PRESS RELEASE

BRINE-BASED FIREFIGHTING SYSTEM
– Now in operation on the World's longest RoPAX route

18. JUNE 2025

Onboard and Operational

As EV-related fires continue to challenge the maritime industry – with incidents like the Morning Midas blaze in the North Pacific – operators are urgently seeking more effective solutions. A new brine-based firefighting system, developed by Skansi Offshore in close cooperation with KNUD E. HANSEN, now offers a simple, robust and environmentally responsible answer.

The system is operational aboard Norrøna, sailing the world's longest RoPAX route, and is scheduled for installation on two new RoRo vessels under construction.

Unlike traditional fire suppression methods – which act from the outside and often fail to extinguish the core fire – the brine system targets the battery directly from inside the vehicle. In the event of a fire, one window is penetrated, and cold, saturated brine is delivered directly into the cabin. This allows the fluid to pool around the battery compartment, rapidly cooling the cells, limiting oxygen exposure, suppressing flammable materials, and even short-circuiting and depowering the battery.

"We believe this system sets a new standard. It's low-tech in the best way – reliable, proven, and easily maintainable. Most importantly, it addresses the real issue: HEAT – not just the flames, but the fire inside the battery."

–Finn Wollesen, Managing Director
KNUD E. HANSEN USA Inc.

Proven Performance

In a full-scale fire test conducted in the Faroe Islands, the system extinguished a fully developed EV fire in under one hour, including response times etc. In contrast, lithium-ion battery fires often burn for 24 hours or more when left to self-extinguish, and can reignite multiple times. ►

"Most systems act externally. Ours delivers cold brine inside the car, as close to the battery pack as possible. It cools, displaces flammable gases, and helps short-circuit and depower the battery. The high salinity also absorbs heat efficiently and limits fire spread. It's an elegant way to break the thermal runaway process before it escalates."
Frederik Jonassen, Lead Engineer, Brine System

Key Advantages

- Direct internal cooling of the EV – not just external suppression
- Prevents thermal runaway by targeting heat at the source
- Short-circuits and depowers the battery
- Uses only natural ingredients: Salt and Water
- No toxins, no pressure, no chemical residues
- Compatible with standard fire hoses and couplings
- Cost-effective, refillable, and environmentally friendly
- Can be retrofitted on existing RoRo and RoPAX vessels with minimal modification.

The System

- 16 m³ pre-cooled brine tank (–19 °C)
- Redundant pump system (circulation + discharge)
- Heat exchanger connected to vessel's refrigeration system
- Fire hydrants located on EV deck
- Integrated with ship automation and control (PLC, HMI)

This brine system represents a new direction in maritime fire safety – addressing the source, not just the symptoms, with a scalable, proven and environmentally safe technology. **www.batterybriner.com**

FOR FURTHER INFORMATION, PLEASE CONTACT

Finn Wollesen, Managing Director, USA Inc.
Mobile: +45 4084 2575
E-mail: wollesen@knudehansen.com

ABOUT KNUD E. HANSEN

KNUD E. HANSEN is one of the world's leading independent marine consultancies with more than 85 years of experience in ship & yacht design, with a proven track record in providing unique and cutting-edge solutions to the maritime industry. KNUD E. HANSEN employs about 100 naval architects and Mechanical Engineers in Denmark, Australia, the Faroe Islands, Spain, United Kingdom and USA.

Our approach is based on a combination of continuous innovation, the free exchange of ideas with our clients, and experience derived from many years spent working with every kind of vessel and maritime operator. Using these, we apply fresh thinking to each new project and tailor solutions that are both state-of-the-art and practical to meet the precise needs of each individual customer.

www.knudehansen.com

Cabin after fire has been extinguished ▼