



## 2014 YEAR IN REVIEW





## **INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS**

The International Association of Plumbing and Mechanical Officials (IAPMO) was founded on May 17, 1926 with the mandate “to advance the latest and most improved methods of sanitation; to promote the welfare of and harmony between the owner, the builder, and the craftsman; to accomplish a uniformity in the application of the provisions of the ordinances; and to promulgate the mutual benefit of the members.”

The IAPMO Group focuses its comprehensive capabilities in the technical aspects of the plumbing and mechanical industries through its extensive knowledge base, which includes regulators, professional contractors and manufacturers.

Comprised additionally of six different business units, The IAPMO Group is truly the one-stop shop for all plumbing and mechanical code and product compliance.



## **INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS – INDIA**

The International Association of Plumbing and Mechanical Officials (IAPMO) have a strong cooperative presence in the nation of India and partnered with the Indian Plumbing Association (IPA) to develop a Uniform Plumbing Code for the nation.

The registrar of companies of India approved the establishment of IAPMO Plumbing Codes and Standards India Private Limited, to be known as IAPMO- India. IAPMO and the IPA, both members of the World Plumbing Council (WPC), agreed upon a comprehensive plan to work together to establish a model code of plumbing installation and maintenance for all of India, the Uniform Plumbing Code – India. The IPA Code committee worked with IAPMO staff in creating a document that recognized and utilized proven international concepts, always taking into consideration the proven plumbing practices within India.



## **THE INDIAN PLUMBING ASSOCIATION**

The Indian Plumbing Association (IPA), established in 1993, is the apex body of Plumbing professional in the Country. Set up with an objective to promote advancements in plumbing and the building service industry, IPA has successfully created a forum for exchange of ideas and dissemination of information amongst its members. As a member of the World Plumbing Council, it encourages its members to achieve and maintain high standards of workmanship.

IPA's membership includes architects, builders, plumbing consultants, plumbing contractors, plumbing product manufacturers, traders and planners. IPA also conducts conferences and exhibitions throughout India and publishes the monthly magazine Indian Plumbing Today.

The idea is to make local plumbing professionals aware of issues, problems and prospects in the industry. IPA has succeeded in creating awareness about the need for safe plumbing, and is now ready to assist the Indian professionals with improving their skills and expertise.



Megan Lehtonen

Vice President of International Business Development

**A**s IAPMO India enters into its ninth year with a dedicated office and focus within the Indian marketplace, 2014 has proven to be greatly dynamic as we see continued progress made in developing markets towards standardization. IAPMO continues to focus efforts internationally in markets that greatly benefit from our wide range and extensive suite of services for the industry. With education at the forefront in India, working to upskill the great youth and increase the human development index, 2014 has proven to be the most impactful year yet. Capacity, of course, is driven by the ability to innovate, and IAPMO continues to focus efforts throughout international markets to deliver programs that can be integrated seamlessly into the marketplace with one goal: To protect the health and safety of all citizens through the safe and effective delivery of water.

The statistics and data coming out of this country are the backbone of our daily efforts. IAPMO India has created and released over seven Uniform codes throughout India, to assist in the standardization of the infrastructure and processes throughout the plumbing and mechanical industries. And as we continue to penetrate the industry and marketplace with Uniform Codes, our educational initiatives remain at high demand. This past year in India, our staff has driven the educational component of IAPMO's services to new heights. We are pleased to announce the award of a project from the Kerala Government to deliver basic plumbing training to over 500 students – at 14 training centers throughout Kerala. A state government funded program, IAPMO has built from the ground up to ensure that students get the training they need, and the necessary next steps to progress directly into the workplace. This, along with other contracted trainings throughout India through dynamic partnerships will have a great impact on the unskilled workforce, and the overall industry at large. Infrastructure, and all of its components, is the beginning of the transfer function that leads to sustainable and inclusive growth. The foundation built in this country to date has IAPMO primed for the next steps. And with the recent change in government, we expect to see excellent drive and innovation from Prime Minister Modi, who continues to focus on his pro-business and pro-development approach throughout the country.

IAPMO India's partnership with the Indian Plumbing Association goes hand in hand and we are excited to announce the release of the Uniform Illustrated Plumbing Code – India. The UIPC-I is the first of its kind anywhere in the world, and India is the perfect marketplace to grab hold of this excellent resource.

This dynamic document, based on the ANSI designated Uniform Plumbing Code, allows for the opportunity to prove performance, and push for the adoption of more efficient standards through both public and private Green Rating Organizations that are eager to enhance their programs by incorporating newer and more advanced technologies.

Over 50% of the global population lives in Asia – and standardization of dynamic technologies and conservation efforts is the need of the hour to be able to sustain. The goal is for experts within the industry to fill the gap and continue to have an immediate impact on conservation and efficiency through the development of standards for new technologies. If a jurisdiction is going to mandate a great tool like Rain Water Harvesting, they should first have a standard and enforcement procedure in place to be able to monitor this process, and ensure that consumers have reliable, tested and listed products to utilize. IAPMO India stands by ready to assist with this process.

Continuing to focus on the need for standardization in relation to the delivery of water, IAPMO India has made major end roads in 2014 – and is looking forward to the next year to complete the full suite of services by adding to the three focused verticals – Plumbing / Mechanical / Certification and enhance through audits, new product lines, and other necessary processes to ensure performance keeping a focus on IAPMO's core mandate developed at inception almost 90 years ago: To advance the latest and most improved methods of sanitation; to promote the welfare and harmony between the owner, the builder, and the craftsman; and to accomplish a uniformity in the application of the provisions of the ordinances, to protect the health and safety of every nation's citizens through the safe and effective delivery of water.



Neeta Sharma

Managing Director



Year 2014 saw revision of Uniform Plumbing Code 2011 to Uniform Illustrated Plumbing Code 2014 with all latest revisions included in it along with Illustrations to better understand the requirements of the Plumbing Code.

The prime minister's Independence Day speech to call for "Swachh Bharat" exhorted India to adopt the mission of providing modern sanitation facilities nationwide. As the I-Day weekend got over, India promised to spend big money to clean up India. Big players immediately announced big CSR spends and promised to upgrade existing programmes for building sanitation facilities, especially for female students and women in rural India. These announcements and promises look substantial. TCS, India's largest software services firm, said it will spend Rs 100 crore building sanitation facilities for girl students in 10,000 schools. Our education programmes are well aligned to cover water conservation and hygiene that goes with this Mission.

This mission lays demand for trained Plumbing Professionals- Plumbers, Supervisors & Design Engineers. Few Universities and most Design companies/Builders/ Developers are approaching IAPMO India to get a customized Training Programme.

Kerala, traditionally known for its high quality manpower spread all over the World, with a high density of science and technology personnel has always set a model for the nation in developmental issues, has embarked upon an ambitious project named State Skill Development Project to equip its young population with skills in cutting edge sectors in order to effectively alleviate the unemployment problem in the state, complementing NSDC mission to meet the demand of increased skilled manpower to sustain the industrial growth and thereby the economic growth of the nation. The project combines both preventive (Additional Skill Acquisition Programme - ASAP) and curative approaches (Additional Skill Enhancement

Programme). The General and Higher Education Departments together will implement the Additional Skill Acquisition Programme (ASAP) to amplify working hands in different sectors of the economy, by providing additional skill sets to students along with their regular courses.

IAPMO India has signed an agreement with the Government of Kerala to develop competent manpower in the plumbing sector, to offer skill oriented courses which is valid till 31st July 2016. Presently, about 391 students are taking training through 14 Skill Development Centres spread across 11 districts of Kerala, recognized by the Government of Kerala. The first programme will end by June 2015 and the first batch of Apprentice Plumbers will be ready to join the Industry and fill huge gap of skilled manpower in the Construction Industry.

The Mechanical Education to Employment Program (MEEP) is running successfully in two educational Institutes. IAPMO entered into an Agreement with ISHRAE to mutually promote Education programmes by jointly conducting them in various Centres of Excellence of ISHRAE.

The classified WEP-I mark brings a huge relief to manufacturers complying to any National/ International Standard for a range of water consuming Products to be certified for Water Conservation as per requirements of WEP-I 2013. Modifications in Certification Policy, for Lab approvals, has also been accepted by agencies and more and more manufacturers are seeking Lab Approvals.

