

Criterion of phase stability of asphaltenes in crude oils

Barskaya E., Yusupova T., Saraev D.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Associate formation processes in crude oils are investigated by viscometry and dielectric spectroscopy. It is shown that fluidity decline in the 36-40 C range is typical for crude oils with a high resin and asphaltene content ratio. The critical polar resin concentration in stable asphaltene nanoaggregates is determined. © 2013 Springer Science+Business Media New York.

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Keywords

asphaltenes, crude oil disperse systems, crude oil stability, dielectric spectroscopy, phase transitions, viscometry