

Underwater 'vacuuming' proves less of a chore

August 11 2014, by Tony Malkovic

It might look like a bit like an underwater vacuum cleaner but the Envirocart is set to revolutionise how ships' hulls can be cleaned while still in the water without harming the environment.

The Envirocart, developed by GRD Franmarine in Henderson, south of Perth is among the finalists in the 2014 WA Innovator of the Year Awards.

The unique in-water cleaning and [filtration system](#) uses a diver to clean marine organisms from a hull using either rotating brushes or blades without damaging the anti-fouling coating on the vessel.

The water and debris are then filtered and passed through a UV disinfection unit.

"The method is contactless in the way it creates a vortex that removes the biofouling off the hull without removing the copper oxide, which is a toxic anti-fouling coating system," Franmarine spokesman Sam Lane says.

"So it doesn't remove that and put the copper back into the water, it leaves it on the vessel's hull."

The Envirocart is also likely to save ship owners the considerable expense of using dry dock facilities to clean their vessels, and they'll also save on fuel costs thanks to less drag on the cleaned hull.

The in-water hull cleaning of ships was banned in Australia and New Zealand several years ago amid concerns over anti-fouling paints and the possibility of introducing invasive species.

That ban was overturned last year and the Envirocart has been tested in trials with WA's Department of Fisheries.

"We are the only unit now to be able to do in-water hull cleaning in Australia and New Zealand," says Mr Lane.

Technology tipped for oil and gas industry

The company is looking to expand use of the Envirocart across WA and Australia and is poised to tap into an enormous world-wide maritime maintenance market that also involves offshore oil and gas structures.

"We've had a lot of international enquiries," Mr Lane says.

"We've got expansion plans into New Zealand and Singapore as well which we're looking to take effect next year."

Three other water-based innovations are also finalists in the Mitsubishi Corporation Growth category of the WA innovation awards. They include:

- Quickboats, flat-pack folding boats that can be easily assembled, transported and stored
- The Pegasus buoyancy system made by One Atmosphere, designed to give added buoyancy for helicopters in case they crash at sea, and
- The Virtual Curtain process developed by CSIRO to treat and purify wastewater and reduce sludge at mine sites.

The awards will be announced in November.

Provided by Science Network WA

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