
ACADEMIC YEAR
2023-24



DEPARTMENT OF MECHANICAL ENGINEERING,
MBCET

ISHRAE (Office bearers)

Name of the Student	Office post
MR. JIBIN BABU B S	President
MR. ANANTH P NAMPOOTHIRI	President-Elect
MR. JOEL THOMAS	Secretary
MR. AKASH A S	Treasurer
MR. AAROMAL SANTHOSH S	CWC member
MR. ROHITH P	CWC member
MR. ADITHYAN A K	CWC member
MR. ATHUL SHAJI	CWC member

ISHRAE



The **Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)** was founded in 1981 at New Delhi by a group of eminent HVAC&R professionals. It is led by a team of elected officers, who are members of the Society, working on a voluntary basis, and collectively called the Board of Governors. ISHRAE objectives are advancement of the Arts and Sciences of Heating, Ventilation, Air Conditioning and Refrigeration Engineering and Related Services, Continuing education of Members and other interested persons in the said sciences through Lectures, Workshops, Product Presentations, Publications, Expositions and Encouragement of scientific research. ISHRAE conducts Conferences, Seminars, Exhibitions, Workshops, Panel Discussions and Product Presentations throughout the country with both national and international participants to discuss, promote and display the state of the art technologies, systems, products and services.

ISHRAE OBJECTIVES:

- Advancement of the Arts and Sciences of Heating, Ventilation, Air Conditioning and Refrigeration Engineering and Related Services.
- Continuing education of Members and other interested persons in the said sciences through Lectures, Workshops, Product Presentations, Publications and Expositions.
- Rendition of career guidance and financial assistance to students of the said sciences.
- Encouragement of scientific research.

ISHRAE MISSION:

To promote the goals of the Society for the benefit of the general public. Towards this objective, the Chapters of the Society participate in, and organize, activities to protect the Environment, improve Indoor Air Quality, help Energy Conservation, provide continuing education to the Members and others in the HVAC & related user Industries and offer certification programs, career guidance to students at the local colleges and tertiary institutions.

ISHRAE ACTIVITIES:

As part of its objectives to promote the interests of the HVAC&R Industry, ISHRAE is involved in various activities. ISHRAE reaches out to all its members and seeks their active participation & involvement in all the Events/Programs organized by the society.

ISHRAE student chapters in more than 150 engineering colleges encourage students to opt for careers in the HVAC&R industry. Knowledge dissemination is done through seminars, quiz contests like aQuest, plant and site visits.

ISHRAE has launched “ISHRAE Job Junction” nationally, providing a platform for leading employers to recruit candidates who are members from ISHRAE student chapters.

K-12 initiative of ISHRAE is focused on school students' contests, in making them aware of subjects like, energy conservation and environmental concerns through drawing competitions, poster design, quiz and planting of trees. Emphasis on STEM education is stressed to inculcate a scientific fervor & help develop these young children into responsible citizens.

Research: ISHRAE promotes research in the field of HVAC&R technology. It offers financial support to Graduate/Post Graduate students, to carry out innovative work on R & D in Technology, Systems, and Processes. ISHRAE partners with Industry to carry out scientific research t Institutes associated with ISHRAE for this purpose.

ACREX INDIA: ISHRAE organizes ACREX INDIA, the largest international exposition in South Asia on the Air-Conditioning, Refrigeration, Ventilation and Building services industry. Held annually, ACREX with nearly 500 exhibitors is considered to be a major opportunity to showcase the latest technologies/innovations, and provide a platform for buyer-seller meet, for technical & commercial personnel in the HVAC&R field.

Publications: ISHRAE publications strive to help its members & the industry keep up-to date with the technical developments, latest trends, and sunrise technologies. ISHRAE Standards, Fundamental books on various topics, HVAC&R Handbooks and the extremely popular & informative ISHRAE Journal, are a few such publications.

