iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 5 **Issue:** VI **Month of publication:** June 2017

DOI:

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Volume 5 Issue VI, June 2017
ISSN: 2321-9653
International Journal for Research in Applied Science & Engineering Technology (IJRASET)

Fuel less Generator: Review

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Abstract: ***All over the world, people live with the idea that it's necessary to burn fuel in order to produce power that we can use. We have been persuaded that we have to buy coal, coke, timber, kerosene, gasoline, diesel, propane etc to burn, so that we can obtain our precious energy. Burning these materials will indeed result in energy. We use it in heating, cooling, powering engines etc. But the fact is that they don't need to burn fuel to get the energy. With the help of fueless generator we can generated our own energy. The fuel less generator is a device that is understood to function without the need for a wired power source. This generator does not require any basic thing.***
Keywords: ***Iron Bar; Magnet; Tesla coil; Transformer;***

I. INTRODUCTION

A fuel-less generator is a device that stores power and can be used to run almost anything requiring an electric current. Existing generator use some kind of source but this generator does not required any source. For example, Honda has an entire range of personal generators that run on gasoline.

Fuel-less generators are less messy than their fuel-requiring counterparts. They can be recharged by simply plugging them into an outlet or connecting them to solar panels. And there is no stinky exhaust. Electric energy can be generating without source for consumption. That is to say it powers itself and simultaneously supplies power. In a way it can be also looked at as a form of renewable energy system. The benefits this machine gives include;

A. The fuel less generator can be operated for hours at a time without the use of fuel.
B. It is environmentally friendly as it produces no noise (noiseless operation), smokeless. Infact, it is possible for the machine to be kept indoors.
C. Very low maintenance.
D. Engine can be replace with electromechanical device so that we can convert existing fuel generator into a fuel less generator.

II. LITERATURE SURVEY

J.O Otulana et.al [1] has worked on Construction of a Fuel less Generator. They have developed a fueless generator by using local material. fuelless generator has driving mechanism of 1hp direct current motor, powered by a 12 volts battery, which spines the 0.95KW alternator to produce electricity, while recharging the battery by means of a diode. The output is 1Kva.

Abatan O.A et.al [2] has worked on Constant Electricity Generation From Self-Charging Inverter. This system is more economical, noiseless, emission free and uninterrupted alternate source of electricity named self-charging inverter. This system is Self-charging inverter and can be fully utilized by existing that the inbuilt charger recharges the batteries at the same rate that the DC discharges that the battery when drawing current from the battery.

S.Bala Iyappa et.al [3] has worked on Electricity Generation from a Fuelless Engine in an Isolated Power Generation System. non-conventional energy sources has become evident due to fast depletion of conventional energy sources. solar, wind and tidal energy is becoming popular renewable energy sources. This system focuses on use of fuel less engine as an alternative for isolated power generation from renewable energy sources because of its low cost, low maintenance cost and rugged construction.

K. SREENIVASULA REDDY et.al [4] worked on Modelling and Simulation of an Asynchronous Generator with AC/DC/AC Converter Fed RLC Series Circuit in an Isolated Power Generation System. The objective of this paper is to simulate the model of a self-excited asynchronous generator (SEASG) feeding R L load in conjunction with an AC/DC/AC converter fed RLC series circuit connected at the Point of Common Coupling (PCC). MATLAB/SIMULIMK is used to develop this system. The effect of RLC series circuit when operated at variable frequency affects the generation voltage profile. This reflects that an additional capacitance or inductance effect is possible to inject when the RLC is operated at a frequency lower or higher than the resonance frequency.

K. Subramanian et.al [5] has worked on State Of The Art of Electronic Load Controller of Self- Excited Asynchronous Generator Used In Mini / Micro Hydro Power Generation. This system describes the perception of the load controller of a self-excited

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Volume 5 Issue VI, June 2017
ISSN: 2321-9653
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asynchronous generator with constant power generation. Different load controller has been verified. MATLAB/Simulink software is used. Performances of an asynchronous generator with electronic load controller have been evaluated.

Subramanian K. et.al [6] worked on Simulation of an Asynchronous Generator and PGS Modeling use RLCs by Converters. The aim of the project is to maintain a constant voltage profile. From the characteristics of voltage generation in a SEASG, it is essential To Have A Variable Capacitance At The Machine Terminals To Maintain Constant Voltage With Variable Load Has Been Developed By Using Matlab/Simulink.

III. SYSTEM DEVELOPMENT

Construction of fueless generator: On a wooden board 1m by 1m, draw a point with a pencil. Using a hand drill, make a hole on the point with a 3mm drill bit. Now using a ruler, to guide at straight line, drill another hole symmetrical in the board. Place 2 skewer sticks for guiding in the holes. Take a pencil and a piece of copper wire. Tie the pencil to the copper wire, and measure the length of the wire to 7.5 cm. On the other end of the wire, tie a skewer stick. Now draw a circle for each of the center holes. By using a scale, we have to draw two perpendicular diameters (divide the circle in 4 separate slices). This will help with dividing the circles further more. By using a pencil or a permanent marker, mark 57 points along the length of the circle. The distances between the dots should be approximately the same. using a hand drill with a 3mm drill bit, drill holes on every dot that marked earlier on the circle. The depth should be of maximum 2 cm, depending on the wood board's thickness. We have to repeat this process for other circle.

