



INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY

ISSN: 2454-132X

Impact Factor: 6.078

(Volume 7, Issue 3 - V7I3-2047)

Available online at: <https://www.ijariit.com>

Power generation using PN-Junction

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ABSTRACT

In current year, an increasing concern of environmental problem of emissions, in particular global warming and the limitations of energy resources has resulted in extensive research into novel technologies of generating power. This project concept to generate power with eco friendly environment and low cost. It is also help to save convectional sources because they can be limited. Power generation using burn waste garbage. To reduce the total cost of power generation. The pettier effect generation using burn waste generate heat supply pn junction this heat to generate temperature difference in pn junction and this temperature difference the positive terminal of proton is to attract the negative terminal of electron and the negative terminal of electron attract to the positive terminal of proton. To generate pettier effect electric charge. This electric charge it used to stored in battery with the help of booster circuit.

Keywords: Power Generation, PN Junction

1. INTRODUCTION

A Thermoelectric power generation using PN junction is a solid state device that provides direct energy conversion from thermal energy (heat) due to a temperature gradient into electrical energy based on "See back effect". The thermoelectric power cycle, with charge carried (electron) serving as the working fluid, follows the fundamental laws of thermodynamics and intimately resembles the power cycle of a conventional heat using waste garbage. Thermoelectric power using PN junction offer several distinct advantage over the other technologies,

- They are extremely reliable (typically exceed 100,000 hours of steady-state operation) and silent in operation.
- Since they have no mechanical moving part and require.
- Considerably less maintenance.
- They are simple, compact and safe.
- They have very small size and virtually weightless.
- They are capable of operating at elevated temperatures.
- They are suited for small-scale and remote applications.
- Typical of rural power supply, where there is limited or no electricity.
- They are environmentally friendly.
- They are not position-dependent.

2. PROBLEM DEFINITION

This project to developing power using PN junction and waste garbage. There are different types of project available but they are costier and more fuel consumption. So in future convectional sources can be limited also to increases the population to increase the demand of electricity power.

It is a alternate solution of power generation and to save convectional sources like coal, charcoal, crude oil, fuel etc and also help to reduce the water garbage on the earth surface area.

Now a days number of industries produce power but they also produce the pollution in environmental, so the reduce the environment pollution and waste garbage.

Environmental issues in thermal power plant mainly include the following:

- Air emissions
- Energy efficiency and Greenhouse Gas emissions
- Water consumption and aquatic habitat alteration
- Effluents
- Solid wastes
- Hazardous materials and oil
- Noise

3. OBJECTIVES

It is a alternate solution of power generation and to save convectional sources like coal ,charcoal ,crude oil , fuel etc and also help to reduce the waste garbage on the earth surface area. Now a days number of industries produce power but they also produce the pollution in environment ,so the reduce the environment pollution and waste garbage.

- ▶ To save the convectional energy sources.
- ▶ To save cost of power generation.
- ▶ To reduce envornmental pollution.
- ▶ To reduce the waste garbage

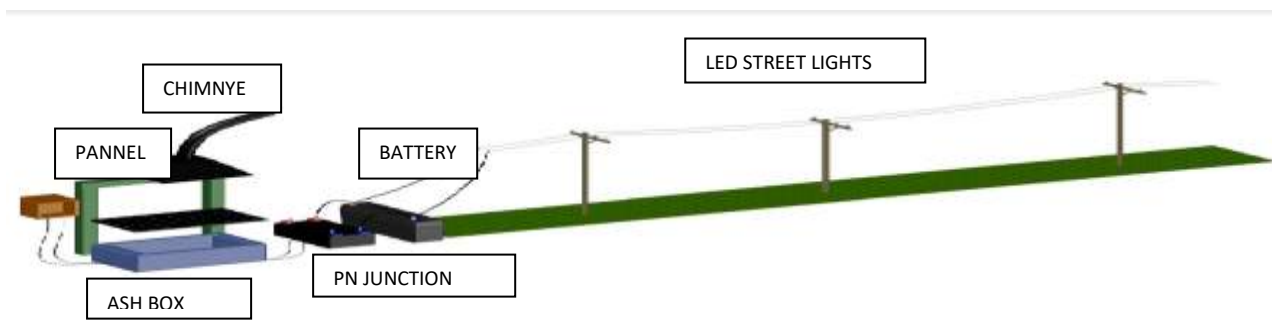
4. WORKING OPERATION

When the waste burn in the burning jar, to produce the heat. This heat absorb to a PN junction ,due to heat absorption the temperature difference create. In PN junction before temperature applied the holes and electron become a neutral stage no charge occurred in this time.

After a heat applied the holes and electron become a compressed in positive and negative side of PN junction. in this stage the positive side hole is attract towards the negative side of electron and the negative side of electron is attract towards the positive side of hole in this time the attraction of holes and electron to generate the deflection region.

In this region the attraction of holes and electron the potential difference produces this difference called as the electric power. this power is transfer to the electric circuit called as buster circuit. Main purpose of this circuit to enhance the power from 6-8 volts to the 12-14 volts. With the help of IC lm324sn. This power transfer to the battery charging terminal. to charge the 12v battery. at the same time the power transfers to the led lights to glow the light. Also used in a nay electrical equipment .the current transfer to the battery with the help of booster circuit in varactor diode and regulator. in regulator regulate the required power and drop the excessive power with help of resistance.

After burning the waste to produce the pollution of the gases. need to be control the pollution of gases with help of air filter. After burning the waste gases passes to the blower and at the end of blower air filter placed this air filter filter the air from pollution gases to the less harmful gases, after filter this gases passes to the atmosphere.



5. CONCLUSION

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There are three significant benefits for industry who choose my project power generation using PN junction, pollution free environment, low cost in production, raw material freely available all times anywhere, high efficiency all over systems.

In future the power generation without conventional sources like coal, charcoal, natural gases is possible. In future the power generation industry around the world will continue to appreciate these project for the benefits they brings.

Environmental issues are increasing every day and now the requirement is to reduce that while utilizing that waste source like the noise of the various machines which produces vibration also so, these vibration can be use to generate the power if we see the other side there is wastage of heat in the thermal power plant so this waste heat can also be used for the generation of power. Thermo electric technology is very suitable and better option for generation of power using these sources.

When these sources are moved in the direction of consumption then the environmental issues will decrease and the impact of these on the human health will decrease continuously in some amount. In other hand power generation will also increase so; supply demand curve will go near to meet each other.

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