



2017

YEAR IN REVIEW

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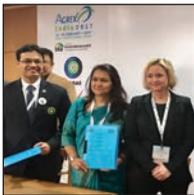
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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

The International Association of Plumbing and Mechanical Officials (IAPMO) was founded 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) has 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 professionals 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 among 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.

2018 Events

Come Visit Us!

ACREX India

Bangalore
22 - 24 February 2018

ISH India powered by IPA

Bangalore
22 - 24 February 2018

24th Indian Plumbing Conference - Plumbing for a Sustainable Future

Goa
27 - 28 April 2018

One Megan Event, 5th Water India Expo - Clean Water for a Sustainable Future

Delhi
23 - 25 May 2018

Municipalika 2018 - Smart & Sustainable City Solutions

Mumbai
19 - 21 September 2018

25th Indian Plumbing Conference - Four Pillars of Plumbing

Mumbai
27 - 28 October 2018

16th Edition: Green Building Congress 2018 - Sustainable built environment for All

Hyderabad
31 Oct - 3 November 2018

“Since its inception in 2007, IAPMO India has worked extensively to lay the groundwork necessary to assist in the commitment to public health and safety through effective codes, standards, and training programs.”



GP RUSS CHANEY

IAPMO Chief Executive Officer

We are absolutely delighted to provide this annual year in review for 2017 as our IAPMO India staff did a fantastic job providing much-needed educational services, and industry work with the focus of Plumbing: Vital to Global Health. I have a high degree of respect and admiration for the IAPMO India staff who are on the front lines of IAPMO's efforts to provide the needed education and technical support to continue to assist in the enhancement of the industry with the ultimate goal of protecting the health and safety of the nation's citizens through effective codes and standards.

It is certainly a pleasure to find ourselves at the end of another exciting year. As we look at the year in review for IAPMO India, we remain encouraged by the continued progression and impact potential that can be accomplished through the dedicated efforts of our staff and treasured partners. I am excited to announce that (efforts built out to include Water Quality and Full Service Solutions for clients within India and 2018 will be a very encouraging year.)

Since its inception in 2007, IAPMO India has worked extensively to lay the groundwork necessary to assist in the commitment to public health and safety through effective codes, standards, and training programs. The relationships made through the development

of codes and training for the plumbing and mechanical industry has offered IAPMO India the opportunity to focus on the delivery of elite services for the industry, and India at large. As much as ever before, we take our hats off to the Indian Plumbing Association (IPA) for its unprecedented dedication and passion that continues to keep India at the forefront of the industry and around the globe. We remain ever encouraged to work alongside the IPA, and are very encouraged by the commitment and dedication of the National Executive Committee, led by IPA President Gurmit Singh Arora's expansive vision.

Highlighting this strong partnership over the past decade, we have developed and published Uniform Illustrated Plumbing Code – India, Uniform Mechanical Code – India, Green Plumbing Code Supplement – India, Green Mechanical Code Supplement – India for the Indian plumbing and mechanical industries, and will continue to dedicate our efforts to assist in the standardization of the industry to protect the health and safety of the nation. On behalf of all my colleagues and on my personal behalf, I sincerely thank all of the dedicated individuals who were involved in our pursuit to improve plumbing standards in India and I look forward to many more years of our rewarding partnerships.

GURMIT SINGH ARORA

President of IPA



I am delighted to address you on the completion of another exciting year, moving with satisfaction from our achievements in 2017, into the 25th Silver Jubilee of the Indian Plumbing Association with great expectations. Our partnership with IAPMO dates back to November 2007 & we are very satisfied with this ongoing cooperation and relationship.

We at IPA were overwhelmed to hear the news of GP Russ Chaney, CEO, IAPMO Group to be elected to serve as Chairman of the American National Standards Institute (ANSI), Board of Directors. ANSI is the leading institution that oversees the development of voluntary consensus Standards. We at IPA are sure, that with the wide experience, reliability and trust that Russ Chaney brings with him, the ANSI will grow to greater heights in the days ahead.

The IAPMO Indian team lead by Neeta Sharma and in particular Swathi Saralaya and Anjali have been participating with IPA shoulder to shoulder. Megan Lehtonen has been travelling to every IPA major event, and even with jet lag and lack of sleep, has always been there to handhold IPA at all junctures. I would like to place my appreciation for the entire team.

By the time you read this, I am sure the news would be out of the bag, of Megan Lehtonen's departure from IAPMO. Megan has been an honest, ethical and hardworking friend of IPA & whatever we have achieved in our partnership with IAPMO is due to Russ and Megan. It is with great regret and shock to know, that Megan

will not be there anymore with IAPMO. We at IPA do appreciate her hard work, dedication, her 24/7 approachability, and the bridge that she had forged for IAPMO and IPA. We are grateful for Megan's contribution to our ongoing partnership with IAPMO.

2018 brings very exciting times for IPA, as we enter the year with seminars in Nashik, Mumbai & Delhi in January and go on to inaugurate IPA's 1st self-owned office in Okhla, New Delhi on the 19th of January. Our determination takes us into "Vision 2018", with great planned activities including, conducting Indian Plumbing Professional League (IPPL) in 16-IPA chapters across India simultaneously, holding the "ISH Powered by IPA" exhibition in Bangalore from the 22nd to 24th February, conducting 2 national seminars in Goa in April, & in Mumbai in October, with the full participation of World Plumbing Council, adding a 1000 Members and 3 Chapters take us into 2018 with awe, excitement and a great sense of satisfaction to turn our perception and dreams into reality.

The recognition of our codes, and for IAPMO's training, will come through the successful implementation of the IPPL & this will further enhance IAPMO & IPA partnership to greater heights, never seen before.

I thank IAPMO for a wonderful relationship and do hope this relationship, remains mutually beneficial for both our organisations.

With kind regards & best wishes



“TWSH is a progressive and vast vehicle to further The IAPMO Group’s humanitarian efforts, created to serve as the necessary bridge for the international water, sanitation, and hygiene community.”

MEGAN LEHTONEN

Senior VP of International Business Development

It has been another exciting year for IAPMO India, and for the entire industry, the world over. IAPMO’s exponential growth in developing markets is the result of the progressive and innovative conceptualism of this organization’s leadership from almost a century ago.

When we focus on global growth, emphasis on the strategic and proactive vision that came to fruition nearly 20 years ago is again thrust into the spotlight. I have been fortunate enough to hear many times over, across the globe, that the foresight and vision of this organization is unprecedented and has strongly planted the IAPMO seed in developing markets to assist in this great industry’s growth. The biggest joy of this statement is that the heart of this mission was with a philanthropic focus — to work to improve on the human condition by fostering the basic human right of safe access to clean water and sanitation.

The IAPMO India business unit, created ten years ago, has seen its growth double under the steady watch of Managing Director Neeta Sharma, and through strong partnerships, with the IPA and IGBC leading the charge. This consistent increase is the result of the continuing training programs originally implemented at the grass-roots level a decade ago, and the introduction and capitalization of state-funded programs as the country moves to focus on the upskilling of youth as a top priority. IAPMO India has trained over 1,000 students in the Kerala state-run program alone this year, at more than 30 training centers, with additional programs in the pipeline. Stuart Henry, World Plumbing Council Secretariat, reminded me of a great concept: “Skills in the land equal

gold in the hands.” It’s a philosophy on which we will continue to focus and continue to build training programs and workshops to upskill the huge workforce within India.

The decade-long partnership with the Indian Plumbing Association has strongly positioned the industry to bring about an unparalleled self-regulated cultural advancement. As a business unit, this has been IAPMO India’s strongest year to date since its inception in 2007. IAPMO India has been building on the value of training and education, together with the overall market’s understanding of the need for certification. With this progress, India continues to grow into a practical solution for clients in the Asian region. We look forward to the MESSE ISH: India show, Powered by IPA, in February of 2018, showcasing industry services and the potential for further growth in this region.

Another exciting development is the creation and expansion of the Water Quality Association India’s Certification program. IAPMO India will assist the WQAI with all testing and certification needs, and is proud to have the first Purity Seal recently awarded! This program, along with other future certification programs, will continue to expand the IAPMO India portfolio. The mechanical program has gained major momentum this year thanks to Dr. Abdul Matheen’s diligence and our great partner ISHRAE offering training programs and highlighting the use of the UMC-I.

It is with great honor and elation that this work, decades in the making, has resulted in another exciting announcement: The creation of an IAPMO foundation to fill

the niche throughout the Water Sanitation and Hygiene (WASH) sector. This initiative, building on the philanthropic projects in which IAPMO has invested, has resulted in the creation of The International Water, Sanitation and Hygiene Foundation (IWSH). IWSH is a progressive and vast vehicle to further The IAPMO Group's humanitarian efforts, created to serve as the necessary bridge for the international water, sanitation, and hygiene community. The foundation has a specific focus on the role of the plumbing industry in community collaborations and educational exchange, and is in a critical position to capitalize on the vast industry network and expertise, ensuring the health and safety of the global community by increasing access to safe drinking water and sanitation systems.

According to the 2016 United Nations Sustainable Development Goals, 2.4 billion people lack access to such basic sanitation services as toilets or latrines, and water scarcity affects more than 40 percent of the global population; this number is projected to rise.

IWSH aligns IAPMO's existing projects throughout the world with those of government, industry, and communities to ensure water systems are safe and sustainable; building a bridge within the WASH community, expanding the industry, and impacting thousands of lives through enhanced systems and education.

Along with numerous projects and targets focused on the foundation's mission, including expanding training programs to upskill the workforce in developing countries and creating sustainable communities, IWSH utilizes our vast network of experts and resources to rebuild and enhance facilities and upgrade school and public washroom and handwashing stations. The preliminary target and focus of the foundation is the ongoing work conducted through the innovative Community Plumbing Challenge (CPC). CPC2015 in Nashik was completed two years back, enhancing the washroom facilities of School 125 in Nashik, India. This competition featured teams from Australia, Basque Country, India, and the United States.

These global teams worked together to build a new sanitation facility for Mukti Dham School No. 125, home to 400 students between the ages of 7 and 15. The school now has 25 working taps (up from four before) and hand wash drainage, two taps in toilet areas (none before), improved

ventilation, better water pressure, and higher water tank storage capacity. Following this success was CPC2016 in Diepsloot, South Africa. The IWSH team, with partner Healthabitat and international partners, replaced 14 toilets — improving access to more than 1,250 people, and enabling 56,000 liters of water to be saved on a daily basis.

The high-profile project was supported by numerous in-country partners — WASSUP (Water, Amenities, Sanitation Services Upgrade Programme), DACN (Diepsloot Arts & Culture Network) — in collaboration with Healthabitat Sanitation Studio and facilitated in South Africa by Sticky Situations, along with event partners Autodesk and the Wot-If Trust. U.S. Consul General Rowan and other international dignitaries supported the project through multiple visits and continue to carry on the positive message the impact CPC projects will continue to have.

The work has only just begun, and we look forward to future projects and updates as the foundation continues to build its network and respond to the long list of projects and events that will result in exponential impact. The IWSH Foundation will support existing initiatives already under way with a heavy focus within India, and in Indonesia, Jordan, Nepal, and South Africa, and will continue to identify nations where improvements in the governance of their water and sanitation services would lead to positive outcomes associated with clean water and sanitation access.

CPC2017 brought the IWSH team and partners to Cicau Village in Indonesia. Please be sure to visit www.IWSH.org to view the video highlights of CPC2017, to get involved, be part of the movement, and for more information on what is planned for 2018 as we plan a return to India to focus on the enhancement of a Health Care Facility.

