

LUCHITSKIY, V. I.

PA 62T56

USSR/Geology
Granite

Apr 1948

"Rapakivi Granite and Alkali Rocks of the Ukraine,"
V. I. Luchitskiy, Act Mem, Acad Sci USSR, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LX, No 2

Recently there have been discovered traces of alkali rock in plutonic rapakivi, and rapakivi granites of the Ukraine. Describes location of alkali rocks that are genetically bonded with rapakivi. Submitted, 14 Feb 1948.

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8

CA

Assimilation and hybridization on the territory of the
Ukrainian crystalline massif. V. I. Luchitskii. *Trudy*
Inst. Geol. Nauk. Akad. Nauk S.S.S.R. No. 107. *Prilog.*
Ser. No. 31, 3-13 (1960).—In the granitic intrusions of this
massif are discernible at least 4 stages. These stages and
their petrographical and mineralogical characteristics are
discussed.
M. Hosh

ALADYSHKIN, A.S.; VASIL'KOVSKIY, N.P.; VINKMAN, M.K.; GINTSINGER, A.B.;
GURARI, F.G.; KARPINSKIY, R.B.; KRASIL'NIKOV, B.N.; KRASNOV,
V.I.; KRIVENKO, A.P.; LUCHITSKIY, I.V.; PAN, F.Ya.; PETROV,
P.A.; POSPELOV, G.L.; SENNIKOV, V.M.; CHAIRKIN, V.M.;
SHCHEGLOV, A.P.

In memory of Andrei Aleksandrovich Predtechenskii, 1909-
1964. Geol. i geofiz. no.4:197-199 '65. (MIRA 18:8)

S/109/60/005/04/005/028
E140/E435

AUTHOR: Luchiva, A.A.

TITLE: Qualitative analysis of a Second-Order Nonlinear
Differential Equation of a Stiff Oscillating System 21

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 4,
pp 562-567 (USSR)

ABSTRACT: This is a continuation of the author's work (Ref 1).
The second-order nonlinear equation of an oscillatory
system is studied for the case of strong nonlinearity
with arbitrary choice of the operating point. Necessary
and sufficient conditions are found for the character of
the non-linearity for stiff oscillations to appear.
K.F.Teodorchik advised in the work. There are 9 figures
and 6 references, 5 of which are Soviet and 1 a Russian
translation from English.

ASSOCIATION: Fizicheskiy fakul'tet Moskevskogo gosudarstvennogo
universiteta im. M.V.Lomonosova Kafedra teorii kolebaniy
(Physics Department Moscow University, imeni M.V.Lomonosov,
Chair on the Theory of Oscillations)

SUBMITTED: May 14, 1959

Card 1/1

AUTHOR: Luchka, A.Yu.

SOV/20-122-2-4/42

TITLE: Sufficient Condition for the Convergence of the Method of Averaging
Functional Corrections (Dostatochnoye usloviye skhodimosti
metoda osredneniya funktsional'nykh popravok)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 2, pp 179-182 (USSR)

ABSTRACT: Let

$$(1) \quad y(x) = \varphi(x) + \lambda \int_a^b K(x, \xi) y(\xi) d\xi, \quad 0 < |\lambda| < \infty$$

be given, where $\varphi(x), K(x, \xi) \in L^2(a, b)$ and are real. For a certain λ -value the solution of (1) is assumed to be unique. According to Sokolov [Ref 1-4] the method of averaging functional corrections consists in the following:

$$y_1(x) = \varphi(x) + \lambda \alpha_1 \int_a^b K(x, \xi) d\xi, \quad \alpha_1 = -\frac{1}{h} \int_a^b y_1(x) dx, \quad h = b-a$$

is to be taken as first approximation, from it

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Sufficient Condition for the Convergence of the
Method of Averaging Functional Corrections

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$$\alpha_1 = \frac{1}{D(\lambda)} \int_a^b \varphi(x) dx, \quad D(\lambda) = h - \lambda \int_a^b \int_a^b K(x, \xi) d\xi dx$$

In the n-th approximation $y_n(x) = \varphi(x) + \lambda \int_a^b K(x, \xi) (y_{n-1}(\xi) + \alpha_n) d\xi$

let be $\alpha_n = \frac{1}{h} \int_a^b \delta_n(x) dx$, $\delta_n(x) = y_n(x) - y_{n-1}(x)$ ($n = 2, 3, \dots$)

From this $\delta_n(x)$ etc.

For the convergence of the method the author gives the condition:

$$\lambda^2 (B^2 - hM^2) \left\{ 1 + \frac{h^{3/2} |\lambda|}{|D(\lambda)|} [M^2 - hK^2]^{1/2} \right\}^2 < 1$$

where $B^2 = \int_a^b \int_a^b K^2(x, \xi) d\xi dx$, $M^2 = \frac{1}{h} \int_a^b \left(\int_a^b K(x, \xi) d\xi \right)^2 dx$

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Method of Averaging Functional Corrections

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The condition is weaker than that one originally given by
Sokolov [Ref 2] .
There are 4 Soviet references.

ASSOCIATION: Institut matematiki Akademii nauk USSR (Institute for Mathematics of the Academy of Sciences of the Ukrain.SSR)

PRESENTED: May 13, 1958, by N.N. Bogolyubov, Academician

SUBMITTED: May 5, 1958

Card 3/3

LUCHKA, A. Yu.

Cand Phys-Math Sci - (diss) "Theory and applications of the method of averaging functional corrections." Kiev, 1961. 10 pp; (Joint Academic Council of Mathematics, Physics, and Metallophysics Academy of Sciences Ukrainian SSR); 170 copies; price not given; bibliography on pp 9-10; (KL, 7-61 sup, 219)

27328

S/021/61/000/002/002/013
D210/D303

12.6500 16.3900

AUTHOR: Luchka, A.Yu.

TITLE: Approximate solution for infinite systems of algebraical equations according to Yu.D. Sokolov's method

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 2, 1961, 146 - 149

TEXT: Yu.D. Sokolov (Ref. 5; 1: DAN URSR, 107, 1955; Ref. 2: UMZh, 10, 193, 1958; Ref. 5: UMZh, p. 419) developed a method of approximate solution of differential, integral and integro-differential equations. E.A. Chernyshenko (Ref. 6: Dissertatsiya na soiskaniye uchenoj stepeni kandidata fiz.-mat. nauk (Dissertation for Candidate's Degree), 1955) generalized Sokolov's result. The author applies the method to infinite systems of algebraical equations

$$x_i = b_i + \lambda \sum_{l=1}^{\infty} a_{il} x_l \quad (i=1, 2, \dots). \quad (1)$$

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It is supposed that λ is a regular value and

$$\sum_{i=1}^{\infty} |b_i|^p = C_1^p < \infty; \sum_{i=1}^{\infty} \left(\sum_{j=1}^{\infty} |a_{ij}|^q \right)^{\frac{p}{q}} = C_2^p < \infty \left(\frac{1}{p} + \frac{1}{q} = 1 \right). \quad (2)$$

If the conditions (2) are fulfilled the system has a unique solution. The method consists in finding the first approximation from the system K

$$x_{i1} = b_i + \lambda \sum_{j=1}^k a_{ij} x_{ij} + \lambda \sum_{j=k+1}^{\infty} a_{ij} x_{0j} \quad (i = 1, 2, \dots), \quad (3)$$

where $x_0 = \{x_{01}, x_{02}, \dots, x_{0i}, \dots\}$ is an arbitrary element of the space l .

$$x_{nm} = b_m + \lambda \sum_{l=k+1}^{\infty} a_{ml} x_{n-l} + \lambda \sum_{j=1}^k a_{mj} \sum_{l=1}^k \frac{M_{lj}(\lambda)}{D_k(\lambda)} b_l + \quad (13)$$

