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Pressure graphs from this morning.

1 message

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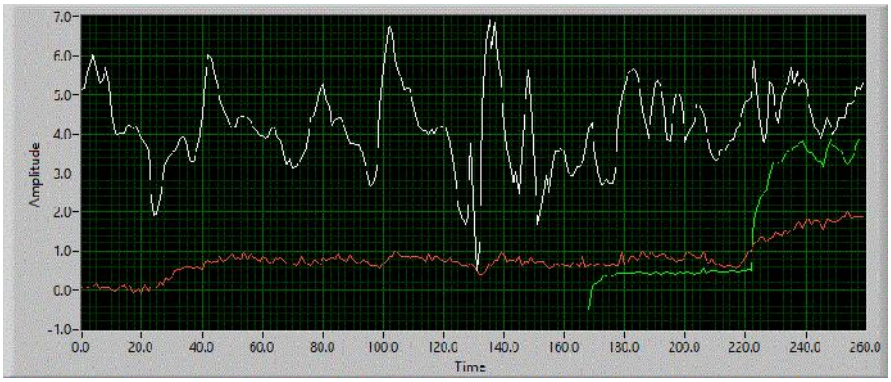
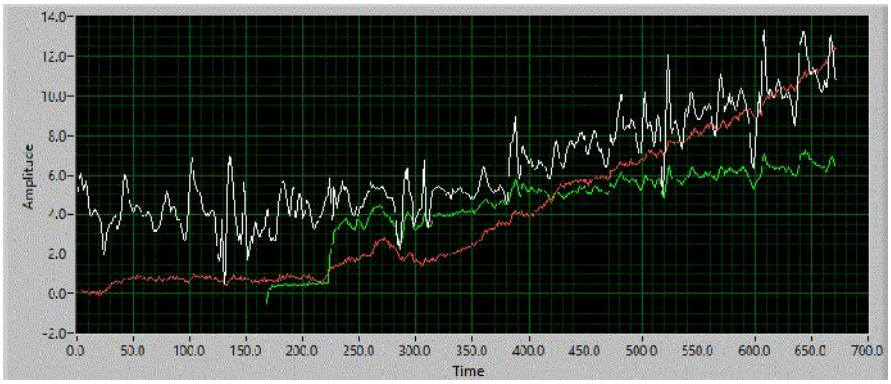
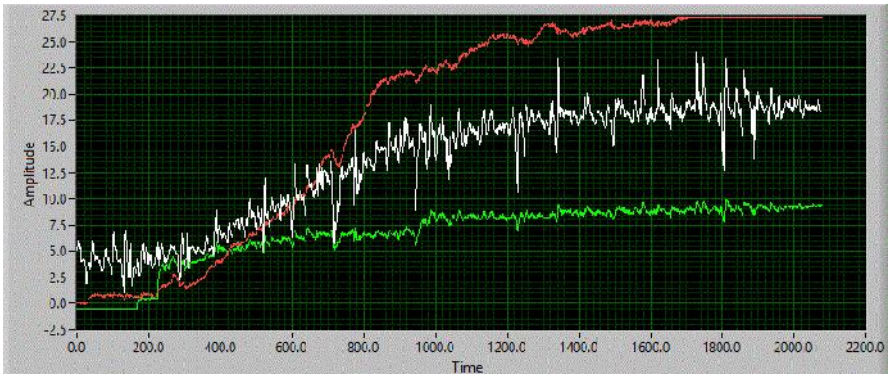
Here's a few pressure graphs from this morning's test. They are done with Magnehelics, since the digital sensors are not hooked up yet.



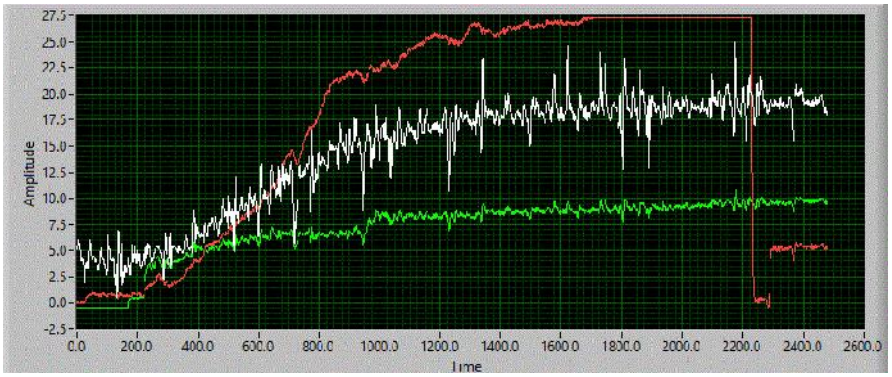
The white line is the stack pressure above the damper, which is closed. Chimney is cold.
The green line is the firebox pressure 4.5" above the floor, at one of the air inlet slots.
Positive readings are pascals of draft (negative pressure). The line starts out pegged at another port, disconnected, zeroed, and attached to the firebox pressure port. It floats along at 0.4 pascals and then the kindling is ignited.
The red line is the pressure at the top of the first channel at 7 feet



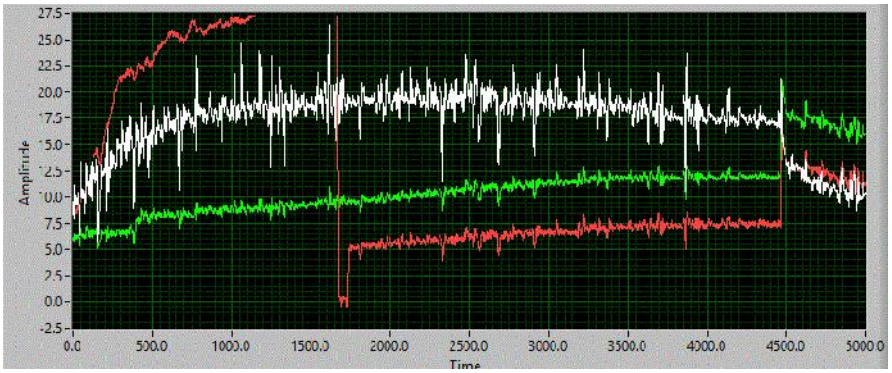
Time at the bottom is in seconds.
As we go along to roughly 10 minutes, we see the stack vacuum rise, as well as the vacuum at the top of the first channel.
The lower firebox pressure settles in at around -6 pascals.



At 35 minutes we see that the upper channel pressure is pegged at 27 pascals, the limit of the magnehelic.
Chimney draft is settling in at around 19 pascals with a stack temperature of around 300F.
Firebox bottom pressure has crept up to around -9 pascals.



A little later, the red line gets switched from the top of the channel to the pressure tap at the top of the firebox. It dips to 0 as the line is disconnected, and then to 5 pascals. There's a roughly 4 - 5 pascal rise in pressure from the floor to the ceiling.



We close the combustion air inlet at 80 minutes, as CO was rising and we were down to charcoal. You can see the firebox floor and ceiling vacuum jump and the stack vacuum drop.
Notice that that right then, the red line track the white line briefly (firebox top and chimney pressure are the same). Then, I close the top and bottom airwash slots on the Pisla 602 door, and the firebox vacuum is higher than the chimney vacuum, probably because the chimney is cooler. I don't quite understand that yet. Hopefully Damien's calculator will help with this.....N

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