

ABSTRACT

Electricity generation system (100), comprising:

5 at least one electricity generation device (20, 20') being removably fixed to a mounting device (10) formed as a floating body or as a fixed infrastructure by means of a retaining device (14, 14', 15, 15'), wherein the electricity generation device (20, 20') is bidirectionally symmetric and comprises a water turbine being functionally connected to a generator (24),
10 wherein the generator (24) comprises a helical gearbox, wherein the generator (24) is a permanent magnet synchronous motor, wherein the generator (24) comprises an incremental encoder, wherein a rotation of the generator (24) is monitorable by a
15 signal generated from the incremental encoder, wherein electrical energy is conductable via a power line (15, 15') being guided from the generator (24) via an outside of the mounting device (10), wherein the electrical energy is conductable from the mounting device (10) to a power station (50), wherein the
20 nose and tail cones (20a, 20b, 20a', 20b') is coated by at least two layered bio fouling coatings, wherein blades (21a...21n, 21a'...21n') of the turbine are sensitive to a bi-directional water flow (A, B), wherein a power line entry point (27, 27') is arranged at a top of an enclosure (25, 25'),
25 wherein the electricity generation device (20, 20') comprises a control panel (30), wherein the electricity generation system (100) is functionally connectable to the web (40).

[Fig. 1]