in mind, I designed an algorithm that allows the user to select a constraint on the macro-mixing orifice and this will be used to change the pipe size. The results of this algorithm are [here](#). My current task is now developing an AutoCAD of the entrance tank and the rapid mixer system.

### Pages Created