IE(I) STUDENTS' CHAPTER – CIVIL
CHAPTER CODE: 388120/BVME/CV
BIRLA VISHWAKARMA MAHAVIDYALAYA
VALLABH VIDYANAGAR – 388120, GUJARAT

Chairman: **Dr. S. D. Dhiman**

Faculty guide: **Prof. A. N. Bhavsar** Faculty Advisor :**Prof. N. F. Umrigar**

Report on

"Bacterial Concrete for The Construction Industry"

Total number of students : 51 Faculty: 3

Date: 21st October, 2023, Saturday
Time: 11:00 AM to 12:30 PM
Venue: C-231 (Seminar hall)

DISTINGUISHED SPEAKERS:

1. **DR. RESHMA PATEL** (Associate Professor)
Department of Civil Engineering, BVM Engineering college
2. **DR. JAYESH PITRODA** (Associate Professor)
Department of Civil Engineering, BVM Engineering college

IE(I) Coordinators:

1. **Prof. N. F. Umrigar** (Assistant Professor)
2. **Prof. Amit Bhavsar** (Associate Professor)

Objective:

To impart beneficiary knowledge about the bacterial Concrete to the students of civil engineering department as well as it's applications in the civil engineering field, IE(I) Students'

Chapter Civil in association with Civil Engineering Department organized a seminar on "Bacterial Concrete for the Construction Industry" on 21st October, 2023 at seminar hall of B.V.M. college.

The program started at 11:00 A.M. and Dr. S.D. Dhiman Sir welcomed the expert speakers Dr. Reshma Patel and Dr. Jayesh Pitroda by providing a bouquet of flowers and after which he shared his valuable insights on the topic of the expert talk and also provided brief information about the speakers and their achievements.

The first session of the expert talk was conducted by the speaker Dr. Reshma Patel. She started the session by providing a basic definition of the Bacterial Concrete which was stated as " The Bacterial Concrete is a concrete which can be made by embedding biochemical solution in the concrete".

After this she also shared some information about the Sustainable Building materials, various experimental materials which are getting used for the manufacturing of bacterial concrete, the manufacturing process for the same. Advantages and disadvantages of the bacterial concrete. It's chemical composition, types of bacteria being used in concrete and their properties. She also explained how the concentration is measured. The ideal concentration is 10^ 5 cells/ml. If the concentration value is more than this then bacterial cells compete with each other and prevent growth due to hunger or nutrients competition. In case of lower concentration then the ideal value calcite precipitation is less.

The different methods for mixing bacteria with other healing agents were also discussed which are:
1. Direct Method
2. Vascular Network Method
3. Encapsulation Method
4. Protection Method

Students also got to know that about 16 different species of bacteria , fungi etc. are being used for the production.

After this Dr. Jayesh Pitroda started his session and provided extravagant information about the application of bacterial concrete, various types of tests which are being performed to check the stability, durability etc Some of them are water absorption test , durability test , compression test , abrasion test .

As earlier discussed by Dr. Reshma Patel about the same. He explained the students about how higher strength could be achieved and what kind of materials should be used . Also the importance of following the conditions as per the IS code was discussed for the making of Bacterial Concrete. And at the last conclusion of the session was provided and it stated as how the use of bacterial concrete could lead to elimination of carbon content from the environment and potentially decrease the pollution.

Conclusion:

Overall it was an interactive and informative session and it also helped the students to get a clear vision and perspective about their future pertaining to further studies & project. It also provided the students very vast knowledge and information about the Concrete & it's structure. At the end of the session certificate of appreciation was provided by Dr. SD Dhiman sir and the session ended with National anthem.

Session Highlights

Birla Vishvakarma Mahavidyalaya

(An Autonomous Institute Managed by CVM)
Vallabh Vidhyanagar

Attendance Sheet

"Bacterial Concrete in Construction Industry"

Date: 21.10.2023

Venue: C231

Sr. No.	ID number	Name	Signature
1	22CE049	Khunti Dhruv R.	
2	22CE055	Sindhal Nayan H.	
3.	22CE043	Mesr Hardik M.	
4.	22CE054	CATHERINE QHOAI	
5.	20CE142	Sanjay Vaghela	
6.	20CE091	Manish Koli	
7.	20CE001	Rahul Kumar	
8.	21CE148	Dhruv Jasbanputra	
9.	21CE133	Khunti Rajiv L.	
10.	21CE113	soham Prajapati	
11.	21CE158	Suthar Hitesh	
12.	23CE011	Khushang Thakar	
13	23CE014	Keyur Rawal	K.A. Rawal
14.	23CE337	Parmar Kanishk	
15	23CE329	Kuldeep Makwana	
16	22CE050	Amaan M. Saiyed	A.M. Saiyed
17	23CE335	Chavda Yash C.	Yash
18	22CE035	Pokar Hardik M.	
19	22CE033	Bhavya Shah	
20	22CE038	Bhurai Darshit	
21	22CE085	Paswan vishal S.	
22	22CE041	Priyank Rabadiya	
23	22CE090	AYUSH Lad	
24	22CE080	Chintan Jadav	
25	22CE075	Hitesh Sagathiya (Dr. J.R. Pitroda)	
26	23CE116	Rathod RUTVIK	
27		Meet Patel	N.P. Patel

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Attendance Sheet

"Bacterial concrete in construction industry"

Date: 21.10.2023

Venue: C231

Sr. No.	ID number	Name	Signature
1	23CE121	Pratik Jethva	Pratik
2	22CE011	Bhoi Meet	M.A.Bhoi
3	22CE040	VRPIT CHUHAN	VRPIT C
4.	23CE078	Bamaiya Mitul	
5.	23CE016	Bhatti Aslam	
6.	23CE036	Jay Baidyavadra	Jay C.B.
7.	23CE109	Avinash Rabadiya	
8	23CE063	Samarth.	Gupta.
9	23CE143	DHWANIT.	
10	23CE056	Sagar	
11	23CE042	Kavya	
12	23CE020	Siddik	
13	22CE303	Meet Rathi	
14	21CE145	Siddharth	
15	23CE354	mahammad Tausif	M. Tausif
16	Faculty	Prof. Dhaval Parmar	
17	Faculty	Prof. Mayank Dalal	
18	20CE067	Abhishek. V. Dodiya	
19	23CE067	RITIK GAUTAM	
20	23CE102	kishan kamaliya	kishan.
21	23CE090	Krishna Patel	
22	23CE089	DEV. P. Lad	D. P. Lad
23	23CE031	Chaudhary Snehal	Snehal
24	23CE142	Dabhi Priya	D. P. R.
25	23CE036	Jiya Patel	
26	22CE014	Ansh Patel (Dr J.R Pitroda)	
27	20CE019	Devansh Shukla	Shukla