



Cover Story:

Valmet advances valve technology

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fluid under control

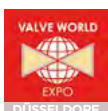
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A word from our Chairman, Bruno Martin

Dear Valued Attendees,

As the Valve World Conference Chairman, I am delighted to welcome you to the 2024 event here in Düsseldorf, Germany. Welcome to the 13th International Valve World Expo & Conference!

It's wonderful to see our global community gathered here once again. As you reconnect with familiar faces and meet new colleagues from around the world, I hope you're feeling the energy and excitement that makes the Valve World Conference such a special event.

Over the next three days, you'll be immersed in a program that our international Steering Committee and the KCI Publishing team have carefully crafted to be both highly relevant and practically applicable to your work. From technical sessions and interactive workshops to keynote speeches and panel discussions, every aspect of this conference is designed to provide you with valuable insights and connections.

This year, we're focusing on three critical themes shaping our industry: energy transition, digitalisation and standardisation. You'll find sessions addressing these topics alongside essential industry staples such as maintenance, severe service and fugitive emissions. We've also included discussions on renewable energy, green and blue hydrogen production and strategies for decarbonising the supply chain – all crucial topics in our evolving global energy landscape.

I encourage you to engage fully with the program. Ask questions, participate in discussions and share your own insights. Your active participation not only enhances your own experience but contributes to the collective knowledge of our community.

For our young professionals, don't miss the dedicated track we've designed especially for you. It's an excellent opportunity to accelerate your learning and connect with industry veterans.

As you navigate the conference, please take a moment to thank our sponsors, steering committee members and organisers. Their hard work and dedication have made this event possible.

Don't miss out on our live demonstrations on December 4th, where you'll have the unique opportunity to witness cutting-edge valve technologies in action and engage directly with industry experts about the latest innovations.

I look forward to meeting many of you over the next three days. Let's make Valve World Conference 2024 a memorable and impactful experience that shapes the future of flow control.

Enjoy the conference!

*Bruno Martin,
Technip Energies*



Valmet advances valve technology

Valmet has established itself as a global leader in flow control solutions and services, with a rich history spanning nearly 70 years. The company's journey began in 1956 when Neles Oy was born out of a passion for valve products and services. This long experience has proven that true reliability is achieved through years of dedication and continuous innovation.

By the Valve World team

The company's expertise extends far beyond the energy transition sector, encompassing a wide range of process industries. Valmet's valves, valve automation and pump technologies are renowned for their quality, reliability and highest safety standards, serving diverse sectors including pulp and paper, bioproducts, renewable energy, oil and gas refining, mining and metals processing, chemicals and various other process industries.

In this exclusive interview, Valve World speaks with Ville Kähkönen, Director of Renewable Energy and Gases, and Andreas Pischke, Global Industry Manager for Renewable Energy and Gas. These industry veterans offer insights into Valmet's innovative solutions and their significant impact across various industrial sectors.

Kähkönen, with over 15 years of experience in flow control technologies, brings a wealth of knowledge in renewable energy applications. Pischke, having spent two decades specialising in industrial gas systems, offers a unique perspective on the challenges and opportunities in the evolving industrial landscape. Together, they provide a comprehensive view of Valmet's strategies and technologies that are shaping the future of industrial flow control.

Valmet leads the field in managing industrial fluid control, with innovative solutions across their product line. The Neles 6D ball valve family stands out as a prime example, showcasing the company's dedi-



Andreas Pischke, Global Industry Manager, Renewable energy and gases, Valmet's Flow Control business line

cation to creating reliable, high-performing equipment that meets the diverse needs of multiple industries.

Neles 6D ball valves provide the necessary reliability for end users

The Neles 6D product family offers a comprehensive solution for API 6D compliant ball valves and API 6DX-compliant actuators, covering a wide range of sizes and variants. This versatility makes it a one-stop-shop for customers across various industries, all while meeting global standards and codes.

Kähkönen emphasises the importance of reliability in valve design: "In our industry, reliability is paramount. We only bring products to market that are based on field-proven technologies and have undergone rigorous testing in our state-of-the-art labs. In addition, they are also certified by independent third parties to be capable for SIS applications." This commitment to reliability ensures that Valmet's customers can trust the Neles 6D valves to perform consistently in any given application.

Many of Valmet's unique flow control innovations have stood the test of time, becoming industry standards. This is particularly true in the pulp and paper industry, where several of their solutions have significantly improved processes and set new benchmarks.

"We're not just focused on how our valves perform when they're first installed. We consider the entire lifecycle, from manufacturing to end-of-life." - Ville Kähkönen



Ville Kähkönen, Director, Renewable energy and gases, Valmet's Flow Control business line

One of the key innovations in the Neles 6D family is its ease of integration with smart technologies. "API 6DX actuators and smart controllers with advanced diagnostics and predictive maintenance capabilities can be easily integrated with the Neles 6D," Kähkönen explains. "This allows our customers to monitor valve performance in real-time, predict potential issues before they occur and optimise their maintenance schedules."

The Neles 6D also stands out for its sustainable environmental performance. "These valves are designed to be fire safe and virtually emission-free," Pischke notes. "This makes them an excellent choice for customers in the growing renewable energy industry and hydrogen industry where safety and environmental concerns are paramount."

To further enhance the customer experience, Valmet offers the Nelprof sizing and selection tool. "This cloud-based online sizing tool helps our customers get the sizing just right," Kähkönen says. "It's part of our commitment to providing not just a product, but a complete solution that includes support throughout the valve's lifecycle."

Neles XH ball valves design features



The Neles XH ball valve has been designed to deliver benefits across its entire lifecycle, not just during its active operating life.

One of the most notable improvements in the Neles XH is its reduced size and weight. "We've managed to decrease the valve's weight and dimensions without compromising on reliability, robustness or performance," Kähkönen explains. "It's like the valve has lost fat without losing any muscle."

"The carbon footprint of the Neles XH is significantly lower than traditional valves of similar capacity," Pischke adds. "This aligns with our customers' increasing focus on reducing their environmental impact across their supply chains."

The valve's design also facilitates easy maintenance, with readily accessible wear parts. "We've designed the Neles XH with serviceability in mind," Kähkönen says. "This not only reduces downtime for our customers but also extends the overall lifecycle of the valve, further contributing to its sustainability."

"Operational safety is a given for any industrial valve," Pischke notes. "But with the Neles XH, we've taken it a step further by improving safety during manufacturing, transportation, handling and installation." This comprehensive approach to safety includes features like new detachable lifting mounts for larger valves, improving manoeuvrability and safety during installation.

The Neles XH is particularly well-suited for demanding applications in the oil and gas and petrochemical industries. "We've seen excellent performance in high-pressure, high-temperature hydrogen applications," Kähkönen reports. "So, what's really exciting is how well it will perform in renewable energy applications, particularly in blue and green hydrogen production."

The valve's versatility is further enhanced by its range of material options. "We offer the Neles XH with various proven valve body material technologies and coatings, including our proprietary Q-trim technology," Pischke explains. "This allows us to tailor the valve to specific process conditions, ensuring optimal performance and longevity."

Innovative butterfly valve enhances Valmet's offerings

Among Valmet's recent innovations is the introduction of what many consider the most versatile butterfly valve on the market. The new platform delivers new functionality while leaning on field-proven technologies, offering a solution for extensive range of applications, superior process efficiency and a minimised environmental footprint. Its robust and reliable design, coupled with ease of maintenance



Neles NDX intelligent positioner offers a linkage-less design, a full suite of diagnostic capabilities and extremely low air consumption.

Sustainability: Core to Valmet's business strategy

Valmet is committed to enabling its customers to achieve completely CO₂-neutral production by 2030. The company has set ambitious targets for itself:

- Reduce CO₂ emissions by 80% in its own subsidiaries by 2030
- Cut CO₂ emissions by 20% in the supply chain
- Minimise waste through efficient material use and recycling
- Extend the life of production facilities through well-planned maintenance

Valmet actively replaces fossil fuels with renewable energy sources, purchases CO₂-free electricity and district heating and implements energy efficiency improvements across its facilities.

