"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--DIFFUSION OF IMPURITIES IN POLYCRYSTALLINE COPPER. II. DIFFUSION OF ARSENIC -U-

AUTHOR-(04)-KLOTSMAN, S.M., RABOVSKY, YA.A., TALINSKY, V.K., TIMOFEYEV, A.N.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA METALLOV I METALLOVEDENIE, APR. 1970, 29, (4), 803-806

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--METAL IMPURITY, METAL DIFFUSION, COPPER, ARSENIC, RADIOACTIVE TRACER, POLYCRYSTAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1801 STEP NO--UR/0126/70/029/006/0803/0806

CIRC ACCESSION NO--AP0129169

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129169

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THREE DIMENSIONAL AND INTERCRYSTALLITE (TWO DIMENSIONAL OR BOUNDARY) DIFFUSION OF AS IN POLYCRYSTALLINE CU WAS STUDIED BY A RADIOISOTOPE METHOD (LAYER BY LAYER ANALYSIS). THE THREE DIMENSIONAL DIFFUSION EQUATION FOR THE RANGE 800-1100DEGREESC WAS D EQUALS 0.2 EXP(NEGATIVE 42 130-RT) CM PRIME2-S; THE INTERCRYSTALLITE DIFFUSION OBEYED THE RELATION DELTA D EQUALS 7.9 TIMES 10 PRIME NEGATIVE10 EXP(NEGATIVE 12 3500RT) CM PRIME3-S, WHERE DELTA WAS THE WIDTH OF THE BOUNDARY LAYER.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--DIMENSIONS OF LINEAR POLYMER CHAINS -U-

AUTHOR-(02)-SIRAZHDINOV, S.KH., TALIPOV, A.

COUNTRY OF INFO--USSR

SOURCE--UZB. KHIM. ZH. 1970, 14(1), 10-13

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--LINEAR POLYMER, MATHEMATIC MODEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1959 STEP NO--UR/0291/70/014/001/0010/0013

CIRC ACCESSION NO--AP0123740

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0123740

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A GENERALIZED MATH. MODEL IS DEVELOPED WHICH GIVES THE PROBABLE LENGTH OF A POLYMER CHAIN IN TERMS OF A VECTOR MATRIX. FACILITY: TASHKENT, GOSUNIV. IM. LENINA, TASHKENT, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/2 017 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--EFFECT OF LYOPHILIZATION ON LACTIC ACID BACTERIA -U-

AUTHOR--TALIPOV, B.

COUNTRY OF INFO--USSR

SOURCE--UZB. BIOL. ZH. 1970, 14(2), 72-3

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BACTERIA, LACTIC ACID, FREEZE DRYING, BIOLOGIC STORAGE STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0003 STEP NO--UR/9079/70/014/002/0072/0073

CIRC ACCESSION NO--AP0137202

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 017 UNCLASSIFIED

CIRC ACCESSION NO--AP0137202 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EFFECTS OF LYOPHILIZATION ON ACID AND AROMA FORMING CAPACITY OF LACTIC ACID BACTERIA WERE STUDIED. TWO YEAR STORAGE OF LYOPHILIZED CULTURES DID NOT CHANGE THEIR PHYSIOL. AND MORPHOL. PROPERTIES. LYOPHILIZATION IS RECOMMENDED AS THE MOST USEFUL WAY TO STORE VALUABLE STRAINS OF LACTIC ACID BACTERIA.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

AZIMOV, S. A., MYALKOVSKIY, V. M., NURITDINOV, Kh., RASULKULOV, H. S., ABDULLAYEV, A. M., BEYSEMBAYEV, R. U., GAVRILIN, Ye. V., KALIMOV, D. A., MULLAZHONOV, E. Zh., TILLAYEV, T., RAKHMANOV, Zh., UMEROV, R., ULIMAYEVA, F. A., KHEN, E., YULDASHBAYEV, T. S., Institute of Nuclear Physics of the Academy of Sciences Uzbek SSR

"Study of the Characteristics of High-Energy Interactions of Pions and Nucleons"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol. 36, No. 8, Aug 72, pp 1626-1631

Abstract: Experimental data obtained at the Kum-Bel' High-Altitude Station of the Physicotechnical Institute of the Academy of Sciences Uzbek SSR are reported. The station is 3200 m above sea level. The setup contains three series of wide-gap spark chambers with effective areas of 2 m^2 placed above and below the target. The Cerenkov spectrometer with total absorption and an ionization calorimeter with an area of 10 m^2 were used to measure the primary energy E_0. Up to the present time experimental data obtained over 630 hours of operation of the device have been processed, with a high-voltage pulse being supplied to the electrodes of the spark chambers. Showers with an energy of >200 Gev generated in the target were selected for analysis. The following ratio was obtained for the number

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

AZIMOV, S. A., et al., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 36, No 8, Aug 72, pp 1626-1631

of primary charged N_c and neutral N_n particles: $N_c/N_n = 2.3 \pm 0.3$; this shows that the proportion of charged particles is ~34% of all nuclear active particles, thus making it possible to study pion-nuclear collisions by comparing the characteristics of the interaction of charged and neutral primary particles. A weak functional dependence between the inelasticity coefficient $\langle K_{\pi\varphi} \rangle$ and the atomic number of the target nucleus and a strong functional dependence between this coefficient and the nature of the primary particles were obtained for interactions of hadron with $E_0 > 200$ Gev. $\langle n_s \rangle$ is almost a logarithmic function of E_0. The average multiplicity in the interaction of pions with neutrons in paraffin is identical within the experimental limit. A considerable azimuthal effect was observed for the angular distribution of secondary particles. The azimuthal effect has its greatest value for showers with n_s = 8-15, or a multiplicity close to average.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 543.8

SHEYNINA, R. I., DZHIYANBAYEVA, R. Kh., KHALIMOVA, U. Kh., TALIPOV, Sh. T., and IBRAIMOV, Ch. I., Tashkent State University imeni V. I. Lenin and the Middle Asia Branch of the All-Union Scientific Research Institute of Fats, Tashkent

"Kinetic Method for Determining Microgram Quantities of the Organophosphorus Compound Butifos"

Moscow, Zhurnal Analiticheskoy Khimii, Vol 27, Vyp 8, 1972, pp 1643-1647

Abstract: Microgram quantities of butifos can be determined from its catalytic properties on the oxidation of benzidine, o-dimethoxybenzidine, and dimethylbenzidine by H_2O_2. The reaction is following photometrically. The dimethylbenzidine reaction is the most sensitive of the indicators as the methyl groups are stronger electron donors than the methoxy group. Conditions optimizing the reaction are examined. Trace amounts of butifos in the fibers and husks of cotton seeds were determined by this method.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 632.95

TALIPOV, Sh. T., DZHIYANBAYEVA, R. Kh., KHALIMOVA, U. Kh., BELOBORODOVA, N. F., SHEYNINA, R. I.

"Analysis of Butyphos in Cotton Seed and Products of Refining Raw Cotton"

Maslo-zhir. prom-st' (Oil and Fats Industry), 1972, No 10, pp 33-34 (from RZh-Khimiya, No 2 (II), Feb 73, Abstract No 2N478)

Translation: In order to determine the butyphos residue in raw cotton, fiber, shells and the refined cotton seed oil, extraction by an organic solvent (for cotton seed oil, MeCN and for the other samples, CCl_4) and purification of the extract in a column filled with Al_2O_3 with SG KSK [expansion unknown] (3:1) [the sorbent was first treated with HCl (acid)] were carried out. Thin layer chromatography was performed using a fixed layer of SG in the n-hexane-acetone system (4:1). It was developed with a solution of Ac-OH. The sensitivity of the method when analyzing butyphos in raw cotton and fiber is 0.1 mg/kg; in the hulls it is 0.6 mg/kg and in the refined cotton seed oil, 1 mg/kg.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 632.95

SHEYNINA, R. I., TALIPOV, SH. T., DZHIYANBAYEVA, R. KH, KHALIMOVA, U. KH.

"Methods of Analyzing Microgram Amounts of Butyphos in Some Products of Industrial Processing of Cotton"

Tr. 2-go Vses. soveshch. po issled. ostatkov pestitsidov i profilakt. zagryaz-neniya imi produktov pitaniya, kormov i vnesh. sredy (Works of the Second All-Union Conference on the Investigation of Pesticide Residues and Preventive Contamination of Food Products, Feeds and Environment), Tallin, 1971, pp 376-380 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12N500)

Translation: For analysis of butyphos (I) in raw cotton and cotton fiber, the property of I to accelerate the oxidation of o-dianisidine by H_2O_2 and retard the oxidation of hydroquinone by H_2O_2 in the presence of Cu^{2+} is used. The concentration of I in the 1.25-6.25 · 10^{-2} $\gamma/m\ell$ range is determined by measuring the rate of one reaction, and the concentration of I to 10^{-4} $\gamma/m\ell$ by measuring the rate of the second reaction. The reaction rate is determined by the fixed time method, measuring the optical density of these solutions 20 minutes after mixing the solutions in the first case and 5 minutes after in the second case.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 632.95

DZHIYANBAYEVA, R. KH., TALIPOV, SH. T., KHALIMOVA, U. KH., and BELOBORODOVA, N. F.

"Qualitative and Quantitative Measurement of Magnesium Chlorate in Cottonseed Oil"

Tr. 2-go Vses. soveshch. po issled. ostatkov pestitsidov i profilakt. zagryaz-neniya imi produktov pitaniya, kormov i vnesh. sredy (Works of the Second All-Union Conference on the Study of Pesticide Residues, and the Prevention of Contamination by Them of Food Products, Fodders and the Environment), Tallinn, 1971, p 280 (from Referativnyy Zhurnal -- Khimiya, No 10 (II), 1972, Abstract No 10H584 by T. A. Belyayeva)

Translation: The cotton plant defoliant $Mg(ClO_3)_2$ (I) is extracted from cotton seed oil with 0.05 N HCl and the extract is passed through anion exchange AB-17 (in OH form) and washed with 2N H_2SO_4. I is determined in in an eluant photometrically with benzidine hydrochloride. Sensitivity of the measurement is 0.05-1 mg/kg.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 543.544

TALIPOV, SH. T., DZHAYANBAYEVA, R. Kh., KHALIMOVA, U. Kh., BELOBORODOVA, N. F., and SHEYNINA, R. I., Tashkent State University imeni V. I. Lenin

"Thin-Layer-Chromatographic Determination of Butyphos in Cottonseed Oil"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 9, No 4 (90), 1971, p 20

Abstract: KSK silica gel was used for determination of butyphos in cottonseed oil, it is more selective than alumina. Butyphos was extracted from cottonseed oil with acetonitrile, passed through a 3:1 column of alumina:silica gel and chromatographed in the system n-hexane-acetone (4:1). The spots were developed with 0.05% bromphenol blue; impurities do not show up in this system.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

172 018 UNCLASSIFIED

TITLE--SPECTROPHOTOMETRIC DETERMINATION OF IONIZATION CONSTANTS OF 6 PRIME,,,2,7,DIHYDROXY,1,NAPHTHYL,AZO,1, METHYLANABASINE -U-

PROCESSING DATE--04DEC70

AUTHOR-(03)-SMAGLYUK, N.G., DZHIYANBAYEVA, R.KH., TALIPOV, SH.T.