ISHRAE MEMBERSHIP LIST

SL NO.	MEMBERSHIP NO	NAME
1	S21097610	Mr. JIBIN BABU B S
2	S22103700	Mr. ANANTH P NAMPOOTHIRI
3	S22106422	Mr. GAUTHAM SREEKUMAR
4	S00110861	Mr. P RAHUL RAJAN
5	S00110864	Mr. ABHIRAM P
6	S00101668	Mr. ARJUN AJI
7	S00101878	Mr. AKASH A S
8	S00103663	Mr. PIYUSH A H
9	S00103718	Mr. JOHN SONY KURIEN
10	S00110886	Ms. POOJA KRISHNA
11	S23110860	Mr. B LOGU SHANMUGAM
12	S00110917	Mr. DAN MATHEW PHILLIP
13	S00110918	Mr. NIHAL N
14	S00110926	Mr. AAROMAL SANTHOSH S
15	S23110930	Ms. SKARIA VINOD
16	S23110920	Mr. ROHITH P
17	S00111012	Mr. ANAND KRISHNA G S
18	S00111013	Mr. AMITH RAVISANKAR
19	S00110974	Mr. ADITHYAN A K
20	S00111029	Mr. JOEL THOMAS
21	S22103760	Mr. SIVAPRASAD
22	S23110993	Mr. ATHUL SHAJI
23	S23111023	Mr. ATHUL S NAIR
24	S00111695	Mr. NITIN SREEKESH

ISHRAE ANNUAL INSTALLATION CEREMONY

Date: 19th May 2023

Venue: Mechanical Dept Seminar Hall

Organized by: ISHRAE Chapter

OVERVIEW:

The Installation Ceremony of the ISHRAE (Indian Society for Heating Refrigeration and Air Conditioning Engineering) Chapter for the year 2023-2024 was a momentous occasion, signifying a new chapter in the organization's journey. This event aimed to inaugurate the new leadership, celebrate past achievements, and set ambitious goals for the upcoming year. Alongside, a technical talk session on the importance of BIM in the MEP industry enriched the knowledge base of attendees.



HIGHLIGHTS:

National Anthem: The event commenced with a rendition of the national anthem, fostering a sense of unity and pride among participants.

Virtual ISHRAE Flag Hoist: Embracing modern technology, the ISHRAE flag was hoisted virtually, marking the official commencement of the new term, symbolizing adaptability and innovation.

ISHRAE Theme Video: A visually captivating theme video elucidated the organization's mission and objectives for the forthcoming year, inspiring all present.

Welcome Speech: Assistant Professor Akhil Chandran, from the Mechanical Department at MBCET, delivered a warm welcome speech, setting a positive and encouraging tone for the event.

Chief Guest Address: Mr. Noushad .M. Hussain, Regional Director South I, ISHRAE HQ, shared invaluable insights during his chief guest address, inspiring the audience with his expertise.

Student Chapter Installation: Mr. Abhilash M.R, President of ISHRAE Trivandrum Chapter SY 2023-2024, led the installation of the student chapter, fostering leadership qualities among the youth, ensuring continuity and growth.

Felicitation Speech: Mr. Prasannalal, Immediate Past President of ISHRAE Trivandrum Chapter, delivered a felicitation speech, acknowledging the contributions of the outgoing team and motivating the new leadership.

Chapter Address: Mr. Jibin Babu B.S, President of ISHRAE MBCET Chapter, provided insights into the chapter's vision and outlined initiatives for the year ahead, emphasizing innovation and excellence.

Technical Talk Session: Mr. Reny John W, a BIM Application Engineer from BIMLABS Engineering Services, delivered an enlightening technical talk session on the application of BIM in engineering, enriching the knowledge of attendees.

Vote of Thanks: Mr. Ananth .P. Nampoothiri, President-Elect of ISHRAE MBCET Chapter, extended gratitude to all participants, sponsors, and contributors for their support, ensuring the success of the event.



CONCLUSION:

The Installation Ceremony of the ISHRAE Chapter SY 2023-2024 served as a platform for reflection, celebration, and anticipation of a promising future. With a new leadership team at the helm, the chapter is poised to continue its journey of success, innovation, and excellence in the field of heating, refrigeration, and air conditioning engineering. ISHRAE extends its heartfelt gratitude to all attendees, sponsors, and contributors for their unwavering support, which ensures the sustained growth and impact of the organization.