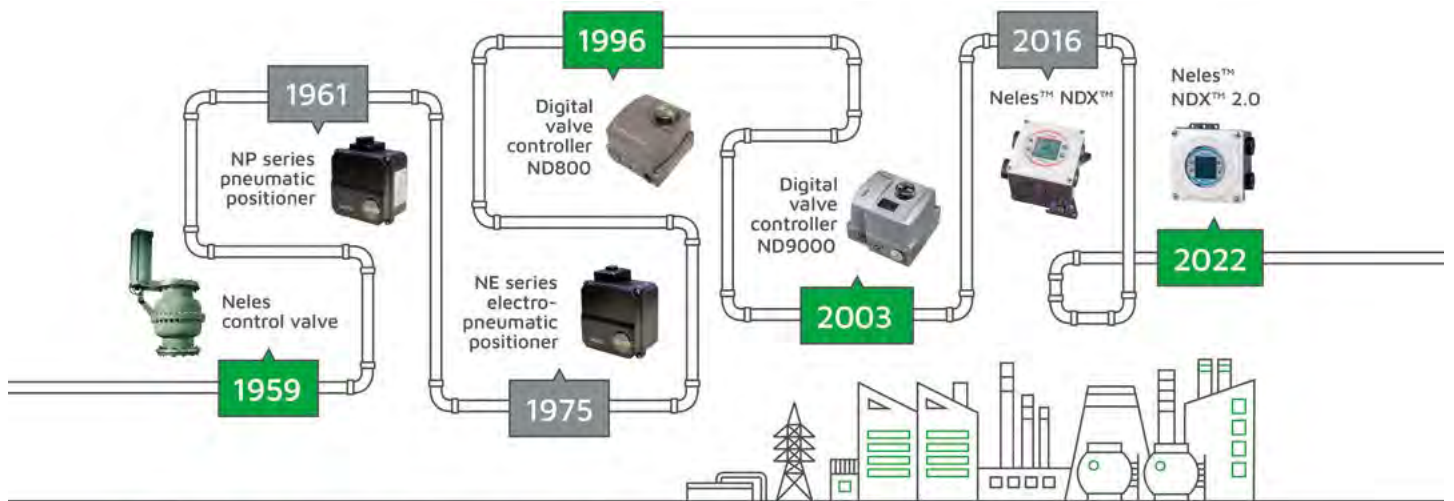
The company's mission is to convert renewable resources into sustainable results, providing technology crucial in mitigating climate change and global warming. Valmet has a long track record in solutions that convert biomass into renewable energy and recyclable products, as well as new bio-based end products like biogas, biofuels and biomaterials.

throughout its entire lifecycle and an infinite number of configurations, has generated significant interest across various industries.

"This new butterfly valve represents our commitment to continuous innovation and customer success," Kähkönen explains. "We've taken a well-established valve type and reimagined it to meet the evolving needs of modern industrial processes."

Valmet integrates sustainability across operations

Sustainability is not just a buzzword for Valmet; it's a fundamental principle guiding their operations and product development across all business areas. This commitment is exemplified by innovations like the Neles NDX 2.0 intelligent valve controller.



Reliability and performance with over 60 years of valve controlling experience

Valmet launched its first digital valve controller in 1996 demonstrating a long history of expertise and innovation in flow control technology.

“The Neles NDX 2.0 represents what we call ‘sustainability 2.0,’” Kähkönen explains. “It can potentially reduce air consumption by up to 90% compared to competing valve positioners. This translates into significant reductions in energy consumption and CO₂ emissions.”

To help customers quantify these benefits, Valmet offers an online calculator for estimating potential savings. “We’ve made it easy for our customers to see the real-world impact of the NDX 2.0,” Pischke adds. “Our online calculator allows them to input their specific parameters and see the potential energy and cost savings.”

This calculator is accessible via the Valmet website or by scanning the QR code:

Scan this QR code to access Valmet’s valve controller energy saving calculator.



But the benefits of the NDX 2.0 go beyond just energy efficiency. Pischke elaborates, “The improved control performance and superior accuracy of the NDX 2.0 have a substantial impact on process quality and output. This leads to better yield and profitability due to reduced process variability.”

The NDX 2.0’s versatility is another key feature. “It’s a universal solution that works well with both linear and rotary valve applications,” Kähkönen notes. “This opens up possibilities for numerous customer segments to benefit from smart valve control technology.”

Valmet’s commitment to sustainability

extends far beyond individual products. Pischke explains, “When we look at valves from a sustainability perspective, three key aspects stand out: emissions, internal tightness and lifecycle view. We’re constantly improving our capabilities in these areas.”

Emissions control is a critical focus. “By eliminating fugitive emissions into the atmosphere, we’re not just reducing local health and safety risks on-site, but also minimising the environmental impact of the process on our climate at large,” Kähkönen says.

Internal tightness is equally important. “Ensuring internal tightness helps eliminate waste of valuable flow media and energy consumed by pumps in the process,” Pischke notes. “In flaring processes used to release pipeline pressure, ensuring we’re not releasing anything extra into the atmosphere is crucial.”

The lifecycle view is integral to Valmet’s approach to sustainability. “We’re not just focused on how our valves perform when they’re first installed,” Kähkönen explains. “We consider the entire lifecycle, from manufacturing to end-of-life. This includes running longer tests on all our valves to ensure sustained tightness and durability of wear parts over time.”

Valmet applies eco-friendly practices to its manufacturing processes as well. “We use predominantly recycled metal in valve production and ensure that correct recycling markings and instructions are always found on our products,” Kähkönen adds. “We’re also constantly looking for ways to reduce waste and energy consumption in our production facilities.”

The company is also driving the development of valve materials and coatings to

meet the demands of new and emerging industries. “We’re seeing a wider range of feedstock being refined in new biofuel production processes,” Pischke notes. “Our materials research is focused on developing solutions that can handle these challenging new environments while maintaining our high standards of performance and durability.”

Solutions for energy transition and advanced automation

Valmet develops advanced valve and automation solutions for a wide range of process industries, with a particular focus on renewable energy applications. Their expertise spans various sectors, including pulp and paper, bioproducts, oil and gas refining, mining and metals processing, and chemicals.

“Hydrogen is set to play a major role in the energy transition,” Pischke states. “While it’s emerging in the public arena now, we’ve been working with hydrogen for decades in sectors like refining and chemicals.” This long-standing experience gives Valmet a significant advantage in addressing the unique challenges posed by hydrogen applications.

Kähkönen elaborates on these challenges: “Hydrogen is the smallest molecule, which makes fugitive emissions a critical concern. We’ve developed specialised packing and seal solutions to address this. Additionally, we have to consider the potential for hydrogen embrittlement in our material selection process.”

Valmet’s work with oxygen has prepared them well for hydrogen applications. “We’ve installed over 30,000 valves for

oxygen use globally. This experience gives us a strong foundation for tackling hydrogen-related challenges," Kähkönen notes.

The company's valves have been proven in both atmospheric alkaline pressure and pressurised alkaline electrolyzers. For SOECs high temperature valve solutions are available. "Our segment, butterfly, ball and other designs cover practically all valve needs in the energy transition, whether for hydrogen, oxygen or carbon dioxide service," Kähkönen adds.

Pischke highlights Valmet's involvement in cutting-edge projects: "We're supplying valves for green hydrogen production facilities and carbon capture projects. Our valves are being used in various Direct Air Capture plants, supporting the growing carbon capture industry."

Valmet's expertise extends beyond valve design to comprehensive automation solutions, including both plant-wide control systems and valve-specific automation. Their Valmet DNA Automation System stands out as a comprehensive solution for the growing hydrogen industry and other process sectors.

"What sets Valmet apart is our ability to provide both valve and automation systems," Pischke explains. "This integrated approach offers significant advantages to our customers. By choosing Valmet as a supplier for both valves and automation systems, customers benefit from seamless compatibility and optimised performance across their control and valve systems." Another service Valmet offers is for valve OEM and skid manufacturers who require engineered valve automation solutions for their own valves. By leveraging Valmet's qualified experts and decades of experience, customers receive precise configuration for their valve. The company's centrally located valve automation centre in Germany allows for rapid response to customer needs across Europe. "Our modular design in valve automation allows us to quickly adjust orders when specifications change," Pischke notes. "This adaptability sets us apart in the market."

The Neles NI series heavy-duty scotch yoke actuator and Neles BI series pneumatic cylinder actuators exemplify Valmet's valve automation capabilities.

