"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

SAMVELYAN, V. M. and MCHEDLISHVILI, G. I., Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 1, 1971, pp 5-9

dilated them, promoting transudation from the blood vessels into brain tissue. Preparation 7351, for example, depressed mitochondrial respiration, thereby preventing circulatory insufficiency from arising in the brain as a result of vasoconstriction. Moreover, injected into the animals prior to brain injury, it prevented the cerebral vessels from becoming more permeable (to P^{32}).

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USSR UDC 543.544.45:535.322.4.08

AYOLLO, Z. S., DEVDARIANI, I. V., DELYUSTO, V. V., KARABEGOV, M. A., KOMRAKOV, YU. I., MCHEDLISHVILI, K. A.

"Refractometric Detector for Liquid Chromatographs"

Dokl. Vses. sovesh. Optich. i titrometrich. analizatory zhidk. sred. 1971. Ch. 2 (Reports of the All-Union Conference on Optical and Titrometric Analyzers of Liquid Media, 1971, Part 2), Tbilisi, 1971, pp 60-65 (from Rzh--Metrologiya i Izmeritel'naya Tekhnika, No 3, Mar 72, Abstract No 3.32.1123)

Translation: A model of a refractometric detector developed at the Special Design Office for Analytical Instrument Making is described. The detector is designed for operation with a gel filtration chromatograph. The sensitivity threshold of the gel chromatograph is $\sim 10^{-3}$-10^{-4} mg/mℓ of analized component. The sensitivity of the recording differential refractometer when measuring the index of refraction must be no worse than $1 \cdot 10^{-6}$-$1 \cdot 10^{-7}$. The check of the sensitivity of the refractometer performed with respect to the height of the peak on the chromatograms demonstrated the reliability of the analysis at $\sim 5 \cdot 10^{-5}$ mg/mℓ. The device was developed to investigate the molecular mass distribution of polymers, but the experimental studies demonstrated the possibility of using a differential refractometer (without a chromatograph) for any refractometric measurements. There are 4 illustrations.

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USSR UDC 669.168.001

MCHEDLISHVILI, V. A., IGNAT'YEV, V. S., ZAOYU, T. N., and KHITRIK, S. I.

"Oxide Inclusions in Ferrotitanium and Ferroniobium"

Moscow, Stal', No 7, Jul 71, pp 614-615

Abstract: The authors studied the quantity and composition of oxide inclusions in standard ferroalloys, viz. 30-percent ferrotitanium Ti1 and 60-percent ferroniobium Nb1 and NbnO, after isolating them by chlorination by converting the metallic components of the alloys into volatile chlorides during heating under the action of gaseous high-purity chlorine with subsequent vacuum sublimation of the chlorides. It was found that the oxide inclusions in ferrotitanium and ferroniobium are mainly of endogenous origin. Those in ferrotitanium are represented by corundum (α-Al_2O_3), β-alumina with an admixture of TiO_2 and Cr_2O_3, mullite, helenite, and silicates of the sphene and fayalite type. Ferroniobium contains inclusions of corundum, complex aluminosilicates and oxides of the columbite and mossite type. The oxide inclusion content of ferrotita-

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USSR

MCHEDLISHVILI, V. A., et al., Stal', No 7, Jul 71, pp 614-615

nium is 0.2-0.3 percent, low-silicon ferroniobium 0.04-0.14 percent and high-silicon ferroniobium 0.1-0.3 percent. The inclusions are distributed much more uniformly in ferroniobium than in ferrotitanium. The principal component of inclusions in both ferroalloys is alumina Al_2O_3. There are also significant quantities of SiO_2, FeO and TiO_2. Ferroniobium also contains niobium and tantalum oxides; and ferrotitanium -- insignificant quantities of manganese, calcium and chromium oxides. The calculated oxygen content of the inclusions for both alloys practically coincides with that found by the vacuum melting method (0.08-0.14 percent for ferrotitanium, 0.03-0.06 percent for low-silicon ferroniobium and 0.08-0.12 percent for high-silicon ferroniobium).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--FORMATION OF PRODUCTS OF IRON DEOXIDATION BY ALUMINUM -U-

AUTHOR-(04)-VERTMAN, A.A., GONGADZE, G.A., MCHEDLISHVILI, V.A., SAMARIN, A.M.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (1), 17-22

DATE PUBLISHED--------70

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

TOPIC TAGS--IRON, STEEL DEOXIDATION, ALUMINUM CONTAINING STEEL, NONMETALLIC INCLUSION, ALUMINUM OXIDE, METALLOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0167 STEP NO--UR/0370/70/000/001/0017/0022

CIRC ACCESSION NO--AP0054963

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 024 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054963

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ARMCO FE, CONTG. C 0.008, SI 0.001, MN 0.04, AND O 0.18PERCENT AND AL IN BARS WERE USED. THE SPECIMENS WERE MELTED IN A FURNACE WITH AR ATM. AT THE WORKING TEMP. 1600DEGREES A PIECE OF PURE AL (0.4 G) WAS ADDED TO THE SURFACE OF MOLTEN IRON. THE DURATION OF HEAT AND TEMP. WAS CHANGED DURING THE TESTS. THE CRUCIBLE WITH METAL WAS COOLED IN THE AR. SECTIONS OF THE INGOTS WERE STUDIED BY MICROANAL. WITH THE AIM TO DET. THE AL DISTRIBUTION ALONG THE HEIGHT OF THE SPECIMEN, THE REACTION DEPTHS BETWEEN THE DIFFUSING AL AND THE O IN THE METAL, AND FOR THE DETN. OF THE CONTENT OF NONMETALLIC INCLUSIONS. METALLOGRAPHIC STUDIES WERE ALSO CARRIED OUT. SEVERAL TYPES OF INCLUSIONS WERE STUDIED: LARGE LIQ. INCLUSIONS OF GLOBULAR FORM, COMPOSED OF MGAL SUB2 O SUB4, AL SUB2 O SUB3, DENDRITES AND FINE GRAINS OF ALUMINUM OXIDE. THE FORMATION OF GLOBULAR INCLUSIONS OF AL SUB2 O SUB3 WAS CAUSED BY THE EFFECT OF LIQ. PRODUCTS OF DEOXION. ON AL RESULTING IN THE FORMATION OF HARD SURFACE LAYER OF AL SUB2 O SUB3.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 006 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF HYDROTHERMAL TREATMENT CONDITIONS ON THE PROPERTIES OF CALCIUM HYDROSILICATE FOR USE AS A FILLER OF POLYMER MATERIALS -U-

AUTHOR-(03)-MCHEDLOVPETROSYAN, O.P., SYTNIK, L.V., ZELIKIN, M.B.

COUNTRY OF INFO--USSR

M

SOURCE--ZH. PRIKL. KHIM. LENINGRAD 1970, 43(3), 507-13

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--FILLER, RUBBER, LEATHER, CALCIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0596 STEP NO--UR/0080/70/043/003/0507/0513

CIRC ACCESSION NO--AP0119514

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 006 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119514

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OPTIMUM CONDITIONS FOR PRODUCTION OF THE TITLE COMPD., USEFUL AS A FILLER IN RUBBER AND SYNTHETIC LEATHER, WERE DETD. FOR THE REACTION, DIATOMITE FROM THE DZHADZORSK DEPOSIT, CONTG. 87.5PERCENT SIO SUB2 OF AN AMORPHOUS, ACTIVE FORM, 2.0PERCENT AL SUB2 O SUB3, 1.6PERCENT MGO, 0.8PERCENT CAO, 1.1PERCENT FE SUB2 O SUB3, AND 6PERCENT VOLATILES, AND CAO HEATED OT 900DEGREES AND SLAKED WITH H SUB2 O AT 90DEGREES WERE USED IN DIFFERENT RATIOS. BEST RESULTS WERE AT CAO-SIO SUB2 EQUALS 0.5:1. OPTIMUM TEMP. IN THE AUTOCLAVE WAS 100DEGREES. THE REACTION RATE INCREASED WITH THE DEGREE OF DISPERSION; WET MILLING OF THE MATERIALS IS RECOMMENDED. THE RATE WAS BEST AT THE H SUB2 O SOLIDS RATIO OF 10-20. A HIGH REACTION RATE ALWASY INDICATED A GOOD QUALITY FILLER. FAICLITY: NAUCH.-ISSLED, INST. OSNOV, KHIM., KHARKOV, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

Luminescence

USSR UDC 661.143:620.179.05(088.8)

MALKES, L. YA., OL'GINSKIY, A. G., KRASOVITSKIY, B. M., MOKEDLOV-PETROSYAN, O. P., STAROSEL'SKIY, A. A., and MEL'NICHENKO, P. A.

" A Luminescent Paste for Flaw Detection on Porous Materials"

USSR Author's Certificate No 329191, filed 24 Jul 70, published 20 Mar 72 (from RZh-Khimiya, No 22, Nov 72, Abstract No 22L152P)

Translation: A luminescent paste for flaw detection on porous materials has been developed which reveals flaws over a wide range of dimensions. Example. Preparation of the luminescent past, and technique for using it: 0.075 g 1,8-napthoylene-1',2'-benzimidazole is dissolved with heating to 80°C in 100 g of mineral oil, the solution is cooled and thoroughly mixed in a mortar with 100 g of MgO. The resultant paste is applied to the surface of the material (refractories, porous glass, artificial stone) and thoroughly rubbed in. The excess is removed and the material is observed in ultraviolet light; glowing defects are clearly visible on the surface. When detecting flaws in concrete and ceramics, the materials to be tested are soaked in water before application of the paste; this prevents penetration of the luminescent paste into the fine pores (less than one micron) inherent in the nature of the material, and as a consequence prevents fluorescence of the

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

MALKES, L. YA., et al., USSR Author's Certificate No 329191, filed 24 Jul 70, published 20 Mar 72

entire surface under ultraviolet light which would make it impossible to pick out the flaws against the overall glow of the background. MgO adsorbs the luminescent oil, which then gradually flows into the defects, enables thorough washing of the luminescent paste from the surface of large defects (bigger than 1000 microns). The proposed paste can be used for quality control of raw material and finished goods on various stages of the technological process and in use, and does not require complicated special equipment. The composition of the proposed paste (in wt.%): 1,8-naphthoylene-1',2'-benzimidazole 0.04, mineral oil 49.98, mercuric oxide 49.98. N. Sh.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC: 621.317.33

KROTKOV, I. N., KLEBANOV, M. Ya., GUR'YANOV, V. S., MCHELIDZE, G. V.

"Methods and Equipment for Precision Measurements of the Parameters of Resistors on Alternating Current"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 1 (Reports of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 1), Novosibirsk, 1970, pp 33-37 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A359)

Translation: The paper discusses briefly the problems which arise in precision measurements of the parameters of resistors on alternating current: "absolute" reproduction of the unit dimension of resistance (the ohm), retention and transmission of the unit dimension on alternating current, and determination of the residual parameters of resistors. It is pointed out that it would be advisable to develop a set of equipment for measuring the parameters of resistors with fairly high precision over a wide range of frequencies and resistances. Bibliography of 7 titles. E. L.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

Mdinaradze, Yu. S.

