

GENERATE ELECTRICITY BY WASTE MATERIALS

Manish Kumar
Chandan Kumar
Sani Kumar Patel
Nitish Kumar Gupta
Shaikh Z.A.R.
Electrical Engineering
V.V.P Polytechnic, Solapur Maharashtra, India
kumarmanish01942@gmail.com

Abstract

In This Project We use waste materials for generate Electricity We show in this project one Electricity generating zaar box when we have waste materials like plastic, paper and other Then we burn that Materials in zaar box and when burning start then heat going to heating penal then heating penal convert the heat into Electricity Then we store that Electricity in battery and use that Electricity for bulb glowing and many others work

This is Live working idea for generate Electricity by Plastic and Waste Materials, In This Project when electricity starts storing that time output power supply off because we use heating sensor so when electricity store perfect then heating sensor turn on the output power supply and LED bulb start glowing and we can show that time live working of generate electricity by waste materials

I. INTRODUCTION

The Purpose of making this project is to generate electrical energy from bad materials like plastic, rubber, garbage and bad stuff etc. and store that electrical energy in the battery through the circuit and use that electrical energy to operate the whole project. And the LED bulb is shown to be turned on In This Project when burning start then heating generate and heating penal start converting heat to electricity and that electricity we can see on multi meter display we can see how much voltage generate by waste materials and we electricity generating perfectly then automatic heating sensor on the output power supply then Big LED Bub start glowing and our idea everyone can see in live working , Our Idea 100% work for generate electricity by waste materials. So, this is our best live working idea Filter Pollution Control Filter - In This Idea we show theoretically Idea Based Pollution Control System, In This Project When Smoke generate then smoke go to by pipe line to water tank then on water top surface corban start collecting ,and water cannot heat so there we used water colling filter that filter cool the water again and again and in this idea only we control corban pollution so we collect on water tank up side corban by smoke .

II. LITERATURE REVIEW

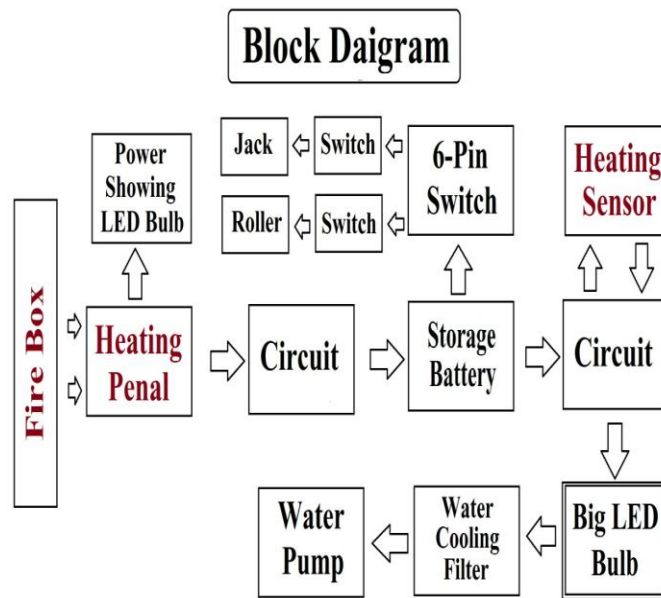
This Project Making Ideas and Invent is My before I make this idea no one make this idea so this project data not available on internet, your idea full related to solar energy and in 1939, Bell Laboratories engineer, Russell Ohl, submitted a patent for what we now know as the modern solar panel. His patent called for the purification of metalloid crystals to form a solar cell. This process created a material that was much more conductive for solar energy and I used solar penal to heating solar penal base so our idea same change. Our Full Project Work on generate electricity by waste material power. So, My Full Project Depend on Heating Solar Penal and I am only one who is work on heating solar penal so my idea research data not available on internet.

