"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR

GALASHENKOV, V. N., et al., Pribory i Tekhnika Eksperimenta, No 6, 1971, pp 100-102

the first transistor of 40 ohms. The mean output power in the operating range is 9 watts, the power amplification coefficient was 10 decibels, and the efficiency, 43 percent.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 027 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--STABILITY AND CONTROLLABILITY OF SUPERSONIC AIRCRAFT -U-

AUTHOR-(02)-LUTSKIY, V., GALASHEV, YE.

COUNTRY OF INFO--USSR

SOURCE--AVIATSIIA I KOSMONAVTIKA, MAY 1970, P. 34, 35

DATE PUBLISHED-------70

SUBJECT AREAS--AERONAUTICS

TOPIC TAGS--SUPERSONIC AIRCRAFT, AIRCRAFT STABILITY, AIRCRAFT CONTROL EQUIPMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0720 STEP NO--UR/0209/70/000/000/0034/0035

CIRC ACCESSION NO--AP0134455

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 027 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134455

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF FACTORS AFFECTING THE STABILITY AND CONTROLLABILITY OF SUPERSONIC AIRCRAFT DURING TURNS ABOUT LONGITUDINAL AND VERTICAL AXES, WITH SPECIAL ATTENTION TO THE PERFORMANCE OF AILERONS AND RUDDER IN MAINTAINING CONTROL. CONDITIONS THAT CHANGE THE EFFECTIVENESS OF AILERONS AND RUDDERS DURING SUCH MANEUVERS ARE ANALYZED IN VARIOUS AIRCRAFT TYPES AT VARIOUS SPEEDS. SUGGESTIONS ARE GIVEN AS TO HOW THE LATERAL STABILITY AND CONTROL CAN BE BEST MAINTAINED IN SUPERSONIC AIRCRAFT.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 034 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--STABILITY AND CONTROLLABILITY OF SUPERSONIC AIRCRAFT -U-

AUTHOR-(02)-LUTSKIY, V., GALASHEV, YE.

6

COUNTRY OF INFO--USSR

SOURCE--AVIATSIIA I KOSMONAVTIKA APR. 1970, N. 25-27

DATE PUBLISHED----APR70

SUBJECT AREAS--AERONAUTICS, PHYSICS

TOPIC TAGS--AERODYNAMIC STABILITY, AERODYNAMIC CONTROL, SUPERSONIC AIRCRAFT, AIRCRAFT DESIGN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0261 STEP NO--UR/0209/70/000/000/0025/0027

CIRC ACCESSION NO--AP0124023

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 034 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0124023

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF VARIOUS FORMS OF SUPERSONIC AIRCRAFT STABILITY WITH SPECIAL ATTENTION TO LATERAL STABILITY UNDER THE ACTION OF AERODYNAMIC FORCES AND MOMENTS DIRECTED LATERALLY WITH RESPECT TO THE LONGITUDINAL AND TRANSVERSE AXES OF AIRCRAFT. THE IMPORTANT ROLE OF DIRECTIONAL AND WEATHERCOCK STABILITIES FOR THE CONTROLLABILITY OF SUPERSONIC AIRCRAFT IS NOTED. AIRCRAFT DESIGN CONSIDERATIONS IMPROVING AIRCRAFT SITUATIONS ARISING DURING SUPERSONIC FLIGHTS IN TERMS OF STABILITY AND CONTROLLABILITY ARE ALSO CONSIDERED.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

UDC 77

USSR

~~GALASHIN, YE. A.~~ FOK, M. V.

"A Mechanism for the Formation of a Latent Photographic Image"

V sb. Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr. chuvstvitel'nosti (International Congress on Photographic Science, Moscow, 1970, Nature of Photographic Sensitivity -- Collection of Works), no place of publication given, Vneshtorgizdat, no year given, pp 163-166 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1365)

Translation: The mechanism for the formation of a critical nucleus of the Ag phase is discussed within the framework of the theory describing the formation of a hidden image as a photostimulated process for the formation of a new phase (metallic Ag) in a supersaturated solid solution of Ag^+ in AgHal. The localization of an electron by the sensitivity center on the [100] edge of an AgBr-crystal with optimal concentration of Ag atoms ($\sim 2 \cdot 10^{14}$ cm^{-2}), the formation of a precenter, localization of the second and subsequent electrons during the life of this precenter, etc., up to association of the number of Ag atoms corresponding

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

GALASHIN, YE. A., FOK, M. V., Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr. chuvstvitel'nosti, no place of publication given, Vneshtorgizdat, no year given, pp 163-166

to the critical nucleus are considered. The precenters may arise spontaneously in the same way at the highest possible sensitivity. The dimensions of the critical nuclei are evaluated and for spontaneous formation are ∿12-15 atoms and for optimum sensitivity are 22 atoms, and hence for the most probable dimensions of the localization centers one should figure ∿4-7 atoms. An evaluation of the gain in energy in the association of this number of atoms in the critical nucleus made by the authors agrees with the magnitude of the thermodynamic barrier for the formation of a latent image. A. L. Kartuzhanskiy.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--POLYSILOXANES -U-

AUTHOR-(05)-SOBOLEVSKIY, M.V., NAZAROVA, D.V., VOROPAYEVA, G.V., KUZNETSOVA, A.A., GALASHINA, M.L.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 265,445
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970
DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYSILOXANE, CHEMICAL PATENT, ORGANIC SULFUR COMPOUND, ORGANIC SILANE, ORGANIC SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1418 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128817
UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0128817

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLYSILOXANES WITH BOTH THIENYL AND ALKOXY GROUPS ARE PREPD. BY HYDROLYSIS OF ORGANOCHLOROSILANES OF FORMULA RSICL SUB3, WHERE R EQUALS THIENYL, HALOTHIENYL, METHYLTHIENYL, OR ITS MIXT. WITH DI OR TRIFUNCTIONAL CHLOROSILANES, WITH A MIXT. OF H SUB2 O AND ETOH IN THE PRESENCE OF AN ORG. SOLVENT.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 C17 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THERMAL EFFECTS OF YEAST CULTIVATION -U-

AUTHOR-(02)-LEVIT, KH.D., GALASHOV, G.I.

G

COUNTRY OF INFO--USSR

SOURCE--KHLEBOPEK. KONDITER. PROM. 1970, 14(1), 35-7

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FOOD TECHNOLOGY, YEAST, FERMENTATION, TEMPERATURE CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/0638 STEP NO--UR/0344/70/014/001/0035/0037

CIRC ACCESSION NO--AP0131243

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0131243

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SCHEME IS PRESENTED FOR THE CALCULATION OF HEAT PRODUCTION IN THE FERMENTATION TANKS DURING THE COM. PRODUCTION OF BAKER'S YEAST. A 50PERCENT YIELD OF DRIED YEAST BIOMASS RELATIVE TO THE AMT. OF CONSUMED GLUCOSE, IS TAKEN AS A BASIS FOR THE THERMOCHEM. CALCNS., GIVING A VALUE OF 920 CAL-KG OF CONSUMED MOLASSES. THE SCHEME IS USEFUL FOR THE REGULATION OF PROPER COOLING OF THE FERMENTATION TANKS IN THE PROCESS OF YEAST PRODUCTION.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

UDC 621.762.001

USSR

MAKAROV, V. I., MEL'NIKOV, V. A., GALAT, N. I., and KUKOZ, F. I.

"Magnetic Properties of Powders and Their Electrochemical Activity"

Tr. Novocherk. politekhn. in-ta (Works of the Novocherkassk Polytechnical Institute), 1970, 208, pp 100-103 (from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11G296)

Translation: A study is made of the dependence of electrochemical properties (capacity) of electrodes, prepared from iron-nickel active masses (AM), on the imperfections of the crystalline structure of the AM components. The magnetic characteristics of AM (magnetic susceptibility $\chi_{эфф}$, coercive force H_c and residual magnetization I_R) are used as parameters which determine the degree of structural imperfections. The results of measurements reveal the presence of magnetic-electrochemical characteristics of AM relation. The higher the values of $\chi_{эфф}$ and I_R, the more imperfect is the crystal lattice of the AM components and the higher the AM quality. The possibility exists of determining the AM quality on the basis of the results of magnetic measurements. V. Kvin

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--SEPARATION OF AN ISOBUTANE ISOBUTYLENE MIXTURE -U-

AUTHOR-(04)-GALATA, L.A., VLASOV, L.V., KOFMAN, L.S., CHIRIKOVA, Z.P.

COUNTRY OF INFO--USSR

G

SOURCE--U.S.S.R. 202,909
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--DISTILLATION, BUTANE, BUTENE, CHEMICAL PATENT, CHEMICAL SEPARATION, ALIPHATIC AMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1777 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0137017

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0137017

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MIXT. OF ISOBUTANE AND ISOBUTYLENE IS SEPD. BY RECTIFICATION IN THE PRESENCE OF MONO OR DIMETHYLAMINE AS A SEPG. AGENT.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 669.184.266:14.018.2

KACHUR, B.K., KUKURUZNYAK, I.S., NIKIFOROV, B.V., TARAPUROV, N.P., UMNOV, V.D. POGORELYY, V.P., GALATON, YE.G., KHARCHENKO, B.V., and PLOKHIKH, V.A. (Ukrainian Scientific Research Institute of Metals, Krivoy Rog Metallurgical Plant)

"Smelting of Low-Alloy Steel in a 130-ton Converter"

Moscow, Metallurg, No 9, Sep 71, pp 14-16

Abstract: A description is given of the technology of smelting low-alloy steels (OST-1, OST-2, 25G2C, and 35GC) in 130-ton oxygen converters at the Krivoy Rog Metallurgical Plant. Pig iron (881 kg per ton of steel) containing 0.6-0.9% Mn, 0.4-0.8% Si, not more than 0.06% S, and not more than 0.1% P, is poured into the converter at 1250-1350°C. Fresh burnt lime (65 kg), limestone (15-20 kg), and fluorspar (2-5 kg) per ton of steel were used as slag forming materials. The use of liquid alloying elements (75% FeMn, 65% FeSi and SiMn) in the ladle makes it possible to reduce the expenditure of ferroalloys, to improve the macro- and microstructure of the metal, and to minimize the content of nonmetallic inclusions. The steel obtained satisfies the requirements of GOST 5058-65.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

GALATONOV A.L

Acc. Nr: AA0108720 Abstracting Service: 3-70 Ref. Code: UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

244353 AIR TUYERE AND GAS LANCE FOR BLAST FURNACE is fitted with a protective case (3) in the lance water jacket (1) to protect the insulation there. The ring gap between lance (2) and case (3) is rammed with vermiculite expanded in situ or perlite etc.

