

USSR

UDC 669.25'28

DENEZI, V.

"Substituting Molybdenum for Tungsten in Cobalt-Base Heat-Resistant Alloys"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 7, 1973, pp 22-24

Abstract: The possibility of substituting molybdenum for tungsten in industrial cobalt-base heat-resistant alloys (Mar-M-509 and FSX-414) was experimentally determined; Properties of these alloys in short-duration tests, values of their fatigue limit and relative elongation, coefficients of thermal expansion, and densities at room temperature are presented. Alloying with molybdenum instead of tungsten does not decrease the fatigue limit and ultimate resistance of Mar-M-509 and FSX-414 alloys, but increases their plasticity in creep rupture tests and decreases their density at room temperature. Coefficients of thermal expansion, characteristics of microstructure, and crystallization of both alloys are identical. Three tables.

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USSR

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USSR

UDC 51.621.391

DENIS, A. A.

"The Problem of Completeness in the Theory of Automata"

Kibernetika [Cybernetics -- Collection of Works], No 1, Kiev, 1970, pp 51-63,
(Translated from Referativnyy Zhurnal, Kibernetika, No 10, 1971, Abstract
No 10 V604 from the authors introduction).

Translation: A general concept of completeness of sets in arbitrary partial algebras is suggested. A brief review is presented of the status of the problem of completeness, the relationship is noted between various aspects of this problem and unsolved problems are indicated. The results of the author with respect to completeness of the set of weakly initial automata are formulated.

DENISENKO, A.A.

JPRS 57517
15 NOV 72

- 139 -

EFFECT OF FREON-114B2 ON THE ACTIVITY OF ISOENZYMES OF LACTATE DEHYDROGENASE
Article by L. A. Tunov, V. A. Voronil'd, A. A. Denisenko, L. A. Linyuchina
and I. S. Kolosova; Moscow, *Kosmicheskaya Biologiya i Meditsina*, Russian,
Vol 6, No 5, September-October 1972, pp 87-89, submitted for publication
16 December 1971]

UDC 577.158.347.01.04

The literature contains information on the possibility of atmospheric contamination of closed spaces by chemical substances emanating from mechanical and L. A. Tunov; Slagter). In particular, the attention of researchers has been drawn to the study of freons. For example, the presence of freon-114B2 in the air of American spacecrafts has been noted by Wessel, Stenmeyer, Anderson and Sanders. It is emphasized that upon contact with heated surfaces the freons decompose, forming hydrogen chloride and fluoride and traces of phosgene (S. A. Tsirel'son and H. A. Razzan; Wessel). Accordingly, a study of the biological effect of freon-114B2 and the products of its decomposition is a timely problem.

The toxic effect of freon-114B2 has been studied by B. D. Karpov, A. I. Korotkova, et al. A relatively low toxicity, presence of a narcotic effect, and danger of products of pyrolytic decomposition have been noted (Kovceti). Taking into account that the narcotic effect is accompanied by hypoxia and accumulation of lactic acid in cerebral tissues (A. V. Palindin and B. I. Khaykina), in the case of intoxication by freon-114B2 one can expect changes in lactate dehydrogenase activity, since an excess of the substrate exerts a considerable inhibiting effect on this enzyme (Kupovitz and Ott; Olotovskhi and Demirevt).

A change in lactate dehydrogenase activity was registered in intoxication by carbon monoxide (L. A. Tunov and V. V. Kuntov; Fecorn, et al.) and lead (Gonchari and Galoi). A change in the isoenzymes of lactate dehydrogenase has been described during hypoxia caused by an oxygen shortage (Yu. A. Iurov) and in poisoning by styrene (Klein, et al.).

USSR

UDC 621.376.332

DENISENKO, A. N.

"Use of a Frequency Discriminator when Measuring Distance in FM Radio Range Finding Systems"

Moscow, Radiotekhnika, Vol 27, No 1, 1972, pp 1-5

Abstract: A study is made of the possibility of using a frequency discriminator to measure distance in FM radar systems. The functions relating the voltage at the frequency discriminator output included in a FM radar set to the distance to the reflecting object are derived. Modulation with respect to a harmonic law and noise modulation are considered. The characteristics of the frequency discriminators are described by which the derived expressions permit establishment of the dependence of the constant component of the voltage at the frequency discriminator output on the distance to the reflecting object. Under certain conditions, the dependence of the output voltage on the distance is unique. For the case of FM noise, the case of a linear modulation characteristic is considered. Beginning with the conditions of formation of the signal at the mixer output in the radar, the relations obtained permit determination of the basic requirements and selection of the parameters of the frequency discriminator used for this measurement. An error analysis is performed for the frequency discriminator design calculations.

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USSR

UDC 621.791.756:669.15-194

MANDEL'BERG, S. L., RYBAKOV, A. A., and DENISENKO, A. V., Institute of Electric Welding imeni Ye. O. Paton of the Academy of Sciences, UkrSSR

"The Effect of Titanium on Properties of Welded Joints of Silicomanganic Steel"

Kiev, Avtomaticheskaya, Svarka, No 7, Jul 72, pp 9-12

Abstract: An investigation was made of the effect of up to 0.23% Ti additions on the mechanical properties of welded joints of silicomanganic steel containing 0.14-0.17% C, 1.08-1.27% Mn, 0.51-0.82% Si, and 0.029-0.086% Al. Specimens 11 mm thick and double-seam flux welded with Sv-08GA electrode were investigated. The welding of silicomanganic steel with $> 0.15\%$ Ti additions was found to lead to joint embrittlement. A decrease of Ti additions to 0.13% tends to increase the impact ductility of individual parts of welded joints. Recommendations are given for welding silicomanganic steel with increased Ti content ($> 0.13\%$) and for increasing impact ductility of the seam metal and the metal of the near-seam zone of silicomanganic steel additionally alloyed with $> 0.15\%$ Ti. Five illustrations, nine bibliographic references.

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Computers: Digital

USSR

SYCHEV, V. V., TERESHCHENKO, S. S., DENISENKO, E. A.

"Resolution of Scanning Cathode Ray Tubes in Input Devices"

Kazan', Vvod i Vyvod Graficheskoy Informatsii v Tsyfrovyykh Vychislitel'-nykh Mashinakh, Kazan' University, 1972, pp 19-21

Abstract: The paper describes the results of investigation of the feasibility of using scanning readers based on the "Ofort" CRT for processing information from both 35 mm and 70 mm microfilm during computer input. The "Ofort" CRT has the advantages of high speed and resolution of 30-40 lines/mm at 80% modulation in the center of the image for a raster of 70 x 70 mm. The authors studied the possibility of increasing the working field of the raster to 90 x 90 mm with a 25-30 μ m scanning spot. The experimental results show that the "Ofort" CRT can be used with a raster field of 90 x 90 mm for a resolution of 30 lines/mm. Thus it should be possible to use this cathode ray tube in processing textual and graphic data stored on microfilm.

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USSR

SKLYAREVICH, A. N., DENISENKO, O. S.

