"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

MALINOV, L. S., SOKOLOV, K. N., KOROTICH, I. K. and ZANNES, A. N.

"Influence of Alloying Elements and Heat Treatment on Hardening of Low-Nickel Martensite-Aging Steel"

Dnepropetrovsk, Metallurgicheskaya i Gornorudnaya Promyshlennost', No 6, Nov-Dec 73, pp 24-26

Abstract: The study of low-nickel martensite-aging steels performed showed that they are a promising structural material with a good combination of mechanical properties. The best properties are those of steels types 00Kh2N5MFYu and 00Kh2N5MFDYu. The nature of hardening in the steels studied is similar to the hardening of high-nickel martensite-aging steels. It results from dispersion hardening of the carbon-free martensite. Softening of the steels is related to loss of the coherent bonding between intermetallides and the martensite matrix, coagulation of intermetallides and the processes of polygonization and recrystallization of the matrix.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 032 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--HYPERTENSIVE DRUGS AGAINST HYPOXIA IN PATIENTS WITH HYPERTENSIVE DISEASE -U-

AUTHOR-(03)-ZANOZDRA, N.S., DROZDOV, O.D., KOZINTSEVA, P.V.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 5, PP 1-5

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIHYPERTENSIVE AGENT, HYPERTENSION, HYPOXIA, BLOOD CHEMISTRY, OXYGEN, METABOLISM, HEPARIN, RESERPINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1724 STEP NO--UR/0475/70/000/005/0001/0005

CIRC ACCESSION NO--AP0129092

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 032 UNCLASSIFIED

CIRC ACCESSION NO--AP0129092 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY OF THE GASEOUS CONTENT OF THE BLOOD IN 198 PATIENTS WITH HYPERTENSIVE DISEASE REVEALED SIGNS OF HYPOXIA IN THE MAJORITY OF THESE PATIENTS. TREATMENT WITH RESERPINE, ISMELIN, AMINAZINE, HYPOTHIAZIDE, ISMELIN PLUS THIAZIDES, HEPARIN AND HEPARIN PLUS RESERPINE RESULTED IN AN INCREASE OF OXYGEN SATURATION OF THE ARTERIAL BLOOD AND AN IMPROVEMENT OF TISSUE OXYGEN METABOLISM, AS EVIDENCED BY THE DYNAMICS OF BLOOD VAKATOXYGEN. FACILITY: KIYEVSKOGO NAUCHNO-ISSLED. INSTITUTA KLINICHESKOY MEDITSKINY IM. AKAD. N. D. STRAZHESKO.

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USSR

UDC 537.311.33

AKSENOV, V.V., ZANTOV, F.A., NIYAZOVA, O.R., KHARAKHORIN, F.F.

"Effect Of Nuclear Penetrating Radiation On The Semiconductor Compounds $A^{II} B^{IV} C_2^{V}$ In Crystalline And Vitreous States"

V sb. Radiats. fiz. nemet. kristallov (Radiation Physics Of Nonmetallic Crystals-Collection Of Works), Vol 3, Part 2, Kiev, "Nauk.dumka," 1971, pp 91-97 (from RZh--Elektronika i yego primenenive, No 10, October 1971, Abstract No 10B65)

Translation: The effect was studied of radiation on the semiconductor compounds $A^{II} B^{V} C_2^{V}$ in crystalline and vitreous states. Neutron and γ-radiation has practically no effect on vitreous specimens; in crystals, however, of $CdGeAs_2$, As_2Se_3 and other semiconductors they give rise to irreversible changes of the values of the resistivity and the mobility of the carriers. 2 ill. 5 ref. I.V.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR UDC 536.24:628.165

TROFIMOV, L. I., and ZAOSTROVSKIY, F. P., Sverdlovsk Scientific Research Institute of Chemical Machinery

"Heat Transfer During Vapor Condensation of Paraffin Streams in Contact Condensers of the Desalination Apparatus"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 7, 1973, pp 23-26

Abstract: On the basis of experiments carried out, equations have been obtained for the calculation of heat transfer processes during the condensation of vapor on liquid paraffin streams of the contact condensers of thermodistillation desalination apparatus based on hydrophobic heat carriers.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--ALLOY ELEMENT WASTE IN HIGH SPEED STEEL MELTS -U-

AUTHOR-(04)-CHUYKO, N.M., GASIK, M.I., ZAOZERNYY, N.T., PARKHOMENKO, G.P.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, METALLURG., NO 5, MAY 70, PP 22-24

DATE PUBLISHED----MAY70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--HIGH SPEED STEEL, METAL MELTING, ALLOY DESIGNATION, STEEL SCRAP, TUNGSTEN STEEL, VANADIUM STEEL, CHROMIUM STEEL, METALLURGIC RESEARCH FACILITY, ARC FURNACE/(U)R9 HIGH SPEED STEEL, (U)R12 HIGH SPEED STEEL, (U)R18 HIGH SPEED STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0407 STEP NO--UR/0130/70/000/005/0022/0024

CIRC ACCESSION NO--AP0135880

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135880

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ALLOYING OF HIGH SPEED STEEL IN ELECTRIC ARC FURNACES IS ACCOMPANIED BY SUBSTANTIAL LOSSES OF SUCH ALLOYING ELEMENTS AS TUNGSTEN, VANADIUM, AND CHROMIUM. THE PURPOSE OF THIS ARTICLE IS TO CLARIFY THE BASIC CAUSES OF INCREASING LOSSES IN TUNGSTEN AND OTHER ALLOYING ELEMENTS DURING THE ELECTRIC ARC PROCESS. IN THE COURSE OF THIS STUDY, A STATISTICAL ANALYSIS WAS MADE OF 479 ALLOYS OF R18, R12, AND R9 STEEL AT AN UNIDENTIFIED PLANT IN 1968. THE MELTS WERE MADE IN FURNACES WITH CAPACITIES OF 7.5 AND 17.5 TONS. THE R18 STEEL CONTAINED 50PERCENT HIGH SPEED STEEL SCRAP AND THE REQUIRED QUANTITY OF FERROTUNGSTEN; THE R12 AND R9 STEELS WERE OBTAINED BY REMELTING THE SCRAP. THE STATISTICS SHOWED THAT THE TUNGSTEN LOSS WAS FROM 8 TO 13PERCENT, THE VANADIUM LOSS 18-28PERCENT, AND THE CHROMIUM LOSS ABOUT 13PERCENT. AN ACCOMPANYING TABLE SHOWS THE LOSSES FOR EACH ELEMENT IN PERCENTAGE, KOLOGRAMS PER METER, AND RUBLES PER METER FOR THE THREE STEEL TYPES. THERE IS ALSO A TABLE GIVING THE RESULTS OF R18 SMELTING IN A 7.5 TON CAPACITY ARC FURNACE. FINALLY, THERE ARE THREE CURVES SHOWING THE LOSS OF TUNGSTEN IN ALLOYING R18 STEEL AS A FUNCTION OF THE DURATION OF THE SMELTING PERIOD, OF THE TIME OF YEAR, AND OF THE DURATION OF R18 SCRAP REMELTING. FACILITY: DNEPROPETROVSK METALLURGICAL INSTITUTE.

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Steels

USSR UDC 669.187.2:669.046.548.2

CHUYKO, N. M., GASIK, M. I., ZAOZERNYY, N. T., PARKHOMENKO, G. P., Dnepropetrovsk Metallurgical Institute

"Alloy Element Waste in High-Speed Steel Melts"

Moscow, Metallurg., No 5, May 70, pp 22-24

Abstract: The alloying of high-speed steel in electric-arc furnaces is accompanied by substantial losses of such alloying elements as tungsten, vanadium, and chromium. The purpose of this article is to clarify the basic causes of increasing losses in tungsten and other alloying elements during the electric-arc process. In the course of this study, a statistical analysis was made of 479 alloys of R18, R12, and R9 steel at an unidentified plant in 1968. The melts were made in furnaces with capacities of 7.5 and 17.5 tons. The R18 steel contained 50% high-speed steel scrap and the required quantity of ferrotungsten; the R12

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

CHUYKO, N. M., et al., Metallurg., No 5, May 70, pp 22-24

and R9 steels were obtained by remelting the scrap. The statistics showed that the tungsten loss was from 8 to 13%, the vanadium loss 18-28%, and the chromium loss about 13%. An accompanying table shows the losses for each element in percentage, kilograms per meter, and rubles per meter for the three steel types. There is also a table giving the results of R18 smelting in a 7.5-ton capacity arc furnace. Finally, there are three curves showing the loss of tungsten in alloying R18 steel as a function of the duration of the smelting period, of the time of year, and of the duration of R18 scrap remelting.

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UDC 669.295.054.79

USSR

ANTIPIN, L. N., DROZDENKO, V. A., KOYGUSHSKIY, N. N., OLESOV, Yu. G., USTINOV, V. S., ZAPADNYA, V. I., VOLYNSKIY, V. V., and KALUZHSKAYA, E. L.

"The Technology for Obtaining Powders by the Electrolysis Method for Liquid Metals With a Soluble Anode"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 85-89

Translation: A technological chart for producing powders of titanium and its alloys by the electrolysis method with a soluble anode is worked out. Opitmal technological conditions for obtaining powders by electrolysis are selected. The chart has been adopted for introduction. The titanium powders obtained do not differ, in impurity content, from the best grades of titanium sponge. The effect of electrolyte temperature on the qualities of the metal obtained and the chlorine content in it are studied. The metal obtained is undergoing testing by users. Two illustrations, two tables, and two bibliographic entries.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

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UDC: 621.762.274:669.295.5'71

OLESOV, YU.G., MEYERSON, G.A., USTINOV, V.S., ZAPADNYA, V.I., SINYAYEVA, N.P., and CHERKASHIN, V.I.

"Electrolytic Derivation of Titanium-Based Alloy Powders"

Moscow, Tsvetnyye Metally, No 5, May 70, pp 79-81

Abstract: Investigations were made of the possibility of obtaining titanium-alloy powders by electrolysis of melts with a soluble anode. Titanium-aluminum alloys were used as examples. The first experiments were conducted on a large laboratory electrolyzer (current up to 300 amps). A mixture of A5-aluminum and ChM-titanium sponge wastes was used as the anode material. Aluminum content in the charge was varied from 10 to 40%. The cathodic deposits were processed by a hydrometallurgical method, separated into four fractions: +0.56, -0.56 + 0.14, -0.14 + 0.07 and -0.07 mm, and analyzed for Al, Fe, Si, C, N, and O content. On the basis literature data and the investigations conducted, optimum conditions were determined: anode current density of 0.1-0.15 amp/cm^2, cathode current density of 0.8-1 amp/cm^2, and electrolyte composed of 40% $MgCl_2$, 35% KCl, and 25% NaCl containing 1-1.5% dissolved titanium in the form of lower chlorides. Subsequent investigations were conducted under plant conditions. After hydrometallurgical processing and drying, the cathode material was separated into +0.5, -0.5 + 0.08, and -0.08 mm fractions. It was established that with a rise in the aluminum

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

OLESOV, YU.G., et al, Tsvetnyye Metally, No 5, May 70, pp 79-81

content in the starting material, the yield of fine particles grows. As a result of the experiments conducted, the basic technological parameters of obtaining titanium-aluminum powders in existing electrolyzers were determined: cell current of 3-3.5 kiloamperes, anode current density of 0.2-0.25 amp/cm^2, 1-1.5% soluble titanium concentration in an $MgCl_2$ -- KCl -- NaCl -- $TiCl_x$ electrolyte, working temperature of the melt at 550-580°C, and unit electrolysis time at 2-3 hours. These parameters ensure a stable current efficiency of 0.45-0.50 g/amp·hr and an 80-85% yield of metal powder fractions after disintegration. The data obtained from the experiments indicate that by electrolysis of melts with a soluble anode, it is possible to obtain powders from titanium-aluminum alloys of determined composition which possess adequately high mechanical properties in the baked state.