EVALUATING THE FUNCTIONAL CAPABILITIES OF THE BODY UNDER THE COMBINED INFLUENCE OF EXTREMAL FACTORS

/Article by Ye. I. Somolov, A. Ya. Tizul, Yu. S. Mdinaradze and V. P. Khmel'kov; Moscow, Aktual'nye Voprosy Kosmicheskoy Biologii i Meditsiny (Current Problems in Space Biology and Medicine), Russian, 1971, pp 326-327/

In order to evaluate the functional and adaptive capabilities of the body it is now customary to use different load examinations and tests in approximate form simulating various kinds of spaceflight (hypokinesis, isolation, hypoxia, accelerations, change in diurnal rhythm, etc.). Study of the influence of those factors on the dynamics of body adaptation is most frequently accomplished with but exposure to a single factor.

In order to ascertain the capability of the body to adapt, applicable to an evaluation of tolerance and reliability of body functions to prolonged space flights, a study was made of the nervous, cardiovascular, endocrinal, immunobiologic and other systems during a 40-day experiment in which six subjects in the age group 28-36 years participated. The experiment involved five stages: 11 days -- collecting background data; two days -- restructuring of the rhythm with four-hour cycles of work, rest and sleep; five days -- restoration period; twelve days -- clinostatic hypokinesis; eleven days -- study of the aftereffect (dynamics of restoration). During the period of 12-day hypokinesis there was a 48-hour restructuring of the diurnal rhythm of three subjects (first group) during the first two days of hypokinesis and another three subjects (second group) during the last two days of hypokinesis.

During the experiment we detected definite changes in functioning of the nervous system, manifested in a lability of autonomic reflexes, frequently exceeding the limits of

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--POLYMER COATING OF GLASS AEROSOL BALLOONS -U-

AUTHOR-(04)-NEUGODOV, P.P., BASHURA, G.S., TELLERMAN, L.S., MOGVARELI, V.A.

COUNTRY OF INFO--USSR

SOURCE--KHIM.-FARM. ZH. 1970, 4(2), 37-42

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLASTIC COATING, GLASS COATING, AEROSOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1359 STEP NO--UR/0450/70/004/002/0037/0042

CIRC ACCESSION NO--AP0125007

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125007

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW WITH 15 REFS. ON THE MANUF. OF POLYMER COATED GLASS CONTAINERS FOR AEROSOLS. FACILITY: KHAR'KOV. NAUCH.-ISSLED. KHIM.-FARM. INST., KHARKOV, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

Aerosols

USSR

UDC: 615.014.83:666.25

NEUGODOV, P.P., BASHURA, G.S., TELLERMAN, L.S., MEGVARELI, V.A., Khar'kov Scientific Research Chemico Pharmaceutical Institute, Kharkov, Ministry of Health Ukrainian SSR

"Coating Glass Aerosol Cylinders With Protective Polymeric Films"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 2, Feb 70, pp 37-42

Abstract: Glass cylinders, when manufactured to quality standards, can withstand very high pressure, usually exceeding 40 kg/cm^2. Optimal cylinder configuration ensuring the best combination of strength and use convenience was determined experimentally -- the shape of a spindle with flat bottom and top opening for the valve. However, cylindrical and oval shapes also meet basic requirements. Plastic coatings of powdered polymers are deposited and the cylinders are placed in an oven to fuse the coating, and then cooled. Optimal thickness of the coatings varies from 0.8 to 1 mm, rupture strength is 96 kg/cm^2, and relative elongation is 180-250 percent.

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USSR

UDC 622.24.054.322:622.24.051.64

KHUBOV, A. N., VOSKANOV, T. G., GEVORKOV, G. S., KARAMEV, S. K., MDIVANI, A. G., SIMONYAN, A. A., SHAKHRAMANOV, A. Kh., Baku Division of the All-Union Scientific Research Institute for Drilling Techniques, All-Union Scientific Research Institute for Drilling Techniques and "Kaspmorneft'" Combine

"Effectiveness of Applying Slow-Speed Turbodrills in Drilling With Diamond Chisels"

Dzerzhinsk, Bureniye, No. 4, 1972, pp 3-7

Abstract: The results of experimental boring with diamond chisels of diameter 241 mm in combination with slow-speed and high-revolution turbodrills when approximately the same power is supplied to the chisel are analyzed. It is shown that the highest economic and technical operating indices for diamond chisels are achieved by applying a slow-speed low-pressure turbine of precision casting, namely the 3TSSh-190TL turbodrill and the 33/11 turbine. This turbine can operate consistently at revolutions of 250-400 per minute and can take axial loads of 12 tons or more. Data are presented on the consumption of DRS241S2 diamond chisels, the nature of their wear, and the change in mechanical rate during drilling. It is shown that a

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KHUBOV, A. N., et al, Bureniye, No. 4, 1972, pp 3-7

decrease in the number of revolutions to 300-400 per minute had a favorable effect on the wear and an increase in cutting capacity by a factor of 2 is achieved at the same mechanical rate.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC 669.017.1:621.771.8

MEANDROV, L. V., BYKOV, A. A., YAKSHINA, O. K., and KAYTSEV, V. V.

"Properties of a Three-Layer Strip Produced by Explosion and Packet Rolling"

Spetsial'nyye Stali i Splavy [Special Steels and Alloys--Collection of Works], No 77, Metallurgiya Press, 1970, pp 160-163

Translation: Results are presented from comparative studies of the quality of bimetal produced by explosive welding and by packet rolling. The strength characteristics of a three-layer strip nickel + steel + nickel, produced by explosive welding, are found to be of the level of properties of a three-layer strip produced by packet rolling. The shear resistance between layers in the explosively welded bimetallic strip is 300-400 Mn/m^2 (30-40 Kg/mm^2). Estimation of the microstructure of the bimetal in the initial state (after explosion) and after hot rolling confirms the good adhesion of the nickel layers to the base layer. 3 figures.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 669.1.017:621.771.8:669.15'24'26'-194

GOLOVANENKO, S. A., MEANDROV, L. V., PERSHINA, N. F., and USTIMENKO, V. A.

"Structure of Two-Layer Corrosion-Resistant Steel"

Spetsial'nyye Stali i Splavy [Special Steels and Alloys--Collection of Works], No 77, Metallurgiya Press, 1970, pp 172-177

Translation: The influence of technological factors on the structure and properties of large bimetallic sheets with a clad layer of chrome-nickel and chrome-nickel-molybdenum steels was studied.

It was established that the technological specifics related to the production of very thick two-layer corrosion-resistant sheets influence the changes in structure and properties.

Methods are recommended for reducing the required corrosion properties of the bimetal. 5 figures; 1 table.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 621.77.016.2:669.14.018.8

BULAT, S. I., GINDIN, A. SH., MARKOVICH, V. I., and MEANDROV, L. V.

"Influence of Hot Rolling Mode on Structure of 0Kh17T Steel"

Spetsial'nyye Stali i Splavy [Special Steels and Alloys--Collection of Works], No 77, Metallurgiya Press, 1970, pp 145-150

Translation: Various modes of heating and rolling of 0Kh17T steel are studied on a semicontinuous mill. Experiments are performed, refining the mechanism of structure formation of high-chromium steel during hot rolling. Conditions of production of fine-grain structure and high plastic properties are determined. 4 tables; 5 biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 621.771.8

BYKOV, A. A., GOLOVANENKO, S. A., MEANDROV, I. V., and CHUB, V. M.
"The Selection of An Optimal Temperature Mode for Rolling of the Bimetals St3+0Kh17T and St3+Kh25T"

Spetsial'nyye Stali i Splavy [Special Steels and Alloys--Collection of Works], No 77, Metallurgiya Press, 1970, pp 177-181

Translation: In order to select the optimal temperature interval for rolling and optimal compression mode under industrial conditions, diagrams of second-order recrystallization of 0Kh17T and Kh25T steels are constructed. This was performed using the method of rolling of wedge-shaped specimens. The temperature of the beginning of rolling of the chrome steels should not exceed 1,000°C. When bimetals St3+0Kh17T and St3+Kh25T were rolled under industrial conditions, the temperature of beginning of rolling was increased to 1100°C. By using slight compression and properly selecting the rolling rate, recrystallization in the high-temperature area was suppressed, a low temperature of end of rolling was achieved, and good fine grain was achieved in the clad layer of the finished sheet. 1 figure; 6 biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC:621.771.8

GOLOVANENKO, S. A., MEANDROV, L. V., USTIMENKO, V. A., TKACHEVA, A. V., and CHERVYAKOVA, V. V.

"Mechanical Properties of Steel + Nickel and Steel + Monel Bimetals"

Spetsial'nyye Stali i Splavy [Special Steels and Alloys--Collection of Works], No 77, Metallurgiya Press, 1970, pp 164-170

Translation: The strength and plasticity characteristics of bimetals were determined during tensile testing in the 20-1200°C temperature interval and impact testing between -60 and +20°C.

In the hot-rolled state, steel + nickel and steel + monel bimetals have mechanical properties as good as the properties of the base layer (steel), while their impact toughness is significantly better.

The dependence of adhesion strength of the layers on degree of deformation and state of the contact surface is obtained. 4 figures; 3 biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC: 536.2:536.63

MEBED, M. N., YURCHAK, R. P., KOROLEV, L. A., Moscow State University imeni M. V. Lomonosov

"Thermophysical Properties of Zirconium Carbide in the High Temperature Region"

Moscow, Teplofizika Vysokikh Temperatur, Vol 11, No 2, Mar/Apr 73, pp 427-429

Abstract: Experimental data are given on the temperature coefficient of thermal conductivity, specific heat, and heat conduction of two specimens of zirconium carbide with experimental error of 5, 4 and 9% respectively. The first specimen was made by cold pressing at 1.5-2 tons per sq. cm followed by sintering in argon at 2400°C for two hours. Chemical composition (in %): Zr-86.3, C_{tot}-11.5, W-0.48, N-0.01, O-0.51. Stoichiometry was 0.95. The second specimen was made by hot pressing the powder and sintering in a vacuum at 2100°C and 50 kg per sq. cm for 30 minutes. Chemical composition: Zr-87.4, C_{tot}-10.9, W-0.6, N-0.17, O-0.34. Stoichiometry 0.85. Analysis of the results shows that the Lorentz number for these materials is much higher than the theoretical value for metals, and

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

MEBED, M. N. et al., Teplofizika Vysokikh Temperatur, Vol 11, No 2, Mar/Apr 73, pp 427-429

remains practically unchanged with temperature. Separation of the experimental heat conduction into electron and phonon components showed that the phonon component comprises about 25% and 35% of the total heat conduction for the first and second specimens respectively. The phonon heat conduction shows practically no change with temperature, while the electron component increases linearly with temperature.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

RUSALOV, V. M., Institute of Psychology of the Soviet Academy of Sciences,
MECACCI, L., Institute of Psychology, Italy

"How Concentration of Attention in Work With a Proofreading Table is Related to the Alpha Rhythm in a Background EEG"

Moscow, Voprosy Psikhologii, No 3, May/Jun 73, pp 32-44

Abstract: The paper represents a first attempt at experimental association of indices of attention concentration with the energy-frequency characteristics of background bioelectric activity of the human brain. A modified Bourdon's cancellation test was given to 36 subjects to determine concentration of attention while simultaneously recording EEG's in the frontal and occipital regions of the right and left cerebral hemispheres. It was found that the most characteristic index of attention in recognizing the positive and negative key letters in the Bourdon's table is the integral index of productivity of attention determined by a modified Baskakova formula. Concentration of attention in recognition of negative stimuli in the table is appreciably lower than when positive stimuli are to be recognized. The individual differences between test subjects with respect to

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RUSALOV, V. M., MECACCI, L., Voprosy Psikhologii, No 3, May/Jun 73, pp 39-44

concentration of attention show up most markedly in the recognition of negative stimuli. Concentration of attention correlates positively with the alpha rhythm frequency in all four leads, and shows no correlation at all with any of the energy indices of the background EEG.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC [537.226+537.311.33]:539.16.04

BEGUCHEV, V. P., FEDOTOVA, T. N., and MECHETIN, A. N.

