



NAAC 3.1. SUMMARY

- 3.1.1 Grants for research projects sponsored by the government/non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution during the last five years (3)
- 3.1.3 Number of research projects per teacher funded by government and non-government agencies during the last five years (For UG Colleges weightage of this metric will be 7) (4)

S.No	Title	Page.No	
1	Energy Audit	1	
2	PMSG based seashore windmill with automatic output voltage control	8	
3	CFD analysis of catalytic converter to reduce particulate matter and achieve limited back pressure in diesel engine	11	
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5	Testing of Material for Road Construction	19	
6	Low power consumption of submersible pumps	22	
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12	Closed Loop control of Three phase Induction		
13	50		

Principal

PRINCIPAL

JCT College of Engineering & Technology
PICHANUR, Colmbatore - 641 105.

JCT College of Engineering and Technology

(Approved by AICTE, New Dolhi, Affiliated to Anna University, Chennai Accredited by NAAC & Accredited by NBA for Petrochemical, Mechanical, EEE & CSE.)

Pichanur, Coimbatore - 641 105 Tamil Nadu INDIA Phone; +91 422 2636900 Fax: +91 422 2636901 Email: info@jct.ac.in www.jct.ac.in



Vanitha Engineering

20/128,Kumaran Naga Eachanari, Coimbatore 641024 Ph.: 984258825.

Ref. No. VE/098/2018

To Date: 14.06.2018

The Head of the Department,

Department of Electrical and Electronics Engineering,

JCT College of Engineering and Technology,

Coimbatore -641105

Dear Sir,

Sub: Requisition for Consultancy Work - Reg.

We are operating CNC Machines for past few years. For past few months Power Consumption charges increased drastically. Many of friends recommended me about Energy Auditing. So I kindly request you to help me identify the problem by conducting an Energy Audit in my Company.

Please kindly arrange your best men and also quote the amount for the Consultancy Work.

Thanking you

Yours faithfully

(S.Dominic Albert)
Propreitor





Ref: JCTCET/EEE/R&D/02

25.06.2018

To

The Proprietor, Vanitha Engineering, 20/128, Kumaran Nagar, Eachanari, Coimbatore - 641024.

Dear Sir,

Sub: Acceptance for Consultancy Work - Reg.

Ref: VE/098/2018 dated 14.06.2018

Warm greetings from JCT College of Engineering and Technology

We are happy to inform that accepting your consultancy work to conduct an Energy Audit in your company. We will audit the entire Electrical component which you have installed on your company and we will provide complete detail on the Energy Consumptions. We also give suggestion on how to improve the Energy efficiency. For the above work mentioned we quote the amount sum of Rs.15, 000 and our professionals will visit your company on your appointed date.

Thanking you

Dr. K. GEETHA, M.F.

Professor and Head Dept. of Electrical and Electrical as Enga. JCT College of Engineering and Technology, Colmbatore - 041 186.





Ref: JCTCET/EEE/R&D/02

23.07.2018

To

The Proprietor, Vanitha Engineering, 20/128, Kumaran Nagar, Eachanari, Coimbatore - 641024.

Dear Sir,

Sub: Results of Pre-Audit - Reg.

Ref: VE/098/2018 dated 14.06.2018

Warm greetings from JCT College of Engineering and Technology

The Pre-Audit on your company Completed successfully. Herewith this report I also attached the Pre-Audit Report. Please go through the Report and we divided the Components according to their functions. Once you send the Confirmation letter, we will proceed for the Detailed Auditing.

Thanking you

Yours faithfully

Dr. K. GEETHA, N Professor and Head, Dept. of Electrical and Electronics Engg. JCT College of Engineering and Technology,

Coimbatore - 641 105.

JCT College of Engineering and Technology



Vanitha Engineering

20/128 Kumaran Nagar Eachanari, Coimbatore 641024

Ph. : 9842588255

Ref. No. VE/106/2018

To

Date: 26.07.2018

The Head of the Department,

Department of Electrical and Electronics Engineering,

JCT College of Engineering and Technology,

Coimbatore -641105

Dear Sir,

Sub: Confirmation for Detailed Energy Audit - Reg.

Greetings from Vanitha Engineering. We are satisfied about the Pre-Audit Report. We confirm you to conduct detailed Energy Audit. So contact through phone to confirm the convenient date.

Thanking you

Yours faithfully

(S.Dominic Albert) **Propreitor**





Ref: JCTCET/EEE/R&D/02

10.08.2018

To

The Proprietor, Vanitha Engineering, 20/128, Kumaran Nagar, Eachanari, Coimbatore – 641024.

Dear Sir,

Sub: Completion of Consultancy Work - Reg.

Ref: VE/106/2018 dated 26.07.2018

Warm greetings from JCT College of Engineering and Technology

We are happy inform that the Energy auditing on your Campus has done successfully. I hereby submit the Detailed Energy Auditing Report.

We have considered all the Electrical utilization and the report include the problem for Energy loss and also about the actions to be taken for the improvement of Energy efficiency.

We thank you for all your support and the opportunity you have given us.

Thanking you

Yours faithfull

Dr. K. GEETHA, HODIEE

Profescor and Head,

Dept. of Electrical and Liectronics Engg.

JCT College of Engineering and Technology,

Colmbutors - 541 105.



Vanitha Engineering

20/128, Kumaran Nagar Eachanari, Coimbatore - 641024.

CASH BILL

Bill.No. VE/B/023

Date: 14/8/2019

To. Jer College of Ergy & Tech, Combater

S.No	PARTICULARS	RATE	AMOUNT
1	Eregy Andrit Consultancy work		15,000
	TOTAL		15,000

ENERGY AUDIT REPORT VANITHA ENGINEERING

(Audited by Dr.M.Jayaprakash and Dr.T.Anbalagan, JCTCET.)

Introduction

This Project is the vision to make the company energy efficient. It is a fact that CNC Machines uses a huge amount of energy and it is also very obvious that we waste quite a sizable chunk of it. Vanitha Engineering energy bill keeps up around INR 17-24 Lakhs per year. This amount is huge and thus naturally attracts attention when we understand that quite a lot of energy is being wasted, which in turn would mean that huge amount of financial resources are being wasted. Making the Company area energy efficient will not only help the company reduce its expenses but also helps to fulfil the moral responsibility of not wasting this precious resource, which is scarcely available to rest of the people of the country.

