

A Future Technology: Solar Winged Autonomous Underwater Vehicle Design

Authors : Mohammad Moonesun

Abstract : One of the most important future technologies is related to solar Autonomous Underwater Vehicles (AUVs). In this technical paper, some aspects of solar winged AUV design are mentioned. The case study is for Arya project. The submarine movement cyclograms, weight quotas for internal equipment, hydrodynamic test results are mentioned, and some other technical notes are discussed here. The main body is the SUBOFF type and has two hydroplanes on the both sides of the body with the NACA0015 cross section. On these two hydroplanes, two 50-W photovoltaic panel will be mounted. Four small hydroplanes with the same cross section of the NACA0015 are arranged at the stern of the body at a 90° angle to each other. This test is performed in National Iranian Marine Laboratory with the length of 402 m.

Keywords : AUV, solar, model test, hydrodynamic resistance

Conference Title : ICNAOE 2020 : International Conference on Naval Architecture and Ocean Engineering

Conference Location : Vancouver, Canada

Conference Dates : August 06-07, 2020