

PROJECT MANAGEMENT

Project Management

International

Current and Wave Measurement Campaign

Client: Tema Offshore Mooring Ltd
Location: Tema, Ghana
Period: March to October 2007

Current and Wave Measurement Campaign

TEMA Offshore Mooring Limited (TOML) imports petroleum products via a Conventional Buoy Mooring (CBM) system for the Tema Oil Refinery, Ghana. (see picture on the right)

The existing system comprises of an 18" pipeline between the CBM and Tema Oil Refinery.

The system suffers from low operability and shows damage to mooring equipment. TOML commissioned Project Management international (PMI) to carry out a study on the existing system and to propose measures to improve the system.

To confirm the environmental data at the CBM a measures campaign to collect current and wave data was implemented. Metocean Services International. (MSI) was contracted to carry out the study.

In March 2007, MSI installed an RD Instruments 300kHz Acoustic Doppler Current Profiler (ADCP) fitted with wave firmware.



MT Westama, offloading at the CBM facility

The unit has also been fitted with a double external battery canister to allow for at least 2 months uninterrupted data collection and all instruments are moored inside a gimballed stainless steel bottom frame (picture right below)

Since April 2007, 3 service visits have already been undertaken to collect data for preliminary design purposes.

The data collected enable the engineers to confirm that the wave direction as derived from the refraction modelling agrees reasonably well with the measured wave direction.

The current measurements showed that the direction varies more frequently than expected from previous available data. The measured data provided valuable information for the optimization of the CBM orientation.



ADCP with Frame