"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

LAKERNIK, R. M., et al., Kabeln. tekhnika. Nauchno-tekhn. sb. (Cable Technology. Scientific-Technical Collection), 1970, No 61, pp 6-7 (from RZh--Elektrosvyaz', No 9, September 1970, Abstract No 9.64.258)

to 14-25 percent (in comparison with tests at special test fields). The results of cable tests which are recorded on punched tape in the automatic measuring units are fed into electronic computers for statistical processing, which makes it possible operationally to analyze and to adjust the manufacturing process for cables. One illustration, four references. N.S.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--COMPENSATION OF SELECTIVE EXCITATION IN X RAY SPECTROGRAPHIC ANALYSIS BY A COMBINED ADDITIVE METHOD -U-

AUTHOR-(04)-DUIMAKAYEV, SH.I., BLOKHIN, M.A., BELOV, V.T., TSOPOVA, L.N.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(2), 164-6

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--X RAY SPECTROSCOPY, SPECTROGRAPHIC ANALYSIS, FLUORESCENCE SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1844 STEP NO--UR/0032/70/036/002/0164/0166

CIRC ACCESSION NO--AP0118808

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118808

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INTENSITY DECREASE OF THE ANAL. LINE IN X RAY FLUORESCENCE SPECTROGRAPHY IS CAUSED BY ABSORPTION BY ALL COMPONENTS IN THE SAMPLE. EQUATIONS DESCRIBING THE DEPENDENCE OF THIS ABSORPTION ON CONCN. OF COMPONENTS ARE DERIVED AND DISCUSSED. A METHOD IS PROPOSED IN WHICH THE SAMPLE IS DILD. WITH A MATERIAL HAVING ABSORPTION AS SIMILAR AS POSSIBLE TO THE COMPONENT TO BE DETD. DILN. WITH AN EQUAL AMT. OF 66PERCENT NIO-34PERCENT FE SUB2 O SUB3 MIXT. IS SUED TO DET. 5-20PERCENT CO SUB2 O SUB3 IN THE PRESENCE OF 40-80PERCENT ZNO. THE STD. DEVIATION IS 3.4PERCENT, AND FOR THE METHOD OF SINGLE ADDN. IT IS 13.4PERCENT. FACILITY: ROSTOV. GOS. UNIV., ROSTOV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 517.946

TSORAYEV, YA. M., Chair of Differential Equations (Deceased)

"Uniqueness Classes for the Solution of the First Boundary Value Problem in Unbounded Regions and the Cauchy Problem for Nonuniformly Parabolic Equations"

Moscow, Vestnik Moskovskogo Universiteta-Matematika, Mekhanika, No 3, May/Jun 1970, pp 38-44

Abstract: The Cauchy problem in the layer $H\{x=(x_1,x_2,\ldots,x_n) \in R^n,\ 0 \leqslant t \leqslant T\}$ with the initial condition

$$u(x,0)=u_0(x) \qquad (1)$$

is discussed for the parabolic equation

$$Lu = \sum_{i,j=1}^{n} a_{ij}(x,t)\frac{\partial^2 u}{\partial x_i \partial x_j} + \sum_{i=1}^{n} b_i(x,t)\frac{\partial u}{\partial x_i} + c(x,t)u - \frac{\partial u}{\partial t} = f(x,t). \qquad (2)$$

It can in a certain way degenerate to infinity. It is assumed that for any finite point (x, t) contained in H and any real $\alpha_1, \alpha_2, \ldots, \alpha_n$ the following inequalities hold:

1/4

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

TSORAYEV, YA. M., Vestnik Moskovskogo Universiteta-Matematika, Mekhanika, No 3, May/Jun 1970, pp 38-44

$$0 < \sum_{i,j=1}^{n} a_{ij}(x, t)\, a_i a_j \leqslant A(r_1) \sum_{i=1}^{n} a_i^2, \qquad (3)$$

where $$r_1 = \left(1 + \sum_{i=1}^{n} x_i^2\right)^{1/2}, \quad A(r_1) \in C^1 \quad \text{s} \int_0^{\infty} \frac{dy}{\sqrt{A(y)}} = \infty. \qquad (4)$$

It was previously proved under certain additional assumptions relative to the coefficients that the problem (2), (1) has a unique solution in the class of functions u(x,t) satisfying the condition

$$|u(x, t)| \leqslant M \exp\left\{M_1 \left(\int_1^{r_1} \frac{dy}{\sqrt{A(y)}}\right)^2\right\}; \qquad (5)$$

2/4

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

TSORAYEV, YA. M., Vestnik Moskovskogo Universiteta-Matematika, Mekhanika, No 3, May/Jun 1970, pp 38-44

the exponent 2 in this expression can generally not be increased without impairing the uniqueness of the solution. The first boundary value problem for equation (2) is examined under the assumptions (3) and (4) in the cylinder $Q\{x \in \Omega,\ 0 \leq t \leq T\}$, where Ω is an unbounded region of the space R^n. A uniqueness theorem is proved in the class of solutions satisfying the inequality

$$|u(x,t)| \leq M \exp\left\{\varphi\left(\int_1^{\rho} \frac{d\rho}{\sqrt{A(\rho)}}\right)\right\}, \qquad (6)$$

where $\varphi(s) \in C^2\ (0 \leq s < \infty;\ \lim_{s \to \infty} \varphi(s) = \infty)$ is an arbitrary, previously assigned nondecreasing, nonnegative function under the condition that omega narrows sufficiently rapidly at infinity. The rate of narrowing of omega depends on the behavior of the coefficients of the equation and the rate of increase of $\varphi(s)$ as $s \to \infty$. It is noted that this is a new theorem even for uniformly parabolic equations. The Cauchy problem for equation (2) is also studied for

3/4

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

TSORAYEV, YA. M., Vestnik Moskovskogo Universiteta-Matematika, Mekhanika, No 3, May/Jun 1970, pp 38-44

different rates of degeneration in different directions. The uniqueness of the solution in a class of functions subject to an inequality similar to (5) is proved.

4/4

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC: 621.396.669(088.8)

TSORFOS, L. A., Central Design Office of Motion Picture Equipment

"A Device for Noise Suppression"

USSR Author's Certificate No 270007, filed 10 Jul 68, published 13 Aug 70 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1D59 P)

Translation: The proposed device contains a limiter amplifier and a frequency detector whose output is connected to the input of an emitter follower. To improve resistance to interference, the emitter of the follower is connected to the output of the limiter amplifier through the collector-base junction of an auxiliary transistor and through a choke.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC 536.4.088

AMATUNI, A. N., MALYUTINA, T. I., TSORIN, V. G., SHEVCHENKO, YE. B.

"Increasing the Accuracy of Determination of the Coefficients of Linear Thermal Expansion is a Way of Improving the Quality of Mechanisms and Instruments"

Moscow, Izmeritel'naya Tekhnika, No. 7, 1971, pp 40-41

Abstract: Note is taken of the necessity for increasing the precision of measurement of coefficients of linear thermal expansion for design calculations of thermal deformations in machine-tool and instrument production. There is shown the degree of accuracy to which the coefficient of linear thermal expansion of various materials must be known in order to provide for a high degree of reliability of installations working under variable conditions. Note is taken of the fact that dilatometers used for this purpose, either domestically produced or those imported extensively from abroad, do not provide a sufficiently high degree of measurement precision. In addition, the dilatometers being produced by Soviet industry are not of the type required in many instances. Recommendations are made that dilatometers of the appropriate types be produced, and that the ones presently being produced and imported should be subjected to more rigorous testing. Standardized test methods for various dilatometers should be developed. 1 bibliographic entry.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--EFFECT OF ESERINE AND PROSERINE ON CHOLINESTERASE ACTIVITY IN VARIOUS SECTIONS OF RAT BRAIN AND HEART -U-

AUTHOR-(04)-MNDZHOYAN, A.L., AMADYAN, M.G., SHIRINYAN, E.A., TSOVYANOVA, S.T.

COUNTRY OF INFO--USSR

SOURCE--BIOL. ZH. ARM. 1970, 23(1), 3-9

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ALKALOID, CHOLINESTERASE, BRAIN, CEREBRAL CORTEX, HEART, ENZYME ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0036 STEP NO--UR/0427/70/023/001/0003/0009

CIRC ACCESSION NO--AP0137235

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 018

UNCLASSIFIED

CIRC ACCESSION NO--AP0137235 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ESERINE AND PROSERINE (0.05 MG-KG I.P.) LOWERED THE CHOLINESTERASE ACTIVITY MORE IN THE CEREBRAL CORTEX THAN IN THE OTHER PARTS OF BRAIN. PROSERINE, IN CONTRAST TO ESERINE, WAS MORE EFFECTIVE ON HEART CHOLINESTERASE THAN ON BRAIN CHOLINESTERASE.

FACILITY: INST. TONKOI ORG. KHIM., EREVAN, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC: 51:330.115

TSOY, A. Kh., TSKHAY, S. M., DRUZHININ, V. N.

"On Scheduling Excavator Traffic as a Problem of Several Traveling Salesmen"

Tr. In-ta Gorn. dela AN KazSSR (Works of the Institute of Mining, Academy of Sciences of the Kazakh SSR), 1971, 45, pp 9-13 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V536)

Translation: The scheduling of the movements of excavators in quarries is formulated as a problem of several traveling salesmen. Cases with limitations on the length of routes and cycles are considered. Authors' abstract.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Acc. Nr.: AP0046783

USSR

Ref. Code: UR0113

UDC 621.43-233.13:621.822.004.62

TSOY, I. M., and GURVICH, I. B., Candidate of Technical Sciences, Gor'kiy Auto Plant

"Effect of Certain Technological Factors on Unevenness of Wear of Crankshaft Base Bearings"

Moscow, Avtomobil'naya Promyshlennost' (Motor Vehicle Industry), No 1, 1970, pp 36-38

Translation: An investigation was made of the effect of amount of error in the relative positions of adjacent parts and clearance differences on the unevenness of wear of crankshaft base bearings in the GAZ-51 and GAZ-69 engine. The initial tolerances were found for the nonalignment of bearing block bushings, main journal play and clearance difference in bearings. (1 table, 2 illustrations, 2 biblio. ref.)

1/1

REEL/FRAME
19790087

18

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 632.95

AZERBAYEV, I. N., AYTKHOZHAYEVA, M. Zh., TSOY, L. A.

