

2/2 042

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0112439

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. EXPERIMENTAL INVESTIGATION OF THE TURBULENT DIFFUSION COEFFICIENTS AND THE TIME DEPENDENT SCALE OF TURBULENT VELOCITY PULSATIONS IN TURBULENT AIR FLOWS OF VARIOUS TYPE. SPECIFICALLY INVESTIGATED IS THE RELATION BETWEEN THE EULERIAN AND LAGRANGIAN TURBULENCE CHARACTERISTICS. THE LAGRANGIAN CHARACTERISTICS WERE DETERMINED FROM THERMAL DIFFUSION MEASUREMENTS BEHIND A HOT WIRE, WHILE THE EULERIAN CHARACTERISTICS WERE DETERMINED FROM HOT WIRE ANEMOMETER MEASUREMENTS. THE RELATIONS OBTAINED FOR THE VARIOUS FLOWS ARE ANALYZED AS TO THEIR VALIDITY AND GENERALITY FOR CALCULATING TURBULENT DIFFUSION COEFFICIENTS ON THE BASIS TURBULENCE SCALES DETERMINED IN AN EULERIAN SYSTEM OF COORDINATES.

UNCLASSIFIED

1/2 036 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--EXPANSION OF A PLANE TURBULENT JET FROM A LINEAR SOURCE POSITIONED  
AT THE APEX OF A WEDGE -U-  
AUTHOR--SEKUNDOV, A.N.

COUNTRY OF INFO--USSR

SOURCE--INZHENERNO-FIZICHESKII ZHURNAL, VOL. 18, MAY 1970, P. 919-923. 5  
REFS  
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--TURBULENT FLOW, JET FLOW

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAHE--3007/1142

STEP NO--VR/0170/70/018/000/0919/0923

CIRC ACCESSION NO--AP0136562

UNIT ACCESSION

2/2 036

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136562

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS OF A THEORETICAL SOLUTION OF THE PROBLEM OF THE EXPANSION OF A PLANE TURBULENT JET FROM A LINEAR SOURCE AT THE APEX OF A WEDGE, TAKING INTO ACCOUNT THE FLOW OF EJECTED AIR TOWARD THE JET AND THE ASSOCIATED STATIC PRESSURE VARIATION. ALLOWANCE FOR THE STATIC PRESSURE VARIATION LEADS TO A NEW LAW FOR AXIAL VELOCITY ATTENUATION IN WHICH THE POWER EXPONENT IS A FUNCTION OF THE WEDGE APEX ANGLE.

FACILITY: TSENTRAL'NYI NAUCHNO

ISSLEDOVATEL'SKII INSTITUT AVIATIONNOGO MOTOROSTROENIIA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 532.525.2

ABRAMOVICH, G. N., KUZ'MICH, V. E., SEKUNDOV, A. N., SMIRNOVA, I. P.,  
Moscow

"Experimental and Theoretical Study of a Supersonic Jet Near a Wall in an  
Accompanying Supersonic Flow"

Moscow, Izv. AN SSSR: Mekhanika Zhidkosti i Gaza, No 4, Jul/Aug 72, pp  
25-32

Abstract: Experiments were done in a supersonic ( $M=2-4$ ) continuous  
action wind tunnel. A flat jet was blown in along a plate located in  
the middle of the working section of the tunnel through a specially  
shaped nozzle with an output section 2 mm high and a throat 0.8-0.9 mm  
high. The end of the nozzle was 80 mm away from the sharpened leading  
edge of the plate. The plate was 200 mm wide and 400 mm long. Two modes  
of flow were considered. The Mach number in the initial section of the  
jet for both modes was  $M_1 = 2.18$ . The Mach number of the accompanying  
flow, the static pressure in the working section of the tunnel, and the  
Reynolds number determined with respect to the height of the nozzle and  
the oncoming flow parameters were respectively:  $M_2 = 2.7$ ,  $p = 38.6$  mb,

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USSR

ABRAMOVICH, G. N. et al., Izv. AN SSSR: Mekhanika Zhidkosti i Gaza, No 4, Jul/Aug 72, pp 25-32

Re = 15 500 for the first mode, and  $M_2 = 3.8$ ,  $p = 18.1$  mb, Re = 17 800 for the second mode. The stagnation temperature in the jet and the accompanying flow was about 300°K. The velocity distribution was determined with respect to the fields of dynamic pressures found by means of an ordinary gauge with transverse dimension of 0.35 mm. Vent holes were used for measuring the static pressure on the plate. The concentration in the supersonic flow was measured by a method based on determining the thermal conductivity of the mixture flowing through the gauge as a function of concentration. Non-self-similar isobaric flow was numerically calculated in the boundary layer approximation using the equation for turbulent viscosity as the closure relation. A comparison of the experimental and theoretical results showed that the proposed analytical method is applicable to description of turbulent compressed flows.

2/2

1/2 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--OXIDATIVE DEHYDROGENATION OF LOW MOLECULAR WEIGHT OLEFINS ON TIN  
ANTIMONY OXIDE CATALYSTS -U-

AUTHOR--(04)-SEKUSHOVA, KH.Z., VARTANOV, A.A., ALKHAZOV, Y.G., BELENKIY,  
M.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 102-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--DEHYDROGENATION, CATALYST ACTIVITY, ANTIMONY COMPOUND, TIN  
OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1997/1019

STEP NO--UR/0153/70/013/001/0102/0106

CIRC ACCESSION NO--ATO119886

UNCLASSIFIED

2/2 009

CIRC ACCESSION NO--AT0119886

UNCLASSIFIED

PROCESSING DATE--23OCT76

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDIES OF THE ACTIVITY OF 13  
 SN-SB OXIDE CATALYSTS COVERING THE COMPLETE COMPN. RANGE, FOR THE  
 OXIDATIVE DEHYDROGENATION, DEEP SEATED OXID., AND ISOMERIZATION OF C  
 SUB4-5 OLEFIN MIXTS. IN PULSE AND FLOW SYSTEMS AT 350-450DEGREES,  
 INDICATE THAT ACTIVITY IS PROPORTIONAL TO SP. SURFACE OF CATALYSTS, AND  
 THAT MAX. ACTIVITY IS NOTED FOR CATALYSTS WITH 4:1 OR 9:1 ATOM RATION  
 SN-SB. LITTLE ACTIVITY IS SHOWN BY SNO SUB2, AND LESS BY SB SUB2 O  
 SUB4. THE CATALYSTS ARE PREPD. BY MIXING NITRATE SOLNS., SEPG. AND  
 DRYING THE PPT., AND CALCINING 16 HR AT 850DEGREES. SP. SURFACE AREAS  
 RANGED FROM 0.9-27.2 M PRIME2 PER G. THE ACTIVE CATALYST IS SN-SB  
 SOMPD., WHICH IS AMORPHOUS TO X RAY EXAMN. FACILITY: AZERB.  
 INST. NEFTI KHIM. IM. AZIZBEKOVA, BAKU, USSR.

UNCLASSIFIED

USSR

UDC 681.3.06:51

GLUSHKOV, V. M., KOSTYRKO, V. F., LETICHEVSKIY, A. A., ANUFRIYEV, F. V.,  
SEL'DEROV, Z. M.

"A Language for Recording Formal Theories"

Teor. Kibernetiki. vyp. 3 [Theory of Cybernetics, No 3 -- Collection of Works],  
Kiev, 1970, pp 4-31, (Translated from Referativnyy Zhurnal, Kibernetika, No 6,  
1971, Abstract No 6 V591 by V. Mikheyev).

Translation: A version is suggested of the first portion of a formal language, YaP for recording of mathematical theorems and their proofs -- language YaT for recording of formal theories. It is noted that the second portion of the YaP language -- language YaA for recording of algorithms for transformation of numerical and non-numerical information -- will be presented in a later article. YaT includes means taken from the language of narrow predicate calculus with equalities and functional variables, a language of expanded calculus, the language of set theory, as well as certain special devices. The syntax of the language, structure of the formalized mathematical text, symbols representing subjects, objects and structural functions are described in detail. The rules for usage of language YaT are presented.



USSR

UDC 621.365.82

PUGNIN, V. I., SEL'DIMIROV, I. M., SENYUTOVICH, E. G., and TEKUCHEV, A. N.

"A Study of the Effect of Xenon on the Size of the Population Inversion of Oscillatory Levels of the CO<sub>2</sub> Molecule in a Discharge in a Mixture of CO<sub>2</sub> + He + Xe"

Tr. Ryazan. Radiotekhn, in-ta (Proceedings of the Ryazan' Radiotechnical Institute), No 37, 1972, pp 69-77 RZh-Fizika, No 9, Sep 73, Abstract No 9D752

Translation: The effect of adding Xe on the amplification of a CO<sub>2</sub> gas discharge laser was studied. The degree of amplification was recorded as a function of the quantity of Xe and the electrical characteristics of the discharge. It is suggested that the effect of Xe on the population inversion occurs through the change of the electrical characteristics of the discharge: the temperatures and concentrations of electrons. Eight bibliographic citations.

Yu. M.

1/1

USSR

UDC 681.142.37:61

ANTONOVA, N. G., IVANOVSKAYA, G. A., NADENENKO, V. K., SEL'DIMIROVA, Ye. M. and  
CHERNYAVSKIY, V. S. Fourth Clinical Hospital

"Processing Medical Information With the "Minsk-22M" Computer and "Blank-P"  
Automatic Counting System"

Minsk, Zdravookhraneniye Belorussii, No 6, 1970, pp 62-66

Abstract: Machine storage of medical information and the use of a ready retrieval system were discussed. In addition, a form No 266-M, divided into 60 zones and 490 cells, capable of deciphering 999 pertinent medical problems was added. After detailed presentation of the workings of the "Minsk-22M" computer in conjunction with these blanks, it was concluded that: Machine processing of medical information with the aid of formal documents improves the quality of book-keeping, insures veracity of the data, improves accountability by compiling additional summaries and indicators, and standardizes the discrepancies in diagnoses and thereapeutic processes for all medical personnel. In addition, computer processing improves the organization of the initial documentation, perfects the organization of work for accounting personnel and other institutional personnel by freeing them from search and grouping operations, substantially increases the productivity of statisticians, and increases the quality and efficiency of management of a medical establishment.

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1/3 011

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--SCULDER OF DIAMOND BEARING ECLOGITE FROM THE MIR KIMBERLITE PIPE

-U-

AUTHOR--(04)-MIKHEYENKO, V.I., VLADIMIROV, B.M., NENASHEV, N.I.,  
SELDISHEVA, YE.B.

COUNTRY OF INFO--USSR

S

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(6), 1440-3

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--DIAMOND, GEOCHEMISTRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0274

STEP NO--UR/0020/70/190/006/1440/1443

CIRC ACCESSION NO--AT0108576

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--02DCT70

2/3 011

CIRC ACCESSION NO--AT0103576  
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE 1ST LARGE XENOLITH OF DIAMOND BEARING ECLOGITE WAS FOUND IN 1967. IT HAD THE FORM OF TYPICAL BOULDER 15 TIMES 10 TIMES 6 CM. FIVE DIAMONDS, 1-3 MM LONG, WERE FOUND ON ITS SURFACE, THE 6TH DIAMOND, 13 MM LONG, WAS FOUND IN THE WALL OF AN OPEN FRACTURE, AND THE 7TH, WEIGHING 8 MG, WAS FOUND IN THE ECLOGITE PROTRUSION. THE ECLOGITE FROM THE MIR PIPE CONSISTED OF FRESH GARNET AND ALTERED PYROXENE. THE ROCK HAD PORPHYROBLASTIC TEXTURE, D. 3.20, AND CONTAINED: SiO SUB2 40.50, TiO SUB2 0.96, Al SUB2 0 SUB3 10.47, Fe SUB2 0 SUB3 2.86, FeO 10.45, Mn 0.014, MgO 9.95, CaO 10.35, Na SUB2 0 1.32, K SUB2 0 0.89, H SUB2 0 PLUS 2.84, H SUB2 0 MINUS 0.30, P SUB2 0 SUB5 0.27, Cr SUB2 0 SUB3 0.41, NiO 0.024, AND S 0.32 PERCENT. THE DIAMONDS ON ECLOGITE XENOLITHS WERE XENOCRYSTALS AND THEIR APPEARANCE IN KIMBERLITE WAS CONTROLLED TO A LARGE DEGREE BY THE SIZE AND SHAPE OF KIMBERLITE BODY. THE SERPENTINE CARBONATE COMPN. OF KIMBERLITE, THE COMPLETE ABSENCE OF MAGMATIC EFFECT ON THE NEAR CONTACT ROCKS, AND XENOLITHS WITH ORG. BITUMENS PRESERVED WITHOUT ALTERATION, INDICATE THAT THERMAL ENERGY WAS NOT A FACTOR CONTROLLING FORMATION OF THESE DIAMONDS. THE EFFECTS OF POWERFUL MECH. ENERGY, DURING FORMATION OF PIPE, WERE OBSD. IN KIMBERLITE. THE CRYSTAL STRUCTURE OF MINERALS PROBABLY CAN DISINTEGRATE TO AMORPHOUS AND IONIZED STATE OF SUBSTANCE UNDER EFFECT OF SUFFICIENTLY STRONG DYNAMIC PRESSURE. THE EXCITED ATOMS AND IONS ARE CAPABLE TO BUILD NEW AND STRONGER CRYST. FORMS. THE DIAMONDS WERE CRYST. TOGETHER WITH GRAPHITE IN KIMBERLITE INTRUSIONS WHICH ARE A CONTINUOUS ZONE OF CATACLISM.