The world continues to get smaller on a daily basis, as technology, connectivity, and global capabilities deliver solutions we wouldn't have dreamt of even a decade ago. And as necessity is often the mother of invention, it is our goal to continue to stay in front of this curve and work diligently to find and deliver the best services to our customers, and create the most impactful programs through our philanthropic efforts, in every corner of this energizing world. Thank you for your ongoing support, we continue to be inspired by the tremendous efforts throughout India at large.



“The Industry has come to understand benefits of seeking IAPMO certification, as it opens door for export to Global market. This facilitates local manufacturers to be vendors for International Market.”

NEETA SHARMA

Managing Director

This year continued with Education Programmes in PEEP, Plumbing Education to Employment Programme and MEEP, Mechanical Education to Employment Programme including customization of programme, at a dedicated pace. There was a constant rise in enquiries on Trade Certification. We collaborated with KIOT, Salem as Technical partner utilizing their resources for Certification. With this came up association with many Construction and Design companies seeking trained and certified personnel.

This year saw the launch of Service Technicians Programme for Installers and Service technicians in the residential segment of water treatment. The goal for this program will be to create a pool of skilled professionals available to water treatment industry, manufactures and dealers, and provide companies with an additional resource to further train their current employees. The program will be supported by schools and universities, industry manufacturers, and other training providers to support the growing demand for skilled water treatment professionals. With one batch already complete, we look forward to many such open batches and customized programmes for the industry.

IAPMO India will be the “Certification Body” and plans to approve different schools and trainers to provide courses throughout India, including training and certification in different languages. This program will have theory & practical training to ensure comprehension of industry products, components, and troubleshooting, along with “Soft skills” training that is needed for consumer interactions.

State Skill Development Project, an ambitious project of Kerala, continued to sensitize and equip its young population with skills in various sectors, 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).

IAPMO India, has an agreement with Government of Kerala to develop competent manpower in Plumbing Sector, to offer skill oriented courses in Plumbing. This continued in various Centers spread across different districts of the State. Over 2000 students

have benefited over last 4 years, from this training through Skill Development Centers. Interested students got good placements within the State and in adjoining States. This brought in Affiliation with IPSC, Indian Plumbing Skill Council where Plumbing Assistant Programme was mapped to their NOSs. This will surely fill the existing gap of skilled manpower in the Construction Industry. Efforts are also being made for approval under PMKVY Project, Ministry of Skill Development and Entrepreneurship or any other State Skill Project to take for skilling of manpower.

We have experienced the best way to utilize CSR funds is to use it for Skilling & Upskilling school dropouts and unemployed youth. This is a solution where everyone benefits – both industry & Professionals alike. Federal Bank ran Mechanical System Design and gave employment to hundreds of unemployed youth and helped them in shaping up their career, through Federal Skill Academy. KOHLER which runs our Plumbing Apprentice Programme, PAP, through their CSR funds has so far trained 200 students. While most of them have been placed at a salary of Rs 14000/- pm, few have even been successful to be placed at a salary of Rs 27000/- pm and find a job abroad too.

Our association with ISHRAE, to mutually promote Education programmes by jointly conducting them in various Centers of Excellence of ISHRAE will be an effort to bridge gap of demand of trained professionals.

Globally, Certification is an ultimate tool/ indicator of any Quality Standard. Our continued effort on getting as many manufacturers to accept our certification scheme for the products which are not covered under Mandatory Certification by any guidelines/ notifications, saw an incredible increase in number. This year saw an increase in certification queries for different types of Pipes including NSF certifications. There is bound to be a big leap in this area.

There lies huge scope in certifying Pre-fabricated structures too, which may be a combination of one or more standards; deviation from a Standard, as per clients' requirement; combined with inputs from skilled manpower-in designing or manufacturing. Through our Evaluation Services

vertical from HQ, IAPMO India is ready to offer such Certifications to our clients which is sure to bring more confidence to customers globally. Our partnership with WQAI, Water Quality Association India, as their Certification Body to offer WQAI's Seal of Purity on a product as per WQA INDIA microbiological standard- WQA INDIA protocol: IP 100; NSF certification and relevant NSF certifications continued during this year. The Industry has come to understand benefits of seeking IAPMO certification, as it opens door for export to Global market. This facilitates local manufacturers to be vendors for International Market.

Last year, we took approval for RMCPCS, Ready Mix Concrete Plant Certification Scheme by QCI. At present, it's mandatory only in Maharashtra & Karnataka, it is sure to spread to all other States to bring in Quality ethics among developers & contractors.

Worldwide, the consumption of water is doubling every two decades. Water audit is the most effective tool for water management. Through audit one can identify and quantify what steps can be taken to reduce water use and losses. Water audits trace water use from its point of entry into the facility/system to its discharge into the sewer. The audit also identifies and quantifies unaccountable water losses, leaks at each point of use within and around the facility.

The principal purpose of a water audit is to accurately determine the amount of unaccounted Water (UAW) in a water system. This includes water loss through leaks, inoperative system controls (such as blow off valves), and unmetered sources such as wells or hydrants. IAPMO India aims to deal with the water audit at a micro level and possible ways of water use reduction in the typical urban Indian household.

I reiterate and emphasize on need to acknowledge and support for Sustainable Environment by seeking Third Party Certified Products, Third Party Inspections of the Projects (Water & Energy Audits) and Skilled and certified personnel by all stakeholders of Construction Industry. IAPMO India continue to strive and contribute to this achievement by offering best and sustainable services in these areas.



DR. ABDUL MATHEEN

Director Mechanical

Millions of informal workers in India struggle to find employment and work on a temporary basis at a far-low wage, without health insurance or other benefits, and at the whim of employers. At the same time, the growing middle-class, mid-sized business community, and active construction sector has a strong demand for qualified, reliable, skilled workers; but finding and training workers is a time-consuming hassle.

IAPMO India is dedicated to support and provide informal sectors construction and service sector workers with institutionalized access to jobs, enhanced incomes, and financial and social services. IAPMO India does this by filling the market gap between the supply and demand of trained workers in Mechanical HVAC-R sector. With this market linkage, IAPMO India also offers social benefits that informal sector workers are largely excluded from.

“India currently faces a severe shortage of well-trained, skilled workers. It is estimated that only 2.3% of the workforce in India has undergone formal skill training as compared to 68% in the UK, 75% in Germany, 52% in USA, 80% in Japan and 96% in South Korea. Large sections of the educated workforce have little or no job skills, making them largely unemployable. Therefore, India must focus on scaling up skill training efforts to meet the demands of employers and drive economic growth.

Skills are a critical asset for individuals, businesses and societies. The importance of skills is even more pronounced in a dynamic, globalized world. Building basic skills early on and further enhance during working life; and that they are recognized and used by employers is a challenge. Another concern is “Matching skills and jobs” has become a high-priority policy concern. Skills

“Creating Skilled Workforce for Improved Productivity, Employment, Growth and Development”

mismatches occur when workers have either fewer or more skills than jobs require. Some mismatch is inevitable, as the labour market involves complex decisions by employers and workers and depends on many external factors. But high and persistent skills mismatch is costly for employers, workers and society at large. Skills mismatch has become more prominent in the global economic crisis. However, it is primarily a structural issue and as such existed prior to the recent global economic slowdown. For the same reason, contrary to what some commentators believe, current record-high unemployment rates cannot be attributed to skills mismatch. Indeed, there is no evidence that skill levels have collapsed during the crisis.

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. The need for establishment of skill development programs and 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.

IAPMO India has been playing a pivotal role in nation building, by adopting the best and most selective way by introducing the cutting-edge concept and a complete cycle "Education-to-Employment" such as MEEP (Mechanical Education to Employment Program) training to the university youths at the entry level industry in order to tackle the impeding 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 HVAC-R System Design (MSD) Program**

The objective of this program is to prepare & educate Mechanical System Design such as Mechanical Heating Ventilation and Air-Conditioning System Design and Installation specifics 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 Program (MSP)**

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 Program (MTP)**

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.

- **SHORT TERM HVAC-R TECHNICIANS PROGRAMS:**

- 1) Certificate Course in Basic Refrigeration & Air Conditioning.
- 2) Certificate Course in Repair & Maintenance of Refrigerators & Deep freezers.
- 3) Certificate Course in Repair & Maintenance of Water Coolers & Bottle Coolers.
- 4) Certificate Course in Repair & Maintenance of Window & Split Air Installation and fabrication.

- 8) Certificate Course in Mechanical HVAC-R Installation, Testing and Commissioning Technicians.
- 9) Certificate Course in Operation & Maintenance of Chiller Plant.
- 10) Certificate Course in Mechanical HVAC-R Sales & Service Technicians.

- **IAPMO INDIA – KIOT, Centre Of Excellence (IIK-CoE) -Technical Trade Test Center/Training & Consultancy Services:**

IAPMO INDIA & KIOT Technical Trade Center is aimed to serve all the services together under one roof associated with training and placement. We aim to help domestic and international clients to employ the right candidates for the right job. We are assisted by adequate manpower agencies across India for placement requirement, We have enough space, latest Equipments, instruments that is required for Trade Testing of the candidates. Our training center is assisted by well qualified HVAC and Plumbing Engineers and foremen having vast experience in the field.

- **Our services**

- We serve with well-organized training and testing center established at KIOT. We are assisted by adequate manpower, space, latest Equipments, instruments that is required for training and testing of the candidates
- We serve cordial environment, well trained staff to support our clients & candidate during interview related with professional jobs and any other computer related query.
- We provide Technical evaluation as per international standard to meet requirement of Building Industry such as construction, O&M, Production, Sales and industrial sector.
- We help domestic and international clients to employ the right candidates for the right job.

Mechanical Training

- A/C Mechanic (Window / Split).
- A/C Mechanic (Plant).
- A/C Mechanic (Car).
- A/C Plant Operator.
- Duct Insulator.
- Duct Erector/Fabricator.
- Central HVAC Plant Pump Operator
- Central HVAC Plant Chiller Operator
- Plumber

Heating Ventilation and Air-Conditioning Department

- Plant Supervisors
- Chiller Supervisor
- Control Room Operators
- Control Room Supervisors
- Preventative & Corrective Maintenance technicians
- Supervisors Preventative & Corrective Maintenance
- HVAC Sale Engineers
- HVAC Sale supervisors
- HVAC Sale 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

“I am extremely excited to join IAPMO India and look forward to working with the team on these news initiatives.”



DR. K. CHANDRASEKHAR

Director - Water Systems

A New Year 2018, a new opportunity, to establish a water systems division in IAPMO India and help to take the organization to a greater height. I have been associated with drinking water treatment industry in India for last ten years and worked closely with industry companies in product testing & certification activities and conducted training seminars for water treatment professionals and service technicians. Fortunately, I received an opportunity, along with top industry players, to establish the Water Quality India Association in 2014. This association was formed to work towards educating the people in India on the importance of safe drinking water, conservation of water, create performance standards, create education programs and be an advocate for the industry.

With the excellent team in place at IAPMO India, we are excited to accept the challenge to initiate various programs in water systems in 2018. Currently we are working on following items:

- i) Initiate a formal training and certification course on “Certified Service Technician” – Residential drinking water segment to address the challenges facing after sales service/support of drinking water treatment systems. Through this course we will try to fill the technical gaps that exist today. There is a huge potential to train the massive human resource involved in this sector which will also enhance their career prospects. This also ensures the customers have access to qualified, skilled, and certified service technicians who can be trusted in assuring safe drinking water for their families.
- ii) We are setting up program along with IAPMO R&T to offer product testing and certification for water-conditioning and treatment products against international standards so that companies will have access in international markets.
- iii) We are playing a key role as Certification body for “Seal of Purity” product certification program of Water Quality India Association (WQIA) for WQIA Microbiological standard IP-100. Currently two companies Kent RO Ltd. and TTK Prestige Ltd. few products are certified and plans to reach out to many industry players to go for this certification.
- iv) We plan to initiate standard(s) awareness training programs so that industry players can achieve a better understanding of global regulatory requirements that help industry for opening international market opportunities.
- v) We plan to engage with trade associations to help their members understand international market requirements, product testing/certification needs, and provide education and training to enhance the industry’s knowledge on various water treatment product categories.

