Colby Watts

330 Test 3 Reflection

4/14/24

Professor Ayala

1) This test demonstrates towards the series of pipelines as well as energy losses in pipes, as well as Bernoulli's principle.

2) The first thing I did wrong was I gathered my values in feet and not meters or millimeters. My values for reduction, expansion, and friction factors are wrong as well besides for . We did assume the temperature of the water so I chose 70 degrees Fahrenheit and the correct solution is 77 degrees Fahrenheit or 25 degrees Celsius. I never calculated for the energy loss in the tee run but I did calculate for reduction, expansion, tee loss and elbow loss. I did iterate correctly but my Bernoulli's equation is a lot different. I do feel as if I made the correct assumptions. The only value I did not calculate for was

3) What my grade should be.

PROBLEM 1 or 2)

1.	Reasonable assumptions (reductions, valve, tubing diam, lengths) 1/10	1/10 out of
2.	Apply Bernoulli twice or get 2 equations from Bernoulli 1/10	1/10 out of
3.	Consider ALL minor losses? Handled them correctly? of 2/10	1.8/10 out
4.	Handled correctly the pipe losses? 1/10	1/10 out of
5.	Obtained 3 equations with 3 unknowns? 1/10	1/10 out of
6.	Solved system of equations correctly (Excel?)? of 3/10	2.6/10 out
7.	Final results of 1/10	.8/10 out
TOTAL of 10/10		9.2/10 out

FINAL GRADE:

 $(90)^*(9.2/10) = 82.8$

4) Discuss the following:

a. The issues I encountered the most was friction values for the elbows and tees as well as the reduction and expansion as well as excel because it can be finnicky a lot.

b. What I changed was taking the full allotted for the test and not waiting till the last three days to start it so I can troubleshoot any problems.

c. I have learned how to solve for a series of parallel pipelines.

d. Engineers use these concepts when designing pipeline systems whether its for buildings or large municipal work.

e. Hopefully I will be using this in my internship this summer.

f. I think anything I learn is valuable towards my professional career.

g. I would use this in any line of work that has to do with the flow of fluids.

h. I have not but hopefully this summer I will.

i. I felt most successful when iterating my values for Q on excel and excel has grown on me a lot more.

j. This course will intersect very well with my course of work.

k. I would say I spent a good 12 hours over the span of a week and including the pre-test work which saved me a lot of time.