

Chair's Introduction

The [Pressure Systems Group](#) (PSG) is one of the 18 [Divisions and Groups](#) that make up the committee structure in the Institution of Mechanical Engineers (IMechE). The PSG is headed by the PSG Board, which comprises 25 members covering all aspects of pressure systems technology, and is there to represent the interests of anyone working or interested in pressure systems technology, policy, or research.

The aim of PSG is to bring the whole pressure systems industry together and share knowledge and advancements in technology. The PSG is currently going from strength to strength, and it is fantastic to see both new faces and old friends coming along to PSG events and getting involved in our work.

The PSG's industrial outreach and connections continue to grow at pace:

- We now have representation from EEMUA, SAFed, ONR, HSE and BSI on the PSG board.
- Partner organisations for our events in 2023 included the PVMf, BCGA and TSA.
- Event sponsors in 2023 included Axiom, Flexitallic, LRQA, Siemens Energy/Gecko Robotics and TUV Rheinland.
- We're working with nuclear industry stakeholders on an initiative on Nuclear Pressure Systems.

The PSG Board meets in February, June, September and December each year, normally two meetings at IMechE HQ and two meetings hosted at regional industrial sites or at partner organisation facilities.

It is a real privilege to be the Chair of the PSG, and I have many fond memories of all the things we have achieved, and look forward to the future and all the work and challenges it will bring. I am really enthused by all that 2024 has in store for the pressure systems community!

In this newsletter, we'll look at the achievements of 2023, and take a look at what is in store for 2024.

Dr Paul Smith, FIMechE

Pressure Systems Group

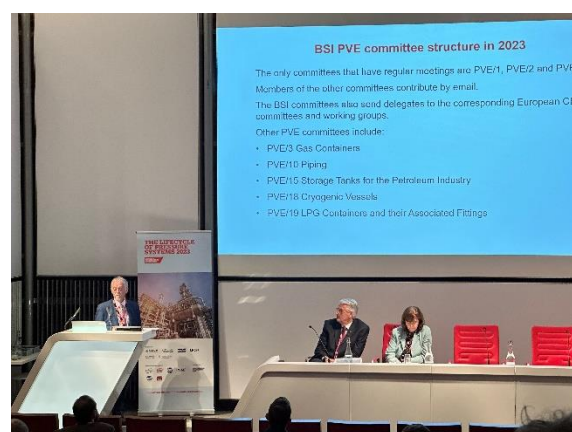
Looking Back on 2023

Conference Report – Lifecycle of Pressure Systems

The [PSG](#) organised and hosted a fantastic 2-day event at One Birdcage Walk in October 2023 to discuss and explore the “*Lifecycle of Pressure Systems*”. This was the second edition of the event, the first being run in 2019. Over 100 delegates attended this event, and 5 sponsors set up stands in the marble hall for the breakout networking sessions. The event was organised around the chronology of pressure systems, covering regulations, design, fabrication, non-destructive examination, pressure testing, connectors, in-service inspection, and repairs.

There were parallel sessions enabling delegates to choose which session to attend (a first for PSG), and the HSE book ended the technical programme with presentations on the regulatory outlook and approach to regulation of pressure systems. The IMechE did a great job of running the event at HQ, and also put on a fantastic dinner for all the attendees. We were lucky enough to also have a ‘fireside chat’ with [Professor David Nash](#) to reflect on his amazing journey through his career.

Excellent presentations were given on the various topics and the PSG would like to send a huge thank you to all the speakers, delegates and sponsors at the event. Thanks also go to the IMechE events teams for the hard work behind the scenes organising the event and ensuring it ran so smoothly over two full days.



Technical Visit – Wilton Centre

The PSG Board was lucky enough to be hosted at the Wilton Centre in September 2023, and the trip also included a coach tour of the industrial facilities at the site. It was amazing to see the different industrial plant that are in operation at the centre, including efforts to decarbonise industry and reduce plastic waste. The scale of the operations there was awe-inspiring - there are literally miles of pressure systems on the site, and the efforts to inspect and maintain them are commendable. Unfortunately, photos were not permitted on the day so we can't share any here.

Thanks to Scott Taylor of Exergy for hosting us on the day, and Rob Johnson of Axiom for organising the visit. It will stay long in the memory of all who attended.

Regional Engagement – Hong Kong Branch

The PSG Board was invited by the [Hong Kong Branch of the IMechE](#) to present at the [27th Boilers and Pressure Vessels Safety Seminar](#) in Hong Kong in November 2023. It was a real honour for PSG to take part in such a prestigious event, and Paul Smith delivered a presentation on additive manufacturing for pressure equipment (thanks to David Hardacre of LRQA for developing the material).

Other presentations on the day included inspection of heat recovery steam generators and case studies of stress corrosion cracking in steam drums.

PSG has a longstanding involvement in this biennial event, and we look forward to collaborating in a future edition of this excellent seminar. Our thanks go to the organisers and hosts – it was a fantastic few days in Hong Kong and the itinerary included a conference dinner and a technical visit to Lamma Island Power Station.

