



A peep into the PEEP

An insight into the ambitious programme launched by IPA, IAPMO & IIP which will have far reaching implications on the Indian plumbing industry.

Indian Plumbing Association (IPA), International Association of Plumbing and Mechanical Officials (IAPMO) of USA and the education and training arm of IPA – Indian Institute of Plumbing (IIP) – have joined hands to launch a nation-wide initiative – Plumbing Education to Employment Programme (PEEP) to impart plumbing education. The objective of this ambitious initiative is to create a skilled workforce who can understand efficient and safe plumbing installations, based on Uniform Plumbing Code – India.

While Mr. Allen Inlow, Sr. Director of IAPMO Group is overseeing the whole project in close co-ordination with IPA President Mr. Sudhakaran Nair, two of IAPMO's senior functionaries - Ms. Kathleen Mibelich and Mr. Sherard Jones are working on the shop-floor to devise the syllabus, course material, action plan, modus operandi, etc. Mr. Kamal Khokhani, Publisher of IPT, had a detailed interaction with Ms. Mibelich and Mr. Jones on the shape of things to come, as far as PEEP is concerned. Here follows the peep...

Q First of all, tell our readers something about IAPMO's forays into plumbing training and education programmes.

KM and SJ: IAPMO has been dedicated to the professional development and career potential of individuals in the plumbing and mechanical code industry since its inception 80 years ago. IAPMO has conducted training all over the world, and the education department continues to grow in size and scope of work. Currently, IAPMO has an established catalogue of over 50 training seminars and courses.

Q IAPMO and IPA have launched the Plumbing Education to Employment Programme (PEEP) in India. How will it benefit the individuals, the industry, and also the end users?

KM and SJ: The PEEP will function as an extension of the vision for which the UPC-I was created - to incorporate and implement the latest technology and systems for the protection of public health and hygiene and bring uniformity in the installation of plumbing works throughout the country. The PEEP is another vehicle through which this vision can be realized, and it endeavours to prepare multiple levels of professional groups in India to read, understand, interpret, engage, and apply the provisions of India's Uniform Plumbing Code to initial installations and continued maintenance of plumbing systems. The PEEP will simultaneously impact individuals, the industry, and end users by playing a major role in developing plumbing professionals who will lead India into the next millennium.

Q What is the model on which PEEP will be executed in India, especially looking to the vast geographic expanse and vernacular languages? Are you planning to have a partnership with local educational institutions?

KM and SJ: The PEEP will partner with local educational institutions. While IAPMO has expert knowledge in the field of plumbing education programming, we acknowledge our limitation relating to knowledge of the Indian educational system. So, in order to offer quality comprehensive service, it is necessary for us to partner with those institutions that have the resources and experience to serve the needs of the Indian learner.

Q What will be the criteria/ requirements you will be considering while selecting such partner institutions?

KM and SJ: We will partner with institutions who meet the following value criteria:

The institution:

- Has a mission that is compatible with the IAPMO-INDIA mission.
- Is capably and responsibly managed.
- Is fiscally sound and demonstrates ethical financial practices.
- Has a curricular design and materials that follow sound educational practices.

- Utilizes appropriate and effective instructional methods and other resources to ensure sound instructional delivery.
- Ensures that qualified instructors, under professional and capable direction, effectively deliver educational and training services.
- Recruits and enrolls only qualified students, who can reasonably be expected to benefit from the education and training services, and provides student services appropriate to their needs.
- Utilizes appropriate methods of evaluation to ensure that outcomes are consistent with the mission and goals of the education and training. The institution maintains all required documentation.

Q What type of education programmes will be introduced as a part of PEEP?

KM and SJ: PEEP will offer three Academic Certificate Programmes. Each of these programmes targets a different audience group, and is designed to fulfill the needs of emerging and existing industry professionals. These programmes are:

Plumbing Systems Design Certificate Programme

- Plumbing systems are one of the most important and vital parts of an overall building design. Through this 1-year course of study, an individual will gain an understanding of the basic and advanced principles and code requirements of typical plumbing systems and the ability to design and review plumbing systems. This course of study will be academically intensive and will be delivered at the College and University levels. In some institutions, this study may be integrated into the four-year institution as an "elective."

Plumbing Construction Management Certificate Programme

- Construction managers co-ordinate and supervise the work at construction sites from start to stop. Through this 1-year course of study, an individual will gain an understanding of the basic principles of managing code-compliant construction projects; an understanding of the basic principles and code requirements of typical plumbing systems and the ability to review plumbing systems. This study will be academically intensive and will be delivered at the College and University levels.

