



اَوْنِيُوْرَسِيْتِي تِكْنُوْلُوْجِي مَارَا
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MARA

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CLEAN TECH VACUUM PUMP

PREPARED FOR:

MADAM JAMALIAH BINTI MD SAID

PREPARED BY:

- | | |
|---|-------------------|
| 1. SYED ARIF BIN SYED AZIS | 2015810542 |
| 2. MUHAMMAD HASRUL FITRI BIN AHMAD | 2015861698 |
| 3. NURUL SHUHADAH BINTI JASRI | 2015812496 |
| 4. NURUL AMIRAH BINTI MUHAMAD | 2015880998 |
| 5. NUR AMIRAH BINTI AHMAN | 2015885626 |

Thank you to God whom with his willing giving us this opportunity to complete Final Year Project which is entitled Clean Tech Vacuum Pump. This final year project report was prepared for our course which is Mechanical Engineering Design (MEC332).

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For our product for this final year project, we have an idea from vacuum cleaner which also known as a sweeper or Hoover that uses an air pump which is a centrifugal fan in all but some of the very oldest models to create a partial vacuum to suck up dust and dirt, usually from floors and from the surface such as upholstery and draperies. The low pressure air caused by the air going into the vacuum cleaner draws up small particles of dirt and dust.

So we want to invent the vacuum that collect and discharge the mud which can help people after the disaster such as flood. Hence, our group choose to design according to the themes which is aid for the disaster and named our project with water pump vacuum. It is the ideal solution for the victims to clean their houses and places. Our vacuum can separate solid from the liquid by using pump and discharge the liquid outside and the solid remains in the filter. We provide the initial precaution in the beginning of the suction line. We put the filter thread at the suction line to avoid pump from damage.

The speciality of our design are, our product can suck the flood water and mud together and only discharge the water to the drain. Hence, the device will remove all the water and leave the dry surface behind. It makes the flood victims more helpful after the disaster to clean up their houses and places.

CONTENT

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ABSTRACT

TABLE OF COTENTS

• CHAPTER 1: INTRODUCTION	1-3
CHAPTER 2: DESIGN PROBLEM DEFINITION	4
2.1 Market Analysis	
2.1.1 General Need for Product	5
2.1.2 Description and estimation of market size	6
2.1.3 Competitive Products and Benchmarking	7-9
2.1.4 Opportunity for Competitive Advantages	10
2.2 Physic of the Artifact	11-12
2.3 Criteria for Selecting Final Design Concept	13
2.4 Final Product Design Specification	14-15
CHAPTER 3: CONCEPT GENERATION AND SELECTION	16
3.1 Feasible Concepts	
3.1.1 Morphological Chart	17
3.1.2 Concept 1	18
3.1.3 Concept 2	19
3.1.4 Concept 3	20
3.1.5 Concept 4	21
3.1.6 Concept 5	22
3.2 Selection of Final Concept	
3.2.1 Pugh Chart	23
3.2.2 Discussion	24

INTRODUCTION

Floods in Malaysia are regular natural disaster in Malaysia which happen nearly every year during the monsoon season. Lately, in Malaysia, there are lots of disaster which is flood such as at Penang, Kedah, Perak, Kelantan, Terengganu, Pahang, east Johor and west Sarawak were reeling as floods following continuous heavy rain caused havoc in parts of these states. One of the biggest issues surrounding flooding after natural disaster is mud. This can be proved by the analysis made by Ambient Risk Analytics which partially funded by the UK Space Agency's International Partnership Programme (IPP).

Mud is the one of the problem that can stay with a structure long after floodwaters have receded. This situation makes us decided to choose project theme for our Final Year Project is Disaster Aid by creating and inventing useful technological prototype to assist in managing and surviving a disaster. The name of our product is Clean Tech Vacuum Pump which the actual problem to be solved is cleaning the mud after the flood. Our product can collect and discharge mud. It is a good solution for flood and it can separate solid while liquids or mud being pumped out through a flexible hose.

This will make the process of cleaning more easy and tidy because the mud will be straight to discharge. The concept of our product is collect and discharge the mud in one area. It is the ideal safety aids for flood to help with the cleaning process after the disaster or other suitable situation. Our product which is wet vacuum cleaners is offering the efficient cleaning for every cleaning task involved the water or liquid. Wet vacuum cleaners are designed for all wet applications. Our professional wet vacuum cleaners have the filter which will prevent the pump from broke down and increase the pump life cycle.