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Bedini wheel Using Electromagnetic Flux Generation

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ABSTRACT

This paper presents the performance comparison for 2 types of Bedini SSG free energy generator. The Bedini SSG is one types of magnetic motor generators based on zero point technology created and demonstrated by John Bedini. This device acts as a self-battery charger. The study involved the construction and performance of the original Bedini Monopole Mechanical Oscillator SSG Energizer and 4-Pole Neodymium Magnet Bedini SSG. This type of free energy generator can be one of an alternative way to replace the non-renewable energy sources that will run out in future. In this paper, the Battery's Coefficient of Performance (COP) for both designs will be identified. Investigation and analysis were done for both types of Bedini SSG. It was found that the replication design can charge faster, had less power consumption and its COP improved by 8% compared to the originaldesign.

Keyword-Component: Bedini SSG circuit operation; Bifilar winding, Sealed lead acid battery, coil core, Bedini SSG rotor.

1. INTRODUCTION

Free energy generator is one type of free energy device that applied to produce the energy without utilizes resources from outside such as burning fossil fuels namely coal, petroleum and natural gas[1]. Free energy also used to minimize the cost of energy consumption[2]. The free energy generator is a decent, powerful and well-looking topology that can give benefit to human being. This free energy idea and concept came from Nikola Tesla. Nowadays, this energy is implementing by further research with many scientists and researcher. One of the type's free energy generators is Bedini SSG.

Bedini simplified school girl (SSG) is the most basic rendition of a patented circuit developed by John Bedini and researched by Dr. Peter A. Lindemann, based on the technology of Nikola Tesla, with follow-up work by Edwin Gray, Thomas H. Moray, and others[3]. This design is the most basic presentation of the Bedini system. The circuit is run by one battery as primary battery to produce mechanical work like turning a wheel or rotor and the electricity that consume to turning a rotor is recycled and capture into another battery[4]. Basically, a feature of this device based on a very simple design. It is also inexpensive in term of construction. Other than that, this charger device also produce output that friendly to batteries[5]. Charging takes less energy input by far than what is normally required, implicating radiant energy infusion in the process[6]. This project conducted by initial investigation and analysis for both types of Bedini SSG design. Then, evaluation and comparison performance between original Bedini SSG design and 4-pole Neodymium magnet Bedini SSG which is the replication design were conducted. This project focused on the construction to build the original Bedini Monopole Mechanical Oscillator SSG Energizer and 4-Pole Neodymium Magnet Bedini SSG Replication. The performance for 4-Pole Neodymium Magnet Bedini SSG replication free energy generator and original design were determined in terms ofCOP.

2. BEDINISSG

Bedini SSG design is one of the crucial parts that need to be constructed with correct material chosen with minimum cost. A good construction and material chosen will give a good result to this project.

Figure 1: Bedini SSG based on original design

Figure 2: Bedini SSG replication design

Figure 1 and figure 2 show the Bedini SSG based on original design and the replication design respectively. Meanwhile, figure 3 explains the methodology and procedure in developing the original Bedini Monopole Mechanical Oscillator SSG Energizer and 4-Pole Neodymium Magnet Bedini SSG Replication. Both SSG will be tested to compare their performance in terms of COP.

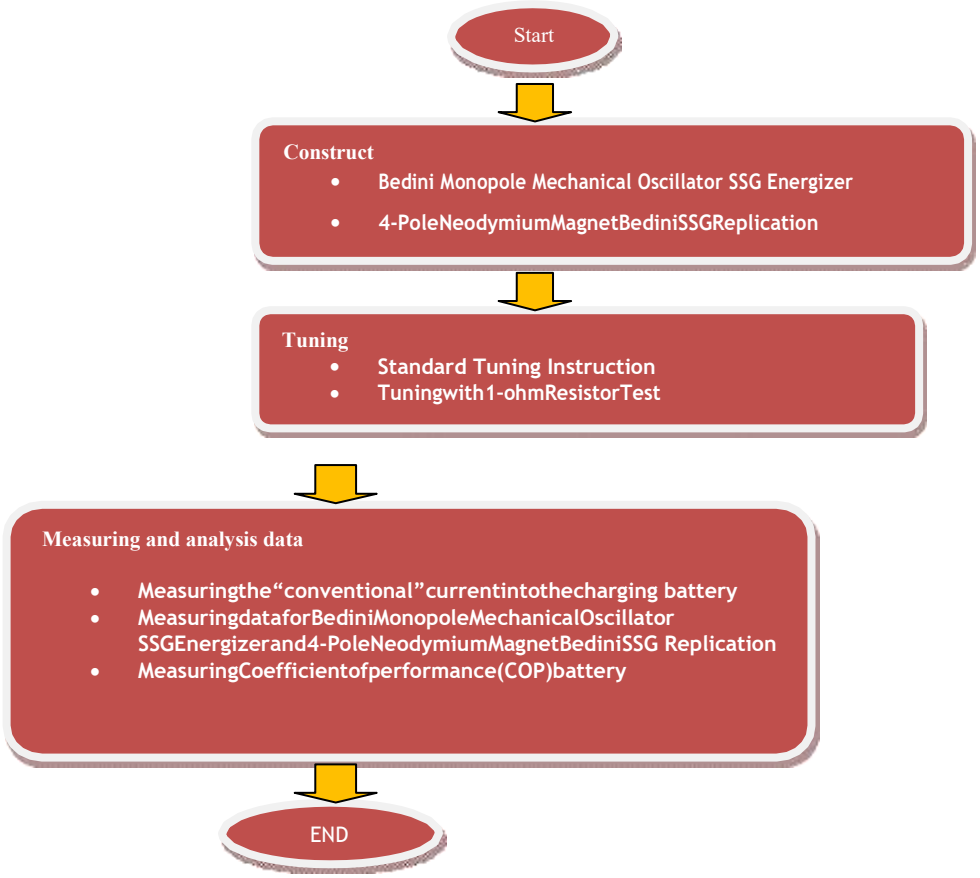

Figure 2: Metthodology of Bedini SSG

In order to build a good SSG, there are many factors and consideration that need to take into account so that it can run and operate with smooth and optimum condition. Besides that, the aim is to have the Bedini SSG generator running with the minimum amount of current being consumed from the primary battery and higher rpm[7].

