"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

KEKELIYA, V. I. and TSEYTLIN, G. Ye.

UDC: 577.4

"Realizing Multirecorded Periodic Determinations of the Conversions in One Abstract Model of a Computing Medium"

Novosibirsk, V cb. Vychisl. sistemy (Computer Systems--collection of works) No 47, 1971, pp 87-102 (from RZh--Matematika, No 8, 1972, Abstract No 8V428)

Translation: The article is devoted to developing methods for realizing multirecorded conversions in one abstract model of a computing medium. Microprograms of basic arithmetic operations are described. From the introduction

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USSR

UDC 620.193.5

SOROKIN, YU. I., TSEYTLIN, KH. L., VALASHOVA, A. A., RABITSKAYA, S. M., LEVIN, YA. S., Scientific-Research Institute of Organic Semi-Products and Dyes

"Influence of Water Vapor and Its Mixtures With Carbon Dioxide on Corrosion of Metals in Ammonia at 500°"

Moscow, Zashchita Metallov, No 4, 1972, pp 430-434

Abstract: It was shown earlier that the catalytic action of metals on dissociation of ammonia and their corrosion resistance are interrelated. It was therefore of interest to determine the influence of water vapor and its mixtures with CO_2 on the resistance of metals to a stream of gaseous ammonia. The addition of water vapor has little influence on corrosion losses of carbon steel, but its mechanical properties change significantly, specimens breaking at bending angles of 30° after 400 hours (as opposed to 90° in pure ammonia). Water vapor sharply reduces the corrosion of stainless steel. The strength properties of the steel change little. The addition of carbon dioxide with water vapor sharply increases total corrosion of carbon steel. The strength properties change slightly, but cracks appear at bending angles of 90°.

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USSR

UDC 620.193.3

STRUNKIN, V. A., TSEYTLIN, Kh. L. and PORET, E. N., Scientific Research Institute of Organic Intermediates and Dyestuffs

"Combustion of Titanium and Its Alloys in Gaseous Chlorine"

Moscow, Zashchita metallov, Vol 8, No 1, Jan-Feb 72, pp 15-18

Abstract: Discussed is the combustibility of titanium and its alloys in gaseous chlorine as well as the effect of alloying on both inflammation and corrosion resistance of titanium in chlorine gas. Involved in the study were OT4-0, OT4-1, VT5-1, VT-14, Ti-Pd and Ti-Mo alloys of given compositions. The time from the input of chlorine gas to the moment of the specimen's combustion is termed "induction period". The duration of this period depends largely on the preparation of the specimen. A table shows the effect of temperature (30, 60, 90, 120 and 150°C) on the duration of the induction period of titanium alloys in dry chlorine gas as a function of preparation conditions. The VT5-7 alloy, being a stable alloy, took 352 and 206 hrs to ignite at 30 and 60°C, respectively. TU-14 ranked second. Freshly cleaned specimens demonstrated shorter

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USSR

STRUNKIN, V. A., et al, Zashchita metallov, Vol 8, No 1, Jan-Feb 72, pp 15-18

induction periods. Metal chlorides with higher vapor pressures appear to react violently with chlorine. Of all experimental alloys, Ti-32% Mo was most stable and is recommended for components of experimental equipment using dry chlorine at temperatures not exceeding 60°C. (2 tables, 19 bibliographic references).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

UDC: 620.193.5

TSEYTLIN, Kh. L., SOROKIN, Yu. I., BALASHOVA, A. A., RABITSKAYA, S. M., LEVIN, Ya. S., KONYUSHENKO, A. T., GOLOVIN, R. V., and LADYZHINSKIY, B. S., Scientific Research Institute of Organic Intermediates and Dyestuffs

"High-Temperature Corrosion of Metals in Gaseous Ammonia"

Moscow, Zashchita Metallov, Vol. 6, no. 4, 70, pp 451-454

Abstract: Processes involving the use of ammonia are known to cause corrosion of equipment. The homogeneous reaction of ammonia dissociation in the gas phase begins above 1200--1300°C. In the presence of a catalyst this temperature drops to 300--400°C. Experiments have shown that the type of metal considerably affects the thermal dissociation of ammonia and that this effect is a function of temperature. This study describes in detail the testing and effects of gaseous ammonia on KhN10T steel, KhN78T, N70M27F, and Kh15N55M16V alloys, VT-1 titanium, and MZS copper. The analysis of experimental data shows that there is a fundamental correspondence between the effect of metals on ammonia dissociation and their resistance. Therefore, to insure continuous service of equipment in gaseous ammonia, it is advisable to use materials which

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TSEYTLIN, Kh. L., et al, Zashchita Metallov, Vol 6, no. 4, 70, pp 451-454

will not readily catalyze ammonia dissociation. Materials which are suitable for service under these conditions include carbon steel and N70M27F, Kh15N5516V alloys up 400°C; Kh18N10T steel and nickel up to 300°C; KhN78T up to 600°C; aluminum, titanium, and copper up to 450°C. Considering the low specific gravity, good technological properties, relative availability, and low cost of aluminum, this metal is preferred in selecting materials for equipment operated in gaseous ammonia at high temperatures. A table illustrating the performance of the above metals during 400 hours of testing with gaseous ammonia at high temperatures, including corrosion rate tensile strength, relative elongation, % and Vickers hardness, prior to and after the experiment, is given in the original article.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

TSEYTLIN, L. A.

UDC: 621.318.4:621.3.013.5

"Coils With Active Electromagnetic Shields"

Moscow, Izvestiya Akademii Nauk SSSR--Energetika i Transport, No. 4, 1971, pp 51-55

Abstract: This paper is based, in part, on two earlier articles by the same author (Zh. tekhn. fiz., vol. 37, No. 3, 1967; vol. 27, No. 12, 1957) proposing a method of shielding an object from outside magnetic fields in which the object is surrounded by a coil carrying current. Such shielding is known as active shielding, as opposed to passive shielding which depends on eddy currents generated in the shielding material by the action of the outside field itself. The present paper considers some general problems in the use of active shielding as applied to reactive inductances. It concludes that active shielding may be used with profit in power, measurement, and other electrical equipment, that it can be used with direct as well as alternating current in the absence of passive shielding, that the weight of active shielding at industrial frequencies is much lower than that of passive shielding, and that the specific inductance of a coil using active shielding is at least of the same order as that of a toroidal coil and is often higher.

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USSR

UDC 669.71.049.6

TKACHENKO, V. M., MIKHAYLOV, N. S., TSEYTLIN, L. A., MERKULOVA, Ye. V.

"Corundum Packing Masses for Lining of a Reactor for the Subchloride Process of Distillation of Aluminum"

Tr. Vses. N-i. i Proyektn. In-ta. Alyumin., Magn. i Elektrodn. Prom-sti [Works of All-Union Scientific Research and Planning Institute of the Aluminum, Magnesium and Electrode Industry], 1970, No. 71, pp. 208-217. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 G170, by the authors).

Translation: A literature review is presented, and the characteristics of corundum packing masses are given as functions of the addition of H_3PO_4, H_3BO_3, $Al(OH)_3$, TiO_2, SiO_2, $AlCl_3$, MgO. Compositions of these masses are developed with high contents of Al_2O_3. They have high density, and strength and low residual volume changes following roasting. 2 figs; 3 tables; 11 biblio refs.

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Acc. Nr: AP0037242

Ref. Code: UR 0301

PRIMARY SOURCE: Voprosy Meditsinskoy Khimii, 1970, Vol 16, Nr 1, pp 83 - 87

SPLITTING OF THIAMINE PHOSPHATES IN HEART MUSCLE AT ADRENALINE-INDUCED MYOCARDITIS AND IN NORMAL ANIMALS

Boyko, S. S.; Tseytlin, L. A.

Laboratory of Biochemistry Institute of Pharmacology USSR Academy of Medical Sciences, Moscow

The splitting of exogenous TPP and TMP in homogenates of heart muscle took place. Dephosphorylation of TPP either leads to TMP or free thiamine formation. From all subcellular fractions the supernatant containing microsomes is characterized by the highest thyamine pyro- and thiamine monophosphatase activity. The enzymatic splitting of TPP and TMP is significantly increased in all cellular fractions of heart muscle homogenate at myocarditis.

D.R.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

Acc. Nr. AP0040012 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code UR 0096

68589r **Heat transfer in rotating, closed, cylindrical channels filled with sodium.** Uskov, I. B.; Tseitlin, L. M. (Tsent. Kotloturbin. Inst., Leningrad, USSR). *Teploenergetika* 1970, 17(1), 56-8 (Russ). An exptl. study was carried out on the heat transfer in a rotating, closed, straight, cylindrical channel filled with liq. Na. The channels were made of 4.1 and 10-mm inside-diam. steel tubes. The max. heat flux in the tubes was 10^7 and 10^6 kJ/m² hr, resp. The heat-transfer coeffs. were calcd. from the exptl. data. The data on the local heat-transfer coeff. were correlated by the equation $Nu = 14.1\,[Gr\,Pr/(1 + Pr)]^{-1.15} f^{0.33} (d/l)^{1.43}$, where *Nu*, *Pr*, and *Gr* are the Nusselt, Prandtl, and Grashof nos., resp., *f* an adjustable parameter accounting for the rotational overload, *d* and *l* the diam. and length of the channel.

M. Shelef

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

TSEYTLIN, M. B., BETSKIY, O. V., and TSITSON', I. T.

UDC 621.385.64

"Optimal Choice of Parameters for the Input Section of a Type M Plane Amplifier Cascade"

Kiev, Izvestiya VUZ -- Radioelektronika, Vol 13, No 8, 1970, pp 916-922

Abstract: From earlier papers on the subject of M type UHF amplifiers, it follows that in a cascade amplifier of this type there exists some optimal height of interaction space in the input circuit at which a compromise is reached for the amplification factor, the efficiency, and the length of the instrument. The purpose of this article is to determine this optimal height and its effect on the basic parameters of the amplifier. The analysis is made on the basis of equations in nonlinear theory developed in an earlier paper coauthored by the first and third writers named above (Izv. VUZ -- Radioelektronika, 12, No 9, 1969, p 976). Three basic assumptions are made in the computations: the electron bean is infinitely fine; the mode of operation is adiabatic; and the interaction of the electrons with only one spatial harmonic is taken into account. It is shown that there is no need for the surface of the input stage delay system to be kept close to the electron beam since this neither increases the efficiency nor improves the gain but may lead to a significant loss in the electrical length of the amplifier.

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USSR

DUGIN, N.A., TURCHIN, V.I., TSEYTLIN, N.M., SHARONOV, G.A.

UDC 621.396.677:523.164

"On The Use Of A Two-Element Interferometer With Fixed Base For Obtaining A Knife-Edge Directivity Diagram"

Radiotekh. i elektronika (Radio Engineering And Electronics), 1971, 16, No 6, pp 918-928 (from RZh--Radiotekhnika, No 9, Sept 1971, Abstract No 9B17)

Translation: The singularities are considered of the synthesis of the linear antenna of a two-element interferometer with a fixed base during rotation of the earth. The conditions during which such synthesis can take place are obtained. The possible directional diagrams for such a system are calculated and certain requirements placed on the receiving apparatus of the interferometer are determined. 7 ill. 8 ref. Author's abstract.

