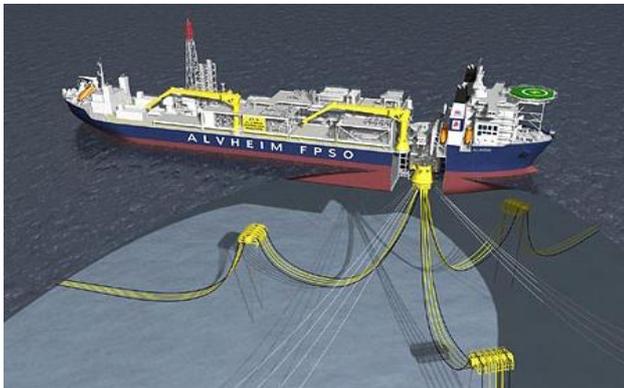




Riser System Engineering



Riser system engineering

The riser system is an important component within any field development employing a floating production unit (FPU). The risers provide the vital link between the subsea facilities and the process facilities on the FPU, and have a strong interaction with the moorings, turret, subsea system and maintenance of flow assurance. The definition of the riser systems is an important activity during the early phases of field development engineering, particularly in deep water where there are a range of available solutions.

Crondall Energy has experienced engineers who understand the drivers influencing riser system selection and can advise on the most suitable riser concept, considering all aspects of the field development. We will define the riser system layout and riser configuration, with static and dynamic analysis performed to establish that the loads are within the requirements for extreme and fatigue conditions. The requirements for the additional components for the riser system, such as buoyancy, bend stiffeners, and mid-water arch will also be defined.

As part of the overall Field Development services offered by Crondall Energy, the riser system engineering will include development of outline installation procedures,

input into the overall project cost and schedule estimates, and development of the project contract strategy.

Interaction with FPU and subsea systems

Crondall Energy has core skills in both the engineering of floating production and subsea systems. This provides a unique understanding of the interaction with the riser system. With an FPU this is of particular importance for the riser hang-off loads, mooring system interaction, riser pull-in systems and the general interfaces with the turret. The touch down point region of a riser is a sensitive section of the system, which has a significant interaction with the pipeline system, particularly pipelines influenced by walking. Crondall Energy has world leading capabilities in the field of pipeline engineering, which add to the capabilities with riser system engineering.

Flow assurance can be a major driver in riser system selection. Crondall Energy has the expertise to define the most appropriate solution for riser thermal management as part of the overall flow assurance mitigation measures.

Riser system analysis

Crondall Energy is equipped with all of the specialist software for riser system analysis, such as ORCAFLEX, AQWA, HydroSTAR, and ABAQUS.

Benefits

A thorough understanding of riser systems combined with the class leading skills Crondall Energy has in both Floating Production and Subsea engineering is the key to the selection of an optimum riser concept.

Riser systems are key components for all Floating Production Systems, particularly in deep water.