

Three Way Electricity from Waste Water with Garbage

Giftson Felix D

Received: 6 December 2014 Accepted: 4 January 2015 Published: 15 January 2015

Abstract

In today's world the increase in population leads to usage of more products and so waste [garbage] quantity is also increased. On the other hand the disposal of the same is still a question mark. Huge number of researches and inventions has been given to dispose the garbage in a good and useful way and in that way the very new technology is producing electricity from waste. So this paper gives a new efficient way to use the garbage as well as garbage water for producing electricity and even dispose it safely. This is done by a mechanism with a specially designed wheel which acts as a turbine as well as garbage transmitter and in turn it uses kinetic energy of water to operate.

Index terms— specially designed turbine wheel, belt conveyor, garbage water turbine, furnace, hot gas/smoke turbine.

1 I. Introduction

oday the dumping of large number of garbage is been done in the water bodies in most developing countries as seen in below image. This spoils the nature of water bodies. Avoiding this dumping is impossible.

2 Previous improvements

? Domestic waste to Bio-Fuels

The garbage is dried and sent to the furnace where it is burnt and the gas or smoke from it is used to run a turbine and so electricity is generated? Microbial Fuel Cell

In this catalytic reaction of microorganisms and bacteria that are present in nature is used to produce Like this there are many processes but main problem or disadvantage is this is done in small amount or the amount of electricity produced is very less or more than 50% electricity produced is used by the same equipment. The working principle of the idea presented in this paper is a specially designed turbine which operates by using the kinetic energy of the flowing So from this paper we can dispose that garbage to the maximum extent as well as generate electricity from that thing. along with waste water from here both garbage and waste water are diverted into separate passage and by means of turbine and furnace some process takes place and so at three different points electricity is generated.

3 II. Components Present

The above image depicts the complete working principle of this idea.

4 IV. CONSTRUCTION

The construction of this idea is very simple here it is divided into three separate units. They are Specially designed turbine setup Belt conveyor setup Furnace setup

5 Specially Designed Turbine Setup

In this setup the specially designed turbine with buckets is connected to mixing chamber by the waste water flow pipe. The mixing chamber outlet leads to the turbine wheel which is coupled to a generator at the same time the specially designed turbine wheel is also coupled to a generator by means of belt.

6 Belt conveyor Setup

This is the conveyor type used in this system this may be belt or chain. This conveyor has many separators attached to it.

This separator has two purposes one is during upward movement preventing the garbage from sliding down and on another side this separator moves due to the kinetic energy of water obstructed by the separator.

7 Furnace Setup

In this setup furnace, a chimney and an outlet are attached. The furnace has an opening which is used for getting the garbage from the belt conveyor. A turbine wheel is placed nearer to the outlet and so it is coupled to a generator.

8 V. Working

The working principle behind this idea is that a specially Designed turbine wheel which operates by using the kinetic energy of the flowing waste water with garbage this wheel carries the garbage along with waste water This specially designed turbine wheel has many buckets which has an opening at the centre which is connected to a waste water flow pipe as the wheel rotates with buckets carrying the garbage as well as waste water the waste water from the bucket is taken to the mixing chamber by the waste water flow pipe here continuously waste water is collected as shown in the below figure.

This collected waste water is taken out through the outlet this leads to a turbine wheel. Thus this wheel rotates and the same makes the generator coupled to that turbine rotates and so electricity is produces. This is the first electricity output point.

This turbine wheel has buckets which carries the garbage and throws it in the slider so that the garbage falls into the belt conveyor. This conveyor works by means of the same kinetic energy of water the separator in the conveyor is pushed by the water and so the conveyor rotates and thus it carries the garbage upward here it is taken to open air thus it is dried to Inside the furnace there is a sliding plate which takes that garbage into the furnace and here it is dried by meanns of dry air. Then it is fired so that hot gases and smoke is left out this is taken out through the outlet pipe which leads to a turbine wheel. Due to the force of hot gases and smoke the turbine wheel rotates and so the generator coupled to it rotates and produce electricity as shown in the figure above. This is the second electricity output point.

The specially designed wheel which is operated by the kinetic energy of water. This operation also causes some rotational energy hence which in turn this is used by transferring remove the water content in it. Then it is dropped into the furnace the motion to the generator by means of a belt as shown in the above figure. So at this point also some small amount of electricity is produced this is the third electricity output point.

Thus at three points electricity is generated and at the same the garbage is also disposed safely without much harm.

9 VI. Other Images

10 IX. Conclusion

On the way of many improvements to generate electricity from the waste water with the garbage this paper has added one more way which completely separates the waste water and garbage as well as generate electricity at three points.

11 X. Acknowledgement

I am using this oppurtunity to express my grattitude to my parents who supported me throughout the paper. I am thankful for their aspiring guidance and supervision during the process. ¹

¹© 20 15 Global Journals Inc. (US)



Figure 1:



Figure 2:



Figure 3:



Figure 4:

82 **.1 VII. Advantages**

83 Electricity is generated at three points. Garbage is disposed safely. Waste Water and Garbage present in it
84 separated to the extent.

85 **.2 VIII. Disadvantages**

86 This purely depends on the flow of the water.

87 Maintenance is a major problem