"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

Industrial

UDC: 621.396.6.72:621.791

USSR

SHUSTOV, B. N., SHUGAYEV, V. A.

"An Installation for Thermocompression Welding of Metal to Ceramic"

Elektron. prom-st'. Nauchno-tekhn. sb. (The Electronics Industry. A Scientific and Technical Collection), 1970, No 1, p 111 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10V290)

Translation: The installation described has two technological chambers with a common control panel and power supply. The drive is hydraulic. Technical data are given.

N. S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 050 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--DETERMINING THE BEARING CAPABILITY OF SLOPING REINFORCED CONCRETE SHELLS, TAKING INTO ACCOUNT LARGE DEFLECTIONS -U-

AUTHOR--SHUGAYEV, V.V.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, STROITEL'NAYA MEKHANIKA I RASCHET SOORUZHENIY, NO. 1, 1970, PP 7-12

DATE PUBLISHED-------70

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

TOPIC TAGS--REINFORCED CONCRETE, FLUID FLOW, MATERIAL DEFORMATION, SHELL STRUCTURE, SHELL STRUCTURE STABILITY, VISCOUS FLOW

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1321 STEP NO--UR/0595/70/000/001/0007/0012

CIRC ACCESSION NO--AP0104639

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 050 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104639

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR REPORTS ON WORK UNDERTAKEN AT THE SCIENTIFIC RESEARCH INSTITUTE FOR CONCRETE AND REINFORCED CONCRETE ON THIS PROBLEM. HE POINTS OUT THAT THE METHOD OF LIMITING EQUILIBRIUM IS INAPPLICABLE FOR PROBLEMS IN WHICH THE STRESSED CONCRETE SHELL IS SIGNIFICANTLY DEFORMED, SINCE IT ASSUMES AND ESSENTIALLY STATIONARY SHELL. THE AUTHOR'S INVESTIGATIONS APPLY TO CYLINDRICAL SHELLS AND SHELLS OF POSITIVE GAUSSIAN CURVATURE. CONSIDERING THE DEFORMATIONS WHICH OCCUR AS THE MOVEMENT OF SEPARATE SECTIONS OF THE SHELL, SEPARATED BY HINGES OF VISCOUS FLOW, THE AUTHOR HAS ARRIVED AT THE EQUATIONS SHOWN ON MICROFISCHE.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 624.074.4.012.45.04

SHUGAYEV, V. V.

"Determining the Bearing Capability of Sloping Reinforced Concrete Shells, Taking into Account Large Deflections"

Moscow, Stroitel'naya Mekhanika i Raschet Sooruzheniy, No. 1, 1970, pp. 7-12

Abstract: The author reports on work undertaken at the Scientific Research Institute for Concrete and Reinforced Concrete on this problem. He points out that the method of limiting equilibrium is inapplicable for problems in which the stressed concrete shell is significantly deformed, since it assumes an essentially stationary shell. The author's investigations apply to cylindrical shells and shells of positive Gaussian curvature.

Considering the deformations which occur as the movement of separate sections of the shell, separated by hinges of viscous flow, the author has arrived at the following equation:

$$\varepsilon_x = \varkappa_x z_c + \varepsilon_x^0 ; \quad \varepsilon_y = \varkappa_y z_c + \varepsilon_y^0 \qquad (1)$$

where ε_x^0 and ε_y^0 are the deformation of the median surface of the shell, and κ_x and κ_y are changes in the normal curvature of the surface. The displacement of the neutral layer from the median surface is

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SHUGAYEV, V. V., Stroitel'naya Mekhanika i Raschet Sooruzheniy, No. 1, 1970, pp. 7-12

$$c = \varepsilon_x^0 / \varkappa_x = \varepsilon_y^0 / \varkappa_y = \varepsilon_i^0 / \varkappa_i ,$$

where ε_i^0 is the intensity of axial deformation in the median surface. The operation of internal forces on an element of the shell surface dF, can be calculated from the formula

$$dT = \int_{-h/2}^{h/2} \sigma |\varepsilon_i| \, dF \, dz_c , \qquad (2)$$

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SHUGAYEV, V. V., Stroitel'naya Mekhanika i Raschet Sooruzheniy, No 1, 1970, pp 7-12

where h is the thickness of the shell. Thus, having observed experimentally that c h/2, i.e., that the lines of deformation and tension along the thickness of the shell are of constant sign, the author arrives at

$$dT \int_{-h/2}^{h/2} \sigma_0 \varepsilon_i^0 dz_c dF + \int_{-h/2}^{h/2} \frac{\sigma_1}{c} z_c^2 \varkappa_i dz_c dF = \sigma_0 \varepsilon_i^0 h dF + \frac{\sigma_0 h^3}{12c} \varkappa_i dF, \quad (3)$$

where σ_0 is the tension in the median surface of the shell.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

UNCLASSIFIED PROCESSING DATE--03JUL70

TITLE--STUDIES OF STABILITY OF THE CORD DORSUM POTENTIAL (CDP) EVOKED BY SINGLE AND CONDITIONING STIMULATION OF AFFERENT NERVES -U-

AUTHOR--SHUGUROV, G.A.

COUNTRY OF INFO--USSR

SOURCE--NEYROFIZIOLOGIYA, 1970, VOL 2, NR 1, PP 10-16

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CAT, NERVE, SPINAL CORD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1977/0581 STEP NO--UR/0660/70/002/001/0010/0016

CIRC ACCESSION NO--APO064107

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

Acc. Nr: AP0044107 Ref. Code: UR 0660

PRIMARY SOURCE: Neyrofiziologiya, 1970, Vol 2, Nr 1, PP 10-16

STUDIES OF STABILITY OF THE CORD DORSUM POTENTIAL (CDP) EVOKED BY SINGLE AND CONDITIONING STIMULATION OF AFFERENT NERVES

O. A. Shugurov

The State University, Dniepropetrovsk

Summary

Experiments were carried out on spinal and narcotized cats. Cord dorsum potentials CDP were recorded in the region of the lumbo-sacral enlargement after a single stimulus or a pair of stimuli delivered to the peripheral nerves with the time interval between them: 20 msec, 100 msec, 400 msec. Each record was made once in 15 sec. Number of records at each time interval was from 80 to 265.

Histograms of changes in the N_1-component recorded after single and conditioned stimulus were plotted. After recalculation of single response histograms their coincidence with those obtained under conditioning was found. Variation coefficients were practically equal for both types of stimulation.

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REEL/FRAME
19770581

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AP0044107

Variation coefficient increased with a decrease of the single response amplitude. Conditioning of the low-amplitude responses did not change the variation coefficient as compared to the coefficient for the weak single responses.

It was shown that confidence intervals of the variation coefficient changes which were found in the conditioning experiments practically coincided with intervals obtained for single stimulation. A conclusion is made that presynaptic inhibition has no visible influence on the N_1-CDP component stability under conditions mentioned above.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 018 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--REACTIONS OF BENZYL ALCOHOL UNDER CONDITIONS FOR THE SYNTHESIS OF ALIPHATIC COMPOUNDS FROM CARBON MONOXIDE AND HYDROGEN -U-

AUTHOR-(04)-KRYUKOV, YU.B., SHUIKIN, A.N., SHUMAYEVA, Z.T., BASHKIROV, A.N.

COUNTRY OF INFO--USSR

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SOURCE--NEFTEKHIMIYA 1970, 10(1), 83-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZYL ALCOHOL, CATALYTIC ORGANIC SYNTHESIS, METAL OXIDE, CARBON MONOXIDE, HYDROGEN, GAS CHROMATOGRAPHY, BENZENE DERIVATIVE, ETHANOL, PROPANOL, HYDROGENATION, HYDROCARBON SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1883 STEP NO--UR/0204/70/010/001/0083/0087

CIRC ACCESSION NO--AP0112863

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 018 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0112863

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHCH SUB2 OH-CO-H WAS PASSED OVER A FE SUB2 O SUB3-AL SUB2 O SUB3-V SUB2 O SUB5-K SUB2 O CATALYST AT 450DEGREES-50 ATM DURING 12 HR AND THE PRODUCTS WERE DISTD. AND ANALYZED BY GAS LIQ. CHROMATOG. PHCH SUB2 OH WAS, IN PART, CONVERTED DIRECTLY TO PHME, BZH, AND BIBENZYL. CHAIN FORMATION TO 2,PHENYLETHANOL, 3,PHENYLPROPANOL, AND HIGHER HOMOLOGS AND HYDROGENATION OF THESE TO THE CORRESPONDING HYDROCARBONS ALSO OCCURRED. FACILITY: INST. NEFTEKHIM. SIN. IM. TOPCHIEVA, MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC: 629.1.054.6

VASHURKIN, Yu. V., SHUIN, V. V., MATVEYEV, V. G.

"A Device for Correcting a Gyroscopic Angle-Data Transmitter"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 10, Apr 72, Author's Certificate No 332323, Division G, filed 25 Sep 68, published 14 Mar 72, p 157

Translation: This Author's Certificate introduces a device for correcting a gyroscopic angle-data transmitter. The device contains a gyroscope in a Cardan suspension, a contact pickup of the angle of misalignment of the suspension frames, a relay, and a torque pickup. As a distinguishing feature of the patent, the accuracy and reliability of the device are improved by adding a delay unit for the relay release time, and by making the contact pickup of the angle of misalignment in the form of two brush contacts which are fixed to the outer frame and spaced by a gap in which a contact connected to the inner frame of the Cardan suspension of the gyroscope slides freely.

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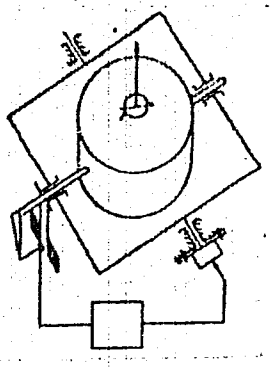
"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

VASHURKIN, Yu. V. et al., USSR Author's Certificate No 332323



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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

Acc. Nr: AP0048368 Abstracting Service: INTERNAT. AEROSPACE ABST. 5-70 Ref. Code: UR0243

A70-24315 # Study of the geoactive particles and photoelectrons by means of satellite 'Kosmos-261.' IV—Study of charged particles with a middle and high energy (Issledovanie geoaktivnykh korpuskul i fotoelektronov na sputnike 'Kosmos-261.' IV—Izmereniia zariazhennykh chastits srednikh i vysokikh energii). A. D. Bolionova, A. D. Verevkin, Iu. I. Gal'perin, L. S. Gom, L. S. Zhurina, I. D. Ivanov, R. N. Isaeva, I. P. Karpinskii, R. A. Kovrazhkin, V. V. Temnyi, B. I. Khazanov, A. V. Shifrin, and F. K. Shuiskaia. *Kosmicheskie Issledovaniia*, vol. 8, Jan.-Feb. 1970, p. 126-135. 7 refs. In Russian.

Descriptions of the scintillation spectrometers for measuring the electrons with energy ranging from 20 to 150 keV and more, protons with energy ranging from 0.30 to 9 MeV. A lead-screened Geiger counter for measuring the protons with energy above 50 MeV and rigid electrons is also described. The latitude dependent intensity distribution of the intrusive electrons is determined together with the pitch distribution of the electron intensity in the auroral zone, and differential electron spectra. Z.W.