"Longitudinal Cathodoconductivity of Cadmium Telluride Layers"

V sb. Tonkiye plenki soyedineniy tellura s metallami podgrupp tsinka i galliya (Thin Films of Tellurium Compounds With Metals of the Zinc and Gallium Subgroups -- Collection of Works), Vil'nyus, 1970, p 91 (from RZh-Fizika, No 10, Oct 71, Abstract No 10YE998 by authors)

Translation: The authors investigated the cathodoconductivity (CC) of 0.5 to 5-micron-thick CdTe layers in an Al-CdTe-SnO_2 "sandwich" system. The layers were obtained by vacuum evaporation on a heated substrate and had a specific resistance of 10^9-10^{10} ohm·cm. CC was investigated during electron-beam excitation with an energy of 5-25 kev and current density $i_{excit}=10^{-7}$-10^{-10} a/sq cm, with constant or alternating bias voltage fed to the layer under investigation. The selective character of CC dependence on the velocity of the exciting beam is determined by the relation between film thickness and the depth of penetration of the electrons under investigation. The relation between the practical path of the electrons in the layers and their initial velocity is determined, as well as the dependence of CC on exciting current

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USSR

BEGUCHEV, V. P., et al., Tonkiye plenki soyedineniy tellura s metallami podgrupp tsinka i galliya (Thin Films of Tellurium Compounds With Metals of the Zinc and Gallium Subgroups -- Collection of Works), Vil'nyus, 1970, p 91 (from RZh-Fizika, No 10, Oct 71, Abstract No 10YE998 by authors)

density. On CdTe layers an amplification factor k_{ampl} (ratio of CC current to exciting current) up to $5 \cdot 10^3$ was obtained for electron velocity of 15 kev and bias voltage of 10 v. An even higher k_{ampl} (up to 10^5) was observed in layers obtained by cosputtering of CdTe and CdS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

Acc. Nr: AP0034719 Ref. Code: UR 0241

PRIMARY SOURCE: Meditsinskaya Radiologiya, 1970, Vol 15, Nr 2, pp 24-29

THE USE OF STRONTIUM[85] FOR THE DIAGNOSIS OF BONE TUMORS

N. F. Zarkevich, D. S. Mechev [redacted]

Summary

Strontium[85] was used for the diagnosis of primary tumors and metastases of the bones. Under examination were 130 patients, of this number 82 were operated upon. Radiological investigation consisted in scanning of the focus of affection in 24—96 hours, as well as in profile scanning and radiometry during the first 3—6 days. In myelomic disease, Ewing's sarcoma and reticulosarcoma the isotope accumulation in the focus was lesser than in osteogenic sarcoma, chondrosarcoma, malignized osteoblastoclastoma and metastases into the skeleton.

D. M.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC 669.243 + 669.337:669.052

MASH'YANOV, N. P., KOLESNIKOV, B. I., LAPIN, Yu. D., MEHHEV, N. V., RYABOV, V. G., VASIL'YEV, M. G., and SHUSTITSKIY, V. D.

"Certain Problems of the Production of Copper and Nickel From Complex Crude Sulfides"

Moscow, Tsvetnyye Metally, No 10, Oct 70, pp 11-14

Abstract: Difficulties encountered in the production of copper and nickel from sulfide copper-nickel ores are discussed. Procedures used in the USSR for separating these metals as well as cobalt are evaluated, and the necessity for the reconstruction of present copper-nickel production combines is stressed. A plan is recommended which would involve the parallel production of copper and nickel with an exchange of semi-products between them. A schematic production chart and a table containing the compositions of basic materials used in processing sulfide copper-nickel ores are presented. The recommended plan would ensure the recovery of 98-99% Cu, 96-97% Ni, and 85-87% Co, and would increase the recovery of noble metals and platinum. The plan involves a substantial increase in the use of oxygen, not only for melting but also for converting ores and concentrates. The plan would also make it possible to utilize more complete-

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MASH'YANOV, N. P., et al, Tsvetnyye Metally, No 10, Oct 70, pp 11-14

ly the crude sulfides, and to obtain pig-iron and construction materials from the high-ferrous converter mattes.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--SEPARATION OF IRON III AND ALUMINUM FROM COPPER, NICKEL, COBALT, CADMIUM, AND ZINC USING ETHYLENEDIAMINE -U-

AUTHOR-(03)-TEODOROVICH, I.L., MECHOS, KH.Z., GUTNIKOVA, R.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHIM. 1970, 25(3), 526-31

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALUMINUM, COPPER, METAL CHEMICAL ANALYSIS, NICKEL, COBALT, CADMIUM, ZINC, CHEMICAL PRECIPITATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0381 STEP NO--UR/0075/70/025/003/0526/0531

CIRC ACCESSION NO--AP0126136

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0126136

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COPPTN. OF CU(II) AND ZN(II) WITH FE(OH) SUB3 AND AL(OH) SUB3 WAS STUDIED IN ORDER TO ELUCIDATE THE INTERACTION OF SOME BIVALENT METALS WITH PPTS. IN THE PRESENCE OF ETHYLENEDIAMINE AND NH SUB4 OH. WHEN MACROAMTS. OF FE(III)-CU(II), FE(III)-ZN(II), AL(III)-CU(II), AL(III)-ZN(II) ARE SEPD. WITH ETHYLENEDIAMINE, THE COPPTN. OF BIVALENT CATIONS DECREASED CONSIDERABLY. THE COPPTN. OF CU WITH FE(OH) SUB3 AND AL(OH) SUB3 IS DUE TO ADSORPTION. THE COPPTN. OF ZN WITH FE(OH) SUB3 IS DUE TO THE FORMATION OF A CHEM. COMPD. AT A ZN:FE RATIO OF 1:1. ON THE COPPTN. OF ZN WITH AL(OH) SUB3 THE FORMATION OF CHEM. COMPDS. OF THE VARIABLE COMPN. AT A ZN:AL RATIO FROM 1:1 TO 1:2 CAN BE OBSERVED. AT SMALL ZN(II) CONCNS. THE COPPTN. OF ZN WITH FE(OH) SUB3 AND AL(OH) SUB3 MAY ALSO BE DUE TO ADSORPTION. FACILITY: INST. CHEM., TASHKENT, USSR.

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MEDCHUK, I. K.

SO:JPRS 53402
18 June 71

UDC: 614.253:061.3(477.82)"1970"

FIRST OBLAST CONFERENCE OF PHYSICIANS DEALING WITH DEONTOLOGY

[Article by I.K. Medchuk, chief physician, Volynskaya Oblast House of Sanitary Education; [redacted], Sovetskoye Zdravookhraneniye, Russian, No 5, 1971, submitted 11 December 1970, pp 5-6]

The first All-Union conference on problems related to medical deontology, which convened in Moscow on 28-29 January 1969, was very timely. In his opening remarks, B.V. Petrovskiy, USSR Minister of Health, stated "Deontology characterizes Soviet physicians; it is manifested not so much in their pronouncements and statements as in their acts and behavior. Today, as in the past, heroic feats and selflessness are normal behavior for a doctor."

The speeches by prominent scientists of our country delivered at this conference drew the attention of the physicians of Volynskaya Oblast. In compliance with the resolution adopted by the conference, which deemed it purposeful to convoke local republic, oblast (krayl), and municipal conferences on medical deontology, the oblast department of public health jointly with the Oblast Medical Scientific Engineering Society and Oblast House of Sanitary Education prepared for and convoked, on 17 November 1970, the first oblast conference of physicians dealing with deontology, in Lutsk. The All-Union Scientific Research Institute of Social Hygiene and Public Health Organization [illegible] N.A. Semashko rendered considerable organizational and methodological assistance in preparing for the conference.

There were 330 participating physicians of the oblast at the conference, including chief physicians of municipal, rayon, oblast therapeutic and prophylactic institutions, chief physicians of district hospitals, sanitary and epidemiological stations, public health veterans, VUZ graduates of 1960-1970, [illegible] members from the Party oblast committee and oblast executive committee also participated in the conference. The conference's opening remarks were delivered by the head of the oblast department of public health, [illegible], who indicated the importance to physicians of all specialties of the papers to be delivered.

The main paper, entitled "Deontology in the History of Soviet Medicine," was delivered by B.D. [illegible] (Moscow), corresponding member of the USSR AMS

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USSR UDC 539.385

BARGYALIS, A. S., MEDEKSHA, G. G., DAUNIS, M. A., TIMOFEYEV, B. T.

"Behavior of Pearlitic Welded Seams with Low-Cycle Loading at High Temperatures"

Soprotivl. Materialov. Materialy XXII Resp. Nauch.-tekhn. Konf. [Strengths of Materials, Materials of XXII Republic Scientific and Technical Conference -- Collection of Works], Kaunas, 1972, pp 32-36, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 V1226 by A. P. Gusenkov).

Translation: The static and cyclical strength and ductility characteristics of materials 15Kh2MF, 22K and Kh18N22V2T2 at 350° are presented. Diagrams of static deformation, values of yield points and strength, rupture resistance and coefficient of reduction in area are produced. Curves of low-cycle fatigue are constructed for rigid loading in the coordinates initial loading deformation vs. number of cycles to crack formation. The maximum durability is $5 \cdot 10^4$-10^5 cycles.

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USSR

Automatic Control: Instruments

USSR UDC 621.317

MEDEM, Ye. M. and GOLOVIN, V. I.

"A Device for Representing Vectors on the Screen of a Cathode Ray Tube"

USSR Author Certificate, Class G 01 r 13/02, No 340972, filed 12 Oct 70, published 28 June 72 (from RZh-Avtomatika Telemechanika i Vychislitel'naya Tekhnika, No 3, Mar 73, Abstract No 3 A334 P)

Translation: An apparatus is suggested for representing vectors on the screen of a CRT, containing deflection apparatus whose circuits can be commutated by a negative feedback commutator. To reduce the number of control channels in forming images of output signals from a computer, the inputs of the commutators are connected to the output of a flip-flop whose input comes through a delay line from the output of a logical OR unit. The inputs to the OR unit pass through a series-connected limiter, phase shifter, and input signal differentiating circuit. One illustration.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC 669.721.046.4

MAURITS, A. A., MEDEUOV, Ch. K., BERSENEV, P. D.

"Tensometric Study of Ammonium Carnallite"

Tr. Vses. N-i. Proyektn. In-ta. Alyumin., Magn. i Elektroden. Prom-sti [Works of All-Union Scientific Research and Planning Institute of the Aluminum, Magnesium and Electrode Industry], 1970, No. 72, pp. 84-89. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 G191 by the authors).