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UDC 621.762.2

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ANTIPIN, L. N., DROZDENKO, V. A., KOYGUSHSKIY, N. N., OLESOV, YU. G., USTINOV, V. S., ZAPADNYA, V. I., VOLYNSKIY, V. V., and KALUSHSKAYA, E. L.

"Technology of Production of Powders by Electrolysis of Melts With Soluble Anode"

Sb. tr. Vses. n.-i. i proyektn. in-t titana [Collected Works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, pp. 85-89, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No.1 G456 by the authors).

Translation: A technological plan is developed for the production of Ti and titanium alloy powders by electrolysis with a soluble anode. The optimal technological mode is selected for electrolytic powder production. The plan has been accepted for use. The Ti powders produced are equal in impurity content to the best types of Ti sponge. The influence of electrolyte temperature on properties of the Ti produced and on content of Cl is studied. The Ti produced has passed consumers' tests. 2 figures; 2 tables.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC: 669.295-492

USTINOV, V. S., LOBANOV, V. S., OLESOV, Yu. G., KANYUK, A. I., and ZAPADNYA, V. I.

"Technical-Economic Problems and Prospects in the Development of Titanium Powder Metallurgy"

Moscow, , Tsvetnyye Metally, No 8, Aug 70, pp 73-76

Abstract: The factor which has prevented the wide use of titanium has been the high cost of parts made from castings of the metal. In the industrial production of such parts and semi-finished products from titanium castings, 70-80% of the furnace charge is waste. Nor can the waste be reprocessed to bring it up to standard. However, the metal-ceramic method of producing such parts lends itself readily to automation, and the waste is less than 25% of the weight of the finished part. Thus, the economy in materials and labor is reflected in a substantial reduction of the production costs. One metallurgical plant (unidentified) has a method for recovering titanium dioxide with calcium hydride. The titanium powder then obtained, with a grain size of less than 40 microns, contains 0.2-0.3% H, 0.04-0.07 C, 0.05-0.08 Ca, 0.2-0.35 of Fe and Ni, 0.006 Cl, 0.2-0.25 O. The powder is used in

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USTINOV, V. S., et al., Tsvetnyye Metally, No 8, Aug 70, pp 73-76

electronics production as a getter, for the production of porous filters, and other products. Such products, however, suffer from poor mechanical properties because of the high content of impurities. Hydrogenation is a likely method of titanium powder production. The resulting powder is large-grained, but can be broken down to any desired size. Its wastes can be reprocessed on a large laboratory scale. Electrolysis of titanium production wastes with a soluble anode is also a promising method for obtaining titanium powder. The quality of the powder is good and the process is adaptable to industrial conditions of production. The authors present the results of computations they have made of the anticipated production costs of these methods.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC 669.295-492.8

VOROB'YEV, B. YA., OLESOV, YU. G., USTINOV, V. S., PETRUN'KO, A. N., KONOVALOV, V. K., and ZAPADNYA, V. I.

"Assembly-Line Manufacture of Construction Parts From Titanium Powder by the Metal-Ceramic Process"

Moscow, Tsvetnyye Metally, No 7, Jul 70, pp 65-66

Abstract: The titanium powder discussed in this article is made from reworking the wastes formed in the production of parts and semi-finished titanium materials by an electrolytic refining process. The article describes the metal-ceramic method by which the powder is first pressed into bricks and baked in a vacuum at 1100° C. The materials for the finished parts is then pressed on P-472, P-474, and D-2334 hydraulic equipment with a force of 100-250 tons, used normally for the production of plastic parts. The process for producing the finished parts is described and the hourly rates for making disks, rings, and flanges 57 mm in diameter and 12-15 mm high, are specified. The article is illustrated with a cross-sectional sketch of the modernized EVT-15 vacuum oven in which the parts are baked before finishing. Dimensions of the oven are given in this sketch,

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VOROB'YEV, B. YA., et al., Tsvetnyye Metally, No 7, Jul 70, pp 65-66

and the various parts identified. A photograph of some of the parts manufactured by the metal-ceramic process is also shown.

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UNCLASSIFIED PROCESSING DATE--30OCT70

1/2 016

TITLE--COMBINING OF VITAMINS WITH OTHER DRUGS IN GERIATRIC PRACTICE -U-

AUTHOR--ZAPADNYUK, V.I.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 4, PP 90-94

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GERIATRICS, DRUG TREATMENT, VITAMIN, ALKALOID, ACTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1606 STEP NO--UR/0475/70/000/004/0090/0094

CIRC ACCESSION NO--AP0127097

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127097

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMBINATION OF DIPHENINE WITH VITAMINS B SUB1, B SUB2, B AND STROPHANTHINE WITH VITAMIN B SUB6 INCREASED PHARACOLOGICAL ACTIVITY AND REDUCED TOXICITY OF THE PREPARATIONS. PRELIMINARY COURSES OF POLYVITAMIN PREPARATIONS NORMALIZED THE REACTION OF OLD ANIMALS TO ADMINISTRATION OF AMIZYL, ACTH, HEXENAL, STROPHANTHINE. EXPERIMENTAL DATA INDICATE THE EXPEDIENCE OF PREPARING OLD PATIENTS TO DRUG TREATMETN BY PRELIMINARY ADMINISTRATION OF POLYVITAMIN PREPARATIONS. FACILITY: INSTITUTA GERONTOLOGII AMN SSSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 018 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--THE INFLUENCE OF NICOTINE ON THE ORIGIN OF AUDIOGENIC CONVULSIONS IN ANIMALS OF DIFFERENT AGE -U-

AUTHOR--ZAKHARIYA, YE.A., ZAPADNYUK, V.I.

COUNTRY OF INFO--USSR

SOURCE--BYUULLETIN'EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 3, PP 24-25

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RAT, MOUSE, ACOUSTIC EFFECT, DRUG EFFECT, AKLALOID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/0947 STEP NO--UR/0219/70/069/003/0024/0025

CIRC ACCESSION NO--AP0052281

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2/2 018 UNCLASSIFIED

CIRC ACCESSION NO--AP0052281 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN RATS AND MICE NICOTINE INCREASES THE CONVULSIVE RESPONSE, THIS LEADING TO INTENSIFICATION AND ACCELERATION OF AUDIOGENIC CONVULSIONS. THE DEGREE OF MARKEDNESS OF CONVULSIVE RESPONSE WAS MOST PRONOUNCED IN YOUNG AND IMMATURE AND OLD RATS AND MICE. GUINEA PIGS ARE RESISTANT TO THE EFFECT OF SOUND STIMULI.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECT OF DOSATED PHYSICAL EXERCISE ON MYOCARDIAL FUNCTION IN CORONARY INSUFFICIENCY IN PATIENTS OF DIFFERENT AGE -U-

AUTHOR-(03)-SAKHARCHUK, I.I., ZAPESOCHNYY, A.Z., PARKHOTIK, I.I.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 4, PP 55-58

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HEART DISEASE, EXERCISE, CORONARY BLOOD CIRCULATION, CARDIOVASCULAR SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1956 STEP NO--UR/0475/70/000/004/0055/0058

CIRC ACCESSION NO--AP0127357

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2/2 017 UNCLASSIFIED PROCESSING DATE--30OCT7(

CIRC ACCESSION NO--AP0127357

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY OF 82 PATIENTS WITH MYOCARDIAL INFARCTION AND POSTINFARCTION CARDIOSCLEROSIS INDICATES THAT ADEQUATELY CHOSEN AND DOSATED PHYSICAL EXERCISE EXERTS A FAVOURABLE EFFECT ON THE CORONARY BLOOD CIRCULATION AND CONTRACTILE CAPACITY OF THE MYOCARDIUM. TIMING OF EXERCISE THERAPY AND TOTAL DOSE OF PHYSICAL LOADS SHOULD BE STRICTLY INDIVIDUAL DEPENDING ON THE CLINICAL PICTURE AND PERIOD OF INFARCTION. THE RESPONSE OF THE CARDIOVASCULAR SYSTEM TO PHYSICAL LOADS SHOULD BE REGULARLY CONTROLLED BY MEANS OF FUNCTIONAL TESTS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Acc. Nr: AP0043764

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 3, pp 810-816

ABSOLUTE MEASUREMENTS OF THE EXCITATION FUNCTIONS FOR KII LINES PRODUCED IN COLLISIONS BETWEEN K⁺ IONS AND HE ATOMS

Pop, S. S.; Krivskiy, I. Yu.; Zapesochnyy, I. P.; Baletskaya, M. V.

The absolute course of the excitation functions for the K II spectral lines $\lambda =$ $= 3897.9$; 4134.7; 4149.2; 4186.2; 4222.9 + 4225.7; 4263; 4305 + 4309.1; 4388.2; 4608.5 + + 4595.6 and 4829.2 Å and also for the He I line $\lambda = 5875.6$ Å is measured for ion energies between 0.5 and 34 keV. The excitation functions for the K II lines have two peaks. Qualitatively the course of the excitation functions is the same for all K II lines studied. The maximal values of the excitation cross sections of the K II lines investigated vary between $0{,}25 \cdot 10^{-18}$ and $2.9 \cdot 10^{-18}$ cm² whereas the maximal value of the total excitation cross section for all measured lines in the visible range of the spectrum is $1.4 \cdot 10^{-17}$ cm². The theoretical curves calculated by the Landau — Ziner formula satisfactorily agree with the experimental curves.

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REEL/FRAME 19770171

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USSR

ZAPEVALOV, P. P., and GORBUNOV, A. T.

"Study of Emulsification of Liquids by Ultrasound"

Nauch. Tr. Omsk. S-Kh. In-t., [Scientific Works of Omsk Agricultural Institute] No 84, 1971, pp 118-128 (Translated from Referativnyy Zhurnal Khimiya, No 5, Moscow, 1972, Abstract No 5N681 by I. P.)

Translation: The influence of emulsification conditions of 2,4-D butyl ester (I) using a magnetostriction US oscillation radiator was studied. Introduction of OP-7 $\geq$ 3% to I allows the production of a stable emulsion with a concentration of the dispersed phase of $\leq$ 15%. However, magnetostriction radiator installations are cumbersome, require much power and have a low productivity (0.1-1.0 m^3/hr) and cannot be installed on mobile equipment and in aircraft.

