

DEVELOPMENT OF A COMMAND AUV ROBOTIC COMPLEX FOR OPERATIONAL MONITORING OF UNDERWATER NOISE SITUATION

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The article substantiates the design of the command autonomous unmanned underwater vehicle (CAUV) of the robotic complex of hybrid autonomous unmanned underwater vehicles (HAUV) equipped with vector-scalar receivers (VSR) of sound for solving the problems of operational monitoring of the underwater noise environment in a given water area. CAUV should provide coordinated control of the movement of the HAUV group to a given area and back, the placement of devices in the specified geographic coordinates of the bottom surface to form a distributed antenna system of VSR, as well as collecting the results of processing noise sound field signals via a hydroacoustic communication channel and transmitting them to a remote control post in real time via a radio channel. A model of CAUV application is proposed, the composition of the equipment ensuring its intended use is determined, the design of the device is substantiated and formed. At the same time, special attention was paid to the unification of the onboard systems of the CAUV and HAUV complex. The prospects for using such a complex are noted, determining the possibility of solving the tasks of the assignment in real time and increasing the efficiency of its use.

Keyword: Hybrid autonomous unmanned underwater vehicle, command autonomous unmanned underwater vehicle, vector-scalar sound receiver, distributed antenna system, operational underwater situation monitoring system, hydroacoustic navigation and communication system

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