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19800076

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 022 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--COSMIC RAYS AND COSMOLOGY -U-

AUTHOR-(03)-PRILUTSKIY, O.P., ROZENTAL, I.L., SHUKALOV, I.S.

COUNTRY OF INFO--USSR, HUNGARY

SOURCE--INTERNATIONAL CONFERENCE ON COSMIC RAYS, 11TH, BUDAPEST, HUNGARY, AUGUST 25-SEPTEMBER 4, 1969, PROCEEDINGS. VOLUME 1 ORIGIN AND GALACTIC

DATE PUBLISHED--------70

SUBJECT AREAS--ASTRONOMY,ASTROPHYSICS, ATMOSPHERIC SCIENCES

TOPIC TAGS--COSMIC RAY, COSMOLOGY, X RADIATION, COSMIC RADIO SOURCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605060/F09 STEP NO--HU/2506/70/029/000/0565/0568

CIRC ACCESSION NO--AT0144423

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 022 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AT0144423

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RELATIONS BETWEEN VARIOUS COMPONENTS OF COSMIC RAYS, COSMOLOGICAL PARAMETERS AND SOURCES OF RADIATION ARE CONSIDERED. ANALYSIS OF THE PRODUCTION OF RADIO AND X RAY BACKGROUND RADIATION IS THE MAIN PART OF THIS REPORT.

FACILITY: AKADEMIIA NAUK SSSR, INSTITUT KOSMICHESKIKH ISSLEDOVANII, MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

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USSR

SHUKALOVA, T. F., VYSHEPAN, Ye. D., and CHERNUKH, A. M.

"Serum Alkaline Ribonuclease Activity in Carbon Tetrachloride Poisoned Rats and Effects of an In Vitro Hepatic Inhibitor"

Byul. Eksperim. Biol. i Med., Vol 74, No 9, 1972, pp 50-53 (from Referativnyy Zhurnal -- Biologicheskaya Khimiya, No 5, 1973, Abstract No 5F2279)

Translation: Serum activity of free alkaline RNAse was found to increase 3 h after intraperitoneal administration of CCl_4 to rats (0.3 ml/100 g in vegetable oil). In vitro addition to the serum of a partially purified inhibitor from the livers of intact rats, significantly inhibited the enzyme activity in sera obtained from control and CCl_4-treated rats. After 3 h, the free RNAse activity in the sera decreased, and then commenced to increase to normal levels. The significance of the changes in the activity of free alkaline RNAse in the sera associated with CCl_4 treatment was discussed in relation to the transport of exogenous polymeric RNA to the liver.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 621.384.634

BASARGIN, YU. G., KOMAR, YE. G., LOBASHEV, V. M., Corresponding Member of the Academy of Sciences USSR, and SHUKEYLO, I. A., Scientific Research Institute of Electrophysical Equipment imeni D. V. Yefremov, Leningrad, and Leningrad Institute of Nuclear Physics imeni B. P. Konstantinov

"Medium-Energy Proton Synchrotron as Source of Intense Kaon Beams"

Moscow, Doklady Akademii Nauk SSSR, Vol 209, No 4, 1973, pp 819-821

Abstract: The best source for obtaining medium-energy kaons is a 5- to 7-Gev proton accelerator. It is difficult to determine current requirements at the present time, but if existing programs for the modernization of operating accelerators are considered, then apparently the immediate problem is to increase intensity by ~ 2 orders; that is, a medium current of 100 microamperes. This is not beyond present-day technical capabilities if a fast synchrotron with an injector-linear accelerator of the "meson factory" type is used.

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USSR

ADO, YU. M., ZHURAVLEV, A. A., LOGUNOV, A. A., MYAE, E. A., NAUMOV, A. A., PISAREVSKIY, V. YE., ROGOZINSKIY, V. G., TUSHABRAMISHVILI, K. Z., SHUKEYLO, I. A., BOYKO, S. N., KOMAR, YE. G., MALYSHEV, I. F., MOZIN, I. V., MONOSZON, N. A., MOZALEVSKIY, I. A., SPEVAKOVA, F. M., STOLOV, A. M., TITOV, V. A., VODOP'YANOV, F. A., KUZ'MIN, A. A., KUZ'-MIN, V. F., MINTS, A. L., RUBCHINSKIY, S. M., UVAROV, V. A., GUTNER, B. M., ZALMANZON, V. B., PROKOP'YEV, A. I., and TEMKIN, A. S.

"Some Results of the Overall Adjustment and Start-up of the 70-Gev Proton Synchrotron of the Institute of High-energy Physics"

Moscow, Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-136

Abstract: The physical part of the plan for the 70-Gev proton synchrotron was executed by the Institute of Theoretical and Experimental Physics. The electromagnet with feed system, the vacuum chamber, and the injection devices were developed at the Scientific Research Institute of Electrophysical Apparatus imeni D. V. Yefremov. The radio-electronic systems for acceleration process control and generation of

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

the accelerating field, as well as the radiotechnical measurement and beam observation systems, were developed by the Radiotechnical Institute of the Academy of Sciences USSR. "Tyazhpromelektroproyekt" [State Planning Institute for the Planning of Electrical Equipment for Heavy Industry] designed the general-purpose electrotechnical devices and cable connections. The plan for the construction complex of the accelerator was developed by the State All-Union Planning Institute. The construction of the accelerator was under the general supervision of the State Committee for the Use of Atomic Energy USSR. The adjustment of individual systems and the overall adjustment and start-up of the accelerator were carried out by the Institute of High-energy Physics and the developers of the accelerator systems. The basic beam work was done by the Institute of High-energy Physics with the participation of the Radiotechnical Institute. The construction of the accelerator was begun in 1960, and all the basic construction and assembly work was completed at the beginning of

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

1967. At the initial stage of construction, before the formation of the Institute of High-energy Physics in 1963, the work was coordinated by the Institute of Theoretical and Experimental Physics. The linear accelerator injector was started on 28 July 1967, the operation of the individual systems was adjusted by September 1967, and the physical start-up of the accelerator was accomplished on 14 October.

A description is given of the work done to adjust the annular electromagnet (including the electromagnet cooling and feed systems), the injection system (consisting of matching channel and injection device), the vacuum system, the radioelectronic system (including the accelerating field generation system, the acceleration process control system, and the radiotechnical measurement system), and the beam observation system (which provides for beam observation in the first revolution and during acceleration). In the physical start-up of the accelerator the main efforts were directed towards obtaining accelerated protons of the planned energy, and the problem of obtaining high

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

intensity of the accelerated proton was not raised.

The article gives a listing of the principal parameters of the proton synchrotron, as well as a schedule of the individual stages of the start-up of the accelerator. Photographs include a view of the part of the ring hall in the beam injection area and a general view of the hall of ignitron rectifiers.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 621.372.832.8

SHUKEYLO, YU. A. and ZLOBIN, V. A.

"Determining the Thermal Stressed State of the Ferrite Element of a Phase Circulator"

Elektron. tekhnika. Nauch.-tekhn. sb. Ferrit. tekhn. (Electronics Technology. Scientific-Technical Collection of Articles. Ferrite Technology), 1971, vyp.4 (31), pp 115-119 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 B151)

Translation: The authors present the calculations of the stress field in a ferrite element. The calculations were conducted on a computer. Results of the calculations are given in the form of graphs. Original article: three illustrations and five bibliographic entries. Resume.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

SHUKEYLO, YU. A.

UDC 621.372.832.8

"Studying the Temperature Field of the Ferrite Element of a Phase Circulator"

Elektron. tekhnika. Nauch.-tekhn. sb. Ferrit. tekhn. (Electronics Technology. Scientific-Technical Collection of Articles. Ferrite Technology), 1971, vyp.4 (31), pp 120-125 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 B149)

Translation: The author studies problems associated with the removal of heat from a ferrite element. The thermal conductivity problem for a band is solved. Calculations of the temperature field of a ferrite were conducted on a computer. Lines were constructed for equal temperatures in the cross section of the ferrite element. The highest temperature values are achieved at points which are farthest from the intense cooling zone and where the power of the individual sources was greatest. The accuracy of the obtained results is evaluated. Original article: three illustrations and eight bibliographic entries. Resume.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 014

UNCLASSIFIED

TITLE--TECHNOLOGICAL IMPROVEMENT OF THE PROCESS FOR REMOVAL OF HYDROGEN SULFIDE FROM COKE OVEN GAS -U-

PROCESSING DATE--02OCT70

AUTHOR-(03)-ROTT, A.V., SEVOSTYANOV, V.N., SHUKH, YA.I.

COUNTRY OF INFO--USSR

SOURCE--KOKS KHIM. 1970, (3), 33-8

DATE PUBLISHED-------70

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

TOPIC TAGS--HYDROGEN SULFIDE, CARBONATE, SULFURIC ACID, CHEMICAL SYNTHESIS, SULFUR DIOXIDE, COKE, INDUSTRIAL FURNACE, INDUSTRIAL WASTE, AIR POLLUTION CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1407

STEP NO--UR/0068/70/000/003/0033/0038

CIRC ACCESSION NO--AP0109469

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 G14 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0109469

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN A PLANT BUILT IN 1960 FOR REMOVAL OF H SUB2 S FROM COKE OVEN GAS, VACUUM CARBONATE METHOD WAS USED AND H SUB2 SO SUB4 WAS SYNTHESIZED BY WET CATALYSIS. ALTERATIONS FOR CONTINUOUS OPERATION INTRODUCED CHARACTERISTICS THAT REDJCED THE EFFICIENCY. THE PROCESS WAS ACCORDINGLY IMPROVED BY A SERIES OF MAJOR MODIFICATIONS. THESE INCLUDING SUBDIVIDING THE COOLER INTO SECTIONS FOR SELECTIVE USE; INCREASING THE WATER FLOW AND PROVIDING FOR ITS PURIFICATION AND REPLENISHMENT; REPLACING THE CAST IRON RADIATORS OF THE COOLER FOR THE ABSORBENT SOLN. WITH TUBULAR CONDENSERS AND INCREASED COEFF. OF HEAT TRANSFER; CAULKING THE SEAMS OF THE ACID COOLER TUBES WITH CEMENT AND RECORDING THE SOLN. ACIDITY; AIR BLOWING OF THE CATALYST FOR SO SUB2 OXION.; ELIMINATION OF EQUIPMENT BY IMPROVED SO SUB2 CIRCULATION; PROVIDING FOR STEADY OPERATION OF THE ELECTROSTATIC FILTERS; AND REARRANGING THE EQUIPMENT TO REDUCE CORROSION. THESE MEASURES RAISED THE VACUUM AND THE H SUB2 SO SUB4 YIELD; REDUCED THE REQUIREMENTS FOR CIRCULATING WATER BY 30-40PERCENT, THE LOADING ON THE EVAPORATORS, AND THE REQUIREMENTS FOR FREQUENT MAINTENANCE.