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USSR

UDC: 621.936.677.012.12

DUGIN, N. A., TURCHIN, V. I., TSEYTLIN, N. M., SHARONOV, G. A.

"On Using a Two-Element Interferometer With Fixed Base to Produce a Knife Radiation Pattern"

Moscow, Radiotekhnika i Elektronika, Vol. 16, No 6, Jun 71, pp 918-928

Abstract: The authors consider some peculiarities and parameters of an equivalent antenna with a "knife" radiation pattern synthesized from a two-element interferometer with a base which remains fixed as the earth rotates for the case of observation of sources with "optimum" inclinations. Some requirements of the main parameters of the receiver are considered -- the width of the passband, selection of the time constant, use of a phase shifter, phase stability. The results of the analysis show that when observational data are appropriately processed, the proposed two-antenna interferometer system can give a "finger" radiation pattern with low side-lobe level at the expense of reduced sensitivity.

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USSR

UDC 576.851.513.095.57.095.18

STOLYAROVA, L. G., USAKOVSKAYA, T. S., TSEYTLIN, P. I., and PEKHOV, A. P., Institute of Experimental Biology, Academy of Medical Sciences USSR, Moscow

"The Effect of Nitrous Acid on the Capacity of DNA to Inhibit Transformation of Bac. subtilis"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 3, 1970, pp 81-84

Abstract: The effect of nitrous acid on the capacity of DNA to inhibit transformation of Bac. subtilis was studied using calf thymus DNA treated with a 2 M solution of $NaNO_2$ for 20, 40, and 60 min. In control experiments, the effect of $NaNO_2$ on the transformation activity of DNA was studied. It was determined that 20 min treatment of DNA with $NaNO_2$ augments its inhibiting activity. Longer treatment reverses the order, so that after a 60 min treatment, the inhibition process is completely suppressed.

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UNCLASSIFIED

TITLE FEATURES OF THE ACTION OF RADIOMIMETICS ON THE CONDENSATION AND PROPERTIES OF SUPERMOLECULAR DEOXYRIBONUCLEOPROTEIN

PROCESSING DATE--30OCT70

AUTHOR-(03)-MARTYNOV, E.V., SPITKOVSKIY, D.M., TSEYTLIN, P.I.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA 1970, 10(1), 3-8

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--THYMUS GLAND, NUCLOPROTEIN, ORGNAIC PHOSPHORUS COMPOUND, ORGANIC ACID, IMIDE, AMIDE, X RAY IRRADIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0476

STEP NO--UR/0205/70/010/001/0003/0008

CIRC ACCESSION NO--AP0121150

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

ACCESSION NO--AP0121150 UNCLASSIFIED PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACTION OF 8ETHOXYCAFFEINE (I) AND PHOSPHAZIN(DI(ETHYLENEIMIDE),2,PYRIMIDYLAMIDOPHOSPHORIC ACID) (II) ON DEOXYRIBONUCLEOPROTEINS EXTD. IN 0.7M NACL SOLN. FROM CALF THYMUS HAS BEEN EVALUATED. NUCLEOPROTEIN GELS WERE INCUBATED WITH I AND (ORO II (0.001M SOLNS) FOR 24-26 HR AT 4DEGREES. THE LENGTH OF NUCLEOPROTEIN FIBERS FORMED FROM THE PREPNS. PRELIMINARY TREATED WITH II WAS INCREASED BY 10-15PERCENT, WHILE IT WAS DECREASED BY 15-20PERCENT AFTER TREATMENT WITH I, IN COMPARISON WITH CONTROL FIBERS (10 CM). THE TEMP. OF THE TRANSITION OF THE FIBERS FROM THE HIGHLY ELASTIC INTO THE VISCOSE STATE WAS INCREASED TO 60-65DEGREES AFTER TREATMENT WITH II (50-55DEGREES IN CONTROL FIBERS). 35-40DEGREES AFTER TREATMENT WITH I AND DECREASED TO THE EFFECT OF II WAS LESS INTENSIVE IN EXPTS. WITH DEPROTEINIZED DEOXYRIBONUCLEOPROTEINS (N-P RATIO OF 3.2-2.8), II POSSESSED A RADIOMIMETIC ACTION WEAKENING INTERMOL. INTERACTION IN SUPERMOL. DEOXYRIBONUCLEOPROTEIN SYSTEMS. THE PREPNS. DID NOT CHANGE THE STRUCTURE OF INDIVIDUAL MOLS. OF DNA AND DEOXYRIBONUCLEOPROTEIN ACTING IN LOCO WHERE WEAK INTERMOL. BONDS OCCURRED. SYNERGISM OF THE ACTION OF X RAYS AND II WAS NOTED IN EXPTS. WITH DEOXYRIBONUCLEOPROTEINS TREATED WITH I AND 90R) II AND THEN X IRRADIATED WITH A DOSE OF 200 R.

FACILITY: INST. EKSP. BIOL. MOSCOW, USSR.

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USSR

UDC 621.357.12:661.418(088.8)

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EBERIL', V. I., YELINA, L. M., SHKRED, V. V., TSEYTLIN, R. I., YURKOV, L. I., GURVANOV, L. S., KORYAGIN, V. I., PANCHENKO, M. B., and SHANTALIN, A. M.

"Process of the Decomposition of Active Chlorine in Solution"

USSR Authors' Certificate No 335211, filed 20 Jun 60, published 15 May 72 (from Referativnyy Zhurnal -- Khimiya, No 8, (II), 1973, Abstract No 8L254P)

Translation: A process is patented for the dissociation of active chlorine in solutions by means of heating, which is distinguished in that, in order to increase the velocity of dissociation, a process occurs in order to maintain a stable pH value for the solution equal to 5.5 to 6.5. It is proposed to carry out the process by bubbling gases which have been pre-heated and humidified to 60-100% (relative to the temperature of the solution). The value of the pH of the solution during the process starys in the region 5.5 to 6.5 by the addition of alkaline or alkali salts to the solution. The temperature of the solution is confined to the region 60-100°C. The process is carried out either as a batch or as a continuous system, for example, for the flow of the pre-heated solution across a step-wise capacity pattern. The solution is made alkaline at the beginning of the process; that is, the most rapid reduction in the pH of the solution occurs during the first stage of the pro-

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USSR

EBERIL', V. I., et al., USSR Authors' Certificate No 335211, filed 20 Jun 60, published 15 May 72

cess when velocity of dissociation of the active chlorine is highest. From 50-100% of the alkali reagents supplied in the solution are introduced during the first 60 minutes of the process.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 534.647:621.83:389

TAYTS, B. A., TSEYTLIN, S. I., and SHUMILIN, V. V.

"Metrological Problems in the Seismic Method of Gauging Nonuniformity and Inconsistency in the Motion of Elements of Kinematic Chains"

Khar'kov, Ukr. resp. nauch.-tekhn. konf., posvyashch. 50-letiyu metrol. sluzhby USSR, 1972 -- st. (Ukrainian Republic Scientific and Technological Conference Honoring the 50th Anniversary of the Ukrainian SSR's Metrological Service, 1972 -- Collection of Works), 1972, pp 178-179 (from Referativnyy Zhurnal -- Metrologiya i Izmeritel'naya Tekhnika, No 2, 1973, Abstract No 2.32.521)

Translation: The authors have worked out two models of a device for measuring nonuniformity and inconsistency in the rotation of a table and a tool. The set consists of two seismic angular oscillators fitted with individual amplifying channels, an electronic adder with scale multiplication of the components according to the gear ratio, and a three-channel recorder. Differential-transformer inverters are used in the sensors. In order to calibrate the seismic device, the authors developed a calibrator consisting of a platform with spring suspension that makes angular vibrations when acted upon by a pair of electrodynamic oscillators. The induced vibrations are controlled by a

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USSR

TAYTS, B. A., et al., Ukr. resp. nauch.-tekhn. konf., posvyashch. 50-letiyu metrol. sluzhby USSR, 1972, pp 178-179

precision induction-transformer displacement inverter. The authors provide for certification of the control equipment in the statistical mode by using standard linear and angular measures, as well as spring-actuated contact comparator heads in the lower part of the spectrum. Identity of the amplitude and phase characteristics of both measuring circuits (including the sensors) affects the adder error, which is quite substantial in the frequency band close to the sensor's natural frequency, where these disgrams are steepest. Dynamic errors in the recorder are primarily caused by its amplitude-frequency characteristics. A detailed investigation of the metrological problems involved in the seismic method is of pressing importance.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

Acc. Nr: AP0040883

PRIMARY SOURCE: Avtomatika i Telemekhanika, 1970, Nr 1, pp 176-182

Ref. Code: UR0103

ALGORITHMICAL APPROACH TO RATIONAL RESERVATION OF INFORMATION SYSTEM

L. M. KOGAN, V. A. TSEYTLIN

There is considered the problem of the rational distribution of the levels of the reliability of the information system devices proceeding from the reliability requirements made to a number of algorithms. The approach to the solution of this problem as well as the method of the optimal distribution of reliability among the devices of the algorithmical is suggested.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

TSEYTLIN, V. I.

UDC: 539.385

"Resistance of Materials to Repeated Static Loading"

Tr. Kuybyshev. aviats. in-t (Works of Kuybyshev Aviation Institute), 1970, vyp. 45, pp 270-278 (from RZh-Mekhanika, No 5, May 72, Abstract No 5V1050)

Translation: Literature data are given on the resistance of metals to short--cycle fracture in connection with the loading frequency, the stress concentration and the presence of soft interlayers. The paper presents the results of experiments on loading with given load amplitudes for EI-696A and EI961F steels, and VT-8 and VT-9-0.7 titanium alloys. The use of surface work hardening, annealing at appropriate temperatures, and the reduction of stress concentration can increase the maximum number of cycles.
N. A. Makhutov.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

Titanium

USSR

UDC 669.295:620.172

TSEYTLIN, V. I., GROMOV, G. A., and KRYUCHKOVA, A. N.

"Low-Cycle Fatigue of Titanium Alloys"

Moscow, Metallovedeniye i termicheskaya obrabotka metallov, No 4, 1972, pp 57-58

Abstract: This paper deals with the effect of strength, temperature, stress concentration, and surface hardening on the low-cycle fatigue of titanium alloys. The sensitivity of VT8 and VT9 titanium alloys to repeated stresses is shown to increase with the strength of these alloys for both smooth and notched specimens. The sensitivity factor to repeated stress remains unaffected by increasing the test temperatures. Surface hardening is shown to be an effective means of extending the service life of titanium alloys during low-cycle fatigue tests. This is attributed to the relaxation of residual stresses at test stress values exceeding the yield point of the material. (4 tables)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 629.78.002.3

TSEYTLIN, V. I.

