

DAFTAR PUSTAKA

- Celik, I. B., Ghia, U., Roache, P. J., Freitas, C. J., Coleman, H., & Raad, P. E. (2008). Procedure for estimation and reporting of uncertainty due to discretization in CFD applications. *Journal of Fluids Engineering, Transactions of the ASME*, 130(7), 0780011–0780014. <https://doi.org/10.1115/1.2960953>
- De Marco, A., Mancini, S., Miranda, S., Scognamiglio, R., & Vitiello, L. (2017). Experimental and numerical hydrodynamic analysis of a stepped planing hull. *Applied Ocean Research*, 64, 135–154. <https://doi.org/10.1016/j.apor.2017.02.004>
- Demirel, Y. K., Turan, O., & Incecik, A. (2017). Predicting the effect of biofouling on ship resistance using CFD. *Applied Ocean Research*, 62, 100–118. <https://doi.org/10.1016/j.apor.2016.12.003>
- Deng, R., Wang, S., Hu, Y., Wang, Y., & Wu, T. (2021). The effect of hull form parameters on the hydrodynamic performance of a bulk carrier. *Journal of Marine Science and Engineering*, 9(4). <https://doi.org/10.3390/jmse9040373>
- Derakhshandeh, J. F., & Alam, M. M. (2019). A review of bluff body wakes. In *Ocean Engineering* (Vol. 182, pp. 475–488). Elsevier Ltd. <https://doi.org/10.1016/j.oceaneng.2019.04.093>
- Eberechukwu Onwuegbuchunam, D., Chimobi Ogbenna, F., Charles Ezeanya, N., & Okechukwu Okeke, K. (2019). Ship Hull Form Optimization: A Computational Fluid Dynamics (CFD) Approach. *International Journal of Transportation Engineering and Technology*, 5(3), 43. <https://doi.org/10.11648/j.ijtet.20190503.11>
- Gray-Stephens, A., Tezdogan, T., & Day, S. (2020). Numerical modelling of the nearfield longitudinal wake profiles of a high-speed prismatic planing hull. *Journal of Marine Science and Engineering*, 8(7). <https://doi.org/10.3390/JMSE8070516>

Rifki Andrian, 2026

**OPTIMALISASI GEOMETRI STEPPED PLANNING HULL BERBASIS CFD
UNTUK PENINGKATAN EFISIENSI HIDRODINAMIKA**

UPN Veteran Jakarta, Fakultas Teknik, S1 Teknik Perkapalan

[www.upnvj.ac.id-www.library.upnvj.ac.id-www.repository.upnvj.ac.id]

- Gutiérrez-Romero, J. E., & Esteve-Pérez, J. (2022). Assessment of the Influence of Added Resistance on Ship Pollutant Emissions and Freight Throughput Using High-Fidelity Numerical Tools. *Journal of Marine Science and Engineering*, 10(1). <https://doi.org/10.3390/jmse10010088>
- Hosseini, A., Tavakoli, S., Dashtimanesh, A., Mikkola, T., & Hirdaris, S. (2024). Drift test analysis of a conventional planing hull utilising CFD and 2D+t models. *Ocean Engineering*, 308(May), 118226. <https://doi.org/10.1016/j.oceaneng.2024.118226>
- Jin, S., Peng, H. (Heather), Qiu, W., Hunter, R., & Thompson, S. (2023). Numerical simulation of planing hull motions in calm water and waves with overset grid. *Ocean Engineering*, 287(P2), 115858. <https://doi.org/10.1016/j.oceaneng.2023.115858>
- Kazemi, H., Salari, M., Nowruzi, H., & Najafi, A. (2019). Hydrodynamics analysis of stepped planing hull under different physical and geometrical conditions. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 41(9). <https://doi.org/10.1007/s40430-019-1866-9>
- Kim, B. S., Oh, M. J., Lee, J. H., Kim, Y. H., & Roh, M. Il. (2021). Study on hull optimization process considering operational efficiency in waves. *Processes*, 9(5). <https://doi.org/10.3390/pr9050898>
- Kim, S. J., Kõrgersaar, M., Ahmadi, N., Taimuri, G., Kujala, P., & Hirdaris, S. (2021). The influence of fluid structure interaction modelling on the dynamic response of ships subject to collision and grounding. *Marine Structures*, 75(March 2020). <https://doi.org/10.1016/j.marstruc.2020.102875>
- Matheswaran, V., DeLillo, T. K., & Miller, L. S. (2024). Vortex shedding from bluff bodies: a conformal mapping approach. *Journal of Engineering Mathematics*, 146(1). <https://doi.org/10.1007/s10665-024-10367-x>
- Matveev, K. I. (2025). CFD Simulations of Basic Stepped-Hull Configurations in Planing Regime Using Star-CCM+ Software. *Journal of Marine Science and Engineering*, 13(7), 1–14. <https://doi.org/10.3390/jmse13071217>

