34253
S/181/62/004/002/051/051
B102/B138

24.7900 (1055, 1145, 1147, 1163)

AUTHOR: Azbel', M. Ya.

TITLE: Combined resonance in metals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 2, 1962, 568 - 570

TEXT: Besides the cyclotron and paramagnetic resonance in metals which are located in a non-uniform variable magnetic field H_1, combined resonance is also possible. It is due to transitions between diamagnetic levels with different spin projection (c.f. Fig.), its frequency is $\omega = q\Omega^* \pm \Omega_0$, $q\Omega^*$ being the cyclotron frequency. For $H_1 = H_1(y) \| x$ and $\vec{H} \| z$, for example, the momentum projection p_z of the conduction electron is conserved and the probability of a transition $ns \to n's'$ is $w = \hbar^{-2}\alpha\delta_{\varepsilon_{ns},\varepsilon_{n's'}+\hbar\omega}$, with $\alpha = (ns|\mu_0\hat{\sigma}_x H_1|n's') = \mu_0\delta_{s,s'\pm1}(n|H_1|n')$. For uniform H_1, $w \sim \delta_{nn'}\delta_{s,s'\pm1}$ and $\omega = \Omega_0$. For non-uniform H_1, $(n|H_1|n') \neq 0$, and no spin-orbital

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Combined resonance in metals

coupling is necessary for combined resonance. For combined, as for cyclotron, resonance, the $\vec{H}$-field has to be strictly parallel to the metal surface and, as with paramagnetic resonance, $\vec{H}$ and $\vec{H}_1$ must not be in parallel. The intensity of the combined resonance depends on the dispersion law and on the relation between the relaxation times. Its calculation is described in Ref. 1 (Azbel' et al. ZhETF, 32, 1212, 1957). The combined resonance width $\Delta\Omega \sim 1/T_{sp}$ for $t_o > T_{sp}$ and $\sim 1/t_o$ for $t_o < T_{sp}$. t_o is the ordinary relaxation time, T_{sp} the relaxation time with spin transfer.

M. I. Kaganov, V. M. Tsukernik, and R. N. Gurzhi are thanked for discussions. There are 1 figure and 2 references: 1 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: F. J. Dyson. Phys. Rev. 98, 349, 1955.

SUBMITTED: November 30, 1961

34253
S/181/62/004/002/051/051
B102/B138

Combined resonance in metals

Fig. Resonance transitions.
Legend: --- cyclotron resonance, ... paramagnetic resonance, ——— combined resonance; s - spin projection upon z-axis, ν - number of diamagnetic level.

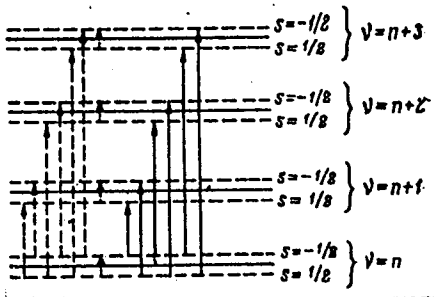

Fig.

Card 3/3

SOV/112-58-1-991

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, p 147 (USSR)

AUTHOR: Abel', M. Ye.

TITLE: Ship-Type Remote Hydrometeorological Station
(Sudovaya distantsionnaya gidrometeorologicheskaya stantsiya)

PERIODICAL: Tr. N.-i. in-ta gidrometeorol. priborostr., 1957, Nr 4, pp 87-97

ABSTRACT: The SDS-51 station of the NIIGMP Institute measures, at a distance, wind speed and direction (1.5 to 40m/sec and 16 rhumbs), air temperatures (from -32° to +32° C), air humidity (30 to 100%), and water temperature (from -2° to+32° C). A combined pickup unit that includes an anemometer, a rhumbmeter, and psychrometer is mounted at an elevated point of the ship. A water-temperature pickup is immersed overboard. The contact anemometer operates a pulse counter. Average number of pulses over 100 sec is proportional to the speed of the wind. The wind-rose axis of the rhumbmeter carries a permanent magnet. A potentiometer-type pickup of the PDK-45 compass serves for remote transmission of the position of the rhumbmeter. Humidity and air temperature are measured by an electric aspiration psychrometer. Resistances

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SOV/112-58-1-991

Ship-Type Remote Hydrometeorological Station

of water and air thermometers are measured by a balanced resistance bridge method. Readings are taken periodically from a central point. A protective system is provided for the pickup unit during the intervals between measurements.

A.I.G.

AVAILABLE: Library of Congress

1. Meteorology 2. Meteorological instruments--Performance

Card 2/2

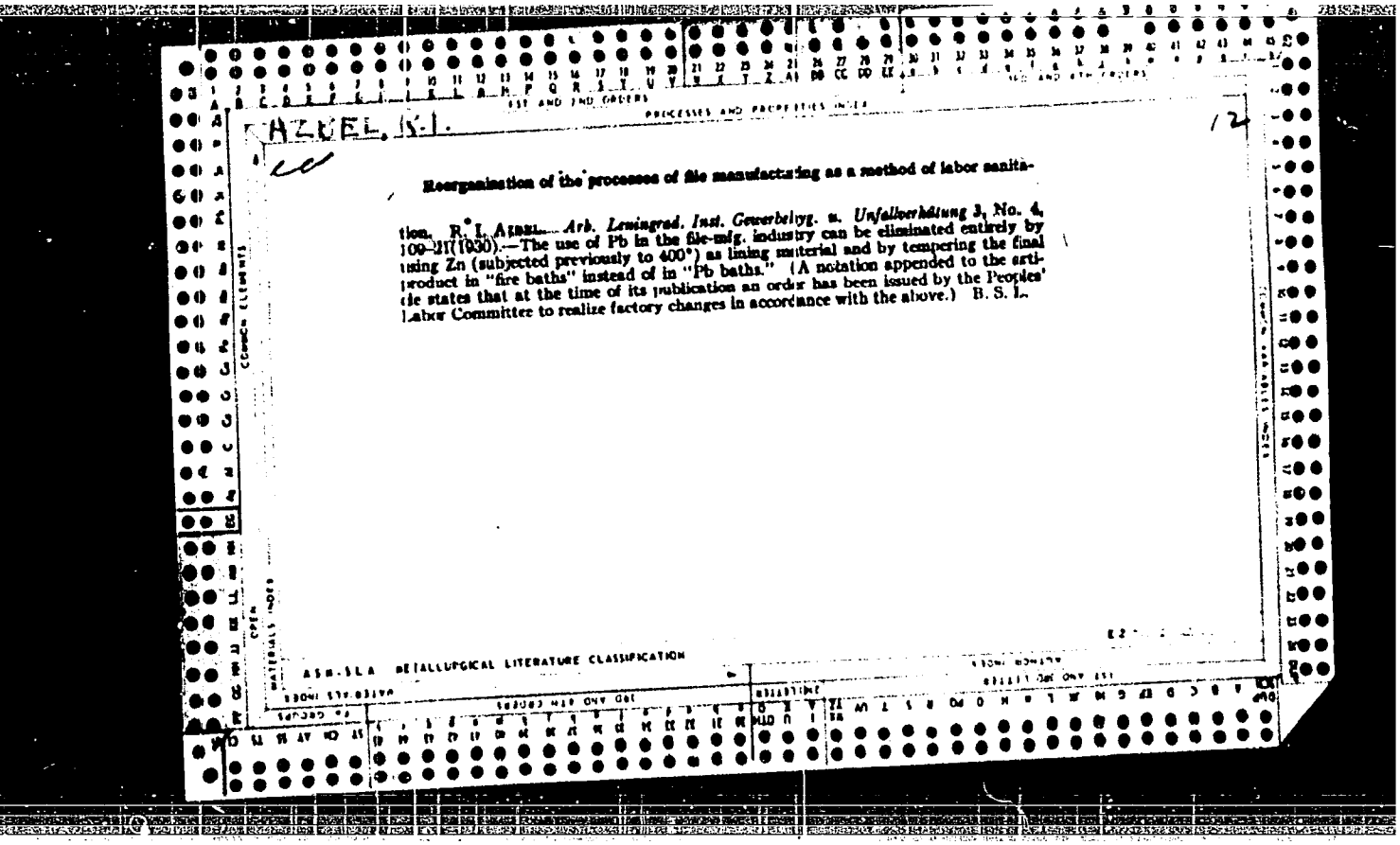
DASHKEVICH, L.L.; SURAZHSKIY, D.Ya.; USOL'TSEV, V.A.; AZBEL', M.Ye.; BOZHEVIKOV, S.N.; VORZHENEVSKIY, N.S.; MARUYLOV, K.N.; GLAZOVA, Ye.F.; KARPUSHA, V.Ye.; PROTOPOPOV, N.G.; SHADRINA, Ye.N.; IGRUNOV, V.D.; NECHAYEV, I.N.; BESPALOV, D.P.; ILLARIONOV, V.I.; GLEBOV, P.A.; GLAZOVA, Ye.F.; KAULIN, N.Ya.; GORYSHIN, V.I.; GAVRILOV, V.A.; TIMOFEYEV, M.P., retsenzent; YEFREMYCHEV, V.I., retsenzent; KRASOVSKIY, V.B., retsenzent; V'YUNNIK, A.P., retsenzent; STERNZAT, M.S., otv. red.; RUSIN, N.P., otv. red.; YASNOGORODSKAYA, M.M., red.; VOLKOV, N.V., tekhn. red.

