

# Matrusri Engineering College



(Sponsored by Matrusri Education Society, Estd.1980)(Approved by AICTE & Affiliated to Osmania University)

# 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764 (ISO

9001:2015 Certified, Accredited by NBA)

Index

3.1.1 Grants received from Government and non-governmental agencies for research projects, endowments in the institution during the year (INR in Lakhs)

3.1.2 Number of departments having Research projects funded by government and non-government agencies during the year

S. No	Name of the Project/ Endowments,	Name of the Principal Investigator/Co- investivator	Department of Principal Investigator	Year of Award	Amount Sanctioned	Duration of the project	Name of the Funding Agency	Type (Government/ non-Government)	Page N
	Chairs Analysis of Electromagnetic Interference of	Dr. Nukala Srinivasa Rao, Professor ECE	Electronics & Communication Engineering	2021	5.5 L	1 Year	RCI/DRDO	Defence Ministry	1-18
	radiation patterns of two high power gain transmitting antenna and two low power gain receiving antennae On-								
2	Boardship Thermal Profile Analysis and Protection Methods for Propulsion Components in a	Dr. D Hanumantha Rao Dr. M.V.Kishore	Mechanical Engineering	2021	6.05 L	1 Year	ASL, DRDL, Kanchanbagh, Hyderabad	Defence Ministry	19-21
3	Flight Vehicle. AICTE- SPICES	Dr. M.V.Kishore, Mr. T.Somasekhar	Mechanical Engineering	2021	l L	l Year	AICTE	Government	22-26

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4	Smart Control of Adaptive Automobile	Mr. GVSSN Srirama Sarma	Electrical and Electronics Engineering	2021	16,000	4 Months	Erkey Motors Pvt. Ltd, Chhattisgarh	Non-Government	27-34
					10,000		Matrusri Education Society	Non-Government	
5	Wireless Charging System for Electric	Mr. GVSSN Srirama Sarma	Electrical and Electronics Engineering	2021	7,300	- 4 Months	Erkey Motors Pvt. Ltd, Chhattisgarh	Non-Government	35-42
	Bicycle				10,000	4 Months	Matrusri Education Society	Non-Government	
6	Design and Fabrication of Soot Collector and Filtration of Soot	Mr. A.Kalyan Charan	Mechanical Engineering	2022	28,000	6 Months	IEI R& D	Government	43-67
7	Rain Water Harvesting	Mrs. K. Vijetha	Electronics and Communication Engineering	2022	1 L	6 Months	Unnat Bharat Abhiyan	Government	68-82
8	Battery Health Management System	Dr. N. Shribala	Electronics and Communication Engineering	2022	2.3 L	lYear	MSME	Government	83-93
9	Seed Planting Robot	Shaik Haseena Begun	Electronics and Communication Engineering	2022	2.5 L	1 Year	MSME	Government	
10	Smart fabricia using IOT	Mrs. C Haripriyanka	Computer Science and Engineering	2022	40,569	6 Months	Matrusri Engineering College	Non-Government	94-101
					75,000		TSIC (Telangana State Innovation Cell)	Government	

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ATTESTED

Principal Matrusri Engineering College Saidabad, Hyderabad-58

Page 2 of 2

Phone : 040-2418 2610 Fax : 040-2434 0428

GOVT. OF INDIA MINISTRY OF DEFENCE RCI / PROGRAMME 'AD' KANCHANBAGH PO HYDERABAD - 500 0 58

PGAD/FV-EXO/7755/5

To The Principal Matrusri Engineering College, Hyderabad 02 SEP 2021

Sub: Sub Project sanction - "Analysis of Electromagnetic interference of radiation patterns of two High power gain transmitting antennae and two low power gain receiving antennae On-board Ship"

Ref: SI No.14 of Part-2 Appendix-B to Govt Letter No. DRDO/DFMM/83226/ M/01/1976/D(R&D) dated 18 Dec 2019,

Sanction of Project Director AD (FV-Exo) is hereby conveyed for undertaking sub project as per following details:

1. Title of Project

		Analysis of Electromagnetic interference of radiation patterns of two High power gain transmitting antennae and two low power gain receiving antennae On-board Ship
2. Nodal Institution	:	
3. Total estimated cost		Matrusri Engineering College, Hyderabad
		Rs. 5,50,000/- (Rupees Five lakhs Fifty thousand only)
4. Start Date		02 Sep 2021
5. Duration	:	Twelve Months (PDC: 01 Sep 2022)
6. Probable completion	h ji da	01 Sep 2022
7. Project No.		

SP-2021/PDV-FV-EXO-05

8. Details of funds

	Head	
1	Manpower	Cost (Rs)
2	Expendables	2,00,000/-
3	Travel	40,000/-
2.58		50,000/-

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1|Page

4	Contingencies	
5	Visiting Faculty/ Research Consultant/ Outside Technical	40,000/-
6	Support services	
6	RSP Overheads	1,00,000/-
	Total	5,50,000/-

## 9. Objective & Scope of work:

To carry out the interference analysis between two high power gain transmitting antennae viz S-band Radar, X-Band Radar and two low power gain receiving antennae viz Telemetry system antennae and V-SAT antennae on board FTR and suggest the means to reduce the effect.

## 10. Work Break down:

10.1 Phase - I

After receiving inputs from PGAD/RCI, institute has to carry out following activities:

- Literature survey
- Identify the manpower, Software and High end system on which simulation can be carried out.
- Initiate the outside consultation services
- Submit report for its review and approval (Design Review 1)

### 10.2 Phase - II

2)

- Implementation of suggestions of Phase-I review
- Processing of model and generating radiation pattern analysis for each antennae
- Interference analysis of radiation patterns
- Documentation of interference analysis and submit for review (Design Review

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- 10.3 Phase - III
  - Final result and conclusions

  - Suggest the ways to reduce the noise at receiving end of anten nae
  - Final Documentation and review meeting (Design Review 3)

## **Project Milestones**

Mar in	No Project Milestone Receipt of Advanced Payment	Time in months
2.	Receipt of I/P from PGAD	TO
3.	Completion of Phase I	T0 + 1 months
1.	Completion of Phase II	T0 + 4 Months
i.	Completion of Phase III	T0 + 8 Months
		T0 + 12 Months

## **Payment Milestones**

SI No	Payment schedule	
1.	Advanced Payment (30% of total basic)	Amount
2.	Completion of Phase-I (20% of total basic)	1,66,500/-
3.	Completion of Phase-II (20% of total basic)	1,11,000/-
4.	Completion of Phase II (20% of total basic) Completion of Phase III (20% of total basic)	1,11,000/-
	Completion of Phase III (30% of total basic)	1,66,500/-

(Dr P Sreehari) Sc'G' Project Director AD (FV-Exo)

CDA R&D, Hyderabad

Dy Director Planning, AD

Copy to

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Director RCI for kind info Programme Director AD - for kind info

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Courses accredited by NBA-(BE - CIVIL, CSE, ECE, EEE & MECH)

Accredited by NAAC with A+ Grade

MEC/RCI/PGAD/2021 18 Nov 2022

To Project Director AD (FV-EXO) RCI/Programme 'AD' Kanchanbagh PO Hyderabad,- 500 058

Sub; Project 'Analysis of Electromagnetic Interference of radiation patterns of two High power gain Transmitting antennae and two low power gain receiving antennae On-board Ship''' Ref; Project no PGAD/FV-EXO-/7755/6, Dated 21 Sept 2021

Dear Sir,

On behalf of the Matrusri Engineering College, I thank you for the opportunity given to ECE Dept of this College to carry out the Project 'Analysis of Electromagnetic Interference of radiation patterns of two High power gain transmitting antennae and two low power gain receiving antennae On-board Ship'.

Presentation was made to PRC in PGAD complex on the work completed and results along with inference and recommendations. Project activities are completed as per the objectives. PRC in the first meeting suggested that the Stage instalments may be met by college initially and that claim for all stages including completion may be made at the completion of the project activities to reduce paper work.

As the Project work is now completed, I am enclosing the required documents along with the signed pre-receipt bills for release of Stage 1 payment of Rs 1,11,000/ (Rupees one lakh eleven thousand only), Stage 2 payment of Rs 1,11,000/ (Rupees one lakh eleven thousand only) and Project completion payment of Rs 1,66,500/ (Rupees One lakh sixty-six thousand five hundred only) for the project activities.GST undertaking is enclosed. You are requested to release the payments as the project is completed.

Thanking you,



Yours sincerely,

(Dr D Hanumantha Rao) Principal **Principal** Matrusri Engineering College Saldabad, Hyderabad.

1) Contractor's banker details

- 2) Pro forma invoice for the claimed amounts
- 3) GST undertaking

Encl:

- 4) Pre-signed contractor bill
- 5) Utilisation Certificate
- 6) Project Report



Email: principal@matrusri.edu.in | www.matrusri.edu.in

#### MES/MEC/ASL/CONSUL/2021

Dt: 25-11-2021

#### ELECTRONIC CLEARING SERVICE (CREDIT CLEARING)

1)	INVESTOR /VENDOR'S NAME &		
	ADDRESS	Principal, Matrusri Engineering College, Hyderabad, Telangana	
		Sponsored by MATRUSRI EDUCATION	
•		SOCIETY, Estd I 1980	
2)	PARTICULARS OF BANK ACCOUNT	SOCIET I, ESILI I 1900	
2)		: Union Bank of India	
	(A) BANK NAME	: Saidabad Branch	
	(B) BRANCH NAME	:Saidabad, Hyderabad, Telangana	4
	(C) ADDRESS	: 8937000758&	
	(D) TELEPHONE NO & EMAIL-ID	bm0521@unionbankofindia.com	1
	(E) 9- DIGIT CODE NUMBER OF THE BA		
	BRANCH APPEARING ON THE MICH		
	ISSUED BY BANK	: 500026168	
	(F) ACCOUNT TYPE ( SB/CURRENTACO		
	OR CASH CREDIT) WITH CODE	: SB	
	(G) LEDGER NO/LEDGER FOLIO NO		
	(H) ACCOUNT NUMBER		
	(AS APPEARING ON THE CHEQUE BO	OOK) : 052110100038170	
	•	ined as under, please, attach a blank cheque o	r
		ur saving bank pass book issued by your bank fo	
	verification of the above particulars)		
	(I) DATE OF EFFECT		
3)	IFSC/NEFT CODE OF THE BRANCH/BA	ANK :UBIN0805211	
4)	PAN NUMBER	: AAATM2433P	
5)	TAN NUMBER	: HYDM10906A	
6)	TIN NUMBER		
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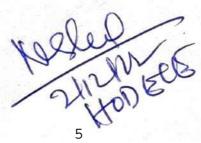
I hereby declare that the particulars given above are correct and complete, if transaction is delayed or not effected at all for reasons of incomplete or incorrect information. I would not hold the user institution responsible. I have read the option invitation letter and agree to discharge the responsibility expected of me as a participant under the scheme.

Date:

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Signature of investor/Vendor &seal Principal

Certified that the particulars furnished above are correct as per oblatesoitdsgineering Colleg-Saldabad, Hyderabad.





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#### UNDERTAKING

Sub: Payment/setoff against GST Input credit of GST Amount and filing of GST Return in 'B to 'C - Reg

Sir,

With reference to payment of GST amount and filing of GST Return for availing Input Tax Credit (ITC) by you as per eligibility provisions for the identified Invoices raised by us, we, M/s. Matrusri Engineering College established by Matrusri Education Society, 16-1-486, Saidabad, Hyderabad, Telangana-500059, possessing GST Identification No.36AAATM2433P1ZC hereby declare and undertake as follows:

1. We have disclosed all the facts relating to our Institution/Trust to Recipient name: RCI/Programme 'AD' ,Ministry of Defence, Govt of India Address: Kanchanbagh PO, Hyderabad -500 058 GSTIN:Not applicable

SI. No.	RCI/PGAD Order No.	RCI/PGAD Order Date	Invoice No.	Invoice Date	Assessable Value Rs.	CGST Rs.	SGST Rs.	Date of Payment
1	PGAD/FV- EXO/7755/6	21/09/2021	MES/22- 23/07	18 nov 2022	94067.80	8466.1	8466.1	NA

In this connection, we hereby agree and undertake to furnish to you proof of payment of GST/ utilization of GST Input, which includes above mentioned GST amount.

3. We hereby declare that we have agrees to file the GSTR 3B related to the abovementioned invoices in time. In this connection, we hereby agree and undertake to furnish you proof of electronically filed GST Return to the authority.

We hereby agree and confirm that -

any breach of the above indemnification or undertakings shall be construed as breach of the terms and conditions for reimbursement of GST and RCI/Programme 'AD', Ministry of Defence, Govt of India shall be at liberty to take such action against us including recovering of reimbursed GST amount from

- a) any of our Bank Guarantee executed in your favour, if any,
- b) Security Deposit paid for any of your work, if any or

#16-1-486, Saidabad, Hyderabad-500 059. Ph: 040-24072764 Email: principal@matrusri.edu.in | www.matrusri.edu.in

- b) Security Deposit paid for any of your work, if any or
- c) Other unpaid invoices, if any of us raised either at RCI/Programme 'AD', Ministry of Defence, Govt of India

We declare that I am empowered to execute this Indemnity Bond cum undertaking and the same is given under the orders of proper authority as per the delegation of power of the organization.

Place : Hyderabad

Date: 18.11.2022



Authorised Signature of the Indemnifier Name : Dr. D Hanumanth Rao **Designation : Principal** 

Principal Matrusri Engineering College Saidabad, Hyderabad.



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18 Nov 2022

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X

Place : Hyderabad

Date : 18 .11.2022



Authorised Signature of the Indemnifier Name :Dr. D Hanumanth Rao Designation : Principal Seal.

Principal Matrusri Engineering College Saidabad, Hyderabad.

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## MATRUSRI ENGINEERING COLLEGE (Sponsored by Matrusri Education Society, Estd.1980)



(Approved by AICTE & Affiliated to Osmania University) MEC/RCI/PGAD/202

Courses accredited by NBA-(BE - CIVIL, CSE, ECE, EEE & MECH) 18 Nov 2022

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1	PGAD/FV- EXO/7755/ 6	21/09/202 1	MES/22 -23/09	18 nov 2022	141101.7 0	12699.1 5	12699.1 5	NA

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Date: 18.11.2022

X ginee Authorised Signature of the Indemnifier Name :Dr. D Hanumanth Rao Designation : Principal MECS Principal Matrusri Engineering College Saidabad, Hyderabad

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#### CONTRACTOR'S BILL

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I.A.F.A. (Revised)

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#### CONTRACTOR'S BILL

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#### I.A.F.A. (Revised)

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been stered j	ent No. / Postal F forwarded to th	A dated	Date Date	se certificat	es are not	Signature Contractor <b>Principal</b> Atrusri Engineering College Saldabad, Hyderabad. Date



## MATRUSRI ENGINEERING COLLEGE (Sponsored by Matrusri Education Society, Estd.1980)



(Approved by AICTE & Affiliated to Osmania University) Courses accredited by NBA-(BE - CIVIL, CSE, ECE, EEE & MECH) Accredited by NAAC with A+ Grade

> MEC/RCI/PGAD/2021 18 Nov 2022

Sub; Project 'Analysis of Electromagnetic Interference of radiation patterns of two High power gain Transmitting antennae and two low power gain receiving antennae Onboard Ship'''

Ref; Project no PGAD/FV-EXO-/7755/6, Dated 21 Sept 2021

#### UTILISATION CERTIFICATE

Certified that the amount of Rs ,5,55,000/ (Rupees five lakh fifty five thousand only) sanctioned vide letter No PGAD/FV-EXO/7755/6 dated 21 Sept 2021 received for Project 'Analysis of Electromagnetic Interference of radiation patterns of two High power gain Transmitting antennae and two low power gain receiving antennae Onboard Ship"sanctioned under heads of Manpower, Consumables/Expendables, Travel, Contingency, Visiting Faculty/Research Consultant/Outside Technical Support and RSP overheads has been utilized for the above purpose for which it was granted.



( Dr D Hanumantha Rao)

Principal **Principal** Matrusri Engineering College Saidabad, Hyderabad,

#16-1-486, Saidabad, Hyderabad-500 059. Ph: 040-24072764 Email: principal@matrusri.edu.in | www.matrusri.edu.in



## Matrusri Engineering College

(Sponsored by Matrusri Education Society, Estd.1980)

Original

(Approved by AICTE & Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764 (ISO 9001:2015 Certified, Accredited by NBA)

Tax Invoice **Bill to Party Invoice Details** Name: RCI/Programme 'AD', Ministry of Defence Invoice No: MES/22-23/09 Govt. of India Address: Kanchanbagh PO, Invoice Date: 18/11/2022 Hyderabad - 5000 058 Reverse Charge (Y/N): No GSTIN: NA State: Telangana Code 36 State: Telengana Code 36 Buyers Reference No. - PGAD/FV-EXO/7755/6 Transport Mode: NA Reference Date: - 21/09/2021 Vehicle number: NA S. HSNC/ Product Description Quantity Rate per No. Amount SACC Project : 'Analysis of Electromagnetic interference of 1 1 94068.00 94068.00 radiation patterns of two High Power gain Transmitting antenna and two low power gain receiving antenna Onboard ship' (stage2 payment) Total 1 94068.00 Total Amount before Tax 94068.00 Add: SGST 9% 8466.12 Add: CGST 9% 8466.12 Total Amount after Tax (Rounded 111000.00 off) Total Invoice amount in words Rupees One Lakh Eleven Thousand only **Bank Details** Ceritified that the particulars given Name of Account Holder: Matrusri Engineering College above are true and correct Bank A/C: 052110100038170 Union Bank of India For Matrusri Engineering College Bank IFSC: UBIN0805211 Saidabad (Hyderabad) Authorised signatory Principal Matrusri Engineering College Saidabad, Hyderabad.



# Matrusri Engineering College (Sponsored by Matrusri Education Society, Estd. 1980)

(Approved by AICTE & Affiliated to Osmania University) # 16-1-486, Saldabad, Hyderabad-500059. Ph: 040-24072764 (ISO 9001:2015 Certified, Accredited by NBA)

Original

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		Tax Inv	oice	1		1			
Bill to Party				Invoice Details					
Name: RCI/Programme 'AD', M Govt. of India	inistry of Defence		Invoice No: MES/22-23/08						
Address: Kanchanbagh PO, Hyderabad – 5000 058				Date: 18/1					
GSTIN: NA	Reverse	e Charge (Y/	(N): No						
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	Code	36				ÇOUE	30		
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Bank A/C: 052110100038170 Bank IFSC: UBIN0805211		ank of India	Contract date Engineering Contege						
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## Matrusri Engineering College

(Sponsored by Matrusri Education Society, Estd.1980) (Approved by AICTE & Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764 (ISO 9001:2015 Certified, Accredited by NBA)

Original

**Tax Invoice** Bill to Party Invoice Details the second s Name: RCI/Programme 'AD', Ministry of Defence Invoice No: MES/22-23/10 Govt. of India Address: Kanchanbagh PO, Invoice Date: 18/11/2022 Hyderabad - 5000 058 Reverse Charge (Y/N): No GSTIN: NA State: Telangana Code 36 State: Telengana Code 36 Buyers Reference No. - PGAD/FV-EXO/7755/6 Transport Mode: NA Reference Date: - 21/09/2021 Vehicle number: NA S. HSNC/ **Product Description** Quantity Rate per Amount No. SACC Project : 'Analysis of Electromagnetic interference of 1 1 141101.70 141101.70 radiation patterns of two High Power gain Transmitting antenna and two low power gain receiving antenna Onboard ship' (Completion of project) Total 141101.70 1 **Total Amount before Tax** 141101.70 Add: SGST 9% 12699.15 Add: CGST 9% 12699.15 Total Amount after Tax (Rounded 166500.00 off) Total Invoice amount in words Rupees One Lakh Sixty Six Thousand and Five Hundred only **Bank Details** Ceritified that the particulars given Name of Account Holder: Matrusri Engineering College above are true and correct Union Bank of Ind Bank A/C: 052110100038170 For Matrusri Engineering College Bank IFSC: UBIN0805211 Saidabad (Hyde pequadit meteores ebtilistrubri Brayinber ingr College Saldahad, Hyderabad.



