

USSR

SECHKAREV, A. V., et al, Izvestiya: Fizika, No 5, 1970, pp 7-12

possible to provide a qualitative, and, in a number of cases, quantitative interpretation of these rules and to define a series of molecular parameters for a whole group of substances.

2/2

Acoustical and Ultrasonic

USSR

UDC 534.874.3

VOLOVOV, V. I., LYSANOV, Yu. P., and SECHKIN, V. A., Acoustic Institute of the Academy of Sciences USSR, Moscow

"On Spatial Correlation of Acoustic Signals Reflected From the Sea Bottom"

Moscow, Akusticheskiy Zhurnal, Vol 19, No 1, Jan-Feb 73, pp 16-20

Abstract: Experimental data are presented on the correlation of envelopes of acoustic signals reflected from the sea bottom and admitted on horizontally dispersed receivers. The experiments were carried out on abyssal plains in Atlantic and Indian Oceans at normal sound incidence on the sea bottom. It is demonstrated that by high frequency a correlation of enveloping signals is absent, whereas by low frequency it appears to be very high. The obtained results are explained by reference to diagrams. Three types of fluctuations of acoustic signals reflected from the sea bottom are distinguished which are determined by different mechanisms and characterized by highly contrasting spatial periods. Four figures, seven bibliographic references.

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1/2 012 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--POLYMERIZATION OF METHYL METHACRYLATE IN THE PRESENCE OF BUTYL
NITRITES DURING PHOTO AND REAGENT INITIATION -U-
AUTHOR--(031)-SECHKOVSKAYA, V.A., LEPLYANIN, G.V., GLADYSHEV, G.P.
COUNTRY OF INFO--USSR S
SOURCE--IZV. AKAD. NAUK KAZ. SSR, SER. KHIM. 1970, 20(1), 59-64
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMETHYLMETHACRYLATE, POLYMERIZATION INHIBITION, ORGANIC
PEROXIDE, PHOTOPOLYMERIZATION, NITRITE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/0323

STEP NO--UR/0360/70/020/001/0059/0064

CIRC ACCESSION NO--AP0103978

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--18SEP70

2/2 . 012

CIPC ACCESSION NO--AP0103978
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. BU NITRITES, WHICH CAUSE WEAK INHIBITION OF ME METHACRYLATE POLYMN. IN THE DARK WITH INITIATION BY BZ SUB2 O SUB2 OR DICYCLOHEXYL PEROXYDICARBONATE, STRONGLY INHIBIT LIGHT INITIATED POLYMN. N, ISO, SEC, AND TERT BUONO SCARCELY AFFECT POLYMN. SPEED IN THE INITIAL STAGES BUT THEY SLOW DOWN THE PROCESS AT THE GELATION STAGE AT HIGH DEGREES OF CONVERSION. RATIOS OF INHIBITION CONSTS. TO GROWTH CONSTS. AT 40DEGREES FOR THE 4 ISOMERS WERE 8.5-12.5 TIMES TO PRIME NEGATIVE2. THE PROPOSED MECHANISM OF INHIBITION WITHOUT IRRADN. INVOLVES REACTION BETWEEN FREE RADICALS R TIMES AND BUONO TO GIVE BUOR AND NO, WHICH MAY REACT WITH FREE RADICALS AT LOW TEMPS. OR ADD TO THE MONOMER AT HIGHER TEMPS. (90DEGREES) WHERE THE INHIBITING EFFECTS ARE ALMOST NIL. DURING PHOTOPOLYMN., THE BUONO GIVES NO AND BUO RADICALS, WHICH MAY ADD TO THE MONOMER TO GIVE CHAIN GROWTH VIA R TIMES, BUT R TIMES CHAINS MAY BE TERMINATED BY 3 REACTIONS: R TIMES PLUS NO YIELDS RNO; R TIMES PLUS RNO YIELDS RNOR; OR R TIMES PLUS RNOR YIELDS RONR SUB2. TEMP. INCREASES FOR PHOTOPOLYMN. ALSO WEAKEN THE INHIBITING INFLUENCE OF NITRITES.

UNCLASSIFIED

UDC 621.762:669.127.44

USSR

BULANOV, V. Ya., MIKHAYLICHENKO, A. V., MOSTKANTSEV, G. A., BYSVUKOV, N. Ye.,
and SEBACH, Yu. A., Orsk-Khalilovov Metallurgical Combine

"Cermet Materials Based on Iron Powders from the Rolling Scale of 17GS and
10KHSND Steels"

Kiev, Poroshkovaya Metallurgiya, No 7, Jul 70, pp 57-61

Abstract: Iron powders from the rolling scale of 17GS and 10KHSND naturally
alloyed steels were produced by combined reduction. These powders were used
to produce cermet test materials both with additions of carbon, in the form of
S-c graphite, and without it. The principal properties of the powders are cited
for comparison with the properties of PZh2M iron powder of the same granulometric
composition produced by the same method. A table in the original article shows
the density of the specimens as a function of full compacting pressure. The
shrinkage was studied in the process of sintering at 1000 and 1250° C in a dried
hydrogen atmosphere for 2 hours. The results show that an increase in porosity
is followed by an increase in shrinkage for all specimens regardless of compo-
sition and processing conditions. The tests for uniaxial compression, tension,
bending, and shear indicate that the tensile strength of materials based on
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BULANOV, V. Ya., et al, *Poroshkovaya Metallurgiya*, No 7, Jul 70, pp 57-61

alloyed iron powders is higher than the same properties of materials based on unalloyed iron powders. It was found (by metallography) that alloyed powders with zero graphite content consist of alloyed ferrite with a microhardness higher than that in the ferrite of $P2h2M$; an increase in the graphite content in the initial mixture raises the amount of pearlite. Additions of graphite above 2% result in cementite.

2/2

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THERAPEUTIC EFFICACY OF BICILLIN 6 IN TREATMETN OF GONORRHEA IN MEN
-U-
AUTHOR--(04)-KOZIN, S.L., KRAVCHENKO, V.G., DEREVYANKO, R.V., SEDASH, V.A.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 5, PP 75-78
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--VENEREAL DISEASE, ANTIBIOTIC, DRUG DOSAGE RESPONSE/(U)BICILLIN
6 ANTIBIOTIC
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/2046 STEP NO--UR/0206/70/000/005/0075/0079
CIRC ACCESSION NO--AP0122275
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--2300T70

CIRC ACCESSION NO--AP0122275

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BICILLIN 6 IN DOSES OF 1,200,000 TO 2,400,000 UNITS WAS USED FOR TREATMENT OF 120 MEN WITH FRESH GONORRHEA. FAILURE OF TREATMETN WAS OBSERVED IN 10PERCENT OF THE PATIENTS DURING THEIR STAY IN THE HOSPITAL. POSTGONNORRHEAL URETHRITES WERE OBSERVED IN 21.7PERCENT OF THE PATIENTS. IN SOME PATIENTS WITH GONORRHEA FAILURE OF TREATMENT WAS OBSERVED AFTER A SERIES OF SUCCESSIVELY USED ANTIBIOTICS. TREATMETN WITH BICILLIN 6 WAS FOUND TO BE MORE EFFECTIVE THAN THAT WITH WATER SOLUBLE PENICILLIN IN THE SIMILAR COURSE DDOSES. FACILITY: KHAR'KOVSKIY N-I INSTITUT DERMATOLOGII I VENEROLOGII, AND KHAR'KOVSKIY OBLASTNOY KOZHNO-VENEROLOGICHESKIY DISPANSER.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--EFFECT OF NONMAGNETIC IONS ON THE RELAXATION OF SPIN WAVES IN
YTTRIUM GARNETS CONTAINING RARE EARTH IONS -U-
AUTHOR--(04)-KRASNOVA, V.A., PILSHCHIKOV, A.I., SEDLITSKAYA, N.S.,
SILVESTROVICH, I.I.
COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(3), 785-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--YTTRIUM, GARNET, RARE EARTH METAL, ION, SAMARIUM, SPIN WAVE,
SPIN RELAXATION, MAGNETISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1277 STEP NO--UR/0181/70/012/003/0785/0788

CIRC ACCESSION NO--AP0116739
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116739

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SPIN WAVE RELAXATION
PARAMETER, DELTAETA SUBKAPPA, WAS INVESTIGATED IN POLYCRYST. Y AL AND Y
IN GARNETS CONTG. SMALL CONCNS. OF SM ION. DELTAETA SUBKAPPA WAS
MEASURED BY THE METHOD OF PARALLEL PUMPING AT 2850 MHZ. WITH INCREASED
CONCN. OF NONMAGNETIC IONS, ESP. AL IONS, THE EFFICIENCY OF THE EFFECT
OF SM IONS ON DELTAETA SUBKAPPA INCREASES. THE POSSIBILITY IS DISCUSSED
OF AN EXPLANATION OF THE RESULTS WITH THE AID OF THE THEORY OF SLOW
RELAXATION.

FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW,
USSR.

UNCLASSIFIED

USSR

UDC 532.517.4

LEVIN, A. M., SEDELKINA, M. I.

"Experimental Study of Turbulent Stream Flow in a Bounded Space"

Aerodinamika. Mezhvuz. sb. (Aerodynamics. Intervuz Collection), 1972, No. 14, pp 146-157 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B1053)

Translation: The results of an experimental study of average and pulsation characteristics of a flow in axisymmetric turbulent jets propagating in cylindrical chambers of different diameters are presented. The jet flows from a nozzle along the axis of the cylindrical prechamber, behind which there follows a working chamber of greater diameter. The ratio of the diameters of the prechamber and the nozzle is 2.5 and that of the working chamber and prechamber varies within the limits 2.14 to 9.36. The flow parameters are measured with the aid of a thermoanemometer with a Pitot-Frandsl crossed pickup. The effect of constriction of the flow (the ratio of the diameters of the working chamber and the prechamber) on the distribution of average velocities, the mean-square values of the longitudinal and radial components of the pulsation velocity, and turbulent tangential stresses along the axis of the stream and in two of its transverse cross sections is analyzed. It is noted that in the particular case

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LEVIN, A. M., SEDELKINA, M. I., Aerodinamika. Mezhdvuz. sb., 1972, No. 14,
pp 146-157

as distinct from known results the maximum values of the pulsation parameters
correspond to the axis of the stream. 5 ref. A. V. Kolesnikov.

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1/2 013 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ANALYSIS OF THE GEOMETRY OF ROTATIONAL CUTS IN STATICS -U-
AUTHOR--(03)-KONOVALOV, Y.G., SOUS, A.V., SEDELNIKOV, B.M.
COUNTRY OF INFO--USSR
SOURCE--MINSK, IZVESTIYA AKADEMII NAUK BSSR, SERIYA FIZIKO-TEKHNICHESKIKH
NAUK, NO. 1, 1970, PP 37-46
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--METAL CUTTING, CUTTING TOOL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/2008 STEP NO--UR/0201/70/000/001/0037/0046
CIRC ACCESSION NO--AP0118964
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118964

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE PURPOSE OF THIS ARTICLE IS TO SHOW HOW LABOR OUTPUT IN CUTTING METALS CAN BE IMPROVED BY APPLYING NEW KINETIC CUTTING METHODS; FOR EXAMPLE, ROTATIONAL CUTTING THROUGH THE USE OF A ROTATING INSTRUMENT. SINCE THE METHODS DESCRIBED IN THE LITERATURE FOR DETERMINING THE ACTUAL OPERATING ANGLES OF ROTATIONAL CUTS TO BEST ADVANTAGE ARE CUMBERSOME AND INCONVENIENT FOR PRACTICAL USE, THE AUTHORS OFFER A SIMPLER THEORETICAL ANALYSIS OF THE GEOMETRY OF THOSE CUTS IN PROLONGED LATHE WORK, BORING, AND PREPARING FLAT SURFACES. THEIR ANALYSIS LEADS THEM TO THREE CONCLUSIONS: FIRST, THE CUTTING ANGLES AND THEIR POSITIONS RELATIVE TO THE WORK ARE CHOSEN FROM THE OPTIMAL VALUES PROVIDED BY THREE EQUATIONS DEVELOPED IN THE ARTICLE'S TEST: SECOND, THE COMPUTATIONS MADE BY THE FORMULAS DEVELOPED BY THE ARTICLE SHOW THAT AT CONSTANT GRINDING ANGLES, THE FORWARD ANGLE IS REDUCED AND THE REAR ANGLE IS INCREASED WITH INCREASING MACHINE ANGLES; THIRD, AN INCREASE IN THE DEPTH OF CUT IN REVERSE CUTTING LEADS TO AN INCREASE IN THE FORWARD ANGLE AND A REDUCTION IN THE REAR ANGLE.

