BELOVA, A.V.; GORBACHEVA, N.A.; SHVAYKOVA, Mariya Dmitriyevna, prof.; SHEVERDYAYEVA, V.M.; RUBTSOV, A.F., kand.farmatsevticheskikh nauk, retsenzent; YASKINA, D.Z., kand.farmatsevticheskikh nauk, retsenzent; KOZULIN, V.S., red.; RAYKO, N.Yu., tekhn.red.

[Manual on the practical studies of forensic chemistry for pharmacology correspondence students of institutions of higher learning] Rukovodstvo k prakticheskim zaniatiiam po sudebnoi khimii; dlia studentov-zaochnikov farmatsevticheskikh vuzov. Pod obshchei red. M.D.Shvaikovoi. Moskva, I-i Mosk.med.in-t im. I.M.Sechenova, 1961. 101 p.

(MIRA 14:6)

1. Kafedra sudebnoy khimii farmatsevticheskogo fakul'teta 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova (for Belova, Gorbacheva, Shvaykova, Sheverdyayeva).

(PHARMACOLOGY--LABORATORY MANUALS)
(CHEMISTRY, LEGAL)

BELOVA, A.V.; VALLANDER, S.V.

Integral kinetic equations in the theory of monatomic gases in the presence of an external field of mass forces. Aerodin. raarezh. gaz. no.1:38-44 '63.

Integral kinetic equations for a gaseous mixture with internal degrees of freedom. Ibid.:45-52 (MIRA 17:3)

BELOVA, A.V.

Approximate determination of the parameters of a gas in a shock wave. Aerodin. razrezh. gaz. no.1:220-233 '63. (MIRA 17:3)

BELOVA, A.V.

Food of the codfish Elegimus navaga of the Pechora Bay.
Trudy MMBI no.4:146-152 '62. (MIRA 15:11)

1. Laboratoriya akklimatizatsii morskikh organizmov (zav. - L.I. Vasil'yev) Murmanskogo morskogo biologicheskogo institua.

(Pechora Bay--Codfish)
(Fishes--Food)

MIRONOVA, N.V.; TSEYEB, R.Ya.; GERASIMOV, V.V.; POZDNYAKOV, Yu.F.; CHINARINA, A.D.; BELOVA, A.V.

Distribution and some biological characteristics of commercial fishes in the littoral area of the Murman Coast in 1957. Trudy MMBI no.4:162-173 '62. (MIRA 15:11)

1. Laboratoriya ikhtiologii (zav. - N.V. Mironova) Murmanskogo morskogo biologicheskogo instituta.
(Barents Sea--Fishes)

MIRONOVA, N.V.; TSEYEB, R.Ya.; GERASIMOV, V.V.; POZDNYAKOV, Yu.F.; CHINARINA, A.D.; TARVERDIYEVA, M.I.; BELOVA, A.V.

Distribution and some biological characteristics of commercial fishes in the littoral area of the Murman Coast in 1958. Trudy MMBI no.4:174-185 '62. (MIRA 15:11)

1. Laboratoriya ikhtiologii (zav. - N.V. Mironova) Murmanskogo morskogo biologicheskogo instituta.
(Barents Sea—Fishes)

BELOVA, A.V.; TARVERDIYEVA, M.I.

Materials on the feeding habits of the Arctic codling (Boreogadus saida). Trudy MMBI no.5:143-147 '64. (MIRA 17:4)

1. Laboratoriya biologicheskikh osnov akklimatizatsii (zav. - L.I.Vasil'yev) Murmanskogo morskogo biologicheskogo instituta.

BELOVA, A.V.

Effect of transportation conditions on the blood composition in young humpback salmon raised in the fish hatcheries of Murmansk Province. Dokl. AN SSSR 161 no.2:466-468 Mr '65.

(MIRA 18:4)

1. Murmanskiy morskoy biologicheskiy institut Kol'skogo filiala AN SSSR. Submitted April 27, 1964.

BELOVA, A.V.

Materials on the blood morphology in young Oncorhynchus gorbuscha reared in the Ura-Guba Fish Hatchery. Trudy MMBI no.9:88-94 '65.
(MIRA 18:12)

BELOVA, A.V.

124-58-6-6446

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 22 (USSR)

AUTHOR: Belova, A. V.

TITLE: The Force Exerted by a Subsonic Gas Flow on a Fluid Foil (or Profile) (Silovoye vozdeystviye dozvukovogo potoka gaza na profil')

PERIODICAL: Uch. zap. LGU, 1957, Nr 217, pp 90-123

ABSTRACT: An exact formula is evolved for calculating the lifting force exerted on a given wing section in a subsonic flow. To permit use of the method of successive approximations, the system of equations of the motion of the gas

$$\frac{\partial \varphi}{\partial x} = \frac{\rho_0}{\rho} \frac{\partial \psi}{\partial y}; \qquad \frac{\partial \varphi}{\partial y} = -\frac{\rho_0}{\rho} \frac{\partial \psi}{\partial x} \qquad (1)$$

is broken down into an infinite sequence of equation systems (See S. A. Khristianovich, Tr. TsAGI, 1940, Nr 48). The initial solution represents an incompressible fluid flow satisfying the system of equations

Card 1/3

Equation on card 2

The Force Exerted by a Subsonic Gas Flow on a Fluid Foil (cont.)

$$\frac{\partial \varphi_0}{\partial x} = \frac{\rho_0}{\rho_\infty} \frac{\partial \psi_0}{\partial y}, \qquad \frac{\partial \varphi_0}{\partial y} = -\frac{\rho_0}{\rho_\infty} \frac{\partial \psi_0}{\partial x} \tag{2}$$

The author turns next to the independent variables in the plane of the circumference with unit radius and solves, by means of the Khristianovich method, the systems of equations obtained in the vicinity of a point at infinity. Here the author evolves a recurrent solution for the n-th system of equations, which is essential, inasmuch as her starting point is not ... Prandtl's linearized solution but an incompressible fluid flow. Summating and transforming her solutions, she obtains the following formula for the circulation of a subsonic flow:

$$\Gamma = \frac{\Gamma_0}{\sqrt{1 - M_\infty^2}} (1 + \delta) \tag{3}$$

wherein M is the Mach number. The correction δ for Prandtl's formula appears in the form of a series according to powers of M_∞^2

$$\delta = \frac{\Gamma_1}{\Gamma_0} \left(\frac{1}{2} M_\infty^2\right) + \ldots\ldots + \frac{\Gamma_n}{\Gamma_0} \left(\frac{1}{2} M_\infty^2\right)^n + \ldots\ldots \tag{4}$$

Card 2/3

The Force Exerted by a Subsonic Gas Flow on a Fluid Foil (cont.)

wherein the quantities Γ_i are independent of M_∞ and are calculated from known formulae. In effect, the author is content to limit herself to evaluating the first term of series (4). The quantity Γ_1 is calculated for a circumference, for a plate, for a small circular arc, and for a Zhukovskiy profile. From these calculations the conclusion is reached that the factors affecting the quantity Γ_1 are, basically, the relative profile thickness and, to a lesser degree, the profile camber. It is pointed out in conclusion that the basic correction for the formula

$$\Gamma = \frac{\Gamma_0}{\sqrt{1 - M_\infty^2}}$$

can be obtained with relative ease from the second approximation of the usual iteration method if, for the first approximation, one takes the linearized Prandtl solution. The second approximation for the stream function ψ is worked out in finite form in a paper by Hantzsche and Wendt (Hantzsche, W., Wendt, Z. Angew. Math. und Mech., 1942, Vol 22, pp 72-86).

1. Gas flow--Mathematical analysis 2. Fluid flow--Mathematical analysis 3. Wings--Lift

I. M. Yur'yev

Card 3/3

SOV/124-58-7-7477

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 22 (USSR)

AUTHOR: Belova, A. V.

TITLE: Wing-section Moment at High Subsonic Speeds (Moment profilya kryla pri bol'shikh dozvukovykh skorostyakh)

PERIODICAL: Uch. zap. LGU, 1957, Nr 217, pp 124-143

ABSTRACT: A precise formula is evolved for the moment of the aerodynamic forces acting on a given wing profile in a subsonic flow. To enable herself to use the method of successive approximations, the author breaks down the system of equations

$$\frac{\partial\phi}{\partial x} = \frac{\rho_0}{\rho}\frac{\partial\psi}{\partial y} \quad \text{and} \quad \frac{\partial\phi}{\partial y} = -\frac{\rho_0}{\rho}\frac{\partial\psi}{\partial x} \qquad (1)$$

for the motion of a gas into an infinite sequence of equation systems (See Belova, A. V., Uch. zap. LGU, 1957, Nr 217, pp 90-123; RZhMekh, 1958, Nr 6, abstract 6446). She turns then to the independent variables of the plane of the unit-radius circumference (ξ) and solves the systems of equations in the vicinity of the infinitely distant point by the method of

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Wing-section Moment at High Subsonic Speeds

S.A. Khristianovich (Tr. TsAGI, 1940, Nr 481). For the n-th system of equations a recurrent formula is evolved. Then, in the general moment formula, the author again turns to the independent variables of the plane of (ξ_1), substituting therein the results obtained and making the radius of the circumference $|\xi| = r$, along which the integration is performed, tend to infinity. As a result, by utilizing the conclusions of her own previous work (mentioned above), the author obtains for the moment L the following formula:

$$L = \frac{\rho_\infty v_\infty^2}{b^2} \left[\pi \beta_1 \left(1 + \frac{1}{\sqrt{1 - M_\infty^2}} \right) - \alpha_0 \gamma \right] \qquad (2)$$

wherein v_∞ and ρ_∞ are the values for the velocity and density of the gas flow at infinity,

$$b = \left(\frac{d\xi}{dz} \right)_\infty , \qquad z = x + iy ,$$

β_1 is the imaginary portion of the coefficient of ξ_1^{-2} when $(w/w_0)^2$ is expanded into a series in the vicinity of $\xi_1 = \infty$ (w being the flow velocity of

Wing-section Moment at High Subsonic Speeds

an incompressible fluid), and α_0 is a constant determining the location of the point with respect to which the moment is calculated. The quantity $w_\infty \gamma/b$ represents the circulation of the subsonic gas flow in question. If it is assumed that $M_\infty = 0$, the well-known expression for the moment of a wing section in an incompressible fluid flow is obtained.

I.M. Yur'yev

1. Wings--Moments --Applications 2. Wings--Aerodynamic characteristics 3. Mathematics

Card 3/3

KOVALEV, Maksim Antonovich; BELOVA, Aleksandra Vasil'yevna; MARKEVICH, Natal'ya Mikhaylovna; LANDMAN, Vera Gennadiyevna; GINZBURG, I.P., prof., red.; BUSORGINA, N.I., red.; ZHUKOVA, Ye.G., tekhn.red.

