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sticking together of particles (flocculation) in an oil, relatively friable aggregates are formed, their dispersion may be regarded as a process of peptization. Whenever the oily suspension reaches the hottest parts of the engine, and if the additive is not sufficiently surface-active, a desorption of the additive occurs; the disperse phase is then not adequately protected, and the insoluble particles unite into relatively large aggregates (flocculation) and precipitate onto the metallic surface. Hence, the so-called detergent action of additives can be regarded as a dispersive (or peptizing) action and, hence, detergent additives should really be termed "dispergators" or "peptizing agents." "The authors express their gratitude to P. A. Tesner for the preparation of the soot specimens and the electron-microscope photographs." Orig. art. has 7 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petrochemical Synthesis, AS, USSR).

SUBMITTED: 00 DATE ACQ: 23Jan63 ENCL: 00

SUB CODE: FL, CH, EL NO REF SOV: 020 OTHER: 011

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KUSAKOV, M.M.; SHISHKINA, M.V.; PROKOF'YEVA, Ye.A.; KISLINSKIY, A.N.; SANIN, P.I.; TERENT'YEVA, Ye.M.; STEPANTSEVA, T.G.

Investigation of the oscillation spectra of hydrocarbons of the 1,1-diphenylethane series. Neftekhimia 1 no.3:317-328 My-Je '61. (MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.

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VINOGRADOV, G.V.; LYAN GO-LIN' [Liang Kuo-lin]; PODOL'SKIY, Yu.Ya.; SANIN, P.I.; SHEPELEVA, Ye.S.

Peculiarities of the joint action of air (molecular oxygen) and thio-, phosphorus- and chloroorganic compounds as additives to mineral oils of different viscosities. Neftekhimia 1 no.3:433-443 My-Je '61. (MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.

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MUSAYEV, I.A.; GU TSI-VEY; TOPCHIYEV, A.V.; SANIN, P.I.

Separation of C_8- C_{14} aromatic hydrocarbons by the gas-liquid chromatography. Neftekhimiia 1 no.4:459-472 Jl-Ag '61. (MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.

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B103/B220

11,9700

AUTHORS: Sanin, P. I., Sher, V. V., Chernyavskaya, L. E., and Melent'yeva, N. V.

TITLE: Antioxidants of the type of dialkyl dithio phosphates of metals

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 2, 1961, 393-395

TEXT: In continuation of their previous papers (P. I. Sanin, V. V. Sher, Ref. 1: DAN 107, no. 4, 551 (1956) and P. I. Sanin, V. V. Sher, Ref. 2: Khim. i tekhnol. topliv i masel, no. 3, 38 (1956)) the authors publish the results of their studies regarding dialkyl dithio phosphates (DP) of metals as antioxidants of hydrocarbons in lubricating oils. The anti-oxidizing activity of DP of metals of different structures was studied and the influence of certain factors on the oxidation process in the presence of these additions was shown. Table 1 shows the structure of the synthetic additions. The additions DP-1, DP-2, and DP-12 are barium dialkyl dithio phosphates while the others are zinc dialkyl dithio phosphates. High-molecular alcohols produced by direct oxidation of the paraffin of fraction

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330-390°C were used to obtain DP-1 and DP-5. Alcohols produced by oxidation of the paraffin fraction 270-330°C were used to obtain DP-2. The molecular weight of the alcohols corresponded to C_{20} - C_{24} and C_{16} - C_{20}. DP-8 was obtained based on secondary octyl alcohol, n-octanol-2, the additions DP-9 and DP-12 based on the primary octyl alcohol, 2-ethyl hexanol. DP-10 as well as DP-11 were produced from two alcohols and contained, thus, radicals of different structure. Mainly, paraffin-naphthene hydrocarbons were oxidized which had been isolated from the oil distilled of sulfur-containing naphtha by adsorption chromatography. The oxidation of the hydrocarbons was determined based on the absorption of oxygen in the closed system. All DP of metals slacken more or less the oxidation rate of the hydrocarbons, thus, they can be termed typical antioxidants. The activity of the antioxidants varies, however, dependent on the structure of the hydrocarbon radicals and the nature of the metals. Barium DP containing secondary hydrocarbon radicals proved to be the most active ones. Fig. 1 shows results of the oxidation of paraffin-naphthene hydrocarbons at different temperatures in the presence of DP-1 (high-molecular barium DP). The DP antioxidants show their highest activity at temperatures up to 150°C.

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Antioxidants of the type of dialkyl ...

On transition to higher temperatures the activity of the antioxidants is reduced, probably due to thermal decomposition. The optimum concentrations of various additions amounted to 0.75-2.5% at the conditions mentioned. The oil where-from unstable paraffin-naphthene hydrocarbons were isolated, contained also monocyclic and bicyclic aromatic hydrocarbons and sulfur compounds. Certain aromatic hydrocarbons are natural antioxidants for the unstable oil hydrocarbons. Therefore, the oil itself is highly stable. The natural inhibitors contained in the oil paralyze the action of synthetic DP antioxidants. In these circumstances, the effect of the latter on the oxidation process of the oil itself is negligible. It should be borne in mind that metals and their oxides (Fe, Cu, CuO) represent catalysts of the oxidation of hydrocarbons. It is proved that the oil becomes poorly stable in the presence of metals, although it contains natural inhibitors. The catalytic action of metals can be reduced or eliminated by the use of DP of metals. The addition of DP-1 increased for instance the stability of the oil in the presence of metals. Apparently DP are adsorbed as surface-active substances on the metallic surface and show, thus, a direct positive effect on the stability of the oil on oxidation of the latter by atmospheric oxygen. [Abstracter's note: Essentially complete translation.] There are

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B103/B220

Antioxidants of the type of dialkyl ...

1 figure, 1 table, and 2 Soviet-bloc references.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis, Academy of Sciences USSR)

PRESENTED: February 8, 1961 by A. V. Topchiyev, Academician

SUBMITTED: February 7, 1961

Table 1. Structure of additions of the type of dialkyl dithio phosphate salts.
Legend: (1) denomination of the addition; (2) formula, $A\Phi \equiv DP$.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

S/020/61/140/001/023/024
B130/B101

AUTHORS: Sanin, P. I., Chernyavskaya, L. F., Sher, V. V., and Melent'yeva, N. V.

TITLE: Synthetic dispergator-type additives

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 1, 1961, 176-178

TEXT: The washing effect of additives to lubricating oil is explained here by their adsorption on the insoluble particles of the oil suspension. Thus, dispersion and stabilization of the suspension are achieved. Most of the tests were made with polyfunctional additives of the Ni-dialkyl dithiophosphate type (I). $[(C_{18}H_{37}O)_2PSS]_2Ni$ has excellent washing properties, as shown by P. I. Sanin and V. V. Sher (Khimiya i tekhnologiya topliv i masel, no. 3, 38 (1957)). Carbon black suspended in toluene containing a certain quantity of (I) was used as a model suspension. The quantity of (I) adsorbed on carbon black was calculated indirectly by determining the quantity of (I) remaining dissolved, after adsorption equilibrium had been reached and the carbon black separated. The

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difficulty of determining the slight additives in the dilute hydrocarbon solutions was overcome as follows: After toluene had been separated (I) was decomposed with a mixture of nitric and sulfuric acids, and the nickel was determined colorimetrically with dimethyl glyoxime. The results of adsorption of various (I) on carbon black are illustrated in Fig. 1. The quantity of adsorbed (I) as a function of its equilibrium concentration is a typical adsorption isotherm. This also proves that (I) is actually adsorbed on carbon black. Electron micrographs of the carbon-black preparations show that about $6 \cdot 10^4$ molecules of Ni-di-n-octodecyl dithiophosphate were adsorbed on one particle of carbon black. Owing to the adsorption, the carbon-black particles are covered by a layer of (I) molecules oriented with their hydrocarbon group toward the oil medium. Consequently, the oleophily of the particles increases, and the suspension becomes more stable. The surface of the particles of different types of carbon black is inhomogeneous and more or less oxidized. The polar groups of (I) are adsorbed on carbon black owing to oxidation, and, consequently, the non-polar hydrocarbon groups are oriented toward the oil medium. The stabilization of the suspension was either studied

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by sedimentation or centrifugation the carbon black or determined by measuring the optical density of the carbon-black concentration as a function of time. There are 1 figure and 10 references: 6 Soviet and 4 non-Soviet. The two references to English-language publications read as follows: A. R. Badeley, A. H. Nisson, F. H. Garner, J. Inst. Petrol., 35, No. 303, 141 (1949); F. H. Garner, C. W. Nutta, M. F. Mohtadi, J. Inst. Petrol., 36, No. 317, 292 (1950); ibid. 39, no. 358, 677 (1953).

ASSOCIATION: Institut neftekhimicheskogo-sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis of the Academy of Sciences USSR)

PRESENTED: April 8, 1961, by A. V. Topchiyev, Academician

SUBMITTED: April 4, 1961

Fig. 1. Adsorption isotherms of Ni-dialkyl dithiophosphates on carbon black. Suspension of carbon black in toluene. The concentration of carbon black is 0.00061%. Legend: (1) Ni-di-n-octadecyl dithiophosphate;

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Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

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Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

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B144/B186

AUTHORS: Sanin, P. I., Shepeleva, Ye. S., Kleymenov, B. V.

