

KINERJA MEMBRAN *REVERSE OSMOSIS* TERHADAP REJEKSI KANDUNGAN GARAM AIR PAYAU SINTETIS

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ABSTRACT

The technology of reverse osmosis (RO) membrane is one of the desalinization methods that are environmentally friendly, with lower energy consumption and it does not need a large area to build which makes this technology suitable to applied and competitive to applicative.

This research studies the alternative of desalinization of brackish water, the performances of reverse osmosis membrane and the influence of operation pressures and concentration to the membrane mechanism. Samples used in this study are synthetic (NaCl with a concentration of 10, 20, 50 and 100 ppm). The operation pressure of the membrane used in this research is between 0,5 and 7 bar. The Filmtec USA model TW30-1817-75 RO membrane is utilized. The measured parameters are fluxes and TDS. It can be conducted, from the results, that operation pressure, the concentration of NaCl and TDS baits influence flux of the reverse osmosis membrane in the desalinization of the synthetic brackish water. The increase operation pressures increase the flux. The increase of NaCl and TDS concentration decreases the flux. The maximum flux of synthetic sample of NaCl was 52,5547 L/ m². jam with the sample of NaCl concentration used 10 ppm, operation pressure was 7 bar.

Keywords: Desalinization, Brackish water, Reverse Osmosis membrane, Flux, TDS.

