



SRI VENKATESWARA COLLEGE OF ENGINEERING

(an Autonomous Institution affiliated to Anna University, Chennai)

Pennalur, Sriperumbudu Tk – 602 117

DEPARTMENT OF CIVIL ENGINEERING



Indian Concrete Institute

Report of the Webinar on “A deep insight into Light Weight Concrete (Science, Technology and Applications)”

Date : 27th May 2020, Wednesday

Time : 4.00 p.m. – 5.00 p.m.

Mode : Online through Cisco Webex

Meeting Link: Meeting URL: meetingsapac17.webex.com

Meeting number: 910 922 331

Meeting password: uGv6p2ck

Speaker

Dr.G.Indu Siva Ranjani

Assistant Professor

Department of Civil Engineering

Indian Institute of Technology. Guwahati

Convenor & Organising Secretary

Dr.R.Kumutha, Professor & Head/Civil Engg.

Target Audience : Students and Faculty members

Number of Participants benefited: 128 (27 internal and 101 external)

Students : 75

Faculty : 53

BROCHURE



Sri Venkateswara College of Engineering

Sriperumbudur, Tamilnadu

Department of Civil Engineering Cordially
invites you for a Webinar on

A deep insight into Light Weight Concrete
(Science, Technology and Applications)

WEDNESDAY 27th MAY 2020 4.00 - 5.00 PM
Meeting URL : meetingsapac17.webex.com
Meeting number: 918 421 431



Speaker
Dr.G.Indu Siva Ranjani
Assistant Professor
Department of Civil Engineering
Indian Institute of Technology
Guwahati

Host:
Dr.R.Kumutha
HoD/Civil

Register @ <https://forms.gle/E13ZbpGqDyKCHPhUA>

PROFILE OF THE SPEAKER



Dr. G.Indu Siva Ranjani holds a PhD degree in Civil Engineering (Building Technology and Construction Management) from Indian Institute of Technology Madras, India. Presently she is working as Assistant Professor at Indian Institute of technology Guwahati, India. She has also proposed new materials for the production of foamed concrete. Also she is incessantly exploring several promising possibilities to incorporate sustainability aspect in concrete. She has contributed in development of new mix design methods of concrete using particle packing concept. Her work has been published in peer reviewed journals and cited over 709 times in leading scientific journals throughout the world.

Education

Ph.D - Indian Institute of Technology Madras (2011)

M.E - College of Engineering Guindy Anna University (2004)

B.E - College of Engineering Guindy Anna University (2002)

Professional Experience

- Assistant Professor, Dept. of Civil Engineering, IIT Guwahati.
(From May 2014 to date)
- Associate Professor, Dept. of Civil Engineering, Hindustan Institute of Technology and Science
(From June 2011 to April 2014)

Research Interest

Light weight concrete (Foam concrete), Durability related studies on concrete, Shrinkage behaviour and thermal performance of concrete, Sustainable materials in construction

Honors/Awards/Medals

- Gold Medal and Shree Gayathri Devi Award for standing first in Ph.D Civil Engineering at IIT Madras in the year 2011
- Gold Medal for standing first in M.E Construction Engineering and Management at College of Engineering Guindy Anna University in the year 2004
- Professor Sivalingam award for standing first in course Advanced Construction techniques at College of Engineering Guindy Anna University in the year 2004
- Dr.V.C.Kulandaiswamy award for standing first in course Construction Equipment and management at College of Engineering Guindy Anna University in the year 2003

Professional Membership

- Life Member: Indian Concrete Institute (India)

Reviewer for journal

- Reviewer of Journal Current Science
- Reviewer of Journal of the Institution of Engineers (India): Series A

