

# Shell Brent Spar Dismantling

**Client:** Heerema Marine Contractors -  
Lifting System Wood-GMC -  
Travelling Gantry System



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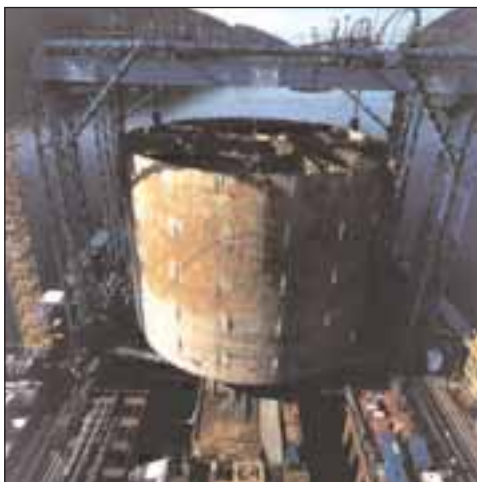
OFFSHORE 20

Fagioli PSC Ltd. were awarded two contracts by Wood-GMC, the Anglo-Norwegian venture contracted to decommission the Spar, having put forward the best practicable environmental solution to Shell. Most of the Spar has been recycled, with the spar 'can' sections used to help build a quay extension at Mekjarvik in Norway.

The first contract awarded to Fagioli PSC, placed by Wood-GMC's subcontractor Heerema Marine Contractors, was to provide engineered strand jack lifting services for raising the spar from the water so that it could be cut into sections, known as 'cans'. Eighteen 600 tonne capacity Fagioli PSC L600 jacks, linked to a fully computerised control system, were divided equally along two beams which cantilever from the end of one of the worlds largest barges, Heerema's 'H851'. The L600 jack cables were then connected to a 600 tonne cradle, which was lowered into the water to a depth of over 100 metres to allow the spar to be moved over the cradle. The jacking system then lifted each section of the spar to its cut height. The total weight lifted was approximately 7,500 tonnes.



After an initial lift to allow the cutting of a 17 metre diameter transition piece, each one of the three remaining lifting operations raised the 29 metre diameter spar by 23.25 metres so that each 'can', weighing up to 2,250 tonnes, could be cut. The travelling gantry system, supplied by Fagioli PSC under a second contract, directly for Wood-GMC, then lifted each 'can' in turn and, with the aid of the existing barge skid track system, placed four 'cans' along the main barge structure. The fifth piece remained on the cradle for the H851's journey to the ferry terminal site.



The lifting and gantry systems were engineered, supplied and transported to site on a very tight schedule, but with the gantry solution based on maximum re-use of Fagioli PSC's 'Towerlift' support system, the deadlines were met.