UNCLASSIFIED

3/3 011

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AT0103576

ABSTRACT/EXTRACT--NATURAL DIAMONDS ARE THUS THE PRODUCTS OF HUGE DYNAMIC PRESSURE GENERATED DURING VISCOUS PLASTIC DEFORMATION OF KIMBERLITE. THE HIGH PHYS. DYNAMICAL PARAMETERS IN KIMBERLITE OF LARGE PIPES AND DIKES WERE THE MAIN CAUSES OF GENERATION AND GROWTHS OF DIAMOND CRYSTALS BOTH IN SERPENTINE CARBONATE ROCKS AND ON THE SURFACE OF ECLOGITE XENOLITHS.

UNCLASSIFIED

USSR

UDC 669.721.472(088.8)

CHEPRASOV, I. M., SELETSOV, D. K., CHIKODANOV, A. I., BESTAUBAYEV, M. B., PEYSAKHOV, I. L.; and BYKHOVER, L. N.

"Method of Purifying Waste Gases"

USSR Author's Certificate No. 267586, Filed 12/05/68, Published 14/07/70, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No.1 G171 P).

Translation: A method is suggested for purifying waste gases to remove  $Cl_2$  and  $Cl_2$ -containing products by transmitting the gases through inorganic reagents. In order to increase the degree of purification and simplify the process, the inorganic reagents used are wastes of Ti and its alloys in the form of fine sponge or chips. Example. The gases pumped from the cathode space of a magnesium electrolyzer, at  $360^\circ$ , containing 5-6 mg/l  $Cl_2$ , are passed without preliminary drying to a layer of crushed, unheated titanium sponge. The sponge is heated by the gases themselves to  $250-280^\circ$ . All of the  $Cl_2$  contained in the gases is trapped by the sponge, forming lower chlorides of Ti, which are then dechlorinated to produce  $TiCl_4$ .

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USSR

UDC 669.295.054.79

5

GALITSKIY, N. V., BAYBEKOV, M. K., DROZHNEV, V. I., CHEPRASOV, I. M.,  
MEDVEDCHIKOV, E. P., BARKOVA, N. P., ZAVADOVSKAYA, V. N., SELEDTSOV, D. K.,  
and KORENDYASEV, M. I.

"Reprocessing Waste Titanium and Its Alloys in a Chloride Melt"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya  
Publishing House, Vol 6, 1970, pp 135-140

Translation: Results are given of experimental-industrial research on the reprocessing of ungraded waste mixtures of chips from different titanium alloys by chlorinating in a chloride melt. An experimental batch of marketable titanium sponge was obtained. The characteristics of the raw material used, the chlorine gas, the coke, and the working fusion are given, along with a description of the technological conditions, the chart for preparing chips for chlorination, and the technological equipment charts for the chlorination and cleaning conversions. An analysis is made of the distribution of alloying elements in the products of chlorination. Basic expenditure coefficients, calculated per ton of industrial titanium tetrachloride, are deduced, and data are given on the quality of the  $TiCl_4$  and the sponge titanium obtained. Three illustrations and one table.

1/1

USSR

UDC: 543.53:539.1.07.543

YEGIAZAROV, B. G., MATVEYEV, V. V., SEL'DYAKOV, Yu. P.

"Commercial Combined System of Nuclear Instruments for Instrumental Activation Analysis"

Moscow, Atomnaya Energiya, Vol 34, No 2, Feb 73, pp 97-104.

Abstract: The necessary composition and components of a standardized instrumental activation analysis system have been determined. They include: 1) a two-channel pneumatic transport system with centralized control panel; 2) a single-channel pneumatic transport system with centralized control panel; 3) an all-wave neutron monitor; 4) a conversion system with digital indicator, designed for loads up to  $4 \cdot 10^6$  pulses per second; 5) a scintillation detection unit; 6) a four-channel spectrometric installation with a set of four detection units and lead containers; 7) a computer, designed for processing of analysis data; 8) a universal summary coincidence spectrometer; 9) a gamma radiation spectrometer; 10) a multichannel pulse amplitude analyzer; 11) a printer; 12) a tape and card puncher; 13) a system for direct input of data to a computer; 14) a gamma radiation dosimeter with signaling device; 15) a gamma radiation dosimeter; 16) a neutron dosimeter.

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USSR

Yegiazarov, V. G., Matveyev, V. V., Sel'dyakov, Yu. P., Moscow, Atomnaya Energiya, Vol 34, No 2, Feb 73, pp 97-104.

Block diagrams of various combinations of the individual elements of the system are presented, plus a photograph of the KAMA-1-01 functional system, consisting of two subsystems: 1) the pneumatic transport system; 2) a universal gamma spectrometer.

2/2

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012 UNCLASSIFIED PROCESSING DATE--16OCT70  
 TITLE--MEASUREMENT OF HALF LIVES OF THE FIRST EXCITED 2 PLUS STATES OF  
 OSMIUM-184, OSMIUM-186, AND OSMIUM-188 -U-  
 THOR-(05)-BEDICA, T., ZAYTSEVA, N.G., MOROZOV, V.A., MUKIMOV, T.M.,  
 SELEGEANU, S.  
 COUNTRY OF INFO--USSR  
 SOURCE--YAD. FIZ. 1970, 11(3), 481-2  
 DATE PUBLISHED-----70

S

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--RADIOACTIVE DECAY SCHEME, OSMIUM ISOTOPE, EXCITED NUCLEUS,  
 COINCIDENCE COUNTING, NUCLEAR ENERGY LEVEL, HALF LIFE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
 COPY REEL/FRAME--1991/1059

STEP NO--UR/0367/70/011/003/0481/0482

ARC ACCESSION NO--AP0110749

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--16OCT70

212 012

RC ACCESSION NO--AP0110749

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT: THE HALF LIFE T SUBONEHALF OF THE  
119.8 KEV LEVEL OF PRIME184 OS WAS DETD. BY DELAYED E-GAMMA COINCIDENCE.  
RESOLN. S SUBTAUD SMALLER THAN OR EQUAL TO 1.2 NSEC, TO BE 1.18 PLUS OR  
MINUS 0.05 NSEC. THE 137.2 AND 155.0 KEV LEVELS, T SUBONEHALF 0.84 PLUS  
OR MINUS 0.05 AND 0.71 PLUS OR MINUS 0.03 NSEC, WERE DETD. BY VARIOUS  
METHODS. FACILITY: OB'EDIN. INST. YAD. ISSLED., DUBNA, USSR.

1/2 012  
UNCLASSIFIED  
TITLE--SPECIFICATION ON DIES FOR DIAMOND ABRASIVE TOOLS -U- PROCESSING DATE--18SEP70  
AUTHOR--(04)-IVANOV, A.A., KOVALEV, S.N., MENDELSON, V.S., SELEKH, V.F.  
COUNTRY OF INFO--USSR  
SOURCE--STANDARTY I KACHESTVO, 1970, NR 3, PP 7-9  
DATE PUBLISHED-----70  
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR  
TOPIC TAGS--DIAMOND, ABRASIVE, BIBLIOGRAPHY, TECHNICAL STANDARD, ECONOMIC  
CONDITION, CUTTING TOOL, MACHINE TOOL COMPONENT  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1986/0868 STEP NO--UR/0422/70/000/003/0007/0009  
CIRC ACCESSION NO--AP0102829  
UNCLASSIFIED

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2/2 012

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0102829

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE GIVES AN ACCOUNT OF THE SPECIFICATION ON THE DIES, THAT IS NOW PREPARED FOR THE FIRST TIME. THEIR ECONOMIC EFFICIENCY IS GROUNDED.

UNCLASSIFIED

89

Instrumentation and Equipment

USSR

UDC 621.74.073:621.922.02:389.6

IVANOV, A. A., KOVALEV, S. N., MENDEL'SON, V. S., SELEKH, V. P.

"Specifications of Dies for a Diamond Abrasive Tool"

Moscow, Standarty i kachestvo, No 3, Mar 70, pp 7-9

Abstract: This article presents a draft of standard specifications of dies for diamond abrasive tools (wheels) with organic and metallic bonds. The specifications are divided into four groups: 1) the selection of materials; 2) the selection of basic dimensions; 3) assembly and accuracy; and 4) the finishing quality of dies. Two types of dies are considered: those designed for pressing operations at temperatures not exceeding 200°C and those designed for sintering with a metallic bond at 700-800°C. Recommendations are given on steels and their heat treatment. The finishing of surfaces must meet the requirements of GOST 2789-59. EI481 steel and EI437B refractory metal are finding wide acceptance for use in dies for diamond abrasive tools.

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USSR

UDC 66.067.38:62-278

SAMSONOV, G. V., ROZHANSKAYA, T. I., MOSKVICHEV, B. V., MARGOLINA, N. A.,  
SELEKHOVA, G. B., KOZHEVNIKOVA, P. YE.

"Study of the Permeability of Ultrafiltration Diaphragms"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, 1973,  
pp 2589-2592

Abstract: The results are presented from a study of the physical-chemical properties of Soviet anisotropic diaphragms based on cellulose acetate: the permeability and filtration rates as functions of the concentration and pressure gradients and the composition of the solution. The degree of trapping of the material by a given diaphragm depends primarily on the molecular weight of the material. The filtration rate depends on the type of diaphragm, the magnitude of the pressure gradient, the concentration and composition of the filtered solution. The dimensions of the ultrafilter pores are estimated. Integral pore distribution curves with respect to dimensions in the active layer of the membrane are plotted and interpreted. The active layer of the tested diaphragm is characterized predominantly by pores corresponding with respect to permeability to materials with a macromolecule diameter of 20-40 Å. The performed studies make it possible efficiently to select ultrafilters suitable for the concentration of biological preparations of defined molecular weight.

1/1

USSR

UDC 621.372.822/823

KATS, L.I., SELE'NIKOV, V.A.

"To An Analysis Of The Field Of An N-Mode Waveguide By The 'Hidden Periodicity' Method"

V sb. Vopr. elektron. tekhn. (Problems Of Electronics Technology--Collection Of Works), No 2, Saratov, Saratov University, 1971, pp 209-218 (from RZh--Radiotekhnika, No 2, Feb 72, Abstract No 2B79)

Translation: The theoretical principles of the method are stated. The difficulties of its practical realization are considered. A measuring device is described with a fixed electrical probe of small diameter ( $0.05 \pm 0.05$  mm) in a circular waveguide. The results are presented obtained at a 4-mm wave for a smooth transition from a rectangular to a circular waveguide. 1 ill. 11 ref. N.S.

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USSR

UDC: 533.95

KRUPNIK, L.I., DAMCHENKO, P.A. and SELENIR, V.D.

"Interaction of Plasma Flow With Metal Surface"

Moscow, 2-y Vses. Simpoz. po Vzaimodeystviyu Atom. Chastits s Tverdyim Telom (Second All-Union Symposium on Interaction of Atomic Particles With Solid Bodies), 1972, pp 224-227 (from Referativnyy Zhurnal-Mekhanika, 1973, Abstract No 2B102 by B.A. Chesnokov)

Translation: The experimental setup and test results of investigation of hydrogen plasma parameters before and after interaction with the metal surface are described. Plasma density is  $2.8 \times 10^{14} - 1.9 \times 10^{11} \text{ cm}^{-3}$ , electronic temperature 6-8 ev, velocity  $(3 + 8) \times 10^6 \text{ cm/sec}$ , degree of ionization 0.6, pressure in the interaction space  $1 \times 10^6 \text{ mm Hg}$ . An increase of density in the boundary layer by three times after the plasma hit the metal obstacle was observed. Neutrals, forming by the interaction of the charged particles with the atoms of the obstacle and by elastic and nonelastic collisions with the particles in the boundary layer, become plasma's main component. The installation diagram and the graphs of plasma component densities versus distance from obstacle are presented.

