



FLENSE MODEL 4

Lab Report #9

Date: 9/2/2022

Test Conductor: Vincent Sadowski and Jack Charles

Location: Behind the apartment building

Time: Start – 10:00AM **Finish** – 2:00PM

Amount of Water: 32 oz. of water

Objective(s): To measure the distance of the steam can travel through the tubing and into the jar.

Product(s): Fresnel Lens #3 – **Stainless steel regular size bowl with a hole** – Water 32 oz. – Pink Tubing - Thermometer – Pen – Notepad – Time watch – **Glass Dome Model #5 (No Tubing attached)** – **Glass Cup** – Glass Jar – Red Marker.

Water Temperature Test: Before – $24.88889^{\circ}\text{C} = 76.80^{\circ}\text{F}$ **After** – $78.77778^{\circ}\text{C} = 173.80^{\circ}\text{F}$

Report Detail:

- For this test, there were a few changes on the dome glass, but it is attached to the bowl. The pink tubing inside the bowl that collects water, both ends are attached to the main tubing. The original glass triangle on the dome that was used to attach the tubing was replaced by the aluminum foil. The bottom of the glass dome was added with the aluminum foil to support and direct clean water to travel into the pink tubing. Lastly, a small glass cup with the aluminum foil attached to cover the cup was replaced with the glass jar. The test began at 10:00 AM. At 10:03 AM, the glass dome began to form fog as the water inside the bowl got hot. At 10:18 AM, the fog that is sticking on the glass dome began to turn into liquid form. At 11:25 AM, the fog began to appear halfway into the tubing. At 11:30 AM, after doing some checking on the dome, it's confirmed that while checking, the hole size that was drilled through the silver bowl is larger than the size of the tubing. Because of this incident, this affects the result of collecting new water because the tubing doesn't collect enough fog to turn into new water. To solve this



issue, the glass cup was replaced with the old glass jar and lowered it in into a laying down position in order to position the tubing to cover the partial hole. At 11:45 AM, the first mark was marked on the tubing (show signs of the fog entering into the tubing). At 12:05 PM, the fog inside the tubing slowly turned into liquid form. At 12:20PM, the second mark was marked, the rest of the previous marked continues to turn into liquid form. **At 12:30 PM, the liquid form inside the tubing finally makes its way into the jar – allowing the jar to collect and hold new clean water for the very first time throughout the project.** At 12:33 PM, the third mark was marked halfway of the tubing. At 1:08 PM, the fourth mark was marked. At 2:00 PM, the test is over. Although there was a problem with the tubing earlier of the test – with quick easy fix, the test was able to resume without any further damage to the model, performance and loss of time to fix the problem. One thing was found during this test was that very small amount of water was able to go through all the process and create from old water into new water. With this new discovery of this new performance, the conclusion is that once again, throughout this test – it's a slow process – however, as the project progress, there has been tremendous progress made.

NEW DISCOVERY – At 12:30 PM, the liquid form inside the tubing finally makes its way into the jar – allowing the jar to collect and hold new clean water for the very first time throughout the project.

1. **During this test, there was water inside the glass jar.**

Conclusion:

- At 2:00 PM, the test is over. Although there was a problem with the tubing earlier of the test – with quick easy fix, the test was able to resume without any further damage to the model, performance and loss of time to fix the problem. One thing was found during this test was that very small amount of water was able to go through all the process and create from old water into new water. With this new discovery of this new performance, the conclusion is that once again, throughout this test – it's a slow process – however, as the project progress, there has been tremendous progress made.



Problem(s):

- The tubing is too loose to fit into the hole drilled on the silver bowl due to both sizes are different.

Next Step:

- Fix the issue of the hole on the silver bowl by using the soldering method and create a smaller size. Fix the issue on realigning the setup of the pink tubing in order for its purpose be more efficient.