[Instructions to hydrometeorological stations and posts] Nastavlenie gidrometeorologicheskim stantsiiam i postam. Leningrad, Gidrometeoroizdat. No.3. Pt.3. [Meteorological instruments and observation methods used on a hydrometeorological network] Meteorologicheskie pribory i metody nabliudenii, primeniaemye na gidrometeorologicheskoi seti. 1962. 295 p. (MIRA 15:5)

(Continued on next card)

DASHKEVICH, L.L.— (continued) Card 2.

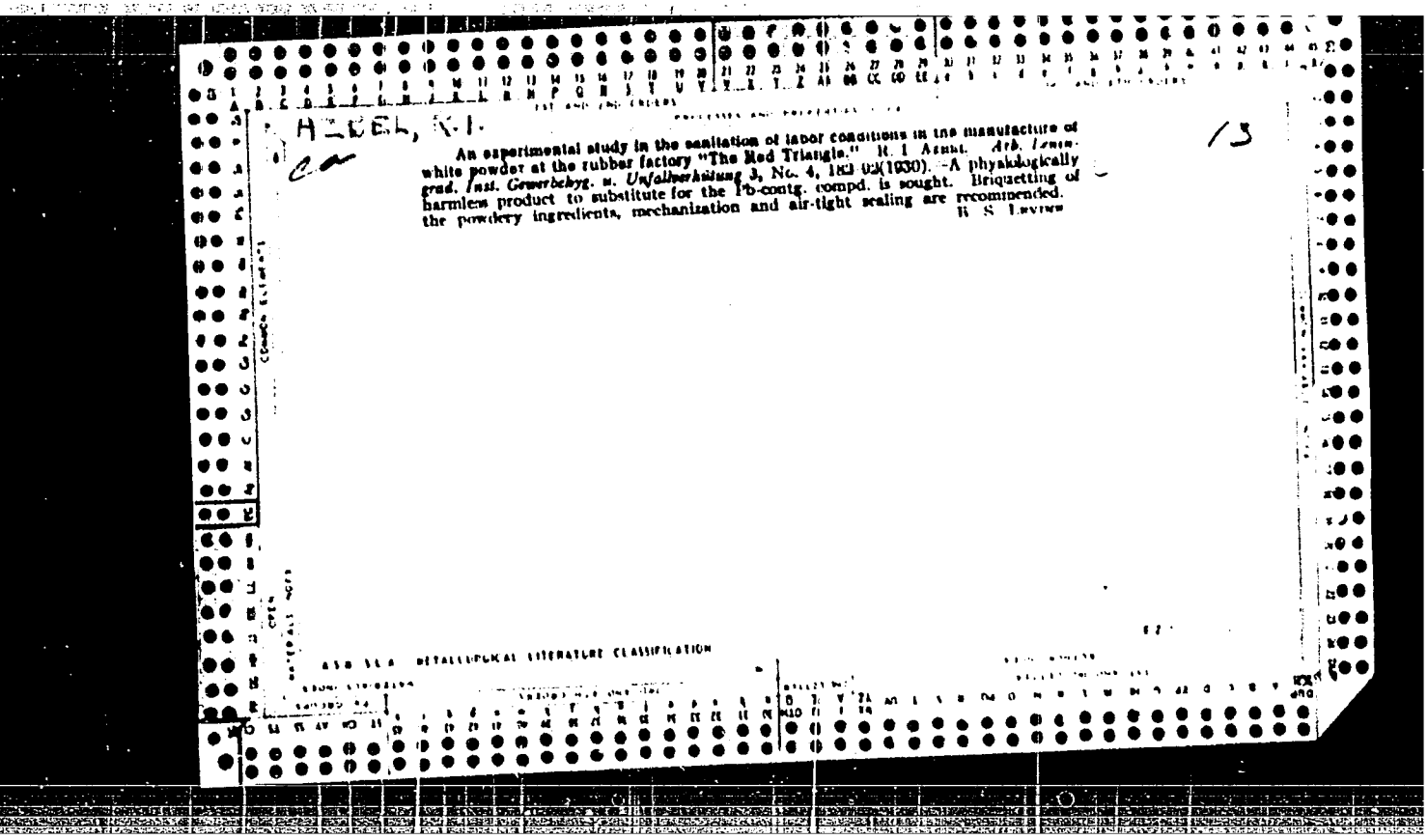
1. Russia (1923- U.S.S.R.) Glavnoye upravleniye gidrometeorologicheskoy sluzhby. 2. Glavnaya geofizicheskaya observatoriya Nauchno-issledovatel'skogo instituta gidrometeorologicheskikh priborov i Gosudarstvennogo gidrologicheskogo instituta (for Dashkevich, Surazhskiy, Usol'tsev, Azbel', Bozhevikov, Vorzhenevskiy, Manuylov, Glazova, Karpusha, Protopopov, Shadrina, Igrunov, Nechayev, Bespalov, Illarionov, Glebov, Glazova, Kaulin, Gorysnin, Gavrilov). 3. Komissiya Glavnogo upravleniya gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR (for Nechayev, Usol'tsev, Timofeyev, Yefremychev, Krasovskiy, V'yunnik)
(Meteorology)



AZUEL, K. I.

Reorganization of the processes of file manufacturing as a method of labor sanitation. R. I. Azuel. *Arb. Leningrad. Inst. Gewerbehyg. u. Unfallverhütung* 3, No. 4, 109–11(1930).—The use of Pb in the file-mfg. industry can be eliminated entirely by using Zn (subjected previously to 400°) as lining material and by tempering the final product in "fire baths" instead of in "Pb baths." (A notation appended to the article states that at the time of its publication an order has been issued by the Peoples' Labor Committee to realize factory changes in accordance with the above.) B. S. L.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



HEBEL, A. I.

An experimental study in the sanitation of labor conditions in the manufacture of white powder at the rubber factory "The Red Triangle." R. I. Azmat. *Arb. Leningrad. Inst. Gewerbehyg. u. Unfallverhütung* 3, No. 4, 183-92(1930). —A physiologically harmless product to substitute for the Pb-contg. compd. is sought. Briquetting of the powdery ingredients, mechanization and air-tight sealing are recommended. H. S. Isaacs

13

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

AZBEL', S.M., starshiy master; ZAZOVSKIY, D.G.

Seminar on the operation of ChME2 diesel locomotives. Elek.i tepl.-tiaga 6 no.1:29 Ja '62. (MIRA 15:1)

1. Tsekh profilakticheskogo osmotra teplovozov depo Lyublino (for Azbel'). 2. Nachal'nik proizvodstvenno-tekhnicheskogo otdela depo Lyublino (for Zazovskiy).

