

CIVIL MAGAZINE

Engineering your dreams with us

September-2018

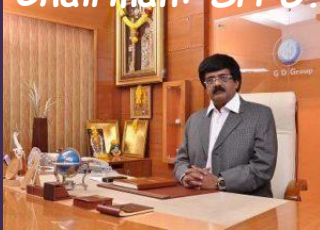
VISION

To Create Technically Competent, Research Oriented and Ethically Robust Civil Engineers to address the current and future challenges of the society

MISSION

- To Enhance proficiency in practical and theoretical concepts of Civil Engineering through a Supportive Environment
- To Promote Higher Education, Research and Entrepreneurship in Civil Engineering and allied fields to meet the needs of global environment
- To Create Civil Engineers of High Technical Competency with Ethical and Moral

Chairman: Sri G. Dayanand



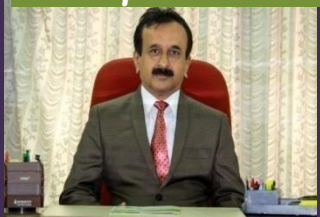
The "CE-Suddi" Newsletter of the Civil Engineering department is providing great space for the faculty and students to pen down their innovative ideas, imagination and perceptions to show case their creativity. So, I take the opportunity to congratulate the department of Civil Engineering and its editorial team to successful release of this issue. I am sure that students and faculty will find the content of this edition very interesting and educating.

Executive Director: Sri G. D Manoj



I am indeed happy to know that the Civil Engineering department has taken initiative in realizing its monthly newsletter "CE-Suddi" and urge faculties and students to make use of the platform to share and educate among themselves in publishing article pertaining to the emerging domain and articles of interesting. I congratulate the team of editorial community and department of Civil Engineering.

Principal's Desk



It is indeed very happy to bring out newsletter "CE-Suddi" by the Civil Engineering department. It is a platform provided by the Civil Engineering department for their students and faculty members where they can share the knowledge, experience and talents in terms of written articles and I would like to compliment and congratulate the department of Civil Engineering and its editorial team for the contribution in bringing out the newsletter.

Administrative Officer's Desk



It gives me immense pleasure to note that Civil Engineering Department bringing out the newsletter for the academic year 2018-19. I am sure this newsletter provides an opportunity to the student's and the faculty of the Civil Engineering department to project their talents through articles, reports of the various academic and extracurricular programmes. I congratulate the editorial Committee of the newsletter for their efforts.

HOD'S Desk



I am very happy to bring out the First issue of the Departmental newsletter "CE-Suddi". This newsletter outlines various activities that have taken place during the period July-December 2018 and the achievements of faculty and students. It is great to find a considerable number of articles, poems and art that certainly prove that our staff and students are adequately equipped and possess necessary skill sets to express their talent. Sincerely congratulate the Chairman, Principal, Administrative Officer and editorial team of the department for their unrelenting efforts in compiling this News Letter.

ABOUT THE DEPARTMENT

A warm and affectionate welcome the department of Civil Engineering at SCE. The Department emerged in the year 2014 and has endowed with quality and excellence to provide all facilities to each individual with an approved intake of 60 students.

In broad sense, Civil Engineering is a combination of various fields such as Structural Engineering, Environmental; Engineering, Highway Engineering, Geotechnical Engineering, Concrete Technology etc. Our Department has a team of qualified and experienced faculty members and well equipped laboratory. We are striving hard continuously to improve upon the quality of education and to maintain its position of leadership in engineering and Technology.



PROGRAMME EDUCATIONAL OBJECTIVES (PEO'S)

PEO 1: Apply fundamental and specialized technical knowledge and communication skills to find creative solution for technological challenges.

PEO 2: Take up advanced education and to engage in research and development in Civil engineering

PEO 3: Practice Civil engineering in a responsible, professional and ethical manner and implement eco-friendly sustainable technologies for the benefit of the industry and society

PEO 4: Enrich competence of graduates to implement emerging techniques for societal needs

PROGRAM SPECIFIC OUTCOMES

PSO 1: Expertise in Design and technical areas of Civil Engineering such as Design of RCC Structures, Design of Steel Structures, Design of Composite Structures Materials and pre-stressed concrete structures with a focus on research and innovation.

