"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 007

UNCLASSIFIED

CIRC ACCESSION NO--AP0139359 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLED STUDY WAS MADE ON ROTATING FIELD AND FORAGE CROPS DURING 1962-67. THE FIELD CROPS WERE CULTIVATED IN THE ORDER: WINTER WHEAT, POTATOES, WINTER WHEAT, SPRING WHEAT AND CLOVER, AND FINALLY CLOVER ALONE. THE FODDER CROPS WERE: CORN, BEET, AND FEED GRADE BEANS. THE AGROCHEM. FEATURES OF THE SOIL, CLIMATE OF THE REGION, AND DETAILS OF TREATMENT OF THE SOIL WITH LIMESTONE AND N-P-K FERTILIZERS FOR EACH CROP ARE MENTIONED. THE MATERIAL BALANCES OF N-P-K NUTRIENTS FOR EACH CROP IS GIVEN. USE OF K FERTILIZER GREATLY INCREASED THE YIELDS FOR BOTH TYPES OF CROPS. WHEN CATTLE MANURE WAS USED, THE EFFECTIVENESS OF K ON THE YIELD DECREASED SIZABLY. PERCENT UTILIZATION OF K RANGED 32-44PERCENT FOR THE FIELD CROPS, AND WAS 50PERCENT IN THE ABSENCE OF LIMESTONE; FOR THE FODDER CROPS IT WAS SIMILAR TO 50PERCENT. FOR BOTH THE TYPE OF CROPS, THE SOIL FERTILITY INCREASED PROGRESSIVELY WITH FURTHER CULTIVATION. STOPPAGE OF K FERTILIZERS IN FEED DOSES IMMEDIATELY REDUCED THE YIELD OF THE NEXT CROP IN BOTH CASES, AND ALSO REDUCED THE CONTENT OF AVAILABLE K IN THE SOIL IN ALL CASES. THE PLANTS DID NOT REMOVE ALL K FED TO THE SOIL, AND THIS LED TO MOBILIZATION AND CONSEQUENT ACCUMULATION OF K IN CERTAIN SOIL LAYERS. AN EXPTL. PROCEDURE IS DESCRIBED TO DET. SUCH ACCUMULATION OF K IN THESE SOILS.

FACILITY: VSES. INST. UDOBR. AGROPOCHVOVED., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 616.981.718-06:616.988.25-022.395.42-092.9

PCHELKINA, A. A., Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences USSR, Moscow

"Characteristics of a Mixed Infection (Q Fever and Tickborne Encephalitis) in Experimentally Infected Laboratory Animals"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 2, 1972, pp 199-203

Abstract: Simultaneous infection of guinea pigs and mice with Coxiella burnetii and tickborne encephalitis virus markedly aggravated the pathological process, shortened the prodromal period, and slightly lengthened the course of the disease. The animals developed viremia and rickettsiemia simultaneously. The titers of antihemagglutinins and complement-fixing antibodies to both pathogens increased. The interval between the infections was a significant factor. For example, injection of virus 2 days after infection with C. burnetii resulted in the latter's inhibiting reproduction of the former. On the other hand, when virus was injected 15 days after the animals were infected with C. burnetii, the rickettsias had no effect on the height or duration of viremia and their reproduction was inhibited by the virus.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 533.6.011

D'YAKONOV, YU. N., PECHLKINA, D. V. and SANDOMIRSKAYA, I. D.

"On the Calculation of the Supersonic Flow Past Bodies Under Large Angles of Attack"

Moscow, Sb. rabot Vychisl. tsentra Mosk. un-ta (Collection of Works of the Computer Center of Moscow University) No 19, 1972, pp 64-70 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4B295 by G. L. Stenchikov)

Translation: A method for calculating the flow past long, blunt bodies under a large angle of attack is described: the method is used when peculiarities of the type of shock wave, flow separation, etc., arise in the shadow region of the current. Outside the separation zone the flow is calculated with the aid of the ideal gas model, which, as is well known, in this case describes the process well. The distribution of pressure in the separation zone is given on the basis of experimental data and the results of calculations obtained for the region of smooth flow. For the calculation of three-dimensional steady flow in the supersonic region the grid method is used. The boundaries of the separation zone are considered flat and previously set. It is assumed that the gas flow in the separation region does not show influence on the purely gas-dynamic region, that is, no additional conditions are placed on the zone boundary.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

D'YAKONOV, YU. N., et al., Sb. rabot Vychisl. tsentra Mosk. un-ta, No 19, 1972, pp 64-70

However it is indicated that such a formulation in the case when the component of peripheral velocity normal to the separation surface is less than the local speed of sound, but comparable to it in value, is also incorrect but gives results close to reality.

Results of the calculation of a flow past a blunt cone under various angles of attack are presented. The use of the scheme practically removes the substantial limits which existed earlier on the length of the body calculated. The scheme is easily generalized to the case when the boundary of the zone of separation is given or is in the form of a function determined by the results of experimental investigations or found with the aid of gas-dynamic parameters obtained in the process of solving the problem.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 025

TITLE--VITAMIN B SUB12 -U- UNCLASSIFIED

PROCESSING DATE--20NOV70

AUTHOR-(02)-PANTSKHAVA, YE.S., PCHELKINA, V.V.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,043

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

DATE PUBLISHED--09MAR70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--VITAMIN, COBALT COMPOUND, BIOSYNTHESIS, BACILLUS, CONTINUOUS CULTURE, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1079

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

CIRC ACCESSION NO--AA0130114

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 025 UNCLASSIFIED

CIRC ACCESSION NO--AA0130114 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VITAMIN B SUB12 IS PREPD. BY FERMENTING LOWER ALCS. WITH THERMOPHILIC METHANOBACILLUS KUZNECEGUII IN THE PRESENCE OF CO SALTS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 620.193.47

TSYGANKOVA, L. YE., VIGDOROVICH, V. I., and PCHEL'NIKOV, I. T., Tambor State Pedagogical Institute

"Corrosion and Electrochemical Behavior of Certain Metals in Water-Ethyleneglycol Solutions of Sodium Chloride"

Moscow, Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 648-652

Abstract: This article contains a study of the behavior of St.3 steel and M-1 copper in water-ethylene-glycol solutions as a function of the concentration of ethyleneglycol (20-99.6%) and fluoride ions (up to 2 normal).

It was found that the corrosion rate of steel in water-ethylene-glycol solutions drops systematically with an increase in the ethylene-glycol content. For copper this relation is more complex with a general trend toward a decrease. Under conditions of periodic heating the corrosion of St.3 steel and copper in the liquid phase decreases with an increase in the chloride ion concentration. Corrosive deterioration of the investigated materials takes place with oxygen depolarization under cathode control conditions. The proposition has been stated that at room temperature and a chloride ion concentration of more than 0.1 gram-

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

TSYGANKOVA, L. YE., et al, Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 648-652

ion/liter, ionization of copper to Cu^{+} takes place, and at 80^{0}, to Cu^{2+}. It is pointed out that the calculated corrosion rate of the metals found by the polarization curves obtained during the experiment agree well with the results of gravimetric measurements. This is a proof of the electrochemical mechanism of corrosion of the investigated materials in the investigated solutions.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC: 621.372.85

IZYUMOVA, T. I., PCHEL'NIKOV, Yu. N.

"A Splitter-Amplifier Based on a Traveling Wave Tube"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific and Technical Collection. SHF Electronics), 1971, vyp. 1, pp 138-140 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5B149)

Translation: The paper presents the design of a matching device based on coupled helices for splitting the signal at the output of a traveling wave tube; frequency responses are given for a two-channel splitter. The authors show how loading affects the frequency dependences of the gain in both channels. Three illustrations. Resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

Acc. Nr: AP0049769 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: UR 0191

101292p Effect of synthesis conditions on the molecular weight of polyurethane ureas. Strakhov, V. V.; Kafengauz, A. P.; Pchel'nikova, G. V. (USSR). *Plast. Massy* 1970, (1), 8-9 (Russ). The title polymers (I) were prepd. in CH_2Cl_2-H_2O by a procedure of V. V. Strakhov (1969). The isocyanate prepolymers were prepd. from polypropylene glycol of mol. wt. 1000 and 2,4-tolylene diisocyanate at a 2:1 NCO-OH molar ratio. The yield and the mol. wt. of I increased with agitation. Thus, when the mixt. was stirred for 5 and 30 sec, the yield and sp. viscosity increased from 79.5% and 0.78 to 84.0% and 1.43, resp. The mol. wt. of I was also affected by the order of mixing of the reagents. The effects of a change in the pH of the aq. phase on the mol. wt. of I were less significant. CKJR

REEL/FRAME
19801687

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

Glass and Ceramics

USSR UDC 666.1.031:532.5

SOKOLOV, A. A., SHEYNKOP, I. M., and PCHELYAKOV, K. A.

Modelirovaniye protsessov gidrodinamiki vyazkikh rasplavov)Modeling of Processes of the Hydrodynamics of Viscous Smelts), Moscow, Izdatel'stvo Literatury po Stroitel'stvu, 1972, 191 pp

Translation of Annotation: The book discusses the physical bases of processes of modeling the hydrodynamics of viscous smelts. Theoretically based methods are given for the calculation of convectional and production flows. Questions are examined which concern the influence of internal sources of heat and bubbling on a viscous smelt. Several engineering tasks are presented which have been solved by the authors with the modeling method.

The book is intended for technical engineering workers in the glass manufacturing industry and also may be used by students at schools of higher education.

