Claims

1. An offshore storage facility comprising an elongate structure having:

at least one storage compartment;

a buoyant first portion; and

a second portion comprising an end portion, the second portion operable to be submerged in a water body,

where in operation, the end portion rests on a natural surface in the water body and the offshore storage facility pivots about the natural surface on which the end portion rests.

2. The offshore storage facility of claim 1, wherein the elongate structure comprises an inner wall and an outer wall.

3. The offshore storage facility of claim 2, wherein the inner wall and outer wall define at least one chamber therebetween for containing at the buoyant first portion, a first matter which has lower density compared to the water body.

4. The offshore storage facility of claim 2 or 3, wherein the inner wall and outer wall define at least one chamber for containing at the second portion, a second matter which has substantially equal or higher density compared to the water body.

5. The offshore storage facility according to any one of the preceding claims, the buoyant first portion comprising at least one buoyancy means around a portion of the periphery of the elongate structure.

6. The offshore storage facility of claim 5, wherein the buoyancy means is movable along the longitudinal axis of the elongate structure.

7. The offshore storage facility according to any one of the preceding claims, wherein the end portion is tapered.

8. The offshore storage facility according to claim 7, wherein the second portion comprises a flange extending radially with respect to an exterior circumferential surface of the end portion.

9. The offshore storage facility according to any one of the preceding claims, wherein the end portion is rounded.

10. The offshore storage facility according to any one of the preceding claims, the second portion comprising a positioning system adapted to minimize movement of the offshore storage facility along the surface.

11. The offshore storage facility of claim 10, wherein the positioning system comprises one or more of the following: a suction pile, an anchor and a ballast.

12. The offshore storage facility according to any one of the preceding claims, the offshore storage facility comprising an anti-rotation means for engaging the surface to minimize rotation of the elongate structure.

13. The offshore storage facility of claim 12, wherein the anti-rotation means comprises at least one protrusion extending from the end portion.

14. The offshore storage facility of claim 13, wherein the protrusion comprises at least one plate wherein the normal of the plate is aligned substantially perpendicular to the longitudinal axis of the elongate structure.

15. The offshore storage facility according to any one of the preceding claims, the offshore storage facility comprising a helical strake on the outer surface of the elongate structure.

16. The offshore storage facility according to any one of the preceding claims, the buoyant first portion comprising at least one attachment adapted to moor at least one floatable structure.

17. A method for installing an offshore storage facility in a water body, the method comprising the steps of:

Providing an offshore storage facility according to any one of claims 1 to 16 at an offshore installation site;

Weighting the second portion of the elongate structure to cause the end portion to rest on a surface in the water body; and

Pivoting the offshore storage facility about the surface on which the end portion rests.

18. The method of claim 17, the method further comprising the step of providing at least one buoyancy means around a portion of the periphery of the elongate structure.

19. The method according to claim 17 or 18, wherein the step of weighting the second portion comprises ballasting said portion with a

ballast which has a higher density compared to the water surrounding the offshore storage facility.

20. The method according to any one of claims 17 to 19, the method further comprising the step of positioning the end portion on the surface to minimize movement of the offshore storage facility along the surface.

21. The method according to any one of claims 17 to 20, the method further comprising engaging the end portion to the surface to minimize rotation of the elongate structure.

22. The method according to any one of claims 17 to 21, the method further comprising the step of mooring at least one floatable structure to the buoyant first portion.

23. A method for loading and unloading oil in an offshore storage facility according to any one of claims 1 to 16 located in a water body, the method comprising the steps of:

Filling the storage compartment of the elongate structure with water, the storage compartment adapted to be in fluid communication with the water surrounding the offshore storage facility via an outlet;

Loading the storage compartment with oil to cause the water in the storage compartment to be displaced out to the water body surrounding the offshore storage facility via the outlet; and

Unloading the oil from the storage compartment to cause water surrounding the offshore storage facility to enter the storage compartment via the outlet.

24. The method of claim 23, the method further comprising the step of separating the oil and water with an intermediate membrane in the storage compartment.

25. The method of claim 23 or 24, the method further comprising the step of separating oil from an oil-water mixture with a coalescer.