

272 022

UNCLASSIFIED

PROCESSING DATE--02JCT70

CIRC ACCESSION NO--AP0112501

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

ABSTRACT. TECH. ALUMINA WAS USED AS THE BASIS FOR 2 HIGH ALUMINA CERAMICS: 22KHS (95PERCENT AL SUB2 3 SUB3, BALANCE MN, CR, AND SI OXIDES) AND A995 (99PERCENT AL SUB2 3 SUB3, BALANCE MOO); AFTER THE FINAL FIRING, 22KHS CONTAINED 10PERCENT OF A VITREOUS PHASE WHILE A995 CONTAINED NO VITREOUS PHASE. BOTH CERAMICS HAD A HIGH MECH. STRENGTH (E.G. THE BENDING STRENGTH REACHED 4500 KG-CM PRIME2), HIGH HARDNESS (9.5 MOHS SCALE) RELATIVELY HIGH THERMAL COND. (30 TIMES 10 PRIME NEGATIVE3 AND 45 TIMES 10 PRIME NEGATIVE3 CAL-(CM. DEGREE SEC) FOR 22KHS AND A995 RESP.), COMPRESSIVE STRENGTHS LARGER THAN 20,000 KG-CM PRIME2, LOW WATER ABSORPTION (SMALLER THAN OR EQUAL TO 0.02PERCENT), AND HIGH RESISTANCE TO THERMAL CYCLING (I.E., HEATING TO 350DEGREES FOLLOWED BY COOLING IN RUNNING WATER). THE SAMPLES WERE BOILED FOR 3 HR IN 10PERCENT HCL, 10PERCENT H SUB2 SO SUB4, AND 10PERCENT HA SUB2 CO SUB3 SOLYS.; THE WT. LOSSES WERE: FOR 22KHS 118, 74 AND 21 MG-DM PRIME2 FOR A995 0.7, 5.1 AND 2.7 MG.-DM PRIME2, RESP.

UNCLASSIFIED

USSR

UDC 669.295:620.192.46

PARSHIN, A. M., USHKOV, S. S., and YARKOLOVICH, I. I.

"Titanium Alloy Cracking During Aging"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 4, Apr 73,
pp 43-46

Abstract: In a study of titanium alloy of the VT-22 type with varying alloying: 6% Al and 6.5% beta-stabilizing element (3.0% Mo, 2.5% Fe, 0.5% Cr, and 0.5% Mn) it was observed that extrusions, 120 mm in diameter and 10-12 mm thick, quenched in water after one hour at 870°C, cracked during subsequent aging. The most intensive cracking during aging after quenching from 870°C occurs at 400°C, where cracks are noted after 5-10 hours at the aging temperature. Above 500°C and below 200°C the formation of cracks was not detected, even after 2500 hours. Studies showed that the cracking during aging was caused by the nucleation and development of cracks as a result of structural stresses building up from the precipitation of both the alpha- and beta-phases. To avoid crack development in VT-22 titanium alloys it is recommended that rapid heating rates between 250 and 500 C be used and that the aging process be performed above 500°C. Five figures, one table, nine bibliographic references.

1/1

YARMOLOVICH, M.V.

ECON

CATEGORIES OF PLANT WORKING CAPITAL VIEWED

[Article, M. V. Yarmolovich; "The Capital Structure and Production Rate of Heavy Industry Enterprises," Izvestiya Akademiya Nauk SSSR, Seriya Ekonomicheskaya, Moscow, No. 1, 1972, pp. 92-110]

The article examines the economic content of the physical and monetary capital of enterprises. Its component parts and functions in the production process. The task is posed of working out an optimum ratio for the component parts of productive capital under the conditions of the economic reform.

The strengthening of economic management methods and the rise in the operational independence of enterprises have required a profound theoretical elaboration of the economic content of the physical and monetary capital which the individual enterprises have at their disposal.

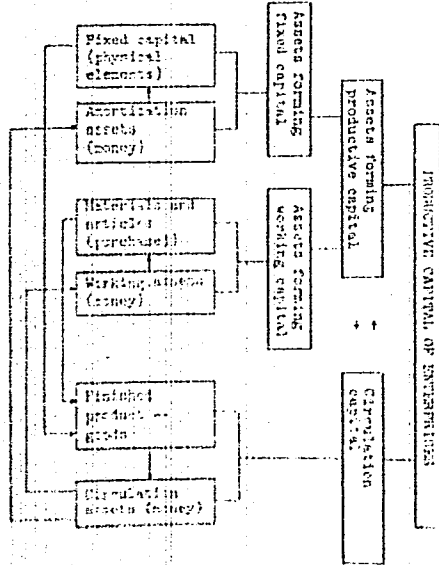
Without a correct understanding of the economic nature of each of the component parts of this capital, it is difficult to achieve a rational structure of the capital, and this, to a significant degree, determines the effective functioning of enterprise assets in the production stage. At the same time, in textbooks and individual research on economics, the concept of certain elements of enterprise capital is frequently given in isolation from its circulation, and in the process of this circulation, the composition and replacement of its component parts occur.

The physical and monetary assets which the enterprises have at their disposal consist of productive capital, which a certain type of production product is created in the process of the circulation of this capital, and the nonproductive capital which does not participate directly in creating the production process. Particular attention should be paid to the portion of productive capital grouped under the concept of "working assets" (operational and productive), the economic content of which has caused numerous interjections among our economists. This shows the debated character of the given position.

In a number of works, the concept of "working assets" is formulated as the aggregate of working capital (operating funds) and circulation

PPS 55337 1/19/72 Yarmolovich
from USSR Economic Affairs, No. 574

Diagram of the Capital of Socialist Production (Stage Reproduction)



In this report we should point out that the structure of production additional monetary assets to the construction contracting organizations (in building customer activities, and in changing over to payment of completed projects) and which has been explained as the assets of working assets to them, in actuality forms the circulation assets of the contracting organizations. This is respectively reflected on the balance sheet of these organizations as an increase in the circulation assets. For this reason, in following the existing accounting system, the designated monetary assets are called the separating of circulation assets.

In formulating what has been stated above, let us recommend that the capital structure of socialist enterprises in the form of a graph for the sake of clarity.

In this diagram, the structure and process of converting the various parts of enterprise capital are represented in a simplified form, in describing the labor force and the intermediate class which is involved in production. Here, attention has been focused exclusively on the initial material and monetary prerequisites and the end results of the reproduction process itself.

At the same time, the continuity and planned nature of production fixed capital in the system of the entire national economy require that a significant portion of the accumulation fund be concentrated at the enterprise level which provides direct management of the enterprise (the firms, enterprise associations, and main administrative). Potentially this superior level would invest the combined funds of several enterprises for replacing the fixed capital of one of them.

NOTES

1. See I. Uvarov, Ekonomicheskoye Otsenivaniye Proizvoditelstva i Potrebnykh Resursov (Planning Beyond Limits of an Industrial Enterprise), Moscow, State Financial Publishing House, 1961, p. 4. Also Sovetskaya Ekonomika (Journal of Communist Economics), edited by V. Ye. Shtet, Moscow, Ekonomicheskoye Izdatel'stvo, 1957, p. 225.
2. See for example, Yu. K. Petrov, Kontrolyrskaya i Finansovaya Otsenka (Control and Accounting) (Moscow: Finansovaya Otsenka i Kontrol', 1961, p. 10). Also Ekonomicheskoye Otsenivaniye Proizvoditelstva i Potrebnykh Resursov (Moscow: Finansovaya Otsenka i Kontrol', 1961, p. 10). Also Ekonomicheskoye Otsenivaniye Proizvoditelstva i Potrebnykh Resursov (Moscow: Finansovaya Otsenka i Kontrol', 1961, p. 10).
3. P. M. Pavlov, Osobyye Otsenivaniya (The Formover of Enterprises), Moscow, Finansovaya Otsenka i Kontrol', 1967, pp. 52-63.
4. V. G. Dyukov, Otsenivaniye Ekonomicheskoy Aktivnosti Proizvoditelstva (Working Assets of Socialist Enterprises), Moscow, Ekonomicheskoye Izdatel'stvo, 1960, p. 21.
5. K. Marx and F. Engels, Soch. (Works), Vol. 24, p. 184.
6. Ibid., Vol. 24, p. 220.
7. Ibid., Vol. 25, part 1, p. 234.
8. Lokshin, Ekonomika (Economics), State Political Publishing House, 1967, p. 201. Also Ekonomicheskoye Otsenivaniye Proizvoditelstva i Potrebnykh Resursov (Moscow: Finansovaya Otsenka i Kontrol', 1961, p. 10).
9. S. B. Bartkol'tsa, Otsenivaniye Ekonomicheskoy Aktivnosti Proizvoditelstva (The Working Assets of Soviet Industry), Moscow, Finansovaya Otsenka i Kontrol', 1965, pp. 26 and 36.

- 10. V. A. Zhuravlev, Statistika Promyshlennogo Proizvodstva (Industrial Production and Analysis of Their Use in Industry), Moscow, Statistika Publishing House, 1964, p. 6.
- 11. Yu. G. Lyubovitch, Statistika Promyshlennogo Proizvodstva (Industrial Production and Analysis of Their Use in Soviet Industry), Moscow, Statistika Publishing House, 1964, pp. 30 and 31.
- 12. K. Mark and P. Srolovitz, Secur, Vol. 3, p. 320.
- 13. Calculated from Statistika Narodivogo SSSR v 1967 G. (The Soviet National Economy in 1967), Moscow, Statistika Publishing House, 1967, pp. 602, 606.
- 14. See for example, E. B. Baranovskii, Statistika Promyshlennogo Proizvodstva (Industrial Production and Analysis of Their Use in Soviet Industry), Moscow, Statistika Publishing House, 1964, p. 31.
- 15. Statistika Promyshlennogo Proizvodstva (Industrial Production and Analysis of Their Use in Soviet Industry), Moscow, Statistika Publishing House, 1967, No. 12, p. 4.

10,272
CSCS 1920-5

USSR

UDC 621.438-22.536.21.001.24

YARMOLYUK, V.K., and KRAVCHENKO, V. F.

"On a Method of Calculating Thermal Fields for Bodies of Complex Form"

Energ. Mashinostroyeniye. Resp. Meshved, Temat. Nauch.-Tekhn. Sb. Power
Machinebuilding. Republic Interdepartmental Thematic Scientific-Technical
Collection, 1972, Vol 14, pp 10-17 (from Referativnyy Zhurnal, No 9, Sep 72,
49. Turbostroyeniye. Abstract No 9.49.22)

Translation: A method is discussed of an approximate solution of a certain class of stationary heat conductivity problems for bodies of complex form. The method is based on the use of R-functions in combination with variational principles. The problem of determination of the stationary condition of body parts of a gas turbine is analyzed as a concrete example. In the limiting case, the obtained approximate solution is compared with the known exact solution for the field of simple form. Three illustr., seven biblio. refs.

1/1

- 96 -

1/2 028 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--CRYSTAL STRUCTURE OF THE X PHASE OF A MANGANESE COBALT SILICON
SYSTEM -U-
AUTHOR--(03)-YARMOLYUK, YA.P., KRIPYAKEVICH, P.I., GLADYSHEVSKIY, YE.I.
COUNTRY OF INFO--USSR
SOURCE--KRISTALLOGRAFIYA 1970, 15(2), 268-74
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--MANGANESE ALLOY, COBALT ALLOY, SILICON ALLOY, CRYSTAL
STRUCTURE, ZINC ALLOY, ALUMINUM ALLOY, ZIRCONIUM ALLOY, INTERMETALLIC
COMPOUND, METAL SINGLE CRYSTAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/0910 STEP NO--UR/0070/70/015/002/0268/0274
CIRC ACCESSION NO--AP0116420
UNCLASSIFIED

2/2 028

CIRC ACCESSION NO--AP0116420

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE WAS DETD. FOR A SINGLE CRYSTAL OF THE X PHASE OBTAINED FROM AN ALLOY WITH MN 42.8 AND SI 14.3 AT. PERCENT OBTAINED IN AN ARC FURNACE AND TEMPERED AT 800DEGREES FOR 480 HR. THE CRYSTAL HAS THE FOLLOWING PARAMETERS: A 12.47, B 15.50, AND C 4.76 ANGSTROM; Z EQUALS 74, AND THE SPACE GROUP IS PNNM. THE AT. PARAMETERS WERE REFINED BY 2 DIMENSIONAL FOURIER SYNTHESIS; R EQUALS 15.5 PERCENT FOR 135 OBSD. HKO REFLECTIONS. THE COMPN. IS GIVEN BY R SUB14 X SUB23 IN WHICH R ARE ATOMS WITH COORDINATION NOS. OF 16, 15, AND 14 (MN) AND X ARE ATOMS WITH A COORDINATION NO. OF 12 (MAINLY CO AND SI). THE STRUCTURE CONSISTS OF FRAGMENTS OF STRUCTURES OF THE ZR SUB4 AL SUB3 AND MGZN SUB2 TYPE AND IT IS A MEMBER OF THE HOMOLOGOUS SERIES ZR SUB4 AL SUB3-MGZN SUB2. FACILITY: L'VOV. GOS. UNIV., L'VOV, USSR.