The benefits of taking Certification, acceptable in major parts of the World, is taken as a tool to target other countries, by the manufacturers. With Global and Indian manufacturers having become listed, the marketplace will soon see a good size sample of efficient products, tested for performance and efficiency.



Dr. Abdul Matheen, Ph.D  
Director Mechanical

 Skills and knowledge are the engines of economic growth and social development in any country. IAPMO India has in place both skill and knowledge to offer to Indian Mechanical HVAC-R Industry.

Countries with higher and better levels of skills adjust more effectively to the challenges and opportunities of globalization. There is a growing sense that the past strategies of skill development have been inadequate in addressing the new challenges that India faces. The need for establishment of skill development programs and two continuing education system will provide an institutional mechanism to facilitate greater and active participation of the industry, and to better link skill development with the country's employment demands. The shortage of skilled workforce across many industries is emerging as a significant and complex challenge to India's growth and future. According to a survey, more than two million mechanical professionals in the HVAC-R domain are required to meet construction-industry demand by 2020. The growing skills gap is reflecting slim availability of high quality professional in India and the galloping pace of the country's construction and allied service driven economy, which is growing faster than most countries in the world. As businesses propose to double and triple their workforces and IAPMO India strives to maintain its position in the global marketplace, it has become imperative to prepare and plan for a world-class, competent, talented and innovative workforce.

IAPMO India has a great role to play in nation building, the best and most selective way is to introduce the cutting-edge concept of MEEP (Mechanical Education to Employment Program) training to the university youths at the entry level industry in order to tackle the impending shortage of knowledge workers. This strategy will provide fresh graduates or Diploma Holders to have dual-certification. This will mitigate the existing shortfall

of trained professionals at entry level for which, companies today have spent a lot. IAPMO India has firmly installed Plumbing Education System and is now ready to offer Mechanical education systems to Indian citizens. MEEP Graduates of the multi-level education programs created will be given the option of obtaining professionally qualified certifications with the following credentials:

- **Mechanical Managers Academic program**  
The objective of this program is to train and equip mechanical Installation, Commissioning and O & M Engineers to equip with code based education program for imparting training on latest knowledge in the related codes & standards applicable to the mechanical HVAC-R domain keeping in mind the present and future global industrial requirements, so that skilled man power of the country may become enable to compete in the global market.
- **Mechanical Supervisors(MS) Academic program**  
The objective of this program is to train and equip mechanical Installation, Commissioning and O & M Supervisors to equip with code based education program for imparting training on latest knowledge in the related codes & standards applicable to the mechanical HVAC-R trade keeping in view of the present and future global industrial requirement.
- **Mechanical Technicians (MT) Academic program**  
The objective of this program is to train and equip mechanical technicians to equip with code based education program for imparting training on latest knowledge in the related codes & standards applicable to the mechanical trade keeping in view of the present and future global industrial requirements, so that semi-skilled / skilled man power of the country may become enable to compete in the global market.

## DIRECTOR MECHANICAL MESSAGE

### Short term HVAC-R Technicians Programs:

- Certificate Course in Basic Refrigeration & Air Conditioning.
- Certificate Course in Repair & Maintenance of Refrigerators & Deep freezer.
- Certificate Course in Repair & Maintenance of Water Cooler & Bottle Cooler.
- Certificate Course in Repair & Maintenance of Air Conditioner.
- Certificate Course in Repair & Maintenance of Car Air-conditioning unit.
- Certificate Course in Servicing & Maintenance of Air Conditioning Plant.
- Certificate Course in duct design Installation and fabrication.
- Certificate Course in Mechanical HVAC-R Installation, Testing and Commissioning Technicians.
- Certificate Course in Mechanical HVAC-R Sales & Service Technicians.

### MEEP Benefits

- Recognition to International body
- Industry-Institutional interactions
- World class Mechanical-HVAC-R education and training
- Better mechanical installations ensuring energy conservation,
- Enhanced IAQ, safety of public and structures and reduced maintenance
- Energy efficient installations, increased efficiency and productivity, better reputation

*"IAPMO India invites institutions, universities, state and central Government ministries and organizations to associate with IAPMO India for effective implementation of powerful HVAC-R skills & educational programs throughout the nation".*

The 2014 Green Mechanical Code-India (GMCS-I) is a document developed by IAPMO Plumbing Codes and Standards India Pvt. Ltd. (IAPMO India) based upon the copyrighted material "Green Plumbing and Mechanical Code Supplement (GMCS) of International Association of Plumbing and Mechanical Officials, headquartered in Ontario, California, USA.

The Green Mechanical Code Supplement to Uniform Mechanical Code-India is a set of recommendations to all those who are involved in the design, engineering, construction, installation, operation, maintenance and manufacturing of Heating Ventilation, Air-Conditioning systems, Boilers, Incinerators, and other miscellaneous heat-producing systems and appliances, while conserving energy and protecting the planet earth. The provisions in Green Mechanical Code supplement (GMCS-I) and its parent code UMC-I will certainly be advantageous for energy conservation in projects if implemented judiciously.



Charles Gross

Director of India Product Certification



APMO India's product certification program continues being based on standard ISO/IEC 17065 "General Requirements for Bodies Operating Product Certification Systems" whereby

products are certified to their performance standard and to the new 2014 *Uniform Illustrated Plumbing Code - India (UIPC-I)*.

It was in 2007 that IAPMO India formally established a successful partnership with the Indian Plumbing Association (IPA), but it was the earlier year 2006 that IAPMO initially began its work in India and its partnership with the IPA to develop plans for publishing the first India plumbing code ever, namely the *Uniform Plumbing Code - India (UPC-I)* in 2008. This 2008 UPC-I subsequently underwent update every three years to now its updated published current version, the 2014 *Uniform Illustrated Plumbing Code - India (UIPC-I)* which was revised in 2014 from its earlier 2011 version last year, and was subsequently just released to industry during the recent 18th Indian Plumbing Conference last November 2014 in Bengaluru, India. The new 2014 UIPC-I now supersedes all previous versions of the UPC-I, and be used to evaluate and to certify new products as well as to renew existing certified products.

Complementing development of the first published 2008 UPC-I, IAPMO India and the IPA continued joint efforts to develop and update other related and complementing industry codes also on a three year cycle, namely the 2013 *Green Plumbing Code Supplement - India (GPCS-I)*, the 2012 *Uniform Solar Energy Code - India (USEC-I)*, the 2011 *Uniform Swimming Pool Code - India (UPSC-I)*, and last but not least, the water efficiency plumbing fixture star rating specification, the 2013 *Water Efficient Products India (WEP-I)*.

Additionally, IAPMO India and the IPA continued beyond the development of the above codes to also structure and initiate plumbing training

and educational programs (known as 'Plumbing Education to Employment Program,' or 'PEEP') with interested academic institutions throughout India for designers, contractors, engineers, and students which number a current total of approximately 2000 combined graduates since inception in 2009.

Similarly, IAPMO India also began partnerships with other professional organizations such as ISHRAE (Indian Society of Heating, Refrigerating and Air Conditioning Engineers, <http://www.ishrae.in>), to develop the first ever 2012 *Uniform Mechanical Code - India (UMC-I)*, used primarily for design, installation, maintenance and use of heating and cooling products used globally.

IAPMO India's codes, when coupled with product performance standards (especially those standards cited in each respective code), help manufacturers to use the proper standard and methods to test their products at an IAPMO recognized laboratory, such as IAPMO R&T Laboratory, for their products' subsequent IAPMO India certification. During 2014, the following new IAPMO India product certifications were added to IAPMO India's product listing directory website (at <http://www.iapmoindia.org/Pages/pld.aspx>) as follows:

- **CERA** Sanitaryware Ltd. (UPC-I, Dual Flush Water Closets),
- **CERA** Sanitaryware Ltd. (WEP-I, Water Efficient Toilets),
- **Viega** GmbH & Co. KG (UMC-I, Copper, Copper Alloy Fittings (Press Type),
- **Viega** GmbH & Co. KG (UMC-I, Stainless Steel Fittings (Press Type).

These four new certifications raised the total listings to thirteen on IAPMO India's product listing directory website at <http://www.iapmoindia.org/Pages/pld.aspx>, where all listings can be viewed for their specific models and respective descriptions. Within 2015, we're expecting the addition of more new UMC-I, UIPC-I and WEP-I product certifications based on the recent inquiries

## DIRECTOR OF INDIA PRODUCT CERTIFICATION

received from various manufacturers of faucets, plastic pipe & fittings, and sanitary ware products.