"Some Problems of Structural Strength of Materials"

Tr. Kuybyshev. Aviats. In-t. [Works of Kuybyshev Aviation Institute], No 45, 1970, pp 278-294, (Translated from Referativnyy Zhurnal, Raketostroyeniye, No 4, 1972, Abstract No 4.41.217 from the Resume).

Translation: In developing materials and recommendations for their utilization, the standard characteristics σ_b, $\sigma_{0.2}$, δ, ψ_b, a_k, $\sigma^t_{B/T}$ are used without considering the entire complex of properties and peculiarities of operation of the material in the structure, leading to unjustified expenditures of funds and time for refinement of units and in worsening of the basic parameters of products and their reliability. Certain considerations are presented on the foundation of requirements placed on the structural strength of materials, i.e., strength considering structural, metallurgical and technological factors. 6 Figures; 5 Tables.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

UNCLASSIFIED

TITLE--LOSS OF CAPTURED ELECTRONS IN GAMMA IRRADIATED ALKALINE GLASS AT 77DEGREESK -U-

PROCESSING DATE--02OCT70

AUTHOR-(02)-YERSHOV, B.G., TSEYTLIN, YE.L.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(2) 186-7

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--GAMMA RADIATION, ELECTRON ACCEPTOR, NITRITE, NITRATE, FERROCYANIDE, ALKALI GLASS, IRRADIATED GLASS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1498

STEP NO--UR/0456/70/004/002/0186/0187

CIRC ACCESSION NO--AP0112492

UNCLASSIFIED

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UNCLASSIFIED

CIRC ACCESSION NO--AP0112492 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RANDOM LOSS OF CAPTURED ELECTRONS (E PRIME NEGATIVE CAPT) WAS STUDIED IN THE PRESENCE OF ELECTRON ACCEPTORS. THE DOSE OF GAMMA RADIATION FROM PRIME60 CO WAS 6 TIMES 10 PRIME15 EV-G,SEC. THE ABSORPTION MAX. OF E PRIME NEGATIVE CAPT (580 NM) DECREASES WITH THE INTRODUCTION OF THE ACCEPTORS NO SUB2 PRIME NEGATIVE, NO SUB3 PRIME NEGATIVE, FE(CN) SUB6 PRIME3 NEGATIVE. IN PURE ALK. "GLASS" THE ABSORPTION OF E PRIME NEGATIVE CAPT REMAINS CONST. FOR SOME TIME. IN THE PRESENCE OF ACCEPTORS A NOTICEABLE DECREASE IN THE ABSORBANCE IS OBSD. THE RELATIVE DOSE OF THE RANDOMLY DISAPPEARING E PRIME NEGATIVE CAPT INCREASES WITH THE ACCEPTOR CONCN. WITH AN INCREASE IN THE CONTENT OF NO SUB3 PRIME NEGATIVE AND FE(CN) SUB6 PRIME3 NEGATIVE FROM 5 TIMES 10 PRIME NEGATIVE3 TO 5 TIMES 10 PRIME NEGATIVE2 M IT INCREASES FROM 8 TO 25 AND FROM 12 TO 40PERCENT, RESP. THE KINETICS OF THE LOSS OF ELECTRONS ON THE SECTION OF FAST DROP IS BEST DESCRIBED BY AN EQUATION OF THE 1ST ORDER. THE RATE CONSTS. FOR 10 PRIME NEGATIVE2 M NO SUB3 PRIME NEGATIVE, NO SUB2 PRIME NEGATIVE, FE(CN) SUB6 PRIME3 NEGATIVE ARE 2.4 TIMES 10 PRIME NEGATIVE2, 3.9 TIMES 10 PRIME NEGATIVE2, 3.3 TIMES 10 PRIME NEGATIVE2 SEC PRIME NEGATIVE1, RESP. THE RANDOM LOSS OF E PRIME NEGATIVE CAPT IN AQ. ALK. "GLASSES" IS APPARENTLY DUE TO THE TUNNEL TRANSFER OF AN ELECTRON TO THE ACCEPTOR.

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USSR

TSIBAROV, V. A.

"On Solution of Weakly-Rarefied Gas Aeromechanics Problems by Means of Approximate Kinetic Equation"

Leningrad, Aerodinamika Razrezhennykh Gasov, 1970, pp 39-52.

Abstract: This article establishes the significance of the Krukov model equation (first iteration of local Maxwell solution neglecting the terms containing ε^n, $n > 0$ in (1.10)) and of the model equation of reference [3] (first iteration of Navier-Stock approximation neglecting terms containing ε^n, $n > 1$ in (1.10)).

Approximate integral-differential macroscopic equations of motion are set up taking into account the boundary effect. A method is given for the approximate solution of these equations.

For the flow of weakly-rarefied gas around a blunt convex body the first approximation of the solution is given, assuming that the solution of boundary layer equations is known.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

Acc. Nr: AP0052333

Ref. Code: UR0238

PRIMARY SOURCE: Fiziologichniy Zhurnal, 1970, Vol 16, Nr 2, pp 190-196

PARTICIPATION OF HYPOTHALAMUS IN THE REGULATION OF CONTENT AND CIRCULATION OF BLOOD AND LYMPH

P. D. Kharchenko, V. P. Glagolev, V. O. Tsibenko, L. M. Ponomarenko, L. O. Smirnova
Department of Physiology, State University, Kiev

Summary

The effect of hypothalamus stimulation was investigated on the regional blood circulation, lymph stream rate and lymph content, on the physicochemical properties of blood and acetylcholine content in it.

The data obtained testify to the fact that, when stimulating hypothalamus, there appear not isolated reactions of one system or organ, but the whole complex of vegetative reactions and processes connected between themselves.

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19820919

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC: 531.781.087.92

TSIBIN, G. I., STEPANOV, V. P.

"A Reversible Force Pickup"

Tr. Metrol. in-tov SSSR (Works of Metrological Institutes of the USSR), 1970, vyp. 100 (160), pp 65-67 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 11, Nov 70, Abstract No 11.32.369)

Translation: This article describes a new kind of force pickup. Incorporated in the pickup is an elastic unit to which sensing elements are cemented. The upper section of the elastic unit is freely supported by the housing, which is equipped with a locating stud. The lower part of the elastic unit has a thickened section on which current-collecting contacts are mounted for connecting the electrical plug to the sensing elements. The strain gauge operates under pure tension conditions and is protected against the effect of deformation of the housing; the elastic transducer, which operates under tension conditions, ensures uniform strain distribution.
P. N. A.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

VASIL'YEV, A. I., MAMONOV, A. A., TSIBIN, G. I.

UDC: 620.17

"Some Problems in Developing Precision Strain-Gauge Instruments for Measuring Force and Mass"

Tr. Sib. NII metrol. (Works of the Siberian Scientific Research Institute of Metrology), 1971, vyp. 13, pp 7-9 (from RZh-Mekhanika, No 7, Jul 72, Abstract No 7V1156)

Translation: It is shown that the material of the elastic pickup element of an electronic strain-gauge device for measuring mass or force must have high reproducibility of elastic deformation, i. e. it must have a minimum level of microplastic deformations. It is found that alloy steels widely used for making elastic elements correspond to this requirement in the normalization state. A design is described for a 10 000 kg electronic strain-gauge beam balance pickup in which the transducer converting deformation to an electric signal is made in the form of a three-electrode capacitor with two fixed working electrodes. The pickup is hermetically sealed and has a temperature compensation range of 20±15°C, which means that masses can be measured with a precision

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USSR

VASIL'YEV, A. I. et al., Tr. Sib. NII metrol., 1971, vyp. 13, pp 7-9

to 0.01% in a range from 1 000 to 10 000 kg at a distance of up to 50 m. The measurement system contains a device for correcting readings as a function of the local value of acceleration due to gravity. N. A. Petrova.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

Refractory Materials

USSR

TSIBIN, I. P., and SYREYSHCHIKOV, Yu. D., Eastern Institute of Refractories

"Heat-Resistant Lightweight Refractories"

Moscow, Ogneupory, No 7, Jul 70, p 57

Abstract: A method has been developed at the Eastern Institute of Refractories for producing heat-resistant lightweight products half the size of normal bricks of a mass including chamotte, refractory clay, and graphite; the compositions of ordinary charges are presented in a table. The products are pressed at 600 kg/cm^2 and annealed in a medium of technical nitrogen containing up to 2.5% oxygen. The material produced has good heat resistance, since it contains significant quantities of silicon carbide and graphite. It can therefore be used with sharp temperature changes, when the use of ordinary lightweight products is impossible (compensating for the higher cost resulting from the high-temperature nitrogen annealing).

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Automation System

GLORIA

SO: JPRS 56047
19 MAY 72

PROBLEM OF STANDARDIZATION OF ADMINISTRATIVE DOCUMENTATION

[Article by N.I. Tsibikov, V.I. Kokorev, Candidates of Technical Sciences, VNIIS; Moscow, Standarty i Kachestvo, Russian, No 3, 1972, pp 33-34]

In order to insure compatibility of automated control systems of various levels, it is necessary to borrow, isolate and generalize what is common to the experience of the various branches of the national economy which can be used for the development of automatic control systems both with regard to functional systems and with regard to service subsystems.

In particular, the factors of successful functioning of automatic control systems is a clearly setup information service.

Improvement of the information service is continuously connected with improving the forms of presentation of the information, for example, the forms of documents, and standardization of them on the basis of standardizing the principles and basic requirements.

Some Concepts in the Document Field

The most widespread method of recording information created and used by the administrative agencies is documentation. In our understanding of the word, a document is information recorded for purposes of storing it or transmitting it on a special carrier. The majority of administrative documents are now filled out on paper.

The set of documents used when recording the activities of administrative agencies in all spheres of the national economy is the administrative documentation.

Depending on the purpose, administrative documents can be subdivided into individual systems:

Planning documentation;

Accounting-statistical and primary accounting documentation;

Bookkeeping, financing and primary accounting documentation of the

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

UNCLASSIFIED

TITLE--STATE SYSTEM OF STANDARDIZATION -U-

PROCESSING DATE--09OCT70

AUTHOR-(02)-TSIBIZOV, N.I., LIZUNOV, YU.F.

COUNTRY OF INFO--USSR

SOURCE--STANDARTY I KACHESTVO, 1970, NR 3, PP 3-5

DATE PUBLISHED--------70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--INDUSTRIAL STANDARD, INDUSTRIAL MANAGEMENT, GOVERNMENT ECONOMIC CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/1729

STEP NO--UR/0422/70/000/003/0003/0005

CIRC ACCESSION NO--AP0103493

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

CIRC ACCESSION NO--AP0103493 UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BASIC REQUIREMENTS OF GOST 1-68 ARE EXPLAINED. THE AUTHORS PRESENT DEFINITIONS OF "STANDARDIZATION" AND "STANDARD", THEY SHOW THE MAJOR TASKS FACING STANDARDIZATION, ANALYZE VARIOUS CATEGORIES OF STANDARDS, AND DISCUSS THEIR FIELDS OF APPLICATION. EXPLAINED IN THE ARTICLE ARE PROCEDURES OF STATE SUPERVISION OVER, AND DEPARTMENTAL CONTROL OF, THE INTRODUCTION OF STANDARDS AND SPECIFICATIONS AND FOLLOWING THEM.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

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UDC 669.046.5

SHIRER, G. B., KOMEL'KOV, V. K., VOINOV, S. G., SHALIMOV, A. G., PEGOV, V. G., MOLCHANOVA, A. A., TSIBUL'NIKOV, A. I., and MOKHIR, Ye. D.

