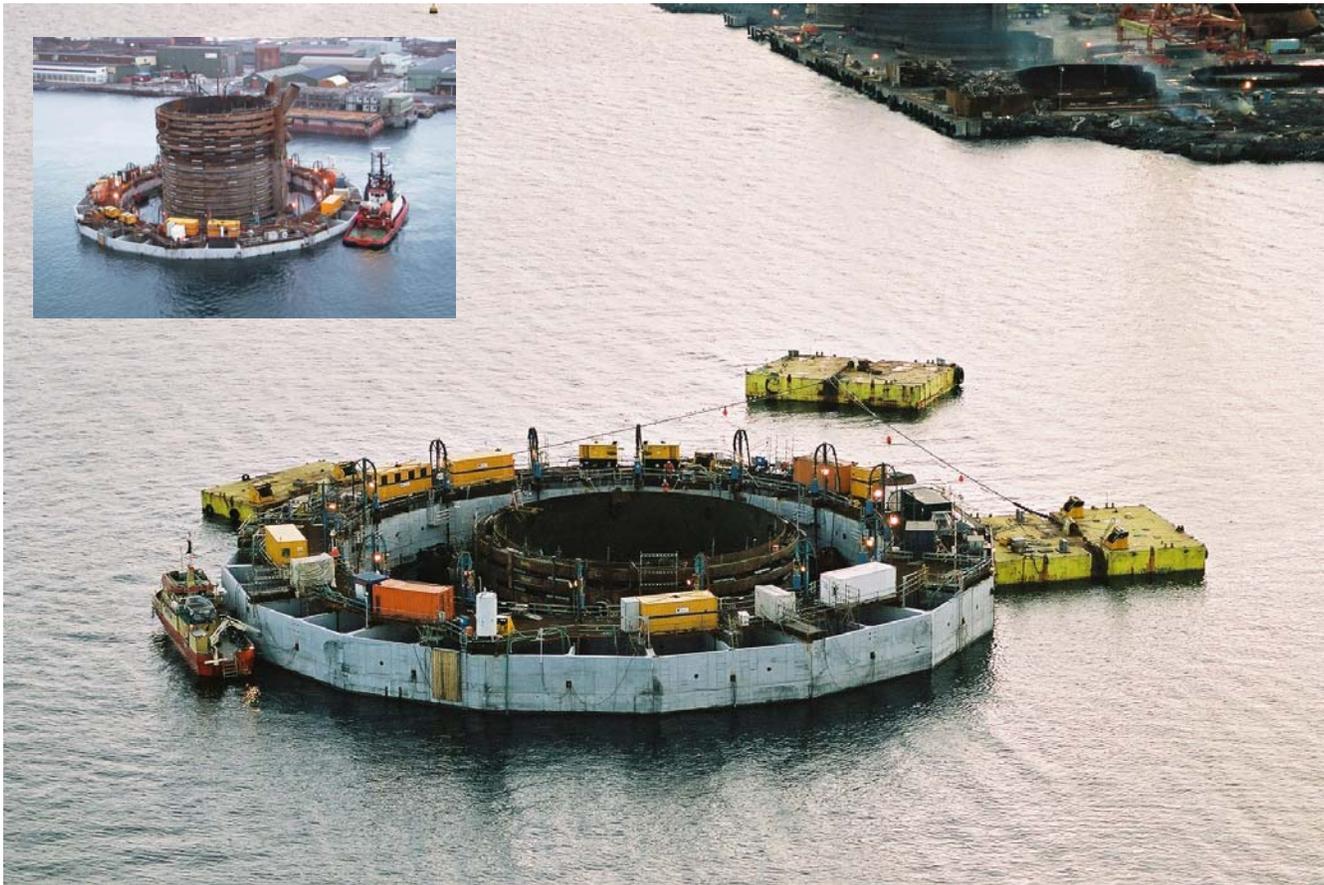


Maureen Alpha Platform, Norway



Skidding, lifting and lowering works during the de-construction of an oil platform at Akerkvaerners Demolition Site at Stord



▲ *Lifting of one of the three tanks from the concrete ring and moving it to its final position*.*

After 25 years of operation, the time had come for this platform in the Maureen oil field to go out of service. The whole structure weighing some 105,000 tonnes was moved from its location in the North Sea to an inshore position just off Stord island. The heavy base will form part of a new quay wall whereas most of the steel has been cut and recycled.

A floating crane lifted off all the top modules except the flare tower. The the Hi-Deck was demated from the substructure onto a barge and brought to the quayside in Stord.

Main data of Maureen Alpha Platform:

Description:

Steel gravity platform consisting of 3 storage tanks, the Hi-Deck and the tubular lattice frame, linking the storage tanks and supporting the Hi-Deck.

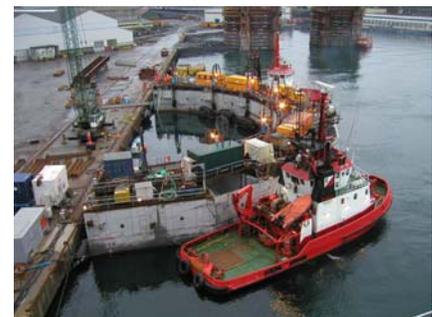
Base area: 7,800 m²
Overall height: 235 m
Overall weight: 105,000 t

Here VSL went into action for the first time. The massive 12,000 t deck was skidded over a distance of 90 meters onto the wharf for dismantling. With 4 of our strand pulling units SLU 330 a launching speed of 12 m/h was achieved.

With the smaller draft due to the reduced weight, the platform was then moored about 2 km away from shore. There the upper part of the substructure was removed in sections with a smaller floating crane and brought directly into the scrapping yard. The bottom 40 meters, weighing about 66,000 tonnes, were left at the end of this operation.

The challenging part was now to separate the 3 storage tanks from the lattice frame. To achieve this in a stable situation the self-weight had to be balanced against the buoyancy. Barges were located against the three sides of the lattice frame. On each barge 8 units SLU 330 were attached and by lifting 5 m took the calculated load. The first tank was then cut off, pulled away with tugs and positioned into one half of a floating

concrete ring. Then the ring was closed with the second half.



▲ *Setting up of the strand lifting equipment on the concrete ring*

To get the tanks close enough to their final position, they had to be lifted a further 22 m. From 16 units SLU 330, located on the concrete ring, the lifting cables were attached to the skirt of the tank. To assist with the lifting operation, air was blown underneath the tank.

When the tank reached the highest level, about 5,000 t were hanging on the strands and a 6,000 t air bubble supported the massive structure. o To keep the air in place the tank had to be maintained in an absolutely horizontal position. With two tugs and controlled by a GPS system the tanks were then moved cm by cm over a prepared base near the existing quay wall. At the final location the tanks were lowered by 8 m onto the seabed. This operation as well had to be carefully coordinated with the release of air, so as to avoid any blowouts.



▲ Skidding of the Hi-deck

After all three tanks were successfully placed, the lattice had to make its final journey. With the 24 SLU 330 it was lifted a further 8 m out of the water. During this time the barges had to be ballasted carefully so as to stay within 1 degree of the horizontal. The lattice was then tugged as close as possible to the scrap yard and lowered to the seabed for final cutting.

Soon only pictures will tell that this massive structure ever existed. Most of it will be hidden in a new quay and appear in recycled steel components.

(*) photos by courtesy of Harald Øhickers

▼ One lifting point at the lattice structure



▲ Third tank in position *

▼ Lattice structure being raised



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