One such recent manufacturer was KiTEC, who expressed the need to certify their Polyethylene/Aluminum/ Polyethylene (PE-AL-PE) and Polyethylene/Aluminum/ Crosslinked Polyethylene (PE-AL-PEX) Composite Pipes, along with Brass Compression Fittings for their pipes for the Indian market but did not find a suitable national standard in existence to address the design and dimensions of their products.

Hence, with the help of IAPMO's Standards Department ([www.iapmostandards.org](http://www.iapmostandards.org)), KiTEC submitted their internal standards that underwent development into the following industrial standards:

- IAPMO IGC-India 306-2014 Brass Compression Fittings for Multilayer Piping Systems,
- IAPMO IGC-India 308-2014 Polyethylene/ Aluminum/Polyethylene (PE-AL-PE) Composite Pipes,
- IAPMO IGC-India 309-2014 Polyethylene/ Aluminum/Crosslinked Polyethylene (PE-AL-PEX) Composite Pipes.

These standards are now available for industry's use, and will be used to test KiTEC's products for subsequent IAPMO India UMC-I and/or UIPC-I product certification.

Such product tests must be made at an IAPMO recognized test laboratory, but since currently there is no such independent third party test laboratory within India, IAPMO's upper management recently approved implementation of IAPMO's "Manufacturer's In-House Test Lab Recognition Program" that gave manufacturers an option to have their plants' in-house test laboratory recognized by IAPMO for subsequently testing their products. The feedback from manufacturers regarding this new program was that they highly welcomed this opportunity since this program helps them in many ways and more primarily helps them save

a lot of time when it comes to distributing their certified products into their markets. To date, three different manufacturers have applied to have their in-house test laboratory recognized by IAPMO, and there appear other manufacturers who have expressed similar interests.

In addition, another new certification program for manufacturers was also recently approved by IAPMO's upper management, which is IAPMO India's new 'Classified WEP-I' product certification program. This new program was primarily developed for water efficient products (i.e., faucet aerators, faucet flow restrictors, high efficiency flushing devices for urinals, low flow urinals, low flow toilets, etc.) that are not UIPC-I nor UPC-I certified but that do comply to other standards (such as IS, or international standards) whereby such product fixtures can undergo evaluation for a WEP-I star rating after having their water consumption measured at an IAPMO recognized laboratory. Many manufacturers have expressed their appreciation of this new WEP-I program since it also helps to expedite the distribution of their Classified WEP-I certified products into their various markets, and to help distinguish these two types of WEP-I product certifications, the following two different WEP-I star rating marks of conformity will be used:



For products that are UIPC-I or UPC-I certified



For products that are not UIPC-I or UPC-I certified but do comply to IS or to International standards

The expected new product certifications in 2015, along with the upcoming recognition of more manufacturers' in-house test laboratories, confirm and manifest the concerns, contributions, and support of many various manufacturers for growing production of highest quality certified products and especially increased production of enhanced sustainable water

## DIRECTOR OF INDIA PRODUCT CERTIFICATION

conservation products, all of which help to enhance and strengthen society's health, safety and welfare. This increased awareness for production of more certified water conserving products is one of the reasons that IAPMO's upper management approved implementation of IAPMO's "Manufacturer's In-House Test Lab Recognition Program" as well as IAPMO India's new 'Classified WEP-I' product certification program for WEP-I related products.

Needless to say that as each day goes by, the conscientious and awareness levels continue to rise and grow for the installation and use of more certified water efficient products to the 2013 Water Efficient Products India (WEP-I) specification. Using these types of products will help to promote and to enhance sustainable water conservation measures throughout India and other neighboring countries. As a result of these current and future new WEP-I listings, architects, consumers, contractors, engineers, plumbing instructors, plumbing designers, and inspectors alike continue to be assured that these certified products comply with every standard and code governing their use throughout India.

There's never been a better time than today to join manufacturers of IAPMO certified products and to begin marketing your products within India's rapidly emerging market via IAPMO India's new product testing and certification programs. The installation and use of IAPMO India certified products help give all societies a greater level of assurance and confidence which also help to protect and optimize the public's health, welfare, and safety, as compared to the general uncertainties that exist in the use of uncertified products.

Now that you see where IAPMO India started and the progress made to date of our product certification services, we kindly ask for your continued trust and opportunities to serve your entire product testing and certification needs, as we're continually thinking of new ways to further enhance our services even more, in an effort to serve you much more and better - Please contact us or peruse IAPMO India's web site and its product certification programs at <http://www.iapmoindia.org> for further details.

WE HAVE NOT INHERITED THIS PLANET FROM OUR PARENTS, WE HAVE MERELY BORROWED IT FROM OUR CHILDREN.

GREEN UFGCI

CAMPBELL 4.0  
Dual-Flush Commode

CAMPBELL 4.0  
Dual-Flush Bidet

CAMPBELL 4.0  
Dual-Flush Bidet

VERBAL 4.0  
Dual-Flush Bidet

CAMPBELL 4.0  
Dual-Flush Bidet

CARE  
Dual-Flush Bidet

CERA  
www.cera-india.com  
SAVE WATER

CERA, India's fastest growing sanitaryware company is committed to save water. And to this end, continuing the tradition of innovation and the pursuit of excellence, CERA's Carobell, Care and Care Plus have been certified by IAPMO, an international agency, as Green products. Already a benchmark in the industry, All the CERA products and the waterless urinal have been awarded certifications in these help save thousands of liters of water without compromising on performance. Let's have a happy and a greener planet.



During the World Plumbing Day Celebrations at Bangalore, on March 11, 2014 held at Hotel Atria Mr. Sudhakaran Nair, President IPA and Chairman WPC was felicitated by the members of IPA Bangalore chapter. During his speech he emphasized on the alliance between IPA and IAPMO–USA, for drafting and publishing various plumbing codes. IPA and IAPMO-India have brought out six codes in last six years, which by no means is a small achievement! The IPA-IAPMO partnership is now spearheading the Plumbing Education to Employment Programme (PEEP) and the 'Green Plumbers India' initiatives across the nation. There can be no doubt that it is IPA has seen unprecedented growth over these years.



Ms. Neeta Sharma and Mr. Abdul Matheen attended Nypunyan Summit on January 20th & 21st, 2014 at The Leela Kovalam, Thiruvananthapuram. The Hon'ble Chief Minister Mr. Oommen Chandy was also present during the Summit. Kerala has shown the lead in the process of Skill Development thereby in the Economic Development of the State and Country too. This is an initiative to bridge the gap between industry requirements and skilled workforce also this initiative will help raise quality standards of Kerala's workforce making them employment ready by honing the quality of their skills in accordance to the demand in different industry verticals



Standards Development Workshop BIS ANSI New Delhi, India

## IAPMO Participates in Indian Workshop on Building and Construction Standards

The International Association of Plumbing and Mechanical Officials (IAPMO®) last week joined other prominent industry stakeholders as a sponsor and participant of the ANSI-CIIBIS Workshop on Building and Construction Standards, Feb. 12-13, at Hotel Le Meridien in New Delhi. The workshop, jointly organized by ANSI (American National Standards Institute), CII (Confederation of Indian Industry) Institute of Quality, and BIS (Bureau of Indian Standards), brought together experts from leading U.S. organizations — IAPMO, ASHRAE, ASME, ASTM, NFPA and UL — and key Indian groups — Ministries of Urban Development and Consumer Affairs, Indian Green Building Council, Indian Plumbing Association — to participate in technical discussions about regulations, standards, and conformity assessment activities that could significantly impact the industry. Workshop themes included:

- U.S. and Indian landscapes for development of consensus codes and standards
- Building safety and regulation for urban development
- Consumer protection in the building sector
- Green and sustainable buildings — U.S. and Indian industry perspectives
- Importance of standards to application of environmental codes in a building environment
- Future needs in the U.S. and Indian markets
- Expanding awareness through training and education — developing skills for employment

“The India-U.S. construction industry SDO workshop was a very rewarding experience because it brought together the leading U.S. organizations, as well as representatives from the confederation of Indian industry and the Bureau of Indian Standards,” said GP Russ Chaney, IAPMO CEO. “Of particular value were the detailed discussions that ensued regarding the Uniform Plumbing Code – India (UPC-I) as a proposed BIS standard, which was widely supported by representatives of the Indian Plumbing Association, specifically Sudhakaran Nair, IPA president and chairman of the World Plumbing Council, B.S.A. Narayan, convener of the plumbing provisions contained in the National Building Code of India, as well as C.S. Gupta, a member of the Indian Plumbing Skills Council. It was a beneficial two days and the outcome of the workshop will enable IAPMO India to take major strides in advancing water and sanitation provisions throughout all of India.