"Acetylene-Containing Ureas"

Alma-Ata, Khimiya atsetilena i tekhnol. karbida kal'tsiya -- sbornik (Chemistry of Acetylene and Technology of Calcium Carbide -- collection of works), "Kazakhstan," 1972, pp 157-160 (from RZh-Khimiya, No 9, May 73, abstract No 9N534 by M. G. Kaplun)

Translation: Substances of the formulas $H_2NCONHC(R)(R')C{\equiv}CH$ (I) and $m\text{-}XC_6H_4NHCONHC(R)(R')C{\equiv}CH$ (II) (R and R' = alkyls or RR' = cycloalkyl, X = H or Cl) are synthesized in reactions of acetylene amines with nitrourea (III), with PhNCO, or with $m\text{-}ClC_6H_4NCO$. Example: 0.01 mole of $Me_2C(NH_2)C{\equiv}CH$ (IV) is added to 0.01 mole of III in 4 ml of distilled water at about 20°C, mixed for 30 minutes at the same temperature, and then at 50-55°C until gases are no longer given off, and then filtered. The filtrate is evaporated to 1/4 original volume, cooled, the precipitate is separated and crystallized from water and then from heptane. 1.09 grams of I (R = R' = Me) are obtained, $C_6H_{10}N_2O$, yield 70.7%, melting point 151°C. The following compounds of type I are synthesized by analogous methods (given are R, R' or RR', molecular formula, yield in % and melting point

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

AZERBAYEV, I. N., et al., Khimiya atsetilena i tekhnol. karbida kal'tsiya -- sbornik, "Kazakhstan," 1972, pp 157-160

in °C): Me, Et, $C_7H_{12}N_2O$, 77.2 103; Me, Pr, $C_8H_{14}N_2O$, 89.7, 64; cyclo-C_6H_{11}, $C_{10}H_{15}N_2O$, 90.4, 129. 0.01 mole of PhNCO is gradually added with cooling to 0.01 mole of IV in 3 ml of absolute C_6H_6. The mixture is held for 40 minutes at 40-50°C, cooled, and evaporated until dry on the following day. The residue is doubly crystallized from heptane giving 1.72 g of II (R = R' = Me, X = H), $C_{12}H_{14}N_2O$, yield 85.1%, melting point 153°C. The following compounds of type II are synthesized by analogous methods (given are R, R' or RR', X, molecular formula, yield in %, melting point in °C): Me, Et, H, $C_{13}H_{16}N_2O$, 86.1, 111; Me, Pr, H, $C_{14}H_{18}N_2O$, 99.6, 104; cyclo-C_6H_{11}, H, $C_{16}H_{19}N_2O$, 95.3, 151; Me, Me, Cl, $C_{12}H_{13}ClN_2O$, 93.2, 144; Me, Et, Cl, $C_{13}H_{15}ClN_2O$, 95.8, 123; Me, Pr, Cl, $C_{14}H_{17}ClN_2O$, 99.8, 91; cyclo-C_6H_{11}, Cl, $C_{16}H_{18}ClN_2O$, 98, 1, 133. The structure of the synthesized compounds I and II is confirmed by the data of IR spectra. The compounds were produced in a search for mutagens, herbicides and soil sterilizers.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

AZERVAYEV, I. N., AITKHOZHAYEVA, M. ZH., TSOY, L. A.

"Method of Producing Mono-or Disubstituted Urea"

USSR Author's Certificate No 281454, field 28/07/69, published 19/03/71. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4N592P by T. A. Belyaeva).

Translation: Substituted ureas with the general formula RNHC(O)NHCR'-R"C=CH(I) (R=H, Ph, C_6H_4Cl; R' and R" = lower alkyl or CR'R"=cyclical radical) are produced by reacting nitrourea (II) or RNCO (III) with substituted acetylene amine. 0.01 mol $Me_2C(NH_2)C{=}CH$ (IV) is added to a solution of 0.01 mol II in 4 ml water at about 20°, agitated 30 minutes at about 20°, then at 50-55° until gas bubbles stop evolving, filtered, evaporated in a vacuum and I (R=H, R'=R"=Me), is separated, yield 70.7%, mp 151° (from water). Similarly, I is produced (R=H) (given are R', R", yield in %, mp in °C): Me, Et, 77.2, 109; Me, Pr, 89.7, 64. Also produced is I [R=H, R'R"C=cyclohexylidiene (CHD)], yield 90.4%, mp 129°. 1.1 g III (R=Ph) is added to a solution of 0.88 g IV in 3 ml C_6H_6 with cooling, heated 40 minutes to 40-50°, cooled, evaporated and I is separated (R'=R"=Me, R=Ph), yield 85.1%, mp 153° (heptane). A similar process produces I (given are R, R', R", yield in %, mp in °C: Ph, Me, Et, 86.1, 111; Ph, Me, Pr, 99.6, 104; m-ClC_6H_4, Me, Me, 93.2, 144; m-ClC_6H_4, Me, Et, 95.8, 123; m-ClC_6H_4, Me, Pr, 99.8, 91; Ph, R'R"C=CHD, 95.3, 151; m-ClC_6H_4, R'R"C=CHD 98.1, 133.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

172 023

UNCLASSIFIED

TITLE--ELECTRON PARAMAGNETIC RESONANCE OF NITROGEN DIOXIDE AT HIGH PRESSURES -U-

PROCESSING DATE--04DEC70

AUTHOR-(03)-GASANOV, E.M., KIM, S.KH., TSOY, T.G.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK UZB. SSR, SER. FIZ.-MAT. NAUK 1970, 14(1), 79-80

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--EPR SPECTRAL LINE, NITROGEN OXIDE, HIGH PRESSURE EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1801

STEP NO--UR/0166/70/014/001/0079/0080

CIRC ACCESSION NO--AP0118768

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 023

UNCLASSIFIED

CIRC ACCESSION NO--AP0118768 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EFFECT OF PRESSURE ON THE WIDTH AND INTENSITY OF THE EPR SIGNAL OF NO SUB2 WAS STUDIED. THE LINEWIDTH INCREASED WITH PRESSURE; 250 OE AT 650 TORR. INTENSITY OF EPR LINE WAS PROPORTIONAL TO THE PARTIAL PRESSURE OF NO SUB2 IN THE GAS.

FACILITY: INST. YAD. FIZ., TASHKENT, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 632.9546.631.472

UMAROV, A. A., Candidate of Agricultural Science, LOY, N. P., and TSOY, Z. I., Candidates of Biological Science Institute of the Chemistry of Plant Material, Academy of Sciences Uzbekistan SSR

"Detoxification and Removal of the Herbicide SKHIB in the Soil"

Moscow, Khimiya v Sel'skom Khozyzystne, No 7, Vol 11, 1973, pp 65-67

Abstract: In field experiments the herbicide SKHIB (5-chloro-N-isopropenyl-benzimidazolone) was effective against annual weeds when applied to cotton fields prior to the germination of the cotton seeds. The time required for the deactivation of SKHIB is 2 to 5 months. During fixation in the soil and during its application in higher doses, its toxicity increases. A high water content of the soil accelerates the deactivation of the herbicide being almost completely deactivated after 8 weeks. Dose of 5 and 10 kg/hectare on soils containing a normal humidity were deactivated in 18 and 22 weeks respectively. Deactivation was determined by a biological method. The herbicide is only weakly leached from the soil. The major part remains in the surface layer.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 591.1.15

TSUDZEVYCH, B. O.

"Effect of RNA and Its Hydrolyzates on Liver Nucleic Acid Metabolism in Radiation Injury"

Visnyk Kyiv. un-tu. Ser. Biol. (Herald of Kiev University -- Biology Series), 1972, No 14, pp 13-17 (Ukrainian, summaries in English and Russian) From RZh-Biologicheskaya khimiya, No 21, 10 Nov 72, Abstract No 21F1342 from summary)

Translation: It is established that whole-body X-irradiation of guinea pigs in a dose of 500 roentgens causes significant disturbances in the content and renewal rate of the phosphorus of liver nucleic acids. Yeast RNA and its alkaline hydrolyzates promote normalization of the content and rate of renewal of the phosphorus of liver nucleic acids of irradiated guinea pigs. With the administration of yeast RNA, the lifespan of guinea pigs after irradiation is increased up to 15-25 days. Control animals, as a rule, die in 10-12 days.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Acc. Nr: AP0047312

Ref. Code: UR 0300

PRIMARY SOURCE: Ukraynskiy Biokhimichniy Zhurnal, 1970, Vol 42, Nr 1, pp 31-34

EFFECT OF RNA ON CONTENT AND RENEWAL OF ATP IN LIVER WITH RADIATION INJURY

E. F. Sopin, B. O. Tsudzevich

Department of Biochemistry of Human and Animals, the T. H. Shevchenko University, Kiev

Summary

The content of ATP decreases in liver after total X-irradiation of guinea-pigs in a dose of 500 r, but the intensity of renewal increases in all the times under investigation on the 1th, 3rd, 7th, 10th day. Yeast RNA favours a rise in the ATP content of the liver in irradiated guinea-pigs as well as has a stabilizing effect on the intensity of ATP and inorganic phosphorus renewal.

A long duration administration of yeast RNA to the normal animals results in increasing ATP in the liver (on the 3rd and 10th day) as well as in rising the intensity of ATP and inorganic phosphorus metabolism in all the times under investigation.

Yeast RNA being administrated, the duration of life of the guinea-pigs after irradiation increases up to 15—20 days. The control animals as a rule dies in 10—12 days.

1/1

REEL/FRAME
19790830

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Acc. Nr: AP0101134

Ref. Code: UR0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 3, pp208-212

PRODUCTION OF ANTIBIOTICS OF AZALOMYCIN F TYPE BY ACTINOMYCES IMBRICATUS N. SP.

~~V. A. Tsyganov~~, Yu. Yu. Konev, N. P. Barashkova, L. Ya. Petrova, S. N. Solovyev

Leningrad Institute for Antibiotics

Three actinomycetes belonging to non-chromogenic actinomycetes were isolated from soils of arid zones of the South regions of the USSR. The aerial mycelium of the cultures was slightly developed of whitish color. The sporophores were spiral, the spores oval with smooth membrane. When grown on soybean media with glucose, the cultures produced antifungal antibiotics close to azalomycin F. Comparison of the isolates with the organism producing azalomycin F described in the literature and close species of actinomycetes allowed to classify it as a new species designated as Actinomyces imbricatus (Konev, Tsyganov, Barashkova) n. sp.

1/1

REEL/FRAME
19850759

6

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Public Health, Hygiene and Sanitation

USSR

UDC 614.73:[621.311.25:621.039

ARKHANGEL'SKAYA, I. G., TSUKANOV, I. F., VERBITSKIY, B. V., and RYAKHOVSKIY, A. V., Institute of Biophysics, Moscow

"Characteristics of Radioactive Aerosols in the Atmosphere of Premises of the Novo-Voronezh Atomic Electric Power Station"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 3, 1970, pp 41-43

Translation: One of the possible factors of the effect of the industrial environment on personnel employed at the atomic electric power station (APS) is the contamination of premises with radioactive aerosols. We determined the concentration of these aerosols in air in the principal industrial premises during various periods of work at the Novo-Voronezh APS, studying the isotope composition of the aerosols, and the doses emitted by them in critical organs of service personnel. To determine the aerosol contents, air samples were collected on filters made of FPP fabric, followed by radiometric determination on the DP-100 apparatus, with the S1-25 counter. The amount of aerosols was calculated by the known method. About 500 samples were collected.

1/7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

ARKHANGEL'SKAYA, I. G., et al, Gigiyena Truda i Professional'nyye Zabolyevaniya, No 3, Mar 70, pp 41-43

Table 1

Concentration of long lived β-active aerosols in the atmosphere of the APS premises

	Concentration ($n \cdot 10^{-13}$ curie/l)	
	Energy conditions	Stopped reactor
Continuously used premises	2-7	1.2-4.2
Periodically used premises	4-5.2	1.2-2.3
Unused premises		1.2-15

The concentrations and isotope composition of aerosols varied. None of the premises tested showed aerosol concentrations exceeding the acceptable air limits for work premises during the test period.

Table 1 shows the content of long lived β-active aerosols in the air of production premises.

2/7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

ARKHANGEL'SKAYA, I. G., et al, Gigiyena Truda i Professional'nyye Zabolevaniya, No 3, 1970, pp 41-43

Analysis of the decomposition curves of aerosol samples showed that in 95-99% of all cases, they consisted of relatively short-lived isotopes with T_{eff}= 20-25 min. Only 1-5% of the activity corresponded to the fraction of the long-lived component (the filters were read after 24 hrs of storage).

The isotope composition of aerosols was determined radiochemically and by means of γ-spectrometry. It was determined that the relatively short-lived aerosols consist primarily of Rb^{88} and Cs^{137} (up to 70%). In addition, this short-lived fraction contains rare earth elements (up to 17%) and barium group elements (about 7%). Thus, the dominant input into the activity of the short-lived component is due to Rb^{88} -- a product of the breakdown of "fission" gas Kr^{88}.

The long-lived fraction of aerosols consits mainly of elements of induced activity of the heat carriers such as: Fe^{59}, Zr^{95}, Zr^{97} and Co^{60} (V. M. Kozlov and co-authors).

