## Indian Plumbing To

Vol 07/ Issue 08/ November 2025

Annual Subscription: ₹ 240

Total no. of Pages: 70

### **Guest of Honour**



**Sushil Mohta** Chairman Merlin Group

### Chief Guest -



Firhad Hakim Mayor of Kolkata & State Minister of Urban Development, Municipal Affairs & Housing

### **Guest of Honour**



Apurva Salarpuria Executive Director, Salarpuria Group & President CREDAI Kolkata

### Leading Speakers and Panellists —



**Anand Neotia** Director **Orbit Group** 



**Milind Deore** Secretary Bureau of Energy Efficiency, Ministry of Power



Rohit Kakkar Deputy Adviser CPHEEO, Ministry of Housing and Urban Affairs (MoHUA)



Ar. Shakuntala Ghosh Principal Architect and Partner Ghosh Bose and Associates

SUSTAINABLE **SMART WATER** MANAGEMENT

31st INDIAN UMBING CONFERENCE KOLKATA

Thursday

Friday

Saturday

**NOVEMBER 2025** 



Redefining Plumbing Standards OFFICIAL JOURNAL OF THE INDIAN

### **MULTIPEX**



### METAL TOUGH. PEX SMART.





Meet the future of piping with Astral MultiPex- a next-genPEX-AL-PEX multilayer pipe built for unmatched strength, flexibility, and thermal resilience. Perfect for homes, commercial spaces and high-performance systems, it ensures leakproof, hassle-free, and long-lasting efficiency.

### At its core lies an intelligent 3-layer construction:



To meet diverse installation needs, MultiPex fittings come in two advanced joining systems: Compression fitting (Crimping) and Press fitting (Push-fit system).

Scan to know more about the product







### Published by Chandra Shekhar Gupta

Printed by Chandra Shekhar Gupta

On behalf of Indian Plumbing Association

Printed at Infinity Advertising Services Pvt. Ltd.,

Plot No. 171 & 172, Sector 58 Faridabad - 121 004. Haryana

### **Published from**

Indian Plumbing Association 416, DLF Prime Tower 79 & 80, Okhla Phase 1 New Delhi - 110 020.

### Editor

Sharatchandra Venkat Rao

### **Editorial Board**

Chandra Shekhar Gupta Rahul Dhadphale Dipen Mehta

### **Editorial Team**

Dr. Madhubanti Dutta Aditi Mishra

Mob: +919667591004

### G M - Marketing & Events

Sushanta Sinha Mob: +919599001282

### Design

Naveen Jaiswal Studio Detail

### Share your feedback at:

ipt.ipahq@indianplumbing.org / hq@indianplumbing.org

Copyright: All rights reserved by Indian Plumbing Association. Any part of this publication may be reproduced only with the written permission from the Editor. The Editors do their best to verify the information published but do not take responsibility for absolute accuracy of the information. Views expressed in the articles published in this magazine are of the respective authors and not necessarily of the editors and publishers. Indian Plumbing Today assumes no responsibility or liability on behalf of the contributor for the information published in the magazine. Objections, disputes, differences. claims & proceedings, if any, are subject to New

Disclaimer: Drawings/photographs/illustrations published in articles in IPT are only for illustrative purposes. IPA/IPT does not endorse any products, equipment or processes. Best efforts are made to ensure that there is no infringement of any copyright or IPR. In spite of our vigilance, some incorrect information may creep in mostly due to our an the author's oversight.

### **MY PAGE**

Artificial Intelligence (AI) coupled with Internet of Things (IOT) has become a buzzword in all spheres of life and 'plumbing' is no exception. The integration of sensors, real time data analysis supported by intelligent control systems improve water management efficiency, reduce wastage and most



importantly supports sustainability. Industry, IT parks, residential commercial & hospitality sectors are employing judicial use of IOT in their operation, maintenance and reporting systems which has resulted in huge savings of energy, man power and money. IOT also impacts the agriculture sector by increasing production efficiency through precision farming. Keeping this particular aspect in mind this issue covers a few articles highlighting the importance of IOT.

It's IPPL season once again at IPA, and the excitement is spreading across the nation! 16 Cities/ Chapters are hosting this unique educational initiative. bringing together students, professionals, and plumbing enthusiasts to learn, compete, and innovate. This year, IPPL takes a major leap forward with the National Skill Development Council (NSDC) by providing a cobranded certificate to the participants which has significantly enhanced the program's reach, credibility, and impact in promoting skill development and water awareness across India.

We are also delighted to announce that the 31st Indian Plumbing Conference (IPC) & Exhibition will be held in Kolkata from 13th to 15th November 2025, centred around the theme "Sustainable Smart Water **Management.**" The conference promises an enriching experience with an impressive lineup of speakers, panellists, and industry experts, all sharing insights on the latest trends, technologies, and solutions in plumbing and water management. The grand finale of IPPL 2025 is all set for 15th November, during the 31st Indian Plumbing Conference & Exhibition. The detailed programme schedule can be downloaded from www.indianplumbingconference.com with key highlights featured in the inner pages of this issue.

Alongside the conference, the exhibition will showcase cutting-edge innovations, products, and technologies that are shaping the future of the plumbing industry. We warmly invite all professionals, students, and enthusiasts to register and participate to engage in meaningful discussions, share knowledge, and be part of this collective movement towards a smarter, more sustainable water future.

Adding to the excitement, the 3rd edition of Jaquar IPA Neerathon Delhi is set to take place on 30th November 2025, bringing together citizens, professionals, and water warriors for a cause that matters — raising awareness on water conservation and sustainable living—aiming to inspire collective action towards protecting our most precious resource "water" while promoting fitness, community spirit, and environmental responsibility.

### Sharat V. Rao

Managing Editor, Indian Plumbing Today National Joint Secretary, Indian Plumbing Association







The First Step to Saving Water Is to Know What's Happening Beneath the Surface Yash Shah



Bridging the Policy Gap: Advancing Water Security through Government Initiatives

Dr. Madhubanti Dutta



Water View - Column 24
Water is Starting to Hurt
Company Bottom Lines
Chandrashekhar Hariharan



Advanced Hot Water Systems: A Guide for Design and Installation Professionals

**Ram Kumar** 



Back to basics Impact of Internet of Things (IoT) in the Field of Plumbing Sharat V. Rao



Learning from Failures 08 Air Trapped in Pipe line Kiran Joshi

31st Indian Plumbing Conference, Kolkata
WPC Scholarship Visit 2024
Chapter Activities40
National Outreach44
IPPL Glimpses and Grand Finale
WAC Report
Press Meet and Curtain Raiser - 31st IPC
IPA Vanita
Corrigendum60
Chapter News
Future Events





## FRAMING INDIA'S FUTURE

**Premium Door & Window Solutions** 







### SANT



BRASS . BRONZE . CAST IRON . CAST STEEL . STAINLESS STEEL . FORGED STEEL

### **SANT VALVES**

Suitable for

WATER.OIL.GAS.STEAM.AIR

IBR . BIS . ISO 9001: 2015

Certified

### Other products by SANT GROUP

- Water Meters / Flow Meters
- Forged MS Pipe Fittings
- DI Pipe Fittings (UL/FM)
- Composite Pipe & Brass Fittings
- Malleable Pipe Fittings

### **India's Largest Plumbing Conference and Exhibition** coming to Kolkata after 9 years





## 71st INDIAN PLUMBING CONFERENCE & EXHIBITION

Thursday

Saturday

**NOVEMBER 2025** 

Biswa Bangla Mela Prangan (Milan Mela), Kolkata



The theme of the conference "Sustainable Smart Water Management" underscores the industry's collective emphasis on efficiency, innovation and environmental stewardship in water, sanitation and plumbing infrastructure in the City of Joy.

With India touching 1.4 billion in population but only 4% of the world's freshwater resources, the need for efficient water systems and smarter urban water infrastructure has never been greater. Plumbing can drastically reduce non-revenue water (NRW), which currently exceeds 40% in many Indian cities, through better fittings, efficient fixtures, and water management retrofits that can curtail usage by up to 30-50% through sustainable design and technology. Coupled with sustainable practices such as rainwater harvesting and greywater reuse, smart plumbing can transform India's built environment.

The IPA has been advancing this agenda closely with the Ministry, Skill India, and the Bureau of Indian Standards (BIS) to ensure that plumbing standards in accordance with IS 17472 Part 1 & II are implemented nationwide. IPA continues to advocate for smarter water management underpinned by systems thinking and a holistic approach that integrates sustainability, water efficiency, and technological innovation.











Biswa Bangla Mela Prangan (Milan Mela), Kolkata





## IPA Lifetime Achievement



### **IPA Navratna** AWARDS



Launch of **We Stand Code** 



### **IPA Felicitations**

Plumbing Consultant | Plumbing Contractor Architect | Manufacturer | Academician

### Kolkata: Where Heritage Meets Innovation in Sustainable Water

The 31st Indian Plumbing Conference & Exhibition returns to Kolkata after nine years, scheduled from November 13-15, 2025, at the state-of-the-art Biswa Bangla Mela Prangan (Milan Mela). This flagship event will unite stakeholders from the plumbing, building services, infrastructure, and real state sectors under the timely and forward-looking "Sustainable Smart Water Management,".

Kolkata is rapidly emerging as a national model for sustainable urban transformation.