"Sequence of Tests Used to Check Automata for Multiple Defects"

Izv. Leningr. Elektrotekhn. In-ta. [Works of Leningrad Institute of Electric Engineering], 1972, No 118, Part 1, pp 98-102 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V444 by Kh. Madatyan).

Translation: An algorithm is suggested for construction of complete checking tests for an automaton, determined by its logic plan. Defects such as constant 0.1 and inversion of a signal are analyzed.

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USSR

UDC: 621.762.5.001

DENISENKO, E. T., SKOROKHOD, V. V., Institute of Problems of Material Science, Academy of Sciences, UkrSSR

"Creep of Nickel Powder in Oxidizing and Neutral Media"

Kiev, Poroshkovaya Metallurgiya, No 4, 1972, pp 83-87.

Abstract: The kinetics of creep and the effect of preliminary oxidation on creep are studied by compression of sintered powdered nickel briquettes in air and in argon. It is demonstrated that preliminary oxidation decreases the deformation rate. Oxidation under load activates dislocation flow in the early stages of the process. The relationship between volumetric shrinkage during oxidation and during creep in air indicates a dislocation mechanism of deformation in both cases. However, the seeming invariance of total shrinkage may be only apparent for a number of reasons, including a possible difference in weight gain between free oxidation and oxidation under load, simultaneous development during oxidation of processes activating and inhibiting deformation, or possible localization of dislocation creep resulting from the chemical reaction in the thin surface layer of the particles. All of these problems must be studied further before final conclusions can be drawn.

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USSR

UDC 621.762:621.772

MAY, V. K., DENISENKO, E. T., and KHEIYENKO, A. F., Institute of the Problems of Material Science, AN UkrSSR

"Effect of Nichrome Powder Structure Characteristics of Hot Pressuring Kinetics"

Kiyev, Poroshkovaya Metallurgiya, No 6 (102), Jun 71, pp 25-28

Abstract: The metallographic investigation of hot pressed Nichrome specimens did not reveal a substantial growth of grains with increasing temperature and increasing pressure. Therefore, the main parameters characterizing the structural factor must be of the size of the initial powder particles and the magnitude of the mosaic blocks established during the hot pressing process. The effect of initial powder particle sizes on the packing rate was experimentally investigated on powder of Nichrome Kh20N80. Its packing kinetics and calculated deformation change kinetics during hot pressing are shown. The structural factor characterizing the packing rate during hot pressing was found to be a monotonically decreasing function of the average powder particle size. The character and direction of the substructure change during hot pressing are determined not only by temperature and the hot pressure, but they depend also on preliminary thermal treatment of the powder. Four illustr., two tables, five formulas, five biblio. refs.

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USSR

UDC 621.3.064.1:621.315.1.3.027.5

DENISENKO, G. I. MALINOVSKIY, A. A.

"Application of Cutouts in Ripple Voltage Circuits"

Vestn. L'vov. politekhn. in-ta (News of the L'vov Politechnical Institute),
1970, No 46, pp 27-37 (from RZh-Elektrotehnika i Energetika, No 3, Mar 71,
Abstract No 3Ye109)

Translation: The possibility of using cutouts installed in 6-10 kv AC networks for protection from single-phase short circuits in a ripple current circuit with a variable voltage component up to 10 kv is investigated and evaluated. The limiting transformer power for which such protection is possible both with short circuiting across the transformer clamps and at any point of the winding is determined. A procedure is proposed for calculating the phase distribution of the current of the electric power transmission line and the transformer in the case of a single-phase short circuit considering the effect of the current regulator of the converter for a circuit of any complexity. There are 4 illustrations and a 10-entry bibliography.

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UNCLASSIFIED

PROCESSING DATE--17JUL70

TITLE--LUMINESCENCE OF PHENANTHRENE WITH AN ANTHRACENE IMPURITY ADSORBED
ON RAY ZEOLITE -U-

AUTHOR--DENISENKO, G.I., LISOVENKO, V.A., SHPAK, M.T.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(1), 108-12

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--LUMINESCENCE, ANTHRACENE, ZEOLITE, ADSORPTION, HEPTANE,
CHEMICAL SEPARATION, PHENANTHRENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1323

STEP NO--UR/0368/70/012/001/0108/0112

CIRC ACCESSION NO--APCC55994

UNCLASSIFIED

135/16

Acc. Nr:

AP0055994

Abstracting Service:

CHEMICAL ABST. 6-70

Ref. Code:

UR 0365

116417g Luminescence of phenanthrene with an anthracene impurity adsorbed on NaY zeolite. Denisenko, G. I.; Lisovenko, V. A.; Shpak, M. T. (USSR). *Zh. Prikl. Spektrosk.* 1970, 12(1), 108-112 (Russ). Fluorescence and phosphorescence spectra were recorded at 77°K. The samples were prepd. as described (G. I. Denisenko, 1968). The initial concn. of phenanthroline, contg. traces of anthracene in heptane and in zeolite was 10^{-3} and 10^{-2} - 10^{-3} g/cm³. Changes of the spectra on evacuation, exposure to air, and washing with heptane indicate that on exposure to air, the hydrocarbons are forced on the zeolite surface where they form aggregates similar to mixed crystals. This phenomenon can be used to remove traces of anthracene from phenanthrene. V. Zitko

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1/2 030 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--POLYMERIC COMPOSITIONS BASED ON POLY(VINYL CHLORIDE) AND BUTADIENE
STYRENE THERMOELASTIC PLASTIC MATERIALS FOR ARTIFICIAL LEATHER -U-
AUTHOR--DENISENKO, I.S., KOVALEV, N.F., MISHUSTIN, I.U., ALEKSEYENKO, V.I.
COUNTRY OF INFO--USSR D
SOURCE--KOZH., OBUV. PROM. 1970, 12(2) 44-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--POLYVINYL CHLORIDE, BUTADIENE STYRENE RESIN, LEATHER,
COPOLYMER, TENSILE STRENGTH, ELONGATION, FREEZING, PLASTICIZER/(U)DST30
BUTADIENE STYRENE RESIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0187 STEP NO--UR/0498/70/012/002/0044/0046
CIRC ACCESSION NO--AP0106843
UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106843

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF A BUTADIENE STYRENE BLOCK COPOLYMER DST-30 (I) (CONTG. 30PERCENT STYRENE) ON THE PHYSICOMECH. PROPERTIES OF POLY(VINYL CHLORIDE) (II) WERE STUDIED. INTRODUCTION OF LARGER THAN 60 PARTS I-100 PARTS II BROUGHT ABOUT INCREASED TENSILE STRENGTH AND RELATIVE ELONGATION, SUGGESTING THAT I WAS A POLYMERIC PLASTICIZER OF II. THE FREEZE RESISTANCE, FLEXURAL STRENGTH, TEAR STRENGTH, AND REBOUND RESILIENCE INITIALLY DECLINED WITH ADDN. OF I, REACHING A MIN. AT 60-70 PARTS I, AND ON FURTHER ADDN. OF I, INCREASED, PRESUMABLY DUE TO LIMITED COMPATIBILITY BETWEEN I AND HIGHLY POLAR II. AN INTERLAYER PLASTICIZATION MECHANISM IS PROPOSED.

