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Pulse Motor Free Energy Generator for Electric Car Charging System

Vaishak[1], Sayed Irfan[2], Nelson Benny[3], Neetha John[4]

UG Student, Dept. of EEE, Mar Athanasius College of Engineering, Kothamangalam, Kerala, India[1]

UG Student, Dept. of EEE, Mar Athanasius College of Engineering, Kothamangalam, Kerala, India[2]

UG Student, Dept. of EEE, Mar Athanasius College of Engineering, Kothamangalam, Kerala, India[3]

Professor, Dept. of EEE, Mar Athanasius College of Engineering, Kothamangalam, Kerala, India[4]

ABSTRACT: An electric car is an automobile that is propelled by one or more electric motors using energy stored in rechargeable batteries. Since 2008, there is an increase in the production of electric vehicles due to the advances in batteries and due to concerns about increasing oil prices. This project concerns the design and construction of pulse motor free energy generator (PMFEG). A pulsed motor, unlike normal A/C or D/C types uses short pulses of current to drive the motor, which makes it spin. This system is a new idea to generate electricity without making use of any common external sources. PMFEG conserves the input energy at high efficiency and store it and feed it back to the system and thus produces a mechanical output which can be used as a primemover. The input is given to the system using a battery, it generates pulsed and mechanical output which can be used to charge another battery. The output appears to be far greater than the input provided which results in greater efficiency. Hence the pulse motor free energy generator is a decent, powerful , low cost, high efficient and well-looking topology of a free energy generator, which can be used to charge the electric vehicles and the batteries can be charged from systems inside the car itself. By using this non conventional charging methods the efficiency of electric vehicles increases and thus we can avoid the frequent visit to charging stations.

KEYWORDS: Electric car, PMFEG, Non conventional charging

I. INTRODUCTION

A proper analysis of the overall benefits and efficiency of an electric vehicle must include what type of source was used to charge the battery, the energy required to make the battery, and the energy expended in disposing of it, in an environmentally sound manner.

Recharging of batteries of electric vehicles can take up to an hour, however this amount of time is being reduced as the technology improves. A major limiting factor is that currently (2017) there is inadequate recharging infrastructure for long routes, though many owners use home charging stations instead of commercial infrastructure. In this project we are designing an charging system which can be implemented in vehicles itself. We are providing LCD & LED indications about the charge left in the battery, so that the driver can charge the car by simply turning on a switch.

The objective of the project is to make a Pulse Motor Free Energy Generator which can be used to charge the batteries used in electric vehicles.

It is possible to draw substantial amount of energy from the local environment and use that energy to charge batteries. Not only that, but when this method of charging is used, the batteries gradually get conditioned to this form of non-conventional energy and their capacity for doing work increases. In addition, about 50% of vehicle batteries abandoned as being incapable of holding their charge any longer, will respond to this type of charging and revive fully. This means that a battery bank can be created at a very low cost.

Any generator requires a prime mover (such as diesel engines, water turbines etc.) to operate, that is, an external source of input is required to give an output. This external source of energy is deteriorating day by day due to excessive use .More over this input energy once used cannot be regained back and an output that is much smaller than input is usually obtained.

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This project is a new idea to generate electricity without making use of any external source. That is, we have developed a way to conserve the input energy completely and store it and feed it back to the system and thus produce a mechanical output which can be used as a prime mover. A charged battery is necessary for starting the machine. Ones it is started the power from the machine is fed back to recharge the battery and this process continuous. Hence, the output is far greater than the input provided which results in great efficiency.

Another aim of this project is to observe a different kind of charging, fundamentally opposite from conventional systems. Two different kinds of energies involved in the process can be carefully distinguished and manipulated for practical advantages in powering various loads. The Pulse Motor Free Energy Generator is a decent, powerful and well-looking topology of a free energy generator.

Free energy has two meanings:

1. Energy that can be obtained from a device at low cost.
2. More output energy that appears to be available than input energy.

The Law of Conservation of Energy is generally thought to be correct when it states that more energy cannot be taken out of any system than is put into that system. However, that does not mean that we cannot get more energy out of a system than we put into it. The Pulse Motor Free Energy Generator is a device that demonstrates this free energy concept on a small scale .It will generate the required electric power with less input

This system can be implemented in existing electric vehicles, as a result efficiency can be increased and also the frequent visit to the charging station can be avoided.

