"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

MATVEYEV, Arkadiy Arkad'yevich; BORISOV, Dmitriy Mikhaylovich; MOROZOV, P.K., nauchnyy redaktor; ZNAMENSKIY, A.A., redaktor; OSTRIROV, N.S., tekhnicheskiy redaktor

[Mechanical drawing] Cherchenie. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 219 p. (MIRA 9:11)
(Mechanical drawing)

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MATVEYEV, Arkadiy Arkad'yevich; BORISOV, Dmitriy Mikhaylovich; BARANOVSKIY, M.A., nauchnyy red.; VYSHNEPOL'SKIY, I.S., red.; PERSON, M.N., tekhn.red.

[Mechanical drawing] Cherchenie. Izd.3., perer. i dop. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 279 p. (MIRA 13:10)

(Mechanical drawing--Study and teaching)

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MATVEYEV, Arkadiy Arkad'yevich; BORISOV, Dmitriy Mikhaylovich; BARANOVSKIY, M.A., nauchn. red.; SIDOROV, N.I., nauchn. red.; KOBRINSKAYA, M.V., red.

[Mechanical drawing] Cherchenie. 4. perer. i dop. izd. Moskva, Vysshaia shkola, 1964. 311 p. (MIRA 18:2)

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BORISOV, D. P.

"Two-way Semi-automatic Blocking System for Railways," (Dvukhochkovaya poluavtomaticheskaya blokirovka), Moscow 1950, 1 copy.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BARANOV, A.F., redaktor; BIZYUKIN, D.D., redaktor; VAKHNIN, M.I., otvetstvennyy redaktor toma, professor, doktor tekhnicheskikh nauk; VEDENISOV, B.N., redaktor; IVLIYEV, I.V., redaktor; MOSHCHUK, I.D., redaktor; RUDOY, Ye.F., glavnyy redaktor; SOKOLINSKIY, Ya.I., redaktor; SOLOGUBOV, V.N., redaktor; SHILEVSKIY, V.A., redaktor; ALFEROV, A.A., inzhener; ANASHKIN, B.T., inzhener; AFANAS'YEV, Ye.V., laureat Stalinskoy premii, inzhener; BELENKO, K.M., dotsent; BORISOV, D.P., dotsent, kandidat tekhnicheskikh nauk; ZHIL'TSOV, P.N., inzhener; ZBAR, N.R., inzhener; IL'YENKOV, V.I., dotsent, kandidat tekhnicheskikh nauk; KAZAKOV, A.A., kandidat tekhnicheskikh nauk; KRAYZMER, L.P., kandidat tekhnicheskikh nauk; KOTLYARENKO, N.F., dotsent, kandidat tekhnicheskikh nauk; MAYSHEV, P.V., professor, kandidat tekhnicheskikh nauk; MARKOV, M.V., inzhener; NELEPETS, V.S., dotsent, kandidat tekhnicheskikh nauk; NOVIKOV, V.A., dotsent; ORLOV, N.A., inzhener; PETROV, I.I., kandidat tekhnicheskikh nauk; PIVKO, G.M., inzhener; POGODIN, A.M., inzhener; RAMLAU, P.N., dotsent, kandidat tekhnicheskikh nauk; ROGINSKIY, V.N., kandidat tekhnicheskikh nauk; RYAZANTSEV, B.S., laureat Stalinskoy premii, dotsent, kandidat tekhnicheskikh nauk; SNARSKIY, A.A., inzhener; FEL'DMAN, A.B., inzhener; SHASTIN, V.A., laureat Stalinskoy premii, inzhener; SHUR, B.I., inzhener; GONCHUKOV, V.I., inzhener, retsenzent; NOVIKOV, V.A., dotsent, retsenzent; AFANAS'YEV, Ye.V., laureat Stalinskoy premii, retsenzent;

[Technical handbook for railroad men] Tekhnicheskii spravochnik zheleznodorozhnika. Vol. 8. [Signaling, central control, block system, and communication] Signalizatsiia, tsentralizatsiia, blokirovka, sviaz'. Red. kollegiia A.F.Baranov [i dr.] Glav.red. E.F.Rudoi. Moskva, Gos. transp. zhel-dor. izd-vo, 1952. 975 p. (Continued on next card)

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BRYLEYEV, A.M., laureat Stalinskoy premii, inzhener; GAMBURG, Ye.Yu., inzhener, retsenzent; GOLOVKIN, M.K., inzhener, retsenzent; KAZAKOV, A.A., kandidat tekhnicheskikh nauk, retsenzent; KUT'IN, I.M., dotsent, kandidat tekhnicheskikh nauk, retsenzent; LEONOV, A.A., inzhener, retsenzent; SEMENOV, N.M., laureat Stalinskoy premii, inzhener, retsenzent; CHERNYSHEV, V.B., inzhener, retsenzent; VALUYEV, G.A., inzhener, retsenzent; METTAS, N.A., laureat Stalinskoy premii, inzhener, retsenzent; NOVIKOV, V.A., dotsent, retsenzent; PIVOVAROV, A.L., inzhener, retsenzent; POGODIN, A.M., inzhener, retsenzent; KHODOROV, L.R., inzhener, retsenzent; PIVOVAROV, A.L., inzhener, retsenzent; POGODIN, A.M., inzhener, retsenzent; KHODOROV, L.R., inzhener, retsenzent; SHUPLOV, V.I., kandidat tekhnicheskikh nauk, retsenzent; KLYKOV, A.F., inzhener, retsenzent; YUDZON, D.M., tekhnicheskiy redaktor; VERINA, G.P., tekhnicheskiy redaktor.

[Technical handbook for railroad men] Tekhnicheskii spravochnik zheleznodorozhnika. Vol. 8. [Signaling, central control, block system, and communication] Signalizatsiia, tsentralizatsiia, blokirovka, sviaz'. Red. kollegiia A.F.Baranov [i dr.] Glav.red. E.F.Rudoi. Moskva, Gos. transp. zhel-dor. izd-vo, 1952. 975 p. (Card 2) (MLRA 8:2)
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BORISOV, D.P., doktor tekhn.nauk, prof.; KORNIYENKO, N.I.; MUZALEVSKIY, N.D.; PUSHKAREV, B.N.; CHEKMENEV, N.M., inzh., red.; BOEROVA, Ye.N., tekhn.red.

[Electric block centralization] Blochnaia elektricheskaia tsentralizatsiia. Moskva, Gos. transp. zhel-dor. izd-vo, 1957. 108 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorozhnogo transporta. Trudy, no.145). (MIRA 11:4)
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BORISOV, D.P., doktor tekhn.nauk; KORNIYENKO, N.I., kand.tekhn.nauk

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(Railroads--Automatic train control)

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BORISOV, D.P., prof., doktor tekhn.nauk

Operational and technical conditions for the automation of train movement control in stations. Zhel.dor.transp. 42 no.6:21-24 Je '60. (MIRA 13:7)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, Dmitriy Petrovich, doktor tekhn. nauk, prof.; YERPYLOV, Konstantin Nikolayevich, kand. tekhn. nauk; KORMILITSYN, Aleksandr Yakovlevich, kand. tekhn. nauk, dotsent; VAKHNIN, M.I., doktor tekhn. nauk, prof., retsenzent; LISTOV, V.N., doktor tekhn. nauk, prof., retsenzent; NEUGASOV, N.M., kand. tekhn. nauk, dotsent, retsenzent; MARENKOVA, G.I., inzh., red.; NOVIKAS, M.N., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Automatic and remote control and communications in railroad transportation] Avtomatika telemekhanika i sviaz' na zheleznodorozhnom transporte. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 283 p. (MIRA 14:7)

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L 41029-65 EPF(n)-2/EPR/EPA(s)-2/EWT(1)/EPA(bb)-2/T-2 Ps-4

ACCESSION NR: AP5008571 S/0286/65/000/006/0111/0111

AUTHORS: Ryabchenkov, A. V.; Pongil'skiy, N. F.; Zaytsev, E. G.; Borisov, D. P.; Svobodin, A. A.

TITLE: An electromagnetic piston pump. Class 59, No. 169401

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 6, 1965, 111

TOPIC TAGS: piston pump, electromagnetic pump, pump pressure equalizer

ABSTRACT: This Author Certificate presents an electromagnetic piston pump with programmed measuring of forced corrosive liquids with the help of a timing relay (see Fig. 1 on the Enclosure). The relay is made with two chambers, one of which contains the electromagnetic windings and is filled with the cooling medium; the other chamber is the working cylinder. The piston rod of the working chamber is rigidly connected to the core of the electric magnet. To provide measured forcing of the corrosive liquids under various pressures, the electromagnetic windings are shielded by a thin-walled shield. This shield is relieved from the pressure by a bellows-membrane pressure equalizer established in the trunk line between the forced medium and the cooling medium. Orig. art. has: 1 figure.

Card 1/3

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L 41029-65

ACCESSION NR: AP5008571

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya goskomiteta SM SSSR po avtomatizatsii i mashinostroyeniyu (Central Scientific Research Institute of Engineering and Machine Construction of the State Committee SM SSSR for Automation and Machine Construction)

SUBMITTED: 02Nov62 ENCL: 01 SUB CODE: PR,EM

NO REF SOV: 000 OTHER: 000

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AFONIN, A.P.; BABITSKIY, V.I.; BORISOV, D.S.; KOBRINSKIY, A.Ye.; KOZHIN, V.D.; SAKAYAN, A.R.

Experimental investigation of the dynamics of an electric step-by-step motor. Teor. mash. i mekh. no.94/95:127-141 '63. (MIRA 16:11)

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AFONIN, A.P.; BORISOV, D.S.; KOBRINSKIY, A.Ye.

