



**CONTENTS**

*	<b>Achievements</b>	<b>02</b>
*	<b>Faculty Activities</b>	<b>03</b>
*	<b>Department Activities</b>	<b>05</b>
*	<b>Student Activities</b>	<b>09</b>
*	<b>Student Article</b>	<b>15</b>

## ACHIEVEMENTS

### FACULTY ACHIEVEMENTS

1. Dr.M.Shahul Hameed received an AICTE STTP titled on “Advanced Concrete Technology” grant Rs. 2,75,000.
2. Mr.Venkada Subramanian has completed NPTEL online course on “Integrated Waste Management for a Smart City” with score 91%.

### STUDENTS ACHIEVEMENTS

1. Ms. V. Abarna has got ISTE Chapter- Best student Award.
2. Mr. B. Yogash has got SPT- 2<sup>nd</sup> Prize & Award.



Our student Ms. V. Abarna, IV year, Civil Engineering achieved ISTE Chapter - Best student Award on 19<sup>th</sup> ISTE Chapter @ PSG Institute of Technology and Applied Research

**FACULTY ACTIVITIES****JOURNALS**

1. Josephine Kelvina Florence, S., Renji, **K., Subramanian, K.**, “Estimation of strains in composite cylindrical shells in a statistical energy analysis framework” *Applied Acoustics* 155 (2019) 453–462.
2. Karthik Prabhu.T, **Subramanian.K**, Jagadesh.P, Nagarajan.V, “Experimental Investigation On Concrete With Replacement Of Fine Aggregates With Steel Slag” *Romanian Journal of Materials* 2019, 49 (3), 394 -399.
3. **Arun Raja, L., Shahul Hameed, M.**, “Experimental Investigation on Reron Fibre Reinforced Self Compacting Concrete using Silica Flour and M-Sand”. *International Journal of Current Engineering and Scientific Research*, Volume 6, Issue 12, ISSN (ONLINE:2394-0697), ISSN Print:2393-8374, DOI:10.2176/ijcesr, Dec 2019.

**CONFERENCES**

1. **Mahendran, K., Shahul Hameed, M.**, “An Experimental investigation on mechanical, physical and chemical properties of materials used for pile foundation” *International Conference on Sustainable Development in Energy and Environment*, July 2019, Kamarajar College of Engineering and Technology, Virudhunagar..
2. **Mahendran, K., Shahul Hameed, M.**, “Non-destructive test study on high strength reactive powder concrete” *International Conference on Sustainable Development in Energy and Environment*, Kamarajar College of Engineering and Technology, Virudhunagar, July 2019.
3. **Arunraja, L., Shahul Hameed, M.**, “Influence of hypo sludge in concrete” *International Conference on Sustainable Development in Energy and Environment*, July 2019, Kamarajar College of Engineering and Technology, Virudhunagar.

4. **Venkada Subramaian, M.**, “Prediction of anaerobic biodegradability by MAT lab assisted models for the assessment of bio-fuel production in marine macro algal biomass” *International Conference on Sustainable Development in Energy and Environment*, July 2019, Kamarajar College of Engineering and Technology, Virudhunagar.
- 5.

**FACULTY PROGRAMMES ATTENDED**

Name of the faculty	Name of the Programme	Date
Ms.S.Bharathi	A six days FDP on“ Instructional design and delivery system”	04-11-2019 to 09-11-2019
Mrs.K.Ranjitha	A six days FDP on“ Instructional design and delivery system”	04-11-2019 to 09-11-2019
Ms.K.Priyanka	A six days FDP on“ Instructional design and delivery system”	04-11-2019 to 09-11-2019
Mrs.A.Dhanalakshmi	Five days hands on training on "ETABS"	22-11-2019 to 26-11-2019

**PATENT PUBLICATION**

Name of the Faculty Members	Title of the invention	Date of publication
Dr. M. Shahul Hameed Dr. B.G. Vishnuram Mrs. A. Dhanalakshmi Mr. L. Arunraja Mr. S. Lakshmi Narayanan Mr. S. Karthik Rangunath Ms. N. Saranya Mr. S. Vijaya Baskar	PREFABRICATED FERRO- FOAM CONCRETE DOORS	29/11/2019



**DEPARTMENT ACTIVITIES**

1. Inauguration of Civil Engineering Association on 07.06.2019 by Dr. Manu Santhanam, Professor Building Construction and Management Division, IIT Madras.



