



SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, New Delhi / Affiliated to Anna University, Chennai / Accredited by NAAC)

Dindigul – Palani Highway, Dindigul 624 002

DEPARTMENT OF MECHANICAL ENGINEERING

STUDENT PROJECTS SCHEME 2021-2022

REPORT

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE Campus, Chennai-600025

Name of the guide and address

**Dr.V.KANDAVEL,
Associate Professor
Department of Mechanical Engineering,
SSM Institute of Engineering and Technology,
Dindigul-Palani Highway, Dindigul - 624 002**

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE Campus, Chennai-600025

STUDENT PROJECTS SCHEME

Proposals for 2021-2022

(www.tanscst.nic.in).

**INVESTIGATE THE MECHANICAL PROPERTIES OF E-GLASS FIBRE & S-GLASS
FIBRE REINFORCED WITH POLYMER MATRIX COMPOSITES**

SUBMITTED BY

ADITHYAN. B

AFZAL IBRAHIM. M

AKTHARALI. S

ANAND ALBERT RAJA. A

**SSM Institute of Engineering and Technology,
Palani-Dindigul Highway, Sindalagundu (Post),
Dindigul-624002**

**The Member Secretary,
Tamilnadu State Council for Science and Technology,
DOTE Campus,
Chennai - 600 025**

STUDENT PROJECT PROPOSAL 2021-22

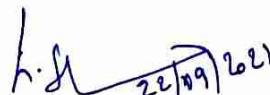
1	Name of the Student(s)	ADITHYAN. B (9221118114001) AFZAL IBRAHIM. M (9221118114002) AKTHARALI. S (9221118114003) ANAND ALBERT RAJA. A (9221118114004)
	Student Email Id	vkvel3467@gmail.com
2	Name of the Guide	Dr.V.KANDAVEL
	Department / Designation	Associate Professor/Mechanical
	Institutional Address	SSM Institute of Engineering and Technology, Dindigul-Palani Highway, Dindigul - 624 002.
	Phone No. & Mobile No	0451 2448800-2448899 & 9791427440
3	Project Title	Investigate the Mechanical Properties of E-Glass Fibre & S-Glass Fibre Reinforced with Polymer Matrix Composites
4	Sector in which your Project proposal is to be Considered	Mechanical
5	Project Details	Annexure I
7	Has a similar project been carried out in your college / elsewhere? If so furnish details of the previous project and highlight the improvements suggested in the present one	No

CERTIFICATE

This is to certify that Mr.ADITHYAN. B, Mr.AFZAL IBRAHIM. M, Mr.AKTHARALI. S, Mr.ANAND ALBERT RAJA. A) are bona fide final year student of U.G. Engineering courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.


Signature of the Guide

Dr. V. KANDAVEL


Signature of the HOD



Signature of the Principal
Dr.D.SENTHIL KUMARAN, M.E., Ph.D.,(NUS)
Principal



SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

ANNEXURE I

INVESTIGATE THE MECHANICAL PROPERTIES OF E-GLASS FIBRE & S-GLASS FIBRE REINFORCED WITH POLYMER MATRIX COMPOSITES

ABSTRACT

Glass fibers reinforced polymer composites have been prepared by various manufacturing technology and are widely used for various applications like electronics, aviation and automobile application etc. Glass fibers are having excellent properties like high strength, flexibility, stiffness and resistance. The present work concentrates on the fabrication and testing of S-glass fibre + E-glass fibre + polymer resin by reinforcement and hand layup method. Among the various methods available for fabrication of hand layup method is the simplest and most economical one. After the fabrication of S-glass fibre + E-glass fibre + polymer resin composite, testing is done to find hardness, toughness, tensile Strength, compression and compared with those of S glass fibre + polymer resin and E-glass fibre + polymer resin composite.

INTRODUCTION

E-GLASS & S-GLASS FIBRE E-glass - electrical grade glass was originally developed for stand off insulators for electrical wiring. It was later found to have excellent fibre forming capabilities and is now used almost exclusively as the reinforcing phase in the material commonly known as fibreglass . Figure 1.1 E – Glass fibre



Figure 1.1 E – Glass fibre

S-glass - which contains a greater amount of alumina, is used to make glass fibres with superior mechanical properties whereas type C has a much reduced alumina content and resists an acid environment. Type D, which has no alumina, but a high content of boron oxide is used for its dielectric properties.



