The FPSO main features

The FPSO (Floating Production, Storage and Offloading unit) is a strong, reliable, and high-capacity unit, field proven for North Sea conditions. The process equipment is suitable for a wide range of oil products, from condensate to heavy oil types, suitable for high CO2 content, thanks to the outfitting of exotic materials (duplex).

The hull is strengthened for lifetime extension. Offloading can be carried out to conventional tanker and/or shuttle tanker.

Recommendations to make FPSO fire-proof conditions. The Glas Dowr has a large lay down area with cranes on both sides of the FPSO.

Specifications

General

Port of Registry Curaçao, Willemstad
Flag state Netherlands Antilles
Converted to FPSO Harland and Wolff (Belfast), and upgrades Heerema (Hartlepool) - 1996/1997
Verolme Botlek (Rotterdam), SA-Five (Cape Town-2002, Sembawang-2010)
Classification society LRS
Class Notation OI 100 AT, Floating Production and Storage Installation for service area Kitan Field, OIWS, LI, OMC, IGS

Principal dimensions

Deadweight [Tonnes] 89,384
Hull type Double Hull Aframax size suitable for North Sea
Dynamic Positioning No
Storage capacity excl slops 660,000 bbls (105,181 m3) in 13 Cargo storage tanks (98%)
Offloading Tandem offloading
Accommodation 80 persons
Helicopter deck EH101 max 14290 kg
D value 22.8 m

Topsides data

Net daily capacity 2,400 bbl/d
Crude production 94,000 bpd
Processed water 42,000 bpd
Water content 3.5% bbl/d
Gas compressors 4 x 12 MMscfd
Gas treatment 22 MMscfd (dehydration)
Material selection NACE MR 01-75
Power generation 4 x 5.2 MW Gas Turbine, 1 x 6.3 MW Diesel Generator

Material selection

Turret mooring data

Turret type Internal turret with pop mooring system
Number of moor lines including umbilicals 0

The FPSO main features

The Floating Production, Storage and Offloading unit (FPSO) has a strong, reliable and high capacity turret, field proven for North Sea conditions. The process equipment is suitable for a wide range of oil products, from condensate to heavy oil types, suitable for high CO2 content, thanks to the outfitting of exotic materials (duplex).

The hull is strengthened for lifetime extension. Offloading can be carried out to conventional tanker and/or shuttle tanker.

Recommendations to make FPSO fire-proof conditions. The Glas Dowr has a large lay down area with cranes on both sides of the FPSO.

References
The FPSO Glas Dowr has been converted from an intercept, newly built oil tanker to an FPSO in the UK, in 1995. In 1997, the Glas Dowr first commenced operations on oil fields on the UK shelf of the North Sea. From then onwards, it operated in the harsh environments offshore South Africa, and Australia, until end of 2015. It has been proven to be a reliable and flexible FPSO with high production uptimes. The FPSO Glas Dowr is employable in harsh environments in a wide range of fields around the world.

Internal turret mooring system

The Glas Dowr has a high capacity fixed internal turret mooring system. The turret system includes a coupled structure that is moored to the main hull, ensuring high floater motions in the mooring legs. The system includes 15 J-tubes for risers and umbilicals.

Double hull AFRAMAX size tanker

The FPSO Glas Dowr is a double hull AFRAMAX size tanker. The FPSO is equipped with fully segregated ballast tanks arranged in the wing tanks and double bottoms, and in the fore and aft peak to control stability and weight distribution. The FPSO is employable in harsh environments in a wide range of fields around the world.

Topsides equipment

The FPSO was upgraded for deployment on the Sable Field. A high pressure separation section, MP/HP compression and closed loop cooling were added to the topsides. In 2010/2011 a gas dehydration unit (TEG), a crude fiscal metering skid, freshwater generators for crude desalting and large (60 m3) methanol storage vessels were added.

Floating offloading hose

The crude from the cargo oil tanks is routed via the offloading manifold from where it is pumped through a flexible offloading hose to the shuttle tanker. Offloading of the stored crude is undertaken with two of the three cargo pumps. The maximum offloading capacity is 5,200 m³/hr (about 32,700 bbls/hr). A parcel size of 550,000 bbls can be offloaded within 24 hours.