COUNTRY OF INFO--USSR

SOURCE--UZB. KHIM. ZH. 1970, 14(2), 24-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SPECTROPHOTOMETRIC ANALYSIS, IONIZATION, HYDROXYL RADICAL, NAPHTHALENE, AZO COMPOUND, HETEROCYCLIC NITROGEN COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0926

STEP NO--UR/0291/70/014/002/0024/0028

CIRC ACCESSION NO--AP0137954

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

CIRC ACCESSION NO--AP0137954 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISSOCN. CONSTS. OF THE TITLE COMPD. (I) WERE DETD. AT 18DEGREES BY 3 METHODS. ABSORPTION SPECTRA (400-600 NM) OF 0.002M ETOH SOLN.5 OF I AT PH 0.82-9.81 WERE MEASURED. ABSORPTION CURVES FORM 3 ISOSBESTIC POINTS. THE 1ST AT 450 MM DEPENDS ON THE SPLITTING OFF OF THE PROTON FROM N OF THE PYRIDINE RING. AT PH SMALLER THAN 0.82 (ABSORPTION MAX. LAMBDA SUBMAX. 420 NM), PH LARGER THAN 2.7 (LAMDBA SUBMAX. 460 NM), AND PH 1-2.2, PROTONATED MOLS., NEUTRAL MOLS., AND A MIXT. OF BOTH OF THESE I MOL. TYPES ARE PRESENT IN THE SOLN., RESP. AN ISOSBESTIC POKNT AT 495 NM CORRESPONDS TO PROTON ELIMINATION FROM THE OH GROUP OF I NEPHTHALENE RING, NEARER TO THE AZO GROUP. AT PH 2.5-5 (LAMBDA SUBMAX. 460 NM), THE I MOLS., ARE IN A NONDISSOCD. (H SUB2 A) STATE, AT PH 5.5-8 A MIXT. OF H SUB2 A AND I MOLS. DISSOCD. TO THE 1ST STAGE (HA PRIME NEGATIVE) IS PRESENT, AND AT PH 8.3 LAMBDA SUBMAX. 470 NM), THE 1ST DISSOCN. STAGE OF I IS FINISHED. AN ISOSBESTIC POINT AT 440 NM IS CAUSED BY REMOVING PROTON FROM THE 2ND OH GROUP OF THE NAPHTHALENE RING. AT PH 8.6-9.8, A MIXT. OF HA PRIME NEGATIVE AND A PRIME2 NEGATIVE IONS EXISTS IN THE SOLN. THE 2ND DISSOCN. STAGE OF I IS COMPLETED AT PHLARGER THAN 10 (LAMBDA SUBMAX. 480 NM) BY THE FORMATION OF A PRIME2 NEGATIVE. THE MEAN PK VALUES OF I ARE 1.69, 7.88, AND 8.88.

FACILITY: TASHKENT. GOSUNIV. IM. LENINA, TASHKENT, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

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USSR

UDC 539.171.017

ABDULLAYEV, A. M., AZIMOV, S. A., BEYSEMBAYEV, R. U., BELITSKIY, M. T., MULLIZHANOV, E. ZH., MYALKOVSKIY, V. M., TALIPOV, T. A., TILLAYEV, T., UMEROV, R., KHEN, E., and YULDASHBAYEV, T. S.

"Study of Characteristics of Inelastic Interactions of Cosmic-Ray Particles in the 10^{11} to 10^{12}-ev Energy Range"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 10, Oct 71, pp 2065-2068

Abstract: Experiments that were performed at the high-altitude test station (3,200 m.) at Kum-Bel' in Uzbekistan are described. The purpose of the experiments was to investigate the angle of arrival and the energy characteristics of interactions of pions and nucleons with light and heavy nuclei at 2×10^{11} to 2×10^{12} ev and the mechanism of generating muons at energies above 2×10^{12} ev. Equipment consisted of spark chambers, located above and below the target (paraffin wax, carbon, and iron), a Čerenkov spectrometer of full absorption, and an ionization calorimeter. This complex method of measurements was found convenient for use in various modes of operation. A detailed description of various parts of the installation and their disposition is given in the paper. 1/3

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

ABULLAYEV, A. M., et al., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 10, Oct 71, pp 2065-2068

Joint operation of ionizing calorimeters and spark chambers is normally difficult because of the need for high voltage on the calorimeter electrodes, combined with the time lag of the input pulse from the spark chambers, amounting to over 20 microseconds. This difficulty was avoided in the present experiments by storing pulses in memory cells, with the subsequent input of a high-voltage pulse of about 120 kv. Operation was controlled by a master-pulse, prior to which all parts of the equipment were kept inoperative.

Results of 200 hours of the joint operation of a Čerenkov spectrometer and ionizing calorimeter, with graphite used as the target, have been processed so far. For analysis, showers with energy above 1.5×10^{11} ev were selected, 130 of them having been observed. The ratio of charged to neutral nucleons were determined and, from it, the fraction of charged pions of the total nucleus-active stream of particles. The inelastic coefficient for the formation of π^0-mesons was computed from the experiments related to the interaction of neutral particles with nuclei of graphite.

It is concluded that the combination of ionizing calorimeter with Čerenkov spectrometer of full absorption for the simultaneous determination of energy of primary particles made it possible to determine the fraction of

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

ABULLAYEV, A. M., et al., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 10, Oct 71, pp 2065-2068

energy supplied by the ionizing particles η, since a Čerenkov spectrometer measures only the energy emitted by relativistic particles. It was found that for the mean energy of primary particles of 350 Gev the energy part lost on nuclear fissions in the spectrometer, with CCl_4 as the light emitter, is η = 0.25,

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/2 021 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--A STUDY OF THE INFLUENCE OF VIBRATION AND ITS COMBINATION WITH HEAT ON THE PERIPHERAL CIRCULATION -U-

AUTHOR-(02)-KANDROR, I.S., TALIVANOVA, R.V.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 49, NR 6, PP 26-29

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BIOLOGIC VIBRATION EFFECT, PHETHYSMOGRAPHY, BLOOD CIRCULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0699 STEP NO--UR/0219/70/049/006/0026/0029

CIRC ACCESSION NO--AP0131298

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 021 UNCLASSIFIED

CIRC ACCESSION NO--AP0131298 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN EXPERIMENTAL CONDITIONS ON HEALTHY PERSONS VOLUNTEERS THE AUTHORS STUDIED THE EFFECT OF LOCAL VIBRATION (FREQUENCY, 50 CYCLES PER SECOND, AMPLITUDE, 0.7 MM). WITH THE AID OF OCCLUSION PLETHYSMOGRAPHY IN BURCH'S MODIFICATION AND CAPILLAROSCOPY IT WAS NOTED THAT VIBRATION DECREASES THE VOLUME AND RATE OF BLOOD INFLOW AND OUTFLOW, CAUSES A REDUCED QUANTITY OF FUNCTIONING CAPILLARIES AND OPACIFICATION OF THE CAPILLAROSCOPIC BACKGROUND. HEAT USED DURING VIBRATION (HEATING OF THE CONTACT SURFACE UP TO 40-43DEGREESC) ELIMINATES OR REDUCES THE VASOCONSTRICTOR EFFECT OF THE VIBRATION. FACILITY: INSTITUTE OF RAILROAD HYGIENE, MOSCOW.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 612.13-06:[613.644+613.646

KANDROR, I. S. and TALIVANOVA, R. V., All Union Scientific Research Institute of Railroad Hygiene, Chief Medical and Sanitary Administration

"The Effect of Vibration and Vibration Combined With Heat on the Peripheral Circulation"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 6, 1970, pp 26-29

Abstract: Vibration applied to the hands (frequency 50 Hz, amplitude 0.7 mm) of 10 human subjects produced marked changes in the blood supply, as judged by the pulse wave, number of functioning capillaries, volume and rate of inflow and outflow of blood, all of which decreased below the original level. However, the simultaneous use of heat (warming the contact surface to 40-43°C) almost completely abolished the vasoconstrictor effect of vibration. This effect of vibration on the tone of the peripheral vessels is purely local and would not result from vibration employed at other points of application.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC: 632.95

GVERDTSITELI, I. M., MUKHASHAVRIYA, A. L., TSIRGILADZE, T. V., ADAMIYA, S. V., TALIYA, D. P., TSINTSADZE, E. S., and KAPANADZE, G. G., Institute of Plant Protection, Academy of Sciences, Georgian SSR

"Study of the Toxicity of Certain Organotin Preparations for the European Spruce Bark Beetle (Dendroctonus micans kugel)"

K izucheniyu toksicheskikh svoystv nekotorykh olovoorganicheskikh preparatov protiv bol'shogo yelovogo luboyeda (Dendroctonus micans kugel) (cf. English above), Tbilisi, 1970, 8 pp, bibliogr. 4 titles (from RZh-Khimiya, No 23, 10 Dec 70, Abstract No 23 N726 Dep)

Translation: The toxicity of some new organotin unsaturated alcohols was studied under Georgian conditions. The preparations were effective in controlling the European spruce bark beetle both in the laboratory and in the field.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC: 621.317.33

TAL'KO-GRINTSEVICH, P. P., KLIMKOVICH, V. I., ZASLONOVA, N. M.

"Some Problems in the Theory of Resonance Circuits Involving Exact Measurements of the Electromagnetic Characteristics of Materials"

Tr. Sib. NII metrol. (Works of the Siberian Scientific Research Institute of Metrology), 1971, vyp. 12, pp 35-39 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A303)

Translation: The article is devoted to problems associated with increasing accuracy and improving the resolution of resonance circuits, and the resonance method of measuring the electromagnetic properties of materials. Various sources of errors are considered, and criteria for the use of various formulas are pointed out, in particular in the thin specimen method. Resumé.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

Technical Science (Design)

TALLER, S. L.