“Our thanks certainly go out to Joe Bhatia and Leslie McDermott of ANSI for their support, as well as Neeta Sharma, managing director of IAPMO India, and Megan Lehtonen, IAPMO vice president of International Business Development.”



## India gets first ever Energy Efficiency Tool "2014 GMCS-I"

Standing L-R: **Mr. C S Gupta**, General Secretary, Indian Plumbing Association, **Mr. Sunil Kher**, President ISHRAE Delhi Chapter, **Mr. Vinay Gupta**, Treasurer, Indian Plumbing Association, **Mr. Gurmeet Singh**, Chairman IPA-Mumbai Chapter, **Mr. Srikanth N**, BOSCH India, **Mr. Pankaj Shah**, Past President ISHRAE, **Ms. Neeta Sharma**, Managing Director-IAPMO India, **Dr. William P. Bahnfleth**, ASHRAE President, **Mr. Dipak Barma**, National President ISHRAE, **Dr. Prof. Karel Kabele**, President REHVA, **Mr. Ashish Rakheja**, VP & Managing Director, AECOM-Chairman ACRES India 2014, **Mr. Sushil K Choudhury**, Immediate Past President ISHRAE, **Mr. Krishnan**, Past President ISHRAE, **Mr. Nirmal Ram**, President elect ISHRAE, **Mr. Abdul Matheen**, Director Mechanical-IAPMO India.

The Sustainable Building Industry today has a powerful and revolutionary new tool at its disposal with IAPMO India's (International Association of Plumbing and Mechanical Officials-India) has launched Green Mechanical Code Supplement India [2014 GMCS-I], the most comprehensive document ever created in the history of India to standardize sustainable residential and commercial mechanical HVAC-R systems. Green Mechanical Code Supplement India is a set of recommendations to all those who are involved in the design, engineering, construction, installation, operation, maintenance and manufacturing of heating ventilation, air-conditioning, systems; incinerators; and other miscellaneous heat-producing appliances. This process brings together volunteers representing varied viewpoints and interests to achieve consensus on mechanical issues.

India is witnessing tremendous growth in infrastructure development. The construction industry in India is one of the largest economic activities and has been growing at an annual rate 11% as compared to the global average of 5%. The undoubtedly calls for increased use of natural resources such as energy, water and materials, which in turn would aggravate the global concern of carbon emissions and its impact on the quality of life. The construction sector therefore needs to pay a responsible role towards preservation of the environment.

Commenting on the significance of the Green Mechanical Code Supplement India [GMCS-I] Ms. Neeta Sharma, Managing Director of IAPMO India opined "It gives us a great opportunity to be associated with many likeminded professionals, societies and organizations pan India to develop The Green Mechanical Code Supplement India, will thus be an invaluable combination of our globally gathered expertise and the knowledge of India's best and most seasoned HVAC-R professionals. Indeed a fruitful relationship which would go a long way in furthering sharing of knowledge for creating better standards and professionals who would ultimately work for the benefit of the Indian society."

Codes and standards forms part of the mandatory requirement in building design to bring back mother earth from the ill effects of Global warming, Climate Change, Carbon Emission to contribute to water and energy conservation. We at IAPMO India aim to meet the need in mechanical HVAC-R domain, through "Green Mechanical Code Supplement India" in our small and humble way- said Abdul Matheen, Director Mechanical IAPMO India.

The sixth edition of PlumbexIndia, created a buzz among people from the plumbing trade and industry, offering an opportunity to look at the latest and the best in the world of plumbing products, process and technology.

PlumbexIndia 14 was organized at Bombay Exhibition Centre, Goregaon (East), in Mumbai from March 20 – 22, 2014. IAPMO India participated in the event, which was attended by Megan Lehtonen, Vice President, International Business Development, IAPMO and Neeta Sharma, Managing Director, IAPMO India.



Plumbex India 2014



ITC Windsor, Bengaluru water audit conducted by IAPMO India

The water audit was conducted by team of IAPMO India on November 27-28, 2013 at the ITC Windsor premises, Bengaluru.

The IAPMO India team comprised of Mr. Subhash Deshpande, Director Plumbing and Ms. Swathi Saralaya, Manager - Technical & Training. Mr. Rahul Prabhakar, Chief Engineer, ITC Windsor coordinated. Mr. Mahal and Mr. Sharanappa assisted in site visits.

Purpose of the audit was to study the existing practices of water consumption and seek possible ways to conserve water and energy. In the introductory meeting, Mr. Rahul briefed the IAPMO team about the structure, total facilities and existing practices. He also briefed about the present measures taken to conserve water. Mr. Deshpande explained the proposed method to conduct water audit which included visits to plants, facilities and rooms, and discussions with the operators and staff. A concluding meeting was held at the end of the 2 days audit in which Mr. Deshpande explained the findings and possible solutions.

Interview of  
Ms. Neeta Sharma,  
Managing Director, IAPMO India  
for magazine ICE Connect

*Question:*

Plumbing though is a crucial element involved in the construction process; do you think that the segment has not been its adequate importance and attention in the construction industry?

*Ms. Neeta:*

The year 2013 witnessed delays in the implementation and execution of numerous infrastructure and construction process. However, the cost of holding up the infrastructure projects could be many – for instance it can be due to the delays in gaining approvals and clearances from various ministries or land approvals etc. As far as the plumbing industry is concerned, yes, the plumbing concept in a structure has always been neglected for quite a long time now. It has always been over-shadowed by other activities such as structural and heating, ventilation, air-conditioning (HVAC) activities. Plumbing is a very important element in construction process. Poor plumbing has huge impacts not only on the color/ texture/ durability of the structure but plays havoc on the health of the occupants. Thus, it not only affects the appearance of the structure and lead to a reduction in the total lifecycle of the structure but is also responsible for various water borne diseases and other health issues. Further, water is a very rare commodity and due to its limited resource, we need to give more importance to this sector. However, with the concept of various certifications and construction of green buildings gaining momentum, the concept of plumbing is increasingly gaining importance.

*Question:*

Do you see a lack of effective or qualitative installation of plumbing in India?

*Ms. Neeta:*

Qualitative and effective plumbing installations are always a boon to the structure's total lifecycle. The sector though is gaining importance, still lags behind when compared with the focused approach emphasized in international regions. The situation witnessed in the Indian context is that the plumber involved in this process will be often not a trained person or will be hired on a labour contract basis. Hence, the person with little or no qualitative experience when designed to deliver his duty will be able to give an output which is below the standardized mark. A plumber's technical knowledge and skill thus really matters and qualitative education of this section of the construction workers also

plays a pivotal role in ensuring longer durability and shelf-life of a structure and health of its occupants.

*Question:*

So can the provision of qualitative education be considered as a need of the hour today for effective plumbing? Does IAPMO offer any such measures to enrich the workforce involved in this profession?

*Ms. Neeta:*

Yes definitely, qualitative education is a must for the plumber base to deliver effective plumbing in a structure. In any construction project you need a distinct level of expertise, starting designers who shapes or visualizes the projects, supervisors who monitors the execution and the third and most important level involving the workforce who actually implements the project. Quality in this on-field level thus becomes of prime importance for the sustainability and lifespan of a structure.

IAPMO always upholds this and has constantly focused on enhancing the skills of the plumbing workforce. We provide training sessions, programs, workshops and even educative courses for the individuals interested in adopting plumbing as a profession. The education programs related to the plumbing segment has been developed as per the interest and qualification levels of the students – which distinct at various levels, i.e. from school dropouts to Engineers. International Association of Plumbing and Mechanical officials, USA, is an organization existing for more than 80 years, has developed various Codes such as Uniform Plumbing Code (UPC), Illustrated Training Manual (ITM), Green Plumbing Codes Supplement (GPCS) putting best international practices. However, due to the variation in the socio-economic and technical background customization or localizing these standards is of utmost important. IAPMO India and IPA, Indian Plumbing Association, have developed Uniform Plumbing Code of India, Illustrated Training Manual (ITM) and Green Plumbing Codes Supplement (GPCS) suiting to the needs of Indian industry and the best practices available.

