"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHKINA, Ye. S.

3(3,4) PHASE I BOOK EXPLOITATION SOV/2355

Moscow. Universitet. Geograficheskiy fakul'tet.

Informatsionnyy sbornik o rabotakh Geograficheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta po Mezhdunarodnomu geofizicheskomu godu, No 1 (Collection of Information on Work Done by the Geography Department of Moscow University for the International Geophysical Year, Nr 1) Moscow, 1958. 298 p. Errata slip inserted, 800 copies printed.

Resp. Ed.: G. K. Tushinskiy, Professor

PURPOSE: This book is intended for earth scientists, particularly those interested in glacial phenomena.

COVERAGE: This book describes the activities of the Geography Department of Moscow State University in connection with International Geophysical Year. The work is divided into 4 parts, each dealing with a specific regional expedition. These are: the Mount Elbrus Expedition, the Khibiny Expedition, the Pamir Expedition, and the Antarctic Expedition. Additional articles discuss problems in glaciology and research techniques. References accompany each article.

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FRAME I BOOK EXPLOITATION SOV/2355

3(3,4)

Moscow. Universitet. Geograficheskiy fakul'tet.

Informatsionnyy sbornik o rabotakh Geograficheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta po Mezhdunarodnomu geofizicheskomu godu. No 1 (Collection of Information on Work Done by the Geography Department of Moscow University for the International Geophysical Year, No 1) Moscow, Izd-vo Moskovskogo universiteta, 1958. 298 p. Errata slip inserted. 800 copies printed.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

LYTKINA, M.B.; TROSHKINA, Ye.V.

Cord 16B used in tires. Khim.volok. no.2:36-38 '62. (MIRA 15:4)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Tire fabrics)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

LYTKINA, M.B.; YAMINSKAYA, Ye.Ya.; YEVSTRATOV, V.F.; TROSHKINA, Ye.V.

Basic properties required of automobile tire cords. Kauch.i rez. 19 no.3:9-13 Mr '60. (MIRA 13:6)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Tire fabrics)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

SOV/124-58-1-1460

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 178 (USSR)

AUTHORS: Yaminskaya, Ye. Ya., Troshkina, Ye. V., Kargin, V. A.

TITLE: On the Role of Friction Forces in the Fatigue Strength of Cotton String (O roli sil treniya v ustalostnoy prochnosti khlopkovogo korda)

PERIODICAL: Kauchuk i rezina, 1957, Nr 5, pp 25-27

ABSTRACT: Bibliographic entry

Card 1/1

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHKINA, Ye.V.

YAMINSKAYA, Ye.Ya.; TROSHKINA, Ye.V.; KARGIN, V.A.

Importance of friction force in fatigue strength of cotton cord. Kauch.i rez. 16 no.5:25-27 My '57. (MLRA 10:7)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Friction) (Cordage--Testing)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

LYTKINA, ~~M.B.;~~ YAMINSKAYA, Ye.Ya.; TROSHKINA, Ye.V.

Properties of cord made from extrastrong "Meryl" viscose fibers and its applications. Khim.volok. no.2:37-40 '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti. (Rayon) (Tire fabrics)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHKO, A.I., fel'dsher

Organization of vaccination centers in a rural locality.
Fel'd. i akush. 28. no.6:45-47 Je'63. (MIRA 16:8)

1. Zaveduyushchiy Lyashkovskim fel'dshersko-akusherskim punktom Vitebskoy oblasti.
(VITEBSK PROVINCE--VACCINATION)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

SILAYEV, A.B.; STEPANOV, V.M.; YULIKOVA, Ye.P.; TROSHKO, Ye.V.; LEVIN, Ye.D.

Chemistry of polymyxin M. Part 1: Qualitative amino acid analysis and analysis for end groups. Zhur. ob. khim. 31 no.1:297-305 Ja '61. (MIRA 14:1)

1. Moskovskiy gosudarstvennyy universitet.
(Polymyxin)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

BOTVINIK, M.M.; TROSHKO, Ye.V.

Paper chromatography of amino acid esters and their detection in a form of hydroxamates. Part 2. Zhur.ob.khim. 32 no.5:1389-1390 My '62. (MIRA 15:5)

1. Moskovskiy gosudarstvennyy universitet.
(Amino acids) (Hydroxamic acid) (Paper chromatography)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

BOTVINIK, M.M.; TROSHKO, Ye.V.

Determinations of esters of acylated peptides by means of the hydroxamic reaction. Zhur.ob.khim. 33 no.12:3813-3819 D '63. (MIRA 17:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

BOTVINIK, M.M.; TROSHKO, Ye.V.; GORSHKOVA, T.A.

Determination of amino acid esters by the hydraxamic reaction. Part 1. Zhur.ob.khim. 32 no.5:1382-1389 My '62. (MIRA 15:5)

1. Moskovskiy gosudarstvennyy universitet.
(Amino acids) (Hydroxamic acid)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

KHOKHLOV, A.S.; SILAYEV, A.B.; STEPANOV, V.M.; YULIKOVA, Ye.P.; TROSHKO, Ye.V.; LEVIN, Ye.D.; MAMIOFE, S.M.; SINITSYNA, Z.T.; CHI CHAN-TSIN [Ch'ih Ch'ang-Ch'ing]; SOLOV'YEVA, N.K.; IL'INSKAYA, S.A.; ROSSOVSKAYA, V.S.; DMITRIYEVA, V.S.; SEMENOV, S.M.; VEYS, R.A.; BEREZINA, Ye.K.; RUBTSOVA, L.K.

A new type of polymyxin, polymyxin M. Antibiotiki 5 no.1:3-9 Ja-F '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov i laboratoriya khimii belka i antibiotikov khimicheskogo fakul'teta Moskovskogo ordena Lenina gosudarstvennogo universiteta imeni M.V. Lomonosova.

(POLYMIXIN)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHKOV, A.A., kand.med.nauk

Surgery for radiation ulcers. Kaz.-med.zhur. 40 no.2:73-75 Mr-Ap '59. (MIRA 12:11)

1. Iz kliniki fakul'tetskoy khirurgii (zav. kafedroy - prof. V.I.Akimov) L'vovskogo meditsinskogo instituta i 5-y gorodskoy bol'nitsy (glavvrach - I.I.Khoma).
(X RAYS--PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHKOV, A.A., kandidat meditsinskikh nauk

Free autoplasty of perforated skin in surgical treatment of elephanthiasis of the foot. Ortop.travm. i protez. no.3:40-43 My-Je '55. (MLRA 8:10)

1. Iz kafedry fakul'tetskoy khirurgii (zav.prof. V.I.Akimov) Stanislavskogo meditsinskogo instituta.

(ELEPHANTHIASIS,
leg, surg.skin transpl.)
(SKIN TRANSPLANTATION, in various diseases,
elephanthiasis of leg, free autoplasty of perf.skin)
(LEG, diseases,
elephanthiasis, surg.,skin transpl.)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

LISTOPAD, G. (Velikiy Ustyug, Vologodskaya obl.); KOMAROV, V. (Novgorodskaya obl.); FEDOROVYKH, I. (Toguchinskiy rayon, Novosibirskaya obl.); SUVOROV, A. (Omsk); TROSHKOV, D. (Permskaya obl.); ZAGOROVSKIY, L.; GLOBUSOV (Sverdlovskaya obl.)

1. Readers' letters. Pozh.delo 8 no.12:31 D '62. (MIRA 16:1)
(Fire prevention)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHKOV, G.A.

Quantitative geological interpretation of complex two-dimensional gravity and magnetic anomalies. Vop. razved. geofiz. no.3:110-121 '64. (MIRA 18:2)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

21345
S/132/60/000/012/002/004
A054/A130

3.9100 (1041, 1121)

AUTHOR: Troshkov, G. A.

TITLE: The problem of estimating the magnetic and the gravitational anomalies of three-dimensional bodies

PERIODICAL: Razvedka i okhrana nedr, no. 12, 1960, 28 - 32

TEXT: In order to simplify the calculation of three-dimensional anomalous fields, a method is proposed (based on the idea of S. V. Shalayev) to reduce the three-dimensional fields to two-dimensional ones. By introducing into Laplace's equation for three-dimensional bodies a new function

$$U_1 = \int_{-\infty}^{+\infty} U(x, y, z)\, dy = U(x, z) \qquad (2)$$

the equation is written as follows:

$$\Delta U_1 = \frac{\partial^2 U_1}{\partial x^2} + \frac{\partial^2 U_1}{\partial y^2} + \frac{\partial^2 U_1}{\partial z^2} \qquad (3)$$

as

$$\frac{\partial^2 U_1}{\partial y^2} = 0 \qquad (4)$$

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The problem of...

it follows that $$\frac{\partial^2 U_1}{\partial x^2} + \frac{\partial^2 U_1}{\partial z^2} = 0 \qquad (5)$$

Formula (5) corresponds with Laplace's equation for two-dimensional problems. With the aid of function (2) the reduction of three-dimensional anomalies to two--dimensional ones in the case of the pointed pole is obtained as follows: the formula of the vertical component of the magnetic field, Z, is

$$Z = \frac{mh}{(x^2 + y^2 + h^2)^{3/2}} \qquad (6)$$

(m = magnetic mass, h = the depth of location of the pole). When integrating (6) according to (2) we obtain:

$$Z_1 = \int_{-\infty}^{+\infty} \frac{mh}{(x^2 + y^2 + h^2)^{3/2}} dy = \frac{2mh}{x^2 + h^2}. \qquad (7)$$

This equation is in agreement with the formula of the vertical component Z for the line of poles, while the numerical value of h remains the same as for pointed

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21345
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A054/A130

The problem of...

poles. The reducing method for spherical beds is:

$$Z = \frac{M\,(2h^2 - x^2 - y^2)}{(x^2 + y^2 + h^2)^{5/2}} \qquad (8)$$

(M = magnetic moment, h = the depth of the centre of the spherical bed). By integrating (8) according to (2), we obtain:

$$Z_1 = \int_{-\infty}^{+\infty} \frac{M\,(2h^2 - x^2 - y^2)}{(x^2 + y^2 + h^2)^{5/2}}\,dy = \frac{2M\,(h^2 - x^2)}{(x^2 + h^2)^{?}} \qquad (9)$$

The equation corresponds with the formula of the vertical component Z for a horizontal cylinder, with the same parameter h as for a spherical bed. The reducing method for a vertical prism sunk to infinite depth is as follows: the formula of the vertical component of the magnetic field Z is:

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The problem of...

$$Z = \sigma\left[\operatorname{arctg}\frac{x+b}{h}\cdot\frac{l+y}{\sqrt{(x+b)^2+(y+l)^2+h^2}} - \right.$$
$$- \operatorname{arctg}\frac{x+b}{h}\cdot\frac{l-y}{\sqrt{(x+b)^2+(l-y)^2+h^2}} - \operatorname{arctg}\frac{x-b}{h}\times$$
$$\left.\times\frac{l+y}{\sqrt{(x-b)^2+(y+l)^2+h^2}} + \operatorname{arctg}\frac{x-b}{h}\cdot\frac{l-y}{\sqrt{(x-b)^2+(l-y)^2+h^2}}\right], \quad (10)$$

