



Civil Info

Civil Engineering
News Letter Volume-V Issue-II Aug-Sep (2018-2019)



"WHATEVER GOOD THINGS WE BUILD END UP BUILDING US "

Lateral Entry Students Admission:

Classes for lateral entry students have been started from 2nd august

72nd Independence Day Celebrations

We celebrate our Independence Day on 15th August every year. It is the day when we became independent from the foreign rule after a long and continuous struggle for freedom. The Prime Minister of India unfurls the National Flag over the Red Fort in Delhi on this day. He also addresses the nation from the ramparts of the Red Fort on this day which is broadcast over the All India Radio and telecast on Doordarshan.

After the flag hoisting, National Anthem is sung. A guard of honor is presented by the Armed Forces, the Police and the N.C.C., then guns fire to salute. Similar functions are held in all the State capitals and important towns and cities. The schools and colleges in the country also celebrate Independence Day.



In our college 72nd Independence Day had been celebrated patriotically. Our respected Chairman Sri. D Ravindranath Tagore Garu had hoisted National Flag. The teachers address the students and explain the importance of Independence. Students gave patriotic speech. There was a guard of honor by NCC students. On Occasion on Independence Day, cultural activities have been conducted by College Cultural Cell and students were given prizes on this auspicious day.



Fresher Day Celebrations

Civil Department organize fresher's party to the fresher's every year. This year we organized on September 1st. The main aim of this party is to give a warm welcome to the new comers. Such parties not only build their confidence but also add creativity to their levels. It is accompanied with so many colorful events and programs like ramp walk, traditional, fusion, and western dances, exhilarating singing performances, and splendid decoration, thus making it a soulful evening.

Teachers play an imperative role in students' lives. They actively participate and guide the students towards a successful event. It is integrated with hard work, dedication and understanding among the leaders and the team members. Students enjoy a fun evening with their peers and reminisce the good time spent with each other. The event creates many memories for the first-year students and their seniors alike, with an array of cultural programs.

A little music, new faces, smiles all along, clamouring for the party time! College provides moments to chill out in the form of orientation day, fresher party and bidding farewell. Fresher's Day is a platform where the juniors showcase their talents.



ETABS Workshop

The workshop is on ETABS. The workshop is been held on 08-09-2018 to 09-09-2018 .

The workshop is conducted by the college *Dhanekula Institute of Engineering and Technology* with the collaboration of CADDESK . In workshop the main discussed topics are the analysis of the Buildings & Bridges.



The workshop is held in CAD LAB,DIET by the CADDESK officials on 08-09-2018 to 09-09-2018. It is two day programme on the introduction towards the software by the CADDESK. E-Tabs is a software company with headquarters in London, England. The company develops and delivers data visualization and report automation software and services tailored for the market research industry. The founder of the E TABS is Benjamin Rietti and founded in the year 1999 on December 21. The First day is about the Introduction to the E TABS, Centre Line method for a Building Plan. Followed by the Commands and hot keys of the E TABS, Design of the building.The Second Day is followed by the Analysis and Design of the Building and Bridge .The conclusion of the workshop is that the Design of the Buildings and the massive structures is been done easily than the other software such as STAAD Pro, Revit Architecture etc,. It is extended three-Dimensional analysis of building system. The workshop was useful for the analysis and perfect design of the high rise structures in the upcoming generation of the high growing structures. Modelling can be done with various standard codes with accurate results. To make the task easier with more complex calculation.



JnanaBheri

The JnanaBheri Program is been conducted by the Andhra Pradesh state govt. for the creative and innovative ideas for the students of all engineering and science streams.

The JnanaBheri program held in Vijayawada in Indira Gandhi Municipal Stadium on 20 September 2018. Several models, projects is been displayed in the program. Many medical camps for the awareness programs and many engineering collages attended the program with new ideas.

The prizes for the competitions held on 15 September was given by our Honorable Chief Minister Sir. N. Chandra Babu Naidu. HE gave the motivational speech to the students. Many innovations and creative and new projects or modal where introduced in the program.

Thus the JnanaBheri Program gave a lot of experience and new thinking gave me a new knowledge. The whole program was newly decorated and innovative ideas gave me a lot of knowledge.



Significance Of Engineers' Day Celebration In India

Engineers' Day is celebrated on September 15 every year in India commemorating the birthday of one of the greatest engineers in India so far and a great human being Sir Mokshagundam Visvesvarayya, popularly known as Sir MV.

Engineers' day is celebrated for the great works of Sir MV towards the development of various places which are the most developed cities of today's India. Sir MV is an international hero, recognized for his mastermind in harnessing water resources; he had successfully designed and constructed several river dams, bridges and revolutionized the irrigation system in India by implementing irrigation and drinking water system all over India.

