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Retracted article:Developing reagents to reduce the flow resistance in the liquid stream

Kemalov A., Kemalov R., Abdrafikova I., Valiev D.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© Copyright 2016.It was established that the best efficiency for reduction of the hydraulic friction in condition of the closed circulating loop has reagent compositions D 157 (diproksamine) + CMC (carboxymethylcellulose), and MEA (monoethanolamine) + CMC. With increasing of water content up to 35 % the highest efficiency of the compositions of the reactants is observed due to the increase of the effect of Toms, according to the theory, the action of a composition can be managed in a needed way by choosing the right water-soluble and oil-soluble portions of reagents, affecting water and the hydrocarbon parts in the emulsion so that to achieve a certain Toms effect. With increasing of water content in oil emulsion up to 70 % and above, the addition of the reagent becomes ineffective. By experimental results we can expect a high economic effect in the practical use of the reagents, since the effectiveness of some of the reactants compared to the pumping oil emulsion without reactants reaches 35 %.

Keywords

Composition, Emulsion, Oil-soluble reagent, Physicochemical properties, Structuring of the fluid, Toms effect, Water-soluble reagent