CLAIMS

1. A vessel (1001) for installing or repairing an offshore structure, the vessel moveably connected to at least one elongate support member (1007, 1009, 1011, 1013), the vessel comprising;

   a primary platform (1003);

   a secondary platform (1029) moveably connected to the or at least one further elongate support member in which the vessel and platform are moveable in an elongate direction along the or each elongate support member wherein the elongate support member extends through the primary (1003) and secondary platforms (1029);

   wherein the vessel comprises a first drive means (1019, 1021) for driving the vessel along one of the elongate support members and the platform comprises a second drive means (1031, 1033) for driving the secondary platform along one of the elongate support members; and

   a control means for controlling operation of the first and second drive means in a first mode of operation in which the platform and vessel are synchronously driveable along one of the elongate support members, and wherein the control means is further configured to control the first and second drive means in a second mode of operation in which the secondary platform is driveable independently from the vessel.

2. A vessel according to claim 1 wherein the control means is further configured to engage a first locking means to lock the vessel at a predetermined position on one of the elongate support members and particularly to control operation of the second drive means to drive or further drive the secondary platform along one of the elongate support members.

3. A vessel according to any preceding claim wherein the control means is further configured to engage a second locking means to lock the platform at a predetermined position on one of the elongate support members.

4. A vessel according to any preceding claim in which vessel further comprises a propulsion system for displacing the vessel relative to the offshore structure.

5. A vessel according to any preceding claim in which the platform is constructed to support a maximum supportable load and the second drive means has a maximum lifting capacity which substantially greater than the maximum load supportable by the secondary platform.

6. A vessel according to any preceding claim in which the vessel is constructed to support a maximum load which is substantially greater than the maximum load supportable by the secondary platform.

7. A vessel according to claim 6 in which the maximum lifting capacity of the second drive means is substantially the same as the maximum lifting capacity of the first drive means.

8. A vessel according to any preceding claim further comprising a first locking means for locking the position of the vessel at any predetermined position on one of the elongate support members and preferably further comprising a second locking means for locking the position of the secondary platform at any predetermined position on one of the elongate support members.

9. A vessel according to any one of claims 1 to 7 further comprising a first locking means for locking the position of the vessel at any predetermined position on one of the elongate support members and a second locking means for locking the position of the secondary platform at any predetermined position on one of the elongate support members wherein the first and second locking means are independently lockable.

10. A vessel according to any preceding claim in which the secondary platform is positioned substantially above the vessel including a hull.

11. A vessel according to any preceding claim in which the platform comprises an aperture for moving one or more components between the platform and the vessel via the aperture.

12. A vessel according to any preceding claim in which the secondary platform further comprises a gantry crane.

13. A vessel according to claim 12 in which the gantry crane is moveable along at least a portion of the length of the secondary platform.

14. A vessel according to any preceding claim further comprising a platform extension moveable between a first position in which the extension is stowed within the secondary platform and a second position in which the extension projects beyond the secondary platform.

15. A vessel according to claim 14 in which the platform extension is connected to the secondary platform.

16. A vessel according to any preceding claim in which the secondary platform is suitable for moving or transporting a component of a wind turbine in particular a wind turbine blade or rotor or wave generator, or tidal turbine.

17. A vessel according to any preceding claim comprising a plurality of elongate support members in which the first drive means comprises a drive system associated with each of the elongate support members and in particular, in which the second drive means comprises a drive system associated with each of the elongate support members.

18. A vessel according to claim 17 in which the control means is configured to control operation of the drive system associated with each of the support members such that the deck or secondary platform or both remain substantially horizontal.

19. A method of installing or repairing an offshore structure using a vessel moveably connected to at least one elongate support member, the vessel comprising;

a primary platform (1003)

a secondary platform (1029) moveably connected to the or at least one further elongate support member in which the vessel and platform are moveable in an elongate direction along the or each elongate support member wherein the elongate support member extends through the primary (1003) and secondary platforms (1029);

wherein the vessel comprises a first drive means for moving the vessel along one of the elongate support members and the platform comprises a second drive means for moving the secondary platform along one of the elongate support members; and

controlling operation of the first and second drive means, using a drive control means, wherein the drive control means is configured to control the first and second drive means in a first mode of operation in which the vessel and secondary platform are synchronously driveable along one of the elongate support members and a second mode of operation in which the secondary platform is driveable independently from the vessel.