(Diesel locomotives)

AZBEL', S.M.; ZAIKIN, M.I.; KRYUKOV, P.I.; SAVIN, I.M.; NOVIKOV, V.F., inzh., retsenzent; KHARLAMOV, P.G., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Repair of failures of the ChME2 diesel locomotive] Ustranenie neispravnostei teplovoza ChME2. Moskva, Transzheldorizdat, 1963. 53 p. (MIRA 16:5)
(Diesel locomotives--Maintenance and repair)

AZBEL' Ya. A.

Azbel' Ya. A. - "Certain peculiarities of roentgenological x-ray in osteomyelitis of the stump," Uchen. zapiski (Ukr. nau h. - issled. in-t protezirovaniya), Issue 1, 1948, p. 41-51, - Bibliog: 10 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

AZHEL' Ya. A.

Azhel' Ya. A. - "Fistulography on fistulas of the stump," Uchen. zapiski (Ukr. nauch. issled. in-t protezirovaniya), Issue 1, 1948, p. 53-63, - Bibliog: 5 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

AZBEL' Ya. A.

Azbel' Ya. A. - "Roentgenological findings on the condition of the closing plate of a nonweight-bearing stump," Uchen. zapiski (Ukr. nauch. - issled. in-t protezirovaniya), Issue 1, 1948, p. 121-42, - Bibliog: 15 items

S O: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

AZBEL', Ya.A., starshiy nauchnyy sotrudnikp GAL'PERINA, A.I., kandidat meditsinskikh nauk

Method of measuring equinism of foot stumps. Ortop., travm. i protez. 17 no.2:62 Mr-Ap '56. (MIRA 9:12)
(ORTHOPEDIC APPARATUS)

AVERBUKH, Solomon Khononovich; KELLER, Il'ya Aronovich; KRUKOVETS, Faina Isaakovna; Prinimali uchastiye: FETTER, N.N.; AZBEL', Ya.I.; BRETTBART, A.Ya., retsenzent, otv.red.; SHCHETININ, A.P., retsenzent; VENGRENYUK, L.I., red.; SHEFER, G.I., tekhn.red.

[Industrial interferences to television and methods for their suppression] Industrial'nye pomekhi televideniiu i metody ikh podavleniia. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1960. 66 p. (MIRA 13:5)

1. TSentr tekhnicheskogo radiokontrolya (TsTRK) (for Fetter, Azbel').
(Television--Interference)

16.3100

86023
S/020/60/135/003/001/039
C111/C222

AUTHORS: Azbelev, N.N., Smolin, I.M., and Tsalyuk, Z.B.

TITLE: An Approximate Method of Constructing Cauchy Function

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol.135, No.3, pp.511-514

TEXT: The authors consider the equation

$$(1) \qquad L[y] \equiv y^{(n)} - \sum_{k=0}^{n-1} g_k(x) y^{(k)} = f(x), \quad y^k(a) = y_o^{(k)}, \quad k=0,\dots,n-1,$$

where g_k and f are continuous on $[a,b)$. Let

$$K(x,s) = \begin{vmatrix} u_o(s) & \dots & u_{n-1}(s) \\ \dots & \dots & \dots \\ u_o^{(n-2)}(s) & \dots & u_{n-1}^{(n-2)}(s) \\ u_o(x) & \dots & u_{n-1}(x) \end{vmatrix} : \begin{vmatrix} u_o(s) & \dots & u_{n-1}(s) \\ \dots & \dots & \dots \\ u_o^{(n-2)}(s) & \dots & u_{n-1}^{(n-2)}(s) \\ u_o^{(n-1)}(s) & \dots & u_{n-1}^{(n-1)}(s) \end{vmatrix},$$

where $u_k(x)$ $(k=0,\dots,n-1)$ is a fundamental system of the solutions of $L[y] = 0$.

Let $W(x,s)$ be a function n times continuously differentiable with respect

Card 1/4

An Approximate Method of Constructing Cauchy Function

to x for $a \leq s \leq x < b$, $W^{(k)}(s,s) = \delta_{k,n-1}$ ($k=0,\ldots,n-1$; δ_{ij} - Kronecker symbol). Let the sequence $\{W_i(x,s)\}$ be defined by $W_0(x,s) = W(x,s)$;

$$W_{i+1}(x,s) = W_i(x,s) - \int_s^x W_i(x,t) L[W_i(t,s)]\,dt \quad (i=0,1).$$

Theorem 1: Let $|L[W_0(x,s)]| \leq (x-s)^{\beta} Q$ and $|K^{(k)}(x,s) - W_0^{(k)}(x,s)| \leq (x-s)^{\alpha_k} P_k$ ($k=0,\ldots,n$). Then it holds $|K^{(k)}(x,s) - W_i^{(k)}(x,s)| \leq$

$$\leq \frac{P_k \alpha_k! (Q\beta!)^{2^i-1}}{[(2^i-1)(\beta+1)+\alpha_k]!} (x-s)^{(2^i-1)(\beta+1)+\alpha_k}$$

($K^{(k)}$ and $W^{(k)}$ are k-th derivatives with respect to x).

Let $z(x)$ ($z^k(a) = y_0^{(k)}$, $k=0,\ldots,n-1$) be a function n times continuously differentiable in $[a,b)$. For the approximate solution

Card 2/4

An Approximate Method of Constructing Cauchy Function

(3) $$\tilde{u}(x) = z(x)+\int_a^x W_1(x,s)\left\{f(s)-L[z(s)]\right\}ds$$

of the equation (1) then there holds the estimation: if $|f(x)-L[z(x)]|\leq$ $\leq(x-s)^{\gamma}R$, then

(4) $$\left|\tilde{u}^{(k)}(x)-u^{(k)}(x)\right| \leq \frac{R\gamma!P_k\alpha_k!(Q\beta!)^{2^i-1}}{[(2^i-1)(\beta+1)+\alpha_k+\gamma+1]!}(x-a)^{(2^i-1)(\beta+1)+\alpha_k+\gamma+1}.$$

As $W_o(x,s)$ it is recommended e.g.

$$W_o(x,s) = \frac{(x-s)^{n-1}}{(n-1)!} + \frac{(x-s)^n}{n!}\varepsilon_{n-1}(s).$$

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An Approximate Method of Constructing Cauchy Function

Some properties of the considered sequence are given. Therefrom there result the conditions given in (Ref. 3,5) that $K^{(k)}(x,s) \geq 0$ $(k \leq n)$.

There are 5 Soviet references.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Mechanical Institute)

PRESENTED: June 17, 1960, by S.L.Sobolev, Academician

SUBMITTED: June 14, 1960

Card 4/4

AZBELEV, N. V.

USSR/Mathematics - Approximation, Successive 11 Mar 52

"Process of Successive Approximations for Finding the Eigenvalues and Eigenvectors," N. Azbelev, R. Vinograd, Inst of Math and Mech, Moscow State U imeni Lomonosov

"Dok Ak Nauk SSSR" Vol LXXXIII, No 2, pp 173, 174

Acknowledges utilizing the method of successive approximations for the soln of systems of linear eqs which was expounded in an unpublished report of A. M. Lopshits. Considers a linear operator A, whose symmetry is unpresumed, in a n-dimensional (real or complex) space. Subject process reduces, for a suitable choice of the null approximation, to any eigenvector of operator A. Clarifies the nature of the convergence. Submitted by Acad I. G. Petrovskiy 27 Jun 51.

21446

AZBELEV, N. V.

USSR/Mathematics - Approximation 1 Apr 52

234T73

PA 234T73

"Approximate Solution of Ordinary Differential Equations of the Nth Order on the Basis of S. A. Chaplygin's Method," N. V. Azbelev, Moscow Mach Tool and Instruments Inst imeni Stalin

"Dok Ak Nauk SSSR" Vol 83, No 4, pp 517-519

Proposes a method of successive approximations which gives the upper and lower limits for the soln of the eq $y^{(n)} = f(x, y, y', \ldots, y^{(n-1)})$ converging to this soln, and satisfying the condition $df/dy^{(k)} \geq 0$ ($k = 0, 1, \ldots, n-1$). The case $df/dy^{(k)} \geq 0$ has already been considered by B. N. Babkin ("Dok Ak Nauk SSSR" Vol 59, p 419, 1948). Submitted 2 Feb 52 by Acad S. N. Bernshteyn.

