CLAIMS

1. A ~~Modular~~ modular kinetic machine (M) for producing electricity from fluid flows, floating, type "open center", with ~~the~~ a swept area fully immersed and perpendicular to the flow direction, consisting of:

- ~~one or more~~ two coaxial turbines counter rotating ~~(Ti, where i=1,2,.....n) mechanically and electrically independent~~, one with external blades (T1) and the other with internal blades (T2), with built in generators,
- a floating/positioning control device (F) consisting of a floater (11), a positioning wing (12) that is located outside the turbines, and a fixture (13) connecting the turbines to the floater (11),

~~**characterized by the fact that**~~**whereby** each turbine is structurally, ~~as well as~~ mechanically and electrically independent, ~~due to the fact that it consists of~~ and consisting of a rotor with blades, a stator and a built in generator.

2. The ~~Modular~~ modular kinetic machine (M), according to ~~the~~ claim 1, **characterized by the fact that** each rotor and the related stator consist of more parts centered on the rotational machine axis itself, involving a low radial runout and out of bound among the rotational parts.

3. The ~~Modular~~ modular kinetic machine (M), according to ~~the~~ any one of claims 1 and 2, **characterized by the fact that** the number of blades ~~(5) and (10)~~ is the maximum ~~suitable~~ compatible with the overall machine dimensions and performances~~,~~ in order to reduce the load for each blade, thus allowing to use materials characterized by a lower structural strength and lowering the whole machine weight and costs.

4. The modular kinetic machine (M), according to any one of claims 1, 2 and 3, **characterized by the fact that,** each turbine is configured so that the rotor circular movement, related to the stator, is allowed by rotating elements of spherical, cylindrical or any other shape, sliding through circular races machined on the rotor close to blades root.

~~4~~5. The ~~Kinetic~~ modular kinetic machine (M), according to ~~the~~ any one of claims 1, 2, 3, and 4, **characterized by the fact that** the center hole of the turbines is ~~suitably~~ designed,

using ~~the~~ a Di/De ratio, for allowing the maximum available energy production, whereby Di is the central hole diameter and De is the external diameter of the turbine.

~~5~~6. The ~~Modular~~ modular kinetic machine (M), according to ~~the~~ any one of claims 1, 2, 3, 4, and 5, **characterized by the fact that** ~~the cited floating/axes control device (F) consists at least of a buoy (11), a positioning wing (12) and a machine buoy link fixture (13); and where~~ the ~~buoy~~ floater (11) is suitably designed ~~(shape and calculations)~~ in order to allow the machine positioning in terms of optimal depth and stable transient mood; and ~~where~~ the cited positioning wing (12) is installed out of the turbine, close to the ~~buoy~~ floater (11) and it is linked to the turbine module by one or more beams or ~~any~~ other frame (13) ~~suitable for this purpose~~, thus allowing the machine to reach the right distance from the shore or to the anchoring point.

~~6. Modular kinetic machine (M), according to the claim 1, **characterized by** only one turbine for low cost purposes, high Power Coefficient, allowable for small loads.~~

~~7. Modular kinetic machine (M), according to all the previous claims, **characterized by** more turbines can be installed on a single fixture, including a number of floating/axes control devices, conveniently designed~~

7. The modular kinetic machine (M) according to any one of the previous claims, **characterized by the fact that** comprises a connection system between the machine and shore.

8. The modular kinetic machine (M) according to any one of the previous claims, **characterized by the fact that** the generator (G1, G2) of each turbine consists of a metal support ring (14, 18).

9. The modular kinetic machine (M) according to any one of the previous claims, **characterized by the fact that**:

- the rotor (R1) of the first turbine (T1) rotates inside the stator (S1) housing the blades (5) over the external perimeter, and
- the rotor (R2) of the other turbine (T2) rotates inside the stator (S2) housing the blades (10) over its internal perimeter.