PSO 2: Ability of problem solving by adopting analytical, numerical and experimental skills with awareness of societal impact.

PSO 3: To apply the knowledge of environmental studies such as water supply engineering, sanitary and sewage engineering, industrial waste water engineering and to know the impact of environmental issues.

PSO 4: To comprehend and apply the ideas of Construction the executives, quality and authority.

Faculty List

Dr R L RAMESH.M.E.Ph.D
Professor & HOD

Mr.Rajiv T.M.Tech.(Ph.D)
Assistant Professor

Mr.Pramod K R.M.Tech.(Ph.D)
Assistant Professor

Mrs.Geetha T S.M.Tech
Assistant Professor

Mrs.Krupa T L.M.Sc
Assistant Professor

Mr. Akshay J.M.Tech.(Ph.D)
Assistant Professor

Mrs Suma N G.M.Tech
Assistant Professor

Mr.Raghavendra R.M.Tech
Assistant Professor

Mr.Dhruvaraj M S.M.Tech
Assistant Professor

Mrs Pallavi G A. M.Tech
Assistant Professor

Mrs.Navya N. M.Tech
Assistant Professor

Ms.Sanjana.G.M. M.Tech
Assistant Professor

In-house Events Organized

The technical talk on carrier opportunities by **VANI INSTITUTE** conducted on 5th September 2018 in presence of 5th, 7th semester students, and department faculties. The talk is on the following aspects, How to prepare for a successful interview, How to address certain questions that may arise in interview, Effective Job Search Techniques and some of the different approaches to becoming successful in searching for job that Institute offers are about Career Planning after Engineering, How to crack IES/GATE in 1st attempt. Finding job openings in PSU's (PGCIL, NTPC, BHEL, IOCL, NALCO...etc), Higher Education (M.Tech in IIT's, NIT's And M.S/MBA) and Career in Research Laboratories (DRDO, BARC, CSIR...etc).



The technical talk on Higher Education by RICS (Royal Institution of Chartered Surveyors) conducted on 11th September 2018 in presence of 7th semester students. The talk is about higher studies and job opportunities in RICS. The talk is given by Prof. Paul C. Charles Raj about Engineering contains a large number of job opportunities and specialties. With each specialty, RICS look at the definition and nature of the work, the specialties employment trends, possibly career advancement opportunities, for to spread the information among all, we are conducting a program entitled “Effective Career Planning for Engineering Students” designed and validated by academic advisory board of RICS.



“Engineers day” celebration on 29th September 2018 was held at seminar hall. The chief guest for the occasion of Engineers day was Dr. M.R.Pranesh (Retired Professor –IIT Madras) and He delivered a Technical talk on “Future development- Civil Engineering Interaction” on problems occurring due to the environmental pollution and the remedies for the upcoming construction problems by acquiring proper knowledge by using innovative teaching methodologies. He emphasized about the pollution that is existing in the current situation and gave the example of the LED pollution in juhu beach. The talk also included that several commissions were formed to overcome all the problems like, All India Knowledge commission- May 2018, Washington accord, United Kingdom made an area of sustainable curriculum (2004-2014) to enhance the knowledge such that it should be applicable when travelled to any part of the world.



WORLD WATER DAY

Water is the main constituent of earth's oceans, lakes etc. Water is basically a tasteless, odorless, colorless chemical substance that is used for multipurpose utilization. "World Water Day" celebration on 24th April 2018 was held at seminar hall. The chief guest for the occasion of World Water Day was Dr. Ramaraju H.K (Head of the Department Dayanand Sagar College of Engineering) and He delivered a Technical talk on "scarcity of Water". The main agenda of celebrating world water day is to create awareness regarding saving water for future use.

Students of Civil Engineering department also presented short movies which gave a message about saving water by avoiding unnecessary flow of water from the tap and rain harvesting.