TITLE: Organophosphorus compounds containing the CCl_3 group as additives to lubricating oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 595, abstract 23M214 (In collection: Khimiya i primeneniye fosfororgan. soyedineniy, M., AN SSSR, 1962, 389 - 394)

TEXT: Results are given of friction experiments in the four-ball machine with oils containing additives of chloro-alkanes: $CH_3(CH_2)_5CH_2Cl$, $CCl_3CH_2CH_2Cl$, $CCl_3(CH_2)_3CH_2Cl$, $CCl_3(CH_2)_5CH_2Cl$; of derivatives of metaphosphinic acid: $CH_3PO(OC_4H_9)_2$, $ClCH_2PO(OC_4H_9)_2$, $CCl_3PO(OC_2H_5)_2$, $CCl_3PO(OC_4H_9)_2$, $CCl_3PO(OC_6H_5)_2$, $CCl_3PO[N(CH_3)C_{18}H_{37}]_2$; and of chloro-alkyl phosphites: $(CH_3CH_2O)_3P$, $(ClCH_2CH_2O)_3P$, $(CCl_3CH_2O)P(OCH_2CH_3)_2$, $(CCl_3CH_2O)_3P$, $P[CCl_3C(CH_3)_2O]_3$. It is shown that the specific activity of

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compounds of this type depends to a considerable extent on the presence of the CCl_3 group in their molecule. Apparently the chloride film on the metal surface also forms on account of the Cl atoms of this group. When phosphorus is simultaneously present in the molecule, the action of the additive consists in the effect of the trichloro-methyl group (chloride film) and of the phosphorus, more exactly of the phosphorus compound which is obtained as a result of the decomposition of the additive and which forms a phosphide film. [Abstracter's note: Complete translation.]

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B124/B144

15.8061

AUTHORS: Nechitaylo, N. A., Polak, L. S., Sanin, P. I.

TITLE: Effect of gamma radiation on polypropylene in the presence of ionol as stabilizer

PERIODICAL: Plasticheskiye massy, no. 7, 1962, 3-11

TEXT: Gamma-irradiated isotactic polypropylene with and without stabilizer was studied by infrared spectroscopy, and by thermomechanical and thermal differential analysis. Ionol (2,6-di-tert-butyl-4-methyl phenol) in concentrations between 0.5 and 5% by weight was used as stabilizer. Polypropylene was irradiated with Co^{60} both at 10^{-3} mm Hg and at atmospheric pressure, using a dose of $1.1 \cdot 10^{16}$ ev/cm^3·sec, in the apparatus of the Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute imeni L. Ya. Karpov). The infrared spectra were taken with the ИКС-14 (IKS-14) spectrograph, and the thermomechanical curves obtained with a loading of 100 g/4 mm^2 at a heating rate of 80°C/hr. The intrinsic viscosity was determined in Decalin at 120°C; the thermal

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dose, polypropylene without stabilizer shows a decrease of melting point and of the area of endothermic peaks corresponding to the melting heats of polypropylene. Finally, an intensive exothermic process takes place above the melting point; the reaction heat of this process increases with increasing irradiation dose. With addition of ionol, the melting heat of polypropylene increases; no exothermic reaction above the melting point takes place owing to inhibition of the oxidation processes; the melting point drops but still lies some degrees above that of nonstabilized polypropylene. The optimum ionol concentration is about 1.5%. On irradiation of polypropylene, the melting point drops as the amorphous proportion increases. G. L. Slonimskiy is thanked for the thermomechanical analyses, and N. M. Rytov and M. A. Dzyubin for assistance. There are 7 figures and 4 tables. The most important English-language references are: W. H. Hawkins, et al. J. Appl. Polymer Sci. 1, 37 (1959); W. H. Hawkins et al. J. Polymer Sci. 28, No. 177, 439 (1958); W. H. Hawkins et al. J. Appl. Polymer Sci., 1, No. 1, 43 (1959).

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Konferentsiya po khimii i primeneniyu fosfororganicheskikh soyedineniy. 2d, Kazan', 1959.

Khimiya i primeneniye fosfororganicheskikh soyedineniy; trudy (Chemistry and Use of Organophosphorus Compounds; Conference Transactions) Moscow, Izd-vo AN SSSR, 1962. 630 p. Errata slip inserted. 2800 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Kazanskiy filial.

Resp. Ed.: A. Ye. Arbuzov, Academician; Ed. of Publishing House: L. S. Povarov; Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This collection of conference transactions is intended for chemists, process engineers, physiologists, pharmacists, physicians, veterinarians, and agricultural scientists.

COVERAGE: The transactions include the full texts of most of the scientific papers presented at the Second Conference on the Chemistry and Use of

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Organophosphorus Compounds held at Kazan' from 2 Nov through 1 Dec 1959. The material is divided into three sections: Chemistry, containing 67 articles; Physiological Activity of Organophosphorus Compounds, containing 26 articles; and Plant Protection, containing 12 articles. The reports reflect the strong interest of Soviet scientists in the chemistry and application of organophosphorus compounds. References accompany individual reports. Short summaries of some of the listed reports have been made and are given below.

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TRANSACTIONS OF THE CHEMISTRY SECTION

Gefter, Ye. L. [NII plastmass (Scientific Research Institute of Plastics, Moscow]. Some Prospects for the Industrial Use of Organophosphorus Compounds 46

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Sanin, P. I., and A. V. Ul'yanova [Institut neftekhimicheskogo sinteza (Institute of Petrochemical Synthesis, Academy of Sciences USSR, Moscow)]. Mechanism of the Action of Organophosphorus Compounds on Wear During Friction 376

The conversions undergone by synthetic additives trialkylphosphite, trioctadecylphosphite, tributylphosphite, and tributyltrithiophosphite at elevated temperatures have been studied. The results indicate that organophosphorus compounds on contact with metal at elevated temperatures undergo chemical conversions accompanied by formation of metal phosphides.

Sanin, P. I., V. V. Sher, and I. S. Glukhoded [Institute of Petrochemical Synthesis]. Application of Dialkyldithiophosphates in Engineering 383

Dialkyldithiophosphates of different structure have been studied, and the relationship of their properties to structure was determined. It has been shown that dialkyldithiophosphates are multifunctional additives which depending on structure can possess properties of

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detergents, anticorrosion agents, antiwear additives, as well as serve as demulsifiers, antioxidants, and depressants. Methods for preparing industrial additives by synthesis are pointed out and described.

Sanin, P. I., Ye. S. Shepeleva, and B. V. Kleymenov [Institute of Petrochemical Synthesis]. Organophosphorus Compounds With CCl_3 as Additives to Lubricants 389

A synthesis of compounds containing the CCl_3 group has been made and their effect as wear-reducing additives under friction conditions at high loads studied. It has been shown that the effect of this type of compound depends largely on the presence of the CCl_3 group in the molecule and that the chloride film on the friction surface of the metal develops due to the effect of the chlorine atoms in the CCl_3 group.

Voskresenskiy, V. A. [Kazanskiy inzhenerno-stroitel'nyy institut (Kazan' Construction Engineering Institute)]. Trichlorotricresyl

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

S/204/62/002/004/006/019
E075/E436

AUTHORS: Lavrovskiy, K.P., Brodskiy, A.M., Musayev, I.A., ~~Sanin, P.I.~~, Rumyantsev, A.N., Filatova, Ye.D., Iskhakova, E.Kh.

TITLE: On the preparation of higher normal α-olefines by a high speed cracking of paraffinic petroleum products

PERIODICAL: Neftekhimiya, v.2, no.4, 1962, 487-494

TEXT: Results are described of high speed cracking of soft and hard paraffin waxes, slack wax from Bitkov crude and waxy residue from Ozek-suat crude in a pilot plant. The plant was described previously (Khim. nauka i prom-stv, v.2, no.2, 1957). The waxes were heated to 900-1000°C and mixed with powdered coke preheated to 600-730°C. They were fed into the reactor at the rate of 60 to 80 h^{-1}. The gases produced (23.0 to 47.4% by weight of total products) contained 33.1 to 52.7% wt. ethylene. The fraction of the liquid products from the slack wax boiling between 40-73°C and 73-100°C contained heptene-1 as the main component. For the hard wax cracking products, the fraction boiling up to 60°C contained 49.80% α-olefines (main component), about 20% conjugated dienes and 15 to 12% cyclenes. The content of α-olefines in

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the 60 - 175°C fraction was 70.4% (13.6% hexene-1, 17.1% heptene-1, 15% octene-1, 11.9% nonene-1, 12.8% decene-1). In general it was shown that the benzene from the high speed cracking of paraffin waxes consisted mainly of α-paraffins, their content in benzenes from the cracking of slack wax and waxy residue being much lower. There are 11 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR
(Institute of Petrochemical Synthesis AS USSR)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

NECHITAYLO, N.A.; POLAK, L.S.; SANIN, P.I.

Effect of gamma rays on polypropylene in the presence of the ionol stabilizer. Plast.massy no.7:3-11 '62. (MIRA 15:7)
(Propene)
(Gamma rays)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, Pafnutiy Ivanovich

"Synthesis and investigation of mechanism governing action of friction wear-reducing additives"

report to be submitted for the 6th World Petroleum Congress, Frankfurt am Main, W. Germany, 19-26 Jun 63.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SHEPELEVA, YE.S., SANIN, P.I.

Reaction of dialkylphosphorus acids with p-benzoquinone.

Khimiya i Primeneniye Fosfororganicheskikh Soyedineniy (Chemistry and application of organophosphorus compounds) A. YE. A[illegible], Ed. Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P.I.

MUSAYEV, I.A., ROSENBERG, L.M., NIFONTOVA, S.S., GALPERN, G.D., MEGHITAYLO, N.A., TENENTIEVA, YE.N., KUSAKOV, N.N., SANIN, P.I.

Investigating chemical composition of middle fractions of a sulphurous crude oil in the USSR

Report to be submitted for the Sixth World Petroleum Congress, Frankfurt, 16-26 June 63

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 15487-63 EWP(j)/EPF(c)/EWT(m)/BDS Pc-4/Pr-4 RM/WW/JT

ACCESSION NR: AP3005444 S/0204/63/003/004/0456/0464

61
64

AUTHORS: Bagriy, Ye. I.; Sanin, P. I.; Petrov, Al. A.