29.5.67 as 1160010/22-2. MALIKOV.K.V., V.L.LISHVANOV, A.L. GALATONOV et al. METALLURGICAL HEAT TECHNIQUES RES INST. (9.10.69) Bul 18/28.5.69. Class 18a. Int. Cl. C 21 b.

AUTHORS: Malikov, K. V.; Pishvanov, V. L.; Galatonov, A. L.; Babarykin, N. N.

Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Metallurgicheskoy Teplotekhniki

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REEL/FRAME
19900494

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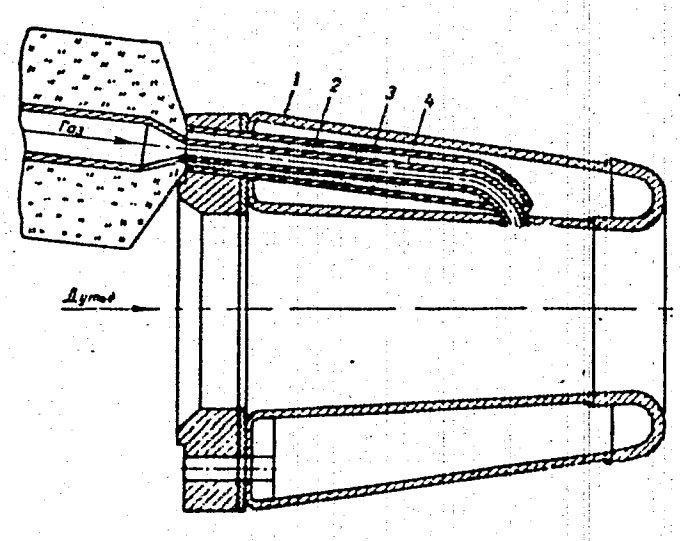
"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

Acc. Nr.: AAD108720



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Reel/Frame

19900495

BS

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 669.715'74.018.28:620.186

GALATSKAYA, I. K.

"Manifestation of Segregation Heterogeneity in the Structure of Extruded Aluminum Alloy Products"

Tekhnol. legkikh splavov. Nauchn-tekhn. byul. VILSa (Technology of Light Alloys. Scientific and Technical Bulletin of All-Union Institute of Light Alloys), 1970, No 3, pp 36-39 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 1752 by I. NABATOVA)

Translation: The author studied defects of casting origin of the dendritic-microstructure and lines-of-varying-etchability (LVE) types in AMts alloy rods in the draw part obtained from the peripheral zone of the ingot, where larger crystals with sharply pronounced intradendritic segregation of manganese form during continuous casting. LVE zones form in sections of the alloys V-95, D16, and AK8 from ingotisms (neslitina) not removed during ingot turning. The LVE reveal chains of intermetallide inclusions or clusterings with oxide inclusions. The appearance of dendritic microstructure and LVE is prevented by machining the peripheral zone of ingots or by choosing the optimum casting regime. Dendritic microstructure can also be eliminated by introducing small additions into the melt which refine the grain, or by homogenizing ingots at 620-640°. Four illustrations. One table.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 669.715'3'721:620.186:539.4

GALATSKIY, B. D., VAYNBLAT, Yu. M., PESHUKOV, K. G., KLEPACHEVSKAYA, S. Yu., SAGALOVA, T. B., and FEDOROVA, K. A.

"Dependence of Texture and Mechanical Properties on Shape Factor and Degree of Deformation of Extruded Aluminum-Alloy Products"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul. VILSa (Technology of Light Alloys. Scientific and Technical Bulletin of the All-Union Institute of Light Alloys), 1970, No 3, pp 28-35 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 1757 by E. KADANER)

Translation: An investigation was conducted on alloy D16 produced under industrial conditions by the semicontinuous casting method with subsequent extrusion under various regimes. With an increase in the shape factor of extruded products, uniform variation of deformation texture from biaxial ⟨111⟩, ⟨100⟩orientation to rolling texture takes place with predominant {110} ⟨112⟩ orientation. With an increase in shape factor, strength anisotropy decreases. With the same degree of deformation and shape factor, ultimate strength and its anisotropy are independent of the size of the section of the product. Five illustrations. Three tables. Bibliography of seven titles.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

Aluminum and Its Alloys

USSR UDC 669.71.017:548.53

YAKOVLEV, V. I., and GALATSKIY, B. D.

"Some Characteristics of the Production Technology of Small-Grained Recrystallized Intermediate Products of Aluminum Alloys"

Metallovedeniye Splavov Legkikh Metallov-Sbornik, Moscow, "Nauka", 1970, pp 155-160, resume

Translation: An analysis of serial tests of pressed products established that there is a non-correspondence of mechanical properties in the case of a coarse-recrystallized structure. The kinetics of the change in structure and properties of pressed products, depending on the chemical composition of the alloy and technological factors, is investigated. A production technology is recommended for intermediate products with a small-grained recrystallized structure and volumetrically uniform mechanical properties with a complete absence of a large-crystalline rim. Four figures.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 537.311.33:546.682'86

VITOVSKIY, N.A., VIKHLIY, G.A., ~~GALAVANOV, V.V.~~, MASHOVETS, T.V., KHANSEVAROV, R.YU.

"Radiation Defects In Indium Antimonide"

V sb. Radiatsion. fiz. nemet. kristallov (Radiation Physics Of Nonmetal Crystals--Collection Of Works), Minsk, Nauka i tekhn., 1970, pp 124-130 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B41)

Translation: It is shown that defects originating in InSb during irradiation of it by electrons and γ rays are also formed in p-type InSb and under the effect of soft radiation -- x-rays with maximum energies to 55 kev and visible light. It is obvious that the process of formation of these defects is connected with the effect of some nonimpact mechanism of radiation defect formation. 6 ill. 12 ref. Summary.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 621.382.3

GALAVANOV, V. V., RAVKOV, A. V., SAIMKULOV, Z. A.

"Alloy-Diffusion n - InSb Transistor"

Leningrad, Izvestiya VUZ, Priborostroyeniye, Vol 13, No 1, 1970, pp 13-14

Abstract: Certain characteristics are presented of an alloy-diffusion n-InSb transistor with $7.8 \times 10^{13} cm^{-3}$ concentration of noncompensated donors, and $5,5 \times 10^5 cm^2/v.$ sec electron mobility, designed for low temperature operation (down to 78°K). The emitter junction with $0.09 mm^2$ surface is formed by fusion, while the collector junction with $6 mm^2$ surface is accomplished with the aid of "outward" diffusion. The transistor's output characteristics at 78°C, as presented in the graph for emitter currents I_e = 0, 1, 2, 3, and 4ma, show that the transistor has good amplification properties. Its amplification coefficient is equal to 0.83 at $U_c = -1_v$ and I_e = 1mA, and decreases with increasing emitter current when U_c = constant. The collector reverse current does not exceed 10 microampere at U_c = 1.8v. The transistor differential input resistance in a circuit with a common

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR

GALAVANOV, V. V., et al, Izvestiya VUZ, Priborostroyeniye, Vol 13, No 1, 1970, pp 13-14

Abstract: emitter is 30 ohms at U_c = -1v. The results indicate the possibility of producing cooled InSb transistors for the use in low temperature circuits. Orig. art has: 1 figure.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

Acc. Nr.: AT0046521 Ref. Code: UR014

USSR UDC 621.382.3

GALAVANOV, V.V., RAVKOV, A.V., SAIMKULOV, Z.A.

"Fused-Diffusion n-InSb Transistor"

Splavno-diffuzionnyy tranzistor na baze n-InSb (cf. English above), Leningrad, Izvestiya Vysshikh Uchebnykh Zavedeniy, Priborostroyeniye, 1970, No 1, pp 13-14

Translation:

A fused-diffusion n-InSb transistor was fabricated, whose emitter junction was created by fusion, while the collector junction was created by exodiffusion. The transistor output characteristics measured in a circuit with common base are presented. The current gain $\alpha = 0.8$.

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Reel/Frame
19781778

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 019 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--MECHANISM OF HOLE SCATTERING IN INDIUM ANTIMONIDE -U-

AUTHOR--GALAVANOV, V.V.

G

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(5), 853-9

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--INDIUM ANTIMONIDE, THERMAL EMF, VALENCE BAND, CRYSTAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0892 STEP NO--UR/0449/70/004/005/0853/0859

CIRC ACCESSION NO--AP0136326

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 019 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136326

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCES WERE STUDIED OF THE HOLE MOBILITY IN INSB ON THE HOLE CONCN. (N SUBP SIMILAR TO 10 PRIME12-10 PRIME20-CM PRIME3) AT 77 AND 290DEGREESK AND ON THE TEMP. 75-550DEGREESK). THE MOBILITY WAS CALCD. FOR THE MODEL WITH SIMPLE SPHERICAL AND PARABOLIC VALENCE BAND STRUCTURE, USING THE VALUES OF THE EFFECTIVE MASS OF HEAVY HOLES, M EQUALS 0.4M SUB0, THE EFFECTIVE CHARGE OF IONS, E EQUALS 0.13E, THE CHARACTERISTIC TEMP., 290DEGREESK, AND THE DEFORMATION POTENTIAL OF THE VALENCE BAND, E EQUALS 4 EV. THE EXPTL. DATA ARE IN SATISFACTORY AGREEMENT WITH THE THEORY, WHICH TAKES INTO ACCOUNT THE MIXED SCATTERING MECHANISM ON OPTICAL AND ACOUSTIC PHONONS AND ON IMPURITY IONS. THE SCATTERING ON IONS IN PURE INSB CRYSTALS (N SUBP SMALLER THAN 10 PRIME15-CM PRIME3) IS NEGLIGIBLY SMALL. THE MIXED SCATTERING MECHANISM WAS CONFIRMED BY THE RESULTS OF THE MEASUREMENTS OF THE THERMOEMF. AND THE TRANSVERSE NERNST-ETTINGSHAUSEN EFFECT IN P-TYPE INSB. FACILITY: FIZ-TEKH. INST. IM. IOFFE, LENINGRAD, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--OUTPUT CHARACTERISTICS OF AN ALLOYED JUNCTION TRANSISTOR BASED ON N INDIUM ANTIMONIDE AT 78DEGREESK -U-

AUTHOR-(03)-GALAVANOV, V.V., RAVKOV, A.V., ATABEKOV, S.G.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKH. ELEKTRON. 1970, 15(4), 868

DATE PUBLISHED--------70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--ALLOY TRANSISTOR, JUNCTION TRANSISTOR, INDIUM ANTIMONIDE, MANUFACTURING PROCESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2186 STEP NO--UR/0109/70/015/004/0868/0868

CIRC ACCESSION NO--AP0125766

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125766

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD OF PREPN. IS DESCRIBED, AND THE OUTPUT CHARACTERISTICS ARE GIVEN OF AN ALLOYED JUNCTION TRANSISTOR BASED ON N INSB. FACILITY: FIZ.-TEKH. INST. IM. IOFFE, LENINGRAD, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 029 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ON MECHANISM OF ELECTRON SCATTERING IN INP -U-

AUTHOR-(02)-GALAVANOV, V.V., SIUKAEV, N.V.