2. Workshop on Non Destructive Testing of Concrete on 28.06.2019 by Dr. K. Subramanian, Professor, PSR Engineering College.



3. Seminar on Deep Foundation on 06.07.2019 by Dr. R. Ayyothiraman, Professor Department of Civil Engineering, IIT Delhi.



4. Guest Lecture on Durability of Concrete Structures on 25.07.2019 By Dr. V. S. Saraswathy, Chief Scientist Corrosion and material Protection, CECRI, Karaikudi.





5. Alumni Interaction Program on 08.08.2019 By Mr. V. Vigneshraj, Site Civil Engineer, McLaren Construction LLC, Dubai.



6. Guest Lecture on Building Analysis and Design on 26.08.2019 By Dr. S. Nagan, Professor, Department of Civil Engineering, Thiagarajar College of Engineering, Madurai.





7. Workshop on Mix Design of Concrete on 05.09.2019 By Dr. K. Muthukumaran, Professor Department of Civil Engineering, NIT Trichy.



8. Hands on training on STAAD PRO on 13.09.2019 By Dr. P. Kathirvel, Professor, Department of Civil Engineering, Kamaraj College Of Engineering and Technology, Virudhunagar.



**STUDENTS ACTIVITIES**  
**EVENTS PARTICIPATED**

**WORKSHOPS****IV Year**

S.No.	Name	Title	Date	Place
1.	R.Dhanapal	National level technical workshop, Coimbatore Institute of Technology	20.9.2020	Coimbatore Institute of Technology, Coimbatore

**III Year**

S.No.	Name	Title	Date	Place
1.	J.N.Puvaneshwaran E.Vipurajan B.Yogash	Total Station (Workshop)	13.09.2019	Department of Civil Engg in National Engg College, kovilpatti
2.	J.N.Puvaneshwaran E.Vipurajan B.Yogash	Soil Penetration (Workshop)	13.09.2019	Department of Civil Engg in National Engg College, kovilpatti

**SYMPOSIUMS****IV Year**

S. No.	Student Name	Prize Won	Event Name	Date	Institution
1	V.Abarna N.Nivethitha P.Kaleeswari	2 nd prize	SHERLOCK HOLMES	13.09.2019	Department of Civil Engg in National Engg College, kovilpatti
2	V.Abarna N.Nivethitha P.Kaleeswari	2 nd prize	BRAIN TEASER	13.09.2019	Department of Civil Engg in National Engg College, kovilpatti

**III Year**

S. No.	Student Name	Prize Won	Event Name	Date	Institution
1	M.Karthikeyan S.Matharamoorthy	I st prize	TREASURE HUNT	13.02.2020	Department of computer science and engineering, P.S.R.Engineering College, Sivakasi.
2	T.Vasantha ruban	Participated	National level Technical Workshop	7.09.2019	P.S.R Engineering college, Sivakasi.



**SEMINARS**

<b>Year of Study</b>	<b>Event Name</b>	<b>Student Name</b>	<b>Date</b>	<b>Institution</b>
IV	Seminar(Third Generation waste biomass degradation & solid Waste Management using GIS)	R.Saravana P.Thangapandi S.Ramya V.Subashini C.Sindhu M.Sridhar G.Durka	10.10.2019	Vel Tech (R&D institute of scienceand Technology)
III	Seminar(Third Generation waste biomass degradation & solid Waste Management using GIS)	R.Sathish kumar R.Thenmozhi P.Shalini M.k.Suveka M.Varalakshmi M.Karthikeyan J.N.Puvaneshwaran S.Karthick kumar S.Manthra moorthy M.Dhinesh B.Yogash P.Uthaya kumar S.Sureka S.Niranjana J.Palaninathan	10.10.2019	Vel Tech (R&D institute of scienceand Technology)

**INTERNSHIP**

<b>Name of the Students</b>	<b>Year</b>	<b>Organization</b>	<b>Date</b>
S. Mathan Kumar M. Mari Raja R.Mano K.Mari Kumar	IV	National Highway	30.04.2019 to 14.05.2019
N.Kowiska V.Murugaveni S.Nirajana P.Shalini K.Suveka S.Sureka M.Varalakshmi	III	PUBLICS WORKS DEPARTMENT, WRO	(07.06.2019 to 27.06.2019)

