CLAIMS

~~We claim:~~

~~1. A method for dry-docking a first vessel connected to a pipeline using a second vessel, the~~ method comprising:

raising a normally submerged section of the first vessel above a water level using the second vessel, while the first vessel is connected to the pipeline wherein the first vessel is disposed at least partially on a deck of the second vessel.

2. The method of claim 1, wherein the first vessel is moored with one or more anchor lines.

3. The method of claim 2, wherein at least one of the anchor lines is slack.

4. The method of claim 1, further comprising:

performing vessel operations while raised.

5. The method of claim 4, wherein vessel operations performed comprise specialized vessel operations.

6. The method of claim 1, wherein the first vessel is a Floating Production Storage and Offloading (FPSO) vessel and the second vessel is a semi-submersible transport vessel.

7. The method of claim 6, wherein the FPSO vessel operations comprise hydrocarbon extraction from a wellhead to the FPSO vessel.

8. The method of claim 6, wherein the FPSO vessel operations comprise hydrocarbon processing.

~~9. The method of claim 1, further comprising:~~

performing a dry-dock operation on the normally submerged section while the first vessel continues performing the vessel operations.

10. The method of claim 9, where the dry-dock operation comprises at least one of:

i) repairing the normally submerged section;

ii) performing maintenance on the normally submerged section; and

iii) inspecting the normally submerged section.

11. The method of claim 1, further comprising:

submerging the deck of the second vessel.

12. The method of claim 11, wherein the submerging step comprises filling at least one ballast tank.

13. The method of claim 1, further comprising:

moving the deck of the second vessel into a position below the first vessel.

14. The method of claim 1, further comprising:

moving the first vessel to a position above the deck of the second vessel.

15. The method of claim 1, wherein the deck is substantially flat.

16. The method of claim 1, wherein the disposition of the first vessel relative to the deck is selected so that the first vessel is at least one of: i) overhanging a front of the deck, ii) overhanging an aft of the deck, and iii) fully on the deck.

17. The method of claim 1, wherein raising the normally submerged section of the first vessel step comprises at least partially emptying at least one ballast tank.

~~18. The method of claim 1, wherein the normally submerged section is a portion of the first~~ vessel selected for at least one of: i) repair, ii) maintenance, and iii) inspection.

19. The method of claim 1, wherein the second vessel is self-propelled.

20. A method for dry-docking a first vessel using a second vessel, the method comprising:

performing a dry-dock operation while the first vessel maintains vessel operations, wherein the dry-dock operation involves a normally submerged section of the first vessel that has been raised above a water level using a deck of the second vessel.

21. The method of claim 20, where the dry-dock operation comprises at least one of:

i) repairing the normally submerged section;

ii) performing maintenance on the normally submerged section; and

iii) inspecting the normally submerged section.

22. The method of claim 20, further comprising:

submerging the deck of the second vessel;

moving the first vessel and the second vessel relative to one another; and

raising the normally submerged section of the first vessel above the water level using the second vessel.

23. The method of claim 22, wherein the submerging step comprises filling at least one ballast tank.

24. The method of claim 22, wherein the raising the normally submerged section of the first ~~vessel step comprises at least partially emptying at least one ballast tank.~~

~~25. The method of claim 22, wherein the moving the first vessel and the second vessel relative to~~ one another step comprises:

moving the deck of the second vessel into a position below the first vessel.

26. The method of claim 22, wherein the moving the first vessel and the second vessel relative step to one another comprises:

moving the first vessel to a position above the deck of the second vessel.

27. The method of claim 20, wherein the deck is substantially flat.

28. The method of claim 20, wherein the first vessel is disposed on the deck so that the first vessel is at least one of: i) overhanging a front of the deck, ii) overhanging an aft of the deck, and iii) fully on the deck.

29. The method of claim 20, wherein the normally submerged section is selected for at least one of: i) repair, ii) maintenance, and iii) inspection.

30. The method of claim 20, wherein the vessel operations comprise specialized vessel operations.

31. The method of claim 20, wherein the vessel operations comprise hydrocarbon extraction from a wellhead to the first vessel.

32. The method of claim 20, wherein the vessel operations comprise hydrocarbon processing.

33. The method of claim 20, wherein the first vessel is a floating production, storage, and offloading vessel (FPSO) and the second vessel is a semi-submersible transport vessel.

~~34. The method of claim 20, wherein the first vessel is connected to a pipeline.~~

~~35. The method of claim 20, wherein the second vessel is moored with one or more anchor lines.~~

36. The method of claim 35, wherein at least one of the anchor lines is slack.

37. The method of claim 20, wherein the second vessel is self-propelled.

38. A method for dry-docking a vessel using a semi-submersible transport vessel, the method comprising:

submerging a deck of the semi-submersible transport vessel;

moving the vessel and the semi-submersible transport vessel relative to one another such that the deck of the semi-submersible transport vessel is positioned below the vessel;

raising a normally submerged section of the vessel above a water level; and

maintaining vessel operations while the normally submerged section of the vessel is above the water level.