The technical talk gave a tremendous knowledge about the comparison between the geographical survey map obtained in 1950 and the map in 2018, which lets us know the deforestation areas in our country and where exactly the problem of scarcity of water is. The talk also gave the precautions to be taken to prevent drought and conveyed the message about how one can overcome the problems in drought areas. Dr. Ramaraju H.K also gave enormous examples through his talks regarding saving water, rain harvesting, afforestation, and drought affected areas which has made a blue print in the minds of students, faculties regarding conserving water for present use and future use.

Everyone should know the importance of water, precautions to be taken to not to waste water, rain water harvesting and also will be put into practice for the betterment of individual and the betterment of the society.



Industrial Trip

Dr.T. Thimmaiah Institute of Technology, Oorgaum, Kolar Gold Fields- on 26th September 2018. The 3rd Semester students had an opportunity to gain practical knowledge of minerals and ore deposits; they also had a great chance to view different parameters to be observed in rocks.

In National Institute of Rock Mechanics (NIRM) KGF Dr. RajanBabu

(principal) gave a brief introduction about how they test the quality of the rocks using theUTM (universal testing machine). Students gain knowledge about how they extract a biodiesel using the Pongamia seeds. By this they prepare biodiesel, hand wash soap, cooking oil etc. Department of mining explained how actually mining will do in the mining area, how they transport the materials and gave air blocks for oxygen, safety measures will take inside the mining.



An Industrial visit to Thorekadanahalli Water Treatment Plant in Malavalli taluk of Mandya district and Shivanasamudram Solar Power Generation Plant on 14th November 2018. The 5th Semester students had an opportunity to gain practical knowledge of normal turbidity of raw water, high turbidity and pipe intake details. Shivanasamudram, which is Asia's first Hydroelectric station, is set to become a hub of solar power as Karnataka Power Corporation Ltd. (KPCL) is in the process of commissioning 10 MW grid-connected solar power plant .The installation of solar plant located near the Gaganachukki Waterfalls in Belakawadi village of Mandya district was awarded by Karnataka power Transmission Corporation limited to Bharath Heavy Electricals limited.



An Industrial Visit to Sewage Treatment Plant (Mylasandra) BWSSB on Friday 16th November 2018. 7th Semester students visited to Sewage Treatment Plant to interact about the treatment of sewage water. The treatment plant consists of Pre-treatment process like a) Primary Treatment b) Secondary Treatment c) Disinfection d) Sludge process. Also they visited to metro construction site near Kengeri, practically they got knowledge about I-section and detailing of the pier (intermediate column).Which was very useful for thorough understanding of theory concepts.

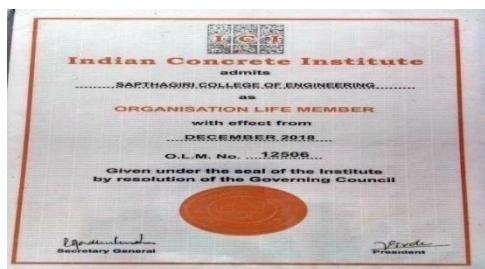


Student Participation and Achievements

1. **Chethan S Patil, Mamatha R, Benaka Kumar S** 8th semester Students participated in the event Tall Building Design Workshop held at Official Event Centre Government Engineering College, Ramanagar conducted on 25th and 26th October 2018.**Benaka Kumar S** got selected for final round in Mumbai.
2. **Chidanand B R**, 6thSemester student participated and got 2nd prize in the event sketching held at IKYA FIESTA 2018 organized by Nagarjuna College of Engineering and Technology on 26th and 27th October 2018.
3. **Ramesh K, V U Aishwarya V U, Ravikumar K S &Sushmitha**,8th semester Students participated in the event ODYSSEY and has secured the second place during the international level civil engineering Students Tech Symposium, NIRMAAN ICESS 2018, at BMS College of Engineering, Bangalore on 18th-19th November 2018
4. **Sushmitha A, Ramesh K,Sushma L, Sushmitha D N,Amrutha A G,Aishwarya V U** 8th semester Students participated in Concrete Fair 2018 organized by the Civil Engineering, R V College of Engineering in association with ICI Bengaluru Centre & ASCE Student Chapter-RVCE.
5. **Sharath V, KarthilKuttappa,Sushmitha D N,Yashaswini R, Keerthana K, Suma K H, Sushmitha A, Kemparajamma S, Amrutha A G, Archana R** has participated in International Design Competition 2018 conducted by CADD Centre Training Services Pvt. Ltd during September-November 2018.

