"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, V.A.

Contribution to the theory of the spectra of radio emission from discrete sources at frequencies below 30 mc. Izv.vys.ucheb.zav.; radiofiz. 3 no.4:584-594 '60. (MIRA 13:9)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.
(Radio astronomy)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, V.D.

Saving metals at machinery plants of the Moscow City Economic Council. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. 16 no.11:78-81 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, V.D., brigadir armaturshchikov

Tool for making mesh reinforcements. Suggested by V.D.Razin. Rats.i izobr.predl.v stroi. no.8:45-49 '58. (MIRA 13:3)

1. Po materialam Kombinata proizvodstvennykh predpriyatiy trasta No.37 Stroygaz.
(Reinforced concrete)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

3-58-6-9/34

AUTHOR: Razin, V.I., Candidate of Philosophical Sciences

TITLE: A Sound Knowledge of the Field of Marxist-Leninist Philosophy for Prospective Engineers (Budushchim inzheneram - prochnyye znaniya v oblasti Marksistsko-Leninskoy filosofii)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 6, p 36-41 (USSR)

ABSTRACT: Dialectical materialism is now being taught at technical vuzes during the second year. After proving the necessity for introducing philosophy at technical vuzes, the author points out the distinction in education given to the students of humanitarian and technical vuzes prior to their admission to these vuzes. This fact implies the necessity of adapting the instruction of philosophy to the character of the respective vuz. Turning to the abilities of an instructor of philosophy, the author comes to the conclusion that it is necessary for the instructor to be familiar with the most characteristic subjects of the given vuz, although it is still better if he is well conversant with at least one of the subjects. This conclusion he draws from the experience of the pedagogical work at the Moscow Higher Technical School imeni Bauman.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

3-58-6-9/34

A Sound Knowledge of the Field of Marxist-Leninist Philosophy for Prospective Engineers

There is 1 Soviet reference.

ASSOCIATION: Moskovskoye vyssheye tekhnicheskoye uchilishche imeni N.Ye. Baumana(Moscow Higher Technical School imeni N.E. Bauman)

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

DIBNER, V.D.; RAZIN, V.K.; RONKINA, Z.Z.

Lithology and conditions governing the formation of Mesozoic sediments on Franz Josef Land. Trudy NIIGA 121:44-74 '62. (MIRA 15:9)

(Franz Josef Land--Rocks, Sedimentary)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

SETKIN, L.; ANISIMOV, V.; BOBROV, N.; RAZIN, Vl.

There are no trifles in traffic regulations. Za rul 18 no.1:10-11 Ja '60. (MIRA 13:5)

1. Reydovaya brigada zhurnala "Za rulem" (for all). 2. Inspektora Otdela regulirovaniya ulichnogo dvizheniya g.Moskvy (for Setkin, Anisimov). 3. Korrespondenty zhurnala "Za rulem" (for Bobrov, Razin).
(Traffic regulations)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, Vl. (Stavropol'-na-Volge)

Conquerors of the Volga. Za rul. 17 no.1:10-11 Ja '59. (MIRA 12:3)

(Volga Hydroelectric Power Station--Dump trucks)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, V. I.

Nurses and Nursing

Nurse Zinaida Kuroktina. Med. sestra No. 2, 1953.

SO: Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, Vladimir Izrailevich; MAKSAKOVA, Ye., red.; TAMULEVICH, T., tekhn. red.

[Happy journey]Schastlivogo puti. Moskva, Molodaia gvardiia, 1962. 107 p. (MIRA 15:8)

(Pilots)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

1. RAZIN, V. I.

2. USSR (600)

4. Kurokhtina, Zinaida

7. Nurse Zinaida Kurokhtina. Med. no. 2 1953

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

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, V.M.

Consideration of the radiation drag in the calculation of target shift of electrons accelerated in a betatron. Zhur. tekh. fiz. 28 no. 8:1845-1848 Ag '58. (MIRA 11:10)

1. Tomskiy politekhnicheskiy institut.
(Electron beams)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

ACC NR: AR7004325 SOURCE CODE: UR/0271/66/000/011/B042/B042

AUTHOR: Razin, V. M.; Strogonov, M. N.

TITLE: Quantitative criteria of operation reliability and effectivity of a Minsk-1 digital computer

SOURCE: Ref. zh. Avtomat. telemekh. i vychisl. tekhn., Abs. 11B327

REF SOURCE: Izv. Leningr. elektrotekhn. in-ta, ch. 2, vyp. 56, 1966, 121-123

TOPIC TAGS: computer reliability, digital computer, computer storage device / Minsk-1 digital computer

ABSTRACT: The computer has been in operation 7-14 hours a day. The temperatures in the lower and upper parts of the cabinet were +5C and +42C, respectively. Observations have shown that the computer is unstable at temperatures close to 0C and +45C in the lower and upper parts of the cabinet, respectively. The temperature drop between the top and bottom of arithmetic-unit cabinets, the control unit, and the magnetic internal storage has been 10--25C depending on the temperature of the atmosphere. To achieve more stable operation, the temperature in the cabinets should be maintained with 10--35C. The following reliability characteristics were recorded over 21 months of Minsk-1 computer operation: mean time between failures, 19.58hrs; mean time of failure location and repair, 2.04 hrs; efficiency of preventive maintenance, 0.614; availability, 0.906; utilization factor, 0.664. Values of λ-characteristics of some units of the computer (at a certainty of 0.9) are given. G. V. [Translation of abstract]

Card 1/1 SUB CODE: 09, 14 UDC: 681.142.322.004

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

ACC NR: AR7004324 SOURCE CODE: UR/0271/66/000/011/B042/B042

AUTHOR: Razin, V. M.

TITLE: Improving the effectivity of the Minsk-1 digital computer

SOURCE: Ref. zh. Avtomat. telemekh. i vychisl. tekhn., Abs. 11B326

REF SOURCE: Izv. Leningr. elektrotekhn. in-ta, ch. 2, vyp. 56, 1966, 139-142

TOPIC TAGS: computer design, digital computer / Minsk-1 digital computer
computer technology

ABSTRACT: Based on some statistical data obtained in the operation of a Minsk-1 computer, the mean time of location and elimination of faults in various parts of the computer (certainty, 0.9) has been estimated. The distribution of location-and-elimination time is assumed to obey the exponential law. Examination of the failure distribution and the mean time has shown that the effectivity of this computer can be considerably improved by cutting down the time of repairing arithmetic units and control units by means of automating the fault location. A block diagram of an attachment is suggested which is promising according to preliminary estimates to yield considerable effect. One figure. Two tables.G. V. [Translation of abstract]

SUB CODE: 09

Card 1/1 UDC: 681.142.322.004

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

66189

SOV/146-59-2-9/23

~~(2), 21(8)~~ 21.2300

AUTHOR: Belov, Ye.M., and Razin, V.M.

TITLE: Extremal Regulator of Betatron Radiation Intensity

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - priborostroyeniye, 1959, Nr 2, pp 52-55 (USSR)

ABSTRACT: To increase the stability of a betatron performance, the method of stabilization of its individual nodes is the most expedient. Practical research has shown that in order to attain a stable betatron performance, a periodical trimming of the electron injection phase in respect to the betatron magnetic field alteration is necessary, as the dependence of electrons entrainment on the injection impulse phase is very critical. Alteration of entrained electron number from cycle to cycle can bear a static and continuous character. Static alterations are provoked by different casual phenomena affecting the entrainment conditions. Continuous alterations are, on the whole, explained by the influence of variable network tension upon the injection impulse phase. The most efficient method

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SOV/146-59-2-9/23

Extremal Regulator of Betatron Radiation Intensity

of radiation intensity stabilization is the application of a deviation regulator which ensures the necessary injection phase trimming depending on the variation of radiation intensity. Such a regulator ensures the tracing of the maximum radiation intensity independently of the causes of the change. It works under two basic conditions: 1) conditions of automatic scan of radiation intensity maximum, and 2) conditions of automatic tracing of radiation intensity maximum. A block diagram of an extremal intensity regulator is given in Fig 1. 1 = is electronic commutator which ensures the injection impulse formation and realizes its commutation through different channels; 2 = is a synchronizer for starting the betatron injection; 3 = is a radiation meter; it delivers the bearing tension for sanatrons which depends on the alteration of radiation intensity; 4 and 5 are sanatrons; delay of the sanatron 4 is larger by 0.1-0.2 mcsec than that of sanatron 5. The principal layout of the extremal regulator of

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SOV/146-59-2-9/23

Extremal Regulator of Betatron Radiation Intensity

radiation intensity is given in Fig 2. Recommended by the Vtoraya mezhvuzovskaya konferentsiya po elektronnym uskoritelyam (2nd Inter-Vuz Conference on Electronic Accelerators). There are 2 diagrams and 3 Soviet references.

