

REZNIKOV, V.D.; ZASLAVSKIY, Yu.S.; SHOR, G.I.

New method for determining the content of an active neutralizing additive in motor oils. Khim. i tekhn. topl. i masel 6 no. 5:63-66 My '61.
(MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.
(Lubrication and lubricants--Additives)

РЕЗНИКОВ, В. И.

SOV/135-59-4-16/16

25 (1)

AUTHORS:

Alakandrov, P. K., Scientific Secretary, Mel'usan, B. Z., Chief Engineer of the Technical Department

TITLE:

The Rostov Sovarkhoz Welders Discuss Welding Industry Development. (Svarshchiki Rostovskogo sovarkhosa obshchidysat voprosy razvitiya svarchnogo proizvodstva.)

PERIODICAL:

Svarchnyye proizvodstvo, 1959, Nr. 4, PP. 44 - 45

ABSTRACT:

Information is presented on welding conferences in the Rostov oblast since the beginning of the Soviet organization of industry after the XII Communist Party congress. There was a conference at the plant "Rosstal'mash" in September 1958 on general prospective development, with reports by Engineer Kochka "On Further Introduction of Welding into Production Practice"; Engineer Mironov on "Mechanization of Assembly Welding Work and Modernization of the Plant's Equipment"; Engineer Saitmov on "High-Efficiency Electrodes and their Prospective Use at the Plant". A conference was organized at the plant "Prodmash" on the problem of using natural gas for cutting metals.

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with a demonstration of the process, which is extensively used at other plants of the Tazanrog plant "Krasnyy hotel' ehchik" conference at the Tazanrog plant "Krasnyy hotel' ehchik" discussed the problems of electric slag welding and contact welding. It is mentioned that nearly all existing welding processes are extensively used at all plants and construction projects in the Rostov oblast. Welded work makes up 60% of the production of the machine building plants. It is emphasized that maximum automation and mechanization of welding and the auxiliary processes is the task of the scientific and practical welders and the welders innovators. More detailed information is given on the conference of December 1958, concerning technical development of welding and the introduction of new welding technique at the coldest plants during 1959-1965, with 98 practical welding specialists and scientific workers participating. The participants (Engineer B. Z. Mel'usan (Technical Department of the Sovarkhoz) spoke of the welding process, which is used at the "Krasnyy hotel' ehchik" (Tazanrog Combine Harvester Plant). There, the production

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of the self-propelled "K-1" combine has been mastered, the necessary welding equipment has been completed, and the auxiliary operations mechanized. The plant "Krasnyy hotel' ehchik" is using natural gas instead of acetylene for cutting, has mechanized 50% of the gas cutting work and is using oxygen jets in the butt welding of pipes by the contact-flash method (to intensify the welding process and remove the slag ridge outside the pipe in using argon). In the production of hydraulic systems for combine harvester plants, the entire welding production is to be doubled during the seven-year plan as compared with 1949, coating by solder is to be increased by 2.7 times, the production of electricals by 6 times (the lack of cool electrodes and wire is presently causing great difficulty) flux by 1.5 times, and the means of mechanization by 2 times. The use of contact welding will have to be increased by 4% and soldering will also have to be used extensively.

Card 3/6

1954, p. 1.

"...in the light of the doctrine of A. P. Pavlov."

vestnik venerologii i dermatologii (bulletin of venereology/dermatology),
no. 1 January-February 1954 (Winter), Moscow.

ИИ МИРА 10/10

PUCHKOV, N.G.; SEROV, A.V.; BELYANCHIKOV, G.P.; REZNIKOV, V.D.; PYSHKOV, S.I.

Suitability for engines of diesel oils derived from sulfur crude oil.
Trudy VNII NP No.6:3-12 '57. (MIRA 10:10)
(Diesel fuels)

DEMIN, Lev Mikhaylovich; ZHAROV, V.A., otv. red.; REZNIKOV, V.L.,
red.

[Island of Bali] Ostrov Bali. Moskva, Nauka, 1964. 303 p.
(MIRA 18:1)

ALEKSANDROV, Mikhail Aleksandrovich; MEL'MAN, S.M., otv. red.;
REZNIKOV, V.L., red.

[Calculated waste; some aspects of the U.S.A. economic aid
to the developing countries] Raschetlivaia rastochitel'nost';
nekotorye aspekty ekonomicheskoi pomoshchi SShA razvivaiu-
shchimsia stranam. Moskva, Nauka, 1965. 65 p.
(MIRA 18:8)

REZNIKOV, V. M.

Physical Chemistry

Dissertation: "Absorption Spectra and the Structure of Pyridine and Its Alpha- and Gamma-Derivatives." Cand Chem Sci, Inst of Organic Chemistry, Acad Sci USSR, 16 Mar 54. (Vechernyaya Moskva, Moscow, 8 Mar 54)

SO: SUM 213, 20 Sept 1954

Reznikov, V. M.

9

U.S.S.R.

Absorption spectra and structure of quinoline derivatives used as starting materials in synthesis of antimalarial substances. II. Tautomerism of 2- and 4-methylpyridines. V. I. Bliznyukov and V. M. Reznikov (Pharm. Inst. Kharkov). *Zhur. Obshch. Khim.* 1955, 30(185), 21; *C.A.* 48, 3142b. Ultraviolet absorption spectra are shown for pyridine, 4-methylpyridine, and 2-methylpyridine in hexane, H₂O, EtOH, CHCl₃, EtOH-HCl, 98% H₂SO₄, and EtONa. The ring-N has a dual character both in donation of electrons in the formation of salts and in attraction of electrons from the ring analogously to PhNO₂. Increased intensity of absorption and bathochromic shift with 2- and 4-Me deriva. in comparison with pyridine is caused possibly by conjugation of ring N with the Me group. The spectra do not support the concept of tautomerism of the 2- and 4-methylpyridines. The following max. and intensities are reported: pyridine in hexane 2520 Å. (ε 2000); in H₂O 2530 (3000); in EtOH 2530 (3000); in EtOH-HCl (1:1) 2545 (5200); in 98% H₂SO₄ 2525 (5200); 4-methylpyridine in hexane 2615 (2000); in H₂O 2600 (3200); in EtOH 2620 (3200); in EtONa-EtOH 2620 (3500); in CHCl₃ 2620 (4100); in EtOH-HCl 2815 (5200); in 14.5M H₂SO₄ 2605 (5200); 2-methylpyridine in hexane 2600 (2000); in H₂O 2640 (4000); in CHCl₃ 2830 (4500); in EtOH 2600 (4300); in EtONa-EtOH 2600 (4000); in EtOH-HCl 2620 (5200); in 98% H₂SO₄ 2605 (5200). Also in *J. Gen. Chem.* (U.S.S.R.) 25, 379-85 (1955) (English translation). G. M. Kosolapoff

RDW
PM

Reznikov, V.M.

1000

✓ Absorption spectra and structure of derivatives of quino-
line serving as raw material for antimalarial substances.
III. The tautomerism of 2- and 4-hydroxyquinoxalines. V.
I. Bliznyukov and V. M. Reznikov. *J. Gen. Chem.*
U.S.S.R. 25, 1735-45(1956) (Engl. translation).—See *C.A.*
50, 1465g. H. M. R.

6/1/67
E. J. Chew

RM

REZNIKOV, V. M.