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$$+ \lambda^2 \sum_{j=1}^k a_{mj} \sum_{i=1}^k \frac{M_{ij}(\lambda)}{D_k(\lambda)} \sum_{i=k+1}^{\infty} a_{ii} x_{n-1} \quad (n, m = 1, 2, \dots). \quad (13)$$

is then obtained. If for some k the condition

$$L_k = \left\{ \sum_{m=k+1}^{\infty} \left\{ \sum_{i=k+1}^{\infty} \left| \lambda a_{mi} + \lambda^2 \sum_{i=1}^k \sum_{j=1}^k \frac{M_{ij}(\lambda)}{D_k(\lambda)} a_{ii} a_{mj} \right|^q \right\}^{\frac{p}{q}} \right\}^{\frac{1}{p}} < 1. \quad (14)$$

is fulfilled the sequence (13) coincides with the solution of (1) according to the l^p norm [Abstractor's note: Not defined]. It can be proved that if (2) is fulfilled, $L_k \rightarrow 0$ if $k \rightarrow \infty$. Therefore one can always choose k so that $L_k < 1$. For estimation of the error one obtains

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$$|x_{mn} - x_m^*| \leq \frac{M_{km}}{1-L_k} \left\{ \sum_{l=k+1}^{\infty} |x_{nl} - x_{n-1l}|^p \right\}^{\frac{1}{p}} \quad (15)$$

$$|x_{nn} - x_m^*| \leq \frac{M_{km} L_k^{n-1}}{1-L_k} \left\{ \sum_{l=k+1}^{\infty} |x_{ll} - x_{0l}|^p \right\}^{\frac{1}{p}}; \quad (16)$$

$$J_{nm} = \frac{|x_{nn} - x_m^*|}{|x_m^*|} \leq \frac{100|x_{nn} - x_m^*|}{|x_{nm}| - |x_{nm} - x_m^*|} \% \quad (n > n_0), \quad (17) \quad \checkmark$$

where $x^* = x_1^*, x_2^*, \dots, x_m^* \dots$ is the solution of (1) and

$$M_{km} = \left\{ \sum_{l=k+1}^{\infty} \left| \lambda a_{ml} + \lambda^2 \sum_{i=1}^k \sum_{j=1}^k \frac{M_{ij}(\lambda)}{D_k(\lambda)} a_{il} a_{mj} \right|^q \right\}^{\frac{1}{q}} \quad (18)$$

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Approximate solution for ...

An example is then discussed. It is claimed that the method can be used if the condition

$$L_k = \sup \sum_{l=k+1}^{\infty} \left| \lambda a_{ml} + \lambda^2 \sum_{i=1}^k \sum_{j=1}^k \frac{M_{ij}(\lambda)}{D_k(\lambda)} a_{mi} a_{lj} \right| < 1. \quad (14')$$

instead of (2), is fulfilled; and that (1) has then a solution for any values of b. There are 7 Soviet-bloc references.

ASSOCIATION: Instytut matematyki AN URSR (Institute of Mathematics, AS UkrSSR)

PRESENTED: by Academician AS UkrSSR, Y.Z. Shtokalo

SUBMITTED: April 27, 1960

X

Card 5/5

22764
S/041/61/013/001/003/008
B112/B202

104600

AUTHOR: Luchka, A. Yu.

TITLE: Approximate solution of linear operator equations in the Banach space by the method of Yu. D. Sokolov

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, v. 13, no. 1, 1961, 39-52

TEXT: The author studies an algorithm for the approximate solution of the operator equation $x = f + \lambda ABx$, $f = Ag$ (2), where A, B are linear operators defined on a Banach space E_1 , the range of values of which lies in a Banach space E_2 . He assumes that $g \in E_2$, $0 < |\lambda| < \infty$, and BA is totally continuous. The solution algorithm of the author is more general than similar algorithms by Yu. D. Sokolov and E. A. Chernyshenko. It has the following structure:

$$x_n = f + \lambda ABx_{n-1} + \lambda \sum_{i=1}^k \sum_{j=1}^k \frac{M_{ij}(\lambda)}{D_k(\lambda)} B_{ni} A \varphi_j \quad (n = 1, 2, \dots). \quad (16)$$

$M_{ij}(\lambda)$ and $D_k(\lambda)$ are the algebraic complements and the determinant of the matrix, respectively:

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B112/B202

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$$\begin{pmatrix} 1 - \lambda K_{11} & \dots & -\lambda K_{1k} \\ \dots & \dots & \dots \\ -\lambda K_{k1} & \dots & 1 - \lambda K_{kk} \end{pmatrix}$$

with $K_{ij} = f_i(BA\varphi_j)$, where $\{\varphi_i\}$ is a base of E_2 and where the f_i are chosen such that they form a biorthogonal set together with the φ_i . The author proves the convergence of process (16) on the sufficient condition:

$\|\lambda BA\| < 1$. He derives the formula: $\|x_n - x^*\|_{E_1} \leq \frac{C_k M_k L_k^{n-1}}{1 - L_k}$ as the error estimate, where $M_k = \|\lambda A Q_k + \lambda^2 R_k B A Q_k\|$, $L_k = \|\lambda Q_k B A Q_k + \lambda^2 Q_k B R_k B A Q_k\|$,

$$Q_k = I - P_k, P_k = \sum_{i=1}^k f_i \varphi_i, R_k = \sum_{i=1}^k \sum_{j=1}^k \frac{M_{ij}(i)}{D_k(\lambda)} f_i A \varphi_j.$$

Finally, the author applies his algorithm to integro-differential equations and gives numerical examples for his estimations. There are 3 tables and 7 Soviet-bloc references.

SUBMITTED: December 29, 1959

Card 2/2

25151

S/021/61/000/004/003/013
D213/D303

16.4600

AUTHOR: Luchka, A.Yu.

TITLE: On the approximate solution of linear operator equations by the method of Yu.D. Sokolov

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 4, 1961, 424 - 428

TEXT: The author considers equations of the form $Lx = g + \lambda Bx$, where L and B are linear operators defined in a complex Banach space E_1 , the regions of whose terms lie in a complex Banach space E_2 which has a basis, $g \in E_2$, $0 < |\lambda| < \infty$. Further, it is supposed that L has an inverse $A = L^{-1}$ [Abstractor's note: This is written as L^{-1} in the text] and also that the operator BA is cyclically continuous. The equation may then be written $x = f + \lambda ABx$, $f = Ag$ (2). The solution follows the method of Yu.D. Sokolov. The first approximation is sought from the equation

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On the approximate solution ...

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$$x_1 = f + \lambda ABx_0 + \lambda \sum_{i=1}^k \alpha_{1i} A\phi_i \quad (3)$$

where

$$\alpha_{1i} = f_i(B\delta_1) \quad (i = 1, \dots, k), \quad (4)$$

and

$$\delta_1 = x_1 - x_0, \quad (5)$$

$\{\phi\}$ is the basis of E_2 and x_0 is an arbitrary element of E_1 , and the α_{1i} are given by

$$\alpha_{1j} = \frac{\sum_{i=1}^k M_{ij}(\lambda) B_1}{D_k(\lambda)} \quad (j = 1, \dots, k) \quad (7)$$

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On the approximate solution ...

where $K_{ij} = f_i(BA\varphi_j)$; $B_{li} = \lambda f_i(BABx_0) + f_i(Bf) - f_i(Bx_0)$,

and

$$D_k(\lambda) = \begin{vmatrix} 1 - \lambda K_{11} & \dots & -\lambda K_{1k} \\ \dots & \dots & \dots \\ -\lambda K_{k1} & \dots & 1 - \lambda K_{kk} \end{vmatrix}$$

and the $M_{ij}(\lambda)$ is the algebraic complement of the element at the intersection of the i -th row and j -th column. In the case $B = I$ (the unit operator) and $x_0 = \theta$ an algorithm is used as shown in E.A. Chernyshenko (Ref. 6: Diss. K. 1955). The sufficient condition for convergence is

$$L_k(\lambda) = \|\lambda Q_k BAQ_k + \lambda^2 Q_k BR_k BAQ_k\| < 1. \tag{15}$$

