Test 3 Reflection

MET 330

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1. In this test I was given two variations of parallel pipe systems where I had to find the flow rate in each branch as well as the total flow rate. In this procedure deriving Bernoulli's equation and then determine the equation for energy losses through the system are objectives in this course.

2. Compared to the given solutions my process is similar with different outcomes. I did not set up the figure in question one with four different sections. That and having slightly different energy losses equations lead to me calculating the wrong answer with my final equations. If I were to retake this test some advice, I would give is to focus on the energy equations more before worrying about the calculations I would get.

3.

1st PROBLEM)

1.	Label branches and put reference	1/8 out of ⅛	**1/8**
2.	Apply Bernoulli's correctly and get two equation	2/8 out of 2/8	**2/8**
3.	Define energy losses for both branches	2/8 out of 2/8	**2/8**
4.	Get flow rate (iteration process)	2/8 out of 2/8	**2/8**
5.	Correct results?	1/8 out of ⅛	**0/8**

7/8

2nd PROBLEM

1.	Label new branches	1/6 out of ⅙	**1/6**
2.	Get new third equation	1/6 out of ⅙	**1/6**
3.	Modify conservation of mass equation	1/6 out of ⅙	**.5/6**
4.	Manipulate equations appropriately	1/6 out of ⅙	**1/6**
5.	Get flow rate (iteration process)	1/6 out of ⅙	**1/6**
6.	Correct results?	1/6 out of ⅙	**0/6**

4.5/6

FINAL GRADE:

If getting everything right:

(90/2)*(8/8 + 6/6) = 90

(90/2)*(⅞+4.⅚)= 73.1
Homework= 6.5
Total= 79 to 80

4.
   A. I struggled finding the right way to derive Bernoulli's equation and also with stressing or overthinking every moving part involved with this test.

B. I got ahead of myself when I first started the test. After asking my professor I was able to slow down and restart my steps a few times after I realized I made mistakes. Drawing, References, Bernoulli's, Energy losses, and iterate.

C. The main concept I learned was Parallel Pipe Systems. This test also improved other course objectives like Bernoulli's equation energy loss equations.

D. Think Engineers use this concept everyday when dealing with basically any system moving a fluid. That could be pump stations or most plant locations if not all of them.

E. If I follow the HVAC route, I will use similar concepts when picking duct sizes to get a certain CFM.

F. Depending on which area I choose to pursue this concept could be very beneficial. Knowing where a programs answers are coming from is extremely beneficial.

G. Like I said above it all depends on which are I choose to pursue and if it involves pipe systems.

H. I would not say I have been able to apply this concept, but I can definitely make connections to certain parts of courses I have taken.

I. The process to getting my flow rate equations improved from the last two test.

J. Like I said above in E, F, and G If I go HVAC I would see similar concepts, but if I go into basically anything dealing with pipe systems I should most definitely deal with this concept.

K. In total I spent between a solid 10 hours on this test give or take an hour or two. I would not do anything different besides having to restart from scratch multiple times.