✓ Absorption spectra and structure of derivatives of quinoline serving as raw materials for antimalarial substances.
III. Tautomerism of 2- and 4-hydroxypyridines. V. I. Bliznyukov and V. M. Reznikov (Pharm. Inst., Kharkov), *Zhur. Obshchei Khim.* 49, 1781-84 (1965); cf. *C.A.* 49, 9384d. The literature on spectra of pyridine derivs. is reviewed. The ultraviolet spectra of 2- and 4-hydroxypyridines were detd. in neutral solvents, in H_2SO_4 , and NaOEt solns. of various concns. The same was done for 1-methyl-2-pyridine and 2-ethoxypyridine. The spectra of 2- and 4-hydroxypyridines in neutral solvents are identical with those of N-alkyl derivs. and analogous to spectra of *o*- and *p*-disubstituted benzenes. These substances can be represented electronically by an M' shift from O into the ring and toward the hetero-N atom which has a pos. charge, resulting from H transfer from the HO group. The 2- and 4-hydroxypyridines form salts at the O atom with both acids and bases, with the 2-deriv. reacting with acids at higher concn. of the acids than is the case for the 4-isomer. No tautomerism was detected in spectra of 2- and 4-hydroxypyridines. Thoroughly purified 4-hydroxypyridine does not show an absorption band at 2880 Å. G. M. Kosoloff.

REZNIKOV

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REZNIKOV, V. M.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 22 - 27/49

Authors : Sheynker, Yu. N., and Reznikov, V. M.

Title : Infrared spectra and the structure of 2- and 4-oxypyridines and their salts

Periodical : Dok. AN SSSR 102/1, 109-111, May 1, 1955

Abstract : Employing infrared absorption spectra the authors investigated the structure of oxypyridines and their salts and to determine the relation between the chemical properties of the substances and tautomerism. The data obtained regarding the structure of pyridine oxy-derivatives (in crystal state and in solutions) and their salts indicate that the reason for the double reactivity of such compounds is the ability of transferring the reaction center over the chain of conjugated bonds and is not the cause of tautomerism or difference in structure of their salts. Three references: 1 USSR, 1 USA and 1 Ger. (1907-1954). Graphs.

Institution : All-Union. Sc. Res. Chem-Pharmac. Inst. im. S. Ordzhonikidze and the Kharkov Pharmaceut. Inst.

Presented by : Academician I. L. Knunyants, December 16, 1954

KARPOVSKAYA, R.L.; LEVDIKOVA, V.I.; DORZET, N.M.; REZNIKOV, V.M.

Chemical and physical inhomogeneity of dioxane lignin. Zhur.
prikl. khim. 37 no.6:1318-1324 Je '64.

(MIRA 18:3)

REZNIKOV, Vladimir Mikhailovich. 4. 1918-1978. 1978.

[Theory of the permeation theory of the...]
Teoriya perkolatsionnoy glivatsii razlita raznykh.
Moskva, Lesnaya promyshlennost', 1978. 100 p.
(1978-1979)

ACCESSION NR: AR4032171

S/0058/64/000/002/D029/D029

SOURCE: Ref. zh. Fiz., Abs. 2D223

AUTHORS: Reznikov, V. M.; Pilipchuk, Yu. S.; Solov'yev, L. S.

TITLE: Infrared spectra of dioxane-lignin

CITED SOURCE: Sb. Materialy* 1-y Nauchn. konferentsii Kompleksn. problemn. labor. Sibirsk. tekhnol. in-t. Krasnoyarsk, 1961, 36-42

TOPIC TAGS: dioxane, lignin, dioxane lignin, infrared spectrum, absorption spectrum, hydrogen bond, hydroxyl group

TRANSLATION: Infrared dioxane-lignin absorption spectra (3619--763 cm^{-1} region) were investigated in KBr dissolved in dioxane, suspended in mineral oil, and in the form of a film. A strong hydrogen bond is observed in the dioxane-lignin. It is established that in the lignin molecule, part of the hydroxyl groups remains free. It

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ACCESSION NR: AR403217i

is noted that the dioxane and the lignin are bound quite strongly
in the film.

DATE ACQ: 31Mar64

SUB CODE: PH, CH

ENCL: 00

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REZNIKOV, V.M.; PONUROV, G.D.

Lignin extracted from Siberian spruce by the Bjorkman method.
Zhur. prikl. khim. 36 no.5:1068-1075 My '63. (MIRA 16:8)

1. Sibirskiy tekhnologicheskii institut, g.Krasnoyarsk.
(Lignin) (Extraction (Chemistry))

REZNIKOV, V.M.; SVIDERIK, G.V.; LEVDIKOVA, V.L.; PONUROVA, G.D.

Ultraviolet spectra of condensed lignins. Zhur.prikl.khim. 36
no.6:1314-1322 Je '63. (MIRA 16:8)

1. Sibirskiy tekhnologicheskii institut, g. Krasnoyarsk.
(Lignin—Spectra)

REZNIKOV, V.M.; KHOL'KIN, Yu.I.; MOROZOVA, V.I.

Chromatographic analysis of furfurole. *Gidroliz.i lesokhim.-*
prom. 15 no.6:19-22 '62. (MIRA 15:9)

1. Sibirskiy tekhnologicheskii institut (for Reznikov, Khol'kin).
2. Krasnoyarskiy tsellyulozno-bumazhno-gidroliznyy kombinat (for Morozova).

(Chromatographic analysis) (Furaldehyde)

REZNIKOV, V.M.; PLOTNIKOV, G.S.; KHOL'KIN, Yu.I.

Balance sheet of turpentine in furfurole production. Trudy
Sib.tekh.inst. no.23:74-75 '59. (MIRA 14:4)
(Furaldehyde) (Turpentine)

REZNIKOV, V.M.; KATAYEV, A.I.

Charcoal from coniferous wood in the manufacture of carbon disulfide.
Gidroliz. i lesokhim.prom. 14 no.3:6-7 '61. (MIRA 14:4)

1. Sibirskiy tekhnologicheskii institut.
(Charcoal) (Wood-Chemistry) (Carbon disulfide)

KHOL'KIN, Yu.I.; REZNIKOV, V.M.

Adsorption of furfurole from organic solvents by alumina.
Trudy Sib.tekh.inst. no.23:51-55 '59. (MIRA 144)
(Furaldehyde)

REZNIKOV, V.M.; KHOL'KIN, Yu.I.

Adsorption of turpentine from organic solvents by alumina.
Trudy Sib.tekh.inst. no.23:69-70 '59. (MIRA 14:4)
(Turpentine)
(Alumina)

REZNIKOV, V.M.
USSR/Physical Chemistry - Molecule, Chemical Bond.

B-4

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 6923.

Author : V.I. Bliznyukov, V.M. Reznikov.

Inst :

Title : Absorption Spectra and Structure of Substituted Quinolines
Serving as Initial Products of Antimalarial Medicaments.
III. Tautomerism of 2- and 4-oxypyridines.

Orig Pub: Zh. obshch. khimii, 1955, 25, No 9, 1781-1794.

Abstract: The ultraviolet absorption spectra of 2-oxypyridien (I), 4-oxypyridine (II), 1-methyl-2-pyridone and 2-ethoxypyridine in neutral solvents, sulfuric acid and sodium ethanolate were studied. It follows from the similarity of the ultraviolet spectra of I and II with the spectra of their N-methyl derivatives that the proton in I and II is located at the ring nitrogen. It is concluded from the comparison of I and II spectra with spectra of 3,5,5-trimethyl-2-cyclohexene-1-one,

-12-

Card : 1/3

REZNIKOV, V.N., inzhener.