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1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--DETERMINATION OF ASPARTATE AMINOTRANSFERASE ISOENZYMES IN SERUM BY
AN ENZYMIC ELECTROPHORETIC METHOD -U-
AUTHOR--(03)-DENISENKO, L.N., KOROVKIN, B.F., AMDIY, E.M.
COUNTRY OF INFO--USSR
SOURCE--LAB. DELO 1970, (1), 25-7
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HEPATITIS, AMINDTRANSFERASE, GAMMA GLOBULIN, ALPHA GLOBULIN,
MITOCHONDRION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1644 STEP NO--UR/9099/70/000/001/0025/0027
CIRC ACCESSION NO--AP0106390
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0106390

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. USING THE METHODS OF T. BOYDE AND A. LATNER (1962) AND OF A. BURGER, ET AL. (1964) ONLY 1 ISOENZYME (CYTOPLASMIC) OF THE TITLE ENZYME WAS DETECTED IN THE BLOOD SERUM OF HEALTHY HUMANS; THIS ISOENZYME HAD AN ELECTROPHORETIC MOBILITY AT PH 8.6 IN AGAR GEL SIMILAR TO THAT OF ALPHA SUB2 GLOBULINS. IN PATIENTS WITH LIGHT BOTKIN'S DISEASE THE ACTIVITY OF THE ISOENZYME WAS HIGHER AND IN SEVERE BOTKIN'S DISEASE ANOTHER ISOENZYME (MITOCHONDRIAL) WITH ELECTROPHORETIC MOBILITY SIMILAR TO THAT OF GAMMA GLOBULINS OCCURRED IN ADDN. FACILITY: VOENNOMED. AKAD, IM. KIROVA, LENINGRAD, USSR.

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Acc. Nr.: AM 0103682

Ref. Code: UR 0000

Denisenko, N. I.

Steam Superheaters of Ship Steam Boilers (Paroperegrevateli sudovykh parovykh kotlov) Leningrad, Sudostroyeniye, 1970, 182 pp (SL:2065)

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II	Operating Conditions of Steam Superheaters	9
III	Designs and Calculation of Steam Superheaters	59
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Acc. Nr.: AM 0103682

Given are comparative evaluation and analysis of structures and groups of systems of steam superheaters of contemporary ship boilers, methods for their calculation, a brief characteristics of steels used in construction of steam superheaters, and examples of calculation methods.

The book was written for engineering-technical personnel of design and scientific research organizations, ship mechanics and college students.

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19861968

Public Health, Hygiene and Sanitation

USSR

UDC 612.8+612.766.1

CHUKMASOVA, G. T., ~~DEMYSENKO, N. M.~~, and LEKHAN, V. M., Dnepropetrovsk Medical Institute, Dnepropetrovsk

"Heavy and Tense Work of Some Professional Workers at Automated Plants"

Kiev, Fiziologichnyy Zhurnal, Vol 18, No 4, Jul/Aug 72, pp 554-559

Abstract: Work of operators controlling the performance of automatic instruments and of workers doing physical work at the same production lines is compared. Eight professions involving 124 individuals were analyzed. Physiological studies were carried out 4-5 times per shift, and ergonomic studies, during the entire shift. Despite a difference in assignment of two groups of operators at two different plants their work required constant attention accompanied by emotional tension without interruptions in the workload per shift. At the end of the shift they responded less accurately to their assignment and paid less attention. The pulse rate in both groups was accelerated almost identically despite the fact that one group carried out its assignment while seated. Work of both groups was classified as tense. Workers doing only physical work (different professions) requiring the use of different muscles lost their work productivity level at the end of the shift, their pulse rate averaged 97-106 beats/min. Both groups, operators and workers doing physical work,
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CHUKMASOVA, G. T., et al., Fiziologichnyy Zhurnal, Vol 18, No 4, Jul/Aug 72, pp 554-559

were tired and lost some of their productivity. But these conditions had different causes: in the first case by constant attention while watching performance of different instruments, and in the second case, simple physical exhaustion. The authors see a need for a healthy organization of the work and rest hours to eliminate disturbances in the work procedures.

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Acc. Nr.: AP0042642

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Ref. Code: UR0203
JPRS 52/62

Riometer Absorption and Ionospheric-Magnetic Activity

(Abstract: "Study of the Correlation Between Riometer Absorption and Ionospheric-Magnetic Activity in the Auroral Zone," by Yu. N. Gorshkov and N. M. Denisenko, Northeastern Multidiscipline Scientific Research Institute, Siberian Department Academy of Sciences USSR, Moscow, Geomag- netizm i Aeronomiya, Vol X, No 1, 1970, pp 73-76)

In order to explain the nature of anomalous absorption in the high latitudes it is very important to determine the quantitative characteristics of its interrelationship with variations of ionospheric and geomagnetic parameters. This paper examines the correlations of these phenomena on the basis of data from vertical sounding of the ionosphere and riometer absorption at Cape Shmidt and geomagnetic observations in the world net during 1966. Cosmic radio emission was registered at a frequency of 32 Mc/sec. As a characteristic of ionospheric disturbance the authors computed the hourly deviations of the critical frequencies of the F2 layer and the minimum frequency of reflection from the corresponding median values for ten magnetically quiet days. The collected data were used in determining the diurnal variations of these deviations for disturbed days for summer and winter. In addition, the mean daily Δf_0F2 and Δf_{min} values

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were computed; these can be used as a quantitative characteristic of change in the state of ionization of the upper atmosphere with time. Geomagnetic disturbance was estimated from the $\sum K_p$ indices. Disturbed days were those with $\sum K_p > 15$. The seasonal variation of the mean daily A (absorption) values, computed separately for magnetically quiet and disturbed days, agree rather well with the similar variation of the $\sum K_p$ index. The curves show that in both cases the A and $\sum K_p$ maxima coincide and fall in September, whereas the A minimum, falling in April, relates to a period of relatively low geomagnetic activity. For disturbed days the correspondence between A and $\sum K_p$ is considerably better than for quiet days. There is a relatively good correspondence in changes of A and Δf_{\min} . Correlation coefficients are almost not dependent on season and for winter and summer are 0.67 and 0.63 respectively. As a characteristic of absorption one can use f_{\min} ; the reliability of the estimates will be approximately identical for any season. There is no correlation between absorption and $\Delta f_0 F2$ in winter; the correlation is not much better in summer. The results indicate a small contribution of the F2 layer to total absorption (which contradicts some other studies). On disturbed days the absorption maximum is at 1100 LT, with the minimum at midnight. There is also a morning maximum at 0600. The distribution of maximum and minimum values in

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summer is different. The minimum and morning maximum are two hours later than in winter and there is no nighttime maximum. In general, increased absorption in winter occurs during the first half of the day and in the summer in the second half; this is governed by the seasonal difference in the distribution of geomagnetic activity. Correlation of other parameters is analyzed. The correlation between total absorption and the K_p index is high; it is linear and expressed by the regression equation.

$$A = 0.3 + 0.036 \sum K_p.$$

Using this equation, on the basis of data on the level of geomagnetic activity it is possible to judge with a good degree of approximation the degree of absorption for a particular region and vice versa, using mean absorption for a particular day it is possible to determine the magnetic disturbance.