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USSR

UDC 669.14.018.29-414

COL'DSHTEYN, M. I., BLYUM, E. E., GRIN', A. V., SELETKOV, A. I., LITVINENKO, D. A., LEYKIN, I. M., RUDCHENKO, A. V., OREL, E. I., VAYNTRAUB, S. S., LOKTIONOV, P. Ya., LASHCHEV, V. Ya., MOSIOSHVILI, V. V., MIROSHNICHENKO, S. I., and KONDRASHOV, M. M., Ural Scientific Research Institute of Ferrous Metals, Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin, and Kommunarsk Metallurgical Plant:

"Adoption of the Industrial Production of 15G2AF Sheet Steel"

Moscow, Stal', No 9, Sep 70, pp 828-830

Abstract: An investigation of the 15G2AF plate steel (10-25 mm), commercially produced at the Kommunarsk Metallurgical Plant, revealed that alloying of the manganous structural steel with nitrogen and vanadium increases the strength and plasticity properties of the normalized rolled steel. Normalizing of the metal effects a size reduction of the grain (to 10-12), which assures a low (-100°C to -120°C) cold brittleness threshold. The strength of the 15G2AF steel was found to be at least 60 kg/mm<sup>2</sup> and the yield stress at least 45 kg/mm<sup>2</sup>. Use of 15G2AF steel for welded structures decreased weight, in comparison with steel 10G2S1, by 13.6%.

1/1

1/2 023

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--EFFECT OF BELOW ZERO TEMPERATURES ON THE PHYSICOMECHANICAL PROPERTIES OF PLASTIC CONCRETE -U-

AUTHOR--(02)--BALBACHAN, I.P., SELETSKIY, L.I.

COUNTRY OF INFO--USSR

SOURCE--BETON ZHELEZOBETON 1970, 16(1), 14-16

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CONCRETE, FURFURAL, ACETONE, MONOMER, LOW TEMPERATURE EFFECT, COMPRESSIVE STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1058

STEP NO--UR/0097/70/016/001/0014/0016

CIRC ACCESSION NO--AP0124715

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124715

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONCRETE MIXES, CONTG. ADDED  
SIMILAR TO 2PERCENT FURFURAL, SIMILAR TO 12PERCENT FURFURAL ACETONE  
MONOMER, AND CATALYTIC AMTS. OF PHSO SUB3 H, WERE HARDENED IN THE MINUS  
10DEGREES TO PLUS 20DEGREES RANGE. THE LOWERING OF THE TEMP. ONLY  
SLOWED DOWN THE HARDENING PROCESS AND THE INCREASE OF THE COMPRESSION  
STRENGTH. E.G., THE CONCRETES HARDENED AT MINUS 10DEGREES TO MINUS  
8DEGREES FOR LESS THAN OR EQUAL TO 5 MONTHS HAD A COMPRESSION STRENGTH  
SIMILAR TO 10PERCENT LOWER THAN THAT OF THE CONCRETES HARDENED AT  
20DEGREES. ON WARMING UP THE RATE OF THE HARDENING INCREASED AND THE  
CONCRETES REACHED THEIR ULTIMATE STRENGTH IN ALL CASES.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT79  
TITLE--REACTIONS OF THE OXIDATIVE IMINATION OF DIARYL DISULFIDES -U-

AUTHOR--(02)--LEVCHENKO, YE.S., SELEZHENKO, L.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3), 485-92

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZENE DERIVATIVE, HYDROLYSIS, MOLECULAR STRUCTURE, ORGANIC  
SULFUR COMPOUND, CHLORINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1992/1669

STEP NO--UK/0366/70/006/003/0485/0492

CIRC ACCESSION NO--AP0112663

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112663

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTIONS OF 2PHSO SUB2 NCINA WITH (XC SUB6 H SUB4) SUB2 S SUB2 (I) GAVE (XC SUB6 H SUB4 S) SUB2 (NSO SUB2 PH) SUB2 (II) (X IS H OR P-CL). SIMILARLY, I REACTED WITH 2(ETO) SUB2 C:NC1 (III) TO GIVE (XC SUB6 H SUB4 S) SUB2 (NCO SUB2 ET) SUB2 (IV) (X IS P-O SUB2 N OR O-O SUB2 N). THE REACTION OF O,O SUBW NC SUB6 H SUB4 SCL WITH III OR CL SUB2 NCO SUB2 ET ALSO GAVE IV (X EQUALS O,O SUB2 N) (V). PASSING CL THROUGH V GAVE O,O SUB2 NC SUB6 H SUB4 SCL. THE REVERSIBILITY OF THE ABOVE REACTION WAS CONFIRMED BY REACTING P,O SUB2 NC SUB6 H SUB4 SCL WITH CL SUB2 NCO SUB2 ET TO P,O SUB2 NC SUB6 H SUB4 S(:NCO SUB2 ET) CL AND CL. OTHER IV REACTED WITH CL TO GIVE XC SUB6 H SUB4 S(:NSO SUB2 PH)CL. THE REACTION OF IV WITH PCL SUB5 GAVE XC SUB6 H SUB4 SCL, CL SUB2 PONCO, AND ETCL. THE HYDROLYSIS OF II OR IV IN ACID SOLNS. GAVE XC SUB6 H SUB4 SO SUB2 SC SUB6 H SUB4 X, AND XC SUB6 H SUB4 SO SUB2 NH SUB2 OR H SUB2 NCO SUB2 ET. ALK. SOLNS. DECOMP. IV TO (XC SUB6 H SUB4 S) SUB2 AND II TO XC SUB6 H SUB4 S(:NSO SUB2, PH)NHSO SUB2 PH, (XC SUB6 H SUB4 S) SUB2, AND XC SUB6 H SUB4 SO SUB2 H. THE ABOVE REACTIONS DO NOT PERMIT TO DIFFERENTIATE BETWEEN STRUCTURES (ETO SUB2 CN:S(C SUB6 H SUB4 X)) SUB2, XC SUB6 H SUB4 S(:NCO SUB2 ET) SUB2 C SUB6 H SUB4 X, OR XC SUB6 H SUB4 S(:NCO SUB2 ET) N (SC SUB6 H SUB4 X)CO SUB2 ET FOR IV OR THE CORRESPONDG STRUCTURES FOR II. FACILITY: INST. ORG. KHIM., KIEV, USSR.

UNCLASSIFIED

172 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--REACTION OF THIOPHENOLS AND SODIUM THIOPHENOLATES WITH  
BENZENESULFONIC ACID DICHLOROAMIDE -U-

AUTHOR-(02)-LEVCHENKO, YE.S., SELEZHENKO, L.V.

S

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3), 492-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THIOL, PHENOL, SULFONIC ACID, AMIDE, CHLORINATED ORGANIC  
COMPOUND, ORGANOSODIUM COMPOUND, CHLORINATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1992/1671

STEP NO--UR/0366/70/006/003/0492/0496

CIRC ACCESSION NO--AP0112665

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112665

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDN. OF 2 MOLES PHS<sub>2</sub> TO 1 MOLE PHSO<sub>2</sub> NCL<sub>2</sub> SUB<sub>2</sub> (I) GAVE PHSCL AND PHSO<sub>2</sub> NH<sub>2</sub> SUB<sub>2</sub>. WHEN I PHS<sub>2</sub> MOLAR RATIO WAS 2:3, PHSCL REACTED FURTHER GIVING PHS (:NSO<sub>2</sub> SUB<sub>2</sub> PH) CL (II). THE ADDN. OF 4 MOLES I TO 5 MOLES PHS<sub>2</sub> OR P<sub>2</sub>O<sub>5</sub> SUB<sub>2</sub> NC SUB<sub>6</sub> H SUB<sub>4</sub> SH GAVE (PHS) SUB<sub>2</sub> OR (P<sub>2</sub>O<sub>5</sub> SUB<sub>2</sub> NC SUB<sub>6</sub> H SUB<sub>4</sub> S) SUB<sub>2</sub> WHICH REACTED FURTHER WITH I GIVING II OR P<sub>2</sub>O<sub>5</sub> SUB<sub>2</sub> NC SUB<sub>6</sub> H SUB<sub>4</sub> S (:NSO<sub>2</sub> SUB<sub>2</sub> PH) CL (III). THE REACTION OF 2,4, (O SUB<sub>2</sub> N) SUB<sub>2</sub> C SUB<sub>6</sub> H SUB<sub>3</sub> SH WITH I GAVE ONLY 2,4, (O SUB<sub>2</sub> N) SUB<sub>2</sub> C SUB<sub>6</sub> H SUB<sub>3</sub> SCL AND PHSO<sub>2</sub> NH<sub>2</sub> SUB<sub>2</sub>. THE REACTIONS OF PHSNA, P<sub>2</sub>CLC SUB<sub>6</sub> H SUB<sub>4</sub> SNA, OR P<sub>2</sub>O<sub>5</sub> SUB<sub>2</sub> NC SUB<sub>6</sub> H SUB<sub>4</sub> SNA WITH 1 EQUIV. I GAVE RS (:NSO<sub>2</sub> SUB<sub>2</sub> PH) CL (R IS PH, P<sub>2</sub>CLC SUB<sub>6</sub> H SUB<sub>4</sub>, OR P<sub>2</sub>O<sub>5</sub> SUB<sub>2</sub> NC SUB<sub>6</sub> H SUB<sub>4</sub>). THE REACTION OF PHSNA OR P<sub>2</sub>MEC SUB<sub>6</sub> H SUB<sub>3</sub> SNA WITH 0.5 EQUIV. I GAVE (PHS) SUB<sub>2</sub> (NSO<sub>2</sub> SUB<sub>2</sub> PH) SUB<sub>2</sub>, OR (P<sub>2</sub>MEC SUB<sub>6</sub> H SUB<sub>4</sub> S) SUB<sub>2</sub> (NSO<sub>2</sub> SUB<sub>2</sub> PH) SUB<sub>2</sub> AND THE CORRESPONDING DIARYL DISULFIDES. THE REACTION OF P<sub>2</sub>O<sub>5</sub> SUB<sub>2</sub> NC SUB<sub>6</sub> H SUB<sub>4</sub> SCH SUB<sub>2</sub> PH (IV) WITH I GAVE PREDOMINANTLY III (A CYCLIC REACTION INTERMEDIATE IS PROPOSED). THE CHLORINATION OF IV DECOMP. IT TO PHCH SUB<sub>2</sub> CL AND P<sub>2</sub>O<sub>5</sub> SUB<sub>2</sub> NC SUB<sub>6</sub> H SUB<sub>3</sub> SCL. FACILITY: INST. ORG. KHIM., KIEV, USSR.

UNCLASSIFIED



USSR

UDC: 621.791.011:669.15-194

FOMINA, O. P., LEVENBERG, N. Ye., SELEZNEV, A. G., and GERMAN, S. I.;  
Khar'kov Polytechnical Institute, Khar'kov, Turbine Plant

"Mechanical Properties of the Metal in the High-Temperature Region of the Heat-Affected Zone in 15Kh1M1FL Steel Welds"

Kiev, Avtomaticheskaya Svarka, No 11, Nov 70, pp 30-31

Abstract: A study was made of the high-temperature region of the heat-affected zone in 15Kh1M1FL steel (0.19% C, 0.64% Mn, 1.7% Cr, 1.14% Mo, 0.14% V). The effects of various tempering conditions on the structural transformations and properties of the metal of each variant of the imitated weld-affected zone were analyzed. It was found that the ductility of the metal in the high-temperature region of the heat-affected zone markedly depends on the cooling rate after welding. As applied to multipass welding conditions, the required impact toughness may be met by tempering the weld at 740-760°C. The hardness of the high-temperature region of the heat-affected zone in 15Kh1M1FL will not always

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USSR

FOMINA, O. P., et al, Avtomaticheskaya Svarka, No 11, Nov 70, pp 30-31

correlate with the impact toughness. A decrease in the hardness after tempering even to HV 220 for a metal very slowly cooled down from 1300°C will not raise the impact toughness.

Acc. Nr.: APO046765

Ref. Code: UR0125

USSR

UDC 621.791:14.011.539.163

SELEZNEV, A. G., KHRISTOFOROV, A. I., MOZHAROV, M. V., BUGAYEV, G. P.