Figure 1.2 S – Glass fibre

OBJECTIVE

- ✓ Addition of S glass fibre + E glass fibre with polymer resin which improves the tensile strength than E glass fibre + polymer resin and S glass fibre + polymer resin
- ✓ Impact strength is same for both E glass fibre + S glass fibre +polymer resin and S glass fibre + polymer resin composites. Impact strength of the E glass fibre + polymer resin composite is lower compared to other two composites
- ✓ Hardness is found to be slightly higher for the E glass fibre + S glass fibre + polymer resin Composite than the S glass fibre + polymer resin. In the case of hardness, S glass fibre is better than E glass fibre in reinforcement

- ✓ Compressive / Tensile strength is found to be higher in the E glass fibre + S glass fibre + polymer resin compare to other two composites (S glass fibre + polymer resin and E glass fibre +polymer resin).

METHODOLOGY

Hand lay-up is the simplest and oldest open molding method for fabricating composites. At first, dry fibres in the form of woven, knitted, stitched, or bond fabrics are manually placed in the mold, and a brush is used to apply the resin matrix on the reinforcing material. In the hand layup process involves manually laying down the individual layers or piles (OHP sheets) of a form of reinforcement known as preapear. This consists of thousands of fibres, which are pre-impregnated with resin and bundled into rows and arranged either in a single unidirectional ply or woven together.

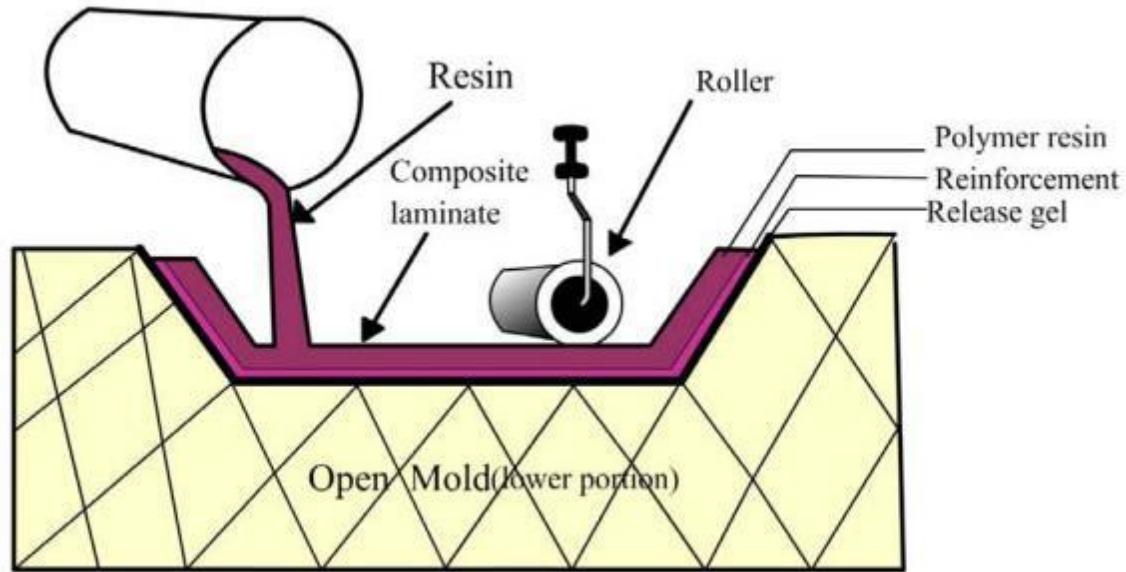


Figure 1.3 Hand Lay-up Method

The polymer resin which is mixed with catalyst and accelerator which colors red by adding the coloring agent. Mixed polymer resin is applied on the OHP sheets after that E – glass fiber is placed over the OHP sheet. After placing the E – glass fiber the polymer resin is applied over the E – glass fiber. Then the S – glass fiber is placed over the polymer resin applied on the E – glass fiber. After placing the S glass fiber again the polymer resin is applied over the S – glass fiber.

CONCLUSION

Glass fibre/polymer resin, E glass fibre/polymer resin, S glass fibre/E glass fibre/ polymer resin composites were fabricated using hand layup method with reinforcement technique. The composite is to addition of E glass fibre with S glass fibre using polymer resin on the mechanical properties to be analysed from the coming results of Tensile strength, Impact strength and Hardness.

WORK PLAN

S.NO	MODULE	DEADLINE
1	Literature survey	Dec – 2021
2	Developing methodology	Jan – 2022
3	Preparation of composites	Feb – 2022
4	Testing of composites	Mar – 2022
5	Final reporting and publication	Apr - 2022

BUDGET

S.NO	COMPONENT	COST in Rupees
1	Raw material cost	4,000.00
2	Preparation of resin	1,000.00
3	Fabrication cost	2,000.00
4	Testing of composites (Impact, Tensile & Hardness)	3,000.00
Total		10,000.00



V KANDAVEL <vkvel3467@gmail.com>

(no subject)

Google Forms <forms-receipts-noreply@google.com>
To: vkvel3467@gmail.com

Wed, Sep 22, 2021 at 4:18 PM

Thanks for filling out

Here's what was received.

