"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 020 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--EFFECT OF LOW TEMPERATURE ANNEALING ON THE TEXTURE OF THE PRIMARY RECRYSTALLIZATION OF A SINGLE CRYSTAL OF SILICIDED IRON -U-

AUTHOR-(03)-LIVSHITS, B.G., NOVIKOV, V.YU., ROSHCHINA, L.Y.

COUNTRY OF INFO--USSR

R

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 249-54

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--METAL TEXTURE, METAL SINGLE CRYSTAL, IRON, SILICIDE, ANNEALING, METAL RECRYSTALLIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0188 STEP NO--UR/0048/70/034/002/0249/0254

CIRC ACCESSION NO--AP0115892

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 020 UNCLASSIFIED PROCESSING DATE--09OCT7C

CIRC ACCESSION NO--AP0115892

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING X RAY AND METALLOGRAPHIC METHODS IT WAS SHOWN THAT IN A COLD ROLLED SILICIDED FE SINGLE CRYSTAL (110) (001) THE RECRYSTN. NUCLEI APPEAR 1ST ON THE NEUMANN BANDS AND THEREAFTER ON THE STRAIN BAND BOUNDARIES. THE LATTER HAVE A FASTER GROWTH RATE. THE ORIENTATION OF THE GRAINS APPEARING ON THE NEUMANN BANDS IS (320) (001), (210) (001), AND (310) (001), ON THE STRAIN BAND BOUNDARIES MAINLY (110) (001); INSIDE THE STRAIN BANDS (111) (112) AND (320) (001), AND (210) (001). ANNEALING AT 450DEGREES FOR 13 MIN BEFORE THE PRIMARY RECRYSTN. SLOWS DOWN THE GROWTH OF THE (110) (001) GRAINS. THIS LEADS TO A DECREASE OF THIS COMPONENT IN THE RECRYSTN. TEXTURE AND THE COMPONENTS (320) (001), (210) (001), AND (310) (001) ARE STRONGLY ENHANCED. FACILITY: MOSK. INST. STALI SPLAVOV, MOSCOW, USSR.

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ROSHCHINA, N. A.

SU:JPRS 54435
9 Nov 71

UDC: 612.766.2.014.464

THE EFFECT OF AN ALTERED GAS ENVIRONMENT ON SOME PHYSIOLOGICAL EFFECTS OF PROLONGED HYPOKINESIA (EXPERIMENTS ON ANIMALS)

[Article by P.V. Vasil'yev, V.B. Malkin, A.I. Volozhin, Ye.V. Loginova, V.Ye. Artokin, N.A. Roshchina, N.N. Uglova; Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 9, 1971, pp 78-83]

In the course of investigating the effect on the organism of prolonged hypokinesia the conception of a hypodynamic syndrome was formed which is characterized by specific functional disturbances which diminish the organism's adaptive capabilities (A.R. Kotovskaya et al., 1964; L.I. Kakurin et al., 1966; L.I. Kakurin, 1968; Miller and Leverett, and others).

Various measures have been proposed to prevent development of the hypodynamic syndrome: physical exercise (A.V. Yeremin et al., 1969; V.I. Stepantsov and A.V. Yeremin; Brannon et al., Miller et al., and others), use of arm and leg cuffs (I.D. Pustov, Vogt; Stevens et al., and others), use of pharmacological preparations (P.V. Vasil'yev and B.Yu. Lapinskaya; Sohn et al.; McCally et al.) and, finally, use of an "active" gas environment. The purposefulness of special gases as a means of preventing development of deconditioning phenomena was theoretically substantiated in the works of Soviet and foreign researchers (V.B. Malkin et al.; P.V. Vasil'yev and N.N. Uglova, and others).

These studies are indicative of the effectiveness of using "hypoxic" gas environments, and our authors called serious attention to a regimen of "hypoxic" training. Their studies established that optimum effectiveness is observed with step-by-step elevation to increasing altitudes, staying there for 6-8 hours and descending for 28-16 hours every day [sic]. Such a regimen of training for hypoxia is most effective for development of compensatory reorganization on the molecular and cellular levels (F.Z. Meyerson et al.).

The purpose of the present work was to investigate the possibility of using various gas environment receptors as a means of preventing development of the hypodynamic syndrome.

Method. The investigations were conducted in four series of experiments on 900 mongrel albino male rats, weighing 120 to 200 grams. The distribution of animals in groups and experimental conditions are shown in Table 1.

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USSR UDC 518.5:681.3.06

SURNIN, Yu. M., ROSHCHINA, T. I.

"Plans of Algorithms for Construction of Technological Routes Through Systems for Automatic Planning of the Technology of Assembly of Units and Machines"

Tekhn. Kibernetika, Vyp. 6, [Engineering Cybernetics, No 6--Collection of Works], Kiev, 1970, pp 60-71, (Translated from Referativnyy Zhurnal Kibernetika, No 5, 1971, Abstract No. 5V664, unsigned).

Translation: Certain problems of formalized description of the technological routes of assembly of reducing gears are studied and the possibility of representing algorithms for planning technologies as matrix plans and automatic synthesis of these plans with subsequent minimization is analyzed.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 017 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--THERMAL STABILITY OF ACIDIC SODIUM SELENITES -U-

AUTHOR-(04)-SELIVANOVA, N.M., ROSHCHINA, Z.V., ANANINA, M.S.,
KHUTORYANSKIY, F.M.
COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(5), 975-81

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMAL STABILITY, SODIUM COMPOUND, SELENIDE, X RAY ANALYSIS, THERMAL ANALYSIS, SODIUM OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0951 STEP NO--UR/0080/70/043/005/0975/0981

CIRC ACCESSION NO--AP0131536
UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

UNCLASSIFIED PROCESSING DATE--11DEC70

2/2 017

CIRC ACCESSION NO--AP0131536

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CURVE OBTAINED FROM THE DTA ANAL. OF NAHSEO SUB3 HAS 4 ENDOTHERMAL POINTS WITH MAX. AT 114, 343, 615, AND 710DEGREES. THERMOGRAVIMETRIC, CHEM., AND X RAY ANALS. ALLOWED THE MAX. TO BE ASCRIBED TO THE FOLLOWING PROCESSES; (1) 2NAHSEO SUB3 YIELDS NA SUB2 SE SUB2 O SUB5 PLUS H SUB2 O, (2) MELTING OF NA SUB2 SE SUB2 O SUB5, (3) NA SUB2 SE SUB2 O SUB5 YIELDS NA SUB2 SEO SUB3 PLUS SEO SUB2 AND, (4) MELTING OF NA SUB2 SEO SUB3 WITH PARTIAL DECOMPN. THE DTA CURVES OF NAH SUB3 (SEO SUB3) SUB2 HAVE MAX. AT 114, 350, 608, AND 710DEGREES. THE 1ST MAX. CORRESPONDS TO 2(NAHSEO SUB3 H SUB2 SEO SUB3) YIELDS NA SUB2 SE SUB2 O SUB5 PLYS 2SEO SUB2 PLYS 3H SUB2 O AND MAX. 2-4 ARE ATTRIBUTED TO THE SAME PROCESSES AS IN THE CASE OF NAHSEO SUB3. DECOMPN. PRODUCTS OF BOTH SALTS HEATED TO 1100DEGREES ARE COMPOSED MAINLY OF NA SUB2 O.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 015 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--HEAT OF FORMATION OF LITHIUM TRIHYDROGEN SELENITE -U-

AUTHOR-(02)-ROSHCHINA, Z.V., SELIVANOVA, N.M.

COUNTRY OF INFO--USSR

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SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 3-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SELENIDE, HYDROGEN COMPOUND, HEAT OF FORMATION, LITHIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/1911 STEP NO--UR/0153/70/013/001/0003/0005

CIRC ACCESSION NO--AT0114351

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 015 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AT0114351

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STD. HEAT OF FORMATION OF LIH SUB3 (SO SUB3) SUB2 (I), D PRIME25 EQUALS 3.212, AT 25PERCENT IS MINUS 327.8 PLUS OR MINUS 0.4 KCAL-MOLE, FROM THE REACTION BETWEEN CRYSTN. PB(NO SUB3) SUB2 WITH A 1:800 WATER SOLN. OF I AT 25PERCENT, FOR WHICH THE HEAT OF REACTION IS 13.412 PLUS OR MINUS 0.01 KCAL-MOLE, AND THE HEAT OF SOLN. OF I AT 1:800 CONCN. IS 9.665 PLUS OR MINUS 0.02 KCAL-MOLE. THE HEAT OF FORMATION OF PBSEO SUB3 IS ASSUMED TO BE MINUS 127.89 KCAL-MOLE. THE STD. HEAT OF FORMATION OF I FROM LIHSEO SUB3 AND H SUB2 SEO SUB3 IS CALCD. AS 5.8 KCAL-MOLE. THIS VALUE IS CLOSE TO THAT FOR THE CORRESPONDING NA SALT. FACILITY: MOSK. KHIM.-TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

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UDC 621.791.793.052.01:669.017.3:669.14.013.298.3

KHAKIMOV, A. N., Candidate of Technical Sciences, YEFIMENKO, L. A., Engineer, and PRYGAYEV, A. K., Engineer, Moscow Institute of the National Economy imeni G. V. Plekhanov and GP (abbreviation unknown) imeni I. M. Gubkina; SMIRNOV, B. A., Candidate of Technical Sciences, IVOCHKIN, I. I., Candidate of Technical Sciences, SOSEDOV, A. F., Engineer, and ROSHCHUPKIN, N. P., Engineer, All-Union Scientific Research Institute Montazhspetsstroy

"Regulation of the Structure and Properties of Welded Joints of 10G2FR Heat-Treated Steel in Electroslag Welding"

Moscow, Svarochnoye Proizvodstvo, No 1(471), Jan 74, pp 24-26

Abstract: A study was made of the conditions for the regulation of the structure and properties of electroslag-welded joints of 10G2FR heat-treated low-alloy sheet steel, 40 mm thick, with a view to increase the structural-mechanical homogeneity of welded joints. The introduction of a powerlike additive metal into the slag bath favors a reduction of the stay period over the temperature of the critical point Ac_3 of the near-seam metal at heating from 45-50 to 10-12 sec., an increase of the heating rate from 8-10 to 35-40°C/sec, and nearly two-fold increase of the welding rate. The application of

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KHAKIMOV, A. N., et al., Svarochnoye Proizvodstvo, No 1(471), Jan 74, pp 24-26

accompanying cooling makes it possible to decrease the stay period over the Ac_3 temperature of the near-seam metal on cooling from 140-170 to 80-95 sec and to increase the cooling rate from 0.7-1 to 13.5-14° C/sec. At 12.5-14° C/sec cooling rate, the impact ductility of the seam and the near-seam zone of welded joints of 10G2FR heat-treated steel increases up to a level exceeding the norm values within the temperature interval of 20 to -60° C, and a loss of strength is practically prevented. Six figures, three tables, two bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 016 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--PROTECTIVE COATINGS FOR CONCRETE SURFACES -U-

AUTHOR-(05)-ROSHCHUPKIN, V.I., FAYNTSIMER, R.Z., YAKOVLEV, D.A., PINUS, E.R., LISIENKO, S.K.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 260,877

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

DATE PUBLISHED--06JAN70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PROTECTIVE COATING, CONCRETE, COUMARIN INDENE RESIN, BUTYL RUBBER, FILLER, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1094 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0116560

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 016 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AA0116560

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROTECTIVE COATINGS BASED ON ORG. COMPDS. ARE USED SHIEFLY FOR CONCRETE SURFACES. THEY HAVE GOOD PHYSICOMECH. PROPERTIES, DESIRED ROUGHNESS, AND A RAPID RATE OF COATING. THEY CONSISTED OF: COUMARONE-INDENE RESIN 1-50, PETROLATUM 5-30, PARAFFIN 0.5-5, BUTYL RUBBER 0.05-2, FILLER 1.0-30, AND AN ORG. SOLVENT 10-200 PARTS-WT. A MIXT. OF ZR WITH AL POWDER IN A 1:10 WT. RATIO IS USED AS THE FILLER. FACILITY: STATE SCIENTIFIC RESEARCH AND PLANNING INSTITUTE OF PETROLEUM MACHINE CONSTRUCTION. FACILITY: STATE ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF HIGHWAYS.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

Acc. Nr: AP0052506

Abstracting Service: CHEMICAL ABST. 5-70

Ref. Code: UR 0460

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101319c Empirical principles of thermal molecular motion in polymers. Roshchupkin, V. P.; Kochervinskii, V. V. (Filial Inst. Khim Fiz., Chernogolovka, USSR). *Vysokomol. Soedin., Ser. B* 1970, 12(1), 41-3 (Russ). The thermal coeff. (v_0) and the activation energy (E) of thermal mol. motions were detd. for a no. of polymers [(e.g., poly(alkylene oxides), natural rubber, and polyethylene] by dielec. relaxation and NMR to be $\log v_0 = 4.7 + 0.94\,E$. When $E = 0$, i.e., thermal motion having no activation energy had $\leq 10^5$ Hz frequency and consisted of phonons. The linearity of the equation was due to the additivity of entropy and the heat of activation of groups of atoms. The difference between the relative positions of the polymer in the equation $\log v_0 = A + BE$ gave a qual. indication of the degree of cooperation of mol. motion. A and B were coeffs. detd. for each polymer. CKJR

REEL/FRAME 19821147

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 026 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF AXIAL SUBSTITUTIONS ON COBALT CARBON AND COBALT NITROGEN BONDS IN COBALOXIMES -U-

AUTHOR-(05)-ROSHCHUPKINA, O.S., RUDAKOVA, I.P., POSPELOVA, T.A., YURKEVICH, A.M., BORODKO, YU.G.