Pickup of an electric step-by-step motor. Teor. mash. i mekh. no.103/104:87-92 '64. (MIRA 17:11)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

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BORISOV, D.S. (Moskva); GUSEV, V.P. (Moskva); KOBRINSKIY, A.Ye. (Moskva)

Some characteristics of step-by-step motors. Mashinovedenie no.1:44-50 '65. (MIRA 18:5)

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ANDREYEV, V.P., polkovnik; BORISOV, D.S., polkovnik; ZHELEZNYKH, V.I., dotsent, kand.tekhn.nauk, general-leytenant inzhenernykh voysk v otstavke, otv.red.; NAZAROV, K.S., dotsent, general-polkovnik inzhenernykh voysk v otstavke, red.; KHRENOV, A.F., general-polkovnik inzhenernykh voysk, red.; SHOR, D.I., dotsent, kand. tekhn.nauk, inzhener-polkovnik zapasa, red.; ROSSAL, N.A., polkovnik, red.; KHLYSTALOV, S.I., polkovnik, red.; SOLOMONIK, R.L., tekhn.red.

[The Soviet military engineers, 1918-1940; collection of articles] Sovetskie inzhenernye voiska v 1918-1940 gg.; sbornik statei. Moskva, Voen.izd-vo M-va obor.SSSR, 1959. 141 p. (MIRA 13:4)
(Military engineering)

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16.9500 (1031,1121,1132)

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E191/E485

AUTHORS: Borisov, D.S. and Kobrinskiy, A.Ye. (Moscow)

TITLE: Contribution to the Dynamics of the Stepping Motor

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, No.6, pp.173-178

TEXT: Steady state motion of typical electrical stepping motors is examined analytically and experimentally. Both the stator and the rotor of such a motor are divided into three sections in parallel planes. Each section of the stator consists of alternating electromagnetic poles. Poles of equal polarity are aligned in parallel with the axis. The rotor also consists of three sections, each of which constitutes an externally toothed annular magnetic core with a number of teeth equal to the number of stator poles. The rotor sections are so assembled that each is shifted by one third of the pole distance in relation to the adjoining sections (one step). When the corresponding section of the stator is energized, the rotor turns by one step. When the stator sections are energized in a consecutive sequence, the rotor rotates in one direction. A different energizing order can produce rotation in the opposite direction. Paired energizing

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Contribution to the Dynamics of the Stepping Motor

in a certain order can produce the same results. Knowledge of the step motor dynamics includes its "static characteristics" and the "frequency response" of the free oscillations of its rotor. The static characteristics is the output torque at a given stator current as a function of the rotor turning angle. The frequency response is the frequency of the free oscillations of the rotor as a function of the stator current. The torque has a peak roughly halfway through a step interval. Measuring the torque along the falling branch requires a special test rig which was developed by A.Ye.Kobrinskiy et al (Russian patent No.125614 of June 27, 1959). Typical characteristics are shown (Fig.3). A typical frequency response (Fig.5) shows little change of frequency with stator current. A simplified dynamic model of the motor is analytically examined. The delay in the rise of stator current is neglected. The actual static characteristics were replaced by a cubic parabola whose constants are obtained by test. It is assumed that the motor is loaded only by a linear friction torque. A periodic commutation of the stator current is assumed. The motion in the

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Contribution to the Dynamics of the Stepping Motor

interval between two adjacent commutations is the free motion of a non-linear elastic system proceeding with certain initial conditions, characteristic of a given periodic switching. The initial phase and initial velocity of the rotor at the instant of commutation as a function of the frequency, if known, yield the dynamic properties of the motor, namely the amplitude frequency response, the "entrainment" of the rotor and the non-uniformity. The equation of motion is formulated and its periodic solutions are sought. The conditions of periodicity are stated. An analytical derivation yields the amplitude frequency response shown in Fig.6 for different values of the logarithmic decrement. It is shown that, with a commutation frequency approaching the natural frequency of the rotor, maximum amplitudes are obtained and the phenomenon of falling out of step is observed. Falling out of step can be prevented by sufficient friction. The non-uniformity is illustrated in Fig.8. It is greatest at a commutation frequency near the natural frequency of the rotor. At higher commutation frequencies, the non-uniformity falls sharply.

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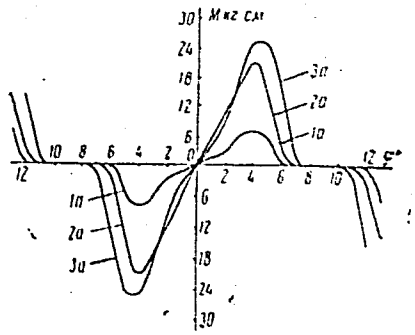
Contribution to the Dynamics of the Stepping Motor

Stepping motors can, therefore, operate at high frequencies of commutation. The entrainment, denoting the position of the rotor in relation to the stator poles, is shown in Fig.9. There are 9 figures and 4 Soviet references.

SUBMITTED: June 14, 1960

Fig.3.



Фиг. 3. Семейство статических характеристик ЭШП

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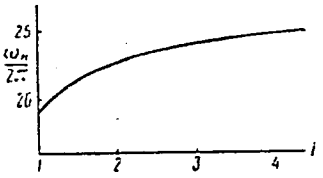
Contribution to the Dynamics of the Stepping Motor

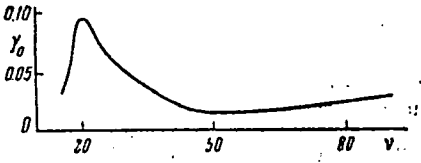
Fig. 5 6



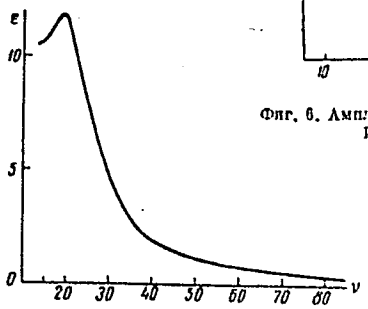
Фиг. 5. Характеристика частоты свободных колебаний ротора ЭШД

$$\varepsilon = \frac{\varphi_{max} - \varphi_{min}}{\varphi_{cp}} \quad (3\ 7)$$

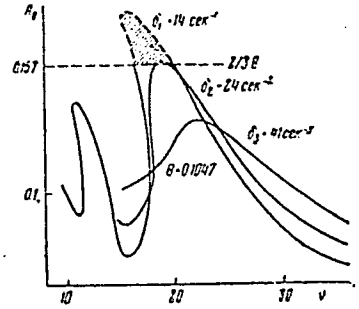
Fig. 8 9



Фиг. 9. Характеристика «увода» γ_0



Фиг. 8. Характеристика неравномерности хода ротора ЭШД



Фиг. 6. Амплитудно-частотные характеристики ЭШД

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BORISOV, D.S., polkovnik; SHEVCHUK, M.K., podpolkovnik; LEOSHENYA, Ye.V., dotsent, kand.voyennykh nauk, general-leytenant inzhenernykh voysk, nauchnyy red.; POLIKARPOV, V.D., red.; SOKOLOVA, G.F., tekhn.red.

[Soldier, hero, and scientist; reminiscences about D.M.Korbyshev] Soldat, geroi, uchenyi; vospominaniia o D.M.Karbysheve. Moskva, Voen.izd-vo M-va oborony SSSR, 1961. 194 p.

(MIRA 15:2)

(Karbyshev, Dmitrii Mikhailovich, 1880-1945)

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BORISOV, D.S.; SHEVCHUK, M.K.

"Soldier, hero, scientist; reminiscences about D.M.Karbyshev." Compiled by D.S.Borisov, M.K.Shevchuk. Voen. vest. 41 no.3: 126-127 Mr '62. (MIRA 15:4)
(Karbyshev, Dmitrii Mikhailovich, 1880-1945)

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BORISOV, D.S. (Moskva); KOBRINSKIY, A.Ye. (Moskva)

Dynamics of a step-by-step motor with current "cutoff". Izv.AN SSSR.Otd.tekh.nauk.Energ.i avtom. no.2:140-147 Mr-Ap '62. (MIRA 15:4)

(Electric motors) (Automatic control)

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KARBYSHEV, D.M., Geroy Sovetskogo Soyuza, prof., doktor voennykh nauk, general-leytenant inzh. voysk[deceased]; GOLDOVICH, A.I., general-leytenant inzh., voysk v otstavke, red.; PLYASKIN, V.Ya., V.Ya., general-leytenant inzh. voysk, red.; LEOSHENYA, Ye.V., general-leytenant inzh. voysk v otstavke, red.; SOCHILOV, M.F., general-mayor inzh. voysk v otstavke, red.; AFANAS'YEV, D.M., polkovnik v otstavke, red.; BORISOV, D.S., polkovnik zapasa, red.; TOROPOV, K.V., inzh.-polkovnik v otstavke, red.; SHOR, D.I., inzh.-polkovnik v otstavke, red.; SHEVCHUK, M.K., podpolkovnik zapasa, red.;ROSSAL, N.A., polkovnik, red.; SOKOLOVA, G.F., tekhn. red.

[Selected scientific work]Izbrannye nauchnye trudy. Moskva, Voenizdat, 1962. 703 p. (MIRA 16:3)
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BORISOV, D.S.

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AFONIN, A.P.; BORISOV, D.S.; KOBRINSKIY, A.Ye.

Subharmonic motion conditions of electric step-by-step motors. Teor. mash. i mekh. no.94/95:34-40 '63. (MIRA 16:11)

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AFONIN, A.P. (Moskva); BORISOV, D.S. (Moskva); KOBRINSKIY, A.Ye. (Moskva)

A nonlinear effect in a pulse excited vibrating system. Izv.AN SSSR. Mekh. i mashinostr. no.4:18-22 Jl-Ag '63. (MIRA 17:4)

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S/229/62/000/007/001/001
I060/I260

AUTHOR: Barabanov, N.V., Candidate of Technical Sciences, Borisov, E.K., Engineer, and Lavrenkov, L.V., Engineer

TITLE: Influence of ulcerous corrosion on tensile strength of steel

PERIODICAL: Sudostroyeniye, no. 6, 1962, 47-49

TEXT: The purpose of this work was to test steel which suffered ulcerous corrosion (corrosion of submerged parts) on tensile strength. The experiments were conducted on 36 samples of steel cut out from the hull of a ship operating for 26 years. The conclusions reached were: 1. When calculating strength of steel corroded by ulcerous corrosion, it is necessary to take into account the mean remaining width of metal. 2. Presence of ulcerous corrosion does not affect either the yield point σ_T or the yield strength σ_B. 3. As a result of ulcerous corrosion the plasticity of steel decreases by 15-20%.

