"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

Circuit for the Use of a D. C. Operational Amplifier for the Multiplication of Variables

S/119/61/000/001/003/013
B019/B067

closed by square-topped pulses. With positive pulses the input resistor is earthed in the center. Thus, the transfer coefficient of the amplifier is zero, with negative pulses it is finite. If the reciprocal of the pulse duty factor of the square-topped pulses corresponds to the second multiplicand, the output voltage is equivalent to the product of input voltage and the reciprocal of the pulse duty factor. The conservation of strict proportionality of the amplifier coefficient and the block diagram of a multiplication circuit shown in Fig. 2 are then discussed. The circuit is an electronic equivalent to a servosystem. It contains a group of operational amplifiers which are equivalent to the potentiometers of a servosystem. It allows the multiplication of two arbitrary input voltages. Under the supervision of senior designer V. B. Ushakov, Doctor of Technical Sciences, a simulator was developed at the otdel elektricheskogo modelirovaniya NII Schetmasha (Branch for Electrical Simulation of the NII Schetmash). A d. c. operational amplifier was used for the multiplication of a quantity which was variable from zero to a certain positive value, by nine different quantities. This operational amplifier contained two transformation blocks of types I and II. The

Card 2/4

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

Circuit for the Use of a D. C. Operational Amplifier for the Multiplication of Variables

S/119/61/000/001/003/013
B019/B067

circuits of these types are shown in Figs. 3 and 4. Type I is a d. c. amplifier with triode keys at the input circuit. Type II consists of a direct current d. c. amplifier, a sawtooth generator and a Schmidt-trigger. In Fig. 2 type I corresponds to the amplifiers $y_1, y_2, \ldots y_n$, type II to NO and BM. Engineers L. V. Achkasova, N. F. Bushko, and T. L. Solov'yeva took part in the investigations. There are 5 figures and 4 references: 3 Soviet and 1 US.

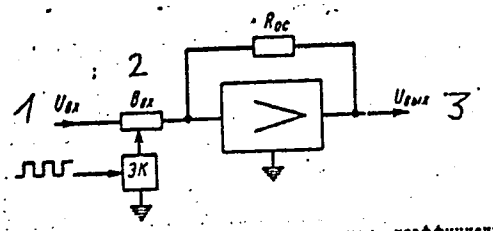


Рис. 1. Структурная схема усилителя с переменным коэффициентом передачи:
R_{oc} — сопротивление обратной связи.

Card 3/4

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

88999

S/119/61/000/001/003/013
B019/B067

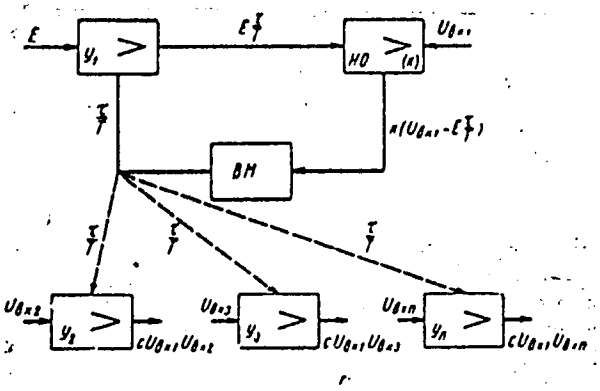


Рис. 2. Блок-схема системы перемножения:
T — период; c — постоянный коэффициент.

Legend to Fig. 1: 1) U_{input}; 2) R_{input}; 3) U_{output}; 4) electronic key.
Legend to Fig. 2: E) Standard voltage; $y_1, y_2, \ldots y_n$ operational amplifiers; BM-time modulators. NO-zero element.

Card 4/4

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, I.M.

BOOK I BOOK EXPLOITATION SOV/5027

Raschet tsifrovykh elektronnykh ustroystv; sbornik statey (Problems of the Calculation and Design of Electronic Computers, v. 1) Moscow, Mashgiz, 1960. 194 p. Errata slip inserted. 8,000 copies printed.

Ed.: I.Ya. Kazarinskiy, Doctor of Technical Sciences; Ed. of Publishing House: A.G. Akimova; Tech. Ed.: B.I. Kudel'; Managing Ed. for Literature on Machine Building and Instrument Construction: B.V. Petrovskiy, Engineer.

PURPOSE: This collection of articles is intended for scientists and technicians working in computing machine building and related fields.

COVERAGE: This collection of articles presents the results of investigations related to the design and development of electronic computers. It examines the realization of some general and special algorithms by means of digital and analog computers, investigates errors in the realization of functional relationships in electronic analogs, and reviews problems of computing and designing the external outputs and arrangement of digital computers based on various principles of operation. Methods of computation and the basic characteristics of stabilized supply sources for digital and analog computers, methods of computing standard circuits, and problems related to half-stability are examined. No personalities are mentioned. References accompany some of the articles.

PART I. GENERAL PROBLEMS OF COMPUTER DESIGNING

Bakov, A.I., I.M. Vitenberg, and A.I. Kozlov. Additional Possibilities of a Universal Electrical Analog 57

Kogan-Ayzen, F.S. Errors of Variable Coefficient Units With Step-by-Step Approximation 75

Vitenberg, I.M., M.G. Bartfeld, and V.I. Shubarina. On Electrical Analog Computation of Nonlinear Motor Characteristics 86

PART II. ELEMENTS NECESSARY OF COMPUTERS

Schreyander, V.V. Some Problems Related to the Amplification of Pulses 97

Saglio, M.S. Photoelectrical Computers Reading Printed Figures 119

Tikhomirskiy, A.M., F.F. Sypchuk, and I.Ya. Grafchik. High-Speed Reader 125

PART III. SUPPLY SOURCES OF MODAL AND ANALOG COMPUTERS

Lebedin, B.B., and I.T. Trepalov. Unit of Stabilized Supply Sources for an Electrical Simulator With Semiconductor Components 132

Pauk, V.A. Regulated Rectifier With a Series Transformer 142

Dolik, S.D. Transistorized Voltage Regulators for Computing Devices 156

PART IV. DESIGN OF ELECTRONIC COMPUTER CIRCUITS

Rizkin, I.Kh. On the Theory of Delay Components Containing Ferrites With a Rectangular Hysteresis Loop and Power Amplifiers 172

Bauer, Ya.M. Characteristics of Semiconductor Diodes Used in Computing Techniques 185

AVAILABLE: Library of Congress

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, I.M., kand.tekhn.nauk; GINZBURG, S.A., kand.tekhn.nauk; Gornshteyn, V.M., kand.tekhn.nauk

Use of an electronic simulating device in calculating the efficiency of operation of power systems with hydroelectric power stations. Trudy VNIIE no.8:233-242 '59. (MIRA 13:9)
(Hydroelectric power stations)
(Electric power)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

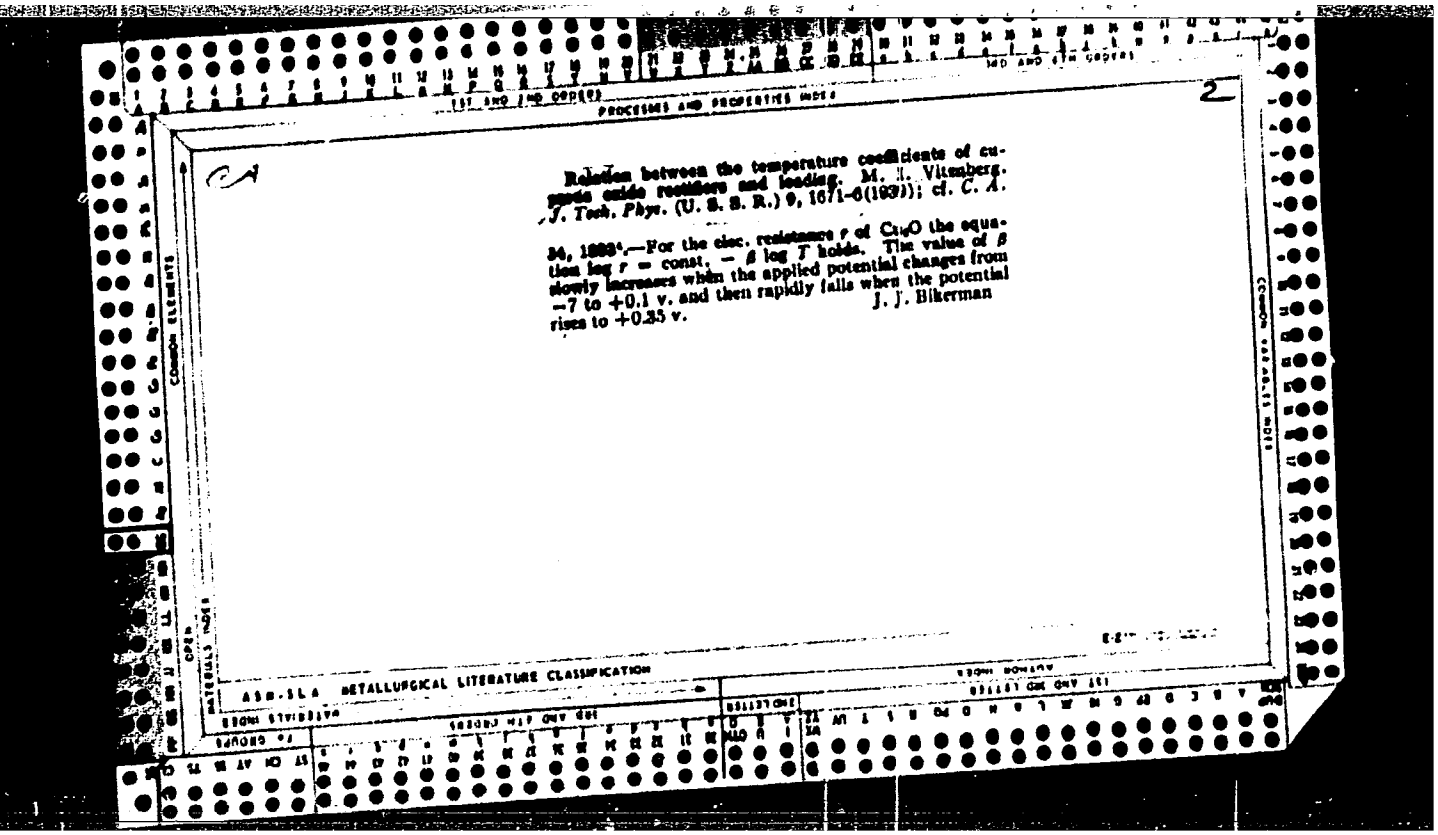
"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, I.M.