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USSR

SOKOLOV, A. A., et al., Modeling of Processes of the Hydrodynamics of Viscous Smelts, Moscow, Izdatel'stvo Literatury po Stroitel'stvu, 1972, 191 pp

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SOKOLOV, A. A., et al., Modeling of Processes of the Hydrodynamics of Viscous Smelts, Moscow, Izdatel'stvo Literatury po Stroitel'stvu, 1972, 191 pp

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

SOKOLOV, A. A., et al., Modeling Of Processes of the Hydrodynamics of Viscous Smelts, Moscow, Isdatel'stvo Literatury po Stroitel'stvu, 1972, 191 pp

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JPRS 59008
6-73

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XVI-7. GROWTH MECHANISMS AND THE FORMATION OF DEFECTS IN THIN HOMOEPITAXIAL SILICON FILMS IN THE ION DEPOSITION METHOD

[Article by O. P. Pchelyakov, R. N. Lovyagin, A. I. Toropov, Ye. A. Krivorotov, L. S. Aleksandrov, G. I. Stepin, Novosibirsk; Novosibirsk, III Simpozium po Protsessam Rosta i Sinteza Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June 1972, p 226]

The methods of highly resolving replicas and electron microscopy by transillumination were used to study the surface structure of silicon in the presence of thermal etching of it in an ultra high vacuum and the growth mechanisms of the epitaxial film. It is demonstrated that after etching, macro- and microstages are formed on the substrate surface. During the film growth process, shifting of these stages is observed.

A study was made of the types of defects and their distribution in the film with respect to thickness. The interrelation was established between the configuration of the developed growth surface and the location of the defects formed. On the growth surface reactions take place which lead to the appearance of coherent interstitial separations with increased carbon concentration and subsequent conversion of them into epitaxial layers of silicon carbide.

Theoretical estimates were made of the epitaxial growth parameters and the elastic stresses arising during transformation of the coherent separations into carbide particles.

PCHELYAKOV, O.P.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 013 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--EFFICIENCY OF METAL PROTECTION WHEN WELDING WITH A FLUX CORED ROD -U-

AUTHOR-(02)-PCKHOONYA, I.K., SHLEPAKOV, V.N.

COUNTRY OF INFO--USSR

SOURCE--AVTOMAT. SVARKA. FEB. 1970, (2), 10-12

DATE PUBLISHED----FEB70

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

TOPIC TAGS--NITROGEN, METAL CONTAINING GAS, GAS CONTAINING METAL, WELDING ELECTRODE, SHIELDED ARC WELDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0314 STEP NO--UR/0125/70/000/002/0010/0012

CIRC ACCESSION NO--AP0124073

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 013 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSICN NO--AP0124073

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RELATIVE EFFICIENCIES OF VARIOUS METHCDS CF PROTECTING HOT METAL PARTS FROM ATTACK BY THE SURRCUNDING AIR DURING ARC WELDING ARE DISCUSSED, WITH SPECIAL REF. TO THE USE OF FLUX CORED WELDING RODS OF VARIOUS TYPES (TUBULAR, DOUBLE LAYERED, ETC.). THE DOUBLE LAYERED TYPE, IN PARTICULAR, IS VERY EFFICIENT IN PREVENTING THE ENTRY OF N INTO THE WELD METAL; IT IS EQUIVALENT IN THIS RESPECT TO COATED ELECTRODE WIRES.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

Acc. Nr: AP0047349 Ref. Code: UR0589

PRIMARY SOURCE: Vestnik Khirurgii imeni I. I. Grekova, 1970, Vol 104, Nr 1, pp 68-72

PHYSIOLOGICAL ASPECTS OF GASTRIC RESECTION (THE PROBLEM OF FUNCTIONAL COMPENSATION)

Ye. A. Pechatnikova

Cancer, ulcer, and polyposis of the stomach are accompanied by considerable disturbances on the part of the digestive system organs. Factors determining the functional state in the operated patients are as follows: the extent of gastric resection, the time elapsed since the operative procedure and the level of transection of the vagus nerves. The processes of compensation are not regular, and it accounts for the presence of dissociation of functions of the digestive system organs.

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19790875

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USSR UDC 669.71.018.9.4

TSABROV, N. D., VINOKUROV, N. D., MARCHENKO, A. M., PECHENEV, V. S., KOPYTOV, G. A., VOL'KHIN, G. D., BERNSHTEYN, G. G.

"Experiment in Operating a Vacuum Mixer"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul VILSa (Light Alloy Technology. Scientific and Technical Bulletin of the VILS), 1970, No 5, pp 26-31 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G206)

Translation: The application of a vacuum mixer for evacuating liquid alloys based on aluminum is expedient and has a number of advantages over the methods used earlier: the gas saturation of the metal is reduced appreciably; the technological plasticity of the ingots is increased; an increase in the casting rate by 10-15% is possible; and the number of defects during ultrasonic control of the products is reduced sharply. The schematic of the mixer and its operation are described. There are 4 illustrations and 1 table.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 612.451:612.766.2

VYAZNITSKIY, P. O., PECHENEVSKIY, A. V., and KOROTKOV, D. I.

"Effect of Hypodynamia on the Nitrogen Balance and Glucocorticoid Activity of the Adrenal Cortex"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 8, 1972, pp 59-60

Abstract: Several biochemical parameters were measured in the urine of 16 human subjects who remained seated and inactive for 3 days in armchairs with the backs tilted at 90, 110, and 140°. The enforced hypodynamia distinctly increased the excretion of total nitrogen and creatinine, but only when the back of the chair was tilted at 90 and 140° (at 110° there was virtually no change). The 17-hydroxycorticosterone level tended to rise while the glucocorticoid activity of the adrenal cortex clearly decreased when the subjects' backs were at 90 and 140° angles. Thus, not only hypodynamia but the position of the trunk affected this function. The excretion of neutral 17-ketosteroids with urine increased in the subjects who sat in chairs with the backs tilted at 90 and 140°. These subjects also exhibited a distinct decrease in glucocorticoid activity of the adrenal cortex, i.e., the increase in excretion of neutral 17-KS may have been due solely to the intensification of androgen activity, a protective-adaptive reaction of the body to the negative nitrogen balance brought about by hypodynamia.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 615.21+615.22]:547.785.5].012.1

PECHENINA, V. M., MUKHINA, N. A., ABATUROVA, K. A., GREBENSHCHIKOVA, L. P., MIKHAYLOVA, T. V., KURILENKO, V. M., and GILEV, A. P., Novokuznetsk Scientific Chemical-Pharmaceutical Research Institute

"Synthesis and Investigation of Some Benzimidazole Derivatives. V. Esters and Ethers of 1-Hydroxymethyl- and 1-(2-Hydroxyethyl)-benzimidazoles"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 5, No 10, Oct 71, pp 13-15

Abstract: To anaalkoxide obtained from 0.04 g-atom of metallic Na and corresponding alcohol, 0.02 mole of 1-chloromethylbenzimidazole hydrochloride is added with stirring, the mixture is left standing for several hours, the precipitate is removed by filtration, the filtrate is evaporated, and the oily residue is dissolved in ethanol. Upon addition of an alcoholic acid solution the respective salts of 1-hydroxymethylbenzimidazole ether is precipitated. To obtain esters of 1-(2-hydroxyethyl)benzimidazole, a previously described method was used. The compounds are moderately toxic, affecting slightly the central nervous system, lowering rectal temperature, and disturbed coordination in some animals. Specific physiological effects of select representatives are reported, but no general trend is noticeable.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 669.017.11

SIDORENKO, A. P., VASYUTINSKIY, N. A., PECHENKIN, V. P., and LUKHMANOV, L. M.

"Change in the Mass of Titanium Slags During Ingot Cooling"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 18-22

Translation: It is shown that change in the mass of slag in ingots with cooling depends on the degree of slag restoration, the porosity and size of the ingot, and, most of all, on cooling conditions. Methods of determining the increase in mass of slags when they are cooled are described. Numerical data on increase in the mass of ingots of titanium slags during cooling under industrial conditions are given. One illustration, one table, and five bibliographic entries.

1/1

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 669.295.053.24

SIDORENKO, A. P., VASYUTINSKIY, N. A., PECHENKIN, V. P., and LUKHMANOV, L. S.

"Change in the Mass of Titanium Slag During Cooling of Ingots"

Sb. tr. Vses. n.-i. i proyektn. in-t titana [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 18-22, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No.1 G186 by the authors).

Translation: The change in slag mass in ingots during cooling depends on the degree of reduction of the slag, the porosity and the quantity of slag, and, most of all on the cooling conditions. Methods are described for determining the increase in slag mass during cooling. Numerical data are presented on the increase in the mass of Ti slag ingots during cooling under industrial conditions. 1 figure; 1 table.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 015 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--KINETICS OF THE VACUUM ANNEALING OF PRODUCTS OF CARBONIFEROUS FERROCHROME OXIDATION -U-

AUTHOR-(03)-MAZALETSKIY, G.D., PECHENKIN, V.S., BAYTAKOVA, R.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(3), 670-2

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--OXIDATION, FERROCHROMIUM, METAL REDUCTION, VACUUM ANNEALING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1065 STEP NO--UR/0080/70/043/003/0670/0672

CIRC ACCESSION NO--AP0123058

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 015 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123058

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MATERIAL SUBJECTED TO THE VACUUM ANNEALING CONTAINED CR SUB2 O SUB3 57.2, FEO 4.55, CR 17, FE 14.1, AND C 1.01PERCENT. THE ANNEALING PROCESS CAN BE DESCRIBED BY THE TOPOCHEM. VOLINGGOROV-EROFEEV EQUATIONS. THE CURVILINEAR ARRHENIUS PLOT INDICATES 2 PARALLEL PROCESSES. THE REDN. OF FEO IS DIFFUSION CONTROLLED. FACILITY: AKTYUBINSK. ZAVOD FERROSPLAVOV, AKTYUBINSK, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 621.396.66(083.8)

BEKHTEREV, A. P., PECHENKO, V. V., [illegible], Y. M., ERASTOV, R. A.

