"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

Measuring, Testing, Calibrating

USSR

MAZO, V. I.

UDC 620.17

"High-Sensitivity Pickups for the Measurement of Lateral Deformation"

Tallin, Tr VII Vses. Konf. po Polyarizats - Optich. Metodu Issled. Napryazh., 1971 (Works of the Seventh All-Union Conference on the Polarization-Optical Method of Stress Research, 1971), Vol 1, 1971, pp 247-249 (from Referativnyy Zhurnal, Mekhanika, No 2, Feb 72, Abstract No 2V1649 by N. P. Petrova)

Translation: The article describes the design and operating principle of extensometers intended for the measurement of transverse deformations on models of optically active materials. A method for calibrating the extensometers and for establishing the optimal value of pressure on the measuring pins when installing the extensometers on the model is indicated. It is shown that for samples of epoxy resin the scale value of the extensometer used in deformations was 0.05 microns. It is also indicated that by means of the described extensometers a number of problems were solved, which deal with the distribution of stresses on polarization-optical models.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 621.791.75.754.01:533.5

SHIGANOV, N. V., Doctor of Technical Sciences, POTAPOV, YU. D., Engineer, BARESKOV, N. A., Candidate of Technical Sciences, and MAZOK, V. K., Engineer

"Some Features of Vacuum-Arc Welding With a Hollow Cathode"

Moscow, Svarochnoye Proizvodstvo, No 9, 1973, pp 17-19

Abstract: Results from a study of the main electrical characteristics of arc discharge during vacuum-arc welding with a hollow cathode and with supply of a stabilizing gas, are presented along with the specifics of the process and properties of the produced weld joints. Lanthanum-plated tungsten tubes, 4 mm in outside diameter and 2 mm inside diameter, were used as electrodes. Stainless steel 1Kh18N10T and titanium alloy VT6 were used as the two materials welded (steel-steel and titanium-titanium). It was established that the process of vacuum-arc welding with inleakage of a plasma-forming gas into the arc zone was stable over a large range of welding rates (from 2 to 100 m/hr). With a welding rate of 40 m/hr the coefficient of seam shape changes (the ratio of seam width to height is decreased). It was concluded that when welding with a hollow cathode the change in arc length of 60-70 mm does not change its voltage. A stable arch discharge can be guaranteed here with a very insignificant consumption of plasma-forming gas (0.14-2 l/hr), which makes it possible to produce stable melting upon significant fluctuations of the arc gap.

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

SHIGANOV, N. V., et al., Svarochnoye Proizvodstvo, No 9, 1973, pp 17-19

Mechanical properties and welding characteristics are given for the vacuum-arc welded samples along with the same data for argon-arc welded samples for comparison. 4 figures, 1 table, 3 bibliographic references.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

Welding

USSR UDC 621.791.053.01:669.017.3:669.295

KUZNETSOV, V. D., MALINKIN, I. V. (Engineers), CHERNYSH, V. P. (Cand. of Techn. Sciences), and MAZOK, V. K. (Engineer)

"Effect of Electromagnetic Stirring of the Weldpool on Both the Structure and Properties of Weld Joints on VT6S Alloy"

Moscow, Svarochnoye proizvodstvo, No 5, May 72, pp 8-10

Abstract: It is shown that electromagnetic stirring (EMS) of the weldpool in welding titanium alloys provides higher plastic properties of the weld metal while maintaining its strength properties through thinning and decreasing the linear structural dimensions of the α-phase, and reducing the intergranular inhomogeneity. A comparative microstructural analysis shows a marked distinction in both the shape and type of α-phase segregations. The structure of the α-phase in welds done without the use of EMS is characterized by the presence of roughly lamellar elongated colonies intersecting in some areas the boundaries of the parent grain. In welding with ESM, the α-phase has a slightly elongated fine-needle shape with dispersion decay signs typical of fine-grained metal. (3 illustrations, 2 tables, 2 bibliographic references)

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 621.791.754.293:669.295

USSR

GUSEVA, YE. A., KLIMYCHEV, A. I., FOMICHEVA, I. A., and MAZOK, V. K.

"Argon-Arc Welding of Titanium Alloys by Through Fusion"

Moscow, Svarochnoye Proizvodstvo, No 2, Feb 70, pp 15-16

Abstract: A procedure is described for through fusion welding of titanium alloys up to 10 mm thick without dressing the edges. The welds obtained by this procedure have good penetration and a high weld shape factor. There are no sharp transitions from fusion to basic metal on the backside of the weld. X-ray control of the welded joints showed that the pores in the weld are very small. Comparative data are presented showing that the strength of samples without reinforcement for the welded joints executed by through fusion is approximately 10 kg/mm^2 higher than in the case of two-pass welding.

It is shown that through fusion can be obtained only under certain welding conditions. The basic condition for through fusion welding is insuring a specific arc pressure on the pool of molten metal which can overcome the surface tension, force the molten metal out of the pool, and equalize the hydrostatic pressure of the liquid metal. The comparatively low specific weight of titanium alloys and correspondingly lower hydrostatic pressure provide a basis for assuming that for these metals through fusion welding can be realized more easily than for steel.

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

GUSEVA, YE. A., et al., Svarochnoye Proizvodstvo, No 2, Feb 70, pp 15-16

Conditions for argon-arc through fusion welding are calculated for sheet material made of OT4 and VT6S alloys 4, 8, and 10 mm thick.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC: 537.312.62

KRAINSKIY, I. S., MAZOKHIN, S. S., SOKOLOV, V. I., SHCHEGOLEV, I. F., ENMAN, V. K.

"A Vacuum Installation for Making the Compound Nb_3Sn by a Continuous Method With Diffusion of Tin Into a Niobium Base From a Melt"

V sb. Probl. sverkhprovodyashchikh materialov (Problems of Superconducting Materials--collection of works), Moscow, "Nauka", 1970, pp 124-130 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D540)

Translation: The article contains a constructive description of an installation designed for continuous production of a thin layer of Nb_3Sn compound on niobium stock (band, wire, cable) of considerable length as it is drawn through a bath with a melt of tin heated to 950-1050°C in a vacuum at a predetermined pulling rate. When the pulling rate is increased or the temperature of the molten tin is reduced, niobium stock covered with a thin layer of tin may be produced, the Nb_3Sn compound being produced by subsequent heat treatment. The installation provides a high vacuum, a wide range of pulling rates (0.72-570 m/hr) and controllable molten tin temperature, and can be used to study the effect of various factors on the critical characteristics of superconductors with Nb_3Sn compound. Critical characteristics are presented for the first experimental specimens of superconducting strip made on the installation. Four illustrations, one table, bibliography of four titles. Authors' abstract.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 537.312.62+533.599

KRAINSKIY, I. S., MAZOKHIN, S. S., SOKOLOV, V. I., SHCHEGOLEV, K. F., and ENMAN, V. K.

"Vacuum Installation for Production of Nb_3Sn by Continuous Method by Diffusion of Tin in Niobium Base from Melt"

Problemy Sverkhprovodyashchikh Materialov [Problems of Superconducting Materials — Collection of Works], Moscow, Nauka Press, 1970, pp 124-130

Translation: A constructive description is presented of an installation in which a continuous process of formation of a thin layer of the compound Nb_3Sn on a niobium profile (strip, wire, cord) of great length is performed by drawing through a bath of melted tin at 950-1,050°C in a vacuum at a predetermined drawing rate. If the drawing rate is increased or the bath temperature is decreased, the installation can be used to produce a niobium shape coated with a thin layer of tin without formation of the compound Nb_3Sn, which is formed upon later heat treatment. The installation, which can produce a high vacuum and can provide a wide range of speeds (0.72-570m/hr) and an adjustable tin melt temperature, allows the study of the influence of various factors on the critical characteristics of superconductors of the compound Nb_3Sn to be performed.

Critical characteristics of this first experimental specimens of superconducting strip produced on the installation are presented.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 576.851.553:664.848

NIKOLAYEVA, S. A., and MAZOKHINA, N. N., All Union Scientific Research Institute of the Canning and Vegetable Drying Industry, Moscow

"Propagation of Cl. botulinum Type B in Canned Mushroom Sauce"

Moscow, Voprosy Pitaniya, Vol 31, No 2, Mar/Apr 72, pp 83-86

Abstract: The possibilities of propagation of Cl. botulinum type B in canned mushroom sauce with the composition mushrooms 10%, butter 5%, milk 5%, dried onions 5%, sugar 3%, flour 2%, NaCl 3%, fermentation sauce 0.3%, black pepper 0.08%, citric acid 0.25%, water 65.47% were studied. The pH of the sauce varied in the 4.1-5.0 range. The pH and dose of Cl. botulinum used for infection had a pronounced effect on propagation of the microorganism in mushroom sauce, while enrichment of the sauce with glucose and yeast autolysate had no noticeable effect. Vegetative cells of Cl. botulinum multiplied at pH 4.1-4.35 at a rate which increased by a factor of 2-4 orders of magnitude after the infected sauce had been kept at 37°C for 25 days. Spores of Cl. botulinum multiplied only at pH 5.0 upon addition to the sauce. Botulinus toxin reached maximum titer at pH 4.35, increasing to 550 and 1000 MLD, respectively, for sauce of the initial composition infected with 7 X 10^7 bacterial cells per gram and sauce enriched with glucose and

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

NIKOLAYEVA, S. A., and MAZOKHINA, N. N., Voprosy Pitaniya, Vol 31, No 2, Mar/Apr 72, pp 83-86

yeast autolyzate infected with 3 X 10^7 cells per gram. Upon addition to the sauce of toxin in the form of culture liquid free of Cl. botulinum, the toxin titer diminished gradually during storage of the sauce of 37°C.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

MAZOKHIN-PORSHNYAKOV, G. A.

"Mechanisms of Spatial Orientation and Signaling in Animals: Symposium on Bionics, Held at the Soil Biology Faculty of Moscow University"

Moscow, Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Biologicheskiy, Vol 75, No 4, Jul/Aug 70, pp 157-158

Abstract: To allow ample time for discussion, only 13 papers were presented at the Symposium on Bionics held from 15 to 17 Apr 69. N. P. Naumov discussed problems in the spatial orientation of animals and research methods, with emphasis on mathematical and physical approaches to the study of animal behavior. Acoustic orientation, principally in bats, was the subject of papers by V. D. Il'ichev and R. D. Zhantiyev, G. M. Simkin, V. P. Peresady, and D. M. Matyushkin, all of whom dealt with one aspect or another of echolocation. G. A. Mazokhin-Porshnyakov and O. Yu. Orlov presented a paper on visual orientation and navigation in insects, particularly homing activity. A. B. Mistyukovskiy reported on various "redundant" systems of orientation and navigation in birds. Orientation of invertebrates in a magnetic field was the subject of a critical paper by V. B. Chernyshev. Yu. A. Yelisarov and V. N. Gusel'nikov reviewed the literature on chemoreception and orientation to odors. A most interesting paper, by

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

[redacted], G. A., Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Biologicheskiy, Vol 75, No 4, Jul/Aug 70, pp 157-158

V. R. Protasov, dealt with electrical discharges of the so-called "nonelectrical" fishes and the use of such discharges for purposes of orientation. A. N. Malakhov and Yu. D. Podlipalin discussed the role of the acoustilolateral system in signaling and spatial orientation of fish.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 535.379:576.851.5

DOSKOCH, Ya. Ye., PARKHOMENKO, I. M., BOGDANOVA, N. V., MAZOKHINA, N. N., and TARUSOV, B. N., Moscow State University and All-Union Institute of the Canning and Vegetable-Drying Industries