UNCLASSIFIED

USSR

UDC 577.391

YARMONENKO, S. P., Institute of Experimental and Clinical Oncology, Academy of Medical Sciences USSR, Moscow

"The Problem of Increasing the Biological Action of Ionizing Radiation"

Moscow, Radiobiologiya, Vol 11, No 4, Jul/Aug 71, pp 537-539

Abstract: Increasing the biological effect of radiation is of particular importance in connection with the therapy of tumors. At the Laboratory of Radiation Biology of the Institute of Experimental and Clinical Oncology, Academy of Medical Sciences USSR, methods of increasing the action of radiation on tumors have been studied which involve stimulation of cell metabolism to impair the mechanism of cell autoregulation or worsen the conditions under which the tumor develops, specifically by reducing the blood supply to it. From the standpoint of development of methods for differential irradiation producing a stronger effect on tumors than normal tissue, relations obtained in the study of the action of radiation on normal tissue of especially sensitive organs such as bone marrow and intestine are of no value. Differences between the cycles of normal and tumor cells must be considered; use made of surface, antigenic, and biochemical characteristics of tumor cells; methods found of exerting an action that affects

1/2

USSR

YARMONENKO, S. P., Radiobiologiya, Vol 11, No 4, Jul/Aug 71, pp 537-539

predominantly anoxic cells; differences in the rates of regeneration of tumor and normal cells utilized; and the proliferation pull of tumors increased artificially by stimulating the exit of tumor cells from the stage G_0 . The nonspecific resistance of the organism and its antitumor immunity must be activated. In connection with the application of large-field irradiation, critical radiation-sensitive organs such as bone marrow and intestine must be protected. In work conducted at the Laboratory of Radiation Biology along these lines, principal attention is being paid to the selective action of agents which modify the effects of radiation.

2/2

- 22 -

1/2 033

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--QUANTITATIVE CHARACTERISTICS OF THE RADIOPROTECTIVE EFFECT OF
MEXAMINE -U-
AUTHOR--(05)-YARHONENKO, S.P., SUVDROV, N.N., KAROCHKIN, B.B., AIRAPETYAN,
G.M., QVAKIMOV, V.G.
COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA 1970, 10(2), 78-82

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIRADIATION DRUG, AMINE DERIVATIVE, X RAY IRRADIATION, GAMMA
RADIATION, CESIUM ISOTOPE, RADIATION DOSAGE, BONE MARROW

CONTROL MARKING--NO RESTRICTIONS,

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0460

STEP NO--UR/0205/70/010/001/0078/0082

CIRC ACCESSION NO--AP0121134

UNCLASSIFIED

2/2 033

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121134

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

ABSTRACT. THE RADIOPROTECTIVE EFFECT OF HEXAMINE (I) WAS EVALUATED QUANT. ON THE BASIS OF NOS. OF SURVIVING MICE AND RATS. THE ANIMALS WERE IRRADIATED WITH 700, 800, 900, OR 1000 R 180 KEV X RAYS, AND 950 R OF 190 KEV R RAYS, OR 1100 R PRIME137 CS GAMMA RAYS. I WAS APPLIED IN DOSES OF 1, 2.5, 5, 7.5, 15, 30 OR 75 MG-KG BODY WT. AND 2.5, 5, 10, 20, OR 40 MIN PRIOR TO THE IRRADN. IN BOTH MICE AND RATS, A SLIGHT PROTECTIVE EFFECT OF I WAS OBSERVED AT ALL DOSES FOLLOWING I.P. APPLICATION. INCREASING DOSES OF I RESULT IN INCREASES IN THE MAGNITUDE AND DURATION OF THE PROTECTIVE EFFECT. THE PROTECTIVE ACTION APPLIES NOT ONLY TO THE BONE MARROW, BUT ALSO TO THE GASTRO INTESTINAL SYNDROME. HOWEVER, THE DURATION OF THE PROTECTIVE ACTION IS SHORT. WITH DIFFERENT I DOSES THE PERCENTAGE OF SURVIVING MICE INCREASED FROM 0 TO 12-85PERCENT.

FACILITY: INST. GIG. TRUDA

PROFAZABOL., MOSCOW, USSR.

UNCLASSIFIED

1/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--CHEMICAL PREVENTION OF THE IMMEDIATE AND DELAYED EFFECTS OF IRRADIATION BY HIGH ENERGY PROTONS IN A WIDE DOSE RANGE -U-

AUTHOR--(03)-YARMONENKO, S.P., SUSLIKOV, V.I., MAKARENKO, I.G.

COUNTRY OF INFO--USSR

SOURCE--RADIUBIOLOGIYA 1970, 10(1), 83-8

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIRADIATION DRUG, AMINE DERIVATIVE, PROTON RADIATION BIOLOGIC EFFECT, RADIATION DOSAGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1998/0459

STEP NO--UR/0205/70/010/001/0083/0088

CIRC ACCESSION NO--AP0121133

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121133

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROTECTIVE EFFECT OF HEXAMINE (I) WAS STUDIED ON IMMEDIATE AND DELAYED CONSEQUENCES OF IRRADN. WITH HIGH ENERGY PROTONS. MICE (23-26 G) RECEIVED (I.P.) 1.5 MG I PER ANIMAL 3-5 MIN PRIOR TO THE IRRADN. THE PROTON ENERGY WAS 600 MEV, WITH DOSES OF 600-1300 RADS. THE COEFF. OF PROTECTION AFTER 30 DAYS RANGED BETWEEN 0.6 AND 1.0 OVER THE DOSE INTERVAL OF 1300 TO 700 RAD. MODERATION OF THE DELAYED CONSEQUENCES OF THE IRRADN. WAS MANIFESTED TO A LESSER EXTENT. FOR 600-900 R THE COEFF. OF PROTECTION WAS 0.79 AND 0 WHEN MEASURED AFTER 30 AND 490 DAYS, RESP. FACILITY: INST. EKSP. KLIN. ONKOL., MOSCOW, USSR.

UNCLASSIFIED

1/2 026
UNCLASSIFIED
TITLE—DIFFERENTIATED ANTIRADIATION PROTECTION OF THE ORGANISM OF PATIENTS WITH TUMORS -U-
AUTHOR—YARMONENKO, S.P.
COUNTRY OF INFO—USSR
SOURCE—MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 4, PP 16-22
DATE PUBLISHED—70
SUBJECT AREAS—BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS—TUMOR, RADIUM, RADIOTHERAPY, NEOPLASM, HYPOTHERMIA, RADIATION PROTECTION, RADIOPROTECTIVE AGENT, ANOXIA
CONTROL MARKING—NO RESTRICTIONS
DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAME—1990/0940
STEP NO—UR/0241/70/015/004/0016/0022
CIRC ACCESSION NO—AP0109097
UNCLASSIFIED

2/2 026

CIRC ACCESSION NO--AP0109097

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER DEALS WITH THE CURRENT STATE, DIFFICULTIES AND PROSPECTS OF PREVALENT WEAKENING OF RADIATION AFFECTION OF CRITICAL ORGANS AND THE WHOLE ORGANISM IN THE PROCESS OF RADIUM THERAPY OF MALIGNANT NEOPLASMS. THE WAYS OF EXPERIMENTAL ELABORATION OF THE PROBLEM WITH THE AID OF PHYSICAL FACTORS (LOCAL HYPOTHERMIA AND ANOXIA) AND CHEMICAL AGENTS RADIOPROTECTORS ARE OUTLINED. THE AUTHOR ANALYZES THE PRACTICAL ASPECTS OF INCREASING THE RADIOSENSITIVITY OF THE ORGANISM IN A RADIOLOGICAL CLINIC. IN PARTICULAR, SUBJECT TO DISCUSSION ARE CLINICAL SITUATIONS DURING WHICH IT IS DESIRABLE TO EMPLOY CERTAIN METHODS OF LOCAL OR WHOLE BODY ANTIRADIATION PROTECTION ON ONCOLOGICAL PATIENTS.

UNCLASSIFIED

USSR

UDC 617-001.28-07:616-008.932.691-074

PETROSYAN, E. P., KORINTELI, V. I., and YARMONENKO, S. P., Institute of Experimental and Clinical Oncology, Academy of Medical Sciences USSR

"Kinetics of Changes in Endogenous SH-Groups in Primary Processes of Radiation Damage"

Moscow, Meditsinskaya Radiologiya, Vol 17, No 7, Jul 72, pp 29-32

Abstract : By using a specially designed semi-automatic set-up, changes in the content of endogenous SH-groups in a rat spleen homogenate were determined directly during irradiation of the latter with gamma-rays. The homogenate was prepared in an Ar atmosphere. The concentration of SH-groups was determined by automatic titration. Irradiation was accompanied by a decrease in the level of SH-groups, which reached its lowest point (corresponding to a decrease by 20%) upon absorption of a dose of approximately 500 rad. Further increases in the absorbed dose up to 2500 rad did not produce any significant additional changes in the SH-group level. No more than 20% of the SH-groups were converted, because simultaneous reduction of the disulfide groups that formed took place. After irradiation had been stopped, intensive regeneration of the SH-groups occurred, with the initial level being restored in 20 min. The phenomena in question, although observed in experiments with a homogenate consisting of destroyed cells, probably did not differ from those taking place during irradiation in vivo in view of the fact that most

1/2

USSR

PETROSYAN, E. P., et al., Meditsinskaya Radiologiya, Vol 17, No 7, Jul 72,
pp 29-32

enzymes are extremely resistant to the effects of radiation.

2/2

-- 97 --

YAR-MUKHAMEDOV, G. K.

HYDROMETEOROLOGICAL SERVICE OF KIRGIZIA

UDC 551.5:947.084 (375.2) (447)

Article by head of the Central office of the Hydrometeorological Service of Kirgizia G. K. YAR-MUKHAMEDOV, Moscow, Meteorologiya i Gidrometeorologiya, No. 12, 1972, a bulletin for August 1972, pp. 121-131

The specific nature of the hydrometeorological service of the national economy in Kirgizia is demonstrated.

The true history of the lowering of the economy, culture and science in Kirgizia began after the Great October Socialist Revolution. The meteorological service in Kirgizia begins to develop at that time although initially, the meteorological affairs have found on Kirgizia soil since before the war were organized by G. A. Zverev in 1936. In 1941, three meteorological stations were opened up almost simultaneously: in... (one meteorological station school A. V. Mehenkov in Karabul (now Przhnevsk), by Ya. I. Kozlov, and in Gul'cha (the military fort) by Mal'kov.

In subsequent years, nature lovers opened several more stations, in particular, at Maryn (1943), Tol'kank (1953), Pshach'ky (1959), Kizil'skaya (1959) and in other places. The meteorological stations were opened by enthusiasts at their own expense. They worked without any wages for their labor. However, they are considered to have worked very accurately to meet the observations to the State Observatory in Bishkek.

Thus was the general picture of the pre-revolutionary state of the meteorological network in the territory of Kirgizia. During the years of the civil war, this entire network ceased to exist.

The young Soviet State was faced with the most difficult problem — creation of the State hydrometeorological service on a scientific basis which could actively the requirements of a rapidly developing socialist economy.

Before 1926, a gradual study and generalization of the materials in the area of the natural resources of the Turkestan Republic took place. In August 1927, the meteorological office was created under the Peoples' Commissariat of Agriculture of the Kirgiz Autonomous Republic. On 7 August 1929, by resolution

JRS 58133
2-22-73

USSR

UDC 616.993.162-084.47-035.2

YARMUKHAMEDOV, M. A.

"Broadening of Contraindications to Vaccinations Against Cutaneous Leishmaniasis"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 5, 1971, pp 549-552

Abstract: Of 254 persons vaccinated against cutaneous leishmaniasis, 64 developed a variety of skin disorders around the ulcers. The following are therefore regarded as absolute contraindications to vaccination in order to prevent eczematization of allergids and possible exacerbation of existing diseases: eczema, psoriasis in the progressive stage, dermatomycoses in the stage of exacerbation or accompanied by secondary rashes, complicated scabies, extensive or chronic forms of pyodermas. Relative contraindications include pruritic dermatoses (urticaria, neurodermatitis, etc.), dermatitides and toxicodermatitides, limited forms of mycoses, uncomplicated scabies, limited forms of pyodermas before healing, and acute stage of widespread acne vulgaris.