"Radioactive Isotope Investigation of the Structure of the Transition Layer During Spin Welding"

Kiev, Avtomaticheskaya Svarka (Automatic Welding), No 1, 1970, pp 21-24 (from Avtomaticheskaya Svarka, No 1, 1970, p 79)

Translation: Results are presented from using tagged atoms to study the structure of the contact layer during spin welding of heterogeneous metals. During spin welding of steel 30 and R18 and also steel 30 and armco-iron, no essential movement of the carbon atoms is observed. The absence of carbon atom diffusion is demonstrated to a depth of more than 5-10 microns. There are 2 illustrations and a 6-entry bibliography.

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19790069

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1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--RECOVERY OF UREA FOR DEPARAFFINATION OF PETROLEUM FUELS -U-  
AUTHOR-(03)-SELEZNEV, A.K., POPLAVSKAYA, A.V., VOROBYEVA, YE.I.  
COUNTRY OF INFO--USSR  
SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (3), 43-3  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY, PROPULSION AND FUELS  
TOPIC TAGS--CRUDE OIL, LOW TEMPERATURE EFFECT, PETROLEUM FRACTION,  
DEPARAFFINATION, UREA  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRACTION--3002/1721 STEP NO--UR/0318/70/000/003/0043/0044  
CIRC ACCESSION NO--AP0129089  
UNCLASSIFIED

2/2 018

CIRC ACCESSION NO--AP0129089  
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT. A DISTILLATE (B. 244-340DEGREES, CONGEALING AT PLUS 4DEGREES, AND 27.68PERCENT YIELD OF COMPLEX FORMERS WITH UREA) WAS OBTAINED FROM A COM. UNIT DISTG. OZEK SUATSK CRUDE OIL. IT WAS DEPARAFFINATED WITH RECRYSTD. AND SPENT UREA BY USING 4 WT. PERCENT ETOH AS ACTIVATOR. SOLVENT NAPHTHA (B. 80-120DEGREES) (100 VOL. PERCENT) WAS USED TO DIL. THE CHARGE. THE TEMP. OF TREATMENT VARIED FROM NEGATIVE 8 TO NEGATIVE 19DEGREES. AFTER MIXING FOR 30 MIN, THE COMPLEX WAS VACUUM FILTERED, WASHED FREE FROM OIL WITH NAPHTHA, DRIED, AND THEN DECOMP. BY ETOH AT 70-50DEGREES. THE UREA DISSOLVED IN THE ETOH AND RECRYSTD. WHEN THE SOLN. WAS COOLED. THE PARAFFINS COLLECTED ON THE SURFACE WERE WASHED WITH H SUB2 O, DRIED, AND ANALYZED. THE FILTRATE CONTG. THE DEPARAFFINATED FUEL WAS WASHED WITH H SUB2 O TO REMOVE RESIDUAL UREA AND ETOH. WITH MULTIPLE USE (1-5) OF THE SAME UREA, THE YIELD OF DEPARAFFINATED FUEL INCREASED FROM 72 TO 87PERCENT, AND THE TEMP. OF TREATMENT WAS NEGATIVE 19 TO NEGATIVE 8DEGREES. WHEN THE UREA WAS RECRYSTD., THE YIELD OF FUEL WAS 68PERCENT, THAT OF PARAFFINS WAS 27PERCENT (M. 23DEGREES), AND THE TEMP. OF TREATMENT WAS NEGATIVE 19DEGREES. A METHOD OF DETG. THE ACTIVITY OF THE UREA FOR COMPLEX FORMATION WAS DEVELOPED, BASED ON MEASUREMENT OF THE HEAT OF COMPLEX FORMATION DURING DEPARAFFINATION UNDER STD. CONDITIONS. THE HEAT OF FORMATION INCREASED WITH INCREASED ACTIVITY OF THE UREA.

FACILITY: GOZH. NEFT. INST., GORZNY, USSR.

UNCLASSIFIED

USSR

UDC: 621.376.56(088.8)

SELEZNEV, A. M.

"A Method of Controlling Semiconductor Switches"

USSR Author's Certificate No 269265, filed 17 Jan 66, published 10 Jul 70  
(from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1D322 P)

Translation: This Author's Certificate introduces a method of controlling semiconductor switches such as transistors in a bridge power amplifier with PDM by regulating and reversing the voltage in the load. To reduce dynamic losses with a given polarity of the input signal, the device utilizes blocking of a pair of switches in the bridge diagonal, one of them operating in the pulse mode while the other operates continuously. Another pair of diagonally connected switches is incorporated in the device. One is in the parallel leg with respect to the first of the above-mentioned switches and is controlled by a PDM signal, while the other is controlled by a continuous signal. V. P.

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USSR

UDC 621.314.61(088.8)

SELEZNEV, A. M.

"Three-Phase Controlled Rectifier"

USSR Author's Certificate No 269284, filed 2 Aug 66, published 16 Jul 70 (from RZh-Elektronika i yeye primeneniye, No 2, Feb 71, Abstract No 2B548P)

Translation: Three-phase bridge and null circuits for rectifiers /vypryamitel'7 are proposed in which control of the rectified voltage is accomplished by one thyristor. In the bridge circuit one of the rectifiers /ventil'7 of the anode (or cathode) group is connected directly to the load, and the remaining two rectifiers of this group -- across the thyristor. In the null circuit, the cathode of one of the rectifiers is also joined with the load, and the cathodes of the two other rectifiers are joined together and connected to the anode of the thyristor, whose cathode is connected to the load. 2 ill. L.R.

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USSR

YUKHTIN, N. N., FURSENKO, I. V., IVANOVA, N. S., SELEZNEV, A. P., SHALINA, N. A.

"Synthesis of N-3,4-Dichlorophenyl-N'-hydroxyurea"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protective Agents -- collection of works ), No 2, Moscow, 1972, pp 59-65 (from RZh-Khimiya, No 19, Oct 73, Abstract No 19N546)

Translation: Experimental results are reported of the first stage in the synthesis of lynurone -- synthesis of N-3,4-dichlorophenyl-N'-hydroxyurea [ I ]. The relationship between the yield of I and the type of solvents has been investigated. Maximum yield of I has been achieved using the solvent system chlorobenzene-methanol-water 2:2:1. It has been shown that I is capable of reacting in two directions during its carbonylation with 3,4-dichlorophenylisocyanate. NH<sub>3</sub> is passed through a solution of 8.61 g hydroxylamine sulfate in 60 ml water at 20° until pH of 7.4 is reached, MeOH is added, the reaction mixture cooled to 0-3°, 18.8 g of 3,4-dichlorophenylisocyanate in 121 ml ClPh is added, the mixture is left standing for 15 min., evaporated and filtered, yielding 20.6 g of 94% I.

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USSR

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SELEZNEV, G. B., LAVROV, G. I.

UDC 621.394.423

"Discrete Automatic Carrier Frequency Tuning"

Moscow, Elektrosvyaz', No 7, 1970, pp 39-42

Abstract: This article discusses two basic methods for the formation of synchronous frequency oscillations in discrete signal transmission equipment from the information signal through the use of the latter's spectral characteristics. The first is the so-called resonance-phase method, and the device which executes it is known as the resonance synchronizer. In this method, the synchronous frequency oscillations are detected by a narrow-band filter from the information signal. In the second method, special correction devices for automatic phase and frequency tuning of the oscillator without direct effect on its parameters are used in the formation of the synchronous frequencies. This paper proposes a method of phase and frequency control of intermediate frequency oscillations by which the difficulties involved in applying the two systems can be avoided. A block diagram of the proposed system is given and its operation detailed. The authors express their gratitude to A. Yu. Lev for his criticism of the manuscript.

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USSR

UDC 681.3.055

KALINKIN, I. P., SELEZNEV, G. D., and TRIFONOVA, L. S.

"A Counting Device Which Retains Information When Power is Interrupted"

USSR Author's Certificate No 364112, KHF 03 k 23/10, filed 16 Aug 71, published 21 Mar 73 (from EZh Avtomatika Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 73, abstract No 11 A364 P)

Translation: A counting apparatus which retains information during power interrupts is proposed, containing a single pulse generator, flipflops, memory elements, and a delay line. To extend the logical capabilities, inhibit and assembly circuits are included, with the output of the single pulse generator connected to one of the regulating inputs of the flipflops and through one of the delay lines to the inputs of the read elements of the memory and to one of the inputs of the assembly circuit.

The other input of this last circuit is connected to the "command reading" bus, with the output of the assembly circuit connected through a second delay line to the signal inputs of the inhibit circuits; the controlling inputs of the latter are connected to the outputs of the flipflops, while the outputs of the inhibit circuits are connected to the inputs of the memory elements, the outputs of which are connected to the secondary regulating inputs of the flipflops. One illustration.

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USSR

UDC 621.396.679:621.372.852.1(008.8)

KUZMINYKH, YE. S., ZAVADOVSKIY, B. D., SELEZNEV, G. YE.

"Separating Transmission and Reception Filter"

USSR Author's Certificate No 248859, Filed 3 Apr 67, Published 22 Jan 70  
(from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9B85P)

Translation: The proposed separating filter consists of a basic transmission line, an auxiliary transmission line with a ballast load on the end and traveling wave resonators connecting them with a ring length equal to an even number of halfwaves of the receiver and an odd number of halfwaves of the transmitter. In order to insure the given decoupling between the cross arms, the loaded end of the auxiliary line is connected to the basic line by a directional coupler through which part of the transmitter signal coming to the filter is shunted. There is one illustration.

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SELEZNEV, L.I.

RAM / 1 K-760 / 5-NXV-73  
Dec 1972

Solomon, G. A., and L. I. Seleznev.  
Variations of flow parameters and flow structure of moist vapor for the case of interphase heat and mass exchange in the relaxation zone behind a shock wavefront. TVT, no. 6, 1971, 1200-1206.

Relaxation phenomena behind a stationary shock wavefront in moist vapor are analyzed, with allowance for relatively low sliding phase motion. The numerical solution of a set of equations (particle-size distribution), and shock wave width for the thermodynamic equilibrium of a two-phase medium ahead of the shock wave. Theoretical data were found to be in good qualitative agreement with the experiment, e.g. using a Leval nozzle.

USSR

UDC 536.24:621.175

SALTANOV, G. A., SELEZNEV, L. I.

"Change of Parameters and Structure of a Stream of Moist Steam with Inter-phase Heat and Mass Exchange in the Relaxation Zone Behind the Leading Edge of a Shock Wave"

Teplofizika Vysokikh Temperatur, Vol 9, No 6, 1971, p. 1200-1206.

Abstract: Certain relaxation phenomena behind the leading edge of a shock wave in moist steam with small drops formed by spontaneous condensation are studied. Numerical solution of a system of equations is used to determine changes in the parameters of the stream and its structure when the 2-phase medium before the shock wave is in thermodynamic equilibrium.

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USSR

UDC 669.715.620.1

PARKHUTIK, P. A., SELEZNEV, L. P., LUBENSKIY, M. Z., and  
DUDETSKAYA, L. R.

"Effect of Zinc and Magnesium on the Mechanical Properties of  
ALLOV Alloy"

Moscow, Tsvetnyye Metally, No 12, Dec 70, pp 52-55

Abstract: Impurities in the ALLOV include zinc, with a maximum GOST-permissible content of 0.6%. Such a rigid limitation reduces the potential use of waste and scrap in producing secondary aluminum alloys, thus requiring an additional expenditure of primary aluminum or very costly vacuum equipment for dezincification, involving high power consumption. A basic component in the ALLOV alloy is magnesium which, when combined with zinc, forms a number of chemical compounds. A magnesium content within 0.2-0.5% is readily controllable under production conditions. Earlier studies have shown that 0.15-0.35% Mg additions to ALLOV alloy increase its strength and hardness and decrease plasticity. This study attempts to determine the combined effect of both zinc (0.0-3.0%) and magnesium (0.0-0.5%)

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USSR

PARKHUTIK, P. A., et al., Tsvetnyye Metally, No 12, Dec 70,  
pp 52-55

on the mechanical properties and plasticity of ALLOV alloy. The material was melted under flux consisting of equal amounts of NaCl and KCl. Zinc metal was introduced after melting at 730-740° C. The alloy was refined with MnCl<sub>2</sub> at 0.1% and was poured at 720-730° C. The experimental data show that extending the limit for zinc in ALLOV alloy to 1.4% is fully permissible and that such additions have no adverse effects on the hardness, strength, and plasticity of the alloy.

