

ABSTRACT

SYSTEM FOR TREATING SHIP BALLAST WATER

Provided are a system and a method for treating ballast water for a ship, the system including a rotary filtration apparatus including a filter that is cylindrically formed so as to surround an axis, that is rotatable around the axis, and that has a pleated shape that is folded in a cylinder radial direction; and an electric motor for rotating the filter. A distance between the cleaning nozzle and a recess of the filter is 120 mm or less. The system and the method are configured to perform a steady-state operation that satisfies the following conditions a to d:

- a) a rotation speed of the filter during a filtering operation is in the range of 20 to 100 rpm,
- b) a flow speed of cleaning water ejected from the cleaning nozzle is 250 m/min or more,
- c) a flow rate of filtered water per unit area of the filter is 5.1 m/h or less, and
- d) a flow rate of discharged water discharged from the discharge channel is 5% of the flow rate of filtered water or more.

Fig. 6