1/1

USSR

UDC 616.993.162-022.39-084.47-036.8

10

SERGIYEV, P. G., BEYSLEKHEM, R. I., MOSHKOVSKIY, Sh. D., DEMINA, N. A.,
KELLINA, O. I., SHUYKINA, E. Ye., SERGIYEV, V. P., DUKHANINA, N. N., TRIYERS,
I. I., SHCHERBAKOV, V. A., YARMAKHAMEDOV, M. A., USKOV, N. Ye., LOSIKOV, I. N.,
and NELOSPELOVA, Ye. I., Institute of Medical Parasitology and Tropical Medicine
imeni Ye I. Martsinovskiy, Ministry of Health USSR, Moscow

"Results of Mass Vaccinations against Zoonotic Cutaneous Leishmaniasis"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 5,
Sep/Oct 70, pp 541-551

Abstract: Preventive mass vaccinations with a virulent strain of *Leishmania tropica* major were found to give reliable protection against cutaneous leishmaniasis. Only virulent strains can be used for vaccination. The degree of inoculation with such strains is almost 100%, the inoculative process having, as a rule, a favorable effect. The maximum size of the vaccination lesion does not exceed 2 cm in diameter in 3/4 of the subjects vaccinated. In practically all cases, the process does not last more than 5-6 months. Morbidity occurred in the group vaccinated with the low-virulence strain, among those without lesions, and among those whose lesions were less than 0.5 cm in diameter.

1/2

- 24 -

USSR

SERGIYEV, P. G., et al., *Meditinskaya Parazitologiya i Parazitarnyye Bolezni*,
Vol 39, No 5, Sep/Oct 70, pp 541-551

Secondary pyococcal infections represented the only complications observed; allergic exanthem was noted occasionally. In order to prevent local and general allergic reactions after vaccination, it is necessary to exclude persons who have had cutaneous leishmaniasis. If past disease cannot be revealed by means of anamnesis or medical examination, the intracutaneous leishmanin test is recommended. The level of the virulence in inoculative strains should be periodically tested, since insignificant initial virulence or its weakening during culturing make a given strain unfit for preparation of inoculum.

2/2

USSR

UDC: 621.396.69:621.318.4

YARMUKHAMEDOV, R. I.

"A Resistor Controlled by Magnetic Induction"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970, vyp. 104, pp 123-125 (from RZh-Radiotekhnika, No 12, Dec 70; Abstract No 12V396)

Translation: The described nonlinear element consists of a magnetic powder suspended in a liquid dielectric and located in a glass tube with stoppers of magnetic material at the ends. The stoppers also act as working electrodes. A curve is given for the resistance of the element as a function of magnetic induction. Two illustrations, bibliography of two titles. N. S.

1/1

USSR

UDC 632.95

YARMIKHAMETOVA, D. KH., KUDRYAVTSEV, B. V., Institute of Physical and Organic Chemistry imeni A. Ye. Arbuzov

"A Method of Making Phosphorylated Phenothiazines"

USSR Author's Certificate No 287017, filed 14 Jul 69, published 15 Mar 71
(from RZh-Khimiya, No 1(II), Jan 72, Abstract No 1N381)

Translation: 3-R-10-R'-phenothiazines [R = NHC(Me₂)₂PH(O)OH, R' = Me
(Ia); R = NHC(Me₂)PH(O)OH, R' = Et (Ib); R = H, R' = C(O)CH₂NHC(Me₂)PH(O)OH
(Ic)]

are made by the reaction of amino derivatives of phenothiazine with hypophosphorous acid (II) and a ketone in an organic solvent e.g. by adding 1 g of II diluted with alcohol (1:2) to 3.4 g of 3-amino-10-methyl-phenothiazine in 50 ml of alcohol, and heating 2.6 g of the resultant salt for 4 hours with 25 ml of dry acetone at the boiling point. It is produced in 75% yield mp 199-200°C (AcOH-water). Similar method of synthesis from 3-amino-10-ethylphenothiazine and 10-glycylphenothiazine gives Ib, mp 179-180°C, and Ic in 92% yield mp 165-167°C. Compounds I may find application as physiologically active agents. V. P. Kozyukov.

1/1

USSR

UDC 632.95

YARMUKHAMETOVA, D. Kh., and KUDRYAVTSEV, B. V., Institute of Organic and Physical Chemistry imeni A. Ye. Arbusov

"A Method of Making Phosphorylated Phenothiazines"

USSR Author's Certificate No 257502, filed 18 Dec 67, published 28 May 70 (from RZh-Khimiya, No 3, 10 Feb 71, Abstract No 3N556 P)

Translation: A method is proposed for synthesizing physiologically active 2-R-10-R'-phenothiazines (I) [R = R' = H, Ac, dialkylphosphonoacetyl or (dialkylphosphonoxy)-vinyl]. Two grams of triethyl phosphite (II) (40% excess of theoretical) is added to molten 2-acetyl-10-bromoacetylphenothiazine (3 grams), at 150°C/100, the excess of II is distilled, and 2.7 grams of I is isolated [R = Ac, R' = diethylphosphonoacetyl (A)], C₂₀H₂₂-NO₅PS, melting point 150-60°C. The following compounds (I) were also analogously synthesized (given are R, R', empirical formula, yield in percent, and melting point in °C): Ac, diisobutylphosphonoacetyl, C₂₄H₃₀NO₅PS 81, 99-100; diethylphosphonoxy (B), Ac, C₂₀H₂₂NO₅PS, 78, —; V, H, C₁₈H₂₀NO₄PS, 32, 95-7; dibutylphosphonoxy (V), H, C₂₂H₂₈NO₄PS, 84 —; B, A, C₂₄H₃₁NO₈P₂S, 86, —; V, dibutylphosphonoacetyl, C₃₂H₄₇NO₈P₂S, 78, —; 1/1

USSR

UDC 542.91+661.718.1

YARMUKHMETOVA, D. Kh., SPERANSKAYA, Z. G., KUDRYAVTSEV, B. V., and YERMAKOVA, Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, USSR Academy of Sciences

"Monothio- and Dithiophosphonacetylphenothiazines and Phenoxazines"

Moscow, Izvestiya Akademii Nauk SSR, Seriya Khimicheskaya, No 4, 1971, pp 802-806

Abstract: Because of their marked biological properties, esters of monothio- and dithio- acids of phosphorus during the past few years have been the object of research, leading to the discovery of new compounds, among other results.

In the present study of the reactions of chloroacetylphenothiazine with salts of the monothiophosphoric acids, the following new compounds were discovered: 10-[(0,0-dialkylphosphonothio)acetyl]phenothiazines (alkyl: ethyl, propyl, 1-propyl, butyl, 1-butyl), 10-methyl(ethyl)-3-[(0,0-diethylthionophosphothio)acetylamino]phenothiazines, [(0,0-diethyldithiophosphono)acetyl]phenothiazine, 10-(0,0-diethylphosphonothioacetyl)phenoxazine, 10-[(0,0-dialkyldithiophosphono)acetyl]phenoxazines (alkyl: 1/2

USSR

YARMUKHAMEDOVA, D. Kh.; et al., Izvestiya Akademii Nauk SSR, Seriya Khimicheskaya, No 4, 71, pp 802-806

ethyl, propyl, i-butyl), and 2, 10-bis-[0,0-diethyldithiophosphono)acetyl] phenothiazine.

Tests for larvacidal and antifungus properties have been started on these new compounds but have thus far showed no positive results.

2/2

- 28 -

USSR

UDC 542.91:547.1'118

YARHUKHMETOVA, D. KH., SPERANSKAYA, Z. G., KUDRYAVTSEV, B. V., Institute of Organic and Physical Chemistry imeni A. Ye. Arbutov of the USSR Academy of Sciences

"10-(0,0-dialkylphosphonformyl)-phenoxazines and phenothiazines"

Moscow, Izvestiya Akademii Nauk SSSR -- Seriya Khimicheskaya, No 11, 1972, p pp 2624-2625

Abstract: A series of new 10-(0,0-dialkylphosphonformyl)-derivatives of phenoxazine and phenothiazine were synthesized. The reaction of the corresponding 10-(chloroformyl)-derivatives with dialkylphosphite proceeds by the Arbuzov regrouping scheme. In the infrared spectra of the compounds obtained there is 1,640 cm^{-1} band characteristic of the CO group and a 1,280 cm^{-1} band characteristic of the P=O group. The precipitated 10-(0,0-dialkylphosphonformyl)-phenoxazines and phenothiazines are white crystals soluble in organic solvents but insoluble in water. The toxicity of the compounds for warm blooded animals is low; LD_{50} is 1,000 mg/kg. The antihelminth activity of 10-(0,0-dialkylphosphonformyl)phenothiazines is lower than for the corresponding dialkylphosphonacetyl-derivatives. The anticholinesterase properties of 1/2

USSR

YARMUKHAMEDOVA, D. KH., et al., Izvestiya Akademii Nauk SSSR - Seriya
Khimicheskaya, No 11, 1972, pp 2624-2625

the formyl and acetyl-derivatives of phenothiazine are approximately the
same and amount to I_{50} 10^{-4} - 10^{-5} M. 10-(chloroformyl)phenoxazine and
phenothiazine were obtained by the reaction of phenothiazine or phenoxazine
with phosgene (M. Claisen, et al., J. Organ. Chem., No 26, 4130, 1961).

2/2

USSR

UDC 542.91-547.1'118

CHEPLANOVA, I. V., and YARMUKHAMEDOVA, D. KH., Institute of Organic and Physical Chemistry Imeni A. Ye. Arbuzov, Acad. Sc. USSR

"Phenophosphazine Derivatives. 2 Communication. Synthesis of the Esters of Thiophenophosphazinic Acid"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 10, Oct 72, pp 2283-2285

Abstract: Reaction of thiophenophosphazinic acid chloride with sodium alkoxide yields corresponding alkyl esters: methyl -- m.p. 186-187°, ethyl -- m.p. 211-212°, propyl -- m. p. 178-179°, and isopropyl -- m.p. 233-234°. When the potassium salt of thiophenophosphazinic acid reacts with alkyl halides, the products are S-alkyl esters: methyl -- m.p. 265-267°, ethyl -- m.p. 221-222°, propyl -- 174-176°, and butyl -- m.p. 149-151°.

1/1

USSR

- UDC 624.07:534.1

YARMUL'NIK, F. V.

"Application of Modeling in Studying the Three-Dimensional Stability of Complex Rod Systems"

V sb. Modelir. pri issled. stroit. konstruktsiy (Modeling in Studying Structures -- Collection of Works), Kiev, 1972, pp 103-105 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V330)

Translation: Nonlinear similarity conditions are discussed which make it possible to solve the problem of local and general stability of three-dimensional large-span rod systems with elements in the form of girders. Instead of copying on the scale of the actual structure, a certain new structural system was investigated, the mechanical properties of which ensure similarity of nature in the sense of the character of the distribution of forces and deformations. The resulting similarity indicators are derived for studying three-dimensional stability on models (four equations) and local stability (three equations), the system of which expresses the necessary and sufficient conditions for incomplete similarity in studying local and general stability of three-dimensional rod systems. Three

1/2

USSR

YARMUL'NIK, F. V., Modelir. pri issled. stroit. konstruktsiy, Kiev, 1972,
pp 103-105

unknowns can be selected arbitrarily from the ten unknowns entering into this system. The similarity conditions obtained are the basis for a technique for studying a model in the scale 1:40 of the frame of a major building of a research center. The actual diameter was 226.5 m and the height was 100 m. V. D. Kopytov.

2/2

- 120 -

USSR

UDC 619.614.449:576.895.4

YARNYKH, V. S., Professor, and SIMETSKIY, M. A., Candidate of Veterinary Sciences, All-Union Scientific Research Institute of Veterinary Sanitation

"Effectiveness of Acaricide-Insecticide Aerosols Against Ixodid Ticks"

Moscow, Veterinariya, No 8, 1971, FP 33-34

Abstract: Aerosols of four acaricide-insecticides were applied to the skin of cattle by means of electric spray guns. Some 500-700 ml of the solutions were applied on the whole body of each animal from a distance of about 2 meters. With this arrangement, one man could treat about 200 young or 100 adult animals per hour. After the treatment, hungry *H. a. anatolicum* ticks were placed on the skin of animals. The first ticks began to fall off after 2-3 hours, and the animals were completely free of them on the next day. The duration of the protective effect of each application was as follows: 1% tsiodrin -- 7-8 days; 1% chlorophos -- 5-7 days; 2% sevin suspension -- 10-12 days; 2% sevin emulsion -- 12-14 days; and 2% bicresyl emulsion -- 7-8 days. Subsequently, the treatments were repeated at these intervals throughout the summer and fall. The compounds induced no toxicosis, dermatitis, or abortions. Milk production by cows and growth rate among young cattle were

1/2

USSR

UDC: 616.24-008.4.-07:616.152.21+616.154.19

YAROGHKIN, V. S., and DMITRENKO, L. V., First Therapeutic Department, and Laboratory of Clinical Physiology, Central Institute of Tuberculosis, Ministry of Health USSR

"Study of Arterial Blood Gases After Physical Exertion as a Means of Evaluating Respiratory Function"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 14, No 6, Nov/Dec 70, pp 68-70

Abstract: Respiratory function was studied in 30 pulmonary tuberculosis patients and 12 healthy persons. Sadoul's method was used in interpreting the results of analysis of arterial blood gases, based on the interdependence of oxygen saturation of arterial blood, partial pressure of carbon dioxide, and shape of the oxygen-hemoglobin dissociation curve. Measurements were taken while the individuals were resting and after they had pedalled for several minutes on bicycle ergometer. Five types of respiratory insufficiency, corresponding to the degree of alveolar hypoventilation and dissemination of tuberculosis were distinguished on the basis of the response to exercise. The reactions ranged from no changes or only a slight

1/2

USSR

YAROSHKIN, V. S., and DMITRENKO, L. V., Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 14, No 6, Nov/Dec 70, pp 68-70

(1-2%) decrease in the extent of oxygen saturation of arterial blood, accompanied by fluctuations in pCO_2 within normal limits (type 1), to marked deficiency of blood oxygenation and a parallel increase in pCO_2 (type 5).