Among all the developing countries, India is one of the prime exporters of light and heavy engineering goods. India produces a wide range of items. The bulk of capital goods required for mining equipment, steel & petrochemical plants, cement, fertilizer, power projects are made in India. The engineers of India are also involved in making equipment for irrigation projects, construction machinery, cotton textile & sugar mill machinery, diesel engines, transport vehicles, tractors, etc. Thus, the role of Engineers in a developing India is not only diverse, but it is also very significant.

The first semester end exams for all the years starts from the end of the October month. The schedule of the exams will be displayed in the Notice Board.

Fund Rising For KERALA

On 18th AUG 2018 NSS cell of DIET have Initiated a Fund Raiser for FLOOD effected state Kerala all most 746 Students have participated in this Fund raising and an amount of Rs 100001 was collected

The collected charity amount was transferred to Kerala government through check, They have appreciated DIET-NSS cell for their contribution towards a noble cause



Building from Mushrooms

Blood Donation Camp

On 05-09-18 DIET- National Service Scheme (NSS) in association with Lions Club – Vja have organized a blood donation camp in DIET-T&P HALL about 72 members have attended this event on 5-09-18 and 448 students have checked their blood group on 06-09-2018 this camp was headed by Dr KSRK Prasad from Lions blood bank who involved in Process of testing donors before donation, Mr. Vinod Kumar from Lions blood bank have appreciated the Management, Principal and NSS coordinators for helping them in making this a grand success.



Faculty Research COLLOQUIA

The Mycotecture (Building from Mushrooms)

What is Mycotecture ?

It is nothing but the preparing or making the construction materials or construction using the fungus composites . In particular with mycelium component which is a root tissue of white fungus .

This fungus that converts hydrocarbons into carbohydrate chains. Those chains wrap themselves around anything that gets in the way as tightly as a web.

Mycelium grows underground in the absence of light, which means it requires no external energy source to work its magic. Inject it into a mixture of rice husks, corn stalks or any other crop waste and it quickly digests any available lignin and encapsulates everything left over.

What is the need of Mycotecture ?

The constructions made from cement concrete leaves a severe footprint on ecological balance as the concrete releases considerable amount of carbon in to the atmosphere.

Consumption of energy while the construction is in process

Increasing amount of waste day by day

The deteriorated concrete material is not compostable

Applications in Civil Engineering ?

1) Mycelium Concrete :

The general concrete structures need continuous maintenance and repair work is difficult because it usually requires an enormous amount of labor and investment. In search of remedial for the above mentioned , researchers found a solution named “ fungus “

As the continuous monitoring of micro cracks is difficult , the self healing concrete (using fungus “Trichoderma reesei”) is observed as a compatible remedy.



Zero Energy Building

A zero-energy building, also known as a zero net energy (ZNE) building, net-zero energy building (NZEB), net zero building or zero-carbon building is a building with zero net energy consumption, meaning the total amount of energy used by the building on an annual basis is roughly equal to the amount of renewable energy created on the site, or in other definitions by renewable energy sources elsewhere. These buildings consequently contribute less overall greenhouse gas to the atmosphere than similar non-ZNE buildings. They do at times consume non-renewable energy and produce greenhouse gases, but at other times reduce energy consumption and greenhouse gas production elsewhere by the same amount. A similar concept approved and implemented by the European Union and other agreeing countries is nearly Zero Energy Building (nZEB), with the goal of having all buildings in the region under nZEB standards by 2020. Zero-energy buildings are becoming more widespread for new construction but are still fairly rare as upgrades to existing houses.



Advantages

- isolation for building owners from future energy price increases
- increased comfort due to more-uniform interior temperatures (this can be demonstrated with comparative isotherm maps)
- reduced requirement for energy austerity
- reduced total cost of ownership due to improved energy efficiency
- reduced total net monthly cost of living
- reduced risk of loss from grid blackouts
- improved reliability
- extra cost is minimized for new construction compared to an afterthought retrofit
- higher resale value as potential owners demand more ZEBs than available supply
- the value of a ZEB building relative to similar conventional building should increase every time energy costs increase
- future legislative restrictions, and carbon emission taxes/penalties may force expensive retrofits to inefficient buildings

Disadvantages

- initial costs can be higher – effort required to understand, apply, and qualify for ZEB subsidies, if they exist.
- very few designers or builders have the necessary skills or experience to build ZEBs
- new photovoltaic solar cells equipment technology price has been falling at roughly 17% per year – It will lessen the value of capital invested in a solar electric generating system – Current subsidies will be phased out as photovoltaic mass production lowers future price
- challenge to recover higher initial costs on resale of building, but new energy rating systems are being introduced gradually.
- while the individual house may use an average of net zero energy over a year, it may demand energy at the time when peak demand for the grid occurs. In such a case, the capacity of the grid must still provide electricity to all loads. Therefore, a ZEB may not reduce the required power plant capacity.
- without an optimised thermal envelope, the embodied energy, heating and cooling energy and resource usage is higher than needed. ZEB do not mandate a minimum heating and cooling performance level thus allowing oversized renewable energy systems to fill the energy gap.
- solar energy capture using the house envelope only works in locations unobstructed from the sun. The solar energy capture cannot be optimized in north (for northern hemisphere, or south for southern Hemisphere) facing shade, or wooded surroundings.

