HYCARE

IMPROVED MONITORING OF BILGE-WATER HYDROCARBON LEVELS

MARPOL regulations prohibit the discharge of bilge water containing hydrocarbons at sea, making it compulsory to have an oil water separator fitted with an approved mechanism for continuously monitoring hydrocarbon content. The move from 15 ppm to 5 ppm as a maximum limit for hydrocarbons offers an opportunity to position a new inspection and control technology on the market. Current technologies do not provide reliable measurements at this level of concentration.
The HYCARE project, officially recognised in 2007, involved developing an approved onboard system that was robust, economically viable and capable of detecting hydrocarbons in these complex solutions. This development relies on a combination of different innovative optical methods and incorporates an algorithm which allows the results of simultaneous analyses to be processed.

During the project, work was carried out to analyse and characterise bilge-water samples and to develop the sensor and transmitter element. All the mechanical, electronic, software and optical elements have now been perfected. The project has thus led to the development of a hydrocarbon detector for levels below 5 ppm at a cost within the project's targets.

Three R&D posts have been created, strengthening the capacity of Hocer to develop low-cost optical sensors. The key market targeted by the project concerns onboard ship systems. Three ships are due to be equipped initially during 2013.

As well as being of value to the bilge-water systems market, the sensor will be of interest to the wider sector of hydrocarbon settling tanks, where it has a competitive advantage through the introduction of sensor signal digitisation and a direct connection between transmitter and settling tank.

A model of the sensor was exhibited at the Pollutec show in December 2012 and is in the process of being launched commercially.

Partners

Companies

Hocer, Brest et Nantes [Project Developer]
Labocea, Brest

Research center

Ifremer, Laboratoire de Mesure in situ et Électronique, Brest

Other partner

Louis Dreyfus Armateurs, Suresnes

Funders

- Bpifrance
- Conseil régional de Bretagne
- Conseil départemental du Finistère

Labelisation

29/02/2008

Overall budget

767 K€