COUNTRY OF INFO--USSR

R

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(2), 466-70

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--COBALT COMPLEX, OXIME, PYRIDINE, IR SPECTRUM, ELECTRON DONOR, EXCHANGE REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1419 STEP NO--UR/0079/70/040/002/0466/0470

CIRC ACCESSION NO--AP0116866

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 026 UNCLASSIFIED

CIRC ACCESSION NO--AP0116866 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TREATING CHLOROPYRIDINE (OR TRIPHENYLPHOSPHINO) BIS(DIMETHYLGLYOXIME)COBALT SUSPENSION IN AQ. ETOH WITH NABH SUB4 GAVE COBALOXIMES I WITH INDICATED L AND R: C SUB5 H SUB5 N, ME, M. 220DEGREES; C SUB5 H SUB5 N, CO SUB3, D. 210DEGREES; PH SUB3 P, ME, M. 174-6DEGREES; PH SUB3 P, CD SUB3, M. UNSTATED; ME SUB2 S, ME, M. 178DEGREES; H SUB2 O, ME M. 108DEGREES; C SUB5 H SUB5 N, HOCH SUB2 CHCH SUB2 CL, M. 179-80DEGREES. THE IR SPECTRA ARE SHOWN. INCREASED ELECTRON ACCEPTOR NATURE OF SUBSTITUENTS IN I REDUCES THE FREQUENCY OF CO-C AND CO-N BANDS WHILE INCREASED ELECTRON DONOR ABILITY OF AXIAL LIGANDS IN I SHIFTS THE CO-C AND CO-N BANDS TOWARD HIGHER FREQUENCIES.

FACILITY: VSES. NAUCH.-ISSLED. VIT. INST., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--THE RISK RATE OF CARDIAC STANDSTILL IN THE SURGERY OR BURNED PATIENTS -U-

AUTHOR-(02)-ROSIN, L.B., GUBLER, YE.V.

R

COUNTRY OF INFO--USSR

SOURCE--EKSPERIMENTAL'NAYA KHIRURGIYA I ANESTEZIOLOGIYA, 1970, NR 3, PP 3-6

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CARDIAC ARREST, SURGERY, THERMAL BURN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0919 STEP NO--UR/0461/70/000/003/0003/0006

CIRC ACCESSION NO--AP0126578

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0126578

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CARDIAC ARREST ON THE OPERATION TABLE IS 10 TIMES MORE FREQUENT IN BURNED CASES THAN IN OTHER SURGICAL PATIENTS. DETERMINATION OF PROBALITY OF SUCH A COMPLICATION IS THEREFORE OF IMPORTANCE. A PROGNOSTICATION METHOD IS DESCRIBED. CALCULATIONS ARE BASED ON ANALYSIS OF 22 CASES WITH CARDIAC ARREST AND ON 100 CASES WITHOUT SUCH A COMPLICATION. FACILITY: KAFEDRY TERMICHESKIKH PORAZHENIY I ANESTEZIOLOGII VOYENNO-MEDITSINSKOY AKADEMII IM S. M. KIROVA, LENINGRAD.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/3 043 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--BARRIER FUNCTIONS OF THE ORGANISM -U-

AUTHOR--ROSIN, YA.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, MEDITSINSKAYA GAZETA, 27 FEB 70, P 3

DATE PUBLISHED--27FEB70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HISTOHEMATIC BARRIER, ELECTRON MICROSCOPY, HOMEOSTASIS, HYPERTENSION, IONIZING RADIATION BIOLOGIC EFFECT, ATHEROSCLEROSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605038/D11 STEP NO--UR/9034/70/000/000/0003/0003

CIRC ACCESSION NO--AN0142498

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/3 043 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AN0142498

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE LABORATORY OF THE PHYSIOLOGY OF HISTOHEMATIC BARRIERS, ESTABLISHED BY ACADEMICIAN L. S. STERN, IS PLAYING A LEADING ROLE IN DEVELOPING AND COORDINATING RESEARCH CONCERNING HISTOHEMATIC BARRIERS (HHB). THE REGULATORY FUNCTION OF THESE BARRIERS IS TO MAINTAIN HEMEOSTASIS IN THE INTERNAL ENVIRONMENT OF CELLS THROUGH SELECTIVE PERMEABILITY. ELECTRON MICROSCOPY HAS REVEALED THAT NOT ONLY THE CAPILLARY ENDOTHELIUM, BUT ALSO THE BASAL MEMBRANE, FORMS THE FIRST BARRIER LINE. THIS SYSTEM INCLUDES THE THREE LAYER LIPOPROTEIN CELLULAR EMEBRANES AND THE INTRACYTOPLASM NETWORK OF CHANNELS. THE HHB ARE CONTROLLED BY THE AUTONOMIC NERVOUS SYSTEM AND BY CHEMICALS. STUDY OF THE HHB IN PATIENTS HAS REVEALED THAT TISSUE PERMEABILITY INCREASES EVEN BEFORE CLINICAL SIGNS OF HYPERTENSION, ATHEROSCLEROSIS, HEART FAILURE, AND NEUROENDOCRINE DISEASES APPEAR. TISSUE INCOMPATIBILITY IN ORGAN TRANSPLANTATION AND IMMUNOLOGICAL REACTIONS SHOULD BE INVESTIGATED JOINTLY WITH THE HHB. IONIZING RADIATION CHANGES TISSUE PERMEABILITY, AND FURTHERMORE INDUCES THE FORMATION OF RADIOMIMETICS IN THE BODY. CONCER DEVELOPS (ACCIDENTALLY OR NOT) MOST OFTEN IN TISSUES WITH THE MOST PERMEABLE HHB. THE BEST KNOWN OF THESE SYSTEMS, THE BRAIN BARRIER, IS STILL NOT COMPLETELY UNDERSTOOD. ITS SELECTIVE PERMEABILITY VARIES FROM ONE ENCEPHALIC REGION TO ANOTHER. BIOGENIC, PHYSIOLOGICALLY ACTIVE MEDIATORS ARE HANDLED BY THE HHB IN A SPECIAL WAY. FOR EXAMPLE, INTRAVENOUSLY INJECTED ACETYLCHOLINE STIMULATES THE PARASYMPATHETIC SYSTEM, WHILE PHYSIOLOGICALLY SECREATED ACETYLCHOLINE ACTING ON NEURAL CENTERS STIMULATES THE SYMPATHETIC SYSTEM.

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3/3 043 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AN0142498

ABSTRACT/EXTRACT--SIMILARLY, MUCH WORK MUST BE DONE TO ANALYZE HOW THE HHB PARCELES DRUGS, ESPECIALLY NEUROTROPIC AND PSYCHOTROPIC COMPOUNDS. FORTUNATELY, THE HHB RESEARCH FIELD IS ATTRACTING INCREASINGLY MORE SCIENTISTS FROM THE MOST DIVERSE BIOLOGICAL, CHEMICAL, AND MEDICAL AREAS. FACILITY: LABORATORY OF THE PHYSIOLOGY OF HISTOHEMATIC BARRIERS, INSTITUTE OF HIGHER AND NEUROPHYSIOLOGY ACADEMY OF SCIENCES USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

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ROSIN, YA., Laboratory of the Physiology of Histohematic Barriers, Institute of Higher and Neurophysiology, Academy of Sciences USSR

"Barrier Functions of the Organism"

Moscow, Meditsinskaya Gazeta, 27 Feb 70, p 3

Abstract: The Laboratory of the Physiology of Histohematic Barriers, established by academician L. S. Shtern, is playing a leading role in developing and coordinating research concerning histohematic barriers (HHB). The regulatory function of these barriers is to maintain homeostasis in the internal environment of cells through selective permeability. Electron microscopy has revealed that not only the capillary endothelium, but also the basal membrane, forms the first barrier line. This system includes the three-layer lipoprotein cellular membranes and the intracytoplasm network of channels. The HHB are controlled by the autonomic nervous system and by chemicals. Study of the HHB in patients has revealed that tissue permeability increases even before clinical signs of hypertension, atherosclerosis, heart failure, and neuroendocrine diseases appear. Tissue incompatibility in organ transplantation and immunological reactions

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

ROSIN, YA., et al., Moscow, Meditsinskaya Gazeta, 27 Feb 70, p 3

should be investigated jointly with the HHB. Ionizing radiation changes tissue permeability, and furthermore induces the formation of radiomimetics in the body. Cancer develops (accidentally or not) most often in tissues with the most permeable HHB. The best known of these systems, the brain barrier, is still not completely understood. Its selective permeability varies from one encephalic region to another. Biogenic, physiologically active mediators are handled by the HHB in a special way. For example, intravenously injected acetylcholine stimulates the parasympathetic system, while physiologically secreted acetylcholine acting on neural centers stimulates the sympathetic system. Similarly, much work must be done to analyze how the HHB handles drugs, especially neurotropic and psychotropic compounds. Fortunately, the HHB research field is attracting increasingly more scientists from the most diverse biological, chemical, and medical areas.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

Pharmacology and Toxicology

USSR

ROSIN, Ya. A., and KAZENNOVA, I. I., Institute of Higher Nervous Activity and Neurophysiology, Academy of Sciences USSR, Moscow

"Application of the Hematoencephalic Barrier for Ribonuclease"

Moscow, Biofizika, Vol 15, No 5, Sep/Oct 70, pp 920-922

Abstract: Determination in the brain of RNA-ase conjugated with fluorescein thiocyanate was found to be a suitable means of investigating the permeability of the hematoencephalic barrier for RNA-ase. It was established that the RNA-ase did not lose its activity on being conjugated with the dyestuff. On local introduction of RNA-ase labelled with fluorescein isothiocyanate into the rat brain, the RNA-ase penetrated into nerve cells of various sections of the brain, as indicated by the typical fluorescence along the periphery of the cells in brain preparations. The method described is being applied in studies of the penetration into divisions of the brain of RNA-ase introduced in various ways.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

UDC 621.382.002

VERNIKOV, M.A., VORCB'YEV, N.N., MARKOVA, T.A., ROSINA, L.A., SHCHEGLOV, A.S.

"Study Of The Effect Of Thermocompression Regimes On The Electrical Parameters Of Transistors"

Elektron.tekhnika.Nauch.-tekhn.sb. Poluprovodn.pribory (Electronic Technics. Scientific-Technical Collection. Semiconductor Devices), 1971, Issue 4(61), pp 161-166 (from RZh:Elektronika i yeye primeneniye, No 4, April 1972, Abstract No 4B526)

Translation: The study was conducted on planar silicon n-p-n transistors with an epitaxial base. The thermocompression regime was controlled by two parameters --the temperature and pressure at the wedge [igla], which were varied in the limits 320--390° C and 25--31.3 kg/mm^2, respectively. It is shown that an increase of the temperature and pressure at the wedge leads to a significant instability of the parameter h_{21E} in the course of 500-hour tests on reliability. The mechanism of the effect of remanent strains on the instability of h_{21E} is discussed. It is proposed first to set the temperature and pressure at the minimum level which assures a sufficient mechanical stability, and secondly to maintain the regime with a precision not worse than 5 percent. 4 ill. 17 ref.S.I.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR UDC 536.248.2.001.5

LEBEDEV, P. D., BUYEVICH, A. V., GRIGOR'YEV, V. G., ROSINSKIY, A.Z., UVAROV, V. V., and SHKLOVER, L. L.