"Refining of Ball Bearing Electrical and Martin Steels by Synthetic Lime-Alumina Slag with High Silica Content"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS). (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 247-249

Translation of Abstract: Results are presented of the refining of ShKh15 steel melted in 100-ton electric furnaces using synthetic slag with high silica content in a ladle. With respect to sulfur content and the level of contamination by sulfide impurities, the obtained steel is similar to metal refined with conventional synthetic slag containing not more than 3% of silica, although the former is more contaminated with oxide and globular impurities. Data are presented on production testing of the described slag at a Martin plant, at which the quality of the 12KhIMF and 20 K steels for pipes was found to be similar to a steel refined with the usual synthetic slag. The production cost of the slag with high silica content is given (It is approximately 30 rubles/ton cheaper than the ordinary slag). 3 tables.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

UNCLASSIFIED

TITLE--STABILIZATION OF 1,1,1,TRICHLOROETHANE -U- PROCESSING DATE--04DEC70

AUTHOR-(03)-BRATOLYUBOV, A.S., ALESHINA, G.F., TSIBULSKAYA, G.S.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,381

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI, 1970

DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL STABILITY, CHLOROETHANE, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0845

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0136279

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

CIRC ACCESSION NO--AA0136279 UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. METHYLCHLOROFORM IS STABILIZED BY ADDING GUAIACOL, NITROANISOLE, OR THEIR MIXT. (30-50PERCENT NITROANISOLE) IN A QUANTITY OF 3-5PERCENT.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 621.317.725

TUZ, YU. M., TSIDELKO, V. D., NIKIFOROVA, G. A., SERPILIN, K. L., GAPCHENKO, L.N., and SINITSKIY, O. P.

"A Digital Phase-Sensitive Voltmeter"

V sb. Tsifr. vychisl. mashiny (Digital Computing Machinery--collection of works), Kiev, 1972, pp 109 - 118 (from RZh Avtomatika Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 73, abstract No 11 A369)

Translation: The article contains a description of a digital phase-sensitive voltmeter in which signals are converted in a single-channel circuit. A block diagram of the instrument and a description of its operation are given. The advantages of a phase rotator based on a single-channel circuit are noted. A logometric voltage-frequency converter is used in the instrument to reduce errors due to the effect of the base voltage. The technical characteristics of a model of the digital phase-sensitive voltmeter made at the Department of Measurement Technology of Kiev Polytechnical Institute are given. One illustration, seven bibliographic citations.

Abstract by O.K.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

1/2 023 UNCLASSIFIED

TITLE--EFFECT OF PRESSURE ON THE EFFECTIVE MASS OF ELECTRONS IN INDIUM ARSENIDE -U-

PROCESSING DATE--27NOV70

AUTHOR-(03)-DEMCHUK, K.M., TSIDILKOVSKIY, I.M., RODIONOV, K.P.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(5), 997-1000

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--INDIUM ARSENIDE, ELECTRON STRUCTURE, MODEL, SINGLE CRYSTAL, ELECTROMOTIVE FORCE, HALL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0145

STEP NO--UR/0449/70/004/005/0997/1000

CIRC ACCESSION NO--AP0129401

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

ACCESSION NO--AP0129401 UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE OF HYDTOSTATIC PRESSURE (P IS SMALLER THAN OR EQUAL TO 12 KILOBARS) ON THE EFFECTIVE MASS OF THE ELECTRONS AT SIMILAR TO 950EGREESK WAS MEASURED IN 20 TIMES 3 TIMES 2.5 MM SPECIMENS OF SINGLE CRYSTAL N INAS WITH CARRIER CONCNS. OF 3.7 TIMES 10 PRIME16 MINUS 6.2 TIMES 10 PRIME17-CM PRIME3. THE EFFECTIVE MASS WAS DETD. FROM MEASUREMENTS OF THE THERMAL EMF. AND OF THE HALL EFFECT IN STRONG MAGNETIC FIELDS (H IS SMALLER THAN OR EQUAL TO 20 KOE). A THEORETICAL MODEL BASED ON THE 2 BAND APPROXN. BY E. O. KANE (1957) DESCRIBES THE EXPTL. DATA WELL.

FACILITY: INST. FIZ. METAL., SVERDLOVSK, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

CIRC ACCESSION NO--AP0127831 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN N-GE WITH THE ELECTRON CONCN., N EQUALS 6.2 TIMES 10 PRIME14-CM PRIME3 AT 20.4DEGREESK IN MAGNETIC FIELDS SMALLER THAN OR EQUAL TO 125 KOE AND ELEC. FIELDS SMALLER THAN OR EQUAL TO 60 V-CM, THE CURRENT VOLTAGE CHARACTERISTIC AND DEPENDENCE OF THE HALL CONST. ON C.D. WERE MEASURED. A JUMP WAS OBSD. IN THE VOLTAGE ON THE SPECIMEN, AS WELL AS A NEG. DIFFERENTIAL RESISTANCE AND ANOMALOUS DEPENDENCE OF THE DRIFT VELOCITY ON ELEC. FIELD.

INST. FIZ. METAL., SVERDLOVSK, USSR.

FACILITY:

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

1/2 035 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--EFFECT OF UNIFORM COMPRESSION ON THE ROTATION EFFECT IN ANITIMONY -U-

AUTHOR--BROYDE, YE.L., TSIDILKOVSKIY, I.M., RODIONOV, K.P.

COUNTRY OF INFO--USSR

SOURCE--PIS'MA ZH. EKSP. TEOR. FIZ. 1970, 11(2), 101-5

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--COMPRESSIVE STRESS, SINGLE CRYSTAL PROPERTY, ANTIMONY, THERMAL EMF, ENERGY SPECTRUM, MAGNETIC FIELD CONFIGURATION, CRYSTAL ORIENTATION, HIGH PRESSURE EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0747 STEP NO--UR/0386/70/011/002/0101/0105

CIRC ACCESSION NO--AP0104201

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

2/2 035 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104201

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SINCE THEORETICAL AND EXPTL. DATA INDICATE THAT COMPRESSION ALTERS THE RATIO BETWEEN THE CRYSTAL AXES AND THE RHOMBOHEDRAL ANGLE OF THE SB UNIT CELL IN SUCH A WAY THAT THE STRUCTURE TENDS TO THE CUBIC TYPE, CURRENT CARRIER SPECTRA SHOULD ALSO BE AFFECTED, AND THE ROTATION EFFECT SHOULD DIMINISH. UNDER THIS PRESUMPTION, THE COMPRESSION ROTATION EFFECT RELATION SHOULD YIELD DIRECT INFORMATION ON THE ENERGY SPECTRA OF CURRENT CARRIERS. AN EXPTL. PROOF OF THE CORRECTNESS OF THIS PRESUMPTION WAS ATTEMPTED. THE THERMOEMF. OF SB SINGLE CRYSTAL. SAMPLES CUT FROM BRIDGMAN GROWN INGOTS WAS MEASURED IN MAGNETIC FIELDS UP TO 3 KOE, PRESSURES UP TO 12 KILOBARS, AND A TEMP. OF 97DEGREESK. WITH MAGNETIC FIELDS ORIENTED ALONG THYC SUB1 AND C SUB2 AXES, A ROTATION EFFECT WAS OBSD. IN THE DIAGONAL COMPONENTS OF THE THERMOEMF. ALPHA SUB22 (H) ALPHA SUB33 (H). IN MAGNETIC FIELDS PARALLEL TO THE TRIGONAL AXIS C SUB3, NO ROTATION EFFECT WAS OBSD. OF ALPHA SUB22 (H). MEASUREMENTS WERE ALSO MADE AT DIFFERENT ORIENTATIONS OF THE TEMP. GRADIENT AND THE MAGNETIC FIELD WITH RESPECT TO THE CRYSTALLOGRAPHIC AXES. DELTA ALPHA-ALPHA SUBO -H CURVES WERE PLOTTED. A MATH. EXPRESSION WAS DERIVED FOR THE EVALUATION OF THE ROTATION EFFECT. THE PRESSURE, DELTA ALPHA-ALPHA SUBO CURVES FOR DIFFERENT ORIENTATIONS OF THE TEMP. GRADIANT AND THE MAGNETIC FIELD INDICATE THAT THE ROTATION EFFECT DIMINISHES AT HIGH PRESSURES. THIS EFFECT IS CONSIDERED TO BE DIRECT EVIDENCE THAT THE ANGLE BETWEEN THE CONST. ENERGY ELLIPSOID AND THE MAJOR BRILLOUIN ZONE AXIS DECREASES WITH INCREASING PRESSURE.

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USSR UDC 669.721.472(088.8)

YELIN, N. M., BURDAKOV, YU. M., KOLOMIYTSEV, A. V., CHALABAYEV, I. A., KOLYADZIN, A. A., TSIDVINTSEV, G. V., and BIBIK, G. P., Ust'-Kamenogorsk Titanium-Magnesium Combine imeni 50th Anniversary of October

"Vacuum Ladle"

USSR Author's Certificate No 254104, filed 28 Nov 66, published 5 Jan 70 (from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11 G139 P)

Translation: A design is proposed for vacuum ladle which consists of a lock and a tap hole. To simplify the servicing of the magnesium electrolytic reduction cells, it is equipped with a teeming device, which is made in the shape of a branch connection with bottom closing device mounted on the lid of the ladle.

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UESR UDC: 519.2

KOLOMIYETS, V. G., TSIDYLO, K. V.

"Random Oscillations of Quasilinear Systems With Delay and Impulse Action"

V sb. Differents.-raznostn. uravneniya (Differential Difference Equations --collection of works), Kiev, 1971, pp 17-26 (from RZh-Kibernetika, No 5, May 72, Abstract No 5V79)

Translation: The equation

$$\ddot{x}+\omega^2 x=\varepsilon f+\sqrt{\varepsilon}\, g\,\xi+\varepsilon h(x,\dot{x})\,\delta(x-\dot{x})$$

is considered, where ξ is a standard Wiener process, ε is a small parameter, f and g are polynomial functions of $\cos\nu t$, $\sin\nu t$, $x(t)$, $\dot{x}(t)$, $x_\tau=x(t-\tau)$, $\dot{x}_\tau=\dot{x}(t-\tau)$. After substituting $x=a\cos(\omega t+\theta(t))$, $y=-a\omega\sin(\omega t+\theta(t))$ the authors get a system relative to $a(t)$, $\theta(t))$.. Since $a(t)$ and $\theta(t)$ change slowly, when $\tau\ll\frac{2\pi}{\omega}$ delay can be disregarded. Therefore the process $(\theta(t), a(t))$ is a Markov diffusion process, which means that the Kolmogorov equation can be written for the combined distribution density function $W(t,a,\theta)$ of the amplitude and phase. By next applying the method of averaging, the authors get an equation for $W(t,a,\theta)$ which describes a homogeneous diffusion process whose coefficients depend only on a.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

KOLOMIYETS, V. G., TSIDYLO, K. V., Differents.-raznostn. uravneniya, Kiev, 1971, pp 17-26

In the resonance case ($\omega = \nu$), after introducing detuning we get an averaged Kolmogorov equation whose coefficients now depend on a and θ.

