



Message from the Director

Dear Members,

As we step into the new fiscal year, our industrial valve and actuator manufacturing sector is set for significant growth. Key drivers include technological advancements, infrastructure development, and rising demand in sectors like oil and gas, water and wastewater, power generation, and pharmaceuticals. Government initiatives such as Make in India, Digital India, and Smart Cities Mission further bolster our industry by encouraging domestic manufacturing and infrastructure investments.

Our strategic location and favorable trade policies position us as a prime export hub. Leveraging our skilled labor force, cost-effective manufacturing, and robust supply chain, we can capture international markets and establish ourselves as leading exporters. The global shift towards sustainable practices and renewable energy sources also offers opportunities for developing eco-friendly technologies.

IVAMA is dedicated to fostering a supportive business environment



Mitesh Javiya
Director, IVAMA

through collaboration with the government, industry associations, academia, and manufacturers. Emphasizing sustainable and inclusive growth, the New Industrial Policy promotes One Nation-One Standard, start-ups, and international branding.

Reflecting on our progress, the upcoming big event of Valve World Expo 2024 at Mumbai shall be a great effort by IVAMA Members.

In our newsletter "IVAMAspk", we aim to provide valuable updates on industry developments. Wishing

you a productive and prosperous fiscal year 24/25.

Warm regards,
Mitesh Javiya
Managing Director – GM
Engineering Private Limited

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PFAS RESTRICTION PROCESS AND ITS IMPACT ON THE VALVE AND SEALING INDUSTRY

Introduction

In February 2023, five EU countries—Germany, Denmark, the Netherlands, Norway, and Sweden—submitted a proposal to the European Chemicals Agency (ECHA) to impose new restrictions on per- and polyfluoroalkyl substances (PFAS). This proposal, which aims to mitigate the environmental and health impacts of PFAS, includes a blanket ban on over 10,000 chemicals. During the public consultation on the PFAS restriction dossier submitted by the five national authorities, which ran from March to September 2023, a record number of 5642 comments were received.

Given the high number of comments received, updating the assessments takes time, particularly for the uses of PFAS that received the most comments. For most of the submissions are found that approx. 70% of them are referring to Fluoropolymers with most of them are proposing/requesting a derogation or an exemption of Fluoropolymers from the PFAS REACH restriction. The Agency's scientific committees for Risk Assessment (RAC) and for Socio-Economic Analysis (SEAC) will evaluate the proposed restriction together with the comments from the consultation in batches, focusing on the different sectors that may be affected.

Overview of PFAS and Fluoropolymers

PFAS are synthetic chemicals known for their strong carbon-fluorine bonds, which impart high resistance to degradation, water, oil, and heat. These properties make PFAS useful in numerous industrial applications, including non-stick cookware, firefighting foams, and waterproof clothing. Fluoropolymers like Polytetrafluoroethylene (PTFE) and Perfluorelastomers are also part of the PFAS family. PTFE, widely used in sealing devices due



Mr. Sandy Van Den Broeck,
ESG Director,
European Sealing Association

to its low friction and high chemical resistance, is crucial in industries where seals must endure harsh conditions, such as the chemical, nuclear, aerospace, and petrochemical sectors.

Controversy and Exemption Argument for Fluoropolymers

Despite Fluoropolymers inclusion in the PFAS group, there is debate over whether it should be subjected to the same restrictions as other PFAS chemicals. Fluoropolymers (e.g. PTFE) differs from other PFAS in that Fluoropolymers do not pose a risk to human health or the environment as they are non-toxic, non-water soluble, non-mobile and do not bio-accumulate.

PTFE's unique properties make it indispensable in the sealing industry. Its low coefficient of friction ensures durability and longevity in seals, while its high chemical resistance allows it to function in corrosive environments.

Given the extensive evaluation PTFE has undergone under the EU's REACH regulation, which ensures its safe use, many argue that Fluoropolymers should be exempt from the proposed PFAS restrictions.

