

ABSTRACT

A complex desalination system (100A) includes: a wastewater treatment system (1) for filtering a wastewater having a low salinity concentration lower than that of a seawater (D) by use of a low-pressure reverse osmosis membrane device (16); and a seawater desalination system (3) for filtering the seawater (D) by use of a seawater reverse osmosis membrane device (38). The seawater desalination system (3) includes an intake tank (32) storing the seawater (D) taken in; a pre-treatment filtration device (34) for performing filtration in a stage preliminary to the seawater reverse osmosis membrane device (38); and a turbine pump (33A) for pressuring a water to be treated from the intake tank (32) to supply the water to be treated to the pre-treatment filtration device (34). The turbine pump (33A) is driven under a hydraulic pressure by a non-permeate water which is discharged from the low-pressure reverse osmosis membrane device (16) of the wastewater treatment system (1). The non-permeate water having driven the turbine pump (33A) is supplied to the intake tank (32).