

Developing a more fuel efficient tonnage through blasting of hulls and timely in water husbandry

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The purpose of the presentation is to inform the audience regarding the relevance of Hull and Propeller Performance Monitoring in immediate fuel conservation and emission reduction of Ocean Going Vessels. Hull and Propeller Performance Monitoring is a topic on the IMO Ship Energy Efficiency Management Plan. In addition, the INTERTANKO Tanker Energy Management Plan includes the topic of "Propulsion Resistance Management Program", describing the need for hull and propeller performance monitoring as a key element in minimizing emission through improving fuel efficiency for ships in service.

This paper will briefly describe hull and propeller performance monitoring and to illustrate case studies of real ships of various types which have underwent hull cleanings, propeller polishing and blasting of hulls in drydock and the real improvement in fuel efficiency attained from these routine husbandry practices. Further will be a case study illustrating the effect of hull blast surface area and demonstrate that more comprehensive hull pre-treatments in connection with high quality coating systems can attain noteworthy improvements in technical performance.

The presentation will include an anonymous benchmarking sample of the hull and propeller condition of a sample of the world fleet and conclude with estimations of fuel savings and emission reduction of possible by implementation of hull and propeller performance monitoring and timely husbandry.

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Daniel Kane is Co-Founder and V.P. of Business Development for Propulsion Dynamics Inc. founded in 2003. He has a Bachelor of Science Degree, Mechanical Engineering, from Cal State Los Angeles. Prior to joining Propulsion Dynamics, his experience includes 10 years as a sales engineer for technical products furnished to the US Navy. He is a member of the SNAME "Ship Efficiency Panel" and co-authored a chapter of SNAME's Energy Efficiency Guide. In addition, he is on the advisory council to IMO through National Association of Corrosion Engineers on hull and propeller condition. Daniel is member of SNAME and Royal Institute of Naval Architects. Propulsion Dynamics pioneered hull and propeller performance monitoring through its CASPER service which is now active on more than 400 ships worldwide.