"A Device for Mechanically Tuning a Resonance Circuit"

USSR Author's Certificate No 255377, Filed 15 Jul 68, Published 24 Mar 70 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10V420 P)

Translation: The proposed device for mechanically tuning a resonance circuit contains a kinematic chain for adjusting the tuning element, a kinematic chain for fine tuning of this element, and a mechanism for switching the kinematic chains which is controlled by a mismatch pickup. As a distinguishing feature of the patent, the construction of the device is simplified and its operational reliability is improved by using a free travel mechanism as the mechanism for switching the kinematic chains. This mechanism is equipped with a sprocket which is connected to the shaft of the tuning element. Spring-supported rollers are wedged between the sprocket and the ring of the worm wheel for the kinematic chain used for fine tuning. The switching mechanism is also equipped with a fork fitted with lugs to unwedge the rollers.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

Rare Metals

USSR UDC 546.664'24:621.317.412

PECHENNIKOV, A. V., KUPRIYANOV, B. A., CHECHERNIKOV, V. I., ABRIKOSOV, N. KH., and ZINCHENKO, K. A., Moscow State University imeni M. V. Lomonosov, Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences USSR

"Magnetic Properties of Dysprosium Tellurides"

Moscow, Neorganicheskiye Materialy, Vol 6, No 8, Aug 70, pp 1528-1529

Abstract: There is interest in a study of the magnetic properties of the r.e.m. Chalcogenides of the yttrium subgroup, most elements in which have a complex magnetic structure. The authors therefore studied compounds of dysprosium with tellurium: DyTe, Dy_3Te_4, Dy_2Te_3, Dy_4Te_7, Dy_4Te_9, and Dy_4Te_{11}. Measurement of the temperature dependence of magnetic susceptibility of dysprosium tellurides was performed using a pendulum balance in the 80-900°K temperature interval with a magnetic field intensity of about 10 koe. The investigations showed that the dependence of the inverse specific magnetic susceptibility on temperature is linear for all dysprosium tellurides. The results of the studies of the magnetic properties showed that these compounds have different electrical properties from metallic dysprosium and a significantly different nature of exchange interactions, indicating that the sf exchange interaction is significant in the formation of complex magnetic structures in the r.e.m.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 621.378.325

BOGDANKEVICH, O.V., ZVEREV, M.M., PECHENOV, A.N., SIBIRYAK, I.O.

"On The Divergency Of Radiation Of Lasers Of The 'Radiative Mirror' Type With Electron Pumping"

Kvantovaya elektronika (Quantum Electronics), Moscow, No 6(12), 1972, pp 110-111

Abstract: The dependence is studied of the radiation divergence of a semiconductor laser with a "radiative mirror" type resonator and electron beam pumping on the distance L to the external mirror. (Pumping was conducted with a pulsed beam of electrons which have an energy of 170 kev, a current density up to 25 a/cm^2, and a duration of 200 nanosec.) A minimum divergence of 7' was observed at L equals 28 mm and a diameter of the excited region of 300 micron, which corresponds to the diffraction limit of divergence of the fundamental type of oscillations. It is shown that an increase of L leads to a decrease of the width of the longitudinal mode. With L equals 22 mm the measured width of the mode amounted to $\Delta\lambda \leqslant 0.05$ Å. 1 fig. 4 ref. Received by editors, 28 March 1972

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

Lasers/Masers

USSR UDC 621.373:530.145.6

BOGDANKEVICH, O. V., ZVEREV, M. M., MESTVIRISHVILI, A. N., NASIBOV, A. S., PECHENOV, A. N., SVIRENKOV, A. I., FEDOSEYEV, K. P.

"A High-Power Semiconductor Maser With Electron Beam Pumping"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 2, Moscow, 1971, pp 92-93 (from RZh-Radiotekhnika, No 7, Jul 71, Abstract No 7D113)

Translation: To increase the power of a semiconductor maser with electron beam pumping, the authors study multielement structures of gallium arsenide and cadmium sulfide. An emission power of 1.5 MW is achieved when a semiconductor maser on gallium arsenide is excited by an electron beam with an energy of 300 keV and a current of 300 A. Two illustrations, bibliography of five titles.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 621.378.35

BOGDANKEVICH, O. V., ZVEREV, M. M., MUSTVIRISHVILI, A. N., NASIBOV, A. S., PECHENOV, A. N., SVINENKOV, A. I., FEDOSEYEV, K. P.

"A High-Power Semiconductor Laser With Electron-Beam Pumping"

Moscow, Kvantovaya Elektronika, No 2, 1971, pp 92-93

Abstract: Multiple-element structures of gallium arsenide and cadmium sulfide are studied for the purpose of increasing the power of a semiconductor laser with electron-beam pumping. An emission power of 1.5 MW is achieved when a gallium arsenide semiconductor laser is stimulated by a beam of 300 keV electrons at 300 A. Two figures, bibliography of five titles.

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USSR

UDC 621.378.35

BOGDANKEVICH, O.V., ZVEREV, M.M., KOLOMIYSKIY, A.N., PECHENOV, A.N., VASIL'YEV, B.I.

"Multielement Semiconductor Laser Of The 'Emitting Mirror' Type"

Kvantovaya elektronika, Moscow, No 5, May 71, pp 95-96

Abstract: The construction and some characteristics are described of a multielement laser of the emitting mirror type. A high-voltage pulse electron gun was used for pumping of the laser, with a beam energy of 108 kev and a current density of 20 a/cm^2. The polished plane-parallel disks 0.2-mm thick used as the working medium were cut out of single crystals of n-type conductivity gallium-arsenide doped with tellurium to a concentration of(1--2) . 10^{18} cm^{-3}. The generation power increases linearly with an increase of the cross section of the multielement target. A power of 28 kw is attained with a crystal with a 1 cm^2 area. The halfwidth of the directivity pattern is 7°, and the generation spectrum consists of several lines corresponding to the modes of the Fabry--Perot resonator. Received by editors, 28 Apr 71. 2 fig. 6 ref.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 621.373.029.7.004.14:681.3

BOGDANKEVICH, O. V., NASIBOV, A. S. , NOVIKOV, A. A., PECHENOV, A. N., FEDOROV, V. B., TSVETKOV, V. V.

"Some Possibilities of Applying a Semiconductor Laser with Electron Excitation in Computers"

Moscow, Radiotekhnika i Elektronika, Vol XVI, No 5, May 1971, pp 824-828

Abstract: A study is made of the requirements on a cathode ray tube based on a semiconductor laser with electron excitation beginning with the problems of creating prospective optoelectronic memories. Experimental and theoretical results confirming the possibility of satisfying these requirements are presented.

The threshold current density is plotted as a function of the electron energy for various sizes of the excited domain d and reflection coefficients of the mirrors. With a beam energy of 100 kiloelectron volts and a current density of 10 amps/cm^2 from a cell 210 microns in diameter, the output power was 5 watts, and the conversion efficiency was 1.5 percent. Since the pulse length of the electrons in the beam was 10^{-7} seconds, the radiation energy was $5 \cdot 10^{-7}$ joules. Consequently, in order to obtain the radiation energy of

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USSR

BOGDANKEVICH, O. V., et al., Radiotekhnika i Elektronika, Vol XVI, No 5, May 1971, pp 824-828

10^{-7} joules required to insure a read rate of $B = 10^8$ bits/second, under all other equal conditions, the size of the spot on the laser screen of the cathode ray tube has to be about 100 microns. The pulse power of the radiation will be 1 watt and the mean power, 10^{-2} watts, and a screen with 10^5 positions will be about 40 × 40 mm. A screen spot size up to 300 microns is required to insure a read rate of 10^9 bits/second.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--ALUMINUM BASE CATHODIC PROTECTION ALLOY -U-

AUTHOR-(03)-FRANTSEVICH, I.N., ZHURAKHOVSKIY, A.F., PECHENTKOVSKIY, YE.L.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,158
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--04FEB70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ALUMINUM BASE ALLOY, ZINC CONTAINING ALLOY, CALCIUM ALLOY, COPPER CONTAINING ALLOY, LEAD CONTAINING ALLOY, MANGANESE CONTAINING ALLOY, ELECTROCHEMICAL PROPERTY, METALLURGIC PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1056 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0130091

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0130091

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN AL BASED CATHODIC PROTECTION ALLOY WITH GOOD ELECTROCHEM. CHARACTERISTICS HAD THE FOLLOWING CHEM. COMPN.: ZN 17.5-20; CA 4.3-5.3; MN 0.25-0.4; IMPURITIES OF FE SMALLER THAN OR EQUAL TO 0.25; SI SMALLER THAN OR EQUAL TO 0.15, CU SMALLER THAN OR EQUAL TO 0.01PERCENT PB TRACES, CD TRACES; AND AL THE REMAINDER.

FACILITY: INSTITUTE OF PROBLEMS IN MATERIAL MANAGEMENT, ACADEMY OF SCIENCES, UKRAINIAN S.S.R.

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USSR UDC 669.715'5'74'891.018.8(088.8)

FRANTSEVICH, I. N., ZHURAKHOVSKIY, A. F., and PECHENTKOVSKIY, Ye. L., Institute of Problems of Material Science, Academy of Sciences Ukrainian SSR

"Aluminum-Base Protective Alloy"

USSR Authors' Certificate No 263158, Cl. 40B, 21/00, (C 22 c) filed 15 May 67, published 29 May 70 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 1797 P)

Translation: An anti-corrosion alloy to protect storage spaces containing corrosives on board ships and in installations operating under conditions of marine corrosion contains the following (in %): Zn 17.5-20.0, Ca 4.3-5.3, Mn 0.25-0.4, admixtures of Fe < 0.25, Si 0.15, Cu < 0.01, and traces of Pb and Cd. It has an electrochemical equivalent of 0.51 g/l·hr, possesses heightened technological properties, and is economical.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 008 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--BEHAVIOR OF ISOMERIC DIAMMINES OF PLATINUM (II) IN THE PRESENCE OF ACTIVATED CARBON -U-

AUTHOR--GRINBERG, A.A., GELFMAN, M.I., PECHENYUK, S.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 487-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PLATINUM, ACTIVATED CARBON, ISOMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0307 STEP NO--UR/0078/70/015/002/0487/0489

CIRC ACCESSION NO--AP0103962

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 008 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103962

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON A CONTACT WITH ACTIVATED C (PREPD. FROM SACCHAROSE), CIS (PT(NH SUB3) SUB2 CL SUB2) ISOMERIZED IN AQ. SOLN. TO TRANS (PT(NH SUB3) SUB2 CL SUB2).