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BORISOV, F.; DERTEV, N.K.

Electrochemical method of investigating the process of founding glass. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.3:420-423 '59. (MIRA 13:8)

1. Gor'kovskiy politekhnicheskiy institut imeni A.A.Zhdanova, kafedra tekhnologii silikatov.
(Glass research)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

YERSHOV, B.P.; BORISOV, F.B.

Colorimetric determination of phenols in water by means of 4-aminoantipyrine. Plast.massy no.6:66-68 '60. (MIRA 13:11)
(Phenols) (Antipyrine)

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26996 S/191/61/000/009/006/007
B110/B218

15.1124 also 2808 2208

AUTHORS: Borisov, F. B., Oster-Volkov, N. N.

TITLE: New synthetic universal glue БОВ-1 (BOV-1)

PERIODICAL: Plasticheskiye massy, no. 9, 1961, 42-44

TEXT: The authors produced a glue cheaper than, but equally good as epoxy glues. They used: furfurole acetone monomer (FAM), styrene, epoxy resin ЭД 5 (ED-5), and hardeners: polyethylene polyamine or distillation residues of hexamethylene diamine. Production was performed in two stages: (1) varnish, (2) glue. For (1), the following substances were mixed: FAM, ED-5, and styrene, and stirred for 20-30 min in the cold, or under heating to 40-50°C. For (2), this varnish was mixed with the hardener below <30°C. Depending on the application, the following fillers were used: sand, chalk, cement, Aerosil, graphite, powdered mica and quartz, powdered asbestos, etc. BOV-1 only costs one-third of ED-5, and may be used for gluing decoratively laminated plastics, glass-reinforced plastics, shockproof polystyrene, foamed plastics, ceramics, concrete, wood, asbestos cement,

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paper, and metals (but not polyethylene and polyvinyl chloride). For wood, BOV-1 must be used with a filler to prevent entering of pores. For metals, it must be plasticized. It is applied in 0.1-0.3 mm layers (200 - 600g/m^2). Gluing should be performed at temperatures that are not below $\geqslant 16^{\circ}$C under minimum pressure (e. g., 0.1-0.5 kg/cm^2 for gluing together three layers. It glues honeycomb plastics on the basis of МФФ(MFF) resins and foamed plastics ПС-1 and ПС-4 (PS-1 and PS-4). Specimens glued with BOV-1 and ED-5 resin were tested for tear and shear at the NIIPM and the Belorusskiy politekhnicheskiy institut (Belorussian Polytechnic Institute). Whereas some samples glued with ED-5 broke in the glued joint, the specimens glued with BOV-1 broke in the material only. Ceramic plates, porcelain washing basins, wooden chairs, and silica bricks were glued. Three-layer panels of wood-fiber boards (on КФ-20 (KF-20) and МФ-17 (MF-17) basis) were glued at the NIIPM; a honeycomb block soaked with MFF resins, having cells of 7 mm side length, was placed between them. Under short-termed load, the specimens glued with ED-5 withstood 200-350 kg/m^2; the specimens glued with BOV-1 with cement filler withstood a load of 500-800 kg/m^2. The

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Brinell hardness of BOV-1 coatings lies between 16 and 29 kg/cm^2. They are very stable against abrasion. The strength remained unchanged after two weeks' moistening at normal temperature and at 100°C. No decrease in strength was observed during half a year under atmospheric influences. BOV-1 without a filler can withstand temperatures between -60°C and 225-250°C without any change in the film structure . The film softens at higher temperature, and its properties are restored in cooling. Thermal stability increases with cement to 300°C. When applied with distillation products of hexamethylene diamine (2.5 time more than polyethylene polyamine) the BOV-1 film becomes more elastic. In this, the hardening time at 18-20°C increases from 10-16 to 20-24 hr. This is particularly important for gluing wood with metals or metals of different expansion coefficients. BOV-1 is not inferior in elasticity to epoxy and phenol glues, and glues modified with polyvinyl acetal, etc. BOV-1 films do not change in alkalis, acids, oils, acetone, dichloro ethane, alcohol ,

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kerosene, etc. BOV-1 is a good dielectric in pure state and with sand, cement, graphite as filler. Since it also insulates with Al powder as filler, it forms well insulating films around the small conducting grains. There are 3 tables and 8 Soviet references.

Table 2. Results of abrasion tests of BOV-1 film. Legend: (1) Weight of the two specimens, g, (2) before test, (3) after test, (4) wear of the two specimens, mg, (5) load, kg, (6) specific load, kg/cm^2, (7) friction force, kg, (8) specific wear, $m^2/cm^2 \cdot m$.

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YERSHOV, B.P.; BORISOV, F.B.

High-frequency titration. Determination of alpha polyoxymethylene.
Plast.massy no.11:46 '61. (MIRA 14:10)
(Titration) (Polyoxymethylene)

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PEYVE, Ya.V.; PETERBURGSKIY, A.V., doktor sel'khoz. nauk, prof.; GAR, K.A., kand. sel'khoz. nauk; GOLYSHIN, N.M., kand. biol. nauk; KOROTKIKH, G.I., kand. sel'khoz. nauk; CHESALIN, G.A., kand.sel'khoz.nauk; RAKITIN, Yu.V., doktor biol. nauk; ZEZYULINSKIY, V.M., kand. sel'khoz.nauk; DEVYATKIN, A.I., kand. sel'khoz. nauk; VENEDIKTOV, A.M., kand.sel'khoz. nauk; TARANOV, M.G., kand. biol. nauk; BORISOVA, L.G.; BEREZNIKOV, V.V., kand. tekhn.nauk; KONDRATENKO, R.V., st. nauchn.sotr.; BORISOV, F.B., st. nauchn.sotr.

[Chemistry in agriculture] Khimiia v sel'skom khoziaistve. Moskva, Kolos, 1964. 381 p. (MIRA 17:9)

1. Chlen-korrespondent AN SSSR (for Peyve). 2. Nachal'nik laboratorii Nauchno-issledovatel'skogo instituta plastmass (for Borisova). 3. Nauchno-issledovatel'skiy institut plastmass (for Kondratenko, Borisov).

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BORISOV, G.; NAUMOV, M.

Adjustment and temporary fixing of girders, cross bars and spans. Stroitel' 2 no.4-5:6-7 Ap-My.'56. (MLRA 10:1)
(Girders)

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BORISOV, G.

BORISOV, G.

Construction abroad. Stroitel' no.6:27 Je '57. (MIRA 10:9)
(Construction industry)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

4-6-26/30

AUTHOR: Borisov G., Engineer

TITLE: A Liquid Cutter (Zhidkiy rezets)

PERIODICAL: Znaniye - Sila, 1957, # 6, pp 38-39 (USSR)

ABSTRACT: The author describes methods of liquid cutting of metals by chemical processes replacing the usual treatment of machine parts on machine tools. The cutting, shaving and milling is performed with the aid of sulphuric and nitrogen acids. Steel, copper, brass, titanium, aluminum and magnesium alloys can be treated by this method. The chemical bath must be adapted to the chemical qualities of the metal; higher concentrations and temperatures speed up the process. Duraluminum parts can be cut to a depth of several cm, steel and titanium to a depth of 10 - 15 mm. The treatment does not lower the metal quality and is of satisfactory precision.

It is also possible to cut or mill certain parts of metal surfaces by the aid of stencil-masks, which protect the sections not being treated. The new treatment is simple, economical and universal. One bath can replace several machine tools and the chemical milling workshop can be managed by a minimum of workers. The working rooms are quiet and clean

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A Liquid Cutter 4-6-26/30

and there is no loss of material as the dissolved metal can be recovered and remelted.
There are 5 figures.

AVAILABLE: Library of Congress

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BORISOV, G., inzh.

Using pipes in transporting mortars. Stroitel' no.11:25-28 '58. (MIRA 11:12)

(Mortar--Transportation)

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Distr: 4E2c(j)/4E3d

Syntheses with organolithium compounds obtained by substitution of a labile hydrogen atom. III. Syntheses with sodium α-lithio-β-naphthylacetate obtained through alkyllithium compounds. D. Ivanov, Iv. M. Panalotov, and G. Borisov. *Compt. rend. acad. bulgare sci.* 9, 23-6 (1956)(in German); cf. *C.A.* 51, 5020g; 52, 3352i.—The reaction of β-$C_{10}H_7CH_2CO_2Na$ (I) with ArLi (II), gave β-$C_{10}H_7CHLiCO_2Na$ (III). Thus, 0.01 mole dry I and 0.01 mole PhLi in 25 ml. dry Et_2O stirred 5 hrs. at room temp. and poured on solid CO_2 gave 0.409 g. β-$C_{10}H_7CH(CO_2H)_2$ (IV), m. 155-6°, and 0.597 g. β-$C_{10}H_7CH_2Bz$ (V), m. 122-3°. Similarly, III from other II gave the following yields of IV: o-MeC_6H_4, 48.0%; m-MeC_6H_4, 19.6%; p-MeC_6H_4, 21.7%; α-$C_{10}H_7$, 20.1%; p-$Me_2NC_6H_4$, 18.5%. With these II, no V was obtained. Ph_2CO and III from PhLi, p-MeC_6H_4Li, and m-MeC_6H_4Li gave, resp., 20.5, 18.3, and 17.2% $Ph_2C(OH)CH(C_{10}H_7\beta)CO_2H$, m. 189-90°. In contrast, I treated with p-MeC_6H_4MgBr followed by carbonation gave β-$C_{10}H_7CH_2CP(OH)CH(C_{10}H_7\beta)CO_2H$ (R = p-$Me_2NC_6H_4$) (VI), m. 179-81°, alk. decompn. of which gave I and a neutral compd., m. 149-50°. Similarly, I and m-MeC_6H_4MgBr gave VI (R = m-MeC_6H_4), m. 185-6°, alk. decompn. of which gave I and a neutral compd., m. 99-7°. I and Grignard reagents thus give ketones which with III give VI. IV. Syntheses with sodium α-lithio- and β-naphthylacetates obtained through alkyllithium compounds. Iv. M. Panalotov and G. Borisov. *Ibid.* 27-30. The optimum conditions were detd. for the reaction of α- and β-$C_{10}H_7CH_2CO_2Na$ with RLi (I) to give $C_{10}H_7CHLiCO_2Na$ (II). In n-C_4H_{11} no reaction occurred, presumably owing to the insoly. of the salt. In Et_2O a yellow color indicated formation of II, but its presence could not be demonstrated. In dioxane II formed, but when poured onto

