USSR UDC 621.385.632

KOVALEV, I. S., Corresponding Member of the Academy of Sciences of the BSSR, KURAYEV, A. A., DEMIDOVICH, Ye. M., SHEVCHENKO, F. G., Minsk Radio Engineering Institute

"Efficiency Optimized Gyro Amplifier Circuits With Waveguide Energy Tap"

Minsk, Doklady Akademii Nauk BSSR, Vol 16, No 1, pp 24-27

Abstract: Gyroresonance amplifiers with waveguide energy tap have much higher self-excitation currents than amplifiers with a cavity (resonator) tap, and can be used at high power levels. In order to reach a high efficiency in circuits with a short waveguide tap, electron oscillators must be efficiently pregrouped, and therefore the authors consider autonomous and nonautonomous resonator pregroupers having fairly broad detuning of the resonance frequency relative to the working frequency, in addition to considering conventional circuits. The Rosenbock method was used in efficiency optimization of the gyro amplifier circuits, and in solving the boundary value problem for a waveguide tap. The resultant data indicate that introducing a pregrouper appreciably improves the efficiency of a gyro amplifier with waveguide tap, the efficiency of optimized waveguide circuits approaching that of optimized resonator circuits ($\eta_1 = 81\%$). Four tables, bibliography of one title.

1/1

USSR

UDC 621.385.632:621.372

KOVALEV, I.S., KURAYEV, A.A., DEMIDOVICH, YE.M., SHEVCHENKO, F.G.

"Gyro-Resonant Devices With A Nonuniform Magnetostatic Field In an Interaction Space"

Dokl. AN BSSR (Reports Of The Academy Of Sciences, Belorussian SSR), 1971, 15, No 10, pp 896-899 (from RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2A152)

Translation: Gyro-resonant devices (GRD) have promise as a source of microwave oscillations of great power, and consequently the problems of increasing their electronic efficiency deserve detailed study. One of the methods of increasing the efficiency of GRD is the choice of the optimum distribution of the magnetostatic field in an interaction space. On the basis of a special form of the method of averages, nonlinear equations are derived and thoroughly analyzed for a GRD with an adiabatic nonuniformity of the magnetostatic field of arbitrary form and amplitude in an interaction space. Computed data are presented for the simplest model of a gyromonotron with a nonuniformity of the specified form. The high value of the electronic efficiency shows that from the energy point of view, GRD have a significant advantage in comparison with classical microwave devices. 5 ref. Summary.

1/1

USSR UDC 612.438+612.13]:612.017.1

KOVALEV, I. Ye., SERGEYEV, P. V., and IMAMBAYEV, S. Ye., Second Moscow Medical Institute imeni Pirogov

"The Blood' Thymus Barrier and Immunological Reactivity of the Organism"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 5, May 71, pp 85-90

Abstract: Literature data on the morphology and function of the blood-thymus barrier are analyzed, and experimental results on this controversial problem are presented. Since intravenous injections of spleen homogenates from donor rabbits into rabbits which are recipients of skin grafts did not suppress tissue rejection but simular intrathymus injections did suppress the tissue rejection reaction, the conclusion is drawn that the thymus participates in immunological reactions. It was also concluded that antigens in sufficiently high concentrations penetrate the blood-thymus barrier.

1/1

USSR UDC 669.294.5.293.018.5

ZHIKHAREV, Yu. V., KOVALEV, K. S., NOVIKOVA, S. M., ROMANOVA, N. A., CHUPRIKOV, A. V.

"Study of the Possibility of Replacing Tantalum Foil Used for Manufacture of Dry Electrolytic Condensers With Tantalum-Niobium Alloy Foil"

Nauchn. Tr. N-i. i Proyektn. In-t Redkomet. Prom-sti [Scientific Works of Scientific Research and Planning Institute for the Rare Metals Industry], 1971, Vol. 32, pp. 66-70. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I788 by the authors).

Translation: The permissible content of Nb in Ta which does not worsen the special characteristics of condenser foil is determined. A possible area of application of foil of Ta-Nb alloys in condensers of various capacities is indicated. The basic electrical characteristics of dry condensers of various capacities made of Ta-Nb alloys are presented. 2 figs; 4 tables; 3 biblio refs.

1/1

USSR UDC: 621.319.4

ZHIKHAREV, Yu. V., KOVALEV, K. S., NOVIKOVA, S. M., HOMANOVA, N. A., CHUPRIKOV, A. V.

"Investigation of the Possibility of Substituting Tantalum-Niobium Alloy Foil for the Tantalum Foil Used in Making Dry Electrolytic Capacitors"

Nauchn. tr. N.-i. i proyektn. in-t redkomet. prom-sti (Scientific Works of the Scientific Research and Design Institute of the Rare Metals Industry), 1971, 32, pp 66-70 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V328)

Translation: The authors consider the possibility of substituting tantalum--niobium alloys for the tantalum used in making capacitor foil. An investigation is made of the effect which the niobium content in tantalum has on the special electrical properties of capacitor foil. It is shown how the heat treatment temperature affects the properties of foil made from tantalum--niobium alloys. The permissible concentration of niobium in tantalum is determined which does not have an adverse affect on the special characteristics of capacitor foil. The potential field of application of foil made from niobium-tantalum alloys in capacitors of various ratings is indicated. The basic electrical characteristics are given for dry capacitors of various ratings made from tantalum-niobium alloy foil. Two illustrations, four tables. Resumé.

1/1

USSR UDC: 621.319.4

KOVALEV, K. S., ZHIKHAREV, Yu. V., NOVIKOVA, S. M., ERLIKH, E. A.

"Increasing Cold Resistance in Foil Tantalum Capacitors With a Working Voltage of 6 and 15 Volts"

Nauch. tr. N.-i. i proyektn. in-tredkomet. prom-sti (Scientific Works of the Scientific Research and Design Institute of the Rare Metals Industry), 1971, 32, pp 76-83 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V327)

Translation: The authors investigate factors which have a considerable influence on the electrical characteristics of tantalum foil capacitors with a working voltage of 6 and 15 volts. A new grade of paper is selected for the liners. The optimum coefficient ϕ for the paper and its thickness are determined. The tantalum foil oxidation voltage and geometric dimensions of the plates are more precisely determined. Two illustrations, bibliography of five titles. Resumé.

1/1

USSR UDC: 621.319.4

KOVALEV, K. S., ZHIKHAREV, Yu. V., VINOGRADOV, V. V., TEVSEYEVA, I. A., ROMANOVA, P. A., PAVLUSHINA, G. M.

"Some Singularities of Heat Treatment in the Production of Capacitor Foil From Tantalum"

Nauchn. tr. N.-i. i proyektn. in-t redkomet. prom-sti (Scientific Works of the Scientific Research and Design Institute of the Rare Metals Industry), 1971, 32, pp 71-76 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V329)

Translation: An investigation is made into the heat treatment of thin foils in connection with solution of the problem of making high-quality capacitor foil from tantalum. Three illustrations, one table, bibliography of three titles. Resumé.

1/1

USSR UDC 539.3

KOVALEV, K. V.

"Use of Surface of the Restraining Moment Effect of a Circular Plate for Calculating When the Load is Asymmetric"

Soprotivl. materialov i teoriya sooruzh. Resp. mezhved. nauch.-tekhn. sb. (Resistance of Materials and the Theory of Structures. Republic Interdepartmental Scientific-Technical Collection), 1972, No. 18, pp 65-72 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V191)

Translation: The intensity of the bending moment in the restraint of a circular plate on the basis of the surface of effect experimentally obtained on a model is determined. Asymmetric loads from a force applied to any point, from a load uniformly distributed along a segment of the radius, along a segment of arc or along a cord and from a load uniformly distributed along the area of an annular sector, the area of a sector and the area of a rectangle, and also over the entire area of the plate are considered. Author's abstract.

USSR

UDC 538.3:538.4:621.362

KOVALEV, L. K., and KONEYEV, S. M.-A.

"Effect of the Asymmetry of an External Magnetic Field on Viscous Fluid Flow in an Annular MHD Channel"

Riga, Magnitnaya Gidrodinamika, No 3, Jul-Sep 72, pp 46-50

Abstract: The article considers the laminar, single-component flow $v(0, 0, v)$ of an incompressible viscous fluid with constant conductivity σ in an annular channel which has the potential difference U_0 applied to its cylindrical, ideally conducting walls. The asymmetric, external, tangential magnetic field $B(B_r, B_\theta, 0)$ is created by current in the central electrode, which is a certain small distance δ from the geometric axis of the channel. It is assumed that there is no Hall effect and the magnetic Reynolds number is small. The analytic solution of the two-dimensional problem follows the method of expansion in a power series of the small parameter $\delta \ll 1$. The resultant expressions for the velocity and potential in the channel in the zeroth and first approximations are used as the basis for calculating flow

1/2

USSR

KOVALEV, L. K., and KONEYEV, S. M.-A., Magnitnaya Gidrodinamika, No 3, Jul-Sep 72, pp 46-50

parameters for different Hartmann number values. The latter indicate the possibility of periodic velocity and potential variations along the radius of the channel with an asymmetric magnetic field at Ha numbers $\geq$ 1000.

2/2

KOVALEV, L. K.

(1)
JPRS-60634
27 November (19..)

INTEGRAL METHOD OF STUDYING THE TERMINAL AND BOUNDARY EFFECTS IN MAGNETOHYDRODYNAMIC CHANNELS WITH NONUNIFORM DISTRIBUTION OF THE PARAMETERS OF THE CONDUCTING LIQUID

Abstract of a Paper by U. A. But, L. K. Kovalev, Yu. M. Nikitin, I. A. Nikitina, V. P. Yrutin Given at a Magnetohydrodynamic Conference, pp 112–114]

When studying the terminal and boundary effects in magnetohydrodynamic channels, it was decided to use the kinematic approximation where the velocity distribution v and the conductivity distribution σ are given from the solution of the hydrodynamic problem or from the experiment [1]. A study was made of the terminal effects for v' = const and σ' = const in [1,2], in which the solutions were obtained in the form of infinite series. The nonuniformity of v and σ can turn out to have a noticeable effect on the electrical characteristics of the magnetohydrodynamic channel. Some of the problems with the variable v were investigated in [1]. The proposed integral method of investigation of the terminal and boundary effects permits consideration of the nonuniformity of the velocity and conductivity profiles and obtaining an exact solution in a broad class of problems.

The potential distribution for Φ and the current density $\bar{j}$ during the flow of a conducting liquid with σ = const, $R_m \ll 1$ and $\beta \ll 1$ are found from the equations

$$\Delta\varphi = \bar{B}\,\mathrm{rot}\,\bar{v}\,; \qquad \bar{j} = \sigma(-\nabla\varphi + \bar{v}\times\bar{B}). \qquad (1),\ (2)$$

The solution of equation (1) for the two-dimensional region in integral form has the form

$$\varphi(M_0) = \frac{1}{2\pi}\oint_L \left[G(M_0,M)\frac{\partial\varphi(M)}{\partial n} - \varphi(M)\frac{\partial G(M_0,M)}{\partial n}\right]dl - \frac{1}{2\pi}\iint_S \bar{B}\,\mathrm{rot}\,\bar{v}\,G(M_0,M)\,dS, \qquad (3)$$

where $G(M_0,M)$ is the Green function.

For a number of problems the Green function can be constructed by using the conformal transforms of the given regions into canonical. This method can be used to solve the problems of the entry and exit of the conducting medium in the magnetic field in the constant-cross section and variable-cross section

USSR

UDC 538.4

BERMINOV, A. I., BUM, D. A., KOVALEV, L. K., YUDAS, V. I., Moscow

"Two-Dimensional Magnetic Fields in Magnetohydrodynamic Channels with Steel Walls with Finite Magnetic Reynolds Numbers"

Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 5, 1971, pp 3-11.