2/2

USSR

GOLENKO, D. I., LIVSHITS, S. Ye., TORNOPOL'SKIY, Yu. Ya., YAROKER, Ya. N.

"Study of ϵ Networks in Statistical Modeling Processes"

Tr. Leningr. Inzh.-Ekon. In-ta [Works of Leningrad Institute of Economics Engineering], 1972, No 94, pp 43-50 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V273, by B. Granovskiy).

Translation: Set M in compact metric space K is called an ϵ network in K if for any point $t \in K$ there is a point $t' \in M$ which is not more than ϵ distant from t . If m is the minimum number of points necessary to construct an ϵ network in a certain set $A \cap K$, the number $H = \log_2 m$ is called the ϵ entropy of A . As we know, the ϵ entropy of the set can be used to estimate the accuracy of tabulation, integration, as well as various procedures of optimization of function F , continuous in K , using the corresponding ϵ network. The problem thus arises of constructing a sequence of points $\{x_i\}_{i=1}^n \in K$, the ϵ entropy of which with any n is near the maximum possible. In this work for the case $K = [0, 1]$, a comparison is given of regular and probabilistic methods of production of an ϵ network from this standpoint. The regular method consists in construction of $1/2$

USSR

Golenko, D. I., Livshits, S. Ye., Tornopol'skiy, Yu. Ya., Yaroker, Ya. N.,
Tr. Leningr. Inzh.-Ekon. In-ta, 1972, No 93, pp 43-50.

sequences of equally separated points in $[0, 1]$, the probabilistic method consists in construction of sequences formed by values of a random quantity, evenly distributed in $[0, 1]$. One new method is suggested for construction of an ϵ network, the ϵ entropy of which increases strictly with increasing number of points.

USSR

UDC 533.92:621.039.61

VOYTSENYA, V. S.; ZISER, V. Ye., DIKIY, A. G., ZHDANOV, A. I.,
PINOS, I. B., YAROKER, Ya. N.

"Calculation and Modeling of Helical Windings of Various Types on Toroidal Surfaces"

Fiz. plazmy i probl. uprav. termoyader. sinteza. Resp. mezhyed. sb.
(Plasma Physics and Problems of the Controlled Thermonuclear Fusion. Republic Interdepartmental Collection), 1972, No. 3, pp 137-141 (from RZh-Fizika, No 11, Nov 72, Abstract No 11G276)

Translation: The problem of the possibility of using various winding patterns for helical conductors on toroidal surfaces is investigated: geodesic lines, lines of constant inclination to the generatrix of the torus, and lines of a cylindrical and toroidal spiral. It is shown that a tight elastic grid can be a fairly good approximation for geodesic lines on a torus. Data are given for constructing a geodesic line on a toroidal surface with an arbitrary aspect ratio. The calculations were made on the "Ural-4" and "Mir" computers.

1/1

USSR

UDC 621.317.757 (088.8)

YAROMENKO, A.S., ZEMLYANSKIY, A.V., MAKAL'SKIY, V.I., RISSE, V.S."Digital Analyzer Of Time Characteristics Of Transistor Circuits"USSR Author Certificate No 297011, filed 16 Jan 69, published 4 June 71 (from
RZh: Radiotekhnika, No 2, Feb 72, Abstract No 2A286P)

Translation: A digital analyzer is proposed for precise monitoring of the time characteristics of semiconductor devices which has an increased resolution and precision of measurements and assures the possibility of automation of measurements, which is achieved by the introduction into the analyzer of a time scaling device which assures operation of the analyzer in an extended time scale; a coincidence circuit, shapers of test and inhibiting pulses of square form, a subtraction circuit, three-amplitude discriminators, and also AND and NAND circuits. The time scaling device includes two crystal oscillators, the outputs of which are connected with the inputs of the coincidence circuit and the pulse shapers. The inputs of the latter are connected to the outputs of the logical control device; the AND and NAND circuits are connected with the outputs of the amplitude discriminators, to the inputs of which are fed the output signals of the subtraction circuit. The output of the shaper of inhibiting pulses is connected to one of the inputs of the subtraction circuit and the object under test to the other. One of the terminals for connection of the object under test is connected with the shaper of test pulses. A.K.

1/1

- 42 -

YAROMIENOK, H.

biocurrents

THE HINDERS ABOUT BIOCURRENTS

A. Yaromienok

Great physicist I. V. Savchenko used to say: "We know that the hands of a magnetic extensor could pull of the end pieces on from an ordinary coil's instrument, and that the hand of a regular antenna's stones, these life-giving hands, however, are only capable of making mechanical movements which can, strictly speaking, be subjected to analysis and expressed in formulas."

Such an analysis has now been carried out, and a formula of control over these psychokinetic movements has been derived. The commands are given with the help of bioelectric impulses. Then scientists had arrived at this conclusion a considerable number of fantastic projects filed up. Only they did not look at all fantastic at closer scrutiny.

The following incident was recorded during the first international congress on automatic control in 1963: a boy approached the board and took a piece of chalk, and wrote "Welcome to the delegates" a storm of applause broke out. "Welcome the boy had done it using an artificial bioelectrically-controlled forearm."

And what if a man falls ill? And one of his arms gets paralyzed? Is there a way to alleviate the suffering there is. A group of Ukrainian cyberneticians headed by L. N. Alekseyev have built an installation which they have christened Motion. It controls the movements of a paralyzed arm according to a pre-set programme.

An athlete with magnificently developed muscles has been invited, and his biceps and triceps (electrical impulses from the commands of the brain to the muscles of the arms) have been registered. The tape can now be used to cure certain ailments.

Bioelectrical control can be applied in other cases, for instance, to teach children the movements made by virtuoso musicians or help runners, skiers, divers, and adjusters to learn the most delicate points of their trades.

All this has been described by I. A. Tarkov in his screenplay which has been made into a film by the Forprom Science Studios in Kiev.

"Biological Currents" is a short film. It lasts not more than 10 minutes--ten minutes about science, which succeed in telling a great deal.

1972
D. G. G. G.
2014624/E

(Provide Ukraine, January 6. Slightly revised)

Pa. G. G. G. G.
1/10/72

USSR

UDC: 534-8

SUKATSKAS, V. and YARONIS, E.

"Interferometer of Constant Length for Measuring the Dispersion of Ultrasonic Velocity in Liquids"

Nauch. tr. vyssh. ucheb. zavedeniy LitSSR. Ul'trazvuk (Scientific Works of the Lithuanian VUZ; Ultrasonics) No 4, 1972, pp 25-32 (from RZh--Fizika, No 4, 1973, Abstract No 4Zh593)

Translation: A variable-frequency differential interferometer with two chambers is described. One of the chambers of constant length is filled with the liquid being investigated; the other is a standard with no ultrasonic velocity dispersion in the investigated frequency range. The frequency intervals corresponding to the specified increase in wave number in the chambers are automatically measured; the velocity dispersion is determined from the values of these intervals. The block diagram of the measuring device is given and the amplifiers (with automatic gain control) designed for the case of low repetition frequency of the resonance peaks are described. Bibliography of 13. Authors' abstract

1/1

UDC 669.15.018.23-14(088.8)

USSR

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

"Automatic Cast Stainless Steel"

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

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

1/1

1/2 027 UNCLASSIFIED
TITLE--PRODUCING A METALLIC SURFACE -U-

PROCESSING DATE--04DEC70

AUTHOR--(02)--YAROLOV, I.I., KUZMIN, M.N.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,817

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--10FEB70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--METAL COATING, ENAMEL, PROTECTIVE COATING, CHEMICAL PATENT,
METAL CASTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/0846

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

CIRC ACCESSION NO--AA0131439

UNCLASSIFIED

2/2 027

CIRC ACCESSION NO--AA0131439

UNCLASSIFIED

PROCESSING DATE--04DEC70

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

ABSTRACT. A METALLIC SURFACE, E.G., FOR USE
IN CASTING TECHNDL., IS PREPD. BY SPRAY COATING THE METAL ON THE PATTERN
AND APPLYING A LAYER OF PENTOPHTHALIC ENAMEL.

UNCLASSIFIED

USSR

UDC 616.8-099-018-092

YAROSH, A. A., Chair of Nervous Diseases, Kiev Medical Institute

"Morphological and Histochemical Changes in the Nervous System in Methylmercaptophos Poisoning"

Kiev, Vrachebnoye Delo, No 12, 1971, pp 101-103

Abstract: Methylmercaptophos is a widely used organophosphorus insecticide highly toxic to man and warm-blooded animals whether it penetrates into the body through unprotected skin or by inhalation. Minimum toxic doses (10 mg/kg) were applied to the skin of rats for 5 days. The animals were sacrificed 10 and 180 days later and sections from various parts of the brain, spinal cord, and peripheral nerves were examined histologically and histochemically. Within 10 days the insecticide had induced profound degenerative changes in the blood vessels of the hypothalamus and anterior gyri of the frontal lobes and in the intervertebral ganglia and peripheral nerves. Many of the nerve cells exhibited perinuclear and peripheral chromatolysis, karyolysis, or karyorrhexis and disintegration of tigroid. Methylmercaptophos also decreased true cholinesterase activity in the region of the synapses and acid phosphatase activity in the cerebral and spinal neurons. Most of the pathomorphological and histochemical changes were still evident 6 months after the poisoning.

1/1

USSR

UDC 615.356:577.164.2].03:616.831-099:615.285.7

YAROSH, A. A., and VOLOTOVSKAYA, E. F., Chair of Nerve Diseases at the Ternopol' Medical Institute

"The Effect of Ascorbic Acid on the Course of Dystrophic and Reparatory Processes in the Brain of Rats Poisoned With Methylmercaptophos"

Moscow, Farmakologiya i Toksikologiya, Vol 33, No 5, Sep-Oct 70, pp 622-624

Abstract: Pathomorphological and histochemical changes in the brain of 60 albino rats poisoned with mercaptophos were studied. Of these, 30 rats received ascorbic acid IP, the rest were untreated. In the early stage of the poisoning the brain vessels undergo reversible changes -- spasms, dilatation --, at later stage permanent changes take place accompanied by deep dystrophic changes of the nerve cells and glial elements. The enzymatic activity in the cells and nerve structures of the brain dropped sharply in the early stage. Later phase showed a gradual increase but the level of ascorbic acid treated animals was not reached. Ascorbic acid facilitates enzymatic activity in the brain by intensifying the action of the cholinesterase proper and of the acid phosphatase.

1/1

USSR

UDC 621.397.3

KRANTS, A. B., MIRONOV, V. M., ~~YAROSH, K. S.~~, Leningrad Institute of Aviation Instrument Building

"A Device for Forming Symbols on the Screen of a Cathode Ray Tube"

Moscow, Otkrytiya, Izobreneniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 5, Feb 72, Author's Certificate No 327581, division H, filed 4 Feb 70, published 26 Feb 72, p 164

Translation: This Author's Certificate introduces a device for forming symbols on the screen of a cathode ray tube. The device contains an input angle-of-turn register, an output symbol-size register, a ferrite matrix, decoders, pulse amplifiers, a cadence pulse generator, coordinate counters and inverters. The output of the angle-of-turn register is connected to a sine function converter and to a cosine functional converter, and the inverters are connected to the horizontal and vertical deflecting plates of the cathode ray tube. As a distinguishing feature of the patent, provision is made for determining the instantaneous parameters of the symbols. Multiplication modules are connected in parallel to the output of the symbol-size register. The outputs of the sine functional converter and

1/2

USSR

KRANTS, A. B., et al., USSR Author's Certificate No 327581

the cosine functional converter are connected respectively to the second input of the multiplication modules. The voltage from the output of the multiplication module is fed simultaneously through a voltage divider to the vertical deflecting plates of the cathode ray tube and the inverter, and through parallel-connected auxiliary multiplication modules to auxiliary voltage dividers. The voltage from the coordinate counters is fed to the second inputs of the auxiliary multiplication modules, and the voltage from the output of the auxiliary voltage dividers is fed to the horizontal and vertical plates of the cathode ray tube.