As an example, the equation

$$\ddot{x} + x = \varepsilon\gamma x\dot{\delta}(x) + \sqrt{\varepsilon}\, c x_\tau \dot{\xi} + \varepsilon\{-\dot{x} + \alpha[1 + \beta x_\tau - x_\tau^2]\dot{x}_\tau\}$$

is considered. The stationary amplitude distribution is found at small τ, and in particular the most probable amplitude. M. Benderskiy.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

UDC 621.396.676:629.7(088.8)

USSR

BUYVOL-KOT, YU. I., SEROV, L. A., TSIFRINOVICH, I. I., TSYBAYEV, B. G.

"Landing Beam Aircraft Antenna"

USSR Author's Certificate No 253876, Filed 24 Apr 68, Published 3 Mar 70 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9B26P)

Translation: A landing beam aircraft antenna with broad coverage is proposed. In order to create a nonprotruding design, the antenna was executed in the form of a segment of a shorting symmetrical ribbon line. The screen plates of the line are shifted with respect to each other. There is one illustration.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

Power Engr. Inst. (Semiconductors)

TSIBANKOV, V.A.

JPRS 58321

26 February 1973

Semiconductors

UDC 621.382.3

STUDY OF VOLT-AMPERE CHARACTERISTICS OF AN OPTICALLY CONTROLLED AVALANCHE TRANSISTOR

[Article by V. P. D'yakonov, V. A. Tsibankov, Smolensk Branch of Moscow Power Engineering Institute; Gor'kiy, Izvestiya VUZ, Radiofizika, Russian, Vol 14, No 9, 1971, submitted 2 November 1970, pp 1367-1372]

The possibility of effective optical control of the shape of S-type volt-ampere characteristics of an avalanche transistor is demonstrated. An analysis is presented of the equivalent circuit, and the equations for the volt-ampere and light triggering characteristics are obtained. Results are presented from an experimental study of experimental models of avalanche phototransistors.

The utilization of optical and electrical phenomena is a prospective area in radiophysics and electronics [1, 2]. Modern light sources, for example, injection lasers and light diodes, have very high speed reaching 0.1-1 nanoseconds. At the same time, a deficiency is perceived in photoreceivers with good switching characteristics having the same speed. The existing instruments, for example, phototransistors and photothyristors [1-3] have 2-3 orders lower speed which reduces to no real advantage of many of the pulsed and logical optoelectronic devices over their ordinary analogs.

Among the switching devices with the S-type volt ampere characteristics, avalanche transistors play a special role [4]. Modern avalanche transistors which have very high speed (on the order of 0.01-1 nanoseconds) have found application in a number of devices [5]. Special types of avalanche transistors have been developed and are being industrially manufactured abroad and in the USSR. However, up to now no effort has been made to utilize avalanche transistors in optoelectronic devices.

Accordingly, there is a great deal of interest in the possibility of optical control of the shape of the volt-ampere characteristics of an avalanche transistor which is demonstrated in the present paper. This possibility significantly expands the areas of application of avalanche transistors. First, the possibility of efficient matching of the light radiators and

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USSR

UDC 621.382.3

D'YAKONOV, V.P., BOSYY, V.I., KUZNETSOV, YU.A., KOSTRYUKOV, A.S., TSIGANKOV, V.A.

"Avalanche Transistor And Its Use In Circuit Technics"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices In The Technics Of Electrical Communication--Collection Of Works), Issue 9, Moscow, "Svyaz'," 1972, pp 159-166 (from RZh:Elektronika i yeye primeneniye, No 5, May 1972, Abstract No 5B187)

Translation: The structure and special features of a Type GT-338 avalanche transistor are described. A number of pulse circuits using avalanche transistors are presented, which provide the possibility of shaping pulses with a rise time less than 1 nanosec and an amplitude up to 10--15 V and higher at a 75-ohm load. Circuits using Type GT-338 avalanche transistors are characterized by high temperature stability. 7 ill. 12 ref. Summary.

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USSR UDC: 621.382.3

D'YAKONOV, V. P., BOSYY, V. I., KOSTRYUKOV, A. S., and TSIGANKOV, V. A.

"Parameters and Characteristics of Special Avalanche Transistors"

Leningrad, Priborostroyeniye, No 6, 1972, pp 5-10

Abstract: The special avalanche transistors discussed in this paper are of the GT338 type, with very high-speed operation, now being mass produced in the Soviet Union. They have already been used in electronic measuring devices such as the stroboscopic oscillographs S1-45 and S1-60, and the block S1-15/8 for use in the oscillograph S1-15. The transistors are germanium diffusion-alloyed mesoepitaxial high-frequency p-n-p-p^+ devices which, in relaxation circuits, form pulses with a rise time of less than 1 ns and an amplitude of up to 15 volts on a 75-ohm load. They can be used in fast pulse and logic circuits, in rapid-operation computers, in nuclear and quantum electronics, in fast optical-electronic circuits, and the like. Specifications as well as details of the construction of these devices are given together with circuit diagrams indicating possible applications. The authors are associated with the Smolensk Branch of the Moscow Power Institute.

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TITLE--PURIFICATION OF RIBONUCLEASE -U-

AUTHOR-(05)-RYSHKA, F.YU., POLONSKAYA, L.B., BELENKIY, N.G., TSIGANKOVA, V.N., CHAMIN, N.N.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 259,790

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, 47(3)

DATE PUBLISHED--22DEC69

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PATENT, RIBONUCLEASE, CHEMICAL PURIFICATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0914 STEP NO--UR/0482/69/000/000/0000/0000

CIRC ACCESSION NO--AA0109071

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2/2 008 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AA0109071

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RNASE IS TREATED WITH PHENOL AND ALC. AND THE OBTAINED PPT. IS EXTD. WITH H SUB2 O. THE EXT. IS LYOPHILZED AND THE RESULTING PRODUCT IS FILTERED ON SEPHADEX.

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USSR

UDC 529.7.036.54-66:536.46

FROLOV, Yu. V. and TSIGANOV, S. A.

"The Ignition and Combustion of Aluminum in Mixtures With Ammonium Perchlorate"

Odessa, 11-ya Vses. Konf. po Vopr. Ispareniya, Goreniya i Gaz. Dinamiki Dispersn. Sistem, 1972--Sbornik(11th All-Union Conference on Problems of the Evaporation, Combustion, and Gas Dynamics of Dispersed Systems, 1972--Collection of Works), 1972, p 40 (from Referativnyy Zhurnal--Aviatsionnyye i Raketnyye Dvigateli, No 1, 1973, Abstract No 1,34.156. Resume)

Translation: In the work, experimental data are presented with regard to the length of time aluminum particles are present on the combustion surface of a specimen and the mixture system of ammonium perchlorate (AP) polymethylmethacrylate (PMMA), the speed of their movement within the flame tongue, the change of the reaction zone -- the zones of luminescence of the individual particles -- with time. For intensification of the combustion of aluminum particles in the composition of the mixture systems of AP with an organic fuel, use was made of the method of "enveloping" the aluminum particles by AP particles. The combustion of dual mixtures of AP - aluminum is discussed. It is shown that the presence of aluminum shifts the lower limit of AO combustion into a region of higher pressures (50-80 technical atmospheres).

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FROLOV, Yu. V. and TSIGNAOV, S. A., 11-ya Vses. Konf. po Vopr. Ispareniya, Goreniya i Gaz. Dinamiki Dispersn. Sistem, 1972--Sbornik, 1972, p 40

The supplementary introduction of a combustion catalyst (2% Cu_2O) into the mixture intensifies the process of the ignition of aluminum particles in the flame tongue. This effect is linked to the supplementary heat release in the reaction of Cu_2O oxidation which takes place immediately after the stage of preliminary decomposition of the AP. A consequence of early ignition of the aluminum particles is a decrease of the lower limit of stable AP combustion ($p < 10$ physical atmospheres) with respect to pressure, an increase of the rate of combustion of the mixture, and a decrease of the degree of aluminum-particle agglomeration on the combustion surface of the specimen.

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hydrology

TSIGEL'NAYA, I. D.

THE WATER BALANCE OF MOUNTAINOUS TERRITORIES

(Conference in Moscow)

[Article by Candidate of Geographic Sciences [illegible] Moscow, Vestnik Akademii Nauk SSSR, Russian, Vol [illegible] August 1972, pp 123-124]

The Institute of Geography and the sections of Hydrology and Glaciology of the Interdepartmental Geophysical Committee of the AS USSR conducted on 5-6 April in Moscow an all-union conference on the water balance and the balance estimation of water resources of mountainous territories. About 109 participants in the conference represented over 30 institutions of the union and republican academies, the Main Administration of the Hydrometeorological Service, the Ministry of Water Resources and Land Improvement USSR, the Gosstroy USSR, etc. That problem is attracting the attention both of scientists and of practical workers because mountains are the region of formation of water resources and for arid territories serve as practically the only source of fresh water. Mountains also represent a storehouse of hydroelectric power resources still used in a very limited manner.

Due to the complexity of organization of high-mountain investigations and difficulty of access of mountainous regions they have as yet been inadequately studied. As a rule, hydrological and meteorological observations are conducted where rivers emerge from mountains, and scientists obtain an integral characteristic of water resources forming under the conditions of certain height belts. As a result of distinctive features of zonal differentiation of water resources it is necessary to estimate them with inadequate hydrometeorological data. Therefore the conference gave much attention to investigation procedure.

