

Out coming of Energy from Oceans and Seas

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Abstract

Getting energy from seas or oceans could be represented by some famous phenomenon like temperature difference, tide and salt density difference. These sources are available in some of the coasts, while, temperature difference are distributed in tropical areas. Although different kinds of such energies have different specifications, but they are common in engineering designation difficulties in ocean conditions.

These systems, usually have high level of initial invest capital and should able to act reliable in bad conditions and long duration.

The activities of these plants may vary the conditions of ecosystem, especially near entrance of the rivers. Sea thermal power plants, can also produce fresh water as a by-product or side-production. So, it will be attractive for the regions far from coasts without any fresh water resources.

Out coming of energy from tide is applicable in places which energy concentrate in a high level and good situation for establishment of power plant is available. Although, such places are not found everywhere, but up now, some have been recognized.

Wave power plants, varies in a wide range. Some are buoyant in sea level and some others installed near coasts. Meanwhile it could be specify that now, wave power plants are not completed and should have a long time to become as a commercialized system.

Out coming from thermal energy conversion (OTEC) from oceans or seas from thermal differences between surface and deep waters (1000 meters) causes to a low efficiency thermodynamic cycle which has been under investigation.

The thermal difference should be at minimum 20 degrees centigrade which is available in tropical regions. Solinity differences and salt density also is known as a good potential

to out come of energy. These sources are called as salt gradient energy.

By using of great differences of salt density between the fresh water which enters to seas and salt water exists, it is possible to get 240 meters head from Osmotic pressure difference, although it is still under theoretical investigations.

As a result, in oceans and seas, there are a great deal of energy exist in the form of tide and temperature differences. Now, the possibility of out coming of the aforementioned energies are proved. The energy resources are infinite and non-pollutant and because not usage of hydrocarbons, they are non-dangerous also.

In this paper it has been tried, because of social benefits, to introduce kinds of sea and Ocean energies and scope of out coming of these energies.