2/2

- 50 -

Miscellaneous

USSR

UDC: 539.4.019.1

SAMSONOV, G. V., ALEKSEYEVSKIY, V. P., BOZHKO, S. A., and YAROSH, V. V., Kiev

"The Effect of Explosion on Refractory Carbides"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 73, pp 108-112

Abstract: The authors study the effect of explosion on refractory carbides. Hot pressed specimens of the refractory $TiC_{0.98}$, $ZrC_{0.96}$, and $NbC_{0.99}$ carbides were subjected to the action of shock waves. The reduction by explosion was carried out in steel cylindrical storage ampules with pressure in the detonation front of the explosive of 120 and 67 kbars. After the explosion, higher micro-hardness was observed in the case of niobium carbide and higher dislocation density in the case of all of the other carbides studied up to 10^{10} cm^{-2} .

1/1

Acc. Nr: AP0036571

Ref. Code: UR 0391 2

PRIMARY SOURCE: Gigiyena, Truda i Professional'nyye
Zabolevaniya, 1970, Nr 2, pp 21-24

HYGIENIC, CLINICAL AND EXPERIMENTAL DATA CHARACTERIZING
MAGNESITE PNEUMOCONIOSIS

Zeleneva, N. I.; Makarov, Yu. V.; Starikova, S. K.;
Babushkina, L. G.; Yarosh, Z. P.; Ragol'skaya, F. S.

Summary

An examination of workers of a magnesite plant with long service record exposed to highly concentrated dust of raw or roasted (burnt) magnesite containing about 1-3% of total SiO₂ revealed 13 cases of pneumoconiosis, chiefly among workers exposed to the effect of roasted magnesite. Roengeno-morphologically magnesite pneumoconiosis is characterized by diffuse pneumofibrosis with isolated micromaculous elements. Clinical manifestations and periods marking development of the disease justify including it in the group of the so-called "benign" pneumoconiosis. Not infrequently it is associated with symptoms of chronic bronchities and pulmonary emphysema. Experiments on animals demonstrated magnesite dust to have had an insignificant fibrinogenicity, but confirmed its possible accumulation in the lungs, following its long-term inspiration. By comparison with the raw magnesite dust that of the roasted magnesite has somewhat greater pronounced fibrinogenous properties. |

REEL/FRA
19721423

6 D. 1.

USSR

UDC 616.083.98:616-099

SEMENOV, I. A., PALAMARCHUK, Ye. S., MUDRITSKIY, V. D., and YAROSHCHUK, G. S.,
Clinical Hospital imeni October Revolution, Kiev Medical Institute, Kiev

"Emergency Treatment in Acute Poisoning with Organophosphorus Compounds"

Kiev, Vrachebnoye Delo, No 10, Oct 72, pp 131-134

Abstract: Experience acquired in emergency treatment during the past 9 years of 112 persons poisoned with organophosphorus compounds (principally chlorophos) is reviewed. Thirty-nine persons inhaled the poison, while 73 swallowed it. In cases in which the poison was swallowed, the stomach was washed out with water or a 2% Na_2CO_3 solution, whereupon an absorbent (activated carbon or a 25% solution of Na_2SO_4) was administered. In cases of unconsciousness, endotracheal intubation was carried out and the stomach pumped out. In every instance, an 0.1% atropine solution was injected immediately either subcutaneously, intramuscularly, or intravenously (1-2, 2-4, and 3-5 ml in cases of light, medium severe, and acute poisoning, respectively). A 15% solution of dipyroxime was administered in an amount of 1-2 ml in 8 cases of acute poisoning accompanied by deep unconsciousness. In severe cases, an intravenous injection of a 5% glucose solution (250-300 ml) together with vitamin C (100-200 mg), B_1 (60 mg), B_6 (60 mg), PP (30-40 mg), and B_{12} (600-800 gamma) was

1/3

USSR

SEMENOV, I. A., et al., Vrachebnoye Delo, No 10, Oct 72, pp 131-134

carried out at the site of the accident. If the condition of the patients did not improve, 250-800 ml physiological NaCl solution or 200-400 ml of a 2-4% NaHCO₃ solution were injected in addition to that. The majority of patients were given subcutaneous injections of cordiamine, mezaton, and caffeine and also intramuscular injections of MgSO₄ to stimulate cardiac activity. On hospitalization washing out of the stomach was repeated and atropine was administered as required, in the absence of harmful effects produced by it, until improvement of the condition of the patients set in. The total amount of atropine administered was 2-12, 10-20, and > 20 mg in cases of light, medium, and acute poisoning, respectively. Because atropine is dangerous in cases of pronounced hypoxia, patients in this state were given oxygen to inhale. If indicated by the condition of the patients, the following methods of treatment were applied: intramuscular injection of a 25% MgSO₄ solution in pronounced mental disturbances; bloodletting and intravenous injection of a 40% glucose solution and a 10% CaCl₂ solution in pulmonary edema; intravenous injection of an 0.05% strophanthine solution together with a 40% glucose solution in cases of collapse. Poliglucine, hydrocortisone, ephedrine, and other drugs were also administered. As a part of the detoxification therapy vitamins of the B complex (B₁, B₆, PP, etc) and ascorbic acid were administered together with glucose and plasma substitutes. As resuscitation measures artificial respiration (upon

2/3

- 62 -

USSR

SEMENOV, I. A., et al., Vrachebnoye Delo, No 10, Oct 72, pp 131-134

endotracheal intubation), infusion of poliglucine and other blood extenders, indirect massage of the heart, and defibrillation were applied. Complete recovery following the treatment resulted in 88 cases. Side effects that accompanied recovery comprised pneumonia, acute psychosis, and polyneuritis in 9, 8, and 2 cases, respectively. Five patients died.

3/3

USSR

UDC 669.295.018.9.4(088.8)

GOLUBTSOVA, R. B., and YAROSHENKO, A. D.

"Electrolyte for Isolation of Metallide Phases in Alloys of Titanium"

USSR Author's Certificate No 293058, filed 11/11/69, published 11/03/71.
(Translated from Referativnyy Zhurnal Metallurgiya, No 3, 1972, Abstract
No 3G160P)

Translation: An electrolyte is proposed for isolation of metallide phases in alloys of Ti, containing HCl and methanol. To achieve selective isolation of the Ti-Fe phase, perchloric acid is introduced to the electrolyte with the following ratio of components in M1/1): HCl 45-55, perchloric acid 10-15, methanol 1,000. The process of electrolytic purification of Ti alloys is performed at room temperature and $D=0.05 \text{ a/cm}^2$. An example is presented.

1/1

1/2 016

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--SPECTROPHOTOMETRIC DETERMINATION OF MICROGRAM AMOUNTS OF CHROMIUM
IN ANODIC POWDERS -U-

AUTHOR-(02)-GOLUBTSOVA, R.B., YAROSHENKO, A.D.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(2), 147-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHROMIUM, TRACE ANALYSIS, SPECTROPHOTOMETRIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1882

STEP NO--UR/0032/70/036/002/0147/0148

CIRC ACCESSION NO--AP0118844

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118844

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A 0.01-G SAMPLE IS DISSOLVED IN 15 ML H SUB2 SO SUB4 (1:2) CONTG. SEVERAL DROPS OF HNO SUB3 (D. 1.4). THE SOLN. IS EVAPD. 3 TIMES AND DILD. TO 50 ML WITH H SUB2 O. A 1-5 ML ALIQUOT IS MIXED WITH 2 ML 10PERCENT NACLO SUB4, 5 ML 5PERCENT NAOAC, 1 ML 4PERCENT NAF, AND, AFTER ADJUSTING THE PH TO 5-6 WITH ALKALI OR HOAC, 2 ML OF 0.1PERCENT AQ. PYROCATECHOL VIOLET. THE SOLN. IS DILD. TO 25 ML, INCUBATED 20 MIN AT 90DEGREES, AND THE ABSORPTION MEASURED AT 605 NM. SENSITIVITY OF THE REACTION IS 0.04 MUG-ML. TI AND V IN 50, NI IN 30, AND MO IN 15 FOLD EXCESS DO NOT INTERFERE WITH THE DETN. FE IS MASKED WITH ASCORBIC ACID AND EXCESS OF AL AND TI WITH F PRIME NEGATIVE. CL PRIME NEGATIVE, NO SUB3 PRIME NEGATIVE, AND SO SUB4 PRIME NEGATIVE NEGATIVE INTERFERE WITH THE DETN. IN CONCNS. GREATER THAN 10 MG-ML.
FACILITY: INST. MET. IM. BAIKOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SOLVATOCROMIC EFFECT AND ELECTROCHEMICAL REDUCTION OF SOME
AROMATIC COMPOUNDS ON A DROPPING MERCURY ELECTRODE -U-
AUTHOR--(02)--FINKELSHEYN, A.V., YAROSHENKO, A.I.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(2), 194-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ELECTROLYTIC REDUCTION, DROPPING MERCURY ELECTRODE,
NITROBENZENE, CHEMICAL SUBSTITUENT, BROMINE, CHLORINE, HYDROXYL RADICAL,
AMINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1104 STEP NO--UR/0153/70/013/002/0194/0196
CIRC ACCESSION NO--AT0134790
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0134790

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CORRELATIONS ARE PRESENTED BETWEEN THE SOLVATOCHROMIC EFFECT AND THE HALF WAVE POTENTIAL (IN 26 OR 35 PERCENT EtOH AT PH 3) FOR 24 SUBSTITUTED MONONUCLEAR AROMATIC COMPOUNDS. THE CORRELATION IS OF THE FORM $\Phi_{SUBONEHALF} = \alpha + \beta \Delta V_{SUB1,2}$, WHERE $\Phi_{SUBONEHALF}$ IS THE HALF WAVE POTENTIAL, $\Delta V_{SUB1,2}$ IS THE SOLVATOCHROMIC EFFECT AND NEGATIVE ALPHA AND BETA TIMES 10³ HAVE THE FOLLOWING VALUES: RC SUB6 H SUB4 NO SUB2 (R EQUALS H, M, NO SUB2, M, BR, M, CL, P, OH, O, OH, M, OH, M, ME, M, NH SUB2, P, ME, P, CO SUB2 H, P, CL), 0.200 AND 0.120; RC SUB6 H SUB4 NHEN (R EQUALS P, DET, M, CL, H, P, OR, P, CL, M, CL, M, BR), 1.088, 0.288; AND RC SUB6 H SUB4 CHO (R EQUALS M, CL, M, DET, M, OME, O, OME, P, ME, P, NH SUB2), 0.75, NEGATIVE 0.050.

FACILITY: SIB. TEKHNOL. INST., KRASNOYARSK, USSR.

UNCLASSIFIED

172 009

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--EFFECT OF PH ON REGRESSION EQUATION PARAMETERS PHI SUB1OVER2 AT
DELTA V SUB1.2 FOR SUBSTITUTED BENZYLIDENEACETONE DERIVATIVES -U-
AUTHOR--(03)--FINKELSHTEYN, A.V., YAROSHENKO, A.I., TARBYEVA, N.A.

COUNTRY OF INFO--USSR

SOURCE--ELECTROKIMIYA 1970, 6(2) 268-71

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--DROPPING MERCURY ELECTRODE, HYDROGEN ION CONCENTRATION,
BENZENE DERIVATIVE, ACETONE, CARBONYL RADICAL, POLAROGRAPHIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0462

STEP NO--UR/0364/70/006/002/0268/0271

CIRC ACCESSION NO--AP0107068

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107068

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

ABSTRACT. THE POLAROGRAMS (I VS. PHI) AND THEIR DERIVS. (DI-D PHI, PHI) WERE RECORDED ON A POLAROGRAPH OF THE ON-102 TYPE AT 20DEGREES. THE CATHODE WAS A DROPPING HG ELECTRODE, THE ANODE A HG MACROELECTRODE. THE CONC. OF THE STUDIED SUBSTANCE WAS 5 TIME 10 PRIME NEGATIVE4 M. FOR ALL PH VALUES STUDIED THERE IS A CLEAR CORRELATION BETWEEN THE HALF WAVE POTENTIALS, PHI SUB1-2, OF THE SUBSTITUTED BENZYLIDENEACETONE DERIVS. AND THE SOLVATOCHROMIC EFFECT (DELTA V SUB1-2): PHI SUB1-2 EQUALS ALPHS PLUS BETA DELTA V SUB1,2. THE GENERAL FORM OF THE EQUATION RELATING DELTA V SUB1,2 TO PHI SUB1-2 FOR REDN. OF BENZYLIDENEACETONE DOES NOT DEPEND ON PH AT PH EQUALS 2-5. THE PARAMETER BETA OF THIS EQUATION IS ALSO PRACTICALLY CONST. WITHIN THIS PH RANGE. THE PARAMETER ALPHS DECREASES WITH INCREASING PH AND IS A LINEAR FUNCTION OF THE H INDEX WHICH IS DESCRIBED BY THE EQUATION ALPHA NEGATIVE 0.481-0.058 PH. THE LINEAR CORRELATION BETWEEN PHI SUB1-2 AND DELTA V SUB1,2 CONFIRMS THE MECHANISM PROPOSED IN LITERATURE THAT THE CARBONYL GROUP AND NOT THE DOUBLE BOND IS REDUCED AND APPEARS AGAIN AFTER REGROUPING.