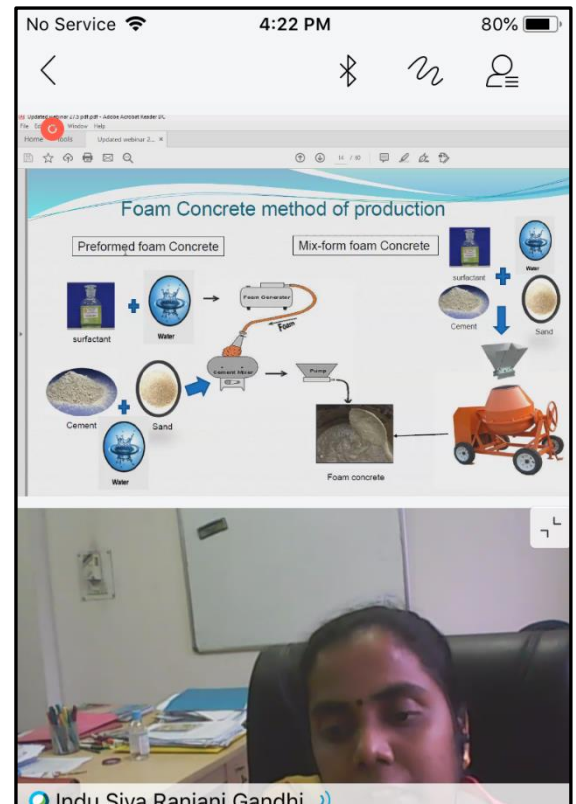
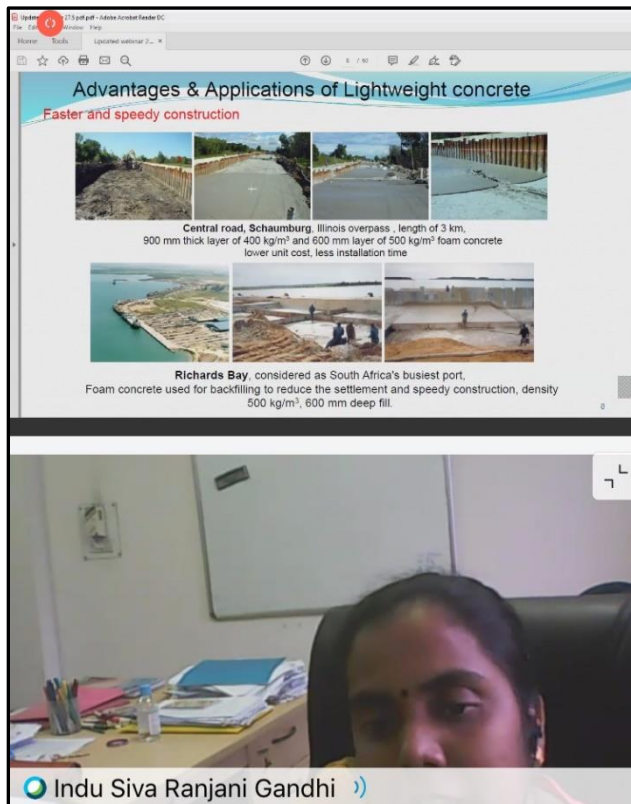
Brief Report of the Webinar

The webinar started with a welcome note and the introduction of the speaker to the Participants by Dr.R.Kumutha, Professor & Head/ Civil Engineering, who is the Convenor of this Program. Dr.G.Indu Siva Ranjani outlined the different types of light weight concrete such as Light weight aggregate concrete, no fines concrete and aerated concrete. The various methods of production of aerated concrete were discussed in detail in her lecture with a special focus on foam concrete and gas concrete. The effect of surfactant and the quality of foam production on the quality of foam produced was emphasized to the participants. Use of different foaming agents and their effect on the strength was better explained through the already proven studies by research.

Various projects in which light weight concrete was successfully applied were also indicated by Dr.Indu Siva Ranjani during her lecture. The nature of foamed concrete, its composition and properties and how it could be specified for use in civil engineering works were also described in detail.

The session ended with a vote of thanks delivered by Dr.R.Kumutha, Professor & Head/ Civil Engineering. The participants also had appreciated the webinar.

SNAPSHOTS OF THE WEBINAR



Updated webinar 27.5.pdf - Adobe Acrobat Reader DC

Home Tools Updated webinar 2...