Designing specialized electronic analog computers for controlling technological processes. Priborostroenie no.12:11-13 D '61.
(MIRA 14:12)
(Electronic analog computers)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9



CA

2

Relation between the temperature coefficients of cuprous oxide rectifiers and loading. M. I. Vitenberg. *J. Tech. Phys.* (U. S. S. R.) 9, 1671-6(1939); cf. *C. A.* 34, 1888⁴.—For the elec. resistance r of Cu_2O the equation $\log r = \text{const.} - \beta \log T$ holds. The value of β slowly increases when the applied potential changes from −7 to +0.1 v. and then rapidly falls when the potential rises to +0.35 v.

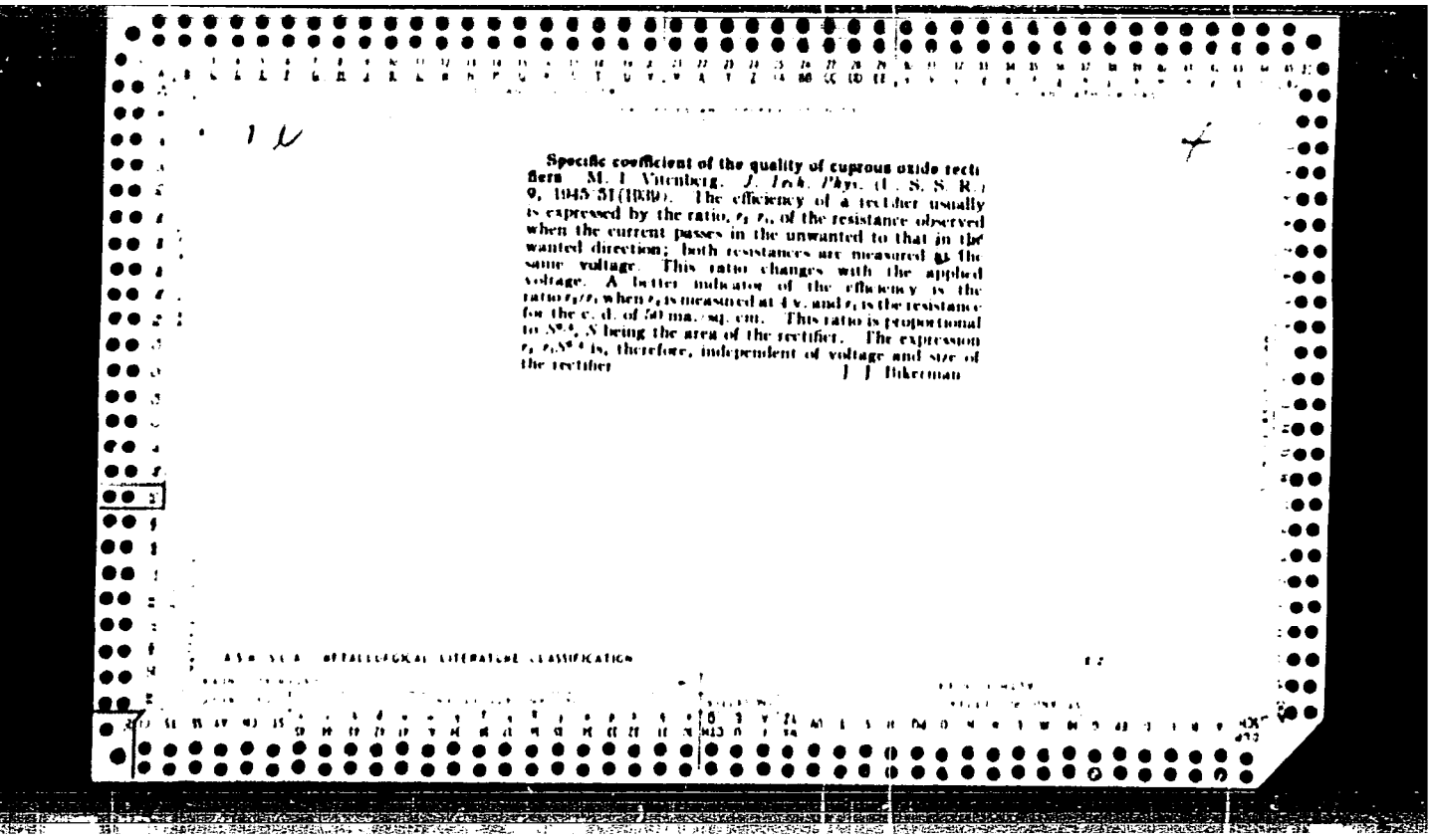
J. J. Bikerman

PROCESSES AND PROPERTIES INDEX

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

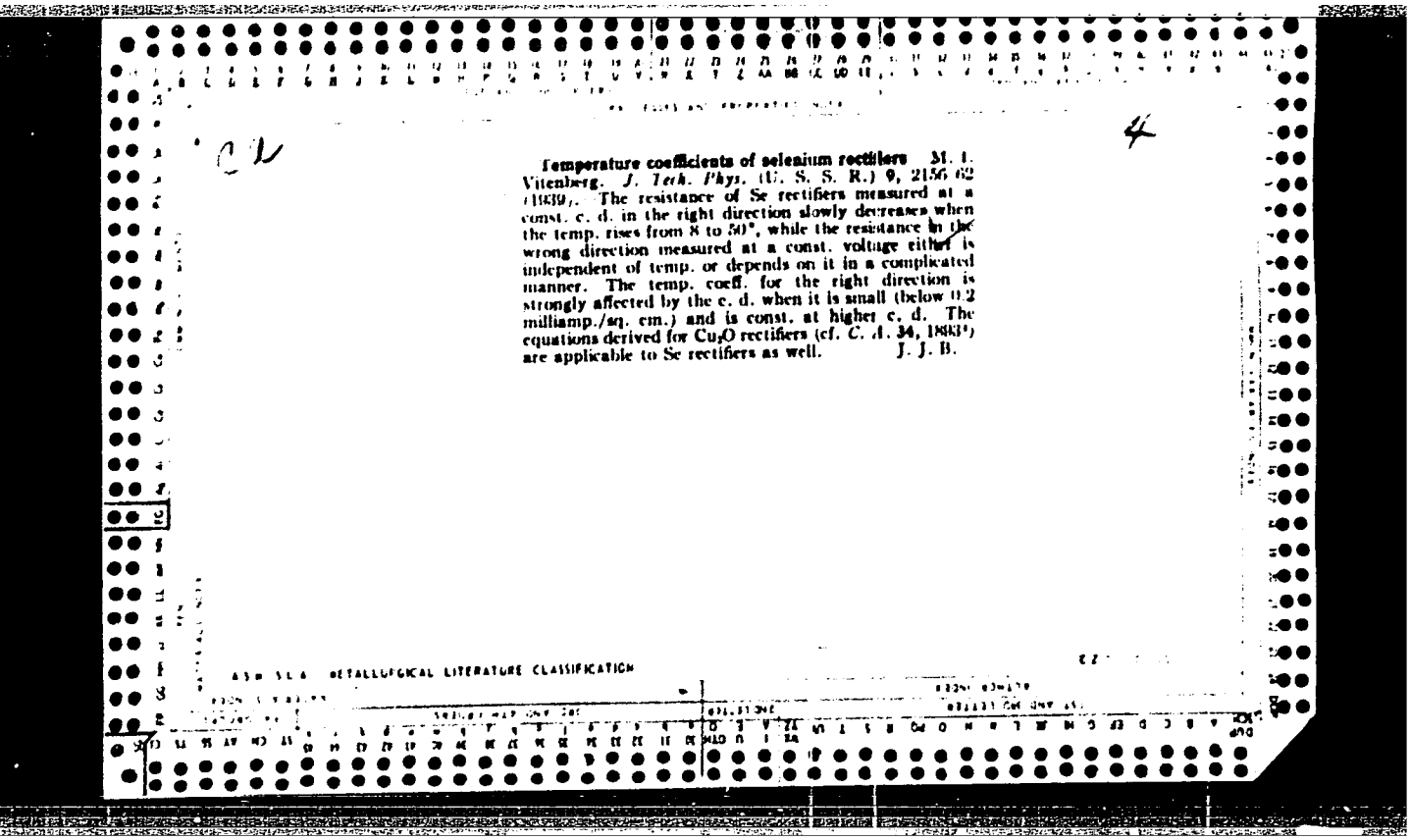
"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9



Specific coefficient of the quality of cuprous oxide rectifiers M. I. Vitenberg. *J. Tech. Phys. (U. S. S. R.)* 9, 1945-51(1939). The efficiency of a rectifier usually is expressed by the ratio, $r_1 : r_0$, of the resistance observed when the current passes in the unwanted to that in the wanted direction; both resistances are measured at the same voltage. This ratio changes with the applied voltage. A better indicator of the efficiency is the ratio r_2/r_1 when r_2 is measured at 4 v. and r_1 is the resistance for the c. d. of 50 ma./sq. cm. This ratio is proportional to $S^{0.4}$, S being the area of the rectifier. The expression $r_2 r_1 S^{0.4}$ is, therefore, independent of voltage and size of the rectifier. J. J. Bikerman

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9



Temperature coefficients of selenium rectifiers. M. I. Vitenberg. *J. Tech. Phys.* (U. S. S. R.) 9, 2156-62 (1939). The resistance of Se rectifiers measured at a const. e. d. in the right direction slowly decreases when the temp. rises from 8 to 50°, while the resistance in the wrong direction measured at a const. voltage either is independent of temp. or depends on it in a complicated manner. The temp. coeff. for the right direction is strongly affected by the e. d. when it is small (below 0.2 milliamp./sq. cm.) and is const. at higher e. d. The equations derived for Cu_2O rectifiers (cf. *C. A.* 34, 1883[1]) are applicable to Se rectifiers as well. J. J. B.