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D. IVANOV, IV. M. PANAYOTOV, ...

solid CO_2 gave no acid, owing to the freezing of the solvent. II was therefore characterized by reaction with Ph_2CO to give $Ph_2C(OH)CH(C_{10}H_7\text{-}\alpha)CO_2H$ (III), m. 177.5°, or $Ph_2C(OH)CH(C_{10}H_7\text{-}\beta)CO_2H$ (IV). In this way the following yields of II were detd. (R of I, % yield of III, % yield of IV given): Pr, 45.3, 37.0; Me_2CH, 15.6, 8.34; Bu, 40.7, 31.5; $Me_2CHCH_2CH_2$, 10.0, 27.6. Five-fold diln. of a dioxane soln. of II (from BuLi) with Et_2O followed by carbonation gave a 6.5% yield of $\alpha\text{-}C_{10}H_7CH(CO_2H)_2$. V. Syntheses with sodium α-lithiophenylacetate, obtained through alkyllithium compounds. D. Ivanov and G. Vasilev. *Ibid.* 39-42.—The optimum conditions for the formation of $PhCHLiCO_2Na$ (I) from RLi (II) and $PhCH_2CO_2Na$ were detd. II were prepd. in $n\text{-}C_6H_{14}$, but in this solvent no I was formed. It was therefore distd. and replaced by Et_2O, in which the reaction proceeded well. I was also formed in dioxane, but in lower yield. Carbonation of I gave low yields (30% and 25% from BuLi and PrLi, resp.) of $PhCH(CO_2H)_2$, m. 146-8°, owing to the high H_2O content of the solid CO_2. I was therefore characterized with Ph_2CO to give $Ph_2C(OH)CHPhCO_2H$ (III), m. 185-7°. In this way the following yields of III were detd. (R of II, % yield of III are given): Me, 3.3; Et, 18; Pr, 45; Me_2CH, 23; Bu, 47 (in dioxane 28); EtCHMe, 18; Me_3C, 12; $Me_2CHCH_2CH_2$, 35; cyclohexyl, 20. The best yields of I are therefore obtained from primary II, in contrast with Grignard reagents, whose secondary and tertiary compds. give the best results. Direct hydrolysis of I with dil. HCl gave $PhCH_2CR(OH)CHPhCO_2H$ (IV), which on alk. decompn. gave $PhCH_2CO_2H$ and $PhCH_2COR$ (V) (R, % yield of IV, m.p. of IV, m.p. of IV semicarbazone given): Pr, 10 (of V), —, 121-2°; Bu, 34, 145-6°, 114-15°; $Me_2CHCH_2CH_2$, 17 (of V), —, 121-3°. Olden E. Paris

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BORISOV, G.

BORISOV, G. Syntheses with organic lithium compounds, obtained by substituting a labile hydrogen atom. IV. Syntheses with a-lithium sodium-x and B-naphthyl a cetate, obtained by means of alkyl lithium compounds. In German. p. 27. Vol. 9, no. 1, Jan./Mar. 1956, DOKLADY.

SOURCE: EAST EUROPEAN ACCESSIONS (EEAL) VOL 6 NO 4 April 1957

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BORISOV, G.

BORISOV, G. Bulgarian juniper oil. In English. p.59 Vol. 9, no. 1, Jan./Mar. 1956 DOKLADY., Sofiia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol. 6 No. 4 April 1957

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BULGARIA / Chemical Technology. Perfumes and Cosmetics. Essential Oils. H-19

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 78921.

Author : Staykow, B., Panayotov, I., Borisov, G.
Inst : Not given.
Title : The Investigation of Juniper Fruits and the Isolation of an Essential Oil Therefrom.

Orig Pub: Isv. In-ta Rastenievedstvo. Belg. AN, 1958, No 5, 339-347.

Abstract: An essential oil (O) was separated from the fruits of juniper (F) (Juniperus communis L.) and was studied. The crushed F were submitted to steam distillation, water distillation with steam at 3.5 atmospheres pressure, and distillation with steam at 3.5 atmosphere pressure. The best results were obtained by a water-steam

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The addition of diethyl benzylphosphonate to ethyl cinnamate. D. Ivanov and G. Borisov (Chem. Inst. Acad. Sci., Sofia, Bulgaria). *Naturwissenschaften* 46, 171(1959). —PhCH:P(OH)(OEt)$_2$ (I) reacts with iso-PrMgCl to give C_3H_8 and PhCH:P(OMgCl)(OEt)$_2$ (II). II adds to the double bond in cinnamic acid esters. Thus, 5.9 g. I and 4.4 g. $EtO_2CCH:CHPh$ are heated 1.5 hrs. at 70° with a small amt. of NaOEt to give 3.5 g. *PhCH(CHPhCH$_2$CO$_2$Et)P(O)(OEt)$_2$*, m. 100–1°. David Stefanye.

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BORISOV, G.

Addition of dialkylphosphites to methyl -β-naphthylketone. Doklady BAN 15 no.2:159-162 '62.

1. Submitted by Corresponding Member B. Kourtev [Kurtev, B.].

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L 12281-63 EPR/EWP(j)/EPF(c)/BDS Ps-4/Pr-4/Pc-4 RM/WW
S/081/63/000/005/038/075

68

AUTHOR: Ivanov, D., Vasilyev, G., Panaiatov, I. and Borisov, G.

TITLE: Synthesis with lithium organic compounds, obtained by replacement of the labile hydrogen atom

PERIODICAL: Referativnyy zhurnal, Khimiya, no. 5, 1963, 261, abstract 5Zh268 (Godishnik Sofiisk. un-ta. Fizmatem. fak., 1957-1958 (1959), v. 52, no. 3, 1-54)

TEXT: In the course of action of RLi (R=alkyl or aryl) on $ArCH_2COONa$ (Ia-c here and hereafter aAr = C_6H_5, bAR = α-$C_{10}H_7$, cAR = β-$C_{10}H_7$) ArCHLiCOONa (II), is formed which is converted after action of CO_2 and acidification into ArCH $(COOH)_2$ (III). By the interaction of II with $(C_6H_5)_2CO$ (IV) there (C_6H_5) C(OH) CHArCOOH) (V) is obtained. The use of lithium alkyls in the place of ArLi leadds to a decrease in yield of III and IV. The reaction of RLi with Ia in the absence of substituents in the ortho position may proceed by a different course, with formation of $C_6H_5CH_2COR$ (VI), the interaction of which with II leads to $C_6H_5CH_2$ $CR(OH)CH(C_6H_5)COOH$ (VIII), by the action of RLi an $ArCH_2CN$ (VIII) ArCHLiCN (IX)

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Synthesis of lithium organic S/081/63/000/005/038/075

is obtained which changes into ArCH(CN)COOH (X). In reaction of IX with IV $(C_6H_5)_2C$ (OH)CHArCN (XI) is formed. The interaction of IIa with $Ar'CH_2Cl$ with subsequent hydrolysis leads to $C_6H_5CH_2CHAr.COOH$ (XII). In the reaction of IIa with unsaturated ketones of the type $Ar'CH = CHCOC_6H_5$ (XIII) and $C_6H_5CH - CHOCH + CHC_6H_5$ (XIV) the addition takes place in 1,4 poistion and after hydrolysis $C_6H_5CH(COOH)CHAr'CH_2COC_6H_5$ (XV) and $C_6H_5CH(COOH)CH(C_6H_5)CH_2COCH = CHC_6H_5$(XVI) are obtained respectively. The addition of the Shiff's bases of $Ar''N = CHAr'$ to IIa leads to $C_6H_5CH(COOH)CHAr'NHAr''$ (XVII). In the action of I_2 or N-bromosuccinimide on II meso-forms of ArCH(COOH)CH(Ar)COOH are formed. The reactivity of II and IX is comparable to similar Grignard compounds. From 1.2 g of Li , 13.7 g of O-bromtoluene (XVIII) 12.7 g of Ia and 14.6 g of IV in 100 ml of ether Va is obtained, the yield for which is 67%, m.p. 187 - 188° C (from alcohol). Va is also obtained with the use of other RLi (indicated are starting bromide and yield of Va in %): α- C H Br (XIX), 65-70 (with 25% excess of Li and IXI the yield is 71%) 1,3,5-$(CH_3)_3C_6H_2Br$, 72; 1.3-$(CH_3)_2C_6H_2Br_2$-4.6, 33. From Ib C_6H_5Br, Li and IV, Vb are obtained with 57% yield, m.p. 159-160° C (from alcohol). In the synthesis of Va using RLi maximum yields are observed if R- is a primary radical. Below are given starting halides, solvent and yield of Va in %: n-

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L 12281-63
Synthesis of lithium organic S/081/63/000/005/038/075