The levels due to the activity of individual isotopes during normal utilization of the APS, with consideration for repairs, were calculated (N. G. Gusyev) and

3/7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

ARKHANGEL'SKAYA, I. G., et al, Gigiyena Truda i Professional'nyye Zabolevaniya, No 3, 1970, pp 41-43

reported in units of maximum permissible load (MPL) per organ in question. According to data from the International Commission on Radiological Protection, the exposure period in all calculations was considered to be one hr. All reports on dose levels are this time period. Lungs were selected as the critical organ for dose calculation of relatively short-lived components.

The average annual concentration of short-lived aerosols reaches 10^{-11} curie/l, and the average annual concentration of the long-lived ones — $5 \cdot 10^{-13}$ curie/l. Tables 2 and 3 show the concentrations and dose levels in critical organs due to the relatively short-lived and long-lived components of the aerosols, respectively. It follows from these data that the dose levels in critical organs were not high, amounting to hundredths of MPL. Due to the fact that personnel servicing the station use individual protective masks during work to safeguard the breathing organs, the actual levels should be even lower.

Thus the concentrations of aerosols and the doses of internal irradiation of service personnel were for all practical purposes considerably lower than the maximum permissible level during various work periods at the station.

4/7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

ARKHANGEL'SKAYA, I. G., et al, Gigiyena Truda i Professional'nyye Zabolevaniya, No 3, 1970, pp 41-43

Table 2

Concentration (curie/l) of individual short-lived aerosol components and their dose in critical organs.

Isotope	Concentration	Dose load (in units of maximum permissible load)	Critical organ
Rb^{88}	$3.9 \cdot 10^{-12}$	$3.9 \cdot 10^{-3}$	Lungs
Rb^{89}	$5 \cdot 10^{-15}$	$6.3 \cdot 10^{-8}$	Lungs
Fe^{131}	$1 \cdot 10^{-13}$	$1.6 \cdot 10^{-4}$	Bones
Cs^{138}	$3.3 \cdot 10^{-12}$	$3.4 \cdot 10^{-6}$	Lungs
Ba^{141}	$3 \cdot 10^{-13}$	$1.1 \cdot 10^{-2}$	Thyroid gland
Ba^{142}	$5.6 \cdot 10^{-13}$	$3.3 \cdot 10^{-3}$	Lungs
RE elements	$1.7 \cdot 10^{-12}$	$6.6 \cdot 10^{-5}$	Lungs
		$1.9 \cdot 10^{-4}$	Lungs
		$3.6 \cdot 10^{-5}$	Lungs

Note. Rubidium and caesium MPC is 10^{-9} curie/l; MPC of other elements is not available.

5/7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

ARKHANGEL'SKAYA, I. G., et al, Gigiyena Truda i Professional'nyye Zabolevaniya, No 3, 1970, pp 41-43

Table 3

Concentration (curie/l) of individual long-lived aerosol components and their accumulation in critical organs.

Isotope	Concnetration	MPC	Dose accumulation (in MPC units)	Critical organ
Cr^{51}	$1 \cdot 10^{-14}$	$2 \cdot 10^{-9}$	$5 \cdot 10^{-6}$	Lungs
Fe^{59}	$7 \cdot 10^{-14}$	$3 \cdot 10^{-11}$	$2.4 \cdot 10^{-3}$	Spleen
Co^{60}	$5 \cdot 10^{-15}$	$9 \cdot 10^{-12}$	$5.6 \cdot 10^{-4}$	Lungs
Sr^{89}	$5 \cdot 10^{-15}$	$3 \cdot 10^{-11}$	$1.7 \cdot 10^{-4}$	Bones
Y^{91}	$1 \cdot 10^{-14}$	8.10^{-9}	$1.3 \cdot 10^{-6}$	Lungs
Zr^{95}	$1.1 \cdot 10^{-13}$	$1 \cdot 10^{-9}$	$1.1 \cdot 10^{-4}$	Lungs
Zr^{97}	$5 \cdot 10^{-15}$	$9 \cdot 10^{-11}$	$5.6 \cdot 10^{-5}$	Lungs
Ru^{106}	$5 \cdot 10^{-15}$	$6 \cdot 10^{-12}$	$8.4 \cdot 10^{-4}$	Lungs
Cs^{137}	$1 \cdot 10^{-14}$	$1 \cdot 10^{-11}$	$1.0 \cdot 10^{-3}$	Lungs
La^{140}	$5 \cdot 10^{-15}$	$1 \cdot 10^{-10}$	$5 \cdot 10^{-5}$	Gastro-intestinal tract
Ce^{144}	$1 \cdot 10^{-14}$	$6 \cdot 10^{-12}$	$1.7 \cdot 10^{-3}$	Lungs

6/7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

ARKHANGEL'SKAYA, I. G., et al, Gigiyena Truda i Professional'nyye Zabolevaniya, No 3, 1970, pp 41-43

The levels of contamination of the atmosphere in production premises may be lowered substantially by improving the quality of cleaning of heat carriers from radioactive products, by improving the hermetic sealing of the units, so that the dose of internal irradiation for service personnel at APS may be brought to the minimum.

LITERATURE

GUSYEV, N. G., Maximum permissible levels of ionizing radiation. M., 1961.

GUSYEV, N. G., (Edit) et al, Dosimetric and radiometric methods. M., 1966.

7/7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

TSUKER, M. S.

UDC 621.372.837

"Power Losses in a Window of Finite Conductivity Included Transverse to the Wave Guide"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-t svyzai. Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute. Vyp. 2), Leningrad, 1970, pp 207-210 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8B192)

Translation: In order to estimate the power losses in a superhigh-frequency switch used with a ferrite circulator the given system is considered as a window of finite conductivity which is included transverse to the wave guide (in the opening). An expression is derived for the losses. There is one illustration and a two-entry bibliography.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 621.373.521.1:621.382.233

BOBROVSKIY, YU. L., BOL'SHAKOVA, N. P., OBCHINNIKOV, K. D., TSUKER, M. S.

"Superhigh Frequency Tunnel Diode Generator with a Wide Mechanical Tuning Band"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-t svyazi. Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute. Vyp. 2), Leningrad, 1970, pp 204-207 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D261)

Translation: The results of an experimental investigation of a superhigh frequency tunnel diode generator with a wide range of mechanical tuning are presented. The applicability of the quasilinear approximation for calculating the output power is demonstrated. There are two illustrations and a two-entry bibliography.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC [537.226+537.311.33]:538

TSUKERBLAT, B. S., and ABLOV, A. V.

"Temperature Dependence of Magnetic Susceptibility of Exchange-Coupled Ions"

V sb. Teoriya elektron. obolochek atomov i molekul (Theory of Electron Shells of Atoms and Molecules -- Collection of Works), Vil'nyus, "Mintis," 1971, pp 290-293 (English summary) (from RZh-Fizika, No 2, Feb 72, Abstract No 2YE1372 from summary)

Translation: The problem of the temperature dependence of the magnetic susceptibility of a complex which includes several paramagnetic ions is solved within the scope of the spin hamiltonian of an isotropic exchange interaction. The existing theory of the magnetism of such complexes is discussed critically. General considerations developed in the work are illustrated by calculating the magnetic susceptibility of three and four exchange-coupled ions with identical spins.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

018 UNCLASSIFIED

TITLE--POLARIZATION OF BANDS IN THE OPTICAL SPECTRA OF TRANSITION METAL COMPLEXES WITH ACCOUNTING FOR THE JAHN TELLER EFFECT -U-

PROCESSING DATE--30OCT70

AUTHOR-(04)-TSUKERBLAT, B.S., VEKHTER, B.G., BERSUKER, I.B., ABLOV, A.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. STRUKT. KHIM. 1970, 11(1), 102-7

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--LUMINESCENCE SPECTRUM, EXCITED STATE, TRANSITION METAL, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1658

CIRC ACCESSION NO--AP0125280

STEP NO--UR/0192/70/011/001/0102/0107

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 018

CIRC ACCESSION NO--AP0125280 UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THEORY OF POLARIZED LUMINESCENCE SPECTRA FOR COMPLEXES OF D SUB4H (TETRAGONAL) AND D SUB3D (TRIGONAL) SYMMETRY IS CONSIDERED. FOR TRANSITIONS FROM A NON DEGENERATE STATE TO A DEGERNERATE STATE IF LIGHT IS POLARIZED ALONG (100), POLARIZED LUMINESCENCE IS OBSD., BUT IF LIGHT IS POLARIZED ALONG (111), LUMINESCENCE IS COMPLETELY DEPOLARIZED AND THE EXCITED STATE HAS TETRAGONAL MIN. IF FOR LIGHT POLARIZED ALONG (111) LUMINESCENCE IS PARTIALLY POLARIZED, BUT FOR LIGHT POLARIZED ALONG (100) LUMINESCENCE IS COMPLETELY DEPOLARIZED, THE EXCITED STATE HAS TRIGONAL MIN. FOR TRANSITIONS BETWEEN DEGERNATE STATES, THE PRESENCE OF 2 BANDS REPRESENTING MAGNETIC DIPOLE TRANSITIONS BETWEEN THE DEGENERATE STATES PROVES THE EXISTENCE OF TRIGONAL MIN. IN BOTH STATES. IN THE PRESENCE OF 1 BAND, LIGHT POLARIZED PARALLEL TO (100) WITH LUMINESCENCE PARTIALLY POLARIZED IN THE SAME DIRECTION IMPLIES TETRAGONAL MIN., WHILE COMPLETELY DEPOLARIZED LUMINESCENCE IMPLIES TETRAGONAL AND TRIGONAL MIN. THESE RESULTS HOLD ONLY IN THE ADIABATIC APPROX. AND NEGLECT TUNNELLING BETWEEN EQUIV. CONFIGURATIONS. IF TUNNELLING OCCURS, THE LUMINESCENCE IS DEPOLARIZED.

FACILITY: INST. KHIM., KISHINEV, USSR.

PROCESSING DATE--30OCT70

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

PINSKER, I. Sh., TSUKERMAN, B. M., SHAKIN, V. V.

"Diagnostic Classification of Electrocardiograms as Vector Functions"

Opoznavaniye i Opisaniye Liniy [Recognition and Description of Lines -- Collection of Works], Moscow, Nauka Press, 1972, pp 47-57 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V712 by the authors).

Translation: The expediency is demonstrated of recognizing electrocardiograms as vector functions using the method developed, and experimental results of EKG diagnosis of myocardial infarct are presented.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

MALINOVSKIY, L. G., PINSKER, I. Sh., TSUKERMAN, B. M.

"Coding of Electrocardiograms in Automatic Diagnosis Systems"

Opoznavaniye i Opisaniye Liniy [Recognition and Description of Lines -- Collection of Works], Moscow, Nauka Press, 1972, pp 86-95 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V708 by the authors).

Translation: A digital computer is used to compare various methods of coding of electrocardiograms. Based on the results produced, a device was suggested and manufactured for coding of EKG's. 14 Biblio. Refs.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

TSUKKERMAN, N. S., Leningrad Institute of Precision Mechanics and Optics

UDC: 621.382.3

"Statistical Analysis of Transistorized Amplifiers With Direct Coupling"

Leningrad, Izvestiya VUZov, Priborostroyeniye, Vol 15, No 3, 1972, pp 8-12

Abstract: The author discusses use of the method of statistical tests to plot distribution curves for the output parameter of directly coupled amplifiers. Changing any element in one stage of such amplifiers affects the operation of the other stages. It is shown how the volume of statistical data can be reduced for the transistors and resistors. A sequence of computations is proposed for finding the histogram of distributions which accounts for the change in operating conditions with a spread of parameters of passive elements, and for finding transistor parameters as a function of operating conditions. It is shown that accounting for the latter relationship considerably reduces the measurement of statistical data for transistors with a concomitant reduction in the volume of digital computer input data. It is also shown that the statistical scatter of impedances has little effect on variation of the output parameter, and can therefore be disregarded with a resultant appreciable reduction in computer time. Three figures, bibliography of six titles.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

TSUKERMAN, P.B.

