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NEWS, ANALYSIS, PROJECTS & BUSINESS INTELLIGENCE FOR THE CONSTRUCTION INDUSTRY

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# CONSTRUCTION WEEK

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## FEATURES

- WINDOW & FAÇADE PROJECTS
- PLUMBING

## EVENT REPORT

HAVELLS SMART LIVING SERIES 2016



# RULE BOUND

PRADEEP JAIN, FOUNDER-CHAIRMAN, PARSVNATH DEVELOPERS, IS COMMITTED TO EXECUTING EXISTING PROJECTS THUS DELIGHTING HIS CUSTOMERS



## PLUMBING

# LET IT POUR

Designing pipe lines in a building requires careful vision. Cross connection between pipes for drinking water and pipes carrying waste water can be a revolting experience

BY JAYASHREE MENDES

An architect/building planner or the developer's job is not completely done till the residents come to inhabit the place and find it free of any glitches. More often than not, troubles begin for the residents a few months after inhabiting the place when some of the hidden factors in a building give in and cease to function as they ought to, thus causing grief to residents. Shoddy wiring jobs, poor plumbing, weak structures

in certain sections, are some of the incidents that can play havoc with residents' lives.

As population continues to grow at a steady pace, a larger number of people are moving to cities, which means the development in urban infrastructure has to happen simultaneously to meet this influx. Plumbing infrastructure thus becomes an important part of the city planning to address issues of sanitation, waste disposal and household water us-



age. This must be taken care at the planning stage itself. It is the job of the mechanical, electrical, and plumbing (MEP) contractor to create building layouts that simplify his task and benefit a project in terms of the cost in the long run. A building layout that is optimised for MEP services will not only have a lower construction cost, but it will also help conserve the design team's budget by minimising coordination efforts.

#### CHANGE OF DEMAND

In India, developers prefer to adopt any of the seven types of pipes in water supply systems of a building: Cast iron (CI) pipes, steel pipes, galvanised iron (GI) pipes, copper pipes, plastic or polythene or PVC pipes, asbestos cement (AC) pipes, and concrete pipes.

Speaking of the advantages of PVC pipes, Nitin Kulkarni, president, marketing & sales, Finolex Industries Ltd, says, "From the industry perspective, demand for metal pipes has decreased and the need of PVC pipes has grown. This has happened because PVC pipes are corrosion resistant, tensile, stronger and lighter in weight. They are also non-degradable and are easily available in various shapes and sizes. Finolex Pipes produces all of them, including the resin/solvent that is needed for pipe fixtures."

