**ABSTRACT**

Electrification of all aspects of modern civilization has led to the development of various converters for transferring natural potential energy sources into electric power. Along with fossil fuel power systems and nuclear reactors, which create huge new environmental pollution problems, clean renewable energy sources have attracted scientists and engineers to exploit these resources for the production of electric power, Tidal energy, in particular is one of the best available renewable energy sources, that can be predicted for centuries ahead from the point of view of time and magnitude. Energy can be extracted from tides by creating a reservoir or basin behind a barrage and by passing tidal water through turbines in the barrage to generate electricity. Potential energy of the tide is important for designing conventional tidal power plants using water dams for creating artificial upstream water heads. In contrast, kinetic energy of the tide has to be known in order to design floating or other types of tidal power plants which harness energy from tidal currents induced by tides. Since tidal energies clean and not depleting and of many features make it an important energy source for global power production in the near future.