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USSR

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UDC: 621.941.014.8

KONOVALOV, Ye. G., SOUS, A. V., and ~~SEDERBERG~~ B. M.

"Analysis of the Geometry of Rotational Cuts in Statics"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskika Nauk, No. 1,
1970, pp 37-46

Abstract: The purpose of this article is to show how labor output in cutting metals can be improved by applying new kinetic cutting methods: for example, rotational cutting through the use of a rotating instrument. Since the methods described in the literature for determining the actual operating angles of rotational cuts to best advantage are cumbersome and inconvenient for practical use, the authors offer a simpler theoretical analysis of the geometry of those cuts in prolonged lathe work, boring, and preparing flat surfaces. Their analysis leads them to three conclusions: first, the cutting angles and their positions relative to the work are chosen from the optimal values provided by three equations developed in the article's text; second, the computations made by the formulas developed by the article show that at constant grinding angles, the forward angle is reduced and the rear angle is increased with increasing machine angles; third, an increase in the depth of cut in reverse cutting leads to an increase in the forward angle and a reduction in the rear angle.

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USSR

UDC: 8.74

YEFIMOV, Yu., KIZEV, V., NEVPAYEV, V., SEDEL'NIKOV, P.

"Algorithm and Program for Compilation of an Operative Calendar Plan on the 'Ural-11' Computer"

V sb. Elektronno-vychisl. tekhn. i programmir. (Electronic Computer Technology and Computer Programming--collection of works), vyp. 4, Moscow, "Statistika", 1971, pp 60-65 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V1062)

Translation: The described automated system for operative control of a machine building enterprise under conditions of small-series, series and large-series production is based on the theory of graphs and set-theory concepts and, in the authors' opinion, has advantages over a number of existing systems. Authors' abstract.

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USSR

UDC: 519.1

YEFIMOV, Yu. N., KIZEV, V. I., NEVRAYEV, V. I., SEDEL'NIKOV, P. A.

"Concerning a Graph Enlargement Algorithm"

Izv. Tomsk. politekhn. in-ta, 1972, 223, pp 15-17 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V391 by I. Sigal)

Translation: The paper deals with the problem of transformation of an oriented graph with a large number of arcs and vertices, retaining all main parameters and mutual relations of the initial graph (the problem of enlargement). In the given graph $G=(I, \Gamma)$, where I is the set of vertices, and Γ is its mapping, the author indicates the set of vertices $\{C\}$ to be excluded. For each vertex $\{C\}$ a set of vertices is designated with which this vertex is associated (connected), and characteristics are assigned for all vertices of the designated set. Then for each vertex $\{C\}$ a vertex i_k is defined for which $\{C\}$, the connections of vertex i_k are included in the connections of i_k , and the connections of vertex i_k are deleted from the graph. The parameters of the vertices are recalculated accordingly.

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USSR

UDC: 519.1

YEFIMOV, Yu. N., KIZEV, V. I., MAROSHKIN, G. Yu., NEVRAYEV, V. I., SEDEL'NIKOV, P. A.

"Using Graphs in Normative Calculation of the Production Cost of an Item"

Izv. Tomsk. politekhn. in-ta, 1972, 223, pp 10-11 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V390 by I. Sigal)

Translation: The paper deals with the problem of determining the production cost of a good. The problem consists in calculating indirect expenses, as well as expenses introduced by the elements which comprise the given product. The problem may be represented by an oriented graph, each vertex corresponding to some item i , while the arcs (i,j) of the graph correspond to the applicability of this item (good) i for obtaining product j into which these products i are incorporated as a component part. It is assumed that the vertices in this graph are broken up into layers (topologically ordered). To get the complete production cost, the expenses are calculated for each product j by adding the expenses with respect to the component products for all vertices of the graph from left to right.

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USSR

UDC: 519.1

YEFIMOV, Yu. N., SEDEL'NIKOV, P. A.

"An Algorithm for Transforming the Form of Representation of a Graph"

Izv. Tomsk. politekhn. in-ta (News of Tomsk Polytechnical Institute), 1972, 243, pp 154-157 (from RZh-Kibernetika, No 5, May 73, abstract No SV535 by V. Kozyrev)

Translation: An algorithm for "joining" network models is described -- constructing an oriented graph $G = (I, U)$, where

$I = \bigcup_{k=1}^n I_k, U = \bigcup_{k=1}^n U_k$ for data of n orgraphs $G_k = (I_k, U_k), k=1, 2, \dots, n.$

USSR

UDC 621.373:535/:546.293.128

SEDEL'NIKOV, V. A., SINICHKIN, Yu. P., TUCHIN, V. V.

"Some Characteristics of the Radiation Spectrum of an Ion Laser
(Ar⁺)"

Leningrad, Optika i Spektroskopiya, Vol 31, No 5, 1971, pp 761-
762

Abstract: The laser used in this experimental work was a sealed-off version of the LG-106 instrument, in which the magnetic field induction was smoothly varied from 0 to 840 gauss with the discharge current varied from 8 to 15 amp. The resonator consisted of a spherical mirror with a radius of curvature of 2 m, a transmission of about 0.2%, and a flat mirror with a transmission of 12.5%. The resonator length was 0.98 m, and the spectrum examined was of a line having a wavelength of 0.48 μ . A diagram of the equipment is given. The behavior of the level of the beat signals was investigated at several frequencies as a function of the discharge current at magnetic field strengths of 420 and 560 gauss, and it was found that these relationships are linear within discharge current ranges of 8 to 15 amp. Gratitude is expressed to N. V. Cheburkin for his comments.

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USSR

Forming

UDC 621.73.043

ATROSHENKO, A. P., SEDEL'NIKOV, YE. P., SHASTIN, E. G., and SEVEROV, M. A.

"Precise Barb Stamping of Turbine Blades"

Moscow, *Kuznechno-Shtanpovochnoye Proizvodstvo*, No 6, Jun 73, pp 1-4

Abstract: A study is made of precision stamping of turbine blades with minimum allowances for cutting (and in some cases allowance only for burnishing and finishing). The precision stamping represents a departure from stamping with the usual allowances, governed by GOST7505-55. The new technology involves hot-stamping crankshaft presses and is used to forge 212-mm-long turbine blades for the 16th working stage of the VT-100 turbine. Comparative data are presented for material expenditures under the old and new methods. Five figures, and one table.

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USSR

UDC 539.374

ATROSHENKO, A. P., SEDEL'NIKOV, YE. P.

"More Precise Technique for Calculating Upsetting in Horizontal-Forging Machines of Shaped Blanks for Turbine Blades"

Tr. Leningr. politekhn. in-ta (Works of Leningrad Polytechnical Institute), 1971, No. 322, pp 129-132 (From RZh-Mekhanika, No 12, Dec 71, Abstract No 12V580)

Translation: A study of the upsetting of blanks of 1Kh13 and 2Kh13 heat-resistant steels and EI823 and EI765 alloys was conducted to refine the calculation for upsetting shaped blanks on a horizontal-forging machine for turbine blades. Numerical values of the coefficients are given and also formulas for calculating the individual elements of the upsetting stamps considering the types of steel and alloy. It is shown that in calculations of a technological process and the design of dies in upsetting, it is necessary to take into account the characteristics of the plastic deformation of the heat-resistant steels and alloys. Authors' abstract.

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USSR

UDC: 621.396.677.32

SEDEL'NIKOV, Yu. Ye.

"Synthesis of a Traveling Wave Antenna"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970, vyp. 122, pp 18-24 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12B80)

Translation: A method is outlined for synthesizing a continuous line antenna whose elements are excited by a traveling wave. The problem is solved by linear programming methods. The conditions for realizability of the radiation pattern are analyzed. One illustration, bibliography of four titles. N. S.

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USSR

UDC: 621.372.8.049.75-416

SEDEL'NIKOV, Yu. Ye.

"Resonance Slot in a Symmetric Strip Line"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970, vyp. 104, pp 11-18 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12B174)

Translation: The author studies the purely resistive component of the impedance of a resonance slot as a function of the dimensions of a symmetric strip line. It is shown that in cases where the length of the slot is appreciably greater than the distance between the outside plates, this resistance is practically independent of the dimensions of the line and the wave impedance. The derived formula gives more accurate results than the previously derived Oliner formula. (See also Trans. IRE, 1955, MTT-3, No 2). Three illustrations, bibliography of seven titles. N. S.

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USSR

UDC: 621.396.677.001.5

POPOVKIN, V. I., SEDEL'NIKOV, Yu. Ye.

"On the Theory of Synthesis of Discrete Antennas for the Case of Uniform Approximation to a Given Polar Diagram"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 9, Sep 72, pp 1945-1947

Abstract: A method is proposed for solving a number of problems in synthesis of discrete antennas for the case of uniform approach to a preassigned radiation pattern with regard to limitations imposed on the unknown currents. The computational apparatus of linear programming serves as the basis for the proposed technique. The essential features of the procedure are illustrated by a one-dimensional scalar problem. A numerical example is given. The authors thank S. I. Zukhovitskiy for constructive criticism.

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USSR

UDC 621.396.677.3

BEY, K. A., ZIMIN, D. B., KREKHITUNOV, V. M., LOSEV, V. S., SEDEENOV,
Ye. G.

"An Element for a Reflecting Antenna Array"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obrabotki, tovarnyye znaki,
No 23, Aug 71, Author's Certificate No 310326, Division H, filed 8 Dec
69, published 26 Jul 71, p 170

Translation: This Author's Certificate introduces an element for a reflecting antenna array which operates with arbitrarily polarized signals. The element consists of a phase shifter, radiators with superimposed phase centers, and sections of transmission line. As a distinguishing feature of the patent, the design is simplified by using in the element a feed-through phase shifter and two radiators with orthogonal polarization characteristics connected to the two outputs of the phase shifter by sections of transmission line which pass signals with fixed polarization.

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USSR

UDC: 621.317.7

SEDENKOV, Ye. G., PODKAMINER, L. L.

"An Ampliphase Meter for Measuring Amplitude-Phase Distribution in Antenna Apertures"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 2 (Report of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 2), Novosibirsk, 1970, pp 108-109 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A337)

Translation: The authors give a block diagram and describe the operation of all modules in an ampliphase meter developed on the basis of a phase meter with frequency conversion. One illustration. E. L.

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UDC: 621.317.75(088.8)

BESKORSAYA, N. P., SEDIKOV, Kh. N.

"A Device for Observing Processes of Build-Up of Magnetic Flux in the Deflecting System of a Cathode Ray Tube"

USSR Author's Certificate No 265198, filed 28 Dec 67, published 23 Jun 70 (from RZh-Radiotekhnika, No 2, Feb 71, Abstract No 2A376)

Translation: Existing devices for observing processes of build-up of the magnetic flux in the deflecting system of a cathode-ray tube are suitable for only one coil in the system. A distinguishing feature of the proposed device is that the inputs of the three coils in the deflecting system to be checked are connected to logic circuits. Each circuit consists of an OR gate and several AND gates to which the voltage from the outputs of the last digits in an eight-place counter is sent. This enables observation of the build-up processes simultaneously in all coils of the deflecting system. E. L.