Energy Audit Objective

This Energy Audit was conducted in two phases

- Phase 1 Pre-Audit
- Phase 2 Detailed Audit

Pre-Audit:

 To acquire and analyse data and finding the energy consumption pattern of these facilities.

Detailed Audit:

- To calculate the wastage pattern based on the results of the first objective.
- To find and implement solutions that are acceptable and feasible

ICT College of Engineering nd Tech	nology	rihara Pramesh M CF	1E-014 The f	Principal College of Engineer	ing nd 7500 h		3
Dr S Kavitha Associate Professor Dept. of Petrochemical JCT College of Engineering ad Technology Coimbatore-641105 Ms J. Privasharshini Assistant Professor Dept. of EEE JCT College of Engineering ad Technology Pichanur Coimbatore - 641	Cfd Analysis of catalytic Haconverter to reduce particulate matter and Fachieve limited back presure in diesel engine PMSG Based seashore windmill with attuornationally output voltage control	P.Anas Ibn Yousuf	Tes Co	hnology imbatore-641105 The Principal ICT College of E Technology Pichanur Coimbatore - 6	กฐเกอะทำรู กษ	7500-	

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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(Govt. of Tamilnadu)

DOTE Campus, Chennal - 600 02

Ph: 044- 22301428 Fax: 044- 22301552

www.tanscst.nic.in E-mail:enquiry.tanscst@nic.in : ms.tanscst@nic.in

Dr.R.SRINIVASAN, M.Sc., Ph.D.,F.I.C.S., M.A.C.S.(USA)., Member Secretary

Ref: TNSCST/SPS/AR/2018-2019/

24.06.2019

To:

Ms.J.Priyadharshini Assistant Professor Dept. of EEE

JCT College of Engineering nd Technology

Pichanur

Coimbatore - 641 105

Sir/Madam,

Sub:

TNSCST Programme 'Student Project Scheme' – Conduct of Seminar–Cum-Exhibition – Invitation extended – reg.

With reference to the above, the Seminar-cum-Exhibition has been arranged on 19th and 20th JULY 2019 at Kalasalingam Academy of Education and Research (Kalasalingam University), Krishnankoil, Srivilliputhur-626126. I request you to kindly ensure that one of the student who did the project must come to Krishnankoil and present the findings of the project in the seminar. Models pertaining to the project can be exhibited and share your innovative ideas with others.

The following points may please be noted:

- The student must report to coordinator Dr.R.Ramalakshmi (9486488642 & rama@klu.ac.in) & Dr. N. Nallamuthu (8220471458 & nnallamuthu@gmail.com) Kalasalingam Academy of Education and Research, Krishnankoil, Srivilliputhur-626126.
- Accommodation and food will be provided from the evening of 18th July 2019 till the evening 20th July 2019 in the college hostel.
- Only one student will be provided boarding and lodging in the College hostel. No charges need to be paid. Second sleeper class train fare / Actual Bus (Govt. bus) fare (Up & Down) from the Place of study to Kalasalingam Academy of Education and Research, Srivilliputhur will be provided for one student of each project.
- The student must be present on both the days (i.e) 19th and 20Th JULY 2019.
- The student should make the oral presentation within the allotted time of 10 minutes and LCD Projectors will be provided.
- Request for specific requirement for display of project must be made in advance to the Coordinator.
- Certificate will be given to those who have done the project.
- Prizes will be given to the best presentation and best exhibit in each discipline.

Those who have not submitted the Utilization Certificate so far, kindly arrange to send the same immediately without any further delay.

I request you to co-operate in making this seminar-cum-exhibition a successful academic event.

Thanking you,

Yours faithfully,

Member Secretary

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(Govt. of Tamilnadu)

DOTE Campus, Chennai - 600 02 Ph: 044- 22301428 Fax: 044- 22301552

www.tanscst.nic.in

E-mail:enquiry.tanscst@nic.in : ms.tanscst@nic.in

Dr.R.SRINIVASAN, M.Sc., Ph.D., F.I.C.S., M.A.C.S.(USA)... Member Secretary

Ref: TNSCST/SPS/AR/2018-2019/

24 06 2019

To:

Dr S Kavitha

Associate Professor Dept. of Petrochemical

JCT College of Engineering nd Technology

Coimbatore-641105

Sir/Madam,

Sub:

TNSCST Programme 'Student Project Scheme' - Conduct of Seminar-Cum-Exhibition -Invitation extended - reg.

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The student should make the oral presentation within the allotted time of 10 minutes and LCD

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I request you to co-operate in making this seminar-cum-exhibition a successful academic event.

Thanking you,

Yours faithfully,

Member Secretary



अविनाशी रोड, कोयंबत्तूर - 641018 AVINASHI ROAD, COIMBATORE - 641018 IFSC : SYNB0006121

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Dr S Kavitha Associate Professo Dept. of Petrochemical JCT College of Engineering nd Technology		Harihara Pramesh M	I Star Miles	The Principal JCT College of Engineering nd Technology Coimbatore-641105	- 4	7500/-
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Submitted nothe principal

Respected STV,

Herewith I am submitting an amount Re 1500/= (One shousance fire hundred only). Jowards change too testing ex project work speien from ME Studient of RVS facults of Ensineering sulur.

Thanking You Test conducted by. mr. N. Sellakamme. ASET. Mont. / Cicii.

yours

Alm

A-Kumer

HOD/Covi,

116/18

Pichanun. 26/5/18

Jyin-s (3011) Rus faculty of Engineering Sulva

To

The Head of department Civil derantment JCT CET

Respected sia,

Subject: (Regarding Permission For testing of Concrete SPE cimens)

This is to inform you that we are Rus Faculty of Engineering, Sular. & we need to Dor concrete Secrimen for our W.E broject. Hereby we request you to Kindig Provid cultu bonatied certificate at earliest

HOD (ciai)

List of Specimens cube, cylinder column.

permitted Thanking you that July Jou

Sajith-V.R (7129164/3019) from RVS faculty of Engineering Sulur.