Rifki Andrian, 2026

**OPTIMALISASI GEOMETRI STEPPED PLANNING HULL BERBASIS CFD
UNTUK PENINGKATAN EFISIENSI HIDRODAMIKA**

UPN Veteran Jakarta, Fakultas Teknik, S1 Teknik Perkapalan

[www.upnvj.ac.id-www.library.upnvj.ac.id-www.repository.upnvj.ac.id]

- Matveev, K. I., & Bari, G. S. (2016). Effect of deadrise angles on hydrodynamic performance of a stepped hull. *Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment*, 230(4), 616–622. <https://doi.org/10.1177/1475090215613813>
- Najafi, A., Nowruzi, H., Karami, M., & Javanmardi, H. (2019). Experimental investigation of the wetted surfaces of stepped planing hulls. *Ocean Engineering*, 187(424), 106164. <https://doi.org/10.1016/j.oceaneng.2019.106164>
- Niazmand Bilandi, R., Dashtimanesh, A., Mancini, S., & Vitiello, L. (2023). Comparative study of experimental and CFD results for stepped planing hulls. *Ocean Engineering*, 280(May), 114887. <https://doi.org/10.1016/j.oceaneng.2023.114887>
- Pacuraru, F., Mandru, A., & Bekhit, A. (2022a). CFD Study on Hydrodynamic Performances of a Planing Hull. *Journal of Marine Science and Engineering*, 10(10). <https://doi.org/10.3390/jmse10101523>
- Pacuraru, F., Mandru, A., & Bekhit, A. (2022b). CFD Study on Hydrodynamic Performances of a Planing Hull. *Journal of Marine Science and Engineering*, 10(10). <https://doi.org/10.3390/jmse10101523>
- Ren, Y., Zhang, H., Zhang, X., Cai, X., Song, Y., Liang, J., Zhang, L., Zhu, T., & Huang, J. (2025). Research progress and current application of weak turbulence and turbulence intermittency in stable boundary layers. *Earth-Science Reviews*, 262(November 2024), 105062. <https://doi.org/10.1016/j.earscirev.2025.105062>
- Sulman, M., Mancini, S., & Bilandi, R. N. (2024). Numerical Investigation of Single and Double Steps in Planing Hulls. *Journal of Marine Science and Engineering*, 12(4). <https://doi.org/10.3390/jmse12040614>
- Sulman, M., Mancini, S., Niazmand Bilandi, R., & Vitiello, L. (2025). Hydrodynamic Performance of High-Speed Craft: A CFD Study on Spray Rails. *Journal of Marine Science and Engineering*, 13(3), 1–21.

Rifki Andrian, 2026

**OPTIMALISASI GEOMETRI STEPPED PLANNING HULL BERBASIS CFD
UNTUK PENINGKATAN EFISIENSI HIDRODAMIKA**

UPN Veteran Jakarta, Fakultas Teknik, S1 Teknik Perkapalan

[www.upnvj.ac.id-www.library.upnvj.ac.id-www.repository.upnvj.ac.id]

<https://doi.org/10.3390/jmse13030438>

- Tavakoli, S., Zhang, M., Kondratenko, A. A., & Hirdaris, S. (2024). A review on the hydrodynamics of planing hulls. *Ocean Engineering*, 303(January), 117046. <https://doi.org/10.1016/j.oceaneng.2024.117046>
- Terziev, M., Tezdogan, T., & Incecik, A. (2019). A geosim analysis of ship resistance decomposition and scale effects with the aid of CFD. *Applied Ocean Research*, 92(July), 101930. <https://doi.org/10.1016/j.apor.2019.101930>
- Tezdogan, T., Demirel, Y. K., Kellett, P., Khorasanchi, M., Incecik, A., & Turan, O. (2015). Full-scale unsteady RANS CFD simulations of ship behaviour and performance in head seas due to slow steaming. *Ocean Engineering*, 97, 186–206. <https://doi.org/10.1016/j.oceaneng.2015.01.011>
- Vitiello, L., Mancini, S., Bilandi, R. N., Dashtimanesh, A., De Luca, F., & Nappo, V. (2022). A comprehensive stepped planing hull systematic series: Part 1 - Resistance test. *Ocean Engineering*, 266(P2), 112242. <https://doi.org/10.1016/j.oceaneng.2022.112242>
- Yang, Z., Qu, W., & Zhuo, J. (2024). Optimization of Energy Consumption in Ship Propulsion Control under Severe Sea Conditions. *Journal of Marine Science and Engineering*, 12(9). <https://doi.org/10.3390/jmse12091461>
- Yousefi, R., Shafaghat, R., & Shakeri, M. (2013). Hydrodynamic analysis techniques for high-speed planing hulls. *Applied Ocean Research*, 42, 105–113. <https://doi.org/10.1016/j.apor.2013.05.004>