FOMIN , Yu.Ya., kandidat tekhnicheskikh nauk.

Eliminating supplementary fuel injections in engines. Avt. i trakt. prom. no.2:14-16 F '57. (MLRA 10:3)
(Automobiles--Engines)

FOMIN, [illegible] kand.tekhn.nauk

Initial rising of fuel pump needles used in high-speed engines. Nauch.trudy OIIMF no.13:134-146 '57. (MIRA 11:11)
(Fuel pumps) (Gas and oil engines)

FOMIN, Yu.Ya., kand.tekhn.nauk

Designing fuel systems for engines using compression fuel combustion. Nauch.trudy OIIMF no.13:147-163 '57.
(MIRA 11:11)

(Fuel pumps) (Gas and oil engines)

AUTHOR: Fomin, Yu.Ya. 90-58-5-10/10

TITLE: The Pressure Valve of the Diesel Fuel Pump (O nagnetatel'-nom klapane toplivnogo nasosa dizelya)

PERIODICAL: Energeticheskiy Byulleten', 1958, Nr 5, pp 30-33 (USSR)

ABSTRACT: The fuel supply of the diesel engine determines the performance of the engine and depends considerably on the pressure valve of the fuel pump. Results of tests with a slide valve type fuel pump are given, whereby the revolutions of the camshaft ranged between 300 - 1,100 per min. The fuel was injected through a closed nozzle of the KKAZ type. The dependence of a single fuel injection on the height of the discharging annulet at various positions of the regulating rack and with the revolutions of the fuel pump at 490 rpm is shown in Figure 1. Experiments have shown that the injection factor η_H is greatly influenced by the height of the discharging annulet. The curves of the pump work with valve No 4 in which the discharging annulet has a height of 1.0 mm are given in Figure 2. At a value of 850 rpm it is evident that η_H is constant. Figure 3 shows the dependence of the maximal injection pressure p_{max} on the height of the discharging annulet at 1,100 rpm.

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This demonstrated dependence contradicts the present opinion that the maximum injection pressure is independent from the height of the annulet. The character of change of the residual pressure valve in the pipeline p_T is also dependent on the height of the discharging annulet as shown in Figure 4. The increase of the p_T values at an increase of revolutions with the height of the discharging annulet remaining the same is explained by different closing conditions of the valve. The change in the height of the maximum lift of the valve exerts a considerable influence on the injection process at small revolution values and in single injections of the pump.
There is 1 table, 5 figures, and 2 Soviet references.

AVAILABLE: Library of Congress

Card 2/2 1. Fuel pumps-Performance 2. Diesel engines-Fuel injection

FOMIN, Yu.Ya., kand.tekhn.nauk

Perfecting the hydraulic design of diesel-engine fuel systems. Energomashinostroenie 4 no.12:11-15 D '58. (MIRA 11:12)
(Diesel engines—Design)

FOMIN, Yu.Ya., kand.tekhn.nauk

Calculating the end of the fuel injection process in diesel engines having enclosed burners. Nauch.trudy OIIMT no.16: 63-76 '58. (MIRA 11:11)
(Diesel engines) (Oil burners)

FOMIN, Yu.Ya., kand.tekhn.nauk.

Determining indicated horsepower and constructing indicator diagrams for engines with divergent pistons. Sudostroenie 24 no.8:30-33 Ag '58. (MIRA 11:10)

(Marine engines)

10(4) PHASE I BOOK EXPLOITATION SOV/2501

Fomin, Yuriy Yakovlevich

Gidrodinamicheskiy raschet toplivnykh sistem sudovykh dizeley (Hydrodynamic Calculation of Fuel Systems in Marine Diesel Engines) Moscow, Izd-vo "Morskoy transport," 1959. 82 p. Errata slip inserted. 3,000 copies printed.

Ed.: M.I. Chernov; Ed. of Publishing House: S.A. Semenova; Tech. Ed.: Ye.A. Tikhonova.

PURPOSE: This book is intended for scientific workers and industrial engineers in the field of propulsion. It may also be useful to students of advanced courses in propulsion.

COVERAGE: The author describes a new method of hydrodynamic calculation of heavy fuel systems for marine diesels having comparatively long compression pipelines. One of the features of these fuel systems is the importance of the effect of hydrodynamic resistance on injection. The omission of the calculation of this resistance may lead to inadmissibly large errors. The proposed calculation method is based on the solution of the telegraph equations obtained in calculating

Card 1/4

the hydraulic drag in the initial equations. In addition to the verification of the method and the derivation of the calculating expressions, the book gives explanatory examples and discusses the calculation method for basic types of marine diesel fuel systems. In conclusion, the author gives a method of improving the hydrodynamic calculation of fuel systems of high-speed diesels on the basis of the wave-equation without taking hydraulic resistance into account. No personalities are mentioned. There are 21 Soviet references.

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1. Composition of Equations for Calculating the Flow of Fuel in Compressor Conduits in Calculating Hydraulic Resistance Forces 8

2. Determination of Speed of Flow of Fuel at Points of Diagram Included Between Straight Lines $x = \lambda_1 t$ and $x = \lambda_2 t$, and Axis of Abscissas 13

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Hydrodynamic Calculation of Fuel Systems (Cont.) SOV/2501

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AVAILABLE: Library of Congress

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IS/mg
11-24-59

FOMIN, Yu., dots.; SUKHOMLIN, V., insh.; REMESKOV, A., insh.

Purification of the circulating oil system on "Kazbek"-type tankers. Mor.flot 19 no.12:35-36 D '59.
(MIRA 13:3)

1. Odesskiy institut inzhenerov morskogo flota (for Fomin).
(Marine diesel engines--Lubrication)

FOMIN, Yu.Ya

Graphoanalytical method of calculating the operation of free-piston gas generators. Sudostroenie 25 no.10:30-33 O '59.
(MIRA 13:2)
(Marine gas turbines)

SUKHOMLIN, V.R., inzh.; FOMIN, Yu.Ya., dotsent

Taking measures to mechanize and automate the power plant of "Kazbek" type tankers. Biul.tekh.-ekon.inform.Tekh.upr.Min.mor.flota 5 no.4: 13-29 '60. (MIRA 15:1)

1. Odesskiy institut inzhenerov morskogo flo[redacted]
(Tank vessels) (Marine engineering) (Automatic control)

FOMIN, Yu.Ya., dotsent

Rated nomogram for the combustion equation in diesel engines. Izv. vys.ucheb.zav.; mashinostr. no.4:133-136 '61. (MIRA 14:6)

1. Odesskiy institut inzhenerov morskogo flota.
(Diesel engines) (Nomography (Mathematics))

45

L 16618-63

S/145/62/000/012/008/011

AUTHOR: Fomin, Yu. Ya., Candidate of Techn. Sciences, Docent

TITLE: The improvement in fuel atomizing in Diesel engines at low revolutions and feeds

PERIODICAL: Izvestiya vysshikh uchebynkh zavedeniy. Mashinostroyeniya, no. 12, 1962, 123-129

TEXT: The author indicates measures for increasing the fuel injection pressure at low speeds and feeds. From the design viewpoint this is a simple method. It is accomplished by increasing the residual pressure in the supercharging conduit, or by tightening of the atomizer spring. In the first case correcting compressing valves must be added to the engine. An increase in tightening of the atomizer spring improves the quality of atomization at low revolutions and low feeds. The range of increase in these pressures depends on the maximum pressure of the fuel injection at normal revolutions and permissible stresses in the elements of fuel supply equipment. One Soviet reference. There are 1 formula and 6 figures.

ASSOCIATION: Odesskiy institut inzhenerov morskovo flota (Odessa Institute of Marine Engineers) SUBMITTED: July 3, 1961

Card 1/1

TAMATOR, Daniil Borisovich, prof., doktor tekhn. nauk [deceased]; FOMIN, Yu.Ya., dots.; KAMKIN, S.V., dots.; RAPOPORT, L.I., kand. tekhn. nauk; SHCHELGACHEV, R.V., inzh.-mekhanik; SANDLER, N.V., red.izd-va; KOTLYAKOVA, O.I., tekhn. red.

[Diesel engines; their design and calculation] Dizeli, kompanovka i raschet. Izd.3., perer. i dop. Leningrad, Izd-vo "Morskoi transport," 1963. 439 p. (MIRA 16:7)
(Diesel engines--Design and construction)

TANATAR, Daniil Borisovich, prof., doktor tekhn. nauk [deceased];
Prinimali uchastiye: FOMIN, Yu.Ya., dots.; KAMKIN, S.V., dots.; RAPOPORT, L.I., kand. tekhn. nauk, red.; SANDLER, N.V., red.izd-va; KOTLYAKOVA,O.I., tekhn. red.

