"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

KRIVTSOVA, Ye. N., et al., Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 5, Sep/Oct 70, pp 599-603

required a 100 g/hectare dose to be effective; trolen in doses 40 and 80 g/hectare reduced the density of mosquito larvae only insignificantly. Dipterex and sevin proved ineffective as larvicides, being significantly inferior to DDT. The effect of mosquito larvae eradication with organophosphorus compounds lasts for 7-14 days.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 612.8+014.423

KOSTANDOV, E. A., D'YACHKOVA, G. I., and TIMOFEYEVA, L. V., Central Scientific Research Institute of Forensic Psychiatry imeni V. P. Serbskiy, Moscow

"Characteristics of Cortical Potentials Evoked by Weak Soundwave Stimuli in Man"

Moscow, Doklady Akademii Nauk SSSR, Vol 196, No 2, 1971, pp 471-474

Abstract: The study of the behavior of cortical potentials induced by sound stimuli has only recently become feasible, through the use of computers for the analysis of weak signals produced by sound. The minimum sound intensity at which a signal is produced in the surface of the cranium is of interest. The mean induced potential was observed in 12 healthy men 22-40 years of age with sound stimuli of threshold or above-threshold intensity. In the occipital region, this potential was deflected in all of the cases studied, but not consistently. A cortical potential was recorded even when the noise stimuli did not reach the threshold level. Considerable differences were found in the latent period and in the potential amplitude. Nevertheless, it is impossible to link shifts in these parameters to the process of stimulus perception.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 911.3.616.9.576.895.771(571.56)

TIMOFEYEVA, L. V., MITROFANOV, A. M., VINOGRADSKAYA, O. N., RASNITSYN, S. P., PETRUCHUK, O. Ye., RYAZANTSEV, V. A., and YERMISHEV, Yu. V.

"Organizational Principles in the Struggle Against Blood-Sucking Midges and Aedes Mosquitoes on the Basis of Their Biological Characteristics"

V sb. Materialy Nauchn. konferentsii, posvyashch. 50-letiyu In-ta med. parazitol. i tropich. med., 1970 (Proceedings on the Conference Commemorating the 50th Anniversary of the Institute of Medical Parasitology and Tropical Medicine 1970 -- collection of works), Moscow, 1970, pp 50-51 (from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No 1.36.75)

[No abstract]

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

LEVCHENKO, T. V. and TIMOFEYEVA, N. G.

UDC 621.372.82

"Studying the Solution Accuracy of Waveguide Problems Using the Galerkin Method"

Tr. Mosk. in-ta radiotekhn., elektron. i avtomatiki (Works of the Moscow Institute of Radio Engineering, Electronics and Automation), 1972, vyp.55, pp 75-86 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 B82)

Translation: Using the example of the problem associated with a rectangular waveguide with total filling longitudinally along its height, the authors study solution accuracy using the Galerkin method by comparing approximate solutions to a closed analytical solution. The closed analytical solution can be obtained with any degree of accuracy for the constants of propagation for the basic type of wave and corresponding projection coefficients. Original article: two tables. N.S.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC: 621.785:661.65

ROMASHOV, V. M., TIMOFEYEVA, N. I., FROLOVA, K. I., and ROMANOVICH, I. V., Moscow

"Interaction of Nickel With Samarium Hexaboride and Boron"

Kiev, Poroshkovaya Metallurgiya, No. 9, Sep 70, pp 80-86

Abstract: This study involved 99.7% pure carbonyl nickel powder and samarium hexaboride. The latter was obtained by the reaction $2Sm_2O_3+30B \rightarrow 4SmB_6+3B_2O_2$. Alloys of both powders were subjected to x-ray diffraction and microstructure analyses, microhardness measurements of phase components, and quantitative analyses of both nickel and samarium. The interaction of nickel with samarium hexaboride indicates a dissociation of the latter to form SmB_4. Depending on the nickel and hexaboride ratio in the initial mixtures, nickel borides are formed. Data on thermal and x-ray structure analyses of nickel and samarium hexaboride alloys, given in

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

ROMASHOV, V. M., et al, Poroshkovaya Metallurgiya, No. 9, Sep 70, pp 80-86

tables in the original article, suggest that the melting temperature of nickel boride is higher than that indicated by earlier researchers. An equilibrium diagram in the high boride domain of the Ni-Sm-B ternary system is proposed.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

UNCLASSIFIED

TITLE--TANTALUM PENTOXIDE,GADOLINIUM SESQUIOXIDE SYTEM -U-

PROCESSING DATE--20NOV70

AUTHOR-(02)-TIMOFEYEVA, N.I., MORDOVIN, O.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 865-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHASE DIAGRAM, THERMAL STABILITY, TANTALUM COMPOUND, GADOLINIUM COMPOUND, METAL OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1725

STEP NO--UR/0078/70/015/003/0865/0867

CIRC ACCESSION NO--AP0115554

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 017 UNCLASSIFIED

CIRC ACCESSION NO--AP0115554 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHASE DIAGRAM OF THE GD SUB2 O SUB3-TA SUB2 O SUB5 SYSTEM IS CONSTRUCTED. THE SYSTEM FORMS 3 CONGRUENTLY MELTING COMPDS., GDTA SUB3 O SUB9, GDTAO SUB4, AND GD SUB3 TAO SUB7, M. 1840, 2050, AND 2280DEGREES, RESP. THESE COMPDS. ARE INSOL. IN BOILING WATER AND DO NOT DECOMP. IN CONCD. HCL, HNO SUB3, H SUB3 PO SUB4, H SUB2 SO SUB4 OR NAOH.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/2 021 UNCLASSIFIED

TITLE--SYSTEM TA SUB2 O SUB5 GD SUB2 O SUB3 -U- PROCESSING DATE--04DEC70

AUTHOR-(02)-TIMOFEYEVA, N.I., MORDOVIN, O.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM.: 15: 865-7, MAR 1970

DATE PUBLISHED----MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL STABILITY, MICROHARDNESS, THERMAL EFFECT, GADOLINIUM, TANTALUM, METAL OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605019/B04 STEP NO--UR/0078/70/015/000/0865/0867

CIRC ACCESSION NO--AP0140895

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 021

CIRC ACCESSION NO--AP0140895 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FUSIBILITY DIAGRAM OF THE SYSTEM GD SUB2 O SUB3-TA SUB2 O SUB5 WAS STUDIED AND THE PRESENCE OF THREE CONGRUENTLY MELTING COMPOUNDS ESTABLISHED. GDTA SUB3 O SUB9 (T SUBMP EQUALS 1840DEGREESC), GDTAO SUB4 (T SUBMP EQUALS 2280DEGREESC), AND GD SUB3 TAO SUB4 (T SUBMP EQUALS 2050DEGREESC). THE COMPOSITION, DENSITY, MICROHARDNESS, AND THE CHEMICAL STABILITY OF THESE COMPOUNDS WERE DETERMINED.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/2 022

UNCLASSIFIED

TITLE--CHEMICAL STABILITY OF HAFNIUM DIBORIDE -U- PROCESSING DATE--11SEP70

AUTHOR--TIMOFEYEVA, N.I., SAVITSKIY, YE.M., BAKARINOVA, V.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(1), 120-1

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL STABILITY, HAFNIUM COMPOUND, BORIDE, OXIDATION, THERMAL STABILITY, ACTIVATION ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0595 STEP NO--UR/0363/70/006/001/0120/0121

CIRC ACCESSION NO--AP0105578

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 022

CIRC ACCESSION NO--AP0105578 UNCLASSIFIED PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STABILITY OF HFB SUB2 IN CERTAIN CHEM. REAGENTS AT ROOM AND HIGH TEMPS., AS WELL AS ITS STABILITY TO OXIDN. IN AIR AT 700-1000DEGREES WAS STUDIED. THE COMPN. OF THE HFB SUB2 POWDER (IN WT. PERCENT) WAS: HF 89.2, B 11.3, AND C 0.1, PARTICLE SIZE IS LESS THAN 20 MU, FREE B CONTENT 0.065 WT. PERCENT. AT ROOM TEMP. AFTER 24 HR, HFB SUB2 DISSOLVES PARTIALLY IN CONCD. HCL, H SUB2 SO SUB4, AND HCLO SUB4; IT IS EVEN LESS STABLE IN HNO SUB3. UPON BOILING IN CONCD. HNO SUB3 AND AQUA REGIA, HFB SUB2 POWDER DISSOLVES COMPLETELY IN 30 MIN; IN HCLO SUB4, HF, AND 1:1 HNO SUB3, IT DISOOLVES COMPLETELY AFTER 1 HR. IT DISSOLVES PARTIALLY IN NH SUB4 F, HCL, AND MIXTS. OF HCL WITH H SUB2 O SUB2; IT IS STABLE TO HOAC AND SOLNS. OF H SUB2 O SUB2 AND NH SUB3 BOTH AT ROOM TEMP. AND UPON HEATING. HFB SUB2 IS VERY STABLE IN H SUB2 O AT ROOM TEMP. AND IN BOILING H SUB2 O. IN AIR, HFB SUB2 STARTS TO OXIDIZE AT 700DEGREES; THE DENSE OXIDE FILM FORMED IS HFO SUB2. THE OXIDN. OF HFB SUB2 IN O ATM. WAS ALSO INVESTIGATED AT 20-1100DEGREES. THE ACTIVATION ENERGIES WERE DETD. THE OXIDN. RATE FOR HFB SUB2 IN O UP TO 1100DEGREES FOLLOWS A PARABOLIC LAW.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

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UNCLASSIFIED

TITLE--STRUCTURAL STUDY OF RARE EARTH ELEMENT TANTALATES -U-

PROCESSING DATE--16OCT70

AUTHOR-(03)-ROMASHOV, V.M., TIMOFEYEVA, N.I., BUROBINA, L.N.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 511-14

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--RARE EARTH COMPOUND, TANTALUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0837

STEP NO--UR/0363/70/006/003/0511/0514

CIRC ACCESSION NO--AP0118013

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

CIRC ACCESSION NO--AP0118013 UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE OF TANTALATES OF THE TYPE RTAO SUB4, R SUB3 TAO SUB7, AND RTA SUB3 O SUB9 OF ALL RARE EARTH METALS WITH THE EXCEPTION OF CE, PM, AND Y, SYNTHESIZED BY HIGH TEMP. ANNEALING AND MELTING OF MIXTS. OF THE OXIDES, WAS INVESTIGATED. THE RTAO SUB4 (WHERE R EQUALS RAREEARTH ELEMENTS RANGING FROM ND TO LU, AND Y) HAVE A MONOCLINIC FERGUSONITE TYPE STRUCTURE. THE RTA SUB3 O SUB9 HAVE A PEROVSKITE TYPE STRUCTURE, BEING TETRAGONAL FOR COMPDS. RANGING FROM LA TO SM, ORTHORHOMBIC FOR COMPDS. OF EU AND GD, AND MONOCLINIC FOR COMPDS. OF RARE EARTH ELEMENTS WITH TB TO YB. COMPDS. OF THE R SUB3 TAO SUB7 TYPE (WHERE 4 EQUALS RARE EARTH ELEMENTS RANGING FROM SM TO LU, AND Y) HAVE A CUBIC PYROCHLORE TYPE STRUCTURE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

UNCLASSIFIED

TITLE--REACTION OF RARE EARTH OXIDES WITH WATER -U- PROCESSING DATE--16OCT70

AUTHOR-(03)-TIMOFEYEVA, N.I., DROZDOVA, L.N., TIMOFEYEV, V.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 605

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--RARE EARTH COMPOUND, METAL OXIDE, CHEMICAL REACTION, WATER, X RAY TECHNIQUE, THERMOGRAPHIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0906