Industry Impact and Regulatory Landscape

The valve and sealing industry relies heavily on Fluoropolymers for seals, gaskets, coatings, and lubricants due to their exceptional performance in extreme conditions. The proposed PFAS restrictions could lead to significant changes in this industry, including:

1. Product Redesign and Material Substitution challenges

Valve and sealing manufacturers will need to redesign products using PFAS, necessitating significant R&D efforts to find and test alternative materials.

Suitable substitutes must offer similar resistance to chemicals, heat, and mechanical stress to ensure product reliability.

2. Increased Costs

The net present value of loss for EU fluoropolymer industry in case of limited derogation for 2025-2030 period can be in the range of €6.2 – 18 billion. NPV of relevant downstream markets for the same period can be as high as €4.8 – 7.2 trillion. R&D and testing new materials will incur substantial costs and require significant time.

Manufacturing processes may need modifications, potentially involving new equipment.

Establishing new supply chains for alternative materials will be necessary, involving new contracts and quality assurances.

3. Regulatory Compliance challenges

New materials must undergo rigorous testing and certification processes to

comply with safety standards, depending on the industry sector could take between 5 and 25 years. Enhanced documentation will be required to ensure compliance with new regulations, adding administrative burdens.

- **Market concerns**

A general ban on PFAS could affect industrial production and lead to economic problems. Effective market surveillance to ensure effective enforcement and a level playing field will be challenging to achieve.

The need to find PFAS alternatives can drive innovation, but so far no alternatives with comparable properties are available.

- **Environmental and Health Benefits**

During the REACH restriction process, alternatives must be fully scrutinised and assessed for their risks to human health and the environment, their technical and economic feasibility as well as their availability on the market.

Conclusion

The proposed PFAS restrictions by ECHA could present significant challenges for the valve and sealing industry. A general ban on PFAS should not be implemented as long as substitutes for all uses are not recognized and not all uses of PFAS are reflected in the restriction dossier.

About the Author

Mr. Sandy is Environmental & Social Governance Director for the European Sealing Association, a non-profit making trade association, representing the manufacturers and suppliers of sealing devices and materials across Europe. HE has over 45 years experience in Sealing and Packing technology and a forever learner. He loves Indian ginger tea.



19–20 September 2024

Hall 3, Bombay Exhibition Center
Mumbai, India

WORKSHOP

Sourcing of Castings – Valve Manufacturer and Foundry Perspectives

- Technical delivery conditions for sand casting procurement
- New product development (Foundry & Valve Manufacturer's perspectives)
- Design for manufacturability
- Types of casting defects and solutions from Foundry and Valve design perspectives

20th September | 10:00 am

Workshop Room 4

Hosted by:



Workshop attendees will receive a Certificate of Attendance.

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**To Attend the Workshop
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<https://valve.tst-india.com>**

TRIM THE TIME: FAST-TRACKING VALVE TRIM DESIGN WITH AUTONOMOUS CFD

'The heart of a control valve is its trim. Each industrial process is unique and demands specific flow control characteristics. The process requirements can be achieved by re-shaping the valve trim to get the desired valve characteristics. This blog shows how CFD simulations can be used to test the valve trim design to get the required flow characteristics'

Valve trim and valve characteristics

The operating parts of a valve which are exposed to the process fluid are referred to as 'valve trim' like stem, plug, and disc. Different valve characterizations may be achieved by re-shaping the valve trim. For instance, the plug profiles of a globe valve may be modified to achieve the quick-opening, linear, and equal-percentage characteristics.

• **Quick Opening:** Produces a large increase in flow for a small initial change in stem travel. Ideal for on-off applications.

• **Linear:** Produces equal changes in flow per unit of valve stroke regardless of plug position. Used in systems where the valve pressure drop is a major portion of the total system pressure drop.

• **Equal Percentage:** Produces the same percentage change in flow per fixed increment of valve stroke, commonly used in process control.

