

CFD ANALYSIS OF SHIP PERFORMANCE IN SHALLOW AND CONFINED WATERS

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ABSTRACT

When sailing in shallow or confined waters, ships experience a variety of hydrodynamic effects as a result of ship-seabed and/or ship-bank interactions. Although a number of methods to predict performance and behaviour in such cases exist, Computational Fluid Dynamics (CFD) is the most versatile particularly because of its ability to model viscous effects. However, there are considerable challenges in accurately reproducing the flow around a hull in calm water or waves in shallow or confined waterways. This Session aims to provide a forum for industry and academia to discuss challenges and accomplishments in confined water ship hydrodynamic performance and behaviour prediction. Contributions on ship performance in shallow and confined waters, whether in calm conditions or in waves, which study ship performance using CFD in the broadest sense are invited.