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S/021/61/000/004/003/013
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On the approximate solution ...

where

$$R_k = \sum_{i=1}^k \sum_{j=1}^k \frac{M_{ij}(\lambda)}{D_k(\lambda)} f_i A_{\varphi_j}$$

$$P_k = \sum_{i=1}^k f_i \varphi_i; Q_k = I - P_k$$

Theorem: If BA is cyclically continuous and λ is regular, then $L_k(\lambda) \rightarrow 0$ as $k \rightarrow \infty$. Hence the estimate of error is

$$\|\Delta_n\|_{E_1} \leq \frac{\Omega_k(\lambda)}{1 - L_k(\lambda)} \|Q_k B \delta_n\|_{E_1} \quad (16)$$

where x_n is the n-th approximation to x^* the exact value, $\Delta_n = x_n - x^*$, and

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On the approximate solution ...

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$$\Omega_k(\lambda) = \|\lambda A Q_k + \lambda^2 R_k B A Q_k\|.$$

Theorem 2: Let M be the set of regular points and M* the set of special values of BA. M_k is the set of values of for which L_k()

1. Then M* is contained in some M_k. There are 7 Soviet-bloc references. X

ASSOCIATION: Instytut matematyky AN URSR (Institute of Mathematics AS UkrSSR)

SUBMITTED: April 27, 1960

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LUCHKA, A.Yu.

Use of I.U.D. Sokolov's method in the approximate solution of infinite systems of linear integral equations. Dop. AN URSR no.9: 1149-1153 '62. (MIRA 18:4)

1. Institut matematiki AN UkrSSR.

LUCHKA, Anton Yur'yevich; SOKOLOV, Yu.D., otv. red.; MEL'NIK, T.S.,
red.; TURBANOVA, N.A., tekhn. red.

[Theory and application of the method of averaging of
functional corrections] Teoriia i primeneniie metoda os-
redneniia funktsional'nykh popravok. Kiev, Izd-vo AN
USSR, 1963. 125 p. (MIRA 17:3)

1. Akademiya nauk Ukr.SSR (for Sokolov).

LUCHKA, A.Yu.; KURPEL', N.S.

Nonstationary iterative method for the approximate solution
of linear operator equations. Ukr.mat.zhur. 16 no. 3:389-
395 '64. (MIRA 17:7)

LUCHKA, A.Yu.

Use of IU. D.Sokolov's method in the approximate solution of infinite systems of linear differential equations. Dop. AN URSSR no.5:563-567 (MIRA 17:9) '63.

1. Insti:ut matema'iki AN UkrSSR. Predstavleno akdemikom AN UkrSSR Yu.A.Mitropol'skim [Mytropol's'kyi, IU.O.].

LUCHKA, A.Yu.

Use of I.U.S. Sokolov's method in solving the Dirichlet problem
for Poisson's equation. Dop. AN URSR no.4:426-429 '65.

(MIRA 18:5)

1. Institut matematiki AN UkrSSR.

APPROVED FOR RELEASE: 04/03/2001

Сухча, А. Ю.

On the application of Yu. D. Sobolev's method to the solution of Neumann's boundary problem for Poisson's equation

Keywords: Boundary value problem

Subject: linear equation, integral equation, solution theorem

$$x = f + Ax \tag{1}$$

where x is defined in a complete Hilbert space H .

Neumann's external problem for Poisson's equation. It is proved that if there exists a unique solution of Eq. (1) and the spectrum of the operator A lies in a sector S_α , with the exception of λ_0 , then the operator A_0 is invertible and

$$x_n = (I - AA_{n-1})^{-1} f$$

which converges to the solution of Eq. (1). The convergence and stability with

L 44152-65 ZWT(d) IJP(c)

NR: AP5010782

DR: 0021/65/000/004/0426/0429

Luczka, A. J.

AN UkrRJR. Popovici, M. J., 1957, 1957-1958

INDEX: Dirichlet problem, Poisson equation, Galerkin method,

The Galerkin method is originally presented in a journal,

1957, it is applied to the problem of solving the

Poisson equation which is transformed into a

linear Fredholm integral equation of the second kind. The integral equation is written in operator form in Hilbert space and an algorithm for obtaining a sequence of successive approximations of the solution

is given. A theorem is proved which establishes the conditions

in respect to the boundary conditions.

L. 11152-65

ACCESSION-NR: AP5010782

advantages of the Sokolov method as compared with the method of analytic continuation. The Dirichlet problem for the Poisson equation in a simply connected domain is solved. It is shown that the method of Sokolov is a particular case of the method of analytic continuation.

1964

1964

1964

1964

MITIN, N.G.; SEN', Z.P.; LUCHKA, M.Kh.

Mechanized production line for the manufacture of dishes. Stek.
i ker. 19 no.2:36-38 F '62. (MIRA 15:3)
(Baranovka--Porcelain)

SEN', Z.P.; SIVCHIKOVA, M.G.; LUCHKA, M.Kh.; BELYAKOVA, I.N.;
YARMAK, O.F.; DAYN, F.L.

Possibility of lowering the temperature of porcelain firing
and of its replacement in drying under high temperatures.
Stek.i ker. 19 no.9:21-24 S '62. (MIRA 15:9)
(Porcelain)

SEN', Z.P., kand.tekhn.nauk; LUCHKA, M.Kh.; LUGANSKIY, V.I. [Luhans'kiy, V.
I.]

Rapid glazing of decorated faience articles. Leh.prom. no.3:20-23
Jl-S '63. (MIRA 16:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut stekol'noy i far-
foro-fayansovoy promyshlennosti.

SEN', Z.P., kand.tekhn.nauk; LUGANSKIY, V.I. [Luhans'kyi,V.I.];
LUCHKA, M.Kh.

Firing of decorated glazed earthenware in conveyor kilns without
muffles. Leh.prom. no. 4:68-73 O-D '63. (MIRA 17:5)

SEN', Z.P., kand.tekhn.nauk; LUCHKA, M.Kh.; SKRIPKO, V.Ya. [Skrypko, V.IA.]

Use of liquid fuels in the firing of porcelain. Leh.prom.
no.1:66-70 Ja-Mr '64. (MIRA 66-70)

KOMENDAR, V.I.; KRAYEV, V.G. [Kraiev, V.H.]; LUCHKEVICH, M.Yu. [Luchkevych, M.IU]

Studying the underground parts of herbaceous plants of the
Rivna (Ukrainian Carpathians) alpine meadows. Ukr. bot. zhur.
22 no.4:48-57 '65. (MIRA 18:10)

1. Uzhgorodskiy gosudarstvennyy universitet, kafedra morfologii
i sistematiki rasteniy.

LUCHKEVICH, Stanislav [Luchkevych, Stanislav]

Heading for the beacons. Znan. ta pratsia no.6:24 Je '61.
(MIRA 16:8)

1. Kolkhoz im. Shchorsa, Kirovogradskaya oblast'.

LUGHEVICH, S. ^G inzh.

Efficient plans for mechanizing the water supply on livestock farms. Sel' stroi. 13 no.8:4-5 Ag '58. (MIRA 11:9)
(Stock and stockbreeding) (Water supply, Rural)

IUCHKEVICH, S.G.