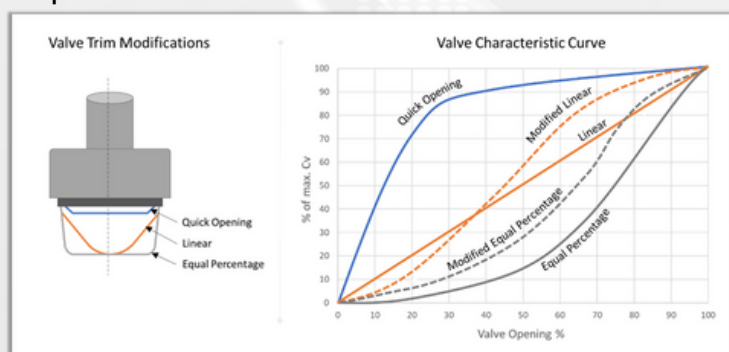


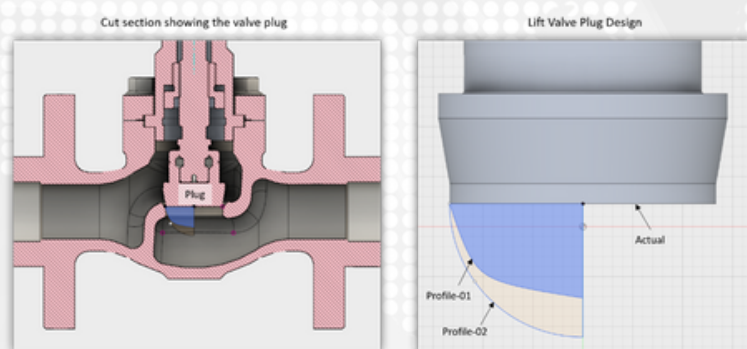
Figure 1 Valve trim shape and characteristics

The relationship between valve stem position and the flow rate through a control valve is described by the flow characteristic curve.

The inherent characteristic curve is a plot of the percent of valve opening vs. the percent of maximum flow coefficient (C_v). The C_v value is calculated from the flow rate at various openings for a fixed differential pressure across the valve.

Case study – Evaluating valve trim designs

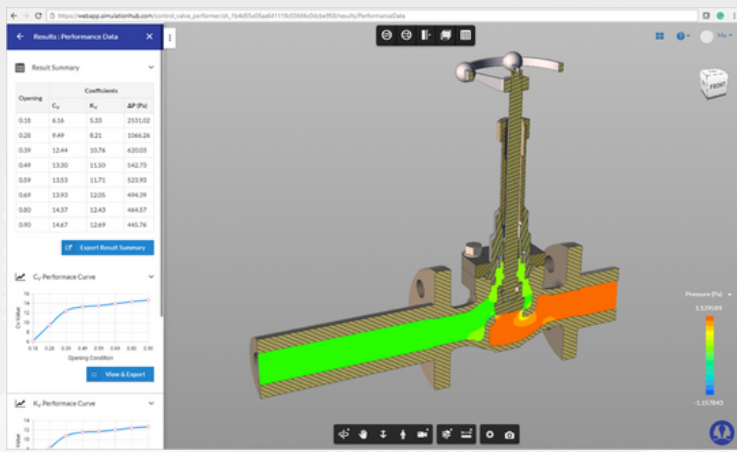
Let's explore the impact of valve design on the valve characteristics through a case study. Here we evaluated a lift valve of size DN28, modifying the valve plug design to observe changes in the characteristics curve. Autodesk Fusion360 was used for design modifications, and simulationHub's Autonomous Valve CFD app was used to extract C_v curves through a series of CFD simulations at different valve openings. The plug profiles considered are shown here.