FACILITY: RUTCHENKOVSK, KOKSOKHIM. ZAVOD., USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

POSTNIKOV, V. S., MILOSHENKO, V. YE., ZOLOTUKHIN, I. V., SHUNIN, G. YE., and SHUKHALOV, YE. I., Voronezh Polytechnic Institute

"Effect of Imperfections on Internal Friction of Superconductors During n-s Transition"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 11, Nov 72, pp 3447-3448

Abstract: The article reports on further studies of the low-frequency internal friction of superconductors by the method of flexural vibrations. Previous articles by the authors reported that the internal friction peak Q^{-1} is detected during the n-s transition and its value does not vary appreciably with a change in the number of impurities in polycrystalline niobium. The present article studies the effect of extended structural imperfections on this peak in polycrystalline and single-crystal specimens of niobium. The Q^{-1} peak of a 99.8 percent deformed polycrystalline specimen has a width that considerably exceeds the width of the peak in a single crystal with a deformation of several percent. No peak is observed experimentally in a single-crystal specimen annealed at 950° C for an hour. No Q^{-1} peak is observed in

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

POSTNIKOV, V. S., et al., Fizika Tverdogo Tela, Vol 14, No 11, Nov 72, pp 3447-3448

perfect single crystals, but it is observed in polycrystalline specimens (deformed and annealed) and single crystals with slight deformation, reaching a width of several tenths of a degree. Conclusion: Extended structural imperfections are responsible for such a substantial expansion of the temperature range; theoretical works have failed to consider the effect of these on the character of fluctuations.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC: 621.318.1

POLIVANOV, K. M., MIROSHNIK, I. A., YEZHOV, S. N., PIGAREV, Ye. N., SHUKH-MIN, L. N., Voronezh Polytechnical Institute

"A Method of Sorting Magnetically Soft Ferrites"

USSR Author's Certificate No 282454, filed 25 Apr 69, published 17 Dec 70 (from EZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V464 P)

Translation: This Author's Certificate introduces a method of sorting magnetically soft ferrites used for work in weak magnetic fields as cores in wide-band transformers. As a distinguishing feature of the method, the sorting process is simplified by using double grading of the ferrites on the lower and upper frequency of the working band with measurement of the absolute value of the permeability of a ferrite.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 621.396.932.1

GOLOVIN, V. M., MEL'NIKOV, E. A., SHUKHMIN, L. N.

"Effect of the Earth's Magnetic Field on the Errors of Radio Navigational Angle Meters with Ferrite Antennas"

Tr. aspirantov Fiz.-tekhn. fak. Voronezh. politekhn. in-t (Works of the Post-graduates of the Physical-Technical Department of Voronezh Polytechnic Institute), 1971, vyp. 2, pp 169-172 (from RZh-Radiotekhnika, No 5, May 72, Abstract No 5G73)

Translation: The maximum error in determining the arrival angle in radio navigational angle meters caused by variation of the magnetic permeability of the core material of the antenna under the effect of the Earth's magnetic field is estimated. It is demonstrated that this error has a sufficiently large magnitude and requires compensation. There is 1 illustration and 1 table.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 669.7.017:620.172.251.22

SHUKHMIN, Yu. A., Moscow Institute of Aviation Technology

"On the Use of an Accelerated Method to Determine the Fatigue Limit of Light Structural Alloys"

Moscow, Zavodskaya Laboratoriya, Volume 6, 71, pp 705-707

Abstract: The accelerated testing method under consideration was suggested by V. S. Ivanova in No. 5 of this journal for 1960, and is based on a similarity between fatigue destruction and melting. It is assumed that such factors as thermal working, small quantities of alloying materials and various design factors do not affect the criteria of fatigue. This is not true for edge stress concentrators, which retard plastic deformation in the region of a cut and increase the parameter α.

Using data compiled in previous studies, the authors determined the relationship between the theoretical coefficient of stress concentration α_σ and the fatigue destruction criterion α, considered the possibility of applying the accelerated method to alloys whose fatigue curves have no horizontal section and evaluated the error in determining fatigue limits for such alloys. The alloys covered were based on aluminum and magnesium. In no case did the Ivanova method

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

SHUKHMIN, Yu. A., Moscow, Zavodskaya Laboratoriya, Volume 6, 71, pp 705-707

introduce an error of greater than 6% in determining the fatigue limit. The effect of technological and design factors on the fatigue limit can be calculated, but the effects of different alloy compositions must be determined experimentally before Ivanova's method can be applied.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

Microbiology

USSR

BOGOMOLOVA, N. N., IZAKOVA, L. P., SHUCHTINA, N. R., and ANDZHAPARIDZE, O. G., Moscow Scientific Research Institute of Viral Preparations

"Chronic Infection of Cells With Tickborne Encephalitis Virus. 7. Isolation of Cell Clones and Study of Their Properties"

Moscow, Voprosy Virusologii, No 5, 1971, p 623

Abstract: A study is presented of 15 cell clones isolated from chronically infected Hep-2-Soph cultures while protected by specific antibodies. The production of infectious tickborne encephalitis virus was detected in 13 clones where interference with WEE virus was observed and specific antigen was synthesized. The use of histochemical methods revealed three groups of cells with different metabolisms in each of the clones. The first group included degenerating cells found during the first 2 hours after subculturing. These cells contained an abudnance of glycogen in the lyoform. They were also characterized by high succinic dehydrogenase activity with pronounced polymorphism of the formazan residue and low acid phosphatase activity. The second group of cells with normal morphology constituted most of the cell population. They were characterized by high succinic dehydrogenase activity, large content of lyo (dissolved) and granular glycogen, and high acid phos-

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

BOGOMOLOVA, N. N., et al., Voprosy Virusologii, No 5, 1971, p 623

phatase activity. The third group was indistinguishable from the control with respect to the nature of the metabolism of the substances studied. It was concluded that most of the cell population could be infected by a chronically infected Hep-2-Soph culture.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 576.858.25.095.5

STEPANOVA, L. G., SHUKHMINA, N. R., and ANDZHAPARIDZE, O. G., Moscow Scientific Research Institute of Virus Preparations

"Study of the Variability of Tickborne Encephalitis Virus. Report VI. Some Aspects of Immunogenesis in Mice Vaccinated With the Attenuated I-40 D Strain"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 70, pp 405-408

Abstract: Following intracerebral inoculation of white mice with the pathogenic I-40 strain of tickborne encephalitis and the attenuated I-40 D strain (antigen and infectious virus), both viruses were isolated from the brain, blood, cervical lymph nodes, and spleen of the animals. All of the mice died 5 to 7 days later. After subcutaneous inoculation of I-40, the virus and antigen were found in the brain blood, cervical and mesenteric lymph nodes, spleen, and small intestine. After subcutaneous inoculation of I-40 D, however, the virus was found only in the lymph nodes and small intestine. The antigen (but not the infectious virus) was isolated from the brain. All of the animals infected subcutaneously with strain I-40 died within 9 days, while those so infected with strain I-40 D remained healthy throughout the 25-day observation period. Both oral and subcutaneous vaccination of mice with the I-40 D strain produced immunity to 1,000 LD_{50} of tickborne encephalitis virus.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 621.373:535(206.3)

MISHAKOV, V. G., TIBILOV, A. S., and SHUKHTIN, A. M.

"Generation of Radiation in $Na-H_2$ and $K-H_2$ Mixtures During Pulsed Introduction of Metal Vapors into a Gas-Discharge Plasma"

Leningrad, Optika i Spektroskopiya, Vol XXXI, No 2, Aug 71, pp 324-325

Abstract: Generation of radiation in $Na-H_2$ and $K-H_2$ mixtures was produced in cold discharge tubes by the method of pulsed introduction of metal vapors into a gas-discharge plasma. This method, which eliminates the need for a heating element, involves the transmission of two current pulses through a discharge tube on the wall of which is a metallic layer of sodium (Na) or potassium (K). The first current pulse strips metal atoms from the walls of the tube and creates mixtures of $Na-H_2$ or $K-H_2$. The metal vapors thus obtained are excited by the second current pulse, and radiation is generated. It was discovered that when the length of the first current pulse was increased, the generation of radiation on its trailing edge increased greatly in length, achieving a length of 300 microseconds. Several interesting new facts were established experimentally about generation of this type.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC: 531.715.2 531.717.53

SIZONENKO, G. A., BOGRETS, G. N., SHUKTS, Z. E., GOKHBERG, Yu. L., KOLODYAZHNYY, A. P., VYKHRIST, N. S., MINAKOV, N. A.

"A Device for Measuring the Thickness of Nonmagnetic Coatings on the Inside of Pipes"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329373, Division G, filed 25 Mar 70, published 9 Feb 72, p 151

Translation: This Author's Certificate introduces a device for measuring the thickness of nonmagnetic coatings on the inside of pipes. The device contains a micrometer unit, a tubular bar, a movable rod, a force-measuring spring, and a head with a permanent magnet connected to the movable rod. The micrometer unit is fastened to the end of the tubular bar which is on the outside of the pipe to be inspected, and the movable rod is coaxial with the tubular bar and is coupled to the micrometer unit. The head with permanent magnet is fastened to the end of the tubular bar on the inside of the pipe to be inspected. As a distinguishing feature of the patent, the device is designed for improved accuracy in measuring the thickness of coatings on

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

SIZONENKO, G. A. et al., USSR Author's Certificate No 329373

the inside of long pipes, and especially those of small cross section. Inside the measurement head is a moduler mechanism made up of two rollers wound with a flexible thread fastened by one end to the permanent magnet, and connected by the other end to the force-measurement spring. Also included in the device is a microcontact indicator of the position of the magnet fastened to one of its ends.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--EFFECT OF VARIOUS DOSES OF 7,12 DIMETHYLBENZ,A,ANTHRACENE ON DIFFERENTIATION OF CULTURED MUSCLE CELLS -U-

AUTHOR--SHUKLINOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--VOP. ONKOL. 1970, 16(5), 58-61

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RAT, CELL CULTURE, MUSCLE TISSUE, DRUG EFFECT, ANTHRACENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3009/0094 STEP NO--UR/0506/70/016/005/0058/0061

CIRC ACCESSION NO--AP0138959

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

UNCLASSIFIED PROCESSING DATE--04DEC70

2/2 022

CIRC ACCESSION NO--AP0138959

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RAT MUSCLE CELLS GROWN IN A MEDIUM CONTG. 6.0 MU G OF 7,12 DIMETHYLBENZ(A)ANTHRACENE-ML SHOWED LESS DIFFERENTIATION THAN DID CONTROL CELLS, ESP. WHEN THE COMPD. WAS ADDED TO THE MEDIUM NEAR THE START OF THE CULTURE GROWTH. HOWEVER, IF THE MEDIUM CONTAINED 0.003 MU G OF THE COMPD.-ML, DIFFERENTIATION WAS STIMULATED. FACILITY: RES. INST. EXPTL. CLIN. ONCOL., KIEV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

UNCLASSIFIED

SECTION II

Name: Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov (IEFIB), Leningrad

Description:

(U) During this quarterly reporting period, 14 new articles were located from the Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov (IEFIB). On the basis of these articles, it was possible to associate ten new persons with the institute. Given below is a list of these persons, the subjects of the articles and the dates:

Bagrov, Ya. Yu.	antidiuresis	1970[3]
Fruiz, L.	phospholipids	1969[4]
Gazyan, D. M.	digestion	1970[5]
Lapin, A. V.	muscle physiology	1970[6]
Handel, F.	phospholipids	1969[4]
Pinsin, I. I.	spectrophotometer	1970[7]
Pomeranskaya, L. F.	phospholipids	1969[4]
Shakolyukov, S. A.	nucleotides	1970[8]
Serebrenikova, T. P.	muscle physiology	1969[9]
Chetkaya, M. N.	cholinesterase	1970[10,11]

Five of the articles were coauthored by persons already identified with the institute. These articles dealt with nerve physiology[12], muscle physiology[13], and enzyme activity[14-16].