CIRC ACCESSION NO--AP0118075 STEP NO--UR/0363/70/006/003/0605/0605

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

LIRC ACCESSION NO--AP0118075 UNCLASSIFIED PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF RARE EARTH OXIDES (FROM LA TO LU, WITH THE EXCEPTION OF PM, AND Y) WITH BOILING H SUB2 O FOR 10-100 HR AND WITH H SUB2 O AT 350DEGREES FOR 24 HR WAS STUDIED BY X RAY STRUCTURAL, THERMOGRAPHIC, AND GRAVIMETRIC ANALYSES. LA SUB2 O SUB3, ND SUB2 O SUB3, SM SUB2 O SUB3, AND GD SUB2 O SUB3, WHEN IN CONTACT WITH BOILING H SUB2 O AND WITH H SUB2 O AT 350DEGREES ARE CONVERTED TO HYDROXIDES OF THE LN(OH)SUB3 TYPE. SESQUIOXIDES OF RARE EARTHS RANGING FROM HO TO LU AND Y FOR ALL PRACTICAL PURPOSES DO NOT REACT WITH BOILING H SUB2 O. IN H SUB2 O AT 350DEGREES THE RARE EARTH OXIDES FROM HO TO LU FORM MONOHYDRATES; CEO SUB2 DOES NOT INTERACT WITH H SUB2 O AT 100 AND 350DEGREES. PR SUB6 O SUB11 AND TB SUB4 O SUB7 REACT WITH SMALLER THAN 2 MOLS. OF H SUB2 O. LA(OH) SUB3, ND(OH)SUB3, SM(OH)SUB3, EU(OH)SUB3, AND GD(OH)SUB3 HAVE A HEXAGONAL UCL SUB3 TYPE STRUCTURE. ALL THE RARE EARTH OXIDES ARE ONLY SLIGHTLY SOL. IN H SUB2 O.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

AP0105531 Abstracting Service: CHEMICAL ABST.

Ref. Code UR0363

128186u Synthesis of rare-earth tantalates and study of their physicochemical properties. Portnoi, K. I.; Timofeeva, N. I.; Salibekov, S. E. (USSR). *Izv. Akad. Nauk SSSR, Neorg. Mater.* 1970, 6(2), 289–93 (Russ). By high-temp. firing of mixts. of rare earth oxides and Ta_2O_5, $RTaO_4$, RTa_3O_9, R_3TaO_7 (where R = rare earth element ranging from La to Lu, with the exception of Ce, Pm, and Y) were synthesized. The chem. compn., m.p., d., thermal expansion coeff., heat cond., microhardness, and chem. stability of these compds. were detd. The m.ps. range from 1730 to 2390°, with R_3TaO_7 being the refractory. All the synthesized compds. have a high chem. stability in concd. acids and in boiling H_2O. S. A. Mersol

ELB

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 546.623'171.1-162.2

TIMOFEYEVA, N. I., MORDOVIN, O. A., GRIBKOV, V. N., and SAKOVICH, V. N.

"Chemical Properties of Thread-Like Crystals in Aluminum Nitride"

Moscow, Zhurnal Prikladnoy Khimii, Vol 45, No 8, Aug 72, pp 1858-1860

Abstract: The thread-like crystals of AlN were obtained by partial reduction of aluminum oxide with carbon and silicon followed by nitridation of the intermediate reduction products. The crystals of aluminum nitride are highly stable at room temperature in acids, bases, in water, and in organic solvents. On heating they dissolve in phosphoric acid, in KOH and in Na_2CO_3 solutions, as well as in mixtures consisting of H_3PO_3+ $HClO_4$ (1:1) and H_2SO_4 + H_3PO_4 (1:1).

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USSR

UDC 612.822.3+612.821.6

KOTLYAR, B. I., ZUBOVA, O. B., TIMOFEYEVA, N. O., and KRYUCHKOVA, N. A., Chair of the Physiology of Higher Nervous Activity, Moscow State University imeni M. V. Lomonosov

"Electrophysiological Analysis of Limbic-Reticular Interaction in the Orienting Reflex"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, No 4, Vol 22, Jul/Aug 72, pp 828-836

Abstract: Changes in the frequency of synchronized oscillations during extinction of the EEG component of the orienting reaction to acoustic stimuli were studied in rabbits with electrodes implanted in various areas of the brain. The most common development in the reticular formation of the brain stem (73% of all cases) was an immediate fall in the frequency of these oscillations, followed by an undulating extinction of the changes (type II reaction). The simultaneous changes in nonspecific thalamic and limbic nuclei and in the dorsal hippocampus were more variable. However, the most characteristic development (43.5%) was an initial gradual rise with a subsequent diminution in the frequency of the synchronized rhythm (type I reaction). Intramuscular chlorpromazine blocked primarily the type II reaction in the brain stem reticular formation. It is inferred that the first stage of the orienting reaction is

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

KOTLYAR, B. I., et al., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol 22, No 4, Jul/Aug 72, pp 828-836

associated with activation of the reticular formation in the brain stem, while the second stage in the analysis of the significance of the signal is based on recruitment of the activating mechanisms of the limbic-thalamic system.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 616-099-02:632.95

TIMOFEYEVA, N. T., Candidate of Medical Sciences, Kiev Scientific Research Institute of Labor Hygiene and Occupational Diseases

"A Case of Intoxication Due to the Synergistic Effect of Pesticides"

Kiev, Vrachebnoye Delo, No 4, Apr 71, pp 140-141

Abstract: Whereas the clinical picture of intoxications due to the effect of specific insecticides and fungicides has been sufficiently widely reported in the literature, the question of the combined effect of these chemicals has not yet been studied. Meanwhile, in connection with the increase in the production of various insecticides in recent years, the number of people who come into contact with a complex of these poisons during use has risen considerably. Combined action of various insecticides occurs in agricultural work, in disinfectant work, and so forth. We shall report our observation of an intoxication produced by the combined effect of several forms of pesticides. Patient B., age 47, was admitted to the occupational disease clinic on 10 June 1969 with complaints about difficulties in walking, dull

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

TIMOFEYEVA, N. T., Vrachebnoye Delo, No 4, Apr 71, pp 140-141

diffuse pains, weakness and clumsiness in the muscles of the lower extremities and the left arm. In addition, periodic headaches without specific localization and insomnia were reported. These symptoms had begun seven years previously, and had been gradually intensified, particularly during the last year.

The patient works as an exterminator and has had continuous contact for 14 years with organochlorine preparations (hexachlorane, DDT), periodic contact with organophosphorus compounds (chlorophos or Dipterex), a rodenticide (naphthylthiourea), zoocoumarin, and zinc phosphide. He did not observe the required safety measures. No acute poisoning was observed.

No pathology was discovered during X-ray examination of the thoracic organs and the abdominal-intestinal tract. The chest portion of the spine showed initial thickening of the intervertebral ligaments. however, In the clinical picture of the illness

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

TIMOFEYEVA, N. T., Vrachebnoye Delo, No 4, Apr 71, pp 140-141

on the nerve level, a lower spastic paraparesis was observed, without gross disturbances in sensitivity and with undisturbed functioning of the sphincters, indicating that the predominant affection of the lateral columns of the spinal cord is of the type of familial spastic paraplegia. Encephalomyelopolyneuritis with involvement of the spinal cord is indicated.

The disease transformed a healthy man in prolonged contact with a complex of insecticides and who did not observe safety measures. There was a slowly developing pathological process of the nervous system (the central and peripheral nervous system) with symptoms of kidney involvement, which is characteristic for DDT intoxication; the presence of DDT in the blood indicates a toxic etiology of the disease. It should be pointed out that the clinical picture of the patient is unusual; it differs from the one described in the literature in symptoms of intoxication by specific insecticides and this, apparently, causes the peculiar synergistic effect of these insecticides on the patients over a long period.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

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UNCLASSIFIED

TITLE--CLINICAL PICTURE AND PATHOMORPHOLOGY OF CERVICAL VEGETATIVE GANGLIONITIS IN VIBRATION SICKNESS -U-

PROCESSING DATE--27NOV70

AUTHOR-(04)-MODEL, A.A., RAPORPORT, M.B., TIMOFEYEVA, N.T., PASTERNAK, G.A.

COUNTRY OF INFO--USSR

SOURCE--KLINICHESKAYA MEDITSINA, 1970, NR 3, PP 74-78

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BIOLOGIC VIBRATION EFFECT, GANGLION, RAT, MORPHOLOGY, SPINAL CORD, SPINAL NERVE, CENTRAL NERVOUS SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1742

STEP NO--UR/0497/70/000/003/0074/0078

CIRC ACCESSION NO--AP0136983

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 032

CIRC ACCESSION NO--AP0136983 UNCLASSIFIED PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AS A RESULT OF OBSERVATION OF 29 PATIENTS SUFFERING FROM VIBRATION SICKENSS, THE CLINICAL SYMPTOMS OF AFFECTION OF THE CERVICAL SYMPATHETIC GANGLION WERE ANALYZED. IN A NUMBER OF CASES THE AFFECTION OF CERVICAL VEGETATIVE FORMATIONS WERE ACCOMPANIED BY DEGERNERATIVE AND DYSTROPHIC CHANGES OF THE SPINE. THE AUTHORS CARRIED OUT HISTOLOGICAL INVESTIGATIONS OF CERVICAL VEGETATIVE GANGLIA USING RATS SUBJECTED TO INTERMITTENT OVERALL VIBRATION FOR THREE HOURS DAILY DURING A PERIOD OF THREE MONTHS. MORPHOLOGICAL CHANGES OF PRE AND POST GANGLIONIC FIBERS WERE FOUND, AS WELL AS CHANGES OF NERVE CELLS OF SYMPATHETIC GANGLIA. IT IS BELIEVED THAT IN THE DEVELOPMENTAL MECHANISM OF CERVICAL VEGATATIVE GANGLIONITIS OF VIBRATION ETIOLOGY, AN IMPORTANT ROLE IS PLAYED BY PATHOLOGICAL IMPULSATION FROM THE PERIPHERY AS WELL AS BY DISTURBANCES OF THE CENTRAL NERVOUS SYSTEM. IT IS ASSUMED THAT THE CHANGES OF THE SPINE ARE OF SECONDARY NATURE CAUSED BY THE AFFECTION OF THE CERVICAL SYMPATHETIC GANGLION. FACO;OTU"

KIYEVSKIY NAUCHNO-ISSLEDOVATELSKIY INSTITUT GIGIYENY TRUDA I PROFFESSIONAL'NYKH ZABOLEVANIY.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC: 616.839.19-002-02:613.644

MODEL', A.A., RAPOPORT, M.B., TIMOFEYEVA, N.T., and PASTERNAK, G.A., Kiev Scientific Research Institute of Labor Hygiene and Occupational Diseases

"The Clinical Picture and Pathomorphology of Cervical Autonomic Ganglionitis in Vibration Sickness"

Moscow, Klinicheskaya Meditsina, No 3, 1970, pp 74-78

Abstract: Clinical symptoms of cervical autonomic ganglionitis in patients exposed to local and/or general whole body vibration consisted of headache, eye and ear disturbances, and disturbances of the central nervous system. In a number of cases disturbances of cervical autonomic structures were concurrent with degenerative and dystrophic changes in the spine. Histological studies were conducted in animals subjected to whole-body vibration, pathological changes were found in pre- and post-ganglionic fibers, and in the cells of the sympathetic ganglia. The dominant factor in the etiology of ganglionitis may be pathological impulses from the peripheral nerves and disturbances of the central nervous system. Changes in the spine are of secondary nature and are apparently due to affection of the cervical sympathetic ganglia.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/2 022 UNCLASSIFIED

