Claims

1. A modular reel drive assembly comprising:
two reel drive tower modules;
a reel hub adapter; and
a reel hub adapter support module;
wherein the hub adapter support module comprises at least one support pin which is configured to be movable between a storage position in which the at least one support pin is not aligned with at least one aperture on the hub adapter support module and an operational position in which the support pin is aligned with at least one aperture on the hub adapter support module and
wherein the hub adapter support module comprises at least one hydraulic cylinder configured to move the at least one support pin between a storage position and an operational position.

2. The modular reel drive assembly as claimed in claim 1 wherein the at least one aperture on the hub adapter support module is configured to be aligned with at least one aperture on at least one reel drive tower module.

3. The modular reel drive assembly as claimed in claim 1 or claim 2 wherein the reel drive assembly comprises a control unit which is configured to control the movement of the support pin.

4. The modular reel drive assembly as claimed in claim 3 wherein the control unit which is configured to control the movement of the support pin between a storage position and an operational position.

5. The modular reel drive assembly as claimed in claim 3 or claim 4 wherein the control unit which is configured to control the extension or retraction of the support pin through the aperture on the hub adapter support module and/or through at least one aperture on at least one tower module.

6. The modular reel drive assembly as claimed in any preceding claim wherein the two reel drive tower modules are moveably mounted on a base frame module.

7. The modular reel drive assembly as claimed in any preceding claim wherein the reel hub adapter is mounted on the hub adapter support module.

8. The modular reel drive assembly as claimed in any preceding claim wherein the reel hub adapter support module comprises a sliding drive unit and/or a crawler unit.

9. The modular reel drive assembly as claimed in any preceding claim wherein the reel hub adapter support module comprises at least one lifting device to lift the reel hub.

10. The modular reel drive assembly as claimed in any preceding claim wherein the hub adapter support module comprises least one hydraulic cylinder configured to extend or retract the support pin through the aperture on the hub adapter support module.

11. The modular reel drive assembly as claimed in claim 10 wherein the least one hydraulic cylinder is configured to extend or retract the support pin through the aperture on the hub adapter support module and through at least one aperture on the tower modules.

12. The modular reel drive assembly as claimed in any preceding claim wherein the hub adapter support module comprises a protective frame configured to protect the at least one support pin when in a storage position.

13. The modular reel drive assembly as claimed in any preceding claim wherein the reel drive towers each comprise at least one channel.

14. The modular reel drive assembly as claimed in claim 13 wherein the reel hub adapter support module is slidably mounted between the two reel drive tower modules in the at least one channel on each reel drive tower.

15. The modular reel drive assembly as claimed in any preceding claim wherein the reel hub adapter is driven by a motor.

16. The modular reel drive assembly as claimed in any preceding claim wherein the motor is mounted on the reel hub adapter support module.

17. A reel hub adapter support module for use in a reel drive assembly comprising:
at least one support pin configured to extend through an aperture on the reel hub support module;
wherein the at least one support pin is configured to move between a storage position in which the at least one support pin is not aligned with at least one aperture on the hub support adapter module and an operational position in which the support pin is aligned with at least one aperture on the hub adapter support module and wherein the hub adapter support module comprises at least one hydraulic cylinder configured to move the at least one support pin between a storage position and an operational position.

18. The reel hub adapter support module as claimed in claim 17 wherein the hub adapter support module comprises at least one hydraulic cylinder configured to extend or retract the support pin through the aperture on the hub adapter support module.

19. The reel hub adapter support module as claimed in claim 17 or claim 18 wherein the reel hub adapter support module comprises a sliding drive unit and a crawler unit.

20. The reel hub adapter support module as claimed in claim 19 wherein the reel hub adapter support module comprises at least one hydraulic cylinder located between the sliding drive unit and the crawler unit.

21. The reel hub adapter support module as claimed in claim 19 or 20 wherein the sliding drive unit comprises at least one hydraulic cylinder configured to extend or retract the support pin through an aperture on the sliding drive unit and through at least one aperture on at least one of the tower module.

22. The reel hub adapter support module as claimed in any of claims 19 to 21 wherein the crawler unit comprises at least one hydraulic cylinder configured to extend or retract the support pin through an aperture on the crawler unit and through at least one aperture on at least one of the tower module.

23. The reel hub adapter support module as claimed in any of claims 21 to 22 wherein the sliding drive unit and/or the crawler unit comprises at least one positional

hydraulic cylinder configured to move the at least one support pin between a storage position and an operational position.

24. The reel hub adapter support module as claimed in any of claims 19 to 23 wherein the sliding drive unit and/or crawler unit comprises a protective frame configured to protect the at least one support pin when in a storage position.

25. A method of assembling a modular reel drive assembly comprising the steps of:
providing two reel drive tower modules; and
a reel hub adapter support module comprising:
at least one support pin configured to extend through an aperture on the reel hub support assembly; and
at least one hydraulic cylinder configured to move the at least one support pin between a storage position and an operational position;
mounting the reel hub adapter support module between the two reel drive tower modules; and
moving the at least one support pin from a storage position in which the at least one support pin is not aligned with at least one aperture on the hub adapter support module to an operational position in which the at least one support pin is aligned with at least one aperture on the hub adapter support module.

26. The method as claimed in claim 25 comprising extending the at least one support pin through the aperture on the reel hub adapter support module and/or through at least one aperture on at least one reel drive tower module.

27. The method as claimed in claim 25 or claim 26 comprising controlling the extension of the at least one support pin through the aperture on the reel hub adapter support module and/or through at least one aperture on at least one reel drive tower module.

28. The method as claimed in any of claims 25 to 27 comprising controlling the movement of the at least one support pin from a storage position to an operational position.

29. A method of disassembling a modular reel drive assembly comprising the steps of:

providing a modular reel drive assembly comprising two reel drive tower modules and

a reel drive hub adapter support module mounted between the two reel drive tower modules;

wherein the reel hub adapter support module comprises at least one support pin configured to extend through an aperture on the hub adapter support module; and

wherein the hub adapter support module comprises at least one hydraulic cylinder configured to move the at least one support pin between a storage position and an operational position;

moving the at least one support pin from an operational position in which the support pin is aligned with at least one aperture on the hub adapter support module to a storage position in which the at least one support pin is not aligned with at least one aperture on the hub adapter support module; and

removing the hub adapter support module from between the at least two tower modules.

30. The method as claimed in claim 29 comprising retracting the at least one support pin through the aperture on the reel hub adapter support module and/or through at least one aperture on at least one reel drive tower module prior to moving the at least one support pin from an operational position storage to a storage position.

31. The method as claimed in claim 29 or 30 comprising controlling the retraction of the at least one support pin through the aperture on the reel hub adapter support module and/or through at least one aperture on at least one reel drive tower module.

32. The method as claimed in any of claims 29 to 31 comprising controlling the movement of the at least one support pin from an operational position storage to a storage position.