Abstract

OTEC is a method for generating electricity which uses the temperature difference that exist between deep and shallow water with the minimal difference about 20°C. OTEC is very compatible build in Indonesian waters because Indonesia is placed in equator, a lot of island, strain and many difference of topography. A calculation ocean thermal distribution in Indonesia for OTEC is doing with statistics from ocean thermal surface from Hawaii, Puerto Rico and Filipina with depth until 700 m under sea water surface. Validation with data from Mamuju is use for search the best equation to forecast temperature in deep water in Indonesia based data from surface temperature and depth. This equation then use for to calculated three place in Indonesia i.e. Simuelue ocean at NAD, North Bali ocean and Banda ocean with depth until 600m under surface water. From three place that used for research, the best potential place to build OTEC is in Simeulue ocean because it has efficiency 0.818529, the biggest efficiency than the other place.

Keyword : OTEC, Temperature, thermal distribution study