Valve plug profiles considered for the study

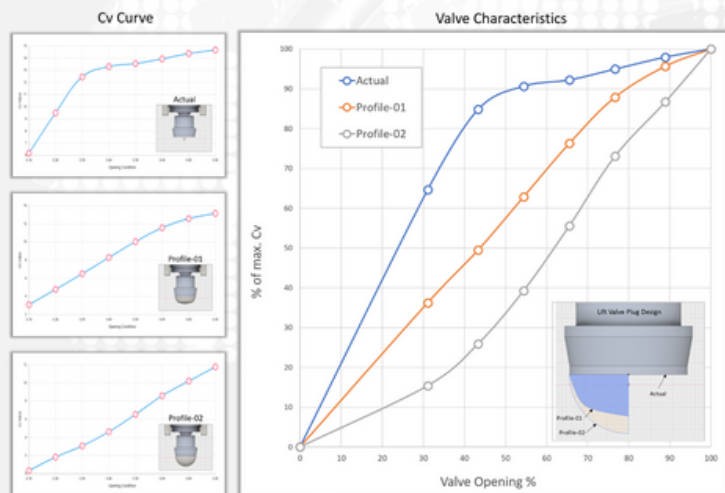
To plot the C_v curve, we simulated the valve for 8 openings for each profile, resulting in 24 individual CFD simulations. Each simulation involves fluid volume extraction, cleanup, meshing, solver inputs, post-processing, and plotting the C_v curve.

No worries, the CFD workflow is completely automated in the Autonomous Valve CFD (AVC) app. Simply upload the CAD model, set the valve openings, and the app handles the rest. All the inputs related to CFD including flow conditions, meshing, solver models/methods, convergence are autonomously selected by the algorithm. Simulations are carried out on AWS cloud, providing CFD results and C_v curves for all cases in under an hour.



CFD Results obtained using Autonomous Valve CFD app on web browser

The Cv curves obtained for all three plug designs were used to generate the flow characteristic curves. Changes in the valve plug design show variation in valve characteristics.



Impact of valve trim design on valve characteristics

It is evident from the results that the actual valve exhibited a quick opening nature, but modifying the plug profile altered the inherent characteristic. Profile-01 shifted the curve towards a linear characteristic, while Profile-02 inclined the curve towards an equal percentage characteristic.

Unleash the designer within

Gone are the days when control valve design simulations were exclusive to expert CFD engineers. Imagine bypassing the conventional way of designers providing their designs to simulation experts and then

wait for results, only to iterate and improve performance. Welcome to the new era of CFD democratization.

The Autonomous Valve CFD (AVC) app empowers design engineers to simulate their valve designs themselves, without any CFD expertise. This revolutionary tool allows design teams to work on multiple products and design options simultaneously, finding optimal design solutions in a shorter time frame.

Personally, as a CFD engineer, AVC Papp let me use CFD as just a tool and complete the design work. Usually, one gets carried away by the mammoth amount of work (fluid volume extraction, cleanup, meshing, solver, convergence, post, report) involved in carrying out the CFD simulation and loose the focus on the design aspect of the valve. AVC app made it easier and more realistic to focus on the designing part.

About the author

Praveen Kumar is a Product Marketing Manager at CCTech, the parent company of simulationHub's Autonomous Valve CFD product. He is deeply involved in the development of the Autonomous Valve CFD application, which aims to bring CFD and advanced technologies to all valve designers.

Praveen Kumar is a Mechanical Engineer with a Product Management certification from IIM Indore. With 15+ years of experience in CFD analysis, he has provided design and analysis solutions to various industries, specializing in valves.

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For further details, contact

R Muruganantham, Director General

Admin@ivama.in; +91 98412 89271

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Skill development is one of the focus areas in any organization which makes it more competitive and profitable. IVAMA Association offers a range of Technical Webinars which will be helpful to young and middle level engineers in Sales/Marketing, Design, R&D, SCM, Production and Quality functions of Valve and Actuator industry. Seven webinars are developed to provide deep understanding of basics of valves and pipes, different types of valves and actuators – how they interact with piping systems. They also cover codes and standards, various materials of construction, etc. and give expert guidance in making cost-effective technical decisions and tips for proper valve selection and application.

