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عنوان مقاله:

Experimental Investigation of the Base Fluid Miscibility Condition on the Oil Recovery Using Nanofluids Flooding

محل انتشار:

مجله بین المللی فناوری نانو در آب و محیط زیست, دوره 3, شماره 1 (سال: 1396)

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خلاصه مقاله:

This research illustrates the effect of miscibility condition between nanofluid and oil on the process efficiency and to achieve this aim four types of fluid including distilled water, ethanol, n-hexane, and gas condensate were used to disperse silica nanoparticles. The prepared nanofluids were injected into a glass micromodel and the oil recovery factor and effective mechanisms were investigated. Results showed that in presence of nanoparticles, the oil recovery factor for miscible base fluids injection increases about 30%. But in immiscible base fluids, nanoparticles enhance the oil recovery factor up to 20% more than the base fluids. So nanoparticles are more efficient in miscible base fluids compared to immiscible ones

کلمات کلیدی:

EOR, IFT, Immiscible, Miscible, Micromodel, Nanofluid, Oil Recovery Factor, Viscosity

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