39. The method of claim 38 further comprising:

performing a dry-dock operation involving the normally submerged section.

40. The method of claim 39, where the dry-dock operation comprises at least one of:

i) repairing the normally submerged section;

ii) performing maintenance on the normally submerged section; and

iii) inspecting the normally submerged section.

~~41. The method of claim 38, wherein the deck is substantially flat.~~

~~42. The method of claim 38, wherein the position of the deck below the vessel is selected so that~~ the vessel is at least one of: i) overhanging a front of the deck, ii) overhanging an aft of the deck, and iii) fully on the deck.

43. The method of claim 38, wherein the submerging step comprises filling at least one ballast tank.

44. The method of claim 38, wherein the raising the normally submerged section of the vessel step comprises at least partially emptying at least one ballast tank.

45. The method of claim 38, wherein the normally submerged section is a portion of the vessel selected for at least one of: i) repair, ii) maintenance, and iii) inspection.

46. The method of claim 38, wherein the vessel operations comprise hydrocarbon extraction from a wellhead to the vessel.

47. The method of claim 38, wherein the vessel operations comprise hydrocarbon processing.

48. The method of claim 38, wherein the vessel is a floating production, storage, and offloading vessel (FPSO).

49. The method of claim 38, wherein the vessel is connected to a pipeline.

50. The method of claim 38, wherein the vessel is moored with an anchor line.

51. The method of claim 50, wherein the anchor line is slack.

52. The method of claim 38, wherein the semi-submersible transport vessel is self-propelled.

~~53. The method of claim 38, wherein the vessel operation is a specialized vessel operation.~~

CLAIMS

We claim:

1. A method for dry-docking a first vessel connected to a wellhead using a second vessel, the method comprising:

raising a normally submerged section of the first vessel above a water level using the second vessel, while the first vessel is connected to the wellhead wherein the first vessel is disposed at least partially on a deck of the second vessel, wherein the first vessel is a Floating Production Storage and Offloading (FPSO) vessel and the second vessel is a semi-submersible transport vessel.

2. A method for dry-docking a first vessel connected to a pipeline using a second vessel, the method comprising:

raising a normally submerged section of the first vessel above a water level using the second vessel, while the first vessel is connected to the pipeline wherein the first vessel is disposed at least partially on a deck of the second vessel and

performing FPSO vessel operations while raised, wherein the FPSO vessel operations are hydrocarbon extractions from a wellhead to the FPSO vessel.

3. A method for dry-docking a first vessel connected to a wellhead using a second vessel, the method comprising:

raising a normally submerged section of the first vessel above a water level using the second vessel, while the first vessel is connected to the wellhead wherein the first vessel is disposed at least partially on a deck of the second vessel and

performing FPSO vessel operations while raised, wherein the FPSO vessel operations are hydrocarbon processing.

4. A method for dry-docking a first vessel using a second vessel, the method comprising:

performing a dry-dock operation while the first vessel maintains vessel operations, wherein the dry-dock operation involves a normally submerged section of the first vessel that has been raised above a water level using a deck of the second vessel, wherein the vessel operations are hydrocarbon extractions from a wellhead to the first vessel.

5. A method for dry-docking a first vessel using a second vessel, the method comprising:

performing a dry-dock operation while the first vessel maintains vessel operations, wherein the dry-dock operation involves a normally submerged section of the first vessel that has been raised above a water level using a deck of the second vessel, wherein the vessel operations are hydrocarbon processing while the first vessel is connected to a wellhead.

6. A method for dry-docking a first vessel using a second vessel, the method comprising:

performing a dry-dock operation while the first vessel maintains vessel operations, wherein the dry-dock operation involves a normally submerged section of the first vessel that has been raised above a water level using a deck of the second vessel, wherein the first vessel is a floating production, storage, and offloading vessel (FPSO) and the second vessel is a semi-submersible transport

vessel wherein vessel operations are hydrocarbon extractions from a wellhead to the first vessel.

7. A method for dry-docking a vessel using a semi-submersible transport vessel, the method comprising:

submerging a deck of the semi-submersible transport vessel;

moving the vessel and the semi-submersible transport vessel relative to one another such that the deck of the semi-submersible transport vessel is positioned below the vessel;

raising a normally submerged section of the vessel above a water level; and

maintaining vessel operations while the normally submerged section of the vessel is above the water level, wherein the vessel operations are hydrocarbons extraction from a wellhead to the vessel.

8. A method for dry-docking a vessel using a semi-submersible transport vessel, the method comprising:

submerging a deck of the semi-submersible transport vessel;

moving the vessel and the semi-submersible transport vessel relative to one another such that the deck of the semi-submersible transport vessel is positioned below the vessel;

raising a normally submerged section of the vessel above a water level; and

maintaining vessel operations while the normally submerged section of the vessel is above the water level, wherein the vessel operations are hydrocarbon processing while the vessel is connected to a wellhead.