



Norbert Senf <norbert.senf@gmail.com>

Milestone

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To: Norbert Senf <norbertsenf@gmail.com>

Thu, Nov 23, 2017 at 9:09 AM

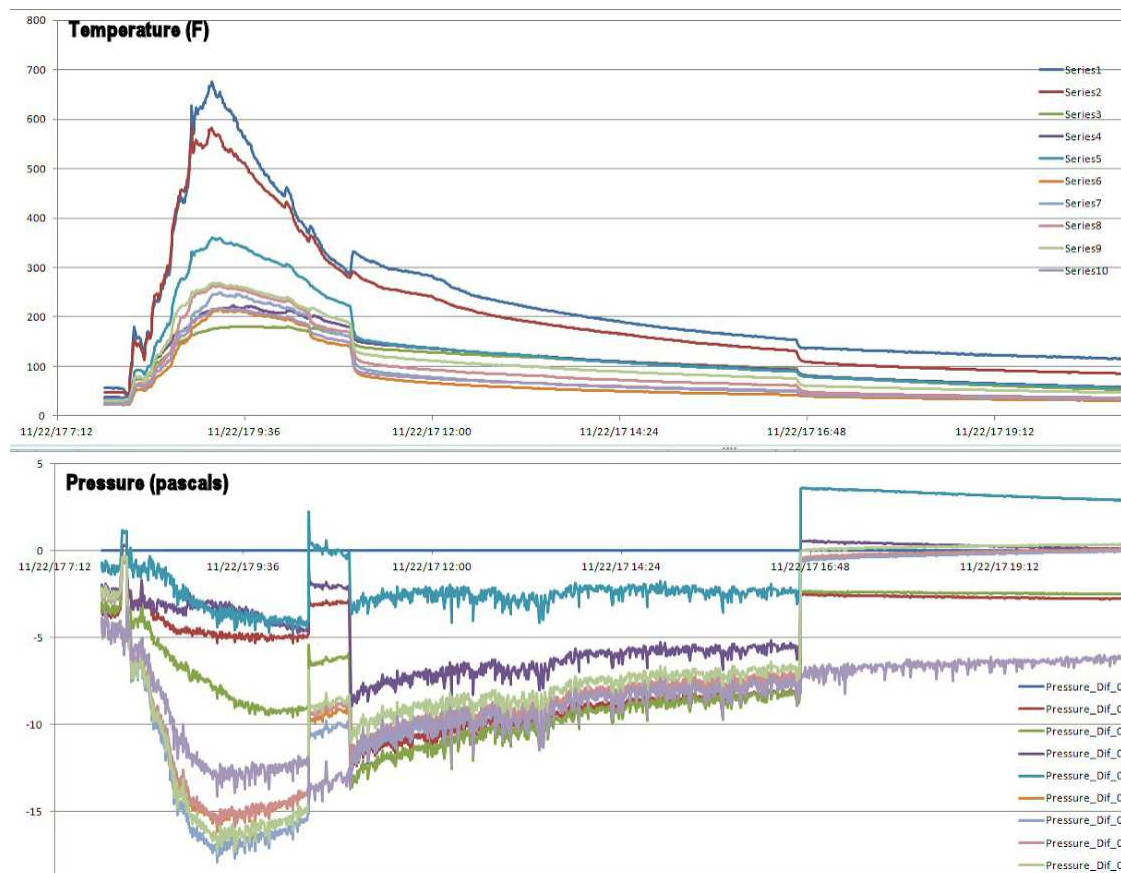
----- Forwarded message -----

From: **Norbert Senf** <norbert.senf@gmail.com>
Date: Thu, Nov 23, 2017 at 8:17 AM
Subject: Milestone
To: "mhatech@yahooogroups.com" <mhatech@yahooogroups.com>

Hi all:

Happy to report some progress in the lab. Since last winter, I have been working with Damien Lehmann in France to get the temperature and pressure sensors working. They've been working for a while, but we only started using the heater to heat the shop about 2 weeks ago.

We've got the logging working, below is a graph from yesterday, showing 10 temperature and 10 pressure channels. Roughly, the temperatures and pressures progress from sensor 1 to sensor 10 as we go from the air intake, through the heater, the bench and then into the chimney:

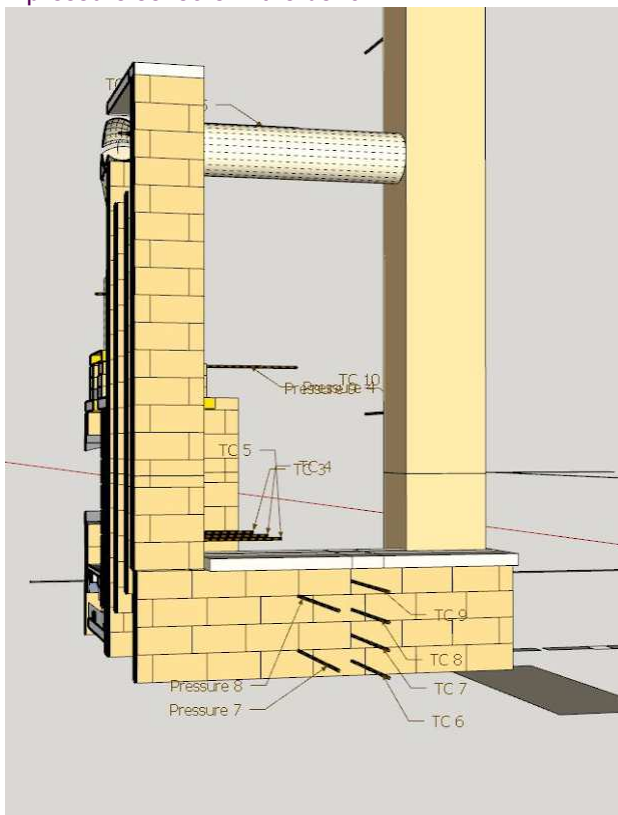


Not obvious is pressure sensor 1, which is in free air, with no differential pressure. It is the dead flat blue line at 0.

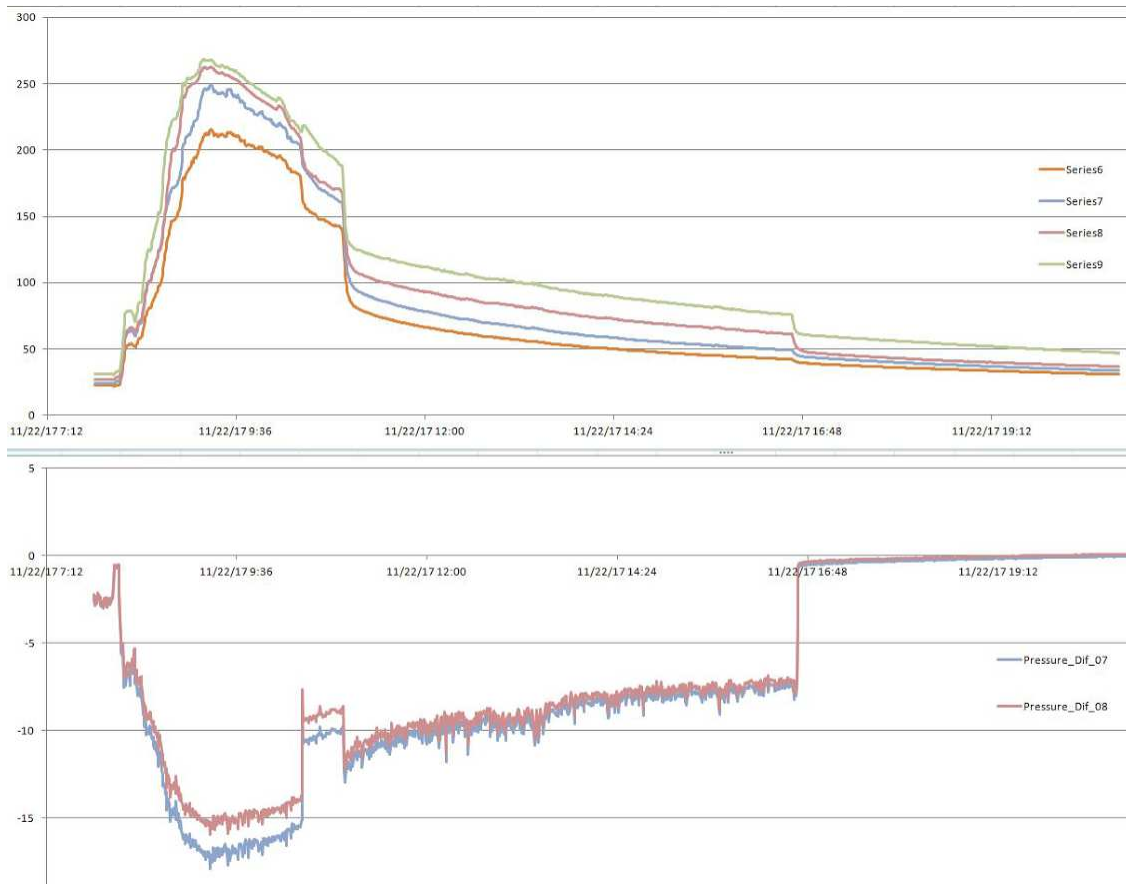
The Sensirion SDP610-025 sensors are self calibrating, with zero drift, no hysteresis and 100% repeatability at the

zero point. We had these at Wildacres last year. The jagged lines are chimney pressure fluctuations. Notice after the chimney damper is closed, everything is flat except for the chimney above the damper.

It is fun to look at, for example, the horizontal bench. Here are the locations of the 4 temperature and 2 pressure sensors in the bench:



If we plot just those channels, here is what we get:



The timeline is over about 12 hours, opening the chimney damper and lighting the heater at 8:00 am and closing the chimney damper 100% at around 4:30 pm.

Norbert

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