IAPMO I and IPA have developed programs, sessions and training activities on Best Practices available ie, the Uniform Plumbing Code of India. So far, we have signed about 30 MoUs with distinct government bodies, educational institutions and industry associations for implementing and spreading the reach of our training and educative programs. Kerala Government has done a commendable job by taking Plumbing as one of the optional skills to be developed at pre-university and high-school level. Besides, IAPMO I also focuses to expand its presence in the rural and interior regions, for which we are in constant touch with the Ministry of Rural Development and numerous state governments. We are targeting to become Training Partners of National Skills Development Council (NSDC) so that these initiatives to propagate skill developed can be spread across country, as we are also targeting other state governments of Delhi, Haryana, Rajasthan and Karnataka through other similar schemes of the government.



Uniform Plumbing Code India Awareness Programme at Oberoi Realty Limited



The UPC-I Awareness Programme was conducted on 28th – 29th March, 2014 at Oberoi Realty, Mumbai. The training was conducted by Mr. Subhash Deshpande. This UPC-I Awareness workshop was useful for Profession from the plumbing field and it enhanced their knowledge on Codes & Standards, General Regulations, Plumbing Fixtures, Sanitary Drainage, water Supply etc. Ms. Neeta Sharma, Managing Director, IAPMO India, also gave a presentation about IAPMO India activities during the training.

Conference on Green Existing Buildings, 2014 was held on 19 & 20 March 2014, at India Habitat Centre, New Delhi. The conference had around 130 participants comprising of 30 speakers, 5 Supporters and 100 delegates attending the two day conference. Ms. Neeta Sharma's presentation at the Session on "Water Efficiency" was well received and appreciated by the participants. The feedback received from the participants indicates high degree of satisfaction.



Conference on Green Existing Buildings

## Conference on Energy Management

Conference on Energy Management, Managing Energy Cost for Competitive Advantage, held on 25th February, 2014 at IHC, New Delhi, was attended by Ms. Neeta Sharma, Managing Director, IAPMO India. Dr Ajay Mathur, Director General, Bureau of Energy Efficiency (BEE) was the Keynote Speaker & Dr Prem C Jain delivered Special Address at the Inaugural Session.

Energy cost constitutes more than 10 percent of the total operating expenses of Indian Industries and most of the firms want to reduce their energy costs but do not have know-how for it. The rising costs of fuels such as coal, oil and gas has resulted in steep increase in power tariff coupled by the lack of a reliable grid supply. In such a situation, we are seeing that industrial consumers of power are keen to embrace new solutions on energy efficiency and management that can bring down costs or at least keep them constant. Concurrently there have been options that have been enabled through a mix of policy, new technologies and smart practices that provide opportunity to reduce energy consumption. Utilization of Renewable Energy, is a vital link in parallel meeting energy consumption and address environmental concerns. Given the current context, such savings in energy would indeed translate into competitive advantage. Keeping this focus, CII Northern Region organized this Conference.



MOU Signing with Indian Institute of Entrepreneurship Development and Research (IIEDR)

The MOU signing between IAPMO India and IIEDR happened on 21st February 2014, during Plumbex at Bombay Exhibition Centre, Mumbai. The MOU was signed by Ms. Megan Lehtonen, Vice President, International Business Development, IAPMO, Ms. Neeta Sharma, Managing Director, IAPMO India, Mr. Subhash Inamdar, Chairman, Jnanada Pratishtan and Mr. Manoj Kulkarni, COO, Jnanada Pratishtan.

Conference on Green Interiors was held on 29th & 30th May 2014 at ITC Grand Parel, Mumbai. To recognizing the importance of health and comfort, the theme of the conference this year was 'Health, Comfort and Sustainably Built Indoors'. IAPMO India being one of the major players in the green building space and also a strong supporter of the activities of Indian Green Building Council, joined as a panelist and shared the views and thoughts. Ms. Neeta Sharma, Managing Director gave a presentation on 'Water Efficient Products – India', which was well received and appreciated by the participants and the feedback received from the participants indicated high degree of satisfaction.



Conference on Green Interiors



Green Building Congress 2014

"Green Building Congress" Twelfth edition was scheduled from 4 – 6 Sep 2014 at Hyderabad International Convention Centre, Hyderabad, India. Green Building Congress 2014 featured three days of multiple conferences and a parallel exhibition showcasing Green Building Technologies, Products & Services. More than 2,000 participants attended the three day conferences. There were more than 50 eminent international speakers and Indian thought leaders who shared their vision and experiences with all varieties of Green Buildings. The exhibition attracted more than 100 manufacturers, vendors & service providers, showcasing the latest green technologies, products & services, which attracted 10,000 footfalls. Ms. Megan Lehtonen, Vice President IAPMO and Ms. Neeta Sharma, Managing Director, IAPMO India joined as one of the "Panellists" and offered their valuable suggestions at the Parallel Session of Water Efficiency scheduled.

GOVERNMENT OF KERALA AND IAPMO INDIA  
**For Implementation of Additional Skill  
Acquisition Programme (ASAP)**



**ADDITIONAL SKILL ACQUISITION PROGRAMME**  
A Joint initiative of General & Higher Education Depts. Govt. of Kerala



### Project Summary

Demographic dividend, Development indicators and Market potential has placed India in a formidable position in the 21st century's financial landscape. By the year 2020, the country is poised to become a major human resource hub of the World even ahead of many developed nations of the present. A huge responsibility rests with the State Governments towards making the country future ready and a great deal of this depends upon concerted efforts in raising the quality and standards of the human resources. The Government of India, realizing this has created a road map for Human Resources Development at all levels including Education, Research, Industry and Trade.

National Skill Development Mission has estimated that there is an increased demand for skilled manpower to sustain the industrial growth and thereby the economic growth of the nation. To create such a trained manpower, it is essential to give training that will provide assistance for skill formation to the general populace that will enhance their capacity to undertake gainful self-employment as well as access to better salaried employment in industries through identified skill sectors.

The plumbing Industry faces a huge gap in the supply of skilled labour. This course will provide the learner with practical skills and knowledge to carry out plumbing applications in both the commercial and domestic sectors of the industry. RFP was invited by Kerala government on behalf of prospective skill training service providers seeking to provide—Skill Course Training in Plumbing sector.

#### Mission

Kerala, traditionally known for its high quality manpower spread all over the World and with a high density of science and technology personnel, has always set a model for the nation in developmental issues. The realization of the fact that its unemployed population kept swelling despite having a rich talent pool, made it think and devise ways to counter the trend.

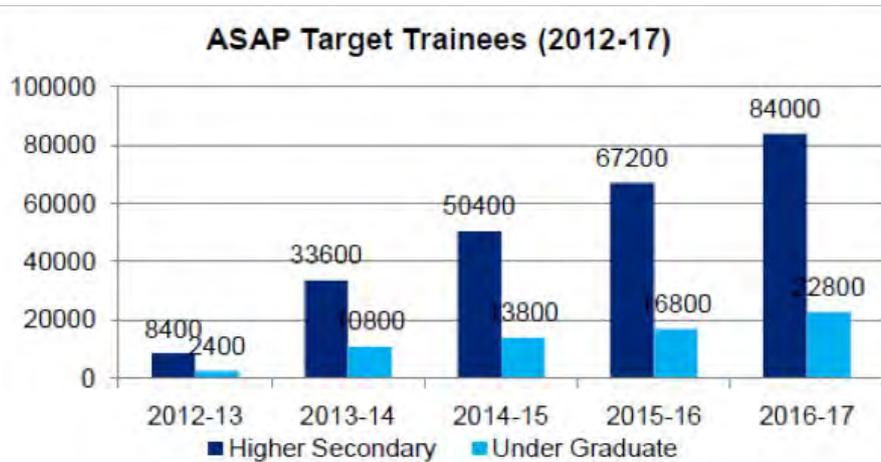
The Kerala State, by realizing this responsibility, has embarked upon an ambitious project named State Skill Development Project to equip its young population with skills in cutting edge sectors in order

to effectively alleviate the unemployment problem in the state. The project combines both preventive (Additional Skill Acquisition Programme - ASAP) and curative approaches (Additional Skill Enhancement Programme). On the preventive side, the General and Higher Education Departments together will implement the Additional Skill Acquisition Programme (ASAP) to amplify working hands in different sectors of the economy, by providing additional skill sets to students along with their regular courses.