"Spontaneous and Induced Chemoluminescence of Spores From Thermophilic Microorganisms in Relation to Their Thermostability"

Moscow, Mikrobiologiya, No 5, 1971, pp 849-857

Abstract: Study of spores from the thermophilic strain Bacillus aerothermophilus showed that they do not luminesce spontaneously whether heated or not. However, passage of an electrical current through unheated spore suspensions induced luminescence at a constant level. The intensity was much lower than the luminescence emitted by suspensions heated to 120 to 130°C and the shape of the kinetic curve was much different. The intensity of luminescence was a function of the duration of heating, the maximum occurring after all the spores were killed due to destruction of the spore coat. High temperatures also affected the electrical conductance of the suspensions. In suspensions heated to 120°C the maximum current intensity occurred after 90 minutes, whereas in suspensions heated to 130°C it occurred after 3 minutes, the time when all the spores were killed, i.e., the current intensity varied with the number of dead microorganisms.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 666.97.033.17:666.972.16:666.972.162.002.237

USSR

FEREDEREYEVA, E.K., Engineer, GLADKOV, V.S., Candidate of Technical Sciences
IVANOV, F.M., Doctor of Technical Sciences, MAZOV, G.I., Engineer

"Highly Frost-Resistant Centrifuged Concrete With Air-Entraining Additives"

Moscow, Gidrotekhnicheskoye Stroil'stvo, No 3, 1972, pp 37-39

Abstract: Presented in the article are the procedure and results of tests for frost-resistance, conducted on full-scale elements and on samples of various types of concrete with air-entraining and complex additives. It is noted that the air entrained into the concrete mixtures during centrifuging is not removed. It is shown that the introduction of air-entraining and complex additives into centrifuged concrete considerably increases its frost resistance. The greatest frost resistance is noted for shells made of a concrete mixture with an air-entraining additive consisting of neutralized air-entraining resin (2300 freezing and thawing cycles). Centrifuged shell piles with complex additives to provide high forst resistance, are now being produced. 3 figures, 4 tables. 11 bibliographic entries.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC: 553.652/.661.013

USSR

SOLONIN, S. V., YEROSHOVA, V. S., MAZOVER, S. I., GAVRILOV, E. M.

"Determining the Trajectory of Minimum Flight Time of an Aircraft by the Method of Dynamic Programming"

Tr. Leningr. gidrometeorol. in-ta (Works of the Leningrad Hydrometeorological Institute), 1971, vyp. 42, pp 24-35 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B398)

Translation: The paper deals with the problem of an optimum accounting for the effect of a variable wind field on airplane flight. The authors formulate the problem of determining the trajectory along which flight from a point of departure to a point of arrival takes place in minimum time. The airplane trajectory is plotted in a rectangular coordinate system. The method of dynamic programming is used to determine the minimum-time trajectory. In conformity with the principle of optimality on which dynamic programming is based, recurrent relations are written out and used for step-by-step optimization. A program is given for determining the minimum-time trajectory by the method of dynamic programming in algorithmic language algol-60. The program contains all operations which immediately

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

SOLONIN, S. V. et al., Tr. Leningr. gidrometeorol. in-ta, 1971, vyp. 42, pp 24-35

precede optimization: computation of wind velocity components, the flight path of the airplane, etc. An example is given of calculation of the minimum-time trajectory for a given synoptic situation. The initial data for determining the minimum-time trajectory were the values of the geopotential taken at points of intersection of a rectangular grid from a chart of absolute baric topography corresponding to the flight altitude. All calculations were checked on the BESM-4 computer. Bibliography of 14 titles. Author's abstract.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC: 533.652/.661.013

SOLONIN, S. V., YERSHOVA, V. S., MAZOVER, S. I.

"Determining the Minimum Flight Time Trajectory of an Airplane by the Method of Dynamic Programming With Regard to the Sphericity of the Earth"

Tr. Leningr. gidrometeorol. in-ta (Works of the Leningrad Hydrometeorological Institute), 1971, vyp. 42, pp 43-50 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B400)

Translation: The paper deals with the problem of determining the minimum flight time trajectory of an aircraft in a variable wind field with regard to the sphericity of the earth. It is important to account for the earth's sphericity on a long flight path. The method of dynamic programming is used to determine the minimum-time trajectory. A program for computing the minimum-time trajectory in algol-60 is set up in accordance with the functional equations of this method. An example is given of determination of the minimum-time trajectory for a specific synoptic situation. Authors' abstract.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC: 533.652/.661.013

USSR

SOLONIN, S. V., YERSHOVA, V. S., MAZOVER, S. I.

"Determining the Trajectory of Minimum Flight Time of an Airplane with Restrictions on Coordinates"

Tr. Leningr. gidrometeorol. in-ta (Works of the Leningrad Hydrometeorological Institute), 1971, vyp. 42, pp 36-42 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B399)

Translation: The paper deals with the problem of determining the minimum flight time trajectory for horizontal flight of an aircraft in a variable wind field with restrictions on the phase coordinates. The method of dynamic programming is used to determine the minimum-time trajectory. A program is given for computing a minimum-time trajectory in algol-60 algorithmic language, together with an example of calculation of a minimum-time trajectory for a specific synoptic situation. All calculations were checked on the BESM-4 digital computer. Bibliography of 6 titles. Authors' abstract.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UNCLASSIFIED

1/2 022 PROCESSING DATE--20NOV70

TITLE--DIABETES MELLITUS AND RETINOPATHY -U-

AUTHOR-(03)-RAZOVETSKIY, A.G., MIKHAYLOVA, N.A., TIRKINA, T.[illegible]

COUNTRY OF INFO--USSR

SOURCE--SOV MED 33(2): [illegible]-38, 1970

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIABETES MELLITUS, RETINA, EYE DISEASE, HYPERTENSION, INSULIN, ATHEROSCLEROSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0515 STEP NO--UR/0399/70/033/002/0094/0098

CIRC ACCESSION NO--AP0135810

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UNCLASSIFIED PROCESSING DATE--23NOV76

2/2 022

CIRC ACCESSION NO--AP0159810

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CASE HISTORIES OF 264 PATIENTS WITH DIABETES MELLITUS AND RETINOPATHY OF A DIFFERENT DEGREE OF INTENSITY ARE ANALYZED. A NEW WORKING CLASSIFICATION OF DIABETIC RETINOPATHIES, WHICH TAKES ACCOUNT OF MORPHOLOGICAL AND FUNCTIONAL CHANGES ON THE LEVEL OF THE ORGANS OF VISION, IS OFFERED. DATA ON THE DEGREE OF RETINOPATHY AS A FUNCTION OF THE SEX AND AGE OF THE PATIENTS, THE SEVERITY AND DURATION OF THE AFFECTION, PRECEDING AND CONCOMITANT INFECTIONS, THE DEGREE OF DIABETES CONTROL, COMBINATION OF DIABETIC RETINOPATHY WITH HYPERTENSION AND ATHEROSCLEROSIS AND INSULIN REQUIREMENTS OF THE PATIENTS ARE PRESENTED. FACILITY: INST. EXP. ENDOCRINOL. CHEM. PHARM., ACAD. MED. SCI. USSR, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 538.245

USSR

SIROTA, N. N., Academician of the Academy of Sciences Belorussian SSR, and
MAZOVKO, A. V., Institute of Solid State and Semiconductor Physics, Academy of Sciences Belorussian SSR

"Magnetostriction of Fe-Ni-Co System Alloys in Strong Magnetic Fields"

Minsk, Doklady Akademii Nauk BSSR, Vol 16, No 7, 1972, pp 596-599

Abstract: The authors made a systematic study of the longitudinal magnetostriction of Fe-Ni-Co system alloys in strong magnetic fields at room temperature. Specimens averaging 10 cm in length and 4-5 mm in diameter were used. The magnetostriction was determined by means of wire strain gages on an electronic tensometer. A longitudinal magnetizing field of up to 10 kOe was generated in the pole gap of an electromagnet. On the basis of results magnetostriction isolines were plotted on the concentration triangle for specimens at 5 and 10 kOe. By extrapolating the rectilinear sector of the field dependence of magnetostriction in strong fields for H=0, values were obtained for the saturation magnetostriction λ_s. The saturation magnetostriction isolines are shown for the entire system.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

Acc. Nr: AT0048607

Abstracting Service: CHEMICAL ABST. 5-70

Ref. Code: UR0250

103180z Modulus of elasticity of iron–nickel–cobalt alloys. Sirota, N. N.; Mazovko, A. V. (Inst. Fiz. Tverd. Tela Poluprov., Minsk, USSR). *Dokl. Akad. Nauk Belorussk. SSR* 1970, 14(1), 10–12 (Russ). The elasticity of ternary Fe–Ni–Co alloys were studied. The isolines of Young's modulus values of this system are presented by means of the Gibbs concn. triangle indicating the relation of Young's modulus E and the shear elasticity modulus G. The anal. of the concn. relation of these 2 values is used to det. the ranges with min. E and G values and also to det. the characteristic of the elasticity modulus in the entire ternary system. Two ranges with max. E and G were found, one at Fe 35–80 and Ni 0–15 at. %, which approaches the binary system Fe–Co and the 2nd one with hexagonal structure in the range of Co 80–100 and Fe 0–10 at. %, which is near the binary system Ni–Co. The ranges of min. G and E values are in the heterogenous α–γ region in concn. of 20–50 at. % Ni and 30–80 at. % Fe. The min. range of the E and G values corresponds to binary Fe–Ni and Ni–Co systems, to the min. Curie temps., and also to the heterogenous γ–α transition range.

J. Polacek

18

1/1

REEL/FRAME 19800334

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 621.791.16.01

USSR

MAZUR, A. I., Candidate of Technical Sciences, ALEKHIN, V. P., Candidate of Physical and Mathematical Sciences, and SHORSHOROV, M. KH., Doctor of Technical Sciences

"Intensification of the Joint Formation Process During Ultrasonic Welding"

Moscow, Svarochnoye Proizvodstvo, No 8, Aug 73, pp 24-26

Abstract: A method was proposed of programming the contact force in the process of ultrasonic welding which leads to substantial intensification of the seizure process on contact surfaces and to increased wled joint strength. As a result of the tests conducted the optimum mode of ultrasonic welding with contact force programming was established: P_{init} = 250 gauss, P_{add} = 550 gauss, t_I = 0.8 sec, t_d = 0.4 sec, t_n = 20.10^3, V_{pn} = 20-25 kgauss/sec.

Five figures, one table, five bibliographic references.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 536.244

USSR

DYBAN, YE. P., Doctor of Technical Sciences, Professor, EPIK, E. YA., Candidate of Technical Sciences, MAZUR, A. I., FILIPCHUK, V. YE., Engineers

"Heat Exchange in the Presence of Jet Blowing of the Intake Edge of a Turbine Vane"

Minsk, Izvestiya vysshikh uchebnykh zavedeniy -- Energetika, No 5, 1972, pp 90-96

Abstract: The results of studying local heat exchange on the inside surface of the cavity of the intake edge during symmetric rotation of a plane air jet ($h/B > 1$, $\bar{b} > 0.3$ [$\bar{b} = b/B$ = the relative width of the slot in the nose of the deflector; h/B is the relative depth of the cavity of the intake edge]) were discussed previously [Ye. P. Dyban, et al., IFZh, No 5, 1969]. Now, experimental data are presented on heat exchange in the cavity of the intake edge for asymmetric rotation of the plane jet and also for discharge of a number of circular jets into it. The device described by Ye. P. Dyban, et al. was used for the experiments, and the required visual observations were made in a circulating system filled with water with the addition of small amounts of colored aluminum [Ye. P. Dyban, et al., IFZh, Vol XX, No 6, 1971]. The experimental data cover the heat exchange intensity in the cavity of the intake edge of the turbine vane of the deflector type blown by a plane air jet for $\bar{b} < 0.27$ and the series

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

DYBAN, YE. P., et al, Izvestiya vysshikh uchebnykh zavedeniy -- Energetika, No 5, 1972, pp 90-96

of circular jets. The nature of the distribution of the local heat exchange coefficients along the perimeter of the cavity of the intake edge depends on the ratio of the jet and cavity dimensions. A comparison of the heat exchange intensity caused by the plane and a series of circular jets among themselves and with the known data of other analogous studies was made.

