MARINE CONSTRUCTION

Allseas doubles up with twin-hull behemoth

Concept signals **'different playing field'** in lifting of **giant** platforms, but **'cannibalism'** risk **looms** for the owner

ERIK MEANS
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Unprecedented: Allseas' Pieter Schelte at Daewoo (above), and (below) the new twin-hull concept seen in comparison to the smaller Pieter Schelte
Photo: ALLSEAS

EDWARD Heerema, president of marine construction contractor Allseas, aims to rewrite the record books by building yet another gargantuan platform installation and removal vessel — eclipsing the twin-hull behemoth he is currently constructing for nearly $3 billion on a speculative basis.

Heerema's latest catamaran project, which he said will be operational in 2020 at a capital cost of more than $3.4 billion, will measure about 400 metres long by 160 metres wide.

Perhaps more importantly, the gap between the unit's twin hulls is designed to be a sprawling 72 metres wide, enabling the huge vessel to position itself around the largest of offshore platforms, and perform single-lift operations on structures of up to 72,000 tonnes.

It will use 12 horizontal support beams and ballast — rather than cranes — to lift topsides.

Heerema said this concept will represent "a different playing field" when it comes to lifting the largest offshore production platforms on the planet.

In comparison, Allseas' twin-hull vessel Pieter Schelte — due for delivery from Daewoo Shipbuilding & Marine Engineering in South Korea in the second half of next year — measures 382 metres long by 124 metres wide, with a gap of 59 metres and a lifting capacity of about 48,000 tonnes.

Estimated to cost €2.2 billion ($3 billion) and with a displacement of about 1 million tonnes at maximum draft, Pieter Schelte will be the largest vessel the world has seen, but will be dethroned after six years if its big sister arrives according to plan.

Edward Heerema — whose late father Pieter Schelte Heerema revolutionised the offshore heavy lift industry in the 1970s, when he built the world's first semi-submersible crane vessels — is prepared to gamble more than $6 billion on these two speculative mega-ships.

"I'm just following my father's determination. I worked for him for 10 years," said the Allseas boss.

He acknowledges, however, that there is a risk of cannibalism between the two vessels.

"In principle, Pieter Schelte can do all the very large platform removal or installation work in the North Sea, and even worldwide, because it does a big job in a matter of weeks," Heerema told Upstream.

"But the platforms of extreme size — in terms of weight, length and width — are a different league, and to deal with them, a separate and much more powerful vessel is needed," he added.

"The difficulty there, of course, is that extreme-sized platforms for decommissioning or installation worldwide are not numerous.

"In that sense, the two vessels will indeed to some extent cannibalise each other."

Heerema hastened to add that having two such vessels offers added scheduling flexibility, as the units can be interchangeable on some contracts.

He said that, while Pieter Schelte will also offer pipelay and jacket-lifting capabilities, the initial plan for the larger unit is for it to concentrate solely on topsides lifts.

Heerema's team has identified 13 platforms in the North Sea that are too large for the Pieter Schelte to handle in a single lift.

Allseas is currently collecting data from the rest of the world to catalogue all mega-platforms, and Heerema suggested the dimensions of his yet-unnamed new vessel could be increased depending on the findings.

Without Allseas' giant vessels to remove these platforms, Heerema said that decommissioning "would have to be done module by module — a tremendous amount of work".

Asked about the market for these vessels, Heerema said: "In the long run, platform installation work is probably more interesting, but in the shorter term it will be the removal market."

The daunting question for Allseas is whether there will be sufficient demand for such huge installation and removal jobs to keep the catamarans busy.

According to Heerema, the larger of the two units "will need two large topsides decommissioning or installation projects, and then a few smaller jobs" each year to justify the investment.

He identified several major platforms in the North Sea as suitable for his latest brainchild. These include many concrete gravity-base platforms operated by Statoil in Norway — on the Statfjord, Gullfaks, Oseberg, Sleipner and Troll fields.

Heerema also mentioned several fields in the UK North Sea, including Dunlin, Brae, Magnus, Thistle and Ninian South.

"We have spoken with Statoil and all the other operators in the North Sea with very big platforms," Heerema said, adding that the response to his newbuilding plan was positive.

Many potential customers will watch with keen interest to see how Pieter Schelte performs on its maiden contract, removing at least three large topsides structures on Shell's Brent field in the UK North Sea, starting in 2015.

Korean yards in pole position to build record-breaking mega-ship

PLATFORM REMOVAL

Aim to award detailed design contract in 2014

ALLSEAS' giant new platform installation and removal vessel will definitely be a newbuild as opposed to converting a pair of supertankers into the twin-hull behemoth, *writes Erik Means.*

Company president Edward Heerema explained that the unit is simply too complex for a conversion.

Allseas has done conceptual design and basic engineering internally, and will aim to award an external contract for detailed design in 2014.

On the similar but smaller Pieter Schelte project, detailed design was handled by Deltamarin of Finland, where "220 people worked full-time for nearly 18 months", according to Heerema.

He told Upstream he plans to invite tenders from fabrication yards in 2015 or 2016 for the unprecedented newbuild job.

"We will look for as many contenders as we can to build the vessel — in Europe, in China... I must say the Koreans have the papers at the moment, but we will go worldwide."

The remark stands as an apparent vote of confidence for South Korean yard group Daewoo Shipbuilding & Heavy Engineering, which is due to deliver the Pieter Schelte within a year.

The Allseas owner will need to dig deep to pay for his latest invention. "Such a huge vessel, plus inflation — my guess is that (the capital cost) will go beyond €2.5 billion ($3.4 billion)," he said.

About two-thirds of those funds will be "from our own cash sources", Heerema claimed, while the remaining third will involve bank funding.

Big spender: Allseas president Edward Heerema

Photo: ALLSEAS

EDWARD HEEREMA FACTS

- Edward Heerema, born in 1947, has a Master's Degree in Civil Engineering from the Technical University of Delft, 1974.
- He was an engineer, and later manager of the R&D department, of Heerema Engineering Service, and was named general manager in 1978.
- After his father's death in 1981, he became president of Heerema Holding Company until 1984.
- He founded Allseas in 1985, and is responsible for the daily management of the Allseas Group.