Problem of laying concrete on frozen foundations without heating
the ground-concrete joint. Stroil.prom.32 no.11:3-6 N '54.
(Concrete construction--Cold weather conditions)(MLRA 7:11)

ACCESSION NR: AP4026365

S/0138/64/000/003/0019/0021

AUTHORS: Zalukayev, L. P.; Pivnev, V. I.; Reznikov, V. S.; Shestakova, O. G.;
Korbanova, Z. N.; Buryagina, A. S.

TITLE: A study of thermal aging in protector rubbers made from natural rubber by
nuclear magnetic resonance

SOURCE: Kauchuk i rezina, no. 3, 1964, 19-21

TOPIC TAGS: thermal aging, rubber, nuclear magnetic resonance, magnetic field,
aging coefficient, oxidation kinetics

ABSTRACT: The nuclear magnetic resonance (NMR) method is briefly described. The
phenomenon involves magnetic moments acquired by the nuclei of element atoms
placed in a constant magnetic field of magnitude H_0 . For a proton-nucleus atom of
hydrogen, the orientation energy is determined from

$$\Delta E = 2\mu H_0$$

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ACCESSION NR: AP4026365

and the frequency from

$$h\nu_0 = 2\mu H_0 .$$

This method has been used to determine the thermal aging of 2-mm thick protector rubber specimens with various antioxidants at 100, 120, and 140C temperatures in atmospheric air. The amplitude change ΔA of an arbitrary NMR signal is represented graphically as a function of time and temperature. At 120 and 140C temperatures a plateau is observed in the curves for aging times of 90 and 30 hours respectively. A table is presented of aging coefficients, comparing the oxidation kinetics of eleven specimens by the NMR method and a mechanical method. The NMR method is shown to be a useful means for investigating thermal aging in rubber. Orig. art. has: 3 formulas, 2 tables, and 1 figure.

ASSOCIATION: Voronezhskiy shinnyy zavod (Voronezh Tire Works); Voronezhskiy Gosudarstvennyy universitet (Voronezh State University)

SUBMITTED: 00

DATE ACQ: 17Apr64

ENCL: 00

SUB CODE: MT

NO REF SOV: 002

OTHER: 000

Card 2/2

ZALUKAYEV, L.P.; PIVNEV, V.I.; REZNIKOV, V.S.; SHESTAKOVA, O.G.;
KORBANOVA, Z.N.; BURYAGINA, A.S.

Using the nuclear magnetic resonance method for studying
the thermal aging of tire tread compounds made from natural
rubbers. Kauch. i rez. 23 no. 3:19-21 Mr '64. (MIRA 17:5)

1. Voronezhskiy shinnyy zavod i Voronezhskiy gosudarstvennyy
universitet.

REZNIKOV, V.T., gornyy inzhener; DEMCHENKO, A.I., gornyy inzhener.

Scientific and technical conference on problems of developing
the Lvov-Volyn Coal Basin. Ugol' 32 no.6:46-47 Je '57.
(MIRA 10:7)

(Lvov-Volyn Basin--Coal mines and mining)

TROFIMOV, V.P., gornyy inzh.; REZNIKOV, V.T., gornyy inzh.

Mechanization of coal mining operations in United States mines.

Ugol' Ukr. no.6:40-41 Jc '60.

(MIRA 13:7)

(United States--Coal mines and mining)

BURLAKOV, Vasiliy Nikolayevich, inzh.; FOSTIY, Yevgeniy Aleksandrovich,
inzh.; REZNIKOV, V.T., inzh., retsenzent; SEMENENKO, M.D., inzh.
red. izd-va; BEREZOVYY, V.N., tekhn. red.

[Mine timberer]Krepil'shchik gornyykh vyrabotok. Kiev, Gos.izd-
vo tekhn. lit-ry USSR, 1962. 151 p. (MIRA 16:1)
(Mine timbering)

REZNIKOV, V.T.

Supporting workings in operating mines of the Lvov-Volyn' Basin.
Sbor.trud.Inst.gor.dela AN URSR no.5:133-143 '58. (MIRA 15:5)
(Lvov-Volyn' Basin--Mine timbering)

SEMKO, B.P., inzhener; REZNIKOV, V.T., inzhener.

Scientific and technical conference of young Ukrainian scientists.
Ugol' 32 no.7:47 J1 '57. (MIRA 10:7)
(Coal mines and mining) (Ukraine--Scientists)

GOGOLITSYN, V.A., inzh.; GURIN, N.M., inzh., DUL'KIN, V.Ya., inzh.,
REZNIKOV, Ya. Z., inzh.

Determining the compressive strength of concrete. Bet. i zhel.-
bet. no.8:372-375 Ag '60. (MIRA 13:8)
(Concrete—Testing)

REZNIKOV, Yef.

Not included in the staff. Izobr. i rats. no.6:22-23 Je '61.
(MIRA 14:6)

1. Spetsial'nyy korrespondent zhurnala "Izobretatel' i ratsionalizator", Nakhicheven' - Baku.
(Ordubad--Fruits--Preservation)

REZNIKOV, Ya.Z., inzh.

Installation for preparing and feeding cold mastics during
the execution of roofwork. Prom. stroi. 41 no.11:42-44
N '63. (MIRA 17:2)

1. Ordena Lenina Kuybyshevgidrostroy.

ROKHMAN, D.Ye.; REZNIKOV, Ye.A.; SOTS, G.A.

Determining minimum data content for establishing norms
for qualitative indices. Standartizatsiia 27 no.10:10-15
0 '63. (MIRA 16:11)

REZNIKOV, Ye. K.

Fixed dermatites arising at the site of smallpox vaccinations
several months after inoculation. Vest. dermat. i ven. no.10:70-71
'61. (MIRA 14:12)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof.
M. M. Zheltakov) II Moskovskogo meditsinskogo instituta imeni
N. I. Pirogova i Moskovskogo gorodskogo kozhno-venerologicheskogo
dispansera (glavnyy vrach A. S. Obukhova)

(SMALLPOX, INOCULATION OF—PHYSIOLOGICAL EFFECT)
(SKIN—INFLAMMATION)

REZNIKOV, E. K.

REZNIKOV, E. K., KHACHATUR'IAN, G. K.

Complications and side effects in penicillin treatment. Vest.
vener. No. 4, July-Aug. 50. p. 42-3

1. Of the Clinic for Skin Diseases, Second Moscow Medical Institute
imani I. V. Stalin and the 8th Venereal Dispensary (Director--
Honored Worker in Science Prof. F. N. Grinchar).

GLM. 19, 5, Nov., 1950

REZNIKOV, Ye.K.

KHACHATUR'YAN, G.Kh.; DAYNYAK, A.N.; REZNIKOV, Ye.K.

Penicillin dermatitis. Sovet. med. 16 no. 6:11-13 June 1952. (CLML 22:4)

1. Of the Clinic for Skin Diseases (Director -- Prof. F. N. Grincher, Honored Worker in Science), Second Moscow Medical Institute imeni I. V. Stalin and of the 8th Venereological Dispensary.

MOLODENKOVA, S.P., REZNIKOV, Ye.K.

Health education practices of the Moscow Municipal Dermato-
venerological Dispensary. Vest.derm. i ven. 32 no.4:56-60
Jl-Ag '58 (MIRA 11:10)

1. Iz Moskovskogo gorodskogo kozhno-venerologicheskogo dispansera
(glavnyy vrach S.P. Molodenkova).
(SKIN DISEASES, prev. & control
in Russia (Rus))
(VENEREAL DISEASES, prev. & control.
same (Rus))

REZNIKOV, Ye.K.

