



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

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Dr. U T Vijay

Executive Secretary

19th April, 2024

Ref: 7.1.01/SPP/37

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

Dear Sir/Madam,

Sub : Sanction of Student Project - 47th Series: Year 2023-2024

Project Proposal Reference No. : 47S_BE_1198

Ref : Project Proposal entitled **DESIGN AND FABRICATION OF SOLAR-POWERED MANUAL CUTTING DEVICE FOR HARVESTING TEA LEAVES**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 47th Series". The project details are as below:

Student(s)	Ms. JENNY FERNANDES	Department	MECHANICAL ENGINEERING
	Ms. NAVYASHREE H. B.		
	Ms. PALLAVI P.		
	Mr. SANDEEP JARALE		
Guide(s)	Mr. DEEPAK KOTHARI	Sanctioned Amount (in Rs.)	5,500.00

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/6s8hq5XbScsBMv3G9>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)

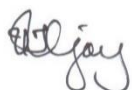

PRINCIPAL
Alva's Institute of Engg. & Technology,
Mijar. MOODBIDRI - 574 225, D.K

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
 - 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
 - 10) Scope for future work (about 20 lines).
- e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.
 - f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
 - g) The sponsored projects evaluation will be held **third week of May 2024** onwards through Online Mode and the details of the same will be intimated shortly by email / Website
 - h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/Mi446v1U5fdFcMD99>. The report should be prepared in the format prescribed by the university.
 - i) The **Utilization Certificate and Statement of Expenditure duly signed by competent authority** of consolidated sanctioned projects from your institution need to be submitted **20 August 2024** without fail.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
MECHANICAL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOODBIDRI
- 2) Mr. DEEPAK KOTHARI
MECHANICAL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOODBIDRI
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU



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**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELAGAVI 590018**



**A project report on
“DESIGN AND FABRICATION OF SOLAR POWERED
MANUAL CUTTING DEVICE FOR HARVESTING TEA
LEAVES”**

**Submitted in partial fulfillment of the requirements for the degree of
BACHELOR OF ENGINEERING**

**in
MECHANICAL ENGINEERING**

By

JENNY FERNANDES	4AL20ME011
NAVYASHREE H B	4AL20ME016
PALLAVI P	4AL20ME017
SANDEEP JARALE	4AL21ME404

**Under the Guidance of
Prof. Deepak Kothari
Assistant Professor**



**Department of Mechanical Engineering
ALVAS INSTITUTE OF ENGINEERING AND TECHNOLOGY
MOODBIDRI-574225, KARNATAKA
2023 – 2024**

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

Mijar, Moodbidri D.K. -574225 – Karnataka



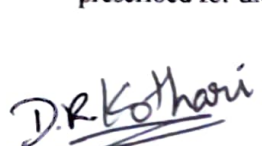
DEPARTMENT OF MECHANICAL ENGINEERING

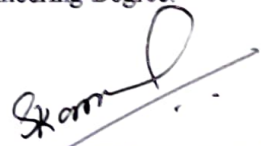
CERTIFICATE


Certified that the project work entitled "DESIGN AND FABRICATION OF SOLAR POWERED MANUAL CUTTING DEVICE FOR HARVESTING TEA LEAVES" is a bona fide work carried out by

JENNY FERNANDES	4AL20ME011
NAVYASHREE H B	4AL20ME016
PALLAVI P	4AL20ME017
SANDEEP JARALE	4AL21ME404

are bonafide student 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 2023-2024. 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

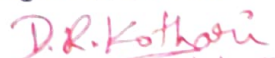


Dr. Satyanarayan
Dept. of Mechanical Engineering
Alva's Institute of Engg. & Technology
Mijar, MOOBBIDRI - 574 225
External Viva


Dr. Peter Fernandes
Principal
Alva's Institute of Engg. & Technology
Mijar, MOOBBIDRI - 574 225, D.K.

Name of the Examiners

1. Deepak Kothari
2. Dr. Mohan Kumar

Signature with Date


28/5/24

28/5/24

ABSTRACT

Our project is focused on the construction and design of the solar tea leaf cutting apparatus. These locations are great places to get tea because it is possible to grow tea leaves there. Tea leaves are often chopped by hand using a larger workforce. In addition to being labor-intensive, this takes a long time. The consistency of the tea that is made could be affected because the leaves are not cut into equal pieces. We suggest a basic solar tea leaf cutting device to get rid of these kinds of drawbacks. Our device is lightweight and manageable to carry with just the hands. Our automated procedure allows for faster leaf cutting and eliminates the requirement for an external power source for operation. The device has a blower on the side to help loosen leaves that have become stuck in its teeth. The entire system is powered by the backpack-mounted solar panel, which transforms solar energy into electricity. Project components were designed and constructed using Solid Works software, and then they were manufactured.