19 May 1972

UDC 025.4:621.81

TECHNOLOGICAL DESIGN CLASSIFICATION OF PARTS

[Article by L.M. Zulik, G.M. Shneyderman, Candidates of Technical Sciences, and S.L. Taller; VNIIKI; Moscow, Standarty i Kachestvo, Russian, No 3, 1972, pp 13-15]

Sharp intensification of the scientific and production activity, non-proportionally fast growth of the volume of information, and an increase and complication of its flows have given rise to the objective necessity for introduction of computer engineering and, consequently, formalization of the language which is based on the principles of systematization and coding of technical-economic information. One of the most widespread and active forms of systematizing information is classification.

At the present time the problem of introducing automatic information control systems on all levels of economic activity is being solved on a state scale. The supply of documents for such systems in machine and instrument making is based on a united system of classification and coding of technical-economic information the most important component parts of which are the design and techological process classifiers of parts for general machine building applications.

The design classification of parts for machine and instrument building has been performed within the framework of the All-Union Classifier of Industrial and Agricultural Production (OKP). The higher qualification groupings of the OKP encompass both commercial and noncommercial production (parts and assemblies), and they contain branch and general machine building classes of machine and instrument making.

The design classification of parts was constructed by the hierarchical principle where successive subdivision of the entire set of parts is carried out from top to bottom by the method of deduction into groupings having similar attributes.

The classifier of parts for general machine building application is a summary of nomenclatures of the groups of parts combined by the principle of structural similarity. The depth of the classification division numbers five levels: class, subclass, group, subgroup, type.

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1/2 025 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--COMPONENT CLASSIFICATION FOR UNIFIED SYSTEM OF DESIGNER DOCUMENTATION -U-

AUTHOR-(04)-KULIK, L.M., SHNAYDMAN, G.M., POGODIN, B.A., TALLER, S.L.

COUNTRY OF INFO--USSR

SOURCE--STANDARTY I KACHESTVO, 1970, NR 4, PP 22-30

DATE PUBLISHED--------70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--DESIGN STANDARD, DESIGN FACILITY R AND D MANAGEMENT, PRODUCTION STANDARD, ENGINEERING STANDARD, DATA PROCESSING SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/0109 STEP NO--UR/0422/70/000/005/0022/0030

CIRC ACCESSION NO--AP0122375

UNCLASSIFIED

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CIRC ACCESSION NO--AP0122375 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE PRESENTS A CLASSIFICATIONAL SYSTEM OF DESIGNATIONS FOR PRODUCTS AND DESIGNER DOCUMENTS IN MECHANICAL AND PRECISION ENGINEERING. UNIFICATION OF PRODUCT DESIGNATIONS, INCLUDING THE DESIGNATIONS OF COMPONENT PARTS, IS SUGGESTED AND THEIR CLASSIFICATIONAL CHARACTERISTICS ARE GIVEN. COMPONENT PARTS IN MECHANICAL AND PRECISION ENGINEERING CAN BE CLASSIFIED AS THOSE COMMON FOR ENGINEERING AT LARGE AND THOSE SPECIFIC FOR CERTAIN BRANCHES OF INDUSTRY. FIGS. 5.

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USSR

UDC 576.809.55

HEYNARU, A. L., and TALLMEYSTER, E. T., Chair of Microbiology, Tartu State University

"Shigella and Escherichia Coli Sensitivity to Colicins Depending on Episomic Resistance Factors, Colicinogenic Factors, and S-R Types of Dissociation"

Moscow, Genetika, Vol 7, No 5, 1971, pp 113-122

Abstract: Under the action of resistance-promoting factors transmitted from Shigella and Excherichia coli, recombining clones of various enterobacteria change their sensitivity spectrum to colicins. R-factors obtained from R+Col+ donor strains mainly induce resistance to colicins Ia and Ib, regardless of whether or not Col-factors are transmitted during conjugation. Episomic resistance factors obtained from R+Col⁻ donor bacteria usually make the recombining clones sensitive either to colicins B, D, and K, or to colicins B, D, K, Ia, and Ib, depending on the colicin type of the recipient bacteria. R-forms, unlike S- and SR-forms, are sensitive to colicins B, D, K, and Ia, irrespective of the presence or absence of colicinogenic or episomic resistance factors in the cell. However, the S-r mutation does not affect the phenotype manifestation of colicinogenic factors. The above-mentioned changes in

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USSR

HEYNARU, A. L., and TALLMEYSTER, E. T., Genetika, Vol 7, No 5, 1971, pp 113-122

sensitivity spectrum are probably conditioned by changes induced in the superficial structures of the bacterial cells.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 576.8.097.22:615.33]:576.8.098

TALLMEYSTER, E. T., KHEYNARU, A. L., and ILOMETS, T. Ya., Tartu State University

"Multiplicity of Mechanisms Controlling Episomal Resistance to Antibiotics"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 11, 1971, pp 23-27

Abstract: R-factors of 10 wild polyresistant strains of Shigella and Escherichia coli were investigated after they were transferred to an auxotrophic E. coli K12 W1845 F⁻ strain through conjugation. Serial tests, performed to study the behavior of genetic determinants of resistance to streptomycin, levomycetin, and benzylpenicillin, yielded diverse results. Seven R-factors displayed either low-level (50-100 mcg/mg) or high-level (200-1000 mcg/mg) resistance to streptomycin after conjugation. One R-factor controlling resistance to benzylpenicillin lacked beta-lactam activity, while absence of enzymatic inactivation of levomycetin was demonstrated by Bouanchaud color tests in the case of two R-factors resistant to that antibiotic. The results indicate that R-factors with an identical antibiotic resistance spectrum may have genetic resistance determinants with different mechanisms of action.

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USSR

KHOROSHEVSKIY, V. G., TALNYKIN, Z. A.

"Games-Theory Approach to the Problem of Functioning of Homogeneous Computer Systems"

Vychisl. Sistemy [Computer Systems -- Collection of Works], No 51, Novosibirsk, 1972, pp 20-37 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V595, by the authors).

Translation: Given a homogeneous computer system (HCS), consisting of n elementary machines (EM). The solution of a problem may involve $0 \leq i \leq n$ machines (for example, due to machine failures). The HCS receives a stream of tasks of various ranks. It is considered that a task has rank $0 \leq j \leq n$ if its program requires j machines. The problem is to organize the functioning of the HCS such that the stochastically optimal utilization of each machine is assured as tasks are performed. Four games theory problems are stated and solved for the basic modes. This approach has the advantage that the problem of organization of functioning is solved only once for each system. Furthermore, it is proven that the solution of the system can be found using the HCS being studied. The algorithms for functioning of the HCS are extremely simple; they are realized by a pseudorandom number generator. A "mechanism" natural to the HCS may be used as such a generator (for example, the mechanism of failure and repair of individual EM).

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USSR

UDC 621.382:621.317.799

KLYUCHANTSEV, S.V., KOLESNIKOV, V.G., LITVINOV, V.M., MOISEYEV, I.A., SERGEYEV, N.M., TALOV, I.L.

"Multiprogram System With Time Sharing For Monitoring Of Parameters And Classification Of Semiconductor Devices"

V sb. Novoye v tekhn. poluprovodn. proiz-va (New Semiconductor Production Technology--Collection Of Works), Voronezh, Voronezh University, 1971, pp 96-104 (from RZh:Elektronika i yeye primeneniye, No 4, April 1972, Abstract No 4B538)

Translation: The paper reports on the development of an automatic system for monitoring and classification of transistors and semiconductor diodes. The following enter into the composition of the system: 1) A Type "Elektronika-100" computer with a storage size of 4096 words and a device for input-output of information; 2) A Type UT-1 program-controlled tester with 1 ÷ monitoring stations each. The maximum set [komplekt] of the system can have up to seven UT-1 testers. The mathematical security developed makes it possible to perform multi-program control by testers (the monitoring stations operate in a time-sharing regime) and with the following monitoring regimes: 1) Simultaneous monitoring of up to seven different types of transistors and semiconductor diodes (the

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KLYUCHANTSEV, S.V., et al. V sb. Novoye v tekhn. poluprovodn. proiz-va, Voronezh, Voronezh University, 1971, pp 96-104

overall extent of the test program should not exceed 240 tests) and the separation of them into 14 or 32 groups; 2) Automatic monitoring and processing of the results of measurements (quantity and percentage of devices in each group, quantity and percentage of rejected devices), and also the entry of these results into the numerical printing [tsifropechat']. The system can change the quantitative composition of the equipment with the object of accommodation to the requirements of test, series, or mass production. 3 ill. 1 ref. V.P.

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1/2 039

UNCLASSIFIED

TITLE--EFFECT OF FIRST AND SECOND ORDER STRESSING ON THE MECHANICAL PROPERTIES OF STAINLESS STEEL OKH20N4AG10 (NN3) AT LOW TEMPERATURES -U-

PROCESSING DATE--11SEP70

AUTHOR--TALOV, N.P., LEBEDEV, D.V., FATKINA, A.M.

