MAERSK
FPSOs

Factsheet
North Sea Producer

FPSO

North Sea Producer

North Sea Producer is moored in the MacCulloch field 250 kilometers northeast of Aberdeen, UK. It is 236 meters long and operates at a water depth of 147 meters. North Sea Producer has a daily production capacity of 76,000 barrels of oil and holds a storage capacity of 560,000 barrels.

Former product oil tanker Dagmar Maersk, Dead Weight 99,800 tons, built in 1983 and converted to an FPSO in 1997.

Water depth:	147 meters
Storage capacity:	560,000 bbls
Oil Production:	76,000 bbls/day
Gas Export:	24 MMscf/day
Water Injection:	70,000bbls/day

Main Particulars

DIMENSIONS	
Length overall	236.05 m
Length BP	226.50 m
Breadth moulded	39.90 m
Depth moulded	20.50 m
Draught	15.34 m
Dead-weight	99,800 dwt

CAPACITIES, TANKS @ 100% CAP.	
Crude storage	99,897 m^3
Ballast water	32,098 m^3
Slops	4,395 m^3
Fresh water	293 m^3
Liquid fuel	3,052 m^3

CAPACITIES

Oil production
Oil production 76,000 bop/d stabilised to TVP 0.965 bara @ 45.0°C to tanks or 60,000 bop/d to TVP 8.3 bara @ 37.8°C to pipeline @ maximum 110 bar, BS&W 0.5 %, one 100 % train

Gas production
28.8 MMscf/d of dried gas 60 ppmv, for fuel gas and export and lift gas

Gas export
24 MMscf/d @ 161 barg, two 50 % three-stage electrically driven reciprocating compression trains

Produced water
70,000 bwp/d @ 40 ppm or below, through high and low flow hydrocyclones and de-gassing vessel

Flare system
65 MMscf/d through HP and LP flare headers and drums to a 65 m above deck, high flare tower

Power generation
Main 2 x 6 & 2 x 3.5 MW dual fuel turbine, auxiliary 3 x 900 kw and emergency 1 x 388 kw diesel driven

Fire Water
Two 100 % fully enclosed diesel driven fire water pumps delivering 1,200 m^3/hr @ 10 bar each

MOORING

- The FPSO is moored utilising a forward mounted internal turret with a mooring spread of three times three anchors connected to the chain table.
- The well fluids, export and lift gas and export oil, are transferred through a swivel stack in the turret, enabling the FPSO to freely weathervane around the geo stationary part of the turret under all conditions.
- The swivel stack includes one 16" production, one 10" test, one 10" oil export, one 6" gas export, one 4" gas lift, one 12" water injection, one electrical and one hydraulic swivel.

TOPSIDE

- The facility is capable of exporting partially stabilised crude via pipeline or stabilised crude to cargo tanks for export via shuttle tanker.
- The crude oil is stabilised and de-watered in three stages. The first and second stage separators are three-phase separators, the third stage is a coalescer.
- The second stage separator operates at pressures, governed by export mode, ensuring the crude is stabilised to the specified true vapour pressure.
- From the second stage separator the crude is routed through the coalescer where the crude is de-watered to the specified BS&W and then either to oil pipeline export pumps or into the temporary storage before pumping to 2nd stage separator for export to oil pipeline.
- The produced gas is compressed through two three-stage compression trains, electrically driven, for export into a pipeline system or lift gas.
- The produced oil is metered to fiscal standards prior to export.

OTHER

Accommodation
For 73 persons

Main lifesaving
Two 73 persons TEMPSC

Helideck
22.2 m landing circle certified for Sikorsky S61N, to LRS and CAP 437 requirements

Cranes
Two offshore pedestal with lifting capacity of 15 t @ 30 m reach and 11 t @ 45 m reach

Oil export
Via stern offloading system @ 4,500 m^3/hr through a 16" hose, to tandem moored shuttle tankers up to 150,000 dwt or oil export through 10" pipeline

Thruster
One stern tunnel thruster @ maximum load of 15.9 t

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