

## Lift of Reactor R1101, Shell Pernis Refinery, The Netherlands

**Client:** Shell Nederland Raffinaderij B.V.

**Engineering Contractor:** Fluor Daniel B.V.

**Main Contractor (Lifting):** van Seumeren B.V.

PETROCHEM 06



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In the expansion of Shell's Pernis Refinery near Rotterdam the first and largest vessel to be erected was this 36 metres long, 200 bar working pressure reactor weighing 1,256 tonnes.

It had to be lifted, traversed and then lowered on to its 20 metres high concrete plinth.

The lift arrangement consisted of a pair of 64 metres high, square format, Tower Lift supports spanned by a pair of 23 metres long box beams. On top of the box beams four Fagioli PSC L600 lifting jacks were supported on a traversing carriage which was itself supported on sixteen Hilman Rollers each of 150 tonnes capacity. The traversing carriage was pulled in either direction by a pair of Fagioli PSC L100 jacks fixed at each end of the box beams. The L600 lift cables were connected by fabricated link plates to the reactor's lifting trunnions. The reactor was tailed by a Demag TC2400 crane.