COUNTRY OF INFO--USSR

SOURCE--PHYSICA STATUS SOLIDI, 1970, VOL 38, NR 2, PP 523-530

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTRON SCATTERING, HALL MOBILITY, SINGLE CRYSTAL PROPERTY, ELECTRON DENSITY, ELECTRON PHONON INTERACTION, IMPURITY LEVEL, HALL CONSTANT, TEMPERATURE DEPENDENCE, ELECTRON MOBILITY, PHOSPHIDE, INDIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1009 STEP NO--GE/0030/70/038/002/0523/0530

CIRC ACCESSION NO--AP0107525

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 029 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0107525

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HALL MOBILITY OF ELECTRONS WAS STUDIED IN N-INP SINGLE CRYSTALS IN THE TEMPERATURE RANGE FROM 77 TO 1000DEGREESK AT ELECTRON CONCENTRATIONS N EQUALS 2 TIMES 10 PRIME15 TO 2 TIMES 10 PRIME17 CM PRIME NEGATIVE3 AND MOBILITIES MU EQUALS 3 TIMES 10 PRIME3 TO 4.3 TIMES 10 PRIME4 CM PRIME2-VS. THE RESULTS AGREE WELL WITH CALCULATIONS FOR THE MIXED MECHANISM OF ELECTRON SCATTERING ON OPTICAL PHONONS, MU SUBO EQUALS (100-SQUARE ROOT OF T) (EXP (500-T) MINUS 1). AND ACOUSTIC PHONONS, MU SUBA EQUALS 6.53 TIMES 10 PRIME7 T PRIME NEGATIVEGHREE HALVES CM PRIME2-VS (THE DEFORMATION POTENTIAL IS ASSUMED TO BE EQUAL TO 21 EV). SCATTERING ON IONS AND NEUTTRAL IMPURITY ATOMS IS IMPORTANT IN SPECIMENS WITH N GREATER THAN 5 TIMES 10 PRIME15 CM PRIME NEGATIVE3 AT LOW TEMPERATURES. THE CONCENTRATION OF NEUTRAL IMPURITY ATOMS DOES NOT EXCEED 10 PRIME14 CM PRIME NEGATIVE3 IN PURE SPECIMENS, WHILE IN SPECIMENS WITH N GREATER THAN 10 PRIME16 CM PRIME NEGATIVE3 N SUBN REACHES THE VALUE OF 10 PRIME16 CM PRIME NEGATIVE3 AND MORE. THE RESULTS OF THE HALL COEFFICIENT DEPENDENCE ON THE MAGNETIC FIELD STRENGTH (0.3 TO 20 KOE) AT 77 AND 300DEGREESK SHOW THAT THE HALL FACTOR A (R EQUALS A-NES) APPROXIMATES L IN ALL THE SPECIMENS WITH THE EXCEPTION OF PURE SPECIMENS WHERE A APPROXIMATELY EQUAL TO 1.13 AT 77 DEGREESK. THESE RESULTS AGREE WELL WITH THE CONCLUSIONS DRAWN FROM THE ANALYSIS OF TEMPERATURE AND CONCENTRATION DEPENDENCES OF MOBILITY.

FACILITY: A. F. IOFFE PHYSICO TECHNICAL INSTITUTE. FACILITY: ACADEMY OF SCIENCES OF THE USSR, LENINGRAD. FACILITY: NORTH OSSETIA STATE UNIVERSITY, ORDZHONIKIDZE.

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USSR

PRIYMAK, A. A., et al., Voyenno-Meditsinskiy Zhurnal, No 2, 1971, pp 22-23

of the blood maintains the necessary blood flow rate.

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UDC 547.752.754'814.5:541.127'651

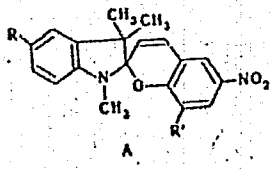
USSR

PANISYRNYY, V. I., GAL'BERSHTAM, M. A., and DONSKAYA, N. A., All-Union Scientific Research Institute of Organic Polymer Products and Dyes

"Effect of Groups at the 5 and the 8' Positions on the Rate of the Dark Decoloration Reaction of Colored Solutions of 1,3,3,-Trimethylspiro [indolin-2,2'-]2H-1 benzopyranes"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy,5, May 1973, pp 653-658

Abstract: The reaction rates of thirty-five spiropyranes having the general form



A

were measured. The R and R' (the 5 and 8') groups were a variety of alkyls, alkoxyls, acids, esters, and halides. A detailed statistical analysis of the kinetics curve at 10° in toluene established that the decoloration reaction

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USSR

PANTSYRNYY, V. I., et al., Khimiya Geterotsiklicheskikh Soyedineniy, 5, May 1973, pp 653-658

can be satisfactorily described as first order. The effects of various experimental conditions were determined. The experimental data on the effect of the 5 and 8' groups were analyzed by multifactor analysis. The differences in rates could not be correlated with parameters describing the electronic effect of R and R'.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 612.821.2

GAL'BINOV, G. V.

"Polarization as a Research Method in the Study of Long-Term Memory Traces and Certain Mechanisms of Memory"

Leningrad, Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenova, Vol 57, No 6, 1971, pp 784-789

Abstract: Experiments on cats show that when direct electrostimulation of motor and higher branches of the cerebral cortex is alternated with polarization of the same areas, the intervals between stimulations reveal a rapid formation of connections between the indicated areas expressed as a motor response. The character of the motor reaction and its frequency of appearance in the polarization period is in complete conformity with observations on the action of combined stimulants. The motor response is absent upon stimulation of one higher brain area of upon the action of any afferent stimulation. Polarization in the pauses between combined stimulation is a necessary condition for obtaining the described effect, which can be ascribed to behavioral manifestation of long-term memory. Polarization under these conditions fulfills at least two functions: local increase in the functional state of the brain and the fading stimulus of the inner "conditioned rhythmic signalizer" whose localization amdn mechanism require further study.

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Inorganic Compounds

USSR

UDC 541.11:541.121/.123

GAL'BRAYKH, E. I., and ARIYA, the late S. M., Leningrad State University imeni A. A. Zhdanov

"Enthalpy of Formation of Some Metalline Compounds of Titanium and Zirconium"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 11, Nov 70, pp 2773-2775

Abstract: Enthalpies of formation were previously determined for zirconium nitrides ZrN_x relating to the homogeneity region of the cubic phase (fcc structure of the NaCl type) and the homogeneity region of the solid solution of nitrogen in zirconium (hexagonal close-packed structure). It was found that the enthalpy of formation linearly depends on the nitrogen index and with the composition $ZrN_{0.78 \pm 0.05}$ the "enthalpy of formation-composition" line undergoes a sharp bend. The present article establishes that there is a correlation between the composition given which the line inflection is observed in the systems Ti-O,

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USSR

GALIBRAYKH, E. I., et al., Zhurnal Fizicheskoy Khimii, Vol 44, No 11, Nov 70, pp 2773-2775

Ti-N, Zr-N and the number of d-symmetry electrons in metallic titanium and zirconium obtained from a study of the x-ray emission L spectra of these metals.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 017 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--INFRARED SPECTROSCOPIC STUDY OF 5,6,CELLULOSENE ACETATES -U-

AUTHOR--KOMAR, V.P., ZHBANKOV, R.G., DIMITROV, D.G., GALBRAYKH, L.S., ROGOVIN, Z.A.
COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER. B 1970, 12(1), 77-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CELLULOSE RESIN, ACETATE, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0228 STEP NO--UR/0460/70/012/001/0077/0079

CIRC ACCESSION NO--AP0106884
UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 017 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106884

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURES OF 5,6,CELLULOSENE (I) ACETATES CONTG. OAC GROUPS AT C-5, C-2, C-3, AND C-5; AND AT C-2, C-3, C-5, AND C-6, WERE STUDIED BY IR SPECTROSCOPY AT 400-3800CM PRIME NEGATIVE1. SEVERAL ABSORPTION BANDS AT 1730, 1240, 1060, AND 600CM PRIME NEGATIVE1 SUGGESTED THAT I ACETATE RESULTED FROM THE IONIC ADDN. OF ACOH TO THE DOUBLE BOND. THE DIFFERENCE BETWEEN THE SPECTRA OF I ACETATE (CONTG. AN OAC GROUP AT C-5) AND I TRIACETATE (CONTG. OAC GROUPS AT C-5, C-2, AND C-3) INDICATED THAT THE FREQUENCIES AND VIBRATION INTENSITIES OF OAC GROUPS WERE SENSITIVE TO THE SPATIAL ORIENTATION. ABSORPTION BANDS AT 600 AND 900CM PRIME NEGATIVE1 WERE ESP. SENSITIVE TO A CHANGE IN THE RELATIVE ORIENTATION OF OAC GROUPS, A PROPERTY TO BE UTILIZED FOR REFINED STRUCTURAL ANAL.

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Transportation and Conveying

USSR

UDC 629.113-592:629.113.004.5

KUZNETZOV, YE. S., Dr of Techn. Sciences; GAL'BURT, A.YE. (Scientific Research Institute of Automobile Transport)

"Investigation of Reliability and Conditions of Technical Servicing of the MAZ-500 Automobile Brake Mechanisms"

Moscow, Avtomobil'naya Promyshlennost' No 6, June 71, pp 9-11

Abstract: Long term investigations on wear resistance and on preventive maintenance of the MAZ-500 automobile brakes, have been carried out on four MAZ-500 and three MAZ-502B automobiles, with two axes trailers of 14.225 kg and 13.950 kg total weight, respectively. Total distances covered by two groups are 223.000 and 251.000 km respectively. The preparation of mechanisms and measuring techniques for lining and drum wear are described. Data are presented on lining and drum wear rate along their length and width. It was observed that lining wear varies with year seasons, with minimum in winter and maximum in spring and fall. Braking tests have been conducted on a dry dynamometric road of the Central Scientific Research Institute of Automobiles and Automobile Engines, with braking run measured by Haysler instrument and the deceleration by decelerograph of the 3-9/23 type. Optimal periods for brake adjustment for front and rear wheels were established on the basis of data on variation of gap between linings and drums, with distance covered. It is stated that despite

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USSR

KUZNETZOV, YE.S., et al, Avtomobil'naya Promyshlennost' No 6, June 71, pp 9-11

a certain increase in weight of the MAZ-500 vehicles and reduction in total lining surface the reliability of braking mechanisms in operation increased, due to construction changes.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 013 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--APPARATUS FOR DETERMINING VAPOR PRESSURE AND BOILING POINTS OF LIQUIDS -U-

AUTHOR-(03)-VARUSHCHENKO, R.M., GALCHENKO, G.L., SKURATOV, S.M.

