

Hydrodynamic analysis and optimization of the Titan submarine via the SPH and Finite–Volume methods

S.R. Carberry Mogan, D. Chen, J.W. Hartwig, I. Sahin, A. Tafuni

PII: S0045-7930(18)30518-8
DOI: <https://doi.org/10.1016/j.compfluid.2018.08.014>
Reference: CAF 3979



To appear in: *Computers and Fluids*

Received date: 6 April 2018
Revised date: 16 August 2018
Accepted date: 19 August 2018

Please cite this article as: S.R. Carberry Mogan, D. Chen, J.W. Hartwig, I. Sahin, A. Tafuni, Hydrodynamic analysis and optimization of the Titan submarine via the SPH and Finite–Volume methods, *Computers and Fluids* (2018), doi: <https://doi.org/10.1016/j.compfluid.2018.08.014>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- A SPH and FVM numerical hydrodynamics analysis of the Titan submarine is presented.
- Contours of flow variables are shown in the near and far field for several Re and Fr .
- Preliminary thrust and power values are given for surfaced and submerged conditions.
- Design recommendations are proposed based on the current submarine hull shape.
- SPH is successfully applied to simulate 3D fluid flow over complex geometries.

Download English Version:

<https://daneshyari.com/en/article/11003789>

Download Persian Version:

<https://daneshyari.com/article/11003789>

[Daneshyari.com](https://daneshyari.com)