The Head of Oliportment. civil department. JCT CET

Respected dry

Subject - (Seeling permission for testing of our concrete

This is to inform you that, we are from RVS faculty of Engrneering, Juliur, we need to test our & concrete specimens for afour ME-project.

Hereby, we request you to kindly provide a with bonafide confifrate, at the earliest.

List of specinens cube, cylinder, beamo

Thanking you

(Sajith V.R)

(Sajith.v.R)

from

Pichanar 26/05/18

Manush PK (3014 Rus faculty of enginering Salur

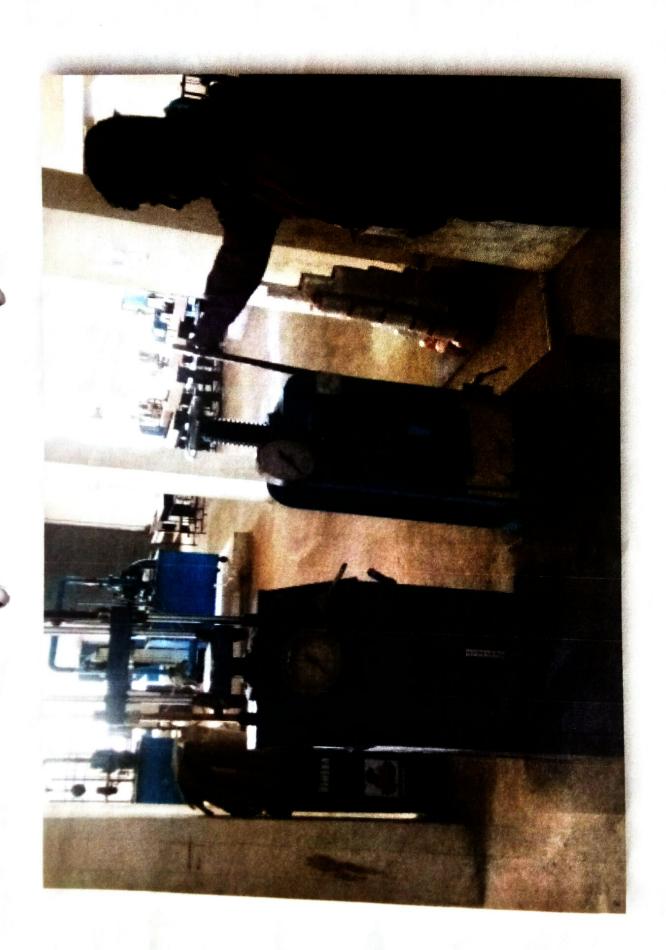
The Head of department Civil department JC+ CGT

Respected Dir

Subject - (Seeking Permission for Gesting of our Concrete Spectuens).

The is to inform you that, we are from Pro Joiluty of engenering, Sulur, use need to test our and concrete Sperimens for of our Me. Project Here by, we request you to . Ki'ndly Provide ud with boughte certificate at the earliest

the specimen's Thomking you cube, cyhnolir Sor Manoo Ph. P.K.)



-

Submitted to the principal

Respected Sir,

Here with I am submitting an amount Rs. 10,400/= (Ten thousand Four hundred only) towards fund generaled twough consultancy material Testing.

1. P.M.GSY 2016-17 Kindadam Block- upgradation of Road from sangarankmpalayam no pudu pelayam,

(a) Test an sand - 900.00

900.00 (b) Test on aggregatee -

(c) 7est on cement(2) - 900.00

(d) Test on Steel (1). 1200.00

(e) Test on water (1) - 1000.00

(f) Test on concrete cute 600.00

2. P.MG.SY 2016-17 Kundadam Block upgradation of Road from Sunya vallew - Velappoin palayours

(a) Test on sand - 900.00

(b) Test on Aggresquire(2) - 900 UD

(C) Text on Cement (2) - 900.00

d) Test on sheel (1) - 1200.00

(e) Test on water (1)-1000.00_

4,900/=

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RECeived Ami -10,400/=

TEST INCHARGE

From,

Assitant Engineer, Kundadam Block, Panchayat Union, Tirupur.

To

The Principal, JCTCET, Colmbatore.

Sub: Test report for samples-reg.

Sir,

kindly send the following test reports: Name of work: Upgradultion of work from km 3/6 of Sangaramdompalayam - Pudhupalayam to Sellappillai gounden puder road km 0/0 - 3/2.

Scheme: P.M.G.S.Y (2016-2017)

I request to concluct the following test and Send the test report.

> @ Mun Assitant Engineer.

From,

Assitant Engineer, Ikundadam Block, Panchayat Union, Tirupur,

To

The Principal, JCTCET, Coimbatore.

Sub! Test report for samples - reg.

Sir,

Kindly send the following test reports.

Name of work: Upgradation of the road from Suriyanallur - Velapopam palayam road to S. Alampalayam km 0/0 - 4/6.

Scheme: P.M.G.S. Y (2016 - 2017)

I request to concluct the following test and send the test report.

Assitant Engineer

COIMBATORE PUMP ENGINEERING

POST BOX No. 2019, 80 Post Box no. 2019, 30-C Kamadhenu Nagar,



CM/L-6434063 CM/L-6434164

Krishnarayapuram, Avarampalayam, Coimbatore 641006. Ph.: 0422-2562426

frs. of: Single phase & Three phase Submersible Pumpsets, Monoblocks, Openwell Monoblocks, Motors & Spares

То

Date: 16.03.2018

The Principal,

JCT College of Engineering and Technology,

Coimbatore -641105

Dear Sir,

Sub: Design of motor for low power consumption Submersible pump – Reg

We are very happy to introduce ourselves a leading pump manufacturing company in Tamilnadu. At present we are focusing on low power consumption submersible pumps. We have got some enquiries for open-well; dry type, monoblock and low power consumption submersible type pumps of range 12.5HP and 15 HP.

We request you to develop a designfor motors for above mentioned submersible pump with better efficiency and performance characteristics.

