

CASE HISTORY

Kizomba Mooring Line Studies

Project Description

The Kizomba A FPSO Deepwater Production Facility is located in 1,200m water depth off the coast of Angola. The FPSO is spreadmoored with 15 mooring lines connected to suction piles with an offloading CALM buoy.

Sealand Projects provided support to this project by determining the readiness of ExxonMobil to respond to a mooring line incident to either the Kizomba A FPSO or CALM buoy, with specific reference to the enabling assets, equipment and engineering requirements should a mooring line failure occur.

Our Scope

The following work was completed for both the FPSO and CALM buoy:

- Identify credible mooring line failure scenarios;
- Method statements for mooring line replacements developed;
- Procurement plans identified based on spares requirements, lead time and availability in-country;
- Mooring line failure response roadmaps identified;
- Identification of readiness based on 90 / 180 / 365 days from mooring line failure;
- Geotechnical review of conditions at site and effect on change out / installation of new mooring line using suction pile;
- Orcaflex analysis of methodology for change out;
- Plan and coordinate a Bowtie assessment on the credible scenario and develop Bowtie event tree.

Deliverables

- Spares, Logistics, Storage and Marshalling Philosophy Constructability Review Workshop;
- Structural andia Analysis Basis of Design;
- Bow Tie Event Tree;
- Readiness Response Plan;
- Procurement Plan;
- Risk Register.



Key Facts

Client:	MMS / Exxon
Location:	Angola
Water Depth:	1200m
Date:	Q2 2021
Project Reference:	P0488

Services Provided

- Package Management
- Business Assurance
- Carbon Management
- Energy Transition
- Engineering Design and Analysis
- Marshalling, Transport, Installation and Field Support
- Floating systems, Towing, Mooring and Hook-Up
- Visualisation and Digitalisation

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