These "top works" can be easily configured to suit a wide range of applications and industrial requirements.

Valmet's approach to both plant-wide automation and valve automation considers sustainability. "The optimised plant layout in our German facility and our advanced logistics design aren't just about making our customers' lives easier," Pischke concludes. "We're also minimising the environmental impact of our operations by shipping small parts in bulk and providing short transportation routes for heavy assemblies within Europe."

Advancing sustainable solutions across process industries

Industries worldwide face significant challenges in sustainability and energy transition. Valmet's innovative technologies play a key role in addressing these challenges. The company's offerings, from the reliable Neles 6D and innovative Neles XH ball valves to their comprehensive automation systems and valve-specific automation solutions, are setting new standards across many process industries.

Valmet has proven expertise in demanding applications like hydrogen and oxygen service. However, their capabilities extend well beyond the energy sector. Their solutions serve a wide range of industries including pulp and paper, bio-products, oil and gas refining, mining and metals processing, and chemicals.

The company's strong commitment to sustainability and innovation puts them at the forefront of industrial technology development. As Kähkönen explains, "Our main goal is to provide value for our customers across all process industries by being a dependable, long-term business partner. Whether we're supporting energy transition efforts or improving traditional industrial processes, our commitment continues long after the equipment is delivered, lasting throughout its entire lifespan."

This comprehensive approach, combining expertise in valve technology, automation systems, and a deep understanding of various industrial processes, makes Valmet a significant contributor to efficiency, sustainability and innovation in process industries.



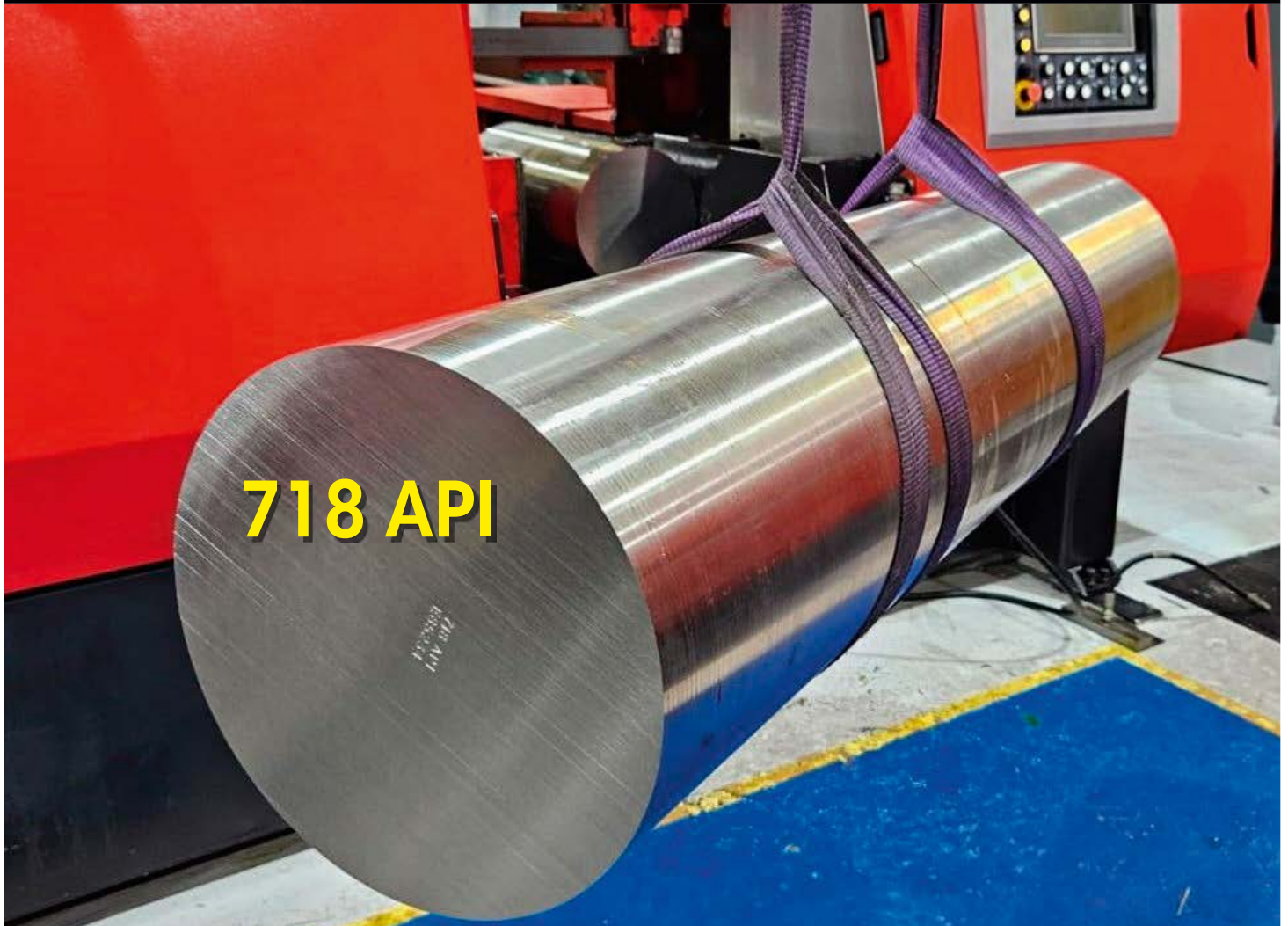
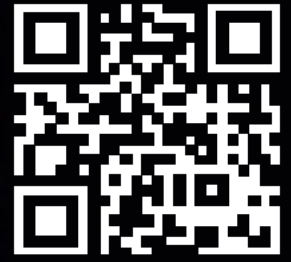
Valmet's proven flow control solutions offer reliability for the energy transition.

For more information, visit valmet.com/flowcontrol or scan the QR code.













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VALVE WORLD CONFERENCE 2024

DAY ONE - 3 DECEMBER > ENERGY TRANSITIONS

MORNING PROGRAM	KEYNOTE		
9:15 - 9:30	OPENING ADDRESS CHAIRMAN, <i>Bruno Martin, Technip Energies</i>		
9:30 - 10:15	KEYNOTE 1: Valve preservation challenges, <i>Roberto Muscarà / Salam Alsowaidan, Saudi Aramco</i>		
10:15 - 10:45 COFFEE BREAK			
10:45 - 11:15	KEYNOTE 2: The move toward "green" valves for the oil & gas industries, with a certified & low carbon footprint, <i>Alfred Kruijer, Shell</i>		
11:15 - 12:00	KEYNOTE 3: API specification for valves for hydrogen gas service, <i>Jonathan Geleijns, SLB</i>		
12:00 - 13:30 LUNCH BREAK			
AFTERNOON PROGRAM	ROOM 14	ROOM 15	ROOM 16
13:30 - 15:10	Technical session / INNOVATIONS <i>Moderator: Dave Anderson, Score</i>	Technical session / MATERIALS <i>Moderator: Ron Merrick, Fluor</i>	Workshop / FUTURE <i>Moderator: Gobind Khiani, Enbridge Inc</i>
13:30 - 13:55	The technical development of valves for liquefied hydrogen, <i>Mitsuru Hosokawa, KITZ Corporation</i>	Hydrogen effects on polymeric materials, <i>Simona Macchi, Effeciemme Componenti srl</i>	Valves for future energy – Riding the hydrogen wave, <i>Sumith S, Venkatesh NR, L&T Valves Limited</i> Next-gen pipeline maintenance: The move to pig ball valve technology, <i>Zahra Farrokhi / Neşe Yayla, Batu Valve Türkiye</i> CheFEM 3: AI-Enhanced computer simulated rapid gas decompression damage of seals, <i>Sijmon van der Wal, Composite Analytica</i>
13:55 - 14:20	Valves for CCUS applications: addressing challenges of CO ₂ service with cost-effective solutions, <i>Marco Sparisci, DAFRAM S.p.A.</i>	Optimizing protection: Coating selection for molten salt valves using FactSage™, <i>Fadila Khelfaoui, Velan Inc</i>	
14:20 - 14:45	The new control valve era towards the energy transition. Advantages of the DDV against the traditional control valves, <i>Leire Colomo Zulaika, Ampo Poyam Valves</i>	Cryogenic paek polymers for LNG and LH2, <i>Christian Salvatori, Victrex Europa</i>	
14:45-15:10	Automated detection & minimisation of flaring & venting, <i>Dave Anderson, Score</i>	Empowering net-zero ambitions with precision sealing & material solutions, <i>Hiroataka Sato, H₂ Application Engineer, Omniseal Solutions</i>	
15:10 - 15:30 COFFEE BREAK			
15:30 - 16:45	Technical session / DESIGN <i>Moderator: Alberto Seveso, Neway</i>	Technical session / EMISSIONS <i>Moderator: Muktiadi Rahardjo, Shell</i>	Workshop / HYDROGEN <i>Moderator: Knut Riegel, Emerson</i>
15:30 - 15:55	Isolation valve designs for electrolyser applications, <i>Rene van der Gaag, Emerson</i>	Comparative analysis of packing materials and geometries in high-pressure needle valves for hydrogen applications at 700 Bar, <i>Enric Palau Forte, Redfluid & Universitat Rovira i Virgili</i>	Fugitive emissions of a valve with gaseous hydrogen: tests on seals and tests on valve, <i>Emmanuel Sauger, Cetim</i> Getting ready for liquid hydrogen, <i>Emiel Lechevallier, Ventil Test Equipment</i> Fugitive emission sealing of hydrogen for flanges and valve stems, <i>Ralf Vogel, European Sealing Association</i>
15:55 - 16:20	Cryogenic high performance valve for hydrogen aircraft, <i>Nozomi Matsumura, KITZ Corporation</i>	Magnetic applications for severe services, <i>Nick Runyon, MagDrive Technologies</i>	
16:20 - 16:45	Challenges in torque reduction and lifecycle time increase for quarter turn trunnion ball valve, <i>Luca Paggi, Flowserve</i>	Emissions Low E Valves – 20 years in the making, <i>Paul Heald, Bonney Forge / Rodney Roth, PILLAR America</i>	
16:45	NETWORKING ON THE EXHIBITION FLOOR		