UDC: 614.2:31

INTEGRATED [OVERALL] EVALUATION OF INDICES IN THE PUBLIC HEALTH SYSTEM

[Article* by Professor V.V. Kanaev, G.S. Popov, B.Ts. Ol'shanskiy, Candidate of Medical Sciences, P.B. Tsukerman, Moscow, Sovetskoye Zdravookhraneniye, Russian, No 9, 1972, submitted 18 February 1972, pp 20-24]

In the public health system it is often necessary to compare the efficiency of institutions or agencies thereof to demonstrate those that are ahead or lagging for the purpose of stimulating advancement of the entire system. An analogous need also arises when assessing the dynamics of development of specific institutions, when data pertaining to operation of one of them over a period of several years is used as compared objects. The use of concrete indices is ineffective for such purposes: an institution may be ahead with respect to some indices and behind with respect to others; furthermore, a person is not able to cope with concurrent comparison of many hundreds of parameters. Yet the choice of a few indices would introduce considerable subjectivity and would not reflect the overall activity. It is therefore logical to use the set of all existing indices to make an overall evaluation. We use the term overall evaluation, from the standpoint of logic, as a single figure obtained on the basis of many parameters of concrete signs which could then be evaluated by means of a scale of qualitative characteristics.

Overall evaluation involves solving two problems: is the initial information necessary and sufficient to characterize the overall criterion? Is the shift from initial information to overall evaluation adequate?

Professor L.Ye. Polyakov and D.M. Malinskiy, candidate of medical sciences, tried to find such an overall criterion as national health status. The authors used the method of overall probability evaluation (OPE).

*This is a response to the article by Professor L.Ye. Polyakov and D.M. Malinskiy entitled "A Method of Overall Probability Evaluation of National Health Status," Sovetskoye Zdravookhraneniye, No 3, 1971.

The editorial board is aware of the debatable nature of evaluating some indices shown in Table 1.

JPRS 57351
27 Oct 72

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

025 UNCLASSIFIED

TITLE--ON THE THRESHOLD BEHAVIOUR OF THE CROSS SECTION FOR IONIZATION OF ATOMS BY ELECTRONS -U-

PROCESSING DATE--09OCT70

AUTHOR-(02)-PETERKOP, R.K., TSUKERMAN, P.B.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 2, PP 699-705

DATE PUBLISHED------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--IONIZATION CROSS SECTION, ELECTRON BOMBARDMENT, EXCITATION ENERGY, NUMERIC SOLUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1976/2069

STEP NO--UR/0056/70/058/002/0699/0705

CIRC ACCESSION NO--AP0043596

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 025

CIRC ACCESSION NO--AP0043596 UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0- PROCESSING DATE--09OCT70

ABSTRACT. ACCORDING TO WANNIER'S THEORY THE DIMENSION OF IONIZATION REGIONS IN THE INITIAL CONDITION SPACE DECREASES IN THE THRESHOLD BY ONLY ONE. THEREFORE FOR VERIFICATION OF THE THRESHOLD LAW IT SHOULD BE SUFFICIENT TO INVESTIGATE THE VARIATION OF THE LINEAR SIZE I.E. SOLVE PROBLEMS WITH A SINGLE VARIABLE PARAMETER IN THE INITIAL CONDITIONS. NUMERICAL CALCULATIONS OF THE CLASSICAL IONIZATION CROSS SECTION ARE CARRIED OUT FOR A MODEL OF THIS TYPE. THE RESULTS OBTAINED CONFIRM THE WANNIER FORMULA (SIGMA SIMILAR TO E PRIME1.127). IT IS ALSO FOUND TO BE VALID FOR A TOTAL ORBITAL MOMENTUM L GREATER THAN 0. CONTEMPORARY EXPERIMENTAL DATA ARE DISCUSSED.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC: 669.018.25

TSUKERMAN, S. A., Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences USSR

"Wear-Resistant Titanium Carbide-Base Material"

Kiev, Poroshkovaya Metallurgiya, No 6, Jun 70, pp 53-56

Abstract: In powder metallurgy, impregnation serves to bind two phases, making it possible to obtain a structure with extraordinary properties and produce a material which will simultaneously combine the hardness of a carbide skeleton with the viscosity of the impregnating material and possess adequate strength. This paper describes a method of making a wear-resistant TiC-base composition with the use of impregnation. The effect of granulometric composition on wear resistance and the dependence of changes in the grain size on the heat treatment temperature were determined. Other technological factors, including sintering conditions and their effect on both the structure and properties of the material were also considered. Optimal treatment conditions were established. The wear resistance of the new material under conditions of impact abrasive wear is about 17 times higher than that of 3 St.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

Powder Metallurgy

UDC: 621.762:669.018.29

BUNDUR, G. K., KOSAREVA, I. B., TSUKERMAN, S. I.

"Production of Corrosion-Resistant Parts by Powder Metallurgy"

Nizkovol'tn. Apparatostroyeniye [Low-Voltage Apparatus Construction -- Collection of Works], Kiev, Tekhnika Press, 1973, pp 99-104 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G418, by S. Krivonosova).

Translation: A technological process is suggested for preparation of parts of Fe powder for automatic breakers, based on cementation, diffuse chromizing and heat treatment. The results of the tests of corrosion resistance and wear resistance showed that parts of type 3Kh13 stainless steel can be replaced by metal ceramic diffusion chromized parts, with a savings of 87,000 rubles per year, saving 27 tons of stainless steel per year. 2 figures, 1 table, 5 biblio. refs.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 021

TITLE--ASSOCIATION CONSTANTS OF PHENOL WITH CHALCONES AND THEIR ANALOGS -U-

UNCLASSIFIED

PROCESSING DATE--27NOV70

AUTHOR-(03)-TSUKERMAN, S.V., SUROV, YU.N., LAVRUSHIN, V.F.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 874-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHENOL, KETONE, IR SPECTRUM, CHEMICAL SUBSTITUENT, ORGANIC SULFUR COMPOUND, ORGANOSELENIUM COMPOUND FURAN, EQUILIBRIUM CONSTANT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1498

STEP NO--UR/0079/70/040/004/0874/0879

CIRC ACCESSION NO--AP0135159

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 021

CIRC ACCESSION NO--AP0135159 UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM IR SPECTRA THE EQUIL. CONSTS. WERE CALCD. FOR SYSTEMS OF 23 KETONES OF TYPE P RC SUB6 H SUB4 COCH:CHC SUB6 H SUB4 R PRIME1 P, WHERE R AND R PRIME1 WERE SELECTED FROM H; ME, MEO, NME SUB2, PH, CL, BR; OR OF TYPE RCOCH:CHR PRIME1, WHERE R WAS SELECTED FROM PH, 2,THIENYL,2,SELENIENYL 2,FURYL, STYRYL AND 2,(2,THIENYL)VINYL GROUPS AND R PRIME1 FROM 2,THIENYL,2,SELENIENYL, PH, 2,FURYL, OR STYRYL GROUPS. THE DATA AT 20, 35 AND 50DEGREES WERE TABULATED FOR SYSTEMS OF THESE KETONES WITH PHOH IN CCL SUB4. THE EQUIL. CONSTS. WERE READILY CORRELATED WITH HAMMETT SUBSTITUENT CONSTS. OF THE KETONES AND REPLACEMENT OF PY BY A HETEROCYCLIC GROUP INCREASED THE PROTON ACCEPTOR CAPABILITY OF THE KETONG IN INCREASING ORDER: 2,THIENYL, 2,SELENIENYL, 2 FURYL. THESE ASSOCN. CONSTS. ARE SOMEWHAT MORE SATISFACTORY CRITERIA FOR BASICITY OF THE CARBONYL GROUPS THAN ARE THE FREQUENCY SHIFTS OF THE HO GROUP OF THE PROTON DONORS.

FACILITY: KHAR'KOV. GOS. UNIV. IM. GOR'KOGO, KHARKOV, USSR.

UNCLASSIFIED

PROCESSING DATE--27NOV70

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 010

UNCLASSIFIED

TITLE--SYNTHESIS OF UNSATURATED KETONES AND DERIVATIVES OF 2 PYRAZOLINE CONTAINING AN INDOLE RING -U-

PROCESSING DATE--20NOV70

AUTHOR-(04)-TSUKERMAN, S.V., BUGAY, A.I., NIKITCHENKO, V.M., LAVRUSHIN, V.F.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (3), 399-403

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, PYRAZOLE, INDOLE DERIVATIVE, KETONE, ALDEHYDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0226

STEP NO--UR/0409/70/000/003/0399/0403

CIRC ACCESSION NO--AP0126010

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 010

CIRC ACCESSION NO--AP0126010 UNCLASSIFIED PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. METHOD A. A SOLN. OF 0.01 MOLE APPROPRIATE ALDEHYDE AND ME KETONE IN 8-10 ML (CH SUB2 OH)SUB2 WAS TREATED WITH 1 ML 40PERCENT NAOH AND THE WHOLE WAS HEATED 20-30 MIN AT 120-35DEGREES TO YIELD RCOCH:CHR PRIME1 (I). METHOD B. APPROPRIATE ALDEHYDE AND KETONE (0.01 MOLE EACH) WAS REFLUXED 15-25 MIN IN 7-10 ML ETOH WITH 1 ML 20PERCENT NAOH. METHOD C. SIMILAR TO METHOD A, BUT WITH HEATING 40 MIN AT 180-90DEGREES. METHOD D. ALDEHYDE AND KETONE (0.01 MOLE EACH) WAS HEATED 20-30 MIN AT 170-85DEGREES IN 8-10 ML (CH SUB2 OH)SUB2 WITH1 ML PIPERIDINE. THE FOLLOWING I WERE PREPD. (R, R PRIME1, M.P., M.P. 2,4 DINITROPHENYLHYDRAZONE, METHOD USED, AND PERCENT YIELD GIVEN): SHOWN ON MICROFICHE.

FACILITY: KHAR'KOV. GOS. UNIV. IM. GOR'KOGO, KHARKOOV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 012 UNCLASSIFIED

TITLE--PROTON MAGNETIC RESONANCE SPECTRA OF SOME CHALCONES AND THEIR HETEROCYCLIC ANALOGS -U-

PROCESSING DATE--04DEC70

AUTHOR-(04)-TSUKERMAN, S.V., ORLOV, V.D., YATSENKO, A.I., LAVRUSHIN, V.F.

COUNTRY OF INFO--USSR

SOURCE--TEOR. EKSP. KHIM. 1970, 6(1), 67-71

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--MAGNETIC RESONANCE, KETONE, HETEROCYCLIC BASE COMPOUND, FURAN, THIOPHENE, ORGANOSELENIUM COMPOUND, SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0909

STEP NO--UR/0379/70/006/001/0067/0071

CIRC ACCESSION NO--AP0137937

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 012

CIRC ACCESSION NO--AP0137937 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NMR SPECTRA OF 18 CHALCONE DERIVS. RCOCH:CHR PRIME, WHERE ONE OF THE R AND R PRIME SUBSTITUENTS IS PH AND THE OTHER IS ME, P,MEC SUB6 H SUB4, PHCH:CH, PENTAFLUOROPHENYL, AND UNSUBSTITUTED OF 5,METHYLATED FURAN, THIOPHENE OR SELENOPHENE RING ATTACHED IN THE 2 POSITION, WERE RECORDED IN CCL SUB4 AND INTERPRETED.