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M.I.

VITENBERG, M. I., Docent.

"DC Inductance of Relays". Vol 6, No. 2,

Avtomatika i Telemekhanika, No. 2, 3, 4, 7, (1941).

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

[illegible] L. P., Docent

"Time Constant for Code Relays". Vol. 4, No. 2,

Avtomatika i Telemekhanika, No. 2, 3, 4, 5, (1941).

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

[illegible], L. I., Docent.

"Nomograms for the Calculation of Telephone Relay Switches," Vol. 4, No. 3. Avtomatika i Telekhanika, No. 2, 4, 3, 5, (1951).

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VIT[illegible]G, V.I.

"Effect of the Capacity on the Working Time of a Telephone Relay."

/Sci Res Inst of MPSS - Min Prom Sredst Svyazi ?/

Avto i Tele, 9, 5, 1948.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Moisey Izrailevich; BERGMAN, P.Ya., redaktor; MIKHAYLOVA, Ye.M., tekhnicheskiy redaktor

[Computation for electromagnetic relays of automatic control and telecommunication systems] Raschet elektromagnitnykh rele dlia apparatury avtomatiki i sviazi. Moskva, Gos. energ. izd-vo, 1956. 464 p. (MLRA 9:9)

(Electric relays)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M. I. PA 22T46

USSR/Engineering Jan 1947
Relays
Curves

"Time-Lag Curves for Electromagnetic Relays," M. I. Vitenberg, 4 pp

"Avtomat i Telemekh" Vol VIII, No 1

Explains the statement that the time-lag of electromagnetic relays can be defined graphically by calculating the time-lag with reference to a coefficient "m," determined by the number of ampere turns.

22T46

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M. I.

Temperature coefficients of selenium rectifiers. M. I. Vitenberg. *J. Tech. Phys.* (U.S.S.R.) 9, 2150-62 (1939). The resistance of Se rectifiers measured at a const. e. d. in the right direction slowly decreases when the temp. rises from 8 to 50°, while the resistance in the wrong direction measured at a const. voltage either is independent of temp. or depends on it in a complicated manner. The temp. coeff. for the right direction is strongly affected by the e. d. when it is small (below 0.2 milliamp./sq. cm.) and is const. at higher e. d. The equations derived for Cu_2O rectifiers (cf. *C. A.* 34, 1893[4]) are applicable to Se rectifiers as well. J. J. B.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M. I.

USSR/Mathematics - Relays, Pulse Circuits Jan/Feb 51

"The Release Time of Relays Under Pulse Conditions of Operation," M. I. Vitenberg

"Avtomat i Telemekh" Vol XII, No 1, pp 61-67

PA 187T36

Calculates release time of relays operating in pulse conditions. Derives curves of release time (type 100 relay) vs inserted resistance, and established ampere turns for various durations of magnetizing pulses. Derives curves of release time (for normal and slow relays of type 100) vs load for various pulse durations

187T36

USSR/Mathematics - Relays, (Contd) Jan/Feb 51

of magnetizing current. Finally, derives comparative curves of release time for various types of relays; shows that it is more convenient to use normal relays with shortened coils instead of time-lag relays as series relays. Submitted 22 Oct 48; resubmitted 5 May 50 after revision.

187T36

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M. I.

Temperature coefficients of selenium rectifiers. M. I. Vitenberg. *J. Tech. Phys.* [U. S. S. R.] 9, 2150-62 [1939]. The resistance of Se rectifiers measured at a const. e. d. in the right direction slowly decreases when the temp. rises from 8 to 50°, while the resistance in the wrong direction measured at a const. voltage either is independent of temp. or depends on it in a complicated manner. The temp. coeff. for the right direction is strongly affected by the e. d. when it is small (below 0.2 milliamp./sq. cm.) and is const. at higher e. d. The equations derived for Cu_2O rectifiers (cf. *C. A.* 34, 1893[9]) are applicable to Se rectifiers as well. J. J. B.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Moisey Izrailevich; ZELIGER, N.B., prof., retsenzent; ARONOVICH, B.I., dots., retsenzent; USSER, A.S., red.; SOBOLEVA, Ye.M., tekhn. red.

[Design of electromagnetic relays for automatic control and communication apparatus] Raschet elektromagnitnykh rele dlia apparatury avtomatiki i sviazi. Izd.2., perer. i dop. Moskva, Gos. energ.izd-vo, 1961. 704 p. (MIRA 15:1)
(Electric relays)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

29592

S/120/61/000/004/001/034
E032/E514

24.6731

AUTHORS: Val'dner, O.A. and Vitenberg, I.M.

TITLE: An electrical model of a linear accelerator

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.4, pp.25-26

TEXT: In view of the increasing number of electron accelerators which are either being built or are being designed, it is desirable to evolve methods for the preliminary calculation of the beam parameters. From this point of view the machines can be divided into two groups, namely, those with a working energy of less than 30 MeV and those above this energy. Design calculations carried out at МИФИ (MIFI) showed that in order to ensure the necessary beam parameters all the accelerators belonging to the second group can be discussed in terms of the same solution describing the electron dynamics during the acceleration process. The situation is different in the case of the first group, i.e. in the case of low energies. The electron dynamics in linear accelerators of this type can be described by the following equations:

Card 1/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

An electrical model of a linear ... S/120/61/000/004/001/034
E032/E514

$$\frac{d\gamma}{d\xi} = A(\xi) \sin \varphi, \qquad (1)$$

$$\frac{d\varphi}{d\xi} = 2\pi\left[\frac{1}{\beta_B(\xi)} - \frac{1}{\beta_\gamma}\right],$$

$$\gamma = (1 - \beta_\gamma^2)^{-1/2},$$

where φ is the phase angle of the particle relative to the wave and γ, ξ, A, β_B and β_γ are the dimensionless energy, linear coordinate, electric field amplitude, wave velocity and electron velocity, respectively. This equation can only be solved by numerical integration. It is, therefore, interesting to produce an electrical model for this set of equations. A model is particularly useful if the electron energy is to be adjustable. The search for acceptable solutions can be reduced to the selection of functions describing changes in the accelerating wave amplitude

Card 2/

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

and the phase velocity along the accelerator. The present authors have developed special apparatus which can be used to investigate phase oscillations and the output beam parameters for different forms of A and β_B, the stability of the beam parameters and the capture into the acceleration process under different working conditions. The figure shows the circuit employed. In electrical modelling the integration time represents the dimensionless accelerator length. The functions $\alpha_B = \beta_B^{-1}(\xi)$ and $\alpha_\gamma = \beta_\gamma^{-1}(\gamma)$ are generated by the non-linear units БН2 (BN2) and БН3 (BN3). A detailed description of this circuit is not given except that СУ1 (SU1) is an adding amplifier and ИУ3 (IUZ) is an integrating amplifier. The phase trajectories obtained with this apparatus can be inspected visually on the screen of a CRO or photographed. Acknowledgments are expressed to A. V. Shal'nov, I. K. Ogorodova and Yu. V. Ogorodov. There is 1 figure.

SUBMITTED: December 13, 1960

Card 3/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M.I. (Leningrad)

Effect of ambient temperature on the overheating of the windings and the heat transfer coefficient of a relay. Avtom. i telem. 21 no.3:384-392 Mr '60. (MIRA 13:6)
(Electric relays)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

9.2140

78168
SOV/103-21-3-14/21

AUTHOR: Vitenberg, M. I. (Leningrad)

TITLE: Dependence of the Winding Overheat and the Heat Exchange Coefficient of a Relay on the Temperature of Surrounding Air

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 3, pp 384-392 (USSR)

ABSTRACT: The winding overheat and the heat exchange coefficient are investigated as functions of the ambient temperature for three types of Soviet relays: type PMY (RMU), dimensions 24.7 x 38.5 x 41 mm, weight 70 g; type РЭС 10 (RES10), dimensions 11.1 x 16.5 x 26 mm, weight 6 g; and type PKH (RKN), dimensions 25.6 x 56.5 x 97 mm, weight 290 g. Curves are given showing the excess of winding temperature above the ambient temperature as function of the applied power. This plot is obtained experimentally for the RMU-type relay at various temperatures of surrounding air of up

Card 1/4

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

to 141° C. Based on this plot the general expression for the temperature of overheating of relay winding is derived as function of the applied power and of the ambient temperature:

$$\vartheta = a_0 - c\theta_0 + (b_0 - d\theta_0) P. \qquad (4)$$

Here, P and θ_o are power and ambient temperature, respectively; a_o, b_o, c, and d are parameters given in curve form. Because of the difficulty of determining the parameters a_o, b_o, c, and d for each type of relay, the winding overheat is determined as a function of various ambient temperatures at a constant value of applied power. Assuming that the initial ambient temperature equals 20° C, the following expression is given for the

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

overheating temperature ϑ_2 above the actual ambient temperature θ_{02}:

$$\vartheta_2 \approx \vartheta_1 [1 - 0{,}0019 (\theta_{02} - 20)]. \qquad (7a)$$

where ϑ_1 is the initial temperature of overheating.

In order to determine the dependence of the heat exchange coefficient of the winding on the temperature, a plot of average values of the heat exchange coefficient is made as a function of the temperature of the winding. Based on this experimentally obtained plot and assuming that the initial external temperature equals 50° C, the following expression for the heat exchange coefficient

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

is given:

$$q_2 \approx q_1[1 + 0{,}00306(\theta_2 - 50)]. \qquad (13a)$$

where q_1 and q_2 are initial and actual values of coefficient, respectively. Two examples illustrate the use of the empirical equations given. There are 8 figures; and 1 Soviet reference.

