Claims

1. A linear winch assembly comprising:
a first gripper assembly comprising a first gripper block;
a second gripper assembly comprising a second gripper block;
a first mechanism operable to move at least part of the first gripper block between an operative position in which the first gripper block is configured to grip and release a cable and an inoperative position which is laterally, vertically and/or horizontally offset from the operative position and is configured to provide a pathway for a connector on the cable through the first gripper assembly and
a second mechanism operable to move at least part of the second gripper block between an operative position in which the second gripper block is configured to grip and release a cable and an inoperative position which is laterally, vertically and/or horizontally offset from the operative position and is configured to provide a pathway for a connector on the cable through the second gripper assembly.

2. The linear winch assembly according to claim 1 wherein the first mechanism is configured to move the at least part of the first gripper block to a position which is out of the pathway of the cable connector, wherein the position is within a linear winch housing.

3. The linear winch assembly according to claim 1 or 2 wherein the second mechanism is configured to move the at least part of the second gripper block to a position which is out of the pathway of the cable connector, wherein the position is within a linear winch assembly housing.

4. The linear winch assembly according to any preceding claim wherein the first gripper assembly and/or the second gripper assembly are configured to sequentially grip and release the cable.

5. The linear winch assembly according to any preceding claim wherein the first gripper assembly and/or the second gripper assembly are configured to move within the linear winch assembly to pull and/or push a cable.

6. The linear winch assembly according to any preceding wherein one gripper assembly is configured to grip the cable while the other gripper assembly is configured to release the cable.

7. The linear winch assembly according to any preceding wherein the at least part of the first gripper block and the at least part of the second gripper block are configured to sequentially move out of the pathway of the cable connector.

8. The linear winch assembly according to any preceding claim wherein the first mechanism and/or second mechanism comprise a hydraulic, pneumatic, electric or mechanical actuator.

9. The linear winch assembly according to any preceding wherein the first gripper assembly comprises a first lid and the second gripper assembly comprises a second lid.

10. The linear winch assembly according to claim 9 wherein the first gripper assembly comprises a mechanism configured to open and close the first lid and the second gripper assembly comprises a mechanism configured to open and close the second lid.

11. The linear winch assembly according to any preceding claim comprising a control unit.

12. The linear winch assembly according to claim 11 wherein the control unit is configured to control the position of the first and/or second gripper assemblies to enable controlled passing of the cable connector through the winch assembly.

13. The linear winch assembly according to claim 11 or claim 12 wherein the control unit is configured to use feedback information relating to the position of the gripper assemblies to ensure that the gripper assemblies are located in a correct position to provide a pathway for the connector on the cable to pass.

14. A gripper assembly for a linear winch assembly comprising;
a lid;
a gripper block; and

a mechanism operable to move at least part of the gripper block between an operative position in which the gripper block is configured to grip and release a cable and an inoperative position which is laterally, vertically and/or horizontally offset from the operative position and is configured to provide a pathway for a connector on the cable through the gripper assembly.

15. The gripper assembly according to claim 14 wherein the inoperative position of the gripper block is within a gripper assembly housing.

16. The gripper assembly according to any of claims 14 to 15 wherein the lid is movably mounted on the gripper assembly.

17. The gripper assembly according to any of claims 14 to 16 wherein the lid is pivotally mounted on the gripper assembly.

18. The gripper assembly according to any of claims 14 to 17 wherein the lid is configured to be moved to a position out of the pathway of the cable connector.

19. The gripper assembly according to any of claims 14 to 18 wherein the gripper assembly comprises a guide assembly.

20. The gripper assembly according to claim 19 wherein the gripper block is movably mounted on the guide assembly.

21. The gripper assembly according to claim 19 or claim 20 wherein the mechanism is configured to move the gripper block along the guide assembly between the operative position and the inoperative position.

22. A method of operating a linear winch assembly, the method comprising:
providing a linear winch assembly comprising:
a first gripper assembly comprising a lid and a gripper block; and
a mechanism operable to move at least part of the gripper block between an operative position in which the first gripper block is configured to grip and release a cable and an inoperative position which is laterally, vertically and/or horizontally offset from the operative position;
moving at least a part of the gripper block to the inoperative position;
and passing the cable connector through the gripper assembly.

23. The method as claimed in claim 22 comprising moving the first gripper assembly to pass the cable connector through the first gripper assembly.

24. The method as claimed in claim 22 or claim 23 comprising moving the at least part of the first gripper block from the inoperative position to the operative position when the cable connector has passed through the first gripper assembly.

25. The method as claimed in any of claims 22 to 24 comprising:
providing a second gripper assembly comprising:
a second lid;
a second gripper block; and
a second mechanism operable to move at least part of the second gripper block between an operative position in which the second gripper block is configured to grip and release a cable and an inoperative position which is laterally, vertically and/or horizontally offset from the operative position;
moving at least a part of the second gripper block to the inoperative position; and
passing the cable connector through the second gripper assembly.

26. The method as claimed in claim 25 comprising moving the at least part of the second gripper block from the inoperative position to the operative position when the cable connector has passed through the second gripper assembly.

27. The method as claimed in any of claims 22 to 26 comprising moving the first and/or second gripper assembly to pull in or pay out a cable.

28. The method as claimed in any of claims 22 to 27 comprising moving the second gripper assembly to push and/or pull the cable to move the cable connector through the first gripper assembly.

29. The method as claimed in any of claims 22 to 28 comprising moving the first gripper assembly to push and/or pull the cable to move the cable connector through the second gripper assembly.

30. The method as claimed in any of claims 22 to 29 comprising moving the first gripper assembly to move the cable connector through the first gripper assembly.

31. The method as claimed in any of claims 25 to 30 comprising moving the second gripper assembly to pass the cable connector through the second gripper assembly.