TITLE: Synthesis and properties of C sub 28 polycyclic hydrocarbons

SOURCE: Neftekhimiya, v. 3, no. 4, 1963, 456-464

TOPIC TAGS: polycyclic hydrocarbon, hydrocarbon synthesis

ABSTRACT: The following new compounds containing benzene, pentamethylene and hexamethylene rings were synthesized and characterized physically and spectrally: 1,7-diphenyl-4-nonylheptane; 1,7-dicyclohexyl-4-nonylheptane; 1,7-bis-(4-methylphenyl)-4-heptylheptane; 1,7-bis-(4-methylcyclohexyl)-4-heptylheptane; 1,7-bis-(3,4-dimethylphenyl)-4-pentylheptane; 1,7-bis-(3,4-dimethylcyclohexyl)-4-pentylheptane; 1,1-bis-(3,4-dimethylphenyl)-dodecane; 1,1-bis-(3,4-dimethylcyclohexyl)-dodecane; 1,1-bis-(4-cyclopentylphenyl)-decane; 1,1-bis-(4-cyclopentylcyclohexyl)-decane. Orig. art. has: 1 table, 2 equations, and 2 figures.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 15487-63

ACCESSION NR: AP3005444

3

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of petrochemical synthesis, AN SSSR); Institut geologii i razrabotki goryuchikh iskopayemikh Goskomiteta po toplivnoy promy*shlennosti pri Gosplane SSSR (Institute of Geology and Processing of Fossil Fuels, State Committee for the Fuel Industry of the State Planning Commission)

SUBMITTED: 14Feb63 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: CH NO REF SOV: 003 OTHER: 012

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 15486-63 EWP(j)/EPF(c)/EWT(m)/BDS Pc-4/Pr-4 RM/WW

ACCESSION NR: AP3005445 S/0204/63/003/004/0465/0471

67
66

AUTHORS: Petrov, Al. A.; Sanin, P. I.; Tsedilina, A. L.; Bagriy, Ye. I.; [redacted]

TITLE: Synthesis and properties of C sub 24-hydrocarbons

SOURCE: Neftekhimiya, v. 3, no. 4, 1963, 465-471

TOPIC TAGS: C sub 24-hydrocarbon synthesis, hydrocarbon structure, naphthene

ABSTRACT: The following 24 new C_{24}-hydrocarbons, containing varied structures including 5- and 6-membered naphthene rings of different degrees of substitution were synthesized and described. 10-cyclopentylnonadecane; 1-methyl-2-octadecylcyclopentane; 1,7-dicyclopentyl-4-heptylheptane; 1,7-di-(3-methylcyclopentyl)-4-amylheptane; 1,10-di-(2,4-dimethylcyclopentyl)-decane; 1,7-dicyclopentyl-4-(B-ethylcyclopentyl)-heptane; 1-phenyl-4-hexyl-7-cyclopentylheptane; 1-cyclohexyl-4-hexyl-7-cyclopentylheptane; 7-(4-cyclopentylphenyl)-tridecane; 7-(4-cyclopentylcyclohexyl)-tridecane; 1,7-dicyclopentyl-4-benzyl-

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 15486-63

ACCESSION NR: AP3005445

heptane; 1,7-dicyclopentyl-4-methylcyclohexylheptane; 6-(2,4,5-trimethylphenyl)-pentadecane; 6-(2,4,5-trimethylcyclohexyl)-pentadecane; 1-phenyl-3-(2,5-dimethylbenzyl)-nonane; 1-cyclohexyl-3-(2,5-dimethylmethylcyclohexyl)-nonane; 1,1-di-(4-isopropylphenyl)-hexane; 1,1-di-(4-isopropylcyclohexyl)-hexane; 1,1-di-(2,4,5-trimethylphenyl)-hexane; 1,1-di-(2,4,5-trimethylcyclohexyl)-hexane; 1,3-di-(5-indanyl)-2-propylpropane; 1,3-di-(5-hydrindanyl)-2-propylpropane; 1-phenyl-4-(2-dodecyl)-benzene; 1-cyclohexyl-4-(2-dodecyl)-cyclohexane. "Synthesis (of 1,3-di-(5-indanyl)-2-propylpropane) carried out by L. N. Stukanov". Orig. art. has: 29 formulas.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: CH NO REF SOV: 008 OTHER: 007

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

ROBINZON, Ye.A.; D'YACHKOVA, Ye.A.; KOMISSAROVA, N.I.; GAREVSKAYA, G.S.; SANIN, P.I.

Use of the oxidation method for determining the structure of aromatic hydrocarbons from petroleum fractions. Neftekhimiia 3 no.4:598-608 Jl-Ag '63. (MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR imeni A.V. Topchiyeva.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P.I.; BAGRIY, Ye.I.; PETROV, Al.A.; NIKITSKAYA, Ye.A.; TSEDILINA, A.L.

Viscosity of C_{24} and C_{28} polycyclic hydrocarbons. Neftekhimiia 3 no.6:835-844 N-D '63. (MIRA 17:3)

1. Institut neftekhimicheskogo sinteza AN SSSR im. A.V.Topchiyeva i Institut geologii i razrabotki goryuchikh iskopayemykh.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P.I.; KRYUKOV, Yu.B.

Sixth World Petroleum Congress. Neftekhimiia 3 no.6:928-934 N-D '63. (MIRA 17:3)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P. I.; SHEPELEVA, Ye. S.; MANNIK, A. O.; KLEYMENOV, B. V.

"Chemical modification of friction surfaces."

report presented at the Intl Lubrication Conf, Washington, D.C., 13-16 Oct 64.

Inst of Petrochemical Synthesis, AS USSR, Moscow.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

ACCESSION NR: AP4017576 S/0065/64/000/003/0062/0066

AUTHORS: Sanin, P.I.; Sher, V.V.; Chernyavskaya, L.F.; Melent'yeva, N.V.; Komissarova, N.I.

TITLE: Stability of oils containing antioxidant and additives of the sulfonate type.

SOURCE: Khimiya i tekhnol. topliv i masel, no. 3, 1964, 62-66

TOPIC TAGS: oil antioxidant, oil additive, oil, engine oil, lubricating oil

ABSTRACT: In view of the ever increasing use of sulfonate additives (which in themselves are not antioxidants but merely dispersers) to lubricating oils (of the DS-11 type), the authors undertook a study of additives and their combined action with different antioxidants. DS-11 is an oil selectively drawn from eastern, sulfur-rich crudes. Its paraffin-naphthene fraction has a molecular weight of 404, ρ_4^{20} = 0.8627, n_D^{20} = 1.4740, oil viscosity v_0 = 66.8 cst; v_{100} = 11.35 cst. The additives studied were: (1) SB-3 (barium sulfonate) and antioxidants DF-1 (barium dialkyldithiophosphate),

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

ACCESSION NR: AP4017576

(2) DF-11 (zinc dialkyldithiophosphate), (3) AN-22k (calcium dithiophosphate), (4) V-353 (free dialkylphenyldithiophosphoric acid), and (5) NG-183a (interaction product of terpenes and phosphoruspentasulfide neutralized with calcium oxide). Their stability was evaluated according to oxygen absorption in a closed system at 150C. It was found that the above antioxidants range according to decreasing activity: DF-11, DF-1, AN-22k, B-353, NG-183a. At great oxidation depth, only the first two increase oil stability. Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 23Mar64 ENCL: 00

SUB CODE: CH, FL NR REF SOV: 001 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

ACCESSION NR: AP4028542 S/0191/64/000/004/0003/0006

AUTHORS: Nechitaylo, N.A.; Sanin, P.I.; Bevza, T.I.; Pokatilo, N.A.

TITLE: Stability of poly-3-methylbutene-1

SOURCE: Plasticheskiye massy*, no. 4, 1964, 3-6

TOPIC TAGS: polymethylbutene, stability, differential thermal analysis, methylbutene polymerization, thermogram, exothermic effect, endothermic effect, amorphous, crystalline, isotactic polymer, stabilizer, polymer oxidation

ABSTRACT: The stability to atmospheric oxidation of poly-3-methylbutene-1 was studied by differential thermal analysis. The polymer was produced by polymerization of 3-methylbutene-1 on the $Al(C_2H_5)_3$: $TiCl_4$ system (1.5:1). The thermogram of the polymer sample in air shows a series of exothermic effects above 120C and an endothermic peak at 260C. In the thermogram in argon the exothermic effects are absent but there is a series of endothermic effects, associated with changes in the structure of the polymer macromolecules.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

ACCESSION NR: AP4028542

Comparison of the amorphous, slightly crystalline and crystalline or isotactic fractions (structures confirmed by x-rays) of the polymer shows the highly crystalline material is oxidized most on heating. The effect of the addition of various amounts of ionol (2,6-di-tert. butyl-4-methylphenol) was studied, and it was found that the intensity of the exothermic effects was reduced with increasing amounts of stabilizer, up to 2% ionol when there is almost no oxidation of the polymer. Orig. art. has: 5 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 28Apr64 ENCL: 00

SUB CODE: CH NR REF SOV: 002 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 36473-65 EPF(c)/EWT(m)/T Pr-4 RM/WE

ACCESSION NR: AP5010003 UR/0204/64/004/004/0567/0571 23 22

AUTHOR: Musayev, I. A.; Iskhakova, E. Kh.; Rumyantsev, A. N.; Kislinskiy, A. N.; Sanin, P. I.

TITLE: Investigation of olefins contained in gasolines of high-velocity cracking of paraffin petroleum products

SOURCE: Neftekhimiya, v. 4, no. 4, 1964, 567-571

TOPIC TAGS: hydrocarbon, gasoline, paraffin wax, petroleum, petroleum refining, petroleum refinery product

Abstract: The individual and group hydrocarbon compositions of fractions boiling up to 60° and the gasolines (60-175°) of high-velocity cracking of soft paraffin of sulfur petroleums and Ozek-Suatskiy mazut was studied. The gasoline (60-175°) obtained from soft paraffin contained 74% olefins of normal structure, while the gasoline from Ozek-Suatskiy mazut contained 39% of such olefins. The light fractions (up to 60°) had a high content of alpha-olefins. Concentrates of alpha-olefins were isolated by chromatography on silica gel; distillation of the concentrates on a column with an efficiency of 45 theoretical plates gave a distinct fractionation of the C_6-C_{10} alpha-olefins. High-velocity cracking of paraffin products thus was found

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 36473-65

ACCESSION NR: AP5010003

to be a promising method of producing alpha-olefins. Orig. art. has 3 graphs and 4 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 19Nov63 ENCL: 00 SUB CODE: FP, GC

NO REF SOV: 002 OTHER: 000 JPRS

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 36486-65 EPF(c)/EWT(j)/EWT(m) Pc-4/Pr-4 RM

ACCESSION NR: AP5010564 UR/0204/64/004/005/0793/0797

AUTHOR: Musayev, I. A.; Sanin, P. I.; Suchkova, A. A.; Nifontova, E. S.; Sushchik, R. Ya.

