

Alatortsev E.I., Leont'eva S.A., Botin A.A., Podlesnova E.V.

Development of quality control system of oil and oil products

Keywords: quality control, oil, methods, gas chromatography.

Abstract. Problems of organization of control system of impurity which effect negatively on process of oil refining and oil products quality are considered. Most influential impurities are identified. Methods of control of technogenic impurities based on gas chromatography opportunities are proposed. Examples of realization of these methods are shown.

All-Russian Research Institute for Oil Refining [VNII NP], Moscow

Khuramshin R.T., Nelyubina E.S., Makarova I.K., Nelyubin A.V.

Industrial experience of operation of oil desalting plants and prospects of scientific researches in the field of oil treatment for processing

Keywords: electro-desalination, water-oil emulsion, demulsifier, chemical-technological corrosion protection, electric dehydrator.

Abstract. The industrial experience of operation of oil desalting plants of Rosneft refineries is presented. The analysis of the reasons for inefficient oil desalting is performed. Amount the reasons are the increase of the volume of processing of overweight oils, the exploitation of physically worn-out equipment, the lack of a system approach to the choice of demulsifiers and the use of inefficient mixing devices to create water-oil emulsions. The results investigations of emulsions are given. The main directions of research and development work in the field of oil desalting are formulated.

All-Russian Research Institute for Oil Refining [VNII NP], Moscow

Khavkin V.A.

Hydrogenation processes in oil refining with obtaining diesel fuel of a modern level of quality

Keywords: metal complex catalysis, hydrogenation processes, V.N. Ipatiev award, catalytic dewaxing of diesel distillates, hydrogenation under high pressure, "soft" hydrocracking, yield and quality of diesel fuel.

Abstract. VNII NP JSC offers a series of hydrogenation processes, which allows deepening the processing of oil and obtaining diesel fuel of a modern level of quality. The work was awarded the Prize in the name of Academician V.N. Ipat'ev.

The basis of advanced technologies is the achievements in the field of catalysis and the use of new catalysts. The proposed processes are implemented at industrial facilities in Russia.

The further development of the created technologies will allow raising the refining of Russia to a new qualitative level.

All-Russian Research Institute for Oil Refining [VNII NP], Moscow

Aliev R.R., Urusova E.A., Khavkin V.A.

Results of operation of hydrotreating catalysts of series AGKD-400

Keywords: hydrotreatment, catalyst, diesel fuel secondary gas oil modifiers.

Abstract. The main characteristics of hydrotreating catalysts AGKD-400 are given. The results of their operation in industrial plants are generalized. The possibility of obtaining environmentally friendly diesel fuels is shown. The results of the test of the new catalyst AGKD-500 are presented.

All-Russian Research Institute for Oil Refining [VNII NP], Moscow

Alekseenko L.N., Guseva A.I., Barsukov O.V., Boldushevskiy R.E., Nikul'shin P.A., Mozhaev A.V., Alyab'ev A.S., Spaschenko A. Yu., Davydov K.A., Roschin V.I., Reutov A.N.

Research of dialkyl disulfides mixture (DADS) as a sulfiding agent for industrial hydrotreating catalyst

Keywords: hydrotreatment, sulfiding, dimethyl disulfide, dialkyl disulfides, sulfiding agent, spent catalyst, sulfur content, coke content, catalyst texture, surface characteristics, active phase morphology, sulfiding method.

Abstract. Industrial hydrotreatment catalysts were sulfided with dimethyl disulfide (DMDS) and dialkyl disulfides mixture (DADS). A comparative test of these catalysts in the hydrotreatment of straight-run diesel was carried out. Samples of spent catalysts were dumped out from the reactor and investigated with physic and chemical analytical methods (elemental CHNS-analysis, simultaneous

thermal analysis (STA), low-temperature nitrogen adsorption, X-ray photoelectron spectroscopy (XPS), high-resolution transmission electron microscopy (HR-TEM). It was found that choice of sulfiding agent does not determine hydrotreatment effectiveness. Physical and chemical characteristics of both spent catalysts were almost equal. The use of DADS mixture as sulfiding agent for hydrotreating catalysts was approved.

*All-Russian Research Institute for Oil Refining [VNII NP], Moscow;
Samara State Technical University;
STC Salavatnefteorgsintez Ltd Co;
Gazprom Gazenergoset Ltd Co.*

Mitusova T.N., Lobashova M.M., Kalinina M.V., Erchov M.A.

Diesel , marin fuel and additives

Keywords: diesel fuel, additives, marine fuels.

Abstract. The basic standards for diesel fuel production are considered. Information for additives to diesel fuels EURO. It is noted that a feature of the Russian market is a wide range of additives used. The requirements of MARPOL to marine fuels and ways to reduce the sulphur content are considered.

All-Russian Research Institute for Oil Refining [VNII NP], Moscow

Zolotov V.A.

Global requirements for operational properties of modern motor oils

Keywords: Operational properties, classification, specification, engine oil additives, environment, fuel efficiency.

Abstract. This article contains information about the current requirements of global manufacturers to the level of operational properties, ecological safety and fuel efficiency in the application of modern motor oils

All-Russian Research Institute for Oil Refining [VNII NP], Moscow

Danilov A.M., Ovchinnikov K.A., Bartko R.V.

The main trends in the field of additives for fuels and oils

Keywords: additives for fuels, additives to oils, oils Low SAPS.

Abstract. The main tendencies of development and application of additives to the fuels and oils trends are considered. We can assume that the main technical solutions in the field of additives for petroleum fuels was found. Interest moves out of the way of additives to fuels of biological origin. The appearance of engines of new designs stimulates research in the field of itinerant additives. In the field of oil additives continue to develop packages for oils Low SAPS. Noted that it is important not only as additives, but the quality is the basis of the basics.

All-Russian Research Institute for Oil Refining [VNII NP], Moscow

Danilov A.M., Salakhov I.I., Safiullin A.M., Abbasov M.M., Bezgina A.M., Kosmina I.B.

Development and implementation of anti-wear additives on the basis of fatty acids from alternative plant materials

Keywords: low Sulfur diesel fuel, anti-wear additive, vegetable fatty acids.

Abstract. Domestic raw material base for the production of anti-wear additives for low-sulfur diesel fuel is analyzed. It is shown that in addition to the fatty acids of tall oil based antiwear additives can be acids, allocated from the products of processing of sunflower oil and other oil crops. Developed additive on the basis of such oils, organized its production.

*All-Russian Research Institute for Oil Refining [VNII NP], Moscow;
Joint Stock Company «TANECO»;
Gamma-additive LLC*

Bulatnikov V.V.

Prospects for the development of standardization in Russian oil refining

Keywords: technical regulation; technical directive; standard; counterfeit.

Abstract. The article outlines the forecast for the development of standardization work in oil refining for the near future. A review of international and foreign standardization systems affecting the work on technical regulation in Russia is presented.

All-Russian Research Institute for Oil Refining [VNII NP], Moscow