Compiled and edited by Rakesh Kumar, Technical Editor, Air Conditioning and Refrigeration Journal

# A New Team for a New Society Year

### **New BoG Installed with Fanfare**

The Board of Governors for Society Year 2016-17 was installed on March 18 at The Lalit, New Delhi, The strong resolve to perform and achieve was evident in the speeches made. Equally there was an atmosphere of celebration and camaraderie.

President 2016-17 Sachin Maheshwari and Secretary 2016-17 Nishant Gupta introduced Search-O, a new initiative of ISHRAE to make available a searchable database of Indian HVAC players.

K. Ramachandran, President 2015-16, launched e-Journal, the web version







K. Ramachandran launches e-Journal

of Air Conditioning and Refrigeration Journal, which will be available to members through Member Log-in on ISHRAE website.

The outgoing President reviewed the year gone by, mentioning the achievements as well as concerns. Among the achievements are adoption of the chiller standard as an Indian Standard, position papers on IEQ and refrigerants, adoption of ISHRAE version in NBC 2015, research grants, student grants, ISHRAE Certification Programs, IIE diploma courses, National Student Design Competition, aQuest, Job Junction, eprograms, ACREX 2016, K-12 programs, new committee refrigera-



tion, Apex Ad- his acceptance speech

visory Committee and Search-O. The concerns are about new member acquisition and membership renewals, and some inactive chapters.

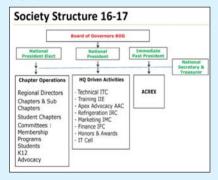
Dr. Prem C. Jain, an industry stalwart, administered the oath of office to the new team. He appreciated the good work done by the outgoing President and his team. He mentioned the target of 10,000 million sq ft of Green buildings by 2022 - the 75th anniversary of India's independence. He also threw a challenging target of 1 lakh ISHRAE members - higher than the strength of ASHRAE.



Dr. Prem C. Jain administers the oath to the new team

# **President's Message**

Delivering his acceptance speech, Sachin Maheshwari expounded his Vision of ISHRAE: To be recognized as a leading body involved in meeting the Technical and Training requirements of HVAC&R Industry. He outlined the Society structure to realise the vision.



The President outlined the roles of Technical Committee, IIE, Apex Advocacy Committee, Refrigeration Committee, Marketing Committee and IT cell.

### **Apex Advocacy Committee AAC ISHRAE** Reaches out

Dedicated committees working on

- Allied Domestic & International Societies
- Industry
- Governments
- Academic Institutions
- Public Relations

### **Refrigeration Committee IRC**

Strengthening ISHRAE's reach

- Dedicated committees working on
- Standards
- **Training & Certification**
- Programs **Publications**
- Advocacy
- **R&D Projects**
- ACREX Promotion Cold Chain Pavilion

# IT Cell

**Efficiency & Transparency** 

- Online Membership
- Online engagement of members Online Working for ISHRAE
- Chapter Reporting & Review
   Mass Mailing
  Online Student Membership & Job Portal

The Society Theme for 2016-17 is Enhancing Value for all Stakeholders.

Members will see new value propositions: e-Journal, new publications and ehandbooks, more features in membership software, online platform to discuss and share technical issues, more benefits from associate societies, new programs, training courses and certification programs.

Students will get the benefit of online membership and renewal, concessional rates to become regular members, Job Junction and portal, e-Journal, website, online sharing of information, student re-

search grants, student design competition, aQuest and international quiz competition.

The industry can look forward to standards, training and certification, industry research projects, Search-O, Job Junction, scaling of ACREX – building a fair alliance, Indian pavilion at various international fares, marketing, PR and advocacy of Indian industry.

Associates will get the advantage of Apex Advocacy Committee, dedicated committee working with every Associate, MoUs with tangible action items, joint programs and initiatives, reaching out to more international and domestic associates and the increasing international presence of ISHRAE.

The academia will have a dedicated committee, industry-academia research projects, database of faculty members, refresher courses for faculty members and a model curriculum for the RAC course.