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Student Project Scheme -2021-2022

Applicant's registration for data collection. Fill required details. Take a printout of the same, get signatures and send it with project details [3 pages only].

Email *

vkvel3467@gmail.com

GUIDE NAME *

Dr.V.KANDAVEL

DESIGNATION *

Associate Professor

DEPARTMENT *

Department of Mechanical Engineering

NAME OF THE INSTITUTION *

KANDAEL

INSTITUTION ADDRESS WITH PINCODE *

SSM Institute of Engineering & Technology, Dindigul-624 002

GUIDE CONTACT MOBILE NUMBER *

9788230018

GUIDE EMAIL-ID *

kandavel@ssmiet.ac.in

TITLE OF THE PROJECT *

INVESTIGATE THE MECHANICAL PROPERTIES OF E-GLASS FIBRE & S-GLASS FIBRE
REINFORCED WITH POLYMER MATRIX COMPOSITES

STREAM *

Science

Engineering

Engineering Stream

Project to be considered under the Sector: CSE-CSE/IT/Computer Application/Software; ECV-Civil Engineering; EME-Mechanical/ Mechatronics/ Production/automobile etc/; EEE-EEE/ECE/EIE/ICE; CHE-Chemical Engineering

CSE ECV EME EEE CHE

CODE



Institution Details

INSTITUTION CATEGORY *

GOVT. SELF FINANCE GOVT. AIDED UNIVERSITY

STATUS



STUDENT(S) NAME (Maximum 4 students) *

1) ADITHYAN. B 2) AFZAL IBRAHIM. M 3) AKTHARALI. S 4) ANAND ALBERT RAJA. A

STUDENT STUDYING *

U.G ENGINEERING P.G PROFESSIONAL COURSE P.G SCIENCE

COURSE



CERTIFICATE

This is to certify that Mr./Miss. _____ is a bonafide final year student of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.

.. Signature of

'

Guide HOD Principal/ Head of the Institution

Note:

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 17 September 2021, 5.00PM

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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE Campus, Chennai-600025

STUDENT PROJECTS SCHEME 2021-2022

LIST OF APPROVED PROJECTS - ENGINEERING AND TECHNOLOGY

MECHANICAL ENGINEERING					
1065	Dr.V.Kandavel Associate Professor Dept. of Mechanical Engg SSM Institute of Engineering and Technology Dindigul-624 002	Investigate the mechanical properties of e-glass fibre & s-glass fibre reinforced with polymer matrix composites	Adithyan.B, Afzal Ibrahim.M, Aktharali.S, Anand Albert, Raja.A	EME-0388	7500/-



தமிழ்நாடு அறிவியல் தொழில்நுட்ப மாநில மன்றம்
TAMIL NADU 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/2021-2022/

11.03.2022

To
The Principal
SSM Institute of Engineering and Technology
Dindigul-624002.

Sir/Madam,

Sub: TNSCST – Student Project Scheme (2021-2022) – 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. You are requested to adhere to terms and conditions such as submission of UC and seminar paper in time.

No	Guide Name and Institutional Address	Title of the Project	Students Name	Project Code	Amount
1	Mr.D.Manoj Assistant Professor, Department of EEE SSM Institute of Engg and Tech., Dindigul-624002	High efficiency wireless power transfer systems for electric vehicle applications	K.Vigneshwaran, P.Ramkumar, K.Thanuj, J.Viswakshenan	EEE-1544	7500/-
2	Dr.Dhamodharan.S Assistant Professor, Department of Electronics and Communication Engineering SSM Institute of Engg and Tech., Dindigul-624002	Design of menstrual cycle calculator app with gynae bot interface using react native frame work	R.Madhumitha, C.N.Nalli Sneha, M.Keerthana, M.Priyadarshini	CSE-0231	7500/-
3	Dr.V.Kandavel Associate Professor, Dept. of Mechanical Engineering SSM Institute of Engg and Tech., Dindigul-624002	Investigate the mechanical properties of e-glass fibre & s-glass fibre reinforced with polymer matrix composites	Adithyan.B Afzal Ibrahim.M Aktharali.S Anand Albert Raja.A	EME-0388	7500/-

Herewith enclosed 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,

Member Secretary

- Encl: a) Terms & Conditions (T&C)
b) Format of Utilisation Certificate (UC)
c) Cheque for Rs. 22,500/- No:409455 dt:11.03.2022

Copy to: The individual guides

**TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY DOTE CAMPUS,
CHENNAI - 600 025**

**STUDENT PROJECT SCHEME 2021-2022
UTILISATION CERTIFICATE**

(TWO COPIES)

1. Name of the guide and address : Dr.V.KANDAEL,
Associate Professor/Mechanical,
SSM Institute of Engineering and Technology,
Dindigul-Palani Highway, Dindigul - 624 002.