C_4H_9Cl, ether, 50-52; $H-CH_3H_7Cl$, pentane ether (PE), 45-48; $C_2H_5CHClCH_3$, PE, 18; $(CH_3)_3CCl$ (PE) 12-14; iso-C_3H_7Cl, PE, 23-25; $C_6H_{11}Br$, PE, 20. Below the data gives RLi, the ratio RLi:I, the yield of corresponding VII in %, m. in ° C (temp. of reaction from -10 to 0°): C_3H_7Li, 2:1, 45, 160-161 (from aqueous alcohol); iso-C_3H_7Li 2:1, 31, 135-137 (from aqueous alcohol); iso-C_3H_7Li, 3:1 28-; n-C_4H_9, 1:1, 42, 145-146 (from toluene); n-C_4H_9, 1.5:1, 55, ---; $C_2H_5CHLiCH_3$, 3:1, 39, 137-139 (from aqueous alcohol). Below are given starting RLi, yields of Vb and Vc in %: C_2H_5Li, 45.3, 37; iso-C_3H_7Li, 15.6, 8.34; n-C_3H_7Li, 40.7, 31.5; iso-$C_5H_{11}Li$, 10, 27.6. From 1.4 g of Li, 20.7 g of IXI and 15.8 g of Iz in 120 ml of ether IIIa was obtained with 42% yield, m.p. 152-153° C (decompose; from water); the yield of IIIv ~20%, m.p. 155-156° C. From 1.47 g of Li, 16.5 g of Ia in 80 ml of ether VIIa was obtained with 39-41% yield, m.p. 56-57.5° C (from iacohol). Also obtained with other VI's (indicated are R and yields in %): p-tolyl, 25-33, m-tolyl, 25-33; m-tolyl, 29-32; n-$C_6H_4N(CH_3)_2$, 55. Below are giving starting bromide, yield of VII in %, m.p. in °C: n-XVIII, 44.4, 169-170 (from alcohol); meta-XVIII, 40-43, 149-151; β-XIX, 53, 172-180; p-$CH_3OC_6H_4Br$,

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38, 176-177 (from alcohol). Below are given starting bromide, yields of IIIb and IIIc in %: C_6H_5Br, 38, 17.7; O-XVIII, 42.2, 42.8; meta-XVIII, 35, 19.6; p-XVIII, 19.5, 21.7; XIX, 37.4, 26.1; p-$(CH_3)_2NC_6H_4Br$, 29.1, 18.5 (after separation of IIIb, m. p. 147-148° C, VIb was isolated, yield 12.1%, m.p. 105-106° C (from alcohol); oxime, m.p. 138-139° C; Vc, m.p. 189-190° C (from alcohol). To a solution of 0.01 0 0.5 moles of RLi in 25-60 ml ether 0.01-0.05 moles of VIII in 5-40 ml of ether are added and the mixture is heated. After 3 hours IV is added to the formed IX and it is heated again for 3-4 hours. Under the reaction conditions water is split from the produced XIa and $(C_6H_5)_2C = C(C_6H_5)CN$ is obtained with 30% yield, m.p. 165-168° C (from alcohol); XIb, yield 21.2% m.p. 179-180° C. Below are given RLi, yield of Xa and Xc in %, CH_3Li, 38, ---; H-C_3H_7Li, 40, 37.9; H-C_4H_9, 47, 54.5; C_6H_5Li, 41, 50: o-$CH_3C_6H_4Li$, 45, 23.7; O-$C_{10}H_7Li$, 44, 41.2. From 0.4 g of Li, 2.4 g of H-C_4H_9Cl, 3.95 g of Ia and 5.2 g of XII (Ar^1 - C_6H_5) in 120 ml of ether XV (Ar^1 - C_6H_5), is obtained, with 38% yield, m.p. 257-259° C. Also obtained are other XV's (given is Ar', yield in %, m.p. in °C): p-$CH_3OC_6H_4$, 29, 220-223; p-ClC_6H_4, 51, 242-243 (from glacial CH_3COOH). From 0.35 g of Li, 5.13 g of XVIII, 3.95 g of Ia and 5.85 g of XIV

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L 12281-63

Synthesis of lithium organic S/081/63/000/005/038/075

in 100 ml of ether XVI is obtained with 45% yield, m.p. 254-255° C (from alcohol). To IIa (from 0.4 g of Li, 4.3 g of XVIII, 3.95 g of Ia in 70 ml ether) are added 6.35 g of $C_6H_5CH_2Cl$ and the yield of XII (Ar = C_6H_5) is 77%, m.p. 88-89° C (from chloroform). Also obtained are other VII's (indicated is Ar, yield in % and m.p. in °C): o-ClC_6H_4, 73, 121-122 from ether-peter. ether); p-ClC_6H_4, 70, 140-140.5 (from aqueous alcohol); meta-NC_6H_4, 82, 128-129 (from water). To a solution of II in ether 1 equiv. Shiff's base is added, it is heated for 6 hours, decomposed with ice and NH_4Cl, the Na-salt XVII is acidified with CH_3COOH and XVII is seperated (shown are Ar' Ar' ', yield in %, m.p. in ° C): C_6H_5, C_6H_5, 74, 157-158 (from aqueous alcohol); C_6H_5, n-$CH_3C_6H_4$, 60, 178-180 (from aqueous alcohol), C_6H_5, β-napthyl, 70, 156-157 (purified through chlorhydrate); p-$CH_3OC_6H_4$, C_6H_5, 78, 141-143 (from aqueous alcohol). Ya. Komissarov.

[Abstractor's note: Complete translation]

Card 5/5

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

SHOPOV, D.; BORISOV, G.; IVANOV, S.

Addition of dialkylphosphites to phenylfurylketone and methylfurylketone. Doklady BAN 17 no.5:471-474 '64

1. Predstavleno chlenom-korrespondentom B.Kurtevym.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.

Addition of dialkylphosphites to α- and β-naphthaldehydes.
Doklady BAN 17 no.7:633-636 '64.

1. Submitted by Corresponding Member B. Kourtev [Kurtev, B.].

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.; MANOV, V.

Addition of bis-(-chloroethyl) phosphite to aldehydes and ketones. Doklady BAN 17 no.10:925-927 '64.

1. Submitted June 3, 1964.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

L 05721-67 SOURCE CODE: BU/0011/65/018/009/0833/0836

ACC NR: AP6031805

12

B

AUTHOR: Mihailov, M.; Gerdjikova, S.; Borisov, G.
ORG: Institute of Organic Chemistry, BAN

TITLE: Production of phosphorus-containing polyestermethacrylates

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 9, 1965, 833-836
TOPIC TAGS: phosphorus compound, polymer chemistry, flammability, esterification, oligomer

ABSTRACT: Some of the existing synthesized polyestermethacrylates have shown very good binding properties in the case of glass, plastics and film-forming substances and are commercially produced in the USSR. However, like most organic polymers, they suffer from the major drawback of being inflammable. Injections of phosphoric atoms or phosphorus-containing groups tend to reduce greatly this defect. Consequently, the authors investigated ways for synthesizing phosphorus-containing polyestermethacrylates (PEM) of varying structures. The present paper gives detailed description of PEM production by re-esterification of the diethylester of the benzylphosphonic acid with ethylene-glycol and a subsequent methacylation of the hydroxyl-containing oligomers. The polymerization of the synthesized benzylphosphonate PEM and the properties of the polymers obtained from such polymers is the subject of a separate study, the results of which will be published later.

This paper was presented by Corresponding Member BAN B. Kourtev on 31 May 1965.
[Orig. art. in Eng.] [JPRS: 34,518]
SUB CODE: 07 / SUBM DATE: 31May65 / SOV REF: 005 / OTH REF: 002

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

L 7898-66 EWT(m)/EPF(c)/EWP(j) RM

ACC NR: AP5024972 SOURCE CODE: UR/0286/65/000/016/0034/0034

AUTHORS: Kabachnik, M. I.; Tsvetkov, Ye. N.; Lobanov, D. I.; Borisov, G.; Malevannaya, R. A.

ORG: none

TITLE: Method for obtaining methyl-di-(aryl-oxymethyl)-, or methyl-di-(β-alkoxyethoxymethyl)-phosphine oxides. Class 12, No. 173765

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 34

TOPIC TAGS: alkoxy phosphine oxide, phosphorus compound, organic phosphine, hydrocarbon, organic oxide, organic phosphorus compound

ABSTRACT: This Author Certificate presents a method for obtaining oxides of either methyl-di-(aryl-oxymethyl) or methyl-di-(β-alkoxyethoxymethyl)-phosphines. The oxide of methyl-di-(chloromethyl)-phosphine is reacted with sodium phenolate or with sodium alkoxyethylate in an inert solvent such as toluene.

SUB CODE: 07/ SUBM DATE: 20Jul64

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UDC: 547.419.1.07

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G. A.

3(5,7) PHASE I BOOK EXPLOITATION SOV/2822

Mezhduvedomstvennoye soveshchaniye po merzlotovedeniyu. 7th, Moscow, 1956

Materialy po inzhenernomu merzlotovedeniyu (Materials on Engineering Aspects of Permafrost; the 7th Interdepartmental Conference on Studies of Permafrost) Moscow, Izd-vo AN SSSR, 1959. 199 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye geologo-geograficheskikh nauk. Institut merzlotovedeniya.

Eds.: I. Ya. Baranov, N. A. Tsytovich, and A. M. Chekotillo; Ed. of Publishing House: A. L. Raskvitser; Tech. Ed.: Ye. V. Makuni.

PURPOSE: This book is intended primarily for construction engineers and geologists interested in permafrost problems.

COVERAGE: This collection of articles contains reports originally discussed at the 7th Interdepartmental Conference on Permafrost held in Moscow in March, 1956. Materials of this conference were published in three issues: general permafrost studies, engineering aspects of permafrost (present work), and ground physics and mechanics. Individual articles of this work discuss basic problems of planning, building, and operating various buildings and structures in permafrost regions. Some of the information reported, particularly on hydraulic engineering construction, is new and appears for the first time in the literature on permafrost. Articles are accompanied by references.