A district where milking has been mechanized on a large scale.
Zhivotnovodstvo 20 no.4:75-77 Ap '58. (MIRA 11:3)

1. Starshiy inzhener po mekhanizatsii trudoyemkikh rabot v zhivotnovodstve Kirovogradskogo obl'sel'khozupravleniya.
(Aleksandrovka District (Kirovograd Province)--Milking)

LUCHKEVICH, S.G. (Luchkevych, S.H.), inzh.

Glass water pipes. Mekh. sil'. hosp. 11 no.7:26 J1 '60. (MIRA 13:10)
(Water pipes) (Pipe, Glass)

LUCHKEVICH, S.G. [Luchkevych, S.H.], inzh.

Practices in the use of the M'D-100 milking parlors. Mekh. sil'.
hosp. 14 no.7:23 J1 '63. (MIRA 17:2)

1.1100

27534

S/123/61/000/014/022/045
A004/A101

AUTHOR: Luchkin, A.G.

TITLE: Workhardening of heat-resistant cast iron

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no.14, 1961, 25, abstract
14B163 ("Tr. Kazansk. aviats. in-ta", 1960, no. 52, 83 - 91)

TEXT: The depth and degree of workhardening were determined with the aid of specimens from the heat-resistant $\text{X4H}\bar{\text{A}}\text{X}$ -15-7-2 (ZnChNDKh-15-7-2) grade cast iron cut out from rings by measuring the microhardness on the surface of oblique cuts. The microhardness was measured on the ПМТ-3 (PMT-3) device with a load on a diamond tip of 50 gr. Prior to cutting out the specimens, the rings were machined on a lathe at different cutting conditions with $\beta\text{K}8$ (VK8) tools having variable magnitudes of rake angle γ . It was found that, at $V = 50$ m/min, the workhardening degree grows with an increasing feed, while at $V = 100 - 367$ m/min the workhardening degree decreases, which can be explained by an acceleration of instantaneousness of the force action with increasing feed. Owing to this, the heat removal into the depth of the cold metal is reduced which stimulates the softening process of the surface being machined and a reduction of the

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S/123/61/000/014/022/045

ACC4/A101

Workhardening of heat-resistant cast iron

workhardening degree. The workhardening degree varies depending on the cutting speed by the law of curves, forming a maximum and a minimum. The amplitude and frequency of oscillation depends on the value of angle γ . The workhardening degree increases with a decrease of γ from $+20^\circ$ to -30° at $V = 50$ m/min, while it decreases at $V = 100 - 367$ m/min. There are 2 figures and 36 references.

4

I. Bernshteyn

[Abstracter's note: Complete translation]

Card 2/2

SAFRONOV, Petr Vasil'yevich, inzh.; LUCHKIN, Andrey Ivanovich, inzh.;
SERGEYEV, A.F., red.; MAL'KOVA, N.V., tekhn.red.

[Laboratory manual for road materials] Laboratornyi praktikum po
dorozhno-stroitel'nym materialam. Moskva, Nauchno-tekhn.izd-vo
M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1959. 111 p.
(Road materials--Testing) (MIRA 12:4)

LUCHKIN, Andrey Ivanovich; SAFRONOV, Petr Vasil'yevich; IVANOVSKAYA,
K.M., red.; GALAKTICNOVA, Ye.N., tekhn. red.

[Laboratory manual on road building materials] Laboratornyi
praktikum po dorozhno-stroitel'nym materialam. Izd.2., perer.
i dop. Moskva, Avtotransizdat, 1963. 134 p. (MIRA 16:9)
(Road materials)

RAKHOVSKIY, V.I.; Prinsipal'nyye uchastnye: LUCHKIN, G.A.; LEBEDEVA, G.I.

Corrosion of refractory electrodes in a high-current arc discharge
under vacuum. Zhur.tekh.fiz. 34 no.11:2072-2078 N '64. (MIRA 18:1)

1. Vsesoyuznyy elektrotekhnicheskiy institut imeni V.I.Lenina.

KHAI, M.G., polkovnik meditsinskoy sluzhby. LUCHKIN, G.I., podpolkovnik
meditsinskoy sluzhby

Pulley block for dragging wounded. Voen.-med. zhur. no.9:40-41
S '55. (MLRA 9:9)
(RUSSIA--ARMY--TRANSPORTATION OF SICK AND WOUNDED)

34538
S/659/61/007/000/025/044
D204/D303

18.1785-

AUTHOR: Luchkin, G.P.

TITLE: High temperature oxidation of metallic titanium in various atmospheres

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 7, 1961, 227 - 232

TEXT: Oxidation of Ti metal was studied in steam, air and dry and wet oxygen, between 800 and 1200°C, to determine certain aspects of the reaction mechanism. The rates of oxidation were followed by a continuous weight-gain method, at a pressure slightly (1 - 2 mm Hg) greater than atmospheric. At 800°C the reaction proceeded faster in dry air than in steam, until the curves crossed over after ~70 hrs. at a point corresponding to a weight increase of 0.65 mg/cm², and was very much faster in pure, dry oxygen. With increasing temperature (1000°C) the oxidation in steam tended to become relatively quicker and at 1100 - 1200°C the rate was higher in H₂O than in O₂ or in air. Experiments carried out in oxygen containing various pro-

Card 1/2

High temperature oxidation of ...

S/659/61/007/000/025/044
D204/D303

portions of steam have also shown that the rate of reaction increased with the partial pressure of H₂O. X-ray investigations, using Cu-K radiation and an Al filter proved the scales formed in steam between 800 and 1200°C to consist only of rutile. It was also found that the scales grown in steam were monolithic and adhered well to the metal, whilst those formed in air were laminated and showed a definite texture on the outside. The scale grown in steam is ascribed to a reaction of the metal with the free oxygen derived from the decomposition of H₂O. It is concluded that the oxidation process in steam takes place by the unilateral diffusion of the reacting gas through the oxidized layer, ensuring a close contact between the latter and the metal. This diffusion also limits the rate of reaction. There are 5 figures, 1 table and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: E. Hayes, A. Robertson and R. Robertson, J. Electrochem. Soc., 97, 1950.

Card 2/2

X

38985

S/137/62/000/006/134/163

A057/A101

11.2221
AUTHOR: Luchkin, G. P.

TITLE: High-temperature oxidation of titanium in different gaseous media

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 84, abstract 6I532
(V sb. "Issled. po zharoprochn. splavam", T. 7, Moscow, AN SSSR,
1961, 227 - 232)

TEXT: The mechanism of high-temperature oxidation of Ti was investigated in steam, O₂ atmosphere and dry air in the interval of 800 - 1,200°C by the method of continuous weighing. A device was constructed to obtain curves of oxidation kinetics of Ti in different gaseous media. At a temperature of 800°C and pressure of 1 - 2 torr above the atmospheric one the oxidizability of Ti in an atmosphere of pure O₂ is considerably higher than in a steam atmosphere and in air. From 1,100°C upward the rate of growth of the scale on Ti metal during heating is greater in steam than in dry air and even atmosphere of pure O₂. The phase composition and texture in the outer layer of the scale was investigated roentgenographically. The scale, obtained in steam in the interval 800 - 1,200°C

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High-temperature oxidation of...

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A057/A101

contained only the TiO_2 phase in the rutile modification. The texture in the outer layer of the scale is clearly seen in samples oxidized in air at $1,200^\circ C$, but absent in scale obtained in steam atmosphere under same conditions. There are 5 references.

Ye. Layner

+

[Abstracter's note: Complete translation]

Card 2/2

LUCHKIN, I. I.

"The Use of Synthetic Lactic Emulsions in Preparing Food Concentrates and the Quality of the Latter as Staple Commodities." Cand Tech Sci, Moscow Inst of National Economy imeni G. V. Plekhanov, 24 Sep 54. (VI, 7 Sep 54)

SO: Sum 432, 29 Mar 55

LUCHKIN, N.

