# OPTIFLOAT For Princess Cruises

Knud E. Hansen USA LLC delivers a comprehensive Computational Fluid Dynamics (CFD) analysis for trim management onboard the Princess Cruises Grand Class Vessels.

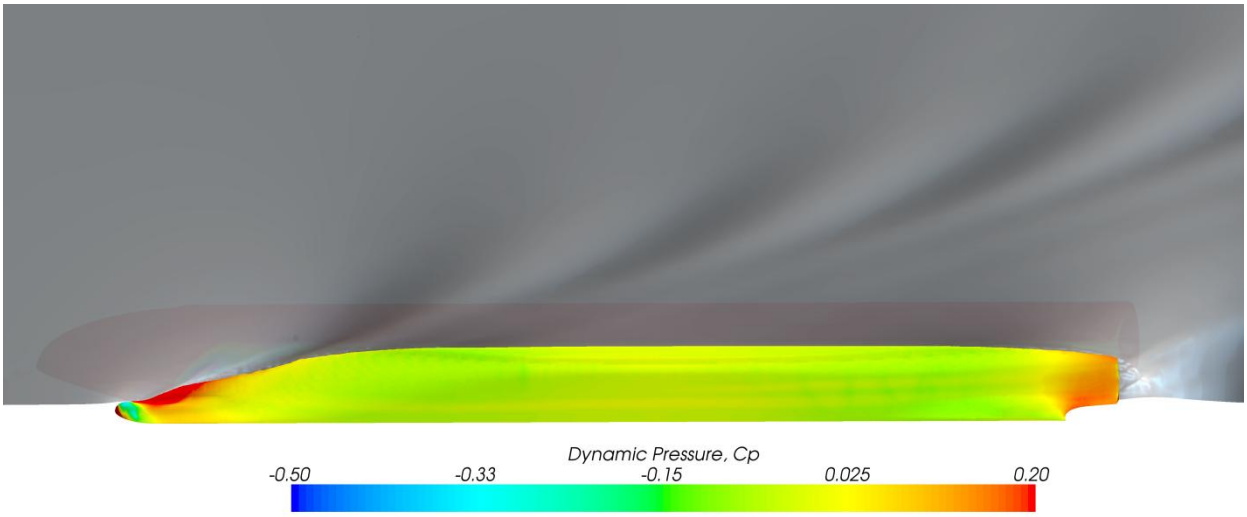
As part of an ongoing cooperation with Onboard NAPA Ltd., Knud E. Hansen USA has provided CFD analysis covering a large range of trim/draft/speed conditions for numerous ship owners to be used in the Onboard Napa Loading Computer-Optifloat Module.

Optifloat is a tool developed by Onboard NAPA Ltd, which provides the vessel crew with a recommended optimal floating position for voyage planning. Optifloat references the vessels current floating position, which is retreived from the loading computer, and compares it with a speed & power dataset of various speed/trim/draft conditions that is loaded into the software prior to installation onboard.

Optifloat can be used in pre-voyage planning to maximize fuel savings by reducing required power through properly planned operations onboard. The softare instructs the vessels crew to change the vessels trim and draft to floating position which shows the most favorable resistance based on the desired speed for a given voyage.

Optifloat works as an add-on module to the vessels existing Onboard NAPA loading computer and automatically monitors the vessels floating position throughout the voyage, assuring compliance with all required strength and stability criteria. This allows the user to optimize the floating position throughout the entire voyage based on all required operational practices such as; ballast operations, bunkering, waste water management, and cargo operations.

KEH USA uses Star-CCM+, a commercial CFD code developed by Cd-Adapco, with a Dell HPC system to produce highly accurate hydrodynamic studies with cutting-edge solutions for the marine industry. Results are calculated values (numerically simulated) based on specific hull, appendage, and propeller geometry, and have been delivered in both model and full scale depending on owners requirements. Simulations have covered various applications including tankers, cruise vessels, ferries, and special purpose vessels.



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