

Response to reviewer

Dear Stefano Gaggero,

Thank you for reading and reviewing regarding the paper “Numerical estimation of Pre-Swirl Stator efficiency”.

Please find below the response to your comments.

The paper shows an interesting investigation on Pre-Swirl Stator fin performance assessment using CFD, showing the effectiveness of this energy saving device. The limited number of pages for a conference paper does not allow detailed discussion on grid convergence, self-propulsion coefficients modifications and so on. Only few curiosities, however, are worth to be mentioned and addressed in the paper.

The authors fully agree that a more in-depth study with the grid convergence is necessary, but it is beyond the scope for the short conference study.

The design of the ESD was not mentioned. How authors selected this shape/fins positioning? Since the power gain is remarkable, few words commenting the choice of this devise (why 3 fins? In that position..) could be useful to the readers.

The ESD studied in this work is a part of a broader collaborative project Global Core Research Center for Ships and Offshore Plants (GCRC-SOP) established by the Republic of Korea Government through the National Research Foundation of South Korea. Our part in the study was mostly concerned with the structural issues through development of hydro-structure CFD-FEM interaction models. Unfortunately, the authors were not involved in the design of the ESD, but only verified the design as beneficial which is presented in the current work. However, the authors are aware of the work [11] referenced in the article concerning the PSS design and are looking forward to discuss the issue at the conference venue.

It would be more interesting to see the back face (suction side) of the propeller, in order to verify if the change in the incoming hull wake due to the presence of the PSS increase the risk of cavitation inception.

The images with the suction side of the propeller are now included in the article as Figure 8 with appropriate comments. From the results, the high pressure drop on the suction side at the blade tip is similar in both cases.

Best regards,
Andro Bakica