234T73

1. [illegible]W, N. V.

2. USSR (600)

4. Differential Equations

7. Limits of applicability of S. A. Chaplygin's theorem, Dokl. AN SSSR 89 No. 4, 1953.

Proposes a generalization of this theorem see (Novyy Metod Priblizhennogo Integrirovaniya Differentsial'nykh Uravnoniy) "New Method for the Approximate Integration of Differential Equations", 1950, by which one can easily evaluate the limits of applicability of the theorem on differential inequalities, the evaluation reducing to the soln of linear eq with const coef. Presented by Acad S.L.Sobolev 6 Feb 53. 256T96

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

AS[illegible], V. I.

Dissertation: -- "On the Limits of Applicability of the Theory of S. A. Chaplygin on Differential Inequalities." Cand Phys-Math Sci, Moscow Order of Lenin State U imeni M. V. Lomonosov, 15 Jun 54. (Vechernyaya Moskva, Moscow, 4 Jun 54)

SO: Sum 318, 23 Dec. 1954

AZBELEV, N.V.

USSR

Azbelev, N. V. On a sufficient condition for applicability of Chaplygin's method to equations of higher orders. Dokl. Akad. Nauk SSSR (N.S.) 99, 493–494 (1954). (Russian)

Let y be a solution of the differential equation

$$y^{(n)} = f(x, y, y', \cdots, y^{(n-1)})$$

with initial conditions $y^{(k)}(x_0) = y_0^k$ $(k = 0, \cdots, n-1)$. The author gives a sufficient condition for the existence of an upper (lower) comparison function $z(x)$ where $f^{(0)} > y^{(0)}$ $(z^{(0)} < y^{(0)})$ over a given interval (x_0, x). *W. E. Milne.*

1 - F/W

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RMW

1. Moskovskiy Instrumentalnyy institut im. I. V. Stalina.

Predstavlena Akademikom S. L. Sobolevym.

(Equations)

AZBELEV, N.V.

USSR/ Mathematics - Chaplygin's method

Card 1/1 Pub. 22 - 1/62

Authors : Azbelev, N. V.

Title : Regarding the expansion of the Chaplygin method beyond the limits of the applicability of the theorem on differential inequalities

Periodical : Dok. AN SSSR 102/3, 429 - 430, May 21, 1955

Abstract : A proof is presented for the expansion of the Chaplygin method of solving equations of the type:

$$y^{(n)} = f[y], \quad (f[y] = f(x, y, y' \ldots y^{(n-1)})$$

beyond the limits of the applicability of the theorem on differential inequalities on which the essential part of the Chaplygin method (the function of comparison $\leq$) is based. Five USSR references (1950-1954).

Institution : The Mechanical Institute, Izhev

Presented by: Academician S. L. Sobolev, Jan. 27, 1955

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/1 PG - 431
AUTHOR AZBELEV N.V.
TITLE On the limits of applicability of the theorem of Caplygin on differential equations.
PERIODICAL Mat. Sbornik, n. Ser. 39, 161-178 (1956)
reviewed 12/1956

The theory of Caplygin concerning the approximative integration of the differential equation

$$y^{(n)} = f(x,y,y',\ldots,y^{(n-1)}) = f((y))$$

with the initial conditions

$$y^{(k)}(x_0) = y_0^{(k)} \qquad (k=0,1,\ldots,n-1)$$

permits to conclude, under certain restrictions for the functions $f((z))$ and z, from $z^{(n)} > f((z))$ in a certain interval (x_0,x') that the inequation $z > y$ holds too. The author gives in his paper a contribution to the question for the position of the point x'; this is done firstly by carrying out an estimation for the applicability of Caplygin's theorem in the case of a linear equation and secondly by reducing the non-linear problem to the linear one by aid of a "comparison theorem".

AZBELEV, N.V.

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/2 PG - 632
AUTHOR AZBELEV N.V, TONKOV L.V.
TITLE A theorem on the estimation of the error for the approximative solution of a differential equation.
PERIODICAL Doklady Akad.Nauk 111, 515-516 (1956)
reviewed 3/1957

Let be given the differential equation $y^{(n)} = f\,y \equiv f(x,y,y',\ldots,y^{(n-1)})$. The difference u - y shall be estimated if u = u(x) is a given function and y is the sought solution. It is assumed that f[y] is continuous in $x_0 \leq x \leq X$, $a_k \leq y^{(k)} \leq b_k$ (k=0,1,...n-1) and satisfies the conditions $\mathcal{L}^*$ with the coefficients q_k and $\mathcal{L}^{**}$ with the coefficients p_k (Azbelev, Doklady Akad.Nauk 89, 589 (1953); Mat.Sbornik 39, 161 (1956)). Let besides u = u(x) on $[x_0,X]$ be n times continuously differentiable where $a_k \leq u^{(k)} \leq b_k$ ($x_0 \leq x \leq X$; k=0,1,..n-1). Let $\varphi = u^{(n)} - f[u]$ and $\bar{\varphi}$ and $\underline{\varphi}$ be two functions being continuous on $[x_0,X]$, where $\varphi \leq \bar{\varphi} \geq 0$ and $\varphi \geq \underline{\varphi} \leq 0$. Let $\eta = u-y$, where y is the sought solution for the initial conditions $y^{(k)}(x_0) = y_0^{(k)}$ (k=0,1,...n-1). Let ξ be the solution of

$$\xi^{(n)} = \sum_{k=0}^{n-1} p_k \xi^{(k)} + \bar{\varphi},$$

Doklady Akad.Nauk 111, 515-516 (1956) CARD 2/2 PG - 632

where $0 \leq \bar{\xi}^{(k)}(x_0) \geq \eta^{(k)}(x_0)$ $(k=0,1,\ldots,n-1)$ and let $\underline{\xi}$ be the solution of

$$\xi^{(n)} = \sum_{k=0}^{n-1} q_k \xi^{(k)} + \underline{\varphi},$$

where $0 \geq \xi^{(k)}(x_0) \leq \eta^{(k)}(x_0)$ $(k=0,1,\ldots n-1)$.

Theorem: The terms $\bar{z} = u - \underline{\xi}$ and $\underline{z} = u - \bar{\xi}$ shall satisfy the inequations $a_k \leq \bar{z}^{(k)} \leq b_k$, $a_k \leq \underline{z}^{(k)} \leq b_k$ $(x_0 \leq x \leq X,\ k=0,1,\ldots n-1)$. Then inside of the interval (x_0, x^*) there hold the inequations $\underline{\xi}^{(k)} < \eta^{(k)} < \bar{\xi}^{(k)}$ $(k=0,1,\ldots n-1)$. A definition of x^* is given in the papers (loc.cit.).

INSTITUTION: Mechanic Institute, Izevsk.

AZBELEV, N.V.; TSALYUK, Z.B.

Iteration methods for the solving of differential equations.
Izv.vys.ucheb.zav.; mat. no.1:21-23 '57. (MIRA 12:10)

1. Izhevskiy mekhanicheskiy institut.
(Differential equations)

AUTHORS: Azbelev,N.V., Tsalyuk,Z.B.,and Chinchkin,E.S SOV/140 58-2-1/20

TITLE: On the Non-Oscillation of the Solutions of Second Order Non-Linear Equations (O neostsillyatsii resheniy nelineynykh uravneniy vtorogo poryadka)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy Ministerstva vysshego obrazovaniya SSSR, Matematika, 1958, Nr 2, pp 3-4 (USSR)

ABSTRACT: The authors consider conditions under which the difference of two arbitrary solutions of

(1) $$y'' = f(x,y)$$

has not more than one zero on the given interval (a,b). With the notations of the paper of Azbelev and Tsalyk [Ref 1] the authors formulate and prove two theorems in which the problem for (1) is reduced to the same problem for $y''-qy = 0$, where q is a certain constant depending on f(x,y). The results of [Ref 1] are used essentially.
There are 2 Soviet references.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Mechanical Institute
SUBMITTED: November 28, 1957

Card 1/1

16(1)