Bakhalov, V. P. Problems of Heat Engineering Computation of Frozen Structural Foundations Susceptible to Thaw Based on Experimental Data and Field Observations 39

Chernigov, V. A. Heat Engineering Computation of Cooling of Concrete Foundations Taking Into Account the Heat Losses in a Perennially Frozen Bed 50

Shltykov, N. I. Bases and Foundations of Surface Structures Erected in Areas of Perennially Frozen Ground 56

Mel'nikov, P. I. Methods of Efficient Foundation Building in the Perennially Frozen Ground of the Yakutskaya ASSR 65

Suryachiy, A. N., and V. A. Illarionov. Certain Problems of Construction Designing for the Conditions Which Prevail in the Far Northeast 74

Materials on Engineering Aspects (Cont.) SOV/2822

Maksimov, G. N. Practical Experience in Operating Industrial Buildings Erected on Permafrost Grounds 82

Maksimov, G. N. Control of a Permafrost Station in the Construction and Operation of Buildings 91

Shmakhura, G. Ya. (deceased). Practical Experience in the Operation of Public Buildings Erected on the Permafrost Ground of Noril'sk 94

Veselov, V. A. Practical Experience in Designing Industrial and Public Buildings and Structures in the Igarka Mountain Region 105

Borisov, G. A., and G. Ya. Shmakhura (deceased). Practical Experience in Designing, Building, and Operating Earth Dams at Noril'sk 110

Sereda, V. A. Practical Experience in the Designing of Hydraulic Structures With Long-term Ground Freezing 120

Bakakin, V. P. Specific Mining Problems in Regions With Frozen Rocks and Deep Ground Freezing in Winter 129

Zarubinskiy, Ya. I. A Survey of Water Supply Sources in the Region of the Perennially Frozen Rocks of the Zabaykal'ye Coal Deposits 137

Churakov, S. N. Laying Out Sanitary Engineering Conduits in Areas Covered by Permafrost 144

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.A. [deceased]

Choosing the layout of water-supply networks for populated places and industrial enterprises in permafrost regions. Sbor.nauch.rab.AKKH no.12:3-12 '62. (MIRA 16:4)
(Water—Distribution) (Frozen ground)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G. A., LOKHANOV, E. A., OL'SHTEIN, L. Ye. (Moscow)

"Rotating Stall in Compressors."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.A.; LOKSHTANOV, Ye.A.; OL'SHTEYN, L.Ye.

Rotating stall in an axial-flow compressor. Prom.aerodin. no.24: 35-47 '62. (MIRA 16:7)

(Compressors--Aerodynamics)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.A.

Computer system for calculating and registering the consumption characteristic of a boiler. Trudy Kar. fil. AN SSSR no.40: 17-33 '64. (MIRA 17:12)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

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A060/A000

24.4200

AUTHOR: Borisov, G. A.

TITLE: On a boundary problem for the Tricomi equation

PERIODICAL: Referativnyy zhurnal, Matematika, no. 9, 1962, 49, abstract 9B236 ("Tr. I-y Nauchn. konferentsii matem. kafedr. ped. in-tov Povolzh'ya 1960". Kuybyshev, 1961, 40 - 45)

TEXT: The Tricomi equation

$$yu_{xx} + u_{yy} = 0 \qquad (1)$$

is investigated in the domain Δ, bounded by the Jordan line σ with endpoints at the points A(0, 0) and B(1, 0) in the halfplane $y > 0$ and the characteristics

$$AC : x = \frac{2}{3}(-y)^{3/2} \quad \text{and} \quad BC : x = -\frac{2}{3}(-y)^{3/2} + 1$$

of equation (1). $E_k(a_k, 0)$ $(k = 0, 1, \ldots, n+1)$, $a_o = 0$, $a_{n+1} = 1$ $(a_k < a_{n+1})$ are points on the x axis. A_k and B_k are the points of intersection of the char-

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acteristics AB and BC with the characteristics E_kA_k and E_kB_k originating at the point E_k. The generalized Tricomi problem is considered, consisting in the finding of the solution of equation (1) in the domain Δ, besides the points of the segment AB and the characteristics E_kB_k, E_kA_k. The requisite solution takes the required values on σ and on A_kA_{k+1} or B_kB_{k+1} (depending on whether k is even or odd). The solution of this problem in a class of generalized solutions is represented in a convenient form and the uniqueness of the solution is proven. In conclusion, a relationship is derived between the values of the solution and its derivatives on the segment AB and the boundary values.

L. Ye. Vostrova

[Abstracter's note: Complete translation]

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.A., red.; YERMAKOV, I.V., red.; YERMOLIN, M.A., red.; MALAFEYEV, R.I., red.; SERGEYEV, P.A., red.; FEDOROV, I.V., red.

[Collection of articles on scientific methodology; physics and mathematics faculty] Nauchno-metodicheskii sbornik; fiziko-matematicheskii fakul'tet. Kurga, 1962. 238 p. (MIRA 16:12)

1. Kurgan. Gosudarstvennyy pedagogicheskiy institut.
(Physics--Study and teaching)
(Mathematics--Study and teaching)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.A., inzh.

Computer system for the determination of the optimal characteristics in electric power plants. Izv. vys. ucheb. zav.; energ. 7 no.11:113-116 N '64 (MIRA 18:1)

1. Karel'skiy institut lesa Gosleskomiteta pri Gosplane SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

ARTEM'YEVA, N.K.; VAYLUKOVA, G.A.; OCHNEVA, I.N.; SOTSKOVA, A.S.; BORISOV, G.A.

Recovery of zinc sulfate from settling and plastification baths. Khim. volok. no.5:67-68 '65. (MIRA 18:10)

1. Krasnoyarskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna (for Artem'yeva, Vaylukova, Ochneva). 2. Krasnoyarskiy zavod iskusstvennogo volokna (for Sotskova, Borisov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

GOVALLO, Ivan Ivanovich; BORISOV, G.B., otv.red.; NOVIKOVA, Ye.S., red.; MARKOCH, K.G., tekhn.red.

[Standard television centers and television relay stations] Tipovye televizionnye tsentry i retransliatsionnye televizionnye stantsii. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1960. 61 p. (MIRA 13:5)
(Television stations) (Television--Transmitters and transmission)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

SANKIN, Nikolay Mikhaylovich; TRUNOV, Vadim Ivanovich. Prinimali uchastiye: TIMOFEYEVA, G.Ya.; KHANOV, B.A.; SAVITSKIY, B.I.. BORISOV, G.B., otv.red.; VORONOVA, A.I., red.; MARKOCH, K.G., tekhn.red.

[Principles of technical planning of transmitting networks for television and shortwave F.M.broadcasting; information manual] Printsipy tekhnicheskogo planirovaniia peredaiushchikh setei televizionnogo i UKV ChM veshchaniia; informatsionnyi sbornik. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1960. 93 p. (MIRA 13:5)

1. Nauchno-issledovatel'skiy institut svyazi Ministerstva svyazi SSSR (for Sankin, Trunov).
(Radio, Shortwave--Transmitters and transmission)
(Television broadcasting)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G. B.

PHASE I BOOK EXPLOITATION SOV/4299

USSR. Ministerstvo svyazi. Tekhnicheskoye upravleniye

Printsipy tekhnicheskogo planirovaniya peredayushchikh setey televizionnogo i UKV ChM veshchaniya; informatsionnyy sbornik (Principles of Technical Planning of Television Transmission Networks and VHF Frequency Modulated Broadcasting Networks; Collection of Information Data). Moscow, Svyaz'izdat, 1960. 132 p. (Series: Tekhnika svyazi) Errata slip inserted. 10,000 copies printed.

Resp. Ed.: G.B. Borisov; Ed.: A.I. Voronova; Tech. Ed.: K.G. Markoch.

PURPOSE: This booklet is intended for technical personnel working in the fields of television and broadcasting.

COVERAGE: The booklet is written by N.M. Sankin and V.I. Trunov, workers of the Gosudarstvennyy nauchno-issledovatel'skiy institut Ministerstva svyazi SSSR (State Scientific-Research Institute of Communication of the Ministry of Communications, USSR) and published under the auspices of the aforementioned institute and of the Tekhnicheskoye upravleniye Ministerstva svyazi SSSR (Technical Administration of the Ministry of Communications, USSR). The booklet presents basic principles for planning transmission networks of television

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and VHF f-m broadcasting. It describes physical processes occurring in meter wave propagation, the regional distribution of field intensity around radiating systems and protective relationships ensuring the quality of television and VHF f-m broadcast reception under various operating conditions. The booklet reviews methods of determining the effective area of service of a transmitter in the presence of interference from other transmitters and the probable quality of television and VHF f-m broadcast reception. It introduces the concept of protective field intensity and establishes the period of interference during which the relation of effective transmitter field to that of the interfering transmitter is equal to or less than the established protective relation. It fixes the minimum number of channels required for bringing television to the population of a given territory in relation to the height of antenna masts and the power of transmitters. Methods of distributing operating frequencies between television and VHF f-m broadcasting transmitters are reviewed. Finally the appendix contains diagrams showing the change of field intensity depending on distance for the 48.5 - 230 Mc frequency range and for various periods of time. The authors thank G.Ya. Timofeyeva, B.A. Khanov, B.I. Savitskiy, A.I. Kalinin, Z.V. Topuria and editor G.B. Borisov. There are 50 references, 21 Soviet, 21 English, 6 German, 1 French and 1 Italian.

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S/106/60/000/011/010/010
A055/A033

6.6000 (3502,1159 only)

AUTHOR: Borisov, G.B.