"On the Question of Condensing Clean Vapor in Tubular Streams of Variable Cross Section"

Dokl. nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Sekts. Promteploenergetiki. Podsekts. Sushil'n i teploobmen. ustroistv (Reports of the Scientific-Technical Conference on Summaries of Scientific Research Work for 1968-1969. Industrial Thermal Engineering Section, Subsection on Desiccating and Heat Transfer Devices), Moscow Power Engineering Institute, 1970, pp 113-118 (from RZh-Teploenergetika, No 5, May 70, Abstract No 5G90)

Translation: For calculating the effect of variable cross sections of tubular stream in the formula for mean KTO (coefficient of thermal omission), for the case of condensing clean vapor in counterflowing horizontal tubes as proposed by L. D. Berman, a factor is introduced which is a function of vapor condensation level. Experiments have been made to determine the values of constants in the modified formula. Three figures, three references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

UDC 536.248.2.001.5

GRIGOR'YEV, V. G., ROSINSKIY, A.Z., and SHKLOVER, G. G.

"Study of Heat Transfer in a Steam Turbine Condenser"

Dokl. nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Sekts. Promteploenergetiki. Podsekts. Sushil'n i teploobmen. ustroistv (Reports of the Scientific-Technical Conference on Summaries of Scientific Research Work for 1968-1969. Industrial Thermal Engineering Section, Subsection on Desiccating and Heat Transfer Devices), Moscow Power Engineering Institute, 1970, pp 119-124 (from RZh-Teploenergetika, No 5, May 70, Abstract No 5G94)

Translation: It is experimentally shown that distribution of local heat loading, when using the method of water cooling in a two-channel system, is practically uniform for the case of pure vapor; with air added, the distribution becomes non-uniform, and increases this tendency with increased air added to the vapor. Two figures, three references.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

ROSINSKIY N.L.

AA0052569

UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 1-70

243461 CUMULATIVE CHARGES OF EXPLOSIVES are obtained by charging the explosive into an elastic shell, e.g. of polyethylene provided with an inserted body of the corresponding shape and an overall length equal to the length of the above shell, and subsequent sealing and subjecting to the action of compressed air of a liquid under elevated pressure. 6.12.67. as 1201819/40-23. Add to 210724. N.L.ROSINSKII et alia. Safety in the Mining and Metallurgical Ind. Res. Inst. (30.9.69.) Bul.16/5.6.69. Class 78c. Int.Cl.C06b.

19821254

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

AA0052569

Rosinskiy, N. L.; Matyunin, V. S.; Tolstykh, E. S.;
Morozov, A. M.; Kuznetsov, N. M.
Makeyevskiy Gosudarstvennyy Nauchno-Issledovatel'skiy
Institut po Bezopasnosti Rabot v Gornoy Promyshlennosti

19821255

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR UDC: 533.9.07

ROSINSKIY, S. Ye., RUKHADZE, A. A., RUKHLIN, V. G., EPEL'BAUM, Ya. G., Physics Institute imeni P. N. Lebedev, Academy of Sciences of the USSR, Moscow

"Injection of an Electron Beam Into a Plasma Contained by a Conductive Shell"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 5, May 72, 929-938

Abstract: One of the most interesting effects which arises as a result of injecting electron beams into a plasma is magnetic neutralization of the beam due to induction of a plasma countercurrent. It is this effect which enables transmission of superhigh currents through a drift space filled with plasma. This paper investigates injection of a radially nonuniform electron beam into a plasma contained by a conductive shell. It is found that the perturbation of charge density is the same as in an unbounded plasma. The fields and currents induced by the beam in the plasma contained by an ideally conductive shell are not qualitatively different from the fields and currents which arise in an unbounded plasma. An ideally conducting shell does not cause any appreciable decompensation of the fields

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR
ROSINSKIY, S. Ye. et al., Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 5, May 72, pp 929-938

and currents in the plasma but only changes the quantitative data previously found for the case of an unbounded plasma. Thus, the spatial nonuniformity of the beam induces a plasma countercurrent which partially compensates for the magnetic field of the current throughout the entire cross section of the beam. The authors thank D. D. Ryutov for discussing the results of the work.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

UDC 547.269.352.1

BIBA, A. D., KREMLEV, M. M., ROSITSKIY, A. A., Dneipropetrovsk Chemical-Technological Institute imeni F. E. Dzerzhinskiy

"Synthesis of Bis-trichloromethyl Sulphenyl Esters of Arensulphonyl-Imino-Dithiocarbonic Acids"

Kiev, Ukrainskiy Kimicheskiy Zhurnal, Vol XXXVII, No 5, 1971, pp 472-474

Abstract: A procedure is proposed for synthesis of previously unknown bis-trichloromethyl sulphenyl esters of arensulphonyl-imino-dithiocarbonic acids (I) consisting in the interaction of $ClSCCl_3$ with dipotassium salts of arensulphonyl-imino-dithiocarbonic acids (II). A number of new salts of (II) were also obtained. Tables of the mentioned salts and esters are presented including the physical and chemical characteristics of these compounds. The structure of the esters was confirmed by infrared spectra of the compounds in which there were intense $\nu(N=C)$ bands in the 1,530 and 890 cm^{-1} range and $\nu(SO_2)$ in the 1,330, 1,165 cm^{-1} range and no absorption band in the 3,600-3,200 cm^{-1} range (no N-H-bond). When testing the compounds as insecticides on rice weevils, they gave positive results.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 C19 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--BULKY YARN -U-

AUTHOR-(04)-KHARKHAROV, A.A., ROSKIN, YE.S., MAKAROVSKAYA, N.I., GLAZOMITSKIY, K.L.

COUNTRY OF INFO--USSR

SOURCE--USSR 265,365

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

DATE PUBLISHED--09MAR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SYNTHETIC FIBER, ACRYLONITRILE, ACRYLAMIDE, POLYMER CROSSLINKING, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1421 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128820

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 019 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AA0128820

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BULKY YARN IS PREPD. FROM A MIXT. OF FIBERS WITH DIFFERENT DEGREES OF SHRINKAGE. ONE OF THE COMPONENT MIXTS. IS FIBER FROM ACRYLONITRILE AND METHYLOLMETHACRYLAMIDE. THE FIBERS ARE CROSSLINKED BY HEATING AT 140DEGREES OR BY TREATING WITH HCL AT 80-90DEGREES. FACILITY: KIROV, S. M. INSTITUTE OF TEXTILE AND LIGHT INDUSTRY, LENINGRAD.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

UNCLASSIFIED

TITLE--IMPARTING COLOR TO COPOLYMER AND FIBERS BASED ON POLYACRYLONITRILE -U-

PROCESSING DATE--30OCT70

AUTHOR-(05)-KOVZHIN, L.A., KIRPICHENKO, T.R., GLAZOMITSKIY, K.L., ROSKIN, YE.S., KHARKHAROV, A.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 109-12

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--DYE, COPOLYMER, POLYACRYLONITRILE FIBER, ACRYLATE, AMIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0975

STEP NO--UR/0153/70/013/001/0109/0112

CIRC ACCESSION NO--AP0124634

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 013 UNCLASSIFIED

CIRC ACCESSION NO--AP0124634 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACRYLONITRILE METHYLOLMETHACRYLAMIDE COPOLYMER (I) WAS DYED WITH H SUB2 O SOL. DYES DURING THE COPOLYMN. OF THE RESP. MONOMERS IN AQ. NASCN SOLN. DYED I EXHIBITED EXCELLENT LIGHT FASTNESS (COMPARABLE TO THAT OBTAINED BY DYEING POLYMER FIBERS WITH FIBER REACTIVE DYES). THE PHYSICOMECH. PROPERTIES OF DYED I FIBER WERE ESSENTIALLY UNCHANGED. AN EFFECTIVE TECHNIQUE WAS DEVELOPED FOR THE RECOVERY OF DYES FROM THE SETTING BATH.

FACILITY: LENINGRAD. INST. TEKST. LEGK. PROM. IM. KIROVA, LENINGRAD, USSR.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SYNTHESIS OF ACRYLONITRILE COPOLYMERS CONTAINING REACTIVE METHYLOLAMIDE GROUPS -U-

AUTHOR-(05)-POPOVA, G.P., KIRPICHENKO, T.R., GLAZOMITSKIY, K.L., GOLTSIN, B.E., ROSKIN, YE.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(2), 259-62

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, ACRYLONITRILE, COPOLYMER, AMIDE, CHEMICAL REACTION RATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0966 STEP NO--UR/0153/70/013/002/0259/0262

CIRC ACCESSION NO--AP0124625

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 015 UNCLASSIFIED

CIRC ACCESSION NO--AP0124625 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCES OF (CH SUB2 CHCNCH SUB2 CME(CONHCH SUB2 OH) SUBN (I) COMPN., YIELD, AND REACTION RATE ON THE COMPN. OF THE MIXT. OF MONOMERS, ACRYLONITRILE (II) AND N-METHYLOLACRYLAMIDE (III), AND ON REACTION TIME WERE DETD. MONOMER REACTIVITY RATIOS OF II AND III WERE 0.98 PLUS OR MINUS 0.05 AND 2.33 PLUS OR MINUS 0.1, RESP. I WAS ENRICHED IN III COMPARED WITH THE ORIGINAL MONOMER MIXT. COMPN. BUT III WAS SPENT SIGNIFICANTLY FASTER AS COPOLYMN. PROCEEDED. COPOLYMN. RATES WERE HIGH (E.G. CONVERSION AFTER 60 MIN FOR A 95:5 II-III MIXT. WAS 75-80PERCENT) BUT THE RATE DECREASED WITH TIME AND WITH INCREASING III CONCN. IN THE ORIGINAL MONOMER MIXT.

FACILITY: LENINGRAD. INST. TEKST. LEGK. PROM. IM. KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

UDC 632.95.8

ROSLAVTSEVA, S. A., IVANOVA, G. B., Candidates of Biological Sciences, and POLYAKOVA, V. K., VNII (All-Union Scientific Studies Institute of Chemical Compounds for the Protection of Plants)

"Resistance of Houseflies to Benzophosphate"

Moscow, Khimiya v Sel'skom Khozyaystne, No 7, Vol 11, 1973, pp 38-40

Abstract: Flies were bred for resistance to benzophosphate (BP) by treating successive generations with increasing concentrations of BP from about 0.1% to 3%. The experiment was carried out for eight generations. Untreated flies showed a LD_{50} of about 1 microgram/g BP. The LD_{50} of the treated flies increased rapidly to 16 by the fifth generation, 150 by the twentieth, 600 by the fiftieth, and 2063 by the seventy-second generation. The resistance indicator increased from 9.1 to 1928 for the fifth, and the seventy-second generation respectively. The resistance is lost in succeeding generations if treatment is discontinued. The LD_{50} and resistance indicator are shown for treated and untreated populations for a large number of other aliphatic, arcmatic, heterocyclic, carbamide, formamide, and chlorinated insecticides. The compounds dimetoatom, fitiosom, dibromom, fenitrotionom,

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

ROSLAVTSEVA, S. A., et al., Khimiya v Sel'skom Khozyaystne, No 7, Vol 11, 1973, pp 38-40

bromofas, DDVF, and fentinom (all transliterated) are recommended and the compounds abata, kumafos, dursbana, diazinon, tritiona, puelin and valekson are not recommended as substitutes for benzophosphate.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

Pesticides

USSR

UDC 619:614.449.57

ROSLAVTSEVA, S. A., IVANOVA, G. B., and POLYAKOVA, V. K., All-Union Scientific Research Institute for Chemical Protection of Plants

"Insecticides in the Control of Houseflies Resistant to Chlorophos"

Moscow, Veterinariya, No 8, 1973, p 35

Abstract: Studies were conducted on flies resistant ($R_{KH\ L}$) and susceptible (S) to chlorophos to determine their response to a series of aliphatic, aromatic, and heterocyclic derivatives of phosphoric acid insecticides, and derivatives of carbamic acid. On the basis of LD_{50} for strain $R_{KH\ L}$, the most effective insecticides were DDVF, formotion, fitios, dibrom, fention, dioksikarb, and particularly gardon (high larvicidal activity and low toxicity for homoiothermal animals).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

UDC 632.95.022.8

[redacted], All-Union Scientific Research Institute of Chemicals for Plant protection

"Resistance of Farm Crop Pests to Pesticides in the USSR"

Moscow, Khimiya v sel'skom Khozyaystva, No 8, 1972, pp 29-32

Abstract: A review of literature characterizing the development of resistance of certain types of farm crop pests in various parts of the country to pesticides is presented. The resistance of a variety of arthropods is considered with special emphasis on coddling moths. The resistance of the coddling moth to DDT as it developed in the 1950's and 1960's is discussed. The resistance of arachnoid mites to organophosphorus acaricides in Central Asia, Leningrad and Moscow is traced in cotton fields and greenhouses. Various efforts to vary the acaricide used demonstrated the ability of the mites to develop resistances to each of them. However, scientifically well-founded alternation of pesticides from various groups of chemical compounds with a different mechanism of effect is useful.