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USSR

ZAPEVALOV, P. P., and GORBUNOV, A. T.

"Study of Emulsification of Liquids by Ultrasound"

Nauch. Tr. Omsk. S-Kh. In-t., [Scientific Works of Omsk Agricultural Institute] No 84, 1971, pp 118-128 (Translated from Referativnyy Zhurnal Khimiya, No 5, Moscow, 1972, Abstract No 5N681 by I. P.)

Translation: The influence of emulsification conditions of 2,4-D butyl ester (I) using a magnetostriction US oscillation radiator was studied. Introduction of OP-7 $\geq$ 3% to I allows the production of a stable emulsion with a concentration of the dispersed phase of $\leq$ 15%. However, magnetostriction radiator installations are cumbersome, require much power and have a low productivity (0.1-1.0 m^3/hr) and cannot be installed on mobile equipment and in aircraft.

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USSR

ZAPEVALOV, P. P.

"Theory and Practice of Homogenization of Emulsified Liquids by Spraying the Phase into a Medium"

Nauch. Tr. Omsk. S-Kh. In-t. [Scientific Works of Omsk Agricultural Institute], No 84, 1971, pp 112-117. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4N692 by T. A. Belyayeva).

Translation: It is established that a high quality emulsion can be achieved at significantly lower spray pressure by spraying the phase into a medium repeatedly (for emulsification of herbicides). The total quality of emulsified substance $G_x=G_0(1-x)^{0.75K}$, where G_0 is the total quantity of dispersed phase, x is the share of emulsified material in one pass, K is the number of passes. With 3 to 5 passes of the emulsion, the spray pressure can be reduced by 3 to 5 times in comparison to the pressure of a single spraying operation. The maximum possible number of passes is 3-5. A diagram of the installation used is presented.

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ZAPEVALOV, P. P.; MILASHCHENKO, N. Z., PADZINOVSKIY, I. P., GORTLEVSKIY, A. A., NARINCHENKO, M. Z., YAKOVLEVA, L. I., YEMEL'YANOV, I. M.

"Results of Field Testing of Various Emulsions and Forms of 2, 4-D Butylester"

Nauch. Tr. Omsk. S-Kh. In-t. [Scientific Works of Omsk Agricultural Institute], No 84, 1971, pp 129-131. (Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract No 4N693 by T. A. Belyayeva).

Translation: In 1969, experiments were performed to compare the technical effectiveness of various 2, 4-D emulsions under field conditions when sprayed from the air (dose 0.4 kg/ha). Products used were: 1. 2,4-D -- technical preparate +1% OP-10 emulsifier; preparation of the emulsion was by spraying the preparate into water; 2. 2,4-D -- technical preparate +3% OP-10, spraying method; 3. 2,4-D -- "A" form (60% 2,4-D butylester, 20% OP-7, 20% diesel fuel); 4. 2,4-D type "B" (60, 10 and 30 % respectively); 5. 2, 4-D -- "C" form (60, 5 and 35 % respectively); 6. 2,4-D -- technical preparate. The effects of the herbicide were evaluated on the basis of the quantity and weight of perennial weed shoots and the wheat harvest. Versions 1 and 2 give the best results.

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USSR

ZAPEVALOV, P. P.

"Analysis of Forms of Herbicides and Methods of Their Application to Fields"

Nauch. tr. Omsk. S.-kh. In-t [Scientific Works of Omsk Agricultural Institute], Vol 84, 1971, pp 80-88 (Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No 3 N672 by T. A. Belyayeva).

Translation: Known methods of applying herbicides insoluble in water (without emulsifiers and solvents) are analyzed. A diagram is presented of an installation for emulsification of herbicides before applying them to fields by a spraying method, based on continuous and direct spraying of one liquid into another under pressure. The emulsion produced does not lose its qualities for several hours. This method is economically effective, allows the preparate to be sprayed evenly over the field and decreases loss resulting from loading of emulsion drops.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 007 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--THE SINGULAR AIM -U-

AUTHOR--ZAPISOV, M.

COUNTRY OF INFO--USSR

SOURCE--SOTSIALISTICHESKAYA INDUSTRIYA, AUGUST 5, 1970, P 2, COLS 1-4

DATE PUBLISHED--05AUG70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--POWER PHYSICS INSTITUTE, ELECTRIC INDUSTRY, POLYTECHNICAL INSTITUTE, ELECTRIC EQUIPMENT PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1893 STEP NO--UR/0533/70/000/000/0002/0002

CIRC ACCESSION NO--AN0125495

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 007 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AN0125495

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR REVIEWS THE ACTIVITIES OF THE "ELECTRO APPARAT" CORPORATION. THE CORPORATION, WHICH CONSISTS OF A RESEARCH INSTITUTE, A DESIGN PLANNING AND TECHNOLOGICAL INSTITUTE, AND A PLANT, WAS FORMED BY THE MINISTRY OF ELECTROTECHNICAL INDUSTRY. ITS RESPONSIBILITIES INCLUDE RESEARCH AND DEVELOPMENT OF NEW HIGH VOLTAGE APPARATUS, FABRICATION OF INDUSTRIAL MODELS, AND THE DEVELOPMENT OF TECHNOLOGIES. THE ELEKTROAPPARAT IS ALSO RESPONSIBLE FOR THE TECHNICAL QUALITY OF GENERATOR AND LINEAR SWITCHES, TRANSFORMERS WITH CAST AND AIR INSULATION, AND HIGH VOLTAGE DEVICES FOR DC POWER LINES. THE CORPORATION HAS STRONG TIES WITH THE LENINGRAD POLYTECHNIC INSTITUTE, THE ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF SYNTHETIC RUBBER VNIISK, AND SCIENTIFIC RESEARCH INSTITUTE FOR DIRECT CURRENT.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC 615.371:576.851.45].036.8:612.112.9

DURIKHIN, K. V. and ZAPLATINA, S. I., Rostov-Na-Donu Antiplague Institute

"Some Characteristics of the Plasmacyte Reaction in Macaca Rhesus Monkeys Vaccinated With Live Plague Vaccine (Strain EV)"

Moscow, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, Vol 48, No 6, Jun 71, pp 135-140

Abstract: Macaca rhesus monkeys vaccinated enterally with live plague vaccine stain EV were used to determine the feasibility of using the plasmacyte reaction as one of the criteria of immunological rearrangement. The animals were immunized with a bacterial suspension prepared from lyophilized EV vaccine, or the same strain washed from an agar culture in physiological solution. The immunizing dose of the preparation was 100 billion cells. Lymph smears obtained from mesenteric and inguinal lymph nodes and the number of young and differentiated cells of the plasmacyte series were counted. At the same time the antibody level was determined in the passive hemagglutination reaction. Studies showed that one of the characteristics of the plasmacyte reaction to immunization with plague vaccine is the predominance of small differentiated forms of cells of the plasmacyte series. There is no relationship between the

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

DURIKHIN, K. V., et al, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, Vol 48, No 6, Jun 71, pp 135-140

number of plasma cells in the lymph nodes of vaccinated animals and the level of serum antibodies indicating the nonspecific character of the cytological criterion. The newly proposed method of evaluating the extent of proliferation of cellular elements of the plasmacyte series maybe used to assess the dynamics of serum antibody production. The currently used method of assessing the results of a plasmacyte reaction on the basis of the number of plasma cells is questioned.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR UDC: 616.981.452-092.9-085.371-091

TERNOVOY, V.I., ZAPLATINA, S.I., KHOKHLOVA, A.I., and ROZHKOVA, G.F., Rostov-na-Donu Scientific Research Antiplague Institute

"Morphological Shifts in Guinea Pigs Following Enteral Immunization With EV Plague Vaccine"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 2, 1970, pp 18-21

Abstract: Enteral inoculation of guinea pigs with EV plague vaccine (250 million and 20 billion microbial cells) stimulated the proliferation of reticuloendothelial elements in the mesenteric lymph nodes, with the formation of epithelial cell granulomas, a distinct macrophage reaction, and the appearance of numerous pyroninophilic cells. These shifts were less pronounced in the spleen and absent in the remote lymph nodes. Productive lymphadenitis and formation of microscopic granulomas (with central necrosis) developed in the acute stage of the vaccinal process, especially after the 20 billion cell dose was used, but disappeared within 18 days of immunization.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Acc. Nr: AP0043935 Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, 1970, Nr 2, pp 18-21

MORPHOLOGICAL CHANGES IN GUINEA PIGS IN ENTERAL IMMUNIZATION WITH PLAGUE EV VACCINE

V. I. Ternovoy, S. I. Zaplatina, A. I. Khokhlova, G. F. Rozhkova

The authors studied the structural changes in the organism of guinea pigs enterally immunized with plague EV vaccine in a dose of 250 million and 20 milliard microbial cells. Immunomorphological changes in the form of proliferation of lymphoidal and reticular tissues with formation of epithelioido-cellular granulomas, macrophagic reaction and hyperplasia of pyroninophilic elements developed in the mesenteric lymph nodes. Changes in the spleen and remote lymph nodes were insignificant. Productive mesenterial lymphadenitis with granulomatosis resolved by the 18th day from the time of immunization of guinea pigs, even when massive doses were used.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 026 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--SOME INDICES OF THE ORGANISM FUNCTIONAL STATE DURING DROWNING AND REANIMATION -U-

AUTHOR-(04)-SOKOLYANSKIY, I.F., GERYA, YU.F., ZAPLATKINA, A.I., YANKOVSKIY, V.D.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHNIY ZHURNAL, 1970, VOL 16, NR 3, PP 326-329

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DROWNING, RESUSCITATION, BODY TEMPERATURE, BLOOD PRESSURE, CLINICAL DEATH, BLOOD TRANSFUSION, ACIDOSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1352 STEP NO--UR/0238/70/016/003/0326/0329

CIRC ACCESSION NO--AP0115327

UNCLASSIFIED

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CIRC ACCESSION NO--AP0115327 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CHANGES WERE TRACED OF OXYGEN TENSION IN ARTERIAL BLOOD AND SKELETAL MUSCLE, OF BLOOD PRESSURE, RESPIRATION, BODY TEMPERATURE CONCENTRATION OF THE HYDROGEN IONS IN BLOOD AND OTHER INDICES OF THE ORGANISM FUNCTIONAL STATE DURING THE DROWNING OF DOGS IN SALT WATER AND THEIR FOLLOWING REANIMATION. CLINICAL DEATH, COMING FROM THE LAST MOVEMENT OF THE THORAX, LASTED FROM 9 MIN 36 SEC UP TO 21 MIN. REANIMATION OF THE DROWNED ANIMALS WAS CARRIED OUT BY THE METHOD OF ARTIFICIAL BLOOD CIRCULATION ACCORDING TO S. S. BRYUKHONENKO OR ACCORDING TO A VARIANT OF THIS METHOD, USING A PUMP OF AUTOJECTOR AND A DONOR (LIVING ORGANISM). THE DIFFERENCE IS SHOWN IN THE DYNAMICS OF PO SUB2 CHANGES IN ARTERIAL BLOOD AND SKELETAL MUSCLE. IT DECREASES IN BLOOD QUICKER THAN IN THE MUSCLE WHEN SUBMERGING AN ANIMAL INTO WATER, AT THE SAME TIME DURING REANIMATION, AFTER PROLONGED CLINICAL DEATH, PO SUB2 IN THE SKELETAL MUSCLE REACHES CONSIDERABLE VALUES WITH RECOVERY OF RESPIRATION AND HEART ACTIVITY, IF THE BLOOD FLOW RATE IS HIGHER THAN 100 ML-KG-MIN. DATA ARE OBTAINED EVIDENCING FOR A RELATIVELY QUICK LIQUIDATION OF BLOOD ACIDOSIS, AS WELL AS FOR THERMOGENESIS INTENSIFICATION. AFTER SWITCHING OFF THE EXTRACORPORAL BLOOD CIRCULATION, AS A RULE THE FREE OXYGEN CONCENTRATION IN THE MUSCLE DROPS. IT MIGHT BE A REASON FOR PUTTING THE REANIMATED ANIMALS INTO CONDITIONS OF THE ELEVATED OXYGEN PRESSURE.

