



Sumitomo
SHI FW

DRIVING THE ENERGY TRANSITION

We speak to Tomas Harju-Jeanty, CEO of Sumitomo SHI FW (SFW), and discuss the company's mission to pave the way to a decarbonised world

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In an increasingly technological world, the topic of sustainability, environmental welfare and green methods of practice are at the forefront of individual, business and governmental thought and focus. At the core of this, and fuelling society at every level, is the energy sector.

Across Europe especially, the incorporation of innovative and clean energy is widely regarded as a must, giving rise to a new generation of companies that specialise in supplying sustainability-focused fuel to many diverse sectors over vast regions.

Sumitomo SHI FW (SFW) is a strong player that has been in the market of sustainable energy solutions for decades. Headquartered in Finland, the company's operations stretch from USA to Europe and across several Asian countries, with its solutions expanding from the world-leading circulating fluidised bed (CFB) technology to long-duration energy storage, waste-to-value solutions, carbon capture, and services for the global power and environmental markets.

"What we represent is the future of energy generation technology, and in light of this we are focused on a very progressive trio of directives within the industry: decarbonisation, decentralisation and digitalisation. SFW has already made investments into organisational development, and we have hired new talent as well as reorganised the way we operate and invest in technologies," begins Tomas Harju-Jeanty, CEO of SFW.

CO-CREATION, PARTNERSHIPS, AND ECOSYSTEM COLLABORATION

While SFW has always prided itself on being a proprietary technology company; that is to say in the business of developing its own technologies, pilot testing, and commercialising them in the market, the company builds its future focusing on technology partnerships

and collaboration in order to answer to fast pace of change in the transitioning world energy industry.

SFW's dedicated Innovation Programme develops the best decarbonisation ideas from employees and partners alike. The programme plays a key role in helping SFW's customers phase out fossil fuels and transition towards sustainable energy production.

Innovation can come from anybody and anywhere – either inside or outside an organisation. People see

things from different perspectives, so it's important to create spaces where they can come together and share ideas.

"We've brought in new talent and created the Innovation Programme to identify and develop new products and services for our portfolio that accelerate the transition towards a more sustainable future for the energy industry. The programme takes a customer-centric approach, starting by identifying market needs and then selecting problems worth solving.

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EXCEEDING EXPECTATIONS TOGETHER

As reliable partner of Sumitomo in multiple ASME and DIN-EN projects, HP Valves excels in project execution, thanks to open communication, flexibility and supply of bespoke products.

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EME OUTLOOK: HOW DID YOU COME TO WORK FOR SFW?

Tomas Harju-Jeanty, CEO: "I have actually worked in the energy industry my entire career, having joined as a Trainee Engineer working for a Finnish company called Ahlstrom who were the first company to invent and commercialise CFB technology for power generation.

"This would break into the global market, and it was then that I realised the importance of the new technology that Ahlstrom had created. Originally an American engineering company, Foster Wheeler recognised the potential of this, acquired the business from Ahlstrom and commercialised it. I moved to work for Foster Wheeler and eventually headed their European division as well as the company's Asian power business.

"Sumitomo Heavy Industries, the overarching parent company of SFW and a long-term licensee of Foster Wheeler for the CFB technology, was sold Amec Foster Wheeler's power business. Meanwhile, UK-based Amec had acquired Foster Wheeler, and they asked me to take over the new SFW company created under Sumitomo Heavy Industries."



"One of our most prominent partnerships is with Highview Power, and under the leadership of Javier Cavada, CEO and President, the company has done an amazing job. SFW and Highview Power collaborate in the development and execution of projects, and their energy storage technology has revolutionised the market and industry."

For Harju-Jeanty, this relationship between SFW and Highview Power has promoted each collectively and has paved the way towards a very promising future for both companies.

"A combination of our capabilities is beneficial for both sides in the area of long duration energy storage, specifically bringing Highview's cryo-battery technology to the market," he tells us.

"Having been involved with Highview Power for over two years and undertaken a complete technology transfer, we are now involved together in the first projects based in the UK, wider Europe and the US.



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POWERING A DECARBONISED WORLD FOR EVERYONE

“SFW has been providing innovative and environmentally sound energy solutions to our customers for over 100 years. Our mission is to enable the energy transition to a carbon-free future through decarbonisation, decentralisation and digitalisation.

“Our solutions expand from the world-leading circulating fluidised bed (CFB) technology to long-duration energy storage, waste-to-energy, waste-to-value, carbon capture and services for the global power and industrial markets. Through co-creation, partnerships, and ecosystem collaboration SFW aims to accelerate the speed of decarbonisation and create more value to our customers.