The intensity of the heat exchange when blowing the edge with a series of circular jets and fixed values of ℓ/b equal to the actual and equivalent widths and identical air flow rates (Re_ℓ = idem) is higher than when blowing with a plane jet. For example, when $\ell/b = 10$ and $Re_\ell = 10^5$ and $6 \cdot 10^5$, the Nusselt numbers for the circular jets exceed those for the plane jet by an average of 26 and 47% respectively under the experimental conditions. As ℓ/b is increased, that is, the length of the cooled surfaces increased, under other equal conditions the difference in heat exchange levels decreases, and when $\ell/b = 20$ the plane jet is in practice equivalent to the series of circular jets having equal equivalent width.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 621.791.16

ALEKHIN, V. P., MAZUR, A. I., and GUZEV, O. V., Moscow

"Investigation of Temperature Distribution in the Ultrasonic Welding of Semiconductors with Metals"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 4, Jul-Aug 71, pp 155-159

Abstract: A study was made of the temperature distribution directly on the surface and along the thickness of silicon single crystals in the ultrasonic welding of the crystals with aluminum wire (grade AV000) with a diameter of 100 microns. The temperature on the surface of the silicon crystals was determined by the method of the formation of natural thermocouples, while the temperature distribution along the crystal width was determined according to the relationships of the p-n transition parameters. The typical oscillograph curve for the ultrasonic welding process showed three characteristic sections: I -- no ultrasonic oscillations; II -- ultrasonic oscillations (W = 2.8 watts, P(load) = 150 grams, t = 0.6 sec); III -- ultrasonic oscillations switched off. For I there is a straight drop of voltage in relation to the geometry and condition or state of the touching components (crystal and welding wire). For II there is a reduced drop in the straight drop of volt-

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

ALEKHIN, V. P., et al., Fizika i Khimiya Obrabotki Materialov, No 4, Jul-Aug 71, pp 155-159

age followed by stabilization to the end of the process. For III there is observed some increase in the welding voltage, i.e., a lowering of temperature for the p-n transitions to room temperature. Five figures, 9 bibliographic references.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 621.791.16

ALEKHIN, V. P., GUSEV, O. V., and MAZUR, A. I., Moscow

"Investigation of the Effect of Ultrasonic Oscillations on the Production of an Aluminum Joint with Monocrystalline Silicon"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 3, May-Jun 71, pp 100-108

Abstract: Results are presented of the investigation of regularities in joining by ultrasonic welding (USW) small aluminum wires with silicon single crystals with a view to producing ohmic contacts. The dependence of the contact quality on the change of USW parameters was metallographically examined. Depths of disturbed surface layers of Si single crystals were determined by the method of anomalous transmission of X-rays. On the basis of the investigations, optimum parameters of USW were selected. The activating effect of ultrasonic oscillation on the production of a strong joint of Al with Si without their preheating is analyzed. Four figures, 20 bibliographic references.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

LEVICH, V. G., Corresponding Member of the Academy of Sciences USSR; MAZUR, N. G.; MARKIN, V. S., Institute of Electrochemistry of the Academy of Sciences USSR, Moscow

"Blocking of a Pulse by an Inhomogeneity in an Electrochemical Model of a Nerve"

Moscow, Doklady Akademii nauk SSSR, Vol. 198, No. 5, 11 Jun 71, pp 1214-1216

Translation: Papers have recently appeared [V. S. Markin, V. F. Pastushenko, Biofizika, Vol. 13, pp 316 and 517, 1969] devoted to an analytical study of the passage of a nerve pulse along an inhomogeneous fiber in a model with inner current sources [V. S. Markin, Yu. A. Chizmadzhev, Biofizika, Vol. 12, p 900, 1967]. It is of interest to consider a similar problem for different physical models of a nerve fiber, particularly for the Lillie-Bonhoeffer model [R. S. Lillie, Biol. Rev. Cambr. Phil. Soc., Vol. 11, p 181, 1936; K. Bonhoeffer, Tr. IV soveshch. po elektrokhimii, Izd. AN SSSR, 1959, p 579; G. I. Barenblatt, V. M. Yentov, R. L. Salganik, P.M.M., Vol. 29, p 977, 1965] taking into account

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

LEVICH, V. G., et al, Doklady Akademii nauk SSSR, Vol. 198, No. 5, 11 Jun 71, pp 1214-1216

specific physicochemical characteristics. The Lillie model consists of an iron wire in a tube with solid nitric acid. The passage of a pulse along a smooth [V. G. Levich, N. G. Mazur, V. S. Markin, D.A.N., Vol. 198, No. 4, 1971] and a myelinized [V. G. Levich, N. G. Mazur, V. S. Markin, D. A.N., Vol. 195, p 206, 1970] fiber was studied in this model. The motion of an activation pulse in an inhomogeneous Lillie model is investigated below and the results are compared with experimental data [K. Yamagiwa, Japan. Med. J., Vol. 2, p 38, 1949].

1. Abrupt Inhomogeneity

The state of the system is described by the potential $\varphi(x, t)$, the proportion of free to passivating film of oxide of the surface $a(x, t)$ and the concentration $c(x, t)$ of one of the reaction products, nitric acid. In this problem one can neglect the change in the latter quantity and put $c(x, t) = c_0 = \text{const}$, since the change in $c(x, t)$ occurs only in the zone at the far end of the tail (in the repassivation process).

The change in the potential in the portion of the active surface is determined by the equations

2/10

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

LEVICH, V. G., et al, Doklady Akademii nauk SSSR, Vol. 196, No. 5, 11 Jun 71, pp 1214-1216

$$\partial^2\phi/\partial x^2 + R(j_{Fe} + j_f + j_{acid}) = 0, \qquad (1)$$

$$\partial\alpha/\partial t + 1/Q\ j_f = 0, \qquad (2)$$

where $R = R_1 = \rho\sigma_1/S_1$ for $x < 0$ and $R = R_2 = \rho\sigma_2/S$ for $x > 0$. The letters $\sigma_{1,2}$ and $S_{1,2}$ denote the perimeter of the cross section of the wire and the area of the cross section of the electrolyte in the tube, respectively. In other words it is assumed that the inhomogeneity is localized at the point $x=0$.

Expressions for the equivalent currents of the processes of active solution of iron, breakdown, and the formation of a passivating film and restoration of nitric acid to nitrous have the form (in the linear approximation)

$$j_{Fe} = A(\phi_1 - \phi)\alpha;$$
$$j_f = A\cdot\begin{cases}(\phi_* - \phi)(1-\alpha) & \text{for } \phi > \phi_*,\\ \phi_* - \phi)\alpha & \text{for } \phi < \phi_*,\end{cases} \qquad (3)$$

3/10

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

LEVICH, V. G., et al, Doklady Akademii nauk SSSR, Vol. 198, No. 5, 11 Jun 71, pp 1214-1216

$$j_{acid} = \begin{cases} 0 & \text{for } \phi = 0, \\ -Jc_0 & \text{for } \phi > 0. \end{cases}$$

The threshold potential ϕ_* is characterized by the fact that for $\phi > \phi_*$ there occurs breakdown on the film and for $\phi < \phi_*$ there is formation on the film.

The purpose of the problem is to explain conditions under which an activation pulse is blocked by an inhomogeneity. This question can be answered by studying stationary states of the system.

One can easily obtain from the condition $\partial\alpha/\partial t = 0$, considering (2) and (3), the general form of the stationary solution: either $\alpha = 0$ and $\phi < \phi_*$ or $\alpha = 1$ and $\phi > \phi_*$. To be specific we shall consider a pulse arriving from the left. In accordance with the condition $c(x, t) = c_0$ (absence of repassivation) it consists of a simple activation wave. It is clear that stationary states of two types can develop from this pulse as $t \to \infty$: either $\alpha \equiv 1$, which corresponds to the passage of the pulse, or

4/10

$$\begin{aligned} \alpha &= 1 \text{ for } x < l, \\ \alpha &= 0 \text{ for } x > l, \end{aligned} \qquad (4)$$

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

LEVICH, V. G., et al, Doklady Akademii nauk SSSR, Vol. 198, No. 5, 11 Jun 71, pp 1214-1216

which corresponds to blocking (stopping of the front of the pulse at the point $x = l$).

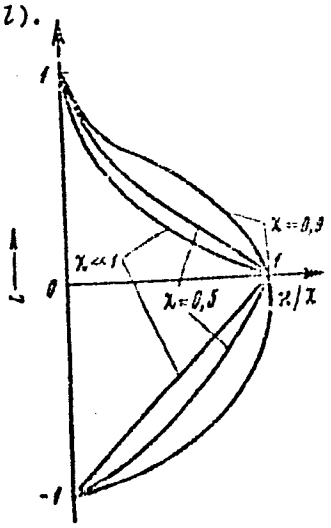


Рис. 1

Fig. 1. $l(\kappa)$ as a function of certain values of the parameter χ. For convenience different units of measurement of length (characteristic for each region) were chosen for $l > 0$ and $l < 0$.

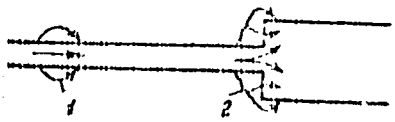


Рис. 2

Fig. 2. Local currents in an activation pulse. 1--front of pulse far from junction, 2--front of pulse in region of junction.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

LEVICH, V. G., et al, Doklady Akademii nauk SSSR, Vol. 198, No. 5, 11 Jun 71, pp 1214-1216

The method of solution of the problem is the following. If α is substituted into equation (1) in form (4), a linear equation is obtained with a piecewise-constant coefficient. Besides the condition of boundedness of φ and continuity together with the first derivative distinguishing a solution of this equation for any l, there is also the condition $\phi(l) = \phi_*$. This "extraneous" condition determines l as a function of the parameters of the problem. The corresponding formulas are fairly unwieldy and therefore it is convenient to express this relationship graphically. Fig. 1 shows the graph l as a function of the geometric parameter $\kappa = \sigma_1 S_1/\sigma_2 S_2$ for several values of the refractoriness parameter $\chi = 2A\phi_* J\sigma_0/[A(\phi_1 - \phi_*) - J\sigma_0]^2$, which under actual conditions is much less than unity. For simplicity it may be assumed that the tube with the acid is much thicker than the wire so that $S_1/S_2 \approx 1$. Then κ will be simply the ratio of the diameter of the wire to the left of the inhomogeneity to its diameter to the right of the inhomogeneity.

6/10

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

LEVICH, V. G., et al, Doklady Akademii nauk SSSR, Vol. 198, No. 5, 11 Jun 71, pp 1214-1216

It is evident from Fig. 1 that for $\kappa > \chi$ the point $l(\kappa)$ does not exist, i.e., the pulse will pass the inhomogeneity. On the contrary, for $\kappa < \chi$, i.e., when the right side of the wire is a sufficient number of times thicker than the left, two values of $l(\kappa)$ exist: $l_- < 0$ and $l_+ > 0$. It can be shown that the pulse stops at l_- without reaching the junction of the thin and thick wires. This is associated with the fact that the stationary state with $l = l_-$ is stable and unstable with $l = l_+$.

