

# Evacuation Slide Test *Results of RR6 and Updated AC Power Controller*

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*International Aircraft Materials Fire Test Working Group  
Meeting*

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## ***Activity***

### ***Evacuation Slide Round Robin 6:***

***Tests were conducted on typical slide materials to ensure the Revised Test Method is functioning properly***

- ***2 different heaters were used for the Tests***  
***H1 = Part # 38000 and H2 = Part # 40400***
- ***3 materials were tested; 3 tests of each material***

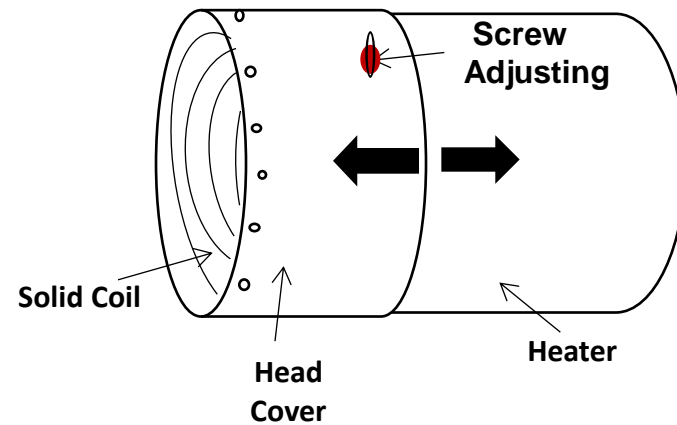
## *Heaters Used in Testing*



**Heater part # 68086038000,  
1.5-inch coil-to-face distance.**

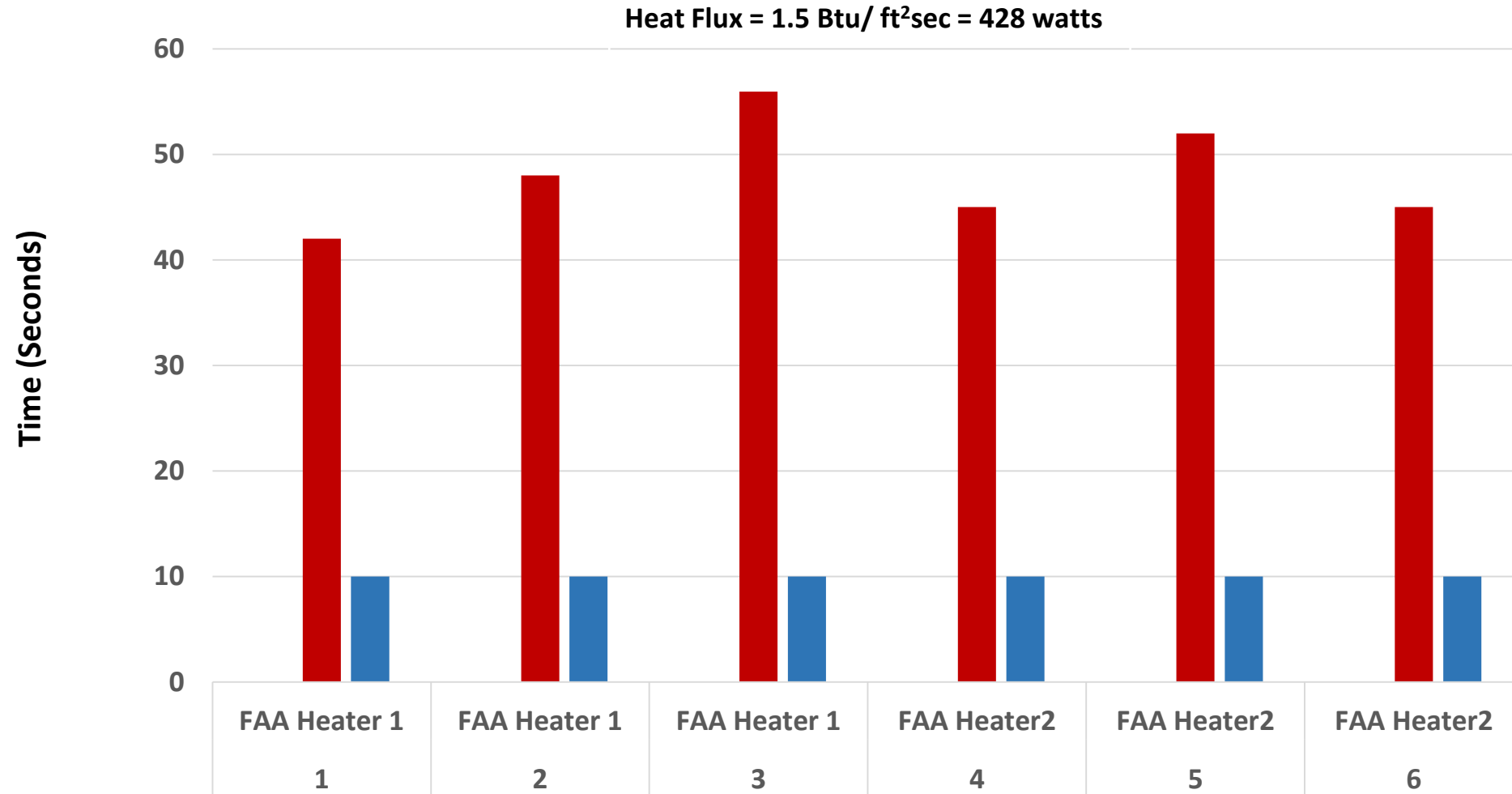
**Heater part # 68086040400,  
1.75-inch coil-to-face distance.**