SUBMITTED: November 30, 1959

Card 4/4

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

SOV/103-19-11-5/10

AUTHOR: Vitenberg, M. I., (Leningrad)

TITLE: Determination of the Heating of Electromagnetic Relay Windings (Opredeleniye nagreva obmotok elektromagnitnykh rele)

PERIODICAL: Avtomatika i telemekhanika, 1958, Vol 19, Nr 11, pp 1036 - 1047 (USSR)

ABSTRACT: In each individual case, the exact value of the mean coefficient of heat dissipation can be determined by experimental means only. It has hitherto been given by the most authors only within the range from $0.9.10^{-3}$ to $1.4.10^{-3}$ $W/cm^{2}.°C$. The results of experiments have shown, however, that in computing the heat values of the mean coefficients of heat dissipation for small-sized relays these values involve great errors and are therefore useless. For small-sized relays this coefficient is of a considerably greater value. To investigate this problem, measurements were carried out on about 100 different electromagnetic relays provided with an exterior rotor armature, as well as on 5 types

Card 1/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

of such relays of various size, and on 3 large coreless coils. Based on these experiments it is shown that the degree to which the mean coefficient of heat dissipation depends on the cooling surface can be expressed within the limits from $1 < S_k < 100$ cm^2 by formula (5) and in the limits from $100 < S_k < 5000$ cm^2 by formula (6), respectively. Two limiting cases have been investigated. The characteristic curves obtained showed that in computing it is most precise to consider as cooling surface the sum of the cylindrical exterior and interior surfaces of the relay coils. S_k - cooling surface of the coil in the calculation. The conception of the specific temperature superelevation of the winding is introduced. This conception characterizes the relay design from the standpoint of heat dissipation. To determine the temperature superelevation of the winding and the heating time constants as a function of the cooling surface, and the weight and dimensions of the relay, approximate formulae are also given.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

Determination of the Heating of Electromagnetic Relay Windings SOV/103-19-11-3/19

There are 11 figures and 7 references, 6 of which are Soviet.

SUBMITTED: June 19, 1957

Card 3/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M.I. (Leningrad)

Determining the heating of electromagnetic-relay windings [with summary in English]. Avtom. i telem. 19 no.11:1036-1047 N '58.
(Electric relays) (MIRA 11:11)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M. I.

Vremia otpushkaniia rele pri impul'snom rezhime raboty. (Avtomatika i telemekhanika, 1951, v. 12, no. 1, p. 61-67, diagrs., bibliography)

Title tr.: Release time in pulse-operated relays.

TJ213.A453 1951

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, M.I

AUTHOR: Not Given. PA - 2021
TITLE: New Books.
PERIODICAL: Radiotekhnika, 1957, Vol 12, Nr 1, p 81 (U.S.S.R.)
Received: 2 / 1957 Reviewed: 3 / 1957

ABSTRACT: M.I.VITENBERG: Computation of electromagnetic relays for apparatus of automation and communication. Gosenergoizdat, M.L.1956, 464 pages, price 14.50 roubles.
Theory and computation of the electromagnetic relays of parallel- and alternating current for apparatus of automation and communication. Analytical and graphoanalytical methods of computations, constructions, test data. The book is destined to be used by engineers and technical engineers.

M.P.KAPLANOV, V.A.LEVIN: The automatic foundation of frequency, 2.enlarged edition. Gosenergoizdat, M.L. 1956, 200 pages, price 11.50 roubles.
Description and classification. Computation formulae for construction. The book is for radio specialists and advanced university students.

The Successes attained by Electrovacuum Engineering, edited by Prof. G.A.TJAGUNOV, L.M.Gosenergoizdat, 1956, 256 pages, price 10.25 roubles.
A collection of articles on the types, computation methods, properties, and physical phenomena of some new types of electrovacuum de-

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

vices. For students, university professors, and engineers.

F.V.MAJOROV: Electron Regulators. M. Gosenergoizdat, 1956, 492 pages, price 14.20 roubles.
Elements and assemblies of electron regulators with uninterrupted and discrete effect as well as practical schemes.

P.V.SAHAROV: Technology of apparatus construction. Vol 1. Special features of electro-apparatus construction. Technology of current-carrying parts and magnetic conductors. M-L-Gosenergoizdat, 1956, 315 pages, price 7.85 roubles. Construction, technical production.

ASSOCIATION: Not given.
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.

Card 2/2

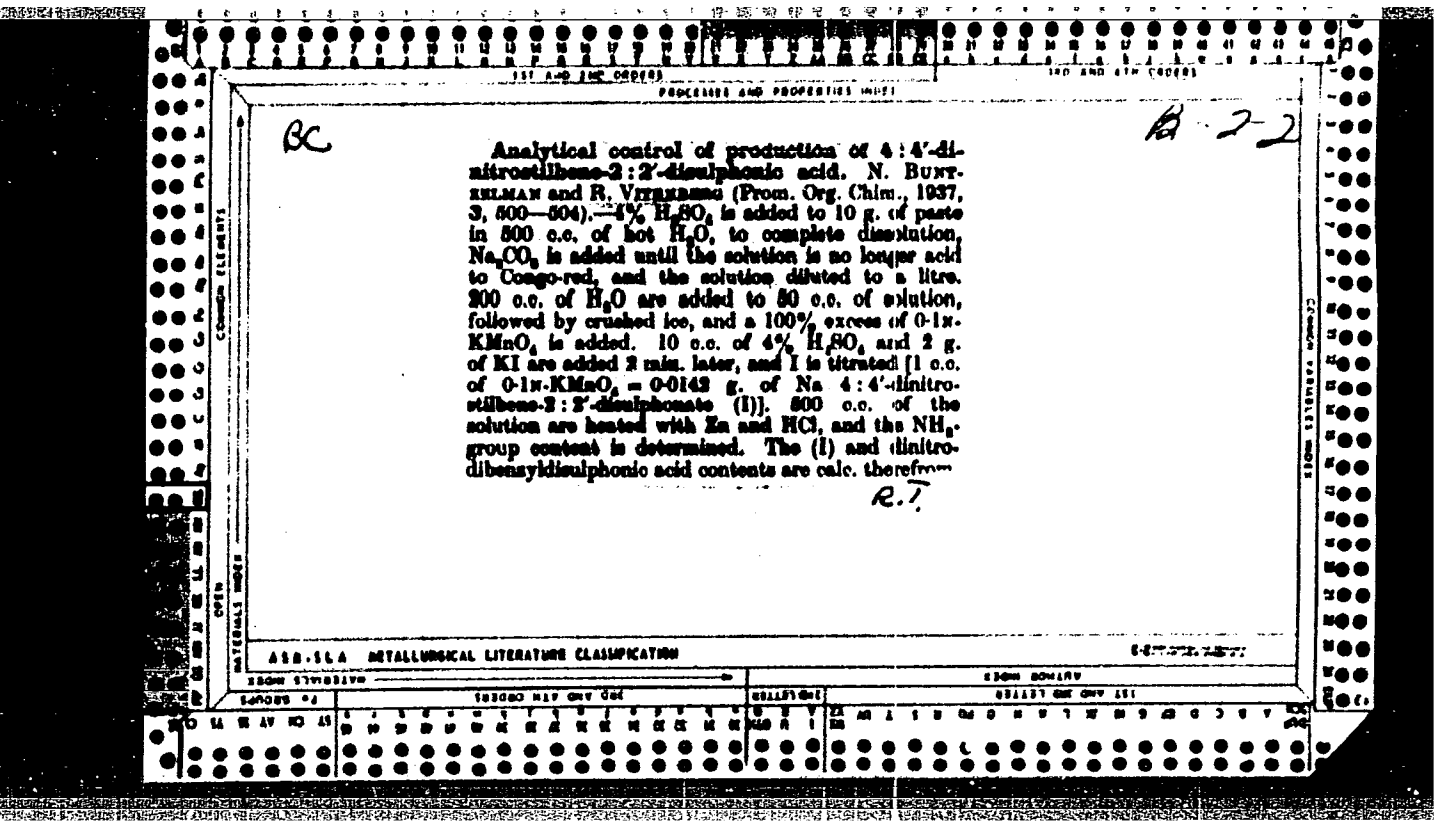
APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX



BC

B-2-2

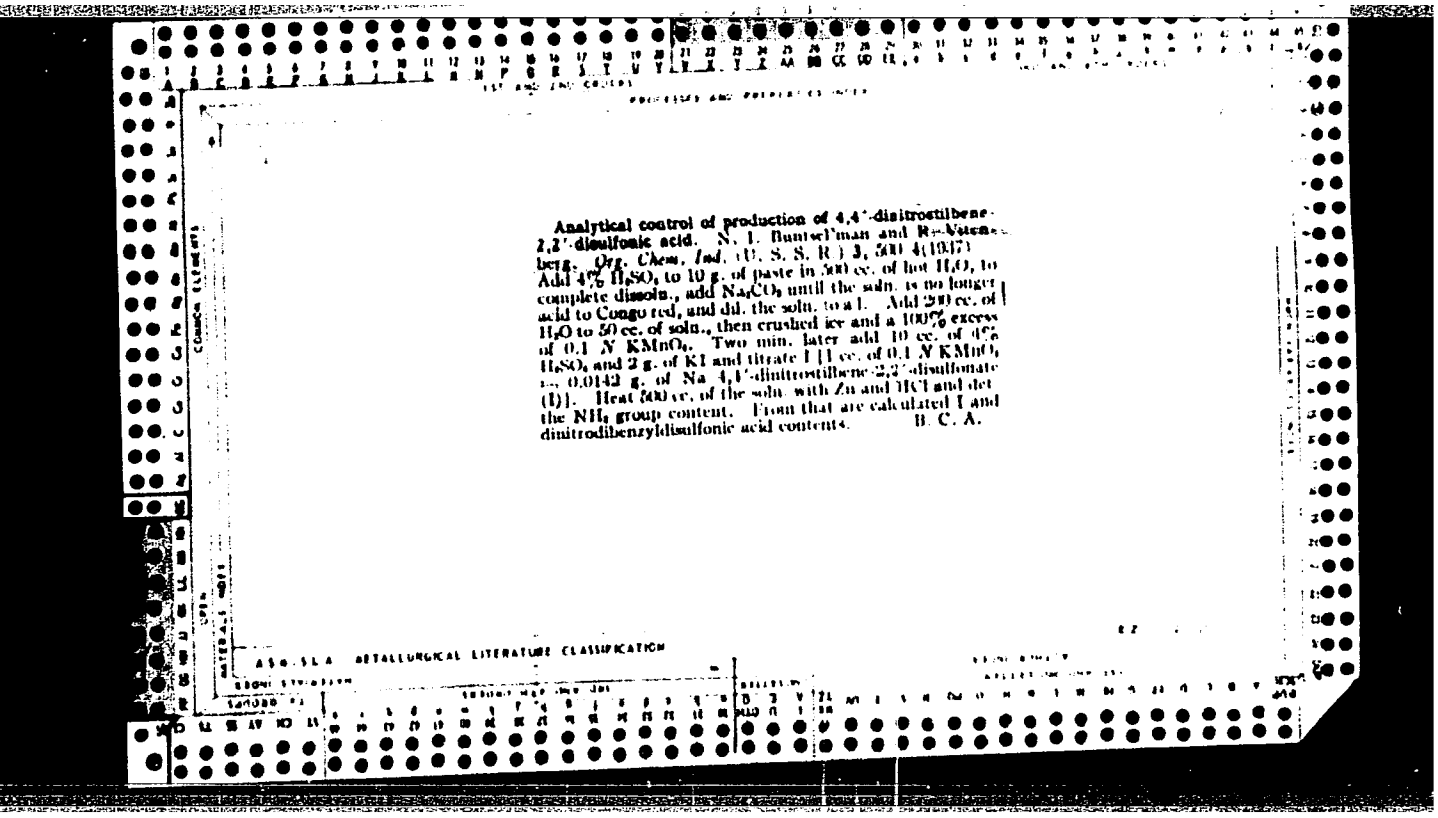
Analytical control of production of 4 : 4'-dinitrostilbene-2 : 2'-disulphonic acid. N. BUNTZELMAN and R. VITENBERG (Prom. Org. Chim., 1937, 3, 500—504).—4% H_2SO_4 is added to 10 g. of paste in 500 c.c. of hot H_2O, to complete dissolution, Na_2CO_3 is added until the solution is no longer acid to Congo-red, and the solution diluted to a litre. 200 c.c. of H_2O are added to 50 c.c. of solution, followed by crushed ice, and a 100% excess of 0·1N-$KMnO_4$ is added. 10 c.c. of 4% H_2SO_4 and 2 g. of KI are added 2 min. later, and I is titrated [1 c.c. of 0·1N-$KMnO_4$ = 0·0142 g. of Na 4 : 4'-dinitrostilbene-2 : 2'-disulphonate (I)]. 500 c.c. of the solution are heated with Zn and HCl, and the NH_2-group content is determined. The (I) and dinitrodibenzyldisulphonic acid contents are calc. therefrom