FACILITY: KHAR'KOV. GOSUNIV., KHARKOV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

of their analogs. Tsukerman, Sa V.; Maslennikova, V. P.; Nikitchenko, V. M.; Lavrushin, V. F. (USSR). Zh. Prikl. Spektrosk. 1970, 12(1), 91-6 (Russ). The electron absorption and luminescence spectra of 16 *p*-dichalcones R.CH:CHC(O)C$_6$H$_4$C(O)CH:CHR (*A*) and the analogous *p*-isodichalcones RC(O)CH:CHC$_6$H$_4$CH:CHC(O)R (*B*), where R is substituted Ph rings, β-naphthyl, 9-anthryl, and heterocycle groups, were measured in chloroform and dioxane solns. In comparison with chalcone with the absorption max. at 310 or 305 nm, the dichalcone band is shifted 11-15 nm, the isodichalcone band 45 nm to longer wavelengths; in addn., a new band appears at 270-5 nm for the compds. *A* as well as *B*. Donor groups cause a bathochromic shift in *A*, whereas in *B* the effect is considerably smaller. The shift in the former case, expressed in wavenos., can be correlated with the Hammett σ-consts. of the substituents in R. Electron acceptor groups have a negligible effect on the spectra. In the series R = biphenyl, naphthyl, anthryl in *A*, a bathochromic shift as well as a hyperchromic effect occurs and the naphthalene or anthracene vibrational structure appears.

1/2

REEL/FRAME
19801670

7

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Acc. Nr. AP0049755 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code UR 0368

105589p Electron spectra of isomeric p-dichalcones and some of their analogs. Tsukerman, S. V.; Maslennikova, V. P.; Nikitchenko, V. M.; Lavrushin, V. F. (USSR). Za. Prikl. Spektrosk. 1970, 12(1), 91-6 (Russ). [illegible] and luminescence [illegible]

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

AP0049755

A red shift is obsd. on the transition from the dioxane to the chloroform solns., on account of the H bonds between the latter solvent and the solute C:O groups. The compds. *A* and *B* show no luminiscence, in contrast to 1,4-distyrylbenzene. This is attributed to the adverse effect of the $n \rightarrow \pi^*$ levels. In the compds. *A* with strong electron donor groups or with long conjugated chains, the $\pi \rightarrow \pi^*$ level energy decreases more rapidly than the $n \rightarrow \pi^*$ energy and the compds. exhibit luminiscence.

P. Adamek

2/2

19801671

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Acc. Nr. AP0041532 Abstracting Service: CHEMICAL ABST. 4170 Ref. Code UR0366

89964z Unsaturated dioxo derivatives of biphenyl and p-terphenyl. Tsukerman, S. V.; Polyakov, V. K.; Nikitchenko, V. M.; Lavrushin, V. F. (Kharkov Gos. Univ. im. Gor'kogo, Kharkov, USSR). *Zh. Org. Khim.* 1970, 6(1), 135-8 (Russ). The crotonic condensation of aldehydes with 4-OHCC$_6$H$_4$C$_6$H$_4$-CHO-4′ (I) or 1,4-(4-OHCC$_6$H$_4$)$_2$C$_6$H$_4$ (II) gave, resp., 4-RCH:CHCOC$_6$H$_4$C$_6$H$_4$COCH:CHR-4′ (Ia) or 1,4-(4-RCH:CHCOC$_6$H$_4$)$_2$C$_6$H$_4$ (IIa). The reactions of I proceeded in iso-PrOH contg. KOH below, or at room temp. giving 32-53% Ia (R is Ph, 4-MeC$_6$H$_4$, 4-MeOC$_6$H$_4$, 2,4,6-Me$_3$C$_6$H$_2$, 4-Me$_2$NC$_6$H$_4$, 4-ClC$_6$H$_4$, 4-BrC$_6$H$_4$, 4-O$_2$NC$_6$H$_4$, or 4-Ph$_3$C$_6$H$_4$). The reactions of II required refluxing at ≤200° in HOCH$_2$CH$_2$OH and gave 27-90% IIa (R is Ph, 4-MeC$_6$H$_4$, 4-MeOC$_6$H$_4$, 4-Me$_2$NC$_6$H$_4$, 4-ClC$_6$H$_4$, 4-BrC$_6$H$_4$, or 4-O$_2$NC$_6$H$_4$). Ia (R is 2,4,6-Me$_3$C$_6$H$_2$ or 4-Me$_2$NC$_6$H$_4$) and IIa (R is Me$_2$NC$_6$H$_4$) are luminescent. Correlations were obtained between Hammett σ consts. of R and ir spectra of Ia.

CPJR

REEL/FRAME 19751400

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

TSUKERMAN, V.A.

X-rays

Keith
GWIA

UDC: 523.813

PORTABLE X-RAY SOURCES

[Article by Doctor of Technical Sciences V. A. Tsukerman; Moscow, Vestnik Akademii Nauk SSSR, Russian, No 11, November 1971, pp 18-25]

Pulse equipment in combination with new types of X-ray tubes and the commercial production of radioactive isotopes emitting low-energy X rays or gamma rays have made it possible in recent years to build sources of X-radiation of extremely small physical dimensions.

Originally sources of short X-ray bursts were employed primarily for recording high-speed processes in experimental gas dynamics and ballistics. Exposures in the order of millionths and 10-millionths of a second made it possible to X-ray photograph various phases of an explosion, the interaction of a moving bullet and an obstruction, plus other similar processes. It was later established that the principles of pulse generation of X-radiation enjoy certain advantages in traditional areas of X-ray applications as well -- radiography and medical diagnosis.

Two physical ideas are implemented in building portable radiation pulse generators. The first involves the utilization of short pulses of high voltage applied to the vacuum space within a tube, and the second -- replacement of the heated cathode by a cold emitter.

Under a constant voltage an insulator immersed in a liquid dielectric usually operates with surface gradients of 10-20 kV/cm. With pulses of several microseconds these values can be raised to 30-50 kV/cm. A further shortening of the pulses to about 10 nanoseconds with a high-voltage buildup front duration of 1-2 nsec ($1-2 \cdot 10^{-9}$ sec) leads to an increase in allowable surface gradients to 80-120 kV/cm. Volume and weight of the electrical device are approximately proportional to the third power of the value of the linear dimensions of its components. Thus a three to fivefold reduction in the size of the transformer, pulse tube and other components of the high-voltage part of the generator, operating at voltage pulses in the nanosecond range, makes it possible to reduce volume from 10 to 100 times.

JPRS 55013 25 Jan 72
VESTNIK OF THE USSR ACADEMY OF SCIENCES - 20 -
Vol. 41, No. 11 1971

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

- 63 -

UDC 612.85

ED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

USSR

GAVRILOV, L. R., GERSHUNI, G. V., IL'INSKIY, O. B., SIROTYUK, M. G., NIKOV, Ye. M., and TSUKERMAN, V. A., Laboratory of the Physiology of Hearing, Institute of Physiology imeni I. P. Pavlov, USSR Academy of Sciences, Laboratory of the Physiology of the Sensory Organs, Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov, Laboratory of General Physiology of Reception, Institute of Physiology imeni I. P. Pavlov, and Laboratory of Ultrasonic Cavitation, Acoustics Institute, USSR Academy of Sciences

"Study of the Skin Sensitivity by Means of Focused Ultrasound"

Leningrad, Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, Vol 58, No 9, 1972, pp 1,366-1,371

Abstract: A study was made of the effect of focused ultrasound on the skin of a human hand. The sensitivity of the skin of the palm surface of the fingers, wrist and lower third of the forearm was investigated in five people (2 men and 3 women). The sensitivity thresholds were determined with a gradual increase and decrease in the stimulus. As a rule, the thresholds were higher with an increase in stimulus. The intensity for which no less than 50% positive responses occurred to 8-10 stimulations was taken as the threshold. Stimulation of the skin by identical stimuli with an intensity of 30-500 watts/cm^2 usually

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC: 621.391:519.2

TSUKERMAN, V. M. and MASYUKOV, V. A.

"Analysis of a System for Processing Space-Time Signals"

Sb. tr. Nauchno-tekhn. konferentsii prof.-prepodavat. sostava Vses. zaochn. elektrotekhn. in-ta svyazi, Vyp. 5 (Collected Transactions of the Scientific-Technical Conference of the Professorial-Instructor Staff of the All-Union Correspondence Electrical Engineering Institute of Communication, No. 5) Moscow, 1970, pp 27-36 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A92)

Translation: A two-wave antenna analyzer system of four isotropic vibrators is considered. The utilization factor of the energy, the degree of compensation of the mixing signal, and the coefficient of space correlation are determined. The possibility of increasing the signal-noise ratio at the output of the processing system over that at the input is shown. Five illustrations, bibliography of four.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 621.311.016.352:681.3

TSUKERNIK, L. V., DERZSKIY, V. G.

"Set of Programs for Analyzing the Stability of Power Systems on a Digital Computer Considering the Error in the Initial Information and Realization of the Calculation Conditions"

V sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 25, Kiev, Naukova Dumka Press, 1970, pp 71-76 (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 Ye213)

Translation: Insufficient accuracy and completeness of the initial data require a statistical approach to analysis of the stability of power systems. The problem is solved by the method of statistical simulation on the Ural-2 digital computer using a set of programs. The dynamic stability of an actual power system is analyzed considering inaccuracy of the initial information. There are 2 illustrations and a 5-entry bibliography.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 621.311.016.352.001.24:681.3

AVRAMENKO, V. N., UMED'YAN, V. V., TSUKERNIK, L. V.

"Study of Programs for Calculating Dynamic Stability and the Electromechanical Transmission Process of Power Systems"

V.sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 25, Kiev, Naukova Dumka Press, 1970, pp 76-83 (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 Ye212)

Translation: A program for calculating the synchronous dynamic stability in the first cycles of variation of relative angles and a program for more precisely defined calculation of the electromechanical transmission process in complex power systems on the Ural-2 digital computer are described. The maximum possible volume of problems solved by these programs and the time required for their solution are indicated. There are 2 tables and a 6-entry bibliography. [Electrodynamics Institute of the Ukrainian SSR Academy of Sciences].

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC: 621.373+621.397.331.222+621.386.2/7

BAYKOV, A. P., BELAGO, V. A., BUDARNYKH, V. I., DOTSENKO, V. I., KURASHOV, E. M., LYUBIN, V. M., NALIVAYKO, V. I., FEDOROVA, Ye. I., TSUKERMAN, V. G., and SHESTAK, A. F.

"Methods of Recording X-Ray Images in a Science Research Automation System"

Novosibirsk, Avtometriya, No 6, 1971, pp 67-80

Abstract: A description is given of a complex of pulsed x-ray sources with memory elements for recording fast processes, along with highly sensitive systems for visualizing two-dimensional x-ray images of threshold intensity. The radiation required has a duration of 10^{-5} to 10^{-7} sec with a hardness of several hundred kev. For the recording equipment, photographic film and television systems were used, in which the memory cells were the semiconducting targets of sensor tubes. In such a system, the image is impressed directly on the target of the x-ray vidicon with a controllable memory, or is fixed by re-recording the video signal on a vidicon with optical memory, thus allowing connection of the recording equipment to the input of an electronic computer. The purpose of a system of this type is to gather scientific data as part of a system for automation of the research procedure. Descriptions of the equipment are given, together with photographs

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC: 621.373+621.397.331.222+621.386.2/7

BAYKOV, A. P., et al, Avtomatriya, No 6, 1971, pp 67-80

of the x-ray and recording equipment as well as sample oscillograms of various equipment items. The authors express their gratitude to Yu. Ye. Nesterikhin and A. M. Iskol'dskiy for their delineation of the problem and their supervision of the work. For his assistance with the experiments made using this equipment, the authors thank E. V. Yanshin.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC 53.07/.08+53.001.5

LYUBIN, V. M., PLAKHOV, S. A., FEDOROVA, G. A., TSUKERMAN, V. G.