FACILITY: DEPARTMENT OF PATHOLOGY OF HYPO AND PYPEROXY, THE A. A. BOGOMOLETZ INSTITUTE OF PHYSIOLOGY, ACADEMY OF SCIENCES, UKRAINIAN SSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC: 518.5:681.3.06

ZAPLETIN, P. P., CHERNOV, O. A.

"A Program for 'Nairi' Computer Realization of Selection of the Optimum Size of Industrial Enterprises"

Tr. Seminara po teorii ustoychivosti dvizheniya. Kazakhsk. gos. ped. in-t (Works of the Seminar on Motion Stability Theory. Kazakh State Pedagogical Institute), 1970, vyp. 3, pp 77-80 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V776)

[No abstract]

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC 539.184.01

ZAPOL', B. P., KUNIN, P. YE., and TAKSAR, I. M., Latvian Order of the Red Banner of Labor State University imeni P. Stuchka

"Effective Potential Method for Computation of Quantum Systems. II. Nonrelativistic Wave Functions and Eigenvalues"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR, Seriya Fizicheskikh i Tekhnicheskikh Nauk, No 6, 1971, pp 20-25

Abstract: The article gives a detailed description of a new calculation technique using the effective potential method, discussed in an earlier article by the authors. The fundamental principle of the method is as follows: For calculating wave functions of an optical electron in an alkali metal atom in a good approximation, it can be considered that its states are defined by some effective field so that the problem reduces to a one-electron problem. The effective potential of this field in the effective potential method is found from ordinary physical considerations and from the condition for the best coincidence between the eigenvalue spectrum of the electron energy in the effective potential and the experimental energy spectrum. The method is based

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USSR

ZAPOL', B. P., et al., Izvestiya Akademii Nauk Latviyskoy SSR, Seriya Fizicheskikh i Tekhnicheskikh Nauk, No 6, 1971, pp 20-25

on the physical assumption that the small difference of the energy spectra for two different potentials over the entire energy range also entails the small difference of wave functions. The validity of this assumption was confirmed by the results of the authors' previous article. The fundamental difference between the effective potential method and semiempirical methods is the use of eigenfunctions of the electron in the effective potential, which is the same for all states and assures the best coincidence between the eigenvalue spectrum and the experimental spectrum.

The calculation procedure is considered, with the effective potential sought in the following form (atomic units are used in the article):

$$U(r) = -(A_i/r) - G_i \text{ for } r_i < r < r_{i+1};$$
$$i = 1, 2, \ldots, m; \quad r_0 = 0; \quad r_{m+1} = \infty;$$

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ZAPOL', B. P., et al., Izvestiya Akademii Nauk Latviyskoy SSR, Seriya Fizicheskikh i Tekhnicheskikh Nauk, No 6, 1971, pp 20-25

where $A_0 = Z$, $A_m = K$, $G_m = 0$; while the remaining A_i, G_i, and r_i are free parameters to be determined from the condition for the best coincidence between the theoretically found and the experimental spectrum. Eigenvalues and analytic eigenfunctions are given for a series of Na and Rb states.

An appendix suggests a new method for calculating Whittaker functions.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Radiobiology

USSR

UDC 612.014.482

ZAPOL'SKAYA, N. A.; FEDOROVA, A. V.; LAVRENT'YEV, L. N.; Leningrad Scientific Research Institute of Radiation Hygiene, Ministry of Health RSFSR

"Long-Term Effects of Combined Exposure to External and Internal Radiation Sources"

Moscow, Gigiyena i Sanitariya, No 7, 1971, pp 53-57

Abstract: One group of rats was irradiated with x-rays, two others were given a misture of radionuclides consisting of alkali earth and rare earth elements, two others were given the same isotopes after single external irradiation, and a sixth group was used as controls. Those animals exposed to both external and internal radiation died sooner and in greater numbers than those exposed to either radiation factor separately. The irradiated and control animals eventually died of the same diseases, but owing to lowered general resistance, the experimental animals became sick much more often and earlier. There was a definite relationship between the total absorbed dose,

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USSR

ZAPOL'SKAYA, N. A., et al, Gigiyena i Sanitariya, No 7, 1971, pp 53-57

the type of radiation, and the development of malignant neoplasms. Malignant neoplasms appeared chiefly in animals exposed to the combined radiation and in those that received a single mixture of isotopes with an initial activity of 20 microcuries. If the total dose from internal radiation sources was higher than that from external sources, the nature of the long-term effects was determined by the internal dose.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC: 669.71.053.4.067

LIKHODED, A. D., ZAPOL'SKIY, A. K., SAZHIN, V. S.

"Separation of Pulp After Roasting of Alunite Ores with Sulfuric Acid"

Vopr. Khimii i Khim. Tekhnol. Resp. Mezhved. Temat. Nauch.-Tekhn. Sb. [Problems of Chemistry and Chemical Technology. Republic Interdepartmental Thematic Scientific and Technical Collection], 1973, No 28, pp 141-150 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G161, by G. Svodtseva).

Translation: The process of agglomeration of pulp after leaching of alunite cake roasted at 300° with full dosing of H_2SO_4 is studied. As the temperature is varied from 80 to 96°, the settling rate is increased by 6.2 times, the degree of clarification of the solution -- by 2.6 times. When the L:S ratio in the pulp is changed from 4.4:1 to 15.8:1, the settling rate increases from 0.035 to 1.59 m/hr, while the quantity of solids in the clarified layer decreases from 12.89 at L:S = 4.4:1 to 0.82 g/l at L:S = 15.8:1. When 18 mg/dm^2 polyacrylamide is introduced to the pulp, the settling rate increases by 1.8 times, the quantity of solids in the clarified layer decreases by 5.1 times. The optimal filtration conditions are L:S = 12.1:1, temperature 96°, thickness of layer of sediment on filter 5 mm, polyacrylamide 18 mg/dm^3.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC: 681.325.5

GAVRILOV, V. S., GORNOSTAYEV, V. N., ZAPOL'SKIY, B. A., SEROV, B. V.,
Karelian Scientific Research Institute of the Forestry Industry

"A Parallel Ring Register"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 20, Jul 72, Author's Certificate No 343305, Division G, filed 10 Mar 70, published 22 Jun 72, p 175

Translation: This Author's Certificate introduces a parallel ring register which contains n ring registers and AND and OR circuits. As a distinguishing feature of the patent, provision is made for changing the numbers in the register without loss of time on carry operations and the amount of equipment is reduced by introducing one single-place adder for every two inputs in each of the n registers. The carry output of each adder is connected to one of the inputs of the adder located in the next higher register and shifted relative to the adder of the lower register by one digit in the direction of motion of information in the register, and the input of the adder of the lower register is connected to the output of the AND circuit. One input of the AND circuit is connected to the input of the device, and the other is connected through the OR circuit to the input of one of the digital places of each of the n registers.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Stress Analysis and Stability Studies

USSR

UDC 624.074.4.042

ZAPOL'SKIY, N. N. (Kherson, Kherson Branch of the Odessa Tekhnological Institute)

"Experimental Investigation of Twisting Thin-Walled Shells of Variable Cross-Section"

Kiev, Academiya Nauk Ukr SSR. Prikladnaya Mekhanika, Vol 7, No 2, Feb 71, pp 105-110

Abstract: The results of an experimental investigation of twisting a thin-walled steel shell with elliptical end faces, two prismatoids, and one prism with trapezoidal cross-section, are presented. The shell end faces are in the shape of two nonsimilar ellipses, with the major axis of one parallel to the minor axis of the other. The experimental setup, presented schematically, and measuring techniques are described. Deformations were measured in 15 points at four cross-sections by strain gages. Angles of shell twist were measured by four clock type indicators. The measured stresses and angles of twist are presented in tables and discussed. Their comparison with theoretical data obtained by formulas derived by the author shows a good agreement. 8 formulas, 5 figures, 3 tables, 3 references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--PHASE DIAGRAM OF A POTASSIUM BOROHYDRIDE,POTASSIUM CHLORIDE,POTASSIUM BROMIDE SYSTEM -U-

AUTHOR-(03)-ZAPOLSKIY, S.V., TOLMACHEVA, L.N., MIKHEYEVA, V.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 840-2

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHASE DIAGRAM, SOLID SOLUTION, POTASSIUM BROMIDE, POTASSIUM CHLORIDE, BOROHYDRIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1715 STEP NO--UR/0078/70/015/003/0840/0842

CIRC ACCESSION NO--AP0115544

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0115544

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SOLIDUS DIAGRAM OF THE KBH SUB4-KCL-KBR SYSTEM IS CONSTRUCTED BY DETN. OF TWO CROSS SECTIONS OF KBH SUB4 AND 60:40 MOLE PERCENT KBR:KCL AND AT 50 MOLE PERCENT KBH SUB4. THE DATA ARE TABULATED. THE SYSTEM FORMS A CONTINUOUS SERIES OF SOLID SOLNS. WITH A SADDLE POINT AT 610DEGREES AND A REGION OF HIGH KBH SUB4 CONCN. FAICLITY: INST. OBSHCH. NEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 017 UNCLASSIFIED

TITLE--REACTION OF POTASSIUM BOROHYDRIDE WITH LITHIUM CHLORIDE -U- PROCESSING DATE--20NOV70

AUTHOR-(03)-ZAPOLSKIY, S.V., STERLYADKINA, Z.K., MIKHEYEVA, V.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 404-12

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMOGRAPHIC ANALYSIS, POTASSIUM COMPOUND, BOROHYDRIDE, LITHIUM CHLORIDE, SOLID SOLUTION, CRYSTALLIZATION, EUTECTIC MIXTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1707 STEP NO--UR/0078/70/015/002/0404/0412

