

Gearing up for Mainstream Coatings Role



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After acquiring the intellectual property rights to undertake Selektepe synthesis and appointing a dedicated supply chain manager earlier this year, bio-tech company I-Tech is evaluating partners for large-scale European production of its unique antifouling ingredient.

The announcement follows hard on the heels of I-Tech AB's listing on the Nasdaq First North exchange in May, a move instigated to create a robust platform for business development and signal the company's maturity as a business ready to grow in the global arena.

Combined, the latest commercial moves demonstrate confidence in the traction already achieved by the bio-repellent mode of action enabled by Selektepe as a mainstream product for the marine coatings market.

I-Tech AB has patented medetomidine as a marine antifouling agent and offers the active substance under the registered trademark Selektepe to the global marine coating industry. [The organic, non-metal compound repels barnacle settlement on ships' hulls by temporarily stimulating the barnacle larvae's swimming behavior.](#) Its

developers are convinced that its mode of action represents a paradigm shift in marine coatings, because it provides a solution that is more effective than today's alternatives, as well as being environmentally sustainable.

When used in traditional marine coating systems, Selektope is also characterised by high efficacy at extremely low concentrations (0.1% w/w) with ultra-low leaching. The superior hard fouling protection results in lower water resistance and decreased fuel consumption, in addition to reduced maintenance costs. Uniquely, it offers paint manufacturers the flexibility to boost copper-based paint formulations or to replace copper completely.

I-Tech has already scaled up production from quantities measured in kilos to multiple tons scale. In March, I-Tech AB announced the strategic acquisition of the manufacturing process technology and IPR to produce medetomidine from life sciences company Cambrex Corporation. The acquisition was facilitated by issuing new shares, with Cambrex becoming a major shareholder in I-Tech AB.

However, a European manufacturing partner will strengthen the I-Tech supply chain as customer demand continues to rise, developing the redundancy as well as competitive scale required to support marine coatings customers in key markets.

I-Tech has secured all necessary regulatory approvals for Selektope. It has also established relationships with most of the major manufacturers of marine coatings, two of which have so far launched branded marine coatings which include the substance.

Also in March, I-Tech secured its largest-ever supply agreement for the technology, from Chugoku Marine Paints (CMP). CMP initially started to market antifouling coatings containing Selektope in 2016 under two separate brands: SEAFLO NEO CF PREMIUM; and SEAFLO NEO-S PREMIUM. SEAFLO NEO CF PREMIUM is based on zinc polymer technology and is a coating with an in-service life exceeding five years, ideal for oceangoing vessels operating worldwide. SEAFLO NEO-S PREMIUM, is based on silyl polymer technology, and specifically targets 'low activity' vessels such as static vessels during outfitting in

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shipyards. In 2017, CMP launched a brand-new product based on hydrolysing technology – SEA GRANDPRIX 880HS PLUS. Uniquely, CMP guarantees extended static performance of up to 45 days for this product, thanks to the barnacle-repellent boost enabled by Selektope.

Danish marine coatings company Hempel, meanwhile, brought a new antifouling coating targeting hard biofouling prevention during vessel outfitting in late 2017. GLOBIC 9500S includes Selektope as part of its 'smart biocide package' that delivers boosted static performance against hard fouling for ships with extended idle periods. As global water temperatures increase, global

'biofouling hotspots' in subtropical/tropical areas are intensifying, exposing newbuildings at the world's major shipyards to greater risk of hard fouling during the outfitting process.

Evidence that Selektepe can address specific shipping industry concerns on hard fouling came after a twenty-four-month trial of a hull coating containing the bio-repellent on a 46,067dwt chemical and products carrier. The vessel spent two years in active operation across a wide range of routes, with more than 50% of its operating time spent in biofouling hotspots with > 25oC (up to 32oC) temperatures.

The full results covered the performance of coatings applied to the vertical sides and flat bottom of Laurin Maritime's vessel Calypso in 2015, during the vessel's first five-year drydock. Independent hull and propeller performance analysis verified that after twenty-four months Calypso's increased total resistance was 7%, compared with a benchmark new vessel that would see an increase in resistance of 10-20%. Over the period, speed losses experienced by Calypso amounted to a mere 2% when measured against sea trial performance. Data also confirmed that the development rate of added resistance for Calypso amounted to 0.1 % (0.5% to 1.5% is expected).

With average surface temperatures across the world's oceans rising by an average of 0.12°C per decade, according to the National Oceanic and

Atmospheric Administration, further intensification is expected for biofouling hotspots, increasing the need for more effective fouling control. Given the operating profile of Calypso, I-Tech believes that the 24-month trial results suggest that Selektepe is also a serious contender to help ship operators futureproof their vessels for greater hull efficiency under all conditions.

In a further demonstration of its expectations for Selektepe as an impactful product for the maritime industry, I-Tech AB became members of the non-profit organisation Clean Shipping Index (CSI) in May this year.

Through membership, I-Tech will encourage environmentally responsible decisions around antifouling coating procurement to users of CSI's holistic labeling system which ranks the environmental performance of ships. CSI-ranked vessels are eligible for reduced fairway dues from the Swedish Maritime Administration (SMA) and reduced port fees at the ports of Brofjorden, PetroPort, Gothenburg, Vancouver, Prince Rupert and Gävle.

According to I-Tech, the cleaner the ship, the greater the financial incentive which creates a win-win situation for both the environment and business. •