ABSTRACT: A study is made of the planar problems of the distribution of a two-dimensional magnetic field in magnetohydrodynamic channels with ferromagnetic walls with real Reynolds magnetic numbers and fixed hydrodynamic flow. A complex function describing the field from a unique point is used to construct an integral representation for the full magnetic induction, allowing any approximation to strict solution of the problem to be produced by digital computer. The influence function can be defined for various channels using mirror reflections and conformal mappings. The method is illustrated by numerical calculation of the distribution of the magnetic field as a conducting fluid flows along a flat, ferromagnetic wall and a fluid flows in the band between ferromagnetic walls. The influence of the external circuit and heterogeneous transverse velocity profile on distribution of the magnetic field is calculated.

1/1

USSR UDC 636.2:616.988.4

LEBEDEV, A. I., AVILOV, V. S., KOVALEV, L. V., and REVENKOV, A. G., Candidates of Veterinary Science All Union Institute of Experimental Veterinary Medicine

"Virus-Neutralizing Activity of Extracts of Tongue Epithelial Tissue and Serum From Animals Recovered From Foot-and-Mouth Disease"

Moscow, Doklady Vsesoyuznoy Ordena Lenina Akademii Sel'skokhozyaystvennykh Nauk imeni V. I. Lenin, No 1, 1971, pp 39-40

Abstract: A definite relationship was observed between the results of the virus-neutralization reaction with tongue epithelial tissue extracts and serum obtained from animals 4 months after recovering from foot-and-mouth disease caused by the type A_{22} strain 20/432 virus. The index of neutralization was comparatively high in both cases - 2.5 to 4.5 lg LD_{50}. On the other hand, no such relationship was found 9 to 12 months after the animals recovered. A high level of virus-neutralizing antibodies was found in the serum at this time, but the tissue extracts had virtually no virus-neutralizing capacity. Titration of the type A_{22} virus grown in a culture of cattle tongue epithelium revealed that the accumulation of virus in epithelium obtained 9 to 12 months after the disease was on the average 2 logarithmic units higher than in epithelium obtained after 4 months.

USSR

LEBEDEV, A. I., et al, Doklady Vsesoyuznoy Ordena Lenina Akademii Sel'skokhozyaystvennykh Nauk imeni V. I. Lenin, No 1, 1971, pp 39-40

Based on the results of their experiments and on the literature data, the authors concluded that the type-specific immunity of epithelial tissue from animals recovering from foot-and-mouth disease is largely attributable to specific cellular (tissue) factors.

2/2

USSR

UDC 519.95

YEMELICHEV, V. A., and KOVALEV, M. M., Belorussian State University imeni V. I. Lenin

"Solution of Some Concave Programming Problems by the Method of Constructing a Sequence of Plans. II"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Matematicheskikh Nauk, No 1, 1972, pp 65-74

Abstract: Inasmuch as, during the operation of algorithm $\mathcal{U}$, part of the variables x_{ij} is fixed ($x_{ij} = 0$ or b_j), the range of each sum $\sigma_i = \sum_{j=1}^{n} a_{ij}x_{ij}$, $i = \overline{1,m}$ narrows. Because of this, at any step of the algorithm $\mathcal{U}$ it is possible to improve the approximation of each concave function $f_i(\sigma_i)$: i.e., to raise the minorant of the functional $F(X)$. As a result, the optimality criterion will come into play sooner. The article, which continues a study begun in an earlier article by the authors, describes a new algorithm

1/2

USSR

YEMELICHEV, V. A., and KOVALEV, M. M., Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Matematicheskikh Nauk, No 1, 1972, pp 65-74

$\hat{\psi}$ for solving assignment problem (1)-(3), with allowance for the possibility of constant refinement of the minorant of the functional $F(X)$. In addition, a generalization is given of this algorithm for an assignment problem with limited production volumes, as well as an allocation problem with Boolean variables. Since assignment problems are closely related to problems of parts standardization and machine pool selection, algorithm ψ can be used also for the solution of these problems. A numerical example of a generalized parts standardization problem is given to illustrate the algorithm.

USSR

KOVALEV, M. M., Professor, Honored Scientist of Ukrainian SSR and Chairman of the Scientific Council, Ministry of Health Ukrainian SSR and MATYASHIN, I. M., Professor, Chief Surgeon, Ministry of Health Ukrainian SSR (Reviewers)

Lazery v Biologii i Meditsine (Lasers in Biology and Medicine), by R. Ye. Kavetskiy, V. G. Chudakov, Ye. P. Sidorik, N. F. Gamaleya, and T. S. Kogut, Kiev, "Zdorov'ya," 1969, 258 pp

Kiev, Klinicheskaya Khirurgiya, No 11, Nov 70, pp 89-90

Abstract: The monograph, the first of its kind in the Soviet Union, summarizes the research activities of scientists at the Kiev Scientific Research Institute of Experimental and Clinical Oncology, together with work on lasers conducted by other Soviet and foreign scientists. The book consists of seven chapters. Chapter 1 describes the physical basis and characteristics of lasers, (e.g., monochromaticity, high energy density, etc.). The various types of laser rays which are applicable in biology and medicine are discussed. The biological action of laser radiation is dealt with in the second chapter. Various aspects of the biological effects of lasers (thermal, kinetic, and photochemical effects of tissue ionization; development of endotoxins) are discussed in

1/2

USSR

KOVALEV, M. M., and MATYASHIN, I. M., Klinicheskaya Khirurgiya, No 11, Nov 70, pp 89-90

detail. In the third chapter, the effect of laser radiation on cells in tissue cultures is described. The results of morphological studies of the effect of laser rays on parenchymatous organs, lungs, cerebrum, skin, and mucosa are reported in the fourth chapter. Chapter 5 is devoted to problems associated with the application of laser radiation in oncology. Numerous experiments have established the antitumor action of laser rays, especially in melanoma cases. The potentiating effect of laser radiation in combination with chemotherapeutic preparations was also established. Chapter 6 is devoted to a discussion of all other aspects of laser radiation. Chapter 7 covers safety measures for protection of personnel working with lasers. One of the shortcomings of the monograph is its failure to deal in greater detail with the pathomorphological aspects of gas lasers, which no doubt will eventually be used in surgical practice. More attention should also be devoted to the problem of the application of lasers in the study of trace elements. The monograph contains 107 illustrations and 14 tables. It is well written and will be highly useful to all medical practitioners, oncologists in particular. Unfortunately, only 2,750 copies of the monograph have been printed.
2/2

KOVALEV, M. P.

missile related research

NC

JPRS 53883

23 August 1971

DESIGN AND BASIC CHARACTERISTICS OF BEARINGS FOR GYROSCOPIC DEVICES

[Chapter III from book by M. P. Kovalev; Moscow, Opory i Podvesy Giroskopicheskikh Ustroystv (Bearings and Suspensions for Gyroscopic Devices), Russian, 1970, pp 75-135 UDC: 629.7.058.82]

(missile related research)

In present-day gyroscopic devices for aircraft, bearings are for the most part based on small-size instrument ball bearings. But quite recently, aerodynamic and aerostatic bearings, as well as magnetic suspensions and certain other types of bearings have begun to come into use.

3.1 Instrument Ball Bearings

The quality of main bearings is determined by their longevity, by the moment of friction, by the rotational accuracy and the accuracy of positioning of the rotor center, and, finally, by the stability of the established preload. More rigid requirements are now being placed on gyroscopic devices, and hence the requirements on the bearings used in gyroscopes are correspondingly raised; these, in fact, are now being produced with clearances as fine as fractions of a micrometer.

Thanks to the high accuracy achieved in the geometrical forms and the dimensions of the working surfaces of bearing parts, the use of oil-saturated separators, and the exceptional dirt-free state of the working surfaces, it has been possible to lower the vibration level, to increase the longevity, to insure stability of preload, to decrease the effect of wear on the displacement of the center of gravity of the rotor, and, finally, to reach at least an approximation to equirigid bearings.

To assure high sensitivity and accuracy in gyroscopic devices, it is necessary that the Cardan suspensions possess a moment of friction which is minimal in magnitude and constant with respect to time. The ideal, in this respect, is a moment of friction equal to zero.

[I - USSR - G]

As regards rotational speed, instrument ball bearings may be divided into high-speed and low-speed types. The latter are also referred to as "high-sensitivity".

Figure 3.1 Radial supporting ball bearings without separator or central ring (filled).

High-speed bearings are those in which the rotational velocity along the circle passing through the centers of the swing bodies is more than 15 m/sec, or the condition that $dn \geq 300{,}000$ (d is the shaft center in mm, n is the maximal rotation velocity in rpm). High-sensitivity bearings are those which have a low rotational velocity and minimal friction.

Depending upon the direction of the applied load with respect to the axis of rotation of the bearing, and the number of ranks of swing bodies, instrument ball bearings are divided into four types, reflecting their design:

1) radial supporting single-row bearings without internal ring or separator;

2) radial, single-row;

3) radial-spherical, double-row; and

4) radial-supporting (magnetic).

In Figure 3.1 these are illustrated two types of filled ball bearings, both having separator and internal ring. Here the surfaces of roll are located directly on the axis and cup, or on the housing of the device.

USSR

UDC:534.282

MATVEYEV, V. V., CHAYKOVSKIY, B. S., KOVALEV, M. S., RZHAVIN, L. N., Kiev

"Influence of Design Peculiarities and Loading Conditions on the Damping Ability of a Herringbone Lock Joint of a Turbine Blade"

Kiev, Problemy Prochnosti, No 10, Oct 73, pp 66-70

Abstract: Results are presented from an experimental and theoretical study of design damping in the herringbone lock joints of turbine blades. The influence of a number of design and technological factors is studied, as well as the influence of loading parameters on the damping ability of lock joints.

1/1

1/2 012 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--MATHEMATICAL METHODS AND COMPUTING EQUIPMENT IN PLANNING -U-

AUTHOR--KOVALEV, N.

K

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, VOPROSY EKONOMIKI, NO 2, FEB 70, PP 120-131

DATE PUBLISHED----FEB70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--CYBERNETIC ECONOMIC PLANNING, ECONOMIC PLANNING PHILOSOPHY, POLITICAL THOUGHT, MATHEMATIC METHOD, DATA PROCESSING SYSTEM, AUTOMATIC CONTROL SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/1478 STEP NO--UR/9109/70/000/002/0120/0131

CIRC ACCESSION NO--AP0107910
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--11SEP70
CIRC ACCESSION NO--AP0107910
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AFTER A SOMEWHAT LENGTHY INTRODUCTORY PORTION, IN WHICH THE AUTHOR INVEIGHS CERTAIN UNNAMED SOVIET MATHEMATICAL ECONOMISTS WHO HAVE ALLEGEDLY ABANDONED THE MARXIAN LAW OF VALUE FOR THE THEORY OF MARGINAL UTILITY, THE ARTICLE IS DIVIDED INTO TWO MAIN SECTIONS. THE FIRST OF THESE IS A CLASSIFICATION OF THE BASIC TRENDS IN THE USE OF COMPUTING EQUIPMENT AND MATHEMATICAL METHODS IN PLANNING. THE SECOND DISCUSSES AUTOMATED INFORMATION COMPUTING AND CONTROL SYSTEMS IN PLANNING AND CONTROL.

ZZZZZZZZZZZZ UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201520014-4"

Acc. Nr.: AP0041081 K Ref. Code: UR 0054

USSR UDC: None

KOVALENKO, N., Chief of the Technical Library

"Priceless Assistant"

Moscow, Grazhdanskaya Aviatsiya, No. 1, 70, p. 16.