Great Beginning: As many as 375 new members and renewals happened in April

### BOARD OF GOVERNO

#### The following are the **HQ** members of the Board of Governors for Society Vear 2016-17

dovernors for .	Society lear 2010-17
Sachin Maheshwari	National President
K. Ramachandran	National Past President
Vishal Kapur	National President Elect
Nishant Gupta	National Secretary
Amitabha Sur	National Treasurer
Sanjay Gupta	Regional Director-North 1
Ashu Gupta	Regional Director-North 2
Jayanto Das	Regional Director-East
Diwakar Sawant	Regional Director-West 1
D N Shukla	Regional Director-West 2
S N Raju	Regional Director-South 1
V Sridhar	Regional Director-South 2
Yogesh Thakkar	National Chair- Membership
G Ramesh Kumar	National Chair- Programs
Deepak Arzare	National Chair- Students
Amit Kakkar	National Chair- K-12
Kapil Purandare	National Chair- Advocacy
Th	000 6146

There are over 900 CWC members in Chapters and Sub-chapters

#### **Various Chapter Presidents are** listed below

Ahmedabad	Sanjay C Adhvaryu
Bangalore	Shilpan Shah
Chandigarh	Cecil Akhai
Chennai	Balakrishnan Duraisamy
Deccan	Sreekanth Papineni
Delhi	Aneesh Kadyan
Goa	Prakash Tukaram Naik
Indore	Sharad Chaudhary
Jaipur	Mohammad Zahid Qureshi
Kochi	Saji Joseph
Kolkata	Utpal Biswas
Mumbai	Nandlal R Singh
Mysore	Selvaraj P
Nagpur	Sunil Upasrao Kolhe
Pune	Parag Dattaprakash Riswadkar
Ranchi	Rajesh Singh
Surat	Viren H Dubal
Thane	Nivedita Jadhav
Vadodara	Hasmukh Bapuji Patel
Visakhapatnam	B Madhu

### Following are the Presidents of various Sub-chapters

Agra	Sanjay Sharma
Ajmer	Om Prakash Sharma
Aurangabad	Mohammad M Sayeeduddin
Coimbatore	Rajendran P
Dehradun	Ajay Kumar Dhiryan
Gurgaon	Dhiraj Rastogi
Guwahati	Muthukumar Palanisamy
Hosur	Srikanth Narayanasamy
Jodhpur	Himanshu Jain
Kalpakkam	Jayaprakash S
Kolhapur-Sangli	Nishikant Madhukar Bhingarde
Kolhapur-Sangli Lucknow	Nishikant Madhukar Bhingarde Harish Sahni
Lucknow	Harish Sahni
Lucknow Ludhiana	Harish Sahni Jagjit Singh Mann
Lucknow Ludhiana Madurai	Harish Sahni Jagjit Singh Mann Kishore R
Lucknow Ludhiana Madurai Meerut	Harish Sahni Jagjit Singh Mann Kishore R Vinod Chandra Rajpal
Lucknow Ludhiana Madurai Meerut Nashik	Harish Sahni Jagjit Singh Mann Kishore R Vinod Chandra Rajpal Rashid Noor Shaikh
Lucknow Ludhiana Madurai Meerut Nashik Raipur	Harish Sahni Jagjit Singh Mann Kishore R Vinod Chandra Rajpal Rashid Noor Shaikh Nishesh Khare

#### The following Committees are already functional, and have started meeting

Advocacy Committee
Apex Advocacy Committee
Honours and Awards
ISHRAE Advisory Council- IAC
ISHRAE Certified Professional- ICP
ISHRAE Finance Committee- IFC
ISHRAE IEQ Sub-committee
ISHRAE Institute of Excellence- IIE
ISHRAE Marketing Committee- IMC
ISHRAE Refrigerant Sub-committee
ISHRAE Refrigeration Committee- IRC
ISHRAE Technical Committee- ITC
ISHRAE VRF Sub-committee
IT Cell
K-12 Activities Committee
Membership Promotion Committee
Program Committee
Publication Committee
Student Activities Committee

March - April 2016

# ISHRAE INSTITUTE OF EXCELLENCE



V. K. Seth addresses the alumni meet

ISHRAE Institute of Excellence, Delhi organised its first alumni meet and diploma award function on March 17. The meeting was attended by industry stalwarts like Vir Advani, Deepak Pahwa and Pradeep Agrawal, and ISHRAE dignitaries like Dr. Prem C. Jain, K. Ramachandran, Pankaj Dharkar, Ashish Rakheja, G. C. Modgil and D. Nirmal Ram. Around 100 persons including students

attended the meeting. A souvenir, 'IIE Journey 2005 - 2016', was released on the occasion. IIE felicitated the faculty and staff with mementos.