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USSR

UDC 615.471:615.849.5

DENISENKO, O. N., IL'ICHEV, B. V., KOZLOV, V. A., SKOROPAD, Yu. D.,
STROYKOV, M. Ye.

"Fifty-Channel Dosimeter With Transistorized Detectors"

Moscow, Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

Translation: Department of Roentology and Radiology (Chief-Academician of Academy of Medical Sciences, USSR, G. A. Zedgenidze) of the Scientific-Technical Institute of Medical Radiology of the Academy of Medical Sciences, USSR, Obninsk.

Growth of means for measurement of dose fields lead to the creation of automatic isodoseographs of the following or scanning type (V. A. Volkov, Kh. Dzhons; E. G. Bochkarev and V. A. Mikhaylov). In essence such an isodoseograph is a dosimeter, the movement and recording of readings of which take place automatically. The principal disadvantages of a device of this type is the low operativeness, the impossibility of measurements in solid phantoms, and also with the use of mobile methods of irradiation provide a way so that the isodosograph pertains to the class of single-channel recording systems.

Transition to multichannel methods of recording because of the basic trend in measuring techniques makes it possible to eliminate the disadvantages mentioned above.

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

In the literature a 10-channel isodoseograph with ionization chambers (Birkner) is described; however, the small number of detectors requires additional transfer of them which for practical purposes reduces the principal advantages of a multichannel system to nothing.

A fifty-channel system of recording a dose field with megavolt radiation energy was developed by us.

The over-all block diagram of the multichannel dosimeter shown in Fig. 1 is constructed on the principle of time sharing of the channels. The commutator K_1 , which is triggered by the generator G, successively connects the detectors D_1 -- D_{50} to the input of the d-c amplifier (UPT). The amplified signal passes by way of commutator K_2 , operating in step with the commutator K_1 , through the correcting network K_{Ts1} -- K_{Ts50} intended for balancing the sensitivity of the detectors, and is admitted into the recording device. The recording device is a digital voltmeter TsV, the frequency of the measurement cycle of which is also determined by the generator G. The response of the digital voltmeter can be recorded visually, photographically or with the aid of the digital-printing device TsU. During the comparative representation of the results of the measurements, the signal J_0 of the reference detector is

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

established with the aid of a resistor R, 100 percent equal to 100 units (mv). The sensitivities J_n of the other detectors automatically represent the ratio J_n/J_0 expressed in percentages.

Semiconductor silicon phototransducers with a p-n junction are used as radiation detectors, the electrical and dosimetric character of which are well known (Yu. B. Mandel'tsvayg; A. N. Krongauze and coauthors; F. I. Glezin and coauthors). For their use in a multichannel system it is necessary that the spread of the basic parameters -- sensitivity, energy dependence, internal resistance -- be a minimum. The initial choice of detectors with dimensions of 10 x 10 x 1 mm from a batch of 300 pieces was made on the basis of measurements with the aid of an avometer [ampere-volt-ohmmeter] of the values of the forward and back resistances. As investigations showed, for maintenance of zero of an amplifier operating in a compensating regime it is necessary that the magnitude R_{back} be not less than 50--60 kOhm.

After this, the energy dependence was studied of 10 detectors arbitrarily selected from a batch of detectors in the 13-120 e.v. range.

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

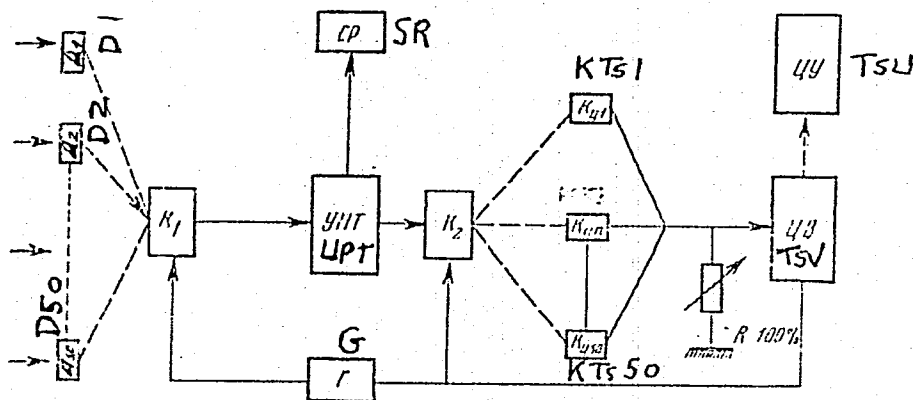


Fig. 1. Block Diagram Of Multichannel Dosimeter

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

The results obtained show that the maximum spread does not exceed 20-30 percent. It practically did not affect the attenuation curves of Co⁶⁰ measured with the aid of these detectors. The attenuation curves coincided with attenuation curves measured by the scintillation detector of the NS-200/B dosimeter with a precision on the order of 3 percent, which corresponds to data obtained in the work of V. K. Lyapidevskiy. The geometry of the detector in the form of a plate with dimensions of 10 x 10 x 1 mm is not optimum, which appears in the dependence of the sensitivity on the angle of incidence of the quanta emission. In order to improve the geometry, the plates were divided into two equal halves which then were superimposed one on the other (sensitive side inward) so that the over-all dimensions of the detector became equal to 10 x 5 x 2 mm. Electrically, these parts of the detector were connected in parallel, thanks to which the electrical parameters and the sensitivity of the new detector correspond to the original (up to cutting). The dependence of the response on the angle of incidence of the γ quanta during this did not exceed 5 percent (the analogous magnitude for the original plate was 25 percent).

The maximum spread of the detector was in sensitivity. The differential distribution of sensitivity is shown in Fig. 2 a and the integral in Fig. 2 b.

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

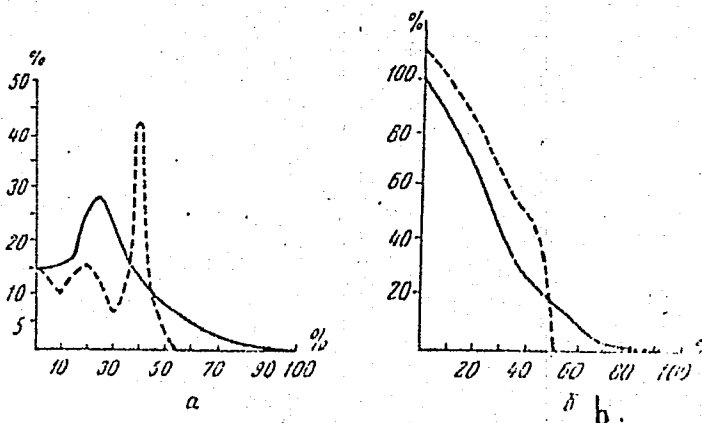


Fig. 2. Distribution of Detectors With Respect to Sensitivity
a--Differential; b--Integral. Solid line up to "cutting of the detectors; dotted line, after.

