

FPT INDUSTRIAL AND SEALENCE: THE FUTURE OF MARINE PROPULSION SETS OFF FROM CES 2022

Turin, Italy, 6 January 2022

Busy marinas full of motor yachts and boats setting off on long, medium and short-range trips, with plenty of excitement, but no noise at all. Is this only a futuristic scenario? Actually it could be imminent thanks to the vision of FPT Industrial and Sealence, which, together, are presenting their **innovative Hybrid Electric Marine Propulsion System Concept** for leisure and commercial vessels at CES 2022.

Following the signing of a Letter of Intent, **FPT Industrial** and **Sealence**, a startup based in Buccinasco (Milan, Italy) – whose mission is to move the marine industry towards a more environmentally conscious approach – have decided to join forces to explore **a real, sustainable revolution in marine propulsion systems**. The core of the concept, which is displayed in the **Marine Innovation Area of the FPT Industrial's new 2200 sq ft stand (booth #9643 North Hall) at CES 2022**, is the **DeepSpeed Jet**, a turn-key solution addressing the challenge of electrification in marine propulsion.



Shaped to externally resemble an aviation jet, through an integrated electric motor it sucks the water from the front and pushes it from the bow side to propel the boat. The energy for the electric motor is supplied by batteries that can be recharged on board by the **FPT Industrial N67 570 EVO engine**, coupled with a state-of-the-art variable generator, or by the charging station when the boat is in harbor mode.

A modern take on more than 100 years of technological expertise, the ICE, dialogues with a 30-year-old technology, the batteries, and together they interface with the future to create one of the most efficient, effective, environmentally friendly and silent – when operating in full electric mode – marine propulsion systems.

The new Hybrid Electric system is designed to maximize efficiency, silence, application modularity and flexibility. With the same amount of energy, the DeepSpeed Jet generates more thrust and speed compared to a prop system, while consuming less.

An outboard system positioned directly under the hull, the DeepSpeed Jet offers leisure and commercial vessel builders a number of significant advantages. Only cables run through the hull, since the system installation does not require bulky mechanical connections and interfaces that could impair flexibility.

Since there is no need for transmissions and axles, **there is more available space on board, giving shipyards the opportunity to optimize the engine room layout**, boat design and internal layout.



By varying the number and size of battery packs and generators, boat propulsion configurations can be customized according to their intended use: a mainly electric set-up is preferable for short-range trips, while long-range usage will require more generators and less batteries, since during this kind of navigation the electric motor is powered by the ICE in the open water stretches.

The versatility and enhanced efficiency of this unique Hybrid Electric Marine Propulsion System Concept are evident when considering its various operating modes.

Cruising Mode

The boat starts in electric mode with gentle accelerator mapping and jet configuration geared towards maximum efficiency, allowing smooth maneuvering and low-speed cruising. When the cruise speed is reached, the generator steps in, supplying energy to the jet and recharging the battery.

Sport Mode

When the boat starts, the generator is switched on, with steep accelerator mapping and jet configuration geared towards maximum performance. The generator and battery work together to provide the jet with maximum energy.

Full Electric

The boat starts in electric mode with gentle accelerator mapping and jet configuration geared towards maximum efficiency, allowing navigation in protected areas and harbors near the city in a totally silent mode. The generator never steps in.

Long Range

When the boat starts, the generator is switched on, with gentle accelerator mapping and jet configuration geared towards maximum efficiency. The generator keeps the batteries 100% charged and supplies the energy to maintain cruise speed. The boat can exceed cruise speed for 2 minutes, then the system automatically returns to cruise speed.

On-board charging

The propulsion is shut off. If the battery charge drops under 50%, the generator automatically starts at minimum rpm and restores the charge.

Dock charging

The propulsion is shut off. The battery is recharged by the charging station when the boat is in harbor mode.

Additionally, FPT Industrial and Sealence are also developing a new generation of marine batteries, featuring an internal filling technology to make them totally fireproof and safe.

“By selecting and powering startups, FPT Industrial is taking another step forward in its path to innovation and sustainable value proposition,” comments **Davide De Silvio**, Director of Sales - ePowertrain. *“As with Nikola and Potenza, the collaboration with Sealence offers a new approach to exploring disruptive solutions, while increasing our competitive edge in a market that regards sustainability as one of the main performance indicators.”*

“The collaboration signed with FPT Industrial for the joint development of new-generation batteries and range extenders is part of our industrial acceleration strategy and will allow us to enter the market with a solution that is unrivalled in terms of technological content, efficiency, ease of navigation and reliability,” comments Sealence President **William Gobbo**. *“I’m sure that our joint participation at CES 2022 will cause a big stir.”*

***FPT Industrial** is a brand of Iveco Group, dedicated to the design, production and sale of powertrains for on and off-road vehicles, marine and power generation applications. The company employs more than 8,000 people worldwide, in ten manufacturing plants and seven R&D Centres. The FPT Industrial sales network consists of 73 dealers and about 800 service centres in almost 100 countries. A wide product offering, including six engine ranges from 42 hp up to 1,006 hp, transmissions with maximum torque of 200 Nm up to 500 Nm, front and rear axles from 2 to 32 ton GAW (Gross Axle Weight). FPT Industrial offers the most complete Natural Gas engines line-up on the market for industrial applications, including engine ranges from 136 hp up to 460 hp. This extensive offer and a close focus on R&D activities make FPT Industrial a world leader in industrial powertrains. For further information, visit www.fptindustrial.com.*

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