II. SYSTEM CONFIGURATION AND WORKING

Pulse Motor Free Energy Generator is a device designed for charging the electric vehicles in a non conventional way. The time for recharging can be reduced using this device and due to its small size and less weight, it can be easily implemented in electric vehicles, and the performance of electric vehicles can be increased.

A. Block Diagram :-

The block diagram of the Pulse motor free energy generator for electric car charging system is shown in figure 1. Solar cell is used as the driving battery and can be placed above the car and there is charging battery inside the car, which is used to run the electric motors of the electric vehicle. Consists of three coils, they are driving, triggering and pickup coil. The gauges of these coils are SWG 30, SWG 30 and SWG 32 respectively. The three coils are wounded onto the PVC frame with combined 800turns. The windings are cated with varnish so that it stays well on to the core and also improves its insulation capacity. The entire winding is covered with nylon tape to protect the windings from external hazards. Bridge rectifier is used to rectify the pulses received and they are filtered and is given to the charging battery.

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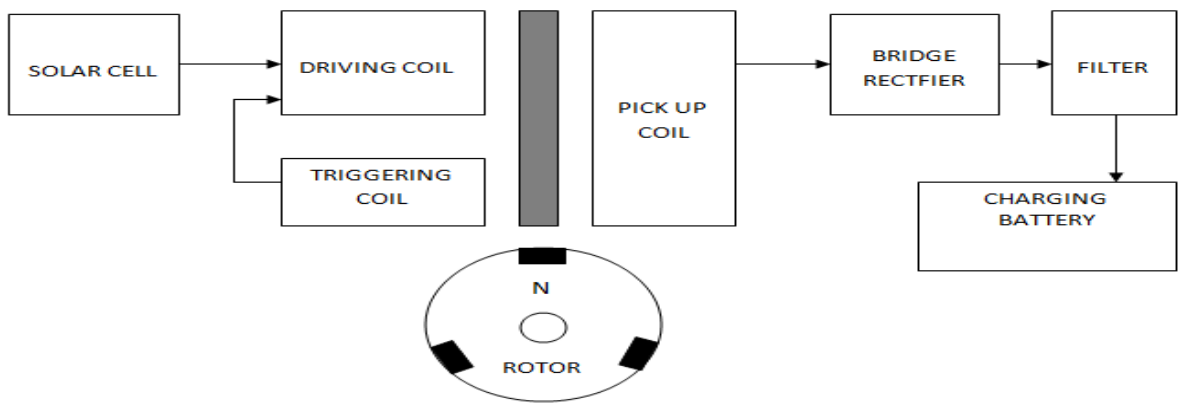

fig1: Block diagram of pulse motor free energy generator for electric car charging system

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B. **Working and circuit diagram:-**

When there is an indication of low voltage on batteries by the LED and LCD displays, the switch is turned on by the driver, so that the rotor is started. As the North pole of the magnet passes the triple-wound "tri-filer" coil, it induces a voltage in all three coil windings. The magnet on the rotor is effectively contributing energy to the circuit as it passes the coil. One winding feeds a current to the base of the transistor via the resistor. This switches the transistor on, driving a strong current pulse from the battery through the second coil winding, creating a 'North' pole at the top of the coil, boosting the rotor on its way. As only a changing magnetic field generate a voltage in a coil winding, the steady transistor current through coil two is unable to sustain the transistor base current through coil one and the transistor switches off again.

The third coil picks up all of these pulses and rectifies them with a bridge of diodes. The resulting pulsing DC current is passed to the capacitor, the voltage on the capacitor builds up after several pulses, the stored energy in it is discharged into the "Charging" battery. The rotor is started by hand and it gains speed until its maximum rate is reached.

If the rotation is fast enough, the operation changes. Up to now, the current taken from the solar cell has been increasing with the increasing speed, but now the driving current starts to drop although the speed continues to increase. The reason for this is that the increased speed has caused the permanent magnet to move past the coil before the coil is pulsed. This means that the coil pulse no longer has to push against the 'North' face of the magnet, which keeps the rotor going and increases the magnetic effect of the coil pulse.

