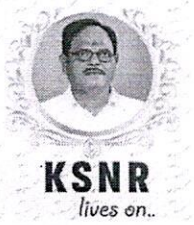
4.2

K.S.R.M. COLLEGE OF ENGINEERING
(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India– 516 003
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution



Lr./KSRMCE/CE/2023-24/ Date: 04.03.2024

From
G. Chennakesava Reddy,
Asst. Professor,
Dept. of Civil Engineering,
KSRMCE,
Kadapa.

To
The Principal,
KSRMCE,
Kadapa.

Sub: Request for Permission to Conduct Workshop on "Advanced NDT Techniques: A Deep Dive into UPV and Rebound Hammer Applications"– Reg.

Respected Sir,

Department of Civil Engineering proposes to conduct a workshop titled "Advanced NDT Techniques: A Deep Dive into UPV and Rebound Hammer Applications." This workshop aligns with our commitment to providing industry-relevant training and exposure to our students.

Workshop Details:

Title: Advanced NDT Techniques: A Deep Dive into UPV and Rebound Hammer Applications
Proposed Date: 07th March 2024.
Duration: One day
Target Audience: Final year B. Tech students of Civil Engineering

The workshop aims to provide hands-on experience and in-depth knowledge of Non-Destructive Testing (NDT) techniques, specifically focusing on Ultrasonic Pulse Velocity (UPV) and Rebound Hammer applications. These techniques are crucial in modern civil engineering practices for assessing the quality and integrity of concrete structures.

The proposed workshop will cover:
1. Theoretical background of NDT techniques
2. Practical demonstrations of UPV and Rebound Hammer tests
3. Data interpretation and analysis
4. Real-world applications and case studies

This initiative is in line with the objectives outlined in our MoU with The Ramco Cements Ltd., particularly in terms of knowledge sharing and enhancing our students' practical skills. We believe this workshop will greatly benefit our students by bridging the gap between theoretical knowledge and industry practices.

In this regard, we kindly request your approval to proceed with organizing this workshop. Your support for this initiative would be greatly appreciated.

Thank you for your consideration.

Thanking you,

Yours faithfully

(G. Chennakesava Reddy)

K.S.R.M. COLLEGE OF ENGINEERING
(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India– 516 003
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
An ISO 14001:2004 & 9001: 2015 Certified Institution

Cr./KSRMCE/CE/2023-24/ Date: 06.03.2024

Circular

Dear Students and Faculty Members,

We are pleased to announce an upcoming workshop titled "Advanced NDT Techniques: A Deep Dive into UPV and Rebound Hammer Applications." This workshop is being organized as part of our recent collaboration with The Ramco Cements Ltd, following the signing of a Memorandum of Understanding (MoU) between our institution and this leading cement manufacturer.

This workshop presents an excellent opportunity for students to gain hands-on experience with industry-standard NDT techniques, which are crucial in modern civil engineering practices for assessing the quality and integrity of concrete structures.

All students and faculty members of the Civil Engineering Department are encouraged to participate in this workshop. This initiative is part of our ongoing efforts to bridge the gap between academia and industry, providing invaluable exposure to real-world engineering practices.

We look forward to your active participation in this enriching learning experience.

The Event Coordinators
Sri G. Chennakesava Reddy,
Dr.M.V.Ravikishore Reddy,
Assistant Professor,
Department of Civil Engg. - KSRMCE.

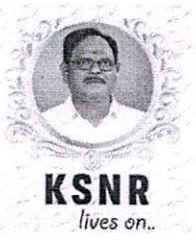
HoD
Head
Department of Civil Engineering
K.S.R.M. College of Engineering
(Autonomous)
KADAPA - 516 003. (A.P)

Cc to:

The Managing Director, KSRMCE

The Principal, KSRMCE

IQAC-KSRMCE



Report of

Workshop on "Advanced NDT Techniques: A Deep Dive into UPV and Rebound Hammer Applications" on 07th March. 2024

Co-coordinator(s) : **Sri G. Chennakesava Reddy, Dr.M.V.Ravikishore Reddy**

Organizing Department : **Civil Engineering**

Target Group: Students and Faculty of Civil Engineering Department

Details of Participants: 80 (65 Students and 15 Faculty members)

Organizing Department: Civil Engineering

Description:

The Department of Civil Engineering, organized a one-day workshop on "Advanced NDT Techniques: A Deep Dive into UPV and Rebound Hammer Applications" on June 15, 2024. The event aimed to provide participants with comprehensive knowledge and practical experience in Non-Destructive Testing (NDT) techniques, with a specific focus on Ultrasonic Pulse Velocity (UPV) and Rebound Hammer applications.