**NOVEMBER 2025** 



Biswa Bangla Mela Prangan (Milan Mela), Kolkata

### Day 1 - Thursday, 13th November, 2025

### **INAUGURAL SESSION**



**Firhad Hakim** Cabinet Minister of Urban Development and Municipal Affairs and Housing **Government of West Bengal** 

### **Guest of Honour**



**Sushil Mohta** Chairman Merlin Group



**Apurva Salarpuria Executive Director I President** Salarpuria Group I CREDAI Kolkata

### **Panel Discussion**

### **Sustainable Smart Water Management**



**BO Prasanna Kumar** Joint Managing Director DesignTree Service Consultants Pvt Ltd



**Sadiq Divan** Senior Vice President MEPF Services, Phoenix Mills



**Sushil Mohta** Chairman Merlin Group



Ar. Vivek Singh Rathore Ar. Shakuntala Ghosh Partner & Principal Architect Salient Design Studio



Principal Architect & Partner Ghosh, Bose & Associates (GBA)



**Apurva Salarpuria Executive Director** Salarpuria Group President, CREDAI Kolkata











Biswa Bangla Mela Prangan (Milan Mela), Kolkata

### Day 1 - Thursday, 13th November, 2025

### Technical Session

### Transforming Water Supply with Real-Time Data -through AI & IoT in Water Management



**Avinash Mishra** Chairman | Former Adviser Water Audit Council | NITI Aavog



Prof. Dr. Asis Mazumdar Professor **Jadavpur University** 



**Ganesh Shankar** Founder and CEO Fluxgen



M. K. Sinha Former Chairman Central Water Commission



Shreva Khurana Programme Associate, Water & **Environment, National** Institute of Urban Affairs



**Rohit Kakkar** Deputy Adviser, CPHEEO, Ministry of Housing and **Urban Affairs** (MoHUA)

### Technical Session

### From Drain to Gain: Innovations in Wastewater Treatment and Water Circularity



Sandeep Talaulicar Managing Director Jackson Hospitality



**Prasanna Venkatesh** Executive VP- Plumbing, Fire and Environment Sobha Limited



**HC Vinayaka** Vice President, Technical, EHS & Sustainability. ITC Hotels, ITC



**Prem Thakur** Vice President and Head. **Design and Technical** Services, IHCL, Taj Group



**Milind Deore** Secretary, Bureau of Energy Efficiency, Ministry of



Ar. Ayan Sen Principal Architect. Avan Sen Architects

### Day 2 - Friday, 14th November, 2025

### Panel Discussion

### The Road to Water-Neutral Buildings: Tools, Certifications, and Best Practices



**Sharat V. Rao** Convenor | Managing Director **IPA Technical Committee ECPHC** 



**Anand Neotia** Director Orbit Group



Yashaswi Shroff **Executive & Marketing** Director Alcove Group



**Avinash Mishra** Chairman | Former Adviser Water Audit Council | NITI Aayog



S Karthikeyan Dy Ex. Director, CII-Indian Green Building Council (IGBC)



**Rakesh Bhatia** Senior Vice President **Ecofirst Services Limited,** A TATA Enterprise











Saturday 15 **NOVEMBER 2025** 

Biswa Bangla Mela Prangan (Milan Mela), Kolkata

### Day 2 - Friday, 14th November, 2025

### **Technical Session**

### **Smart Solutions for Wastewater and Stormwater Management**



Pradeep Chakravarti Partner Imperial PHE Services LLP



Prof. Dr Arunabha Majumdar Professor, Emeritus Fellow, School of Water Resources Engineering, Jadavpur University



G Asok Kumar, IAS (R) Former DG, National Mission for Clean Ganga (NMCG)



**Dr. Madhubanti Dutta Former Consultant** (Water Division), NITI Aayog, Govt. of India



**Arjun Bhattacharya Chief Technology Officer** & Chief Digital Officer, Ion Exchange (India) Ltd.

### **Panel Discussion**

### Challenges in Plumbing Design & Installation for High Rise buildings



Sandeep Goel Founder and Director **Proion Consultants** 



**BO Prasanna Kumar** Joint Managing Director DesignTree Service Consultants Pvt Ltd



**Ani Ray Managing Director Arabian Construction** Company India



Pradeep Chakravarti Partner Imperial PHE Services LLP



Ar. Debatosh Sahu **Principal Architect** Espace



**Ar. Sunil Maniramka Principal Architect** Maniramka & Associates



**Sudip Das** Business Unit Head, Sanitary Syndicate Pvt Ltd











Saturday 15 **NOVEMBER 2025** 

Biswa Bangla Mela Prangan (Milan Mela), Kolkata

### Day 3 - Saturday, 15th November, 2025

Inauguration of



Learning ▶ Knowledge ▶ Quiz

### **GRAND FINALE**

### **Inaugural of IPPL 2025 Grand Finale**

**IPPL 2025 National Sponsor felicitations** 

**IPPL Technical Committee felicitations** 

**IPPL 2025 Organizing Chapter felicitations** 

### **IPPL Grand Finale Quiz & Buzzer Round**

### **Awards and Felicitations**

**31st Indian Plumbing Conference Industry Partner Felicitations** 

31st Indian Plumbing Conference Organizing Committee

**Best Stall Awards** 

Announcement of IPPL National Winners and Felicitation

Vote of Thanks



Winner



1st Runner-Up



2nd Runner-Up









Biswa Bangla Mela Prangan (Milan Mela), Kolkata

### **INDUSTRY PARTNERS**



Established in 1996, Astral Pipes is one of the India's leading plastic pipes manufacturers - acknowledged for unbeaten quality and innovative piping solutions. Astral went beyond category codes by launching many industry firsts, like India's first CPVC pipes, lead-free uPVC pipes for plumbing as well as for stream water, just to name a few. Astral Pipes is equipped with production facilities at Santej and Dholka in Gujarat, Hosur in Tamil Nadu, Ghiloth in Rajasthan and Sangli in Maharashtra, Sitarganj in Uttarakhand, Cuttack in Odisha, Hyderabad in Telangana and Guwahati in Assam to manufacture plumbing, drainage, agriculture, automatic fire sprinkler piping systems, industrial piping and electrical conduit pipes with all kinds of necessary fittings.



From its modest beginnings in 2007, KPT Piping has emerged as India's foremost manufacturer of PPR (Polypropylene Random Copolymer) pipes and fittings for Plumbing Applications and Industrial Applications.



From past 150 + years, KSB Limited India, is a leading manufacturer of pumps, valves, and systems. With a strong focus on building services, KSB delivers innovative, energy-efficient, and sustainable pumping solutions for water supply, pressure boosting, HVAC, and fire-fighting applications.



Wilo is a pioneer in sustainable and intelligent premium water solutions for global challenges - creating impact for everyone. Specially for the building services, water management and industrial sectors and its leading position drives to maintain our superiority.



Vijay Cycle and Steel Industries is renowned in the field of Forged Steel Pipe Fittings, Valves Flanges & Pipe nipples in the Indian Sub-Continent, since 1958.



Skipper Pipes, India's Safest Pipes, provides NSF-certified, BIS-approved, 100% lead-free polymer piping systems and bath fittings — delivering reliable, highperformance solutions for water and drainage across Housing, Agriculture and institutional projects.



Sintex, one of India's largest water management solution manufacturers, offers SMC panel tanks, packaged STPs, and a complete range of piping solutions, delivering truly end-to-end water management expertise.



Zoloto valves is a prominent and renowned name for manufacturing different type of ferrous and non-ferrous valves for water, oil, steam, air and gas line applications, with over six decades of experience.

**CKA Birla** Group birlanu.com

### **LEAKPROOF PIPES**

### INFINITE PEACE OF MIND







Comprehensive Range



Sustainable Solutions



Innovative Solutions\*



In-House CPVC Compound\*\*









Most of us think of saving water as a simple act: closing a tap, reusing wastewater, or fixing leaks. But the truth is, real conservation begins much earlier. It begins with awareness — knowing what is happening to every drop before it disappears.

That awareness comes from one thing: Information.

Sensors are the silent observers that convert what we cannot see into information we can act on. They tell us how much water we are using, how pure it is, what pressure it flows under, and when a system needs care. When these sensors are connected to the Internet, the picture becomes even clearer. Suddenly, every tank, pipe, and filter begins to speak.

### From Guesswork to Clarity

For years, most households and industries have worked in the dark when it comes to water usage. We notice when a tank overflows or when pressure drops, but not much in between. We don't know exactly how much water is used, when usage peaks, or how efficiently our systems perform.

Sensors remove the guesswork. They turn every invisible change into data that can be seen and understood. When linked with an IoT platform, that data becomes available in real time on your phone or computer. You no longer have to check manually. You simply know.

Once you can see, everything changes. Patterns appear.

Leaks become obvious. Maintenance becomes proactive instead of reactive. Awareness transforms into control.

### The Key Sensors That Make Water Smart

Every sensor plays a unique role in helping you understand what is really happening behind the scenes. Together, they form a complete view of your water system.

### **Water Meter:**

It tells you how much water you use. Even a broad view of daily or weekly consumption can reveal waste and encourage better habits. When connected to an app, you can instantly see how usage changes and where you can save.

### **Pressure Sensor:**

Pressure is the heartbeat of your plumbing system. A sudden drop might signal a leak, while excessive pressure can damage pipes and fittings. Monitoring it helps maintain balance and protects your setup from silent failures.

### **Temperature Sensor:**

Temperature data ensures efficiency and comfort. It helps track water heater performance, identify energy losses, and maintain safety. For industries, it is essential for quality control and reliability.



### **TDS Sensor:**

The Total Dissolved Solids sensor measures water purity. It ensures that drinking water and filtration systems are functioning correctly. With IoT, users can receive instant alerts if water quality begins to fall, long before it becomes noticeable.

### **Level Sensor:**

Modern level sensors, like LHT-based systems, provide accurate readings of water levels in tanks and sumps. They prevent overflow, protect pumps from running dry, and keep operations consistent. They replace old float switches with precision and reliability.

### Why IoT Brings It All Together



INTERNET OF THINGS

Each sensor alone is useful, but together they become powerful. When integrated through IoT, they create an intelligent ecosystem that constantly watches, records, and reports.

Imagine your phone showing you that your tank is full, pressure is stable, water quality is good, and usage is trending lower this week than last. This is not just data. It is insight that drives better decisions.

IoT brings convenience to this awareness. With Wi-Fi now accessible almost everywhere, you can monitor your water system from anywhere. Whether you are at home, in the office, or traveling, your devices keep you informed. That accessibility is what turns technology into habit.



**Devang Shah** Director, Devyami Pumps

Devang Shah is the Director of Devyami Automatic Pumps & Devang; Controls Pvt. Ltd.; one stop water solution from Vadodara, Gujarat. He began his journey in 1996 with a strong engineering foundation. A pioneer in water technology, he introduced heat pump solutions for domestic use in India as early as 2006, earning a certificate from the Bureau of Energy Efficiency for this innovation. With a passion for R&D, he has developed multiple in-house solutions in both water and electronics technologies, driving practical and sustainable advancements in the industry. He can be reached on devang@devyami.com.