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnic Institute)

SUBMITTED: June 11, 1958

4

Card 3/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

BELOV, Ye.M.; RAZIN, V.M.

Answer to a letter to the editor. Izv.vys.uqhęb.zav.; prib. 3 no.3: 125-126 '60. (MIRA 14:4)

(Betatron)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, V.M.

Diagnostic value of radiography in tumors of the breast. Vop. onk. 11 no.8:27-31 '65. (MIRA 18:11)

1. Iz rentgenodiagnosticheskogo otdeleniya Moskovskoy gorodskoy onkologicheskoy bol'nitsy No.62 (zav. otdelom - V.M.Razin, glavnyy vrach - V.D.Margolin).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

AUTHOR: Razin, V. M. SOV/57-58-8-36/37

TITLE: Consideration of Radiation Retardation in the Computation of the Radial Advance Towards the Target of Electrons Accelerated in a Betatron(Uchet radiatsionnogo tormozheniya v raschete smeshcheniya na mishen' uskorennykh v betatrone elektronov)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Nr 8, pp 1845 - 1848 (USSR)

ABSTRACT: In large betatrons the radial advance of the electrons (moving with high energies and driven by a high acceleration on their trajectories towards the target) is retarded due to the electromagnetic radiation emitted by these electrons. This effect must be taken into account in the computation of the radial advance. The method described in reference 1 is used in solving this problem. For this purpose the distance from the actual position of the trajectory at the moment of trip-out to the target is substituted into the equations as the wanted distance and not the distance from the computed equilibrium trajectory from the target. The problem of compensating the radiation losses can be substituted in a certain

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

Consideration of Radiation Retardation in the Computation of the Radial Advance Towards the Target of Electrons Accelerated in a Betatron SOV/57-58-8-36/37

sense by the equivalent problem of displacing the electrons towards the target. Both problems can be solved by the same method, viz., by an increase of the magnetic field at the circular trajectory. Hence the compensation of the losses due to a radiation retardation can be combined with the increase of the radius in order to effect a trip-out of the accelerated electrons towards the target. In order to accomplish both purposes the following method is suggested: In the final stages of acceleration, when the radius is noticeably reduced such an accelerating magnetic flux pulse is to be applied which is of a duration exceeding that of the normal pulses. Thus a gradual increase of the radius is achieved instead of a reduction of the radius of the equilibrium trajectory. This increase must be balanced as to guarantee an accurate timing of the electron impact on the target. Subsequently the suggested method is mathematically analyzed. Equation (19) is deduced. It specifies the modification of the radius when the radiation losses are compensated for

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

Consideration of Radiation Retardation in the Computation of the Radial Advance Towards the Target of Electrons Accelerated in a Betatron SOV/57-58-8-36/37

according to the method suggested. It simultaneously takes into account the radiation retardation upon the modification of the equilibrium trajectory. There are 2 references, 2 of which are Soviet.

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute)

SUBMITTED: April 18, 1957

Card 3/3

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ACCESSION NR: AP5004677 S/0115/64/000/009/0058/0059

70
18
B

AUTHOR: none

TITLE: Fourth scientific and technical conference on "Cybernetics for the improvement of measurement and inspection methods"

SOURCE: Izmeritel'naya tekhnika, no. 9, 1964, 58-59

TOPIC TAGS: cybernetics, electric measurement, electric quantity instrument, digital computer, electronic equipment, electric engineering conference

ABSTRACT: The conference was held 1-4 July at the All-Union Scientific Research Institute of Metrology by the Section of Electrical Measurements of the Council on the Problem of "Scientific Instrument Making" of the State Committee on Coordination of Scientific Research Work in the USSR together with the All-Union Scientific Research Institute of Electrical Measurement Instruments and the Leningrad Regional Administration of the Scientific and Technical Division of the Instrument Making Industry. More than 400 delegates from 29 cities of the country participated. Fifty-seven reports were heard and discussed. Reports were given by: P. V. NOVITSKIY (Leningrad)--"Definition of the Concept of Informational Error in Measurement and its Importance in Practical Use" and "On the Problem of the Average Informational Criterion of Accuracy Throughout the Entire Scale of an Instrument"; Ya. A.

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ACCESSION NR: AP5004677

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KUPERSHMIDT (Moscow)--"On Determination of the Criteria of Accuracy for Measurement Devices"; S. M. MANDEL'SHTAM (Leningrad)--report on a new criterion of accuracy of measurement instruments; P. F. PARSHIN (Leningrad)--report on optimization when using Fourier transforms on electronic digital computers; S. P. DMITRIYEV, G. Ya. DOLGINTSEVA and A. A. IGNATOV (Leningrad)--proposal of a new method for solving problems of optimum filtering for non-stationary random signals and interference; I. B. CHELPANOV--"Calculation of the Dynamic Characteristics of an Optimum Complex Two-Channel System which Uses Signals from a Position Meter and from a Speed Meter"; R. A. POLUEKTOV (Leningrad)--"Optimum Periodic Correction in the Measurement of Continuous Signals"; S. P. ADAMOVICH (Moscow)--"Analysis and Construction of Devices for Correction of Non-linearity and Scaling for Unitary Codes; G. V. GORELOVA (Taganrog)--"A Method for Statistical Optimization in Graduating the Scales of Electrical Measuring Instruments"; M. A. ZSHEL'MAN (Moscow)--"Analog-Digital Voltage Converter with Automatic Error Correction"; B. N. MALINOVSKIY, V. S. KALENCHUK and I. A. YANOVICH (Kiev)--"Automatic Monitoring of the Parameters of the Electrical Signals of Complex Radio and Electronic Equipment"; V. P. PEROV (Moscow)--"Operational Cybernetics as an Independent Scientific Specialization"; Ye. N. GIL'BO (Leningrad)--"On the Problem of Effective Non-linear Scales"; A. I. MARKELOV (Moscow)--"Devices for Preliminary Processing of the Results of Measurements Presented in the Form of

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

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ACCESSION NR: AP5004677 20

Graphic Recordings For Subsequent Introduction of the Information into Universal Digital Computers"; O. M. MOGILEVER and S. S. SOKOLOV (Leningrad)--"On a Method for Reducing Excess Information"; T. V. NIKOLAYEVA (Leningrad)--"A Device for Temporal Discretization of Continuous Signals"; A. A. LYOVIN and M. L. BULIS (Moscow)--"Optimization of the Transmission of Telemetric Information as a Means for Raising the Efficiency and Eliminating Interference"; D. E. GUKOVSKIY (Moscow)--"On a Statistic Approach to the Detection of Events in Automatic Inspection"; M. I. LANIN (Leningrad)--"Method for Calculating the Holding Time of Communications in a Centralized Inspection System or Constant Servicing Time"; O. N. BRONSHTEYN, A. L. RAYKIN and V. V. RYKOV (Moscow)--"On a Single-Line Mass Service System with Losses"; V. M. SHLYANDIN (Penza)--report on circuit designs for direct compensation electrical digital measuring instruments; A. N. KOMOV (Novocherkassk)--report on a new method for compensation of digital bridges; M. N. GLAZOV (Leningrad)--report on the problem of voltage-to-angular rotation conversion; V. S. GUTNIKOV (Leningrad)--"Methods for Construction of Frequency Capacitance Pickups with a Linear Scale"; R. Ya. SYROPYATOVA and R. R. KHARCHENKO (Moscow)--report on the determination of the amplitude-frequency and phase characteristics of PFM and PWM modulators; Ye. I. TENYAKOV (Novocherkassk)--"The Phototransistor as a Switch for Electrical Measurement Purposes"; N. V. MALYGINA (Leningrad)--a report on ways for making universal equipment for measurement of current, voltage and power; P. P. ORNATSKIY and V. I. ZOZULYA (Kiev)--reports on the construction of static voltmeters, wattmeters and

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ACCESSION NR: AP5004677 15

phase meters; A. V. TRIKHANOV, I. G. SMYSHLYAYEV, N. I. SABLIN, V. M. RAZIN and V. A. GORBUNOV (Tomsk)--report on a device for automatic processing of the measurements of vibration amplitude of pneumatic hammers; L. K. RUKINA and V. G. KNORRING (Leningrad) --report on the development of a digital compensator for measuring pressure, force, etc.; N. B. DADUKINA (Leningrad)--report on a method for constructing frequency pickups for gas analysis; Yo. M. KARPOV, V. A. BRAZHNIKOV and B. Ya. LIKHTTSINDER (Kuybyshev)--reports on analysis and recording of boring speeds; Yu. V. PSHENICHNIKOV (Kuybyshev)--"A High Speed Voltage-to-Digital Code Converter for ac Pickups"; G. P. VIKHROV and V. K. ISAYEV (Vilna)--"A Highly Accurate Digital Peak-to-Peak Voltmeter"; and S. M. PERSIN (Leningrad)--"A Low Level Analog-Digital Voltage Converter."

