**Experimental Procedure:**

The following is the procedure that our group completed by following the guidelines outlined in the document “Rankine Cycle.” We found that we did not have to deviate from the established procedure.

The steam admission valve was opened and 3500ml of de-ionized water was placed into a graduated cylinder and inserted into the filler tube in the back of the boiler. The steam admission valve was then closed and the casters were locked. The thumbscrews were removed from the turbine in order for oil to be filled to a level of 1/8 inches from the top. The load and burner switches were set to the “OFF” position. The load knob was turned fully counter clockwise. The catch tube behind the cooling tower was disposed of in a drain. The computer was turned on. The valve on the propane tank was opened. The gas valve knob, the master power switch, and the burner switch was turned to “ON.”

The “Virtual Bench” was opened on the computer. The file configuration dialog box was opened and the Filename, Username, Comments, Field Length, Precision, and Number of Lines were filled out. Next Enable Logging and Being Logging on Start were selected. OK was selected and data began logging.

When the boiler pressure approached 110 psig, the steam admission valve was opened slowly to regulate the turbine speed between 7 and 10 volts. The steam admission valve was closed after 20 seconds to rebuild pressure. When the boiler pressure reached 110 psig, the admission valve was opened and the turbine was adjusted to 9 volts. The load switch was turned “ON.” The Load knob and the steam admission valve were adjusted until the voltmeter and ammeter read 9 volts and .04 amps. The steam admission valve was closed. The load knob was turned counter clockwise and the Load switch, burner switch, gas valve, and propane tank were turned “OFF.”

The volume of condensate behind the cooling tower was measured and recorded. The boiler was left to cool down to 10 psig. The load was turned to full and the steam admission valve was opened to allow the boiler to reach atmospheric pressure. The water from the boiler was removed and measured and the steam admission valve was closed.