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC: 681.3

KAGANOV, S., LEVCHENKO, V., PECHERSKIY, B.

"Some Problems of Organizing Commands for Exchange of the M-220 Computer With a Communications Line"

V sb. Elektronno-vychisl. tekhn. i programmir. (Computer Technology and Programming--collection of works), vyp. 3, Moscow, "Statistika", 1970, pp 57-62 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V696)

Translation: Requirements are formulated for these commands, their structure is hypothesized and exchange algorithms are formulated. Organization of the operation of the exchange commands is described under conditions of reception and transmission of information. Authors' abstract.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 617-089.843-06:616-021.2

VISHNEVSKIY, A. A., KOLESNIKOV, I. S., BALLYUZEK, F. V., PORTNOY, V. F., KOSTIN, E. D., PECHERSKIY, V. I., KOLOMIYETS, S. G., and KHUNDANOV, L. L., Institute of Surgery imeni A. V. Vishnevskiy Academy of Medical Sciences USSR, and Hospital Surgery Clinic Military Medical Academy imeni S. M. Kirov

"Causes of Early Functional Incompetence of Allotransplants"

Moscow, Eksperimental'naya Khirurgiya i Anesteziologiya, Vol 1, Jan/Feb 71, pp 3-8

Abstract: Causes and effects in postoperative developments were analyzed, which enabled us to systematize the factors responsible for early functional incompetence of a transplanted organ. Factors in four etiological categories were considered: 1. Organization and Tactics: each of availability of funds for establishing transplantation centers; lack of the required equipment, instruments, and drugs; absence of a central list of potential recipients; and inadequate cooperation between transplantation surgeons and reanimation specialists.

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USSR

VISHNEVSKIY, A. A., et al., Eksperimental'naya Khirurgiya i Anesteziologiya, Vol 1, Jan/Feb 71, pp 3-8

2. Physiological Anatomy: poor estimation of the anatomical and physiological reserves of the transplant; and shortcomings in surgical techniques. 3. Pathophysiology: deteriorated state of the recipient; poor health of the donor; injury to the transplant; excessive functional load on the transplant; and inadequate prevention of operative and postoperative complications. 4. Immunobiology: poor matching of donor and recipient; high immunological potential in the recipient; inadequate prevention of stimulation of immunological reactions in the recipient; and mistakes committed in immunosuppressive therapy.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC: None

BOROVKOV, A. A., Corresponding Member of the USSR Academy of Sciences, and PECHERSKIY, Ye. A.

"Criteria of Weak Convergence of Nonnegative Measures, and σ-Topological Spaces"

Moscow, Doklady Akademii Nauk SSSR, 1 January 1973, pp 18-20

Abstract: Let $(X,\mathcal{A})$ be an arbitrary measurable space, P_θ be a limited measure in it, and $\Pi = \{P_\theta\}_{\theta \in \Theta}$ be a network of measures in $(X,\mathcal{A})$. Again, let $\mathcal{F}$ be some family of real, measurable functions in X. The purpose of this article is to formulate functions sufficient for the weak convergence of the "distribution functions"

$$P_\theta\{f(x) < t\} \Rightarrow P\{f(x) < t\}$$

for all $f \in \mathcal{F}$. As the more convenient of two possible ways of solving this problem, the authors choose that of σ-topological spaces introduced in earlier articles: (Aleksandrov, A. D., Matem. sborn., 8, 1940, p 302; 9, 1941, p 563; 13, 1943, p 169).

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

PECHINKIN, A. V.

"Convergence of Sums of a Random Number of Random Components to the Normal Rule"

Teoriya Veroyatnostey i yeye Primeneniya [The Theory of Probabilities and Its Applications], 1973, Vol 18, No 2, pp 380-382 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V35)

Translation: Let us study the sequence of independent identically distributed random quantities

$$\xi_{m1}, \xi_{m2}, \ldots, \xi_{mn}, \ldots$$

with each m, and assume $\{\nu_m\}$ $(m = 0, 1, \ldots)$ is a sequence of positive integer random quantities, where with each m, ν_m and ξ_{mn} are independent and $\nu_m \xrightarrow{P} \infty$ as $m \to \infty$. It follows from (RZHMat, 1970, 1V38) that if for a certain sequence $\{k_m\}$ of integers

$$\nu_m / k_m \xrightarrow{P} 1 \quad \text{и} \quad \mathbf{P}\left\{\sum_{n=1}^{k_m} \xi_{mn} < x\right\} \Rightarrow N(0, 1), \qquad (1)$$

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

PECHINKIN, A. V., Teoriya Veroyatnostey i yeye Primeneniya, 1973, Vol 18, No 2, pp 380-382

$$\mathbf{P}\left\{\sum_{n=1}^{\nu_m} \xi_{mn} < x\right\} \Rightarrow N(0, 1).$$

It is proven in this article that in the case of symmetrical random components ξ_{mn}, condition (1) is also necessary.

From the introduction

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 008 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--COMPOSITION OF MG H SUB2 PO SUB4 SUB2.2H SUB2 O DEHYDRATION PRODUCTS -U-

AUTHOR-(02)-SHCHEGROV, L.N., PECHKOVSKIY, V.V.

P

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(1) 10-13

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHOSPHATE, DEHYDRATION, MAGNESIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1980/1067 STEP NO--UR/0080/70/043/001/0010/0013

CIRC ACCESSION NO--AP0049260

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 008 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0049260

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMPNS. WERE DETD. OF MG POLYPHOSPHATES FORMED UPON DEHYDRATION OF MG(H SUB2 PO SUB4) SUB2.2H SUB2 O IN AIR AND IN A STREAM OF WATER VAPOR. IF THE PROCESS IS CARRIED OUT IN AN ATM. OF WATER VAPOR, A DEHYDRATION PRODUCT WITH A SMALL CONTENT OF HIGHLY CONDENSED PHOSPHATES IS OBTAINED.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--THERMAL DEHYDRATION OF A SIMPLE SUPERPHOSPHATE -U-

AUTHOR-(02)-SHCHEGROV, L.N., PECHKOVSKIY, V.V.

COUNTRY OF INFO--USSR

SOURCE--LZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 83-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMAL ANALYSIS, DEHYDRATION, CHROMATOGRAPHIC ANALYSIS, CALCIUM PHOSPHATE, THERMAL EFFECT, CHEMICAL COMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1508 STEP NO--UR/0153/70/013/001/0083/0085

CIRC ACCESSION NO--AT0130437

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0130437

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DTA UP TO 600DEGREES OF SAMPLES OF SIMPLE SUPERPHOSPHATE (20.3PERCENT ASSIMILABLE P SUB2 O SUB5) INDICATES STRONG ENDOTHERMIC EFFECTS AND WT. LOSSES AT 120 AND 200DEGREES, AND A WEAK ENDOTHERMIC EFFECT IN THE RANGE 225-310DEGREES. CHROMATOGRAMS OF ALL SAMPLES HEATED ABOVE 120DEGREES INDICATE THE PRESENCE OF PYROPHOSPHATE; TRIPOLYPHOSPHATE IS PRESENT IN ALL SAMPLES ABOVE 200DEGREES AND TETRAPOLYPHOSPHATE IN SAMPLES ABOVE 310DEGREES. DRYING THE SUPERPHOSPHATE FOR 0.5-2HR AT 80 TO 300DEGREES RESULTS IN A GRADUAL INCREASE IN THE TOTAL P SUB2 O SUB5 CONTENT TO 24.8PERCENT AS THE TEMP. IS INCREASED. THE PERCENT ASSIMILABLE P SUB2 O SUB5, WHEN DRIED IN THE RANGE 80-200DEGREES, IS CONST. AT ABOUT 90-3PERCENT FOR 0.5 HR OF DRYING, AND 82-3PERCENT FOR 2 HR OF DRYING. HOWEVER, AS THE DRYING TEMP. IS INCREASED ABOVE 200DEGREES, THE ASSIMILABLE P SUB2 O SUB5 DROPS SHARPLY TO 8-12PERCENT AT 250DEGREES AND SIMILAR TO 2PERCENT AT 400DEGREES, HIGHLY POLYMD. CA PHOSPHATE BEING FORMED. FACILITY: BELORUSS. TEKHNOL. INST. IM KIROVA, MINSK, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 010 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--CADMIUM SELENIDE -U-

AUTHOR-(03)-PECHKOVSKIY, V.V., PINAYEV, G.F., GORYAYEV, V.M.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,092.
REFERENCE--OTKRTIYA, IZOBRET., PROM,. OBRAZTSY, TOVANYE ZNAKI, 47(10)20.
DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CADMIUM SULFIDE, CHEMICAL PATENT, SELENIUM COMPOUND, INERT GAS, SELENIDE, METAL OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/1442 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0126973

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 010 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AA0126973

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CD SELENIDE IS PREPD. FROM CDS AND SEO SUB2 AT INCREASED TEMP. IN AN INERT GAS CURRENT CONTG. 0.02-0.7 G SEO SUB2-1. GAS. FACILITY: BELORUSSKIY TEKHNOLOGICHESKIY INSTITUT IM. S. M. KIROVA.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 014 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--PREPARATION OF ALKALI METAL METAPHOSPHATES -U-

AUTHOR-(03)-VOROBYEV, N.I., PECHKOVSKIY, V.V., PTASHKOVA, G.V.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 266,745
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--01APR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALKALI METAL, PHOSPHATE, CHEMICAL PATENT, CHEMICAL PRODUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1074 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0130109

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 014 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AA0130109

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ALKALI METAL METAPHOSPHATES, SUCH AS KPO SUB3, WERE PREPD. BY TREATING THE CHLORIDE OF THE APPROPRIATE METAL WITH A P COMPD. IN THE PRESENCE OF O AT HIGH TEMPS. POCL SUB3 WAS USED FOR THE P COMPD.; THE ALKALI METAL CHLORIDE WAS USED IN MELT FORM; AND THE PREPN. PROCESS TOOK PLACE AT SIMILAR TO 1000DEGREES.