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Acc. Nr:

AP0043929

Abstracting Service: 5/76
INTERNAT. AEROSPACE ABST

Ref. Code:

4R0141

A70-23135 Intensity fluctuations in a pulsed laser beam during propagation in the atmosphere at distances up to 9.8 km (Fluktuatsii intensivnosti v puchke impul'snogo OLG pri rasprostraneni v atmosfere na rasstoiniakh do 9,8 km). V. Ia

S'edin, S. S. Khmelevtsov, and M. F. Nebel'sin (Tomskii Gosudarstvennyi Universitet, Tomsk, USSR). Radiotekhnika, vol. 13, no. 1, 1970, p. 44-49, 8 refs. In Russian.

Experimental study of intensity fluctuations in the transverse cross section of a pulsed laser beam after passing a distance of 9.8 km in the ground layer of a turbulent atmosphere. Attention is given to variations in dispersion and to changes in the correlation function of intensity fluctuations as a function of distance. The divergence of a focused beam in a turbulent atmosphere is also examined. T.M.

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USSR

UDC 621.348.629.113.004.15

KOSSOV, M. A., Candidate of Technical Sciences, BOKAREVA, A. A., ZVEZDINA, N. S., GREKOV, L. I., ~~SEDINA, G. I.~~, NAMI (Central Scientific Research Institute of Motor Vehicles and Motor-Vehicle Engines)

“The Technical and Economic Effectiveness of Using Gas-Turbine Engines on Trucks Under the Conditions of the North”

Moscow, *Avtomobil'naya Promyshlennost'*, No. 7, 1971, pp 5-10

Abstract: For a piston engine in operation, the problem of change of the parameters of the characteristics with a drop in the air temperature is not as acute as for a gas-turbine engine. However, the starting of a piston engine, particularly of a diesel engine, under low air-temperature conditions is considerably more difficult. It is economically advantageous to use gas-turbine motor-vehicle engines in the northern regions when the maximum cost of these engines is up to 20 rubles per horsepower for engines with a capacity of 1200 horsepower, up to 22 rubles per horsepower for a capacity of 660-720 horsepower, and up to 18 rubles per horsepower for an engine capacity of 240 horsepower. These costs are actual costs, and can be obtained

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KOSSOV, M. A., et al., *Avtomobil'naya Promyshlennost'*, No 7, 1971, pp 5-10

in the series production of gas-turbine engines of the types under consideration. The possibility of obtaining large savings in the national economy is an objective prerequisite for the creation of modern and promising gas-turbine engines with a capacity of 1500-1200, 900-600, and 250-400 horsepower with a specific fuel consumption of 0.170-0.210 kg per horsepower, and the preparation of their series production and operation first of all in the northern and northwestern regions of the USSR.

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GEDKO, A.P.

AAC052688

UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General.
Derwent, 9-70

244578 GANTRY CRANE comprising trolley with polypast hoist mechanism has the polypasts set horizontally and asymmetrically about the lateral axis of the trolley. This increases the height to which the load can be lifted. The crane consists of a rigid rectangular frame 1 with running wheels 2, driven by electric motor 3 via reduction gear 4 and pivoted shafts 5. The trolley is in the form of bearing beam 6 with running wheels 7 driven by electric motor 8 via reduction gear 9 and shafts 10. The hoist mechanism with two load suspensions is made in the form of two horizontal polypasts. The fixed pulleys 12 are set at the edges of the trolley, and the moving pulleys 13 are connected to running nuts, moving in guide beams 6 along a screw driven by electric motor 16 via a reduction gear. Traction cables 18 pass round the fixed and moving

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pulleys. When motor 16 is switched on the screw is rotated via its reduction gear. Due to its two-way thread, the nuts are moved opposite ways, thus moving apart or together the moving pulleys 13, shortening or lengthening the freely hanging suspensions on pulleys 12.

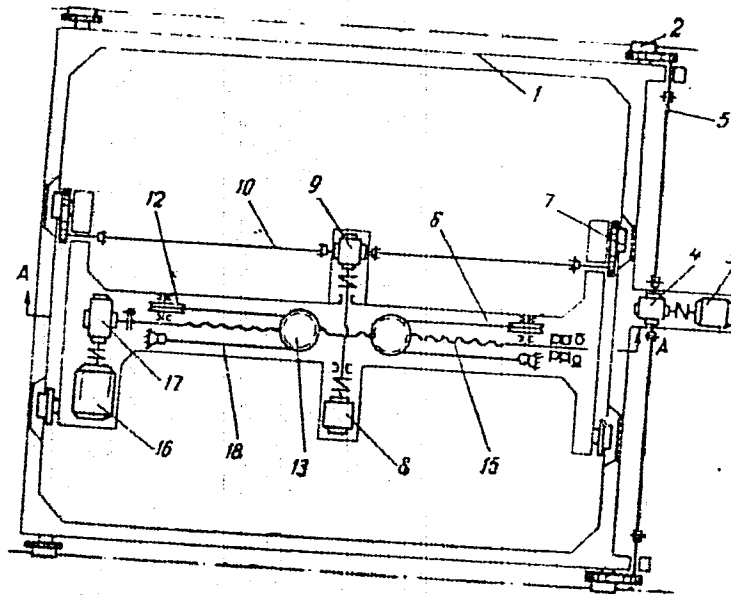
29.12.64. as 936420/27-11, GUBIN, I.P. et al.
Eastern Mining Res. Inst. (8.10.69) Bul.
18/28.5.69. Class 35b, Int. Cl. B 66c.

Gubin, I.P.; Sed'ko, A.P.; Bukhtin, V.S.; Lyubkin, A.P.;
Goncharova, M.A.; Vostochnyy Nauchno-Issledovatel'skiy
Gornorudnyy Institut

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19821471

1/2 013

TITLE--RESULTS OF A GEOPHYSICAL INVESTIGATION OF BOREHOLES IN THE KARLYUK
POTASSIUM SALT DEPOSIT -U-
AUTHOR--(02)-SEDLETSKIY, V.I., YEROFEYEV, V.N.

UNCLASSIFIED

PROCESSING DATE--02OCT70

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK TURKM. SSR, SER. FIZ.-TEKH., KHIM. GEOL. NAUK
1970, (1), 47-52
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEOPHYSICS, POTASSIUM COMPOUND, ORE, EXPLORATORY DRILLING,
WELL LOGGING, GEOCHEMISTRY, MINERAL DEPOSIT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROGAY REEL/FRAME--1988/1279

STEP NO--UR/0202/70/000/001/0047/0052

CIRC ACCESSION NO--AP0106060

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--020CT70

CIRC ACCESSION NO--A0106060

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KARLYUK DEPOSIT IS THE LARGEST K SALT DEPOSIT IN CENTRAL ASIA. THE UPPER JURASSIC SALIFEROUS FORMATION, SIMILAR TO 400 M THICK, IS SITUATED AT DEPTHS OF 100-1000 M UNDER QUATERNARY AND LOWER CRETACEOUS TERRIGENDUS FORMATIONS. FROM 3 TO 11 LAYERS OF K SALTS, 0.5-25 M THICK, WERE SEPD. FROM A SINGLE MINERAL HALITE STRATUM CONTG. RARE THIN INTERLAYERS OF ANHYDRITES. THE K SALTS ARE EITHER PURE SYLVINITE OR MIXED SYLVINITE CARNALLITE VARIETIES. THE INTERLAYERS OF TERRIGENDUS ROCKS ARE ABSENT IN K SALT LAYERS. THE CONTENT OF RESIDUE, INSOL. IN WATER, IS USUALLY SMALLER THAN 3-5PERCENT. ELEC. LOGGING (RESISTIVITY AND SELF POTENTIAL), THERMOMETRY, GAMMA LOGGING, AND NEUTRON GAMMA LOGGING WERE USED DURING GEOCHEM. STUDIES. THE GEOPHYS. METHODS WERE EXTREMELY EFFECTIVE IN PROSPECTING AND SEPN. OF K SALT LAYERS. THE RESISTIVITY LOGGING WAS ESP. EFFECTIVE FOR SEPN. OF LAYERS AND BEDS, SITUATED OVER THE SALT COMPLEX, AND FOR OUTLINING THE ANHYDRITE INTERLAYERS IN SALTS. IT CAN BE USED ALSO FOR DETN. OF THE DIAM. OF DRILL HOLES IN A UNIFORM HALITE STRATUM AND IN ZONES OF LEACHING IN K LAYERS. THE SELF POTENTIAL METHOD IS SOMEWHAT LESS EFFECTIVE BECAUSE OF A HIGH TOTAL MINERAL CONTENT IN DRILLING MUS. THE GAMMA LOGGING WAS THE MAIN METHOD IN PROSPECTING. IT PROVIDED FOR A SURE SEPN. OF K LAYERS, FOR DETN. OF THEIR THICKNESS, AND EVALUATION OF K CONTENT. THE NEUTRON GAMMA LOGGING WAS USEFUL FOR APPROX. DETN. OF MINERAL COMPN. OF K SALTS AND SEPN. OF CARNALLITE BEDS.

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Acc. Nr: AP0034677

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Ref. Code: UR 0297

PRIMARY SOURCE: Antibiotiki, 1970, Vol 15, Nr 2, pp 166-168

1 LEVELS OF MORPHOCYCLINE IN BLOOD AND BONE TISSUE AFTER ITS
INTRAVENOUS AND INTRABONE ADMINISTRATION

(Experimental investigation)

Sedletskiy, Yu. I.

Faculty Surgery Clinics of I. P. Pavlov I Moscow Medical Institute, Microbiological
Laboratory of Leningrad Institute for Antibiatics

Experimental data on a possibility of intrabone administration of morphocycline and its comparative levels in blood and bone tissue after the antibiotic intravenous and intrabone administration in a dose of 30000 Units/kg are presented. Four dogs and 20 rabbits were used in the studies. It was demonstrated that after intrabone administration the morphocycline bone levels were much higher than after intravenous administration.

D.M.

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USSR

UDC 547.241

KOZLOV, E. S., ~~SEDLOV, A. I.~~, and KIRSANOV, A. V., Institute of Organic Chemistry, Academy of Sciences of the Ukrainian SSR

"Some Conversions of 1-Phospha-3,5-dioxa-4-arylbicyclo[2,2,1]-heptanes and Their Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 3, Mar 72, pp 519-522

Abstract: Reaction of 1-phospha-3,5-dioxa-4-arylbicyclo[2,2,1]heptanes with sulfur produces 1-hydroxymethyl-1-thio-4-aryl-1-phospha-3-oxacyclopentenes-4. Treating 1-hydroxymethyl-1-oxo-1-phospha-3-oxacyclopentenes-4 with excess chlorine gives oxides of 1-phospha-3,5-dioxa-4-aryl-7,7-dichlorobicyclo[2,2,1] heptanes.

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USSR

UDC 547.241

KOZLOV, E. S., SEDILOV, A. I., KIRSANOV, A. V., Institute of Organic Chemistry, Kiev, Academy of Sciences Ukrainian SSR

"Oxidation of 1-Phospha-3,5-dioxa-4-arylbicyclo [2,2,1]-heptanes"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 8, Aug 70, pp 1673-1677

Abstract: Oxidation of 1-phospha-3,5-dioxa-4-arylbicyclo-[2,2,1]-heptanes (I) with HgO at 20° gives the corresponding phosphine oxides (II), which by heating can easily be rearranged to 1-hydroxymethyl-1-oxo-4-aryl-1-phospha-3-oxacyclopentenes. Reacting (II) with benzyl chloride gives the corresponding benzoyl derivatives. The oxides (II) are not very stable except for those with electronegative substituents at the phenyl ring. This instability is probably due to the stress of the bicyclic ring system.

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USSR

UDC 522.54-8

KONOVALOV, Ye. G., SEDLOV, L.M., and SHILYAYEV, A.S.

