



TECHNOLOGY BLUEPRINT

“AQUABIN”

FACULTY : **FACULTY OF APPLIED SCIENCE**

PROGRAM : **APPLIED CHEMISTRY**

PROGRAM CODE : **AS245**

SEMESTER : **5**

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SUBMISSION DATE

7 DECEMBER 2018

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1 EXECUTIVE SUMMARY

By now, report shows that our oceans are turning into swirling garbage dumps. It is estimated that some 8 million metric tons of plastic waste enter global waters every year. This Aquabin is made to reduce water pollution that caused by human such as trash dumping, food waste, and eutrophication problem. Water pollution is also a threat to aquatic life, so it is also made to save the aquatic life. Cleaning up the ocean or beach manually is time and labor consuming. So, with Aquabin, massive human intervene is not required anymore.

This Aquabin develops innovative upstream solutions for cleaner and more sustainable marinas. It is made to reduce water pollution that caused by human such as trash dumping, food waste, and eutrophication problem. The Aquabin is a floating rubbish bin that is located in the water at marinas, docks, rivers, lakes, public waterways and oceans. The Aquabin is a unique and sustainable water system cleaning technology. It is an automated rubbish bin that catches everything from plastic bottle, paper, oil, fuels and detergent which built from recycled material. Water is sucked in from the surface and passes through a filter fibers bag inside the Aquabin. With the aid of impeller, the water is then remove back into the ocean leaving litter and debris trapped in the filter fibers bag to be disposed of properly. So, with Aquabin, massive human intervene is not required anymore.

2 PRODUCT OR SERVICE DESCRIPTION

It is reported that Malaysia water system such as sea, river and beach has become much polluted due to debris and dumped waste into the water system. Recently, Julian Hyde, the general manager of Reef Check Malaysia from New Straits Times reports that during a clean-up of beaches in the country earlier in March 2018, revealed that most of the rubbish collected (2,700kg) was made from plastic. The items ranged from water bottles to plastic bags. This is evidence that urgent action is needed to address plastic pollution in oceans. The clean-up, organized by Reef Check Malaysia (RCM), was conducted in 16 locations and involved more than 500 people from 20 organizations. They cleaned up trash along 15km of coastline, filling nearly 400 trash bags. The rubbish collected included 15,874 plastic water bottles, 6,884 plastic bags, 2,368 cigarette butts, and 203 diapers. Marine debris must be concerned for some time. This clean-up shows just how big the problem is. Imagine if this were extrapolated to the whole of Malaysia.

In order to solve this problem, our company have come up with a new technology which is called Aquabin that act like a floating rubbish bin. Aquabin is made to reduce water pollution that caused by human such as trash dumping, food waste, and eutrophication problem. Water pollution is also a threat to aquatic life, so it is also made to save the aquatic life. Cleaning up the ocean or beach manually is time and labor consuming. So, with Aquabin, massive human intervene is not required anymore.

Product Description

This Aquabin develops innovative upstream solutions for cleaner and more sustainable marinas. It is made to reduce water pollution that caused by human such as trash dumping, food waste, and eutrophication problem. The Aquabin is a floating rubbish bin that is located in the water at marinas, docks, rivers, lakes, public waterways and oceans. The Aquabin is an automated rubbish bin that catches everything from plastic bottle, paper, oils, fuels, debris and detergent which built from recycled material. Water is sucked in from the surface and passes through a catch bag inside the Aquabin, with a submersible water pump. The water is then pumped back into the marina

leaving litter and debris trapped in the catch bag to be disposed of properly. So, with Aquabin, massive human intervene is not required anymore.

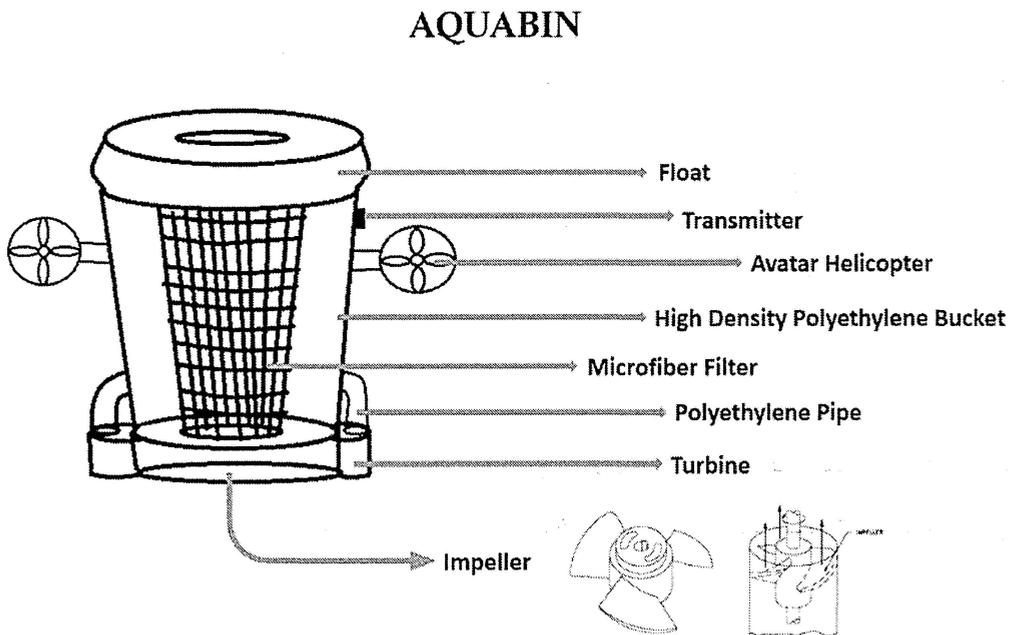


Figure 1: Labelled sketch model of Aquabin

Mechanism/how it works

The mechanism of the Aquabin is very intuitive: a bin is totally immersed in the water. Water is captured by the motor that operate inside the Aquabin bucket. The motor will rotate the turbine and suck the water from above and the water will flow out as the water jet motor. The water will hit the central of impeller at the bottom of the tank. Then the impeller will rotate and suck the water from surface of water into the Aquabin. Thus, only trash and debris are trapped in the microfiber filter bag. Since Aquabin is equip with the component of radio transmitter, it will give the signals and can be control by the remote controller.