AUTHORS: Azbelev,N.V., Rakhmatullina,L.F.,and Tsalyuk,Z.B. SOV/155-58-2-1/47

TITLE: On the Extension of the Solution of the Problem of Chaplygin Beyond the Limits of Application of the Theorem on Differential Inequations (O rasprostranenii resheniya zadachi Chaplygina za granitsu primenimosti teoremy o differentsialnykh neravenstvakh)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 2, pp 3-5 (USSR)

ABSTRACT: If on the interval [a,b] a linear differential equation is given and if y is a solution satisfying the Cauchy initial conditions in the point a, then the difference z-y, where z is the comparison function of Chaplygin, in general is of constant sign only on $[a,c] \subset [a,b]$. The authors use the results of Azbelev [Ref 3,5] and Tsalyuk [Ref 4] and establish conditions under which $[a,c] \equiv [a,b]$. A similar result is obtained for systems of differential equations. There are 9 references, 7 of which are Soviet, 1 Polish, and 1 Hungarian.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Institute of Mechanics)

SUBMITTED: December 13, 1957

Card 1/1

of Zeros of the Solutions of the Equation
$y'''+p(x)y'+q(x)y = 0$

2) the existence of a function $w_i(x)$ (resp. $w_i(x)$) ... w_i continuously differentiable on $[a,c]$ so that

$$w_i(a) = w_i'(a) = 0, \quad w_i''(a) = 1, \quad w_i(x) > 0,$$

$$L_i[w_i] \leqslant 0, \quad i = 1 \text{ (resp. } i = 2), \quad x \in (a,c).$$

Theorem: Necessary and sufficient for the fact that the solution of (2) on $(a,c) \subset (a,b)$ has at most two zeros, is the existence of a function $v(x)$ two times continuously differentiable on $[a,c]$ with the properties

$$v(x) > 0, \quad l[v] \leqslant 0, \quad x \in (a,c).$$

Two further similar theorems are formulated.
There are 4 Soviet references.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Mechanical Institute)

SUBMITTED: January 20, 1958

Card 2/2

68005

Some Conditions for the Solvability of the Chaplygin Problem for Systems of Ordinary Differential Equations SOV/155-58-6-6/36

Theorem 1 : The existence of a matrix $W(x,s)$ differentiable in x on $a \leq s \leq x \leq d$ is necessary and sufficient for $K_A(x,s) \geq 0$. $a \leq s \leq x \leq d$ such that a.) $W(x,x) = E$, $x \in [a,d]$, E unit matrix and b.) $W(x,s) \geq 0$ and $\frac{\partial}{\partial x} W(x,s) - A(s)W(x,s) \leq 0$ for $a < s \leq x \leq d$.

Theorem 2 and 3 generalize a theorem of A.V. Gel'fand [Ref 9] and a former result of the author and others [Ref 4] .

There are 11 Soviet references.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Mechanical Institute)

SUBMITTED: June 8, 1958

Card 2/2

On an Application of the Fixed Point Principle to Operators Given in a Semiregulated Space SOV/155-58-6-14/36

The authors mention M.A. Krasnosel'skiy and Chaplygin. There are 5 Soviet references.

ASSOCIATION: Izhevskiy mekhanicheskiy institut (Izhevsk Mechanical Institute)

SUBMITTED: August 6, 1957 (Uspekhi matematicheskikh nauk)
October 24, 1958 (Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki)

Card 2/2

AUTHOR: AZBELEV, N.V. and TSALYUK, Z.B. (Izhevsk) 41-1-1/15

TITLE: On Chaplygin's Problem (O zadache Chaplygina)

PERIODICAL: Ukrainskiy Matematicheskiy Zhurnal, 1958, Vol 10, Nr 1, pp 3-12 (USSR)

ABSTRACT: The Chaplygin problem is formulated as follows: Let X be a semiordered set and P be an operator defined on X. For the solution y of the operator equation $Py = 0$ an element $\bar{z} \in X$ $(\underline{z} \subseteq X)$ is to be constructed which satisfies the inequality $\bar{z} > y$ $(\underline{z} \leqslant y)$. The problem is equivalent to the estimation of the error of the approximative solution u of $Py = 0$, i.e. for the given $u \in X$, a $\bar{\xi} \in X$ $(\bar{\xi} \in X)$ is to be constructed which satisfies the inequality $u - y \leqslant \bar{\xi}$ $(u - y \geqslant \bar{\xi})$. This problem arises in the qualitative theory of differential equations, in approximation methods etc. In the present paper an abstract theory of the problem is developed and the solution for the case of ordinary differential equations is given. At first it is shown in the general case that the problem is closely connected with the question of the existence of positive inverse operators, in particular

Card 1/2

On Chaplygin's Problem

these questions are equivalent for additive operators. Then, under restriction to ordinary differential equations, the necessary and sufficient condition for the positivity of the corresponding operator is established and thereby the problem is solved. Finally an application to approximative solutions of non-linear differential equations is presented.
15 Soviet references are quoted.

SUBMITTED: 20 November 1956

AVAILABLE: Library of Congress

1. Function-Analysis

Card 2/2

83220
S/039/60/051/004/002/002
C111/C222

16.3400

AUTHORS: Azbelev, N.V., and Tsalyuk, Z.B. (Izhevsk)

TITLE: On the Question on the Distribution of Zeros of the Solutions of a Linear Differential Equation of Third Order

PERIODICAL: Matematicheskiy sbornik, 1960, Vol.51, No.4, pp.475-486.

TEXT: Let

(1) $$L[y] \equiv y''' + p_2(x)y'' + p_1(x)y' + p_0(x)y = 0$$

and let $L^*[y]$ be the adjoint operator. Let the coefficients of L and L^* be continuous on $[a,\infty)$. Two neighboring zeros of the solution y of (1) are called (i,k)-neighboring if they have at least the multiplicities i and k. Let $r_{ik}(t)$ be defined by the fact that on $[t,r_{ik}(t))$ there lies no pair of (i,k)-neighboring zeros and on $[t,r_{ik}(t)+\varepsilon)$ there lies at least one pair of (i,k)-neighboring zeros. The authors reduce the question for the existence and distribution of the (i,k)-neighboring zeros of (1) to the problem of Chaplygin (Ref.4,5,6) and prove 6 lemmas, 6 theorems and some conclusions, e.g.:
Theorem 3: $r_{22}(t) = \max [r_{12}(t), r_{21}(t)]$.

Card 1/2

AZBELEV, N.V.; SMOLIN, I.M.; TSALYUK, Z.B.

Approximate method for the derivation of the Cauchy function. Dokl. AN SSSR 135 no.3:511-514 N '60. (MIRA 13:12)

1. Izhevskiy mekhanicheskiy institut. Predst. akad. S.L.Sobolevym.
(Functional analysis)

S/039/62/056/003/003/004
B125/B102

16,4500

AUTHORS: Azbelev, N. V., and Tsalyuk, Z. B. (Izhevsk)

TITLE: On integral equations. I

PERIODICAL: Matematicheskiy sbornik, v. 56(98), no. 3, 1962, 325 - 342

TEXT: It is demonstrated that there are solutions $u_d(t)$ (so-called non-continuable lower (upper) solutions) of the equation

$$x(t) = \int_a^t K(t, s, x(s))ds + \psi(t),$$

such that the inequality

$$\varphi(t) = z(t) - \int_a^t K(t, s, z(s))\,ds - \psi(t) \geqslant 0 \quad (\varphi(t) \leqslant 0)$$

implies the inequality $z(t) \geqslant u_d(t)$ $(z(t) \leqslant u_d(t))$ for $t \in [a, d)$. This theorem is applied to a system of differential equations, which is equivalent to a system of integral equations. There are 17 Soviet-bloc ref-

Card 1/2

S/039/62/056/003/003/004
B125/B102

On integral equations. I

erences.

SUBMITTED: June 30, 1960

Card 2/2

AZBELEV, N.V.; KHOKHRYAKOV, A.Ya.; TSALYUK, Z.B. (Izhevsk)

Theorems on differential inequality for boundary value problems.
Mat. sbor. 59 (dop.):125-144 '62. (MIRA 16:6)
(Boundary value problems)

AZBELEV, N.V. (Izhevsk); TSALYUK, Z.B. (Izhevsk)

Necessary and sufficient condition for the boundedness of solutions to a certain class of systems of linear differential equations. Prikl. mat. i mekh. 28 no.1:149-150 Ja-F'64. (MIRA 17:2)

AZBELEV, N.V.; TSALYUK, Z.B.