Plumbing Technology Certificate Programme

- The Plumbing Technology Programme is a comprehensive two-year programme designed to provide individuals with the skills to apply a broad range of plumbing principles. Through this course of study, an individual will learn how to install, repair and maintain a variety of piping systems, plumbing fixtures and other equipment generally associated with water distribution and wastewater disposal; and learn the basic principles and code requirements of typical plumbing systems. This course will be focused on practical skills, and will be delivered at the Polytechnic level.



I am overjoyed by this opportunity. I feel that it represents an opportunity for tremendous personal growth, as my efforts would serve to change the lives of countless people. It is both humbling and empowering to be part of something as grand as this program.

Sherard Jones

Workforce Preparation Specialist
IAPMO Group

What type of Certification System is being introduced as a part of this programme?

KM and SJ: The PEEP certification programme will be autonomous from the academic programme and will be voluntary in nature. This comprehensive examination programme plays a critical role in assessing knowledge of the *Uniform Plumbing Code – India* as an indicator of proficiency in the use of the Code and referenced standards. Certification is achieved by successful completion of an examination in a controlled, proctored setting.

In order to create and maintain the credibility of the PEEP certification programme, the choice of test administrator for India was paramount. We take the job of examination monitoring and security procedures very seriously and recognize that, not only is our test administrator responsible for examination security, but he is also the frontline to the certification candidates and represents both IAPMO and our clients. Under our partnership agreement with an internationally known test administrator, certified proctors will be made available on site to answer examination candidates' questions regarding their testing experience. The test

administrator will provide a comfortable, distraction-free environment, and follow standardized procedures to help guarantee the security of the exam. Our partnership agreement enables us to track, manage and report on the proctor training and certification status at each examination location. Secure test sites are typically located in conjunction with professional organizations such as colleges and universities, and/or testing and training companies.

After passing the required examination, the candidate will receive a certification document and a wallet identification card indicating the title and scope of the certification, the date of issue and the date of expiration.

There will be four certifications offered:

Certified Plumbing Systems Engineer, C.P.S.E.

- Engineers will use this certification to attest their knowledge of the code requirements for plumbing systems and to demonstrate their ability to design and review plumbing systems.

Certified Plumbing Supervisor, C.P.S.

- Contractors, construction managers, and supervisors will



Viewing the existing plumbing laboratory at M.E.I. Polytechnic



Meeting at S.J. Polytechnic to introduce program to school administrators

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Kathleen Mihelich
Director of Career Services
IAPMO Group

use this certification to demonstrate their knowledge of code requirements relating to basic plumbing principles and plumbing systems.

Certified Plumber, C.P.

- Plumbing installers and repairers will use this certification to validate their capability to install, repair, and maintain piping systems, fixtures and equipment in compliance with the code requirements.

Certified Master Plumber, C.M.P.

- Plumbing installers and repairers will use this certification to prove their experience level and overall ability to apply code requirements with a variety of installations associated with water distribution and waste water disposal.

Q Which are the specific target groups for which you would be developing training programmes in India?

KM and SJ: The Programme seeks to serve three audience groups. Each group has a unique relationship with the Uniform Plumbing Code -India and the national plumbing

industry at large, requiring educational objectives and curriculum of varying focus. The PEEP audience groups are:

1. Existing and emerging engineers
2. Contractors/Construction Managers/Supervisors
3. Plumbing System Installers and Repairers

Q What are the factors taken into consideration while designing course material for a specific group?

KM and SJ: Our programmes are created according to sound instructional design methodology and adult learning principles and theory. The IAPMO staff utilizes subject matter experts who are at the forefront of their respective disciplines to aid in the necessary technical analysis for the creation of our programmes. All learning objectives are linked to performance-based outcomes, and these outcomes are, in turn, based on student competency level.

Q How are you thinking of overcoming the language barriers in imparting training to India?



Meeting at Bangalore University to introduce program to school administrators



Meeting with the Institution of Engineers in India (IEI) to introduce the program to members of the Engineering community in order to gain grass root support

KM and SJ: We were impressed with the high level of English language skill that the students enrolled in the polytechnics and universities exhibited. This allows us to develop the programmes in English. The Uniform Plumbing Code – India is published in English as well.

Q What do you think would be your main challenges in imparting training and preparing workforces in India?

KM and SJ: Our main challenge will be the development of an infrastructure by which all educational partners are provided with every necessary resource. Without a fully functioning facility and faculty, we will not achieve the results we are seeking. Additionally, engaging students to participate in the programme will be a critical component.

Q What would be the concrete benefits to individuals by attending educational programmes conducted by IAPMO – IPA? How would they help the career prospects of the students?