VALVE WORLD CONFERENCE 2024

DAY TWO - 4 DECEMBER > DIGITALISATION

MORNING PROGRAM	KEYNOTE		
9:10 - 9:15	OPENING ADDRESS CHAIRMAN, Recap 1 st day and outlook 2 nd day, <i>Bruno Martin, Technip Energies</i>		
9:15 - 9:45	KEYNOTE 1: Why RBI is a critical element of your digitalisation efforts, <i>Dave Anderson, Score</i>		
9:45 - 10.15	KEYNOTE 2: Global fugitive emissions reductions with a total cost of ownership (TCO) view, <i>Bronson Pate, MagDrive Technologies</i>		
10.15- 10:45 COFFEE BREAK			
10.45 - 12.00	<p>PANEL DISCUSSION</p> <p>The advancements, challenges, and future prospects in the digitalization of valves. How digital technologies are transforming valve design, manufacturing, operation, maintenance, and overall efficiency.</p> <p><i>Moderator: Ron Merrick, Fluor</i></p> <p><i>Panellists: Mike Austin (UCL University College London), David Heiny (SimScale), Michael Howells (Emerson), Scott Moreland (Quadax Inc.), Wojciech Zmudzinski (bp America Inc.)</i></p>	<p>Young Engineer Program (10:30-12:00)</p> <p>Introduction to valves</p> <p><i>Moderator: David Anderson, Score</i></p> <p>After the presentation the participants will be divided into groups and visit stands on the Expo floor. Each group will be led by an experienced valve specialist.</p>	
12.00 - 13.30 LUNCH BREAK			
AFTERNOON PROGRAM	ROOM 14	ROOM 15	ROOM 16
13.30 - 15.10	<p>Technical session / MAINTENANCE</p> <p><i>Moderator: Ayo Kilani, Nigeria LNG Limite</i></p>	<p>Technical session / ADDITIVE MANUFACTURING</p> <p><i>Moderator: Mohanned Tarabzouni, Saudi Aramco</i></p>	<p>Young Engineer Program (13:30-14:45)</p> <p>Interactive discussion</p> <p><i>Moderator: Muktiadi Rahardjo, Shell</i></p>
13:30 - 13:55	Combining process anomaly detection with continuous valve diagnostics, <i>Jules Oudmans, UReason / Perry Jaspers, Yara International</i>	Zirconium 705C valve development by laser powder bed fusion, <i>Alexandre Bois-Brochu, CMQ - Centre de métallurgie du Québec</i>	<ul style="list-style-type: none"> - Expo visit highlights - Case studies / debates
13:55 - 14:20	ENKI: Remote planning and management system of plant turnaround with focus on industrial valves maintenance, <i>Tiago Remedio, Axpr Valve Science</i>	Challenges in the development of new valve designs with additive manufacturing, <i>Steve Freitas, IMI CCI</i>	Create teams and conduct debates on current challenges and future trends in the valve industry. This engaging activity will encourage critical thinking, problem-solving and the exchange of ideas among participants.
14:20 - 14:45	Plantweb Insight™ Valve Health Application - A Valve Reliability Suite™ solution, <i>Andrea Tarantino, Emerson</i>	Optimizing titanium valve production: E-PBF for small batches, reduced inventory, and fast delivery, <i>Simon Blomé, AIM Sweden AB</i>	
14:45 - 15:00 COFFEE BREAK			
15:00 - 16:40	<p>Technical session / DESIGN / NEW TECHNOLOGY</p> <p><i>Moderator: Gobind Khiani, Enbridge Inc.</i></p>	<p>Technical session / MATERIALS</p> <p><i>Moderator: Claire Dwyer, Fluor</i></p>	<p>Live demonstrations</p> <p><i>Moderator: Tony Smart, Neway</i></p>
15:00 - 15:25	Data-driven computational fluid dynamics models and their applications, <i>Justin Bernard, Bray International</i>	The digital approach to better castings, <i>Mike Austin, UCL University College London / Kevin Smith, Digital Manufacturing Technologies Ltd.</i>	Live demo 1 (15:00-15:30): A practical guide to helium and forming gas for fugitive emission testing, <i>Emiel Lechevallier, Ventil</i>
15:25 - 15:50	Hole chamfer effects on cavitation and pressure dissipation in perforated plates, <i>Stefano Malavasi, Politecnico di Milano University</i>	Evolution thanks to technology, <i>Klaus Schiebel and Michael Piller, SCHIEBEL Antriebstechnik</i>	Live demo 2 (15:30-16:00): Optimize valve health: Practical techniques for data-enhanced monitoring, <i>Nicolas Spiegl / Florian Zurfluh, Ureason</i>
15:50 - 16:15	Cavitation risk assessment in valves - Method for predicting incipient cavitation index and FL using single-phase CFD simulations, <i>Praveen Kumar Ramachandran, Centre for Computational Technologies</i>	Embracing digital connectivity for proactive maintenance, <i>Dave Godfrey, Rotork</i>	Live demo 3 (16:00 - 16:30) Smart valve monitoring solutions with SIPLUG-C, <i>Ulrich Diehl, Framatome</i>
16:15 - 16:40	Digital platform for valve manufacturers: 3D design, AR, customization, and machine learning for predicting control valve flow coefficient (cv), <i>Rohit Chavan, Centre For Computational Technology</i>	Hybrid seat design enabling high-g shock resistance floating ball valves, <i>Jill Lawton, Flowserve</i>	Live demo 4 (16:30 - 17:00): A complete digital foundry, <i>Mike Austin, UCL University College London / Kevin Smith, Digital Manufacturing Technologies Ltd.</i>
17.00	NETWORKING ON THE EXHIBITION FLOOR		