FACILITY: KIROV, S. M., BELORUSSIAN TECHNOLOGICAL INSTITUTE.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 024 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--DEFLUORINATION OF PHOSPHATES IN A LOW TEMPERATURE PLASMA JET -U-

AUTHOR-(05)-PECHKOVSKIY, V.V., MOSSE, A.L., TETEREVKOV, A.I., YERSHOV, V.A., CHELNOKOV, A.A.

COUNTRY OF INFO--USSR

P

SOURCE--KHIM. VYS. ENERG. 1970, 4(2), 114-18

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHOSPHATE, PHASE ANALYSIS, LOW TEMPERATURE PLASMA, PLASMA JET, DEHALOGENATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0971 STEP NO--UR/0456/70/004/002/0114/0118

CIRC ACCESSION NO--AP0131556

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 024 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0131556

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POSSIBILITY OF THE PREPN. OF DEFLUORINATED PHOSPHATES BY MEANS OF A STREAM OF LOW TEMP. PLASMA IS STUDIED. A DEFLUORINATED PHOSPHATE CONTG. PRACTICALLY ALL OF THE P SUB2 O SUB5 IN ASSIMILABLE FORM IS OBTAINED. THE PHASE COMPN. OF THE PRODUCT IS STUDIED. FACILITY: INST. TEPLO-MASSOOBMENA, MINSK, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--USE OF PMR FOR EVALUATING THE CHEMISTRY OF THE DEHYDRATION OF MONOSUBSTITUTED MAGNESIUM, CALCIUM, AND BARIUM ORTHOPHOSPHATES -U-

AUTHOR-(04)-BREKHUNETS, A.G., MANK, V.V., PECHKOVSKIY, V.V., SHCHEGROV, L.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(3), 509-12

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHOSPHATE, MAGNESIUM COMPOUND, CALCIUM COMPOUND, BARIUM COMPOUND, DEHYDRATION, MAGNETIC RESONANCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0329 STEP NO--UR/0368/70/012/003/0509/0512

CIRC ACCESSION NO--AP0119316

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119316

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF THERMAL DEHYDRATION UPON THE WIDE LINE PMR SPECTRA OF MG (H SUB2 PO SUB4) SUB2.2H SUB2 O, CA(H SUB2 PO SUB4) SUB2.H SUB2 O, AND BA (H SUB2 PO SUB4) SUB2. 0.1H SUB2 O WERE STUDIED AT 25 AND MINUS 120DEGREES. THREE OVERLAPPONG BANDS WERE OBSD. IN THE SPECTRA: THE 1ST BAND, ATTRIBUTED TO CRYSTN. WATER, IS ABSENT IN BA PHOSPHATE AND DISAPPEARS FROM THE OTHERS AFTER DEHYDRATION AT 250DEGREES, THE 2ND BAND, WHICH BELONGS TO OH GROUPS OF H SUB2 PO SUB4 PRIME NEGATIVE IONS AND TO WATER OF LIMITED MOBILITY, INDICATES THE BEGINNING OF H SUB2 PO SUB4 PRIME NEGATIVE DECOMPN. AT 250DEGREES, THE BAND DISAPPEARS AT 450DEGREES IN THE CASE OF MG PHOSPHATE, THE 3RD BAND OF MOBILE WATER REMAINS IN THE SPECTRUM EVEN AFTER THE SAMPLE HAS BEEN DEHYDRATED AT 600DEGREES. THE SLIGHTLY MORE COMPLEX BEHAVIOR OF CA PHOSPHATE IS ALSO DESCRIBED. THE LINEWIDTHS AND 2ND MOMENTS ARE GIVEN AS WELL AS THE CALCD. INTERPROTONIC DISTANCES.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 G20 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ELECTRON MICROSCOPIC STUDY OF CLAYS FROM THE STAROBINSK POTASH DEPOSIT -U-

AUTHOR-(03)-ALEKSANDROVICH, KH.M., MAKATUN, V.N., PECHKOVSKIY, V.V.

COUNTRY OF INFO--USSR

SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. KHIM. NAVUK 1970, (1), 43-9

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--ELECTRON MICROSCOPY, FLOTATION REAGENT, POTASSIUM COMPOUND, SODIUM CHLORIDE, CELLULOSE, PEPTIDE, AMINE DERIVATIVE/(U)CM CELLULOSE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0708 STEP NO--UR/0419/70/000/001/0043/0049

CIRC ACCESSION NO--AP0113572

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0113572

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. METHODS ARE DESCRIBED FOR DETN. NOT ONLY OF FORM AND SIZE OF CLAY PARTICLES IN K DEPOSITS BY ELECTRON MICROSCOPY BUT ALSO FOR THE OBSERVATION OF THE EFFECT OF ADMIXTS. OF NACL AND KCL OR OF THE FLOTATION AGENTS CM CELLULOSE AND OCTADECYLAMINE ON FLOCCULATION AND OF NA SUB4 P SUB2 O SUB7 ON THE PEPTIZATION OF THE CLAY PARTICLES AND THE CONDITION OF THE DISPERSIONS. THE CLAYS PARTICLES WERE SPED. FROM KCL BY TREATMENT WITH BOILING H SUB2 O AND FROM CARBONATES BY N HCL. FACILITY: INST. OBSHCH. NEORG. KHIM., MINSK, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--INFRARED SPECTRA OF COPPER SELENITES -U-

AUTHOR-(04)-MAKATUN, V.N., PECHKOVSKIY, V.V., MELNIKOVA, R.YA., GUSEV, S.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(3), 497-503

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--COPPER COMPOUND, SELENIUM COMPOUND, OXYGEN COMPOUND, CHRYSTALLOGRAPHY, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0330 STEP NO--UR/0368/70/012/003/0497/0503

CIRC ACCESSION NO--AP0119317

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

UNCLASSIFIED PROCESSING DATE--23OCT70

2/2 G20

CIRC ACCESSION NO--AP0119317

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STATE OF H SUB2 O IN CRYST. CU SELENITE HYDRATES, AND THE CHANGES OF THE SPECTRAL CHARACTERISTICS OF SEO SUB3 PRIME2 NEGATIVE ION BOUND TO ONLY ONE CATION WERE STUDIED AS A FUNCTION OF THE CHANGE OF CRYSTALLOGRAPHIC PARAMETERS. THE PREPN. OF CUSEO SUB3.2H SUB2 O, CUSEO SUB3.2O SUB2 O, CRYST. CUSEO SUB3, AMORPHOUS CUSEO SUB3, CUO.CUESEO SUB3, AND CUO. 2SEO SUB3 IS DESCRIBED IN GREAT DETAIL. THE IR SPECTRA WERE OBTAINED BETWEEN 400 AND 4000 CM PRIME NEGATIVE1.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 530.13

MOSHKOV, A. D., and PECHNIKOV, A. V., Tashkent Institute of Railroad Transportation Engineers

"Use of the Continued Fraction Method for the Study of Torsional Oscillations of Multimass Systems on a Digital Computer"

Tashkent, Izvestiya Akademii Nauk Uzbekskoy SSR, Seriya Tekhnicheskikh Nauk, No 2, 1970, pp 68-71

Abstract: The article describes a program for calculating continued fractions on a medium-class digital computer (for example, the "Ural-2") for the study of free and forced torsional oscillations of a multimass system. The use of a computer speeds up the study and makes it possible to analyze different versions for the construction of mechanical, electrical, and other chain-structure systems.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 621.382.23.022.002

PECHNIKOV, N.V., CHELNOKOV, V. Ye.

"Increase Of The Technical Level Of Production Of Power Semiconductor Devices"

Preobrazobatel'n. tekhnika. Inform. nauchno-tekhn. sb. (Converter Technology. Information Scientific-Technical Collection), 1970, No 2, pp 22-23 (from RZh--Elektronika i yeye primeneniye, No 8, August 1970, Abstract No 8B427)

Translation: The necessity is justified for increasing the technical level of industrial and manufacturing processes in connection with farther development of semiconductor technics. 5 ref. Summary.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

PECHNIKOV, V. V.

Automation

SO: JPRS 54171
01 OCT. 1971

UDC 681.3.007

ENGINEERING-PSYCHOPHYSIOLOGICAL ESTIMATE OF LINEAR GAS-DISCHARGE DISPLAYS AS A MEANS OF COMPLEX DATA REPRESENTATION

[Article by Engineer V. V. Pechnikov (Автореферат), Moscow, Pribory i Sistemy Upravleniya, Russian, No 10, 1970, pp 18-19]

The linear gas-discharge displays developed at the NIIGRP jointly with the Control Problems Institute (Institute of Automation and Telemechanics) for which the length of the glow is proportional to the current are now means of representing information [1, 2]. Application of linear gas-discharge displays on control panels, instrument panels and mnemonic systems as display and measuring devices requires engineering-psychophysiological research with respect to evaluating linear gas discharge displays as means of data representation. A study of this type of research performed at the Institute of Automation and Telemechanics is made in this article.

Comparison of Linear Gas-Discharge Displays and Pointer-Type Instruments with Circular Scales with Respect to Reading Perception Reliability

In the given research, the test objects were a group of four linear gas-discharge displays with a vertical scale and two double pointer-type indicators with circular scales. The purpose of the research consisted in comparative estimation of the reliability of perceiving the readings with respect to pointer-type instruments with circular scales and with respect to instruments based on linear gas discharge displays. The scales of all the instruments had identical length, the same number of divisions and digital markings. The studies were made by the tachystoscopic method. The instruments were shown for a strictly defined time during which the operator had to note the deviation from the rated value and name the parameter deviating from the norm. Before the beginning of the experiment, all the participants in the tests were familiarized in detail with the test unit. They were also trained in how to read the various instruments. The schedule of performing the studies was constructed in such a way as to exclude the effect of acquired skills and obscure the experimental results. The criteria for evaluating the instruments were the number of unnoted deviations and the latent voice reaction period.