III. METHODOLOGY

The first step before the project implementation was to review the project scope and research area. Then the next task was to Design the mechanical structure and electrical structure of the conveyor belt which is to be built. Then, if all the design had been finalized, the implementations of the hardware and the circuitry took

place. Reaching the pick of the project, the programming segment Took place especially for the heating penal output, heating sensor sensing process and Output to the LED Bulb glow for Last But not least, certain modification on the circuitry and soft-Ware took place in order to make the system perform in finer Movements. Thus, troubleshooting process also took place to Correct certain faulty processes while the system was performing its task

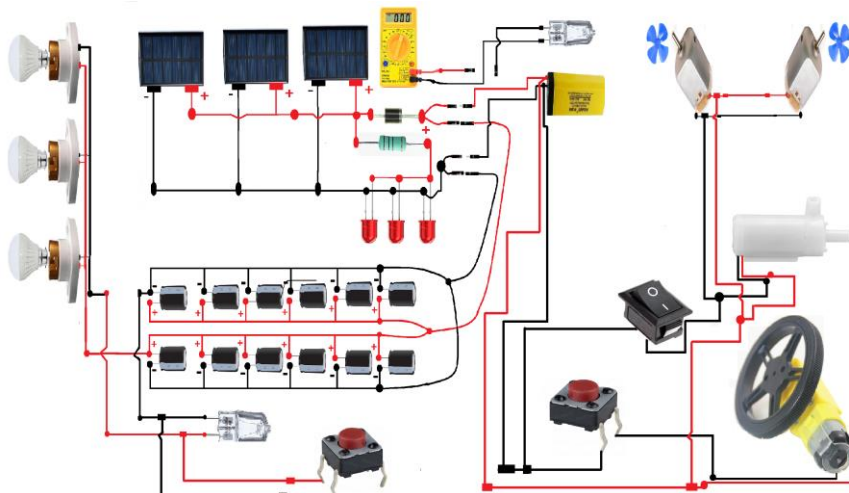
IV. BLOCK DIAGRAM



V. BASIC WORKING OF BLOCK DIAGRAM

In This Block Diagram you can see when we burn waste materials and fire box then heat generating and heating panel starts to heat convert electricity and after that this electricity, we can see by LED Bulb glowing and that electricity go to circuit and after that in battery and start storing power and when electricity store in battery then heating sensor turn on the output power supply and LED Bulb start glowing and smoke go to water tank and filter system start controlling pollution.

VI. CIRCUIT DIAGRAM

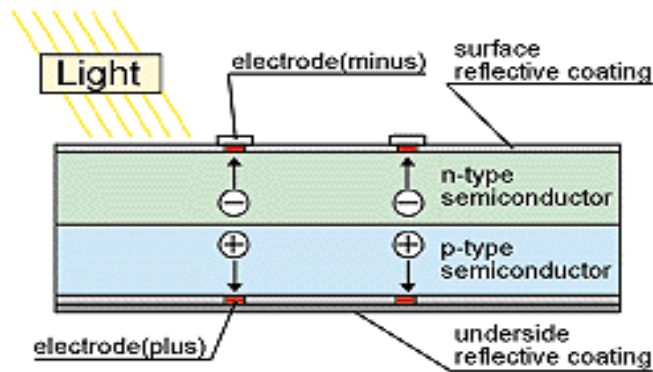


VII. WORKING PRINCIPAL OF PROJECT

This Project Working Depend on Heating Solar Penal So Heating Solar Penal Principle is Project Working Principle.

Simply put, a Heating panel works by allowing photons, or particles of light or heat, to knock electrons free from atoms, generating a flow of electricity. Heating panels actually comprise many, smaller units called photovoltaic cells. (Photovoltaic simply means they convert heating or light into electricity.)

How to Work Heating Penal



A p-n junction is formed by placing p-type and n-type semiconductors next to one another. The p-type, with one less electron, attracts the surplus electron from the n-type to stabilize itself. Thus, the electricity is displaced and generates a flow of electrons, otherwise known as electricity.