"On the Problem of Ultrasonic Separation of the Gaseous Component from the Liquid Component in the Flow of a Gas-Liquid System"

Minsk, Izvestiya Akademii Nauk, BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 2, 1972, pp 65-70

Abstract: The effect of acoustic and hydrodynamic forces on a bubble approaching with a flow of liquid from an undisturbed medium to the emitter of ultrasound is discussed. The separation of the gaseous component from the liquid in the flow is theoretically analyzed by reference to diagrams showing the acting forces on the bubble. The mechanism of the process is described and fundamental correlations for determining critical values of the outflow velocity, the field intensity, and the acting forces are presented. The latter include the viscous force, the emission pressure on the bubble, the acoustic flow force, Bjerknes acoustic forces, Bernoulli hydrodynamic forces, and the floating-up force of the bubble. Characteristic moments by separation of the gaseous component, the braking action of the bubble, coalescence, stopping, and floating-up are analyzed. The most destructive feature of the coalescence is its high increase of intensity near the interface purified-gasifies liquid, where a contraction mechanism of bubbles develops, which is the final stage of the separation process. Two illustr., sixteen formulas, nine biblio. refs.

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USSR

UDC 632.95

BABIN, Ye. P., SKAVINSKIY, Ya. P., ANDRUKHOV, N. A., SEDLOVA, L. N.,
LITOSHENKO, N. A., and RUDAVSKIY, V. P.

"Chlorination of Diphenyl Ether and Its Derivatives"

Khim. tekhnologiya. Nauch.-proizv. sb. (Chemical Technology. Science-
Production Collection), No 3 (69), 1973, pp 48-49 (from RZh-Khimiya, No 22,
25 Nov 73, Abstract No 22N571 by D. Z. Levin)

Translation: Sulfides of metals with variable valence or mixtures of Sb_2S_5 and I_2 are used as a catalyst to chlorinate Ph_2O and $(MeC_6H_4)_2O$. Example. Ph_2O and 0.3% Sb_2S_5 are loaded into a reactor and Cl_2 is supplied at 70-80° for 4 hours at the rate of 30 g/hour. Tetrachlorodiphenyloxyde is obtained, boiling point 155-70°/5. Heptachlorodiphenyloxyde, FeS, 111-3 are obtained in a similar fashion (the substance, catalyst, and boiling point in °C are given); octachloro-4, 4'-ditolyl ether, FeS, 192-4 (ethyl alcohol); $\omega, \omega, \omega, \omega', \omega', \omega'$ -hexachloro-ditolyl ether, PCl_5 , -; $\omega, \omega, \omega, \omega', \omega', \omega'$ -hexachloro-2, 2'-dichloroditolyl ether, Sb_2S_5 , 300 (decomposition); trichloro-4, 4'-dicarboxydiphenyloxyde, -, 259-61; pentachloro-4, 4'-dicarboxydiphenyloxyde, $I_2 + H_2SO_4$, 192-3; octachloro-4, 4'-dicarboxydiphenyloxyde, $H_2SO_3 + I_2$, 268-70. These chloro derivatives are used as synergistic additives in herbicides, insecticides, and nematocides.

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USSR

UDC 547.582:546.185

RUDAVSKIY, V. P., SEDLOVA, L. N., and KUCHEROVA, M. N.

"Phosphorylated Derivatives of Fluobenzoic Acid Amides"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 5, May 72, pp 972-976

Abstract: It was found that: 1. Trichlorophosphazofluoroacyls react with phenols and thiophenols in the presence of triethylamine, to form triamido- and triphenoxy (trithiophenoxy) phosphazofluoroacyls; 2. Fluorobenzoyl- amidophosphoryl dichlorides react with amines, alcohols and phenols in the presence of triethylamine to form diamides and diesters of fluoro- benzoylamidophosphoric acids; 3. Phosphorus pentachloride reacts with fluorobenzoylamidophosphoryl dichlorides, to form N-dichlorophosphonyl- iminofluorobenzoyl chlorides which form N-diamidophosphonyl-N'-aryl- fluorobenzamidines with amines.

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USSR

UDC 547.26.118.07

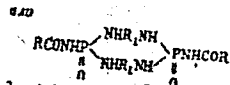
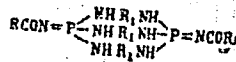
RUDAVSKIY, V. P., KUCHEROVA, M. N., and SEDLOVA, L. N.

"A Method of Synthesizing Derivatives of Cyclic Amides of Phosphoric Acid"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 17, 1971, Author's Certificate No 304256, Division C, filed 8 Dec 1969, published 25 May 1971, pp 85-86

Translation: This Author's Certificate introduces: 1. A method of synthesizing derivatives of cyclic amides of phosphoric acid of the general formulas

or



where R is a halogen-substituted phenyl or alkyl, and R₁ is an alkylene or phenylene. As a distinguishing feature of the patent, a diamine is interacted with a phosphoric acid chloride of the formula:

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RUDAUSKIY, V. P., et al., Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tsvarnyye Znaki, No 17, 1971,

in the presence of an organic base in an organic solvent with subsequent isolation of the goal product by conventional methods. 2. A modification of this method distinguished by the fact that the process is carried out in the presence of an excess of amine.

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USSR

UDC 620.193.2:[669.14.018.29:669.587-977

LAYNER, V. I., Doctor of Technical Sciences, Professor, and SEDLOYEV, I. A.,
Engineer

"Increasing Corrosion Resistance of Hot-Galvanized Structural Steels"

Moscow, Vestnik Mashinostroyeniya, No 1, Jan 71, pages 60-62

Abstract: The influence of steel composition, process mode and heat treatment on the structure of coatings and corrosion resistance of hot-galvanized structural steels is demonstrated. Alloying elements in structural steels expand the temperature area of accelerated dissolution of iron into the zinc melt and facilitate the production of thick zinc coatings. Diffusion annealing at 500-600°C homogenizes the structure of the hot zinc coatings based on the hexagonal iron-zinc δ -phase. This heat treatment of hot-galvanized steels increases their corrosion resistance by approximately a factor of 2.

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AT 0032087

NUCLEAR SCI. ABST. 2/70 UR 0000

5363 (SLAC-Trans-103) ACCELERATING RESONATOR FOR THE VEPP-2 STORAGE RING. Veshcherevich, V. G.; Karliner, M. M.; Petrov, V. M.; Sediyarov, I. K.; Shekhtman, I. A. (Akademiya Nauk SSSR, Novosibirsk, Institut Yadernoi Fiziki). Translated by T. Watt for Stanford Linear Accelerator Center, Calif., from Russian Preprint No. 272. 12p. Dep. CFSTL.

The resonator of the VEPP-2 storage ring operates in two oscillation modes: the antiphase mode (natural frequency 75 MHz, shunt resistance about 1 Mohm) and in the inphase mode (natural frequency 25 MHz, effective shunt resistance about 7.5 kohm). The operating accelerating voltage of up to 300 kV at the third-harmonic of the rotational frequency is ensured by the first mode. The second mode is used to recapture the particles from three separatrices onto one. Full account is taken in the resonator design of the required spectrum of higher natural frequencies, so that coherent synchrotron and betatron oscillations are adequately damped out. (auth)

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USSR

UDC: 620.175-462

PAKHOTIN, K. K. and SEDOKOV, L. M.

"Method of Determining the True Stresses in Twisted Thick-Walled Tubes"

Moscow, Zavodskaya laboratoriya, No. 1, 1971, pp 102-104

Abstract: An equation derived by Noritsyn and Kislyy for computing the tangential stresses on hollow rods undergoing mechanical twisting tests is cited, and a method of experimentally checking the two assumptions on which the equation is based is proposed. The assumptions are, first, that the plane transverse cross sections remain flat up until destruction occurs, and second, that the straight radii in the transverse cross sections remain rectilinear. A curve showing the results of these tests and proving the correctness of the assumptions is plotted. Also given is a curve showing the results of twisting thick-walled tube specimens of 2Kh13 steel. The authors are associated with the Tomsk Polytechnical Institute.

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USSR

UDC 577.1:547.963.3

SEDOKUR, L. K., All-Union Scientific Research Institute of Hygiene and Toxicology of Pesticides, Polymers and Plastics, Kiev

"Effect of Dithiocarbamic Acid Derivatives on the Nucleic Acids in the Rat Liver"

Kiev, Ukrayin'skiy Biokhimichnyy Zhurnal, Vol 43, No 4, Jul/Aug 71, pp 511-514

Abstract: Chemically pure TMTD, a derivative of dithiocarbamic acid, was administered to healthy adult rats internally in doses of 5-200 mg/kg of intraperitoneally in doses of 1 mg/kg daily in the form of an aqueous suspension stabilized by 1% starch gel. In some cases thymidine, a commercial preparation, was administered internally in doses of 5 mg/kg in combination with TMTD. The total content of nucleic acids, soluble proteins, and water was determined. The experiments established that TMTD, regardless of the method of administration, reduces the liver content of DNA and increases the RNA content. The extent of the shifts depends on dosages, and the duration of the effect of the drug on the organism. The changes are accompanied also by a drop in the level of soluble proteins in the liver of experimental animals. Thymidine given in combination with TMTD inhibits the effect of TMTD with respect to DNA.

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USSR

UDC: 577.1:615.7/9

SEDOKUR, L. K.

"State of Nucleic Metabolism in Rat Liver When Intoxicated by Realistically Encountered Doses of Dithiocarbamates"

V sb. Gigiyena primeneniya, toksikol. pestitsidov i klinika otravl. (Pesticides -- Sanitary Measures in Using, Toxicology, and the Poison Clinic--collection of works), vyp. 9, Kiev, 1971, pp 194-197 (from RZh-Biologicheskaya Khimiya, No 6, Mar 72, Abstract No 6P2174)

Translation: Thirty-day-old rats were bottle-fed aqueous extracts containing dithiocarbamate (I; 98 mg/liter; 3 γ I per day) in place of drinking water for 60 or 270 days. The structure of DNA in the liver, the total concentration of nucleic acids and cytoplasmatic proteins were then studied. The RNA concentration increased in both series of experiments; the DNA content and its structure did not change; the concentration of cytoplasmatic proteins decreased in the liver of baby rats fed I for 60 days, the decrease corresponding to the concentration of I in the extracts. In the longer experiments, this reduction in the concentration of cytoplasmatic proteins corresponded to the norm, which the author attributes to a similar adaptation of the organism to the effect of a small dose of I. B. 1971.

SEDOV, A. V.

SPRS 55687
13 Apr 1972

RADIOBIOLOGICAL EFFECTS AFTER 3-YEAR GAMMA IRRADIATION OF DOGS

UDC 612.014.482.4

[Article by Yu. G. Grigor'ev, B. A. Morkelov, V. I. Ponom', A. A. Akhunov, A. V. Lyubina, I. P. Izbashnikova, A. V. Sedov, and V. A. Korotkov; Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 6, No 1, pp 3-7, 1972, submitted for publication 25 March 1971]

Abstract: This paper summarizes the results of a three-year radiobiological experiment on dogs. In several experimental series chronic irradiation with varied dose rates (21 to 150 rad per year) and chronic irradiation combined with acute exposures (total doses of 190 rad per year) were applied. Clinical hematological, physiological and cytological examinations demonstrated that the animals maintained a satisfactory clinical condition and exhibited no serious organic radiation damage. However, a decrease in their compensatory potentialities and a change in their reactivity were noted.

A lack of adequate information in the literature on the biological effects induced by constant exposure to ionizing radiation in the doses possible during prolonged space flights served as a basis for conducting a special experiment on a large number of dogs. The scientific program for the experiment, the irradiation conditions and the results obtained over two years after beginning this experiment have been published earlier (Yu. G. Grigor'ev, et al., 1968, 1970).

This paper gives materials obtained after three years of irradiation of the experimental animals. Data on the number of animals, doses and irradiation conditions are given in Table 1.

After three years of the experiment the condition of the animals, evaluated from the results of systematic examinations (inspections, temperature measurement, measurements of body weight, pulse and respiration rates), remains satisfactory. The incidence of disease in the irradiated groups (conjunctivitis, dyspnoea, etc.) was low and did not exceed the corresponding incidence in the group of control animals.

SEDOV, A. V.