TITLE--EFFECT OF HIGH PRESSURE ON THE CRYSTALLIZATION OF ARSENIC AND SULFUR GLASSES -U-

PROCESSING DATE--18SEP70

AUTHOR-(05)-TIMOFEYEVA, N.V., VINOGRADOVA, G.Z., FEKLICHEV, YE.M., DEMBOVSKIY, S.A., KALASHNIKOV, YA.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(4), 902-4 (PHYS CHEM)

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--HIGH PRESSURE EFFECT, GLASS CRYSTALLIZATION, ARSENIC COMPOUND, SULFUR COMPOUND, X RAY ANALYSIS, GLASS STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1575

STEP NO--UR/0020/70/190/004/0902/0904

CIRC ACCESSION NO--AT0100193

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 022

UNCLASSIFIED

CIRC ACCESSION NO--AT0100193 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CRYSTN. OF AS SUB2 S SUB3 GLASSES WAS DETD. AT 30-70 KILOBARS AND UP TO 500DEGREES. AS SUB2 S SUB3 CRYSTD. AT 250DEGREES AND 40-70 KILOBARS. X RAY PHASE ANAL. PROVED THAT THE OBTAINING CRYST. AS SUB2 S SUB3 HAS THE SAME STRUCTURE AS THE NATURALLY OCCURRING ORPIMENT (I). BETA AS SUB2 S SUB3 FORMED AT 400DEGREES. IT HAS A STRUCTURE DIFFERENT THAN I. AS SUB2 S SUB5 GLASS (M. 190DEGREES) CRYSTD. AT GREATER THAN 250DEGREES AND 50-70 KILOBARS. AS SUB2 S SUB5 HAS AN ORTHORHOMBIC STRUCTURE WITH A CONGRUENT TO 10.37, B CONGRUENT TO 9.9, AND C CONGRUENT TO 8.66 ANGSTROM.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

TIMOFEYEVA, O. A., SHVARTSMAN, G. A., and DEMCHENKO, YE. P.

UDC 632.96

"Gas Chromatographic Determination of γ-hexachlorocyclohexane and p,p'-DDT in Grapes, Wine, Water and Juice"

V sb. Novyye metody tekhnol. i kontrolya konservn. i vinodel'ch. proiz-va (New Methods of Technology and Inspection in the Canning and Distillery Industry -- collection of works), Kishinev, "Shtintsa", 1972, pp 120-124 (from RZh-Khimiya, No 22, Nov 72, Abstract No 22N415)

Translation: A chromatograph with tritium detector is used for determining re idual quantities of γ-hexachlorocyclohexane and p,p'-DDT in grapes and products processed from grapes. The column is charged with 10% SE-30 on chromosorb W. The temperature of column, vaporizer and detector 230, 260, 160°C. Rate of argon flow 65 ml/min. The authors investigate the conditions of isolation of the given insecticides from the specimens to be analyzed, methods of purifying the resultant extracts, and the basic parameters of gas chromatographic analysis. For liquid products, the best results are given by predistilling the hexachlorocyclohexane and DDT with steam, followed by extraction with n-hexane. For grapes, direct extraction is used followed by purifying the extract with concentrated sulfuric acid. Extraction of insecticides

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

TIMOFEYEVA, O. A., et al., V sb. Novyye metody tekhnol. i kontrolya konservn. i vinodel'ch. proiz-va, Kishinev, "Shtintsa", 1972, pp 120-124

from specimen comes to 85-95%. The method can be used to determine 0.2 μg of hexachlorocyclohexane and 1 μg of DDT in 1 liter (kg) of a specimen when 100 ml (g) is subjected to analysis. The time of analysis of liquid products is 1.5 hours, and the time for grapes is 2-2.5 hours. T. A. Belyayeva.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

Organ and Tissue Transplantation

USSR

UDC 617.57/.58-089.843-0929-07:616.8-003.93-07

TIMOFEYEVA, O. N., and LAPCHINSKY, A. G., Department of Experimental Traumatology and Orthopedics, Central Scientific Research Institute of Traumatology and Orthopedics, Moscow

"Restoration of Innervation in Replanted Extremities of Dogs"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 4, 1970, pp 104-107

Abstract: By means of neurohistological techniques, the authors studied the peripheral innervation of replanted hind legs of seven dogs surviving the operation from one year and seven months to nine years and seven months. In the replanted limbs, when there were no postoperative complications, normal restoration of peripheral nerves and nerve endings was observed. The process of degeneration and subsequent restoration of the peripheral nervous system of replanted limbs was essentially similar after sterile amputations, nonsterile traumatic amputations, and when the limb had been preserved for more than 24 hours. In such experiments, the process of innervation restoration was similar to experimental section of the nerve and subsequent ligation.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/2 021

UNCLASSIFIED

TITLE--RESTORATION OF INNERVATION IN REPLANTED EXTREMITIES OF DOGS -U-

PROCESSING DATE--09OCT70

AUTHOR-(02)-TIMOFEYEVA, O.N., LAPCHINSKIY, A.G.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 4, PP 104-107

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TISSUE TRANSPLANT, DOG, NERVOUS SYSTEM, AMPUTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1654

STEP NO--UR/0219/70/069/004/0104/0107

CIRC ACCESSION NO--AP0106400

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 021

UNCLASSIFIED

CIRC ACCESSION NO--AP0106400

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY MEANS OF NEUROHISTOLOGICAL TECHNIQUES THE AUTHORS STUDIED THE PERIPHERAL INNERVATION OF REPLANTED HIND LEGS OF 7 DOGS WHO LIVED AFTER THE OPERATION FROM 1 YEAR AND SEVEN MONTHS TO 9 YEARS AND SEVEN MONTHS. IN THE REPLANTED LIMBS IN THE ABSENCE OF POSTOPERATIVE COMPLICATIONS THER IS SEEN NORMAL RESTORATION OF PERIPHERAL NERVES AND NERVE ENDINGS. THE PROCESS OF DEGENERATION AND SUBSEQUENT RESTORATION OF THE PERIPHERAL NERVOUS SYSTEM OF REPLANTED LIMBS RAN A COURSE WITHOUT ESSENTIAL DIFFERENCES AFTER STERILE AMPUTATION, NONSTERILE TRAUMATIC AMPUTATION AND IN THE INSTANCE OF REPLANTATION OF THE LIMB PRESERVED FOR MORE THAN 24 HOURS IN AN ISOLATED STATE. IN SUCH EXPERIMENTS THE PROCESS OF INNERVATION RESTORATION RUNS A COURSE SIMILAR TO EXPERIMENTAL SECTION OF THE NERVE WITH ITS SUBSEQUENT LIGATION.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 632.954:635.342

NALETOV, B. G., PETROV, N. P., Scientific Research Institute of Vegetable Farming, TRUBNIKOVA, T. I., TIMOFEYEVA, T. A., KIRYUKHINA, N. N., Saratov Scientific Research Institute of Farm Hygiene

"Application of Semeron in Cabbage Fields"

Moscow, Khimiya v sel'skom Khozyaystva, No 8, 1972, pp 39-41

Abstract: Optimal doses of semeron for soddy alluvial soils of different mechanical composition were established, and the economic advantage of applying semeron to white cabbage was demonstrated. In medium-weedy cabbage fields of medium loamy and light loamy soils in flood plain areas, the optimal dosage of semeron is 0.5 kg/hectare. In heavy, very weedy ground the dosage should be increased to 0.7 kg/hectare. Chemical analysis of the cabbage demonstrated that semeron does not lower the quality or the food value. A study was also made of the hygienic conditions of labor of workers applying the herbicide and the effect of the compound on the organism of the workers. No deviations from the norm in the functional state of the organism was discovered for a semeron concentration in the respiratory zone of 0.003-0.42 mg/m3, on the clothes, 0.001-0.33 and on the skin, 0.001-0.073 mg/dm^2.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 538.27 : 547.341

TIMOFEYEVA, T. N., SEMAKOV, B. V., and IONIN, B. I., Leningrad Technological Institute imeni Lensovet, Leningrad, Ministry of Higher and Secondary Specialized Education RSFSR, and All-Union Scientific Research Institute of Metrology imeni D. I. Mendeleyev, Leningrad, State Committee of Standards, Measures, and Measuring Instruments USSR

"Analysis of PMR Spectra of Ethylenephosphonic Acid Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1169-1170

Abstract: The authors analyzed the proton spectra of ethylenephosphonic acid derivatives, viz. the acid dichloride, dimethyl ester, bis-dimethylamide and diethylvinylphosphine oxide. The trial-and-error method, employing a "Razdan-2" computer, was used to correlate lines and for preliminary calculations. The final calculations were performed by means of a "Minsk-2" computer according to an iterative program of the LACCN type. The chemical shifts of the two terminal protons (A and B) are practically the same in the spectra of all the

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USSR

TIMOFEYEVA, T. N., et al, Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1169-1170

studied compounds, indicating the insignificant contribution of the magnetic anisotropy of P=O to chemical proton shifts. The authors thank A. U. STEPANYANTS, YU. L. KLEYMAN and N. V. MORKOVIN for taking the spectra.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR UDC 547.241

TIMOFEYEVA, T. N., KLEYMAN, YU. L., and IONIN, B. I., Leningrad Technological Institute imeni Lensovet, Leningrad, Ministry of Higher and Secondary Specialized Education RSFSR

"Analysis of Signals of Ethyl Group in PMR Spectra of Ethanephosphonic Acid Derivatives and Triethylphosphine Oxide"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1046-1050

Abstract: The article uses the previously suggested method of averaging of theoretical spectra for the case of an ethyl group linked with magnetic nuclei with spin 1/2. The PMR spectra of acid dichlorides and difluorides, dimethyl ester and bisdimethylamide of ethanephosphonic acid and triethylphosphine oxide are considered. The spectra of such compounds belong to type A_3B_2X, and the sub-spectra method suggested by P. T. NARASHIMHAN and M. T. ROGERS is convenient for their analysis. A "Razdan-2" digital computer was used to calculate line frequencies and intensities, employing a specially compiled program "A_3B_2X With Averaging," which provides

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

TIMOFEYEVA, T. N., et al, Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1046-1050

for the calculation of frequencies and intensities of two subspectra and their averaging. The results indicate that variations in the constants for H-P spin-spin coupling are subject to the same regularities as in the case of H-H spin-spin coupling.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/2 047 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--RADIATION STABILITY OF ZNS PLUS PRIME10 B TYPE DETECTORS TO NEUTRONS -U-

AUTHOR-(04)-GANICHEV, G.I., KOLESOV, B.M., OVCHINNIKOV, A.K., TIMOFEYEVA, T.V.