- **Webinar-1:** Basics of Valves
- **Webinar-2:** Different Types of Valves and Selection
- **Webinar-3** Codes and Standards for Valves and Actuators
- **Webinar-4:** Materials of Construction for Valve Shell Components
- **Webinar-5 :** Materials of Construction for Valve Trim Components
- **Webinar-6:** Valve Operation
- **Webinar-7:** Pressure Testing of Valves

This program is scheduled to be repeated from August 07, 2024.

For more details, use the link:
<https://www.ivama.in/events/tech-webinar-basic-program-7>.

SUSIN'S NOTABLE HIGHLIGHTS FROM 2023-2024

SUSIN, renowned as a leader in valve automation solutions since 2006. SUSIN has a Technology partnership with I-Tork Controls and KTC Systemtechnik.

Susin is known for its exceptional contributions to the process and valve automation industries. With cutting-edge technology and a passion for innovation, we have established ourselves as pioneers in the field.

Notably, Susin holds the distinction of being the first company in India to manufacture in Scotch yoke technology for pneumatic actuators. Our diverse portfolio includes Electric, Pneumatic and Electro-Hydraulic solutions for valve and damper automation, catering to core process industries such as Oil & Gas, Water Treatment, Food, Cement, Power and steel across the global market.

SUSIN has direct local service support offices in 10 countries across the globe. Among them, 3 countries only from the Middle East region.

Few Highlights of 2023-2024

- SUSIN has achieved remarkable history by getting our Indian plant approval from Qatar



Energy for the PNEUMATIC EMERGENCY SHUTDOWN/BLOWDOWN category and we are proud that the first Indian company to get listed in such a critical application vendor list.

- Recognizing the unique demands of the European market and the importance of localized expertise, SUSIN embarked on a strategic expansion initiative to establish a branch in Germany. This move reflects our unwavering dedication to meeting the evolving needs of our European customers and further strengthens our position as a global leader in actuation technology. "Our new arms to support European customers, we believe in localization. Our new brand KTC CONTROLS gives service and support to each European customer doorsteps. For European customers, we support through our European Brand "KTC CONTROLS"

INDUSTRY UPDATE: PROMOTION AND LEADERSHIP CHANGE



New Head of Marketing at Auma India

Auma India is pleased to announce that Mr. Nilesh C. Patil is now heading the Marketing department. He has over 28 years of experience in the field of pumps, valves, and actuators and has been a marketing veteran at Auma India for 19 years. Previously, he spearheaded the Marketing teams for the West and East regions at Auma India as Business Head, West and East regions

INDIA ATTRACTING INVESTORS WITH \$100 BILLION OPPORTUNITIES IN THE ENERGY SECTOR

India is offering global investment opportunities worth \$100 billion in the energy sector by 2030, according to the Minister of Petroleum and Natural Gas, Hardeep Singh Puri.

Puri stated that the government aims to increase the acreage under oil and gas exploration to one million square kilometers by 2030.

"Currently, only 10 percent of India's sedimentary basin area is under exploration. With the award of blocks under the forthcoming Open Acreage Licensing Policy (OALP) rounds, this will increase to 16 percent by the end of this year," the Minister said.

He made these remarks after the conclusion of "Urja Varta 2024," a two-day conclave organized by the Directorate General of Hydrocarbons (DGH).

The conclave brought together 400 industry experts, service providers, consultants, and academia members from both traditional and non-traditional energy sectors worldwide.

Puri announced the formation of a Joint Working Group comprising representatives from private sector exploration and production enterprises, national oil companies, the Ministry of Petroleum and Natural Gas, and the DGH to address industry concerns and improve the ease of doing business in the sector.

"We have already simplified and reduced 37 approval processes into 18, with nine of these processes now eligible for self-certification. However, we recognize the need to push these reforms further," the Minister added.

He also mentioned that India has significantly reduced the "no-go" areas in its exclusive economic zone (EEZ) by almost 99 percent.