(σ = magnetic density, 2b = the width of the prism at axis x, 2l = the length of the prism at axis y, h = the depth to the upper edge of the prism). By integrating (10) according to y within infinite limits, we obtain the formula of the vertical component Z for a vertical layer with the same 2b, h parameters as for prism y:

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The problem of...

$$Z_1 = \sigma \int_{-\infty}^{+\infty} \left[\operatorname{arctg} \frac{x+b}{h} \frac{l+y}{\sqrt{(x+b)^2+(l+y)^2+h^2}} - \right.$$

$$- \operatorname{arctg} \frac{x+b}{h} \frac{l-y}{\sqrt{(x+b)^2+(l-y)+h^2}} - \operatorname{arctg} \frac{x-b}{h} \frac{l+y}{\sqrt{(x-b)^2+(y+l)^2+h^2}} +$$

$$\left. + \operatorname{arctg} \frac{x-b}{h} \frac{l-y}{\sqrt{(x-b)^2+(l-y)^2+h^2}} \right] dy = 2\sigma \left[\operatorname{arctg} \frac{x+b}{h} - \operatorname{arctg} \frac{x-b}{h} \right]. \quad (11)$$

When calculating (2), we use the formula of the parallelogram:

$$U_1 = \Delta y \sum_{i=1}^{n} U_i \quad (12)$$

(Δy = constant distance between the points along the line of parallel axis y; n = number of points selected for calculation; U = potential function , cor-

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The problem of...

responding with H, Z, H_x, Z_x, Δg, U_Δ, U_{xz} (Abstracter's note: $g = \nu$), $U_{\Delta x}$, U_{xzx}. Formula (12) can be made more convenient for calculations. The distance Δy between points having a U_i value can be expressed by the length of the interval of integration according to

$$\Delta y = \frac{2L}{n} \quad (13)$$

(2L = the length of the integration interval according to axis y). Substituting the above value for Δy in (12) we obtain:

$$U_1 = \Delta y \sum_{i=1}^{n} U_i = \frac{2L}{n} \sum_{i=1}^{n} U_i = 2LU_{cp}, \quad (14)$$

где $U_{cp} = \frac{\Sigma U_i}{n}$.

Where $U_{aver} = \frac{\Sigma\ U_i}{n}$

(Abstracter's note: subscript cp has been changed into aver [average]). In practice the integration method is as follows: the field of anomalies will be covered by a system of parallel profiles arranged perpendicularly to axis y, and at a distance of Δy from each other. The curve U is plotted for each profile. Next, all the profiles are combined into one and from the corresponding curves of

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The problem of....

three-dimensional anomalies an average curve is plotted, which corresponds with a two-dimensional body having a section equal to the projection of the three-dimensional body on the x, o, z surface. Depending on the mutual location of the surveying profiles in relation to the strike of anomaly, there are several possibilities: 1) the profiles intersect the anomaly perpendicularly to the strike and are parallel. In this instance integration gives a curve for defining the elements of the bedding of the body in cross section which is perpendicular to the strike of the anomaly; 2) the surveying profiles intersect the anomaly in the strike direction and are parallel. In this case a curve is obtained for defining the elements of the bedding of the body in cross section, parallel to the strike of the anomaly; 3) the surveying profiles intersect the anomaly at a certain angle to the strike direction and are parallel; 4) the surveying profiles intersecting the anomaly are not parallel. (2) would have to be integrated within infinite limits, which is practically impossible, however, the error arising when integrating with finite instead of infinite limits must be corrected. The relative error for the pointed pole is corrected by the following formula:

$$\frac{\Delta Z}{Z} = 1 - \frac{L/h}{\sqrt{1 + (L/h)^2}} \qquad (15)$$

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The problem of....

(2L = the length of the profile of integration on axis x). The correction for a spherical bed is carried out by the following formula:

$$\frac{\Delta Z}{Z} = 1 - \left[\frac{2\,(L/h)}{\sqrt{(L/h)^2 + 1}} \right] - \frac{(L/h)^3}{\left(\sqrt{(L/h)^3 + 1}\right)^3} \qquad (16)$$

The relative error for a vertical prism $L/h = 4$ does not exceed this value either. The method recommended has been confirmed by calculations and by reference to graphs for the three mentioned cases. There are 2 figures.

ASSOCIATION: Leningradskiy filial VNIIGeofizika (The Leningrad Branch of VNIIGeophysics)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

28400
S/169/61/000/007/032/104
A006/A101

3 7110

AUTHOR: Troshkov, G.A.

TITLE: On the problem of interpreting magnetic and gravitational anomalies of three-dimensional bodies

PERIODICAL: Referativnyy zhurnal.Geofizika, no.7, 1961, 23-24, abstract 7A205 ("Razvedka i okhrana nedr", 1960, no. 12, 28 - 32)

TEXT: To simplify calculations, a method is proposed of reducing three-dimensional field anomalies to two-dimensional ones. The method consists in the integration of any harmonic function along one of the coordinate axes, e.g. y, yielding a new function, which satisfies the Laplace equation on a plane (xz). The numerical integration of the anomalous field is performed and, as a result, an anomaly is obtained corresponding to a two-dimensional body having the same parameters in the plane (xz) as the unknown body. The method is applicable to individual magnetic and gravitational anomalies.

4+

M. Artem'yev

[Abstracter's note: Complete translation]

Card 1/1

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHKOV, G.A.; SHALAYEV, S.V.

Use of the Fourier transform for solving an inverse problem of gravity and magnetic prospecting. Prikl.geofiz. no.30:162-178 '61. (MIRA 14:10)

(Gravity prospecting)
(Magnetic prospecting)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

S/169/62/000/009/020/120
D228/D307

AUTHORS: Troshkov, G. A. and Shalayev, S. V.

TITLE: Application of the Fourier conversion for solving the inverse problem of gravity and magnetic prospecting

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 25, abstract 9A159 (In. collection: Prikl. geofizika, no. 30, M., 1961, 162-178)

TEXT: The authors examine the possibility of using the Fourier type conversion

$$f(x) = \frac{1}{2\pi}\int_{-\infty}^{\infty} S(\omega)e^{-i\omega x}d\omega$$

and

Card 1/3

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

S/169/62/000/009/020/120
D228/D307

Application of the Fourier ...

$$S(\omega) = \int_{-\infty}^{\infty} f(x)e^{i\omega x}dx$$

for preliminarily transforming initial curves for the purpose of the quantitative geologic interpretation of gravity and magnetic data. Here f(x) is the material or complex function, satisfying the conditions that guarantee the convergence of the integrals; $S(\omega)$ is the Fourier conversion of the function f(x); and ω is the material variable. Expressions of the Fourier conversions $S(\omega)$ are derived for two-dimensional bodies, whose vertical and transverse sections are bounded by an arbitrarily broken line with an infinite number of links (beds, scarps, and other angularly shaped bodies). A method of determining a disturbing body's position from the Fourier conversion is given on the grounds of the correlations obtained. Some specific cases are considered: a thick bed, a thin bed, and a vertical scarp. Special pallets, guaranteeing the cal-

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culation of the Fourier conversion $S(\omega)$, are given. A practical example of the determination of the disturbing body's depth (from the curve Z_a) is cited by way of illustration. In it the value, calculated for the depth with an accuracy of up to 6.6%, coincides with the data of drilling. It is pointed out that the method described was carried out over 50 magnetic and gravity anomalies.
[Abstracter's note: Complete translation.]

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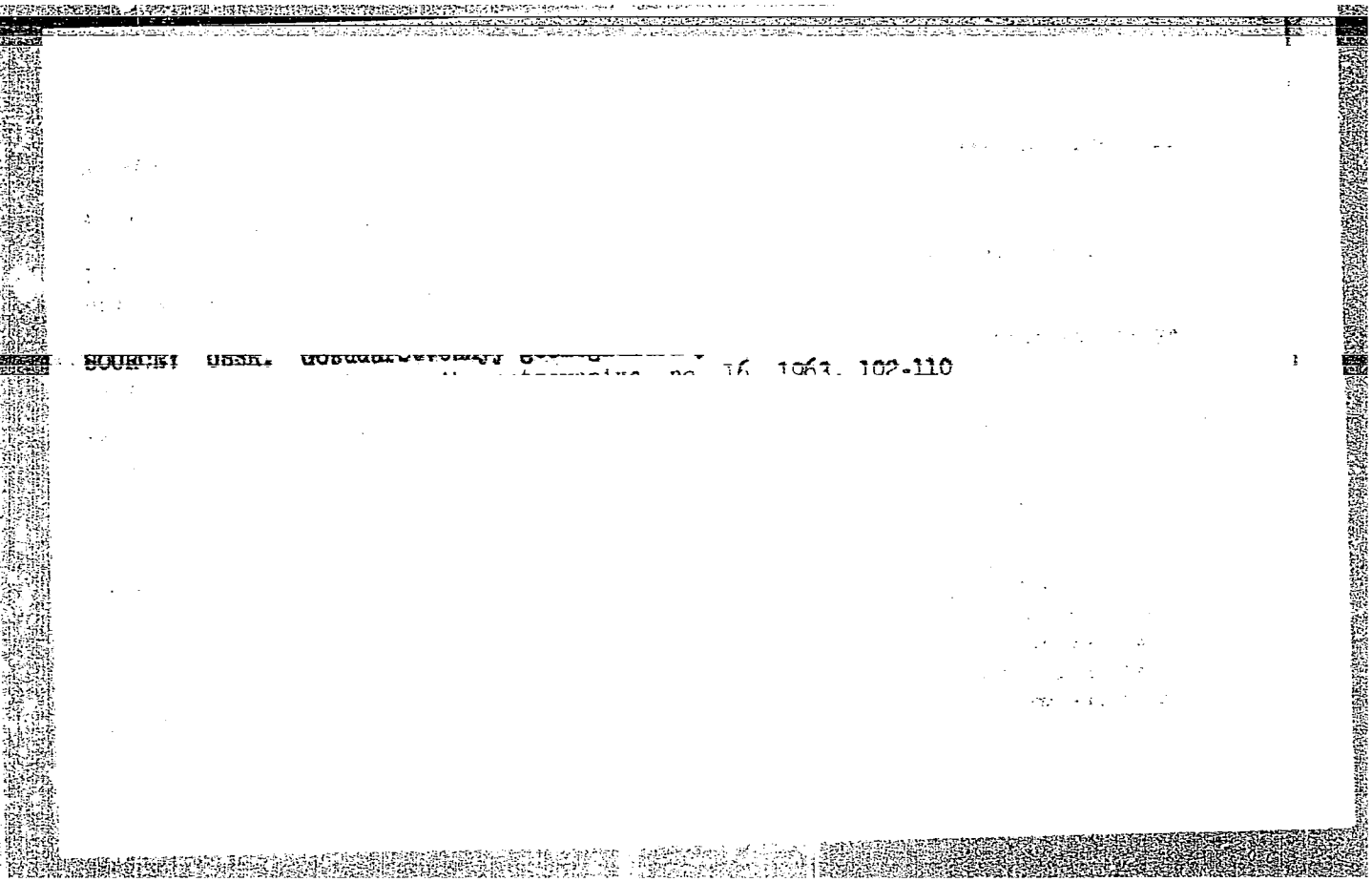