DAY THREE - 5 DECEMBER > STANDARDISATION

MORNING PROGRAM	Room 14	Room 15	Room 16
9:30 - 10:45	Technical session / SEALING <i>Moderator: Sieuwert Blommaert, Ineos</i>	Technical session / FUGITIVE EMISSIONS <i>Moderator: Tony Smart, Neway</i>	Technical session / ACTUATION <i>Moderator: Anthony Vangasse, Rotork</i>
9:30 - 9:55	Impact of adhesives on functional reliability of TOSV, <i>Michael Balcerek, IDT Industrie- und Dichtungstechnik</i>	2024 Updates for all API Fugitive Emission Test Standards, <i>Simon Weiler, amtec North America, Inc.</i>	API 6DX: Overview and implementation, <i>Girish Dalbhanjan, Emerson</i>
9:55 - 10:20	Application of graphite seals in the field of valves, <i>Tony (Ming) Sun, Neway Valve</i>	Sustainable fugitive emission testing, <i>Emiel Lechevallier, Ventil Test Equipment</i>	ESG reconciliation and pipeline electrification utilizing engineered gear operators, <i>Gobind Khiani, Enbridge Inc.</i>
10:20 - 10:45	Next-generation valve sealing solutions: Evolution of high-performance PFAS-free gland packing in response to market trends and environmental regulations, <i>Masashi Tachibana, PILLAR</i>	The importance of packing installation in maintaining valve reliability, <i>Hans Dekker, A.W. Chesterton Co.</i>	The importance of electric actuation in Carbon Capture and Storage, <i>Daryl Stothard, Rotork</i>

10:45 - 11:15 COFFEE BREAK			
11:15 - 12:55	Technical session / COATING <i>Moderator: Wojciech Zmudzinski, bp America Inc.</i>	Technical session / DESIGN <i>Moderator: Bronson Pate, MagDrive Technologies</i>	Technical session / TESTING <i>Moderator: Thomas Wagner, Framatome</i>
11:15 - 11:40	Low temperature surface hardened stainless steels in pumps and valve applications, <i>Susanne Gerritsen, Bodycote Specialist Technologies</i>	Anti-cavitation butterfly valve, <i>Hiroki Okuda, KITZ Corporation</i>	ISO 23632: Design validation testing to enhance safety, reliability, and environmental impact, <i>Luc Vernhes, Velan / Colin Zegers, ITIS</i>
11:40 - 12:05	Sustainable surface hardening solutions for valves: A comparative analysis of expanite vs. hard chroming, <i>Per Wennersten, Ramén Valves AB / Holger Selg, Expanite GmbH</i>	Pushing the limits of segmented ball valves into severe energy transition applications, <i>Mathew Varghese / Prasad Kumar, Bray International</i>	Full explosion proof ball valves innovation engineering for critical service, <i>Zhang Guohong, FR Valve</i>
12:05-12:30	Advanced surface modifications: Extending the life of HPAL valves, <i>Evelyn Ng, Callidus Process Solutions</i>	Design valves for hydrogen fluoride (HF) alkylation service, <i>Paul Heald, Bonney Forge</i>	Challenges faced in gas testing, <i>Sugumar Sampath, L&T Valves Limited</i>
12:30 - 12:55	Low-friction, anti-galling, coke-repellent, and sulfidation-resistant coating to mitigate fouling in resid upgrading environments, <i>Luc Vernhes / Fadila Khelfaoui, Velan</i>	Standardization of valve production datasheet (PDS), <i>Owen Gu, Neway Valve</i>	Evaluating lubricated plug valve sealant compatibility in hydrogen gas service, <i>Ochuko Ifie, Flowsolve</i>
12:55-13:00	CONFERENCE CONCLUSION		



Yongjia China The Township of Pump Valve

Who am I? Yongjia - “Township of Chinese Pump Valve”

Yongjia produces about **3000** varieties and **40000** series of valve products & more than **1000** varieties and **10000** series of pump products and exports to more than **150** countries.

Total industrial output value reached **55.8** billion yuan from Yongjia in 2023.

- **217** international & national standards
- Own **4545** valid patents
- **4** national-level specialized and innovative “little giant” enterprises
- **2** provincial key enterprise research institutes
- **159** high-tech enterprises & **760** provincial technology-based small and medium-sized enterprises
- **33** provincial enterprise research and development centers

Welcome to VALVE WORLD EXPO 2024 Düsseldorf, Yongjia Pavilion @ 3H92

Expo Forum

Wednesday 14:00 – 16:30 / Thursday 11:00 – 12:30
Where: Expo Floor (Hall 3, Stand C16)

The Valve World Expo Forum is held in addition to the Valve World Conference, providing a valuable platform for open information sharing, discussion and networking through more commercial presentations held directly on the exhibition floor.

Open to all Valve World delegates, exhibitors and visitors, the Expo Forum does not require prior registration. Simply stop by to enjoy and engage with the presentations.



WEDNESDAY 4 DEC

time	company	name	presentation
14:00	Fluorten	Massimiliano Salogni	Cryo Seal, the future of sealing technology
14:30	Emerson	Jean-Paul Boyer	Beyond bellows – addressing bellows failures in safety valves applications
15:00	Richter Chemie-Technik GmbH	Dr. Stefan Ubben	KSE 3.0 - the new generation of innovative safety valves
15:30	Rotork	Ronald Tuijn and Armin Nagel	Empowering flow control: Rotork's focus on customer-centric improvements
16:00	Automize Lab. Co., Ltd.	Mihwa Gen	Innovative retrofit automation solution for a sustainable future

THURSDAY 5 DEC

time	company	name	presentation
11:00	SOMAS Instrument AB	Daniel Svensson	If your valves could speak, what would they say ?
11:30	MSA, a.s.	Daniel Přebyla	MSA – manufacturer of industrial valves. Future steps.
12:00	NexGen Solutionz	Anthony Roestenberg, Roozbeh Fartash	“Why” crystal clear valve improvement?



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As a global leader in automation technology, Emerson offers intelligent field devices, control systems, and industrial software with a clear purpose: driving innovation that makes the world healthier, safer, smarter and more sustainable.

Participating as a dedicated sponsor at Valve World presents a valuable opportunity to collaborate with a global community of end users, EPCs, and technology providers. Together, we can address the diverse challenges facing the process industry, including diversification, digitalization, and decarbonization. At our stand #1C52, we will showcase the latest product innovations and services for valves, actuators, and regulators, with a strong emphasis on sustainable solutions and demanding chemicals applications. This event also allows us to highlight our ongoing investments in the region.



KITZ introduced their industry solutions to support our future society's Sustainable Development Goals (SDG) at Valve World 2022.

Visit our exhibition stand to learn how we have met the challenges of supporting H₂ stations and LNG processes, which are keywords for the future of clean energy infrastructure. We will also introduce our activities contributing to semiconductors and functional chemistry, which are industries that support the future, and inform visitors about a service that prevents valve problems by using predictive detection of valve malfunction.

We are looking forward to meeting and talking with you during the Valve World 2024 exhibition, and during our various presentations.



At its core, MRC Global is a supply-chain solutions company. It connects the world's best PVF manufacturers with the world's best gas utility, energy and industrial companies.

Headquartered in Houston, Texas, the company is the largest global distributor of pipe, valve and fittings (PVF) and related products and services to the energy and industrial industries, based on sales. MRC Global supplies these products and services, along with technical expertise, across each of the gas utility, downstream, industrial and energy transition, upstream production, and midstream pipeline sectors.



Neway is an international industrial valve manufacturer, committed to R&D, production and sale of industrial valves.

Our products include gate, globe, check, ball, butterfly, nuclear, control, subsea, safety valves and well-head equipment, which are widely applied in oil & gas exploration and production, chemical, petrochemical, LNG, offshore, power, pipeline transmission and other fields.

With our own R&D center, forging and casting plants and production & assembling bases, Neway takes responsibility for manage our business in all process, which ensure our stable supply chain, strict quality control, competitive price and delivery time, etc.

Approximately 3500 employees in 9 countries strive to provide high quality products and excellent service to all customers worldwide.

2024

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Rotork is a market-leading global provider of mission-critical intelligent flow control solutions. Customers rely on us for innovative, high-quality, and dependable solutions for managing the flow of liquids, gases, and powders. We help customers around the world to improve efficiency, reduce emissions, minimise their environmental impact and assure safety.

Our product range includes electric, pneumatic, and hydraulic actuators, gearboxes, instruments, and valve accessories. We are a global company with local support, providing assured reliability for critical applications and environments.

We are dedicated to “enabling a sustainable future” and are well-positioned to enable a low-carbon economy and to participate in the global energy transition.

VELAN

They say the best inventions start with a sudden flash of illumination. That’s exactly what happened when A.K. Velan first came up with the idea for a new steam trap a few months after he arrived in Canada in 1949 from Soviet-dominated Czechoslovakia.

