



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 8 Issue: X Month of publication: October 2020

DOI: <https://doi.org/10.22214/ijraset.2020.31958>

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com

Experimental Approach of Self Electric Generating Machine

CH Laxmana Raju¹, M N C Veeresh Kumar², P Venkata Mutyala Naidu³

¹Assist Professor, Department of Mechanical Engineering, Aditya Engineering College, Surampalem, Andhrapadesh, India.

²M Tech Student, Department of Mechanical engineering, Aditya College of Engineering and Technology, Surampalem, Andhrapadesh, India.

³Lecturer (Head of Department), Department of Mechanical Engineering, Aditya Engineering College second shift Polytechnic.

Abstract: *There are various types of electric power generating methods such as thermal, nuclear power plants etc. comes under high electric power generation.*

The major drawback of this system they uses fossil fuels which are non- renewable sources and also pollution to atmosphere. The renewable sources of energy are also having drawback it depends on atmospheric conditions

Now we are introducing new concept i.e. self electric generating machine. In this we are generating electric power the repulsive forces of magnets and motor.

A dynamo and motor is meshed with the gear of the inner wheel. By this arrangement we can generate power for small voltage (around 6v) for charging low voltage electric devices like mobile, trimmer etc. the major advantages of this machine is that it neither depends on fossil fuels nor atmosphere conditions

The topic under discussion is generation of electric power irrespective of high/low power

I. INTRODUCTION

In recent times due to effect of pollution and global warming there is a need for generating power from renewable sources

The repulsive type magnetic system has been employed so far in bearing and levitation system alone. Due to the scarcity of power generation, much modern technique must be employed for power production in this world. This proposed work states the new invention of producing free energy from repulsive type magnetic system for power generation. This generated power can be used in all kinds of applications, specifically in this paper the generated power is fed to ups.

Now a day mobile phones and laptops are the most important part of anybody's life. Basically in india there is a lot of scarcity of electricity for charging the above electronic devices

A. About The SEGM

Self electric generating machine (SEGM) is about the generation of low voltage electricity by the phenomenon of repulsion of magnet

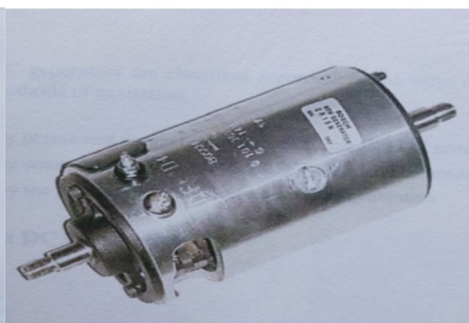
Every magnet has two poles north & south poles. The like poles of different each other, and the unlike poles attract each other. This project is based on the repulsion of magnet i.e. same poles repel each other.

B. Main Parts Of The SEGM

- 1) Magnet
- 2) Dynamo
- 3) Bearing
- 4) Gears
- 5) Wheels
- 6) stands
- 7) Battery



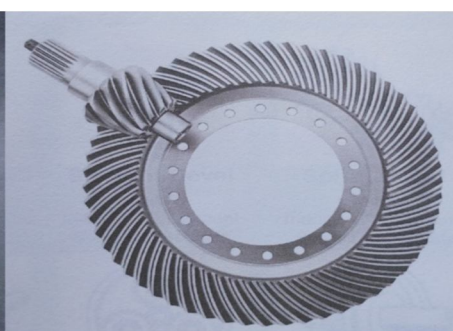
Magnets



Dynamo



Bearings



Gear



Outer Wheel



Inner Wheel

C. Construction Details

Take two wheels outer and inner wheels of diameter of 40 cm & 20 cm respectively. Now fix the 16 magnets on the outer wheels and 8 magnet in the inner wheel. Make sure that the both magnet facing each other is having same polarity shown in the figure. Now fix bearing on the plastic wheel. Fix the outer wheel and inner wheel in the stand as shown in the figure. Make sure that there is very less gap between two wheels for the repulsion of magnet. Gear is fixed on the both the side of the inner wheel. Now the dynamo and motor is connected with inner wheel and meshed with spur gear for the generation of electricity. Now the electrical connection are made as per circuit diagram