ISHRAE-MBCET EVENTS LIST

Event Name	Date	Venue
CWC Installation Of ISHRAE MBCET Student Chapter	19-05-2023	MBCET Campus
Technical Talk Session On The Application Of Bim In Engineering	19-05-2023	MBCET Campus
Environment Day Poster Design Competition On Schools	05-06-2023	Trivandrum
Technical Talk On Simulation For HVAC And Cold Room Design	30 -06-2023	Online
Distinguished Lecture On Evaporative Multi-Stage Cooling System	21-07-2023	Online
Technical Talk On 'Thermal Comfort For Decarbonization	2-08-2023	Online
Heat Load Calculation (Full Day) Training With E-20 Sheets	26-08-2023	Ridges Hotel Pattom
Technical Talk On " Pharma And Clean Room Design "	3-09-2023	Online
Intership Visit To Mc Donald's Kazhakoottam Work Site	12-09-2023	Kazhakoottam Mc Donalds
Acreserve Program	18-11-2023	Ridges Hotel Pattom
Technical Talk on the Design and Selection of Kitchen Hoods	11-12-2023	Online
Technical Talk on Climate Change and the Role of Building Stakeholders	14-12-2023	Online
Industrial Visit To Trivandrum International Air-Port	9-03-2024	Trivandrum

Report on Environment Day 2023 Poster Competition

Organizer: ISHRAE MBCET Chapter

Date: 5-06-2023

Location: Trivandrum

The ISHRAE MBCET Chapter successfully conducted a Poster Competition in celebration of Environment Day 2023, in collaboration with 12 schools in Trivandrum. This report highlights the objectives, methodology, key findings, and the impact of the event, demonstrating the importance of fostering environmental awareness among the younger generation.

INTRODUCTION

Environment Day is an annual event celebrated worldwide to raise awareness and encourage action for the protection of our environment. ISHRAE MBCET Chapter organized a Poster Competition to engage students and schools in Trivandrum, fostering environmental consciousness among the youth.

OBJECTIVES

To raise awareness about environmental issues.

To encourage creative expression of environmental concerns.

To engage students in a positive and educational activity on Environment Day.

PARTICIPATION AND OUTREACH

A total of 12 schools from Trivandrum participated in the competition. This widespread participation showcased the commitment of schools and students to environmental awareness.



POSTER THEMES

The theme for the Environment Day 2023 Poster Competition, "POLLUTION TO SOLUTION," provided an excellent platform for students to express their concerns and ideas about the state of the environment. This theme was carefully chosen to encourage young minds to reflect on the critical environmental issues facing our planet and to propose innovative solutions to combat pollution.



JUDGING AND AWARDS

A panel of judges, consisting of environmental experts and artists, evaluated the posters. Winners were selected in various categories, and prizes were awarded to encourage and recognize the efforts of the young artists.



IMPACT AND FEEDBACK

The event generated significant interest and awareness among students, teachers, and parents. The colorful and meaningful posters served as a conversation starter about environmental issues. Positive feedback from participants and the community underscored the event's success in achieving its objectives.

CONCLUSION

The ISHRAE MBCET Chapter's Poster Competition for Environment Day 2023 was a remarkable success. It engaged the youth, fostered environmental consciousness, and celebrated creativity. The event underlined the importance of involving schools and students in environmental initiatives and set a positive example for future endeavors.

The ISHRAE MBCET Chapter extends its gratitude to all participants, schools, judges, and sponsors who made this event possible. The commitment to environmental awareness remains a cornerstone of our mission, and we look forward to continuing our efforts in the future.

Report on ACRESERVE Organized by ISHRAE Trivandrum Chapter

Venue: Ridges Hotel, Pattom Kowdiar Road, Pattom, Thiruvananthapuram

Date: 18th November 2023, Saturday

INTRODUCTION:

On November 18, 2023, the ISHRAE MBCET Chapter actively participated in the ACRESERVE 2023-24 program organized by the ISHRAE Trivandrum Chapter. Held at Ridges Hotel in Thiruvananthapuram, the event provided an extensive platform for learning and networking in the field of HVAC&R. This report encapsulates the proceedings and highlights of the program.

PROGRAM OVERVIEW:

The program, spanning from 10:00 am to 4:00 pm, witnessed the enthusiastic participation of 18 students from the MBCET Chapter. It encompassed a wide array of topics essential to HVAC&R, including troubleshooting in air conditioning installations, VRF technology, preventive maintenance, and electrical safety.