Abstract: A description of the library in the plant of Grazhdanskaya Aviatsiya (Citizens' Aviation), the journal in which this article appears. As a result of the Russian appetite for literature, this library is constantly expanding. It now contains some 40 thousand books where only several years ago it had no more than five thousand, and now occupies large, well-lit quarters instead of the simple room it formerly had. In addition to its books, it receives 15 newspapers and more than a hundred journals, the most popular of which are Grazhdanskaya Aviatsiya and Aviatsiya i kosmonavtika (Aeronautics and Astronautics). About two thousand readers use the library's services; some of the more prominent patrons are named. It also has a large collection of Lenin's works and entertains propagandists in search of material, thus earning its epithet in the title given above.

1/1 Reel/Frame 19750854 30

1/2 030 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--POLYMERIC COMPOSITIONS BASED ON POLY(VINYL CHLORIDE) AND BUTADIENE STYRENE THERMOELASTIC PLASTIC MATERIALS FOR ARTIFICIAL LEATHER -U-

AUTHOR--DENISENKO, I.S., KOVALEV, N.F., MISHUSTIN, I.U., ALEKSEYENKO, V.I.

COUNTRY OF INFO--USSR

SOURCE--KOZH., OBUV. PROM. 1970, 12(2) 44-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYVINYL CHLORIDE, BUTADIENE STYRENE RESIN, LEATHER, COPOLYMER, TENSILE STRENGTH, ELONGATION, FREEZING, PLASTICIZER/(U)DOP DIOCTYL PHTHALATE
BUTADIENE STYRENE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/0187 STEP NO--UR/0498/70/012/002/0044/0046

CIRC ACCESSION NO--AP0106843

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--11SEP70

2/2 030

CIRC ACCESSION NO--AP0106843

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF A BUTADIENE STYRENE BLOCK COPOLYMER DST-30 (I) (CONTG. 30PERCENT STYRENE) ON THE PHYSICOMECH. PROPERTIES OF POLY(VINYL CHLORIDE) (II) WERE STUDIED. INTRODUCTION OF LARGER THAN 60 PARTS I-100 PARTS II BROUGHT ABOUT INCREASED TENSILE STRENGTH AND RELATIVE ELONGATION, SUGGESTING THAT I WAS A POLYMERIC PLASTICIZER OF II. THE FREEZE RESISTANCE, FLEXURAL STRENGTH, TEAR STRENGTH, AND REBOUND RESILIENCE INITIALLY DECLINED WITH ADDN. OF I, REACHING A MIN. AT 60-70 PARTS I, AND ON FURTHER ADDN. OF I, INCREASED, PRESUMABLY DUE TO LIMITED COMPATIBILITY BETWEEN I AND HIGHLY POLAR II. AN INTERLAYER PLASTICIZATION MECHANISM IS PROPOSED.

UNCLASSIFIED

KOVALEV, N. I.

TECHNICAL TRANSLATION

FSTC-HT-23-726-71

ENGLISH TITLE: Chemical Reinforcement of Soils in Airfield and Road Construction

FOREIGN TITLE: Khimicheskoye Ukrepleniye Gruntov V Aerodromnom I Dorozhnom Stroitel'stve

AUTHOR: N. F. Klishchenko, N. N. Serov, L. A. Markov, A. V. Kovalev, V. N. Khal'ko, I. V. Yegorov, V. G. Didura, and V. A. Filatov

SOURCE: Chemical Stabilization of Soil in Airfield and Road Construction, 1967, 212 pages

Translated for FSTC by ACSI

NOTICE

The contents of this publication have been translated as presented in the original text. No attempt has been made to verify the accuracy of any statement contained herein. This translation is published with a minimum of copy editing and graphics preparation in order to expedite the dissemination of information. Requests for additional copies of this document should be addressed to Department A, National Technical Information Service, Springfield, Virginia 22151. Approved for public release; distribution unlimited.

USSR

UDC 616.988.75-06:616.831.06:616.8-009.24

KOGAN, B. S., KOVALEV, N. K., and SHEVELEV, YU. F., Chair of Psychiatry, Kursk Medical Institute, and Kursk Oblast Psychiatric Hospital

"Convulsive States in Patients With Influenza Injury of the Central Nervous System"

Moscow, Klinicheskaya Meditsina, No 7, 1971, pp 93-96

Abstract: A number of authors have described epileptic seizures in cases of influenza and the influenza type of encephalitis. The present authors observed 256 patients with acute affections of the central nervous system of influenza origin who were patients at the Kursk Oblast Psychiatric Hospital and the Kursk City Infectious Disease Hospital between 1954 and 1967. In 42 cases, the disease was accompanied by epileptic seizures, and in 37 of these, influenza infection caused convulsive seizures (in 23 cases during the acute period, and in 14 cases, 2 or 3 weeks after the disappearance of the major clinical manifestations of influenza.) In 5 patients the course of an earlier epilepsy of undetermined origin was adversely affected. All patients had their conditions clinically diagnosed by internists and specialists, and in 32 cases, the diagnoses were confirmed by serological studies. Eight of the 42 cases observed died. Study of their medical histories showed that they

1/2

USSR

KOGAN, B. S., et al., Klinicheskaya Meditsina, No 7, 1971, pp 93-96

had passed through various infections (measles, scarlatina, typhus, malaria, etc.), 9 were alcoholics, 6 had had cranial trauma with loss of consciousness, and 3 had had dynamic disturbances of cerebral circulation. The period of fever lasted from 1 to 7 days in 33 patients, and 8 days or longer in 9 others. The following neurological symptoms were found: damage to the cerebral cranial nerves (38 patients); tendon anisoreflexia (26); pyramidal hemisyndrome (14); pathological reflexes (12); instability of the Romberg test (12); and meningeal symptoms (25). The authors support the opinion of A. I. Viting and other investigators as to the toxic nature of affections of the central nervous system in influenza. A total of 18 of the 42 patients with epileptic symptoms showed local symptoms indicating the presence of an epileptogenic zone, and the other 24 showed general convulsive seizures without clearcut local symptoms. The attacks were treated with chloral hydrate, barbamil, hexonal, and other drugs. The 34 nonlethal cases received supportive therapy, including small doses of sedatives for several months after the cessation of the attacks.

2/2

USSR

UDC 550.834

KOVALEV, O. I., SHVEDCHIKOV, L. K., and VYAZ'MIN, V. A., All-Union Scientific Research Institute of Geophysical Exploration Methods

"Electrodynamic Seismic Detector"

USSR Authors' Certificate No 363059, Cl. G 01v 1/16, filed 20 Aug 70, published 20 Dec 72 (from Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 3, 1973, p 92)

Abstract: The device contains an electromechanical transducer of the electrodynamic type with a system for removing current from the moving coil to the output terminals through suspending springs, an inert mass suspended on elastic elements of increased linearity and a hermetic-sealing rubber ring. The unique feature of the device is that, to increase the operating reliability of the design, the coil of the seismic detector is suspended on three iris springs attached to the coil ends. At one end of the coil there are two springs, isolated from each other, which serve as elastic elements for suspending the coil and the elements for removing current from the moving coil

1/2

USSR

KOVALEV, O. I., et al., USSR Authors' Certificate No 363059

to the output terminals of the transducer. Over the rubber ring, which is shifted into a circular groove formed by the cylindrical surfaces of the frame and cover, there is a metal ring. An illustration of the device is included.

2/2

AA0046290

Soviet Inventions Illustrated, Section II Electrical, Derwent, UR 0482 1/10

241721 SEISMOGRAPH ensuring adequate and reliable indication of polarity comprises a magnetic system 1, a movable coil with winding 2 and a pair of electric contacts 3 electrically insulated from the body. These contacts are connected to the winding and in one of the limiting positions of the inert mass (represented in this case by 2) they are operated so that the winding is shortcircuited. 22.3.68 as 1226912/26-25. I.S.LEV.O.I.KOVALEV. GEOPHYSICAL INVESTIGATION TECHNIQUES RES.INST. (10.9.69) Bul 14/10.9.69. Class 42c. Int.Cl.G 01v.

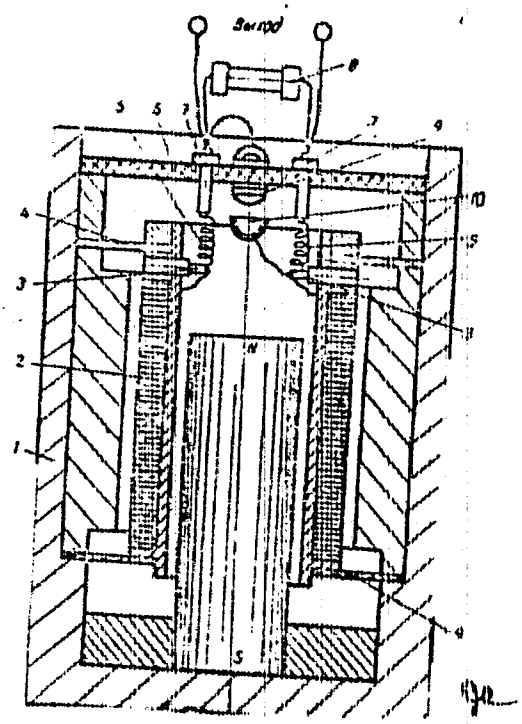
Vsesoyuznyy Nauchno - Issledovatel'skiy Institut Geofizicheskikh Metodov Razvedki

1/2

12

19781445

AA0046290



3/2

19781446

KOVALEV O.V.

Acc. Nr. AP0042397 Abstracting Service: CHEMICAL ABST. 3-7 c Ref. Code UK0000

quantum-mechanical operators. Kovalev, O. V.; Gorbanyuk, A. G. (Phys.-Tech. Inst., Kharkov, USSR). *J. Phys. Chem. Solids* 1970, 31(1), 149-61 (Eng). The methods of constructions of Wigner corepresentations in all those cases which can be met in considering all 674 magnetic space groups, are discussed. To use known tables of the irreducible representations of usual space groups, it is necessary to change the description of many magnetic groups. All cases of such changes are considered. The examples of direct calcns. of corepresentations are given. RCKH

1/1

REEL/FRAME
19760359

USSR

UDC 548.0 # 538.22

KOVALEV, O. V., Physicotechnical Institute, Academy of Sciences Ukrainian SSR

"Antiferromagnets With Electric Polarization"

Moscow, Kristallografiya, Vol 18, vyp 2, 1973, pp 221-226

Abstract: The article uses Landau theory as the basis for considering magnetic phase transitions from a magnetically and electrically disordered and, moreover, nonpyroelectric phase to an antiferromagnetic phase possessing the spontaneous electric polarization vector P, provided that in the ordered phase the magnetic and chemical cells coincide. Since a previous article by the author listed all transitions to the antiferromagnetic phase, the present article deals with the question of when such transitions can or must be accompanied by the appearance of the spontaneous vector P. It is determined in what cases the relation between magnetic and electric orderings is of an exchange character.