*The Heater coil depth is adjustable*

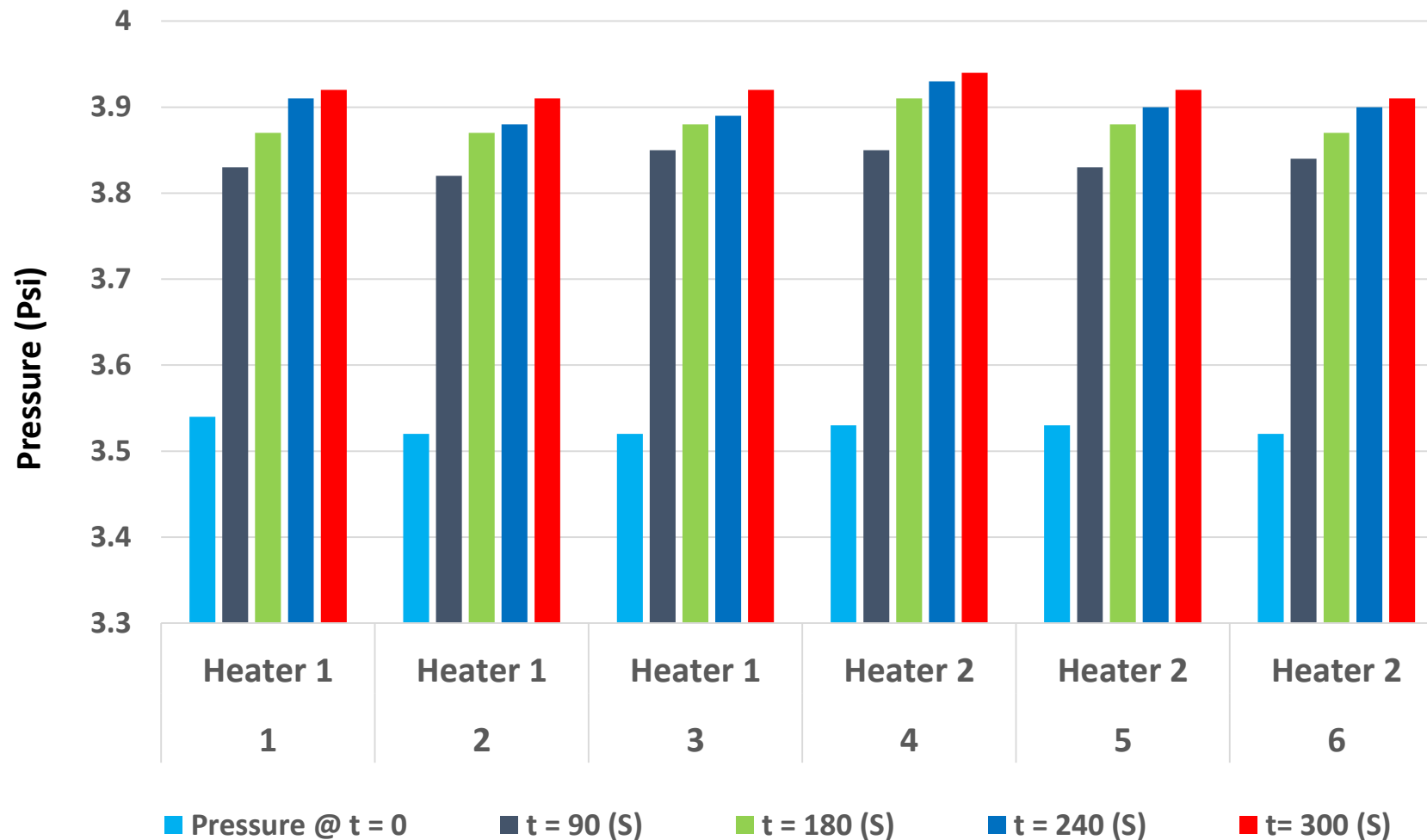


***Open the screw on the heater, and adjust the head cover until the distance of the coil from the face of the heater is 1.5" if using the heater with (Part # 68086038000) and 1.75" if using heater with (Part # 68086040400)***