Vir Advani presents a diploma to an alumnus

## ISHRAE CERTIFICATION **PROGRAM**

ISHRAE Ahmedabad Chapter has planned to conduct its first ICP - AC Design Level-1 from June 2016 at Hotel Cosmopolitan, Navrangpura. The program will be in 3 modules. Module 1, covering Basics of Psychrometry and Heat Load, will be held from June 9 to 16. Module 2 will cover Overview of Equipment and Duct Design from July 7 to 9. Module 3, from August 4 to 6, will cover Insulations and Basics of Water and Refrigerant Piping.

## **ADVOCACY**

### **President Addresses China Refrigeration Expo**

President Sachin Маheshwari attended the China Refrigeration 2016 Expo held at Beijing from April 7 to 9, at the invitation Sachin Maheshwari



of Chinese As- delivers his presentation

sociation of Refrigeration (CAR). He was accompanied by Sushil Choudhury, Technical Chair and Past National President, and Nishant Gupta, National Secretary.

Sachin Maheshwari made a 30 minute presentation on 'The Indian HVAC&R Growth Story' on April 7 at the China Refrigeration 2016 Forum, held immediately after the grand opening ceremony of the Expo.



Sachin Maheshwari at the head table during the evening program along with Presidents of worldwide associations from China, Japan, Korea, Thailand, Hong Kong, Turkey, Europe, ASHRAE, AHRI and Eurovent.

#### **ISHRAE Signs MoU with CAR**

During his visit to Beijing, Sachin Maheshwari signed a Memorandum of Understanding on behalf of ISHRAE with Chinese Association of Refrigeration (CAR).



ISHRAE team with CAR team

### **MoUs Between ISHRAE and Turkish Associations**

Sachin Maheshwari signed an MoU with Air-Conditioning and Refrigeration Manufacturers' Association of Turkey (ISKID) in Istanbul on May 4 during ISK-SODEX show. ISKID has 107 member companies. Another MoU was signed with TTMD on May 5. TTMD is a technical society of Turkey with only professional members. Sachin Maheshwari foresees strong cooperation between India and Turkey in the coming years.

The objective of the MoUs is to strengthen the relationship between ISHRAE and the Turkish Societies and to

Sachin Maheshwari signs MoU with ISKID President Cem Savki



Sachin Maheshwari signs MoU with TTMD President Sarven Çilingiroğlu

jointly promote substantial and tangible actions to increase cooperation between the Societies, to protect the rights of consumers and companies, and to conduct activities to ensure that companies are sensitive to the environment while providing for the country's cooling and heating needs and contributing to the national economies.

### REHVAJournal covers ACREX 2016







The REHVA European HVAC Journal gave a full page coverage to ACREX 2016 in its May issue. REHVA Journal is distributed in 50 countries.

# **Guidelines for Reports** in *eNews*

It is heartening to see the number of reports submitted for publication in eNews going up exponentially. It reflects the rising competition among chapters to carry out activities in line with the Society's objectives, and shows increasing member engagement.

Here are some simple and useful guidelines for the reports to help **eNews** become a powerful catalyst of chapter activities:

- The deadline for receiving reports is the last day of the relevant period. For example, for publication in the March-April issue, the deadline is April 30.
- Please send or copy reports of events to news@ishraehq.in
- Please send a Word file containing a brief report of the event: what, when, where, who and any other relevant

### **PROGRAMS**

# **Seminar on Sustainability at**

ISHRAE Mumbai and Thane Chapters and ASHRAE Mumbai Chapter, along with Indian Association of Energy Management Professionals (IAEMP), organised seminar on Sustainability through Energy Management and Renewable Energy on April 9 at United 21, Thane. It was supported by IGBC, IPA, RATA and AWESOME.