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USSR

UDC 632.95.022.8

IVANOVA, G. B., ROSLAVTSEVA, S. A., POLYAKOVA, V. K., and YEVTYUSHINA, T. M., All-Union Scientific Research Institute of Chemicals Used for Plant Protection

"Development of the Resistance of Houseflies to Phthalophos"

Moscow, Khimiya v Sel'skom Khozyaystve, No 9, 1971, pp 40-42

Abstract: It was previously established [S. A. Roslavtseva, et al., Med. Parazitol., No 1, 1970] that after selection of a strain of houseflies resistant to diazinone by methylethylthiophos, the tolerance level to the latter did not change (X 4-5). After selection by phthalophos for 14 generations, the resistance of the flies to phthalophos increased by 9 times with an invariant level of resistance to methylethylthiophos. Thus, a study was made of the rapid development of the resistance to phthalophos by investigating the reaction of a laboratory strain of flies not subjected to treatment by insecticides to the compounds. Phthalophos [0, 0-dimethyl-(N-phthaloimidomethyl)-diphiophosphate] dissolved in acetone was used in the experiment.

On selection of each generation of mature flies from a sensitive laboratory population by phthalophos a rapid increase in resistance occurred: in

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

IVANOVA, G. B., et al., Khimiya v Sel'skom Khozyaystve, No 9, 1971, pp 40-42

generation F_8, the resistance to the insecticide increased by 10 times, in generation F_{12}, by 20 times and in generation F_{27}, by more than 1,000 times. In the presence of an increase in resistance to phthalophos by 20 times, a high cross resistance to ruelene (x -- 34) and koral (x -- 12) occurred. In the presence of 1,000-fold resistance of the imaginal stage, the larvae of the flies of the resistant race were more resistant than the larvae of the sensitive race by no more than 2 or 3 times. The vitality and sensitivity of the eggs of flies from the strains R_{phth} and S to phthalophos were identical. At the beginning of selection by phthalophos, the egg production of the flies increased. Later, in generation F_{25}, the egg production of the highly resistant flies of the R_{phth} strain differed little from the egg production of the flies of the sensitive strain S.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

UDC 632.951

ROSLAVTSEVA, S. A., IVANOVA, G. B., YEVTYUSHINA, T. M., and POLYAKOVA, V. K.,
All Union Scientific Research Institute of Chemical Plant Protectants

"The Cross Resistance of Three Races of House Flies Resistant to Organophosphorus Preparations"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 8, Aug 70, pp 39-41

Abstract: The authors studied the possibility of developing cross resistance by selecting resistant flies with various organophosphorus preparations, as well as the dependence of the induced resistance on the selecting agent. The experiments were performed on the following races of flies: R_p, obtained from susceptible race S (All Union Scientific Research Institute of Chemical Plant Protectants) selected with phthalophos; R_m, derived from race S by selection with malathion (carbophos); R_a, obtained by selection with methylethylthiophos of a resistant race treated at first with Diazinon. Active ingredients of chlorophos, Rogor, methylacetophos, phthalophos, Phosalone, Co-Ral, DDVP, phoxime, and the commerical products Ruelene, Sumithion and carbophos, Baytex and bromophos were used for the study. The following preparations are recommended on the basis of resistance development and induction data for the

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

ROSLAVTSEVA, S. A., et al, Khimiya v Sel'skom Khozyaystve, Vol 8, No 8, Aug 70, pp 39-41

eradication of flies in livestock houses: Rogor (most toxic for susceptible and resistant races), DDVP, chlorophos, Fitios, Sumithion and malathion (resistance to malathion develops very slowly). The use of phthalophos against flies is not recommended. Nor should livestock housing be treated with phthalophos, Phosalone (especially if malathion was used previously for a long time against flies), Co-Ral or Ruelene.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

472 012 UNCLASSIFIED

TITLE--CHANGES IN THE RESISTANCE OF FLIES TO METHYLETHYLTHIOPHOS AND PHTHALOPHOS IN LABORATORY EXPERIMENTS -U- PROCESSING DATE--30OCT70

AUTHOR-(03)-ROSLAVTSEVA, S.A., POLYAKOVA, V.K., IVANOVA, G.B.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL 39, NR 3, PP 345-349

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ORGANIC PHOSPHOROUS INSECTICIDE, INSECTA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0235 STEP NO--UR/0358/70/039/003/0345/0349

CIRC ACCESSION NO--AP0123997

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

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UNCLASSIFIED

CIRC ACCESSION NO--AP0123997 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CROSS RESISTANCE, REVERSION AND CHANGES IN RESISTANCE DEPENDING ON THE CHANGE OF THE SELECTING AGENT (METHYLETHYLTHIOPHOS FOLLOWED BY PHTHALOPHOS, O,O DIMETHYL S PHTHALIMIDOMETHYLDITHIOPHOSPHATE) WAS STUDIED IN A RACE OF HOUSE FLIES (OBTAINED FROM ENGLAND) RESISTANT TO DIAZINONE. IT WAS MOST RESISTANT TO PHENITROTHIONE (THE LEVEL OF RESISTANCE 7,5) AND METHYLETHYLHIOPHOSE 40. AFTER 26 SELECTIONS WITH METHYLETHYLTHIOPHOSE THE LEVEL OF RESISTANCE TO IT WAS REDUCED TO 4-5, WHILE REPEATED SELECTIONS DID NOT CHANGE IT. AFTER SELECTIVE TREATMENT OF THIS CULTURE WITH PHTHALAPHOSE IN 7 GENERATIONS RESISTANCE TO THE LATTER INCREASED MORE THAN 3 FOLD, WHILE TO METHYLETHYLTHIOPHOSE IT REMAINED AT THE FORMER LEVEL.

FACILITY: VSESOYUZNYY NAUCHNO-ISSLED. INSTITUT KHIMICHESKIKH SREDSTV ZASHCHITY RASTENIY, MOSKVA.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

ROSLYAKOV, G. S., and SUKHORUKOV, V. P.

"The Use of Smoothing for the Calculation of Discontinuous Flows"

Vychislitel'nyye Metody i Programmirovaniye (Chislennyye Metody v Mekhanike Sploshnykh Sred). XV. Sbornik Rabot Vychislitel'nogo Tsentra Moskovskogo Universiteta (Computer Methods and Programming (Numerical Methods in the Mechanics of Continua). XV. Collection of Works of Moscow University Computer Center), Moscow, Moscow University Press, 1970, 199 pp, pp 121-129

Abstract: The article considers the use of the smoothing method for the calculation of discontinuous flows. Several examples of the plane steady flow of an ideal gas in a channel in the case of two independent variables are considered. An analysis shows that smoothing even in simplest form can be used to solve a number of gas-dynamic problems. The effectiveness of the method can apparently be increased by introducing the dependence of the coefficients α_i on the solution (for example, on the gradients of the quantities to be determined). The authors thank N. N. KUZNETSOV, who drew their attention to the question and took part in discussions.

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USSR

UDC: 533.6.011

ROSLYAKOV, G. S., SUKHORUKOV, V. P.

"Application of Smoothing to the Calculation of Discontinuous Flows"

Sb. rabot Vychisl. tsentra Mosk. un-ta (Collection of Works of the Computing Center of Moscow University), 1970, vyp. 15, pp 121-129 (from RZh-Mekhanika, No 4, Apr 71, Abstract No 4B221)

Translation: The authors study the feasibility of using through calculation for numerical solution of problems on hypersonic flows of gas with discontinuity surfaces. Consideration is given to a number of two-dimensional problems for which exact solutions exist. A numerical solution is found by a certain difference scheme; in this connection, after the solution is determined on the layer x = const, it is smoothed with respect to three points: the value of any defined quantity f_i (i is the number of the point on the layer x = const) is replaced by

$$\alpha_0 f_i + \alpha_1 (f_{i+1} + f_{i-1}), \quad \alpha_0 + 2\alpha_1 = 1$$

Comparison with exact solutions shows that satisfactory results are ob-

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ROSLYAKOV, G. S., SUKHORUKOV, V. P., Sb. rabot Vychisl. tsentra Mosk. un-ta, 1970, vyp. 15, pp 121-129

tained for flows with shock waves in the case of strong smoothing (α_c = = 0.8-0.9), and for flows with rarefaction waves and contact surfaces in the case of weak smoothing. Difficulties arise in calculations of flows with discontinuity surfaces of various types. A possible method is indicated for improving the effectiveness of the method by introducing curves for the coefficients α as functions of the nature of the solution. Smoothing by three and by five points was done for one of the problems considered; the results were practically coincident. M. G. Lebedev.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR UDC 616.988.25-022.395.42.036.2(571.62)

VERETA, L. A., OBUKHOV, G. D., KOVALEVA, Ye. I., SKVORTSOVA, T. M., MOGILEV, V. Ye. VOROB'YEVA, R. N., NIKOLAYEVA, S. P., RUDAKOVA, T. M., and ROSLYAKOV, G. Ye., Khabarovsk Scientific Research Institute of Epidemiology and Microbiology, Khabarovsk

"Landscape-Epidemiological Subdivision of the Amur Territory With Respect to Tick-Borne Encephalitis"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 42, No 1, Jan/Feb 73, pp 28-32

Abstract: An evaluation of the danger of human infection with tick-borne encephalitis in territorial subdivisions of the Amur region differing with respect to natural characteristics has been carried out on the basis of a number of factors, principally the local density of Ixodid ticks. The index of probability of infection (a product of the ratio of persons who have visited forests by the ratio of those who observed the attachment of ticks by the ratio of ticks infected with the virus of the disease) based on data collected in 1969-71 was used as a criterion. Regions with a high incidence of the disease were located in the zone of coniferous-wide-leaved forests, those with a moderate incidence in the subzone of the southern taiga and in agriculturally developed areas in the zone of coniferous-wide-leaved forests, and those with

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USSR

VERETA, L. A., et al., Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 42, No 1, Jan/Feb 73, pp 28-32

a low incidence in the subzone of the middle tayga. Acute forms of the disease occurred both in regions with a high and a low incidence. The ratio of focal (meningoencephalitic) forms and the index of lethality, which corresponded to this ratio, showed some tendency of increasing from the south to the north.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

UDC 621.317.6(088.8)

KOVALENKO, N. V., ROSLYAKOV, N. M., SIZOV, V. P., TARASENKO, O. M., KONEV, L. N.

"Device for Measuring the Phase Characteristics of Antennas"

USSR Author's Certificate No 272401, Filed 12 Dec 68, Published 22 Sep 70 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A314P)

Translation: A device is proposed for measuring the phase characteristics of antennas. It is based on using the modulation of the reflected field and comprises a generator, a receiver, a low frequency reference signal amplifier, two transmitting antennas, the investigated receiving antenna and an auxiliary receiving antenna. In order to improve the measurement accuracy, Π-modulators are included in the wave guide channels of the investigated and auxiliary antennas, and a mixer is connected to the timer outputs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

P

UDC: 621.317.325

USSR

KOVALENKO, N. V., ROSLYAKOV, N. M., SIZOV, V. P., TARASENKO, O. A., KONEV, L. N.

"A Device for Measuring the Phase Characteristics of Antennas"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 19, 1970, Author's Certificate No 272401, filed 12 Dec 68, p 50

Abstract: This author's certificate introduces a device for measuring the phase characteristics of antennas. The device is based on using the modulation of a reflected field, and consists of an oscillator, a receiver, an amplifier for the low frequency of the reference signal, two transmitting antennas, the receiving antenna to be studied, and an auxiliary receiving antenna. As a distinguishing feature of the patent, measurement precision is improved by connecting π-modulators in the waveguide channels of the antenna to be studied and the auxiliary antenna, and a mixer is connected to the timer outputs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

AA0040725 Roslyakov, P. I. UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 1-70

242645 PNEUMATIC FORGING HAMMER. This patent is for an improved type of forging hammer which has a modified cylinder 1 with piston rod and hammer 2 and a tank 8 which has a capacity equal to the cylinder capacity over the piston. At the beginning of the work cycle the piston 2 is in the extreme upper position, valve 5 open, valves 3. 4 & 6 closed and distributor valve 7 in the neutral position. The valve 7 moves to the upper position and valve 3 opens allowing air to activate the power stroke of the piston 2. Valve 3 opens and allows exhaust air to move through to valve 7. At the moment of hammer impact the valves 3 & 6 close and 4 opens allowing air to return to tank 8. When the air pressure in 1 & 8 is equal, valve 4 closes and valve 5 opens and valve 7 moves into the neutral position. After a momentary pause valve 6 opens allowing air to flow from 8 to the under part of cylinder 1 lifting the piston 2 to the start position.