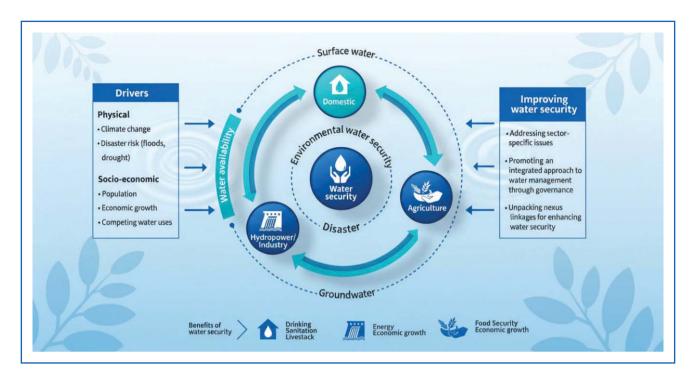
### Introduction

Water has always been central to India's civilization, shaping its agriculture, economy, and culture for millennia. From the stepwells of Gujarat to the tanks of Tamil Nadu, community-led water management has long been part of India's heritage. Today, however, this legacy is under strain. Rapid urbanization, population growth, and climate variability have pushed the nation into a state of chronic water stress. Nearly 600 million Indians face high to extreme scarcity, and 21 major cities are projected to run out of groundwater soon. Agriculture consumes over 80% of available freshwater, yet inefficient irrigation and urban leakages amounting to 30–40% of treated water worsen the crisis. Per capita water availability has declined from 5,178 cubic meters in 1951 to 1,486 cubic meters in 2021 (CWC, 2022), while by 2030, demand may double supply, causing up to a 6% GDP loss (NITI Aayog, 2019). With 70% of surface water contaminated (World Bank, 2023), India faces an urgent need for integrated, data-driven, and accountable water governance.

Over the past decade, landmark initiatives such as Jal Jeevan Mission, Atal Bhujal Yojana, Amrit Sarovar Mission, and Jal Shakti Abhiyan have revitalized water management efforts. Yet, a persistent gap remains between policy design and ground-level outcomes. Bridging this gap requires robust governance and measurable accountability. Water Audits, which assess how water is sourced, used, and conserved, can play a transformative role in turning intent into impact and







moving India from water management to water stewardship. Despite multiple national missions addressing water challenges, a persistent policy gap exists between legislative intent, institutional coordination, and on-ground delivery. While India's water governance structure involves the Ministry of Jal Shakti, state water departments, and local panchayats, the lack of inter-departmental convergence and data integration often leads to duplication of efforts and inefficient resource allocation. Bridging this gap requires unifying frameworks, shared databases, and performance-linked outcomes.

### Grassroots Initiatives That Are Making a Difference

Several government programs have already demonstrated how local participation can transform water management. The Jal Shakti Abhiyan: Catch the Rain campaign, launched in 2019, has become one of

India's most visible people-driven movements for water conservation. Guided by the simple motto "Catch the rain, where it falls, when it falls," the initiative has led to the construction of over 1.2 million water conservation structures and the rejuvenation of more than 50,000 water bodies across 700 districts (MoJS, 2023). Villages in Bundelkhand, Rajasthan, and Maharashtra have shown tangible results, with rising groundwater levels and a renewed sense of ownership among communities in managing local resources.

Under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), water conservation has quietly evolved into one of the largest environmental regeneration efforts in rural India. More than 2.8 million water-related assets including contour trenches, check dams, and farm ponds have been created, directly benefiting over 60 million rural households (MoRD, 2023). The scheme not only provides livelihood opportunities but also strengthens

Table 1: Key Government Initiatives for Advancing Water Security in India

Key Program	Objective	Achievements (as of 2024)
Jal Jeevan Mission	Rural tap water supply	80% rural households covered
Atal Bhujal Yojana	Groundwater management	Implemented in 8,200-gram panchayats
Jal Shakti Abhiyan	Rainwater harvesting & recharge	1.2M water structures built
Amrit Sarovar Mission	Rejuvenation of traditional ponds	50,000+ ponds restored



the link between employment generation and sustainable natural resource management.

Together, these grassroots models demonstrate that when people become custodians of water, conservation moves beyond policy documents to become a measurable and sustainable reality at the local level.

### Mandate Water Audits: From Voluntary to Integral Practice

Water audits must move beyond being voluntary assessments to becoming an integral part of India's water governance architecture. Integrating them into flagship government schemes such as Jal Jeevan Mission (JJM), AMRUT 2.0, and the Smart Cities Mission would enable data-driven monitoring of water efficiency and resource optimization at every stage, from design to delivery.

By making water audits mandatory for industrial clearances, urban building approvals, and large public facilities, authorities can ensure that water efficiency is embedded right from the planning phase. Industrial establishments, townships, and commercial complexes can be required to submit periodic water audit reports to the Central Ground Water Authority (CGWA), aligning with the guidelines issued under the Environmental (Protection) Act, 1986.

The CGWA, as the nodal regulatory body, already mandates water use and groundwater abstraction audits for major water-consuming sectors. Expanding this framework to cover all high-water-use industries and urban utilities can institutionalize nationwide water accountability. This will help benchmark performance,

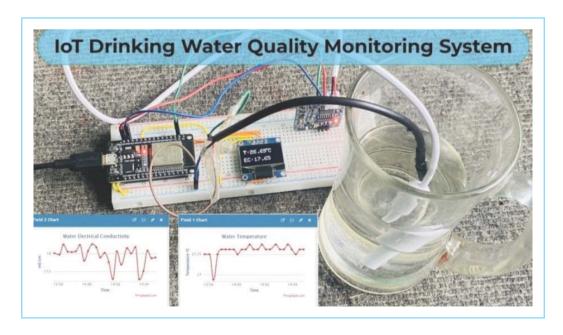
identify inefficiencies, and create an ecosystem where every drop is monitored, measured, and valued.

### Leverage Technology: Data as the New Water

Technology has emerged as one of the most powerful enablers in bridging India's water governance gaps. Smart tools — including IoT-enabled flow meters, GIS mapping systems, satellite-based monitoring, and Aldriven predictive analytics — can provide real-time insights into consumption, losses, and anomalies.

IoT sensors can track usage across industrial plants, urban water supply systems, and large buildings, while Al algorithms can forecast shortages or leakages before they escalate. Geospatial mapping, supported by CGWA and state groundwater departments, can identify critical extraction zones, enabling authorities to take timely corrective measures.

At a broader scale, integrating water audit data into a National Water Information Dashboard can enhance coordination between ministries, regulators, and local bodies. With transparent, time-stamped, and geotagged data, decision-making becomes not only faster but also more equitable and evidence-based. Cities like Bengaluru and Hyderabad are already piloting IoT-based water metering and AI leakage detection, achieving up to 18–22% reduction in non-revenue water. Singapore's Smart Water Grid and Israel's water metering network provide global templates that India can adapt through localized innovation. The Central Ground Water Authority's (CGWA) online 'NOCAP' system for monitoring groundwater abstraction is a significant step toward digital transparency.







### **Encourage Partnerships: Collaboration for Innovation**

Water management cannot remain the sole responsibility of government agencies. To drive largescale change, India must encourage public-private partnerships (PPP) that bring together innovation, finance, and technical know-how.

The private sector and start-ups can introduce advanced metering infrastructure, wastewater recycling technologies, and digital monitoring platforms, while research institutions can contribute to modelling and impact evaluation. Partnerships with organizations such as the Indian Green Building Council (IGBC), industry associations, and civil society organizations can help scale water audit practices in sectors such as real estate, healthcare, and manufacturing.

Such collaborations, supported and validated by CGWA's regulatory framework, can ensure that conservation becomes a shared mission. When data flows transparently between stakeholders, it encourages collective accountability and helps create a resilient water economy.

### **Empower Communities: Ownership at the** Grassroots

No policy can succeed unless people at the grassroots take ownership. Building water-secure communities requires turning awareness into action. Local water user

associations, panchayats, and self-help groups should be empowered to conduct community-level water audits, monitor local water bodies, and maintain recharge structures.

Awareness campaigns under Jal Shakti Abhiyan and Amrit Sarovar Mission can be strengthened to promote water literacy — teaching citizens to track and value water usage in their daily lives. Schools and colleges can be engaged through "Campus Water Audits," cultivating a generation that views conservation as civic duty.

Participatory approaches where local data is collected, verified, and used by the community can help ensure that water decisions are context-specific and inclusive. When communities understand their water budgets and have the tools to act, they transition from being consumers to custodians of the resource.

### Conclusion

India's journey toward water security is not about creating more policies but about strengthening the effectiveness of existing ones. The government's grassroots initiatives have laid a strong foundation, and tools such as Water Audits can ensure measurable outcomes. By embedding efficiency, accountability, and awareness into every layer of governance, India can turn its water challenges into pathways for resilience. The future of water security lies not in abundance, but in how intelligently and responsibly we manage every



drop. Water security is increasingly intertwined with climate resilience. With changing rainfall patterns and rising temperatures, India's per capita water availability could fall below 1,000 cubic meters by 2050, placing the country in the category of "water-scarce nations." Integrating climate adaptation strategies such as nature-based recharge systems and resilient infrastructure, into water governance is now essential for long-term sustainability.

### Way Forward: Toward a Water-Secure Future

To achieve true water resilience, India must institutionalize water audits across all sectors, ensuring

every drop is measured and optimized. The Central Ground Water Authority (CGWA) can lead this effort by creating a National Water Audit Repository, promoting transparency and data-driven accountability. Strengthening digital tools such as IoT sensors, GIS mapping, and Al analytics can make water monitoring smarter and more responsive. At the grassroots, empowering panchayats, schools, and communities to conduct local audits and water budgeting will sustain behavioural change. Finally, linking water efficiency to ESG standards and green financing can align economic growth with environmental stewardship, helping India evolve into a truly water-secure and water-wise nation.

### References

- 1. Ministry of Jal Shakti (MoJS). (2023). Jal Shakti Abhiyan: Catch the Rain Progress Report 2019–2023. Department of Water Resources, River Development & Ganga Rejuvenation, Government of India.
- 2. Ministry of Rural Development (MoRD). (2023). MGNREGS Annual Report 2022–23. Government of India.
- 3. NITI Aayog. (2019). Composite Water Management Index (CWMI) Report 2019. Government of India.
- 4. National Water Policy. (2012). Ministry of Water Resources, River Development and Ganga Rejuvenation. Government of India.
- 5. Central Ground Water Authority (CGWA). (2023). Guidelines to Regulate and Control Groundwater Extraction in India. Ministry of Jal Shakti, Government of India.
- 6. World Bank. (2023). India Country Water Resources Assistance Strategy: Water for Sustainable Growth. Washington, D.C.
- 7. Bureau of Energy Efficiency (BEE). (2022). Guidelines for Water and Energy Efficiency Audits in Industrial and Commercial Establishments. Ministry of Power, Government of India.
- 8. AMRUT 2.0 Mission. (2023). Urban Water Supply, Reuse and Recycling Targets Report. Ministry of Housing and Urban Affairs, Government of India.



