



PRAGATI ENGINEERING COLLEGE (Autonomous)

1-378, ADB Road, Surampalem, E.G.District, A.P. - 533 437
(Approved by AICTE & Permanently Affiliated to JNTUK, Kakinada & Accredited by NAAC with 'A' Grade)
(Recognised by UGC Under Sections 2 (f) and 12 (b) of UGC act, 1956)
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(Sponsored by Gayatri Educational Society)

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PEC/CE/Circular

Date: 21-10-2024

CIRCULAR

This is to inform that CIVIL ENGINEERING DEPARTMENT and Association of Consulting Civil Engineers (India), Kakinada centre cordially organizing an offline Lecture on “RECENT ADVANCEMENTS IN UNDER WATER CONSTRUCTIONS” by “ASST Prof. B.SRI KALYAN, PRAGATI ENGINEERING COLLEGE, SURAMPALEM” on Monday 28th October, 02Pm (IST) Onwards At MS-08 Room.

All the students and faculty members are requested to utilize this opportunity with your presence.

HOD-CE



Copy to...,

Dept. Notice Board.

Circulate among Faculty,

Class Rooms of II, III & IV years



Learning is Supreme Duty

PRAGATI ENGINEERING COLLEGE

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#1-378, ADB Road, Surampalem – 533 437, Near Peddapuram, E.G. Dist., A.P.
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DEPARTMENT OF CIVIL ENGINEERING

WEBINAR Report

RECENT ADVANCEMENTS IN UNDER WATER CONSTRUCTIONS - ASST Prof. B.SRI KALYAN, PRAGATI ENGINEERING COLLEGE, SURAMPALEM

Date: 29th Oct, 2024

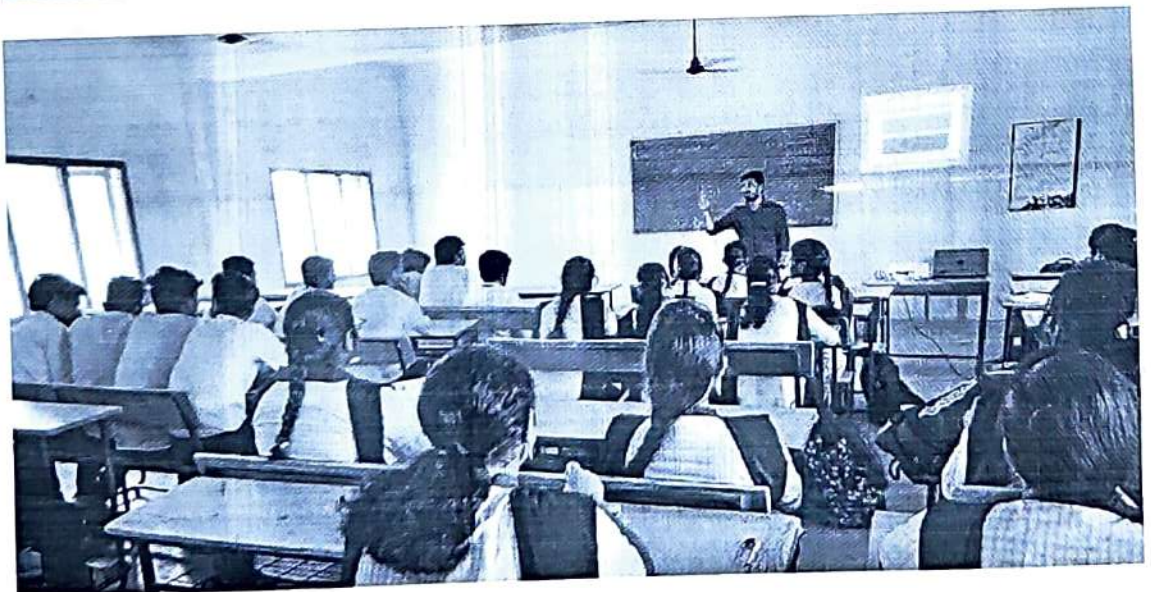
This is to inform that CIVIL ENGINEERING DEPARTMENT and Association of Consulting Civil Engineers (India), Kakinada centre cordially organizing an offline Lecture on “**RECENT ADVANCEMENTS IN UNDER WATER CONSTRUCTIONS**” by “**ASST Prof. B.SRI KALYAN, PRAGATI ENGINEERING COLLEGE, SURAMPALEM**” on Monday 28th October, 02Pm (IST) Onwards at MS-08 Room. Mr. Sri Kalyan explained the importance of underwater constructions and further he explained that, Recent advancements in underwater construction are transforming the industry, driven by innovations in materials, digital technology, and infrastructure demands.