(U) A large number of persons have been identified with the institute during the preceding quarterly reporting periods. To provide a ready source of reference, given below is a list of all the IEFIB staff members identified to the present time.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 021 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--GLUCOSE 6,PHOSPHATE DEHYDROGENASE AND LACTATE DEHYDROGENASE FROM MEMBRANOUS STRUCTURES OF THE RETINA -U-

AUTHOR-(03)-ETINGOF, R.N., ZHUCHIKHINA, A.A., SHUKOLYUKOV, S.A.

COUNTRY OF INFO--USSR

SOURCE--BIOKHIMIYA 1970, 35(1), 35-41

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LACTATE DEHYDROGENASE, RETINA, CELL PHYSIOLOGY, MITOCHRONDRION, HOMOGENIZATION, CENTRIFUGATION, ISOENZYME, ELECTROPHORESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0640 STEP NO--UR/0218/70/035/001/0035/0041

CIRC ACCESSION NO--AP0117866

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 021 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117866

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MITOCHONDRIA AND OUTER SEGMENTS OF BOVINE RETINA POSSESSED GLUCOSE,6,PHOSPHATE DEHYDROGENASE (I) AND LACTATE DEHYDROGENASE (II). ALMOST ALL II PERTAINING TO THE MEMBRANOUS STRUCTURE WAS RECOVERED IN EXTS. AFTER HOMOGENIZATION IN 0.9PERCENT NACL AND CENTRIFUGATION. I WAS RECOVERED FROM EXTS. TREATED WITH 1PERCDNT TRITON X-100 IN 0,9PERCENT NACL. EXTS. OF RETINA AND SEGMENTS CONTAINED 5 AND 4 II ISOENZYMES, RESP., AS REVEALED BY AGAR GEL ELECTROPHORESIS. THERE WERE NO ESSENTIAL DIFFERENCES IN I ACTIVITIES IN AQ. AND SALT EXTS. AND EXTS. TREATED WITH TRITON X-100. FACILITY: INST. EVOL. PHYSIOL. BIOCHEM., LENINGRAD, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 021 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--APPLICATION OF ACID BASE INDICATORS TO THE STUDY OF CHANGE IN PH DURING THE ILLUMINATION OF OUTER SUGMENT OF RETINA PHOTORECEPTORS AND

AUTHOR-(02)-SHUKOLYUKOV, S.A., ETINGOF, R.N.

COUNTRY OF INFO--USSR

SOURCE--BIOFIZIKA 1970, 15(1), 112-19

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHEMICAL INDICATOR, HYDROGEN ION CONCENTRATION, RETINA, VISUAL PERCEPTION, BIOLOGIC PIGMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0011 STEP NO--UR/0217/70/015/001/0112/0119

CIRC ACCESSION NO--AP0105111

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

UNCLASSIFIED PROCESSING DATE--16OCT70

2/2 021

CIRC ACCESSION NO--AP0105111

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EXPTS. WERE PERFORMED ON ISOLATED OUTER SEGMENTS OF BOVINE RETINA AND ON BOVINE RHODOPSIN (R. N. ETINGOF, S. A. SHUKOLYUKOV, AND A. A. ZHUCHIKHINA, 1967) UNDER RED ILLUMINATION (650 NM). BOTH THE OUTER SEGMENTS AND RHODOPSIN (IN THE FORM OF DIGITONIN MICELLES) BOUND BROMOTHYMOL BLUE (I) BUT NOT BROMOCRESOL PURPLE (II). THIS ALLOWED SIMULTANEOUS DETECTION OF THE CHANGES IN H PRIME POSITIVE CONCN. IN THE SEGMENT MEMBRANES AND IN THE SURROUNDING SOLN. THE PK OF I UPON BINDING INCREASED FROM 7.1 TO 8.5. THE ILLUMINATION OF "DARK" OUTER SEGMENTS OR DIGITONIN EXTS. OF RHODOPSIN WITH WHITE LIGHT (1500 LUX) DECREASED THE ABSORBANCE OF BOUND I WHILE IT INCREASED THE ABSORBANCE OF II. NO SIGNIFICANT DIFFERENCES IN I BINDING TO "DARK" SEGMENTS AND RHODOPSIN AND ILLUMINATED SEGMENTS WERE OBSD. THE CHANGES IN ABSORBANCE, PROBABLY DUE TO THE FORMATION OF A PH GRADIENT UNDER FUNCTIONAL LOAD, WERE DEPENDENT ON MANY POORLY CONTROLLABLE FACTORS AND COULD NOT BE INTERPRETED QUANT.

FACILITY: I. M. SECHENOV INST. EVOL. PHYSIOL. BIOCHEM., LENINGRAD, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

AA0046404

UR 0482

Soviet Inventions Illustrated, Section ~~CI Electrical~~, Derwent,

2/70

244129 HYDRAULIC VELOCITY TRANSDUCER comprises rotor 1 with inlet 2 and outlet 3, housing 4, load-valve 5 with spring 6, auxiliary spool 7 with spring 8, feed pump 9, bypass valve 10, and actuator 11 with spring 12. The centre of spool 7 is offset with respect to the rotor axis, and its gravity centre is located on a radius perpendicular to the spool axis. The position of valve 5 is set so that in case of uniform speed of the rotor the pressure in housing 4 is a function of angular velocity for control of the actuator. At higher speed than the setting, spool 7 compresses spring 8 and partly covers the return line 3 causing a pressure increase in the housing. This produces a signal for acceleration control, the rate of change of which can be adjusted by altering the mass of the spool and its spring.

15.2.67 as 1133712/24-6.K.E. DOLGANOV & N.P.SMUKSHIN (9.10.69) Bul 17/14.5.69. Class 60. Int.Cl.G 05c.

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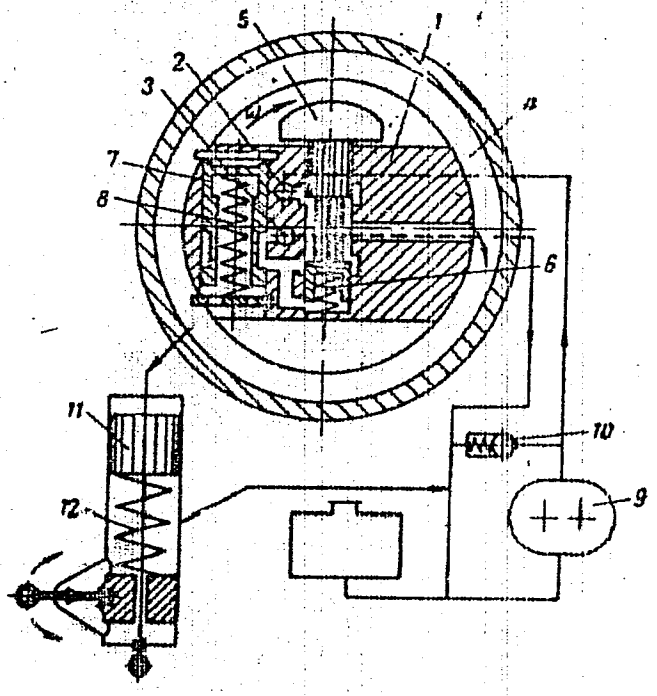

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AA0046404

AUTHORS: Dolganov, K. Ye.; Shukshin, N. P.

Kiyevskiy Avtomobil'no - Dorozhnyy Institut

19781603

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

Pharmacology and Toxicology

USSR

ALIMOV, R. A., SHUKUROV, A., KOVALEVSKAYA, R. A., and CHERNYSHEV, V. K., Tashkent Scientific Research Institute of Roentgenology, Radiology, and Oncology, Uzbek SSR Ministry of Health

"A Study of the Effects of the NK-5 Compound on the Biological Activity of Thio-TEPA"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 7, Jul 71, pp 17-19

Abstract: Since most antitumor drugs cause serious injury to the hematopoietic system, an investigation was performed to establish whether the NK-5 compound, administered in conjunction with the antitumor drug Thio-TEPA to young rats with sarcoma-45 transplant, would suppress the untoward effects of Thio-TEPA. Peripheral blood sample analyses performed throughout the test (one month) revealed that the NK-5 compound prevented a drop in leukocyte concentration and increased hemoglobin and erythrocyte concentration. Moreover, these rats were growing significantly faster than the controls. Post-experimental histological examinations revealed small necrotic areas in the sarcoma transplants in rats treated with Thio-TEPA alone. In animals treated with Thio-TEPA and NK-5, the tumors had large necrotic areas in their central

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

ALIMOV, R. A., et al., Meditsinskiy Zhurnal Uzbekistana, No 7, Jul 71, pp 17-19

portions and dystrophic tumor cells in their peripheral portions. It is concluded that the NK-5 compound not only inhibits the undesirable side effects of Thio-TEPA, but also magnifies the antitumor effect of the latter.

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Mechanical Properties

USSR UDC 669.6:539.531:[669.3 + 669.71

SAIDOV, M. S., and SHUKUROV, I.

"Investigation of the Combined Influence of Copper and Aluminum Impurities on the Microhardness of Tin"

[Nauchn. tr.] Tashkent. politekhn. in-t ([Scientific Works] of the Tashkent Polytechnical Institute), 1970, vyp. 65, pp 319-321 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 1777 by V. BOCHKAREVA)

Translation: The purity of Sn, Cu, and Al used to produce alloys ≥ 99.999%. Cu and Al separately raise the microhardness of Sn. When present in combination, Al and Cu decrease the microhardness of Sn.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 017 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--MAGNETIC ROTATIONAL DISPERSION AND REFRACTIVE INDEX DISPERSION CURVES OF LA PRIME3POSITIVE IN AN AQUEOUS LANTHANUM CHLORIDE SOLUTION

AUTHOR-(02)-YAMSHCHIKOV, YE.F., SHUKUROVA, R.M.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUL SSSR 1970, 191(4), 807-10.

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LANTHANUM CHLORIDE, REFRACTIVE INDEX, DIFFERENTIAL EQUATION, INTEGRAL EQUATION, LANTHANUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1790 STEP NO--UR/0020/70/191/004/0807/0810

CIRC ACCESSION NO--AT0125402

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 017 UNCLASSIFIED

CIRC ACCESSION NO--AT0125402 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RELATIONS BETWEEN THE DISPERSION CURVES ARE CHECKED BY USING THE LA PRIME3POSITIVE ION IN AN AQ. SOLN. OF LACL SUB3 AS THE EXAMPLE. BECQUEREL'S DIFFERENTIAL AND INTEGRAL FORMULAS WERE VERIFIED; THE COEFF. R (SERBER, 1932) IS EQUAL TO 0.24 IN BOTH FORMULAS. THE INTEGRAL FORMULA WAS FOUND MORE SUITABLE FOR EXPTL. CHECKING AND GIVE A MORE RELIABLE RESULT IN DETG. R.

FACILITY: INST. OBSHCH. BEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC: 539.3:534.1

KARIMBAYEV, T. D., SHUKUROV, S.

