



**Port AGVs Using GS Yuasa's Lithium-ion Batteries Begin Operation
~ Helping Shanghai's Yangshan Port - The World's Largest Automated Wharf ~**

GS Yuasa Corporation (Tokyo Stock Exchange: 6674; "GS Yuasa") announced that the lithium-ion battery system powering port automatic guided vehicles ("AGVs") that GS Yuasa delivered to Shanghai Zhenhua Heavy Industries Company Limited ("ZPMC") were installed in 50 AGVs, manufactured by ZPMC, which began operation in December 2017 in Shanghai's Yangshan Port in China.

Port AGVs are able to transport containers without being operated by humans, which contribute to the efficiency of port logistics bases. These AGVs are also electric vehicles powered by GS Yuasa's lithium-ion batteries, and thus they release no exhaust gas during operation. Therefore, the use of these AGVs is expected to curb CO₂ emissions.

Yangshan Port will continue to further automate its port logistics systems, and moving forward the port plans to use lithium-ion battery systems produced by GS Yuasa in 30 additional AGVs.

Going forward, GS Yuasa will continue to broaden applications for industrial-use lithium-ion batteries in the global market, and contribute to the creation of an energy saving society.

[Specifications of the lithium-ion batteries installed in ZPMC's AGVs]

Module format	LIM50EN-12
Nominal voltage (V)	44.4
Nominal capacity (Ah)	50 (2,200Wh)
Structure	15 connected in series 10 connected in parallel

[Images]

1. Port AGV exterior view



2. Lithium-ion battery module LIM50EN-12