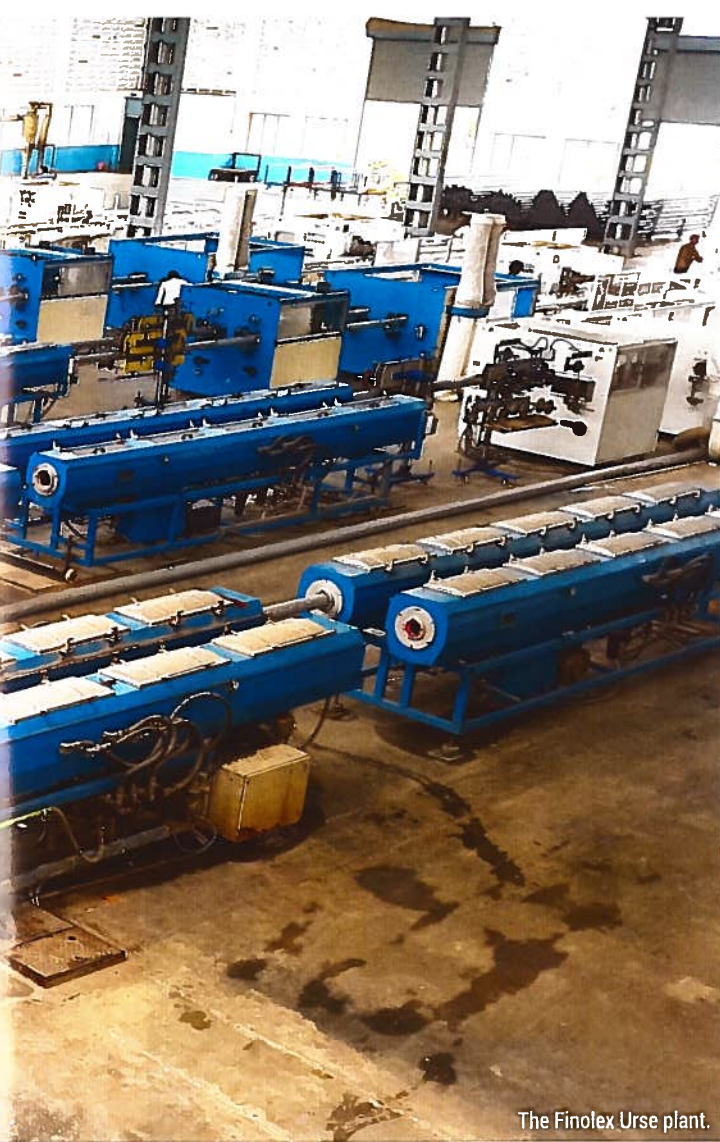


AUTHORITIES MUST  
STRESS ON QUALITY  
PRODUCTS TO  
ACHIEVE THE DESIRED

OUTCOMES THEY SEEK. ”

RAMESH MUNOT

It is important that pipes also come installation-ready. Installation-ready couplings can be installed up to ten times faster than welding, six times faster than flanging, and twice as fast as standard mechanical grooved couplings. Pankaj Soni, country manager, India, Victaulic, says, "Thin wall stainless steel pipe joining is an attractive option across European construction markets, particularly for chilled water, cooling, air and potable water systems. It increases the efficiency of



The Finolex Urse plant.



“THIN WALL STAINLESS  
STEEL PIPE JOINING IS  
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ACROSS EUROPEAN  
CONSTRUCTION MARKETS.”

### PANKAJ SONI

on-site material handling and lowers costs from a total installation point of view.”

However, welding thin wall stainless steel isn't without its risks. Overheating the pipe and the need for chemicals to pickle and passivate the pipe to restore its corrosion resistance are just two of the challenges associated with the welding process. To address these industry challenges, Victaulic listened to its customers and created the StrenghThin 100



“THE BASIC DOCUMENT  
FOR PLUMBING  
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### NEETA SHARMA

system, the only grooved mechanical solution for joining thin wall stainless steel. The company offers installation-ready couplings that improve on the original mechanical design as they are delivered to the jobsite ready-to-install, without the requirement to first disassemble then reassemble a coupling on a joint. The coupling can simply be pushed onto the pipe ends as a single unit, and tightened with an impact wrench or standard hand tools. This speeds up installation, making pipe installation even more efficient.

Over the last decade and half, the building construction and infrastructure industry has accepted major changes in their piping practices with a major shift from metal pipes to plastic pipes (predominantly PVC based). The major driver was the plumbing application namely hot and cold water plumbing, building and underground drainage.

Users want a piping system that can be run on the lowest service and maintenance costs. This is only possible when the piping installation has the lowest number of joints to avoid leakages. To achieve this feat, the construction and infrastructure industry needs to move towards leaving behind conventionally used methods and start avoiding joints wherever necessary by encouraging the use of mechanical benders which helps bend pipes on site as required during installation and avoid unwanted costly fittings which require brazing to join them. Ramesh Munot, director, Mandev Tubes, says, “Until and unless all end users, builders, consultants, engineers and concerned departments do not emphasise on the use of newer quality assured products and methods of pipe installation they will never be able to achieve the desired outcomes they seek. India being a price sensitive market, users/contractors end up using cheaper and old alternatives which keeps delivering faulty piping system failures.” He wants to educate users to be aware and stop the infertile practise that

can cause damage later in years to come.

Atul Jain, joint MD, Jain Irrigation Systems, says, "We decided to focus more on our new division, namely, building products, by launching CPVC piping systems for hot and cold plumbing applications. We created this division last year to bring a strong focus to the domestic residential construction business by selling a package of products comprising PVC plumbing & drainage piping systems, solar water heating systems, solar power packs & PVC sheets as panelling material for furniture. Most of these products were being sold individually."