CIRC ACCESSION NO--AP0115536

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0115536

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF KBH SUB4 WITH LICL WAS STUDIED THERMOGRAPHICALLY. THE REACTION STARTS AT 140DEGREES. THE MELTING DIAGRAM OF THE KBH SUB4-LICL-KCL-LIBH SUB4 SYSTEM WAS CONSTRUCTED. THE SYSTEM HAS A KCL-LICL EUTECTIC AT 350DEGREES AND HAS REGIONS OF SIMULTANEOUS CRYSTN. OF SOLID SOLNS. OF KBH SUB4-KCL AND LIBH SUB4-LICL SUB SYSTEMS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 022

UNCLASSIFIED

TITLE--SYNTHESIS OF ALUMINUM TETRAHYDROBORATE BY AN EXCHANGE REACTION OF ALUMINUM CHLORIDE WITH ALKALI METAL TETRAHYDROBORATES -U-

PROCESSING DATE--13NOV70

AUTHOR-(02)-MIKHEYEVA, V.I., ZAPOLSKIY, S.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 633-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, ALUMINUM CHLORIDE, MOLTEN CHLORIDE, ALKALI METAL COMPOUND, BORON COMPOUND, HYDRIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1870

STEP NO--UR/0078/70/015/003/0633/0637

CIRC ACCESSION NO--AP0115689

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 022 UNCLASSIFIED

CIRC ACCESSION NO--AP0115689 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AL(BH SUB4)SUB3 WAS PREPD. BY FUSING ALCL SUB3 WITH MBH SUB4 (M EQUALS K OR LI) OR WITH A LICL-45 MOLE PERCENT KBH SUB4 MELT. THE REACTION WAS PERFORMED IN DRY N ATM. AND THE PRODUCT WAS WASHED WITH C SUB6 H SUB6 (DRIED WITH LIH). ANY LEAK IN THE REACTION SYSTEM CAUSED AN EXPLOSION. THE REACTION WITH FUSED LICL-KBH SUB4 MIXT. IS ESP. CONVENIENT AND TAKES PLACE AT LOWER TEMPS. THAN A REACTION WITH MBH SUB4 WITHOUT A SOLVENT.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

UDC 621.384.664

USSR

GALYAYEV, N. A., GOLOVINA, N. I., GRACHEV, M. I., GRIDASOV, V. I., GUBRIYENKO, K. I., YEREMENKO, Ye. V., ZAPOL'SKIY, V. N., ZELENOV, B. A., KOTOV, V. I., KUZNETSOV, V. S., MERKER, E. A., MYZNIKOV, K. P., PUCHUGIN, V. A., PRILEPIN, A. A., SELEZNEV, V. S., SEREBRYAKOV, B. A., KHODYREV, Yu. S., and CHEPEGIN, V. N.

"Proton Beam With an Impulse of Up to 70 Gev/s Elastically Dispersed Inside a Target"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

Abstract: This paper discusses the operation of a channel built into the French liquid-hydrogen Mirabelle chamber for the accelerator of the Institute of High-Energy Physics (IFVE). The function of the channel is to form pure beams of pi and k mesons, and antiprotons, in a broad range of impulse magnitudes under the action of a high-frequency separator. The secondary particles are generated on the inside of a target placed in the path of a proton beam diverted from the accelerator with an energy of 70 Gev. By using a fast system for aiming the proton beam at the target, together with a kicker magnet in the channel, the required number of particles passing through the chamber can be provided. The optical system of the channel is described with the

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

GALYAYEV, N. A., et al., Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

aid of diagrams of two possible variants; the beam aiming system and the particle dosage for the bubble chamber are also explained. The authors thank R. M. Sulyayev, P. F. Yermolov, A. M. Moiseyev, M. I. Solov'yev, I. A. Danil'chenko, Ye. A. Parshin, V. M. Kolesnik, A. N. Aleyev, V. D. Rudko, and V. M. Gorshkov for their assistance.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC 537.311.33:546.289

KONOPLEVA, R.F., NOBIKOV, S.R., RUBINOVA, E.E., ZAPOROZHCHENKO, YU.A.

"Investigation Of Radiation Defects In Germanium With Irradiation By High Energy Protons"

V sb. Radiatsion. fiz. nemet. kristallov (Radiation Physics Of Nonmetal Crystals--Collection Of Works), Minsk, Nauka i tekhn., 1970, pp 106-111 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B25)

Translation: The results are presented of an investigation of the temperature dependence and spectral curves of the impurity photoconductivity for n-type Ge with an initial concentration of Sb of 2.10^{15} cm^{-3} and of p-type with a concentration of Ga of $4.10^{14} cm^{-3}$ irradiated by protons with an energy of 660 Mev with various integrated fluxes (from 1.10^{11} to 1.10^{14} r/cm^2). The initial rate of formation is determined for the defects, which for n- and p-Ge proved to be on the order of 10^2 cm^{-1}. The theoretical computation presented of the number of displaced atoms shows that the portion in the formation of defects as a result of Rutherford scattering is small. The number of displaced atoms owing to nuclear elastic and nonelastic interactions amount to 10^3 and 10^2 cm^{-1}, respectively. It is found that during irradiation, acceptor levels are primarily found in n- and p-type Ge. From the temperature dependence of the Hall constant and the spectral curves of the impurity photoconductivity, the eight levels pertaining to the radiation defects are determined (E_c - 0.1 e.v., E_c - 0.20 e.v., E_c - 0.27 e.v., E_c - 0.34 e.v., E_v + 0.27 e.v., E_v + 0.20 e.v., E_v + 0.12 e.v., E_v + 0.065 e.v.) 6 ill. 2 tab. 2 ref. Summary.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC 537.311.33:54[illegible]289

KONOPLEVA, R.F., NOBIKOV, S.R., RUBINOVA, E.E., ZAPOROZHCHENKO, YU.A.

"Investigation Of Radiation Defects In Germanium With Irradiation By High Energy Protons"

V sb. Radiatsion. fiz. nemet. kristallov (Radiation Physics Of Nonmetal Crystals--Collection Of Works), Minsk, Nauka i tekhn., 1970, pp 106-111 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B25)

Translation: The results are presented of an investigation of the temperature dependence and spectral curves of the impurity photoconductivity for n-type Ge with an initial concentration of Sb of 2.10^{15} cm^{-3} and of p-type with a concentration of Ga of $4.10^{14} cm^{-3}$ irradiated by protons with an energy of 660 Mev with various integrated fluxes (from 1.10^{11} to 1.10^{14} r/cm^2). The initial rate of formation is determined for the defects, which for n- and p-Ge proved to be on the order of 10^2 cm^{-1}. The theoretical computation presented of the number of displaced atoms shows that the portion in the formation of defects as a result of Rutherford scattering is small. The number of displaced atoms owing to nuclear elastic and nonelastic interactions amount to 10^3 and 10^2 cm^{-1}, respectively. It is found that during irradiation, acceptor levels are primarily found

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USSR

KONOPLEVA, R. F., et al., Radiatsion. fiz. nemet. kristallov, 1970, pp 106-111 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B25)

in n- and p-type Ge. From the temperature dependence of the Hall constant and the spectral curves of the impurity photoconductivity, the eight levels pertaining to the radiation defects are determined (E_c - 0.1 e.v., E_c - 0.20 e.v., E_c - 0.27 e.v., E_c - 0.34 e.v., E_v + 0.27 e.v., E_v + 0.20 e.v., E_v + 0.12 e.v., E_v + 0.065 e.v.) 6 ill. 2 tab. 2 ref. Summary.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC 621.822.002.3:621.762

YAS', D. S., OSVETIMSKIY, L. A., DYADENKO, N. S., ZAPOROZHETS, A. A., and BELENISOVA, N. A., Ukrainian Scientific Research Institute of the Textile Industry

"Copper-Graphite Materials with Additives of Graphite Granules Plated with Copper"

Kiev, Poroshkovaya metallurgiya, No 5, May 71, pp 70-75

Abstract: A new method for improving the antifriction properties of materials intended for operation under conditions of dry friction, for manufacturing sliding contacts and low-load sliding bearings, developed at the metal ceramics laboratory of the Ukrainian Scientific Research Institute of the Textile Industry was applied to obtain metal ceramic of copper-graphite material with additives of graphite granules plated with copper. The results, presented in graphs and photographs of microstructure of copper-graphite materials with various graphite content, show that the addition of copper-plated graphite reduces the material electric conductivity and increases its compression strength, and with 6% content the hardness and bending strength increase. Thus, for a material with 15 wt% content of plated graphite, hardness and compression and bending strength increase by 30, 80, and 100%, respectively, while

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

YAS', D. S., et al., Poroshkovaya metallurgiya, No 5, May 71, pp 70-75

the specific electric resistance and the dry friction coefficient decrease by 60 and 27%, respectively, in comparison with the same material with exposed graphite.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

KOBTSEV, Yu. D., VORONKOV, V. I., ZAPOROZHETS, L. F., Kiev Polytechnical Institute

UDC: 539.293

"Nonlinear Resistors -- Elastic Films"

Kiev, Poluprovodnikovaya Tekhnika i Mikroelektronika. Resp. Mezhved. Sb., No 7, 1972, pp 113-116

Abstract: A method is proposed for making nonlinear resistors in the form of elastic films. The nonlinear current-voltage curves for such resistors based on zinc oxide with a polyvinyl butyral binder are given. The characteristics of films at various ambient temperatures are studied, and it is found that their thermal stability is determined by the choice of organic binder, and that their resistance decreases with increasing temperature. The capacitance of the films is 50-60 $pF \cdot cm^{-2}$. The results of the studies showed that the film resistors can be used to good effect in electroluminescent matrix display panels for controlling brightness and contrast.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 034 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--EFFECT OF TEMPERATURE, ELECTRIC FIELD, AND ILLUMINATION ON THE ABSORPTION OF ULTRASOUND IN SBSI IN THE PHASE TRANSITION TEMPERATURE

AUTHOR-(05)-ZAPOROZHETS, O.I., LYAKHOVITSKAYA, V.A., PEKAR, S.I., POLOTSKIY, I.G., SILVESTROVA, I.M.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(2), 671-2

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ULTRASONIC ABSORPTION, THERMAL EFFECT, ELECTRIC FIELD, PHASE TRANSITION, TRANSITION TEMPERATURE, PARAELECTRIC MATERIAL, FERROELECTRIC MATERIAL, ILLUMINATION, IODIDE, SULFUR COMPOUND, ANTIMONY COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0061 STEP NO--UR/0181/70/012/002/0671/0672

CIRC ACCESSION NO--AP0105158

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

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UNCLASSIFIED

CIRC ACCESSION NO--AP0105158 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STUDY WAS MADE OF THE EFFECT OF TEMP., EXTERNAL STATIC ELEC. FIELD, AND ILLUMINATION ON ABSORPTION OF LONGITUDINAL ULTRASOUND VIBRATIONS IN SBSI CRYSTALS AT TEMPS. NEAR THE 1ST ORDER PHASE TRANSITION (SIMILAR TO 20DEGREES). THE DEPENDENCE IS GIVEN OF THE ABSORPTION COEFF. OF ULTRASOUND ON THE MAGNITUDE OF EXTERNAL ELEC. FIELD AT INITIAL TEMP. OF 17DEGREES AND AN ELEC. FIELD INCREASING AT 0.4 KV-MIN. THE ABSORPTION COEFF. INCREASES WITH INCREASING FIELD, PASSES THROUGH A MAX. AND STARTING WITH A FIELD OF 5 KV-CM, DECREASES. ILLUMINATION IN THE PRESENCE AND ABSENCE OF AN ELEC. FIELD DECREASES ABSORPTION BY LESS THAN 15PERCENT IN THE FERROELEC. PHASE AND HAS LITTLE EFFECT IN THE PARAELEC. PHASE.