23
22
B

TITLE: Determination of normal paraffins in middle petroleum fractions by a method of gas-liquid chromatography

SOURCE: Neftekhimiya, v. 4, no. 5, 1964, 793-797

TOPIC TAGS: petroleum, paraffin wax, chromatographic analysis, hydrocarbon

Abstract: The chromatographic separation and determination of normal paraffins of the middle fractions (175-350°) of Romashkin petroleum were studied. Conditions were found for determining normal paraffins by gas-liquid chromatography on stationary liquid phases: polyphenylmethylsiloxane fluid PPMS-4 and cable oil. It was found to be more convenient to conduct the chromatographic separation at different temperatures, depending on thermolecular weight or on the boiling point of the hydrocarbons: for hydrocarbons up to C_{16} at 225°, and for hydrocarbons above C_{16} at 275°. The quantitative content of each hydrocarbon in the mixture was determined according to the chromatograms by two methods, which gave identical results: from the ratio of the areas of all the peaks and according to an internal standard (n-tridecane for one ...

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 36486-65

ACCESSION NR: AP5010564

mixture, n-nonadecane for the other). The quantitative content of the individual paraffins, from decane to heneicosane in the 175-350° cut of Romashkin crude was established. Orig. art. has 6 graphs and 3 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 13Jan64 ENCL: 00 SUB CODE: FP, GC

NO REF SOV: 001 OTHER: 004 JPRS

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 51814-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5017013 UR/0204/64/004/006/0899/0905

20
19
B

AUTHOR: Myannik, A. O.; Shepeleva, Ye. S.; Sanin, P. I.

TITLE: Synthesis and properties of some esters of phosphoric, thiophosphoric and phosphinic acids

SOURCE: Neftekhimiya, v. 4, no. 6, 1964, 899-905

TOPIC TAGS: ester, phosphoric acid, phosphinic acid, organic sulfur compound, organic synthetic process

ABSTRACT: A number of esters of phosphoric, thiophosphoric, and phosphinic acids were synthesized and described. Esters of thiophosphoric acid containing thiol sulfur were prepared from sodium salts of dialkylthiophosphoric acids and alkyl halides, the salt with thione structure giving an ester with a thiol structure. Esters of thiophosphoric acid containing thione sulfur were produced by various methods: triethylthione phosphate by the reaction of sodium ethylate and phosphorus thiochloride; diethylbutylthione phosphate from the chloride of diethyl thiophosphoric acid. Esters containing the trichloromethyl group were produced by a scheme including the reaction of sulfur with the correspond-

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 51814-65

ACCESSION NR: AP5017013

ing phosphite; esters of phosphinic acids were produced from the corresponding dichlorides of phosphinic acids and alcohols. The activity of the esters as additives for reducing wear under conditions of high loads were found to depend on the structure of the ester. Esters containing thiol sulfur are more active than esters containing thione sulfur. Esters containing the trichloromethyl group are the most active.

Orig. art. has: 11 formulas, 5 graphs, 2 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute of Petro-Chemical Synthesis AN SSSR)

SUBMITTED: 29Apr64 ENCL: 00 SUB CODE: OC, GC

NR REF SOV: 009 OTHER: 007 JPRS

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P.I.; SHER, V.V.; CHERNYAVSKAYA, L.F.; MELENT'YEVA, N.V.; KOMISSAROVA, N.I.

Studying the stability of lubricants containing antioxidants and sulfonate type additives. Khim. i tekh. topl. i masel 9 no.3:62-66 Mr'64 (MIRA 17:7)

1. Institut neftekhimicheskogo sinteza AN SSSR.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 62083-65 EPF(c)/EWT(m) Pr-4 RM

ACCESSION NR: AP5016837 UR/0204/65/005/003/0320/0321
547.592.07

AUTHORS: Terent'yeva, Ye. M.; Sanin, P. I.; Stepantseva, T. G.; Klyukina, Z. P.

TITLE: Synthesis of polycyclic naphthenic hydrocarbons

SOURCE: Neftekhimiya, v. 5, no. 3, 1965, 320-321

TOPIC TAGS: hydrocarbon, polycyclic compound, synthesis property, cyclic hydrocarbon

ABSTRACT: In the present work, which is a continuation of an earlier investigation, nine polycyclic naphthenic hydrocarbons (not previously described in literature) were synthesized. Most of these hydrocarbons are the homologs of 1.1-dicyclohexyl ethane and are regarded as model hydrocarbons of the medium oil fractions. Some of them were obtained by hydrogenating the aromatic hydrocarbons described by E. M. Terent'yeva, P. I. Sanin, T. G. Stepantseva, M. M. Kusakov, N. A. Shimanko, and V. I. Sidorenko (Neftekhimiya, 1, No. 2, 141, 1961); the others were obtained by the condensation of styrol with mesitylol and cumene. From 20 to 50 g of hydrocarbon and 10% of a nickel catalyst were hydrogenated at 200C and at the initial hydrogen pressure of 130 atm. After each experiment, the autoclave was cooled to room temperature, the pressure was lowered to normal, the product removed, and the autoclave washed with alcohol which was then added to the product. Subsequently,

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 62083-65
ACCESSION NR: AP5016837

the catalyst and alcohol were separated from the product, which was dried over calcium chloride and tested by the formolite reaction which indicates the absence of aromatic hydrocarbons. Finally, it was purified by multiple distillation. The characteristics of the bi-and tricyclic hydrocarbons obtained are tabulated. Orig. art. has: 1 table.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 04May64 ENCL: 00 SUB CODE: OC,GC

NO REF SOV: 005 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 56027-65 EWT(m)/EPF(c)/T Pr-4 DI

ACCESSION NR: AP5016842 UR/0204/65/005/003/0399/0405
547.26'118'122.1:66.094.382

AUTHOR: Sher, V.V.; Melent'yeva, N. V.; Nechitaylo, N. A.; Sanin, P. I.

TITLE: The effect of thermal conversion of metal dialkyl dithiophosphates on their effectiveness as hydrocarbon antioxidants

SOURCE: Neftekhimiya, v. 5, no. 3, 1965, 399-405

TOPIC TAGS: lubricant additive, antioxidant, metal dialkyl thiophosphate, oxidation inhibitor

ABSTRACT: Metal dialkyl dithiophosphates, particularly those of zinc, are antioxidants of hydrocarbons and find application as lubricant additives. Unlike other antioxidants, such as various phenols, metal dialkyl dithiophosphates not only inhibit the initiation of oxidation (extend the induction period), but also continue to inhibit the propagation steps of oxidation. Preliminary experiments had shown that the specific action of metal dialkyl dithiophosphates depends on the formation of secondary products. In the present work, the antioxidative effectiveness of several metal dialkyl dithiophosphates

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 56027-65
ACCESSION NR: AP5016842

was examined as a function of their prior heat treatment. It was found that nickel di-n-decyl dithiophosphate acted most effectively as an antioxidant for a mixture of alkanes and cyclanes when the antioxidant had been kept for 5 hours at 180C under nitrogen. Similarly, zinc diisobutyl dithiophosphate was most effective as an antioxidant when prior heat treatment had been conducted at 225C; higher or lower temperatures decreased its effectiveness. Other compounds of this type exhibit similar behavior. Heating of the above compounds in air proved as effective as heating under nitrogen. It was concluded that metal dialkyl dithiophosphates are changed by heat treatment into substances which combine with oxidation products of hydrocarbons to form effective antioxidants. Orig. art. has: 4 figures. [VS]

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. B. Topchiyeva AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 03Oct64 ENCL: 00 SUB CODE: FP, IC

NO REF SOV: 006 OTHER: 004 ATD PRESS: 4032

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 55930-65 EWT(m)/EPF(c)/EPF(n)-2/EWA(d)/EWP(j)/T/EWP(t)/EWP(b) Pc-4/Pr-4/Pu-4
IJP(c) JD/WW/JG/WB/DJ/RM UR/0204/65/005/003/0406/0409
ACCESSION NR: AP5016843 547.26'147'118'122.1:547.21:66.094.382

AUTHOR: Kuz'mina, G. N.; Sher, V. V.; Sanin, P. I.

TITLE: Zinc dialkyl thiophosphates as hydrocarbon antioxidants

SOURCE: Neftekhimiya, v. 5, no. 3, 1965, 406-409

TOPIC TAGS: antioxidant, lubricant additive, phospate salt ester, metal dialkyl thiophosphate

ABSTRACT: Zinc dialkyl dithiophosphates and similar compounds are used as antioxidant additives in lubricants. The purpose of this work was to investigate the relationship between the effectiveness of this type of antioxidant and its structure, particularly the position of the sulfur atoms in the molecule. The following compounds were prepared for the first time:

$[(C_8H_{17}O)_2P(S)S]_2Zn$, $[(n\text{-}C_{16}H_{33}O)_2P(S)S]_2Zn$, $[(n\text{-}C_4H_9O)_2P(O)O]_2Zn$, $[(C_8H_{17}O)_2P(S)O]_2Zn$, $[(n\text{-}C_{16}H_{33}O)_2P(S)O]_2Zn$, $[(C_8H_{17}O)_2P(O)O]_2Zn$, $[(n\text{-}C_{16}H_{33}O)_2P(O)O]_2Zn$.

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 63507-65 EPF(c)/EWP(j)/EWT(m)/T RM/DJ

ACCESSION NR: AP5020958 UR/0204/65/005/004/0624/0628

62..892.8:547.26'139'11815'113.1

AUTHOR: Myannik, E. I.; Sher, V. V.; Sanin, P. I.