1/1

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--PRODUCTION OF NEW BRANDS OF VERY FINE TRANSFORMER STEEL -U-

AUTHOR-(05)-AFANASYEV, S.V., BARYATINSKIY, V.P., GORBACHEV, V.N., YELTS[illegible] YU.V., KOVALEV, P.M.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 272-5

DATE PUBLISHED-------70

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

TOPIC TAGS--TRANSFORMER STEEL, METAL ROLLING, ELECTRICAL PROPERTY, STEEL MANUFACTURE PROCESS, STEEL SHEET, ANNEALING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1936 STEP NO--UR/0048/70/034/002/0272/0275

CIRC ACCESSION NO--AP0115745

UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115745

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TECHNOLOGY USED IN MANUFG. VERY FINE, ORIENTED TRANSFORMER STEEL SHEET (0.05-0.15 MM THICK) FOR INSTRUMENTS AND APP. UTILIZING A WIDE RANGE OF FREQUENCIES IS GREATER THAN OR EQUAL TO 400 HZ DIFFERS IN MANY ASPECTS FROM THE CONVENTIONAL TECHNOLOGY USED FOR HEAVIER GAGE SHEET (0.2-0.5 MM), AS THE FINE SHEET IS MADE GENERALLY FROM HEAVIER GAGE, COLD ROLLED SHEET OF AN ORIENTED TEXTURE RATHER THAN FROM NONORIENTED MATERIAL. IN THE COURSE OF MANUFG. THE FINE SHEET, THE (110) (001) TEXTURE OF THE THICKER TRANSFORMER SHEET IS TRANSFORMED BY COLD ROLLING INTO A DEFORMATION TEXTURE (111) MEAN VALUE OF 112 WHICH AGAIN IS CHANGED TO IKO MEAN VALUE OF 001 BY SUBSEQUENT ANNEALING, K DEPENDING ON THE DEFORMATION RATIO AND THE TEMP. OF THE ISOTHERMAL ANNEAL. THUS, THE FINAL TEXTURE IS THAT FORMED BY PRIMARY RECRYSTN.; ITS DEGREE OF PERFECTION (WHICH DETS. THE MAGNETIC PROPERTIES OF THE MATERIAL) DEPENDS ON THE INITIAL TEXTURE AND GRAIN SIZE (BEFORE ROLLING), THE DEFORMATION RATIO APPLIED, AND THE TEMP. AND DURATION OF FINISH ANNEALING. SECONDARY RECRYSTN. IS SUPPRESSED SINCE IT WOULD BRING ABOUT TEXTURE DETERIORATION. ANNEALING AT 950-1000DEGREES FOR A PERIOD OF TIME NOT EXCEEDING THE INCUBATION PERIOD OF SECONDARY RECRYSTN. (20 SEC) OR CONTROLLED ANNEALING PERMITTING LONGER EXPOSURES TO HIGH TEMPS. IS RECOMMENDED; THE FORMER TREATMENT MAY NOT BE FOLLOWED BY A SECONDARY ANNEAL. THE TECHNOLOGICAL GUIDELINES GIVEN PERMIT THE MANUF. OF FINE SHEET EXHIBITING SP. CORE LOSSES OF SIMILIAR TO 12W-KG.

FACILITY: TSNIICHM IM BARDINA, MOSCOW, USSR.

UNCLASSIFIED

SO: JPRS [illegible]
14 Jan 73

MECHANISM OF THE DISAPPEARANCE OF PACKING DEFECTS IN SILICON EPITAXIAL FILMS DURING CERTAIN THERMAL PROCESSES

[illegible]

[Article by R. A. Kovalev, B. I. [illegible], Yu. I. [illegible], [illegible], Protsessy, Rosta i Struktura Monokristallicheskikh Sloev Poluprovodnikov — Trudy Simpoziuma, Russian, Part 2, 1969, pp [illegible]]

One of the most widespread structural defects of epitaxial films is the packing defects. When pickling in selective pickling agents the packing defects are revealed in the form of flat configurations or individual lines. For epitaxial films with a diamond type crystal lattice oriented in the (111) plane, the tetrahedral packing defects which give etching configurations in the form of right triangles are characteristic. The morphology and the possible causes of nucleation of the tetrahedral packing defects and the defects appearing in the form of individual lines are described in detail [1-5]. Prolonged annealing in an inert atmosphere has no effect on the packing defects [4, 5]. However, it is noticeable that after annealing in hydrogen, in a vacuum or after diffusion of the admixtures, the number of packing defects decreases [4, 6, 7]. No variations in their morphology are noted in this case.

We have observed analogous facts of a decrease in the number of defects. We also recorded this defect during thermal oxidation of silicon epitaxial films in wet oxygen. It must be noted that during annealing in hydrogen during the boron diffusion process and also during thermal oxidation of the films, the variation in morphology and packing defects was observed. Previously there were no indications of such facts in the literature.

As the specimens we used silicon epitaxial films of n-type conductivity with an admixture concentration of $5 \cdot 10^{16}$ cm^{-3} alloyed with phosphorus. The films were oriented in the (111) plane.

The specimens were oxidized for 1 hour at a temperature of 1,200° C.

The experiments with respect to annealing in hydrogen and boron diffusion were described previously [8].

Before oxidation, the packing defects were revealed by a selective etching agent (1 part HF + 1 part 33 percent CrO_3 solution in deionized water).

KOVALEV, R.A.

KOVALEV, S. A.

JPRS 56076

23 May 1972

EXPERIMENTAL STUDY OF HEAT TRANSFER IN BOILING NITROGEN TETROXIDE

by

B. S. PETUKHOV, S. A. KOVALEV, [illegible]

- USSR -

JOINT PUBLICATIONS RESEARCH SERVICE

USSR

BERKINBLIT, M. B., VVEDENSKAYA, N. D., DUDZYAVICHUS, I., KOVALEV, S. A., FOMIN, S. V., KHOLOPOV, A. V., and CHAYLAKHYAN, L. M. Institute of Problems of Information Transmission, Academy of Sciences USSR, Moscow and Moscow State University imeni M. V. Lomonosov

"Study of Propagation of Excitation in Purkinje Fibers of the Heart Studied in a Mathematical Model"

Moscow, Biofizika, Vol 15, No 3, May/Jun 70, pp 521-527

Abstract: Propagation of the action potential in a uniform Purkinje fiber was modeled on a computer using Noble and McAlister models. The velocity of impulse propagation in the Noble model is shown to be five times lower, and in the McAlister model two times lower, than that measured experimentally. This discrepancy can be explained by the underestimated value of the rate of growth of the forward front of the action potential in the models used, since the calculations showed that the velocity of the impulse propagation to a first approximation linearly depends upon the growth of velocity of the forward front. The action potential in the region of fiber expansion was modeled on the Noble Model. It passes through larger expansions than the impulse in the Hodgkin-Huxley model, apparently because of the more extended time of the heart impulse. It is also shown that geometric nonuniformity can provide a

USSR

BERKINBLIT, M. B., et al., Biofizika, Vol 15, No 3, May/Jun 70, pp 521-527

temporary delay in impulse propagation, which comprises a considerable part of atrioventricular delay. It is suggested that the experimentally observed "hollow" and "hump" on the background of the plateau of cardiac action potentials are caused by the electrotonic "reflection" of the potential from geometric nonhomogeneities, since the potentials of such a shape are reproduced in model calculations.

2/2

USSR

BERKINBLIT, M. B., DUDZYAVICHYUS, I., KOVALEV, S. A., FOMIN, S. V., KHOLOPOV, A. V., and CHAYLAKHYAN, L. M., Institute of Problems of Information Transmission, Academy of Sciences USSR, Moscow

"Study of the Formation of a Local Response in a Nonuniform Membrane Corresponding to the Hodgkin-Huxley Model"

Moscow, Biofizika, Vol 15, No 5, Sep/Oct 70, pp 873-880

Abstract: The electric response of a model which consists of two membranes regions (one active and the other shunting) connected in parallel is considered. This model imitates biological objects containing membrane regions with a different threshold (e. g., neurons), as well as conditions of nonuniform membrane polarization. The transition is gradual in actual membranes, however. Shifts in the amplitude and duration of the reaction that develops, in the stimulation threshold, and in ionic currents as a result of shifts in the ratio of the excitable to nonexcitable area of the membrane are discussed. On the basis of the model, it is shown that the nonuniformity of the membrane considerably increases the range of strengths of the stimulating current at which a local response develops. The relations obtained

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201520014-4"

USSR

BERKINBLIT, M. B., et al, Biofizika, Vol 15, No 5, Sep/Oct 70, pp 873-880

explain some characteristics of the electric reactions of smooth muscles and of myocardial tissue.

2/2

1/2 032 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--HEAT TRANSFER DURING THE BOILING OF FREON 113 ON THE SURFACE OF A VERTICAL CYLINDRICAL ROD -U-

AUTHOR-(03)-KOVALEV, S.A., ZHUKOV, V.M., KAZAKOV, G.M.

COUNTRY OF INFO--USSR

SOURCE--TEPLOFIZ. VYS. TEMP. 1970, 8(1), 217-19

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--HEAT TRANSFER, CALCULATION, FREON, NUCLEATE BOILING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0770 STEP NO--UR/0294/70/008/001/0217/0219

CIRC ACCESSION NO--AP0107312

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--02OCT70

2/2 032

CIRC ACCESSION NO--AP0107312

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HEAT TRANSFER OF FREON 113 (SATN. TEMP., 47.6DEGREES AT 1 ATM) WAS STUDIED. MODES OF HEAT TRANSFER IN BOILING FREON WERE OBSD. ON 4 AND 10MM DIAM. (D) TUBES OF VARIOUS LENGTHS (L) TO GIVE L-D EQUALS 5. HEAT TRANSFER CALCN. WERE MADE ACCORDING TO S. A. KOVALEV AND L. F. SMIRNOVA (1968). OBSERVATIONS SHOWED NUCLEATE BOILING (A) AT TEMP. DIFFERENCES (DELTAT) LESS THAN 21DEGREES, TRANSITIONAL BOILING (B) AT DELTAT 21-76DEGREES, AND FILM BOILING (C) AT DELTAT IS GREATER THAN 76 DEGREES. THE HEAT FLOWS (Q) AT A AND B WERE SEVERAL TIMES LARGER THAN THE CRIT. Q FOR ISOTHERMAL CONDITIONS: ON A 4 MM DIAM. ROD A Q OF 2.2 TIMES 10 PRIME6 W-M PRIME 2 WAS OBSD. WHEREAS IN THE C RANGE THE INCREASE IN Q WAS INSIGNIFICANT. EXPTL. RESULTS IN WHICH A, B, AND C OCCURRED SIMULTANEOUSLY AGREED TO WITHIN 15 AND 25PERCENT, WITH CALCD. Q FOR 10 AND 4 MM DIAM. RODS, RESP., AND TO 30PERCENT IN C.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--COMPUTER MODELING OF THE BEHAVIOR OF NERVE FIBER MEMBRANE UNDER RHYTHMIC STIMULATION -U-

AUTHOR-(05)-BERKINBLIT, M.B., DUDZEVICUS, I., KOVALEV, S.A., FONIN, S.V., KHOLOPOV, A.V.

