SARVAJANIK UNIVERSITY

Sarvajanik College of Engineering & Technology, Surat

Report on DPS Lecture

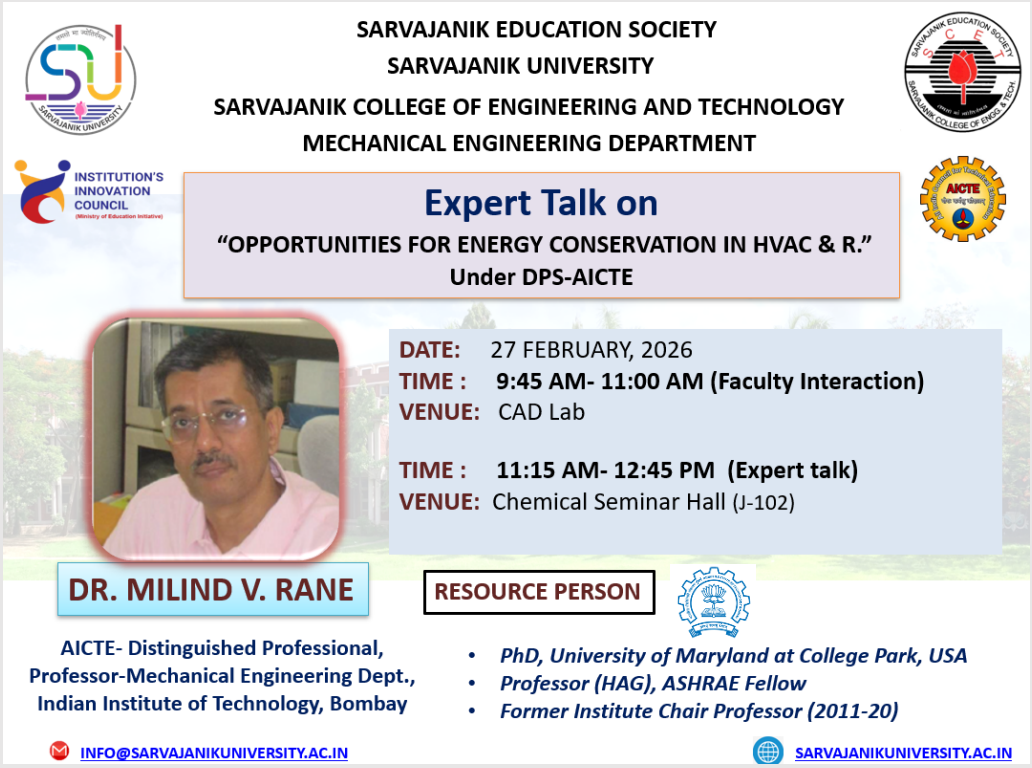
"Opportunities for Energy Conservation in HVAC & R."

Under AICTE-DPS

Organized by

Department of Mechanical Engineering

Resource person	**Dr. Milind V. Rane** (Professor in Mechanical Department, Indian Institute of Technology, Bombay)
Facilitator	Dr. Pankaj Gohil
Coordinator	Prof. (Dr.) Piyush Patel & Prof. Amit Mehta
Targeted Audience	Students of 1st , 2nd & 3rd Year
Venue	Chemical Seminar Hall (J-102)
Participants	121 students
Date and Time	27th February 2026 (Friday); 9:30 AM onwards



Sarvajanik College of Engineering and Technology organized expert lecture on “Opportunities for Energy Conservation in HVAC & R” on 27th February 2026 (9:30 AM Onwards) by resource person **Dr. Milind V. Rane** (Professor in Mechanical Department, Indian Institute of Technology, Bombay) Organized by **Department of Mechanical Engineering, Surat.**

OBJECTIVE OF THE EVENT:

The primary objective of this session is to promote Knowledge Integration, Knowledge Dissemination, and Knowledge Generation in the domain of energy conservation in HVAC & Refrigeration systems.

The session is structured to enhance technical understanding through meaningful interaction with faculty members and students, and aims to:

- Strengthen industry-academia collaboration in the domain of energy-efficient HVAC & R systems.
- Promote research, innovation, and consultancy opportunities in sustainable technologies.
- Foster entrepreneurship and startup initiatives in energy conservation and green building solutions.
- Support skill development and improve the employability of students in the HVAC & R sector.
- Integrate principles of the Indian Knowledge System with modern energy-efficient practices for sustainable societal development.