Ref. :

## **Matrusri Engineering College**

(Sponsored by : MATRUSRI EDUCATION SOCIETY, Estd: 1980)
 (Approved by AICTE, Affiliated to Osmania University)
 # 16-1-486, Saidabad, Hyderabad - 500 059. Ph : 040-24072764
 Email : principal@matrusri.edu.in , www.matrusrl.edu.in



MES/MEC/ASL/CONSUL/2021

25 Nov 2021

Dale \_

To Director Advanced Systems Laboratory; Dr. APJ Abdul kalam Missile Complex Kanchanbagh PO Hyderabad – 500 058

Sub: CARS Project 'Thermal Profile Analysis and Protection methods for Propulsion components in Flight Vehicle'

Ref: 1) MEC letter no MEC/ASL/CONSUL/2021 Dated 27 Oct 2021

2) Project no ASL/31/21/4051/4061/CARS/03 Dated 14 Sept 2021

Dear Sir,

Reference is made to the letter for advance payment at ref 1 above.

On perusal of the documents submitted by Matrusri Engineering College for 30% advance payment of Rs 1,81,500/ (Rupees one lakh eighty one thousand and five hundred only), it is observed that the PAN card number was quoted mistakenly.

Matrusri Engineering College is sponsored by Matrusri education Society established in 1980. As Matrusri Engineering College comes under administrative control of Matrusri Education Society, Income tax, GST returns, duly audited are submitted under Matrusri Education Society. In view of this, the PAN and GST No. of Matrusri Education Society are provided in ECS mandate.

I am enclosing the corrected ECS details along with this letter.

In view of the above, you are requested to transfer the funds sanctioned against the Project execution.



.w. /. .

(Dr D Hanumanth Rao) Principal *Principal* Matrusri Engliceoring College Saidabad, Hyderabad.

Enclosures: 1) Corrected ECS details

संविदाएवंसामग्रीप्रबंधननिदेशालग्(बिल्ड-अप) Directorate of Contracts& Materials Management (Build up)

दूरभाष / Tel: 040 - 2418 8436 / 8157

भारत सरकार, रक्ता मंत्रालय Government of India, Ministry of Defence रका अनुसंधान एवं विकास संगठन Defence Research & Development Organisation उन्नत प्रणाली प्रयोगशाला ADVANCED SYSTEMS LABORATORY डॉ .ए.पी.जे .अब्दुलकलामप्रक्षेपास्त्रसमष्टि Dr. A.P.J. Abdul Kalam Missile Complex कंचनबाग डाकघर, हैदराबाद - 500 058 PO Kanchanbagh, Hyderabad - 500 058 

SEPT' 2021

फैक्स / Fax: 040 - 2418 8199 E-mail:dydcmm2@asl.drdo.in

No.ASL/31/21/4051/4061/CARS/03

Dt.

To

March 19

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PROF D HANUMANTH RAO, MED & PRINCIPAL DEPARTMENT OF MECHANICAL ENGINEERING M/S.MATRUSRI ENGINEERING COLLEGE 16-1-486, SAIDABAD, HYDERABAD-500 059

Sir,

3.

## SUB: CARS AGREEMENT - "THERMAL PROFILE ANALYSIS AND PROTECTION METHODS FOR PROPULSION COMPONENTS IN FLIGHT VEHICLE" - REG.

Three copies of CARS agreement pertaining to "THERMAL PROFILE ANALYSIS AND PROTECTION METHODS FOR PROPULSION COMPONENTS IN FLIGHT VEHICLE" are enclosed herewith. You are requested to sign at Item SI.No.10 with official seal, date and send two copies to us for further action. The total duration of the CARS agreement is 6 months from receipt of advance payment.

The following documents are required to be send along with the signed CARS 2. documents for claiming initial advance:

- Enclosed contingent bill in duplicate duly filled in and signed by RSP for claiming (i) initial advance amount (copy enclosed)
- Proforma Invoice in duplicate claiming advance amount (Show Basic amount (ii) and GST separately)
- Income Tax exemption certificate, if any (mandatory, otherwise 10% IT will be (iii) deducted)
- ECS details (Mandatory for payment, format enclosed) (iv)

On receipt of above cited documents, initial advance payment will be processed.

" arlana

(LOKESH SRIVASTAVA) SC 'F', DY.DCMM-II For DIRECTOR, ASL

Encl: CARS Agreement copies, ECS format and Contingent Bill

NOTE: For claiming Milestone payments, Financial statement along with funds utilization certificate, Invoice showing the Basic amount and GST , Copies of GST paid proof, Contingent bill in duplicate are required to be enclosed

M V Kish Me Head of the Department Matrusri Engineering College Saidabad, Hyderabad.

## CONTRACT FOR ACQUISITION OF RESEARCH SERVICES (CARS)

By signature of authority identified at (11) below, DRDO hereby contracts on the Research Service Provider identified at (3), the provision of the Research Services described at (6), within the time stated at (8) for payments at (9.2), and subject to other conditions overleaf, as follows:

1.Short title of Research Service "THERMAL PROFILE ANAL" FOR PROPULSION COMPON	YSIS AND PROTECTION		Contract No. ASL/31/21/4051. Date 14/09/2021	
2. RSQR Document Ref.No.	Date of issue YY MM DD	Issuing DRDO I ASL	Amendme	ent -
3.Name and address of Research PROF D HANUMANTH RAO DEPARTMENT OF MECHAI MATRUSRI ENGINEERING 16-1-486, SAIDABAD, HYDEI Email: principal@matrusri.ed	), MED & PRINCIPAL NICAL ENGINEERING COLLEGE RABAD		4. RSP MEC/ME 04/08/202	D/2/2021 dated
5.(a) This contract will require a (b) RSP is authorized to engage (a) Key personnel of RSP to	these professionals as resea to be deployed: Sri MV Ki	rch consultants(Na	mes, institute/comp	ilable to RSP: -NA- panies):
6. Principal technical features of Technical Analysis of thermal thermal propagation profile to as to components of LP engine.	propagation along with t ssociated LP components.	To find different n	nethods to reduce/a	
7. DRDO will make available				6 months
8. The technical performance of report before (date):	this contract shall be com	plete when RSP su	bmits the final	
9.1 Expenditure on items below :	shall not exceed sums show	n against each		Rs. (In Lakhs)
a) Research Staff (Persone				1,50,000.00
b) Equipment				
c) Others				4,55,000.00
			TOTAL:	6,05,000.00
9.2 Schedule of payments (Rs. in	Lakhs)			Payment (Rs.)
a) Initial Advance (Start of proj-	ect - Date of receipt of firs	t installment) (T <sub>0</sub> )	(30%)	Rs.1,81,500/
b) At performance Milestone - I	of RSQR (At To+3 month	us) (40%)		Rs.2,42,000/-
c) At performance Milestone - II	ofRSQR			
d) At performance Milestone - II	II of RSQR (30%)			
e) On Submission of final report.	& deliverables (At T <sub>0</sub> +6 m	onths)		Rs.1,81,500/
			TOTAL:	Rs.6,05,000/-
10. DRDO will deem this contra to have been consummated when the academic institution (e.g.Reg contract:	n signed below by the aut	hority of	) ature of L/E/P C	Contract Administrator:
Signature of Competent Authority DEPARTMENT OF MECHAN MATRUSRI ENGINEERING ( 16-1-485, AUDALAD, HYDER Matrush Engineering College Baldebed, Hyderebed.	COLLEGE	Design Advan PO.Ka Ph.No.	LOKESH SRIVA ation: DY.DCMM ced Systems Labo nchanbagh, Hyde 040-24188436,241 .040-2418 8199	I-II ratory rabad - 500 058
	Read Hys. 55-	MUNista	.040-24188436,241 .040-24188199 / Head of the Mechanical I Matrusri Engine Saidabad, H	



# **Matrusri Engineering College**

(Sponsored by : MATRUSRI EDUCATION SOCIETY, Estd: 1980) (Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad - 500 059. Ph : 040-24072764 Email : principal@matrusri.edu.in , www.matrusri.edu.in

1. 3

Ref: MEC/C/UBI/2022.

To The Manager, Union Bank of India, Saidabad, Hyderabad.

Sir.

Sub: Amounts received from the organizations under Ministry of Defence -Confirmation required – Reg.

We would like to inform that our SB A/c. No. 052110100038170 is credited with the amounts transferred online by the organizations under Ministry of Defence as detailed below:

S. No.	Date of credit	Transaction Id	Received from	Amount in Rs.
1	29-11-21	\$97777235	PCDARD, HYD.	1,35,458
2	06-01-22	S52112929	PCDARD, HYD.	1,53,814

We requested you to confirm the amounts having credited to our A/c. as above. This information we need to furnish to Govt. Bodies i.e., University, AICTE, NBA, AAC etc.

Thanking you.

Sooen

Principal

Principal Matrusri Engineering Collaga Saidahad, Hyderabad

22

Academic Year:

2020-2021

AQIS Application Id: 1-9285558256

0

Permanent Institute Id: 1-445103151

Name of the Institute:

Scheme:

Department\*:

MATRUSRI ENGINEERING COLLEGESPICES-Scheme for Promoting Interests, Creativity and Ethics among StudentsMECHANICAL ENGINEERING

Title: Dr.

MYLAVARAPU

Surname:

Status:

Submitted

VENKATESWARA

First Name:

Final Status: Proposal is provisionally recommended

Head of the Department Mechanical Engineering Matrusri Engineering College Saidabad, Hyderabad.

## All India Council for Technical Education (A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: <u>www.aictc-india.org</u> SPICES - Sanction Letter



F.No. 10-91/AICTE/IDC/SPICES/2020-21

Dated: 05.03.2021

То

The Drawing and Disbursing Officer All India Council for Technical Education Nelson Mandela Marg, Vasant Kunj, New Delhi-110070.

Subject: Release of a sum of Rs. 1,00,000/- (Rupees One lakh only) as Grant-in-Aid under AICTE-SPICES for the year 2021-22 payable during the current financial year 2020-21-reg.

Madam/Sir,

With reference to the proposal submitted by the institute, this is to convey the sanction of the Council for payment of Rs. 1,00,000/- (Rupees One lakh only) to support the student club/chapter/society (hereinafter referred to as 'Club') under the "Scheme for Promoting Interests, Creativity and Ethics among Students (SPICES)", as per details given below:

1.	Name and address of the Beneficiary Institute:	MATRUSRI ENGINEERING COLLEGE, 16-1-486, SAIDABAD, HYDERABAD, 500059, Telangana
2.	Permanent ID of Institute:	1-445103151
3.	Name of student club:	MECSSAE COLLEGIATE CLUB
4.	Name of Coordinator:	Dr. Venkateswara Mylavarapu
5.	Name of Co-coordinator	Todupunuri Somasekhar
6.	Grant-in-aid Sanctioned:	Rs. 1,00,000/- (Rupees One Lakh only)
7.	Amount to be released during the year 2020-21	Rs. 1,00,000/- (Rupees One Lakh only)
8.	Sanctioned grant-in-aid is debitable to:	Major Head 602.22 (a) General (Non-Plan Head)

- The amount of the grant shall be drawn by the Drawing and Disbursing Officer, All India Council for Technical Education, New Delhi on the Grant-in-aid bill and shall be disbursed to and credited to the account of Registrar/ Director/ Principal of the institute through RTGS.
- This grant-in-aid is being released in conformity with the terms & conditions as well as norms of the Scheme as already communicated and also being communicated in this letter.

The instructions/guidelines to be followed by college/institution

### I. Release of funds

a. The Principal/Director of the institute and the Coordinator of the student club is hereby requested to verify the correctness of the undermentioned bank account/ RTGS details submitted by them alongwith the proposal, against which the grant is being released:

MV Kichne Head of the Department

Head of the Department Mechanical Engineering Matruch Engineering College Saidabad, Hyderabad.

Institute	Bank	Bank Branch	Address	Account	Account	Account	1FSC
PAN No.	Name	Name		Holder Name	Type	Number	Code
ААЛВМ628 9Р	Union Bank of India	SAIDABAD, Code-0805211	17-9-73, PB No- 1455, saidabad Hyderabad	Principal, MATRUSRI ENGINEERING COLLEGE	Saving Account	052110100 039018'	UBIN0805 211

In case of any omission the same should be reported to AICTE within 7 (Seven) days.

- b. The full amount of the grant sanctioned is being released as advance to the College/Institute.
- c. This sanction is issued in exercise of the powers delegated to the Council and other terms and condition laid down in the guidelines of the Scheme.

#### **II. Limit of Funding**

a. The grant from AICTE will be Rs. 1,00,000/- (Rupees One lakh only) and the institute is required to make a contribution of Rs. (100001 to 200000) to the club (as committed by the institute in the proposal), non-compliance of which shall invite penal action.

#### **III. Utilization of funds**

- a. Funds once released/sanctioned for supporting the particular student club cannot be utilized for any other programme/ student club.
- Students on roll in the institute shall be the member of the club. h.
- The grant can be utilized for supporting Interests/Hobbies, Creativity/ Imagination/ Innovation and C. Ethics/ Value through a range of student activities and meeting the cost of registration and travel (up to 40% of the total grant) of students of the beneficiary club, participating in outstation activities.
- d. Ex-students and ex- faculty members and other officials of the institute shall not be the member of club.
- e. The clubs must be encouraged to reach out alumni and industries for fund-raising for their events.
- Coordinator will maintain an electronic record of activities, participants etc.. f.

### IV. Maintenance of accounts

- The institute shall strictly follow the provisions laid down in the Scheme document and this sanction a. letter. All correspondence related to the project must contain the number of this letter alongwith year of sanction of the project failing which correspondence will not be entertained.
- The institute shall maintain proper accounts of the expenditure out of the grant and the Council or b. its nominee shall have the right to check/verify the account to satisfy that the fund has been utilized for the purpose for it was sanctioned.
- c. Funds covered by this grant shall be kept separately and would not be mixed up with other funds, so as
- to know the amount of interest accrued on the grant.
- V. Refund of grant to AICTE (by way of a demand draft in favour of Member Secretary, AICTE, New Delhi)
- a. The grant shall be refunded to AICTE if the Letter of Approval (LOA) or Extension of Approval is not issued by AICTE to the institute for the academic year 2021-22.
- b. Interest accrued on the grant released, shall be refunded to AICTE.
- c. No payment is permissible against the activities already conducted by club
- d. As AICTE needs adequate time for depositing the Demand Draft in the bank, the same be immediately dispatched to avoid any lapse of the validity period.

## VI. Documents to be uploaded on AICTE Dashboard/ Portal

## a. On receipt of grant:

- j. The Acceptance Letter within 7 days from the date of receipt of the Sanction Letter duly signed and seal affixed by Coordinator and Head of the Institutions. NIV KUSHN
- b. After completion of every quarter (from the date of receipt of grant) feed of the Department

Muchanical Engineering Matrusri Engineering College

Saidabad, Hyderabad.

i. Upload the list of activities /events /participation date-wise brief description, achievement and 4-5

## c. After completion of the project (after one year):

Institute has to fill up and update information on AICTE Dashboard/ Portal and upload following documents:

- i. Photographs showing various activities, events organized by club.
- ii. Feed-back of members of the club.
- iii. Identify 3 other clubs which the institution proposes to develop on the lines of club benefited under SPICES.

### VII. Submission of documents by institute for project closure (after one year)

The following documents must be submitted to AICTE within a period of one month, after completion of one year, to stay eligible for receiving further grants from AICTE:

- Utilization Certificate and Statement of Accounts in prescribed format duly audited by the Chartered Accountant in the case of a private institution and by the Finance Officer/Account Officer in respect of a. government/government- aided institution.
- Supporting bills/documents on account of expenses incurred for the purpose duly attested by the Head of b.
- Proof of the amount made available by the institution approved by the Council/ University/ State C. Soft copy of final report submitted on AICTE Dashboard/ Portal as mentioned above (in section VI).
- d.

## VIII. General instructions

- The assets acquired wholly or substantially of the grants from AICTE shall not be disposed or encumbered or utilized for the purposes other than those for which it was given without proper sanction of the Council and should, at any time the Institution ceased to function, such assets shall revert to the AICTE. a. The beneficiary institute will make best efforts to promote the scheme by mentioning the sponsorship
- support from AICTE, carrying the Logo of AICTE in club activities and other means. h.
- The beneficiary institution shall observe all financial norms and guidelines as prescribed by the AICTE/ Government of India from time to time. GOI GFR rules (@https://doe.gov.in/order-circular/general-financial-C. rules2017.0) should be followed during utilization of grant.

This Sanction Letter may be treated as Offer Letter for all purposes.

d.

purs sincerely

(Dr. Neckaj Saxena) Adviser (IDC)

Copy forwarded for information and necessary action to:

- Dr. Venkateswara Mylavarapu,
- MATRUSRI ENGINEERING COLLEGE, 16-1-486, MU KUSLAN 1. SAIDABAD, HYDERABAD, 500059, Telangana.
- 2. The Registrar / Director / Principal, MATRUSRI ENGINEERING COLLEGE, 16-1-486, SAIDABAD, HYDERABAD, 500059, Telangana.
- 3. Guard File.

Head of the Department Mechanical Engineering Matricert Engineering College Caldausd, Hyderabad.



Matrusri Engineering College



27.09.2021

Website: www.matrusri.edu.in

(Sponsored by: MATRUSRI ERDUCATION SOCIETY, Estd: 1980) (Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764

Email: principal@matrusri.edu.in To The principal Matrusri Engineering College Saidabad, Hyderabad

**Through HOD-EEE Department** 

Sub: Request for reimbursement of part of the amount spent for innovative projects - Reg.

Sir,

I am here to inform you that two proto type projects on "Wireless Charging System for Electric Bicycle" & "Smart Control of Adaptive Automobile" developed by two student groups (2017-21 batch) of EEE. It is glad to inform you that these innovative projects have got recognition through an article published in Motor India Magazine. These working models are made available in Centre of Excellence for Electric Vehicles, MECS. I am very thankful to you for encouraging us to do these projects. The details of the expenditure is as given below.

