J Material Sci Eng 2016, 5:7 (Suppl)
http://dx.doi.org/10.4172/2169-0022.C1.047

6th International Conference and Exhibition on
Materials Science and Engineering
September 12-14, 2016 Atlanta, USA

Water desalination using cellulosic nano-filtration membrane based on nano-scale polytetraflouroethylene

M F Shaaban, M A El-Khateeb and **M A Saad**
National Research Centre –Dokki- Giza- Egypt

This study deals with the preparation and characterization of nanofiltration cellulose acetate-based membranes and their application in desalination of waters. Cellulose acetate Nanofiltration (NF) membrane was prepared according to the phase inversion process. Pore size of the prepared membrane was monitored by using dope solutions of different polymer concentrations (weight %) and annealing temperatures from 60-80°C followed by casting the membrane on polytetraflouroethylene sheets and examining the efficiency of the product. Characterization of the prepared membrane will be carried out using scanning electron microscopy (SEM), and the hydraulic permeability, water permeation as well as salt rejection rate.

dr_mohamedfikry1967@yahoo.com

Effect of crystallographic texture on anisotropy of SAE 970X steel under hot rolling and various post-treatments

Mohammad Masoumi and **Hamilton Ferreira Gomes de Abreu**
Universidade Federal do Ceará, Brazil

High strength low alloy (HSLA) steels are widely used in automotive industry such as cars, trucks and cranes. One of the main challenging issues to use the rolled products is the stamping and deep-drawing that employed in automotive industry. The effect of crystallographic texture produced by hot rolling and different post-treatments on tensile and anisotropic properties was studied in current work. The best anisotropic behavior was obtained by solution treated sample that attributed to the formation of a new set of recrystallized and strain-free grains. The formation of {111} and {110}//ND texture components resulted in an excellent combination of strength and mechanical properties in quench-tempered at 700°C sample.

mohammad@alu.ufc.br