JSW STEEL TO INVEST \$1 BILLION IN DECARBONIZATION OF CAPACITIES

Indian steel company JSW Steel plans to invest \$1 billion in decarbonization of capacities. This will contribute to the company's ambition to become carbon neutral by 2050 and reduce CO2 emissions by 42% (1.95 tonnes of CO2 per tonne of steel) by 2030. It is reported by Kallanish with reference to the quarterly report of JSW.

"We have developed a clear roadmap to become carbon neutral for all our divisions by 2050, well ahead of India's commitment by 2070," the company said.

The company also plans to increase Indian capacity to 42 million tons of steel per year by September 2027, and reach 50 million tons by 2031. It is estimated that capital expenditures for capacity expansion will be about \$500 per ton of products.

Over the next three years, JSW Steel expects capital expenditures at 644.34 billion Indian rupees (\$7.72 billion).

In the II quarter of 2024 (I quarter 2024/2025 fiscal year), JSW Steel consolidated steel production fell by 1% compared to the same period 2023 year, and by 6% compared to the previous quarter – up to 6.35 million tons. The reduction in production volumes is the result of planned shutdowns for maintenance.

Steel production at Indian enterprises fell by 1% y/y over the period and 6% q/q – up to 6.12 million tons. Capacity utilization was 87%. USA-Ohio reduced production by 4.2% y/y – up to 23 thousand tons.

The annual consolidated capacity of JSW Steel is 36.2 million tons/year. By 2027, this figure is planned to increase to 43.5 million tons.

JSW Steel USA, a subsidiary of the Indian JSW Steel, plans to invest \$110 million in the modernization of its steel plant in Baytown (Texas) using sustainable technologies and state-of-the-art equipment.

MEET

21
SEP 2024


7 PM
ONWARDS


MUMBAI

Participation Options

Sponsorships &
Table spaces

For further details, contact

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www.ivama.in

Dear Members,

We are excited to announce that IVAMA will be sponsoring the Instrumentation Experts Club (IEC) monthly meeting on 21st September 2024. The IEC, a prominent non-profit organization founded in 2002 by a group of dedicated instrumentation professionals, sets the standard for automation. It helps its members and other professionals stay at the forefront of knowledge in this highly competitive field while enhancing their leadership and personal career capabilities. IEC meetings are attended by members and their spouses, fostering a collaborative and engaging environment. You can read more about IEC here: IEC Website..

We believe this is an excellent platform to showcase your products and services to leading instrumentation experts in the country.

Ways to participate:

- Sponsorship – Includes a 30-minute presentation and table space for display and interaction. Cost: INR 1.5 lacs.
- Table Space – Table space for display and interaction. Cost: INR 30,000.

We look forward to your participation in making this event a great success

ADANI POWER, NTPC, AND JSW ENERGY COMPETE TO ACQUIRE SINNAR THERMAL PLANT

Some of India's largest power producers, including Adani Power, JSW Energy, Jindal Power, Vedanta Group, Torrent Power, and NTPC, have submitted expressions of interest (EOIs) to take over the debt-ridden Sinnar Thermal Power near Nashik, Maharashtra.

Indiabulls Power created the 1,350 MW plant, now a subsidiary of RattanIndia Power. Bidders have until later this month to submit an initial resolution plan with a ₹10 crore deposit.

The project spans 1,600 acres, with only 110 acres yet to be bought, allowing the capacity to be doubled by adding another 1,350 MW. However, coal supply remains a challenge. In December 2022, South Eastern Coalfields terminated the coal supply contract due to the lack of a power purchase agreement (PPA) and the non-commissioning of most plant units. Sinnar's PPA with Maharashtra State Electricity Distribution Company (MSEDCL) was terminated a few years ago.

Only one 270 MW unit is operational, and the remaining four units have functioned at full capacity for only a few hours. Land acquisition disputes may also exist, but the plant has good equipment from BHEL, Kirloskar, and L&T.