Overview:

The workshop was structured to cover both theoretical and practical aspects of NDT techniques, emphasizing their crucial role in modern civil engineering practices. It featured expert speakers from The Ramco Cements Ltd. and experienced faculty members from the department. The event was divided into four main sessions:

1. Theoretical Foundation of NDT Techniques
2. Practical Demonstrations of UPV and Rebound Hammer Tests
3. Data Interpretation and Analysis
4. Case Studies and Real-world Applications

The workshop was well-attended by students and faculty members, all eager to enhance their understanding of these essential testing methods used for assessing the quality and integrity of concrete structures.

Outcome of the Workshop:

The workshop yielded several positive outcomes for the participants:

1. **Enhanced Understanding:**

Participants gained comprehensive knowledge about the principles, applications, and limitations of Ultrasonic Pulse Velocity (UPV) and Rebound Hammer techniques in civil engineering. The theoretical sessions provided a deep dive into the physics behind these NDT methods, their accuracy levels, and the scenarios where they are most effective. Students and faculty now have a clearer understanding of how these techniques complement traditional destructive testing methods and their role in modern construction and structural health monitoring.

2. **Practical Skills Development:**

The workshop's hands-on component was particularly impactful. Participants engaged in practical demonstrations that covered the entire process of conducting UPV and Rebound Hammer tests. They learned about:

- Proper equipment handling and safety protocols
- Calibration techniques to ensure accurate readings
- Surface preparation for different types of concrete structures
- Correct positioning and application of UPV transducers and Rebound Hammers
- Techniques to minimize errors and ensure repeatability of results

This practical experience has equipped the participants with skills that are immediately applicable in field situations.

3. **Enhanced Analytical Capabilities:**

The data interpretation sessions were crucial in developing the participants' analytical skills. They learned to:

- Interpret raw data from UPV and Rebound Hammer tests
- Understand the correlation between test results and concrete strength
- Identify potential anomalies or areas of concern in structures
- Use statistical methods to ensure reliability of results
- Combine results from multiple NDT techniques for comprehensive assessments

These skills have significantly improved the participants' ability to make informed decisions about structural integrity based on NDT results.

4. **Industry Insights and Real-world Applications:**

Experts from The Ramco Cements Ltd. presented a series of case studies that showcased the practical applications of UPV and Rebound Hammer techniques. These real-world examples covered:

- Quality control in precast concrete manufacturing

- Assessment of fire-damaged structures
- Evaluation of historic buildings for restoration
- Monitoring of bridges and other critical infrastructure
- Troubleshooting in cases of early-age concrete failures

These insights helped participants understand the wide-ranging applications of NDT in various sectors of the construction industry.

5. Networking and Collaboration Opportunities:

The workshop served as a platform for meaningful interaction between academia and industry. Students and faculty had the opportunity to:

- Engage in discussions with industry experts
- Explore potential internship and project collaboration opportunities
- Understand industry expectations and skill requirements
- Build professional relationships that could lead to future research partnerships or employment opportunities

6. Alignment with Industry Standards and Practices:

The workshop highlighted current industry standards and best practices in NDT. Participants learned about:

- Latest equipment and technologies used in the field
- Industry-standard procedures and protocols
- Quality assurance and quality control measures
- Regulatory requirements and compliance issues
- Emerging trends and future directions in NDT

This exposure has helped bridge the gap between academic learning and industry expectations, better preparing students for their future careers.