[Diesel engines; their arrangement and design] Dizeli; komponovka i raschet. Izd.3., perer. i dop. Leningrad, Izd-vo "Morskoi transport," 1963. 439 p. (MIRA 16:11)
(Diesel engines--Design and construction)

ACCESSION NR: AP4040340 S/0152/64/000/005/0065/0068

AUTHOR: Fomin, Yu. Ya.

TITLE: Compressibility of motor fuels DT-1, DT-2, and DT-3

SOURCE: IVUZ. Neft' i gaz, no. 5, 1964, 65-68

TOPIC TAGS: motor fuel, fuel compressibility, injection unit, modulus of elasticity, fuel viscosity/ DT 1 fuel, DT 2 fuel, DT 3 fuel

ABSTRACT: The author studied the properties of motor fuels DT-1, DT-2, and DT-3 with densities of 0.934, 0.946 and 0.950 g/cm^3 respectively at 20C. Their viscosity values were 36 x 10^{-6}, 55 x 10^{-6} and 66.6 x 10^{-6} m^2/sec at 50C. Tests were performed in an experimental injection unit after preheating up to 150C and above. There were special provisions in the experimental setup for measuring the speed of propagation of the wave to an accuracy of ± 2%. The experiments showed that for all fuels the speed of propagation was practically the same in the temperature interval 40-80C. At higher temperatures (120-140C), the speed of propagation in DT-1 was lower than that in DT-3 by about 5.5%. The compressibility coefficient is given by the formula

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ACCESSION NR: AP4040340

$$\alpha = -\frac{1+pk}{2p} + \sqrt{\left(\frac{1+pk}{2p}\right)^2 + \frac{1}{a^2\rho_t p} - \frac{k}{p}},$$

where ρ_t is the density of the fuel at atmospheric pressure and at the temperature at which the experiment was conducted, E is the Young's modulus of the conduit material, μ is the Poisson coefficient, R and r are the external and internal radii of the conduit, and $k = \frac{2}{E}\left(\frac{R^2 + r^2}{R^2 - r^2}\right)\mu$. The mean coefficient of compressibility is given by the formula

$$\alpha_{cp} = (1 - \alpha_{cp} p)\frac{\int_0^p \alpha dp}{p}.$$

The plotted curves of these coefficients for DT-1 at various pressures were approximately parabolic in form. Orig. art. has: 5 formulas and 4 figures.

ASSOCIATION: Odesskiy institut inzhenerov morskogo flota (Odessa Institute for Naval Engineers)

SUBMITTED: 23Dec63 ENCL: 00

SUB CODE: FP NO REF SOV: 002 OTHER: 000

Card 2/2

L 22580-65 EWT(m)/EPF(c)/T Pr-4 WE
ACCESSION NR: AP5002245 S/0122/64/000/012/0019/0023

AUTHOR: Fomin, Yu. Ya. (Candidate of technical sciences)

TITLE: General equations of the injection process of viscous fuel in a diesel engine and their solution with an electronic computer

SOURCE: Vestnik mashinostroyeniya, no. 12, 1964, 19-23

TOPIC TAGS: fuel injection, diesel engine, diesel fuel, fuel injector

ABSTRACT: An electronic digital computer method is presented for solving the hydrodynamic fuel flow equations for injection of viscous fuels in a diesel engine. Although a method for solving this problem was previously presented by the author (Gidravlicheskiy raschet toplivnykh sistem sudovykh dizeley. Izd-vo "Morskoy transport," 1959), the present method is particularly suited for use with digital computers. The general boundary conditions at the entrace to the pressurizing circuit are described by 7 equations (11 in the previous work) and 3 inequalities. Three of these equations are differential equations and are solved by finite difference methods, the others are solved by successive approximations. The fuel velocity at the entrance is found by $u_{0,i+1} = u_{1,i+1} + \frac{1}{a\rho}(p'_n - p'_{n_1})$ (where a = pressure wave

Card 1/3

L 22580-65
ACCESSION NR: AP5002245

velocity, p_n' = pump outlet pressure found from differential equations; the subscript 1 refers to the initial value and no subscript to the final value during a time interval Δt.) The flow velocity at the outlet of the pressurizing circuit is similarly found by $u_{L,i-1} = u_{L-1,i+1} - \frac{1}{a\rho}(p_f - p_{f_1})$ (where p_f = nozzle pressure). The case of a flow discontinuity in the piping (cavitation) is also treated by assuming the pressure at the flow separation equal to zero and expressing the fuel velocity to the left and right of the discontinuity by algorithms similar to the above. This method is used to solve the injection process for a fuel viscosity of 0.2×10^{-4} m^2/sec and a tubing length of 2.6 m. Figure 1 on the Enclosure shows a comparison of the calculated and experimental nozzle pressure (2) and (1) respectively and a calculated pressure assuming no friction (3). Orig. art. has: 1 figure and 24 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01 SUB CODE: PR, DP

NO REF SOV: 002 OTHER: 000

Card 2/3

FOMIN, Yu.Ya.

Compressibility of DT-1, DT-2, and DT-3 motor fuels. Izv. vys. ucheb. zav.; neft' i gaz 7 no.5:65-68 '64. (MIRA 17:9)

1. Odesskiy institut inzhenerov morskogo flota.

FOMIN, Yu.Ya., kand. tekhn. nauk

Effect of pressure and temperature on the velocity of the propagation of waves, the coefficients of compressibility, and the density of diesel fuel. Trakt. i sel'khozmash. no.9:6-8 S '64. (MIRA 17:11)

1. Odesskiy institut inzhenerov morskogo flota.

[illegible], Yu.Ya., [illegible]

Regulation of the fuel flow phases in diesels with superchargers.
Energomashinostroenie 10 no.11 10-11 N '64 (MIRA 18:2)

L 53789-65
ACCESSION NR: AP5009874 UR/0115/65/000/002/0035/0036
536.5:621.038

AUTHOR: Fomin, Yu. Ya.; Gundorin, B. K. 6 B

TITLE: Measuring the rapidly-changing temperature of fuel under high-pressure conditions

SOURCE: Izmeritel'naya tekhnika, no. 2, 1965, 35-36

TOPIC TAGS: diesel engine, diesel fuel

ABSTRACT: The measurement of the temperature of the fuel in a diesel-engine fuel injector is described. The constant temperature component was measured by a copper-constantan 0.03—0.06-mm thermocouple having a thermal inertia of 15—20 msec, and the variable component, by a 0.015-mm tungsten resistance thermometer with a thermal inertia of 4—6 msec. An oscillogram shows the entire injection process: lifting the injector needle, fuel pressure, and temperatures. The resistance thermometer reading was behind that of the pressure by only 1—2 msec. Orig. art. has: 3 figures.

Card 1/2

L 53789-65
ACCESSION NR: AP5009874

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: PR, IE

NO REF SOV: 000 OTHER: 000

Card 2/2

FOMIN, Yu.Ya., kand. tekhn. nauk, dotsent

Eliminating additional fuel injections in engines in case of a high residual pressure in the pressure piping. Izv. vys. ucheb. zav.; mashinostr. no.2:111-118 '65.
(MIRA 18:5)

L 29552-66 EWT(m)/T WW/JW/WE

ACC NR: AP6012270 SOURCE CODE: UR/0114/65/000/011/0024/0026

69
B

AUTHOR: Fomin, Yu. Ya. (Candidate of technical sciences, Docent)

ORG: none

TITLE: Effect of density, pressure and temperature on the compressibility of engine fuels

SOURCE: Energomashinostroyeniye, no. 11, 1965, 24-26

TOPIC TAGS: compressible fluid, liquid fuel, fluid density, fuel test, temperature test, fluid pressure

ABSTRACT: Various types of heavy motor fuel with densities of 0.85-0.99 g/cm^3 are experimentally studied as a basis for deriving formulas to find the coefficients of compressibility as a function of pressure and temperature. The specific weights and viscosities of the various fuels studied are given. The formulas derived show that the compressibility of motor fuels is affected primarily by pressure, temperature and fuel density while the fractional composition has little effect. The effect of pressure on the compressibility of motor fuel increases considerably with a rise in temperature. The true and average coefficients of compressibility may be calculated from the formulas

UDC: 621.43.019.004-12

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L 29552-66

ACC NR: AP6012270

$$a = a_0 + a_1 p + a_2 p^2, \qquad a_{av} = \frac{a_0 + \frac{a_1}{2} p + \frac{a_2}{3} p^2}{1 + \left(a_0 + \frac{a_1}{2} p + \frac{a_2}{3} p^2\right) p}.$$

where the coefficients a_0, a_1 and a_2 depend on fuel density and temperature. A comparison with experimental data shows that these formulas give an error of ±4% for the entire range of operational fuel temperatures and pressures up to 700 kg/cm^2. Formulas are also given for finding the fuel density and rate of pressure wave propagation for various types of fuel at a given pressure and temperature. Orig. art. has: 3 figures, 1 table, 5 formulas.

