

Ocean Thermal Energy Conversion

Converting ocean thermal energy into useful energy. It is a mean of

OTEC is a technology that converts solar radiation into electric energy. It uses the ocean's temp. gradient to generate the power, based on second law of thermodynamics.

The absorption of solar radiation in the water varies & can be expressed by Lambert's law -

$$-\frac{dI_y}{dy} = \mu I$$

or $I_y = I_0 e^{-\mu y}$

where - I_y = Radiation intensity at depth y from water surface & falls exponentially

I_0 = Radiation Intensity at water surface.
 μ = Extinction or absorption coefficient.

Type of OTEC System -

There are two basic types of OTEC system

- (a) closed cycle system or Anderson cycle system
- (b) open cycle system or Claude cycle system

(a) closed cycle system -