7. Inspiration for Further Research and Study:

The workshop ignited a spark of curiosity and interest among many participants. Several outcomes were noted:

- Students expressed interest in pursuing advanced studies or research projects in NDT techniques
- Faculty members identified potential areas for curriculum enhancement to include more practical NDT training
- Ideas for collaborative research projects between the college and The Ramco Cements Ltd. were discussed
- Participants showed enthusiasm for exploring other NDT techniques beyond UPV and Rebound Hammer tests

Photo:

The pictures taken during the Workshop are given below:

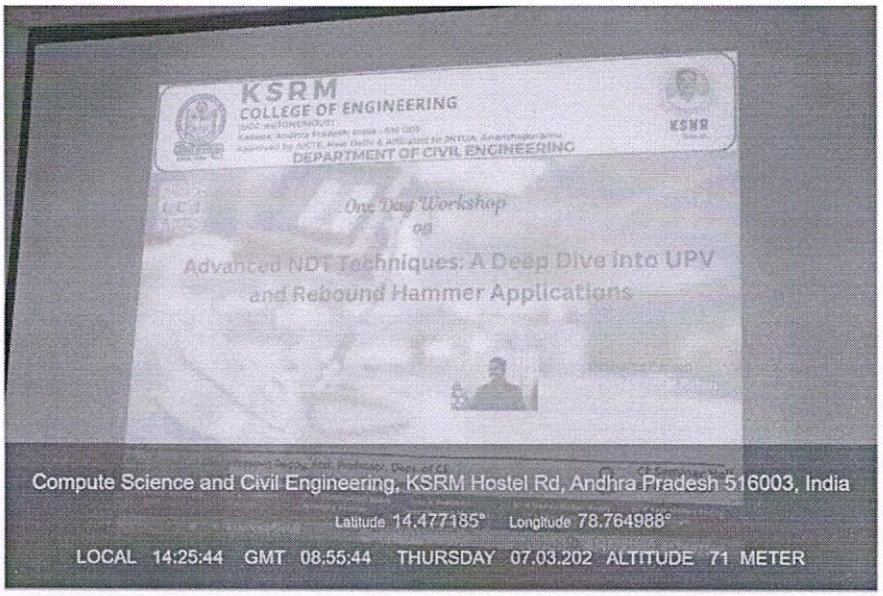


Fig 1. E-Banner

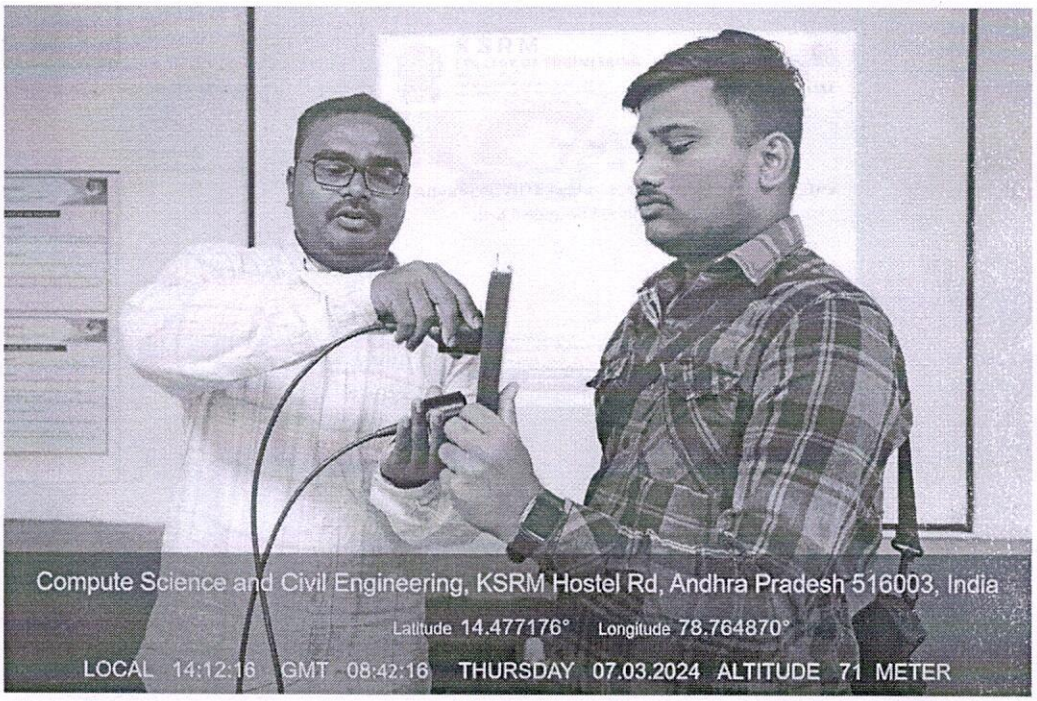


Fig.2 Experimental setup

Fig.3 Practical explanation to the students

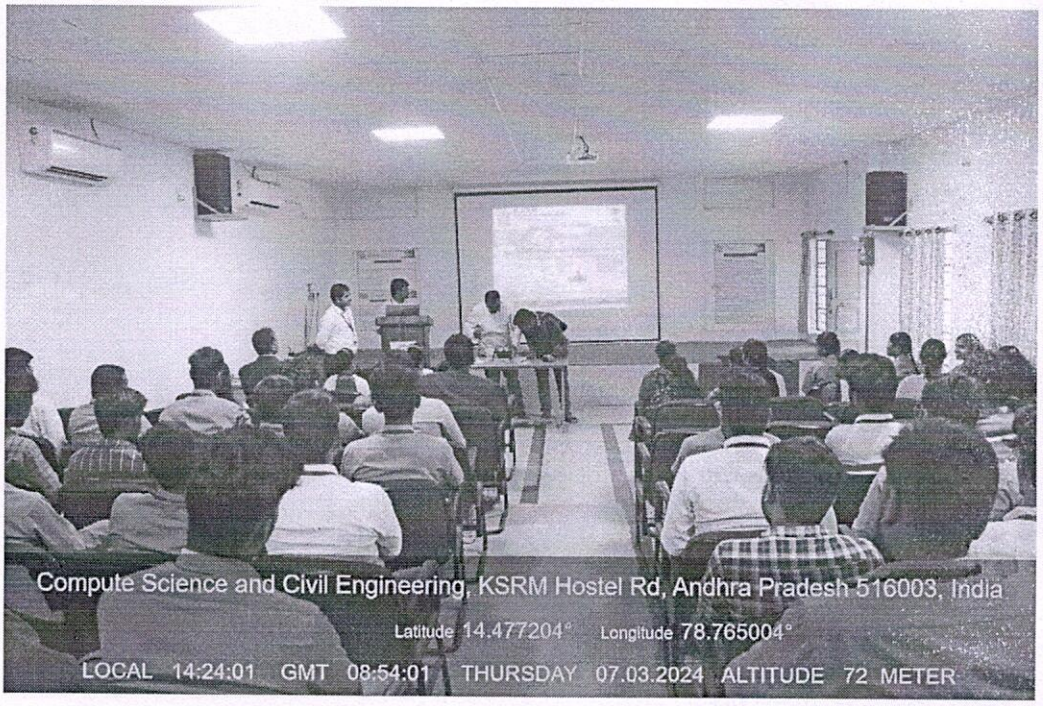


Fig.4 Photo with faculty and students

Coordinator

HoD, CE.

Head
Department of Civil Engineering
K.S.R.M. College of Engineering
(Autonomous)
KADAPA - 516 003. (A.P.)

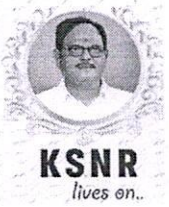
K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa,Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution



Date: 07.03.2024

List of Participants of MoU

" workshop on "Advanced NDT Techniques: A Deep Dive into UPV and Rebound Hammer Applications "on 07th March. 2024"

Sl. No.	Name of the Faculty	Faculty ID no.	Signature
1	P. Pavan Kumar	1021905	
2	V. Venkata Subbamma	1022301	
3	M. Vijay Kumar	1022401	
4	[illegible]	1028806	
5	[illegible]	[illegible]	
6	Dr. K. Shaikha Vali	1022303	
7	Dr. M V Ravi Reddy	1022102	
8	K. Hemanth Kumar Reddy	[illegible]	
9	Y. Dalthapir	1022201	
10			
11			
12			
13			
14			
15			

Coordinator

HoD, CE.

Head
Department of Civil Engineering
K.S.R.M. College of Engineering
(Autonomous)
KADAPA - 516 003. (A.P.)