I am extremely excited to join IAPMO India and look forward to working with the team on these news initiatives.



CHARLES GROSS

Director of India Product Certification

IAPMO India continues to operate its product certification program based on the principles of standard ISO/IEC 17065 “General Requirements for Bodies Operating Product Certification Systems” as its total product certifications’ count is now at 40 certificates of listing as compared to 25 certificates of listing this time last year as can be seen on IAPMO India’s product listing directory website at

<http://www.iapmoindia.org/Pages/pld.aspx>. Products continue to be certified and listed in one of two manners:

- 1) An IAPMO India ‘Classified’ product listing whereby products are certified to their performance standard only, and
- 2) A regular IAPMO India product listing whereby products are certified to their performance standard and to the products’ respective code, such as the *2012 Uniform Mechanical Plumbing Code - India (UMC-I)* and/or the *2017 Uniform Illustrated Plumbing Code - India (UIPC-I)*.

Brief History

In 2007 IAPMO India formally established a successful partnership with the Indian Plumbing Association (IPA) which continues to progress today which began initially in 2006 when IAPMO visited the IPA in India to discuss partnership with them which progressed with plans to jointly develop and publish India’s first ever comprehensive plumbing code, namely the *Uniform Plumbing Code - India (UPC-I)* which was first published in 2008.

The *2008 UPC-I* was a brand-new and complete plumbing code in India which sparked attention and interest and became better known little by little each day by various industries, especially the plumbing industry. The *2008 UPC-I* subsequently underwent update in 2011 and was published along with its complementing 2011 Illustrated Uniform Plumbing Code – India manual, both of which again underwent combined update in 2014 to the *2014 Uniform Illustrated Plumbing Code – India (UIPC-I)*, which again underwent update to its current

“The increase in use of green sustainable certified products will help to promote and to heighten efficient water conservation efforts and measures throughout India and around the world by aiding societies and future generations.”

version, the *2017 Uniform Illustrated Plumbing Code – India (UIPC-I)*. This new *2017 UIPC-I* supersedes all previous UPC-I and UIPC-I versions, and continues to be used to evaluate and to certify new products as well as to renew existing certified products. As such, certified products continue to display the UIPC-I mark of conformity that replaced the conventional UPC-I mark of conformity initially used. Additionally, IAPMO India and the IPA continued working together beyond development of the above codes to 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 whose combined graduates now exceed 2000 since the programs' inception in 2009. Similarly, IAPMO India also began partnerships with other professional organizations such as the 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.

New India Codes and Sustainable Specifications

Complementing development of the first published *2008 UPC-I*, IAPMO India and the IPA continued joint efforts to subsequently develop and update other related and complementing industry codes, which are:

- *2011 Uniform Swimming Pool Code - India (UPSC-I)*,
- *2012 Uniform Solar Energy Code - India (USEC-I)*,
- *2013 Green Plumbing Code Supplement - India (GPCS-I)*, and
- *2017 Water Efficient Products India (WEP-I)*.

Please note that the *2012 UMC-I* is currently undergoing update this year, and all above codes are available on IAPMO India's publications page at www.iapmoindia.org/Pages/publications.aspx.

WEP-I Certification of Green Sustainable Products

IAPMO India's WEP-I product certification program continues to grow since its inception in 2012. The WEP-I program offers two different types of 2017 Water Efficient Products India (WEP-I) product certifications to manufacturers for efficient water conveying sustainable green products: A UIPC-I/WEP-I certification, and a Classified WEP-I certification.

IAPMO India's 'Classified' WEP-I product certification program was introduced to various faucet and sanitary ware manufacturers in 2014 as this program was developed for the efficiency star rating of efficient water consuming products addressed in the WEP-I specification (e.g., faucets, EWCs, shower heads, urinals, etc.) that are not certified to a code such as the UIPC-I, UMC-I or USEC-I codes but that do comply to their pertinent performance test standards such as to an ASME Standard (ASME), India Standard (IS), or to an International Standard.

In either type of WEP-I certification, sustainable products can also undergo evaluation for a 'GREEN' code rating (to GPCS-I/GRIHA/IGBC/LEED green point systems) to complement a WEP-I star rating based on their product's actual water consumptions measured at an IAPMO recognized laboratory. Manufacturers continue to express their appreciation of this new WEP-I/ GREEN program since it helps them to gain acceptance and distribution of sustainable water efficient products into various markets which also helps societies use water efficient products to help conserve water supplies.

IAPMO India's different WEP-I/GREEN star rating marks of conformity used are:

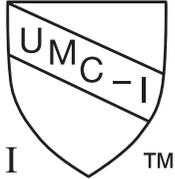
Mark	Listing	Reference(s)	Required Criteria
	UIPC-I/ WEP-I	<i>Uniform Illustrated Plumbing Code – India (UIPC-I) + Water Efficient Products - India (WEP-I)</i>	Same as <i>UIPC-I</i> listing criteria above plus product must meet respective star rating criteria per the 2017 <i>WEP-I</i> specification.
	Green WEP-I & UIPC-I	<i>Uniform Illustrated Plumbing Code – India (UIPC-I) + Water Efficient Products - India (WEP-I) + Green Codes (GPCS-I/ GRIHA/ IGBC/ LEED)</i>	Same as <i>WEP-I</i> & <i>UIPC-I</i> listing criteria above plus product must meet green points criteria in <i>GPCS-I</i> and/ or <i>GRIHA</i> and/ or <i>IGBC</i> and/ or <i>LEED</i> .
	Green UIPC-I	<i>Uniform Illustrated Plumbing Code – India (UIPC-I) + Green Codes (GPCS-I/ GRIHA/ IGBC/ LEED)</i>	Product must meet a standard recognized or acceptable within the <i>UIPC-I</i> , comply to the provisions of the <i>UIPC-I</i> , and meet green points criteria in <i>GPCS-I</i> and/ or <i>GRIHA</i> and/ or <i>IGBC</i> and/ or <i>LEED</i> .
	Classified WEP-I	<i>Water Efficient Products – India (WEP-I)</i>	Product must comply to a national standard or an IS standard, and meet the respective star rating criteria awarded per the 2017 <i>WEP-I</i> specification.
	Green Classified WEP-I	<i>Water Efficient Products - India (WEP-I) + Green Codes (GPCS-I/ GRIHA/ IGBC/ LEED)</i>	Same as <i>Classified WEP-I</i> listing criteria above plus product must meet green points criteria in <i>GPCS-I</i> and/ or <i>GRIHA</i> and/ or <i>IGBC</i> and/ or <i>LEED</i> .

Growth of Certified Products

As mentioned previously, IAPMO India’s product certification program has grown to a total 40 varying product certifications that include Classified WEP-I, UIPC-I, UIPC-I/WEP-I, UMC-I, and USEC-I types of IAPMO India product certifications.

In addition, there are new product certification applications undergoing processing for addition to IAPMO India’s product listing directory, which are expected to be consummated in early 2018.

IAPMO India’s marks of conformity used for all certification types are like the WEP-I/GREEN star rating marks of conformity but have different significances as shown below:

Mark	Listing	Reference(s)	Required Criteria
	UIPC-I	<i>Uniform Illustrated Plumbing Code – India (UIPC-I)</i>	Product must meet standard recognized or acceptable within the UIPC-I, and comply to the provisions of the UIPC-I.
	UMC-I	<i>Uniform Mechanical Code – India (UMC-I)</i>	Product must meet a standard recognized or acceptable within the UMC-I, and comply to provisions of the UMC-I.
	USEC-I	<i>Uniform Solar Energy Code – India (USEC-I)</i>	Product must meet a standard recognized or acceptable within the USEC-I, and comply to the provisions of the USEC-I.
	USPC-I	<i>Uniform Swimming Pool Code – India (USPC-I)</i>	Product must meet a standard recognized or acceptable within the USPC-I, and comply to the provisions of the USPC-I.

Earlier this year, IAPMO India certified CPVC and uPVC plastic pipe products with UIPC-I certification in addition to toxicity standard NSF 61 certification for products that convey drinking water. IAPMO India's recently formed NSF 61 / UIPC-I mark of conformity is shown as follows:

Mark	Listing	Reference(s)	Required Criteria
	NSF 61 & UIPC-I	Uniform Illustrated Plumbing Code – India (UIPC-I) + NSF 61	Product must meet a standard recognized or acceptable within the UIPC-I, comply to the provisions of the UIPC-I, and comply to the requirements in standard NSF 61.

Product Certifications' Outlook

Based on past and recent interest and inquiries from manufacturers, growth of new product certifications continues along with recognition of new manufacturers' in-house test laboratories, all of which confirm enhanced contributions and support from various manufacturers for production growth of highest quality certified products and especially that of enhanced sustainable water conservation products. These efforts also help to enhance and strengthen society's health, safety and welfare whereby this increased awareness for production of more UIPC-I certified products and especially water efficient WEP-I certified products are one of the main reasons that IAPMO's upper management approved implementation of IAPMO India's 'UIPC-I / Classified WEP-I / GREEN' product certification programs.

The increase in use of green sustainable certified products will help to promote and to heighten efficient water conservation efforts and measures throughout India and around the world by aiding societies and future generations. Many 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 global use.

Now that you see where IAPMO India started and its continued progress made to date of our product certification services, we kindly ask your 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 to serve you much more and better. There's never been a better time than today for your products to join IAPMO India's directory of certified products (www.iapmoindia.org/Pages/pld.aspx) and begin marketing within India's rapidly emerging markets via IAPMO India's 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 common uncertainties that exist in the use of uncertified products. Please peruse IAPMO India's web site and its product certification programs at www.iapmoindia.org and let us know how we may help you to better market your products.

“Code based Training and Education and Skills Development continue to be a development priority for IAPMO India...”



SWATHI SARALAYA

Project Manager

The flourishing infrastructure and real estate, projects such as Skill India, Swacch Bharat, has necessitated the need for trained plumbing professionals in India.

Plumbing trainings in IAPMO India are imparted through Plumbing Education to Employment Programme (PEEP) in private and Government vocational training centers. Though the challenges are many in skill training, joint efforts from IAPMO India and Indian Plumbing Association (IPA) as industry partner are being made to promote plumbing as an integral part of public health and to treat plumbing as a Noble profession.

IAPMO India and IPA recognized training institutes such as The/Nudge Foundation, Dnyanada Institute Of Flow Piping Technology (DIFPT) and Kohler Plumbing Academy (KPA) have been training plumbers through CSR funds for skill development. C.V.Raman College of Engineering (CVRCE), Bhubaneswar has trained fresh Civil Engineering graduates in Plumbing System Design and have been successfully placed. Since 2013, IAPMO India has been conducting “Assistant Plumber” trainings for Higher Secondary class students in the state of Kerala under Acquired Skill Acquisition Programme (ASAP), Government of Kerala project.

Over 2000 candidates have been successfully trained and Indian Plumbing Sector Skill Council (IPSC) certified till date.