SESSIONS BRIEF DESCRIPTION:

The expert session was delivered by **Dr. Milind V. Rane**, who shared valuable insights drawn from his extensive academic, research, and industrial experience in the field of HVAC & Refrigeration. The session focused on exploring practical and innovative opportunities for energy conservation, while aligning modern engineering practices with the broader goals of sustainability and global environmental responsibility.

The session began with a discussion on the growing need and scope for sustainable development in the energy sector. Participants were made aware of the increasing global demand for energy, environmental challenges, and the necessity of adopting low-carbon and energy-efficient technologies. The importance of integrating sustainability principles into HVAC & R system design was highlighted.

A brief overview of advanced technologies was presented, including electric and heat-driven multi-utility heat pumps, exhaust heat recovery systems, and renewable energy integration. Dr. Milind Rane explained how these technologies can simultaneously provide heating, cooling, and energy recovery, thereby improving overall system efficiency. He elaborated on the advantages of waste heat recovery systems and described their salient features, such as enhanced thermal efficiency, reduced operational costs, and minimized environmental impact.

To strengthen practical understanding, several case studies were presented, demonstrating successful implementation of energy-efficient and sustainable technologies in real-world scenarios. These examples helped students understand current industry trends, design challenges, and innovative solutions adopted globally.

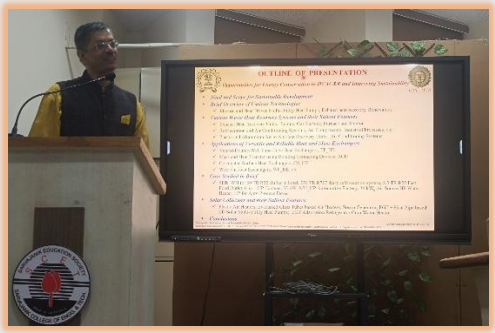
Overall, the session provided a comprehensive and industry-oriented perspective on energy conservation in HVAC & R systems, significantly enriching the technical knowledge of faculty members and students.

OUTCOMES OF THE EVENT:

The expert session significantly enhanced the technical knowledge and practical understanding of faculty members and students. Participants developed deeper insights into sustainable development, advanced heat pump technologies, waste heat recovery systems, renewable energy integration, and the application of efficient heat and mass exchangers. The discussion on systematic design and experimental validation strengthened their understanding of performance evaluation, energy optimization, and real-world engineering challenges aligned with global industry trends.

The event also fostered research orientation, innovation, and industry awareness among participants. Through practical case studies and expert interaction, attendees were motivated to explore research opportunities, consultancy projects, and entrepreneurial ventures in sustainable HVAC technologies. The session contributed to skill development, improved employability prospects, and encouraged integration of sustainable engineering practices with long-term societal and environmental goals.

GLIMPSES OF THE EXPERT SESSION:


OUTLINE OF PRESENTATION


AICTE-DPS
SARVAJANIK UNIVERSITY
SCET
WELCOME

ATTENDANCE DETAILS:

Total 121 Participants have attended for this expert talk session. The session proved to be highly beneficial for all the participants and inspired them to integrate sustainable engineering practices with long-term societal and environmental objectives.

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MECHANICAL ENGINEERING DEPARTMENT
Expert Talk on "OPPORTUNITIES FOR ENERGY CONSERVATION IN HVAC & R."
Under DPS-AICTE on the 27 FEBRUARY, 2026

Sr. No.	Enrollment No.	Name	Current Semester	Student Sign
1	ET25BTME046	Sachi Nirav Chudasma	II	
2	ET25BTME016	Joshi Yash Kumar	II	
3	ET25 BTME064	Shreyash Vijay Thoot	II	
4	ET25BTME013	Tanay H. Jani	II	Tanay
5	ET25BTME066	Bhavya Vaghasiya	II	
6	ET25BTME023	Dhruvil Maru	II	
7	ET25BTME005	Dharmik Chavda	II	
8	ET25BTME020	Gajera Jaimin	II	
9	ET25BTME048	Savani Moon	II	
10	ET25BTME032	Jenil Patel	II	
11	ET25BTME040	Sahil Patel	II	
12	ET25BTME069	Kevin Vora	II	
13	ET25BTME070	Yug Patel	II	
14	ET25BTME067	Dhyan Vashi	II	
15	ET25BTME056	Shreyansh Patel	II	
16	ET25BTME008	Pranay Devganiya	II	
17	ET25BTME053	SHEKHDA HARSHAL	II	
18	ET25BTME025	Miraliya Yagnesh	II	
19	ET25BTME019	Krish Saliya	II	
20	ET25BTME021	Dhruv Magtarpara	II	

