

Abstract

The invention provides a carrier separating screen unit for separating microbe-mounted-carriers 5 contained in a waste water in an aeration tank 1 for biologically purifying organic and inorganic substances. A stream guide member 20 is disposed close to and spaced from a carrier separating screen 7, and an air-bubble supply apparatus 8 is mounted below and close to the carrier separating screen. This arrangement of the carrier separating screen unit positively prevents the screen from clogging. Furthermore, the invention provides an air-bubble supply method/apparatus having an air-bubble supply header and a control means for varying the air supply rate with time, which prevents a carrier separating screen from clogging. Moreover, the invention provides a waste water treatment method and an apparatus thereof which generate a circulation flow in a tank so as to evenly distribute the carriers in the tank for a sufficient performance of the carriers and so as to prevent a blockage of the carrier separating screen.