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE, EC

NO REF SOV: 000 OTHER: 000 JPRS

Card 4/4

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

8 (3)

AUTHORS: Razin, V. M., Candidate of Technical Sciences, Chuchalin, I. P., Candidate of Technical Sciences, Kochegurov, V. A., Engineer

SOV/105-59-8-12/29

TITLE: Design of Anode Current Dividers

PERIODICAL: Elektrichestvo, 1959, Nr 8, pp 54 - 57 (USSR)

ABSTRACT: This is an analysis of the three-anode current divider shown by figure 1. It is assumed that the voltage drop across the gas tube at the limit of the permissible maximum current is independent of the magnitude of the anode current. Hence the following approximations can be made: (1) Neglect of the ohmic resistances and the core losses of the current divider coils. (2) Neglect of the influence of the anode current divider and of the tubes upon the processes in the main circuit, and (3) the magnetic leakage between the windings. This implies that each winding has the same inductivity, and that the mutual inductivity is half the inductivity of one winding. The latter condition is satisfied if either the windings are zigzag connected, or, if each leg carries one winding, by providing for small air gaps. Anode current dividers must be designed as to secure ignition of each tube and a distribution of the mean and peak anode cur-

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

rents which is uniform within a certain limit. The requirements for satisfying the first condition are investigated under the above assumptions. The formulas for the ignition of the first, second, and third tube are given, and formula (10) is derived for the case of n banked tubes in the circuit. The system of differential equations (11) holds for the simultaneous operation of all three tubes. Formula (15) specifies the average current carried by one tube, and formula (17) the mean current deviation. The irregularities of the distribution of the average anode currents are expressed in relative units (18), whereas formula (19) gives the inductivity of the divider windings for three, and (20) for the same, the latter when the circuit consists of n parallel branches. The control pulses arriving at the tube grids must have a very short rise time in order to reduce the ignition straying. The circuit shown in figure 2 appears to be best suited for this purpose. If the pulse repetition frequency is small, the irregularity of current distribution should be estimated not from the average value, but from the peak value. The inductivity of the divider is, for this case, given by formula (21). The authors also made experiments

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

Design of Anode Current Dividers

SOV/105-59-8-12/28

on a parallel operation of tubes with multi-legged anode current dividers in a simple single-phase rectifier and with two-legged anode current dividers and separate capacitors for a commutation of the discharge current of the condensers. In both cases, favorable results were obtained. Under normal operating conditions none of the tubes showed ignition failure. The oscillograms of the total current and of the tube currents are shown by figure 4. There are 7 figures and 3 Soviet references.

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute)

SUBMITTED: May 31, 1958

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APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

BELOV, Ye.M.; RAZIN, V.M.

Optimalizing monitor of the radiation intensity of a betatron.
Izv. vys. ucheb. zav.; prib. no.2:52-55 '59. (MIRA 13:2)

1.Tomskiy politekhnicheskiy institut. Rekomendovana Vtoroy mezhvuzovskoy konferentsiyey po elektronnym uskoritelyam.
(Betatron)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

ACC NR: AR6027186 SOURCE CODE: UR/0271/66/000/005/B018/B018

AUTHOR: Razin, V. M.; Yefimov, Yu. N.; Strogonov, M. N.

TITLE: Certain problems in automatic checking of digital computer malfunctions 16C

SOURCE: Ref. zh. Avtomat telemekh i vychisl tekhn, Abs. 5B142

REF SOURCE: Izv. Tomskogo politekhn. in-ta, no. 138, 1965, 105-107

TOPIC TAGS: special purpose computer, digital computer, computer application

ABSTRACT: The utilization of a special-purpose logic computer in the form of an adaptor unit for testing a least number of basic elements is examined. The adaptor unit must be relatively small since it is intended for testing a small quantity of elements. It must also be sufficiently reliable and have self-diagnostic features. It is assumed that the tested machine has a built-in self-checking system consisting of a portion of the total number of elements whose operation may be checked without making the tested machine overly complex. This implies the power supplies, periodic clock pulse generators, power amplifiers, etc. The diagnostic testing system in this case must encompass only those elements in its test which are not tested by the auto-control system. [Translation of abstract] Bibliography of 5 titles. B. U.

SUB CODE: 09

Card 1/1 UDC: 681.142.32.004.5

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

105-9-9/32

AUTHORS: Chuchalin, I.P., Engineer, Razin, V.M., Dotsent

TITLE: Calculating Back-Voltage Extinguishing in a Pulse Circuit. (Raschet Gasheniya obratnogo napryazheniya v impul'snoy skheme)

PERIODICAL: Elektrichestvo, 1957, Nr 9, pp. 39 - 41 (USSR)

ABSTRACT: For the calculation the authors assume that the back voltage of the commutating apparatus 1, according to its magnitude of resistance R (in series with the commutating apparatus 2) is extinguished completely or partially on the occasion of the connection of the additional commutating apparatus at the moment when the current i_L of the commutating apparatus 1 passes its maximum value, or a little later. The investigations were carried out in a scheme using ignitrons I-100/100 as commutating apparatuses. The comparison of the curves obtained for the transition process with the calculation method given here with those of the experiments showed a satisfactory exactness of the theoretical calculations. There are 4 figures.

ASSOCIATION: Tomsk Polytechnical Institute. (Tomskiy politekhnicheskiy institut)

SUBMITTED: April 11, 1957

AVAILABLE: Library of Congress

Card 1/1

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

AKIMOCHKIN, P.V.; TSYTSARKIN, V.N.; RAZIN, V.N.

Results of experimental investigations on selecting compositions of equivalent materials. Vop. gor. davl. no.7:66-69 '61. (MIRA 13:7)

1. Tomskiy politekhnicheskiy institut im. S.M.Kirova.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, V.N., inzh.

Laying concrete in constructing the power house of the Stalingrad Hydroelectric Power Station. Gidr. stroi. 30 no.10:8-12 O '60. (MIRA 13:10)

(Stalingrad Hydroelectric Power Station--Equipment and supplies)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

KAZIK, Vilen Petrovich

[Under the eyes of time] U vremeni na vidu. Moskva, Molodaia gvardiia, 1963. 106 p. (MIRA 17:10)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, Vilen Petrovich; LANINA, L.I., red.; RAKITIN, I.T., tekhn. red.

[Heights]Vysoty. Moskva, Izd-vo "Znanie," 1962. 45 p. (Novoe v zhizni, nauke, tekhnike. X Seriia: Molodezhnaia, no.18) (MIRA 15:9)

(Tyrnyauz region--Gold mines and mining)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

D'YAKONOV, I.A. ; DOMAREVA-MANDEL'SHTAM, I.V.; RAZIN, V.V.

Reaction of diazoacetic ester with 1,3-cyclohexadiene. Zhur. ob.khim. 33 no.10:3437-3438 O '63. (MIRA 16:11)

1. Leningradskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

D'YAKONOV, I.A.; KOMENDANTOV, M.I.; RAZIN, V.V.

Synthesis of new derivatives of bicyclobutane. Zhur.ob.khim. 33 no.7:2420-2421 Jl '63. (MIRA 16:8)

1. Leningradskiy gosudarstvennyy universitet.
(Bicyclobutane)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, Yevgeniy Andreyevich; KUZNETSOV, V.B., polkovnik zapasa, red.; MYASNIKOVA, T.F., tekhn. red.

