

The Fish Power Generation

The new potential sustainable –energy is getting popular these days. I like animals, fish, and birds. They make energy by themselves to fly or run. Don't you think it would be nice if we could use the energy they made again? (For one more time?) For example, what do you think of the energy made by the current which got from swimming fish? This paper focuses on the energy we can make from swimming fish.

In order to look for interesting animal's habitat, we sent a questionnaire to Asa Zoo, and Miyajima Aquarium. Moreover, we actually visited AQUAS, and interview them.

At the interview, we heard about the fish habitat. Fish, such as a school of sardines, are used to swim in the opposite direction to the current. Hearing about this, we come up with "The Fish Power Generation". To prove the possibility of "The Fish Power Generation", we set up the experiment.

First, we connect a propeller to the motor, which can make power into electricity. Next, we put colored water in 500ml pet bottle and joint eight bottles to a long stick. This is the model of the swimming fish. Then we put the propeller, pet bottles, (with stick,) and full- watered swimming plastic pool. When the experiment starts, we straw the water in the pool with the stick that bottles follows for 31.5 km/h. This speed is almost same as the speed at which tuna or a seal swims. As you understood, if the light which is connected to the motor lighten up while the current are made, it indicates that "Fish can make electricity".

The result was "It's POSSIBLE!!" The light lit up! I mean we could make electricity.

After we made sure that the light has lit up, we connect the propeller to ammeter in order to calculate the power of electricity we were able to make. It was $1.25 \times 10^{-3} \text{W}$. This can turn into 0.0009 yen of electricity fee. In other words, we need 4110 times power to cook rice at once. It means that the amount are too small. This is a problem, because we may cannot get much advance from it. Other problems we became to face was that whether we are allowed to use fish as a tool. We must think about the ethical problem.

Considering all above, I'd like to conclude this study that if the Fish Power Generation became practice, we could make electricity in a way friendly to environment, but there are many problems we need to solve.