Translation: Experimental results are presented from determinations of the vapor pressure over ammonium carnallite crystal hydrates and its anhydrous complex as a function of temperature. The thermal effects of the processes of dehydration and decomposition of carnallite are calculated on the basis of the data produced by a statistical method, using the isobar equations of the chemical reactions. The dependence of the equilibrium constant of dissociation of anhydrous carnallite on temperature is determined. 4 figs; 1 table, 9 biblio refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC 669.721.046.4

MAURITS, A. A., MEDEUOV, Ch. K., SHADSKIY, S. V.

"Thermochemical Investigation of Ammonium Carnallite"

Tr. Vses. N-i Proyektn. In-ta. Alyumin., Magn. i Elektrodn. Prom-sti [Works of All-Union Scientific Research and Planning Institute of the Aluminum, Magnesium and Electrode Industry], 1970, No. 72, pp. 77-83. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 G190 by the author).

Translation: The integral heats of dissolution of anhydrous, dihydrate, and hexahydrate ammonium carnallite at 25° are experimentally determined. Based on the data produced, the thermal effects of the processes of dehydration and decomposition of ammonium carnallite are calculated: $NH_4Cl \cdot MgCl_2 \cdot 6H_2O = NH_4Cl \cdot MgCl_2 \cdot 2H_2O + 4H_2O = 60.5$ kcal; $NH_4Cl \cdot MgCl_2 \cdot 2H_2O = NH_4Cl \cdot MgCl_2 + 2H_2O + 50.6$ kcal; $NH_4Cl \cdot MgCl_2 = MgCl_2 + NH_3 + HCl + 46.08$ kcal. 1 table, 8 biblio refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 019 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--EFFECT OF SORPTION OF GASES AND LAYER THICKNESS ON THE ELECTRIC CONDUCTIVITY OF THIN LAYERS OF CADMIUM SELENIDE -U-

AUTHOR-(02)-VISHCHAKAS, YU.K., MEDEYSHIS, A.S.

COUNTRY OF INFO--USSR

SOURCE--LIT. FIZ. SB. (LITHUANIAN COLLECTION OF WORKS IN PHYSICS), 1969,
REFERENCE--RZH-FIZIKA, NR 11, NOV 69, ABSTRACT NR 11E796
DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CADMIUM SELENIDE, ELECTRIC CONDUCTIVITY, GAS ABSORPTION, VACUUM TECHNIQUE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0179 STEP NO--UR/0000/69/000/005/0875/0880

CIRC ACCESSION NO--AR0125978

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 019 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AR0125978

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCE OF ELECTRIC CONDUCTIVITY OF CADMIUM SELENIDE LAYERS ON THEIR THICKNESS AT VARIOUS PRESSURES OF SURROUNDING GASES WAS INVESTIGATED. THE THICKNESS OF LAYERS VARIED FROM 0.03 TO 1.5. IT WAS ESTABLISHED THAT IN A VACUUM OF 10-5 MM HG THE DECREASE OF ELECTRIC CONDUCTIVITY WITH DECREASING LAYER THICKNESS IS VERY INSIGNIFICANT AND IS NOTICEABLE ONLY AT THICKNESSES SMALLER THAN 0.5. WHEN THE PRESSURE IN THE SYSTEM IS INCREASED, THE DROP IN THE ELECTRIC CONDUCTIVITY WITH DECREASING THICKNESS IS MORE ABRUPT AND IS NOTICEABLE IN THICKER LAYERS. THE FINDINGS OBTAINED ARE EXPLAINED BY THE EFFECT OF INCREASED HEIGHT OF INTERCRYSTALLINE ENERGY BARRIERS CAUSED BY THE SORPTION OF GASES. THEORETICAL EVALUATION OF THE EFFECT OF HEIGHT OF INTERCRYSTALLINE BARRIERS AND SURFACE DEFLECTION OF ZONES ON THE ELECTRIC CONDUCTIVITY OF CADMIUM SELENIND LAYERS WAS CARRIED OUT. THE ELECTRIC CONDUCTIVITY MEASUREMENTS OF THE LAYERS WERE CARRIED OUT WITYOUT REMOVING THEM FROM A VACUUM AFTER THEIR PREPARATION.

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RUBENCHIK, YU.I., KROSHKIN, V.A., MEDINSKAYA, I.P., EROLOV, O.F., ZHERDEV, A.V., and VAYNTRAUB, S.S., VNIIPTkhimneftesapparatury and Kommunarsk Metallurgical Plant

"High-Strength Sheet Steel 10G2FR"

Moscow, Metallurg, No 8, Aug 71, pp 25-26

Abstract: On the basis of investigating 09G2S and 16GS low-alloy steels, melted in 100-kg induction and 3-ton electric furnaces, the optimum composition of 10G2FR steel was established. At the Kommunarsk Metallurgical Plant two heats were melted in 300-ton open-hearth furnaces by conventional technology and deoxidized with ferrosilicon, silicomanganese, and aluminum. The resulting slabs were rolled into sheet and the mechanical properties of the sheet were determined. Then the sheet was heat treated by heating to 930-950°C water quenching, and tempering at 660°C. In all cases the heat-treated sheet exhibited much greater mechanical properties for all thicknesses tested than were shown by the steel in the hot-rolled state. It was found that 10G2FR steel also possesses good weldability without pre-heating. At the Volgograd Petroleum Equipment Plant imeni Petrov the first batch of fabricated vessels were made of 10G2FR steel and are designated to be used under pressures of 8-55 kg/cm² at temperature down to -40°C.

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USSR UDC 620.[illegible]

RUBENCHIK, Yu. I., KROPEKIN, V. A., [illegible], I. P., [illegible], A. V., [illegible], S. S., and SUKHOMLINA, A. G., VNIIPTKhimneftemparatury [Expansion unknown], Kommunarsk Metallurgical Plant

"Work Hardening of 10G2FR Plate Steel"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 11, Nov 70, pp 55-57

Abstract: A study was made of the effect of thermal hardening and hot rolling of 10G2FR plate steel on its mechanical properties. In the thermally work hardened state at elevated temperatures the tensile strength of [illegible] does not change up to 400° C, but thereafter decreases [illegible] 450° C the thermally work hardened metal does not differ [illegible] one. The mechanical properties of 10G2FR steel [illegible] hot rolled and thermally work hardened states are presented. [illegible] metals make it possible to produce a sulfurized metal with a uniform distribution of segregated units along the plate section, ensuring sufficient ductility and strength of the metal when it is made into plates of different thickness.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 024 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECT OF METEREOLOGICAL FACTORS IN STROKE INFARCTION DISEASES IN CONDITIONS OF THE CITY OF LVOV -U-

AUTHOR-(02)-MEDINSKIY, P.G., MEDINSKIY, R.P.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 5, PP 23-25

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HEART DISEASE, CEREBRUM, HEMORRHAGE, SEASONAL VARIATION, GEOGRAPHIC LOCATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1953 STEP NO--UR/0475/70/000/005/0023/0025

CIRC ACCESSION NO--AP0127354

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 024 UNCLASSIFIED PROCESSING DATE--30OCT7(

CIRC ACCESSION NO--AP0127354

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ANALYSIS IS PRESENTED OF THE CLIMATIC CHARACTERISTICS OF THE CITY OF LVOV. IT IS SHOWN THAT THE INCIDENCE OF CARDIO VASCULAR CATASTROPHIES (STROKES, STENOCARDIA, MYOCARDIAL INFARCTIONS, CEREBRAL HEMORRHAGES) SHOW A DISTINCT SEASONAL DEPENDENCE. THE EFFECTS HAVE BEEN STUDIED OF THE ATMOSPHERIC PRESSURE AND AIR TEMPERATURE. THE INFAVOURABLE EFFECT OF THE FRONT TYPE OF WEATHER ON THE PATIENTS IS SUGGESTED.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 024 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECT OF METEREOLOGICAL FACTORS IN STROKE INFARCTION DISEASES IN CONDITIONS OF THE CITY OF LVOV -U-

AUTHOR-(02)-MEDINSKIY, P.G., MEDINSKIY, R.P.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 5, PP 23-25

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HEART DISEASE, CEREBRUM, HEMORRHAGE, SEASONAL VARIATION, GEOGRAPHIC LOCATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1953 STEP NO--UR/0475/70/000/005/0023/0025

CIRC ACCESSION NO--AP0127354

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2/2 024 UNCLASSIFIED PROCESSING DATE--30OCT7C

CIRC ACCESSION NO--AP0127354

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ANALYSIS IS PRESENTED OF THE CLIMATIC CHARACTERISTICS OF THE CITY OF LVOV. IT IS SHOWN THAT THE INCIDENCE OF CARDIO VASCULAR CATASTROPHIES (STROKES, STENOCARDIA, MYOCARDIAL INFARCTIONS, CEREBRAL HEMORRHAGES) SHOW A DISTINCT SEASONAL DEPENDENCE. THE EFFECTS HAVE BEEN STUDIED OF THE ATMOSPHERIC PRESSURE AND AIR TEMPERATURE. THE INFAVOURABLE EFFECT OF THE FRONT TYPE OF WEATHER ON THE PATIENTS IS SUGGESTED.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC 621.791.763.1.011

KORZH, V. N., MEDKO, B. V., and ZHDANOV, I. M., Kiev Polytechnic Institute

"The Determination of the Magnitude of the Zone of Plastic Deformations in Spot Welding of Thin-Sheet Constructions"

Kiev, Avtomaticheskaya Svarka, No 1, Jan 72, pp 14-16

Abstract: The effect of the dimensions of welded members of low-carbon steel on the magnitude of the zone of a residual plastic deformations was investigated and a simplified method for its calculation is suggested. The method takes into account the distributions of the temperature from spot heating and of the maximum temperature on the edge of the weldable member, which depends on the section of the member. The results are discussed on the basis of graphs showing the distribution of maximum temperatures on specimens spot welded in their centers under different conditions and the calculated and experimental values of the radius of the zone of residual plastic deformations. Their comparison shows a satisfactory consistency, the average relative magnitude of the error being in the limits of 7-14%. Three illustrations, seven bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC: 547.665;547.541;543.422

GEYTA, L. S., DALBERGA, I. E., MEDNE, K. K., ARENS, A. K., Institute of Organic Synthesis, Academy of Sciences Latvian SSR, Order of the Red Banner of Labor

"Study of Unsaturated Acylindandiones. Part 6. Sulfoderivatives of 2-Cyannamoylindiones-1,3"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR, Seriya Khimicheskaya, no 5, 70, pp 571-575

Abstract: Sulfuration of 2-cyannamoylindandiones-1,3 (CI) has shown that the 2-sulfoacid CI which is formed by treating CI with dioxanosulfotrioxide is unstable; however, when sulfurated in a benzene ring, by treatment with chlorosulfonic acid, CI becomes a stable compound. Sulfochlorides and sulfonamides have been synthesized and their infrared spectra studied. The turbeculostatic activity of CI tested on strains of microorganisms H37Kv, Ravenel, Vallee u D has shown their low activity. The minimal inhibiting concentration of the growth of tubercular cultures by CI sulfoderivatives fluctuates between 1.7 mcg/ml and > 50.00 mcg/ml, while tubamid inhibits microbacterial growth in concentrations of 0.10 to 22.46 mcg/ml. Tables 1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

GEYTA, L. S., et al, Izvestiya Akademii Nauk Latviyskoy SSR, Seriya Khimicheskaya, no 5, 70, pp 571-575

In the original article provide data on infrared spectra and tuberculostatic activities of various Cl sulfoderivatives, their formulas, melting points, composition (%), and yields (%).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

MEDNIKAROV, P.D.