Use of pneumatic transportation systems in a mixed fodder department.
Mik.-elev.prom. 28 no.3:11-12 Mr '62. (MIRA 15:4)

1. Glavnyy inzhener Khabarovskogo upravleniya zagotovok.
(Grain milling)

ACC NR: AP7001460

(A)

SOURCE CODE: UR/0413/66/000/021/0211/0212

INVENTOR: Arinushkin, L. S.; Dumov, V. I.; Luchkin, S. M.; Polinovskiy, A. Yu.; Sharov, Yu. A.

ORG: none

TITLE: Self-priming centrifugal-pump assembly. Class 59, No. 188308

SOURCE: Izobreteniya, promyshlennyye obratzsy, tovarnyye znaki, no. 21, 1966, 211-212

TOPIC TAGS: aircraft fuel pump, axial pump, fluid pump, centrifugal pump, engine fuel pump

ABSTRACT: This Author Certificate introduces a self-priming centrifuge pump for fuel systems such as those used in aircraft. A common casing contains a main centrifugal pump and an auxiliary fluid-flow ring pump. The discharge cavity of the latter connects with the fuel tank. The intake chamber of the fluid-flow ring pump is connected to the forechamber of the main pump rotor by means of a channel which encircles, for instance, the hub of the main rotor, and another channel in the casting connects the functional chamber of the ring pump to the discharge cavity of the main pump. This arrangement improves the anticavitation properties of the

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UDC: 621.67-112

ACC NR: AP7001460

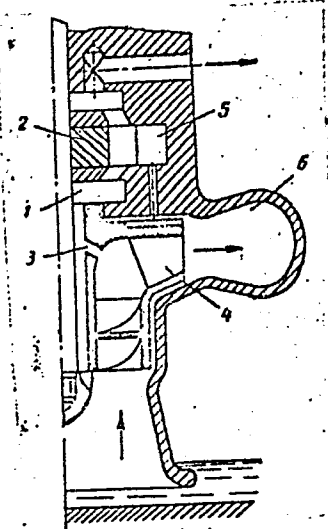


Fig. 1. Self-priming centrifugal pump

1 - Intake chamber; 2 - rotor; 3 - channel; 4 - rotor hub; 5 - functional chamber; 6 - discharge cavity of the main pump.

assembly and results in more dependable operation. In another version of the above assembly the main pump includes an engaged axial rotor, and in this case the intake of the ring pump is also connected to the forechamber of the axial rotor (see Fig. 1). Orig. art. has: 1 figure. [SA]

SUB CODE: 13, 01/ SUBM DATE: 30Dec62/ ATD PRESS: 5110
Card 2/2

LUCHKIN, V.T.; POVOLOTSKIY, I.A.

Development of power engineering in France. Energ. i elektrotsekh.
prom. no.3:73-80 J1-S '62. (MIRA 18:11)

STRUMILIN, Stanislav Gustavovich, akademik; LUCHKINA, A.N., red.izd-va;
RUBE, V.A., red.izd-va; MAKUNI, Ye.V., tekhn. red.

[Selected works in five volumes] Izbrannye proizvedeniia v piati
tomakh. Moskva, Izd-vo Akad. nauk SSSR. Vol.1.[Statistics and
economics] Statistika i ekonomika. 1963. 486 p. Vol.2.[At the
planning front] Na planovom fronte. 1963. 441 p.

(MIRA 16:5)

(Statistics) (Economics) (Russia--Economic policy)

D'YACHENKO, V.P., red.; LUCHKINA, A.N., red.; RUBE, V.A., red.;
LAUT, V.T., tekhn. red.

[The essential social labor expenditures, costs and
profitableness] Obshchestvenno neobkhodimye zatraty
truda, sebestoimost' i rentabel'nost'; materialy. Pod
red. V.P.D'iachenko. Moskva, Izd-vo AN SSSR, 1963. 422 p.
(MIRA 16:11)

1. Rasshirennaya sessiya nauchnogo soveta po problemam
tsenoobrazovaniya. 1 st, 1962. 2. Chlen-korrespondent
AN SSSR (for D'yachenko).

(Prices)

L 31194-66 EWP(j)/EWT(m) RM

ACC NR: AP6022568

SOURCE CODE: UR/0216/66/000/002/0197/0210

AUTHOR: Tseytlin, P. I.; Spitkovskiy, D. I.; Gorin, A. I.; Ivannik, B. P.;
Kulikova, L. G.; Luchkina, L. A.; Martynov, E. V.; Ryabchenko, N. I.; Usakovskaya, T. S.

ORG: Institute of Experimental Biology, AMN SSSR, Moscow (Institut eksperimental'noy biologii AMN SSSR)

TITLE: Analysis of radiation injury to deoxyribonucleoproteins at the molecular and supramolecular levels

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 2, 1966, 197-210

TOPIC TAGS: radiation injury, protein, DNA, x ray irradiation, hydrogen bonding, molecular structure

ABSTRACT: X-irradiation does not give rise to covalent crosslinks within the DNA macromolecule, i.e., it does not prevent the separation of DNA strands or interfere with its replication. The authors' studies on optic rotation of DNA and DNP and melting curves indicate that irradiation causes latent damage to the system of hydrogen bonds. The formation of single breaks in the polynucleotide skeleton may result in rotation around the remaining single bond at the site of the break. This may produce local change in the configuration of the DNA macromolecule, resulting in steric hindrance between the DNA and corresponding protein molecule.

Irradiation with doses below 10^3 rad causes breaks only in a small number of DNA molecules. This does not alter the physicochemical properties of the DNA or DNP as a whole, although it undoubtedly has some biological

Card 1/2

UDC: 577.391

L 31194-66

ACC NR: AP6022568

effect. Thus, there is no reason to believe that the effects of low irradiation doses, as manifested in structural rearrangements of chromosomes, are related to changes in the DNA macromolecules. The results of studies on the physicochemical properties of supramolecular oriented DNP structures present in a medium with physiological ionic strength indicate that these formations are highly sensitive to radiation. Orig. art. has: 10 figures. [JPRS]

SUB CODE: 07, 06, 20 / SUBM DATE: 18Dec65 / ORIG REF: 013 / OTH REF: 013

Card 2/2 1C

LUCIKINA, N. N.

"Chemicotechnological Characteristic of Meat Subproducts in Connection With Their Culinary Utilization." Cand Tech Sci, Moscow Inst of National Economy imeni, G. V. Plekhanov, Min Trade USSR, Moscow, 1955. (KL, No 11, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

ЛУЧКИНА, Н. В.

BREMENER, Solomon Mikheylovich, kandidat meditsinskikh nauk; KROTKOV,
F.G., professor, redaktor; ЛУЧКИНА, Н. В., redaktor; ТОЛМАЧЕВА,
А. В., redaktor; СУДАК, Д. М., ~~технический~~ redaktor

[Hygiene in public catering with fundamentals in anatomy and
physiology] Gigena obshchestvennogo pitaniia (s osnovami ana-
tomii i fiziologii). Izd. 2-e, dop. i perer. Moskva, Gos. izd-vo
torgovoi lit-ry, 1955. 280 p. (MIRA 9:2)
(FOOD HANDLING) (ANATOMY) (PHYSIOLOGY)

YUSIPOV, Z.I., kand.tekhn.nauk; KANUKOV, N.D., kand.tekhn.nauk; LUCHKINA, O.A.

Introducing a mill for deep burnishing of surfaces. Biol.tekh.-ekon.
inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform. 18 no.4:17-19 Ap
'65. (MIRA 18:6)

L 13551-63

RM/RW

EPR/EMP(j)/EPF(c)/EMT(m)/BDS AFFTC/ASD Ps-l/Pc-l/Pr-l

ACCESSION NR: AF3000701

S/0190/65/005/005/0124/0128

74
72

AUTHOR: Myagchenkov, V. A.; Kuznetsov, Ye. V.; Iskhakov, O. A.; Luchkina, V. N.