UNCLASSIFIED

USSR:

UDC 539.4:669-419.4

YAVOR, A. A., and YAROSHENKO, A. P., Volgograd Polytechnic Institute:

"On the Strength of Clad Steels"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 8, 1971, pp 14-20

Abstract: The article considers the mechanical properties of clad structural sheet steels. The mechanical properties of clad steel are determined by the thickness ratio of the layers (soft and hard). There is reduced strength and increased ductility with an increase in the proportion of soft steel, but not according to linear law. The article attempts to establish the character of this dependence so as to determine the most rational cladding and reinforcement limits. Materials studied include hardened steel 30KhGSA, two-ply steel of the composition 30KhGSA + 25-percent Khl8N10T, two-ply steel Khl8N10T + 65G, three-ply

1/22

USSR:

YAVOR, A. A., and YAROSHENKO, A. P., Metallovedeniye i Termicheskaya Obrabotka Metallov, No 8, 1971, pp 14-20

steels: 65G + Kh18N10T + 65G and Kh18N10T + 65G + Kh18N10T, five-ply steel Kh18N10T + 65G + Kh18N10T + 65G + Kh18N10T, alloy KhN78T + VKS type steel + alloy KhN78T. The structural strength and ductility of high-strength steels can be increased by two-sided cladding with plastic steels of the austenitic class.

2/2

USSR

UDC 546.651:542.61:547.558

RUSINA, M. N., POLIKARPOV, Yu. M., YAROSHENKO, G. F., and TIMAKOVA, L. M.

"Aminosubstituted Phosphine Oxides as Extractants of Rare Earth Elements"

Leningrad, Zhurnal Obshchey Khimii, Vol 43(105), No 2, Feb 73, pp 238-242

Abstract: Synthesis of aminosubstituted phosphine oxides containing phosphoryl and amino groups in the molecule was carried out. Their ability to extract rare earth elements [REE] was studied. The structure of such reagents makes it possible to form chelate rings with metal salts, with both functional groups participating; this makes the complexes very stable and selective. It was shown that substituting an octyl radical for an ethyl group increases the extractational capacity of the material, probably due to the increase in the basicity of the nitrogen atom and better solubility of the complex in the organic phase. β -Aminosubstituted phosphine oxide extracts the REE much better than α -aminosubstituted ones, due to a greater strength of the six membered chelate ring as compared to a five membered one. The coefficient of extraction of REE by above reagents is about 0.1, while for the Ca^{2+} , Mg^{2+} , Al^{3+} , Fe^{3+} and Cr^{6+} they are less than 0.01.

1/1

USSR

UDC 616.981.71-078

PSHENICHNOV, P. A. and YAROSHENKO, L. K., Rickettsia Laboratory, Perm Scientific Research Institute of Vaccines and Sera; Perm' Medical Institute

"Use of Liquid and Dry Erythrocyte Diagnosticums in the Cysteine Test for Differentiation of Primary and Secondary Infections Caused by Rickettsia prowazeki"

Moscow, Laboratornaya Delo, No 12, 1971, pp 738-740

Abstract: A detailed description is presented of the liquid erythrocyte diagnostic method for typhus. In primary infection, the level of IgM, and in secondary infection, the level of IgG increased in the serum. IgG antibodies were resistant to reducing agents (2-mercaptoethanol, ethanethiol, cysteine), while IgM antibodies were not. A decrease of hemagglutinin level by 88-90% in serum pretreated with cysteine indicates an increase of IgM antibodies. If the level of hemagglutinin was only one half of the original, it meant an increase of the cysteine-resistant IgG. With this method preliminary results can be obtained in 4-5 hr, and final results, in 16-18 hr. The suggested method was tested on 236 rabbits, 423 guinea pigs, and 70 human sera.

1/1

USSR

UDC 661.184

YAROSHENKO, N. A., DEMCHENKO, P. A., FESHCHENKO, N. G., and IRODIONOVA, A. F.,
 Institute of the Chemistry of High-Molecular Compounds, Academy of Sciences
 UkrSSR, and Institute of Organic Chemistry, Academy of Sciences UkrSSR

"The Surface Activity of Alkylphosphonic Acids and of Their Sodium Salts in
 Aqueous Solutions at Various Temperatures"

Kiev, Ukrainskiy Khimicheskij Zhurnal, Vol 19, No 9, Sep 73, pp 895-899

Abstract: The isotherms in the 20-90° range of the surface tension of aqueous
 solutions of the alkylphosphonic acids $RP(O)(OH)_2$ ($R = C_8, C_9, C_{10}, C_{12}, C_{16}$)
 at various concentrations and also of their acidic and neutral Na salts were
 determined. The neutral and acidic salts had a surface activity that was twice
 as high and five-six times as high, respectively, as that of Na salts of
 alkylcarboxylic acids $RCOOH$ ($R = C_8-C_{16}$). The surface activity increased in
 the order $RP(O)(ONa)_2 < RP(O)(OH)ONa < RP(O)(OH)_2$. The tendency of the last
 two members of this series to form intermolecular hydrogen bonds increased
 their surface activity. Because of the more pronounced metallic characteristics
 of P as compared with C or S, the compounds $RP(O)(OH)_2$ and $RP(O)(OH)ONa$ had a
 high surface activity which decreased to a relatively slight extent with increasing
 temperatures of their solutions. This decrease was particularly small for
 $R = C_{12} - C_{16}$ and became somewhat greater for $R = C_8 - C_{10}$.

1/1

USSR

UDC 661.185.1

DEMCHENKO, P. A., and YAROSHENKO, N. A., Institute of the Chemistry of High Molecular Compounds, Academy of Sciences UkrSSR, Kiyev

"Solubilization of Trialkylphosphine Oxides in Aqueous Solutions of Sodium Dodecyl Sulfates"

Moscow, Kolloidnyy Zhurnal, Vol 35, No 4, Jul-Aug 73, pp 751-753

Abstract: The solubilization ability of the oxides of symmetrical aliphatic tertiary amines in aqueous sodium dodecyl sulfate solutions of various concentrations has been investigated. An assumption has been made about a mixed type of their solubilization in mycellar solutions. With increasing oleophilic properties the solubilization of phosphine oxides occurs mainly by the nonpolar mechanism. Addition of sodium sulfate to the aqueous solution of sodium dodecyl sulfate increases its solubilization ability in respect to the dodecyl-, decyl-, and hexadecyl-phosphine oxides, but decreases it in case of octylphosphine oxide.

1/1

USSR

UDC: 681.185.224

YAROSHENKO, N. A., DEMCHENKO, P. A., TANCHUK, Yu. V., Institute of Chemistry of High-Molecular Compounds, AS UkrSSR

"Synthesis of Ammonium Monoalkyl Pyrophosphates"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 45, No 5, May 72, pp 1114-1115

Abstract: New phosphorus-containing surface-active agents were synthesized by reacting higher aliphatic alcohols with pyrophosphoric acid. Octyl, decyl, dodecyl, tetradecyl, hexadecyl and octadecyl esters of pyrophosphoric acid were synthesized. Ammonia neutralization of these esters yielded triammonium salts of monoalkyl pyrophosphates. It was found that these salts are effective surface-active agents: an increase in the number of carbon atoms in the radical from 8 to 18 reduces the minimum surface tension at 60°C from 24.3 to 21.8 ergs/sq. cm.

1/1

USSR

UDC 541.132.3

DEMCHENKO, P. A., and YAROSHENKO, N. A., Institute of the Chemistry of High Molecular Weight Compounds, Acad. Sc. UkrSSR

"Concentration Constants of the Ionization of Alkylphosphonic Acids"

Kiev, Ukrainskiy Khimicheskii Zhurnal, Vol 38, No 4, Apr 72, pp 359-362

Abstract: Solubility and ionization constants of the C₃-C₁₆ alkylphosphonic acids were determined in a study of the effect of ionization constants on the transition from real solutions to the colloidal state. It was shown that the pK₁ values range from 3.2 to 4.2, while pK₂ remain constant. Temperature changes affect the pK₂ values more than pK₁. Even though pK₂ values of the higher analogs are constant at the lower end they are directly related to the chain length; this is due to the fact that addition of methyl groups to a short chain acid increases its electronegativity, but as the chain becomes longer, this inductive effect diminishes. The decrease in acid strength with increased radicals is due to the entropy effect, which is more pronounced at the second stage of neutralization. Solubility of these acids increases slowly with temperature increase until a certain temperature is reached above which the solubility increase becomes more pronounced. The Kraft points
1/2

USSR

DEMCHENKO, P. A., and YAROSHENKO, N. A., *Ukrainskiy Khimicheskiy Zhurnal*,
Vol 38, No 4, Apr 72, pp 359-362

range from 15 to 35° and this is where increased solubility is observed due
to the formation of colloidal ions. Critical concentrations of colloidal
ions formation of the C₈, C₉, C₁₀ and C₁₂ acids are 0.6; 0.58; 0.37; and
0.26 g/l respectively.

2/2

- 21 -

YAROSHENKO, N. G.

SO:JPRS 53658
22 July 1971

UDC: 614+616-082]:651(-22)

MANAGEMENT OF RURAL PUBLIC HEALTH SERVICES TO BE IMPROVED

[Article* by V.G. Mikitin, head of the organizational methodological office of Komotop Central Rayon Hospital (chief physician: N.G. Yaroshenko), Sumskaya Oblast; Moscow, Sovetskoye Zdravookhraneniye, submitted 5 January 1971, pp 12-15]

The discussion on rural public health management raised by V. Bondarenko in the journal, Sovetskye Zdravookhraneniye [Workers' Deputy Councils] (1969, No 1) and by F. Grigor'yev in Sovetskoye Zdravookhraneniye [Soviet Public Health] (1969, No 3) reflects the wishes of public organizers to increase the volume and to improve the quality of medical care in rural areas.

It is not surprising that the chief physicians of rayons are the first to raise this question. In many respects, on their activities depends the fulfillment of scheduled objectives related to elimination of differences between medical services to urban and rural population.

In our opinion, it is not only the scientists, public health ministry workers and chief physicians of rayons who should voice their views on the subject, but also and necessarily the heads of organizational methodological offices since the quality of public health management in rural areas depends largely on their work. As a rule, in hospitals where the work of such an office is not set up well enough, it is difficult for the chief physician to work, and, to use the words of V. Bondarenko, he is "not able to manage public health services in the rayon as a whole" in such hospitals.

Considerable time has passed since the elimination of rayon public health departments, yet, as validly observed by V.Ch. Brzheveskiy [1], to date "there has been no legislation to define the role of the rayon hospital as the legitimate heir to rayon public health departments."

*Published for the purpose of discussion.

USSR

UDC 632.938:616.992:632.4

YAROSHENKO, T. V., GREBENCHUK, Ye. A., NIKITINA, A. V., and KUZICHEVA, V. V.,
Kharkov State University

"Plant Immunity to Different Kinds of Parasites"

Leningrad, Mikologiya i Fitopatologiya, No 6, 1972, pp 235-240

Abstract: Long-term studies on different plant families (Gramineae, Chenopodiaceae, Solanaceae) show that they have similar immunological responses to fungus infections regardless of the biological characteristics, evolutionary development, and nature of the parasitism of the pathogens, e.g., Erysiphe graminis, Ustilago zeae, Cercospora beticola, Peronospora schachtii, Tilletia tritici, Sphacelotheca panici-miliacea, and Puccinia triticina. These pathogens all undergo recessive changes in the host plants in the form of hypoplasia, plasma degeneration, and lysis. It would appear, therefore, that the processes by which physiological immunity is formed are basically similar even when induced by different agents.

1/1

USSR

UDC: 621.785.019

YAROSHENKO, V. I.

"Method of Heat Treatment of Containers"

USSR Author's Certificate 344005, Filed 12/05/69, Published 18/07/72
(Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract
No 8I855P).

