

عنوان مقاله:

The effect of different solvents on the performance of PAN membranes for oily wastewater treatment

محل انتشار:

دومین همایش ملی نفت، گاز و پتروشیمی (سال: 1391)

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خلاصه مقاله:

The aim of this research is to study the effect of different solvents on the membrane morphology and the performance of ultrafiltration polymeric membranes via phase inversion method. PAN (polyacrylonitrile) was used as a base polymer. The solvents considered were DMF (dimethyl formamide), DMAc (dimethyl acetamide) and NMP (N-Methyl-2-pyrrolidone). The cross-sectional morphology of the manufactured membranes was investigated using SEM. The performance of the membranes has been studied based on the pure water permeation measurements. The permeation flux of PAN membrane prepared by using DMAc as solvents shows the maximum amount of 472.07 l/m².h comparing the ones prepared using DMF and NMP. The permeation fluxes of the prepared membranes have been compared with Sepro® PAN 3055 UF membrane, too. The membranes can be used in oily wastewater treatment.

کلمات کلیدی:

PAN membranes, Phase inversion, Solvents, Oily Wastewater treatment, Ultrafiltration

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