TITLE: Fractionation of methylmethacrylate-methacrylic acid copolymer and the properties of the fractions

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 5, no. 5, 1963, 724-728

TOPIC TAGS: fractionation, copolymers, methacrylate, methacrylic acid, macromolecules, Li

ABSTRACT: The purpose of the present investigation consisted in a study of the physical and chemical characteristics produced in copolymers of methylmethacrylate-methacrylic acid by varying its composition. To this end, a copolymer was produced by heating for 40 hours at 45C a mixture of 9.75% methacrylic acid, 90.2% methylmethacrylate, and 0.05% lithium methacrylate with the addition of an initiator. The obtained copolymer was dissolved in acetone, from which fractions were precipitated by a 2:1 mixture of hexane-dichloroethane. These were dried, and their properties studied by viscosimetry and spectroscopy. The examination of the fractions of the copolymer gave an identical methacrylic acid content of 7.4%, the 92.6% balance being accepted as methylmethacrylate. The constants K and a of the Staudiger-Mark equation for a copolymer of the given composition in acetone were determined. It

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L 13554-63

ACCESSION NR: AP3000701

was demonstrated that the addition of lithium methacrylate to the polymerizing mixture caused the reaction to proceed with the formation of a tertiary copolymer. Orig. art. has: 9 formulas, 5 figures, and 1 table. 2

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskiy institut im. S. M. Kirova (Kazan' Institute of Chemical Engineering)

SUBMITTED: 05Nov61

DATE ACQ: 17Jun63

ENCL: 00

SUB CODE: CH

NO REF SOV: 005

OTHER: 001

Card 2/2

GWARDIONOV, B.O.[Hvardionov, B.O.], red.; LUCHKIV, M.R., tekhn.red.

[The "Ukrainian hour"] "Ukrains'ka hodyna." Uzhhorod, Zakarpats'ke obl. knyzhkoho-gazetne vyd-vo, 1963. 29 p.
(MIRA 17:3)

KOSTYUK, V.P.; LUCHKO, A.G.

Endogenetic and metamorphic apatite deposits of Siberia and the Far East and the prospects for their utilization for obtaining phosphate fertilizers. Geol. i geofiz. no.10:90-103 '64.
(MIRA 18:4)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

KRENDELEV, F.P.; LUCHKO, A.G.; PONETAYEV, P.A.; PETROV, B.M.

Quartz syenites in the northern part of the Yenisey Range. *Sov. geol.* 8 no.4:129-131 Ap '65. (MIRA 18:7)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.

KIYAK, Grigoriy Stepanovich [Kiyak, H.S.], prof.; SAVITSKIY, K.A.
[Savyts'kyi, K.A.], kand.sel'skokhoz.nauk, glavnyy red.;
LUCHKO, S.S., otv. za vypusk; GURENKO, V.A. [Hurenko, V.A.],
red.

[Experience in the cultivation of corn in the western regions
of the Ukrainian S.S.R.] Dosvid vyroshchuvannia kukurudzy;
v zakhidnykh raionakh URSR. Kyiv, 1959. 31 p. (Tovarystvo
dlya poshyrennia politychnykh i naukovykh znan' Ukrain'skoi
RSR. Ser.6, no.19). (MIRA 13:1)

1. Chlen-korrespondent AN USSR (for Kiyak). 2. Referent Tova-
ristva dlya poshirennya politichnikh i naukovykh znan' Ukra-
ins'koi RSR (for Luchko).

(Ukraine, Western--Corn (Maize))

LUCHKO, A.S.; PORUTSKIY, G.V.; YAVORSKIY, A.G.

Gaseous excretions and the amino acid composition of green
peas. Fiziol. rast. 11 no.1:53-58 Ja-F '64.

(MIRA 17:2)

1. Sel'skokhozyaystvennaya akademiya, Kiyev.

LUCHKO, Aleksandr Sergeevich [Luchko, O.S.], agronom; VLASYUK, P.A.,
akademik, red.; GURENKO, V.A. [Hurenko, V.A.], red.

[Growing peas in the Ukraine] Dosvid vyroshchuvannia horokhu
na Ukraini. Za red. R.A.Vlasiuka. Kyiv, 1960. 43 p. (Tovarystvo
dlia poshyrennia politychnykh i naukovykh znan' Ukrain's'koi RSR.
Ser.6, no.11). (MIRA 13:9)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.
Lenina; AN USSR i Ukrain's'kaya akademiya sel'skokhozyaystvennykh
nauk (for Vlasyuk).
(Ukraine--Peas)

PORUTSKIY, G.V.; LUCHKO, A.S.; MATKOVSKIY, K.I.

Ethylene hydrocarbon content of volatile excretions of plants.
Fiziol.rast. 9 no.4:482-485 '62. (MIRA 15:9)

1. Institute of Plant Physiology, Ukrainian S.S.R. Academy of
Sciences, Kiev.

(EXUDATION (BOTANY))

MOISEYEVA, N.I.; LUCHKO, G.D.

Immediate results of the treatment of fractures of the base of the skull in civilian practice. Vest. khir. 84 no. 4:55-58 Ap '60.

(MIRA 14:1)

(SKULL--FRACTURE)

MOISEYEVA, N.I.; LUCHKO, G.D.

Late results of the treatment of cranial base fractures. Vest.
khir. 86. no.2:37-41 '61. (MIRA 14:2)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. F.G. Uglov) i kliniki nervnykh bolezney (zav. - prof. D.K. Bogorodinskiy) 1-go Leningradskogo meditsinskogo instituta im. I.P. Pavlova.

(SKULL—FRACTURE)

KEDROVA, A.N. (Leningrad, Kaznacheyskaya ulitsa, 4, kv.21); LUCHKO, G.D.;
UCHVATKINA, M.K.

Management and treatment of traumatic subdural hematoma. Vest. khir.
92 no.3:126-128 Mr '64. (MIRA 17:12)

1. Iz gosptal'noy khirurgicheskoy kliniki (zav. - prof. F.G.Ugl'ov)
1-go Leningradskogo meditsinskogo instituta imeni Pavlova.

LUCHKO, G.D.

"Card for hospital discharge patient". Zdrav. Nos. Feder. 5 no.8:
21-22 Ag '61. (MIRA 14:10)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. F.G.Uglov)
I Leningradskogo meditsinskogo instituta.
(MEDICAL STATISTICS)

GOL'DBERG, D.G. (Leningrad, ul. Marata, 14, kv. 18); LUCHKO, G.D.; PYSHNOVA,
M.A.

Some characteristic clinical aspects of acute traumatic subdural
hematomas. Vest. khir. 92 no.1:58-63 Ja '64. (MIRA 17:11)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. F.G. Uglov)
i kliniki nervnykh bolezney (zav. - prof. D.K. Bogorodinskiy) 1-go
Leningradskogo meditsinskogo instituta imeni Pavlova.

MOISEYEVA, N.I.; LISTOVA, A.I.; LUCHKO, G.D. (Leningrad)

Relationship between injuries of the brain and the development
of hypertension. Klin.med. 39 no.5:27-30 My '61. (MIRA 14:5)

1. Iz kliniki gospital'noy khirurgii (zav. - prof. F.G. Uglov)
i kliniki nervnykh bolezney (zav. - prof. D.K. Bogorodinskiy)
I Leningradskogo meditsinskogo instituta imeni I.P. Pavlova.
(HYPERTENSION) (BRAIN—WOUNDS AND INJURIES)

MOISEYEVA, N.I.; LUCHKO G.D.; LISTOVA, A.I.