Sinnar was admitted to insolvency after the bankruptcy appellate court lifted a stay to commence corporate insolvency proceedings. Shapoorji Pallonji & Co. filed a recovery action for nonpayment of dues after completing part of the plant. Power Finance Corp and REC are the top creditors, with dues totaling ₹15,909 crore. Other creditors include Punjab National Bank, Axis Bank, Canara Bank, Bank of India, and LIC.

The plant is in the Sinnar Special Economic Zone, 50 kilometers from the city and 4 km from a highway. MSEB Holding Company and Mahagenco might bid to keep the asset under state control.

L&T TARGETS \$50-60 BILLION MIDDLE EAST INVESTMENT IN OIL-TO-CHEMICALS SECTOR

Larsen & Toubro (L&T) plans to invest \$50-60 billion in oil-to-chemicals (O2C) and petrochemical projects in the Middle East, starting from fiscal year 2025, as reported by Moneycontrol. Subramanian Sarma, L&T's whole-time director and president of energy, highlighted the significant opportunities in O2C projects anticipated for execution in FY25 or soon after.

The company aims to pursue these opportunities independently but is also considering joint ventures with major EPC firms for larger projects. While L&T's current pipeline for conventional projects remains strong, green energy initiatives, such as blue ammonia and carbon capture in the Middle East and green hydrogen in Europe, are gaining momentum.

L&T plans to enhance its focus on green hydrogen, involving electrolyser manufacturing and EPC projects. The company, India's largest construction and engineering firm with a market cap of \$60.11 billion, reported a consolidated total order book of ₹4.75 trillion for FY2024.

International exposure in the Middle East grew from 20% in Q1 2022 to nearly 40% by Q4 2024. Analysts have raised concerns about the company's heavy reliance on the Middle East due to geopolitical risks and commodity price fluctuations. L&T's shares rose 0.07% to ₹3,650.45 on July 15, 2024. The board will review the April-June quarter results on July 24.



Warm welcome to THE NEW MEMBERS



**Ghatge Patil Industries,
Kolhapur**



**Jayant Engineering
And Marketing,
Gandhinagar**



**Klinger Industrial Products,
Bangalore**



**Mevada Engineering,
Mumbai**



**Pennant Engineering,
Pune**



**Rapid Valves,
Palghar**



**R&D Multiples,
Mumbai**

IMPORTANT UPCOMING EVENTS



**Sept 17-20, 2024
Houston, USA**



**Sept 19-20, 2024
Mumbai, India**



**Nov 4-7, 2024
Abu Dhabi, UAE**



**Dec 3-5 2024
Düsseldorf, Germany**



International Valve Trade Fair & Conference

19–20 September 2024

Hall 3, Bombay Exhibition Center, Mumbai, India

WORKSHOP SCHEDULE

THURSDAY, 19TH SEPTEMBER 2024

Use of Electrical Actuators in Building IIOT Capabilities in Process Industries

Hosted by: **auma®**
Solutions for a world in motion

Time: 10:00 am

- Talk about the increasing use of IIOT/ AI in Industrial Manufacturing
- Increased capabilities of Electric Actuators
- Information capture by Electrical Actuators and storage of this information on Cloud
- Practical Demonstration

| Workshop Room 2 |

Valves for Liquefied Natural Gas (LNG)

Hosted by: **L&T Valves**

Time: 11:35 am

- **Overview:** Gain insight on how LNG is transforming the global energy landscape
- **Role of Valves:** Understand the critical function of valves in isolating and controlling flow within LNG processing and storage systems as well as downstream industries
- **Design and Performance Requirements:** Learn the essential features that LNG valves must possess to operate safely, reliably and efficiently in LNG service, including cryogenic capability
- **Valve Selection:** Interactive session on LNG valve portfolio and selection of valve type, parameters, materials, etc. based on industry and customer standards and specifications
- **Innovations:** Introduction to Smart Valves and Remote Monitoring

| Workshop Room 3 |

The Age of Digital Gasket Training (DGT)