FACILITY: INST. METALLOFIZ., KIEV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

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UDC 615.31:547.827

HANUSHCHAK, N. I., FIS'KO, G. T., MURYAK, V. S., KUCHER, V. I., NIKOLAYCHUK, N. A., KARLIKOVSKAYA, R. B., NEVSKAYA, T. L. and ZAPOROZHETS, Y. I.; Chernovtsy University

"Synthesis and Certain Biological Properties of Piperidine Derivatives"

Moscow, Khimiko-Farmitsevticheskiy Zhurnal, Vol 5, No 9, 1971, pp 8-14

Abstract: Piperidine derivatives have a wide range of biological action, and many of them are [illegible] in medical practice. However, the biological action depends largely upon the nature of the substitutes introduced, both at the nitrogen atom, and at the carbon atoms of the peridine ring. Meanwhile, those compounds substituted with fatty-aromatic radicals at the nitrogen atom which have multiple carbon-carbon bonds have been very little studied. The authors studied 23 members of this group to determine their biological action on test animals (cats, white rice), and to determine basic physicochemical properties. Increased toxicity, effect on blood pressure, and strengthened heart biocurrents were observed in many cases. Data obtained are summarized in tabular form.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Superalloys

USSR

UDC 669.14.018.45-13:621.771.0.14:539.374

GUN, G. YA., POLUKHIN, P. I., SKUGOREV, V. S., GALKIN, A. M., ZHUCHIN, V. N., ISAYEV, V. A., KARLOV, S. V., and ZAPOROZHTSEV, YU. V., Moscow Institute of Steel and Alloys

"Investigation of the Resistance to Deformation and the Indicators of Plasticity of Heat-Resistant Alloys on a Nickel Base"

Moscow, Izvestiya VUZ, Chernaya Metallurgiya, No 11, 1973, pp 92-97

Abstract: In this article the authors cite the results of an investigation on resistance to deformation of heat-resistant alloys EP199, EP220, and EI929 on a nickel base in wide temperature range and deformation rate. They have constructed curves for the change in the indicators of plasticity in a broad range of temperature-rate conditions of deformation.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

GUN, G. YA., et al., Izvestiya VUZ, Chernaya Metallurgiya, No 11, 1973, pp 92-97

The research was carried out because of the reality at the present time for knowledge of the behavior of materials with respect to resistance to deformation and indicators of plasticity in a range that varies broadly for the temperature and rate of deformation.

The first three illustrations depict curves of deformation resistance of the above alloys as a function of the size and amount of deformation at various temperatures. The fourth figure shows change in values of ψ and δ of these heat-resistant alloys as a function of temperature and rate of deformation.

The article contains four illustrations and 3 bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

VERBA, G. A., ZAPOTYL'KO, V. E.

"The Problem of Calculation of the Reliability of Multicycle Control Systems based on Logic Elements"

Teoriya Optimal'n. Resheniy [Theory of Optimal Solutions -- Collection of Works], Kiev, 1972, pp 14-19 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V332, by I. Kovalenko).

Translation: A model of reliability of a system with exponential distribution of time between failure of elements is studied. In calculating reliability, the possibility of various failure states is considered, but only in the binomial plan: only the fact of failure of an element within a given time interval is significant, not the actual moment of failure. The algorithm for calculation of reliability is run on the M-220 computer using the SLANG programming system.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ANNIVERSARY OF THE BIRTH OF VLADIMIR ILYICH LENIN -U-

AUTHOR--ZAPPE, A.

COUNTRY OF INFO--USSR

SOURCE--VERMESSUNGSTECHNIK, 1970, VOL 18, NR 3, PP 121-125

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEODESY, CARTOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0268 STEP NO--GE/0056/70/018/003/0121/0125

CIRC ACCESSION NO--AP0126040

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 018 UNCLASSIFIED

CIRC ACCESSION NO--AP0126040 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LENIN'S INFLUENCE ON THE DIRECTION AND DEVELOPMENT OF SOVIET GEODESY AND CARTOGRAPHY, HIGH STATE OF SOVIET SCIENCE IS AN EXAMPLE AS WELL AS A HELP FOR OUR OWN ACTIVITIES.

FACILITY: VERWALTUNG VERMESSUNGS UND KARTENWESEN.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Acc. Nr: AP0038687 Ref. Code: UR 0326

PRIMARY SOURCE: Fiziologiya Rasteniy, 1970, Vol 17, Nr 1, pp 49-53

PHYSIOLOGICAL ACTIVITY OF PHENOLIC COMPOUNDS EXTRACTED FROM APPLES

Surgucheva, M. P.; Smirnova, G. G.; Zaprometov, M. N.

Scientific Research Horticulture Institute of Nonchernozem Region, Moscow, and K. A. Timiriazev Institute of Plant Physiology, USSR Academy of Sciences, Moscow

The growth activity of (—) epicatechin, dimer of (—) epicatechin and leucocyanidin and also of quercitrin as the chief components of the phenolic complex isolated from green apples (Pepin Shafranny variety) was tested. Besides wheat coleoptiles, which are the classical object for physiological activity tests, sprouts of isolated embryos from stratified apple seeds were used. This permits one to study the effect of phenolic compounds on hypocotyl growth and root formation. The growth stimulation activity of apple phenolic compounds is not the same. Stimulation of growht of wheat coleoptiles by equimolar solutions of phenolic compounds did not exceed 38% over that in the control. One of the most oxidized flavonoids, flavonol quercitrin, stimulated growth of wheat coleoptiles to a greater extent than growth of apple shoots. The effect of phenolic compounds on growth of tissues of apple sprouts was greater, the stimulation exceeding 70%.

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REEL/FRAME 19731875

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Representatives of the most reduced flavonoid groups — (—) epicatechin and dimer of (—) epicatechin and leucocyanidin exhibited the highest activity. The problem of participation of phenolic compounds in regulation of growth processes is discussed.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--FUNGI ACCOMPANYING BACTERIA OXIDIZING MANGANESE -U-

AUTHOR--MIRCHINK, T.G., ZAPROMETOVA, K.M., ZVYAGINTSEV, O.G.

COUNTRY OF INFO--USSR

SOURCE--MIKROBIOLOGIYA, 1970, VOL 39, NR 2, PP 379-383

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FUNGUS, BACTERIV, BIOLOGIC OXIDATION, MANGANESE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/0371 STEP NO--UR/0220/70/039/002/0379/0383

CIRC ACCESSION NO--AP0100857

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 010 UNCLASSIFIED

CIRC ACCESSION NO--AP0100857 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WHILE USING SOIL AGAR, 21 FUNGAL STRAINS, GROWING WITH MICROORGANISMS OF THE METALLOGENIUM GENUS, WERE ISOLATED FROM TURF PODZOL SOIL OF THE MOSCOW AND NOVGOROD REGIONS AS WELL AS OF THE ESTONIAN SSR. THESE FUNGI WERE REPRESENTED BY THE FOLLOWING SPECIES: CONIOTHIRIUM FUCKELLI, SAC. MYCOGONE NIGRA (MORGAN) JENSEN, FUSARIUM KUHNI (FUCK) SAC., ALTERNARIA GEOPHILA OASZ., CEPHALOSPORIUM SP. AS WELL AS BY THE FORMS OF STERILE MYCELIUM. HENCE, NOT ONE FUNGAL SPECIES BUT SEVERAL CAN BE SATELLITES OF METALLOGENIUM. THESE ARE WELL KNOWN FORMS BUT WITH SOME PECULIARITIES DUE TO COEXISTANCE WITH METALLOGENIUM.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

KIRGIZOVA, T. M., and ZAPROMETOVA, L. V., of the Uzbek Scientific Research Institute of Epidemiology, Microbiology, and Infectious Diseases, and the Moscow Scientific Research Institute of Viral Preparations

"The State of Collective Immunity of the Population of the Cities of Bokhara and Samarkand to the Viruses Coxsackie A_9, Coxsackie B_3, $ECHO_9$ and $ECHO_{29}$"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 4, 1971, pp 34-39

Abstract: The presence of antibodies to the viruses Coxsackie A_9, Coxsackie B_3, $ECHO_9$ and $ECHO_{29}$ was established in the cities of Bokhara and Samarkand, proving the circulation of these viruses among the population of the two cities. The two strains of each of the two viruses, isolated in 1963-1966, had produced sporadic cases of aseptic serous meningitis, meninogoencephalitis, and poliomyelitis-type diseases recorded in Tashkent in 1963-1964. For both cities the most widespread were antibodies to $ECHO_9$ virus, and least widespread -- those to $ECHO_{29}$. Reliable fluctuations in the distribution of antibodies were revealed depending on the season of the year. The content of antibodies was highest in the sera of the adult population, and the lowest -- in the blood of children o to 3 years old. The mean geometric titers of antibodies for both cities were relatively low, from 2.64 to 0.02.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Acc. Nr: AP0043669 Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 2, pp 394-406

INVESTIGATION OF THE RADIATION SPECTRUM OF A LASER EMPLOYED AS A DETECTOR OF A DOPPLER SHIFTED SIGNAL

I. M. Belousova, O. B. Danilov, A. F. Zapryagayev, N. N. Rozanov

The radiation spectrum of a helium-neon laser subjected to the action of a signal reflected from a moving body is investigated. Stimulated generation arising on cessation of action of the external signal on the laser is observed.

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REEL/FRAME
19770073

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Acc. Nr: AP0047884 Abstracting Service: INTERNAT. AEROSPACE ABST. 5-70 Ref. Code: UR0057

A70-25123 # Experimental investigation of nonlinear processes in a laser employing a neon-helium gas mixture (Eksperimental'noe issledovanie nelineinykh protsessov v OKG na smesi gazov gelii-neon). I. M. Belousova, O. B. Danilov, and A. F. Zapriagaev. *Zhurnal Tekhnicheskoi Fiziki*, vol. 40, Feb. 1970, p. 405-407. In Russian.

Study of the spectrum and depth of modulation of laser emission in the case where the laser beam is reflected back into the resonator by a mirror moving along the direction of the beam. In this case, the laser power output is modulated at the Doppler frequency corresponding to the rate at which the mirror moves. It is found that the spectrum of the Doppler beats exhibits several harmonics whose intensity depends on the conditions under which the backward wave is reflected from the moving mirror. V.P.