Health education work in gonorrhoea control. Vest. dermat. i ven.
3" no.5:55-59 My '63. (MIRA 17:5)

1. Moskovskiy gorodskoy kozhno-venereologicheskiy dispanser (glavnyy
vrach A.S. Obukhov

VINOKUROV, I.N.; REZNIKOV, Ye.K.; CHERNOVA, P.N.

Meladine therapy of disseminated forms of vitiligo, and alopecia areata and universalis. Vest.derm. i ven. 37 no.1: 42-46 Ja'63. (MIRA 16:10)

1. Iz kafedry kozhnykh i venericheskikh bolezney II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova (zav. - prof. M.M.Zhehtakov) i Moskovskogo gorodskogo kozhno-venerologicheskogo dispansera (glavnyy vrach A.S.Obukhova).
(VITILIGO) (BALDNESS) (XANTHOTOXIN)
(IMPERATORIN)

REZNIKOV, Ye.K.

Use of tissue therapy in seroresistant syphilis. Vest.ven. i derm.
no.3:57 My-Je '56. (MLRA 9:9)

1. Iz kliniki kozhnykh bolezney II Moskovskogo meditsinskogo
instituta imeni I.V.Stalina i Moskovskogo gorodskogo kozhno-venerolo-
gicheskogo dispensera.
(SYPHILIS) (TISSUES--TRANSPLANTATION)

REZNIKOV, Ye.K.

Role of sanitary education in control of skin diseases in
industry. Vest.derm.i ven. no.11:53-56 '61. (MIRA L1:11)

1. Iz Moskovskogo gorodskogo kozhno-venerologicheskogo dispansera
(glavnyy vrach A.S. Olukhova).
(INDUSTRIAL HYGIENE) (SKIN..DISEASES)

REZNIKOV, Yu.

Mechanization of the quality control of production and labor
savings. Sots.trud 4 no.9:100-104 S '59. (MIRA 13:1)
(Bearing industry--Quality control)

SHLYAPOSHNIKOV, B.M. (Leningrad); REZNIKOV, Yu.A. (Leningrad)

Automatic control of a direct current welding circuit. Avtom.
svar. 13 no.12:84-85 D '60. (MIRA 13:11)
(Electric welding) (Automatic control)

SHEIN, Anatoliy Ivanovich; NIGEY, Fedor Mefod'yevich: REZNIKOV, Yu.,
red.

Karatau. Alma-Ata, Izd-vo Kazakhstan, 1965. 81 p.
(MIRA 18:6)

ACC NR: AT6036708

SOURCE CODE: UR/0000/66/000/000/0247/0256

AUTHOR: Severdenko, V. P. (Academician AN BSSR); Reznikov, Yu.N.

ORG: none

TITLE: The effect of ultrasonic oscillations of various directions on the wire drawing process of metals

SOURCE: AN BSSR. Fiziko-tekhnicheskiy institut. Plastichnost' i obrabotka metallov davleniyem (Plasticity and metalworking by pressure). Minsk, Nauka i tekhnika, 1966, 247-256

TOPIC TAGS: ultrasonic vibration, ultrasonic impulse, metal drawing, longitudinal ultrasonic wave, transverse wave

ABSTRACT: A theoretical analysis, verified by experimental data, showed that longitudinal oscillations were most effective in lowering frictional forces during tube drawing (no mandrel). Oscillations that are perpendicular to the drawing die may be used during tube drawing on a short mandrel, when the application of longitudinal oscillations are difficult or impossible. The effect of ultrasonics on the lowering of contact friction was analyzed by equating the applied impulse to the impulsive friction force acting on the wire or tube per unit time. A hodograph gave the geometrical relationship between the velocity vectors. Trigonometric relationships between the angles

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ACC NR: AT6036708

and velocity vectors were obtained from the hodograph in deriving an integral equation for the ratio of frictional forces during ultrasonic wave application relative to ordinary drawing. This equation was approximated by Simpson's rule and a numerical method was used to obtain values for each term in the approximation. A table gave numerical values for each term for values of β ranging from 0.0004 to 0.15, where $\beta = V_0/a\omega$, V_0 is the slip velocity, a is the oscillation amplitude, and ω is the angular frequency. The theoretical study showed that longitudinal oscillations were the most effective in lowering frictional forces. Experimental data verified this for values of β ranging from 0 to 0.14. Transverse oscillations were least effective in lowering frictional forces, while rotational oscillations were almost as effective as longitudinal ones. A schematic diagram shows the experimental apparatus used for tube drawing in an ultrasonic field. Experiments on copper tube showed that longitudinal oscillations lowered the drawing force 30-35%, and transverse--15%. Orig. art. has: 3 figures, 2 tables, 15 formulas.

SUB CODE: 11/

SUBM DATE: 08Jul66/

ORIG REF: 007/

OTH REF: 002

Card 2/2

BEZHNEKOV, Yu.M., inzh. konstruktor

Some problems concerning the operation of the SP-1 electric
switch drive. Avtom. telem. i svyaz' 8 no.9:29-31 S '64.

(MIRA 17:10)

1. Zavod "Transsignal."

REZNIKOV, Yuriy Aleksandrovich; YUSHTIN, Yevgeniy Ivanovich; GORCHAKOV, N.D.,
otvetstvennyy red.; MISHKEVICH, G.I., red.; LEVOCHKINA, L.I., tekhn.
red.

[Filter-absorber for electric welding] Fil'tr-poglotitel' dlia
elektrosvarochnykh rabot. Leningrad, Gos. soizuznoe izd-vo sudo-
stroit. promyshl., 1957. 27 p. (MIRA 11:7)
(Electric welding--Equipment and supplies)

SHLYAPOSHNIKOV, B.M., doktor tekhn.nauk; REZNIKOV, Yu.A., inzh.; SINITSKIY, V.A.,
inzh.

Automatic machine for the protection of welders from injuries inflicted
by electric currents during manual welding. Sudostroenie 28 no.5:68-
69 My '62. (MIRA 15:7)
(Electric welding—Safety appliances)

1.5400

9/125/60/000/012/013/014
A161/A030

AUTHORS: Shiyaposhnikov, B.M.; Reznikov, Yu.A. (Leningrad)
TITLE: Automatic Control of Direct Current Welding Circuit
PERIODICAL: Avtomaticheskaya svarka, 1960, No. 12, pp. 84 - 85

TEXT: It is important from the point of view of accident prevention to control the welding circuit automatically, i.e., switch welding voltage automatically on the electrode holder at the moment when it contacts the workpiece, and automatically remove welding voltage from the electrode holder at the moment when the arc breaks. The authors suggest such a control system (diagram, p. 85) for welding with direct current. The circuit contains two branches connected to the source of (welding) D.C. in the points 1, 2, 3 and 4 parallel the line electrode holder - welded metal (ЭМ). The contacts of a line contactor (ЛК) are connected in series between the two branches. Very low sinusoidal voltage (U_1) from the secondary winding (III) of the transformer (Т) is connected into the right branch, and rectified and evened out voltage (U_2) from the winding (II) of the same transformer to the left branch. The U_2 voltage is so chosen as to exceed the maximum no-load voltage of the source U_0 . The feed to the transformer (Т) is from the

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A161/A030

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Automatic Control of Direct Current Welding Circuit

winding (I) side, with voltage U_1 . A normally closed contact (P_2), the winding of the relay (P) and the capacitor (C) are connected into the right branch; the relay winding (P_2), valve (B) and capacitor (C_2) into the left. If voltage U is connected to the D.C. bus bars but the electrode is not in contact with metal, and the line contactor's ($\mathcal{N}K$) contacts are open, the electrode holder (Θ) is insulated from the welding voltage source and welding current is zero, and voltage (U_1) in the electrode holder is very low. The electrode must contact metal to start welding. Then, the current through the winding (P_1) will close the contacts (P_1), and current will appear in the ($\mathcal{N}K$) coil circuit. This will cause the line contactor's contacts to close, and welding voltage (U) will be connected to the electrode. As is evident from the circuit diagram, voltage U_2 in the relay R_2 winding in the left branch will always be $U_2 = U_3 - U$. During the interruption interval $U = U_{x,x}$, and during the welding interval $U = U_{work}$ (where $U_{work} < U_{x,x}$).