Results of dispensary service for patients who have suffered
brain trauma. Sov.Med. 27 no.7:85-89 J1'63. (MIRA 16:9)

1. Iz kafedry gospital'noy khirurgii (zav. - chlen-korrespon-
dent AMN SSSR prof. F.G.Uglov) i kafedry nervnykh bolezney
(zav. - prof. D.I.Bogorodinskiy) I Leningradskogo meditsinsko-
go instituta imeni I.P.Pavlova.

(BRAIN—WOUNDS AND INJURIES)

(DISPENSARIES)

LUCHKO, G.D.

Head injuries as revealed by data from Leningrad hospitals for 1958.
Sov. med. 25 no.8:96-99 Ag '61. (MIRA 15:1)

1. Iz gospi'tal'noy khirurgicheskoy kliniki I Leningradskogo meditsin-
skogo instituta imeni I.P.Pavlova (zav. - prof. F.G.Uglov) i Nauchno-
metodicheskogo byuro sanitarnoy statistiki Leningradskogo gorodskogo
otdela zdravookhraneniya (dir. - kand.med.nauk Ye.I.Lozhkina).
(HEAD...WOUNDS AND INJURIES)

LUCHKO, G.D.; SMIRNOV, A.D. (Leningrad)

Registration of cerebrospinal fluid pressure. Klin.med. no.9:28-31 '62. (MIRA 15:12)

1. Iz kliniki gospital'noy khirurgii Leningradskogo meditsinskogo instituta imeni akad. I.P. Pavlova (zav. - chlen-korrespondent AMN SSSR prof. V.G. Uglov).
(CEREBROSPINAL FLUID)

STUKKEY, A.L. (Leningrad, ul. Furmanova, d.7, kv.94); LUCHKO, G.D.

Diagnosis and treatment of hernias in the area of the spigelian
line. Klin.khir. no.6:10-12 Je '62. (MIRA 16:5)

1. Gospi'tal'naya khirurgicheskaya klinika (zav. - prof. F.G.
Uglov) 1-go Leningradskogo meditsinskogo instituta.
(ABDOMEN—HERNIA)

UGLOV, F.G., prof. (Leningrad, ul. Ordinarnaya, d.20, kv.5);
LUGHKO, G.D.

Use of neuroplegic and ganglioblocking agents in the treatment
of craniocerebral injures. Vest.khir. 89 no.11:63-69 N '62.

(MIRA 16:2)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. F.G.
Uglov) 1-go Leningradskogo meditsinskogo instituta imeni aka-
demika I.P. Pavlova.

(AUTONOMIC DRUGS)

(BARIN--WOUNDS AND INJURIES)

(SKULL--WOUNDS AND INJURIES)

LUCHKO, G.D.

Some statistical data on the mortality and length of hospital stay of patients with craniocerebral injuries. Vop. neurokhir. 27 no.4:22-25 J1-Ag'63 (MIRA 17:2)

1. Gosptal'naya khirurgicheskaya klinika (zav. - prof. F.G. Uglov) I Leningradskogo meditsinskogo instituta imeni I.P. Pavlova i nauchno metodicheskoye byuro sanitarnoy statistiki (dir. - kand. med. nauk Ye.E.Lozhkina) Leningradskogo gorodskogo otdela zdravookhraneniya.

LUCHKO, G.D.; PESHNOVA, M.A.

Some disorders of coronary circulation in craniocerebral
trauma. Sov. med. 27 no.12:56-59 D'63 (MIRA 17:4)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - chlen
korrespondent AMN SSSR prof. F.G.Uglov) I Leningradskogo medi-
tsinskogo instituta imeni Pavlova.

LUCHKO, I., inzh.; GOLUBEVA, O., inzh.

Determining logging errors in the case of two receiving units.
Mor. flot 25 no.5:25-26 My '65. (MIRA 18:5)

LUCHKO, I. F.

Clinical aspects of morbillous encephalomyelitis. Vrach. delo
no. 3:147 Mr '62. (MIRA 15:7)

1. Mezhrayonnaya bol'nitsa. Chertkov, Ternopol'skov oblasti.

(MEASLES) (ENCEPHALMYELITIS)

LUCHKO, I.Ye.

Portable stand for testing differential manometer-flowmeters.
Izm. tekhn. no.11:45-47 N '65. (MIRA 18:12)

L 45602-66 EWT(1) WW

ACC NR: AP6014522

SOURCE CODE: UR/0115/65/000/011/0045/0047

AUTHOR: Luchko, I. Ye.

47
B

ORG: None

TITLE: A portable stand for checking differential ²⁵flowmeter manometers

SOURCE: Izmeritel'naya tekhnika, no. 11, 1965, 45-47

TOPIC TAGS: manometer, flow meter, checkout equipment, pressure, fluid pressure

ABSTRACT: The author describes a stand for checking differential flowmeter manometers and other manometric devices without disassembly. The main assemblies of this stand are: a two-fluid manometer for measuring pressure set up in the flowmeter to be tested, an equalizing tank in which a constant fluid level is maintained automatically with respect to pressure changes in the hydraulic system of the stand and a pressure-producing press (see figure). The two-fluid manometer contains tanks (2) and (3). Both of these tanks are the same in diameter and are made from plastic. These tanks are joined by the flexible hose (1). Tank (2) is equipped with the pressure valve (4) by which the manometer is connected to the press (14) and in turn with the differential manometer (7) under examination. For checking a differential manometer without taking off the connecting tubes on its vessels, it is necessary to provide the fittings (8) which are blocked during direct differential manometer operation. The tank (3) is

Card 1/3

UDC: 681.2.089.6:531.732

L 45602-66

ACC NR: AP6014522

0

of the fluid in the indicator tube. As mercury flows in the differential manometer from the plus vessel to the minus vessel, the fluid in the minus vessel flows into the equalizing tank, but the same amount of fluid flows out of the leveling tank into the right cylinder of the press. Thus the fluid level in the leveling tank is constant throughout checking procedures. A window with a scale is provided for checking fluid level. The back wall of the press is connected to the leveling tank by the tube (16) in order to prevent the inflow of air through the disc packing. The dimensions of the entire unit are 500×450×200 mm. An operational formula for using the stand with the two-fluid manometer is given. The two-fluid manometer can be used for measuring varying and average pressures. The advantages of this stand are that it is small, portable and extremely accurate. Orig. art. has: 2 figures, 5 formulas.

SUB CODE: 13/ SUBM DATE: None

Card 3/3 *da*

VOLOSKOV, P.A., prof.; SUNAYKIN, A.A., starshiy nauchnyy sotrudnik;
LUCHKO, M.A., starshiy nauchnyy sotrudnik

Treating trichomoniasis in bulls. Veterinariia 42 no.7:80-81
Jl '65. (MIRA 18:9)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.

VOLOSKOV, P.A., prof.; LUCHKO, M.A., aspirant

Pathogenesis of trichomoniasis and the biology of *Trichomonas*
foetus. Veterinariia 40 no.8:30-31 Ag '63.

(MIRA 17:10)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.