Faculty Participation & Achievements

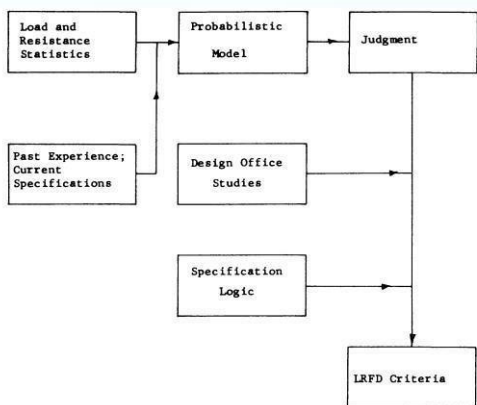
1. **Dr.R L Ramesh** participated in International Conference on Innovations in Concrete ICI-IWC 2018 held at NIMHANS Centre, Bengaluru on 20th-22nd September 2018.
2. **Dr.R.L.Ramesh** participated as DELEGATE in one day Seminar on “RERA and GST” (Real Estate Regulation and Development Act, 2016 & Goods and services Tax) on Thursday, 20th December 2018 at Capital Hotel. Bengaluru.
3. **Pramod K R** participated in International Conference on Innovations in Concrete ICI-IWC 2018 held at NIMHANS Centre, Bengaluru on 20th-22nd September 2018.
4. **Rajiv** Participated in two days workshop on “Design and Detailing of RC and Steel Structures ” held on 13th and 14th August 2018 at Brindavan College of Engineering
5. **Rajiv T** participated in one day workshop on “Brainstorm of good practice in Geotechnical Engineering” held on 27th October 2018 at New Horizon College of Engineering in association with Indian Geotechnical Society, Bengaluru
6. **Raghavendra R** participated in International Conference on Innovations in Concrete ICI-IWC 2018 held at NIMHANS Centre, Bengaluru on 20th-22nd September 2018.
7. **Rajiv T**” Growing greens on wall structures using waste water and bio-filter”, International Journal of Management Technology and Engineering, ISSN: 2249-7455; Volume 8 Issue X, October 2018.
8. **Raghavendra R** Successfully completed the course “Design of Reinforced Concrete Structures” in NPTEL Online Certification.



Indian Concrete Institute admits Saptagiri College of Engineering as ORGANIZATION LIFE MEMBER with effect from December 2018.

Faculty Article

KNOWLEDGE BOOSTER



Load and Resistance Factor Design, abbreviated as LRFD, is a scheme of designing steel structures and structural components which is different from the traditionally used allowable stress format. Emphasis was placed on the numerous sources on which this document stands. After the working stress and limit state method LRFD-type specifications are now appearing throughout the world. These specifications employ several resistance factors and load factors to account for the various types of uncertainties which underlie design. The reliability is to be interpreted as being "notional," i.e., it is a comparative concept. It should not be confused with actual structural failures, which are the result of errors and omissions. Only

the natural statistical variation of the parameters is included, and, as in other traditional specifications, human errors must be guarded against by other control measures. Basically, the LRFD Specification attempts, within the limits of the first-order probability theory used, to provide designs across the whole design parameter space, which have an approximately consistent reliability under a given load combination. For the first time a method is provided, and load factors are proposed, which would permit the design of building structures of all structural material types to be based on a common approach.