[History of military art] Istoriia voennogo iskusstva. Moskva, Voen. izd-vo M-va oborony SSSR. Vol.3. [The art of war during the period of manufacture, the 16th and 17th centuries] Voennoe iskusstvo manufakturnogo perioda voiny XVI - XVII vv. 1961. 733 p. (MIRA 15:2)

(Military art and science)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

U-TSZY [Wu, Tsu]; SIDORENKO, Ye.I., podpolkovnik [translator]; RAZIN, Ye.A., general-mayor, professor, redaktor; OSIPOV, I.A., polkovnik, redaktor; SOROKIN, V.V., tekhnicheskiy redaktor

[Military art] Ob iskusstve vedeniia voiny. Moskva, Voen.izd-vo M-va obor.SSSR, 1957. 39 p. (MIRA 10:10)
(China--Military art and science)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

SUN TZU; SIDORENKO, Ye.I., podpolkovnik [translator]; RAZIN, Ye.A., professor, general-mayor, redaktor; OSIPOV, I.A., polkovnik, redaktor; MYASNIKOVA, T.F., tekhnicheskiy redaktor

[Treatise on the art of war. Translated from the Chinese] Traktat o voennom iskusstve. [Perevod s drevnekitaiskogo i primechaniia E.I. Sidorenko] Moskva, Voen.izd-vo Ministerstva obor. SSSR, 1955. 121 p. (Military art and science) (MLRA 9:7)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

BOUCHER, J.; RAZIN, Ye.A., professor general-mayor, redaktor; DEYEV, M.N., redaktor; BOGDANOV, V.P., tekhnicheskiy redaktor; SHAPOVALOV, V.I., tekhnicheskiy redaktor

[Tanks in the war] Bronetankovoe oruzhie v voine. Pod red. E.A. Razina. Moskva, Izd-vo inostrannoi lit-ry, 1956. 330 p. (MLRA 10:1)
(World War, 1939-1945--Campaigns)
(Tanks (Military vehicles))

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZIN, Yevgeniy Andreyevich; OSIPOV, I.A., polkovnik, red.; MYASNIKOVA, T.F., tekhn.red.

[History of the military art] Istoriia voennogo iskusstva. Moskva, Voen.izd-vo M-va obor.SSSR. Vol.2. [The art of war in the feudal era] Voennoe iskusstvo feodal'nogo perioda voiny. 1957. 653 p. (MIRA 10:12)

(Military art and science--History)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

27

Peroxide value and refractive index of fats during storage. A. Razma and N. Semenova. *Myasnaya Ind. S. S. S. R.* 10, No. 1, 33-4(1939); *Chimie & industrie* 42, 1046. The peroxide value and *n* of fats increase considerably during storage. The increase in the *n* of pork fat is closely related to the increase in peroxide value; its increase is also parallel to that of the Ac value of the fat.

A. Papineau-Couture

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, A.

Improve the training in safety regulations. Avt.dor. 25 no.9:32 S '62. (MIRA 15:9)

1. Glavnyy inzhener dorozhno-ekspluatatsionnogo uchastka No.22 Upravleniya dorozhnym khozyaystvom, Moskva-Khar'kov.
(Road construction—Safety measures)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

L 59335-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5015422 UR/0020/65/162/004/0821/0823

AUTHOR: Korotkov, A. A. (Corresponding member AN SSSR); Anufriyeva, L. A.; Petrov, G. N.; Razina, A. G.

TITLE: Role of soluble organoaluminum compounds in the polymerization of isoprene with a complex catalyst

SOURCE: AN SSSR. Doklady, v. 162, no. 4, 1965, 821-823

TOPIC TAGS: isoprene polymerization, aluminum compound, titanium compound, polymerization catalyst, stereospecific polymerization, catalyst poisoning, organoaluminum compound

ABSTRACT: The article discusses the role of the soluble part of the cocatalyst in the reaction of stereospecific polymerization of isoprene. The catalyst is usually prepared by combining equimolar amounts of solutions of $TiCl_4$ and triisobutylaluminum (R_3Al). The precipitate of β-$TiCl_3$ which is then formed contains 10 to 40% organoaluminum compounds strongly bound to $TiCl_4$. Experiments carried out by the authors showed that the β-$TiCl_3$ precipitate does not polymerize isoprene if its separation from the solution and the washing out of the organoaluminum compounds are performed in argon. The catalytic activity of β-$TiCl_3$ is restored by shaking the precipitate in a solution of R_2AlCl. It is postulated that an irreversible oxidation of the active polymerization centers by trace amounts of oxygen present in the argon takes place, for example

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L 59335-65

ACCESSION NR: AP5015422

$$TiCl_3 \cdot ClAlR_2 + {}^1/_2O_2 \rightarrow TiCl_3 \cdot ClAl(OR)R.$$

The restoration of catalytic activity upon addition of R_2AlCl will thus result from the exchange reaction

$$TiCl_3 \cdot ClAl(OR)R + R_2AlCl \rightleftharpoons TiCl_3 \cdot ClAlR_2 + RAl(OR)Cl,$$

which is analogous to the case of vanadium catalysts for the polymerization of isoprene. Experiments on the polymerization of isoprene with a catalyst precipitate washed with hexane in the absence of argon showed that the catalyst consists of complex compounds of β-$TiCl_3$ with dialkylaluminum chloride. The organoaluminum compounds, dissolved or weakly adsorbed on the precipitate, have no effect on the activity of the catalyst, but constitute a "protective" medium against "poisoning" by traces of certain impurities. Orig. art. has: 3 figures, 4 formulas and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva (Scientific Research Institute of Synthetic Rubber)

SUBMITTED: 21Dec64 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 010

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

KIVIT, A.A., red.; ANTONS, R.I., red.; AARNA, A.Ya., prof., doktor tekhn.nauk, retsenzent; KULL', E.V., kand.ekon.nauk, retsenzent; RAZINA, G.M., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Technology and economic aspects of the industrial semicoking of oil shales] Voprosy tekhniki i ekonomiki promyshlennogo polukoksovaniia goriuchikh slantsev. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie. No.2. 1959. 429 p. (MIRA 12:10)

1. Kiviõli Põlevkivikeemia Kombinaat.
(Oil shales)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

FILIPPOVA, Mariya Filippovna, kand.geol.-miner.nauk; ARONOVA, S.M.; AFREMOVA, M.F.; GALAKTIONOVA, N.M.; GASSANOVA, I.G.; GIMPELEVICH, E.D.; KARASEV, M.S.; LYASHENKO, A.I.; MAYZEL', Z.L.; RATEYEV, M.A.; SOKOLOVA, L.I.; SOLOV'YEVA, N.S.; KHANIN, A.A.; SHISHENINA, Ye.P.; SHNEYDER, N.P.; BAKIROV, A.A., red.; VEBER, V.V., red.; DANOV, A.V., red.; DIKENSHTEYN, G.Kh., red.; MAKSIMOV, S.P., red.; POZNYSH, M.A., red.; SAIDOV, M.N., red.; SEMIKHATOVA, S.V., red.; TURKEL'TAUB, N.M., red.; UL'YANOV, A.V., red. [deceased]; KHALTURIN, D.S., red.; SHABAYEVA, Ye.A., red.; RAZINA, G.M., vedushchiy red.; GENNAD'YEVA, I.M., tekhn. red.

[Devonian deposits in the central provinces of the Russian Platform] Devonskie otlozheniia tsentral'nykh oblastei Russkoi platformy. Pod red. M.F.Filippovoi. Leningrad, Gos. nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 404 p. (MIRA 11:4)
(Russian Platform--Geology, Stratigraphic)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

L 1566-66 EWT(1)/EWT(m)/EPA(w)-2/EWP(t)/EWP(b)/EWA(m)-2 LJP(c) JD/AT
ACCESSION NR: AP5019240 UR/0056/65/049/001/0265/0274

44,55

AUTHOR: Fal'kovskiy, L. A.; Razina, G. S. 44,55

TITLE: Electrons and holes in bismuth 27

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 265-274

TOPIC TAGS: bismuth, energy band structure, electron spectrum, crystal lattice structure, cyclotron resonance, magnetic susceptibility, electric conductivity 21,44,55

ABSTRACT: This is a continuation of an earlier paper by the author (with A. A. Abrikosov, ZhETF v. 43, 1089, 1962), devoted to the energy spectrum of the electrons and holes in metals having a bismuth-type lattice. In the present paper a quantitative comparison is made with the theory of the earlier work and experimental data published in the same source on measurements of cyclotron resonance (V. S. Edel'man and M. S. Khaykin, ZhETF v. 49, 107, 1965; Accession Nr. AP5019222), data on oscillations of the magnetic susceptibility (N. B. Brandt et al., ZhETF v. 47, 1711, 1964, and earlier papers), and data on the conductivity (G. E. Smith et al., Phys. Rev. v. 135, A118, 1964; Ye. P. Vol'skiy, ZhETF v. 46, 2035, 1964). The parameters describing the spectra of the holes and electrons in the bismuth lattice, the arrangement of the bands of the carriers in the bismuth, and certain features of the

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ACCESSION NR: AP5019240

18

Fermi surface are all obtained from the experimental data with the aid of a computer and tabulated. Reasons for disparities between the theoretical and experimental results are discussed, especially with respect to the effective mass, but it is concluded that in general the agreement is satisfactory. "The authors thank Ye. G. Shustin for help with the calculations, V. F. Gantmakher, V. S. Edel'man, and A. P. Korolyuk for presenting experimental data prior to publication, and A. A. Abrikosov for a discussion of the work." Orig. art. has: 3 figures, 25 formulas, and 3 tables.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki (Institute of Theoretical and Experimental Physics)

SUBMITTED: 01Feb65 ENCL: 00 SUB CODE: SS

NR REF SOV: 006 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

SEMENOV, Ye.I.; RAZINA, I.S.