REEL/FRAME
19791556

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

BELOUSOVA, I. M.; DANILOV, O. B.; ZAPRYAGAYEV, A. F.

"Experimental Study of Nonlinear Processes in Lasers Using a Mixture of Helium and Neon"

Leningrad, Journal of Technical Physics; February, 1970; pp 405-7

Δ Δ Δ

ABSTRACT: The article concerns an experimental study of the spectrum and modulation depth of laser radiation, with the return wave's being directed into the resonator by a moving reflector. The study indicates the presence of several harmonics in the spectrum of Doppler beats whose intensity depends on the conditions of the return of the radiation from the moving reflector inside the resonator. The effect of generating forced oscillations in a laser with a fixed reflector is observed.

The article includes a table and two figures. There are three references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

BELOUSOVA, I. M., DANILOV, O. B., ZAPRYAGAYEV, A. F., and ROZANOV, N. N.

"Study of the Radiation Spectrum of a Laser Used as Receiver of a Signal With a Doppler Shift"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 58, No 2, Feb 70, pp 394-406

Abstract: The article describes results of a study of the radiation spectrum of a helium-neon laser which is acted on by a signal reflected from a moving object (a mirror or a reflector with a diffusing surface). It is shown that at a significantly low answer signal intensity ($\sim 10^{-4}$ of the output power) beats appear in the laser radiation whose frequency is determined by Doppler's law, with a modulation depth close to 100 percent. The low-frequency beat spectrum reveals harmonics. Two reasons are assumed for the appearance of the harmonics: 1) multiple passage of the signal between the laser and the moving object, and 2) (in the case of a multifrequency laser mode) non-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

BELOUSOVA, I. M., et al., Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 58, No 2, Feb 70, pp 394-406

linear interaction between the field of the answer signal of one mode and the field of another mode.

It was found experimentally that a mode of stimulated laser generation sets in after the signal reflected from the moving object ceases to act on it ("memorization" effect). It is shown that the existence of the "memorization" effect is due to the presence of harmonics in the beat spectrum. The question of the stability of the "memorization" mode is considered theoretically. It is suggested that there is a stability region for the case of three frequencies belonging to one longitudinal mode.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 018 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--USE OF NINHYDRIN FOR SPOT TESTS OF DRUGS -U-

AUTHOR-(03)-ZAPUTRAYEV, B.A., BYKOVA, K.N., NAGORNAYA, L.P.

COUNTRY OF INFO--USSR

SOURCE--FARMALSIYA (MOSCOW 1970, 19(1), 85-6

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TEST, DRUG ANALYSIS, ALKALOID, TERPENE, PHENOL, BARBITURATE, SULFA DRUG, ETHER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1163 STEP NO--UR/0466/70/019/001/0085/0086

CIRC ACCESSION NO--AP0115182

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

272 018

UNCLASSIFIED

CIRC ACCESSION NO--AP0115192 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 1PERCENT SOLN. OF NINHYDRIN (I) IN CONC. H SUB2 SO SUB4 IS PROPOSED FOR SPOT TESTS OF SOME ALKALOIDS, TERPENES, PHENOLS, BARBITURATES, SULFONAMIDES, AND ETHERS. RESULTS ON TIME OF APPEARANCE AND COLOR OF THE SPOT AND MIN. NECESSARY QUANTITY OF DRUG FOR 17 DRUGS ARE GIVEN. SUBSTITUTION OF CO GROUPS OF I BY CH SUB2 NH, OR CHCO SUB2 ET GROUPS ELIMINATES THE COLOR OF THE SPOTS.

FACILITY: LENINGRAD, KHIM.-FARM. INST. LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 013 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104441

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KINETICS OF HYDROLYSIS OF 1,FORMYL,1,2,3,4,TETRAHYDROQUINALDINE (I) TO 1,2,3,4,TETRAHYDROQUINALDINE WAS MEASURED SPECTROSCOPICALLY (LAMBDA EQUALS 240 NM) IN 0.99 TO 59.60 PERCENT H SUB2 SO SUB4 AT 25.0 PLUS OR MINUS 0.1DEGREE. THE REACTION IS IRREVERSIBLE AND 1ST ORDER IN I. DEPENDENCE OF K SUBEFF ON H SUB2 SO SUB4 CONCN. SHOWS A MAX. AT 24PERCENT IN ACCORD WITH THE DEPENDENCES OF CONCNS. OF H SUB3 O PRIME POSITIVE AND UNIONIZED FORM OF I. PK SUBBH PRIME POSITIVE OF I AT 25DEGREES IS MINUS 2.00 PLUS OR MINUS 0.02. E SUBAKT WAS DETD. FROM KINETIC MEASUREMENTS AT 49.1, 59.0, 68.4, 77.7, AND 87.4DEGREES (E SUBAKT, KCAL-MOL AND H SUB2 SO SUB4 CONCN. PERCENT ARE GIVEN): 18.7 PLUS OR MINUS 1.4, 0.99; 21.7 PLUS OR MINUS 1.5, 54.74; 21.7 PLUS OR MINUS 1.5, 59.60.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

Organ and Tissue Transplantation

USSR

PAL'GOV, K. A.; ZARAYSKIY, A. A.; Chair of Traumatology and Orthopedics, Alma Ata Medical Institute, and Department of Orthopedics, East Kazakhstan Oblast Hospital

"Grafting Compact-Cancellous Homotransplants Preserved in Argon to Noninfected Bone Bed"

Alma Ata, Zdravookhraneniye Kazakhstana, No 4, 1971, pp 35-38

Abstract: Compact-cancellous homotransplants preserved for 1 to 6 months in argon were used to fill defects surgically created in the tibias of 5- to 6-month-old rabbits. As a control, similar experiments were performed with frozen and lyophilized homografts. Histological and X-ray studies of the repair processes showed that they proceeded at approximately the same tempo in both series of experiments. After 6 months the defects were replaced with new tissue indistinguishable from surrounding healthy bone.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--LEACHING OF NITROGEN FROM AMMONIUM NITRATE IN HUMUS CALCAREOUS SOILS IN THE WESTERN PART OF THE GEORGIAN SSR -U-

AUTHOR--ZAADALISHVILI, O.YU.

COUNTRY OF INFO--USSR

SOURCE--KHIM. SEL. KHOZ. 1970, 8(3), 187

DATE PUBLISHED--------70

SUBJECT AREAS--AGRICULTURE

TOPIC TAGS--NITROGEN FERTILIZER, AMMONIUM NITRATE, SOIL TYPE, CEREAL CROP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0516 STEP NO--UR/0394/70/008/003/0187/0187

CIRC ACCESSION NO--AP0126264

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0126264

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TESTS WITH SOIL PLANTED IN CORN SHOWED THAT AMMONIUM N PREDOMINATED IN THE LEACHING WATER IN WINTER AND NITRATE N IN SPRING AND SUMMER. FROM NONFERTILIZED SOILS, 10-17 KG N-HA-YEAR WERE LEACHED OUT. WITH FERTILIZATION WITH 120 KG NH SUB4 NO SUB3 PER HA THE YEARLY LOSS OF FERTILIZER N IS 15-19PERCENT. IF THE RATIO OF THE FERTILIZER DISTRIBUTED PRESOWING:MID JULY WAS CHANGED FROM 1:1 TO 1:3, THE N LOSS DECREASED AND CORN YIELD ROSE 20-5PERCENT. AMMONIUM AND AMIDE FERTILIZERS ARE LESS LEACHED OUT THAN NITRATE FERTILIZERS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

UNCLASSIFIED PROCESSING DATE--18SEP70

1/2 012

TITLE--LIQUID AND LIQUID EQUILIBRIUM IN WATER, CYCLOHEXANE AND C SUB1 THROUGH C SUB5 MONOCARBOXYLIC ACID SYSTEMS -U-

AUTHOR-(04)-GORODETSKIY, I.YA., LEVITANAITE, R., LEGOCHKINA, L.A., ZARECHNOVA, A.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(1), 115-20

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--FLUID EQUILIBRIUM, CYCLOHEXANE, WATER, CARBOXYLIC ACID, FORMIC ACID, TITRATION, BUTYRIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0080/70/043/001/0115/0120

PROXY REEL/FRAME--1984/1359

CIRC ACCESSION NO--AP0100022

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

UNCLASSIFIED PROCESSING DATE--18SEP70

2/2 012

CIRC ACCESSION NO--AP0100022

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DISTRIBUTION OF FORMIC (I), ACETIC (II), PROPIONIC (III), BUTYRIC, AND VALERIC ACIDS BETWEEN WATE/ AND CYCLOHEXANE (IV) WAS DETD. AT 650EGREES BY USING ISOTHERMAL TITRN. THE RESULTS ARE TABULATED AND PLOTTED AS TERNARY EQUIL. DIAGRAMS. INCREASING THE NO. OF C ATOMS IN THE ACID REDUCED ITS SOLY. IN THE AQ. LAYER AND INCREASES ITS SOLY IN THE IV LAYER. WATER CAN BE USED TO EXT. I, II, AND III FROM THE PRODUCTS OF THE OXIDN. OF IV.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 025 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--PHASE COMPOSITION OF NEODYMIUM, IRON AND ALUMINUM ALLOYS IN THE 0 TO 33.3 AT. PERCENT NEODYMIUM RANGE -U-

AUTHOR--VIVCHAR, O.I., ZARECHNYUK, O.S., RYABOV, V.R.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (1), 211-13

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--NEODYMINUM ALLOY, ALUMINUM ALLOY, IRON ALLOY, CRYSTAL LATTICE STRUCTURE, ALUMINUM CONTAINING ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0537 STEP NO--UR/0370/70/000/001/0211/0213

CIRC ACCESSION NO--AP0105522

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 Q25 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0105522

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VARIOUS ND-FE-AL ALLOYS WERE ANNEALED FOR 2500 HR AT 500DEGREES AND THEN QUENCHED. THE TERNARY COMPDS. PSI PRIME, PSI, AND N SUB2 WERE FOUND AND THE TERNARY PHASE PHI SUB2 SOLID SOLN. OF AL IN THE COMPD. ND SUB2 FE SUB17. THE PSI PRIME PHASE CAN BE EXPRESSED BY THE APPROX. FORMULA NDFE SUB2 AL SUB10. THE PSI PHASE HAS A VARIABLE COMPN., NDFE SUB3.3-4 AL SUB8.7-8, AND A TETRAGONAL STRUCTURE WHICH IS THMN SUB12 TYPE. ITS LATTICE PERIODS VARY FROM A EQUALS 8.84, C EQUALS 5.05, C-A EQUALS 0.571 TO A EQUALS 8.78, C EQUALS 5.04 ANGSTROM, C-A 0.574. THE STRUCTURE OF THE N SUB2 PHASE IS NOT KNOWN, AND ITS COMPN. VARIES (NDFE SUB1.2-1.65 AL SUB0.8-0.35). THE SOLID SOLN. ND SUB2 (FE, AL) SUB17 IS CHARACTERIZED BY A CONSIDERABLE EXTENSION. THE MAX. AL CONTENT IN THE SOLID SOLN. IS 45 AT. PERCENT. THUS, THE SYSTEM ND-FE-AL IS VERY SIMILAR TO THE LA-FE-AL SYSTEMS (O. S. ZARECHNYUK, ET AL., 1968), AND THE CE-FE-AL SYSTEM (O. S. ZARECHNYUK, ET AL., 1969).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 033 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ON FORCED STANDING WAVES OF A FINITE AMPLITUDE IN SOLIDS -U-

