

SOLAR OPERATED UNMANNED LAKE CLEANING BOAT TO CLEAN DEVIKA NAGAR LAKE, ADYAR MANGALORE

Project Reference No.: 45S_BE_2639

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Keywords:

unmanned solar operated lake cleaning boat

Introduction:

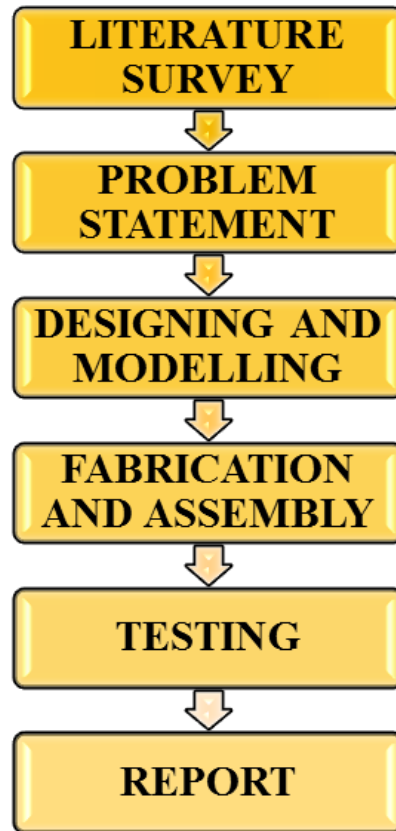
We have 71% of water in our global area, out of which we have only 3% of water in the ground. So, we don't have enough water for daily use and we must protect lakes, rivers and wells. The government is highly investing in the rivers compared to the lakes. People are throwing waste to the lakes as well as aquatic plants are also growing itself beneath the lake. So, lakes are draining fast. If humans are cleaning the lakes, it may cause accidents or some other damage etc. To avoid this, we have made a budget-friendly project solar operated unmanned lake cleaning boat.

Presently, IC engine boats are there to clean the lake, but it is not economical and IC engines work by internal combustion. It takes place in the simplest terms; combustion means burning. It is an exothermic chemical reaction that involves fuel and oxidants. Due to this, lots of pollutants will emit into the environment.

Objectives:

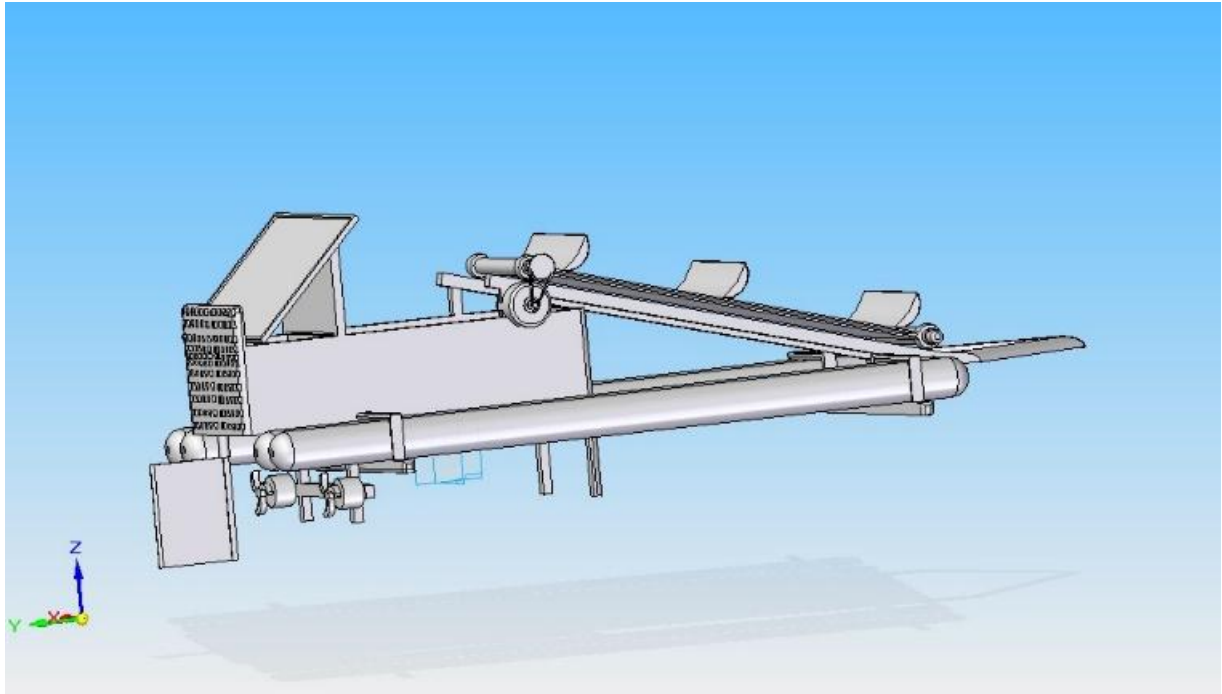
- To design and fabricate unmanned solar operated lake cleaning boat to clean Devika nagar lake.
- To use UV sensor technology to identify the nearby obstacles in the lake.
- To maintain the lake clean.
- To Improve the water quality in the lake.
- To make public aware of lake cleaning by creating website and to publishing lake cleaned data in the website.

Methodology:



Fabricated Project:





3D Model of the project

Conclusion:

We successfully designed and fabricated an unmanned solar operated lake cleaning boat to clean Devika Nagar Lake. We used UV sensors to identify the nearby obstacle(50cm). Also, we create websites to give awareness to people. Our project does not produce any kind of pollution to the environment. For the solar panel helped to generate the electric city. That does not affect the environment. Our machine collects waste and debris to maintain the clean lake, and it will also improve the quality of the water. This project is more eco-friendly for the environment. It can give flexibility in operation. This innovation has turned out to be an easy and affordable price. On the basis of its design, cost and availability

Scope for future work:

- This project makes only for small lake by doing some modification its size and capacity it can use in big lake and river.
- Its having less stability during heavy current in lake and river. It can be improved by adding such as gyroscopic devices.
- The object detector sends message only when any obstacle is detected in a range of 50 cm. In future It can be modified to stop or change the direction of the boat and also increase the range of object detector.
- The setup can be taken into a business level.