Bearing this in mind, the U_3 voltage value may be so chosen that during the interruption time the difference will be $U_3 - U_{x,x} = U_2 \approx 0$ and the P_2 relay will not work; during the welding time the difference will be $U_3 - U_{work} = U_2 > 0$, and the P_2 relay will work. One couple of the P_2 relay contacts will close the circuit of the $\mathcal{N}K$ contactor coil circuit, and the other couple will interrupt the

Card 2/3

Automatic Control of Direct Current Welding Circuit

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feed circuit of the P_1 relay winding. Thus no current will flow in the right branch during welding time, and the welding voltage is fed to the electrode holder through the left branch. When the welding stops (the arc interrupts), the U_2 voltage of the feed source rises to U_x value. In the result the U voltage becomes too low to hold the relay P_2 closed, and this leads to interruption of the current circuit in the contactor AK winding. The work current circuit is then interrupted, and the electrode holder disconnected from the welding current source. What is important, the auxiliary U_1 voltage left on the electrode holder (9) may be made several times lower than the voltage considered safe by the accident prevention rules. There is 1 figure.

SUBMITTED: June 8, 1960

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Card 3/3

REZNIKOV, Yu.A., inzh.

Programming control devices used for shipbuilding in foreign
countries (from foreign periodicals). Sudostroenie 25 no.10:
57-58 0 '59. (MIRA 13:2)
(Shipbuilding) (Electronic control)

REZNIKOV, Yu. K., Cand Tech Sci -- (diss) "Utilization of low-strength limestone in various forms of concrete." Moscow, 1960. 27 pp; (Academy of Construction and Architecture USSR, All-Union Scientific Research Inst of New Building Materials); 150 copies; price not given; list of author's work at end of text (11 entries); (KL, 22-60, 138)

BRUYEVICH, N.V.; BREYTMAN, Z.M.; REZNIKOV, Yu.M.; MIKHAYLOV, N.V.,
inzh., retsenzent; KURATTSEV, L.Ye., red.; GORDEYEVA,
L.P., tekhn. red.

[Technical measurements in the bearing industry] Tekhni-
cheskie izmereniia v podshipnikovoi promyshlennosti. Mo-
skva, Mashgiz, 1963. 198 p. (MIRA 17:2)

REZNIKOV, Yu.M., inzh.

Apparatus for remote control of disconnecting switches of
high-voltage automatic block system lines. Avtom., telem. i
sviaz' 7 no.7:14-18 J1 '63. (MIRA 16:10)

SEARCH CODE: 15/0000/00/010/000/00000

AUTHORS: S. V. Kuznetsov, V. P.; Kozmin, Ya. N.

ORG: Physico-Technical Institute of the AN BSMR (Fiziko-tekhnicheskiy institut AN BSMR)

TITLE: Heating of pipes during drawing in an ultrasonic field

SOURCE: AN BSMR. Doklady, v. 10, no. 6, 599-599

TOPIC TERMS: pipe, metal drawing, ultrasonic field, generator, magnetostrictor, steel alloy / ShKh-15 steel alloy, PMS-6 magnetostrictor, VSO-10M ultrasonic generator

ABSTRACT: Heating of copper pipes during drawing in an ultrasonic field (to decrease drawing force required) was investigated on a universal pipe drawing machine (50-ton capacity). Ultrasonic energy was directed into the deformation region (ShKh-15 steel die, 12° cone) through a steel 45 concentrator from a PMS-6 magnetostrictor driven by a VSO-10M ultrasonic generator. Copper pipes (18.0 mm in diameter, 1.5 mm thick) were drawn with a drawing coefficient of $\mu \approx 1.7$ at 100--150 mm/min with and without the ultrasonic field, and the pipe temperature was monitored. It was found that the pipe temperature did not increase without the ultrasonic field and increased to 350--370K with the ultrasonic field. The lower yield strength at this temperature has a negligible effect on the drawing force decrease obtained with the ultrasonic field. Orig. art. has: 2 figures.

SUB CODE: 15/ SUBM DATE: 04Feb66/ ORIG REF: 006/ OTH REF: 002

TSELUYKO, Yu.I.; SADAKH, A.F.; BOBOSHKO, V.S.; DODOKA, V.G.; LIKHININ, A.I.;
Prinimali uchastiye: PEKKER, A.N.; LOLA, V.N.; KSENZUK, F.A.;
BONDAREV, L.V.; REZNIKOV, Yu.N.; KLEKL', A.E.

Study of the heating of metal in a holding furnace. Stal' 25
no.5:462-464 My '65. (MIRA 18:6)

1. Nauchno-issledovatel'skiy i proyektnyy institut metallurgicheskoy
promyshlennosti.

REZNIKOV, Z. (Stalino)

Taking care of students. Obshchestv. pit. no. 6:46 Je '58.
(MIRA 11:7)

(Chistyakovo--School lunchrooms, cafeterias, etc.)

REZNIKOV, Z.

Two homemade apparatuses for practical work in electrical engineering. Politekh.obuch. no.12:77-78 D '58.(MIRA 11:12)

1. Srednyaya shkola No.30, g. Shakhty.
(Electric relays)

REZNIKOV
KONDRATSKAYA, N. (Tiraspol', Moldavskaya SSR); REZNIKOV, Z. (Stalino,
Ukrainskaya SS)

Letters to the editors. Obshchestv. pit. no.2:10 P '58.
(MIRA 11:3)

1. Stalinskoye oblastnoye upravleniye trogovli (for Reznikov)
(Restaurants, lunchrooms, etc.)
(Potatoes)

REZNIKOV, Z.

Service became faster, the accounting more accurate. Obshchestv.
pit. no.11:41-42 N '60. (MIRA 14:3)

1. Nachal'nik otдела obshchestvennogo pitaniya Stalinskogo
oblastnogo upravleniya trgovli.
(Stalino Province--Restaurants, lunchrooms, etc.)

REZNIKOV, Z.M.

Simplified photorelay circuit. Fiz. v shkole 20 no.2:72
Mr-Ap '60. (MIRA 14:5)

1. Gorod Shakty, 30-ya srednyaya shkola.
(Photoelectric cells)
(Electric relay)

REZNIKOV, Z.M.

Accumulator switchboard. Politekh. obuch. no.1:55 Ja '58.
(Storage batteries) (MIRA 10:12)

POPOV, P.K.; POPOV, N.G.; REZNIKOV, Z.O.; BOROVICH, I.L.; MOREYNIS, Ya.I.;
RESH, G.S., red.; SOKOLOVA, I.A., tekhn. red.