COUNTRY OF INFO--USSR

SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (2), 62-3

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--STAINLESS STEEL, MECHANICAL PROPERTY, ALLOY DESIGNATION, CHROMIUM STEEL, LOW TEMPERATURE ALLOY, PLASTICITY, HEAT RESISTANT STEEL, COLD WORKING, AUSTENITICS STEEL/(U)AP319 HEAT RESISTANT STEEL, (U)NN3 HEAT RESISTANT STEEL, (U)OKH20N4AG10 CHROMIUM STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1294

STEP NO--UR/0129/70/000/002/0062/0063

CIRC ACCESSION NO--AP0106075

UNCLASSIFIED

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CIRC ACCESSION NO--AP0106075 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ECONOMICALLY ALLOYED STAINLESS AUSTENITE STEEL 0KH20N4AG10 (NN3, AP319) HAS HIGH MECH. PROPERTIES AT LIQ.H TEMPS. STRESSES OF THE 1ST AND 2ND ORDER, ARISING AS A RESULTS OF THERMAL AND MECH. TREATMENTS (COLD WORK), SUBSTANTIALLY AFFECTS THE PLASTICITY OF STEEL BY LOWERING IT, PARTICULARLY THOSE STRESSES CAUSED BY MECH. TREATMENT. IN ORDER TO REMOVE THESE STRESSES FROM ARTICLES PREPD. FROM THIS STEEL, ANNEALING AT 440-60DEGREES FOR 3 HR AND FURNACE OR AIR COOLING FOLLOWING MECH. TREATMENT IS RECOMMENDED. THE POSSIBILITY OF THE EFFECT OF STRESSES OF THE 1ST AND 2ND ORDER, ARISING DURING HEAT AND MECH. TREATMENT OF THE SPECIMENS MUST BE TAKEN INTO ACCOUNT WHEN ESTG. THE MECH. PROPERTIES OF AUSTENITE STEELS AT LOW TEMPS. THE POSSIBILITY OF THE EFFECT OF THE POSSIBLE FORMATION OF MARTENSITE AND THE PRESENCE OF STRESSES MUST BE CONSIDERED WHEN ESTG. THE MECH. PROPERTIES AT MINUS 253DEGREESC.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 615.385.1

VINOGRAD-FINKEL', F. R., Prof, TERENT'YEVA, E. I., Prof, SUKHOVA, A. G., VOROB'YEVA, G. S., TAL'SKAYA, I. N., LIFLYANDSKIY, D. B., DOROFEYEVA, T. N., and SAMSONOVA, N. N., Central Institute of Hematology and Blood Transfusion (Prof A. Ye. Kiselev, Director), Ministry of Health USSR and Institute of Cardiovascular Surgery (Prof V. I. Burakovskiy, Director), Academy of Medical Sciences USSR (Moscow)

"Morphological and Biochemical Characteristics and Viability of Washed Erythrocytes Intended for Surgical Procedures With Extracorporeal Circulation"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 16, No 8, 1971, pp 3-7

Abstract: Erythrocytes were obtained after separation of plasma from donor blood which had been kept in storage for 24 hours, washed with physiological solution, and examined by the electron microscope method; unwashed erthrocytes from the same blood served as controls. After two washings the submicroscopic organization of cells in the washed erythrocytes did not differ essentially from that in the unwashed erythrocytes. The conclusion

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VINOGRAD-FINKEL', F. R., et al., Problemy Gematologii i Perelivaniya Krovi, Vol 16, No 8, 1971, pp 3-7

was that washing the erythrocytes from blood prepared with a glucose-citrate preservative and stored for one day has no significant effect on the ultrastructure of almost the entire mass. Investigation of phosphorus fractions demonstrated the metabolic integrity of the washed erythrocytes through one or two washings. Thus, washing with physiological saline solution does not alter the structural completeness, metabolic activity, or biological value of erythrocytes. None of their indexes differ from those of erythrocytes of whole blood stored for 1 day and used for extra-corporeal circulation in cardiac surgery; they should therefore be recommended as the basic component in perfusates for extracorporeal circulation.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--EVALUATION OF THE VIABILITY OF ERYTHROCYTES OF CADAVER BLOOD BY THE ISOTOPE METHOD CHROMIUM 51 -U-

AUTHOR-(04)-SUVOROVA, I.A., PAFOMOV, G.A., TALSKAYA, I.N., OLDUROVA, S.V.

COUNTRY OF INFO--USSR

SOURCE--PROBL GEMATOL PERELIV KROVI 15(4): 26-28. 1970.

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CADAVER BLOOD, ERYTHROCYTE, BLOOD PRESERVATION, CHROMIUM ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605015/E08 STEP NO--UR/9080/70/015/004/0026/0028

CIRC ACCESSION NO--AP0140623

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140623

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ASSESSMENT OF VIABILITY OF ERYTHROCYTES OF CADAVER BLOOD WAS MADE BY LABELING WITH CR PRIMESI. THE NEW METHOD OF PRESERVATION OF CADAVER BLOOD WITH THE SACCHAROSE SOLUTION PROVIDED (ACCORDING TO THE DATA INVIVO) GOOD PRESERVATION OF ITS FORMED ELEMENTS: 24 HR AFTER THE TRANSFUSION TO THE RECIPIENT SURVIVAL OF ERYTHROCYTES OF 10 DAY BLOOD AVERAGED 81PERCENT. FACILITY: LAB. BLOOD PRESERV., CENT. INST. HEMATOL., BLOOD TRANSFUS., MIN. HEALTH USSR, MOSCOW, USSR.

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USSR UDC 615.388.073:612.111.3

SUVOROVA, I. A., PAFOMOV, G. A., TAL'SKAYA, L. N., and OLDUROVA, S. V., Laboratory of Blood Preservation, Central Institute of Hematology and Blood Transfusion, Ministry of Health USSR, and Laboratory of Blood Transfusion, Institute of First Aid imeni Sklifosovskiy, Moscow

"Estimating the Viability of Erythrocytes of Cadaver Blood by an Isotope Method Involving the Use of Cr^{51}"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 4, 1970, pp 26-28

Abstract: The viability of erythrocytes of cadaver blood preserved with a sucrose solution containing levomycetin (a method developed by Suvorova) was compared with that of erythrocytes preserved by the older sucrose-glucose-phosphate method. After labeling of erythrocytes with Cr^{51}, the blood was used, to stimulate healing, in transfusions to recovering patients with fractures of the arm and leg bones. Blood samples were taken from the patients at various times up to 21 days after the transfusion, and on the basis of the radioactivity of the samples, the half-life of the erythrocytes was determined. The viability of erythrocytes preserved by the sucrose method was superior to that of those preserved by the sucrose-glucose-phosphate method. The survival of sucrose-treated erythrocytes 24 hr after transfusion of blood stored for 10 days averaged 81 percent. This

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SUVOROVA, I. A., et al, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 4, 1970, pp 26-28

met the requirement for transfusion blood which states that at least 70 percent of the erythrocytes must survive for 24 hr after transfusion.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 539.67

NIKOLAYEV, V. V., ORLOV, A. N., and TALUTS, G. G.

"Contribution of Plane Dislocation Pileups to an Amplitude-Independent Internal Friction"

Sb. "Vnutrenneye treniye v metallicheskikh materialakh" (Internal Friction in Metallic Materials), Moscow, Izd-vo "Nauka," 1970, pp 113-119

Abstract: A calculation of the amplitude-independent internal friction is presented. It is shown that dislocation pileup distribution along the lengths can substantially alter the internal friction frequency dependence. 5 references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

Single Crystals

USSR UDC: 539.376:548.55

AKSEL'ROD, Ye. I., VISHNEVSKIY, I. I., DOBROVINSKAYA, Ye. R., TAL'YANSKAYA, N. D., Ukrainian Scientific Research Institute of Refractories, Khar'kov

"High-Temperature Creep of Corundum Single Crystals Subjected to Pure Bending"

Moscow, Doklady Akademii Nauk SSSR, Vol 213, No 2, 11 Nov 73, pp 331-334

Abstract: The authors study the mechanical behavior of corundum single crystals subjected to steady-state creep under conditions of stress of the pure bending type and forbidden basis slip in an effort to obtain information on the principles which govern plastic flow in non-basis systems on the temperature interval of 1650-1970°C (83-97% of the melting point). It was found that the nature of steady-state creep in corundum single crystals of zero orientation is the same as with deformation in the basis plane. The energies of creep activation in corresponding temperature intervals are in close agreement. This confirms the similarity of creep mechanisms for these orientations. At the same time, there is a pronounced difference in

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USSR

AKSEL'ROD, Ye. I. et al., Doklady Akademii Nauk SSSR, Vol 213, No 2, 11 Nov 73, pp 331-334

strain rates: at 1900°C a tensile stress of 0.327 kg/mm^2 along an axis making an angle of about 45° to the basis plane gives a creep rate of $1.4 \cdot 10^{-5}$ s^{-1}; in the zero-orientation experiments at the same temperature, ten times this tensile stress produced a creep rate of only 10^{-5} s^{-1}. Since the dependence on stress is the same ($v \sim \sigma^{3/2}$), the creep rates under equal tensions differ by a factor of at least 10^7. The authors thank A. N. Galagurya for taking part in the experiments.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR UDC: 620.186.4

VISHNEVSKIY, I. I., TAL'YANSKAYA, N. D., BOYARINA, I. L., Ukrainian Scientific Research Institute of Refractories, Khar'kov

"Change of the Microstructure of Polycrystalline Corundum in the Process of High-Temperature Creep"

Moscow, Doklady Akademii Nauk SSSR, Vol 202, No 5, 11 Feb 72, pp 1046-1048

Abstract: The most extensively employed method of processing measurement results during the investigation of creep (deformation flow in time) is an analysis of the relationships of a steady deformation rate to temperature and time. Information thus obtained permits a judgment to be made concerning the mechanisms which control creep. However, interpretation of the experimental data is substantially complicated by deviation of the structural state of the material from its initial state. In the present work a study is made, by means of optical microscope facilities, of change of the polycrystalline structure of corundum samples that have been tested for creep at high temperatures. Under test conditions, the linear boundaries are found to be unbalanced, and become distorted with recrystallization. The authors noted no predominant movement of boundaries with a specific curvature, although possibly migration of the convex boundary is preferential. Three figures. Eight references.
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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

Mechanical Properties

USSR

UDC: 669.15-196.55

SAVEL'YEVA, T. S., MASLENKOV, S. B., STEPANOV, V. P., and TAL'YANTSEV, V. S., Central Scientific Research Institute of Ferrous Metallurgy, "Elektrostal'" Plant

"Effect of Small Additives on the Anisotropy of the Plasticity in EP637 Steel"

Moscow, Stal', No 5, 1973, pp 448-449

Abstract: This article gives the results of investigations made by the authors into the effect of small quantities of carbon, boron, zirconium, and silicon on the anisotropy of the mechanical characteristics of EP637 (N18K9M5T) steel. The tests were made under industrial conditions in a vacuum induction oven with a capacity of 1.3 tons. The amounts of each additive element were, in percentage, C, 0.01-0.042; Si, 0.04-0.22; B, 0-0.006, and Zr, 0-0.09. Details of the experimental method are given. The mechanical characteristics of the metal were determined for longitudinal and transverse cuts of the ingots. A table is given of the chemical composition of the ingots, and curves are given of the effects of the various additives on the plasticity of the steel. It was found that more than 0.014%C sharply reduces the plasticity in transversely cut samples, and that zirconium increases the plasticity

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SAVEL'YEVA, T. S., et al., Stal', No 5, 1973, pp 448-449

index of the EP637 specimens. Silicon has little effect on longitudinal cuts but reduces the plasticity in transverse sections. It is recommended that boron content be kept to a minimum.

