

VESSELS ASSOCIATED WITH OFFSHORE OIL AND GAS FIELDS

Drilling Rig



Once preliminary prospecting of the area under the seabed has been done and it is likely that oil or gas reserves exist, a prospecting oil rig is brought to the position to drill in the seabed to establish whether viable oil or gas reserves exist. These are generally not self-propelled and are towed into position by tugs.

Drill Ship



A similar function to that of an oil rig. These vessels are usually self-propelled.

FPSO



Floating, Production, Storage and Off-loading Vessel : A vessel that is directly connected (via a coupling in the bow) to a vertical pipe through which crude oil is drawn from below the seabed. Mud, water and some other impurities are removed from the oil which is then trans-shipped to a shuttle tanker for shipment to a shoreside oil terminal for refining, The vessel "van" around the bow connection according to changes in the weather and/or current.

Cylindrical FPSO



A cylindrical vessel that is directly connected to a vertical pipe through which crude oil is drawn from below the seabed. Mud, water and some other impurities are removed from the oil which is then trans-shipped to a shuttle tanker for shipment to a shoreside oil terminal for refining, The cylindrical design nullifies the "vaning effect" that occurs in conventional FPSOs according to changes in weather and/or current.

FSO



Floating Storage and Off-Load vessel. A vessel (usually a converted tanker) that is used as a floating storage facility for crude oil. FSOs are based at various offshore oilfields, and store the oil until it is trans-shipped to a tanker that will take it to an oil refinery ashore for refining.

Shuttle tanker



A tanker that loads crude oil from an offshore storage facility (via specialised equipment on the fo'c'sle) and carries the oil to an oil terminal ashore for refining. Because of the areas in which many of these vessels operate, they are specially designed for harsh weather operations. Approximate dimensions of a typical vessel (these vary greatly) Length : 220m; Beam : 40m; Draught : 14m; Deadweight : 100 000 tons.

LNG FPSO



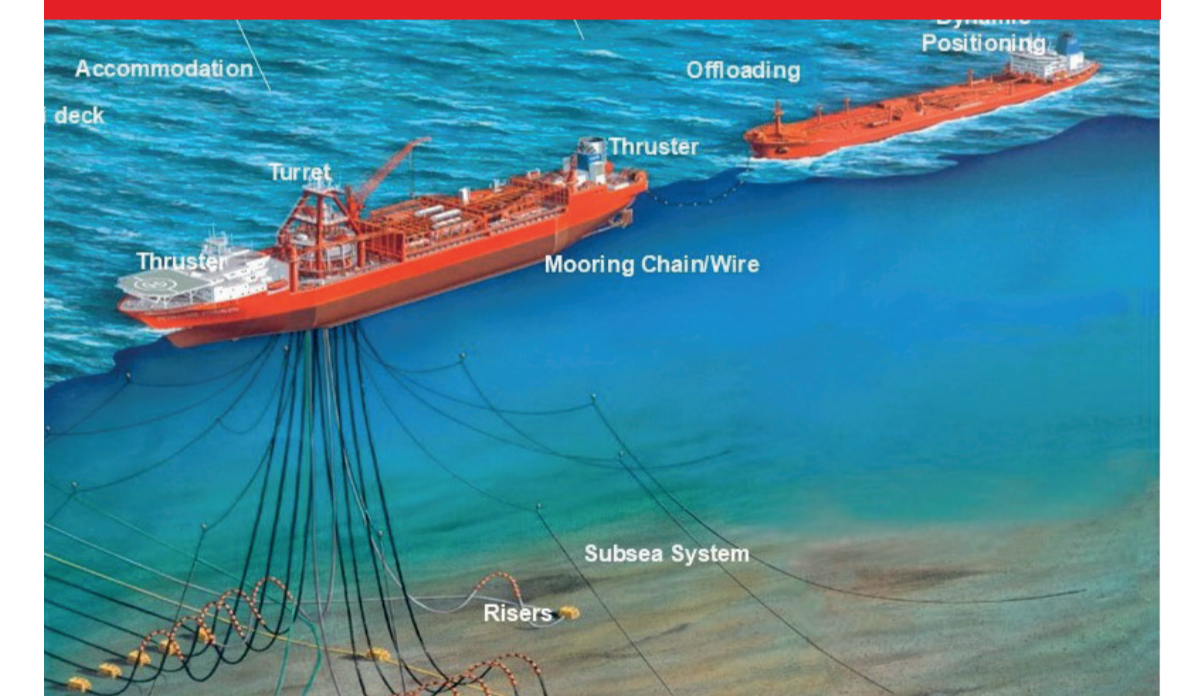
Floating, Production, Storage and Off-loading Vessel : A vessel that is directly connected (via a coupling in the bow) to a vertical pipe through which natural gas is drawn from below the seabed. Some impurities are removed from the gas, which is then cooled to the required temperature, and trans-shipped to a shuttle LNG tanker for shipment to a shoreside LNG terminal for refining, The vessel "van" around the bow connection according to changes in the weather and/or current.

Offshore Service Vessel



These vessels have several roles : carrying stores, equipment, fuel and personnel to offshore installations; laying out the anchors for rigs and other structures on an oil or gasfield; towing oil-related structures where necessary. Their length varies , but few are over 100m in length.

Undersea Arrangements



An FPSO drawing crude oil from below the seabed, partially refining it, and then loading a shuttle tanker. Note the undersea arrangement of pipes and other systems to bring the oil to the FPSO.

This poster was commissioned by the French Embassy in South Africa, Lesotho and Malawi in support of the strengthening of maritime education in South Africa



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Photos courtesy Brian Ingpen and Lawhill Maritime Centre