#### **Mumbai Holds Tech Talks**

Mumbai Chapter's first program for the current Society Year was held on April 15. It was Tech Talk 1 on 'Low humidity by refrigeration, to energy saving techniques'. It was organised in association with ASHRAE Mumbai Chapter. The main speaker was Surendra H. Shah, Director, Panasia Engineering Pvt. Ltd.

The year's second program, Tech Talk 2, was held on April 23. The topic was 'Air separator/ expansion tank', and the faculty was Dilip Datey, Director, KDAC Accessories Pvt. Ltd.

#### **Technical Talk on Cold Chain at** Ranchi

A technical talk was delivered by C. D. Goswami, Joint GM, Environmental



C.D. Goswami delivering his lecture

Section, MECON, on April 10 at Hotel Green Horizon. The topic was 'Challenges and Opportunities of Cold Chain Management'.

#### **Product Presentation at Vadodara**



A view of the audience at Vadodara

Vadodara Chapter arranged a Product presentation by The Supreme Industries Ltd. on April 26 at Prakruti Resorts. Around 70 members attended the program.

# **FELLOWSHIP**

#### **Kolkata Chapter Celebrates Nabobarsho**

Kolkata Chapter celebrated Bengali New Year Nabobarsho on April 17 at Spring Club. There were about 100 participants including families. It was all fun and games followed by Bengali cuisine for dinner.



Kolkata Chapter Members



The Wifey Group shakes a leg

#### **Mumbai Chapter Holds Office Anniversary Pooja**

To celebrate the first anniversary of its office-cum-training centre, Mumbai Chapter held a pooja on April 23.

information. Word file is preferable to pdf or ppt.

Relevant photos in jpg format should accompany the report. Each photo should have a caption describing the occasion and giving the full names of persons in the photo from left to right. Only first names or only last names are not enough. (In case of large group photos, e.g. a batch of 20 participants in a training programme, all names are neither feasible nor necessary. Key names would do in such cases.)

- In addition to the jpg files, photos may also be copy-pasted into the Word file at relevant places, with captions below each photo.
- While "a picture is worth a thousand words", **only pictures** do not constitute a report. A Word file describing the event must accompany the pictures.

**ISHRAE** Membership Toll-Free Number: 1800 3000 4245

# CHAPTER INSTALLATIONS

#### **Bangalore**



Bangalore team poses for a group photo after the installation

Bangalore Chapter held its installation program on April 1 at Ritz Carlton Hotel. It was attended by close to 250 members. The whole year's program calendar was displayed at the registration counter.

T. Nagaraj, President-elect, welcomed the participants followed by the national anthem and lighting of the lamp. National President Sachin Maheshwari addressed the audience on the theme of Enhancing Value. Past National President D. Nirmal Ram spoke on the plans of IIE HQ. A. Madhukar, outgoing President, gave a report on IBC activities for the year 2015 - 2016.

The installation of new CWC was performed by Pankaj Shah, the chief guest of

In his presidential address, Shilpan Shah spoke on the theme Innovate, Renovate and Celebrate. All the Chairs spoke about their main objectives for the year. The total strength of the team is 35 members.

The event saw the launching of the IBC mobile app, Facebook page with innovative content, and an e-library called I~Share. IBC has started a yearly partnership program where the partner will get mileage throughout the year for all the programs. All the 17 partners' logos were displayed at the installation venue.

A national program called Acretech on IEQ was announced to be held on November 11. Social programs like cultural night, picnic, chess tournament and ISHRAE cricket tournament have been planned. Forty-five new members joined on day one.

Other programs on the anvil are: educative and informative movies for Government schools and under-privileged children, first student conference for South region, yearly pocket diary for members, two dedicated seminars on refrigeration, ICP on Design and Service Level, Senior Advisory Committee for IBC, and upgradation and renovation of the existing office.

