

PROJECT MANAGEMENT

Project Management

International

Execution of cores with a hydraulic vibrocore offshore

Client: Tema Offshore Mooring Ltd
Location: Tema, Ghana
Period: September 2007

Execution of cores with a hydraulic vibrocore offshore Ghana, Tema

The Client, Tema Offshore Mooring Limited commissioned Project Management International (PMI) to execute vibrocores and interpret soil samples to determine suitability of soil conditions for anchor ground.

The samples were taken at the future Single Point Mooring (SPM) and Conventional Buoy Mooring (CBM) anchor locations.

The objective of the project was the execution of cores at the different anchor positions of the relocated CBM and new SPM as well as a core at the new Pipeline End Manifold (PLEM) location. Penetration of about 5 m was required at these locations offshore Tema, Ghana.

The Works

PMI mobilized shortly after contract award and completed the vibrocore works in a week.

The multi cat MCS Ely was mobilised and served as platform from which the vibrocore unit was lowered unto the seabed. A suitable anchor pattern to stabilise the vessel in the offshore conditions was elaborated.



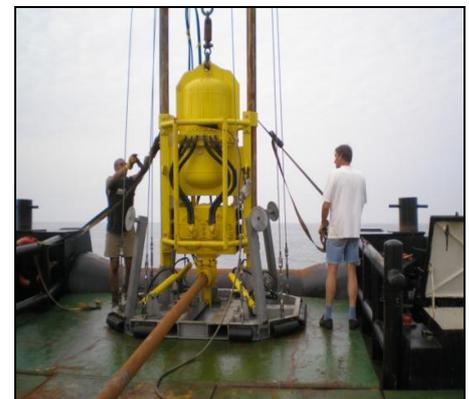
MCS Ely

The Vibrocore equipment and Coring expert arrived simultaneously with the vessel.

The vibrocore positions were pre - marked with a DGPS positioning system and the vessel Kpone Express.

After installation of the DGPS survey equipment on the vessel MCS Ely and testing of the vibrocore equipment the execution of the cores commenced.

Twelve vibrocore samples were taken at the required positions in water depths ranging from 10 to 25 meter. The penetration depth varied from 1 to 4.5 meters, depending on the sea bed sedimentation properties, as well as rock layers present in the area.



Vibrocore unit

The samples were analysed and grain size through sieve analysis and Wet / dry densities were determined for the different core samples.

The information gained from the vibrocore samples enables the determination of the suitability of the anchor locations and anchor types for the planned offshore SPM and CBM structures.

The campaign further confirmed the results of previous sub bottom profiling investigations.

After the successful completion of the works, the vessel demobilized and departed shortly afterwards.

A full report was prepared and used as basis for the design.