Peyton Brack Met 330 Test reflation 3

1

This test demonstrates my work towards the course objective of computing friction loss in series and parallel pipes. Both problems in this test had to do with series or parallel pipes. I believe this test deepened my knowledge on how to overcome problems that include these aspects.

2

Unfortunately, I did not specify on which problem I wanted graded and what problem should be extra credit. So for this reflection I will grade problem two as the selected problem. The real reason for this is that I was stupid and did not real the whole test and did both problems. For the second problem many mistakes were made. As I found a flow rate of 0.2 for part 1 when the actual flow rate was 0.003. For this problem I attempted an iteration process that led me nowhere, that is why there is so much marked in red. I believe I was led astray because instead of assuming the friction factor, I assumed the flow rate. Because of this my whole iteration process was thrown off. I though the information given was enough to calculate the friction factor. Overall, I just messed up the iteration process. This was my biggest downfall.

3

PROBLEM or 2)

1.	Reasonable assumptions (reductions, valve, tubing diam, lengths)	1/10
2.	Apply Bernoulli twice or get 2 equations from Bernoulli	1/10
3.	Consider ALL minor losses? Handled them correctly?	1/10
4.	Handled correctly the pipe losses? (0/10
5.	Obtained 3 equations with 3 unknowns?	0/10

 6. Solved system of equations correctly (Excel?)?
 0/10

 7. Final results
 0/10

 TOTAL

 (90)*(3/10) = 30

I give myself a zero for problem 1 extra credit.

4

One issue I encountered during this test was finding the correct equations through Bernoulli's. This has been a problem for me the whole semester. I though I trouble shot this problem by going over my found equation twice, but I guess this was to no avail. To complete this whole test, I used the textbook wherever I could. I think I should have relied on my notes more, as they would have shown the more efficient way to solve this problem, using the professor's method. One new concept I learned was how to properly use the iterative process when it comes to parallel. The method I used was completely wrong, and after looking over the correct way I believe it has pushed me in the right direction. I think engineers use this when they are designing pipe systems. I believe I could use this in the field when I have to design a pipe system. I believe everything in this class is very important to my professional career. This class has been one of the most interesting and though provoking class I have taken in college so far. This courses content has not yet intersected in my work, but I am using the portfolio in an interview very soon so that might change. Overall, I spent about 15 hours on this test. I think I organized my time efficiently. I had to fit this test into a window of two days, because it was so close to tests in other classes.