

CLAIMS

1. A mooring assembly for attaching a vessel to a subsea well including a well conductor, the mooring assembly comprising:
 - (a) a housing adapted to be fixed to the well conductor and including a rotatably mounted vessel attachment point extending laterally therefrom; and
 - (b) a base defining an interface for a subsea ground surface; andwherein, in use, a vessel moored to the subsea well is capable of rotational movement around the subsea well.
2. A mooring assembly according to claim 1 wherein the well conductor comprises a conductor pipe or conductor casing.
3. A mooring assembly according to claim 1 adapted to allow a vessel moored thereto to weather vane through 360 degrees.
4. A mooring assembly according to claim 1 or 2 wherein the housing defines a conduit for the well conductor.
5. A mooring assembly according to claim ~~4~~³ wherein the conduit defines an upper end and a lower end and an inner surface therebetween with a profile that is sized and shaped to allow the housing to form a sleeve or sheath around the well conductor.
6. A mooring assembly according to any one of the preceding claims wherein the housing is adapted to be fixed in position relative to the well conductor by a fixing means for forming a frictional engagement between the housing and the well conductor.
7. A mooring assembly according to claim 6 wherein the fixing means comprises a first mating surface provided on the housing that is compatible with a second mating surface on the well conductor.
8. A mooring assembly according to claim 7 wherein the first mating surface comprises a pin, a ball, a bore, a projection, a blade or a channel.
9. A mooring assembly according to claims 7 or 8 wherein the second

mating surface comprises a pin, a ball, a bore, a projection, a blade or a channel.

10. A mooring assembly according to any one of the preceding claims wherein the housing further comprises a locating means for centring a well casing therein.
11. A mooring assembly according to claim 10 wherein the housing comprises a conduit and the locating means is adapted to centre the casing in the conduit.
12. A mooring assembly according to any one of the preceding claims wherein the housing further comprises a guide means to further assist with landing a well casing in the housing.
13. A mooring assembly according to any one of the preceding claims wherein the base comprises at least one engaging means for the subsea ground surface.
14. A mooring assembly according to claim 13 wherein the engaging means for the subsea ground surface comprises a projection.
15. A mooring assembly according to claim 13 or 14 wherein the engaging means for the subsea ground surface comprises at least one arm or strut that extends laterally from the base to allow the interface to extend over a larger area of subsea ground surface.
16. A mooring assembly according any one of claims 13 to 15 wherein the engaging means for the subsea ground surface is adapted to receive an additional anchoring element.
17. A mooring assembly according to claim 16 wherein the additional anchoring element is a stake, pile, screw or a spike.
18. A mooring assembly according to any one of the preceding claims wherein the base further comprises a spacing means to allow the formation of void between the base and the subsea ground surface, when in use.
19. A mooring assembly according to claim 18 wherein the void is adapted

to allow for the passage of a fixing material to an area adjacent to a lower portion of the base.

20. A mooring assembly according to any one of the preceding claims wherein the base comprises a skirt or at least one arm that extends out radially from the main longitudinal axis of the housing.
21. A mooring assembly according to any one of the preceding claims wherein the rotatably mounted vessel attachment point comprises at least one bearing member that defines a bearing surface.
22. A mooring assembly according to any one of the preceding claims wherein the rotatably mounted vessel attachment point comprises an attachment member for releasably receiving a vessel anchor line or hawser.
23. A mooring assembly according to any one of the preceding claims fitted to a subsea well, wherein the subsea well further comprises a flow controller and wherein the rotatably mounted vessel attachment point is adapted to rotate independently of the flow controller.
24. A method of fitting a mooring assembly according to any one of the preceding claims, to a subsea well including a well conductor, the method comprising the steps of
 - (a) providing the mooring assembly; and
 - (b) rotatably mounting the mooring assembly to the well conductor at or near a subsea ground surface;wherein, in use, a vessel moored to the subsea well is capable of rotational movement around the subsea well.
25. A method of mooring a vessel to a subsea well, the method comprising the step of attaching the vessel to the subsea well via a mooring assembly according to any one of claims 1 to 23 and wherein, when moored, the vessel is capable of rotational movement around the subsea well.