2.1 Bedini Bifilar coil forSSG

Bedini bifilar winding is two winding wound on the spool with parallel together. This winding is usually used in making for a few types of winding for transformer[8]. There are two names for winding wound on the spool together, one is trigger coil and the other one is power coil. Both coil wire come in form of Standard wire gauge (SWG) unit. This Bifilar winding is one of the main parts that has to consider when built SSG. This winding is important to produce electromagnet when connected to the SSG circuit.

Figure 3: Bifilar Coil for Bedini SSG

2.2 Types of Magnet

Ideally the magnet width should be equal to or greater than the coil core. Rectangular magnets give an improved performance over simple discs in order for the magnet field to sweep across the entire face of the coil or close to it[9]. The distance between each magnet cannot less than 1.5 to 2 size of magnet widths. This is because to avoid interactivity of the scalar south poles.

Figure 4: Types of magnet

2.3 Coil Core

The coil core is metal rod that stuffed in the middle of the coil winding. Normally, it stuffed with welding rod. Other materials can also be used provided the rod compatible to react with the magnet. If the materials retain any magnetism when the magnet is taken away, then they are not suitable. If both south and north attract to both core ends, then such core is suitable.

Figure 5: Coil Core

2.4 Rotor

It is worth noted that anything round and non-magnetic can be used as a rotor [10]. For example, skate board wheels, with a little grinding or machining of the rubber to accommodate the magnets can make a good 3 or 4 pole rotors. Basically smaller diameter, 3 or 4 pole rotors run at higher RPM and draw less current like 6 pole rotor. This may be an important consideration in keeping the current draw down, below the critical battery C20 rate, on the smaller batteries [11]. In addition, it is a wise precaution to wrap some kind of heavy duty strapping tape with the little strings imbedded in it, or even electrical tape around the perimeter of the rotor as a back-up to gluing of the magnets in.

Figure 6: prototype of original Bedini SSG rotor

2.5 Battery

Battery is one of the important factors that have to be considered in building SSG. In this project, lead acid battery is chosen whereas it can charge and discharging [12]. Charging will perform on charging battery side and discharging will perform on primary battery side. Both charging and discharging will perform simultaneously for both of Bedini SSG. Lead acid battery also important to determine the coefficients of performance (COP) by discharge the charging battery with load and recharge the charging battery of Bedini SSG. The 3 to 7 amp hour (Ah) battery Lead-Acid batteries are recommended and come in Sealed Lead-Acid (SLA)[12]. Other like Lithium Ion and non-rechargeable batteries are not recommended.

In this project, the charging process is usually stopped after a voltage is reached at certain amount[13]. It is recommended to rest the battery a minimum of one hour before charging or discharging. However, in the short term it is fine to cycle the battery without a rest period. Normally, Lead-acid batteries are rated for a 20-hour discharge. The current that will discharge the battery from fully charged is about 13.8 volts to fully discharge around 11.5 volts in 20 hours is called the C20 rate [9].

Figure 7: Sealed lead acid battery

3. RESULT

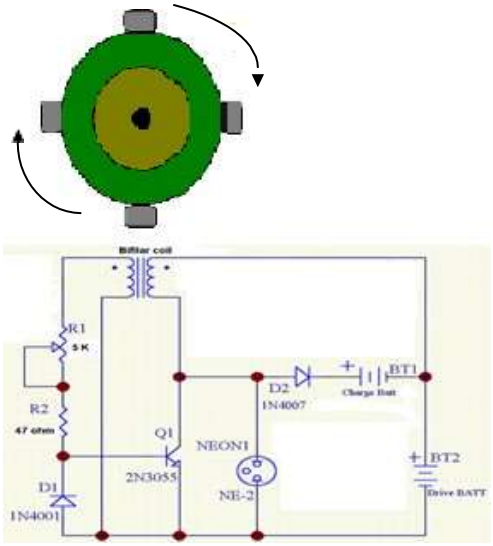

Figure 8: Schematic Circuit of Bedini SSG

When a magnets approach to coil, it induces a current in the trigger coil that goes through the 1N4001 diode, the resistor and potentiometer. When the magnet is directly above the core the induced current will stops. Then when the magnet has passed the core, it induces a current in the opposite direction that flows through the base of the transistor and out through the emitter. This turns on the transistor and current is then free to flow from the positive of the primary battery through the primary coil and back to the negative of the battery Once the magnet has past the coil, the magnet has no longer induces a current in the trigger coil, and so the transistor turns off. The coils magnetic field then collapses Based on the results, it show that the time taken for replication design to charge less than the original design. This is because the averages replication design revolution per which creates a high potential spike in the primary coil that original design. The small goes through the charging battery [4].

4. CONCLUSION

As a conclusion, this project is a successful project and full fills the objective requirement. 4-pole neodymium magnet has successful improve on COP by 8%. Besides that, the replication design also can charge faster than original design and also had less power consumption. It is also can save 20% cost of construction compared to the original design. Therefore, it can be concluded that replication design produced better performance compared to the original design.

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