New data on lovozerite. Mat. po min. Kol'. poluost. 2:111-113 '62. (MIRA 16:4)

(Lovozerite)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

ACCESSION NR: AT4028288 S/2677/63/000/010/0125/0135

AUTHOR: Nechelyustov, N. V.; Popova, N. N.; Mintser, E. F.; Belevitin, V. V.; Razina, I. S.

TITLE: Selenium and tellurium in lead-zinc deposits of the Alty*n-Topkan ore field

SOURCE: AN SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Trudy*, No. 10, 1963. Redkiye elementy* v sul'fidny*kh mestorozhdeniyakh (rare earth elements in sulfide deposits) 125-135

TOPIC TAGS: selenium, tellurium, galenite, lead-zinc deposits, skarn, sphalerite, pyrite, chalcopyrite, sulfide, effusion

ABSTRACT: Certain regularities in the distribution of selenium and tellurium in the deposits of the Alty*n-Topkan ore fields in the Karamaza area of the USSR, as well as probable conditions and the method of entry of these elements into the crystal lattice of galenite are examined. The authors describe the types of minerals and composition of the separate ore fields in that area. The selenium and tellurium content of sulfides of the various fields are listed in tables. The primary minerals of the various ore fields are galenite, pyrite, chalcopyrite, sphalerite. Samples used in the tests were taken from six different ore fields in

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the area. The selenium and tellurium distribution in galenite in the various fields are listed in graphs. The authors also describe the influence of impurities on the distribution of selenium and tellurium as well as the influence of the depth of formation of their distribution. In the high temperature stage of the process of ore formation, selenium and tellurium accumulated toward the end of the stage and were fundamentally concentrated in galenite. The selenium and tellurium content and the Se:Te ratio in galenite differs sharply in specific samples of the same deposit and corresponds to a known degree to the content and ratio of these elements in other sulfides of the same samples and in the deposit as a whole. Some influence of a number of cations of the admixture elements (bismuth and silver, to a lesser degree antimony and thallium) in galenite is noted, which seems to facilitate the isomorphic entrance into its lattice of the anions, selenium and tellurium. The authors point out the undoubtedly practical value of selenium and tellurium in galenite of the skarn-ore deposits of the Alty*n-Topkan ore fields. Orig. art. has: 4 figures and 5 tables.

ASSOCIATION: Institut minerologii, geokhimii i kristallokhimii redkikh elementov, AN SSSR (Institute of Mineralogy, Geochemistry and the Chemistry of Crystals)

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: ML, EL NO REF SOV: 007 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

SITNIN, A.A.; RAZINA, I.S.

Chemical composition of lithium micas from methasomatically altered granites. Geokhimia no.7:695-699 Jl '63. (MIRA 16:9)

1. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov, Moskva.
(Siberia, Western--Mica--Analysis) (Metasomatism)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

NECHELYUSTOV, N.V.; POPOVA, N.N.; MINTSER, E.F.; BELEVITIN, V.V.; RAZINA, I.S.

Selenium and tellurium in leand-zinc deposits of the Altyn-Topkan ore zone. Trudy IMGRE no.10:125-135 '63. (MIRA 17:5)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

PERLOVEV, V.G.; MASINA, I.S.

Find of phosphorus in beryl. Trudy Min. muz. no.15:247-250 '64.
(MIRA 17:11)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, I. S.

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Colorimetric determination of palladium by nonaqueous solution of nitrosodiphenylamine. E. S. Pryberal'skii, V. I. Shlenskaya, and I. S. Razina. *Vestnik Moskov. Univ., Ser. Mat., Mekh., Astron., Fiz. i Khim.* 12, No. 1, 111 (1957).—To a soln. contg. up to 5 γ Pd add 2 ml. of buffer soln. pH 1.8, 5 ml. 0.005% of p-nitrosodiphenylamine in an aq. alc. soln., dil. to 10 ml. with H_2O, heat 30 sec. at 55-60°. Cool, ext. 3 times with 2 ml. BuOH and det. photometrically at 510-530 mμ. The Pd forms with I ($C_6H_5NHC_6H_4NO$)$_2PdCl_2$ which is more stable in BuOH soln. than in H_2O. In the concn. range from 0.5 to 5 γ Pd obeys Beer's law. The method allows the detn. of Pd in the presence of Co, Ni, Fe, Cu, and Ir. The error is not higher than 2-3%.

M. Charmandarian

MT

Moscow State U., Chem Analyt. Chem.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

AFINOGENOVA, S.A.; DRUZHININA, K.V.; PANKOV, Yu.A.; RAZINA, L.G.; KREKHOVA, M.A.

Conference on the biochemistry of corticosteroids and their use in clinical practice. Vop.med.khim. 5 no.5:393-397 S-O '59. (MIRA 13:2)

(STEROIDS)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

[illegible] I.G.

[illegible] of [illegible] phosphate and [illegible]-6-phosphate on the formation of corticosteroids from [illegible]-progesterone in slices of guinea pig adrenals. Biokhimiia [illegible] .5:913-921 S-O '65. (MIRA 18:10)

1. [illegible] Khimii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, L.G.

Effect of cortisone acetate on the activity of transaminases in rabbit tissues. Vop.med.khim. 6 no.2:136-145 Mr-Ap '60. (MIRA 14:5)

1. Laboratory for the Study of Nervous and Hormonal Regulation of Biochemical Processes, Institute of Biological and Medical Chemistry, the U.S.S.R. Academy of Medical Sciences, Moscow.
(CORTISONE) (TRANSAMINASE)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

YUDAYEV, N.A.; RAZINA, L.G.

Study of the stimulating effect of ACTH and reduced triphosphopyridine nucleotide on the formation of corticosteroids from cholesterol-4-C^{14}. Vop. med. khim. 9 no.6:597-600 N-D '63. (MIRA 17:10)

1. Laboratoriya biokhimii gormonov i gormonal'noy regulyatsii biokhimicheskikh protsessov Instituta biologicheskoy i meditsinskoy khimii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, L.G.

Byosynthesis of carnosine by muscle tissue reproduced in vitro. Dokl.AN SSSR 111 no.1:161-164 N-D '56. (MLRA 10:2)

1. Institut biologicheskoy i meditsinskoy khimii Akademii meditsinskikh nauk SSSR. Predstavleno akademikom V.A.Engel'gardtom.
(CARNOSINE) (TISSUE CULTURE)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, L. G.

T-2

USSR/Human and Animal Physiology - Metabolism. Nitrous Metabolism.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 45688

Author : Razina, L.G.
Inst :
Title : The Place Where Carnosine Biosynthesis Occurs in the Organism.

Orig Pub : Byul. eksperim. biol. i meditsiny, 1957, 43, No 5, 87-91.

Abstract : Twenty-four hours after young rabbits were subcutaneously injected with histidine-2-C^{14} (I), about 5-7 percent of the injected preparation was found in the muscles, most of it in the component of the proteinless fraction, carnosine (II). I was not absorbed by the anserine of muscles in rats. I and II absorption intensity by the muscles of rats in whom the liver was isolated from the blood circulation, and also of gastroenterectomized, hepatectomized, and

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KIR'YAKOV, G.Z.; RAZINA, N.F.; DUNAYEV, Yu.D.

Insoluble anodes based on lead. Trudy Inst.khim.nauk AN Kazakh. SSR 6:3-53 '60. (MIRA 14:4)

(Electrodes, Lead)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

ZABOTIN, P.I.; RAZINA, N.F.; KIR'YAKOV, G.Z.

Polarographic investigation of the effect of the medium on the pH of chromium hydroxide deposition. Izv.AN Kazakh. SSR. Ser.khim. no.1:32-39 '61. (MIRA 16:7)
(Hydrogen-ion concentration) (Chromium plating)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, N.F.; ZABOTIN, P.I.; KIR'YAKOV, G.Z.

