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Rudra Koul's Individual Contribution Page

Fall 2012 Contributions

I was a member of the Linear Chemical Dose Controller ([LCDC](#)) team for the Fall 2012 semester. The challenges for the LCDC team this semester were to fabricate, refine, and test a lever arm assembly.

After fabrication of the lever arm assembly, the team organized for the parts to be anodized with a label, scale, and AguaClara logo engraved on the lever arm. The weight design was modified, in addition. Both of these adjustments in fabrication were done in order to create an aesthetically pleasing device.

To test the lever arm assembly for linearity, the team created a model CDC setup. In this set up the drop tube connection was redesigned to reduce leakage and an extra cross bracing was added to the lever arm assembly to reduce bending of the lever arms. A calibration device was also added to enable fine-tuned adjustments.

Upon testing the entire CDC setup, we concluded that our lever arm assembly was linear in its dosing.

Winter 2013 Contributions

During Winter 2013 I traveled with my Fall 2012 LCDC team to Honduras where we delivered our fabricated lever arm assembly to Agua Para el Pueblo.

Spring 2013 Contributions

For the Spring 2013 semester, I am a member of the [Coagulant Management](#) team which is responsible for fabricating a more efficient coagulant injector, testing for a practical maximum coagulant concentration and stock tank mixing, and testing a stock tank centrifugal pump mixing system. In addition, if time permits, we will be looking into other forms of stock tank mixing.