Hosted by: **TEADIT®**
Scaling for a safer and more sustainable

Time: 02:00 pm

- The intricate world of industrial piping and pressurized systems
- How a gasket dictates the integrity and safety of operations
- Proper gasket installation
- How to overcome challenges, inconsistencies, and inaccuracies with gasket installation
- The use of the Digital Gasket Training (DGT) as an innovative software solution, transforming the gasket assembly process
- The use of the FRP Leakage Test machine

| Workshop Room 1 |

Flow Control Solutions - Challenges for Valves in Hydrogen Service

Hosted by: **Valmet**

Time: 03:45 pm

- Hydrogen behavior compared to other gases
- Understanding associated risks when selecting valve vendors for hydrogen service
- Importance of material selection and valve design when used in hydrogen service

| Workshop Room 6 |

FRIDAY, 20TH SEPTEMBER 2024

Sourcing of Castings – Valve Manufacturer and Foundry Perspectives

Hosted by: **IVAMA®**
INDIAN VALVE AND ACTUATOR MANUFACTURERS ASSOCIATION

Time: 10:00 am

- Technical delivery conditions for sand casting procurement
- New product development (Foundry & Valve Manufacturer's perspectives)
- Design for manufacturability
- Types of casting defects and solutions from Foundry and Valve design perspectives

| Workshop Room 4 |

Generative AI: The Catalyst for Digital Transformation and End-User Success in Valve Manufacturing

Hosted by: **simulationHub**

Time: 10:00 am

- Develop an understanding of GenAI technology
- Learn how GenAI can streamline workflows
- Explore case studies and insights
- Implement data-driven decision making
- Utilize GenAI to meet code compliance
- Develop data engineering capabilities
- Explore strategic opportunities for organizational growth using AI

| Workshop Room 5 |

Integrated Water Management Solutions

Hosted by: **BERMAD**
Water Control Solutions

Time: 11:40 am

- Importance of equitable distribution of water in municipal and irrigation networks
- State government revenue generation through smart metering and remote cloud-based SCADA control
- How to control, measure, and monitor efficiently in long-term sustainable projects
- Pump station surge problems, pipe bursts, loss of valuable water, and their solutions
- Pressure management in large municipal water networks

| Workshop Room 7 |

Inclusions:

- Visitors will get complimentary tea/coffee. • Workshop attendees will receive a Certificate of Attendance.

To register for the workshops, visit <https://valve.tst-india.com/>

www.valveworldindia.com

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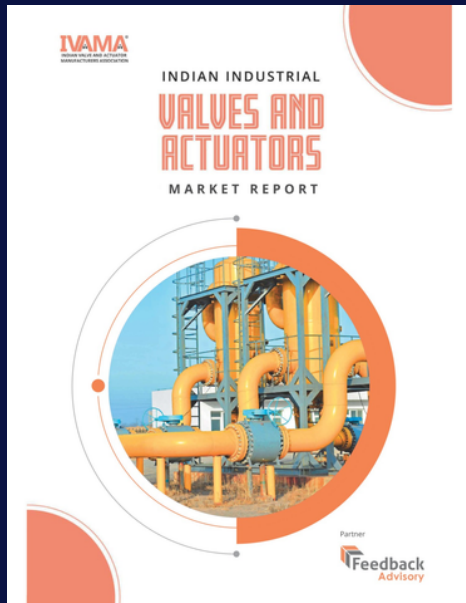
Organised By



To Attend the Workshops

Pre-Register Free at

<https://valve.tst-india.com>



PURCHASE OF MARKET REPORT

The second edition of the bi-annual report on the Indian industrial valves and actuators market that was unveiled at the annual conference is available for purchase.

For more details, kindly contact admin@ivama.in

About IVAMAspk

"IVAMAspk" is a quarterly newsletter published by the IVAMA Association, delivering valuable insights into forthcoming projects, businesses, individuals, innovations in product development, IVAMA's ongoing activities, events, and various other relevant industry specific topics.

IVAMA Association encourages its members to contribute news about their companies, appointments to senior positions, and product advancements to help ensure the success of IVAMAspk.

For feedback and membership, please contact:



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