UNIVERSITI TEKNOLOGI MARA

DEVELOPMENT OF PROPULSION SYSTEM FOR WATER TRASH COLLECTOR

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ABSTRACT

Every year the number of rubbish is increasing because of people who are irresponsible to our nature. Furthermore, river is highly exposed to pollutions where the number of rubbish is highest than the other place. To prevent this problem, many people have prepared the prototype of water trash collector to collect the rubbish along the river, lake and ocean. However, propulsion system is one of the main important parts to move the water trash collector. The result of the propulsion system of the water wheel will move along the river without any problem because the shape and the size of the water wheel is made in accurate measurement. However, the material of the product is important to choose because it will affect to the water wheel during rotating the blade. Material from PVC is use to fabricate the water wheel to withstand the pressure of water. The number of blade is six because it can move smoothly and did not move too fast during collecting the rubbish. The DC motor suitable for the water wheel because it has torque and will develop high speed to rotate the water wheel. This project is developed to the society to decrease the number of rubbish at river and increase the quality of water to drink. Human is less likely to expose to dangerous health issues due to contaminated river, if the water river is clean. In addition, the bad smell of surrounding will decrease and river can be main attraction place to visit by people. The prototype is made with patience to achieve the highest accuracy, so it can function really well.

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INTRODUCTION

1.1 Background of Study

There is a lot of river in Malaysia use for tourism and to do some activities with friends and family which is swimming, picnic and fishing. However, there is a lot of rubbish in the river due to people who selfishly threw thrashes into it. There is many people use river for their own life. There are many irresponsible people around this world did not take care of the river. River is our main sources water to drink, taking shower, cooking and others stuff. But they did not realise about the pollution of the river become worst and destroy our mother nature. Moreover, Water pollution could be a major problem in Malaysia and it give effects on the water resources [1]. The amount of the plastic is higher than other materials such as tin, stainless and others [1]. Water pollution could be a major problem in Malaysia and it give effects on the water resources [1].

Every year the number of pollution at the river was increased because of the irresponsible people. Moreover, it can causes the ecosystem in the river became worst because the aquatic life did not get the fresh water to stay alive. The river pollution can cause the disease to the human because did not get the fresh water and it can cause to the people who did not have any filter water in their house. The example disease that people can get is cholera [1]. This can cause the damage in our organ such as liver, heart and kidney [1]. Many fishes and aquatic life would die, and some species may be extinct. This problem will drag on if no prevention measures are not taken. The effects of pollution on the ecosystem of the river are extremely alarming. Malaysia has rich aquatic ecosystems that offer vital resources like water, food, medicine, commercial marine resources, energy, transport, and social development. Also, it provides control, erosion prevention, and shoreline protection. The ever-present and abundant supplies of those resources have resulted in minimal concern about their conservation and sustainable exploitation [3].

In this regard, a water trash collector is the best solution so the river could be clean and the ecosystem can be saved. Water trash collector helps to collect rubbish on the surface of the river. The trash includes debris, plastic, and dry leaves. It will reduce