SI. No	Title of the Project	Total expenditure (INR)	Sponsorship amount from Erkey Motors Pvt. Ltd (INR)	Amount spent by the students (INR)
1	Wireless Charging System for Electric Bicycle	17300/-	7300/-	10000/-
2	Smart Control of Adaptive Automobile	26000/-	16000/-	10000/-
	Total	43300/-	23300/-	20000/-

The two student groups have given request letters to reimburse the amount spent by them (Rs.10,000/- each). The covering letters, relevant bills and sponsorship letters are attached here with. I request you do the needful in this regard.

Thanking you sir,

for kind Considered DI

Yours Sincerely

GJJarma

GVSSN Srirama Sarma, Assistant Professor, EEE Dept., MECS.

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rignent is retained by college

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**Matrusri Engineering College** 

(Sponsored by: MATRUSRI ERDUCATION SOCIETY, Estd: 1980) (Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764



27.09.2021

Email: principal@matrusri.edu.in

Website: www.matrusri.edu.in

To The principal Matrusri Engineering College Saidabad, Hyderabad

Through HOD-EEE Department

Sub: Request for reimbursement of part of the amount spent for final year project work- Smart control of Adaptive Automobile-Reg.

Sir,

We, S.PavanKalyan, M. Sirihasa and G. Tirupathaiah, EEE students of 2017-21 batch have successfully completed our final year project on "Smart Control of Adaptive Automobile" under the guidance of Mr. GVSSN Srirama Sarma, Assistant Professor, EEE Dept., MECS and Industry Advisor Mr. Ashhar Ahmed. The developed project is for elderly and handy capped people who are facing difficulties to travel on their own for small distances. This vehicle has a variety of application areas like hospitality activity, airports, railway platforms, Institutional groups and several other firms. The main objective of our project is to develop smart control vehicle which should be capable of proceeding Occurately to a target area, maneuvering within that area to fulfill its mission and returning accurately and safely to base. Bluetooth wireless technology is used to control our robot car which is a very simple communication system. The controller in this project is an android device which has Bluetooth feature built in. The user has to install developed application on his/her mobile and turn on the Bluetooth in the mobile phone. User can perform actions like moving forward, backward, left and right using commands that are sent from the android mobile. Bluetooth module in the project allows us to communicate with Arduino. The task of controlling the vehicle is done by the Arduino UNO which houses the micro-controller ATMEGA32. The motor driver control used in this project acts as per the command given by the Arduino and runs the motors.

Nevertheless, the project has a great scope to extend by the upcoming students. It may be applicable for people who can operate the mobile with hands but can't be applicable for blind people. In future, with voice recognition feature it is possible. The speed regulation, four wheel drive etc. are the other kinds of developments that can be used to make the project available to all people in need and meet all desirable needs in using this vehicle



Matrusri Engineering College

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Email: principal@matrusri.edu.in

Website: www.matrusri.edu.in

The total expenditure for the development of vehicle is Rs. 26000/- wherein an amount of Rs.10000 /- is spent by us. We are very glad to inform you that we have received an amount of Rs. 16000/- as sponsorship from EURKY Motors, Pune. We are very proud to inform you that an article on our work is published in Motor India Magazine.



Smart Control of Adaptive Automobile

We will be very grateful if the amount spent by us (Rs.10000/-) is reimbursed. We are very thankful for encouraging us to do this project.

Thanking you sir.

M. Sirihasa (1608-17-734-009) M. Sirihasa G. Tirupathaiah (1608-17-734-009) G. Tirupathaiah (1608-17-734-303) S.PavanKalyan (1608-17-734-301)

#### Attachments:

- 1. Invoice copy
- 2. Sponsorship letter copy
- 3. Brief report about Project
- 4. Copy of motor India Magazine

Javne Gussn Smitemalerna) Boternal Guide

The projectwork developed mat technology and there is the Cur factures by the 8 cope 1 or edd og. 8 li 26merle

(2 of 2)

Dr. G. Ravindranath 27 2021 M.Tech, PhD, MIE, MIEEE, MISTE Professor, Dept. of EEE

#### SkillShark EduTech Pvt. Ltd Hyderabad, Telangana Pin: 500068

# **SKILL SHARK**

## Invoice

Date: 18/06/2021

From SkillShark EduTech Address: 3-7-63/6P, Bandlaguda Rd, Sai Sapthagiri Colony,Mansoorabad, Hyderabad, Telangana 500068 Contact:+91-9028095540 To Matrusri Engineering College Address: 6-1-486, Saidabad Rd, DBR Enclave, Sapota Bagh, New Malakpet, Hyderabad, Telangana 500059

Contact:+91-9440062482

S.N	Item Description	Cost (INR)
	2, 12 V Bosch Motors	6000
1		3000
2	Wheels Assembly	1200
3	Bluetooth Module & Relays	800
4	Micro-Controller Structure, Chair & Worm Gear	6000
5		4000
6	Amron Raja Battery 12 V 42 Ah Miscellaneous (Soldering, Wires, Switches, Diodes, Resistors, LED)	1000
10		4000
08	Shipping & Logistics	26000
	Total Payable Amount	10000
	Amount Paid by Students	
16.	Sponsorship Amount from Erkey Motors	16000

Authorized Signatory:



0

chq, No: "022975", DE:23/10/2021 Amt: 20,000/-.



Date: 15/06/2021

To, The Principal, Matrusri Engineering College, Hyderabad, Telangana 500059.

( )

Sub: Sponsorship for Project Android Controlled EV Platform (Smart Control of Adaptive Automobile) developed under Center of Excellence for Electric Vehicles, Matrusri Engineering College, Hyderabad.

With reference to our latest discussion regarding Sponsorship for Project Android Controlled EV Platform (Smart Control of Adaptive Automobile), we acknowledge & accept the proposal. We believe in fostering Innovations. Hence, we would be glad to sponsor the mentioned amount of INR 16000 from our end.

Our accounts team will further complete the formalities by coordinating with your team. Looking forward to a strengthened Industry-Academia Collaboration.

With Best Wishes.

Arpit Chauhan CEO Erkey Motors Pvt. Ltd.

Copy to: SkillShark EduTech Hyderabad, Telangana, 500068



## MATRUSRI ENGINEERING COLLEGE

Saidabad, Hyderabad-500 059.

#### Party : Erkey Motors Pvt. Ltd.

Bill No : Orginal PO No : Bill Date : 18-06-2021 PO Date :

Voucher Type :	Bank Payments	
Voucher No :	352.00	
Voucher Date :	23-10-2021	

**Voucher Particulars** 

Narration : Being Chq. issued to reimbursement of students for part of the amount spent for final year project work "Smart Control or Adaptive Automobile", developed by student groups. Chq. prepared to Dr.G.Ravindranath.

#### Bank Details

 Bank :
 UBI -Saidabad (A/c No. 052110100038170)

 Chq Amount :
 Rs
 10,000.00
 (Rupees Ten Thousand Only)

 Chq Date :
 23-10-2021
 Cheque No :
 022975

CODE	Subsidary Ledger	Dept	Head of Account	Debit	Credit
3319	G Ravindranath		UBI -Saidabad (A/c No. 052110100038170)		10,000.00
4806	Erkey Motors Pvt. Ltd.	-	Sponsorships Received		16,000.00*
8248	Erkey Motors Pvt. Ltd.		Research & Development 🗸	26,000.00 -	
		4		26,000.00	26,000.00

OUNTS SECTION



10/2021 **RECEIVER'S SIGNATURE** 

			VALID	FOR	3 MONTH	S FROM	I THE DA	ATE C	F ISSUE
यूनियन बैंक 🕖 Union Bank	सैदाबाद-हैदराबाद शाखा, हैदराबाद - 500059 SAIDABAD-HYDERABAD BRANCH,	दिनांक DATE	2	3	1 0	2	0 2	2	1
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PAYABLE AT PAR AT ALL OUR BRANCHES IN INDIA			PLE	ASE	SIGN AB	OVE T	HIS LIN	E	

					Contin	uation to pre-	vious page
	MATRUSRI ENG	BINEERIN	NG COLLEG	E, Saidabad	Hyder	abad.	
		ACCO	DUNTS SEC	TION			n = Antonio 1
Ref:MEC/C/ R & D / 2021				Dt: 23/10/2021			
Note to the Chai						A set of a set of the	
Sub : Payment a	dvice vide approve	ed by Hon	. Chairman or	27/09/2021			
Regular Paymen			8				
Name of the Cor payment is to be	npany / Person to v made	whom the					to fact the
Description of Ite or services provi			Towards pay proto type pro 21 batch) of	piects develo	ped by :	student group	os.(2017-
1) capital. Expr	2) Reven	ue Expen				Recurring Ex	
For the Dept.	of :		2) Common I	Procurement	3) For	the Section : A	cad.Sec
			3) Full and Final Payment Recovery for remittance				
Payment Details							
S No Invoi	ce No. Da	ate	Amount (Rs)	P.O No	Date	DC No	Date
1 Orginal	18/6/202	1	17300	Wireless Char	ging Sys	tem for Electr	ic Bicyle
2 Orginal	18/6/202	1	26000	Smart Control of Adaptive Automobile			
Total Bill Amoun	1		43300	✓		1	
	ount from Erkey Mo	otors Pvt	23300	(7300+16000	D)		
Amount of payment to be made Rs.			20000 Refund the amount to student groups.				
Chq. No "022975"/UB/ 38170		Dt.:	23/10/2021	Rs.	20000		
Favour of:		vindranat	h	0		*	
	Activities: Project	Works & E	Experiments	0			
Rudget sanctioned Bs. 2.00.000/-			Utilized Rs. 5	5,000/-	Balance budget Rs.1,95,000/-		
Note Approval fo	Balance Budget	Payment : R Utilized Rs.0		- 43,300/- = 1,51,700/- Balance Rs. 20,000/-			
Note Approval to	Bala	ance Budg	get After This	Payment : Ni	11		
Documents verifi					1		
Bill : Origina	IVI Proforma	2					
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Matrusri Engineering College



(Sponsored by: MATRUSRI ERDUCATION SOCIETY, Estd: 1980) (Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764

Email: principal@matrusri.edu.in To

Website: www.matrusri.edu.in 27.09.2021

The principal Matrusri Engineering College Saidabad, Hyderabad

### Through HOD-EEE Department

Sub: Request for reimbursement of part of the amount spent for innovative projects - Reg.

Sir,

I am here to inform you that two proto type projects on "Wireless Charging System for Electric Bicycle" & "Smart Control of Adaptive Automobile" developed by two student groups (2017-21 batch) of EEE. It is glad to inform you that these innovative projects have got recognition through an article published in Motor India Magazine. These working models are made available in Centre of Excellence for Electric Vehicles, MECS. I am very thankful to you for encouraging us to do these projects. The details of the expenditure is as given below.

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2	Smart Control of Adaptive Automobile	26000/-	16000/-	10000/-
	Total	43300/-	23300/-	20000/-

The two student groups have given request letters to reimburse the amount spent by them (Rs.10,000/- each). The covering letters, relevant bills and sponsorship letters are attached here with. I request you do the needful in this regard.

Thanking you sir,

Horward sto Principal for kind Considered Dr

Yours Sincerely

GJJarma **GVSSN Srirama Sarma**, Assistant Professor,

is retained by college

EEE Dept., MECS.

reimburse RS 20,00 - to students

equipment



**Matrusri Engineering College** 



27.09.2021

(Sponsored by: MATRUSRI ERDUCATION SOCIETY, Estd: 1980) (Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764

Email: principal@matrusri.edu.in

Website: www.matrusri.edu.in

To The principal Matrusri Engineering College Saidabad, Hyderabad

Through HOD-EEE Department

Sub: Request for reimbursement of part of the amount spent for final year project work- Wireless Charging System for Electric Bicycle -Reg.

Sir,

We, M.Sumanth Goud, M.Shashikanth, P.Jhansi and T.Sai Brundha, EEE students of 2017-21 batch have successfully completed our final year project on "Wireless Charging System for Electric Bicycle" under the guidance of Mr. GVSSN Srirama Sarma, Assistant Professor, EEE Dept., MECS and Industry Advisor Mr. Ashhar Ahmed. Wireless Charging for E-Bicycle: Micro-electromobility refers to a range of small, lightweight vehicles operating at speeds typically below 25 km/h and driven by motor/battery. Looking at the major crisis that India is facing: Pollution and Traffic Congestion, in coming days Electric Bicycles will be the best way to promote zero-emission & affordable transportation. Customized Electric Bicycle with 250 W, 36 V BLDC Hub Motor 36 V 12 Ah NMC Battery, was made earlier at COE in Feb 2021. Now we have made a wireless charging system for that bicycle using wireless power transmission technology. In EV ecosystem, innovative & effective charging methodologies will come in the future to tackle the problem of range anxiety. Inductive charging is one of them. Developed wireless charging system is having two parts, one Transmitter & other Receiver. Transmitter circuit is having SMPS (AC 230 V to DC 24 V20 Amp) capacitors, resistors, inductors, and MOSFET along with Transmitter Coils. At the receiver end, there is a bridge rectifier circuit with the inductor, capacitor network & 250 W boost converter. They can get charging current & voltage around 2 A & 40 V respectively for the first version of the system. In the coming days, the plan is to have a sophisticated structure & mechanism for wireless charging in E-Bicycle with less charging time & more charging current.

(1 of 2)



# Matrusri Engineering College

(Sponsored by: MATRUSRI ERDUCATION SOCIETY, Estd: 1980) (Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764



Email: principal@matrusri.edu.in

### Website: www.matrusri.edu.in

The total expenditure for the development of vehicle is Rs. 17300/- wherein an amount of Rs. 10000 /- is spent by us. We are very glad to inform you that we have received an amount of Rs. 7300/- as sponsorship from EURKY Motors, Pune. We are very proud to inform you that an article on our work is published in Motor India Magazine.



Wireless Charging System for Electric Bicycle

We will be very grateful if the amount spent by us (Rs.10000/-) is reimbursed. We are very thankful for encouraging us to do this project.

Thanking you sir.

Yours Sincerely M.Sumanth Goud(1608-17-734-302) M.Shashikanth (1608-17-734-304) P.Jhansi (1608-17-734-033) T.Sai Brundha (1608-16-734-050) T. Sai Drunda

Attachments:

- 1. Invoice copy
- 2. Sponsorship letter copy
- 3. Brief report about project
- 4. Copy of Motor India Magazine

GUSSN Snamelarre) Brtanal Guido.

The projectwork definit need the Current technology and may be made Connerhelly Vicille by the manship . (2 of 2)

Dr. G. Ravindranath M.Tech, PhD, MIE, MIEEE, MISTE Professor Dept of FFF SkillShark EduTech Pvt. Ltd Hyderabad, Telangana Pin: 500068



# Invoice

Date: 18/06/2021

From SkillShark EduTech Address: 3-7-63/6P, Bandlaguda Rd, Sai Sapthagiri Colony,Mansoorabad, Hyderabad, Telangana 500068 Contact:+91-9028095540 To Matrusri Engineering College Address: 6-1-486, Saidabad Rd, DBR Enclave, Sapota Bagh, New Malakpet, Hyderabad, Telangana 500059 Contact:+91-94400 62482

S.N	Item Description	Cost (INR)
1	24/0/24 Transformer 10 Amp	1400
2	N Channel MOSFETS	1000
3	Boost Converter Module 6 Amp	2500
4	Primary Coil	1500
5	Secondary Coil	1000
6	6*4 PCB & Power Module	1000
7	XRD 1556-adj	1200
8	DC-DC Buck Converter & Power Supply Card 3 Pin	1200
9	Base Structure & Soldering	1500
10	Miscellaneous (Wires, Switches, Diodes, Resistors, LED)	1000
11	Shipping & Logistics	4000
-	Total Payable Amount	17300
	Amount Paid by Students	10000
	Sponsorship Amount by Erkey Motors	7300

Authorized Signatory:



"chq.No: "022975", Dt: 23/10/2021 Amt: 10,000/-



Date: 15/06/2021

To, The Principal, Matrusri Engineering College, Hyderabad, Telangana 500059.

Sub: Sponsorship for Project Wireless Charging of E-Bicycle developed under Center of Excellence for Electric Vehicles, Matrusri Engineering College, Hyderabad.

With reference to our latest discussion regarding Sponsorship for Project Wireless Charging of E-Bicycle, We acknowledge & accept the proposal. We believe in fostering Innovations. Hence, we would be glad to sponsor the mentioned amount of INR 7300 from our end.

Our accounts team will further complete the formalities by coordinating with your team. Looking forward to a strengthened Industry-Academia Collaboration.

With Best Wishes.

Arpit Chauhan CEO Erkey Motors Pvt. Ltd.

Copy to: SkillShark EduTech Hyderabad, Telangana, 500068

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of India	सैदाबाट - ईदराबाट गाखा, हैदराबाट - 500059 SAIDABAD-HYDERABAD BRANCH, HYDERABAD-500059 IFS Code : UBIN0805211	-,	दिनांक DATE	2	3	1 0	2	0 2	1	
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					Continuation to previous page
	MATR	USRI ENGINEERI	NG COLLEG	E, Saidabad	, Hyderabad.
and a		ACC	OUNTS SEC	TION	
Ref:MEC	/C/ R & D / 202	1			Dt: 23/10/2021
	ne Chairman :				
Sub : Pay	ment advice vid	de approved by Hon	. Chairman or	27/09/2021	an a sub-sub-sub-sub-sub-sub-sub-sub-sub-sub-
-	Payment agains		,		
	the Company / is to be made	Person to whom the			
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1) capital	Expr	2) Revenue Expen	diture :	Recurring	/ Non- Recurring Expenses /
For the	Dept. of :	9 51	2) Common I	Procurement	3) For the Section : Acad.Sec
1) Adv. P	ayment	2) Part Payment	3) Full and F	inal Payment	Recovery for remittance
Payment	Details :				
S No	Invoice No.	Date	Amount (Rs)	P.O No	Date DC No Date
1	Orginal	18/6/2021	17300	Wireless Char	ging System for Electric Bicyle
2	Orginal	18/6/2021	26000	Smart Control	of Adaptive Automobile
Total Bill	Amount		43300	<ul> <li>.</li> </ul>	
Ltd.	hip amount fron f payment to be	n Erkey Motors Pvt	23300	(7300+16000 Befund the a	) mount to student groups.
	"022975"/UB/ 38		Dt.:	23/10/2021	The second s
Favour		Dr. G. Ravindranat		20/10/2021	113. 20000
		s: Project Works & E			
	nctioned Rs. 2,		Utilized Rs. 5	.000/-	Balance budget Rs.1,95,000/-
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# MATRUSRI ENGINEERING COLLEGE

Saidabad, Hyderabad 500 059,

### Party : Erkey Motors Pvt. Ltd.

Bill Particulars Bill Date : 18-06-2021 PO Date :

Voucher Type :	Bank Payments
Voucher No :	351
Voucher Date :	23-10-2021

**Voucher Particulars** 

Narration : Being Chq. issued to reimbursement of students for part of the amount spent for final year project work "Wireless Charging Systems for Electric Bicycle", developed by student groups. Chq. prepared to Dr.G.Ravindranath.