#### Delhi

Delhi Chapter of ISHRAE was installed on March 18 at The Lalit, immediately after the installation of National BoG. Aneesh Kadyan succeeds Jagdeep Singh as the President. Dr. Prem C. Jain administered the oath to CWC members.

#### Chennai

Chennai Chapter held the installation of its new office bearers on March 23 at The Savera Hotel. It was attended by 15 senior past presidents, 20 CWC members and 55



Chennai team takes the oath

The program was chaired by senior past presidents and Sridhar Vijayaraghavan, RD South-2. D. Balakrishnan took over as the 27th President of the Chapter. He outlined his plans for the year. Sridhar Vijayaraghavan conducted an orientation program for new CWC members, which includes some first time entrants.

#### Kolkata



takes the oath



Utpal Biswas cuts his birthday cake



Vishal Kapur and Amitabha Sur welcome new members with chocolates

The 28th Kolkata Chapter Working Committee for the Society Year 2016-17 was installed on April 9 at Mainland China. About 80 members witnessed the ceremony including 'Wifey Group' members and new members.

President Emeritus Manoj Chakravorti installed Utpal Biswas as the President, Gautam Mukherjee as the President-elect, Subrata Biswas as the Secretary and Ranjit Mukherjee as the Treasurer. The other CWC members are Manoj Khanna, Sanku Bandopadhay, Anindya Basu, Shyamal Burman, S. Ganesh, Pradeep Dutta, Shuvro Lahiri and Nikhil Malkani.

The event coincided with Utpal Biswas's birthday, which was celebrated spontaneously by the gathering.

### **Deccan Chapter**

The installation of Deccan Chapter CWC team was performed on March 25 by National President Sachin Maheshwari and RD South-2 V. Sridhar, at Hotel Fortune Manohar. It was well attended by 120 active members, families of the CWC team and six past presidents. The program was followed by product presentations from Mitsubishi Electric and Makita Power Tools.



Sreekanth Papineni, President, Deccan Chapter, poses with his team

In a meeting with senior members, past presidents and the CWC team, Sachin Maheshwari shared his thoughts and plans for the new year.

Satish Bolla Reddy, immediate past president, conducted the CWC orientation.

Thane Chapter held the installation ceremony of its Chapter Working Committee for the Society Year 2016-17 on April 2 at United 21. Past National Presidents K. Ramachandran and Outgoing President A. Ravi reviewed the year gone by. V. Krishnan administered the oath to President Nivedita Jadhav and her team. In her acceptance speech, Nivedita outlined her personal targets for the year.

Student members scoring the maximum marks in HVAC subjects were felicitated.

This was followed by a presentation by Rohit Mansukhani, Senior GM - India Engineering Centre, Johnson Controls on the Internet of Things.

#### Mumbai

The installation ceremony of Mumbai Chapter was held on April 7 at The Mirador. Outgoing President Raveendra Shetty presented the achievements of 2015-16, which include the Best Chapter trophy for the third time in a row, and opening of the new office-cum-training centre.

K. Ramachandran, National President 2015-16 administered the oath to CWC members. Nandlal R. Singh is the new President, Ajaj Kazi is the President-elect, Mihir Sanghvi is the Secretary, and Sangita Jhangiani is the Treasurer.

In his acceptance speech, Nandlal Singh spoke of his vision of Bigger and Better ISHRAE. He outlined his thrust areas: ICP, Smart Energy, need based technical training and Job Junction.

The installation was followed by a presentation on Supply Chain Management Overview by Sandeep Nemlekar, founder and Director, Deep Archan Management Consultancy.

#### Vadodara

The 10th installation ceremony of Vadodara Chapter was carried out on March 26 at Prakruti Resort. Hasmukh Patel was installed as President along with the new CWC by D N Shukla - Regional Director (West - II).

Manish Naik, DGM Business Development, The Supreme Industries Ltd., made a product presentation during the event. All the Past Presidents and student co-ordinators were present. All the Chapter members were also present with their families.



Vadodara CWC members pose after the installation

Earlier in the day, D N Shukla conducted an orientation program for CWC members.