**CENTER OF EXCELLENCE PROGRAMS**

**The Department of Civil Engineering has organized following value added course to our students**

<b>Sl. No</b>	<b>Year</b>	<b>Course Name</b>	<b>Training Dates</b>
1.	2019	TOTAL STATION / GIS	16.07.2019 to 26.07.2019
2.	2019	STADD PROV8	29.06.2020 TO 14.07.2020

## NPTEL COURSES

S.No.	Name of the Students	Year	Name of the Course	Date of Completion
1.	Divya Lakshmi S	III	Concrete Technology	12 week
2.	Yogash B	III	Concrete Technology	12 week
3.	Sureka S	III	Concrete Technology	12 week
4.	Vishnuram M	IV	Design of Reinforced Concrete Structures	12 week
5.	Suresh Kumar V	IV	Design of Reinforced Concrete Structures	12 week
6.	Sathish S	IV	Principles of Construction Management	8 week
7.	Santhiya I	IV	Principles of Construction Management	8 week
8.	Udhaya Nantha S	IV	Principles of Construction Management	8 week
9.	Susindran	IV	Principles of Construction Management	8 week
10.	Sankarasubbu J	IV	Principles of Construction Management	8 week
11.	Karthickkumar S	IV	Principles of Construction Management	8 week
12.	Velci Sridevi PA	II PG	Advanced Concrete Technology	8 week



**SPORTS**

<b>S. No.</b>	<b>Roll No.</b>	<b>Name of the Student</b>	<b>Price Won</b>	<b>Zonal</b>	<b>Date</b>
1.	16CE065	P.Vigneshwaran	Ist - 200 mts	Anna University Zonal Athletic meet (2019-2020)	03.10.2019 to 05.10.2019
2	16CE065	P.Vigneshwaran	Ist - 400 mts Relay	Anna University Zonal Athletic meet (2019-2020)	03.10.2019 to 05.10.2019
3.	16CE065	P.Vigneshwaran	Ist-100 mts	Anna University Zonal Athletic meet (2019-2020)	03.10.2019 to 05.10.2019

## STUDENT ARTICLE

### **An Experimental Study on Corrosion Initiative of Infused Reinforcing Bar in Concrete**

Durability of concrete is the essential property for the lifespan of concrete structures. Rusting of steel is the major factor responsible for the loss of durability property. In order to study the corrosion behaviour of three types of reinforcing bars like Thermo-mechanically treated bar(TMT), Corrosion resistant steel (CRS), Epoxy coated rebar(ECR) were experimentally studied. The reinforcing bars having 12 mm diameter were infused in 300×300×75 mm size of concrete slab samples were kept under room temperature and certain samples are spraying with 3% of NaCl solution to attain a simulated marine exposure condition. There are various techniques including Open circuit potential (OCP), Linear polarisation resistance (LPR), Electrochemical impedance spectroscopy (EIS) are used to monitorize the corroding performance of samples. On analysing the results of the electrochemical studies, it could be inferred that the efficient rebar to withstand the corrosive nature by improving the life expectancy of the concrete structure.

As indicated by IS 1489 (Part I) – 1991, the Portland Pozzolana concrete of 53 grade and the properties of PPC utilized is introduced, Coarse aggregates under Zone II of 12mm and 16mm size by extents of 40 % and 60 % and fine total under 4.75 mm size of Zone I adjusting to IS 383 – 2016 alongside proportion of 1 : 2.02 : 3.5 with water concrete proportion of 0.5 were used to make the samples. The 28 days compressive quality of cement was got as 36.9 MPa. The rebar of TMT, CRS and ECR was adjusted to ASTM A615/A615M-18 [17], ASTM A1035/A1035M – 19 [18], ASTM A775/A775M – 17 having 12mm measurement of Fe500D are utilized. The rebar of 250 mm length was bound to a copper wire to get further investigations. Initial lengths and weights of steel rebar were estimated using a balance with 0.01 g sensitivity. The slab of 300 x 300 x 75 mm size is cast alongside steel bar infused from the depth of 25mm from the top. Each rebar is ought to be cleaned by pickling using sulphuric acid to eliminate the rust on the rebar. The samples with infused steel bars were exposed to room temperature and also some more samples are kept to a cyclic state of four days of wetting by showering 3% NaCl arrangement followed by three days of drying in the outside. This redundant exchanging wet–dry introduction at high-recurrence will quicken the erosion commencement which is fundamental to screen just as to comprehend the corrosion condition of the concrete structure upkeep.