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TECHNICAL TRANSLATION

Arn/ FSTC-HT-23- 1128-71

(1)

ENGLISH TITLE: Study of the Bauschinger Effect

FOREIGN TITLE: Issledovaniye Effekta Baushingera

AUTHOR: G. B. Talybov

SOURCE: Izvestiya AN SSSR. Mekhanika i mashinostroyeniye, Nov - Dec 1964, p. 131 - 137.

Translated for FSTC by Leo Kanner Associates

NOTICE

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TALYBOV, G.B.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR UDC 621.791.011

TALYPOV, G. B.,

"Welding Strains and Stresses"

Leningrad, Svarochnyye Deformatsii i Napryazheniya, Izd-vo Mashinostroyeniye, 1973, 278 pp

Translation of Annotation: This monograph gives the physico-mechanical basis of the approximate theory of welding strains (stresses), its application to specific problems and an analysis of the available experimental and industrial data on investigating the influence of welding stresses on the strength of structures. The theory gives the possibility of an approximate determination of welding strains and stresses after welding and cooling in products of metals, the temperature of the spatial displacements of which is higher than that for which they lose the capacity to resist plastic deformations. It supplements existing theories and permits arriving at a solution to the two- and three-dimensional problems as well as at an investigation of loss in stability of the initial shape by allowing for the irreversible change in

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TALYPOV, G. B., Svarochnyye Deformatsii i Napryazheniya, Izd-vo Mashinostroyeniye, 1973, 278 pp

the mechanical properties of the base metal of the seam zone as a result of welding and cooling. Analysis of the experimental data shows that the welding stresses may lead to a substantial reduction in strength of the structure. Recommendations are given that are directed to decreasing the influence of these stresses on the strength.

The monograph is intended for scientific and engineering-technical personnel of the machine construction industry and may also be useful to students of the upper courses in technical institutes of the corresponding specialties . The book contains 22 tables, 57 illustrations, and 149 bibliographic references.

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TALYPOV, G. B., Svarochnyye Deformatsii i Napryazheniya, Izd-vo Mashinostroyeniye, 1973, 278 pp

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Acc. Nr: AP0054289 Ref. Code: UR 9115

PRIMARY SOURCE: Ortopediya, Travmatologiya i Protezirovaniye, 1970, Nr 3, pp 38-41

EFFECT OF LASER BEAM ON THE BONES

(Preliminary Report)

Talyshinskiy, R. R.

Experiments have been carried out on 32 bone explants from the cadavera with use of gas and solid-state lasers. The gas laser produced charring of bones. The ruby laser with the exit energy output of 14—15 joules caused mechanical injury of bone. A penetrating gap through the cortical layer formed after 8—10 impulses. Data of histological examination are submitted. Changes in structure (densification and plication) of the bone trabeculae have been disclosed as the result of photohydraulic effect.

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Pharmacology and Toxicology

USSR UDC 591.477.4

CHECHULIN, A. S., SHAPIRO, A. M., VAL'TSEVA, I. A., and TALYZIN, F. F., First Moscow Medical Institute im. I. M. Sechenov

"Some Data on the Effect of Central Asian Cobra Venom on Blood"

Moscow, Nauchnyye Doklady Vysshey Shkoly, Biologicheskiye Nauki, No 7, 1972, pp 58-59

Abstract: Examination of the peripheral blood of animals 20 to 40 min after subcutaneous injection of sublethal doses of Central Asian cobra venom revealed an increase in the number of leukocytes, reticulocytes, and especially immature forms of erythrocytes. However, the resistance of the erythrocytes was unaffected. This suggests that hemolysis did not occur under experimental conditions, for the permeability of the membrane of these cells did not increase in response to the neurotropic toxin.

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All-satellite communications

UDC 621.396.645

THE NEW 'ORBITA-2' SATELLITE COMMUNICATIONS STATIONS

[Article by L. Ya. Kantor, V. A. Polukhin, and N. V. Talyzin; Moscow, Elektrosvyaz', Russian, No. 5, 1973, signed to press 3 January 1973, pp 1-8]

The Directives of the 23d Congress of the CPSU (Communist Party of the Soviet Union) provided for the transmission of programs from Central Television via artificial satellites of the Earth to distant regions of our country. This task was solved in 1967 on the eve of the 50th anniversary of the Great October Socialist Revolution, when 20 "Orbita" stations were placed in operation, i.e., a network of ground stations receiving the program from Central Television via "Molniya-1" communications satellites was created [1]. At the present time the number of "Orbita" stations has doubled. The majority of the "Orbita" stations have obtained the capability of receiving color television programs.

In certain cases the "Orbita" stations have become the source of one more Central Television program, in addition to the program obtained by cable and radio-relay communications lines. In these years, rich experience in the operation of new communications systems has been accumulated in the network "Orbita" stations, and a large number of technical problems have been worked out [6].

The Directives of the 24th Congress of the CPSU with respect to the five-year plan for the development of the national economy of the USSR for 1971--1975 provides for the performance of scientific work in space for purposes of the development of long-range telephone-telegraph communications and television. In carrying out these directives, in 1972 by the fiftieth anniversary of the formation of the Union of Soviet Socialist Republics, the development of a set of equipment for the new satellite communications stations, which have been named "Orbita-2", has been completed.

In September 1972 the first "Orbita-2" technological station was placed in operation at the city of Arkhangel'sk; on the eve of the 55th anniversary of

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TALYZIN, N.V.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

Acc. Nr.: AN0104550 Ref. Code: UR 9003

AUTHOR-- TALYZIN, N. V., DEPUTY MINISTER OF COMMUNICATIONS, U.S.S.R.

TITLE-- MOSCOW HAS BEEN BROUGHT CLOSER

NEWSPAPER-- IZVESTIYA, JUNE 9, 1970, P 3, COLS 6-7

ABSTRACT-- ACCORDING TO THE ARTICLE, THE CONSTRUCTION OF "ORBITA" STATIONS IN BILIBINO, ANADYR, OKHOTSK, AND SOVETSKAYA GAVAN WILL HAVE BEEN COMPLETED IN 1971.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR UDC: 629.195.621.397

TALYZIN, N. V.

"Problems in the Development of the 'Orbita' System"

Moscow, Elektrosvyaz', No 2, 1971, pp 1-4

Abstract: This article describes the present condition and answers questions concerning the future development of the "Orbita" system, designed for reception and retranslation of Central Television Program telecenter transmissions by the communications satellite "Molniya 1." This station network system began operation in October of 1967. At the end of that month, there were 20 ground stations in the system; today there are more than 30, and additional stations in Blagoveshchensk, Gur'yev, Dzhezkazgan, as well as other cities. Technical characteristics of the system are given. The author notes that what has been done on the system is only a beginning; both the satellites and ground stations must be improved to increase the coverage of the Central Television Program. Ground stations of several types, differing in basic antenna structure and equipment, will probably be included in the system. With rapid progress in

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TALYZIN, N. V., Elektrosvyaz', No 2, 1971, pp 1-4

sputnik communication techniques, it is to be hoped that this means of transmitting information will play an increasingly important part in the nation's electrical communications system, the author concludes.

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UDC 629.195.2:621.39

TALYZIN, N. V., KANTOR, L. YA. and PAYANSKIY, YU. M.

"Economic Aspects of Increasing the Capacity of a Satellite Communication System"

Moscow, Radiotekhnika, Vol 25, No 1, Jan 70, pp 3-8

Abstract: The article deals with the economic factors of the satellite communication system and their relation to system capacity. Its purpose is to determine the dependence of the system optimal parameters and efficiency on system capacity. Various ways for increasing the system capacity are considered and their efficiency and performance are analyzed. The way of increasing the system capacity by increasing the number of high-frequency "cores" is retained for the analysis. The optimum number of "cores" is determined by the frequency deviation on the channel from an equation. At a given repeater and HF core capacity this equation makes it possible to establish the necessary frequency deviation and to determine the outlay for a satellite communication system, as a function of the onboard transmitter power and system capacity. Calculations of the optimal system parameters at variable system capacity was carried out, according to the algorithm presented previously by

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TALYZIN, N. V., et al., Radiotekhnika, Vol 25, No 1, Jan 70, pp 3-8

the authors, under the assumption, that every ground station is provided with one full-turn antenna and that the redistribution of channels between the ground stations is neglected. An analysis of the results shows that: 1. Outlays for one telephone channel decreases with increasing system capacity. 2. The system capacity increase leads to the reduction of optimal power of the onboard transmitter, and to an increase in the optimal antenna diameter at ground station. 3. The increase in system capacity has a small effect on its relative efficiency i.e. the average distance between the stations of an equivalent (with respect to outlays and capacity) ground station. This distance depends on the number of ground stations.

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Acc. Nr.: AP0046413 Ref. Code: UR0108

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UDC 629.195.2:621.39

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TALYZIN, N. V., KANTOR, L. YA. and PAYANSKIY, YU. M.

"Economic Aspects of Increasing the Capacity of a Satellite Communication System"

Moscow, Radiotekhnika, Vol 25, No 1, Jan 70, pp 3-8

Abstract: The article deals with the economic factors of the satellite communication system and their relation to system capacity. Its purpose is to determine the dependence of the system optimal parameters and efficiency on system capacity. Various ways for increasing the system capacity are considered and their efficiency and performance are analyzed. The way of increasing the system capacity by increasing the number of high-frequency "cores" is retained for the analysis. The optimum number of "cores" is determined by the frequency deviation on the channel from an equation. At a given repeater and HF core capacity this equation makes it

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AP0040413

possible to establish the necessary frequency deviation and to determine the outlay for a satellite communication system, as a function of the onboard transmitter power and system capacity. Calculations of the optimal system parameters at variable system capacity was carried out, according to the algorithm presented previously by the authors, under the assumption, that every ground station is provided with one full-turn antenna and that the redistribution of channels between the ground stations is neglected. An analysis of the results shows that: 1. Outlays for one telephone channel decreases with increasing system capacity. 2. The system capacity increase leads to the reduction of optimal power of the onboard transmitter, and to an increase in the optimal antenna diameter at ground station. 3. The increase in system capacity has a small effect on its relative efficiency i.e. the average distance between the stations of an equivalent (with respect to outlays and capacity) ground station. This distance depends on the number of ground stations.

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UDC 629.7.015

KOZHEVNIKOV, YU. V., TALYZIN, V. A., BOYKO, A. N.