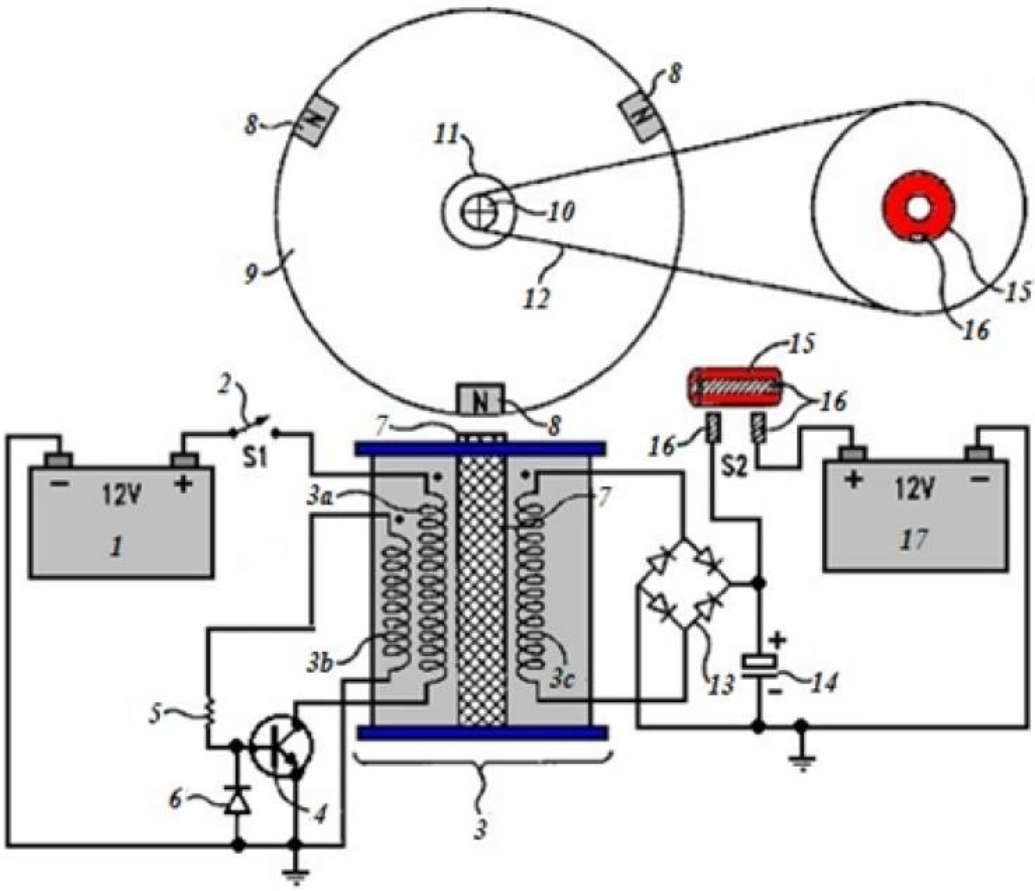

Fig 2. Circuit diagram

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1. Driving battery (12v,7Ah)
2. SPST Switch
3. Field winding
   - 3a. Driving coil
   - 3b.Triggering coil
   - 3c. Pick up coil
4. Transistor(BD243C)
5. Resistor (680 ohms,1/2 watts)
6. Diode (IN4148)
7. Winding core
8. Neodymium permanent magnets
9. Aluminum rotor
10. Rotor shaft
11. Ball bearings
12. Belt
13. Bridge rectifier (IN5408)
14. Capacitor (330 micro farad, 450v)
15. Cam switch
16. Silver contact
17. Charging battery

