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Tidal wave energy large scale conversion technology.

Poster - Abstract ID: 315

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Abstract:

The objective of my paper is to describe how can we get maximum amount of working force from tidal wave energy. The paper starts with a short background. Then defining the tidal forces acting on a floating object. Then describe the theory how unnecessary forces can be opposes except the force which is useful and how this useful force can be increase hugely and how we can use the force safely. Using some hand sketch. Finally conclusion states the advantages.

Background:

The unlimited source of ocean tide has the potential to generate unlimited amount of electricity and to provide unlimited water demand. Since 1799, till now energy companies are not able to harness sufficient amount of energy from this constant source of energy. Existing projects are small, critical technology and so are not economic.

Basically tidal energy is a physical movement of water, so compare to solar and wind, harnessing energy from tide should not so difficult.

Introduction:

Tidal force on a floating object has two elements: 1) Horizontal force (HF): create by tidal current/flow and 2) Vertical force (VF): create by tidal wave.

Description:

Tidal horizontal force (HF)(along with others external any kinds of wind forces) on a floating object can be oppose by anchored it properly (by using minimum four long distance anchors) so that the vertical force (VF) remain almost same. This vertical force (VF) is useful. This vertical force (VF) of tidal wave can be very much useful as easily increase this vertical force (VF) by increasing the size of the object. This bidirectional vertical force (VF) is very much suitable for pumping purpose.

Method:

By installing pump protected by RCC structure using vertical upward force of the wave continuously sufficient water pumping possible for hydro power station as shown in my hand sketch.

Conclusion:

This is a very easy technique to harness energy from ocean tidal energy as already running some small projects, Expensive waterproof devices not require. As like existing hydro power stations dam, big reservoir, big catchment area not required so cost effective.

1/Low cost Renewable Power.

2/Very safe.

3/Reject ships can be use as a floating object so that form a ship city.

4/Very simple pumping operation so that pump can be design for any size of wave.

5/Continuous pumping so no need a big reservoir for hydro power station.

6/Economic.

7/Easy technology.

8/Zero emission, Reliable and unlimited.

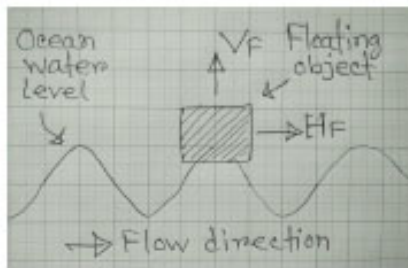


Fig. 1 Tidal force on a floating object

Tidal force on a floating object.jpg



Useful energy that are out of sights.jpg

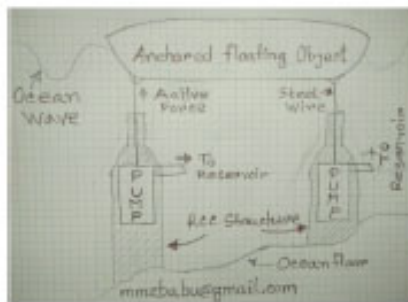


Fig. - Tidal wave vertical upward forces on a floating object used for water pumping.

Wave energy conversion principal.jpg



Some anchored big ships can provide Electricity and Water demand of a big city.

Anchored objects providing demand.jpg