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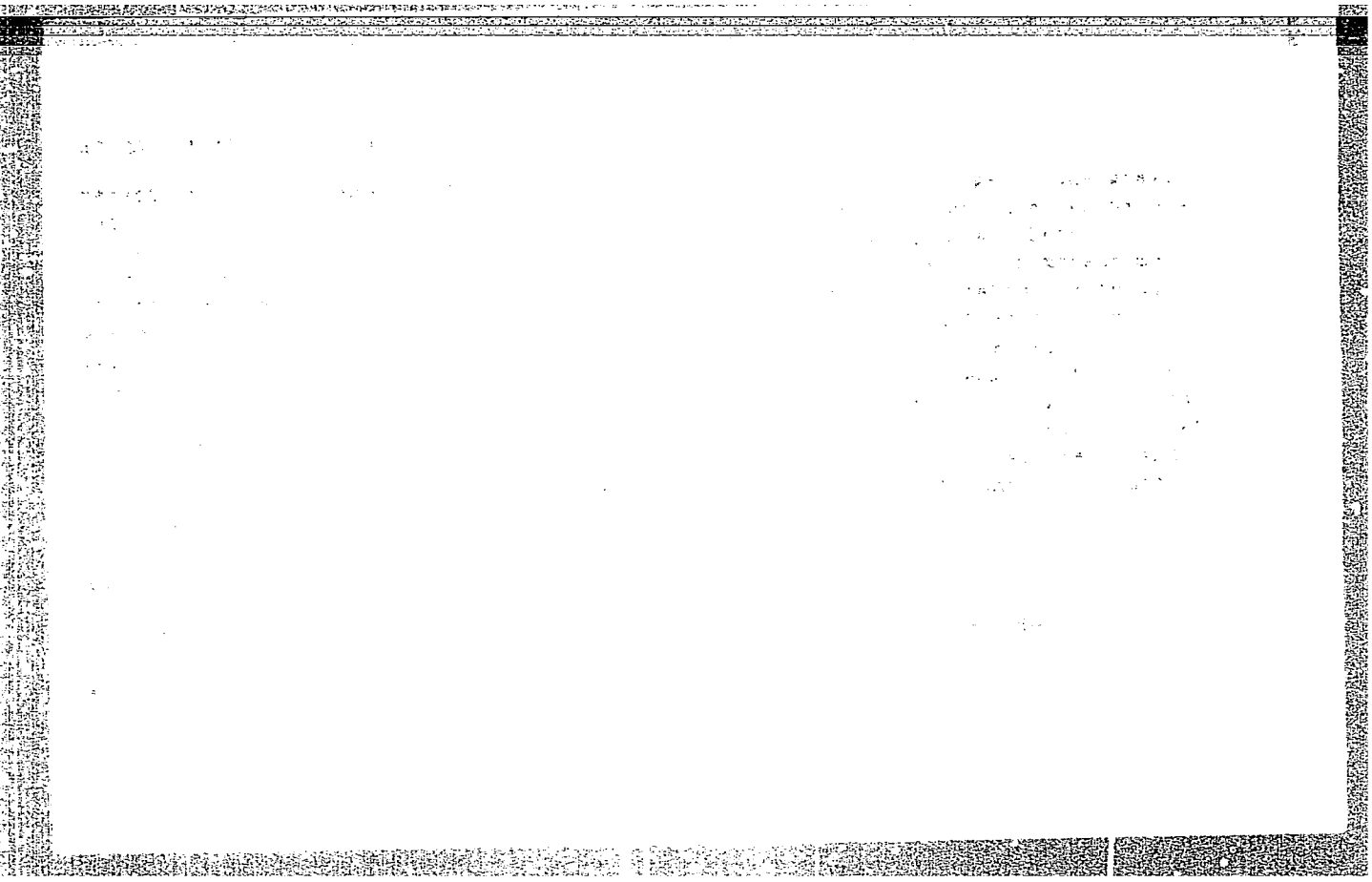

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BUBIN, L.G.; TROSHKOV, G.F.

Semiautomatic device for assembling roller bearings. Biul.tekh.-ekon. inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 18 no.9:20-21 S '65. (MIRA 18:10)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHKOVA, A.V.

Use of phosphacol for primary glaucoma in dispensary practice. (MIRA 12:6)
Oft.zhur. 14 no.3:156-160 '59.

1. Iz kafedry glaznykh bolezney (zav. - prof.A.M.Rodigina) L'vovskogo meditsinskogo instituta.
(GLAUCOMA) (PHOSPHORIC ACID)

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TROSHKOVA, G.N.

Petrography of coals in the Medzhigeyskoye deposit of the Ulug-Khem Basin. Geol. i geofiz. no.5:62-72 '60. (MIRA 13:9)

1. Krasnoyarskoye geologicheskoye upravleniye.
(Ulug-Khem Basin--Coal geology)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHNEV, N.P.

Nomograms for controlling hydraulic hammer in water pipes. Stroi.truboprov. 10 no.10:25-26 O '65. (MIRA 18:10)

1. Giprospetsgaz, Leningrad.

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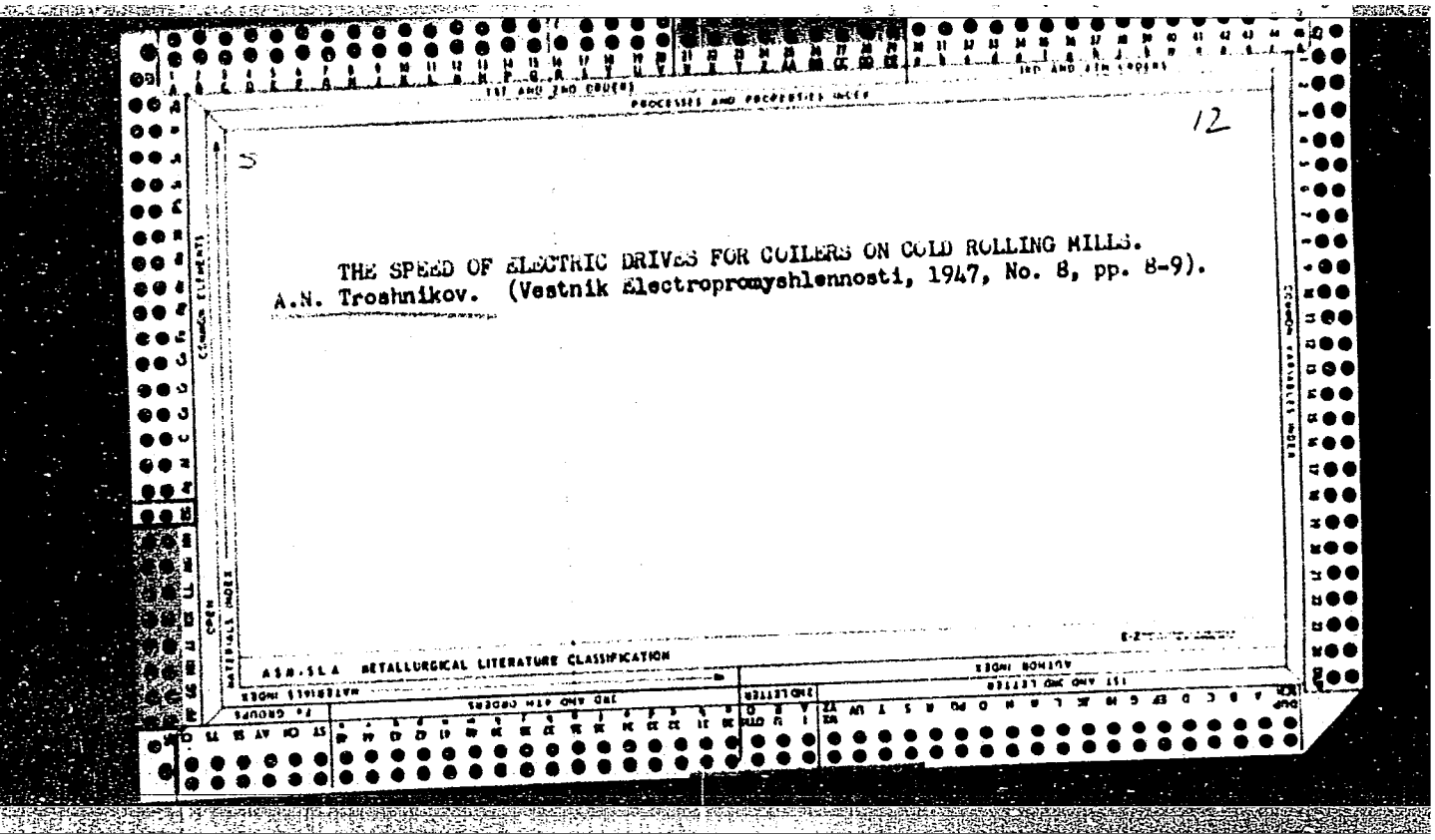

12

THE SPEED OF ELECTRIC DRIVES FOR COILERS ON COLD ROLLING MILLS.
A.N. Troshnikov. (Vestnik Electropromyshlennosti, 1947, No. 8, pp. 8-9).

