



FLENSE MODEL 3

Lab Report #8

Date: 8/30/2022

Test Conductor: Vincent Sadowski and Jack Charles

Location: Behind the apartment building

Time: Start – 11:10 AM **Finish** – 2:45 PM

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 – Water 32 oz. – Thermometer – Pen – Notepad – Time watch – Glass Dome Model #4 – Pink Tubing – **Red Marker.**

Water Temperature Test: Before – $26.55556^{\circ}\text{C} = 79.80^{\circ}\text{F}$ **After** – $68.3333^{\circ}\text{C} = 155.00^{\circ}\text{F}$

Report Detail:

- For this test, all the model parts will be used again. The goal for this test is to measure the distance the steam travels through the tubing within the 4-hour test using the red marker to mark on the tubing for every 30 minutes or so. The test began at 11:10 AM. At 11:20 AM, the fog began to appear inside the glass dome as the heat temperature inside the bowl increased. At 11:30 AM, fog also began to form inside at the entrance of the tubing. This will be the first mark of the fog enters into the tubing. At 12:30 PM, another mark was formed passing the previous mark. At this stage, all the fog at the beginning mark had turned into liquid. At 12:45 PM, one of the triangle pieces that connects to the tubing had come off. To fix the issue, applying another piece of tape was added. At 2:20 PM, the fog has finally reached the end of the tubing that's connected to the jar. At 2:30 PM, another mark was formed while all the other fog from the previous marks have turned into liquid form. At 2:45 PM, the test had to be stopped due to the partial piece of the triangle that is connected to the tubing came off twice due to high intense heat. The last mark was set at 2:45 PM which was almost 75% of the steam



covered in inside the tubing. In conclusion, although the test was stopped early, one result was evident– as the heat inside the bowl increases, the faster the steam would travel into the tubing and into the jar forming new clean water.

NEW DISCOVERY – The glue and the tape doesn't sustain itself for a long period of hours due to its high increase of heat. Also, the length of the current tubing and its curve is a bit too long. Due to its long length, the time it takes for the new water to travel to the empty jar takes longer.

1. **The length of the current tubing is a bit long and because of this, it takes longer time for the new water to transfer into the empty jar.**

Conclusion:

- In conclusion, although the test stopped early, one thing for sure is that – as the heat inside the bowl increases, the faster the steam would travel into the tubing and into the jar forming new clean water.

Problem(s):

- The glue and the tape don't sustain itself for a long period of hours due to its high increase of heat. Also, the length of the current tubing and its curve is a bit too long. Due to its long length, the time it takes for the new water to travel to the empty jar takes longer.

Next Step:

- In order to fix the issue, adding more tape to extend the stickiness to hold the model together from the high heat is needed. By doing this, it increases the durability and



the effectiveness of the tape for a long time – especially with increased heat overtime from the silver bowl Model.