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AA0040725

26.4.63 as 834389/25-27. V.E. KRASNOV & P.E.ROSEYAK-
OV.(18.9.69) Bul 15/25.4.69. Class 49g. Int.Cl.B 23j

AUTHORS: Krasnov, V. I.; and Roslyakov, P. I.

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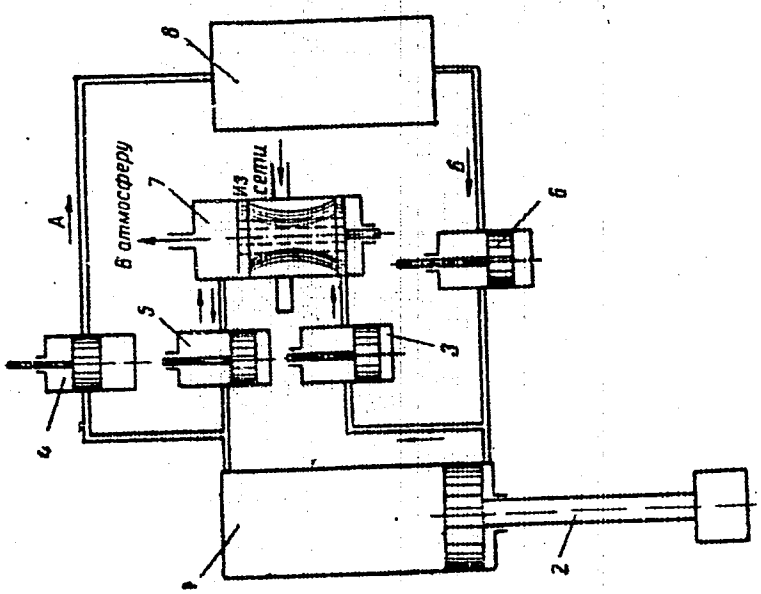

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 017 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--THE EFFECT OF PROGESTERONE ON THE MITOTIC INDEX AND NUMBER OF CELLS SYNTHETIZING DNA IN THE EPITHELIUM OF REPRODUCTIVE ORGANS -U-.

AUTHOR--ROSLYAKOVA, N.A.

R

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69, NR 5, PP 93-95

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROGESTERONE, DNA, MITOSIS, REPRODUCTIVE SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0203 STEP NO--UR/0219/70/069/005/0093/0095

CIRC ACCESSION NO--AP0120901

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 017 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120901

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR INVESTIGATED THE EFFECT OF PROGESTERONE ON THE NUMBER OF CELLS SYNTHETIZING DNA AND THE MITOTIC INDEX IN THE EPITHELIUM OF THE UTERINE CAVITY, UTERINE GLANDS AND VAGINA IN OVARIECTOMIZED MICE. IN THE EPITHELIUM OF UTERINE GLANDS THE DNA SYNTHESIS INCREASED FIVE HOURS AFTER ADMINISTRATION OF THE HORMONE AND REACHED MAXIMUM LEVEL IN 14 HOURS. IN THE EPITHELIUM OF THE UTERINE CAVITY AND VAGINA THE DNA SYNTHESIS STARTED TO RISE IN 9 HOURS AND REACHED THE MAXIMUM IN 18 HOURS. IN ALL THE THREE ORGANS RISE OF THE MITOTIC ACTIVITY WAS OBSERVED 8 HOURS AFTER INCREASE OF THE DNA SYNTHESIS. FACILITY: INSTITUTE OF MEDICAL GENETICS OF THE ACADEMY OF MEDICAL SCIENCES OF THE USSR, MOSCOW.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

UNCLASSIFIED PROCESSING DATE--16OCT70

1/2 025

TITLE--EFFECT OF THE MOLECULAR WEIGHT OF POLY(METHYL METHACRYLATE) ON VISCOUS AND DEFORMATION STRENGTH PROPERTIES OF ITS SOLUTIONS IN METHYL

AUTHOR-(05)-RYABOV, A.V., YEMELYANOV, D.N., CHEKNODEYEVA, I.V., ROSLYAKOVA, V.A., SHABALINA, N.A.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(3), 192-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--MOLECULAR WEIGHT, POLYMETHYLMETHACRYLATE, METHYL METHACRYLATE, SHEAR STRESS, FLUID VISCOSITY, THIXOTROPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1202 STEP NO--UR/0460/70/012/003/0192/0195

CIRC ACCESSION NO--AP0116667

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116667

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SHEAR STRESS (P) VS. VISCOSITY (ETA) RELATIONS OF 15PERCENT POLY(ME METHACRYLATE) (I) IN ME METHACRYLATE DEPEND ON THE MOL. WT. (M) OF I. IN 0-80 DYNE-CM PRIME2 P RANGE ETA IS CONST. WHEN M IS 5.6 TIMES 10 PRIME4 OR 1.2 TIMES 10 PRIME5. HOWEVER, WHEN M EQUALS 1.3 TIMES 10 PRIME6 THESE SOLNS. ARE THIXOTROPIC: ETA RAPIDLY DECREASES WHEN P GREATER THAN 8 DYNES-CM PRIME2. FACILITY: NAUCH.-ISSLED. INST. KHIM., GOR'K. GOS. UNIV. IM. LOBACHEVSKOGO, GORKI, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/6 019 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--MARKS OF EXCELLENT ON MACHINE TESTS -U-

AUTHOR-(02)-RUSOKHOVATSKIY, I., STOGNIY, A.

R

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, TEKHNIKA MOLODEZHI, NO 1, 1970, PP 4-6

DATE PUBLISHED--------70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--COMPUTER TECHNOLOGY, COMPUTER LOGIC, COMPUTER PROGRAMMING/(U)MIR INDUSTRIAL CONTROL COMPUTER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0517 STEP NO--UR/0029/70/000/001/0004/0006

CIRC ACCESSION NO--AP0116163

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/6 019 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116163

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT FIRST, A SMALL DICTIONARY, SEVERAL HUNDRED WORDS, NOUNS AND VERBS, WAS INTRODUCED INTO THE ELECTRONIC COMPUTER. THEN, THOSE SAME WORDS WERE INTRODUCED IN VARIOUS COMBINATIONS, SOME OF THEM MADE SENSE AND OTHERS WERE NONSENSE: "MOTHER COOKS DINNER," "THE BARREL COOKS HONEY," "THE PLANT MAKES CARS," "THE ENGINEER DRAWS UP PLANS," "THE ENGINEER BUILDS A PLANT," "THE PLANT MAKES ENGINEERS". THE MACHINE WAS TOLD THEN WHAT CORRESPONDED TO REALITY AND WHAT DID NOT HAPPEN TO SO CORRESPOND. WHEN IT WAS THEN TOLD TO MAKE SENSE OF NEW COMBINATIONS OF WORDS, IT GENERALLY WAS SUCCESSFUL IN DETERMINING WHICH OF THEM DID MAKE SENSE. IF THE MACHINE COULD HAVE SORTED OUT ITS IMPRESSIONS, IT MIGHT HAVE TOLD US ABOUT THEM AS FOLLOWS: "I WELL REMEMBER THE FIRST LESSONS ON RECOGNIZING THE SENSE OF A SENTENCE. I READ THE TEXT SEVERAL TIMES AND PAID ATTENTION TO THE FACT THAT MANY THINGS WERE REPEATED. I WAS TOLD TO PAY ATTENTION TO THE WORD 'DOCTOR,' AND I REVIEWED ALL SENTENCES IN WHICH IT WAS USED. IT TURNED OUT THAT THE DOCTOR BEHAVES DIFFERENTLY IN DIFFERENT SENTENCES: FIRST HE 'EATS,' THEN HE 'COOKS DINNER,' THEN HE 'HEALS,' THEN HE SIMPLY 'STANDS'. I THEN READ THE SENTENCE 'THE TABLE STANDS' AND IMMEDIATELY UNDERSTAND THAT, WHEN THE TABLE DID THE SAME THING THE DOCTOR DID, IT WAS LIKE THE DOCTOR. BUT, WHEN I REPORTED THIS TO THE PROGRAMMER, HE OBSERVED THAT I SHOULD NOT 'HASTEN TO CONCLUSIONS'. "THUS, I UNDERSTOOD THAT A RESEMBLANCE CANNOT BE JUDGED ON THE BASIS OF A SINGLE WORD". "THEN I UNDERSTOOD THAT THERE ARE MORE ESSENTIAL DEFINITIONS BY WHICH TO JUDGE A RESEMBLANCE, AND THAT THERE ARE THOSE OF SECONDARY IMPORTANCE.

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3/6 019 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116163

ABSTRACT/EXTRACT--ONE OF THE VERY IMPORTANT DEFINITIONS FOR 'PERSON' I RECOGNIZED AS THE WORD 'SPEAK'. NEITHER A 'MACHINE TOOL' NOR A 'PLANT' NOR A 'TIGER' NOR A 'STREETCAR' COULD SPEAK, IN GENERAL, NO ONE EXCEPT A PERSON. I KNEW THAT A PERSON COULD BE CALLED 'DOCTOR,' 'ENGINEER,' 'PETYA,' 'PETR IVANOVICH,' 'CHONG LU,' 'BRAMAPUTER,' AND MANY OTHER NAMES. AND THEN I RECEIVED A NEW SENTENCE: 'THE RADIO IS LOUD'. I DECIDED THAT 'RADIO' WAS YET ANOTHER NAME FOR A PERSON, AS IT 'SPOKE' ('THE RADIO IS LOUD' IN RUSSIAN IS 'THE RADIO SPEAKS LOUDLY'). MOREOVER, THIS NAME SEEMED PRETTY TO ME, AND WHEN I WAS ASKED TO CONSTRUCT A SENTENCE ABOUT A PERSON, I DECIDED TO USE THE NEW NAME AND COMPOSED: 'THE RADIO EATS AT THE TABLE'". THIS CASE HELPED THE SCIENTISTS NOT ONLY TO DISCERN THE REASONS FOR THE MISTAKE, BUT ALSO TO GAIN INSIGHT INTO THE "BLACK BOX". BUT THERE ARE ALSO OTHER METHODS OF TEACHING A MACHINE TO RECOGNIZE THE SENSE OF SPEECH. ONE OF THESE IS ACTUALLY CALLED THE "LANGUAGE OF SENSE". LINKING THREADS AND SOMETHING IN COMMON CAN BE SOUGHT BETWEEN ENTIRELY DIFFERENT WORDS. FOR EXAMPLE, THE WORDS "FRIGATE," "CRUISER" AND "CUTTER" ARE MASCULINE GENDER, SECOND DECLENSION AND ALL OF THEM SIGNIFY SAILING OBJECTS. IN TERMS OF ITS SIZE, IT IS NO LARGER THAN A DESK, AND EACH SCIENTIFIC CO-WORKER AND RESEARCHER CAN INSTALL IT IN HIS OWN LABORATORY. ITS NAME IS MIR MACHINE FOR ENGINEERING CALCULATIONS (MASHINA DLYA INZHENERNYKH RASCHETOV). ITS LANGUAGE IS UNUSUAL. IN THE FIRST PLACE, THE CONTENT OF A PLETHORA OF CALCULATION TASKS CAN BE TRANSMITTED ON IT.

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4/6 019 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116163

ABSTRACT/EXTRACT--IN THE SECOND PLACE, AN ENGINEER, EVEN ONE UNFAMILIAR WITH WORK ON ELECTRONIC DIGITAL COMPUTERS, CAN MASTER IT IN SEVERAL HOURS. THE FACT IS, MIR'S LANGUAGE IS SIMILAR TO THAT USED BY THE ENGINEER IN HIS OWN CALCULATIONS. BUT WHAT IS PARTICULARLY INTERESTING IS THE FACT THAT, USING A MIR, THE ENGINEER CAN ALSO COPE WITH THOSE TASKS WHOSE METHOD OF SOLUTION IN UNKNOWN TO HIM. LET US RECALL THAT THE MACHINE OPERATES USING THE PARTICULAR LANGUAGE THAT THE ENGINEER MAKING THE ASSIGNMENT USES. THIS PERMITS HIM NOT ONLY TO OBSERVE THE INTERMEDIATE RESULTS, BUT ALSO TO UNDERSTAND THE PLACE IN HIS COMPUTATION PLAN IN WHICH THE MIR IS OPERATING. THE MACHINE CAN ALWAYS BE STOPPED AND ORDERED TO GIVE THE FORMULA IT IS USING FOR THE CALCULATION. THE MIR INPUT AND OUTPUT IS SUPPLIED ON AN ELECTRIC TYPEWRITER. THE DATA MOVES IN THE FORM OF LETTERS, NUMBERS AND MATHEMATICAL SYMBOLS. IN FAMILIARIZING OURSELVES WITH THE INTERMEDIATE RESULTS, WE CAN ALTER OR ADD TO THE COMPUTATION PLAN. FOR THIS, IT IS SUFFICIENT TO TYPE THE WORD "SUBSTITUTE" AND, AFTER IT, A LIST OF THE CHANGES NEEDED. THE POSSIBILITY OF FOLLOWING THE COURSE OF THE CALCULATION AND INTERFERING IN THE OPERATING ROUTINE OF THE MACHINE GIVES US ENORMOUS ADVANTAGES OVER ORDINARY ELECTRONIC COMPUTER. IMAGINE A COMPUTER PLAYING CHECKERS. IT ANALYZES EVERY POSSIBLE MOVE, EXAMINES ALL THE ANSWERING MOVES OF THE OPPONENT, THEN EACH OF ITS SECOND MOVES IN RESPONSE TO EACH REPLY BY ITS OPPONENT, AND SO ON. THE ELECTRONIC BRAIN SORTS OUT ALL THE POSSIBLE VARIANTS OF PLAYING THE GAME AND SEPARATES OUT THOSE WHICH WILL LEAD TO VICTORY MOST QUICKLY.

