

Jaycob Maciel
Writing Seminar
Profesor Hanson
December 7,2022

Cold Fusion

When it comes to something interesting that I had learned over the semester in the course it would be called fusion. It was something I've never even heard of before, so I was intrigued to learn more and more about it. The first time I had heard it ever mentioned was in the course. One time you were called fusion ones I knew that it would stick with me all the way until then. Cold fusion is all hypothetical for if done correctly, it can achieve nuclear fusion at low temperatures. Now at the time I found to believe something very interesting, but also beneficial. At the time, and even though I believe the cold fusion is very useful for the information that was mentioned in class to what I have done research on, I can see that it could benefit the world.

When first finding out about cold fusion, I figured it would be best to know who created it, and the history behind it. In the late 1980s went to chemist by the names of Stanley Pons, and Martin Fleischmann had successfully completed ColdFusion. They announced to the world that they had successfully created low temperature nuclear fusion. They claimed that it was able to power the world once the experiment was on a much larger scale. According to an article "the tragic story of ColdFusion" it stated that, "the experiment was simple enough to take a container of heavy water water, where the hydrogen has been replaced with a heavier form of hydrogen known as the deuterium and submerge a rod of, palladium and coil of platinum into the water an electrical current will separate the heavy water into oxygen to deuterium. This, to deuterium, will absorb into the Palladium, where the atoms will become packed together so tightly that they will eventually fuse". That is the simplified down way of breaking down cold fusion.

Cold fusion was really based on the idea that palladium will be able to absorb the atoms of hydrogen and force them to be so closely together that they would form and go into fusion.

The two scientists had thought that they solved it early on but they had not. Their work was not reputable. Yes, it was attempted many times by different sizes, but none were able to produce the same results of the original two scientists. These original two scientists took it to the extreme where they rushed their work, and released their findings, and took it to the extent of even attending conferences and press conferences where they were asked about the experiment. At the end of the day they were accused of fraud, because their work was not valid even though they had an idea it wasn't true.

If Cold fusion was possible, the benefits would truly be endless. When it comes to cold fusion, there are plenty of benefits for instance, one of the main ones is that it's clean. Cold fusion emits no carbon dioxide and an addition to this is that the hydrogen and metal are recyclable. In other words cold fusion uses no radioactive components and produces no carbon dioxide CO₂. Metal and hydrogen are recyclable after use. In addition to my research I found that an element of water is hydrogen. The fuel can be used as regular water or as a gas. Metals including nickel, palladium, platinum, and others are used in the generator. On Earth's surface, nickel ranks as the 24th-most abundant element; if we include the planet's interior, it ranks as the fifth-most abundant element.

In continuation Michael McKubre SRI International stated that "The first commercial hot-water boilers demonstrated are small enough to sit on a tabletop and have thermal energy returns between 6, 10 and 20 times the input energy; only a few grams of hydrogen and nickel powder can produce 10 kW of steam power over six months time. When fully exploited, "fusing the hydrogen out of water results in 355,000 times more energy than is contained in the same volume of gasoline.". In other words what he meant at the time is that fusion would create a massive source of energy that would be beneficial for many things. the most important benefit by far would be the technology. For instance new societal roles and methods of living are produced by new technology. Participation from all spheres of society is required for third-party application opportunities. A brand-new service environment generates jobs. Numerous jobs are created as a result of the need for thermoelectric converter efficiency to be raised and the development of new types of engines for ground, air, and space transportation. By producing materials required for production in the lab, LENR transmutations have the potential to transform the mining industry. LENR-based power systems transform space exploration. In addition to this water access leads to hydrogen fuel access, which puts an end to resource wars. Due to the fact that LENR technology does not require a grid connection, local groups and individuals have more control over their energy preferences. Clean drinking water brings about a revolution in health. Energy with a high energy density enables the recycling of all trash. Hydroelectric dams can be taken down, waterways can be cleaned, and our wilderness can be restored at a cost that will benefit both us now and our children in the future (coldfusionnow.org).

As you can see everything that was mentioned above clearly shows and demonstrates that cold fusion would really be beneficial. Not only would it help save the planet but also provide many different opportunities for people.

Bibliography

Alderson, Ella. "The Tragic Story of Cold Fusion." *Medium*, Predict, 9 Jan. 2021, <https://medium.com/predict/the-tragic-story-of-cold-fusion-67e0b3a6773>.

Greshko, Michael. "Cold Fusion Remains Elusive-but These Scientists May Revive the Quest." *Science*, National Geographic, 3 May 2021, <https://www.nationalgeographic.com/science/article/cold-fusion-remains-elusive-these-scientists-may-revive-quest>.

To: Candidates for Legislature and Agency Policymakers - Cold Fusion Now.
<http://coldfusionnow.org/wp-content/uploads/2012/06/Top-Five-Benefits.pdf>.