2. Name of the student(s) : ADITHYAN. B
AFZAL IBRAHIM. M
AKTHARALI. S
ANAND ALBERT RAJA. A

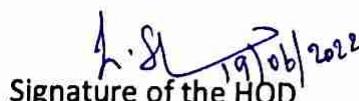
3. Title of the project : Investigate the Mechanical Properties of E-Glass Fibre & S-Glass Fibre
Reinforced with Polymer Matrix Composites.

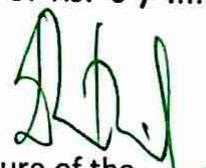
4. Project code : EME -0388

It is certified that a sum of Rs.7500/- (Rupees Seven thousand five hundred)
Sanctioned by the council for carrying out above mentioned student project has
been utilized for the purpose for which it was sanctioned and sum of Rs. 0 /.....--
.....remaining unutilized is refunded.


Signature of the guide

Dr. V. KANDAEL.


Signature of the HOD


Signature of the
REGISTRAR/PRINCIPAL/DEAN
With SEAL

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (MUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindhalagundu (Po),
Palani Road, Dindigul - 624 002



INVESTIGATE THE MECHANICAL PROPERTIES OF E-GLASS FIBRE & S-GLASS FIBRE REINFORCED WITH POLYMER MATRIX COMPOSITES

Adithyan. B Afzal Ibrahim. M Aktharali. S Anand albert raja. A
SSM Institute of Engineering and Technology, Palani-Dindigul Highway, Dindigul-2

Abstract

Glass fibers reinforced polymer composites have been prepared by various manufacturing technology and are widely used for various applications like electronics, aviation and automobile application etc. Glass fibers are having excellent properties like high strength, flexibility, stiffness and resistance. The present work concentrates on the fabrication and testing of S-glass fibre + E-glass fibre + polymer resin by reinforcement and hand layup method. Among the various methods available for fabrication of hand layup method is the simplest and most economical one. After the fabrication of S-glass fibre + E-glass fibre + polymer resin composite, testing is done to find hardness, toughness, tensile Strength, compression and compared with those of S glass fibre + polymer resin and E-glass fibre + polymer resin composite.

Introduction

E-GLASS & S-GLASS FIBRE E-glass - electrical grade glass was originally developed for standoff insulators for electrical wiring. It was later found to have excellent fibre forming capabilities and is now used almost exclusively as the reinforcing phase in the material commonly known as fibre glass. Figure 1.1 E – Glass fibre & S – Glass fibre.



Figure 1.1 E – Glass fibre & S – Glass fibre

S-glass - which contains a greater amount of alumina, is used to make glass fibres with superior mechanical properties whereas type C has a much reduced alumina content and resists an acid environment. Type D, which has no alumina, but a high content of boron oxide is used for its dielectric properties.

Objective

- ✓ Hardness is found to be slightly higher for the E glass fibre + S glass fibre + polymer resin Composite than the S glass fibre + polymer resin. In the case of hardness, S glass fibre is better than E glass fibre in reinforcement
- ✓ Compressive / Tensile strength is found to be higher in the E glass fibre + S glass fibre + polymer resin compare to other two composites (S glass fibre + polymer resin and E glass fibre +polymer resin).

Methodology

Hand lay-up is the simplest and oldest open molding method for fabricating composites. At first, dry fibres in the form of woven, knitted, stitched, or bond fabrics are manually placed in the mold, and a brush is used to apply the resin matrix on the reinforcing material. In the hand layup process involves manually laying down the individual layers or piles (OHP sheets) of a form of reinforcement known as prepare. This consists of thousands of fibres, which are pre-impregnated with resin and bundled into rows and arranged either in a single unidirectional ply or woven together.

The polymer resin which is mixed with catalyst and accelerator which colors red by adding the coloring agent. Mixed polymer resin is applied on the OHP sheets after that E – glass fiber is placed over the OHP sheet. After placing the E – glass fiber the polymer resin is applied over the E – glass fiber. Then the S – glass fiber is placed over the polymer resin applied on the E – glass fiber. After placing the S glass fiber again the polymer resin is applied over the S – glass fiber.

