FirePro.

ForSea - Aurora

Location: **Europe** Partner: **X-Fire A.B.** Application: **Energy Storage Systems (ESS)** Industry: **Marine**

ForSea (HH-Ferries)
is a European ferryboat operator based in Helsingborg, Sweden that supports 'sustainable' ferry routes. ForSea strives to achieve its operational efficiency and optimization with the use of the latest eco-friendly technology. Its ultimate goal is to lessen as much as possible any negative impact on the environment caused by its operations while strengthening regional integration around Oresund. ForSea is certified in accordance with the ISO 14001:2015 standard related to environmental management.

The Task
Aurora is a 100 metre-long vessel that employs a 4160 kWh power source. The energy is stored in 640 batteries placed in four large containers on the upper deck. The hi-tech equipment can rapidly store and release energy according to the payload. The primary aim is the fast deployment of the fire suppression system in the event of fire in these enclosures to limit damage and prevent it from spreading. The prescribed fire suppression system must therefore have been tested and proven effective and be space and weight saving to allow its installation. As the project is co-financed by the Connecting Europe facility it also needs to adhere to environmental standards.

FirePro Systems Used

FP-5700S

Why FirePro?

FirePro fire suppression systems have an exceptional track record on reliability and effectiveness. In fact, the robust condensed aerosol fire extinguishing generators for this specific application can outlast the current ESS battery lifespan, while protecting against fire incidents. What is more, the overall system is not pressurized and does not require room integrity or agent leakage tests. The compact nature of the systems also significantly minimizes the weight and space burden on the vessel. Critically, they are aligned with national authorities and the European Union's long-term climate sustainability policy requirements.

Risks Involved & Consequences

Possible fire hazards associated with operating the world's largest battery powered ferries include electrical faults, thermal runaway of the batteries and human error. Fire protection design needs to take into account the different types of material that may be present therefore the proposed suppression system must be suitable for various classes of fire. Rapid detection and containment of a fire incident within the Energy Storage Systems (ESS) enclosure is critical. Escalation of an electrical or any other fire to critical equipment or compartments on board the vessel could prove disastrous.

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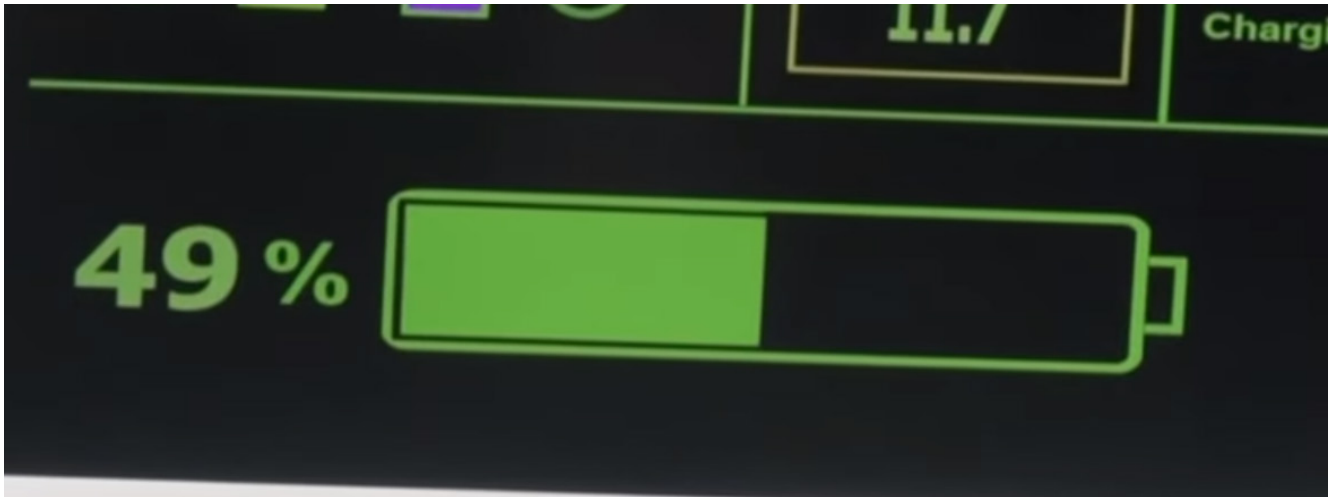
Results & Implementation

FirePro systems are currently installed in the four Battery Energy Storage Systems on board the Aurora. They are primed and ready to spring into action to suppress and contain fire in these enclosures on a 24/7 basis. The efficiency, effectiveness, low maintenance and low environmental footprint of the system along with its long-life span and robustness provide strong assurance and peace of mind to ForSea passengers and crew.



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Fire Suppression