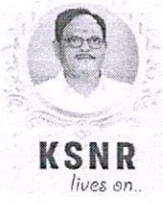
K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa,Andhra Pradesh, India– 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution



Date: 07.03.2024

List of Participants of

"Workshop on "Advanced NDT Techniques: A Deep Dive into UPV and Rebound Hammer Applications "

Sl. No.	Name of the Student	Reg. No.	Signature
1	T. Sidda Reddy	239Y1A0135	
2	P. UGYESH CHANDRA	2394 1A0121	
3	K. Samba siva Reddy	2394 1A0111	
4	T. Ganga Pavan	2394 1A0122	
5	E. Hari Vardhan Reddy	239Y 1A0110	
6	P. Ashvan Yadav	229Y 1A0126	
7	P. Siva Kumar Reddy	229Y 1A0124	
8	P. Vishnuvardhan Reddy	229Y 1A0125	
9	B. Jagadeesh varReddy	229X 1A0103	
10	A. Naveen	2294 1A0101	
11	G. subbaReddy	229X 1A0107	
12	Makathik Reddy	229Y 1A0119	
13	C. G. Vasudeva Reddy	229Y 1A0105	
14	B. yogeswarReddy	229Y 1A0102	
15	K. Ganga Kiran Kumar	2294 1A0110	
16	S. Arun kumar Reddy	229Y 1A0127	
17	Vs. Mohammed Ismail	2294 1A0133	
18	G. chandra	229X 1A0108	
19	S. MD. KHAMRODDIN	2294 1A0134	
20	K. Manohar	2294 1A0115	
21	Sk. Mabu Shareef	229Y 1A0129	

22	L. Prashanth	229Y1A0116	
23	P. Nithin	229Y1A0121	P. Nithin
24	K. Naga Sai	229Y1A0111	
25	B. Govardhan Prasad	239Y5A0113	
26	B. Vyshnavi	239Y5A0112	
27	Y. Gayathri	229Y1A0138	
28	B. Saikrishna	239Y5A0114	B. Saikrish
29	B. V. Poojitha	239Y5A0110	
30	A. Maheswary	239Y5A0106	
31	A. Shankar Narayana	239Y5A0102	
32	A. Kusuma	239Y5A0105	
33	A. Deepika	239Y5A0101	
34	B. Likhitha	239Y5A0115	
35	A. Manusha	239Y5A0104	
36	P. Venkata Subbaiah	229Y1A0122	
37	A. Swapna	239Y5A0107	
38	K. Lakshmi Kanth	229Y1A0112	
39	MADHU	229Y1A0135	
40	D. Sumanth	229Y1A0106	
41	Sathish	209Y1A0156	
42	C. Vishnu Vardhan Reddy	229Y1A0141	
43	B. Jayanthi	239Y5A0111	
44	S. Mohammad Basha	229Y1A0118	
45	S. Jainuddin	219Y1A0152	S. Jainuddin
46	Govardhan	229Y1A0104	
47	G. Jagadeesh	199Y1A0114	
48	E. Sai Vinay	219Y1A0107	
49	G. Vijay Kiran	219Y1A0108	
50	K. Nagesh	219Y1A0110	

51	B. Giripriya	239Y5A0118	B. Giripriya
52	B. Akhila	239Y5A0119	B Akhila
53	K. Thanu Sri	239Y5A0138	K. Thanu
54	M. Sireesha	239Y5A0142	M. Sireesha
55	R. Sravani	239Y5A0157	R. Sravani
56	K. Pavani	239Y5A0136	K. Pavani
57	M. LAKSHMI KAR REDDY	239Y1A0118	M. LAKSHMI KAR REDDY
58	M. Vishnupriya	239Y5A0146	M. Vishnupriya
59	K. Balachand yadav	239Y1A0116	K. Balachand yadav
60	K. V. S. Vignesh	2394 1A0114	K. V. S. Vignesh
61	G. Chandra Kanth	229Y1A0108	G. Chandra Kanth
62	K. Sameena	239Y5A0135	K. Sameena
63	S. Akbaaj	229Y1A0128	S. Akbaaj
64	K. Susanth	219Y1A0112	K. Susanth
65	Thulasi Ram	239Y5A0164	Thulasi Ram
66	C. MADHAVA	229Y5A0112	C. MADHAVA
67	G. Siddartha Naidu	219Y1A0110	G. Siddartha Naidu
68	L. Sumithra	229Y5A0130	L. Sumithra
69	M. Nandini	239Y5A0167	M. Nandini
70	K. Naseem	219Y1A0116	K. Naseem

Coordinator

HoD, CE.

Head
Department of Civil Engineering
K.S.R.M. College of Engineering
(Autonomous)
KADAPA - 516 003. (A.P.)