### **Nagpur**

Nagpur Chapter organized its 10th CWC installation ceremony at Hotel Ashok on April 9. Diwakar Sawant, RD (West-1), administered the oath to Sunil Kolhe as President, Dr. Shashank Dongarwar as President-elect, Satish Naranje as Secretary, Ajay Pande as Treasurer and Dilip Mirzapure, Viju Nair, Sanjay Kanetkar, Harshad Phadke, Shiv Dalmia, Nitin Rewatkar, Anand Patil and Kunal Gadre as CWC members.



Nagpur CWC team for 2016-17

Outgoing President Sanjay Tatwawadi presented the highlights of SY 2015-16. Shankar Ghime (ex-RD) moderated an interactive panel discussion on VRF Systems v/s Chillers - energy perspective. Senior members Dr. S. Rajagopalan, Dr. Kriplani and G.J. Jiwani shared their views on upcoming chapter activities.

Secretary Satish Naranje proposed the vote of thanks.

#### Indore

The new CWC of Indore Chapter was installed on April 25 by RD West-2 D N Shukla and Nishant Gupta, National Sec-

The event took place at Hotel Fortune Landmark. Dr. Sharad Chaudhary was sworn in as President, Pankaj Tiwari as President-elect, Kanak Kothari as Secretary and Sandeep Belsare as Treasurer.



The installation was followed by a Daikin product presentation by Vikas Gupta and Rohit Saxena.

#### **Aurangabad Sub-chapter**

the installation of office bearers for 2016-17 at Aurangabad Sub-chapter was held on April 5 at Hotel Bagga International by Diwakar Sawant (RD West-1). It was attended by 27 members.



Diwakar Sawant administers the oath to the Aurangabad team

Outgoing President Taher Shaikh reviewed the activities of 2015-2016. Incoming President Mohammad Sayeeduddin and the new CWC took the oath of office. The Sub-chapter managed to get one new member and 8 renewals on that day.

Diwakar Sawant conducted the Chapter Orientation Program.

#### Raipur Sub-chapter

The installation of Raipur Sub-chapter was held on April 2 at Hotel Royale Ambience in the presence of RD East Jayanta Das. Nishesh Khare was sworn in as President, Meetesh Meghani as President-elect, Pratik Khandelwal as Secretary and Rajesh Sahu as Treasurer along with other CWC Members.

#### ISHARE Raipur Chapter's new body installed



The Hitavada covers Raipur installation

It was followed by a product presentation on Industrial Ventilation Systems by Past President Dilip Mahobe, Business Development Manager, Saket Engineers.

### Madurai Sub-chapter

The new office bearers of Madurai Sub-chapter were installed on April 2 at Hotel Germanus by V. Sridhar, RD South-2.



Madurai CWC members take the oath

R. Kishore was sworn in as President, S. Hifasudeen as President-elect, K. Samayarajan as Secretary and Sathish Selvaraj as Treasurer. There were more than 160 participants, including over 100 members.

#### Kalpakkam Sub-chapter

The installation Name of Kalpakkam Subchapter was held at Sri Guest House, Anupuram on April 4. About 40 participants comprising members and HVAC professionals attended. V. Sridhar, RD-South-2 administered the oath



delivers his acceptance speech at Kalpakkam

to Balakrishnan as President and other office bearers, Rajasriram, Past President and other Chennai CWC members participated.

March - April 2016

# STUDENT ACTIVITIES

#### **Technical Talk at JNAFA University, Hyderabad**

Deccan Chapter arranged a technical talk on Fundamentals of Air Conditioning at JNAFA University on April 26. The talk was delivered by Sundar PRK, Chair - Student Activities. Around 40 Students attended along with 4 faculty members. Hema Malini - Student President, JNAFA University proposed the vote of thanks.



Sundar PRK addresses JNAFA University Students

#### **National Seminar at Poornima College**

A one day National Seminar on Innovative Green Technologies for Sustainable Sanitation, Health & Environment' was organized by Department of Mechanical Engineering & Applied Sciences at Poornima College of Engineering, Jaipur on April 22, 2016. The seminar was technically supported by ASHRAE, ISHRAE, Indian Society for Technical Education (ISTE) and Intellectual Society for Socio Techno Welfare (ISST).