TITLE: Synthesis and properties of esters of metaphosphimic acid trimer (synthetic lubricant additives)

SOURCE: Neftekhimiya, v. 5, no. 4, 1965, 624-628

TOPIC TAGS: antiwear additive, antiseize additive, lubricant, organic lubricant, lubricant additive, lubricant property, lubricating oil, lubrication, phosphonitrile

ABSTRACT: Esters of metaphosphimic acid trimer were investigated to determine their antiwear properties. The esters can be synthesized from the corresponding acid chloride, $N_3P_3Cl_6$, by condensation with sodium alkoxides and phenoxides, or by condensation with alcohols and phenols in the presence of pyridine. The isobutyl, decyl and undecyl esters were obtained for the first time. The esters exhibited no tendency to polymerize under reaction conditions. Molecular weights were determined cryoscopically, in benzene. All the esters examined increase the critical load values of oils, the ethyl and propyl esters most of all. At critical loads and above, ad-

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 63507-65

ACCESSION NR: AP5020958

3

dition of esters increases wear appreciably; this effect may be eliminated by introducing, in addition to alkoxy and phenoxy groups, other, more active groups into the phosphonitrile ring. Orig. art. has: 1 table and 1 figure. [VS]

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 02Sep64 ENCL: 00 44155 SUB CODE: MT, OC

NO REF SOV: 007 OTHER: 008 ATD PRESS: 4023

KC

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 65031-65 EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AP5020959 UR/0204/65/005/004/0629/0635

547.26'118'122.1:543.422.4

AUTHOR: Zimina, K. I.; Kotova, G. G.; Sanin, P. I.; Sher, V. V.; Kuz'mina, G. N.

TITLE: Infrared absorption spectra of dialkyldithiophosphates of metals

SOURCE: Neftekhimiya, v. 5, no. 4, 1965, 629-635

TOPIC TAGS: absorption spectrum, nickel compound, lead compound, zinc compound, IR spectrum, electron mobility

ABSTRACT: The spectra of dialkyldithiophosphates of metals were recorded on a UR-10 infrared spectrophotmeter, in the region of frequencies from 400 to 1600 cm^{-1}. The spectral width of the aperture was varied from 3 to 6 cm^{-1} and the scanning rate was 50 cm^{-1}/min. The liquid preparations were placed in a sectional tray, with the thickness of the layer about 0.01 mm. Solid preparations were precipitated from their carbon tetrachloride solutions on an aperture made of potassium bromide, in the form of a crystalline or vitreous layer. A study was made of the dialkyldithiophosphates of zinc, nickel, and lead, containing alkoxy groups of hydrocarbon radicals with different structures: isopropyl, butyl,

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 65031-65

ACCESSION NR: AP5020959

2-ethylhexyl, decyl, and hexadecyl. The stretching vibrations of the P=S and P-S bonds are shown in a table. The most intensive absorption bands are observed in the frequency intervals 625-665, 750-850, and about 1000 cm^{-1}; these correspond to the stretching vibrations of the P=S, P-O-(C), and C-O-(P) groups. The present article examines the absorption frequencies of the P=S and P-S bonds, which are most significant for dithiophosphates. Results show that the nature of the metal and the structure of the alkyl groups have an effect on the stretching vibrations of the P=S and P-S groups. Frequencies of 661, 642, and 653 cm^{-1} correspond to P=S bonds, and frequencies of 543 and 552 cm^{-1} to P-S bonds. Zinc dialkylthiophosphates are absorbed in the interval 651-662 cm^{-1}; nickel dialkylthiophosphates in the interval 635-655 cm^{-1}; and lead dialkylthiophosphates in the interval 625-640 cm^{-1}. This is evidence of the different mobility of the valence electrons. Orig. art. has: 1 figure and 4 tables.

ASSOCIATION: Vsesoyuznyy institut po pererabotke nefti (All-Union Institute for Oil Refining); Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute for Petrochemical Synthesis, AN SSSR)

SUBMITTED: 09Nov64 ENCL: 00 SUB CODE: OG, NP

NR REF SOV: 006 OTHER: 008

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 60041-65 EWT(m)/EPF(c)/EPF(n)-2/EWP(j) Pc-4/Pr-4/Pu-4 GG/JAJ/RM

ACCESSION NR: AP5018034 UR/0191/65/000/007/0007/0013
678.742.3:621.039.83:678.021.122

AUTHOR: Nechitaylo, N. A.; Sanin, P. I.; Gol'denberg, A. L.; Polak, L. S.

TITLE: Effect of stabilizers on irradiated polypropylene

SOURCE: Plasticheskiye massy, no. 7, 1965, 7-13

TOPIC TAGS: polypropylene, ionizing radiation, oxidation inhibitor, phenylnaphthylamine, ionol, polymer stabilizer, gel formation

ABSTRACT: Polypropylene (MW~224,000) was irradiated with a Co^{60} source in ampoules at about 10^{-3} mm Hg. The stabilizers chosen were phenyl-β-naphthylamine (Neozone D), 2-mercaptobenzimidazole, and barium di-n-octadecyldithiophosphate; for comparison, experiments were made with ionol. Thermograms were recorded automatically with a Kurnakov pyrometer, and the temperatures of the thermal effects observed were studied in relation to the irradiation dose and the content of stabilizers. The endothermic effects on the heating curves correspond to the melting of the polymer samples, and the exothermic ones to the reactions of oxidation of polypropylene. The degree of oxidation was determined by infrared spectroscopy from the content of carbonyl compounds. On the basis

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 60041-65

ACCESSION NR: AP5018034

of the quantity of carbonyl groups formed in the various experiments, the most effective oxidation inhibitors are phenyl-β-naphthylamine and ionol. The intrinsic viscosity of the samples was studied as a function of the irradiation dose. The protection coefficients, energy transfer factors, and intrinsic viscosities of polypropylene irradiated in air were determined. The number of breaks in the primary molecular chain caused by the ionizing radiation was correlated with the reciprocal molecular weight. The addition of 2% ionol is sufficient to prevent cross-linking in the polymer at a dose of 70 mr. At 160 and 250 mr, 5 and 8% ionol, respectively, is needed to prevent gel formation. "The authors thank M. A. Dzyubin for considerable assistance in the work." Orig. art. has: 8 figures, 6 tables, and 2 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: OC, NP

NO REF SOV: 006 OTHER: 010

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 13819-66 EWT(m)/EPF(n)-2/EWP(j)/EWA(h)/EWA(1) GG/RM

ACC NR: AP6002480 (A) SOURCE CODE: UR/0191/66/000/001/0037/0041

59
58
B

AUTHORS: Nechitaylo, N. A.; Pospishil, Ya.; Sanin, P. I.; Polak, L. S.

ORG: none

TITLE: Dihydroxyphenols-stabilizers for irradiated polypropylene

SOURCE: Plasticheskiye massy, no. 1, 1966, 37-41

TOPIC TAGS: polymer, polypropylene, radiation damage, radiation effect, polypropylene

ABSTRACT: The stabilizing action of hydroquinone, 2-methylhydroquinone, 2-tert-butylhydroquinone, 2-tert octylhydroquinone, 2,5-di-tert-butylhydroquinone, pyrocatechine, 4-methyl pyrocatechine, 4-tert-butylpyrocatechine, 4-tert-octylpyrocatechine, and 3,5-di-tert-butylpyrocatechine on the stability of irradiated polypropylene was studied. The initial polypropylene had a molecular weight of 390 000 and was irradiated with Co^{60} γ-radiation of 1.5—1.0 M roentgen intensity. Thermodifferential analysis curves, IR spectra, and viscosity for irradiated polypropylene specimens in the presence and absence of air (and containing varying amounts of different dihydroxyphenols) are presented in tables and graphs (see Fig. 1). The number of chain ruptures produced by the radiation was calculated after P. M. Black and B. J. Lyons (Proc. Roy. Soc., 253, 322, 1959). It was found

Card 1/2 UDC: 678.742.3:678.048.5

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 13819-66

ACC NR: AP6002480

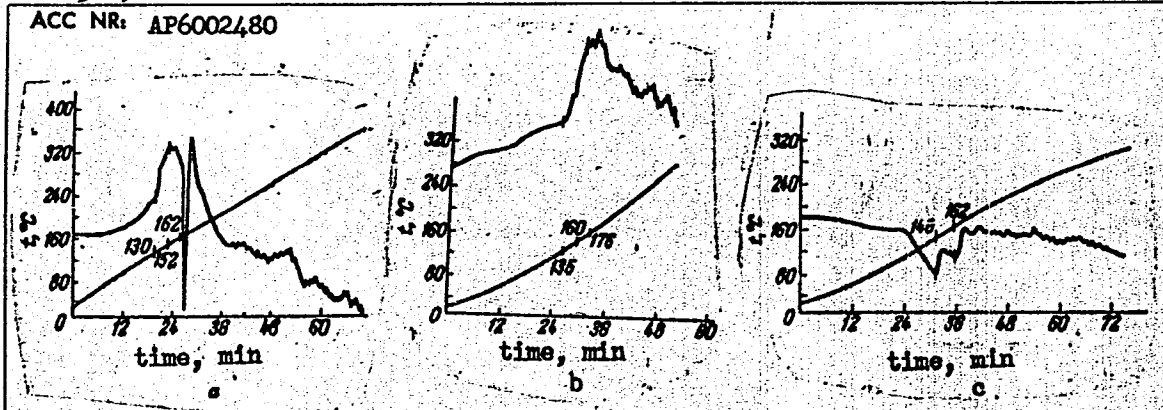

Fig. 1. Thermogram, obtained during the differential thermal analysis of polypropylene (irradiated in presence of air; radiation dosage 40 Mr). a - initial polypropylene; b - after irradiation containing 2-tert-butylhydroquinone; c - after irradiation containing 4-tert-butylpyrocatechine.

that 4-tert-butylpyrocatechine and 3,5-di-tert-butylpyrocatechine were the most effective stabilizing agents. A conclusion is reached that dihydroxyphenols stabilize irradiated polypropylene by inhibiting its reaction with atmospheric oxygen. The authors thank M. A. Dzyubin for his aid in the present work. Orig. art. has: 6 tables, 3 graphs, and 1 equation.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008/ OTH REF: 003

Card 2/2 GPC

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 29560-66 EWP(j)/EWT(m)/T RM/DJ
ACC NR: AP6003435 (A)

SOURCE CODE: UR/0065/66/000/001/0054/0057

AUTHOR: Zimina, K. I.; Kotova, G. G.; Sher, V. V.; Kuz'mina, G. N.; Sanin, P. I.