COUNTRY OF INFO--USSR

SOURCE--PRIB. TEKH. EKSP. 1970, (2), 78-80

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, PHYSICS

TOPIC TAGS--ZINC SULFIDE, BORON ISOTOPE, NEUTRON DETECTOR, SCINTILLATOR, RADIATION EFFECT, LIGHT EMISSION, RADIATION INTENSITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1077 STEP NO--UR/0120/70/000/002/0078/0080

CIRC ACCESSION NO--AP0136497

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 047 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136497

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE LOWERING WAS STUDIED OF THE LIGHT OUTPUT OF ZNS PLUS PRIME10 B DETECTORS OWING TO RADIATION FAULTS CAUSED BY THERMAL N. AT DOSAGES ALRGER THAN 10 PRIME12 N-CM PRIME2 THE REDN. OF THE LIGHT OUTPUT IS SIGNIFICANT. FACILITY: VNII RAZVED. GEOFIZ., LEINIGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/3 C20 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--DEGREE OF LIGHT POLARIZATION IN TURBID MEDIA -U-

AUTHOR--TIMOFEYEVA, V.A.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, IZVESTIYA AKADEMII NAUK SSSR, FIZIKA ATMOSFERY I OKEANA, VOL VI, NO. 5, 1970, PP 513-521

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, PHYSICS

TOPIC TAGS--LIGHT POLARIZATION, TURBIDITY, INDICATRIX, SEA WATER, LIGHT SCATTERING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0518 STEP NO--UR/0362/70/006/005/0513/0521

CIRC ACCESSION NO--AP0132716

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/3 020 UNCLASSIFIED

CIRC ACCESSION NO--AP0132716 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A LABORATORY STUDY WAS MADE OF THE SPATIAL DISTRIBUTION OF THE DEGREE OF POLARIZATION IN TURBID MEDIA SUCH AS SEA WATER. THE OBJECTIVE WAS TO APPLY THE RESULTS IN COMPUTING THE POLARIZATION OF NATURAL LIGHT IN THE SEA. THE AUTHOR HAS DESCRIBED THE METHOD AND EXPERIMENTAL RESULTS IN AN EARLIER PAPER (IZV. AN SSSR, FIZIKA ATMOSFERY I OCEANA, 2, NO 12, 1966). THE EXPERIMENTAL TURBID MEDIA WERE DYED AND UNDYED MILKY MEDIA, WHOSE SCATTERING INDICATRIX VIRTUALLY COINCIDES WITH THE MEAN SCATTERING INDICATRIX FOR SEA WATER. IT WAS FOUND THAT THE DEGREE OF NEGATIVE POLARIZATION OF LIGHT HAS VIRTUALLY NO DEPENDENCE ON DEPTH (AT LEAST TO TAU EQUALS 10) (TAU-OPTICAL DEPTH). NEITHER IS IT DEPENDENT ON THE OPTICAL PARAMETERS OF THE MEDIUM, BUT IT IS DEPENDENT ON SOLAR ALTITUDE, SINCE WITH AN INCREASE IN H THE MASS OF THE SUN THE DEGREE OF POLARIZATION DECREASES. IT IS NATURAL TO ASSUME THAT THE REASON FOR APPEARANCE OF NEGATIVE POLARIZATION IS THE POLARIZATION OF LIGHT DURING ITS PASSAGE THROUGH THE DISCONTINUITY. HOWEVER, THIS IS NOT THE ONLY REASON BECAUSE IT CANNOT EXPLAIN THE PRESENCE OF A WEAK BUT OBVIOUSLY NEGATIVE POLARIZATION WHEN THE MEDIUM IS ILLUMINATED BY A VERTICAL BEAM. THE LATTER PHENOMENON CAN PROBABLY BE ATTRIBUTED TO LIGHT POLARIZATION DURING SCATTERING ON PARTICLES: ON LARGE PARTICLES LIGHT IS FOR THE MOST PART SCATTERED FORWARD AND IS NEGATIVELY POLARIZED. THE ARTICLE GIVES INFORMATION ONLY ON THE DEGREE OF POLARIZATION IN A HORIZONTAL DIRECTION IN THE AZIMUTHAL PLANE PERPENDICULAR TO THE PLANE OF THE SOLAR VERTICAL FOR H THE MASS OF THE SUN EQUALS 30DEGREES.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

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UNCLASSIFIED

CIRC ACCESSION NO--AP0132716 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--THE DEPENDENCE OF THE DEGREE OF POLARIZATION ON T (T IS THE RATIO OF THE COEFFICIENTS OF THE MAXIMUM SCATTERED AND DIRECTED LIGHT FLUXES) IS APPROXIMATED FOR THE MOST PART BY A FORMULA OF THE TYPE P EQUALS P SUBO TDELTA, WHERE DELTA EQUALS F(A), P SUBO EQUALS ALPHA (A, ZETA, TAU) AND WHERE 0.33 LESS THAN OR EQUALS TO DELTA LESS THAN OR EQUAL TO 0.50. THE DEPENDENCE OF DELTA ON A IS AS FOLLOWS: ANGSTROM, 0(180), 22.5(157.5), 45(135), 67.5(112.5), 90; DELTA, 0.50, 0.40, 0.36, 0.33, 0.33. THE ARTICLE CONCLUDES WITH COMPUTATIONS OF THE SPATIAL DISTRIBUTION OF THE DEGREE OF POLARIZATION FOR A SPECIFIC CASE.

FACILITY: MARINE HYDROPHYSICAL INSTITUTE, ACADEMY OF SCIENCES UKRSSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 536.531.08

BRODSKIY, A. D., and TIMOFEYEVA, V. S.

"Tape Resistance Thermometer"

Tr. Metrol. In-tov SSSR [Works of Metrological Institutes USSR], 1972, No 131 (191), pp 160-161 (from Referativnyy Zhurnal, No 11, Nov 72, 32. Metrologiya i Izmeritel'naya Tekhnika. Single Issue. Abstract No 11.32.658 by V. S. K.)

Translation: The design of a resistance thermometer (T) with a thermosensitive element in the form of a tape of copper wire on capron base is described. The absence of heat conductors and mechanical stresses from the armature side of T provides in the temperature range from +100 to -200°C a stability of measurements of the -0.01-0.05°C order. The resistance of manufactured T is in the 1000-1500 ohm range, the sensitivity is 4-6 ohm per 1°C. Tape resistance T are used in the industry and at temperature measurements in hydrography. One illustr.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/2 018 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--SEARCH FOR MEDIA USEFUL AS SOLVENTS FOR GROWING Y SU83 FE SU85 O SUB12 CRYSTALS FROM SOLUTION MELTS -U-

AUTHOR-(02)-TIMOFEYEVA, Y.A., LUKYANOVA, N.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 587-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--BORATE, CRYSTAL GROWING, VANADATE, ALKALI METAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0833 STEP NO--UR/0363/70/006/003/0587/0589

CIRC ACCESSION NO--AP0118009

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 018 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118009

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPDS. BASED ON VANADATES, NIOBATES, BORATES, AND FERRATES OF THE ALKALI METALS WERE TESTED. THE GREATEST EFFECT IS EXPERIENCED AT HIGH TEMPS., WHEN THE SOLY. OF SUCH OXIDES AS Y SUB2 O SUB3 STRONGLY INCREASES WITH INCREASED TEMP. A NEW METHOD OF SPONTANEOUS CRYSTN. WAS TESTED FOR CHECKING THE NEW COMPNS., WITH THE HEATING BEING PERFORMED TO 1450-1500DEGREES AND THE COOLING PROCEEDING AT A RATE OF 1-3DEGREES-HR. ALL THE TESTED SOLVENTS WERE NONVOLATILE. IN MOST OF THE CASES ADDNL. CRYST. PHASES PPT. OUT SIMULTANEOUSLY WITH Y SUB3NEGATIVE FE SUB5 O SUB12. WHEN WORKING WITH SOLVENTS BASED ON THE VANADATES OF THE ALKALI METALS, THE FOLLOWING ADDNL. PHASES PPT. OUT: FE SUB2 O SUB3, RFE SUB5 O SUB8, AND YVO SUB4. FROM SOLNS. BASED ON THE NIOBATES, (WITH THE EXCEPTION OF LINBO SUB3), THE FOLLOWING ADDNL. PHASES PPT. OUT: RFE SUB5 O SUB8, YNBO SUB4, RNBO SUB3, AND YFEO SUB3. THE BEST RESULT IN THIS GROUP OF COMPDS. WAS SHOWN BY EXPTS. WITH NANBO SUB3, WHEN AT 33.3PERCENT ONLY THE PHASE Y SUB3 FE SUB5 O SUB12 PPTD. OUT. DURING THE CRYSTN. FROM BORATES AND FERRATES OF THE ALKALI METALS, THE GARNET PHASE PPTD. OUT IN ALMOST ALL CASES, AND ONLY RARELY YFEO SUB3 AND FE SUB2 O SUB3. MAX. SIZE OF THE Y SUB3 FE SUB5 O SUB12 CRYSTALS (2-3 MM) WAS ATTAINED AT A CONCN. OF 40PERCENT FOR NA SUB2 B SUB4 O SUB7, AND 80PERCENT FOR K SUB2 B SUB4 O SUB7.

FACILITY: INST. KRISTALLOGR., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

TIMOFEYEVA, Ye. N.

(2)

SO: JPRS 59637
27 JULY 1973

BEHAVIOR OF HAFNIUM DIOXIDE PARTICLES IN PRECIPITATION-HARDENED NICKEL DURING ISOTHERMAL ANNEALING

UDC 669.24:621.785.78

[Article by Ye. N. Timofeyeva and N. Ye. Berestev', (Moscow); Moscow, Izvestiya Akademii Nauk SSSR, Metally, Russian, No 3, 1973, submitted 10 May 1972, pp 140-142]

Precipitation-hardened alloys of the type TD-nickel /1/ are strengthened by finely dispersed refractory oxides previously added to the material and no phase changes occur here. The oxides, being preserved almost without change up to temperatures at which conventional intermetallide strengtheners and carbides are fully dissolved, stabilize the microheterogeneous structure providing the most increase in heat resistance /2/. The nature of strengthener particle size and distribution is an important condition for achieving a high structural stability and properties.

In the present work the results of studying the effect of initial dimensions of the particles of the strengthener--hafnium dioxide--on certain structural changes and properties of Ni + 3.4% (by volume) HfO_2 in the process of isothermal annealing are presented.

The subject of investigation was an alloy of nickel containing hafnium dioxide of varying dispersity: in sample 1 the particle size was 0.075 microns and in sample 2--0.350 microns. Dispersed powder mixtures of nickel with hafnium dioxide, produced by the method of chemical coprecipitation of the components from aqueous solutions of nitrate salts of nickel and hafnium with ammonium carbonate and subsequent filtration, drying, roasting, and selective reduction in hydrogen, were used for preparation of alloy samples. The powders were pressed into blanks at a pressure of 7 ton/cm², sintered at 1150 C, and extruded with a 97% degree of reduction. Samples for mechanical tests and research were made from the rods.

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Superalloys

USSR

UDC 546.77'21+546.78'21+546.623'21+
+546.832'21+546.74'21

TIMOFEYEVA, Ye. N., KUSTOV, Yu. A., BERESTEN', N. Ye., ROMANOVICH, I. V.

"Interaction of MoO_3 and WO_3 with NiO, Al_2O_3, HfO_2 and ZrO_2 in Metal Ceramic Production of Nickel Alloys"

Moscow, Neorganicheskiye Materialy, Vol 8, No 10, Oct 72, p 1,872.

Abstract: This work presents the results of a study of the interaction of molybdenum and tungsten trioxides with the oxides of nickel, aluminum, hafnium and zirconium. The initial products used were mixtures of oxide powders with particle dimensions less than 0.1 μ. The powders were heated in air at 400, 600, 800 and 1,000°C for 25 hours to establish the degree of sublimation and nature of interaction, then were subjected to reducing annealing in hydrogen at 800-1,000°C for two hours. X-ray analysis showed a phase identical to the known compound $M'MO_4$. Nickel tungstenate and molybdate fuse incongruently. They apparently practically do not dissociate in air right up to the melting point. The presence of the oxides of high temperature modifications of aluminum, hafnium and zirconium does not reduce the rate or degree of sublimation of molybdenum trioxide and tungsten tri-

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UDC 546.77'21+546.78'21+546.623'21+546.832'21+
+546.74'21

TIMOFEYEVA, Ye. N., KUSTOV, Yu. A., BERESTEN', N. Ye., ROMANOVICH, I. V.,
Moscow, Neorganicheskiye Materialy, Vol 8, No 10, Oct 72, p 1,872.

oxide. The presence of nickel molybdate or tungstenate does not influence the kinetics of reduction; the entire quantity of alloying elements enters the solid solution in the stage of reduction of the mixture of oxides.

