



GS Yuasa's Lithium-ion Batteries Installed in Japan's First Fully Battery-Powered Vessel "e-Oshima"

GS Yuasa International Ltd. (Tokyo Stock Exchange: 6674; "GS Yuasa") today announced that its industrial lithium-ion batteries have been installed as a power source in Japan's first fully battery-powered vessel by Oshima Shipbuilding Co., Ltd. (President: Eiichi Hiraga; headquarters: Saikai, Nagasaki Prefecture; "Oshima Shipbuilding"). The vessel commenced operations today.

Oshima Shipbuilding's "e-Oshima", is one of the largest* fully battery-powered vessels in Japan (full length: 35m; gross tonnage: 340t), and it is the first one in Japan to operate as an ocean-going passenger ferry. Storage batteries are its only power source, making it a zero-emission vessel that emits no CO₂, either while in motion or at anchor, and it also features an experimental automatic vessel navigation function employing next-generation IoT technologies.

The battery propulsion system of the vessel uses high capacity lithium-ion batteries (approx. 600kWh) manufactured by GS Yuasa, which are used as the main power supply system required for operations, and the battery system includes management equipment that provides multiple layers of redundant protection for the batteries. The lithium-ion batteries made by GS Yuasa act not only as the ferry's motive power source but also supply all of the other power required during operations such as power for communications, navigation, and radio equipment, and air conditioning, and the batteries play a role in the ferry's automatic navigation technologies, which facilitate labor saving and enhanced safety.

GS Yuasa will continue to develop new applications for industrial-use lithium-ion batteries so as to contribute to preservation of the global environment with clean energy.

*Maximum capacity of the vessel is 50 people and it can also carry one large bus and four automobiles at the same time.

[Specifications of the lithium-ion battery system installed in "e-Oshima"]

Battery module format	LIM50EN-12 (12-cell module)
Number of batteries	3,360 cells (14 modules connected in series x 10 connected in parallel x 2 units)
Rated capacity	590.5kWh (2 units)
Nominal voltage	622V

[Images]

1. Fully battery-powered vessel “e-Oshima”



2. Industrial lithium-ion battery module LIM50EN series