Additional Skills Acquisition Programme (ASAP) has been developed to impart sector specific skills to create a labour market ready work force. Additional Skill Acquisition programme has recognized that trained manpower is required in the sectors such as Agriculture, Construction and Infrastructure Development, Life Sciences, Plumbing, Event Management.

#### Objectives

- To enhance the employability of the students graduating from regular academic courses by introducing additional skill acquisition programmes along with the regular studies.
- To ensure students enrolled for ASAP programmes attain a reasonable level of competence in English Communication as well as in basic IT domain.
- To provide good quality industry endorsed training in selected industry sectors to the interested students predominantly from the families belonging to socially and economically weaker sections. The broad aim of State Skill Development Project is to fulfil the growing skilled manpower requirements of the state and to bridge the gap between supply and demands. Within this broad framework, the Additional Skill Acquisition Programme aims to provide quality industry oriented skill training to more than 3.1 lakh deserving students through a network of selected schools and colleges across the state of Kerala over a period of five years.
- Additional Skill Acquisition Programme has been conceived as an idea making the State of Kerala as a hub for Skilled Manpower through imparting skill training through industry linkage to students of Schools and Colleges.



Source: State Skill Development Project – Preliminary Report, GoK, 2012

## Road Map

IAPMO India signed an agreement on 3rd December 2013 with Government of Kerala to develop competent manpower in plumbing sector, to offer skill oriented courses in plumbing Sector which is valid till 31st July 2016. 14 Skill Development Centers spread across 11 districts of Kerala have been recognized by Government of Kerala where basic infrastructure support required for the training is provided. Programme Manager (PM) of ASAP, appointed by Government for the purpose of ASAP, are managing and administering the training programmes in the selected institutions along with the faculty co-ordinators designated in the institutions.

## Skill Exhibition 2013

The 'Skill Exhibition 2013' of Additional Skills Acquisition Programme (ASAP), a joint venture of the General Education and Higher Education Departments, was organised in all districts to create awareness among the students, parents and the public about the Skill Courses that ASAP is offering this year. It was conducted on December 21 and 23, 2013.

The Skill Exhibition was given sufficient publicity and different publicity tools such as press releases, media briefings, display of banners, posters etc were used for it. It was specifically designed to help the students meet the training providers currently providing the skill courses and choose from over 33 courses during the exhibition.

Each training provider was allotted a stall to highlight their courses. Necessary facilities like a table, chair, plug point etc were available in each stall. A stall was set apart for ASAP. The leaflet of ASAP was distributed to parents and students from this stall. The concept and activity videos of ASAP were played in this stall. In the ASAP stall, both student and parent enquires were handled. Besides this, various announcements regarding the exhibition were also made from this stall.



### Role of IAPMO India

- Design the programme in such a way that students enrolled with ASAP can take the programme as an add-on programme and equip them to take up job in the concerned sector.
- Design a curriculum with 50 hours of theory, 150 hours of practical and 24 hours internship for "Plumbing Apprentice Programme" which is compliant to National Occupational Standards of "Plumbing General Assistant" Job role (QP No. PSC/ Q 0102 NSQF Level :2) of Indian Plumbing Skill Council (IPSC).
- The Plumbing Apprentice Programme (PAP) developed jointly by IAPMO and IPA (Indian Plumbing Association) is a foundation programme in plumbing to provide individuals with the basic plumbing skills. Through this course of study, an individual will learn practical aspects of the installation, repair and maintenance of a variety of piping systems, plumbing fixtures and other equipment generally associated with water distribution and waste water disposal; and be introduced to some of the basic principles and code requirements of typical plumbing systems.
- This course equips the students with knowledge in topics including Introduction to Plumbing, Building Sewer (External), Drainage, Waste and Vent (Internal), Occupational Health & Safety, Water Supply (Internal), Engineering Drawing, plumbing Fixtures, Uniform Plumbing Code-India and Introduction to Plumbing Systems.
- IAPMO India with the help of SB Global Education Resources Pvt Ltd., is imparting "Plumbing Apprentice Programme" (PAP) to 391 students at 14 Skill Development Centers. To impart training to these students at all locations, IAPMO India along with SB Global Education Resources Pvt Ltd has deployed trainers having proficiency both in English and Malayalam.
- Orientation sessions were conducted for all the new trainers.
- IAPMO India conducted Train the Trainer Session for PAP, on 22nd and 23rd March, 2014 at SRATI, Coimbatore which was conducted by IAPMO India Master Trainer.
- All programme materials required by students during the training period has already been updated. The arrangement for lab facilities at all identified locations have also been set up and the training sessions are being conducted regularly with more scope for team work, individual practice on skill and interaction of the students.
- Course material containing both reading material and hands out in the form of learners note, guidelines, quick reference guide etc. in English have been distributed to all students.
- The Government of Kerala and IAPMO India have been frequently visiting these training centers to conduct inspection to ensure teaching standards and quality maintenance.
- A 3 day work placement will take place at the end of the course which is followed by 30 days internship in May 2015.
- The certificates shall be jointly issued by Government of Kerala and IAPMO to students after completion of training.
- Placement of successful students is also ensured.

Glimpses  
of Training



TTT session at Coimbatore



IAPMD visit to Ernakulum Training Center



Lab make shift arrangement at  
Ernakulum Training Center



Mr. Abdul Matheen & Ms. Neeta Sharma  
at Pathanamthitta Center



Discussion with ASAP officers during inspection of lab facility at Thiruvananthapuram centre



5 girls have opted for Plumbing at Kollam location



Students at Kollam Center



The eighteenth edition of Indian Plumbing Conference – 18th IPC was held at Manpho Convention Centre, Bengaluru, between November 20 – 21, 2014. This two-day conference revolved around the central theme – Plumbing Installations for High-Rise Buildings. 18th IPC facilitated knowledge-sharing and meaningful interactions with enlightened speakers as well as with fellow professionals, from all over India. The presence of a large number of plumbing professionals from all over the country facilitated interaction among manufacturers, consultants, contractors, bureaucrats, builders, architects, and end-users.

During the Inaugural Ceremony of the 18th IPC at Bengaluru, the 2014 Uniform Illustrated Plumbing Code – India (UIPC-I) was released by Dr. C N Manjunath. The two-day IPC presented a frank look at the necessity to mandate compliance of the UIPC-I brought out painstakingly by the IPA.



Ms. Swathi Saralaya, Manager-Technical and Training was recognized by IPA during the 18th IPC, Bangalore for her work with the Technical Committee.

## KUDUMBASHREE-PUNARJANI PROGRAM

Kudumbashree has launched 'PUNARJANI' project in collaboration with SB-Global & IAPMO for capacitating and skilling the woman and then placing them as employees, in Plumbing, HVAC Sectors. 'The Trainees' the most marginalized section of society comprise widows, unwed mothers unmarried women facing domestic violence, victims of trafficking etc. who are in the age group of 35-50 years. Currently there are 8 centers in different districts of Kerala with more than 150 women taking the training in Plumbing.



## UPC-I AWARENESS PROGRAMME TO BLUE STAR

To positively impact the national well-being, and to address the need for plumbing education in India, the Indian Plumbing Association (IPA), and the International Association of Plumbing and Mechanical officials (IAPMO) joined together to provide a framework for plumbing education and training.

The goal of the IPA- IAPMO India Plumbing education to employment Programme (PEEP) is to prepare multiple levels of professional groups in India to read, understand, interpret, engage and apply the provisions of the Uniform Plumbing Code-India (UPC-I), to plumbing designs, initial installations and to maintain the plumbing systems. The Uniform Plumbing Code-India (UPC-I) is a product of the joint effort of the Indian Plumbing Association (IPA) and International Association of Plumbing & Mechanical Officials (IAPMO), with world headquarters in USA.

IAPMO India, in collaboration with IPA, has been conducting PEEP (Plumbing Education to Employment Program) since the last few years in India. After signing the MoU under PEEP many organizations are benefitted with developing trained manpower in the plumbing sector, providing better plumbing for better living and improved reputation.

