POLITEKNIK MALAYSIA
MUKAH

LEAF VACUUM AND SHREDDER MACHINE

ALEXANDER KALAU ANAK JULIN	20DKM15F1138
MOHD MILZAM BIN MOHAMAD KHAN	20DKM15F1042
MOHD HAMDI BIN HAMCA	20DKM15F1066
AMYLIA JELIMIN ANAK ROBIN	20DKM15F1041
DIANA JOSS	20DKM15F1063

PROJECT SUPERVISOR

MOHAMAD SYAHIDULLAH BIN AHMAD ANUAR'

DEPARTMENT OF MECHANICAL ENGINEERING

POLITEKNIK MUKAH

SESSION: JUNE 2017

LEAF VACUUM AND SHREDDER MACHINE

NAME	REG. NUMBER
ALEXANDER KALAU ANAK JULIN	20DKM15F1138
MOHD MILZAM BIN MOHAMAD KHAN	20DKM15F1042
MOHD HAMDI BIN HAMCA	20DKM15F1066
AMYLIA JELIMIN ANAK ROBIN	20DKM15F1041
DIANA JOSS	20DKM15F1063

This report is submitted to the Department of Mechanical Engineering in partial fulfilment of the requirements for graduation Diploma in Mechanical Engineering

"We declare that this report is our own work except each piece that we have explained the source"

1. Signature : 
   Name : ALEXANDER KALAU ANAK JULIN
   Registration Number : 20DKM15F1138
   Date : 12/10/2017

2. Signature : 
   Name : MOHD MILZAM BIN MOHAMAD KHAN
   Registration Number : 20DKM15F1042
   Date : 12/10/17

3. Signature : 
   Name : MOHD HAMDI BIN HAMCA
   Registration Number : 20DKM15F1066
   Date : 12/10/2017

4. Signature : 
   Name : AMYLIA JELIMIN ANAK ROBIN
   Registration Number : 20DKM15F1041
   Date : 12/10/2017

5. Signature : 
   Name : DIANA JOSS
   Registration Number : 20DKM15F1063
   Date : 12/10/2017

PROJECT REPORT VERIFICATION

This report entitled "**Leaf Vacuum and Shredder Machine**" has been submitted and reviewed as to meet the conditions and requirements of project writing.

Reviewed by:

Supervisor 1 : MOHAMAD SYAHIDULLAH BIN AHMAD ANUAR

Signature :

Date :

ACKNOWLEDGESEMENT

First and foremost, we would like to thank the Institute of Polytechnic Mukah for providing a complete facilities and equipment in the accomplishment of the project.

A lot of people have been helpful in completing the project involving lecturers and friends. We also like to give a special gratitude toward our final year project supervisor, Mr. Mohamad Syahidullah bin Ahmad Anuar for his encouragement, guidance and comment during the duration of the project.

Last but not least, we would like to express our appreciation to all that have been involved in completing this project, be it directly or indirectly such as our parents for giving us support.

CONTENT

LIST OF TABLE

LIST OF FIGURE

LIST OF APPENDIXES

ABSTRACT

The project was applied from the observation on how Leaf Vacuum and Shredder Machine were useful in Polytechnic Mukah. There are a lot of trees in Polytechnic Mukah which causes the abundant of dried leaves that litters the ground. One of the conventional method to get rid of the dried leaves in Polytechnic Mukah is usually blow them by blower in one place then raking/swiping then and collect into bags. However, this method takes time and requires major effort. To solve this problem, there is where Leaf Vacuum and Shredder Machine is created. By vacuuming the dried leaves using Leaf Vacuum and Shredder Machine, the work of cleaning up dried leaves easy to implement. This machine also functional to shred the dried leaves until they turns into small pieces of debris. The purpose of shredding the dried leaves that had been vacuum is to reduce the storage of dried leaves. The scopes for this machine are, this machine is for use in small-scare like around Polytechnic Mukah area. The storage space can accommodate about 0.5 x 0.8m size of sack. This machine is only for vacuum and shred the dried leaves and cannot be run in rainy day. In literature review, the products that available in the market is compared to improve the product capability. Methodology research is done to create a planning, selection, flow chart as a guide for fabrication process and design of the machine. A test run is done for data analysis.

ABSTRAK

Projek ini dibuat melalui pemerhatian di mana 'Leaf Vacuum and Shredder Machine" ini amat berguna di Politeknik Mukah. Terdapat banyak pokok di Politeknik Mukah yang menyebabkan banyak daun kering yang berguguran di tanah dan tepi jalan. Anatara salah satu kaedah konvensional untuk membersihkan daun kering di Politeknik Mukah ialah dengan membawanya ke satu tempat dengan mesin "blower" dan menyapu lalu dikumpul ke dalam beg . Walau bagaimanapun, kaedah ini mengambil masa yang panjang. Bagi menyelesaikan masalah ini, "Leaf Vacuum and Shredder" telah dicipta. Dengan vakum daun kering menggunakan "Leaf Vacuum and Shredder", kerja membersihkan daun kering mudah dilakukan. Mesin tersebut juga berfungsi untuk mengisar daun kering sehingga menjadi serpihan yang lebih halus. Tujuan mengisar daun kering selepas divakum adalah untuk mengurangkan tempat penyimpanan daun kering. Mesin ini boleh digunakan di tempat yang berskala kecil sperti di Politeknik Mukah. Tempat penyimpanan dapat menampung kira-kira 0.5 x 0.8m saiz guni. Mesin ini hanya untuk vakum dan mengisar daun kering sahaja dan tidak boleh digunakan semasa hari hujan. Dalam kajian literatur, produk yang terdapat dalam pasaran sekarang ini telah dibandingkan bagi meningkatkan keupayaan mesin yang hendak dicipta. Metodologi dilakukan bagi membuat perancangan, pemilihan, carta aliran sebagai panduan untuk proses fabrikasi dan reka bentuk mesin. Satu ujian telah dilakukan untuk analisis data.