The blocking of a pulse is explained physically by the fact that as it approaches the inhomogeneity the subthreshold zone creeps up on the thicker wire and the use of current rises in it since the current is needed to be distributed over the larger area. At the same time, the activation zone in the thin wire generates a fixed activating current (Fig. 2). The activating current may not be enough for a sufficient difference in the diameters and the pulse will stop.

7/10

USSR

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

2. Inhomogeneity With an Electrochemically Inert Interval

Under actual conditions the parameter χ is of the order 10^{-4}. Blocking will therefore be observed if one of the halves of the wire is tens of thousands of times thicker than the other, i.e., under actual conditions it is practically impossible to observe this effect. A one-sided conductivity is observed in a somewhat modified system, however, namely if the junction point is covered with an insulator. Fig. 3 shows a model of a synapse from the work of Yamagiwa consisting of a long wire to which is fastened a bunch of several short wires. One of the ends of the bunch is filled with paraffin. The discussions of the previous point are applicable to the theoretical calculation of this model with the only difference that in the interval $(0, h)$ one should put $j_{Fe} + j_f + j_{acid} = 0$. This interval corresponds to the part of the wire covered with paraffin. Curves $l(\kappa)$ analogous to the curves for Fig. 1 are obtained as a result of the calculation. Now, however, the maximum value of κ at which blocking is still possible is a function of h:

$$\kappa_{cr} = \chi(1 + h\sqrt{R_1 A})^2. \qquad (5)$$

It is evident from this formula that the blocking action of the inhomogeneity rapidly decreases with an increase in the inert interval. Since the characteristic length $(R_1 A)^{-1/2}$ for wires ordinarily used is a value of the order of

8/10

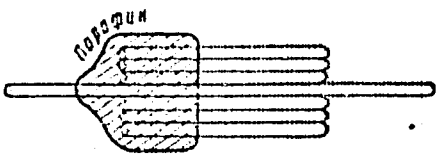
APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

LEVICH, V. G., et al, Doklady Akademii nauk SSSR, Vol. 198, No. 5, 11 Jun 71, pp 1214-1216

0.1 cm, values of κ_{cr} slightly less than unity are obtained in the presence of an inert segment with a length of several centimeters. In the system shown in Fig. 3, therefore, there is observed blocking of the pulse moving from the left even for a small number of wires in the bunch.



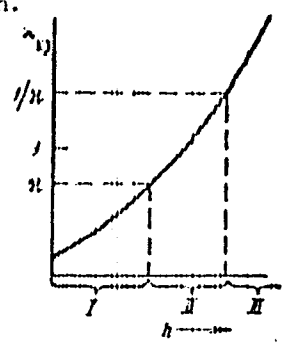


Рис. 3 Рис. 4

9/10

Рис. 3. Система с односторонним проведением на работы (*)

Рис. 4. Зависимость критического отношения толщин от h и области двух- и односторонней проводимости и отсутствия проводимости

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

LEVICH, V. G., et al, Doklady Akademii nauk SSSR, Vol. 198, No. 5, 11 Jun 71, pp 1214-1216

With the aid of the graph of relationship (5) shown in Fig. 4, it is easy to construct the region of values h corresponding to a two-sided (region I) and one-sided (region II) conductivity and also to the absence of conductivity (region III). It is sufficient to take into account here that the quantity κ is replaced by $1/\kappa$ for a pulse coming from the right.

10/10

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 621.362.2(088.8)

USSR

BEYLIN, A. Yu., DUDKIN, L. D., ZYKOVA, N. P., KOLOMEYETS, N. V. MAZUR, V. A., TARTAKOVSKIY, D. L., KHANIN, M. A.

"A Thermocouple"

USSR Author's Certificate No 227428, Filed 6 Jul 67, Published 20 Jan 70 (from RZh-Electrotekhnika i energetika, No 8, Aug 70, Abstract No 8A127 P)

Translation: The proposed thermocouple contains a P-branch of germanium telluride, a commutation bus of iron, and a commutation substrate. A mechanical mixture of tungsten and tin telluride, or tungsten and lead telluride is used as the commutation substrate. This is to improve mechanical strength and reduce power lost in commutation.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC: 621.362.2(088.8)

KHANIN, M. A., DIDORENKO, N. S., DUDKIN, L. D., MAZUR, V. A., KOLOMOYERE, N. V., ZYKOVA, N. P.

"A Commutation Line"

USSR Author's Certificate No 256002, filed 2 Jan 68, published 19 Mar 70 (from RZh-Elektrotekhnika i Energetika, No 10, Oct 70, Abstract No 10A163 P)

Translation: This Author's Certificate introduces a commutation line for a thermocouple produced by combined hot powder pressing. As a distinguishing feature of the patent, the line is made from aluminum powder which is partially oxidized (by 5-20 percent). This makes it possible to increase the working temperature to 600°C.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

AA0052699

UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 1-70

241256 DIELECTRIC MATERIAL ABRASIVE MACHINING is ensured with grains rotating in a magnetic field at a velocity of 1000m/sec and chips removed by air blast. The magnetic levitation of abrasive grains 2 is provided by electromagnet 1, while the concentric electromagnet 3 limits the levitation and prevents grain escape from the field of magnet 1. The magnets are fed by generators 4 & 5, the alternating or pulsating current in magnet 1 forming the rotating field.

2.8.67. as 1178289/29-33, MANZHOS, F.M. et al. (18.8.69) Bul. 13/1.4.69. Class 67a, Int. Cl. B 24b.

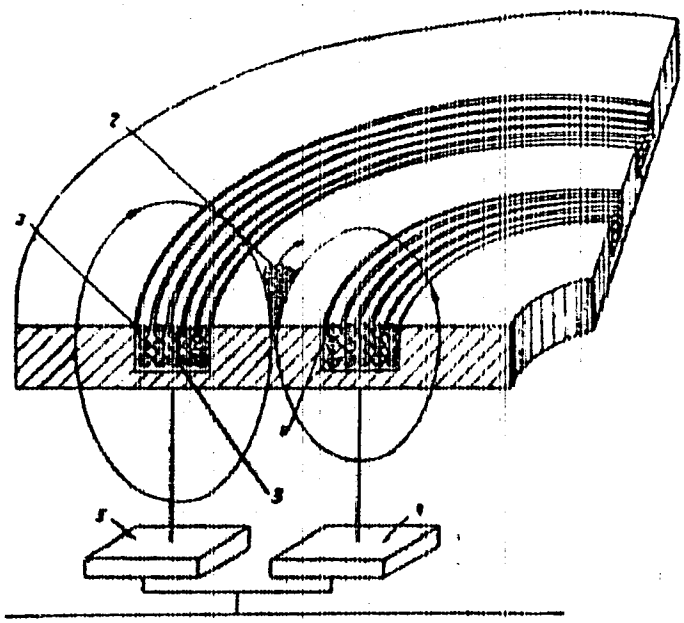
1/2 Manzhos, F. M.; Soldatenok, V. V.; Mazur, V. F.; Babich-Dekan', F. T. 4

19821493

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

Acc. Nr.: AA0052699



2/2

REEL/FRAME
19821404

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 621.791.052.001.24:539.4

MAZUR, V. G., Engineer, ZHEMCHUZHNIKOV, G. V., and NOVIKOV, I. V., Candidates of Technical Sciences, Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences Ukrainian SSR

"Investigation of Strength Under Static Load of Notched Samples of Joints Made by Electroslag Welding"

Kiev, Avtomaticheskaya Svarka, No 12 (249), Dec 78, pp 11-13

Abstract: Tests were conducted at low temperatures for the static fracture of notched samples of 12KhM steel joints made by electroslag welding and multi-operation welding. It was shown that the critical temperature for drop in rated strength of such samples under static load is low. Normalization lowers this temperature insignificantly. These investigations should be considered only as preliminary ones and the results, which are of practical interest, need further checking using other brands of steel. The article contains 3 illustrations and 3 bibliographic references.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

Hydraulic and Pneumatic

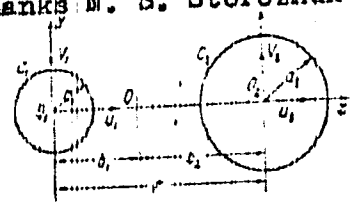
USSR

MAZUR, V. YU., Odessa

"Motion of Two Circular Cylinders in an Ideal Fluid"

Moscow, IAN SSSR, Mekhanika Zhidkosti i Gaza, No 6, Nov/Dec 70, pp 80-84

Abstract: An exact solution is found for the problem of arbitrary motion of two circular cylinders in an ideal fluid. The geometry of the problem is illustrated in the figure. It is assumed that two cylinders with radii a_1 and a_2 are in motion in an ideal fluid which is at rest at infinity. Plane xy is taken perpendicular to the generatrices of the cylinders, and the x-axis at the given instant is assumed to coincide with the line joining the centers of circles C_1 and C_2. The coordinate origin is at the center of the first circle. The author thanks N. S. Storozhuk for assistance in carrying out this work.



1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

1/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--EFFECT OF ETHYL ACETATE ON THE POLYMERIZATION OF VINYL CHLORIDE WITH THE TETRABUTOXYTITANIUM,DIISOBUTYLALUMINUM CHLORIDE CATALYST SYSTEM

AUTHOR-(02)-BUDANOVA, G.P., MAZUREK, V.V.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(5), 1062-77

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ACETATE, POLYMERIZATION KINETICS, VINYL CHLORIDE, CHEMICAL REACTION MECHANISM, ORGANOTITANIUM COMPOUND, ORGANOALUMINUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1015 STEP NO--UR/0459/70/012/005/1062/1077

CIRC ACCESSION NO--AP0136442

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

2/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136442

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLYMN. KINETICS OF CH SUB2:CHCL IN C SUB7 H SUB16, INITIATED BY THE TITLE CATALYTIC SYSTEM (I), WAS STUDIED IN THE PRESENCE OF ETOAC, WHICH MARKEDLY INCREASED THE EFFECTIVENESS OF I. A REACTION MECHANISM THAT ACCOUNTED FOR THE INCREASED EFFECTIVENESS WAS PROPOSED. THE KINETICS OF THE TI(OBU) SUB4 REACTION WITH ISO-BU SUB2 ALCL WITH OR WITHOUT ETOAC IS DISCUSSED AND A FREE RADICAL POLYMN. MECHANISM IS SUGGESTED. FACILITY: INST. VYSOKOMOL. SOEDIN., LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

AN0012623

177

UR9016

TITLE-- A LIFE THAT IS LONGER THAN THAT OF A DIAMOND

NEWSPAPER-- SOVETSKAYA BELORUSSIYA, JANUARY 9, 1970, P 1, COLS 4-6

ABSTRACT-- A. M. MAZURENKO AND V. B. SHIPILO, ASSOCIATES OF THE INSTITUTE OF SOLID STATE PHYSICS AND SEMICONDUCTORS OF THE WHITE RUSSIAN ACADEMY OF SCIENCES, HAVE SYNTHESIZED BORON NITRIDE IN THE FORM OF PLATES. THE PROGRAM WAS GUIDED BY N. N. SIROTA, MEMBER OF THE WHITE RUSSIAN ACADEMY.

1/1

21

19571517

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

M

USSR UDC 621.373.53(088.8)

MUSAYELYAN, S. A., MAZURENKO, I. V., SHARYAPOV, Sh. A., PAVLOV, V. G.

