

عنوان مقاله:

NEURO FUZZY SYSTEM (ANFIS) MODELING OF DESALINATION BY AIR GAP MEMBRANE DISTILLATION

محل انتشار:

اولین همایش ملی تکنولوژی های نوین در شیمی و پتروشیمی (سال: 1393)

تعداد صفحات اصل مقاله: 8

نویسندگان:

M PIRI - *Chemical Engineering Department, Faculty of Engineering, Razi University, Kermanshah, Iran*

Y Vasseghian - *Chemical Engineering Department, Faculty of Engineering, Razi University, Kermanshah, Iran*

R Seif Mohaddecy - *West Blvd. of Azadi Sports Comple, Catalytic Reaction Engineering Department, Catalysis and Nanotechnology Division, Research Institute of Petroleum Industry, Tehran, Iran*

خلاصه مقاله:

This study deals neuro fuzzy system (ANFIS) model to describe the performance of air gap membrane distillation process for different operating conditions. The air gap thickness, the condensation temperature, the feed inlet temperature, and the feed flow rate of salt aqueous solutions are the input variables of this process, whereas the response is the performance index, which takes into consideration both the permeate flux and the salt rejection factor. The overall agreement between the ANFIS predictions and experimental data was very good showing a correlation coefficient of 0.999. The optimum operating conditions were obtained as 3.1 mm air gap thickness, 15 °C condensation temperature, 70 °C feed inlet temperature and 200 L/h feed flow rate with a maximum experimental performance index of 49.7 kg/m² h.

کلمات کلیدی:

Adaptive Neuro Fuzzy Inference System, Air gap membrane distillation, Desalination

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