



New for old

Ecoslops sustainably treats oil residues from shipping, transforming them into marine fuels. Rhys Berry talked to CEO Vincent Favier about the genesis of this new product offering



Vincent Favier

In 2005, a group of petrochemical executives began the design and development of a technology which would enable the sustainable disposal of marine hydrocarbon residues. Three years later, a 1:42 scale pilot project was established which validated the process and its capacity to refine mixtures of liquid hydrocarbon residues to extract marine diesel oil (MDO) and intermediate fuel oil (IFO) 380 centiStokes (cSt). This laid the foundations for Ecoslops, which claims to be the first company to transform oil residues from shipping into new marine fuels.

'Shipping is a traditional industry and, like with any new technology, there is an inevitable amount of scepticism at the outset,' says Ecoslops CEO, Vincent Favier. 'Ecoslops was also looking to break into a fragmented and rather conservative sector.'

Shipping's traditional reputation as a reactionary industry – if not reluctant to embrace

new technologies, then at least cautious to adopt them – was to prove a testing obstacle to overcome for a company with a 21st century vision of the marine fuel mix.

A considerable amount of time and resources were therefore needed, says Favier, in not just developing the technology, but also building networks and a position for Ecoslops as a company that could work effectively with all immediate stakeholders, including ports, slops collectors, fuel suppliers, and shipowners and operators.

'Once the concept was proven, we won a tender in the Port of Sinès in Portugal, where land was granted to construct our first refinery, and where we have a 15-year sub-concession agreement for the exclusive rights to collect slops but also solid waste within the Port. This provided us with credibility.'

Nevertheless, the company still needed to contend with issues such as a widespread

lack of port reception facilities and technology to deal with slops. Despite a hesitant approach to innovation adopted by some industry stakeholders, Favier recognises there is an ongoing focus on sustainability within the shipping industry which has made the company's technology 'a unique solution to a genuine market issue.' This spotlight has provided an appetite for investment, says Favier, pointing to the company's successful initial public offering (IPO) announced in February 2015.

In November 2015, the company announced the first production of its ISO 8217-compliant fuel from the Sinès refinery. Having imported 3,200 tonnes of slops from Northern Europe in the third quarter of the year, the company produced some 1,300 tonnes of fuel products for the marine market comprising distillates and heavy fuel oil (HFO), as well as light bitumen for the roofing market.

A week later, Ecoslops announced its

first sale of the fuel: a 1,000 tonne purchase of MDO from a 'European operator specialising in marine bunkers.' In December, the company revealed it had signed a letter of intent (LOI) with Grup Servicii Petroliere (GSP) to conduct a feasibility study for the development of an oil residues processing plant in the Romanian Port of Constanta, while in January this year, it was announced that Ecoslops had received an agreement in principle from the Port of Abidjan, Ivory Coast, to provide land for a new oil residue recycling plant. Currently, says Favier, Ecoslops is 'actively pursuing strategic opportunities' in Northern Europe and the Mediterranean.

'Ecoslops is a unique company. There is no-one else doing what we do within the market,' he comments. And the industry reception to date suggests, he says, that we have developed 'a niche offering that is both timely and relevant to the current and future dynamics of the market.'

Some commentators in the fuel testing sector have suggested that the recent emergence of so-called 'novel' fuels has raised a number of issues, not least relating to safety. Concerns have been raised over the possibility of contamination within the process, not least the presence of organic solvents and acids, which are potentially hazardous.

With regard to the refining process, Favier explains that in order to optimise distillation, the slops are pre-treated.

'They are heated, decanted and using high-speed vertical centrifugation, the water, hydrocarbons and the sediments are separated before the refining and distillation process. As the reprocessing of the water from the slops is fully integrated within the treatment process, the water is then depolluted using the latest techniques.'

The water is then returned to its natural environment in line with international and local environmental laws. After the water and sediment is removed, the slops are sent to the P2R vacuum distillation column, where they are heated to 400°C, explains Favier.

'Under vacuum conditions, as well as the "overflash" process implemented by Ecoslops, the hydrocarbons and heavy molecules are vapourised, and at the end of the distillation process several fuels are produced, including naphtha, marine fuel (distillates and IFO) and light bitumen.'

The principle and the design of the fuel concept was well established, says Favier; founded on an understanding of engineering and the petrochemicals industry. The company's founders include the former head of refining at Total Group, as well as



the former CEO of Heurtey Petrochem, who have a combined 80 years' industry experience. Based on this, the company developed the concept for the Oil Waste Processing Plant (OW2P), a technology that combines an innovative refining petroleum process with an appropriate clean water regeneration scheme. It has also partnered with organisations such as Heurtey Petrochem which designs, manufactures and supplies process furnaces for a variety of petrochemical and oil refineries.

Indeed, the development of such a pioneering fuel required contact with fuel testing agencies. Scrutiny of marine fuel has never been higher. With such an array of fuel grades on the market, ship operators demand assurances that the fuel they are purchasing will not have any long-lasting adverse effects. So what has been the response of fuel testing agencies to the use of slops as fuel?

'We have relationships with a number of traditional, independent, well-known testing companies, which have shown the quality of the MDO to be in line with ISO 8217:2010 standards,' says Favier. 'Our marine fuel products are compliant with ISO 8217:2010 standards, and in line with regulations.'

As with the so-called 'hybrid' low-sulphur fuels on the market, there will be a lot of attention on price. In theory, the fuel should represent an economically viable formula to manufacture, although Favier will not be drawn on the specific costs involved.

'Ecoslops buys slops from slops collectors or we collect slops directly from our operations, such as in the Port of Sinès, and then we sell the marine fuel at traditional market prices.'

However, Favier is at pains to point out that the company's focus is not on placing itself as a bunker provider, and competitive with fuel suppliers.

'We position ourselves within the market as

solving the increasing challenges of sustainably disposing slops, which is heavily regulated with MARPOL 73/78 regulation, as well as European Union law (EC directive 59/2000).'

For ports, and in a market which is still tough from an economics perspective, there are high costs associated with implementing the right collection and disposal facilities. For vessel owners looking to dispose of their waste they need to be reassured about how their waste is treated and that it is at an acceptable cost.

'The reality is that there are limited opportunities for waste collectors to sustainably dispose of slops. Our process solves this dilemma by turning slops into refined products, which can then be marketed as traditional refined oil products and not as a waste anymore.'

The Ecoslops solution, says Favier, is attractive for the industry because it takes the hassle of slops' disposal out of the equation, recycling them rather than burning them.

Favier argues that sustainably disposing of slops 'is always the preferred option' given the focus on environmental matters, and when the shipping industry is trying to improve its sustainability. The company believes that by working with Ecoslops, ports and ship owners can improve their sustainability profile, and enhance their competitiveness and reputation in the eyes of their customers, and wider stakeholders.

'And for bunker suppliers we are providing a new kind of 'Eco-bunker', which they can sell back into the market.'

 Vincent Favier
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