COUNTRY OF INFO--USSR

G

SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 283-5

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--CHEMICAL LABORATORY APPARATUS, VAPOR PRESSURE, CHEMICAL PURITY, BOILING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1004 STEP NO--UR/0076/70/044/001/0283/0285

CIRC ACCESSION NO--AP0115025

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 013 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0115025

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EBULLIOSCOPIC METHOD WAS USED FOR DETG. THE VAPOR PRESSURE AND B.PS. OF LIQS. AT 40-200DEGREES AND 30-660 MM HG. THE ADVANTAGE OF THE METHOD IS THE MEASUREMENT OF THE DEGREE OF PURITY OF LIQ. COMPDS. ACCORDING TO THEIR B.PS. THE APP., WHICH INCLUDES A DIFFERENTIAL EBULLIOSCOPE, A HG MANOMETER, AN ELECTROMAGNETIC VALVE, AND A CYLINDER OF N IS DESCRIBED IN DETAIL. THE PRECISION OF THE MEASUREMENT WAS PLUS OR MINUS 0.004DEGREES AND THE MAX. DIFFERENCE FOR THE PRESSURE MEASUREMENT WAS WITHIN 0.02-0.09 MM HG. METHYLCYCLOHEXANE AND N DECANE WERE USED AS TEST COMPDS. AND THE RESULTS WERE VERIFIED BY CHROMATOG. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR

UDC: 621.372.85

GAL'CHENKO, N. A., LERER, A. M., MIKHALEVSKIY, V. S.

"A Thin Inductive Line Stretcher in Π- and H-Waveguides"

Kiev, IVUZ: Radioelektronika, Vol 15, No 3, Mar 72, pp 302-307

Abstract: A modified Shwarz method is used as a basis for a theoretical analysis of a nonhomogeneity in the form of a thin inductive rod in Π- and H-waveguides. The resultant formulas are sufficiently accurate for practical purposes in calculating shunting impedance.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR

UDC 621.372.2.001.24

GAL'CHENKO, N. A., MIKHALEVSKIY, V. S.

"Application of the Schwartz Method to Calculating the Electric Parameters of Band Transmission Lines"

Moscow, Radiotekhnika i elektronika, Vol XVII, No 2, 1972, pp 240-246

Abstract: A study was made of the alternating Schwartz method for calculating the basic electrical parameters of band transmission lines. The characteristics of specific band lines were analyzed. The proposed method is quite effective for calculating the fields and characteristic resistance of band transmission lines. Generalization of the method to the case of connected band transmission lines with arbitrary dimensions of the internal conductors causes no theoretical difficulties. The defined advantages of the Schwartz method make its use expedient also when studying higher types of waves [N. A. Gal'chenko, Radiotekhnika i elektronika, Vol 15, No 12, 2504, 1970]. Symmetric band lines, channel lines, a band line with arbitrary arrangement of the internal conductor and a rectangular line were investigated.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

UDC: 621.372.822

USSR

GAL'CHENKO, N. A., MIKHALEVSKIY, V. S.

"Electrical Parameters of a Rectangular Waveguide With a T"

Moscow, Radiotekhnika i Elektronika, Vol 15, No 12, Dec 70, pp 2504-2511

Abstract: The band properties of a rectangular waveguide with a T are theoretically and experimentally studied. Formulas are derived for calculating the characteristic impedance, maximum power and attenuation constant of the waveguide. It is found that the Schwartz method of calculating electrical parameters improves accuracy by 40-60% over conventional methods.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

GALCHENKO N.A.

Acc. Nr.: AP0040393 Ref. Code: UR0109

USSR UDC 621.372.825.09 JPRS 52248

GAL'CHENKO, N. A., and MIKHALEVSKIY, V. S.

"Application of the Schwartz Method to Calculation of U and L Waveguides Electrical Parameters"

Moscow, AN SSSR, Radiotekhnika i Elektronika Vol 15, Jan 70, No 1, pp 51-57

Abstract: This article describes a practical application of the alternating Schwartz method to the problem of determining the electrical parameters of U and L waveguides, which makes it possible to obtain simple and compact formulas ensuring more accurate approximation. This method makes it possible to solve the problem for the region $D = D1 + D_2$ if successive solutions for each of these D_1 and D_2 regions containing a common region D^1 can be obtained. The numerical results of calculation of the critical frequency (H_{10} wave) for U and L waveguides are presented in tables. An approximate calculation of the series of the trascendental equation (10) is given in the appendix. Original article has 3 figures, 20 formulas and 2 tables.

Reel/Frame
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USSR

UDC 621.372.825.09

GAL'CHENKO, N. A., and MIKHALEVSKIY, V. S.

"Application of the Schwartz Method to Calculation of ⊔ and ⊏ Waveguides Electrical Parameters"

Moscow, AN SSSR, Radiotekhnika i Elektronika Vol 15, Jan 70, No 1, pp 51-57

Abstract: This article describes a practical application of the alternating Schwartz method to the problem of determining the electrical parameters of ⊔ and ⊏ waveguides, which makes it possible to obtain simple and compact formulas ensuring more accurate approximation. This method makes it possible to solve the problem for the region $D = D1 + D_2$ if successive solutions for each of these D_1 and D_2 regions containing a common region D^1 can be obtained. The numerical results of calculation of the critical frequency (H_{10} wave) for ⊔ and ⊏ waveguides are presented in tables. An approximate calculation of the series of the trascendental equation (10) is given in the appendix. Original article has 3 figures, 20 formulas and 2 tables.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

UNCLASSIFIED PROCESSING DATE--11SEP70

1/2 020

TITLE--STRUCTURAL STRENGTH OF CEMENT MORTARS DURING HARDENING -U-

AUTHOR--GALCHENKO, P.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., GORN. ZH. 1970, 13(1), 27-30

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CEMENT, ALUMINATE, LOW TEMPERATURE EFFECT, CALCIUM CHLORIDE, FERRIC CHLORIDE, SURFACE ACTIVE AGENT, MECHANICAL STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0174 STEP NO--UR/0150/70/013/001/0027/0030

CIRC ACCESSION NO--AT0105250

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 020 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AT0105250

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CEMENTS WITH AN ALUMINATE CONTENT OF 4.1, 11.9, AND 6.7PERCENT WERE STUDIED. THEY WERE MIXED FOR 3 MIN AT 450 RPM. THE WATER CEMENT RATIO AND THE ALUMINATE CONTENT HAD A CONSIDERABLE EFFECT ON THE PLASTIC STRENGTH OF THE MORTARS. AT A RATIO OF 0.5 AFTER 20 HR, THE STRENGTH WAS HIGHER BY A FACTOR OF 4-5 COMPARED WITH A RATIO OF 0.8-1.0. THE INCREASE IN PLASTIC STRENGTH IS ACCELERATED BY A FACTOR OF 2.5-10 IN HIGH ALUMINATE CEMENT THAN IN MEDIUM OR LOW ALUMINATE ONES. THE STRENGTH INCREASES VERY SLOWLY AT LOW TEMPS. AT 2DEGREES AFTER 24 HRS. THE STRENGTH IS LOWER BY A FACTOR OF 30 COMPARED WITH A TEMP. OF 30DEGREES. THE INCREASE IN STRENGTH AT LOW TEMPS. IS ESP. SLOW IN THE 1ST 10-15 HR. THE STRENGTH INCREASE IN HIGH ALUMINATE CEMENTS IS ACCELERATED BY A FACTOR OF 2-25. CACL SUB2 GIVES A UNIFORM INCREASE IN PLASTIC STRENGTH, WITH ADDN. OF NA ALUMINATE IT INCREASES SHARPLY. FECL SUB3 AND WATER GLASS ACCELERATE THE STRUCTURE FORMATION IN THE INITIAL PHASE, BUT DELAY IT LATER. THE SEDIMENTATION STABILITY OF THE MORTARS CAN BE INCREASED BY THE ADDN. OF SURFACE ACTIVE COMPDS. THE OPTIMUM ADDNS. ARE SULFITE ALC. SLOPS 0.15-0.25PERCENT, NEUTRAL PITCH 0.1-0.2PERCENT, SAPOND. PITCH 0.05-0.1PERCENT. AT HIGHER DOSES THE SEDIMENTATION INSTABILITY INCREASES. THE SURFACE ACTIVE SUBSTANCES ACT AS LIQUEFIERS AND SHOULD BE USED IN THE PLUGGING OF FINE CRACKS.

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USSR UDC 536.46:533.6

MERZHANOV, A. G., GAL'CHENKO, Yu. A., GRIGOR'YEV, Yu. M., MASHKINOV, L. B.

"Ignition of an Aluminum Wire"

V sb. Goreniye i vzryv (Combustion and Explosion -- Collection of Works), Moscow, "Nauka", 1972, pp 245-249 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B941)

Translation: The ignition of an aluminum wire in a pure hydrogen flow at atmospheric pressure was studied by an electrothermographic method. The ignition temperatures and the critical electrical powers were determined as a function of the rate of flow of the gas and the diameters of the wires. The ignition parameters were determined as a function of the initial thickness of the oxide film on the wire for different methods of application. 7 ref. Authors' abstract.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

Acc. Nr: AP0040326 Ref. Code: UR 0481

PRIMARY SOURCE: Eksperimental'naya Khirurgiya i Anesteziologiya, 1970, Nr 1, pp 32-34

ON SUSTAINED HAEMODIALYSIS

Galchikov, V. I.; Trikashchnyy, A. A.; Koslov, Yu. M.; Gorbovitskiy, Ye. B.

A preliminary report on sustained haemodialysis with a small dialyzer.

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REEL/FRAME
19741757

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

Crystals & Semiconductors

USSR

GAL'CHINETSKIY, L. P., KOSHKIN, V. M., KUMAKOV, V. M., KULIK, V. N., RUDENKO, M. I., RYABKA, P. M., ULMANIS, U. A., SHAKHOVTSOV, V. I., and SHINDICH, V. L.