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Sr. No.	Enrollment No.	Name	Current Semester	Student Sign
21	ET25BTME022	Shrey Mangukiya	2	
22	ET25BTME030	Hetraj Parmar	2	
23	ET25BTME011	Kashyap N. Gandhi	2	Kashyap
24	ET25BTME068	Vora Heet Rajendrakumar	2	
25	ET25BTME009	Dhameliya Vatsalkumar	2	
26	ET25BTME006	Chavda Harshil.	2	
27	ET25BTME028	Tanish Panchal . A	2	
28	ET25BTME033	Patel Ayush P.	2	
29	ET25BTME029	Devam R. Parekh	2	Devam Parekh
30	ET25BTME020	Maanya Padshah	2	
31	ET25BTME027	Neeti Desai	2	
32	ET25BTME014	Jonki Patel	2	
33	ET25BTME050	Shree Krishna Kumar	2	
34	ET25BTME052	SHUKLA SIDDHARTH - J	2	
35	ET25BTME031	Vansh . V . Patel	2	
36	ET 25 BTME015	Jashika Mahobia	2	Jashika
37	ET25BTME010	Patel Tusha A.	2	
38	ET25BTME004	Maharshi Bodat	2	
39	ET25BTME018	Princy .D. Kansara	2	
40	ET25BTME026	Maithily N. Naik	2	M.N. Naik

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Sr. No.	Enrollment No.	Name	Current Semester	Student Sign
41	ET25BTME062	Arya Jignesh Suba	2	
42	ET25BTME060	Prayag J. Soni	2	P.J.S
43	ET25BTME017	Dharm Kansara	2	
44	ET25BTME061	Soumya Patel	2	
45	ET25BTME039	Preet Patel	2	Preet
46	ET25BTME043	Vansh Patel	2	V.Patel
47	ET25BTME055	Shourya Srivastava	2	
48	ET25BTME059	Soni Krish	2	
49	ET25BTME044	Patil Hitesh	2	Hitesh
50	ET25BTME052	SHAH VANSH	2	
51	ET25BTME038	Neel Patel.	2	Neel

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Sr. No.	Enrollment No.	Name	Current Semester	Student Sign
1.	ET24BTME017	Khorodia Manthan. H.	4th	
2.	ET24BTME011	Meet Dhrangdhariya	4th	
3	ET24BTME032	DAKSH PATEL	4th	
4	ET24BTME004	Tirth Anghan	4th	
5	ET24BTME003	Kavya Aragiya	4th	
6.	ET24BTME015	Vatsal Gabani	4th	Vatsal
7.	ET23BTME017	Smit Lakhani	4th	Smit
8.	ET24BTME023	Movani Ruvij	4th	
9.	ET24BTME024	Meet Patel	4th	
10.	ET24BTME022	Mann Saliya	4th	
11.	ET24BTME010	Om Dhola	4th	
12.	ET24BTME051	AAYUSH SANGHADIA	4th	
13.	ET24BTME033	DEEP PATEL	4th	Deep
14.	ET24BTME038	Patel Ronak	4th	
15	ET24BTME062	Vavadiya Om R.	4th	
16	ET24BTME047	Ranoliya Nishit	4th	
17	ET24BTME030	Rishi Panchal	4th	
18	ET24BTME048	Shubham Rana	4th	
19	ET24BTME013	Patel Dhyan	4th	
20	ET24BTME028	Naik Yug	4th	