SUB CODE: 21/ ORIG REF: 006/ OTH REF: 001

Card 2/2

POBUL', L. [Pobul, L.], kand.tekhn.nauk; FOMINA, A., kand.tekhn.nauk

Refining and fractionation of mixtures of saturated dicarboxylic acids produced by oxidation of kerogen in kukersite. Eesti tead akad tehn fuus 11 : no.3:203-211 '62.

1. Academy of Sciences of the Estonian S.S.R., Institute of Chemistry.

FOMINA, A., doktor khim.nauk; YERUSENKO, V.

Oxidative decomposition of kerogen in dictyonema shale by alkaline potassium permanganate. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh.nauk 12 no.2:189-197 '63. (MIRA 16:10)

1. Academy of Sciences of the Estonian S.S.R., Institute of Chemistry.

FOMINA, A., kand. tekhn. nauk; SHARAPOV, V.

Using portable gas analyzers, GB-3 and PGF-11-54, to measure the concentration of petroleum products vapors. Mor. flot 23 no.9:36-37 S '63. (MIRA 16:11)

NAPPA, L.; FOMINA, A., doktor khim. nauk

Nitrogen of the organic matter in dictyonema shale. Part 3. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh. nauk 12 no.4:446-449 '63. (MIRA 17:1)

1. Institut khimii AN Estonskoy SSR.

NAPPA, L.; FOMINA, A., doktor khim. nauk

Determination of the nitrogen in the organic matter of Dictyonema shale. Part 2. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh. nauk 12 no.3:320-326 '63. (MIRA 16:11)

1. Institut khimii AN Estonskoy SSR.

NAPPA, L.; FOMINA, A., doktor khim. nauk

Nature of the melanoidins taking part in the formation of kerogen of dictyonema shale. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh. nauk 13 no.2:143-147 '64. (MIRA 17:9)

1. Academy of Sciences of the Estonian S.S.R., Institute of Chemistry.

YERUSENKO, V.; FOMINA, A., doktor khim.nauk

Oxidizing decomposition of kerogen in dictyonema shale by alkaline potassium permanganate. Part 2. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh.nauk no.4:319-328 '64. (MIRA 18:4)

1. Academy of Sciences of the Estonian S.S.R., Institute of Chemistry.

NAPPA, L.; FOMINA, A.

Hydrolysis products of kukersite kerogen. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh. nauk 14 no.1:163-165 '65.
(MIRA 18:11)

1. Institut khimii AN Estonskoy SSR.

FOMINA, A.A.

Regenerating legumes and multiplying the variety of grasses on meadows.
Dokl. Akad. sel'khoz. 24 no.7:18-21 '59. (MIRA 12:10)

1.Dedinovskaya opytnaya stantsiya po poymennomu lugovodstvu.
Predstavlena akademikom I.V. Larinym.
(Legumes) (Grasses) (Pastures and meadows)

FOMINA, A.A., mladshiy nauchnyy sotrudnik

Using 2,4-D for killing weeds on meadows. Zashch. rast. ot vred. i bol. 5 no.25-26 Ja '60. (MIRA 14:6)

1. Dedinovskaya opytnaya stantsiya po poymennomu lugovodstvu. (2,4-D) (Pastures and meadows)

FOMINA, A. A.

Cand Agr Sci - (diss) "Effect of fertilizers, herbicides, and mowing on the botanical composition of grass stands and the harvest yield of alluvial-plain meadows." Moscow, 1961. 15 pp; (Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev); 200 copies; price not given; (KL, 5-61 sup, 198)

TOPCHIYEVA, K.V.; TAKHTAROVA, G.N.; FOMINA, A.I.

Vapor-phase esterification of aromatic acids with ethers on oxide catalysts. Neftekhimiia 2 no.5:744-749 S-O '62. (MIRA 16:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.
(Acids, Organic) (Esterification) (Ethers)

FOMINA, A.I.

Sorghum should be cultivated. Inform. biul. VDNKH no.10: 20-21 '63. (MIRA 18 5

1. Starshiy ekskursovod pavil'ona "Kukuruza" na Vystavke dostizheniy narodnogo khozyaystva SSSR.

L 11957-65 EWT(m)/EPF(c)/T/EWP(j) Pc-4/Pr-4/Pb-4 SSD/AEDC(b)/AEDC(a)/
AS(mp)-2/ASD(p)-3 RM/MLK
ACCESSION NR: AT4048191 S/0000/64/000/000/0099/0108

AUTHOR: Alekseyeva, A. V.; Berman, S.S.; Gol'bert, K. A.; Datskevich, A. A.; Moshinskaya, M. B.; Fomina, A. I.

TITLE: Determination of trace impurities in monomers

SOURCE: Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po gazovoy khromatografii, 2d, Moscow, 1962. Gazovaya khromatografiya (Gas chromatography); trudy* konferentsii. Moscow, Izd-vo Nauka, 1964, 99-108

TOPIC TAGS: monomer analysis, impurity determination, gas chromatography, flame ionization detector, molecular sieve, thermal conductivity detector

ABSTRACT: The paper concerns the determination of trace impurities in ethylene and propylene to be used as raw materials for polymers and copolymers. Light impurities (H_2, N_2, O_2, CO_2, CH_4) were determined with the thermal conductivity detector G-9, heavy impurities with the flame ionization detector. The sensitivity was increased considerably by the use of programmed temperatures. The determination of light impurities is based on the enrichment effect obtained if the impurities are adsorbed to a lesser degree than the main component; the width of the band of heavy components was determined by the coefficient of their adsorbability from the mixture, that of the light

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L 11957-65

ACCESSION NR: AT4048191

impurities by the spread of the adsorptive zone of the main component (ethylene, propylene). Formulas for finding the enrichment value are presented. Two adsorption columns were used, the first for enrichment, the second for separation. Separation of N_2 and O_2 required the use of a molecular sieve in the column, with silica gel as the adsorbent. With small loads the degree of enrichment increased linearly with the amount of the specimen introduced, but there was a limit to the latter. Simultaneous tests were conducted with the concentrator at temperatures of -17 and 20C and with the molecular sieves at 80C, with satisfactory results. Heavy impurities (C_1-C_4) were satisfactorily separated on, for example, aluminum oxide soaked with dicyanodiethylsulfide, using the flame-ionization detector made by OKBA. Inza brick and tripolite with other modifiers were also tested. This work served as a basis for the development for the KhTM-1 chromatograph (1961). The apparatus is described and illustrated schematically. It was concluded that programmed temperatures will lead to a severalfold increase in the heights of the peaks, but that they should be used only with a very pure carrier gas. Various adsorbents may be used. Orig. art. has: 8 figures and 2 formulas.

ASSOCIATION: None

SUBMITTED: 16 Jun '64

Card 2/3

L 62079-65 EPF(c)/EWP(j)/EWA(c)/EWT(m) Pc-4/Pr-4 RM
ACCESSION NR: AP5016845 UR/0204/65/005/003/0449/0452
547.313.2:543.544.451.064

AUTHORS: Alekseyeva, A. V.; Gol'bert, K. A. (deceased); Fomina, A. I.

TITLE: Determination of microadmixtures of hydrocarbons C_1-C_4 in pure ethylene

SOURCE: Neftekhimiya, v. 5, no. 3, 1965, 449-452

TOPIC TAGS: hydrocarbon, impurity content, ethylene/ EMU 3 amplifier, EPP 09 registration device, KhT 2M chromatograph, A 1 aluminum oxide

ABSTRACT: A procedure is offered for determining hydrocarbon (C_1-C_4) admixtures in ethylene by using a KhT-2M chromatograph with flame-ionization detection, an EMU-3 amplifier of ionic current, and an EPP-09 registering device. The admixtures were removed in two series-connected towers, one filled with A-1 aluminum oxide, another--with diisodecylphthalate saturated brick (the first column worked under specific temperature conditions, the second--at the temperature of the surrounding medium). Results obtained with the artificial ethylene-impurities mixture are shown graphically in Fig. 1 and the relation of the heights of the peaks on this curve to the quantity of substance in Fig. 2 on the Enclosure. Minimum detectable concentrations of the admixtures separating before ethylene were 0.3 part per million of

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ACCESSION NR: AP5016845

4

ethylene parts, and those of C_3 hydrocarbons, acetylene, butene and divinyl separating after ethylene were 0.5-1 part per million. Subsequent exchange of tower locations and the replacement of diisodecylphthalate in the second tower by diisoamylphthalate did not alter the separation order of the admixtures. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Nauchno-issledovatel'skiy in-t sinteticheskikh spirtov i organicheskikh produktov (Scientific Research Institute of Synthetic Alcohols and Organic Products)