[Technical, industrial, and financial plan for sugar plants;
principles and methods of drawing them up] Tekhpromfinplan sakharnykh
zavodov; printsipy i metodika sostavleniia. Moskva, Pishchepromizdat,
1958. 147 p. (MIRA 11:12)

(Sugar industry)

REZNIKOV, Zh.V., inzh.

Operation of the GB-2 horizontal boring machine. Vod. 1 san.
tekh. no.1:35-37 Ja '62. (MIRA 15:6)
(Boring machinery)

4

J. Plasticizing polyvinyl chloride with butadiene-nitrile copolymer. I. The effect of the concentration of the butadiene and nitrile groups in the butadiene-nitrile copolymer on the compatibility of the polymers and the plasticizer effect. R. A. Reznikova, A. D. Zolotarevskii, and S. S. Voyutskii. *Colloid J. U.S.S.R.* 15, 111-17 (1953) (Engl. translation).—See *C.A.* 47, 7816a. H. L. H.

Jan/Feb 49

REZNIKOVA, A. I.

USSR/Medicine - Penicillin, Effect of
Gonorrhea, Therapy

"The Effect of Penicillin for Chronic Sulfa-Resistant Gonorrhea in Men," Z. S. Colotina,
I. A. Meshchaninova, A. I. Reznikova, Ukrainian Sci Res Inst of Skin and Venereal
Diseases, 3 pp

"Vest Venerol i Dermatol" No 1

Penicillin has a bacteriostatic and bactericidal effect on gonococcus. However, not all types of this bacteria exhibit the same reaction to penicillin. Young gonococcus cultures show greatest reaction to penicillin. Effective bactericidal action can be obtained only after long exposure to penicillin. It has been shown that gonococci resistant to sulfamide compounds are not always resistant to penicillin because the mechanism of resistance to penicillin differs from the mechanism of resistance to sulfamide.

PA 65/49T94

GOLITSYN, V.S., inzh.; REZNIKOVA, A.I., inzh.

Repair of the seals of high-pressure latches. Energetik 10
no.9:18-19 S '62. (MIRA 17:1)

REZNIKOVA, A. I.

GOLOTINA, Z. S., MESHCHANINOVA, E. A., REZNIKOVA, A. I.

Effect of penicillin in gonorrhoea. Vest. vener. No. 4, July-Aug. 50. p. 29-32.

1. Of the Ukrainian Scientific-Research Skin-Venereological Institute (Director--Prof. A. M. Krichevsky).

GLML 19, 5, Nov., 1950

REPOPORT, S.G.; GOLOTINA, Z.S.; REZNIKOVA, A.I.

Inactivation of penicillin by various inhibitors and the significance of this factor in the treatment of resistant gonorrhoea. *Vest. vener.* No.1:38-43 Jan-Feb 51. (GLML 20:6)

1. Docents S.G.Rapoport and Z.S.Tolotina. 2. Of the Ukrainian Scientific-Research Skin-Venereological Institute.

GRANAT, S.; MAYBORODA, N. (g.Chelyabinsk); KOLOMATSKAY A, L.; SHISHLOV, V.,
(g.Kashira); REZNIKOVA, B.

Conferences. NTO no.7:37-38 Jy '59. (MIRA 12:11)

1. Predsedatel' energeticheskoy sekti pri Leningradskom oblastnom pravlenii nauchno-tekhnicheskogo obshchestva bumazhnoy i derevoobrabatyvayushchey promyshlennosti (for Granat).
2. Chlen sekti myasnoy i molochnoy promyshlennosti Chelyabinskogo oblastnogo pravleniya nauchno-tekhnicheskogo obshchestva pishchevoy promyshlennosti (for Mayboroda).
3. Zamestitel' predsedatelya Ukrainского pravleniya Vsesoyuznogo khimicheskogo obshchestva imeni D.I.Mendeleyeva (for Kolomatskaya).
4. Tekhnicheskii rukovoditel' makaronnoy fabriki "Udarnitsa"; predsedatel' soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva (for Shishlov).
5. Zamestitel' predsedatelya Kuybyshevskogo oblastnogo pravleniya nauchno-tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti (for Reznikova).
(Research, Industrial)

SOV-117-58-9-21/22

AUTHOR: Reznikova, B.L., Engineer

TITLE: Conference on Modernization of Equipment (Konferentsiya po modernizatsii oborudovaniya)

PERIODICAL: Mashinostroitel', 1958, Nr 9, pp 47-48 (USSR)

ABSTRACT: The Council of National Economy of the Kuybyshev Economical Region and the Oblast' Administration of the Scientific-Technical Society of the Machinebuilding Industry convened a conference which was attended by 240 persons from 52 enterprises and institutions, as well as representatives from Moscow, Gor'kiy, Kazan' and Orenburg. The conference heard the following reports: D.F. Shaposhnikov, Section Head, on modernized equipment in enterprises; K.I. Barsukov and P.A. Vakhrushev on problems of complex modernization; A.G. Nestruxh (NIAT), on modernization of screw-cutting lathes; Engineer V.N. Gusev, on modernization of machine tools with the use of hydraulic drive; Engineer M.M. Bronshteyn, on design of pneumatic and hydraulic clamps of modernized equipment; S.S. Plakida, Chief of the Designing Office at OTM, on increased wear-resistance of parts; B.M. Smol'kov, on the use of high-frequency electric spindles in modernized grinding machines; B.S. Yevminenko, Deputy Chief Technologist, on automation of milling and grinding

Card 1/2

Conference on Modernization of Equipment

SOV-117-58-9-21/22

machines; A.V. Ivanov, Mechanic, on complex automation and modernization of equipment; Senior Instructor of the Kuybyshev Industrial Institute, Ye.S. Zheleznov, on a system of tracking feed in grinding machines; V.L. Postnikov, Chief Mechanic, on modernization of forging-press equipment. The Conference decided to improve modernization and automation of equipment in the enterprises.

1. Machine tools--USSR

Card 2/2

REZNIKOVA, B.L., inzh.

Conference on the modernization of equipment. Mashinostroitel' no.9:47-48
S '58. (MIRA 11:10)

(Machinery industry--Equipment and supplies)

BASKAKOV, M.P., doktor geol.-miner. nauk, red.; SADYKOV, A.A.,
red.; ISKANDAROV, E., red.; KUSHMURADOV, O., red.
REZNIKOVA, P., red.; LYUBETSKAYA, I., red.; GOR'KOVAYA,
Z.P., tekhn. red.

[Problems of the geology of Central Asia and Kazakhstan]
Voprosy geologii Srednei Azii i Kazakhstana. Tashkent. Izd-
vo AN UzSSR, 1963. 148 p. (MIRA 16:12)

1. Akademiya nauk Uzbekskoy SSR, Tashkent, Otdeleniye geologo-
khimicheskikh nauk.

(Soviet Central Asia--Geology) (Kazakhstan--Geology)

LAZUNOVA, A.; REZNIKOVA, F.

Dishes made of flounder. Rabotnitsa 34 no.10:31 0 '56. (MLRA 9:11)
(Cookery (Fish))

NIKOLYUK, V.F., doktor biol. nauk, otv. red.; ASKAROVA, S.A.,
kand. biol. nauk, otv. red.; REZNIKOVA, F.L., red.;
SPEKTOR, L.Ye., red.; KARABAYEVA, Kh.U., tekhn. red.

[Soil and agricultural microbiology] Pochvennaia i sel'-
skokhoziaistvennaia mikrobiologiya; materialy. Tashkent,
Izd-vo AN Uzb.SSR, 1963. 330 p. (MIRA 16:11)

1. Konferentsiya po sel'skokhozyaystvennoy i pochvennoi
mikrobiologii, Tashkent, 1961.
(Agricultural microbiology--Congresses)

YAKHONTOV, V.V., otv. red.; REZNIKOVA, F.L., red.; KARABAYEVA,
Kh.U., tekhn. red.