SO:JPRS 54396
05 Nov 1971

SPACE MEDICINE

UDC 629.78.067:614.876

PROVIDING RADIATION SAFETY FOR THE "SOYUZ-9" SPACESHIP CREW

(Article by Ye. I. Vorob'yev, I. V. Chelisev, Yu. G. Grigor'yev, V. I. Vefimov, A. V. Vaitzov and A. V. Sedov, Moscow, Kometicheskaya Kabinnyy Meditsina, 1970, Vol. 3, No. 4, pp. 282-287, submitted for publication 28 December 1970)

During flight of the "Soyuz-9" ship, as on earlier flights of Soviet manned spacecrafts, necessary measures were taken for ensuring crew radiation safety. The general approaches and principles serving as a basis for radiation protection have been set forth in earlier published studies (Yu. M. Volyakin, et al., 1964; Yu. G. Grigor'yev, et al., 1967; Ye. I. Vorob'yev, et al., 1968).

Accordingly, during the period of preparations for this flight an evaluation was made of the radiation conditions along the trajectory of the "Soyuz-9" ship, having the following principal characteristics: mean apogee ~250 km, mean perigee ~225 km, angle of inclination of orbital plane to the equatorial plane 51.7°. An analysis revealed that in the case of absence of power-line proton solar flares the radiation conditions will be determined by galactic cosmic radiation, the contribution of the proton component of the earth's radiation belt in the zone of the Brantion magnetic anomaly, and the electron component of the belt in the high-latitude segments of the flight trajectory. The total dose due to galactic cosmic radiation and the earth's radiation belt, according to computations, must not exceed 0.25 rad. However, an examination of the ship trajectory in L, B coordinates indicated the presence of trajectory segments in which the geomagnetic shielding effect was considerably attenuated and the geomagnetic threshold for protons was ~100 MeV. A possible decrease in this threshold during the development of several successive solar flares, whose probability was not excluded due to the flight duration, made it necessary to have an effective forecast and careful monitoring of radiation conditions during the entire flight.

USSR

UDC: 8.74

SEDOV, B. I., CHENTSOV, V. M.

"A Method of Adaptive Placement of Elements"

Moscow, Kibernetich. sistemy avtomatiz. proyektir.--sbornik (Cybernetic Automated Design Systems--collection of works), 1973, pp 101-103 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V593 by O. Belkin)

Translation: A central problem in the stage of technical design of electronic items is that of arrangement of design elements (modules) and laying out connections in multilayered printed circuits. The task of optimum placement of elements is that of finding the global extremum of a quality function. Most known algorithms of placement are regular. As a rule they handle the problem in two stages: 1) finding the initial version of placement, 2) improving this version. A heuristic method of handling this job is proposed which is based on the ideology of automaton games. The use of automaton models increases the efficiency of handling the job as compared with traditional methods.

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USSR

UDC 621.373:535

LEONT'YEV, V. G., OSTAPCHENKO, Ye. P., and SEDOV, G. S.

"Optimal Generating Conditions for a Helium-Neon Axial-TEM₀₀-Mode Laser"

Leningrad, Optika i Spektroskopiya, Vol 32, No 4, April 72, pp 795-797

Abstract: The authors undertook to study optimal conditions for the excitation of a helium-neon axial-mode laser with a laser wavelength of 0.63 micron, as well as to find their relation to the parameter of resonator nonconfocality. The results indicate that the optimal excitation conditions differ from those for a multimode laser. The maximum total mixture pressure and pumping current correspond to a multimode condition, the minimum to an axial-mode laser with a strongly confocal resonator ($L/R = 0.1$). The optimal excitation conditions are related to the configuration of the resonator radiation field.

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USSR

UDC: 621.373:530.145.6

ALPATOV, Yu. V., DEMIDOV, M. N., MEDVEDEV, V. D., SEDOV, G. S., SIBIREV, A. V.

"A Single-Mode Gas Laser With Stabilization of Emission Power"

Elektron. tekhnika. Nauchno-tekhn.-sb. Gazorazryadn. pribory (Electronic Technology. Scientific and Technical Collection. Gas-Discharge Devices), 1970, vyp. 2(18), pp 64-70 (from RZh-Radictekhnika, No 11, Nov 70, Abstract No 11D265)

Translation: The paper describes a single-mode helium-neon gas laser which has stable emission power and stable position of the optical axis.

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USSR

UDC 678.674.004.14:621.397

SEDOV, L. N., VLADIMIROVA, Z. V., SAPOZHNIKOVA, YE. I., MAKEYEVA, A. A., SEMENOV, L. G., MAK-MILLIN, D. M., BAKANOV, YU. A., DIDZHYULENE, D. I., MALKINA, F. S., and ZHLABIS, S. B.

"Polyester Hermetic-Sealing Compounds"

Moscow, Plasticheskiye Massy, No 6, 1970, pp 61-62

Abstract: The authors studied compounds for the hermetic sealing of horizontal output transformer coils for television receivers. These compounds should have low viscosity in the initial state and a high hardening rate up to 100°C. In the hardened state they should possess self-extinguishability, water resistance, good mechanical and electric insulation properties, and stability of properties up to 120°C. The principal components chosen were polyester resins PN-1 and PN-69. Because of the requirement of self-extinguishability, special additives (antimony trioxide and chlorine- or fluorine-containing polymers) were introduced into the resins. In addition, mineral fillers (talc, mica, powdered quartz, titanium dioxide, powdered silica gel, etc.) were added to give the sealing compounds

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USSR

SEDOV, L. N., et al, Plasticheskiye Massy, No 6, 1970, pp 61-62

the requisite viscosity and to lower their cost. The article gives data on the hermetic sealing process. These self-extinguishing compounds are being used for the hermetic sealing of horizontal output transformers for black-and-white (1 class) and color television sets and viewing monitors.

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- 93 -

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UR 0482

S
Soviet Inventions Illustrated, Section II Electrical, Derwent,

243045 INVERTER co-operates with an a.c. power supply. 2/70
When switch (1) is in position (a) the rail (3) of the synchronizing supply and the output of controlled frequency generator (4) are connected to phase detector (2). The generator is composed of variable frequency generator (5) and a multi-phase shaping network (6). If the frequency of the synchronizing source changes, the frequency of generator (4) will also change due to the effect of phase detector (2) and frequency and phase deviation sensor (7) until both the frequency and phase on the output rail (8) of switching power amplifier (9) agree with the corresponding values of the synchronizing source. If switch (1) is in position (b) the inverter is governed by a stable frequency source (10).
28.10.66 as 1109773/24-7. ~~U.S. SENOV~~ (30.9.69) Bul 16/5.5.69. Class 21d². Int.Cl. H 02m.

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USSR

UDC 621.375

SEDOV, N. Ya., Physicotechnical Institute, Academy of Sciences of the USSR,
Leningrad

"Achieving Maximum Resolution in Low-Power FET Preamplifiers at 25°C"

Moscow, Pribery i Tekhnika Eksperimenta, No 4, Jul/Aug 71, pp 106-109

Abstract: Defining resolution as the full width at half the height of the spectral distribution curve expressed in keV, the author presents a method of finding the resolution of a preamplifier based on field-effect transistors which is determined by the noises of the input transistor at 25°C. An input section is proposed which permits realization of the low noises of the FET. It is shown that the resolution of the preamplifier can be improved by a factor of 2 using the same FET by shielding the input section and by proper grounding, and by reducing the input capacitance and increasing the input impedance. The author thanks S. R. Novikov for constant interest in the work and for constructive criticism in reviewing the manuscript, and also G. A. Shishkina for making the detectors.

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1/2 021 UNCLASSIFIED PROCESSING DATE--0900170
TITLE--EQUILIBRIUM REACTIONS OF DIBROMOETHANE -U-
AUTHOR--(05)-LEVANOVA, S.V., ROZHN OV, A.M., SEDOV, S.M., STARKOV, V.YA.,
MANZHOS, V.N.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 62-5
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL REACTION RATE, BROMINATED ORGANIC COMPOUND, ETHANE,
ISOMERIZATION, THERMODYNAMIC FUNCTION, SPECTRUM, HYDROGENATION,
BROMINATION, ENTROPY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1922 STEP NO--0R/0153710/013/001/0062/0065
CIRC ACCESSION NO--AT0112894
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AT0112894

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RATE CONST. (K SUBR TIMES 10 PRIME3) FOR THE DEHYDROBROMINATION OF MECHBR SUB2 (I) IS 2.01 AT 413DEGREES, 5.13 AT 157DEGREES, 13.8 AT 176DEGREES, AND 65.0 AT 1210DEGREES. SIMILAR DATA FOR BRCH SUB2 CH SUB2 BR (II) ARE 28.6 AT 131DEGREES, 52.1 AT 1400DEGREES, 106.1 AT 156DEGREES, AND 209 AT 174DEGREES. IN STUDIES OF THE ISOMERIZATION OF II TO I, THE PERCENT I IN THE EQUIL. MIXT. (INITIALLY PURE II) IS 1.94 AT 176DEGREES, 2.30 AT 198DEGREES, 2.50 AT 211DEGREES, 2.74 AT 225DEGREES, AND 3.05 AT 245DEGREES. THERMODYNAMIC FUNCTIONS OF II ARE CALCD. FROM BOND LENGTHS AND SPECTRAL DATA AT 25-727DEGREES. VALUES AT 127DEGREES AND 227DEGREES ARE S SUBT, 84.77 AND 90.10 CAL-(DEGREES MOLE), C SUBP, 22.49 AND 25.33 CAL-(DEGREES MOLE), (H SUBT DEGREES H SUBD DEGREES) T, 15.18 AND 16.79 KCAL-MOLE, AND MINUS (2 SUBT DEGREES, H SUBT DEGREES) T, 69.59 AND 73.31 CAL-MOLE. THE REACTION RATE DATA ARE USED TO CALC. THERMODYNAMIC FUNCTIONS FOR THE DEHYDROGENATION AND ISOMERIZATION REACTIONS, AND THE CALCD. ENTROPY CHANGES AGREE WELL WITH LITERATURE DATA.

FACILITY: KUIBYSHEV. POLITEKH. INST. IM. KUIBYSHEVA, KUIBYSHEV, USSR.

UNCLASSIFIED

USSR

UDC: 669.017:539.37 (1)

KOLACHEV, B. A., GORSHKOV, YU. V., MAL'KOV, A. V., SEDOV, V. I., and DROZDOV, P. D.,
Moscow

"The Effect of Hydrogen on the Breakdown Strength of the OT4 and OT4-1 Grades of Alloys"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 73, pp 102-107

Abstract: The authors study the effect of hydrogen on the critical coefficient of the intensity of stresses on the OT4 and OT4-1 titanium alloys during the testing of specimens with fatigue cracks for static console bending. This type of testing shows the susceptibility of sheet titanium materials to brittle fracture. The results show that the breakdown strength for the OT4 and OT4-1 alloys is somewhat increased at a hydrogen concentration in the order of 0.008-0.012 percent and then falls. The magnitude of the coefficient of stress intensity is not a constant of the material, but depends on a series of factors including hydrogen content in the alloy and the work time under load. The micro-breakdown mechanism changes as hydrogen content rises. Micro-cracks appear in the specimen during the formation and interaction of twins in the plastic deformation process up to a hydrogen content in the order of 0.01 percent for OT4-1 and 0.012 percent for OT4. Further increase in hydrogen concentration results in the realization of a new mechanism: splitting of the beta phases

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USSR

KOLACHEV, V. A., et al, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 73, pp 102-107

and the formation of micro-cracks on the alpha-beta phase boundary division. The mechanism takes effect at hydrogen concentrations greater than 0.015 percent. The micro-breakdown mechanism affects the basic stages of micro-crack growth which ultimately is reflected in the ductility of the material.