SUBMITTED: 01Jun64 ENCL: 02 SUB CODE: OC, GC

NO REF SOV: 001 OTHER: 006

Card 2/4

L 62079-65

ACCESSION NR: AP5016845

ENCLOSURE: 01

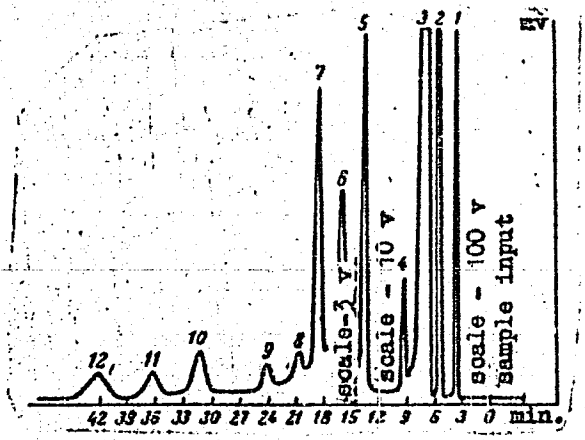

Fig. 1. Separation of admixtures in ethylene. 1- methane; 2- ethane; 3- ethylene; 4- propane; 5- propylene; 6- isobutane; 7- butane; 8- allene; 9- acetylene; 10 and 11- butenes; 12- divinyl

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L 62079-65

ACCESSION NR: AP5016845

ENCLOSURE: 02

6

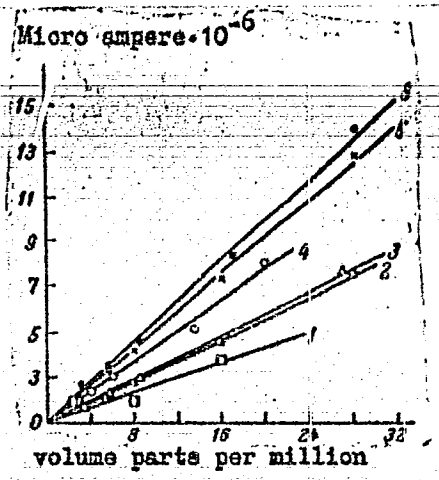


Fig. 2. Relation of peak height to the quantity of substance (sample volume 1 ml). 1- acetylene; 2- butane; 3- propylene; 4- methane; 5- ethylene; 6- propane

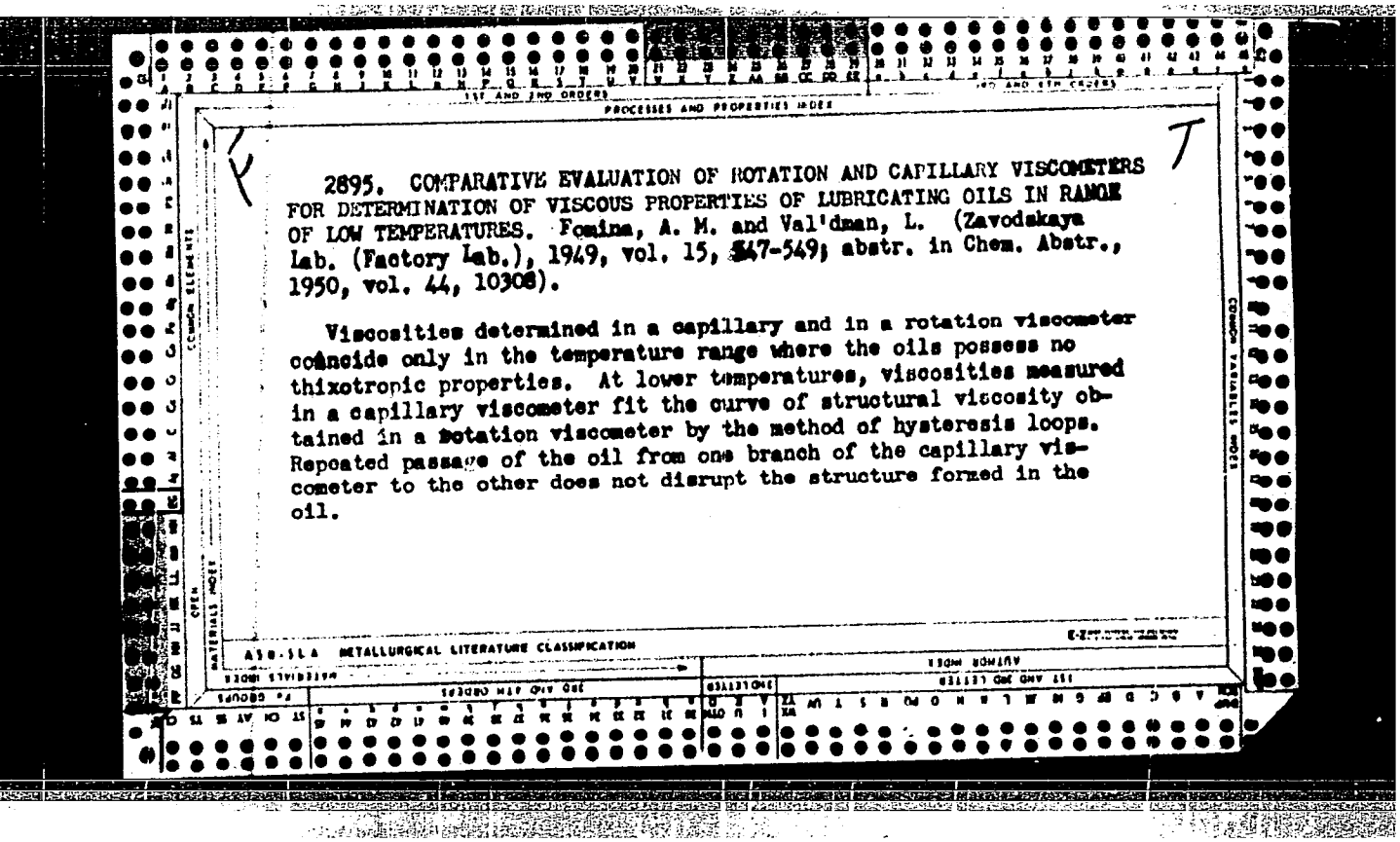
Card 4/4

SABLINA, Z.A.; FOMINA, A.M.; CHURSHUKOV, Ye.S.; SAKODYNSKAYA, T.P.

Evaluation of the performance of sulfur-containing diesel fuels and their components by means of rapid laboratory methods. Khim. i tekh. topl. i masel 8 no.5:57-61 My '63. (MIRA 16:8)

SHARAPOV; V.I. FOMINA, A.M.

Determining the tars present according to All-Union State Standards 8489-58. Nefteper. i neftekhim. no. 3:16-18 '64. (MIRA 17:5)



PROCESSES AND PROPERTIES INDEX

2895. COMPARATIVE EVALUATION OF ROTATION AND CAPILLARY VISCOMETERS FOR DETERMINATION OF VISCOUS PROPERTIES OF LUBRICATING OILS IN RANGE OF LOW TEMPERATURES. Fomina, A. M. and Val'dman, L. (Zavodskaya Lab. (Factory Lab.), 1949, vol. 15, 547-549; abstr. in Chem. Abstr., 1950, vol. 44, 10308).

Viscosities determined in a capillary and in a rotation viscometer coincide only in the temperature range where the oils possess no thixotropic properties. At lower temperatures, viscosities measured in a capillary viscometer fit the curve of structural viscosity obtained in a rotation viscometer by the method of hysteresis loops. Repeated passage of the oil from one branch of the capillary viscometer to the other does not disrupt the structure formed in the oil.

A10-51A METALLURGICAL LITERATURE CLASSIFICATION

C A.

22

The physico-mechanical properties of lubricating oils at their temperature of solidification. V. I. Val'dman and A. M. Fomina. *Kolloid. Zhur.* 12, 342-6(1950).—The oils [illegible] classified in 2 groups. One group included oils contg. greater than 2% paraffin hydrocarbons; they solidified at −5 to 5° and had at the solidification temp. max. viscosity (η) of 10–3000 and min. viscosity (η_1) (after destruction of the structure) between 3 and 300 g./cm. sec., the ratio η/η_1 being less than 9. The paraffin content of the other group was less than 1%, the oils solidified below −13°, had η_1 between 1800 and 10⁶, and η_1 between 470 and 15,000 the ratio η/η_1 being 2 to 310. The yield points of all oils varied between 20 and 330 dynes/sq. cm. The common opinion that solidification occurs at the temp. at which η is 100 is incorrect.