Translation: A method of heat treatment of containers, performed by heating from within, differs in that in order to assure even heating, heating is performed by moving the products of combustion of fuel from a heat generator through the container.

1/1

USSR

UDC: 620.169.1-192.05

ZAKOLDAYEV, Yu. A., YAROSHENKO, V. V.

"Device for Automatic Testing of Operability of Output Amplifiers of Logical Control Devices"

Tezisy Dokl. k Nauchn-Tekhn. Konf. na Temu: Probl. Sozdaniya Sistem Upr. Sudovymi Techn. Sredstvami, 1971 [Theses of Reports at Scientific and Technical Conference on the Problem of Creation of Shipboard Equipment Control Systems, 1971], Leningrad 1971, p. 48 (translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 3, 1972, Abstract No 3 A346 from the resume)

Translation: One peculiarity of the circuits used in devices testing output amplifiers (OA) is operation involving waiting, processing, and rejecting OA, as well as the fact that checking of operation of OA is performed both with and without information from the outputs of the logic channels. The structural systems of test devices include: test pulse shapers, OA test circuit, signal collecting circuits, a circuit to make the determination "OA failed," and a master circuit. It is shown to be possible to produce such a unit using microelectronics elements. The principles of organization of a program allowing minimization of the number of logic conditions by a method other than total trial are presented.

1/1

USSR

UDC: 621.391.2:621.371.1(088.8)

YUSHKOV, N. P., KOLOMENTSEVA, T. I., YAROSHENKO, V. V.

"A Cycle and Channel Synchronization Device for an Equal-Accessibility Multiple-Channel Radio Communications System"

USSR Author's Certificate No 259136, filed 3 Oct 67, published 23 Apr 70 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A258 P)

Translation: This patent covers a cycle and channel synchronization device for an equal-accessibility multiple-channel radio communications system. The device consists of a phase discriminator, cadence pulse shaper, oscillator, cycle synchronization signal decoder, channel distributor, selector and multiplexer. To ensure independent synchronization of one receiver or a group of receivers simultaneously from different transmitter signals arriving with different time delays, the device incorporates the following modules: 1) an independent synchronization module connected between the cadence input and the output of the cycle synchronization signal decoder, the cadence and trigger inputs and the intermediate output of the channel distributor, the cadence input of the multiplexer and the input of the phase discriminator, and connected by its commutated inputs to the outputs

1/2

USSR

YUSHKOV, N. F. et al., USSR Author's Certificate No 259136

of the oscillator and cadence pulse shaper; 2) a phase storage module connected between the selector output and the cadence input of the channel distributor; 3) a series circuit comprised of a control pulse shaper, a counter of decorrelated cycle synchronization signals and a generator of autonomous cycle synchronization signals connected between the output of the cycle synchronization signal decoder and the trigger input of the channel distributor.

2/2

- 47 -

PHYSICS
Crystals & Semiconductors

USSR

UDC 621.315.592

ABDULLAYEV, G. B., AKHUNDOV, G. A., AGAYEVA, A. A., SALMANOV, V. M., and
YAROSHETSKIY, I. D. -- Azerbaydzhan State University imeni S. M. Kirov, Baku,
and Physical-Technical Institute imeni A. F. Ioffe, USSR Academy of Sciences,
Leningrad

"Recombination Radiation in Solid Solutions Under Neodymium Laser Excitation"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 7, No 6, Jun 73, pp 1108 - 1110

Abstract: The studies were made with $\text{GaS}_x\text{Se}_{1-x}$, where x was varied from 0.05 to 0.80. The crystals were grown by slow cooling with a constant temperature gradient; plane parallel sheets were then peeled off for testing at $T = 77^\circ\text{K}$. It was found that the two primary spectral bands, caused by the decay of free excitons with the release of 1 and 2 optical phonons respectively, were displaced smoothly with change in the crystal composition. Increasing the pumping power narrowed the bands and sharply increased intensity at the maxima (by a factor of W^n , where W is the pumping power and n varied from 4 to 7). The data indicates the availability of laser radiation from these crystals over a range from 4350 angstroms to 6000 angstroms.

1/1

USSR

UDC 621.315.592

AGAFONOV, B. G., VALOV, P. M., RYVKIN, B. S., YAROSHIETSKIY, I. D., Physico-technical Institute imeni A. S. Ioffe of the USSR Academy of Sciences, Leningrad

"Photon Drag of Electrons in the Presence of Intraband Light Absorption by Free Current Carriers in $A^{III}B^V$ Semiconductors"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 5, 1972, pp 909-914

Abstract: A study was previously made of the drag effect as applied to IV type semiconductors where the scattering of the carriers is determined by acoustic, nonpolar optical phonons and ionized impurity centers [A. M. Danishevskiy, et al., *ZhETF*, No 58, 544, 1970; A. A. Grinberg, *ZhETF*, No 58, 989, 1970]. Now an experimental and theoretical study has been made of the photon drag of electrons in $A^{III}B^V$ semiconductors where the scattering of the carriers on the polar optical phonons is the defining factor. The effect was recorded by means of a CO_2 laser ($\lambda = 10.6$ microns) using n-type InAs of various concentrations. A drag current caused by intraband transitions was detected experimentally. In accordance with the theoretical analysis, the electrons were dragged by the light. The corresponding temperature functions are presented for an electron concentration of $n = 1.6 \cdot 10^{16} \text{ cm}^{-3}$ with consideration of three currents:
1/2

- USSR.

UDC 621.315.592

AGAFONOV, B. G., et al., Fizika i Teknika Poluprovodnikov, Vol 6, No 5, 1972, pp 909-914

a) the current connected with absorption with the participation of polar optical phonons, b) the current connected with absorption in the presence of acoustic phonons and c) the current connected with absorption in the presence of admixture centers. The current connected with light absorption in the optical phonon section is predominate in the sample with the concentration $n = 1.6 \cdot 10^{16} \text{ cm}^{-3}$. The theoretical and experimental curves (considering absorption) are also presented for a concentration of $1.8 \cdot 10^{17} \text{ cm}^{-3}$. In this case the "cold" electron current can be neglected and the absorption coefficient with the participation of charged impurities can be considered independent of temperature. For this concentration the "admixture" drag current must become comparable with the "optical" current, and the rise of the theoretical curves with a decrease in temperature is connected with both of these currents.

2/2

USSR

2

VALOV, P.M., DANISHEVSKIY, A.M., KASTAL'SKIY, A.A., RYVKIN, B.S., RYVKIN, S.M., YAROSHETSKIY, I.D., Physicotechnical Institute imeni A.F. Ioffe, Academy of Sciences, USSR; Institute of Semiconductors, Academy of Sciences, USSR

"Photon Drag of Electrons During Intraband Light Absorption by Free Current Carriers in Semiconductors"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, No 12, 1970, pp 1919-1925

Abstract: Photon drag of electrons during indirect intraband absorption of light in semiconductors has been detected experimentally. This effect is due to an asymmetry of the distribution function originating as a result of the momentum of the incident photon flux. The effect was recorded during the absorption of radiation from a CO₂ laser in electronic germanium. The experimental results are in satisfactory agreement with the theory developed in a cited source. 2 figures, 9 bibliographic entries.

1/1

Acc. Nr: AP0043677

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki, 1970, Vol 58, Nr 2, pp 544-550

PHOTON DRAG OF FREE CARRIERS IN DIRECT INTERBAND
TRANSITIONS IN SEMICONDUCTORS

Danishevskiy, A. M.; Katal'skiy, A. A.;
Yaroshetskiy, I. D.; Ryvkin, S. M.

Drag of free carriers by light in direct optical transitions is predicted and experimentally observed. The experiment was carried out in hole germanium by means of a CO₂ Q-switched laser with a peak power of about 2 kW. With variation of the temperature from room to nitrogen temperature inversion of the drag current sign is found to occur. The regularities observed are in good agreement with the theory developed in ref [4].

1/1
REEL/FRAME
19770081

21-DI

Acc. Nr: **AP0043662** 4

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 2, pp 507-514

COLLECTIVE PROPERTIES OF EXCITONS IN SILICON

Ashkinadze, B. M.; Kretsu, I. P.;

Ryvkin, S. M.; Yaroshetskiy, I. D.

Recombinational radiation for high injection levels is investigated. It is shown that then the exciton density is high their collective interactions become important. At low temperatures (below 20° K) these lead to the formation of exciton «drops». At higher temperatures the formation of exciton associations, which are drop embryos, becomes possible.

4/1

REEL/FRAME
19770066

2/PI

1/2 032

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--THERMAL TREATMENT AND PROPERTIES OF MARTENSITE AGING STEEL OF THE
CON12KI6M11 TYPE -U-

AUTHOR--(04)--BODYAKO, M.N., ASTAPCHIK, S.A., YAROSHEVICH, G.B., OLEFIRENKO,
V.M.

COUNTRY OF INFO--USSR

SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. FIZ. TEKH. NAVUK 1970, (1),
47-53

DATE PUBLISHED--70

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

TOPIC TAGS--STEEL HEAT TREATMENT, HIGH STRENGTH STEEL, HOT ROLLING,
CRYSTAL STRUCTURE, MARTENSITIC STEEL, STEEL HARDENING, METAL
AGING/IU)00N12KI6M11 HOT ROLLED STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1994/1930

STEP NO--UR/0201/70/000/001/0047/0053

CIRC ACCESSION NU--AP0115742

UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--09GCT70

CIRC ACCESSION NO--AP0115742
 ABSTRACT/EXTRACT--(U) GP-G- ABSTRACT. BY TAKING INTO ACCOUNT THE RESULTS OF PREVIOUS WORK (B., ET AL., 1968), THE PRESENT WORK CONSTITUTES A FURTHER AND MORE DETAILED STUDY OF THE NATURE OF STRUCTURAL TRANSFORMATIONS AND PROPERTIES OF THE TITLE ALLOY. THE MATERIAL WAS HOMOGENIZED, FORGED, AGED, AND HARDENED. ANAL. OF THE DATA SHOWS THAT WITHIN THE AGING RANGE WHICH IS GENERALLY RECOMMENDED AS BEING THE OPTIMUM ONE, ONE CAN OBTAIN HIGH STRENGTH VALUES, NAMELY, 260-300 KG-MM PRIME2. THE PLASTICITY THEREBY IS VERY SATISFACTORY. UNDER REAL CONDITIONS DURING THE EXISTANT TECHNOL. OF MELTING AND HOT-PROCESSING OF STEEL IT IS DIFFICULT TO PREVENT STRESS CONCNS., IN THE FORM OF BRITTLE IMPURITIES, FROM ENTERING THE MATERIAL. THE STRENGTHENING OF MARTENSITE DURING AGING IS ASSOCD. WITH THE EARLY STAGES OF FORMATION OF PARTICLES OF THE SECONDARY PHASE. THE DIFFERENCES BETWEEN LOW TEMP. AND HIGH TEMP. AGING ARE DISCUSSED. QUENCHING IS THE ONE PROCESS THAT WOULD MOST SIGNIFICANTLY REDUCE THE LARGE SCATTER IN THE PROPERTIES OF THE MATERIAL FROM SAMPLE TO SAMPLE. CORRECT MARTENSITE AGING OF HOT ROLLED STEEL 00N12K16M11 AT 460-520DEGREES FOR 3 HR WILL RESULT IN STRENGTH VALUES OF 260-300 KG-MM PRIME2, WITH SATISFACTORY PLASTICITY AND DUCTILITY VALUES. RAPID CONTINUOUS HEATING AT 950-1200DEGREES MAKES IT POSSIBLE TO OBTAIN A FINE GRAINED (5-30 MU) STRUCTURE. HOWEVER, NO SUBSEQUENT AGING PRODUCES SATISFACTORY PLASTICITY. FACILITY: FIZ. TEKH. INST., MINSK, USSR.

UNCLASSIFIED

USSR

YAROSHEVSKAYA, K. SH.