As the experimental results demonstrated, the number of unnoticed deviations expressed in percentages of the total number of presentations was

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

Organometallic Compounds

USSR UDC 547.244.245

MIRONOV, V. F., GIRGOS, V. I., PECHURINA, S. YA., and ZHIGACH, A. F.

"Synthesis of a New Class of Silicon Containing Carboranes"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 11, 1972, p 2583

Abstract: Up to now, it has been possible to prepare only the C-substituted silicon carboranes. However, the vinylchlorosilanes and the cinylalkylchlorosilanes may be added to o-, m-, and p-carboranes and their derivatives in the presence of aluminum chloride. As shown below, this occurs at the B-H bond of the carborane nucleus with the formation of new B-substituted silicon-containing carboranes.

$$HCB_{10}H_{10}CH + H_2C{=}CHSiCl_3 \xrightarrow[t^\circ]{AlCl_3} HCB_{10}H_{10-n}(CH_2CH_2SiCl_3)_nCH$$

$n = 1, 2, 3.$

Structures were confirmed by IR and NMR spectra in mass spectroscopic data.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--RARE EARTH HYDROXYNITRILOTRIACETATES IN AN AQUEOUS SOLUTION -U-

AUTHOR-(05)-VARLAMOVA, G.L., MITROFANOVA, N.D., MARTYNENKO, L.I., PECHUROVA, N.I., VARLAMOV, V.G.
COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(5), 1239-43

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--RARE EARTH COMPOUND, ACETATE, COMPLEX COMPOUND, LANTHANUM COMPOUND, CESIUM COMPOUND, YTTRIUM COMPOUND, IONIC BONDING, POTENTIOMETRIC TITRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/0947 STEP NO--UR/0078/70/015/005/1239/1243

CIRC ACCESSION NO--AP0137975

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 017 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137975

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPN. AND STABILITY CONSTS. (K) OF HYDROXYNITRILOTRIACETATE COMPLEXES OF IONS OF THE LA TO LU RARE EARTH ELEMENTS AS WELL AS Y AND CS WERE DETD. BY POTENTIOMETRIC TITRN. AT 20DEGREES AND IONIC STRENGTH OF 0.2. THE VALUE OF K (TIMES 10 PRIME NEGATIVE5) RANGES FROM 1.17 FOR LA TO 73.94 FOR LU. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

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USSR UDC 669.15'74'24-194.3

BANNYKH, O. A., KOVNERISTYY, Yu. K., and PEDAN, T. N., Moscow

"Phase Transformations and Mechanical Properties of High-Alloy Cr-Mn-Ni Steels"

Moscow, Akademiya Nauk SSSR. Izvestiya. Metally, No 6, Nov-Dec 72, pp 123-129

Abstract: The basic phase transformations taking place under the effect of temperature and plastic flow in high-alloy Cr-Mn-Ni steels are considered and which also determine three important qualities inherent in these steels: the possibility of considerable work hardening while retaining the nonmagnetic state, high temperature-time stability of the austenitic structure, and superplasticity. Manifestation of these qualities depends on the development of various phase transformations and, consequently, is determined by the chemical composition of the steel.

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UR 0482

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Soviet Inventions Illustrated, Section I Chemical, Derwent,

240654 TUBE DRAWING ASSEMBLY provides firm tube distribution on the drum. It consists of a guide draw plate 1, working draw plate 2 and an additional plate 3. The plates are divided by sleeves 4 and enclosed in a body 5 with a cover 6. The plate 2 has a diameter equal to the diameter of the tube whilst the plates 2 and 3 are of equal smaller diameter.

AUTHORS: Ural'skiy, V. I.; Patseruk, A. P.; Popov, Yu. A.; and Pedas, V. P.

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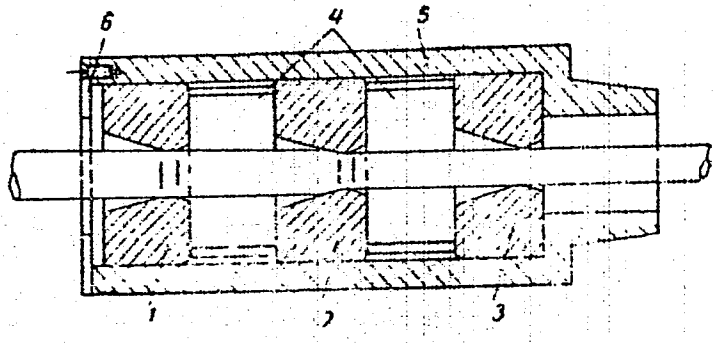

19.5.67 as 1156931/22-2. V.I. URALSKY et alia.
(21.8.69.) Bul 13/1.4.69. Class 7b. Int.Cl.B 21c.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

Physical Properties

USSR P UDC 536.63:537.32:621.039.531

PEDCHENKO, K. S., KARASEV, V. S., and TRIKULA, V. M., Institute of Physics, Kiev, ~~Academy of~~ Sciences Ukrainian SSR

"Effect of Neutron Radiation on Some Thermophysical Properties of Metals"

Minsk, Inzhenerno-Fizicheskiy Zhurnal, Vol 17, No 4, pp 665-672

Abstract: The article shows and experimentally substantiates the fact that the study of such termophysical characteristics of irradiated metals as specific heat and thermoelectromotive force can become an effective method of studying radiation and materials. The method of differential and thermal analysis with the use of copper specimens (99.99%) and radiation dose $8 \cdot 10^{17}$ fast neutrons/cm^2 (E=1 Mev) revealed 8% increase in the specific heat. On the basis of comparison of this data with the increase in specific heat observed under the equilibrium conditions at pre-melting temperatures, the concentration of excess vacancies is calculated whose magnitude corresponds well to the one obtained in the same experiments according to separated excess energy and also to estimates made according to the theory of cascades. The dependence of specific heat increase on the concentration of radiation defects is presented. The appearance of induced thermoelectromotive force in the pair irradiated-nonirradiated metal is shown. The data for Mo at $4 \cdot 10^{18}$ fast neutrons/cm^2 shows that the absolute differential thermoelectromotive force $\varepsilon = dE_t/$

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

PEDCHENKO, K. S., et al., Minsk, Inzhenerno-Fizicheskiy Zhurnal, Vol 17, No 4, pp 665-672

dt = -1.3 microvolt/deg and that neutron irradiation induces changes in the thermoelectromotive force of metals. The obtained value of ε is used in calculating concentrations of vacancies and comparison with the one obtained in tests according to electrical resistance. The data on isothermal annealing of thermoelectromotive force is presented.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 031 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--ENTHALPY OF FORMATION OF TETRAPHENYLGERMANE AND GE C SUBAROMATIC BOND ENERGY -U-

AUTHOR-(03)-SHAULOV, YU.KH., PEDOROV, A.K., GENCHEL, V.G.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(1) 262-3

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANOGERMANIUM COMPOUND, ENTHALPHY, HEAT OF COMBUSTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0472 STEP NO--UR/0076/70/004/001/0262/0263

CIRC ACCESSION NO--AP0107078

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 031 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107078

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FROM HEAT OF COMBUSTION OF TETRAPHENYLGERMANE, THE HEAT OF FORMATION, DELTA H SUBF DEGREES (KCAL-MOLE), AND GE C SUBAROMATIC BOND ENERGY, E (KCAL), WERE CALCD. THE FOLLOWING VALUES WERE OBTAINED: (DELTA H SUBF DEGREES) EQUALS 123.7, (DELTA H SUBF DEGREES) EQUALS 102.8 FOR THE GASEOUS AND SOLID STATE, RESP., AND E EQUALS 62. GE C SUBAROMATIC BOND ENERGY IS HIGHER THAN GE C SUBALIPHATIC BOND ENERGY.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 621.3.-035.3:666.31.537.311.3

MUDRYAVTSEV, L. A., DMITRIYEVA, L. M., PEDOROV, A. P., and DANILKIN, V. I.

"Some Properties of Ceramic Ion Exchange Membranes"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 45, No 1, Jan 72, pp 30-33

Abstract: A study was carried out on the utilization of ceramic membranes with ionic conductivity in vacuum electrochemical processes. These materials were found to exhibit high mechanical strength as well as thermal and chemical stability. Ceramic membranes which exhibit ionic conductivity are based on solid porcelain to which minerals and granite pegmatites containing alkaline oxides were added: a) porcelain mass - spodumene with lithium conductivity; b) porcelain mass - synnirite with potassium conductivity; and c) porcelain mass - granite pegmatites with sodium conductivity. In spite of the fact that ceramic materials (with higher content of alkaline oxides) exhibit lower electroconductivity than glasses, they can be used in electrochemical processes, especially at elevated temperatures where the use of glass is very limited. Ionic transport across the ceramic membranes obeys the Ohm law, its function against the voltage plot is linear.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

UNCLASSIFIED PROCESSING DATE--27NOV70

1/3 024

TITLE--DIFFUSION, SOLUBILITY, AND ELECTRICAL PROPERTIES OF ZINC IN SILICON -U-

AUTHOR-(04)-BAKHADYRKHANOV, M.K., BOLTAKS, B.I., KULIKOV, G.S., PEDYASH, E.M.