J. J. Bikerman

CA

7

Direct determination of oxygen in scales (from internal-combustion engines). V. L. Val'diman, A. M. Fomina, and E. A. Bondarevskaya. *Zavodskaya Lab.* 16, 709–71 (1950); cf. *C.A.* 41, 808k.—Data are given on the O_2 in the mineral portion of the scales which was obtained by roasting the scale in a muffle at 850–900°. B. Z. Kamich

FOMINA, A.M.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor fuels. Lubricants. I-13

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12991

Author : Klimov K.I., Fomina A.M.
Title : Behavior of Oils, Thickened with Polyisobutylene, in Transmission Assemblies

Orig Pub : Novosti neft. tekhn. Neftepererabotka, 1955, No 6, 17-18

Abstract : Experimental use was made, in ZIS-151 and GAZ-63 cars, of transmission oil prepared by thickening of a mixture consisting of 53% summer nigrol and 47% arctic diesel fuel, with polyisobutylene (I) of molecular weight (MW) 24000, used in an amount of 3%. The automobiles traveled over 12000Km at air temperatures from +2 to -32°, with a change of oil after 6000 Km. It is shown that I of the given MW undergoes decomposition, and after a 6000 Km run, the viscosity of the oil, at 100°,

Card 1/2

KLIMOV, K.; VINOGRADOV, V.; SENICHKIN, M.; FOMINA, A.; VILENKIN, A.

New oils for automobile transmission units. Avt.transp. 33 no.11: 17-19 N '55. (MLRA 9:3)

(Automobiles--Lubrication)

SOV/92-58-7-22/37

AUTHORS: Leont'yev, B.I. and Fomina, A.M.

TITLE: The Speedy Dehydration of Dark Petroleum Products (Uskoreannoye obezvozhivaniye temnykh nefteproduktov)

PERIODICAL: Neftyanik, 1958, Nr 7, p 25 (USSR)

ABSTRACT: The authors state that the analysis of a petroleum product sample containing a considerable amount of water is complicated, and is particularly difficult when heavy viscous oils or mazout have to be analysed. The dehydration of such samples by presently existing methods takes a long time. Therefore the authors have proposed a new method of dehydrating the samples of dark petroleum products, which is based on the absorption of moisture by filter paper, capillary ascension of moisture and evaporation. They describe the proposed method and state that the vessel with the product and filter paper has to be heated to 60° - 120°C until moisture bubbles disappear from the surface of the petroleum product. In order to speed up evaporation a stream of air may be directed on to the upper part of the filter paper which is projected over the edge of the vessel. The new method ensures the dehydration of 150 grams of mazout containing 2 - 3 percent of water in 30 - 40 minutes.

Card 1/1 1. Petroleum--Dehydration 2. Oils--Analysis 3. Petroleum--Testing equipment 4. Petroleum--Test results

KHAZANOV, V.S., kand.tekhn.nauk; FOMINA, A.M., inzh.

Electric and light measurements of fluorescent lamps. Svetotekhnika 6 no.2:8-15 F '60. (MIRA 13:5)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Fluorescent lamps)

[redacted], V.S., kand.tekhn.nauk; FOMINA, A.M., inzh.

Concerning the quality of IU-16 luxmeters. Svetotekhnika 7 no.11:18-19 N '61. (MIRA 14:11)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Light—Measurement)

Z/011/62/019/004/007/008
E073/E335

AUTHORS: Sarapov, V.I. and Fomina, A.M.

TITLE: On determining the pressure of saturated vapours of motor fuels according to the GOST 6668-53 standard

PERIODICAL: Chemie a chemicka technologie; Prehled technicke a hospodarske literatury, v.19, no. 4, 1962, 174, abstract Ch 62-2377 (Khimiya i tekhnologiya topliv i masel, no. 1, 1962, 64 - 65)

TEXT: A calculation according to the given formulae has to be made more accurate by using a correction factor, which takes into consideration the volume of the water vapours. The thus-obtained values are compared with data from published literature and with values determined from the original equation. 2 tables, 4 references.

[Abstracter's note: this is a complete translation.]

Card 1/1

KHAZANOV, V. S.; FOMINA, A. M.

Control of light and electric parameters of luminescent lamps. Standartizatsiia 26 no.10:27-29 O '62. (MIRA 15:10)

(Fluorescent lamps—Testing)

L 22629-65 EWT(m)/EPF(c)/EWA(d)/T/EWP(t)/EWP(b) Pr-4 IJP(c) JD/WB/DJ

ACCESSION NR: AP5001628 S/0318/64/000/012/0028/0029

AUTHOR: Sharapov, V. I., Fomina, A. M.

TITLE: Preparation of lead sheets used for determining the corrosion activity of oils according to GOST 5126-49 and GOST 8245-56

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1964, 28-29

TOPIC TAGS: oil corrosiveness, corrosion testing, lead corrosion, lubricating oil, lead polishing, chemical polishing

ABSTRACT: A rapid and reliable method is presented for cleaning and polishing the lead sheets used in standard Soviet corrosion tests for lubricants (Gost 5126-49 and Gost 8245-56). The sheets are immersed for 10-15 min. in chemically pure 2 N hydrochloric acid, washed with water, and dried with filter paper. Results obtained by both methods and with both highly corrosive oils and high-quality lubricants were readily reproducible, whereas larger deviations were obtained with lead sheets which were polished by the standard mechanical method. The proposed technique and mechanically polished sheets gave similar corrosion values. The sheets can be used 5 times if prepared by the new technique, and they can be produced

Card 1/2

L 22629-65

ACCESSION NR: AP5001628

from large sheets or by casting or rolling. Orig. art. has: 3 tables.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: FP, IE

NO REF SOV: 000 OTHER: 000

Card 2/2

L 22233-66 EWP(j)/EWT(m)/T/EWP(v) IJP(c) RM/WW/WE
ACCESSION NR: AP6006494 (N) SOURCE CODE: UR/0138/65/000/010/0052/0054

AUTHOR: Englin, B. A.; Solomatin, A. V.; Fomina, A. M.; Tugolukov, V. M. 79 B

ORG: Scientific-Research Institute of the Rubber Industry (Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti)

TITLE: Investigation of the mutual effect of rubber coatings and fuels on their properties during storage

SOURCE: Kauchuk i rezina, no. 10, 1965, 52-54

TOPIC TAGS: jet fuel, fuel storage, storage tank, insulated storage tank, fuel contamination, fuel corrosiveness, rubber, surface active coating, corrosion protection/SKN 26 rubber, SKN 40 rubber, T 1 jet fuel, T 2 jet fuel, 88 N glue, 3 300 glue, DS diesel fuel

ABSTRACT: The authors studied the effect of fuels on the degree of swelling of SKN-26 and SKN-40 rubbers and the effect of these rubbers, as well as brand 88-N and 3-300 glues and a sealing agent based on a brand U-30s Thiokol paste, vulcanized at room temperature and at 145C, on the properties of fuels. The degree of swelling of the rubbers was investigated in T-1 and T-2 jet fuels, in DS diesel fuel, and in solar oil at a temperature of 18—25C for a period of 6 months. In
Card 1/2 UDC: 678.026.3:662.75:539.196

L 22233-66
ACCESSION NR: AP6006494

order to select control media, mixtures containing 80% cetane and 20% green oil or 90% cetane and 10% green oil were used for the study of the degree of swelling of rubber. It was found that the degree of swelling of SKN-26 rubber in T-1 and T-2 and in DS amounts to 10--15%, and that of SKN-40 rubber to 8--12%. In the contacting of the rubber coatings of fuel storage tanks with jet fuels, the greatest effect on the acidity of the fuels is produced by SKN-40 rubber and brand 88-N glue. SKN-26 rubber has an insignificant effect on the acidity of the fuels. U-30s sealing agent has almost no effect on the acidity of the fuels. Brand 88-N glue has the greatest effect on the content of gums in the fuel, i.e., the acidity of the fuels and the gum content in the fuels increase. The other physicochemical properties of the fuels remain unaltered. In conclusion, the authors recommend SKN-26 rubber with any glue and a sealing agent based on brand U-30s Thiokol paste as an anticorrosion coating for fuel storage tanks. Orig. art. has: 1 figure and 3 tables.

