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New BASF fuel performance packages for deposit control in modern diesel engines

Keywords: Diesel fuels, deposits in direct injection engine, diesel deposit control additives.

Abstract. The features of the deposit formation in modern «Common-rail» diesel engines were described. The most effective way to prevent diesel engine deposits is the use of fuel performance packages. It is shown that modern BASF fuel performance packages maintain perfect purity of all types of diesel engines, including the most modern «Common-Rail» engines, as well as provide cleaning of fuel injectors from formation of all kinds of deposits (external and internal). "Keep clean" effect of the fuel system by using of diesel fuel with fuel performance packages Keropur DP provides an increase and the full recovery of engine power.

BASF SE

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

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Pretreatment of heavy petroleum feedstock for further catalytic refining

Keywords: heavy oil feedstock, deasphalting, solvent refining, adsorption-catalytic refining, hydro-demetalization.

Abstract. For the purpose of preparation of heavy oil feedstock for further catalytic refining the following technologies are used: deasphalting with the use of solvents, solvent refining, adsorption-catalytic refining, hydro-demetalization and desulfurization. The article presents the material balances, quality of feedstock and obtained products for the above mentioned processes.

The article mentions the necessity of pretreatment of heavy vacuum gas oils and petroleum residues for the processes of catalytic cracking and hydrocracking.

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Alkylating of distillate of turbine oil by liquid gases of catalytic cracking

Keywords: alkylating, distillate of turbine oil, liquid gases of the catalytic cracking, alkylate, viscosity-temperature properties, index viscosity.

Abstract. Results over of improvement of viscosity-temperature properties of distillate of turbine oil are brought in the process of his alkylating by liquid gases of the catalytic cracking. Realization of process on the catalyst of Цеокар-600 at the temperature of 50°C, pressure 0,6 МПа and correlation of oil:gases 1 : 1 results in the increase of index of viscosity of distillate of turbine oil from 32 to 80-81.

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Regioselective alkoxyhalogenation of inden by unsaturated C₃-alcohols

Keywords: inden, unsaturated, alcohols, alkoxyhalogenation, bromosycsimimide, clinoptilolite.

Abstract. Reaction alkoxyhalogenation of indene have been conducted. With this aim as an initial compounds unsaturated alcohols have been used. For receiving of β-bromoesters reaction have been conducted by use of bromosycsinimide. Iodine containing analogs have been synthesized by use of cristalline iodine and seolite catalyst clinoptilolite. Existence in composition of compounds potentially active reaction centers give a possibility use of it,s as an addition to oil and fuels .Composition and structure of synthesized substances have been determined by element analysis IR and NMR spectroscopy.

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ECOLOGY and INDUSTRIAL SAFETY

Dyachkova S.G., Ribkin A.Y.

Organic pollutants in air of a working zone tank farms of the republic Sakha (Yakutiya)

Keywords: organic pollutants, the air a working zone, tank farm.

Abstract. Carried out monitoring organic pollutants in air of a working zone tank farms of the republic Sakha (Yakutiya). The objects of study were «Ust-kuyginskaya tank farm» (village Ust-Kuyga, Ust-Yana

region) and «Belogorsk tank farm» (White Mountain village Abyisky district). These tank farm are located in the Siberian region of the subarctic zone and are similar in amount and nomenclature and handling of oil products. Have been carried optimization of the sampling method (filter, sorbent) and sample preparation (extraction, thermal desorption), which revealed a wide range of pollutants working zone air of tank farms. GLC and GC-mass spectrometry is determined qualitative and quantitative composition of organic pollutants relating to aromatic, aliphatic and polyaromatic hydrocarbons. It was found that the content of organic pollutants does not exceed 0.05 Maximum permissible concentration (MPC), the ecological state of the air basin in the area of tank farms of the Republic Sakha (Yakutiya) is good.
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Creation of analytical system for studying oil pollution in natural environments

Keywords: The soil, oil, oil pollution, high performance liquid chromatography, fluorescent spectroscopy, polycyclic aromatic hydrocarbons.

Abstract. A set of analytical methods for the determination of oil pollution of the natural environment, providing information on the composition of PAHs in oil, as the source and extracted from the soil, an extremely efficient method of liquid chromatography and molecular luminescence in combination with column chromatography. This analytical complex provides an opportunity to obtain a vast array of experimental data on the nature and composition of the oil and oil muddied, which in turn greatly increases the quality and veracity of expert data, due to the possibility of a clear ranked sample or samples to a specific type. As demonstrated in the results allow it to say that the identification criterion of oil pollution could be the ratio of individual aromatic compounds (PAHs), and not quantitative content of each.

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HISTORY PAGES

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The formation of fuel industry of the region: the unknown facts of the history of the Republic of Tatarstan

Abstract. The modern economy of the Republic of Tatarstan represents a model of successful, innovative, and most importantly the perspective of the region. The Republic is among the leaders on several important indicators of economic development and it is significantly ahead of many of the subjects of the Russian Federation in qualitative social indicators. The reason for such a powerful development lies in several factors, among which, of course, it has a well-developed industry, rich resources, skilled labor population, competent investment policy, targeted actions of the Republican leadership and many others. At the same time it is possible to identify a number of historical factors that contributed to the powerful rise of the Republic. Among them it should be noted the powerful development of the fuel industry.

The author comes to the conclusion that a key factor contributing to the strong growth of national economy was the rapid development of the fuel industry. The purpose of this paper is to study the development of the fuel (mainly peat) industry of the Republic of Tatarstan in the first half of the twentieth century. The domestic demand of fuels in the years after the revolution demanded the search for cheap energy source that was found in deposits of peat. Almost the entire first half of the twentieth century that type of fuel was the only one available for the needs of the Republic. In accordance with economic growth, and, as a consequence, the growth of peat extraction the management of the energy industry was changed (management, police stations and other forms of management were created).

All this is well seen in the national industry. In general, the relevance of the present work is complemented by the fact that the regional economy and the ensuing problems of development of control system of its industries are generally neglected in theoretical studies. In this regard, the peculiarities of the fuel industry forming of the Republic of Tatarstan are under review in this article in its historical sequence, the information about changes in the system of machine management industry is given in accordance with the reforms of the first half of the twentieth century.

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MATERIALS of the PETROCHEMICAL and REFINERS ASSOCIATION

Extracts of the protocol #126, 127 of ANN board meeting of 12.11.2015 and 23.12.2015 / Subject – on experience of the Gazpromneft-Omsk Refinery JSC, Gazpromneft-Moscow Refinery JSC and Slavneft-YaNOS JSC in modern competitive projects of oil and petrochemical refineries