

DEVELOPMENT OF POWER GENERATION SYSTEM USING TIDAL CURRENT IN ULDOLMOK

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Abstract

The Korean peninsula has a number of coastal sites where the rhythmic rising and lowering of water surface due to tides results in strong tidal current. The kinetic energy of these currents can be efficiently exploited by use of tidal current turbines. The pilot tidal current power plant is to be constructed at the Uldolmok between Chindo and Haenam, during next year, and extensive coastal engineering research works have been carried out. This paper describes some observation results of the field test for the design of a pilot plant of 1,000kW and a future tidal current power plant. Also, this paper describes some modeling approach in order to investigate the tidal current regime change by the operation of the tidal current power plant (TCPP).

Keywords: Tidal current power generation; Uldolmok narrow channel; Tidal characteristics; Turbine; Tidal variation; Energy dissipation

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