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USSR

UDC 669.395:548.4:620.179:620.187.24.5

KOLACHEV, B. S., MAL'KOV, and SEDOV, V. I., Moscow Aviation Technology Institute

"Effect of Hydrogen on the Micromechanism of Failure in OT4 and OT4-1 Titanium Alloys"

L'vov, Fiziko-Khimicheskaya Mekhanika Materialov, No 3, 1973, pp 59-64

Abstract: The effect of hydrogen in the failure of OT4 and OT4-1 titanium alloys was studied by methods of electron microscopy, microfractography, and electrical resistance measurement. Sheet samples, 3 mm thick, were used which had the following chemical composition:

	Al	Mn	Fe	Si	C	N ₂	O ₂	H ₂
OT4	1.37	1.13	0.13	0.12	0.06	0.004	0.083	0.006
OT4-1	2.95	1.41	0.14	0.11	0.07	0.0046	0.081	0.0064

Alloy structure in the annealed condition was approximately 95% alpha-phase and 5% beta-phase, and vacuum annealing was used to reduce and vary hydrogen content. Electrical resistance was measured for alloy OT4 containing 0.008% H₂, subjected to a stress of 85 kg/mm². The relationship of resistance to time-to-failure showed that the alloy went through four stages to failure. These

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USSR

KOLACHEV, B. A., et al., Fiziko-Khimicheskaya Mekhanika Materialov, No 3, 1973, pp 59-64

stages were the incubation period (constant electrical resistance), stage of defect accumulation and initial fatigue cracks (smooth change of resistance), crack propagation (spastic resistance), and catastrophic crack development leading to failure. It is possible that stage three is a continuation of stage two. From the obtained data it was possible to conclude that increased hydrogen content in OT4-1 alloy does not change the stages of failure, but only its duration. The negative effect of hydrogen on long-time strength only starts upon reaching specified concentrations. When there is a hydrogen content of 0.012% in the alloy, plastic deformation occurs by twinning of the crystals. Four figures, one table, fourteen bibliographic references.

2/2

USSR

UDC: 621.317.783

PRONENKO, V. I., TURUNTSOV, V. V., SEDOV, V. I., SHISHKINA, M. F.

"Design and Manufacturing Technique for First-Class Master Thermistor Milliwattmeter Converters"

Tr. metrol. in-tov SSSR (Works of Metrology Institutes of the USSR), 1972, vyp. 116(176), pp 135-139 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 6, Jun 72, Abstract No 6.32.1013)

Translation: The paper describes a new design for power converters (thermistor waveguide heads). The advantage of the proposed design is that the thermistor head is a direct load on the calorimetric unit, and therefore power is measured right at the thermistor head. Channels (for flow of the heat-transfer agent) are located on the surface of the thermistor head. Use of the device increases the speed of the system because of the reduced mass of the thermistor head. Development of a new power meter increases the precision of determining the coefficient of conversion of power pickups with waveguide input over a broad frequency band of 37-214 MHz. They can be used with their maximum attainable precision for certification on the initial calorimetric unit. The use of such converters will make first-class precision power meters available. One table, three illustrations.

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I/2 009 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--ECONOMIC DEPENDANCES IN SYSTEM OF PRODUCT QUALITY CONTROL -U-
AUTHOR--SEDOV, V.I. S
COUNTRY OF INFO--USSR
SOURCE--STANDARTY I KACHESTVO, 1970, NR 3, PP 48-51
DATE PUBLISHED-----70
SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, MECH., IND., CIVIL AND
MARINE ENGR
TOPIC TAGS--QUALITY CONTROL, COST ESTIMATE, COMMERCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/1728 STEP NO--UR/0422/70/000/003/0048/0051
CIRC ACCESSION NO--AP0103492
UNCLASSIFIED

PROCESSING DATE--09OCT70

UNCLASSIFIED

2/2 009

CIRC ACCESSION NO--AP0103492

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ANALYSIS IS GIVEN OF ECONOMIC DEPENDANCES THAT RESULT IN THE FORMATION OF THE QUALITY LEVEL OF PRODUCTS; NEW ECONOMIC CATEGORIES APPEAR, SUCH AS THE COST OF A UNIT OF USE VALUE OR THE EXPENSES ON PROVISIONS FOR SOCIAL NEEDS. ALSO STUDIED ARE FACTORS INFLUENCING THE REALIZATION OF THE ACTUAL ECONOMIC EFFECT BY THE MANUFACTURER AND USER AND AFFECTING THE FUNCTIONAL EFFICIENCY OF THE ECONOMIC FEEDBACK FROM THE USER TO THE MANUFACTURER, E. G. THE EFFECT OF SCARCE AVAILABILITY OF A PRODUCT ON THE PRODUCT'S QUALITY LEVEL.

UNCLASSIFIED

USSR

UDC 669.295.5.018.29:[620.186 + 539.56]:669.78

KOLACHEV, B. A., GORSHKOV, Yu. V., BUKHANOVA, A. A., SEDOV, V. I., and SHEVCHENKO, V. V.

"Influence of Hydrogen on the Structure and Properties of Titanium Alloy OT4-1"

Tr. Mosk. aviats. tekhnol. in-ta (Works of the Moscow Aviation Technological Institute), 1970, vyp. 71, pp 16-23 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 I779 by the authors)

Translation: Impact tests and tests according to the Troyano method (test basis: 500 days) showed that a hydrogen concentration $< 0.005\%$ is safe for alloy OT4-1. Threshold stresses decline with an increase in hydrogen content and at concentrations of 0.02-0.1% amount to 30 kg/mm² given a test basis of 500 days. The tendency of the alloy toward hydrogen embrittlement intensifies with a drop in test temperature. Alloy OT4-1 with an acicular structure is more prone to hydrogen embrittlement than that with a granular phase form. Eight illustrations. Bibliography of five titles.

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PROCESSING DATE--2300110

UNCLASSIFIED AND PROPERTIES OF ALLOY VT5L

72 033

TITLE--EFFECT OF HYDROGEN ON THE STRUCTURE

AUTHOR--(05)--KOLACHEV, B.A., KHODOROVSKIY, G.L., POPOV, A.A., BUKHANOVA, A.A., SEDOV, V.I.

COUNTRY OF INFO--USSR

SOURCE--LITEINDE PROIZVOD. 1970, 2, 29-30

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--TITANIUM ALLOY, ALLOY DESIGNATION, ALLOY COMPOSITION, HYDROGEN EMBRITTLEMENT, METAL CONTAINING GAS, GAS CONTAINING METAL, MECHANICAL PROPERTY, HYDRIDE, METAL MICROSTRUCTURE/(U)VT5L TITANIUM ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1678

STEP NO--UR/0128/70/002/003/0029/0030

CIRC ACCESSION NO--AP0118656
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

7/2 033

CIRC ACCESSION NO--AP0118656
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE TI ALLOY CONTAINED AL
5.05-5.34, FE 0.08-0.14, SI 0.06, J 0.04-0.1, N 0.015-0.017, C
0.09-0.10, AND H 0.003-0.006PERCENT. THE MECH. PROPERTIES WERE STUDIED
AT MINUS 70 TO 20DEGREES FOR A H CONTENT OF 0.003-0.05PERCENT. AT THESE
TEMPS. THE ALLOY BECAME BRITTLE WHEN THE H CONTENT WAS GREATER THAN
0.035PERCENT. HOWEVER, IF THE ALLOY WAS EXPOSED TO MINUS 60DEGREES FOR
3 DAYS IT BECAME BRITTLE AT LOWER H LEVELS. THE EMBRITTLEMENT WAS
CAUSED BY HYDRIDE FORMATION, WHICH WAS OBSO. IN THE MICROSTRUCTURE WHEN
THE H CONTENT EXCEEDED THE SOLY. LIMIT. THE STRENGTH OF THE ALLOY
INCREASED AS THE H CONTENT INCREASED TO 0.015PERCENT, BUT AT A H LEVEL
ABOVE THIS VALUE THE STRENGTH DECREASED.

UNCLASSIFIED

USSR

UDC 669.295.620.184:620.187.5

KOLACHEV, B. A., SEDOV, V. I., MAL'KOV, A. V., Moscow Institute of Aviation Technology

"Influence of Hydrogen on Structure of Fractures in OT4 Titanium Alloy"

Kiev, Fiziko-khimicheskaya Mekhanika Materialov, Vol 8, No 3, 1972, pp 80-82.

Abstract: This work is an attempt to estimate the influence of hydrogen absorbed by the metal on the fracture structure of specimens of OT4 titanium alloy (2.95% Al; 1.41% Mn; 0.14% Fe; 0.11% Si; 0.0044% H₂; 0.07% C; 0.081% O₂; 0.0046% N₂) during impact testing. The differences in the nature of the fracture are most clearly seen under the electron microscope. With hydrogen concentrations of not over 0.008 wt.% the microrelief is dominated by long "holes" and "ridges," the mean diameter of a "hole" decreasing with increasing hydrogen content. The "holes" cover about 80% of the surface. As the hydrogen content increases to 0.012 wt.%, the percentage of ductile fracture ("holes") decreases significantly, as the increased concentration of hydrogen seems to influence the ability of individual microvolumes of the material for plastic deformation. An increase in hydrogen content to 0.03 wt.% reduces
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USSR

UDC 669.295.620.184:620.187.5

KOLACHEV, B. A., SEDOV, V. I., MAL'KOV, A. V., Kiev, Fiziko-khimicheskaya Mekhanika Materialov, Vol 8, No 3, 1972, pp 80-82.

impact toughness by a factor of 3, causing the appearance of areas of inter-grain fracture. Hydrogen begins to influence impact toughness significantly at about 0.012 wt. %.

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USSR

UDX 621.396.677.75

TERESHIN, O.N., SEDOV, V.M. [Members Scientific-Technical Society Of Radio Engineering, Electronics, And Communications imeni A.S. Popov]

"Directional Antenna In The Form Of A System Of Two Conductors Located On The Generatrix Of A Relief Impedance Cylinder"

Radiotekhnika, Vol 27, No 5, May 1972, pp 47-51

Abstract: The paper discusses an impedance antenna with axial radiation in which the directional diagram forms the weakly-retarded surface of a wave. The method of assigning fields in the antenna and a calculation of the parameters of the skin impedance of the antenna are presented, and the results are shown of an experimental study of a model of the antenna. It is concluded that the antenna considered has a number of significant advantages over known antennas: small transverse dimensions, a decrease in the longitudinal size, a simple feed circuit, and a constant directive gain in the frequency band. The antenna can find an application in various radiocommunication systems as a low-projection antenna which possesses high electrical characteristics. 5 ill. 3 ref. Received 6 Oct 1969.

1/1

- 17 -

USSR

UDC: 621.396.677.75

TERESHIN, O. N., SEDOV, V. M., Moscow Electrotechnical Institute of Communications

"An Exciter for a Flat Surface-Wave Antenna"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 6, 1970, p 216, patent No 251026, filed 4 Mar 68

Abstract: This author's certificate introduces an exciter for a flat surface-wave antenna. The unit is made in the form of a horn and a ribbed section with varying impedance. As a distinguishing feature of the patent, the overall dimensions of the exciter are reduced and its effectiveness is improved by making the outer surface of the ribbed section concave, and inclining the horn to the ribbed section at some angle, say 45° .

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Antennas

UDC: 621.396.677.75

USSR

TERESHIN, O. N. and SEDOV, V. M.

"Surface-Wave Antenna Combined With an Excitation Device"

Moscow, Radiotekhnika, No 10, 1972, pp 45-49

Abstract: The basic defect of a surface-wave antenna in which the impedance structure forming the directional diagram is excited by an incident surface wave formed in an excitation device is the increase in the longitudinal dimension of the antenna because of the added excitation device. The authors show that this may be avoided by solving the problem of synthesizing the antenna as a whole, when the impedance structure transforms the structure of the feed line field into the structure of the surface wave field, with the required directional diagram formed in the same length of the structure. Thus, the longitudinal dimension of the antenna is diminished. The authors begin their analysis by assuming the primary source of surface-wave excitation to be a filament of magnetic flux in a two-dimensional plane of reference, and derive a system of equations for computing the structural parameters of the antennas from their required characteristics. Antennas so designed were 1/2

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TERESHIN, O. N., et al, Radiotekhnika, No 10, 1972, pp 45-49

tested, and their directional diagrams found to agree closely with the computed values. The authors conclude that these antennas have the advantage of two-mirror antennas -- the feed line is brought up to the base of the reflecting surface.