More than six decades later, that same innovative and entrepreneurial spirit continues to flourish in a company that has a proven portfolio of top-quality valves installed in industrial applications worldwide.

SHAPING THE FUTURE OF VALVES: INNOVATE, DIGITALISE, STANDARDISE

1
2
3

THREE THEMES FOR 2024

- 1. Energy transitions:** Discover innovative valve solutions driving sustainability, including low-emission technologies and renewable energy applications.
- 2. Digitalisation:** Explore the power of automation, data intelligence, and predictive maintenance to revolutionize the valve industry.
- 3. Standardisation:** Stay ahead of new regulations and end-user requirements shaping valve selection, testing, and performance.

Keynote Speakers

Roberto Muscarà and **Salam Alsowaidan**, Saudi Aramco
Keynote session: Valve preservation challenges,
 day 1 (3 December), 09:30

DESCRIPTION

This presentation examines the effects of inadequate preservation throughout a valve's lifecycle, which may lead to functional failures. Using practical examples and photographic evidence, it highlights recurring preservation deficiencies observed during site inspections and investigates the possible root causes. The analysis examines corrosion mechanisms and focuses on critical stages during valve manufacturing and after-delivery handling that represent internal corrosion risks. Each manufacturing step is examined for its impact on corrosion propagation, with suggested improvement opportunities. The study also recommends tools that can be integrated into manufacturers' quality programs to assess and mitigate corrosion risks effectively and ultimately enhance reliability.



BIO

Roberto completed a bachelor's degree in aerospace engineering at Politecnico di Milano. With over 15 years of experience in the oil and gas industry, Roberto has held leadership roles across quality, engineering, and operations with end-users, engineering and manufacturing companies. Currently, Roberto serves as a Quality Management Engineer (Valve Specialist) at Aramco Europe, where he is primarily responsible for overseeing inspections of valves procured directly by Aramco within the Quality Control Unit.

BIO

Salam is an accomplished leader with over 22 years of experience in the oil & gas sector, primarily with Saudi Aramco. Throughout his career, he has held multiple key roles, including serving as Aramco Europe representative in Italy, Project Quality Manager, and Supervisor of Inspection Units. Salam holds a master's degree in Project Management and a bachelor's degree in Mechanical Engineering. Additionally, he is certified by the American Petroleum Institute (API) and holds a Six Sigma Black Belt, demonstrating his commitment to quality and efficiency in the energy industry.

Alfred Kruijer, Shell
Keynote session: The move toward "green" valves for the oil & gas industries, with a certified & low carbon footprint,
 day 1 (3 December), 10:45

DESCRIPTION

Climate change has emerged as a major environmental challenge, and many of the oil & gas industries have committed to the Paris Agreement targets to reduce its effects.

Shell's phasing includes reducing its absolute Scope 1 and Scope 2 emissions by 50% (compared to 2016 levels) by 2030.

Furthermore, Shell's target is to become a net-zero emissions energy business by 2050. This includes Scope 3 emissions from the products sold.

The green valve concept is an incentive to externally certify the carbon footprint of a valve product to better compete in tenders for projects already targeting Scope 3 emissions.

The added insight into what the main contributors are to a carbon footprint allows for a specific reduction in Green House Gas (GHG) emissions, which leads to lower energy usage and, hence, lower cost.

While the concept of Green Valves is in its infancy, the tools that guide the supply chain on the journey to climate neutrality and the requirements for the auditable and transparent certification of a product's carbon footprint are available e.g., ISO 14067. The quantification of GHG emissions per production site is guided by ISO 14064. This talk will explore how valves contribute to the oil & gas industries' GHG emissions. While the product carbon footprint is important, resolving the lifetime emissions due to sluggish control loops, spurious trips, stem emissions and passing of fluids are the main contributions the (control) valve manufacturers can make to reduce overall GHG emissions.

BIO

Alfred Kruijer is Shell's Principal Technical Expert on Piping & Valves and Flare & Relief.

Now in his 40th year in Shell, Alfred has served in almost all aspects of Mechanical Engineering, from projects to maintenance,

inspection, research & development, asset management, technical standards and Technical Authority.

In his current global discipline role, he is the Custodian of Shell's technical specifications related to his area, responsible for the health of the mechanical community of practice, and he is involved in many of the novel technologies that will make the energy transition real, safe and at affordable cost.



Jonathan Geleijns, SLB
Keynote session: API specification for valves for hydrogen gas service,
 day 1 (3 December), 11:15

DESCRIPTION

The challenges for valves handling hydrogen compared to natural gas, combined with the expected growth of the hydrogen supply chain, require reliable and qualified equipment. To ensure that valves for hydrogen gas service meet the necessary reliability and quality levels, it is important that the minimum design, material, manufacturing, and testing requirements be defined in a recognised industry standard. In September 2024, the American Petroleum Institute (API) published the second addendum to API Specification 6D, which includes the much-anticipated Annex M covering valves for hydrogen gas service, addressing hydrogen's unique challenges, such as material degradation and sealing difficulty. This presentation will address how this standard was established, as well as the main requirements specified herein.



BIO

Jonathan Geleijns has more than 30 years of valve experience gained in engineering, sales, aftermarket/field services, and technical support in multiple geographical locations. His current position is Energy Transition Technologies Manager for the valves business line at SLB. In this role, he focuses on developing markets for hydrogen, CCUS, biofuels, geothermal, emissions control, and other associated applications by investigating and influencing market trends, market needs, product gaps, and industry standards and regulations. Jonathan is also co-chairman of the API 6D Specification, Annex M for valves in hydrogen gas service and is involved with other committees, such as for Hydrogen Europe and ASME B31.12.

Dave Anderson, Score
Keynote session: Why RBI is a critical element of your digitalisation Efforts, day 2 (4 December), 09:15
Moderator of technical session on innovations, day 1 (3 December), 13:30 (room 14)

DESCRIPTION

This paper argues that a fully digitalised Risk-Based Inspection (RBI) approach to valve management plays a vital role in enhancing operational safety, environmental performance, process efficiency, and optimised profitability. By managing valve-related risks, RBI helps to avoid in-service failures that negatively impact business objectives. More than just a data collection exercise, RBI is focused on risk assessments like Probability and Consequence of Failure (PoF and CoF). Valve Condition Monitoring (VCM) activities create structured and digitalised data sets to reveal emerging failure trends. These insights support a proactive approach to valve management, where maintenance, repair, and replacements are optimised. RBI reporting transforms data into a strategic asset, enabling continuous improvement, optimising operations, and aligning with organisational KPIs for long-term safety, efficiency, and performance improvements.



BIO

Dave Anderson has over 40 years of experience in the valve industry, with 30 years of service at Score. He specialises in valve diagnostics and condition monitoring, focusing on operational efficiency, risk reduction and emissions elimination. His extensive expertise includes leadership in technology development and a strong commitment to mentoring and sharing industry knowledge. His long-standing dedication to Score underscores his leadership within the field and highlights his impact on advancements in valve monitoring technology, asset integrity management and emissions elimination.

Bronson Pate, MagDrive Technologies
Keynote session: Global fugitive emissions reductions with a total cost of ownership (TCO) view, day 2 (4 December), 09:45
Moderator of technical session on design, day 3 (5 December), 11:15 (room 15)

DESCRIPTION

Fugitive emissions (FEs) are a key environmental concern, with international agreements like COP21 and COP26 emphasizing the need to reduce emissions. FEs mainly arise from valves and flanged connections, which can be mitigated with "low-emission" and "zero-emission" technology. Reducing FEs not only benefits the environment but also improves cost-efficiency, cutting losses from wasted materials and maintenance expenses. With growing regulations, especially in the EU and USA, companies face increasing pressure to adopt sustainable practices. Net-zero targets drive this shift, with firms setting measurable goals and adopting new technologies. The author discusses recent advancements and presents data-driven approaches, using USEPA AP-42 calculations, to demonstrate the financial and environmental benefits of FEs reduction technologies.



BIO

Bronson Pate is the Global Vice President of Operations for MagDrive Technologies in Bozeman, Montana, USA. He has extensive experience dealing with regulatory and technical issues related to fugitive emission programs in numerous industries, especially refining, petrochemical and chemical plants. With this experience, Bronson has gained in-depth knowledge of API 622, API 624, API 641, TA-LUFT, and ISO 15848. He has also led international business related to LDAR in China, Malaysia, Singapore, Argentina, Bolivia, Peru, Brazil, Mexico, and Europe.