Uniqueness of a solution to an integral equation. Dokl. AN SSSR 156 no. 2:239-242 My '64. (MIRA 17:7)

1. Izhevskiy mekhanicheskiy institut i Udmurtskiy gosudarstvennyy pedagogicheskiy institut. Predstavleno akademikom L.S.Pontryaginym.

L 21120-66 EWT(d) IJP(c)

ACC NR: AP6011984 SOURCE CODE: UR/0376/65/001/004/0431/0438

AUTHOR: Azbelev, N. V.; Tsalyuk, Z. B.

ORG: Izhevsk Mechanical Engineering Institute (Izhevskiy mekhanicheskiy institut)

TITLE: Question of a differential inequality

SOURCE: Differentsial'nyye uravneniya, v. 1, no. 4, 1965, 431-438

TOPIC TAGS: differential equation, Volterra equation, vector function, linear equation

ABSTRACT: The authors, on the basis of assertions concerning an integral inequality, present a solution to N. N. LUZIN's problem of a differential inequality for equations of a higher order than the first. They consider the system of Volterra equations

$$x(t) = \int_0^t K[t, s, x(s)]\,ds + \psi(t), \qquad (1)$$

where vector function $K[t, s, x] = \{K_i(t, s, x_1, \ldots, x_n)\}$, $i = 1, \ldots, n$ is defined, given $0 \leq x \leq t < T$, $\|x\| < c$, and vector function $\psi(t)$ is continuous in $[0,T)$ and $\|\psi\| < c$. In an earlier article the authors proved a series of assertions regarding system (1), assuming that $K[t, s, x]$ satisfies Caratheodory's conditions. The results of the earlier article are formulated as the following theorem:

Card 1/2

L 21120-66

ACC NR: AP6011984

Theorem 1. Let $K[t, s, x]$ be nondecreasing for x. Then a) System (1) has an upper $\bar{u}$ and a lower $\underline{u}$ solution; i.e., solutions such that $\bar{u} \geqslant u \geqslant \underline{u}$ for any solution u; the upper and lower solutions can be continued to the boundary of the region of definition of K.

b) If $\bar{u}(\underline{u})$ is defined in $[0, T]$, then in this interval the integral inequality

$$\varphi(t) = z(t) - \int_0^t K[t, s, z(s)]\,ds + \psi(t) > 0 \quad (\varphi(t) < 0)$$

involves the inequality $z \geqslant \underline{u}$ $(z \leqslant \bar{u})$. Moreover, if $\varphi > 0$ $(\varphi < 0)$, given $t \in [0, T)$, then $z > \bar{u}$ $(z < \underline{u})$ in $(0, T)$.

The article considers the assertion resulting from Theorem 1 on the existence of an upper and a lower solution and on a differential inequality for the nonlinear equation

$$N[y] = y^{(n)} - f(t, y, \ldots, y^{(r)}) = 0,$$

$$y^{(k)}(0) = 0,\ k = 0, \ldots, n-1,\ r \leqslant n-1.$$

Several nonlinear theorems are presented on a differential inequality. These are comparison theorems: for equation $N[y] = 0$ a theorem is valid in the given interval $[0, T)$ (the so-called "interval of applicability" of CHAPLYGIN's theorem) if an assertion on the differential inequality for the linear equation $L[y] = 0$, corresponding to condition L_1, is valid in this interval. Effective criteria are suggested for preserving the sign of Cauchy function and its derivatives. Orig. art. has: 13 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 04Jan65 / ORIG REF: 012 / OTH REF: 001

Card 2/2 dda

28955
S/146/61/004/003/004/013
D217/D301

13,2522

AUTHORS: Izbelev, P.P., and Rybak, S.S.

TITLE: A semi-conductor device for converting direct current into three-phase alternating current

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 3, 1961, 47 - 54

TEXT: This problem arose in connection with portable gyro-compasses. The gyromotor was driven by a three-phase current converted from a battery source. The conversion into d.c. is widely discussed. There are only a few published works on conversion into t.p. and those published have a series of defects. A system with only one transformer is used for analyzing the general case of assymmetrical load. Vector analysis gives Fig. 2 and

$$\dot{I}_{p1} = \frac{3w}{2w_{cp}} (\dot{I}_A + \dot{I}_C), \quad \dot{I}_{p2} = \frac{w}{2w_{\delta}} (\dot{I}_A - \dot{I}_C) \qquad (2)$$

Card 1/4

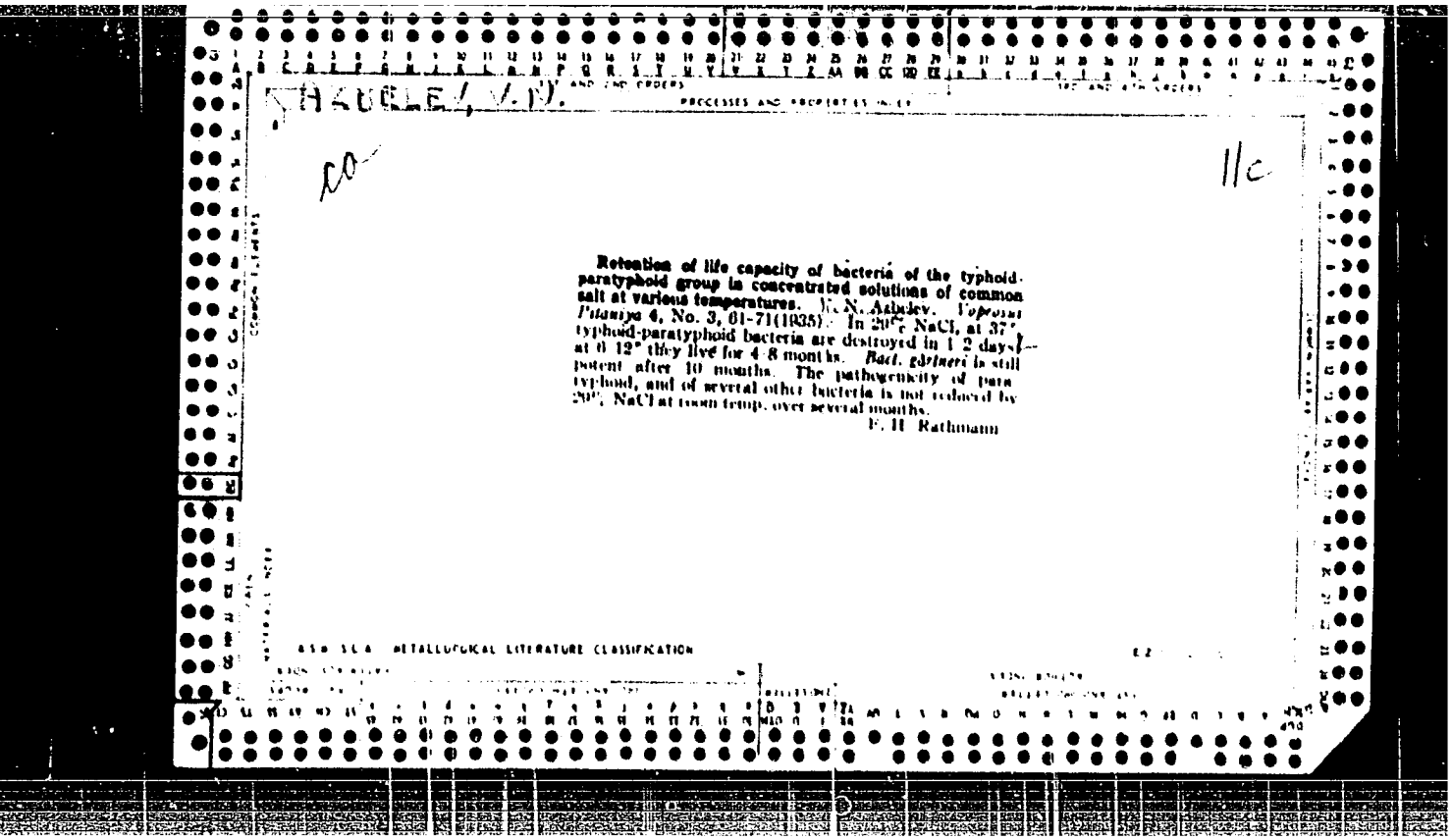
28955

S/146/61/004/003/004/013
D217/D301

A semi-conductor device for ...