[Animal kingdom of the Golodnaya Steppe] Zhivotnyi mir Golod-
noi stepi. Tashkent, Izd-vo AN UzSSR, 1962. 174 p.

(MIRA 15:7)

1. Akademiya nauk Uzbekskoy SSSR, Tashkent, Institut zoologii i
parazitologii. 2. Chlen-korrespondent Akademii nauk Uzbekskoy
SSSR, Tashkent (for Yakhontov).

(Golodnaya Steppe - Zoology)

MOMOTOV, I.F., kand.biol. nauk, otv. red.; REZNIKOVA, F.L., red.;
GOR'KOVAYA, Z.P., tekhn. red.

[Pastures of Uzbekistan; materials] Pastbishcha Uzbekistana; materi-
aly. Tashkent, Izd-vo Akad. nauk Uzbekskoi SSR, 1961. 256 p.

(MIRA 15:7)

1. Respublikanskaya nauchnaya konferentsiya po voprosam ispol'zo-
vaniya i uluchsheniya pustyennykh i polupustyennykh pastbishch,
Tashkent, 1960.

(Uzbekistan--Pastures and meadows)

RASHIDOV, T.R.; GOLOLOVSKIY, V.L., kand. sel'khoz. nauk, otv. red.;
REZNIKOVA, F.L., red.

[Related subspecies of corn] Rodstvennost' podvidov kukuruzy.
Tashkent, Izd-vo "Nauka" UzSSR, 1964. 229 p. (MIRA 18:1)

KRESTOV, A.P., inzh.; LAZUNOVA, A.S., inzh.; REZNIKOVA, F.N.;
NOVIKOV, V.M., spets. red.; VELICHKO, Ye.M., red.

[Production of prepared, smoked and gastronomic products
from fish and raw materials other than fish] Proizvodstvo
kulinarnykh, kopchenykh, gastronomicheskikh rybnykh i ne-
rybnykh produktov. Moskva, Izd-vo "Pishchevaia promysh-
lennost'," 1964. 214 p. (MIRA 17:5)

LAZUNOVA, A.S., inzhener-tekhnolog; REZNIKOVA, F.N., inzhener-tekhnolog;
ARKHAROVA, Z.A., inzhener tekhnolog; BAUDIN, V.A., redaktor;
ROSLOV, G.I., tekhnicheskiiy redaktor

[A collection of technological instructions, recipes and technical specifications for fish products] Sbornik tekhnologicheskikh instruktsii, retseptur i tekhnicheskikh uslovii na rybnuu kulinariiu. Moskva, Gos. izd-vo torgovoi lit-ry, 1956. 223 p. (MLBA 9:9)

1. Russia (1923- U.S.S.R.) Glavrybtorg. 2. Glavrybtorg (for Lazunova, Reznikova, Arkharova)
(Fishery products--Preservation)

BERGAKH, A.G.; IAZNEVA, A.S.; REZNIKOVA, F.N.; BOLESNIK, A.A.,
prof., reitsent; SHODOLATOV, G.A., reitsent;
BOYDRINA, V.A., red.

[Technology of frozen products] Tekhnologiya zamorozhen-
nykh produktov. Moskva, Pishchevaia promyshl., 1964.
164 p. (MIRA 18:3)

Reznikova, G. A.

Plasticizing poly(vinyl chloride) with butadiene-nitrile copolymer. V. Compatibility of the polymers in solutions. S. S. Vovutskii, A. D. Zafonchkovskii, and G. A. Reznikova (Central Sci. Research Inst. Leather Substitutes Ind. Moscow). *Kolloid. Zhur.* 18, 515-22 (1956); cf. *C.A.* 49, 13785; 50, 2109f. — Viscosity, η , of x wt. % poly(vinyl chloride) (I) + (100 - x)% butadiene (63%)-acrylonitrile (37%) copolymer (II) in C_2H_5Cl (probably CH_2ClCH_2Cl) was almost a linear function of x in 1% solns. (total concn. of polymer) at 20°, 2% solns. at 60°, and 2% solns. in the presence of 1% EtOH at 20°; in these instances, interaction between I and II was negligible. In 2% solns. at 20° or 30°, the curve of η against x had an S-shape and η was consistently greater than the sum of the η values for the 2 components; the difference was greatest at $x = 60\%$, at which concn. the interaction between I and II is strongest. The η of 2.5% solns. depended on the previous treatment of the solns. The η of nonpolar mixts. (Na butadiene rubber and natural rubber) in light gasoline was an almost linear function of wt. ratio in solns. as concd. as 3%. J. I. Bikerman

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REZNIKOVA, G. YE. KUDRYAKOV, A. A., Authors.

Vologod Oblast' Veterinary Bacteriological Laboratory
GAERTNER'S BACILLUS

Development of filtrable forms of Gaertner's bacillus from old bouillon cultures. Veteri-
nariia 29 no. 9, 1952.

Monthly List of Russian Accessions, Library of Congress. November 1952. UNCLASSIFIED.

SOV/20-121-2-33/53

AUTHORS:

Zelinskiy, V. V., Kolobkov, V. P., Reznikova, I. I.

TITLE:

The Influence of the Structure of Organic Molecules on the Probability of Their Transition Into the Metastable State (Vliyaniye struktury organicheskikh molekul na veroyatnost' perekhoda v metastabil'noye sostoyaniye)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 2, pp. 315 - 318 (USSR)

ABSTRACT:

The authors of the present papers give a report on investigations on mainly various N-methyl phthalimides; it turns out that the structure of these compounds has a clear influence on the amount of δ (δ is the ratio between the quantum yield of phosphorescence and of fluorescence) and thus on the position of λ_{fl}^{max} (λ_{fl}^{max} is the maximum in the spectrum of fluorescence). The following compounds were investigated: 3-hydroxy-N-methyl phthalimide, 4-hydroxy-N-methyl phthalimide, 3-acetyl amino-N-methyl phthalimide, 4-acetyl amino-N-methyl phthalimide, 3-methyl-acetyl amino-N-methyl phthalimide, 3-acetyl amino-6-amino-N-methyl phthalimide, 3-acetyl amino-6-dimethyl amino-N-methyl

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The Influence of the Structure of Organic Molecules on the Probability of Their Transition Into the Metastable State

phthalimide, 3-diphenyl amino-N-methyl phthalimide, 3,6-di-acetyl amino-N-methyl phthalimide, and others as well as N-methyl phthalimides which contain a nitro group; furthermore phenyl-anthranilic acid and anthranilic acid, β -naphthylamine and phenyl- β -naphthylamine. The relation between δ and ν_{fl}^{max}

for the various examined compounds is reproduced and compared in 4 diagrams. ν_{fl}^{max} varies between 20000 cm^{-1} and 26000 cm^{-1} , the δ -values of the various compounds differ very much between the different compounds (e.g. between 3-hydroxy-N-methyl phthalimide and 4-hydroxy-N-methylphthalimide at $\nu_{fl}^{max} = 24-25 \cdot 10^3\text{ cm}^{-1}$ for the 20- to 30-fold).

There are 4 figures and 5 references, 0 of which is Soviet.

PRESENTED: March 31, 1958, by A. N. Terenin, Member, Academy of Sciences, USSR

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2

REZNIKOVA, I. I.