"Craft Optimization in an Independent Test Program"

Kazan', Izvestiya Vysshykh Uchebnykh Zavedeniy, Aviatsionnaya Tekhnika, No 3, 1970, pp 14-21

Abstract: The article deals with the problem of optimization of the program of motion of a two-stage craft that is being delivered to a given flight-range segment /I', I"/ in accordance with the following criteria: a) maximization of the probability of a successful outcome of not less than m craft launchings in a series of n ($n \geqslant m$) launchings; b) maximization of the probability of exactly m successful arrivals of the craft in a series of n ($n \geqslant m$) launchings. The necessary optimality conditions in the problems are obtained by methods of the theory of optimal averaging of the controls. An algorithm for numerical solution of the problem is compiled. The results of optimization of the movement program of a single-stage craft in accordance with criteria a) and b) are presented as an example. 2 tables, 2 figures, 4 bibliographic entries.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/3 015 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--THEORETICAL PROBLEMS IN PROGRAMMED INSTRUCTION --U-

AUTHOR--TALYZINA, N.F.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, SOVETSKAYA PEDAGOGIKA, NO 1, JAN 70, PP 137-139

DATE PUBLISHED-------70

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TOPIC TAGS--LEARNING PROGRAM, CYBERNETICS, PROGRAMMED TEACHING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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CIRC ACCESSION NO--AP0131777

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CIRC ACCESSION NO--AP0131777

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN RECENT YEARS, THE RAPID RISE IN THE NUMBER OF PUBLICATIONS DEVOTED TO PROGRAMMED INSTRUCTION HAS UNDERGONE A SHARP SLACKENING BECAUSE THE OVERWHELMING MAJORITY OF PROGRAMS DO NOT GUARANTEE THE ACHIEVEMENT OF EDUCATIONAL GOALS. THE BASIC REASON FOR THIS IS THE POOR DEVELOPMENT OF THEORETICAL FUNDAMENTALS OF PROGRAMMED INSTRUCTION. THE REVIEWED BOOK SHOULD HELP REMEDY THIS SITUATION. ITS AUTHOR FORMULATED THE BOOK'S BASIC IDEA IN THE FOLLOWING WAY: "THE THEORY OF PROGRAMMED INSTRUCTION IS AN ORGANIC COMBINATION OF THE GENERAL THEORY OF CONTROL AND THE PSYCHOLOGICAL AND PEDAGOGICAL THEORY OF STUDY". ALTHOUGH MANY ATTEMPTS HAVE BEEN MADE BEFORE THE APPEARANCE OF THIS BOOK TO ANALYZE THE PROCESS OF STUDY FROM THE POINT OF VIEW OF CYBERNETICS, MOST OF THEM WERE UNSUCCESSFUL SINCE THE IDEAS AND METHODS OF CYBERNETICS HAVE BEEN GIVEN A ONE SIDED APPLICATION. THE AUTHOR OF THIS BOOK DEVOTES SPECIAL ATTENTION TO PSYCHOLOGICAL PEDAGOGICAL PROBLEMS OF CONTROL OF LEARNING PROCESSES AND CONSIDERS THE PROCESS OF CONTROL TO BE ON THE LEVEL OF PSYCHOLOGICAL ACTIVITY. SUCH AN APPROACH PERMITS HIM TO OFFER A SPECIFIC SYSTEM OF CONTROL. HE DEMONSTRATES THAT THERE CAN BE NO RELIABLE SYSTEM OF LEARNING WITHOUT PERCEPTIVE TEACHING ACTIVITY. HE ALSO SHOWS THE DEFECTS IN THE GENERAL DESCRIPTION OF STUDY GOALS AND THE SCIENTIFIC INCOMPETENCE OF THE BEHAVIORIST APPROACH TO SUCH A DESCRIPTION, WHICH REDUCES TO A SET OF BEHAVIORAL ACTS AND IGNORES PSYCHOLOGICAL EFFORTS. THERE IS AN INTERESTING TREATMENT OF THE FEEDBACK CONCEPT.

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CIRC ACCESSION NO--AP0131777 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--SOME DEFECTS AND MISCONCEPTIONS NOTED BY THE REVIEWER ARE GIVEN: FOR EXAMPLE, THE AUTHOR TENDS TO SUMMARIZE HIS EXPLANATIONS, THUS MAKING IT DIFFICULT FOR THE READER TO UNDERSTAND THEM.

FACILITY: MOSCOW STATE UNIVERSITY.

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TITLE--EXPERIMENTAL STUDY OF A DETECTOR OF ULTRAHIGH ENERGY PARTICLES USING X RAY TRANSITION RADIATION -U-

PROCESSING DATE--23OCT70

AUTHOR-(04)-ALIKHANYAN, A.I., ISPIRYAN, K.A., OGANESYAN, A.G., TAMANYAN, A.G.

COUNTRY OF INFO--USSR

SOURCE--PIS'MA ZH. EKSP. TEOR. FIZ. 1970, 11(7), 347-9

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--TRANSITION RADIATION, GAMMA DETECTOR, HIGH ENERGY PARTICLE, CHARGED PARTICLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/2208

STEP NO--UR/0386/70/011/007/0347/0349

CIRC ACCESSION NO--AP0127570

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CIRC ACCESSION NO--AP0127570 UNCLASSIFIED PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROBLEM OF SEPG. PARTICLES FROM T E TRANSITION RADIATION WAS SOLVED. A GAMMA DETECTOR OF TORIDAL FORM WAS USED. CHARGED PARTICLES PASSED THROUGH A CENTRAL OPENING OF THE DETECTOR AND THE PART RADIATION PASSING THROUGH THE OPENING SIMULTANEOUSLY WITH THE PARTICLES WAS NOT REGISTERED. THIS DETECTOR WAS EXAMD. BY E OF 0.4-4 GEV. THE DEVICE WAS ADJUSTED BY A LASER. THE RADIATION WAS REGISTERED IN THE REGION OF HW IS GREATER THAN OR EQUAL TO 15 KEV FREQUENCIES. THE EFFICIENCY (EPSILON) OF E REGISTRATION IS SHARPLY DEPENDENT ON THE E ENERGY; UNDER THE CONDITIONS USED, EPSILON WAS SIMILAR TO 0.1. BY USING DETECTORS WHICH CAN RECORD GAMMA QUANTA OF LOWER ENERGIES, THE HIGH ENERGY PARTICLES CAN BE REGISTERED WITH EPSILON SIMILAR TO 1. THE DETECTOR CAN BE USED FOR IDENTIFYING PARTICLES OF DIFFERENT MASSES WITH A HIGH RESOLN. POWER IN THE REGION OF GREATER THAN OR EQUAL TO GEV PULSES.

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UDC: 621.375.421.001.5:621.3

TAMARCHAK, D. Ya., KHOTUNTSEV, Yu. L.

"Computer Synthesis of a Tunnel Diode Amplifier With Distributed Parameters"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 4, Apr 72, pp 773-780

Abstract: The authors discuss computer synthesis of a wide-band tunnel diode amplifier with series stabilization utilizing elements with distributed parameters. The synthesis is done in the lower region of the X-band. The wave impedance and lengths of line sections are determined which give relative passbands of 16, 25 and 35% with the selected diode for an amplifier with a minimum gain of 12 dB and nonuniformity of 1 dB or less in the amplitude-frequency response. The stability of the amplifier is monitored during synthesis. Functions are calculated for the sensitivity of the amplification factor to a change in wave impedances and in the lengths of the line sections. An algorithm is given for solving the problem of synthesis. The proposed method of synthesis can also be used in the design of other wide-band devices for operation in the microwave band.

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USSR

UDC 621.375.4.001.5:621.382.23.011.222

MOGILEVSKAYA, L.YA., TAMARCHAK, D.YA., UVBARKH, V.I., KHOTUNTSEV, YU.L.

"Possibility Of Decreasing Stabilization Bands With Synthesis Of Tunnel Amplifiers"

Radiotekhnika i elektronika, Vol XVII, No 3, Mar 1972, pp 549-555

Abstract: The possibilities are considered of decreasing the stabilization frequencies of tunnel amplifiers of various types with parallel tuning in which a tunnel diode is presented in the form of the frequency-independent parallel-connected parameters R_{eq}, C_{eq}. The results obtained are valid for dual circuits with series tuning with presentation of a tunnel diode in the form of a series-connected R'_{eq}, C'_{eq}. 6 fig. 5 tab. 4 ref. Received by editors, 11 Jan 1971.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR UDC 621.375.4.001.5

TAMARCHAK, D. Ya., KHOTUNTSEV, Yu. L.

"On the Problem of Synthesizing a Tunnel-Diode Amplifier With a Real Circulator"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 10, Oct 71, pp 1822-1827

Abstract: The authors develop a tunnel diode amplifier with a series stabilization circuit of the first kind connected to a circulator whose equivalent circuit is given in the form of a parallel tank (the impedance transformer of the circulator is assumed to be a wide-band unit and is disregarded). The circuit is synthesized for several stabilization frequencies and for various values of the reactive component of the input impedance of the circulator in amplifier passbands comprising 50-70 percent of the passband of the circulator. The results are also applicable to a three-tank tunnel diode amplifier with a passband approximately 30 percent wider than that of the two-tank unit. Amplifier parameters are tabulated for various amplification factors. Three figures, three tables, bibliography of six titles.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/2 007 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--DETERMINATION OF MICROAMOUNTS OF IODIDE BY A KINETIC METHOD BASED ON CADION OXIDATION BY POTASSIUM PEROXYDISULFATE -U-

AUTHOR--TAMARCHENKO, L.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHIM. 1970, 25(3), 567-70

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TRACE ANALYSIS, IODIDE, CHEMICAL ANALYSIS, TITRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0473 STEP NO--UR/0075/70/025/003/0567/0570

CIRC ACCESSION NO--AP0126225

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 007 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126225