"Stability and Free Oscillations of Close to Cylindrical Shells Subjected to a Twisting Moment"

V sb. Prochnost' i dinamika aviats. dvigateley. Vyp. 6 (Strength and Dynamics of Aircraft Engines--collection of works, No 6), Moscow, "Mashinostroyeniye", 1971, pp 37-68 (from RZh-Mekhanika, No 7, Jul 71, Abstract No 7V206)

Translation: The small-parameter method is used to study the problem of stability and free oscillations of shells of revolution which differ from cylindrical in their parabolic contour. It is shown for the investigated shells that there is a mutual influence between the stressed state due to the action of twisting moments distributed over the end face of the shell and the spectrum of natural frequencies. Approximate expressions are presented for the critical twisting moment which enable accounting for the slight deformation of the shell. A detailed description is given of the procedure for testing and for processing experimental data on the stability of close to cylindrical shells subjected to a twisting moment. Authors' abstract.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR UDC: 629.78.015.4

KARIMBAYEV, T. D., SHUKUROV, S.

"Stability and Free Oscillations of Shells Close to Cylindrical When Subjected to Torque"

V sb. Prochnost' i dinamika aviats. dvigateley (Strength and Dynamics of Aircraft Engines--collection of works), vyp. 6, Moscow, "Mashinostroyeniye", 1971, pp 37-68 (from RZh-Raketostroyeniye, No 7, Jul 71, Abstract No 7.41.188)

Translation: The small-parameter method is used to analyze the problem of stability and free oscillations of shells of revolution distinguished from cylindrical shells by a parabolic profile. For the shells which are studied, the authors determine the mutual influence of the stressed state caused by the action of twisting moments distributed over the end face of the shell, and the spectrum of natural frequencies. Approximate expressions are given for the critical torque. These expressions can be used to account for the slight flexibility of a shell. A detailed description is given of a procedure for carrying out tests and processing experimental data on the stability of close to cylindrical shells subjected to torque. Eight illustrations, two tables, bibliography of six titles.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SPECTROPHOTOMETRIC STUDY OF THE COMPLEXING OF LANTHANIDES WITH CARBOXYARSENAZO -U-

AUTHOR-(03)-SHUKUROV, S.SH., SHEMYAKIN, F.M., BASARGIN, N.N.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK TADZH. SSR 1970, 13(1), 36-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SPECTROPHOTOMETRIC ANALYSIS, COMPLEX COMPOUND, LANTHANUM COMPOUND, RARE EARTH COMPOUND, AZO COMPOUND, SULFONIC ACID, NAPHTHALENE, ARSENIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1123 STEP NO--UR/0425/70/013/001/0036/0039

CIRC ACCESSION NO--AT0119977

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 013 UNCLASSIFIED

CIRC ACCESSION NO--AT0119977 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN WEAKLY ACID SOLN. LA, CE, PR, AND ND FORM GREEN COMPLEXES WITH CARBOXYARSENAZO (THE DI-NA SALT OF 7,(O,ARSONOPHENYLAZO),2,(O,CARBOXYPHENYLAZO), 1,8,DIHYDROXY,3,6,NAPHTHALENEDISULFONIC ACID). THE ABSORBANCE OF THE COMPLEX IS QUITE CONST. AT PH 2.5-4.8 AND 50DEGREES. THE ABSORPTION MAX. ARE AT 610 AND 660 NM. BEER'S LAW IS FOLLOWED FOR 2-30 MUG RARE EARTH PER 25 ML. THE RELATIVE ERROR IS PLUS OR MINUS 5PERCENT.

FACILITY: TADZH. GOSMEDINST. IM. ABUAH IBN-SINO, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 022 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--IR ABSORPTION SPECTRA AND SPATIAL STRUCTURE OF STERO ISOMERIC 1,2,5,TRIMETHYL,4,HYDROXY,4,PEPERIDYLCARBINOLS -U-

AUTHOR-(05)-MAMONOV, V.I., DVORYANTSEVA, G.G., SHULAYEV, N.P., SYJYEVA, E.G., UNKOVSKIY, B.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970 (2) 173-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IR SPECTRUM, MOLECULAR STRUCTURE, HYDROXYL RADICAL, HETEROCYCLIC NITROGEN COMPOUND, HYDROGEN BONDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1503 STEP NO--UR/0409/70/000/002/0173/0179

CIRC ACCESSION NO--AP0112497

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 022 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112497

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONFIGURATION AND CONFORMATION OF I (R PRIME1 AND R PRIME2 EQUALS H, ME, ET, AND PH) WERE ESTD. ON THE BASIS OF IR SPECTROSCOPIC STUDY OF I INTRAMOL. H BONDS.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC: 681.332.65

MARKOV, A. I., NETKACH, A. Ya., SHULAYEV, V. F., Kazan' University

"A Pulse Shaper"

USSR Author's Certificate No 296043, filed 8 Dec 69, published 6 Apr 71 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct 71, Abstract No 10B219 P)

Translation: The invention applies to the field of information-measurement and computer technology. The advantages of the proposed device are most fully realized in instruments designed for operations under field conditions with power supply from portable truck-mounted generators. Similar devices are known for shaping control pulses for a dekatron which are based on vacuum-tube, semiconductor, and gas-discharge devices. The analogs described in many instances are not very economical, require high-voltage power supplies, or are exceptionally slow. The proposed device is capable of operation at a supply voltage of 10-12 V, providing high speed (up to 100 kHz when operated with an OG-8 dekatron) and adequate economy. One illustration.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

Acc. Nr: AP0053443 Abstracting Service: CHEMICAL ABST. 5130 Ref. Code: UR0366

S

110529y Transformation of halogen-containing aromatic compounds in the presence of an organic base. X. Reaction of 8-halo-5-nitro-1-naphthoic acids with piperidine in benzene. Lisitsyn, V. N.; Shulchishin, V. A. (Mosk. Khim.-Tekhnol. Inst. im. Mendeleeva, Moscow, USSR). *Zh. Org. Khim.* 1970, 6(2), 325-9 (Russ). The kinetics were studied of piperidine (I) or piperidine-*1-d* (Ia) with 8-bromo-5-nitro-1-naphthoic acid (II) or its 8-chloro analog (IIa). The reaction is base-catalyzed (Cu salts have no effect) and obeys the equation $dD/dt = k_1(A - x)(B - 2x) + k_2(A - x)(B - 2x)^2$ (D is halide ion concn., A is the initial II or IIa concn., B is the initial I or Ia concn.). The existence of a slight isotope effect suggests that the reaction mechanism involves no only quaternary salt formation, but also H-bonding (or D-bonding). A cyclic intermediate is postulated, which rearranges to the 8-piperidino analog of II.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 532.526:533.601.313

KOVALENKO, V. M., NESTEROVICH, N. I., SHULEMOVICH, V. N.

"Experimental Study of the Turbulent Boundary Layer on a Much Elongated Solid of Revolution in a Supersonic Flow"

Izvestiya sibirskogo otdeleniya Akademii Nauk SSSR, Seriya tekhnicheskikh nauk, No 8 (203), vyp. 2, Jun 1972, pp 41-46

Abstract: An experimental Study was performed to check the calculation techniques used to determine the characteristics of the boundary layer on an elongated solid of revolution in a supersonic flow. A model of the M-100 meteorological rocket without fins was used. It is a long hollow cylinder with ogive nose and shaft. The diameter of the cylindrical part was 25 mm with a total geometric elongation of $\lambda = 40$. Along the upper and lower generatrices of the cylindrical section there were 7 holes 0.6 mm in diameter to measure the static pressure P_w and 7 chromel-copel thermocouples to measure the surface temperature of the model T_w. The tests in a wind tunnel revealed that the wall law obtained for a turbulent boundary layer on a plate remains valid for the boundary layer on a cylinder at supersonic gas flow velocities to $M = 6$. With great elongation of the cylinder when the thickness of the boundary layer becomes commensurate

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USSR

KOVALENKO, V. M., et al., Izvestiya sibirskogo otdeleniya Akademii Nauk SSSR, Seriya tekhnicheskikh nauk, No 8 (203), vyp. 2, Jun 1972, pp 41-46

with the radius, the basic characteristics of the boundary layer differ noticeably from the corresponding characteristics on a plate. In particular, when $\lambda = 30-40$ the coefficients of friction, displacement area and momentum loss increased by 10-15%. The shape parameter H does not differ from the calculated value for a plate. The experimental data on the effect of the transverse curvature on the integral characteristics of the turbulent boundary layer and on the friction drag agree with those calculated by the semiempirical methods used previously [A. S. Ginevskiy, et al., Izv. AN SSSR, otd. mekhaniki i mashinostroyeniya, No 1, 1963; V. M. Kovalenko, Tr. TsAGI, No 1084, 1967].

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC: 532.526

KOVALENKO, V. M., SHULEMOVICH, V. M., Institute of Theoretical and Applied Mechanics, Siberian Department of the Academy of Sciences of the USSR, Novosibirsk

"Turbulent Boundary Layer on a Circular Cylinder"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Tekhnicheskikh Nauk, No 13(208), Issue 3, Oct 72, pp 8-16

Abstract: Formulas are derived for determining the principal characteristics of a compressed turbulent boundary layer on a circular cylinder in a supersonic flow: area of displacement, area of loss of momentum, form parameter, thickness of the boundary layer, and also the localized and average coefficients of friction drag. Curves are given showing these characteristics as functions of the basic flow parameters. A comparison with the case of a plate in an identical supersonic flow shows that the thickness of the boundary layer is less for a cylinder, while friction drag increases, and the form parameter changes little. The influence of the transverse curvature of the surface increases with an increase in the Mach number and temperature factor, and with a decrease in Reynolds number.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

KOVALENKO, V. M., SHULEMOVICH, V. M., Izv. SO AN SSSR, Ser. Tekhn. Nauk, No 13(208), Issue 3, Oct 72, pp 8-16

Curves for the ratio of average coefficients of friction drag for a cylinder and a plate in the same supersonic flow show that the theory of calculation of this ratio needs improvement. Comparison of the theoretical results with experimental data shows satisfactory agreement in general. V. M. Kovalenko thanks A. A. Boldyrev, Yu. P. Sergeyev and Yu. G. Shvalev who helped with boundary-layer experiments.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC 532.526

KOVALENKO, V. M., and SHULEMOVICH, V. M., Institute of Theoretical and Applied Mechanics, Siberian Department, USSR Academy of Sciences, Novosibirsk

"A Turbulent Boundary Layer on a Long, Thin Filament"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Tekhnicheskikh Nauk, Issue 1, No 3, 1973, pp 56-67

Abstract: The effect of transverse surface curvature on the characteristics of a turbulent boundary layer has been dealt with in a number of studies; the present research consisted of experimental investigation of the characteristics and structure of a boundary layer on extended flow-around circular cylinders with elongation up to 2,500. The observations were made with use of the ITPM T-324 low-turbulence wind tunnel.

In the studied range of Reynolds numbers $Re = (6-15) \cdot 10^6$, with elongations $\lambda = 1{,}020-2{,}500$, the boundary layer in the case of longitudinal flow-around of a circular cylinder was found to be purely turbulent, and quite different from the corresponding boundary layer of a smooth plate. Its thickness, for example, is less by a factor of 2 or more, the velocity profiles are fuller, and the value of the form parameter H is 16% lower, while the value of

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USSR

KOVALENKO, V. M., and SHULEMOVICH, V. M., Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Tekhnicheskikh Nauk, Issue 1, No 3, 1973, pp 56-67

friction drag is 53-69% higher, than in the case of the plate. Turbulence intensity distribution is qualitatively different as well, this being explained by the altered character of turbulence energy generation across the thickness of the boundary region.