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1/2 022

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--CHANGES OF RHEOLOGICAL PROPERTIES OF THE BLOOD IN TRAUMATIC SHOCK  
AND THEIR SIGNIFICANCE IN GENESIS OF CIRCULATORY DISTURBANCES -U-

AUTHOR--(02)-SELEZNEV, S.A., KHRAbroVA, O.P.

COUNTRY OF INFO--USSR

SOURCE--PATLOGICHESKAYA FIZIOLOGIYA I EKSPERIMENTAL/NAYA TERAPIYA, 1970,  
VOL 14, NR 2, PP 65-70  
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--WHOLE BLOOD, FLUID VISCOSITY, RHEOLOGIC PROPERTY, TRAUMATIC  
SHOCK, BLOOD CIRCULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1988/0025

STEP NO--UR/0396/70/014/002/0065/0070

CIRC ACCESSION NO--AP0105124

UNCLASSIFIED



2/2 022

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105124

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RHEOLOGICAL PROPERTIES OF THE BLOOD OBTAINED AT VARIOUS PERIODS OF TRAUMATIC SHOCK FROM CATS WERE STUDIED. THE FOLLOWING DETERMINATIONS WERE MADE: BLOOD VISCOSITY WITH THE AID OF HESS' VISCOSIMETER; BLOOD VISCOSITY AT VARIOUS EXTENS OF THE SHOCK IN A UNIT WITH CAPILLARIES WITH A RADIUS OF 0.45 AND 0.60 MM; SEDIMENTATION OF FORMED ELEMENTS UNDER CONDITIONS OF CONTINUOUS FLOW. CAPILLARIES INCLUDED INTO THE UNIT WERE GRADUATED BY WATER, 40 AND 60 PERCENT SACCHAROSE SOLUTIONS. BESIDES, THE VALUE OF HEMATORITE READING AND OF THE PLASMA PROTEIN COMPOSITION WERE ALSO TAKEN INTO CONSIDERATION. THE RELATIVE AND ASYMPTOTIC VISCOSITY PROVED TO BE DIMINISHED DURING SHOCK. ALTERATIONS OF VISCOSITY WERE MORE PRONOUNCED THAN THE CHANGES OF HEMOTOCRITE INDEX. VISCOSITY OF ERYTHROCYTE SUSPENSION WAS REDUCED IN THE PLASMA OF ANIMALS IN CONDITION OF SHOCK. IN SHOCK SEDIMENTATION OF FORMED ELEMENTS CHARACTERIZING THEIR ADHESIVE PROPERTIES EXCEEDED THE NORMAL ONE. FACILITY: LABORATORIYA PATOLOGICHESKOY FIZIOLOGII INSTITUTA SKOROY POMOSHCHI IM. I. I. DZHANELIZDE, LENINGRAD.

UNCLASSIFIED

USSR

UDC 536.46 + 662.222.1

POKHUL, P. F., MAL'TSEV, V. M., LOGACHEV, V. S., SELEZNEV, V. A., Moscow

"Combustion of Aluminum Particles in the Flame of a Condensed System"

Fizika Goreniya i Vzryva, No 1, Mar 71, pp 51-57.

ABSTRACT: This work presents a study of the process of combustion of aluminum particles in a flame of type N ballistite powder and a model mixture of ammonium perchlorate with organic fuel. The study of the process of combustion of metal particles was performed in a constant pressure bomb with quartz windows, in which a vacuum or the necessary inert gas (nitrogen, argon) pressure was created. The metal particles were introduced to the composition of the fuels during the manufacturing process. A photographic method was used to study the processes occurring on the surface of combustion, and specimens were taken to study the dimensions of the metal particles through the height of the flame. It was established that as ballistite powder burns, the metal particles adhere to the thermostable decomposition products of the nitrocellulose, later merging near the surface of the charge. Increasing the percentage of metal in the fuel causes an increase in particle diameter. Aluminum particles accumulate and

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USSR

UDC 536.46 + 662.222.1

POKHUL, P. F., MAL'TSEV, V. M., LOGACHEV, V. S., SELEZNEV, V. A., Fizika  
Goreniya i Vzryva, No 1, Mar 71, pp 51-57.

agglomerate on the surface of combustion of the charge. In the initial stage of combustion, oxidation of the metal occurs on its surface, with 4 to 6% of the heat realized due to combustion of the metal liberated in this manner in the reaction layer. Combustion of aluminum particles in the flame occurs through intermediate products with the formation of lower oxides. The temperature of the combustion zone of aluminum particles is 400-600° higher than the temperature of the remainder of the flame.

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USSR

UDC 536.46

POKHIL, P. F., LOGACHEV, V. S., MAL'TSEV, V. M., SELEZNEV, V. A. S

"Spectral and Photometric Research on the Flame Jet in Model Fuel-Oxidizer-Metal Systems"

Novosibirsk, Fizika Goreniya i Vzryva, No 2, June 1970, pp 143-152

Abstract: The equipment used for spectral research on the flame jet in the combustion of fuel-oxidizer-metal systems is described, and its operation is explained. Spectral flame-jet research by means of this installation permitted the photometric method to be used for temperature measurement; this method permitted the shape of the flame of individual metal particles in the combustion products of the charge to be locally determined. Evaluation of the combustion temperature of aluminum and magnesium particles in the flame jet of model systems by the spectral and the photometric method is discussed.

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USSR

UDC 629.7.036.54-66:536.46

MAL'TSEV, V. M., KURYLEV, V. V., and SELEZNEV, V. A.

"The Ignition of Individual Metal Particles"

Odessa, 11-ya Vses. Konf. po Vopr. Ispareniya, Gorennya i Gaz. Dinamiki Dispersn. Sistem, 1972--Sbornik (11th All-Union Conference on Problems of the Evaporation, Combustion, and Gas Dynamics of Dispersed Systems, 1972--Collection of Works), 1972, p 33 (from Referativnyy Zhurnal--Aviatsionnyye i Raketnyye Dvigateli, No 1, 1973, Abstract No 1.34.165, Resume)

Translation: The authors discuss the influence of various factors upon the ignition of particles of zirconium, titanium, magnesium, and zirconium hydride. The investigation was conducted by means of microphotographing the particles during heating in an atmosphere of air. The maximum temperature of the heater was 1900°K, the heating rate was from 2.5 to 120 degrees/sec. Particles 100 to 500 microns in size were investigated. The influence of the type of metal, particle size, heating rate, and porosity upon the ignition temperature was established. Zirconium, titanium, and zirconium hydride ignite in two stages. The first stage is smoldering, which is characterized by elevation of the particle temperature to a red glow. The second stage is a flare-up, characterized by the formation of a bright nucleus of light. Zirconium and

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USSR

MAL'TSEV, V. M., et al., 11-ya Vses. Konf. po Vopr. Ispareniya, Goreniya i Gaz. Dinamiki Dispersn. Sistem, 1972--Sbornik, 1972, p 33

titanium are characterized by the earlier ignition of larger particles. The converse pattern is observed for magnesium. As the heating rate increases, the  $T_{\text{ignit}}$  of the particles decreases. The ignition temperature of the less dense particles is lower because of the greater specific surface.

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- 19 -

USSR

UDC 546.791.6.161

TSVETKOV, A. A., SELEZNEV, V. P., SUDARIKOV, B. N., GROMOV, B. V., Moscow  
Institute of Chemical Technology imeni D. I. Mendeleev

"Basic Uranyl Fluorides"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol XVIII, No 1, 1973, pp 12-15

Abstract: The possibility of the formation of the basic salt of uranyl fluoride was demonstrated by Marshall, et al. [*J. Amer. Chem. Soc.*, No 76, 4279, 1954] when studying the phase diagram of the uranyl fluoride and water systems. Yu. A. Buslayev, et al. [*Dokl. AN SSSR*, No 148, 832, 1963] detected the existence of hydrated hydroxofluoruranyl which precipitates as the equilibrium bottom phase in the range of 0.59-8.39% by mass of HF. In the present work, the differential thermal analysis method was used in combination with chemical and x-ray phase analysis to demonstrate the existence of two separate hydrates of the basic salts of variable composition in the  $UO_3-HF-H_2O$  system: 1)  $UO_2(OH)_x F_{2-x} \cdot 2H_2O$  and  $UO_2(OH)_x F_{2-x} \cdot H_2O$  where  $x = 0.3-1.2$ . A study was made of the structure of the salts, and some of their thermodynamic characteristics were determined. The thermogravimetric curve of the decomposition of  $UO_2(OH)_x F_{2-x} \cdot 2H_2O$  and tabulated data for the analysis of the basic salts of uranyl fluoride are presented. The heats of formation and the isobaric-isothermal potentials of the formation of the basic salts of uranyl fluoride and their errors are also calculated.

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USSR

UDC 539.3

SELEZNEV, V. G., YAKOVLEV, V. V.

"Study of the Bending of Plates by the Holographic Interferometry Method"

V sb. Ispol'z. optich. kvant. generatorov v sovrem. tekhn. i med. Ch. 2-3  
(Use of Lasers in Modern Engineering and Medicine. Parts 2-3 -- Collection of  
Works), Leningrad, 1971, pp 47-50 (from RZh-Mekhanika, No 3, Mar 72, Abstract  
No 3V272)

Translation: A schematic diagram and parameters are given for a device for  
studying the bending of plates by the holographic interferometry method. The  
device is mounted on a concrete plate weighing about 1000 kg which is placed  
on two rubber balloons filled with air to exclude the effect of field oscilla-  
tions of the location. Deflections were measured by the double exposure method.  
Construction of an interpolation polynomial in terms of known values of the  
deflection is proposed to determine derivatives of the bending in terms of  
orthogonal coordinates. V. P. Netrebko.

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USSR

UDC: 632.951+661:718.1:632.732

SELEZNEV, V. N., and SHUTOVA, S. S., All-Union Scientific Research  
Institute of Tobacco and Makhorka imeni A. I. Mikoyan

"Effectiveness of the Application of New Insecticides Against Tobacco  
Aphid"

Moscow, Khimiya v Sel'skom Khozyaystve, no 11, Nov 70, pp 28-30

Abstract: Tobacco aphid (*Myzodes persicae* Sulz) draws the sap from tobacco leaves, contaminates them with sticky excretions and reduces the quality of the raw material. The All-Union Scientific Research Institute of Tobacco and Makhorka conducted a series of tests on a number of new compounds-insecticides. It was found that metathion, folithion, methyl-nitrophos, and Nexion may be used against the tobacco aphid instead of the toxic thiophos group. Saipnos and metathion in 0.3% concentrations are recommended for wider large-scale testing in the tobacco-growing

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USSR

SELEZNEV, V. N., et al, Khimiya v Sel'skom Khozyaystve, no 11, Nov 70,  
pp 28-30

areas of the Union. Treatment of plants with rogor and metathion promotes higher crops and yields of light tobacco varieties. The various concentrations of insecticides used in this study as well as their effectiveness in these concentrations are cited.

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- 03 -

USSR

UDC 621.375.82

GLAZER, A. A., NIKITINA, T. F., PANTELEYEV, V. I., PLOTNIKOV, A. F., POPOV, YU. M., POTAPOV, A. P., SELEZNEV, V. N., TAGIROV, R. I., and SHUR, YA. S.

"Using GaAs and Nd Lasers for Optical Writing on MnBi Film"

Kratkiye Soobshch. po fiz. (Brief Communications on Physics) No 12, 1972, pp 9-12 (from RZh-Fizika, No 7, 1973, Abstract No 7D1088)

Translation: The possibility of using a GaAs semiconductor laser for recording information on a ferromagnetic film of MnBi is experimentally investigated. MnBi film 700 Å thick, which has undergone condensation in a vacuum on glass substrates of 0.1-0.2 mm in thickness, is used. For recording information, a GaAs laser with a threshold current of 2 amp at 77° K and a p-n junction width of 400 μ is used. It is shown that the laser's minimum pumping current at which recording is possible is 80 amp, whereas the radiation power is 20 w. The energy density of the radiation on the film is then  $6 \cdot 10^{-9}$  j/μ<sup>2</sup>. With a monopulse neodymium laser, an evaluation of an information recording density equal to 2500 lines/cm is made. It is noted that the use of a semiconductor laser with a junction width not exceeding 20 μ permits reducing the power to a fraction of a watt. Bibliography of four.