If for temperatures -20°C to +50°C frequency stability is written ± 1 %, a multivibrator with silicon triodes may be used. Pulses are directed into 3 trigger circuits, whose sequence of work is directed by a coincidence circuit. There are preliminary and output amplifiers which are provided to avoid heavy losses in trigger. Data for operating the converter (at temperatures -30°C - + 50°C); direct voltage 12V (± 15 %); output voltage 36 V; frequency 400 c/s (± 1.2 %). At temperature variations of ± 3°C to ± 5°C the frequency variation does not exceed 0.5 %. Energy taken: a) under normal working conditions 39-40 W, b) for the first 3-4 minutes 60-65 W. Energy given: a) under normal working conditions 22-24 W, b) for the first 3-4 minutes 36 - 40 W. Cos φ of load 0.85, dimensions of transformer 220 x 130 x 100 mm. Weight 3.0 Kg. An output voltmeter is added. There are 6 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: I.C. Hogan, Analysis of single phase to three phase converters. Applic. and Ind. 1956, no. 22.

Card 3/4



Retention of life capacity of bacteria of the typhoid-paratyphoid group in concentrated solutions of common salt at various temperatures. N. N. Azbukev. *Voprosy Pitaniya* 4, No. 3, 61-71(1935). In 20° c NaCl, at 37° typhoid-paratyphoid bacteria are destroyed in 1-2 days; at 0-12° they live for 4-8 months. *Bact. gärtneri* is still potent after 10 months. The pathogenicity of para typhoid, and of several other bacteria is not reduced by 20% NaCl at room temp. over several months.

F. H. Rathmann

ASM SCA METALLURGICAL LITERATURE CLASSIFICATION

AZBELEV, V. N.

37618

sovremennoy sostoyaniye voprosa o pishchevykh otravleniyakh vyzyvayemykh aerobnymi bakteriaymi v sb: vsesoyuz, syezo gigiyenistov, epidemiologov, mikroboilogov, i infektsionistov. T. I. M., 1949 s. 230-33

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

AZBELEV, V. N.

USSR/Medicine - Literature
Aleukia
Jun 49

"Review of V. V. Efremov's Book 'Alimentary Toxic Aleukia,'" V. N. Azbelev, 1½ PP

"Gig i San" No 6

Author has summarized current data on this subject in 90 pages. The first chapter on "Etiology" includes information on the fungus stimulant Fusarium sporotrichioides and others. Other chapters discuss pathogenesis, pathological anatomy, clinics, treatment and prophylaxis. There are some inaccuracies but the book is valuable.

65/49T62

Azbelev, V. N.

USSR/Medicine - Toxins

"V. N. Azbelev's 'Food Toxicoinfections and Intoxications Brought About by Aerobic Bacteria'," (V. L. Troitskiy, Corr Mem Acad Med Sci USSR, reviewer)

Vest Akad Med Nauk SSSR, No 1, pp 54,55

Praises Azbelev's book (Pishchevyye toksikoinfektsii i intoksikatsii, vyzvannyye aerobnymi bakteriyami) as of value because it does not limit itself to salmonelloses, but also deals with food toxicoinfections and intoxications caused by staphylococci, streptococci, and coli, paracoli, proteus, Morgan, faecalis alcaligenes, and dysentery bacilli. States that no information on B. botulinus and botulism is given in the book, because there is a recent monograph by K. I. Matveyev on the subject. Regrets the relative scarcity of data in the book on diseases caused by S. typhi murium; on the role of Morgan's bacilli in intestinal infections; on the conditions under which the presence of proteus, salmonellae, and B. coli in food produces toxicoinfections; on the role of parastrains of B. coli (which are para-agglutinated by dysentery bacilli sera) in such infections; and on the agglutinin titers of patients suffering from food infections caused by Breslau bacilli. Book published Moscow, 1952, by Acad Med Sci USSR.

112 p.

265 T 32

STOLMAKOVA, I. I., AZRELEV, V. N.

Food poisoning in England and Wales (1941-1949). Gig. i san. No. 3, 1952

SO: MLRA. August 1952.

AZBELEV, V.N.

TROITSKIY, V.L., chlen-korrespondent.

Review of V.N.Azbelev's "Sitotoxisms and intoxications caused by aerobic bacteria." Vest. AMN SSSR no.1:54-55 Ja-Mr '53. (MLRA 6:7)

1. Akademiya meditsinskikh nauk SSSR. (Food poisoning) (Azbelev, V.N.)

AZBELEV, V.N.; TONGUR, V.S.; TSEYTLIN, P.I.

"Biochemical bases of medical bacteriology." V.S.Gostev. Reviewed by V.N.Azbelev, V.S.Tongur, P.I.TSeitlin. Zhur.mikrobiol.epid.i immun. no.2:73-75 F '54. (MLRA 7:3)
(Bacteriology) (Biochemistry) (Gostev, V.S.)

AZBELEV, V.N.
SHUR, I.V. (Reviewer)

"Food poisoning of a paratyphoid character." I.V.Shur. Reviewed by V.N.Azbelev. Vop.pit. 13 no.3:45-48 My-Je '54. (MLRA 7:5)
(Food poisoning) (Paratyphoid fever) (Shur, I.V.)

AZBELEV, V.N.

Scientific and practical conference on problems of sanitation bacteriology held in memory of I.I.Minkevich on December 17-18, 1953 in Leningrad. Vop. pit. 13 no.4:61-63 Jl-Ag '54. (MLRA 7:7)
(BACTERIOLOGY)

AZBELEV, V.N., professor

"Urov disease." P.F.Kotrekhov. Reviewed by V.N.Azbelev. Klin. med. 32 no.8:93-94 Ag '54. (MLRA 7:10)
(ARTHIRITIS DEFORMANS)
(KOTREKHOV, P.F.)

AZBELEV, V.N.; GEYMBERG, V.G.; MEYED'YEVA, M.P.; RUBINSHTEYN, Yu.I.

"Sanitation bacteriology." V.I.Tets. Reviewed by V.N.Azbelev and others. Vop.pit. 14 no.2:57-60 Mr-Ap '55. (MLRA 8:6)
(FOOD)
(BACTERIOLOGY)
(TETS, V.I.)

AZHELEV, V.V.; GROMOV, G.D.; LAGUNOV, I.I.

Repeated spawning of the salmon Salmo salar L. Trudy Kar.fil. AN SSSR no.5:131-140 '56. (MLRA 10:7)

1. Polyarnyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.
(Salmon)

AZBELEV, V.V.; LAGUNOV, I.I.

Data on the marine migration of salmon. Vop.ikht. no.6:113-120 '56.
(MLRA 9:8)

1. Polyarnyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii -- PINRO.
(Salmon) (Fishes--Migration)

AZBELEV, V. V. and LAGUNOV, I. I.

"On the Tuloma Fishway Operation and the Condition of Salmon Stock in the Tuloma River,"

paper presented at the Meeting of the International Council for Exploration of the Sea, Annual Meeting, Bergen, Norway, 30 Sep - 8 Oct 57. Presented to Salmon and Trout Committee.

AZBELEV, V.V.; LAGUNOV, I.I.

Sex ratio in Salmo salar L. [with summary in English]. Zool.zhur. 37 no.1515-1520 O '58. (MIRA 11:11)

1. Polyarnyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii (Murmansk).
(Kola Peninsula--Salmon)

AZBUKIN, A. Y.