KM and SJ: The educational programmes and certifications offered by IAPMO-IPA will develop in individuals the ability to enter into a professional discipline that is at the forefront of significance and magnitude. Students will be distinguished as participating in the IPA and IAPMO programme. IPA and IAPMO are organizations recognized by a world-wide community of plumbing professionals. The academic programmes and certifications will be recognized by many leading contractors and companies within the plumbing design and construction industry in India and elsewhere. This recognition will likely increase the potential of employment and even create increased salary potential. Finally, the IPA is comprised of prominent construction owners, managers, contractors, and consultants who are committed to sponsoring internships and making employment available to a significant number of participants. These IPA members have access to vast employment resources.

Q We'd like to hear something about your past projects, and a bit on the one you feel was, until now, the most challenging assignment in your career.

KM: I have been an advocate for code professionals in pursuit of achieving and excelling in their careers for the past 25 years. During this time, I have been devoted to making available training, education, and certification programmes for their professional development and continuing education. My most challenging responsibility was originating the composition and structure of the extensive, wide-ranging professional development programme for the Building Officials and Code Administrators organization. This extensive programme, which is now the International Code Council's programme, includes a vast collection of career building resources that enables individuals to become qualified code administrators, and to accomplish respect and authority as professionals. This programme has been the benchmark for all other organizations endeavoring to initiate similar programmes.

SJ: To date, my most challenging assignment was launching an Employee Volunteer Programme for a Chicago health system, designed to impact the 3000-employee system and surrounding community.

Q What are your personal feelings about your new responsibilities – of the opportunity to be involved in the improvement of millions of lives?

KM: I can't think of anything I could be doing that would be more rewarding and more fitting to draw my career to its close. It is a privilege to contribute toward the success of this phenomenal mission championed by so many who are devoted and committed to improving the quality of life of millions of people.

SJ: I am overjoyed by this opportunity. I feel that it represents an opportunity for tremendous personal growth, as my efforts would serve to change the lives of countless people. It is both humbling and empowering to be part of something as grand as this programme.

Q The IAPMO code has been adopted with modifications in several countries. Did you have the chance to involve yourself in any capacity for programme development for any other country? What were the principal challenges you had to overcome?

KM: I designed a comprehensive programme of study which focused on code adoption, implementation, and administration for the countries of Poland and Slovakia. This year-long initiative concluded with bringing forty individuals to the United States to participate in a month-long internship. Each person lived with a designated building official and followed his performance of daily duties and responsibilities. Language skill was the most difficult challenge, even with an interpreter. Another challenge was making sure that the building officials and the trainers shared their knowledge without being arrogant, condescending or acting self-important. They were reminded that those being trained were not inferior just because they had different systems, methods and materials to work with and also had different reference points.

Q In most other places, the enforcement of plumbing codes is through government agencies. How do you perceive the scene in India where there is no government agency to back the code and voluntary agreement is a prior condition for being able to implement the UPC?

KM and SJ: Many other places initially launched their codes as "self-regulating" the construction industry. Code usage and recognition by public agencies overseeing construction evolved over time in response to pressure from various external sources such as home owners, politicians, and builders. At the beginning, the Uniform Plumbing Code-India will be known as a published technical document that represents the industry consensus for minimum quality and performance criteria. How quickly the UPC-I will be formally recognized will be impacted by the IPA's ability to influence, convince, and persuade decision makers that when used, the UPC-I will:

- Readily provide technical information to all in a consistent and fair manner
- Provide uniformity and compatibility among construction firms and builders
- Eliminate unjustified and/or unnecessary restrictive requirements
- Provide a vehicle for introducing new products, methods, techniques, and technology as acceptable

- Present a manner in which individuals can be evaluated for level of code knowledge and, in turn, earn professional certification

Q How do you think the efforts of the Indian Plumbing Association would uplift the Indian society?

KM and SJ: The IPA is the first and foremost proponent for the improvement of public health in India through the use of modern plumbing systems, and because of this initiative, among others, the IPA has established itself as the authoritative and most trustworthy organization dedicated to accomplishing effective, wide-ranging code use. The UPC-I is a means to protect public health, and for safety and welfare. Specifically, the plumbing code:

- Will provide protection by reducing potential hazards
- Will provide uniformity to the industry, which will keep construction costs down
- Will provide consistent standards that, when applied, will protect the public
- Will contribute to the overall wellbeing of India; over time, property values will be impacted positively as the direct result of the application of the plumbing code
- When recognized by a government body, it can be a useful tool in determining the quality and adequacy of a new or existing construction

Q How do you rate the official magazine of IPA, the Indian Plumbing Today, vis-à-vis other similar association magazines in other countries?

KM and SJ: Indian Plumbing Today is a quality magazine that sits among top-tier periodicals. IPT, by consistently providing timely information and by presenting quality technical reports and articles, constructively and effectively represents the Indian plumbing industry. **IP**