Community Plumbing Challenge(CPC) is one such venture by the International Water, Sanitation and Hygiene Foundation (IWSH). IWSH is a charitable foundation by the IAPMO Group whose mission is to work to improve on the human condition by fostering the basic human right of safe access to clean water and sanitation. IWSH strives to align our own efforts with those of government, industry and the communities where we work to ensure that the water systems are safe and sustainable. IAPMO India supported CPC 2017, Design week and Construction week which was held in Cicau Village, Bekasi, Indonesia. The main feature of the project was Renovation of existing toilet facilities in both buildings at SDN Cicau 02- Public Elementary school. The first phase of construction work was completed in Nov 2017 and efforts were made to deliver all water supply and wastewater upgrade for the school buildings, plus renovation/expansion of toilet facilities and addition of handwashing. The Phase 2 is to be completed by students and teachers from local vocational schools as part of Legacy project (Feb/March 2018), to deliver renovation/expansion of toilet facilities and addition of handwashing for second building.

Code based Training and Education and Skills Development continue to be a development priority for IAPMO India and the management has amply provisioned for existing initiatives such as PEEP to be scaled up and newer initiatives to also be launched.

GOVERNMENT OF KERALA AND IAPMO INDIA

For implementation of Additional Skill Acquisition Programme - ASAP

Additional Skill Acquisition Programme (ASAP) and IAPMO India's "Assistant Plumber" training program provide plumbing skill sets to students along with their regular courses. The objectives of the course being:

- To enhance the employability of the students graduating from regular academic courses
- To ensure students enrolled 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

Assistant Plumber course developed jointly by ASAP and IAPMO India, 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.

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. Since then, IAPMO India has conducted training at 40 Skill Development Centers spread across 12 districts of Kerala and training was provided to over 2000 students. IAPMO India's team based in Kerala comprises of Nodal officers, trainers and Quality Assessor are committed to the overall implementation and supervision of the project.



GLIMPSES OF TRAINING

IAPMO India and ASAP “Assistant Plumber” students in Alappuzha, Kerala formed a ‘Plumbers Club’ consisting of students who were Assistant Plumber Certified previously. They took the task of refurbishing toilets of Govt.schools with the support of Zilla Panchayath Education Standing Committee. The first project of the club was completed at Govt. Higher Secondary School, Kidangara.



GHSS Manjeri students plumbing for irrigation – before



GGHSS Manjeri - After

Assistant Plumber” students at GHSS Manjeri worked on irrigation work for plantations for floriculture department in their own SDC. The irrigation system comprised of 8 dripping and three sprinklers. The plantation area before and after the irrigation system is shown here.

ADDITIONAL SKILL ACQUISITION PROGRAMME (ASAP)



*World Youth Skills Day – 15 July 2017,
LAPMO India “Assistant Plumber”
students showcased importance of plumbing at
Calicut Medical College Campus.*



*GHSS Thirurangadi– Quality Assessment Team
auditing the SDC.*



Key Elements of Life Skills Education



Kohler Plumbing Academy Graduates

Find Opportunity, Job Satisfaction

Since the India Plumbing Association (IPA), IAPMO Plumbing Codes and Standards India Private Limited (IAPMO India), and Kohler India opened the doors of the Kohler Plumbing Academy 20 months ago, 159 plumbers have graduated and entered the workforce.

The two-month program provides comprehensive training on plumbing piping and fixture installation and repair, site surveys, plumbing codes, and general mechanical skills. Graduates receive accreditation from both IPA and IAPMO India, giving them immediate industry credibility and career opportunities with employers in the construction industry.

The plumbing program offers two degrees, Trained Apprentice Plumber and Trained Master Plumber, but it provides far more than the skill to install and fix bathroom fixtures. In addition to hands-on plumbing training, the academy provides students with the business and interpersonal skills needed to work successfully with coworkers and customers. Finance courses teach students the needed skills to start their own independent plumbing business, computer

skills help them apply for positions and fulfill the administrative aspects of the job, and English courses prepare them to better communicate with customers on job sites or in private homes.

Many graduates find positions with local contractors, a few choose to work abroad, and several have been hired to work as service technicians for Kohler.

“There was a lot of learning on the job, and I am being paid to learn,” said program graduate and technician Muhammed Imran. “After I work with customers, they see us as plumbers who are also Kohler technicians who can find the problem and solve it. I’m proud to be respected by my clients.”

Imran, who heard about the program from a friend and applied after passing the 12th grade, admits he wasn’t very dedicated to his studies before joining the Kohler Plumbing Academy.

“Now I have a sense of responsibility, and I earn a handsome salary to take care of myself and help my parents,” Imran said. “That makes them happy and proud.”



Top left: Plumbing instructor Debidutta Bhuyan, who formerly worked as a tradesman for 10 years, diagrams the piping specifications needed for installing wall-hung toilet.

Top right: Student in the Kohler Plumbing Academy program is guided by his instructor on installing Water Closets at academy's demonstration lab.

Bottom left: Kohler Plumbing Academy students are ready to start class during the two-month program to earn their Trained Apprentice Plumber certification.

Sanjeet Parit was working on his family's small farm and was very poor when he heard about the program. Now he also works as part of the technical service team for Kohler.

"I feel empowered with a skill to better my life," Parit said. He appreciates the mutual respect shared among the technical service team and enjoys the challenge of diagnosing a plumbing problem for a customer.

Plumbing instructor Debidutta Bhuyan formerly worked as a tradesman for 10 years in the Caribbean and brings experience in hotel construction.

"I am teaching the students to install plumbing fixtures and pipes and get home bathrooms working again," he said. "Piping systems in new construction must be installed at the proper height to meet code requirements. Because many of the students have used only Indian (squat) toilets, they have to learn to properly install Western-style toilets."

Damayanti Bhowmik is the head of operations for 10 skilled trades training programs in the Delhi area, which includes the Kohler Plumbing Academy and electrical and automotive programs in Gurgaon. "All of the students, no matter what skilled program they are in, spend several hours a day learning

computers, soft skills and English, which helps them with job interviews and the communication skills they will need on the job," she said.

"The program runs for two months for eight hours a day, which is a short time to learn a full course of training, but this format holds their attention and they get the rest of their training on the job. The program is focused and strict, and students know there are high expectations for their learning."

Kohler has been impressed with the graduates it has hired from the program and the brand visibility the program has provided.

"The program serves the entire plumbing industry and also is good for the KOHLER brand," said Antony Antly, manager for Kohler Tech Support. "Having a strong local reputation helps Kohler secure contracts for area construction projects, which is our ultimate goal."

The program's students are a mix of young adults seeking to move on from minimum wage jobs, high school dropouts and people from rural areas with few long-term career prospects. They range in age from 18 to 22 years old and come from 6 states in northern India. Students who live too far from the academy for daily travel stay in area hostels.



IAPMO INDIA, IPA AND THE/NUDGE FOUNDATION

Trainer Mr. Diptraranjan explaining Indoor Water Supply

IAPMO India, IPA and The/Nudge Foundation entered into a MoU on 13 April 2017 for running Plumbing Technology Programme (PTP).

The/Nudge Foundation is a collective initiative of some of India's best leaders and entrepreneurs, with a dream to see a poverty-free India within our generation. The/Nudge Foundation focuses on sustainable poverty alleviation by building a strong 360-degree life, learning and economic foundation for underprivileged youth in 3-month long rigorous "Programme in Life Management" in fully residential "Gurukuls", along with lifelong support system.

The/Nudge has been running 8 Gurukuls in Bangalore since November 2015 with Beautician, Driving and Sales courses, to which Plumbing was added in June 2017. This has created a pool of qualified plumbers for the industry and address the scarcity of certified professionals in this field. At the Gurukul, students undergo the regimens of a structured course which will help them acquire a different professional as well as personal dimension and also enable them to be considered as potential talent both by the industry and commercial centers.



Plumbing students with trainers and The/Nudge staff during site visit



Plumbing students with trainers and The/Nudge staff at Plumbing Gurukul

Gurukul offers certification course of IAPMO India and IPA's Plumbing Technology Programme: Trained Apprentice Plumber (TAP), a course in plumbing technology for aspiring plumbers, students who have passed 10th standard school exam and also for practicing plumbers with a minimum qualification of 10th standard pass. The courses follow formal syllabus and curriculum with course material in form of powerpoint slides, text books, handouts. A 2-day training was provided to the

Gurukul trainers at IAPMO India's Bangalore center.

Speaking of the partnership, Mr Anand Sri Ganesh, Head of Product Management, The/Nudge Foundation said, "It is a great opportunity to partner with IAPMO and IPA to deliver industry aligned high quality plumbing training programme. We are delighted that the course benefits underprivileged youth while solving the skill deficit in the industry."



Nubilal, the son of a poor farmer from Yadgir, graduated and IAPMO India Certified from Nudge Gurukul in September 2017 and joined Dinesh Plumbing Works. The young man has already made an impression upon his employer who says, "Boys like Nubilal are hard to find because they already have the skills required for the job and there is no need to train them. I would be very happy to take more Gurukul students like Nubilal."

Thank you Nubilal for your hardwork and commitment.

SDN CICAU
02 SCHOOL IN
CIKARANG,
BEKASI
(WEST JAVA),
INDONESIA



2017



COMMUNITY PLUMBING
CHALLENGE 2017
(CPC2017)

The International Water, Sanitation and Hygiene Foundation (IWSH) Community Plumbing Challenge program aims to contribute to improving public health in areas where communities are still threatened by the lack of basic sanitation and safe drinking water systems. Previously the program was presented in India (2015) and South Africa (2016).

CPC2017 was a combination of cross-section of skillsets expanding on the pathway and career options for apprentices, students and professionals in Indonesia, and around the world. The aim of the overall Community Plumbing Challenge program is to demonstrate that Plumbing is vital to global health. For the first time, CPC2017 presented an International Team of students and apprentices from different countries, working together in collaboration from the very start.

Design Week 31 July to 3 August 2017

Community Plumbing Challenge 2017 (CPC2017) has established a platform for an international team to co-operate and design a toilet block for the SDN Cicau 02 school in Cikarang, Bekasi (West Java), Indonesia.

CPC2017 Project Site - Condition of toilets



The Nepal Village Health Improvement Program created by Healthabitat in 2015 has been an essential starting point for the project, but the skills and expertise of the CPC team, in addition to the Indonesian National Plumbing Standards (SNI 8153:2015) have developed a new set of principles suitable for the current project and its location.

Involvement from local Indonesian vocational training students and teachers has been invaluable for the project's success and has ensured

the CPC goal of education and implementation has occurred. The 'CPC Hub' workshop space was provided at the head office of PT. IAPMO Indonesia, 3km away by road in the neighbouring Kapuk Timur industrial park which borders Cicau Village. For the duration of the week, the International Team travelled to and from the CPC Hub base and Cicau Village for ongoing discussions, meetings and site visits, before developing a final design solution and workplan which was presented to SDN Cicau 02 management on the final day.

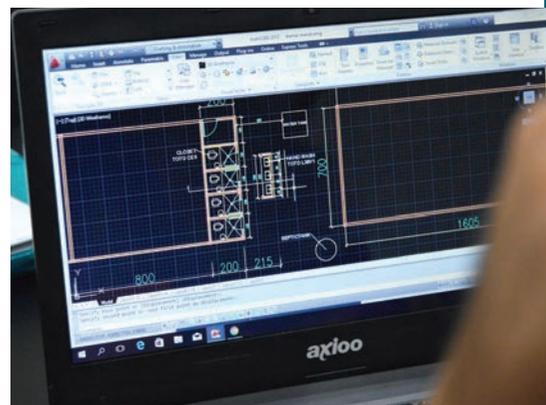
PT. IAPMO Indonesia space as ‘CPC Hub’



Educational activities (germ limbo, basic plumbing and toilet design) have also taken place with school students to promote health, hygiene, sanitation and the importance of plumbing and clean water supply. A hand washing and teeth brushing program is hoped to be implemented at a later stage. These aspects have been integral to the design of the two toilet blocks, in addition to, the expertise of the local and international teams.

