

عنوان مقاله:

An Experimental Investigation of Using C19TAB into an Iranian Oil Filed in a Micromodel System

محل انتشار:

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خلاصه مقاله:

According to recent needs and demand from Iranian Southern oil reservoirs for enhancing oil recovery, this study was aimed to investigate surfactant injection in a glass micromodel as a good porous medium. In this paper, evaluation parameters are considered as wettability fluctuations and reduction of interfacial tension. In the presented process, C19TAB was employed as the active substance of cationic surface. In order to obtain interfacial tension reduction values, Pendant Drop test was used for different surfactant concentrations and contact angle was measured using conventional measurement methods, and finally wettability was derived. Applied experiments on micromodel, were conducted under oil-wetting phase, 10 times diluted water flooding, and chemical solution flooding. Therefore, injection rate for both water and chemical solution flooding was 0.1 cc per hour. Obtained results from interfacial tension tests indicated that by having a small change in injected surfactant concentration, interfacial tension has a great decrease. Moreover, it can be concluded that wettability alteration of micromodel medium from oil-wet to water-wet phase has been achieved successfully using C19TAB.

کلمات کلیدی:

Micromodel, Surfactant, Interfacial Tension, Wettability

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