"Radiation Stability Effect in Semiconductors With Stoichiometric Vacancies"

Leningrad, Fizika Tverdogo Tela, vol 14, No 2, 1972, pp 646-648

Abstract: Because such lattice defects as impurity atoms have no effect on the electrical characteristics of semiconductors of the $A^{III}_2B^{VI}_3$ type, such as In_2Te_3, Ga_2Te_3, and Ga_2Se_3, the authors were led to the assumption that irradiation of these crystals by high-energy particles would have little effect on their electrical characteristics as well. To test this assumption, they subjected crystals of In_2Te_3 and Ga_2Te_3 to irradiation by gamma quanta, fast electrons, and fast neutrons in a pulse reactor, as well as by mixed reactor radiation. Tables of the characteristics of these crystals before and after the irradiation are presented. The authors of this brief communication thank V. S. Vavilov and V. L. Vinetskiy for their helpful discussions of the results.

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JPRS 53208
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VI-9. USE OF ZONE EQUALIZATION FOR ALLOYING THE SEMICONDUCTOR In_2Te_3

[Article by L. P. Gal'chinetskiy, A. I. Korin, Khar'kov; Novosibirsk, III Simpozium po Protsessam Rosta i Sintera Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June, 1972, p 81]

The method of zone equalization was used to alloy the semiconductor In_2Te_3 with copper. The peculiarities of the structure and certain physical parameters of the alloyed specimens were investigated for different equalization conditions. The optimal conditions were found which make it possible to obtain uniform single-phase specimens of In_2Te_3 alloyed with copper in the concentration range of 1-9 atomic percent.

The data obtained indicate that the zone equalization is an effective method of alloying semiconductors of the type of In_2Te_3.

GAL'CHINETSKIY, L. P.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 537.1.074

GALUCHINETSKIY, L.P., KOSHKIN, V.M., KULAKOV, V.M., KULIK, V.N., RUDENKO, A.I., RYABKA, P.M., ULMANIS, U.A., SHAMKOVTSOV, V.I.

"Study Of The Possibility Of Use Of Type In_2Te_3 Semiconductors As Detectors Of Reactor Radiation"

V sb. Metrol.neytron.izlucheniya na reaktorakh i uskoritelyakh (Metrology Of Neutron Radiation At Reactors And Accelerators--Collection Of Works), Moscow, 1971, p 56 (from RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2B275)

Translation: During irradiation of $A^{III}B^{VI}$ compounds of the In_2Te_3 type by fast neutrons with fluxes up to 5×10^{16} cm^{-2}, electrons with an energy of 100 Mev with fluxes up to 10^{19} cm^{-2}, and gamma quanta with an energy of 1.2 Mev with fluxes up to 10^{18} cm^{-2}, a marked radiation sensitivity is discovered. An irreversible change of the electrophysical properties after irradiation is not established. The possibility is studied of the use of these materials as the basis for radiation-resistant detectors. A.M.

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USSR G UDC 548.55

~~GALICHINETSKIY, L.~~ P., ATROSHCHENKO, L. V., KOSMKIN, V. M., SYSOYEV, L. A., All Union Scientific Research Institute of Single crystals, Khar'kov

"Single Crystals of In_2Te_3 With a Progressively Varying Magnitude of Deviation From Stoichiometry"

Moscow, Neorganicheskiye Materialy, Vol 6, No 5, May 70, pp 860-863

Abstract: The authors studied alloys in the area of In_2Te_3 homogeneity using single crystal samples and compared the results obtained with data from polycrystalline materials. Single crystal samples were obtained by zone melting. The results corroborated the composition diagram plotted from earlier data for the In-Te system, close to the compound In_2Te_3. It was further determined that physical properties of single crystals in the entire range of the existence of In_2Te_3 are identical with the properties of polycrystalline samples. Deviations from stoichiometry show practically no effect on the electric proper-
1/1 ties of the defective phase of In_2Te_3.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--SINGLE CRYSTALS OF IN SUB2 TE SUB3 WITH A PROGRESSIVELY VARYING MAGNITUDE OF DEVIATION FROM STOICHIOMETRY -U-

AUTHOR-(04)-GALCHINETSKIY, L.P., ATROSHCHENKO, L.V., KOSHKIN, V.M., SYSOYEV, L.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. SSSR. MOSCOW, NEORGANICHESKIYE MATERIALY, VOL 6, NO 5, MAY 70, PP 860-863

DATE PUBLISHED----MAY70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--SINGLE CRYSTAL, INDIUM COMPOUND, TELLURIDE, ELECTRIC PROPERTY, PHYSICAL PROPERTY, STOICHIOMETRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1534 STEP NO--UR/0363/70/006/005/0860/0863

CIRC ACCESSION NO--AP0133461

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0133461

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS STUDIED ALLOYS IN THE AREA OF IN SUB2 TE SUB3 HOMOGENEITY USING SINGLE CRYSTAL SAMPLES AND COMPARED THE RESULTS OBTAINED WITH DATA FROM POLYCRYSTALLINE MATERIALS. SINGLE CRYSTAL SAMPLES WERE OBTAINED BY ZONE MELTING. THE RESULTS CORROBORATED THE COMPOSITION DIAGRAM PLOTTED FROM EARLIER DATA FOR THE IN-TE SYSTEM, CLOSE TO THE COMPOUND IN SUB2 TE SUB3. IT WAS FURTHER DETERMINED THAT PHYSICAL PROPERTIES OF SINGLE CRYSTALS IN THE ENTIRE RANGE OF THE EXISTENCE OF IN SUB2 TE SUB3 ARE IDENTICAL WITH THE PROPERTIES OF POLYCRYSTALLINE SAMPLES. DEVIATIONS FROM STIOCHIOMETRY SHOW PRACTICALLY NO EFFECT ON THE ELECTRIC PROPERTIES OF THE DEFECTIVE PHASE OF IN SUB2 TE SUB3. FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF SINGLE CRYSTALS, KHAR'KOV.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 024 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ELECTRICAL AND OPTICAL PROPERTIES OF ALLOYS OF THE (CUINTE SUB2) SUB3(1NEGATIVEX)-(IN SUB2 TE SUB3) SUB2X AND (CUGATE SUB2)

AUTHOR-(05)-KOSHKIN, V.M., NESTEROVA, T.N., GALCHINETSKIY, L.P., SKLOVSKAYA, I.L., KARAS, V.R.

COUNTRY OF INFO--USSR

SOURCE--UKR. FIZ. ZH. (RUSS. ED.) 1970, 15(2), 210-16

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--OPTIC PROPERTY, TELLURIDE, INDIUM COMPOUND, ELECTRIC PROPERTY, SEMICONDUCTOR ALLOY, SEMICONDUCTOR MATERIAL, GALLIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1938 STEP NO--UR/0185/70/015/002/0210/0216

CIRC ACCESSION NO--AP0118900

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 024 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118900

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ELEC. COND. SIGMA, MOBILITIES MU, CONCN. OF THE MAIN CARRIERS N, AND THE OPTICAL ENERGY GAP (E SUBO) OF SEMICONDUCTING ALLOYS OF THE (CUINTE SUB2) SUB3(1NEGATIVEX) -(IN SUB2 TE SUB3)SUB2X AND (CUGATE SUB2)SUB3(1NEGATIVEX) -(GA SUB2 TE SUB3) SUB2X SYSTEMS WERE INVESTIGATED. VALUES FOR BAND BAND TRANSISTIONS ENERGY WERE DETD. THE METHOD CONSISTS OF BUILDING THE DIFFERENTIAL CURVES OK-D EPSILON (EPSILON) AND D(1-K)-D EPSILON (EPSILON), WHERE K IS THE ABSORPTION COEFF. AND, EPSILON IS THE PHOTON ENERGY. APPLICATION OF THIS METHOD PERMITS SPLITTING THE VALENCE BAND IN THE ALLOYS WITH THE CHALCOPYRITE LATTICE TO BE FOUND. ALL TRANSITIONS ARE CONSIDERED DIRECT AND ALLOWED. PERCULARITIES IN THE CURVES E SUBO (X) ARE CONNECTED WITH THE CHANGE IN THE CRYSTAL STRUCTURE FROM CHALCOPYRITE TO SPHALERITE. THE DEPENDENCE OF N, SIGMA, E SUBO IN THE ABOVE SYSTEMS SHOWS THEIR DEVIATION FROM THE PSEUDOBINARITY. THIS INCREASES N AND SIGMA IN THE ALLOYS WITH SMALL VALUES OF X COMPARED TO THAT N AND SIGMA IN THE ALLOYS WITH X EQUALS 0. THE RISE OF N CAUSES DEGENERATION OF THE FREE CARRIER GAS AND RESULTS IN THE BURSTAINE EFFECT. FACILITY: VNII MONOKRIST., KHARKOV, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 621.382.002

GAYSINSKIY, V.B., GAL'CHINETSKIY, L.P., GRIGOR'YEV, A.N., KOSHKIN, V.M., KULIK, V.N., NIKOLAYCHUK, L.I., PIVOVAR, L.I., RAYSKIN, E.K., SYSOYEV, L.A., FAYNER, M.SH.

"Ion Implantation Of Single Crystals Of Cadmium Sulfide"

V sb. Monokristally i tekhnika (Single Crystals And Technology--Collection Of Works), Issue 6, Khar'kov, 1972, pp 109-112 (from RZh Elektronika i yeye primeneniye, No 11, Nov 1972, Abstract No 11B459)

Translation: The effect was studied of the dose and energy of irradiation by lithium ions in the temperature range from minus 70 to plus 180° C on the conductivity of cadmium sulfide. A divergence is found between the theoretically calculated value of the depth of penetration of lithium ions and the experimental results. These divergences are accounted for by the marked differences of the structures of the surface layer and the volume of the crystal. With the aid of ion implantation piezosemiconductor transducers were produced based on a high-resistance layer in CdS. Summary.