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UDC 614.1:313.13-057:614.3/.4.07

TSIGEL'NIK, M. I., (Kemerovo), Regional Sanitary Epidemiological Station

"Procedures for Studying Occupational Disease Incidence at Sanitary Epidemiological Stations"

Moscow, Gigiyena Truda i Professionallnyye Zabolevaniya, No 6, Jun 71, pp 44-47

Abstract: Prevention and reduction of occupational disease are the concern of various sanitary-epidemiological stations. An edge-punched card with two rows of edge perforations was designed for recording various data on occupational diseases. The card allowed one to subdivide information into 23 groups from a dictionary of 229 keywords and to maintain an empty card field in reserve. The coding on the card includes information on various geographical regions, duration of a given occupational disease, the final diagnosis, recurrence data of the disease, incidence rate, and similar information. The card was found to be useful in the statistical evaluation of masses of data collected and for the development of essential preventive measures against a variety of diseases.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 615.471:615.844

SUKONKINA, Ye. A., TSIKHON, V. N., and KIRICHENKO, V. G., All Union Scientific Research Institute of ~~Medical Instrument~~ Building, Moscow

"Apparatus for Treatment With Diadynamic Currents "Tonus-1"

Moscow, Meditsinskaya Tekhnika, No 5, Sep/Oct 73, pp 59-62

Abstract: A new model for treatment with diadynamic currents has been developed -- Tonus-1 -- with the goal of producing a simple, utilitarian and safe unit. Tonus-1 produces 9 types of diadynamic currents. Maximum protection of the patient is one of the strong points of Tonus-1.

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USSR

UDC 621.373.029.7.001.5

TSIKIN, B.G., DUBROVSKIY, V.A.

"On The Possibility Of Accumulation Of Laser Radiation Scattered By An Electron Stream"

Radiotekhnika i elektronika, Vol. XVII, No 7, July 1972, pp 1433-1438

Abstract: The conditions for the interaction of electron beams with optical radiation are found, and the possibility of the storage of scattered energy is evaluated, with the object of decreasing the requirements imposed on a photodetector. An analysis of the storage condition and an evaluation of its magnitude and criticality to the electron velocity show the effect under consideration can prove to be useful for investigation of the properties of electron beams. The possibility for study of the transient changes of the velocity of the electrons can be used for an investigation of beams with velocity modulation of the electrons. 2 fig. 8 ref. Received by editors, 8 Dec 1970.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 621.385:530.145.6:623

TSIKIN, B. G., KORNOUKHOV, G. M., LERNER, N. B.

"A Possibility for Reception of Frequency Modulated Light Signals"

Elektron. tekhnika. Nauchno-tekhn. sb. (Electronic Engineering. Scientific and Technical Collection), 1970, ser. 11, vyp. 1(19); pp 69-72 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D376)

Translation: In this article it is proposed that an FM superhigh frequency signal discriminator created on the basis of a two-section traveling wave tube be used for the detection of frequency modulated light signals both with a superhigh frequency subcarrier and without it. The results of experimental investigation of the proposed circuit under conditions of reception of a light signal with an FM subcarrier are presented.

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USSR UDC 621.385.632

TSIKIN, B. G.

"Trajectory of Electron Condensations in Type O Traveling Wave Tubes

Saratov, V. sb. Vopr. elektron. sverkhvysok. chastot (Problems of Super-High Frequency -- collection of works), No 6, Saratov University, 1969, pp 32-41 (from RZh -- Elektronika i yeye primeneniye, No 2, Feb 70, Abstract No 2A129)

Abstract: The results are presented of a calculation of the trajectory of electron condensations in a traveling-wave field of terminal amplitude in a Type O traveling-wave tube (TWT). As initial data the results of the approximate nonlinear theory for TWT are used. The computations show that during interaction of the electron stream with a wave some ($\geqslant 2$) electron condensations are formed, and at least one of them shifts into the accelerating phase fields lagging behind the wave and produces saturation power in the tube. The method of computation of the trajectory of electron condensations can also be utilized for consideration of the mechanism of saturation power in other devices. 1/1 7 ill. 1 ref. G.B.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

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TSIKIN, B. G., PISHCHIK, YE. D.

"Aptitude Characteristics of a TWT With Two Input Signals"

Saratov, V sb. Vopr. elektron. sverkhvysok. chastot (Problems of the Electronics of Super-High Frequencies -- collection of works), No 5, Saratov University, 1969, pp 92-102 (from RZh -- Elektronika i yeye primeneniye, No 2, Feb 70, Abstract No 2A137)

Abstract: The properties were experimentally investigated of a traveling-wave tube (TWT) with a supplementary energy lead-in located immediately behind the absorbing insert. The dependence of the output power on the magnitude of the input signal at the first and second energy lead-ins, and also on the phase difference of these signals, is removed. It is established that by a selection of the corresponding phase difference, some increase of the output power with a more outstanding value of the gain is possible. A more marked increase of the output power is possible with a large degree of modulation (small gain). An efficient TWT is of interest as a power limiter. 3 ref. G.M.

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USSR UDC 621.385.632

KOSLOV, G. A., KORNOUKHOV, G. M., TSIKIN, B. G.

"Amplitude-Phase Characteristics of a TWT With Premodulation of the Electron Stream"

Saratov, V sb. Vopr. elektron. sverkhvysok. chastot (Problems of the Electronics of Super-High Frequencies -- collection of works), No 5, Saratov University, 1969, pp 68-81 (from RZh -- Elektronika i yeye primeneniye, No 2, Feb 70, Abstract No 2A136)

Abstract: Using L. A. Vaynshteyn's system of equations for the case of a linear regime, the properties of a traveling-wave tube (TWT) with premodulation of the electron stream are theoretically investigated. Particular attention is alloted to an investigation of the effect of suppressing a signal at the output of the TWT (the so-called Kompfnerovskiy gap). Conditions are found for assuring such a suppression of the signal remaining in a wide band of fluctuation of the device's performance. G.M.

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USSR

UDC 621.385.632

TSIKIN, B. G., KOZLOV, G. A., KORNOUKHOV, G. M., LERNER, N. B., MARTYNOV, YU. I.

"Experimental Investigation of the Effect of Total Suppression of the Signal in a TWT With Premodulation of the Electron Stream"

Saratov, V sb. Vopor. elektron. sverkvysok. chastot (Problems of the Electronics of Super-High Frequencies -- collection of works), No 5, Saratov University, 1969, pp 82-91 (from RZh -- Elektronika i yeye primeneniye, No 2, Feb 70, Abstract No 2A133)

Abstract: For an investigation of signal suppression, an ordinary traveling-wave tube (TWT) was used with an additional energy input situated behind the local absorber. The tests were conducted in a small signal regime in the 1.5 — 3 GHz range. The length of the modulating section was 0.25 the length of the TWT. The dependence of the degree of suppression of the output signal on the correlation of the amplitude and phase of the signals at the inputs was investigated, and showed that for maximum suppression these relations must be fulfilled with a precision up to 3 percent in amplitude and several degrees in phase. The effect

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TSIKIN, B. G., et al, V sb. Vopor. elektron. sverkhvysok. chastot, No 5, Saratov University, 1969, pp 82-91 (from RZh -- Elektronika i yeye primeneniye, No 2, Feb 70, Abstract No 2A133)

Abstract: of total suppression was observed at all frequencies in the operating range of the TWT and did not depend on the absolute magnitude of the power. Rise of the collector current increased the transconductance characteristics in the area of suppression. Deflection of the voltage at the spirals did not change the form of the characteristics. The investigations show that the device can successfully be used in phase measurements at super-high frequencies as a null indicator with direct reading of phase. A. B.

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UNCLASSIFIED

TITLE—ESTIMATION FROM ABOVE OF THE FAULTY RECEPTION PROBABILITY FOR A SIGNAL WITH INDEFINITE ARRIVAL MOMENT —U—

PROCESSING DATE—30OCT70

AUTHOR—TSIKIN, I.A.

COUNTRY OF INFO—USSR

SOURCE—RADIOELEKTRONIKA, VOL. 8, MAR. 1970, P. 394-398

DATE PUBLISHED———70

SUBJECT AREAS—ELECTRONICS AND ELECTRICAL ENGR., NAVIGATION

TOPIC TAGS—SIGNAL RECEPTION, SIGNAL NOISE REDUCTION, DETECTION PROBABILITY

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—2000/0237

STEP NO—UR/0452/70/008/000/0394/0398

CIRC ACCESSION NO—AP0123999

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

2/2 034 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123999

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DERIVATION OF FORMULAS FOR ESTIMATING THE NOISE REJECTION IN AN OPTIMAL CHANNEL DURING THE RECEPTION OF CONTINUOUS SEQUENCES OF SIGNALS WITH UNDETERMINED ARRIVAL TIMES AND COMPLETELY OVERLAPPING SPECTRA. THE SPURIOUS RECEPTION PROBABILITY FOR SUCH SIGNALS IS DISCUSSED. THE ACCURACY OF THE ERROR PROBABILITY ESTIMATES OBTAINED IS ANALYZED.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

1/2 008 UNCLASSIFIED

TITLE--DISCRETE ANALOG MATCHED FILTERS -U- PROCESSING DATE--09OCT70

AUTHOR--TSIKIN, I.A.

COUNTRY OF INFO--USSR

SOURCE--KIEV, IZVESTIYA VUZOV SSSR RADIOELEKTRONIKA, VOL 13, NO 2, 1970, PP 205-211

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--DIGITAL FILTER, DISCRETE AUTOMATION, ALGORITHM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1464 STEP NO--UR/0452/70/013/002/0205/0211

CIRC ACCESSION NO--AP0110950

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

2/2 008 UNCLASSIFIED

CIRC ACCESSION NO--AP0110950 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A DISCRETE ANALOG MATCHED FILTER IS A DEVICE IN WHICH THERE IS TIME DISCRETIZATION OF A CONTINUOUS RADIO INPOUT SIGNAL WITH SUCCEEDING WEIGHTED TREATMENT OF THE OBTAINED CHOSEN VALUES BY THE METHODS OF ANALOG PULSE TECHNIQUES. THIS PAPER CONSIDERS SEVERAL CHARACTERISTICS OF THESE FILTERS, EQUIVALENT TO THE CORRESPONDING CHARACTERISTICS OF ANALOG SYSTEMS, AND DISCUSSES THEIR POSSIBLE APPLICATIONS. IT IS DEMONSTRATED THAT THE FILTER IS INVARIANT TO THE MOMENT OF SIGNAL ARRIVAL. IT IS DEMONSTRATED ALSO THAT WITH REGARD TO THE RESOLVING POWER OF THE FILTER, I.E., THE ABILITY TO SEPARATE SIGNALS INPUT TO THE FILTER WITH RELATIVE DELAY, IT POSSESSES THE CHARACTERISTIC OF "LINEARITY," DIVIDING THE SIGNALS DELAYED WITH RESPECT TO ONE ANOTHER WITH JUST AS MUCH EFFICIENCY AS THE ANALOG LINEAR SYSTEM. THE POSSIBLE APPLICATIONS OF THIS FILTER ARE DISCUSSED. THE MOST PROMISING DIRECTION OF FILTER APPLICATION IN THE PROCESSING OF COMPLEX SIGNALS IS THE REALIZATION OF ALGORITHMS PROVIDING FOR RETUNING THE FILTER DURING OPERATION.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

TSIKIN, I. A.