Foamed concrete- Constituent materials

Few proprietary foaming agents used in various studies

Foaming agent	Dilution	Foam density
Cellucon ^{US}	1:100	48 kg/m ³
Neopor ^{Germany}	1:40	80 kg/m ³
Mearicrete ^{US}	1:24 to 40	32 to 48 kg/m ³
Elastizell ^{US}	1:40	48 kg/m ³
Celcore ^{US}	1:40	56 kg/m ³
Foamtech ^{India}	1:40	75 kg/m ³
FC – LITE ^{India}	1:40	35-80 kg/m ³
ADDAGE (Natural) ^{India}		40-60 kg/m ³
Green Stone ^{India}		
Foam Guard ^{India}	1:25 to 30	50 to 60 kg/m ³

In India, there are many plant based sources rich in protein and saponin with potential foamability (Selija et al., 2020)

Updated webinar 27.5.pdf - Adobe Acrobat Reader DC

Home Tools Updated webinar 2...

Gas concrete

Lightweight concrete

Lightweight aggregate concrete

Aerated concrete

Gas concrete

Foam concrete

No-fines concrete

Constituents

- Cement
- Fine sand
- Lime
- Aluminium powder
- Water

$$\text{CaO} + \text{H}_2\text{O} = \text{Ca}(\text{OH})_2$$

$$3\text{Ca}(\text{OH})_2 + 2\text{Al} + 6\text{H}_2\text{O} = \text{Ca}_3(\text{Al}(\text{OH})_6)_2 + 3\text{H}_2$$

$$6\text{SiO}_2 + 5\text{Ca}(\text{OH})_2 = 5\text{CaO} \cdot 6\text{SiO}_2 \cdot 5\text{H}_2\text{O}$$

LIST OF PARTICIPANTS

S.No	Name of the Participant	Name of the Institution/Industry	Category
1.	Lavanya. C	Peri Institute of Technology	Faculty
2.	Praveen Kumar	Sri Venkateswara College of Engineering.	Student
3.	V.Hariharan	Sri Venkateswara College of Engineering.	Student
4.	Mr M. Anil Kumar	K L E F Deemed to Be University	Faculty
5.	Babu R	K.S.R College of Engineering	Faculty
6.	Hareesh D	St.Joseph's College of Engineering	Student
7.	Premalatha A	Narasu's Sarathy Institute of Technology	Faculty
8.	Dr.K.Vijai	St.Joseph's College of Engineering	Faculty
9.	Ashokram.S	Vel Tech High Tech Engineering College Avadi Chennai	Faculty
10.	Ruby Freya	Sri Venkateswara College of Engineering	Faculty
11.	M Leela Sai Rangarao	IIT Guwahati	Student
12.	Chandrashekhar Wagh	IIT Guwahati	Student
13.	M.M.Devasena	St.Joseph's College of Engineering,Chennai.	Student
14.	Nandipati S M Ravi Kumar	Dvr & Dr. H S Mic College of Technology	Faculty
15.	Jegan M	SRM Institute of Science and Technology	Project Officer
16.	Inam UI Haq	Global Institute of Engineering and Technology	Student
17.	Aarthi.B	Tamilnadu College of Engineering	Faculty
18.	Kocherla Naveen Kumar	Pace Institute of Technology And Sciences	Student
19.	Naveen Kumar U	Sri Venkateswara College of Engineering	Student
20.	Naveen S	Sri Venkateswara College of Engineering, Sriperumbudur	Student
21.	Dharshini.G	Sri Venkateshwara College of Engineering	Student
22.	Sidharth Saravanan .T	Sri Venkateswara College of Engineering	Student
23.	Benny Hinn D	St. Joseph's College of Engineering	Student
24.	S.Meena	Narasu's Sarathy Institute of Technology	Faculty
25.	Brinila Bright B N	Mohamed Sathak AJ College of Engineering	Faculty
26.	Vidhya.K	Kongunadu College of Engineering and Technology	Student
27.	Abinaya .J	M.A.M College of Engineering	Student
28.	Kannan.S	A.V.C College of Engineering	Faculty
29.	Hemalatha M	Tamilnadu College of Engineering	Faculty
30.	S. Sathya Priya	Peri Institute of Technology	Student
31.	A.Mega	Vivekanandha College of Technology for Women	Student
32.	Kavinarasi M	K.L.N College of Information Technology	Student
33.	C. Ravikumar	Kongunadu College of Engineering aAnd Technology	Student