COUNTRY OF INFO--USSR

SOURCE--BIOFIZIKA 1970, 15(1), 147-55

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--NERVE TISSUE, CELL MEMBRANE, MATHEMATIC MODEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0017 STEP NO--UR/0217/70/015/001/0147/0155

CIRC ACCESSION NO--AP0105117

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105117

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BEHAVIOR OF EXCITABLE MEMBRANE UNDER RHYTHMIC STIMULATION WAS STUDIED USING THE MATH MODEL OF HODGKIN AND HUXLEY. SUMMATION OF SUBTHRESHOLD STIMULI WAS REPRODUCED ON THE MODEL. THIS PROCESS WAS MAINLY DETD. BY THE TIME CONST. OF THE RESTING MEMBRANE. THE PERIODIC FALL OF IMPULSES AND THE CHARACTER OF IONIC PROCESSES RESPONSIBLE FOR THIS PHENOMENON WERE STUDIED IN DETAIL. EXISTENCE OF MAX. FREQUENCIES WAS SHOWN; THESE WERE REPRODUCED BY THE MEMBRANE UNDER HIGH FREQUENCY STIMULATION, IN THE RANGE OF 140-170 RESPONSES-SEC. THE CHANGE OF FIBER IONIC GRADIENTS MAY BE THE CAUSE OF FATIGUE AND OF GRADUAL TRANSITION FROM LONG CYCLES TO THE SHORTER ONES IN THE PROCESS OF PROLONGED RHYTHMIC STIMULATION. FACILITY: INST. PROBL. INFORM. TRANSM., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.382.2

KOVALEV, I. S., MEYERSON, V. M., KOVALEV, S. I., SHARAPOV, V. V. [Corresponding Members of AS, BSSR]

"Calculation Of Electronic Retuning Of Oscillator Based On a Tunnel Diode With The Aid Of a Varactor"

Doklady Akademii Nauk BSSR, Vol XVI, No 7, July 1972, pp 607-609

Abstract: An experimental study is made of an oscillator based on a non-symmetrical strip with varactor retuning. The equation of an oscillator based on a tunnel diode with a varactor connected to it is solved graphically, which makes it possible to calculate its retuning curve. An analysis is made of the dependence of the frequency retuning of the oscillator on the parameters of the varactor and the resonance system of the generator. The design of the resonance system of the oscillator makes it possible to change the coupling factor of the varactor. The results of the experimental study of varactor retuning of a tunnel-diode oscillator agree well with calculated data. 2 ill. 2 ref. Received, 7 December 1971.

1/1

USSR UDC 681.888

KONOVALOV, Ye. G., SINYAYEV, V. A., and KOVALEV, S. I.

"Variation of the Mechanical Characteristics of M1 Copper as a Function of Duration of the Preliminary Cyclic Loading with Bending Vibrations of Ultrasonic Frequency"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1970, pp 9-12

Abstract: This article contains a study of the effect of ultrasonic bending vibrations on the mechanical characteristics of M1 copper. The graphs for the yield point $\sigma_{0.2}$, ultimate strength σ_b, elongation per unit length δ, and reduction of area ψ as a function of the duration of the preliminary cyclic loading with ultrasonic bending vibrations are presented. An acoustic system permitting effective excitation of bending vibrations is the specimen and fast multiple changing of specimens is described. Results are tabulated showing that the ultrasonic bending vibrations have great effect on the mechanical properties of M1 copper (in the delivered state), and in the final analysis, destroy samples made of it. Under the effect of ultrasonic bending vibrations the mechanical characteristics $\sigma_{0.2}$, σ_b, δ, and ψ of M1 copper

USSR

KONOVALOV, Ye. G., et al, Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1970, pp 9-12

drop as the number of loading cycles increases. The higher the amplitude of the ultrasonic bending vibrations, the faster the mechanical characteristics drop.

2/2

1/2 012 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--SPECIFICATION ON DIES FOR DIAMOND ABRASIVE TOOLS -U-

AUTHOR-(04)-IVANOV, A.A., KOVALEV, S.N., MENDELSON, V.S., SELEKH, V.F.

K

COUNTRY OF INFO--USSR

SOURCE--STANDARTY I KACHESTVO, 1970, NR 3, PP 7-9

DATE PUBLISHED--------70

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

TOPIC TAGS--DIAMOND, ABRASIVE, BIBLIOGRAPHY, TECHNICAL STANDARD, ECONOMIC CONDITION, CUTTING TOOL, MACHINE TOOL COMPONENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/0868 STEP NO--UR/0422/70/000/003/0007/0009

CIRC ACCESSION NO--AP0102829

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--18SEP70

2/2 012

CIRC ACCESSION NO--AP0102829

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE GIVES AN ACCOUNT OF THE SPECIFICATION ON THE DIES, THAT IS NOW PREPARED FOR THE FIRST TIME. THEIR ECONOMIC EFFICIENCY IS GROUNDED.

89

UNCLASSIFIED

USSR UDC 661.143

ISHCHUNIN, V. K., KOVALEV, V. A., and PONOMAREV, YU. V.

"Determination of the Energy Discharge of Cathodo-Luminophors in Selected Electron Radiating Assembleges"

Sb. Nauch. tr. VNII lyuminoforov i osobo chist. veshchestv (Collection of Scientific Works From the All-Union Scientific Research Institute of Luminophors and Principles for Purifying these Compounds), Vyp 7, 1972, pp 44-49 (from Referativnyy Zhurnal — Khimiya, No 8(II), 1973, Abstract No 8L168)

Translation: In selected electron radiating assembleges produced industrially, there is observed a significant amount of light reflected from the upper surface of the discharging window and collector. A method is proposed for determining the energetic discharge and its value for some of the most widely used cathodo-luminescent compounds (Resume).

1/1

UDC 678.06-419.8.677.521].05

USSR

VOLKOV, R. A., KOVALEV, V. A., and MITROFANOV, S. A.

"Flow Line for Fabrication of Fiberglass Lifeboats"

Moscow, Plasticheskiye Massy, No 6, 1971, pp 17-20

Abstract: The article describes a pilot line for the constant flow production of fiberglass lifeboats. Despite the difficulties encountered in the adjustment and introduction of the complex of equipment the result was a significant increase in labor productivity, as well as improved sanitary and hydienic conditions for the workers. The flow line is designed for the production of 1500 boats a year. The line makes provision for the production of single-layer and sandwich-type boats. The sandwich-type boats consist of an exterior and interior fiberglass shell, with the space between the shells filled with polyurethane foam. The line has two parallel flows for making the exterior and interior shells. The following operations are performed at sequentially arranged specialized work places: preparation of forming equipment; fabrication of the exterior and interior hull shells; hydroremoval of the shells; testing of the exterior shell for watertightness by filling with water; filling the space between the shells with polyurethane foam; installing of deck covers; assembling of machinery and equipment; testing of the boat; elimination of

1/2

USSR

VOLKOV, R. A., et al., Plasticheskiye Massy, No 6, 1971, pp 17-20

minor defects found during the tests and painting of the boat; outfitting of the boat.

The flow line includes polymerization chambers equipped with individual ventilation and heating devices, a special device for the preparation and pouring of PPU-3S polyurethane foam, transport equipment (transfer-bar and intermittent conveyors), special equipment for making the exterior and interior shells of the boat hulls, and a traffic control panel.

The following are used to make the shells: polyurethane resin NPS-609-21 (STU [Sovnarkhoz Technical Specifications] 30-14366-65), glass cloths ASTT(b) - C_2-0 (MRTU [Interrepublic Technical Specifications] 6M-836-62), TZhS-0.56-0 (MRTU 6-11-62-67) and glass gauze SE-0-1 (MRTU 6-11-64-67).

2/2

1/2 023 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--APPARATUS FOR IMPREGNATING PACKS OF GLASS FABRIC WITH A BINDER -U-

AUTHOR-(03)-SKIPIN, V.A., DOROSHENKO, I.V., KOVALEV, V.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM. NEFT. MASHINOSTR. 1970, (2) 40-1

DATE PUBLISHED-------70

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

TOPIC TAGS--GLASS FABRIC, SHIPBUILDING ENGINEERING, REINFORCED PLASTIC/(U)ASTTBSO IMPREGNATED GLASS FABRIC, (U)TZHS GLASS MAT, (U)NPS609 21 BINDER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1504 STEP NO--UR/0314/70/000/002/0040/0041

CIRC ACCESSION NO--AP0112493

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--02OCT70

2/2 023

CIRC ACCESSION NO--AP0112496

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN AUTOMATIC IMPREGNATING APP. UPS-1 WAS DEVELOPED AND TESTED BY THE LENINGRAD CENTRAL SCIENTIFIC RESEARCH INSTITUTE OF SHIPBUILDING TECHNOLOGY. THE APP. WAS USED TO IMPREGNATE GLASS FABRIC ASTT(B)-S SUB2-0 AND GLASS MAT TZMS-0.7-0 ROLLS WITH AN NPS-609-21 BINDER AT 2.7 M-MIN. UPS-1 INCREASED THE OUTPUT 10 FOLD (COMPARED WITH MANUAL OPERATION) AND IMPROVED THE QUALITY OF THE IMPREGNATED PRODUCT.

UNCLASSIFIED

1/2 063 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--ELECTROMECHANICAL METHOD FOR PHASE MODULATION OF LIGHT -U-

AUTHOR-(02)-DOBRIN, YU.F., KOVALEV, V.I.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, RADIOTEKHNIKA I ELEKTRONIKA, NO. 4, 1970, P 851

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PHASE MODULATION, ELECTROMECHANIC CONVERTER, LIGHT MODULATION, LIGHT MODULATOR, ELECTROOPTIC EFFECT, COULOMB INTERACTION, QUARTZ, AIR, CAPACITOR, NICKEL, TANTALUM, STEEL, ELECTRODE, LASER EMISSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605041/012 STEP NO--UR/0109/70/000/004/0851/0851

CIRC ACCESSION NO--AP0142745
UNCLASSIFIED

2/2 063 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0142745

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIS BRIEF COMMUNICATION DESCRIBES A METHOD OF LIGHT PHASE MODULATION WHICH, AT LOW FREQUENCIES, IS MORE EFFECTIVE THAN THE CUSTOMARY METHOD USING ELECTROOPTICAL EFFECTS. THIS NEW METHOD USES THE ELECTRICAL COULOMB ATTRACTION BETWEEN THE PLATES OF AN AIR CAPACITOR. IN THEIR EXPERIMENTS, THE AUTHORS USED SUCH MATERIALS AS A QUARTZ PLATE OF 70 MICRONS THICK WITH ONE SIDE SILVERED, AS WELL AS SIMILAR PLATES OF NICKEL, TANTALUM, AND STEEL, AS ONE OF THE CAPACITOR ELECTRODES. A DIAGRAM OF THE EXPERIMENTAL SETUP WHICH, BESIDES THE CAPACITOR, USES A LASER LIGHT SOURCE, A PHOTORECEIVER, TWO MIRRORS, ONE OF THEM HALF SILVERED, AND AN OSCILLATOR, IS PROVIDED. THE PHASE MODULATION WAS ACHIEVED AT A LOW VOLTAGE, ABOUT 50, AND THE FREQUENCY LIMITS WERE FROM 1 TO 10 MHZ. THE AUTHORS EXPRESS THEIR GRATITUDE TO YE. F. KLSHCHENKO FOR HIS ASSISTANCE IN CONSTRUCTING AND PREPARING THE INTERFERCMETER.

UNCLASSIFIED

USSR UDC 539.374

KOVALEV, V. M.

"On the Stability of Circular Annular Plates"

Alma-Ata, Izvestiya Akademii Nauk Kazakhskoy SSR, Seriya Fiziko-matematicheskaye, No. 5, Sep/Oct 71, pp 60-62

Abstract: The loss in stability of a circular annular plate uniformly compressed along the outer edge is discussed in terms of a method proposed by Yu. N. Rabotnov. The method is the following: the elastic deformation energy is sufficient under a certain value of the compressing forces to move the plate into a new position which is different from the plane and is characterized by the formation of plastic joints. A portion of the elastic energy is freed in this transition and should be equal to the work performed by the moment of forces in the plastic joints. After the loss of stability the plate occupies a new position in the form of a truncated cone with the formation of plastic joints. The critical forces are found from the condition of equality of the work of the moment in the plastic hinges freed as a result of the loss in stability of elastic energy for two cases: the internal contour is free and the external

1/2

Phytology

USSR UDC 63:551.509.6

SHEVELUKHA, V. S., Candidate of Agricultural Sciences, RUDASHKO, A. F., KRYSHNEV, I. I., and KOVALEV, V. M., Belorussian Agricultural Academy

"An Artificial Climate Chamber"

Moscow, Vestnik Sel'skokhozyaystvennoy Nauki, No 11, Nov 70, pp 131-135

Abstract: An artificial climate chamber has been designed which provides for programed control of the temperature, humidity, and intensity and duration of artificial light in experiments concerned with the physiology of plants and plant growth. The outer frame is lined with a double layer of insulating material. The inner dimensions (length 2,600 m, width 960 m, height 1,590 m) are ample to accommodate simultaneously 18 to 24 pots with plants, 2 to 4 mechanical auxanographs, and a variety of sensors and recording devices. There are 3 interconnected compartments, two of which contain the plants while the third holds a ventilator and condenser. In the center of the chamber are an electric heater, humidifier, temperature and humidity sensors, etc. The chamber has been used mainly to study plant growth as a function of time and to determine the reasons for the "bottlenecks" in plant growth arising from external and internal factors. The results of these studies are briefly described.