UDC 519.2

"A Problem of Optimizing the Control of a Random Process"

Tr. Mosk. in-ta radiotekhn. elektron. i avtomatiki (Works of Moscow Institute of Radio Engineering, Electronics and Automation), 1972, vyp. 57, pp 64-66 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V58)

No Abstract

1/1

- 11 -

1/2 039 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THERMOCOMPENSATED MICROTENSORS FOR STRESS CONCENTRATION MEASUREMENTS -U-
AUTHOR--(03)-TISENKO, N.G., YAROSHEVSKAYA, L.S., RODIONOVA, N.A.
COUNTRY OF INFO--USSR
SOURCE--ENERGOMASCHINSTROENIE, VOL. 16, MAR. 1970, P. 10-12
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR, METHODS AND EQUIPMENT
TOPIC TAGS--STRESS CONCENTRATION, AUSTENITIC STEEL, ALUMINUM ALLOY, TENSOMETER, MICROELECTRONICS, BRONZE, BRASS, CAST IRON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/1487 STEP NO--UR/0114/70/016/000/0010/0012
CIRC ACCESSION NO--AP0120274
UNCLASSIFIED

2/2 039

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120274

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THEORETICAL ANALYSIS OF THE PERFORMANCE OF A CLASS OF MICROSENSORS IN THE MEASUREMENT OF STRESS CONCENTRATIONS IN SMALL AREAS OF MACHINE PARTS AND COMPONENTS. NOMOGRAMS ARE PLOTTED FOR THE SELECTION OF SUITABLE PARAMETERS FOR MICROSENSORS INTENDED FOR SPECIFIC APPLICATIONS. THE USEFULNESS OF THE APPLICATION OF WIRE LOOP MICROSENSORS OF THIS TYPE, WITH 2-3 MM BASES AND 80-100 RESISTANCES, TO CAST IRON, PERLLITE AND AUSTENITE STEELS, BRASS, BRONZE, ALUMINUM ALLOYS AND OTHER MACHINE PART MATERIALS IS POINTED OUT.

UNCLASSIFIED

1/2 '017

UNCLASSIFIED

PROCESSING DATE--11SEP70

TITLE--FLUORINE 19 NMR IN CADMIUM AND MERCURY ANHYDROUS AND HYDRATED
DIFLUORIDES -U-

AUTHOR--GAGARINSKIY, YU.V., POLISHCHUK, S.A., YAROSHEVSKAYA, N.F.,
AVKHUTSKIY, L.M.

COUNTRY OF INFO--USSR

SOURCE--SPECTROS. LETT. 1970, 3(1), 23-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--NMR SPECTRUM, MERCURY COMPOUND, CADMIUM COMPOUND, FLUORIDE,
FLUORINE, ISOTOPE, MAGNETIC MOMENT, CRYSTAL HYDRATE, HYDROGEN BONDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1331

STEP NO--US/0000/70/003/001/0023/0026

CIRC ACCESSION NO--AP0107804

ZZZZZZZZZZZZ

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107804

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRIME19 F NMR SPECTRA OF HGF
 SUB2 AND HGF SUB2.2H SUB2 O WERE OBSD. AT 150DEGREESK AND COMPARED WITH
 THOSE OBSD. BY A., ET AL. (1969) FOR CDF SUB2 AND CDF SUB2.2H SUB2 O.
 THE CHEM. SHIFTS FOR HGF SUB2 AND HGF SUB2.2H SUB2 O WERE 536 PLUS OR
 MINUS 8 AND 538 PLUS OR MINUS 8 PPM, RESP., AND THE 2ND MOMENTS WERE 5.9
 PLUS OR MINUS 0.3 AND 17.1 PLUS OR MINUS 0.8 OE PRIME2, RESP. THE H
 POSITIVE 2ND MOMENT FOR HGF SUB2.2H SUB2 O WAS 28.5 PLUS OR MINUS 0.8 OE
 PRIME2, DEMONSTRATING THE EXISTENCE OF H BONDING, APPARENTLY OF THE OH,F
 TYPE, IN THE CRYSTAL HYDRATES.

ZZZZZZZZZZZZ

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--18SEP70
 TITLE--THE MORPHOLOGICAL CHARACTER OF CHANGES IN THE FEMORAL HEAD AFTER
 REDUCTION OF CONGENITAL DISLOCATION -U-
 AUTHOR-(03)-GONCHAROVA, M.N., MIRZYEVA, I.I., YAROSHEVSKAYA, YE.N.
 COUNTRY OF INFO--USSR
 SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIYE, 1970, NR 2, PP 10-15
 DATE PUBLISHED-----70
 SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
 TOPIC TAGS--MORPHOLOGY, NECROSIS, ORTHOPEDIC SURGERY, TISSUE REGENERATION,
 BONE
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAME--1983/1405 STEP NO--UR/9115/70/000/002/0010/0015
 CIRC ACCESSION NO--AP0054269
 UNCLASSIFIED

2/2 023

CIRC ACCESSION NO--AP0054269

UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. THE CHANGES WHICH DEVELOP IN THE FEMORAL HEAD IN COMPLICATED COURSE OF CLOSED, LESS FREQUENTLY OPEN, REDUCTION OF CONGENITAL DISLOCATION OF THE HIP WERE SUBJECTED TO HISTOLOGICAL AND HISTOCHEMICAL STUDY. SECTIONS OF ARTICULAR CARTILAGE OF 34 FEMORAL HEADS AND 7 SOCKETS HAVE BEEN INVESTIGATED IN 37 CHILDREN AND ADOLESCENTS RANGING IN AGE FROM 3 TO 17 YEARS. IN PART OF CASES THE BONE TISSUE UNDERLYING THE ARTICULAR CARTILAGE HAS BEEN STUDIED. THE AUTHORS DISCLOSED NONSPECIFIC CHANGES OF ARTICULAR CARTILAGE OF REACTIVE CHARACTER AS MIGHT BE ENCOUNTERED IN A RANGE OF OTHER PATHOLOGICAL PROCESSES: FOCI OF NECROSIS AND NECROBIOSIS, CARTILAGINOUS TISSUE DEDIFFERENTIATION INTO FIBRILLAR CONNECTIVE TISSUE, AS WELL AS A REGENERATIVE REACTION IN THE FORM OF CARTILAGINOUS CELL PROLIFERATION. IN SOME CASES DISTURBANCES OF EPIPHYSEOGENESIS WERE OBSERVED AS THE RESULT OF CARTIILAGINOUS CELL DEDIFFERENTIATION OF THE ENCHONDRAL GROWTH ZONE. A DEPENDENCE WAS FOUND BETWEEN THE NUMBER OF REPEATED REDUCTIONS AND DEGREE OF SEVERITY. THE RESULTS SUPPORT THE BELIEF THAT THE INJURIOUSNESS PROVOKING THE REACTION IN THE GIVEN CASE ARE THE ANTIPIHYSIOLDICAL CONDITIONS OF THE INTEGUMENTARY CARTILAGE EXISTENCE IN THE POSTOPERATIVE PERIOD. OF ALL THE KNOWN TERMS CHARACTERIZING THE CHANGES IN THE FEMORAL HEAD WHICH SOMETIMES DEVELOP AFTER REDUCTION, THE TERM "PATHOLOGICAL RECONSTRUCTION" APPEARS TO MOST PRECISELY DETERMINE THE NATURE OF THE PROCESSES WHICH TAKE PLACE.

UNCLASSIFIED

USSR

UDC: 681.327

ATOVM'YAN, A. E., KUDRYAVTSEV, O. M., LITVAN, A. B., MALOVICHKO, V. V.,
MUSATOV, I. F., PUKOV, N. P., YAROSHEVSKIY, I. D.

"A Multiple-Reel Tape Transport Mechanism for Memory Devices"

USSR Author's Certificate No 288051, filed 5 Aug 69, published 20 Apr 71
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct
71, Abstract No 10B344 P)

Translation: Multiple-reel tape transport mechanisms for memory units are known which contain a reel cassette, reel drive spindles, and a drive for moving the cassette. A distinguishing feature of the described device is arrangement of the reels in the cassette by pairs in two groups coaxially with each other and with their drive spindles; and the cassette contains a bracket with guides for displacing the cassette along the axis of the spindles, which are equipped with releasable cartridges containing cams for locating the reels with internal tapers. Fastened to the reels are spring-loaded gear sectors which engage in the initial state with geared rims fastened on the cassette housing. This speeds up data sampling and improves the reliability of the device. Two illustrations.

1/1

USSR

YAROSHEVSKIY, M. G., Institute of the History of Natural Science and Technology, Academy of Sciences of the USSR, Moscow

"Categorical Analysis of the Development of Psychological Cognition"

Moscow, Voprosy Psikhologii, No 3, May/Jun 73, pp 15-31

Abstract: One of the problems of scientific psychology is to develop procedural guidelines for identifying the invariants in psychological cognition and the logic of evolutionary and revolutionary transition from certain forms to others. The author reviews attempts to handle this problem in terms of the concepts of "contrasting pairs" (G. Allport, G. Murphy, R. Coan and others), "paradigms" (D. Palermo) and "prescriptions" (R. Watson). An alternative solution is proposed: identification of the system of categories, principles and problems which form the invariant core of psychology ("categorical order" or "categorical network"). The logic of development of psychological science is reflected in the transformations which take place in the categorical apparatus as a whole or in its individual subcategories. The transformation is the result of sociohistorical factors -- economic, political and ideological -- rather than a mere "spontaneous offshoot" of

1/2

USSR

YAROSHEVSKIY, M. G., Voprosy Psikhologii, No 3, May/Jun 73, pp 15-31

existing ideas. Differentiation of categorial and theoretical levels in the movement of scientific thought provides a basis for identifying the goals and methods of various disciplines and areas on the one hand, and their actual function in the development of science on the other.

2/2

USSR

UDC 629.76/.78.015:533.6

KLIMIN, A. V., YAROSHEVSKIY, V. A.

"Control of the Entry of a Space Craft Upon Entry Into the Atmosphere With Hyperbolic Velocity"

V sb. Upravleniye v kosmose. T. 1 (Control in Space. Vol 1 -- Collection of Works), Moscow, "Nauka", 1972, pp 237-248 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B350)

Translation: Problems of the control of a spacecraft entering the earth's atmosphere with hyperbolic velocity are discussed. Control is achieved by a change in the angle of roll. 11 ref. Authors' abstract.

1/1

USSR

UDC: 629.19:533.6

YAROSHEVSKIY, V. A.

"Disturbed Motion of an Uncontrolled Body Around its Center of Gravity During Flight in the Atmosphere"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of Central Aerohydrodynamics Institute), 1971, 2, No 6, pp 80-86 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B425)

Translation: The method of phase integrals (Wentzel-Kramers-Brillouin method) is used for studying the disturbed motion of an uncontrolled flight vehicle. The initial data are linearized equations of disturbed motion which are solved in accordance with the given method assuming a weak time change in the parameters of motion (flight speed, velocity head, and longitudinal angular velocity). The results are used for determining the angles of attack and glide in the case of atmospheric entry of a rotating vehicle with a shape close to that of a solid of revolution, and a low degree of aerodynamic and weight asymmetry. V. I. Kholyavko.

1/1

USSR

UDC 629.78.015.076.8

VOYEYKOV, V. V. and YAROSHEVSKIY, V. A.

"Probability of Rotating Body Stabilization at Large Angles of Attack During Atmospheric Descent"

Uch. Zap. Tsentr. Aerogidrodinam. In-ta (Scientific Writings of the Central Aerohydrodynamics Institute), Vol 3, No 2, 1972, pp 94-101 (from Referativnyy Zhurnal--Raketostroyeniye, No 8, 1972, Abstract: 8.41.82)

Abstract: The problem of determining the probability of rotating body stabilization at large or small angles of attack in uncontrolled atmospheric descent is examined. The moment characteristic of a rotating body provides stable balance for $\alpha = 0$ and 180° . Two limiting cases are investigated: small initial angular velocities (the solution is trivial) and large angular velocities. The results are compared with the results of numerical calculations for plane motion. 4 figures, 5 bibliographical references.

1/1

USSR

UDC 629.78.015.017.2

YAROSHEVSKIY, V. A.

"Perturbed Motion of an Uncontrolled Body Near the Center of Mass During Flight in the Atmosphere"

Uch. zap. Tsent. Aero-gidrodinam. In-ta. [Scientific Writings of Central Aero-Hydrodynamics Institute], Vol 2, No 6, 1971, pp 80-86, (Translated from Referativnyy Zhurnal, Raketostroyeniye, No 4, 1972, Abstract No 4.41.116 from the Resume).

Translation: Linearized equations of perturbed motion about the center of mass of an uncontrolled body with a plane of symmetry are studied. It is assumed that the velocity head, velocity and longitudinal angular velocity are slowly changing functions of time. The rules of change of angles of attack and slipping with time are determined. 8 Biblio. Refs.

1/1

USSR

UDC: 629.19.533.6

YAROSHEVSKIY, V. A.

"Determination of Quasistatic Modes of Motion in Three-Space of an Uncontrolled Body"

Uch. zap. Tsentr. aero-gidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamics Institute), 1970, 1, No 5, pp 44-54 (from RZh-Mekhanika, No 7, Jul 71, Abstract No 7B348)

Translation: The paper deals with quasistatic states of change in the angles of attack and glide of a body moving in the atmosphere and rotating relative to the longitudinal axis. The effect of weight eccentricity and centrifugal moments of inertia are taken into account. By using the small parameter method, approximate analytical expressions are found for the angle of attack and the angle of glide in the quasistatic mode. V. M. Ponomarev.

1/1