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

Co^{60} radiation was used in determining the sensitivity. The relative sensitivity (the response of the most sensitive detector is taken as equal to 100) is plotted on the X axis and the relative number of detectors (the overall number of detectors in a batch corresponds to 100) on the Y axis.

All detectors were equalized to a relative sensitivity of 40 percent. It is clear that during this it is possible to utilize those detectors, the relative sensitivity of which exceeds 40 percent. It is possible mechanically to reduce the sensitivity (e.g., by a decrease of the dimensions of the detector) and by electrical means. We used the latter method, for which correcting networks were introduced into the electrical circuit [tsep'] for the signals after amplification, with the aid of which it was possible smoothly to change the sensitivity to the necessary magnitude. As seen from Fig. 2 b, the relative number of detectors which were used during this did not exceed 25 percent (for a relative sensitivity of 40 percent). In order to increase the output of the detectors in a batch which are used, and the preliminary (up to electrical correction) equalizing of their sensitivity, the process described above of improving the geometry of the detectors was used. To accomplish this, the halves of detectors with a relative sensitivity greater than 40 percent were connected with halves of detectors with a relative sensitivity less than

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

40 percent, so that the sum of their relative sensitivities would amount to 40 percent. The corresponding distributions after these operations are shown in the dotted lines of Figs. 2 a and 2 b. It is seen that the output of detectors which are used increased up to 55 percent. Furthermore, the spread of the detectors with respect to sensitivity (see Fig. 2 a) was substantially decreased, which to a considerable degree contributed to a simplification of the electrical circuits for sensitivity control. After electrical connection the final spread of 50 selected detectors did not exceed 2 percent.

The detectors were placed at the ends of rods (at a depth of 3 mm) with a length of 30 cm and a diameter of 1 cm, made of tissue-equivalent mass M-3. Conductors with a cross section of 0.14 mm passed within the rods. The number of the detector was placed on the lateral face of the rod. For convenience in exploitation, all the detectors were united in groups of 10 pieces each, which are connected via releasable connections to the block of the K_1 commutator, distributed in the immediate vicinity of the phantom.

The principal circuit and the external appearance of the multichannel dosimeter are shown in Figs. 3 and 4.

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

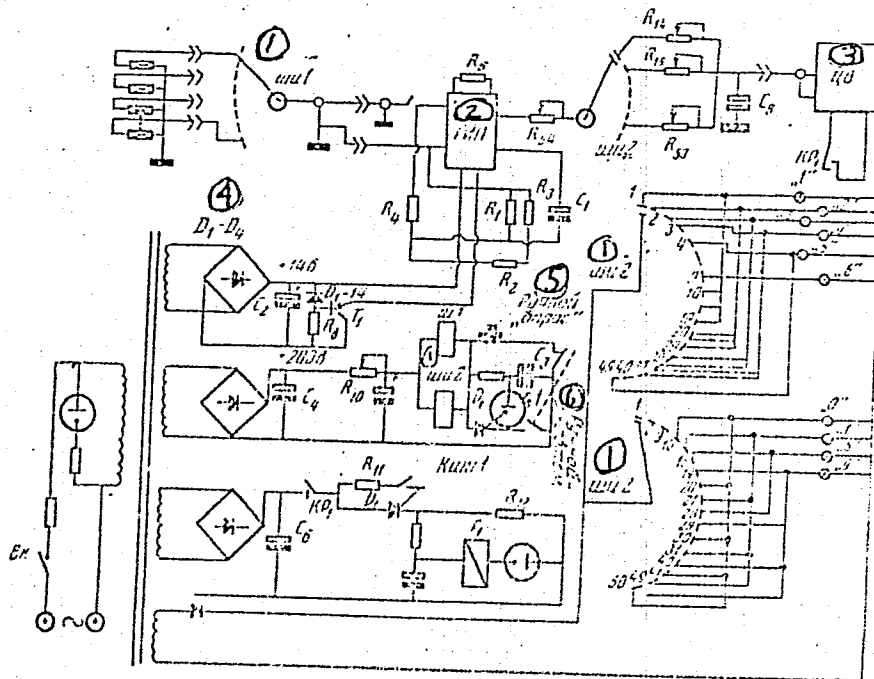


Fig. 3. Principal Circuit Of Multichannel Dosimeter

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

Key to Fig. 3.

1. (SH)-1, -2 Step-by-step switch
2. Galvanometric induction converter
3. Digital voltmeter
4. Detectors
5. Manual interrogation
6. Manual-automatic

ShI-50/4 step-by-step switches were used as K_1 and K_2 commutators. Their triggering was accomplished by the thyristorized generator L_1 , operating in a regime of energy pileup in the interval between pulses. The possibility is provided for of manual or automatic interrogation with frequency control. After the commutator K_1 the signal enters a Type I-310 d-c amplifier which contains a Type 131M/3 galvanometric induction converter (GIP) an a-c amplifier, and a synchronous demodulator. The input resistance of the GIP does not exceed 1-2 ohm which makes it possible to assure realization of a short-circuit regime. From the GIP the signal proceeds via the commutator K_2 to the correcting network which contains the variable resistors R_{14} - R_{53} . Resistor R_{54} (100 10/15

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

percent R) is used during relative measurements. For an indication of the number of a detector being questioned, indicator digital panels were used, connected with the aid of the ShI-50/4 contacts, and giving in digital form the number of the detector being questioned. The results of the measurements were recorded with the aid of a Type ShCh1411M digital voltmeter, with which an output to digital printing in the code 2-4-2-1 was provided.

Structurally the multichannel dosimeter is made in the form of the block of detectors, the block of the commutator K_1 , a principal block in which are located the commutator K_2 , the d-c amplifier (UPT), the correcting network, and the control general G, the power supply block, and the digital voltmeter block.

The commutator K_1 is located in the immediate vicinity of the phantom. The signals are transmitted with the aid of a coaxial cable approximately 20 m long. For convenience, in the principal block there was a supplementary pointer-type recorder (SR) (See Fig. 1) of the power of the radiation dose, connected to the output of the GIP.

