

MOL Adopts Low-friction Ship Bottom Paint on a New PCTC for the First Time

TOKYO—Mitsui O.S.K. Lines, Ltd. (MOL; President: Koichi Muto) today announced the adoption of the low-friction ship bottom paint named “LF-Sea” developed by Nippon Paint Marine Coatings Co., Ltd. (headquarters: Kobe City, Hyogo; President: Nobuhiro Sasaki) on a new building PCTC (Pure Car and Truck Carrier). In sea trial of the vessel using the new paint, tests confirmed that it improved fuel efficiency, which in turn reduces CO₂ emissions from the vessel.

Vessel hull’s friction drag is the greater part of resistance in the sea water. Reducing the friction drag is a very effective way to reduce CO₂ emissions during vessel operation. MOL has taken a proactive stance in developing and adopting a low-friction ship bottom paint as part of its environmental initiatives.

[New building vessel adopting the new paint]

Car carrier *Neptune Ace* (capacity: 6,400 units of standard passenger cars) built by Minaminippon Shipbuilding Co., Ltd., and completed on October 27, 2010

[Low-friction ship bottom paint “LF-Sea”]

LF-Sea, developed by Nippon Paint Marine Coatings, uses a component called hydrogel, which is a naturally derived material. The hydrogel allows water to fill in small indentations on the hull to minimize friction drag. LF-Sea can realize about 4% reduction in fuel consumption compared to an identical vessel using conventional bottom paint. Reducing the consumption of heavy fuel oil by 4% ensures a decrease in CO₂ emissions at the same rate.

MOL continues joint research and development on an ultra-high fuel efficient ship bottom paint with the aim of further CO₂ reduction with Nippon Paint Co., Ltd. (headquarters: Osaka; President: Kenji Sakai) and Nippon Paint Marine Coatings Co., Ltd. The companies will strive to further improve LF-Sea paint with the goal of reducing CO₂ emissions by 8% to 12% compared to conventional anti-fouling paints. MOL believes the performance assessment on the new

MOL Car & RoRo E-Commerce



building PCTC will serve as a benchmark for the development on an ultra-high efficient ship bottom paint.

This R&D initiative is one of several subsidized through the Japanese Ministry of Land, Infrastructure, Transport and Tourism's "Support for Technology Development from Marine Vessels for Curtailing CO₂" project.

For further information, please contact:

Kenta Arai, General Manager

Technical Division, Ship Design Group

Mitsui O.S.K. Lines, Ltd.

Tel: +81-3-3587-7062/+81-3-3587-7722

E-mail: sdsmo@mail.mol.co.jp

MOL – smoothing the waves of information flow.