TITLE: Television-and Radio Transmitting Station "IGLA"

PERIODICAL: Elektrosvyaz', 1960, No. 11, pp. 74 - 75

TEXT: The new Soviet television-and-radio station "IGLA" has been successfully developed. The power of the new video-transmitter will be 5 kw, and that of the accompanying sound-transmitter 1.5 kw. The station will operate within the frequency range from 174 to 230 Mc. Here are some of the principal features of the new station, as specified in the present article: Both the video-transmitter and the sound-transmitter consist of two independent units, the power of each unit being one half of the total rated power respectively. In the video-transmitter, modulation takes place in the stage preceding the last one. The suppression of the lower side-band is mainly effected in the output circuits of the final stages. New, specially designed, air-cooled beam-tetrodes with a high power-amplification factor are used in the video-transmitter. The new station permits a high-quality

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S/106/60/000/011/010/010
A055/A033

Television-and-Radio Transmitting Station "IGLA"

transmission of monochromatic (black-white) television, using the system of offset carriers. However, the possibility of color television (according to the system of simultaneous quadrature modulation of color-subcarrier) is allowed for. From the technological and economic point of view, the new station "IGLA" is considerably superior to the previously designed stations of the same rated power. The quality of sound transmission is also remarkable. The coefficient of non-linear distortion is lower than 1% in the 100 to 15,000 cycle range, and lower than 1.5% in the 50 to 100 cycle range. The level of f.m.-background noise is below 60 db, the level of a.m.-background noise below 52 db, and the level of spurious amplitude modulation below 40 db.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, Gleb Borisovich; VASIL'YEV, Sergey Vasil'yevich

[Sverdlov Machine-Tool Plant; an outline history of the Sverdlov Machine-Tool Plant in Leningrad, 1867-1961]Stankostroitel'nyy imeni Sverdlova; ocherk ; ocherk istorii Leningradskogo stankostroitel'nogo zavoda imeni Sverdlova, 1867-1961 gg. Leningrad, Lenizdat, 1962. 350 p. (MIRA 16:1)
(Leningrad--Factories)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

KALABIN, Vladimir Sergeyevich; BORISOV, G.B., otv. red.; KOKORIN, Yu.I., red.

[Analysis of circuits for the reinsertion of the d.c. component in television] Analiz skhem vosstanovleniia postoiannoi sostvliaiushchei v televidenii. Moskva, Izd-vo "Sviaz'," 1964. 64 p. (MIRA 17:6)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

LAYNER, A.I.; BERENT, Ya.K.; KOLENKOVA, M.A.; BORISOV, G.B.

Obtaining copper-zirconium addition alloys from potassium fluorozirconate. TSvet.met. 38 no.3:87-90 Mr '65. (MIRA 18:6)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.I.

TITKOV, N.I.; VARZANOV, M.A.; SLEZINGER, I.I.; PETROVA, O.P.; BORISOV, G.I.

Drilling by means of electric discharges in fluids. Neft. khoz. 35 no.10:5-10 O '57. (MIRA 11:1)
(Oil well drilling)
(Electric discharges)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

Diffusion study of elimination of traces of martensitic transformation on high-temperature heating. B. M. Nosov, G. K. Borisov, and R. V. Shevnin (State Univ., Gorkii). *Fiz. Metall. i Metalloved., Akad. Nauk S.S.S.R.* 3, 278–81(1956).—Specimens of 0.9% C-24% Ni and of 25% Ni-5% Cr steels were electrolytically coated with a [illegible] mm. layer of Fe^{59} isotope and heated for 36 hrs. at 900°, after which 0.1-mm. layers were taken off their surface, and the β radiation was measured, providing the coeff. of self diffusion. Purely martensitic specimens were tempered for 1–25 hrs. at 700–1000° before subjecting specimens to the diffusion treatment. The diffusion coeffs. for these steels were 1.85 and 1.6 × $10^{[illegible]}$ for austenite and 4.7 and 4.5 × $10^{[illegible]}$ for martensite. The ratio coeff. of diffusion, which means the same degree of eliminating the traces of martensitic transformation, was obtained in C-Ni-Fe alloy and in Cr-Ni-Fe alloys at 900° in 20 and 36 hrs., at 1000° in 4 and 9 hrs., and at 1100° in 1 and 2 hrs., which gives for the $t = f^{[illegible]}$ formula the values of 45,000 and 4[illegible],000 cal./mole, t being time necessary for the removal of martensitic transformation.

I. D. Gat

1. Nauchno-issledovatel'skiy inst. Khimii Gor'kovskogo gosudarstvennogo universiteta.
(Martensite) (Diffusion) (Iron alloys—Metallography)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

DEVYATYKH, G.G.; BORISOV, G.K.; PAVLOV, A.M.

Separation of silicon isotopes by monosilane rectification. Dokl. AN SSSR 138 no.2:402-404 My '61. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N.I.Lobachevskogo. Predstavleno akademikom A.N.Frumkinym.
(Isotope separation) (Silicon--Isotopes)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

L 16968-63 EWT(m)/BDS AB S/020/63/149/006/008/027

AUTHOR: Devyatykh, G. G., and Borisov, G. K.

TITLE: Separation of silicon istopes in monosilane by the thermal diffusion method

PERIODICAL: Akademiya nauk SSSR. Doklady. v. 149, no. 6, 1963, 1293-1294

TEXT: The authors investigated the possibility of separating silicon isotopes by the thermal diffusion method. Monosilane was used as the working gas, because the relative difference in the masses of istope molecules for this gas is greater than for any other silicon compound. The experiments were performed in a metal column of the coaxial cylinder type, the inner cylinder having a temperature of 250°C and the outer being water-cooled to ~ 15°C. A relationship was plotted between the pressure of monosilane in atmospheres and the separation factor. There is 1 figure. The most important English-language reference reads as follows: C. P. Keim, J. Appl. Phys., 24, 1255 (1953).

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N. I. Lobachevskogo (Scientific Research Institute of Chemistry, Gor'kiy State University imeni N. I. Lobachevskiy

SUBMITTED: June 28, 1962

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

L 18871-63 EPF(c)/EWT(m)/BDS Pr-4 WW/JW

ACCESSION NR: AP3006616 S/0076/63/037/009/1985/1988 59 58

AUTHORS: Devyatykh, G. G.; Borisov, G. K.

TITLE: Separation of silicon isotopes by thermal diffusion of monosilane

SOURCE: Zh. fizicheskoy khimii, v. 37, no. 9, 1963, 1985-1988

TOPIC TAGS: monosilane, thermal diffusion, silicon, silicon isotope, silane, Onsager theory

ABSTRACT: Possibility of separation of silicon isotopes by thermal diffusion has been investigated. Monosilane was employed in this study because the relative difference in masses of isotope molecules is greater in monosilane than in any other silicon compound. Separation was carried out on a coaxial cylindrical column with 2 mm gap, 46 mm inside diameter and 102 cm long working surface. The experimental results are in agreement with the Johns-Ferry-Onsager Theory. Parameters of the ideal cascade for producing 1 gm of monosilane per 24 hours containing 20 atom-percent of Si-30 have been determined. "We wish to express our appreciation to E. I. Ovcharenko for his assistance in conducting the experiments." Orig. art. has: 3 figures and 2 tables.

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

L 18871-63

ACCESSION NR: AP3006616

ASSOCIATION: Gorkovskiy gosudarstvennyy universitet im. N. I. Lobachevskogo (Gor'kiy State University)

SUBMITTED: 25Jun62 DATE ACQ: 30Sep63 ENCL: 00

SUB CODE: CH NO REF SOV: 004 OTHER: 004

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Card

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

L 20447-66

ACC NR: AP6008771 SOURCE CODE: UR/0240/66/000/002/0021/0025

8

B

AUTHOR: Borisov, G. K.

ORG: Leningrad Scientific Research Institute of Physical Culture (Leningradskiy nauchno-issledovatel'skiy institut fizicheskoy kul'tury)

TITLE: Dynamics of fatigue of railroad dispatchers during day and night shifts

SOURCE: Gigiyena i sanitariya, no..2, 1966, 21-25

TOPIC TAGS: working capacity, fatigue, stress, vestibular function, cardiovascular system, conditioned reflex

ABSTRACT: Railroad dispatchers perform fatiguing work under stress in the course of a 12-hr day or night shift. In order to determine the dynamics of fatigue in such work, 37 dispatchers were examined at their working locations. Physiological tests were conducted before work, 5 times during the shift, and 30 minutes after work. It was found that this type of work disrupted vestibular function, as indicated by unsteadiness during walking and instability in the Romberg position. The following disturbances were also noted, usually in the last 6 hr of work: tremor of hands and eyelids, increased perspiration, altered handwriting, increased nervousness, etc. Cardiovascular indexes changed considerably: during the first 6 hr of the day shift, systolic pressure decreased 13.6 mm and pulse rate decreased 11.1 beats/min. During the first 3 hr of the night shift, systolic pressure

Card 1/2 UDC: 613.6:656.071.7<<372>>

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

L 20447-66

ACC NR: AP6008771

dropped 13.6 mm and pulse rate was down 9 beats/min. An increase in the latent period of the visual motor reaction from 312 to 400.1 msec was observed during the day shift (this index did not change reliably at night). The latent period of a complex conditioned-reflex reaction also increased (by 113 msec) by the end of the day shift. A decrease in the reliability of work, as indicated by worsening of attention indexes, was observed on both shifts. It is interesting to note that more significant shifts in cardiovascular function were observed during the night shift; however, changes in CNS function were less clearly expressed and appeared somewhat later than on the day shift. It was concluded that increased working capacity and decreased fatigue can be achieved by shortening the dispatcher's shift, using labor-saving devices, and instituting industrial gymnastics. Exercises should be performed before fatigue develops between the 6th and 9th hrs on both shifts. Orig. art. has: 2 figures and 1 table. [JS]

SUB CODE: 06/ SUBM DATE: 06Mar64/ ORIG REF: 007/ ATD PRESS: 4222

Card 2/2 BK

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

S/081/62/000/006/009/117
B166/B101

AUTHORS: Agafonov, I. L., Kukavadze, G. M., Borisov, G. K., Orlov, V. Yu.

