



**Karnataka State Council for Science and Technology**  
Indian Institute of Science Campus, Bengaluru - 560 012

Telephone: 080-23341052, 23348840, 23348840 • Telefax: 080-23348840  
Email: office@kscst.iisc.ernet.in, office@kscst.org.in • Website: www.kscst.iisc.ernet.in, www.kscst.org.in

**Mr. H. Hemanth Kumar**  
Executive Secretary

27th March 2019

Ref: 7.1.01/SPP/1333

The Principal,  
Alva's Institute of Engineering and Technology,  
Shobavana Campus,  
Mijar,  
Moodbidri - 574 225.

Dear Sir/Madam,

**Sub : Sanction of Student Project - 42nd Series: Year 2018-2019**  
Your Project Proposal Reference No. : **42S\_BE\_0687**

Ref : Your Project Proposal entitled " **UAV FIRE EXTINGUISHER**

I am happy to inform that your student project proposal referred above, has been approved by the Council for "Student Project Programme - 42nd Series" and has been sanctioned with a budgetary break-up as detailed below:

Student / s	Mr. A.Ranjith Prabhu and others	Budget	Amount (Rs)
		Materials/Consumables	7,000.00
Guide/s	Prof. K V Suresh	Labor	500.00
		Travel	500.00
Department	Mechanical Engineering	Miscellaneous	500.00
		Report	500.00
		TOTAL	9,000.00
NINE THOUSAND RUPEES ONLY			

The following are the guidelines to carryout the project work :

- The project should be performed based on the objectives of the proposal sent by you.
- The project should be completed in all respects and one copy of the hardbound report along with softcopy of the full report in a CD (.pdf format) should be submitted to KSCST.
- Any change in the project title and objectives, etc., or students is liable to rejection of the project and the amount sanctioned needs to be returned to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- Important:** After completing the project, 2 to 3 page write-up (synopsis) needs to be sent by e-mail [spp@kscst.iisc.ernet.in] and should include following :
  - Title of the project
  - Name of the College & Department
  - Name of the students & Guide(s)
  - Keywords

**PRINCIPAL**

Alva's Institute of Engg. & Technology  
Mijar, MOODBIDRI - 574 225, D.K

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,**

**Jnanasangama,Belgavi-590018**



**A project report on**

**“UAV FIRE EXTINGUISHER”**

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

**BACHELOR OF ENGINEERING**

**In**

**MECHANICAL ENGINEERING**

**By**

<b>A.Ranjith Prabhu</b>	<b>4AL13ME001</b>
<b>Arjun Sushil</b>	<b>4AL14ME009</b>
<b>Vishnuprasad PP</b>	<b>4AL14ME741</b>
<b>Vishwadev</b>	<b>4AL14ME742</b>

**Under the Guidance of**

**Prof. K V Suresh**

**Professor, Department of Mechanical Engineering**



**Department of Mechanical Engineering**

**ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY**

**MOODBIDRI-574225, KARNATAKA**

**2018-2019**

**Sponsored by KSCST, Bangalore**



# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mijar, Moodbidri, D.K. 574225 Karnataka



## DEPARTMENT OF MECHANICAL ENGINEERING

### CERTIFICATE

Certified that the project work entitled "UAV FIRE EXTINGUISHER" is a bonafidework carried out by

A.RANJITH PRABHU	4AL13ME001
ARJUN SUSHIL	4AL14ME009
VISHNUPRASAD PP	4AL14ME741
VISHWADEV	4AL14ME742

are bonafide student of Mechanical Engineering Department, Alva's Institute of Engineering and Technology in partial fulfillment for the award of BACHELOR OF ENGINEERING in MECHANICAL ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2018-2019. 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.

Prof. K V Suresh

Project Guide

Dr. Harishananda K S

Head of the Department

External Viva

H. O. D.

Name of the Examiners

Dept. Of Mechanical Engineering  
Alva's Institute of Engg. & Technology  
Mijar, MOODBIDRI - 574 225

1. Dr. Harishananda K.S

2. Sampath Kumar D

Dr. Peter Fernandes

PRINCIPAL

Alva's Institute of Engg. & Technology,  
Mijar, MOODBIDRI - 574 225, D.K.

Signature with Date

13.06.2019

13/6/19

## ABSTRACT

The ignition of certain materials that combust to create a fire is something that most of the times occurs without being wanted. The damages that a fire causes are proportional to the size of the fire. Sometimes, nothing happens to property and living beings, but other times, the emotional and economic losses are too great to afford to keep having fires that are difficult to control, and eventually extinguish. For that reason, the intention of this design project is to improve the ways in which fires are prevented and extinguished. UAVs are apparatuses that have become popular in recent years thanks to not only their many capabilities to program, but also that a human being does not need to be on board in order to control it. Hence, this team decided to use them in an innovative and inventive manner to create a mechanism to release a fire extinguishing grenade in the desired location that will prevent fires or directly extinguish them.

**Key words :** UAV, Fire extinguisher, Thrust, Drag, Lift, AOA