Initially, a new block has been proposed for the school to allow for the additional 4 toilets (4 currently existing). The suitable number of toilets were based from the 2015 Nepal Guide, SNI 8153:2015 and expertise from the CPC team. Further discussion and design has led to the decision to renovate the existing 4 toilets to create 8 new toilets and new handwashing facilities. Measurements were checked and tested with the existing building footprint to ensure sufficient space was available. Further discussions with the school staff confirmed this decision as the right path to follow.

Design week team member working on final toilet plans



Construction Week 8 – 15 November 2017

During Construction Week, an International Team of plumbing professionals from Indonesia, India – represented by IAPMO India, Australia, and the United States improved facilities at Sekolah Dasar Negeri (SDN: “Public Elementary School”) Cicau 02 and invited the community to participate in educational seminars intended to link sanitation and hygiene to public health.

Various participants during the Construction week at Cicau 02 school site



The work plan included renovating existing toilet facilities in both buildings at SDN Cicau 02; increasing the number of toilets in each building from two to four; constructing new hand-washing areas outside both renovated toilet facilities; installing two new elevated water tanks for improved water supply to the facilities; and installing a new wastewater system for the facilities.

The plan was divided into two phases, with the first phase occurring during Construction Week. The first phase, completed by the International Team, included the installation of the elevated water tanks and the new wastewater system for both buildings, as well as the renovation of one of the toilet facilities and the construction of one of the new hand-washing areas. For phase two, students and teachers from local vocational schools will finish the project in March of 2018.



Teams renovating existing toilet facilities

In addition to the work plan, on Nov. 11 a team representing IWSH held social events on the importance of hygiene for public health. Activities at Cicau Village Hall included free medical treatment and counseling on the importance of proper hand-washing.



"CPC2017, our most ambitious and far-reaching program yet, brought together young, talented tradespeople from around the world to Cicau Village in Indonesia to provide clean water and safe, reliable sanitation to an elementary school and to teach the schoolchildren – and the village as a whole – about how important plumbing is to one's health," IWSH Managing Director Megan Lehtonen said.

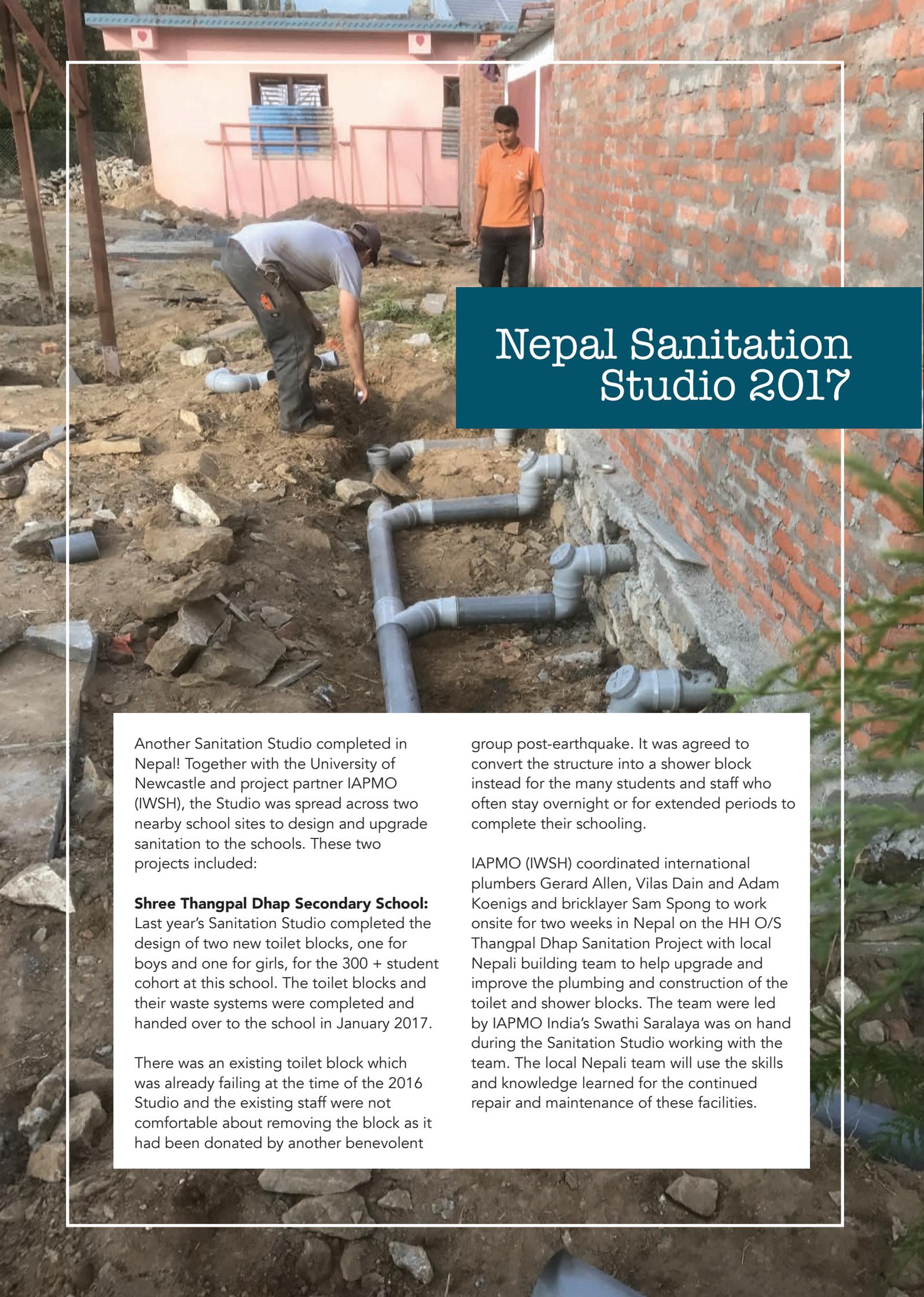
CPC2017 Social Media

 Facebook: /CommunityPlumbingChallenge

 Twitter: @CommPlumbing

Official hashtag: #CommPlumbing





Nepal Sanitation Studio 2017

Another Sanitation Studio completed in Nepal! Together with the University of Newcastle and project partner IAPMO (IWSH), the Studio was spread across two nearby school sites to design and upgrade sanitation to the schools. These two projects included:

Shree Thangpal Dhap Secondary School:

Last year's Sanitation Studio completed the design of two new toilet blocks, one for boys and one for girls, for the 300 + student cohort at this school. The toilet blocks and their waste systems were completed and handed over to the school in January 2017.

There was an existing toilet block which was already failing at the time of the 2016 Studio and the existing staff were not comfortable about removing the block as it had been donated by another benevolent

group post-earthquake. It was agreed to convert the structure into a shower block instead for the many students and staff who often stay overnight or for extended periods to complete their schooling.

IAPMO (IWSH) coordinated international plumbers Gerard Allen, Vilas Dain and Adam Koenigs and bricklayer Sam Spong to work onsite for two weeks in Nepal on the HH O/S Thangpal Dhap Sanitation Project with local Nepali building team to help upgrade and improve the plumbing and construction of the toilet and shower blocks. The team were led by IAPMO India's Swathi Saralaya was on hand during the Sanitation Studio working with the team. The local Nepali team will use the skills and knowledge learned for the continued repair and maintenance of these facilities.



Release of 2017 UIPC-I and 2017 WEP-I at 23rd Indian Plumbing Conference (IPC)

The 23rd IPC was held at Chennai between 22-23 Sept, 2017 with the theme “Intricacies in Plumbing Design for High Rise buildings”.

The 23 IPC saw the launch of the latest version of *Uniform Illustrated Plumbing Code – India (2017)* and *Water Efficient Products (WE-I)*. IPA’s Technical Committee (TC) is the backbone of development of updating of UIPC-I and WEP-I and it is with their active and enthusiastic involvement that the 2017 version was released during 23 IPC.



IAPMO Signs MoU with IGBC, IPA to Implement WEP-I 2017 Standard for Indian Plumbing Products

The International Association of Plumbing and Mechanical Officials (IAPMO), the Confederation of Indian Industry-Indian Green Building Council (IGBC) and the Indian Plumbing Association (IPA) have entered into a Memorandum of Understanding (MoU) with the goal of implementing the Water Efficient Products — India (WEP-I) 2017 standard in India.

As a result of the MoU, the IGBC will adopt the WEP-I 2017 standard for green product certification for plumbing products, considering an Indian context. The three organizations agree to work together on the following areas:

- Use of WEP-I 2017 for plumbing products for India, implementing green measures for the entire life cycle of the products, including the design, manufacturing process, product use and end-of life management.
- Recognition of WEP-I 2017 for plumbing products in IGBC and GreenPro — Green certification rating systems.
- IGBC and IPA endorsement of IAPMO's testing and certification within India for plumbing and water treatment products, ensuring water conservation, energy efficiency and performance targets are met in accordance with WEP-I 2017 requirements.
- IGBC and IPA recognition of IAPMO India as a third-party inspection body for assessing the sustainability of IGBC-approved green projects.
- Identifying new avenues to further IGBC's green footprint throughout the plumbing industry.
- Participating in and supporting each other's events without any financial commitments; conducting joint events; and creating opportunities to enhance networking among the groups' members.

The MoU was signed Oct. 5 by IAPMO CEO GP Russ Chaney; IPA National President Gurmit Singh Arora; and V. Suresh, Director of Advocacy for the IGBC, at the Green Building Congress in Jaipur. The MoU is valid for three years, and may be renewed for an additional three years.

"IAPMO has had a 10-year partnership with the Indian Plumbing Association and a very good working relationship with the Indian Green Building Council," IAPMO Group CEO GP Russ Chaney said, "so this MoU serves to strengthen those relationships by providing IAPMO India's Water Efficiency Products – India program as the baseline for the IGBC's green rating schemes

"Together we will ensure that our younger generations, and generations not yet born, enjoy the abundance of safe and clean domestic water and bounties of our natural resources."

that serve to enhance the energy and water use efficiency of new buildings being constructed throughout all of India."

Dr. Prem Jain, Chairman of the IGBC, said the organizations will work together to protect the water supply for future generations. "India is facing a grave crisis of acute shortage of domestic water," he said.

"Over the last 60 years since the industrial revolution came to India, our rivers, water bodies and even underground water reserves have gotten heavily polluted from chemical waste. The CII-IGBC, a nonprofit organization founded in 2001, has been actively pursuing restoration of water resources and conservation of domestic water. The IPA and IAPMO have been our esteemed partners in developing and training our engineers and work force in green plumbing practices, and also providing testing and rating of locally manufactured plumbing fixtures and fittings. Together we will ensure that our younger generations, and generations not yet born, enjoy the abundance of safe and clean domestic water and bounties of our natural resources."

IPA National President Gurmit Singh Arora said the MoU would play a key role in saving valuable resources.

"I am delighted at the acceptance of the Water Efficient Products India 2017 code by the CII-IGBC for all its 21 ratings being prescribed for Green Project Ratings today," he said. "This will universally help IPA in achieving its goals of saving precious water, without compromising on the comfort of the user. CII-IGBC, with a green footprint of 4.65 billion square feet and 92 percent market share in India — aspiring to touch 10 billion square feet by 2022 — will help in achieving this goal in saving billions of liters of water."