UPC-I Awareness Program (UAP) is a workshop useful for those who desire introduction to Uniform Plumbing Code-India (UPC-I) and want to enhance their knowledge which may further their career. Reading a code book and self-studying it is a lengthy process which many working professionals find difficult. A short 2 days' UPC-I Awareness Program will be a great opportunity for them. The program is suitable for any building/plumbing professional having keen interest in learning and upgrading the knowledge and skills in plumbing based on the latest Uniform Plumbing Code-India (UPC-I) (now called as UIPC-I - 2014 Uniform Illustrated Plumbing Code – India). Many far thinking builders and developers (including Hiranandani, Kalpataru, and Oberoi Construction etc.) have availed of this course to train their engineers in plumbing technology.

IAPMO India's Master Trainer Asit Adalja (also Secretary, IPAMC) has conducted two training sessions in September & November 2014 in Mumbai. The first was conducted on Sept 12 & 13 for 31 engineers at a Hotel at Andheri and the second session was conducted on Nov 7 & 8 for 15 engineers at Blue Star's office at Thane.

The feedback from Blue Star engineers after two sessions has been exceptionally good – they felt that they were in a better position to interact with plumbing consultants, clients as well as to supervise the day to day installation quality of plumbers at site.



Asit Adalja conducting UAP with Blue Star Engineers Sept 2014 – Mumbai



Asit Adalja conducting UAP with Blue Star Engineers Nov 2014 – Thane

### **Indian Institute of Entrepreneurship Development & Research**

#### **Introduction: About IIEDR**

Jnanada Pratishthan, Pune is a voluntary organization dedicated to education & the holistic development of the students from economically & social weaker sections of the society. Established in 1979 & runs a Pre-primary, Primary & secondary school in Pune.

It was strongly sensed by Jnanada teams that after 10th standard, 60 % of the students drop out from education and become unemployable due to lack of technical skills. Effect of this is in alienation of about 15 crore youths from main stream of education in India & 1.2 crores in Maharashtra. Jnanada Pratishthan made a research on a need analysis in the construction industry and observed that there is a massive shortfall of skill sets like Plumbing (Shortfall of the facilities for development of these skills). Jnanada has experience that there is a need to upgrade a training curriculum in existing educational institutes providing vocational education skills like ITI.

To address this issue in August 2010, Jnanada has made a joint venture with world class institute i.e. International Association of Plumbing & Mechanical Officials (IAPMO India), & IPA i.e. Indian Plumbing Association.

In November 2010 Jnanada formed an institute i.e. Indian Institute of Entrepreneurship Development & Research (IIEDR) & started a residential vocational training activity of two months Trained Apprentice Plumber (TAP) course.

#### **Features of the course:**

1. World class Technical Training: Course designed by IAPMO India is based on latest plumbing technology & codes. After completion of the training, students are certified by IAPMO's world class certification.
2. Short Duration Course: It's a two months (60 days) residential training course.
3. Affordable Fees: The course is design for school & college dropout students of below poverty line (BPL) category students of villages and therefore the total fees are Rs. 6500/- including lodging & boarding of 60 days.
4. Mindset Training: Modules on how to set goals, positive thinking, going the extra mile to change the attitude by inside-out approach.
5. Soft & Entrepreneurship Skill: Training on communication, presentation, leadership, creative thinking, etc.
6. Mentorship: During the training & one year apprenticeship period mentorship is provided.
7. Development of the Innovative Model: Under this model the total course is divided in to three segments i.e. 20-20-20 days. The first 20 days training is provided to the students at various village centres from Maharashtra (Satara, Osmanabad, Nanded & Nandurbar districts). The second 20 days on site training at Pune & last 20 days advance training is provided in IIEDR Wagholi Pune campus.



### Results of the Activity:

1. Training to BPL category youths: Till date the training is provided to 172 youths particularly BPL category from the various villages of the state.
2. Employment Ratio: 100% employment is provided to all above mentioned youths for one year apprenticeship with stipend of Rs. 6 to 7 thousand per month with various construction industries.
3. Entrepreneurship: 20% of the youths who have completed the one year apprenticeship have started their own business as a service provider.
4. Industry Collaboration: The IIEDR has created a network with various construction houses such as Vascon Engineers, Nanded City Construction Company, Kushal Credai, B. G. Shirke Construction Technology etc.
5. Appreciation from State Government: Maharashtra State Rural Livelihood Mission has appreciated the IIEDR's activity & offered a partnership to start the activity in 10 districts of Maharashtra.
6. Women Empowerment: With the assistance of Maharshi Karve Stree Shikshan.

### IIEDR's Diploma in Plumbing Technology:

1. The course commenced in September 2014, considering the demand of construction industry & need for skilled supervisory level job opportunities, coupled with huge short fall in man power.
2. About 20 students are admitted from unprivileged class & from AA category norms as per CII report.
3. IIEDR has also organized to provide PART TIME SERVICE / JOB with the support of involved builders and construction houses where in students are getting Rs. 5000/- per month.
4. With the support of Janata Sahakari Bank Pune, we could provide education loan worth Rs. 20,000 to students and which will be repaid Rs.1000 on monthly basis from their part time emoluments.
5. On completion all students are to get assured jobs with leading contractors with handsome salary & perks as well few of them can start their own business and even can go abroad.
6. The teaching medium is English and local language for better understanding.
7. All faculty members are highly qualified for the post & with long industry experience.
8. The syllabus of TAP and TMP designed by IPA and IAPMO India is partly used in developing the total syllabus of Diploma.

## DIPLOMA INAUGURATION



The dignitaries on dais include Mr. Magar Director of Magar Patta City Nanded City , Director, Mr. Paranjape of Paranjape Constructions, Mr. Darode owner of Darode –Jog Constructions, Mr. President, Kriplani of Finolax India Ltd & Chairman Mr. Vasudevan of VASCON Engineers.

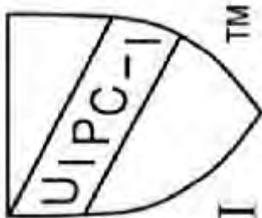
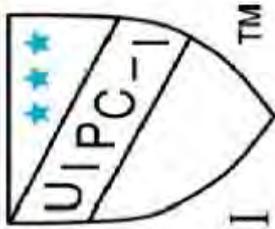
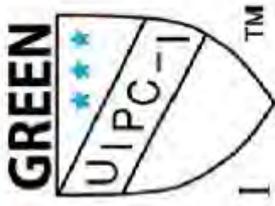
## PLUMBING AWARENESS WORKSHOP FOR ESSESS BY ASAIN PAINT

Ess Ess, the bath fittings and accessories expert is now a part of Asian Paints. This unique partnership will exhibit a world of ergonomically and innovatively designed bath concepts. There is a wide range of products, offering best in class value across categories. In addition, it also provides an unmatched experience for the customer with our 10 year warranty period and expert team for speedy after-sales service.

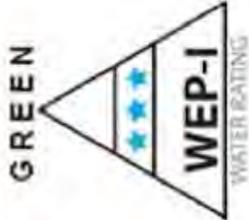
In order to enable a strong induction for all employees in Bath division with adequate theoretical and hands on experience, Asian Paints has embarked on a partnership with IAPMO India. IAPMO India jointly with Indian Plumbing Association (IPA) conducted 2 days plumbing awareness workshop to a diversified target group comprising of Technical, sales and marketing personnel. The first program in this journey was conducted on 9-10th January 2015 at Pune. The two day program included 1 day of classroom and 1 day of practical demonstration.