**Dr Madhubanti Dutta** Manager, Water Audit Council

Dr. Madhubanti Dutta is an Environmental Economist with over a decade of experience at the intersection of climate change, water sustainability, and policy. She is presently associated with the Water Audit Council, where she leads initiatives on water governance, efficiency, and net-zero water strategies. Previously, she has worked with NITI Aayog Gol, engaging in policy development on industrial decarbonization and resource efficiency, and with the World Energy Council India, where she directed research on sustainable energy transitions and net-zero strategies.

Her research genre lies in regenerative agriculture, climate adaptation, and sustainable development economics, with her PhD focusing on climate resilience and carbon sequestration. Dr. Dutta has an extensive publication record covering topics such as water use efficiency, green growth, and sustainable urban transitions, and has also served in leadership and teaching roles at institutions like IIM Ahmedabad and Gujarat University.

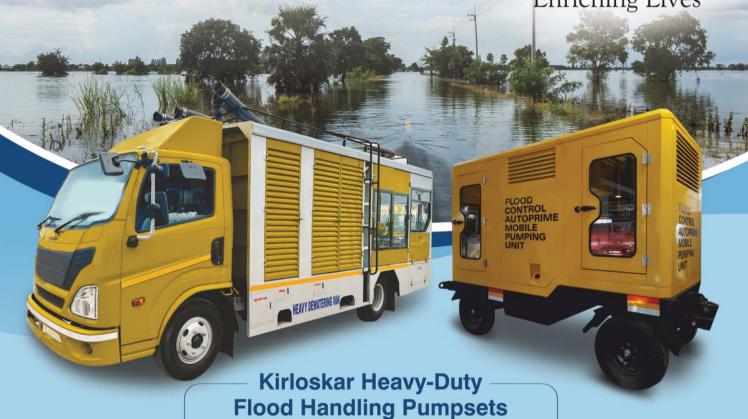
She can be reached at info@wateraudit.in

### Life as usual...

Inspite of flooding and water clogging during monsoons



**Enriching Lives** 



30 HP to 300 HP Pumpsets Discharge capacity up to 20,00,000 Litres Per Hour



Autoprime Pumpsets: Plug and Play | Push Button Start | Self Priming | Remote Monitoring

COMPLETE RANGE OF PUMPS & SYSTEMS FOR BUILDING & CONSTRUCTION SECTOR

Fire-Fighting Systems | Hydropneumatic Systems | Dewatering Pumps | Domestic Pressure Boosting Systems | HVAC

### KIRLOSKAR BROTHERS LIMITED

Established 1888 A Kirloskar Group Company

**OUR COMPANIES** 











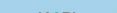
















## Water is Starting to Hurt Company Bottom Lines -Chandrashekhar Hariharan

Water security is no longer a peripheral sustainability issue. It is soon becoming a central financial concern. The challenges of climate variability and water stress are already influencing credit quality for companies, particularly for those with high water dependency and limited adaptation strategies. Both near-term disruptions and long-term exposure are factored into ratings and investor risk models. An ice-cream manufacturing company needing annually over 150 million litres of DM Grade water [with TDS of less than 5 ppm] is beginning to see that its profits are eroding thanks to cost of water, or lack of water for manufacturing on a regular basis every day.

For businesses, the imperative is clear: proactively managing water-related risks is no longer just about environmental stewardship but also about ensuring financial resilience. Failure to manage water-related risks could lead to higher borrowing costs, reduced investor confidence, and increased vulnerability to operational disruptions.

Organizations integrating water management into their strategic planning are better positioned to maintain credit strength, attract long-term capital, and build competitive advantage. Securing access to water is no longer just about sustainability—it's a business continuity issue with bottom-line consequences, says another organisation dedicated to smarter water management.

Some companies are embedding water-stress forecasting into enterprise-risk models, using scenario analysis to guide investment decisions and contingency planning. Some others use such scenario analysis for mapping what they are likely to get as rains over the 30-

70 rain-days of a year depending on where are you are located. In European markets, on the financing front, bonds are gaining traction as tools for directing capital toward sustainable water infrastructure. In 2024, the global 'blue bond' market expanded by 10%, funding projects that included wastewater treatment upgrades. rainwater harvesting systems, and freshwater ecosystem restoration. Such funding of water-related tech upgrades is yet to touch Indian business in a large way. But there are Net Zero Water Solution integrators in the Net Zero Water space who are making rapid inroads with options for green water infrastructure that save companies and institutions upward of 50 lac to € 1 Crore every year, with an investment of 2-2.5 Crore, that spells payback periods of an astounding 20-24 months—or an IRR of over 40-45%!

That takes us to another definitive and broader shift, where many public listed companies are starting to treat water-risk as a financial driver, not just as an ESG concern. It is obvious that these companies are likely to secure greater investor confidence, protect long-term margins, and lead in a resource-stressed future.

### **ESG** and Water-Use

In an ESG framework, reducing water-use cuts carbon emission because of the deep, energy-intensive process required to extract, transport, soften, and treat water for TDS, heavy metals and such. When a company conserves water, or finds alternate water options that avoid Borewells, tankers that transport, and long-distance municipal water, it also decreases energy-use by 30-50% or more. It is obvious that it will offer a measurable benefit for both the environmental



component of ESG and in the overall context of climate action.

For a discerning readership of water professionals that this IPT Journal draws, it is needless to overemphasise Water's direct link to carbon emissions. But as professionals, it will help to nudge companies to see the connection between water usage and GHG emissions that occur at multiple points in the water cycle. From **Extraction** or transporting it long distances from rivers, from treatment to cleaning and making water potable or suitable for industrial use, or the complex process of reducing TDS while ignoring the scary consequences of High concentrated TDS in Reject Water that users simply don't know how to deal with. It is a chemical and energy-intensive process. Governments stay silent on the aftermath of RO Reject water. Companies using the process shrug their helplessness since securing DM water with TDS of less than 5 mg/litre in some cases is an absolute necessity for their business operations to run. Distribution and maintaining pressure and pumping water through pipes consumes large chunks of energy. In some municipalities, water and wastewater systems can account for up to 50% of all energy consumption in the city, or at least public energy consumption in a city. Heating and cooling water demands energy, both in industrial settings and commercial buildings. Wastewater treatment demands high energy before they are safely returned to the environment.

If you carefully scan reports in the media, the new buzz word in industry is Water and ESG. 'Your next ESG risk report will be blue, not green," says one consultant who claims, "Forget Carbon for a minute... the next global ESG crisis is water. What is not known is that 40% of Indian industries is reeling under water-scarcity risks... some of them even face the risk of their profits being hurt thanks to the rising cost of water. Yet, strange as it may seem, very few corporate managements track or disclose such 'blue metrics'.

Many at middle and higher levels of management recognise the need for a shift to Water Accounting,

catchment-based disclosures for measuring damage to company bottom lines, and circular water systems. The writing on the wall is clear: Companies that are waterwise will face lower risks of business operations and enjoy a better reputation. Even investors on Dalal Street are beginning to watch 'blue data' of companies. The next sustainability race is not about net zero water... it is about net water positive.

When reducing carbon emissions, people tend to think of strategies like using public transportation instead of driving, using solar power instead of traditional electricity, and trying to limit their overall energy use. Many, shockingly, continue to fail to realize how deeply water use is intertwined with energy consumption and how water conservation is a key piece in achieving decarbonization.

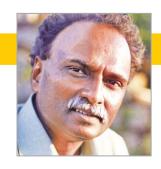
Even water managers within companies are not yet seeing the significant amount of carbon embedded in our water infrastructure. Rationalising water-use in a company without compromise on quantum of water needed, clearly is the direction to securing lesser carbon footprint. Water systems within buildings and facilities are a major source Carbon emission. In many Indian cities, water distribution and wastewater treatment account for 40-50 per cent or more of the city's energy consumption — and approximately 25 percent of all water is eventually 'wasted', driving up water-related energy use and carbon emissions.

Think about the water we use every day; it's been treated to be safe and usable, and then transported to us — both of which are energy-intensive processes that produce carbon emissions. When we waste water that's been treated and delivered, we're also wasting the energy that goes into distribution or treatment.

Every 1000 litres of water consumed generates 10 kg to 20 kg of carbon emissions. It is clear that a key piece of decarbonization is about being smarter about how we use water: trick is to control total water use, improve efficiency, and limit pollution of water.

### Chandrashekar Hariharan

The writer is founder-trustee at AltTech Foundation and Prem Jain Memorial Trust, and a Senior Fellow at CII IGBC. As a green building pioneer and a Net Zero Water/Energy exponent, he currently mentors startups to harvest over 5 billion litres of low-carbon, low-TDS water every year for a variety of commercial and industrial projects. He can be reached at Hariharan@AltTech.Foundation.





In contemporary construction and renovation projects, reliable hot water delivery has evolved from convenience to essential infrastructure. Residential complexes, hospitality venues, healthcare facilities, and educational campuses now require sophisticated water heating solutions that meet elevated performance standards. This reality positions architects and plumbing professionals as key decision-makers in selecting and implementing optimal hot water systems.

### **Understanding Today's Market Demands**

Modern consumers bring heightened awareness and specific expectations to hot water solutions. Their priorities center on four critical areas:

Energy Performance remains the primary concern, with buyers carefully weighing operational costs against initial investment. Long-term energy consumption often influences purchasing decisions more than upfront pricing.

Aesthetic Integration has gained prominence as consumers seek water heating equipment that harmonizes with interior design schemes. Compact, visually appealing units that blend seamlessly into living and working spaces are increasingly preferred.

Smart Technology Features continue gaining traction, with IoT-enabled systems offering remote monitoring, scheduling capabilities, and intelligent performance optimization through mobile applications.



Comprehensive Service Excellence extends beyond product quality to encompass professional installation,



complete system integration, and responsive ongoing support throughout the equipment lifecycle.



### **System Selection across Application Types**

Hot water requirements differ significantly based on application context, usage patterns, and installation environment, making informed product selection crucial for project success.

### **Residential Applications**



Single-family homes, apartments, and condominiums typically require systems serving bathrooms, kitchen facilities, and utility areas with varying capacity needs.

### **Commercial and Institutional Applications**

Hotels, medical facilities, educational institutions, and similar venues demand robust systems capable of continuous operation and high-volume hot water delivery.

