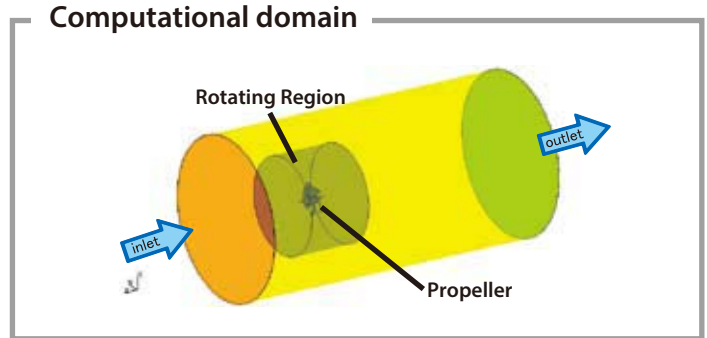
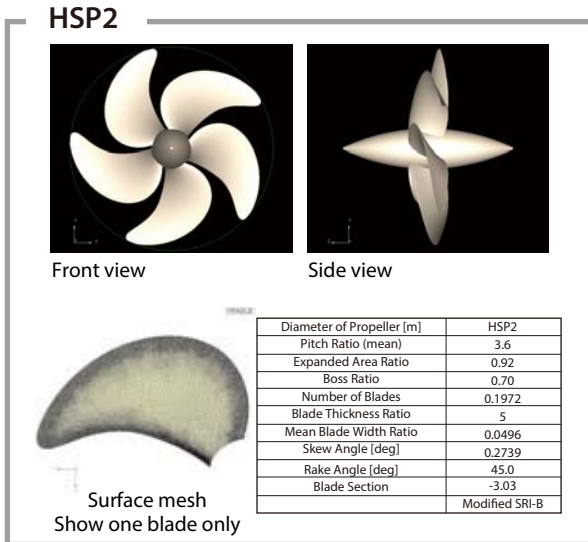


Performance Evaluation of Ship Propeller by Fluid Analysis

Case Study of SC/Tetra

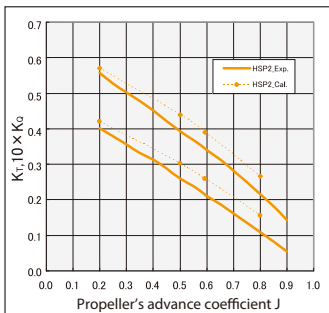
Analyzing independent performance of propeller blade and estimating propeller thrust using SC/Tetra

Propeller Shape

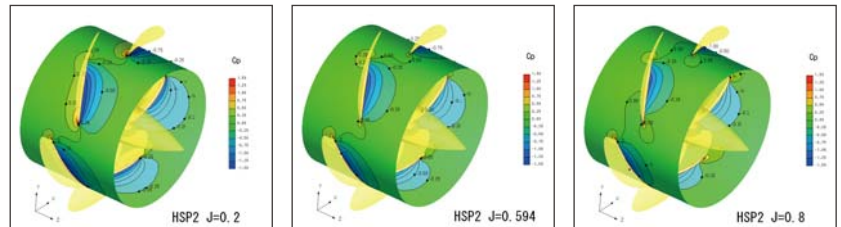


Evaluation of propeller performance

Comparison with experimental data



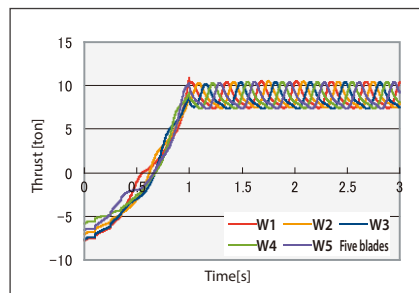
Pressure distribution near propeller – HSP2 (cylindrical section displayed)



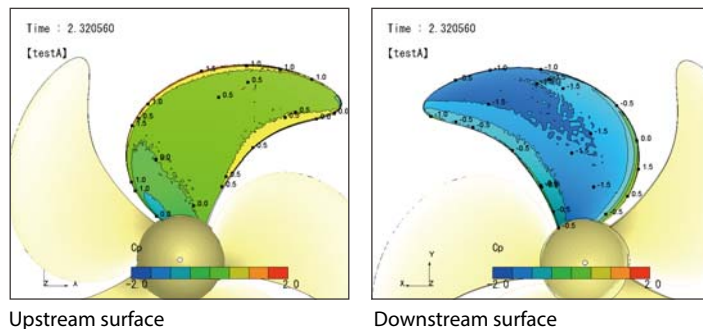
The smaller the propeller's advance coefficient J is, the larger the negative pressure region at the upstream side becomes. It shows the consistency with experimental data regarding thrust.

Evaluation of propeller performance

Time variation of thrust generated by each blade



Surface pressure distribution at the maximum thrust



Notes

To increase total performance of a ship, we have to not only improve efficiency of a propeller but also capture their performance correctly. Utilization of CFD helps reduce the lead time and costs in design phase.