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ideas for life

Press Release

Panasonic Corporation
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Panasonic's Green Technology Helps Reduce Carbon Emissions from Ocean-going Car Carrier

Panasonic's HIT solar panels and lithium-ion batteries on board the EMERALD ACE ocean-going car carrier supply electricity while at anchor, allowing the carrier's diesel power generator to be turned off.

Osaka, Japan - Panasonic Corporation today announced that a car carrier outfitted with Panasonic's green technology has been completed and is now ready for the sea. The ship named EMERALD ACE, designed to achieve zero emissions in harbor with a hybrid electric power supply system on board, is a result of joint R&D efforts the company embarked in January 2010 together with Mitsui O.S.K. Lines, Ltd. (MOL) and Mitsubishi Heavy Industries, Ltd. (MHI) to explore a car carrier using natural energy. The EMERALD ACE will leave MHI's Kobe shipyard today, ready to go into service on routes around the world.

This R&D was designated as part of the "Project to Develop Technologies for the Reduction of CO_2 Emissions from New Ships" by the Ministry of Land, Infrastructure, Transport and Tourism and is supported as a cooperative research program to develop technology to reduce greenhouse gas emissions in international shipping by Nippon Kaiji Kyokai (ClassNK), a non-profit ship classification society dedicated to ensuring the safety of life and property at sea as well as protecting the marine environment.

The EMERALD ACE employs Panasonic's system consisting of its HIT solar modules (160 KW) and lithium-ion batteries (approx. 2.2 MWh[*1]). With this system, Panasonic is aiming to establish a technology that enables a ship to reduce its total CO_2 emissions by supplementing the power generated by the ship's diesel power generator. The power generated by the HIT solar modules and stored in the lithium-ion batteries is primarily used while the ship is at anchor, allowing the diesel power generator to be turned off, thereby helping to reduce environmental impact of the ship in port as well as CO_2 emissions. The lithium-ion batteries are located at the bottom of the ship, used as fixed ballast[*2], so that they do not affect the carrying capacity of the ship.

Panasonic continues to develop and provide systems that combine solar cells and secondary batteries that leverage the company's expertise in energy creation and storage.

Notes:

*1: Practical value

*2: Weight placed at the bottom or in a tank for stabilizing the ship. Seawater is usually used by commercial carriers.

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Battery room storing lithium-ion batteries

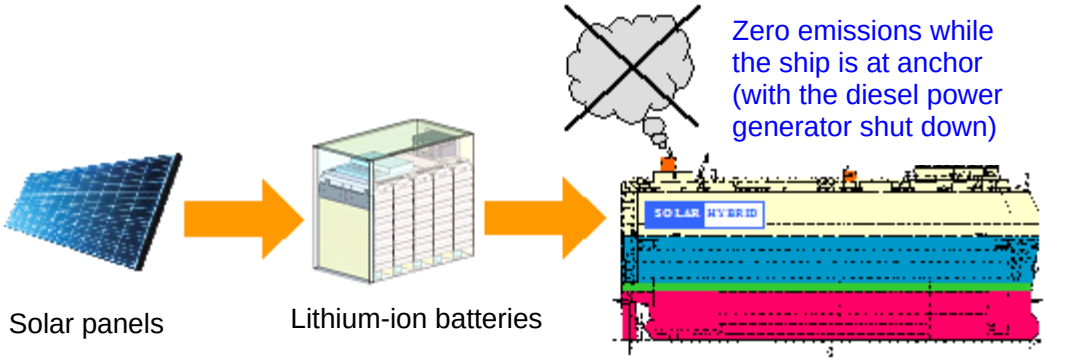
HIT solar modules covering the garage deck

■ **"Hybrid Car Carrier Utilizing Natural Energy"**

(R&D conducted jointly with Mitsui O.S.K. Lines and Mitsubishi Heavy Industries)

The HIT solar modules on the deck and a storage battery system reduce CO_2 emissions from the vessel.

Hybrid car carrier EMERALD ACE



Conceptual image of the hybrid power supply system

About Panasonic

Panasonic Corporation is a worldwide leader in the development and manufacture of electronic products in three business fields, consumer, components & devices, and solutions. Based in Osaka, Japan, the company recorded consolidated net sales of 7.85 trillion yen for the year ended March 31, 2012. Panasonic's stock is listed on the Tokyo, Osaka, Nagoya and New York (NYSE:PC) Stock Exchanges. The company has the vision of becoming the No. 1 Green Innovation Company in the Electronics Industry by the 100th year of its founding in 2018. For more information on Panasonic, its brand and commitment to sustainability, visit the company's website at http://panasonic.net/.

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