Brillouin Energy Corp.

Brillouin Energy Scientific Milestone Neutron Test

July 10th, 2020

The senior technical team of Brillouin Energy Corp (BEC) has designed a technique that will potentially provide scientific proof of LENR occurring in Brillouin's Hydrogen Hot Tube™ (HHT™) reactors through the measurement and documentation of neutron production. While there is no ultimate guarantee, with all of the company's recent technical progress, it is now possible to generate this proof before Q1 of 2021, subject to available financial resources.

BEC has recently been working with independent scientists and engineers to develop this technique in order to provide unmistakable scientific proof of controlled low energy (cold) neutron production in our reactors. Such production is considered the most contested aspect of our original CECR™(Controlled Electron Capture Reaction) Hypothesis by PhD physicists and related technical experts.

A recent peer reviewed study published in the preeminent journal Physics Review C - Nuclear fusion reactions in deuterated metals[1] - provides an initial stepping stone across the schism between academics and the possibility of driving a nuclear reaction in a metallic lattice. If BEC demonstrates production of cold neutrons, it provides the next stepping stone across that schism.

Another way to say this is that production of neutrons within a metallic lattice is by definition a Low Energy Nuclear Reaction (LENR). Verification of such neutron production will prove to scientific experts that LENR is real and is being produced in our HHT reactor. Further, the demonstration of cold neutron production shows that BEC's original CECR Hypothesis allows control of LENR heat generation for commercial use without generating any hazardous byproducts whatsoever.

More specifically:

Our CECR Hypothesis predicts that our Q-Pulse technology produces low energy ("cold") neutrons within our HHTs. Because they are not high energy ("fast") neutrons, they never leave the interior of our catalyst rod, and therefore they are not hazardous in any way, i.e., there is no generation of any hazardous waste of any kind. This is a dramatic difference compared to all existing nuclear technologies. Regardless, scientific proof of a Low Energy Nuclear Reaction still requires measurement of nuclear activity.

Verification of neutron production satisfies this requirement. In this specific case it involves the use of the element indium. Indium is a soft stable metal that the company already has in stock. We use it for heat transfer and low temperature soldering purposes. Indium also has a very high cross section (i.e., a very high sensitivity) to cold neutrons, on the order of 10,000 barns for the energy

[1] PhysRevC.101.044609, Nuclear fusion reactions in deuterated metals

levels we are producing neutrons at. Based on all of our recent technical progress, we have accumulated enough experimental evidence to indicate that we now have a way to make neutrons interact with the indium that we place in our catalyst rod.

BEC will include trace amounts of Indium during fabrication of its catalyst rods within our HHT reactor. By using only trace amounts inside of our HHT, the shielding of the HHT allows safe operation, and is only being done for measurement purposes. The indium is not radioactive but does emit radiation in the form of gamma rays when interacting with neutrons. Because of its sensitivity to neutrons, indium provides an effective way to detect them. The best way to detect these neutrons is to use a common gamma spectrometer. If gamma rays in the scientifically accepted energy spectrum for decay of 116In are detected, it means that the neutrons being produced are interacting with the Indium in our catalyst rod. By confirming this, we are actually proving that LENR is real and that we are generating it in our HHT.

Further, because we can turn our Q-Pulse technology on and off, we can control the generation of neutrons that we expect to measure through the above technique. This is an additional key step that shows that it is possible to control the generation of LENR heat on demand.

The importance of demonstrating this level of technical proof cannot be overstated as it would be a first of its kind technical milestone for scientific purposes. Or put another way, its value should not be underestimated as it represents an immediate dramatic increase in the value of our CECR technology.

Upon completing the demonstration of neutron production, we are seeking independent PhD scientists willing to write confirming test reports. The reports will be available for review by any technical expert. BEC will make all data available to those interested in working on a report or a paper for publication in a peer reviewed journal. In addition, one of the Principals of the Martin Fleischmann Memorial Project (MFMP), has agreed to replicate the neutron production test, and stream it live on Youtube (as is customary for the MFMP). Finally, if you are a PhD and have expressed interest to collaborate on publication of a test report and or a paper in a peer reviewed journal, please contact us.

This test is intended to advance Brillouin's CECR technology to a level of proof never before seen in the LENR field for the scientific community. It will change the broader perceptions of the reality of LENR as a viable commercial field.

In Conclusion

We have a high degree of confidence that we will achieve a positive neutron test Milestone with a relatively small amount of additional Series C Round funding. Please contact us if you are

interested in helping with, refining the test procedure or helping with calculations to refine predictions of count rates or other aspects.

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If you are interested in helping to fund this test please contact.

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