SESSIONS AND SPEAKERS:

The inaugural session primarily focused on retrofitting and targeted service engineers, technicians, HVAC&R professionals, dealers, distributors, and contractors. Distinguished speakers like Santhosh and Noushad Hussain M delivered insightful sessions covering various aspects of air conditioning technology and safety measures.

NETWORKING OPPORTUNITIES:

A break for high tea not only offered a refreshing pause but also facilitated valuable networking opportunities. Students, professionals, and technical staff engaged in meaningful interactions, exchanging knowledge and insights.



VENUE AND LEARNING ENVIRONMENT:

The Ridges Hotel provided an ideal setting for the program, offering a conducive environment for learning and interaction. The comfortable ambiance enhanced the overall experience of the participants, contributing to the success of the event.



PARTICIPANTS FROM ISHRAE MBCET CHAPTER:

1. Jibin Babu BS
2. Adhithyan A K
3. Akash A S
4. Abhiram P
5. Anand Krishnan
6. Arjun Aji
7. Athul S Nair
8. Soorayanandan Sudhin
9. Nihal N
10. Yashika S Kumar
11. Sam P R
12. Sivaprasad
13. Nitin Sreekesh
14. Skaria Vinod
15. Aaromal Santhosh
16. Toby Samuel Suresh
17. Gem Varghese George
18. Albin Raju

CONCLUSION:

The ACRESERVE 2023-24 program hosted by the ISHRAE Trivandrum Chapter was a resounding success. The event not only provided valuable insights into HVAC&R but also facilitated networking and knowledge exchange among participants. The commitment of the organizers and the active participation of students from the MBCET Chapter underscored the significance of continuous professional development in the field. This program undoubtedly contributed to the academic and professional growth of all attendees, reaffirming ISHRAE's dedication to promoting excellence in HVAC&R.

Report on Internship Visit to McDonald's Kazhakoottam Work Site

Date: September 12, 2023

Organizer: ISHRAE MBCET Chapter

PARTICIPANTS:

The following students from S7 ME2, representing ISHRAE MBCET Chapter, attended the internship at McDonald's Kazhakoottam work site:

1. Jibin Babu BS
2. Akash AS
3. Amith Ravisankar
4. Pooja Krishna
5. B Logu Shanmugam
6. Rahul Rajan

OVERVIEW OF THE VISIT:

The internship visit to McDonald's Kazhakoottam work site, organized by the ISHRAE MBCET Chapter, aimed to familiarize chapter members with refrigeration ducting and installation processes. The visit provided practical exposure and knowledge sharing opportunities in these specific fields.

Subject: Report - Internship Visit to McDonald's Kazhakoottam Work Site

REFRIGERATION DUCTING:

The visit commenced with an orientation session, introducing participants to the refrigeration ducting system at McDonald's Kazhakoottam. Detailed information on design, sizing, and installation of ducts was provided, emphasizing the importance of maintaining precise airflow and temperature control.

INSTALLATION TECHNIQUES:

Participants actively engaged in hands-on experience by participating in duct installation and various refrigeration system components. This practical involvement significantly enhanced their understanding of the complexities involved in the installation process.

SAFETY PROCEDURES:

Mr. Sarath, an expert in refrigeration ducting and installation, conducted an informative session on safety procedures. Students learned about proper equipment handling, tool usage, and adhering to personal protective gear guidelines to ensure a secure working environment.

INTERACTION WITH SITE ENGINEERS:

An interactive session with site engineers facilitated a deeper understanding of industry practices and provided a platform for networking and future guidance.

FEEDBACK AND CONCLUSION:

The students' feedback regarding the visit to McDonald's Kazhakoottam was highly positive. They found the visit informative and insightful, primarily due to the invaluable guidance provided by Mr. Sarath. This practical exposure will undoubtedly contribute to their academic and professional growth, aligning with ISHRAE MBCET Chapter's commitment to fostering industry-relevant knowledge and skills among its members.