As many as 150 papers and abstracts were received from various institutions such as TERI and Government Engineering Colleges of Rajasthan, Maharastra, Harayana, U.P., and many other states. Around 54 papers were selected for oral presentation and 27 for poster presentation. Five delegates from Brazil and Nigeria also presented their papers and posters.

#### **Visit to Solar Power Plant at Jaipur**

Department of Mechanical Engineering, Poornima College of Engineering, Jaipur organized a visit to the Solar Power Plant at J.B. Fashion, Sitapura, Jaipur in association with ASHRAE and ISHRAE on April 7. Thirty five student members of ASHRAE and ISHRAE student chapters of PCE along with faculty coordinators Shailendra Kasera and Sobhag Bhandawat participated.



Poornima students at J.B. Fashion solar power plant

#### **IEM Students Visit Godrei Genesis** Technopark, Kolkata



IEM students at Godrej Genesis Technopark

Kolkata Chapter organized one day MEP project site visits to Godrej Genesis Techpark for its IEM Student Chapter members in association with Voltas on April 6 and 20.

#### **MCKVIE Students Visit Godrej Genesis**, Kolkata

An industry visit was conducted for MCKVIE Student Chapter to Godrej Genesis on April 2.



#### **Chartering of NIT Agartala Student Chapter**

Utpal Biswas, President, Kolkata Chapter handed over the Student Chapter Charter to Dr. Gopal Mugeraya, Director, NIT Agartala on March 10 in the presence of Dr. Swapan Bhowmik, Associate Professor and HOD (Mechanical), Prof. Deepak Das (Prof. in-charge of students), CWC team and students. This was followed by the swearing in of student office bearers. About 150 students attended, including 33 student members.



Utpal Biswas hands over the charter

A technical talk on Basic Psychrometry and Fans was delivered by Prabir Kumar Sen, a senior ISHRAE member.

# K-12 ACTIVITY

### **STEM Project at Ranchi**

A K-12 program based on STEM concept was conducted by Ranchi Chapter on April 21 at Samov High School. Around 55 students from class 7 and 8 participated.



Students participating in STEM project

#### **Earth Day Celebration at Ranchi**

Earth Day was celebrated at Samov High School on April 22 by Ranchi Chapter. Saplings of mango, guava, blackberry, jack fruit and Ashoka trees were planted with the help of students.



Students pose with saplings

#### **Painting Competition at Ranchi**

A painting competition on the theme of rain water harvesting, energy saving and green earth was organised by Ranchi Chapter on April 23 at Samov Middle School. Around 60 students from class 4 to 6 participated. Sunil Kujur of class 6A was the winner. Ten students were awarded prizes and certificates,

and the other participants were given consolation prizes. LED bulbs were distributed among the school staff.



Students participating in the competition



Entries being evaluated

#### **Earth Day at Raipur**

Raipur Sub-chapter held a K-12 program at Government Higher Secondary School, Datrenga on World Earth Day, April 22 with painting, rangoli and guiz competitions. About 220 students participated. Sub-Chapter President Nishesh Khare, Secretary Pratik Khandelwal, Program Chair Vijay Dewangan, Advocacy Chair Shreyans Dassani, Publications Chair Tarni Acharya, Marketing Chair Vikram Chowdhari and K-12 Chair Dr. Meenakshi Rathore were present. Principal Kalpana Raj Dubey, other teachers and staff, IBC Secretary K.K. Verma, Founder of Sewa Welfare Foundation Dilip Singh Tikriha and Mrs. Khare were also present.

### K-12 Program at Guwahati

IIT Guwahati Student Chapter organized a K-12 event at the Kendriya Vidyalaya, IIT Guwahati on April 23 under the guidance of Prof. P. Muthukumar, President, Guwahati Sub-chapter. The event included drawing and essay competitions. About 190 students participated. The event was supported by Principal G.K. Dwivedi.



Students in action at Guwahati









Rangoli made by students at Raipur

4 March - April 2016