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USSR

UDC 632.951.2.07 1

KOZLOVA, T. F., SHAKHOVA, G. B., BELUGIN, V. F., ZHELONKIN, V. G., and
SEDOV, N. V.

"Synthesis of the Koral Insecticide"

Moscow, Khimicheskaya Promyshlennost', No 6, 1971, pp 29-30 (429-430)

Abstract: Koral -- 0,0-diethyl-3(3-chloro-4-methylcoumaryl-7)thiophosphate is an insecticide of low toxicity in respect to cattle, when applied externally. The synthesis of this material consists of four steps; preparation of 0,0-diethylchlorothiophosphate (I) by the reaction of thiotrichlorophosphorus with ethanol; synthesis of α -chloroacetoacetate from acetoacetate and sulfur chloride followed by condensation with resorcinol to yield 3-chloro-7-hydroxy-4-methylcoumarine (II) and finally condensation of (I) with (II) by refluxing their mixture in acetone containing potassium carbonate. Koral is a white powder, m.p. 92-92.5°C. It is practically insoluble in water, slightly soluble in alcohols, and hydrocarbons, dissolves well in ketones.

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USSR

UDC: 621.396.677.32(088.8)

TERESHIN, O. N., SEDOV, V. M., Moscow Electrical Engineering Institute of Communications

"An Exciter for a Flat Surface Wave Antenna"

USSR Author's Certificate No 251026, filed 4 Mar 68, published 9 Jun 70
(from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11B53 P)

Translation: This Author's Certificate introduces a horn-type exciter with one of its walls made in the form of a ribbed surface. The shape of the surface and the law of change in the depth of the grooves gives a high coefficient of surface wave excitation over a broad frequency range as well as reducing the overall dimensions of the horn. For this purpose, the ribbed surface is made concave and is inclined to the horn at an angle of 45°. A linear slot source is used in the horn. One illustration. N. S.

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USSR

UDC 669.15.018.23-14(088.8)

BELOV, A. D., VILIM, YU. V., KOSOBOKOV, E. A., SEDOV, V. V., YAROLOV, I. I.,
VASIL'YEV, V. D.

"Automatic Cast Stainless Steel"

USSR Author's Certificate No 276433, Filed 15 Jul 68, Published 12 Oct 70,
(from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4I613P)

Translation: In order to improve machinability, steel containing the following (in %) is proposed: C < 0.12, Cr 17-20, Ni 8-11, Bi 0.1-0.2, S 0.06-0.12, P < 0.035, Si < 1.0, Mn 1.0-2.0. The presence of S and Bi in steel raises the strength of the cutting tool and improves the machinability of the steel. When using the steel (compared with 1Kh18N9TL steel) the cutting rate with 60-min strength of the tool is improved by 25-50%, or the strength of the cutting tool is increased by 2-6 times.

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USSR

UDC 617-001.28-036.12-092.9-085.849.1.015.25-07[:
616.36+616.61]07

MIKHAYLOVICH, S. M., OVDIYENKO, N. I., ~~SEDQV, V. V.,~~ LEBEDEVA, G. A., and PARFENOV, Yu. D.

"The Effect of Oxathiol on the Liver and Kidneys in Chronic Radiation Sickness Induced by the Injection of Polonium²¹⁰"

Moscow, Meditsinskaya Radiologiya, No 4, 1970, pp 43-51

Abstract: A single subcutaneous injection of dogs with 2.5 microcurie/kg of Po²¹⁰ produced chronic radiation sickness accompanied by impairment of liver and especially kidney function, causing death of animals in 9 months. In experimental dogs, daily doses of 50 and 25 mg/kg of oxathiol for a month not only mitigated the liver and kidney disorders, but enabled the animals to survive for the entire 7-year observation period. Oxathiol treatments also reduced the size of the absorbed dose of Po²¹⁰ in the organs. Oxathiol is a complexing agent that accelerates the excretion of polonium from the body by forming stable water-soluble complexes. The free SH groups contained in oxathiol help to restore the radiation-impaired balance of SH groups in the enzyme systems.

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USSR

UDC 615.849.2+616-073.916:546.79

BOCHKAREV, V. V., LEVIN, V. I., STANKO, V. I., SEDOV, V. V., KHARLAMOV, V. T., KOZLOVA, M. D., and TARASOV, N. F., Institute of Biophysics, Ministry of Health USSR

"New Radiopharmaceuticals and Prospects for Their Clinical Use"

Moscow, Meditsinskaya Radiologiya, No 1, 1972, pp 4-12

Abstract: Description of the methods of preparation and most important properties of some recent Soviet-developed radioactive drugs based on relatively short-lived isotopes: (a) In^{111} preparations for liver (colloidal solution) and kidney (citrate complex) scanning; (b) iodobenzoic acid with I^{131} to study liver detoxification function; (c) colloidal solution of Pd^{103} for prolonged and uniform preoperative irradiation of tumors of different sites and sizes; (d) combined oleophilic preparations with different isotopes (Y^{90} , In^{111} , Pd^{103} , Au^{198}) for local irradiation of lymph nodes; (e) X-ray contrast media, iodoethiol and iodolinethol, to visualize lymph nodes; (f) resorptive beta applicator with Y^{90} for the treatment of eye tumors (clinical trials of the applicator in a group of patients with melanoblastomas showed complete or partial resorption of the tumor and no recurrences during the observation period (6 months to 2 years). Improvement in the technology of preparing two important

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USSR

BOCHKAREV, V. V., et al., Meditsinskaya Radiologiya, No 1, 1972, pp 4-12

diagnostic agents containing I¹³¹ albumin macroaggregates (used for scanning in many lung diseases) and polyvinylpyrrolidone (used in the diagnosis of exudative enteropathy and other diseases) has resulted in marked enhancement of their quality.

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1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--VERTICAL DISTRIBUTION OF THE MAIN METEOROLOGICAL PARAMETERS AND
LARGE SCALE PROCESSES IN THE STRATOSPHERE AND MESOSPHERE -U-
AUTHOR--(05)-GAYGEROV, S.S., ZAYCHIKOV, B.P., KALIKHMAN, M.YA., SEDOV,
V.YE., TARASENKO, D.A.
COUNTRY OF INFO--USSR
SOURCE--COSPAR, PLENARY MEETING, 13TH, LENINGRAD, USSR, MAY 20-29, 1970,
PAPER. 42P
DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES

TOPIC TAGS--STRATOSPHERE, MESOSPHERE, VERTICAL PROFILE, TEMPERATURE,
ATMOSPHERIC CIRCULATION, METEOROLOGIC ROCKET, OROGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3001/0005

STEP NO--UR/0000/70/000/000/0042/0042

CIRC ACCESSION NO--AT0125845

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0125845

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF VERTICAL TEMPERATURE PROFILES AND GLOBAL CIRCULATION PATTERNS IN THE STRATOSPHERE AND MESOSPHERE, USING ROCKET DATA FROM RESISTANCE THERMOMETER, THERMISTOR, AND GRENADE MEASUREMENTS. THE OBTAINED MEAN TEMPERATURE DISTRIBUTION AS A FUNCTION OF ALTITUDE IS COMPARED WITH DIFFERENT STANDARD AND REFERENCE ATMOSPHERES. SEASONAL AND LATITUDINAL TEMPERATURE VARIATIONS ARE CONSIDERED TOGETHER WITH LONGITUDINAL VARIATIONS IN THE NORTHERN HEMISPHERE. ANALYSIS OF PRELIMINARY GLOBAL CIRCULATION PATTERNS IN THE UPPER STRATOSPHERE AND LOWER MESOSPHERE SHOWS THAT SUMMER ANTICYCLONIC CIRCULATION IS POLARLY SYMMETRICAL AND IS PRACTICALLY THE SAME IN BOTH HEMISPHERES. WINTER CIRCULATION IN THE SOUTHERN HEMISPHERE IS LESS PERTURBED DUE TO THE OROGRAPHY AND UNIFORMITY OF THE UNDERLYING SURFACE IN THIS HEMISPHERE.
FACILITY: GLAVNGE UPRAVLENIE GIDROMETEOROLOGICHESKOI SLUZHBY SSSR, MOSCOW, USSR.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--PN JUNCTIONS IN GALLIUM ARSENIDE PREPARED BY SULFUR DIFFUSION -U-
AUTHOR--(03)-GUTKIN, A.A., NASLEDOV, D.N., SEDOV, V.E.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(1), 23-8
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--SEMICONDUCTOR MATERIAL, GALLIUM ARSENIDE PN JUNCTION, SULFUR,
PHYSICAL DIFFUSION, ZINC
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1983/1003 STEP NO--UR/0449/70/004/001/0023/0028
CIRC ACCESSION NO--APG053923
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--18SEP70

2/2 018

CIRC ACCESSION NO--AP0053923

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. JUNCTIONS WERE PREPD. BY DIFFUSION OF S INTO P TYPE GAAS DOPED WITH ZN. THE PROPERTIES OF TYPICAL SPECIMENS OBTAINED AT (A) 800DEGREES FOR 1 HR AND (B) 1000DEGREES FOR 30 HR ARE INDICATED. UNDER THESE CONDITIONS, THE N TYPE LAYERS WERE APPROX. 0.5 AND 12 MU THICK, RESP. THE SPECTRA OF THE B SPECIMENS, PREVIOUSLY ETCHED TO DECREASE RECOMBINATION CLOSE TO THE SURFACE, EXHIBITED SHARP MAX. ASSOCD. WITH THE CONSIDERABLE THICKNESS OF THE FRONT LAYER. THE DIFFUSION LENGTH OF THE HOLES WAS APPROX. 2.5 MU. THE SPECTRA OF A SPECIMENS, IN WHICH THE N TYPE REGION WAS APPROX. 0.5 MU THICK, EXHIBITED A CONSIDERABLE DROP IN THE SHORT WAVELENGTH REGION, WHICH SHOWED SCARCELY ANY DECREASE AFTER REMOVING APPROX. 0.1 MU FROM THE SURFACE BY ETCHING. THIS INDICATES THE EXISTENCE OF A SURFACE LAYER CONTG. MINORITY CURRENT CARRIERS OF SHORT LIFETIME, THESE BEING EVIDENTLY ASSOCD. WITH A HIGH CONCN. OF DEFECTS. THE SPECTRAL CHARACTERISTICS OF A AND B SPECIMENS IN THE IMPURITY REGION WERE SIMILAR TO THOSE FOUND PREVIOUSLY (A. A. GUTKIN, ET AL., 1969), AND WERE ALMOST IDENTICAL. INVESTIGATION OF THE DIFFERENTIAL CAPACITANCE AS A FUNCTION OF VOLTAGE AT 393 AND 770DEGREESK AND 0.47-200 KHZ SHOWED THE SPECIMENS TO BE P-PO-N JUNCTIONS. THE PO LAYER IS FORMED AS A RESULT OF THE COMPENSATION OF SMALL DONORS BY DEEP ACCEPTORS, THE PRESENCE OF WHICH HAS BEEN OBSD. PREVIOUSLY.

UNCLASSIFIED

Acc. Nr.

AP0048457

Abstracting Service:
CHEMICAL ABST. 5/70

Ref. Code

4R0449

105526r Behavior of copper during diffusion into gallium arsenide studied on the basis of bound exciton spectra. Safarov, V. I.; Sedov, V. E.; Yugova, T. G. (Fiz.-Tekh. Inst. im. Ioffe, Leningrad, USSR). Fiz. Tekh. Poluprov. 1970, 4(1), 150-6 (Russ). The previously obsd. bound-exciton spectra (Gross, E. F.; S., V. I., 1967; G., et al., 1969) of Cu-doped crystals of GaAs were investigated. The photoluminescence spectra at different depths of the crystal permitted the observation of the diffusion front of Cu in GaAs is detd. by the different soly. and diffusion coeffs. of the impurity centers. A retardation of the diffusion of one of the centers was obsd. when the As pressure in the ampul was increased. The following models of the centers are proposed: $[V_{As}Cu_G V_{As}]$ and $[Cu_G V_{As}]$, where Cu_G is the Cu atom in a Ga vertex and V_{As} is an As vacancy. A shallow 0.023-eV level was obsd., ascribed to a lattice defect. The variation of the spectra with low-temp. annealing (450°) was also investigated. Alexandre Fuchs

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REEL/FRA
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Acc. Nr.: AP0046764

Ref. Code: URO125

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USSR

UDC 621.791.927:669.35.6

ILYUSHENKO, V. M., SEDOV, V. YE., MANYKIN, E. T., YUGA, A. I.