24(8) PHASE I BOOK EXPLOITATION SOV/2809
 Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk
 Termodinamika i stroyniye rastvorov; trudy soveshchaniya...
 (Thermodynamics and Structure of Solutions; Transactions of the
 Conference Held January 27-30, 1958) Moscow, Izd-vo AN SSSR,
 1959. 295 p. 3,000 copies printed.
 Ed.: M. I. Shakhparonov, Doctor of Chemical Sciences; Ed. of Publishings
 House: M. G. Yegorov; Tech. Ed.: T. V. Polyakova.
 PURPOSE: This book is intended for physicists, chemists, and
 chemical engineers.
 COVERAGE: This collection of papers was originally presented at the
 Conference on Thermodynamics and Structure of Solutions sponsored
 by the Section of Chemical Sciences of the Acad. Sci. USSR, and
 the Department of Chemistry of Moscow State University,
 and held in Moscow on January 27-30, 1958. Abstracts of the
 conference are listed in the foreword, included in this book,
 also read at the conference, but not included in this work are:
 papers on the problems of the structure of solutions, dielectric
 electrolytic solutions, etc. of various mixtures, spectro-
 dynamic and thermodynamic properties of various mixtures, spectro-
 scopic analysis, etc. References accompany individual articles.
 Rezhikina, G. F. Molecular Dispersion of Light in Solutions
 of Nonelectrolytes 233
 Shleinitz, M. D., and M. I. Shakhparonov. Verification of the
 Theory of Molecular Dispersion of Light by Means of Binary
 Solutions 239
 Yuks, M. P. Anisotropic Dispersion of Light and Its Use in
 Studying Liquids and Solutions 242
 Mikhchenko, E. F., and A. M. Ponomareva. Partial Molar
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 Water and the Structure of These Solutions 246
 Chulanavskiy, V. M. Spectroscopic Methods for Studying the
 Structure of Solutions 251
 Belyi, M. D. Spectroscopic Methods for Studying Complexes in
 Solution 258
 Zelinitskiy, V. V., V. P. Kolobkov, and I. I. Reznikova.
 Relationship Between Electronic Absorption Spectra and
 Radiation of Solutions of Organic Compounds and the Chemical
 Nature of Solvents 262
 Yarmakova, E. Ya., and I. I. Antipova-Karapayeva. Study of
 Solvation of Ions in Solutions with the Aid of Optical
 Absorption Spectra 266
 Antipova-Karapayeva, I. I. Study of the Effect of the
 Surrounding Medium on the State of the Chromophore by Means
 of Absorption Spectra of Solutions and Alum Crystals
 Lazenko, Ye. M., A. F. Chernyavskaya, and M. V. Chernaya.
 Infrared Spectra of Electrolytic Solutions in Formamide 270
 Lavshin, V. L., Ye. G. Barnova, L. D. Derkacheva, and
 I. V. Lavshin. Study of Association in Concentrated
 Solutions of Dyes by Means of Absorption and Luminescence
 Spectra 275
 Lavshin, I. V. Effect of Ionization and Association on
 Optical Properties of Complex Organic Molecules 285

24(7), 5(4)

SOV/48-23-10-38/39

AUTHORS: Zelinskiy, V. V., Kolobkov, V. P., Reznikova, I. I.

TITLE: An Interrelation Between the Probability of the Transition of Complex Organic Molecules Into a Metastable State and Spectral Composition of Radiation

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 10, pp 1269-1272 (USSR)

ABSTRACT: Whereas all other articles published in this number of the periodical are publications of lectures held at the 12. All-Union Spectroscopy Conference (November 19-26, 1958), the present paper is a reproduction of a lecture delivered at the 11. All-Union Conference for Theoretical Spectroscopy (Moscow, December 2 - 10, 1957). In the introduction the results obtained by two earlier papers (Refs 1, 3) are discussed, which dealt with the investigation of the interrelation between transition probabilities into a metastable state and the position of the fluorescence bands. Among others, the fluorescence spectra of phthalimide derivatives in 37 different media had been investigated and the ratios of the phosphorescence- and fluorescence yields q_{phos}/q_{fl} had been determined in dependence of the fluorescence maximum ν_{fl}^{max}

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(cf. Fig 1). This ratio increases exponentially with increasing ν_{fl}^{max} . In this respect a number of further investigations

was made. Figure 2 shows the same diagram for α - and β -naphthols and anthrazyl acid. The former was investigated in four different media, the latter in 17. Most of the measuring points are located on an (exponential) curve.

ν_{fl}^{max} varied from 21,200 to 25,900 cm^{-1} , the corresponding yield ratio only from 0.01 to 0.2. These results are then discussed. The transition probability into a metastable state was investigated according to three methods: by means of the spectral dependence of q_{fl} at 20° , of q_{phos}/q_{fl} at -196° , and by means of the dependence of the k-value at 20° on

ν_{fl}^{max} . These functions are shown by figure 3. The details resulting from the diagrams for 4-amino-N-methyl phthalimide, 4-acetyl-amino-N-methyl phthalimide, and 3-methyl-acetylamino-6-acetylamino-N-methyl phthalimide are discussed. All three methods gave results which were in qualitative agreement as

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to the spectral dependence of the transition probabilities.
There are 3 figures and 6 Soviet references.

ASSOCIATION: Gos. opticheskiy institut im. S. I. Vavilova
(State Optical Institute imeni S. I. Vavilov)

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KOCHEMIROVSKIY, A.S.; REZNIKOVA, I.I.

Effect of the solvent on the fluorescence yield. Opt. i spektr. 8
no.3:399-401 Mr '60. (MIRA 14:5)

(Flourescence)

КЕЗНИКОВА, И.И.

S/OJL/60/008/03/027/038
E201/2191

AUTHORS: Zamyreva, I.A., Zaitinskiy, V.V., Kolobezov, V.P.,
Kozminirovskiy, A.S., and Keznikova, I.I.

TITLE: On the Problem of the Effect of Solvents on the Electronic
Spectra of Organic Molecules

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 3,
pp 412-414 (USSR)

ABSTRACT: Bakhshiyev (Refs 7, 8) derived relationships between the
effect of solvents on the electronic spectra of organic
compounds and the refractive indices and dielectric
constants of the solvents. According to Bakhshiyev the
experimental results fit excellently the formulae derived
by him. Unfortunately if one substitutes into Bakhshiyev's
formulae the values of ϵ and $\Delta\nu_{\nu}$ for a wider range
of solvents than those investigated by him, the experimental
and theoretical dependences no longer agree; such
disagreement can be seen clearly in Fig 1 which shows the
dependence of $\Delta\nu_{\nu}$ on ϵ for 4-aminophthalimide.
Here $\Delta\nu_{\nu}$ is the frequency shift due to a solvent and

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where ϵ is the dielectric constant and n is the
refractive index of the solvent. Experimental data also
disagree with a theoretically predicted inverse
proportionality between the effect of solvents on the
spectra and the molecular radii of the solvents (Fig 2).
The authors follow earlier workers (Refs 9-13) and suggest
that it is wrong in principle to attempt description of
the effect of solvents on the spectra using macro-
properties of these solvents, since such effect is
primarily due to short-range intermolecular interactions
governed by micro-properties of the solvents. A semblance
of the relationship between the shift in the electronic
frequencies and the dielectric constant is due to the fact
that the dielectric constant is governed by the micro-
properties of the solvents. There are 2 figures and
13 references, of which 6 are Soviet, 1 English, 2 Japanese
and 4 German.

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