Values of the form pareter of the boundary layer, thickness of the layer, and mean friction drag, as obtained experimentally for very large elongations of the cylinder ($\lambda \leq 2{,}500$) are in close agreement with results obtained by other investigators.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR UDC: 519.2

TARASENKO, F. P., SHULENIN, V. P.

"Concerning the Statistical Relation Between an Observation and its Rank"

Tr. Sib. fiz.-tekhn. in-ta pri Tomsk. un-te (Works of the Siberian Physicotechnical Institute Affiliated with Tomsk University), 1971, vyp. 62, pp 220-228 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V164)

Translation: Expressions are given for a number of characteristics of the relation between an observation and its rank in a sample of volume N: the conditional distributions and mathematical expectations of one quantity when the other is fixed, the correlation coefficient, the amount of information in one quantity concerning the other. D. Chibisov.

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R.V. SHULENINA

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Acc. Nr.: AP0042570

Ref. Code: UR0293

JPRS 50162

Study of Geoactive Corpuscles and Photoelectrons

(Abstract: "Study of Geoactive Corpuscles and Photoelectrons on the 'Kosmos-261' Satellite," by A. D. Bolyunova, M. L. Bragin, Yu. I. Gal'perin, V. A. Gladyshev, N. V. Dzhordzhio, G. N. Zlotin, I. N. Kiknadze, R. A. Kovrazhkin, T. M. Mulyarchik, Yu. N. Ponomarev, V. V. Temnyy, N. I. Fedorova, Yu. P. Shilyayev, F. K. Shuyskaya and R. V. Shulenina; Moscow, Kosmicheskiye Issledovaniya, Vol VIII, No 1, 1970, pp 104-136)

The artificial earth satellite "Kosmos-261" was used in a study of low-energy geoactive corpuscles and fresh photoelectrons and their interaction with the earth's upper atmosphere. The satellite was launched on 20 December 1968. Orbital inclination to the equator was 71°, so that for a relatively long time it moved almost along a tangent along the auroral zone over the Soviet Far North, making it possible to increase the volume of simultaneous measurements from the satellite and from ground observatories. The storage regime made it possible to extend continuous measurements for periods of several revolutions, including passes over the auroral zones in the Arctic and Antarctic and over the polar caps as far as invariant geomagnetic latitudes 82-85°. During the initial period the satellite apogee was at 670 km and perigee was at 217 km, but it finally

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AP0042570

burnt up upon entering into the dense layers of the atmosphere on 12 February 1969 after making 857 revolutions of the earth. The experiment lasted 53 days. The orbit was such that in the northern hemisphere middle and high latitudes the satellite moved below or close to the maximum of the Foregion so that ionospheric electron density along its trajectory and its variations could be determined in a number of regions on the basis of measurements by ground ionospheric stations. The period of the experiment included both quiet periods and those with strong disturbances. The experiment was conducted under the "Program of Cooperation Among Socialist Countries in the Field of Space Research and Peaceful Use of Space." Ground measurements were made in Bulgaria, Hungary, East Germany, Poland, Rumania, USSR and Czechoslovakia. Observatories and special expeditionary stations in the USSR participated: in Yakutia, the Far North, Siberia and middle latitudes. The article cited below is divided into four parts: 1) Description of Experiment; 2) Measurement of Low-Energy Electrons; 3) Measurement of Low -Energy Ions; 4) Measurements of Charged Particles with Intermediate and High Energies. Parts 2)-4) are essentially independent articles and are abstracted separately.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--SOLUTION OF CRITICAL PROBLEMS BY SOLVING NONLINEAR EQUATIONS -U-

AUTHOR-(02)-SHULEPIN, V.S., RUMYANTSEV, G.YA.

COUNTRY OF INFO--USSR

S

SOURCE--AT. ENERG. USSR 28, 61-2 JAN 1970

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--GROUP THEORY, NUCLEAR REACTOR TECHNOLOGY, NONLINEAR EQUATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1309 STEP NO--UR/0089/70/028/000/0061/0062

CIRC ACCESSION NO--AP0054193

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 018 UNCLASSIFIED

CIRC ACCESSION NO--AP0054193 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MULTIGROUP METHOD (WITH ARBITRARY NUMBER OF ENERGY GROUPS) FOR REACTOR CRITICALITY CALCULATIONS IS DESCRIBED CONSIDERING THE PROPERTIES OF THE MEDIUM AS CONTINUOUS COORDINATE FUNCTIONS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 012 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--SOLUTION OF CRITICAL PROBLEMS IN A SYMPTOTIC APPROXIMATION -U-

AUTHOR--SHULEPIN, V.S.

S

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. (USSR), 28: 60-1(JAN 1970)

DATE PUBLISHED----JAN70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--NUCLEAR REACTOR DESIGN, ASYMPTOTIC SOLUTION, GROUP THEORY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/1066 STEP NO--UR/0089/70/028/000/0060/0061

CIRC ACCESSION NO--AT0053977

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 012 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AT0053977

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ASYMPTOTIC THEORY WAS USED FOR REACTOR CRITICALITY CALCULATIONS WITH MULTIGROUP ASSUMPTION.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 012 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--DETERMINATION OF EXCESS REACTIVITY -U-

AUTHOR-(02)-SHULEPM, V.S., MATVEYENKO, V.I.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. 1970, 28(4), 355

DATE PUBLISHED--------70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, PHYSICS

TOPIC TAGS--WATER MODERATED REACTOR, NUCLEAR REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0593 STEP NO--UR/0089/70/028/004/0355/0355

CIRC ACCESSION NO--AP0137678

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 012 UNCLASSIFIED

CIRC ACCESSION NO--AP0137678 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR DETG. THE EXCESS REACTIVITY IN A WATER MODERATED REACTORS WITH A REFLECTOR, THE METHOD PROPOSED EARLIER (S. KRASIK AND A. RADKOVSKII, 1955) WAS APPLIED BY INTRODUCING A CORRECTION DELTA DEFINED AS DELTA EQUALS P SUB2 MINUS P SUB1, WHERE P SUB2 WAS THE CALCD. EXCESS REACTIVITY OF THE FULL SIZE REACTOR ACCORDING TO THE ABOVE METHOD AND P SUB1 WAS THE VALUE DETD. FROM EQUATION P SUB1 EQUALS INTEGRAL OF PRIMEHO SUBHM (SINULETP-SINULETH)(H, R SUBK)DH PLUS P(H SUBM, R SUBO)F WHERE H SUBO AND R SUBO WERE THE LENGTH AND RADIUS OF THE FULL SIZE REACTOR, RESP., H SUBM WAS THE MIN. EXPTL. CRIT. HEIGHT OF THE ACTIVE ZONE, AND R SUBK WAS THE CRIT. RADIUS AT THE HEIGHT H OF THE ACTIVE ZONE. A SIMILAR EQUATION WAS RECOMMENDED FOR INHOMOGENEOUS ACTIVE ZONE; THE RESULTS CALCD. BY APPLYING VARIOUS APPROXNS. ARE GIVEN.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/3 032 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--MECHANISM OF ELECTRICAL CONDUCTIVITY OF CARBONIZED MATERIALS BASED ON PETROLEUM COKE -U-

AUTHOR-(03)-PLECHEV, V.N., PEKIN, P.V., SHULEPOV, S.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TVERD. TOPL. 1970, (2), 120-4

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--ACTIVATION ENERGY, COKE, PETROLEUM PRODUCT, ENTHALPY, HALL EFFECT, CHEMICAL REACTION MECHANISM, ELECTRICAL CONDUCTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1849 STEP NO--UR/0467/70/000/002/0120/0124

CIRC ACCESSION NO--AP0130679

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

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2/3 032 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0130679

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESISTIVITY RHO AND THERMAL EMF. COEFFS. ALPHA AT 100-1100DEGREESK WERE MEASURED AND HALL CONSTS., ACTIVATION ENERGIES DELTAE SUB1 AND DELTAE SUB2, ELEC. CURRENT CARRIER CONCNS. N, AND EFFECTIVE MOBILITIES MU WERE CALCD. FOR POWD. PETROLEUM COKE COAL TAR PITCH MIXTS. SINTERED AT 870-2720DEGREESK. THE TEMP. COEFFS. OF RHO WERE NEG. DELTAE SUB1, THE THERMAL ACTIVATION OF THE ELECTRONS FROM THE VALENCE TO THE COND. ZONE, AND DELTAE SUB2, THE ENTHALPY OF ACTIVATION OF ELECTRON MOBILITY, DECREASED WITH INCREASING TEMP. FROM 0.57 AND 0.120 EV AT 870DEGREESK TO 0.20, 0.09, 0.043 AND 0.002, 0.001, AND 0.001 EV AT 1690, 2070, AND 2470DEGREESK. FOR SAMPLES PREPD. AT THE EXTREMES OF THE TEMP. RANGE, ALPHA SHOWED SHARP MAX. (40 AND 8 MUV-DEGREESK AT 200-400DEGREESK FOR SAMPLES CARBONIZED AT 950 AND 2720DEGREES, RESP.), THE POSITIONS OF WHICH DEPENDED ON THE CARBONIZATION TEMP., WHEREAS, FOR THOSE PREPD. AT 1373 AND 1910DEGREESK, ALPHA INCREASED STEADILY BUT MUCH MORE GRADUALLY THE LOWER THE CARBONIZATION TEMP. THE HALL CONSTS. WERE 8, 3.8, 1.5, MINUS 1.7, MINUS 2, MINUS 3.4, 3.5, 11.5, 21.5, 13.8, AND 4.0 CM PRIME3 COULOMB AT 970, 1070, 1170, 1370, 1570, 1690, 1910, 2070, 2270, 2470, AND 2720DEGREESK. AT 870 TO 1000DEGREESK, MU WAS SMALLER THAN 1 CM PRIME2-V-SEC AND THE JUMP MECHANISM WAS APPLICABLE; ABOVE 1000DEGREESK, MU WAS GREATER THAN 1 CM PRIME2-V-SEC AND THE ZONAL MECHANISM WAS VLID.

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3/3 032 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0130679

ABSTRACT/EXTRACT--REFLECTING THE DEGREE OF FILLING OF THE VALENCE ZONE AND ACTIVATION OF PI ZONE ELECTRONS, THE VARIATION OF N WITH GRAPHITIZATION TEMP. SHOWED TWO MAX. AT SIMILAR TO 1250 AND 1800DEGREESK, BETWEEN WHICH COND. RESULTED FROM ELECTRON CURRENT AND BELOW AND ABOVE WHICH IT RESULTED FROM HOLE CURRENT. FACILITY: CHELYABINSK. GOS. PEDAGOG. INST., CHELYABINSK, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

TITLE--SOME RESULTS OF STUDY OF TIDAL INTERNAL WAVES IN THE TROPICAL ATLANTIC -U-

AUTHOR-(02)-SABININ, K.D., SHULEPOV, V.A.