"Antifriction Properties and Wear Resistance of Hard-Faced Tin-Lead Bronze"

Kiev, Avtomaticheskaya Svarka (Automatic Welding), No 1, 1970, pp 28-31
(from Avtomaticheskaya Svarka, No 1, 1970, p 79)

Translation: This article contains a study of the wear resistance and coefficient of friction of hard-faced tin-lead bronze. The optimal composition of the antifriction alloy for manufacturing bimetal highly loaded bearings is selected. There is 1 table, 5 illustrations and a 5-entry bibliography.

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UDC: 621.315.592

GOL'DBERG, Yu. A. and SEDOV, V. Ye., A. F. Ioffe Physico-Technical Institute, Leningrad

"Determining the Parameters of Impurity Atoms in GaAs p-n Junctions by the Method of Capacitive Relaxation"

Leningrad, Fizika i tekhnika poluprovodnikov, No 7, 1972, pp 1383-1385

Abstract: The authors propose a method for determining the parameters of deep impurities in a semiconductor. The method was developed for abrupt p-n junctions and Schottky barriers, and is used in this paper for determining the ionization energy and the concentrations and cross sections of charge-carrier capture by deep impurities in diodes with p-n junctions, prepared by diffusing sulphur in p-type GaAs. A study is made of the relaxation of the capacitance in such diodes in the temperature range of 77-400° K. It was found that the curve for the derivative of the voltage across the capacitor with respect to the reciprocal of the capacitance squared, as a function of the capacitance, is linear; the curve for the ionization time constant of the impurities as a function of the inverse temperature is exponential. The ionization

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GOL'DBERG, Yu. A., Fizika i tekhnika poluprovodnikov, No 7, 1972,
pp 1383-1385

energy of the impurities is determined from the time constant curve and the impurity concentration is determined from the curve for the derivative of the voltage. A table is given of the parameters of the impurity atoms in GaAs as determined by the authors' method. They express their gratitude to D. N. Nasledov and E. V. Tsarenkov for their advice, to D. Z. Garbuzov for his measurements and comments, and to Ye. M. Sreselya for her assistance with the work.

2/2

- 107 -

USSR

UDC 577.1:615.7/9

CHAPLYGINA, Z. A., TEODOROVICH, V. P., SEDOVA, L. A.,
TKHORZHEVSKAYA, Z. S., MIKHAYLOVA, L. G.

"Investigation of the Properties of Certain Synthetic Polymers
and Copolymers to Determine Their Physiological Activity"

Riga, V sb. Fiziol. i opticheski aktivn. polimern. veshchestva
(Physiologically and Optically Active Polymer Substances--
collection of works), "Zinatne," 1971, pp 82-88 (from RZh-
Biologicheskaya Khimiya, No 21, Nov 71, Abstract No 21F2189)

Abstract: The authors investigated certain biological properties
of polyvinyl alcohol (I), polyvinyl-pyrrolidone (II), and also
copolymers of vinylpyrrolidone with crotonaldehyde (III) with
various degrees of substitution. It is shown that solutions of
low-molecular I and II (molecular weight 10,000 and 12,000) and
also III with a 5 percent degree of substitution are not toxic for
mice. The toxicity of III increases when the degree of substitu-
tion is raised to 25 percent. Data are given on the concentra-
tion of I and II with different molecular weights in the blood. The
main path of elimination is through the kidneys; an insignificant
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CHAPLYGINA, Z. A., et al, V sb. Fiziol. i opticheski aktivn. polimern. veshchestva, "Zinatne," 1971, pp 82-83

amount penetrates into the tissues. Compound (I) actuates the reticulo-endothelial system on the tenth day after injection, and III throughout the entire period of the observations (3 hours to 20 days). It is shown that the polymers have a detoxifying effect which is associated in the opinion of the authors with the presence of aldehyde groups.

2/2

- 6 -

1/2 015 UNCLASSIFIED PROCESSING DATE--02 OCT 70
TITLE--BIS AND TRIS(DIFLUOROMETHYLTHIO AND SULFONYL)ARENES AND ARYL
DIFLUOROMETHYL ETHERS -U-
AUTHOR--(04)-SEDOVA, L.N., GANDELSMAN, L.Z., ALEKSEYEVA, I.A., YAGUPOLSKIY,
L.M. 5
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(3) 568-73
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--FLUORINATED ORGANIC COMPOUND, SULFONE, ARYL ETHER, CHEMICAL
REDUCTION, HYDRAZINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1531 STEP NO--UR/0366/70/006/003/0568/0573
CIPC ACCESSION NO--AP0112525
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--02 OCT 70

2/2 015

CIRC ACCESSION NO--AP0112525
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. REDN. OF XC SUB6 H SUB3 (SO SUB2
CL) SUB2-2,4 WITH ZN AMALGAM GAVE XC SUB6 H SUB3 (SH) SUB2-2,4 (I) (X IS
H, ME, OR CL). THE ACTION OF CHCLF SUB2 ON I IN NaOH SOLN. GAVE XC SUB6
H SUB3 (SCHF SUB2) SUB2-2,4 WHICH WERE OXIDIZED WITH CRC SUB3-AC SUB2 O
TO XC SUB6 H SUB3 (SO SUB2 CHF SUB2) SUB2-2,4. SIMILARLY, STARTING WITH
XC SUB6 H SUB2 (SO SUB2 CL) SUB3-2,4,6, WERE PREPD. XC SUB6 H SUB2 (SO
SUB2 CHF SUB2) SUB3 2, 4,5 (III) (X IS NH SUB2 OR CL). THE REACTION OF
P-F SUB2 CHSC SUB6 H SUB4 NH SUB2 WITH NaNO SUB2-HCL-SO SUB2 GAVE P-FE
SUB2 CHSC SUB6 H SUB4 SO SUB2 CL, WHICH WAS CONVERTED INTO P-F SUB2 CHO
SUB2 SC SUB6 H SUB4 SO SUB2 CHF SUB2 (III) AS ABOVE. PASSING CHCLF SUB2
THROUGH AN ALK. SOLN. OF P- OR O-HJC SUB6 H SUB4 OR CONTG. NA SUB2 S
SUB2 O SUB4 ALSO GAVE III OR ITS O-ANALOG. THE REACTION OF MEDNA WITH
II (X EQUALS CL) GAVE A MIST. OF II (X EQUALS MED) AND II (X EQUALS HO).
THE REACTION OF N SUB2 H SUB4 WITH II (X EQUALS CL) GAVE II (X EQUALS H
SUB2 NNH).

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--A STUDY OF THE ROLE OF ENTEROCOCCI IN THE ETIOLOGY OF FOOD
POISONINGS -U-
AUTHOR--SEDOVA, N.N.
COUNTRY OF INFO--USSR
SOURCE--VPOROSY PITANIYA, 1970, NR 2, PP 82-87
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ENTEROTOXIN, CELL CULTURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1038 STEP NO--UR/0244/70/000/002/0082/0087
CIRC ACCESSION NO--AP0109189
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109189

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE CITES EXPERIMENTAL DATA DERIVED FROM THE STUDY OF ENTEROPATHOGENIC PROPERTIES IN 30 STRAINS OF ENTEROCOCCI (STR. FAECALIS, STR. FAECALIS V. LIQUEFACIENS, STR. FAEC. V ZYMGENES, STR. FAECIUM, STR. DURANS) FRESHLY ISOLATED FROM DIFFERENT SOURCES. THE STRAINS WERE USED TO INOCULATE STERILE MILK AND MEAT CROQUETTES, WITH THEIR SUBSEQUENT INCUBATION AT 37DEGREESC FOR 5, 24 AND 48 HOURS. A CUPFUL (100 ML) OF MILK AND A CROQUETTE (40 G) WERE INGESTED ONCE IN 7 TO 10 DAYS BY 20 PRACTICALLY HEALTHY VOLUNTEERS, OBSERVED FOR 10 MONTHS. A TOTAL OF 511 TEST FEEDINGS THAT COMPRISED MEAT AND DAIRY CULTURES AND 19 FEEDINGS WITH STERILE FILTRATES OF STR. FAECALIS VAR. LIQUEFACIENS STRAINS WERE REALIZED. IT WAS SHOWN THAT: (A) ALL STR. FAECALIS V. LIQUEFACIENS STRAINS HAD ENTEROPATHOGENIC PROPERTIES, (B) INDIVIDUAL STR. FAECALIS VAR. ZYMGENES STRAINS ALSO POSSESSED ENTEROPATHOGENIC PROPERTIES, (C) THE STR. FAECIUM AND STR. DURANS STRAINS DID NOT DISPLAY ANY ENTEROPATHOGENIC PROPERTIES, (D) THE PRESENCE OF ENTEROPATHOGENIC PROPERTIES IN THE STR. FAECALIN STRAINS REQUIRES SETTING UP FURTHER STUDIES, (E) THE STERILE FILTRATES OF THE STR. FAECALIS V. LIQUEFACIENS ENTEROPATHOGENIC STRAINS HAD NO ENTEROTOXIC PROPERTIES.

UNCLASSIFIED

1/2 020

TITLE--MATERIALS ON THE ROLE OF ENTEROCOCCI AS POSSIBLE CAUSATIVE AGENTS OF FOOD POISONINGS -U-

UNCLASSIFIED

PROCESSING DATE---23OCT70

AUTHOR--SEDDYA, N.N.

S

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 3, PP 29-32

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FOOD CONTAMINATION, POISON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1999/1167

STEP NO--UR/0244/TD/000/003/0029/0032

CIRC ACCESSION NO--AP0123144

UNCLASSIFIED

2/2 020

CIRC ACCESSION NO--AP0123144

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER CARRIES DATA DERIVED FROM THE STUDY OF QUANTITATIVE CONTAMINATION AND SPECIES SPECIFIC PATTERN OF ENTEROCOCCI IN THE THE CURDS AND PRODUCTS MADE THEREFROM WITH SUBSEQUENT OBSERVATION OVER THE HEALTH OF CHILDREN OF DIFFERENT AGE (FROM 1 YEAR 3 MONTHS TO 10 YEARS), WHO CONSUMED THEM. THE ACCESS OF VARIOUS SPECIED OF ENTEROCOCCI INTO THE CHILD'S ORGANISM TOGETHER WITH DAIRY PRODUCTS IN NUMBERS COMPRISING HUNDREDS OF MILLIONS AND BILLIONS OF LIVE CELLS DID NOT LEAD TO THE DEVELOPMENT OF SYMPTOMS TYPICAL OF FOOD POISONINGS IN CHILDREN.

FACILITY: LABORATORIYA MIKROBIOLOGII INSTITUTA PITANIYA AMN SSSR, MOSCOW.

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USSR

UDC 632.95

SEDOV, N. V., KALASHNIKOVA, G. N., and SEDOVA, N. V.

"Use of Ultrasound to Intensify Chemical Processes"

V sb. Khim. sredstva zashchity rast. (Chemical Protection of Plants -- collection of works), No 2, Moscow, 1972, pp 70-75 (from RZh-Khimiya, No 22, 25 Nov 73, Abstract No 22N549 by I Pil'menshteyn)

Translation: With $(\text{CH}_2\text{NHCOSSNH}_4)_2$ as an example, it is shown that the reaction time with the use of ultrasound is much quicker than with mechanical mixing. Ultrasound permits considerable simplification of the apparatus of the process because instead of reactors with a revolving stirrer and stuffing-box seal, hermetic explosionproof apparatus that prevents CS_2 from penetrating into the working place can be used.

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