[Manual for laboratory work on aerogasdynamics] Rukovodstvo k laboratornym rabotam po aerogazodinamike. Pod red. I.P. Ginzburga. Leningrad, Izd-vo Leningr.univ., 1959. 175 p. (MIRA 13:1)

(Aerohydrodynamics--Handbooks, manuals, etc.)

BELOVA, A.V.; VALLANDER, S.V.

Integral kinetic equations in the theory of monatomic gases in the presence of an external field of mass forces. Vest.LGU 16 no.7: 75-80 '61. (MIRA 14:5)

(Aerodynamics)

VALLANDER, S.V.; BELOVA, A.V.

Integral kinetic equations for a gas mixture with internal degrees of freedom. Vest.LGU 16 no.7 81-86 '61. (MIRA 14:5)
(Aerodynamics)

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S/043/62/007/002/003/007
D407/D301

10.1210

AUTHORS: Belova, A.V., and Lozhkina, V.P.

TITLE: Thin airfoil in supersonic flow with complex thermodynamics

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 7, 2, 1962, 96 - 100

TEXT: Steady supersonic flow of a gas with complex thermodynamics past a thin airfoil is considered. The solution is obtained in the first- and second approximation. From the method of solution it is evident that any approximation can be constructed by continuing the process, described in the article. The solution of the system of differential equations ought to satisfy the conditions at the surface of strong discontinuity and the flow conditions. The solution is sought in the form

$$v_x = v_1 + v_x' + v_x'' + \ldots, \quad v_y = v_y' + v_y'' + \ldots, \quad (6)$$
$$p = p_1 + p' + p'' + \ldots, \quad \rho = \rho_1 + \rho' + \rho'' + \ldots,$$

Card 1/3

where v_1, p_1, ρ_1 relate to the undisturbed flow; v', v" are small magnitudes of the first-, second-, and higher order. By introducing Eq. (6) in the original system of differential equations, and by collecting terms of the same order, one obtains a system of equa-tions for first-order magnitudes, second-order magnitudes, etc. The solution of the system of equations for each approximation, ought to satisfy the discontinuity conditions and the flow condi-tions, as formulated for each approximation. The conditions which have to be satisfied at the discontinuity-line $dy/dx = tg\ \varphi$, are carried over to the characteristic (the magnitudes of necessary or-der being taken into account). In the first approximation, one ta-kes (as the equation of the discontinuity line) the characteristic $dy^0/dx = tg\ \varphi_0$, and in the second approximation - the equation

$$\frac{dy^1}{dx} = tg\ \varphi_0 + \frac{1}{\cos^2 \varphi_0}\ \varphi'. \qquad (18)$$

Analogously, the flow conditions are carried over from the line $y = \zeta(x)$ to $y = 0$. After the boundary conditions have been set up, the solution is obtained as in the case of a gas with constant heat

Thin airfoil in supersonic flow ...

capacity. Thus, in the first approximation

$$p'(x, y) = \frac{\rho_1 v_1^2}{\sqrt{M_1^2-1}} \zeta'\left(x - \sqrt{M_1^2-1}\, y\right), \qquad (22)$$

$$v_x' = -\frac{1}{\rho_1 v_1} p', \quad v_y' = \frac{1}{\rho_1 v_1}\sqrt{M_1^2-1}\, p', \quad \rho' = \frac{1}{a_1^2} p'.$$

Only the expression for φ' differs from that for a gas with constant heat capacity. The system of equations for the second approximation is

$$v_1 \frac{\partial v_x^*}{\partial x} = -\frac{1}{\rho_1}\frac{\partial p''}{\partial x}, \quad v_1 \frac{\partial v_y^*}{\partial x} = -\frac{1}{\rho_1}\frac{\partial p^*}{\partial y},$$

$$v_1 \frac{\partial \rho^*}{\partial x} + \rho_1\left(\frac{\partial v_x^*}{\partial x} + \frac{\partial v_y^*}{\partial x}\right) = \rho_1 v_1 \frac{M_1^4}{M_1^2-1}\frac{\partial}{\partial x}\zeta''\left(x - \sqrt{M_1^2-1}\, y\right), \qquad (25)$$

$$\frac{\partial p''}{\partial x} - a_1^2 \frac{\partial \rho''}{\partial x} = \frac{1}{\rho_1 a_1^2}\left(\frac{1}{f_1(\tau_0)} - 1\right)\frac{\partial}{\partial x} p'^2.$$

This system is then solved. The solution of the problem in the 3rd approximation can be readily obtained from the expression for φ''. Formulas are derived for the coefficients of lift and of drag.

SUBMITTED: November 23, 1961

Card 3/3

L 31351-65 EWT(1)/EWP(m)/EPR/FCS(k)/EWA(1) Pd-1/Ps-4 ESD(gs)/ESD(dp)/AEDC(a)/
SSD/BSD/AFWL/ASD(f)-2/AS(dp)-3 RM

ACCESSION NR: AP4044457 S/0043/64/000/003/0075/0084

27
B

AUTHOR: Belova, A. V.; Maksimova, G. G.

TITLE: A nonstationary problem on dissipation of a jet

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 3, 1964, 75-84

TOPIC TAGS: fluid dynamics, jet flow, jet, gas flow, rarefied gas, numerical method

ABSTRACT: Assume that at the initial moment in time (t = 0) a gas moves parallel to the (x, y) plane, where its macroscopic characteristics (n is the number of particles per unit volume, V is velocity, T is temperature) are given in the following manner: I: In the domain $y > a$, $y < -a$.

$$n = n_1,\ V_x = V_1,\ V_y = 0,\ T = T_1;$$

II: In the domain $-a < y < a$

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$$n=n_2,\ V_x=V_{t},\ V_y=0,\ T=T_2.$$

At the initial instant the molecule velocities follow a distribution given by the Maxwell functions

$$f_l^{(0)}(\bar{u})=n_l\left(\frac{h_l}{\pi}\right)^{3/2}\exp\left\{-h_l(\bar{u}-\bar{V}_l)^2\right\}\quad(l=1,\ 2) \tag{2}$$

where $h_l=\frac{1}{2RT_l}=\frac{m}{2kT_l}$, m is the mass of the molecules, and k is Boltzman's constant. The following system of integral kinetic equations is used to find the distribution function f($\bar{r}$, $\bar{u}$, t):

$$f(\bar{r},\ \bar{u},\ t)=f(\bar{r}_0,\ \bar{u},\ 0)\,\Pi(\bar{r},\ \bar{u},\ 0,\ t)+\int_0^t\Phi(\bar{r},\ \bar{u},\ \tau)\,\Pi(\bar{r},\ \bar{u},\ \tau,\ t)\,d\tau, \tag{3}$$

$$\Pi(\bar{r},\ \bar{u},\ \tau,\ t)=\exp\left\{-\int_\tau^t\left[\int\int|\bar{u}-\bar{u}_1|\sigma(|\bar{u}-\bar{u}_1|)\times f(\bar{r}_q,\ \bar{u}_1,\ q)\,d\bar{u}_1\right]dq\right\}, \tag{4}$$

$$\Phi(\bar{r},\ \bar{u},\ t)=\frac{1}{2}\iint|\bar{u}_1-\bar{u}_2|\sigma(|\bar{u}-\bar{u}_2|)f(\bar{r},\ \bar{u}_1,\ t)\times$$
$$\times f(\bar{r},\ \bar{u}_2,\ t)\,T(\bar{u}_1,\ \bar{u}_2,\ \bar{u})\,d\bar{u}_1 d\bar{u}_2. \tag{5}$$

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In a first approximation, the distribution functions in the first and second regions of y are given by

$$f_1^{(1)}(y, \bar{u}, t) = \begin{cases} f_1^{(0)}(\bar{u}) + [f_2^{(0)}(\bar{u}) - f_1^{(0)}(\bar{u})]\, e^{-Q_1(\bar{u})(t-t_1)}; & f_1^{(0)}(\bar{u}), \quad u_y < u_{y_0} = \frac{y-a}{t}, \\ u_{y_0} < u_y < \tilde{u}_{y_0}; & \\ f_1^{(0)}(\bar{u}) + (f_2^{(0)} - f_1^{(0)})\, e^{-Q_1(t-t_1)} - (f_2^{(0)} - f_1^{(0)})\, e^{-Q_1(t_1-\tilde{t}_1)-Q_1(t-t_1)}, & u_y > \tilde{u}_{y_0} = \frac{y+a}{t}. \end{cases} \tag{7}$$

$$f_2^{(1)}(y, \bar{u}, t) = \begin{cases} f_2^{(0)}(\bar{u}) + [f_1^{(0)}(\bar{u}) - f_2^{(0)}(\bar{u})]\, e^{\frac{-Q_2(\bar{u})(t-t_1)}{u_y}}, & \\ u_y < u_{y_0} < 0; & \\ f_2^{(0)}(\bar{u}), \quad u_{y_0} < u_y < \tilde{u}_{y_0}; & f_2^{(0)}(\bar{u}) + (f_1^{(0)} - f_2^{(0)})\, e^{-Q_2(t-\tilde{t}_1)}, \quad u_y > \tilde{u}_{y_0} > 0. \end{cases} \tag{8}$$

These distributions are then used to find the macroscopic characteristics by means of the formulas

$$n(y, t) = \int f(y, \bar{u}, t)\, d\bar{u}, \quad nV_x = \int u_x f d\bar{u}, \quad nV_y = \int u_y f d\bar{u}, \quad n(3RT + V^2) = \int u^2 f d\bar{u}. \tag{11}$$

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Assuming that $\sigma(v)=\frac{\sigma_0}{v}$, $\sigma_0=\text{const}$, where σ is the collision cross-section and v is the relative velocity, the author finds that the macroscopic characteristics for the first and second regions of y are

$$n(y,\ t)=n_1+\frac{1}{\sqrt{\pi}}\left\{\int_{u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_1(y-a)}{u_y}}\,du_y-\int_{u_a}^{+\infty}F_1(u_y)e^{-\frac{Q_1(y-a)+Q_12a}{u_y}}\,du_y\right\};$$

$$nV_x=n_1V_1+\frac{1}{\sqrt{\pi}}\left\{\int_{u_{y_0}}^{+\infty}F_2(u_y)e^{-\frac{Q_1(y-a)}{u_y}}\,du_y-\int_{u_{y_0}}^{+\infty}F_2(u_y)e^{-\frac{Q_1(y-a)+Q_12a}{u_y}}\,du_y\right\};$$

$$nV_y=\frac{1}{\sqrt{\pi}}\left\{\int_{u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_1(y-a)}{u_y}}u_y\,du_y-\int_{u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_1(y-a)+Q_12a}{u_y}}u_y\,du_y\right\};\qquad(16)$$