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USSR UDC 621.314.61(08818)

TIMOFEYEVICH, M.S.

"Voltage Converter"

USSR Author's Certificate No 272420, filed 20 Apr 68, published 11 Sept 70 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4B639P)

Translation: A voltage converter is proposed which contains a rectifier, commutator, and a trigger. With the object of increasing the stability of the output voltage and the reliability of the converter, transistorized modulators with storage capacity are used as voltage shapers, alternately discretely withdrawing energy from a d-c source and delivering this energy in the discharge phase to the common circuit [kontur] of the load circuit [tsep']. The frequency of the sequence of the discharge and charge processes is set automatically, both by the level of the output voltage and the level of the input. 1 ill. V.A.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/2 015 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--THE EFFECT OF SARCOLYSIN ON THE SYNTHESIS OF NUCLEIC ACIDS IN MONOSTRATAL CULTURES OF HUMAN NEOPLASTIC CELLS -U-

AUTHOR-(02)-KARUZINA, N.P., TIMOFEYEVSKAYA, YE.A.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 49, NR 6, PP 77-80

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TISSUE CULTURE, CANCER, NUCLEIC ACID, ANTINEOPLASTIC DRUG, DRUG EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0565 STEP NO--UR/0219/70/049/006/0077/0080

CIRC ACCESSION NO--AP0131108

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

2/2 015 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131188

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON STABLE MONOSTRATAL CULTURES OF CELLS FROM HUMAN TUMORS (CANCER OF THE STOMACH OVARY, PANCREAS, ANGIOSARCOMA, MESENCHYMOMA) THE AUTHORS STUDIED THE EFFECT OF SARCOLYSIN IN DIFFERENT CONCENTRATIONS ON THE INCORPORATION OF LABELLED PRECURSORS INTO NUCLEIC ACIDS AND PORTEIN. THE FOLLOWING LABELLED PRECURSORS WERE USED: ADENINE-8-C PRIME14 (21 MU C-GM), URIDINE-2-C PRIME14 (26 MU C-GM), LYSINE-DL-I-C PRIME14 (56 MC-GM). CELLULAR CULTURES OF THE CUTANEOMUSCULAR TISSUE OF HUMAN EMBRYO SERVED AS CONTROL. SARCOLYSIN IN A DOSE OF 100 MU G-ML INHIBITED THE INCORPORATION OF LABELLED ADENINE INTO NUCLEIC ACIDS OF NEOPLASTIC CELLS FROM 74PERCENT TO 52PERCENT IN DIFFERENT LINES. IN THESE CONDITIONS OF THE EXPERIMENT THE INHIBITION PERCENTAGE OF SYNTHESIS OF NUCLEIC ACIDS OF EMBRYONIC CELLS EQUALLED 37. SARCOLYSIN USED IN DOSES OF 2.5-50 MU G-ML DISPLAYED A DIVERSE SENSITIVITY OF NEOPLASTIC CELLS OF THE LINES STUDIED: A 50PERCENT INHIBITION OF INCORPORATION OF LABELLED PRECURSOR INTO RNA WAS ACHIEVED WITH SARCOLYSIN CONCENTRATION OF 8.5 MU G-ML (FOR OVARIAN CANCER) AND 42.5 MU G-ML (FOR MESENCHYMOMA). INHIBITION OF LABELLED LYSINE INCORPORATION INTO PROTEIN WAS SIMILAR FOR ALL LINES (60-66PERCENT), FOR EMBRYONIC CELLS, 47PERCENT. FACILITY: P. A. GERTSEN MOSCOW ONCOLOGICAL INSTITUTE.

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USSR

TIMOFIYEVSKAYA, L. A., and RODIONOVA, R. P.

"Comparative Evaluation of the Toxicity of Some Aromatic Polynitro Compounds"

V sb. Toksikol. novykh prom. khim. veshchestv (Toxicology of Novel Industrial Chemical Compounds -- collection of works), No 2, Moscow, "Meditsina," 1973m pp 138-144 (from RZh-Biologicheskaya Khimiya, No 10, Oct 73, Abstract No 20 F 1689)

TranslationL In experiments on rats it has been established that single inhalation of the vapors of trinitrobenzene [I; $C_6H_3(NO_2)_3$], hexanitrodiphenyl sulfide { II; [$(NO_2)_3C_6H_2$]$_2$S } and octogene [III; $C_4H_6(N\text{-}NO_2)_4$] in concentrations approac ing saturation levels at 18-20° does not lead to development of acute toxic symptoms. The LD_{50} value of I, II, III for rats on oral administration is 572 mg/kg, 470 mg/kg and $\gtrsim$10 mg/kg respectively. On poisoning mice with I and II, the CNS and peripheral blood are affected; 1-1.5 hrs after administering lethal doses of I and II to mice, the content of MtHb in the blood reaches 57%. Administration of I for 24 ± 4 days leads to the death of 70% of animals. At the 25th day the death rate of mice getting II is 100%. Application of I and II in form of a 33% cream onto the rabbits'

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TIMOFIYEVSKAYA, L. A., and RODIONOVA, R. P., V sb. Toksikol. novykh prom. khim. veshchestv, No 2, Moscow, "Meditsina," 1973, pp 138-144

skin leads to development of hyperemia, edema, and fine point hemorrhages. It has been shown that I, II, III have the ability to penetrate undamaged skin.

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USSR

UDC 541.15

BORISOV, YE. A., and TIMOGEYEV, V. D.

"Possibilities of the Utilization of Nuclear Reactors in Industrial Synthesis of Chemical Compounds""

Moscow, Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva imeni D. I. Mendeleyev, Vol 18, No 3, 1973, pp 323-327

Abstract: A review with 65 references analyzing the possibilities of the utilization of nuclear reactor as a source of radiation during chemical processes. Depending on the type of irradiation, in the active zone of the nuclear reactor, there form two methods for direct utilization of the radiation for chemical synthesis -- chemonuclear and nuclear-chemical. Examples are reported of these processes which were carried out by one of these methods: oxidation of nitrogen, synthesis of hydrogen cyanide, hydrazine, ozone, decomposition of carbon dioxide, synthesis of ethylene glycol, phenol, and other processes. In connection with increased utilization of nuclear reactors, the feasibility and desirability of the production of chemical substances using reactor irradiation is discussed.

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USSR

UDC 535.33/34

YAKUTINA, O. A., RATOVSKIY, G. V., TIMOKHIN, B. V., and FROLOV, Yu. L., Irkut State University and Irkut Institute of Organic Chemistry, Siberian Branch, Academy of Sciences USSR

"Spectral Evidence for the Reaction of Trivalent Phosphorus With Unsaturated Systems. I. Ultraviolet and Raman Spectra of Phenyldialkylphosphines"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 8, 1972, pp 1733-1738

Abstract: The donor and the acceptor characteristics of phosphorus reactions with phenyl radicals were made by measuring the integrated intensity of bonds in the 1000 to 1600 cm^{-1} range of the Raman spectra and the UV spectra in the neighborhood of 220-280 mm. Both p_π-p_π and p_π-d_π interactions occurred. The introduction of the dialkylphosphine into a compound containing a benzene ring increased the integrated intensity at 1600 cm^{-1} (I^{∞}_{1600}) five times. Parasubstitution of chlorine increased I^{∞}_{1600} more than that of the methoxy group. The methoxy group had a greater influence on the I^{∞}_{1600} of triphenylphosphine than on the phenyldialkylphosphine. The UV spectra of phenyldialkylphosphines in the 260 mm region indicate that phosphorus tends to share its unshared electron during electronic excitation. Spectra in the 220-230 mm region in acid solutions indicate a transfer of charge to the vacant P orbitals.

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USSR

UDC 547.341

TIMOKHIN, B. V., GRECHKIN, Ye. F., TRAN'KOVA, N. A., and YAKUTINA, O. A.,
Irkutsk State University imeni A. A. Zhdanov

"Reaction of Organic Derivatives of Phosphorus Pentachloride with Grignard Reagents"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 1, Jan 71, pp 103-105

Abstract: Previous work by the authors showed that phenyltetrachlorophosphorane reacts with phenylmagnesium bromide in a 1:3 ratio to give triphenylphosphine. The authors undertook to ascertain the synthetic possibilities of this reaction and to find how the tertiary phosphine yield is affected by the nature of the organic radical in the Grignard reagent. It was found that phenyltetrachlorophosphorane, when participating in a reaction with a Grignard reagent which has alkyl radicals, is reduced to give trivalent phosphorus compounds. The yield of tertiary phenyldialkylphosphines is considerably lower than the yield of triphenylphosphine obtained by the analogous reaction and shows a regular decline with an increase in the volume of the substituent at the phosphorus atom. An exception is phenyldiisobutylphosphine, whose yield is considerably higher. The lower yield of phenyldialkylphosphines is apparently

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TIMOKHIN, B. V., et al., Zhurnal Obshchey Khimii, Vol 41, No 1, Jan 71, pp 103-105

due to the possible formation of phosphonium salts, as well as the formation of tertiary phosphine oxides as a result of reduced oxidizing capacity. Styryltetrachlorophosphorane likewise reacts with Grignard reagents to form tertiary styrylphosphines.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 547.558.1

TIMOKHIN, B. V., GRECHKIN, YE. F., KALABINA, A. V., Irkutsk State University imeni A. A. Zhdanov, Irkutsk, Ministry of Higher and Secondary Specialized Education RSFSR

"Reaction of Internal Triphenylphosphoniumoxopentachlorophosphate With Grignard Reagents"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 9, Sep 70, pp 2133-2134

Abstract: When internal triphenylphosphoniumoxopentachlorophosphate (I) was reacted with phenylmagnesium bromide (II) at a ratio of 1:1 or 1:2, the only product obtained was triphenylphosphine oxide. When the ratio of (I) to (II) was increased to 1:5, triphenylphosphine was formed, showing that (I) is reduced to the trivalent phosphorus in this process.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

1/2 013 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--REACTION OF PHENYLTETRACHLOROPHOSPHORANE WITH PHENYLMAGNESIUM BROMIDE -U-

AUTHOR-(02)-TIMOKHIN, B.V., GRECHKIN, YE.F.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(2), 497-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC PHOSPHORUS COMPOUND, ORGANOMAGNESIUM COMPOUND, CHLORINATED ORGANIC COMPOUND, CHEMICAL REDUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/1391 STEP NO--UR/0079/70/040/002/0497/0498

CIRC ACCESSION NO--AP0101485

UNCLASSIFIED

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2/2 013 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0101485

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF 3 MOLES PHMGBR WITH 1 MOLE PHPCL SUB4 RESULTED, AFTER AN AQ. TREATMENT, IN 81PERCENT PH SUB3 P; EVIDENTLY THE 2 STEP FORMATION OF PH SUB3 PCL SUB2 WAS FOLLOWED BY REACTION WITH THE 3RD MOLE OF PHMGBR, WHICH RESULTED IN A REDN. TO PH SUB3 P. THIS AGREES WITH THE WORK BY D. DENNEY AND F. GROSS (1967) SHOWING FORMATION OF PH SUB3 P FROM EQUIMOLAR AMTS. PHMGBR AND PH SUB3 PCL SUB2. REACTION OF 2 MOLES PHMGBR WITH 1 MOLE PHPCL SUB4 GAVE AFTER HYDROLYSIS 65PERCENT PH SUB3 PO, CONFIRMING THE ABOVE HYPOTHESIS.