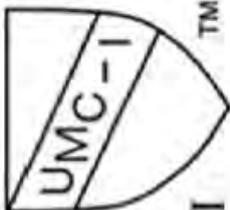
## IAPMO India's Nomenclature for Marks of Conformity

<u>Mark of Conformity</u>	<u>Listing Type</u>	<u>Reference(s)</u>	<u>Required Criteria</u>	<u>Description</u>
	UIPC-1	Uniform Illustrated Plumbing Code – India (UIPC-1)	The product must meet a standard recognized or acceptable within the UIPC-1, and comply to the provisions of the UIPC-1.	This logo is for products that comply to their primary performance standard, recognized or acceptable within the UIPC-1, and also are certified to the UIPC-1.
	WEP-1 & UIPC-1	Uniform Illustrated Plumbing Code – India (UIPC-1) + Water Efficient Products - India (WEP-1)	Same as UIPC-1 listing criteria above plus the product must meet the respective star rating criteria per the 2013 WEP-1 specification.	Same as UIPC-1 listing description above plus water consumption measurement to be made per the Standard's procedure, and the respective star rating awarded per the 2013 WEP-1 specification.
	Green WEP-1 & UIPC-1	Uniform Illustrated Plumbing Code – India (UIPC-1) + Water Efficient Products - India (WEP-1) + Green Codes (GPCS-1/ GRIHA/ IGBC/ LEED, as requested by applicant)	Same as WEP-1 & UIPC-1 listing criteria above plus the product must meet green points criteria in GPCS-1 and/or GRIHA and/or IGBC and/or LEED, as requested for evaluation by a product certification applicant.	Same as WEP-1 & UIPC-1 listing description above plus respective green points to be awarded by GPCS-1 and/or GRIHA and/or IGBC and/or LEED, as requested for evaluation by a product certification applicant.

## IAPMO India's Nomenclature for Marks of Conformity

<u>Mark of Conformity</u>	<u>Listing Type</u>	<u>Reference(s)</u>	<u>Required Criteria</u>	<u>Description</u>
	Green UIPC-I	Uniform Illustrated Plumbing Code – India (UIPC-I) + Green Codes (GPCS-I/ GRIHA/ IGBC/ LEED, as requested by applicant)	The product must meet a standard recognized or acceptable within the UIPC-I comply to the provisions of the UIPC-I, and meet green points criteria in GPCS-I and/or GRIHA and/or IGBC and/or LEED, as requested for evaluation by a product certification applicant.	Same as UIPC-I listing description above whereby this green logo is for products that might not consume water but that may still earn green points awarded by GPCS-I and/or GRIHA and/or IGBC and/or LEED, as requested for evaluation by a product certification applicant.
	Classified WEP-I	Water Efficient Products – India (WEP-I)	The product must comply to a national standard or an IS standard, and meet the respective star rating criteria awarded per the 2013 WEP-I specification.	This logo is for products that are not UIPC-I certified. The water consumption measurement to be made per the Standard's (ASME, international, or IS as approved by IAPMO) procedure and the respective star rating awarded per the 2013 WEP-I specification.
	Green Classified WEP-I	Water Efficient Products - India (WEP-I) + Green Codes (GPCS-I/ GRIHA/ IGBC/ LEED, as requested by applicant)	Same as Classified WEP-I listing criteria above plus product must meet green points criteria in GPCS-I and/or GRIHA and/or IGBC and/or LEED, as requested for evaluation by a product certification applicant.	Same as Classified WEP-I listing description above but that also include the respective green points awarded by GPCS-I and/or GRIHA and/or IGBC and/or LEED, as requested for evaluation by a product certification applicant.

## IAPMO India's Nomenclature for Marks of Conformity

<u>Mark of Conformity</u>	<u>Listing Type</u>	<u>Reference(s)</u>	<u>Required Criteria</u>	<u>Description</u>
	UMC-I	Uniform Mechanical Code – India (UMC-I)	The product must meet a standard recognized or acceptable within the UMC-I, and comply to the provisions of the UMC-I.	This logo is for products that comply to their primary performance standard, recognized or acceptable within the UMC-I, and also comply to the provisions of the UMC-I.
	USEC-I	Uniform Solar Energy Code – India (USEC-I)	The product must meet a standard recognized or acceptable within the USEC-I, and comply to the provisions of the USEC-I.	This logo is for products that comply to their primary performance standard, recognized or acceptable within the USEC-I, and also comply to the provisions of the USEC-I.
	USPC-I	Uniform Swimming Pool Code – India (USPC-I)	The product must meet a standard recognized or acceptable within the USPC-I, and comply to the provisions of the USPC-I.	This logo is for products that comply to their primary performance standard, recognized or acceptable within the USPC-I, and also comply to the provisions of the USPC-I.

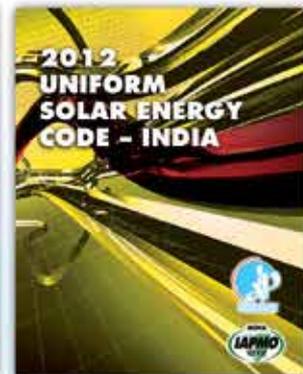
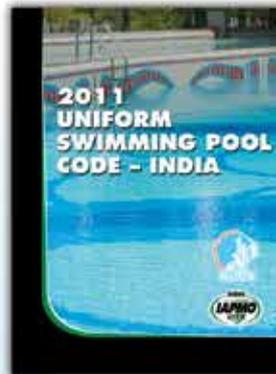
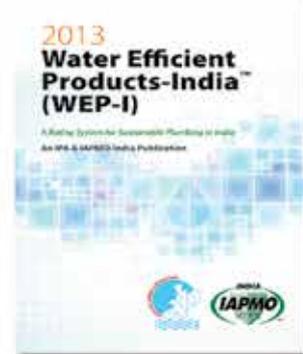
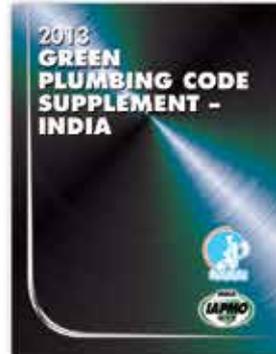


# Latest Plumbing Technology Incorporated in the Codes



## 2014 UNIFORM ILLUSTRATED PLUMBING CODE - INDIA

NEW  
RELEASE



Order 2014 UIPC-I now at Rs. 3,000 (15% discount for IPA Members)

Package Deal for all 5 codes together at 10% discount and  
15% discount for IPA members.

### Bulk Order Discount

Above 10 – 50 copies 10%

50 – 100 copies 15%

100 & Above 20%

To order copies please write to [swathi.saralaya@iapmo.org](mailto:swathi.saralaya@iapmo.org) or send your request at IAPMO India, No. 22, 12th B main, HAL 2nd Stage, Indiranagar, Bengaluru 560008 • Phone: 91 80 3071 4504

# Look for the Mark, DISCOVER THE VALUE



Uniform Plumbing Code – India (UPC-I)



Uniform Solar Energy Code – India (USEC-I)



Green Product listing to Water Efficient Products – India (WEP-I), Green Plumbing Code Supplement – India (GPCS-I), and Uniform Plumbing Code – India (UPC-I)



Uniform Swimming Pool Code – India (USPC-I)



Uniform Mechanical Code – India (UMC-I)



Green Product listings to the Green Plumbing Code Supplement – India (GPCS-I) and product code

*UPC-I, WEP-I, USEC-I, USPC-I and GPCS-I are jointly published by IPA and IAPMO India*

IAPMO India offers convenient, one-stop shop service and product marks of conformity that open doors and eliminate doubts.

The above marks can only be issued by IAPMO India, and IAPMO, the Global leader and the industry's premier choice for plumbing certification for over 45 years.

## Five simple steps to list your products through IAPMO India



For a complete list of our services, please visit [www.iapmoindia.org](http://www.iapmoindia.org),  
or call +91 80 30714500 (India),  
or 909-472-4136 (USA), [charles.gross@iapmo.org](mailto:charles.gross@iapmo.org)

# ARE YOU LOOKING FOR A CAREER AS AN HVAC DESIGN AND INSTALLATION ENGINEER?

## *Why wait?*

The HVAC industry needs more than 2 lakh qualified HVAC design and installation professionals across the globe

Join the global training provider, IAPMO India – a U.S.-based organization conducting job-linked training in HVAC design, installation, operations, and maintenance – 100 percent placement assistance in India and Middle East countries.

### Who can join?

#### Fresh graduates/final year be students of:

- Mechanical Engineering
- Electrical Engineering
- Industrial Production Engineering
- Automobile Engineering

*We also undertake final year engineering projects.*

For more information, please contact  
Ms. Anjali Singh/Dr. A. Matheen

Phone: 080-30714500/502 • Mobile: 91-99202117788





[WWW.IAPMOINDIA.ORG](http://WWW.IAPMOINDIA.ORG)

Bengaluru Office:  
No. 22, 12th "B" Main, HAL 2nd Stage • Indiranagar,  
Bengaluru – 560008 • Karnataka, India

Phone: +91 80 30714500

©IAPMO2015