River Cleaning Machine

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Abstract—India is holy country. There are lots of festivals like ganesh visarjan, navratri durga puja & Siahnthkumbhmela because of these there is lots of water pollution of rivers & lakes. The water pollution is very big problem in rivers, ponds and water bodies near river. Due to gradually increase in water pollution in the form to waste debris; it is hampering the life of aquatic animal and make their life in danger. Similarly sometimes the aquatic animals can eat the surface waste debris considering it as a food; which can cause the death of animals. Due to polluted water is many skin diseases to human kind are observed. To reduce the water pollution we are trying to make river cleaning machine. “River cleaning machine” a machine which used to removed the waste debris from water surface and safely dispose it from the water body. The river cleaning machine works on hydropower. It extracts waste water debris, plastics & garbage from river.

Keywords—River Cleaning Machine, Hydropower, etc.

1. INTRODUCTION

The “River cleaning machine” used in that places where there is waste debris in the water body which are to be removed. This machine is consists of waterwheel driven conveyer mechanism which collect & remove the floating wastage, garbage & plastic wastages from water bodies. This also reduce the difficulties which can be faced in collection of debris take place. The machine will lift the waste surface debris from the water bodies, this will be resulted in reduction of water pollution and the aquatic animal’s death. It consists of conveyer mechanism which lifts the debris from the water surface. This project will be useful for rivers, ponds, lakes and other water bodies for cleaning floating water waste debris. From this project we try to clean the surface water debris from bodies.

2. LITERATURE REVIEW

The literature review is helpful for design, analysis and experimental testing of river cleaning machine. This machine is manufactured on the basis of literature and research on different research papers & journals. It can be manufactured in such a way that it can provide flexibility in operation. This machine is easy and less costly and has lot of area to grow more economical. This project “River Cleaning Machine” is designed with the hope that it is very much economical and helpful to river and Pond cleaning. It is very cheap. It is very useful for the society. After calculations & trial on machine the results are very well. On the basis of these result we can conclude that it is an innovative method of minimizing manual workload & stress. It is very much reliable for stabilizing in the river. It is very useful for the small scale area’s. Although this system able to collect the garbage from the river with human interaction.

3. PROBLEM STATEMENT

Water running through a water drainage system & waterways mostly carries along waste materials most of which are non-biodegradable, which not only cause flooding but also climate change. The impurities present in water can cause hazardous disease.

4. OBJECTIVES

- To reduce the pollution in water bodies.
- To reduce the difficulty of removing floating waste debris on water surface.
- To introduce the automation in cleaning river.
- To improve the speed & reliability in operation.
- Improve the water quality of a stream or river.

5. CONCEPTUAL MODEL
6. WORKING
The main purpose of this machine is to pick up the waste debris from the water surface and dispose them in the container. It consists of arrangement of the conveyor mechanism which is mounted on the shaft & bearings support. The shaft and bearing is mounted on the M.S angle frame. By using hydropower guide wheels are rotate; this power is transmitted to the conveyor mechanism by using chain drives. The conveyor is move as well as it collects the water debris, waste garbage & plastics from water surfaces. When the machine is placed in the water the floating waste debris in water will be lifted & moves in upward direction. The waste debris will get collected in the container. In this way cleaning of water surface and safe collection of waste debris from water takes place. After collection of all wastage debris the container carried out of the river. In this way river cleaning will be taken place. Fig.1 shows the Concept drawing of river cleanup system.

7. ADVANTAGES
- It is a non-conventional river cleanup system.
- It’s initial & maintenance cost is low.
- System does not require skill worker.
- Proper coordination of mechanical operations can improve the control of machine.
- System is economical.

8. CONCLUSION
This machine is manufactured on the basis of literature and research on different research papers & journals. It can be manufactured in such a way that it can provide flexibility in operation. This machine is easy and less costly and has lot of area to grow more economical. This project “River Cleaning Machine” is designed with the hope that it is very much economical and helpful to river and pond cleaning. It is very portable and very useful for the society.

9. REFERENCES
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