

SALMON

Farming fish in scrapped tankers

Vegard Solsetten

A Norwegian company is working on converting old tankers into closed fish farm installations where escapes, salmon lice, disease and waste will be worries of the past.

Problems with salmon lice and escapes have given a serious shove to the debate about closed installations for farming of salmon in Norway.

Several different models have been developed or are in the planning phase, and there is talk, among other things, of producing salmon in installations built with pipes, concrete fibre glass and steel.

This is where it comes in. An Oslo-based company founded and led by Fredrik Mood, a naval architect at Inocean Engineering, its business concept is inspired from Mood's experience in the offshore oil industry.

Indeed, its idea is to convert scrapped tanker vessels or similar vessels that for other reasons are inoperative into closed fish farm installations. These installations can also be used for live storage of fish and shellfish or

for farming genetically modified fish for production of active medicinal connections.

"Tankers and bulk ships have tanks that can easily be converted to salmon farming units. With a closed installation of this set-up, you achieve a well-controlled fish farming environment that is physically separated from the open sea," Mood said.

"Such an installation is intended as a supplement to current existing pens, to maintain current salmon production and ensure increased growth. This would be as a consequence of anticipated stricter production license and consumer demands in the future."

Production on these vessels could reach up to 4,000 metric tons and production costs before slaughter would be at just under NOK 23 (€2.97/\$4.25) per kilo, he said.

The clear advantages of such a system, where fish would be physically separated from wild fish, is that there wouldn't be a risk of escapes, while keeping a zero discharge of waste, preventing salmon lice and reducing the risk of diseases, Mood said.

In addition to cargo holds and pump rooms with loading and offloading systems, these vessels also have engine rooms with a main engine and auxiliary engines with generators, he told *FFI*.

The vessels also offer facilities to have cabins, common rooms, workshops, offices and a control room onboard, as well as having a hatchery, laboratory, cold storage and gutting space, he pointed out.

"Mood Harvest will take the best from the Norwegian maritime, offshore and marine farming industry, combining knowledge and experience from there to develop a sustainable, environmentally focused fish farming installation geared for the future," Mood said.

In contrast with regular fish farms, fish farming onboard ships will not be dependent on location, he said. Mood envisions that the business concept could be put into practice in Norway and abroad, also seeing potential in America, Asia and Europe.

Mood has applied for a patent to his system, and has had direct



FREDRIK MOOD: Founder of Mood Marine

contact with investors to fund the project. He has also been in touch with both local administrative personnel and the ministry of conservation about his plans.

"There's still some distance to go before the project is realized, but with the right people and finance in place, plus positive signals from the authorities it would be realistic to have an installation operative in three to

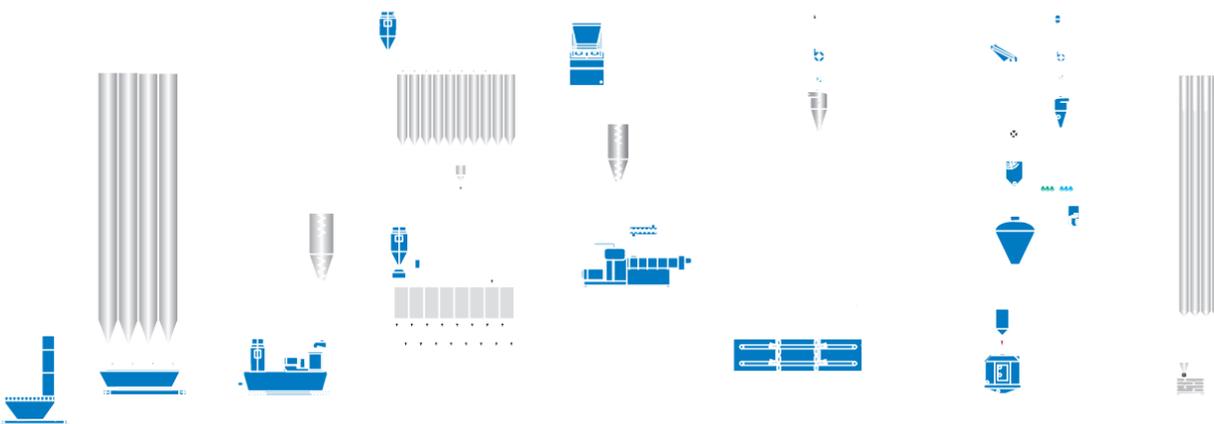
four years' time," said Mood.

He is also keen to enter into cooperations with municipalities that have areas regulated and designated for parking of tanker and bulk vessels, and to gain more exposure in the aquaculture industry. He is also inviting potential partners or investors who could be interested in a cooperation to develop closed fish farm vessels to get in touch with him.

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