Azbukin, A. Y. USE OF KARAGANDA SCHISTLIKE ALUMINOSILICATES FOR THE PRODUCTION OF REFRACTORIES. *Ogneupory*, 11 [9–10] 17–20 (1946).—Schistlike alumino-silicate (flint clay) is mined in the Karaganda coal basin along with the coal. The flint clay has a refractoriness varying from 1620° to 1780°C. It is obtained in plates up to 3 to 4 cm. thick and over 20 cm. long; the surface is smooth and adulterated with coal, which is also present in the form of thin layers. The flint clay is easily disintegrated; it swells in water but does not acquire plastic properties. Loss in weight upon calcination to 1050°C. amounts to 16 to 20%, and shrinkage is 5.8 to 6%; upon further increase in temperature, these values remain practically unchanged. After calcining at 1080°C. the product has a bulk weight of 2.25 to 2.30 gm./cm.³, a volume porosity of 6.6 to 9.2%, and an alumina content of 43 to 44%. Brick made from raw flint clay or the calcine and Dubovsk clay in amounts up to 60% had the following characteristics: alumina content 28 to 39%; refractoriness 1670° to 1720°C.; start of deformation under load (value of load not given) at 1400° to 1550°; apparent porosity 10 to 32%, depending on method of molding; and mechanical strength 140 to 330 kg./cm.², depending on method of molding.

DETERMINATION OF ALUMINA (IN BIL-

Azbukin, A. V.

USSR.

2120. Conversion of periodic kilns to gas-fired chamber kilns.—N. F. Lebedev, F. G. Valdenburger, and A. V. Azbukin (*Ogneupory*, 20, 59, 1955). An account of reconstructions of Russian periodic kilns. (6 figs.)

2

AZBUKIN, B.

Description of Sevano-Zanginskiy Cascade. Hydroelectric Power Installations. Railroads, Settlements. P: Around the World August 47: Moscow

SO: T. I. No. 52614, 52616-18 on file in L of C, Air

AZBUKIN, B.

The Potential Hydroelectric Power of the Sevano-Zanginskiy Cascade Development Project - The Lake Sevan and River Zangu (sic) Region, Armyanskaya SSR.

So: T. I. No. 52614, 52616-18 on file in L of C, Air

Vokrug Sueta - Moscow 47

MARSHALKOVICH, D.B., polkovnik meditsinskoy sluzhby; SACHENKO, N.I., podpolkovnik meditsinskoy sluzhby; AZBUKIN, G.V., podpolkovnik meditsinskoy sluzhby; BELOUSOV, G.G., podpolkovnik meditsinskoy sluzhby; KITAYGORODSKIY, N.I., podpolkovnik meditsinskoy sluzhby; FILIPPOVICH, B.A., podpolkovnik meditsinskoy sluzhby

Rendering of emergency aid at the regimental medical aid station to persons poisoned with toxic organophosphorus substances. Voen.-med. zhur. no.3:19-22 '65. (MIRA 18:11)

AZBUKIN, P.A., prof.; LUPAL, N.V.,prof.; KOTLYARENKO, N.F., dots.; NEUGASOV, N.M., dots.; RYAZANTSEV, B.S.,kand. tekhn. nauk,; KIRILLOV, M.M., kand. tekhn.nauk

Outstanding specialist in the field of railroad automatic and remote control. Avtom., telem. i sviaz' 2 no. 8:43 Ag '58. (MIRA 11:8)

(Maishev, Petr Vladimirovich, 1888-)

PETROV, A.G., inzhener; AZBUKIN, S.N., inzhener.

Stray currents and their control on the Moscow municipal telephone circuits. Gor.khoz.Mosk. 21 no.3:30-32 Mr '47. (MLRA 6:11)
(Moscow--Telephone lines) (Telephone lines--Moscow)
(Electric currents, Vagrant)

ACC NR: AP7002998 (A,N) SOURCE CODE: UR/0413/66/000/024/0103/0103

INVENTOR: Dudko, D.A.; Lakiza, S.P.; Azbukin, V.D.

ORG: none

TITLE: Plasma torch. Class 49, No. 189669 [Electric Welding Institute im. E.O. Paton (Institut elektorsvarki)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 103

TOPIC TAGS: plasma, plasma treatment, plasma torch SPRAYING, PLASMA DEVICE

ABSTRACT:

This Author Certificate introduces a plasma torch for treatment of materials. The torch consists of a housing containing a cathode and a nozzle-anode, and an electromagnetic system for controlling the plasma jet. To provide uniform heating of the treated article, the cathode is made in the shape of a ring mounted in the housing, and the nozzle is made out of two concentric sleeves whose cross section corresponds to that of the treated article.

[TD]

SUB CODE: 13, 20/ SUBM DATE: 22Mar65/ ATD PRESS: 5115

Card 1/1 UDC: 621.791.755.034

AZBUKIN, V.G., inzh.

Use of aluminum alloys in trawler design. Sudostroenie 25 no.9:3-7 S '59. (MIRA 12:12)
(Trawls and trawling)
(Shipbuilding)

AZBUKIN, Yu. I

PA 51/49T10

USSR/Electricity Jul 49
Generators

"Characteristics of Dynamic Balancing of the Rotors of T2-25-2 Generators," Yu. I. Azbukin, Engr, 2 pp

"Elek Stants" No 7

Establishes following characteristics in balancing 18-ton rotors of these generators: (1) Generator bearing on exciter side is much more sensitive (from vibration standpoint) to rotor unbalance than bearing on turbine side; (2) rotor unbalance with weight greater than 300 - 350 grams causes maximum vibration of bearing on exciter side in the axial [redacted] 51/49T10

USSR/Electricity (Contd) Jul 49

direction; and (3) changes in position of rotor balancing loads on exciter side do not affect vibration of bearing on turbine side.

[redacted] 51/49T10

Electrical Engineering Abst.
Vol. 57 No. 675
Mar. 1954
Engineering

831. Dynamic balancing of rotors by measurement of the phase of the unbalance. V. A. KRUKIN. *Elekt. Stantsii*, 1953, *No.* 7, 27-9. *In Russian.*

Based on the principle that for given constant speed the phase angle between unbalance and the amplitude of the vibrations remains constant, a method is described for obtaining the required compensating weights and their position by measuring the phase angle of the vibrations, e.g. by stroboscope in 3 successive runs, e.g. one without extra weights, another with a given extra weight, a third with twice that weight in the same position. Compensating weights and position then are determined graphically. The method of changed phases is explained similarly: first run without, second run with given extra weight, third run with the same weight but 180° displaced; the third method has three changes of the test weights, at 0°, 120° and 240°.

P. BUSEMANN

AZBUKIN, YU. N., Eng.

Dynamos - Testing

Balancing a heavy rotoe on a machine with rocking bearings. Elek. sta. 24, no. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

AZBUKIN, Yu.I., inzhener; OVCHAROV, F.F., inzhener.

Damage to fitting surfaces and bindings of turbogenerator rotors. Elek. sta. 24 No.4:31-33 Ap '53. (MLRA 6:5)
(Dynamos)

AKBUKIN, Yu.I., inzhener.

Vibration of turbogenerators during a fluctuating lubricating oil film. (MLRA 6:7)
Elek.sta. 24 no.5:25-26 My '53. (Dynamos)

AZBUKIN, Yu.I., inzhener.

Balancing rotors with a wide range of unbalance. Elek.sta. 25 no.5:34-36 My '54. (MLRA 7:6)
(Dynamos)

AZBUKIN, Yu.I., inzhener; RABINOVICH, N.M., inzhener.

Reconstructing a circulating cooling system of a small capacity hydrogenerator into a closed-cycle one. Elek.sta. 25 no.11:56-58 N '54.

(Dynamos) (Cooling) (MLRA 7:11)

AZBUKIN, YU. I.

AID P - 2539

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 23/32

Authors : Azbukin, Yu. I., Eng. and Vul'man, G. L., Eng.

Title : Self-releasing clutch for starting motors of synchronous condensers

Periodical : Elek sta, 6, 52-53, Je 1955

Abstract : The article gives a detailed description of the design and operation of an automatic self-releasing clutch installed on starting motors for the operation of synchronous condensers on substations. Standard safety rules applied during the start of operation are listed. One diagram.

Institution : None

Submitted : No date

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chlorpromazine)
(CHLORPROMAZINE, ther. use
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T. R. Parsons

Inst Psychiatry, Min Health USSR

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