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Glass fibre/polymer resin, E glass fibre/polymer resin, S glass fibre/E glass fibre/polymer resin composites were fabricated using hand layup method with reinforcement technique. The composite is to addition of E glass fibre with S glass fibre using polymer resin on the mechanical properties to be analysed from the coming results of Tensile strength, Impact strength and Hardness.

Guide: Dr. V. Kandavel, Associate Professor, Department of Mechanical Engineering, SSM Institute of Engineering & Technology, Dindigul-624 002, Tamilnadu.



V KANDAEL

Customer ID: XXXXX3033
 Registered Address: 49 J/4, Ravivarma
 Illam, Varadarajapuram, West
 Govindapuram, Dindigul,
 Dindigul, Tamil Nadu
 India
 PIN: 624001

Registered Mobile No: XXXXXXXXXXXX0018
 PAN: APEXXXXX3E
 Email ID: vkXXXXXX20@gmail.com;
 KYC Status: Updated

AXIS eDGE

Points for this Month	556
Total Balance	5816
Points As On Date	26-06-2022

Shop till you drop! Redeem your Axis eDGE Reward points for Instant e-Vouchers of Amazon, Flipkart, Myntra and many more. Login using Axis Internet Banking or Axis Mobile App. T&C* apply

Profile Completeness:



100%

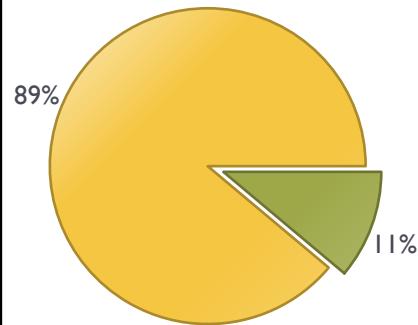
Relationship summary as on date 30-06-2022

Bank Account	CRN	Amount	Other Account	CRN	Outstanding Amount
Savings	INR	11,564.60	Loan Against Share	INR	0.00
Current	INR	0.00	Loan Against Deposit(s)	INR	0.00
Fixed Deposit	INR	0.00	Overdraft Account/s	INR	0.00
Recurring Deposit	INR	0.00			
FCNRB	INR	0.00			

Event Board

- 1 - Please Note: Fees & Charges applicable on Axis Bank Savings/Salary Accounts are revised w.e.f. 01-06-2022 and 01-07-2022. For details of the new fee structure, visit <https://www.axisbank.com/service-charges-and-fees>
- 2 - Please Note: Fees & Charges applicable on select Axis Bank Savings / Salary accounts is also been revised w.e.f. April 1st, 2022.
- 3 - Effective quarter ending June 2021, the interest accrued in your Axis Bank Savings Account for any current quarter will be credited to your savings bank A/c on the first day of the next quarter. However, the accrued interest will be considered as a part of your closing balance of the last day of current quarter so that there is no loss of interest income for you. As an exception to the above, the interest for the last quarter of the financial year will be credited on the last day of the quarter i.e. for Mar'22, quarterly interest will be credited into your Savings Account on 31-03-2022.

Break-Up of Spends on your Debit Card/s



Account No. XXXXXXXXXXXX1657 - Quick View

Account Type : Easy Access Salary Account
 Lien Amount : 0.00
 IFSC Code : UTIB0000352
 MICR Code : 625211004

Branch Name : Dindigul [Tn]
 Open date : 17-07-2014
 Currency : INR
 Nominee Name : Murugeswari K
 Average Balance Maintained : INR 15,012.83