"Experimental Vidicon Sensitive to Soft X-Radiation"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektronnoluch. i fotoelektr. pribory (Electronic Engineering. Scientific-Technical Collection. Electron Ray and Photoelectric Devices), 1970, No 1(15), pp 3-7 (from RZh-Fizika, No 1, Jan 71, Abstract No 1A323)

Translation: The characteristics of an experimental x-ray vidicon with a Be window and a target of vitreous material $Tl_2Se \cdot As_2Se_3$ sensitive to soft x-radiation in the region 5-30 kev are described. Authors abstract.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Acc. Nr: AP0048822 Abstracting Service: CHEMICAL ABST. Ref. Code: UR0366

90127k Propionylation of 2-methoxynaphthalene. Zemzina, I. N.; Tsukervanik, [illegible]; Novgorodova, N. Yu. (Tashkent Gos. Univ. im. Lenina, Tashkent, USSR). *Zh. Org. Khim.* 1970, 6(1), 132-5 (Russ). Heating 2-methoxynaphthalene (I) with 1/3 equiv. $(EtCO)_2O$ and approx. 2×10^{-4} equiv. $FeCl_3$ followed by fractionation gave 80% ketones contg. 85% 1-propionyl deriv. (II) of I and 5% 6-propionyl deriv. (III) of I. The reaction of I with PrCl in the presence of $FeCl_3$ gave 56% ketones (compn. not given). In both cases, besides II and III, also I and β-naphthol were detected by thin layer chromatog. and uv spectroscopy.

CPJR

REEL/FRAME
19800585

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 010 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--BENZOYLATION OF P,BENZOYLANISOLE -U-

AUTHOR-(03)-TSUKERVANIK, I.P., SIDOROVA, N.G., STEMPNEVSKAYA, I.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970 6(3) 535-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ANISOLE, BENZENE DERIVATIVE, BENZOYL CHLORIDE, CHEMICAL SYNTHESIS, FORMALDEHYDE, OXIDATION, CHROMIUM OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1536 STEP NO--UR/0366/70/006/003/0535/0536

CIRC ACCESSION NO--AP0112530

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

TSUKERMAN, V.A.

X-rays

Kieth
GWA

UDC: 523.813

PORTABLE X-RAY SOURCES

[Article by Doctor of Technical Sciences V. A. Tsukerman], Moscow, Vestnik Akademii Nauk SSSR, Russian, No 11, November 1971, pp 18-25]

Pulse equipment in combination with new types of X-ray tubes and the commercial production of radioactive isotopes emitting low-energy X rays or gamma rays have made it possible in recent years to build sources of X-radiation of extremely small physical dimensions.

Originally sources of short X-ray bursts were employed primarily for recording high-speed processes in experimental gas dynamics and ballistics. Exposures in the order of millionths and 10-millionths of a second made it possible to X-ray photograph various phases of an explosion, the interaction of a moving bullet and an obstruction, plus other similar processes. It was later established that the principles of pulse generation of X-radiation enjoy certain advantages in traditional areas of X-ray applications as well — radiography and medical diagnosis.

Two physical ideas are implemented in building portable radiation pulse generators. The first involves the utilization of short pulses of high voltage applied to the vacuum space within a tube, and the second — replacement of the heated cathode by a cold emitter.

Under a constant voltage an insulator immersed in a liquid dielectric usually operates with surface gradients of 10-20 kV/cm. With pulses of several microseconds these values can be raised to 30-50 kV/cm. A further shortening of the pulses to about 10 nanoseconds with a high-voltage buildup front duration of 1-2 nsec ($1-2 \cdot 10^{-9}$ sec) leads to an increase in allowable surface gradients to 80-120 kV/cm. Volume and weight of the electrical device are approximately proportional to the third power of the value of the linear dimensions of its components. Thus a three to fivefold reduction in the size of the transformer, pulse tube and other components of the high-voltage part of the generator, operating at voltage pulses in the nanosecond range, makes it possible to reduce volume from 10 to 100 times.

JPRS 55013 25 Jan 72
Ukraine of the Lead Academy of Sciences - 20 -
Vol. 41, No. 11 1971

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 612.85

GAVRILOV, L. R., GERSHUNI, G. V., IL'INSKIY, O. B., SIROTYUK, M. G., TSIRUL'-NIKOV, Ye. M., and TSUKERMAN, V. A., Laboratory of the Physiology of Hearing, Institute of Physiology imeni I. P. Pavlov, USSR Academy of Sciences, Laboratory of the Physiology of the Sensory Organs, Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov, Laboratory of General Physiology of Reception, Institute of Physiology imeni I. P. Pavlov, and Laboratory of Ultrasonic Cavitation, Acoustics Institute, USSR Academy of Sciences

"Study of the Skin Sensitivity by Means of Focused Ultrasound"

Leningrad, Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, Vol 58, No 9, 1972, pp 1,366-1,371

Abstract: A study was made of the effect of focused ultrasound on the skin of a human hand. The sensitivity of the skin of the palm surface of the fingers, wrist and lower third of the forearm was investigated in five people (2 men and 3 women). The sensitivity thresholds were determined with a gradual increase and decrease in the stimulus. As a rule, the thresholds were higher with an increase in stimulus. The intensity for which no less than 50% positive responses occurred to 8-10 stimulations was taken as the threshold. Stimulation of the skin by identical stimuli with an intensity of 30-500 watts/cm^2 usually

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

GAVRILOV, L. R., et al., Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, Vol 58, No 9, 1972, pp 1,366-1,371

aroused a tactile sensation, the nature of which depended on the stimulated section. When the focal point went deeper into the tissue, the tactile thresholds gradually increased and, finally, the sensation gradually went away altogether (and then in certain cases reappeared on the opposite side). The effect of sound streams on the occurrence of tactile sensations was tested leading to tickling sensations and sensations of heat and cold. Pain occurred at intensities of 1,400-1,600 watts/cm^2 lasting 100 milliseconds and more.

The mechanism of the effect of the focused ultrasound and its value in the study of the receptor structures are discussed. All the basic types of feelings in the skin can be isolated by the application of ultrasound.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

TSUKERMAN, V. M. and MASYUKOV, V. A.

UDC: 621.391:519.2

"Analysis of a System for Processing Space-Time Signals"

Sb. tr. Nauchno-tekhn. konferentsii prof.-prepodavat. sostava Vses. zaochn. elektrotekhn. in-tu svyazi. Vyp. 5 (Collected Transactions of the Scientific-Technical Conference of the Professorial-Instructor Staff of the All-Union Correspondence Electrical Engineering Institute of Communication, No. 5) Moscow, 1970, pp 27-36 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A92)

Translation: A two-wave antenna analyzer system of four isotropic vibrators is considered. The utilization factor of the energy, the degree of compensation of the mixing signal, and the coefficient of space correlation are determined. The possibility of increasing the signal-noise ratio at the output of the processing system over that at the input is shown. Five illustrations, bibliography of four.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

TSUKERNIK, L. V., DERZSKIY, V. G. UDC 621.311.016.352:681.3

"Set of Programs for Analyzing the Stability of Power Systems on a Digital Computer Considering the Error in the Initial Information and Realization of the Calculation Conditions"

V sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics — collection of works), vyp. 25, Kiev, Naukova Dumka Press, 1970, pp 71-76 (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 Ye213)

Translation: Insufficient accuracy and completeness of the initial data require a statistical approach to analysis of the stability of power systems. The problem is solved by the method of statistical simulation on the Ural-2 digital computer using a set of programs. The dynamic stability of an actual power system is analyzed considering inaccuracy of the initial information. There are 2 illustrations and a 5-entry bibliography.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 621.311.016.352.001.24:681.3

AVRAMENKO, V. N., UMED'YAN, V. V., TSUKERNIK, L. V.

"Study of Programs for Calculating Dynamic Stability and the Electromechanical Transmission Process of Power Systems"

V.sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 25, Kiev, Naukova Dumka Press, 1970, pp 76-83 (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 Ye212)

Translation: A program for calculating the synchronous dynamic stability in the first cycles of variation of relative angles and a program for more precisely defined calculation of the electromechanical transmission process in complex power systems on the Ural-2 digital computer are described. The maximum possible volume of problems solved by these programs and the time required for their solution are indicated. There are 2 tables and a 6-entry bibliography. [Electrodynamics Institute of the Ukrainian SSR Academy of Sciences].

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC: 621.373+621.397.331.222+621.386.2/7

BAYKOV, A. P., BELAGO, V. A., BUDARNYKH, V. I., DOTSENKO, V. I., KURASHOV, E. M., LYUBIN, V. M., NALIVAYKO, V. I., FEDOROVA, Ye. I., TSUKERMAN, V. G., and SHESTAK, A. F.

"Methods of Recording X-Ray Images in a Science Research Automation System"

Novosibirsk, Avtometriya, No 6, 1971, pp 67-80

Abstract: A description is given of a complex of pulsed x-ray sources with memory elements for recording fast processes, along with highly sensitive systems for visualizing two-dimensional x-ray images of threshold intensity. The radiation required has a duration of 10^{-8} to 10^{-7} sec with a hardness of several hundred kev. For the recording equipment, photographic film and television systems were used, in which the memory cells were the semiconducting targets of sensor tubes. In such a system, the image is impressed directly on the target of the x-ray vidicon with a controllable memory, or is fixed by re-recording the video signal on a vidicon with optical memory, thus allowing connection of the recording equipment to the input of an electronic computer. The purpose of a complex of this type is to gather scientific data as part of a system for automation of the research procedure. Descriptions of the equipment are given, together with photographs

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC: 621.373+621.397.331.222+621.386.2/7

BAYKOV, A. P., et al, Avtometriya, No 6, 1971, pp 67-80

of the x-ray and recording equipment as well as sample oscillograms of various equipment items. The authors express their gratitude to Yu. Ye. Nesterikhin and A. M. Iskol'dskiy for their delineation of the problem and their supervision of the work. For his assistance with the experiments made using this equipment, the authors thank E. V. Yanshin.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC 53.07/.08+53.001.5

LYUBIN, V. M., PLAKHOV, S. A., FEDOROVA, G. A., TSUKERMAN, V. G.

"Experimental Vidicon Sensitive to Soft X-Radiation"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektronnoluch. i fotoelektr. pribory (Electronic Engineering. Scientific-Technical Collection. Electron Ray and Photoelectric Devices), 1970, No 1(15), pp 3-7 (from RZh-Fizika, No 1, Jan 71, Abstract No 1A323)

Translation: The characteristics of an experimental x-ray vidicon with a Be window and a target of vitreous material $Tl_2Se \cdot As_2Se_3$ sensitive to soft x-radiation in the region 5-30 kev are described. Authors abstract.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Acc. Nr: AP0048822 Abstracting Service: CHEMICAL ABST. Ref. Code: UR0366

4/70

90127k Propionylation of 2-methoxynaphthalene. Zemzina, I. N.; Tsukervanik, L. P.; Novgorodova, N. Yu. (Tashkent Gos. Univ. im. Lenina, Tashkent, USSR). Zh. Org. Khim. 1970, 6(1), 132-5 (Russ). Heating 2-methoxynaphthalene (I) with 1/3 equiv. $(EtCO)_2O$ and approx. 2×10^{-4} equiv. $FeCl_3$ followed by fractionation gave 80% ketones contg. 85% 1-propionyl deriv. (II) of I and 5% 6-propionyl deriv. (III) of I. The reaction of I with PrCl in the presence of $FeCl_3$ gave 56% ketones (compn. not given). In both cases, besides II and III, also I and β-naphthol were detected by thin layer chromatog. and uv spectroscopy.

