

FLOTTA TERMINAL



Last Updated:

May 2017

The Flotta Terminal is located on the island of Flotta in the Orkney Islands just north of mainland Scotland. It was commissioned in 1977, with Repsol Sinopec Resources UK Limited becoming the major shareholder and operator in May 2000. The terminal covers a 395-acre site, approximately one sixth of the area of Flotta Island.

Crude oil is imported to the Flotta Oil Terminal from several offshore installations through a 30" subsea pipeline. The pipeline is fed from the following Repsol Sinopec Operated fields; Claymore, Scapa, Piper 'B', Tweedsmuir, Tartan, Highlander, Duart, Petronella, Galley and Nexen's operated Golden Eagle field.

OPERATIONAL INFORMATION

Joint Venture Partners	Repsol Sinopec Resources UK Limited (Op) 20.2770% Repsol Sinopec North Sea Limited 36.6670% Repsol Sinopec Alpha Limited 19.5560% Transworld Petroleum (U.K.) Limited 23.5000%
Location	Flotta Island, Orkney Islands 16km South West of Kirkwall
Area	395 acres
Coordinates	58°20'22" N 03°06'24" W (at flare stack)
Facility Type	Crude oil storage and processing terminal
Commissioned	1977
Tanker Frequency	Approx. 50 Crude tankers per year
Steel Piled Jetty	Crude oil import/export, propane export Tanker size 150,000 dw tonnes Loading rates 80,000 BPH (max) crude oil 5,000 BPH propane
Single Point Mooring (Mothballed)	Crude oil export Tanker size 200,000 dw tonnes Loading rate 50,000 BPH

CAPACITY PROJECTION

The facilities are nominally designed for the following quantities:

Pipeline Crude Processing

Capacity available in pipeline and process plant

Description	Projected Ullage (% of maximum capacity)				
	2017	2018	2019	2020	2021
Oil	●	●	●	●	●

Available Capacities:	●	> 25%
	●	5% to 25%
	●	< 5%

PRIMARY SEPARATION PROCESSING FACILITIES

The crude oil processing facilities consist of three separate crude stabilisation trains operating in parallel. This allows a design maximum plant flowrate of 375,000 bbl/d to be processed between the three trains.

The main systems which make up each crude stabilisation train are as follows: First Stage Desalting, Second Stage Desalting, Stabilisation and Stabiliser Side-Draw system.

The stabilised crude is then transferred to the Crude Oil Storage area with the Desalter wash water transferred to the Desalter Water Treatment plant.

GAS TREATMENT FACILITIES

There are currently insufficient volumes of gas supply to sustain the operation of the gas processing plant; as such plans are in place to carry out decommissioning of the gas plant facility during 2017/2018.

Gas from the overhead stabilisation process is utilised as fuel gas at the hot oil heaters and power house which generate site electricity using dual fuel turbines.

Any excess gas is used at the power house, where there is spare generating capacity to allow additional power export to the national grid.

PIPELINES

Oil Import
(Capacity limited by process plant)

30" * 210 km subsea from Flotta Catchment Area,
(Piper 'B', Claymore, Tartan)

ENTRY / EXIT SPECIFICATION

Typical Pipeline Entry Specification	API Gravity	30 to 40
	Water	2 % vol
	Base Sediment	0.05 % vol
	Viscosity @ 25°C	10 cP
	Pour Point	-3 °C
	Wax Content	6 % wt
	TVP @ 100°F	120 psia
	Total Sulphur	1 % wt
	H2S	1 ppm wt
	CO2	0.25 % mol
	Total Acid Number	0.05 mg KOH/g
	Nickel	4 ppm wt
	Vanadium	8 ppm wt
Mercury	0.35 ppb wt	
Typical Flotta Blend Specification: – Stabilised Crude Oil	Density at 15°C	0.841.2 kg/m ³
	API Gravity	36.64
	Total Sulphur	0.66 % wt
	Total Salts	2.4 lb NaCl / 1000 bbl
	Water Content	0.03 % wt
RVP	9.61 psig	

Average for 2017 to date