When heat hits the semiconductor, an electron springs up and is attracted toward the n-type semiconductor. This causes more negatives in the n-type semiconductors and more positives in the p-type, thus generating a higher flow of electricity. This is the photovoltaic effect.

VIII.LITERATURE SURVEY

Now a day we have more idea for generate electricity, but in your idea we show very different ideas, because this idea we invent before i make nobody make this idea, every day everyone for making food burn many matters so we make a different type of zaar box when someone making for food start burning that time our zaar box waste extra heat uses for convert heat to electricity and that electricity we can use in real life because we can store that electricity.

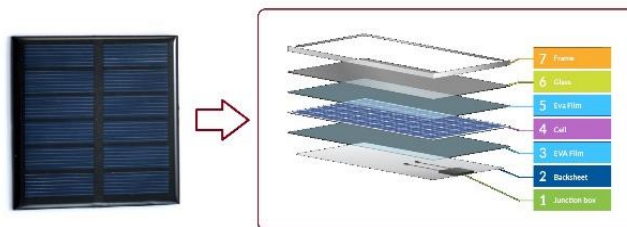
Hardware specification-

SN	Component
A.	Heating Penal
B.	Heating Sensor
C.	Capacitor 25v/1000uf
D.	LED Bulb

E.	Resistor
F.	DC motor 3000 RPM
G.	Battery 4.5V
H.	PCB
I.	Jack System
J.	Switch
K.	IN4007
L.	Wire

A. Heating panel-

5v Heating Penal



Simply put, a Heating panel works by allowing photons, or particles of light or heat, to knock electrons free from atoms, generating a flow of electricity. Heating panels actually comprise many, smaller units called photovoltaic cells. (Photovoltaic simply means they convert heating or light into electricity.)

B. Heating sensor-

Heating Sensor/ Tubelight Starter



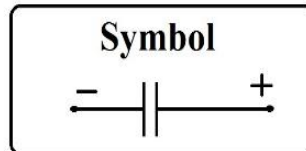
This sensor gives the battery power to the LED bulb only when this sensor is heated by heating. If this sensor is not heated, this LED bulb is not glowing.

Here is heating pen use for switching battery power, Because A Heating Sensor is an electrically operated switch

C. Capacitor-

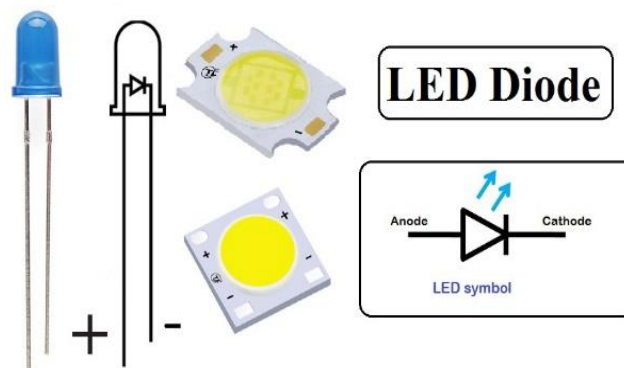


Electrolytic Capacitor
4700uf/25v



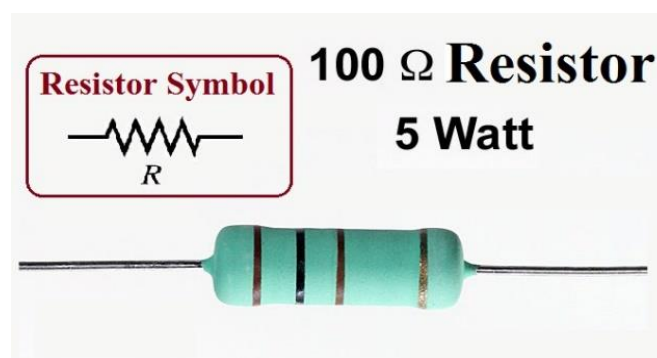
A voltage applied across the conductors creates an electrical field in the capacitor, which stores energy. A capacitor operates like a battery in that, if a potential difference is applied across it that can cause a charge greater than its "present" charge, it will be charged up.