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USSR UDC 669.28'295:620.17

VITORSKIY, Ya. M., GAL'CHINSKIY, F. K., KAVERINA, S. N., KUZNETSOVA, A. S., MAT'YASH, V. A., SOGRISHIN, Yu. P., and TKACHENKO, V. G., Institute of Metal Physics, Academy of Sciences UKr SSR

"Effects of the Rate and Temperature of Straining on the Structure and Properties of the Alloy Mo-0.5% Ti"

Moscow, Metallovedeniye, No 6, 1971, pp 50-53

Abstract: Effects of the rate and temperature of straining on the structure and properties of the molybdenum alloy Mo-0.5% Ti were investigated on specimens strained at speeds of 0.2,5.0, and 20 m/sec on the K862S hot stamping press (630 tons), the M211 exhaust stamping hammer, and the IM-39 high-frequency unit, respectively. The investigation results demonstrate a high plasticity of the alloy Mo-0.5% Ti both in the recrystallized and strained conditions. A high-rate straining significantly increases the plasticity in the working process. Macrostructures of specimens upset at 600-1200°C at high and low speeds show deadlocks. Sectional hardness changes of specimens upset with 70% of strain by 900°C were by 0.2 m/sec strain rate HV 195-266 and by 20 m/sec strain rate HV 212-333. For an optimum strength and plasticity correlation, a cellular structure must be produced in the ingot with not less than 70% of strain at a temperature which is lower than the recrystallization temperature under conditions excluding a heat effect. Six figures, one table, six bibliographic references.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 666.1.031.29

POPOV, O. N., Engineer. GALDINA, N. M., MANEVICH, V. Ye. Candidates of Technical Sciences. (State Scientific Research Institute of Glass)

"Investigating the Stability of Bakor-33 at Molten Glass Temperatures Under Industrial Conditions by the Method of Regression Analysis"

Moscow, Steklo i Keramka, No 8, Aug 71, pp 7-10

Abstract: Mathematical models of corrosion process of electro fusion-cast refractory slabs (250x400x600 m) made of Bakor-33 in the upper part of glass-melting furnaces were constructed using the method of regression analysis, on the basis of results of a study of refractory laying of 12 glass-melting furnaces for sheet glass, after their shutdown for overhaul. The depth of corrosion at the level of the molten glass surface served as dependent variable in the model, while the duration of furnace operation, the specific yield of glass mass, and melting temperatures (1480-1540°C), given in a table, were used as independent variables. The mathematical model of the corrosion process was represented by a Taylor series, with coefficient evaluated by the method of least squares. An analysis of equations obtained showed the unsuitability of Bakor-33 for high temperature (up to 1600°C) glass melting. The

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POPOV, O. N., et al., Steklo i Keramka, No 8, Aug 71, pp 7-10

corrosion process of this refractory material is fully determined by the maximum melting temperature. The specific yield and temperature in the zone of slab location affect the rate of corrosion to a significantly lesser degree.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--REACTION OF SULFUR WITH BIS TRIETHYLSILYL AND BIS TRIETHYLGERMYL MERCURY -U-

AUTHOR-(04)-GALDYSHEV, YE.N., ANDREYEVICHEV, V.S., VYAZANKIN, N.S., RAZUVAYEV, G.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 4(4), 939

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SULFUR, ORGANOSILICON COMPOUND, ORGANOGERMANIUM COMPOUND, ORGANOMERCURY COMPOUND, EXOTHERMIC REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1440 STEP NO--UR/0079/70/040/004/0939/0939

CIRC ACCESSION NO--AP0135111

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

2/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135111

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ET SUB3 SI)SUB2 HG REACTED EXOTERMICALLY WITH S WITHOUT A SOLVENT TO YIELD 94PERCENT ET SUB3 SISHGSIET SUB3, UNDISTILLABLE GREENISH LIQ., WHICH IN UV LIGHT DECOMPD. TO 100PERCENT HG AND (ET SUB3 SI)SUB2 S, B SUB7 125-7DEGREES. REACTION WITH HBR AT ROOM TEMP. RAPIDLY GAVE HG, ET SUB3 SIBR, AND ET SUB3 SISH. SIMILARLY, S AND (ET SUB3 GE)SUB2 HG GAVE AFTER 0.5 HR AT 5DEGREES HG AND (ET SUB3 GE)SUB2 S, AS EVIDENTLY THE EXPECTED INTERMEDIATE ET SUB3 GESHGGEET SUB3 IS VERY UNSTABLE. ONLY 1 EQUIV. S REACTED DESPITE ANY EXCESS PRESENT. FACILITY: LAB. STABIL. POLIM., GORKI, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

Molecular Biology

USSR UDC 576.858.71.098.396.332:576.858.71.095.6

PRASOLOVA, Z. V., LEONT'YEVA, N. A., and GALEGOV, G. A., Virology Institute imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences, Moscow

"RNA Synthesis and Reproduction of Yellow Fever Virus (Strain 17D)"

Moscow, Voprosy meditsinskoy Khimii, Vol 19, No 6, 73, pp 665-666

Translation: Studies were conducted on the synthesis of RNA by following uridine-H^3 incorporation and accumulation of infectious virus in tissue culture of chick embryo fibroblasts, and kidneys from pig embryos. Synthesis of viral RNA in the presence of actinomycin D begins 6 hours following infection; it precedes the formation of infectious virus by 6 hours. Roller cultures yielded virus titers of 9.0 log BOE/ml [BOE expansion unknown -- Plaque-Forming Units].

The yellow fever virus continues to be of importance in infectious pathology of man, despite the presence of effective vaccines. In the literature at our disposal we did not find any information on RNA synthesis and a correlation between viral RNA synthesis and the formation of the infectious virus.

The present communication deals with this aspect of the problem. A number of communications are available in the literature on RNA synthesis in

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PRASOLOVA, Z. V., et al., Voprosy Meditsinskoy Khimii, Vol 19, No 6, 73, pp 665-666

viruses belonging to the Flava genus /1-3/.

Methods

The yellow fever virus[1] was introduced in the usual manner into cultures of chick embryo fibroblast monolayers (CEF) and kidneys from pig embryos (KPE). Medium 199 with 10% natural calf serum was employed. The virus was titrated by the plaque method /4/.

Synthesis of virus induced RNA was followed by the incorporation of uridine-H^3 into the acid insoluble fraction of infected and uninfected cultures. Consequently, 3.5 h prior to sampling 5 μg/ml of actinomycin D was added. Uridine-H^3 (5 μCi/ml; 14 μCi/mM specific activity) was added 90 min after the antibiotic addition. The incubation time with the radioactive precursor was two hours. The medium was then removed, and the cell monolayer washed twice with cold Hanks medium and thrice with cold 5% TCA, followed by a 1:1 ether ethanol mixture. To the cells fixed in this manner was added 0.3 M KOH

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PRASOLOVA, Z. V., et al., Voprosy Meditsinskoy Khimii, Vol 19, No 6, 73, pp 665-666

and the samples were placed in a thermostat at 37° for 18 h. The neutralized incubate was placed on filter paper disks and the radioactivity was determined with a Packard liquid scintillator counter.

The relative resistance of yellow fever virus reproduction and its RNA synthesis to actinomycin D made it possible to study the temporal dynamics of uridine-H^3 incorporation. In the concentration used by us, the antibiotic inhibited viral reproduction by 1.0 log BOE/ml.

Use of roller tube cultures for the yellow fever virus in KPE cells yielded infectious titers ranging from 8.96 to 9.46 log BOE/ml.

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[1]The yellow fever virus (strain 17D) was kindly provided by V. P. Grachev' (Institute of Poliomyelitis and Viral Encephalitis, USSR ACademy of Medical Science).

Results and Discussion

The data given in Fig. indicate that CEF cells infected with yellow fever virus show significant resistance to actinomycin D as far as RNA synthesis goes, which commences six hours after infection and increases until

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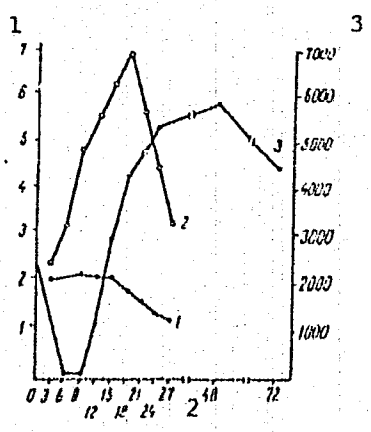
PRASOLOVA, Z. V., et al., Voprosy Meditsinskoy Khimii, Vol 19, No 6, 73, pp 665-666

the 18th hour after which there is a progressive decrease in uridine-H^3 incorporation for the next nine hours.



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PRASOLOVA, Z. V., et al., Voprosy Meditsinskoy Khimii, Vol 19, No 6, 73, pp665-666

Figure 1. RNA Synthesis and Yellow Fever Reproduction in CEF Culture. The Abscissa Indicates Time of Infection (in Hours). The Left Ordinate Indicates Virus Titer in Log BOE/ml. 1 -- Uridine-H^3 Incorporation in Uninfected Cells. 2 -- Uridine-H^3 Incorporation in Infected Cells. 3 -- Virus Accumulation in Culture Medium. Multiplicity of Infection: 0.2-0.4 Log BOE/ml.

Key: 1. Log BOE/ml
2. Hours
3. CPM/10^5 cells

Reproduction of yellow fever virus begins 12 hours after infection and an apparent logarithmic growth is seen until the 24th hour. Analysis of the curves representing viral RNA synthesis and accumulation of the infectious virus reveals that RNA synthesis precedes the appearance of virus by not less than 6 hours. Maximum accumulation of the virus takes place when RNA synthesis has decreased by more than 50%. This indicates that the appearance of extracellular viral particles requires time for the synthesis of structural proteins, viral assembly and their release.

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PRASOLOVA, Z. V., et al., Voprosy Meditsinskoy Khimii, Vol 19, No 6, 73, pp 665-666

The resultant data will be useful in more detailed studies on RNA synthesis of this virus, as well as in the testing of various synthetic preparations on this model system.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

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UDC 616.988.25-092.9-085.37:576.858.095.383

LEONT'YEVA, N. A., FOMINA, A. N., IDRISOVA, Z. V., SHUBLADZE, A. K., and GALEGOV, G. A., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Combined Use of Interferon and Some Styrylquinolines in Cell Culture and in Experimental Arbovirus Infection"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 72, pp 482-485

Abstract: The synergistic prophylactic and therapeutic effects of interferon and styrylquinolines were studied in chick embryo fibroblast cultures and white mice infected with Venezuelan equine encephalomyelitis (VEE) and Western equine encephalomyelitis (WEE) viruses. The following compounds were employed: hydrate of 2-(4^1-bromostyryl)-4-(delta-diethylamino-alpha-methylbutylamino)-7-chloroquinoline triphosphate (R-29P), 2-(3^1-methoxy-4^1-hydroxystyryl)-4-(delta-diethylamino-alpha-methylbutylamino)-6-methoxyquinoline triphosphate (R-43P), and 2-(3^1-methoxy-4^1-hydroxystyryl)-4-(delta-ethylamino-alpha-methylbutylamino)-7-chloroquinoline triphosphate (R-42P). In cell culture these compounds reduced infectious titers of VEE and WEE virus by 2 and 2.6 lg respectively. When used in combination with interferon, these compounds reduced the titers by 6.6 and 7.5 lg respectively. R-42P was the most effective. When used on white mice

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LEONT'YEVA, N. A., et al., Voprosy Virusologii, No 4, Jul/Aug 72, pp 482-485

infected with WEE virus, R-42P administered twice at 9 mg/ml to animals with 0.03 ml 10 LD_{50} (minimum dosage) resulted in the highest survival rate (35%). Combined 2-time administrations of interferon prior to WEE infection and R-42P after infection resulted in enhancement of the protective antiviral effect and prevented development of disease in 60-75% of the animals. Thus interferon and styrylquinolines act synergistically in response to arbovirus infection, indicating that their combined use may be effective in preventing and treating such infections.