SUB CODE: 07, 11 / SUBM DATE: none

Card 2/2 nst

L 07946-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD
ACC NR: AP6007129 SOURCE CODE: UR/0311/66/000/006/0024/0026

AUTHOR: Fomina, A. M. (Engineer)

ORG: All-Union Institute of Lighting Engineering (Vsesoyuznyy svetotekhnicheskiy institut)

TITLE: Use of selenium photocells for measuring variable luminous fluxes

SOURCE: Svetotekhnika, no. 6, 1966, 24-26

TOPIC TAGS: light modulation, selenium, photoelectric cell, light source

ABSTRACT: The author studies the characteristics of various types of selenium photocells used for measuring the luminous flux from light sources flickering at rates from 25 to 8200 cps. The stream of light from incandescent lamps was modulated by rotating slotted discs. The average photocell current was measured on M95 microammeters with internal resistances of 5000, 600 and 11 Ω. The results show that SF-10 photocells may be recommended for measuring modulated luminous fluxes since their deviation from Talbot is no more than 3-4% even at high levels of illumination. The F-102 photocell showed fatigue and instability at levels of illumination exceeding 700 lx. A photocell made by the British company "Megatron" with a sensitive area of 115 cm^2 gave a poorer performance. The readings from this element are dependent both on level of illumination and on the frequency of light modulation (in the 25-160 cps range) at a

L 07946-67
ACC NR: AP6027129

constant level of illumination. Specially selected selenium cells with a light sensitive area of 3-10 cm^2 conform to Talbot's law with an accuracy of no less than 2% for levels of 30-100 lx and flicker[illegible]. In using selenium photocells for technical measurements of flickering light sources, the work must be done at levels of illumination where the luminous characteristics are nearly linear (nonlinearity of less than ±5%).. The upper limit of this range is determined by the maximum instantaneous value of the pulsating luminous flux. Selenium photocells with a sensitive area of more than 100 cm^2 are not practical for light measurements. Orig. art. has: 1 table, 1 formula

SUB CODE: 20/ SUBM DATE: None/ ORIG REF: 002

Card 2/2 VC

L 24183-65 EWT(m)/EPF(c)/T Pr-4 WE

ACCESSION NR: AP5004257 S/0065/65/000/001/0052/0054

AUTHOR: Englin, B. A.; Churshukov, Ye. S.; Fomina, A. M.; Maslennikova, Z. V. B

TITLE: Method for the qualitative detection of hydrogen sulfide in jet fuels

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 1, 1965, 52-54

TOPIC TAGS: jet fuel, hydrogen sulfide, analysis, potentiometry

ABSTRACT: A new potentiometric method has been proposed for the qualitative detection of hydrogen sulfide in jet fuel. The method consists of determining the potential of a silver sulfide electrode (GOST 9558-60 standard) before and after removal of hydrogen sulfide by a 3-minute treatment of the fuel with 2% NaOH in a 1/1 ratio, followed by washing the fuel to neutral wash waters. A change in the electrode potential resulting from the NaOH treatment, not exceeding 100 mv, indicates that there is no hydrogen sulfide in the fuel. Since there is no elemental sulfur in commercial TS-1 jet fuel, it cannot interfere. When applied to TS-1 fuel, the new method proved much more reliable and objective than the existing GOST 10227-62 test

Card 1/2

L 24183-65

ACCESSION NR: AP5004257 O

employing filter paper impregnated with lead acetate. Therefore, the new method is suitable for replacing the test called for in item 7 of the GOST 10227-62 standard for quality control of jet fuel at the plant or in the field. Orig. art. has: 5 tables. [SM]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3175

Card 2/2

DREVAL', V.Ye.; TAGER, A.A.; FOMINA, A.S.

Concentrated solutions of polymers. Part 4: Viscosity of polystyrene solutions in various solvents. Vysokom.soed. 5 no.9:1404-1410 S '63. (MIRA 17:1)

1. Ural'skiy gosudarstvennyy universitet imeni Gor'kogo.

FOMINA, A.S., dots.

Reactivity of patients with extrapulmonary localization of a tubercular process. Trudy LMI 2:130-139 '55 (MIRA 11:8)

1. Kafedra gospital'noy terapii (zav. - deystvitel'nyy chlen AMN SSSR prof. M.V. Chernourtskiy) Pervogo Leningradskogo meditsinskogo instituta imeni akademika I.P. Pavlova.
(TUBERCULOSIS)

USSR/General Problems of Pathology - Pathophysiology of Infectious Process. U.

Abs Jour : Ref Zhur - Biol., No 19, 1958, 89495

Author : Fomina, A.S.
Inst : "
Title : On the Problem of the Composition of the Blood Serum Proteins in Tuberculous Patients Undergoing Therapy, as an Index of Their Body Reactivity.

Orig Pub : Terapevtich. arkhiv, 1957, 29, No 6, 29-36.

Abstract : The blood serum proteins were studied in 2 groups of tuberculous patients (TP):1) acutely ill patients with high TP and tendency to hyperergic reactions, but with an apparently good response to therapy, 2) patients with a more severe and prolonged course of illness, responding poorly to therapy. In the TP of the second group there was a more marked decrease of the total proteins and of the albumin fraction than in the first group; the greatest

Card 1/2

USSR/General Problems of Pathology - Pathophysiology of Infectious Process. U.

Abs Jour : Ref Zhur - Biol., No 19, 1958, 89495

decrease was observed in TP with lympho-hematogenic (LHF) and cavernous forms, particularly when complicated by amyloidosis. During the active course of the process, particularly in the acute phase of the illness, with development of serositis and in TP with LHF, an increase of albumin concentrations. When the tuberculous process quiets down the ratio between the albumins and globulins returns to normal. The study of the protein fractions of serum is a valuable method of determination of the dynamics of the reactivity and trophic processes in the organism of TP. -- L.M. Model'.

Card 2/2

FOMINA, A. S., Doc M[illegible] Sci (diss) -- "Some problems of the reactivity of the organism in tuberculosis in clinical-physiological terms". Leningrad, 1959. 31 pp (Min Health RSFSR, First Leningrad Med Inst im Acad I. P. Pavlov, Chair of Hospital Therapy), 200 copies (KL, No 23, 1959, 171)

Formula A.S.

2

322. OXIDIZING DESTRUCTION OF THE KEROGEN OF KUKERSITE. II. Formula A.S. and Pobul, L.Ya. (Izv. Akad. Nauk EstSSR (Bull. Acad. Sci. Estonian S.S.R.), 1953, Vol. 2, (4), 551-562; title in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (10), 35292).

FOMINA, A.S.

3

The separation and identification of saturated dibasic acids. III. Oxidative degradation of Kukersite kerogen. A. S. Fomina and L. Ya. Enlut. *Izvest. Akad. Nauk Eston. S.S.R.* 4, No. 1, 48-58(1955); cf. *CA* 2, No. 4(1956)).—Partial oxidation of kerogen with alk. $KMnO_4$ (oxidation of 50% of the C present) results in the formation of monobasic acids volatile with steam and nonvolatile oxalic acid and other dibasic acids. These acids, up to pimelic acid, were sepd. chromatographically by the method of Hiquchi, *et al.* (*CA*, 46, 6039g) in a SiO_2 column with water as a buffer, 1*M* Na citrate soln, pH 5.2, was used for acids above pimelic acid; with different contens. of AmOH and BuOH in CH_2Cl_2 as volatile solvents. Succinic, glutaric, adipic, pimelic, suberic, and azelaic acids were identified, and some viscous acids of unknown compn. were also found. The total yield of dibasic acids above oxalic acid is estd. to represent about 10% of the total C in kerogen. The higher dibasic acids are assumed to be formed by partial oxidation of naphthenic derivs., ω-hydroxy acid polymers, aldehyde acids, dihydric alcs. and other aliphatic derivs., esters with fatty acids and ethers with satd. alcs., some terpine derivs., etc. The major part of kerogen is considered to be definitely nonaromatic in character.

W. M. Sternberg

FOMIN, A. S.

2447. SOME PROPERTIES OF SHALE-KUKERSITE. Fomin, A.S. (Izv. Akad. Nauk EstSSR, Ser. fiz. mat. Nauk (Bull. Acad. Sci. Estonian S.S.R., Ser. phys. math. Sci.), 1956, vol. 5, (1), 42-54; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (15), 52181). Variation of the true and apparent specific gravity of shale during thermal treatment (250-750°C) causes increase of porosity not only in the zone of low-temperature distillation, but also in the zone of bitumenization of the organic matter. The increase in porosity is due to the high content of mineral grains, the complete dispersion of which occurs when the concentration of kerogen is greater than 50%. According to the proportions of organic and mineral components, the shale in the bitumenization zone either completely retains its original structure, becomes plastic, or melts. Study of the thermal conversions of the kerogen of shale-kukersite between 200 and 400°C shows that the transition from high molecular weight solid kerogen to low molecular weight fusible thermo-bitumen is connected with its prior dehydrogenation. Raising the temperature of treatment of the shale accelerates the bitumenization of the kerogen and causes further conversion of complex compounds that are unstable under the conditions obtaining into more simple compounds.

FOMINA, A.

