

Zycraft develops Unmanned Vessel Multi-depth Water Quality Sampling

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/EINPresswire.com/ -- [Zycraft](#) USV today announced that it has developed and fielded a multiple depth water sampling system onboard an unmanned boat called the SE40MD.

The SE40MD is a significant improvement over manual water sampling collection methods. Traditionally, water sample collection at depth is done manually using a Niskin bottle and this is laborious and inefficient in terms of resources in labor and time.

The SE40MD vessel is a fully autonomous boat of 1.6m length and weighs 35 kg and is easily handled by 2 persons. It can collect up to 4 one-liter samples or 8 half-liter water samples

at different depth intervals of 0.5 m down to 10 m in a single deployment. With an endurance of 6 hours, it is possible to carry out many sample collections. The vessel can be controlled using cellular mobile network which means an operator can monitor the progress from a sheltered control center via an internet connection.

To deploy the SE40MD, a program is used to create the sampling plan of collection at different locations and water depths. The SE40MD then autonomously goes about its task of water sampling. The collection hoses are flushed after each sample collection to ensure no cross contamination of the water sample at the next collection point. After the sampling collection is completed, only one person is needed to transfer the samples from the vessel to bottles for further laboratory analysis. The SE40MD is easily turned around within an hour for further work.



Multi-depth Water Sampling Vessel

With a position accuracy of less than 1 m and a depth accuracy of 0.5 m, the SE40MD provides excellent comparative analysis of water quality. The data from the computer software can be further collated with the laboratory results for more in-depth analysis ashore.

James Soon, Zycraft's General Manager expressed that "with increasing industrialization and concerns of microscopic waste, it is even more critical to ensure that drinking water resources are continuously monitored to be safe for human and livestock consumption. Having a system that allows 24/7 monitoring of water is essential as no one should let their guard down. The SE40MD is a unique system that ensures water quality monitoring is performed in an efficient and consistent manner."

Zycraft (Zycraft USV Pte. Ltd.), is a company registered in Singapore, and specialises in the design and manufacture of Unmanned Surface Vessels. The company also develops unique total security and fast response solutions for the maritime industry to counter the threat of piracy, sea theft and search and rescue. Please visit www.zycraftusv.com.

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