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

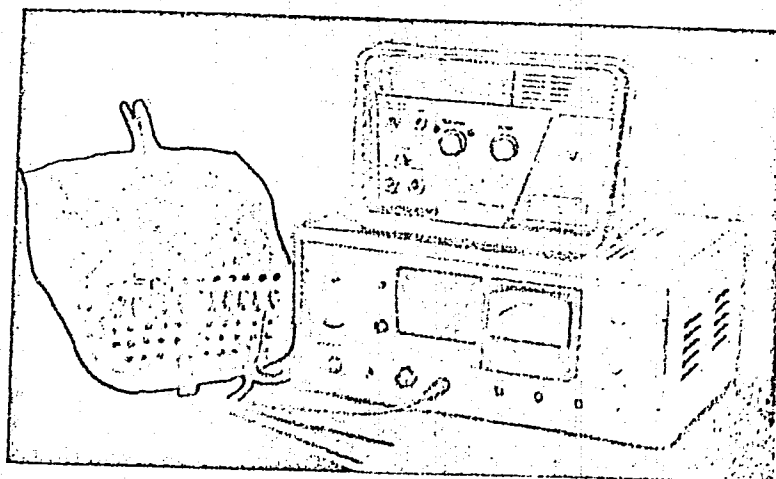


Fig. 4. Exterior View Of Multichannel Dosimeter

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

The multichannel dosimeter can be used with any phantom, both liquid and solid. In our investigations a dosimetric phantom of a human thorax was used, prepared on the basis of this part of the skeleton fixed in Formalin. The thorax wall, the heart, liver, and diaphragm are fulfilled from the M-3 phantom mass (M. Tyubiana and coauthor). The trachea and esophagus are simulated with vinyl chloride tubes. The spinal column canal is a natural cavity with vinyl chloride tubes lead into it. In place of the arrangement of the lungs, a cavity is provided, with the anatomy and dimensions of the skeleton taken into account. The cavity can be filled with various tissue-like materials and ionizing radiation detectors can be introduced into it. On the side of the distal end of the phantom there are 50 cylindrical channels 1 cm in diameter in which rods with detectors can be placed. The direction of the channels coincides with the longitudinal axis of the phantom.

Thus the dosimetric phantom of a human thorax makes it possible wholly or partially to vary the composition of the substance filling the "lungs" cavity and to place detectors at any point of the phantom, including the "esophagus," "trachea," and the "spinal column channel."

Measurements performed on this phantom with the aid of the multichannel dosimeter showed that introduction of detectors into the phantom did not affect the dose field within the limits of error of the measurements.

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DENISENKO, O. N., et al., *Meditinskaya Radiologiya*, Vol 18, No 2, 1973, pp 40-45

With the electronic stages taken into consideration the over-all error of measurements did not exceed 5 percent.

Conclusions A 50-channel dosimeter with semiconductor detectors of the "solar cell" type was developed. The principle of time sharing of the detector communication channels with the recording device is placed at the basis of the block diagram. The multichannel dosimeter makes it possible to conduct measurements on any phantom with the application of static methods of irradiation. It would be possible to use a block diagram with parallel "interrogation" of detectors for recording of the dose field with mobile methods of irradiation; however, for a large number of channels its creation encounters considerable difficulties. In spite of this it is possible to stress that transition to multichannel methods of recording dose fields is very promising and the development in question is only the first step in this direction.

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DENISENKO, O. N., et al., Meditsinskaya Radiologiya, Vol 18, No 2, 1973, pp 40-45

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Received 16 December 1971

15/15

Acc. Nr: **AP0034769**

Ref. Code: UR 0241

PRIMARY SOURCE: Meditsinskaya Radiologiya, 1970, Vol 15,
Nr 1, pp 67-73

THE EFFECT OF THE DETECTORS' SIZE ON THE ACCURACY OF THE DOSE
FIELD DETERMINATION

Denisenko, O. N.; Il'ichev, B. V.; Kozlov, V. A.

Summary

An analysis of the effect produced by the detector's size on the resolution capacity of the measuring device for different dose distributions is given. An expression for the optimal choice of the detector's size is presented, which takes account of the effect of the error due to the limited sensitivity.

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REEL/FRAME

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UDC 615.849.015.3

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DENISENKO, O. N., IL'ICHEV, B. V., and KOZLOV, V. A., Department of Roentgenology and Radiobiology, Institute of Medical Radiology, Academy of Medical Sciences USSR

"Effect of the Size of the Detectors on the Accuracy of Dose Field Determination"

Moscow, Meditsinskaya Radiologiya, No 1, 1970, pp 67-72

Abstract: The authors examine cases of different ratios $\frac{l}{x_2 - x_1}$, where l is the length of the detector and $x_2 - x_1$ is the length of the investigated area of change in function of the dose field $D(x)$. They show that using a detector in which $l > x_2 - x_1$ is equivalent to using a detector with an infinitely small length. The error is greater in the case of a detector with $l < x_2 - x_1$ than with the infinitely small detector. The size of the detector is unimportant for several fields. The authors emphasize that in choosing the size of a detector, one must take into account both the error arising from its limited resolving power and the error caused by its limited sensitivity. They present an expression that takes into account the combined effect of these errors.

1/1

1/2 021 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--TRANSISTORIZED DOSIMETER OF LONG WAVE ROENTGEN RADIATION -U-
AUTHOR--(03)-KOZLOV, V.A., DENISENKO, O.N., ILICHEV, B.V.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 4, PP 61-63
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RADIATION DOSIMETER, TRANSISTOR, X RAY DETECTION, X RAY MEASUREMENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0957 STEP NO--UR/0241/70/015/004/0061/0063
CIRC ACCESSION NO--AP0109114
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0109114

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS DESCRIBE A DOSIMETER WITH TRANSISTORIZED MONITORS ENDOWED WITH DIFFERENT ENERGY DEPENDENCES. THE ENERGY DEPENDENCE OF THE DOSIMETER DOES NOT EXCEED PLUS OR MINUS 3PERCENT IN THE RANGE FROM DELTA ONE HALF EQUALS 0.2 MMAL UP TO DELTA ONE HALF EQUALS 1.8 MMAL. FACILITY: OTDEL RENTGENOLOGII I RADILOGII INSTITUTA MEDITSINSKOY RADILOGII AMN SSSR.

UNCLASSIFIED

USSR

UDC 577.4

DENISENKO, O. S., and SKLYAREVICH, A. N.

"The Verification Capabilities of a Test of an Inertial Automaton"

V sb. Teoriya konech. avtomatov i yeye pril. (Theory of Finite Automata and its Application - collection of works), No 1, Riga, Zinatne, 1973, pp 47 - 63 (from RZh Matematika No 12, 1973, abstract No 12 V475)

Translation: Questions of checking an inertial automaton are considered. The errors considered are a constant and an additional signal inversion in the circuit. $v(t)$ designates the output function of a correctly operating automaton and $u(t)$ the output function of an improperly working automaton. If the equation

$$\bar{z}u + z\bar{u} = 1$$

holds for the input selection (test) A, this indicates that test A will detect the problem. The article gives conditions which make it possible to determine the testing capacity of each test.

Abstract by Kh. Madatyan.

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USSR

UDC: 8.74

DENISENKO, O. S.

"Verification Functions for the Working State of Memory Elements"

Riga, Vopr. sinteza konechn. avtomatov--sbornik (Problems of Synthesizing Finite Automata--collection of works), "Zinatne", 1972, pp 131-142 (from RZh-Kibernetika, No 10, Oct 72, abstract No 10V611 [author's abstract])

Translation: Formulas are derived for checking the working order of memory elements comprised of AND-NOT and OR-NOR logic cells. Tests are found for checking these elements, and it is shown that the use of verification functions for both outputs when organizing a complete check of the elements to be analyzed gives a smaller number of necessary tests than the use of functions which verify working order for each of the outputs.

