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brief report

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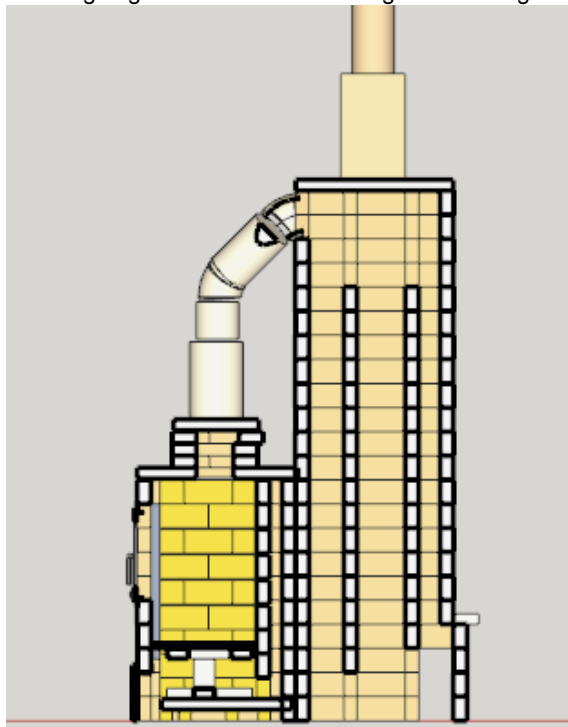
Mon, Jan 15, 2018 at 2:05 PM

To: mhatech@yahoogroups.com

Cc: Damien Lehmann <damien.lehmann@yahoo.com>

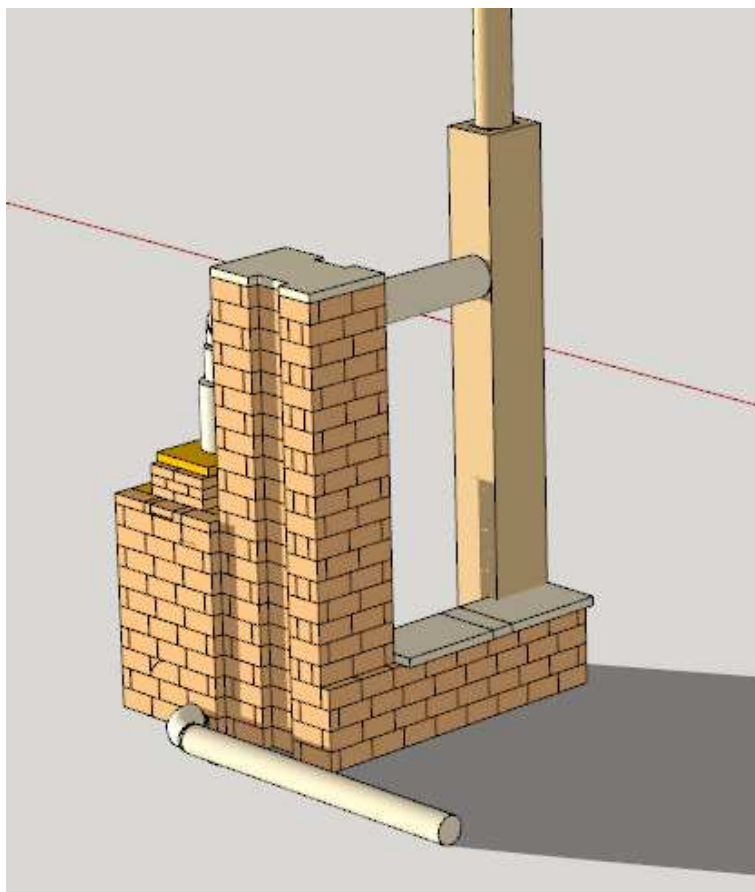
Hi all:

We started formal testing today. In accordance with the request from Adam for "substantially similar" data, we are going to run the heat exchanger in 2 configurations:



The existing version, above, has 3 parallel downdrafting channels.

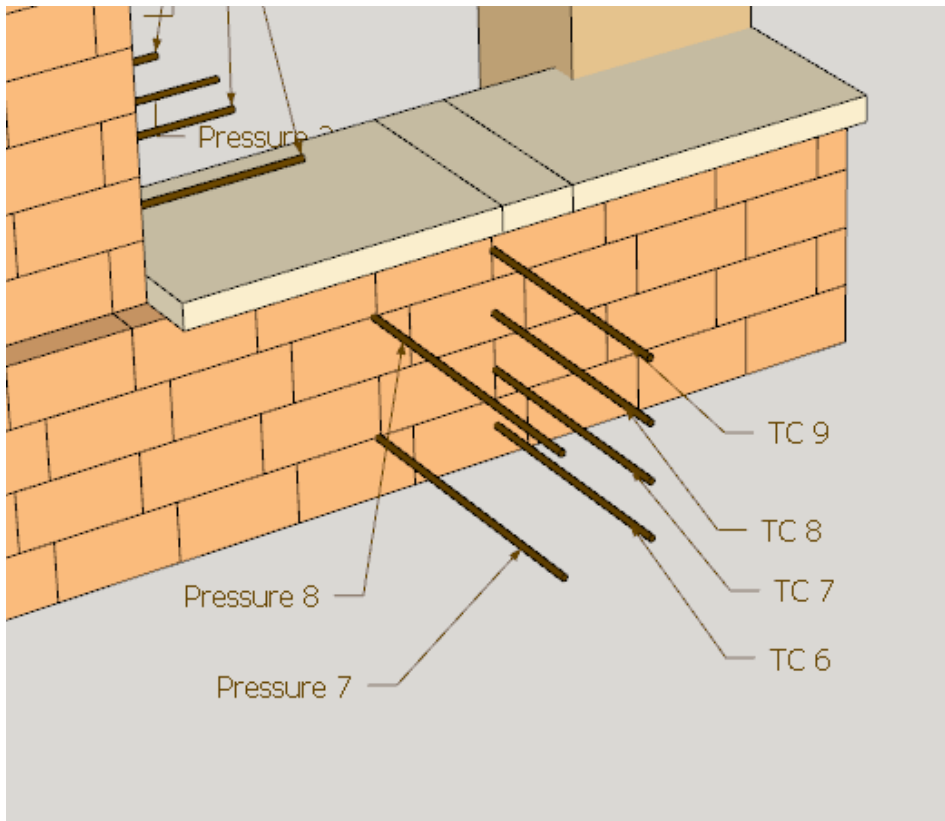
In configuration #2, we will downdraft the first channel, updraft the second, and downdraft the third.