Front View



Side View



Total Set Up

II. METHODOLOGY

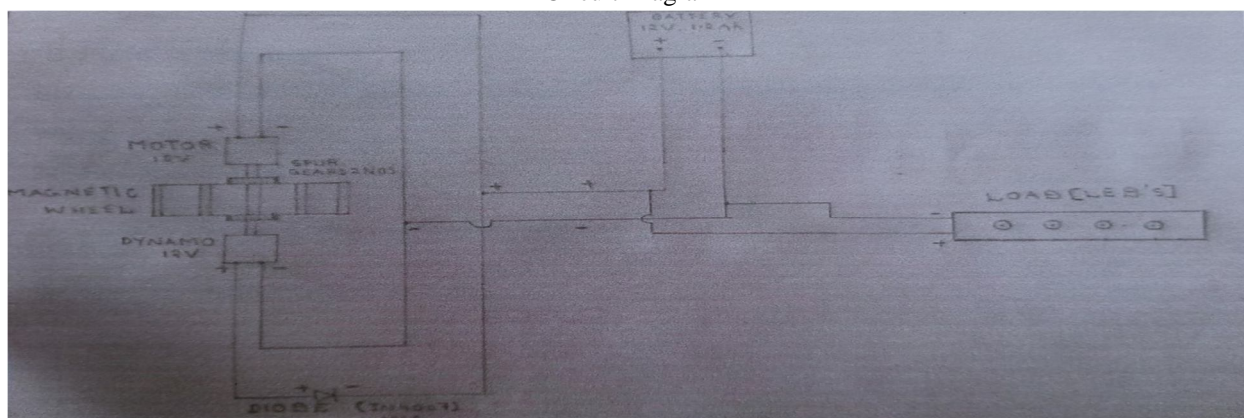
On the inner wheel bearing is fixed and is lubricated so that friction is decreased. Grooving is done top face of the inner wheel so that wooden blocks are placed at an angle of 45 degrees. Place the magnet in a bottle cap so that we can stick it in the wooden block and it also decreases the attraction forces between two magnets. Gear is fixed on both the sides so that motors and dynamo can be meshed

In the outer wheel stick all the 16 magnets in such a way that magnets facing each other has same poles with the inner wheel. Align the inner wheel and outer wheel in the stand and make sure that distance between both the magnets is very less nearly about 2-3 mm and place the magnet at an exact angle of 45 degrees. Gear is attached to both motor and it is meshed to the gear of the inner wheel on each side

Now, when two magnets from outer wheel and inner wheel are near to each other, then same poles repels each other as both the magnets are facing same polarity with each other. Due to repulsion magnet will to move but magnet is fixed to the plastic wheel so the plastic wheel move, as the wooden wheel is fixed. The plastic wheel consist of hub which is synchronized with dynamo. As the dynamo rotates it gives electrical energy as an output

The electrical energy that comes out is used for charging the battery and as the speed of inner wheel is slow, we supply a part of battery power to the motor on the other side so that inner wheel will rotate at required speed.

Circuit Diagram



A. Specifications

Motor – 12V DC

Dynamo – 12V

Diode – IN4007 MIC

Battery – 12V, 1.2 AH

Load (LED)- 12V



B. Applications

Used for low voltage electronic device

Used in railway stations, bus stations for charging mobiles phones

Can be used at home for charging UPS, mobile phones, laptop when electricity is not there

Can be used as study lamp if LED is attached

III. CONCLUSION

The proposed technology employs the theory of magnetic repulsion to utilize the free energy. The system uses permanent magnets to produce repulsion and this repulsive force produces a torque which drives a DC generator.

When compared to other non-renewable sources of energy like coal petroleum products etc. magnet is more easily available everywhere on the earth. The output of the equipments depends on specifications of the generator, strength of magnet, electric circuit, and battery. So by increasing the specifications of the components we can improve the power output

IV. FUTURE SCOPE

Implement in industry to generate electricity

Large scale production can be achieved using this knowledge

BIBLIOGRAPHY

- [1] Machine design by R S khurmi
- [2] Electrical machines by Dr P S Bimbhra
- [3] Electrical machines by B. L. Theraja

JOURNALS

IOSR Journal of electrical and electronics engineering (IOSR-JEEE) e-ISSN: 2278-1676, p-ISSN:2320-3331 PP 47-52.



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)