



| NAME OF THE EVENT | | INDUSTRIAL VISIT | |
|-----------------------------------|------------|---|-----------------------|
| ORGANISED BY | | DEPARTMENT OF CIVIL ENGINEERING | |
| DATE | 01-04-2019 | TIME | 2:00 p.m. – 4.45 p.m. |
| NAME & DETAILS OF RESOURCE PERSON | | 1. Mr. Rajendra Rao Kalbavi, Project Manager, Dakshina Kannada Nirmithi Kendra, Srinivasanagar, NITK, Mangalore. 2. Mr. Nagaraj, M/s. M.M. Industrial Controls Pvt. Ltd., Dharwad. | |
| PLACE OF VISIT | | Dakshina Kannada Nirmithi Kendra, Srinivasanagar, NITK, Mangalore. | |
| DESCRIPTION ABOUT EVENT | | | |

Nirmithi Kendra in Dakshina Kannada is one of the leading organizations established under the Government of India initiative scheme to propagate cost effective building materials, and named it the “Technology Transfer Centre” in order to bridge the gap between the laboratory technologies and the construction site. The main aim of Nirmithi Kendra is to incorporate alternative, environment friendly building materials and technologies developed by various research institutes and to effectively implement for the use of common people.

During the visit, the demonstration of Bio-Digester for Toilet Unit was organised by M/s. M.M. Industrial Controls Pvt. Ltd. (MMICPL), Dharwad. Mr. Nagaraj, Chief co-ordinator of MMICPL gave a brief description about the importance of Bio-Digester, its applications, installation methods in existing buildings and new buildings. The system was developed by DRDO for defense purpose, which was further patented by MMICPL for the use of public. Bio-Digester is a unique innovation in the world of sanitation. It consists of Bio-toilet attached with bio-digester tanks. The microbial inoculum used in the bio-digesters converts the human faecal matter into reusable water and bio-gas.

After the demonstration of Bio-Digester, the Project Manager of Dakshina Kannada Nirmithi Kendra Mr. Rajendra Rao Kalbavi introduced about the organization. He took the students around the organization, where various types of structures were constructed using cement, brick, chicken mesh, hollow blocks, coconut shells, etc. The use of alternate construction



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materials in structures, its strength, durability and significance were demonstrated. New technologies like, using pet bottles for wall construction and preparation of light weight concrete by introducing air bubbles were introduced to students.



Finally, a live demonstration of an arch structure using brick and mortar was shown at the site. The arch was completed within 10 mins and the supporting formwork was also removed. Further the structure was loaded within the initial setting time of cement i.e., 30 mins. The strength and its stability of the structure to carry the loads was demonstrated. The effect of horizontal thrust was discussed. Students were given an opportunity to mould and unmould the bricks at the site. They also invited students to take up project works and internships at Nirmithi Kendra, where they will be providing material and space for the work. Overall the industrial visit was an eye opener for the budding civil engineering students.

| Section | 4 th sem Civil Students |
|-----------------------------|---|
| Number of students attended | 38 |
| Faculty Visited | Mr. Vinod T Dsouza, HOD, Dept. of Civil. Dr. Sangeetha D.M., Assoc. Professor, Dept. of Civil. Mr. Divyesh G. M., Asst. Professor, Dept. of Civil |

HOD (Department of Civil Engineering)

Principal