Report January 22, 2026

Summary:

- **Anode Completed, Preparations for New Experiments Advance**
- **New, Stronger, Beryllium Ordered for Future Anode**
- **Reminders: Wefunder Campaign Closes Jan. 28, Upcoming Meetings**

Anode Completed, Preparations for New Experiments Advance

After months of waiting and many delays, our new anode has finally been annealed and is being shipped to our lab in Middlesex, NJ. We expect it before the end of the week. This delivery will allow us to finish our preparations for the next set of experiments and get them started in February.

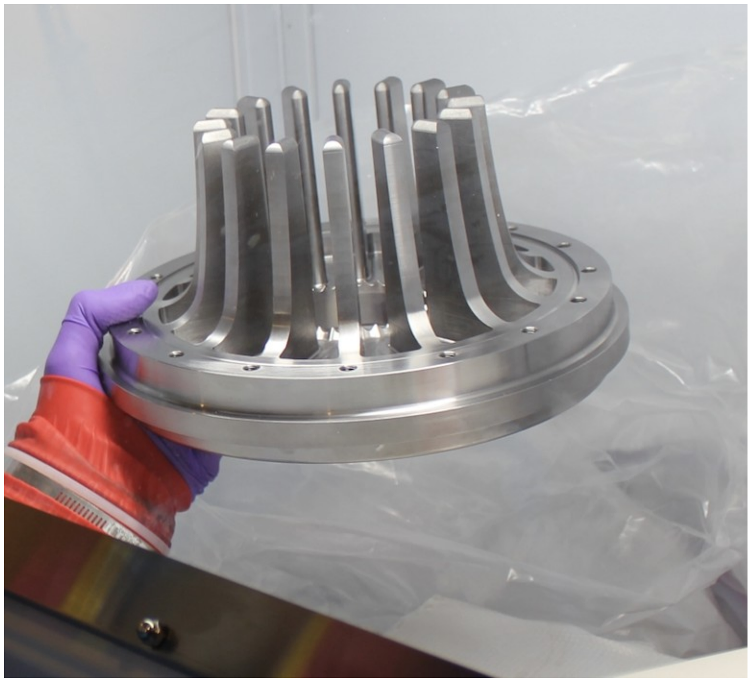
The anode had been awaiting annealing—a process in which it is heated and suddenly cooled, greatly increasing its strength. Last month, we learned that the annealing company, Solar Atmosphere, had run out of the helium it uses during the annealing process. (Annealing can't take place in air, as too much oxidation of the metal will occur at high temperatures.) Then, when they got the helium in January, they found their vacuum system had developed a leak, letting too much air in. So that led to still more delays. Finally, with the leak fixed, our anode got its turn and is now annealed.

In the meantime, we've been progressing with essential maintenance and upgrades in our lab. Research Scientist Syed Hassan is saving LPPFusion considerable expense by replacing a non-functional part of the furnace that heats the lab and changing out aged insulation. To remove the lead dust in the lab, a specialized contractor will do a thorough cleaning of the lab and its HVAC system next week and take away the remaining lead bricks, which will be replaced with steel plates.

Also next week, Dr. Hassan, Mechanical Engineer Rudy Fritsch and Chief Scientist Eric Lerner will finalize plans to upgrade assembly and disassembly procedures to prevent any future release of beryllium dust. A small amount of beryllium dust was found in dust tests, at levels 30 times lower than OSHA safety limits. Medical tests confirmed that neither Dr. Hassan nor Lerner had been exposed to significant beryllium dust. However, we want to ensure that no measurable dust at all escapes.

We determined that the main release of the beryllium dust occurred when some of the beryllium-boron (BeB) dust, formed during the previous experimental shots, was accidentally moved across the anode surface during disassembly. This scratched the bare beryllium metal and created more dust that escaped during disassembly and the transport of the anode out of the experimental room.

In our new procedures, we will make sure that the beryllium electrodes remain under negative pressure, with vacuum pumps sweeping up the dust, at all times during assembly or disassembly, until they can be sealed in airtight containers. That will prevent any future release.



In our new procedures, we'll ensure that the beryllium electrodes will always either be in a sealed container, as with our cathode imaged here in a glove box, or will be under negative pressure, with dust swept into an airflow.

New, Stronger, Beryllium Ordered for Future Anode

While we were waiting for the anode to arrive, we ordered the material for the next anode beyond that, so we won't be waiting for it when we need it. After thorough discussion with beryllium experts, we've chosen **a grade of beryllium metal that's almost twice as strong as the one we're using now**.

Beryllium metal parts are made by pressing together beryllium powder under high pressure. Melting beryllium and casting it produces a very weak structure, so that method is never used. The new material, called I-220-H by beryllium manufacturer Materion, is made stronger by the high temperatures at which the powder is pressed together, as well as the fine size of the powder used. The result is that I-220-H has porous voids that take up only 0.3% of the volume, while the grade that we were using, S-200-F, had voids that took up 1% of the volume. Combined with a tiny amount of beryllium oxide, the lesser porosity makes for greater strength.

This doubled strength will come in handy when, after the next set of experiments, we upgrade our FF-2B to its full power. We'll be increasing its current by 50%, which will about double the thermal stress on the anode. With double the tensile strength, the anode we'll make from the new material will be able to take the stress.

Of course, with greater strength comes greater expense; Materion prices this material at almost exactly twice what we paid for the old grade – $17,000 for the material for one anode. So again, this is why we need to be meeting our goals on fundraising. We need $500,000 total by the end of the campaign in just a week.

Our old anode, shown here, was about as strong as stainless steel. The material we are ordering now is nearly twice as strong.

Reminders: Wefunder Campaign Closes Jan. 28, Upcoming Meetings

You only have a week to buy LPPFusion shares at the current $25 price, either through Wefunder or our Reg D offering. LPPFusion will be holding its annual shareholders meeting online on January 24th at 2:30 PM EST. **This meeting will be open to the general public.** Register in advance for this meeting. The Long Island Section, American Institute of Aeronautics and Astronautics, is sponsoring an online presentation, "The Race to Fusion Energy: Reality vs Hype" by Chief Scientist Lerner. Please register and get the Zoom link by emailing Davidsparis@twc.com