### **Types of Water heaters**

Instant Water Heaters excel in point-of-use applications, particularly kitchen installations and secondary usage locations. The five-liter capacity segment shows strong

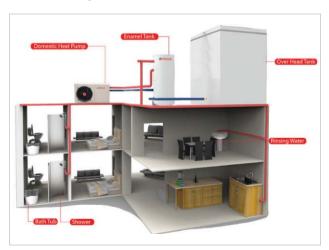
growth, particularly suited to compact urban residences and efficiency-focused households.

Storage Water Heaters provide reliable service for bathroom applications and multi-point distribution systems.

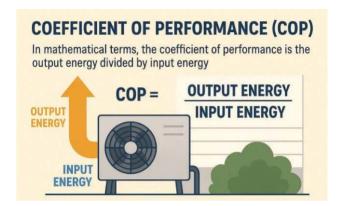
Tankless Water Heaters represent an emerging technology trend. Tankless Heat Exchanger **Technology** integrates heating elements and water pipes in a molded design. This enables rapid heat transfer without direct element-water contact, ensuring faster heating, longer component life, and enhanced user safety.



Heat Pump Water heaters deliver centralized, wholebuilding hot water solutions with outstanding energy performance, achieving a Coefficient of Performance (COP) of 4.4. This translates up to 75–80% energy savings compared to conventional alternatives, making heat pumps ideal for residential complexes and institutional projects. Their efficiency and low operating cost are accelerating adoption in India's sustainabilitydriven building sector.







Solar Water Heating offers sustainable solutions where roof space availability and solar exposure conditions support viable implementation.

### **Urban Infrastructure Challenges**

Accelerating urbanization and high-rise construction create unique operational challenges for hot water systems. Elevated water pressure in tall buildings can trigger thermal expansion issues, potentially causing water discharge from Multi-Function Valves during heating cycles. Without proper management, these conditions can result in water intrusion, interior damage, and significant safety hazards. Installation professionals must understand these dynamics and implement appropriate safety measures and pressure management solutions.

In high-rise buildings, water is often supplied by an overhead tank on the rooftop resulting in high water pressure at lower-level floors. To protect the taps and fittings from damage due to the high pressure, a pressure-reducing valve may have been fixed by the builder on the cold-water line to the water heater. The presence of the pressure reducing valve at the inlet to the water heater prevents thermal expansion during heating and results in water dripping from the MFV.

During the heating phase, the water inside the storage tank will expand and try to go back through the inlet line due to thermal expansion. But the pressure reducing valve on the inlet line will not allow the water to expand. This causes the water pressure inside the tank to increase, and the MFV will start dripping to release the pressure when it exceeds its setting of 8 bars/kg/cm² and protect the tank from damage. In the absence of a pressure reducing valve on the inlet line, thermal expansion is allowed by the flow of water back through the cold-water line.

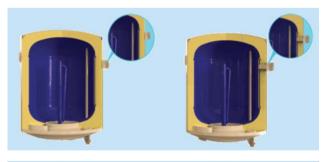
The solution is simple - provide a PVC tube from the

MFV to the nearest drain to drain the dripping water and prevent any internal fittings from getting damaged. This needs to be provided at the time of Installation of the water heater to avoid costly problems resulting from leakages from the safety valve. The architects or plumbing consultants should plan during the design stage itself for provision of drain of expanded water from the safety valve.



### **Key Technology Trends:**

Modern storage heaters also feature "Heat Retention Technology" with 35-40 mm thick PUF (Polyurethane Foam) insulation that keeps water hot for significantly longer periods. This superior insulation minimizes heat loss, reducing the frequency of reheating cycles and thereby lowering energy consumption. Further thermal bridges that transfer heat away from the tank are removed. The enhanced thermal retention translates to measurable operational cost savings while ensuring hot water availability when needed.







### **Addressing Hard Water and Corrosion**

Consumer research highlights that hard water and corrosion remain the most common challenges in Indian conditions. Engineers have addressed this with advanced 5AC (Anti-Corrosion) Technology and Scale







Guard Technology, designed to resist corrosion, minimize scale formation, and improve product durability in demanding water conditions.

### **Professional Specification Responsibilities**

Architects and plumbing professionals serve as primary specifiers whose decisions directly impact long-term user satisfaction. Client expectations include access to energy-efficient, dependable systems incorporating current technologies such as IoT integration, tankless designs, and heat pump efficiency. Beyond product selection, professional responsibility encompasses ensuring safe installation, sustainable operation, and extended system longevity.

The specification process requires balancing performance requirements with aesthetic considerations while maintaining focus on safety, efficiency, and operational reliability.





Ram Kumar Managing Director, Venus Home Appliances

Ram Kumar, managing director, leads the 60-year-old brand trusted by over 3.6 million customers worldwide. Under his stewardship, Venus has become one of the leading manufacturers of water heaters, No.1 exporter and the most certified range of water heaters. Under his guidance, Venus has expanded the portfolio to include storage, instant, tankless, and heat pump water heaters, while also driving innovation in solar water heaters, fans, heat pumps, and solar power solutions. Blending tradition with technology, he continues to strengthen Venus's position as The Hot Water Professionals in India and abroad.



### NOW, INTRODUCING

### SERENE SERENE PLUS



...Ensure serenity with advanced PP drainage systems



Green-pro certified sustainable building drainage systems

- Outstanding noise insulation
- Tried & tested 3-layer technology
- World class quality & superior design
- Precision sealing system
- Quick & efficient removal of waste
- Extremely tough & high impact resistance
- Excellent chemical & heat resistance
- Exhaustive product range from 40 to 200mm sizes



### **Total Piping Solution**

Jeevan bhar ka saath...

Listen to the voice of your soul, Not the noise of your drainage...



중 91-22-4043 0000 Toll Free No.: 1800-102-4707

 www.supreme.co.in @ pvc-pipes@supreme.co.in





## Impact of Internet of Things (IoT) in the Field of Plumbing

- Sharat V. Rao



### Introduction

The Internet of Things (IoT) refers to the network of interconnected devices that communicate and exchange data through the internet. In the plumbing sector, IoT technology is revolutionizing traditional systems by introducing intelligent monitoring, automation, and predictive maintenance. These smart plumbing solutions enhance water management, improve operational efficiency, and support sustainable practices.

### **Objectives**

- To analyse the role of IoT in modern plumbing systems.
- To identify the technical benefits of IoT-based plumbing.
- To examine the challenges and limitations of IoT integration in plumbing infrastructure.

### **IoT Integration in Plumbing Systems**

### **Smart Leak Detection**

IoT-enabled sensors are installed in pipelines and fixtures to detect leaks, pressure drops, or abnormal flow rates.

- Data is transmitted to a central control system or mobile application.
- Automated shut-off valves can be triggered to prevent water damage.

### **Water Usage Monitoring**

Smart meters and flow sensors continuously record water usage data.

- Enables real-time analysis of consumption patterns.
- Helps in detecting wastage and promoting efficient water use.



- Data analytics platforms use this information for optimizing supply and billing.
- These are also extremely useful in monitoring and recording the consumption pattern in all types of building sectors. This in turn aids in water saving thus contributing to overall sustainability.



### **Predictive Maintenance**

IoT sensors monitor system parameters such as temperature, pressure, and flow rate.

- Predictive algorithms identify potential failures before they occur.
- Minimizes unplanned downtime and reduces maintenance costs.
- Supports remote diagnostics by service technicians.
- Modern day pumps and equipment are equipped with these type of sensors which are normally app based.

### **Smart Water Heaters and Fixtures**

Connected plumbing appliances use IoT to optimize performance and energy usage.

- Smart heaters adjust operation based on usage schedules.
- Touchless or sensor-based faucets reduce water waste.

Integration with mobile applications allows remote control and automation.



### Integration with Building Management Systems (BMS)

In commercial and industrial buildings, IoT-based plumbing integrates with BMS for centralized monitoring.

- · Enhances coordination with HVAC and fire suppression systems.
- Provides data-driven insights for efficient building operation.

### **Technical Architecture of IoT-based Plumbing**

Component	Function
Sensors (Flow, Pressure, Leak)	Collect water system data in real time
Microcontrollers / Edge Devices	Process sensor data and trigger responses
Connectivity Modules (Wi-Fi, LoRa, Zigbee) & wired power systems	Transmit data to the cloud or control unit
Cloud Platform	Stores, analyses, and visualizes system data
User Interface (App / Dashboard)	Enables remote monitoring and control



### **Advantages**

- Real-Time Monitoring: Immediate detection of anomalies.
- Water and Energy Conservation: Optimized resource utilization.
- Reduced Maintenance Costs: Predictive maintenance reduces breakdowns and promotes planned shutdowns.
- Automation: Remote and autonomous system control.
- Enhanced Sustainability: Supports green building standards.

### Challenges

High installation and device costs.

- Data privacy and cybersecurity concerns.
- Compatibility issues with existing plumbing infrastructure.
- Requirement of skilled personnel for system maintenance and analysis.

### Conclusion

IoT has a transformative impact on the plumbing industry, enabling intelligent water management and predictive maintenance while supporting sustainability goals. Although implementation challenges exist, the ongoing advancements in IoT technology promise a future where plumbing systems are fully automated, efficient, and environmentally responsible. This will become one of the most important tool for Water Audit in the built environment.



Sharat V. Rao
National Joint Secretary, Indian Plumbing Association
Managing Editor, Indian Plumbing Today magazine
Convener, IPA Technical Committee

Sharat V. Rao is the Managing Director, Engineering Creations Public Health Consultancy Pvt. Ltd. Sharat V. Rao graduated from V.J.T.I, Mumbai, in 1977 and obtained his Master's Degree in Civil Engineering with Environmental Engineering subjects in 1979 from the same institute.

He is IPA National Joint Secretary and Convener, IPA Technical Committee. Prior to becoming the National Joint Secretary, he has been the Chapter Chair for IPA Mumbai Chapter for two terms. He is also fellow of the Institute of Engineers, Member of Indian Water Works Association (IWWA). He is Managing Editor, Indian Plumbing Today, the official journal of Indian Plumbing Association.

He can be reached on itsecretary@indianplumbing.org

## ZOLOTO® **VALVES**



Touching Lives Everyday..

Everywhere...