R.T.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

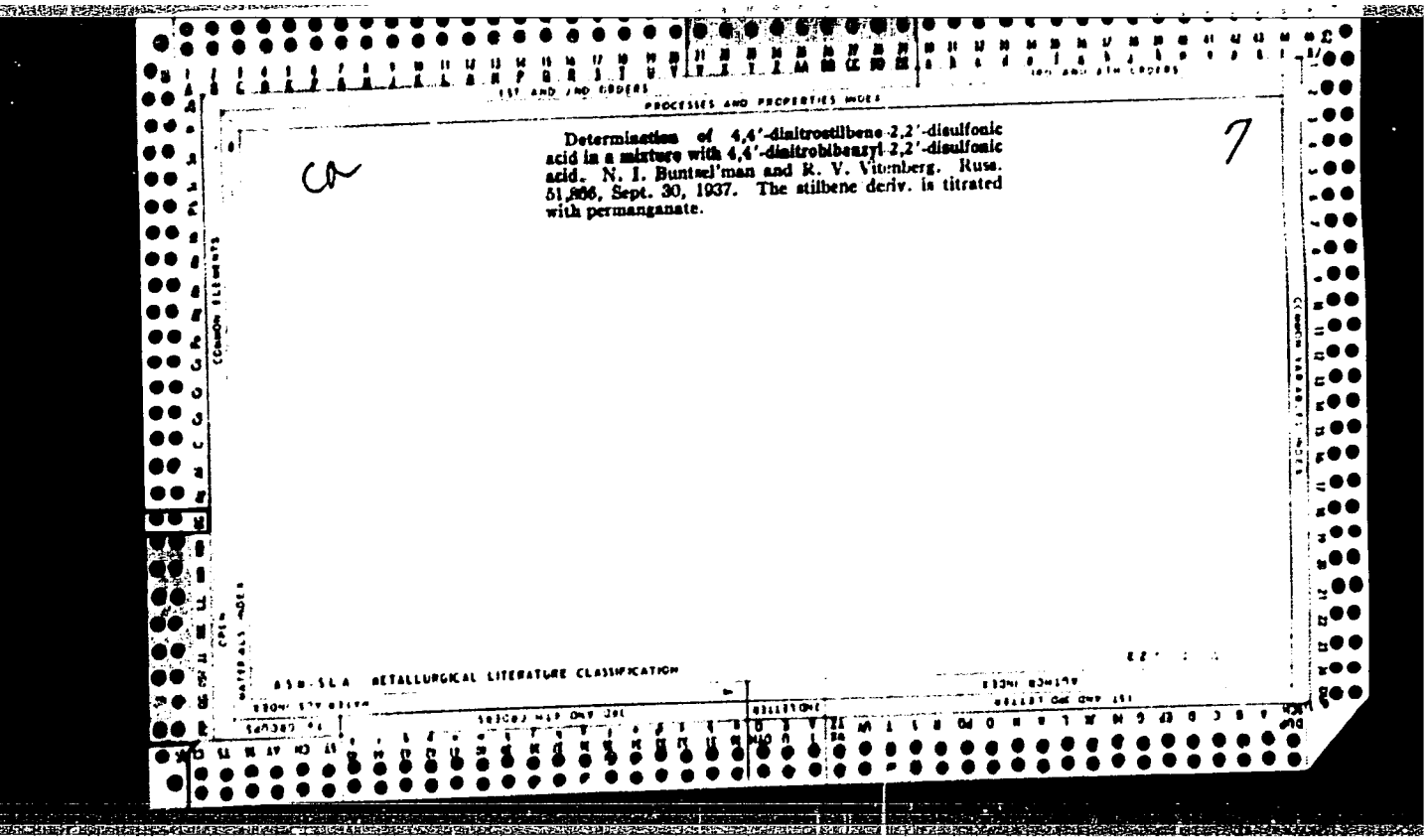


Analytical control of production of 4,4'-dinitrostilbene-2,2'-disulfonic acid. N. I. Buntsel'man and R. Vitenberg. *Org. Chem. Ind.* (U. S. S. R.) 3, 500-4(1937). Add 4% H_2SO_4 to 10 g. of paste in 500 cc. of hot H_2O, to complete dissoln., add Na_2CO_3 until the soln. is no longer acid to Congo red, and dil. the soln. to a l. Add 200 cc. of H_2O to 50 cc. of soln., then crushed ice and a 100% excess of 0.1 *N* $KMnO_4$. Two min. later add 10 cc. of 4% H_2SO_4 and 2 g. of KI and titrate I [1 cc. of 0.1 *N* $KMnO_4$ = 0.0142 g. of Na 4,4'-dinitrostilbene-2,2'-disulfonate (I)]. Heat 500 cc. of the soln. with Zn and HCl and det. the NH_2 group content. From that are calculated I and dinitrodibenzyldisulfonic acid contents. B. C. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9



PROCESSES AND PROPERTIES INDEX

Determination of 4,4'-dinitrostilbene-2,2'-disulfonic acid in a mixture with 4,4'-dinitrobibenzyl-2,2'-disulfonic acid. N. I. Buntsel'man and R. V. Vitomberg. Russ. 51,866, Sept. 30, 1937. The stilbene deriv. is titrated with permanganate.

7

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

GEL'CHINSKIY, M.L.; DEMAT, M.P.; RYAPOLOV, A.F.; TOKAREV, K.K.; CHIZHOVA, A.N.; MEDRIGAYLOV, V.G.; VITENBERG, V.I.; KELLER, Ya.K.; KOLOSOV, S.N.; MAKOVITSKIY, B.K.

Drum-pattern for erecting metal towers made of enlarged blocks. Rats. i izobr. predl. v stroi. no.119:27-29 '55. (MLRA 9:7)
(Towers)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

ROMANOV, M.A.; VITENBERG, Ya. L.

Performance of asynchronous motors in airplanes cirucits.
Sam.elektr. no.1:3-20 '60. (MIRA 14:3)
(Airplanes--Electric equipment)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Ya.L., inzhener.

Three-phase electric motor for work under difficult conditions. Vest. elektroprom. 18 no.1-2:7-10 '47. (MLRA 6:12)

1. Zavod "Dinamo" im. S.M.Kirova.
(Electric motors, Induction)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Ya. L.

PA 1T64

USSR/Electric Machinery Jan-Feb 1947
Motors

"Electric Motors Using Three-Phase Current for Heavy Operating Conditions," Ya L Vitenberg, 3 pp

"Vestnik Elek Prom" Vol XVIII, No 1-2

Cross-section diagrams, graphs and tabular operating data

1T64

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

PHASE I BOOK EXPLOITATION SOV/4414

Samoletnoye elektrooborudovaniye; sbornik statey, No 1 (Aircraft Electric Equipment; Collection of Articles, No 1). Moscow, Oborongiz, 1960. 106 p. Errata slip inserted. 3,600 copies printed.

General Ed.: A. F. Fedoseyev, Candidate of Technical Sciences; Ed. of Publishing House: K. I. Grigorash; Tech. Ed.: V. P. Rozhin; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for engineers engaged in designing and operating aircraft electric equipment. It may also be of interest to those working in the electrical industry, and to teachers, instructors and students in electrical engineering schools of higher and secondary education.

COVERAGE: The book is a collection of 9 articles dealing with problems in designing, calculating and operating aircraft electric equipment, and electric motors, regulators, instruments, etc. The use of heat-resistant coatings and

Card 1/ 3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

electric-insulating materials are discussed. No personalities are mentioned. References follow the article by Gomel'skaya and Yasin.