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USSR

UDC 615.281.8:547.963.32

ATANASOVA, Yu. G., PUSHKARSKAYA, N. L., GALEGOV, G. A., and DEBOV, S. S., Institute of Virology imeni D. I. Ivanovskiy, Academy of Sciences USSR, and Chair of Biochemistry, First Moscow Institute imeni I. M. Sechenov

"Antiviral and Interferogenic Action of Complexes of Polyadenylic and Polyuridylic Acids"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 10, 1971, pp 64-66

Abstract: Sterile solutions of polyadenylic and polyuridylic acids (1:1) at concentrations of 27 to 300 μg/ml inhibited the reproduction of vesicular stomatitis virus in a culture of chick fibroblasts. When the polymers were combined with neomycin, the extent of inhibition of virus reproduction increased from 56.8 to 90.3%. (Neomycin alone did not reduce the infectious titer of the virus). Complexes of polyadenylic and polyuridylic acids also exhibited marked interferonogenic ability in vitro, but less than that of some other inducers.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

USSR UDC 576.858.25.095.6.095.18

LEONT'YEVA, N. A., GAVRILOV, V. I., FADEYEVA, L. L., and GALEGOV, G. A., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Stimulation of Gheta and O'nyong nyong Virus Reproduction by L-Glutamine and Low Concentrations of 5-Bromo-w-Desoxyuridine"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 70, pp 452-456

Abstract: Cultures of BHK-21 cells were grown on Eagle's medium with 10% calf serum and then inoculated with Gheta or O'nyong nyong virus. Addition to the medium of L-glutamine (500 micro g/ml) or 5-bromo-2-desoxyuridine (20 to 40 micro g/ml) markedly intensified viral reproduction. Despite the different chemical nature of the two substances, their effects were similar and directly related to the time at which they were added. The effect was most pronounced when they were added 2 hours after inoculation of the cultures. The amino acid provided greater stimulation. In the presence of L-glutamine and under optimal conditions, accumulation of Gheta virus was 2500 times higher and that of O'nyong nyong virus 3200 times higher than in the control. For 5-bromo-2-desoxyuridine under optimal conditions, reproduction of Gheta and O'nyong nyong viruses was only 250 and 80 times higher, respectively.

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USSR

UDC 576.858.13.098.31.095.383

LINITSKAYA, G. L., ZHDANOVA, L. V., MENTKEVICH, L. M., and GALEGOV, G. A., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, and Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences USSR, Moscow

"The Effect of Interferon on Induction of Alkaline and Acid DNA-ses in Cell Culture Infected With Vaccinia Virus"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 70, pp 549-552

Abstract: The effect of interferon on virus-induced synthesis of alkaline (early) and acid (late) DNA-ses was studied. It was found that both enzymes are highly sensitive to interferon and were significantly inhibited by it even in the lowest dose studied. The highest concentration tested completely blocked their synthesis. However, the interferon concentrations used were not sufficient to inhibit production of the infectious virus. Interferon prevents the combination of cell ribosomes with viral RNA to form viral polysomes and, eventually, virus-specific early proteins. As a result, synthesis of viral DNA polymerase and, consequently, of viral DNA is inhibited. This process did not occur in the system studied. Evidently DNA polymerase is less sensitive to the effect of interferon. The tests suggest that vaccinia virus can

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LINITSKAYA, G. L., et al, Voprosy Virusologii, No 5, Sep/Oct 70, pp 549-552

multiply in cells in the absence of synthesis of both early and late DNA-ses.

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1/2 022 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--INCREASE IN THE STABILITY OF THE GRATE BARS OF SINTERING MACHINES -U-

AUTHOR-(05)-FELDMAN, B.A., NEIGEBAUER, G.O., GALEMIN, I.N., KVANOV, V.A., TERLIKOVSKIY, V.I.

COUNTRY OF INFO--USSR

SOURCE--METALLURG (MOSCOW) 1970, 15(1), 6-8

DATE PUBLISHED--------70

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

TOPIC TAGS--SINTERING FURNACE, MATERIAL FAILURE, CAST IRON, HIGH CARBON STEEL, CHROMIUM STEEL/(U)CSH18 36 CAST IRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1934 STEP NO--UR/0130/70/025/001/0006/0008

CIRC ACCESSION NO--AP0108263

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2/2 022 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0103263

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UNITL RECENTLY THE KARAGANDINSK METALLURGICAL PLANT USED BARS FOR SINTERING MACHINES MADE FROM CSM18-36 GRAY CAST IRON WITH A LIFE OF 4 MONTHS AND A CONSUMPTION OF 400 G-TON OF SINTER. VARIOUS ALLOYS WITH DIFFERENT CR AND FE CONCNS. WERE TRIED. BEST WAS 68 ALLOY CONTG.: C 1.10, CR 19.07, SI 2.00PERCENT. THE NEW BARS LAST 1.5-2 YR.

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USSR

PRASOLOVA, Z. V., et al., Voprosy Meditsinskoy Khimii, Vol 19, No 6, 73, pp665-666

Figure 1. RNA Synthesis and Yellow Fever Reproduction in CEF Culture. The Abscissa Indicates Time of Infection (in Hours). The Left Ordinate Indicates Virus Titer in Log BOE/ml. 1 -- Uridine-H^3 Incorporation in Uninfected Cells. 2 -- Uridine-H^3 Incorporation in Infected Cells. 3 -- Virus Accumulation in Culture Medium. Multiplicity of Infection: 0.2-0.4 Log BOE/ml.

3. CPM/10^5 cells

Key: 1. Log BOE/ml
2. Hours

Reproduction of yellow fever virus begins 12 hours after infection and an apparent logarithmic growth is seen until the 24th hour. Analysis of the curves representing viral RNA synthesis and accumulation of the infectious virus reveals that RNA synthesis precedes the appearance of virus by not less than 6 hours. Maximum accumulation of the virus takes place when RNA synthesis has decreased by more than 50%. This indicates that the appearance of extracellular viral particles requires time for the synthesis of structural proteins, viral assembly and their release.

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USSR

PRASOLOVA, Z. V., et al., Voprosy Meditsinskoy Khimii, Vol 19, No 6, 73, pp 665-666

The resultant data will be useful in more detailed studies on RNA synthesis of this virus, as well as in the testing of various synthetic preparations on this model system.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

UDC 616.988.25-092.9-085.37:576.858.095.383

USSR

LEONT'YEVA, N. A., FOMINA, A. N., IDRISOVA, Z. V., SHUBLADZE, A. K., and GALEGOV, G. A., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Combined Use of Interferon and Some Styrylquinolines in Cell Culture and in Experimental Arbovirus Infection"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 72, pp 482-485

Abstract: The synergistic prophylactic and therapeutic effects of interferon and styrylquinolines were studied in chick embryo fibroblast cultures and white mice infected with Venezuelan equine encephalomyelitis (VEE) and Western equine encephalomyelitis (WEE) viruses. The following compounds were employed: hydrate of 2-(4^1-bromostyryl)-4-(delta-diethylamino-alpha-methylbutylamino)-7-chloroquinoline triphosphate (R-29P), 2-(3^1-methoxy-4^1-hydroxystyryl)-4-(delta-diethylamino-alpha-methylbutylamino)-6-methoxyquinoline triphosphate (R-43P), and 2-(3^1-methoxy-4^1-hydroxystyryl)-4-(delta-ethylamino-alpha-methylbutylamino)-7-chloroquinoline triphosphate (R-42P). In cell culture these compounds reduced infectious titers of VEE and WEE virus by 2 and 2.6 lg respectively. When used in combination with interferon, these compounds reduced the titers by 6.6 and 7.5 lg respectively. R-42P was the most effective. When used on white mice

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LEONT'YEVA, N. A., et al., Voprosy Virusologii, No 4, Jul/Aug 72, pp 482-485

Combined 2-time administrations of interferon prior to WEE infection and R-42P after infection resulted in enhancement of the protective antiviral effect and prevented development of disease in 60-75% of the animals. Thus interferon and styrylquinolines act synergistically in response to arbovirus infection, indicating that their combined use may be effective in preventing and treating such infections.

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UDC 615.281.8:547.963.32

USSR

ATANASOVA, Yu. G., PUSHKARSKAYA, N. L., GALEGOV, G. A., and DEBOV, S. S., Institute of Virology imeni D. I. Ivanovskiy, Academy of Sciences USSR, and Chair of Biochemistry, First Moscow Institute imeni I. M. Sechenov

"Antiviral and Interferogenic Action of Complexes of Polyadenylic and Polyuridylic Acids"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 10, 1971, pp 64-66

Abstract: Sterile solutions of polyadenylic and polyuridylic acids (1:1) at concentrations of 27 to 300 μg/ml inhibited the reproduction of vesicular stomatitis virus in a culture of chick fibroblasts. When the polymers were combined with neomycin, the extent of inhibition of virus reproduction increased from 56.8 to 90.3%. (Neomycin alone did not reduce the infectious titer of the virus). Complexes of polyadenylic and polyuridylic acids also exhibited marked interferonogenic ability in vitro, but less than that of some other inducers.

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LEONT'YEVA, N. A., GAVRILOV, V. I., FADEYEVA, L. L., and BALEGOV, G. A., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

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LINITSKAYA, G. L., ZHDANOVA, L. V., MENTKEVICH, L. M., and GALEGOV, G. A., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, and Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences USSR, Moscow

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LINITSKAYA, G. L., et al, Voprosy Virusologii, No 5, Sep/Oct 70, pp 549-552

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1/2 022 PROCESSING DATE--02OCT70

TITLE--INCREASE IN THE STABILITY OF THE GRATE BARS OF SINTERING MACHINES -U-

AUTHOR-(05)-FELDMAN, B.A., NEIGEBAUER, G.D., GALEMIN, I.M., KVANOV, V.A., TERLIKOVSKIY, V.I.

