

DEPARTMENT OF CIVIL ENGINEERING

05/01/2022

A REPORT ON WEBINAR SUSTAINABILITY IN CONCRETING PRACTICES

A webinar was organized for 2nd, 3rd & 4th year Civil Engineering Students on 04-01-2022. The Speaker is Dr. Nakul Ramanna, Head of the Department, Civil Engineering, Presidency University, Bangalore. The HoD of Civil Engg dept Mr. Y. Srinivas welcomed the speaker and thanked him for accepting our request. The students of 4th year has briefed about the speaker's profile and the webinar commenced at 2.00 PM.

Dr. Nakul, explained about Sustainable Concrete and its necessity. He explained the sustainable and supplementary materials like Fly ash, GGBS, Metakaolin can be used as a partial replacement of the ingredients of concrete production. He also explained the composition and its benefits of each type. A brief explanation was also given for different concrete mix ratios comparing sustainable concrete with conventional concrete. A brief technical note from the webinar is mentioned as below:

Sustainable concrete

Sustainable concrete is a mixture of Cement, Fine aggregate, Coarse aggregate, water, Chemical admixture and Mineral admixture. Explanation was given about IS: 10262-2019 code, w/c ratio, Grades of concrete, cement, supplementary cementitious materials, Importance of w/c ratio, effect of flyash, silica fume, GGBS, RHA on hardened concrete was discussed in a detailed manner in the webinar.

Efficiency

Conventional concrete was explained briefly and was compared with Sustainable concrete and efficiency of sustainable concrete was explained with practical results.

Environment Friendly

Sustainable concrete construction is a step towards green and eco friendly concrete construction practices to solve global environmental problems. The climate has been adversely affected with season changes and effects on human beings becoming evident. Different mineral admixtures like flyash, silicafumes, GGBS, RHA are used in concrete which reduces the utility of cement.

Concrete is a construction material which has been used substantially all over the world. Regarding the amount of concrete that has produced, used and its impact are considered as an important part of the whole global environmental problems. The effect of concrete is taking place in different stages from the extraction of the raw material until the end of structure life. Global

warming due to emission of CO₂, increasing landfill sizes, and pollutions is the result of these impacts.

Methods for achieving sustainable concrete:

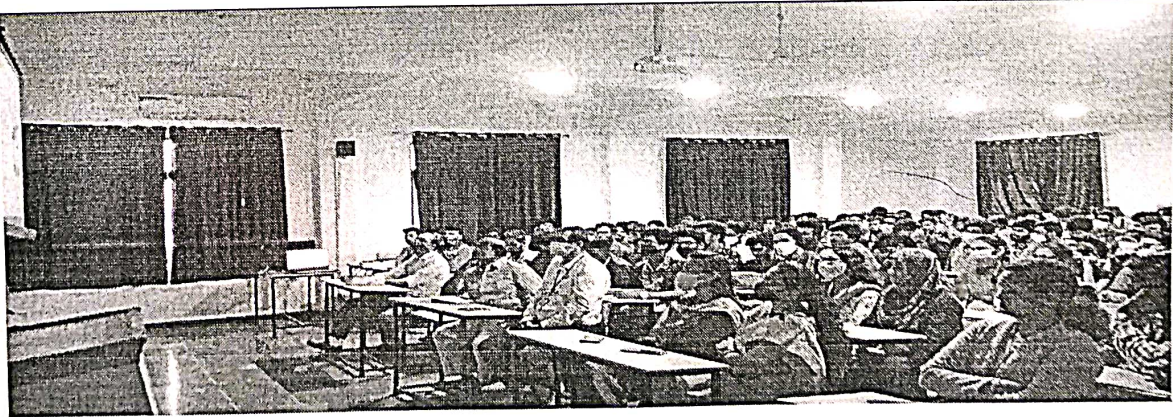
Use of blended cement, using supplementary cementitious materials like GGBS, Flyash, Rice husk ash, silica fumes, sustainability in concrete can be achieved.

With the guarantee of structural durability, higher service life and reliable structure strength, sustainable concrete is a promising product for housing as well as business construction projects and proves to be more economical.

All the points mentioned above are discussed in a detailed way and the webinar concluded at 03.30 PM with Q & A Session. At last, HoD Mr. Y. Srinivas, thanked the speaker Dr. Nakul for sparing his valuable time by sharing his vast knowledge on sustainable concrete with the students and the faculty of civil engineering department.



Dr. Nakul Ramanna, Speaker of the Webinar



Students and Faculty in the Webinar

Hemanth Sai
Webinar i/c
(Mr. Hemanth sai)

Y. Srinivas
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(Mr. Y. Srinivas)