

New â€˜FerryBoxâ€™™ Water Quality Monitor



Xylem Analytics UK and Aanderaa Data Instruments have launched a new marine water quality monitor designed to enable wider deployment of water quality sensors on ferries and other marine vessels. The â€˜SOOGuardâ€™™ will be launched at Ocean Business in April 2013.

The system's four sensors (conductivity, temperature, optical dissolved oxygen and chlorophyll A) are fitted onto the door of a flow-through cell - a design that allows simple and rapid cleaning. The sensors are very stable and require calibration checks less than once a year in most environments. Further flow-through cells can be fitted to allow for the measurement of additional parameters.

In the past, FerryBoxes have been custom-built and as a result, some of the older systems are complex and difficult to service or maintain. A key objective for the SOOGuard design team was therefore to develop a FerryBox that would meet the needs of most vessels whilst requiring the minimum of operational support.

The National Oceanography Centre, Southampton (NOC) has worked with FerryBoxes since 1999 and their staff helped design the SOOGuard. The NOC's David Hydes says that these systems need to be simple to operate and must avoid issues such as air bubbles, biofouling and sedimentation. The compact robust design of the Aanderaa Smart Sensors suits a system that is easily maintained by a ship's crew and can be easily fitted to almost any ship or boat. The deployment of sensors in a small flow-through chamber means that installation is simpler and fouling is reduced.

A SOOGuard system has been fitted to the NOC's 20 metre coastal research catamaran, the RV *Callista*, and Gary Fisher, who manages Southampton University's vessels, finds the system very straight forward to operate. A computer on-board is displaying real-time results and these are also stored in the system's datalogger.

The system is complemented by a hull temperature sensor to support the chamber measurements, and a flow sensor provides confirmation that the system has a continuous feed of water.

While readings are stored locally in the system's datalogger, communication via GSM, GPRS and Iridium satellite is also possible. Additionally, users can access transmitted data via a web-based interface.

Visitors to Ocean Business 2013 (9-11 April) will be able to see a SOOGuard on the Xylem Analytics stand (H2-4) where live data from the system installed on RV *Callista* will be streamed.