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1/2 029

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--MAGNETIC CRYSTALLOGRAPHIC ANISOTROPY OF SINGLE CRYSTALS OF LITHIUM AND LITHIUM ZINC FERRITES WITH TRACE COBALT DOPANTS -U-  
AUTHOR--(04)-SELEZNEV, V.N., PUKHOV, I.K., DRONIN, A.I., SHAPOVALOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERO. TELA 1970, 12(3), 865-91

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PHYSICS, CHEMISTRY

TOPIC TAGS--SINGLE CRYSTAL, LITHIUM, IRON OXIDE, COBALT, ZINC FERRITE, MAGNETIC PROPERTY, CRYSTAL LATTICE STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0581

STEP NO--UR/0181/70/012/003/0885/0891

CIRC ACCESSION NO--AP0105564

UNCLASSIFIED

USSR

UDC 546.791.6'161-31'

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

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

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

Abstract: Three complex uranyl fluoride compounds were isolated in the system  $UO_2F_2-HF-H_2O$ :  $H_2[UO_2F_4] \cdot 4 H_2O$ ,  $H[UO_2F_3] \cdot 2 H_2O$ , and  $H[(UO_2)_3F_5] \cdot 4 H_2O$ . All of these materials form salts with alkali metals and ammonia; their structures were studied. Thermodynamical properties of these compounds were determined by means of differential thermal analysis.

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18

2/2 029

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105564

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE 1ST K SUB1 AND 2ND K SUB2 MAGNETIC ANISOTROPY CONSTS. WERE MEASURED FOR ANNEALED AND TEMPERED SINGLE CRYSTAL FERRITES, LI SUBOTIMES5 NEGATIVE(X-2) FE SUB2TIMES5 NEGATIVE(X-2) CO SUBX D SUB4 (X EQUALS 0,0.005) AND LI SUBOTIMES39 NEGATIVE(X-2) FE SUB2TIMES39 NEGATIVE(X-2) ZN SUBOTIMES22 CO SUBX D SUB4 (X EQUALS 0,0.005), AT 4.2-600DEGREES K. MEASUREMENTS WERE CARRIED OUT BY THE METHOD OF FERROMAGNETIC RESONANCE AT SIMILAR TO 9500 AND SIMILAR TO 36,700 MHZ. WITH INCREASED CONTENT OF CO, THE CONTRIBUTIONS TO K SUB1 MAGNITUDE OF DELTA K SUB1 AND K SUB2 MAGNITUDE OF DELTA K SUB2 INCREASE LINEARLY. ON TEMPERING OF LI-CO FERRITES, MAGNITUDE OF DELTA K SUB1 AND MAGNITUDE OF DELTA K SUB2 DECREASE 3 FOLD. TEMPERING OF LI-ZN-CO FERRITES AFFECTS ONLY LITTLE THE CONTRIBUTION OF CO TO THE ANISOTROPY CONSTS. THE ORDER DISORDER TRANSITION IN LI FERRITE STRONGLY AFFECTS THE CONTRIBUTION OF CO IONS TO K SUB1 AND K SUB2. AT GREATER THAN 60DEGREES, EXPTL. OBSO. TEMP. DEPENDENCES OF DELTA K SUB1 AND DELTA K SUB2 IN THE ORDERED CRYSTALS CAN BE SATISFACTORILY DESCRIBED BY THE THEORY OF TACHIKI; HOWEVER, AT 4.2DEGREES K, EXPTL. AND THEORETICAL DATA DIFFER CONSIDERABLY. POSSIBLE CAUSES ARE DISCUSSED.

UNCLASSIFIED

UDC 621.384.664

USSR

GAJYAYEV, N. A., GOLOVINA, N. I., GRACHEV, M. I., GRIDASOV, V. I., GUBRIYENKO, K. I., YEREMENKO, Ye. V., ZAPOL'SKIY, V. N., ZELENOV, B. A., KOTOV, V. I., KUZNETSOV, V. S., MERKER, E. A., MYZNIKOV, K. P., PUCHUGIN, V. A., PRILEPIN, A. A., SELEZNEV, V. S., SEREBRYAKOV, B. A., KHODYREV, Yu. S., and CHEPEGIN, V. N.

"Proton Beam With an Impulse of Up to 70 Gev/s Elastically Dispersed Inside a Target"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

Abstract: This paper discusses the operation of a channel built into the French liquid-hydrogen Mirabelle chamber for the accelerator of the Institute of High-Energy Physics (IFVE). The function of the channel is to form pure beams of pi and k mesons, and antiprotons, in a broad range of impulse magnitudes under the action of a high-frequency separator. The secondary particles are generated on the inside of a target placed in the path of a proton beam diverted from the accelerator with an energy of 70 Gev. By using a fast system for aiming the proton beam at the target, together with a kicker magnet in the channel, the required number of particles passing through the chamber can be provided. The optical system of the channel is described with the

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USSR

GALYAYEV, N. A., et al., Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972,  
pp 1437-1445

aid of diagrams of two possible variants; the beam aiming system and the particle dosage for the bubble chamber are also explained. The authors thank R. M. Sulyayev, P. F. Yermolov, A. M. Moiseyev, M. I. Solov'yev, I. A. Danil'chenko, Ye. A. Parshin, V. M. Kolesnik, A. N. Aleyev, V. D. Rudko, and V. M. Gorshkov for their assistance.

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USSR

UDC 621.384.634

ALEKSANDROV, I. A., FRACHEV, M. I., GUBRIYENKO, K. I., YEMENKO, YE. V., KOTOV, V. I., NEKRASOV, A. N., PRILEPIN, A. A., PICHUGIN, V. A., RSAYEV, R. A., SAMOYLOV, A. V., SELEZNEV, V. S., SEREBRSKOV, B. A., KHANAMIRYAN, A. YE., and KHODYREV, YU. S.

"Negative Particle Channel With Momentum up to 60 Gigaelectron Volts/Second"

Moscow, Atomnaya Energiya, Vol 29, No 1, Jul 70, pp 29-34

Abstract: This article contains a description of a channel for transporting negative particles generated in an internal accelerator target with momentum up to 60 fifaelectron volts/second and an accelerated proton energy of 70 gigaelectron volts. The channel is designed so that for an accelerated proton energy of 70 gigaelectron volts it can be adjusted to momentum in the range of 40-60 gigaelectron volts/second. On reducing the energy of the accelerated protons, the channel can be adjusted to lower momentum. The lower limit corresponds to an accelerated proton energy of 20 gigaelectron volts and is equal to 11.4 gigaelectron volts/second.

The optical system of the channel and its characteristics



USSR

ALEKSANDROV, I. A., et al., Atomnaya Energoya, Vol 29, No 1,  
Jul 70, pp 29-34

are presented. The limiting solid capture angle of the secondary particles by the channel is 32 microsteradians. The best resolution with respect to momentum is 0.3 percent without decreasing the capture angle. The channel was investigated primarily using a secondary beam with a momentum of  $p = 50$  giga-electron volts/second. The procedure for adjusting the channel and the calculated data are described. The differences between the calculated operating conditions of the elements and the conditions after adjustment together do not exceed the errors of the fringing field of the accelerator, the magnetization curve, and the curve for calibrating the bypasses of the magnet. On the whole, the beam parameters agree well with the calculated data.

A detailed diagram of the channel layout is presented, and graphs are presented for the radial position of the targets and the production angle as functions of the momentum of the secondary particles, the optical system of the channel and path of the beams in the horizontal and vertical planes, the momentum

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USSR

ALEKSANDROV, I. A., et al., *Atomnaya Energiya*, Vol 29, No 1,  
Jul 70, pp 29-34

resolution of the channel, the beam profile with momentum of 50 gigaelectron volts/second in the parallel section and slit width of the aperture collimators of +20 mm and the pulse collimator +6mm, the beam profile with momentum of 50 gigaelectron volts/second in the final representation on including the lens doublet, and the beam profile with momentum of 50 gigaelectron volts/second in the final representation on including a lens triplet.

3/3

1/2 029 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--THE USE OF A DEFIBRILLATOR UNDER THE CONDITIONS OF A GARRISON  
HOSPITAL -U-  
AUTHOR--SELEZNEV, YE.K.  
COUNTRY OF INFO--USSR  
SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, 1970, NR 3, P 126  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--LUNG, TUBERCULOSIS, ELECTROCARDIOGRAPHY, BLOOD PRESSURE  
  
CONTROL MARKING--NO RESTRICTIONS  
  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3007/0422 STEP NO--UR/0177/70/000/003/0126/0126  
CIRC ACCESSION NO--AP0135891  
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135891

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PATIENT M, 56 YEARS OLD, WAS ADMITTED TO THE HOSPITAL ON 28 NOVEMBER 1966 FOR AGGRAVATION OF DISSEMINATED PULMONARY TUBERCULOSIS. ANTITUBERCULAR THERAPY WAS STARTED FROM THE FIRST DAY. ON 12 DECEMBER A SEIZURE OF DYSPNEA SUDDENLY AROSE, ACCOMPANIED BY PAINS IN THE EPIGASTRIC REGION AND TACHYCARDIA. ACCORDING TO THE DATA OF ELECTROCARDIOGRAPHIC INVESTIGATION TRANSMURAL INFARCT OF THE POSTERIOR WALL OF THE LEFT VENTRICLE WAS DIAGNOSED, COMPLICATED BY A PAROXYSMAL FORM OF VENTRICULAR TACHYCARDIA (180 BEATS PER MINUTE). THE ARTERIAL PRESSURE DROPPED TO 80-60 MM HG.

UNCLASSIFIED

Acc. Nr: **AP0047344**

**S**

Ref. Code: **UR0589**

PRIMARY SOURCE: Vestnik Khirurgii imeni I. I. Grekova, 1970,  
Vol 104, Nr 1, pp 14-20

**A CLASSIFICATION OF CHRONIC PNEUMONIA**

By F. G. Uglov, S. N. Sokolov and Ye. K. Seleznev

The elaboration of the most rational classification of chronic pneumonia is an essential task of the science of pneumology. Therefore, principal efforts of the authors were directed toward the selection of a better approach to treatment of various forms of chronic pneumonia both by conservative and surgical methods, new conceptions of etiology and pathogenesis being taken into consideration. The pulmonary lesion usually starts from impairment of the drainage function in B<sub>4,5</sub> that results from constriction of the bronchus by enlarged and consolidated perihilar lymph nodes. The classification is based on stage development of chronic inflammatory process. The first stage involves the affection of B<sub>4,5</sub> and partly B<sub>7</sub>, the second -- B<sub>4,5,7,8</sub> (or all basal segments), the third stage -- also B<sub>6</sub>, and the fourth stage includes the cases when the affection involves the upper lobe. The classification considers only the acquired pulmonary lesions.

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REEL/FRAME  
**19790870**

**Ally 2**

USSR

UDC 621.43.011:533;621.5:533

BRIZHENYUK, N. I., POZNANSKIY, V. I., RYBAKOV, V. S., SELEZNEV, Yu. V.,  
KHOKHLOV, Yu. G.

"On the Problem of Determining the Rate of Combustion of Fuel in Diesels"

V sb. 11-ya Vses. konf. po vopr. ispareniya, goreniya i gaz. dinamike dispersn. sistem. 1972 (11th All-Union Conference on Problems of Evaporation, Combustion and Gasdynamics of Disperse Systems, 1972 -- Collection of Works), Odessa, 1972, p 44 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B421)

Translation: A formula for determining the rate of combustion of fuel in diesels that was proposed by one of the authors of the article is analyzed. It is shown that one of the factors determining the rate of combustion is the rate of evaporation of the fuel, which depends in turn on the thermodynamic parameters of the medium, the surface and the volume of the fuel jet. The rate of heat release was investigated as a function of the basic physicochemical parameters. Yu. F. Dityakin.

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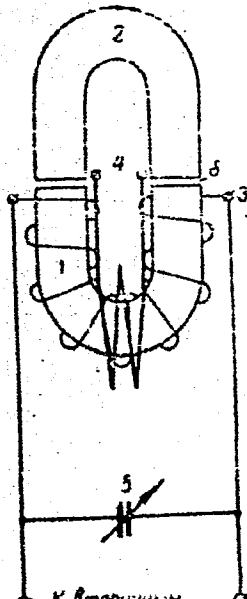
AA0049394

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

241543 TEST SET FOR MAGNETIC CORES, comprising electromagnet (1) with two windings linked through an air gap with test sample (2). The test winding is bridged by a compensating capacitor calculated from equation of reactive components introduced by the air gap and the test winding. 17.1.68 as 1211863/18-10.M.A. BABIKOV et al (1.9.69) Bul 14/18.4.69. Class 21e. Int.Cl.G 01r.

2-70



AUTHORS: Babikov, M.A.; Seleznev, Yu.V.; Maslov, Yu.N.; Ryzhkov, G.P.

