

Modern conceptualization of oil disperse systems composition and structure

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Abstract

© Research India Publications. In practice of naphtha transportation and processing, as well as oil products with specific properties recovery theoretical ideas of oil disperse systems (ODS) are widely used. Importance of naphtha colloid chemical properties accounting in the course of production is being emphasized constantly, however the experimental data allowing to estimate influence of its separate textural features composition and structure on ODS mobility – the composite base units (CBU) and dispersion medium (DM), are absent. On the basis of oil disperse systems (ODS) theoretical ideas the composition of ODS and structure of their separate textural features are characterized quantitatively [1, 2, 3]. Data of component structure and pulse method of spectroscopy nuclear magnetic resonances (NMR) received for the movable oils of Devonian deposits and less movable oils of carboniferous deposits are used [4, 5, 6, 7]. As a part of ODS movable and less movable oils there are associative combinations, the share of which can exceed the share of dispersion medium. Low molecular mobility of the ODS does not depend on associative and dispersion medium contribution ratio. It is bound to low dispersion of system as it is possible to judge on a high share of solvent molecules sheath being part of associative combinations. The increase in solvent molecules sheath is due to immobilization of dispersion medium oil components owing to 50% affinity of their structure with the structure of benzene pitches of solvent molecules external sheath.

Keywords

Group chemical composition, Nuclear – magnetic resonance, Oil disperse systems