Detailed Statement for a/c no. XXXXXXXXXXXX1657 between 01-06-2022 to 30-06-2022

Account Statement					
Txn Date	Transaction	Withdrawals	Deposits	Balance	Other Information
	Opening Balance			21084.41	
01-06-2022	UPI/P2M/215230218395/SVR STORE/Yes Bank /Svr	200.00		20,884.41	
02-06-2022	IMPS/P2A/215313912072/KANDAEL/STATEBAN/MOBLTA01		14,000.00	34,884.41	
02-06-2022	UPI/P2A/215355177850/PANDIARAJ/UCO Bank/Kalan sm	65.00		34,819.41	
02-06-2022	UPI/P2A/215355248182/Mr SARAVA/Central B/Chit ju	1,000.00		33,819.41	
03-06-2022	ATM-CASH/ANNA NAGAR - DINDI/DINDIGUL/030622	3,000.00		30,819.41	
03-06-2022	UPI/P2M/215478291346/ASAIPRIYA/Axis Bank/M	30.00		30,789.41	
04-06-2022	BRN-PYMT-CARD-4400060108039837	27,098.01		3,691.40	
04-06-2022	IMPS/P2A/215515744590/KANDAEL/STATEBAN/MOBLTA14		2,478.00	6,169.40	
04-06-2022	UPI/P2M/215511407508/SVR STORE/Yes Bank /Svr	546.00		5,623.40	
05-06-2022	UPI/P2A/215632169277/MAYILVADI/State Ban/Cable j	250.00		5,373.40	
06-06-2022	UPI/P2A/215752575585/MURUGESAN/Karur Vys/Mathis	100.00		5,273.40	
06-06-2022	NEFT/415998618/V KANDA/ICICI B/NEFT//V/k/KANDAEL		2,000.00	7,273.40	
07-06-2022	BRN-PYMT-CARD-4514570024032818	5,612.90		1,660.50	
09-06-2022	UPI/P2M/216024567132/CREAMS CA/Yes Bank /Pizza	210.00		1,450.50	
09-06-2022	UPI/P2A/216081337678/NAMBIRAJ /DBS Bank /balance		428.00	1,878.50	
11-06-2022	BY CASH DEPOSIT-BNA/CWRO35205/4242/110622/DINDIGU		14,000.00	15,878.50	
11-06-2022	ECOM PUR/LIC/Mumbai/110622/12:08	3,062.00		12,816.50	
12-06-2022	UPI/P2A/216384032913/Mr PMurug/Indian Ba/Kandave	5,000.00		7,816.50	
12-06-2022	POS/AVENUE FOOD PLAZA/DINDIGUL/120622/19:20	25.00		7,791.50	
13-06-2022	UPI/P2M/216420403895/SVR STORE/Yes Bank /Svr	57.00		7,734.50	
15-06-2022	UPI/P2A/216651942340/Mrs Sumat/Indian Ba/school		10,000.00	17,734.50	
15-06-2022	UPI/P2M/216664023809/KARTHIK M/Axis Bank/Headset	200.00		17,534.50	
16-06-2022	SREENIVASA INST/Exam Remuneration SITAMS		1,500.00	19,034.50	
16-06-2022	TRANSFER/TB/25-623503209-19/SSM INSTITUT/SSM402712		7,500.00	26,534.50	

16-06-2022	IMPS/P2A/216720077640/TAMILN/TAMILNA/X3I 1496/	10,005.90		16,528.60	
18-06-2022	UPI/P2A/216932240755/ROBIN ROM/Canara Ba/C	29.00		16,499.60	
18-06-2022	UPI/P2M/216948297074/S S M AGE/Yes Bank /P	200.00		16,299.60	
19-06-2022	GST @18% on Charge	9.00		16,290.60	
19-06-2022	Consolidated Charges for A/c	50.00		16,240.60	
19-06-2022	UPI/P2M/217066101981/VIJAYAKUM/Yes Bank /A	121.00		16,119.60	
22-06-2022	POS/POOCHENDU FILLING/Dindigul/220622/08:39	200.00		15,919.60	
23-06-2022	UPI/P2A/217454379404/BILAL I/HDFC BANK/Photo	80.00		15,839.60	
24-06-2022	UPI/P2A/217574983227/MURUGESAN/Karur Vys/Mathis	30.00		15,809.60	
25-06-2022	UPI/P2A/217682163000/SENDHILMU/Indian Ov/Chit ju	3,800.00		12,009.60	
25-06-2022	UPI/P2A/217682168399/GOOGLEPAY/Axis Bank/UPI		3.00	12,012.60	
25-06-2022	BY CASH DEPOSIT-BNA/CWRO35205/6925/250622/DIND IGU		35,000.00	47,012.60	
25-06-2022	UPI/P2A/217693943178/RAJA BHAR/Karur Vys/Ck	80.00		46,932.60	
27-06-2022	NEFT/MB/AXMB221789447125/V KANDAV/KARUR V/family	35,000.00		11,932.60	
28-06-2022	UPI/P2M/217962896210/M SUNDAR/Yes Bank /Masal	50.00		11,882.60	
28-06-2022	UPI/P2M/217963039680/SVR STORE/Yes Bank /Svr	162.00		11,720.60	
29-06-2022	UPI/P2M/218074798013/MURUGAN M/Paytm Pay/UPI	136.00		11,584.60	
29-06-2022	ECS/Ren/Premi/FY22-23/471920/TATA AIG General Ins	20.00		11,564.60	
	Closing Balance			11,564.60	

Break-up of consolidated charges for(May - 2022) for Account Number : XXXXXXXXXXXXXXX1657

Sr.No.	Type of Fee	Amount	Additional Information
I	BNA Convenience Fee	50	

The fees above may have elements of previously unrecovered charges/fees. Service tax is excluded.