ORG: VNII NP

TITLE: Determination and characteristics of zinc dialkyldithiophosphate-type additives based on infrared absorption spectra

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 1, 1966, 54-57

TOPIC TAGS: lubricant additive, zinc compound, phosphorus compound, sulfur compound, IR spectrum

ABSTRACT: Infrared absorption spectra of motor oil additives based on zinc dialkyldithiophosphates were studied in the 400-700 cm^{-1} range. The alkyl radicals of zinc dialkyldithiophosphates (general formula $(RO)_2P(S)SZnS(S)P(OR')_2$) contained isopropyl, isobutyl, n-butyl, isoamyl, 2-ethylhexyl, sec-heptyl, and higher radicals. It was found that the additives contain basic salts in addition to neutral zinc salts of dialkyldithiophosphates, and that the absorption band with a maximum at 480 cm^{-1} is due to stretching vibrations of the Zn-O bond in such basic salts. The

Card 1/2

UDC: 543.544 : 546.47

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 45816-66 EWT(m)/T DJ/WE (A)

ACC NR: AP6020392 SOURCE CODE: UR/0204/66/006/001/0112/0114

AUTHOR: Sanin, P. I.; Chernyavskaya, L. F.; Sher, V. V.; Komissarova, N. I.; Bogomolov, V. M.

ORG: Institute of Petrochemical Synthesis im. A. V. Topchiyev, AN SSSR (Institut neftekhimicheskogo sinteza AN SSSR)

TITLE: Apparatus for oxidizing organic liquids with automatic compensation for consumed oxygen and its recording

SOURCE: Neftekhimiya, v. 6, no. 1, 1966, 112-114

TOPIC TAGS: chemical laboratory ~~apparatus~~ apparatus, oxidation kinetics

ABSTRACT: A circulation-type unit was constructed for the liquid-phase oxidation of organic liquids (hydrocarbons, lubricating oils and other petroleum products) at various temperatures and atmospheric pressure, with automatic recording and compensation for the oxygen consumed in the reaction. The unit is convenient to operate and gives reproducible results. It can be used for studying the oxidation kinetics of hydrocarbons (and other compounds), for determining the stability of petroleum products, and for the comparative evaluation of the effectiveness of various antioxidants. Experimental data showed that the unit can be used to obtain kinetic data over a wide range of oxidation rates (oxygen absorption rates). Orig. art. has: 3 figures.

SUB CODE: 07/ SUBM DATE: 12Mar65/ ORIG REF: 001/ OTH REF: 001

UDC: 542.943.084

Card 1/1

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 43621-66 EWT(m)/EWP(j)/T DJ/RM

ACC NR: AP6030551 (A, N) SOURCE CODE: UR/0413/66/000/016/0031/0031

INVENTOR: Sanin, P. I.; Shepeleva, Ye. S.; Borodach, M. S.; Myannik, A. G.; Varshavskiy, S. L.; Petyakina, Ye. I.; Vinogradova, I. E.

41

B

ORG: none

TITLE: Preparative method for bis(trichloroalkyl) esters of alkylphosphonic acids. Class 12, No. 184844 [announced by the Institute of Petrochemical Synthesis, AN SSSR (Institut neftekhimicheskogo sintezа AN SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 31

TOPIC TAGS: lubricant additive, mineral oil, alkylphosphonic acid

ABSTRACT: An Author Certificate has been issued for a preparative method for bis(trichloroalkyl) esters of alkylphosphonic acid of the general formula $RP(O)[O(CH_2)_nCCl_3]_2$ where R is an alkyl group and n = 1, 4, 6, 8. To obtain such esters suitable as additives to mineral oils, alkylphosphonic dichlorides are treated with trichloroalkyl alcohols in the presence of an organic base, e.g., pyridine. [SM]

SUB CODE: 07, 11/ SUBM DATE: 05May65/ ATD PRESS: 5072

Card 1/1 fv UDC: 547.26'118.07

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 10399-67 EWT(m)/EWP(j) WE/RM

ACC NR: AP7003128 SOURCE CODE: UR/0204/66/006/004/0635/0644

29
28

AUTHOR: Sanin, P. I.

ORG: none

TITLE: Conference on the chemistry and chemical processing of petroleum and natural gas

SOURCE: Neftekhimiya, v. 6, no. 4, 1966, 635-644

TOPIC TAGS: chemical conference, petrochemistry

ABSTRACT: The above-named international conference was organized by the Section of Petrochemistry of the Society of Hungarian Chemists. It was held in Budapest on 29 September to 3 October 1965. A total of 118 reports were delivered at the conference which was divided into 3 sections. The sections covered the following fields: petrochemistry (petrochemical processes), physico-chemical studies (kinetics, catalysis and adsorption), and the analysis and study of the chemical composition of petroleum and petroleum products.

In the field of petrochemistry, several reports were delivered on the preparation of paraffins and olefins as the initial raw material for the production of wetting agents.

Several reports were devoted to the oxidation processes by hydrocarbons, N. M. Emanual' and E. A. Blyumberg (Institute of Chemical Physics of the

UDC: 665.5:061.3(439.1)

Card 1/2

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

L 10399-67

ACC NR: AP7003128

Academy of Sciences USSR, Moscow) set forth the scientific bases of the oxidation of liquified hydrocarbon gases, particularly, butane. [JPRS: 38,970]

SUB CODE: 07 / SUBM DATE: none

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

ACC NR: AP6034493 SOURCE CODE: UR/0204/66/006/005/0659/0664

AUTHOR: Rozenberg, L. M.; Ushakova, I. B.; Genekh, I. S.; Sanin, P. I.

ORG: Institute of Petrochemical Synthesis im. A. V. Topchiyev AN SSSR (Institut neftekhimicheskogo sinteza AN SSSR)

TITLE: Separation of cyclanes and branched alkanes from petroleum fractions by adsorption chromatography on activated carbon

SOURCE: Neftekhimiya, v. 6, no. 5, 1966, 659-664

TOPIC TAGS: petroleum, alkane, adsorption, adsorption chromatography

ABSTRACT: The adsorbability of hydrocarbons of different structures onto activated carbon BAU was determined in this gas-liquid chromatographic separation of various petroleum fractions. Polyalkyl substituted cyclanes are adsorbed least, n-alkanes most. Cyclanes with long side chains show a high degree of adsorption in comparison to polyalkyl substituted cyclanes, and branched alkanes have an intermediate position. In the absence of n-alkanes, the adsorption of cyclanes with long side chains is greater than that of branched alkanes, which is in turn greater than that of the polyalkyl substituted alkanes. Based on the differences in adsorption onto carbon, a method is developed for chromatographic separation of petroleum fractions to straight chain and branched alkanes and cyclanes. Orig. art. has: 4 tables.

Card 1/1 UDC: 547.21-125+547.592:543.544.2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

ACC NR: AP6034494 SOURCE CODE: UR/0204/66/006/005/0665/0670

AUTHOR: Bagriy, Ye. I.; A,osova, Ye. I.; Sanin, P. I.

ORG: Institute of Petrochemical Synthesis AN SSSR im. A. V. Topchiyev (Institut neftekhimicheskogo sinteza AN SSSR)

TITLE: Separation of adamantine from certain Balakhan and Surakhan petroleums

SOURCE: Neftekhimiya, v. 6, no. 5, 1966, 665-670

TOPIC TAGS: petrochemistry, petroleum, chromatography, intermolecular complex, polynuclear hydrocarbon

ABSTRACT: The adamantine content in one kerosene fraction and in three petroleums (high in naphthene hydrocarbons) from the Balakhan and Surakhan fields was determined, using a modification of the Landa and Gala methods. Adamantine was concentrated by multistage complexing with thiourea; gas-liquid chromatography was used for separation. This method is especially effective for concentrating and separating adamantine from petroleums containing gasoline fractions. The adamantine content in the investigated petroleums ranged from 0.0004-0.0013 weight percent (on weight of initial petroleum), the higher content occurring in the petroleum containing the greater amount of naphthene hydrocarbons. Other hydrocarbons accumulated in the extracts along with adamantine; their separation and identification will be studied further. "The authors

Card 1/2 UDC: 547.678.06:665.5 (479.24)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

ACC NR: AP6029023 SOURCE CODE: UR/0413/66/000/014/0024/0024

INVENTOR: Sanin, P. I.; Shepeleva, Ye. S.; Borodach, M. S.; Myannik, A. O.; Kagan, Yu. S.; Gel'fer, A. P.; Paykin, D. M.; Gamper, N. M.

ORG: none

TITLE: Preparation of esters of phosphoric and thiophosphoric acids. Class 12, No. 183751 [announced by Institute of Petrochemical Synthesis, AN SSSR (Institut neftekhimicheskogo sinteza AN SSSR)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 24

TOPIC TAGS: insecticide, chloroalkyl phosphate, chloroaliyl thiophosphate, ester, phosphoric acid

ABSTRACT: In the proposed method for the preparation of herbicides, the phosphoric and thiophosphoric esters of the general formula:

$$CCl_3(CH_2)_nY\underset{\underset{X}{\|}}{P}(OR)_2,$$

(where X and Y are O or S; n = 1, 4, 6, 8; and R is an alkyl) are obtained by the reaction of trichloroalkyl alcohols with tetrachloroalkanes [sic]. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 21Jun65/

Card 1/1 UDC: 547.26'118.07

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P.S.

PROCESSES AND PROPERTIES INDEX

The action of *tert*-butylmagnesium chloride on the ethyl esters of sebacic, azelaic and suberic acids. A. D. Petrov and P. S. Sanin. *J. Gen. Chem.* (U. S. S. R.) 8, 196-8(in French 198)(1938); *cf. C. A.* 32, 2084[4].—

When 2 mols. of Me_3CMgCl (I) and 0.5 mol. of Et sebacate (II) react, sebacic acid and a HO acid, m. 121°, are the main products. If 3.5 mols. of I and 0.2 mol. of II are refluxed in xylene for 7 hrs., isobutylene, C_4H_8, and a satd. hydrocarbon are given off, and the main product is *2,2,13,13-tetramethyl-3,12-tetradecanediol*, b. 195-205°, m. 95-6°. Liquid by-products are also formed. Under these conditions, Et azelate gives *2,2,12,12-tetramethyl-3,11-tridecanediol* b. 196-202°, m. 78-80°, and Et suberate gives *2,2,11,11-tetramethyl-3,10-dodecanediol*, b. 182-90°, m. 108°.

