

1. Writing Rubric

- a. Purpose
 - i. 0.5: The Purpose of each section was correctly stated
- b. Drawings
 - i. 1.0: Diagrams provided are sufficient and depict the scenarios accurately
- c. Sources
 - i. 1.0 Sources were provided for all problems
- d. Design and Considerations
 - i. 1.0 Reasonable assumptions and considerations were provided
- e. Data and Variables
 - i. 1.0: Relevant Data and Variables Were Provided for all Problems
- f. Procedure and Calculations: 3/10: Mostly Correct but with some errors
 - i. Part 1
 1. Procedure is correct and well described. The Small Difference in result is due to using slightly different pressures for the Container. A pressure was of 64 psi were use derived from a graph from the last exam. I redid Bernulis. In which I used the Friction factor chart which could have resulted in a slightly different friction factor.
 2. 1/25, 1/25, 1/25
 - ii. Part 2
 1. Procedure is partially correct. I did not account for the force of gravity. Also I did not account for the force of gravity in the y direction.
 2. 0.75/25, 0.5/25, 0.5/25
 - iii. Part 3
 1. This Problems Procedure was mostly correct. The only error in procedure was an incorrect formula for the C value.
 2. 1/25, 0.5/25
 - iv. Part 4
 1. Wave velocity formula was correct, but several variables are wrong. C value incorrect. Based on the C value though the pressure increases, and P max were correct. The pipe thickness was incorrect as a result. Cavitation comparison was correct
 2. 0.5/25, 1/25, 0.25/25, 1/25
 - v. Part 5
 1. My dimensions and stipulations were reasonable, and my calculations are in the ballpark of the calculations conducted in the exam answers.
 2. 1/25, 1/25, 1/25
 - vi. Part 6
 1. This problem was very divergent. The equation for drag force is the same between the answer and the submission. A point of major divergence is the Drag coefficient. I used the one provided in the book for a cylinder and the read out was 0.86. as opposed to 3. Which could have been wrong on my end. Other wise a potentially pour unit conversion with slugs could have cause error.
 2. 1/25, 1/25, 0.25/25
 - vii. Part 7

1. For this problem the equation was mostly correct thought I failed to account for $\pi/4$ I instead used π . Given that, my results are correct though. Also, I intuited that the cg would be above the water based on my experience at water parks.
 2. $1/25, 0.5/25, 1/25$
- viii. Correct Results
1. $2/25$
- g. Summary
- i. 0.25 Summary was subpar. Still a bit misunderstood in the format. Analysis and Summary were combined a bit.
- h. Materials
- i. 0.5: materials were listed in full
- i. Analysis
- i. 0.75: analysis was mostly solid though some issues of clarity occurred.
- j. Final Grade 69/90 or 76%

Summary

Overall, I'm very happy with the result of this exam. Considering I thought that I deserved a 3% on my last reflection I'm over the moon. I defiantly could have done better but time constraints of the week made it really tuff. Most of my errors were due to slight inaccuracies in the equations or variable or due to an oversight in missing some force or element. Its kinda funny to me. My first exam I took a look at the problems and thought to myself "Oh no, I don't know what I'm doing this is horrible." and when it came time for this exam I took a look at the questions and initially thought to myself "Oh no, I think I know what to do here. This is horrible." When ever I feel like I know what I'm doing I always feel as if I'm missing something. I think to my self "Well you're an idiot so if you think you know what's going on you clearly are wrong" and while a 76% is just an ok grade I do believe that my Ideas were correct in how I approached these problems even if the numbers and variable pulls did not always work out`