

Abstract

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Solar Energy and Emissions from Ships

The continuous increase in the level of greenhouse gas emissions and the climb in fuel prices as well as the convention fuel depletion are the main driving forces behind efforts to more effectively utilize various sources of renewable energy. One of the promising energy is the renewable energy technologies - in this case, solar energy, which commonly known as Photo-Voltaic (PV) technology. It is known fact that the efficiency conversion of solar energy to electrical energy using (PV) cells falls as the temperature of the (PV) cells modules rises, modules can commonly operate at temperatures over 50 °C above ambient temperature, resulting in a performance reduction. This is the main reason that makes the usage of the (PV) cells in the sun belt countries is less choice. By dissipating the heat from the (PV) cell modules and lowering the operating temperature, significant gains can be made in system performance this will be achieved through hybrid Photo-Voltaic thermal (PV/T) solar system. Numerical analysis using FLUENT software is applied to simulate, demonstrate and investigate thermal heat energy gained.