



July 25, 2011

MOL Adopts Low-friction Ship-bottom Paint

TOKYO—Mitsui O.S.K. Lines, Ltd. (MOL; President: Koichi Muto) today announced the adoption of a new low-friction ship-bottom paint “Seaflo Neo” developed by Chugoku Marine Paint, Ltd. (President: Masataka Uetake). After analyzing the results of an onboard test with a newbuilding vessel, the company confirmed that the new paint offers improvements in fuel efficiency compared to conventional paints. This will contribute to the reduction of CO₂ emissions from vessels.

Friction between the hull and the water accounts for the majority of resistance as a vessel moves through the water. Reducing 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 one of its environmental initiatives.

[Newbuilding vessels adopting the new paint]

Car carrier *Eternal Ace* (capacity: 6,400 units of standard passenger cars) built by Minaminippon Shipbuilding Co., Ltd., and completed on July 25, 2011

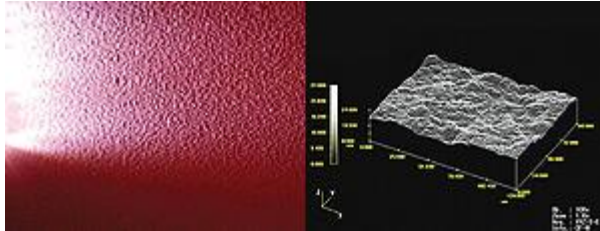
Car carrier *Brilliant Ace* (capacity: 6,400 units of standard passenger cars) built by Minaminippon Shipbuilding Co., Ltd., and completed on March 30, 2011

[Seaflo Neo Low-friction ship bottom paint]

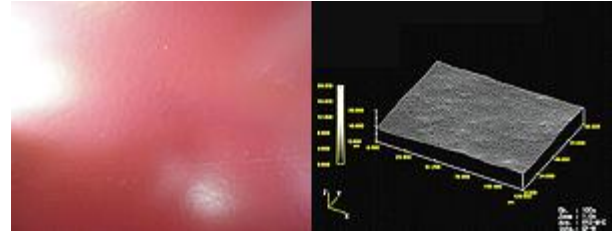
The main characteristic of the new paint, developed by Chugoku Marine Paint is the high smoothness of their paint film surface, the result of a newly developed low-viscosity hydrolyzed polymer. The ultra-smooth finish minimizes friction drag between the hull and the water, improving fuel efficiency by 3-5% compared to an identical vessel with a conventional hull coating. Called Seaflo Neo, the new environment-friendly paint is also low in volatile organic compounds (VOCs), a major source of air pollution.

Seaflo Neo and Conventional Paint Film Surface

Conventional paint



Seaflo Neo



As one of the environmental strategies in the midterm management plan GEAR UP! the company is promoting its next-generation vessel concept Sempaku ISHIN. The adoption of the new paint is part of the concept. MOL moves aggressively to adopt various technologies that will contribute to reducing the environmental burden of its business activities.