Test 1 Reflection
MET 330
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1. In problem 1a. Bernoulli's equation was needed as well as Q=VA. In the question, we used Bernoulli's to solve for "h" we also commuted the energy loss due to the pipe, ½ open gate valve, and the 90-degree elbow. In 1b, Solving for "gamma*h" is the central concept of finding the volume of mercury needed in the certain sized U-tube to make sure the mercury stays in the manometer. In 1c. Using the height from 1a. to find 1% of the height to then calculate the diameter using the volume of a cylinder formula.

Problem 2 is using all of the same formulas and concepts to determine the manometer reading with a different gate as well as the minor losses and depth after 10 minutes of running with the ¼ open gate using excel.

2. When comparing my answer to questions 1a-1c, my calculations were very similar, for questions 1a and 1c very thing besides different rounding was extremely close. In question 1b the main issue I had is I did not consider the tube having to drop down to eye level. Also if I were to retake this exam and for future exams, I would tell myself to try not over complicate things. In question two I made small mistakes. I am not the best with excel and I believe this was a big contributor to these mistakes.

3. If my math was correct in calculating my grade it should be around 77-78 percent including the 8.67 points from the homework. I definitely let my stress get the better of me.

4a. The biggest issue I had was running into a wall and overthinking. I used examples from the book and from the modules to get over those walls

B. I looked at the test for a fairly long time before writing anything down. This helped me from getting to ahead of myself. I would start working on it sooner rather than later.

C. Problem-solving skills I did not know I needed as well as working with U-tube manometers.

D. In every tank whether it is oil, gas, or water engineers use the concepts of Bernoulli"s, minor losses, and U-tubes regularly.

E. Personally I am not sure where I would use it but in every plant in the world, they use one if not all of the concepts.

F. Yes and no, I have done all of my internships in HVAC so I will definitely see Bernoulli's dealing with pressures.

G. If I follow the HVAC route, maybe when looking at which systems would be best for a certain job.

H. I have taken both Thermodynamics and there is definitely a crossover between the two. This semester I do not have any other courses that really crossover besides the lab (obviously).

I. In the beginning I really struggled with absorbing the information in this course well due to having a lot going on with all of my other classes as well as life in general, but I feel like it is improving.

J. Like I said previously, If I followed HVAC there is definitely a crossover.

K. I spent 3-4 days on the test. If I could retake it I would have started a day or two sooner. Also, this exam's last day fell on the Superbowl so that did not help my focus either.