

Viscosity model for predicting the power output from Ocean Salinity and Temperature Energy Conversion System (OSTEC) Part 2: computer simulation

Abstract

The paper presents the computer simulation of the improved prediction model in Part 1 and compared with the classical density model. The prediction model in Part 1 is improved by incorporating the effect of fluid dynamic viscosity when there are salinity and temperature differences between two fluids, for better prediction of kinetic power output. The viscosity prediction model takes account of the water head losing causing by frictional effect and viscous dissipation which in turns provides an analytical predicted outcome. Computer simulations are presented in this paper to assess the system as the parameters of system are varied using the Viscosity Model.