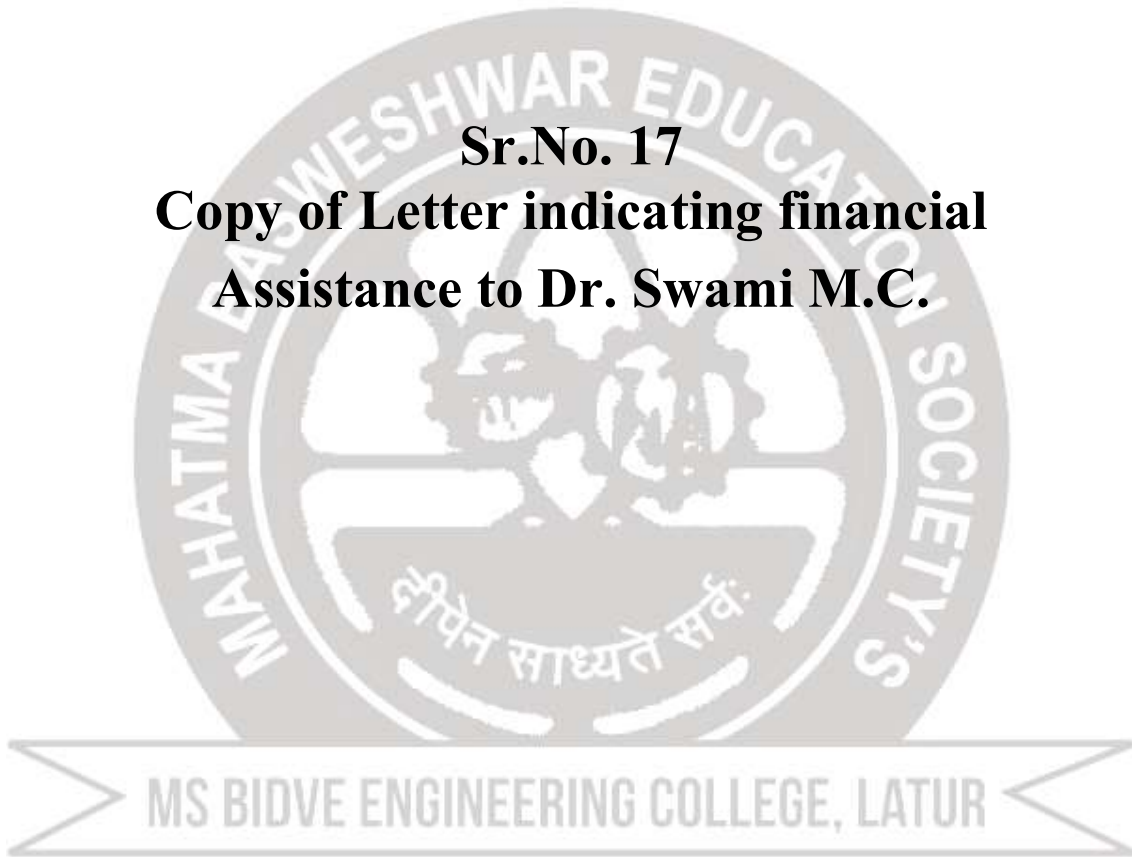


Sr.No. 17

**Copy of Letter indicating financial
Assistance to Dr. Swami M.C.**



19212

Cash-Voucher

Shri Mahatma Basweshwar Education Society's

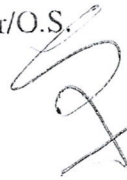
M. S. BIDVE ENGINEERING COLLEGE, LATUR

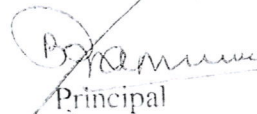
Expenditure Head Paper Publication in Date: 03.03.22
Scores index Journal

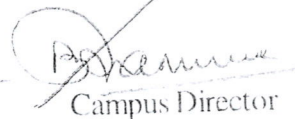
Full Name of the claimant Sudhanshu M.C.

Particulars	Rs.	Ps.	Signature
One Paper published in Elsevier Publication. of title "Sea water effect on the mechanical properties of glass reinforced composite with SiO ₂ & TiO ₂ filler" Total amount - Rs 7500 As per college policy 50% of amount will be refunded of total amount 7500 In Words Rs. <u>Three thousand seven hundred fifty only</u>	3,750/-		
Total Rs.	3,750		


Accountant


Registrar/O.S.