126. USSR

Cybernetics

KHINCHIK, Ye. P., and MEDNIKAROV, P. D., Psychology Faculty, Moscow State University

"On the Mechanisms by Which Signal Probability Affects Human Reaction Time"

Moscow, Voprosy Psikhologii, Vol 6, Nov-Dec 70, pp 34-46

Abstract: Two series of experiments were set up to test the hypothesis that signal probability affects reaction time via two mechanisms: the "physiological," in which the frequency and repetition of a signal conditions the sensomotor apparatus to a rapid response, and the "psychological," in which the reaction time is affected by the subjective expectation of a stimulus. In one series of experiments the subject's attention was focused on one of two possible stimuli by associating a punishment with a slow reaction to that stimulus, while a slow reaction to the other stimulus received no punishment; in this experiment the stimuli were delivered in a random sequence, both with and without warning. In the second experiment there was no preferential reward or punishment, but the subjects were presented with two types of series, one in which the sequence was random and one in which the stimuli were presented in regular succession; in this experiment the ratio of occurrences between the two stimuli was varied.

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SO: FOREIGN PSYCH DIGEST
31 Dec 71

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--MECHANISM OF TRANSLATION MISTAKES IN VIVO AND IN VITRO -U-

AUTHOR-(03)-MEDNIKOV, B.M., GALINOVA, L.M., BELOZERSKIY, A.N.

COUNTRY OF INFO--USSR

SOURCE--BIOKHIMIYA 1970, 35(2), 216-23

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--AMINO ACID, ANTIBIOTIC, PYRIMIDINE, NUCLEOTIDE, STREPTOMYCIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3009/0197 STEP NO--UR/0218/70/035/002/0215/0223

CIRC ACCESSION NO--AP0139060

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 011 UNCLASSIFIED PROCESSING DATE--[illegible]

CIRC ACCESSION NO--AP0139060

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SERICIN PRODUCED BY B[illegible] WORMS FED ON A DIET CONTG. STREPTOMYCIN HAS A SIGNIFICANTLY LOWER PROPORTION OF THE FOLLOWING AMINO ACIDS IN COMPARISON WITH STD. SERICIN: VALINE, 15.3PERCENT DECREASE; LEUCINE, 13.3; ISOLEUCINE, 13.2; THREONINE, 11.6; ARGININE, 8.8; AND SERINE, 4.0, WHILE THE PROPORTION OF THE FOLLOWING IS INCREASED: GLUTAMIC ACID BY 26PERCENT; LYSINE, 17.6; ALANINE, 14.0; AND ASPARTIC ACID, 3.7. IT IS SUGGESTED THAT THE TRANSLATION MISTAKES INDUCED BY THE ANTIBIOTIC IN VIVO ARE COMPARABLE TO THOSE OBSD. IN CELL FREE SYSTEMS. THE MISTAKES RECORDED IN THE ABOVE EXPTS. CAN BE INTERPRETED AS FOLLOWS: ALL THE 4 BASES CAN BE READ AS A, THE PYRIMIDINES CAN ALSO BE READ AS G; IN ADDN., U CAN BE READ AS C AND G AS A, WHILE A IS ALWAYS TRANSLATED CORRECTLY. THE MISREADING FREQUENCY OF NUCLEOTIDES U GREATER THAN C GREATER THAN G GREATER THAN A IS CORRELATED TO THEIR THERMODYNAMIC STABILITY. FACILITY: MOSCOW STATE UNIV., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 621.357.8.035.4:669.14(088.8)

SHTAN'KO, V. M., LIPKIN, Ya. N., NOVIKOV, V. G., VOLKOV, Yu. M., STRIZHAK, G. K., RABINOVICH, O. Ya., ZIMOVETS, V. G., DANILOV, A. M., MATVEYEV, Yu. M., MEDNIKOV, Yu. A.

"Electrolyte for Electrochemical Polishing of Products"

USSR Author's Certificate No 306186, Filed 28/10/69, Published 21/07/71, (Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No 3 L283 P from the Resume).

Translation: An electrolyte for electrochemical polishing of products, for example of stainless steel, differing in that in order to improve the quality of polishing and intensify the process, a foam suppressor is introduced to the electrolyte with the following relationship of components (in wt.%): orthophosphoric acid 30-70, H_2SO_4 10-40, H_2O 10-30 and above 100%. Surfactants based on peptide and polypeptide salts, 1-10 g/l, foam suppressor 0.001-1 g/l. Polymethylsiloxane liquid is used as the foam suppressor.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--PHARMACOLOGICAL PROPERTIES OF THE DIALKYLAMINOALKYL ESTERS OF P,ALKOXYBENZYLPHENYLACETIC ACIDS -U-

AUTHOR-(02)-MEDNIKYAN, G.A., GEVORKYAN, G.G.

COUNTRY OF INFO--USSR

SOURCE--BIOL. ZH. ARM. 1970, 23(1), 87-91

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HYPOTENSION, PHARMACOLOGY, DRUG EFFECT, ESTHER, ACETIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3009/0170 STEP NO--UR/0427/70/023/001/0087/0091

CIRC ACCESSION NO--AP0139033

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139033

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WEAK HYPOTENSIVE AND GANGLIOPLEGIC ACTIVITY AND SOME LOCAL ANESTHETIC AND ANTICONVULSIVE ACTIVITY WERE FOUND WITHIN THE DOSE RANGE OF 1-15 MG-KG IN 24 DERIVS. OF P,ALKOXYBENZYLPHENYLACETIC ACID. DIETHYLAMINOETHYL ESTERS WERE THE MOST ACTIVE. FACILITY: INST. TONKOI ORG. KHIM., EREVAN, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 017 UNCLASSIFIED

TITLE--DETERMINATION OF THE INITIAL COUNTING RATE IN GAMMA NEGATIVE SPECTRA MEASUREMENTS OF SHORT LIVED ISOTOPES BY MULTICHANNEL ANALYZERS

PROCESSING DATE--16OCT70

AUTHOR-(02)-MEUNIS, L., PELEKIS, L.

COUNTRY OF INFO--USSR

SOURCE--LAIV. PSR ZINAT. AKAD. VESTIS, FIZ. TEH. ZINAT. SER. 1970, (1), 3-8

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GAMMA SPECTROMETER, MULTICHANNEL ANALYZER, PARTICLE COUNTING, COUNT RATE METER, ALUMINUM ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1890

STEP NO--UR/0371/70/000/001/0003/0008

CIRC ACCESSION NO--AP0108220

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 017 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0108220

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD FOR DETG. THE INITIAL COUNTING RATE (N SUBOK) IN GAMMA SPECTRA MULTICHANNEL ANALYZER MEASUREMENTS OF SHORT LIVED RADIOISOTOPES IS DESCRIBED, USING PRIME28 AL, T SUBONE HALF EQUALS 2.27 MIN, AS THE SOURCE OF RADIATION. THE TOTAL PERIOD OF MEASUREMENT (T SUBOP), WAS ALSO DETD., AND A SERIES OF MONOGRAMS WAS USED FOR THE RAPID EVALUATION OF SEVERAL VARIABLES. FOR T SUBOP EQUALS 2.2 T SUBONE HALF EQUALS 300 SEC, N SUBOK EQUALS 423 PLUS OR MINUS 28 PULSES-SEC-MG. FACILITY: INST. FIZ., RIGA, USSR.

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USSR

UDC: 51

PUGACHEV, V. F., MARTYNOV, G. V., MEDNITSKIY, V. G., PITELIN, A. K.

"Multistage Optimization With Specific Forms of Local Criterion"

Ekonomika i mat. metody, 1973, 9, No 2, pp 204-217 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V534 [authors' introduction])

Translation: In RZhMat, 1973, 1V737 a scheme of multistage optimization with local criterion of general form is considered. Using specific forms W, corresponding modifications of the general scheme can be made, computational experiments can be formulated, a comparative analysis can be made, and conclusions of a mathematical and economic nature can be drawn. The paper deals with just this class of problems.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC: 51

MEDNITSKIY, V. G.

"Concerning Optimality of Aggregation in a Block Problem of Linear Programming"

Moscow, Mat. metody resheniya ekon. zadach--sbornik (Mathematical Methods of Solving Economics Problems--collection of works), No 3, "Nauka", 1972, pp 3-17 (from RZh-Kibernetika, No 5, May 73, abstract No 5V623 by S. Lebedev)

Translation: Let x^p be the vector of variables of the p-th block of a linear programming problem. Aggregation will be understood to mean the process of substitution of variables $x^p = \xi^p \lambda_p$, where ξ^p is some fixed vector, and λ_p is an undefined parameter. If the optimum values of the goal function of the initial and aggregated problems coincide (with variables λ_p), then the aggregation and its corresponding vector ξ are called optimum. Two questions arise: how to construct the vector of optimum aggregation, and how to establish that a specific aggregation is optimum (or non-optimum). A theorem is proved

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MEDNITSKIY, V. G., Mat. metody resheniya ekon. zadach, No 3, "Nauka", 1972, pp 3-17

which answers these questions. An iterative algorithm is presented for improving the aggregating vector to guarantee an aggregation differing from the optimum (with respect to the goal function) by no more than ε after a finite number of iterations, where ε is an arbitrarily small positive number.

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USSR

DEMIKHOVS'KA, A. A., ZAKHARENKO, N. I., ZARYTS'KYY, A. H., and MEDNYK, M. R.
Kiev Scientific Research Institute of Epidemiology, Microbiology, and Parasitology, Kiev

"Comparative Study of the Nucleotide Composition of DNA of Salmonella typhi Strains of Different Phage Types"

Kiev, Mikrobiologicheskiy Zhurnal, Vol 33, No 6, Nov/Dec 71, pp 751-752

Abstract: The nucleotide composition of DNA of S. typhi of the phage types A, F_1, D_1, D_6, C_1, and Imperfect (of an unknown phage type) was studied. Isolation of DNA was carried out by the Kirby-Georgiyev phenol method modified by Demikhovs'ka. The nucleotide composition was determined chromatographically. The content of guanine (G), adenine (A), cytosine (C), and thymine (T) and the DNA specificity coefficient GC/AT were determined. There were no significant differences in the content of individual nucleotides between strains of the same phage type. The content of GC [G + C] was 53.4, 53.7, 55.2, 56.7, 55.1, and 54.6 percent for A, F_1, D_1, D_6, C_1, and Imperfect, respectively. GC/AT was 1.15, 1.13, 1.23, 1.32, 1.23, and 1.20 for A, F_1, D_1, D_6, C_1, and Imperfect, respectively. Statistically valid differences were established only for D_1 and D_6, the DNA guanine content of which differed from that found for the

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USSR

DEMIKHOVS'KA, A. A., et al., Mikrobiologicheskiy Zhurnal, Vol 33, No 6, Nov/Dec 71, pp 751-752

other phage types. This was reflected in the high GC/AT value for D_6. One may assume that the differences shown by D_1 and D_6 were due to the presence of the corresponding phages (d_1 and d_6) in the nuclear apparatus of S. typhi of these phage types.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 615.285.7.014.413

MEDOVAR, A. M., Kiev Institute for the Advanced Training of Physicians

"Persistence of Organophosphorus Pesticides in the Environment"

Moscow, Gigiyena i Sanitariya, No 10, 1971, pp 78-82

Abstract: The length of time that residues of organophosphorus pesticides remain in or on plants and the amounts depend on many factors: (a) physicochemical properties of the compounds (wettability, size and shape of the particles, resistance to light and temperature, etc.); (b) conditions under which the crops are treated (method of application of the pesticide and number of times, type of apparatus used, etc.); (c) properties of the plants (stage of development, structure, enzymatic activity, nature of the surface, etc.); (d) weather conditions during and after treatment of the crops. Organophosphorus pesticides in the soil are readily taken up by many root crops, especially potatoes and carrots, where they may accumulate and persist for as long as 200 days or more. Within a few days after the crops are treated, the fruits and vegetables contain up to 20 or 30 mg/kg. One to two weeks later the content decreases by a factor of 10 to 100. Trace amounts may linger 2 to 6 months or more.