1/1

USSR UDC 550.42:550.313(571.1/5)

KOVALEV, V. P. and LAPIN, B. N., Institute of Geology and Geophysics, Siberian Division, Academy of Sciences, USSR

"Uranium and Thorium in Several Different-Age Volcanogenic Formations in the South of Siberia"

Novosibirsk, Geologiya i Geofizika, No 6, June 1973, pp 116-122

Abstract: This article gives a comparative analysis of data gained from an x-ray geochemical study of the Cambrian, Devonian, and Triassic volcanogenic rocks found in the south of Siberia. Much of these data are source material. The authors find a close correlation between uranium and thorium and reveal some of the local features discovered. The authors make several conclusions with respect to these formations. They find that the basalt different-age rocks in the regions of the investigation are poor in uranium and thorium and thus differ little from one another. The manifestations of acid vulcanism of these same ages also reveal much in common among themselves and are very rich in radioactive

USSR

KOVALEV, V. P. and LAPIN, B. N., Geologiya i Geofizika, No 6, June 1973,. pp 116-122

elements. The basalt rocks on the one hand and the neutral and acid volcanic formations on the other differ sharply in the amounts of uranium found in them, thus correlating with the overall aluminum oxide nature of the products of magmatism. The correlation factor between uranium and thorium is higher in the basic effusives and lower in the acid ones. The alkali derivatives are richer in uranium and thorium than are their analogs in the alkali-earth series. The alkalinity, that is, the alkali-earth nature of the manifestations of basic and acid vulcanism, varies very little with time, and judging from the uranium-thorium ratio makes up a characteristic local situation. The x-ray geochemical data confirm the conclusion of a directional decrease in alkalinity in the rocks of different-age basalt and trachyandesite-liparite formations from east to west. The article contains 1 table and 6 bibliographic references.

2/2

USSR

UDC: 539.1.074.3:535.853

KOVALEV, V. P., KAPCHIGASHEV, S. P., PAVLOV, L. P.

"Use of Scintillation Spectrometer with Stilbene Crystal for Dosimetry of Mixed Gamma-Neutron Radiation"

Dozimetriya i Radiats. Protsessy v Dozimetr. Sistemakh [Dosimetry and Radiation Processes in Dosimetric Systems -- Collection of Works], Tashkent, Fan Press, 1972, pp 188-192 (Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 3, 1973, Abstract No 3.32.1382)

Translation: The possibility is studied of using a scintillation spectrometer with a stilbene crystal for dosimetry of neutrons and gamma radiation in mixed fields. The transfer factor Q(E) from dose values in the detector material to dose absorption in a standard tissue is calculated. It is shown that for a broad range of energies of gamma quanta and neutrons, the value of Q(E) for stilbene is practically constant. Absolute doses and ratios of doses of neutrons and gamma quanta from a (Pu-Be) source without a shield and with a shield of lead 5 cm thick are also studied. The possibility is discussed of using this scintillation dosimetry method for separate determination of the doses of intensive streams of neutrons and gamma radiation generated in the targets of a linear electron accelerator. 8 biblio. refs.

1/1

USSR UDC 539.12.08

KOVALEV, V. P., KAPCHIGASHEV, S. P., and PAVLOV, L. P.

"Dosimetry of Neutron-Gamma Radiation With a Scintillation Spectrometer"

Moscow, Atomnaya Energiya, Vol 34, No 1, Jan 73, pp 7-10

Abstract: A study was made of the possibility of using a stilbene crystal scintillation spectrometer for the dosimetry of mixed neutron-gamma radiation. By applying the principle of dividing impulses by their form, the doses from neutrons and from gamma radiation can be determined separately. Experimental investigations revealed that the electron spectrum in the stilbene crystal in the vicinity of the dividing threshold of (g-n)—components can be described by the function of the differential electron spectrum

$$\frac{dN}{dE_e}(E_e) = C \cdot e^{-\alpha E_e}$$

. In this case, only the exponential index α changes in the investigated 0.2-4.5-Mev energy range of gamma-quanta. Measurements were made to determine the radiation characteristics of a Pu-Be neutron source and a source of mixed radiation from a linac. It is shown that the use of 50-cm iron shielding results in the creation of a radiation field in which the magnitude of the neutron component is equal to twice that of the gamma component. Four figures, three formulas, two tables, seven bibliographic references.

1/2

1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--THE FORMATION OF UNIFORM DOSE FIELDS OF HIGH ENERGY BREMSSTRAHLUNG BY MEANS OF EQUILIZING TARGETS -U-

AUTHOR-(04)-KOVALEV, V.P., KHARIN, V.P., GORDEYEV, V.V., FILIPENOK, S.P.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 5, PP 49-54

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BREMSSTRAHLUNG, NEUTRON RADIATION, RADIOTHERAPY, ANGULAR DISTRIBUTION, ALUMINUM, FILTRATION, COPPER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0275 STEP NO--UR/0241/70/015/005/0049/0054

CIRC ACCESSION NO--AP0120964
UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120964

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF EXPERIMENTAL STUDIES OF ANGULAR DISTRIBUTIONS OF BREMSSTRAHLUNG AND NEUTRON RADIATION FOR TARGETS FROM COPPER WHICH WAS SELECTED AS A "MODEL" MATERIAL ARE DEPICTED. IN ALTERATION OF THE FORM OF THE TARGET THERE IS SEEN A DISTINCT EFFECT OF "EQUILIZATION" OF THE FIELD OF BREMSSTRAHLUNG. THE PAPER CARRIES THE RESULTS OF EXPERIMENTAL VERIFICATION OF THE INFLUENCE OF THE FACTOR OF ACCUMULATION ON THE DOSE VALUE FOR A COMBINATION OF COPPER TARGET AND ALUMINUM FILTER. THE EXPERIMENTAL RESULTS OF MEASUREMENT OF ANGULAR DISTRIBUTIONS OF NEUTRONS ARE IN ACCORDANCE WITH THE THEORY OF PHOTONEUTRON REACTIONS. THE EFFECT OF THE FORM OF THE TARGET ON THE ANGULAR DISTRIBUTION OF NEUTRONS IS DEMONSTRATED.

FACILITY: INSTITUT MEDITSINSKOY RADIOLOGII AMN SSSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201520014-4"

USSR UDC 621.793.3:669.245.781

KOVALEV, V. V., MARKUS, M. M., and PETROV, YU. N.

"Phase and Structural Conversions in Boron-Containing Nicke Films"

Bul. Akad. Shtiintse RSSMold, Izv. AN MOLD SSR. Ser. Fiztekh. i mat. n. (Bulletin of the Academy of Sciences Moldania SSR. Physical Technical and Mathematical Science Series), No 3, 1972, pp 53-61 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 8L318)

Translation: A study was performed on the structure of chemically precipitated Ni-B films, both of the original composition and after different thermal treatments. Electronographic methods of analysis indicated that prior to the thermal treatment, the films have a highly despersed GTSK (expansion unknown) for nickel in a mixture amorphous boron. As a result of the annealing different borides are formed; however, theri composition is essentially related to the concentration of B in the film. X-ray studies show the formation of compounds Ni_3B (at 310°), Ni_2B, and a previously unknown compound having the presumed composition Ni_7B_3 (at 410°). It was observed that the compound Ni_7B_3 is thermally unstable and decomposes into the phases Ni_2B and Ni_4B. It was shown that the thermal treatment of Ni-B films in air accompanied by oxidation reduction processes may lead to a reduction in the content of the borides in the film, to the separation of free Ni, and to the growth of grains of nickel which in turn causes a rapid reduction the microhardness. 1/1

USSR

YAGUBETS, A. N., KARYAKIN, V. V., KOVALEV, V. V., BUBINOVA, V. P., and BOBANOVA, ZH. I., Kishinev

"Electrodeposition of Nickel and Iron Coatings Alloyed with Boron"

Kishinev, Elektronnaya Obrabotka Materialov, Vol 38, No 2, 1971, pp 24-28

Abstract: A study was carried out to explore the possibility of preparing boron-containing alloys by an electrolytic method. The nickel electrolyte used had a composition (in g/l) of nickel sulfate (80), nickel nitrate (15), ammonium chloride (30), potassium bisulfite (3), sodium citrate (60), triethanolamine (35), trilon B (35), mercaptophthalic anhydride (0.4), and sodium borohydride (0.4). The acidity of the nickel electrolyte varied from a pH of 10.5 to 14, the temperature from 20 to 70°C, the cathodic current density from 3 to 10 amp/decimeters^2. The composition of the iron electrolyte used was (g/l) ferric sulfate (80), Trilon B (132), triethanolamine (154), sodium borohydride (0.5). The electrolyte temperature was 80°C, the pH 11-12, the cathodic current density varied between 5-15 amps/decimeters^2. The boron content in the powder, microstructure, microhardness, and phase composition of the powder in relation to variation of electrolysis conditions were investigated.
1/2

USSR

YAGUBETS, A. N., et al., Elektronnaya Obrabotka Materialov, Vol 38, No 2, 1971, pp 24-28

The addition of stabilizers displaced the polarizarisation curve of nickel, the area and degree of displacement depending on the stabilizer. The iron electrolyte was not affected by the addition of sodium borohydride. The boron uptake by the nickel and iron powders was found to be dependent on the electrolysis conditions and in the nickel amounted to 1-3% by wt, and in the iron up to 7% by wt. Microhardness was also dependant on the electrolytic conditions.

2/2

USSR UDC 621.01:539

KOVALEV, V. V., GOLEGO, N. L., TRUSKOV, P. F., Kiev Institute of Civil Aviation Engineering

"Influence of Degree of Hardening and Roughness of Friction Surfaces on Wear Rate and Load-bearing Ability"

Kiev, Fiziko-khimicheskaya Mekhanika Materialov, Vol 8, No 3, 1972, pp 21-26.

Abstract: This work presents a study of the changes in wear rate, coefficient of friction and friction surface temperature as functions of microhardness and roughness of the friction surfaces at various temperatures of the lubricant supply and various normal pressures. The softer metal of the friction couple, when it does not reach full hardening, wears rapidly with increased normal pressure, and its wear rate may be higher than the same material in the hardened state by 2 or 3 orders of magnitude. During the initial period of friction, the wear rate is decisively influenced not so much by the height of microprojections on the friction surfaces as by their mutual placement on the two surfaces. The temperature of the lubricant layer has a decisive influence on processes of friction and wear, both during the break-in period and after it. An increase in the temperature of the lubri-

1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201520014-4"

USSR

KOVALEV, V. V. GOLEGO, N. L., TRUSKOV, P. F., Kiev, Fiziko-khimicheskaya Mekhanika Materialov, Vol 8, No 3, 1972, pp 21-26.

cant layer above the values causing its local breakdown results in an increase in wear rate, roughness, coefficient of friction and in a decrease in microhardness. The end of the break-in period can be considered to have arrived when a condition of sufficiently complete contact and equality of dimensions of projections and depressions on the profiles of the microirregularities of the two friction surfaces is reached, which occurs as the normal pressure is increased from its average values to the critical values for each given friction speed. When these conditions are met, the load-bearing ability of friction surfaces increases. This means that if the critical values of normal pressure and contacting surface temperature for a given pair of materials is reached during the break-in process, changes in these parameters between the minimum values and the critical values at the same friction speed or less cannot later cause disruption of the normal friction and wear process in the friction couple.

