

# yh696

## Yinghan Hua's Individual Contribution Page

### Fall 2016 Semester Contributions

During this semester I'm a team member in the Prefab 1L/s team. I participated the construction of the sedimentation tank of the 1L/s plant. I was specifically working to help set up the corrugated 3-feet diameter pipe and cut the pipe at an angle of 15 degree. The cut of the pipe was inaccurate and we corrected that by setting up the jig for the pipe again and cutting another time for each half pipe, which made the two pieces of our sedimentation tank around one width of the corrugation on the pipe shorter than the plant which the summer team built. I also worked to analyze the geometry of the base plates of the sedimentation tank and construct the base plates and the jet reverser. We cut the base plates using the calculations of the parameters of the ellipse, but the plates we got the first time cannot fit into the sedimentation tank properly. We figured out that it is because we didn't take into account the space taken by the jet reverser, on which the base plates should be sitting. So we corrected that and did the drawing of the new ellipses again and this time we got the right shape of the ellipse, which can be fit into the sedimentation tank perfectly. After this, we welded the base plates and the jet reverser together at the angle of 60 degree and obtained the structure to be ready to put into the bottom of the sedimentation tank.

This semester I am a new member in the Prefab 1L/s team. Our team goal is to construct a new 1L/s plant which has a more simplified design for the flocculator and a optimized overall structure. For my part, I want to use my higher level of graduate knowledge background to contribute solutions and ideas to my team.

Until now I've participated in the pipe cutting part of work in our team. We set up the pipe at right position and right angle, using the jig built by summer team to do the cutting. However, the first cut was not accurate and thus made the welding infeasible. So we had to do separate cutting on each half piece. By doing that, we moved the jig about one corrugation width of the pipe on both pieces, which means our pipe was shortened comparing with summer team's work. The angle-setting of this second time cutting became a tricky problem because we found that the jig was actually not very flat by itself. According to what Monroe had told us, we chose to ignore some little errors and were trying to make sure that they were as little as possible so as not to affect the welding. Right now we just finished the second cutting of each pieces and were ready to do the welding and construct the inside construction and design the flocculator.