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USSR

UDC 615.285.7.099.07:616.61-008-072.7

MEDOVAR, A. M., All Union Scientific Research Institute of Hygiene and Toxicology of Pesticides, Polymers, and Plastics, Kiev

"The Effect of Saiphos on Renal Function"

Moscow, Farmakologiya i Toksikologiya, Vol 33, No 6, Nov/Dec 70, pp 733-735

Abstract: Saiphos is an organophosphorus insecticide and acaricide with the chemical composition 0,0-dimethyl S- 4,6-diamino-1,3,5-triazinyl-2-methyl dithiophosphate. Saiphos was administered to rats in a dose of 7-14 mg/kg (1/200-1/100 LD_{50}) per day for 6 1/2 months. The animals developed creatinemia and creatinuria. The adaptation capacity of the kidneys to diuretic water loads was disturbed. Prolonged administration of saiphos in the small doses applied did not increase the content of residual N in the blood (an effect that was observed in acute intoxication with other organophosphorus compounds), interfere with the elimination of indigocarmine from the organism, or disturb the acid-base equilibrium.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 669.14.018.291:669.781(02)

MEDOVAR, B. I., PINCHUK, N. I., CHEKOTILO, L. V.

Austenitno-boridnyye stali i splavy dlya svarnykh konstruktsiy (Austenitic Boride Steels and Alloys for Welded Structural Elements), Kiev, Naukova Dumka Press, 1970, 147 pp, ill., 1 r. 8 k. (from RZh-Metallurgiya, No 4, Apr 71, Abstract 4I604K)

Translation: Data are presented on alloying austenitic steels and alloys based on Fe-Cr-Ni, Fe-Cr-Mn, and Cr-Ni with boron. The effect of boron on the structure and properties of the indicated materials is investigated. The effect of boron on weldability, inclination toward local rupture, stress corrosion cracking, high temperature strength, and resistance to scaling of steel and alloys was studied. The structure and properties of new types of austenitic-boron steels and alloys designed for parts of welded structural elements of the power, chemical, and other branches of machine building and the characteristic features of welding austenitic-boride steels and alloys are described.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

MEDOVAR, B. I., et al., Austenitno-Boridnyye Stali i Splavy dlya Svarnykh Konstruktsiy, Kiev, Naukova Dumka Press, 1970, 147 pages

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USSR

MEDOVAR, B. I., et al., Austenitno-Boridnyye Stali i Splavy dlya Svarnykh Konstruktsiy, Kiev, Naukova Dumka Press, 1970, 147 pages

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

MEDOVAR, B. I., et al., Austenitno-Boridnyye Stali i Splavy dlya Svarnykh Konstruktsiy, Kiev, Naukova Dumka Press, 1970, 147 pages

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

Corrosion

USSR

UDC: 621.791.656.3

MEDOVAR, B. I., MARTYN, V. M., CHEKOTILO, L. V., VOSVILOV, N. M., KULEV, G. B., POLTAVETS, A. V., KRAVETS, N. I., and GLOZMAN, L. P.

"Corrosion Resistance of Joints of EP668 Alloy in Nitrogen- and Sulfur-Containing Media"

Kiev, Avtomaticheskaya Svarka, No 11, Nov 70, pp 67-68

Abstract: A study was made of the corrosion resistance of high-chromium alloy Kh50N5V (EP668) and its welded joints in highly aggressive media involved in the production of sulfuric and nitric acids. It was found that EP668 alloy and its welded joints have a high corrosion resistance in media containing nitrogen oxides NO and NO_2, natural gas with air, H_2S, SO_2, CO_2, and HCN gases. In these media the maximum corrosion rate of the parent metal and its welds is 0.019 g/m².hour. For comparison, tests were also conducted on the most extensively employed corrosion-resistant materials, including Kh18N10T, Kh18N12M2T (EI448), OKh21N6M2T (EP54), titanium, aluminum, and St.3 steel. Under similar conditions these materials exhibited intensive corrosion. EP668 alloy is also resistant in ammonium carbonate solutions (43% NH_3, 34% CO_2, 23% H_2O) at 100°C and a maximum pressure of 200 atm.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

M

UDC 669.187.26:669.1.2

MEDOVAR, B. I., Corresponding Member of the Academy of Sciences Ukrainian SSR, Institute of Electric Welding imeni YE. O. Paton

"Electroslag Remelting of Special Steels and Alloys"

Moscow, Metallurg, No 4, Apr 70, pp 32-35

Abstract: The present state and future development of electroslag remelting of special steels and alloys are considered. One of the more important recent achievements was the development of siphon pouring of slag into the crystallizer. Another significant achievement was the development of bifilar electroslag remelting ovens.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 621.791.75:669.15-194

PAVLIYCHUK, G. A., YUSHKEVICH, Z. V., [illegible] S. I., and [illegible], N. A., Electric Welding Institute imeni Ye. O. Paton, Academy of Sciences UkrSSR

"Certain Properties of Welds of Extremely Low-Carbon Corrosion-Resistant Austenitic Steels"

Kiev, Avtomaticheskaya Svarka, No 7, Jul 70, pp 10-13

Abstract: Together with some of their valuable properties, chromium-nickel steels have a grave shortcoming -- a tendency to intergranular corrosion when exposed to critical temperatures. This type of corrosion may be controlled by lowering the carbon content down to a level (0.02-0.03%) at which it dissolves in austenite at room temperature. A study has been conducted at the Electric Welding Institute imeni Ye. O. Paton to determine the corrosion resistance of extremely low-carbon (up to 0.02% C) EP550, EP551, EP552, EP553, and EP554 austenitic steels. The results of the mechanical tests of these steels at various temperatures are indicative of the high plasticity of the metal under conditions of deep cold (liquid nitrogen boiling temperature of -196° C). The steels are not susceptible to brittleness even after aging at 500° C for 500 hours. All the steels were tested for corrosion resistance of their welds in

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

PAVLIYCHUK, G. A., et al, Avtomaticheskaya Svarka, No 7, Jul 70, pp 10-1[illegible]

a boiling 15% solution of HNO_3 and 10% $K_2Cr_2O_7$ for 200 hours. The welds of the experimental steels, including those of the Kh18N9T control steel, were tested as welded. Similar tests were made for resistance of corrosion cracking in a boiling 42% aqueous solution of magnesium chloride, with the tensile strength equal to 90% of the yield point. Of all tested steels, the [illegible] and EP554 grades appear to have the highest resistance to intergranular, total, and stress corrosion.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--ELECTROSLAG REMELTING OF SPECIAL STEELS AND ALLOYS -U-

AUTHOR--MEDOVAR, B.I.

COUNTRY OF INFO--USSR

SOURCE--METALLURG. APR. 1970, (4), 32-35

DATE PUBLISHED----APR 70

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

TOPIC TAGS--ELECTROSLAG MELTING, MECHANICAL PROPERTY, STEEL DEOXIDATION, ALLOY STEEL, RARE EARTH METAL, ALUMINUM CONTAINING STEEL, METAL MELTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0942 STEP NO--UR/0130/70/000/004/0032/0035

CIRC ACCESSION NO--AP0133028

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0133028

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE LATEST DEVELOPMENTS IN THE USE OF ELECTROSLAG MELTING FOR THE REFINING OF METAL IN THE SOVIET UNION ARE SUMMARIZED AND DISCUSSED. IN PARTICULAR, THE MECHANICAL PROPERTIES OF ALLOY STEELS TREATED IN THIS MANNER ARE CONSIDERABLY HIGHER AND MORE UNIFORM THAN THOSE OF STEELS PROCESSED BY EARLIER METHODS, PARTICULARLY WHEN DEOXIDATION IS EFFECTED BY MEANS OF RARE EARTH METALS RATHER THAN, E.G., AL.

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M

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USSR UDC 669.187.26

BUSHMELEV, V. M., TYURIN, YE. I., DUNCHEV, YA. P., KAGANOV, V. M., VOLKOV, S. YE., PUPYNINA, S. M., SHARAPOV, A. A., BAGLAY, V. M., MEDOVAR, B. I., LATASH, YU. V., Krasnyy Oktyabr' Plant, Central Scientific Research Institute of Ferrous Metallurgy and Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences Ukrainian SSR

"Production of 4-Ton Ingots in a Bifilar Electroslag Remelting Furnace"

Moscow, Stal', No 3, Mar 70, pp 236-238

Abstract: The article describes a bifilar electroslag remelting scheme developed at the Institute of Electric Welding imeni Ye. O. Paton, which provides for the melting in one crystallizer of two electrodes, isolated from each other, which are attached to one electrode holder and connected to the ends of the secondary winding of a single-phase transformer with the same power as in a single-electrode furnace. In order to obtain rectangular 640X460 ingots weighing 4 tons, one of the electroslag remelting furnaces of the Krasnyy Oktyabr' Plant, designed for

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BUSHMELEV, V. M., et al, Stal', No 3, Mar 70, pp 236-238

the production of 2-ton ingots according to the single-electrode scheme and equipped with a single-phase 1000-kva transformer, was remodeled for melting according to the bifilar scheme. Only the mechanical part of the furnace underwent alteration. Slag systems used for the melting included CaF_2-Al_2O_3, CaF_2-CaF_2-CaO-Al_2O_3, and CaF_2-CaO-Al_2O_3-MgO. It was found that the production of metal of satisfactory quality in the bifilar furnace requires the same degree of submersion of the electrodes in the slag bath, as well as keeping the electrode spacing unchanged during the melting. This was accomplished with the use of simple devices. The bifilar scheme approximately doubles furnace productivity and reduces electric energy consumption by 25-29 percent. Data are presented on the quality of 4-ton ingots of ball-bearing steel ShKh 15, structural steel 40KhNMA and stainless sheet steels 10Kh12NVMFA (EI962) and Kh23N18 obtained on the bifilar furnace.

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AA0040651 M Medovar, B. I.

