MARATHWADA SHIKSHAN PRASARAK MANDAL'S

DEOGIRI INSTITUTE OF ENGINEERING AND MANAGEMENT STUDIES

NEWSLETTER

JULY 2021 TO DECEMBER 2021

ABOUT INSTITUTE

In The Pursuance with the Policies of Govt. of India to start Engg Colleges in Emerging Technologies. Deogiri Institute of Engg. And Management Studies is established at Aurangabad during The Academic Year 2009-10. Deogiri Institute of Engg. And Management Studies is affiliated to the Dr. Bababasaheb Ambedkar Technological University, Lonere. and is Developed as per the norms of All India Technical Education (AICTE).

VISION OF INSTITUTE

Nation Building By Creating Opportunities For Rural And Urban Through Excellent Education & Research In The Field Of Engineering & Management

MISSION OF INSTITUTE

- To develop the students for best academic and industrial practices by implementing innovative teaching learning methodologies, promoting all round development by giving exposure to series of activities.
- To prepare the students to face global challenges by equipping them with requisite technical expertise and developing entrepreneurship skills among them.
- To promote research attitude among faculty and students.

CIVIL ENGINEERING DEPARTMENT

FROM HOD'S DESK

On behalf of all our faculty, staff, and students, I would like to welcome you to the Civil Engineering Department at Deogiri Institute of Engineering and Management Studies, Aurangabad.

As a Head of the department, I am extremely proud of our role in providing high quality education and hands-on experience to our students. Right from its inception in 2009, the Civil Engineering Department has earned tremendous reputation for qualitative teaching-learning process, meaningful teacher-student interactions, state-of-the-art laboratories, and well qualified faculty; positively contributing to the community through teaching, research and consultancy activities.

VISION OF DEPARTMENT

Develop a proficient civil engineering with technical competency and managerial ability so as to contribute in nation building

MISSION OF DEPARTMENT

- To impart technical proficiency in Civil Engineering through quality teaching learning process
- To mentor Civil Engineering students for competitive services, higher studies, and allied research to meet societal needs.
- To inculcate managerial skills in students to evolve as an entrepreneur

FACULTY ACHIVEMENTS

Research Papers Published

- Gajendra Gandhe, Durgesh H. Tupe" Ameliorating the Dynamic Response of RC Structures with Voided Columns under Eq & Impulsive Loadings" International Journal of Advances in Engineering and Management, Volume 3, Issue 7,JULY 2021,ISBN/ISSN no. 2395-5252
- Durgesh H. Tupe, Dr.G.R.Gandhe," Bending Analysis of Laminated Composite Thick Beam", Advances in Civil Engineering and Infrastructural Development ,july 2021.
- Zubair Shaikh, G.R.Gandhe "Comparative Study of Tune Mass Damper Building in Seismic Zone-II and Zone-V" International Journal of Research in Engineering and Science,Volume 9, Issue 7,2021, ISBN/ISSN (Online): 2320-9364, (Print): 2320-9356
- Mr. S.B.Salve, Dr.Gajendra Gandhe "Effect of Fire On Frame Members of Structure" International Research Journal of Modernization in Engineering Technology and Science, Volume 3, Issue 7,july 2021 e-ISSN: 2582-5208.
- R.S.Patil, G.R.Gandhe "Structural Engineering and Management" STM Journals, Vol 8, Issue:1,2021, ISSN: 2393-8773
- Sachin B Salve "Structural Behavior of Cold Form Steel Truss" International Journal of Structural Engineering and Analysis, Volume 7, Issue:1, ISSN: 2456-5

Professional Body Membership

Sr. No.	Name of Faculty	Professional Body
1	Dr.G.R.Gandhe	Indian Society of Structural Engineers
2	Dr.D.H.Tupe	Indian Society of Structural Engineers
3	Dr.D.H.Tupe	International Association of Engineers
4	Dr.D.H.Tupe	IIRM
5	Dr.S.D.Shinde	Indian Water Works Association
6	Dr.S.D.Shinde	The Institution of Engineers India
7	Prof. A.K.Pardeshi	Indian Water Works Association
8	Dr.A.S.Pathan	HDUG
9	Prof. K.G.Patwari	Structural Engineering Forum of India
10	Prof. S.B.Kapse	Indian Geotechnical Society
11	Prof. Ansari Fatima Uz Zehra	The Institution of Engineers India
12	Prof. T.D.Ukirde	Indian Geotechnical Society