UDC 621.391

"Discrete-Analog Matched Filters"

Kiev, Izvestiya Vuzov SSSR-Radioelektronika, Vol 13, No 2, 1970, pp 205-211

Abstract: A discrete-analog matched filter is a device in which there is time discretization of a continuous radio input signal with succeeding weighted treatment of the obtained chosen values by the methods of analog pulse techniques. This paper considers several characteristics of these filters, equivalent to the corresponding characteristics of analog systems, and discusses their possible applications. It is demonstrated that the filter is invariant to the moment of signal arrival. It is demonstrated also that with regard to the resolving power of the filter — i.e., the ability to separate signals input to the filter with relative delay — it possesses the characteristic of "linearity," dividing the signals delayed with respect to one another with just as much efficiency as the analog linear system. The possible applications of this filter are discussed. The most promising direction of filter application in the processing of complex signals is the realization of algorithms providing for retuning the filter during operation.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 669.046.5

BORODIN, D. I., TSIKIN, L. V., YAVOYSKIY, V. I., and VOLYNKIN, V. M.

"Sulfur Removal Through the Gas Phase in a Converter With Bottom Blowing"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS)(Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 172-176

Translation of Abstract: Metal desulfuration in a converter with bottom blowing as a result of sulfur oxidation by oxygen-containing gases is considered.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 669.046.5

SOKOLOV, G. A., SERGEYEV, A. G., TSYKIN, L. V., ZAVRAZHIN, V. D., VERKHOVTSEV, E. V., VASIL'YEV, N. Ye., and D'YAKOV, S. I.

"The Effect of Vacuum-Slag and Two-Fold Slag Treatments on Electrical Steel Quality"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS). (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys) Izd-vo "Metallurgiya," No 61, 1970, pp 212-213

Translation of abstract: The effect of various outside-furnace steel treatments on desulfurization, contamination by nonmetallic impurities, and mechanical properties of various steels is considered. Data are given on the improvement of mechanical properties of structural alloy steels. 1 table.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 536.42

DEYCH, M. Ye., TSIKLAURI, G. V., SHANIN, V. K., and DANILIN, V. S., Moscow Power Engineering Institute

"Studying Wet Vapor Flows in Nozzles"

Moscow, Teplofizika Vysokikh Temperatur, Vol 10, No 1, Jan-Feb 1972, pp 122-129

Abstract: The authors present the results from the experimental and theoretical study of the flow of a wet vapor in nozzles within a broad range of initial moisture content and initial pressure. Specific methods are developed and used for studying two-phase flows. Experimental data obtained in studying nozzles operating on wet water vapor within a broad range of initial pressure and degrees of dryness are analyzed. The following types of experimental units were used in the study: stand for optical investigation, weighing unit, and a high-pressure water vapor stand. An optical method is used for determining the dimensions and the spectrum of the particles of the liquid phase, the phase being dispersed by the vapor in a flat, narrowing nozzle. The optical method is based on the scattering of light during its passage through a turbid medium: small-angle method by K. S. Shifrin and V. N. Golikov. A schematic is given of the unit for determining the degree of

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

DEYCH, M. Ye., et al., Teplofizika Vysokikh Temperatur, Vol 10, No 1, Jan-Feb 1972, pp 122-129

dispersion of particles by the "small angles" method. The results show that initial pressure within the range studied affects significantly the thrust, power, and consumption characteristics of a two-phase nozzle. It also has a significant effect on the liquid phase dispersion process. Original article: eight formulas, eight figures, and 12 bibliographic entries.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--MOLAR VOLUMES OF GAS SOLUTIONS ALONG THE SATURATION LINE -U-

AUTHOR-(03)-LINSHITS, L.R., RUDKINA, I.B., TSIKLIS, D.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 817-19

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SOLUBILITY, AMMONIA, GAS STATE, NITROGEN, HYDROGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1703 STEP NO--UR/0076/70/044/003/0817/0819

CIRC ACCESSION NO--AP0125324

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

CIRC ACCESSION NO--AP0125324 UNCLASSIFIED PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. OF NH SUB3 IN COMPRESSED N-H MIXTS. CONTG. AR AND CH SUB4 WAS DETD. MOLAR VOLS. OF THE GASEOUS MIXT. OF CONST. COMPN. (20.6, H 61.8, AR 11.0, AND CH SUB4 6.6 MOLE PERCENT) WERE MEASURED AT 0, 10, 25, 50, 75, AND 100DEGREES AND AT PRESSURES OF 50-550 ATM. EXPTL. DATA THUS OBTAINED WERE PLOTTED IN THE COORDIANTES PV SV. P, WHERE P IS PRESSURE AND V IS MOLAR VOL., AND EXTRAPOLATED TO THE SATN. LINE. THE MOLAR VOLS. OF THE STUDIED GASEOUS MIXT. ALONG THE SATN. LINE WERE ASCERTAINED FROM THE PV VALUES CORRESPONDING TO THE SATN. PRESSURE AND ARE TABULATED FOR ALL THE STUDIED TEMPS. AT THE VARIOUS CONCN. OF NH SUB3 IN GASEOUS PHASE. FACILITY: GOS. INST. AZOT. PROM. PROD. ORG. SIN., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 535.33/.34:539.184

BUGRIM, Ye. D., LYUTYY, A. I., ROSSIKHIN, V. S., TSIKORA, I. L.

"Specifics of Excitation of Electron States of CuCl Molecules in the Afterglow"

Spektroskopiya Atomov i Molekul [Spectroscopy of Atoms and Molecules -- Collection of Works] Kiev, Nauk. Dumka Press, 1969, pp 364-366 (translated from Referativnyy Zhurnal Fizika, No 6, 1970, Abstract No 6D381 by I. Dvornikov)

Translation: The anomalous relationships of intensities of the systems of bands of CuCl molecules in the afterglow of a mixture of CO_2, with $CuCl_2$ vapors excited by an HF non-electrode discharge in a flow-through system, is explained by the recombination mechanism of formation of this molecule from free atoms of chlorine and copper. The relationships between the electron constants of CuCl and the states of isolated atoms are analyzed. A system of levels of the CuCl molecule is suggested. 9 biblio refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

BORODYANSKIY, Yu. M., PROSKURINA, N. A., TSIKUNOV, I. K. UDC: 8.74

"A Dialog Language for Giving Expert Estimates"

Kiev, Mat. obespech. EVM dlya ekon. zadach--sbornik (Computer Software for Economics Problems--collection of works), 1972, pp 67-81 (from RZh--Kibernetika, No 7, Jul 73, abstract No 7V622 by V. Mikheyev)

Translation: The paper describes a version of an expert generalization language with an automated system for analysis of situations (ASAS). A specific feature of the language is its dialog nature. Data for the ASAS cannot be obtained in the form of one or more separate data batches, but are obtained rather as a result of a man-machine dialog. In this connection, each succeeding inquiry made by the ASAS to the expert depends not only on the information already present in the system before the dialog with the given expert, but also on the replies of the expert to preceding questions by the system formed by special programs. The proposed language enables the development and insertion of corrections during use. The language is formulated in the formalism of context-free languages with realization of the problem of data retranslation. From the

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

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BORODYANSKIY, Yu. M. et al., Mat. obespech. EVM dlya ekon zadach, 1972, pp 67-81

design standpoint the dialog language consists of two organically related parts: 1) language constructions which describe the object or situation to be analyzed, and which influence realization of the main situation, i. e. constructions for formal description of a very broad class of objects and concepts; 2) language constructions which set the scheme for carrying on the dialog. It is noted that development of formal constructions of the first type for actual objects and situations involves the following difficulties: a) such a formalization is possible only for a fairly foreseeable class of objects, and must be developed through protracted work of the system with experts; b) it is assumed that the problem of semantic identification of syntactically different phrases of the language has been solved to some extent. In this connection it is suggested that the ASAS system be operated at first with an incomplete data language -- the dialog part in which only the most general syntactic limitations necessary for operation of the translator are imposed on the constructions describing the object of analysis. Questions relating to identification of different definitions of the same concept, unique in-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

BURODYANSKIY, Yu. M. et al., Mat. obespech. EVM dlya ekon. zadach, 1972, pp 67-81

terpretation of some concept, and the formation and extension of language constructions of the first type are solved during the initial operation of the system by the expert personnel responsible for operation of the ASAS. As experience in using the system is accumulated, it will become possible to concretize the syntax of phrase-descriptions and to change over to setting up a specialized expanding reference information system which will chiefly take over the functions listed above.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

1/2 048

UNCLASSIFIED

TITLE--RESONANCE PHENOMENA DURING FORCED OSCILLATIONS OF THE INTENSITY OF LASER RADIATION -U-

PROCESSING DATE--20NOV70

AUTHOR--TSIKUNOV, V.N.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 5, PP 1646-1650

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--RESONATOR Q FACTOR, LASER RADIATION, RADIATION INTENSITY, OSCILLATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0003

STEP NO--UR/0056/70/058/005/1646/1650

CIRC ACCESSION NO--AP0127653

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

2/2 048 UNCLASSIFIED

CIRC ACCESSICN NO--AP0127653 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OSCILLATION OF THE INTENSITY OF LASER RADIATION DURING SINUSOIDAL VARIATION OF THE RESONATOR Q FACTOR IS CONSIDERED. A DEPENDENCE OF THE AMPLITUDE OF THE INTENSITY OSCILLATIONS ON PUMPING POWER, FREQUENCY AND Q MODULATION AMPLITUDE IS DERIVED.

FACILITY: INSTITUT OBSHCHEY I NEORGANICHESKOY KHIMII, AKADEMII NAUK SSSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

Antennas

USSR

UDC 621.396.969.182.3:624.074

TSILEVICH, B. N.

"A Device for Rotating and Tilting an Antenna"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 2, Jan 71, Author's Certificate No 290365, division H, filed 3 Jul 69, published 22 Dec 70, pp 141-142

Translation: This Author's Certificate introduces a device for rotating and tilting an antenna. The installation contains a stand, vertical (rotating) and horizontal (tilting) shafts, and a crank mechanism to which a drive is connected. As a distinguishing feature of the patent, in order to reduce the overall dimensions and simplify tuning and operating of the device, the shafts are kinematically interconnected through the planetary gears of a planetary speed reducer with adjustable sun gear connected to the stand by a gear train such as a worm drive.