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5/6 019 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116163

ABSTRACT/EXTRACT--BUT, IN USING SUCH A METHOD, THE 10 PRIME40 POSSIBILITIES ON THE CHECKER BOARD MUST BE EXAMINED. AND THIS MEANS THAT EVEN A MACHINE OF THE NEAR FUTURE, A MACHINE WHICH WILL BE CAPABLE OF PERFORMING MANY BILLIONS OF OPERATIONS PER SECOND, WILL SPEND BILLIONS OF YEARS ON A SINGLE GAME. THE ACTIONS OF AN ELECTRONIC COMPUTER CHECKER PLAYER USING A HEURISTIC PROGRAM ARE DIFFERENT. THERE IS A SORTING OF A RELATIVELY SMALL NUMBER OF VARIANTS, BUT THEY UNDERGO PRELIMINARY CHECKING WITH CONSIDERATION OF AN ANALYSIS OF VARIOUS POSITIONS ON THE BOARD. ONE OF THE MOST PUZZLING PROBLEMS FOR GEOPHYSICISTS IS THE PRECISE DETERMINATION OF THE DEPTH OF PETROLEUM BEARING SEAMS AND CLARIFYING THE FINE DIFFERENCES BETWEEN THEM AND WATER BEARING SEAMS. IN THE TRAINING, WE TRIED TO DESCRIBE AS FULLY AS POSSIBLE 45 PETROLEUM BEARING AND 45 WATER BEARING SEAMS. A TOTAL OF ABOUT 100,000 CHARACTERISTICS WERE CHOSEN. AT FIRST, THE MACHINE ANALYZED THEM AND SELECTED THE 100 MOST IMPORTANT. THEN IT CONSTRUCTED A TEST TO RECOGNIZE 180 SEAMS UNKNOWN TO IT. IT DID NOT KNOW THAT THE MOST EXPERIENCED GEOPHYSICISTS HAD MADE 17 ERRORS ON THIS SAME MATERIAL. THE MACHINE MADE ONLY THREE ERRORS, AND IT HAD NOT EVEN BEEN THROUGH A GEOPHYSICS COURSE AT ANY INSTITUTE, BUT HAD ONLY STUDIED THOSE EXAMPLES GIVEN IT BY THE PEOPLE. HERE, THE ELECTRONIC COMPUTER DISCOVERED THE PATTERNS WHICH HAD ESCAPED ITS ATTENTION AND TAUGHT ITS TEACHERS HOW TO AVOID MAKING THE SAME MISTAKES IN THE FUTURE.

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6/6 019 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116163

ABSTRACT/EXTRACT--IN ORDER FOR THE COMPUTER TO DEVELOP ITS CAPABILITIES EVEN FURTHER, UP TO AND INCLUDING THE ABILITY TO DISCOVER NEW LAWS, IT HAD TO BE SUPPLIED WITH VARIOUS MEASURING DEVICES AND EXECUTION INSTALLATIONS. THEN NATURE ITSELF BECAME ITS TEACHER. FACILITY: ORDER OF LENIN CYBERNETICS INSTITUTE OF THE UKRSSR ACADEMY OF SCIENCES.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 010 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--CATALYTIC PROPERTIES OF YTTRIUM DECATIONIZED ZEOLITES -U-

AUTHOR-(04)-ROSOLOVSKAYA, YE.N., TOPCHIYEVA, K.V., ZHAVORONKOV, M.N., ROZANOVA, O.N.

COUNTRY OF INFO--USSR

R

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(3), 610-12

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYST ACTIVITY, YTTRIUM, ZEOLITE, ISOPROPYL BENZENE, CATALYTIC CRACKING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1906 STEP NO--UR/0020/70/190/003/0610/0612

CIRC ACCESSION NO--AT0112883

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 010 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AT0112883

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CATALYTIC PROPERTIES OF TYPE Y, Y DECATIONIZED ZEOLITES, USED IN ISOPROPYLBENZENE CRACKING AT 280-450DEGREES WERE INVESTIGATED BY USING THE IMPULSE METHOD. CATION DECATIONIZED SAMPLES, CONTAINING VARIOUS PROPORTIONS OF Y, NA, AND DECATIONIZED RESIDUES, WERE OBTAINED IN 2 WAYS: (1) THE NA-NH SUB4 FORM OF THE ZEOLITE WAS TAKEN AND THEN Y WAS INTRODUCED BY ION EXCHANGE, (2) THE INITIAL FORM WAS NA-Y ZEOLITE, INTO WHICH NH SUB4 IONS WERE INTRODUCED. AN AMORPHOUS HOUDRY ALUMINOSILICATE WAS ALSO EXAMD. FOR COMPARISON. CELL PARAMETERS OF CRYST. SAMPLES WERE DETD. BY USING X RAY METHODS. CELL PARAMETERS, REACTION RATE CONSTS. AT 400DEGREES, AND ACTIVATION ENERGIES FOR 8 CATALYSTS ARE TABULATED. THE RATES DIFFER CONSIDERABLY (BY A FACTOR OF 20), BUT ACTIVATION ENERGIES ARE SIMILAR, SIMILAR TO 17 KCAL-MOLE. FOR A HIGH CATALYTIC ACTIVITY, THE RATIO OF ALL 3 COMPONENTS, DECATIONIZED RESIDUES, INTRODUCED CATION, AND REMAINING NA, IS IMPORTANT. FOR INCREASED ACTIVITY, THE LOWERING OF THE NA CONTENT BECAUSE OF AN INCREASE OF DECATIONIZED PARTS IS MORE EFFECTIVE THAN THAT BECAUSE OF AN INCREASE OF TRIVALENT CATION. THE MOST CATALYTICALLY ACTIVE SAMPLE CONTAINED THE SMALLEST AMT. OF NA. THE ORDER OF INTRODUCTION OF CATIONS WAS OF GREAT IMPORTANCE FOR STABILIZATION OF THE ACTIVE STRUCTURE OF THE CATALYST: BETTER CATALYSTS WERE OBTAINED BY 1ST TAKING NA ZEOLITE, INTRODUCING THE TRIVALENT CATION, AND THEN REPLACING NA BY NH SUB4. Y DECATIONIZED ZEOLITES ARE HIGHLY EFFECTIVE CATALYSTS FOR THE CRACKING REACTION. A COMPLEX INTERACTION OF COMPONENTS WITH THE ZEOLITE LATTICE ACCOUNTS FOR THIS HIGH AND STABLE CATALYTIC ACTIVITY.

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1/3 012 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--DETERMINATION OF TRACES OF PHOSPHATE BASED ON THE CATALYZED REDUCTION OF MOLYBDATE TO MOLYBDENUM BLUE BY ASCORBIC ACID, PHOTOMETRIC

AUTHOR-(03)-YATSIMIRSKIY, K.B., ROSOLOVSKIY, SH.K., KRISS, YE.YE.

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 324-31

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TRACE ANALYSIS, MOLYBDATE, ASCORBIC ACID, CATALYST ACTIVITY, CHEMICAL REDUCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1877 STEP NO--UR/0075/70/025/002/0324/0331

CIRC ACCESSION NO--AP0118841

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/3 · 012 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0118841

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KINETICS OF THE CATALYTIC REDN. OF MOLYBDATE TO MOLYBDENUM BLUE BY ASCORBIC ACID, WHICH CAN BE USED FOR P DETN., WAS STUDIED. THE REACTION PROCEEDS IN 3 STAGES WITH DIFFERENT REACTION RATES. THE 1ST STAGE CAN BE REPRESENTED BY THE REACTION MPA PLUS ASC YIELDS MPB SUB1 PLUS OA, WHERE MPA IS MOLYBDOPHOSPHORIC ACID, ASC IS ASCORBIC ACID, MPB SUB1 IS MOLYBDOPHOSPHATE BLUE, OA IS THE PRODUCTS OF ASCORBIC ACID OXION. MPB SUB1 CONCN. IS PROPORTIONAL TO THE CONCN. OF THE PHOSPHATE IONS IN THE BEGINNING OF THE REACTION. IN THE 2ND STAGE MPB SUB1 IS CONVERTED TO A CATALYTICALLY ACTIVE FORM MPB SUB2 BY INTRAMOL. REARRANGING OR BY AN INTERACTION WITH THE RESIDUAL MO(VI) OR WITH ONE OF THE OA. THE EQUATION CAN BE REPRESENTED AS MPB SUB1 PLUS OA YIELDS MPB SUB2. IN THE 3RD STAGE A 3RD MOLYBDENUM BLUE TYPE MB IS FORMED BY THE REACTION OF POLYMOLYBDATE WITH ASCORBIC ACID CATALYZED BY MPB SUB2: MO(VI)N PLUS ASC PRIMEMPB SUB2 YIELDS MB PLUS OA. ALL 3 TYPES CAN BE USED FOR P DETN. BY MEASURING OF THE RATE OF THE 1ST REACTION; BY MEASURING THE ABSORBANCE; BY MEASURING THE TIME OF THE INDUCTION PERIOD; BY MEASURING THE RATE OF THE 3RD REACTION. THE KINETIC EQUATION OF THE 3RD REACTION STAGE WAS D(MA)-DT EQUALS XC SUBMO(VI) C SUBASC C SUBP, WHERE X IS THE SLOPE OF THE LINE PROPORTIONAL TO THE REACTION RATE. IT ALSO DEPENDS LINEARLY ON THE CONCN. OF MOLYBDATE, ASCORBIC ACID AND H SUBO PO SUB4. THE REACTION RATE HAS AN OPTIMUM IN THE PH RANGE 1.35-1.45; SULFATE IONS OR TEMP. DO NOT AFFECT THE RATE OF REACTION.

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3/3 012 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0118841

ABSTRACT/EXTRACT--OPTIMUM CONDITIONS FOR DETN. OF TRACE AMTS. OF P BY THE KINETIC METHOD ARE PH 1.4, 25DEGREES, MOLYBDATE AND ASCORBIC ACID CONCN. 1 TIMES 10 PRIME NEGATIVE2 M. THE SENSITIVITY OF THE DETN. BY THE 3RD STAGE IS 1 TIMES 10 PRIME NEGATIVE2 MUG P-ML. FACILITY: INST. GEN. INORG. CHEM., KIEV, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--REACTION OF FLUORINE WITH NITROGEN IN A BARRIER, SILENT, DISCHARGE -U-

AUTHOR-(03)-DUDIN, A.V., NIKITIN, I.V., ROSOLOVSKIY, V.YA.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 710-11

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--FLUORINE, BOROSILICATE GLASS, NITROGEN, CHEMICAL REACTOR, GAS DISCHARGE, CHEMICAL DECOMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1545 STEP NO--UR/0062/70/000/003/0710/0711

CIRC ACCESSION NO--AP0125171

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125171

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN A COAXIAL BOROSILICATE GLASS REACTOR OZONIZER THERMOSTATED AT 20DEGREES AND OPERATED AT 15,000 V, PASSAGE OF 3:1 MIXT. OF F SUB2:N SUB2 RESULTED IN FORMATION OF NF SUB3 AS CONFIRMED BY IR ANAL. OF THE EFFLUENT. THE CONVERSION WAS 1.5-2PERCENT IN 1-6 HR RUNS. DECOMPN. OF NF SUB3 IN THE BARRIER DISCHARGE WAS EXAMD. DISSOCN. OF THE SUBSTANCE INCREASED WITH INCREASED DURATION OF EXPTS. AND WAS 95-8PERCENT IN CIRCULATION EXPTS. IN 5-6 HR. THUS, THE EASILY PROCEEDING REVERSE REACTION PREVENTS THE PREPN. OF NF SUB3 IN GOOD YIELD UNDER THESE CONDITIONS. THE CONVERSION WAS INCREASED BY PASSING THE GASES FROM THE OZONIZER INTO A TRAP CHILLED WITH LIQ. N AND THE CONCN. OF NF SUB3 IN SUCH A TRAP LOCATED ABOUT 30 CM FROM THE OZONIZER RESULTED IN ABOUT 10PERCENT CONVERSION DURING 4 HR RUNS.