Principal


Campus Director

Date: 22-02-2022

To,

The Principal

M.S. Bidve Engineering College, Latur

Subject:- Regarding the refund of the published research paper

Resp. sir,

I, Swami M.C., have a paper published in a Scopus-indexed journal. "Sea water effect on the mechanical properties of glass reinforced composite with SiO_2 and TiO_2 filler," the title of the paper reads. I paid Rs 7500/- as registration/publication fees during the registration process. According to college regulation, I will receive a 50% refund.

As a result, please take the necessary steps to obtain a refund.

Thanking you,

TD
Shri Deshmukh / A/c section
As per resolution of LMC,
Act accordingly

Signature
22/2/2022

Signature
Yours faithfully

Ink Character 413002972
Code

Registered No

as on 14/09/2021 -5,79,945.54

Date (Value Date)	Narration	Ref/Cheque No.	Debit	Credit	Balance
15-Sep-21 (15-Sep-2021)	DEBIT CMP SBIMF SIP -6751841-346 G		1,000.00		-5,80,945.54
15-Sep-21 (15-Sep-2021)	TO TRANSFER INB RAZORPAY SFT PVT LTD NODA	11000046978916IGALZ1 CKO5 TRANSFER TO	7,500.00		-5,88,445.54
18-Sep-21 (18-Sep-2021)	BY TRANSFER Emp No 00440110 HRMS Medic al Bill Reimbursement	TRANSFER FROM 9815 4063035		2,829.00	-5,85,616.54
18-Sep-21 (18-Sep-2021)	BY TRANSFER Emp No 00440110 HRMS Medic al Bill Reimbursement	TRANSFER FROM 9815 4063035		1,007.00	-5,84,609.54

**This is a computer generated statement and does not require a signature

Print Back

<https://retail.onlinesbi.com/retail/printstatement.htm>

proceedings: (SCOPUS INDEXED), subjected to the peer review and recommendation of

CALL FOR PAPERS

1st International Conference on Design and Materials (ICDM) 2021

December 26-27, 2021

<https://sites.google.com/view/icdm-2021>

Department of Design, Delhi Technological University, India
Proceeding Approved in Materials Today Proceedings: Elsevier

TOPICS OF INTEREST

Materials behavior
Casting and solidification
Powder metallurgy and ceramic forming
Surface, subsurface, and interface phenomena
Coatings and surface engineering
Composite materials
Materials forming
Machining
Nanomaterials and nanomanufacturing
Biomedical manufacturing
Environmentally sustainable manufacturing processes and systems
Manufacturing process planning and scheduling
Meso/micro manufacturing equipment and processes
Modeling, analysis, and simulation of manufacturing processes
Computer-aided design, manufacturing, and engineering
Semiconductor materials manufacturing
Laser based manufacturing
Precision molding processes
Joining processes
Rapid manufacturing technologies
Nontraditional manufacturing
Nanofabrication, nanometrology and applications
Design support tools and methods
Industrial Design
Design information and knowledge
System Engineering Design
Design Organization and Management
Artificial Intelligence and Data-Driven Design

ELSEVIER
materials today
PROCEEDINGS

Scopus

1st International Conference on Design and Materials (ICDM) 2021 is being organized during December 26-27, 2021 by Department of Design (DoD) at Delhi Technological University (DTU), Delhi, India. The ICDM-2021 provides a forum to the best talents from the academia & research institutions, industry experts, designers, management professionals, engineers and executives to collaborate and address the current challenges, in order to explore new windows for discovery, innovation and advancements, promoting the contribution of Design and Materials for a sustainable future. The conference is also aimed to promote synergetic partnership between academia and industry and also to show case the growth of cutting edge technology developed in the field of Design and Materials in recent past. All full paper submissions will be peer reviewed and evaluated based on originality, technical and/or research content/depth, correctness, relevance to conference, contributions, and readability.

Members of Centre for Industrial Design and Ergonomics (CIDE), Delhi Technological University, Delhi also support and sponsor the ICDM-2021.

All the paper submitted in the conference will be published* in Materials Today proceedings. (SCOPUS INDEXED), subjected to the peer review and recommendation of reviewers.

*Registration and Paper presentation are essential

The mode of the presentation will be online as well as offline.