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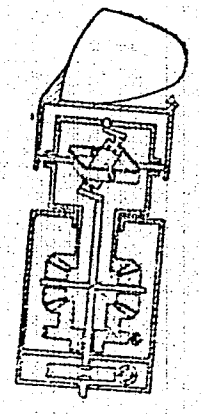
"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

TSILEVICH, B. N., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 2, Jan 71, Author's Certificate No 290365, division H, filed 3 Jul 69, published 22 Dec 70, pp 141-142



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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 576.858.25.083.35.086.3

GUSHCHIN, B. V., TSILINSKIY, Ya. Ya., SHUSHKOV, L. S., L'VOV, D. K., and KLIMENKO, S. M., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Electron Microscopic Investigations of Vero Cells Infected With Genetically Homogenous and Heterogenous Venezuelan Equine Encephalitis Virus (VEE)"

Moscow, Voprosy Virusologii, No 4, 1973, pp 436-438

Abstract: Vero cells grown in medium 199 with 10% normal bovine serum were infected with clones 6 and 8 of VEE either separately, or with both clones at the same time. Electron microscopy of thin sections showed that 17 and 23 h after infection either with clone 6 or 8 alone mononucleoid virions were formed, whereas infection with both clones simultaneously yielded mononucleoid virions as well as giant virions containing several nucleoids (polynucleid virions). After 29 and 41 h an additional type of giant viral particle was formed which contained material equal in density to that of the nucleoids (termed giant viral particles in distinction to polynucleoid virions) in cultures infected with both clones. Cells infected with only one type of VEE clone did not form giant viral particles. The data support the contention that formation of giant virions represents infection of the cells with genetically heterogenous VEE virus.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 576.858.25

TSILINSKIY, Ya. Ya., GUSHCHIN, B. V., KLIMENKO, S. M., and L'VOV, D. K., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR

"Relationship Between the Biological Properties of Venezuelan Equine Encephalomyelitis Virus and Virus Particle Size"

Moscow, Voprosy Virusologii, No 5, 1971, pp 573-576

Abstract: Natural genotypes of Venezuelan equine encephalomyelitis virus exhibited a correlation between the size of the virus particles and the size of the plaques, the size of the viruses evidently affecting plaque size because particles of different sizes diffused through agar at different rates. Hence clones with small virus particles formed larger plaques than did clones with large virus particles. The thermostability of the virus, its pathogenicity for white mice, and capacity for replication at 40°C were independent of the size of the virus particles. Clones with relatively small or medium-sized virus particles combined the capacity for autointerference in chick fibroblast cultures with sensitivity to inhibition by agar polysaccharides. These patterns did not apply to the temperature mutants of VEE virus. They formed small or very small plaques, although

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

TSILINSKIY, Ya. Ya., et al., Voprosy Virusologii, No 5, 1971, pp 573-576

they were characterized by small virus particles. Apparently the size of the plaques in these mutants, which are incapable of replicating at 40°C and are nonpathogenic for white mice, is determined not by the rate of diffusion of the virus particles in agar but by some other factors. 5-Fluorouracil treatment caused the large-plaque and thermostable variant of VEE virus to mutate toward smaller plaque size and inability to withstand heating to 60°C.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 576.858.25.095:38:576.895.771

GAYDAMOVICH, S. YA., TSILINSKIY, Y. YA., L'VOVA, A. I., and KHUTORETSKAYA, N. V., Institute of Virology imeni D. I. Ivanovskiy Academy of Medical Sciences USSR, Moscow

"Reproduction Characteristics of Clones of Venezuelan Equine Encephalomyelitis Virus in Aedes aegypti Mosquitos"

Moscow, Meditisinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 40, No 3, May/Jun 71, pp 267-271

Abstract: Genetically stable clones of arboviruses are useful for experimental work designed to study reproduction. A comparison study of reproduction in Aedes aegypti mosquitos of various virus clones was made. The clones differed in their pathogenic character with respect to white mice and in a few other genetic characteristics. A "wild" strain of Venezuelan equine encephalomyelitis was used and from it were isolated clones 3/5 and 17, as well as clones 53 and 56. The two latter clones are avirulent for white mice at lower temperatures. Clones 3/5 and 5 had a high virulence and represented induced mutants which predominate in the population of "wild" virus, whereas clone 17 was a "spontaneous" mutant, which belongs to the natural population and which has reduced pathogenic character for mice. The natural virulent mutants multiplied intensively

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

GAYDAMOVICH, S. YA., et al., Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 40, No 3, May/Jun 71, pp 267-271

in Aedes aegypti mosquitos, accumulated in the salivary glands of white mice, and were transmitted by bite. The virulent species caused intense viremia. It was concluded that these biological properties of the virulent species may ensure their permanent circulation in nature and their predominance in the natural population of Venezuelan equine encephalomyelitis virus. The avirulent species, on the other hand, do not penetrate into the salivary gland, are not transmitted by bite and as they reproduce in the mice, their concentration in the blood is insufficient for vector infection. Also, the circulation of "spontaneous" mutants with low pathogenicity is inhibited by low viremia.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

UDC 576.858.25.095.5

GAYDAMOVICH, S. Ya., TSILINSKIY, Ya. Ya., L'VOVA, A. I., and KHUTORETSKAYA, N. V., Institute of Virology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences, Moscow

"Genetic Properties of Venezuelan Equine Encephalomyelitis Virus Manifested During Replication in Carriers"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, pp 412-415

Abstract: Certain characteristics of several clones of Venezuelan equine encephalomyelitis virus were studied during replication in Aedes aegypti mosquitoes, which are not the natural carriers of these viruses. No clones were pathogenic to the mosquitoes. Clones 3/5 and 5 were readily transmitted to the mosquitoes, multiplied rapidly, entered the salivary glands of the mosquitoes, and were transmitted from mosquito to mouse by bite. Upon intracerebral or intraperitoneal administration into healthy mice, extracts of these mosquitoes induced encephalomyelitis in the mice. Clones 7, 14, and 17, thought ingested with food, multiplied in the mosquitoes at a much slower rate, did not enter salivary glands, and thus were not transmitted by bite; extracts of these mosquitoes were not pathogenic to mice either after intracerebral or

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

GAYDAMOVICH, S. Ya., et al, Voprosy Virusologii, No 4, Jul/Aug 71, pp 412-415

after intraperitoneal administration. It is concluded that the ability of Venezuelan equine encephalomyelitis virus to proliferate in Aedes aegypti mosquitoes and to enter their salivary glands represents genetic properties of some clones, directly associated with their virulence.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

Instrumentation and Equipment

USSR

UDC 669.01

TSILOSANI, A. G., KASHIN, V. I., and SAMARIN, A. M., (DECEASED),
Moscow

"Installation for Melting Refractory Metals in a Controlled Atmosphere"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 2, Mar-Apr 71, pp 147-149.

Abstract: A device has been developed for studying processes of melting and interaction of liquid refractory metals with gasses. The metal is melted on an air-cooled base using a gas-stabilized electric arc. The installation is capable of melting the most refractory metals and holding them in the liquid state for as long as necessary for chemical reactions to occur: for example, liquid tungsten was held at 3500°C for 7.5-8.0 min. The device consists of the body, stage supporting metal being studied, upper electrode, electrode movement mechanism, evacuation system, gas mixture preparation and input system, power supply and measurement apparatus.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

USSR

GACHECHILADZE, T. G., TSILOSANI, T. P.

"One Method of Studying the Statistical Structure of Text"

Statistika Rechi i Avtomatich. Analis Teksta [Speech Statistics and Automatic Text Analysis -- Collection of Works], Leningrad, Nauka Press, 1971, pp 113-133, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V613 by N. Arapova).

Translation: The statistical distribution F(i) of word lengths (i is the length of the word) in text is described. A word refers to a sequence of characters between two spaces (in the examples presented, i is the length of the word in syllables, the length of the word in letters, the distance in number of words between two labeled members of a sentence). It is assumed that the process of "word formation" is superposition of an absolutely deterministic and absolutely random processes, which can both be described in the framework of the so-called generalized Fuchs model studied in earlier works by the author's. This work presents a method for determination of the deterministic components by experimental methods, i.e., determination of the sets of constants, called the ε spectrum. The value of F(i) theoretically found with various interpretations of i is compared with the experimental data for the Georgian language.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

1/2 008 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SOURCES OF ODORS IN RUSSIAN LEATHER PRODUCTION. 2. USE OF PETROLEUM REFINING BY PRODUCTS FOR LIMING CATTLE HIDES -U-

AUTHOR-(05)-DANISH, L.V., KOTOV, M.P., DUSHIN, B.M., ROMAN, A.S., TSIMBALENKO, A.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., TEKHNOL. LEGK. PROM. 1970, (1), 83-5

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PETROLEUM PRODUCT, LEATHER, TECHNICAL STANDARD, SULFUR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0947 STEP NO--UR/0323/70/000/001/0083/0085

CIRC ACCESSION NO--AP0124607

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

2/2 008

UNCLASSIFIED

CIRC ACCESSION NO--AP0124607 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY REPLACEMENT DURING LIMING OF CATTLE HIDES OF NA SUB2 S WITH A S CONTG. WASTE PRODUCT OF PETROLEUM REFINING, AND BY REDN. OF THE TIME OF ROTATION OF THE HIDES IN THE DRUM DURING SOAKING AND LIMING, THE AMT. OF ODORIFEROUS LEATHER WAS REDUCED FROM 28.5 TO 5.8PERCENT. THE TOTAL TIME OF LIMING WAS REDUCED FORM 44 TO 31 HR. THE RESULTANT LEATHER, AFTER TANNING, MET THE REQUIREMENTS OF THE ALL UNION STATE STD. FACILITY: KIEV. TAKHNOL. INST. LEGK. PROM., KIEV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

UNCLASSIFIED

TITLE--EFFECT OF MOISTURE AND SURFACE ACTIVE AGENTS ON THE TENSILE STRENGTH OF CHROME TANNED LEATHER -U-

PROCESSING DATE--30OCT70

AUTHOR-(03)-MIGLYACHENKO, A.F., MIKHANOSHA, YE.S., TSIMBALENKO, A.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., TEKHNOL. LEGK. PROM. 1970, (1), 91-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SURFACE ACTIVE AGENT, LEATHER, TENSILE STRENGTH, TANNING MATERIAL/(U)OP7 SURFACE ACTIVE AGENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0950

STEP NO--UR/0323/70/000/001/0091/0093

CIRC ACCESSION NO--AP0124610

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0

2/2 023 UNCLASSIFIED

CIRC ACCESSION NO--AP0124610 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SAMPLES OF CHROME TANNED LEATHER WERE COMPLETELY SOAKED IN DISTD. H SUB2 O OR IN A 0.5PERCENT AQ. SOLN. OF SURFACTANT OP-U AND THE DEPENDENCE OF THEIR TENSILE STRENGTHS ON H SUB2 O CONTENT WAS DETD. AT H SUB2 O CONTENTS LARGER THAN OR EQUAL TO 120PERCENT (COMPLETE SATN), THE STRENGTH OF THE SAMPLES WAS ONLY SLIGHTLY GREATER THAN THAT OF DRY LEATHER. THE STRENGTH INCREASED UNIFORMLY AS THE H SUB2 O CONTENT WAS REDUCED TO 40PERCENT (FOR DISTD. H SUB2 O) OR 20PERCENT (FOR OP-7 SOLN.), AND THEN FELL SHARPLY. THE STRENGTH VALUES WERE SLIGHTLY HIGHER FOR SAMPLES WETTED WITH DISTD. H SUB2 O. THE MAX. VALUE OF TENSILE STRENGTH OCCURRED AT THE POINT OF TRANSFER OF BONDING OF WATER FROM MECH. TO PHYSIOCOCHEM. TYPE BONDING.

FACILITY: KIEV. TEKHNOL. INST. LEGK. PROM., KIEV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203330008-0"