PSHENICHNYY, N.I. [Pshenyohnyi, N.I.], dotsent; LUCHKO, O.S., agronom

Agriculturist and scientist. Nauka i zhyttia 10 no.3:29 Mr '60.
(MIRA 14:8)

(Bogdanov, Sergei Mikhailovich, 1859-1920)

85449

S/080/60/033/011/011/014
A003/A001

15-8109

AUTHORS: Shtraykhman, G. A., Al'shits, I. M., Zhidobina, I. A., Luchko, R. G.TITLE: Thixotropic Systems on the Base of the Unsaturated PH-1 (PN-1) Polyester Resin and Powdered Silica Gel ¹⁵PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 11, pp. 2586-2593

TEXT: The thixotropic properties of suspensions were investigated consisting of unsaturated polyester resin and some types of powdered silica gel with a view to using them in the manufacture of articles made of glass plastics with vertical and inclined surfaces. In the experiments the PN-1 resin was used which is produced according to ⁶BTY 33024-59 VCHX (VTU 33024-59 LSNKh). Several types of powdered silica gel, like the types A(A), Y-333 (U-333) and various experimental samples were studied. It was found that for the impregnation of glass fabrics on vertical surfaces only one third of binding material is needed to prevent flowing-off compared to other glass plastics products. The efficiency of the thixotropic filler depends on the degree of its dispersion. With an increase in dispersion the efficiency increases rapidly in the beginning, then the increase becomes slower and, after reaching a certain value, it has no appreciable effect.

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A003/A001

Thixotropic Systems on the Base of the Unsaturated ПН-1 (PN-1) Polyester Resin and Powdered Silica Gel

on the efficiency. The structural viscosity and the shear stress limit were determined by measuring the rate of flow through a pipe in capillary viscosimeters of the Ubbelohde type. For determining the constants of the viscosimeter glycerol with a viscosity of $\eta_{20}^0 = 1,499$ cpoise was used. From all the fillers investigated the experimental alumosilicagel No. 4 showed the best results. The structural viscosity and the shear stress limit increase with an increase in the amount of thixotropic filler. The physical-mechanical properties were investigated on a sample with 7% U-333 powdered silica gel. It was shown that the introduction of a thixotropic filler does not affect the physical-mechanical properties of the sample. The absorption of water by the glass plastics material and the drop of resistance after holding in sea water are also not affected. There are 5 tables, 6 figures and 5 references: 4 Soviet and 1 English.

SUBMITTED: March 29, 1960

Card 2/2

20510

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2209

S/064/61/000/003/004/009
B101/B203

AUTHORS: Al'shits, I. M., Shtraykhman, G. A., Rudkovskiy, D. M.,
Luchko, R. G., Remiz, Ye. K.

TITLE: Slow-burning polyester resins on the basis of pentaerythrite
dichloro hydrin

PERIODICAL: Khimicheskaya promyshlennost', no. 3, 1961, 26-28

TEXT: Glass-reinforced polyesters are widely used for the production of large-sized goods (hulls, automobile hoods). For this purpose, they must have a reduced combustibility. The physicomechanical properties of the resin are deteriorated by the hitherto described methods of reducing the combustibility: 1) the use of acid chlorides or phosphorus-containing acids, 2) replacement of styrene by halogen- or phosphorus-containing compounds, 3) addition of organophosphorus or organohalogen compounds to the resin. Therefore, it was the object of the present study to produce slow-burning resins on the basis of chlorine-containing alcohols. It was assumed that the chloromethyl-, methyl-, and ethyl side radicals of such alcohols would improve the heat resistance, compressive strength, and

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Slow-burning polyester resins ...

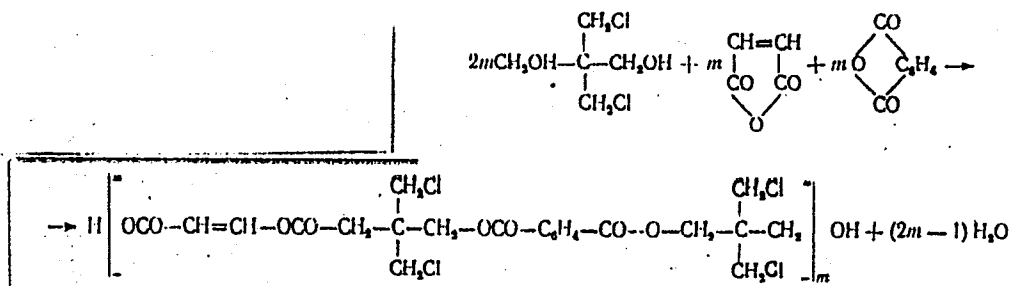
other properties of polyester resins and glass-reinforced plastics made of them, and that their considerable chlorine content would reduce their combustibility. A procedure for direct hydrochlorination of pentaerythrite was developed. 136 g of pentaerythrite, 150 g of benzine (boiling point 150-180°C), and 10 g of organic acid (C₄ - C₆ acids or industrial acids obtained by oxidation of solid paraffin) were heated, and hydrogen chloride was bubbled through at 160-165°C. The reaction was carried on until two hydroxyl groups were substituted by Cl. Total duration of the reaction 6-7 hr. The chlorohydrins were separated from the benzine, and fractionated at 3-4 mm Hg. Dichloro hydrin distilled over at 135-155°C. Its chlorine content was 39-40%, after recrystallization 40-41%, melting point 72-74°C, yield 60-68%. The esters of organic acids and of dichloro hydrin formed as by-products may be used for the synthesis of dichloro hydrin instead of fresh acids. The dichloro hydrin was used for the synthesis of polymaleinate dichloro-hydrin pentaerythrite phthalate: ✓

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Slow-burning polyester resins ...

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The components were melted at 120°C, the temperature was slowly increased to 205°C under stirring, and held there for an hour. The total duration of polymerization was 5.5-6 hr. 3.9 ml of water was separated per 100 g of mixture. The resin yield was 86%. The resin had the following characteristics: viscosity of the 10% solution in acetone 0.488 cpoise; acid

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Slow-burning polyester resins ...

number 40-50; saponification number 520-550; degree of esterification 90.7%; color, lemon-yellow. 30% of styrene was added to this vitreous resin at 70°C in the presence of 0.01% of hydroquinone. The viscosity of the combined resin determined by means of a ВЗ-4 (VZ-4) viscosimeter was 8 min 50 sec. On addition of 3% of isopropyl benzene hydroperoxide and 2% of 40% styrene solution of cobalt naphthenate, gel formation took place after 1.5 hr. The solidified resin had a specific gravity of 1.28; heat resistance according to Vicat 115; Brinell hardness 18.8 kg/mm²; chlorine content 18.6%; water adsorption during 24 hr, 0.038%. Exposed to a spirit alcohol flame for one minute, it was extinguished after 20 sec, whereas industrial ПН-1 (PN-1) diethylene glycol maleinate resin was burnt up completely. With addition of 1% of Sb, it was extinguished after 2 sec. Glass textolite made of this resin and АСТТ-6 (ASTT-b) glass fabric (ratio 1:1) was extinguished after 15 sec after having been exposed to a gas flame for two minutes. The loss in weight was 5%. The glass textolite had a specific gravity of 1.65, breaking strength 2750 kg/cm², bending strength 2700 kg/cm², compressive strength 1400 kg/cm², resilience 160 kg/cm², water adsorption within 24 hr, 0.1%. There are 20 references: 2 Soviet-bloc and 18 non-Soviet-bloc.

Card. 4/4

25402

15.8350
15.8110

S/080/61/034/002/025/025
A057/A129

AUTHORS: Al'shits, I.M., Shtreykhman, G.A., Lushko, R.G., Tsubina, Kh.V.

TITLE: Difficultly inflammable polyester resins on the basis of di- and trichloromethyl derivatives of pentaerythrite

PERIODICAL: Zhurnal Prikladnoy Khimii, v 34, no 2, 1961, 468-469

TEXT: This is the 2nd communication on "Unsaturated polyester resins and glassfiber-containing plastics on the basis of chlorine-containing alcohols". For the first time the new name selfquenching unsaturated polyester maleate resin is used and characterized. The main chain contains dichloromethylolmethane links and the end groups are trichloromethyl derivatives of methylolmethane. On the basis of this resin difficultly inflammable glassfiber-containing plastics with high physical and mechanical properties were obtained by the contact method. Preparation of bis (tri-

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