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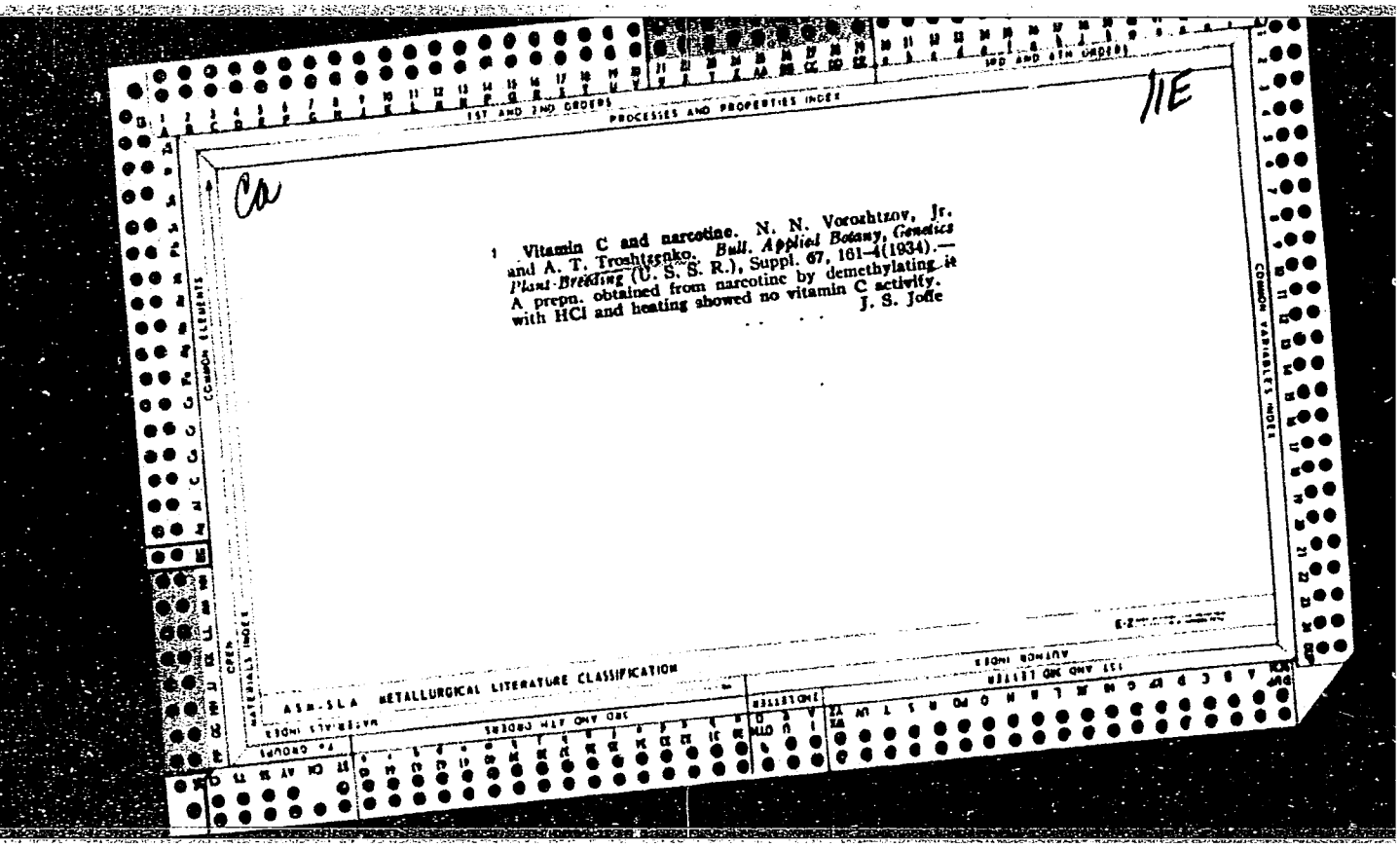

Ca

1 Vitamin C and narcotine. N. N. Vorozhtzov, Jr. and A. T. Troshtzenko. *Bull. Applied Botany, Genetics Plant-Breeding* (U. S. S. R.), Suppl. 67, 161–4(1934).—A prepn. obtained from narcotine by demethylating it with HCl and heating showed no vitamin C activity.
J. S. Joffe

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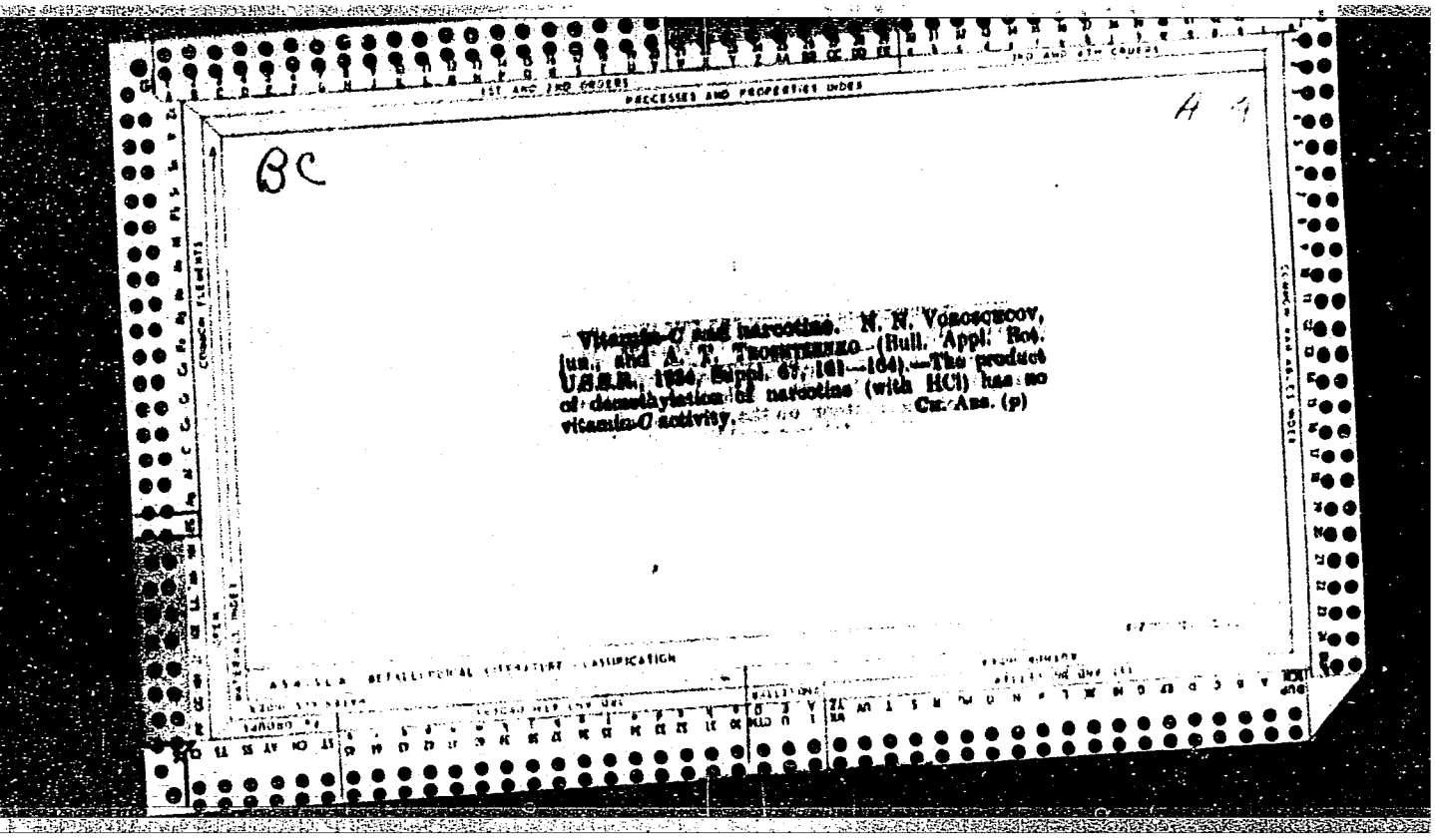

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TROSHUNEV, A.

TROSHUNEV, A.

Effectiveness of short-term credit in construction. Fin.SSSR 18 no.11:59-61 N '57. (MIRA 10:12)

1. Zamestitel' upravlyayushchego L'vovskoy kontoroy Prombanka. (Construction industry--Finance) (Banks and banking)

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SIDOROV, V.A.; MOROZOVA, N.V.; TROSMAN, G.M.; ZAYTSEVA, N.P.; ALEKSANDROV, K.N.

Using stabilized polyamide films in agriculture. Biul. tekh.-ekon. inform. Gos. nauch.-issl. nauch. i tekh. inform. 17 no.9:67-69 S '64 (MIRA 18:1)

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[redacted], V.A.; [redacted], G.M.; KOZIN, V.N.; ALEKSANDROV, K.N.

Stabilization of polyamide fibers with anilin-phenol-formaldehyde resins. Khim.prom. no.6:465-468 '55. (MIRA 18:8)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

SIDOROV, V.A.; TROSMAN, G.M.; ALEKSANDROV, K.N.

Lengthening the service life of the "PK-4" polyamide film. (MIRA 18:9)
Plast. massy no.8:61-62 '65.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKO, A. T.

"Phenylized Oxocarbocyanines", Zhur. Obshch. Khim., 9, No. 18, 1939. Kazakh State University imeni S. M. Kirov, Chair of Organic Chemistry. Received 17 March 1939.

Report &-1614, 3 Jan 1952.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

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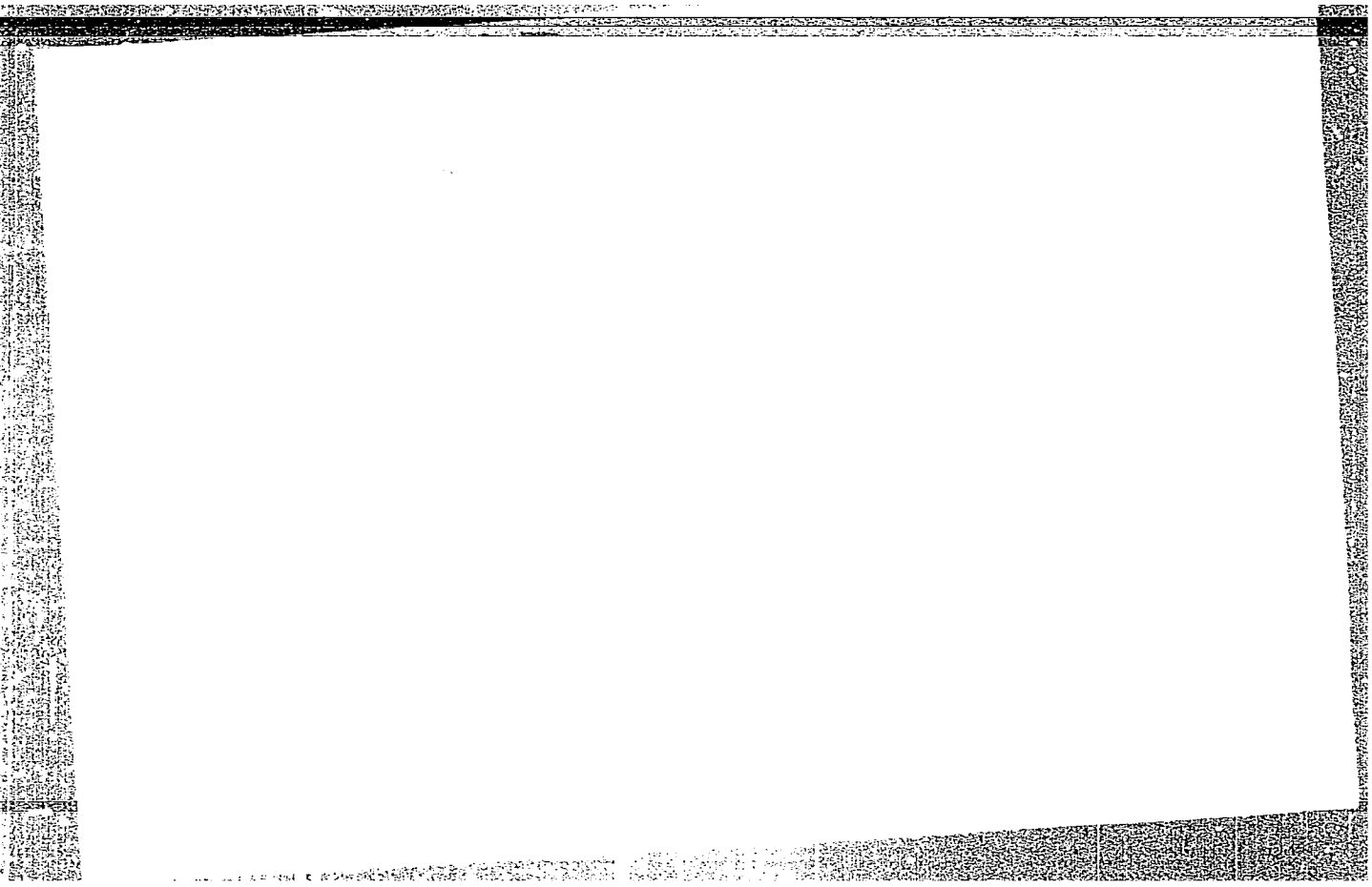

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

SOV/79-28-8-43/66

AUTHOR: Troshchenko, A. T.