Effect of some additions on the buffer properties of trivalent chromium solutions. Izv.AN Kazakh. SSR. Ser.khim. no.1:40-46 '61. (MIRA 16:7)

(Chromium plating) (Hydrogen-ion concentration)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

ZABOTIN, P.I.; RAZINA, N.F.; KIR'YAKOV, G.Z.

Stability of bivalent chromium in aqueous solutions. Trudy Inst. khim. nauk AN Kazakh. SSR 9:42-48 '62. (MIRA 16:6)

(Chromium compounds) (Oxidation)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

ZABOTIN, P.I.; RAZINA, N.F.; KIR'YAKOV, G.Z.

Oxidation of trivalent chromium on a lead anode. Trudy Inst. khim. nauk AN Kazakh. SSR 9:49-54 '62. (MIRA 16:6)

(Chromium compounds) (Oxidation)
(Electrodes, Lead)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RA[illegible], [illegible].F.; [illegible]ARCTIN, [illegible].; KIR'YAKOV, G.Z.

Effect of the permeability of diaphragms on chromium electrodeposition from sulfate solutions. Trudy Inst. khim. nauk AN Kazakh. SSR 12:69-77 '64. (MIRA 18:2)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, N. F.

5(4) PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, O.A. Yesin, Professor; S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor, S.I. Zhdanov (Resp. Secretary); B.N. Kabanov, Professor, Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Losev, P.D. Lukovtsev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and G.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodeposition and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Zaretskiy, S.A., I.G. Zharnitskiy (Deceased), and I.A. Bogdanova. Anodic Behavior of Manganese and Its Alloys 723

Razina, N.F. (Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E. Drerzhinskogo; Institut khimii AN KazSSR - Dnepropetrovsk Institute of Chemical Technology imeni F.E. Dzerzhinskiy; Institute of Chemistry, Academy of Sciences, KazSSR). Electrode Processes at a Lead Anode and Its Corrosion During the Electrolysis of Sulfuric Acid Solutions 729

Discussion [P.P. Tsyb and contributing authors] 732

PART IX. CHEMICAL SOURCES OF CURRENT 735

Bagotskiy, V.S. Electrode Processes in New Electrochemical Sources of Current 737

Card 29/34

Kasparov, Ya. B., E. O. Yampol'skaya, and B. N. Kabanov. Role of Barium Sulfate in the Negative Plate of a Lead Battery 744

Koval', I.I., and V. I. Barilenko. Mechanism of the Loss of Efficiency in the Active Material of the Positive Electrode of a Lead Battery 748

Krivolapova, Ye. V., E. S. Vaysberg, and B. N. Kabanov. Investigating a Lead Dioxide Electrode for Potential Drop and Oxygen Evolution 757

Kryukova, T.A. (Vsesoyuznyy nauchno-issledovatel'skiy institut istochnikov toka-All-Union Scientific Research Institute of Electric Power Sources). Growth of Zinc Dendrites in Some Swelling Polymers 762

Plerov, V. N. (Gor'kovskiy politekhnicheskiy institut imeni

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, N.F.; KIR'YAKOV, G.Z.

Lead-dioxide electrodes. Izv.AN Kazakh.SSR.Ser.khim. no.2:26-31 '59. (MIRA 12:8)

(Electrodes, Oxide)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

STENDER, Vladimir Vil'gel'movich, prof., doktor tekhn. nauk. Prinimali uchastiye: KSENZHEK, Oktavian Stanislavovich, dots., kand. tekhn. nauk; RAZINA, Ninel' Fedorovna, dots., kand. tekhn. nauk; SAGOYAN, Leonid Nikolayevich, dots., kand. tekhn. nauk; SLUTSKIY, Iosif Zinov'yevich, dots., kand. tekhn.nauk; GALINKER, I.S., prof., otv. red.; TRET'YAKOVA, A.N., red.; TROFIMENKO, A.S., tekhn. red.

[Applied electrochemistry] Prikladnaia elektrokhimiia. Khar'kov, Izd-vo Khar'kovskogo gos.univ. im. A.M.Gor'kogo, 1961. 538 p. (MIRA 15:6)

(Electrochemistry)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, N. F.

Destruction of lead anodes in electrolysis of sulphate solutions. N. F. Razina, M. T. Kozlovskii and V. V. Stender (Dokl. Akad. Nauk SSSR, 1956, 111, 404—406).—A review of the works of the author and others into the effects of alloying various metals with the anode, the presence of impurities in the electrolyte, the anode surface structure, and the catalytic action of compounds formed on the anode.

P. Collins.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

S/137/62/000/003/057/191
A006/A101

AUTHORS: Zabotin, P. I., Razina, N. F., Kir'yakov, G. Z.

TITLE: Polarographic investigation of the effect of the medium on pH of chromium hydroxyde deposition

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 3, 1962, 31 - 32, abstract 3G213 ("Izv. AN KazSSR, Ser. Khim". 1961, no. 1 (19), 32 - 39, Kaz. summary)

TEXT: The polarographic method was used to study pH of $Cr(OH)_3$ formation in $Cr_2(SO_4)_3$ solutions with $3.8 \cdot 10^{-3}$ M Cr-concentration in the presence of 0.1 M Na_2SO_4, 0.2 M $(NH_4)_2SO_4$ and a series of buffer admixtures. The authors revealed the effect of these admixtures upon the reduction of Cr^{3+} on the Hg-electrode. They showed the increase in pH of $Cr(OH)_3$ deposition in the presence of $(NH_4)_2SO_4$, urea, and semicarbazide, as compared to Na_2SO_4 solution. Stable complex Cr^{3+} compounds are formed with citric and tartaric acids; such compounds do not form Cr-hydroxides at any pH values of the solution and are not reduced on the Hg-electrode at pH > 2.5 - 3.5. There are 24 references.

Ye. Layner

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

ACCESSION NR: AT4010613 S/3051/63/000/000/0207/0211

AUTHOR: Razina, N. F.

TITLE: Oxide anodes

SOURCE: Kataliticheskiye reaktsii v zhidkoy faze. Trudy* Vsesoyuznoy konferentsii. Alma-Ata, 1963, 207-211

TOPIC TAGS: anode, oxide anode, electrochemistry, electrode manufacture, anodic precipitation, electrode corrosion

ABSTRACT: The article reviews Soviet work on oxide anodes made of PbO_2, Fe_3O_4, SnO_2 and Sb_2O_3. Electrodes can be prepared from these oxides by melting and casting, a process common for magnetite; by oxidizing iron in a steam medium at 800-900C; by compressing and sintering an oxide mixture in air or in a protective medium at high temperatures, a universal method for all the oxides containing any impurity; and by anodic precipitation, a method which is limited to the preparation of a PbO_2 anode. Electrodes made of lead dioxide, tin dioxide, magnetite, magnetite with 5% TiO_2, and iron oxide with 5% TiO_2 were subjected to corrosion tests with 2N H_2SO_4. All the above materials except magnetite showed a high resistance to corrosion. Curves showing the dependence of anodic potentials on the current density gave extremely high potentials for SnO_2 anodes. The unique applicability of a PbO_2 anode

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

SOV/137-57-11-22744

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 302 (USSR)

AUTHORS: Przheval'skiy, Ye. S., Shlenskaya, V. I., Razina, I. S.

TITLE: Colorimetric Determination of Palladium With n-nitrosodiphenylamine Employing Non-aqueous Solvents (Kolorimetricheskoye opredeleniye palladiya n-nitrozodifenilaminom s primeneniyem nevodnykh rastvoriteley)

PERIODICAL: Vestn. Mosk. un-ta. Ser. matem., mekhan., astron., fiz., khimii, 1957, Nr 1, pp 111-116

ABSTRACT: A method was developed for the colorimetric determination of Pd with n-nitrosodiphenylamine (I) in non-aqueous solvents with a relative error of 2 - 3%. I and its analogues produce compounds with Pd salts that are colored from yellow to purple brown. A solution of $PdCl_2$ and a 0.005% water-alcohol solution of I were used. Solutions of a Pd compound with I dissolved in n-butyl alcohol (II) comply with Beer's law within the 0.5 - 2.5 γ Pd concentration range, with a 0.05 γ Pd interval, and within the 1 - 5 γ Pd range with a 1-γ interval when the total volume of the solution is 10 cc. The sensitivity of the reaction is 0.05 γ/cc at λ 533 mμ. To a solution

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Colorimetric Determination of Palladium (cont.)

containing up to 5 γ Pd 2 cc of a pH 1.8 buffer solution and 0.5 cc of I are added and the volume is brought up to 10 cc with water The reaction mixture is heated for 30 sec at 55 - 60°C cooled, and extracted with three 1-cc doses of II in the course of 2 min. Co, Ni, Fe, Cu, Pt, and Ir do not interfere $IrCl_6^{2-}$ is reduced with 3 - 4 drops of 0.5N $FeSO_4$. Colorimetric determination of Pd in an aqueous medium in the presence of these elements is impossible For the determination of the composition of the Pd compound the isomolar series method is used It is established that the compound of Pd with I in II can be expressed by the formula $(C_6H_5NH \cdot C_6H_4 \cdot NO)_2 \cdot PdCl_2$.

