Claims

1. An apparatus for raising a turbine relative to a turbine support, the apparatus comprising:

a turbine mount;

a turbine for mounting on the turbine mount;

means for providing an upward force to raise the turbine; and

a guidance means; wherein

the guidance means is arranged for engagement with the turbine mount, and the turbine is moveable in a path defining an arc about a pitch or roll axis in response to the upward force by virtue of the engagement between the guidance means and the support, wherein the apparatus further comprises:

means to rotate the turbine about a yaw axis for a portion of the upward movement of the turbine when the upward force is applied.

2. The apparatus of claim 1, wherein the guidance means is a pivot, and the turbine is moveable in an arc by virtue of the turbine mount being pivotable relative to the turbine support.

3. The apparatus according to claim 1, wherein the guidance means comprises a curved rail or slot.

4. The apparatus according to claim 3, wherein the apparatus is arranged for the upward force to cause the turbine mount to slide along the guidance means.

5. The apparatus of any preceding claim, wherein the turbine mount is an elongate beam.

6. The apparatus of claim 5, wherein the elongate beam is a telescoping beam comprising an inner beam and an outer beam arranged to slide relative to one another; wherein

the telescoping beam is retractable by the inner beam sliding inside the outer beam in response to the upward force.

7. The apparatus according to claim 6, wherein the means for providing an upward force comprises means for retracting the inner beam within the outer beam.

8. The apparatus according to any one of claims 6 or 7, wherein the inner beam comprises at least one stop for engaging with the outer beam to inhibit the inner beam sliding inside the outer beam beyond a predetermined point.

9. The apparatus according to claim 8, wherein the apparatus is arranged for the upward force to cause a sliding action until the at least one stop engages with the outer beam and causes the turbine to move in a path defining an arc as the telescoping beam interacts with the guidance means once the at least one stops have made contact with the outer beam.

10. The apparatus according to any of claims 6 to 9 wherein the apparatus is arranged for the yaw axis rotation to be caused by an interaction between the inner beam and the outer beam as the inner beam slides inside the outer beam.

11. The apparatus according to claim 10, wherein the inner beam has protrusions on its outer surface arranged to engage with corresponding indentations on the inner surface of the outer beam to cause the yaw axis rotation.

12. The apparatus according to claim 11, wherein the protrusions and indentations comprise threaded portions.

13. The apparatus according to any preceding claim, wherein the upward force is provided by a winch and cable.

14. The apparatus according to claim 1, wherein:

the turbine mount is a frame arranged to be slidably mounted on the turbine support; and

a turbine for mounting on the frame; and wherein

the slidable mounting comprises a projection arranged to run in a groove in the body of the turbine support and the groove is configured to cause the turbine and frame to follow an arced path as the projection runs along the groove.

15. The apparatus according to claim 14, further comprising means for providing an upward force, wherein the groove comprises a first portion arranged to cause lifting of the frame and a second portion arranged to cause rotation of the frame to raise the turbine.

16. The apparatus according to any one of claims 14 or 15, wherein the upward force is provided by a winch and cable.

17. The apparatus of any preceding claim, wherein the apparatus is configured to raise the turbine above the expected water line of the turbine support.

18. The apparatus of any preceding claim, wherein the turbine moving in a path defining an arc is a swinging motion.

19. A method of raising a turbine relative to a turbine support, comprising the steps of:

applying an upward force to the turbine; and

swinging the turbine about a pitch or roll axis for a portion of the upward movement of the turbine when the upward force is applied to the turbine; wherein

the application of an upward force is the arced path movement provided by an apparatus according to any one of claims 1 to 18; and wherein

the turbine rotates about a yaw axis for a portion of the upward movement of the turbine when the upward force is applied.