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$$n(3RT+V^2)=n_1(3RT_1+V_1^2)+$$

$$+\frac{1}{\sqrt{\pi}}\left\{\int_{-u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_1(y-a)}{u_y}}u_y^2du_y-\int_{u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_1(y-a)+Q_{12}s}{u_y}}u_y^2du_y\right\}+$$

$$+\frac{1}{\sqrt{\pi}}\left\{\int_{-u_{y_0}}^{+\infty}F_2(u_y)e^{-\frac{Q_1(y-a)}{u_y}}du_y-\int_{u_{y_0}}^{+\infty}F_2(u_y)e^{-\frac{Q_1(y-a)+Q_{12}s}{u_y}}du_y\right\}.$$

$$n(y,\ t)=n_2-\frac{1}{\sqrt{\pi}}\left\{\int_{-u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_2(a-y)}{u_y}}du_y+\int_{u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_2(a+y)}{u_y}}du_y\right\}$$

$$nV_x=n_2V_2-\frac{1}{\sqrt{\pi}}\left\{\int_{-u_{y_0}}^{+\infty}F_2(u_y)e^{-\frac{Q_2(a-y)}{u_y}}du_y+\int_{u_{y_0}}^{+\infty}F_2(u_y)e^{-\frac{Q_2(a+y)}{u_y}}du_y\right\};\qquad(17)$$

$$nV_y=\frac{1}{\sqrt{\pi}}\left\{\int_{-u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_2(a-y)}{u_y}}u_ydu_y-\int_{u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_2(a+y)}{u_y}}u_ydu_y;\right.$$

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ACCESSION NR: AP4044457

$$n(3RT+V^2)=n_2(3RT_2+V_2^2)-\frac{1}{\sqrt{\pi}}\left\{\int_{-u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_1(a-y)}{u_y}}u_y^3du_y+\int_{u_{y_0}}^{+\infty}F_1(u_y)e^{-\frac{Q_1(a+y)}{u_y}}u_y^3du_y\right\}-$$

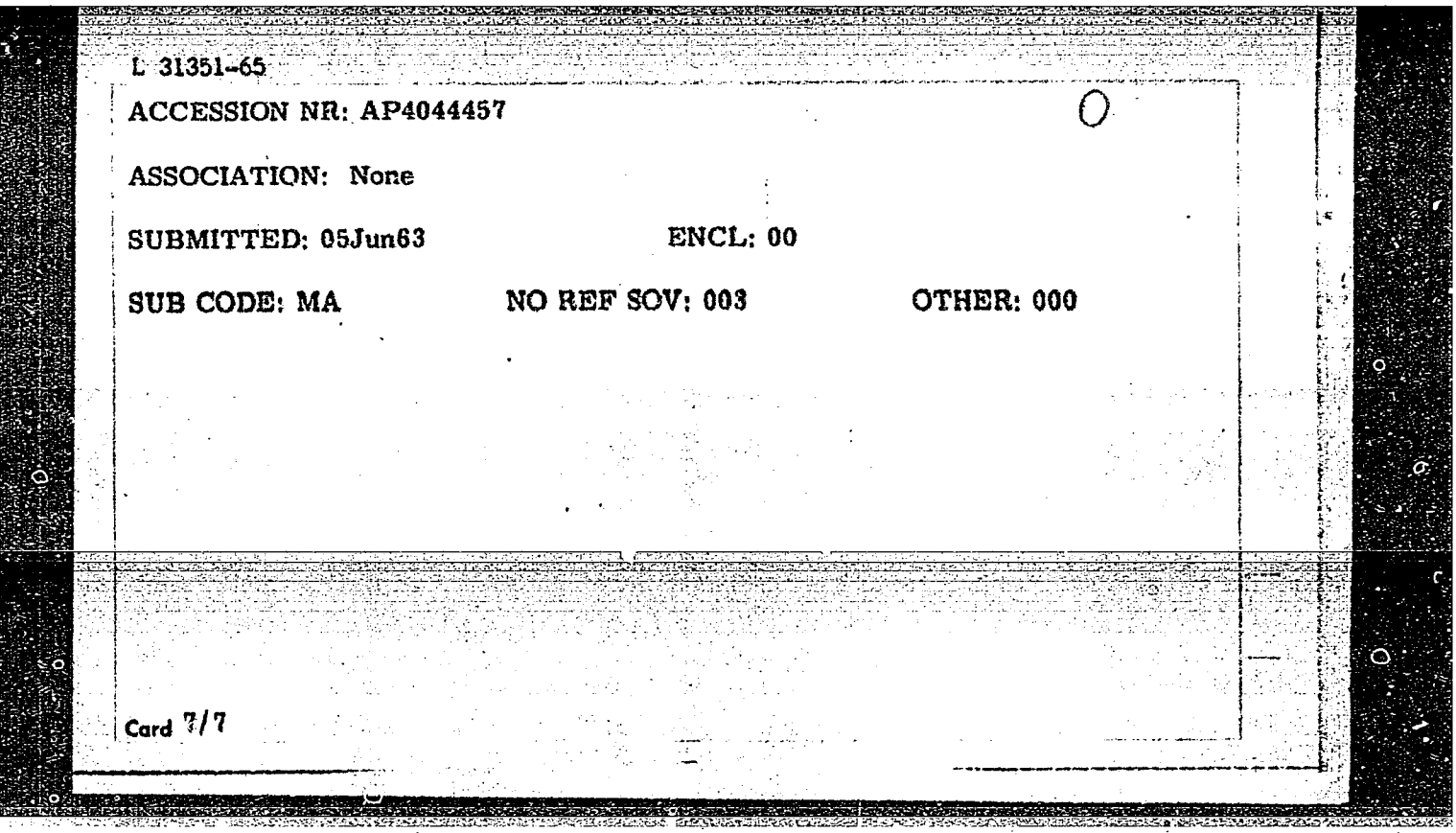
$$-\frac{1}{\sqrt{\pi}}\left\{\int_{-u_{y_0}}^{+\infty}F_2(u_y)e^{-\frac{Q_2(a-y)}{u_y}}du_y+\int_{u_{y_0}}^{+\infty}F_2(u_y)e^{-\frac{Q_2(a+y)}{u_y}}du_y\right\}$$

where $$F_k(u_y)=a_2^{(k)}e^{-h_2u_y^2}-a_1^{(k)}e^{-h_1u_y^2}, \quad (k=1, 2, 3) \qquad (18)$$

and $$a_l^{(1)}=n_l\sqrt{h_l}, \quad a_l^{(2)}=n_lV_l\sqrt{h_l}, \quad a_l^{(3)}=n_l\sqrt{h_l}\left(\frac{1}{h_l}+V_l^2\right), \quad (l=1, 2).$$

These formulas are then applied in several special cases, for which the author gives numerical results. It is concluded that the approximation under discussion provides a good description for the development of the process at its beginning, although the solution provides only a qualitative description of the flow pattern later on. The author presents a method for using his approximations to solve several problems on nonstationary dissipation in the case of one or more regions of gas moving in parallel. Orig. art. has: 18 equations and 2 figures

Card 6/7



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ACCESSION NR: AP4044457

ASSOCIATION: None

SUBMITTED: 05Jun63 ENCL: 00

SUB CODE: MA NO REF SOV: 003 OTHER: 000

Card 7/7

BELOVA, A.V.; MAKSIMOVA, G.G.

Nonstationary problem of the dissipation of a jet. Vest. LGU 19 no.13:75-84 '64 (MIRA 17:8)

BELOVA, A.V.

Microcrystalloscopic detection of some barbituric acid derivatives in forensic chemical investigations. Sud.-med. ekspert. 3 no.2:37-45 Ap-Je '60. (MIRA 18:6)

1. Kafedra sudebnoy khimii (zav. - prof. M.D.Shvaykova) I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

USSR

Diopside in window glass. B. M. Belova and L. G. Gordenberg. *Steklo i Keramik*, 11, No. 1, 5 (1954).—Diopside was observed when the debiteuse was eliminated in vertical drawing of glass analyzing SiO_2 71.8, MgO 4.2, CaO 7.2, $Fe_2O_3 + Al_2O_3$ 1.4, and alkali 14.5–15.0%. This was traced to asbestos as the hydrosilicate in the screen. Upon falling on the glass, it forms centers of crystn. for the diopside.

B. Z. Kamich

MIHAILOV, G., prof.; ANDREEV, Iv.; BELOVA, D.

Cerebral rheumatism; case in a child. Suvrem. med., Sofia 6 no.11: 79-83 1955.

1. Iz II detska gradska bolnitsa pri SGNSDT (gl. lekar: P. Belopitov).

(RHEUMATISM, in infant and child, cerebral. (Bul))
(BRAIN, diseases, rheum. in child. (Bul))

BOLEUKH, A.S.; BELOVA, E.P.; SOL'TS, V.A.

Use of the K40NKhM alloy for watch springs. Sbor.trud.TSNIICHM no.22:57-70 '59. (MIRA 13:6)
(Springs(Mechanism)) (Cobalt-nickel-chromium alloys)

BELOVA, E.P.

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PHASE I BOOK EXPLOITATION SOV/5685

Fridlyander, I. N., Doctor of Technical Sciences, and B. I. Matveyev, Candidate of Technical Sciences, eds.

Teploprochnyy material iz spechennoy alyuminiyevoy pudry [SAP]; sbornik statey (Heat-Resistant Material From Baked Aluminum Powder [SAP]; Collection of Articles) Moscow, Oborongiz, 1961. 122 p. Errata slip inserted. 3,550 copies printed.

Reviewers: M. F. Bazhenov, Engineer, and M. Yu. Bal'shin, Candidate of Technical Sciences; Ed.: M. A. Bochvar, Engineer; Ed. of Publishing House: S. I. Vinogradskaya; Tech. Ed.: V. I. Oreshkina; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE : This collection of articles is intended for scientific workers and engineers in the institute and plant laboratories of the metallurgical and machine-building industry; it may also be useful to instructors and advanced students.

COVERAGE: The 12 articles contain the results of research on the structure, properties, and manufacture of semifinished products

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Heat-Resistant Material From (Cont.) SOV/5685

from sintered aluminum powder. The technology for the manufacture of aluminum powder and briquets is described as are sintering processes, and pressing, rolling, drawing, and sheet-stamping methods. The dependence of the properties of semifinished products on the aluminum-oxide content of the powder, on the degree of hot and cold deformation, and on the stresses of pressing is investigated. Also investigated are the mechanical and corrosive properties of semifinished products, the mechanism of hardening of sintered aluminum powder, the reasons for blister formation, and the possibility of recrystallization. Data on sintered aluminum alloys are included. No personalities are mentioned. References in the form of footnotes accompany the articles.

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Stepanova, M. G., G. P. Zenkov, Ye. M. Lekarenko, and L. A. Sarul'. Aluminum Powder for SAP 17
The work was carried out with the participation of G. N. Pokrovskaya, Chief of TsZL; R. V. Nesterenko, Acting Chief of the Shop; and Engineers L. I. Kibitova, N. D. Chumak, and N. I. Kolobnev.