"A Relaxation Oscillator"

USSR Author's Certificate No 259141, Filed 7 Aug 68, Published 28 Apr 70 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10G170 P)

Translation: A relaxation oscillator is proposed with pulse bridge elements connected in the collector-base circuits of the transistors in the oscillator. To provide conditions for easy self-excitation of the oscillator and improve operational stability, a dynamic control circuit is connected between one of the poles of the power supply and the common bus. This control circuit is made up of a resistor and capacitor connected in series, the common point being connected to the bases of the transistors in the oscillator through auxiliary resistors, and to the collectors of these same transistors through semiconductor diodes. To improve the operational reliability of the oscillator on low frequencies, the additional resistors are connected to the capacitor thorugh an emitter follower.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 535.243.25:535.36

TOPORETS, A. S., MAZURENKO, M. M. and IGI'AT'YEVA, M. G.

"A Goniospectrophotometer for Measuring the Spatial Indicatrix of Light Dispersion"

Leningrad, Optiko-Mekhanicheskaya Promyshlennost', No 2, Feb 73, pp 32-37

Abstract: A two-beam instrument for measuring the spatial indicatrix of light dispersion with one static detector is described. Illumination of the sample is possible at any angle from 0 to 85° from above and below, in the spectral region 0.4 to 0.8 microm. The indicatrix may be recorded from any point of the half-space either in a meridional or a parallel plane. The strength of the light scattered by the sample and also the coefficient of luminosity are registered. An expression for the ratio of the electrical signals in the measuring and reference channels is derived. The indicatrix of milky glass MS14 is presented as an example of machine function.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

Acc. Nr: AP0051972 Ref. Code: UR0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 3, pp 100-104

SPECIFIC SURFACE LEUKEMIC ANTIGEN AND CELLULAR MALIGNIZATION IN MICE OF THE CC57BR LINE INFECTED WITH MAZURENKO'S VIRUS

V. E. Gurtsevich, N. P. Mazurenko, Ye. I. Zharova, N. A. Prabatova, G. N. Stepanova
Institute of Experimental and Clinical Oncology of the Academy of Medical Sciences, of the USSR, Moscow

A specific surface antigen, detected by means of immunofluorescence in mice of the CC57BR line infected with Mazurenko's virus, was revealed before establishing the cytohistological diagnosis of leukemia and before the cells acquired the capacity to transplantation. The referred to antigen was determined in infected mice approximately at the same periods in the spleen, thymus, lymph nodes and bone marrow, this may be interpreted in favor of the autochthonous origin of the leukemia studied. There was established a direct relation between increase of the quantity of fluorescent cells in the organ investigated and intensification therein of morphological changes accompanied by the development of leukemia.

REEL/FRAME
19820459

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 616.988.6-097

GURTSEVICH, V. E., MAZURENKO, N. P., ZHAROVA, Ye. I., PROBATOVA, N. A., and STEPANOVA, G. N., Laboratory of the Virology of Leucoses, Laboratory of Systemic Blood Diseases, and Division of Pathological Anatomy of Human Tumors, Institute of Experimental and Clinical Oncology, Academy of Sciences USSR, Moscow

"Specific Surface Leukosis Antigen and Cellular Malignancy in Mice of the CC57BR Line Infected with Mazurenko Virus"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 3, 1970, pp 100-104

Abstract: Mice of the CC57RB line were injected with Mazurenko virus. The time needed for appearance of specific antigen in cells of various organs and tissues was compared with the appearance of malignant cell transformation, detected morphologically and by transplantation. Using the immunofluorescence method, specific surface antigen was detected before the histological diagnosis of leukemia was made and before the cells became transplantable. This antigen was found in spleen, thymus, lymph nodes, and bone marrow at about the same time. A direct relationship was detected between the quantity of fluorescent cells and the degree of morphological change.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

1/2 016 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THE ACTIVITY OF LIVER CATALASE AND ITS INHIBITOR IN PERSONS WHO DIED FROM ACUTE LEUKEMIA -U-

AUTHOR-(02)-KONYUKHOV, A.F., MAZURENKO, N.P.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 49, NR 6, PP 49-50

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CATALASE, LIVER, LEUKEMIA, AUTOPSY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0704 STEP NO--UR/0219/70/049/006/0049/0050

CIRC ACCESSION NO--AP0131303

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

2/2 018 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0131303

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACTIVITY OF WATER SOLUBLE LIVER CATALASE OF PERSONS WHO DIED FROM ACUTE LEUKEMIA AVERAGED ONE THIRD OF THE ACTIVITY OF LIVER CATALASE OF PERSONS WHO DIED FROM ACCIDENTAL INJURIES. ALCOHOL PREPARATIONS ISOLATED FROM THE LEUKEMIC HUMAN TISSUE BY THEIR INHIBITING ACTION ON WATER SOLUBLE LIVER CATALASE OF HEALTHY MICE WERE MORE ACTIVE THAN SIMILAR PREPARATIONS FROM CONDITIONALLY HEALTHY PERSONS. FACILITY: INSTITUTE OF EXPERIMENTAL AND CLINICAL ONCOLOGY OF THE ACADEMY OF MEDICAL SCIENCES OF THE USSR, MOSCOW.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 617-01.28-008.939.6

FEDOROVA, T. A., TERESHCHENKO, O. Ya., and MAZURIK, V. K.

Nukleinovyye Kisloty i Belki v Organizme pri Luchevom Porazhenii (Nucleic Acid and Protein in the Organism With Radiation Injury), Moscow, Meditsina, 1972, 408 pp

Translation: Annotation: The book systematizes and generalizes vast experimental materials concerning the investigation of impairments of the metabolism of the key substrata of life -- nucleic acids and proteins, during radiation sickness in animals and humans.

The analysis of the mechanism of postradiation impairments of DNA and protein metabolism presented in the book is important for understanding the pathogenesis of radiation injury and, therefore, for developing rational therapy and prophylaxis for this illness, and it is also of general biological significance as a result of the connection between exposure of the organism and cancerogenesis, aging, and genetic impairment.

The book is intended for scientific workers -- radiobiologists, biochemists, roentgenologists, and radiotherapists, as well as for other specialists who are interested in current problems of biology.

Table of Contents: Page

Preface 3

1/6

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

FEDOROVA, T. A., et al., Nukleinovyye Kisloty i Belki v Organizme pri Luchevom Porazhenii, 1972, 408 pp

Part 1. Change in Metabolism and Nucleoproteins and Nucleic Acids in the Exposed Organism

Chapter 1. Synthesis of Nucleic Acids in the Exposed Organism 3

The Effect of Irradiation on the Inclusion of Tracer Predecessors in DNA in the Whole Organism 6

Radiation Impairments of DNA Synthesis in the Cell 15

The Radiosensitivity of DNA Synthesis at Different Periods of the Proliferative Cycle 20

Relationship Between Dosages and Postradiation Changes in DNA Synthesis 34

Relationship Between Impairments of DNA Synthesis and Length of Exposure 39

Mechanisms of Radiation Impairments of DNA Synthesis (Exposure in the S-Period) 40

Radiation Impairments of DNA Synthesis on the Level of Tissues in the Whole Ortanism 50

The Fate of the Tracer Predecessor of DNA 50

Changes in Predecessor Resources 68

2/6

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

FEDOROVA, T. A., TERESHCHENKO, O. Ya., and MAZURIK, V. K., Nukleinovyye Kisloty i Belki v Organizme pri Luchevom Porazhenii, 1972, 408 pp

Impairments of DNA Synthesis Caused by Change in Cell Populations and the Proliferative Cycle 73
Changes in DNA Synthesis Caused by Impairment of the Proliferative Cycle 73
Impairments of DNA Synthesis Related to the Death and Renewal of Cellular Elements 79
Impairments of DNA Synthesis Mediated by Nerve and Humoral Mechanisms 89
Bibliography 95
Chapter 2. Decomposition of Desoxyribonucleoproteins (DNP) and Desoxyribonucleic Acids (DNA) in the Tissues of the Exposed Organism 103
Postradiation Impairment of Supramolecular DNA Structures Weakening of the DNA-Protein Bond 110
Content of DNP and DNA in Tissues at Different Times After Exposure 118
Postradiation Activation of Enzymes Which Serve as Catalysts for the Decomposition of DNA 130

3/6

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

FEDOROVA, T. A., et al., Nukleinovyye Kisloty i Belki v Organizme pri Luchevom Porazhenii, 1972, 408 pp

Content of the Products of DNA degradation (Nucleotides and Nucleosides) in the Tissues After Exposure 143
Content of Nucleic Acids in the Tissues, Change in Their Properties and in the Activity of DNA-ase with Internal Injury by Radioactive Substances 155
Bibliography 161
Chapter 3. Content of the Products of Decomposition of Nucleic Acids (NA) in the Blood and Urine of the Exposed Organism 166
Elimination of the Products of the Metabolism of Pyrimidine Compounds Together with Urine 174
Evaluating Total DNA Catabolism in the Exposed Organism by Elimination of Tracer Deoxynucleosides Together with Urine 206
Elimination of the Products of the Metablism of Purine Compounds Together with Urine 210
Bibliography 213
Part 2. Change in Protein Metabolism in the Exposed Organism
Chapter 4. Intensification of Protein Decomposition in the Exposed Organism 218

4/6

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

FEDOROVA, T. A., et al., Nukleinovyye Kisloty i Belki v Organizme pri Luchevom Porazhenii, 1972, 408 pp

Change in the Nitrous Balance 218
Mechanisms of Intensification of Protein Decomposition. Proteolysis and Autolysis 223
Nitrous Fractions of Urine 229
Change in the Interstitial Metabolism of Certain Amino Acids (Taurine, Triptophan, and Serine) 254
The Activity of Aminotransferases and Glutamatdehydrogenase in the Exposed Organism 265
Bibliography 273
Chapter 5. Impairment of Protein Biosynthesis After Exposure 277
The Effect of Ionizing Radiation on Protein Biosynthesis in the Whole Organism 279
The Effect of Ionizing Radiation on Protein Biosynthesis on Subcellular Fractions of Different Organs 289
The Effect of Ionizing Radiation on Particular Stages of Protein Synthesis 294
Bibliography 302
Chapter 6. Change in the Fraction Composition of Proteins of the Blood Serum of Animals After Exposure 304

5/6

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

FEDOROVA, T. A., et al., Nukleinovyye Kisloty i Belki v Organizme pri Luchevom Porazhenii, 1972, 408 pp

Albumins 305
Alpha$_1$-, Alpha$_2$-, and Beta-Globulins 314
Gamma-Globulins 316
Bibliography 326
Part 3. The Therapeutic Effects of Nucleic Acids in Radiation Sickness. Testing Radiation Injury by Indicators of Nucleic Protein Metabolism
Chapter 7. The Therapeutic Effect of Nucleic Acids and Nucleotides in Radiation Sickness 330
Bibliography 359
Chapter 8. Testing Radiation Injury by Indicators of Nucleic and Protein Metabolism 364
Bibliography 402

6/6

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

1/2 035 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--DEPENDENCE OF THE EXCRETION OF DEOXYURIDINE, THYMIDINE, AND BETA-AMINOISOBUTYRIC ACID BY RATS ON THE DOSE OF IRRADIATION AND TIME

AUTHOR-(03)-MAZURIK, V.K., BRYKSINA, L.YE., BIBIKHIM, L.N.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA; 10: 43-8 (JAN-FEB 1970).