**Product Alloys:** 

**Forged Steel Cast Steel Stainless Steel Cast Iron Bronze Brass** 

### SERVING THE NATION FOR MORE THAN SIX DECADES







ZOLOTO INDUSTRIES

Head Office: Zoloto House, 11th. Mile Stone, Lambra, Nakodar Road, Jalandhar-144 026 (Pb.) India. Phones: 0181 4676666 (100 Lines) E-mail: corporate@zolotovalves.com www.zolotovalves.com





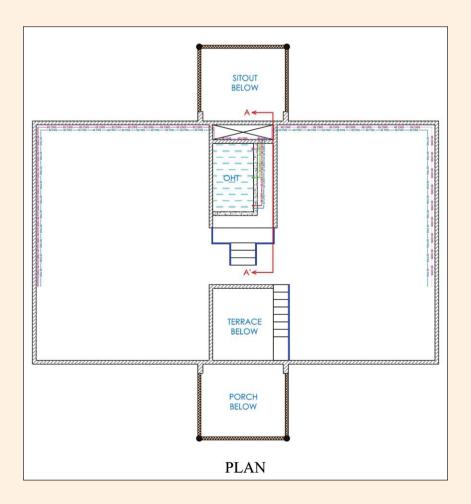
Certified

# AIR TRAPPED IN PIPE LINE - Kiran Joshi

I received a call from my client who owned a villa in a prime area of the city. It was a beautifully built villa. The problem he faced was low water pressure at the shower located in the first-floor toilet. The toilet was fitted with an exposed-type wall mixer of antique design and a 100 mm diameter ceramic rain shower.

I was initially involved in the project for waterproofing the wet areas and terraces, but not for the plumbing work. However, the client knew that I also work as a plumbing consultant, so he sought my help after the project.

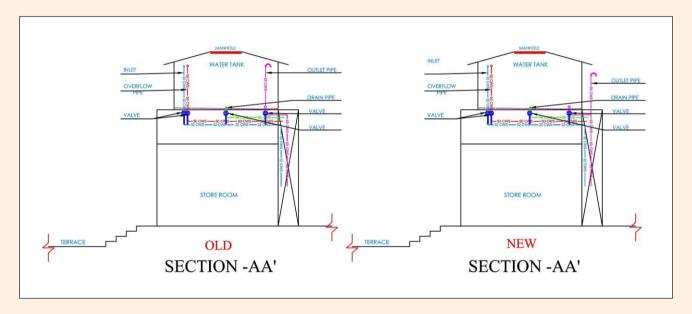
When I visited the site, I found a RCC overhead water storage tank located on the terrace above the store room, at a height of approximately 8 feet. The tank itself was raised by one meter above the store room floor, supported by a slab. The tank height was around 1200 mm. It was designed as an elevation feature with sloping roofs on all sides (as shown in the sketch). The inlet, outlet, drain, and overflow pipes were all installed inside the tank.



The terrace had main water lines of 65/50 mm diameter C-class G.I. pipes fitted with good-quality G.I. fittings. There were two separate lines — one for domestic use and another for flushing. Heavy-duty butterfly valves of a reputed brand had been used. Under normal conditions, the water supply was adequate, but occasionally, there was a complaint of low pressure at the first-floor shower unit.

The overall system appeared sound. Upon speaking with the caretaker, I learned that the low-pressure issue occurred after the cleaning of the water tank, which was done every six months. After refilling, air used to get trapped in the lines since all taps remained closed during filling. There was also no loop connection to the main line. The air vent of the tank was connected directly to the outlet pipe.

I have recommended installing a booster pump at the terrace level, but the client preferred a natural system without any maintenance. Therefore, I recommended adding a vent pipe outside the tank on the back side of the building. I also advised that after every tank cleaning, all ground-floor taps should be opened before refilling the tank, allowing the trapped air to escape. Once the air was released, the taps could be closed one by one.



After following these steps, the problem was completely resolved. The client was satisfied with the shower discharge. Since ceramic shower roses were used, maintaining a pressure of more than 0.5 kg/cm<sup>2</sup> was neither necessary nor possible.

This incident took place 30 years ago, and the system continues to function perfectly to this day.

### Kiran Joshi Chapter Chair, IPA Kolhapur Chapter

Kiran Vinayak Joshi is the Proprietor of the firm Kiran Joshi & Associates, a firm engaged in Public Health and Fire Fighting consultancy at Kolhapur. He has a specialization in institutional buildings, medical colleges, hospitals, hotels, villas etc and in finding water leakages & remedies.

He is a GPI Accredited Trainer and Chapter Chairman, IPA Kolhapur Chapter. He can be reached on kolhapur@indianplumbing.org





### **WPC Scholarship Visit 2024**



### Milind Shete

IPA Regional Director - North, East and Central Past Chairman IPA Nashik Chapter

The World Plumbing Council (WPC) is a global organization that brings together professionals from the plumbing industry to promote the importance of plumbing and sanitation in improving public health and environmental sustainability.

In the year 2023, Milind Atmaram Shete, IPA Regional Director- North, East and Central & past IPA Chairman Nashik Chapter was honored to be awarded the prestigious World Plumbing Council (WPC) Scholarship. This recognition provided him with a unique opportunity to participate in a technical study tour across China which is one of the world's most progressive nations in infrastructure and sustainable building practices.

This journey has laid a strong foundation for future cross-border learning and innovation in plumbing and sustainable infrastructure along with offering deepest gratitude to the WPC, IPA, and the professionals in China who shared their knowledge so generously.



### **Chronicle of Site Visits & Key Interactions**

The primary goal of the tour was to gain hands-on exposure to modern plumbing systems, sustainable water practices, and advanced infrastructure technologies, through direct engagement with Chinese industry experts, project sites, and manufacturing units. Below are the significant cities visited -

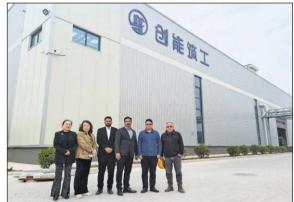
City: Beijing	Date: 3rd November 2024 – 6th November 2024
City: Xian	Date: 7th November 2024 – 12th November 2024
City: Wuhan	Date: 13th November 2024 – 14th November 2024
City: Wuhu	Date: 15th November 2024
City: Yixing Date:	16th November 2024
City: Shanghai	Date: 18th November 2024 – 19th November 2024
City: Chaozhou	Date: 20th November 2024 – 22nd November 2024
City: Guangzhou	Date: 23rd November 2024 – 24th November 2024
City: Foshan	Date: 25th November 2024 – 28th November 2024
City: Guanzhou	Date: 29th November 2024
City: Foshan	Date: 30th November 2024





# GLIMPSES

































#### **COMPARATIVE INSIGHT: INDIA VS. CHINA**

Criteria	China	India	
Work Culture	<ul> <li>Disciplined, process-oriented</li> <li>Strong adherence to timelines and standardized protocols</li> <li>Coordination challenges are common on multi-vendor projects</li> </ul>	<ul> <li>Flexible, often reactive</li> <li>Execution depends more on individual efficiency</li> <li>Coordination challenges are common on multi-vendor projects</li> </ul>	
Tools for Design & Execution	Extensive use of BIM, Revit, 3D coordination and clash detection from design to construction	<ul> <li>Predominantly AutoCAD-based</li> <li>BIM/Revit use is growing especially in high-end or large-scale projects only</li> </ul>	
Smart Infrastructure	<ul> <li>Widespread use of IoT, AI, Smart meter and BMS</li> <li>Real-time water monitoring, leak detection, automated control</li> </ul>	<ul> <li>Limited to isolated smart solutions (sensor taps, smart meters)</li> <li>Full-system automation still emerging</li> </ul>	
Quality Control	<ul> <li>Strong factory-based QC, batch testing, QR-coded traceability</li> <li>Standardized installation protocols</li> </ul>	<ul> <li>QC varies by site and contractor</li> <li>Common reliance on manual checks; less automation</li> </ul>	
Plumbing Installation Practices	Highly standardized with modular shafts, pre-assembled pipe clusters and factory built bathroom pods allow clean, fast & precise installations	Prefab adoption is growing but still limited. Conventional site based plumbing is more common.	
Rainwater Harvesting & Reuse	Modular tanks and large-scale storage systems are widely used in industries and public infrastructure.	Mandated in codes; implemented in many buildings but less common at city-scale or industrial scale.	
Grey water Recycling	Recycled water distributed via dedicated public pipeline networks; widely used for flushing and landscaping.	Mostly limited to individual buildings or green-certified projects; limited public reuse systems.	





#### **COMPARATIVE INSIGHT: INDIA VS. CHINA**

Criteria	China	India
City-Level Hot Water /Heating	In northern China, cities have district heating systems - energy-efficient central boilers distribute hot water/steam to buildings for floor heating.	No district heating concept. Hot water is generated at building or household level using electric, solar, or gas geysers.
Stormwater Management	China implements "Sponge City" concepts: permeable pavements, bioswales, rain gardens, and urban wetlands to reduce runoff and recharge aquifers.	<ul> <li>Still in early stages.</li> <li>Pilot projects in smart cities.</li> <li>Most cities rely on conventional drainage systems which are prone to clogging and overflow.</li> </ul>

The World Plumbing Council (WPC) Scholarship tour to China in 2023 was a deeply enriching experience, offering first hand exposure to a nation where sustainability, precision, and innovation are seamlessly integrated into infrastructure development. From modular rainwater harvesting systems and sponge city initiatives to BIM-driven design workflows and prefabricated plumbing solutions, the tour highlighted China's systemic approach to building smarter, more resilient cities.

Milind Shete Regional Director, North, East and Central, IPA Past Chairman IPA Nashik Chapter Founder & Director of Mukta Group

Milind Shete has executed several award-winning projects in categories such as institutional, commercial, township, and government buildings. Milind is actively engaged in industry leadership roles. He is Past Chair of Nashik Chapter, Life Member of IWWA, and a Green Plumber Accredited Trainer by IAPMO, where he continues to promote sustainability and skill development in the plumbing sector.

He can be reached on rdnorth@indinaplumbing.org



#### CHAPTER ACTIVITIES

### EK PED माँ KE NAAM

#### **Nashik Chapter**

1140 saplings were planted across 4 locations by IPA Nashik Chapter supported by ₹51,000 crowd-funding and saplings from the Forest Dept. & Lions Club under Ek Ped Maa Ke Naam.





#### **Kolkata Chapter**

100 trees were planted by IPA Kolkata Chapter under Ek Ped Maa Ke Naam.