Thanking you

7 Ames

ours faithfully

(M.Elango) Propreitor

TNGST No. :2222594

CST No.:664786

Dt. 26.04.2002

IAC: 1 1 6





23.03.2018

To

The Manager,
M/S Coimbatore Pump Engineering,
Post Box no. 2019, 30-C kamadhenu Nagar,
Krishnarayapuram,
Avarampalayam,
Coimbatore 641006

Dear Sir,

Sub: Consultancy from EEE department - Regarding

Ref: JCTCET/EEE/R&D/01 dated 16.03.2018

Warm greetings from JCT College of Engineering and Technology

With reference to your letter cited above, we wish to bring to your kind information that we are one of the reputed institutions in the state. As a part of research activities from the department of Electrical and Electronics Engineering, We would like to share our expertise and ideas for developing new projects with the needs of your industry which you have stated in reference, and let the students to be sentient towards industrial needs. EEE department in our college is fervently working on design of electrical pumps. As mentioned in your letter we are able to provide implausible guidance to your industry. In this regard you are requested to discuss unreservedly with Mr. V.Jethose, HoD/EEE for any further consultation.

Thanking you

College Octanum.

JCT College of Engineering & Technolo Pichanul Cibring Core - 641105

IS: 8034 IS: 9283

COIMBATORE PUMP ENGINEERING



POST BOX No. 2019, 80 Post Box no. 2019, 30-C Kamadhenu Nagar,

Krishnarayapuram, Avarampalayam, Coimbatore 641006. Ph.: 0422-2562426

Ifrs. of: Single phase & Three phase Submersible Pumpsets, Monoblocks, Openwell Monoblocks, Motors & Spares

To

Date: 03.04.2018

The Principal,

JCT College of Engineering and Technology,

Coimbatore- 641105

Dear Sir,

Sub: Design of suitable motor for low power consumption Submersible pump – Reg

Ref: your letter dated 29.03.2018

We are very happy with your acceptance towards our requisition. We hope the team you have assigned will work to satisfy our expectation. In this regard we request you to send the estimation for the entire process.

Thanking you

Yours faithfully

Propreitor

CST No.:664786 Dt. 26.04.2002 TNGST No.: 2222594





Ref: JCTCET/EEE/R&D/01

09.04.2018

To

The Manager, M/S Coimbatore Pump Engineering, Post Box no. 2019, 30-C kamadhenu Nagar, Krishnarayapuram, Avarampalayam, Coimbatore 641006

Dear Sir,

Sub: Intimation of consultation charges - Regarding

Ref: Your letter dated 03.04.2018

Warm Greetings from JCT College of Engineering and Technology!

With reference to your letter dated 03.04.2018, we would like to quote our consultation charges for design of 12.5 HP and 15 HP motors for low power consumption submersible pump set as below:

1. Consultation charges

Rs.2,000/ per sitting

2. Design Data

Rs.45,000/- up to 15HP

3. Testing charges at your site

Rs.5,000/- up to 15HP

4. Miscellaneous

as applicable

We request you to send your approval for further proceedings

Con Format.

Principal Dr. C. Ramesh, M.E., Ph.D.,

JCT College of Engineering and Technology, Combators - 041 103 (Approved by AICTE, New Delhi & Affiliated to Anna University, Chennal)

Pichanur, Colmbatore - 641 105 Tamil Nadu INDIA Phone: +91 422 2636900 Fax: +91 422 2636901 Email: Info@jctac.in www.jctac.in

IS: 8034 IS: 9283

COIMBATORE PUMP ENGINEERING

CM/L-6434063 CM/L-6434164

POST BOX No. 2019, 80 Post Box no. 2019, 30-C Kamadhenu Nagar,

Krishnarayapuram, Avarampalayam, Coimbatore 641006. Ph.: 0422-2562426

Mfrs. of: Single phase & Three phase Submersible Pumpsets, Monoblocks, Openwell Monoblocks, Motors & Spare

To

Date: 18.04.18

The Principal,

JCT College of Engineering and Technology,

Coimbatore 641105

Dear Sir,

Sub: Development of low power consumption Submersible pump – Reg

Ref: The acceptance letter dated 09.04.18

Thank you very much for accepting our project of designing 12.5 HP and 15 HP motor for submersible pump. Our engineer's crew has accepted the quotation. We request you to start the consultation work without any vacillation. Our chief engineer Mr.S.Karthikeyan would visit your institution for further discussion about the project.

Thanking you

Yours faithfully

(M.ELANGO)

Propreitor

TNGST No. :2222594 CST No. :664786 Dt. 26.04.2002 I A C : 1 1

COIMBATORE PUMP ENGINEERING



POST BOX No. 2019, 80 Post Box no. 2019, 30-C Kamadhenu Nagar,

Krishnarayapuram, Avarampalayam, Coimbatore 641006. Ph.: 0422-2562426

Mfrs. of: Single phase & Three phase Submersible Pumpsets, Monoblocks, Openwell Monoblocks, Motors & Spares

Date: 20.04.18

To:

The Principal,

JCT College of Engineering and Technology,

Coimbatore - 641105.

Dear Sir,

Sub: Development of low power consumption submersible pump set - Reg

Ref: Report of our Chief Engineer Mr.S.Karthikeyan.

From the report we received from our engineer, we are very much impressed by your work towards the project. When your team visits our campus, we will pay the amount of Rs.10, 000 towards your development charges in advance. Please receive the same and acknowledge the receipt.

Thanking you

Yours fajthfully

Propreitor

TNGST No. :2222594 CST No. :664786 Dt. 26.04.2002 TAC: 1 1 6





21.05.2018

Ref: JCTCET/EEE/R&D/01

To

The Manager,

M/S Coimbatore Pump Engineering,

Post Box no. 2019, 30-C kamadhenu Nagar,

Krishnarayapuram, Avarampalayam,

Colmbatore 641006

Dear Sir,

Sub: Designing of 12.5 HP and 15 HP Low Power Consumption Submersible Pump set – Regarding

Ref: Your Letter dated 20.04.2018.

Warm Greetings from JCT College of Engineering and Technology!

