



DESIN AND FABRICATION OF ELECTRIC POWER GENERATOR

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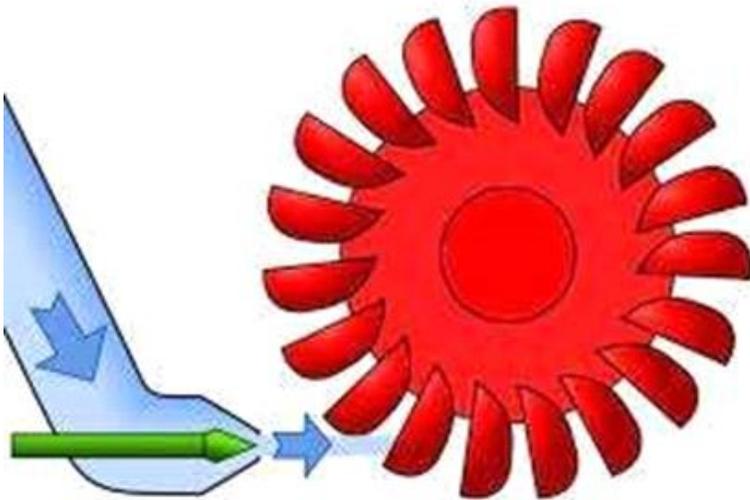
ABSTRACT

Hydropower, or water power, is the process of using falling or swiftly moving water to generate energy or drive machinery. This is accomplished by turning the kinetic energy or gravitational potential of a water source into electrical power. A sustainable method of energy production is hydropower. It draws water from a source, and air suction recycles the water. The water wheel and gravity-driven waterfalls work together to generate electricity for the motor. Fill the tank and the bottom table with water. The wheel will automatically begin spinning as soon as water starts to fall on it. The 12v motor will turn the water wheel enough to produce power. This is dependent on the huge pinium ratio, and if the water recycling process is not properly continuous, it will cease because of the weak air suction. This water wheel-based energy generator is entirely self-sustaining. Make a free energy device like this water wheel for your science project. This is only a test run for a free energy gadget. Actually, free energy technology doesn't operate that that. However, we are aiming to create a solar-powered device that is truly free of charge. Please share your IDEA for using the water wheel in a new way if you enjoyed the video.

Keywords: Power electronics technology, fluid mechanics, motor distribution model, and fluent simulation.

1.INTRODUCTION

According to the 2017 report "International Energy Outlook," the world's energy consumption, which was 575 quads in 2015, is projected to rise by 28% by the year 2040. As nations transition from fossil fuels to various renewable sources, renewable energy is rapidly becoming the most popular energy source. There are three advantages to obtaining energy from natural resources like the sun, wind, and water. Climate change, energy access, and energy security are all being addressed through renewable energy.



For certain rural communities to succeed, technology development suited to their social and cultural needs is essential. We won't go into great detail about the social aspects of the Pico-hydropower energy and rainwater harvesting system in our project, but we have evaluated the ways that rural people acquire water and use electricity. Through the creation of a rain water energy harvesting system, our project will attempt to address the shortage of both water and electricity in rural areas.

2.COMPONENTS

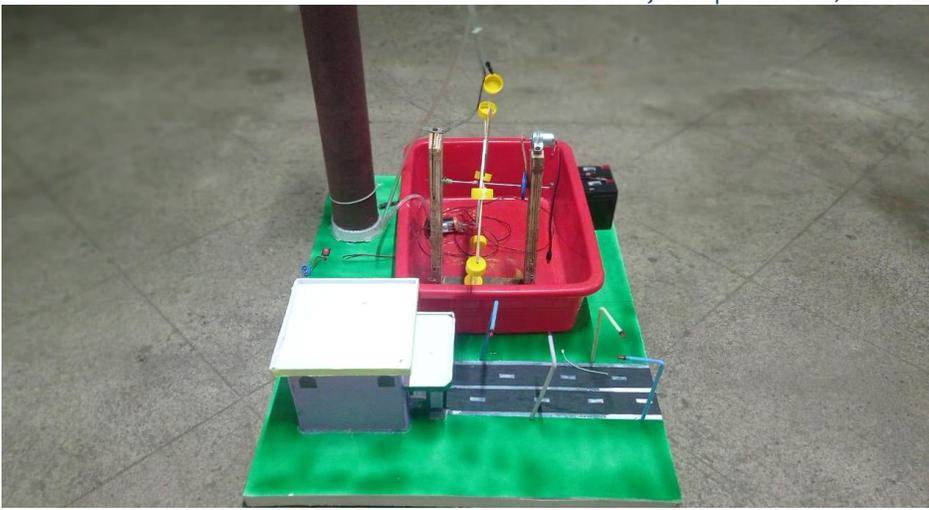
- PVC
- Chop stick and bottle cap (to make the wheel))
- Plastic pipe(to hold the tank)
- 6v motor
- Thread
- Led light 3v

3.SPECIFICATION AND DESIGN CALCULATION

The Pelton turbine is often positioned over a water reservoir while it is being utilised to generate energy. After passing through the penstock, the water travels to specialised nozzles that pressurise the water before it enters the turbine. The penstock is equipped with a surge tank that absorbs unexpected changes in water that could change the pressure to prevent abnormalities. [3] The Pelton turbine is a form of impulse turbine, as opposed to other turbines that are reaction turbines.

4.FABRICATION

we have examined how rural residents use electricity and obtain water. Our project will try to alleviate the lack of both water and electricity in rural regions by building a rain water energy gathering system.



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5.BENIFITS

- Hydro power is a clean source of energy because it is powered by water.
- Since hydroelectricity is a home energy source, every state is able to produce its own energy without relying on foreign fuel sources.
- Impoundment hydropower builds reservoirs that allow for recreational activities like boating, swimming, and fishing. To enable the public to benefit from these opportunities, the majority of hydropower facilities are mandated to grant some public access to the reservoir.

6.RESULTS AND DISCUSSION

This initiative sought to fill the energy gap left by a lack of electricity in heavily populated areas using energy from rainwater to power lights, batteries, or cell phones. These factors could result in the charging of 1.8 cell phones. It should be emphasised that the frequency, severity,

and length of the storms in June were not taken into account. The result was that fewer phones could be charged. In general, the project's goal of producing power from rainwater was successful. This method would be more economical if the energy produced could be used to charge more cell phones in a given month.

7.FUTURE SCOPE

- Additionally, there are an increasing number of jobs in the hydropower industry, including those in manufacturing, utilities, professional and commercial services, construction, trade, and transportation, energy systems, water management, environmental science, welding, machinery, and other services.
- By 2030 and 158,000 jobs, respectively, might be added to the hydropower workforce in the United States. Hydropower education programmes may be found at all levels of the foundation for individuals who are interested in joining this sector.
- Hydropower stimulates economic growth and produces jobs in rural areas.

8.REFERENCE

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