

Texaco 'Tick' Jacket, simultaneous roll-up of bents.

Client: Texaco Exploration & Production, Inc.

Fabricator: Gulf Island Fabrication, Inc.



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Fagioli PSC was contracted by Gulf Island Fabrication, Inc., at their West Yard, Houma, Louisiana, to supply on hire, install and operate Fagioli PSC centre-hole strand jacks for the simultaneous roll-up of the two outer bents of the Texaco 'Tick' Jacket.

This jacket, built for a water depth of 720 feet, was 745 feet long with base dimensions 210 feet by 230 feet, and weighed 10,500 tonnes on completion

The method of construction employed by Gulf Island Fabrication was to erect the central core of the jacket on its launch box on the slipways. The outer bents were then assembled horizontally either side of the jacket core with the inner legs of the bents supported on tilt cradles.

Fagioli PSC strand jacks housed in proprietary tension frames were then connected by slings on either side of the main nodes on the core upper chord. The jacks were connected by strand cables to strops on the corresponding nodes on the outer chords of the horizontal bents.

The roll-up procedure was to position 5 cranes (Manitowoc 4100 & 4600 type) on each side at node points on the bent outer chords. Jacks and cranes together initiated roll-up and this combined lift continued to 30 degrees when the jacks took over the load capacity.

Before reaching "break-over" point on the roll-up, smaller strand jacks, tied back to ground anchors and connected by strand cables to the bent outer chords, were brought into play as a restraining system. Pulling on the roll-up jacks while simultaneously paying out on the restraining jacks completed the roll-up and the jacking system was then locked off as a guying system - independent of hydraulics - while welding was completed.

The total of Fagioli PSC equipment used was, for roll-up, 2 no. L600 and 8 No. L300, and, for restraint, 10 No. L50 jacks. During roll-up the maximum jacking load total was 3,600 tonnes and the maximum crane load total was 1,000 tonnes approximately.

The jack and power pack control systems permitted very close load and deflection control. This facilitated co-ordination of the initial lift with the cranes, and the fit-up of the bracings upon completion, as well as closely controlling racking during the roll-up.