

## COMPLEX ROBOTIC TOOLS TO PERFORM SEARCHES AND SURVEYS OF UNDERWATER INFRASTRUCTURE ON THE SHELF

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### ABSTRACT

Created an underwater robotic system to perform the surveillance and search operations on the shelf, which consists of two independent and one remote-controlled unmanned underwater vehicles (AUV/ROV) and a set of navigation, and providing auxiliary equipment. A distinctive feature of the complex is to reduce the time of search and inspection operations, which is evidenced by the materials of the execution of marine operations. The system can provide for monitoring the status of the seabed allocated water in the area with the placement of the control equipment on the shore, prompt a search operation in different areas on the shelf, when placing the equipment on Board the vehicle, and condition monitoring of subsea hydraulic structures, including ship hulls. Technical implementation of the project foresees the possibility of simultaneous operation of all devices in the same area, and of each of the three devices simultaneously in different areas. The complex is provided in full technical documentation in accordance with the requirements of the applicable standards. This documentation in a short time can be adapted to the production system or its individual components in terms of the "Center for design and manufacture of underwater robots", currently being built in Vladivostok.

**Keywords:** Autonomous underwater vehicle, remotely-operated underwater vehicle, underwater acoustic navigation system, side-scan sonar, sub bottom profiler, digital camera, measuring the parameters of water.

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