H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P. S.

CA

10

Synthesis and dehydration of bisecondary and bitertiary glycols of the series $C_nH_{2n+2}O_2$. A. D. Petrov and P. S. Sanin. *J. Gen. Chem.* (U. S. S. R.) 9, 2129-37(1939); cf. C. A. 32, 5370[illegible]. The following glycols are obtained by Grignard reaction in ether. Refluxing 40 g. Et adipate and iso-BuMgBr (from 100 g. iso-BuBr and 18 g. Mg) for 6 hrs. gave off isobutylene and isobutane and formed 30 g. *2,11-dimethyl-6,9-dodecanediol*, m. 52°; *dimethane*, m. 158°. If MeMgI is used, 2,7-dimethyl-2,7-octanediol (I) is formed (cf. Zelinskiĭ, *J. Russ. Phys.-Chem. Soc.* 38, 931(1906)). MeMgI (from 230 g. MeI and 36 g. Mg) and 70 g. Et sebacate, when treated at 0° for 1.5 hrs. and then refluxed for 2 hrs. and decompd. with NH_4Cl, yielded 92% *2,9-dimethyl-2,9-decanediol*, m. 62°. If EtMgBr is used, 70% *3,12-diethyl-3,12-tetradecanediol*, m. 72.5°, is formed. *5,8-Dibutyl-5,8-dodecanediol*, m. 103°, resulted in 45-g. yield from 23 g. Mg, 137 g. BuBr and 40 g. Et succinate at 0°. *5,10-Dibutyl-5,10-tetradecanediol*, m. 91°, formed in 62% yield from 18 g. Mg, 115 g. BuBr and 40 g. Et adipate by treating the mixt. at −15° for 1-2 hrs. and allowing to stand at room temp. for 12 hrs. A mixt. of 18 g. Mg, 115 g. BuBr and 50 g. Et sebacate, treated as above, gave 68% *5,14-dibutyl-5,14-octanediol*, m. 60°. *7,16-Dihexyl-7,16-docosanediol*, m. 48°, formed from 13 g. Mg, 120 g. hexyl bromide (b. 155-65°) and 34 g. Et sebacate in xylene by refluxing at 90-110° in an oil bath for 17 hrs. The reaction in ether gave a noncrystallizable oil. On heating with an equal wt. of anhyd. oxalic acid at 150-80° for 2-3 hrs., the secondary glycols failed to react, while the tertiary glycols are dehydrated to form the corresponding diolefin hydrocarbons in 60-80% yields. *2,7-Dimethyl-2,6-octadiene*, b. 161-3°, d_{4}^{20} 0.8005, n_D^{20} 1.4501. *2,9-Dimethyl-2,8-decadiene*, b. 77-9°, d_{4}^{20} 0.7957, n_D^{20} 1.4568. *3,12-Diethyl-3,11-tetradecadiene*, b. 171.5-2°, d_{4}^{20} 0.8173, n_D^{20} 1.463. *5,10-Dibutyl-5,9-tetradecadiene*, b. 201-2°, d_{4}^{20} 0.8215, n_D^{20} 1.465. *5,8-Dibutyl-5,7-dodecadiene*, b. 168-70°; it is contaminated by probably 2,2,5,5-tetramethyltetrahydrofuran. *5,14-Dibutyl-5,13-octadecadiene*, b. 231-2°, d_{4}^{20} 0.8219, n_D^{20} 1.466. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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SANIN, P. S.

USSR/Chemistry - Organosilicon Compounds Jul 52

"Concerning the Synthesis and Properties of Certain Triaryl-Alkylsilanes," P. S. Sanin, A. D. Petrov, Lab of Org Chem, Gor'kiy Polytech Inst

"Zhur Obshch Khim" Vol 22, No 7, pp 1124-1127

The syntheses of α-naphthyl-di-p-tolyl-ethylsilane, α-napthyl-di-p-tolyl-butylsilane, α-napthyl-di-p-tolyl-monoethoxysilane and α-napthyl-di-p-tolyl-silane were carried out for the 1st time.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P.S.

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 1954
Organic Chemistry

The synthesis and properties of some [redacted]
P. S. Sanin and A. D. Petrov (Gorkii [redacted]).
J. Gen. Chem. U.S.S.R. 22, 1107-9(1952)(Engl. translation).—See C.A. 47, 8029f.
H. L. H.

NF
7-28-54

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

Sanin, P. S.

Synthesis and properties of some [illegible]. P. S. Sanin (A. A. Zhdanov Polytech. Inst., [illegible]). [illegible] Khim. 23, [illegible] (1953).—To 12 g. Mg and 1 g. iodine in Et_2O was added in 2 portions 108 g. p-$BrC_6H_4SiEt_3$ in Et_2O, and after completion of the reaction (3 hrs. heating) the mixt. was boiled 1 hr. with 70 g. 1-$C_{12}H_{17}Si(OEt)_3$ in Et_2O, evapd., dild. with 100 ml. MePh, and heated 2 hrs. on a steam bath; treatment with NH_4Cl gave a wide range of products, including $PhSiEt_3$, b_7 102–4°, and 76 g. p-[1-$C_{12}H_{17}(EtO)_2Si$] $C_6H_4SiEt_3$ (I), b_7 242–5°, d_{20}^{20} 1.025; the product probably was somewhat contaminated with p-$C_6H_4(SiEt_3)_2$. Similarly, p-MeC_6H_4MgBr (from 106 g. RBr) refluxed 3 hrs. in PhMe with 33 g. I gave 26 g. (72%) p-[$EtO(1$-$C_{12}H_{17})(p$-$MeC_6H_4)Si$] $C_6H_4SiEt_3$, b_7 282–4°, d_{20}^{20} 1.0470. Similarly was obtained 80% p-[$Ph(EtO)(1$-$C_{12}H_{17})Si$] $C_6H_4SiEt_3$, b_7 274–6°, d_{20}^{20} 1.055. By replacing the EtO groups by alkyl groups (for method cf. C.A. 47, 8029f) the following p-[$RR'(1$-$C_{12}H_{17})Si$] $C_6H_4SiEt_3$ were obtained (R, R', % yield, b.p., and d_{20}^{20} given): *Et*, *Et*, 76, b_7 249–52°, 0.9943; *Et*, *Ph*, 90, b_7 276–8°, 1.0406; *Et*, p-MeC_6H_4, 85, b_7 284–6°, 1.035; *Bu*, p-MeC_6H_4, 60, b_7 293–5°, 1.024. A graph showing the drop in viscosity with temp. (60–100°) of the compds. with RR' = Et(p-MeC_6H_4) and *EtPh* is shown.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, P. S.

USSR.

Synthesis and properties of some cryptosilanes. P. S. Sanin. *J. Gen. Chem. U.S.S.R.* 23, 1029-31(1953)(English translation).—See *C.A.* 48, 8765c. H. L. H.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

Sakin, P.S.

4 2 May 3

Distr: 4E3d/4E4j/4E2c(j) 7

Direct synthesis of naphthyltrichlorosilane. P. S. Sanin and A. D. Petrov (Polytech. Inst., Gorki). *Zhur. Obshchei Khim.* 27, 926-8(1957).—I-$C_{10}H_7Cl$ with Si-Cu in a 14 × 650 mm. porcelain tube yielded with the usual Si-Cu alloy only 1-2% $RSiCl_3$ at 600°. If 20% Ag_2O is added to the alloy the yield rises to 10-12% and 2-3% $SiCl_4$ and 10-15% $C_{10}H_8$ are also formed. The best yield of $C_{10}H_7SiCl_3$ (I) was 25% when the Si-Cu alloy was mixed with 20% Ag_2O and dry HCl passed through the tube during the reaction at 500-40°; a flow rate of 8-10 g./hr. and finely divided alloy are essential to this yield. The product, b_4 148°, with EtMgBr readily gave $C_{10}H_7SiEt_3$, b_3 132-3°, d_{20} 0.9734, n_D^{20} 1.5712. I shows λ 312 and 319 mμ; since the pure I-isomer of I has a single band at 312 mμ, it is believed that I from the direct synthesis above is a mixt. of the *1*- and *2-isomers*.

G. M. Kosolapoff

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

Synthesis and properties of trisubstituted derivatives of 1-naphthylsilane. P. S. Sanin (Polytech. Inst., Gorki). Zhur. Obshchei Khim. 27, 1289-90(1957)—1-CuBaMgBr [illegible]

[illegible] Mg treated with [illegible] [illegible] BuMgBr [illegible] [illegible] The temp. of the reaction was raised to 5-20° for the higher-mol. wt. alcs. [illegible] M. [illegible]

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, S. A.; TRUBIN, A. I.

Characteristics of the mineral composition of the silt fractions of takyrs in the Murgab Oasis. Izv. AN Turk.SSSR. Ser.biol.nauk no. 6:57-63 '63. (MIRA 17:5)

1. Turkmenskiy nauchno-issledovatel'skiy institut zemledeliya.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, S.A.

Forms of potassium in virgin and irrigated soils of the Murgab Oasis. Izv. AN Turk. SSR. Ser. biol. nauk no.6:19-24 '64. (MIRA 18:4)

1. Institut pustyn' AN Turkmenskoy SSR.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

USSR / General and Special Zoology. Insects. P

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16471

Author : Degtyareva A.S., Sanin V.A., Granin E.F.
Inst : Not given
Title : The Effectiveness of New Chlororganic Insecticides in the Control of the Beet Weevil. (Effectivnost' novykh khlororganicheskikh insekticidov v bor'be so sveklovichnym dolgonosikom.)

Orig Pub: Nauchn. tr. In-ta entomol. i fitopatol. AN UkSSR, 1956,7,5-20.

Abstract: Laboratory, small-plot experiments, and production studies demonstrated that chlorothane, chlorothane with DDT, chlorindane, and chlorophene were practically equal in effectiveness when sprayed on the young beet sprouts; they brought about death of the weevil beetles (80 - 100%) in eight days.