Matveyev, B. I., M. G. Stepanova, and N. I. Kolobnev. Effect of Specific Pressure in Pressing on Properties of Semifinished Products From SAP 30

Matveyev, B. I., S. I. Nomofilov, and V. A. Shelamov. Pressing of Semifinished Products From SAP 36
The work was carried out with the participation of Engineers A. V. Fedotova and I. R. Khanova, and Senior Technician L. S. Perevyazkin.

Murzov, A. I. [Candidate of Technical Sciences], S. I. Nomofilov [Engineer], and V. A. Shelamov [Engineer]. Rolling of Sheets From SAP 50
The work was carried out with the participation of Engineer R. F. Filimonova and Technicians V. I. Sverlov and O. A. Kolosov.

Matveyev, B. I., N. A. Davydova, and I. R. Khanova. Study of the Effect of the Degree of Deformation on the Properties and Structure of Pressed Semifinished Products and Cold-Rolled Sheets From SAP 59
The work was carried out with the participation of L. S. Perevyazkin and O. A. Kolosov.

Davydov, Yu. P., and G. V. Pokrovskiy. Stamping of Sheets From SAP 66

Litvintsev, A. I., and E. P. Belova. X-Ray Diffraction Study of the Oxide Phase in SAP 77

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Gorelik, S. S., A. I. Litvintsev, and E. P. Belova. Special Features of Recrystallization of Sintered Aluminum Powder (SAP) 88

Litvintsev, A. I., and V. M. Polyanskiy. On the Nature and Mechanism of Blister Formation in SAP 100

Matveyev, B. I., P. V. Kishnev, and I. R. Khanova. Properties of Semifinished Products From Sintered Aluminum Powder 108

Krivenko, R. A., Ye. A. Kuznetsova, and I. N. Fridlyander. Sintered Aluminum Alloys 113

AVAILABLE: Library of Congress

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Card 5/5

L 10814-65 EWT(m)/EPR/T/EWP(k)/EWP(h) Pf-4/Pa-4 ASD(m)-3/SSD(a)/BSD
ACCESSION NR: AT4043511 JD S/3107/64/000/003/0159/0169

AUTHOR: Gorelik, S. S. (Doctor of technical sciences); Litvintsev, A. I. (Candidate of technical sciences); Belova, E. P. (Engineer)

TITLE: Study of recrystallization of sintered aluminum powder (SAP)

SOURCE: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promy*shlennosti. Sektsiya metallovedeniya i termicheskoy obrabotki. Metallovedeniye i termicheskaya obrabotka, no. 3, 1964, 159-169

TOPIC TAGS: aluminum powder, sintered aluminum powder, SAP, SAP cold rolling, SAP hot rolling, rolled recrystallization, SAP recrystallization

ABSTRACT: The recrystallization mechanism of hot and cold rolled SAP with 4% Al_2O_3 was investigated. The hot extruded SAP billets were hot rolled in three steps at 450—480C with 12.5, 22, and 22% reduction, and then cold rolled with 65% reduction. The rolled specimens were annealed at 150—700C for 1 hr and air cooled. The formation of recrystallization centers in the cold-rolled specimens was found to

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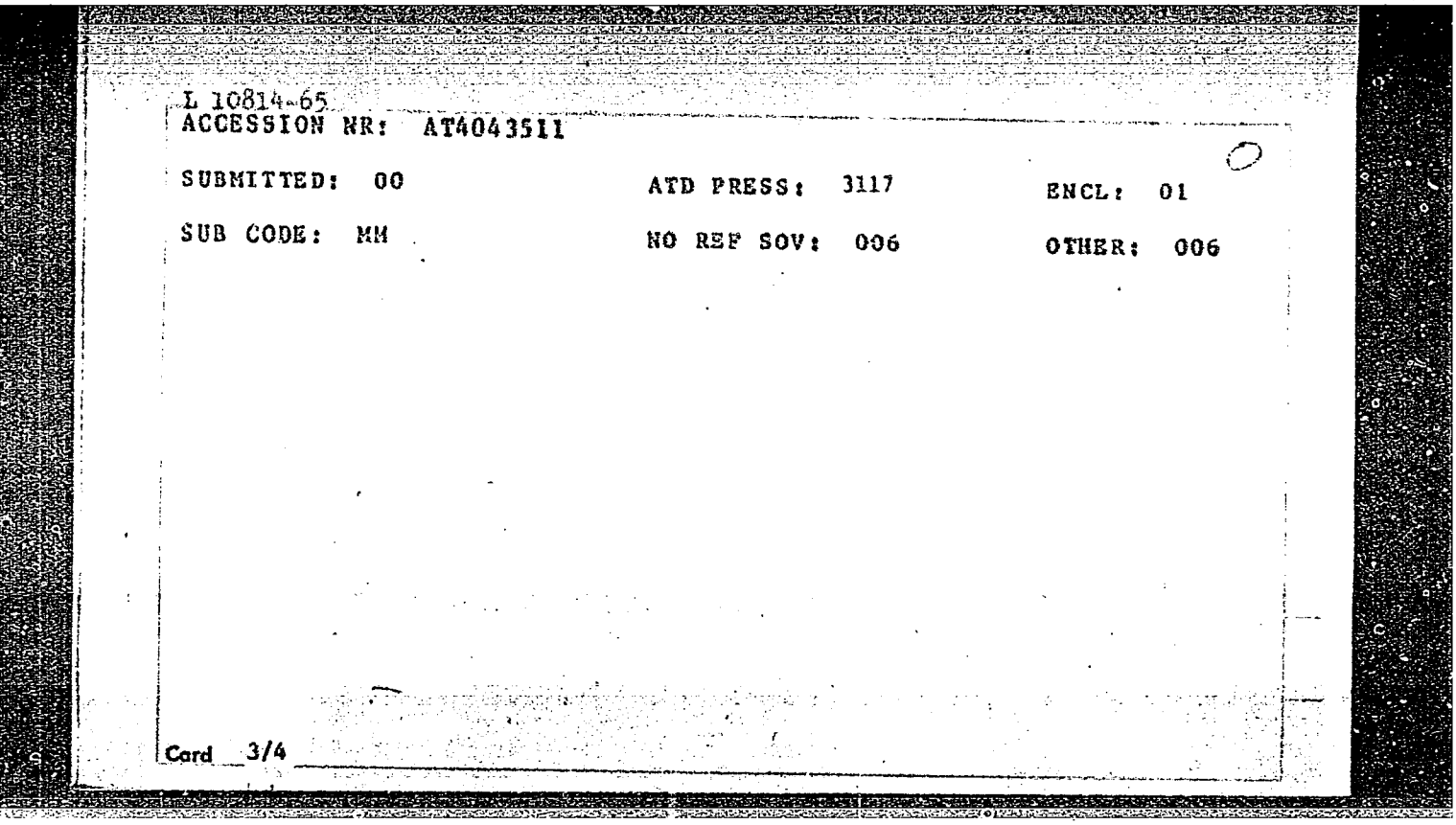
begin at the same temperature as in pure aluminum, i.e., at 200—225C, whereas the grain growth begins at 350—375C owing to the retarding action of Al_2O_3 particles. Accordingly, the hardness-annealing temperature curve shows hardness drops at 200—250C and at 350—400C (see Fig. 1 of the Enclosure). The x-ray diffraction patterns showed that heating of cold-rolled SAP to 250C is accompanied by a diminishing of scattering caused by texture. Heating to 450C almost completely eliminates the texture maxima. The x-ray diffraction patterns of hot-rolled SAP are identical to those of extruded billets. Only at 625C, i.e., close to the melting point of aluminum, does the texture scattering increase, indicating what is apparently the beginning of grain growth. An interesting phenomenon observed during these experiments was a migration of insoluble oxide particles in a solid matrix under the effect of diffusion processes of nuclei growth. The phenomenon is brought about by a redistribution of vacancies occurring under the effect of surface tension. Orig. art. has: 8 figures.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promy*shlennosti (Scientific Technical Society of the Machine Construction Industry)

Card 2/4



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ACCESSION NR: AT4043511

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Card 3/4

L 10814-65
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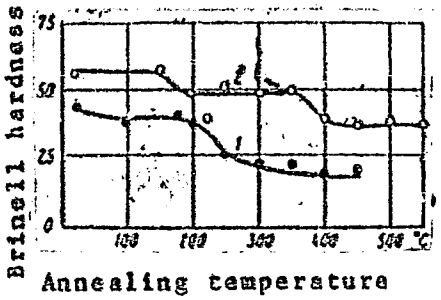

Fig. 1. Dependence of hardness of cold rolled (65% reduction) aluminum (1) and SAP (2) on annealing temperature.

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ACC NR: AP6033047 SOURCE CODE: UR/0126/66/022/002/0204/0209

AUTHOR: Vaynblat, Yu. M.; Belova, E. P.; Sagalova, T. B.

ORG: None

TITLE: X-ray analysis of the fine structure of AK8 aluminum alloy after hot deformation and subsequent heating

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 2, 1966, 204-209

TOPIC TAGS: x ray analysis, aluminum alloy property, fine structure, thermal stability, metal deformation, metal recrystallization

ABSTRACT: The authors made a detailed study of the substructure of a hot pressed rod at various points of its cross section and substructure variation during heating. Data were also obtained on the thermal stability of the rod structure during hot deformation. The rod made from AK8 alloy was 50 mm in diameter and was pressed with a drawing factor of λ=15 at 430°C. The outer layer of the rod (3 to 5 mm thick) recrystallized during heating prior to quenching at 503°C for one hour. Under these conditions, a coarse crystalline annulus formed around the rod. The structure was studied at the center of the cross section, at the center of the recrystallized annulus and 0.5 mm from the surface. This included the original specimen, after heating at 200, 300, 400, 450, 480, 500, 510, 530 and 540°C with subsequent cooling in water. The

 UDC: 539.292:548.73+548.53

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ACC NR: AP6033047

substructure was studied by the x-ray microbeam method. The results show that rods made from AK8 alloy have a polygon-type structure with clear subgranular boundaries. The average subgrain is 3 μ. Heating brings about additional improvement of the substructure, division of the subgrain into uniformly stressed blocks and subgranular coalescence forming recrystallization nuclei. The grain in the annular zone of primary recrystallization follows the deformation grain. This shows that the mechanism responsible for forming recrystallization nuclei in the external zone and inside the rod are not the same. The authors suggest that this difference is due to grain type. Orig. art. has: 3 figures, 4 formulas.

SUB CODE: 11/ SUBM DATE: 12Jul65/ ORIG REF: 004/ OTH REF: 008

Card 2/2

TURSUNOV, Z.T.; POPOVA, N.G.; BELOVA, E.S.

