

ABSTRACT

Many advances have been made in the field of emulsion in recent years. Emulsion Behaviour is largely controlled by the properties of the absorbed layers that stabilized the oil-water surfaces. The effect of chemical demulsification of water-in crude oil emulsion were assessed experimentally. The relative rates of water separation were characterized via graduated beakers. Four groups of demulsifier with different functional groups were used in this work namely, amines, polyhydric alcohol, sulphonate and polymer. The effect of alcohol addition on demulsification performance was also studied. The result obtained in this study have exposed the capability of chemical demulsifiers in destabilization of water- in crude oil emulsion. Further works are nevertheless required to provide deeper understanding of the mechanism involved to facilitate the development of an optimum system applicable to the industry.

Keywords: Demulsification, crude oil emulsion, alcohol, interfacial tension.