TABLE OF CONTENTS:

Romanov, M. A., and Ya. L. Vitenberg. Operation of Induction Motors in Aircraft Systems 3

Romanov, M. A. Voltage Regulation in Aircraft Generators, and Its Effect on Weight and Size Ratios in Generators 21

Grigor'yev, G. V. Electric Starting Systems in Turbojet and Turboprop Engines Using Starter-Generators and Current Regulators 37

Gordon, A. V. Temperature Compensation in D-C Electromagnetic Relays 53

Rozanov, A. V., and V. I. Kukhtenko. A Method for Constructing an Automatic Control System With Almost Optimal Transient Conditions 63

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

Prusov, M. A., and A. V. Vershinkin. Instrument for Measuring Quantity of Electricity, Energy and Arcing Period 70

Gomel'skaya, A. I., and D. R. Yasin. Experience Gained in the Use of Chemical Nickelplating 79

Sayenko, A. D., and S. F. Shakay. Use of Epoxide Resins as Sealing and Impregnating Compounds 83

Ivanova, L. S., and A. P. Vasil'yeva. Determination of Maximum Allowable Operational Temperatures for Glass Textolites 92

AVAILABLE: Library of Congress

/ec

Card 3/3 10-18-60

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

CHEKMAREV, A.I.; MIKHEL', M.L.; KRONGAUZ, I.A.; VITENBERG, Ye.M.; BABUSHKINA, S.I., red.; KHORAS, L.I., red.

[Packing materials for chemicals] Tara dlia khimicheskikh produktov. Moskva, Nauchno-issl.in-t tekhniko-ekon.issl., 1960. 229 p. (MIRA 13:8)
(Chemicals) (Packing for shipment)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENberg, Ye. M.

PHASE I BOOK EXPLOITATION SOV/4657

Chekmarev, A. I., M. L. Mikhel', I. A. Krongauz, and Ye. M. Vitenberg

Tara dlya khimicheskikh produktov (Containers for Chemical Products) Moscow, Nauchno-issl. in-t tekhniko-ekon. issled., 1960. 230 p. 2,000 copies printed.

Sponsoring Agency: Gosudarstvennyy komitet Soveta Ministrov SSSR po khimii.

Eds: I. A. Krongauz, S. I. Babushkina, and L. I. Khoras.

PURPOSE: This book is intended as a guide for all engineering, technical, and planning workers concerned with the packing and shipping of chemical products.

COVERAGE: The book discusses the design, manufacture, and utilization of all types of containers for chemical products. It includes technical data of a nature to permit the proper choice of a container in a given situation. New types of containers developed in the Soviet Union, as well as foreign experience, are described. The letter designations for

Card 1/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

all such containers are listed. No personalities are mentioned.
There are 50 references: 20 Soviet, 19 English, and 11 German.

TABLE OF CONTENTS:

Introduction	5
Metal Containers	11
1. Metal barrels	11
2. Steel drums	39
3. Steel flasks	55
4. Large steel cans and canisters	64
5. Small steel cans	71
6. Steel cylinders	74
Wooden Containers	80
1. Wooden barrels	80
2. Pressed plywood barrels	92
3. New and improved kinds of barrels	97

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

TEPLITSKIY, B.M.; VITENBERG, Yu.R., kand. tekhn. nauk, retsenzent;
LEYKINA, T., red.; KURGPINA, G.N., red.

[Dividing heads and their use] Delitel'nye golovki i rabota na nikh. Moskva, Mashinostroenie, 1964. 215 p.
(MIRA 17:8)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

S/121/61/000/008/006/006
D041/D113

AUTHOR: None given

TITLE: Dissertations

PERIODICAL: Stanki i instrument, no. 8, 41-42

TEXT: V.P. Grechin presented the dissertation "Heat Resistance and Other Wear Resistance Factors of Cast Iron and Alloys During Sliding Friction" at the Institut mekhaniki Akademii nauk USSR (Institute of Mechanics of the Academy of Sciences Ukrainskaya SSR) in order to obtain a doctor's degree. The following dissertation were presented for a candidate's degree: "Investigation of Small-Module Gear-Shapers" by Yu.R. Vitenberg at the Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics); "The Effect of the Structural and Technological Factors of Spot-Welded and Seam-Welded Joints on the Distribution of Stress Caused by Load and on the Fatigue Strength" by B.B. Zolotarev at the TsNII tekhnologii i mashinostroyeniya (TsNII of Technology and Machine Building); "Investigation of Screw-Nut Pairs During Rolling and Sliding" by Kumar Basu Sushil at the Moskovskiy stankoinstrumental'nyy institut im. I.V. Stalina (Moscow Institute of Machine Tools and Instruments im. I.V.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

Dissertations

Stalin); "Investigation of the Surface Accuracy and Smoothness Obtained by Machining Hard and Brittle Materials Using the Ultra-Sound Vibrations Method" by A.Ya. Vladimirov at the Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics); "Effect of Some Technological Factors on the Surface Quality Obtained by Plane Grinding by Means of the Disc Periphery" by B.B. Troitskiy at the Moskovskiy stanko-instrumental'nyy institut imeni I.V. Stalina (Moscow Institute of Machine Tools and Instruments im. I.V. Stalin); "Investigation of the Automatic Synchronization of Gear Changing" by I.M. Khovanov at the Moskovskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni Vysshaye tekhnicheskoy uchilishche im. N.E. Baumana (Moscow "Order of Lenin and Order of the Red Banner of Labor" Higher Technical School im. N.E. Bauman); "Investigation of a Grinding Process with an Oscillating Motion" by Tsao Shih-Shen at the Moskovskiy avtomechanicheskiy institut (Moscow Automechanical Institute). [Abstracter's note: complete translation].

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Yu.R.

Geometry of a ram machined by abrasive worms. Izv. vys. ucheb. zav.; prib. no.2:113-118 '59. (MIRA 13:2)

1.Severo-zapadnyy zaochnyy politekhnicheskiy institut. Rekomendovana kafedroy tekhnologii mashinostroyeniya.
(Gear-cutting machines)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Yu. R., Cand Tech Sci, "Study of ~~Investigation~~ of small-module gear-cutting instruments. Leningrad, 1960. (Min of Higher and Sec Spec Ed RSFSR. Leningrad Inst of Prec Mech and Optics). (KL, 2-61, 207).

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Yu.R.

Investigating gear cutters having a nonlinear relationship between the displacement of the initial contoru and the magnitude of the cut-off layer. Izv.vys.ucheb.zav.; prib. 5 no.6:123-129 '62. (MIRA 15:12)

1. Severo-zapadnyy zaochnyy politekhnicheskiy institut. Rekomendovana kafedroy tekhnologii mashinostroyeniya.
(Gear cutting)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Yuriy Ruvimovich; FIRUN, N.B., red.; ALABYSHEVA, N.A., red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Grinding gear teeth with an abrasive worm] Zuboshlifovanie abrazivnym cherviakom. Leningrad, 1963. 25 p. (Leningradskii dom nauchno-tekhnicheskci propagandy. Obmen peredovym opytom. Seriia: Mekhanicheskaia obrabotka metallov, no.13) (MIRA 17:1)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Yu.R.

Irregularities in profiles, their calculation and relationship with parameters of gear teeth slotting. Izv.vys.ucheb. zav.; prib. no.6:66-71 '58. (MIRA 12:12)

1. Leningradskiy zaochnyy politekhnicheskiy institut.
(Gear cutting)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERG, Yu. R.

LOSKUTOV, Vasiliy Vasil'yevich; KUVSHINSKIY, V.V., kandidat tekhnicheskikh nauk, retsenzent; VITENBERG, Yu.R., inzhener, retsenzent; IL'NITSKIY, I.I., kandidat tekhnicheskikh nauk, redaktor; SARAFANNIKOVA, G.A., tekhnicheskiy redaktor

[Gear-cutting machines] Zuboreznye stanki. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 73 p. (Nauchno-populiarnaia biblioteka rabochego stanochnika, no.26) (MLRA 10:8)
(Gear-cutting machines)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

SOBOLEV, N.P.[deceased]; VITENBERG, Yu.R.; SHAVLYUGA, N.I., kand. tekhn. nauk, retsenzent; FIRUN, N.B., kand. tekhn. nauk, red.; CHFAS, M.A., red.izd-va; VARKOVETSKAYA, A.I., red. izd-va; BARDINA, A.A., tekhn. red.

[Gear-cutting machines and tools used in the instrument industry] Zuboobrabatyvaiushchie stanki i instrumenty v priborostroenii. Moskva, Mashgiz, 1963. 306 p. (MIRA 16:10)

(Instrument industry) (Gear-cutting machines)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBURG, V.L.; DROZDIK, B.M.

Cold breaking of bars. Kuz.-shtam.proizv. 1 no.3:42-44
My '59. (MIRA 12:10)
(Hydraulic presses)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENBERGS, Guntis; GRANTS, Elmars; ROZENBERGA, R., red.; LEMBERGA, A., red.

[Is the incidence of cancer increasing?] Vai saslimstiba ar vezi klust biezaka? Riga, LPSR Zinatnu akademijas izdevnieciba, 1961. 42 p. (MIRA 15:2)
(LATVIA--CANCER)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

L 39387-65 EWT(d)/T IJP(c)

ACCESSION NR: AR5004811 S/0044/64/000/011/B120/B120

1

B

SOURCE: Ref. zh. Matematika, Abs. [illegible]

AUTHORS: Viten'ko, I. V.; Kostovs'kyy, C. M.

TITLE: Generalized transformation formulas in the methods of Lobachevskiy-Greffe and Lemer

CITED SOURCE: Sb. Teor. i prykl. matem. Vyp. 2. L'viv, L'vivs'k. un-t, 1963, 31-35

TOPIC TAGS: Laurent series, transformation formula

TRANSLATION: The authors derive formulas for the calculation of the coefficients of Laurent-series expansion of the functions

16

$$f_k(z) = \prod_{j=0}^{k-1} f(\omega_j^{(k)} z^{\frac{1}{k}}) = \sum_{l=-\infty}^{\infty} a_l^{(k)} z^l.$$

Card 1/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

ACCESSION NR: AR5004811

$$= \sum_{l=-\infty}^{\infty} b_l^{(k)} z^l.$$

where

in terms of the coefficients of the [illegible] Laurent series

$$f(z) = \sum_{l=-\infty}^{\infty} a_l z^l$$

and the auxiliary series

Card 2/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

L 39367-65
ACCESSION NR: AR5004811

$$v(z) = \sum_{l=-\infty}^{\infty} b_l z^l$$

The auxiliary series v(z) is chosen such that f(z) and v(z) have a common convergence ring. The particular case when $v(z) = z^l$ (l -- arbitrary integer) and

$$f(z) = \sum_{l=0}^{\infty} a_l z^l, \; a_0 \neq 0$$

is considered separately. N. Lyashchenko.