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--IONIZING RADIATION BIOLOGIC EFFECT, RADIATION DOSAGE, DNA, METABOLISM, NUCLEOSIDE, EXCRETION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1844 STEP NO--UR/0205/70/010/000/0043/0048

CIRC ACCESSION NO--AP0127254

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

2/2 035 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127254

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE FIRST DAY AFTER IRRADIATION, THE EXCRETION OF DEOXYURIDINE AND THYMIDINE BY RATS WAS A LINEAR FUNCTION OF THE DOSE IN THE RANGE FROM 50 TO 500 TO 700 R AND WAS EQUALLY GREAT AT HIGHER LEVELS OF RADIATION; THE EXCRETION OF BETA-AMINOISOBUTYRIC ACID DID NOT DEPEND ON THE DOSE. THE AMOUNT OF POST RADIATION HYPEREXCRETION OF THYMIDINE WAS INVERSELY PROPORTIONAL TO THE LOGARITHM OF THE WEIGHT OF THE ANIMALS AND WAS CLOSELY CORRELATED WITH THE POSTRADIATION DECREASE IN THE DNA CONTENT IN THE SPLEEN AND THYMUS. A MATHEMATICAL DESCRIPTION OF THE DEPENDENCE OF THE EXCRETION OF THYMIDINE ON THE WEIGHT OF THE RATS AND DOSE OF WHOLE BODY IRRADIATION IS GIVEN. TWO (DOSE 50 TO 300 R) OR THREE (DOSE MORE THAN 400 R) WAVES OF HYPEREXCRETION OF DEOXYNUCLEOSIDES WERE DETEDTED OVER A PERIOD OF 30 DAYS AFTER IRRADIATION. (TR-AUTH) INST. OF MEDICAL RADIOLOGY, OBNINSK, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

ON THE AVAILABILITY OF A AND C VITAMINS (pp 49-52)
IN THE NORTH

By Major Medical Service [illegible] F. Mazurin

The importance of vitamins A and C to human life has been extensively researched. However, so far the problem of supplying man with such vitamins has remained topical, particularly in the northern areas where A and C hypovitaminoses are quite frequent ([illegible] Danishevskiy, 1955; V. V. Yefremov, 1959; V. Ya. Chekin, 1963, and others). This is explained in terms of the greater need for vitamins in a cold climate and their insufficient absorption with the food.

Opinions vary on the subject of the availability of vitamin C for human consumption in the north. In particular, some authors (I. [illegible] Karkalitskiy, 1963; I. I. Matusis, 1949; [illegible] Lopov and [illegible] Osetrov, 1962) believe that the level of vitamin C in the blood and its excretion with the urine drop according to the length of stay in the north. They thus reject the possibility of the body's adaptation to the insufficient supply of vitamin C to the body. Others (V. [illegible] Lok'yanov and N. [illegible] Fushkina, 1961; I. S. Mandror, 1954; I. [illegible] Arnol'di, 1962, and others) find that as man remains in the north longer, the quantity of vitamin C in the blood rises. They explain this phenomenon in terms of the adaptation of the body to conditions requiring a greater amount of vitamin C and its insufficient quantity in the food.

Very few works have been published on the supply with vitamin A. We have been unable to find data on the influence of the cold and the long stay in the north upon the level of content of vitamin A in the body. Taking this into consideration, in April-May 1965 we studied a group of healthy individuals between 20 and 25 years of age living in the north from one to three years and eating together. The content of vitamins A and C in the 24-hour ration, taking additional vitamin consumption into consideration, did not exceed respectively, 2.1 mg and 104 mg with a 2.5 mg and 115 mg norms.

In order to obtain comparable data with studies previously made in that same area (V. [illegible] Lopov and [illegible] G. Osetrov, 1962; I. M. Karkalitskiy, 1959), we used identical methods: the vitamin C content in the blood was determined according to Farmer and Adt; in the daily urine, according to Tilmans; the vitamin A content was determined according to the Karr-Price method with FEKN-57. The individuals were divided into three groups identical in terms of working and living conditions.

Military Medical Journal #2
Aug 71

MAZURIN, M. F.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 612.015.6(470.1)

USSR

MAZURIN, M. F.

"Levels of Vitamins A and C in the North"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 2, 1971, pp 49-52

Abstract: Study of 117 healthy persons 20 to 25 years of age living in the North from about 1 to 3 years showed that the levels of vitamins A and C were abnormally low. There was a tendency for both to rise in the blood and for vitamin C to decrease in the urine with increasing time spent in the North. The contentof vitamins A and C in the blood and excretion of the latter with urine were lower in all those who worked outdoors than in those who had indoor jobs, suggesting that individuals constantly exposed to cold have increased vitamin A requirements. Physical examination revealed symptoms of hypovitaminosis A and C in one-third of the persons (photophobia, dryness and peeling of the skin, bleeding gums, acrocyanosis, etc.).

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 616.981.558

USSR

MAZURIN, N. D.

"Occurrence of the Botulism Pathogens in Soil"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 11, 1973, pp 48-49

Abstract: During the last 10 to 12 years, almost every case of botulism among persons living in the Soviet Far East was related to the consumption of fish. This prompted the author to investigate soil samples collected along the banks of the Amur River and in the intestines of fish caught in the river. Of 314 soil and fish samples examined, 43 (13.7%) contained botulism pathogens: type E in 33, type A in 4, type B in 2, type C in 1, types A and E together in 2 and types B and E together in 1. The character of the soil and time of year determined the extent of contamination. It was most widespread in river ooze in July and August when Clostridia were found in every other sample of this ooze. Carp and whitefish were most frequently infected.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 51:330.115

MAZURINA, G. I.

"Certain Problems of Calculating Parameters and Dependences in Network Graphs for Continuous-Flow Production"

Sb. Tr. Nauchno-Tekhn. Konf. Prof.-Prep. Sostava Vses Zaochn. Elektrotkhn. In-ta Svyazi. Vyp. 5, [Collective Works of Scientific and Technical Conference of Teachers of All-Union Correspondence Electrical Engineering and Communications Institute, No. 5], Moscow, 1970, pp 209-218, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5V583 by L. Romanovskiy).

Translation: The basic concepts and approaches which should be used in the construction of network models of rhythmic production are presented.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 613.644-07:612.824

USSR

ALEKSEYEV, S. V., MAZURKEVICH, G. S., and KHRABROVA, O. P., Medical Institute of Sanitation and Hygiene, and Institute of First Aid imeni I. I. Dzhanelidze, Leningrad

"Changes in the Reactivity of Terminal Brain Vessels in Rats in Response to Stable Noise"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, 1973, pp 18-21

Abstract: Epinephrine and acetylcholine were applied directly onto the pia mater of rats subjected 100 db stable white noise to determine the reactivity of pial vessels to noise. While epinephrine alone did not cause changes in vessel diameter and blood flow rate, acetylcholine alone caused considerable, rapid dilation of arterioles and a weaker response in venules, but blood flow did not change significantly. Epinephrine plus noise produced sharp spasms of small arteries and arterioles. Vessel constriction continued to occur with epinephrine application after the noise was turned off. In the presence of noise, arterioles expanded less than in controls in response to acetylcholine in the first 2 min but began to dilate rapidly 15-20 min after noise was turned on. This effect persists with subsequent acetylcholine applications for 25-30 min after noise is turned off. Thus in the presence of noise

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

ALEKSEYEV, S. V., et al., Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, 1973, pp 18-21

acetylcholine reduces and epinephrine increases the reactivity of pail vessel muscles. Changes in vessel reactivity to the vaso-active substances probably stem from production of catecholamines in response to noise stress.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

1/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--POLAROGRAPHIC REDUCTION OF METHYLENE BLUE. REPLY -U-

AUTHOR-(03)-PAMFILOV, A.V., MAZURKEVICH, YA.S., PAKHOMOVA, E.P.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(1), 100-2

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REDUCTION, METHYLENE BLUE, QUINONE, POLAROGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1983 STEP NO--UR/0073/70/036/001/0100/0102

CIRC ACCESSION NO--AP0125972

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UNCLASSIFIED PROCESSING DATE--13NOV70

2/2 010

CIRC ACCESSION NO--AP0125572

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN ANSWER TO R., BRDICKA (IBID. 99-100) P. AND COWORKERS FIND THAT THE POLAROGRAPHIC RED. OF METHYLENE BLUE IS IRREVERSIBLE AND GOES VIA A SEMIQUINONE, WHICH IS A 1 ELECTRON PROCESS NO MATTER WHAT THE ULTIMATE FATE OF THE SEMIQUINONE.

FACILITY: CHERNOVITS. GOS. UNIV., CHERNOVTSY, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

Acc. Nr AP0050438 Abstracting Service: CHEMICAL ABST. 5/70

Ref. Code UR0051

M

105451n Changes in the electronic spectra of dissolved molecules observed under crystallization conditions of different solvents. Moisya, B. G.; Mazurok, L. G. (USSR). *Opt. Spektrosk.* 1970, 28(3), 232-4 (Russ). The effect of phase transitions of a crystd. solvent (*n*-heptane) on the electronic spectra of dissolved mols. (coronene) is reported. Changes in the spectra, during slow and fast crystn. of the solns., were also studied. The spectra can differ in the positions and halfwidths of the bands, depending on the crystn. conditions.

Alexandre Fucs

21

1/1

REEL/FRAME 19810417

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 669.721.042.6(088.8)

TAGAKIN, A. N., KORZNIKOV, V. M., BELKIN, G. I., ALONTSEV, V. S., PROVODNIKOV, A. A., MAZUROV, G. A., TITAYEV, I. A., PUTINA, O. A., MATSUY, N. V., BOCHKAREV, G. V., NAGIBIN, V. M.

"Method of Processing of Magnesium Ingots"

USSR Author's Certificate No 313908, filed 16/03/70, published 10/11/71, (Translated from Referativnyy Zhurnal, Metallurgiya, No 5, 1972, Abstract No 5 G248 P by G. Svodtseva).

Translation: A method of processing of Mg ingots including transportation, cooling, mechanical working, washing, etching, drying and covering with a protective layer is proposed. In order to reduce the labor expenditures for the process and process time, the ingots are subjected to forced cooling to 450-100°, mechanically worked during transportation, and washed at 350-100°. This reduces labor consumption, decreases the time of the process, and increases the productivity of labor by 40-80%.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 612.591.1-06:[615.322:582.892+613.36

USSR

AFANAS'YEV, B. G., ZHESTOVSKIY, V. A., MAZUROV, K. V., and MAYEVSKIY, K. L.,
Academy of Military Medicine im. S. M. Kirov, Leningrad

"Comparison of the Effects of Eleutherococcus and an Acid-Saline Beverage on Adaptation to Intermittent Heat"

Moscow, Voprosy Pitaniya, No 1, 1973, pp 3-9

Abstract: Eight young men were exposed to hot air in a thermal chamber (37.7 to 38.5°C and 75 to 80% relative humidity) for 4 hours a day for 9 days. Four of them drank an extract of eleutherococcus (an adaptogen like ginseng, known to be able to increase nonspecific resistance) 12 days before and during the experiment and unlimited amounts of tap water while in the chamber. The other four drank only a concoction of 0.2% citric acid solution, 25% potassium and calcium chloride, and 0.5% sugar. Those who drank the eleutherococcus extract exhibited symptoms of a negative water balance, relative and absolute increase in glucocorticoid and androgenic functions of the adrenal cortex, increased sodium excretion with perspiration, and intensified consumption of oxygen. On the other, drinking the special beverage resulted in the establishment of a balance between the intake and elimination of fluid from the body, lowering of the glucocorticoid and androgenic functions of the adrenal cortex, higher

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

AFANAS'YEV, B. G., et al., Voprosy Pitaniya, No 1, 1973, pp 3-9

sodium retention, and decreased oxygen consumption. All these phenomena increased resistance to heat and accelerated adaptation.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

1/2 030 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--AVIATION AND NAVAL MEDICINE, THE STATE OF THE CARDIOVASCULAR SYSTEMS OF SHIP SPECIALISTS UNDER CONDITIONS OF LONG VOYAGES -U-

AUTHOR-(02)-MAZUROV, K.V., ZHERDEV, G.M.