We are happy to notify that we have received the Advance amount of the consultation charge that our faculty received from you. In continuation to the discussion we had with your Engineer, we wish to inform you that design process is in progress, we shall give the design data within six months.

Thanking you

HeD/ERE



Dr.C.Ramesh, M.E., Ph.D., PRINCIPAL

JCT College of Engineering and Technology

JCT College of Engineering and Technology In Colimbian - 041 100

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennal)
Pichanur, Colmbatore - 641 105 Tarnii Nadu INDIA Phone: +91 422 2636/90 Fax: +91 422 2636/01 Email: info@jctacin www.jctacin

COIMBATORE PUMP ENGINEERING

80 Post Box no. 2019, 30-C Kemadhem Nagar, Avarampalayam, cbe - 641006.

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Authorised By

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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(Established by Government of Tamilnadu)

Directorate of Technical Education Campus, Chennai – 600 025.

Ph: 044-22301428, Telefax: 044-22301552 www.tanscst.nic.in

Dr.R.SRINIVASAN, M.Sc., Ph.D.,F.I.C.S., M.A.C.S.(USA)., Member Secretary

Lr.No.TNSCST/SPS/AR/2017-2018

27.01.2018

To

The Principal
JCT College of Engineering and Technology
Pichanur
Coimbatore - 641 105

Sir/Madam,

Sub: TNSCST - Student Project Scheme - 2017-2018 - approval intimation-grant release- reg.

With respect to the above scheme, the list of projects approved by the State Council is enclosed along with terms and conditions. Kindly read and ensure adherence to the terms and conditions such as submission of UC and seminar paper in time.

Kindly find enclosed here with the cheque for the approved grant and disburse the grant to the concerned students through the guides at the earliest.

Kindly send the utilisation certificate (format enclosed) and seminar paper (ref.T&C-no.5&6) on completion of the project.

Thanking you,

Yours faithfully,

Mombar Secretar

Member Secretary.

Encl: a) Terms & Conditions (T&C)

b) Format of Utilisation Certificate (UC) 59

c) Cheque for Rs. 10000/- No: 322466

dt: 27.1.2018

Copy to: The individual guides.



Branch DOTE CAMPUS DOTE OFFICE BUILDINGS GUINDY CHEMNAI IFS Code (IDIB000D080

Ac. Payee Only

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म्हा सं Arc No.

479135159

FOR MEMBER SECRETARY TN STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

CBS Code: 01636

AUTHORISED SIGNATORY

992000060

PAYABLE AT PAR AT ALL OUR BRANCHES

Please sign above

#322459# 600019119#: 3 1 1351591



TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY



GOVERNMENT OF TAMILNADU

CERTIFICATE

This is to certify that the project entitled .. ENHARGEMENT... OF .. CO. SOLVENT...

USING REPORTIVE DISTILLATION sponsored by the Council under the

....carried out and presented CHEMICH. ENGINEERING BY HARIPPASSAD. V.P., DEPT. OF BETROCHEMICAL FNOG. JCT. COLLEGE. OF ENGGATECH.

CONTINUESTORE, at the Seminar cum Exhibition of the STUDENT PROJECT SCHEME held at

National College, Tiruchirappalli has won the Second Prize for the Project Oral Presentation.

Chennai-600025 21.07.2018

DR.R.SRINIVASAN
Member Secretary



CHENNAI SCIENCE FESTIVAL - 2018

Theme: "Health for All"
Science City, Chennai
Government of Tamilnadu

PARTICIPATION CERTIFICATE

representing. J.C.T. College of Enginearing & Technology ... Colmbatore...

participated in the Science Model competition conducted by the Science City during the

" Chennai Science Festival 2018" from 21st to 24th February, 2018.

S CAVAM A

U. SAGAYAM, I. A. S.,

Vice Chairman Science City, Chennai - 25.

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(Govt of Tamilnadu)

DOTE Campus, Chennai - 600 02 Ph: 044- 22301428 Fax: 044- 22301552

www.tanscst.nic.in E-mail:enquiry.tanscst@nic.in : ms.tanscst@nic.in

Dr.R.SRINIVASAN, M.Sc., Ph.D., F.I.C.S., M.A.C.S.(USA)., Member Secretary

CHE-014

Ref: TNSCST/SPS/AR/2017-2018/

05.07.2018

To:

Dr.R.Paramasiyam

Professor

Dept. of Petrochemical engineering

JCT College of Engineering and Technology

Pichanur

Coimbatore - 641 105

Sir/Madam.

TNSCST Programme 'Student Project Scheme' - Conduct of Seminar-Cum-Exhibition - Invitation extended - reg.

With reference to the above, the Seminar-cum-Exhibition has been arranged on 20th and 21st JLUY 2018 at National College, Tiruchirapalli-620001. I request you to kindly ensure that one of the student who did the project come to Tiruchirappalii and present the findings of the project in the Seminar. Models pertaining to the project can be exhibited and share your innovative ideas with others.

The following points may please be noted:

- The Student must report to Dr.Mohammed Jabbir, Associate Professor, Department of Biotechnology, National College, Tiruchirapalli-620001.(Contact details: 9786425226 Email: mohamediaabir@nct.ac.in)
- Accommodation and food will be provided from the evening of 19th July 2018 till the evening 21st July 2018
- The students are requested to bring the required medicines (if any) and other personal needs for their stay at
- Only one student will be provided boarding and lodging in the College hostel. No charges need to be paid. Second sleeper class train fare / Actual Bus (Govt. Bus) fare (Up & Down) from the Place of study to National College, Tiruchirapalli will be provided for one Student of each project.
- The student must be present on both the days (i.e) 20th and 21st JULY 2018.
- The student should make the oral presentation within the allotted time of 10 minutes and LCD Projectors will
- Request for specific requirement for display of project must be made in advance to the Co-ordinator.
- Certificate will be given to those who have done the project and are present at the venue.
- Prizes will be given to the best presentation and best exhibit.

Those who have not submitted the Utilization Certificate so far, kindly arrange to send the same immediately without any further delay.

I request you to co-operate in making this seminar-cum-exhibition a successful academic event.

