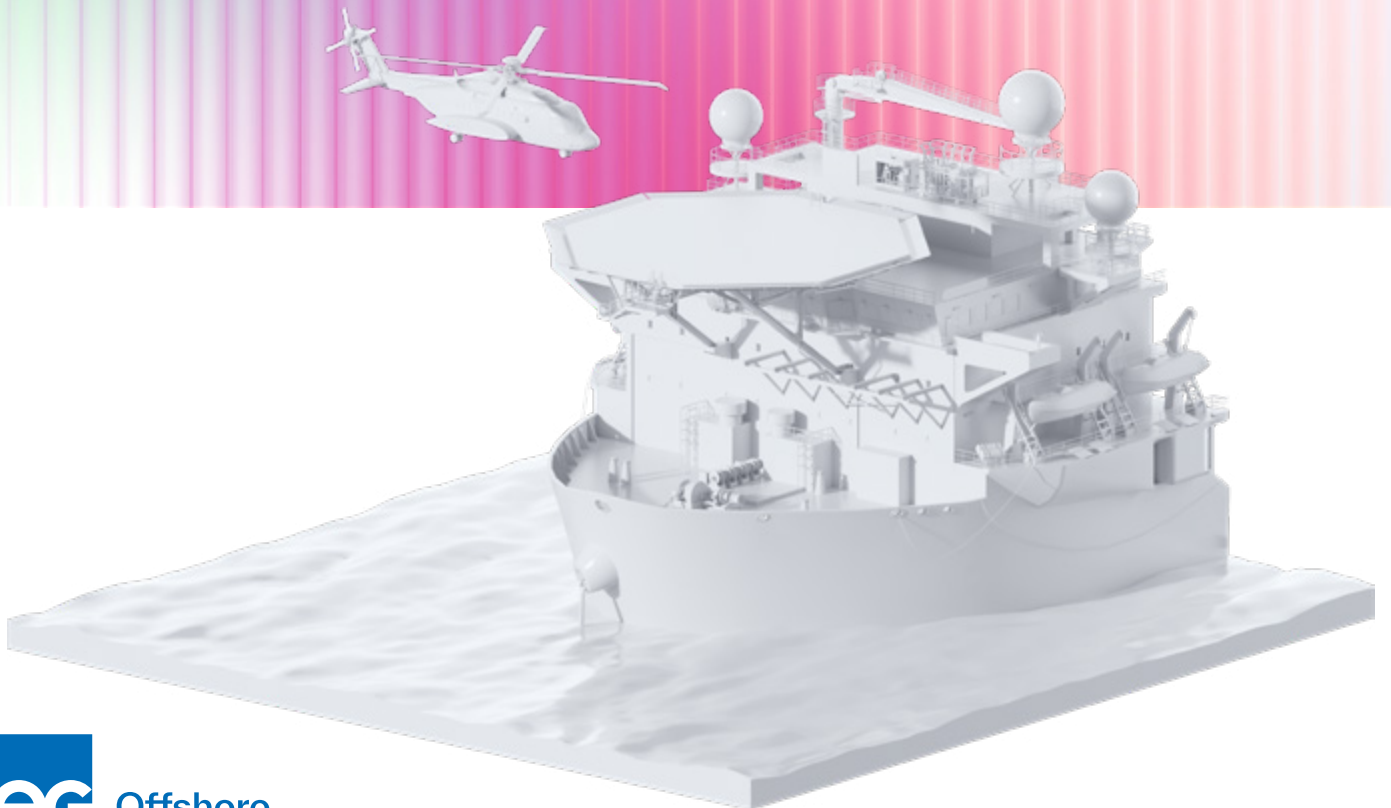


CASE STUDY

# Bespoke Helicopter Refuelling Systems

Kaombo North and South FPSO Vessels



## Industry

Oil and Gas

## Client

Sapiem SA

## Location

Kaombo Development, Block 32,  
Offshore Angola

Kaombo is an ultra-deep offshore project in Angola. Its aim is to develop oil deposits spread across six different fields, connected via 300 kilometres of sub-sea pipelines to two floating production, storage and offloading (FPSO) vessels: Kaombo Norte and Kaombo Sul.

In February 2015 Harran Ltd, now OEG Offshore was awarded a contract from Saipem S.A. for design and fabrication of twin bespoke helicopter refuelling packages for installation on board Total's Kaombo 'Norte' & 'Sul' (North & South) FPSO vessels.

## Bespoke Helicopter Refuelling Systems



### Challenges

Largest single project for Harran

- Upscale of project and build teams to deliver refuelling systems
- Workshop facility modifications

Harran's workshop facility in Aberdeen had to be modified in order to handle the size and number of refuelling skids in production as the build coincided with two other significant projects.



### Workscope

To design and build twin bespoke helicopter refuelling packages to comply with highly stringent CAP 437 safety and operational requirements, for installation on board Total's Kaombo 'Norte' & 'Sul' (North & South) FPSOs.

The dispensing cabinet housed the necessary delivery equipment to safely deliver on-specification, contaminant-free Jet A-1 fuel to the operator's aircraft. In 2017, Harran commissioned the systems and thereafter commenced on-going maintenance activities in line with CAP 437 requirements.



Total E&P Angola

### Solution

Each system comprised of a deluge protected tank laydown area complete with the following:

- A pump & filtration skid
- Five 4,000 litre transportable tanks built to IMO/IMDG, DNV and CAP 437 standards
- A stainless steel dispensing cabinet

Clive Hoskisson  
OEG Offshore UK Ltd.  
Managing Director

*“After challenging fabrication and assembly stages OEG delivered two high quality bespoke helicopter refuelling packages after satisfying the client's and an independent verification body's requirements during thorough Factory Acceptance Testing.”*