CLAIMS

1. A vessel (1001) for installing or repairing an offshore structure, the vessel moveably connected to at least one elongate support member (1007, 1009, 1011, 1013), the vessel comprising;

   a primary platform (1003);

   a secondary platform (1029) moveably connected to the or at least one further elongate support member in which the primary platform and secondary platform are moveable in an elongate direction along the or each elongate support member wherein the elongate support member extends through the primary (1003) and secondary platforms (1029);

   wherein the primary platform comprises a first drive means (1019, 1021) for driving the primary platform along one of the elongate support members and the secondary platform comprises a second drive means (1031, 1033) for driving the secondary platform along one of the elongate support members; and

   a control means for controlling operation of the first and second drive means in a first mode of operation in which the secondary platform and primary platform are synchronously driveable along one of the elongate support members, and wherein the control means is further configured to control the first and second drive means in a second mode of operation in which the secondary platform is driveable independently from the primary platform.

2. A vessel according to claim 1 wherein the control means is further configured to engage a first locking means to lock the primary platform at a predetermined position on one of the elongate support members and particularly to control operation of the second drive means to drive or further drive the secondary platform along one of the elongate support members.

3. A vessel according to any preceding claim wherein the control means is further configured to engage a second locking means to lock the secondary platform at a predetermined position on one of the elongate support members.

4. A vessel according to any preceding claim in which primary platform further comprises a propulsion system for displacing the vessel relative to the offshore structure.

5. A vessel according to any preceding claim in which the secondary platform is constructed to support a maximum supportable load and the second drive means has a maximum lifting capacity which substantially greater than the maximum load supportable by the secondary platform.

6. A vessel according to any preceding claim in which the primary platform is constructed to support a maximum load which is substantially greater than the maximum load supportable by the secondary platform.

7. A vessel according to claim 6 in which the maximum lifting capacity of the second drive means is substantially the same as the maximum lifting capacity of the first drive means.

8. A vessel according to any preceding claim further comprising a first locking means for locking the position of the primary platform at any predetermined position on one of the elongate support members and preferably further comprising a second locking means for locking the position of the secondary platform at any predetermined position on one of the elongate support members.

9. A vessel according to any one of claims 1 to 7 further comprising a first locking means for locking the position of the primary platform at any predetermined position on one of the elongate support members and a second locking means for locking the position of the secondary platform at any predetermined position on one of the elongate support members wherein the first and second locking means are independently lockable.

10. A vessel according to any preceding claim in which the secondary platform is positioned substantially above the primary platform including a hull.

11. A vessel according to any preceding claim in which the secondary platform comprises an aperture for moving one or more components between the secondary platform and the primary platform via the aperture.

12. A vessel according to any preceding claim in which the secondary platform further comprises a gantry crane.

13. A vessel according to claim 12 in which the gantry crane is moveable along at least a portion of the length of the secondary platform.

14. A vessel according to any preceding claim further comprising a platform extension moveable between a first position in which the extension is stowed within the secondary platform and a second position in which the extension projects beyond the secondary platform.

15. A vessel according to claim 14 in which the platform extension is connected to the secondary platform.

16. A vessel according to any preceding claim in which the secondary platform is suitable for moving or transporting a component of a wind turbine in particular a wind turbine blade or rotor or wave generator, or tidal turbine.

17. A vessel according to any preceding claim comprising a plurality of elongate support members in which the first drive means comprises a drive system associated with each of the elongate support members and in particular, in which the second drive means comprises a drive system associated with each of the elongate support members.

18. A vessel according to claim 17 in which the control means is configured to control operation of the drive system associated with each of the support members such that the primary platform or secondary platform or both remain substantially horizontal.

19. A method of installing or repairing an offshore structure using a vessel moveably connected to at least one elongate support member, the vessel comprising; a primary platform (1003) a secondary platform (1029) moveably connected to the or at least one further elongate support member in which the primary platform and secondary platform are moveable in an elongate direction along the or each elongate support member wherein the elongate support member extends through the primary (1003) and secondary platforms (1029);

    wherein the primary platform comprises a first drive means for moving the primary platform along one of the elongate support members and the secondary platform comprises a second drive means for moving the secondary platform along one of the elongate support members; and

    controlling operation of the first and second drive means, using a drive control means, wherein the drive control means is configured to control the first and second drive means in a first mode of operation in which the primary platform and secondary platform are synchronously driveable along one of the elongate support members and a second mode of operation in which the secondary platform is driveable independently from the primary platform.