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33

8 kg/ and 12 kg/ ... correspondingly, while those that remain ... development. In

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

USSR / General and Special Zoology. Insects.

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16477

Author : Rudnev D.F., Sanin V.A.
Inst : Institute of Entomology and Phytopathology Academy of Sciences Ukrainian Soviet Specialist Republic.
Title : The Use of New Forms of DDT Preparations in the Control of the Beet Weevil in Aeroplane Spraying. (Primeneniye novykh form preparatov DDT pri aviaopryskivanii v bor'be so sveklovichnym dolgonosikom).

Orig Pub: Nauchn. tr. in-ta entomol. i fitopatol. AN UkSSR, 1956, 7, 21-29

Abstract: No abstract.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.A.

USSR / General and Specialized Zoology. Insects. Insect and Mite Pests. P

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 44847

Authors : Rudnev, D.; Sanin, V.
Inst : Not given
Title : New Developments in the Aerochemical Control of the Beet Weevil in the Ukraine.

Orig Pub : Grazh. aviatsiya, 1957, No. 1, 32-33.

Abstract : When 15 litres/hect of 10 percent DDT in diesel fuel and 20 litres/ha of 4 percent DDT suspension in caseine were used against the beet weevil, the performance of the plane at an equal expenditure of active substance per single hectare was 1 1/2 times larger than when a 2 percent mineral-oil DDT emulsion was sprayed at 50 litres/ha, the cost of treatment was cut in half; the death of the weevil was respectively 90 percent, 80.4 percent, and 55.7 percent. The beet yield on the fields which

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.A., Cand Agr Sci —(diss) "The effectiveness of chlorinated terpenes in droplet aerial spraying in the control of the garden beet weevil." Kiev, 1958. 18 pp (Min of Agr UkSSR. Ukrainian Acad of Agr Sci), 100 copies. List of author's works, pp 17-18 (10 titles) (KL 43-58,117)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

BONDIN, V.P.; SVECHNIKOV, I.D.; CHIGAREV, G.A.; SAZONNIK, Kh.V.; SANIN, V.A.; FOMYUK, M.K.

Possible methods for aerial chemical control of the Colorado beetle. Zashch. rast. ot vred. i bol. 6 no.9:47-49 S '61. (MIRA 16:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut Grazhdanskogo vozdushnogo flota, Vsesoyuznyy institut zashchity rasteniy i Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy.
(Aeronautics in agriculture) (Potato beetle--Extermination)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V. A., kand. sel'skokhoz. nauk

Use of chlorinated terpenes in the control of pests of agricultural crops. Khim. prom.[Ukr.] no.1:31-36 Ja-Mr '62. (MIRA 15:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy.

(Terpenes) (Pesticides)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, Viktor Arsen'yevich; ONISHCHENKO, I.I., red.

[Low volume aerial spraying against pests and weeds] Maloob"emnoe aviaopryskivanie protiv vreditelei i sorniakov. Kiev, Urozhai, 1964. 191 p. (MIRA 18:1)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.A., kand. sel'skokhoz. nauk

Controlling Bruchus in the field. Zashch. rast. ot vred. i bol. 9 no.6:30-31 '64 (MIRA 17:7)

1. Ukrainskiy institut zashchity rasteniy.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SHPITS, Zh.D.; SANIN, V.A.; KISH, S.S.; TSAPKO, V.G.

Granulated chlorophos for corn fields. Zashch. rast. ot vred. i bol. 9 no.9:19 '64. (MIRA 17:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy i Gosudarstvennyy nauchno-issledovatel'skiy institut Grazhdanskogo vozdushnogo flota.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V., kand. sel'skokhoz. nauk; KISH, S., inzh.

Low volume aerial spraying against weevils. Zashch. rast. ot vred. i bol. 10 no.1:18-19 '65. (MIRA 18:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.D.

Standardization by branches in the transformer industry.
Standartizatsiia 27 no.1:39-40 Ja '63. (MIRA 17:4)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.G., kand.med.nauk

Results of preparatory treatment and application of prosthesis in patients with sequelae of cerebrospinal trauma. Protez. i protezostr. no.10:94-99 '64.

Comprehensive plan for application and construction of prostheses in 1964 - 1965. Ibid.:158-163

(MIRA 18:12)

1. TSentral'nyy nauchno-issledovatel'skiy institut protezirovaniya i protezostroyeniya, Sekretar' Uchenogo soveta Ministerstva sotsial'nogo obespecheniya RSFSR.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.G.

Perforation of an acute hemorrhaging gastric ulcer. Sov. med. 24 no. 10:117-119 O '60. (MIRA 13:12)

1. Iz khirurgicheskogo otdeleniya (zav. A.M. Shakhova) Klinicheskoy gorodskoy bol'nitsy No. 2 (glavnyy vrach Ya. M. Klyavin) Moskovskoy oblasti.

(PEPTIC ULCER)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.G.; BUKHNY, A.F.

Perforations of ulcers of the stomach into the pleural cavity. Khirurgiia 37 no.2:125-127 F '61. (MIRA 14:1)

1. Iz khirurgicheskogo otdeleniya (zav. A.M. Shakhova) Klinskoy gorodskoy bol'nitsy No.2 (glavnyy vrach Ya.M. Klyavin) Moskovskoy oblasti.
(PEPTIC ULCER) (PLEURA--DISEASES)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.G.

Problems in the preparation for prosthesis of patients with sequelae of spine and spinal cord injuries. Ortop.,travm.i protez. no.5:28-33 '61. (MIRA 14:8)

1. Iz TSentral'nogo nauchno-issledovatel'skogo instituta protezirovaniya i protezostroyeniya (dir. - zasluzh. deyatel' nauki prof. B.P. Popov; rukovoditel' raboty - prof. Ye.K. Molodaya).
(SPINE--WOUNDS AND INJURIES) (PROSTHESIS)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.G. (pos. Firsanovska, Moskovskoy obl., Oktyabr'skoy zh., d., ul. Kutuzova, d.17)

Pathological fractures of the bones of the lower extremities with lesions of the spinal cord. Ortop., travm.i protez. 23 no.5:83-84 My '62. (MIRA 15:11)

1. Iz TSentral'nogo instituta protezirovaniya i protezostroyeniya (dir. - zasluzh. deyatel' nauki prof. B.P. Popov).
(EXTREMITIES, LOWER--FRACTURES) (SPINAL CORD--DISEASES)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, V.G. (Moskovskaya obl., pos. Firsanovka, ul. Kutuzova, d.17) USSR

Retrograde invagination of the small intestine in ascariasis, Meckel's diverticulum, and acute phlegmonous appendicitis. Vest.khir. 87 no.11:115-117 N '61. (MIRA 15:11)

1. Iz khirurgicheskogo otdeleniya Klinskoy gorodskoy bol'nitsy No.2 (gl. vrach - B.V. Smirnov) Moskovskoy oblasti.
(APPENDICITIS) (ILEUM)
(INTESTINES--INTUSSUSCEPTION) (ASCARIS AND ASCARIASIS)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

POLUSHKIN, A.S.; SANIN, V.P.

Ust'-Balyk oil field and methods for its commercial prospecting. Geol. nefti i gaza 8 no.8:33-36 Ag '64. (MIRA 17:8)

1. Tyumenskiy filial Sibirskogo nauchno-issledovatel'skogo instituta geologii, geofiziki i mineral'nogo syr'ya.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANIN, Yu.V., inzh.

New control system for electric pulleys. Bezop.truda v prom. 4 no.4: 31 Ap '60. (MIRA 13:9)

(Pulleys)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANINA, A. P., Engineer Cand Tech Sci

Dissertation: "Lead Steels, Their Properties and Application."

26/6/50

Central Sci Res Inst of Technology and Machine Construction - TsNIITMASh.

SO Vecheryaya Moskva
Sum 71

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

SANINA, A.P., kandidat tekhnicheskikh nauk.

The use of basic open hearth steel for cold-rolling working rolls. Trudy TSNIITMASH No.64:32-40 '54. (MLRA 9:1)
(Rolling mills)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447120009-3

129-58-8-12/16

AUTHORS: Sanina, A. P. and Timofeyev, M.M., Candidates of Technical Science

TITLE: Investigation of the Low Temperature Stability of Certain Steel Compositions (Issledovaniye khladostoykosti nekotorykh sostavov stali)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 8, pp 57-58 (USSR)

ABSTRACT: The development of industry in the northern regions of the Soviet Union requires the developing of steels suitable for use at low temperatures which do not contain scarce and expensive elements. Investigations have shown that from the point of view of stability at low temperatures the most favourable influence is exerted by Mn, Si and Cr (Table 1, group A) and Mn combined with a low P content (Table 1, group B). During the smelting of the steels in the induction furnace additional deoxidation with aluminium (1 kg/ton) was effected in addition to the usual deoxidation. For comparison with the experimental steels, carbon steels were also produced with deoxidation under equal conditions. The low temperature brittleness was evaluated on the basis of the

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129-58-8-12/16

Investigation of the Low Temperature Stability of Certain Steel Compositions

critical brittleness temperature and the inclination of the steels to work hardening and mechanical ageing, determined by measuring the impact strength between the temperatures +20 to -100°C. After forging and subsequent normalisation annealing and tempering at 550°C (heats Nos. 1 and 2, Fig.1) higher impact strengths and lower critical brittleness temperatures (-90 to -100°C) were obtained than after high temperature tempering at 680°C (heats Nos. 3 to 6, Fig.1 and Table 1). Mechanical ageing was effected by work hardening by means of tensile stresses and subsequent tempering at 280°C. With increasing work hardening from 2 to 10% the impact strength decreased and the critical range of brittleness became displaced towards higher temperatures. On the basis of the results of the investigations, the authors recommend for use under conditions of low atmospheric temperatures the low alloy steels 12KhGS and 15G, the compositions of which are as follows: 12KhGS - 0.1-0.15% C, 0.5-0.7% Si, 0.7-1% Mn, 0.5-0.68% Cr, $<$ 0.03% S, $<$0.03% P;

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