

htk5

Harrison Ko's Individual Contribution Page

Spring 2010 Contributions

I have worked on changing up the prototype doser design to more properly fit the needs for operation and the competition. I have done this by working with the AutoCAD plugin with 80/20 parts and by doing some work with cutting plastic plates for the doser frame. In addition, I have worked on the rotameter experiment to characterize the head loss through the rotameter to determine its viability for use in the AguaClara plants. This experiment can be seen in detail on the [Rotameter Head Loss Experiment](#) page.

Furthermore, I have also edited the [Orifice Sizes and the Dual Scale for the Lever Arm](#) page.

Also, I drew up the CAD drawing for the current doser design that is being used in Agalteca. This was done from photographs since I had no other specifications under which to base the drawing off of.

Finally, I was a part of the team that competed at the EPA P3 competition in late April where we managed to be one of the award winners. That project required a lot of writing, presenting, and preparation overall.

Fall 2009 Contributions

I have been working with the Non-Linear Chemical Doser team to design a new non-linear alum doser. The first thing I did was to create a spreadsheet to help with lever length and angle calculations, this helped us determine the necessary lengths for both sides of the lever arm. I also began learning MathCAD using the MathCAD tutorial from the AguaClara wiki. More recently however, I have devoted the vast majority of my time working on the prototype design that is to be presented at the EP3 conference in the spring. The work I have done is primarily on AutoCAD. Monica and I have been through many designs and drawings on AutoCAD, and each design appears to have it's own issues. Working on this prototype has also helped with the rest of the design process since problems that we had not previously foreseen were brought to life during the drawing of our actual doser system. Most of my work can be seen on the [Prototype Doser Frame Page](#).

We made many versions of the prototype doser frame, constantly making changes as we thought of new things. Also, we had to wait until we figured out all the details of the lever arm and the head loss throughout the plant before we could safely say that our prototype doser frame was designed to the right specifications. Our main concerns for the prototype doser frame were the functionality and price. We also took certain aspects such as appearance into consideration since we are planning on entering it in the EP3 competition. We eventually agreed on a final design and ordered the parts.

Most recently we completed the construction of the prototype doser frame. Fortunately our drawing worked out to perfection and we were able to assemble it together in a relatively short amount of time. The only thing that is left to do is to attach all the hydraulics and to test the device.

Pages Created

Content created by Anonymous

There are no pages at the moment.

[Prototype Doser Frame Page](#)