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. I PRIME NEGATIVE AND BR PRIME NEGATIVE INHIBIT THE OXION. OF CADICN (DI-NA P-NITRODIAZOAMINOAZOBENZENE DISULFONATE) BY K SUB2 S SUB2 O SUB8 WHICH IS CATALYZED BY AG PRIME POSITIVE. IT IS POSSIBLE TO DET. I PRIME NEGATIVE BY USING THIS REACTION WITH A SENSITIVITY OF 10 PRIME NEGATIVE7 G-ION-L. AG PRIME POSITIVE CONCN. SHOULD NOT EXCEED 5 TIMES THAT OF I PRIME NEGATIVE; 10 FOLD BR PRIME NEGATIVE DOES NOT INTERFERE IN THE DETN. THE ERROR IS SMALLER THAN OR EQUAL TO 8PERCENT. TRACE AMTS. OF I PRIME NEGATIVE AND AG PRIME POSITIVE CAN BE DETD. BY CATALYIC TITRN. THE METHOD CAN BE USED FOR THE DETN. OF BR PRIME NEGATIVE WITH A SENSITITIVYT OF 5 TIMES 10 PRIME NEGATIVE6 G-ION-L. FACILITY: KAZAN STATE MED. INST., KAZAN, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/2 026 UNCLASSIFIED PROCESSING DATE 20 .0

TITLE--TABLE FOR CALCULATING ISENTROPIC AND POLYTROPIC PROCESSES FOR CHANGING THE STATE OF WATER AND WATER VAPOR --U-

AUTHOR--TAMARIN, M.D.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., ENERG. 1970, 13(1), 128-31

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--THERMODYNAMIC PROPERTY, WATER, WATER VAPOR, VAPOR PRESSURE, ENTROPY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1299 STEP NO--UR/0143/70/013/001/0128/0131

CIRC ACCESSION NO--AP0124950

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

UNCLASSIFIED

CIRC ACCESSION NO--AP0124950 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SIMPLE PRESSURE ENTROPY TABLE LISTING THERMODYNAMIC PROPERTIES OF WATER AND WATER VAPOR WAS CARRIED OUT. FACILITY: VORONEZH. INZH.-STROIT. INST., VORONEZH, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

TAMARIN, P. V., BATDALOV, A. B., VOLGA, V. I., Institute of Semiconductors, Academy of Sciences of the USSR, Leningrad

"Effect of Alloying on Some Physical Properties of Graphite"

Leningrad, Fizika Tverdogo Tela, Vol 13, No 9, Sep 71, pp 2819-2821

Abstract: Data are presented on the effect which doping graphite with certain refractory elements has on electrical and thermal conductivity at temperatures from 2 to 2 500°K. The effect of temperature and dopants on thermoelectromotive force is also investigated. It is found that the latter changes both in amplitude and sign with doping. Curves are given which show how this effect can be utilized in thermocouples using boron-doped and Zr+Si-doped graphite. The authors thank S. S. Shalyt for constant interest and for directing the work, and V. V. Popov for taking part in the measurements. Two figures, bibliography of two titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 546.26-162

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LUTKOV, A. I., VOLGA, V. I., DYMOV, B. K., LUKINA, E. YU., and TAMARIN, P. V.

"Thermal and Electrical Properties of Pyrolytic Graphite"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, No 8, 1972, pp 1409-1416

Abstract: The authors studied the thermal and electrical properties of pyrolytic graphite produced by deposition of the products of pyrolysis of methane at 5-10 mm hg on the hot surface of polycrystalline graphite. Due to the comparatively low deposition temperature (2100°C), this pyrolytic graphite is initially high in defects. Following additional high-temperature annealing (3000°C and higher), the external appearance and x-ray structural analysis data of the material were similar to those of natural graphite single crystals. The heat conductivity, electrical conductivity, thermal expansion, and heat capacity of this graphite were studied. The electron heat conductivity was calculated at T<10°K. The mean defect-free area diameter in the crystalline lattice in the direction of the a-axis was 15000-18000 A. Characteristic crystalline lattice temperatures were calculated (θ_1=200°K, θ_2=1200°K). The width of the forbidden zone in the direction of crystallographic axis c was 0.7 ev.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR UDC 616.927-085.371:576.851.49]-039.71-032:611.3]-036.8

MESHALOVA, A. N., KURLOVA, V. I., TELESHEVSKAYA, E. A., BABINA, V. P., GOKHSHTEYN, S. E., LIROVA, B. M., LAVROVSKAYA, V. M., TAMARIN, Yu. A., and NEGINA, Yu. I., Moscow Institute of Vaccines and Sera imeni Mechnikov, Gor'kiy Institute of Epidemiology and Microbiology, and Moscow Municipal and Kuntsevo Sanitary Epidemiological Stations

"Peroral Immunization of Humans with Typhoid Vaccines in a Strictly Controlled Experiment"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 10, 1972, pp 71-77

Abstract: Following a successful trial of enteral immunization of children with heated typhoid vaccine, larger doses of the same vaccine - heated and chemical - contained in sugar-coated tablets were given in a double-blind test to 1225 children age 3 to 15 and 274 adults in 2 equal doses 15 to 30 days apart. The reactions to the vaccine were mild and they generally occurred after ingestion of the first tablet: in 13.60% and 9.31% those who took the heated and chemical vaccines, respectively (in 5.88% of those who received placebo). Both vaccines produced high antibody titers against the O, Vi, and H antigens in the sera of the children as well as the adults. The authors recommend a major epidemiological trial of the vaccines in regions with a high incidence of typhoid.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 621.793.4

KONSTANTINOV, V. A., TEREKHOVA, V.V., and TAMARIN, Yu. A.

"Nature of Alitized Layers on Nickel"

Moscow, Zashchita Metallov, Vol 6, No 2, Mar-Apr 70, pp 213-216

Abstract: The structure of the surface layer of alitized nickel depends primarily on the method and conditions of the process. Etching the cross section cut of nickel after alitizing it at 950°C in containers filled with a powder mixture of 98% Fe-Al alloy (50% Al)+2% NH_4Cl reveals three layers. The thickness of each layer is directly proportional to the square root of alitizing time. The experimental data indicate the relative diffusion rate of nickel atoms toward the surface and that of aluminum atoms from the surface. Calculations show that after alitizing, almost the entire aluminum is concentrated in the intermetallide layers. Four tables in the original article show the characteristics of diffusive layers after 4, 16, and 36 hours of alitizing at 950°C, such as the relative layer thickness, crystal structure, crystal lattice parameter, color, composition of nickel and aluminum (in percent), density (g/cm^3), and microhardness (kg/mm^2). Table 4 provides specific data on the thickness and mean composition of each layer after alitizing. In open air at 950°C, the surface of the intermetallide NiAl forms a fine layer of oxide α-Al_2O_3 which protects the alitized layer from further oxidation until the intermetallide layer dissolves in the nickel.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 620.17:669.14.0.18.298

TAMARINA, I. A., OVSYANNIKOV, B. M., and GOLIKOV, I. N.

"Mechanical Properties of Structural Steel After Refining Remeltings"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 1, Jan 74, pp 14-16

Abstract: The effect of electroslag (ESR) and vacuum-arc remelting (VAR) was studied on resistance to deformation, ductility, and impact strength of structural chromium and Cr-Ni-Mo steels (40KhNM, 20 KhNM, 15 KhNM, 50 Kh, 40 Kh, and 20 Kh) after quenching and low and high tempering. ESR steels are characterized by better ductility properties than VAR steel, which is attributed to the redistribution of stresses to a higher degree in ESR steels. In the low-tempered condition, VAR steels have a higher impact strength and resistance to crack development, while under condition of ductile and ductile-brittle failure, ESR steels possess higher strength and energy properties. Increasing carbon content in the steels lowered strength while additions of nickel and molybdenum improved strength. Refining remeltings of both ESR and VAR steels significantly increases their energy capacity in the high-tempered state in the pre-failure stage, i.e., the stage of crack development

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

TAMARINA, I. A., et al., Metallovedeniye i Termicheskaya Obrabotka Metallov, No 1, Jan 74, pp 14-16

and growth up to a critical dimension in the presence of stress concentrations and a volume-stress state. Two tables, two bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC: 681.332.65

SHAGIAKHMETOV, F. M., TAMARKIN, M. B., KAZAKOV, I. F., SUBBOTIN, V. A.

"A Variable-Priority Device"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 4, Feb 71, Author's Certificate No 292155, Division G, filed 14 Aug 69, published 6 Jan 71, p 130

Translation: This Author's Certificate introduces a variable-priority device which contains registers, decoders, coincidence circuits, merging circuits, comparison circuits and flip-flops. As a distinguishing feature of the patent, the device is simplified by incorporating a gated cycle counter and a gated cycle decoder with auxiliary merging circuits and coincidence circuits in each priority position. The inputs of the auxiliary merging circuit are connected to the inverse outputs of the coincidence circuits and to the inverse outputs of the decoder which correspond to the highest priority. The output of the auxiliary coincidence circuit is connected to the controlling input of the gated cycle counter, the output of this counter being connected through a decoder to the line for the change in the index of priority for the given position.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

1/2 027 UNCLASSIFIED

TITLE--THERMAL BREAKDOWN OF SULFUR POLYCHLOROPRENES -U- PROCESSING DATE--23OCT70

AUTHOR-(04)-TAMARKIN, V.F., DEGTEVA, T.G., TIKHONOVA, S.V., KUZMINSKIY, A.S.

COUNTRY OF INFO--USSR

SOURCE--KAUCH. REZINA 1970, 29(3), 11-13

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--THERMAL DEGRADATION, POLYCHLOROPRENE, MECHANICAL FAILURE, ACTIVATION ENERGY, GEL, SULFIDE, CARBON DIOXIDE, CARBON DISULFIDE/(U)NAIRIT A POLYCHLOROPRENE RUBBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0454 STEP NO--UR/0138/70/029/003/0011/0013

CIRC ACCESSION NO--AP0119390

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119390

ABSTRACT/EXTRACT--(U) GP-O- (S-CONTG. POLYCHLOROPRENE) (I) IS EQUIV. TO ITS THERMOMECH. DESTRUCTION, SUCH AS DURING ROLLING. IT CAUSES EVOLUTION OF CS SUB2, COS, AND CO SUB2 DUE TO BREAKING UP OF I POLYSULFIDE BRIDGES AND THE INTERACTION OF THE RADICALS FORMED WITH O. IN THE 110-50DEGREES RANGE, THE ACTIVATION ENERGY OF I GEL BREAKING IS SIMILAR TO 15 KCAL-MOLE. THE GEL FRACTION CONTENT OF I DECREASES DURING HEATING; AT FIRST IT RAPIDLY INCREASES DUE TO THE FORMATION OF A NEW GEL FRACTION. THE PRESECNE OF ALK. SUBSTANCES IN I INCREASES THE RATE OF GEL DECOMPN. THE DECOMPN. OF I MACROMOLS. IS ACCELERATED BY THIURAM AS SHOWN BY THE INCREASE CO SUB2 AND COS EVOLUTION IN ITS PRESENCE. FACILITY: NAUCH.-ISSLED. INST. REZIN. PROM., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

Acc. Nr. AP0029113

PRIMARY SOURCE: Zhurnal Nevropatologii i Psikhiatrii, 1970, Vol 70, Nr 1, pp 72-76.