### Bank Details

Bank :	UB	-Saidabad	(A/c N	10.0	5211010	0038170)	1
Chq Amount		10,000.00					
Cho Date :	23-1	0-2021	Cheque	No	: 020229	75	

CODE	Subsidary Ledger	Dept	Head of Account	Debit	Credit
3319	G Ravindranath		UBI -Saidabad (A/c No. 052110100038170)		10,000.00
4806	Erkey Motors Pvt. Ltd.		Sponsorships Received		7,300.00
8248	Erkey Motors Pvt. Ltd.	-	Research & Development	17,300.00	
6				17,300.00	17,300.00

ACCOUNTS SECTION

PRINCIPAL

2021 6110 **RECEIVER'S SIGNATURE** 



**Application** Form

(All data are to be typed in Times New Roman Font - 11 points)

### **REFERENCE NO. (To be provided by IEI)**


A. Project Title (in CAPITAL letters - maximum 150 characters):

DESIGN AND FABRICATION OF SOOT COLLECTOR AND FILTRATION OF SOOT

# B. Details of the Institution (in CAPITAL letters):

Name of the Institution	MA	TRU	SRI	ENG	GINE	ERIN	IG COLLEGE
Address	SAI	DAB	BAD				
Town / City	HYI	DER	ABA	٨D			
State	TEL	ANG	GAN	JA			
PIN CODE	5	0	0	0	5	9	
NBA / NAAC Accreditation or validNIRFRank (attach supporting documents)	NBA	A Ac	cred	ited			
Name of Head of Institution	Dr. l	D. H	AN	JMA	NTH	AR.	AO
Phone with STD code	0	4	0	- 1	2 4	0	7 2 7 6 4
Email	prin	cipal	l@m	atrus	ri.ed	u.in	

C. Particulars of Guide/(s) [Maximum 2 guides per project. The Principal Guide's name should be placed in Sl. no.1. Correspondence will be sent to the email of Principal Guide]:

Sl.	Name	Surname	Department	Gender (M/F)
G1	Kishore	M.V.	Mechanical Engg. (MC)	М
G2	Kalyan Charan	Agir	Mechanical Engg. (MC)	М

Sl.	Field of Specialization	Qualification	Experience (Years)
G1	Mechanical Engineering	PhD	27
G2	Thermal Engineering	M.Tech (Ph.D)	14

D. Particular of Student/(s) [The Principal Investigator's name should be placed in Sl. no.1. Correspondence will be sent to the email of Principal Investigator – maximum 5 students per project for UG category and 1 student per project for PG/PhD category]:

SI.	Name	Surname	Date of Birth (dd/mm/yyyy)	Gender (M/F)
<b>S</b> 1	Sphoorthy	Yellapragada Venkata Sai	21/07/2001	F
S2	Deeksha	Gottapu	20/04/2001	F
<b>S</b> 3	Philomina	Neerudu	20/11/1999	F

Continued.....

1-4



SI.	UG/PG /PhD/ Diploma	Department	Year of study	Completion date of study (dd/mm/yyyy)	Branch of research subject**
81	UG	Mechanical Engg. (MC)	4th	30/06/2022	Thermal
82	UG	Mechanical Engg. (MC)	41h	30/06/2022	Thermal
S3	UG	Mechanical Engg. (MC)	4th	30/06/2022	Thermal

\*\*Choose from this list and write the corresponding codes mentioned within ( ):

1. Aerospace Engg. (AS), 2. Agricultural Engg. (AG), 3. Architectural Engg. (AR), 4. Chemical Engg. (CH), 5. Civil Engg. (CV), 6. Computer Tech. (CT), 7. Electrical Engg(EL), 8. Electronics & Telecomm.

Engg(ET), 9. Environmental Engg(EN), 10. Marine Engg(MR), 11. Mechanical Engg. (MC), 12. Metallurgy & Materials Engg. (MM), 13. Mining Engg. (MN), 14. Production Engg. (PR), 15. Textile Engg. (TX), 16. Others (Please write here and provide a two digit code for the same in the box

.....

# E. Details of Published Papers in Journals / Conferences:

1) By the Guide/(s)(Please mention maximum 5 published papers in Peer-reviewed journals and National & International Conferences)

SI.	Title of Paper	Authors	Name of Journal / Conference	Volume No. & Page no. (from- to)
1	Development of a Mathematical Model to study the fluidity in Thixoforming using Fuzzy Logic Approach	M.V. Kishore, Dr. D. Hanumantha Rao, Dr. M. Manzoor Hussain	IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)	Volume 13 Issue 6 Page no.:09-16
2	Numerical Simulation To Determine The Mould Filling Ability of Aluminum Alloy In Semi Solid Metal Processing	M.V. Kishore, Dr. D. Hanumantha Rao, M. Manzoor Hussain	International Journal of Engineering Research	Volume 5 Issue SP 2 Page no.:452-455
3	Evaluation of thermal properties by incorporating perforations of various shapes in fins made with aluminum	<b>A. Kalyan Charan</b> , R. Uday Kumar, B. Balunaik	ScienceDirect (Materials Today: Proceedings)	Volume 46, Part 1, 2021,
4	Evaluation of Convective Heat Transfer Coefficient and Heat Transfer Rate through Aluminum Metal Matrix Composite Fin made by Stir Casting	<b>A. Kalyan Charan,</b> R. Uday Kumar, B. Balunaik	IOP Conference Series: Materials Science and Engineering	Pages 609-614 Volume 1057 Issue 1 Page no.:12-38
5	Extraction of Liquid Hydrocarbon Fuel from Waste Plastic	Aditya Machiraju, V. Harinath A. Kalyan Charan,	International Journal of Creative Research Thoughts (IJCRT)	Volume 3. Issue 4 (2018), Page no.:202 207.

### F. Objectives of the proposed project - (2000 characters)

i.

Unburnt carbon particles from industries, chimneys, and vehicles can adversely affect health and can cause premature death. The particulate matter emitted from the exhaust in the form of soot contains mainly Carbon monoxide (CO), Nitrogen Oxides, Sulphur compounds, Aldehydes, Benzene, low molecular weight PAHs (Polycyclic Aromatic Hydrocarbons), Nitro-PAH in the gas phase, and Diesel Particulate Matter (DPM). The norms and guidelines on emission standards exist, but they are seldom



adhered to, especially for small diesel generators which have been running for years. Hence, the emission from diesel generators is an immense problem. Although the wet scrubbing process is used these days in industries, the particulate matter is washed out into nearby water streams and landfills, which in turn causes pollution of water bodies. Our solution: The device "Carbon Soot Collector" is fabricated at an early stage to collecteapture 50% of Carbon, then the filtration of soot is carried out using various chemicals, additives, and solvents. The filtered soot (70-80% Carbon) can be used to replace earbon black or pigment black and dyes in ink cartridges and chemical industries.

- ii. The production of carbon black involves the thermal decomposition of hydrocarbons such as petroleum oils or coal oils or natural gas. This requires large amounts of energy. It also affects the environment and leads to the depletion of fossil fuels. The soot in exhausts which is released into the atmosphere can be collected and recycled to use in the place of carbon black. But the soot (black carbon) collected is not a pure form of carbon black. It must treat with appropriate reagents in order to make it less harmful.
- iii. This process can be carried out by using the Carbon Soot Collector which consists of a High-Efficiency Particulate Air filter (HEPA). The collected soot is then acid leached using HNO3 which removes the heavy metals in the collected soot. Then it is treated with DEA and TiO2 to remove harmful PAHs. The resultant mixture can be used for various purposes, mainly as a replacement for carbon black.22

G. Review of R&D in the proposed area (National & International Status, Importance, patents etc.) - (3000 characters)

 i. "Device turns air pollution into ink", Swastika Thakur, Shruti SindhiComputer Department, Vivekanand Education Society's Institute of Technology Mumbai, India, International Journal of Innovative Science and Research Technology, Volume 4, Issue 8, August – 2019

This paper is written with the vision of utilizing the resources which were ignored till now. Airpollution can be harvested to produce a substance as useful as ink. Kaalink is a device that smartly detoxifiesheavy metals and particles Carcinogens from the sootor carbon. The pollutants which can harm our lungs can appeal our eyes in the form of art. But the particles regain their carcinogenic properties by floating ability in the air and thus being able to enter into the respiratory system.

ii. "The pollutant emissions from diesel-engine vehicles and exhaust aftertreatment systems",
 I'brahim Aslan Res, itog`lu • Kemal Altinis, ik •Ali Keskin,

This article reviews the characteristics of main pollutant emissions (CO, HC, PM, and NOx) from diesel engines and control technologies of these pollutant emissions with standards and regulations. Among these pollutant emissions, CO and HC are emitted because of incomplete combustionand unburned fuel while NOx emissions are caused because of high combustion temperatures above 1,600 C. As forPM emissions, the reasons for PM emissions are an agglomeration of very small particles ofpartly burned fuel, partlyburned lube oil, ash content of fuel oil and cylinder lube oil or sulfates and water.

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iii.

# The Institution of Engineers (India) Technical Department R&D Grant-in-aid Scheme

"Chemically treated carbon black waste and its potential applications", Pengwei Dong, ThawatchaiManeerung, Wei Cheng Ng, Xu Zhena, YanjunDai ,Yen Wah Tong, Yen-Peng Tin , Shin Nuo Kohd, Chi-Hwa Wang Koon Gee Neoh, Journal of Hazardous Materials, ELSEVIER

In this work, carbon black waste – a hazardous solid residue generated from gasification of crude oil bottom in refineries – was successfully used for making an absorbent material. However, since the carbon black waste also contains significant amounts of heavy metals (especially nickel and vanadium), chemical leaching was first used to remove these hazardous impurities from the carbon black waste. Acid leaching with nitric acid was found to be a very effective method for removal of both nickel and vanadium from the carbon black waste (i.e. up to 95% nickel and 98% vanadium were removed via treatment with 2 M nitric acid for 1 h at 20  $\circ$ C)

iv. "Conversion of Black Carbon Emitted from Diesel-Powered Merchant Ships to Novel ConductiveCarbon Black as Anodic Material for Lithium-Ion Batteries", Jae-Hyuk Choi, Dae-Yeong Kim, Won-Ju Lee, and Jun Kang, Nanomaterials MDPI.

The authors explained about the generation of waste soot from diesel engines of merchant ships which have  $\geq 2 \ \mu m$  agglomerates consisting of 30–50 nm spherical particles, whose morphology is identical to that of carbon black (CB) used in many industrial applications. It was found that waste soot generated from ship engines can be converted to novel and useful energy material through a heat-treatment process.

### H. Project Duration (in months)

0 6

Project Category	Maxim	um Duration (in	monthe
Diploma		6	montins)
UG		9	
PG		12	A CONTRACT OF A CONTRACT OF
PhD	States of the states of the	24	

NB: The project completion date should not be later than course completion date as mentioned under 'ITEM D'

I. Work plan (including detailed methodologyand time schedule)- (5000 characters)

To develop a Carbon Soot Collector which effectively collects the soot from exhausts of vehicles, chimneys, etc. The following methods are followed

 Design of soot collector chamber: - The chamber is designed in order to get a brief idea about the flow of gases. It will be also helpful to find temperatures at different places of soot collector. The chamber is designed to collect the soot from the exhaust gases and acts as a protective casing.

the



- Fabrication of chamber: -The chamber is the fundamental component of the soot collector. It houses all
  the other major parts of a soot collector. It is a rectangular chamber made of stainless steel. The stainlesssteel sheets are bent and welded together to achieve a rectangular shape.
- Baffles: Baffles are used to increase the turbulence of the flow of gases. As a result the heat transfer coefficient and heat transfer rate increase. Baffles are installed on either side of the chamber. It gives direction to the flue gases.
- 4. Installation of wire mesh filter: Steel wire mesh filter of grade 200 is installed into the chamber. It is a fine wire mesh that is cold-rolled. It helps to filter out the dust and heavy particulate matter from the soot. The steel wire mesh can sustain high temperatures and is non-corrosive.
- 5. Installation of HEPA filter: -High-Efficiency Particulate Air (HEPA) filter is a type of pleated mechanical air filter. This type of air filter can theoretically remove at least 99.97% of dust, pollen, mold, bacteria, and any airborne particles with a size of 0.3 microns (µm). The diameter specification of 0.3 microns responds to the worst case; the most penetrating particle size (MPPS). Particles that are larger or smaller are trapped with even higher efficiency. Using the worst-case particle size results in the worst-case efficiency rating (i.e. 99.97% or better for all particle sizes). This filter helps in the separation of soot from the flue gases. HEPA filter plays a major role in the soot collection process.
- 6. Installing the carbon soot collector: The Carbon soot collector is fitted to the tailpipe. The soot is collected into the Soot collector. The amount of pollutants reduced is checked with the help of a gas analyzer. This allows us to understand how effective the soot collector is.
- Acid leaching: The collected soot contains heavy metals like Fe, Ni,Cd,As, etc. The soot is acid leached with HNO3. This process removes heavy metals from the soot. HNO3 gives the best results out of other acids. It is less reactive with metals and can be removed easily because of this.
- Removal of PAHs: Poly Aromatic Hydro Carbons are the main cause of soot being carcinogenic. The PAHs are removed by using DEA and TiO2.
- 9. The filtered soot can be further used for various purposes. It can be used for dyes, pen inks, paints, manufacturing of tyres, etc.

### J. Future plans (1200 characters)

This project can be improved in the following ways providing future work in:

- Developing our stationary device into a portable device for easy accessibility for many industrial purposes.
- · Further theoretical study can be performed on our filtrated soot.
- We can also do some further research on how to make use of filtrated soot to reach out to many consumers and solve their problems by making use of collected soot.
- It can be worked towards releasing oil-based paints, fabric paints, and other outdoor paints, and many more.
- We can try to commercialize products produced by using out filtrated soot.

F ........



- In the future, we can save our fossil fuels by not burning them just to make black color ink. And also, the filtrated soot can be used to replace carbon black or pigment black and die in ink cartridges and chemical industries.
- We can use air pollution as a resource that can be harvested rather than allowing it to disperse and cause further damage to mankind.
- Air pollution can be controlled to a certain extent and health problems like premature death, heart attacks, strokes and aggravated asthma for children will get reduced fin the coming years.

# K. Where the Research Findings / Developed Equipment can be used in the future (1000 characters)

The developed soot collector can be used to capture and filter the emissions produced at the exit or from the tailpipe of generators and stationary industrial equipment. This device can be further modified into a retrofit device that can filter particulate matter from Diesel engine vehicles. The filtration of soot is carried out using various chemicals, additives, and solvents. The filtered soot (70-80% Carbon) can be used to replace carbon black or pigment black and dyes in ink cartridges and chemical industries. Chemically treated Carbon black waste can be used as an absorbing material. The treated carbon black waste has a high adsorption capacity (~356.4 mg dye/g carbon black), which can be attributed to its high specific surface area (~558 m<sup>2</sup>/g). The treated carbon black waste with its high adsorption capacity and lack of cytotoxicity is a promising adsorbent material. Moreover, the carbon black waste shows high electrical conductivity (ca. 10 S/cm), making it a potentially valuable source of conductive material. Waste soot generated from Diesel-powered merchant ship engines can be converted to novel and useful energy through the heat treatment process. The conductive property of Carbon black can be used as an anodic material for Lithium-Ion batteries.

## L. Facilities to be provided by Applicant's Institute:

The following facilities at the department of Mechanical Engineering of Matrusri Engineering College can be extended for the research purpose

- 1. Well established Manufacturing Process Laboratory
- 2. Well established Machine Tools Laboratory
- 3. Well established Metallurgical and Material Science Laboratory
- 4. Well established Heat transfer Laboratory
- Well established CAD/CAM Laboratory (Simulation software such as latest ANSYS CFD version, Solid-works, Auto CAD, Solid-works Simulation, Software Auto Desk Simulation multi-physics for modeling and analysis.)

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M. Details of Financial Requirements (in INR) [Fund will be provided by IEI for non-recurring expenditure only]

	Details of expenditure			Fund to be	Fund required
Sl. No.	Heads	Items	Estimated Cost In INR	arranged by student's Instt. / other sources*	from The Institution of Engineers (India) In INR
	Non-	1. Stainless Steel Sheet	5,000	2,000	3,000
1.	consumables	2.Baffles	5,000		5,000
	Special	1. HEPA filter	7,000		7,000
2.	Equipments /	2. Glass wool fibre	2,000		2,000
	Standard kits	3.Steel wire mesh	2,000	1,000	1,000
	Small Tools	1. Pressure sensor         2. Chemicals and Testing         3. Pipes and Fabrication Materials	3,000		3,000
3.			5,000		5,000
			4,000	2,000	2,000
4.	Others	Recurring cost	5,000	5,000	
		TOTAL:	38,000	10,000	28,000

\*Please mention the other sources of fund (if any):

-

Details of upper ceiling of funding available under various Heads are provided below:

Heads	Eligibility (Y/N)	Upper Limit (INR)
1. Non-consumables	<b>Y</b>	5,000/- for Diploma 10,000/- for UG 15,000/- for PG 20,000/- for PhD
2. Special Equipments/Standard kits	Y	5,000/- for Diploma 10,000/- for UG 15,000/- for PG 20,000/- for PhD
3. Small Tools	Y	5,000/- for Diploma 10,000/- for UG 15,000/- for PG 20,000/- for PhD
4. Testing	artini and an Y	Diploma- Discouraged UG-Discouraged 15,000/- for PG 20,000/- for PhD

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# The Institution of Engineers (India)

Technical Department R&D Grant-In-aid Scheme

5. Experimentation 7 Project-specific special software	Y	Diploma- Discouraged UG-Discouraged 15,000/- for PG 20,000/- for PhD
6, Field Visit	Y	Diploma- Discouraged 2,000/- for UG 5,000/- for PG 5,000/- for PhD
7. Procurement of PC, Laptop, Workstation, Printer, Scanner, Cartridge, Modem, Internet Connectivity, Camera, USB Cable, Pen Drive, IIDD, Android Devices, GPS Devices and other devices of similar nature	N	Discouraged
8. Honorarium/Stipend/Fellowship/ Secretarial Expenses/Publication Related Expenses	N	Discouraged
9. Procurement of software like MATLAB/AutoCAD/CATIA/STAAD Pro etc	N	Discouraged
10. Contingencies	Details to be Rs.2,000/-	provided. Quantum should not exceed

SUMMARY OF FINANCIAL REQUIREMENT (in INR)

Туре	1 – 6 months	7 – 12 months	13 - end of project
Non-recurring	28,000		
TOTAL	28,000		

### Declaration

### **Project Title**

DESIGN AND FABRICATION OF SOOT COLLECTOR AND FILTRATION OF SOOT

Declaration by applicant(s)/student(s):

I/We Ms. Y. V. S. SPHOORTHY, Ms. G. DEEKSHA, Ms. N. PHILOMINAof MATRUSRI ENGINEERING COLLEGE hereby declare that I/we are full-time students/research scholar of the above-mentioned university/institute and shall undertake the project strictly in accordance with the provisions specified in the project proposal and we shall submit half-yearly reports about the progress of the work and final report as per the format of IEI on completion of the project. In case of failure, we shall refund the grant to IEI. We also authorizeIEI to publish the findings of the project in their publications and also to use the same for any useful purpose as deemed fit by the IEI.