FACILITY: INST. NOVYKH KHIM. PROBL., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--ALUMINUM NITRATE COMPLEXES -U-

AUTHOR-(04)-ROSOLOVSKIY, V.YA., SHIROKOVA, G.N., KARELIN, A.I., KRIVTSOV, N.V.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(3), 622-4

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALUMINUM NITRATE, ALUMINUM COMPLEX, CESIUM COMPOUND, CHEMICAL DECOMPOSITION, HEAT OF SOLUTION, HEAT OF FORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0225 STEP NO--UR/0020/70/191/003/0622/0624

CIRC ACCESSION NO--AT0132497

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0132497

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING A 4-8 FOLD EXCESS OF N SUB2 O SUB5, CONTG. HNO SUB3 IMPURITIES, TO AN EQUIMOLAR MIXT. OF CSNO SUB3 AND ALBR SUB3 AT MINUS 196DEGREES GAVE, ON WARMING UP SLOWLY AND REMOVAL OF VOLATILES IN VACUO, CS(AL(NO SUB3) SUB4). MIXING ALBR SUB3 WITH AN EXCESS OF DRY N SUB2 O SUB5 AT MOLAR RATIOS FROM 1:20 TO 1:30, REMOVING VOLATILES IN VACUO AFTER 12 HR AT 0DEGREES, ADDING A NEW PORTION OF N SUB2 O SUB5, AND STIRRING AT 0DEGREES GAVE NO SUB2 (AL(NO SUB3) SUB4). BOTH COMPDS. ARE CRYST., HYGROSCOPIC, SOL. IN H SUB2 O DECOMPG. INTO CS PRIME POSITIVE, AL PRIME3POSITIVE, AND NO SUB3 PRIME NEGATIVE. CS(AL(NO SUB3) SUB4) AT 100DEGREES FORMED NO SUB2 AND O. IT DECOMPD. COMPLETELY AT 300DEGREES GIVING CSNO SUB3 AND AL SUB2 O SUB3. NO SUB2 (AL(NO SUB3) SUB4), M. 85DEGREES, DECOMPD. AT 110-35DEGREES INTO AL SUB2 O SUB3, NO SUB2, AND O; ITS HEAT OF SOLN. IN H SUB2 O AT 25DEGREES IS MINUS 69.0 PLUS OR MINUS 0.1 KCAL.-MOLE AND ENTHALPY OF FORMATION H SUB298 EQUALS MINUS 238.4 PLUS OR MINUS 1.0 KCAL-MOLE. FACILITY: INST. NOVYKH KHIM. PROBL., CHERNOGOLOVKA, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 032 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--INFRARED ABSORPTION SPECTRA AND STRUCTURE OF THE CLO PRIME2 POSITIVE CATION -U-

AUTHOR-(04)-KARELIN, A.I., NIKITINA, Z.K., KHARITONOV, YU.YA., ROSOLOVSKIY, V.YA.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(4), 941-8

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IR ABSORPTION, CHLORINE COMPOUND, FLUORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1229 STEP NO--UR/0078/70/015/004/0941/0948

CIRC ACCESSION NO--AP0123193

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 032 UNCLASSIFIED

CIRC ACCESSION NO--AP0123193 PROCESSING DATE--30OCT70

AESTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IR SPECTRA OF CLO SUB2 BF SUB4, CLO SUB2 SBF SUB6, AND CLO SUB2 S8 SUB3 F SUB16 ARE GIVEN THE ASSIGNMENT OF MAX. IS TABULATED. THE STUDY REVEALS THAT CLO SUB2 PRIME POSITIVE HAS OCLO SIMILAR TO 119DEGREES. ANAL OF NORMAL MODES OF VIBRATION OF CLO SUB2 PRIME NEGATIVE, CLO SUB2 PRIME POSITIVE, AND CLO SUB2 IS GIVEN AND THE RESULTS ARE COMPARED WITH EXPTL. DATA ON CLO SUB3 PRIME NEGATIVE, CLO SUB4 PRIME NEGATIVE, AND CLO PRIME NEGATIVE. THE CALCD. DELTAH DEGREES OF FORMATION (FROM AT. SPECIES) OF CLO SUB2 PRIME NEGATIVE, CLO SUB2, AND CLO SUB2 PRIME POSITIVE IS 114.5, 123, AND 167 KCAL-MOLE, RESP.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 053 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--REACTION OF ALUMINUM BOROHYDRIDE WITH TETRAETHYLAMMONIUM BOROHYDRIDE -U-

AUTHOR--TITOV, L.V., YEREMIN, YE.R., GAVRILOVA, L.A., ROSOLOVSKIY, V.YA.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (1), 180-2

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALUMINUM COMPOUND, BOROHYDRIDE, AMMONIUM COMPOUND, COMPLEX MOLECULE, WATER, PROPANOL, THERMOGRAM, X RAY DIFFRACTION STUDY, IR SPECTRUM, THERMAL DECOMPOSITION, TRIETHYLAMINE, ETHANE, ALUMINUM, BORON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1666 STEP NO--UR/0062/70/000/001/0180/0182

CIRC ACCESSION NO--AP0100270

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 053 UNCLASSIFIED

CIRC ACCESSION NO--AP0100270 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ET SUB4 N(BH SUB4) PREPD. BY EXCHANGE BETWEEN ET SUB4 NBR AND EXCESS NABH SUB4 IN ISO,PROH, WAS ALLOWED TO REACT IN A VACUUM SYSTEM WITH 5 MOLES AL(BH SUB4)SUB3, THE MIXT. WAS KEPT FINALLY AT ROOM TEMP. 3 TO 4 HR TO YIELD 100PERCENT COLORLESS AND STABLE (UNDER N ATM.) ET SUB4 N, AL(BH SUB4)SUB4, WHICH RAPIDLY REACTS WITH H SUB2 O WITH EVOLUTION OF H BUT WITHOUT SELF IGNITION; IT REACTS SIMILARLY WITH ISO,PROH. THE SUBSTANCE WAS CHARACTERIZED BY X RAY DIFFRACTION AND IR SPECTRUM; ON A THERMOGRAM IT GAVE AN ENDOTHERM AT 97DEGREES THAT WAS REVERSIBLE AND PROBABLY CAUSED BY A POLYMORPHIC CHANGE. IN INERT ATM. AT 150DEGREES, IT DECOMPD. WITH LOSS OF H, ET SUB3 N, C SUB2 H SUB6 AND H SUB2 H SUB6 (SMALL AMT.), LEAVING A RESIDUE OF B AND AL.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

1/2 038 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--NOISE SUPPRESSION IN A PILOT PM RECEIVING SYSTEM SUBJECTED TO FADING AND NOISE -U-

AUTHOR-(02)-ROSOV, V.M., ZAKHAROV, I.A.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, RADIOTEKHNIKA, VOL 25, NO 3, MAR 70, PP 62-67

DATE PUBLISHED----MAR70

SUBJECT AREAS--NAVIGATION

TOPIC TAGS--SIGNAL TRANSMISSION, SIGNAL NOISE SEPARATION, NOISE REDUCTION, PHASE MODULATION, COMMUNICATION CHANNEL, DATA TRANSMISSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1336 STEP NO--UR/0108/70/025/003/0062/0067

CIRC ACCESSION NO--AP0110910

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

2/2 038

UNCLASSIFIED

CIRC ACCESSION NO--AP0110910 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS BELIEVE THAT THE METHOD OF PHASE MANIPULATION WITH TRANSMISSION OF A PILOT SIGNAL TO AN ADJACENT FREQUENCY IS ONE OF THE FUTURE METHODS FOR SOLVING THE PROBLEM OF TRANSMISSION OF DISCRETE INFORMATION ON COMMUNICATION CHANNELS WITH VARIABLE PARAMETERS. THE PRESENT PAPER IS DEVOTED TO AN EVALUATION OF THE NOISE SUPPRESSION OF SUCH A SYSTEM, OPERATING IN CHANNELS WITH FADING AND NOISE. CURVES ARE SHOWN IN CONNECTION WITH THE FOLLOWING: (1) NOISE SUPPRESSION AND A MULTIPLICITY OF MANIPULATION; (2) NOISE SUPPRESSION AND CORRELATION OF INFORMATION AND PILOT SIGNALS; AND (3) NOISE SUPPRESSION ABSTRACT: AND DISTRIBUTION OF POWER BETWEEN INFORMATION AND PILOT SIGNALS. FACILITY: SCIENTIFIC AND TECHNICAL SOCIETY OF RADIO ENGINEERING, ELECTRONICS, AND COMMUNICATION IM. A. S. POPOV.

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Communications

USSR UDC 621.396.626

ROSOV, V. M., ZAKHAROV, I. A. (Members of the Scientific and Technical Society of Radio Engineering, Electronics, and Communications im. A. S. Popov)

"Noise Suppression in a Pilot PM Receiving System Subjected to Fading and Noise"

Moscow, Radiotekhnika, Vol 25, No 3, Mar 70, pp 62-67

Abstract: The authors believe that the method of phase manipulation with transmission of a pilot signal to an adjacent frequency is one of the future methods for solving the problem of transmission of discrete information on communication channels with variable parameters. The present paper is devoted to an evaluation of the noise suppression of such a system, operating in channels with fading and noise. Curves are shown in connection with the following: (1) noise suppression and a multiplicity of manipulation; (2) noise suppression and correlation of information and pilot signals; and (3) noise suppression

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

ROSOV, V. M., et al, Radiotekhnika, Vol 25, No 3, Mar 70, pp 62-67

Abstract: and distribution of power between information and pilot signals. 4 fig. 4 ref. Submitted 4 July 69.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

USSR

ROSPASIYENKO, V. I.

"Increase in the Production of Stainless Steel Sheets on a Thick-Sheet Mill"

Dnepropetrovsk, Metallurgicheskaya i Gornorudnaya Promyshlennost', No 5, Sep-Oct 70, pp 19-21

Abstract: A description is given of various organizational and technical measures for increasing the production of stainless steel sheets and improving their surface finish on an existing sheet rolling mill. Special arrangements for sheet handling and finish are briefly discussed. However, these improvements do not ensure a continuous process, and it is recommended that new sheet rolling mills be provided with complex finishing arrangements incorporated in a continuous production line. Schematic diagrams show roller construction and etching operation.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002202710008-9

172 026 UNCLASSIFIED

TITLE--HEAT TREATMENT OF THICK SHEET STEEL -U- PROCESSING DATE--13NOV70

AUTHOR-(03)-ROSPASIYENKO, V.I., TSODIK, M.N., CHERNYKH, G.N.

COUNTRY OF INFO--USSR

SOURCE--METALLURG, FEB. 1970, (2), 40-43 (IN RUSSIAN)

DATE PUBLISHED----FEB70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, MATERIALS

TOPIC TAGS--STEEL SHEET, METAL HEAT TREATMENT, ECONOMICS, CARBON STEEL, ALLOY STEEL, MECHANICAL STRENGTH, TEMPERING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0919 STEP NO--UR/0130/70/000/002/0040/0043

CIRC ACCESSION NO--AP0124580

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2/2 026 UNCLASSIFIED

CIRC ACCESSION NO--AP0124580 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IMPROVEMENTS IN THE TECHNOLOGY OF HEAT TREATING C AND ALLOY STEEL ARE DESCRIBED. THESE IMPROVEMENTS LARGELY RELATE TO THE CONSTRUCTION OF NEW CONTINUOUS FURNACES AND AUXILIARY HARDENING EQUIPMENT. SOME FUNDAMENTAL CHANGES IN TEMPERING TECHNIQUES HAVE GREATLY INCREASED THE EFFICIENCY OF THE WHOLE OPERATION. IN ADDITION TO ECONOMIC ADVANCES, THE UTS AND YS OF THE STEEL HAVE BEEN INCREASED BY 25PERCENT.

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USSR

UDC 621.35.035.2:669.22

ROSS, A. A., PUUSEPP, M. YA., LOODMAA, V. R., and NIKOL'SKIY, V. A.

