

عنوان مقاله:

Technical Notes on the Near Surface Experiments of Submerged Submarine

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خلاصه مقاله:

In this study, the experimental analysis on the bare hull resistance coefficient of submarine at snorkel depth is represented. The experiments are conducted in marine laboratory of Admiral Makarov University. The results are presented for surface condition and snorkel condition. Snorkel depth is regarded equal to one diameter of submarine hull beneath the water surface as usual in submarines. Performing the experiment at the surface condition is a usual practice process but performing the experiment at submerged condition has several technical notes which are evaluated in this paper. One of challenging discussions is estimating the induced resistance between the main hull and struts. For this part of study, CFD method is used. CFD analyses are conducted by Flow-3D (V.10) software based on solving the RANS equations and VOF method. All analyses are performed for still water condition. The results of this research can be used for AUVs, research submersibles and submarines, torpedoes and every submersible who operate near the free surface of water.

کلمات کلیدی:

Submarine, Resistance, Experimental, CFD, Snorkel depth, Flow-Vision, Flow-3D

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