ISH India, Powered by IPA International trade fair for plumbing, sanitation, bathroom & kitchen, renewable energy and home automation systems in India

IAPMO India participated in 'ISH India - Powered by IPA', which was a collaborative venture between Messe Frankfurt and the Indian Plumbing Association, India's national body representing the plumbing industry. The show was launched on 23rd February 2017, at India Exposition Mart Ltd. (IEML) Greater Noida, Delhi/NCR, alongside leading existing exhibition organizers and industry bodies such as Acrex India and Fire & Safety India Expo in collaboration with ISHRAE (Indian Society of Heating and Refrigeration Engineers) and Fire & Safety Association of India.

IAPMO India's Neeta Sharma Named One of 50 Most Impactful Leaders in Water & Water Management at World CSR Day



Ms. Neeta Sharma, Managing Director of IAPMO India, was honored at World CSR Day as one of the 50 Most Impactful Leaders (Global Listing) in Water & Water Management.

The distinction honors leaders who are passionate about water management, who believe that water management must contribute to social change. The citation was announced Feb. 17 at the World Water Leadership Congress & Awards program in Mumbai.

"We extend our congratulations to Neeta for this outstanding news and are very proud of this high honor that has been bestowed upon her," IAPMO CEO GP Russ Chaney said.

A jury of senior professionals from across the globe reviewed a list of candidates who are doing extraordinary work. The criteria were: improvement of water efficiency and conservation; demonstrated leadership within the sector that has had a positive impact in the advancement of water management; contribution toward water-related groups, associations and institutions; demonstration of good leadership and governance; and contribution to water awareness in the community.

"This honor encourages me to optimize every opportunity I get and bring more laurels home," Sharma said. "Considering the fact water conservation still doesn't get the importance it deserves, it further strengthens my resolve to work in this direction." Dave Viola, Chief Operating Officer and Executive Vice President of The IAPMO Group, echoed Chaney's sentiments. "I cannot express how proud we are to learn of this very impressive acknowledgment," Viola said. "It is a true testament to the meaningful work that Neeta and her team are carrying out in India."

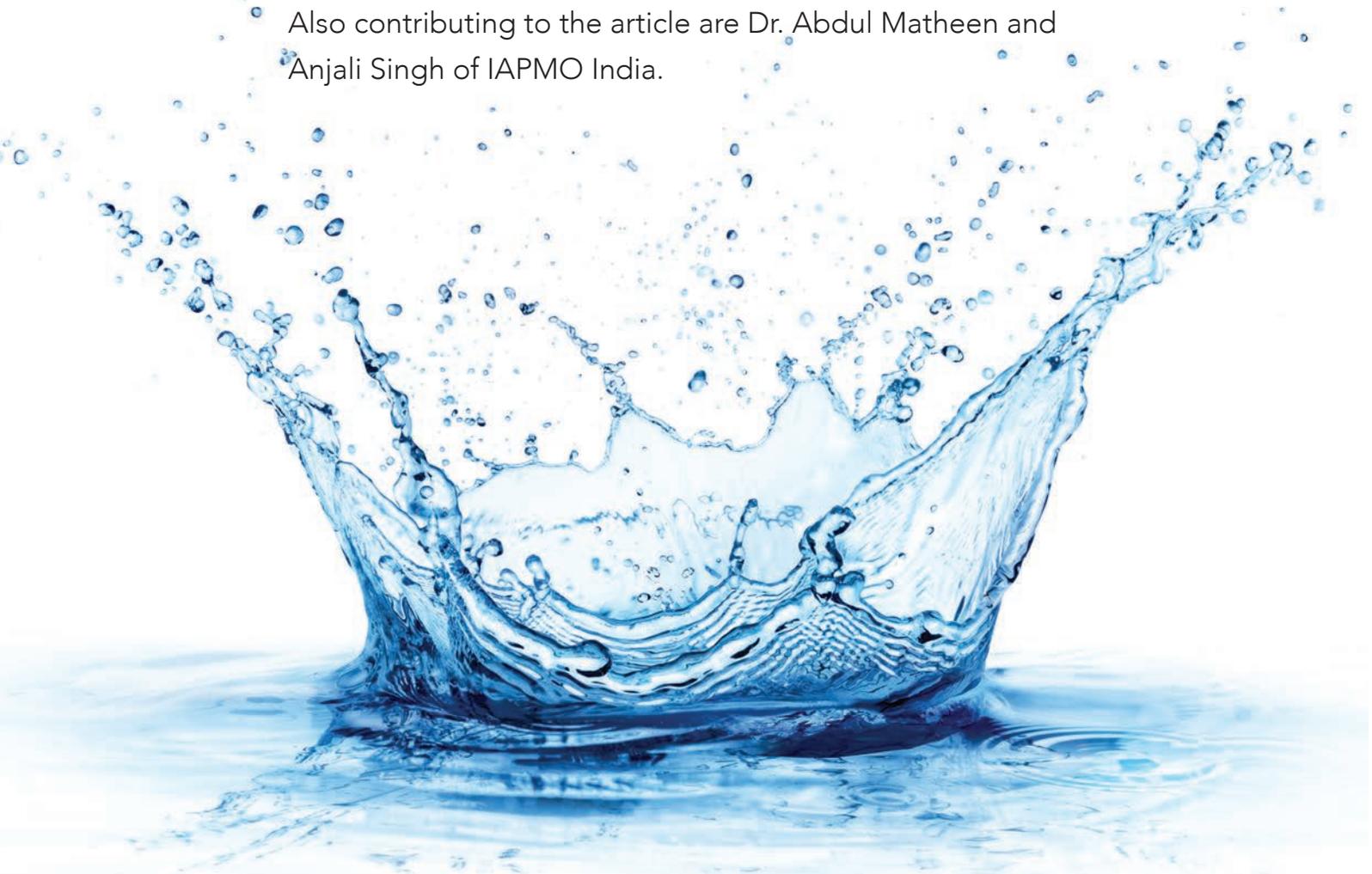
"This honor encourages me to optimize every opportunity I get and bring more laurels home."

WATER EFFICIENT PRODUCTS *to Combat* **GLOBAL WATER SHORTAGES**

Published in Buildotech India Magazine

Consumption of water in buildings constitutes a sizeable proportion of total water demand, calling for urgent and immediate measures for conservation practices. Increasing population, high rate of urbanization and associated changes in lifestyles all contribute toward rising water demand. There is a need to look for opportunities to conserve water, one of the world's most precious gifts: Megan C Lehtonen, Senior Vice President The IAPMO Group, USA writes on the need to use water efficient products to achieve water savings.

Also contributing to the article are Dr. Abdul Matheen and Anjali Singh of IAPMO India.



“Water savings can be achieved through out industry by a combination of behavioral change, modifying and/or replacing equipment with tested and certified water saving equipment, to reducing overall water consumption and increasing internal reuse.”

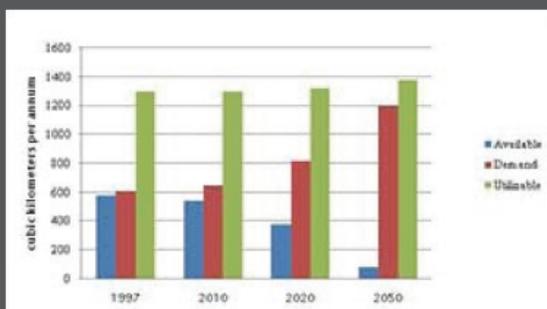
Water savings can be achieved through out industry by a combination of behavioral change, modifying and/or replacing equipment with tested and certified water saving equipment, to reducing overall water consumption and increasing internal reuse. To assure these strategies, and to optimize water and minimize costs, it is important to assess current water use and set personal benchmarks. Perhaps a stronger component in the fight is to reduce industrial water consumption as a means of major waster use reduction. Over the past decade industrial water use accounted for nearly 10% of global freshwater withdrawals. The majority of industrial water use comes from the cooling of power plants. This factsheet provides an overview of how to save and use water more efficiently in industries.

The predicted and imminent water shortages of many countries around the world, including India (as shown in the graph), can be lessened by selecting and installing efficient water consuming products such as taps (including faucets and showerheads) along with water efficient plumbing fixtures such as clothes washers, dishwashers, urinals and water closets (toilets) so that as part of a global effort, many countries have contributed towards helping resolve this issue by following in-country water efficiency guidelines and programs like WELS in Australia and EPA’s Watersense in the USA to help to reduce drastic water shortages to societies.

UIPC-I certification

The *Uniform Illustrated Plumbing Code-India (UIPC-I)* is a nationally recognized code developed by IAPMO and the Indian Plumbing Association to assist in the standardization of the industry for performance, conservation and best practices. The code is updated and published in three – year cycles, and is used as a guidebook for installation, training, and the certification of products. It is of utmost importance that product listing certifications from a third party listing agency, preferably one that is an accredited certification body, be provided to the official for review so that correct decisions to subsequent product installation permits and/ or approvals can be made. Along with the standard set of codes and guidelines for any industry, equally as important is an efficiency rating scheme, similar to energy star for electrical products.

The water efficiency rating scheme to refer to in INDIA is WEPI. Water Efficient Products – India, is a three-star scheme showcasing a product’s water efficiency level. Green buildings are the future for India, and with the Indian Green Building Council (IGBC,) India is leading the way with massive targets for the future for the greenest footprint the world over. This all results in the demand for products that can showcase their water efficiency – so consumers and builders alike have a choice when installing new products.



How plumbing manufacturers benefit by listing their products

A great number of plumbing product manufacturers have been in business and operation for many decades – Some more so than others, and within such a manufacturer’s various staff members, there is at least one person tasked with the duties of insuring all their plumbing products comply to their respective product performance standard and their plumbing code, such as the Uniform Plumbing Code – India (UPC-I).

Similarly, there are various jurisdictional officials who inspect such plumbing products presented to them for their approval for installation in remodeling and/or new construction projects. These officials look at a great variety of plumbing products on a daily basis with the task of ensuring that each of these products meets the specifications and standards that society relies upon and which are necessary to keep our plumbing systems safe. The majority of manufacturers normally obtain their third-party certification of their plumbing products at the final stage of the product’s development process since normally by the end of this stage, an enormous amount of time, energy and money has already been invested into the project. Without a doubt, you can be certain that manufacturers completed their homework (especially on newly invented and innovative products or processes that have never been introduced to public markets) to ensure their products design, materials, and functional operation do comply to the product’s performance standard and the plumbing code – But if the manufacturer has not completely planned their projects, then such new innovative products will likely result to be gigantic expensive problems in various respects. On the other hand, assuming the innovative product has been accepted in the marketplace and approved for installation, one may ask that once the product is installed, how is the jurisdictional official to know that this new innovation is, in fact, safe? This is where the first benefit of three is realized in that

a well-recognized third-party plumbing product certification mark of conformity is worth its value in gold, since this is a mark that assures the official that this product has undergone the necessary testing and evaluation and was found to comply to the criteria within its performance standard and to the specifications of the plumbing code.

Selection of water efficient products

Everyone who selects water efficient products should ensure these product(s) have:

- Complete functionality,
- Proper design, and
- A Water efficiency rating

The functionality of all water efficient products is very important since each product must provide the same performance (or better without sacrificing quality) as expected from conventional non-water efficient products. More specifically, all of the above aforementioned water efficient products need to deliver the same water rinsing and scouring performance effect that’s normally expected from conventional non-water efficient like products.

For example, a water efficient tap needs to deliver as equally good supply of aerated water as any other conventional non-water efficient tap so one will be able to thoroughly wash, scour and rinse their hands with the same ease and in the same time period (or less) as normally is made using a conventional water tap. More importantly, the manner in which to confirm any product’s functionality and quality is to ensure the product is certified by a product certification body (accredited to ISO/IEC 17065) to the product’s national performance standard (and also to the product’s respective code(s), such as those from IAPMO’s Uniform Plumbing Code-India (UPC-I) and the Green Plumbing Code Supplement–India (GPCS-I), as well as certification to a water efficiency rating specification such as IAPMO’s Water Efficient Products-India (WEP-I) water efficiency rating specification.