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AA0044228 -

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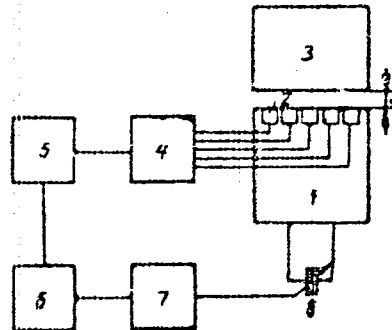
UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

1/70

241521 TEST SET FOR MAGNETIC CORES in which the effect of air gap between the test sample and the instrument is eliminated by means of inductive sensors (2) in the gap. The measurements are transmitted to an integrator (4) and through amplifiers to a compensator (7) which adjusts the value of corrective capacitance (8).

17.1.68 as 1211366/18-10. YU. N. MASLOV. YU. V. SELEZNEV. (3.9.69) Bul 14/18.4.69. Class 21e. Int. Cl. G01r.



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Devices

USSR

UDC 621.327.66

KRATKO, V. I., SELEZNEV, Yu. Ye., Computing Center, Siberian Department of the Academy of Sciences of the USSR

"A Method of Making Frameless Memory Arrays"

Moscow, Otkrytiya, izobreneniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 25, Soviet Patent No 277860, class 21, filed 14 Jun 69, published 5 Aug 70, p 45

Translation: This Author's Certificate introduces a method of making frameless memory arrays by threading a ferrite matrix in the spread-out state and then folding it up. As a distinguishing feature of the patent, the following steps are taken to increase labor productivity: the cores are mounted in two rows along technological rods; the apertures are oriented crosswise to the rod; the cores are fastened by a wire which is a coordinate conductor of one coordinate; this wire is made to follow a helix inside the cores; the wire is fastened on the ends of the rods; the rods are arranged in parallel with the apertures of each row of cores oriented opposite one another; the resultant continuous holes are threaded by wires which are the coordinate conductors of the second coordinate and lie crosswise of the rods; inhibit and readout wires are then threaded through, the

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USSR

KRATKO, V. I., SELEZNEV, Yu. Ye., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 25, Soviet Patent No 277860, class 21, filed 14 Jun 69, published 5 Aug 70, p. 45

rods are removed, the helically wound wires are stretched into straight lines, and the matrix is folded up.

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- 11 -

USSR

UDC 517.919

SELEZNEVA, F. G.; and EYDEL'MAN, S. D., Voronezh Polytechnic Institute, Kiev Advanced Radio-Engineering School

"Initial Value Problem for Systems With Constant Coefficients"

Minsk, Differentsial'nyye Uravneniya, Vol 6, No 11, Nov 70, pp 2062-2073

Abstract: V. A. SOLONNIKOV was the first to show that for general systems of partial differential equations unsolved relative to higher derivatives with respect to the time coordinate  $t$ , the Cauchy problem, generally speaking, is poorly formulated and it is natural to replace it with an initial value problem whose operator is connected with the initial system of differential equations by YA. B. LOPATINSKIY's algebraic condition. The present article establishes theorems on the correct solvability of the initial value problem for arbitrary systems with constant coefficients in the spaces  $H$  as well as the solvability in

spaces increasing with an increase of the spacial coordinates of the func-  
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USSR

SELEZNEVA, F. G., and EYDEL'MAN, S. D., *Differentsial'nyye Uravneniya*, Vol 6, No 11, Nov 70, pp 2062-2073

tions. The article essentially uses methods developed in the study of the Cauchy problem, constructions of V. A. SOLONNIKOV, and the Seidenberg-Tarski exclusion theory.

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USSR

UDC 632.95

SELEZNEVA, T. YE., SISTER, YU. D., SUPIN, G. S.

"Amperometric Titration of Sulfur Containing Biologically Active Substances. Analysis of Cyneb"

Tr. 2-go Vses. sovesich.no issled. ostatkov pestitsidov i profilakt. zagrvaz-neniya imi produktov pitaniya, kormov i vnesh. sredy (Works of the Second All-Union Conference on the Investigation of Pesticide Residues and Preventive Contamination of Food Products, Feeds and Environment), Tallin, 1971, p 249 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12N476)

Translation: Cyneb is dissolved in 5 moles of KOH; the solution is neutralized with HCl or HNO<sub>3</sub> to pH 6.8, and is titrated with Hg<sup>2+</sup> or Ag<sup>+</sup> salts on a platinum rotating microelectrode with respect to a saturated Hg<sub>2</sub>Cl<sub>2</sub>-electrode with a potential of +0.6 volts. The relative error in analyzing 10<sup>-7</sup>-10<sup>-5</sup> moles of cyneb in 50 ml of the solution is 0.3-0.6%.

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USSR

SELEZNEVA, T. V.; TUTUBALIN, V. N.

"Evaluation of Statistical Characteristics of Long Waveguides in a Two-Wave Model"

Moscow, Teoriya Veroyatnostey i Yeye Primeneniya; January-March, 1973; pp 94-108

ABSTRACT: The product of random independent matrices (of the second order) is considered as an exact model of a long waveguide with two propagating waves: the basic wave and a parasitic wave. Two approximation methods for evaluating the statistical characteristics of such models are given: a diffusion approximation and a type of central limit theorem. The accuracy of these approximations is investigated by a Monte Carlo simulation. The Monte Carlo experiments are found to be not statistically stable, but a certain agreement exists between the results of these experiments and the approximation methods given in the article.

There are seven bibliographic references.

1/1

- 26 -

BELEZNEVA, V. S.

*meteorology*

CHARACTERISTIC FEATURES OF THE DEVELOPMENT OF THE QUARTIENNIAL CYCLE IN THE INDIAN OCEAN (UDC 551.514(622.3)(287))

Article by Candidate of Geographic Sciences R. F. Burlutskiy, N. A. Melnikova, V. S. Salanueva, USSR Hydrometeorological Scientific Research Center, Moscow, 125080, USSR. *Hydrometeorology*, Russian, No 11, 1972, submitted 13 March 1972, pp 27-30

*Melnykov*

*Source: JPRS 1972*

According to the data of ten (1967-1971) marine meteorological research expeditions, the temperature and wind conditions in the stratosphere and troposphere of the equatorial latitudes in the Indian Ocean were analyzed in detail. The characteristic features of the development of the quartennial cycle in this region were discovered.

In order to study the characteristic features of the quartennial cycle in the Indian Ocean, meteorological sounding data from ten marine expeditions from 1967 to 1971 were used. The routes followed by the expeditions are presented in Figure 1. In the 17-19 trips of the scientific research ship A. I. Voytykov and the 17 trips of the scientific research ship A. I. the tropical zone of the Indian Ocean was crossed in the latitudinal direction from the Straits of Malacca to the point at 20° south latitude, 65° east longitude.

On trip 20 of the scientific research ship A. I. Voytykov and trip 19-20 of the scientific research ship Yu. M. Shokai'skiy, the route passed along the equator from the Straits of Malacca to 0° latitude, 65° east longitude, and scientific research ship Yu. M. Shokai'skiy and trip 19 of the research ship Akademik Shishov, meridional sections were made along 65° east longitude.

By the data from the indicated trips, the time-space sections of the atmosphere were constructed for the tropical zone of the Indian Ocean. The sections elucidate the wind and temperature conditions of the stratosphere and troposphere of the equatorial latitudes (the zones of effect of the quartennial cycle) in precise detail the entire extent of the Indian Ocean. This

USSR

UDC 539.3:534.231.1

SELEZOV, I. T.

"Propagation of Waves From a Cylindrical Cavity in a Magnetoelastic Medium"

V sb. Kontsentratsiya napryazh. Vyp. 3 (Stress Concentration. No. 3 -- Collection of Works), Kiev, "Nauk dumka", 1971, pp 143-150 (from RZh-Mekhanika, No 9, Sep 71, Abstract No 9V71)

Translation: Approximation equations are derived for the dynamics of a weakly conducting magnetoelastic medium under the action of an unperturbed magnetic field; the magnetoelasticity equations are linearized and considerably simplified through retention of first order terms after representation of all desired functions in the form of expansions in terms of a small magnetic Reynolds number. The relationship between elastic and magnetic fields is determined by the boundary conditions and pondermotor and Lorentz forces. The Laplace transformation method is used to solve the problem of the propagation of compression waves from a cavity to the surface of which pressure is applied that changes in time as a Heaviside function. A constant homogeneous magnetic field acts along the axis of the cavity. Asymptotic solutions are constructed in the prefrontal

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USSR

SELEZOV, I. T., Kontsentratsiya napryazh. Vyp. 3, Kiev, "Nauk dumka", 1971,  
pp 143-150

region for radial stresses. It is shown that the magnetic field and an acous-  
tical medium in the cavity decrease the stresses. Authors abstract.

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1/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--SCATTERING OF ELECTROMAGNETIC WAVES AT A CYLINDER IN A SEMIBOUNDED  
REGION -U-  
AUTHOR-(02)-SELEZOV, I.T., KRIVONOS, YU.G.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK UKRAINS'KOI RSR, DOPOVIDI, SERIIA A  
FIZIKO-TEKHNICHNI I MATEMATICHNI NAUKI, VOL. 32, APR. 1970, P. 367-372  
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTROMAGNETIC WAVE SCATTERING, CYLINDRIC WAVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--2000/1809

STEP NO--UR/0441/70/032/000/0367/0372

CIRC ACCESSION NO--AT0125421

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0125421

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. APPLICATION OF THE METHOD OF IMAGES TO THE SOLUTION OF THE PROBLEM OF THE STATIONARY PROBLEM OF THE SCATTERING OF ELECTROMAGNETIC WAVES AT A CIRCULAR CYLINDER SITUATED IN A SEMIBOUNDED REGION. THE PROBLEM IS REDUCED TO THE SOLUTION OF A HELMHOLTZ EQUATION BY TRANSFORMING THE SOLUTION OBTAINED BY THE METHOD OF IMAGES TO THE REGION OF "REAL" VARIABLES. THE FINAL SOLUTION IS OBTAINED IN THE FORM OF A SERIES WHOSE TERMS DESCRIBE MULTIPLY SCATTERED FIELDS. AN APPROXIMATE ANALYTICAL SOLUTION IS OBTAINED IN A RAYLEIGH APPROXIMATE FOR THE FAR FIELD CASE. NUMERICAL RESULTS ARE PRESENTED WHICH REVEAL A STRONG INFLUENCE OF THE BOUNDARY ON THE RADIATION PATTERN. FACILITY: AKADEMIJA NAUK UKRAINS'KOI RSR, INSTITUT KIBERNETIKI, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--WAVE DIFFRACTION OF CONVEX BODIES IN SEMI BOUNDED REGIONS -U-  
AUTHOR--SELEZOV, I.I. S  
COUNTRY OF INFO--USSR  
SOURCE--PRKLADNAIA MEKHANIKA, VOL. 6, MAR. 1970, P. 38-46  
DATE PUBLISHED-----70  
SUBJECT AREAS--PHYSICS  
TOPIC TAGS--ELECTROMAGNETIC WAVE DIFFRACTION, CONVEX BODY, WAVE EQUATION,  
SUCCESSIVE APPROXIMATION, BOUNDARY VALUE PROBLEM, ELASTICITY THEORY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1996/0494 STEP NO--UR/0198/70/006/000/0038/0046  
CIRC ACCESSION NO--AP0117728  
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 033

CIRC ACCESSION NO--AP0117728

ASSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. APPLICATION OF THE METHOD OF IMAGES TO A STUDY OF THE DIFFRACTION OF A PLANE WAVE FROM AN INFINITELY REMOTE SOURCE AT A CONVEX OBSTACLE WITH A PLANE REAR SURFACE. CASES INVOLVING ONE AND TWO WAVE EQUATIONS ARE EXAMINED. A METHOD OF SUCCESSIVE APPROXIMATIONS, INVOLVING REPEATED APPLICATIONS OF THE METHOD OF IMAGES, IS PROPOSED FOR THE SOLUTION OF THE FIRST AND SECOND BASIC BOUNDARY VALUE PROBLEMS IN ELASTICITY THEORY. APPROXIMATE SOLUTIONS TO THE STEADY STATE PROBLEM OF THE SCATTERING OF AN ELASTIC WAVE AT A SPHERE ARE OBTAINED AND ANALYZED.