S

COUNTRY OF INFO--USSR, ATLANTIC OCEAN

SOURCE--MOSCOW, IZVESTIYA AKADEMII NAUK SSSR, FIZIKA ATMOSFERY I OKEANA, VOL. VI, NO. 2, 1970, PP. 189-197

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--TIDAL WAVE, TROPICS, OCEAN, TEMPERATURE VARIATION, THERMOGRAPHIC ANALYSIS, TRADE WIND, SUBMARINE RIDGE, WAVE PROPAGATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1302 STEP NO--UR/0362/70/006/002/0189/0197

CIRC ACCESSION NO--AP0110393

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/3 022 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0110893

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OT TIDAL INTERNAL WAVES IN THE TROPICAL ATLANTIC ON THE BASIS OF MEASUREMENTS OF TEMPERATURE WITH PHOTOTHERMOGRAPHS IN TWO REGIONS OF THE TRADE WINDS ZONE IN THE ATLANTIC. A NETWORK OF SELF CONTAINED BUOY STATIONS OUTFILLED WITH PHOTOTHERMOGRAPHS WAS SET OUT IN THE NORTHERN PART OF THE BRAZILIAN BASIN AND IN THE SOUTHERN PART OF THE SOUTH AFRICAN BASIN, THAT IS, IN THE ZONES OF THE SOUTHEAST AND NORTHEAST TRADES RESPECTIVELY. THE RECORDS REVEALED A VERY GREAT TEMPERATURE VARIABILITY. TEMPERATURE VARIATIONS WITH A SEMIDIURNAL PERIOD HAVE AN AMPLITUDE ATTAINING 1.3DEGREESC WHEREAS VARIATIONS WITH PERIODS OF TENS OF MINUTES HAVE AN AMPLITUDE OF ABOUT 0.3DEGREESC. (THESE ARE THERMOCLINAL MEASUREMENTS.) IN THE NORTHEAST TRADES REGION THERE ARE SEMIDIURNAL INTERNAL WAVES PROPAGATING IN A NORTHEASTERLY DIRECTION WITH A VELOCITY EXCEEDING 3 M TIMES SEC NEGATIVE PRIMEL. IN THE SOUTHEAST TRADES REGION THERE ARE SEMIDIURNAL INTERNAL WAVES PROPAGATING IN A SOUTHWESTERLY DIRECTION WITH A VELOCITY LESS THAN 3 M TIMES SEC NEGATIVE PRIMEL. THE DEGREE OF EXPRESSION OF THESE WAVES WAS CONSIDERABLY WEAKER THAN IN THE NORTHEAST TRADES ZONE AND THE ACCURACY IN DETERMINING THEIR PARAMETERS WAS CONSIDERABLY POORER. A COMPARISON OF THE DIRECTION OF PROPAGATION OF INTERNAL WAVES IN THE NORTHERN AND SOUTHERN REGIONS INDICATES THAT THE REGION OF EXCITATION OF THESE WAVES MAY BE THE EQUATORIAL REGION OF THE MID ATLANTIC RIDGE WHERE THE LATTER EXTENDS ALMOST ALONG THE PARALLEL.

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3/3 022 UNCLASSIFIED

CIRC ACCESSION NO--AP0110893 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--AS THE TIDAL WAVE EMANATING FROM ANTARCTICA PASSES OVER THIS PART OF THE RIDGE TIDAL INTERNAL WAVES CAN BE GENERATED WHICH ARE PROPAGATED TO THE NORTH AND SOUTH. THE PARAMETERS (LENGTH, DIRECTION AND PROPAGATION VELOCITY) OF THE SEMIDIURNAL INTERNAL WAVES ARE DETERMINED. FACILITY: ACOUSTICS INSTITUTE ACADEMY OF SCIENCES UUSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

USSR

UDC: 620.18.539.4.019.3:621.791

MALAN'IN, Yu. M., KAVERINA, S. N., RZHEVSKAYA, I. Ya., SHULEPOV, V. I., YUDKOVSKIY, S. I., Moscow

"Study of Various Zones in a Welded Joint in Molybdenum by Methods of Internal Friction and Electron Microscopy"

Moscow, Fizika i Khimiya Obrabotki Materialov [The Physics and Chemistry of Materials Processing], No 6, Nov-Dec 73, pp 123-126.

Abstract: It is demonstrated that the high probability of formation of cracks in the zone around a welded seam in molybdenum results from the disappearance of the cellular structure of the metal during welding, the sharp drop in solubility of interstitial impurities and the separation of carbide particles, around which significant local phase hardening occurs.

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USSR UDC 616.988.25-022.395.42-084.4(470.51)

KUCHERUK, V. V., KORENBERG, YE. I., PANFILOVA, S. S., SHULEPOVA, T. G., SHIRNOV, A. V., and LEBEDEV, I. P., Laboratory of Medical Zoology, Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Sciences USSR, Moscow, and Republic Sanitary Epidemiological Station, Udmurt ASSR, Izhevsk

"Recent Results in the Control of Tickborne Encephalitis in the Udmurt ASSR"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 40, No 3, May/Jun 71, pp 275-283

Abstract: The annual incidence of tickborne encephalitis is high in the Udmurt ASSR. In some years, it was 18% of all recorded diseases. Data on the disease as it occurred from 1956 to 1965 were studied. The results of these studies led to a sharp reduction in incidence of the disease in the Udmurt ASSR. Statistical data on the disease level are presented in bar graphs for various regions over the 10-year period. Various forests in the area were characterized by their degree of epidemic danger, based on preliminary mapping of the occurrence and recurrence of infections. Subsequently, tick-extermination areas (amounting to 7% of the entire forest lands) were set aside and ticks eliminated by aerial spraying. Gamma-globulin prophylaxis and vaccination are recommended for the population living in areas in which tick eradication is difficult to achieve or impractical.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/3 011 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--CORRELATION BETWEEN TEMPERATURE OF SURFACE WATER IN THE OCEAN AND THE INTENSITY OF A TROPICAL HURRICANE. CORRELATION BETWEEN SURFACE WATER

AUTHOR--SHULEYKIN, V.V.

S

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, DOKLADY AKADEMII NAUK SSSR, VOL 192, NO 2, 1970, PP 320-323

DATE PUBLISHED--------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--OCEAN SURFACE TEMPERATURE, HURRICANE, TROPICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1197 STEP NO--UR/0020/70/192/002/0320/0323

CIRC ACCESSION NO--AT0133200

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

UNCLASSIFIED PROCESSING DATE--20NOV70

2/3 011

CIRC ACCESSION NO--AT0133200

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THIS IS A CONTINUATION OF SHULEYKIN'S EARLIER ARTICLES (V. V. SHULEYKIN, DAN, 186, NO 3, 1969, 578; DAN, 189, NO 6, 1969). HIS APPROACH TO THE STUDY OF HURRICANES IS THE USE OF A SIMPLIFIED MODEL OF THE FIELD OF A TROPICAL HURRICANE BASED ON ITS REPRESENTATION AS A HEAT ENGINE "OF THE FIFTH KIND" FOR WHICH THE HEATER IS THE WATERS OF A WARM SURFACE CURRENT AND WHOSE CONDENSER IS ALL THE SURROUNDING HALF SPACE. SIMPLE EXPRESSIONS HAVE BEEN DERIVED WHICH CONTAIN ONLY ALGEBRAIC FUNCTIONS, FROM WHICH IT IS POSSIBLE TO ESTABLISH A RELATIONSHIP AMONG THE VARIOUS PARAMETERS OF THE HURRICANE FIELD. IN THIS ARTICLE AN ATTEMPT IS MADE TO FIND A CORRELATION BETWEEN THE TEMPERATURE OF THE UNDERLYING OCEAN WATER AND THE POWER WHICH IS RELEASED DURING CONDENSATION OF THE VAPOR RISING IN ASCENDING CURRENTS IN THE "NUCLEUS" OF THE HURRICANE (IN THE DISTANCE FROM THE "EYE" TO APPROXIMATELY ONE THIRD THE RADIUS OF THE ENTIRE HURRICANE FIELD). THIS APPROXIMATE INVESTIGATION HELPS IN UNDERSTANDING THE REASON FOR THE UNPRECEDENTED DESTRUCTION FROM HURRICANE CAMILLE IN 1969. AT ONE OF ITS STAGES IT PASSED IN THE GULF OF MEXICO OVER WATER HAVING A TEMPERATURE OF ABOUT 32DEGREES, WHEREAS ON THE MAP IN THE SOVIET MARINE ATLAS THE MEAN LONG TERM TEMPERATURE OF THE SURFACE WATER AT THIS TIME OF YEAR I THIS AREA IS LESS THAN 29DEGREES. THE ENERGY RELEASED BY THIS HURRIC WAS TWICE AS GREAT AS FOR THE MOST COMMONLY OBSERVED ATLANTIC HURRICA PASSING OVER A WARM CURRENT WITH A SURFACE TEMPERATURE OF 27DEGREES.

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3/3 011 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0133200

ABSTRACT/EXTRACT--THESE THREE ARTICLES BY SHULEYKIN PROVIDE A FULL THEORETICAL BASIS FOR UNDERSTANDING THE DEPENDENCE OF HURRICANE INTENSITY ON TEMPERATURE OF THE UNDERLYING WATER. FACILITY: MARINE HYDROPHYSICAL INSTITUTE.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--BASICITY AND ELECTRON STRUCTURE OF PYRANONES -U-

AUTHOR-(03)-TOLMACHEV, A.I., DYADYUSHA, G.G., SHULEZHKO, L.M.

COUNTRY OF INFO--USSR

SOURCE--TEOR. EKSP. KHIM. 1970, 6(2), 185-91

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MOLECULAR STRUCTURE, MOLECULAR ORBITAL, AROMATIC KETONE, HETEROCYCLIC OXYGEN COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605013/B03 STEP NO--UR/0379/70/006/002/0185/0191

CIRC ACCESSION NO--AP0140343

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140343

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HUECKEL LCAO MO CALCNS. WERE PERFORMED FOR PYRANONES, CHROMONES, BENZOCHROMONES, XANTHONES, COUMARINS, AND THEIR PROTONATED SPECIES. PARAMETERS USED WERE BY PARISER, PARR, AND POPLE; PK SUBBH PRIME POSITIVE WAS PLOTTED AS A FUNCTION OF PI ELECTRON ENERGY OF PROTONATION (DELTAEPSILON PI). PI ELECTRON D. AND PI BOND ORDERS OF THESE COMPDS. WERE CALCD. AND THE LOCALIZATION ENERGIES FOR ELECTROPHILIC, RADICAL, AND NUCLEOPHILIC SUBSTITUTION IN PYRANONES WERE DETD. THE CALCD. VALUES VERIFY THE EXPTL. FINDINGS THAT FOR ELECTROPHILIC SUBSTITUTION POSITION 3 IS PREFERRED, WHILE POSITION 2 IS FAVORED IN RADICAL AND NUCLEOPHILIC SUBSTITUTION. FACILITY: INST. ORG. KHIM., KIEV, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 020 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--OSCILLATOR MODEL OF AZAPORPHYRINS -U-

AUTHOR-(03)-GURINOVICH, G.P., SINYAKOV, G.N., SHULGA, A.N.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 620-4

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--PORPHYRIN, SPECTRUM, PHOSPHORUS CHLORIDE, ALKENE, TEMPERATURE DEPENDENCE, LUMINESCENCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0214 STEP NO--UR/0048/70/034/003/0620/0624

