# DP - FPSO: A Fully Dynamically Positioned FPSO for Ultra Deep Waters

**Author:** Joaquin Lopez-Cortijo, *IZAR FENE*

## Abstract

In the coming years, there will be a growing demand for Floating Production and Storage Units (FPSOs) for ultra deep waters (say greater than 1500 m [4,500 feet]). One of the most critical issues will be the selection of the most cost-efficient station keeping system for the specified operational requirements. Beyond certain water depths, the technical and economical constraints associated with the use of mooring systems may favor other concepts potentially more attractive and cost-efficient, such as a fully dynamically positioned FPSO (DP-FPSO). This system can either be utilized as an early production system or as a full-fledged field development solution. The areas most suited for this application will be the Gulf of Mexico, Brazil, and West Africa.

The paper describes the results of a joint study to develop a design for a fully dynamically positioned FPSO for ultra deep waters. The paper focuses on the design of the FPSO vessel and its station keeping system, highlighting the main design parameters for sizing of the thruster system and the philosophy for long-term on-site inspection and maintenance. Results from computer simulations and model tests of the DP system performance are presented for a variety of extreme seastates and operating conditions. The paper also provides CAPEX and OPEX estimates of the proposed system, compared to a conventionally moored FPSO.

**Click here to review the complete paper ➤**

**Click here to return to Session Directory ➤**

**Click to return to the Dynamic Positioning Web Site (General Proceedings Page) ➤**