AUTHOR-(02)-ZAREMBO, L.K., SERDOBOLSKAVA, O.YU.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK MOSKOVSKOGO UNIV. FIZ. ASTRON. USSR, VOL. 11, NO. 1, P. 62-7 1970

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--APPROXIMATION CALCULATION, STANDING WAVE, SOLID STATE, NONLINEAR EFFECT, AMPLITUDE MODULATION, FORCED VIBRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1327 STEP NO--UR/0188/70/011/001/0062/0067

CIRC ACCESSION NO--AP0109411

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 033 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0109411

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SECOND ORDER APPROXIMATION IS USED FOR THE CALCULATION OF EXCITATION OF FINITE AMPLITUDE STANDING WAVES (WITHOUT DISSIPATION) IN A SOLID LAYER. THE METHOD ALLOWS FOR DETECTION OF AMPLITUDE MODULATED LONGITUDINAL AND TRANSVERSE WAVES CAUSED BY THE NONLINEAR PROPERTIES OF THE MEDIUM. THE DEPENDENCE OF DAMPING ON FREQUENCY IS ANALYSED.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR

UDC: 519.2

ZARENIN, Yu. G. and SERDYUK, N. G.

"Distribution of the Number of Breakdowns of an Element in the Interval /0,t/ for Arbitrary Distribution of the Time of Faultless Operation and Distribution of the Restoration Time"

Kiev, v sb. Prikl. zadachi tekhn. kibernetiki (Applied Problems in Cybernetic Engineering--collection of works) "Nauk. dumka," 1972, pp 168-176 (from RZh--Matematika, No 6, 1972, Abstract No 6V200)

Translation: Ordinary recurrent formulas are written for the distribution of the number of events in an alternating restoration process in the interval (0,t). Tables are presented; under certain assumptions, the error of the consequence of replacing the gamma distribution for faultless operation time by an exponential distribution is estimated. I. Kovalenko.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

USSR UDC 51.330.115

ZARENIN, Yu. G., SERDYUK, N. G.

"Method of Calculation of Reliability of Homogeneous Redundant Systems with Repair"

Sistemy i Sredstva Avtomat. Upr. [Systems and Equipment for Automatic Control -- Collection of Works], Kiev, 1970, pp 96 to 102 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V599).

No Abstract.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--ROLE OF COMPOUND NUCLEUS IN THE NUCLEON SCATTERING PROCESS -U-

AUTHOR-(02)-ZARESKIY, D.F., URIN, M.G.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(2), 361-72

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--COMPOUND NUCLEUS, NUCLEON INTERACTION, NUCLEAR SCATTERING, EXCITED NUCLEUS, NUCLEAR ENERGY LEVEL, RADIOACTIVE DECAY, EXCITATION ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1049 STEP NO--UR/0367/70/011/002/0361/0372

CIRC ACCESSION NO--AP0110739

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0110739

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXCITATION OF COMPED. NUCLEUS LEVELS IN THE N SCATTERING PROCESS IS CONSIDERED BY USING THE METHOD OF ATTENUATION THEORY. MICROSCOPIC INTERPRETATION OF TRANSMISSION COEFFS. IS GIVEN BASED ON THE INTRODUCTION OF A REAL OPTICAL POTENTIAL AND OF THE WIDTH OF ONE PARTICLE STATE DECAY TO THE LEVELS OF THE COMPD. NUCLEUS. THE EXPRESSION FOR THE DIAGONAL ELEMENT OF THE SCATTERING MATRIX IS OBTAINED FOR THE CASE OF OVERLAPPING LEVELS IN THE COMPD. NUCLEUS. FACILITY: MOSK. INZH. FIZ. INST., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 024 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--INTERACTION OF HYDROGEN WITH STEEL KH18N10T AT INCREASED TEMPERATURES AND PRESSURES -U-

AUTHOR-(02)-ARCHAKOV, YU.I., ZARETSKAYA, L.V.

COUNTRY OF INFO--USSR

SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (3), 64-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--STAINLESS STEEL, ALLOY DESIGNATION, HYDROGEN, GAS CONTAINING METAL, METAL CONTAINING GAS, SOLUBILITY, METAL QUENCHING/(U)KH18N10T STAINLESS STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1676 STEP NO--UR/0129/70/000/003/0064/0066

CIRC ACCESSION NO--AP0118654

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

2/2 024 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118654

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. OF H IN STEEL KH18N10T AT 300-900DEGREES UNDER PRESSURES 20-600 KG-CM PRIME2 WAS STUDIED BY USING SPECIMENTS, DIAM. 10 AND LENGTH 20 MM, WHICH WERE PREVIOUSLY AUSTENITIZED. IN ORDER TO PREVENT THE RELEASE OF H FROM STEEL DURING SLOW COOLING UNDER ATM. PRESSURE, A SPECIAL AUTOCLAVE WAS SUED IN WHICH SPECIMENS COULD BE QUENCHED UNDER PRESSURE AT THE RATE 50EGREES-SEC. THE AUTOCLAVE AND THE METHOD OF SATN. WITH H ARE DESCRIBED BY A., ET AL. (1959; 1967). UNDER GIVEN EXPTL. CONDITIONS THE SOLY. OF H WAS PROPORTIONAL TO THE SQUARE ROOT OF THE PRESSURE OF H. AT 300-400DEGREES THE SOLY. OF H WAS SOMEWHAT HIGHER THAN AT HIGHER TEMPS. THE SOLY. OF H INCREASED EXPONENTIALLY WITH INCREASED TEMP. THE HEAT OF SOLN. AT 300-900DEGREES WAS 2800 PLUS OR MINUS 960 CAL-MOLE. THE FOLLOWING EXPTL. EQUATION IS GIVEN FOR THE DETN. OF H CONCN. (S) UNDER THESE ESPTL. CONDITIONS: S EQUALS 14.4 E MINUS (3800 PLUS OR MINUS 960-2RT) PH PRIMEO.5, WHERE PH IS THE PRESSURE OF H. FACILITY: VSES. NAUCH.-ISSLED. INST. NEFTEKHIM. PROTESSOV, LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

1/2 028 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--RADIATION IMMUNOLOGY AND TRANSPLANTATION -U-

AUTHOR-(02)-PETROV, R.V., ZARETSKAYA, YU.M.

COUNTRY OF INFO--USSR

SOURCE--(RADIATSIONNAYA IMMUNOLOGIYA I TRANSPLANTATSIYA) MOSCOW. ATOMIZDAT. 1970. 544 PP.

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--IMMUNITY, BIOLOGIC TRANSPLANT, RADIATION SICKNESS, ANTIBODY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605010/005 STEP NO--UR/0000/70/000/000/0001/0544

CIRC ACCESSION NO--AM0140141

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720016-8

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CIRC ACCESSION NO--AM0140141 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: PREFACE 3. CHAPTER I NONSPECIFIC FACTORS OF IMMUNITY 7. II SPECIFIC FACTORS OF IMMUNITY 39. III TRANSPLANTATION IMMUNITY 78. IV THE REACTION OF THE TRANSPLANT AGAINST THE HOST 150. V THE EFFECT OF IONIZING IRRADIATION ON TRANSPLANTATION IMMUNITY 182. VI IMMUNOLOGICAL TOLERANCE AND RADIATION 203. VII TRANSPLANTATION OF HEMOPOIETIC TISSUES AS A MEANS TO COMPENSATE FOR RADIAL AFFECTIONS 250. VIII IDENTIFICATION OF RADIATION CHIMERISM AND THE REGULARITIES OF MULTIPLICATION OF TRANSPLANTED CELLS IN THE ORGANISM OF AN IRRADIATED RECIPIENT 292. IX THE HEMATOLOGICAL STATUS OF RADIATION CHIMERAS 315. X THE IMMUNOLOGICAL STATUS OF RADIATION CHIMERAS 332. XI THE MECHANISM OF SECONDARY DESTRUCTION OF RADIATION CHIMERAS 380. XII TRANSPLANTATION OF CELLS TO IRRADIATED RECIPIENTS, A MODEL OF BIOLOGICAL INVESTIGATIONS 411. XIII ANTIGEN PROPERTIES OF TISSUES OF IRRADIATED ANIMALS 444. XIV C REACTIVE PROTEIN AND RADIATION SICKNESS 481. XV AUTOIMMUNE DISORDERS AND THE IMMUNOGENETIC CONCEPTION OF THE EFFECTS OF RADIAL AFFECTIONS 503. LITERATURE 535. EXAMINED IS THE EFFECT OF RADIATION ON THE ANTIBODY GENESIS AND ANTIMICROBE IMMUNITY, NONINFECTUOUS IMMUNOLOGY (AT THE CELL AND SUBCELL LEVEL). THE BOOK IS DESIGNED FOR RESEARCHERS WORKING IN THE FIELD OF RADIO BIOLOGY, IMMUNOLOGY AND FIELD CONNECTED WITH THE USE OF RADIOLOGICAL AND IMMUNOLOGICAL METHODS, SCIENTISTS WORKING WITH THE PROBLEM OF TRANSPLANTATION OF TISSUES AND ORGANS.

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"Wear Resistance of Hard Anodic Films on Aluminum Alloys"

Moscow, Vestnik Mashinostroyeniya, No 1, 1970, pp 58-59

Abstract: The results are presented of a series of investigations of anodizing conditions, under which an anodic film with increased antifriction properties is obtained on AK4-1 and D16T alloys. The antifriction properties of hard anodic films obtained in the sulfuric acid electrolyte, and also in a mixture of sulfuric and oxalic acids under various anodizing conditions, were obtained on samples made of AK4-1 and D16T alloys.

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Reel/Frame

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D16T samples, anodized in the electrolyte, cooled by dry ice, were tested on a MI-1 test stand in the presence of sliding friction in a MC-20 oil and AMG-10 hydrolysis at 50 kg/cm^2 pressure, and 0.4 m/sec sliding velocity against steel. The AK4-1 samples were tested under condition of dry friction at 25 kg/cm^2 pressure during 30 hours. The results are presented in graphs in the form of the dependence of friction coefficient on time for AK4-1 samples in the MC-20 oil, and for D16T samples, anodized under various conditions. These conditions are given in a table. The results show, that hard anodizing in the electrolyte containing sulfuric and oxalic acids, makes it possible to obtain on the AK4-1 alloy, an anodic film of increased wear resistance with low friction coefficient when operating in a fluid medium. Under condition of dry friction a coating of VAP-2 substantially improves the sliding. Original article has 2 figures and 1 table.

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