TITLE: Investigation of Acridine Derivatives (Izucheniye proizvodnykh akridina) I. Synthesis of 1-Nitro-2-Methoxy-9-Chloroacridine (I.Sintez 1-nitro-2-metoksi-9-khlorakridina)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2207 - 2213 (USSR)

ABSTRACT: In spite of their technical significance, many theoretically possible acridine derivatives have hitherto escaped notice. Their synthesis could furnish general rules regarding the dependence of various properties of the acridine compounds on their ___ structure. The authors were interested in the synthesis of undescribed nitro-methoxy derivatives of acridine having both substituents in the orthoposition. A possible way of the synthesis of such acridine derivatives is the cyclization of the 3'-nitro-4'-methoxy-diphenyl amine-2-carboxylic acid (I) which ought to give two isomers, the 1-nitro-2-methoxy acridine (II) and the 2-methoxy-3-nitro-acridine (III). The above acid was formed only by condensation of 2-nitro-4-amino anisole with o-chloro benzoic acid, and

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

Investigation of Acridine Derivatives. I.Synthesis of 1-Nitro-2-Methoxy-9-Chloroacridine

not, as expected, with a anthranilic acid (difficult purification of the resinified final product !). The cyclization of the formed 3'-nitro-4'-methoxy-diphenyl amine-2-carboxylic acid by means of phosphorus oxychloride gave the 1-nitro-2-methoxy-9-chloroacridine, which has hitherto not been described. It was proved that only one of the possible two isomers is formed in this cyclization. For the verification of the structure of this isomer the 4-methoxy-5-nitro-diphenyl amine-2-carboxylic acid, also hitherto unknown, was synthesized and converted into 2-methoxy-3-nitro-9-chloro acridine. There are 1 figure and 5 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: June 26, 1957

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2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

AUTHORS: TROSHCHENKO, A.T.; PETROV, A.A

TITLE: Reaction of vinyl acetylene with diazomethane. Dokl. AN SSSR 119 no.2:292-293 Mr '58. (MIRA 11:5)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 2, pp. 292-293 (USSR)

ABSTRACT: In the works carried out by the authors in a laboratory, the name of which is not given, some rules of the reactions of vinyl acetylene hydrocarbons with electrophilic reagents are described (refs 1,2). Their reactions with nucleophilic reagents, in this case with diazomethane, are not less interesting (refs 3,4). Diazomethane, are not less acetylene under formation of pyrazole (ref 5). With ethylene it produces pyrazoline, however, in a low yield. The authors could not find data on the order of the connection of diazomethane to vinyl acetylene in technical literature. The formation of vinyl pyrazole could be expected in connection with the strong tendency of the triple binding to the connection of nucleophilic reagents. However, experiments showed that the connection takes place only to the double

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binding and that from it 3-ethyl pyrazoline forms. The structure of this matter was proved by the following methods: 1) by means of the mercury method (ref 9) 97,8 % of acetylene hydrogen (acetylene end grouping) were found in this matter. 2) A considerably intensive band of the conjugated acetylene and grouping (2100 cm^{-1}) was observed in the infrared spectrum, moreover, an intensive band of CH oscillations of acetylene hydrogen (3280 cm^{-1}), and finally the frequency around 1700 cm^{-1} (ref 1) characteristic of acetylenes. The frequencies characteristic of the vinyl group in the range between 900 and 100 cm^{-1} lacked in the spectrum. A considerably intensive band 1526 cm^{-1} corresponded to the double binding. In order to solve the position of the double binding in the cycle the authors recorded the infra-red spectrum of pyrazoline. In this case a higher frequency 1585 cm^{-1} corresponds to the double bindings. Due to this reason a conjugation of the double and the acetylene binding takes place in the produced ethinyl pyrazoline since reduced values of the infra-red frequencies correspond to these two bindings. Thus, it was

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TROSHCHENKO, A.T.; KOBRIN, V.S.

Chemical composition of Saussurea frolovii, Ldb. Part 1: Saussurol, triterpene alcohol. Khim.prirod.soed. no.4: 256-262 '65. (MIRA 19:1)

1. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR. Submitted March 1, 1965.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

YUODVIRSHIS, A.M.; TROSHCHENKO, A.T.

Synthesis of β-primveroside methyl salicylate (monotropitoside). Izv. SO AN SSSR no.3 Ser. khim. nauk no.1:145-149 '65. (MIRA 18:8)

1. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

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CHISTOV, V. N.; TROSHCHENKO, A. T.; PETROV, A. A.

Addition of benzonitrile oxide to unsaturated compounds. Part 5: Addition of benzonitrile oxide to isoalkenyl- and cycloalkenylacetylenes. Zhur. ob. Khim. 34 no.6:1891-1896 Je '64. (MIRA 17:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

CHISTOKLETOV, V.N.; TROSHCHENKO, A.T.; PETROV, A.A.

Addition of benzonitrile oxide to unsaturated compounds. Part 4: Condensation of benzonitrile oxide with substances containing a vinylacetylene grouping. Zhur. ob. khim. 33 no.8:2555-2559 Ag '63. (MIRA 16:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

CHISTOKLETOV, V.N.; TROSHCHENKO, A.T.

Addition of benzonitrile oxide to unsaturated compounds. Report No.2: Addition of benzonitrile oxide to diene hydrocarbons and halo derivatives of unsaturated hydrocarbons. Izv. SO AN SSSR no.3 Ser. khim. nauk no.1:147-151 '63. (MIRA 16:8)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta i Novosibirskiy institut organicheskoy khimii.
(Benzonitrile) (Hydrocarbons)

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CHISTOKLETOV, V.N.; TROSHCHENKO, A.T.; PETROV, A.A.

Addition of benzonitrile oxide to unsaturated compounds. Part 3. Interaction of benzonitrile oxide with vinylacetylenes substituted in a vinyl group in β-position. Zhur.ob.khim. 33 no.3:789-793 Mr '63. (MIRA 16:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta. (Benzonitrile) (Butenyne)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

CHISTOKLETOV, V.N.; TROSHCHENKO, A.T.; PETROV, A.A.

Reactions of vinylacetylene and its homologues with benzonitrile oxide. Dokl. AN SSSR 135 no.3:631-633 N '60. (MIRA 13:12)

1. Leningradskiy tekhnologicheskiy institut im.Lensoveta. Predst. akad. B.A.Arbuzovym.

(Butenyne)

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S/020/60/135/003/031/039
B016/B054

AUTHORS: Chistokletov, V. N., Troshchenko, A. T., and Petrov, A. A.

TITLE: Interaction of Vinyl Acetylene and Its Homologues With Benzonitrile Oxide

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 3, pp. 631 - 633

TEXT: The authors report on their experiments to clarify the mode of addition of benzonitrile oxide to enin hydrocarbons. Further, they tried to produce, in this way, crystalline derivatives suitable to identify enin hydrocarbons. The experiments showed that benzonitrile oxide can be only added to the double bond of a) vinyl acetylene, b) vinyl-methyl acetylene, and c) vinyl-ethyl acetylene. 3-phenyl-5-ethinyl-2-isoxazoline (I) is formed in case a), 3-phenyl-5-methyl-ethinyl-2-isoxazoline (II) in case b), and 3-phenyl-5-ethyl-ethinyl-2-isoxazoline (III) in case c), according to the following scheme:

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

Interaction of Vinyl Acetylene and Its Homologues With Benzonitrile Oxide

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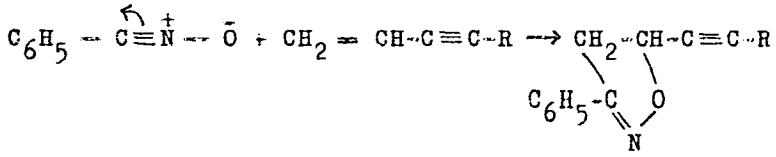

where R=H (I), CH_3-(II), or C_2H_5-(III). The structure of the resulting substances (I)-(III) was determined by the following methods: on the basis of infrared spectra; by the mercury method in the case of substance (I). The same 3-phenyl-2-isoxazoline-5-carboxylic acid was obtained from all three substances by oxidation with alkaline potassium permanganate solution. The authors think it probable that benzonitrile oxide (like diazomethane, Ref.1) is added as a nucleophilic reagent to the double bond of enin hydrocarbons. All three substances synthesized are crystalline and well suited to identify the initial enin hydrocarbons. The reaction mentioned at the beginning may also serve as a passable method of producing isoxazolines with acetylene radicals. There are 1 figure and 6 references: 2 Soviet, 1 US, and 3 Italian.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKO, A.T.; LIMASOVA, T.I.

Study of the chemical composition of [illegible] D.S. Izv. SO AN SSSR no.7 Ser. Khim. rauk no.[illegible] 1965. (MIRA 18:12)

1. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR. Submitted March 5, 1964.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

YUODVIRSHIS, A.M. [Juodvirsis, A.]; TROSHCHENKO, A.T.

Synthesis of α-primeveroside methylsalicylate. Khim. prirod. soed. no.5:302-306 '65. (MIRA 18:12)

1. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR. Submitted April 19, 1965.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

GOLOVUSHKIN, M., inzh.; TROSHCHENKO, L., inzh.; ZAGORODSKIY, L., inzh.

Practices in the removal of underwater rocks. Rech. transp. 23 no.12:35-37 D '64. (MIRA 18:6)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

GOLUBEVA, A.; TROSHCHENKO, M., tekhnolog

New developments in dry cleaning. Prom. koop. 12 no.8:11 Ag '58.
(MIRA 11:9)

1.Glavnyy inzhener moskovskoy fabriki "Khimchistka" No.2 (for Golubeva)
2.Moskovskaya fabrika "Khimchistka" No.2 (for Troshchenko).
(Cleaning and dyeing industry)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

IL'YASHUK, Nikolay Davidovich; TROSHCHENKO, Mariana Aleksandrovna; GOLUBEVA, Aneta Mikhaylovna; ZLATOVERT, B.S., red.; TRUSOV, N.S., tekhn. red.

