

Michael Delacruz

Exam 1 Reflection

MET 330

Professor Ayala

Exam 1 began to develop my skills regarding the computation of pressure, and the forces associated with stagnant fluid. It also helped develop the insight on buoyancy of a floating or submerged object. This exam also helped define the nature of fluids and the different properties of different fluids. These objectives are demonstrated using equations such as $\Delta p = \gamma h$ to find pressure given the height and specific weight of a fluid.

In problem 1, I applied a different method from the one in the solution. I chose to use $\Delta p = \gamma h$ for mercury, water and gasoline. I then summed up each Δp to find the air pressure of the system. Then for part 2 of problem 1, I set the Δp of mercury equal to zero and summed up the remaining pressure. It was a different method and a similar answer. In Problem 2, I believe my biggest problem was the setup. I believe that setting up the view that I was solving for completely affected the rest of my answers. In my opinion, this was the hardest of the three questions. My only problem with problem 3, was I added extra steps that were not necessarily required in achieving the final answer. This made the problem just a bit more difficult to work out but, in the end, I achieved the right answer, albeit with some minor variances in the

rounding. Based on the writing rubric, I would give myself a 7-8/10, because of some shortcomings regarding the procedure and analysis.

This exam taught me concepts of stability and buoyancy and pressure in tanks. Engineers would typically use the concepts of buoyancy and stability in the design of ships and buoys, among others. The things I learned may be applied to design of fluid storage systems and designs of boats. It is important to know these concepts for potential careers in the Navy, shipbuilding, pipe designs, tank designs, etc. I feel as though I have improved in the analyzation of the problem and the visualization of a problem. This course may intersect in my career interests of the merchant marines. The content of this course can help in analyzing problems on a specific ship, the pressure at a given point on the ship, and even how to design a certain ship. All-in-all, I feel as though I have truly grown as this course has progressed, and I hope that my shortcomings from this first exam becomes a step forward in the right direction.