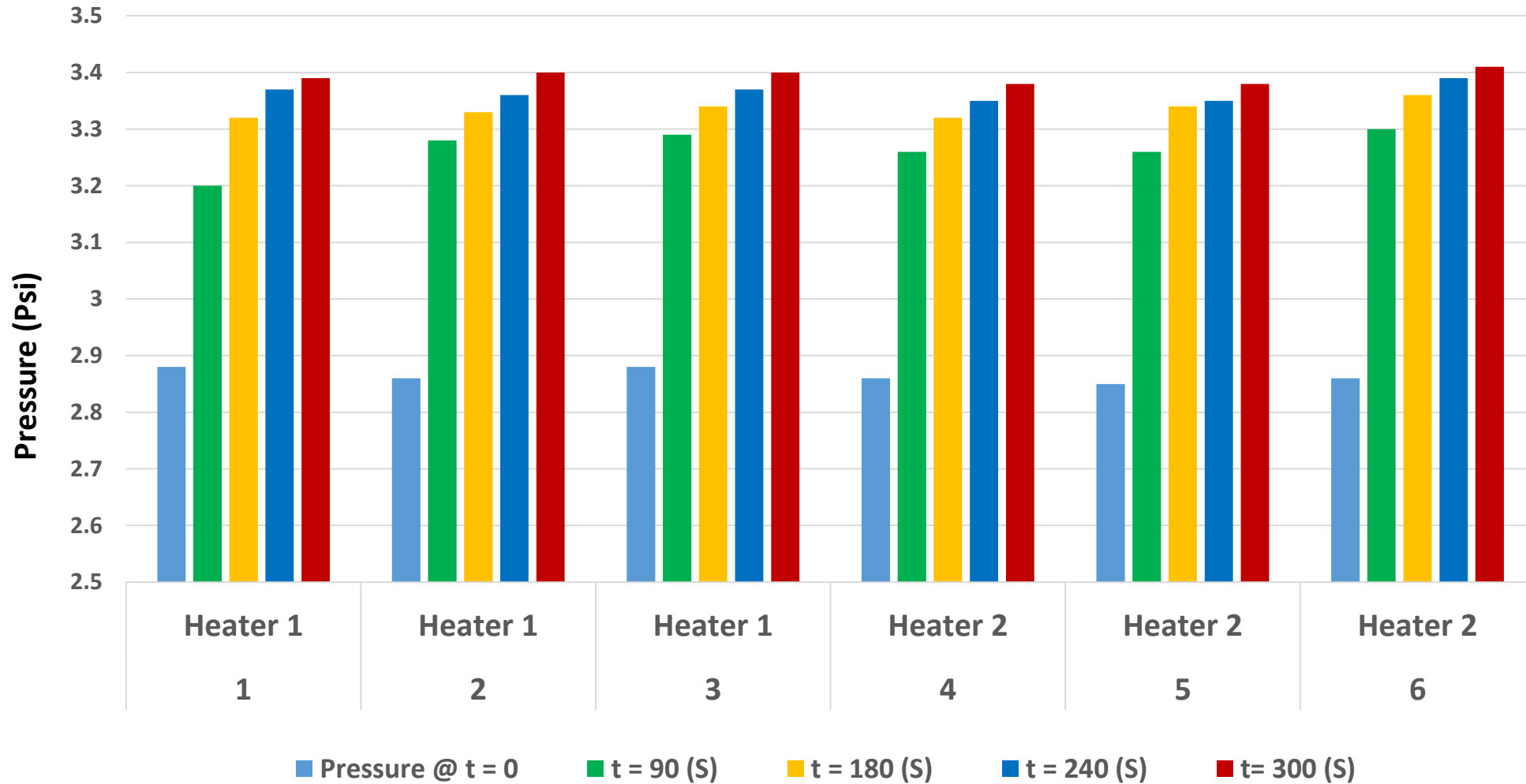
# Test Results of the Mustard / Mustard slide material to compare two different heaters



# Test Results of the Blue / Gray slide material to compare two different heaters



# Test Results of the Ivory / Gray slide material to compare two different heaters



# ***Conclusions***

***Blue / Gray Material and Ivory / Gray Material passed the tests with both heaters (Gray side faced the radiant heat).***

***Mustard / Mustard Material Failed the tests with both heaters.***

***The slide material test result correlation determined that both of the heaters are acceptable for use in the Revised Test Method, provided the coil distances are accurately adjusted.***



# ***Recent Activities***

***Preparation for additional testing using the new AC Power Controller (Keysight AC 6802A) to replace the Powerstat Voltage Regulator, which was used to control the input power of the heaters:***