K K.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, I. S.

537. **Colorimetric determination of palladium by means of 4-nitrosodiphenylamine with the use of non-aqueous solvents.** E. S. Fraheval'skii, V. I. Shlenskaya and I. S. Razina (Dept. Anal. Chem., Moscow Univ.). *Vestn. Moskov. Univ.*, 1957, (1), 111-116.—The composition of the purple-brown complex of Pd and 4-nitrosodiphenylamine extracted from aq. soln. at pH 1·8 by *n*-butanol corresponds to $(C_6H_5NH{\cdot}C_6H_4{\cdot}NO)_2{\cdot}PdCl_2$. To determine Pd ($\simeq 5\ \mu g$), the soln. is mixed with 2 ml of a buffer soln. of pH 1·3 and 0·5 ml of a 0·005% aq.-alcoholic soln. of 4-nitrosodiphenylamine, then diluted to 10 ml, heated at 55° to 60° for 30 sec., cooled and extracted three times with 2-ml portions of *n*-butanol. The extinction of the combined extracts at 533 mμ is measured. No interference is caused by the presence of Co, Ni, Cu, Fe, Ir and Pt.

G. S. Smith

4E3d } 2
4E4j } 6

1/1 NS NB

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, L.G. Cand Biol Sci -- (diss) "On the methods and site of ~~the~~ formation of carnosine in the organism." Mos,1957. 15 pp 20 cm. (Acad Med Sci USSR. ~~Inst~~ Inst of Biology and Medical Chemistry) . 200 copies. (KL, 23-57, 110).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, L.G.

Site of biosynthesis of carnosine in the organism [with summary in English]. Biul.eksp.biol. i med. 43 no.5:87-91 My '57. (MIRA 10:10)

1. Iz laboratorii nervnoy i gormonal'noy regulyatsii biokhimicheskikh protsessov (zav. - prof. N.A.Yudasov) Instituta biologicheskoy i meditsinskoy khimii (dir. - deystvitel'nyy chlen AMN SSSR prof. V.N. Orekhovich) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR S.Ye.Severinym.

(CARNOSINE, metab.
place of biosynthesis in organism, reserch in rats (Rus))

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, M.F.; KOZLOVSKIY, M.T.; STENDER, V.V.

Lead anode destruction in the electrolysis of sulfate solutions. Dokl. AN SSSR 111 no.2:404-406 N '56. (MLRA 10:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E. Dzerzhinskogo. Predstavleno akademikom S.I. Vol'fkovichem.
(Electrodes) (Lead—Electrometallurgy)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

S/137/62/000/001/204/237
A154/A101

AUTHORS: Razina, N. F., Zabotin, P. I., Kir'yakov, G. Z.

TITLE: The effect of certain additives on the buffer properties of trivalent chromium

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 91, abstract 1I643 ("KazSSR Gylym Akad. khabarlary, Izv. AS KazSSR. Ser. khim.", 1961, no. 1[19], 40-46, Kazakh summary)

TEXT: Pure salts of Cr^{3+} (sulfates and especially chlorides) have a very low buffer capacity when pH = 2-3, and an even lower buffer capacity when pH = 3-4. Additions of NH_4Cl and $(NH_4)_2SO_4$ increase the buffer capacity of the solution scarcely or not at all. The buffer capacity of sulfuric-acid and hydrochloric-acid solutions of Cr^{3+} can be raised several times by the introduction of buffers in an amount of 2-3 moles/l. Solutions changing color when the buffer is added to them have a particularly high buffer capacity, probably as a result of complex formation. There are 10 references.

Ye. Layner

[Abstracter's note: Complete translation]

Card 1/1

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

S/850/62/009/000/003/012
B117/B186

AUTHORS: Zabotin, P. I., Razina, N. F., Kir'yakov, G. Z.

TITLE: Oxidation of trivalent chromium on lead anode

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk. Trudy. v. 9. Alma-Ata, 1962. Elektrokhimiya rastvorov i metallicheskikh sistem, 49-54

TEXT: The effect of current density and some other factors on the oxidation of Cr III - Cr VI was studied. A 100% yield in Cr VI was shown to be possible only at very low current densities (30 - 100 a/m^2). The current yield of Cr VI is reduced considerably by an increase in current density, irrespectively of the ratio Cr III : Cr VI. An addition of Fe III which is hardly effective, reduces the current yield of Cr VI slightly, and shifts the anode potential toward negative values. The dependence of the current yield on the current density and on the degree of Cr III oxidation was analyzed by plotting partial polarization curves for the oxidation of Cr III and oxygen formation: One of the causes of this dependence lies in the low values of maximum current density

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(characteristic of anodic Cr III oxidation) at comparatively high concentrations of discharging ions. Polarization increases very much with the current density. This was indicated by the very steep rise of the partial polarization curve for Cr III oxidation (~0.250 as compared to 0.065 in oxygen formation). The specifically high polarization of Cr III oxidation was assumed to have two causes: (1) Cr III cations hardly reach the positive anode surface; (2) Cr VI anions firmly adsorbed on the anode, are difficult to remove. Therefore, these factors naturally depend on the charge of anode surface. Owing to its larger surface, lead oxide is better suited for the oxidation of Cr III - Cr VI than platinum. Pb + 1% Ag or Co addition into the anode space are not to be recommended, as Cr II oxidation is decelerated owing to the depolarization of oxygen formation. There are 3 figures and 1 table.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, N. F.

RAZINA, N. F.: "Electrode processes on a lead anode and its corrosion during the electrolysis of sulfate solutions". Alma-Ate, 1955. Acad Sci Kazakh SSR. Inst of Chemical Sciences. (Dissertations for the degree of Candidate of Chemical Sciences.)

SO: Knizhnaya Letopis' No. 50 10 December 1955, Moscow.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

YUDAYEV, N.A.; SMIRNOV, M.I.; RAZINA, P.G.; DOBBERT, N.N.

Biochemical modifications in muscles following denervation, tenectomy and regeneration of the nervous fibers. Biokhimiia 18 no.6:732-738 N-D '53. (MLRA 6:12)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR, Moscow. (Muscle)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, T., nauchnyy sotrudnik; KOROMYSLOV, B., nauchnyy sotrudnik; KAGANOV, L.

In the land of Vladimir. Prom. koop. 13 no.7:14-18 Jl '59. (MIRA 12:10)

1.Nauchno-issledovatel'skiy institut khudozhestvennoy promyshlennosti (for Razina, Koromyslov). 2.Spetsial'nyy korrespondent zhurnala "Promyslovaya kooperatsiya" (for Kaganov).
(Vladimir Province--Art industries)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

RAZINA, T.D.

Flicker noise of carbon resistors in a frequency band of 1 to 300 cycles. Izv.vys.ucheb.zav.; radiofiz. 3 no.2:234-240 '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.
(Resistors--Noise)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

33222

S/141/61/004/006/009/017
E192/E382

9,3260 (1067, 1139, 1159)

AUTHORS: Malakhov, A.N., Nikonov, V.N. and Razina, T.D.