FACILITY: AKADEMIIA NAUK

UKRAINSKOI SSR, INSTITUT KIBERNETIKI, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

1/2 038 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--DYNAMIC INSTABILITY OF AN ELASTIC PLATE SITUATED IN A FLOW OF  
IONIZED GAS -U-  
AUTHOR--SELEZOVA, L.V. S

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK UKRAINS'KOI RSR, SOPOVIDI, SERIJA A  
FIZIKO-TEKHNICHNI I MATEMATICHNI NAUKI, VOL 32, APR. 1970, P. 361-364  
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELASTIC PLATE, ION, GAS STATE, GAS FLOW

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--2000/1798

STEP NO--UR/0441/70/032/000/0361/0364

CIRC ACCESSION NO--AT0125410

UNCLASSIFIED

2/2 038

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0125410

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALYSIS OF THE FLUTTER OF A  
INFINE ELECTRICALLY NONCONDUCTION PLATE ONE SIDE OF WHICH IS SITUATED IN  
A WEAKLY CONDUCTING GAS WHILE THE OTHER SIDE IS BOUNDED BY AN ACOUSTIC  
MEDIUM AT REST. THE ENTIRE SYSTEM IS SITUATED IN AN UNPERTURBED  
MAGNETIC FIELD. A DISPERSION EQUATION DESCRIBING THE INSTABILITY  
REGIONS IS DERIVED, AND IS SOLVED NUMERICALLY ON A COMPUTER. THE  
INFLUENCE OF THE MAGNETIC FIELD ON THE CRITICAL FLUTTER SPEED AND  
FREQUENCY IS EXAMINED. TWO REGIONS IN WHICH THE INFLUENCE OF THE  
MAGNETIC FIELD DIFFERS ARE IDENTIFIED. FACILITY: KIIVS'KII  
DERZHAVNII UNIVERSITET, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--20NOV70  
TITLE--WAVE DIFFRACTION AT A CYLINDER IN AN ELASTIC HALF SPACE -U-

AUTHOR--SELEZGY, I.T.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK UKRAINS'KOI RSR, DOPOVIDI, SERIJA A FIZIKO  
TEKHNICHNI I MATEMATICHNI NAUKI, VOL. 32, MAR. 1970, P. 259-264.  
DATE PUBLISHED--MAR70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SHOCK WAVE DIFFRACTIGN, CYLINDRIC WAVE, HARMONIC FUNCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1650

STEP NO--UR/0441/70/032/000/0259/0264

CIRC ACCESSION NO--AT0118629

UNCLASSIFIED



2/2 026

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0118629

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. APPLICATION OF THE METHOD OF IMAGES TO THE SOLUTION OF THE STEADY STATE DIFFRACTION PROBLEM OF A PLANE HARMONIC WAVE INCIDENT ON A CYLINDER WHICH IS SITUATED IN AN ELASTIC HALF SPACE. THE SOLUTION IS OBTAINED IN THE FORM OF AN INFINITE SERIES IN WHICH EACH S-TH MEMBER REPRESENTS A DIFFRACTION FIELD OF S-TH MULTIPLICITY. SEVERAL EXAMPLES OF THE APPLICATION OF THIS METHOD TO SPECIFIC CASES OF DIFFRACTION INDUCED WAVE SHATTERING FIELDS ARE GIVEN.

FACILITY: AKADEMIIA NAUK UKRAINS'KOI RSR, INSTITUT KIBERNETIKI, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

USSR

UDC 621.317.757

SELIBER, A. B.

"Procedural Error in Measuring the Coefficients of the Fourier Series for the Coefficient of Transmission of a Linear Four-Terminal Network with a Discrete Spectrum of the Measuring Signal"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrotekhn. in-t svyazi. Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad Electrotechnical Communications Institute. Vyp. 2), Leningrad, 1970, pp 237-244 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A429)

Translation: This article contains an investigation of the problem of a procedural error in measuring the coefficients of a Fourier series of the complex frequency characteristic of a linear four-terminal network for three types of measuring signal with a discrete spectrum.

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USSR

UDC 636.083.37

KARANFILOV, N. I., Chairman of Kolkhoz imeni M. V. Frunze, Ovidiopol'skiy Rayon, Odesskaya Oblast, Honored Veterinarian, Ukrainian SSR, FAYTEL'BERG, R. O., Doctor of Medical Sciences, TKACHENKO, G. P., Candidate of Biological Sciences, Senior Scientific Associate, Odessa State University imeni M. I. Mechnikov, MEDVEDEVA, Ye. I., Doctor of Biological Sciences, PANCHENKO, K. A., PETRENKO, Ye. V., LUKINA, G. D., Senior Engineers, BOYKO, L. I., and SELICH, Ye. F., Engineers, Odessa Technological Institute of the Food Industry imeni M. V. Lomonosov

"The Effect of a Preparation Obtained From Algae (Phyllophora) Upon the Weight Gains and Blood Composition of Calves"

Moscow, Zhivotnovodstvo, No 3, Mar 72, pp 82-83

Abstract: A valuable preparation containing amino acids and peptides has been developed from industrial Phyllophora waste by the Odessa Technological Institute of the Food Industry (Author's Certificate No 287959). Employed as a fodder supplement, 4.5 kg of the preparation yield an incremental weight gain of 11.43 kg, in other words, 2.54 kg of meat for each kilogram of the preparation, which costs less than 30 kopeks. The erythrocyte number of the calves increases, as does the hemoglobin content and the total protein content. Additional testing is recommended.

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Therapy

USSR

UDC 615.281.8.035.4:616.988.75-053.4-036.8

AKSENOV, V. A., ~~SELIDOV~~ KIN, D. A., GLADKIKH, G. N., KJBLIKOV, V. S., KUZNETSOVA, O. V., MOLODISOVA, L. D., BERSENEVA, R. A., AKSENOV, L. A., BOGDANOVA, N. S., and PERSHIN, G. N., All Union Chemico-Pharmaceutical Institute imeni S. Ordzhonikidze, Ministry of Health USSR

"Study of the Prophylactic Value of the New Soviet Antiviral Preparation Oxolin in Preschool Children during the 1969 Influenza Epidemic"

Moscow, Pediatriya, No 5, 1970, pp 18-22

Abstract: The viricidal agent oxolin (tetraxotetrahydronaphthalene (dihydrate) is effective in the treatment of adenovirus kerato-conjunctivitis, herpetic keratitis, dermatitides of virus etiology, and some acute respiratory diseases. In a double-blind trial, oxolin was administered to 4,170 children one to seven years of age in an unidentified Soviet city during the 1969 influenza epidemic. (It was applied to the nasal mucosa in the form of a 0.25% ointment on a vaseline base twice daily for 40-49 days). Oxolin reduced the incidence of influenza 1.7 times (43%) compared with control children. Severe forms of the disease and complications were 1.1-1.4 times more frequent in the latter than in those who received the preparation, and the course of the disease was 1.2 days longer on the average. The use of oxolin produced side effects in only 0.6% of the cases.

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USSR

UDC 615.281.5.035.4:616.988.75-036.8

AKSENOV, V. A., SELIDOVKIN, D. A., GLADKIKH, G. N., GRAKHOVA, A. G., BOGDANOVA, N. S., and PERSHIN, G. N., Ministry of Health USSR, and All Union Scientific Research Chemicopharmaceutical Institute imeni S. Ordzhonikidze, Moscow

"Evaluation of the Prophylactic Effectiveness of the New Soviet Antiviral Agent Oxoline During the 1969 Influenza Epidemic"

Moscow, Farmakologiya i Toksikologiya, Vol 33, No 6, Nov/Dec 70, pp 726-733

Abstract: Oxoline, a polyox compound of the naphthalene series, is a virucidal drug with selective activity against influenza virus and a local action. It is effective in the treatment of virus infections of the eyes and skin, and relieves the symptoms of influenza in patients on application in the nasal and pharyngeal cavities. Its effectiveness as an influenza preventive was studied during the 1969 epidemic caused by the A2 virus. Tests were carried out on 9,600 children 1-7 years old in two cities. Oxoline was applied twice a day for 25 days on the mucosa of the nose in the form of an 0.25-0.5% vaseline ointment, using 0.3-0.5 g ointment per child per day. The coefficient of effectiveness in preventing influenza was 1.7, corresponding to a reduction of the incidence of influenza by 43% over the controls. The frequency of side effects was 0.6 and 0.9% for the 0.25 and 1/2

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ARSENOV, V. A., et al, *Farmakologiya i Toksikologiya*, Vol 33, No 6, Nov/Dec 70, pp 726-733

and 0.5% ointment, respectively. The 0.25% ointment was as effective as the 0.5% ointment. The effectiveness coefficient was the same for children 1-3 years and 4-7 years old, a fact which indicated that oxoline produces a barrier effect, preventing entrance of the infection into the organism through the nasal mucosa, and is not resorbed into the blood. Prophylactic treatment with oxoline alleviated the clinical course of influenza when infection did occur and shortened the duration of the disease.

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1/2 023 UNCLASSIFIED PROCESSING DATE--11SEP70  
TITLE--SOME FEATURES OF INFLUENZA EPIDEMIC IN THE TOWN OF GLAZOV -U-  
AUTHOR--AKSENOV, V.A., ORLOVA, N.N., SELIDOVKIN, D.A., ARSENOV, L.A.,  
ZORIN, V.S.  
COUNTRY OF INFO--USSR  
SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 1, PP 97-101  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--EPIDEMIOLOGY, INFLUENZA, BLOOD SERUM  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1987/0063 STEP NO--UR/0402/70/000/001/0097/0101  
CIRC ACCESSION NO--AP0103743  
UNCLASSIFIED



2/2 023

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103743

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EPIDEMIC OF INFLUENZA WITH A TWO WAVE COURSE WAS OBSERVED IN THE TOWN OF GLAZOV. THE OUTBREAK WAS DEVELOPING AGAINST THE BACKGROUND OF FAVOURABLE CONDITIONS WITH REGARD TO INFLUENZA IN THE SURROUNDING TERRITORY, A FEW WEEKS BEFORE THE ONSET OF INFLUENZA EPIDEMIC IN THE USSR. THE FIRST WAVE OF THE EPIDEMIC WAS REGISTERED IN NOVEMBER DECEMBER 1966, THE SECOND IN FEBRUARY 1967. THE FIRST WAVE INVOLVED PREDOMINANTLY CHILDREN IN KINDERGARTENS AND SCHOOL CHILDREN, IN THE SECOND WAVE THE MORBIDITY OF INFLUENZA WAS RELATIVELY UNIFORMLY DISTRIBUTED BETWEEN ADULT AND CHILD CONTINGENTS. A RISE OF ANTIBODY TO INFLUENZA A SUB2 VIRUS WAS OBSERVED IN THE SERA OF PATIENTS IN THE FIRST WAVE OF THE EPIDEMIC. A STRAIN OF INFLUENZA VIRUS WAS ISOLATED MORPHOLOGICALLY AND SEROLOGICALLY CONSIDERED TO BE AN ATYPICAL A SUB1 STRAIN WITH ALTERED ANTIGENIC STRUCTURE. THE STRAIN HAD NO EPIDEMIC SPREAD.

UNCLASSIFIED

USSR

UDC 616.921.5-036.22(470.51)"1966-'1967"

AKSENOV, V. A., ORLOVA, N. N., SELIDOVKIN, D. A., AKSENOV, L. A., ZORIN, V. S., VOLOGZHKOV, A. D., GLADINA, E. B., SAMUSEV, N. F., ZAKSTEL'SKAYA, L. YA., and YEVSTIGNEYEVA, N. N., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Ministry of Health USSR

"Some Features of the 1966-1967 Influenza Epidemic in Glazov"

Moscow, VoProsy Virusologii, No 1, 1970, pp 97-101

Abstract: This epidemic occurred in two waves: the first in November-December, 1966, when few cases of influenza or other acute respiratory diseases were reported in most of the USSR and localities adjacent to Glazov, and the second in February, 1967. The first wave affected mostly young children, while the second wave affected children and adults to almost the same degree, 10.6 and 9.8 per 100 persons. The course of the disease was severe among children, but relatively mild among adults. The high incidence of influenza in the first wave, characteristic dynamics of the curve with a sharp rise, quick attainment of a peak, and sharp drop, as well as the results of serological examinations, implicated the A<sub>2</sub> virus as the

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AKSENOV, V. A., et al., Moscow, Voprosy Virusologii, No 1, 1970,  
pp 97-101

causative agent. The second wave was attributed to the B virus.  
A peculiar virus - an atypical A<sub>1</sub> strain with altered antigenic  
structure - was also isolated during the epidemic. However, the  
absence of antibodies in both children and adults indicated that  
it did not play an etiological role in the outbreak.

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