USSR UDC 628.3+669.295

AKIMOVA, N. A., KARVATSKAYA, R. A., USACHEVA, L. A., and KOVALEV, V. Ya.

"Semiindustrial Experiments on Removing Suspended Substances and Oils From Runoff Waters"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 143-145

Translation: A description is given of the results of industrial tests on purifying runoff at the DTM [expansion unknown] Plant of suspended substances and oils by mixing neutralized and slightly polluted runoff in a ratio 1:2.5 or 1:2, introducing polyacrylamide in the amount of 0.1-0.2% of the suspended substances, and subsequent standing for one hour. It is demonstrated that under such settling pool operating conditions, a clear, colorless, purified 75% (volumetric) amount is received, which contains an average of 10.4% mg/liter of suspended substances, and no oil. In the settled deposit, the content of the hard part averages 2% and water 98%. After five hours of settling in a separate reservoir, consolidation of the deposit practically ends and the content of the hard part averages 3.6%. One illustration and two tables.

USSR UDC 669.295.004.2

ALIMOVA, N. A., KARVATSKAYA, R. A., USACHEVA, L. A., and KOVALEV, V. YA.

"Pilot Plant Experiments on Purification of Waste Water to Remove Suspended Materials and Oils"

Sb. tr. Vses. n.-i. i proyektn. in-t titana [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 143-145, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. 1 G198 by the authors).

Translation: Results are presented from industrial tests of a method for purification of titanium plant waste waters to remove suspended material and oils by mixing neutralized and little-contaminated water in a ratio of 1:2.5 or 1:2, introduction of polyacrylamide at 0.1-0.2% of the weight of suspended materials, and subsequent settling for one hour. With this mode of settling, the waste water becomes clear and colorless in 75% of its volume; this clear volume contains 10.4% mg/l suspended material, and no oil. The content of solids in the lower portion is about 2%, water 98%. After five hours settling, the compaction of the sediment is practically complete; the content of solids is then about 3.6%. 1 figure; 2 tables.

1/1

USSR UDC 547.455

KUDRYASHOV, L. I., LIVERTOVSKAYA, T. YA., VOZNESENSKAYA, S. V., KOVALEV, YU. I., SHARPATYY, V. A., and KOCHETKOV, N. K.

"Radiation Chemistry of Carbohydrates. XII. Effect of Structural Factors on Course of Radiolysis Processes of Aqueous Solutions of Methylglycosides"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1133-1137

Abstract: The authors studied regularities reflecting the relationship between the structure of the glycoside molecule and processes occurring during and after irradiation of aqueous solutions. The objects of study chosen were α-methyl-D-glucopyranoside, β-methyl-L-arabinopyranoside and α-methyl-D-galactopyranoside. The radiation sources used were a Co-60 device and an electron accelerator for frozen solutions. The periodate oxidation method was used to determine the glycoside concentrations of the irradiated solutions. It was found that the stereochemistry of methylglycosides has a significant

1/2

USSR

KUDRYASHOV, L. I., et al., Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1133-1137

effect on their radiation resistance. There is practically no formation of free monosaccharides in the radiolysis of dilute aqueous solutions. The principal process in the radiolysis of α-methyl-D-galactopyranoside and β-methyl-L-arabinopyranoside is the formation of deoxy sugars. According to EPR measurements, the composition and ratio of radiolysis products depend on the structure of the initial molecules and the reactivity of the intermediate particles that form.

2/2

1/2 017 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--REACTION OF SECRETION OF THE PROSTATE AS AN AUXILIARY CRITERION OF DIAGNOSIS OF CHRONIC PROSTATITIS -U-

AUTHOR--KOVALEV, YU.N.

COUNTRY OF INFO--USSR

SOURCE--UROLOGIYA I NEFROLOGIYA, 1970, NR 3, PP 32-35

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--REPRODUCTIVE SYSTEM, TISSUE FLUID, HYDROGEN ION CONCENTRATION, DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/2009 STEP NO--UR/0606/70/000/003/0032/0035

CIRC ACCESSION NO--AP0120652

UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--23OCT7(

CIRC ACCESSION NO--AP0120652

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN EXAMINING THE REACTION OF SECRETION OF THE PROSTATE OF 122 MEN, AGED FROM 17 TO 50 YEARS, IT WAS ESTABLISHED THAT UNCHANGED SECRETION OF A HEALTHY PROSTATE GLAND IS OF NEUTRAL REACTION. CHRONIC INFLAMMATORY PROCESS IN THE PROSTATEIS ACCOMPANIED BY A DISTINCT SHIFT OF ITS SECRETION IN THE ALKALINE DIRECTION. A CHANGE OF THE REACTION OF THE LATTER PARALLELS THE ELEVATION OF THE LEUKOCYTE COUNT, AS WELL AS THE ANATOMICAL CHANGES IN THE PROSTATE; THIS MAY SERVE AS AN ADDITIONAL CRITERION OF THE INFLAMMATION OF THE PROSTATE. CHANGES OF THE PH OF THE PROSTATE SECRETION NOT INFREQUENTLY COINCIDE WITH THE CHANGES OF THE EJACULATE (OLIGOSPERMIA, ASTHENO NECROSPERMIA AND TERATOSPERMIA).

FACILITY: KLINIKA KOZHNYKH I VENERICHESKIKH BOLEZNEY CHELYABINSKOGO MEDITSINSKOGO INSTITUTA.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201520014-4"

USSR

UDC 66.061.52

KAGAN, S. Z., KOVALEV, YU. N., and ZAKHARYCHEV, A. P., Moscow Chemical Technological Institute Imeni D. I. Mendeleyev

"The Phase Contact Area in Drop Formation"

Moscow, Teoreticheskiye Osnovy Khimicheskoy Tekhnologii, Vol 6, No 6, Nov-Dec 72, pp 924-927

Abstract: The goal of this investigation was to determine experimentally the relationship between the surface of drops being formed at different time periods and the volume and radius of the cones. Also the flow velocity was determined at which the drop formation could be considered as a quasistationary process controlled by the equilibrium between the forces of interphase stress and of the weight forces. The volume of a drop can be described by the equation $V = V_0 + W_t$, where $0 \leq t \leq \tau$; it depends on the consumption of the liquid W and the volume of liquid remaining at the cones during the break-away of the previous drop. The flow process can be considered as quasistationary up to Weber values of 0.2-0.4. With higher Weber numbers the liquid volume remaining on the cone begins to be directly related to the flow rate. In that case determination of the volume on surface of the drops being formed can be carried out only from the equations of the movement.

- END -

1/1

USSR UDC 621.314.58 (088.8)

KOVALEV, YU.S., BOGOPOL'SKIY, B. KH. [Gos. proyektno-konstrukt. i n.-i. in-t po avtomatizatsii ugol'n. prom-sti--State Planning And Design Scientific-Research Institute For Automatization Of The Coal Industry]

"Device For Control Of Frequency Converter"

USSR Author's Certificate No 256047, filed 25 Oct 65, published 23 Mar 70 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11B471P)

Translation: A circuit is proposed for control of the power thyristors of a frequency converter. The device contains a high-frequency oscillator, a low-frequency oscillator, and a 6-phase shift register using low-power thyristors and ferrite transformers. The circuit comprises a supplementary transistor, a controlled low-frequency oscillator, and is connected in parallel with the power supply of the shift register. For realization of reverse, the ferrite transformers each have two coupling windings. 1 ill. L.R.

1/1

USSR

UDC 669.791.793:669.15-194

MAKARA, A. M., KOVALEV, YU. YA., and NOVIKOV, I. V., Institute of Electric Welding imeni Ye. O. Paton

"Effect of Electroslag Remelting on the Mechanical Properties of Electroslag-Welded Joints of Structural Alloy Steels"

Kiev, Avtomaticheskaya Svarka, No 3, Mar 73, pp 1-4

Abstract: Investigations were carried out at the Institute of Electric Welding for the purpose of determining the effectiveness of electroslag remelting of structural alloy steels and welding wire metal in order to increase the mechanical properties and prevent ruptures in joints made by electroslag welding. Tests were conducted on 20Kh2MA and 16GNMA steels (110-115 mm thick) weighing, respectively, 34 and 21 tons before remelting and 9 and 14 tons after remelting. The only significant changes in chemical composition after remelting were reduced amounts of S, O, and N. Steel 20Kh2MA had decreased strength and increased ductility after remelting and heat treatment (normalization and tempering) while strength and ductility both increased for steel 16GNMA after remelting and heat treatment. Steel 16GNMA also had better impact strength properties following welding and heat treatment at all investigated temperatures (20, -20, -40 and -50°C). With both of these steels the danger

1/2

USSR

MAKARA, A. M., et al., Avtomaticheskaya Svarka, No 3, Mar 73, pp 1-4

of heat-affected zone ruptures during electroslag welding is reduced after the steels have been remelted. 4 tables, 2 bibliographic references.

USSR

UDC 548.5

BAGDASAROV, KH. S., DOBROVINSKAYA, YE. R., PISHCHIK, V. V., CHERNYI, M. M., KOVALEV, YU. YU., GERSHUN, A. S., ZVYAGINTSEVA, I. F., All-Union Scientific Research Institute of Single Crystals

"Low-Dislocation Single Crystals of Corundum"

Moscow, Kristallografiya, Vol 18, No 2, Mar-Apr 73, pp 390-395.

Abstract: The relationship of growth conditions and quality of structure of corundum single crystals is studied. The influence of crystal orientation, temperature gradient and stability of thermal conditions on formation of dislocations in crystals of corundum grown by directed crystallization is studied. Proper selection of orientations minimized the influence of structural defects in an etched crystal and practically eliminated heredity of dislocations arising in the growth process. Investigation and consideration of three-dimensional orientation and crystallization conditions on structural quality allowed the production of low-dislocation single crystals of lucosapphire.

1/1

USSR

UDC 661.143:546.48'221

SYSOYEV, L. A., AND KOVALEVA, A. D.

"The Nature and Formation Mechanism of Inherent Defects During Annealing of the CdS Crystals"

Khar'kov, Sb. Monokristally i Tekhnika (Collection of Works: Single Crystals and Technology), Vyp 6, 1972, pp 103-108 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom, No 23(II), 1972, Abstract No 23L135)

Translation: A comparison of data regarding the pycnometer density (PD), x-ray density (RD), and microhardness (MH) of CdS crystals grown from melt and subjected to annealing in the Cd and S vapors has shown that the annealing in the Cd vapor decreases and in the S vapor increases the PD of crystals. The RD remained unchanged during the annealing. The basal plane MH of crystals increased slightly when annealed in the Cd vapor and decreased when annealed in the S vapor. This indicated that the effective charge of the cationic sublattice underwent some changes. The obtained results are attributed to the disorder mechanism of the cationic sublattice. It was demonstrated that the principal type of defects in the CdS crystals is located in the internodal Cd.

1/1

USSR UDC: 621.396.69:621.316.8

KOVALEVA, A. G.

"Mathematical-Statistical Model of the Behavior of a Set of Real Resistors in Time"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiodetali (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 2 (19), pp 67-73 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1V268)

Translation: The author discusses problems of mathematical-statistical description of the behavior of a set of real resistors in time for any type of external loading. It is assumed that in any group of articles there are specimens with aging trajectories which are fairly identical and which also differ noticeably from normal trajectories. This leads to disruption of the homogeneity of the distribution function for the aging parameters of articles in the testing process, and increases the probability that a parameter will fall outside the norm for the failure criterion. Physical and mathematical models for construction of different aging trajectories of individual specimens are considered. Resumé.