Workshop Attended By Faculty

Sr. No.	Name of Faculty	Title	Organisation
1	Dr. S.D.Shinde	Innovative Trends in Water Resources & Hydraulic Engineering	Department of Civil Engineering, RMD Sinhgad School of Engineering, Pune
2	Prof. R.S.Patil	Measurement Uncertainty	National Institute of Training for Standardization, Bureau of Indian Standards
3	Prof. K.G.Patwari	Innovative Trends in Water Resources & Hydraulic Engineering	Department of Civil Engineering, RMD Sinhgad School of Engineering, Pune
4	Prof. K.G.Patwari	Service Life of Buildings	Progressive Expert Consulting Pvt. Ltd. & Civil Engineering Department, D.I.E.M.S.
5	Prof. N.M.Nikam	Unnat Bharat Abhiyan a Synergic Journey of Higher Educational Intitutions Towards Inclusive rural Development Process	Regional Coordinating Institute, Unnat Bharat Abhiyan, Sant Gadge Baba Amravati University
6	Prof. R.A.Thote	Corrosion and its Control	Mechanical Engineering Department, DYPIEMR, Akurdi, Pune
7	Prof. S.B.Kapse	ICT Tools for Technology Infused Learning	IconsTeam Pvt. Ltd.
8	Prof. S.B.Kapse	Enabling Self- Reliant Economy Through Techno-Social Innovation In A Perspective of Post COVID-19 Rural India	Unnat Bharat Abhiyan Cell of MCT's Rajiv Gandhi Institute of Technology, Mumbai
9	Prof. Ansari Fatima Uz Zehra	Construction Projects Management with Innovative Tools & Techniques	Department of Civil Engineering, SRM Institute of Science & Technology, Ramapuram, Chennai

ACTIVITIES ORGANIZED FOR STUDENTS

Sr.No.	Type of Activity	No. of Students Participated	Organization / Resource Person	Faculty Coordinator
1	Expert Talk on Career Opportunities with WRE	59	IIT, Pawai Miss. Ankita Prayag Professional Hydrologist and Researcher	Prof. A. K. Pardeshi
2	Expert Talk Water Resource Engineering	54	Shri Guru Gobind Singhji Institute of Engineering and Technology. Dr. A. P. Nilawar Assistant Prof, Nanded	Dr. A. S. Pathan
3	Expert Talk on Employment & Business Opportunities in Environmental Engineering	58	Watermark Sustainability Foundation Mr. Sanman Kulkarni, Environmental consultant, Pune	Dr. S. D. Shinde
1	Expert Talk on Concrete Mix Design Guidelines	55	Annex Consultant Er. Izhar Ahmed, HUDCO, Aurangabad	Annex Consultant Er. Izhar Ahmed, HUDCO, Aurangabad
2	Expert Talk on Rain Water Harvesting	58	DS Group Mr. Sumit Deshmukh Director, Aurangabad	DS Group Mr. Sumit Deshmukh Director, Aurangabad
3	Inspire Talk	186	FGS Engineers & Innovators Shri Vinod Shukla Managing Director, New Delhi	FGS Engineers & Innovators Shri Vinod Shukla Managing Director, New Delhi
4	Inspire Talk	175	Maharashtra Jeevan Pradhikaran Dr. R. V. Mhaisekar, Former Superitending Engineer, Aurangabad	Maharashtra Jeevan Pradhikaran Dr. R. V. Mhaisekar, Former Superitending Engineer, Aurangabad

SELF HEALING CONCRETE

Self-healing concrete is characterized as the capability of concrete to fix its cracks on its own autogenously or autonomously. It not only seals the cracks but also partially or entirely recovers the mechanical properties of the structural elements. This kind of concrete is also known as self-repairing concrete. Because concrete has a poor tensile strength compared to other building materials, it often develops cracks in the surface. These cracks reduce the durability of the concrete because they facilitate the flow of liquids and gases that may contain harmful compounds. If micro cracks expand and reach the reinforcement, not only will the concrete itself be susceptible to attack, but so will the reinforcement steel bars. Therefore, it is essential to limit the crack's width and repair it as quickly as feasible. Self-healing concrete would not only make the material more sustainable, but it would also contribute to an increase in the service life of concrete structures and make the material more durable and environmentally friendly.