#### INSIDE THE WALLS

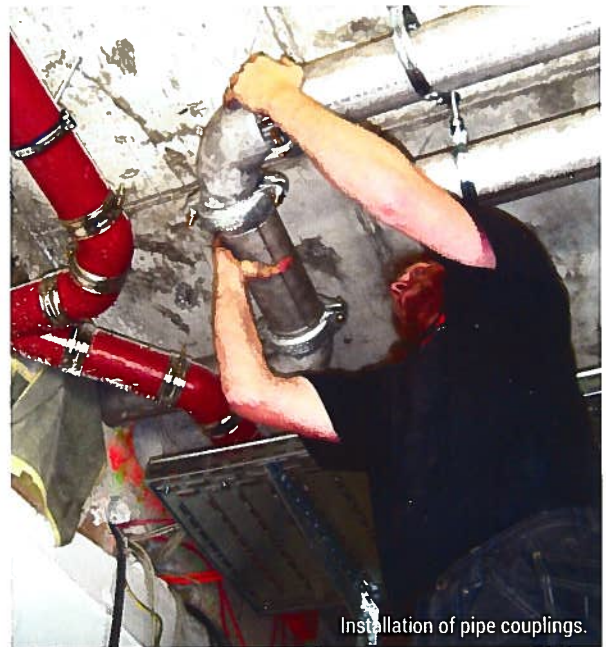
The rapid development in the Indian construction industry in the past decades required the plumbing industry to keep

pace with modern plumbing technology. For this, the codes, standards and practices required improvements in order to be at par with international standards. "The basic document for plumbing considered as uniform throughout India is one part in the National Building Code of the Bureau of Indian Standards (BIS), implementation of which is voluntary, until adopted by local statutory bodies," says Neeta Sharma, MD, IAPMO India, an organisation that along with the Indian



FROM THE INDUSTRY PERSPECTIVE, DEMAND FOR METAL PIPES HAS DECREASED AND THE NEED OF PVC PIPES HAS GROWN.

NITIN KULKARNI



Installation of pipe couplings.



Mandev Tubes wants to educate users on the benefits of using quality pipes.



Jain Irrigation has a plumbing lab that conducts routine tests on pipes.

Plumbing Association (IPA) has developed the most comprehensive plumbing codes and training and education programmes for code-based plumbing installations and maintenance for all of India.

Most makers of pipes for plumbing follow standards set by the National Building Code of BIS. Kulkarni says, "We have put in place the internationally acclaimed Environment Management System under ISO 14001. We comply with all applicable environmental regulations in respect of air, water, noise, hazardous waste, e-waste etc. to mitigate the potential environmental impact on the society."

Considering that the copper tube industry in India has been traditionally working with tube joining methods of soldering and brazing, Mandev Tubes has been working at innovating products that would help bypass brazing and soldering and minimise the number of joints. Munot says, "We offer a design registered product – MT ECO SELF CONNECT PLUS+ & MT MEDI SELF CONNECT PLUS+ – that eliminate the usage of coupling to join two tubes and a brazing for plumbing applications along with it for air conditioning applications (VRF, package & ductable) for various types of building projects and medical grade copper tubes for medical gas pipeline systems (MGPS) for hospitals & medical colleges."

Additionally, IAPMO India and the Indian Plumbing Association (IPA) are working together to propagate code based plumbing training and educational programmes (known as 'Plumbing Education to Employment Programme,' or 'PEEP') with interested academic institutions throughout India for designers, contractors, engineers, and students whose com-



WE CREATED A  
DIVISION LAST YEAR  
TO BRING FOCUS TO  
THE RESIDENTIAL  
CONSTRUCTION BUSINESS.

### ATUL JAIN

bined graduates now exceed 2000 since the programmes' inception in 2009. "With intent to incorporate and implement the latest technology and systems for the protection of public health and hygiene and bring uniformity to the installation of plumbing works out the country IPA, IPA partnered with IAPMO to prepare Uniform Codes applicable all over India. IPA used, adapted, edited and supplemented the UPC I India (Uniform Illustrated Plumbing Code) keeping all basic principles of the original UPC intact but edited to suit the Indian laws condition accepted good engineering practices. The UPC I, now revised as UIPC-I, with illustrations included, has been designed to provide a lucid and comprehensive technical reference to the citizens of India for safe plumbing practices and at the same time allowing latitude for innovation and introduction to new technology. **enr**