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iii) 500059/MECS/MC/00045

ii) 500059/MECS/MC/00067

i) 500059/MECS/MC/00044

Signature of student/s with IEI membership no. (Except Diploma Students)

Date: Place:

# Recommendation by guide(s):

I/We Dr. M. V. KISHORE and Mr. A. KALYAN CHARAN of MATRUSRI ENGINEERING COLLEGE recommend the above project, which is to be carried out under my/our supervision. I/We shall arrange to submit

Form no. Tech/R&D/01 Rev: 06/00000000 dt 08.11.2019



Date Place:

## The Institution of Engineers (India) Technical Department **R&D Grant-in-aid Scheme**

half-yearly reports about the progress of the work and final report as per the format of IEI on completion of the project. In case of failure, I/we shall arrange to refund the grant to IEL I/We also authorizeIEI to publish the findings of the project in their publications and also to use the same for any useful purpose as deemed fit by the IFI

M.V. Kishm

i) F-124532-1 Signature of guide(s) with IEl membership no. (If he/she is a Member)

Recommendation by Head of the University/Institute:

The project is recommended for obtaining grant-in-aid from IEI with the following conditions:

- i) The Investigator will be governed by the rules and regulations of the University/Institute and will be under administrative control of the University/ Institute for the duration of the project.
- ii) The grant-in-aid by the IEI will be used to meet the expenditure on the project and for the period for which the project has been sanctioned.
- iii) No administrative or other liability will be attached to the IEI at the end of the project.
- iv) The University/ Institute will provide basic infrastructure and other required facilities to the investigator for undertaking the research project.
- v) The University/Institute will take into its books all assets received under this sanction and its disposal would be at the discretion of University/ Institute.
- vi) The University/Institute assumes to undertake the financial and other management responsibilities of the project.

Seal of University/Institute

Signature of Registrar of University/Head of Institute Principal Matrusri Engineering College Saidabad, Hyderabad.

Form Bo. Tech/R&D/01 Rev: 06/00000000 dt 08.11.2019





### Information Sheet

1. PROJECT TITLE (in CAPITAL letters - maximum 150 characters):

DESIGN AND FABRICATION OF SOOT COLLECTOR AND FILTRATION OF SOOT

# 2. INFORMATION ABOUT THE INSTITUTE

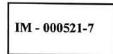
2.1 NAME OF INSTITUTE:

## MATRUSRI ENGINEERING COLLEGE

## 2.2 CATEGORY OF INSTITUTE:

Engineering Colleges/ Universities	Polytechnics
(Please tick)	(Please tick)
2.2.1 University	2.2.1 Government
2.2.2 IISc/ IISER/ IIT/ NIT/IIEST/ Govt. Engg. College	2.2.2 Government-aided
2.2.3 Non-govt. Engineering/Technological College	2.2.3 Private/PPP

# 2.3 IEI INSTITUTIONAL MEMBERSHIP NO. OF THE INSTITUTE:



### 3. INFORMATION ABOUT THE GUIDE(S)

3.1 NAME OF GUIDE/S WITH MEMBERSHIP NUMBER OF THE INSTITUTION OF ENGINEERS (INDIA) [Maximum 2 guides per project – Guide/s must be a corporate member of the IEI]

Project Category	Guide(s) Membership
	Requirement
Diploma	AMIE/MIE/FIE
UG	AMIE/MIE/FIE
PG	MIE/FIE

Form no. Tech/R&D/01 Rev: 06/00000000 dt 08.11.2019

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PhD MIE/FIE

	Name	IEI Membership No.
SI, NO.	10 (MARKA 40)	F-124532-1
	Dr. M. V. Kishore	M-152155-6
2	Mr. Agir Kalyan Charan	

# 3.2 CONTACT DETAILS OF PRINCIPAL GUIDE (ALL COMMUNICATION WILL BE SENT TO THIS CONTACT):

Mobile No.
9502873412

# 4. INFORMATION ABOUT THE STUDENT(S)[MAXM. 3 STUDENTS PER PROJECT]

4.1 Is there any Students' Chapter of The Institution of Engineers (India) in your Institution?

YES / NO

4.2 NAME OF STUDENT/S WITH MEMBERSHIP NUMBER OF THE INSTITUTION OF ENGINEERS (INDIA)[The Principal Investigator's name should be placed in Sl. no.1.]:

Sl. No.	Name	Category (DIP*/UG/PG/PhD)	IEI Membership No.#
1	Yellapragada Venkata Sai Sphoorthy	UG	500059/MECS/MC/00044
2	GottapuDeeksha	UG	500059/MECS/MC/00067
3	NeeruduPhilomina	UG	500059/MECS/MC/00045

Project Category	Student(s) Membership Requirement	
Diploma	Exempted	
UG	SMIE	
PG	AMIE/MIE/FIE	
PhD	, AMIE/MIE/FIE	

# Student must not provide Membership details of Student Chapters under this Column. \*Diploma Students need not provide Membership Details

# 4.3 CONTACT DETAILS OF PRINCIPAL STUDENT INVESTIGATOR (ALL COMMUNICATION WILL BE SENT TO THIS CONTACT):

Email	Mobile No.
mee18736004@matrusri.edu.in	9381766305



# The Institution of Engineers (India)

# Technical Department R&D Grant-in-aid Scheme

### **Payee Details**

For funding under

# IEI R&D Grant-in-Aid Scheme

1.	Account Name	PRINCIPAL MATRUSRI ENGINEERING COLLEGE
2.	Institute Name	MATRUSRI ENGINEERING COLLEGE
3.	Institutional Membership Number	IM-000521-7
4.	Name of The Bank	UNION BANK
5.	Bank Account Number	052110100039018
6.	Name of Branch	SAIDABAD
7.	Branch Code	-
8.	IFSC Code	UBIN0805211
9.	MICR Code	500026168
10.	GST Number of the Institute/College/University	36AAATM2433P1ZC

- Grant will be transferred online only to the account of Principal/Director/Registrar/Dean (R&D) directly. Payee
  details should be provided accordingly.
- Project proposal should be accompanied by hard copy of cancelled cheque. The cancelled cheque should be from the same account against which payee details have been provided.



A Century of Service to the Nation

Ref: R.4/2/UG/2021-22/UG2022007

Date: 22 April 2022

The Principal Matrusri Engineering College Saidabad, Hyderabad 500059 Telangana

Dear Sir/Madam,

11

### Sub: Intimation of Approval for R&D Project entitled: "Design and Fabrication of Soot Collector and Filtration of Soot"

This has reference to your subject project proposal submitted to The Institution of Engineers (India) for funding under IEI R&D Grant-in-Aid Scheme.

We are pleased to inform that the same has been approved by the competent authority as per the details mentioned below:

Project ID:	UG2022007	Category:	UG	Financial Year:	2021-22
Guide(s):	1. Dr M V Kishore 2. Agir Kalyan Charan	Applicant(s):	<ol> <li>Yellapragada Venkata Sai Sphoorthy</li> <li>Gottapu Deeksha</li> <li>Neerudu Philomina</li> </ol>		
College / Institute / University:	Matrusri Engineering College	Total Grant Sanctioned:	₹28,000/-	Number of Instalment(s):	1

Kindly quote your project ID all your future correspondence.

Please note that the Terms & Conditions of the Grant (Copy enclosed) should be strictly followed. On successful completion of the project, the following documents are to be furnished: (1) hard and soft copy of the Project Report, (2) hard/soft copy of the Project Completion Report, (3) two hardcopies of the Utilization Certificates in original, (4) soft copy of the filled-in R&D Compendium pro-forma (in .doc/.docx format) and (5) an Audio/Visual Demonstration of the Prototype/Model/Process in CD or Google Drive File Link. The submission will be treated as successful and complete only on receipt of the above documents.

Kindly acknowledge receipt through email id research@ieindia.org.

Thanking you.

Yours faithfully,

(Dr Jitendra Saxena) Director (EE&A) & Director (Technical) – I/C For Secretary & Director General

Encl: as stated.

cc: Guide(s) – 1. Dr M V Kishore 2. Agir Kalyan Charan



# The Institution of Engineers (India)

Recognized as Scientific & Industrial Research Organization by Ministry of Science & Technology, Govt. of India

# IEI R&D Grant-in-Aid Scheme

## Terms & Conditions of the Grant

- 1. The usual terms and conditions of sanctioned R&D projects remain same in conjunction with the notification of inviting proposals for IEI-Research and Development Grant.
- 2. Approval of the proposal and the grant being released is for the specific project sanctioned and should be exclusively spent on the project within the stipulated time.
- 3. Any un-spent balance out of the amount sanctioned must be surrendered to the Institution of Engineers (India) through a Cheque / Demand Draft drawn in favour of "*The Institution of Engineers (India)*", payable at Kolkata.
- 4. The grant sanctioned should be utilized for expenses incurred under permissible heads as enumerated under 'Details of Financial Requirement' in Application Form. The fund should not be used for traveling expense or any scholarship purpose under any circumstances.
- 5. The beneficiary Institute / Organization has to furnish Half-yearly Progress Report of the work for PG & PhD Project Proposals.
- 6. On completion of the project, one copy of Project Report, Project Completion Report (PCR) and two original copies Utilization Certificate (UC) on the sanctioned work must be sent to IEI. Also, Compendium Pro-forma must be submitted in soft copy (in .doc/.docx format) along with an Audio/Visual Demonstration of The Prototype/Model/Process in CD or Google Drive File Link. In the title page of the Project Report, the following should be mentioned:

### "The Project has been funded by The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020 under R&D Grant-in-Aid scheme"

- 7. The institute / Organization will not entrust the implementation of the work for which the grant is being sanctioned to another institution nor will it divert the grant receipts to other institute as assistance.
- 8. IEI reserves the right to terminate the project at any stage if it is convinced that the grant has not been properly utilized or appropriate progress is not being made and in that instance, the entire amount sanctioned should be refunded.
- 9. The project becomes operative with effect from the date on which the grant is transferred to the beneficiary account. This date should be intimated by the appropriate authorities of Institution / Organization to IEI. It will, in no case be later than one month after the receipt of the grant.
- 10. If the Project Guide wishes to leave the granted Institution / Organization where the project is based, the Institute / Organization / Project Guide has to inform the same to IEI for further necessary action.
- 11. IEI should be acknowledged in case of any paper presentation / patent application in the same manner as mentioned in sl.no.6

## For further information / clarification on this subject, please contact:

Director (Technical) The Institution of Engineers (India) 8 Gokhale Road, Kolkata - 700020 Email: research@ieindia.org



# **Re: Project ID: UG2022007: Design and Fabrication of Soot Collector and Filtration of Soot** 7 messages

RESEARCH IEI <research@ieindia.org> To: matrusri.principal@gmail.com Cc: mecs Kalyan <mecs.kalyan@gmail.com>, mec18736004@matrusri.edu.in Fri, Apr 22, 2022 at 3:19 PM

R.4/2/UG/2021-22/RDUG2021007 [Permanent ID: UG2022007]

Dear Sir/Madam,

This has reference to the subject proposal for IEI R&D Grant-in-aid Scheme.

Please find attached the sanctioned letter along with IEI R&D Grant-in-aid Scheme Terms and Conditions for ready reference.

Hard copy will follow soon.

With best regards,

Sir

Technical Department The Institution of Engineers (India) 8 Gokhale Road, Kolkata-700020 West Bengal, India.

#### Website: www.ieindia.org

On Sun, Feb 6, 2022 at 6:20 PM mecs Kalyan <mecs.kalyan@gmail.com> wrote:

what is the status of project proposal. Looking forward to a positive response from your side

On Wed, 12 Jan 2022 at 2:18 PM, mecs Kalyan <mecs.kalyan@gmail.com> wrote: Respected Sir,

I (A.Kalyan Charan) working as an Assistant Professor in the department of Mechanical Engineering of Matrusri Engineering College. 3 Students of B.E.-Mechanical (IV/IV) are working on their final year project titled "**Design and Fabrication of Soot**".

- Y. V. S. Sphoorthy (500059/MECS/MC/00044)
- G. Deeksha (500059/MECS/MC/00067)
- N. Philomina (500059/MECS/MC/00045).

We are applying for a project proposal for the IEI R&D Grant-in-aid scheme.

All the required documents along with the Application form and students memberships Forms(SMIE Application Forms) with payment details are attached below. Looking forward to a positive response.

Regards,

Thank you and with Regards Mr. A.Kalyan Charan M.Tech, M.I.E, (Ph.D) Assistant Professor Dept.of Mech.Engg., Matrusri Engineering College

Thank you and with Regards Mr. A.Kalyan Charan M.Tech, M.I.E, (Ph.D) Assistant Professor Dept.of Mech.Engg., Matrusri Engineering College

### 2 attachments



Terms & Conditions, R&D, IEI.pdf

mecs Kalyan <mecs.kalyan@gmail.com> To: mechanical department <hodmech@matrusri.edu.in> Fri, Apr 22, 2022 at 4:15 PM

-----Forwarded message ------From: **RESEARCH IEI** <research@ieindia.org> Date: Fri, 22 Apr 2022 at 3:38 PM Subject: Re: Project ID: UG2022007: Design and Fabrication of Soot Collector and Filtration of Soot To: <matrusri.principal@gmail.com> Cc: mecs Kalyan <mecs.kalyan@gmail.com>, <mec18736004@matrusri.edu.in>

R.4/2/UG/2021-22/RDUG2021007 [Permanent ID: UG2022007]

Dear Sir/Madam,

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Hard copy will follow soon.

With best regards,

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### 2 attachments

DG2022007.pdf

Terms & Conditions, R&D, IEI.pdf

**mecs Kalyan** <mecs.kalyan@gmail.com> To: "Kalyan.Mecs" <agirkalyan@matrusri.edu.in> Fri, Apr 22, 2022 at 10:19 PM

------Forwarded message ------From: **RESEARCH IEI** <research@ieindia.org> Date: Fri, 22 Apr 2022 at 3:38 PM Subject: Re: Project ID: UG2022007: Design and Fabrication of Soot Collector and Filtration of Soot To: <matrusri.principal@gmail.com> Cc: mecs Kalyan <mecs.kalyan@gmail.com>, <mec18736004@matrusri.edu.in>

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Website: www.ieindia.org

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Mr. A.Kalyan Charan M.Tech, M.I.E, (Ph.D) Assistant Professor Dept.of Mech.Engg., Matrusri Engineering College

### 2 attachments

 UG2022007.pdf 233K
 Terms & Conditions, R&D, IEI.pdf 443K

RESEARCH IEI <research@ieindia.org> To: <matrusri.principal@gmail.com> Cc: mecs Kalyan <mecs.kalyan@gmail.com>, mec18736004@matrusri.edu.in

R.4/2/UG/2021-22/UG2022007

Dear Sir/Madam,

This has reference to the subject proposal for IEI R&D Grant-in-aid Scheme.

We are pleased to inform you that the sanctioned amount of INR 28,000/- under IEI R&D Grant-in-Aid scheme against the subject project has been transferred through NEFT on 21/04/2022 as per Payee Details provided by you.

Please check with the appropriate authority of your institute and confirm receipt of the amount via mail.

With best regards,

Technical Department The Institution of Engineers (India) 8 Gokhale Road, Kolkata-700020 West Bengal, India.

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Hard copy will follow soon.

With best regards,

Mon, Apr 25, 2022 at 12:06 PM

### Website: www.ieindia.org

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2 attachments
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Terms & Conditions, R&D, IEI.pdf 443K

mecs Kalyan <mecs.kalyan@gmail.com> To: mechanical department <hodmech@matrusri.edu.in> Mon, Apr 25, 2022 at 3:20 PM

----- Forwarded message ------From: RESEARCH IEI <research@ieindia.org> Date: Mon, 25 Apr 2022 at 12:25 PM Subject: Project ID: UG2022007: Design and Fabrication of Soot Collector and Filtration of Soot To: <matrusri.principal@gmail.com> Cc: mecs Kalyan <mecs.kalyan@gmail.com>, <mec18736004@matrusri.edu.in>

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Website: www.ieindia.org

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	Dept.of Mech.Engg., Matrusri Engineering College

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Terms & Conditions, R&D, IEI.pdf

mecs Kalyan <mecs.kalyan@gmail.< th=""><th>com&gt;</th></mecs.kalyan@gmail.<>	com>
To: RESEARCH IEI <research@iein@< td=""><td>dia.org&gt;</td></research@iein@<>	dia.org>

Mon, Apr 25, 2022 at 10:20 PM

Dear sir/Madam

I am very much grateful that you sanctioned a research grant of RS 28000/- for our students project (Project ID:UG2022007) under IEI R&D Grant-in-Aid Scheme.

On Mon, 25 Apr 2022 at 12:25 PM, RESEARCH IEI <research@ieindia.org> wrote: R.4/2/UG/2021-22/UG2022007

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With best regards,

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Website: www.ieindia.org

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1	Vest Bengal, India.		
١	Vebsite: www.ieindia.org		
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	Regards,		
	Thank you and with Regards		
	Mr. A.Kalyan Charan M.Tech, M.I.E, (Ph.D)		
	Assistant Professor		
Dept.of Mech.Engg., Matrusri Engineering College			
	Thank you and with Regards		
Mr. A.Kalyan Charan			
	M.Tech, M.I.E, (Ph.D) Assistant Professor		
	Dept.of Mech.Engg.,		
	Matrusri Engineering College		
	ank you and with Regards r. A.Kalyan Charan		
1.1	h Analyan charan		

M.Tech, M.I.E, (Ph.D) Assistant Professor Dept.of Mech.Engg., Matrusri Engineering College

mecs Kalyan <mecs.kalyan@gmail.com> To: accounts@matrusri.edu.in Thu, May 5, 2022 at 3:23 PM

------Forwarded message ------From: **RESEARCH IEI** <research@ieindia.org> Date: Mon, 25 Apr 2022 at 12:25 PM Subject: Project ID: UG2022007: Design and Fabrication of Soot Collector and Filtration of Soot To: <matrusri.principal@gmail.com> Cc: mecs Kalyan <mecs.kalyan@gmail.com>, <mec18736004@matrusri.edu.in>

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On Wed, 12 Jan 2022 at 2:18 PM, mecs Kalyan <mecs.kalyan@gmail.com> wrote:

Respected Sir,

I (A.Kalyan Charan) working as an Assistant Professor in the department of Mechanical Engineering of Matrusri Engineering College. 3 Students of B.E.-Mechanical (IV/IV) are working on their final year project titled "**Design and Fabrication of Soot** Collector and Filtration of Soot".