Action of nitric acid on kekersite-shale kerogen.

p. 7 (Trudy) No. 2, 1956. Tallin, Estonia

SO: Monthly Index of East European Accessions (EEAI) LC, - Vol. 7, No. 1, Jan. 1958

AUTHOR: Fomina, A.S., Candidate of Technical Sciences 23-58-1-3/10

TITLE: Kukersite, its Chemical Nature and Origin (Kukersit, yego khimicheskaya priroda i proiskhozhdeniye)

PERIODICAL: Izvestiya Akademii nauk Estonskoy SSR, Seriya tekhnicheskikh i fiziko-matematicheskikh nauk, 1959, Nr 1, pp 19-33 (USSR)

ABSTRACT: The first information on the existence of combustible shales in the coastal region of the Baltic Sea originates from 1791. Kukersite is one of them. It is a deposit of the Lower Silurian period. Studies as to its origin have been conducted since the time it was discovered. The author analyzes the research work carried out during 1951-1957, and finds that modern science confirms the observations and hypotheses of earlier years, i.e. that kukersite is of marine origin and primarily consists of organic material which has turned into a colloid substance mingled with sand and clay. The following scientists are mentioned as important contemporary contributors to researches on the chemical properties of kukersite: S.S. Baukov proved by experiments that the organic material of kukersite had been accumulating as a result of a sedimentary process under the influence of oxidation and reduction. N.L. Dilaktorskiy conducted microscopic

Card 1/2

investigations on kerogen kukersite samples and proved the form structure of kerogen to be the globular structure of organic colloid substance.
There are 2 tables and 33 references, 22 of which are Soviet, 8 German, 2 English and 1 Swiss.

ASSOCIATION: Institut khimii Akademii nauk Estonskoy SSR (Institute of Chemistry of the Estonian SSR Academy of Sciences)

SUBMITTED: October 22, 1957

1. Kukersite--Chemical properties 2. Kukersite--Research and Development

AUTHOR: Fomina, A.S., Candidate of Technical Sciences 23-58-2-2/9

TITLE: Kukersite, Its Chemical Nature and Origin (Kukersit, yego khimicheskaya priroda i proiskhozhdeniye) (Continued from Izvestiya Akademii nauk Estonskoy SSR, Nr 1)

PERIODICAL: Izvestiya Akademii nauk Estonskoy SSR, Seriya tekhnicheskikh i fiziko-matematicheskikh nauk, 1958, Nr 2, pp 91-104 (USSR)

ABSTRACT: Kukersite is a fuel mineral of marine origin. Deposits of the organic matter of contemporary kukersite have taken place under oxydizing conditions without preserving the regular structure of the organisms that served as initial material for the synthetization of this so-called "aquatic humus". The author quotes the opinions of various scientists with regard to the chemical nature of kukersite. Some of them hold that considering the high content of phenols ascertained in the semicoking tar, phenolic structures must be inherent in kukersite kerogen. The author, however, on checking existing literary and experimental material, concludes that kerogen does not contain any considerable content of ready phenolic structures nor does it contain a benzol ring as is assumed by some scientists who applied inadequate research methods. There are 50 references, 36 of which are Soviet, 12 German,

Card 1/2

Kukersite, Its Chemical Nature and Origin

23-58-2-2/9

1 English and 1 Swiss.

ASSOCIATION: Institut khimii Akademii nauk Estonskoy SSR (Institute of Chemistry of the Academy of Sciences of the Estonian SSR)

SUBMITTED: Oct 22, 1957

Card 2/2 **1. Kukersite - Sources 2. Kukersite - Analysis 3. Fuels - Sources**

FOMINA, A. S.

ХИМИЧЕСКАЯ ПРИРОДА КЕРОГЕНА ПРИБАЛТИЙСКОГО ГОРЮЧЕГО СЛАНЦА КУКЕРСИТА И НОВЫЙ ПУТЬ ЕГО ИСПОЛЬЗОВАНИЯ

А. С. Фомина, Л. Я. Побуль, З. А. Дегтерева

VIII Mendeleyev Congress for General and Applied Chemistry in
Section of Chemistry and Chemical Technology of Fuels,
publ. by Acad. Sci. USSR, Moscow 1959

abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 15 March 1959.

5(3)

SOV/23-59-2-7/8

AUTHORS: Degtereva, Z.A., and Fomina, A.S., Candidate of Technical Sciences

TITLE: Production of the Dibasic Acids C_4 - C_{10} from the Oil Shale Kukersite

PERIODICAL: Izvestiya Akademii nauk Estonskoy SSR, Seriya tekhnicheskikh i fiziko-matematicheskikh nauk, 1959, Nr 2, pp 123-136 (USSR)

ABSTRACT: The authors present data on the oxidation of kukersite kerogen into dibasic saturated acids using nitric acid of various concentrations, at different temperatures, intervals of time, pressures and quantities of oxidizer. Proceeding from the experimental data, the authors have worked out a system for the industrial treatment of kukersite shale kerogen containing 85-87% of organic matter. The yield of dibasic acids, under optimum conditions, is as follows: 1) 50-55% based on the kerogen using 99% nitric acid, at an expenditure of 4.5 tons of oxidizer per ton of a technically pure mixture of dibasic

Card 1/2

Production of the Dibasic Acids C_4 - C_{10} from the Oil Shale Kukersite

acids; 2) 40-43% based on kerogen using dilute acid (autoclave procedure) at an expenditure of 3.5 to 4.5 tons of oxidizer - 60% nitric acid. The production of dibasic acids from oil shale kukersite is profitable as shown by an estimate of expenses on raw and auxiliary materials. There are 9 tables, 4 diagrams and 16 references, 13 of which are Soviet, 1 French, and 2 English.

FOMINA, A.S.

11(7) PHASE I BOOK EXPLOITATION SOV/2996

Akademiya nauk SSSR. Institut goryuchikh iskopayemykh

Genezis tverdykh goryuchikh iskopayemykh (Genesis Of Solid Fuels) Moscow, AN SSSR, 1959. 358 p. Errata slip inserted. 2,000 copies printed.

Sponsoring Agency: Vsesoyuznoye khimicheskoye obshchestvo im. D. I. Mendeleyeva. Moskovskoye otdeleniye.

Resp. Eds.: N. M. Karavayev, Corresponding Member, USSR Academy of Sciences, and N. G. Titov, Doctor of Chemical Sciences; Ed. of Publishing House: A. L. Bankvitser; Tech. Ed.: I. F. Kuz'min.

PURPOSE: This collection of articles is intended for geochemists, geologists, and other specialists interested in the genesis of solid mineral fuels.

COVERAGE: The collection of papers on the genesis of solid mineral fuels has been prepared for presentation at the 2nd All-Union Conference on this subject. The formation of humic acids and peat from the decomposition of microorganisms and plants is discussed in connection with studies on the origin of hard coal and brown coal and on the role of certain mineral components in the coal-forming process. The chemical composition of peat and the organic mass of coal is analyzed and shown in a number of tables. Estonian "Kukkersite" oil shales are analyzed as are the brown coals of the Dnepropetrovsk basin. Metamorphism and carbonization of coal found in different parts of the Urals and the Ukrainian SSR are also discussed. The transformation of parent matter into combustible minerals is analyzed. References accompany individual articles.

Raudsepp, Kh. T. Genesis of Estonian Kukkersite Oil Shale 69

Fomina, A. S. On the Question of the Origin of Baltic Kukkersite Oil Shale 77

Karavayev, N. M., and I. A. Vikman. Lignite and Initial Stages of Coal Formation 98

Syabryay, V. T. Origin of Brown Coal Found in the Dnepropetrovsk Basin of the Ukrainian SSR 106

Chernousov, Ya. M. Irregular Carbonization of Mesozoic Coal Found on the Eastern Flank of the Central and Northern Urals 121

Bogolyubova, L. I. Petrographic and Chemical Characteristics of Some Types of Coal From Volchanskoye and Bogoslovskoye Deposits 137

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S/023/60/000/003/002/012
C111/C222

AUTHORS: Nappa, L., and Fomina, A.S., Candidate of Technical Sciences

TITLE: On the Question on the Nitrogen of the Organic Part of Dictyonema Shale

PERIODICAL: Izvestiya Akademii nauk Estonskoy SSR,. Seriya Tekhnicheskikh i Fiziko-Matematicheskikh nauk, 1960, No.3, pp.195-204

TEXT: The authors investigated a test piece of 120 kg of Dictyonema shale taken from Maardu. The kerogen of this shale has a content of nitrogen of 2-3%. A hydrolysis with mineral acids was carried out, where according to the method of the one-dimensional paper chromatography described in (Ref.25) in the hydrolysate there were found nine mono amino acids: 1) $CH_2(NH_2)COOH$, 2) $CH_3CH(NH_2)COOH$, 3) $CH_3CH(CH_3)CH(NH_2)COOH$, 4) $CH_3CH(CH_3)CH_2CH(NH_2)COOH$, 5) $C_2H_5CH(CH_3)CH(NH_2)COOH$, 6) $HOCH_2CH(NH_2)COOH$, 7) $HOOC\ CH_2CH_2CH(NH_2)COOH$ and traces of 8) $CH_2(NH_2)CH_2CH_2COOH$, 9) $C_6H_5CH_2CH(NH_2)COOH$. With respect to the origin of the kerogen the authors deviate from the opinion of Manskaya (Ref.26); they assume that it can be traced back to proteins and bacteria. The authors mention

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On the Question on the Nitrogen of the Organic Part od Dictyonema Shale

S/023/60/000/003/002/012
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Arkhangel'skiy, Luha, Kirret, Siirde, Rägo, Polikarpov, Gerasimov, Tikk, Professor V.L.Kretovich, N.N.Bakh and Zh.V.Uspenskaya. They thank Professor V.L.Kretovich and Zh.V.Uspenskaya. There are 4 figures, 6 tables and 26 references: 16 Soviet, 2 German and 8 American.