1/1

USSR

UDC 617-001.36-085.217.32-032:611.814.1

DENISENKO, P. P. and DOLGUSHINA, A. T., Chair of Pharmacology and General Toxicology, Leningrad Institute of Sanitation, Hygiene, and Medicine

"Effect of Cholinotropic Agents Injected Into the Hypothalamus on the Course of Traumatic Shock"

Moscow, Farmakologiya i Toksikologiya, No 6, 1972, pp 657-660

Abstract: In experiments on rabbits, benactyzine, hemicholine, and pediphen were injected into the hypothalamus at the time a trauma was inflicted (blows on the soft tissues). Blood pressure rose to 120 to 120 mm Hg, whereas in controls and in animals receiving galanthamine or arecoline, blood pressure rose to 140 to 150 mm. Nicotine raised blood pressure only 10 mm. Benactyzine and hemicholine also increased the animals' tolerance for trauma. To lower blood pressure to 60-65 required inflicting a trauma twice to three times as severe as in controls. Arecoline injected into the anterior hypothalamus increased the animals' sensitivity to trauma. When the same trauma was inflicted, arterial pressure never fell below 80 mm in the animals that received benactyzine or hemicholine, and their life-span was somewhat longer. However, when the trauma lowered blood pressure to the critical level, only nicotine and especially pediphen injected into the posterior hypothalamus increased the

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USSR

DENISENKO, P. P. and DOLGUSHINA, A. T., Farmakologiya i Toksikologiya, No 6, 1972, pp 657-660

animals' survival time. The results of these experiments show that the cholinergic structures of the hypothalamus take part in the transmission of pain through the regulation of blood pressure and that the course of traumatic shock is related to the functioning of the cholinoreactive systems.

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1/2 009 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--ACTION OF SOME 5,ALKYL,2,PYRROLIDINONES ON THERMO REGULATION AND
DIURESIS IN ANIMALS -U-
AUTHOR--DENISENKO, P.P., LISITSINA, K.A. *D*
COUNTRY OF INFO--USSR
SOURCE--FARMAKOL. TOKSIKOL. (MOSCOW), 33(1), 42-3
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PYRROLIDINE, KETONE, ALKYLATION, DIURESIS, BODY TEMPERATURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/1673 STEP NO--UR/0390/70/033/001/0042/0043
CIRC ACCESSION NO--AP0103439
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103439

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 5.AMYL.2. PYRROLIDINONE,
5,HEXYL,2,PYRROLIDINONE, AND TO A LESSER EXTENT,
5,PROPYL,2,PYRROLIDINONE, 5,ISOBUTYL,2,PYRROLIDINONE,
5,ISOAMYL,2,PYRROLIDINONE, 5,HEPTYL,2,PYRROLIDINONE, AND
5,NONYL,2,PYRROLIDINONE ADMINISTERED I.P. INTO GUINEA PIGS, RABBITS, AND
RATS AT 15, 30, 50, OR 100 MG-KG INHIBITED THE DEVELOPMENT OF
HYPERTHERMIA AND DELAYED DIURESIS FOR 2 HR, PROBABLY DUE TO INHIBITION
OF THE NEUROHYPOPHYSIS.

UNCLASSIFIED

USSR

UDC 619:616.988.73:636.5

TSIRO, V. A., Candidate of Veterinary Sciences, DMITRIYEV, P. V., KIR'YANOV, YE. A., and DENISENKO, R. A., Veterinary Physicians

"Bird Ornithosis Outbreak"

Moscow, Veterinariya, No 3, Mar 71, p 64

Abstract: Up to 120 different species of wild birds and farm poultry can contract ornithosis. Migrating birds transmit the disease to poultry. In the Soviet Union, the ornithosis pathogen was first detected in 1948. However, the disease was first recorded among human beings in 1969: personnel in a poultry combine were infected by sick ducks. These ducks had been in contact with pigeons inhabiting the farm and with water fowl inhabiting the neighboring lakes. Bacteriological and virological tests performed on the blood serum and on internal organs of the ducks, pigeons, and water fowl revealed an absence of bacteria and the presence of ornithosis virus. Veterinary therapeutic and preventive measures were taken immediately. The disease was eradicated, and no cases of ornithosis have been recorded since then.

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CONSTRUCTION

USSR

UDC: 691.88

PONOMARENKO, E. P., Candidate of Technical Sciences,
TYKVA, P. N., DOMIO, A. A., GRIGORCHUK, G. P.,
DENISENKO, V. G., Engineers

"On Chrome Plating of Embedded Parts in Reinforced Concrete Structures"

Moscow, Beton i Zhelezobeton, No. 4, April, 1971, pp 26-28

Abstract: One of the effective means to prevent corrosion is chrome plating, especially the one deposited by the vacuum diffusion method. This method consists of keeping the parts for four hours in a vacuum furnace at 1300°C.

The steel treated by this method loses some of its strength unless it is subsequently normalized.

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USSR

PONOMARENKO, E. P., et al, Beton i Zhelezobeton, No 4, April 1971, pp 26-28

Welding of the chrome plated parts with stainless electrodes does not destroy the chrome plating.

Tests with nitric acid showed that the corrosion resistance of chrome plated specimens equals that of chrome-nickel steel.

Use on chrome plated parts for the prefabricated building panels results in considerable savings over the galvanizing method.

2/2

- 00 -

1/2 007 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--COMPOSITION OF PIGMENTS AND TOCOPHEROLS OF RYE LIPIDS -U-
AUTHOR--(04)-KLYUSHKINA, YU.F., DENISENKO, YA.I., NECHAYEY, A.P.,
YANOTOVSKIY, M.TS. D
COUNTRY OF INFO--USSR
SOURCE--PRIKL. BIOKHM. MIKROBIOL. 1970, 6(1), 95-8
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CEREAL CROP, BIOLOGIC PIGMENT, THIN LAYER CHROMATOGRAPHY,
CHEMICAL ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/0597 STEP NO--UR/0411/70/006/001/0095/0098
CIRC ACCESSION NO--AP0117825
UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117825

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FLOUR PREPNS. OF 6 RUSSIAN RYE VARIETIES WERE EXTD. WITH ETHER. BY THIN LAYER CHROMATOG. IT WAS SHOWN THAT THE CAROTENOID FRACTION CONTAINS BETA CAROTENE, POLY (CIS LYCOPENE), XANTHOPHYLL EPOXIDE, XANTHOPHYLL, AND TARAXANTHIN. THE TOCOPHEROL FRACTION WAS SEPD. BY GAS LIQ. CHROMATOG. (CELITE 545 IMPREGNATED WITH 10PERCENT SILICONE ELASTOMER SE-30, CARRIER GAS AR, TEMP. 240DEGREES). THE FOLLOWING TOCOPHEROLS WERE IDENTIFIED (RELATIVE AMTS. IN PERCENT): ALPHA(37-51), GAMMA(7-11), DELTA(17-26), AND ZETA SUB1(13-24). FACILITY: MOSCOW TECHNOL. INST. FOOD IND., MOSCOW, USSR.

