Leclanché Expands its Marine Electrification Solution to Include Fast Charger for Ports, Harbors and Vessels with Damen Shipyards as First Adopter

- Leclanché battery systems are powering Damen's new Amherst Islander II and Wolfe Islander IV eFerries which will operate on Lake Ontario, Canada between Millhaven and Amherst Island and Kingston and Wolfe Island
- First Leclanché end-to-end sale linking its e-Marine and Stationary Solutions businesses

YVERDON-LES-BAINS, Switzerland and SUMAR, The Netherlands, Sept. 16, 2021 /PRNewswire/ -- Expanding its portfolio of solutions for the marine electrification industry, Leclanché (SIX: LECN) is introducing a new "ports and harbor" infrastructure solution enabling hybrid and fully electric vessels to fast charge when returning to port.

Its first customer for the innovative turnkey solution is <u>Damen Shipyards Group</u>, a globally operating company with more than 50 shipyards and related facilities, which has selected Leclanché to construct and provide two fast charge electric ferry stations, and supporting electrical storage systems, on Canada's Lake Ontario.

The agreement with Leclanché's Stationary Solutions group provides the complete recharging infrastructure. They will be installed next year to support two eFerries Damen has built for the Ministry of Transportation of Ontario. Both of the electric vessels are powered by Leclanché's Marine Rack System (MRS), certified by Bureau Veritas, under prior contracts with Leclanché's e-Marine group.

- The <u>Amherst Islander II (Damen 6819 E3)</u> is fully electric with a 1.9 MWh capacity Leclanché Battery System and produces zero emissions. It will carry up to 42 cars and 300 passengers and speeds of up to twelve knots and connect the mainland port city of Millhaven, Ontario with Stella on Amherst Island.
- The Wolfe Islander IV (Damen 9819 E3), a larger eFerry, will provide service between Kingston, on the mainland, and Wolfe Island and features a 4.6 MWh Leclanché Battery System. It can carry twice the number of passenger vehicles 83 plus 399 passengers. It too produces zero emissions and will sail at up to twelve knots per hour the same speed as vessels powered by conventional propulsion systems.
- The eFerries, have performed their sea trials successfully on the Black Sea in late April (Amherst Island II) and May (Wolfe Islander IV) respectively and are scheduled to be transported to Canada by a specialized semi-submersible vessel starting in August.

"Damen's broad range of ultra-modern ferries operate all over the world and we're proud to have partnered with Leclanché to build two state-of-the-art all electric ferries which are a first of its kind for North America and a breakthrough in sustainability," said Leo Postma, sales director Americas, Damen. "This partnership is consistent with our goal of being the world's most sustainable shipbuilder. Extending our partnership for the onshore fast charge and electrical storage systems is a natural outgrowth of our business relationship and consistent with our pioneering role in the maritime energy transition. It also provides many benefits to Ontario's Ministry of Transportation."

<u>Leclanché's Vision: The Creation of Public and Private Infrastructure to Accelerate the eTransport Industry</u>

Leclanché's in-house capability to provide both the battery energy storage system to power maritime vessels and the on-land charging and storage system, powered by the grid or increasingly cost-effective renewable sources of energy, sets it apart from other providers.

"I would like to thank Damen for trusting Leclanché with this innovative project. We've all observed the growing pains of the global electric automotive industry and the barriers to mass adoption caused by the lack of public and universal recharging infrastructure," said Anil Srivastava, CEO, Leclanché. "You can't have eFerries or electric trains, buses, trucks or other modes of transportation displace fossil-fueled modes of transportation without a reliable, cost-effective and energy efficient infrastructure in place. Our new zero emission ports and harbors solution architecture will make it easier for ship designers and port authorities to design, build and welcome to their shores the latest generation of sustainable vessels.

"For those portside regions unable to install a fixed energy storage system on shore, we are already considering a mobile charging station option – essentially a floating e-Barge with a fast-charge storage system onboard – that will enable a ferry to power-up in port without burdening the local infrastructure."

Ontario Ports and Harbor Solution

The Ontario ports and harbor systems are equipped with a 3.0 MWh Leclanché battery energy storage system (BESS) located in port-side structures (one each in Millhaven and Stella). The BESS, which will be charged by the harbor grid, is connected to the ferry charger via 1800 kW DC-DC converters. These "buffer stations" will be protected by the industry's highest safety standard fire suppression system using piped in water running alongside the battery racks and behind each battery module. The backs of each module have an opening allowing water spray to enter in the event of any thermal events.

Crossing time between ports will be just 20 minutes and Leclanché's high power, DC-to-DC fast charging system will enable the eFerries to "refuel" in just 10 minutes at each port – well within the time it takes for the vessel to discharge passengers and vehicles and reload. The batteries have been designed to charge each vessel up to 7,850 times per year or more than 78,500 times over their projected 10-year lifespan – ensuring 21 hours of duty daily regardless of weather.

"Our continuing partnership with Damen is bringing several firsts to market including the first fully electric passenger and car ferries in North America and the first time two of our business units have collaborated to create an end-to-end solution for a key customer. Now, thanks to our e-Marine and Stationary Solutions teams, passengers will be able to embark on a vessel powered by Leclanché technology onboard and recharged on shore – with the added benefit of our electrical storage systems providing stability to the local power grid," said Srivastava.

Find more information on this project in the <u>Case Study</u>. For more information about Leclanché's ports and harbor infrastructure solution, visit <u>www.leclanche.com</u> or contact <u>info@leclanche.com</u>

About Damen

Damen Shipyards Group has been in operation for over ninety years and offers maritime solutions worldwide, through design, construction, conversion and repair of ships and ship components. By integrating systems, we create innovative, high quality platforms, which provide our customers with maximum added value. Our core values are fellowship, craftsmanship, entrepreneurship and stewardship. Our goal is to become the world's most sustainable shipbuilder, via digitalisation, standardisation and serial construction of our vessels. Damen operates 35 shipyards and 20 other companies in 20 countries, supported by a worldwide sales and service network. Damen Shipyards Group offers direct employment to more than 12,000 people.

About Leclanché

Headquartered in Switzerland, Leclanché SA is a leading provider of high-quality energy storage solutions designed to accelerate our progress towards a clean energy future. Leclanché's history and heritage is rooted in over 100 years of battery and energy storage innovation and the Company is a trusted provider of energy storage solutions globally. This coupled with the Company's culture of German engineering and Swiss precision and quality, continues to make Leclanché the partner of choice for both disruptors, established companies and governments who are pioneering positive changes in how energy is produced, distributed and consumed around the world. The energy transition is being driven primarily by changes in the management of our electricity networks and the electrification of transport, and these two end markets form the backbone of our strategy and business model. Leclanché is at the heart of the convergence of the electrification of transport and the changes in the distribution network. Leclanché is the only listed pure play energy storage company in the world, organised along three business units: stationary storage solutions, e-Transport solutions and specialty batteries systems. Leclanché is listed on the Swiss Stock Exchange (SIX: LECN).

SIX Swiss Exchange: ticker symbol LECN | ISIN CH 011 030 311 9

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