- Y. V. S. Sphoorthy (500059/MECS/MC/00044)
- G. Deeksha (500059/MECS/MC/00067)
- N. Philomina (500059/MECS/MC/00045).

We are applying for a project proposal for the IEI R&D Grant-in-aid scheme.

All the required documents along with the Application form and students memberships Forms(SMIE Application Forms) with payment details are attached below. Looking forward to a positive response.

Regards,

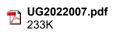
---

Thank you and with Regards Mr. A.Kalyan Charan M.Tech, M.I.E, (Ph.D) Assistant Professor Dept.of Mech.Engg., Matrusri Engineering College

Thank you and with Regards Mr. A.Kalyan Charan M.Tech, M.I.E, (Ph.D) Assistant Professor Thank you and with Regards Mr. A.Kalyan Charan M.Tech, M.I.E, (Ph.D) Assistant Professor Dept.of Mech.Engg., Matrusri Engineering College

### 2 attachments

\_\_\_



Terms & Conditions, R&D, IEI.pdf



# The Institution of Engineers (India)

A Scientific and Industrial Research Organisation (SIRO) Recognised by Government of India, Ministry of Science and Technology, Department of Scientific and Industrial Research

# Certificate of Project Completion

This is to certify that the UG project entitled "Design and Fabrication of Soot Collector and Filtration of Soot" bearing Project ID UG2022007 has been successfully carried out and completed by:

Yellapragada Venkata Sai Sphoorthy, SMIE Gottapu Deeksha, SMIE

Neeudu Philomina, SMIE

of

Matrusri Engineering College, Institutional Member of IEI

under the guidance of

Dr M V Kishore, FIE

Agir Kalyan Charan, MIE

during the FY 2021-22 through funding under IEI R&D Grant-in-Aid Scheme.

Secretary & ector General



उन्नत भारत अभियान ग्रामीण विकास एवं प्रौद्योगिकी केंद्र भारतीय प्रौद्योगिकी संस्थान, दिल्ली





### UNNAT BHARAT ABHIYAN CENTRE FOR RURAL DEVELOPMENT AND TECHNOLOGY INDIAN INSTITUTE OF TECHNOLOGY, DELHI Hauz Khas, New Delhi - 110016 Website: http://unnat.iitd.ac.in

Prof. Virendra K. Vijay Coordinator, UBA **IREDA Chair Professor & Head, CRDT** 

#### : +91-11-2659 1121/1157(O) Tel : +91-11-2659 1121 Fax Email: unnatbhacatabhiyaniitd(a gmail.com vkvijava relat.ind.ac.in,

Date: May 18, 2022

To

Ms. K Vijetha

Matrusri Engineering

College

Subject: Financial Sanction of Technical Intervention project (No. RP-03525G) under UBA 2.0

Dear Sir/ Ma'am,

1. This is to intimate you that Technology Intervention proposals under the category of "Technology Development": Project-No: RP-03525G entitled, "Rain Water Harvesting" submitted by you under the Unnat Bharat Abhiyan 2.0 Program. has been approved by Water Resource Management SEG and funded by the National Coordinating Institute UBA 2.0 (IIT Delhi).

2. You can use the grant for fulfilling the project objectives under the approved heads as per the proposal, using the established procedure of your institute and as per the UBA guidelines, within 6 months from the date of receiving of funds. Kindly note that the utilization of funds allowed under the head "General Contingency" should not be more than 10% of the total sanctioned fund.

Note: TA/ Honorarium is strictly not permitted in this project.

3. Any product/service developed under the sanctioned project must have UBA logo on it.

4. Detailed information of faculty in-charge and students/volunteers, who will be coordinating/ working under the sanctioned project, shall be shared in the project report submitted by your institution.

5. The project implementation location/site shall be selected in consideration with gram panchayat officials/ members.

6. Please take care that the position holders/Panchayat officials shall not be benefitted in person. Also, ensure that the project shall not be controversial in terms of beneficiaries. Selection of beneficiaries shall include the Marginalized communities or EWS Category as well.

7. Few videos and images shall be shared to the SEG Coordinator (for updating the status of the project), also the report shall contain good quality pictures of the project site/product/service and feedback from the villagers/beneficiaries.

8. For the projects related to training camps, awareness, rally etc., the in-charge shall share the material/posters/modules to be used in the villages, for the knowledge of SEG Coordinator and further comments, if any.

You are required to submit the completion report/5-6 photographs/3mins videos of the project within two months after the completion of the project to the competent authority of NCI-IIT Delhi, UBA2.0 cell. Without the submission of the completion report, the opportunity for funding of a new project will not be facilitated.

Prof. V. K. Vijay National Coordinator Unnat Bharat Abhiyan (UBA 2.0) National Coordinating Institute Indian Institute of Technology Delhi

			Amount	Transfer Da
S N	Account No	Account Holder Name	100000	4/12/2022
1	124511500000014	KUMARAGURU COLLEGE OF TECHNOLOGY	100000	4/12/2022
2	6769150834	MOHAMED SATHAK A J COLLEGE OF ENGINEERING	100000	4/12/2022
3	2110135000001594	MOTIWALA NATIONAL HOMOEOPATHIC MEDICAL COLLEC THE GANDHIGRAM RURAL INSTITUTE DEEMED TO BE UNIT	100000	4/12/2022
4	8500101002773	THE GANDHIGRAM RURAL INSTITUTE OLUMES THE PRINCIPAL SRI RAMAKRISHNA ENGINEERING COLLEGE	50000	4/12/2022
5	0206053000020166	THE PRINCIPAL SRI RAMAKRISHNA ENGINEERING	100000	4/12/2022
6	510909010034428	SSSMCRI HOSPITAL COLLECTION ACCOUNT	100000	
7	10884100000001	PRINCIPAL RYMEC BALLARI	100000	
8	7004033929	UBA ACGCET KARAIKUDI	100000	
9	01341131000040	JHULELAL INSTITUTE OF TECHNOLOGY	100000	
10	052110100039018	PRINCIPAL MATRUSRI ENGINEERING COLLEGE	50000	
11	843410110000242	CMRIT PRINCIPAL	100000	
12	1676338873	CAPT D V R FOUNDATION FOR HRD MOUNT ZION COLLEGE OF ENGINEERONG AND TECHNOL	( 100000	
13	128150050309132	MOUNT ZION COLLEGE OF ENGINEERONO AND	85000	
14	911010033371991	AMITY UNIVERSITY MADHYA PRADESH	100000	
15		AJK COLLEGE OF ARTS AND SCIENCE	100000	
16	335602011109001	KLU PROJECT FUND K E SOCIETYS RAJARAMBAPU INSTITUTE OF TECHNOLOGY	100000	
17	0116104000144698		10000	
18		PRINCIPAL	9800	
19	843410110000242	CMRIT PRINCIPAL	9500	
20	1970	RESEARCH AND CONSULTANCY NIT JAMSHEDPUR PROF RAM MEGHE COLLEGE OF ENGINEERING AND MAN	¢ 5000	
21	31680604712	PROF RAM MEGHE COLLEGE OF ENGINEERING NA	G 10000	
22	40717698605	THE PRINCIPAL SETHU INSTITUTE OF TECHNOLOGY	10000	0 4/12/2022
23		CHETTINAD ACADEMY OF RESEARCH AND EDUCATION	10000	0 4/12/2022
24	34576992086	CHETTINAD ACADEMY OF RESEARCH AND EDUCATION		

Chief Finance Officer.

h.)

Principal Matrusri Engineering Collega Saidabad, Hyderabad.



FORM GFR 12A

GENERAL FINANCIAL RULES 2017 Ministry of Finance Department of Expenditure



#### **GFR 12** – A [(See Rule 238 (1)]

### FORM OF UTILIZATION CERTIFICATE FOR AUTONOMOUS BODIES OF THE GRANTEE ORGANIZATION

#### UTILIZATION CERTIFICATE FOR THE YEAR 2022 in respect of recurring/non-recurring GRANTS-IN-AID/SALARIES/CREATION OF CAPITAL ASSETS

- 1. Name of the Scheme UNNAT BHARATH ABHIYAN
- 2. Whether recurring or non-recurring grants NON RECURRING
- 3. Grants position at the beginning of the Financial year
  - (i) Cash in Hand/Bank NIL
  - (ii) Unadjusted advances NIL
  - (iii) Total-NIL
- 4. Details of grants received, expenditure incurred and closing balances: (Actuals)

Unspent Balances ofGrants received years [figure as atSl. No. 3 (iii)]	Intere st Earne d thereo n	Interest deposited back to the Govern- ment	Grant received duringthe year		Total Avail able funds (1+2- 3+4)	Expenditure incurred	Closing Balances (5-6)	
1	2	3		4		. 5	6	7
			Sanctio nNo. (i)	Date (ii)	Amoun t (iii)			
0	0	0	RP- 0352G	12.4.20 22	1,00,000	1,00,00 0	109058	0

Component wise utilization of grants:

Grant-in-aid– General	Grant-in-aid– Salary	Grant-in-aid- creationof capital assets	Total
Annexure-I	NIL	NIL	NIL

Details of grants position at the end of the year

- (i) Cash in Hand/Bank- NIL
- (ii) Unadjusted Advances-NIL

(iii) Total-NIL

GENERAL FINANCIAL ROLES 2017 Ministry of Finance Department of Expenditure

- (iv) Certified that I have satisfied myself that the conditions on which grants were sanctioned have been duly fulfilled/are being fulfilled and that I have exercised following checks to see that the money has been actually utilized for the purpose for which it was sanctioned:
- (v) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained as prescribed in the relevant Act/Rules/Standing instructions (mention the Act/Rules) and have been duly audited by designated auditors. The figures depicted above tally with the audited figures mentioned in financial statements/accounts.
- (vi) There exist internal controls for safeguarding public funds/assets, watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (vii) To the best of our knowledge and belief, no transactions have been entered that are in violation of relevant Act/Rules/standing instructions and scheme guidelines.
- (viii) The responsibilities among the key functionaries for execution of the scheme have been assigned in clear terms and are not general in nature.
- (ix) The benefits were extended to the intended beneficiaries and only such areas/districts were covered where the scheme was intended to operate.
- (x) The expenditure on various components of the scheme was in the proportions authorized as per the scheme guidelines and terms and conditions of the grants-in-aid.
- (xi) It has been ensured that the physical and financial performance under UNNAT BHARATH
   (xi) It has been ensured that the physical and financial performance under UNNAT BHARATH
   ABHIYAN(name of the scheme has been according to the requirements, as prescribed in the guidelines issued by Govt. of India and the performance/targets achieved statement for the year to which the utilization of the fund resulted in outcomes given at Annexure I duly enclosed.
- (xii) The utilization of the fund resulted in outcomes given at Annexure II duly enclosed (to be formulated by the Ministry/Department concerned as per their requirements/specifications.)
- X(xiii) Details of various schemes executed by the agency through grants-in-aid received from the same Ministry or from other Ministries is enclosed at Annexure –II (to be formulated by the Ministry/Department concerned as per their requirements/specifications).

Date:7.12.2022 Place:Saidabad,Hyderabad.

ann

K.Radha Krishna Chief Finance Officer

(Strike out inapplicable terms)

Signature

NICE I

Dr. D. Hanumantha Rao Head of the Organization *Principal* Matrusri Engineering College Saidabad, Hyderabad.

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## MATRUSRI ENGINEERING COLLEGE 16-1-486, Saidabad, Hyderabad-500059 (Approved by AICTE, Affiliated to Osmania University)

## Unnat Bharath Abhiyan

### ANNEXURE-I

Matrusri Engineering College, Hyderabad has received a grant of Rs 1,00,000/- by UBA under the category of "Technology Development" :Project No :RP-03525G entitled," Rain Water Harvesting" which was approved by Water Resource Management SEG.

Rain water Harvesting pits have been constructed in Gaddamallaiahguda and Rangapur villages of Ibrahimpatnam ,Telangana which are adopted by Matrusri Engineering College, UBA Wing.

The Rain Water Harvesting Pit project has been successfully completed and the details of the grant spent on the project are as below

S.no	Item	Price (Rs)	Receiver
1.	Coarse aggregate (40mm &20mm)	21000	B.Raju Supplier
2.	Transportation of Coarse aggregate to Gaddamalliah guda & Rangapur	10200	Venkat Reddy, N.Srikanth Transporters
3.	Daily Labour,Gaddamalliahguda & Rangapur	2400	Srinu, Prasad Labourers
4	JCB for excavation work	9462	Lakshmi Ganapathi JCB works
5	Grill on top of RWH pit	15000	Sri Rama Engineering Works
6	Sand	9196	Rangaiah Supplier
7	Bricks Transportation	2000	Raju Transporter
8	Purchase of Bricks	7200	GangaRaju Supplier
9	Sand Transportation	2000	Venkat Reddy

	Total	109058	
			Labourer
17	Daily Labor	2400	Ramulu,Krishna,Rangaiah, Jyothi
1.7		2400	Supplier
16	Loose sand	1000	Venkat Reddy
			Transporter
15	Mud lifting & Transportation	6000	Anjaiah
			Vendor
14	Cement	2000	SK Javed
			Transporter
13	Transportation of grill	1000	Ramesh
			Labourer
12	Curing	2000	Jyothi &Ramulu
			Labourer
1	Pit Construction	15000	N.Shankar
0	Banner	1200	Indian ADS Digital
			Transporter

The grant received was Rs 1,00,000/- .The expenditure exceeded the grant amount

Matrusri Engineering College sponsored an amount of Rs 9058/- .

This is for your information

K.VIJETHA

Principal Investigator

Staderan

K.Radha Krishna

Chief Finance Officer Matrusri Engineering College

Dr. D.Hanumantha Rao

Head of the Organization Matrusri Engineering College

> Principal Matrusri Engineering Course Saldabad, Hyderabac

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### MATRUSRI ENGINEERING COLLEGE 16-1-486, Saidabad, Hyderabad-500059 (Approved by AICTE, Affiliated to Osmania University)



### Unnat Bharath Abhiyan

To

The SEG-Water Resource Management

IIT Delhi

Unnat Bharath Abhiyan

Sub: Submission of project completion report-: Project No :RP-03525G, Rain Water Harvesting- reg

Dear Sir,

The project 'Rain Water Harvesting' - Project No :RP-03525G,has been granted an amount of Rs 1,00,000/- for construction of Rain Water Harvesting pits at Gaddamalliahguda and Rangapur villages of Telangana.The project has been successfully completed and iam attaching the project completion report for your perusal.

Thanking you,

Yours sincerely,

K VIJETHA Viel

**Principal Investigator** 

Matrusri Engineering College



MATRUSRI ENGINEERING COLLEGE

16-1-486, Saidabad, Hyderabad-500059





(Approved by AICTE, Affiliated to Osmania University)

### Unnat Bharath Abhiyan

Matrusri Engineering College, Hyderabad has received a grant of Rs 1,00,000/- by UBA under the category of "Technology Development" :Project No :RP-03525G entitled," Rain Water Harvesting" which was approved by Water Resource Management SEG.

Rain water Harevsting pits have been constructed in Gaddamallaiahguda and Rangapur villages of Ibrahimpatnam, Telangana which are adopted by Matrusri Engineering College under UBA.

Mrs K.Vijetha ,Asst Prof is the PI of the project has coordinated the project and successfully completed the project. The students involved are

Cheguri vaishnavi - 1608-19-735-074

U Sai charan - 1608-19-735-080

K Srivani -1608-19-735-088

The site for Rain Water Harvesting Pits has been identified in coordination with the local Sarpanch of both the villages.

The Rain water harvesting pit dimensions are 2\*2\*2.5 mts in both Gaddamallaiahguda and Rangapur.

The project was completed according to the following steps.

1. The site of the pits was identified in consultation with local sarpanch.

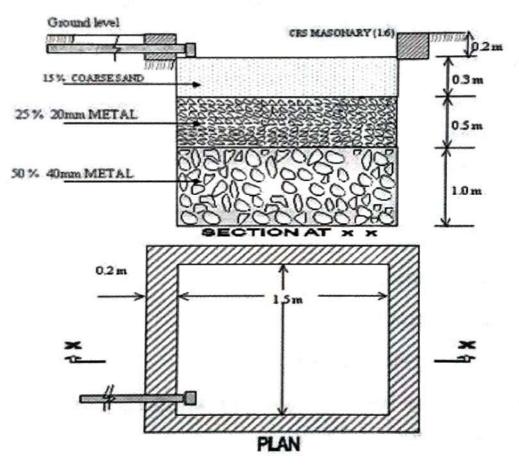
2.Excavation of pits is carried out according to the dimensions.

3.Coarse aggregate of 40mm is laid which is followed by 20mm and 10mm.

4.Sand was then laid on the top.

5.A grill was mounted on the top of Rain water Harvesting pits for safety purpose.

### RAIN WATER HARVESTING STRUCTURE TYPE - I



The Rain Water Harvesting Pit project has been successfully completed and the details of the grant spent on the project are:

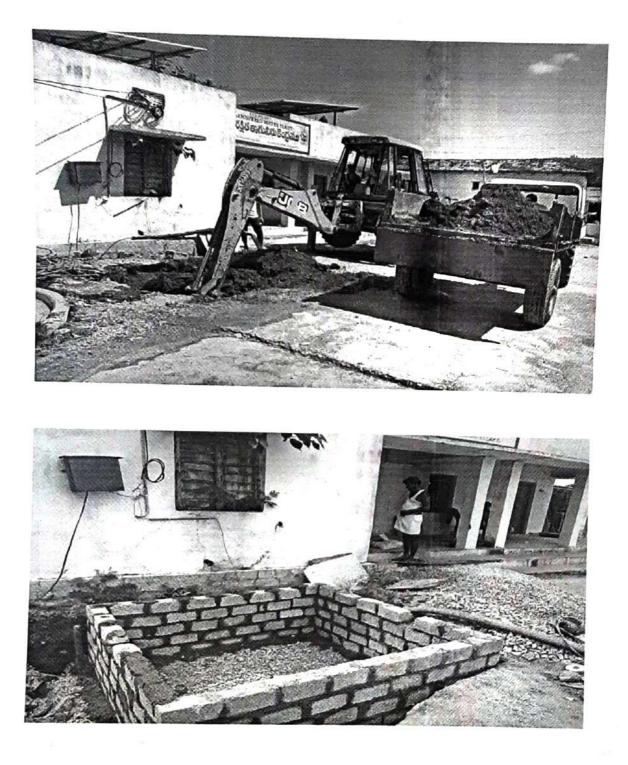
S.no	Item	Price	Receiver
1.	Coarse aggregate (40mm &20mm)	21000	B.Raju
2.	Transportation of Coarse aggregate to Gaddamalliah guda & Rangapur	10200	Venkat Reddy, N.Srikanth
3.	Daily labour Gaddamalliah guda&Rangapur	2400	Srinu, Prasad
4	JCB for excavation work	9462	Lakshmi Ganapathi JCB works
5	Grill on top of RWH pit	15000	Sri Rama Engineering Works
6	Sand	9196	Rangaiah
7	Bricks Transportatiion	2000	Raju
8	Purchase of Bricks	7200	GangaRaju
9	Sand Transportatiion	2000	Venkat Reddy
10	Banner	1200	Indian ADS Digital
11	Pit Construction	15000	N.Shankar
12	Curing	2000	Jyothi &Ramulu
13	Transportation of grill	1000	Ramesh
14	Cement	2000	SK Javed
15	Mud lifting & Transportation	6000	Anjaiah
16	Loose sand	1000	Venkat Reddy
17	Daily labour	2400	Ramulu,Krishna,Rangaiah, Jyothi
	Total	109058	

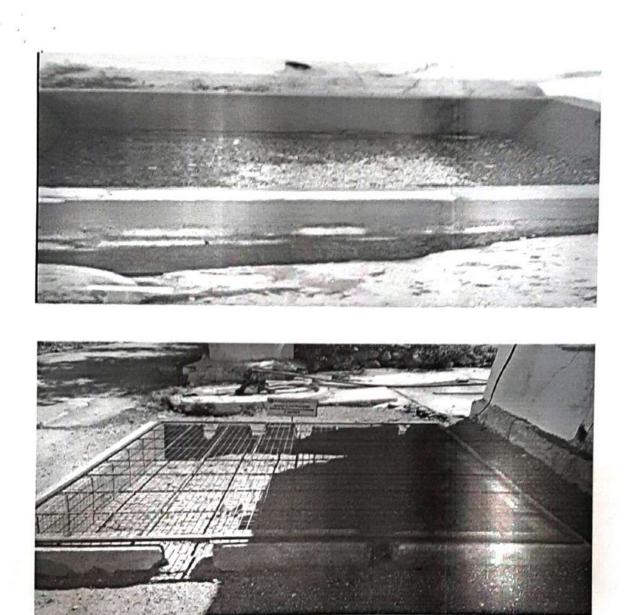
The grant received was Rs 1,00,000/- .The total expenditure exceeded the grant amount by an amount of Rs 9058/-

Matrusri Engineering College sponsored an amount of Rs 9058/- for the completion of the project.

