

## IN SIGHT

*Mayboroda S.*

### **The environmental challenge lubricants business in the Russian Federation: the risks and opportunities**

*Keywords:* waste oils, manufacturers (importers), strategy, risks and opportunities, standard recycling, environmental contribution.

Examined trends in the regulations governing the treatment of used oils. Identified risks and the ability of producers (importers) of lubricants innovation in meeting the requirements of normative legal acts. Describes the relationship between the main participants handling of lubricants, petroleum fuels and used oils. Presented problem fields treatment of used oils in the Russian. Founded and developed a strategy for the manufacturer of lubricants provides a return on investment in complying with regulations.

## **PETROLEUM PRODUCTS: TECHNOLOGY, INNOVATION, MARKET**

*Panov A.V., Generalov V.N., Vinogradova N.Ya., Gulyaeva L.A., Khavkin V.A., Shmelkova O.I.*

### **Development of hydrotreating units reconstruction options of JSC «Gazpromneft-Omsk Refinery»**

*Keywords:* diesel fuel, hydrotreating, catalytic hydrodewaxing, catalytic hydroisodewaxing, reconstruction, investments.

Results of works on expediency assessment of carrying out reconstruction and selection of realization option in relation to hydrotreating units of JSC Gazpromneft-Omsk Refinery are presented.

*Mitusova T.N., Kapitonov I.V., Titarenko M.A.*

### **Stability of diesel EURO and methods of its improvement**

*Keywords:* diesel fuels, stability, antioxidants, diesel fuel stabilizers.

This article describes reasons of low chemical stability of diesel fuels EURO and ways of its improvement by using diesel fuel stabilizers.

*Ibragimova M.D., Azizov A.G., Mamedova P.Sh., Ibragimova T.A., Yusifzade F.Yu., Dadasheva S.D.*

### **Cu-containing composites on the basis of styrene copolymers with butoksymethyl methacrylate with adjustable structure: antimicrobial additives to synthetic oils**

*Keywords:* additive, antimicrobial action, bactericide, fungicide, block copolymer, controlled radical polymerisation.

Results are described of a research of Cu-containing composites on the basis of copolymers of styrene and butoksymethyl methacrylate synthesised by a method of controlled radical polymerisation. It is shown that these compounds at a concentration of 0,25 mass percent suppress the micro-organisms growth. They surpass in efficiency a known antimicrobial additive 8-oksyquinoline and may thus be recommended as effective antimicrobial additives to synthetic oils.

*Nasirov F.A., Farzaliyev R.F., Tagiyeva A.M., Rafiyeva S.R., Javadova A.A., Ahmedov A.I.*

### **Viscosity additives to lubricant oils based on polyalkylacrylates with narrow molecular-weight distribution**

By method controlled radical polymerization in the presence of new chain transmission agents based on thiocompounds have been synthesized polyalkylakrylates with narrow molecular-weight distribution and have been investigated as viscosity additives for mineral oils.

## **EQUIPMENT AND DEVICES**

*Makaryan I.A., Savchenko V.I.*

### **Reactor constructions to perform Fischer-Tropsch synthesis in large-scale production of synthetic liquid fuels**

*Keywords:* Fischer-Tropsch synthesis, synthetic liquid fuel, reactor, construction, design, engineering, multitubular reactor, ARGE reactor, slurry-reactor, Shell, Pearl GTL, Sasol, Oryx GTL.

A comparative estimate of advantages and shortcomings of the major types of Fischer-Tropsch reactors has been done. The design features of Fischer-Tropsch reactors used in large-scale production of synthetic liquid fuels, and also the factors affecting the choice of reactor type are reviewed.

## CHEMMOTOLOGY

*Chudinovskikh A.L., Lashkhi V.L.*

### **Features of motor oils himmotologiya theory formation**

All new applied sciences develop at the first stages ignoring or whenever possible distancing themselves from a theoretical component as the most difficult sphere of activity demanding special training of those who are engaged into it, or assumes to be engaged. Any theoretical or similar examinations are always being postponed for the last moment. They are diligently bypassed, leaving them at best as a gift to next generations and trying to overcome difficulties mainly by the engineering way. Sometimes theoretical study is substituted by some general discussions. At the same time, such situation cannot proceed infinitely long, because in this case a new science will come to an end practically without having begun, i.e. possibility of further existence of such activity as a science becomes extremely problematic, and it accurately transforms into an usual handcraft. In this sense himmotologiya in general and himmotologiya of motor oils in particular is no exception to a general rule.

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