Claims

1. Wind turbine (S), comprising at least one rotor (11) and a floating foundation (13), the floating foundation (13) comprising at a floating hollow body or bodies (15), characterized in that an electrical substation (14), or at least parts of an electrical substation (14), is or are installed in the hollow body or bodies (15, 15a, 15b, 15c) of the floating foundation (13), characterized in that a plurality of separately controllable power switches (19.1, 19.2, …, 19.n, 22) are arranged on an input side of the electrical substation (14).

2. Wind turbine (S) according to claim 1, characterized in that at least parts of the electrical substation (14) are installed in regions (15.1) of the hollow body or bodies (15, 15a, 15b, 15c) that are submerged.

3. Wind turbine (S) according to claim 1 or claim 2, characterized in that the regions (15.1) of the hollow body or bodies (15, 15a, 15b, 15c) that are submerged during operation are designed as a cooling surface, and in that the cooling surfaces are used to cool a transformer (21) and/or a reactive current compensation coil (25).

4. Wind turbine (S) according to either of the preceding claims, characterized in that parts of the hollow body or bodies (15, 15a, 15b, 15c) are designed to encapsulate part of high-voltage electrical assemblies of the electrical substation (14).

5. Wind turbine (S) according to any of the preceding claims, characterized in that the hollow body or bodies

(15, 15a, 15b, 15c) are made of metal and shield electrical components of the electrical substation (14).

6. Wind turbine (S) according to any of the preceding claims, characterized in that the floating foundation (13) comprises one or more hollow bodies (15, 15a, 15b, 15c), in that the transformer (21) and the power switch (19) for strands (3) are arranged in a first hollow body (15.c) and the reactive current compensation coil (25) and a high-voltage switch panel (29) are arranged in a second hollow body (15.b), in that the first hollow body (15,a) and the second hollow body (15.b) are connected to one another by one or more struts (17), and in that cables (27) which electrically connect the transformer (21) and the high-voltage switch panel (29) are laid in at least one of the struts (17).

7. Wind turbine according to any of the preceding claims, characterized in that the hollow body receiving the electrical substation (14) and/or the hollow body (15c, 15b) receiving the reactive current compensation coil (25) have closable openings (23), and in that the closable openings (23) are above water.

8. Wind turbine according to claim 7, characterized in that the closable openings (23) are at least one meter, preferably more than 2 meters, above water.

9. Wind turbine according to any of the preceding claims, characterized in that each of the at least one rotor (11)

is mounted in a nacelle (9), and in that the nacelle (9) is arranged on a tower (7).

10. Wind turbine according to any of the preceding claims, characterized in that an axis of rotation of the at least one rotor (11) extends horizontally or vertically.

11. Wind turbine according to any of the preceding claims, characterized in that the at least one rotor (11) has one wing, two wings or three wings, a Darrieus rotor or a Savonius rotor, or is a wind energy kite.

12. Floating offshore wind farm (1), consisting of a plurality of wind turbines (W, S) which are connected via electrical lines/cables to at least one electrical substation located offshore, characterized in that one of the wind turbines (S) is a wind turbine comprising an integrated electrical substation (14) according to any of the preceding claims, and in that the wind turbines (W, S) are joined to the electrical substation (14) of the wind turbine (S) comprising an integrated electrical substation (14).

13. Floating offshore wind farm (1) according to claim 12, characterized in that the plurality of wind turbines (W, S) interconnected to form a strand (3), and in that each strand (3) is joined to one of the power switches (19, 19.1, ..., 19.n) of the wind turbine (W, S) comprising an integrated switchover mechanism (S).

14. Floating offshore wind farm (1) according to claim 13, characterized in that fewer than five (5) wind turbines (W, S) are interconnected to form a strand (3).

15. Floating offshore wind farm (1) according to any of claims 12 to 14, characterized in that only so many wind turbines are joined to an electrical substation (14) such that all energy can be transmitted to a mainland via one high-voltage export cable (33).