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Moderators

Ron Merrick, Fluor

Moderator of a technical session on materials, day 1 (3 December), 13:30 (Room 1); and panel discussion moderator on digitalisation, day 2 (4 December), 10:45



Ron Merrick recently retired after a forty-five-year career in specifying valves and other piping materials. He retired as a Senior Fellow and Director of Piping Material

Engineering at Fluor Enterprises in Sugar Land, Texas. He was a piping materials engineer for Fluor from 1975 until 2020. Merrick is the author of several articles on valve selection and the book Valve Selection and Specification Guide. He has a BS in Mechanical Engineering from Wichita State University and is a registered professional engineer. Other professional involvement includes membership in the API Refining Division, and as a US delegate to ISO TC 153 "Valves".

Gobind Khiani, Enbridge Inc.

Moderator of the energy transition workshop, day 1 (3 December), 13:30 (room 16)



Gobind N Khiani is a UCalgary alumnus with an MSc in Mechanical Engineering, a proven track record in technical and value engineering, and a fellowship in Pipeline Engineering.

He is the founder of Users Group (Engineering and Technical Subject Matter Experts), Alberta. Currently, he holds the position of Vice Chairman of the Standards Council of Canada. He has done peer review on Emissions Management regulatory documents for Environment and Climate Change Canada and participated in research and development initiatives for Emissions Management and Reduction Programs, Alberta and Canada's Oil Sands Innovation Alliance (COSIA) - a world-leading innovation alliance that set the model for sharing intellectual property to accelerate environmental performance.

His experience is highlighted by active participation, including standards (i.e. API, CSA, PRCI, ASME), technical compliance, strategy, governance (regulations i.e. DOT, PHMSA), engineering management, sustainable development, and operations. He is also skilled in Asset Integrity and Maintenance Management. Gobind is involved in technical standards (energy, tech, public safety) and has been a mentor/judge at First Robotics Western Canada. He is also the past chair of the Calgary Branch Executive Committee of APEGA.

Alberto Seveso, Neway

Moderator of a technical session on design, day 1 (3 December), 15:30 (room 14)



Alberto is a mechanical engineer and is currently the R&D manager of Neway Valve Europe. He has spent more than 25 years designing, manufacturing and validating

isolation valves for industrial applications. He began his career as a designer of industrial vibrating machines and systems for the feeding, sorting and conditioning of bulk materials.

In 1995, he began his career in the industrial valves sector (mainly ball valves) at various leading Italian companies as a designer, application engineer, R&D manager and technical director.

Making use of the collaboration of the research and development department and several strategic suppliers on a global basis, since 2016, he has been engaged in the development of shut-off valves for critical applications for Neway Valve Suzhou Ltd.

Muktiadi Rahardjo, Shell

Moderator of a technical session on emissions, day 1 (3 December), 15:30 (room 15)



Adi, originally from Indonesia, has been in the valve industry for the past 20 years. He is known as a 'Jack of all trades' in valves, with hands-on experiences

as a design engineer, field engineer, project manager, certified ASME VR safety valve assembler and now Subject Matter Expert for Shell. Thus, he understands valve challenges and solutions from the perspective of a manufacturer, service company, inspection, and end user. In his spare time, Adi enjoys refurbishing vintage bikes.

Knut Riegel, Emerson

Moderator of a workshop on hydrogen, day 1 (3 December), 15:30 (room 16)



Knut Riegel has over 15 years of experience in mission-critical flow control in the field of valves, actuators and their comprehensive controls. He spent many years

in various roles, including site services, engineering and sales at well-known multi-layer matrix organisations. As an active member of several valves & actuators standards committees, he is intensively involved with Transition to Net Zero (TNZ) opportunities and industry challenges as valves occupy a special place in accelerating environmental sustainability.

Ayo Kilani, Nigeria LNG Limited

Moderator of a technical session on maintenance, day 2 (4 December), 13:30 (room 14)



Ayo Kilani has over 23 years of experience in the LNG industry and is currently the Corporate Engineering Manager at Nigeria LNG Limited, a company that

produces liquified natural gas (LNG) and natural gas liquids (NGLs) for export. He was previously the Mechanical Static Equipment SME / Technical Authority in the company and led his team to develop a risk-based Valve Maintenance Strategy for the organisation. Ayo had the privilege to be the Steering Committee Chairman for the 2022 Valve World Conference.

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Moderators

Mohammed Tarabzouni, Saudi Aramco

Moderator of a technical session on additive manufacturing, day 2 (4 December), 13:30 (room 15)



Mohammed is a senior engineer with aramco covering downstream valves technical matters with more than 11 years pf experience in project management, operations and maintenance.

Claire Dwyer, Fluor

Moderator of a technical session on materials, day 2 (4 December), 15:00 (room 15)



Claire Dwyer is a piping material engineer with Fluor, and she began her career with the company in South Africa. She has over thirty-five years of experience with piping design,

engineering and valves for a variety of projects in hydrocarbon, chemical, mining and even brewery piping. In 2020, Claire became a Fluor Fellow and is currently the lead piping material engineer on a large capital project in Houston.

Sieuwert Blommaert, Ineos

Moderator of a technical session on sealing, day 3 (5 December), 9:30 (room 14)



Sieuwert specialises in design, material selection and valve expertise. He plays a pivotal role in bridging the gap between operational needs and design requirements

by closely collaborating with operational users, the design office and manufacturers. His focus on standardisation and in-

company training underscores his commitment to enhancing efficiency, facilitating knowledge sharing and ensuring high-quality standards within the organisation.

Tony Smart, Neway

Moderator of a technical session on fugitive emissions, day 3 (5 December), 09:30 (room 15)



Tony Smart brings four decades of experience in the oil & gas and energy Industries, including 35 years at Shell, where he led global valve engineering and applications teams across diverse

business streams. His career includes leadership roles such as LSME on IOGP Valve Standardisation, representation as a long-standing member of API/ISO working groups, and 30 years as a Valve World Steering Committee member. Additionally, Tony has been an entrepreneur and director of two successful IT/Engineering companies. He is currently Vice President of Valve Engineering at Neway Valve.

Anthony Vangasse, Rotork

Moderator of a technical session on actuation, day 3 (5 December), 09:30 (room 16)



A hydro-mechanical and controls engineer, Anthony first worked in automation and heavy mobile plant equipment, subsequently designing primary flight control

systems in aviation, before joining GE in 2008. There, he worked within GE Oil & Gas subsea control systems (now Baker Hughes), initially managing the Advanced Technology Organisation, then as Controls Product Leader, covering subsea production systems, intervention and life-of-field applications. In 2020, he joined Rotork as Head of Product Management, where he continues to work with differentiated technology to create value in customer applications.

Wojciech Zmudzinski, bp America Inc.

Moderator of a technical session on coating, day 3 (5 December), 11:15 (room 14)



Wojciech Zmudzinski is the Engineering Advisor for Valves at BP, based in Houston, Texas. In this role he manages the engineering technical practice, represents BP in

several industry standards organizations, provides specialist valve expertise and engineering support globally to projects, production assets and refineries. This includes root cause failure analysis, risk assessment, and management of change guidance to material selection, valve selection, design and reliability, as well as supporting new valve and actuation technology innovation and implementation.

He has thirty years of experience, working previously with valves in in mining, power, petrochemical, chemical, and pulp & paper industries, for valve manufacturers, service and repair facilities and EPC contractors, prior to joining BP.

Thomas Wagner, Framatome

Moderator of a technical session on testing, day 3 (5 December), 11:15 (room 16)



Thomas started his career at Organic Power ASA, Norway, as a Commissioning- and R&D-Engineer for Small Scale Plants for Municipal Waste. Since 2003, he has worked

for Framatome GmbH (former AREVA, Framatome NP, Siemens), in Karlstein, Germany. Thomas is the Engineering Supervisor at the accredited Components Qualification Department. As a Senior Test Engineer, he gained experience in testing fuel elements, containment venting systems, passive safety systems, pressuriser heaters, Reactor Coolant Pump seal systems and various types of valve assemblies. Thomas works closely with customers from America, Europe and Asia.