TITLE Some methods and results of measurements of amplitude- and frequency-fluctuations in oscillators

PERIODICAL Izvestiya vysshikh uchebnykh zavedeniy Radiofizika, v. 4, no. 6, 1961, 1052 - 1064

TEXT Two methods of measurement of the spectral density of frequency fluctuations are known (Ref. 2: D. Middleton - Trans. IRE, ED-1, 56, 1954; Ref. 3: I.L. Bershteyn, Izv. AN SSSR, ser.fiz., 14, 145, 1950). The methods are discussed and evaluated and one of them is employed to measure the parameters of an experimental oscillator. In general, the measurement of the fluctuation spectra in an oscillator is based on the system illustrated in Fig. 1, which consists of: 1 - a discriminator; 2 - detector and 3 - analyser. The quasi-chromatic signal applied to the input of the discriminator is in the form

$$x(t) = A_0 \left[1 + \alpha(t)\right] \cos\left(\omega_0 t + \int \nu(t)dt\right) \qquad (1.1)$$

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001444420014-7

33222

S/141/61/004/006/009/017
E192/E382

Some methods and results of ....

where $\alpha(t)$ and $\nu(t)$ are stationary random processes having a cross-correlation function $\Phi_{\alpha\nu}(\tau) = \overline{\alpha(t)\nu(t+\tau)}$ such that $\bar{\alpha} = 0$, $\bar{\nu} = 0$, $\overline{\alpha^2} \ll 1$ and $\overline{\nu^2} \ll \omega_0^2$. One of the methods of measurement is based on a discriminator containing a tuned circuit; the second method employs a delay line in the discriminator. The basic function of the discriminator consists of converting the frequency modulation of the input signal into amplitude-modulation of the output signal. The voltage at the input of the detector is therefore in the form

$$y(t) = B_0 \left[1 + \beta(t)\right] \cos\left(\omega_0 t + \int \nu_1(t)dt\right) \qquad (1.2)$$

The relative amplitude fluctuations $\beta(t)$ in the signal $y(t)$ are linearly dependent on $\alpha(t)$ and $\nu(t)$ so that the general expression for the spectral density of the fluctuations $\beta(t)$ can be expressed as

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$$W_\beta(\Omega, n) = K_\alpha(\Omega, n)\, W_\alpha(\Omega) + K_\nu(\Omega, n)\, W_\nu(\Omega) + K^0_{\alpha\nu}(\Omega, n)\, W^0_{\alpha\nu}(\Omega) + K^1_{\alpha\nu}(\Omega, n)\, W^1_{\alpha\nu}(\Omega) \qquad (1.3)$$

where $W_x(\Omega)$ is the spectral density of the signal $x(t)$ at the frequency Ω, n is a certain parameter dependent on the setting of the discriminator, $K(\Omega, n)$ are frequency characteristics of the discriminator and $W^0_{\alpha\nu}(\Omega)$, $W_{\alpha\nu}(\ )$ are mixed spectral densities. The detector is followed by a filter which only passes a frequency lower than ω_0. The output signal of the filter contains a mean component $\bar{z}$ and fluctuations $\Delta z(t)$ which are proportional to $\beta(t)$. If it is assumed that the detector does not introduce any frequency distortion, the spectral density of the useful signal $\Delta z(t)$ at the output of the filter is

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$$W_{\Delta z}(\Omega, n) = \bar{z}^2 \ell^2 W_\beta(\Omega, n) \qquad (1.4)$$

which is applied to the spectrum analyser. The symbol ℓ in Eq. (1.4) is a multiplier, determined by the type of detector. For a linear detector $\ell = 1$ and for a square detector $\ell = 2$. If a tuned circuit is used in the discriminator the quantity $\beta(t)$ can be expressed by (Ref 5 G.S. Gorelik G A Yelkin - Radiotekhnika i elektronika, 2, 28 1957)

$$\ddot{\beta} + 2\delta\dot{\beta} + \lambda^2\beta = \lambda^2\alpha + \delta\alpha + n\nu \qquad (2.1)$$

This equation is employed to determine the amplitude, frequency and frequency-amplitude fluctuations over $\beta(t)$. In the case of a discriminator based on a delay line the quantities $\beta(t)$, $\alpha(t)$ and $\nu(t)$ are functionally related as follows (Ref 3 and Ref. 6 V.S. Troitskiy - Radiotekhnika i elektronika, 1 818, 1956)

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$$\beta(t) = \frac{1}{1+k^2+2k\cos\psi_0}\left\{\alpha(t) + k^2\alpha(t+\tau_0) + k\left[\alpha(t) + \alpha(t+\tau_0)\right]\cos\psi_0 + k\sin\psi_0\,\Delta\varphi\right\} \quad (3.1)$$

Again the expressions for the spectral density of $\beta(t)$ are derived on the basis of Eq. (3.1). The sensitivity of the measurement equipment of either type depends on the internal noise of the equipment. The noise is primarily produced by the detector and by the analyser. The detector noise consists of flicker and shot noise. The minimum detectable amplitude-spectral density and frequency-fluctuation density are determined by the equipment noise and it is shown that these quantities can be expressed by

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$$W_{\alpha}^{\ldots}(\Omega) = \frac{10^{-7} - 10^{-10}}{\Omega} \qquad (4.8)$$

$$W_{\nu}^{\ldots}(\Omega) = \frac{1}{K_{\nu}(\Omega, n)} \frac{10^{-7} - 10^{-10}}{\Omega} \qquad (4.9)$$

By analysing these formulae it is found that the sensitivity of the two methods is identical if the equivalent quality factor of the tuned circuit is given by

$$Q_K = Q_{\ldots} \equiv nQ_{\ldots} = \operatorname{ctg} \varphi_0 \omega_0 \tau_0 \qquad (4.12)$$

The tuned-circuit method was employed to investigate the fluctuations in an oscillator operating at 100 kc/s and an oscillator of 1.25 Mc/s. Some of the results are illustrated

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in Fig. 5, where W_β is plotted as a function of n The experiments showed that the relative width of the spectral line of the first oscillator was 10^{-6} when an oxide-cathode tube was employed and 10^{-7} when the oscillator was based on a tungsten cathode. The corresponding figures were 5×10^{-7} and 10^{-7} for the oscillator operating at 1.25 Mc/s. It is concluded, therefore, that a substantial portion of the spectral line width in the oscillator is due to the flicker noise of the tubes; this fluctuation component can be eliminated by employing tubes with tungsten cathodes. The authors thank I.L. Bershteyn for making useful criticism. There are 6 figures 1 table and 14 references; 12 Soviet-bloc and 2 non-Soviet-bloc. The English-language references mentioned are Ref. 1 D. Middleton, Quart. Appl. Math., 9, 337; 10, 35, 1952; Ref. 2: D. Middleton - Trans. IRE, ED-1, 56, 1954.

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AUTHOR: Razina, T.D.

TITLE: Flicker Noise in Non-wire Resistors in the Frequency Range of 1 to 300 c/s

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1960, Vol 3, Nr 2, pp 234 - 240 (USSR)

ABSTRACT: The spectral density of the flicker noise was investigated in the resistances of the type VS and MLT, whose nominal values were in the range of 1 to 91 kΩ and the power ratings were 0.25 to 2 W. The spectrum of the flicker noise was measured by means of an analyser whose block schematic is shown in Figure 1. This consisted of:

1) a low-frequency amplifier having a gain of 5×10^4 at the resonant frequency of f = 50 c/s and a bandwidth of 0.5 to 400 c/s at the power level of 0.1; 2) a balanced mixer; 3) a local oscillator operating at a frequency of 440 c/s to 870 c/s; 4) an intermediate-frequency amplifier having a gain of 10^5 and a bandwidth of 0.5 c/s and operating at 440 c/s; 5) a metering device; 6) an oscillograph for the visual observation of the

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investigated noise; 7) an oscillograph for the visual observation of the noise contained in the bandwidth of the intermediate frequency amplifier. It was assumed that the spectrum of the flicker noise could be represented by:

$$E_f = Af^{-\alpha} I^{\beta} R^{\gamma} \qquad (1)$$

where f is the frequency,
R is the resistance and
I is the current passing through the resistance.

The parameters α, β and γ are constants for a given type of resistance. The experimental results obtained with the equipment of Figure 1 are shown in Figures 2-5. Figure 2 represents the dependence of E_f on the current I; the curves were taken at the frequency of 5 c/s for two different resistors. From the figure it is seen that $\beta = 2$. Figure 3 illustrates the dependence of the noise

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spectrum on R for two types of the resistor. From this it is seen that the spectral density of the noise varies from sample to sample; the variation can be as large as 10 to 1 or 100 to 1. Figure 4 shows the dependence of E_f on R for the frequency of 5 c/s and the currents of 1.0 mA and 5.0 mA. The spread of the experimental points in this graph is also considerable but it is possible to determine the slope of the curves. It is found that $\gamma = 2.5$. In order to determine the parameter α in Eq (1), fifty different resistors were investigated. It was found that there is no well defined relationship between the value of α and the value of the resistance. A histogram of α is shown in Figure 5. From this it is seen that the average $\alpha = 1.05$. On the basis of the experiments it is concluded that in the frequency range from 1 to 300 c/s and the currents not exceeding 10 mA, the flicker noise spectrum in VS-type resistors can be expressed by Eq (2); the spectrum for the

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