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 1-20

240726 ELECTROSLAG REMELTING in a syphon bottom pouring operation: the consumable electrode is inserted so that its base is clear of the bottom by one third of the slag bath depth. Voltage is applied and the molten slag syphoned into the mould, or else imported via a tundish and orifice in the bottom of the mould. The slag rises and makes the circuit. The idea is to raise the slag sharply and thus avoid any skull or crusting on the mould bottom or walls. Once the slag reaches project height, syphoning stops and remelting proceeds normally.

5.3.66 as 1060334/22-2. PATON.B.E.et al.E.O.PATON ELECTROWELDING INST. (26.8.69) Bul 13/1.4.69. Class 18b. Int.Cl.C 21 c.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

AA0040651

AUTHORS: Paton, B. Ye.; Medovar, B. I.; Latash, Yu. V.; Dudko, D. A.; Yemel'yanenko, Yu. G.; Kryuyev, M. M.; Pryanishnikov, I. S.; Laktionov, V. S.; Butskiy, V. N.; and Kasyrev, L. K.

Ordena Trudovogo Krasnogo Znameni Institut Elektrosvarki imeni E. O. Patona

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

AA0039789 M MEDOVAR, B. I.

UR 0482

1-76

Soviet Inventions Illustrated, Section I Chemical, Derwent,

239470 SLAG CONTENT ANALYSIS using spectroscopy where a single drop of molten slag is taken from the process and placed in a specially built micro-furnace which keeps the slag in molten state. The bottom graphite plate of the furnace together with the slag drop form one electrode; the second electrode being made of copper. Spark or arc discharge across the electrodes emits a spectrum from the slag drop, which then is analysed and slag composition determined. This method of slag analysis is recommended especially for slag welding process.
29.1.68 as 1213751/25-27. N.N.DMITRIENKO et alia. E.O.PATON'S ELECTRO-WELDING INST. (25.7.69) Bul 11/ 18.3.69. Class 21h. Int.Cl. B 23k.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

AA0039789

AUTHORS: Dmitriyenko, N. N.; Podgayetskiy, V. V. and Medovar, B. I.

Institut Elektrosvarki imeni Ye. O. Patona

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 621.791.79

PATON, B. YE. (Academician), MEDOVAR, B. I. (Corresponding Member, Academy of Sciences Ukrainian SSR), SAFONNIKOV, A. N. (Cand. of Techn. Sciences), SEVRUK, A. N., and YEMEL'YANENKO, Yu. G. (Engineers)

"New Electroslag Welding Method"

Moscow, Svarochnoye proizvodstvo, No 6, June 72, pp 16-17

Abstract: Described is a new method for enlarging castings of nearly unlimited cross sections. The method involves the use of two advanced technological processes--electroslag remelting and electroslag welding. The test specimens were castings from 25KhN3MFA rotor steel produced by electroslag remelting. The castings were 1200 mm in diameter and weighed 14 tons. The electrode metal was of the same heat as the castings. The new electroslag welding technique does not require preheating. Mechanical property tests failed to reveal any differences between the base and the weld metal. Plant tests confirmed the superiority of the new method over all others currently in use with respect to simplicity and reliability. The new technique will be chiefly used for producing rotor shafts from individual castings and has been patented in a number of Western countries. (5 illustrations, 3 tables)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC: 621.791:669.295:658.386

MEDOVAR, V. I., Engineer, All-Union Scientific-Research and Design Institute for Titanium

"Training Qualified Welders for Welding Structures Made From Titanium"

Moscow, Svarochnoye Proizvodstvo, No 6, Jun 73, p 48

Abstract: At the present time, instructors are being trained in Kiev in a six month course for this type of welding. Six months is too long to pull personnel out of production. For this reason two month courses have been organized at the All-Union Scientific-Research and Design Institute for Titanium for training qualified welders. The program used was developed at the Sumskiy Machine-Building Plant imeni M. V. Frunze, and consists of 20 hours of theory and 220 hours of practice. At the end of the training period a qualifying commission tests the specialists. The commission is indigenous to the institute. During the test each welder has to manually argon-arc weld 250X150X10mm sheets of VT1-0 commercial titanium, using welding rod in the low position. If no defects are visible, flat specimens are cut out for mechanical testing. The training course per worker is 1000 rubles. The training program is based on agreements between the institute and interested enterprises.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC 621.791.753.042.93:669.295

[redacted], GOLUB, V. S., All-Union Scientific Research and Planning Institute for Titanium

"Use of Manual Argon-Arc Welding in the Manufacture of Titanium Structures"

Moscow, Svarochnoye Proizvodstvo, No 10, Oct 72, pp 41-42.

Abstract: The experimental production sector of the authors' institute utilizes welding to manufacture columns for chemical processes, galvanic baths, etc. All welding work is performed manually by the argon-arc method using specialized direct current welding units. The equipment used is briefly described. The electrical circuit of the unit automatically delays the arc to allow the protective gas to surround the welding zone before starting welding, starts the welding system only after the protective gas and cooling water are being supplied and disconnects the unit in case of an interruption in the supply of gas or water, excites the welding arc with an initial current of 20 a, then automatically increases it to a set value, controls welding current and continues feeding protective gas after the arc is shut off for the required cooling time. This equipment has been used to produce titanium apparatus which has worked reliably for several years in various branches of industry.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC 621.385.032.269+621.385.032.24

ZHARKOVA, G.I., MEDOVIKOV, V.S.

"Triode Gun With Counterclockwise Anode-Grid Pattern"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, No 7, pp 154-156 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11A95)

Translation: A triode electron gun is described. The gun uses a mesh grid curtain of tungsten wire 30 micrometer in diameter, with a square mesh and a spacing of 0.5 mm. Summary.

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M Miscellaneous

USSR [illegible]

RYTVIN, Ye. I., and [illegible], L. A.

"High-Temperature Strength and Structure of the PIRd7 Alloy [illegible] Preliminary Deformation"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, [illegible], pp 53-55

Abstract: An investigation was made of the dependence of the [illegible] platinum alloy with [illegible] (PIRd7) at [illegible] temperature [illegible] conditions of preliminary deformation by drawing. The effect of [illegible] deformation on the structure of the sheet material [illegible] the creep rate decreases with the increase in the rate of preliminary deformation from 8 to 20%; an increase in the deformation rate [illegible] creep rate. The creep rate of specimens at 1400° C increases [illegible] increase in the degree of preliminary deformation from [illegible] to [illegible] decreases, and with an increase of the degree of area reduction [illegible] remains almost unchanged. Thus, the minimum creep strength [illegible] at 1400° C corresponds to a deformation of [illegible]; minimum creep strength at [illegible] C corresponds to a deformation of [illegible].

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MEDUNITSYN, N.

Medicine

Wednesday, [illegible] 201H4690/B

Daily Review Vol XVIII, No. 57(4451), 22 Mar '72 5

A STEP OVER THE INCOMPATIBILITY BARRIER

Prof. [redacted], D.Sc. (Medicine),
Director, [illegible] Ivanikov Institute
of Vaccines and Serums,

[redacted], D.Sc. (Medicine),
[redacted]

A vast research programme on transplantation of organs from man to man has been drawn up for 1971-1975. The problem is one of the most interesting in medicine today. The main reason for unsuccessful attempts to graft organs is not the technical difficulties of operations, but the existence of a so-called barrier of tissue incompatibility which is connected with the presence of complex biological substances in man, which got the name of transplantation antigens.

Any transplanted organ has its own antigens that are alien to the new host. As a result a protective reaction arises in the organism of the patient. It is associated with the appearance in the blood of blood corpuscles--lymphocytes which destroy the cells of the "newcomer". In about 10 days after the operation the grafted organ is rejected.

Rejection does not take place unless the grafted organ contains antigens that are new for the patient. Only enzygotic twins have an identical set of transplant antigens. If an organ, say a kidney, is transplanted from one twin to another, the organ will [illegible] in the organism of the new host. Some proximity is observed in the antigen composition of relations, but it is not always possible to use a patient's relations as donors.

It is extremely difficult to find partners of even approximately, let alone strictly, antigen composition. The probability of such a match is at least 1:1,000. Therefore, there are [illegible] to search for paths of artificial suppression of the organism's reaction aimed to reject the transplant. One of the most widespread suppression methods is to use various active chemical substances. But the majority of these preparations, while prolonging the period of existence of a transplanted organ, [illegible] the protective qualities of the organism and make it extremely sensitive to different kinds of infections.

The second path is to use serums.

The serum was used for the first time on man in 1960 in a kidney transplantation. It has some advantages in the chemical substances used for the same purpose. It is less toxic and it does not deprive the patient of the power to fight off infections.

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In the USSR, serums for practical application are being worked out by the Moscow Institute of Epidemiology and Microbiology, the Moscow and Tashkent Institutes of Vaccines and Serums. At the I I. Mechnikov Institute of Vaccines and Serums in Moscow, research is carried out under the guidance of G.V. Dmitrenko, M.Sc. (Biology), in a close contact with staff members of the Laboratory of Experimental Immunobiology of the USSR Academy of Medical Sciences and the Institute of Clinical and Experimental Surgery of the USSR Ministry of Health.

Serum is obtained from horses who are preliminary injected with human lymphocytes. If horse serum is introduced into a patient for a long time, its anti-lymphocytic activity drops, this being connected with the strengthening of the protective reaction of the human organism. In the future it is expedient to use serums obtained from different animals. In this connection a rabbit anti-lymphocytic serum has been produced at our Institute and an ovine serum at the Tashkent Institute of Vaccines and Serums.

Much work is being done at our Institute for the purification and concentration of different serums. This fosters their activity and safety in use. At the moment they are being successfully tested in a number of clinics in the country.

The Institute of Vaccines and Serums is often called the doctor's assistant. The preparations evolved here, including vaccines which bar the way to different diseases, have entered medical practice and saved thousands of lives in our country and elsewhere.

The first commercial production of anti-lymphocytic serum due to start this year is a new present to the medical profession.

