

ECA Group Demonstrates its AUV A9-M for MCM Missions - Remote operation from a coastal patrol vessel in the North Sea

(Source: ECA Group; issued Nov. 03, 2016)

ECA Group, within the framework of the Belgian Navy evaluation of Unmanned Maritime Systems, demonstrated the AUV A9-M capability to remotely survey the seabed in search for mines from its CPV POLLUX.

The ECA Group AUV A9-M, is a 2-meter long, 70Kg underwater vehicle with a capacity of 10 hours of autonomy, which can easily be deployed and operated from rigid hull inflatable boats by two operators, or directly from a non-specialized Navy ship such as CPVs or OPVs.

The trial took place offshore Zeebrugge Naval base mid-September 2016, on the Navy determined and well known area; the intent of the test was for the Navy to evaluate the operation of Unmanned MCM systems in comparison to legacy MCM equipment currently in use by the Belgian Navy, as well as test these systems in specific North Sea conditions.

The capability of AUV A9-M to navigate in strong currents and high tide environment without degradation of the side scan sonar image quality was one of the objectives of the test of the ECA equipment. The AUV A9-M dived for 5 hours and covered an area of a square kilometer, with 200% coverage of the surveyed area, enabling detection and classification of more than a hundred potential Mine Like Object (MILCO) on the seabed.



Out of these high number of objects detected, ECA Group post processing software Suite including Perspective data analysis and mosaicing tools, enabled to reduce the number of potential MILCO to 14 potential mines. The Belgian Navy had placed prior to the mission a certain number of dummy mines with precise position recording over the entire 2 square nautical miles in order to evaluate the capability of each of the Unmanned systems tested, to actually detect these mines.

Results will be analyzed by the CMRE (NATO Center for Maritime Research Experimentation) and final evaluation of AUV A9-M performance communicated to ECA Group for evaluation and further improvement.

The AUV A9-M performed successfully in this environment, proving its navigation reliability and preciseness, seabed picture data recording quality and demonstrating as well that its deployment could be performed remotely from the CPV, from a RHIB itself deployed from the CPV, which enabled the CPV to stay out of the simulated mine search area; hence proving safe offboard remote capability for mine detection and classification.

The remote operation of AUV A9-M was also performed simultaneously with another UUV being operated directly from the CPV for identification missions, which demonstrated in addition, the capability of multiple UUVs to be operated simultaneously from the same ship, which is a world first as well as a line of thought to future MCM operation time savings.

Further trials are planned by the Belgian Navy in spring 2017 where ECA Group will have another opportunity to demonstrate its latest USV, AUV and ROV solutions for MCM operations.

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