Thanking you,

Yours faithfully

h) Donal

Member Secretary

72.JCT College of Engineering and Technology 10,000/

	10000/-
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-	Ine Principal JCT College of Engineering and Technology Pichanur Coimbatore - 641 105
co-solvent Hariprasad V p	using Fakkrudeen Ali Ahamed.A
4	process
cial different o	trasesterification reactive distillation
Professor	etrochemical Ig e of Engineering and y re - 641 105





INVOICE

dt.25.04.2017.

To The KPC India Pvt Ltd., D.No.6/23, Ragavaiah Road, T.Nagar - 600017, Chennai.

Lr.No. F.Civil Consultancy / JCTCET / 2017 /

Sir(s),

Sub.: Civil Consultancy Works

Ref.: Your letter

Planning, designing and Estimation of a Library building. For this job the charge is about 2,30,000 INR. Please make the arrangement for the payment as earlier possible.

We thank for your keen interest in building a relationship with you.

Regards,

JCT CET, COIMBATORE.

Payment voucher

THE KPC INDIA PVT LTD.,
D.No.6/23, Ragavaiah Road,

T.Nagar,

Chennai 600017

Date: 06-05-2017

Vr.No: 2019 44 88

Compatore.

NO	PARTICULARS	AMOUNT
1	Civil consultancy works	2130,000/





INVOICE

dt.10.07.2016.

To The KPC India Pvt Ltd., D.No.6/23, Ragavaiah Road, T.Nagar - 600017, Chennai.

Lr.No. F.Civil Consultancy / JCTCET / 2016 /

Sir(s),

Sub.: Civil Consultancy Works

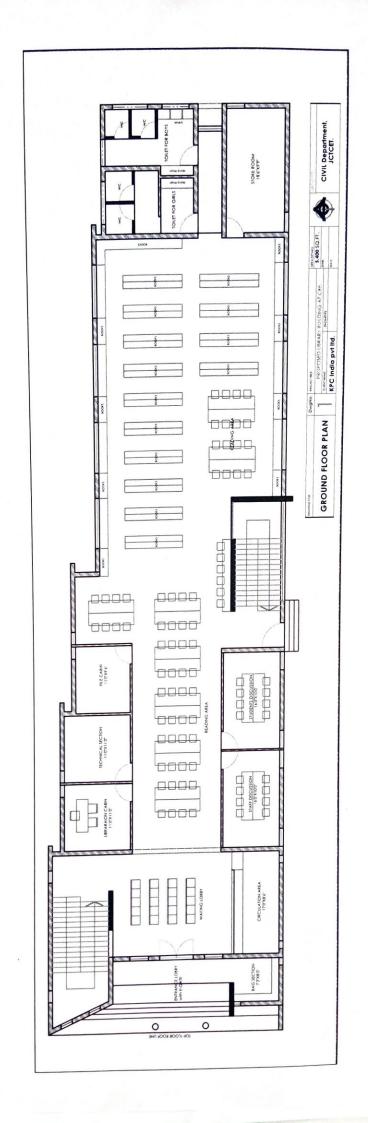
Ref.: Your letter

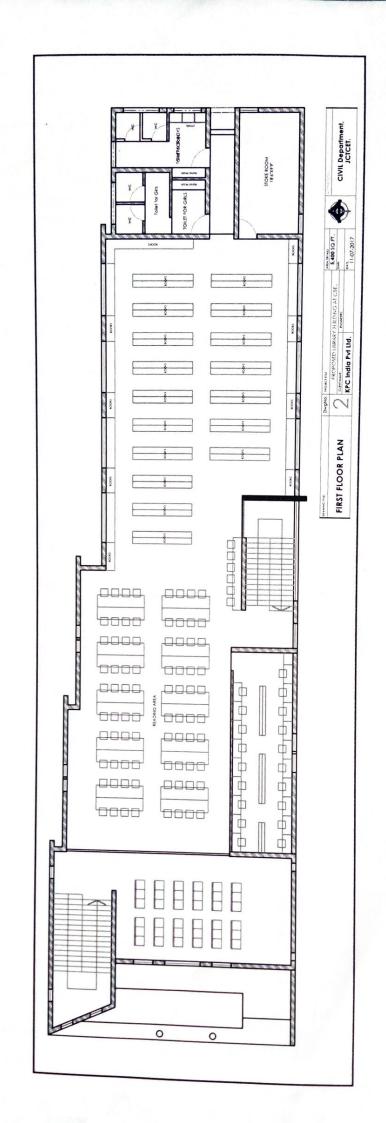
Planning, designing and Estimation of a Girls Hostel building. For this job the charge is about 1,50,000 INR. Please make the arrangement for the payment as earlier possible.

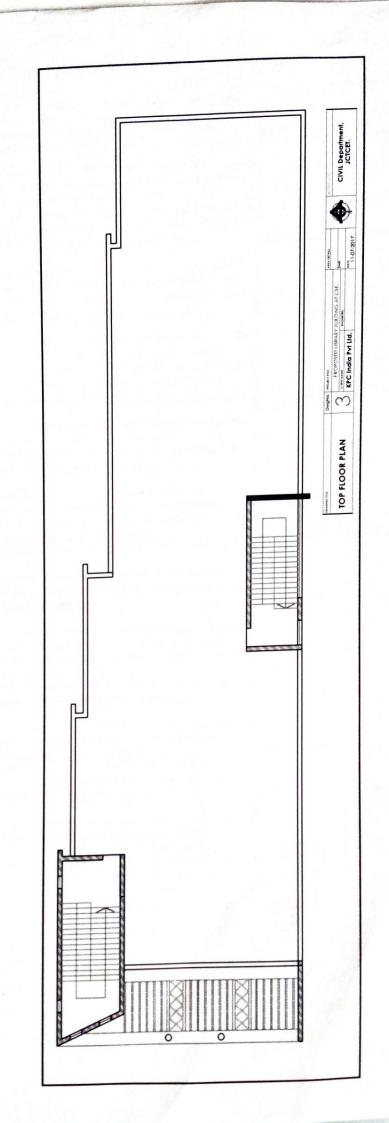
We thank for your keen interest in building a relationship with you.