SUB CODE: MA ENCL: 00

Card 3/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITEN'KO, I.V.; KOSTOVSKIY, A.N.

Division and factorization of Laurent series. Dokl. AN SSSR 162 no.1: 15-18 My '65. (MIRA 18:5)

1. L'vovskiy gosudarstvennyy universitet im. Iv.Franko. Submitted November 20, 1964.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITEN'KO, I.V.; KOSTOVSKIY, A.N.

Determining the principal indices of Laurent series. Dokl. AN SSSR 155 no. 4:732-734 Ap '64. (MIRA 17:5)

1. L'vovskiy gosudarstvennyy universitet im. Ivana Franko. Predstavleno akademikom A.A.Dorodnitsynym.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENKO, Vadim Aleksandrovich; POLYAK, Revera Yakovlevna; SEGAL', Z.G., vedushchiy red.

[Northern Lugansk key well (Lugansk Province)] Severo-Luganskaia opornaia skvazhina (Luganskaia oblast'). Leningrad, Gostoptekhizdat, 1963. 135 p. (Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy, no.223). (MIRA 17:4)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

POLYAK, R.Ya.; VITENKO, V.A.

Mineralogical associations in Permian and Triassic sediments of the Chernigov salient. Trudy UkrNIGRI no.1:122-124 '59.
(MIRA 12:12)

(Ukraine--Mineralogy)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENKO, V.A [Vitenko, V.O.]; POGREBNYAK, V.A [Pohrebniak, V.O.]; POLYAK, R.Ya.

Sediments of the Moscovian stage of the north Lugansk key well.
Geol.zhur. 21 no.3:87-93 '61. (MIRA 14:7)

1. UkrNDGRI.
(Novoaydar District—Geology, Stratigraphic)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

3/169/60/000/006/002/021
A005/A001

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 6, p. 29, # 5751

AUTHOR: Vitenko, V. A.

TITLE: The Main Feature of the Geologic Structure of the Chernigov Gravitational Maximum Region

PERIODICAL: Tr. Vses. n.-i. geologorazved. neft. in-t, 1958, No. 12, pp. 140-152

TEXT: The geophysical research in the last years and deep drilling eludicated the geologic feature of the Chernigov region having a gravitational maximum. A volcanic-sedimentary stratum of 1,160 m thickness occurs above crystalline Pre-Cambrian rocks detected at the 2,747-m depth; this stratum pertains to the Middle and Upper Devonian. The overlying deposits occur above the Devonian system. Magnetic anomalies associated with the gravitation maximum region and reaching 600 γ, and, partly, the maximum itself, are caused by the volcanic-sedimentary stratum having the maximum magnetic intensity in the region. The principal gravitation effect is appearently caused by the nonuniform crystalline-base structure and its relief The author assumes that the Chernigov-maximum-region represents a protrusion of the relatively shallow crystalline-base

Card 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

S/169/60/000/006/002/021
A005/A001

The Main Feature of the Geologic Structure of the Chernigov Gravitational Maximum Region

limited in East and West by breaks. This protrusion acted the part of a dam, which hampered the connection between the Dnepr-Donets depression central part and the Pripyat' graben. However, the Pripyat' graben was directly connected with the Dnepr-Donets depression in the course of long periods and appears probably to be one of its tectonic elements.

T. N. Fedotova

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENKO, V.A.

Chernigov key well. Trudy VNIGNI no.24:5-52 '60.
(MIRA 13:7)
(Chernigov Province—Petroleum geology)
(Chenigov Province—Gas, Natural—Geology)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENKO, V.A.

Basic features of geological structure in the region of the Chernigov gravity maximum. Trudy VNIGNI no.12:140-152 '58.
(MIRA 12:3)

(Chernigov region--Geology, Stratigraphic)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENKO, V.A.; POLYAK, R.Ya.

Lower Carboniferous sediments of the region of the North-Lugansk key well. Trudy UkrNIGRI no.5:49-63 '63.

Lower-Triassic sediments of the region of the North-Lugansk key well. Ibid.:64-67 (MIRA 18:3)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

BARANOV, I.G.; VITENKO, V.A.; ZAV'YALOV, V.M.; MUROMTSEV, A.S.

Possible reserves of oil and gas in the Dnieper-Donets Lowland.
Geol. nefti i gaza 5 no.7:17-19 Jl '61. (MIRA 14:9)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut.
(Dnieper-Donets Lowland--Petroleum geology)
(Dnieper-Donets Lowland--Gas, Natural--Geology)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

BAUBINIENE, A. doc.; JANKEVICIUTE, J., doc.; VITENSTEINAS, G., doc.;

Clinico-anatomical aspects in the diagnosis of myocardial infarction. Sveik. apsaug. 9 no.1:10-15 Ja'64.

1. Kauno Valst. medicinos institutas. Rektorius: prof. Z. Januskevicius.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSHTEYNAS, G.A. (Kaunas)

Some peculiarities of the effect of atropine on the heart. Klin.med. 35 no.5:48-50 My '57. (MLRA 10:8)

1. Iz gospital'noy terapevticheskoy kliniki (zav. kafedroy - dotsent Z.I.Yanushkyavichus) Kaunasskogo meditsinskogo instituta

(ATROPINE, eff.
on heart funct., ECG)
(ELECTROCARDIOGRAPHY, eff. of drugs on
atropine)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSHTEYNAS, G.A.

LASHAS, A.V.; VITENSHTEYNAS, G.A.

Evaluating electric ballistocardiographic methods. Med.prom.12 no.3:27-33 Mr '58. (MIRA 11:4)

1. Kaunasskiy politekhnicheskiy institut i Kaunasskiy gosudarstvennyy meditsinskiy institut.
(BALLISTOCARDIOGRAPHY)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

USSR / Human and Animal Physiology. Blood Circulation. T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41285.

Author : Januskevicius, Z.; Vitenshteinas, G.
Inst : Not Given.
Title : Ballistocardiography and Its Clinical Significance.

Orig Pub: Sveikatos aspauga, 1957, No 6, 30-37.

Abstract: No Abstract.

Card 1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

JANUSKEVICIUS, Z.; VITENSTEINAS, G.; SUMINAS, A., red.; VYSOMIRSKIS,C., tekhn. red.

[Practical electrocardiography] Praktine elektrokardiografija. Vilnius, Valstybine politines ir mokslines literaturos leidykla, 1962. 134 p. (MIRA 16:5)
(ELECTROCARDIOGRAPHY)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

SOV/177-58-3-9/29

17(1,7)
AUTHOR: Vitenshteynas, G.A.

TITLE: Some Observations on the Article by R.M. Bayevskiy "Ballistocardiography and the Possibility of Using It in Military Medicine"

PERIODICAL: Voyenno-Meditsinskiy Zhurnal, 1958, Nr 3, pp 41-42 (USSR)

ABSTRACT: The article by R.M. Bayevskiy (Military Medical Journal Nr 5, 1956) touches on the very topical problem of the wide-spread introduction into practice of the methodology of direct ballistocardiography. This methodology is undoubtedly valuable because it supplements our diagnostic potential. Turning to the registration and analysis of ballistocardiography, it should be recalled that fatigue of a patient, a full stomach, or trembing of the extremities, table or floor may produce artefacts which complicate correct analysis of the ballistocardiogram. Therefore it is better to take the ballistocardiogram before the patient has eaten, after 15-30 minutes' rest, on a convenient

Card 1/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

table, in a warm room, etc. It must be assumed that the method proposed by Bayevskiy of taking the ballicardiogram in the short period of 1 minute without giving the patient rest may lead to inaccurate recordings and may affect the artefacts. The expediency of recording the ballicardiogram without removing heavy boots from the patient is also questionable. To save time the author recommends taking ballistocardiograms without electrocardiograms. However, when saving the time needed for attaching electrodes to the extremities, the author will be unable to determine the distances RI, RJ and RK to which he attributes diagnostic significance. The simplified method proposed by Bayevskiy for taking ballistocardiograms, which stems from his desire to save the maximum amount of time, does not give a sufficiently full and accurate record and may mislead doctors and reduce the value of the method of ballistocardiography itself. The ballisto-

cardiograph developed by Bayevskiy essentially differs

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

little from the apparatus recommended by Academician V.V. Parin, V. Dok and Mandel'baum. Their apparatus is also portable, simple, and the data are recorded by means of an electrocardiograph. The support proposed by the author, with its right angles on which the feet are laid, seems to us inconvenient because under the force of gravity the tissue of the extremities will be pressed against the angles of the support, which may cause an involuntary contraction of the muscles. In our opinion, the leg should be supported by a well-stuffed oilcloth cylinder. In practice well-known and well-tested apparatus and methods should be used, while new apparatus can only be proposed for widespread use after thorough testing.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

YANUSHKEVICHIUS, Z.I. [Januškevičius, Z.I.], prof.; VITENSHTEYNAS, G.A. [Vitenšteinas, G.A.]

Clinical significance and classification of ballistocardiograms. Terap.arkh. 31 no.9:31-36 S '59. (MIRA 12:11)

1. Iz kafedry gospital'noy terapii (zav. - prof. Z.I. Yanushkevichus) Kaunasskogo meditsinskogo instituta.
(BALLISTOCARDIOGRAPHY)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

YANUSHKYAVICHUS, Z.I., prof. [Januškevičus, Z.I.]; VITENSHTEYNAS, G.A. [Vitenšteinas, G.A.]; MITSKIS, A.M. [Mickis, A.M.], kand.med.nauk (Kaunas)

A case of so-called visceral epilepsy simulating acute abdomen. Klin.med. 37 no.9:146-147 S '59. (MIRA 12:12)

1. Iz kafedry gospital'noy terapii (zav. - prof. Z.I. Yanushkyavichus) i kabineta elektroentsefalografii (zav. - dotsent A.M. Mitskis) Kaunasskogo meditsinskogo instituta.
(ABDOMEN, ACUTE diagnosis)
(EPILEPSY, pathology)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSHTEYNAS, G. A., and YANUSHKEVICIUS, Z. I. (Dr.)