ASSOCIATION: Institut khimii Akademii nauk Estonskoy SSR (Chemical Institute of the Academy of Sciences of the Esthonian SSR)

SUBMITTED: October 24, 1959

Card 2/2

NAPPA, L., FOMINA, A.S., kandidat tekhnicheskikh nauk

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1. Institut khimii Akademii nauk Estonskoy SSR.
(Nitrogen) (Dictyonema) (Shale)
(Amino acids) (Chromatography)

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Analyzing dicarboxylic acid mixtures by the method of distributive chromatography on silica gel. Khim. i tekh. topl. i masel. 6 no.10: 55-59 O '61. (MIRA 14:11)

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LIAKUMOVICH, A.G.; PONOMARENKO, V.I.; FOMINA, A.S.

Effect of the standard specifications of the PN-6 oil on the plastic-elastic properties of the GKMS-30ARM-15 rubber. Kauch. i rez. 22 no.5:47-48 My '63. (MIRA 16:7)

1. Sterlitamakskiy zavod sinteticheskogo kauchuka.
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(Mineral oils--Standards)

FOMINA, Aleksandra Sergeyevna; POBUL', Lind.
DEGTEREVA, Zinaida Aleksandrovna; KIRRET, O., red.;
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1. Chlen-korrespondent AN Estonskoy SSR (for Kirret).
2. Redaktorsko-izdatel'skiy sovet AN SSSR (for Skvortsova).

AP0029085

SOURCE CODE: UR/0413/66/000/014/0121/0121

INVENTOR: Fomina, A. S.; Rayg, Kh. A.; Degtereva, Z. A.; Veski, R. E.

ORG: none

TITLE: Plant-growth stimulator. Class 45, No. 184063

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 121

TOPIC TAGS: plant growth regulator, polycarboxylic aliphatic acid, polycarboxylic aliphatic acid salt, aqueous solution, polycarboxylic acid, plant growth

ABSTRACT: It is known that polycarboxylic acids of the aliphatic series, which are the by-product in the preparation of saturated C_4—C_{10} dicarboxylic acids from kerogen of oil shales, are used as plant-growth stimulators. It is proposed to use the polycarboxylic acids in the form of aqueous solutions of their K, NH_4, and Ca salts in concentrations of 0.0001 to 0.1%, based on the dry salt. [WA-50; CBE No. 11]

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ACC NR: AP6029065 SOURCE CODE: UR/0413/66/000/014/0121/0121

INVENTOR: Fomina, A. S.; Rayg, Kh. A.; Degtereva, Z. A.; Veski, R. E.

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Card 1/1 UDC: 631.811.98

[illegible] FOMINA, A.V. A/[illegible] 12

[illegible] nervous system in regulation of milk secretion. A. V. [illegible] (J. Physiol., USSR, 1951, 37, [illegible]—216).— The effects of [illegible], atropine, adrenaline, and carbachol were studied on the milk yield of goats and cows. The results are discussed in relation to the rôle of smooth muscle tonus in the expulsion of milk and the effect of milking on the muscle tonus.

D. H. SMYTH.

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Co-author with P. M. Svintsov and I.I. Ochkina of an article "On the Characteristics of Atypical Fowl Plague". (VIEV).
SO: Veterinariya; Vol. 24; No. 3; 7-10; March 1947 unclassified
Trans. # 322 by L. Lulich

USSR/Medicine - Fowl Plague Jan 51

"Test of the Neutralizing and Preventive Properties of Serum Produced From Sheep Hyperimmunized by the Virus of Asiatic Fowl Plague," A. Ya. Fomina, Cand Vet Sci, I. I. Ochkina, Sci Collaborator

"Veterinariya" No 1, p 51

Tests properties of blood serum produced from sheep hyperimmunized over period of 8 mo by introducing 465 ml of virus material subcutaneously and intraperitoneally. Two-5 ml of serum administered 3-5 days before infection of chickens by

LC 173T75

USSR/Medicine - Fowl Plague (Contd) Jan 51

the virus of Asiatic fowl plague showed prophylactic property of serum. Lists effects of various quantities of serum in neutralizing multiples of lethal doses of the virus.

FOMINA, A., Ya.,

LC

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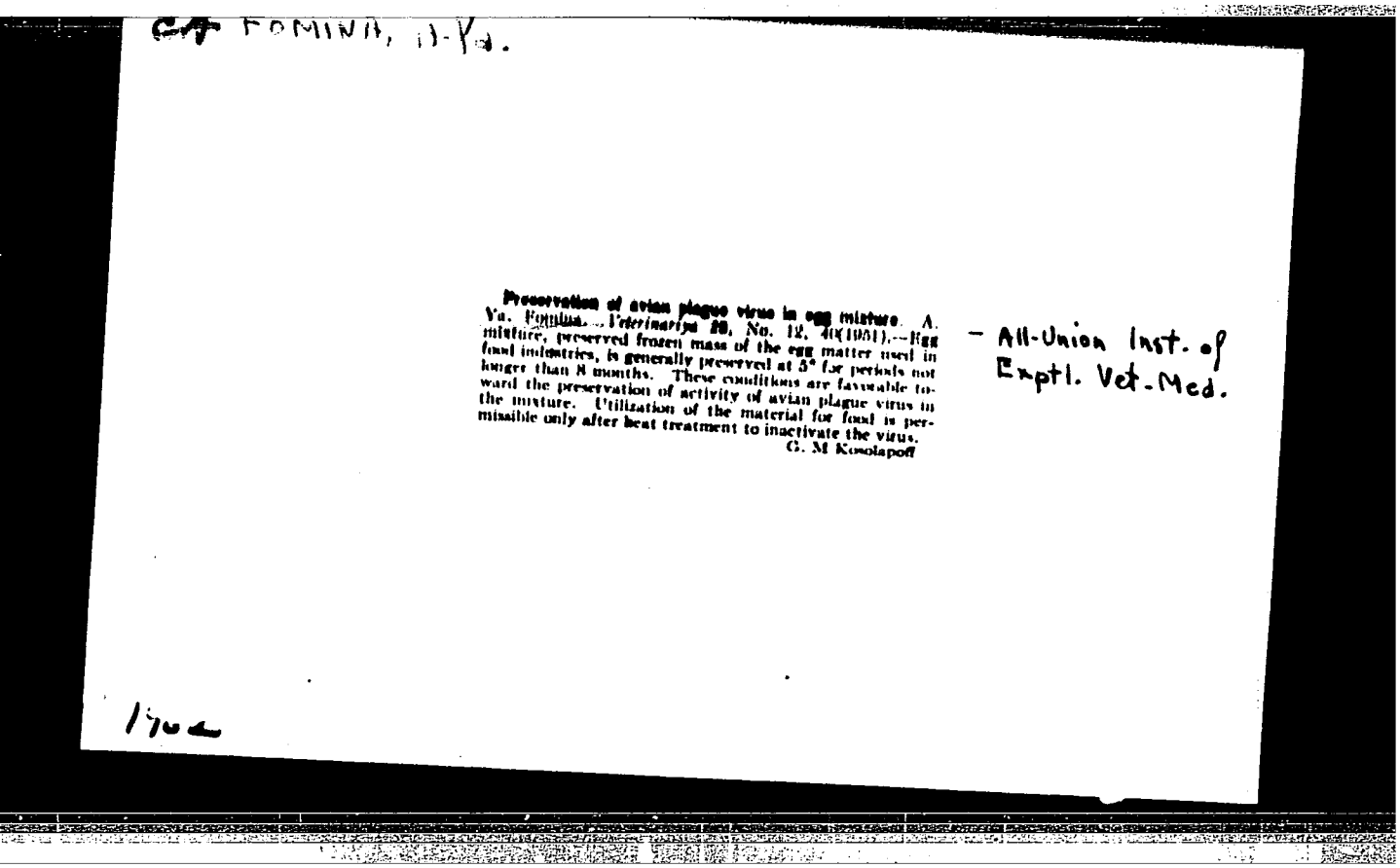

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G. M Kosolapoff

- All-Union Inst. of Exptl. Vet.-Med.

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7. Cultivation of virus of Asiatic fowl cholera on chick embryos. Trudy Vses. inst. eksp. vet. 19, no. 1, 1952.

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