

Construction of Morecambe Bay Gas Field Platform DP4

Client: Hydrocarbons (GB) Ltd

Main Contractor: Howard Doris Ltd



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Platform DP4 was constructed by Howard Doris at their Kishorn site for load out onto its delivery barge for installation the “right” way up. The full height of the platform was 30 metres with the plan dimensions of the base 45 metres square tapering to 36 metres square at the top. Design of the platform was based on horizontal panels at the base, mid-height and top interconnected by tubular bracing members. To limit the necessity for construction at high level Howard Doris decided to fabricate the horizontal panels at ground level and lift them so that the lower sections could be rolled into position beneath them.

Fagioli PSC Tower-Lift sections 50 metres high, in triangular format, were used to provide the temporary support for lifting and the four week hold period for welding. To remove the necessity for heavy overhead beams the towers were inclined, on a simple pin base detail, to an angle of approximately 1 in 4 to reach over the base dimension into an internal lift point to reduce frame deflections. Restraint to the towers was provided by an L50 jack adjustable guy system at each tower, connected back to an appropriately positioned ground anchor.

The actual lifting operations were carried out using single L180 jacks on each tower powered by twin L2/70D power packs remotely controlled from ground level. Lifts of 25m and 48m were completed successfully lifting at rates of up to 50m/hr, with the precise control of the L180 jacks allowing final positioning and holding to millimetre accuracy.