1/1

USSR

UDC 612.1-06:612.865/.867

(6)

NAVAKATIKYAN, A. O., KUNDIYEV, Yu. I., LYSINA, G. G., TOMASHEVSKAYA, L. I., DERKACH, V. S., KAPSHUK, A. P., KOVALEVA, A. I., STANISLAVSKAYA, TS. D., OSINSKAYA, L. S., and PARLYUK, A. F., Kiev Institute of Industrial Hygiene and Occupational Diseases

"Effect of Mental Work Accompanied by Nervous and Emotional Stress of Varying Degrees on the Cardiovascular System"

Moscow, Kardiologiya, No 3, 1973, pp 50-56

Abstract: In addition to making a statistical analysis of 1,585 cases of myocardial infarction among Kiev workers, the authors ran physiological studies on engineers, typesetters, mathematicians, and neurosurgeons. They found that the effects of mental work on the cardiovascular system vary with the degree of nervous tension and some other factors. The manifestations range from incipient functional disturbances of regulation to severe pathology. Moderate tension elevates blood pressure, the increase in systolic and diastolic pressures being related. Great tension, however, tends to disrupt the relationship probably because the centers regulating vascular tonus become uncoordinated. Intense nervous and emotional strain increases the heart beat as well as the "slow" waves among the periodic constituents of the correlation function of

1/2

USSR

(6)

NAVAKATIKYAN, A. O., et al., Kardiologiya, No 3, 1973, pp 50-56

the cardiac rhythm, an indication of an intensification of central neuroendocrine influences on cardiac activity. As the tempo of work and degree of emotional stress increase, the amount of catecholamines and 17-hydroxycorticoids excreted with urine also gradually increases. Thus, tense mental work markedly affects the cardiovascular system. The resulting changes correlate with the functions of the sympathico-adrenalin system and adrenal cortex.

2/2

USSR

UDC 621.373.521.1:621.382.133

BOBROVSKIY, YU. L., GOGOBERIDZE, G. B., KOVALEVA, D. I.

"Synchronizing a Superhigh Frequency Tunnel Diode Generator"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrosvyaz. in-t svyazi. Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute. Vyp. 2), Leningrad, 1970, pp 204-207 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9D262)

Translation: Two versions of the circuit for synchronizing a superhigh frequency tunnel diode generator are investigated. Practical recommendations with respect to utilization of each of the schemes are confirmed by the results of an experimental study.

1/1

USSR UDC: 911.3.616.927(575.1)

CHICHENIN, P. I., PULATOV, Ya. G., YUSUPOV, K. Yu., LI GVANKHUA, V. T., BADANOVA, L. A., KOVALEVA, F. S.

"The Prevalence of Typhoid-Paratyphoid Infections and the Means for Eradicating them in the Uzbek SSR"

V sb. Materialy XV Vses. s'yezda epidemiologov, mikrobiologov i infektsionistov, Tezisy dokl. Ch. I (Proceedings of the 15th All Union Conference of Epidemiologists, Microbiologists and Specialists in Infectious Diseases, Reports of Theses, Part I--collection of works) Moscow, 1970, pp 279 (from Ref Zh-36. Meditsinskaya geografiya, No 1, Jan 71, Abstract No 1.36.250)

[No Abstract]

1/1

1/2 021 UNCLASSIFIED PROCESSING DATE--15NOV70

TITLE--ISOBUTYLENE POLYMERS OR COPOLYMERS -U-

AUTHOR-(04)-LIVSHITS, I.A., SHLIFER, D.I., KOVALEVA, G.V., SOUSTOVA, N.V.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,443
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ISOBUTENE, POLYMER, COPOLYMER, ISOPRENE, ALUMINUM HALIDE, CATALYTIC POLYMERIZATION, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1417 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128816

UNCLASSIFIED

2/2 021 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0128816

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ISOBUTYLENE POLYMERS OR COPOLYMERS ARE PREPD. BY POLYMG. OR COPOLYMG. WITH, E.G., ISOPRENE IN A POLAR OR NONPOLAR HYDROCARBON SOLVENT AT MINUS 30 TO MINUS 100DEGREES BY USING AL HALIDE BASED CATALYSTS. TO OBTAIN END PRODUCTS WITH A SPECIFIED MOL. WT. RANGE, THE POLYMN. PROCESS IS CARRIED OUT IN THE PRESENCE OF 2,4,4,TRIMETHYL,1,PENTENE.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--INFLUENCE OF VARIOUS FACTORS ON THE COPOLYMERIZATION OF ISOBUTYLENE AND ISOPRENE -U-

AUTHOR-(04)-SHLIFER, D.I., KOVALEVA, G.V., SOUSTOVA, N.V., SOKOLOVA, V.M.

COUNTRY OF INFO--USSR

SOURCE--KAUCH REZINA 1970, 29(5), 1-3

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--COPOLYMERIZATION, ISOPRENE, LOW TEMPERATURE EFFECT, ISOBUTENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0975 STEP NO--UR/0138/70/029/005/0001/0003

CIRC ACCESSION NO--AP0138003

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0138003
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ISOBUTYLENE (I) AND ISOPRENE WERE COPOLYMD. IN ETCL OR ISOPENTANE (II) AT MINUS 100DEGREES TO MINUS 30DEGREES. AT SIMILAR TO MINUS 30DEGREES THE MIXT. BECAME HOMOGENEOUS AND THE COPOLYMER MOL. WT. AND COMPN. DID NOT DEPEND ON THE SOLVENT. IN THE HETEROGENEOUS COPOLYM. AT LESS THAN MINUS 30DEGREES THE MOL. WT. OF THE COPOLYMER OBTAINED IN II WAS 3-3.5 TIMES LARGER THAN THAT OBTAINED IN ETCL. THE CHANGES OF THE SOLVENT AND TEMP. VARIED THE AMT. OF I UNITS IN THE COPOLYMER FROM 4 TO 10PERCENT VOL. WITHOUT ALTERING ITS MOL. WT. FACILITY: VSES. NAUCH-ISSLED. INST. SIN. KAUCH. IM. LEBEDEVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--INTERACTION IN THE SILVER, THALLIUM AND TELLURIUM SYSTEM STUDIED FROM THE THALLIUM TELLURIDE AND SILVER TELLURIDE SECTION -U-

AUTHOR-(04)-KOVALEVA, I.S., KRANCHEVICH, K.S., SEMENTSOVA, R.S., NIKOLSKAYA, G.F.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 247-51

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHASE DIAGRAM, SILVER, THALLIUM, TELLURIUM, HARDNESS, X RAY ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0558 STEP NO--UR/0363/70/006/002/0247/0251

CIRC ACCESSION NO--AP0105543

UNCLASSIFIED

CIRC ACCESSION NO--AP0105543

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHASE DIAGRAM OF THE TL SUB2 TE SUB3 MINUS AG SUB2 TE SECTION WAS PLOTTED FROM THE RESULTS OF DTA, MICROSTRUCTURAL, X RAY PHASE, AND MICROHARDNESS DATA OF COMPNS. OF THE TERNARY AG-TL-TE SYSTEM. THE SECTION STUDIED IS NOT QUASIBINARY.

USSR UDC 539.4.015

BLANTER, M. YE., KOVALEVA, L. A., and TISKOVICH, N. L., (Moscow)

"Nature of the Strengthening of Maraging Steel"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 70, pp 151-153

Abstract: A previous article by the authors reported the anomalous effect of decreased strength with 90% deformation of steel pre-aged at 475°. The article showed that an ultimate strength of 250-270 kg/mm^2 can be obtained in maraging steel after combined treatment. The present article attempts to study the nature of the high strength of maraging steel. Maraging steel with the composition 18% Ni, 8% Co, 5% Mo, and 1% Ti was treated under the following regime: hardening + aging + deformation (with shrinkages of up to 90%) + aging. Hardening was performed from 950° C in air. The first aging was under the following conditions: 375° for 1 hour, 475° 30 min. and 475° 3 hours. Re-aging took place at 450° for 3 hours. The results indicate that aging processes take place

1/2

USSR

BLANTER, M. YE., et al., Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 70, pp 151-153

in maraging steel during deformation at room temperature, and the increase in deformation hardness is due not only to cold hardening, but also to precipitation hardening. A study of data on variations in the electrical resistance and lattice parameter of the solid solution indicates that back dissolution of strengthening zones occurs in steel pre-aged at 475° C, and this results in reduced strength of the steel under 90% deformation.

2/2

USSR

UDC 616.155.392-085.277.3-059:615.37

SKURKOVICH, S. V., BULYCHEVA, T. I., KOVALEVA, L. G., and ISAYEV, V. G., Laboratory of Immunology and Virology of Leukoses and Hematology Clinic, Central Institute of Hematory and Blood Transfusion, Ministry of Health USSR

"Active Immunization of Acute Leukemia Patients with Live Allogenous Leukotic Cells Combined with Antileukosis Drug Therapy"

Moscow, Problemy Gematologii i Perelivaniya Krovi, No 5, 1970, pp 32-35

Abstract: A group of nine patients with acute leukemia received intravenous and intramuscular injections of leukotic cells from other such patients, after which they were treated with various drugs (prednisolone, 6-mercaptopurine, methotrexate, vincristine). The response was almost immediate - lowering of body temperature, improvement of sleep and appetite, shrinkage of lymph nodes and parenchymatous organs, cessation of hemorrhages, etc. Five of the nine had remissions lasting an average of 9.1 months and a lengthening of the life span by 18 months. On the other hand, in a group of control patients (treated with drugs alone), the remissions lasted only five months on the average and the life span was extended by just 6-7 months.

1/1

UDC 547.26'118

USSR

GUBAYDULLIN, M. G., and KOVALEVA, L. M.

"Mixed Anhydrides of Sulfonic and Phosphorous Acids. I. Synthesis and Investigation of Properties"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 12, Dec 73, pp 2660-2663

Abstract: Mixed anhydrides of the sulfonic and phosphorous acids have been obtained by the reaction of the silver salts of sulfonic acids with dialkylphosphorous acid chlorides. The reactions of thermal decomposition, hydrolysis and alcoholysis of the product obtained have been studied. Condensation products have been obtained of the title compounds with carbonyl compounds.

1/1

UDC 669.715'9'721:539.27:539.4.016.3

USSR

GERASIMOVA, L. G., KRASNOVA, E. P., KOVALEVA, L. V.

"Variation of the Structure of the Phase Composition and Properties of the Alloy of the Al-Zn-Mg System with the Ratio Mg/Zn $\geq$ 2 During the Heat Treatment Process"

V sb. Metallovedeniye (Physical Metallurgy--collection of works), No 15, Leningrad, Sudostroyeniye Press, 1971, pp 119-128 (from RZh-Metallurgiya, No 4, Apr 72, Abstract No 4I644)

Translation: A study was made of the structure and phase composition of an alloy of the Al-Zn-Mg system with the ratio Mg/Zn $\geq$ 2 by the methods of electron microscopy. The fine structure of the alloy quenched and aged with respect to different conditions was studied. An effort was made to establish the relation between the structural variations and the strength characteristics of the alloy. The decomposition scheme of the supersaturated solid solution during the aging process proposed earlier by the VIAM [All-Union Scientific Research Institute of Aviation Materials] for alloys with a Mg/Zn ratio $\geq$ 1 was confirmed.
6 illustrations, 1 table, and a 20-entry bibliography.

1/1