COUNTRY OF INFO--USSR

SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, NO 3, 1970, PP 67-68

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HAZARDOUS SOUND, CARDIOVASCULAR SYSTEM, NAVAL MEDICINE, AIR TEMPERATURE, ATMOSPHERIC HUMIDITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0365 STEP NO--UR/0177/70/000/003/0067/0068

CIRC ACCESSION NO--AP0134151

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

2/2 030 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0133151

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPARATIVE INVESTIGATIONS HAVE BEEN CONDUCTED OF THE LEVEL OF AIR NOISE, CONVECTION TEMPERATURE AND RELATIVE ATMOSPHERIC HUMIDITY IN SHIPS QUARTERS TO DETERMINE THEIR INFLUENCE ON THE FUNCTIONAL STATE OF THE CARDIOVASCULAR SYSTEM IN SPECIALISTS ON VESSELS WITH GAS TURBINE AND DIESEL INSTALLATIONS DURING LONG VOYAGES IN SUBTROPICAL REGIONS. SPECIALISTS OF MACHINE DIVISIONS AND PERSONNEL OF CONTROL GROUPS HAVE BEEN EXAMINED BEFORE DEPARTURE ON A VOYAGE, AFTER THIRTY DAYS OF THE VOYAGE AND AFTER ITS COMPLETION. TAKING INTO ACCOUNT THAT BEFORE SAILING THE VESSELS HAVE NOT GONE TO SEA FOR A MONTH AND A HALF, WE CONSIDERED IT POSSIBLE TO ADOPT AS BACKGROUND INDICATORS THOSE OF THE STATE OF THE CARDIOVASCULAR SYSTEM IN SHIP'S SPECIALISTS OBTAINED DURING THAT TIME. THE CONVECTION TEMPERATURE OF THE AIR IN LIVING QUARTERS AND MACHINE SECTIONS VARIED IN THE RANGE OF 19-22DEGREES, THE RELATIVE HUMIDITY FROM 70 TO 84PERCENT. THE LEVEL OF AIR NOISE DID NOT EXCEED 60-70 DB WITH A MAXIMUM OF SONIC ENERGY AT LOW FREQUENCIES.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC: 621.375.82

MAZUROV, M. YE., OBUKHOV, V. A.

"Optical Modulators and Devices for Beam Deflection"

Opticheskiye Modulyatory i Ustroystva Dlya Otkloneniya Lucha [English Version Above], (Works of Central Scientific Research Institute of Patent Information and Technical-Economic Studies, Series 2), Moscow, 1970, 59 pages, (Translated from Referativnyy Zhurnal Fizika, No. 8, 1970, Abstract #8D1157, from the resume).

Translation: This work is devoted to an analysis of the present level of developments in the area of optical modulators. Primary attention is given to external and internal amplitude modulators. Special types of optical modulators and methods of improvement of their characteristics are also studied. Devices for deflection of laser beams are also analyzed. The work is written on the basis of analysis of the world patent fund on quantum electronics, amounting to some 2000 documents as of 1 January, 1968. Of this total number of patents, 82 patents concerned with optical modulators and devices for deflection of laser beams were selected, studied, and used in this review.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC: 51

MAZUROV, V. D.

"Concerning Solution of an Incorrectly Formulated Linear Optimization Problem Under Contradictory Conditions"

Moscow, Mat. metody resheniya ekon. zadach--sbornik (Mathematical Methods of Solving Economics Problems--collection of works), No 3, "Nauka", 1972, pp 17-23 (from RZh-Kibernetika, No 5, May 73, abstract No 5V615 by S. Lebedev)

Translation: The problem of linear programming with an incompatible system of restrictions $(c_j, x) \leq a_j$, $j=1, \ldots, n$ is understood to mean the problem $\tilde{m}=\min\{(c_0, x) | x \in M(E)\}$, where $M(E)=\{x \in R^n | (c_j, x)-a_j \leq E, j=1, \ldots, n\}$, $E=\min\{t | (c_j, x)-a_j \leq t, j=1, \ldots, n\}$. This problem of optimization on a set of Chebyshev approximations may be incorrectly formulated, i. e. a small fluctuation of the optimum set $\tilde{M}=\{x \in M(E) | (c_0, x)=\tilde{m}\}$ does not always answer to small fluctuations of the coefficients of the system of limitations. An auxiliary problem using the penalty concept is introduced:

$$\min\{(c_0, x)+Ut | (c_j, x)-a_j \leq t, j=1, \ldots, n; t \geq 0\}. \quad (1)$$

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

MAZUROV, V. D., Mat. metody resheniya ekon. zadach, No 3, "Nauka", 1972, pp 17-23

Here U is a non-negative parameter. It is proved that under certain natural assumptions the solution of problem (1) (if it is finite) is stable relative to small fluctuations a_j. The relation between (1) and the initial problem is established by the following theorem: if M is bounded, then for sufficiently large U the optimum set $\{(\bar{x},\bar{t})\}$ of problem (1) is such that $\{\bar{x}\} \subset M$.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

MAZUROV, V. D., TYAGUNOV, L. I.

"The Committee Method for Recognition of Several Patterns and Duality of Incompatible Systems of Inequalities"

Mat. Metody v Nekotor. Zadachakh Optimal'n. Planir. Vyp. 5 [Mathematical Methods in Some Problems of Optimal Planning, No 3 -- Collection of Works], Sverdlovsk, 1971, pp 55-59 (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V522).

NO ABSTRACT.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 615.616.24-003.656.6

BEZRODNYKH, A. A., KASPAROV, A. A., MAZUROV, V. I., KOCHETKOVA, T. A., RAZDVADOVSKIY, YE. F., SIDOROVA, N. V., KULIKOVA, T. P., GALITSINA, I. Z., ZAMARAYEVA, T. V.

"Antifibrosis Effect of Polyvinylpyridine-N-Oxide as a Compound to Prevent the Development of Silicosis"

Nauch. tr. Irkutsk. med. in-t (Scientific Works of the Irkutsk Medical Institute), 1972, vyp 110, pp 52-53 (from RZh--Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 3, Mar 73, Abstract No 3.54.874)

Translation: The polymers polyvinyl-pyridine-2- and 4-N-oxides had an effect on the degree of expression of histologic alterations in the early stages of the development of experimental silicosis (10 days) when administered intratracheally and, especially, hypodermically. These polymers normalized the indexes of the oxidation processes in the lung tissue and the myrocardium. After one, three and six months of the experiment, the polymers with a molecular weight of 40,000 to 80,000 retarded the development of fibrosis, reduced the amount of neutrally soluble collagen and

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

BEZRODNYKH, A. A., et al., Nauch. tr. Irkutsk. med. in-t, 1972, vyp 110, pp 52-53

normalized the amino acid composition of the lung tissue, the indexes of the oxidation phosphorylation and the activity of the intracellular enzymes. On intratracheal administration of polymers with a molecular weight of 50,000 to 1,500,000, the development of catarrhal bronchitis and bronchiolitis was noted.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

1/2 007 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--THE EFFECT OF CHLORAMPHENICOL ON THE DISSOCIATION AND REASSOCIATION OF E. COLI RIBOSOMES -U-

AUTHOR--GORKINA, N.B., MAZUROV, V.I.

M

COUNTRY OF INFO--USSR

SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 2, PP 163-172

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ESCHERICHIA COLI, RIBOSOME, CHLORAMPHENICOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0798 STEP NO--UR/0301/70/016/002/0163/0172

CIRC ACCESSION NO--AP0102761

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

2/2 007 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102761

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 30S AND 50S RIBOSOME SUBPARTICLES OBTAINED FROM E. COLI ASSOCIATE INTO 70S PARTICLES IN THE SYSTEM CONTAINING 1 TIMES 10 PRIME NEGATIVE2 M MG POSITIVE POSITIVE. HOWEVER, ASSOCIATION OF SUBPARTICLES UNDER THESE CONDITIONS IS INCOMPLETE. CHLORAMPHENICOL DOES NOT AFFECT INTERACTION OF 30S AND 50S SUBPARTICLES. FORMATION OF 70S IN ITS PRESENCE PROCEEDS IN THE SAME MANNER AS IN THE SYSTEM FREE FROM CHLORAMPHENICOL. THE ANTIBIOTIC HAS NO EFFECT AS WELL ON THE PROCESS OF MG POSITIVE POSITIVE DEPENDENT DISSOCIATION OF 70S MONOMERS INTO 30S AND 50S SUBPARTICLES.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 621.385.652.12.032

USSR

BATYGIN, V.N., YEFIMOVA, N.V., INOZEMTSEVA, A.V., MAZUROVA, L.G.

"Volumetric Absorbers For Power TWTs"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, Issue 11, pp 95-102 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A186)

Translation: The absorber of microwave energy developed for a power traveling-wave tube is characterized by high mechanical stability, good thermal conductivity, and low gas generation. The construction is described of a volumetric absorber for a TWT with a spiral-type delay system. It is shown that damping and matching with the delay system of such an absorber is not worse than with a film absorber obtained by the method of pyrolysis of methane. The absorber makes it possible to dissipate large levels of average power. A volumetric absorber with a delay system of the coupled resonators type is also investigated and its high-frequency characteristics are presented. 5 ref. Summary.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC 542.91:547.963.3

USSR

TARUSOVA, N. B., MAZUROVA, V. V., KRAYEVSKIY, A. A., and GOTTIKH, B. P.,
Institute of Molecular Biology, Academy of Sciences USSR

"Aminoacylation of Nucleosides, Nucleotides and Polynucleotides. 11. Synthesis of 3'(2')-O-L-α-Aspartyl-adenosine-5'-phosphate"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 8, Aug 71, pp 1736-1740

Abstract: The article shows that the imidazolide method can be extended to dicarboxylic amino acid derivatives and used for the synthesis of α-aspartyl ester of adenosine-5'-phosphate as a result of the reaction of the imidazolide of β-tert.-butyl ester of N-tert.-butylhydroxycarbonyl-aspartic acid with pA. The structure of the resultant compound was confirmed by hydrolysis and ammonolysis. The stability of the compound in aqueous solutions at various pH values was determined.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 621.73.043

MAZUROVSKIY, B. YA.

"Experimental Hot Precision Stamping From Aluminum-Magnesium Alloys"

Moscow, Kuznechno-shtampovochnoye proizvodstvo, No 4, Apr 72, pp 39-41

Abstract: Presented is a review of the author's earlier studies conducted under plant conditions on upgrading the precision of forgings from aluminum-magnesium alloys. Included is the diagram of a modernized universal heated die block for precision forming with piercing, its operating parameters, specifications, advantages and savings. Precision forgings from aluminum-magnesium alloys feature a high class of surface finish and are said to find ever increasing application in machine construction, shipbuilding, and other industrial sectors. (2 illustrations, 3 bibliographic references)

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 621.983.044.7

MAZUROVSKIY, B. YA., YUSHANTSEVA, T. V., and VOLOCHINSKAYA, L. M.,

"Effect of Pulse Loads on the Properties of Al-Mg Alloys"

Moscow, Kuznechno-Shtampovochnoye Proizvodstvo, No 7, Jul 71, pp 19-21

Abstract: Investigations were conducted at the Electrohydraulics Planning and Design Bureau on the effect of pulse loads on the mechanical properties and structure of deformed AMg6 Al-Mg alloy. The following conclusions were made as a result of the study.