[Technology of the chemical cleaning and dyeing of garments] Tekhnologiia khimicheskoi chistki i krasheniia odezhdy. Moslva. Gosbytizdat, 1963. 185 p. (MIRA 17:2)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKOV N. N.

PHASE I BOOK EXPLOITATION SOV/6512

Ksenzuk, Feofan Andreyevich, and Nikolay Alekseyevich Troshchenkov

Prokatka i otdelka polosovoy nerzhaveyushchey stali (Rolling and Finishing of Stainless Steel Strips) Moscow, Metallurgizdat, 1963. 205 p. Errata slip inserted. 2500 copies printed.

Ed. of Publishing House: V. M. Gorobinchenko; Tech. Ed.: L. V. Dobuzhinskaya.

PURPOSE: This book is intended for engineering personnel, foremen, and skilled workmen of rolling shops which produce stainless steel sheets and plates. It may also be useful to designers of planning organizations and students at schools of higher education.

COVERAGE: The book describes the process of making stainless steel sheets and plates. Characteristics of hot and cold

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

rolling mills for stainless steel are presented, and methods of preparation of ingots and slabs for rolling are reviewed. The book gives a classification of stainless steels with a description of their basic properties and the dependence of these properties on conditions of heat treatment and cold rolling. Modern technology of cold rolling, heat treatment, and pickling of strips is discussed. Various types of defects and methods of preventing them are outlined. No personalities are mentioned. There are 98 references, mostly Soviet.

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Ch. I. Classification, Properties, and Application of Stainless Steels 7
1. Chromium steels 8
2. Chromium-nickel steels 9

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

ACCESSION NR: AT4014063 S/3072/63/000/000/0080/0088

AUTHOR: Ksenzuk, F. A.; Troshchenko, N. A.; Tilik, V. T.

TITLE: Technological lubricants for cold rolling of sheet and thin plate

SOURCE: Fiz.-khim. zakonomernosti deystviya smazok pri obrabotke metallov davleniyem. Moscow, Izd-vo AN SSSR, 1963, 80-88

TOPIC TAGS: cold rolling, rolling mill, lubricant beef tallow, castor oil, palm oil, mineral oil, stainless steel

ABSTRACT: The usually applied 2% emulsion of standard emulsol for cold rolling of sheets is not satisfactory, causing high contact pressure between metal and rolls, enhancing formation of carbon deposit and thus preventing eventual tinning, and not permitting rolling of sheets thinner than 0.25 mm. Therefore, other technological lubricants have been tried, such as refined cottonseed oil, hydrogenated sperm oil, palm oil, beef tallow, castor oil, and hydrogenated vegetable oils. Best results in rolling have been obtained with beef tallow and castor oil. However, beef tallow has caused clogging of drain pipes, due to its high melting point. For the same reason hydrogenated sperm oil has proven to be inadequate. Cotton-

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ACCESSION NR: AT4014063

seed oil has been ruled out for its high cost. Palm oil and castor oil have been accepted as best and have been the basic lubricants for sheet rolling during the last three years. However, these oils also have substantial deficiencies. Palm oil is oxidized considerably after storage times above six months, and consequently loses its effectiveness as lubricant; also, it is an imported item. With castor oil, it is difficult to obtain uniform sheet thickness in rolling; furthermore, it is a scarce product. Hydrogenated sunflower-seed oil has been proposed and tried as lubricant for sheet rolling (lubricant PKS-1) and has been found to be nearly equivalent to palm oil. It has been found that by application of effective technological lubricants on one-unit rolling mills, the production can be raised by 30-40% because of reduction of number of passes from 3 to 2. On three-unit rolling mills, rolling of sheets can be done down to a thickness of 0.20 to 0.22 mm; also, an intermediate anneal can be abolished in rolling of No.28 and 32 sheets. Furthermore, it has been found that failures of rolls and bearings are reduced, and the quality output of tinplate is raised up to 95%. However, lubricant PKS-1 is made from raw food material. Therefore, since 1960 a search for new technological

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lubricants has been under way. Mineral oils of various viscosities, mineral oils with addition of different fatty acids and vegetable oils, and, for comparison, pure vegetable oils have been tested on a one-unit rolling mill. It has been found that lubricants of higher viscosity correspond to higher stretching coefficients in rolling. The best of the tested mineral lubricants has been cylinder oil No.6. However, difficulties have been experienced in spreading this viscous lubricant on the work. Therefore, preference has been given to cylinder oil No.24 (viscosin), which is equivalent to PKS-1 with respect to stretching of sheet and power requirement but approximately 40 times less expensive. However, the surface quality of sheets has been different when using viscosin or PKS-1. With PKS-1 a shiny smooth surface has been produced, while with viscosin the finished surface has been dull, with white spots from rolled-in oil which sometimes made complete degreasing difficult. It has been concluded that high viscosity mineral oils can be advantageously used as technological lubricants in cold rolling of thin sheets and plates, instead of expensive oils of vegetable or animal origin. For manufacture of cold rolled stainless sheets of 0.8-1.4 mm thickness, strips 1.5-1.8 mm thick have been subjected to intermediate heat treatment and pickling, and then rolled to final thickness. Spindle oil has been used as the lubricant. Under such conditions a great amount of rework was needed and the sheet quality was low.

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Instead of the above procedure, cold rolling of stainless steel strips of 0.7;0.8; 0.9;1.0;1.2;1.3; and 1.4 mm from prerolled sheet 3 mm thick without intermediate heat treatment has been adopted. Such rolling has been made possible by using polished rolls and P-28 oil and viscosin as lubricants. Total reduction of sheet thickness without preliminary heating has been increased from 50-55 to 77%, not only for austenitic but also for steels of lower plasticity, such as austenitic-ferritic, austenitic-martensitic, and ferritic-martensitic stainless steels without occurrence of edge tearing. The number of passes for rolling 0.8 and 1.0 mm thick strips has been reduced from 14 and 12 to 11 and 9, respectively; surface quality has improved, and driving power and pressure on rolls have not been excessive. Production has been increased by 70%, by applying higher speed with fewer passes. For rolling of 1.5-2.5 thick stainless strips, spindle oil has been retained as the lubricant. The use of high viscosity mineral lubricants, such as viscosin, has proved adequate also for cold rolling of thin (0.35 mm) transformer steel sheets. Orig. art. has: 11 tables.

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KSENZUK, F.A.; TSELOVAL'NIKOV, V.M.; TILIK, V.T.; TROSHCHENKOV, N.A.

Increasing the output of a continuous three-high cold rolling mill. Met.i gornorud. prom. no.6:27-29 N-D '63. (MIRA 18:1)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

KSENZUK, F.A., inzh.; KHUDAS, A.L., inzh.; TROSHCHENKOV, N.A., inzh.; GAMERSHTEYN, V.A., inzh.; AKIMOV, E.P., inzh.; IOFFE, M.M., inzh.; VEKLICH, M.I., inzh.; ANTIPENKO, V.G., inzh.; TILIK, V.T., inzh.; FILONOV, V.A., inzh. [deceased]; BORISENKO, V.G., inzh.

At the "Zaporozhstal'" plant. Stal' 23 no.6:554, 562, 572, 575 Je '63. (MIRA 16:10)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TOKAR', I.K.; CHAMIN, I.A.; Prinimali uchastiye: BOYKO, M.V.; CHUB, G.F; GAMERSHTEYN, V.A.; YASHNIKOV, D.I.; FILONOV, V.A.; TROSHCHENKO, N.A.; SAMOYLOV, I.D.; ZAYTSEV, V.V.; KOLOMATSKIY, V.D.

Efficient lubrication for the rolling of thin sheet iron. Metallurg 6 no.8:22-24 Ag '61. (MIRA 14:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Tokar', Chamin, Zaytsev, Kolomatskiy). 2. Zavod "Zaporozhstal'" (for Boyko, Chub, Gamershteyn, Yashnikov, Filonov, Troshchenko, Samoylov).
(Metalworking lubricants) (Sheet iron)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKO, T.K.

Present state and prospects for the development of the baking industry in the Ukrainian S.S.R. Khar. prom. no.3:3-6 Jl-S '65. (MIRA 18:9)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKO, T.K

AUERMAN, L.Ya. professor; TROSHCHENKO, T.K.

Conference on the problems of baking in Detmold (West Germany). (MLRA 10:4)
Khleb. i kond. prom. 1 no.1:46-48 '57.

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti (for Auerman).
2. Ministerstvo promyshlennosti prodovol'stvennykh tovarov USSR (for Troshchenko).
(Detmold, Germany--Baking)

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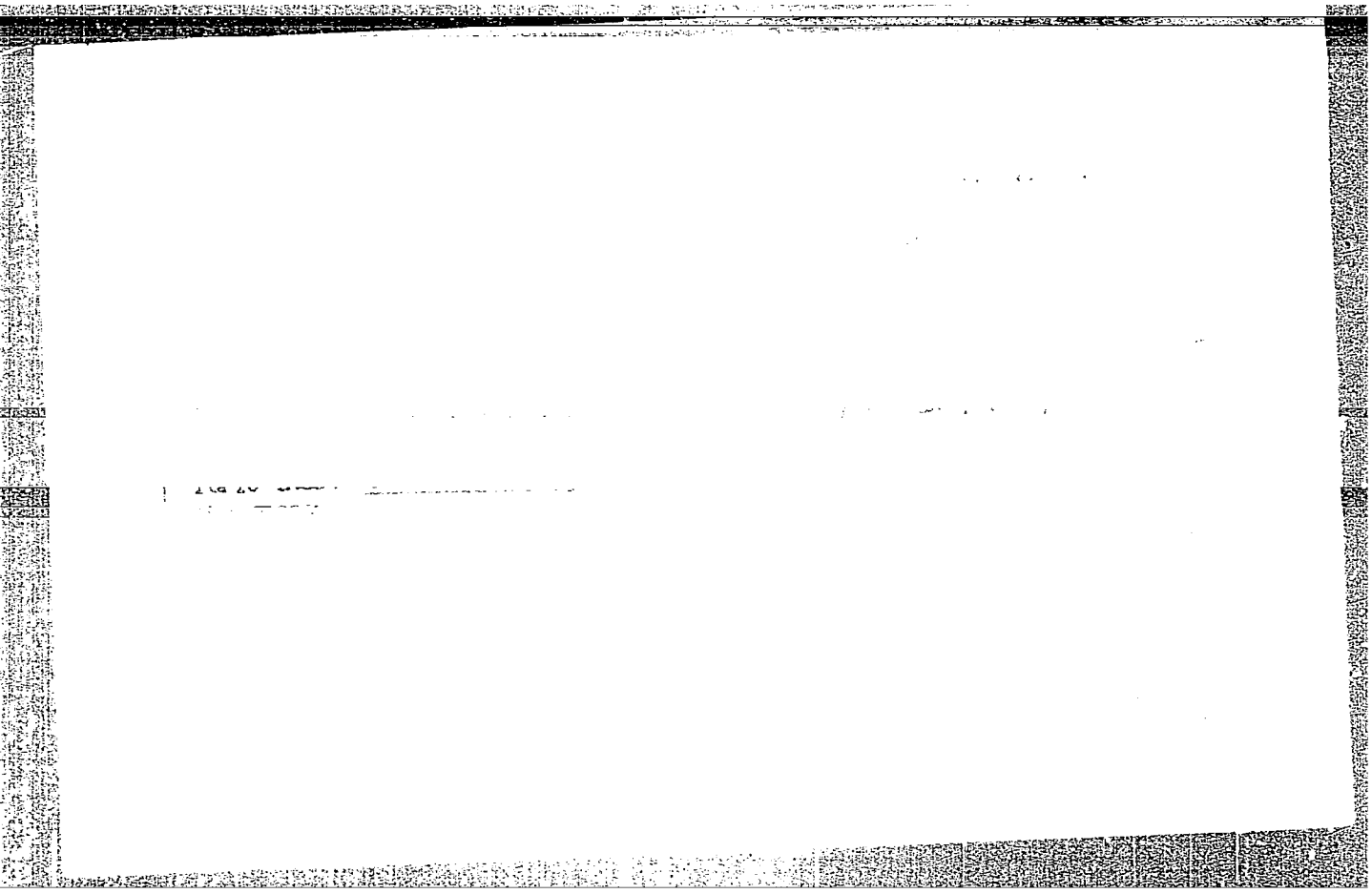