- The new AC Power Controller will provide feedback control of the power input to the heater. When the power input is set to the required wattage, it will be continuously controlled throughout the duration of the test.***
- Time will be saved because the power input to the heater will be stabilized and won't be need to be monitored or adjusted. Simply set it and conduct the test. (no need for Operator to check the power input during the test).***
- Tests on additional slide materials will be conducted to evaluate the new AC Power Controller function.***

# *AC Voltage Controllers for The Power Input of Heaters*

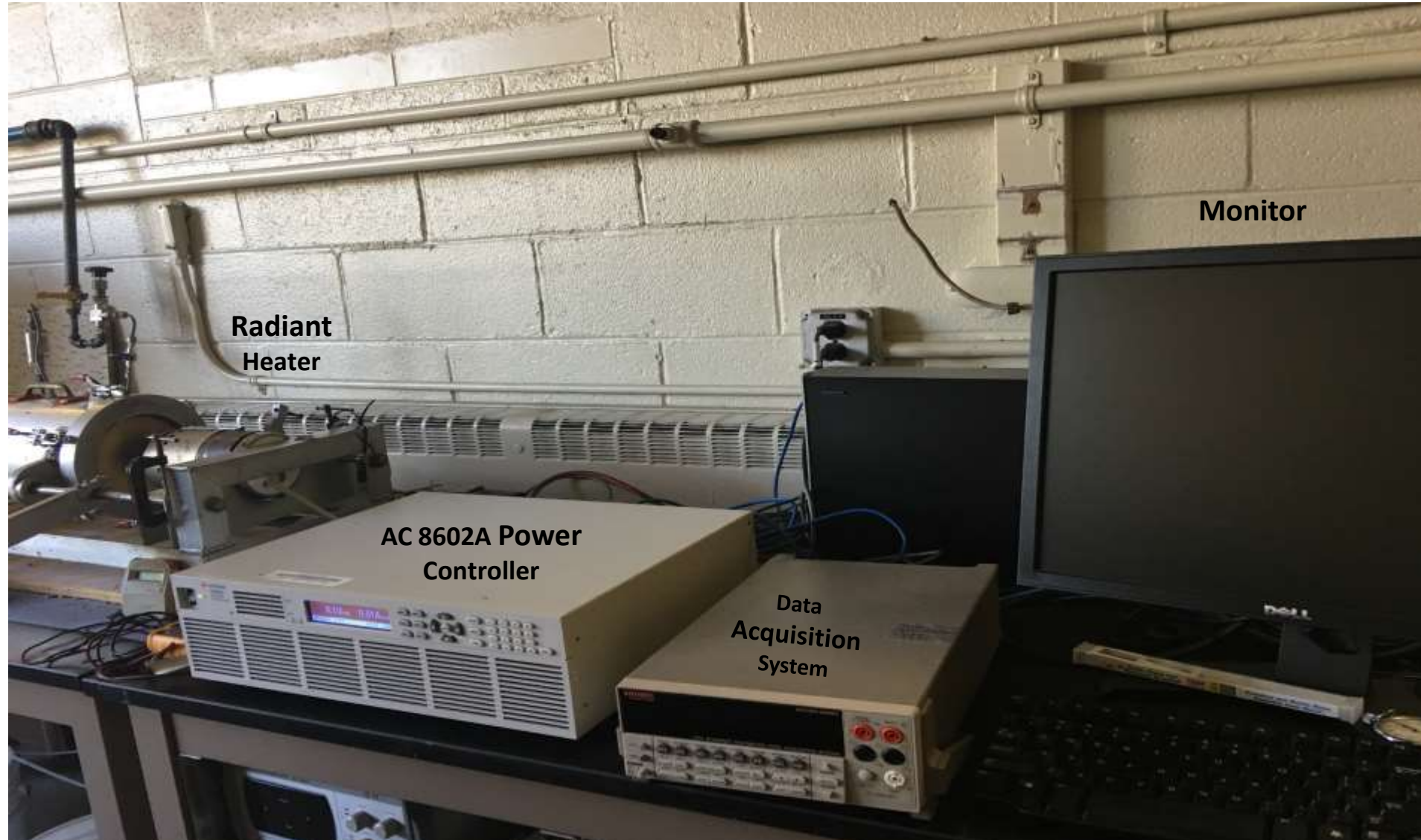
**NEW AC Power Controller  
(Keysight 6802A) \$4871**



**Powerstat Voltage  
Regulator**



***New AC Power Controller was installed for additional  
Evacuation Slide Tests***



**Radiant  
Heater**

**AC 8602A Power  
Controller**

**Data  
Acquisition  
System**

**Monitor**

## ***Future Work***

***Tests will be conducted on typical slide materials using the New AC Power Controller (Keysight AC 6802A):***

- Calibration tests will be conducted to evaluate the stabilization of the power input to the heater***
- 2 different materials will be tested***
- 3 tests on each material***

***The slide material test results will be presented at the next meeting***