Pramod K R
Asst. Professor

Statue of Unity: Salient features of the world's 'tallest statue'

- Prime Minister Narendra Modiji unveiled the ‘Statue of Unity’ in Kevadiya town in Narmada district of Gujarat on the birth anniversary of Sardar Vallabhabhai Patel.
- This project was first announced on 10 October 2010 by the then Gujarat government by a special purpose vehicle-Sardar Vallabhabhai Patel Rashtriya Ekta Trust (SVPRET).
- The iron needed for the statue and other structures was collected from farmers of villages all around India in a form of donation of their used farming instruments.

Features of ‘Statue of Unity’:

- **Height**– 182 metres, this makes the statue almost twice the height of the iconic Statue of Liberty in New York.
- **Location**– around 3.5 km downstream from Sardar Sarovar dam, on an islet **Sadhu Bet** on the bed of River Narmada.
- **Cost**– Rs. 2989 crore.
- **Sculptor**– **Padmama Bhushan Ram V. Suthar**, a 93 year-old acclaimed sculptor.
- **Construction period**– 34 months work began on December 19, 2015.
- **Materials consumed**- 70,000 tons of cement, 18,500 tons of reinforcement steel, 6,000 tons of structural steel and 1700 tons of bronze which was used as outer cladding of the structure.
- **Specialities:** The statue is slender most at the base, which goes against the norms of what other tall statues have followed. The walking pose also opened up a gap of 6.4 metres between the two feet which then had to be tested to withstand wind velocity.
- It is constructed by L&T and has 5 zones of the statue. Up to its shin is the first zone, comprising three levels, including an exhibit floor, mezzanine and roof. This zone will contain a Memorial Garden and a large museum. Zone 2 extends up to the statue’s thighs at 149 metres, while Zone 3 goes up to the viewing gallery at 153 metres. Zone 4 comprises the maintenance area and Zone 5 the head and shoulders.
- Engineered to withstand wind speeds of up to 50 m per second (almost 180 km per hour wind speed)
- The viewing gallery can accommodate up to 200 people at a time.



Geetha T S
Asst. Professor

Students' Article & Art Gallery

Eco Bricks

The ECO Bricks are packing of plastic into bottles to make building blocks is a technique that has popped up organically around the world. The technique builds upon borders the bottle building techniques of German architect Andreas Froese (using sand-filled PET bottles) in South America in 2000. Later on Alvaro Molina began packing plastic into bottles on the island of Ometepe in 2003.



Construction

An Eco brick is made of a plastic bottle or container of some sort (including paper/laminate milk cartons) which has random plastic waste compressed inside it.

Criticism

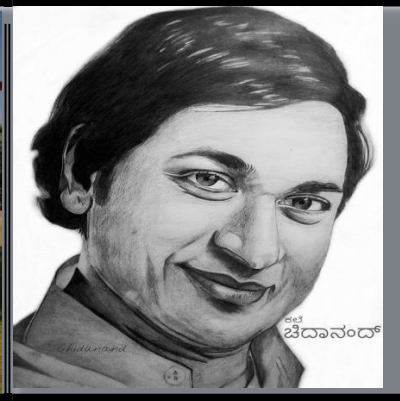
- It is un-decomposable and un-destructible
- On melting it releases a compound gas which is very harmful to the health and environment
- It weakens the ozone layer

Applications

- It is Economical than normal bricks used for construction
- The huge waste plastics can be used as construction material
- Protection of O-Zone

Yamini J

CV, 8th Sem



Chidanand.B.R 6thSem



Sanjay Kumar Shah 6thSem

"Go for civil engineering, because civil engineering is the branch of engineering which teaches you the most about managing people. Managing people is a skill which is very, very useful and applies almost regardless of what you do."

— Sir John Harvey Jones

Editorial Board



Chief Editor: Dr. R.L Ramesh
Professor & HOD



Co- Editor: Mrs. Geetha T S
Assistant Professor



Meghana A H
(8th Semester)



Chidanand B R
(6th Semester)



Sachin T S
(6th Semester)



Nikila R
(4th Semester)