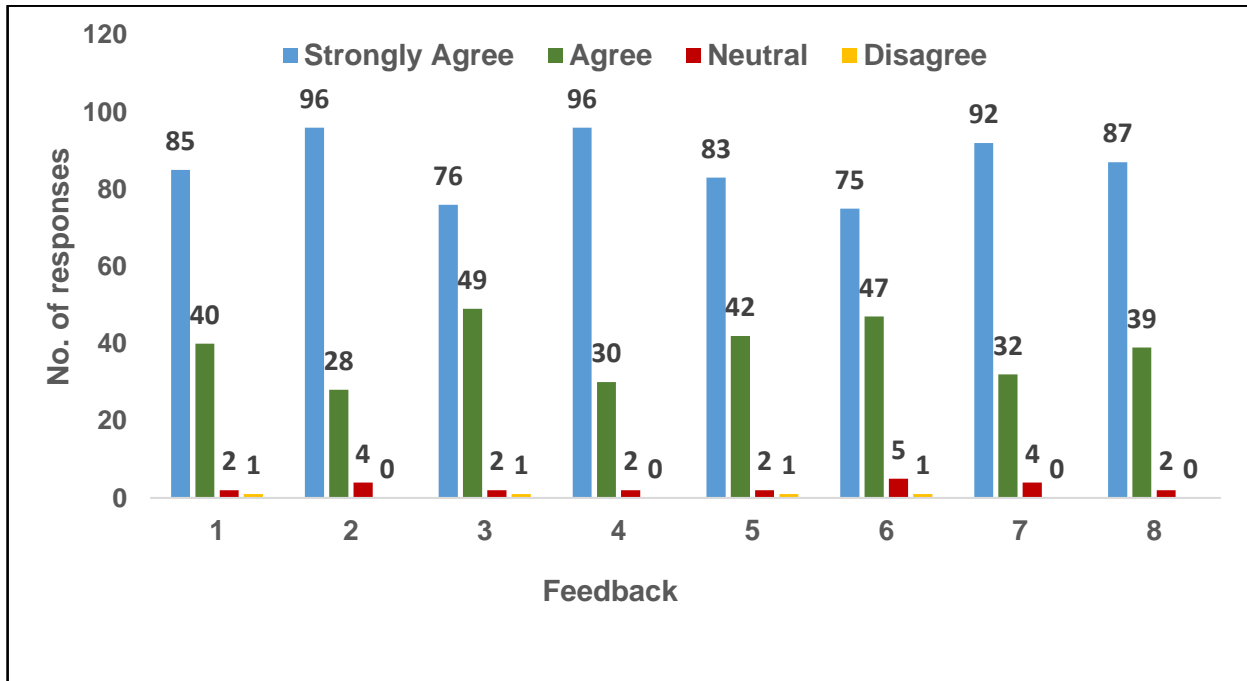
S.No	Name of the Participant	Name of the Institution/Industry	Category
34.	Alex Rajesh A	K. S. R. College of Engineering	Faculty
35.	Hemalatha R	Sri Venkateswara College of Engineering	Student
36.	Mr.Namburu Sandeep Kumar	Koneru Lakshmaiah Education Foundation	Faculty
37.	K.R.Ganesh Babu	K.L.N.College of Information Technology	LAB ASSISTANT
38.	G.Gokul Raj	M.A.M.College of Engineering	Student
39.	Keerthana R	Tamilnadu College of Engineering	Faculty
40.	S.Vengadesh	Mam College of Engineering And Technology	Student
41.	Chayan Sardar	Sri Venkateswara College Of Engineering	Student
42.	Ashwini.K	A.V.C College of Engineering	Faculty
43.	Vetrivel S	St.Joseph's College Of Engineering	Student
44.	Nancy.H	Sri Venkateshwara College of Engineering	Student
45.	Sankaranarayanan J	Sri Venkateswara College of Engineering, Sriperumbudur, Kanchipuram, Tamilnadu	Student
46.	Kone Venkatesh	K L University	Faculty
47.	Uday Boddepalli	Iit Guwahati	Student
48.	Albeena Jasmine	St.Joseph's College of Engineering	Student
49.	Mathiyazhagan R	Sri Venkateswara College of Engineering	Faculty
50.	Dr.S.SIVASANKAR	Cmr Technical Campus, Hyderabad	Faculty
51.	Logeshwari R	Sri Venkateswara College of Engineering, Sriperambuthur	Student
52.	S.Gowtham	Sri Venkateswara College of Engineering	Student
53.	Mamindla Satish Goud	Jyothishmathi Institute of Technology and Science	Faculty
54.	Elamathi. S	Kongunadu College of Engineering and Technology	Student
55.	S.P.Kanniyappan	R.M.K Engineering College	Faculty
56.	Rajkumar. P	Kongunadu College of Engineering and Technology, Thottiyam	Student
57.	Kanchana B	Kongunadu College of Engineering and Technology	Student
58.	S.Gokulakannan	Muthayammal Engineering College	Faculty
59.	Rithika RP	St.Joseph's College of Engineering,Chennai	Student
60.	Darshinala Mounika	Jyothishmathi Institute of Technological Sciences	Faculty
61.	Kiruthika R	St.Joseph's College Of Engineering	Student
62.	Vijaya A.M	K.L.N.College of Information Technology	Faculty
63.	I.Regina Mary	Mount Zion College of Engineering And Technology	Faculty
64.	Kancherla Naveen Kumar Reddy	Indian Institute of Technology Guwahati	Student
65.	Kanaka P	Kongunadu College of Engineering And Technology	Faculty