Ref. Code: UR 0246

CHANGED FERMENTATIVE ACTIVITY IN THE MUSCULAR TISSUE IN PROGRESSIVE MUSCULAR DYSTROPHIA

L. O. Badalyan, E. D. Tamarkina, Ye. S. Bondarenko, L. V. Zakoshchikova

The activity of creatinphosphokinase, lactic de hydrogenase and malatdehydrogenase was studied directly in the affected muscle in 30 patients with different forms of progressive muscular dystrophy. The results of such studies displayed an increased enzymatic activity in the affected muscle and a tendency towards its decrease, as the severity of motor disorders grows. The maximum amount of enzimatic activity was seen during the first years following the appearance of clinical symptoms. In the subsequent periods the anzymatic activity dropped. A study of the normal relatives in such cases also displayed an increased enzymatic activity. The obtained data shows the dependency of the enzimatic activity from the type of hereditary transmission in progressive muscular dystrophy. The highest indices of enzymatic activity were seen in patients with a recessive x-chromosome type of transmission and less high in the autosome-recessive and autosome-dominant type. These results stress the expediency of determining the enzimatic activity in muscular tissues for the diagnostics and prognosis of progressive muscular dystrophy along with other methods of investigation.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

UDC 612.015.32+612.273

ZAKHAREUSKI, A. S., TAMARYNA, N. Z., and LYSTSOVA, G. V.

"Carbohydrate-Phosphorus Metabolism in Hypoxia and Under the Influence of N,N-diethylaminoethylamid of p-Chlorophenoxyacetic Acid"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Biologicheskikh Nauk, No 1, 1971, pp 88-92

Abstract: Hypoxia was induced in white rats by ligation of the trachea. The rats were then frozen in liquid nitrogen, and the brain and liver were extracted and examined for adenosine triphosphate content, creatine phosphate, inorganic phosphorus, lactic acid, glucose, and glycogen. The examinations established that under the influence of hypoxia, the brain and liver content of adenosine triphosphate, creatine phosphate, glucose, and glycogen is decreased, and that of lactic acid and inorganic phosphorus is increased. The prophylactic administration of N,N-diethylaminoethylamid of p-chlorophenoxyacetic acid (IEM-455), an antihypoxia preparation synthesized in the Laboratory of the Synthesis of Medicinal Preparations at the Institute of

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

ZAKHAREUSKI, A. S., TAMARYNA, N. Z. and LYSTSOVA, G. V.,
Izvestiya Akademii Nauk BSSR, Seriya Biologicheskikh Nauk, No 1,
1971, pp 88-92

Experimental Medicine of the Academy of Medical Sciences USSR by N. A. Zakharova, in a dose of 1/4 LD_{50} at different periods prior to the development of hypoxia prevented to a considerable degree the development of the carbohydrate-phosphorus metabolic disorders normally induced by hypoxia.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

172 022

UNCLASSIFIED

TITLE--SPECTROSCOPIC STUDY OF THE CAROTENOID STRUCTURE -U-

PROCESSING DATE--30OCT70

AUTHOR--TAMAS, V.

COUNTRY OF INFO--USSR

SOURCE--STUD. CERCET. CHEM. 1970, 18(2), 137-59

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--BIOLOGIC PIGMENT, IR SPECTRUM, MASS SPECTRUM, NUCLEAR MAGNETIC RESONANCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0659

STEP NO--RU/0052/70/018/002/0137/0159

CIRC ACCESSION NO--AP0128196

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 022

UNCLASSIFIED

CIRC ACCESSION NO--AP0128196 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE USE OF ELECTRONIC, IR, NMR AND MASS SPECTRA FOR CAROTENOID STRUCTURE ELUCIDATION IS REVIEWED WITH 72 REFS.

FACILITY: INST. AGRON. PETRU GRONZA, CLUJ, ROM.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

UNCLASSIFIED

TITLE--USE OF THE ODD HARMONICS OF A PIEZOEMITTER IN AN ULTRASONIC INTERFEROMETER FOR LIQUIDS -U-

PROCESSING DATE--27NOV70

AUTHOR-(03)-ILGUNAS, V., PAULAUSKAS, K., TAMASHAUSKAS, A.

COUNTRY OF INFO--USSR

SOURCE--AKUST. ZH. 1970, 16(1), 148-9

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--FLUID STATE, INTERFEROMETER, ULTRASONIC ABSORPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1033

STEP NO--UR/0046/70/016/001/0148/0149

CIRC ACCESSION NO--AP0136460

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

2/2 023

UNCLASSIFIED

CIRC ACCESSION NO--AP0136460 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INTERFEROMETRIC METHODS CAN BE USED FOR THE SIMULTANEOUS MEASUREMENT OF THE VELOCITY AND THE ABSORPTION OF THE ULTRASOUND. A SERIES OF ODD HARMONICS OF A PIEZOCRYSTAL WAS USED IN THE ULTRASONIC INTERFEROMETER. IT WAS SHOWN EXPTL. THAT THE REACTION CURVE ON THE ODD HARMONICS CORRESPONDS TO THAT OBTAINED ON THE BASE FREQUENCY; ONLY THE COEFF. OF THE STANDING WAVE DECREASES WITH INCREASING ORDER NO. OF THE HARMONIC. THE MEASUREMENTS OF THE VELOCITY AND ABSORPTION OF THE ULTRASOUND WERE CARRIED OUT BY THE METHOD AND WITH THE APP. USED PREVIOUSLY BY I. AND P. (LOC.CIT.). THE RESULTS WERE IN AGREEMENT FOR THE SAME HARMONIC. DIFFRACTION LOSSES WERE TAKEN INTO CONSIDERATION FOR THE LOWER HARMONICS.

POLITEKH. INST., KAUNAS, USSR. FACILITY: KAUNAS.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

UNCLASSIFIED

TITLE--CHEMICAL STABILITY OF ELECTRON EXCHANGE FIBROUS MATERIALS -U-

PROCESSING DATE--23OCT70

AUTHOR-(04)-BURINSKIY, S.V., TAMAZINA, V.N., VOLF, L.A., MEOS, A.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. LENINGRAD 1970, 43(4), 851-4

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ION EXCHANGE RESIN, CHEMICAL STABILITY, FORMALDEHYDE, RESORCINOL, ALCOHOL, POLYMER, THIOUREA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0727

STEP NO--UR/0080/70/043/004/0851/0854

CIRC ACCESSION NO--AP0119634

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

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CIRC ACCESSION NO--AP0119634 UNCLASSIFIED PROCESSING DATE--23OCT7C

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REPRODUCIBILITY OF REDOX CAPACITY OF FIBROUS ELECTRON EXCHANGE POLYMERS CONTG. QUINOID OR SULFHYDRYL GROUPS WAS DETD. BY CYCLIC REDOX TREATMENTS (REDN. BY NA BUS2 S SUB2 O SUB4 AND OXIDN. BY DIL. H SUB2 SO SUB4 CONTG. FECL SUB3), AND THE CHEM. STABILITY OF THOSE CONTG. QUNIOID GROUPS WAS IMPROVED BY SUPPLEMENTARY TREATMENT WITH HCHO RESORCINOL MIXTS. (A). THE ELECTRON EXCHANGE CAPACITY (WHICH WAS REDUCED FROM CYCLE TO CYCLE) OF CELLULOSE HYDRATE AND POLY(VINYL ALC.) (I) WAS IMPROVED BY GRAFTING WITH A POLYCONDENSATE OF HCHO, PYROGALLOL, AND RESORCINOL, BUT THE ELECTRONIC EXCHANGE RATE WAS REDUCED BECAUSE OF STERIC OBSTRUCTION TO DIFFUSION BY THE CROSSLINKED STRUCTURE. SUBSEQUENT TREATMENT WITH A GAVE POLYMETHYLENE RESORCINOL CROSSLINKS, WHICH IMPROVED THE KINETIC ELECTRON EXCHANGE AND CHEM. STABILITY OF I-HCHO-PYROCATECHOL AND I-HCHO-PYROGALLOL GRAFT COPOLYMERS. THE REDOX CAPACITY OF SULFHYDRYL-CONTG. POLYMERS BASED ON ET XANTHATE OR THIOUREA WAS DECREASED LITTLY ON CYCLIC REDOX TREATMENT EVEN WITH HEATED OXIDIZING SOLNS.

FACILITY: LENINGRAD. INST. TEKST. LEGK. PROM. IM. KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

POLYANSKIY, V., and TAMBIYEV, A., Candidates of Biological Sciences

"Gatekeeper of the Brain"

Moscow, Nauka i Religiya, No 2, 1970, pp 20-23

Abstract: The importance of inhibition in all aspects of physical and mental endeavor is discussed. The mechanism of inhibition is discussed from the physiological point of view. The interplay and rhythm of excitation and inhibition are discussed. The special inhibitory cells in the brain are described. The importance of inhibition in defining the limits and outline of a subject and in the simplest abstractions is discussed. The concept of inhibition is also carried over to seances and "spiritual" experiences. The role of inhibition in memory, sleep, exercise of the will, and so on is noted. Further study of this phenomenon is urged.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002203220019-0

USSR

KOGAN, A. B., VLADIMIRSKIY, B. M., TAMBIYEV, A. E., and FOMIN, G. P., Rostov State University

UDC: None

"Spatial Organization of Neuron Assembly Functional Mosaics in the Cerebral Cortex"

Moscow, Doklady Akademii nauk SSSR, vol 206, No 6, 1972, pp 1478-1481

Abstract: Since it is difficult to determine by direct experiment the full configuration of the mosaic pattern formed by the distribution of excitatory and inhibitory cell groups, the authors undertake in this article to determine the pattern through the use of mathematical methods based on the statistics of earlier experimentation. These statistics consist for the most part of dimensions and other spatial characteristics of the actual probabilities of neuron assemblies in the analysor fields of the cerebral cortex. The statistical information for the present article is derived from a paper published by the first of the authors named above (Neyrofiziologiya, 1, 1969, p 120). A picture of the reconstructed mosaic patterns, obtained with the assistance of an electronic digital computer, is reproduced.

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