Effect of various beverages on urine secretion at high temperatures. Izv.AN Uz.SSR.Ser.med. no.4:47-58 '58.
(MIRA 12:5)

1. Institut krayevoy meditsiny AN UzSSR.
(URINE--SECRETION) (HEAT--PHYSIOLOGICAL EFFECT)

BELOVA, E.S.

Effect of various foods at optimum temperatures on changes in the mineral composition of gastric juice. Uzb.biol. zhur. 7 no.2:21-25'63. (MIRA 16:4)
(GASTRIC JUICE) (NUTRITION)

YUNUSOV, A.Yu.; BELOVA, E.S.

Participation of digestive organs in the regulation of water-electrolyte metabolism under various thermal conditions. Fiziol. zhur. 51 no.3:378-383 Mr '65. (MIRA 18:5)

1. Otdel fiziologii Uzbekskogo instituta krayevoy meditsiny AMN SSSR, Tashkent.

L 25800-66
ACC NR: AP6015934 SOURCE CODE: UR/0239/65/051/003/0378/0383

AUTHOR: Yunusov, A. Yu.; Belova, E. S.

ORG: Department of Physiology, Uzbek Institute of Regional Medicine, AMN SSSR, Tashkent (Otdel fiziologii Uzbekskogo instituta krayevoy meditsiny AMN SSSR)

TITLE: Participation of organs of digestion in the regulation of the water-salt metabolism under various temperature conditions

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 51, no. 3, 1965, 378-383

TOPIC TAGS: digestive system, biologic metabolism, dog, biologic secretion, protein, carbohydrate

ABSTRACT: The secretion of saliva, gastric juice, and intestinal juice in the small intestine as well as the content of chlorides, Ca and Na in them were studied on dogs exposed to the effects of high temperatures by keeping them in the sun during hot weather. The secretion of saliva and the loss of Cl^-, Ca^{++}, and Na^+ with it increased compared with the normal during feeding of the dogs exposed to high temperatures. The increase in the loss of water and salts by salivation as compared with that in connection with feeding at the optimum temperature varied with the type of food: it was greatest for fat, lower for proteins, and still lower for

Card 1/2 UDC: 612.015.31+612.3

L 25860-66
ACC NR: AP6015934

mixed food. On the other hand, the secretion of gastric juice and excretion of salts with it were reduced in feeding at an elevated temperature as compared with feeding at the optimum temperature. This effect was lower for proteins and mixed food than for fats or carbohydrates. Mixed food and to a lesser extent proteins increased the secretion of intestinal juice and the excretion of salts with it at high temperatures, while fats and carbohydrates reduced them. Transfer of water and salts to the small intestine in hot weather aids in maintaining the organism in a normal condition by improving thermal regulation and modifying metabolic processes. On the basis of the results obtained, the most favorable conditions from the standpoint of prevention of excessive losses of water and salts by the organism of animals in hit weather are created by keeping the animals on a diet of mixed food. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 29Dec63 / ORIG REF: 005

Card 2/2 CC

TYUSHNYAKOVA, M.K.; FEDOROV, Yu.V.; ZAGROMOVA, M.S.; BELOVA, F.S.

Specific properties of cerebral diagnosticum precipitated in methyl alcohol in tick-borne encephalitis. Trudy TomNIIVS 11: 66-71 '60. (MIRA 16:2)

1. Tomskiy nauchno-issledovatel'skiy institut vaktsin i syvorotok i Klinika infektsionnykh bolezney Tomskogo meditsinskogo instituta.
(ENCEPHALITIS) (ANTIGENS AND ANTIBODIES)
(COMPLEMENT FIXATION)

MASTENITSA, M.A.; KUROLENKO, G.A.; BELOVA, F.S.

Materials on the study of the 1959 influenza outbreak in Tomsk. Trudy Tom NIIVS 12:101-10[illegible]'60 (MIRA 16:11)

1. Tomskiy nauchno-issledovatel'skiy institut vaktsin i syvorotok, i Tomskiy meditsinskiy institut.

*

TSELISHCHEV, A.M.; BELOVA, F.S.

Serum diagnosis and therapy for the acute period of tick-borne encephalitis. Trudy TomNIIVS 14:35-41 '63. (MIRA 17:8)

1. Klinika infektsionnykh bolezney Tomskogo meditsinskogo instituta.

BELOVA, G.A.

PHASE I BOOK EXPLOITATION SOV/4668

Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka

Metody analiza produktov proizvodstva sinteticheskogo kauchuka (Methods for Analyzing Products Obtained in the Manufacture of Synthetic Rubber) Leningrad, Goskhimizdat, 1960. 121 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agency: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni akad. S.V. Lebedeva.

Ed.: Ye. L. Shary; Tech. Ed.: T.A. Fomkina.

PURPOSE: This book is intended for scientists and technical personnel of chemical laboratories of the synthetic rubber, resin, petroleum, natural gas, textile, tanning, and other industries. It may also be used as a textbook for chemistry students in higher educational institutions and tekhnikums.

COVERAGE: The book contains 20 articles reviewing methods for analyzing raw materials and intermediate products used in the manufacture of synthetic rubbers and elastomeric substances and that were developed at the All-Union Scientific Research Institute for Synthetic Rubber imeni S.V. Lebedev and at Soviet synthetic rubber plants. No personalities are mentioned. References accompany the articles.

Mogilevskaya, R.A., and A.N. Kaganova. Determination of Diacetylene and Vinylacetylene in Pyrolysis Gases and Acetylene Concentrate Obtained From the Oxidational Pyrolysis of Methane 32

Dolgopol'skiy, I.M., and S.N. Vakhlakov. A Quantitative Method of Analyzing Technical Chloroprene and Fluoroprene 41

Polikarpova, V.F., and A.N. Kaganova. Determination of Methyltrichlorosilane in Dimethyldichlorosilane 50

Lezkova, N.A., and A.N. Rakhmanina. Determination of Substituted Piperidines in Products Obtained in the Production of Methylvinylpyridine Rubber 56

Dvoryanchikova, V.N. A Visual Method of Determining Water in a 1,3-Butadiene Distillate by Freezing Out 62

Polikarpova, V.F., and A.N. Kaganova. Determination of Unsaturation of Complex Polyesters 66

[illegible] Determination of "Neter Amine" (a tertiary amine) in SKS-45K and SKS-40K Rubbers and Triethanolamine in Oil-Impregnated Rubber (SKS-30M, SKS-30AM) 71

Belova, G.A., and A.F. Kozlova. Determination of the Calcium Salt of Dialkylnaphthalenesulfonic Acid (Nekal) in Rubbers by the Trilonometric Method 75

Mogilevskaya, R.A., Sh. A. Babayan, and A.M. Batenkova. Colorimetric Method of Determining Wood-Resin Antioxidant in Vinyl Alcohol Lacquer 79

Mogilevskaya, R.A., and M.M. Yurkina. A Quick Method of Determining the Overall Sulfur Content of Gum Mixtures and Vulcanizates Having Neoprene and Nitrile Rubber Bases 82

Levina, V.G. Determination of Bromine and Calcium in Brominated Butyl Rubber 87

Shlyakhter, R.A., V.S. Shagov, and R.A. Mogilevskaya. A Refractometric Method of Determining the Composition of Copolymer of 1,3-Butadiene and 2-Methyl-5 Vinylpyridine 91

Polikarpova, V.F. Determination of Chains Containing the Vinyl Group in Silicone Oils and Rubber 96

Markosova, M.I., and G.S. Kashurina. Titrimetric Methods of Determining Acrylonitrile by Reaction With Sodium Sulfite 100

Belova, G.A. Chromatographic Methods Used in the Czechoslovak Republic for Analyzing Products Obtained in the Production of Synthetic Rubber 106

AVAILABLE: Library of Congress (TS1925.L4)

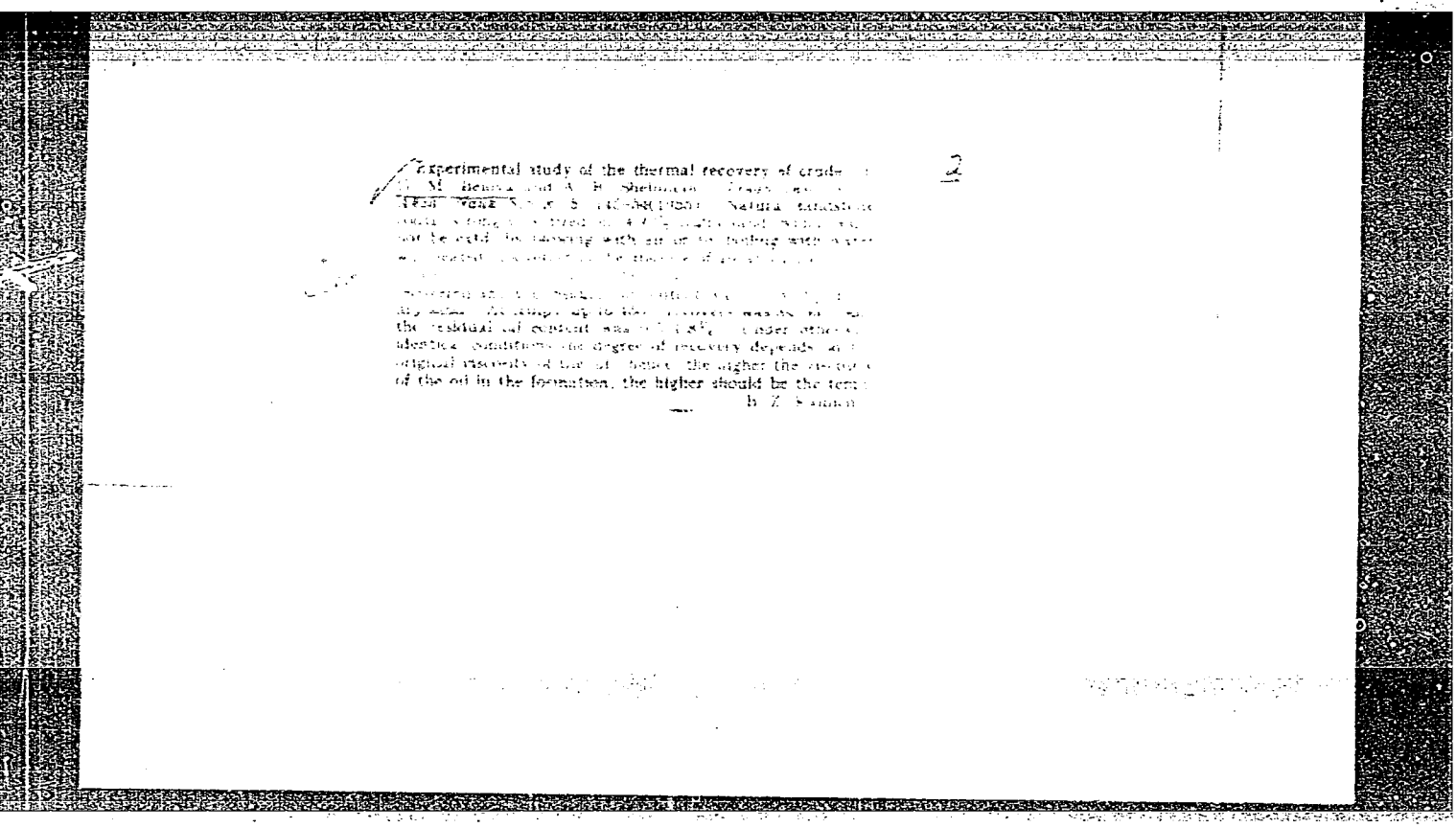
ZALETAYEVA, R.P., kand.tekhn.nauk; Prinimala uchastiye: BELOVA, G.A., tekhnik

Properties of cast, nickel-base, heat-resistant alloys. [Trudy] TSNIITMASH 105:165-175 '62. (MIRA 15:8)
(Nickel alloys—Thermal properties)

ISAKOVA, N.A.; POLIKARPOVA, V.F.; MOGILEVSKAYA, R.A.; REMIZ, Z.K.; BELOVA, G.A.; FIKHTENGOL'TS, V.S.; GARMONOV, I.V., red.; MYASNIKOVA, L.B., red.