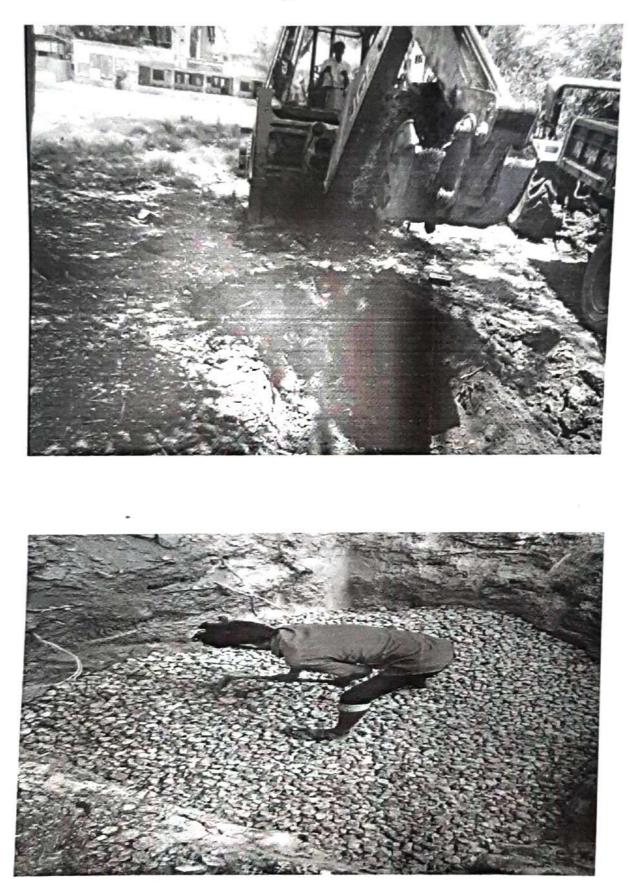
Few photographs of the project are attached for your perusal.

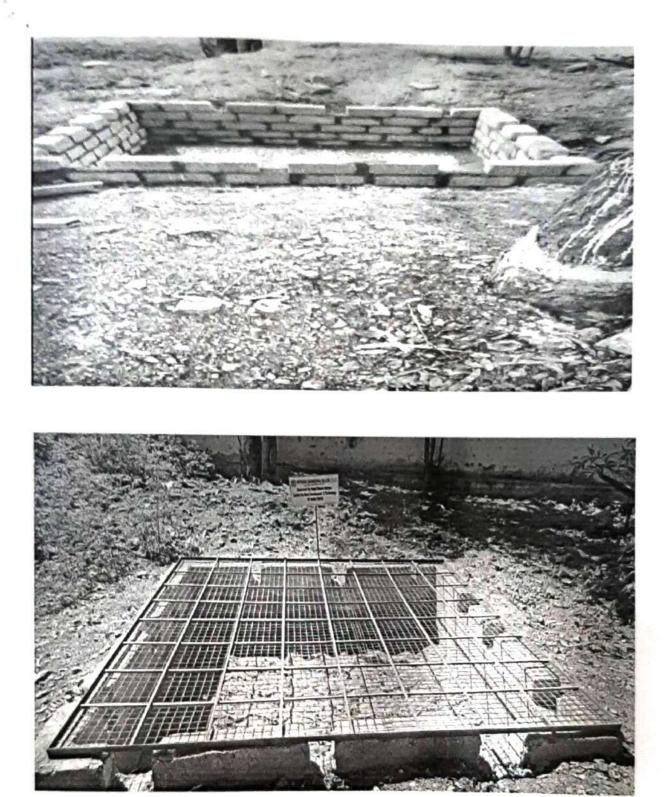
# RANGAPUR Village





## GADDAMALLAIHGUDA Village





W.L

Principal Matrusri Engineering Colleg Saldabad, Hyderabad.

10% HOD (ECE)

का कार्यालय विकास (सूक्ष्म, लघु एवं मध्यम उद्यम) सूक्ष्म, लघु एवं मध्यम उद्यम मेत्रालय (भारत सरकार)

নির্মাण भवन, सातवी संजिल, मौलावा आजाद रोइ, नई दिल्ली-110 108



OFFICE OF THE DEVELOPMENT COMMISSONER (MICRO, SMALL & MEDIUM ENTERPRISES) MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES GOVERNMENT OF INDIA

Nirman Bhawan, 7° Floor, Maulana Azad Road, New Delhi-110 108

## Ph. EPAX-23063800, 23063802, 23063803, 23063804, 23063805 & 23063806

F.No. 6(19)/Sanction to CNA/Incubation /2022-23

Dated : 17/08/2022

To.

The Accounts Officer, Pay & Accounts Office, Micro, Small & Medium Enterprises, New Delhi.

### SANCTION ORDER

### Subject: Sanction of payment of Rs. 20,57,00,000/- to CENTRAL TOOL ROOM AND TRAINING CENTRE (CTTC), Bhubaneswar, ODISHA towards implementation of Incubation Component of MSME Innovative Scheme for FY 2022-23:reg.

Sanction of the President of India is hereby conveyed to release of payment of Rs. 20,57,00,000/- (Rupees Twenty Crore Fifty Seven Lakh Only) under Grant-in-aid General for implementation of Incubation Component of MSME Innovative Scheme, a component of MSME Champions Scheme under Technology Upgradation and Quality Certification (CLCS-TUS), to Central Tool Room And Training Centre (CTTC), Bhubaneswar, Odisha as Central Nodal Agency (CNA) w.r.t. approval in 2<sup>nd</sup> PMAC held on dt. 22.06.2022 for the FY 2022-23. The details are as under:

(Rs. in lakh)

S. No.	BE of MSME Champions Scheme 2022-23	Amount approved in 2 <sup>nd</sup> PMAC	Amount Concurred by IFW	Scheme	in due course of	utilization of 60% amount of 1 <sup>st</sup> release as per scheme guidelines
1	5072.00	2963.676	2074.573	2057.0000	17.573	889.103

2. The details of ideas and the respective amount approved in 2<sup>nd</sup> PMAC and 70% of the amount as 1<sup>st</sup> installment as per scheme guidelines are as per Annexure-A

### 3. Roles and Responsibilities of CNA:

Central Tool Room And Training Centre (CTTC), Bhubaneswar, Odisha shall release the amount to the respective Host Institutes (HIs) as per the Annexure-A after submission/upload all requisite documents on MIS portal by the HIs concerned as per the scheme guidelines. The Grant-in-Aid will be regulated in accordance with the OM of Dept. of Expenditure, Ministry of Finance vide No. 1(18)/PFMS/FCD/2021 dated 9th March, 2022 (copy attached) regarding revised procedure for flow of funds under Central Sector Schemes and provisions contained in the Incubation Component of MSME Innovative Scheme. CTTC, Bhubaneswar, Odisha has been nominated as CNA vide letter No. 41(1)/Budget/MSME Champions/2021 dated 27.06.2022 for Incubation Component of MSME Innovative Scheme of MSME Champions Scheme (copy of the order enclosed for reference). CTTC, Bhubaneswar shall strictly follow the roles and responsibility as mentioned in the aforesaid O.M. The

भेग्रामा निर्देशक अन्तरा माहदीता भाषत सर्वनाय उठेरा of Inea म. लघु एवं मन्त्रम उटान मनाव्यम CEAN REAL CA Michally of Miclo, Small 3 M. Num Encorpress Ream arms in

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## Annexure-A

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	of 257 Ideas a Institute Name	State	Incubatee Name	Incubatee	proposed idea/ innovation	project cost (Rs. In lakh)	GOI assistanc e (Rs. In lakh)	ee share (Rs. In lakh)	be release as 1st Installmen (70% of GoI sanction amount
	Mahendra Engineering College	Tamil nadu	Sivakumar Ponmalai	Entrepren eurs/MSM E	Design and Fabrication of Automatic Poultry Feeder Cum Egg Collector Using Al	12.000	10.200	1.800	7.140
2	St.Josephs Institute of Technology	Tamil nadu	Gnana Kousalya C	Start Up /Employe d/Others	Passageway Devices of Fishing Vessels	12.500	10.625	1.875	7.438
3	Adi Shankara Institute of Engineering And Technologyk	Kerala	Manju Suresh	Start Up /Employe d/Others	Asegurar Vida (Low cost egg sorting machine for hatcheries)	30.000	12.750	17.250	8.925
4	Hindusthan College of Engineering and Technology	Tamil nadu	Jayanthi S	Entrepren eurs/MSM E	Smart Coconut Harvesting Device	12.500	10.625	1.875	7.438
5	Kasegaon Education SocietysRajara mbapu Institute of Technology		OmkarMu rlidharMir ajkar	Student	Advanced poultry raking and manure collection machine	5.800	5.800	0.000	4.060
6			Varsha Yogesh Bhole	Entrepren eurs/MSM E	AI/ML-based Fruit Quality Evaluation and Shelf-Life Prediction System through Contactless and Non- destructive Approach		12.750	2.250	8.925
7	Marathwada Accelerator for Growth and Incubation Council	Mahara r shtra	Gawande Yogesh Rajendra	Entrepren eurs/MSM E	Collector	20.000	12.750	7.250	8.925
1	karpagam college of engineering	Tamil nadu	Bharanidh aran S	Student	Fabrication of Bio-Based Films from Plant	15.000	15.000	0.000	10.500

25	Kuppam Engineering College	Andhra prades h	J Bhavyasri	Student	GreenDoctor A Reliable Food Toxic detector.	15.000	15.000	0.000	10.500
26	St Josephs College of Engineering	Tamil nadu	Sivaranjan i G	Student	Saffron cultivation using assorted modern	8.750	8.750	0.000	6.125
27	Adhiyamaan College of Engineering	Tamil nadu	M Sonali	Start Up /Employe d/Others	techniques Auto Irrigation, Soil Monitoring and Control for Better Crop Yield and Soil Quality	15.000	12.750	2.250	8.925
28	Francis Xavier Engineering College, Tirunelveli, Tamil Nadu	Tamil nadu	C Subaraj	Start Up /Employe d/Others	Sustainable Design and Development of Extraction with Palmyra Palm Pulp System	7.000	5.950	1.050	4.165
29 30	Bangalore Bioinnovation Centre	Karnat aka	Surabhi Vasudeva n	Start Up /Employe d/Others	Bio-degradable Drinking Straws from Agricultural waste	15.000	12.750	2.250	8.925
	Mar Ephraem College of Engineering and Technology	Tamil nadu	Anish John Paul M	Start Up /Employe d/Others	Coconut Leaf Midrib Extractor	15.000	12.750	2.250	8.925
31	GayatriVidyaP arishad College of Engineering	Andhra prades h	IlahiShaik	Start Up /Employe d/Others	Marine Macro algae - a liquid agro bio fertilizer Plant for commercializat ion.	12.000	10.200	1.800	7.140
2/	Matrusri	Telang	Shaikhase	Student	Seed Planting				
	Engineering College	ana	ena Begum	-	Robot	2.500	2.500	0.000	1.750
3	Bangalore Bioinnovation Centre	Karnat aka	Sudha Ramesh Karbari	Entrepren eurs/MSM E	ProSOIL- An Onsite Soil Testing Device	15.000	12.750	2.250	8.925
4	Kakatiya Institute of Technology And Science, Warangal	Telang ana	Bargu Raghu	Student	Design and Fabrication of Reaper And Binder Machine for Leafy Vegetables	15.000	15.000	0.000 RAKESH H	10.500

-9-

	/	/			-20-				
/	Engineering College	Telang ana	NagulShri bala	Start Up /Employe d/Others	Battery Health Management System	2.300	1.955	0.345	1.369
17	Padit Deendayal Petroleum University	Gujarat	Aditya Suraj Shukla	Entrepren eurs/MSM E	Solar Pavement Green Building Material from recycled Plastic Waste	15.000	12.750	2.250	8.925
	St Josephs College of Engineering	Tamil nadu	Venkatesh babu R	Student	Solarboat	14.000	14.000	0.000	9.800
19	IIS Deemed to be University	Rajasth an	Mahesh Chand Sharma	Start Up /Employe d/Others	Design and Development of Smart Self- Cleaning Solar Panel System	15.000	12.750	2.250	8.925
20	Hindusthan College of Engineering and Technology	Tamil nadu	Ras Mathew Yanose	Entrepren eurs/MSM E	Wind Turbine (Tail Guided Vertical Axis)	14.000	11.900	2.100	8.330
21	Sipna College of Engineering and Technology, Amravati	Mahara shtra	Sandeep Vinayakra o Rode	Start Up /Employe d/Others	Automatic switching system for energy transfer from solar to grid and vice versa	4.000	3.400	0.600	2.380
122	Padit Deendayal Petroleum University	Gujarat	ShaniCha ndrakant Pandya	Entrepren eurs/MSM E	Solar Powered Drone Charging Station for the Armed forces and delivery of Courier	15.000	12.750	2.250	8.925
123	Swami Keshvanand Institute of Technology, Management and Gramothan	Rajasth an	Bharat Modi	Start Up /Employe d/Others	Controller For Mitigating, the Temperature Effect in PV Array	15.000	12.750	2.250	8.925
124	Malaviya National Institute of Technology Jaipur	Rajasth an	Sita Ram Gupta	Entrepren eurs/MSM E	Wood Pyre for funerals by using cow- dung, agri waste & herbs - GaumayaSami dha	15.000   X	12.750	2.250	8.925

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INCUBATION SCHEME

### Government of India Ministry of Micro, Small & Medium Enterprises

#### Incubation

G Back 10 entries Show Search: 11 14 Incubatee 11 11 11 11 Upload Document S.No. name Status State District View Details Nagul Shribala 1 TELANGANA HYDERABAD **Document Forward** (ViewIdeaFinancialDetails.aspx? To CNA SID=193) **Document Forward** View Details HYDERABAD 2 shaik haseena TELANGANA (ViewIdeaFinancialDetails.aspx? To CNA begum SID=192)

Showing 1 to 2 of 2 entries

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Next

Previous

Website Content Managed by Ministry of Micro Small and Medium Enterprises Designed, Developed and Hosted by National Informatics Centre(NIC) (https://www.nic.in/).

https://my.msme.gov.in/inc/HI/IdeaHackathonFinanDocList.aspx

### **MSME IDEA HACKATHON 2022**

	Reference No. :- INC22ATS002822
1. Business Incubator Name	Dr.M.Sushanth Babu
2. Business Incubator Email Id	sushanth19.m@gmail.com
3. Business Incubator Mobile Number	9849299910
4. HI/BI State	TELANGANA
5. HI/BI Name	MATRUSRI ENGINEERING COLLEGE
6. Title of proposed idea/innovation	Battery Management System
7. Briefly explain newness/uniqueness of the innovation	Electric vehicles are set to be the dominant form of transportation in the near future and Lithium-based rechargeable battery packs have been widely adopted in them. Battery packs need to be constantly monitored and managed in order to maintain the safety, efficiency and reliability of the overall electric vehicle system. A battery management system consists of a battery fuel gauge, optimal charging algorithm, and cell/thermal balancing circuitry. It uses three non-invasive measurements from the battery system, such as battery impedance, battery capacity, state of charge, state of health, power fade, and remaining useful life. These estimates are important for the proper functioning of optimal charging algorithms, charge and thermal balancing strategies, and battery safety mechanisms.
8. Concept & Objective	A BMS can measure different figures such as current, voltage, temperature, and coulomb count. With these measurements the system can assess the health of the battery and readjust operations as needed to protect the pack. For instance, a drop in cell voltage at a given load can indicate an increase in internal resistance. This then can point toward dry-out, corrosion, plate separation, or other diagnoses. A sudden increase in the temperature of one cell could indicate the possibility of a thermal runaway event within the whole battery pack. The BMS could then stop the flow of energy and alert the user to a potential problem so that it can be contained before it gets out of control. State of charge (SoC) and state of health (SoH) are important indicators for assessing the usability and capabilities of a battery. Together the SoC and SoH provide a state of function, an overview of the battery and the pack's capabilities as a whole. The proposed BMS is Bluetooth enabled/WiFi enabled. The battery voltage/ current, temperature is monitored. There is a provision of High and Low voltage protection. A monitor to display the range of voltages. The system also estimates SoC and SoH. The power is limited at input/output for thermal and over voltage protection, control battery charging profile and when ever required the battery pack may be isolated from source and load.
9. Specify the potential areas of application in industry/market in brief	The potential areas of application are Industrial machines, Electric train traction batteries, forklifts, garbage compressors, , lifts and cranes, robots, shuttle robots, electric street sweepers. Advantages: • Ensure that the battery is in good working order. • Battery health is continuously monitored to avoid an explosion. • Extends the battery's life expectancy. • Displays the battery level

https://my.msme.gov.ln/inc/Hackathon/HackathonPrint.aspx?AppID=2822

View Details

10. Briefly provide the market potential of idea/innovation	Governments across the globe have implemented stringent regulations and policies, to reduce Greenhouse Gas (GHG) emissions. In addition, rise in awareness regarding harmful effects of petrol and diesel-fuelled vehicles on the environment has led to innovations in the automotive industry in the form of electric and hybrid vehicles. Moreover, growth in consumer demand to maximize vehicle efficiency and minimize fuel costs have led to consistent technological advancements in electric and hybrid electric vehicles. The need to optimize utilization of battery storage capacity in electric vehicles and to prevent dangers caused by overheating of battery in electric and hybrid electric vehicles, manufacturers have started to integrate battery management systems in vehicles. Batteries in electric vehicles can be used only in specified conditions, therefore, battery management system (BMS) is necessary to monitor battery state and ensure safety of operations.
11. Uploaded Proposal	View/Download

Six

212



### Fwd: Approval of ideas/ proposals submitted by your Institute under the Incubation Component of MSME Innovative Scheme( Incubation, Design & IPR) of MSME Champion Scheme for Gol assistance-reg.