Paper submission Link: <https://www.editorialmanager.com/matpr/Default.aspx>

After logging in to the submission page, select "SI:ICDM-2021" from the drop down list

IMPORTANT DATES

Last Date of Submission	31.08.2021
Reviews/ Comments to Authors	30.09.2021
Revised Manuscript to be submitted by	15.10.2021

REGISTRATION DETAILS

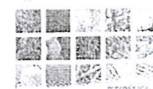
Category	Indian (INR)	Foreign (USD)	Indian (INR)	Foreign (USD)
	Till 31.08.2021		After 31.08.2021	
Student	7500	350	8500	400
Academicians	8000	350	9000	400
Industry	8500	350	9500	400

For General Queries:
write us at: 2021icdm@gmail.com

Thanks and Regards,

Prof. Ranganath M Singari, HoD (Department of Design),
Delhi Technological University, Shahbad Daulatpur, Bawana Road,
Delhi 110 042, India

materials



Sea water effect on the mechanical properties of glass reinforced composite with SiO_2 and TiO_2 fillers

Mahesh C. Swami^{a,*}, Balaji M. Dabade^b

^a Mechanical Engineering Department, M. S. Bidve Engineering College, Latur 413531, India

^b Production Engineering Department, S. G. S. Institute Of Engineering and Technology Vishampuri, Nanded 431606, India

ARTICLE INFO

Article history:
Available online xxxx

Keywords:
Silicon dioxide
Titanium dioxide
Sea water
Tensile
Flexural

ABSTRACT

In this project we determine the moisture absorption behavior and mechanical properties of GFRP composites filled with SiO_2 & TiO_2 . The composite prepared with glass reinforced vinyl ester with silicon Dioxide and Titanium oxide as a filler Materials by hand lay-up technique. The specimens are submerged for 56 days in artificial sea water then tested for mechanical properties. The studies show that SiO_2 and TiO_2 can be used for vinyl ester resin as a toughening modifier. After long term ageing of dry specimen the ultimate tensile strength is decreased by 28.46% & flexural strength decreased by 46.32%.

Copyright © 2022 Elsevier Ltd. All rights reserved.

Selection and peer-review under responsibility of the scientific committee of the First International Conference on Design and Materials (ICDM)-2021

1. Introduction

The fiber reinforced has been widely used in automobile, marine, structural industries due to their excellent physical and mechanical properties. Glass fiber reinforced polymer (GFRP) is widely used because of light weight, easy availability and corrosion resistant. Generally, moisture is absorbed in GFRP in sea water environment.

K. kalyan Krishna et al. [1] studied GFRP composite with combined Titanium and carbon filler by hand layup technique. They concluded that maximum value of young's modulus is 5% of filler addition. The water absorption is more with increasing filler content is compared with the unfilled composite. Ramesh Kumar Nayak et al. [2] experimented with Nano TiO_2 particles. They studied effect on thermal & other properties of GFRP with Nano TiO_2 filled composites. The experimental result shows that the coefficient of water diffusion improved by nine percent, inter-laminar strength by 8% & flexural strength by 19%. Susilendra Mutalikdesai et al., [3] this paper presents influence of various filler materials such as silica fume, fly ash, quartz powder and GGBS powder on GFRP composite. They concluded that flexural strength obtained maximum for fly ash followed by quartz powder, silica fumes and GGBS. Fly ash and silica fumes filled epoxy glass composites exhibited better resistance to water absorption as compared to other laminates. Sideridis, E. et al., [4] This paper presents effect of

water absorption on the flexural properties of iron filled composite laminates. Ya V. Lipatov et al [5] studied the influence of zirconia on mechanical and alkali resistive properties of basalt fibers. There is increases the alkali resistive by 37% due to less than 3.1 wt% of ZrO_2 . Also the alkali resistive and tensile strength of fibers reduces due to the addition of ZrO_2 more than 3.1 wt%. Naveed Anjum et. al, [6] studied effect of SiO_2 micro filler on different properties of GFRP. The experimental result shows that due to addition of SiO_2 filler material there is increase in mechanical properties of composite structure.

The TiO_2 filler is popular for its photo-catalytic nature and low harmful, while, The SiO_2 exhibits polyester aqua phobic and hydro-philic properties and thermal stability. The combination of these fillers give wide scope for use of different application.

The effect of fillers TiO_2 & SiO_2 on water absorption has been not studied for glass fiber reinforced polymers. The ageing is nothing but effect of sea water on composite specimen when specimen comes in contact with water [7]. Hence, an attempt is made in this literature to study artificial sea water effect on Mechanical properties of GFRP with the use of SiO_2 and TiO_2 fillers. Furthermore, percentage of moisture absorbed is also studied.

2. Material

- 1) Glass fiber of 300 GSM Bio woven roving
- 2) TiO_2 & SiO_2 Micro fillers
- 3) Vinyl ester Matrix with hardener and catalyst

* Corresponding author.

E-mail address: mcs@vsnl.com (M.C. Swami).

<https://doi.org/10.1016/j.matpr.2021.10.157>

2214-7853/Copyright © 2022 Elsevier Ltd. All rights reserved.

Selection and peer-review under responsibility of the scientific committee of the First International Conference on Design and Materials (ICDM)-2021