Tariff Plan / Key Fees for EASY ACCESS SALARY ACCOUNT

Account Service Fee : Rs. 100 per month	If salary is not credited for 3 consecutive months, the account will be converted to a suitable savings account and Account Service Fees & full KYC will apply
Cash Transaction Fee: Rs.5 per 1000 or Rs.150 whichever is higher	Monthly Free Limit: First 4 Transactions or Rs.1.5 lakhs whichever is earlier. Cash transactions at Non-Home Branch: Upto Rs.25000 per day.
DD/PO Fee: Up to Rs.10,000 - Rs.50 ; Above Rs.10,000 - Rs.5 per Rs.1,000 (Min. Rs.75 ; Max. Rs.10,000)	You get 1 DD/PO per month
Value Added SMS Alert Fee: Rs.15 per quarter	Entitles you to a host of updates apart from transaction alerts. To unsubscribe, visit your branch
Above free limits: Rs. 4 per leaf	You get One multicity Cheque Book Free per quarter (20 leaves). Hint: You can alternatively use NEFT for fund transfer for a nominal charge.

Legends used in the Statement			
ICONN	Transaction through Iconnect PUR Purchase using the debit card	PUR	Purchase using the debit card
AUTO SWEEP	Transfer to linked Fixed Deposit RATE	RATE.DIFF	Difference in rates on usage of card internationally
REV SWEEP	Interest on linked Fixed Deposit	CLG	Cheque Clearing transaction
SWEET TRF	Transfer from linked Fixed deposit / Account	EDC	Credit through EDC machine transaction
VMT	Visa money transfer through ATM	SETU	Seamless electronic fund transfer through Axis Bank
CWDR	Cash withdrawal through ATM	Int. Pd.	Interest paid to customer
TIP/SCG	Surcharge on usage of debit card at petrol pumps/railway ticket purchase or hotel tips	Int. Coll.	Interest collected from the customer
BRN	Branch	MMT	MasterCard money transfer through ATM
TD	Term Deposit	INT	Interest
SI	Standing Instructions	INB	Internet Banking

Premature Encashment Of Term deposit

For Rupee Term Deposits of a contracted amount less than Rs. 5 crores opened/renewed on or after May 1, 2014 (including Flexi Deposits), interest rate will be 1.00% below the card rate, prevailing as on the date of deposit, as applicable for the period the deposit has remained with the bank. However, for Rupee Term Deposits closing within 7 days from the date of booking of the deposit, no interest will be applicable and for Rupee Term Deposits closing within 7-14 days from the date of booking of the deposit, the interest rate will be the rate applicable for the period the deposit has remained with the bank.

For Rupee Term Deposits of a contracted amount less than Rs. 5 crores opened/renewed on or after December 15, 2017 (including Flexi Deposits), for the first partial withdrawal with value <= 25% of the Term Deposit's original principal value, Premature Closure Penalty Rate will not be applicable. For subsequent partial withdrawals, Premature Closure Penalty Rate will be applicable on the entire withdrawal amount. For the partial withdrawal with value > 25% of Term Deposit original principal value, Premature Closure Penalty Rate will be applicable for the entire withdrawal amount. However, for Rupee Term Deposits closing within 14 days from the date of booking of the deposit, the interest rate shall be the rate applicable for the period the deposit has remained with the bank.

For Rupee Term Deposits of a contracted amount of Rs 5 Crores and above, interest rate shall be 1% below the card rate prevailing as on the date of deposit, as applicable for the period the deposit has remained with the bank. This would also be applicable on Rupee Term Deposits closed within 14 days from the date of booking of the deposit.

In case the depositor desires to renew the deposit by seeking premature closure of an existing term deposit account, the Bank will permit renewal at the applicable rate on the date of renewal, provided the deposit is renewed for a period longer than the balance period of the original deposit. While prematurely closing a deposit for the purpose of renewal, interest on the deposit for the period it has remained with the bank will be paid at the interest rate on the date of deposit applicable for the period the deposit has remained with the bank.

