

ABSTRACT

An electrodeionization apparatus 1 has a cathode 11 and an anode 12, and has alternately formed therebetween concentrating chambers 15 and desalination chambers 16 by alternately arranging a plurality of anion exchange membranes 13 and cation exchange membranes 14, each of the concentrating chambers 15 being provided with a bipolar membrane 20 to partition the interior of the concentrating chamber 15 into a cathode side and an anode side, and each of the desalination chambers 16 being divided into at least two layers including a first layer 16A and a second layer 16B, from an upstream side in a direction of flow of water to be treated, and being filled with an ion exchanger 30 comprising an anion exchanger 30A and a cation exchanger 30B. The ion exchanger 30 filling the first layer 16A contains no less than 50vol% of the cation exchanger 30B, while the ion exchanger 30 filling the second layer 16B contains over 50vol% to 80vol% of the anion exchanger 30A. As a result, the electrodeionization apparatus can be stably operated for a prolonged period of time while preventing formation of scale in the concentrating chambers and desalination chambers.