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# Half of Med coast ships biofouling

**A study into the extent to which biofouling on ships' hulls is contributing to the spread of invasive aquatic species in the Mediterranean Sea – a phenomenon commonly associated with ship ballasting operations – has been welcomed by Belgium-based marine coatings supplier Subsea Industries.**

According to recent research published by Tel Aviv University's (TAU) school of zoology, half the ships passing along the Mediterranean coast of Israel are carrying invasive ascidians, presenting a threat to ecosystems around the world.

TAU's Dr Noa Shenkar, who led the research, said: "These organisms are passing through the Suez Canal, latching onto ropes and the bottom of the ship.

"They're filter feeders, so they cover and clog every surface they latch onto, creating a lot of drag for the ship and damaging marine biodiversity in their new environments. They're a major threat to our coasts and are very costly to shipowners."

Among the wide occurrence of non-indigenous ascidians (NIA), TAU researchers also discovered a Caribbean species new to the region. The findings, they say, "strongly

support the hypothesis that marine vessels constitute a substantial vector for the introduction and dispersal of NIAs".

Subsea Industries' founder and chairman Boud Van Rompay, said: "The NIA threat is increasing because the antifouling systems in use since the ban on the biocide Tributyltin (TBT) have been less effective in eliminating hull fouling. There is currently no miracle cure that will, on its own, prevent the spread of NIAs.

"The only known way of removing the threat is to clean the fouling organisms off mechanically, which is only possible with a hard-type coating. This ensures the underlying protective coating is not damaged. The industry has to consider taking a different approach to hull protection."

The university's *Monitoring the Magnitude of Marine Vessel Infestation by Non-Indigenous Ascidians in the Mediterranean* paper states that "self-polishing hull coatings are ineffective" in controlling biofouling in "hidden and protected" areas.

The research also finds: "The method of rapid high-pressure fresh-water wash fails to provide adequate treatment for removal of invertebrates inhabiting internal hidden

► *Subsea Industries founder and chairman Boud Van Rompay*



areas; especially ascidians, that can survive the dry-docked time outside the water.

"Of greater concern is that it allows vessels to continue their regular operations and at maximal speed for longer periods; conducting a thorough maintenance procedure every three to four years rather than every one to two years."

Commenting on the findings, Van Rompay said: "This research substantiates what we said in January this year: that the entry into force of the Ballast Water Convention will not alone prevent the transfer of invasive aquatic species. There has to be mandatory legislation in place to prevent biofouling on ships' hulls. Hopefully this research will generate greater awareness of the problem and result in appropriate action."

# Arctic research organisation backs hull hard coating

**British Antarctic Survey's (BAS) decision to apply Subsea Industries' Ecospeed hard coating to the hull of its new polar research ship RRS Sir David Attenborough has been validated by the recent drydocking of sister vessel RRS Ernest Shackleton.**

The 80m-long vessel, coated with Ecospeed in 2009, drydocked at the Orskov shipyard, in Frederikshavn, Denmark, where the hull was found to be in "very good condition".

BAS superintendent Andrew Webb, said: "*Shackleton's* hull condition is the best I have seen after typical ice year operations. We tend to account for touch-up coats every other year to areas impacted by the ice, but this year we needed to repair even less surface area than expected, despite the vessel encountering heavy Antarctic ice."

The Orskov yard had to touch up areas in the bow and rudder areas. A touch-up coat was last applied in 2015. Only remedial coats are required as Ecospeed is a one-coat system and does not need to be removed or reapplied.

The durability of the coating and the ease with which repairs can be effected were the reasons why BAS/NERC selected Ecospeed for the newbuild *RRS Sir David Attenborough*.

Webb said: "The shipyard initially wanted to apply its preferred supplier's coating system, but based on our experience of this coating on the *James Clark Ross* and *Ernest Shackleton* we wanted Ecospeed.

"We already had this system on the entire hulls below the water line of both research



vessels and found it much easier to repair: it doesn't need to be applied under such strict environmental conditions or require the hire of any specialist application equipment."

During 2013/14 BAS replaced the competitor system with Ecospeed across the entire hull of *James Clark Ross*.

Subsea Industries' hull protection system will be applied to the hull of *RRS Sir David*

▲ *Two views of the hull of RRS Ernest Shackleton in dry dock at Orskov shipyard*

*Attenborough*, the polar research ship under construction at the Cammell Laird shipyard in Birkenhead, UK. The 15,000gt research vessel, scheduled for operational duties in 2019, will be one of the most advanced polar research vessels in the world.