"Concerning Clinical Significance and Classification of Ballistocardiography,"

reports submitted at Fifth Internationl Congress of Medicine, (Internal). Philadelphia, Pa., April 24-26, 1958.

3rd Therapy Clinic, Kaunas Medical Inst, Lith SSR

Chief - YANUSHKEVICHUS
Asst - VITENSHTEYNAS, G. A.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSHTEYNAS, G.A. [Vitensteinas, G.A.] (Kaunas)

Classification of ballistocardiographic data. Klin.med. 36 no.1:95-98 Ja '58. (MIRA 11:3)

1. Iz kafedry gospital'noy terapii (zav.-prof. Z.I.Yanushkyavichyus [Z.I.Januškevičius]) Kaunasskogo meditsinskogo instituta.
(BALLISTOCARDIOGRAPHY
classif. of data (Rus)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSHTEYNAS, G. A., Cand Med Sci -- (diss) "On the problem of classification and diagnostic value of ballistocardiographic data in coronary sclerosis." Kaunas, 1958. 26 pp (Min of Health of Lithuanian SSR, Kaunas State Med Inst), 200 copies (KL, 35-58, 109)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

USSR/Pharmacology and Toxicology. Cholinergics V-5

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 47202

Author : Vitenshteynas G.A.
Inst : -
Title : Certain Peculiarities of Atropine Stimulation of the Heart

Orig Pub : Klinich. meditsina, 1957, 35, No 5, 48-50

Abstract : In 50 patients with vegetative disorders of the cardiovascular system, the following changes of EKG. were observed after 1 mg. of atropine was introduced subcutaneously; an increase or a decrease of the pulse rate, galloping alteration of rhythm, change of the atrioventricular rhythm to sinus rhythm, disappearance of ventricular extrasystoles. In one patient, following the injection of atropine, symptoms of coronary insufficiency developed.--F.G. Sivashinskaya

Card : 1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSHTEYNAS, T. [Vitensteinas, T.]; KYAULEYKIS, I. [Kiauleikis, I.]

Hemangiectatic hypertrophy (Klippel-Trenaunay-Weber syndrome). Vest. derm. i ven. 38 no.7:69-72 Jl '64. (MIRA 18:4)

1. Kafedra gospital'noy terapii (zav. - chlen-korrespondent AMN SSSR prof. Z.Yanushkevichus [Januskevicius, Z.] Kaunasskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

EXCERPTA MEDICA Sec.2 Vol.11/1 Physic-biochem,etc.Jan58

VITENSHTEYNAS, G.A.

343. CERTAIN PECULIARITIES OF ATROPINE ACTION ON THE HEART (Russian text). Vitenshteynas G.A. KLIN.MED. (Mosk.) 1957, 35/5 (48-50) Graphs 14

Atropine was injected s.c. in a dose of 1 mg. in 50 patients under the age of 30 yr. with autonomic disturbances of cardiovascular function, and observations (pulse and ECG) were made during the following hour. Slowing of the pulse was observed in most cases, but at different speeds and in different ways. In some cases the frequency increased and in one case an attack of angina pectoris occurred The use of atropine in cases of functional cardiovascular disturbances can only be based on a strictly individual assessment of the dosage. Vacek - Brno (II, 18)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

L 4779-66

ACC NR: AP6032012 SOURCE CODE: UR/0243/66/000/009/0044/0047

AUTHOR: Yanushkevichus, Z. I.; Vitenshteynas, G. A.; Valuzhis, K. K.

ORG: Kaunas Medical Institute, TsNIL (Kaunasskiy meditsinskiy institut, TsNIL)

TITLE: Device for obtaining phonocardiogram envelopes (PKG)

SOURCE: Meditsinskaya promyshlennost' SSSR, no. 9, 1966, 44-47

TOPIC TAGS: phonocardiogram, telemetry, physiology, medical electronics, cardiac physiology, signal envelope, envelope recording, physiological data, PHONOCARDIOGRAPHY, ELECTRONIC CIRCUIT, DIAGNOSTIC INSTRUMENT

ABSTRACT: The frequency characteristics of most pen-writing recorder systems (≤100 cps) present difficulties in recording phonocardiograms (PKG's), whose high-frequency components are subject to distortion. To avoid these difficulties, the authors propose a phase-rotation device with the following characteristics: 1) from the input signal the circuit forms two output signals with a phase difference of 90° for all frequency components; 2) output phase characteristics are in logarithmic dependence on frequency; 3) amplitude-frequency characteristics are straight and parallel to the frequency axis; 4) working frequency ranges are from 20 to 300 and from 60 to 900 cps; 5) the accuracy of phase rotation is ±2°. This system will record only the geometrical envelope of the PKG signal, which gives full information on the form, amplitude, and duration of sound signals and is sufficient for clinical analysis of PKG's. The idea of using envelopes in medical electronics is not new, and the drawbacks of envelope recording

Card 1/2 UDC: 616.12-073.43-073.96-71

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

L 47294-66

ACC NR: AP6032012 O

for low-frequency processes have been described. The authors compared their system against a conventional full-wave detector with equal charge and discharge times in its smoothing filter. It was found that the detector did not give envelopes as good as those obtained with the proposed instrument. Orig. art. has: 3 formulas, 1 circuit diagram, and 2 figures. [DP]

SUB CODE: 06/ SUBM DATE: 05Apr66/ ORIG REF: 004/ OTH REF: 003/ ATD PRESS: 5092

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSTEINAS, G.A. (Kaunas)

Paradoxal reaction to atropine in heart block. Klin. med. 32 no.10:87 O '54. (MLRA 8:1)

(HEART BLOCK,
paradoxal reaction to atropine in)
(ATROPINE, effects,
paradoxal reaction in heart block)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSON, S. I.

USSR

Experiment in the Modification of Cast Iron by [illegible] modifitsirovaniia **chuguna magniem.** (Russ-[illegible], S. S. Tripol'skaia, and R. I. Galaiko. [illegible], 1955, no. 5, May, p. 18-19.

[illegible] composition and specific wt. of slags formed under [illegible] modification, use of various fluxes; chemi-[illegible] of different zones of the metal. Micrographs, [illegible]

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENZON, A.A. (Khar'kov)

Hydromechanical cleaning of pipelines from incrustations and deposits. Vod. i san. tekh. no.2:37-38 F '61. (MIRA 14:7)

(Pipes, Deposits in)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENZON, A.S. (Moskva)

Study of nerve processes on the basis of visual aftereffects in cases of lack of sleep. Zhur.vys.nerv.deiat. 6 no.2:212-217 Mr-Ap '56. (MLRA 9:8)

(CENTRAL NERVOUS SYSTEM, physiol.
eff. of lack of sleep, determ. by measurement of after-effect of visual light stimulation)
(SLEEP, physiol.
eff. of lack of sleep on CNS, determ. by measurement of after-effect of visual stimulation with light)
(REFLEX
after-eff. of visual stimulation with light in determ. of eff. of lack of sleep)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSON, A.S.

R-12

USSR/Human Physiology - Nervous System.

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71174

Author : Vitenson, A.S.
Title : The Study of Nervous Processes in the Course of Subsequent Visual Reactions After Lack of Sleep.

Orig Pub : Zh. Vyssh. nerv. Deyat-sti, 1956, 6, No 2, 212-217

Abstract : The influence of lack of sleep (2-6 hrs sleep) on the subsequent visual reaction (VR) differs depending on the individual variant of VR in sufficient sleep, and reflects the typological peculiarities of the nervous system of the subjects. Four variants are shown in the course of VR: 1) latent period (LP) $\frac{1}{2}$-2 sec., duration of VR (DRV) 15-25 sec; 2) LP 3-6 sec., DVR 8-15 sec; 3) $\frac{1}{2}$-1$\frac{1}{2}$ sec, DVR 2-6 sec; 4) LP 3-6 sec., DVR 15-30 sec. In lack of sleep the VR of the 2nd type are the most depressed, a fact which reflects the weak nervous processes with preponderance of inhibition. LP becomes longer, VR shorter (to zero), the strength relations are damaged. A paradoxical phase was

Card 1/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

noted in five tests and appeared at a low level, i.e., the VR decreased at all levels of excitation, but in strong excitants the decrease was larger than in weak ones. In the first and fourth types, representing strong nerve processes with some predominance of excitation, the lack of sleep has less influence on the VR. The strength relations are not always disturbed. The paradoxical phase appears at a low level, i.e., to strong irritants the VR decreases, to weak ones it increases. In the third type, (strongly balanced nerve processes), the influence of lack of sleep on VR is insignificant. Caffeine (0.05-0.2 gm) in lack of sleep can have on the VR of the 1st and 2nd type a normalizing as well as depressing influence. The last probable arises from incorrect dosage of caffeine. The basis for the apparent changes in VR in lack of sleep is, according to the author, the lowering of the work capacity of the nerve elements of the visual analyzer.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71174

(primarily cortical as the most reactive ones). Under these conditions even the moderately strong visual stimuli are sufficient for the development of a limiting defense inhibitions.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

2986. VITENSON A. S. *Physiological mechanism of the tracing reactions in the sight analyser (Russian text)* Z. vyssh. nerv. dejatel. 1956, 6/2 (218—225) Tables 8

The sight-tracing reactions depend on the functional state of the cerebral cortex. During the increase of the unconditional depression the latent period is prolonged and the tracing reaction diminishes and disappears. On stimulation of the cortex the sight-tracing reactions increase. We may presume that the sight-tracing reaction and the latent period arise as a consequence of the different phases of successive induction; the change of this state depends on the functional state of the cerebral cortex. Bajer — Brno

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9

VITENSON, A.S., kapitan med.sluzhby

Investigating after-images. Voen-med.zhur. no.11:79-80 N '57.
(AFTER-IMAGES) (MIRA 11:4)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860120004-9"