COUNTRY OF INFO--USSR

SOURCE--LENINGRAD, FIZIKA I TEKHNIKA POLUPROVODNIKOV, VOL 4, NO 5, 1970, PP 873-878

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--METAL DIFFUSION, SOLUBILITY, ZINC, SILICON, FORBIDDEN ZONE, SOLID SOLUTION, COBALT, ELECTRIC PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1261 STEP NO--UR/0449/70/004/005/0873/0878

CIRC ACCESSION NO--AP0136669

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

UNCLASSIFIED PROCESSING DATE--27NOV70

2/3 024

CIRC ACCESSION NO--AP0136669

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DIFFUSION AND SOLUBILITY OF ZINC IN SILICON AND ITS EFFECT ON THE ELECTRICAL PROPERTIES OF SILICON WERE STUDIED. IT WAS ESTABLISHED THAT THE DIFFUSION OF ZINC IN SILICON HAS COMPLEX DISSOCIATIVE NATURE, AND THE DIFFUSION COEFFICIENT IN THE 1,100-1,300DEGREESC RANGE VARIES FROM 10 PRIME NEGATIVE7 TO 10 PRIME NEGATIVE6 CM PRIME2-SEC. THE LIFE OF ZINC AT A NODE AND AN INTERNODE OF THE SILICON LATTICE CALCULATED FROM THE RISE IN CONCENTRATION LEVEL WITH ANNEALING TIME AT 1,200DEGREESC IS 10 PRIME4 AND 10 PRIME NEGATIVE3 SEC, RESPECTIVELY. THE SOLUBILITY IS OF A RETROGRADE NATURE WITH A PEAK AT 1.5.10 PRIME NEGATIVE6 CM PRIME NEGATIVE3 AT 1,270DEGREESC. ZINC INTRODUCES THREE ACCEPTOR LEVELS IN THE FORBIDDEN ZONE OF SILICON. DURING THE PROCESS OF DECAY OF THE ZINC SILICON SOLID SOLUTION, TWO DONOR LEVELS, 0.1 PLUS OR MINUS 0.03 AND 0.4 PLUS OR MINUS 0.03 EV, OBVIOUSLY CONNECTED WITH THE INTERNODAL ZINC APPEAR. THE AUTHORS CALCULATE THE CHEMICAL POTENTIAL LEVEL OF SILICON ALLOYED WITH ZINC AND DEMONSTRATE THE POSSIBILITY OF OBTAINING THE COMPENSATED MATERIAL IN A BROAD RANGE OF CURRENT CARRIER CONCENTRATIONS. THE CONDITIONS OF OBTAINING SILICON WITH A GIVEN SPECIFIC RESISTANCE ARE CALCULATED INASMUCH AS ZINC IN SILICON IS AN ACCEPTOR AND INASMUCH AS A COMPENSATED MATERIAL CAN BE OBTAINED BY INTRODUCING ZINC INTO ELECTRONIC SILICON. THE EXPERIMENTAL DATA FROM THE ELECTRICAL MEASUREMENTS (CARRIER CONCENTRATION, CARRIER MOBILITY, SPECIFIC RESISTANCE) BEFORE AND AFTER ALLOYING THE SILICON WITH ZINC AND ALSO FOR THE CONTROL SAMPLES ANNEALED WITHOUT ZINC ARE COMPARED WITH THE CALCULATED DATA.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

3/3 024 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136669

ABSTRACT/EXTRACT--IT IS NOTED THAT THE CONCENTRATION OF ELECTRICALLY ACTIVE ZINC ATOMS IS SIMILAR TO 3 ORDERS LESS THAN THE SOLUBILITY DETERMINED FROM RADIOACTIVE MEASUREMENTS. A SIGNIFICANT PART OF THE ZINC ATOMS APPARENTLY SETTLE IN THE DISLOCATIONS THAT OCCUR, FOR EXAMPLE, FOR COBALT IN SILICON FOR THEY ENTER INTO THE COMPOSITION OF ELECTRICALLY INACTIVE COMPLEXES. THE EXPERIMENTAL DATA COMPARE WELL WITH THE CALCULATED DATA EXCEPT FOR CONVERGED SAMPLES, AND IT IS ASSUMED THAT THESE DIVERGENCES ARE THE RESULT OF INCORRECT CALCULATIONS.

FACILITY: INSTITUTE OF SEMICONDICTORS, LENINGRAD, ACADEMY OF SCIENCES USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 621.315.592

BAKHADYRKHANOV, M. K., BOLTAKS, B. I., KULIKOV, G. S., PEDYASH, E. Ye., Institute of Semiconductors, Leningrad, Academy of Sciences USSR

"Diffusion, Solubility, and Electrical Properties of Zinc in Silicon"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 4, No 5, 1970, pp 873-876

Abstract: The diffusion and solubility of zinc in silicon and its effect on the electrical properties of silicon were studied. It was established that the diffusion of zinc in silicon has complex dissociative nature, and the diffusion coefficient in the 1,100-1,300°C range varies from 10^{-7} to 10^{-6} cm^2/sec. The life of zinc at a node and an internode of the silicon lattice calculated from the rise in concentration level with annealing time at 1,200°C is 10^{4} and 10^{-3} sec, respectively. The solubility is of a retrograde nature with a peak at $1.5 \cdot 10^{-6}$ cm^{-3} at 1,270°C. Zinc introduces three acceptor levels in the forbidden zone of silicon. During the process of decay of the

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BAKHADYRKHANOV, M. K., et al., Fizika i Tekhnika Poluprovodnikov, Vol 4, No 5, 1970, pp 873-878

zinc-silicon solid solution, two donor levels -- 0.1±0.03 and 0.4±0.03 ev -- obviously connected with the internodal zinc appear. The authors calculate the chemical potential level of silicon alloyed with zinc and demonstrate the possibility of obtaining the compensated material in a broad range of current carrier concentrations.

The conditions of obtaining silicon with a given specific resistance are calculated inasmuch as zinc in silicon is an acceptor and inasmuch as a compensated material can be obtained by introducing zinc into electronic silicon. The experimental data from the electrical measurements (carrier concentration, carrier mobility, specific resistance) before and after alloying the silicon with zinc and also for the control samples annealed without zinc are compared with the calculated data. It is noted that the concentration of electrically active zinc atoms is ~3 orders less

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

BAKHADYRKHANOV, M. K., et al. Fizika i Tekhnika Poluprovodnikov, Vol 4, No 5, 1970, pp 873-878

than the solubility determined from radioactive measurements. A significant part of the zinc atoms apparently settle in the dislocations that occur, for example, for cobalt in silicon or they enter into the composition of electrically inactive complexes. The experimental data compare well with the calculated data except for converged samples, and it is assumed that these divergences are the result of incorrect calculations.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 028 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--AUTOMATIC DECIPHERING OF THE ELECTROCARDIOGRAM -U-

AUTHOR--ANIN, YU.L., GALPERINA, A.I., KOGAN, I.V., PEGANOVA, L.V.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 3, PP 94-97

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ELECTROCARDIOGRAPHY, HEART DISEASE, COMPUTER MEDICAL DIAGNOSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0966 STEP NO--UR/0475/70/000/003/0094/0097

CIRC ACCESSION NO--AP0102905

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 028 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102905

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A ATTEMPT IS PRESENTED OF USING ELECTRONIC COMPUTING DEVICES FOR DECIPHERING OF ELECTROCARDIOGRAPHIC RECORDS.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 546.791.6'161-31'

TSVETKOV, A. A., SELEZNEV, V. P., SUDARIKOV, B. N., GROMOV, B. V., and PEGANOV, V. A., Moscow Chemical-Technological Institute imeni D. I. Mendeleyev

"Complex Compounds of Uranyl Fluoride With Water and Hydrogen Fluoride"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 16, No 3, Mar 71, pp 768-771

Abstract: Three complex uranyl fluoride compounds were isolated in the system UO_2F_2-HF-H_2O: $H_2[UO_2F_4]\cdot 4\ H_2O$, $H[UO_2F_3]\cdot 2\ H_2O$, and $H[(UO_2)_2F_5]\cdot 4\ H_2O$. All of these materials form salts with alkali metals and ammonia; their structures were studied. Thermodynamical properties of these compounds were determined by means of differential thermal analysis.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

PEGEL', V. A., DOKSHINA, G. A., and DEMENT'YEVA, T. A., Scientific Research Institute of Biology and Biophysics, Tomsk

"Changes in the Content of Thiol Groups in the Mitochondria and Hyaloplasm of the Liver and Myocardium of Rats After High-Energy Irradiation"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biologicheskikh Nauk, No 5, Apr 71, pp 108-113

Abstract: The content of total, protein, and non-protein thiol groups in the mitochondria and hyaloplasm of the liver and myocardium of rats was determined 10, 30 min, 1, 2, 4, 6, 24, 48, and 72 hrs after irradiation of the animals with gamma-rays of an energy $\leq$ 25 Mev in a dose of 1,000 rad on a betatron. The content of SH groups in the mitochondria of the liver and the myocardium decreased. This decrease was due principally to a reduction of the content of protein SH groups; the change in the content of non-protein SH groups was insignificant. Changes in the content of SH groups in the hyaloplasm of the liver and myocardium were of a phasic type. The decrease in the content of SH groups in the mitochondria was accompanied by an increase of the content of these groups in the hyaloplasm. The decrease in the content of SH groups in the mitochondria was presumably due to the inhibition of oxidative phosphoryla-

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

PEGEL', V. A., et al., Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biologicheskikh Nauk, No 5, Apr 71, pp 108-113

tion in them that was established in earlier work. The increase of the content of SH groups in the hyaloplasm was apparently associated with a release of thiol enzymes by mitochondria because of structural damage to mitochondria membranes.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC: 547.466:591.85:636.7

PEGEL', V. A., KSENTS, S. M. and BESSUNDNOVA, S. S., Chair of Human and Animal Physiology, Tomsk State University imeni V. V. Kuybyshev

"Blood Amino Acid Level in Dogs After Static and Dynamic Loads"

Moscow, Nauchnyye Doklady Vysshey Shkoly, Biologicheskiye Nauki, No 1, 1971, pp 38-43

Abstract: The equilibrium between proteinsynthesis and proteolysis in the muscles is disturbed by muscular work, and the amino acid content of the blood is affected as a result. Experiments with dogs showed that, after a static load (a package of sand whose weight totaled 60% of the body weight placed on the animals' back), most amino acids in the arterial blood tended to decrease in comparison to those in the inferior vena cava, where cystine, lysine, histidine, aspartic acid, etc. increased. After a dynamic load (running on a treadmill), on the other hand, such amino acids as threonine, aspartic acid, lysine, glutamine, and tyrosine increased, while histidine, serine, glutamic acid, and methionine decreased. The role of the liver in maintaining the amino acid level of the blood during muscular exertion is discussed.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 034 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--COMPARATIVE EFFECTS OF HIGH ENERGY RADIATION OF A 25-MEV BETATRON AND PRIME60 CO CN THE FUNCTIONAL STATE OF CERTAIN GLANDS OF INTERNAL