[Analysis of the products of the synthetic rubber industry] Analiz produktov proizvodstva sinteticheskikh kauchukov. Moskva, Khimiia, 1964. 315 p. (MIRA 17:12)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.



Experimental study of the thermal recovery of crude

the residual oil content was

identical conditions the degree of recovery depends

original reserves of the oil

of the oil in the formation, the higher should be the

KATSOBASHVILI, Ya.R.; BELOVA, G.M.; CHURAYEVA, G.D.

Interaction of water vapor with coke deposits on catalysts for the process of destructive hydrogenation under low pressure. Zhur.-prikl.khim. 36 no.1:160-166 Ja '63. (MIRA 16:5)
(Coke) (Catalysts) (Hydrogenation)

VINNIK, M.I.; RYABOVA, R.S.; BELOVA, G.V.

Kinetics and mechanism of reactions in concentrated solutions of strong acids. Part 4: Kinetics of dehydration of o-3',4'-dimethylbenzoylbenzoic acid in concentrated solutions of sulfuric acid. Zhur.fiz.khim. 36 no.5:942-950 My '62. (MIRA 15:8)

1. Institut khimicheskoy fiziki, AN SSSR.
(Benzoic acid) (Dehydration (Chemistry))

L 24184-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RPL RM

ACCESSION NR: AP5003830 S/0190/65/007/001/0088/0093

AUTHOR: Berlin, A. A.; Sherle, A. I.; Belova, G. V.; Boreyev, O. N.

TITLE: Synthesis and investigation of polymeric complexes formed in the reaction of tetracyanoethylene with powdered metals

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 1, 1965, 88-93

TOPIC TAGS: coordination polymer, polytetracyanoethylene, tetracyanoethylene

ABSTRACT: Communication 58 of the series "Polymers with a Conjugated System" reports the preparation of copper, iron, and magnesium tetracyanoethylene (TCE) coordination polymers and metal-free polytetracyanoethylene. They were made by reacting TCE with copper, iron, magnesium, or bronze in a 2/1 molar ratio in nitrobenzene in a stream of argon at 210C for 10 hr. All the coordination polymers obtained were infusible black powders, insoluble in the common organic solvents but soluble in concd H_2SO_4. The copper-containing polymer was stable in H_2SO_4, but the magnesium-containing polymer lost the metal to form

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L 24184-65

ACCESSION NR: AP5003830

a metal-free polytetracyanoethylene which behaves like polymerization-prepared polytetracyanoethylene. Thermal-oxidative degradation curves were typical of conjugated polymers. A porphyrazine structure was assigned to the polymers. Orig. art. has: 3 figures, 1 table, and 3 formulas.

[SM]

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR)

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NO REF SOV: 002 OTHER: 003 ATD PRESS: 3175

Card 2/2

L 01003-66 EPA(s)-2/EWT(m)/EPF(c)/EWP(j)/T WW/RM

ACCESSION NR: AP5019562 UR/0191/65/000/008/0003/0005
678.766.2.01:536.495:543.872

AUTHOR: Berlin, A. A.; Belova, G. V.; Sel'skaya, O. G.

TITLE: Study of the thermal-oxidative degradation of polymers with a conjugation system

SOURCE: Plasticheskiye massy, no. 8, 1965, 3-5

TOPIC TAGS: heat resistant polymer, organic semiconductor, semiconducting polymer, polyphenylene, polyphenylvinylene, thermal stability

ABSTRACT: A thermogravimetric study has shown the high thermal-oxidative stability of certain conjugated polymers of the polyphenylene and polyphenylvinylene type. For example, the weight loss in polyphenylene held for 9.5 hr at 400C did not exceed 5%. It is postulated that on heating these polymers, in addition to degradation processes, processes are also possible which involve cross-linking and the formation of segments with condensed rings. This increases the stability range of such polymers. The authors express their appreciation to V. A. Vonsyanskiy and V. P. Parini for making the polyphenylenes available. Orig. art. has: 4 figures and 1 table.

[SM]

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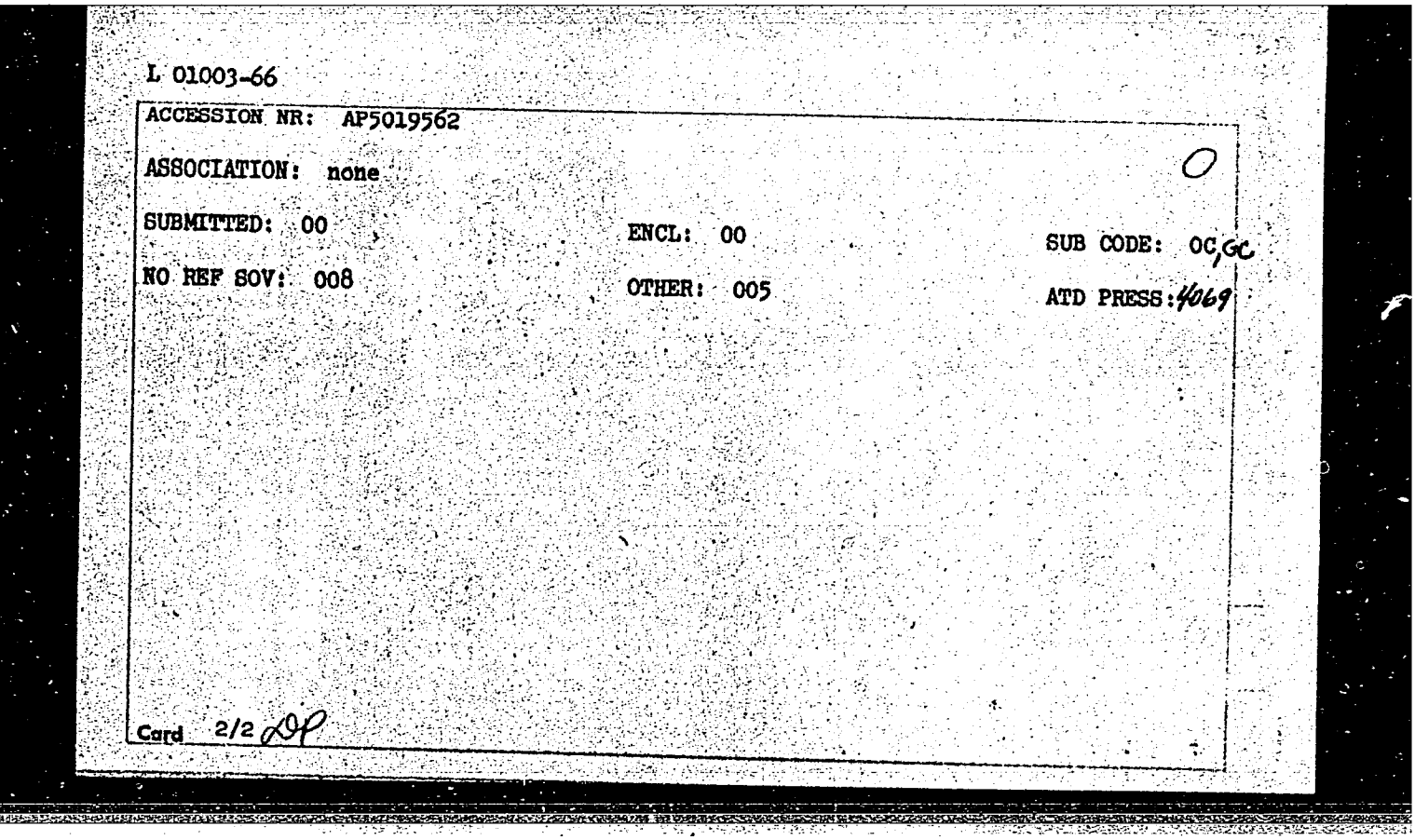

L 01003-66

ACCESSION NR: AP5019562

ASSOCIATION: none

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

NO REF SOV: 008 OTHER: 005 ATD PRESS: 4069

Card 2/2

L 16509-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM

ACC NR: AP6001492 (A) SOURCE CODE: UR/0191/65/000/012/0008/0010

AUTHORS: Berlin, A. A.; Korolev, G. V.; Makhonina, L. I.; Sel'skaya, O. G.; Belova, G. V.

ORG: none

TITLE: Effect of conjugated polymers upon polymerization of oligoesteracrylates and thermal stability of the produced polymers

SOURCE: Plasticheskiye massy, no. 12, 1965, 8-10

TOPIC TAGS: oligomer, thermal decomposition, stabilizer additive, conjugated polymer, polyester plastic, polymerization kinetics / ATV-2 thermal scales, ~~AN SSSR construction~~, MDF-2 polyesteracrylate, MBF-1 polyesteracrylate

ABSTRACT: Thermal stability of three-dimensional polyesteracrylate (I) was studied by using conjugated thermostabilizers: polyphenylene (II), polyazophenylene (III), polyphenylacetylene (IV), polytolane (V), anthracene (VI), and thermally treated (IV) and (VI). Kinetic study of polymerization of I was performed according to the method described by G. V. Korolev (Plast. massy, No. 3, 51, 1963). Kinetic curves of the thermal-oxidative decomposition of cured I were

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UDC: 678.01:335

obtained by heating at 200C in air on automatic thermal scales ATV-2 constructed by IKhF AN SSSR. Specimens were 0.70 ± 0.02 mm thick and weighed 70 mg. The data obtained are summarized in Figs. 1 and 2.