Regards,

JCT CET, COIMBATORE.







Payment voucher

THE KPC INDIA PVT LTD., D.No.6/23, Ragavaiah Road, T.Nagar,

Chennai 600017

Date: 25-03-2016 Vr.No: 2016/20/04-

Payment To: Jet collogo of Enginooning and tochnology,

Coimbatoro.

NO	PARTICULARS	AMOUN	T
1	planning, dosinging and ostimation of hists Hospol.	1150,000	

A.E Rajeswari

Assistant engineer(RD)

Palladam Block

Tirupur Disttrict.

То

The Principal

JCT college of Engineering

Kadakkasavadi

Coimbatore.

Sir,

: Requisition for testing the cube (Retaining Wall) 1:21/2:5 for PMGSY

Road work.

Name of the road

Sub

:Upgradation of the road to Muthandipalayam Km

0/00-1/0&2/2-3/840

Name of the scheme : PMGSY Phase VIII

I kindly request you to perform following tests for the 40mm metal (cube test).

	GRADE 40MM METAL	40MM METAL
S.NO	- 2 . 01	Cube test
1		Impact test
2	Impact test Abrasion test	Abrasion test
3	Water absoration	Water absoration
4	Flakiness index	Flakiness index

Thanking you

Yours truly

Encl:Samples

submitted to the principal,

Respected Sir,

Herewith Iam submitting the an amount Rs 10,500/= (Tenthousand five hundred only) towards material testing changes.

- 1. Testing of aggregate wBm-11, premixcarpet? for Rand from Tiruppur - palladam
- 20 Road from segampulayam to Thottiappichi 3500.00
- do perundurai Kangayam mond 10,500.00 3.

(Rupees Ten thousand five hundred only)

(80%) £18/19

18/1/8

Afris Hod/cevil.

osh Receivel RS, 10,500/-



ST JUDE ELECTRICALS

Vettoor Arcade M C Road, Ettumanoor, Kottayam Ettumanoor - 686631 Kerala, India

Ltr. No: CSW/022/2015

30.11.2015

To,

The Head of the Department,
Electrical and Electronics Engineering,
JCT College of Engineering and Technology,
Pichanur,

Dear Sir,

Sub: Requisition for consultancy work – Reg

Coimbatore - 641 105.

We are Manufacturer, Distributor and Servicing of Electro Mechanical Converter, Transformers, Electrical Lamps, Solar Photovoltaic, Solar Thermal and Solar Equipment.

Now we are focusing to manufacture the Control Circuit for Electrical Drives. So I kindly request you to provide the possible methods to design the control circuit.

So we are requested provide the faculty members for do the consultancy work in your esteemed Institution. So please go through the specified area and quote the amount for the consultancy work.

Thanking you,

Yours Truly,

For St. Jude Electricals Pvt Ltd,

(Sajo Thomas)

Managing Director



JCT/EEE/CON/003

02-12-2015

To,

The Managing Director,
St. Jude Electrical Pvt Ltd,
Vettoor Arcade
M C Road, Ettumanoor, Kottayam
Ettumanoor - 686631
Kerala, India

Sir,

Sub: Acceptance for consultancy work - Reg

We are received your letter on 01nd December 2015 (Letter No: CSW/022/2015). We are happy to inform that accepting your consultancy work in the area of Controlling of Electrical Drives.

We are provide the details of Literature survey, Detailed Report, Design procedure and simulation output. For the above work we quoted the amount sum of Rs. 11000/- and we plan to complete the work within six months.

The following Faculties are allotted for your consultancy work, without affecting their academic schedule.

- 1. Mr. Manikandan S, Assistant Professor/EEE (In charge)
- 2. Mr. Abner Leo N, Assistant Professor/EEE (Assisting)

Thanking You,

Yours Truly,

For JCT College of Engg & Tech

JCT College of Engineering and Technology



JCT/EEE/CON/CS/003

20-05-2015

To,

The Managing Director, St. Jude Electrical Pvt Ltd, Vettoor Arcade M C Road, Ettumanoor, Kottayam Ettumanoor - 686631 Kerala, India

Sir,

Sub: Completion of consultancy work - Reg

Engg & Tech

I hereby submit the Consultancy project titled "Closed Loop Control of Three Phase Induction Motor Using Model Predictive Control" as per the letter Ref. No. CSW/022/2015.

I have taken care of all your specifications mentioned during the process of project execution. Kindly check at your end and thank you for the opportunity given to us.

We seek your continued support in future as like now.

Thanking You,

Yours Truly

	CASH BILL	10.			
From. ST. Jude Electricals 2015/16 Mc Road, Ettumanoon,					
To. ICT collège y Engineering PICHANUR					
S.No	Products	Rate	Amount		
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Total YES 11, WO					
Proprietor					

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CHAPTER 1

INTRODUCTION

1.1 GENERAL

Induction motors are the most widely used motors for industrial control and automation; hence, they are also called the workhorse of the motion industry. They are robust and reliable. When power is supplied to an induction motor at the recommended specifications, it runs at its rated speed. But many applications need variable speed operations. For example, a washing machine may use different speeds for each wash cycle. Induction motor Speed control is complex due to its nonlinear characteristics.

There are two types of controlling speed of induction motor these are scalar control and vector control. Several studies have been carried out in the field of speed control system, but scalar speed control system shows simple structure by low steady state error. The constant V/f scalar control system is considered for study. Variable Voltage Variable Frequency (VVVF) or V/f is the most common method of speed control in open loop approach. This method is most suitable for applications without position control requirements or the need for high accuracy of speed control.

In the last few years, Model Predictive Control (MPC) has a growing interest in many motor control applications due to its nonlinear ties handling features and independence of the plant modeling. The MPC operates in a knowledge-based way, Numerical -based control method has the ability to deal with system nonlinearity and its control performance is less affected by system parameter variations. An MPC technique uses a linguistic if then rule base which is designed by taking advantage of system qualitative aspects and expert knowledge.