Internet of Things in Civil Construction

The Internet of Things, or IoT, is the new buzz word used to describe how more and more things are connecting to the internet. Things like your fridge, your phone, washing machine and almost anything else you can think of.

This also includes your machinery, though connecting your fleet to the office is not a new concept to those aware of [the Trimble Connected Site](#).

IoT is starting to play a large role in the building industry. Already designers are starting to include smart features into their buildings, like blinds that automatically move to block the sun using its connection to the internet. Or a building using this connection to conserve energy by finding a way to heat or cool naturally.

This type of interaction with the structures we use on a daily basis can easily be extended into the civil area.

Imagine a bridge that will provide you with up-to-date information on its congestion. What about solving traffic and congestion issues, as well as parking in cities. Solutions like this could ease the way for the next generation of connected, autonomous vehicles. The IoT is already being tested in the USA to synchronize traffic signals. They are also testing sensors in the roads to provide up-to-date parking information.

With the IoT growing and expanding into all areas and its solutions becoming expected conveniences, it becomes important for those in all areas to be aware of it and that it almost certainly will impact their work in the future.



Reinforced and pre-stressed concrete is, and will be, the main construction material for civil engineering infrastructure – bridges crossing valleys, tunnels under mountains, high skyscrapers – but also the less spectacular infrastructure for water and energy essential for society.

The civil engineering industry is currently, in many industrialised countries, in a transition phase from building new constructions to maintaining the large stock of valuable assets. These reinforced concrete structures are aging and very often show premature deterioration due to corrosion of the reinforcement, with increasing costs for maintenance and repair.

Taking into account that the average lifetime of a repair is shorter than that of the original, a dramatic increase in the number of structures that have to be repaired and the associated costs, can now be predicted. This prediction however, does not include indirect costs such as energy consumption, pollution, traffic jams etc. that are equally relevant for society.

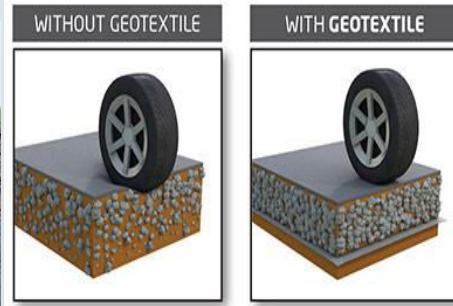


Today, engineers and owners try to extend the service life of these assets with a minimum of interventions, with sophisticated management systems – maybe with more effective and durable repair methods – but a new approach is lacking. Life-cycle thinking is urgently needed for education and the continuous formation of professionals, for both stakeholders and society.

GEOTEXTILE

Geotextiles are permeable fabrics which, when used in association with soil, have the ability to separate, filter, reinforce, protect, or drain. Typically made from polypropylene or polyester, geotextile fabrics come in three basic forms: woven (resembling mail bag sacking), needle punched (resembling felt), or heat bonded (resembling ironed felt).

Geotextile composites have been introduced and products such as geogrids and meshes have been developed. Geotextiles are able to withstand many things, are durable, and are able to soften a fall if someone falls down. Overall, these materials are referred to as geosynthetics and each configuration—geonets, geosynthetic clay liners, geogrids, geotextile tubes, and others—can yield benefits in geotechnical and environmental engineering design.



Geotextiles and related products have many applications and currently support many civil engineering applications including roads, airfields, railroads, embankments, retaining structures, reservoirs, canals, dams, bank protection, coastal engineering and construction site silt fences or geotube. Usually geotextiles are placed at the tension surface to strengthen the soil. Geotextiles are also used for sand dune armoring to protect upland coastal property from storm surge, wave action and flooding. A large sand-filled.

Geotextiles can improve soil strength at a lower cost than conventional soil nailing. In addition, geotextiles allow planting on steep slopes, further securing the slope. Geotextiles have been used to protect the fossil hominid footprints of Laetoli in Tanzania from erosion, rain, and tree roots. In building demolition, geotextile fabrics in combination with steel wire fencing can contain explosive debris. Coir (coconut fiber) geotextiles are popular for erosion control, slope stabilization and bioengineering, due to the fabric's substantial mechanical strength. Coir geotextiles last approximately 3 to 5 years depending on the fabric weight. The product degrades into humus, enriching the soil.

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