

Scientific and practical aspects of development of ultrafine dispersions of modified petroleum oils

Kemalov A., Kemalov R., Valiev D.

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

Abstract

The possibility of dispersing depressing additives in diesel oil using a static radiator for production of ultrafine emulsions having disperse-phase particles sized between 2.5 and 4 μm is shown. Depressing additives such as olefinic hydrocarbon-based linear high-molecular compounds, which possess exceptional physico-chemical resistance to oxidation, thermoelasticity, and high mechanical properties, but do not exhibit a coagulating effect, are produced by nanophase catalysis technology. Compound (mixed) solvents are used as additive diluents. Laboratory tests of the additives in hydrofined diesel, furnace, and marine oils, and various crude-oil fractions showed a high depressing effect. © 2013 Springer Science+Business Media New York.

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Keywords

compound depressing additives, marine oil, dispersity, furnace oil, low-temperature properties, pour point, ultrasonic action