“We are global energy experts with more than 1,800 talented staff, across multiple locations, covering the globe from North America through Europe to Asia.” - Tomas Harju-Jeanty, CEO, SFW

For more information, please visit: <https://www.shi-fw.com>

“The growth and need for a competitive, long duration, multipurpose energy storage solution is absolutely necessary, especially if we are to achieve net zero climate goals. Many companies have invested in and demonstrated such technologies, and collectively with Highview Power we are meeting the demands of the market.”

GLOBAL EXPERTISE

“We have 17 locations across four continents,” Harju-Jeanty continues. “We are made up altogether of approximately 1,800 employees with a broad collective experience from key markets and technologies.

“But we are also close to our clients; we speak their languages, we understand their wants and needs at

a localised level, and this has really helped us conclude on what we should provide in terms of technology and service offerings.”

When it comes to the SFW team, the company is made up of dedicated engineers and energy experts in various key operating centres in the US as well as in Europe and across Asia. This variety of global locations allows SFW to operate internationally, share knowledge and expertise between its hubs of activity, and provide its clients with the latest in the field of energy technologies.

CFB TECHNOLOGY

“Outside of China we hold between 40 and 60 percent of the market share when it comes to CFB technology,” says Harju-Jeanty. “We have supplied a full range of CFB boilers totalling 36 gigawatts electrical (GWe) in power capacity and 30 million hours of operational experience.”

SFW has the largest global delivery network for fluidised bed technology, with nearly 50 percent of the world’s operating CFB fleet in the company’s markets, and the largest number of staff who are experienced fluidised

RESEARCH AND QUALITY

Next to its people, SFW's technology is vital to its business so the company strongly invests in protecting and advancing this field. To ensure the highest level of attention, SFW's technology steering committee (TSC) reports directly to Tomas Harju-Jeanty, CEO of the company. The TSC steers and oversees SFW's intellectual property, research and development (R&D), innovation and technology strategy and is an important part of the company's technology management system.

SFW's R&D resources and capabilities are among the best in the industry, built on a network of the company's own R&D department and labs as well as partnerships with universities; government R&D agencies, like Finnish VTT and Business Finland; and industry R&D groups, such as the Electric Power Research Institute (EPRI) and the High Temperature Corrosion Centre (HTC). SFW also works in close collaboration with other technology suppliers and end customers towards the definition and demonstration of novel solutions. Lastly, SFW participates in networks such as CLIC and ETIP-SNET for the creation of the strategies and the roadmaps that support the regulatory and legislation process in EU.

SFW's R&D Department is a world-class research organisation, leading in the development of fluidised bed technologies, while expanding expertise in new areas of decarbonisation, digitalisation and energy storage. The department is represented at several SFW locations and headquartered in Varkaus, Finland.

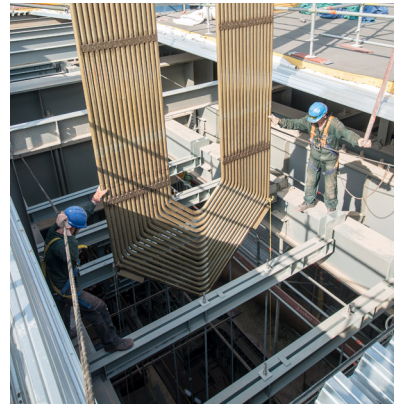


bed experts, with industry-leading R&D resources and capability.

"CFB is a great example of what we can do as a company as we have changed the conventional markets in the past through offering innovative solutions, and by providing more fuel flexibility, increasing environmental performance, and more opportunities

for our customers," Harju-Jeanty tells us. "The company has always built itself on innovative spirit and leads with the latest in the field."

CFB is a type of fluidised bed combustion that makes use of a recirculating loop to increase the efficiency of combustion during the process of creating energy at the



same time as causing lower emissions. When enhanced with oxygen combustion it supports carbon capture of any solid fuel with sound and demonstrated technology.

THE FUTURE IS CARBON-FREE

SFW aims to address greater demands in the market by providing a broader variety of energy and technology solutions to its international clients.

"We want to invest in the new technologies that tomorrow's world will need, and already today we are providing technologies that the world needs to decarbonise," Harju-Jeanty elaborates. "We are going to be focused on our base business, making sure that we remain the world technology leader when it comes to CFB, while keeping close to the digital side of things for the benefit of the client experience.

"Our strategy will be focused on delivering decarbonisation solutions based on our technologies as well as those of our partners to a wide range of industries." 



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