COUNTRY OF INFO--USSR

SOURCE--METALLURG (MOSCOW) 1970, 15(1), 6-8

DATE PUBLISHED--------70

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

TOPIC TAGS--SINTERING FURNACE, MATERIAL FAILURE, CAST IRON, HIGH CARBON STEEL, CHROMIUM STEEL/(U)CSH18 36 CAST IRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1934 STEP NO--UR/0130/70/025/001/0006/0008

CIRC ACCESSION NO--AP0108263

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PROCESSING DATE--02OCT70

2/2 022

CIRC ACCESSION NO--AP0103263

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UNITL RECENTLY THE KARAGANDINSK METALLURGICAL PLANT USED BARS FOR SINTERING MACHINES MADE FROM CSH18-36 GRAY CAST IRON WITH A LIFE OF 4 MONTHS AND A CONSUMPTION OF 400 G-TON OF SINTER. VARIOUS ALLOYS WITH DIFFERENT CR AND FE CONCNS. WERE TRIED. BEST WAS BB ALLOY CONTG.: C 1.10, CR 19.07, SI 2.00PERCENT. THE NEW BARS LAST 1.5-2 YR.

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GLORIA

SO: JPRS 55937
9 MAY 72

HEURISTIC MODELS IN SOCIOLOGY

[Article by N. N. Amosov and D. N. Galenko, Kiev, Kibernetika i Vychislitel'naya Tekhnika, Russian, No 7, 1970, pp 16-24]

Society is an integral, highly organized system which can be considered as a complex network of interacting social institutions -- economic, scientific, ideological, cultural, political, etc. The informational plan for considering society and social relationships permits us to construct models of various social systems and to investigate their integral functions [1, 4, 5].

To guarantee the progress of the social system toward its chosen goals as well as to preserve its "integrity" in doing so, all the links in the hierarchy of the system must be ordered and matched in their activity. The function of this matching is fulfilled by social control.

Strictly speaking, all the activity of man always has been and is regulated and controlled. Thus, the human brain is a regulatory "mechanism" for controlling a large number of inner parameters of the organism and behavior of a given individual in space and time. The specialist -- a doctor, for example -- by observing definite symptoms, derives a hypothesis regarding the control of the course of an illness in order to forestall undesirable consequences likely to be caused by these symptoms. However, our knowledge and ability to control complex systems and processes are insufficient. "People wrongly assume," St. Bir writes, "that the solutions to modern problems in the administration of the social, economic, and industrial spheres are within the limits of human capabilities, or that existing abilities can be developed to the desired level by education and study." [2] With the development of society, the complexity of the processes maintaining control constantly increases. The choice of administrative activity for the purpose of transferring the social system from its present to its desirable state, or for maintaining stable operation, becomes more and more difficult. The objective limitation of correct choices for such administrative activity is the human brain, which is not an ideal regulator outside the somatic sphere. This becomes especially apparent in processes of control of complex systems whose operation is determined by an enormous number of dynamically interconnected variables.

GALENKO, D.N.

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90006v New method for preparing acyl isocyanates. Samarai, L. I.; Belaya, V. P.; Galenko, G. F.; Derkach, G. I. (Inst. Org. Khim., Kiev, USSR). Zh. Org. Khim. 1970, 6(1), 85-8 (Russ). The reaction of RC(:NH)OEt or RC(:NH.HCl)-OEt (I) with $(COCl)_2$ gave RC(OEt):NCOCOCl (II) (R is CCl_3, CH_2ClCCl_2, Ph, p-ClC_6H_4, p-$O_2NC_6H_4$, or 3-piperidyl). The reaction of PhC(:NCl)OEt with $(COCl)_2$ also gave II (R = Ph). Heating II at 110-30° gave RCONCO; II react with moisture in the air giving I, with R^1OH giving RC(OEt):$NCOCO_2R^1$, or with R^1NH_2 giving RC(OEt):$NCOCONHR^1$. CFJR

REEL/FRAME 19751405

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002200830001-5

twisting), even in the so-called elastic region [illegible] hysteresis loop instead of the anticipated Hooke's straight line. A special stand was built to investigate sign-constant and cyclic deformations. Torsion of cylindrical and tubular specimens was selected as the type of deformation to be investigated for polymers and metals. This type of deformation yields shearing in a purer state than other deformation types — elongation, compression, and bending. The torque applied to the test specimens was measured by the deformation of an elastic element. The specimen and the elastic element were rigidly connected with a special coupling element, forming one system. 1/2

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USSR UDC 620.17

GALENKO, P. P., LOBASENOK, V. A., and BOL'SHAKOV, V. N., Dept. of Nondestructive Testing Physics, Academy of Sciences Belorussian SSR

"Study of Cyclic Deformation of Metals and Polymers"

Minsk, Doklady Akademii Nauk BSSR, Vol 15, No 2, 1971, pp 134-136

Abstract: The leading role in departures from Hooke's law is played by

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GALENKO, P. P., et al., Doklady Akademii Nauk BSSR, Vol 15, No 2, 1971, pp 134-136

The mechanism for photographic recording of the loading curve and the hysteresis loop consisted of mirrors with illuminators, a tape drive mechanism, photographic tracing paper, and an electronic module for remote control of the stand. The stand is designed for testing small specimens at different temperatures and over a wide range of deformation rates.

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1/2 022 UNCLASSIFIED

TITLE--COMPARATIVE SEROLOGICAL CHARACTERISTICS OF ANTIHEPATOCYTOTOXIC SERA OBTAINED BY MEANS OF IMMUNIZATION OF ANIMALS WITH ISOLATED MITOCHONDRIA

PROCESSING DATE--16OCT70

AUTHOR-(03)-SPASOKUKOTSKIY, YU.O., ALEKSEEVA, I.M., GALENKO, T.I.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHNIY ZHURNAL, 1970, VOL 16, NR 3, PP 341-344

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RABBIT, IMMUNOLOGY, LIVER, MITOCHONDRION, ANTIGEN, PROTEIN, IMMUNE SERUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1137

STEP NO--UR/0238/70/016/003/0341/0344

CIRC ACCESSION NO--AP0115156

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CIRC ACCESSION NO--AP0115156

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DATA ARE CITED ON THE COMPARATIVE SEROLOGICAL CHARACTERISTIC (ACCORDING TO THE COMPLEMENT FIXATION TEST) OF HEPATOCYTOTOXIC SERA OBTAINED BY MEANS OF RABBIT IMMUNIZATION WITH ISOLATED MITOCHONDRIA OF THE LIVER CELLS AND EXTRACTS OF THE WHOLE LIVER TISSUE UNDER STRICTLY ANALOGOUS CONDITIONS BY SIMILAR QUANTITIES OF ANTIGEN ACCORDING TO PROTEIN. IT IS SHOWN, THAT ANTIHEPATOCYTOTOXIC SERUM OBTAINED BY MEANS OF IMMUNIZATION WITH ISOLATED MITOCHONDRIA OF THE LIVER CELLS IS LESS ORGANOSPECIFIC, THAN THE SERUM OBTAINED BY IMMUNIZATION IWTH THE EXTRACT OF THE WHOLE LIVER TISSUE AND ACCORDING TO IMMUNOLOGICAL ACTIVITY IN THE TEST OF COMPLEMENT FIXATION WITH HOMOGENATE OF THE LIVER IT DOES NOT ESSENTIALLY DIFFER FROM THE LATTER. FACILITY: DEPARTMENT OF EXPERIMENTAL THERAPEUTICS, THE A. A. BOGOMOLETZ INSTITUTE OF PHYSIOLOGY, ACADEMY OF SCIENCES, UKRAINIAN SSR.

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USSR UDC 632.951

GALETENKO, S. M., and OPANASENKO, G. S., Nikitskiy State Botanical Garden

"Systematic Control by Means of Chemical Agents of the Mite Tetranychus vienensis Zacher in Crimean Orchards"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 9, No 5, 1971, pp 26-28

Abstract: The mite Tetranychus vienensis is one of the most noxious pests damaging fruit crops in the Crimea. Organophosphorus compounds are effective in the control of fruit mites, but cannot be applied constantly and for a long time, because resistance to this and analogous compounds develops. It was established in tests conducted in apple orchards that the acaricides neoron, galecron, chloroethanol, milbex, acrex, acar-50, acar-338, "acaricide," and decachlor can be used to advantage instead of organophosphorus acaricides in controlling T. vienensis. The most effective acaricides of those tested were neoron and galecron, followed by milbex and, in the third place, by chloroethanol. The optimum time for the first spraying of apple trees with an acaricide in the Crimea is in the pink bud phenophase. The second spraying should be carried out at the time when the average number of adult mites amounts to 0.2-0.3 per leaf. This is followed by a number of sprayings that varies depending on the activity of the acaricide. If phthalophos, dipterex,

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Acc. Nr: AP0041537 Abstracting Service: CHEMICAL ABST. Ref. Code: UR0366

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95006v New method for preparing acyl hydroxamates. Sakaev, L. [illegible] Bolyat, V. I.; Gulaeva, G. I.; Dorofeev, G. I. Inst. Org. Khim., Kiev. [illegible] 22, 1970(1), [illegible] 1970. 4 p. [illegible] The reaction of RCO(NH)OH or RCO(NH)CH2OH (I) with (ClCO)2 gave RCO(Cl)=NCOCCl (II) (R = CCl3, CHCl2CCl2, Ph, p-ClC6H4, p-O2NC6H4, or 2-naphthyl). The reaction of PhCO(NH)OH with (ClCO)2 also gave II (R = Ph). Heating II at 110-30° gave RCONCO. II react with moisture in the air giving I, with KOH giving RCO(OH)=NCOCO2K, or with RNH2 giving RCO(OH)=NCOCONHR. CPJK

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USSR UDC 620.17

GALENKO, P. P., LOBASENOK, V. A., and BOL'SHAKOV, V. N., Dept. of Nondestructive Testing Physics, Academy of Sciences Belorussian SSR

"Study of Cyclic Deformation of Metals and Polymers"

Minsk, Doklady Akademii Nauk BSSR, Vol 15, No 2, 1971, pp 134-136

Abstract: The leading role in departures from Hooke's law is played by plastic deformations caused by irreversible displacement in crystallites (for example, shear, twinning, dislocation, and so on). When metals and polymers undergo cyclic deformation (stretching-compression and sign-alternating twisting), even in the so-called elastic region these departures yield a hysteresis loop instead of the anticipated Hooke's straight line. A special stand was built to investigate sign-constant and cyclic deformations. Torsion of cylindrical and tubular specimens was selected as the type of deformation to be investigated for polymers and metals. This type of deformation yields shearing in a purer state than other deformation types -- elongation, compression, and bending. The torque applied to the test specimens was measured by the deformation of an elastic element. The specimen and the elastic element were rigidly connected with a special coupling element, forming one system.

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GALENKO, P. P., et al., Doklady Akademii Nauk BSSR, Vol 15, No 2, 1971, pp 134-136

The mechanism for photographic recording of the loading curve and the hysteresis loop consisted of mirrors with illuminators, a tape drive mechanism, photographic tracing paper, and an electronic module for remote control of the stand. The stand is designed for testing small specimens at different temperatures and over a wide range of deformation rates.

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