Megan Lehtonen



Dr. Abdul Matheen



Anjali Singh



L-R standing: Mr. Ashish Rakheja (Chairman ACREX-2017), Ms. Megan Lehtonen (Sr. Vice President The IAPMO Group, USA), Dr. Abdul Matheen (Director Mechanical IAPMO India), Mr. Gurmeet Singh Arora (President, Indian Plumbing Association), Mr. B. S. A. Narayan (Vice-President, Indian Plumbing Association), Ms. Neeta Sharma (MD, IAPMO India), Mr. Sachin Maheshwari (National President ISHRAE), Mr. Pankaj Shah (Past President ISHRAE), Mr. C.S Gupta (Gen Secretary IPA), Mr. Nirmal Ram (Past President ISHRAE), Dr. Srikanth N (BOSCH- Bangalore), Mr. S.V. Venkatachalam (ISRO & ASHRAE India) Mr. Sunil Kher (Past President ISHRAE), Mr. Sheshadri (Past President ISHRAE)

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 “Uniform Mechanical Code India” in our small and humble way.

INDIA GETS REVISED 2017 UNIFORM MECHANICAL CODE INDIA (UMC-I), ILLUSTRATED VOL-I, 2017:

India’s Sustainable Building Industry has a powerful and revolutionary new tool at its disposal with IAPMO India’s (International Association of Plumbing and Mechanical Officials-India) has launched *Uniform Mechanical Code-India (UMC-I) Illustrated Volume-I (2017 UMC-I)*, the most comprehensive document ever created in the history of India to standardize sustainable residential and commercial mechanical HVAC-R systems. The *2017 Uniform Mechanical Code-India (2017 UMC-I)* 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; and other miscellaneous heat-producing appliances. This process brings together volunteers representing varied viewpoints and interests to achieve consensus on mechanical issues.

Commenting on the significance of the *Uniform Mechanical Code-India (2017 UMC-I)*, Megan Lehtonen, Senior Vice president of Business Development, The IAPMO Group USA opined “It gives us a great opportunity to be associated with many likeminded professionals, societies and organizations pan India to develop The UMC-I 2017, 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 domain, through *Uniform Mechanical Code India (UMC-I)* in our small and humble way- said Dr. Abdul Matheen, Director Mechanical IAPMO India.

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 a fast pace, this 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 mechanical industry in the construction sector therefore needs to pay a responsible role towards preservation of the environment.

The Uniform Mechanical Code-India™ Illustrated, Vol.-I (UMC-I™) provides required guidelines for the installation and maintenance of heating, mechanical ventilation, cooling, refrigeration miscellaneous building services and systems, while at the same time allowing latitude for innovation and new technologies.

With an intent to incorporate and implement the latest technology and systems for the protection of public health, comfort and safety and bring uniformity to the installation and maintenance of mechanical heating, ventilating, cooling, and refrigeration systems, IAPMO India and the voluntary members, professionals and experts within Indian Mechanical HVAC & R industry known as “Technical Committee Members” work together to supplement the 2015 UMC published by IAPMO USA. The revised 2017 UMC-I, Illustrated, Vol.-I has kept all basic principles of the original 2015 UMC intact but edited to suit the Indian law and conditions and accepted good engineering practices. The 2017 UMC-I, Illustrated Vol.-I has been designed to provide a lucid, comprehensive technical reference to the citizens of India for safe HVAC-R practices and at the same time allowing latitude for innovation and introduction to new technology.

MoU between **IAPMO India and ISHRAE** signed during ACREX INDIA 2017 for joint ventures on training and education programme for HVAC-R



L-R: Mr. Sushil Kumar Choudhury (past president, ISHRAE) , Mr. Sachin Mabeshwari (National President, ISHRAE), Ms. Neeta Sharma (MD, IAPMO India), Ms. Megan Lehtonen (SVP, IAPMO USA), Mr. Ashwini Mehra (ISHRAE-Delhi Chapter).



L-R: Dr. Matheen, MS. Mala Singh, Mr. S Karthikeyan & Dr. Avinash Kulkarni.

NATIONAL CONFERENCE ON GreenPro, A CII-Godrej IGBC & UNIDO, Joint initiative:

CII-Godrej IGBC has launched 'GreenPro' (Green Product Certification) to facilitate Green Product market transformation in India. The GreenPro certification system has been developed with the active participation and support of all the stakeholders from the Indian building sector. United Nations Industrial Development Organization (UNIDO) has extended their support for widening and deepening GreenPro certification.

The conference served as a common platform for all major stakeholders of building and industrial sectors to deliberate, discuss and share ideas &

experiences utilizing green products for enhancing the performance of green buildings and the factories. Over 300 participants including architects, developers, green building consultants, government representatives, product manufacturers, testing laboratories, academia etc. are expected to attend this conference. Aimed to spread awareness amongst all the stakeholders and facilitate market transformation of Green Products, CII -Godrej GBC, with the support of UNIDO is organising the 1st edition of 'National Conference on GreenPro' on 6th and 7th April 2017 at The Leela Hotel, Mumbai.

IAPMO India's participation at Municipalika 2017

An International Conference & Exhibition on Smart and Sustainable City Solutions being organized at CIDCO Exhibition Centre in Navi Mumbai, one of the country's foremost fully integrated state-of-the-art exhibition-cum-convention facilities.



IAPMO INDIA participation at Municipalika, Dr. Matheen speaking on water efficient Products



Urban Challenges and Opportunities India has seen rapid urbanisation in recent times, its urban population growing from 286 million in 2001 to 377 million in 2011, constituting 31.16% of the country's population. This is expected to reach 590 million by 2030, contributing 70% to the country's GDP. According to a McKinsey report, by 2030 India will have 6 mega cities with a population of 10 million or more, 13 cities with 4 million people each, and 68 cities with population of over 1 million each. The Government of India has announced a slew of new ambitious initiatives: "Swachh Bharat Mission" - Sanitation for All by 2019, Housing for All by 2022 and 100 new Smart Cities. These programmes and the gargantuan growth of urban population is throwing up challenges and opportunities in the housing and infrastructure sectors for the central, state and local/city governments, as well as private industry. For the past 13 years Municipalika, the International Conference and Exhibition on Making Cities Work, has been instrumental in highlighting pertinent issues revolving around these challenges and opportunities, sharing best and leading practices, evolving technological and managerial solutions, and providing inputs for policy interventions. Municipalika Smart & Sustainable Cities 2017 is being organised in Navi Mumbai, Maharashtra, co-located with CAPEX, trade show focusing on Construction, Architecture,

Planning and Engineering. The twin-event will be the only one of its kind in India, focusing on Sustainable Built-Environment and Good Urban Governance. The three day conference and exhibition will be attended by mayors, municipal commissioners, senior urban development officials from the Central and State Governments, Urban Local Bodies and Housing Agencies from all over India, built environment professionals, architects, planners, and engineers. At Municipalika Smart & Sustainable Cities 2017, the national and international experts and thought leaders will gather to answer the question: "How do we plan, design, build and maintain sustainable built environment and Cities".

Municipalika has been a wonderful journey, promoting sustainability at the grass root level. What I love most about Municipalika is that, we get a chance to share the learning from the entire country. The Municipal Commissioners come here and it is a wonderful meeting ground right from the grass root level to the minister level. Municipalika gives a fantastic opportunity to the Indian Green Building Council to come with guidelines, which the municipalities can use to tweak their own by-laws and to ensure that the buildings which are growing up in their municipalities are green. Dr P C Jain - Chairman, Indian Green Building Council.

India Industry and Academia appreciates IAPMO India initiatives in bridging the Industry-Academia gap as many institutions, universities, state and central Government ministries and organizations join hands with IAPMO India for effective implementation of most successful HVAC-R skills & educational programs throughout.

KIOT: India's top Engineering Institution, Knowledge Institute of Technology (KIOT) one of India's most reputable institutions of technical higher learning, has signed a Memorandum of Understanding with IAPMO-India to begin offering Mechanical HVAC System Design (MSD) programs.

Knowledge Institute of Technology (KIOT) is committed to establish the Regional Training Centre for Mechanical System Design (MSD) resulting into certification as Certified Mechanical Managers.

KIOT offers a supportive and caring campus environment for us to develop us socially, physically, intellectually and spiritually. Our college has a broad range of options for leadership growth, social activities and community involvement. KIOT is committed to establish student wellness through counselling. There cannot be a better place than KIOT for a young and aspiring engineering graduate.

KIOT vision is to be a world class institution to impart value and need based professional education to the aspiring youth and carving them into disciplined world class professionals who have the quest for excellence, achievement orientation and social responsibilities.



KIOT MSD students interacting with Faculty during industry site visit cum training session



Engineering Students writing MSD exam at KIOT

Federal Skill Academy (FSA)

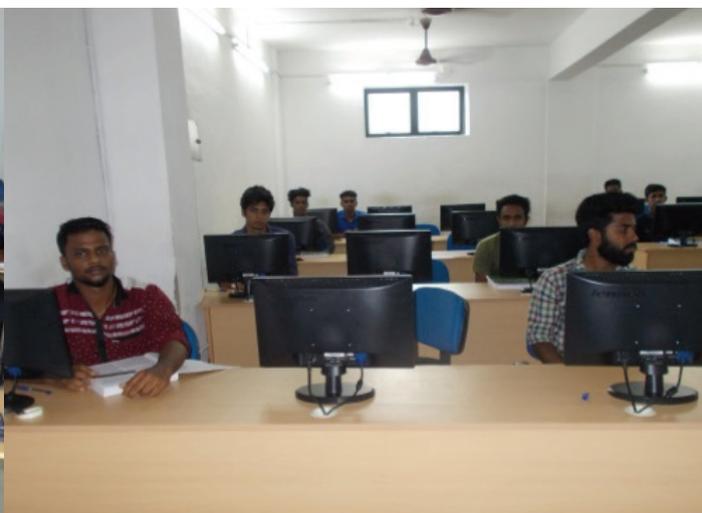
IAPMO India is the knowledge partner for Federal Skill Academy (FSA) and has successfully completed 10 batches Mechanical Education to Employment Programs in partnership with Federal Skill Academy (FSA), with 7 batches of Graduation level programs such as Mechanical System Design (MSD) program and 3 Batches of Mechanical Technicians Program (MTP) the successful MEEP Graduates/ Technicians were placed within Indian HVAC-R Industry with extended support of HVAC Industry partners. These training programs is supported by S B Global Services Pvt. Ltd for the Kerala-based private sector. Federal Bank aim to become part of the skill development mission initiated by the federal Government to train millions of youths

and make India a hub for skilled workforce. The bank said it is embarking on a mission to skill underprivileged youth, which will help them earn a source of dignified living.

As part of its CSR activities, the Bank said, it has decided to start a pilot skill centre/academy in Kochi which will impart highly demanding courses such as IAPMO India's MEEP programs. The Bank said it has tied up with SB Global Education Resources Pvt Ltd as its implementing partner to train Standard 12th passed, degree passed, ITI passed, engineering dropout students in the age group of 18-25 and whose annual family income does not exceed Rs 2 lakh are eligible for the course.



