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USE OF POLYAMIDE MEMBRANES IN REVERSE OSMOSIS TO PURIFY SALT WATER

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ABSTRACT

Salt-water analysis was carried out as a preliminary investigation in designing a drinking water treatment plant. Operating conditions such as pressure and flow rate of the plant were selected according to the daily water requirement.

Polypiperazinamide (PA), an aromatic type polyamide used with polysulfone (PS) in 3:1 ratio (by weight) to prepare a composite type spiral wound membrane to be used in Reverse Osmosis (RO) System in the plant.

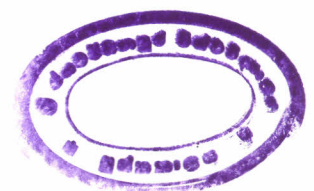
Pretreatment processes reduced Total Suspended Solids and Hardness in water. Electrical Conductivity, Total Dissolved Solids and Chloride ion were removed using the made RO membrane. The percentage of rejection of PA/PS RO membrane was 99.9 %. Therefore this type of polymeric composite membrane could be used as RO membrane to produce good quality drinking water by desalination of salt water.

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