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UNCLASSIFIED

TITLE--TREATMENT OF CEMENT MORTARS -U-

PROCESSING DATE--20NOV70

AUTHOR-(05)-OGOLIKHIN, E.A., TIMOKHIN, I.K., TOKUNOVA, V.V., MALININA, A.I., MUKHIN, L.K.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 266,674

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--01APR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CEMENT, CONSTRUCTION MATERIAL, PATENT, CELLULOSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1470

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128869

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UNCLASSIFIED

CIRC ACCESSION NO--AA0128869 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CEMENT MORTARS WERE TREATED WITH ADDITIVES. TO REDUCE THE WATER LOSS FROM CEMENT MORTARS AT 20-70DEGREES AND TO RETARD HARDENING TIME AT LESS THAN 200DEGREES, 0.25-1.0 WT. PERCENT CARBOXYMETHYL SULFATE CELLULOSE WAS USED AS AN ADDITIVE.

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USSR

UDC 662.215.1+662.217.7

KURBANGALINA, R. Kh., TIMOKHIN, N. N., Moscow

"Influence of Water on Critical Diameter of Fused Hydrazine Mononitrate (Hydrazonium)"

Novosibirsk, Fizika Goreniya i Vzryva, No. 4, Dec. 70, p. 515-519.

Abstract: The critical diameter, at which detonation can be sustained, is studied in hydrazine mononitrate as a function of water content of melted hydrazine mononitrate in aqueous solutions at 75°C. It is discovered that critical diameter increases sharply with increasing water content.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC: 519.217

RUMYANTSEV, V. P., SUMAROKOV, L. N., TIMOKHIN, S. G.

"Some Problems of Analysis of Linear Stochastic Nets"

V sb. Inzh.-mat. metody v fiz. i kibernet. (Engineering and Mathematical Methods in Physics and Cybernetics--collection of works), Moscow, Atomizdat, 1971, pp 44-62 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V142)

[No abstract]

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 621.396.67:624.074

LAPTEV, Yu. P., PUSHKIN, V. N., TIMOKHOV, B. V., SHENDEROV, A. B.

"A Device for Orienting an Antenna With Respect to Azimuth and Polarization"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 5, Feb 72, Author's Certificate No 327545, Division H, filed 11 Sep 70, published 26 Jan 72, p 156

Translation: This Author's Certificate introduces a device for orienting an antenna with respect to azimuth and polarization. The device contains a mechanism for azimuthal rotation fastened on a fixed base, a mechanism for rotation of polarization, and a high-frequency rotating coupler securely fastened to the frame which carries the antenna. As a distinguishing feature of the patent, the overall dimensions are reduced and remote control of antenna orientation is simplified by coupling the output shaft of the polarization rotating mechanism through a differential to the speed reducer of the azimuthal rotation mechanism and through a clutch to the tilting sector regulator. The output shaft of the polarization rotator is coaxial with the movable part of the rotating coupler. The tilting sector regulator is made in the form of a lever-and-linkage mechanism kinematically connected to the azimuthal rotator.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 532.596+551.46.06.8

TIMOKHOV, L. A.

"Theory of Rotation of Ice Floes of an Ice Cover of Different Degree of Packing"

Probl. Arktiki i Antarktiki. Vyp. 33 (Problems of the Arctic and Antarctic. Vyp. 33), Leningrad, Gidrometeoizdat Press, 1970, pp 46-56 (from RZh-Mekhanika, No 10, Oct 70, Abstract No 10 B482)

Translation: This article contains an analytical study of the problem of rotation of ice floes in an ice field. Beginning with the fact that the rotation of the ice floes is determined by the presence of force moments -- a) tangential wind velocity, b) water drag, c) hydrodynamic effect of ice floes on each other, d) friction of the ice floes along the edges, e) random interaction -- the author calculates these moments. Considering that the ice floe (or group of ice floes) rotates around a stationary vertical axis, the author then writes the differential equations of this rotation. The equations are integrated in two specific cases (where the right-hand side is constant or where only a random

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TIMOKHOV, L. A., Probl. Arktiki i Antarktiki. Vyp. 33, Leningrad, Gidrometeoizdat Press, 1970, pp 46-56

force moment enters into it). From the solutions obtained, conclusions are drawn which completely agree with the laws of rotation of ice floes observed empirically by other authors.

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USSR

UDC: 621.316.933

KOVALENKO, V. P., RODICHKIN, V. A., SMIRNOV, V. G., TIMOHIN, A. M.

"A High-Current Spark Discharger"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329614, Division H, filed 30 Jun 70, published 9 Feb 72, p 212

Translation: This Author's Certificate introduces a high-current spark discharger which contains ring electrodes and a coaxial cylindrical channel for feeding current to the electrodes. As a distinguishing feature of the patent, the durability of the discharger is extended by cutting slots at an angle to the generatrix through the coaxial current conducting cylinder at the line of connection to the ring electrode.

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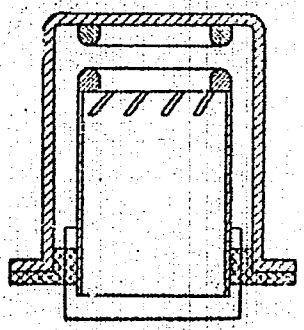
USSR

KOVALENKO, V. P. et al., USSR Author's Certificate No 329614



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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

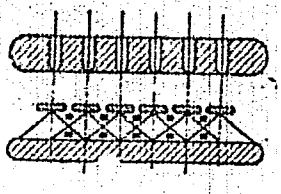
UDC: 621.316.933

DMITRIYEV, S. P., RODICHKIN, V. A., TIMONIN, A. M.

"A Multichannel Spark Discharger"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329616, Division H, filed 30 Jun 70, published 9 Feb 72, p 213

Translation: This Author's Certificate introduces a multichannel spark discharger which contains a one-piece solid electrode, and an electrode with holes accommodating ignition electrodes. As a distinguishing feature of the patent, operational reliability is improved by placing auxiliary electrodes between the main electrodes. Each of the auxiliary electrodes is connected by two wires to the solid electrode at points located on the axes of adjacent auxiliary electrodes.



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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

USSR

UDC 620.195

SOLOV'YEVA, ZH. F., FOKIN, M. N., and TIMONIN, V. A., Moscow Institute of Steels and Alloys

"Criteria for the Tendency of Titanium Alloys to Crevice Corrosion"

Moscow, Zashchita Metallov, Vol 6, No 2, Mar-Apr 1970, pp 204-206

Abstract: In neutral and weakly acid chloride-containing solutions passive titanium may become activated in crevices, which minimizes its value as an all-purpose constructional material for use in chloride media. According to current views, crevice corrosion occurs under conditions promoting the disturbance of the passive state of titanium. The possibility of complete passivation of a crevice under conditions when the metal's surface outside the crevice is passive, considerably depends on its geometric characteristics. This study assesses the applicability of concepts on passivation of extended electrodes for predicting crevice corrosion. The VTZ-1 titanium alloy involved in the experiment (Al-4.0 to 6.2; Cr-1.5 to 2.5; Mo-1.0 to 3.0; Fe-0.8; Si-0.4; and C-0.1%) was studied in a 3% NaCl solution acidified with HCl to various pH values. At the selected temperature 98°C, the incubation period of crevice corrosion caused by the action of air-oxidized films on the surface of titanium was much shorter than at regular temperature. The potentiostatic curves of the VTZ-1 alloy given in the article show

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USSR

SOLOV'YEVA, ZH. F., et al., Zashchita Metallov, Vol 6, No 2, Mar-Apr 1970, pp 204-206

that the active anodic dissolution loop indicating the possible activation of the metal appears at pH less than 0.5. In solutions of lower acidity, titanium remains passive. A diagram of the experimental model is given in the article. Upon analyzing the effect of alloying components of the metal on its tendency to crevice corrosion, it must be noted that all elements reducing the critical current density of passivation or narrowing the region of potentials of anodic active dissolution facilitate metal passivation in the crevice.

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UNCLASSIFIED

TITLE--CRITERIA OF THE PITTING CORROSION TENDENCY OF TITANIUM ALLOYS -U-

PROCESSING DATE--09OCT70

AUTHOR-(03)-SULUVEVA, ZH.F., FOKIN, M.N., TIMONIN, V.A.

COUNTRY OF INFO--USSR

SOURCE--ZASHCH. METAL. 1970, 6(2), 204-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--TITANIUM ALLOY, CURRENT DENSITY, CORROSION RATE, AQUEOUS SOLUTION, SODIUM CHLORIDE, ALUMINUM ALLOY, CHROMIUM ALLOY, MOLYBDENUM ALLOY, SLICON ALLOY, HYDROCHLORIC ACID, METAL SURFACE PROPERTY

CONTROL MARKING--NO RESTRICTIONS

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CIRC ACCESSION NO--AP0112782

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CIRC ACCESSION NO--AP0112782 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CREVICE CORROSION WAS STUDIED ON A TI ALLOY CONTG. AL 4.0-6.2, CR 1.5-2.5, MO 1.0-3.0, FE 0.8, SI 0.4, C 0.1PERCENT, AND THE REST TI; THE STUDIES WERE MADE IN A 3PERCENT NACL SOLN. IN WHICH THE PH WAS SUITABLY ADJUSTED BY ADDN. OF HCL. AT 98DEGREES ACTIVATION OF THE METAL APPEARED AT PH IS SMALLER THAN 0.5. IN LESS ACID SOLNS., THE TI ALLOY WAS PASSIVE. INSIDE A CREVICE WHERE THE VOL. OF ANOLYTE PER UNIT AREA IS VERY SMALL, THE ACIDIFICATION OF THE ANOLYTE CAUSED BY THE HYDROLYSIS OF CORROSION PRODUCTS PROCEEDS RAPIDLY. THE SURFACE OF THE METAL OUTSIDE THE CREVICE IN CONTACT WITH THE SOLN. GREATLY EXCEEDS THE SURFACE INSIDE THE CREVICE, THUS A POTENTIOSTAT OF CONSIDERABLE STRENGTH IS ESTABLISHED. THE PASSIVATION OF THE INSIDE CREVICE SURFACE WAS STUDIED. BY MEANS OF DERIVED EXPRESSIONS, THE CORROSION BEHAVIOR OF THE METAL WITHIN THE CREVICES CAN BE PREDICTED BY KNOWING THE GEOMETRY AND THE ELECTROCHEM. CONSTS. THE DECISIVE FACTOR IN THIS CASE IS THE POTENTIAL OF THE METAL OUTSIDE THE CREVICE. ALLOYING ELEMENTS WHICH REDUCE THE CRITICAL C.D. OF PASSIVATION OR WHICH NARROW DOWN THE RANGE OF POTENTIAL AT WHICH ANODIC DISSOLN. OCCURS CONTRIBUTE TO THE PASSIVATION OF THE METAL WITHIN THE CREVICE.

FACILITY: MOSK. INST. STALI SPLAVOV, MOSCOW, USSR.

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UDC: 572.51.087.1-053.2:681.3

COMPUTER METHOD OF PROCESSING DATA ON PHYSICAL DEVELOPMENT OF CHILDREN AND ADOLESCENTS

[Article by I.I. Sokolova, V.M. Timonin, A.M. Levin, All-Union Scientific Research Institute of Social [redacted] and Public Health Organization imeni N.A. Semashko, Moscow; Moscow, Sovetskoye Zdravookhraneniye, Russian, No 10, 1972, submitted 18 April 1972, pp 27-33]

Physical development has always been one of the important criteria for evaluating the health of the child population. Yet much time has to be spent on gathering the necessary information, developing the main parameters, determining the rate of development, comparing mean values according to criterion t, and making up "standards," which are rating tables of physical development by the method of correlation and regression scales.