S.No	Name of the Participant	Name of the Institution/Industry	Category
66.	Sriram V	Psna College of Engineering And Technology	Student
67.	T.Santhosh Kumar	Ck College of Engineering and Technology	Faculty
68.	G.Dineshkumar	Vaagdevi College of Engineering	Faculty
69.	G.Harshavarthani	Sri Venkateswara College of Engineering	Student
70.	Kavinmalar K	Sri Venkateswara College of Engineering	Student
71.	Dr Hamim Jeelani Syed	K L University	Faculty
72.	Dr.S.M.SUBASH	Malla Reddy Institute of Technology and Science	Faculty
73.	Mahmoodh Zuhair Abdullah S.A.S	S.R.M Easwari Engineering College	Student
74.	K.Samruda	Kongunadu College of Engineering and Technology	Student
75.	S.Baby	Vivekanandha College of Technology for Women	Student
76.	Janani J	SSN College of Engineering	Student
77.	Rajkumar. P	Kongunadu College of Engineering and Technology, Thottiyam	Student
78.	Ramyra Rajamani	Vivekanandha College of Technology for Women	Student
79.	N.Aravindhan	Kongunadu College of Engineering and Technology	Student
80.	Shanmugasundaram R	PSNA College of Engineering and Technology	Faculty
81.	Dr.P.Muthupriya	Dr NGP Institute of Technology	Faculty
82.	Harshak S	Sri Venkateswara College of Engineering, Sriperumbudur	Student
83.	Kavinselva P	Sri Vengateshwara College of Engineering, Sriperumpudhur, Kanchipuram District	Student
84.	R.Sanjay Kumar	Aarupadai Veedu Institute of Technology	Faculty
85.	Balaji V	Kongunadu College of Engineering and	Student
86.	Gokul K	Sri Venkateswara College of Engineering	Student
87.	M.Jemimah Carmichael	Vignan's Lara Institute of Technology and Science	Faculty
88.	Sandhiya.C	Vivekanandha College of Technology for Women	Student
89.	Naveen Balaji.K	College of Engineering, Guindy	Student
90.	R. Yamni	Sri Venkateswara College Engineering	Student
91.	Dr.K.Sargunan	K.S.R College of Engineering	Faculty
92.	Harikrishnan S	A.V.C College of Engineering	Faculty
93.	Ranjana Piriyaadharshini	Sri Venkateshwara College of Engineering	Student
94.	S.Suresh	Kongunadu College of Engineering and Technology	Student
95.	Shehnazdeep	IIT Guwahati	Student
96.	Vanmathi.E	Kongunadu College of Engineering and Technology	Student
97.	Ashok Kumar R	Kongunadu College of Engineering and Technology	Student

