عنوان مقاله:

Phase behavior and volume changes of oil/water/surfactant system

محل انتشار:

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خلاصه مقاله:

Oil fields are reaching maturity. Due to the oil remaining in the reservoirs, we are needed the enhanced oil recovery methods for oil-producing. EOR and IOR have been studied for improving oil production in the reservoir. One of the chemical EOR methods that increase the oil trapped from the reservoir and the amount of oil harvested by reducing the interfacial tension is flooding by surfactants. Injection of surfactant into oil fields reduces the IFT and the brine interface; oil, therefore, modifies the reservoir rock, creating a liquid-liquid balance system. Among the essential factors in the success of this method will be the phase behavior of the oil, water, and surfactant system. Finding the best design of a system that can be used to determine the phase behavior of oil, surfactant, water systems, and volume changes of the binary-phase system can be helpful. Phase behavior investigation of the microemulsion is a vital tool. Brine salinity and the interfacial tension (IFT) affect microemulsions, and microemulsion phase transition occurs. Ultra-low IFT of type II Winsor at optimum salinity cause extremely high oil recovery in EOR. In this research, the effect of oil type, salinity, temperature, and concentration of surfactant on the phase behavior of the n-decane/tween ۸۰/ water system with altering of temperature, ۰.۵ and ۰.۲ g/۱۰۰g solution of salt, volume changes of the .two-phase system have been investigated

کلمات کلیدی:

Nonionic Surfactant, EOR, Microemulsion. Tween, Decane