(Vechernyaya Moskva, March 9. In full.)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 539.293:534.286.8

GULYAYEV, YU. V., KMITA, A. M., MEDVED', A. V., and MOROZOV, A. I., Institute of Radio Engineering and Electronics, Academy of Sciences USSR

"Ultrasound Photoabsorption in CdS and CdSe at Low Temperatures"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 5, May 71, pp 889-894

Abstract: The article describes results of a detailed study of ultrasound photoabsorption in photoconductive CdS and CdSe crystals in relation to temperature, conductivity, and illumination intensity in the 2-50° K temperature range and 2-3 Hz frequency range. Experimental results show that the observed photoabsorption of ultrasound is due to the excitation of photoelectrons and their interaction with ultrasonic waves through the piezo effect but cannot be explained by sound absorption by free electrons. The most probable mechanism appears to be ultrasound absorption by electrons bound on small impurity centers -- absorption of the Debye dipole electric relaxation type. The authors thank S. G. KALASHNIKOV and I. A. VIKTOROV for discussing the work and V. N. FEDORETS for assisting in the measurements.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 041 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--PHOTOABSORPTION OF ULTRASOUND IN CADMIUM SULFIDE AT LOW TEMPERATURES -U-

AUTHOR-(04)-GULYAYEV, YU.V., KMITA, A.M., MEDVED, A.V., MOROZOV, A.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(3), 690-9

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ULTRASONIC ABSORPTION, CADMIUM SULFIDE, PHOTOCONDUCTIVITY, CRYOGENIC PROPERTY, ELECTRON CAPTURE, POTENTIAL WELL, TEMPERATURE DEPENDENCE, CRYSTAL IMPURITY, CRYSTAL DEFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/2005 STEP NO--UR/0181/70/012/003/0690/0699

CIRC ACCESSION NO--AP0105079

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2/2 041 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105079

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ABSORPTION OF ULTRASOUND WAVES WAS INVESTIGATED IN PHOTOCONDUCTING CDS CRYSTALS AT 2.5-50DEGREESK AND AT 2.2-3.2 GHZ. THE ABSORPTION COEFF. CAUSED BY ILLUMINATION OF THE CRYSTAL CAN EXCEED BY SEVERAL ORDERS OF MAGNITUDE THE CORRESPONDING ABSORPTION COEFF. OF ULTRASOUND BY FREE ELECTRONS CALCD. BY THE LINEAR THEORY OF WYATT. THE OBSD. PHOTOABSORPTION OF ULTRASOUND DOES NOT HAVE A SINGULAR RELATION WITH THE INSTANTANEOUS COND. OF THE CRYSTAL OVER A WIDE RANGE. ON INCREASING TEMP. FROM HE TEMP. TO 20DEGREEK, THE PHOTOABSORPTION OF ULTRASOUND DECREASES APPROX. INVERSELY PROPORTIONALLY TO TEMP.; ABOVE 24DEGREESK AT CONDS. SMALLER THAN 10 PRIME NEGATIVE6 OHM PRIME NEGATIVE1-CM PRIME NEGATIVE1, NO NOTICEABLE PHOTOABSORPTION WAS OBSD. THE DEPENDENCE WAS ALSO STUDIED OF PHOTOABSORPTION ON THE APPLIED CONST. ELEC. FIELD. AN EXPLANATION IS PROPOSED FOR THE EXPTL. DATA IN TERMS OF NOTIONS ABOUT CAPTURE OF ELECTRONS (PHOTOELECTRONS) IN SHALLOW POTENTIAL WELLS OF LARGE RADIUS DETD. BY THE PRESENCE OF IMPURITIES AND CRYSTAL DEFECTS. THESE ELECTRONS, BEING BOUND OR QUASI BOUND, DO NOT CONTRIBUTE TO THE STATIC COND. OF THE CRYSTAL, BUT CAN PARTICIPATE IN THE ABSORPTION OF ULTRASOUND BY INTERACTING WITH THE ALTERNATING ELEC. FIELD CREATED BY THE SOUND WAVE. IN ANALOGY WITH THE DEBYE THEORY OF DIPOLE RELAXATION INSOLIDS, AN ELEMENTARY THEORY WAS DEVELOPED OF SUCH ABSORPTION AND QUAL. COMPARISON WAS MADE WITH EXPT. FACILITY: INST. RADIOTEKH. ELEKTRON., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ON THE EMBRYOTOXIC EFFECT OF EPTHANE -U-

AUTHOR-(03)-MEDVED, I.L., VINOGRADOVA, V.KH., OLEFIR, A.I.

COUNTRY OF INFO--USSR

M

SOURCE--VRACHEBNOYE DELO, 1970, NR 5, PP 140-143

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--EMBRYOLOGY, TOXICITY, WHITE RAT, BIRD, DRUG SENSITIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1716 STEP NO--UR/0475/70/000/005/0140/0143

CIRC ACCESSION NO--AP0129084

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

2/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0129084

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EMBRYOTOXIC EFFECT OF EPTHAME (A DERIVATIVE OF THIOCARBAMINE ACID) WAS STUDIED IN 53 WHITE RATS AND 250 CHICK EMBRYONS. OBSERVATIONS ON THE DEVELOPMENT OF CHICK FETUSES AND RAT PROGENY OF THOSE RECEIVING THE DRUG DURING THE ENTIRE PERIOD OF PREGNANCY INDICATE THAT SMALL DOSES OF EPTHAME DID NOT EXERT ANY EMBRYOTOXIC EFFECT. FACILITY: INSTITUT GIGIYENY TRUDA I PROFZABOLEVANIY, KIYEV. FACILITY: INSTITUT INFEKTSIONNYKH BOLEZNEY MZ USSR, KIYEV.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

UDC 632.95.026

MEDVED', L. I., Member Academy of Medical Sciences USSR, Director of VNIIGINTOKS [All-Union Scientific Research Institute of Hygiene and Toxicology]

"The Tasks of Hygienist-Toxicologists"

Moscow, Zashchita Rasteniy, No 2, Feb 73, pp 15-17

Abstract: The health protection criteria developed in the USSR in connection with the use of pesticides have been approved by the World Health Organization and are being applied in socialist and many other countries. In the prevention of poisoning of human beings with toxic chemicals used in agriculture, the USSR is undoubtedly ahead of other economically advanced countries. Prevention of the contamination of the environment with toxic chemicals and of the accumulation of compounds such as chloroorganic derivatives in plants, foods, and the animal organism constitutes a more complex problem. Much remains to be done in regard to an improvement of the selection of pesticides; development of new non-persistent compounds with a selective toxicity for agricultural pests; curtailment of the use of stable chloroorganic insecticides; and gradual replacement of aircraft treatment with chemicals with ground treatment, particularly in densely populated areas and regions with a hot climate. The problem of genetic (mutagenic) effects of pesticides

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR

MEDVED', L. I., Zashchita Rasteniy, No 2, Feb 73, pp 15-17

on human beings is of importance. The allergenic effects of pesticides should also be studied. In recent years data have been obtained which indicates that pesticides sometimes alter the chemical composition of agricultural products. Thus, some organophosphorus compounds (metaphos, phozalon, kilval) and derivatives of dithiocarbamic acid (polycarbazine, maneb) reduce the vitamin C content of berries, applies, lemons, tomatoes, etc. Derivatives of phenoxyacetic acid (2,4-D, 2,4-DM) have a similar effect. Under the action of metaphos and hexachlorocyclohexane, the carbohydrate and protein composition of grains is altered. 2,4-D and 2,4-DM reduce the starch content of potatoes.

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GLORIA

SO: JPRS 54153
29 SEP 71

UDC: 613.6:63

SCIENTIFIC TECHNOLOGICAL PROGRESS AND PROBLEMS OF HYGIENE

[Article by L.I. Medved' (Kiev); Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 7, 1971, pp 19-30]

Progress in science and technology serves, in our times, as the main source of growth in productivity of labor, the means of consistent buildup of production, of augmenting public wealth, and increasing the standard of living.

The great scientific discoveries and the rapid stride of scientific technological progress based on them, which have radically altered the traditional work processes in all branches of human endeavor and living conditions, characterize the qualitative distinctions of development of human society which are usually designated as a scientific technological revolution.

In many respects, the rate of scientific technological progress is related to the scientific potentials of our nation, which, thanks to the constant concern of the Communist Party and Soviet government, have reached enormous dimensions and have caused Soviet science to move to the fore.

The use of scientific and scientific technological achievements in the national economy results in rapid technological rearmament of all its branches, including agriculture.

In order to define correctly the problems and objectives of hygiene as related to scientific technological progress in agricultural production, we must be acquainted with the present index of machinery available to agriculture, with the immediate and long range prospects, relate them to the present state of scientific research pertaining to rural hygiene as a whole and to labor hygiene in agricultural production.

In the report to the Plenum of the Central Committee of the CPSU made by the general secretary of the C. CPSU, L.I. Brezhnev, entitled "Current Objectives of the Party in Agriculture," and in a decree adopted by the Plenum the achievements with regard to development of agriculture are summarized, and a program is outlined for its further accelerated expansion.

MEDVED', L. I.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

USSR UDC 632.95

VYGODCHIKOV, G. V., and MEDVED', L. I., Academy of Medical Sciences of the USSR, Department of Hygiene, Microbiology and Epidemiology (Editors)

"Problems of the Hygiene and Toxicology of Insecticides"

(Works of the Scientific Session of the Academy of Medical Sciences of the USSR, Kishinev, 24-26 Aug 1967), Moscow, "Meditsina," 1970, 295 pp, ill. (from RZh-Khimiya, No 2, 25 Jan 71, Abstract No 2N559 K)

Translation: The collection contains more than 60 papers and reports relating to the toxicity of pesticides, their accumulation and circulation in the ambient medium, treatment of illnesses, ethiology. Particular attention is given to problems of the mechanism of action and toxicology of the most widely used pesticides, as well as the problem of standardizing residual quantities.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002202010014-9

1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EXCITED NUCLEAR STATES DURING CAPTURE OF NEGATIVE MUONS BY CARBON AND OXYGEN -U-

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COUNTRY OF INFO--USSR

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SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--NUCLEAR ENERGY LEVEL, EXCITED NUCLEUS, MESON INTERACTION, MUON, CARBON ISOTOPE, OXYGEN ISOTOPE, NUCLEAR SPIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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2/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROBABILITIES FOR FORMATION OF EXCITED LEVELS OF THE DAUGHTER NUCLEI PRODUCED BY CAPTURE OF NEGATIVE MUONS BY CARBON OR OXYGEN NUCLEI ARE STUDIED. THE TOTAL TRANSITION RATE TO ALL EXCITED BOUND STATES OF THE B PRIME12 SEXTILE NUCLEUS IS DETERMINED FOR THE C PRIME12 PLUS MUNEGATIVE YIELDS B PRIME12 SEXTILE PLUS V REACTION; IT IS EQUAL TO (0.76 PLUS OR MINUS 0.14) TIMES 10 PRIME3 SEC NEGATIVE1. FOR THE O PRIME16 PLUS MUNEGATIVE YIELDS MINUS N PRIME15 SEXTILE PLUS N PLUS V REACTION THE TOTAL TRANSITION RATE TO N PRIME15 SEXTILE EXCITED BOUND STATES WITH POSITIVE PARITY IS FOUND TO BE (14 PLUS OR MINUS 5) TIMES 10 PRIME3 SEC NEGATIVE 1 AND THE TRANSITION RATE TO THE N PRIME15 SEXTILE SPIN THREE HALVES LEVEL IS (20 PLUS OR MINUS 5) TIMES 10 PRIME3 SEC NEGATIVE1. PART OF THE RESULTS STRONGLY DIFFER FROM THE THEORETICAL PREDICTIONS. FACILITY: OB"YEDINENNYY INSTITUT YADERNYKH ISSLEDOVANIY.

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1/2 021 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ON THE THEORY OF THE RESOLVING TIME OF SCINTILLATION COUNTERS -U-

AUTHOR-(02)-AKIMOV, YU.K., MEDVED, S.V.

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SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROBLEM OF THE DETERMINATION OF TIME FLUCTUATIONS IN SCINTILLATION COUNTERS HAS BEEN CONSIDERED WITH AN ARBITRARY TOTAL MEAN NUMBER OF PHOTOELECTRONS R SUB0 DURING A SCINTILLATION FLASH. THE FLUCTUATIONS OF R HAVE BEEN TAKEN INTO CONSIDERATION. THE RESULTS OF CALCULATIONS FOR THE LEADING EDGE METHOD ARE GIVEN WHICH SHOW THE EFFECT OF VARIOUS FACTORS AND PARAMETERS OF A SCINTILLATION COUNTER UPON ITS RESOLVING TIME. FACILITY: JOINT INST. NUCLEAR RES., DUBNA, USSR.

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