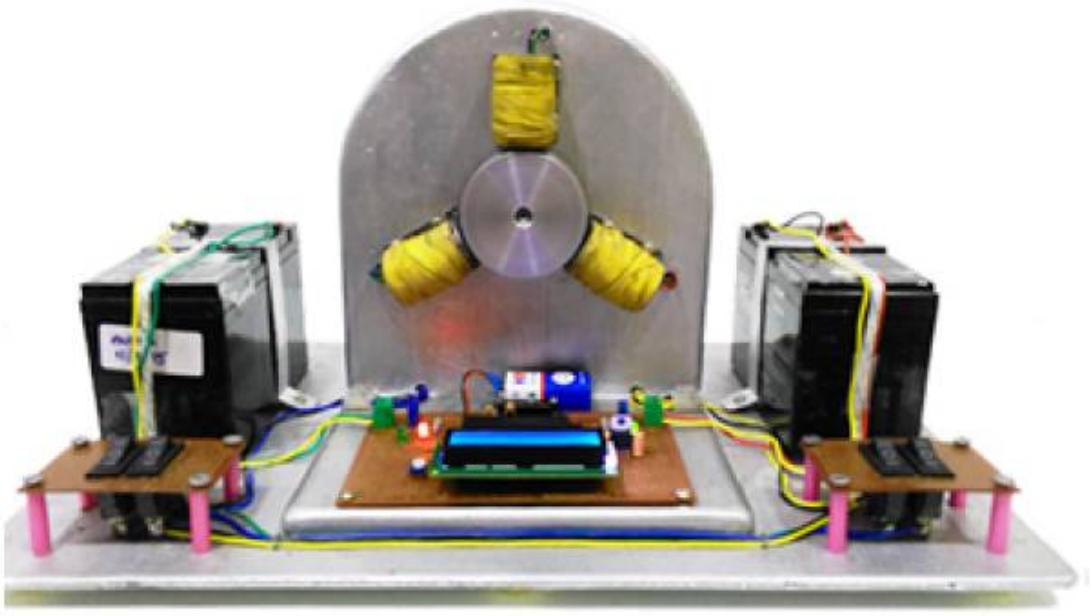

Fig 3. Implemented Prototype

III. RESULT AND DISCUSSION

The increase in voltage in the charging batteries is almost three times equals to the voltage drained from the driving battery. Initially two 12V batteries were taken as both charging and driving batteries and after running the machine for 15 minutes, the voltage in the charging battery increases to 13.5V, where as the voltage in the driving battery decreases

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by 0.5V only. The gain in voltage is greater than the loss from the driving battery, as a result efficiency of this kind of charging is very high and can be employed in electric vehicles so as to boost its performance. For a normal system when energy is transferred from one system to another, we are not able to transfer the full energy due to losses occurring in the system but in the case of pulse motor free energy generator, the complete energy is regained in the system without any losses and hence the efficiency of this system will be much higher than the existing systems

IV. FUTURE SCOPE

The battery bank can be charged with least or almost no cost. By using this method, the batteries get conditioned to non-conventional form of charging and hence their efficiency and capacity increases. This stored energy can be used for lighter domestic loads like TV's, DVD recorders, Fans etc. Thus, such a motor can be used to drive an electrical generator thereby providing "free energy" for a home, business, or industry. This model can be scaled up for higher loads. Additional coils can be added and the number of magnets employed on the rotor can also be increased. This in turn will increase the speed of the rotating part and more output may be obtained. Although the system is having so many advantages, the drawback of cannot driving the battery while charging can be overcome using more number of battery banks. This makes the system bulky and hence more sophiscated system can be developed using nano cells. It minimizes the use of energy resources hence, decreasing its deteriorating rate. This concept can be applied in wide aspects if developed and studied properly. Just like solar panels it's a new method to generate electricity Different from the conventional methods.

V. CONCLUSIONS

Maximum output is obtained with minimum losses in the system. The 'Pulse Motor Free Energy Generator' is a device that demonstrates this free energy concept on a small scale. The electronic circuit converts this power into mechanical energy. The first purpose of this project is to observe a different kind of charging, fundamentally opposite from conventional systems. Only after we notice two different kinds of energies involved in the process can we carefully distinguish and manipulate them for practical advantages in powering various loads. The second purpose is to investigate some of the advantages in this charging method over conventional methods.

Instead of looking at the battery that powers the system, we look at the charging battery and measure its inputs and outputs over the charge and discharge cycle. When the machine is properly built and tuned, by measuring with conventional meters we will see more energy leaving the receiving battery via a constant load than entered it. This kind of charging using pulse motor free energy generator with free energy charging system possesses more benefits as compared to other charging methods,The battery bank can be charged with least or almost no cost. By using this method, the batteries get conditioned to non-conventional form of charging and hence their efficiency and capacity increases, and can be implemented in electric vehicles so that the efficiency of the batteries in the electric vehicles can be increased and the purphose of frequent charging can be avoided.

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