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Sr. No.	Enrollment No.	Name	Current Semester	Student Sign
21.	ET24BTME029	Narayani Ayush H.	4th	
22.	ET24BTME035	Patel Kaushik. P	4th	K.P. Patel
23.	ET24BTME005	Archan Sharma	4th	
24.	ET25BTME804	Patel Jaimishkumar	4th	J.A Patel
25	ET24BTME054	Shlok. M. Shirke	4th	
26	ET25BTME801	Abhi T Desai	4th	A.T.Desai
27	ET24BTME002	AKSHAT PATEL	4th	
28.	ET24BTME031	Martin Patel	4th	
29.	ET24BTME056	Md. Amaan Surati Y.	4th	
30.	ET24BTME043	Poonawala Ebrahim. A	4th	
31.	ET24BTME021	Ammar Lilywala	4th	
32.	ET24BTME036	Patel Parth	4th	
33.	ET24BTME034	Patel Harsh	4th	
34.	ET24BTME018	Kukadiya Shubham	4th	
35.	ET24BTME046	Priyam Raj	4th	
36.	ET24BTME025	Harsh Mistry	4th	
37.	ET24BTME008	Rushank Derawala	4th	
38.	ET24BTME001	Aary Patel	4th	
39.	ET24BTME040	Patel Vedant	4th	
40.	ET24BTME057	Tadhani Kavya	4th	
42.	ET24BTME061	Bhargav Vantarpara	4th	

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Sr. No.	Enrollment No.	Name	Current Semester	Student Sign
42.	ET24BTME042	Bhoomi Patil	4th	
43.	ET24BTME026	Mohammed Bharmal	4th	
44.	ET24BTME044	Raivat Purohit	4th	
45.	ET24BTME058	Pratham Tejani	4th	Prathar
46.	ET24BTME049	Sahani Suraj	4th	

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Sr. No.	Enrollment No.	Name	Current Semester	Student Sign
1.	ET23BTME008	HARSH PANDEY	06	
2.	ET23BTME012	DHAIRYA KHANSAHEB	06	
3.	ET23BTME013	VRUSHABH KHARATE	06	
4	ET23BTME029	[illegible]	06	
5	ET23BTME023	Parth Panchal	06	Parth
6	ET23BTME031	Yashraj Thakor	06	yashraj
7	ET22BTME003	Aryan Chauhan	06	
8.	ET24BTME801	Aryan.K.chauhan	06	
9.	ET21BTME012	Gamgami Uttam H	06	
10.	ET22BTME011	Arshal Nalbandh	06	
11.	ET23BTME011	Harsh Katlariwala	06	
12	ET23BTME007	Hardik Sharma	06	
13	ET24BTME804	Dev Panchal	06	
14	ET23BTME028	Krishna Sailor	06	
15	ET23BTME014	Krish Bhalala	06	
16	ET24BTME805	Sneh Thummar	06	
17	ET23BTME015	Kush Patel	06	
18.	ET24BTME803	Harshil Pangowala	06	
19	ET23BTME017	Manav Patel	06	
20	ET24BTME904	Kaushil Shah	06	

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Sr. No.	Enrollment No.	Name	Current Semester	Student Sign
21	ET23BTME006	Tanisha Gohel	06	
22	ET23BTME024	Mihir H Patel	06	
23	ET23BTME001	Ankit Thakur	06	Ankit
24	MECH - DDU University	Vyas Udit Rathnam	06	

ACKNOWLEDGMENT

The Coordinator extends heartfelt thanks to the Resource Person, **Dr. Milind V. Rane**, for his engaging and thought-provoking interaction with faculty members and students, which fostered a rich intellectual exchange. The insightful discourse delivered by him significantly strengthened industry–academia collaboration and promoted a culture of research, innovation, entrepreneurship, and start-ups.

His vision and guidance inspired students to explore emerging opportunities, enhanced their employability, and emphasized the vital role of engineering in societal development. Furthermore, his emphasis on the Indian Knowledge System added depth and contemporary relevance to the session, making it truly impactful and transformative.

We thank to our Honorable Principal **Dr. Hiren Patel**, Dean-R&D: **Dr. Utpal Pandya** for encouraging us to conduct the session and **Dr. Pankaj Gohil** (Head of the Mechanical Department) for all kinds of support extended.

Through this brief note we would like to acknowledge the support provided by every faculty member of the department to make the event successful.

In addition, we would like to thanks all the participants without whom the talk could not have been planned or executed.

Report Prepared By:

Prof. (Dr.) Piyush T. Patel,
Prof. Amit Mehta
MED, SCET.