KSCST

Karnataka State Council for Science and Technology

(An autonomous organisation under the Dept. of Science & Technology, Govt. of Karnataka)
Indian Institute of Science Campus, Bengaluru - 560 012
Telephone: 080-23341652, 23348848, 23348849, 23348840
Email: office.kscst@iisc.ac.in, office@kscst.org.in ♦ Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Mr. H. Hemanth Kumar
Executive Secretary

19th April 2021

Ref: 7.1.01/SPP/10

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

Dear Sir/Madam,

Sub : Sanction of Student Project - 44th Series: Year 2020-2021
Your Project Proposal Reference No. : ***44S_BE_1165***
Ref : Your Project Proposal entitled " ***DESIGN AND FABRICATION OF AUTOMATED SEED DRYER***

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 44th Series" with a budgetary break-up as detailed below:

Student / s	Mr. Raghavendra M.G	**Budget**	
	Mr. Srivathsa H.S	**Particulars**	**Amount (Rs.)**
	Mr. Arjun R	Materials/Consumables	5,000.00
	Mr. Naveen Kumar H.C	Labour	500.00
Guide/s	Mr. Deepak Kothari	Travel	500.00
		Miscellaneous	500.00
Department	Mechanical Engineering	Report	500.00
		Total	**7,000.00**
	SEVEN THOUSAND RUPEES ONLY		

The following are the guidelines to carryout the project work :

a) The project should be performed based on the objectives of the proposal sent by you.

b) The project should be completed in all respects and softcopy of the full report in a CD (single file .pdf format only) should be submitted to KSCST.

c) 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.

d) Please quote your **project reference number printed above** in all your future correspondences.

e) **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 :

1) Title of the project
2) Name of the College & Department
3) Name of the students & Guide(s)
4) Keywords

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

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI 590018

A project report on

"DESIGN AND FABRICATION OF AUTOMATED SEED DRYER"

Submitted in partial fulfillment of the requirements for the degree of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING

By

RAGHAVENDRA M.G	4AL17ME045
SRIVATSA H.S	4AL17ME072
ARJUN R	4AL17ME012
NAVEEN KUMAR H.C	4AL17ME040

Under the Guidance of

MR. DEEPAK KOTHARI

Assistant Professor Dept. of Mechanical engg

AIET, Mijar

Department of Mechanical Engineering

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

MOODBIDRI-574225, KARNATAKA

2019 – 2020

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mijar, Moodbidri D.K. -574225 – Karnataka

ALVA'S
Education Foundation

DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE

Certified that the project work entitled **"DESIGN AND FABRICATION OF AUTOMATED SEED DRYER"** is a bonafide work carried out by

RAGHAVENDRA M.G	**4AL17ME045**
SRIVATSA H.S	**4AL17ME072**
ARJUN R	**4AL17ME012**
NAVEEN KUMAR H.C	**4AL17ME040**

are bonafide students of Mechanical Engineering 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 2020–2021. 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. Deepak Kothari
Project Guide

Dr. Satyanarayan
Head of the Department

Dr. Peter Fernandes
Principal

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

External Viva

Name of the Examiners

1. Shoratti Mahesh
2. Yogesh Rao.

Signature with Date

ABSTRACT

Solar energy is the most promising renewable energy sources in view of its apparent limitless potential. Direct solar energy has been applied to grain drying for years. The sun and wind dry crops in the field, stack or windrow. Artificial drying has supplemented this process to increase the harvest rate during inclement weather or to minimize field losses. The solar drying system utilizes solar energy to heat up air and to dry any food substance loaded, which is beneficial in reducing wastage of agricultural product and helps in preservation of agricultural product. Based on the limitations of the natural sun drying e.g. exposure to direct sunlight, liability to pests and rodents lack of proper monitoring, and the escalated cost of the mechanical dryer, this project presents the design, construction and performance of a automated solar dryer for food preservation. In the dryer, the drying cabinet or chamber absorbs solar energy directly through the transparent walls and roof,also the blower that is used in the dryer reduces the moisture from the product to be dried. The results obtained during the test period revealed that the temperatures inside the dryer and solar collector were much higher than the ambient temperature during most hours of the day-light.The auxiliary solar power supply will reduce the usage of household power making this seed dryer a fully automatic one.Moreover this dryer can exhibited sufficient ability to dry food items reasonably rapidly to a safe moisture level and simultaneously it ensures a superior quality of the dried product.