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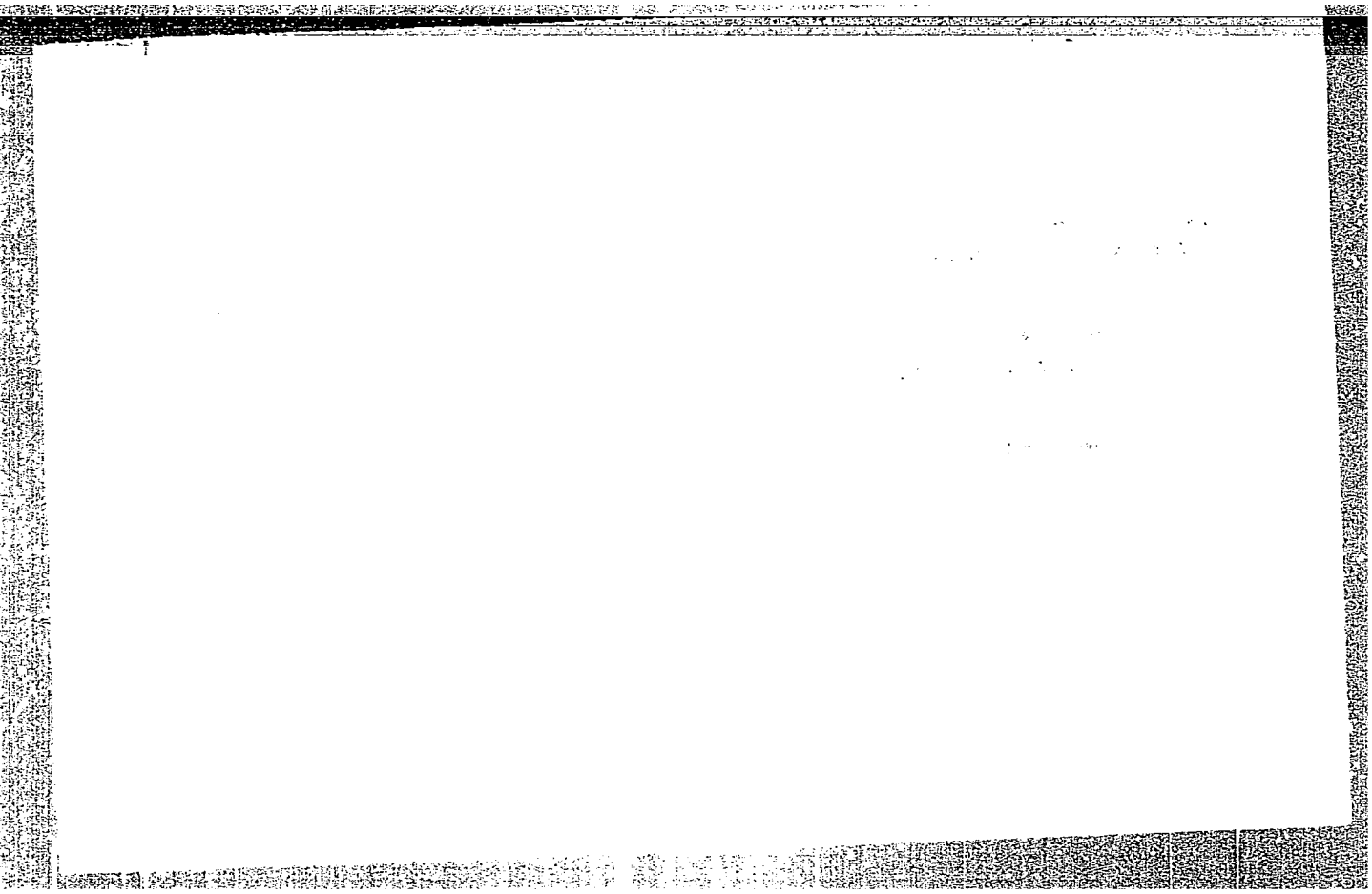

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TROSHCHENKO, V.N.

Lamprophyre dikes in a deposit of mercury ores. Geol. i geofiz. no.5:117-121 '60. (MIRA 13:9)

1. Tomskiy politekhnicheskiy institut.
(Altai Mountains—Mercury ores) (Dikes)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKO, V. N.

Cand Geol-Min Sci - (diss) "Mercury deposits of the northern limits of the Chuyskaya Steppe (Gornyy Altay)." Tomsk, Pub. Tomsk Univ, 1961. 19 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov); 150 copies; price not given; (KL, 7-61 sup, 226)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKO, V.N.

Association of mercury and complex metal mineralization as exemplified by one of the deposits in the southeastern Altai. Izv.vys.ucheb.zav.; geol.i razv. 4 no.2:91-94 F '61. (MIRA 14:6)

1. Tomskiy politekhnicheskiy institut.
(Altai Mountains--Mercury ores)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKO, V.N.

Some characteristics of the geology and genesis of mercury deposits in the northern margin of the Gornyy Altai. Geol. rud.mestorozh. no.5:56-68 '62. (MIRA 15:12)

1. Tomskiy politekhnicheskiy institut imeni S.M. Kirova.
(Altai Mountains—Mercury ores)
(Altai Mountains—Geology, Structural)

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SOV/170-59-6-16/20

15(2)

AUTHORS: Artamonov, A.Ya., Radomysel'skiy, I.D., Troshchenko, V.T.

TITLE: Investigation of the Effect of Electromechanical Treatment on the Strength of Metal Ceramic Materials on a Silicon Carbide Base

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 6, pp 100-103 (USSR)

ABSTRACT: The ordinary mechanical working of materials based on silicon carbide is rather difficult in view of their considerable hardness. Therefore, the authors studied a possibility of applying electromechanical working and its effect on the strength of metal ceramic materials. The specimens were prepared by the powder metallurgy method with impregnation and divided into 6 portions, one of which was left without working and the other five were subjected to electromechanical working with different degrees of fineness on a special installation. The effect of treatment on the strength was investigated by statical bending with a concentrated force, and the results are presented in Table 1 and Figure 3. It is shown that the working affects the strength of the silicon carbide specimens considerably, and the latter

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Investigation of the Effect of Electromechanical Treatment on the Strength of Metal Ceramic Materials on a Silicon Carbide Base

can be increased by as much as 55% as compared with the specimens not subjected to working.
There are: 1 photo, 1 diagram, 1 graph, 1 table and 1 American reference.

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov, AN USSR (Institute of Metal Ceramics and Special Alloys of the AS UkrSSR), Kiyev.

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PHASE I BOOK EXPLOITATION SOV/5303

Nauchno-tekhnicheskoye soveshchaniye po dempfirovaniyu kolebaniy. Kiyev, 1958.

Trudy Nauchno-tekhnicheskogo soveshchaniya po dempfirovaniyu kolebaniy, 17 - 19 dekabrya 1958 g. (Transactions of the Scientific and Technical Conference on the Damping of Vibrations, Held 17 - 19 December, 1958) Kiyev, Izd-vo AN UkrSSR, 1960. 178 p. 2,000 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov.

Editorial Board: I. N. Frantsevich, G. S. Pisarenko (Resp. Ed.), G. V. Samsonov, V. V. Grigor'yeva, and A. P. Yakovlev; Ed. of Publishing House: I. V. Kisina; Tech. Ed.: A. A. Matveychuk.

PURPOSE: This book is intended for mechanical engineers, metallographers, physicists specializing in metals, designers, aspirants, and scientific workers.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

COVERAGE: The book contains 27 articles dealing with principal results of theoretical and experimental investigations of energy dissipation in mechanical vibrations carried out in the Soviet Union from 1956 to 1958. Problems of energy dissipation in materials and factors affecting it are discussed. Purportedly new methods of experimental investigation of damping of vibrations are presented. Attention is given to the recently developed nonlinear theory of calculating vibrations in elastic systems, taking energy dissipation into account. Attempts to analyze internal energy dissipation in materials using methods of mathematical statistics are discussed. Some articles deal with engineering problems in dynamics, in which damping is claimed to play a highly substantial part. Aspirant N. I. Mukhin, of the Kiyev Polytechnic Institute, is mentioned. References accompany some of the articles.

TABLE OF CONTENTS:

Pisarenko, G. S. Survey of Studies, Made in Kiyev, of Damping of Vibrations 3

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

Pisarenko, G. S. Longitudinal Vibrations of a Rod, Taking Into Account Hysteresis Losses 14

Pisarenko, G. S. Longitudinal Vibrations of Spiral Springs, Taking Into Account Energy Dissipation in Material 22

Pisarenko, G. S., and N. I. Shchepetkina [Candidate of Technical Sciences]. Transversal Vibrations of Stepped Rods, Taking Into Account Hysteresis Losses 34

Pisarenko, G. S., and N. I. Shchepetkina. On the Calculation of Hysteresis Losses in Vibrating Plates 46

Vasilenko, N. V., [Aspirant]. Bending-and-Torsional Vibrations of Rods, Taking Into Account Energy Dissipation in Material 58

Troshchenko, V. T., [Candidate of Technical Sciences]. Application of Methods of Mathematical Statistics to the Analysis of Energy Dissipation in Material 71

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

TROSHCHENKO, V.T.

Scattering of energy in a material. Fiz.tver.tela 2 no.6: 1060-1069 Je '60. (MIRA 13:8)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR, Kiyev.
(Damping (Mechanics)) (Vibration)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756730004-8

S/124/61/000/009/055/058
D234/D303

AUTHOR: Troshchenko, V.T.