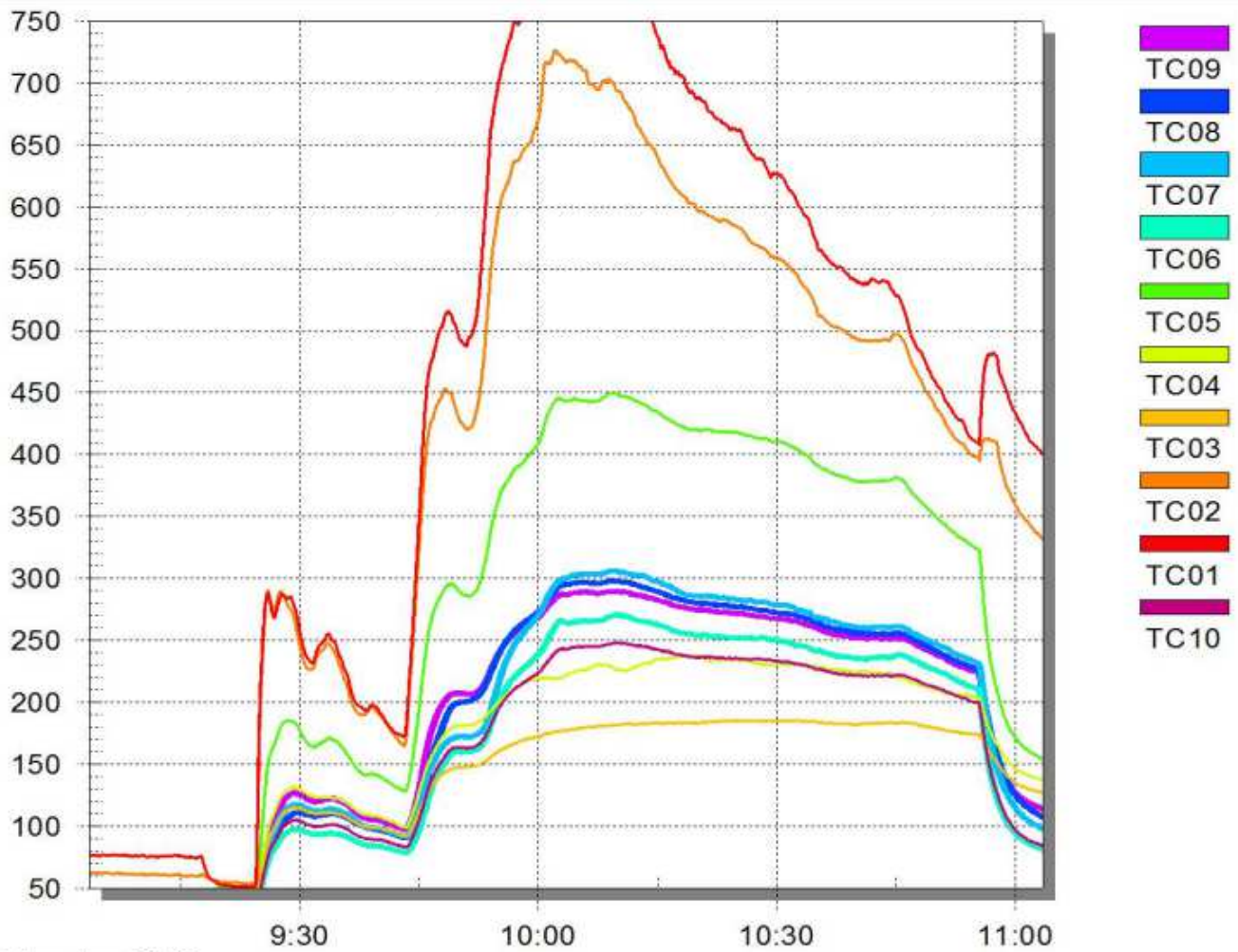
The gases exit into a heated bench that connects to the chimney.
The pipe in front is for measuring the intake air flow.

- We are starting out (series #1) by duplicating the "repeatability" runs from last year, using the same fuel.
 - Next, we plan to install a 7" bleed (T) into the chimney at the 16' level, to simulate the height used in NSPS testing.
 - Then we will repeat series #1.
 - Next, we will make the change to the heat exchanger and repeat.
- If we do 3 repeat runs for each series, that is 9 runs total (2 weeks). Let's see how that goes, and go from there.

From today's run, check out the temperature profile in the bench. Here are the sensor locations:



In the graph below, the 4 temperature sensors in the bench are shown as fatter lines:



15 Mon Jan 2018

Note that during the kindling phase, the purple TC09 line near the top of the bench is warmest. However, once the fire takes off it is interesting that TC07 08 and 09 are reversed. Maybe something to do with the shop being cold, and the bench top being at around 40F to begin with.

Norbert

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