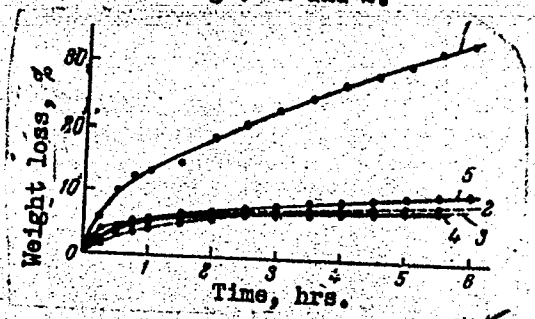


Fig. 1. Effect of the addition of thermal stabilizers upon the thermo-oxidative decomposition of I, type MDF-2: 1 - no thermal stabilizer; 2 - thermally treated IV; 3 - yellow IV; 4 - IV, II; 5 - V.

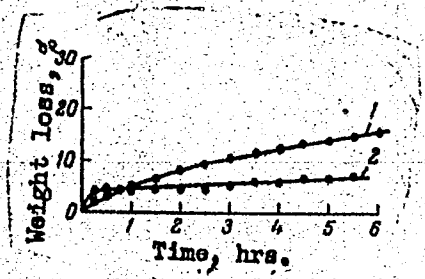


Fig. 2. Effect of the addition of thermally treated VI upon the thermo-oxidative decomposition of I, type MBF-1: 1 - no additive; 2 - 5% of VI.

It was established that addition of 5% of either of the tested thermal stabilizers completely retarded destruction of I. In lower concentrations (up to 1%), thermally treated IV was most effective. It is concluded that deactivating ability of this type of thermal stabilizers increases with temperature, which is in contrast to the behavior of other known stabilizers. Orig. art. has: 4 figures.

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 010/ OTH REF: 001

Card 3/3 SM

L 28881-66 EWP(j)/EWT(m)/T IJP(c) RM/WW

ACC NR: AP6017886 SOURCE CODE: UR/0062/66/000/005/0945/0945

AUTHOR: Berlin, A. A.; Liogon'kiy, B. I.; Shamrayev, G. M.; Belova, G. V. 40 B

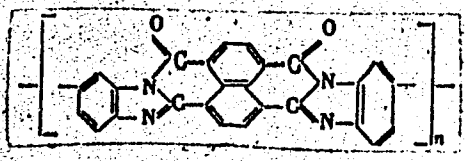
ORG: Institute of Chemical Physics, Academy of Sciences SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

TITLE: New high-thermal-stability polymers with semiconducting properties: poly[aroylenebis(benzimidazoles)]

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 5, 1966, 945

TOPIC TAGS: organic semiconductor, semiconducting polymer, heat resistant polymer, polybenzimidazole

ABSTRACT: New high-thermal-stability polybenzimidazoles — poly[naphthoylenebis-(benzimidazoles)] — have been prepared which show high electrical conductivity at elevated temperatures:



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L 28881-66

ACC NR: AP6017886

The preparation involved the reaction of 1,4,5,8-naphthalenetetracarboxylic anhydride with 3,3'-diaminobenzidine in polyphosphoric acid at 140—200C or in two steps in dimethylformamide. The polymers were soluble in polyphosphoric acid and concentrated H_2SO_4 and remained soluble after vacuum heat treatment at 200C and 10^{-5} mm Hg for 24 hr. The proposed structure was in good agreement with elemental analysis and IR spectroscopy. Viscosity data indicated a high molecular weight. In air, the polybenzimidazoles decomposed at the same temperature (~550C) as polypyromellitimide but more slowly. They were stable on prolonged (7 hr) heating in air at 400C. The polybenzimidazoles were paramagnetic (10^{17}—10^{18} spin/g). At 150C, the conductivity of the original samples and of samples heat treated in vacuum (~10^{-5} mm Hg) in the 300—400C range was 10^{-6} mho/cm; 10^{-5} and 10^{-4} mho/cm, respectively [sic]; at 400C, the conductivity was $10^{-2.9}$ mho/cm. Orig. art. has: 1 formula.

[SM]

SUB CODE: 07, 20/ SUBM DATE: 30Dec65/ ORIG REF: 001/ OTH REF: 002/ ATD PRESS: 5007

Card 2/2

L 21423-66 EWT(m)/EWP(1)/T/ETC(m)-6 WW/RM

ACC NR: AP6010120 (A) SOURCE CODE: UR/0190/66/008/003/0540/0547

AUTHOR: Berlin, A. A.; Ragimov, A. V.; Liqgon'kiy, B. I.; Belova, G. V.

ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: Synthesis and investigation of polyarylenequinones

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 3, 1966, 540-547

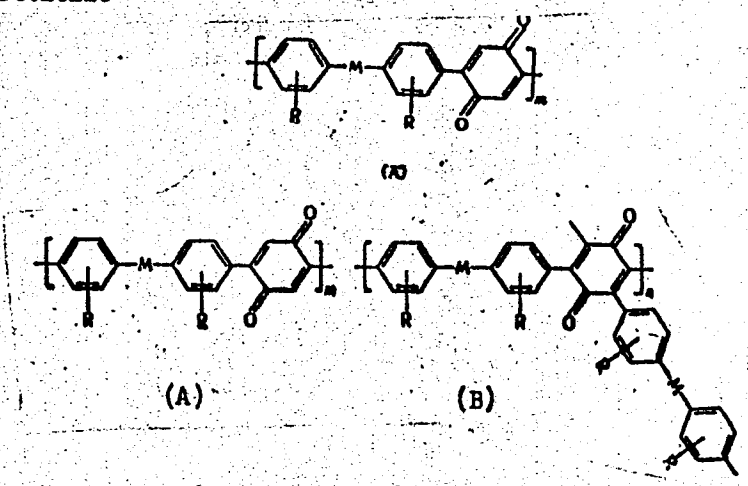
TOPIC TAGS: organic semiconductor, semiconducting polymer, heat resistant polymer, ion exchange resin, redox agent

ABSTRACT: New polyarylenequinones exhibiting redox and ion-exchange properties have been prepared by the reaction of p-benzoquinone with various bisdiazotized aromatic diamines. The diamines used were benzidine (polymer I), o-tolidine (II), 2,2'-benzidinedisulfonic acid (III), and 4,4'-diamino-2,2'-stilbenedisulfonic acid (IV). The polymer had linear (A) or network structures (AB):

Card 1/3 UDC: 541.64+678.01:53

L 21423-66

ACC NR: AP6010120



(A) (B)

where M is -CH=CH- or absent. Structures A were obtained in the case of equimolar benzoquinone/amine ratios, and structures AB, in the case of excess amine. The polymers were light- to dark-brown powders. I and II were partly soluble in acetone, dimethylformamide, pyridine, nitrobenzene, quinoline, conc. H_2SO_4, and aqueous alkalies. Sulfonic acids III and IV were soluble or swelled in water, ethyl alcohol, dimethylformamide, and pyridine. Number-average molecular weights of the soluble fractions of I and II were 900—1500. It was shown that the reaction of benzoquinone with salts of aromatic or bisdiazo (as well as diazo) leads to the reduction of part of

Card 2/3

L 21423-66
ACC NR: AP6010120

the quinone groups to hydroquinone groups. The results of thermomechanical and thermogravimetric measurements showed that heating causes further polymerization. The polymers were resistant to thermal-oxidative degradation up to 250—300C and to thermal degradation in an inert atmosphere up to 600—700C. Orig. art. has: 2 figures and 3 tables. [SM]

SUB CODE: 11/ SUBM DATE: 16Apr65/ ORIG REF: 004/ OTH REF: 005/ ATD PRESS: 4221

Card 3/3 ULR

BELOVA, I.F.; (Moskva); ZHELTOV, Yu.V. (Moskva); ZHELTOV, Yu.P. (Moskva)

Motion of suspensions in narrow horizontal cracks. PMTF no.2:136-140 Mr-Ap '65. (MIRA 18:7)

BELOVA, I.F., gornyy inzh.

Hydraulic fracturing of a coal seam with a radius of the extent of cracks of more than 100 meters. Ugol' 40 no.2:59-60 F '65. (MIRA 18:4)

BELOVA, I. M.

"An Experimental Investigation of the Effectiveness of Biological Elimination of Bacteria Which Cause Intestinal Infections From Sewage." Cand Med Sci, Central Inst for the Advanced Training of Physicians, 7 Dec 54. (VM, 24 Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

KIBAL'CHICH, I.A.; BELOVA, I.M.; BRUK, Ye.S.; SOSUNOVA, I.N.; GUTKOVSKAYA, A.I.; ZHAKOV, Yu.A.; TIMOFEYEVA, T.Z.

Sanitary evaluation of the consequences of flooding tree plantations during the construction of reservoirs. Gig.i san. 25 no.1: 15-20 Ja '60. (MIRA 13:5)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta sanitarii i gigiyeny imeni F.F. Erismana Ministerstva zdravookhraneniya RSFSR.
(WATER RESOURCES DEVELOPMENT--HYGIENIC ASPECTS)

BELOVA, I.M.

Determination of monohydric phenols by partition chromatography and ultraviolet spectrophotometry. Zhur.anal.khim. 16 no.2:229-236 Mr-Ap '61. (MIRA 14:5)

1. All-Union Scientific Research Institute of Metallurgical Thermal Engineering, Sverdlovsk.
(Phenols)

ALIYEVA, G.S.; TRUZHENIKOVA, L.G.; BELOVA, I.N.

Synthesis of an isopropylidene and benzylidene derivative of glycerol monochlorohydrin. Zhur.ob.khim. 32 no.11:3634-3635 N '62. (MIRA 15:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

(Propanediol)

GINZBURG, Vera Moiseyevna; BELOVA, Inessa Nikolayevna; ALEKSANDROVA, A.A., red.; SMUROV, B.V., tekhn.red.

[Calculation of parabolic antennas] Raschet parabolicheskikh antenn. Izd-vo "Sovetskoe radio," 1959. 249 p. (MIRA 13:2)
(Antennas (Electronics))

BELOVA, I. N.

V. M. Ginzburg, I. N. BELOVA: "Computation of the directivity pattern of image antennas." Scientific Session Devoted to "Radio Day", May, 1958, Trudrezervizdat, Moscow, 9 Sep. 58

A method is proposed to compute the directivity pattern of image antennas with beam hunting on an electronic digital computer.

Results are presented of a computation on the BESM of the spatial amplitudes and phases of the directivity pattern of parabolic antennas for the main and cross-polarization field components. The results of the computation of the amplitude patterns for the main polarization are confirmed experimentally to hunting angles of 30° for a beam width of about 1.

Univeraal dependences of the direction of the fundamental maximum, the side lobe levels, beam width, drop in gain, phase at the maximum and width of the vector directivity patterns on the displacement of the emitter from the focus are constructed for various antenna parameters for hunting angles which do not exceed ten times the beam width.

BELOVA, I.O.; RATKEVICH, G.I.

Activities of galenical and pharmaceutical plants. Apt. delo 10 no.4: 46-50 Jl-Ag '61. (MIRA 14:12)

(DRUG INDUSTRY)

MURAVEYSKAYA, V.S.; BELOVA, I.P.