## APCON Powered by Devyami

### **Smart Pump Starters**

1&3 Phase up to 10 kW







#### **Automations**

LEVEL · PRESSURE · TEMPERATURE TIMER · MULTI-PUMP

#### **Protections**

OV · UV · OL · UL · SPP · DRYRUN OVERRUN · OVERDUTY

#### **Monitoring**

WATER USAGE · ENERGY USAGE SYSTEM HEALTH



#### **Applications**



**Water Level Automation** 



**Pressure Automation** 



**Hot Water Circulation** 







#### CHAPTER ACTIVITIES

#### Visakhapatnam Chapter

Free Eye Check camp was organized by screening 55 MEP Technicians from different Infra Project sites.





Technical Session conducted by Sri. D. Tirumala Rao, S superintending Engineer, Quality Control, Vigilance and Enquiry, Water Resource Department, Dawaleswaram, Govt of AP on "Polavaram Project Head Works & Left Main Canal – Uttar Andhra Sujala Sravanthi" on 16th October.

#### **Trivandrum Chapter**

Installation of sixth IPA Student Chapter at "College of Engineering Trivandrum" by IPA Trivandrum Chapter.





#### **Bhubaneswar Chapter**

Installation of IPA Student Chapter at "C.V. Raman Global University" by IPA Bhubaneswar Chapter.





**HARMONY IN QUALITY AND DEVELOPMENT SINCE 1950** 



THE NO. 1 FORGED STEEL PIPE FITTINGS & VALVES



**OUR ASSOCIATES** 







































#### VIJAY CYCLE & STEEL INDUSTRIES

A8-A9 Focal Point, Jalandhar City 144 004 (Pb) India, Phones: +91-181-2604001/2/3 E-mail: info@vsfittings.com, marketing@vsfittings.com, sales@vsfittings.com Website: www.vsfittings.com



### NATIONAL

#### **OUTREACH**









Gurmit Singh Arora, IPA National President, inaugurated the ArchiServe symposium at Sal School of Architecture with other IPA dignitaries including Minesh Shah, IPA National Secretary, Apurva Shah, IPA Ahmedabad Chairman and other IPA office bearers with Ramanjyot Srivastava, Principal, Sal School of Architecture



Rohit Srivastava, IPA Manager Outreach met Rohit Kakkar, Deputy Adviser, CPHEEO, Ministry of Housing and Urban Affairs (MoHUA) to extend a formal invitation to join as a speaker at the 31st Indian Plumbing Conference and Exhibition.

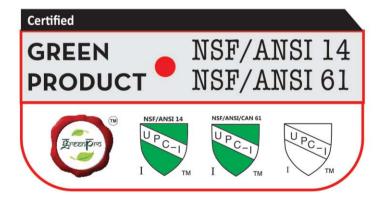


## TRU QUALITY TRU COMMITMENT

Offering world-class pipes and fitting solutions inspired by the quality commitment of its flagship brand Hindware over decades.

All TRUFLO manufactured products are lead-free.

## CPVC PLUMBING SYSTEM FOR HOT AND COLD WATER



#### Assurance to

- Last for generations
- Water quality retention





### NATIONAL

#### **OUTREACH 9**









Team COIPP met the principal and the faculty members of Goa Engineering college, in Goa on 10th October, 2025.



Sathi Datta, Danfoss Drives Solutions, met Umesh Kumar, IPA Manager - Brand Connect and Rohit Srivastava, IPA Manager -Outreach in IFAT 2025, Mumbai.



Ole Slumstrup, LJM Lind Jensen, met Rohit Srivastava, IPA Manager- Outreach and Umesh Kumar, IPA Manager - Brand Connect in IFAT 2025, Mumbai.







#### IF LIFE RUNS ON YOUR PHONE, WHY NOT YOUR WATER HEATER?

MEET OUR WIFI ENABLED STORAGE & HEAT PUMP WATER HEATERS - CONTROL, SCHEDULE, AND SAVE RIGHT FROM YOUR PHONE.





Splash Pro Smart

**Heat Pump Water Heater** 

Splash Pro Smart





Scale Guard **Technology** 





Switch on/ off from your phone

Heat Pump Water Heater







Micro Channel Heat Exchanger



**High Efficient** Compressor

10 years Guarantee on inner tank + 4 years Guarantee on heating element









Customer Care: 08144666999 | (S) +91 98840 64999 | www.venushomeappliances.com





#### Glimpses of IPPL 2025

#### **PUNE CHAPTER**



#### **INDORE CHAPTER**



#### **CHENNAI CHAPTER**







#### Glimpses of IPPL 2025

#### **NAGPUR CHAPTER**



#### **HYDERABAD CHAPTER**



#### **DELHI CHAPTER**







#### **GRAND FINALE**







## Nagpur IPPL 2025 Grand Finale

Winner Team- Ar. Durvesh Chaudhari & Ar. Dheeraj Velthuri 1st Runner up- Ar. Amruta Khaiwale & Ar. Vaishnavi Belkhode 2nd Runner up- Er. Makrand Bonde & Er. Ankit Sonewane





## Trivandrum IPPL 2025 Grand Finale



Winner- Ahammed.F & Sabari Sajeev, Plumbing consultants, Asecom Ventures Pvt Ltd.

1st runner-up - Aishwarya. H & Gitanjali. V .R , College of Architecture Trivandrum

2nd runner-up - Abraham Joshua Sumanam & Ajin. V S , Sumanam Engineering Sevices Consultants



**SANICUBIC 1 WP GRINDER PUMP**FOR LIFTING SEWAGE AND GREY WATER!

- FLOOR-STANDING INSTALLATION
- 1 GRINDER PUMP
- DISCHARGE HEIGHT: 13 M
- MAX. FLOW RATE: 15 M3/HR
- IP68 RATING
- HANDLES TEMPERATURE UP TO 70°C (5 MINS MAX)
- CONTROL PANEL SUPPLIED



SCAN THE QR CODE TO DOWNLOAD THE BROCHURE!

#### **CALL US TODAY**

## Water Audit in Govardhan Eco Village

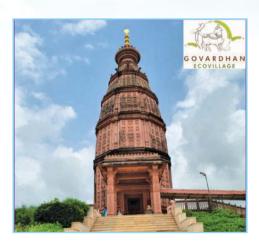


The Water Audit Council (WAC) successfully conducted a detailed water audit at the renowned Govardhan Eco Village (GEV), Palghar, Maharashtra, under the blessings and guidance of Shri Gauranga Das Prabhuji. With his kind coordination, cooperation, and the dedicated support of the GEV sustainability team, the audit was carried out seamlessly from September 2nd to 4th, 2025. Spanning over 100 acres, GEV serves nearly 1,400 people daily and exemplifies the integration of spirituality with environmental responsibility.



The WAC team assessed the site's water sources, consumption, reuse systems, and infrastructure efficiency, finding remarkable results — a Water Use Efficiency Index (WUEI) of 0.99, over 70% utilization of rainwater harvesting potential, and 100% reuse of treated wastewater for agriculture and landscaping. Recognizing these outstanding achievements, WAC proudly awarded GEV a 5-Star Rating Certification for excellence in sustainable water management.





This successful audit reflects WAC's steadfast commitment to promoting responsible and efficient water use across India through scientific evaluation and collaborative engagement. The recommendations provided by WAC — including the integration of IoT-based monitoring, expansion of rainwater harvesting systems, and awareness initiatives for responsible consumption — will further strengthen GEV's progress toward achieving Net Zero Water status. The Water Audit Council expresses its deep gratitude to Shri Gauranga Das Prabhuji and the GEV management for their unwavering support, vision, and leadership, which made this initiative a true example of harmony between spirituality and sustainability.

Date of Audit: September 4, 2025

The Free Press Journal, Mumbai, featured Govardhan Ecovillage (GEV) for earning a 5-star rating from the Water Audit Council (WAC), an initiative of Indian Plumbing Association (IPA) for exemplary water management and conservation. Dated: Oct 12, 2025.









## flow







## View



2500+ SKUs across categories

> Pan-India supply network

**Engineered** for Indian conditions

> **ISO-certified** manufacturing excellence

> > **BIS Certified Products**



#### **Press Meet and Curtain Raiser**



## 31st INDIAN PLUMBING CONFERENCE & EXHIBITION



The 31st Indian Plumbing Conference & Exhibition (IPC) moved one step ahead to Kolkata with the grand unveiling of official mascot on "Sustainable Smart Water Management" by renowned Indian film director – Aniruddha Roy Chowdhury, whose gracious presence added a touch of cinematic flair. 31st Indian Plumbing Conference (IPC) is a three-day event scheduled to be held in Kolkata, at the Biswa Bangla Milan Prangan (Milan Mela) from 13th to 15th November, Thursday – Saturday, 2025.

The event was graced by IPA's national and regional leadership, including:

· Gurmit Singh Arora, National President, IPA

- Chandra Shekhar Gupta, National Vice President, IPA
- Minesh Shah, National Hon. Secretary, IPA
- Abhay Pasari, Chairman, Pradeep Chakravarti, Vice-Chairman, Sandip Kumar Roy Choudhury, Past Chair, Samiran Banik, Hon. Secretary, IPA Kolkata Chapter and along with many stalwarts of IPA Kolkata Chapter

Against the backdrop of Kolkata's rich heritage and fastemerging urban infrastructure, the conference's mascot signifies our collective concern and commitment towards smart water management by the society and the building fraternity — together creating





The Indian Plumbing Association (IPA) honoured filmmaker Aniruddha Roy Chowdhury by conferring upon him the Honorary Membership of the IPA Kolkata Chapter.



an environment dedicated to conserving "Water"- one of the Panchbhutas, essential for sustaining life on Earth by all. The theme of the conference "Sustainable Smart Water Management" underscores the industry's collective emphasis on efficiency, innovation and environmental stewardship in water, sanitation and plumbing infrastructure in the City of Joy.

The event was held in high spirits, attended by senior journalists and reporters from both print and digital media, who came together to help propagate the conference's theme "Sustainable Smart Water Management" to the public at large. Water, being essential to all species living on our planet, was at the heart of the discussions. The journalists emphasized that raising public awareness on water conservation must be treated as a top priority, assuring their continued support in spreading this vital message while appreciating IPA's efforts in driving such meaningful initiatives, marking a visible symbol of innovation, sustainability, and the forward momentum of modern plumbing solutions.

