Analysis of E-cat test October 6 by David Roberson, Oct 19, 2011.

I am attempting to approach the problem from a different view point. I decided that the alternate technique for calculating power used by Mats Lewan allows for important insight. In that approach, you assume that all of the water outputting the heat exchanger was originally steam and then condensed into cool water. I realized that it would be instructive to reverse that way of thinking and instead calculate the expected water usage based upon the output power seen in the secondary loop. I then constructed an Excel program which keeps track of the E-cat internal water level.

The first thing revealed is that the E-cat never overflows to allow water to enter the heat exchanger. It looks like Rossi has set the water pump such that approximately 14 liters of water tends to remain inside during most of the experiment. This is particularly true during the operation before the special frequency generation device module is active. Since 14 liters is far below the level required to overflow, I would not expect much water to penetrate the very small opening through his output valve.

Second, any attempt to add significant bias to the thermocouple network measuring output water heat energy results in a situation where the E-cat runs dry of internal water. This is a very important observation as it tends to establish a maximum power and energy generation level based upon the input water supply rate.

Third, the input water flow rate appears to be adjusted by Mr. Rossi to simulate the action of a feedback network which holds the level at a constant point under his planned operation mode. In his final product, it will be important for the internal water level to be constant and below spill over. My simulation suggests that he is hoping to set it at the half full mark.

My program is a first pass, crude development that hopefully will be useful to others. Two variables are included. I allow a thermocouple bias temperature to be adjusted. This enables us to change the fixed error existing between the input and output water temperature readings. As this parameter is adjusted, more or less net power output is assumed, which leads to variations in the vapor required to meet that need.

The second variable is the flow rate of the input water. Others have estimated the flow rate at approximately 1.5 grams per second. Apparently the operation of the pump is fairly well defined and it was mentioned that on at least one video presentation it was possible to count the cycles. It seems like the device was reported to deliver 40 cycles per minute with 2 grams per cycle outputted. I am aware that this rate is approximate and varies with loading, but using the above value can help to visualize internal E-cat levels and sets a maximum power available.

The long period of relatively constant heat production following deactivation of the E-cat main internal core heater suggests significant excess energy. Accurate determination of that energy cannot be established due to imperfections of the test setup. As an example, the measured water flow exiting from the E-cat does not seem to correlate

well with the power output calculated due to thermocouple readings. Additional data and analysis are required before verification can be established for the COP of the device. It is important to take into consideration that only one of three E-cat core modules was activated for this test procedure. My understanding is that little if any additional input power is required to drive the two other modules that are normally active. The inclusion of these two modules should result in three times the excess energy presently demonstrated.

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