CIRC ACCESSION NO--AP0126004

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

2/2 020 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126004

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF AZA SUBSTITUTION ON A MCL. OSCILLATOR WAS STUDIED BY USING THE METHOD OF POLARIZED LUMINESCENCE AT AMBIENT TEMP. IN 3:1 CYCLOHEXANOL GLYCEROL SOLNS. OF ETICPORPHYRIN II (I), ITS MONOAZA (II) AND TRANS DIAZA (III) ANALOGS, TETRAAZAPORPHINE (IV) AS WELL AS THE ZN II, ZN III, AND MG IV COMPLEXES. AZA SUBSTITUTION RESULTED IN SYMBATIC ALTERATION OF THE LUMINESCENCE AND ABSORPTION SPECTRA; THE ELECTRONIC TRANSITION BAND BECAME MORE INTENSE AND THE VIBRATIONAL BAND CONSIDERABLY WEAKER AS COMPARED WITH THE PARENT PORPHYRINS, AND THE SPECTRA EXHIBITED QUAL. MIRROR SYMMETRY. THE EXTENT OF POLARIZATION OF SINGLE BANDS OF THE SPECTRA IN THE SYM. AND UNSYM. COMPDS. IS DISCUSSED. UNCHAIN REACTION, AFTER THE INITIAL CLEAVAGE OF PCL SUB3 INTO PCL SUB2 AND CL RADICALS. THIS MECHANISM ALSO IS ABLE TO EXPLAIN THE GREATER REACTIVITY OF BRANCHED OLEFINS WITH THEIR HIGH ELECTRON D. AT THE DOUBLE BOND; HOWEVER, AT SIMILAR TO 400EGREES THE BRANCHING BEGINS TO EXERT AN INHIBITING EFFECT ON THE REACTION AND THE STERIC FACTOR BECOMES PREDOMINANT OVER THE POLAR FACTOR; THIS ACCOUNTS FOR THE MAX. RADIOCHEM. YIELD OF THE PRODUCTS AT SIMILAR TO 40DEGREES FROM 2 METHYL 2 BUTENE, WHILE 2 PENTENE SHOWS A STEADILY INCREASING YIELD WITH RISING TEMP. EVEN AT 60DEGREES. FACILITY: INST. FIZ., MINSK, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--EVIDENCE FOR EXTRACHROMOSOMAL LOCATIONOF PROPHAGE N15 -U-

AUTHOR-(02)-RAVIN, V.K., SHULGA, M.G.

COUNTRY OF INFO--USSR

SOURCE--VIROLOGY 1970, 40(4), 800-7

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BACTERIOPHAGE TYPING, BIOLOGIC MUTATION, DNA, CHROMOSOME

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0353 STEP NO--US/0000/70/040/004/0800/0807

CIRC ACCESSION NO--AP0126109

UNCLASSIFIED

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2/2 G15 UNCLASSIFIED

CIRC ACCESSION NO--APC126109 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WITH THE AID OF TEMP. SHIFT EXPTS., THE TS MUTANTS OF TEMPERATE BACTERIOPHAGE N15 WERE DIVIDED INTO 2 GROUPS, EARLY AND LATE ONES. PHAGE DNA REPLICATION WAS NORMAL IN LATE MUTANTS AT ELEVATED TEMP. BOTH IN THE VEGETATIVE AND PROPHAGE STATES, WHEREAS SUCH REPLICATION WAS DISTRUBED UNDER THE SAME CONDITION IN BOTH STATES IN EARLY MUTANTS. THIS DISTURBANCE RESULTED IN THE INTENSIVE CURING OF EARLY MUTANT LYSOGENS UNDER NONPERMISSIVE CONDITIONS. PROPHAGE N15 DNA SEDIMENTED IN SUCROSE GRADIENTS SEP. FROM BACTERIAL DNA. THE CONCLUSION WAS DRAWN THAT PROPHAGE N15 WAS NOT INCORPORATED INTO THE BACTERIAL CHROMOSOME. SOME OTHER PROPERTIES OF PHAGE N15 AND ITS DNA WERE DESCRIBED. FACILITY: INST. GEN. GENET., MOSCOW, USSR.

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Acc. Nr. AP0045098 Abstracting Service: 5170 Ref. Code: UR0441

INTERNAT. AEROSPACE ABST.

S

A70-23391 Dynamic problems of the theory of elasticity for simply connected domain (Dinamichna zadacha teorii pruzhnosti dlia odnozv'iaznoi oblasti). M. O. Shul'ga (Akademiia Nauk Ukrains'koi RSR, Institut Mekhaniki, Kiev, Ukrainian SSR). *Akademiia Nauk Ukrains'koi RSR, Dopovidi, Seriia A—Fiziko-Tekhnichni i Matematichni Nauki*, vol. 32, Jan. 1970, p. 59-62. 6 refs. In Ukrainian.

On the basis of the previously obtained solution for the Heimholtz equation in curvilinar coordinates the method is suggested for reduction of external plane stationary dynamic problems of the theory of elasticity for simply connected domains to the infinite systems of algebraic equations.

(Author)

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SHULGA, N. A.

TECHNICAL TRANSLATION

FSTC-HT-23-317-72

ENGLISH TITLE: Spatial Dynamics Problem of the Theory of Elasticity for a Multiply Connected Area

FOREIGN TITLE: Prostranstvennaya Dinamicheskaya Zadacha Teorii Uprugosti Dlya Mnogosvarnoy Oblasti

AUTHOR: N. A. Shulga

SOURCE: Kiev, Prikladnaya Mekhanika, Vol. 5, No. 11

Translated for FSTC by Albert L. Peabody
LEO KANNER ASSOCIATES INC.

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USSR

AKHIYEZER, A. I., FOMIN, P. I., and SHUL'GA, N. F., Kharkov State Institute imeni A. M. Gorky'

"Coherent Bremsstrahlung of Electrons and Positrons of Ultrahigh Energy in Crystals"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 13, No 12, 20 Jun 71, pp 713-715

Abstract: The authors find that the bremsstrahlung of electrons and positrons has a coherent character for small angles of slope θ of the primary beam to the axis of the crystal. The theory of the effect in the first Born approximation has been described previously. In this approximation the radiation from electrons and positrons is the same. Here the authors wish to show that at sufficiently small angles θ the coherent effect increases the relative contribution of the second and higher Born approximations, which, in turn, leads to a substantial difference in the radiation from electrons and positrons at small angles θ even in crystals of light elements, but they note that the incoherent part does not act in the same manner. They are able to prove their assumptions through use of a mathematical apparatus. The article contains 4 bibliographic entries.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203010011-1

1/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--NATURE OF THE 475DEGREES BRITTLENESS OF HIGH CHROMIUM STEELS -U-

AUTHOR-(04)-SHULGA, N.G., ZAMORA, M.F., PALASH, V.N., ZIMA, YU.V.

COUNTRY OF INFO--USSR

S

SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (2), 51-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--HIGH CHROMIUM STEEL, METAL BRITTLENESS, ALLOY DESIGNATION/(U)KH17 HIGH CHROMIUM STEEL, (U)KH25 HIGH CHROMIUM STEEL, (U)KH28 HIGH CHROMIUM STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1289 STEP NO--UR/0129/70/000/002/0051/0053

CIRC ACCESSION NO--AP0106070

UNCLASSIFIED

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2/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106070

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INVESTIGATION CONFIRMED THA PRESENCE OF 2 TYPES OF PHENOMENA LEADING TO THE 475DEGREES BRITTLENESS IN HIGH CR STEELS KH17 AND KH28 WHICH WAS EARLIER OBSERVED IN KH25. (1) WHILE HOLDING AT BRITTLENESS TEMP. UP TO 1 HR, FORMATION OF AN ORDERED ZONE TAKES PLACE WHICH LOWERS PLASTICITY, MAINLY IN THE LIMITS OF THE CHROME FERRITE SECTION. (2) WITH FURTHER HOLDING TIME, AN INTRAPHASE DECOMPN. OF FERRITE TO 2 SOL. SOLNS. ALL ALONG THE GRAINS WAS OBSD. WHICH WERE DIFFERENT IN COMPN. FROM CR. THE LARGEST EFFECT ON EMBRITTLEMENT WAS HOMOGENEITY OF THE SOL. SOLN. WITH INCREASE IN INHOMOGENEITY OF THE DISTRIBUTION OF CR, THE EMBRITTLEMENT PROCEEDS FOLLOWING ONLY SEVERAL MIN OF HEATING AT 450-520DEGREES.

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TITLE--EFFECT OF ULTRASONIC TREATMENT ON THE PHYSICOMECHANICAL PROPERTIES OF SOME PRECISION ALLOYS -U-

AUTHOR--BABEY, YU.I., YAREMKEVICH, S.K., SHULGA, N.G., VYGOVSKIY, I.P.

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ELEVEN DISPERSION HARDENED, PRECISION ALLOYS FE-NI-AL-CO (RANGES NI 13.5-19.6, AL 7.0-12.27, CO 12.0-36.5, SI 0.0-0.5, TI 0.24-7.0 OR NB 0.5-0.8 WT. PERCENT, FE REST) WERE STUDIED AS TO THE EFFECT OF ULTRASOUND ON PROPERTIES AND STRUCTURE. ALL SPECIMENS WERE HEATED TO 1250-80DEGREES, HELD FOR 15-20 MIN, AND COOLED TOGETHER WITH THE FURNACE AT 20DEGREES PER HR. THE THERMOMAGNETIC TREATMENT WAS CARRIED OUT BY HEATING IN A BACL SUB2 BATH AT 800-40DEGREES FOR 10 MIN, FURTHER HEATING ALSO IN BACL SUB2 AT 1280DEGREES FOR 10-15 MIN.COOLING IN LOWER TEMP. RANGE AT THE CRIT. RATE 40-60DEGREES PER MIN IN A MAGNETIC FIELD. BEFORE THE ULTRASONIC TREATMENT THE FOLLOWING ALTERNATIVE THERMAL TREATMENTS WERE APPLIED: (1) HEATING TO 1250-80DEGREES, COOLING IN THE LOWER TEMP. RANGE (400-850DEGREES) AT 40-60DEGREES PER MIN AND TEMPERING AT 600DEGREES, (2) STEPWISE HEATING AND COOLING AT CRIT. RATE FROM 1280DEGREES IN A MAGNETIC FIELD, (3) THE ABOVE MENTIONED THERMOMAGNETIC TREATMENT WITH TEMPERING FOR 4 HR AT 600DEGREES, AND (4) STEPWISE HEATING AND COOLING WITH CRIT. RATE IN MAGNETIC FIELD (WITHIN THE REGION OF SOLID SOLN.) WHILE APPLYING ULTRASOUND DURING TEMPERING AT 600DEGREES WITH VARYING TIME PERIODS. THE IRRADN. WITH ULTRASOUND WAS CARRIED OUT AT 18-20 KHZ IN A MAGNETIC FIELD OF 1500-2000 OE. AFTERWARDS, THE MICROSTRUCTURE, MAGNETIC PROPERTIES, SP. ELEC. RESISTANCE, THERMAL EXPANSION, MICROHARDNESS, INTERNAL FRICTION, HEAT COND., AND YOUNG MODULUS WERE DETD. THE ULTRASOUND AFTER TREATMENTS (1) AND (3) HAD NO EFFECT, WHILE TREATMENT (2) AND ULTRASOUND HAD A WEAK EFFECT ON MAGNETIC PROPERTIES.

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