CPJR

REEL/FRAME
19800585

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 010 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--BENZOYLATION OF P,BENZOYLANISOLE -U-

AUTHOR-(03)-TSUKERVANIK, I.P., SIDOROVA, N.G., STEMPNEVSKAYA, I.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970 6(3) 535-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ANISOLE, BENZENE DERIVATIVE, BENZOYL CHLORIDE, CHEMICAL SYNTHESIS, FORMALDEHYDE, OXIDATION, CHROMIUM OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1536 STEP NO--UR/0366/70/006/003/0535/0536

CIRC ACCESSION NO--AP0112530

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 010 UNCLASSIFIED

CIRC ACCESSION NO--AP0112530 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HEATING OF P-MEOC SUB6 H SUB4 BZ (I) WITH BZCL AND POWD. FE AT 220-40DEGREES GAVE 86PERCENT 2,4-BZ SUB2 C SUB6 H SUB3 OME (II). THE STRUCTURE OF II WAS PROVEN BY THE FOLLOWING SYNTHESIS: I TREATED WITH HCHO IN THE PRESENCE OF HCL AND ZNCL SUB2 GAVE 1,2-(MEO)CLCH SUB2 C SUB6 H SUB3 BZ WHICH WAS REACTED WITH C SUB6 H SUB6 IN THE PRESENCE OF ALCL SUB3 TO GIVE 1,2-(MEO)PHCH SUB2 C SUB6 H SUB3 BZ (III). THE OXION. OF III WITH A CRO SUB3-ACOH MIXT. GAVE II.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

1

UDC: 621.397.3

BUKHAROV, A. K., GOR'YAN, I. S., KOROCHKIN, E. V., KHAVKIN, L. M., and TSUKERMAN, I. I.

"Television Automaton for Recognition Study"

Moscow, Tekhnika kino i televideniya, No 3, 1972, pp 52-56

Abstract: The recognition or classification of images can be automated by the use of histograms statistically representing the characteristics of the structures to be recognized. This article describes an automatic device operating on this principle, which uses the time scale and video signal of a standard television camera. The television equipment is operated in combination with an electronic computer using a specific algorithm and programmed for recognition. A general block diagram of the equipment is given together with specific block diagrams of individual assemblies. Photographic [illegible] are also provided of the type of structures [illegible] soil specimens and cross sections of [illegible] with the device are compatible [illegible] with a computer.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC: 681.45

TSUKKERMAN, S. T., VELIKOTNYY, M. A., Leningrad Institute of Precision Mechanics and Optics

"On the Possibility of Using Photodiodes in Beam Control Devices"

Leningrad, Izvestiya VUZov: Priborostroyeniye, Vol 15, No 12, 1972, pp 89-92

Abstract: The paper deals with the possibility of using gallium arsenide photodiodes in miniature beam control devices. Epitaxial photodiodes of planar and hemispherical design were investigated with an emission power of 2-10 mW (at a supply current of 100 mA), and a PN junction measuring 0.3 x 0.3 mm. The calculations are experimentally confirmed. It is concluded that it is feasible to make beam control devices with photodiode power sources of about 2 mW for operation at a distance of up to 50 m with a precision of at least 0.5 mm. The range of operation can be extended by using photodiodes with higher power.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 539.3

BLOKH, M. V., TSUKROV, S. Ya.

"Axisymmetric Contact of Thin Cylindrical Shells"

V sb. Raschet. prostranstv. sistem v stroit. mekh. (Calculation of Three-Dimensional Systems in Structural Mechanics -- Collection of Works), Saratov, Saratov University, 1972, pp 79-82 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V148)

Translation: The contact pressure between two thin shells of finite length set one upon the other with tightening is determined. The shells may have a distorted initial form of the meridian and be subjected to an axisymmetric load. The problem is reduced to a fourth-order linear differential equation which admits an exact solution. The problem can be generalized for the case when the contact of the shells is over a portion of the surface, for example when one shell is mounted with tightening to another on a certain segment from the end. 5 ref. V. M. Tolkachev.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 669.26:620.193.91

SHAKHNAZAROV, Yu. V., ANISIMOVA, M. S., and TSUKROV, Ye. A., "Bol'shevik" Factory

"Investigation of the Aging of Cr-Ni-Co-Mo Steels"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 35, No 1, 1973, pp 201-204

Abstract: In martensitic-aging steels a rise of the aging temperature and a lowered content of Ni and Co in the precipitate after high-temperature aging is usually combined with a diminution of the parameter of the lattice of α-solid solution. In 00Kh15K19M3 steel, however, the increase in hardness approximately up to maximum hardening (510 °C) is shown not to be related to a diminution of the parameter of α-phase lattice, which even increases in the low-temperature stage (up to 390 °C). The increase of the parameter is complying with the increment of the length of dilatometric specimens of 00Kh15K19M3 (1),

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

SHAKHNAZAROV, Yu. V., ANISIMOVA, M. S., Fizika Metallov i Metallovedeniye, Vol 35, No 1, 1973, pp 201-204

00Kh13K14N4M3 (2), and 00Kh12K14N5M5 (3) steels after heating up to 300-520 °C. Ni intensifies the hardening effect on (1) and (2) steels after aging at 390 and 420 °C. The increase of aging temperature up to 420 °C causes embrittlement at -196 °C of steel (1). The decrease of brittleness in Cr-Ni-Co-Mo steels after hardening is caused by dissolution of Co- and Mo-rich phases. Ni and Co are assumed not only to activate other hardening elements, but also to participate in separation processes in hardening Cr-Ni-Co-Mo steels. Five figures, nineteen bibliographic references.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 620.10

DEL', G. D., Doctor of Technical Sciences, Professor, and TSUKUBLINA, K. N., Graduate Student, Voronezh Polytechnical Institute

"Experimental-Calculation Determination of Stresses During Axisymmetrical Plastic Deformation"

Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 11, 1971, pp 8-13.

ABSTRACT: This article presents a method for determination of stresses during axisymmetrical plastic deformation which does not include the assumption of equality of circumferential stress to one of the other two main stresses. Experimental data for determination of stresses used include the field of circumferential logarithmic deformations, the field of stress intensities and deformation intensities. The method consists of numerical solution of a hyperbolic system of equations using the experimental data. The method is used to determine the stressed state upon penetration of a spherical stamp and a blunt cone (angle at tip 120°) with and without consideration of forces of friction.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 681.3.06.51

TSULADZE, M. G.

"Certain Algorithms for Organization of Distribution of Computer Memory"

Tr. Vychisl. Tsentra. AN Gruz SSR [Works of Computer Center, Academy of Sciences, Georgian SSR], Vol. 9, No. 3, 1970, pp 58-72 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V657 by V. Mikhevev).

Translation: This article is dedicated to description of supplementary algorithms for organization of the distribution of memory in computers preparing information for decision making by selecting the method of memory distribution. Algorithms for separation of complete chains, Δ tables and quasichains are described in algorithmic language. The terms in the article are fully defined in an earlier work (same author, Tsuladze, M. G., Nekotoryye Voprosy Programmirovaniya [Some Programming Problems -- Collection of Works], Tbilisi, 1965).

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

TSULADZE, S.V.

SO:JPRS 53378
16 JUNE 71

UDC: 616.895.8

PECULIARITIES OF SET, THEMATIC AND ATHEMATIC APPERCEPTION IN SCHIZOPHRENIA

[Article by F.M. Kontridze, M.G. Nestiashvili, S.V. Tsuladze, Institute of Psychiatry imeni M.M. Asatiani, Georgian Ministry of Health, Tbilisi; Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 5, May 1971, pp 15-17]

Investigation of personality deals with different aspects but, at the same time, it must be noted that the pathopsychological and pathopersonological findings of the last few years indicate that personality cannot be considered as the aggregate of different mental functions. It is something that is an entity. The link between different mental functions and the environment is mediated by the entire personality, and this determines the structural uniqueness of behavioral acts in the broadest sense. Therefore, the position is definitely valid that mental disease is not a pathology of some individual function rather that it is a disorder of the integral personality.

The choice of adequate investigations is very important in the study of personality manifestations under pathological conditions. From this point of view, we have to consider popular methods in psychology and psychiatry such as the method of fixed set, according to D.N. Uznadze, and so-called projection (or projective) methods.

Clinico-experimental observations indicate that one of the chief conditions for adaptation to the environment is set, or the condition that precedes action. Set, according to D.N. Uznadze, is the initial reaction to a situation. Need and the corresponding objective conditions are the chief factors in initiation of set. In the case of repeated exposure to extrinsic stimuli, set may be fixed, assuming the form of so-called fixed set.

In the course of evolutionary formation of higher nervous activity it underwent a number of qualitative changes; for example, while in animals set is formed through instincts and appears thereafter in the form of automated behavior, which is what creates an "impulsive" or "timely" plan of mental life, in man it is formed at the objectivation level. This higher level of set is characterized not only by the presence of a situation but also categories of ideation, by social and moral principles.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC:691.327:666.972.52:666.9.015.6

TSULUKIDZE, P. P., BURCHULADZE, Sh. V., MIKASHVILI, Yu. N.

"Influence of Age of Water-Engineering Concrete on Its Strength and Deformation Properties Under Compression"

Moscow, Gidrotekhnicheskoye Stroitel'stvo, No 11, Nov 73, pp 16-18

Abstract: Complex physical and chemical processes occur in the concrete used in dams as it ages, significantly changing its structure. Concrete specimens were taken from several dams in the Georgian SSR at different times following pouring and tested under compression. Cubic specimens and cores were used. Compressive strength was found to increase over the 28-day strength approximately according to the formula

$$R_t = R_{28}(0.14 + 0.59\log t),$$

where t is the age of the concrete in days. Compressibility was found to increase very slightly with increasing age, in spite of the increasing compressive strength. Modulus of elasticity increases with age, transverse deformation factor decreases. Ultrasonic wave transmission velocity increases.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Alkaloids

USSR

UDC 547.944/945

TSULIKYAN, T. A., MUSAYELYAN, L. A., and MNATSAKANYAN, V. A., Institute of Fine Organic Chemistry imeni A. L. Mndzhoyan, Academy of Sciences Armenian SSR, Yerevan

"The Alkaloids of Veratrum lobelianum Bernh."

Yerevan, Armyanskiy Khimicheskiy Zhurnal, Vol 24, No 10, 1971, pp 928-931

Abstract: The alkaloids of the subterranean parts of Veratrum lobelianum Bernh. were extracted with chloroform on treatment of the dry, powdered plant material with 8% ammonia. The total alkaloid content of the subterranean parts was 1.5% at the end of the period of vegetation (end of Jul - Aug). The mixture of alkaloids was separated by chromatography on Al_2O_3, using $HCCl_3$-MeOH as an eluent. The mixture, which consisted of at least seven bases, contained the known alkaloids nervine and pseudonervine in amounts corresponding to 33 and 17%, respectively, of the total alkaloids In addition to these two principal alkaloids, small amounts of unknown bases with m. 260-2° and m. 286-9° were isolated. The leaves and stalks of the plants contained 0.5% alkaloids in May and only traces of them at the end of the period of vegetation.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 547.785.5+541.49+288.4

KOGAN, V. A., OSIPOV, O. A., CHUB, N. K., GAPNOVSKIY, A. D., BURLOV, A. S., TSUPAK, Ye. B., and POLUNIN, A. A., Rostov-na-Donu State University

"Complex Compounds of Copper With Heterocyclic Aldoximes"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 3, Mar 72, pp 581-584

Abstract: A series of new polynuclear compounds of copper with heterocyclic aldoximes synthesized from benzimidazole were produced for the first time. Ultimate analysis and magnetochemical measurements are used to determine the composition of the compounds and the presence of an exchange interaction with perchlorate anions. Differences in the composition and properties of the complexes are determined as they are related to the nature of the anion. The IR spectra of the compounds are studied and a hypothesis is proposed for the point of coordination of the ligand with copper.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 547.785.5'786.07

TSUPAK, Ye. B., CHUB, N. K., SIMONOV, A. M., and MIROSHNICHENKO, N. M.,
Rostov State University, Rostov-on-Don

"Studies in the Field of Benzimidazole Derivatives. XXVIII. Synthesis of Some 3-/2'-Benzimidazolyl/isoxazoles"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 72, pp 812-815

Abstract: By the chlorination of the oximes of 1-methyl-2-formylbenzimidazole and of its 5-methyl and 5-nitro derivatives, the hydrochlorides of the corresponding 2-benzimidazolylmethylhydroxamoyl chlorides were synthesized. Nitration of the oximes gave benzimidazolylmethylnitrolic acids. The products of the two conversions reacted with acetyl- or benzoylacetone in the presence of bases, forming 1', 5'-substituted 3-/2-benzimidazolyl/-4-acyl-5-methylisoxazoles.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--REACTION OF 2,AMINOMETHYLBENZIMIDAZOLE WITH NITROUS ACID -U-

AUTHOR--CHUB, N.K., TSUPAK, YE.B., SIMONOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (1), 127

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, CHLORINATED ORGANIC COMPOUND, BROMINATED ORGANIC COMPOUND, BENZENE DERIVATIVE, ORGANIC AZOLE COMPOUND, AMINE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1782 STEP NO--UR/0409/70/000/001/0127/0127

CIRC ACCESSION NO--AP0100362

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 010 UNCLASSIFIED

CIRC ACCESSION NO--AP0100362 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF I (R PRIME1 EQUALS CH SUB2 NH SUB2, R PRIME2 EQUALS H) WITH 1 MOLE HNO SUB2 IN HCL OR HBR SOLN. (3 MOLES) GAVE I (R PRIME1 EQUALS CH SUB2 CL OR CH SUB2 BR, R PRIME2 EQUALS H) IN 81 AND 90PERCENT YIELDS, RESP. WITH EXCESS HNO SUB2 (2 MOLES) THERE WERE FORMED I (R PRIME1, R PRIME2, PERCENT YIELD, M.P., AND CRYSTN. SOLVENT GIVEN): CH SUB2 CL, NO, 17, 178DEGREES, MEOH; CH SUB2 OH, H, 35, 171-2DEGREES; H SUB2 O; HON:CNO SUB2, H, 39, 108DEGREES (DECOMPN.), BAR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

1

UDC: 53.07/08+53.001.5

FEDOROV, G. A., SLAVYAGIN, P. D., MOISEYEV, I. F., ANTONOV, V. A., TSURGANOV, S. V.