D. LED-



3V DC LED Bulb We use for showing electricity generating for.

E. Resistor-



We use resistor with LED bulb

F. DC Motor-



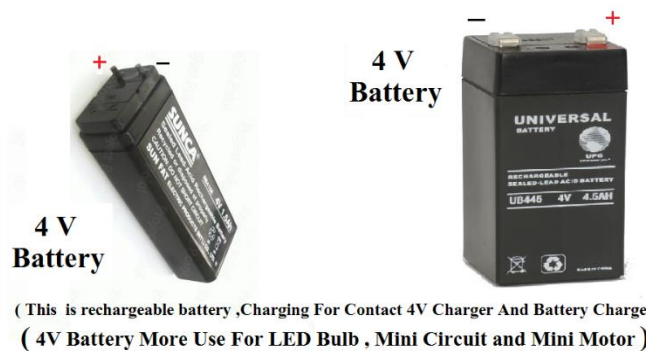
DC Motor-

RPM: 3000, Operating voltage: 6V DC

Shaft diameter: 6mm with internal hole, Torque: 7 kg-cm

No-load current = 60mA (Max), Load current = 300mA (Max).

G. Battery-



This is rechargeable battery, first there will be energy storage in this battery. After that this energy will be used to glow the bulb.

H. DC Water Pump Motor



RPM: 3000, Operating voltage: 6V DC,

Shaft diameter: 6mm with internal hole, Torque: 7 kg-cm

No-load current = 60mA (Max), Load current = 300mA (Max).

IX. ADVANTAGES OF THE SYSTEM

- He can generate electricity by solid waste
- He can generate electricity within second
- We can use any where
- Making cost very less and anywhere we can make
- He can generate electricity depend on heating penal voltage and zaar box size
- We can generate electricity making food time.
- We can collect Carbon by this idea and make many products by Carbon

X. LIMITATIONS OF THE SYSTEM

- We can not burn waste materials in large level so we can generate electricity only normal level.
- We can control pollution 100% when we burn plastic and other.

XI. CONCLUSION

When We Completed our project after that we check our project working, it is very good, he is full work without stop or any problem, So We can use our Project in real life like our industries or Field and he perfect work on there without any problem, This is our project idea and it is full work our project. So, our project idea is work in our prototype project, so our conclusion is so good.

XII. FUTURE DEVELOPMENT

Effectiveness of this project can be improved by following this: -

Recommendation-

We can make high quality heating panel for generate high electricity.

We can make large level burning box with easily heating penal connecting system.

We can make best storage system by generate electricity by waste materials.

ACKNOWLEDGMENT

I would like to thank the Project guide, Head of Department and Dean of Department, for providing all the material possible and encouraging throughout the course of project. It is great pleasure for us to acknowledgement his assistance and contributions for his prompt and timely help in the official clearances and valuable suggestions during the development of this project.

I would also like to express my profound gratitude to my faculty members and all my team members for their efforts and collaboration in doing this project work.

Last but not least, I express my heartiest gratitude to almighty god and our well wishes for their love and blessings to complete the project successfully.

References

1. Olaide Monsor Aderoju (PHD in View in Environmental Science & Technology.)
2. Aliyu Ba midele Oke (Master's in Chemical Engineering at National Space Research & Development Agency-NASR DA. Abuja, FCT- Nigeria)
3. Ganiy Ishola Agbaje (PHD in Geography-Geomatics at African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E), Ile-Ife, Osun State- Nigeria,
4. Anton io Guerner Dias (PHD in Geoscience at Universidade do Porto, Assistant Professor at Faculty of Sciences of the University of Lisbon Portugal.
5. R. Edinger and S. Kual, Renewable Resources for Electric Power: Prospects and Challenges. Quorum Books, London, 2000.
6. <https://www.flipkart.com>
7. <https://www.electroniccomp.com>
8. www.googleimages.com
9. www.reserchgate.com
10. Various web pages from google for search of capstone project.