Donald Julius Groen Prize

PSG awarded Nawal Prinja, Jacobs Technology Director, the Donald Julius Groen prize at the December 2023 meeting. Nawal has made a fantastic contribution to pressure systems over a decades-long career, and his mentorship of younger engineers, and the advancements he has made in technology, have been invaluable to industry as a whole.

He is certainly a worthy winner of the prize, and joins an illustrious list of past winners, and all at PSG would like to congratulate Nawal for this achievement. He received the prize during the December meeting of the PSG Board, and joined us for Christmas lunch at the IMechE HQ in Westminster.

The nominees for the prize are all considered by the PSG Board early each year and the winner is determined through a vote. The prize is awarded for outstanding papers or for outstanding achievements in the sphere of activity of the PSG. We would be happy to receive your nominations by 18 March 2024.



Retirement

[David Nash](#) has decided to step down from the PSG Board at the end of 2023 after many years on the board. We are indebted to David for the magnificent contribution he has made to PSG over the years – he has been the conduit between industry and academia and has given so much time and effort to PSG.

David is so communicative and brings a really affable style to his teachings and presentation (as we saw at the Lifecycle of Pressure Systems event).

I am sure everyone who knows him, including all of his past students, would like to join me in wishing him all the best for his retirement. Thank you, David!



Looking forward to 2024

2024 Seminar Programme

The [PSG](#) is currently working on developing two face-to-face events for 2024. These are based on feedback from the pressure systems community, including from the recent Lifecycle of Pressure Systems event. The 2024 events are in development still, but the details below give you a flavour of what's in store for the coming year. We'll release more information as it becomes available.

Bolted Joints in Pressure Systems	Pressure Systems in Net Zero and Sustainability
Newcastle, 23 April 2024	Strathclyde tbd, October 2024
Bolted joints are key to pressure systems safety. Careful attention needs to be paid to every aspect of their life, from design, procurement, fabrication, installation, inspection, maintenance and repairs. This seminar will explore all aspects of bolted joints and will give delegates the opportunity to soak up the	We have seen a big drive from the pressure systems community for events covering sustainability and where pressure systems fit in. Pressure systems play such a key role in transformative technologies such as hydrogen transition, carbon capture & storage and energy from

latest information and interact with fellow professionals interested in this important technology.

Exhibitors will be on hand to show the latest technologies, and the regulator will give a view of the overall legislative approach to bolted joints.

waste, and yet they are often overlooked by policymakers and planners.

This event will showcase the key technical aspects of pressure systems and the role they play in net-zero & sustainability, including:

- Repurposing pressure systems;
- Rerating pressure systems;
- Repairs of pressure systems.

This event will give delegates the chance to share their ideas and give real tangible input to the way forward on this important policy area.

Nuclear Pressure Systems Industry Survey 2024-2025

PSG is working on an industry-wide survey and summary report covering best practice in the management of all aspect of nuclear pressure systems. The aim is to bring together the key stakeholders in the nuclear industry to share knowledge and experiences of regulations, design, procurement, fabrication, installation and through-life management of these safety-critical items, and illustrate how that differs from non-nuclear systems. The workstream follows the recommendations from a PSG seminar held on the topic of Nuclear Pressure Systems in Bristol in April 2023.

With the current resurgence of nuclear projects, and advancements of Hinkley Point C and Sizewell C, it is timely to understand what best practice looks like for nuclear pressure systems and share it with the industry.

PSG aims to have the survey completed by mid-2024, and the report finished and issued on the IMechE website by early 2025. A separate two-page flyer has been released by the IMechE to promote the workstream and provide details of how to get involved. If you're in any way connected to the nuclear industry, then this is one not to miss.

New Members for 2024

We are delighted to announce that Kat Asvegren of SSE and Yu Ling Khoo of Atkins Realis have joined the PSG Board as Ordinary Member and Young Member respectively.

They both formally take up their posts in January 2024 and we all want to wish them a warm welcome to PSG.

Getting Involved in 2024

If you've got an idea for a PSG event, would like to speak at a PSG event in 2024, want to host a meeting of the PSG Board, or just want to get involved in PSG more generally, please don't hesitate to contact us or post a message on our LinkedIn page.

Webpage: <https://www.imeche.org/industry-sectors/pressure-systems/>

LinkedIn Group: <https://www.linkedin.com/groups/4796016/>

Email address: membersnetworks@imeche.org

If you'd like to join the PSG Board, CVs are accepted for membership, and are considered and voted on throughout the year. We will normally also ask for a covering letter explaining why you want to join,

what you will bring and what initiatives related to pressure systems you would be interested in leading on.

Final Words

As you can see, there is lots going on in the pressure systems industry and the PSG, and lots to look forward to in 2024. I am really excited for the year to come and hope to see the PSG growing in outreach and extending our network.

As always, safety in pressure systems must remain our overall priority – much work has been done by the industry and PSG, particularly in the area of pressure test safety, but there still remains much more to do. Please look out for yourselves and others, and always remember that pressure systems can be extremely hazardous. If something isn't right or isn't being done properly, don't remain silent - speak up and you might just save someone's life.