The main advantage of MPC is the fact that it allows the current timeslot to be optimized, while keeping future timeslots in account. This is achieved by optimizing a finite time-horizon, but only implementing the current timeslot. MPC

Zimbra

paramasivam.r@sjct.co.in

Fund recd from PAO Secretriat New Delhi for Ministry of Earth Science 9/28/2014, 9:39:49 PM

From: arumugam.e@sjct.co.in

To: principal@sjct.co.in

Cc: secretary@sjct.co.in; paramasivam.r@sjct.co.in

Dear Sir,

We wish to confirm that we have recd payment from PAO secretariat, New Delhi a sum of Rs.60,000/- through neft.

13-Sep-14

NEFT SBIN714256214061 PAO Secretariat New Delhi

60,000.00

This is for your kind information pl.

Thanks

E Arumugam

Submitted to Principal,

Remissapora VAODIDE

PICHANUR, COMBATORE - 641 105

an Maglaly

Topaca KIN

Certified that we have satisfied our self that the condition on which the grants in aid was sanctioned have been duly fulfilled and exercised the following checks to see that money was actually utilized for the purpose for which it was sanctioned:

- 1. Committees formed for printing, preconference expenditure and event management.
- II. TAIDA to participants checked
- III. Souvenir printing and preparation Technical Committee
- IV. Stationeries and Registration Committee.
- The following documents have been enclosed along with this Utilization certificate: 11.
 - 2- COPIES OF THE PROCEEDINGS

Total Income details for this event and audited Statement of expenditure

Recommendations and follow-up actions

Other achievements from this event

Other enclosures:

Date:

For JCT College of Engineering & Technology

Signature of Project Investigator

(Michael Rahul Soosai)

Signature of Head of the Institute

(Dr. G. Ramesh,

PRINCIPAL JCT College of Engineering & Technology Pichanur, Coimbatore - 641 105

(To be counter signed by MoES officer-in charge)

Zimbra

paramasivam.r@sjct.co.in

9/28/2014, 9:39:49 PM Fund recd from PAO Secretriat New Delhi for Ministry of Earth Science

From: arumugam.e@sjct.co.in

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13-Sep-14

NEFT SBIN714256214061 PAO Secretariat New Delhi

60,000.00

This is for your kind information pl.

Thanks

E Arumugam

UTILISATION CERTIFICATE

(To be submitted in Quadruplicate within Two months from the date of the event)

(vide No. _

Title of the Conference/ <u>Seminar</u> /Workshop/Symposia	(Amount in Rs. in Lakhs) "Advances in Green Technology for pollution free energy Sources."
2. Name of the Organization	: J.C.T. College of Engineering and Technology, Coimbatore.
3. Principal Organizer's name	: Dr. G. Ramesh, Principal
4. Ministry's sanction letter no. and date	: Mail dated 7th May, 2014 from Dr. Ashok Saha MoES, Proposal No.: MoES/05/PC-V/2014
5. Amount received from MoES (Transfer of Grant through ECS/RTGS) awaited	:Rs. 60,000/-
6. Interest earned, if any on the MoES grants	: <u>Nil</u>
 Total amount that was available for expenditure (S. Nos. 5 + 6) 	: <u>Rs. 60,000/-</u>
 Actual expenditure (excluding Commitments) (Statement of total audited Expenditure is to be enclosed) 	: Rs. 60,000/- : Statement enclosed
Unspent balance refunded, if any (Please give details of Demand draft No. etc.)	: No unspent balance
	11/1/2
10. Certified that the amount of Rs. 60,000/- again the Conference/Segminar/Workshop/Symposithat the balance of Rs. NIL remaining unutilizations.	ainst col. 8 has been utilized on a for the purpose for which it was sanctioned and zed has been surrendered to Govt.

ABOUT THE INSTITUTION

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providing education to all especially the technical education in the country. The Trust has started an engineering college namely JCT College of Engineering and Technology in Charitable Trust was established by renowned and philanthropic people with an objective of population. Pichanur, Coimbatore from the academie year Shri Jagannath Educational Health and Considering the growing demands lero. pue downtrodden

and sensitized to understand full implications Students will be encouraged to get equipped of their decisions, actions and their Education to meet the requirements of innovations. The college promotes Technical Industrial arena. which takes into account the demands of industry and R&D institutions in the context of global concern at the threshold of the twenty-first century.

CORSES OFFERED

UG # BE/BGeh BC - COURSES

- Civil Engineering
- Mechanical Engineering
- Petrochemical Engineering
- Electrical and Electronics Engineering Computer Science Engineering
- Electronics and Communication Engineering
 - Automobile Engineering Petroleum Engineering
 - Food Technology
 - · Engineering Design ME - COURSES
- Power Electronics and Drives
 - Structural Engineering
 - . VI SI Deciun

Advances in Green Technology for Pollution Free Energy Sources National Secument on

Ministry of Earth Sciences (Government of India) Sponsored by

25th August, 2014

Dr. G. Ramesh Convener

Dr. R. Parmasiyam Co Convener \$ N. Aravindh

'rof. N. Krishnaswamy Coordinator

S. Pandigajan & Michael Rahul Soosai Co-Coordinators



JCT College of Engineering and Technology Jointly with



(PETROCHEMICAL ENGINEERS ASSOCIATION FOR THE COUNTRY EMPOWERMENT, JCT) Organized by PEACE

JCT College of Engineering and Technology Faculties of Petrochemical & Petroleum Engineering Ph: 0422 2636900, 0422 2636902 Fax: 0422 2636901 Pichanur, Coimbatore 641105, Tamil Nadu Affiliated to Anna University, Chennai) (Approved by AICTE, New Delhi & Website: www.jct.ac.in

Advances in Green Technology for Pollution Free Energy Sources National Seminar on

Ministry of Earth Science S (Government of India) Sponsored by

25" August, 2014

REGISTRATION FORM

Name (CAPITALE

Designation:

Organization:

Mailing Address:

Mobile:

Email:

Signature of Candidate

Signature of HOD with Seal

Please return this form to:

Prof. N. Krishnaswamy

JCT College of Engineering and Technology Pichanur, Coimbatore 641105, Tamil Nadu Ph: 9159469832, 9894298769. Dean Phemical Sciences Fax: 0422 2636901