The corrosion execution of the rebar doesn't give a consistent rate in electrochemical cycle with fluctuating in rate alongside time. This is depicted by high starting changes in the open circuit potential readings which inevitably balanced out to a steady rate. The OCP drop from latent to dynamic state was most minimal for ECR in examination with the TMT and CRS. On comparing the rebar corrosion current worth ECR is less contrasted with other rebar that it will take time to attain corrosion than others. The LPR shows that  $R_p$  range for ECR is higher than TMT and CRS. The EIS strategy was utilized to evaluate the corrosion states of solid samples regarding  $I_{corr}$  in mm/yr and mils/yr. The outcomes in EIS study expresses that  $R_{ct}$  and  $C_{dl}$  estimations of ECR is vary from other rebar by increment in  $R_{ct}$  qualities and abatement in  $C_{dl}$  values compared with the TMT and CRS rebar.

Ms.PA. Velci Shridevi,  
II year PG



## STUDENT ARTICLE

*The Rise of the Advanced Prefabricated Buildings*

Developers, general contractors and subcontractors swap stories that sound too good to be true about prefabricated construction: a student housing project that cut its delivery time by a third or a hospital that installed hundreds of bathrooms in three days with only five labourers. Though the practice of off-site construction dates back thousands of years, the last real estate cycle has pushed prefabricated construction to prominence.



**Prefabricated house construction**

The prefabricated building market is likely to grow significantly due to the rise in infrastructure development and the growth in residential and commercial sectors. Prefab houses are affordable and can be built in less time, which is expected to positively influence the market in the APAC region due to the growing middle-class population and rapid urbanization. Prefab buildings are energy-efficient and high on sustainability. The increasing awareness of construction wastage on the environment has driven people worldwide to adopt the green buildings concept, which is expected to bolster the market, especially in developed regions. A government-sponsored initiative in developing countries to provide affordable houses in less time is another major factor affecting growth. Prefabricated construction provides structural strength that allows buildings to withstand earthquakes. Hence, prefab buildings are likely to generate demand from seismic-sensitive countries such as Japan, China, Iran, Indonesia, Turkey, Mexico, and Nepal.

The following factors are likely to contribute to the growth of the prefabricated building market during the forecast period:

- Mass Township Projects
- Shifting Focus: Profit, People, planet
- Increase in Demand for Branded Designers
- Expansion of Prefabricated Market
- Big Opportunity in Developing Countries

The study considers the present scenario of the prefabricated building market and its market dynamics for the period 2019-2025. It covers a detailed overview of several market growth enablers, restraints, and trends. The study offers both the demand and supply aspects of the market. It profiles and examines leading companies and other prominent companies operating in the market.

The prefabricated building market is highly fragmented, with several local and international players in the market. The competition among these players is intense. The rapidly changing technological environment is expected to adversely affect vendors as customers expect continual innovations and upgrades in construction. The present scenario is driving vendors to alter and refine their unique value proposition to achieve a strong industry presence. The market concentration in developed countries such as the US and Western European countries is high. At the same time, the industry is in its nascent stage in developing economies such as China and India. The competition between vendors exists on the basis of offerings and pricing. The competition is expected to intensify further with an increase in product extensions, technological innovations, and M&A. Leading international players are likely to expand their presence, especially in the fast-developing countries in APAC and Latin America, to gain more share. Besides, improving global economic conditions is likely to fuel the growth of the market.

- Mr. J.N.Puvaneshwaran  
III Year Civil

## *EDITORIAL BOARD*

### *Patron*

: Thiru.R.Solaisamy, Correspondent

: Er.S.Vigneshwari Arunkumar, Managing Trustee

### *Co-Patrons*

: Dr.B.G.Vishnuram, Principal

: Dr.P.Marichamy, Dean

### *Convener*

: Dr.M.Shahul Hameed, Dean Research & Head/Civil

### *Staff Advisory Committee*

: Mr.S.Sowmya, Assistant Professor/Civil

### *Editors*

: Ms.V.Abarna (IV- Civil)

### *Co Editors*

: Mr. B.Yogash (III- Civil)

: Mr. J.N.Puvaneshwaran (III - Civil)