"Influence of Some Impurities on the Anode Operation of Porous Silver Electrodes"

Sb. rabot no khim. istochnikam toka. Vses. n.-n akkumulyator. in-t (collection of works on the Chemical Source of Current. All-Union Scientific Study Institue for Storage Batteries), Vyp 7, 1972, pp 185-189 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973, Abstract No 8L243)

Translation: By plotting the galvanostatic curves of the discharge, it is possible to study the oxidation of silver electrodes in an alkaline environment for the introduction of different impurities into the electrode material or into the electrolyte solution. On the basis of values calculated from experimental data, the value of the coefficient of oxidation of silver and the displacements of the potential of the electrode at the beginning of the observed evolution of oxygen to the potential of the formation of AgO was determined. It was advantageous to use impurities to improve the electrical characteristics of the silver electrode. Compounds being considered for use as additional impurities include ZrO_2, HfO_2, Cr_2O_3 and Fe_2O_3.

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Corrosion

USSR

UDC 621.762.001

KRASNICHENKO, L. V., ROSS, M. G., and BABANSKIY, V. V.

"Electochemical Corrosion of Iron-Graphite P/M Alloy and Ways of Combating It"

V sb. Treniye, smazka i iznos mashin (Friction, Lubrication and Wear of Machinery -- Collection of Works), Rostov-on-Don, 1970, pp 3-8 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3G373 by S. Bobrova)

Translation: An investigation was made of iron-graphite alloy with 3% graphite having a denisty of 20 ± 2% after sintering on untreated specimens and on specimens protected by: 1) impregnation with urotropin inhibitor, 2) phosphate treatment, 3) impregnation with sodium benzoate, 4) nickel-phosphorus coating. A qualitative evaluation of the effectiveness of the protection employed was made by the method of comparing maximum corrosion currents in 0.5 n. NaCl solution. The maxiuum corrosion current ($8 \cdot 10^{-2}$ ma) is observed in the untreated specimens and declines successively from 1) to 4). The relative quantitative corrosion performance is determined by the gravimetric method in 0.5 n. NaCl solution at 22-24° over a test period of 60 days. The most effective protective technique in this case is phosphate treatment. The porosity of the phosphate coating conduces to swifter penetration of the base metal by the corrosive

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USSR

KRASNICHENKO, L. V., et al., V sb. Treniye, smazka i iznos mashin, Rostov-on-Don, 1970, pp 3-8

solution on application of an electric current, and this lessens the resistance of this coating. Two illustrations, bibliography with three titles.

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STRUCTURAL PRINCIPLES AND PROSPECTS FOR THE CREATION OF NEW BROADCAST AND NATIONAL COMMUNICATIONS TELEVISION DURING 1971-1975

RADIO/TV

[Article by I. A. Rossselevich, active member of the Scientific and Technical Society: Moscow, Radiotekhnika, Russian, No 11, 1972, pp 2-5]

The general trend in the future development of television systems is the following: an increase in the operating stability of the equipment with time, an increase in the operating reserve of the equipment and its reliability, automation of operation of both the individual circuits and sets of equipment as a whole, the creation of equipment capable of varying its parameters on command and also capable of operating by a given or developed program, approximation of the properties of the equipment to the properties of the human eye, transition to integrated microelectronics significantly reducing overall size, weight, intake, and so on.

State of the Art and Basic Trends in the Development of the USSR Television Broadcast Network

At the present time in the Soviet Union there are about 30 program television broadcast stations, 270 high-power and 870 low-power television radio stations and radio relay stations, more than 100 mobile television units at the television broadcast stations and more than 30 ground-based stations in the Orbita space television communications system with the Molniya-1 satellites. The total equipment with television sets by 1972 reached 46.5 million sets.

The basic problem in the television broadcast field is the technical reequipment of the television stations and broad introduction of color television which began in 1967 with the construction of the Technical Television Center in Moscow. The creation of a modern, completely transistorized stably operating set has sharply improved the transmission quality. The equipment of the TTTs [Technical Television Center] is the prototype for the technical equipment of other television stations in the country which will be carried out in the current five-year period.

The new standard television equipment will be built in such a way as to offer the possibility of equipping television stations of quite different size

[I - USSR - F]

ROSSELEVICH, I. A.

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TITLE--FREE NUCLEAR PRECESSION SENSOR WITH A ROTATING SAMPLE, PERFORMING MEASUREMENTS IN A NONUNIFORM MAGNETIC FIELD -U- PROCESSING DATE--16OCT70

AUTHOR-(02)-ROSSHTEYN, A.YA., ALEKSEYEV, G.V.

COUNTRY OF INFO--USSR

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SOURCE--GEOMAGNETIZM I AERONOMIIA, VOL. 10, NO. 2, 1970, P. 320-325

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

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2/2 021

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CIRC ACCESSION NO--AP0119148 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALYSIS OF THE SIGNAL SHAPE OF A FREE NUCLEAR PRECESSION SENSOR WITH A ROTATING SAMPLE, IN THE CASE OF MEASUREMENTS PERFORMED IN A NONUNIFORM MAGNETIC FIELD. THE CONDITIONS UNDER WHICH THE SIGNAL IS NOT FREQUENCY MODULATED AND ITS AMPLITUDE EXPERIENCES ONLY NATURAL DAMPING ARE DETERMINED. POSSIBLE APPLICATIONS OF THE SENSOR IN GEOMAGNETIC MEASUREMENTS ARE EXAMINED.

FACILITY: AKADEMIIA NAUK SSSR, INSTITUT ZEMNOGO MAGNETIZMA, IONOSFERY I RASPROSTRANENIIA RADIOVOLN, LENINGRAD, USSR.

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USSR

UDC:539.374

GONSOVSKIY, V.L. and ROSSIKHIN, YU.A.

"On Propagation of Impulsive Load in Viscous-Elastic Medium"

Voronezh, Tr. NII Mat. Voronezh. Un-ta (Transactions of Mathematics Research Institute, Voronezh University), 1972, vyp 6, pp 63-66 (from Referativnyy Zhurnal-Mekhanika, 1973, Abstract No 2V515 by M.I.Rozovskiy)

Translation: The problem of stress wave propagation in a semi-infinite viscous-elastic rod with a given load on the end is considered. The rod material follows the linear hereditary physical dependence with Yu.N. Rabotnov type aftereffect substance. The problem is solved by the collocation method, with stress $\sigma(x,t)$ given by the formula

$$\sigma(x,t)=\frac{1}{2\pi i}\int_{\alpha-i\infty}^{\alpha+i\infty} F(p)\exp\left[p\left(t-\frac{x}{c_\infty}\right)\right]dp$$

where p - Laplace transformation parameter with respect to time, x -coordinate, c_∞ -constant.

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USSR

GONSOVSKIY, VL and ROSSIKHIN, YU. A., Tr. NII Mat. Voronezh. Un-ta, 1972, vyp 6, pp 63-66

where

$$F(p)=\exp\{px c_\infty^{-1}[1-\lambda(p)]$$

$$\lambda(p)=[1+v_0 K(p)]^{1/2}$$

$K(p)$ -Laplace transformation of aftereffect substance. The calculation takes into account ten terms of Derikhle series. It is established that when the order of Yu.N. Rabotnikov substance γ is fractionary, then the infinite impulse applied to the end of the rod blows-up (starting from the instant $t=0$) and the solution becomes finite everywhere. The magnitude of stress jump at the wave front is zero. Near the wave front the stress has a peak, which decreases with $\gamma \to 0$ and dampens out after a while. 6 references.

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USSR

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MESHKOV, S. I., ROSSIKHIN, Yu. A.

"On Propagation of Acoustic Waves in a Viscoelastic Medium Whose Hereditary Properties are Determined by Weakly Singular Kernels"

V sb. Volny v neuprugikh sredakh (Waves in Inelastic Media--collection of works), Kishinev, Academy of Sciences of the Moldavian SSR, 1970, pp 162-172 (from RZh-Mekhanika, No 4, Apr 71, Abstract No 4V387)

Translation: Based on the example of an acoustic wave, the authors study the singularities of dynamic behavior of a viscoelastic medium whose relaxation properties are determined by weakly singular functions chosen as the kernels of integral operators. Abel, Rabotnov and Rzhanitsyn kernels are considered as specific examples. The resultant expressions for the variance of the velocities of propagation, loss tangent, logarithmic decrement and dynamic modulus show that weakly singular functions can be used to describe the dynamic regularities of viscoelastic systems which have a relaxation-retardation spectrum. A singularity of Abelian type in these kernels at the initial time in explicit form shows up in behavior of the coefficient of absorption at an infinitely high frequency. Authors' abstract.

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TITLE--MECHANISM OF THE FORMATION OF LATEX FILMS FROM VINYLIDENE CHLORIDE COPOLYMERS AT ROOM TEMPERATURE -U-

PROCESSING DATE--16OCT70

AUTHOR-(05)-GUL, V.E., DONTSOVA, E.P., SNEZHKO, A.G., ROSSINA, T.B., KISELEV, M.R.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(3), 671-6

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272 025

UNCLASSIFIED

CIRC ACCESSION NO--AP0111504 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THERMOMECH. CURVES (PLOTS OF DEFORMATION VS. TEMP.) SHOWED THAT VIKH-65 (35:65 VINYL CHLORIDE VINYLIDENE CHLORIDE COPOLYMER) FILMS HAVE A PHASE TRANSITION POINTS AT 3-8DEGREES (ONE GLASS STATE TO ANOTHER), 30-40DEGREES (GLASS TO VISCOELASTIC STATE), AND 70-80DEGREES (MELT FLOW POINT). THE KINETICS OF WATER VAPOR ADSORPTION, FILM DRYING, AND ELECTRON MICROSCOPY SHOWED THAT EVEN IN THE FILMS FORMED FROM MELTS PREHEATED LARGER THAN OR EQUAL TO 80DEGREES THE GLOBULES DO NOT COALESCE. THE PERMEABILITY OF THE FILMS DECREASES WITH THE TEMP. OF THE MELTS. THE MECH. STRONG FILMS OF LOW PERMEABILITY, PREPD. FROM MELTS PREHEATED TO 50-60DEGREES, HAVE A DIFFUSE BOUNDARY LAYERS WHICH PENETRATE INTO THE GLOBULES.

FACILITY: MOSK. TEKHNOL. INST. MYAS. MOLOCH. PROM., MOSCOW, USSR.

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Welding

USSR

UDC 621.791.052:620.1.001.4:669.788

MAKSIMOV, P. K., Engineer, MATKHANOV, V. N., MOROZ, V. G., Candidates of Technical Sciences, and ROSSINEVICH, L. I., Engineer

"Study of the Efficiency of Welded Joints Between Dissilimar Steels (12Kh1MF and Kh5ML) in a Medium of Hydrogen"

Moscow, Khimicheskoye i Neftyanoye Mashinostroyeniye, No 11, Nov 70, pp 25-27

Abstract: This article presents the results of an investigation of the effects of hydrogen on the metal in the area of a welded joint between 12Kh1MF and Kh5ML steels. The investigations were performed using specimens which were held in an autoclave at 570°C under a hydrostatic pressure of technical hydrogen from 100 to 300 kg/cm^2. The temperature used in the experiments was 570 $\pm$ 10°C. The experiments showed that whereas holding under a 90 kg/cm^2 hydrogen pressure at 570°C for various times up to 4,000 hours had little effect on mechanical properties, holding at 273 kg/cm^2 hydrogen pressure resulted in the development of a tendency to brittle rupture, primarily along the line of the welded seam. Notch-sensitivity of the metal was increased in all cases. No noticeable changes in the structure of the metal were discovered. However, in all cases the exposure to hydrogen resulted in slight surface decarburation along the seam.

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Mining, Petroleum, Geological

USSR

UDC: 622.011.43

BRICHKIN, A. V., GENBACH, A. N., PEREVERTUN, V. V., ROSLYAKOVA, T. V.

"Concerning the Mechanism of Thermal and Thermomechanical Methods of Rock Destruction"

Nauch. tr. Kazakhsk. politekhn. in-t (Scientific Works. Kazakh Polytechnical Institute), Alma-Ata, 1971, pp 392-396 (from RZh-Mekhanika, No 5, May 72, Abstract No 5V586)

Translation: It is noted that solid rocks are intensively destroyed by a heat flux (jet). In porous rocks with a strongly developed crack structure, destruction by the thermal method takes place slowly and unsteadily. In this case, combined heat and mechanical action on the rock is recommended. Indentation of a flat punch into a rock preheated by a flux is considered. Stresses in this case are determined as the sum of the stresses due to the heat alone and to the external load in the absence of heating. The paper presents the results of calculation of the pressure on the punch as a function of the heat flux for granite and teschenite. The products of thermomechanical destruction are particles with a size of the order of 0.1 cm. It is noted that there exists a definite relation between the thermal action,

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