- 1. Advanced Underwater Concrete:** Underwater concrete has seen improvements in durability, hydrophobic properties, and resistance to environmental challenges. This specialized concrete is essential for building sturdy foundations for projects like bridges, ports, and offshore wind turbines. The market for underwater concrete is expected to grow significantly, driven by large infrastructure projects and expansion in ports and harbors worldwide. For example, the demand for these materials has expanded in countries like the U.S. and China, with the latter predicted to see notable growth in underwater concrete utilization due to extensive marine infrastructure projects.
- 2. Underwater Tunnel Construction:** New methods for underwater tunnels, including bored and immersed-tube techniques, are improving efficiency and safety. Companies like China Railway Construction Corp and Mitsui & Co are leading in this space, with patents focusing on diverse applications for underwater tunnels. These tunnels, essential for connecting regions separated by bodies of water, are being adopted as a viable alternative to bridges, particularly in areas with challenging geography.
- 3. Advanced Robotics and AI Integration:** AI-powered underwater drones and robots now play critical roles in inspection and maintenance, especially where human divers face high risks. Equipped with sensors and capable of operating in extreme depths, these robots can efficiently monitor structural integrity and perform routine repairs. Companies developing these technologies are contributing to safer, more cost-effective underwater construction and maintenance.

4. **Sustainability in Materials and Techniques:** There is a growing focus on environmentally friendly materials and techniques. For instance, research into bio-concrete, which uses bacteria to self-heal cracks, aims to reduce the need for repairs and extend the lifespan of underwater structures. The industry also explores sustainable practices in construction to limit ecological impacts on marine environments, aligning with global trends toward sustainable infrastructure.

The programme was attended by Students, Faculty members. The programme was well received and attended by 35 participants.

The picture of the event and glimpses of slides presented were mentioned in the report stated.



DEPARTMENT OF CIVIL ENGINEERING, PEC (A)
ACCE (I) STUDENT CHAPTER
LIST OF STUDENTS ATTENDED

Topic: RECENT ADVANCEMENTS IN UNDER WATER CONSTRUCTIONS

Date: 28-10-2024

S. No	Name of the student	Signature
1	G. Naga Venkateswaraswarao	G. Naga Venkateswaraswarao
2	B. Sri Ram	B. Sri Ram
3	D. Sirisha	D. Sirisha
4	S. Ishwarya	S. Ishwarya
5	G. Pavitra Lahari	G. Pavitra
6	D. Ambika	D. Ambika
7	S. Satya Sivani	S. Satya Sivani
8	G. H. L. Kalyani	G. H. L. Kalyani
9	A. Subma	A. Subma
10	K. V. D. Raghav	K. V. D. Raghav
11	Ishwarya	Ishwarya
12	Jagadeesh	Jagadeesh
13	Mani Kumar	Mani Kumar
14	D. V. Swiya	D. V. Swiya
15	B. Udaya Blani	B. Udaya Blani
16	D. Madhu Lakshmi	D. Madhu Lakshmi
17	T. Phanendra Kumar	T. Phanendra
18	Y. Nani Sathish	Y. Nani Sathish
19	S. Hussain	S. Hussain
20	B. Sathish	B. Sathish

21	N. Sri Hanu	<u>N.A. Gh</u>
22	P. Tejaswini Sai Durga	P. Tejaswini
23	P. Maharitha	P. Maharitha
24	N. Harika Lakshmi	N. Harika Lakshmi
25	K. Latha Venkata Durga	K. L. V Durga
26	A. Sushma	A. Sushma
27	P. Varavi	P. Varavi
28	G. H. L. Kalyani	G. H. L. Kalyani
29	J. Harika Patnam	J. Harika
30	Madhulatha	Madhulatha
31	Bhanu	Bhanu
32	V. Mounika	V. Mounika
33	D. Mahesh	D. Mahesh
34	C. Sateem Raj	C. Sateem Raj
35	R. Nandini	R. Nandini
36		
37		