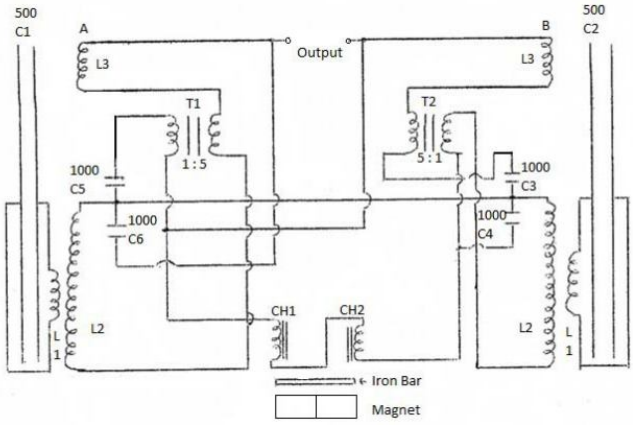

Figure.1 Block diagram

This is the most important step in all the building process. Basketwinding the 2 capacitor coils. The initial 12 windings are from 0 .95 mm copper enameled wire and 6 windings of 1.5 mm PVC insulated copper wire. When the 6 windings are complete, using a different color wire (but with the same dimensions), add another 6 windings to the coil. Now repeat the process for both coils, following the same patterns and the same specifications. After finishing the windings for both coils, using pvc duct tape, insulate the top of the coil. This way, there will be less unwanted interferences and you'll be sure the windings won't slip away. for both coils For resonator take two coils, an iron bar and a magnet. Wind the coils. On an iron cylindrical bar, wind 40 turns of 0.95 mm enameled copper wire. When the winding is complete, rape the edges of the coils with pvc duct tape. By using this the winding won't go loose and two small coils just constructed have to placed on a movable sledge, this being the entire key on starting the generator. By Mounting the small board on the two rails, and, screw the rails to the base wooden board.

Now by placing the two coils on the cardboard and leave them to harden in place for about 10 minutes. using epoxy-glue again. we have to make sure that the small coils on the sled can touch the magnet bar while pivoting. And now for the metal bar. Again with epoxy-glue stick the iron bar to the wooden board right in front of the magnet. They should be parallel. And the distance between the magnet bar and the iron bar no more than half a centimeter. Now with capacitors and place double-adhesive duct tape on the bottom of each one and Place the two 500 Micro Farad ones centered inside the basket coils, and the four 1000 Micro Farad ones on each side of the basket coils. Now Tighten the two transformers to the board. If capacitors have screw-holes on each contact, put screws in them and tighten them with a cricket wrench, pair of pliers or whatever comes in handy It's time to wire the whole generator up. first, solder the two 500 Micro Farad capacitors to the base weaved coil (the enameled copper wire ones.) For safety reasons, is best to mount a socket on the wooden board. We can Connect the socket to the output wires and tighten the top cap back

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Volume 5 Issue VI, June 2017
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on To test the generator, plug an appliance in the socket on the wooden board. Now by moving the sled with the two small coils towards the magnet. By Adjusting the sled's position for best power output. But we have to very careful that not to touch the iron bar with the 2 small coils.

Fig1. Hendershot fueless generator

The fuelless motor works on compass, and the original model would always operate when pointing north or south, as does the compass, but it will not move when pointed east or west. The great scientist Hendershot worked two years to overcome the defect, and finally he brought a motor to the Bettis field that appeared to be working perfectly. A small model airplane with this motor but this experiment fail it crashed to the ground during one of the experiments. By improving the motor.