One of the present authors (I.I. Sokolova) had the task of investigating the present level of physical development of infants up to 12 months old in Moscow, and the effect of the initial level of term neonates on age-related dynamics of this index, as well as to prepare "standards" for individual evaluation of physical development of infants up to 12 months of age as related to initial level at birth. For this purpose, 1,807 infants born in 1966-1967 were followed up in seven pediatric polyclinics of Moscow (central and suburban) in 1966, 1967, and 1968.

Birth weight was 4,000 grams or more in 616 of these 1,807 infants, it ranged from 3,000 to 4,000 in 634, from 2,500 to 3,000 grams in 577, and 2,500 grams or less for the remaining infants.

All measurements were made by well-trained medical personnel in accordance with the routine standardized method of V.V. Bunak. A total of 41,132 anthropometric measurements were made during preventive checkups on the selected group of infants.

The data gathered were grouped according to sex and age. In each age and sex group were included infants within a range of ±15 days of the mean age. Thus, in each of the four sets studied (birth weight) there were 26 age groups (13 boys and 13 girls, including neonates).

TIMONIN, V.M.

JPRS 57493
13 Nov 72

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TIMONIN, V. P.

JPRS 53137

14 May 1971

ACTINOMETRIC INSTRUMENTS ABOARD SOVIET METEOROLOGICAL SATELLITES

[Article by V. A. Beskin, V. V. Zenkov, D. S. Orman, V. P. Timonin, B. V. Khlopov, V. A. Khrustalev and G. I. Shuster, Moscow, Trudy Tsentral'nov Aerologicheskoy Observatorii, Fizika Svobodnoy Atmosfery, Russian, No 100, 1970, submitted 30 June 1969, pp 125-135]

It is known [1] that the equipment of Soviet meteorological satellites consists of two types of actinometric instruments.

The first type is a narrow-angle scanning instrument (lucimeter), with an instantaneous field of view of 4° x 5° with an operating viewing angle of ±66° from the vertical to the plane perpendicular to the flight trajectory of the satellite.

The second type is a wide-angle instrument (a flux density meter) with a viewing angle of 136-140°.

The instruments are duplicated in order to improve the operating reliability.

The energy brightnesses of the narrow-angle instrument are measured in three spectral ranges (0.3-3, 8-12 and 3-30 microns) over two independent channels; the 8-12 and 3-30 micron ranges are combined in one measuring channel, and they are selected by changing the corresponding optical filters.

In the 0.3-3 micron channel, the instrument operates as a single-beam system, and in the 3-30 and 8-12 micron channel, as a dual-beam system. The Earth-space modulation method is used in the last channel: the measurable radiation is compared with the radiation of outer space.

The density of the radiant flux from the Earth into outer space is measured by the wide-angle nonscanning instrument in two spectral ranges: 0.3-3 and 3-30 microns.

The modulation level for the 3-30 micron channel is determined by the modulator temperature, which in the steady-state mode is approximately equal

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Titanium

USSR

UDC 620.178.1:621.78+9.047

TIMONINA, L. G., GOVOROV, A. A., and SAFROSHENKOV, A. F., Siberian Metallurgical Institute, Chair of the Science of Metals and Hot Working of Metals

"Effect of Diffusion Metallization and Heat Treatment on the Wear Resistance of VT-8 Alloy"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 3, 1973, pp 125-129

Abstract: A study was made of the effect of chemico-thermal treatment on the structure, microhardness, and wear resistance of VT-8 alloy. Specimens of VT-8 alloy were heated in mixes of FeMn (50%), Al_2O_3 (48%), NaF (2%) (Composition 1) and mixes of Cr (25%), Si (25%), Al_2O_3 (48%), NaF (2%) (composition 2) at 900-920° and various soakings with subsequent heat treatment. Diagrams show microhardness dependences layer after hardening and aging VT-8 specimens saturated with ferromanganese, chromium, and silicon at 900° saturation temperature, 930° hardening temperature, and 520° annealing temperature. It was found that the temperature, and 520° annealing temperature. It was found that the wear resistance of titanium alloys can be increased by means of thermodiffusion saturation of compositions 1 and 2 and that subsequent heat treatment

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TIMONINA, L. G., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 3, 1973, pp 125-129

has little effect on the wear resistance. Therefore, for increasing the anti-friction properties of VT-8 alloy only chemico-thermal treatment is recommended. Two figures, four tables, five bibliographic references.

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USSR

UDC 669.131.2-196:620.178.16

SLABODINSKIY, I. N., SOFROSHENKOV, A. F., GOVOROV, A. A., and TIMONINA, L. G.
Siberian Metallurgical Institute

"Investigation of the Hydroabrasive Wear Resistance of Cr-Ni White Cast Irons"

Moscow, Izvestiya Uchebnykh Vysshikh Zavedeniy--Chernaya Metallurgiya, No 6, Jun 73, pp 101-103

Abstract: Alloys containing 17-18% Cr, 2-3.5% C and 2-6% Ni were melted in an acid induction furnace in order to study the hydroabrasive wear resistance of white cast irons in the cast and heat-treated conditions in relation to carbon and nickel content in the alloys. It was shown that increased nickel content has little effect on wear resistance, and heat treatment exerts little effect on cast iron durability. Industrial tests showed that the durability of cast wheels of pumps operating in the water of a hydraulic pit is three times higher than in series pumps. 2 figures, 2 tables, 1 bibliographic reference.

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USSR

SOFROSHENKOV, A. F., and TIMONINA, L. G.

"High-Temperature Nitriding of Aluminized Steel"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 7, 1970, pp 138-140

Abstract: Experimental data are presented on the properties of aluminized layers nitrided at high temperature. In the case of high-temperature nitriding, the duration of the process is reduced. The diffusion layers obtained have hardness and wear resistance as high as those of 38KhMYuA nitrided steel. With an increase in the nitriding temperature, the depth of the diffusion layer is increased, but its hardness and wear resistance decrease. The effect of repeated heating on the structure and properties of the nitrided layers was studied, and the most efficient nitriding conditions were recommended.

Nitriding aluminized layers at $t > 500°C$ permits a reduction in the nitriding time to 1-6 hours when obtaining a layer from 0.1 to 0.45 mm deep with the same properties as in the case of ordinary nitriding. Six hours of holding at 600-700°C is most efficient. Retaining a high surface hardness ($H_\mu \geq 900$) during repeated heating to 900-950°C permits use of these layers for products operating under high temperature conditions. It is pointed out that the high values of hardness with increased nitriding temperature arise from the formation of disperse aluminum

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SOFROSHENKOV, A. F., and TIMONINA, L. G., Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 7, 1970, pp 138-140

nitrides which are stable under these conditions. The decrease in wear resistance with an increase in nitriding temperature is connected with the dissociation of low-stability nitrides and the formation of aluminum nitrides in a less disperse form.

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USSR

KUZNETSOV, V.D., TIMONINA, V.I.

UDC 621.396.673

"Medium-Wave Antenna System With Controlled Directional Diagram"

Elektrovyaz', No 9, Sept 1972, pp 1-9

Abstract: The paper describes the SV [medium-wave] (4 + 4) broad-band cophased antenna system with a controlled directional diagram in the horizontal plane in the sector plus or minus 30°. The SV(4 + 4) consists of eight antenna masts arranged in two rows. Four vertical active vibrators arranged in one row are fed from the transmitter; four others play the role of a passive tuned reflector. The distance between the vibrators in a row equals 110 m which amounts to 0.6 percent of the shortest wave of the operating range (186 m). The distance between the row of active and the row of passive vibrators equals 75 m, a distance which is optimum during use of the antenna in the 186--572 m band. The results of calculations and experimental studies of the antenna parameters are presented along with a series of graphs. 10 fig. 4 ref. Received by editors, 31 Dec 1971.

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USSR

TIMONINA, V. I.

UDC: 621.396.673

"Medium-Wave Directional Antenna System with Controlled Directivity in the Horizontal Plane"

Moscow, Radiotekhnika, Vol 26, No. 1, 1971, pp 17-25

Abstract: The antenna system investigated by the author has an anti-fading directional diagram in the vertical plane and is controlled through 360° in the horizontal plane. In medium wavelengths, its gain factor is 10 and it is capable of high power; in the longer wavelengths of 1000 to 2000 meters, it can be used as a nondirectional antenna. The system consists of four vertical vibrators arranged at the corners of a square, with two of the vibrators fed from the transmitter while the remaining two act as passive reflectors. By switching the feeder cable to the proper two vibrators, the radiation direction can be changed in jumps by 90 or 180 degrees. The optimal distances between vibrators was determined experimentally to be 60, 70, 80, and 90 meters. Directivity factor was computed on the electronic "Ural-3" computer by numerical integration. A curve for the amplification factor of the system as a function of the wavelength as well as directional diagrams for various wavelengths are given.

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USSR

VLASOV, G. K.; MASHKEVICH, V. S.; TIMONINA, Ye. A. (Institute of Physics, Ukrainian Academy of Sciences, Kiev)

"Light Absorption by Free Carriers Caused by Interaction Among Them"

Leningrad, Fizika Tverdogo Tela; November, 1972; pp 3397-3404

ABSTRACT: The intrazonal absorption of light in a semiconductor, in which the scattering is caused by electron-electron or electron-hole interaction, is studied. The absence of light absorption due to the interaction of any number of carriers of one sign in all orders of the theory of perturbation under a parabolic law of dispersion is proved. In the second order of the theory of perturbation expressions are obtained for the absorption coefficient: (1) due to the interaction of carriers of one sign under a nonparabolic law of dispersion; (2) due to electron-hole interaction.

In actual cases the spectral absorption coefficient resulting from the above mechanisms has a value of 2.5 to 3.5.

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USSR

UDC 621.371.332.3:551.463.7:538.3

AFANAS'YEV, K.L., BOL'SHAKOV, E.V., GARNAKER'YAN, A.A., LEPENDIN, L.F., LOBACH, V.T., TIMONOV, V.V., CHEREPANTSEV, S.F.

"To The Problem Of Measuring The Height Of Sea Waves By The Radar Method From Aircraft"

Tr. Taganrog. radiotekhn. in-ta (Works Of The Taganrog Radio Engineering Institute), 1971, No 22, pp 148-158 (from RZh: Radiotekhnika, No 2, Feb 72, Abstract No 2G15)

Translation: The theoretical bases are stated of the radar method of measuring the height of waves. It is shown that in order to increase the precision of measurement it is necessary to have a tunable transmitter or some fixed radiation frequencies (3 are sufficient). A measuring unit is described, constructed on the basis of a pulse radar station of the meter range; technical data are presented. An analysis of the results obtained during flight tests shows that the discrepancy between these results and the data obtained with the aid of a wave graph does not exceed 10--12 percent. The defect of the method is the impossibility of determining the character of the waves and the length of a wave. 1 ill. 2 tab. 4 ref. N.S.

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TIMONOVA, M. A., AL'TMAN, M. B., TIKHONOVA, V. V., GERASIMOVA, M. N., TOKMAKOVA, G. S., LASHKO, N. F., MOROZOVA G. I.

UDC 669.721.5'5'296:620.193.4

"Effect of the Composition and Structure of Alloys of the Mg-Zn-Zr System on their Corrosion and Electrochemical Behavior"

V sb Struktura i svoystva legk. splavov (Structure and Properties of Light Alloys — collection of works), Moscow, Nauka Press, 1971, pp 136-140 (from Rzh-Metallurgiya, No 4, Apr 72, Abstract 4I700)

Translation: A study was made of the effect of Zn on the structure and corrosion behavior of alloys of the Mg-Zn system and the Mg-Zn-Zr system with a Zn content of up to 20%; the effect of heat treatment leading to a change in the phase composition and in the quantity and shape of the segregations of intermetallide compounds on the corrosion strength of the alloys of the Mg-Zn-Zr system was also studied. The variation of corrosion resistance of the alloys is explained by the formation of cathode phases with different electrochemical properties and variation of their number and form of segregation. The increase in corrosion resistance with the introduction of Zr into the alloys of the Mg-Zn system is primarily connected with a decrease in the Fe admixture in the alloys. Six illustrations, one table, and a 6-entry bibliography.