Disclaimer

The a/c balance will be taken as correct unless any discrepancy is notified to us immediately. The closing balance includes Credit balance &/or overdraft and funds which are under clearing. It excludes the amount marked as lien, if any. (A legal claim against an asset which is used to secure a loan and which must be paid when the property is sold. Liens can be structured in many different ways.). 'Value date' is the effective date of Credit/Debit in the account. Axis Bank does not send requests for IDs, Passwords, account numbers, or other sensitive financial information by e-mail/SMS. If you receive a message of this type that appears to be from Axis Bank or related to an Axis Bank product or service, please do not respond. Send a copy of the message and any related details to IT.Helpdesk@axisbank.com. Service fee will be levied in case of average balance non-maintenance, as applicable. Not maintaining of average required balances will attract charges as per our current charge structure. The features of your Account & its charge structure are available on the website www.axisbank.com. You may please contact your nearest Axis Bank branch for further details. For accounts in Salary power scheme - In case monthly salary is not credited for more than 3 consecutive months, the account will be treated as normal Savings Account & all charges shall be levied as applicable. Also, the Know Your Customer must be complied with & documents are to be submitted. All products and services of the Bank are subject to applicable law and regulations and would be modified / discontinued based on the prevailing law / regulation at any point of time and the Bank shall not be under any liability or obligation or continue with the products and services till such time the terms are modified by the Parties as per the prevailing/ amended law at that point of time. In the event, that the products and services of the Bank cannot be continued without total compliance of the prevailing law at any point of time, the products and services of the Bank shall be deemed to be terminated forthwith from the date when the amended law restricting / prohibiting the products and services of the Bank comes into force.

- Never share your password/ PIN/ OTP / Card and account details with anyone in person or on call or digitally.
- Do not click on link from unknown/ unsecured sources that seek your confidential information .

Please click the link provided for GST details of Axis Bank -

http://campaign.axisbank.com/generic/Axis_Bank_GST_Migration_details.pdf

Customers are advised to update PAN details through the following ways in case the same is not already updated

- **Internet Banking:** Login to Axis Internet Banking> Side Menu Bar> Contact Details> Update PAN
- **Mobile Banking:**
 - **Android:-** Login to Axis Mobile Banking> Side Menu Bar> Insta Services> Update PAN
 - **iOS:-** Login to Axis Mobile Banking> Side Menu Bar> Manage> Request> Insta Services> Update PAN
- **phone Banking:** Contact us on our customer care number 1860 419 5555, 1860 500 5555 to update the PAN details

Deposit Insurance and Credit Guarantee Corporation (DICGC) insurance cover is applicable in all Banks' deposits, such as savings, current, fixed, recurring etc* up to maximum amount of Rs 5 Lakh including principal & interest both*.

(* or exceptions and details please refer <http://www.dicgc.org.in/>).

In compliance with regulatory guidelines, the non-CTS cheque books attached to the accounts would be destroyed in banks core banking System. Thus, Non CTS cheques will not be valid for CASH, Clearing and Transfer transactions.



TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

GOVERNMENT OF TAMILNADU



CERTIFICATE

This is to certify that **Mr. Adithyan. B, SSM Institute of Engineering and Technology, Dindigul-624 002** has successfully completed the project titled "**Investigate the mechanical properties of E-glass fibre & S-glass fibre reinforced with polymer matrix composites**" in the Sector **MECHANICAL ENGINEERING** under **STUDENT PROJECTS SCHEME** sponsored by the Council during the academic year 2021-2022.

DR.R.SRINIVASAN
Member Secretary

Chennai-600 025
25.11.2022
No.EME-0388/2022



TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

GOVERNMENT OF TAMILNADU



CERTIFICATE

This is to certify that **Mr. Aktharali. S, SSM Institute of Engineering and Technology, Dindigul-624 002** has successfully completed the project titled "**Investigate the mechanical properties of E-glass fibre & S-glass fibre reinforced with polymer matrix composites**" in the Sector **MECHANICAL ENGINEERING** under **STUDENT PROJECTS SCHEME** sponsored by the Council during the academic year 2021-2022.

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DR.R.SRINIVASAN
Member Secretary



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CERTIFICATE

This is to certify that **Mr. Afzal Ibrahim. M, SSM Institute of Engineering and Technology, Dindigul-624 002** has successfully completed the project titled "**Investigate the mechanical properties of E-glass fibre & S-glass fibre reinforced with polymer matrix composites**" in the Sector **MECHANICAL ENGINEERING** under **STUDENT PROJECTS SCHEME** sponsored by the Council during the academic year 2021-2022.

DR.R.SRINIVASAN
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25.11.2022

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CERTIFICATE

This is to certify that **Mr. Anand Albert Raja. A, SSM Institute of Engineering and Technology, Dindigul-624 002** has successfully completed the project titled "**Investigate the mechanical properties of E-glass fibre & S-glass fibre reinforced with polymer matrix composites**" in the Sector **MECHANICAL ENGINEERING** under **STUDENT PROJECTS SCHEME** sponsored by the Council during the academic year 2021-2022.

DR.R.SRINIVASAN
Member Secretary

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