



Technical Webinar

Co-Organised by

The Society of Naval Architects and Marine Engineers Singapore

The Joint Branch of the RINA and IMarEST (Singapore)

Singapore Shipping Association

Prediction and analysis of ship performance and fuel efficiency with a proper selection of fouling control coatings

by



Dr Chen, Haoliang

Technology Leader, AkzoNobel

Date : 18th August 2020 (Tuesday)

Time : Webinar will begin at 5:00 pm and ends at 6.30 pm

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Abstract

With tightening environmental regulations imposed in marine shipping industry, together with challenging business environment, ship owners/operators are more pressured than ever to reduce their fleet's fuel consumption over the whole dry-docking cycle, which means an urgent need to be able to better understand long term economic benefits of any investment made during dry-docking.

Among various options to improve the vessel efficiency, fouling control coating is plausibly one of the most important but least fancy options. However, fouling control coating is also possibly one of the most cost-effective solutions. The challenge is how to more accurately predict and compare the cost benefit of different coating schemes over the whole drydock cycle including the initial drydock investments.

Based on tens of thousands of coating performance inspection records over decades of years as well as advanced computer modelling and data analysis techniques, AkzoNobel developed the very first digital tool, Intertrac Vision, to give the shipping industry a way to accurately predict the potential fuel and CO₂ savings by fouling control coatings. Another important aspect is how to accurately evaluate ship's hull and propeller performance during the in-service period to help understand the hull condition and proactively manage the hull at a good condition.

In the presentation, a holistic performance prediction and evaluation framework will be introduced to achieve more information-based analysis-driven decision-making process. The whole framework is designed to help all relevant stakeholders to make right choice of fouling control coatings for the right vessels.

About the Speaker

Chen, Haoliang joined AkzoNobel in 2014 as a technology leader in hydrodynamics, focusing on improving understanding of the hydrodynamic impacts of fouling control coatings and surface roughness on ship hull. He is currently leading the hydrodynamic team to conduct both vessel performance data analysis and fundamental experimental work on surface roughness impact on ship performance.

He holds a PhD degree in civil engineering from National University of Singapore and a bachelor degree in physical oceanography from Ocean University of China. Before joined AkzoNobel, he worked as a research scientist in Singapore-MIT Alliance for Research and Technology (SMART) Centre from 2009-2013.



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