S.No	Name of the Participant	Name of the Institution/Industry	Category
98.	Gogula Chezhiyan.N	Sri Vengadeshwara College of Engineering	Student
99.	Banuchandar J	Surya Group of Institutions	Faculty
100.	Subha Sakthi V	Prathyusha Engineering College	Student
101.	M.Rajkannan	Paavai Engineering College	Faculty
102.	A.Ananthakumar	Vivekananda College Of Technology For Women	Faculty
103.	Kartheek Babu	RISE Krishana Sai Prakasam Group of Institutions	Faculty
104.	J.Umanambi	Paavai Engineering College	Faculty
105.	Ammaiappan.M	Rajalakshmi Engineering College	Faculty
106.	Akshaya	Kongunadu College of Engineering and Technology	Student
107.	Muthaiyan P	Rajalakshmi Engineering College	Faculty
108.	Addala Surya Manikanta	Sir C R Reddy College of Engineering	Faculty
109.	Bhavadharani.M	Vivekananda College of Technology for Women	Student
110.	Rubana Sundar. G	Kongunadu College of Engineering and Technology	Student
111.	Sasidhar Yalavarthi	Sir C R Reddy College of Engineering	Faculty
112.	G. Arun	Sri Venkateswara College of Engineering	Faculty
113.	Mohamed Jasim.H	Kongunadu College of Engineering and Technology	Student
114.	Ranjani A	Prathyusha Engineering College	Student
115.	Sugashini.C	Kongunadu College of Engineering and Technology	Student
116.	Dhanapal. S	Kongunadu Collage of Engineering and Technology	Student
117.	Richin John Charly	Sri Venkateswara College of Engineering	Student
118.	S. Aravindan	M.A.M. College of Engineering	Faculty
119.	Tharini K	Srm Valliammai Engineering College	Faculty
120.	Kaviya S	Kongunadu College of Engineering and Technology	Student
121.	Rizha Ur Rahman B	Mohamed Sathak AJ College of Engineering	Faculty
122.	Brithisha S	Sri Venkateshwara College of Engineering	Student
123.	Ajay Kumar.R	Sri Venkateswara College of Engineering	Student
124.	Abhishek Kamisetty	Iit Guwahati	Student
125.	Mukesh.K	Kongunadu College of Engineering and Technology	Student
126.	M.Jenani	Sri Venkateswara College of Engineering	Student
127.	P.Malini	Kongunadu College Of Engineering And Technology	Student
128.	Anandhi V	Sethu Institute of Technology	Faculty

SUMMARY OF FEEDBACK

Total Number of respondents: 128				
Feedback statement	Strongly Agree	Agree	Neutral	Disagree
The session delivered the information I expected to receive	85	40	2	1
The subject matter was presented effectively	96	28	4	-
The pace and duration of the webinar was satisfactory	76	49	2	1
The resource person is knowledgeable	96	30	2	-
The resource person presented the information in a clear and logical manner	83	42	2	1
Sufficient time was given for interaction	75	47	5	1
The webinar was well organized	92	32	4	-
As a result of this webinar, I gained new knowledge	87	39	2	-



Additional comments/feedback from participants:

- Very knowledgeable eminent speaker, need more webinars on concrete technology
- Informative lecture and excellent way of organizing the webinar
- Very well organised
- The webinar session good and useful for us
- The webinar is absolutely good, audible. Gained much new informations about Light weight concrete. Thank you for your excellent effort and Please conduct more session like this
- Please keep doing seminars and conduct quizzes
- Complete study on Light Weight Concrete. Thanks for the arrangement.



Prepared By

Dr.R.Kumutha(HoD /Civil Engg.)

Convenor