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PETROLEUM PRODUCTS: technology, innovation, market

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Modernization of coil visbreaking unit

Keywords: coil visbreaking, tube reactor, coke scale, cleaning.

Abstract. It is suggested to upgrade the coil visbreaking unit for oil residue refining with system of continuous mechanical cleaning of radiation coil and tube reactor (soaking section) from coke scale. The suggested technology allows increasing time between overhauls of the unit.

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Refinement of crude oil from hydrogen-sulfide on production fields

Keywords: crude oil, hydrogen sulfide, neutralizer for hydrogen-sulfide, hydrogen-sulfide corrosion, corrosion inhibitor.

Abstract. Results of experimental-industrial runs show worthwhileness of injection neutralizer for hydrogen-sulfide «Calan» in crude oil. Processed oil suit for GOST requirements of hydrogen-sulfide content. Scourage can be considered as water passed inhibition from sulfate-reducing bacterium, since reagent and hydrogen sulfide reaction products have bactericidal properties. That leads to decreasing concentration of hydrogen sulfide in produced oil and, as a result, - reducing of reagent-neutralizer consumption.

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Dolmatov L.V., Akhmetov A.F., Dolmatov A.V., Fazylova A.V.

Oil antiseptic HCL treatment railway sleepers - a valid replacement for coal and shale impregnating oils

Keywords: antiseptic HCL, heavy gas oil, light gas oil, depressant, viscosity, pour point, flash point, sleeper impregnation plant (SIP).

Abstract. The results of studies on the development of self-antiseptic for impregnating railway sleepers and switch ties in order to protect them from biodegradation. Antiseptic HCL (heading conserving liquid), according RRIRT (All-Russian Research Institute of Railway Transport, Moscow) is a «self-preservative» and can replace toxic coal tar and shale oil impregnation on the sleeper impregnation plants and thereby significantly improve the environmental and sanitary hygienic picture on SIP and adjacent territories.

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ANALYTIC METHODS FOR OIL and PETROLEUM PRODUCTS

Koval'skiy B.I., Balyasnikov V.A., Afanasov V.I., Batov N.S., Ermilov E.A.

The method of control of temperature limits of efficiency of processes of mineral engine oils

Keywords: optical density, volatility, an indicator of thermal oxidative stability, the temperature of the onset of oxidation and evaporation, critical and maximum allowable working temperatures abilities.

Abstract. The results of the study of thermal oxidative stability, of mineral oils, including determination of the optical properties, volatility index and thermal-oxidative resistance are presented. Temperature of beginning of oxidation processes, volatility and change exponent is thermo-oxidative stability, as well as the critical temperature of these processes are determined. Based on these data are suggested to classify oil.

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Stability of hydraulic fluids – parameter evaluation of their application

Keywords: stability of hydraulic fluids, corrosiveness tests of hydraulic fluids, methods ASTM.

Abstract. The paper reviews of test methods for estimation stability hydraulic fluids. Test methods use now for testing oxidation stability, thermal stability, stability at low temperatures, hydrolytic stability, corrosiveness are described. Incipient thermal deterioration temperature of hydraulic fluids different type is presented. Methods for determination indication of liquid stability are listed.

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CHEMMOTOLOGOS

Lashkhi V.L., Chudinovskikh A.L.

Some terminological features in motor oils field

MATHEMATICAL SIMULATION

Frantsina E.V., Belinskaya N.S., Afanas'eva D.A., Ivanchina E.D., Ivashkina E.N.

Prediction of increase the resourse base of the catalytic dewaxing by method of mathematical modeling

Keywords: catalytic dewaxing, diesel fraction, mathematical model, middle fraction, low-temperature properties.

Abstract. The choice of a middle fraction of hydrocarbons (C_{14}-C_{20}) to engage in the resourse base in the production of diesel fuels of winter and Arctic marks in the catalytic dewaxing process was based on. A method involving this fraction using flowcharts of catalytic dewaxing process proposed. The effect of the additional involvement of a middle fraction of hydrocarbons (C_{14}-C_{20}) with the installation of isolation paraffins Parex in the feedstock to the dewaxing yield and quality of the diesel fuel is investigated. It is shown that the involvement of additional hydrocarbons (C_{14}-C_{20}) the installation Parex of the raw materials dewaxing allows you to expand the raw material base installation dewaxing to increase the yield of diesel fuels of different marks. model verified the adequacy of the experimental data from the installation. deviations from the experimental design values were within 5%. A mathematical model has shown that the raw material base of the catalytic dewaxing process for the production of diesel fuels of winter and Arctic marks can expand and thus increase the production of diesel fraction at 60-77 m^3/h of fuel for the winter and 52-68 m^3/h – for the Arctic given the quality of the fuel. The optimum temperature was operating mode of the catalyst with the composition and consumption of raw materials for the installation. It is necessary to maintain the temperature of 355-357°C for the production of winter fuels and for the production of Arctic fuels – 363-365°C. Thus, further increase in the entrained flow fraction from 70 to 90 m^3/h will result in a temperature rise in the reactor at 2°C, and the output of the diesel fraction to increase by 8%.

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PORTRAITS

Anniversary congratulation to branch expert V. Efimov

MATERIALS of the PETROCHEMICAL and REFINERS ASSOCIATION

Extracts of the protocol #133 of ANN board meeting of 10.11.2016 / Subject – Russian oil refining main results for 2016