3 messages

M Gmail

25 July 2022 at 07:55

principal mecs <principal@matrusri.edu.in> To: krishna medaraboina <mkvar2016@gmail.com>, mechanical department <hodmech@matrusri.edu.in>

Str. Please take a print and discuss in person on tuesday Reards



Dr. D. Hanumantha Rao M.Tech, Ph.D., FIE PRINCIPAL Matrusri Englneering College Saidabad, Hyderabad- 59 Accredited with A+ grade by NAAC Course Accredited by NBA: BE (CivII, CSE, ECE, EEE & Mech,)

From: MSME Innovative Scheme <helpline-msme@gov.in>
Date: Sat, Jul 23, 2022 at 8:37 PM
Subject: Approval of ideas/ proposals submitted by your Institute under the Incubation Component of MSME Innovative Scheme(
Incubation, Design & IPR) of MSME Champion Scheme for Gol assistance-reg.
To: <principal@matrusri.edu.in>

विकास आयुक्त का कार्यालय (सूक्ष्म, लघु एवं मध्यम उद्यम) यूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय

(भारत सरकार) जिल्लाम अवन, स्वतनी मंदिल, मोलाम आजद रोड़, मई दिल्ली-110 108



OFFICE OF THE DEVELOPMENT COMMISSONER (MICRO, SMALL & MEDIUM ENTERPRISES) MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES GOVERNMENT OF INDIA

> Nirman Bhawan, 7° Floor, Maulana Azad Road, New Delhi-119 185

#### Ph. EPAX-23063800, 23063802, 23063803, 23063804, 23063805 & 23063806

File No. : 17(2)/ MSME Innovative/PMAC/2021-22

Date : 23-07-2022

To,

### MATRUSRI ENGINEERING COLLEGE

Subject: Approval of ideas/ proposals submitted by your institute under the incubation Component of MSME Innovativ Scheme(Incubation, Design & IPR) of MSME Champion Scheme for Gol assistance-reg., I am directed to inform you that the idea(s) / proposals received from your institute under the above scheme were considered b the PMAC meeting held on 22/06/2022 The committee has approved this idea(s). The details of approved idea / proposal are a under.

SI.	Name of incubatee and proposed idea of innovation	Project cost		
-	Nagul Shribala ,   Battery Management System	2.300	1.955	0.345

Further, in order to release Gol grant, It is requested to go through instructions/ guidelines on Revised procedure for flow of funds under Central Sector Schemes O.M from M/o Finance, D/o Exp. vide no. 1(18)/PFMS/FCD/202dated 9.03.2022 carefully and nomination of CTTC Bhubaneswar as CNA vide letter dated No. 41(1)/Budget/MSME Champions/2021 dated 27.06.2022 for Model -2 for release of funds to His (For details Click here )

1, CTTC Bhubaneswar has opened Saving A/c in SBI for release of fund to HIs as CNA Account. The contact officer of CTTC, Bhubaneswar is Shri Skrout, 9437965670, skrout@ctlc.gov.in

2. All His have to inform CTTC, Bhubaneswar about the name of SBI Branch and code, where the Sub Agency (SA) account of Hi is to be opened.

3. CTTC, Bhubaneswar will integrate it with CNA account through SBI Banks help

4. HI will open new Zero Balance Current A/c in SBI in the branch shared with CTTC, Bhubaneswar and link with the CNA account.

5. HI shall share the mandate form with CTTC, Bhubaneswar and O/o DC (MSME) through email- schand@dcmsme.gov.in with a copy to ramakrishnan.v@gov.in

Yours faithfully. (V. Ramakrishnan Dy. Director

This is an automated message. Do not reply.

#### Dr. Krishna Medaraboina <mkvar2016@gmail.com> To: principal mecs <principal@matrusri.edu.in>

25 July 2022 at 13:01

Good afternoon sir

I will come with print out tomorrow sir. [Ouoted text hidden]

Dr. Krishna Medarabolna <mkvar2016@gmail.com> To: mkrishna matrusri <mkrishna@matrusri.edu.in>

(Quoted text hidden)

91

26 July 2022 at 10:23

List of 257 Idea Proposals approved during 2<sup>nd</sup> PMAC Meeting of MSME Innovative Scheme held on 22.06.2022 & Announced by Hon'ble Prime Minister on the occasion of International MSME Day at Vigyan Bhawan on 30<sup>th</sup> June, 2022

	S. No	Ref. No.	Institute Name	State	Incubatee Name	Incubatee Category	Title of proposed idea/ innovation	Sector
	1	IDEATN 004986	AARUPADAI VEEDU INSTITUE OF TECHNOLOGY, a constituent college of Vinayaka Missions Research Foundation ,Deemed to be University	Tamil Nadu	Vijay Jayaraman	Start Up /Employed/Others	Efficient Power Management System by Implementing Solid State Transformer	Power
	2	IDEAKR 004381	ACHARYA INSTITUTE OF TECHNOLOGY	Karnataka	Mithun Ambalal Shah	Entrepreneurs/MSME	Flushable and Biodegradable Sanitary pads	Healthcare
	3	IDEAGJ 003662	Adani Institute of Infrastructure Engineering	Gujarat	SaxenaTushar	Entrepreneurs/MSME	One-Click Sprinkler technology to control fire Sprinkler manually through AUTOVOLTZ-Softwar- Console from any place	Service
	4	IDEATN 003621	Adhiyamaan College of Engineering	Tamil Nadu	M SONALI	Start Up /Employed/Others	Auto Irrigation, Soil Monitoring and Control for Better Crop Yield and Soil Quality	Agriculture
-	5	IDEATN 003503	Adhiyamaan College of Engineering	Tamil Nadu	VADHIRAJAN ACHUTHAN	Start Up /Employed/Others	Cloud Based distance Relay with Fault location Mapping on Google Map	Power
	6	IDEATN 003857	Adhiyamaan College of Engineering	Tamil Nadu	BAALADHINES H A	Start Up /Employed/Others	Solar Membrane Distillation -Solar based Membrane distillation works on the principle of temperature and vapor pressure difference i.e, Membrane distillation is a thermal driven separation process.	Misc.
	-7-	IDEATN 003657	Adhiyamaan College of Engineering	Tamil Nadu	G YOGESH	Start Up /Employed/Others	Smart Sensing Technique for Health Monitoring of Existing Bridges	Misc.
	8	IDEAKL 004510	ADI SHANKARA INSTITUTE OF ENGINEERING AND TECHNOLOGYK	Kerala	Manju Suresh	Start Up /Employed/Others	Asegurar Vida (Low cost egg sorting machine for hatcheries)	Agriculture

S. No	Ref. No.	Institute Name	State	Incubatee Name	Incubatee Category	Title of proposed idea/ innovation	Sector
154	IDEAM H004817	Marathwada Accelerator for Growth and Incubation Council	Maharashtra	DIXIT MIHIR PARESHKUMA R	Entrepreneurs/MSME	Infrared Pyrolysis Process- converts any type of solid waste directly to non toxic air.	Aisc.
	THE LEG	MATRUSRI ENGINEERING	Telangana	Shaikhaseena	Student	Seed Planting Robot	Agriculture
155	IDEATS 003624	COLLEGE	Telaligana	Begum			Deuter
156	IDEATS 003551	MATRUSRI ENGINEERING COLLEGE	Telangana	NagulShribala	Start Up /Employed/Others	Battery Health Management System	Power
157	IDEAUP 003024	Meerut Institute of Engineering and Technology	Uttar Pradesh	Shalini Rana	Student	Biodegradable Diapers with Safe Wetness Indicator	Healthcare
158	IDEAHR 003066	MM College of Pharmacy	Haryana	Neerabatra	Start Up /Employed/Others	An Automated Car Window Opening System on Detection of Carbon Monoxide	Misc.
159	IDEATN 004507	NANDHA ENGINEERING COLLEGE	Tamil Nadu	Krishna Gandhi Pachiappan	Start Up /Employed/Others	Smart Solar Waste Segregation and Management System using Internet of Things	Misc.
160	IDEATN 004095	NATIONAL ENGINEERING COLLEGE	Tamil Nadu	A Saravanaselvan	Start Up /Employed/Others	An Intelligent Device to classify organic and non organic fruit and vegetable items using Non - Destructive Infrared Thermography Technique	Misc.
161	IDEAJH	National Institute of	Jharkhand	Kamal kant	Student	Smart adapter for wi-fi routers with storage capacity	Power
162	003176 IDEAJH	Technology Jamshedpur National Institute of	Jharkhand	Deepak Kumar	Start Up /Employed/Others	Automated Portable Ball Milling Machine for Nanoparticles	Power
	003285	Technology Jamshedpur National Institute of	Jharkhand	BasantaBhowmik	Start Up	A prototype of titania nanostructured based room	Misc.
163 IDEAJH 003262		Technology Jamshedpur			/Employed/Others	temperature alcohol sensor	
164	IDEAJK 004204	National Institute of Technology Srinagar	Jammu and kashmir	DineshkumarRaje ndran	Start Up /Employed/Others	buoyancy force with the object designed to keep the cycle floating over the water.	ct Service

ATG LUDE



# **Matrusri Engineering College**

(Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Snidabad, Hyderabad-500059, Ph: 040-24072764



Department of Computer Science and Engineering NATIONAL BOARD

Accredited by NBA

website: www.matrusri.edu.in

email: hodcse@matrusri.edu.in

10/01/2022

### To The HOD, Department of CSE Matrusri Engineering College

Sub: Request for grant of funds for further development of our product SfUIT.

Respected Sir,

We,

Mohammed Rehan Mohiuddin	- 1608-18-733-101
T Rohit Reddy	- 1608-18-733-118
Abhishek Kumar Jena	- 1608-18-733-119
Mohammed Abdullah Omer	- 1608-18-733-087
C Prateek	- 1608-18-73-079 are the students of CSE
Department, Class: BE IV/IV.	

We have developed a product, **SfUIT**- Smart fabric Using IoT, a health monitoring wearable with features like Continuous Pulse monitoring, Oxygen Level, Body Temperature and ECG that make our product Smarter than any regular wearable. A user who wears our product could check his/her vitals in a Mobile App/ Web App which is also connected to a cloud data base which store these values. The interface, cloud connectivity and backend data processing is also done by us.

I am glad to inform you that we were among the top 5 college student teams to exhibit our product "SfUIT" at the Assistive Technology Exhibition 2021 held on 4<sup>th</sup> January 2022 at Muffakham Jah College Grounds and won **SecondPrize** and were awarded a **cash prize of Rs 1,50,000/-**. The exhibition was organized in collaboration with the Department of Disabled & Senior Citizens Welfare by the Govt of Telangana.

Not only this event, wealso participated in different National level events organized by Scaler, Devfolio namely HackX and Hack O Uplift, where we were ranked as one of the top 20 and top 30 teams among 200 other participants. Ao  $\int G - \int G - \int$ 

The cost incurred till now to build the product, SfUITis**Rs**, **41,601**/<del>)</del>. We kindly request you to grant the funds for the cost incurred.

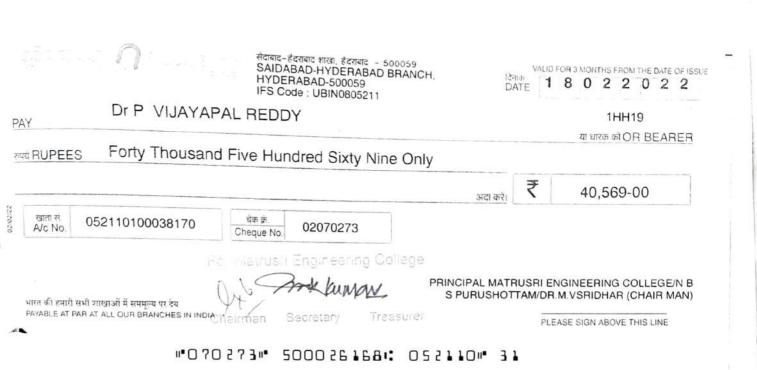
Please find all the attachments attached alongside this letter.

Mitos ist colyzon had chairman, MES

Mohammed Rehan Mohiuddin Team Leader Roll No: 1608-18-733-101

me constant opticities

94





# Matrusri Engineering College

(Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764



Department of Computer Science and Engineering

Accredited by NBA

website: www.matrusri.edu.in

email: hodese@matrusri.edu.in

25/03/2022

Pg 100 >

To The Principal, Matrusri Engineering College, Saidabad, Hyderabad

Sub: Request for release of funds transferred by TSIC Foundation

Respected Sir,

The following are the details of the project for which funds have been granted by TSIC foundation

Project Title	SfUIT- Smart Fabric using IoT			
Category Continuous health monitoring device Differently abled people.				
Proposed by	Department of CSE			
Name of the Principal Investigator	Mrs. C Hari Priyanka, Assistant Professor			
Contact Details of PI	9701828245, haripriya.ksk@matrusri.edu.in			
Objectives of the Project	<ol> <li>Develop a continuous real time health monitoring wearable that Monitors user's health profile. Features like Continuous Pulse monitoring, Oxygen Level, Body Temperature, ECG make our product Smarter than any regular wearable.</li> <li>Develop a GUI that could allow a user to check his/her vitals as a Mobile App/ Web App.</li> <li>Make the product is highly customizable designed as per customer requirement. Now available in following versions which have to be refined         <ul> <li>a) Ring</li> <li>b) Jacket</li> <li>c) Shirt</li> <li>d) Wrist Band</li> <li>e) Arm Band</li> </ul> </li> <li>In case of any emergency (unusual situations), SfUIT makes sure to notify the same to respective family members/ caretaker and to nearest local health care centers.</li> </ol>			
Fund granted by	Telangana State Innovation Cell			



# Matrusri Engineering College

(Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059. Ph: 040-24072764



Department of Computer Science and Engineering NAT

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website: www.matrusri.edu.in

Total fund granted	Rs 1,50,000/-
Number of Milestones	4
Amount released for two milestones	Rs 75,000/-

The following are the milestones agreed and their cost break up

Milestones	Name of the milestone	Estimated expenditure	
Milestone I	Design custom PCB to embedded into the final product	Rs 50,000/-	
Milestone II	Product design	Rs 25,000/-	

email: hodcse@matrusri.edu.in

Mrs. C Hari Priyanka Project coordinator Assistant Professor, CSE

Dr P Vijay Pal Reddy

HOD, CSE



Accounts Venidy Garringe Smills by chy: 1.26/3/2:

Revuesty approved to release the directs. ---. N. L. . [3/22.

mon, MES

chy No: 070356, Dt : 3. \$/03/2022, 75,000/

68 2 22



# Matrusri Engineering College

(Approved by AICTE, Affiliated to Osmania University) # 16-1-486, Saidabad, Hyderabad-500059, Ph: 040-24072764

Department of Computer Science and Engineering Nation

Accredited by NBA email: hodcse@matrusri.edu.in

#### website: www.matrusri.edu.in

29-03-2022

ACCREDITATION

To The Principal, Matrusri Engineering College Saidabad Hyderabad

Sub: Request to release funds

Respected Sir,

The following are the account details of the team members of SfUIT project.

Kindly transfer funds (Rs 75,000) released by TSIC foundation to the account details attached with this letter.

Dr P Vijay Pal Reddy HOD, CSE

1

C Hari Priyanka Product Coordinator Assistant Professor, CSE

23/03/2022	UPIAB/208225572638 /CR/ANJANEYU/SBIN /8501826264@pay	S99383990	10.18		55,000.00	37,01,839.05
23/03/2022	C3081	AA355654	-		40,000.00	37,41,839.05
. 23/03/2022	NEFT:TSIC FOUNDATION N082221884636771	S2082658	Sender No:N0822218846 36771		Z <del>5,</del> 000.00	38,16,839.05
23/03/2022	NEFT:PAY AND ACCOUNTS OFFICE (MAIN BRANC RBI083227	S6563696	Sender No:RB108322720 90766	Alleria	32,000.00	38,48,839.05
24/03/2022	Cash Trans Chrg for Amt:70000.000000	S14000742	· Contraction	82,60		38,48,756.45

Alc NO 38017

Page No10

For any queries, please get in touch with us on our 24 x 7 customer service help line no.1800 2222 44 #. Customers outside India need to dial +91 80 2530 2510. This is a system generated output and requires no signature. Customers are requested to immediately notify the Bank of any discrepancy in the statement TO AVAIL OUR LOAN PRODUCTS GIVE MISSED CALL AT 9619333333 OR SMS <ULOAN> TO 56161

e. 1. 1

APROR Account Details Name: Mr ABHISHEK KUMAR JENA Account No: 38648323571 Amount to be transforred Bank: State Bank of India Branch: Burkas R 15,000/-Branch code: 20356 IFSC: SBIN0020356 Amt. to be transferred Name: CHOUDAVARPU PRATEEK Account No: 52642191011545 B15,000/-Bank: Punjab National Bank Branch: HYDERABAD-BANJARA HILLS IFSC: PUNB0526410 Amt. to be transferred. Name:Mohd Rehan Mohiuddin Account No: 38648635230 Bar1. State Bank Of India R 15,000/-F ·Edi Bazaar B. . code:-8026 IFSC:SBIN0008026 Amt. to be transferred Name: Mohd Abdullah Omer Account No: 50100164592313 Bank: HDFC Bank Ru 15,000/-Branch: Lakdikapul IFSC: HDFC0000021 Amt. to be transferred Name: TALA ROHIT REDDY Account No: 06440100019448 No 15,000/-Bank: Bank of Baroda Branch: Barkatpura IFSC PARBOBARKAT (fifth character is zero)

Certari Priyanka) Project Co-ordinator.



Matrusri Engineering College Saidabad, Hyderabad.

The second secon	IFS Code : UBIN0805211	বিশাঞ্চ DATE 3	1 0 3 2 0 2 2 1LZ88 лыха ФОР ВЕАРЕР
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खाता सं. A/c No. 052110100038170	चेक क्र. Cheque No. 02070356		
	For Matrusri Engineering College	IATRUSRI	ENGINEERING COLLEGE/N
भारत की हमारी सभी शाखाओं में सममूल्य पर देव PAYABLE AT PAR AT ALL OUR BRANCHES IN INDIA	S PURUSI	HOTTAM/D	R.M.VSRIDHAR (CHAIR MAN

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