On stamped bilges two zones of maximum deformation were revealed: in the center and at the flange edge. Hardness of AMg6BM and AMg6BN alloys increases with increased deformation. The zones of greatest deformation for AMg6M alloy are the zones of maximum strengthening in which tensile and yield strengths are increased and relative elongation is reduced. In alloy AMg6BN in the zones of greatest thinning, tensile and yield strengths are decreased and relative elongation is increased in comparison with the initial values. Maximum increase of hardness, and of tensile and yield strengths and maximum lowering of elongation was produced in a thin-sheet bilge (s = 3 mm). In AMg6BM alloy a more intensive growth in observed, after stamping, for yield strength than for tensile strength and a sharp lowering of elongation is

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

MAZUROVSKIY, B. YA., et al., Kuznechno-Shtampovochnoye Proizvodstvo, No 7, Jul 71, pp 19-21

observed in comparison with initial values. Bilges stamped by the electrohydraulic method without annealing have mechanical properties satisfying specified requirements. Changes in microstructure and surface defects were not detected on stamped bilges. The electrohydraulic method of stamping bilges and similar parts of Al-Mg alloys was recommended for industrial usuage. Four figures, one table, four bibliographic references.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

UDC: 517.514

USSR

MAZ'YA, V. G.

"Classes of Sets and Measures Related to Imbedding Theorems"

Teoremy Vlozheniya i Ikh Prilozheniya [Imbedding Theorems and Their Applications -- Collection of Works], Moscow, Nauka Press, 1970, pp 142-159, (Translated from Referativnyy Zhurnal Matematika, No. 8, 1970, Abstract #8B72, by the author).

Translation: Conditions are formulated for correctness of imbedding theorems (primarily necessary and sufficient) characterizing sets of definition of functions or sets included in measure norms. 19 biblio. refs.; 8 illustrations.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

MAZYAR, YE. Z.

AA0052665 UR/0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 1-70

241296 PILE-DRIVING SUSPENSION ARRANGEMENT

differs from that in Pat. 233516 by hinging carriage 7 to the driving jib 8, at which end there is a stop made in the form of an electric jack electrically connected to the switch terminals placed in a hinged movable carriage, allowing free motion of the driving jib 8 in the vertical plane. This improves the construction. 20.4.67. as 1164347/29-14. Add to 233936. LOSHAK, I.A. et al. "Glavsevkavstroya" Office (15.8.69) Bul. 13/1.4.69. Class 84c. Int. Cl. E 02d.

8/13

Loshak, I. A.; Zal'tsman, T. M.; Grinberg, L. I.; Mokryakov, V. M.; Mazyar, Ye. Z.; Beyzym, Ya. T.

Konstruktorskoye Tekhnologicheskoye Byuro Spetsializirovannogo Upravleniya Mekhanizatsii Stroitel'stva Glavsevkavstroya

18

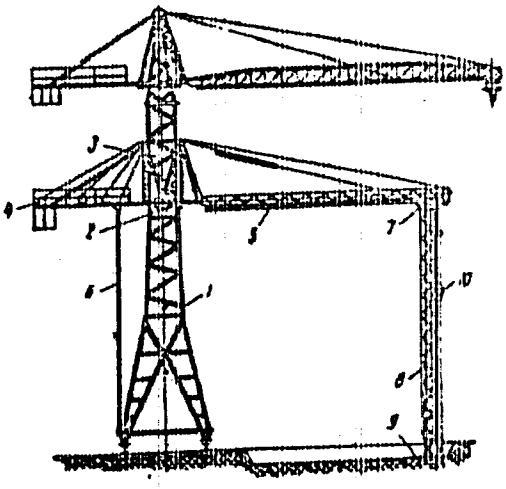
1/2

19821415

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

AA0052665



2/2

19821416

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

UDC 621.385.63

MCHEDLIDZE, G. G., SOLNTSEV, V. A.

"Wave Method of Solving the Nonlinear Equations of Traveling Wave Tubes"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 10, 1972, pp 2227-2230

Abstract: A method of numerical integration of the system of nonlinear equations of traveling wave tubes is proposed which is a generalization of the approximate method discussed previously [V. T. Ovcharov, et al., Radiotekhnika i elektronika, Vol 7, No 11, 1931, 1962; V. A. Solntsev, et al., Radiotekhnika i elektronika, Vol 11, No 1, 58, 1966]. The introduced method is not connected with representation of the beam by a set of charges but operates on its mean characteristics (mean velocity, grouping parameters). Thus, the order of the system of differential equations obtained is small independently of whether a harmonic or a complex signal is investigated. The essence of the method is discussed for the case of amplification of a harmonic signal. The presented algorithm for numerical solution of the equations permits variation of the degree of the approximating polynomial. Calculation results are presented graphically which were used to find the minimum required number of harmonics considered in the Fourier series used to represent the addition to the undisturbed phase of electrons caused by the high frequency forces, insuring correct description of all the nonlinear phenomena in the beam and a comparison of the results obtained

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

MCHEDLIDZE, G. G., et al., Radiotekhnika i Elektronika, Vol 17, No 10, 1972, pp 2227-2230

with previously published results. A system of ordinary differential equations is obtained by the wave method the order of which is appreciably lower than when using the large particle method, and the results are identical in both cases. The method can be generalized to the case of large values of the amplification parameter and more exact consideration of the space charge forces.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 612.824

MCHEDLISHVILI, G. I., MITAGVARIYA, and ORMOTSADZE, L. G., Pathophysiology Division, Institute of Physiology, Academy of Sciences, Georgian SSR, Tbilisi

"Determination of Resistance in Large and Small Cerebral Arteries Using an Adequate Mathematical Model"

Leningrad, Fiziologicheskiy Zhurnal SSR imeni I. M. Sechenov, No 4, 1971, pp 575-583

Abstract: The purpose of the work was to devise a mathematical model capable of utilizing information readily obtainable in physiological experiments for the determination of resistance in the blood vessels that play a major role in regulating cerebral blood flow. The model is based on the quantitative relations existing between hemodynamic resistance in the main brain arteries and arteries on the periphery of the circle of Willis and the pressures measured in the aorta, circle of Willis, and venous sinuses. It was assumed that the relative viscosity of the blood remains constant and that resistance to the blood flow changes only after changes in the lumens of the blood vessels. The model was used in experiments on dogs subjected to asphyxia, injection of norepinephrine and serotonin, change in perfusion pressure, and occlusion of the

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR

MCHEDLISHVILI, G. I., et al., Fiziologicheskiy Zhurnal SSR imeni I. M. sechenov, No 4, 1971, pp 575-583

the cranial vena cava. The results were consistent with those of physiological studies conducted on changes in the lumens of cerebral arteries under the same conditions.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

1/2 C18 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--INTERNATIONAL EUROMECH 12 COLLOQUIUM -U-

AUTHOR--MCHEDLISHVILI, G.I.

COUNTRY OF INFO--USSR, POLAND, WORLD WIDE

SOURCE--MOSCOW, VESTNIK AKADEMII NAUK SSSR, RUSSIAN, VOL 40, NO 1, JANUARY 1970, PP 88-90

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--MEDICAL CONFERENCE, BLOOD CIRCULATION, RESPIRATORY PHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0966 STEP NO--UR/0050/70/040/001/0088/0090

CIRC ACCESSION NO--AP0133052

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

2/2 018 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0130032

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INTERNATIONAL "EUROMECH 12" COLLOQUIUM, DEVOTED TO THE MECHANICS OF THE BLOOD CIRCULATION AND RESPIRATION, WAS HELD ON 9-11 SEPTEMBER 1969 AT JABLONNA, NEAR WARSAW. THE ORGANIZER OF THE COLLOQUIUM WAS THE "EUROMECH" SOCIETY, WHICH UNITES REPRESENTATIVES OF MECHANICS (AS A PHYSICAL DISCIPLINE) OF THE EUROPEAN COUNTRIES. THE USSR HAS NOT ENTERED THAT SOCIETY, BUT AT THE INVITATION OF THE ORGANIZING COMMITTEE A SOVIET DELEGATE WAS SENT TO THE WARSAW MEETING OF SPECIALISTS. PARTICIPATING IN IT WERE MORE THAN 20 SPECIALISTS FROM DIFFERENT COUNTRIES OF EUROPE BELONGING TO THE "EUROMECH" ORGANIZATION: AUSTRIA, ENGLAND, BULGARIA, FRANCE, WEST GERMANY AND CZECHOSLOVAKIA AND, IN ADDITION, ONE REPRESENTATIVE EACH FROM THE USA, CANADA AND THE USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

1/2 021 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--A NEW MODIFICATION OF RESISTOGRAPHY OF THE IN SITU ISOLATED INTERNAL CAROTID ARTERY FOR INVESTIGATION OF THE VASCULAR SPASM -U-

AUTHOR-(02)-MCHEDLISHVILI, G.I., ORMOTSADZE, L.G.

COUNTRY OF INFO--USSR

SOURCE--PATOLOGICHESKAYA FIZIOLOGIYA I EKSPERIMENTAL'NAYA TERAPIYA, 1970, VOL 14, NR 3, PP 72-74

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CARDIOVASCULAR SYSTEM DISEASE, ROTARY PUMP, DRUG TREATMENT, MEDICAL APPARATUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1937 STEP NO--UR/0396/70/014/003/0072/0074

CIRC ACCESSION NO--AP0127338

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

2/2 021 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127338

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROPOSED METHOD HAS THE FOLLOWING ADVANTAGES FOR A DETAILED ANALYSIS OF THE MECHANISM OF VASOSPASM: THE ARTERY UNDER INVESTIGATION IS THE MOST PROBABLE SITE OF THE CEREBRAL VASOSPASM; A HIGH SENSITIVITY TO THE PHYSIOLOGICALLY ACTIVE SUBSTANCES AND PHARMACOLOGICAL DRUGS IS RETAINED THROUGHOUT SEVERAL HOURS OF ACUTE EXPERIMENTS IN DOGS; USE OF A PERFUSION PUMP WITH A CONSTANT MINUTE VOLUME OFFERS STEADY EXPERIMENTAL CONDITIONS WHICH MAY BE CHANGED AT WILL; THERE ARE UNLIMITED POSSIBILITIES TO CHANGE THE CONTENTS OF THE PERFUSION FLUID, SINCE ITS EXCESS IS IMMEDIATELY REMOVED FROM THE ORGANISM. FACILITY: OTDEL PATOFIZIOLOGII INSTITUTA FIZIOLOGII AKADEMII NAUK GRUZINSKOY SSR, TBILISI.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0

USSR UDC 616.831-055.98-085.217.24-039.71

SAMVELYAN, V. M. and MCHEDLISHVILI, G. I., Armenian Institute of Cardiology and Institute of Physiology, Academy of Sciences Georgian SSR

"Mechanism of Inhibition of Edema Formation in the Brain Under the Influence of Neurotropic Agents"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 1, 1971, pp 5-9

Abstract: In experiments on rats, the effects of a number of cholinolytics differing in antiedemic action on various parts of the cerebral blood circulation, permeability of the vascular walls, and rate of metabolism in brain tissue were studied. The cholinolytic agents with muscarinolytic action - amizil, metamizil [methydiazil] and preparation 7351 - were found to possess much greater antiedemic activity than the cholinolytics with nicotinolytic action - arpenal, etpenal, or quateleron. The muscarinolytics intensified the compensatory constriction of the main cerebral arteries, whereas the nicotinolytics

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010013-0"