TITLE: Mass spectra of monosilane and monogermane

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 16, abstract 6B76 (Tr. po khimii i khim. tekhnol. (Gor'kiy), no. 2, 1961, 227 - 229)

TEXT: The mass spectrum of monosilane SiH_4 was taken and calculated for the monoisotopic spectrum. The intensities of the ion currents of SiH_4^+, SiH_3^+, SiH_2^+, SiH^+, and Si^+ are in the ratio of 0.4 : 73.5 : 100 : 26.5 :25.8 (for the MC-4(MS-4) instrument). Using these data as well as data on the monoisotopic mass spectra of CH_4 and GeH_4 as a basis the authors confirm the rule that there is an increase in the probability of dissociation with an increase in mass of the molecule. It is concluded that the law according to which ions, obtained when an odd number of hydrogen atoms is lost, are

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

formed in a relatively large quantity during dissociation cannot be extended to the aforesaid compounds (CH_4, SiH_4, and GeH_4). [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

ACCESSION NR: AP4044904 S/0032/64/030/009/1152/1153

AUTHORS: Agliulov, N. Kh.; Borisov, G. K.; Runovskaya, I. V.

TITLE: Laboratory fractionating column for thorough purification of gases

SOURCE: Zavodskaya laboratoriya, v. 30, no. 9, 1964, 1152-1153

TOPIC TAGS: fractionating column, gas purification, spiral fitting

ABSTRACT: The laboratory fractionating apparatus consisted of a low-temperature fractionator of glass, fluoroplastic-4, and stainless steel. It allowed thorough purification of liquefied gases within a temperature range of zero to -165C. As shown in Fig. 1 on the Enclosure, the fractionating part of the column (1), which is 120 cm long and 0.9 cm in diameter, is fitted with triangular 2 x 2 mm spirals of 0.18-mm stainless steel. These are set at intervals of 1 to 3 cm, depending on the nature of the fractionated gas. The supporting grates (2) are also of stainless steel. The column is equipped with two calibrated 1-ml capacity containers, the upper one (3) for the distilling of high-boiling admixtures, and the lower (4) for separating low-boiling admixtures. The flow of liquid from (3) is regulated by a valve (5) with a needle point stopper (6) of stainless steel. The fractionating column and the containers are enclosed in a silver-coated vacuum jacket. The

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

ACCESSION NR: AP4044904

system is provided with stopcocks (7) for loading and taking of samples. The condenser (8) is a tube 20 cm long and 20 mm in diameter and is fitted into a cavity in a solid cryostat (9) of copper, one end of which is immersed in a Dewar flask with liquid nitrogen. A heating coil (10) provides the proper pressure in the column by means of a contact manometer (11) and a relay (12). The pressure-regulating mechanism also contains a sliding contact (13) and an electromagnet (14), which reduce the pressure fluctuations within the fractionator to a value below 1 mm Hg. Orig. art. has: 1 diagram.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N. I. Lobachevskogo (Scientific Research Institute of Chemistry, Gorkiy State University)

SUBMITTED: 00 ENCL: 01

SUB CODE: GC NO REF SOV: 000 OTHER: 000

Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

ACCESSION NR: AP4044904

ENCLOSURE: 01

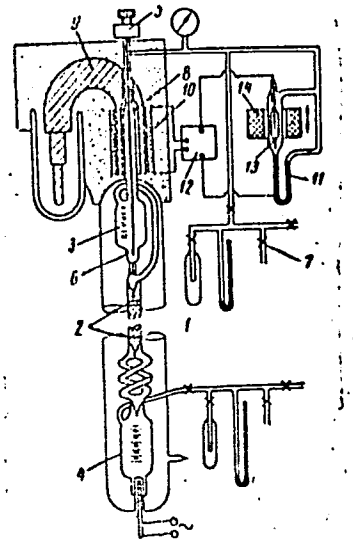

Fig. 1. Diagram of an adaptable low-temperature fractionating column

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

KONDRAT'YEV, A.F., inzh.; BORISOV, G.M., inzh.

Water supply of rural populated places in Czechoslovakia.
Gidr. i mel. 17 no.10:52-55 O '65. (MIRA 18:10)

1. Vsesoyuznyy gosudarstvennyy proyektno-izyskatel'skiy i nauchno-issledovatel'skiy institut vodokhozyaystvennogo stroitel'stva.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

AC: NR: AP6035701 (A, N) SOURCE CODE: UR/0413/66/000/019/0047/0047

INVENTORS: Mityushkin, K. G.; Vulis, A. L.; Borisov, G. M.

ORG: none

TITLE: A remote-control device for a remote signal system. Class 21, No. 186543 [announced by All-Union Scientific Research Institute of Power Engineering and by the Plant "Elektropul't" (Vsesoyuznyy nauchno-issledovatel'skiy institut energetiki i zavod "Elektropul't")]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 47

TOPIC TAGS: pulse signal, remote control, remote control system

ABSTRACT: This Author Certificate presents a remote-control device for a remote signal system. The device includes line subassemblies, selection units, distributors with magnetic cores (which have windings superimposed on them), and output devices. The design provides for accomplishing the operation of the output devices directly from the distributor pulses. The magnetic cores in the device are made, for example, of cold-rolled electrochemical steel (see Fig. 1). The output windings of the distributors are connected through diode-capacitor circuits with the input of the output devices. To increase the reliability of the device, the selection units are made on the bases of a choke circuit. The selection units are connected in series to the triggering circuit and to the releasing circuit of the output devices.

UDC: 621.398

Card 1/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

ACC NR: AP6035701

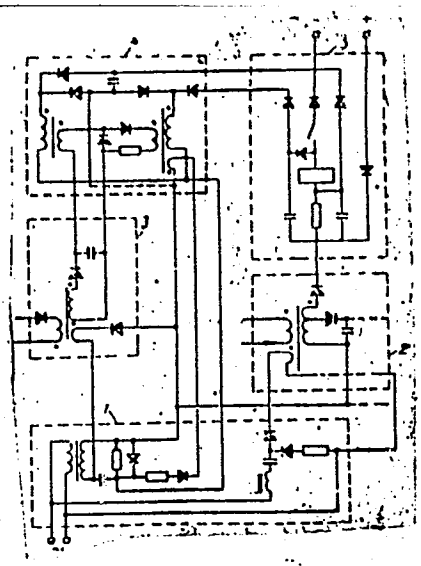

Fig. 1. 1 - cycle pulse shaper; 2 - distributor; 3 - receiver; 4 - selection unit; 5 - output device

Orig. art. has: 1 figure.

SUB CODE: 09/ 13/ SUBM DATE: 29Feb64

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

BORISOV, G.N.

Method of climatic and microclimatic investigations in the study of health resort and sanatorium locations. Izv.AN Turk.SSR no.1:22-27 '52. (MLRA 6:8)

1. Otdel kraevoy patologii i kurortologii Akademii nauk Turkmenskoy SSR. (Climatology, Medical)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

USSR/Cultivated Plants - Technical, Oleaginous, Sachariferous. L-7

Abs Jour : Ref Zhur- Biol., No 9, 1958, 39400

Author : Borisov, G.N.

Inst : State Commision for Testing of Agricultural Crops of the Ministry of Agriculture, USSR.

Title : The Role of Variety Plots in Boosting Cotton Productivity

Orig Pub : Inform. byul. Gos. komiss. po sortoisp. s.-kh. kul'tur pri M-ve s. kh. USSR, 1957, No 10, 21-27.

Abstract : No abstract.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing. M-5

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91753

Author : Borisov, G.N.
Inst : -
Title : Results of Cotton Variety Testing.

Orig Pub : V. sb.: Materialy Ob'yedin. nauchn sessin po khlopkovodstvu. T. 2 Tashkent, Gosizdat UzSSR, 1958, 100-114.

Abstract : No abstract.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

COUNTRY : USSR
CATEGORY : Cultivated Plants. Commercial. Oleiferous. Sugar-Bearing. M
ABS. JOUR. : RZhBiol., No. 1, 1959, No.1726

AUTHOR : Borisov, G.N.
INST. :
TITLE : New Cotton Varieties.

ORIG. PUB. : V sb.: Khlopkovodstvo v SSSR. M., Sel'khozgiz, 1958, 525-540

ABSTRACT : The following varieties are of utmost interest: 1. 8763-I fine fibered, delivered to the Gossortsat (inspection for the selection of grain and olive seeds and grass of the Ministry of Agriculture of the U.S.S.R.) in the year 1953 by the Lototenski experimental station for cotton raising. This variety was tested during the years 1953-1956 on the Maryinskiy seed bed of the Turkmen Socialist Soviet Republic and checked in the year year 1956 in the collective settlements of Turkmen. It unites good productivity, early ripening and high fiber quality; it is more resistant

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206330006-1

CATEGORY :

ABS. JOUR. : RZhBiol., No. 1, 1959, No. 1726

ABSTRACT : in comparison with 5476-1 variety against gummosis. Experiments have shown substantial advantages of the early growing varieties 21E and 5476-I. 2. 5032-V fine fibered variety delivered to the Gossortsot in the year 1955 by the Tajik cotton experimental station. It was tested in the year 1955 and 1956 on small plots; in the year 1956 it was tested and bred in collective settlements of Vakhshsk valley. Being drought resistant, it can be adapted to moderate irrigation up to the blooming period and ripening. 3. S-6002 fine fibered variety delivered to state variety testing in the year 1956 by the central selection station of the All-Union Cotton Scientific Research Institute. In the year 1956 it was sown in a verification sequence and propagation in the collective settlements of the Surkhan-Darynskyaoblast. It is distinguished by its high resistance against fusariosis and bacteriosis. The Central Selection Station of the All-

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