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USSR

UDC:620.193.01

TIMONOVA, M. A., KUTAYTSEVA, A. I., ORZHEKHOVSKAYA, L. B. and KABANOVA, T. S.

"The Problem of the Contact Corrosion of Magnesium Alloys"

Moscow, Zashchita Metallov, Vol 10, No 1, Jan-Feb 74, pp 53-57

Abstract: Magnesium alloy specimens consisting of discs 70 mm in diameter with a central aperture were tested by full immersion in a 3% solution of sodium chloride and in a tropical climate chamber. The specimens were tested in contact with several types of steel, aluminum and copper alloys. The strongest contact corrosion was observed with steel. The chemical composition of the steels tested had practically no influence on the depth and radius of corrosion. Bronze causes stronger corrosion than brass. Contact corrosion depends on the chemical composition of the magnesium alloys, which can be explained by the different degree of difference effect. The use of stannate, zinc, cadmium and chrome coatings helped to reduce corrosion for type-20 steel, while anodizing in chromic acid was most effective for D16 alloy. Under the tropical climate conditions, the contact corrosion caused by type-20 steel is significantly reduced by cadmium and zinc coatings, while that caused by D16 alloy is reduced by an anodic oxide coating.

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USSR

Magnesium

UDC: 669.721.5:620.193

MUKHINA, I. Yu., TIMONOVA, M. A., SPIRYAKINA, G. N., Moscow

"Influence of Phase Composition on Corrosion Behavior of Magnesium Alloys"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 6, 1973, pp 208-212.

Abstract: The influence of aluminum and manganese on the corrosion behavior of magnesium has been studied extensively. The positive influence of the addition of manganese results from an increase in the hydrogen overvoltage on the alloy and the formation of a protective film. It is assumed that the phase $Mg_{17}Al_{12}$ is an ineffective cathode. The role of other phase components when aluminum, manganese and iron are present in alloys remains unclear. This work was intended to study the influence of phases formed in the systems Mg-Al, Mg-Mn, Mg-Al-Mn containing iron as an impurity on the corrosion and electrochemical behavior of the alloys (containing from 0.42 to 9.3% Al, from 0 to 1.32% Mn and from 0.001 to 0.03% Fe) in a 3% solution of sodium chloride and in moist air. The phases fall in the following order as to stable potential: $Mn_{17}Al_2 < \beta_{Mn} < Mn_5Al_8 < Fe_2Al_5$. The cathode effectiveness consequently

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USSR

Mukhina, I. Yu., Timonova, M. A., Spiryakina, G. N., Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 6, 1973, pp 208-212.

increases in the same order. The sharp reduction in corrosion resistance of Mg-Al alloys containing hundredths of one percent of iron results from the formation of phases in the system Fe-Al (FeAl + Fe_2Al_5), which are effective cathodes. The increase in the corrosion resistance of technical magnesium as manganese is introduced results from the inhibition of the cathode process upon formation of Fe-Mn solid solutions and the phase $\beta_{Mn(Fe)}$. The increase in the corrosion resistance of Mg-Al-Mn alloys containing hundredths of one percent of iron when up to one percent Mn is added results from the supression of the formation of phases of aluminum with iron and the formation of a new phase -- β_{Mn}, which has a negative potential and high hydrogen overvoltage.

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USSR

UDC 620.197.6

TIMONOVA, M. A., STOLYAROVA, L. N., and SPIRYANINA, G. I.,

"Stannating of Magnesium Alloys"

Moscow, Zashchita Metallov, Vol 7, No 5, 1971, pp 621-623

Abstract: Coatings used to prevent contact corrosion of magnesium can be deposited in a stannate electrolyte. The starting material was a solution containing the stannate of an alkali metal. Additives used in galvanic tin plating were tested. Ground specimens made of ML5 magnesium alloy were used. Stannating was carried out an elevated temperature (80-90°). At room temperature no coatings are formed on magnesium and steel, and at 60-70° the adhesion to magnesium was low. In openings made in the center of the magnesium alloy strips, steel cylinders were placed. In the range of concentrations tested (K_2SnO_3 and $Na_4P_2O_7$ up to 100 g/liter, NaOH up to 25 g/liter, and $NaC_2H_3O_2$ up to 20 g/liter), the greatest effect on coating thickness was shown by the K_2SnO_3 and NaOH concentrations. The tests led to the following recommendation for the solution to be used in stannating magnesium alloys (ML5, ML10, ML12, and so on) (g/liter): K_2SnO_3 80-90; NaOH 7.5-10, $NaC_2H_3O_2$ 8-12; and $Na_4P_2O_7$ 45-50. The stannating conditions are as follows: temperu-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

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TIMONOVA, M. A., et al., Zashchita Metallov, Vol 7, No 5, 1971, pp 621-623

ture 80-90° and duration 20-25 minutes. On the magnesium alloy the coating consisted of magnesium stannate and magnesium bydroxide (26.7% Mg and 59.6% Sn) but pure tin was deposited on steel. The coating thickness on the magnesium alloy was 3-5, and on the steels -- 5 microns. The growth in thickness of the coating slows down with time and practically ceases after 10 minutes. The adhesion of paint and lacquer cotaings to the stannate coating was tested for different drying conditions. It was found that the initial adhesion of paint or lacquer coatings -- both for hot and cold drying conditions -- to stannated magnesium alloy is good. When moisture is introduced into the environment, the adhesion of the paint or varnish coating in the case of hot drying is reduced much less than for cold drying.

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USSR

UDC 621.372.57

TIMONTEYEV, V. N.

"Matrix-Topological Method of Realizing Electronic Circuits"

Avtomatiz. proyektir. v elektron. Resp. mezhved. nauch.-tekhn. sb. (Design Automation in Electronics. Republic Interdepartmental Scientific and Technical Collection), vyp. 2, Kiev, "Tekhnika", 1970, pp 115-124

Abstract: Matrix-topological analysis of the functional properties of electronic circuits is taken as a basis for constructing a method of realizing an electronic circuit according to a predetermined transfer function. The proposed method might be effectively used in computer design of linear integrated circuits in microelectronics. One table, two illustrations, bibliography of eleven titles.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203310015-4

Circuit Theory

USSR

UDC 621.372.061

TIMONTEYEV, V. N., KALNIBOLOTSKIY, YU. M.

"Synthesis of Electronic Circuits Using the Matrix-Topological Method"

Vestn. Kiyevsk. politekhn. in-ta. Ser. radioelektron. (Bulletin of the Kiev Polytechnic Institute, Radioelectronics Series), 1969, No 6, pp 37-42 (English resume) (from RZh-Radiotekhnika, No 4, 1970, Abstract No 4A142)

Translation: A proof is proposed for the Fialkov-Gerst theorem in generalized form. Several block diagrams are given of direct method algorithms for the synthesis of electronic circuits to be realized on computers. The basis for this is the utilization of the advantages of the matrix-topological method of analysis. Original article: 2 illustrations and 3 bibliographic entries. Resume

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Metrology, Surveying, Graphics

USSR

531.781.2.084.2:621.317.333

TIMOSAGNKO, N. M.

"Some Notes on the Resistance of the Insulation of Cemented Tensometer Transducers"

Kontrol'no-Izmerit. Tekhnika. Mezhved. Resp. Nauchno-Tekhn. Sb. [Testing and Measuring Equipment. Interdepartmental Republic Scientific-Technical Collection], No. 8, 1969, pp 97-102 (translated from Referativnyy Zhurnal Metrologiya I Izmeritel'naya Tekhnika, No. 4, 1970, Abstract No. 4.32.415, unsigned)

Translation: A differential method is suggested for determining the parameter "resistance of transducer insulation": after the adhesive has dried, after moisture insulation and after connecting the transducer into the measuring circuit. Examples are presented of values of insulation resistance corresponding to various stages of preparation of transducers for operation. Three illustrations, five biblio. refs.

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USSR

TIMOSHCHUK, N. S.

"Losses of Preliminary Stress in Reinforced Concrete Girders During Heat Treatment on Short Stands"

Metody Ispytaniy Konstruktsiy v Tekhnol. Protsesse Izgotovleniya [Methods of Testing of Structures During the Technological Process of Manufacture -- Collection of Works], L'vov, 1971, pp 41-43 by V. L. Gil'gur).

Translation: Results are presented from an experimental study of the losses of preliminary stress in the reinforcement of reinforced concrete girders during heat treatment on short stands. 18 m segmented girders in the PK-01-129 series were tested. The girders were reinforced with type AIIIv reinforcement. The rods were stressed by the group method using hydraulic jacks. The test stand was additionally equipped with 2 hydraulic compression jacks, installed between the outside of the nonmoving support of the stand and a traverse which accepted the forces of the stressed rods of the girders. The indications of the dynomometers were continually recorded on a stip chart using an automatic strip chart recorder. At the same time, the temperature of the heat and moisture treatment was continually recorded on the chart, as well as the cooling mode of the finished forms on the stand.

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UNCLASSIFIED

EFFECT OF A STONG, PULSED MAGNETIC FIELD ON MAGNETIC TRANSFORMATIONS IN MN SUB3 B SUB4 -U- PROCESSING DATE--18SEP70

AUTHOR-(02)-FAKIDOV, I.G., TIMOSHCHUK, V.I.

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM MEASUREMENTS OF MAGNETIC SUSCEPTIBILITY AND MAGNETIZATION USING A PULSED MAGNETIC BALANCE, THE DEPENDENCE WAS DETD. OF THE TEMPS. OF MAGNETIC TRANSFORMATIONS OF THE ANTIFERROMAGNETIC COMPD. MN SUB3 B SUB4 ON THE EXTERNAL MAGNETIC FIELD. FROM THE EXPT. RESULTS A MAGNETIC PHASE DIAGRAM WAS CONSTRUCTED.

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USSR

KOSTENKO, L. I., TIMOSHENKO, A. G., TRAYNIN, E. Z.

"Electronic Modeling of Problems of Operations Research"

Elektronnoye Modelirovaniye Zadach Issledovaniya Operatsiy [English Version Above], Kiev, 1973, 163 pages (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V477K).

Translation: Chapter 1. General Problems of Linear Programming. Chapter 2. Problems of Extreme Paths on a Graph. Chapter 3. Problems of Network Planning and Control. Chapter 4. Problems of Extreme Flows. Chapter 5. Combinatorial Problems. Chapter 6. The Traveling Salesman Problem. Chapter 7. Games Theory Problems.

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ELECTRONICS

USSR

Amplifiers

UDC 621.375.2.029.63

LEONT'YEV, N. I., TIMOSHENKO, A. P., UDOVICHENKO, Yu. K.

"On the Problem of Developing a Power Amplifier Based on Plasma-Beam System"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 7, Jul 71, pp 1298-1299

Abstract: A system based on interaction between a plasma and an electron beam is considered. It is shown that such a system can be used as the basis for a power amplifier on frequencies of 1150-1550 MHz. In order to increase the frequency range of an amplifier based on interaction between a modulated electron beam and a plasma, the plasma parameters must be changed in such a way that the system with unmodulated beam has a wide natural emission band. This can be achieved by changing the diameter of the electron beam, the geometry of the system and the parameters of the plasma. The authors thank V. G. Moshichenko and N. V. Aleksandrov for making the modulator attachment.

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