"Using the Geometry of Linear and Spiral Scanning in Human Radiation Spectrometers"

V sb. Vopr. dozimetrii i zashchity ot izluch. (Problems of Dosimetry and Radiation Shielding--collection of works), vyp. 12, Moscow, Atomizdat, 1971, pp 173-178 (from RZh-Fizika, No 4, Apr 72, Abstract No 4A714)

Translation: A study was made of the spatial effectiveness of registration of gamma quanta by a human radiation spectrometer as a function of the energy of the isotopes utilized by the detector, the length and height (or radius) of scanning, and the region of the recorded spectrum for linear and spiral scanning geometries. M. L.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

Materials

USSR

UDC 621.362.2

KAZANDZHAN, B. I., LOBANOV, A. A., SELIN, Yu. I., TSURIKOV, A. A.

"Electrical Conductivity and Thermoelectromotive Force of Tl_2Te and Tl_2Se in the Molten State"

Tr. Mosk. energ. in-ta (Works of the Moscow Power Engineering Institute), 1970, vyp. 75, pp 163-165 (from RZh-Elektrotekhnika i Energetika, No 1, Jan 71, Abstract No 1A158)

Translation: The conductivity σ and thermoelectromotive force of Tl_2Te and Tl_2Se in the molten state are measured at temperatures from 700 to 1150°K. The width of the forbidden band is 0.75 eV for Tl_2Te and 1.02 eV for Tl_2We. Two illustrations, bibliography of five titles.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC: 621.396.677.833

TSURIKOV, G. G.

"Radiator With a Dielectric Cone, Generating a Uniform and In-Phase Field Distribution in the Antenna Aperture"

Tr. NII radio, Transactions of the Scientific Research Institute of Radio) 1970, No. 2, pp 110-119 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3B61)

Translation: The advantages are considered of a two-reflector antenna with a dielectric cone over the classical Cassegrain antenna. A method is given for computing the surfaces by numerical means and for analyzing the obtained results.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC 539.385

GRINBERG, N. M., BOYCHUK, V. M., TSURIKOV, N. A., SOLOGUB, P. S., GLADKIKH, B. V., POPIRNYY, V. Ye., Khar'kov, Leningrad.

"Durability of Titanium Alloy in a Vacuum at Low and High Temperatures"

Kiev, Problemy Prochnosti, No. 4, Apr 71, p. 36-40.

Abstract: Results are presented from a study of the durability of titanium alloy under cyclical twisting in the range from 133 to 432°K under a vacuum of 10^{-7}mmHg. A significant (approximately 7 times) increase in durability of unrolled specimens is discovered for loading under a vacuum in comparison with the same loading in air. When the surface is hardened by rolling, the vacuum has almost no influence on the durability of the alloy under cyclical deformation. An increase is noted in the durability of the alloy at low temperatures, as well as in increase in static strength under these conditions. The durability as a function of temperature above room temperature follows a complex curve. Certain specifics of the fatigue rupture are studied by electron microscopy and electron fractography. An attempt is made to explain the phenomenon observed.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC 531.36

MIS'KEVICH, O. R., and TSURIKOV, YU. A.

"The Asymptotic Stability of a Pendulum System with a Regulator"

Kiev, Prikladnaya Mekhanika, Vol 8, No 2, Feb 72, pp 92-99

Abstract: An investigation is made of the stability of a mechanical system which constitutes a rigid rectilinear rod with two mathematical pendulums of different length, attached to its longitudinal axis. The rod is acted upon by a tracking force along its axis, a directing force, aerodynamic forces, and dissipative forces. On the basis of the Hurwitz criterion, regions of asymptotic stability are obtained. An investigation is made of the influence, upon the system stability, of the parameters of the object, retardation in the regulator, aerodynamic forces and dissipative forces. Three figures, 4 references.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

1/2 049 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--MEASUREMENT OF TRIPLET TRIPLET ABSORPTION SPECTRA OF MOLECULES OF ORGANIC COMPOUNDS IN LIQUID SOLUTIONS BY USING A LASER -U-

AUTHOR-(04)-TSURIKOV, YU.L., ABAKUMOV, G.A., TRUSHANOV, A.A., SIMONOV, A.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(2), 336-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--ABSORPTION SPECTRUM, NAPHTHALENE, RUBY LASER, AROMATIC KETONE, BENZENE, PULSE EXCITATION, LASER RADIATION, SECOND HARMONIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1241 STEP NO--UR/0368/70/012/002/0336/0338

CIRC ACCESSION NO--AP0116703

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

2/2 049 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0116703

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SPECTRA OF TRIPLET TRIPLET (T-T) ABSORPTION OF PH SUB2 CO AND NAPHTHALENE IN BENZENE SOLN. WERE MEASURED AT ROOM TEMP. BY USING A RUBY LASER 2ND HARMONICS RADIATION (LAMBDA EQUALS 347 NM; POWER 0.3-0.5 MW, AND PULSE DURATION SIMILAR TO 30 NSEC) AS THE EXCITATION SOURCE. THE 2ND HARMONICS WAS OBTAINED WITH A KH SUB2 PO SUB4 SINGLE CRYSTAL (25 MM LONG). SOLNS. OF FLUORESCEIN IN HOAC WATER MIXT. AND OF PHENYLACRIDONE IN ETOH WERE USED AS SOURCES OF VISIBLE REGION RADIATION. THE POSITIONS OF MAX. IN PH SUB2 CO AND NAPHTHALENE AT 350 AND 420 NM, RESP., IN THE T-T SPECTRUM, ARE IN GOOD AGREEMENT WITH LITERATURE DATA. THE ADVANTAGES OF THE USE OF LASER RADIATION FOR THE EXCITATION OF ORG. MOLS. IN SOLNS. ARE DISCUSSED.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC 615.37:[576.851.49+576.851.551]:615.451.13].036.8

SHORSHER, S. B., SOLODOVNIKOV, Yu. L., PANKRATOVA, L. P., and TSURIKOVA, Z. F., Moscow Institute of Epidemiology and Microbiology, and Yaroslavskaya Oblast Epidemiological Station

"A Study of Reactivity to Combined Typhoid and Tetanus Vaccinations"

Moscow, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, No 2, 1973, p 132

Abstract: Reactions of industrial workers to vaccination by Vi-antigen and Vi-monovaccine against typhus, and by these vaccines combined with tetanus toxoid were compared. Postvaccination reactions were not dependent on age or sex. Reactions to Vi-antigen combined with tetanus anatoxin were not more severe than those to Vi-monovaccine alone. Thus the combination can be recommended for practical use. Vimonovaccine combined with tetanus toxoid caused reactivity that exceeded permissible levels. Consequently further research must be carried out on this combination to decrease reactivity to it prior to its recommendation for use.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR UDC 621.372.061

SIGORSKIY, V. P., Doctor of Technical Sciences, PETRENKO, A. I., Doctor of Technical Sciences, DENBNOVETSKIY, S. V., Candidate of Technical Sciences, TSURIN, O. E., Candidate of Technical Sciences, KOLESNIK, A. A.

"Experimental System for Operator-BESM-3M Computer Interaction"

Kiev, Mekhanizatsiya i Avtomatizatsiya Upravleniya, No 1, Jan/Feb 72, pp 24-26

Abstract: A brief description of an experimental model for a system for the graphical interaction between an operator and the BESM-3M computer is given. The model was developed at Kiev Polytechnical Institute and is currently being tested at the Scientific Research Institute of Automated Systems for Planning and Control in Construction (Kiev). The designation and characteristics of units in the experimental model are described, including a block diagram of the system and a diagram of the structure of words used in constructing graphical information. The controlling word switches on individual units of the machine such as the light pencil and the rotation unit. The control word can also give an image recorded in the memory of the machine to which a 21-32 bit word corresponds and can also organize a ring structure for the construction of complex images.
1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

SIGORSKIY, V. P., et al., Mekhanizatsiya i Avtomatizatsiya Upravleniya, No 1, Jan/Feb 72, pp 24-26

If the image is recorded by a method invariant to the position on the screen of the indicator device in the data bank to which the transfer in processing the controlling word is made, multiplication of a given image without additional losses is possible and the given structural data bank can be represented as a symbol in the character generator. An image is regenerated by periodic interrogation of the magnetic memory of the BESM-3M with a frequency of 33 Hz. The raw data for images is stored in 1000 locations of the working storage. Digital portions of the operation are carried out on logical elements of the MIR-1 complex.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

USSR

UDC 681.327.21:003.63

TSURIN, O. F.

"Devices for Operational Input of Graphic Information to a Digital Computer"

Avtomatiz. Proyektir. v Elektronike. Resp. Mezhved. Nauch.-Tekhn. Sb. (Automated Design in Electronics. Republics Interdepartmental Scientific-Technical Collection), No 3, 1971, pp 65-68 (from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B341)

Translation: Devices for operational input of graphic information, devices which are being used in systems for graphic interaction of an operator and a digital computer, are classified. The merits and shortcomings of devices of the plotting board type and light pens are considered. 2 illustrations, 12 titles in bibliography.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6

UDC 621.385.532:535

USSR

YELISEYEV, V. K., and TSURIN, O. F.

"Analysis of the Precision of Photoelectric Image Converter Tubes with a Scanning Beam"

V sb. Teoriya tochnosti i nadezhnosti kibernet. sistem. Tr. Seminar (Theory of Precision and Reliability of a Cybernetic System. Work of a Seminar -- Collection of Works), Issue 2, Kiev, 1968(1969), pp 12-15 (from RZh-Elektronia i yeye primeneniye, No 1, Jan 70, Abstract 1A291)

Translation: Ana analysis in a general form is conducted on the precision of "classical" circuits of photoelectric image converter tubes (PCT) with a scanning beam, with separation of errors into "aperture" (insufficient clearance, geometrical distortion, coordinate errors) and "Photometric" (instability of the conversion factor, variability of the parameters of the photocollector, etc.). Two variants of the PCT are considered which were developed by the Institute of Cybernetics of the Academy og Sciences, Ukrainian SSR: 1) Episcope, designed for reading printed texts (electron-beam tube with a scanning light beam, objective, and a photoelectron multiplier, accepting the re-

1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410003-6"