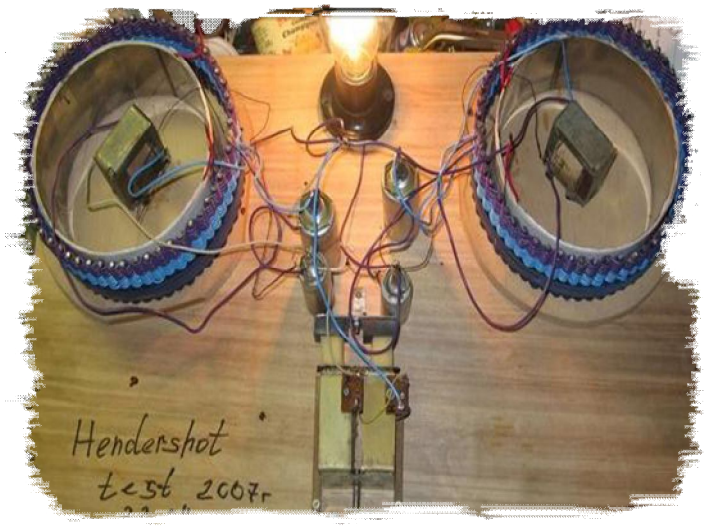

Fig.2: Hendershot fueless generator with dummy load

IV. CONCLUSION

The simplest and most efficient ways of producing own energy is a fuel less generator. The fuel less generator is a device that functions without the need for a wired power source. A fuel less generator draws energy from the environment and provides us with mechanical power. The components needed to fabricate it are readily and easily available and can be sourced with ease. It can be built to any capacity, depending on the capacity of the load we want it to carry. It does not require any mechanical service or maintenance.

V. ACKNOWLEDGMENT

Completion of this work is a task which would have not accomplished without cooperation and help from my guide. At the outset, I wish to express my deep sense of gratitude to my guide. I am very much thankful to all my faculty members whose presence always inspires me to do better. At last I also thank my parents.

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Volume 5 Issue VI, June 2017
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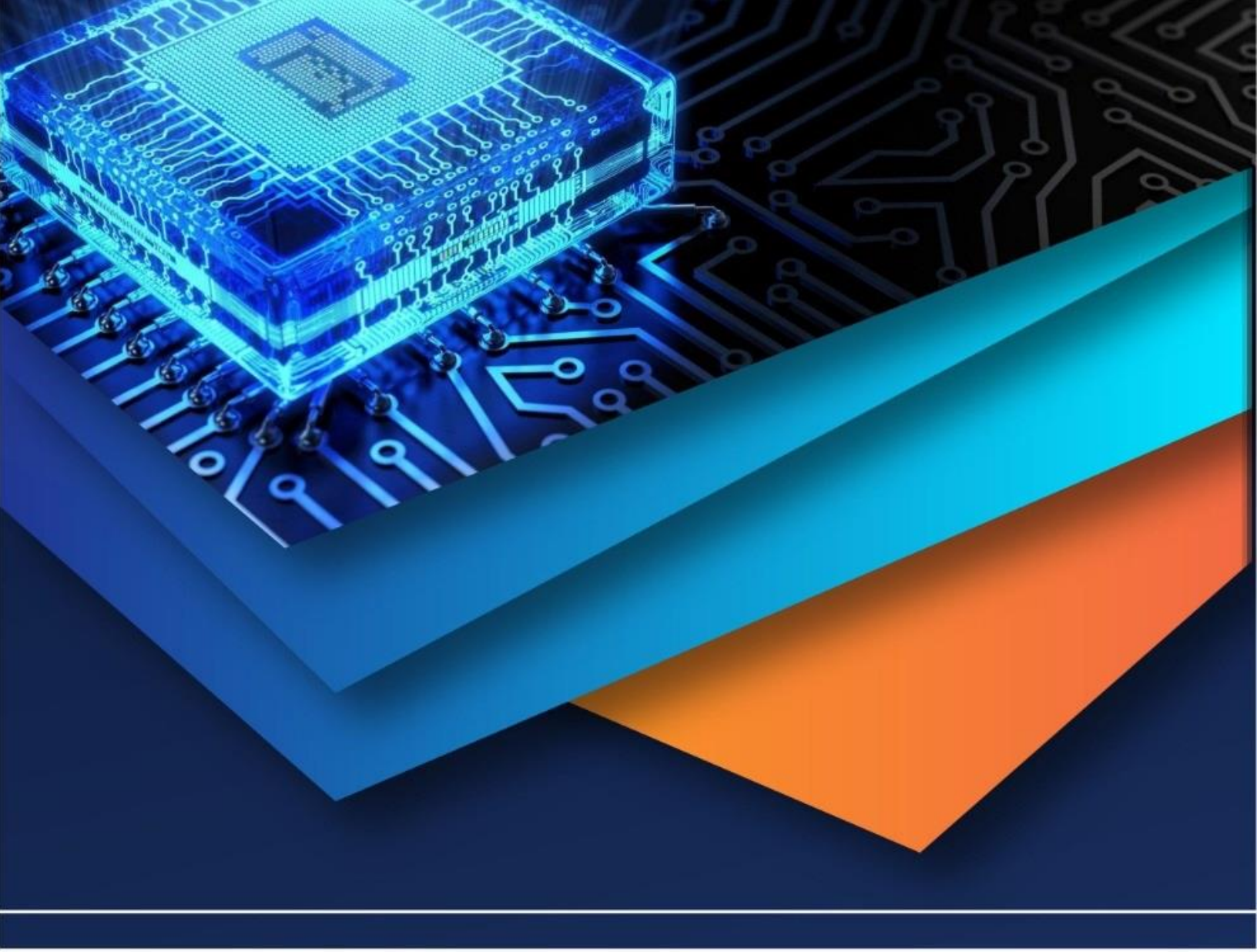

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