Industrial Visit And Technical Talk At Trivandrum International Airport

Date: 9th March 2024

Location: Trivandrum International Airport

INTRODUCTION:

On the 9th of March 2024, a group of students from the Department of Mechanical Engineering, representing ISHRAE MBCET, embarked on an enlightening industrial visit to the Chilled Water Plant situated within the premises of Trivandrum International Airport. The primary objective of this visit was to gain insights into the operational procedures involved in air conditioning systems. The visit was organized to bridge the gap between theoretical knowledge and practical application in the field of mechanical engineering.

DESCRIPTION:

Upon arrival at the Chilled Water Plant, the students were cordially greeted by Mr. Noushad Hussain, an esteemed officer at the plant. Mr. Noushad Hussain commenced the session by elucidating the intricate workings of hydro-pneumatic pumps, a fundamental component of the air conditioning system. Through engaging explanations and live demonstrations, he provided a comprehensive understanding of the equipment and its maintenance protocols.

During the visit, the students were privileged to witness firsthand the sophisticated technology employed in air conditioning, fire extinguisher systems, and the functioning of diesel generators within the airport premises. Mr. Noushad Hussain meticulously elaborated on each aspect, shedding light on the underlying principles and operational nuances.

LIST OF STUDENTS FOR VISIT

SL NO	NAMES	MEMBERSHIP ID
1	Abhiram P	S00110864
2	Akash A S	S00101878
3	Amith Ravisankar	S00111013
4	Anand Krishna G S	S00111012
5	Athul S Nair	S23111023
6	Arjun Aji	S00101668
7	Athul Shaji	S23110993
8	Jibin Babu B S	S21097610
9	B Logu Shanmugam	S23110860
10	Nitin Sreekesh	S00111695
11	Nihal N	S00110918
12	P Rahul Rajan	S00110861
13	Pooja Krishna	S00110866
14	Sivaprasad	S22103760
15	Skaria Vinod	S23110930



OUTCOME OF THE VISIT:

The industrial visit proved to be immensely beneficial for the students, yielding multifaceted outcomes:

Technological Insight: Students gained invaluable insights into the advanced technology utilized in air conditioning systems, fire safety measures, and backup power generation, enhancing their understanding of real-world applications.

Practical Application: The visit facilitated a seamless integration of theoretical knowledge with practical exposure, enabling students to grasp the operational intricacies and maintenance protocols associated with industrial equipment.

Career Prospects: Discussions with Mr. Hussain provided students with valuable insights into the diverse career opportunities available in the field of mechanical engineering, particularly in the domains of HVAC systems and facility management.



Mr Noushad explaining chiller and working

CONCLUSION:

The industrial visit to the Chilled Water Plant at Trivandrum International Airport was an enriching experience for the students of ISHRAE MBCET. It served as a platform for practical learning, fostering a deeper appreciation for the complexities of air conditioning technology and its vital role in modern infrastructure. The insights gained during the visit are poised to equip students with the requisite knowledge and skills to excel in their future endeavors in the field of mechanical engineering.

Conclusion

The annual report of the ISHRAE MBCET Chapter for the year 2023-2024 showcases a year marked by significant accomplishments, expansion, and impactful contributions to the HVAC sector. Throughout this period, the chapter has demonstrated unwavering dedication to advancing knowledge sharing, fostering professional growth, and advocating sustainability within the industry.

Over the course of the year, the chapter orchestrated a diverse array of informative events, workshops, and training sessions tailored to meet the diverse needs of its members. These initiatives covered a broad spectrum of topics, ranging from energy conservation and building regulations to heat transfer and troubleshooting HVAC systems. These events served as dynamic platforms for industry experts, practitioners, and students alike to exchange insights, gain practical wisdom, and remain abreast of the latest industry advancements.

The ISHRAE MBCET Chapter remained actively engaged with its membership base by facilitating numerous networking opportunities, and nurturing a robust sense of community and collaboration. Through initiatives such as quizzes, cricket tournaments, and webinars, the chapter cultivated an inclusive environment conducive to fostering connections, sharing experiences, and fostering enduring relationships among members.

In addition to its focus on knowledge dissemination and networking, the chapter prioritized sustainability and energy efficiency initiatives. It championed the adoption of eco-conscious practices, energy-saving measures, and compliance with established energy codes and standards. By spearheading these endeavors, the chapter aimed to raise awareness and drive positive change within the industry, aligning its efforts with global endeavors towards a more environmentally responsible and sustainable future.