#### Curtain Raiser on IPC Kickstarts with Deliberations on Urban Water Challenges – A Reality

The Curtain Raiser of the 31st Indian Plumbing Conference witnessed an inspiring session with nationally renowned Architect Dulal Mukherjee, the Guest of Honour, who shared his insightful thoughts on the occasion. In his address, he emphasized the importance of sustainable urban planning and efficient water management as integral components of modern infrastructure development.



The event also featured an engaging panel discussion on the theme "Urban Water Challenges - A Reality", moderated by Prof. Asis Mazumdar. The discussion

brought together a distinguished panel of experts- Ar. J.P. Agarwal, Dr. Tapas Kumar Gupta, Prof. Dr. Krishna A. Agarwal and Siddharth Bansal who shared their perspectives on the pressing issues surrounding urban water scarcity, management inefficiencies, and the need for innovative solutions to ensure water security for future generations.



The 31st IPC promises to be a landmark event for professionals shaping India's urban landscape including developers, architects, engineers, policymakers, sustainability advocates, and infrastructure consultants. With its convergence of innovation, policy, and implementation, the conference redefined the roadmap for smart plumbing and sustainable water management in India offering networking and business opportunities to the delegates. The 3- day conference will also witness a concurrent exhibition spread over 5500 sqm with 75+ exhibitors and 50+ experts from the different verticals of the water, sanitation and plumbing industry with cutting edge sustainable solutions.



I Save Water Pledge administered to the audience by Gurmit Singh Arora, National President, IPA.



## VIEGA HEATING & COOLING: TEMPERATURES VARY. PERFORMANCE DOESN'T.

Water is a driving force behind countless industrial processes — from cooling systems to low-pressure steam heating. Each application demands reliability and precision to ensure smooth, uninterrupted operation. Viega's advanced piping solutions deliver consistent performance across all conditions, preventing corrosion, deposits, and temperature fluctuations to maintain efficiency and long-term system stability.

Viega India

viega.india

in Viega India

+91-959-966-4368

www.viega.in

innovations@viega.in

 innovations 
 innovations 
 innovations 
 innovations 
 innovations 
 innovations 
 innovations







The session was led by **Dr. Ruby Makhija**Founder of Why Waste Wednesday

**IPA Vanita** successfully organized a national webinar on "Bin to Brain – The Importance of Waste Segregation at Source" on 29th August 2025. The session was led by **Dr. Ruby Makhija**, Founder of Why Waste Wednesday, a well-known community initiative that has been inspiring thousands to adopt sustainable waste practices.

The program began with a warm introduction to IPA Vanita by **Sujal Shah** from the IPA Pune Chapter, highlighting its vision to channelling women's leadership into creating awareness and building a more sustainable society.

The speaker, Dr Ruby Makhija, was introduced by **Ar. Komal Gilda** from the IPA Amravati Chapter, who set the stage for an engaging and thought-provoking session. The Q&A session was efficiently moderated by **Hemal Mehta** from the IPA Mumbai Chapter, allowing participants to clarify doubts and share their thoughts.

Dr Ruby Makhija delivered a powerful and an eyeopening talk on the urgent need for waste segregation at source. She explained that waste management is not just an environmental issue, but a matter of citizen ownership and responsibility. Her message was clear: waste does not end in the bin—it continues to impact land, air, and water. She emphasized unless each individual take responsibility for their own waste, the cycle of pollution will persist and that segregation at source is the first step to a meaningful change.

#### **Key Highlights**

- Impact of unsegregated waste on the environment and public health.
- The responsibility of every citizen in managing waste sustainably.
- **Simple household practices** that can reduce landfill pressure.



- The importance of early education and habit building among children.
- Inspiring citizens to shift from "blame" to responsibility and action.

The session witnessed enthusiastic engagement, with 135 participants from across India, including students, professionals, homemakers, and community leaders. The lively Q&A segment reflected the growing awareness and determination among citizens to adopt the Bin to Brain mindset in their daily lives.

IPA Vanita emphasizes that IPA take this movement further by initiating a "Bin to Brain Drive" in schools as part of its social obligation. By instilling sustainable habits in young minds, this initiative will ensure that the values of waste responsibility and environmental care are embedded in future generations.

The Bin to Brain webinar was not just an educational session but a wake-up call. With Dr Ruby Makhija's expertise and inspiring delivery, participants were reminded that sustainability begins at home and with each individual's choices.

The event concluded with a heartfelt vote of thanks delivered by **Avni Sikka** from the IPA Ahmedabad Chapter.



VALVES FOR PLUMBING, FIRE FIGHTING, HVAC, POWER, OIL & GAS, CHEMICAL, PHARMA, STEEL, SUGAR, CEMENT, SOLVENT, TEXTILE, MARINE











#### **OUR PRODUCTS**

BRASS / BRONZE / GUN METAL VALVES • CAST IRON / DUCTILE IRON VALVES • BOILER MOUNTINGS

FORGE FITTINGS • CAST STEEL VALVES • FORGED STEEL VALVES















#### **LEADER VALVES LIMITED**

### **CORRIGENDUM**

It has come to our attention that the Raipur Chapter Election Report published in the October 2025 issue of Indian Plumbing Today (IPT) contained certain inaccuracies and discrepancies.

We wish to clarify that the said report was published with certain inadvertent inaccuracies. The **correct and verified Raipur Chapter Election Report**, based on the **official information provided and confirmed by the Returning Officer (RO)** of the Raipur election, has been duly published in the **current issue of Indian Plumbing Today**.

We regret the error and any confusion it may have caused. The inadvertent inaccuracies are sincerely regretted.

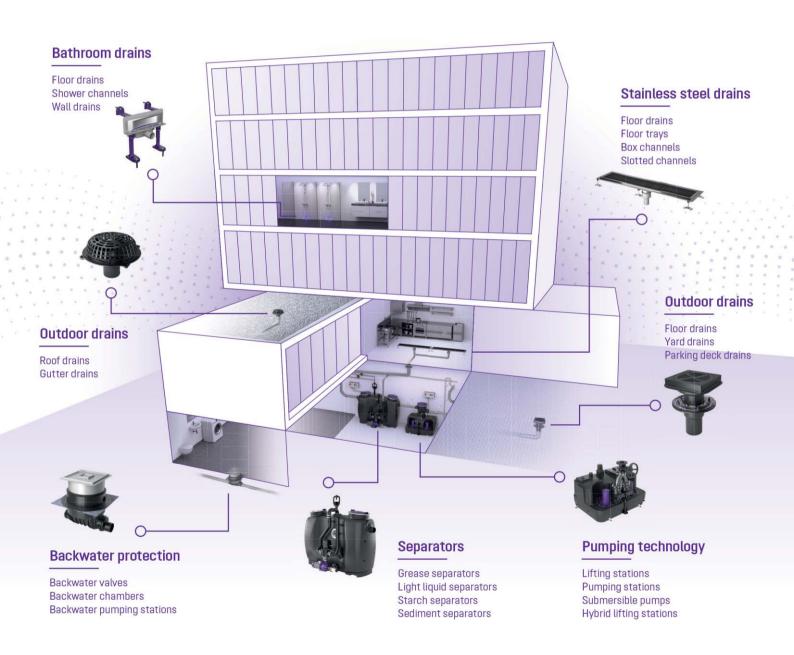
Editor Indian Plumbing Today



Everything from one source

## The KESSEL system

Leading in drainage





## CHAPTER NEWS



#### **IPA Raipur Chapter (Term 2025–2028)**

Elections for the Indian Plumbing Association (IPA) Raipur Chapter were conducted at ARIENA-the Boutique Hotel, Raipur on Wednesday, 20th August 2025, in conjunction with the General Body Meeting. The election process was duly supervised by the Returning Officer.

Some of the members were elected unopposed, while others were elected through voting, as detailed in the table below. All the elected members were subsequently administered the oath of office by the Returning Officer.

Returning Officer: Milind Shete, IPA Zonal Director (North, Central & East), Past Chair, IPA Nashik Chapter

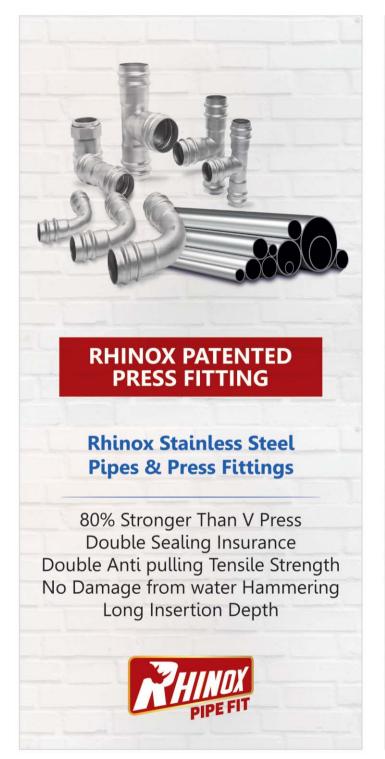
Election Date: 20th Aug 2025

Sl. No.	Name of Candidate	Elected for the post	Election Mode
1.	Ganesh N. Bisen	Chairman	Unopposed
2.	Rajkumar Prajapati	Vice Chairman	Unopposed
3.	Amaresh Sia	Hon. Secretary	Unopposed
4.	Amit Khare	Hon. Joint Secretary	Unopposed
5.	Utkarsh Chouhan	Hon. Treasurer	Unopposed
6.	Madhur Chandak	Exe. Committee Member	Voting
7.	Mustufa J Ahmed	Exe. Committee Member	Voting
8.	Farheen Khan	Exe. Committee Member	Voting
9.	Anurag Singh	NEC Member	Unopposed



Milind Shete – Returning Officer, Farheen Khan – EC Member, Amit Khare – Hon. Joint Secretary, Amaresh Sia – Hon. Secretary, Anurag Singh – NEC Member, Ganesh N Bisen – Chairman, Raj Prajapati – Vice Chairman, Mustufa J Ahmed – EC Member, Utkarsh Singh Chouhan – Hon. Treasurer

## WHAT FLOWS **WITHIN, DEFINES WHAT'S BUILT BEYOND.**RHINOX - WEPIT PIPING SOLUTIONS























#### INDIA'S LARGEST EXHIBITION OF WATER | SANITATION | PLUMBING



**Bringing Industry Together** 











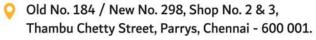
## SHEKHI TRADERS /



## SHEKHI<sup>®</sup> Smart Valves for Smart City

Importers of high quality forged Brass Valves, Brass Gauge Glass Cock Sets.





+91 98410 54899 +91 98401 76552