Histopathological changes in animal organs following the administration of crystallomycin. Antibiotiki 4 no.1: 87-92 Ja-F '59. (MIRA 12:5)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.
(ANTIBIOTICS, eff.
crystallomycin, histopathol. aspects (Rus))

BELOVA, I.P.

Histopathological changes in the gastrointestinal mucosa following peroral administration of colimycin. Antibiotiki 4 no.5:72-74 S-O '59. (MIRA 13:2)

1. Laboratoriya eksperimental'nogo izucheniya lechebnykh svoystv novykh antibiotikov Instituta po izyskaniyu novykh antibiotikov AMN SSSR.

(ANTIBIOTICS pharmacol.)
(GASTROINTESTINAL SYSTEM pharmacol.)

BELOVA, I.P. (Moskva, Krasnoprudnaya ul., d.s6, kv. 41)

Histochemical investigation of the thyroid gland during its destruction by radioactive iodine [with summary in English]. Arkh. anat.gist. i embr. 36 no.2:22-29 F '59. (MIRA 12:4)

1. Laboratoriya endokrinologii (zav. - prof. Ya.M. Kabak) Moskovskogo Universiteta imeni M.V. Lomonosova.

(THYROID GLAND, eff. of radiation, radioiodine, histochem. changes during destructive processes (Rus))
(IODINE, radioactive, thyroid gland, destruction, histochem. aspects (Rus))

BELOVA, I.P.

Histological changes in animal organs following the administrations of monomycin. Antibiotiki 5 no.4:29-33 Jl-Ag '60. (MIRA 13:9)

1. Laboratoriya eksperimental'nogo izucheniya lechebnykh svoystv novykh antibiotikov (zav. prof. V.A. Shorin) Instituta po izyskaniyu novykh antibiotikov AMN SSSR.
(ANTIOBIOTICS)

SHORIN, V.A.; GOL'DBERG, L.Ye.; MURAVEYSKAYA, V.S.; PEVZNER, N.S.; SHAPOVALOVA, S.P.; KUNRAT, I.A.; BELOVA, I.P.; KREMER, V.Ye.; FILIPPOS'YAN, S.T.

Study of the antibacterial activity, toxicity and medicinal properties of methanesulfonates of monomycin and colimycin. Antibiotiki 6 no.10:897-904 O '61. (MIRA 14:12)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.
(ANTIBIOTICS) (METHANESULFONIC ACID)

GOL'DBERG, L.Ye.; VERTOGRADOVA, T.P.; KUNRAT, I.A.; KREMER, V.Ye.; BELOVA, I.P.

Effect of antibiotic 6613 on the bodies of laboratory animals. Antibiotiki 7 no.2:168-174 F '62. (MIRA 15:2)

1. Laboratoriya eksperimental'nogo izucheniya lechebnykh svoystv novykh antibiotikov (zav. - prof. V.A.Shorin) Instituta po izyskaniyu novykh antibiotikov AMN SSSR.
(ANTIBIOTICS)

BELOVA, I.P.; MURAVEYSKAYA, V.S.

Histopathological changes in animal organs following the administration of the antibiotic olivomycin. Antibiotiki 7 no.3:57-59 Mr '62. (MIRA 15:3)

1. Laboratoriya eksperimental'nogo izucheniya lechebnykh svoystv novykh antibiotikov (zav. - prof. V.A. Shorin) Instituta po issledovaniyu novykh antibiotikov AMN SSSR.
(ANTIBIOTICS—TOXICOLOGY)

GOL'DBERG, L. Ye; ROSSOLIMO, O.K.; STANISLAVSKAYA, M.S.; VERTOGRADOVA, T.P.; BLYUMBERG, N.A.; KREMER, V.Ye.; BELOVA, I.P.

Experimental study of the antitumor activity and effect on the body of antibiotic 323/58. Antibiotiki y no. 10:884-888 O '62. (MIRA 16:12)

1. Laboratoriya eksperimental'nogo izucheniya lechebnykh svoystv novykh antibiotikov (zav. - prof. V.A.Shorin) Instituta po izyskaniyu novykh antibiotikov AMN SSSR.

BELOVA, I.P.

Histopathological changes in animal organs and tissues following the administration of ristomycin. Antibiotiki 8 no.5:414-417 My'63 (MIRA 17:3)

1. Laboratoriya eksperimental'nogo izucheniya lechebnykh svoystv novykh antibiotikov (zav. - prof. V.A. Shorin) Instituta po izyskaniyu novykh antibiotikov AMN SSSR.

BELOVA, I.P.; VERTOGRADOVA, T.P.; STANISLAVSKAYA, M.S.

Effect of kanamycin on various animal organs and peripheral blood. Antibiotiki 9 no.7:610 613 Jl '64.

(MIRA 18:3)

1. Laboratoriya eksperimental'nogo izucheniya lechebnykh svoystv novykh antibiotikov (zav. - prof. V.A. Shorin) Instituta po izyskaniyu novykh antibiotikov AMN SSSR, Moskva.

PEVZNER, N.S.; SHAPOVALOVA, S.P.; BELOVA, I.P.

Experimental studies on biological properties of the antibiotic 14725 from the ostreogrycin group. Antibiotiki 9 no.9:828-832 S '64. (MIRA 19:1)

1. Laboratoriya po izucheniyu lechebnykh svoystv novykh antibiotikov (zav. - prof. V.A. Shorin) Instituta po izyskaniyu novykh antibiotikov AMN SSSR, Moskva.

KOSTRYUKOVA, L.I., kand. tekhn. nauk; DYN'KINA, M.A., nauchnyy sotrudnik; BELOVA, I.S., nauchnyy sotrudnik

Investigating the process of the drying of shoe cardboard. Nauch.-issl. trudy VNIIPIK no.14:25 48 '63. (MIRA 18:12)

SHLYAKHTENKO, L.I.; SKOVORODNIKOVA, Ye.S.; BUNTE, A.I.; GUREVICH, L.M.; BELOVA, I.V.; SHEINA, N.N.

Detection and dispensary care of dysentery patients for the improvement of sanitary conditions in a large residential area. Trudy LSGMI 32:287-303 '57. (MIRA 12:8)

1. Kafedra epidemiologii (zav. - prof. V.A.Bashenin), kafedra propedevtiki vnutrennikh bolezney (zav. - prof. S.M.Ryss), kafedra mikrobiologii (zav. - prof. M.N.Fisher) i kafedra kommunal'noy gigiyeny (zav. - prof. P.K.Ageyev) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(DYSENTERY, BACILLARY, prev. & control
detection & dispensary serv. (Rus))
(OUTPATIENT SERVICES
for dysentery (Rus))

BELOVA, I.V.

Indices of the blood coagulation process (fibrinogen, prothrombin, factor V and factory VII) in evaluating the functional state of the liver in Botkin's disease and cirrhosis. Trudy LSGMI no.69:45-51 '61. (MIRA 15:11)

1. Kafedra propedevtiki vnutrennikh sabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - chlen-korrespondent AMN SSSR prof. S.M.Ryss).
(HEPATITIS, INFECTIOUS) (LIVER--CIRRHOSIS) (BLOOD-COAGULATION)

BELOVA, K.D.

DROBYAZGO, D.P.; PERMINOV, T.A.; SHEIN, A.N.; BELOVA, K.D.; GOLIKOVA, A.I.

Pea-hydrolysate culture medium in the production of tuberculin.
Trudy Gos.nauch.-kont.inst.vet.prep. 4:98-100 '53. (MLRA 7:10)

1. Kurskaya biofabrika.
(Tuberculin) (Bacteriology--Culture and culture media)

USSR/Microbiology - General Microbiology. F-1

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67057

Author : Govorov, A.M., Ostashko, F.I., Shein, A.N., Belova, K.D.
Inst : -
Title : A Synthetic Culture Medium for Growing Tubercular Cultures and for Preparing Tuberculin.

Orig Pub : Inform. byul. biol. prom-sti, 1957, No 2, 13-14.

Abstract : No abstract.

Card 1/1

BELOVA, K. I.

BELOKOPYTOVA, Ye.V.; ZAYTSEVA, Ye.D.; IVANOVA, V.I.; KUCHERENKO, A.A.; OVCHINNIKOVA, L.N.; ODINOKOVA, Ye.A.; SHCHUKIN, N.M.; BELOVA, K.I.; SOSKOVA, M.S.; DEMIN, P.M., red.; TYLKIN, M.N., red.; PULIN, L.I., tekhn. red.

[Economy of Tula Province; a statistical manual] Narodnoe khoziaistvo Tul'skoi oblasti; statisticheskii sbornik. [Tula] Tul'skoe knizhnoe izd-vo, 1958. 215 p. (MIRA 11:8)

1. Tula (Province). Statisticheskoye upravleniye.
(Tula Province--Statistics)

BELOVA, K.P.; BOL'SHOVA, K.M.; YELKINA, T.A.

Study of magnetization of ferrite in the Curie point region. Izv. AN SSSR. Ser. fiz. 21 no.8:1047-1054 Ag '57. (MIRA 11:8)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(Magnetic materials) (Ferromagnetism)

BELOVA, L., kand. tekhn. nauk

New technical equipment in the system of navigational signals for reservoirs. Rech. transp. 24 no. 10:46-47 '65.
(MIRA 18:12)

BELOVA, L.A., inzh.; MAMIKONYANTS, L.G., doktor tekhn. nauk, prof.; TUTUBALIN, V.N., kand. fiziko-matematicheskikh nauk

Probability of insulation failure in turbogenerator stator windings dependent on the duration of the operation. Elektrichestvo no.4:42-47 Ap '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki.

ACC NR: AP6025588 SOURCE CODE: UR/0413/66/000/013/0020/0020

INVENTOR: Mandel'baum, Ya. A.; Belova, L. A.; Soyfer, R. S.; Mel'nikov, N. N.

ORG: none

TITLE: Preparation of alkylamino-O-alkyl-S-(N-alkylcarbamylmethyl)dithiophosphates. Class 12, No. 183205. [announced by the All-Union Scientific Research Institute of Chemical for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut (khimicheskikh sredstv zashchity rasteniy)] Means

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 20

TOPIC TAGS: pesticide, alkylaminodithiophosphate ester, mercaptoacetamide, phosphate

ABSTRACT:
In the proposed method for preparing alkylamino-O-alkyl-S-(N-alkylcarbamylmethyl)dithiophosphates with pesticidal properties, an alkylaminodithiophosphate is treated with alcoholic mercaptoacetamide or with sodium methoxide or sodium ethoxide, in alcohol, with subsequent removal of NaCl by evaporation, washing, and rectification. [W.A. 50; CBE No. 10]

SUB CODE: 07,06/ SUBM DATE: 08Jul65/

Card 1/1 UDC: 547.419.1.07