Wednesday 4 December Special

DIGITALISATION PANEL DISCUSSION

10:45-12:00

Moderator: Ron Merrick, Fluor

Panelists: Mike Austin (UCL University College London), David Heiny (SimScale), Michael Howells (Emerson), Scott Moreland (Quadax Inc.), Wojciech Zmudzinski (bp America Inc.)



In this panel discussion, we will be discussing the rise and development of various forms of digitalization as they have been applied to valves. The panelists are experts in various facets of valve design, usage and manufacture who will discuss how the advent of digitalization has affected their process, and the tools that now permit valving to be designed, built and used in a more effective manner. Subjects to be covered will be design, manufacturing, usage of valves and the enhanced capabilities of valves based on the increasing sophistication of these digitalizing tools.

We will have short presentations on the different aspects of digitalization, and discussions of these topics. The audience will be encouraged to ask questions, bring up additional points and amplify their knowledge of the subjects.

LIVE DEMONSTRATIONS

15:00-17:00

Moderator: Tony Smart, Neway

Live demo 1 (15:00-15:30):

A practical guide to helium and forming gas for fugitive emission testing, **Emiel Lechevallier, Ventil**



Join us for an in-depth, practical guide to helium and forming gas for fugitive emission testing—an introduction to Day 3's presentation on Sustainable Fugitive Emission Testing. This live demonstration showcases real-time sniffer testing, comparing helium and forming gas, and addresses key principles and questions for those new to forming gas. We'll examine the performance of mass spectrometers versus hydrogen leak detectors, offering essential insights to kick-start emission testing with forming gas.

Live demo 2 (15:30-16:00):

Optimize valve health: Practical techniques for dataenhanced monitoring, **Nicolas Spiegl / Florian Zurfluh, Ureoson**

Industry 4.0 is all about leveraging data to make better decisions. When it comes to "data," control valves stand out: the information collected from control loops provides valuable insights into the current health of the control valve, as well as the ability to predict the remaining useful life. In this session, we'll demonstrate how you can use readily available data from your processes to implement condition monitoring and predictive maintenance for hundreds of



control valves across your installations—all within just a few hours.

Live demo 3 (16:00 - 16:30):

Smart valve monitoring solutions with SIPLUG-C, **Ulrich Diehl, Framatome**



During this live-demo, Framatome will present the easy integration of the new monitoring sensor "SIPLUG-C" in an industrial switchboard, the data acquisition with the software "ADAM64" and give a short overview of monitoring and diagnosis possibilities with the software. We will demonstrate the capabilities of the automatic evaluation of measurement traces and the trend & statistic functions to improve the system performance, leading to condition-based maintenance.

Live demo 4 (16:30 - 17:00):

A complete digital foundry, **Mike Austin UCL University College London / Kevin Smith, Digital Manufacturing Technologies Ltd.**

A world's first. In January 2025 we will launch a completely new approach to the metal casting process. It will remove all the



variables that typically make the process less reliable and repeatable by removing the human element. From CAD and producing the mould, to melting and casting will be digitally managed to achieve the same parameters for every cast. Using this approach we have proved that the savings in CO₂ and cost could be up to as much as 50% of what it is today. In a world where our planet resources and their use is under enormous scrutiny, the foundry industry in melting metal and producing castings has seen little change in the last 3000 years. This process will see the single largest change in the industry, its own future development taking it to even greater opportunities.

YOUNG ENGINEER PROGRAM

10:30-14:45

10:30-11:20 Introduction to valves
Moderator: David Anderson, Score



The Young Engineer Program "Introduction to Valves" covers the fundamentals of valve engineering, including their history, primary functions, fluid management principles, and major valve types. Key topics also include valve components, data sheets, testing standards, and selection criteria. The session highlights current industry hot topics such as energy transition and sustainability challenges, failure mechanisms, and compliance, whilst also offering engineering opportunities insights, which can drive industry innovations in research and development. Looking ahead, we shall explore potential career paths, digitalization impacts, and AI-driven valve management. The program emphasizes the alignment of valve engineering with the business advantages of maximizing valve reliability, through optimizing life cycle management and achieving process operators' strategic goals resulting from structured risk management, enhanced valve automation, and data analytics.

11:30-12:15

Participants are divided into groups and visit a few stands in the exhibition hall to receive presentations from each company. Each group will be led by an experienced valve specialist.

13:30-14:45 Interactive discussion
Moderator: Muktiadi Rahardjo, Shell

In the first half of the session, we will discuss the topics of 1: definition of young, 2: definition of engineer, 3: a career in valves. How can young talent shape the future valve world/community? What does a successful career in the valve world look like? The moderator, Muktiadi Rahardjo, will give examples based on his own valve journey and experience as a product engineer, field engineer and project manager, SME at Shell.

In the second half of the session, participants will split into teams and debate. Each team will be accompanied by one valve expert chosen to act as a consultant. Topics will be given spontaneously, and debate will be held around it, making it very interactive. Finally, feedback will be provided on the team presentation by the experts who will participate as judges.



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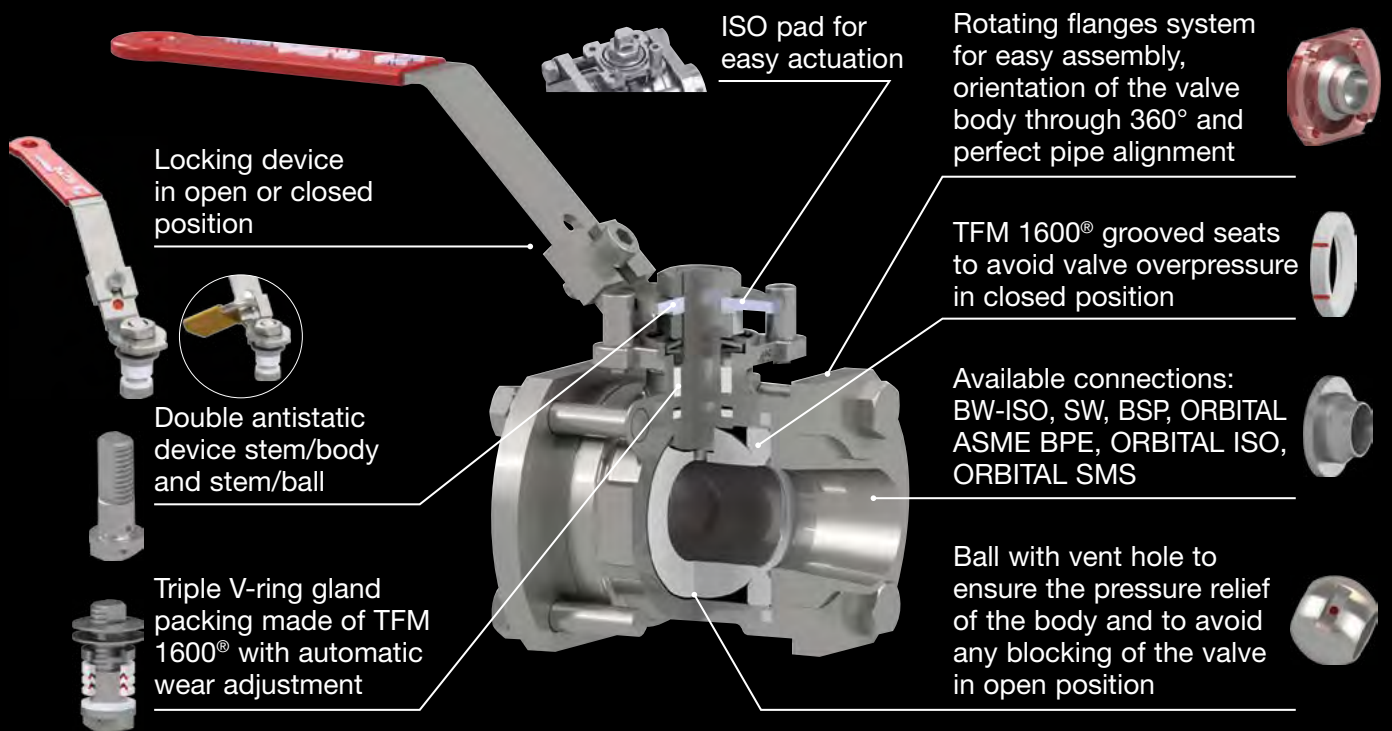
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