AUTHOR-(03)-PEGEL, V.A., DOKSHINA, G.A., POTAPOVA, A.I.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA; 10: 49-53 (JAN-FEB 1970)

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BETATRON, BREMSSTRAHLUNG, GAMMA RADIATION, COBALT ISOTOPE, RADIATION BIOLOGIC EFFECT, RADIATION DOSAGE, EPINEPHRINE, INSULIN, CORTICOSTEROID, LIVER FUNCTION, GLYCOGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1845 STEP NO--UR/0205/70/010/000/0049/0053

CIRC ACCESSION NO--AP0127255

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 034 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127255

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS OF IRRADIATION OF RATS WITH A 25 MEV BETATRON AND WITH PRIME60 CO AT AN EQUIVALENT DOSE OF 1000 RAD ARE PRESENTED FOR THE CHANGE IN THE CONTENT OF ADRENALINE LIKE SUBSTANCES IN THE BLOOD AND URINE, 11,HYDROXYCORTICOSTEROIDS, INSULIN LIKE ACTIVITY OF THE PLASMA, AND 17,HYDROXYCORTICOSTEROIDS OF THE URINE, AS WELL AS THE LIVER SUGAR AND GLYCOGEN. DATA ON THE HIGH RBE FOR BETARON BREMSSTRAHLUNG WERE OBTAINED. THE MORE SIGNIFICANT EFFECT OBTAINED IN THE ACCELERATOR IRRADIATED ANIMALS IS ATTRIBUTED TO THE LARGER ABSORBED DOSE CREATED IN THE ORGANS AND TISSUES.

FACILITY: TOMSK UNIV., USSR.

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UDC 669.71.042.6

USSR

MIKHAYLOV, K. N., GAVRILOV, S. S., VASILEVSKIY, A. M., MARCHENKO, A. M., FOL'KHIN, G. D., and PEGHENEV, V. S.

"Casting of Ingots of Aluminum Alloys in Multiple-Crystallizer Systems"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul. VILSa [Technology of Light Alloys. Scientific and Technical Collection of All-Union Institute of Light Alloys], No. 4, 1970, pp. 30-34, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. I G113 by G.Svodtseva).

Translation: A 24-crystallizer system for casting of aluminum alloy ingots 112, 145, and 165 mm in diameter on a single casting machine from a single tap hole has been developed and tested in order to increase the productivity of labor and casting equipment. A diagram and drawing of the installation are presented. 3 illustrations.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--MELTS OF POLYPROPYLENE, POLY,VINYL CHLORIDE, AND POLYCAPROLACTAM WITH OTHER POLYMERS IN THE FOOTWEAR INDUSTRY -U-

AUTHOR-(03)-SIDORENKO, V.I., PEGLOVSKIY, V.L., LIVYY, G.V.

COUNTRY OF INFO--USSR

SOURCE--KOZH.-OBUV. PROM. 1970, 12(5), 27-30

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MILITARY SCIENCES

TOPIC TAGS--PROPYLENE, POLYVINYL CHLORIDE, CAPROLACTAM, FOOTGEAR, POLYISOBUTYLENE, NYLON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/D07 STEP NO--UR/0498/70/012/005/0027/0030

CIRC ACCESSION NO--AP0140294

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140294

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MELT CONTG. 30PERCENT POLYSTYRENE (I) AND 70PERCENT POLYPROPYLENE (II) HAS LOWER SHRINKAGE THAN II ALONE. THE SP. HEAT CAPACITY OF THE MELT IS LOWER THAN THAT OF II. THESE PROPERTIES SHORTEN THE MOLDING TIME AND INCREASE THE PRODUCTION RATE OF SHOE COMPONENTS FROM THE MELTS BY 15-17PERCENT. THE ADDN. OF POLYISOBUTYLENE TO II INCREASES ITS ELASTICITY, RESISTANCE TO COLD, AND ADHESION. THE BLENDING OF POLY(VINYL CHLORIDE) WITH I AND HIGH D. POLYETHYLENE (III) IMPROVES ITS STRESS DEFORMATION CHARACTERISTICS, COLD RESISTANCE, AND MECH. STRENGTH. THE CHANGES OF THE TENSILE STRENGTH AT BREAK OF III MELTS WITH NYLON 6 SUGGEST CHEM. INTERACITON BETWEEN THESE 2 POLYMERS. THE APPLICABILITY OF THESE MELTS IN THE MANUF. OF SHOE COMPONENTS IS DISCUSSED.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

1/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ENHANCING THE PHYSICOMECHANICAL PROPERTIES OF POLYETHYLENE BY FUSING IT WITH OTHER POLYMERS -U-

AUTHOR-(03)-PEGLOVSKIY, V.L., SIDORENKO, V.I., LIVVY, G.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. UKR. 1970, (1), 10-13

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYSTYRENE RESIN, POLYPROPYLENE, POLYETHYLENE, PLASTIC MECHANICAL PROPERTY, COMPRESSIVE STRENGTH, BENDING STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0752 STEP NO--UR/0436/70/000/001/0010/0013

CIRC ACCESSION NO--AP0119659

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

2/2 022 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119659

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDN. OF SIMILAR TO 20PERCENT POLYSTYRENE OR SIMILAR TO 50PERCENT POLYPROPYLENE TO POLYETHYLENE DECREASES ITS SHRINKAGE AND INCREASES ITS COMPRESSION AND BENDING STRENGTH.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC 669.046.5

SHIRER, G. B., KOMEL'KOV, V. K., VOINOV, S. G., SHALIMOV, A. G., PEGOV, V. G., MOLCHANOVA, A. A., TSIBUL'NIKOV, A. I., and MOKHIR, Ye. D.

"Refining of Ball Bearing Electrical and Martin Steels by Synthetic Lime-Alumina Slag with High Silica Content"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS). (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 247-249

Translation of Abstract: Results are presented of the refining of ShKh15 steel melted in 100-ton electric furnaces using synthetic slag with high silica content in a ladle. With respect to sulfur content and the level of contamination by sulfide impurities, the obtained steel is similar to metal refined with conventional synthetic slag containing not more than 3% of silica, although the former is more contaminated with oxide and globular impurities. Data are presented on production testing of the described slag at a Martin plant, at which the quality of the 12KhIMF and 20 K steels for pipes was found to be similar to a steel refined with the usual synthetic slag. The production cost of the slag with high silica content is given (It is approximately 39 rubles/ton cheaper than the ordinary slag). 3 tables.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR

UDC:669.046.558.7

PEGOV, V. G., ANISIMOV, M. Ye., SHIRER, G. B., ABRAMOVA, A. A., KOMEL'KOV, V. K., MOLCHANOVA, A. A., VOINOV, S. G., SHALIMOV, A. G., and PRONICHKIN, A.A.

"Influence of Deoxidation of Metal With Silicocalcium and Addition of Soda to Synthetic Slag on Contamination of Type ShKh15 Steel With Nonmetallic Inclusions"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 215-226

Translation: When type ShKh15 steel is made in 100-T electric furnaces with treatment by synthetic slag in the ladle, the addition of 2.5-3.0% calcinated soda allows the content of oxygen in the steel to be reduced by 25% and the contamination with sulfides, oxide, and globular inclusions to be significantly reduced. Deoxidation of ShKh15 steel with silicocalcium 2.0-2.5 kg/T with simultaneous processing with synthetic slag decreases the content of sulfides and oxides, but causes an increase in the content of globular inclusions in the steel. 3 tables; 5 biblio. refs.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

Devices

USSR

UDC: 681.327.76

PEGOYEV, A. N., TRIFONOV, V. V., BUDRIS, M. V. K., LEMZYAKOV, S. R., TARASOV, V. A., SHEREMET'YEV, A. K., Leningrad Electrical Engineering Institute of Communications imeni V. I. Ul'yanov (Lenin)

"A Digital Memory Unit"

Moscow, Otkryitya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 9, Mar 71, Author's Certificate No 297071, Division G, filed 10 Dec 66, published 2 Mar 71, p 162

Translation: This Author's Certificate introduces: 1. A digital memory unit based on a magnetostriction delay line with cadence pulse generator. As a distinguishing feature of the patent, the effect of variations in ambient temperature is reduced by adding a magnetostriction resonator in the cadence pulse generator made from the same material as the acoustic line in the delay unit. 2. A modification of this memory unit distinguished by the fact that mismatch between the period of the delay line and the cadence pulse period due to nonuniformity in heating of sections of the device is eliminated by utilizing a heater such as the regulating transistor of an electronic voltage stabilizer for the supply system of the device. 3. A modification of this device distinguished by the fact that the range of permissible variations in ambient temperature is extended by adding a system for precisely

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

PEGOYEV, A. N. et al., USSR Author's Certificate No 297071

matching the period of the delay line to the cadence pulse period. The actuating element of this system is made in the form of an electronic switch which controls the above-mentioned heater and an acoustic line heater. This latter heater is another controlling transistor in a stabilizer located on the housing of the acoustic line.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002202410004-6

USSR UDC 621.383.292.8

PEGOYEV, A.N., TRIFONOV, V.V., BUDRIS, M.V., TARASOV, V.A., LEMZYAKOV, S.R., SHEREMET'YEV, A.K. [Leningr. elektrotekhn. in-t -- Leningrad Electrical Engineering Institute]

"Source Of High Voltage For Supply Of A Photomultiplier"

USSR Author's Certificate No 266860, filed 8 July 66, published 15 July 70 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A259P)

Translation: The proposed source of high voltage for supply of a photomultiplier contains a voltage regulator, the input of the comparison element of which is connected to the output of the first section of the voltage converter. As the operating element of the regulator a single-cycle pulse generator with controlled frequency is used, and as a comparison element for the regulator, a silicon stabilitron. S.D.

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