

[54] **UNDERSTREAM TURBINE PLANT**

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**Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 663,868, Mar. 4, 1976, abandoned.

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[58] **Field of Search** ..... 415/2, 4, 60, 122 A; 417/334-336; 290/43, 54; 60/398; 277/27

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[57] **ABSTRACT**

An understream turbine plant is provided for generating electrical power by means of the flow of an understream effluent, such as the Gulf Stream off the Atlantic seaboard coast. Each turbine plant has a large central opening within which is mounted a large turbine impeller. An electrical generator is mounted within the watertight housing of the plant adjacent to the central opening. The opening of the plant has a large diametrical forward entrance and a large diametrical rearward exit with a substantially central portion of smaller diametrical extent. The impeller of the turbine plant is mounted in the smallest diametrical extent of the opening. The contour of the opening provides for a Venturi effect increasing the efficiency of plant operation. A plurality of plants may be provided to span at least a portion of the understream flow, as well as being placed in a stacked arrangement to span at least a portion of the height of the understream flow. Special bearing seals for the rotating impeller prevent the ocean water from entering the interior of the turbine housing.

8 Claims, 6 Drawing Figures