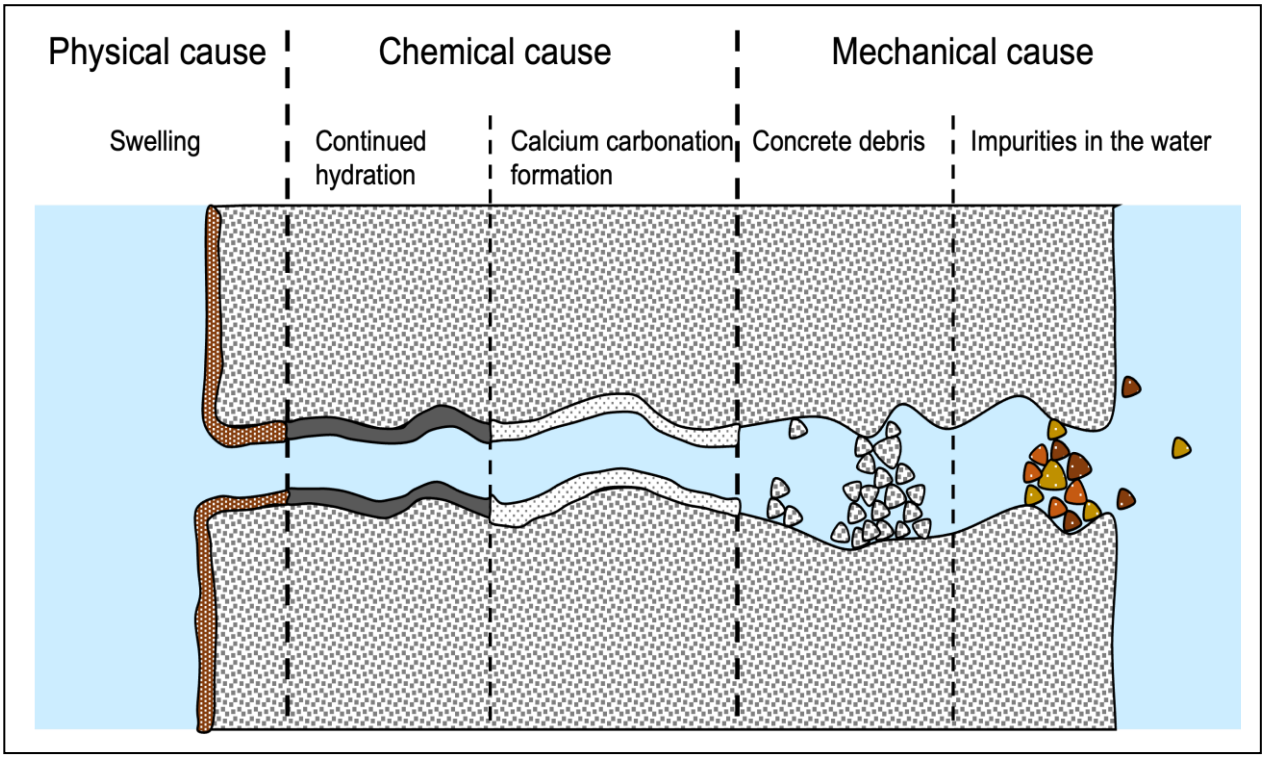
Self-healing is an old and well-known phenomenon for concrete, given that it contains innate autogenously healing characteristics. Cracks may heal over time due to continued hydration of clinker minerals or carbonation of calcium hydroxide. Autogenously healing is difficult to control since it can only heal small cracks and is only effective when water is present. This limitation makes it tough to use. On the other hand, concrete may be altered to provide self-healing capabilities for cracks. There are many solutions for improving autogenously healing by adding the admixtures, such as mineral additions, crystalline admixtures, and superabsorbent polymers. Further, concrete can be modified to built-in autonomous self-healing techniques. The capsule-based self-healing, the vascular self-healing, and the microbiological self-healing are the most common types of autonomous self-healing techniques.

Advantages of Self healing Concrete:

- Self-healing concrete can get self-repair without any external treatment.
- Compare to normal concrete it has better compressive and flexural strength.
- It has good resistance against freeze-thaw attacks.
- Self-healing concrete permeability is low.
- Reduce corrosion of steel as crack self-repair which is a major reason starting corrosion.
- In self-healing concrete, bacteria used in these concrete-like Bacillus bacteria are harmless to human life and hence it can be used effectively.

Disadvantages of Self healing Concrete:

- Self-healing concrete cost is almost double compared to normal concrete.
- Growth bacteria can be affected by different environmental conditions.
- The clay pallets which mixed in concrete almost cover 20 % volume of concrete and this may become a shear zone or fault zone in the concrete.



Crack Repair by Self-healing Concrete

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