TITLE: Applying the methods of mathematical statistics to analyzing the process of energy dissipation in a material

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 9, 1961, 48, abstract 9 V437 (Tr. Nauchno-tekhn. soveshchaniya po dempfirovaniyu kolebaniy, 1958, Kiyev, AN USSR, 1960, 71-83)

TEXT: An attempt is made to find the dependence for characteristics of damping properties of a material on the basis of the assumption that energy dissipation in the material is caused, in the first place, by microplastic deformations, using methods of mathematical statistics for taking these deformations into account. Influence of some structural factors on these characteristics is considered, such as the dimensions of the specimen, the form of the

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Applying the methods...

stressed state, etc. The author finds: 1) An analytic expression for the energy dissipated by the volume unit of the material during a cycle of vibration; 2) relations for relative cyclic viscosity in different forms of stressed state. It is shown that the energy dissipated in the material during one cycle of vibration depends essentially on the structural properties of the material, dimensions of the specimen, form of stressed state. [Abstracter's note: Complete translation]

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B022/B007

18.6000

AUTHOR: Troshchenko, V. T.

TITLE: Some Questions Relating to the Strength of Powder-metallurgical Materials on a Silicon Carbide Basis

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 1, pp. 103 - 107

TEXT: In the present paper, the use of the statistical theory of strength in calculating brittle powder-metallurgical materials (silicon carbide) is dealt with. Equation (1,2) by W. Weibull (Refs. 2,4) on brittle strength is mentioned. The tests were carried out at normal (20°C) and high (1200°C) temperatures on silicon carbide samples, which had been produced according to different technological methods, and had a certain similarity to silicates. The photograph of the microsection of a silicon carbide material is shown (Fig. 1), from which its phase-composition may be seen. The results of the tests carried out on 6 silicon-carbide mixtures with different phase compositions for the purpose of determining the brittle strength F are given (Table 1). The curves for the change of the strength F of the samples as dependent on the working volume $V^{1/3}$ were

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Some Questions Relating to the Strength of Powder-metallurgical Materials on a Silicon Carbide Basis

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determined on the basis of the results of bending tests by the application of a concentrated force (Fig. 2). The experimental (F) and theoretical (F^*) results for various kinds of state of stress are compared (Table 2). The results obtained show good agreement between experimental data and those obtained according to W. Weibull's calculation formulas. The sensitivity to stress concentrations is calculated and the experimentally obtained quantities q are compared to the calculated values q_r (Table 3). On the basis of the results obtained it may be said that the laws in the destruction of brittle powder-metallurgical materials on a basis of silicon carbide have a statistical character, and that for their sufficiently accurate determination the formulas of the statistical theory of strength by W. Weibull may be used. T. Kontorova and Ya. Frenkel' (Ref. 1) as well as G. Neyber (Ref. 5) are mentioned. There are 2 figures, 3 tables, and 5 references, 3 of which are Soviet.

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov AN USSR, g.Kiyev (Institute of Powder Metallurgy and Special Alloys of the AS UkrSSR, City of Kiyev)

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S/032/60/026/012/020/036
B020/B056

1.9600 also 2807

AUTHORS: Gryaznov, B. A. and Troshchenko, V. T.

TITLE: A Method of Determining the Fatigue Limit

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 12, pp. 1398-1401

TEXT: In the present paper, the results obtained by an investigation are given, which was carried out to determine the applicability of the method of increasing stress for determining the fatigue limit of austenite steel ЭИ 612 (EI612) at normal and high temperature (630°) as well as of a number of cermets whose fatigue values were widely spread. Steel and cermets on the basis of iron powder with a porosity of 19-22% were subjected to a symmetric cycle of torsions in the device of the type By-8 (VU-8). The increase of stress was warranted by a special device (Fig. 1) through which water was conveyed into a container fastened to the sample. The device consists of a diaphragm pump, an eccenter, a reducer, and electric motor and a starter. Testing the cermets on the basis of chromium carbide and silicon carbide was carried out in the apparatus of the type УМ-2 (UM-2) by using the same device as described above. The results obtained

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A Method of Determining the Fatigue Limit S/032/60/026/012/020/036
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by investigating the fatigue strength of steel EI612 and of the cermets according to the usual method are given in Fig. 3. Fig. 4 shows the results obtained by investigating the same materials in the case of increasing stress. In tests carried out with symmetric stress cycle, the preliminary stress was 0.8 of the fatigue limit. When recording the curves, the method of least squares was used. The results obtained by using various methods of determining the fatigue limit are given in a table. From this table and from the Figs. 3 and 4 it follows that when using the method of increasing stress, the fatigue limit of steel EI612 may be determined both at normal and also at increased temperature. The saving of time made possible by this method is about 40% for steel EI612 in comparison to the statistical methods. There are 4 figures, 1 table, and 4 references: 1 Soviet, 1 French, and 2 US.

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov Akademii nauk USSR (Institute of Powder Metallurgy and Special Alloys of the Academy of Sciences UkrSSR)

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PISARENKO, Georgiy Stepanovich [Pysarenko, H.S.]; TROSHCHENKO, Valeriy Trofimovich; FRANTSEVICH, I.M. [Frantsevych, I.M.], akademik, otv. red.; REMENNIK, T.K., red.izd-va; LIBERMAN, T.R., tekhn. red.

[Statistical theory of strength and its application to ceramic metal materials] Statystychni teorii mitsnosti ta ikh zastosuvannia do metalokeramichnykh materialiv. Kyiv, Vyd-vo Akad. nauk URSR, 1961. 104 p. (MIRA 15:3)

1. Akademiya nauk USSR (for Frantsevich).
(Ceramic metals) (Strength of materials)

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TROSHCHENKO, V. T.

33544
S/123/62/000/002/004/012
A004/A101

15.2610

AUTHORS: Troszczenko, W. T., Griaznow, B. A.

TITLE: Some problems concerning the fatigue strength of ceramic materials

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 2, 1962, 25, abstract 2A54 ("Wytrzymałość zmęczeniowa tworzyw i elementów metalowych". Warszawa, 1961, 57-60, Polish)

TEXT: The authors present the results of investigations of the effect of temperature, mechanical working, presence of notches and also of the stress sign on the fatigue strength of ceramic materials on the base of chromium carbide (85% Cr_3C_2) and silicon carbide (49, 22% SiC). The specimens on the Cr_3C_2 base had the following composition (in %): Ni - 15.3, C - 9.4, Cr - 71.35. They were manufactured by pressing the powder mixture and subsequent sintering in a hydrogen atmosphere at 1,300°C. Static and fatigue tests were carried out on the rough specimens, ground by the mechanical and electrolytic method. The specimens on the SiC base were made from graphite of the corresponding dimensions and shape and then impregnated with Si in a hydrogen atmosphere. The specimens were heated in the machines by resistance currents. The temperature was measured

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Some problems concerning the fatigue strength ...

with optical pyrometers. The tests on the ИМ-2 (IM-2) machine were carried out at a loading frequency of 50 cps. The 1И-5 (1I-5) machine is intended for pure bending tests with simultaneous tension or compression, at a frequency of 400 cps. The stresses in the specimens were determined from the magnitude of the specimen oscillation amplitude, rated with a microscope. During the tests on the IM-2 machine, the cycle asymmetry attained 0.15, this value being 0.8 on the 1I-5 machine. It was found that a considerable scattering of the fatigue test results could be observed in ceramic materials. The authors recommend to use statistical methods in processing the experimental results. The inflection of the fatigue strength curve in the semilogarithmic coordinates occurs at a base of 10^6 cycles. The fatigue strength depends on the temperature and surface state of the specimens. In ceramics on the base of Cr_3C_2, the fatigue limit is considerably lowered if stress raisers are present. The fatigue strength abruptly decreases if axial tensile stresses act on the specimens, and increases in the presence of axial compressive stresses. During cyclic loading, in most of the cases the fracture has no two clearly expressed zones (fatigue and brittle fracture zones). The mentioned zones could be only observed in fractures of SiC specimens at high temperatures and considerable axial compressive stresses. There are 9 figures.

G. Mekhed

[Abstracter's note: Complete translation]

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TROSHCHENKO, V.T.

Brittle strength of ceramic metal materials. Porosh.met. 1 no.6:62-69 N-D '61. (MIRA 15:5)

1. Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.
(Ceramic metals—Brittleness)

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A052/A101

15.2400

AUTHORS: Artamonov, A. Ya., Radomysel'skiy, I. D., Troshchenko, V. T.

TITLE: The effect of machining on the strength of brittle sintered materials

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 11, 1962, 39, abstract 11B227 ("Poroshk. metallurgiya, no. 5, 1961, 65 - 68, English summary)

TEXT: The effect of machining on the strength of sintered materials on chromium carbide and silicon carbide base was investigated. Sintered materials on silicon carbide base were tested for strength prior to machining (after electro-mechanical processing), whereby a surface layer 0.5 - 0.6 mm thick was removed, and also after applying to the machined surface a silicon carbide layer. Sintered materials on chromium carbide base (9.4% C, 71.35% Cr, 15.3% Ni and 3.95% others) were subjected to static (pure bending) and fatigue tests prior to machining immediately after sintering, abrasive disk grinding and electromechanical processing. It is established that the electromechanical processing as well as the silicon impregnation process increase the static strength of sintered mate-

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rials on silicon carbide base prepared by the method of impregnation. Electro-mechanical processing of sintered materials on chromium carbide base does not reduce the static and fatigue strength, whereas abrasive grinding even under soft conditions reduces considerably both strength characteristics. Such a reduction of strength is caused by the formation in the process of grinding of a large number of superficial microcracks 5 - 10 mm wide (?) and up to 50 mm deep (?). The formation of these cracks is connected obviously with the heating of local surface sections which can produce considerable thermal stresses. It is pointed out that the strength of ground samples is similar to that of the samples with stress concentrators. The microcracks weaken the samples in the same way as the stress concentrators with a concentration factor of 3. The sensitivity to the stress concentration of sintered materials on chromium carbide base is 0.4. There are 5 references and 2 figures.

E. Spivak

[Abstracter's note: Complete translation]

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E194/E435

AUTHORS: Pisarenko, G.S., Corresponding Member AS UkrSSR, Troshchenko, V.T., Candidate of Technical Sciences, Kaplinskiy, L.A., Engineer and Gryaznov, B.A., Engineer

TITLE: An Investigation of the Fatigue Strength of Steel 1X13 (1Kh13) in Variable Bending With Static Tension

PERIODICAL: Energomashinostroyeniye, 1961, No.4, pp.29-31

TEXT: Analysis of turbine blade breakages shows that they are mostly due to fatigue. In most laboratory fatigue tests certain factors are not allowed for, including the presence under service conditions of appreciable tensile stresses due to centrifugal force. The present work describes an investigation of the influence on the fatigue strength of steel 1Kh13 in bending of a constant tensile stress which imitated the influence of centrifugal force. The tests were carried out at temperatures of 100 and 400°C on steel 1Kh13 with different kinds of heat treatment. The specimen geometry is shown in Fig.1. The heat treatment and the mechanical properties of the material is shown in table 1, where the second column gives the heat treatment

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