VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"SMART HYDRAULIC SYSTEM FOR TRACTORS"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
Anusha A Poojary	4AL14EC007
Chaithra	4AL14EC021
Jyothi	4AL14EC042
Yashaswi S	4AL15EC433

Under the Guidance of
Mr. Shankar BB
Associate Professor
Department of E&C Engineering

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
MOODBIDRI – 574 225.

2017-2018

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled **"SMART HYDRAULIC SYSTEM FOR TRACTORS"** is a bonafide work carried out by

Anusha A Poojary	**4AL14EC007**
Chaithra	**4AL14EC021**
Jyothi	**4AL14EC042**
Yashaswi S	**4AL15EC433**

in partial fulfillment for the award of BACHELOR of ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2017–2018. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering degree.

25/5/18	D.V.M 25/05/18	
Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Shankar BB	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Tractors are a revolutionary agricultural equipment or tool that have improvised and facilitated the farm and field activities in the agricultural sector. Tractors are of various types depending on the load they are designed to work with, soil terrain, crops, and many other criteria. Tractors above 45hp are robust enough for heavy work, but the ones with lower hp are not capable. These Tractors when encountering sticky soil, hard rocky ground, dry leaves and logs in the paddy fields and plantations easily tend to get stuck thus making the farmer who is driving the tractor to toil more hard and increase his manual labor, and also leading to more stress on the tractor engine along with increased fuel consumption and damage to the peripherals that get stuck in the hard rocky earth and increase the repair costs to the farmer.

The proposed prototype is designed to detect the obstructions encountered by the peripherals and actuate a series of automated operations which include the lifting up and lifting down of the cultivator, tiller or any other peripherals whenever it gets stuck and the engine is about come to the off condition. These set of operations which usually are manually done in the Tractors with hp below 45hp where the farmer has an extra load of focusing in the front and rare directions which increases his fatigue, is reduced significantly when this simple, automated, sensor based unit is fixed to the tractor. This ensures more productive work in the stipulated time, lesser damage to engine, reduction in damage of brake plates and depreciation of clutch plates and other peripherals linked to hydraulic hub thus ensuring an increased efficiency and improvised results in the farm and the field work.

.