Dr. Matheen addressing the Train the trainer (TTT) session and staff orientation and training in preparation of delivery of MEEP programs at Knowledge Institute of Technology (KIOT) and Federal Skill Academy (FSA)



MEEP, MSD & MTP Students at Federal Skills Academy Poses after Job placements

IGBC GREEN LEAGUE

Learn Leverage and Lead

IAPMO India's participation at IGBC Green League – Learning Leverage & Lead. A unique learning experience for stakeholders in construction industries through tutorials which culminates into a quiz competition on sustainability and Green concepts. The league would be a good platform for the capacity development of participants in enhancing their skills & knowledge on subjects related to Sustainable Built Environment. The league aims at providing detailed insights on methodology and emerging green trends. Ms. Neeta Sharma was invited from IAPMO India to address the Technical session on "Water Standards & Codes".



Technical Committee review meet held at IAPMO India Bangalore office for 2017 **Uniform Mechanical Code-India, Volume II** Revision





IAPMO India Releases 2017 Uniform Mechanical Code- India, Volume II

Bangaluru India— At the recent ISHRAE's conference cum tradeshow ACRESERVE India 2017 at the garden city of Bangaluru, IAPMO India introduced the 2017 edition of the *Uniform Mechanical Code – India, Illustrated Volume II (2017 UMC-ITM)*, which covers specific chapters highlighted as priorities throughout the industry.

The 2017 UMC-ITM provides required guidelines for the design, installation and maintenance of mechanical building services and systems, while at the same time allowing latitude for innovation and new technologies. The UMC-I is the most comprehensive document ever created in India to standardize sustainable residential, industrial and commercial HVAC and mechanical systems. Subjects contained within 2017 UMC-I, Illustrated Volume II, include: combustion air, chimneys and vents, steam and hot water boilers, fuel gas piping, process piping, solar systems, stationary power plants/fuel cells, and Firestop protection. Whereas 2017 UMC-I, Illustrated Volume –I, which was introduced and launched during early 2017, at ACREX India 2017 tradeshow held at Delhi, include: ventilation air supply, exhaust systems, duct systems, installation of specific appliances, refrigeration systems and cooling towers, and hydronics.

CIPET Joined hands with IAPMO India for testing and certification of Plastic products such as PVC, CPVC and UPVC pipes and fittings in India



Seen in the picture during lab audit are Mr. V.KIRAN KUMAR, Director and Head, CIPET Hyderabad along with CIPET QA team members, represented by IAPMO India Managing Director Ms. Neeta Sharma and Dr. Abdul Matheen.

To meet the product certification needs of plastics pipe manufacturers in India, CIPET join hands with IAPMO India as an independent third party testing Laboratory CIPET is now listed as one of the IAPMO India recognized laboratory for our clientele pan India for PVC, CPVC and UPVC pipes and fittings in India has established CIPET has been recognised by Department of Scientific and Industrial Research (DSIR) as a scientific and research organisation in the field of Plastics Engineering &

Technology. CIPET renders Technology Support Services in Design, Tooling, Plastics Processing, and Testing & Quality Assurance in India and abroad. The Plastics Testing Centre (PTC) at CIPET is equipped with state of the art equipments and is recognized as one of the best plastics testing facilities in Asia. Several Central & State Govt organizations utilize CIPET's expertise for consultancy services and as a third party inspection agency for plastics products.



Seen in the picture Ashirvad quality management team along with Dr. Abdul Matbeen, IAPMO India, during plant inspection.

Ashirvad Pipes, the pioneer of Indian water management industry, has Joined the stream of pioneers PVC and CPVC piping & fittings certified IAPMO India certified products

Ashirvad pipes Pvt. Ltd has been relentless in its commitment to quality and service since 1975. The leader in the manufacture of PVC and CPVC piping systems, Ashirvad Pipes is ISO 9001:2008 certified and is a National Award winning company. With its state-of-the-art factory spread over 40 acres, the company has an annual manufacturing capacity of 1,08,000 metric tons and manufactures a complete range of high technology and superior quality plastic piping systems for domestic and agricultural use. The manufacturing systems adhere to the highest level of international quality for a maintenance free life.

Ashirvad Pipes has over 1100 channel partners, 36000 dealers and approximately

400 sales personnel spread all over the country. There is a dedicated helpline number where you can reach Ashirvad Pipes for any help and our representative will reach out to you for any advice or help which you might need in connection with our range of products, installation, availability and prices.

Ashirvad aims to be the provider of highest quality products in India - Offering complete solutions for fluid handling systems including plumbing systems for hot & cold water - Offering complete solutions for soil waste & drainage systems - Offering a sizeable range of products for the sanitary systems - Reinforcing and leveraging its global leadership position in uPVC column pipes

New Clients at Plumbing Products Certification



Seen In The Picture Are Ariston Ceramics Team Along with IAPMO India Auditor During Initial Inspection.



CODE-BASED MECHANICAL EDUCATION PLAYS PIVOTAL ROLE IN BRIDGING THE SKILL GAP IN INDIA

The need for establishment of skill development programs and 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. Skills and knowledge are the engines of economic growth and social development in any country. The shortage of skilled workforce across many industries is emerging as a significant and complex challenge to India's growth and future. 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 treble their workforces and India Inc. strives to maintain its position in the global marketplace, it has become imperative to prepare and plan for a world-class, competent and innovative workforce. IAPMO India is playing a pivotal role in nation building by introducing 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 offering 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 System Design (MSD) 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 program (MSP):** 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.

- **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.

Trade test center/training and consultancy services

IAPMO INDIA – KIOT, Centre Of Excellence (IIK-CoE) -Technical Trade Test Center/Training & Consultancy Services:

IAPMO INDIA & KIOT Technical Trade Center is aimed to serve all the services together under one roof associated with training and placement. We aim to help domestic and international clients to employ the right candidates for the right job. We are assisted by adequate manpower agencies across India for placement requirement, We have enough space, latest Equipments, instruments that is required for Trade Testing of the candidates. Our training center is assisted by well qualified HVAC and Plumbing Engineers and foremen having vast experience in the field.

Our services under Trade Testing, Assessment & Certification include:

- We serve with well-organized training and testing center established at KIOT.
- We are assisted clients with adequate manpower, space, latest Equipments,

instruments that is required for training and testing of the candidates

- We serve cordial environment, well trained staff to support our clients & candidate during interview related with professional jobs and any other computer related query.
- We provide Technical evaluation as per international standard to meet requirement of Building Industry such as construction, O&M, Production, Sales and industrial sector.
- We help domestic and international clients to employ the right candidates for the right job.



First batch of Trade Test assessment & certification students passed out from IIK-CoE, got placed in the industry

Following Trade Test assessment and Certification is done at IIK-COE:

- A/C Mechanic (Window / Split).
- A/C Mechanic (Plant).
- A/C Mechanic (Car).
- A/C Plant Operator.
- Duct Insulator.
- Duct Erector/Fabricator.
- Central HVAC Plant Pump Operator
- Central HVAC Plant Chiller Operator
- Plumber.
- Central HVAC Plant Supervisors
- Central HVAC Chiller Supervisor
- Control Room Operators
- Control Room Supervisors
- Preventative & Corrective Maintenance technicians
- Supervisors Preventative & Corrective Maintenance.
- HVAC Sale Engineers
- HVAC Sale supervisors
- HVAC Sale Technicians
- Welders
- Pipe Fitters



GNMC Skills Academy has signed agreement with IAPMO India as affiliate Training Center, for third party assessment and certification of HVAC-R professionals

GNMC Skills Academy signed Agreement dated November 20, 2017 between: IAPMO Plumbing Codes and Standards India Private Limited having its office at No.22, 12th 'B' Main, HAL 2nd Stage, Indiranagar, Bangalore – 560 008, Karnataka, INDIA, intend to affiliate with IAPMO India for joint assessment and certification of Mechanical programme as follows.

Engineer's Programme

- HVAC-R Design Engineers
- HVAC-R Project Engineers
- HVAC-R Operational and Maintenance (O&M) Engineers (Facility Engineers)

Supervisor's Programme

- HVAC-R Installation Supervisors
- HVAC-R Operational and Maintenance (O&M) Managers (Facility Manager)

Technician's Programme

- Refrigeration & Air Conditioning – Technician
- Repair & Maintenance Technician "Refrigerators & Deep freezer"
- Repair & Maintenance Technician- Water Cooler & Bottle Cooler.
- Repair & Maintenance Technician "Window, Split & Package Air Conditioners"
- Repair & Maintenance Technician "Car Air-conditioners".

IAPMO India as Approved Certification Body for RMC (Ready Mix Concrete) Plant Certification Scheme by Quality Council of India

We have extended our scope and are able to offer certification services beyond UIPC & UMCI, where there is a need for Third Party Certification, such as RMC (Ready Mix Concrete). Quality Council of India (QCI) has taken an initiative to establish an independent third party voluntary "RMC Plant Certification Scheme" in the country to assure quality in operations and processes of RMC Plants.

IAPMO India is one of the few certification bodies approved by QCI to audit as per the set standards for manufacturing RMC & subsequent to satisfactory level of conformance, certify such plants for "RMC Capability Certification". Till now IAPMO India has certified 4 plants and some are under process. Please refer the below link for information on certified RMC plants: http://www.iapmoindia.org/Documents/RMCPS/RMC_Plant_Directory.pdf





Release of curriculum book for Certified Service Technician Course by the water treatment industry representatives

Certified Service Technician Program (Residential Water Treatment Systems)

IAPMO India has launched "Certified Service Technician" (CST) program for residential water treatment systems in Chennai on 15th September 2017.

This program is intended for Installers and Service technicians for Point-of-Use systems (Water purifiers). The goal of CST program is to create a pool of skilled professionals readily available to industry manufacturers & dealers and provide companies with an additional resource to further train their current employees.

This program can also be supported by schools and universities, industry manufacturers, consulting organizations, trade associations and other training providers to support the growing demand for skilled water treatment professionals. One of the uniqueness of this program is that training delivery is in Indian regional languages viz. Hindi, Gujarati, Tamil, Telugu and others.

Completion of Auditor/ Lead Auditor Course by IAPMO India Staff

Swathi Saralaya and Anjali Singh successfully completed their Quality Management Systems Auditor/Lead Auditor Training Course.

This course is certified by the International Register of Certificated Auditors (IRCA) and meets the training requirements for IRCA Quality Management Systems Auditor Certification. This training provided the IAPMO India staff mentioned above with the knowledge and skills needed to fulfil their role as a fully trained Lead Auditor of ISO 9001:2015 Quality Management Systems.



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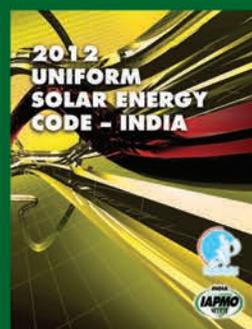
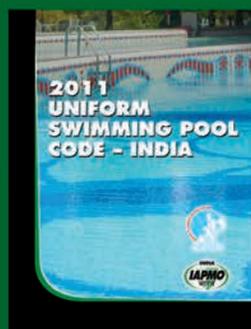
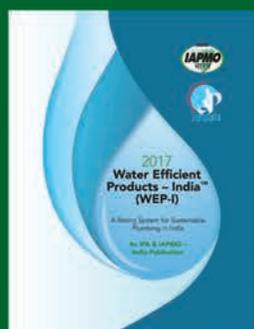
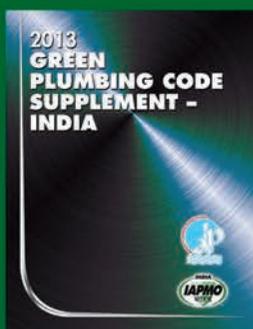
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IAPMO Plumbing Code and Standards India Private Limited
CIN: U90002KA2007FTC044357
No. 22, 12th B Main, HAL II Stage,
Indiranagar Bangalore Karnataka - 560038 India

Phone: +91 80 30714500

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