UNCLASSIFIED

172 008 UNCLASSIFIED PROCESSING DATE--19SEP70
TITLE--FLOTATION OF BARITE FROM A DESLIMED SLURRY AT THE SALAIR
CONCENTRATING MILL -U-
AUTHOR--(04)-VINOKUROV, F.P., KALMYKOV, N.N., SHAKHMATOV, V.N., DENISENKO,
Z.I.
COUNTRY OF INFO--USSR 0
SOURCE--TSVET. METAL. 1970, 43(1), 86-7
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--FLOTATION, BARIUM MINERAL, SLIME

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/0762 STEP NO--UP/0136/70/043/001/0086/0097
CIRC ACCESSION NO--AP0102727
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0102727

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ATTEMPT WAS MADE TO DECREASE THE AMT. OF SLURRIES IN THE FEEDING OF THE BARITE FLOTATION. WHEN DESLIMED SLURRY IS USED THE FLOTATION OF THE BARITE IMPROVES CONSIDERABLY, THE EXTN. INCREASES, THE QUALITY OF THE BARITE CONCS. ALSO IMPROVES. THE DESLIMING OPERATION WAS INVESTIGATED IN SOME DETAIL. THE TECHNIQUE USED AND DESCRIBED HEREIN HAS MANY ADVANTAGES AND IS TO BE PREFERRED OVER THE PRESENT TECHNOL.

UNCLASSIFIED

USSR

UDC 632.954:547

DENISENKOVA, R. N., BABIN, V. V., and UGRYUMOV, YE. P.: Northern Caucasus
Scientific Research Institute of Phytopathology

"Phytotoxicity of the Derivatives of Aryloxyalkylcarboxylic Acids"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 10, No 9 (119), 1973, pp 54-58

Abstract: Herbicidal activity of a series of substituted isopropyl, β -thio-
cyanoethyl esters of aryloxyalkylcarboxylic acids, tin containing aryloxy-
acylates and bis-(aryloxyacetyl)-propyleneglycols-1,3 has been investigated
on leaf mustard and on the winter crop wheat. From the data on leaf mustard
no clearcut structure-activity relationship could be established, although
the phenoxyisopropyl radical appeared to have some effect. Among the thio-
cyanogens only the β -thiocyanoethyl ester of 2,4-D was more active than the
standard control. Tin containing derivatives of 2,4,5-T and 2,4,5-TP were less
active than the butyl esters. Among the propylene glycol derivatives, sub-
stitution of 2,4-D and 2M-4Kh gave stronger agents, but 2,4,5-T -- a weaker
one. Since most of the herbicides studied on wheat did not lower the yield of
grain, it is suggestible that they could be used as selective herbicides.

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USSR

BABII, V. V., BLIZNYUK, N. K., DENISENKOVA, R. N., KOLOMIYETS, A. F.,
STREL'TSOV, R. V., FILIN-KOLDAKOV, B. V.

"Method of Fighting Undesirable Vegetation"

USSR Author's Certificate No 303038, filed 20/04/67, published 5/07/71.
(Translated from Referativnyy Zhurnal Khimiya, No 4, Moscow, 1972, Abstract
No 4N703P by T. A. Belyaeva).

Translation: In order to increase the herbicidal properties of α -(2, 4, 5-trichlorophenoxy)-propionic acid, it is suggested that it be used as its benzylester, which is more active than the other esters of this acid and has very low volatility.

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USSR

UDC 632.95

BABIN, V. V., DENISENKOVA, R. N., UGRYUMOV, YE. P., SHCHEGLOV, YU. V., BLIZNYUK, N. K., STREL'TSOV, R. V., and KOLOMIYETS, A. F., Northern Caucasus Scientific Research Institute of Phytopathology; All-Union Scientific Research Institute of Phytopathology, Moscow, Ministry of Agriculture USSR

"Herbicide"

USSR Authors' Certificate No 250603, filed 14 Jun 68, published 26 Jan 70, (from RZh-Khimiya, No 20 (II), 25 Oct 70, Abstract No 20 N601P by N, B. VSEVOLOZHSKAYA)

Translation: Compounds of the general formula $\sqrt{4\text{-Cl-2RC}_6\text{H}_3\text{OCH}_2\text{C}}(O)O/2\text{SnBu}_2$ (I) (R = Cl or Me) are not inferior in herbicidal activity to butyl esters of the corresponding aryloxyalkylcarboxylic acids. For example, mustard plants in the six-leaf phase were sprayed with aqueous solutions of I in a dose of 50, 100, 250 and 500 g/ha (calculated in acid equivalent). The dose at which the weight of aboveground portions of the plant declines 50% was 53 g/ha for I (R = Cl), whereas that for the butyl ester of 2,4-D was 61 g/ha.

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1/2 026 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DIURNAL RHYTHM OF THE EXCRETION OF URINE, POTASSIUM, AND SODIUM BY
HEALTHY CHILDREN -U-
AUTHOR--(02)-LEONOV, V.A., DENISEVICH, N.I. D
COUNTRY OF INFO--USSR
SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. BIYAL. NAVUK 1970, (1),
104-9
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PEDIATRICS, URINE, POTASSIUM COMPOUND, SODIUM COMPOUND,
EXCRETION, DIURNAL VARIATION, DIET, BLOOD CHEMISTRY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0507 STEP NO--UR/0440/70/000/001/0104/0109
CIRC ACCESSION NO--AP0121181
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121181

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. URINE VOL., K, AND NA EXCRETION OF 3-7 YEAR OLD CHILDREN SHOWED DIURNAL VARIATIONS. MAX. VALUES WERE OBSERVED BETWEEN 12 AND 15 DAY HR (URINE), 9 AND 12 (K), 15 AND 18 (NA); MIN VALUES BETWEEN 24 AND 3 (URINE, K), 24 AND 6 (NA). RATIO BETWEEN MAX. AND MIN. VALUES WAS 7:1 (K), 3.4:1 (NA), 2.8:1 (URINE). DIURNAL VARIATION OF K AND NA EXCRETION DID NOT DEPEND UPON FOOD INGESTION. PLASMA AND RED CELLS CONTENT OF K AND NA SHOWED NO DIURNAL VARIATION.

FACILITY: NAUCH.--ISSLED. INST. OKHR. MATERIN. DETSTVA, MINSK, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED
 TITLE--MICROALLOYING OF STEEL 25KH2GML -U-
 AUTHOR--(03)-BRAUN, M.P., DENISEVICH, YE.A., VINOKUR, B.B.
 COUNTRY OF INFO--USSR
 SOURCE--LITEINOE PROIZVOD. 1970, (1), 15-17
 DATE PUBLISHED-----70

PROCESSING DATE--16OCT70

D

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ALLOY DESIGNATION, MICROALLOYING, IMPACT STRENGTH, LOW ALLOY
 STEEL, CHROMIUM STEEL, MANGANESE STEEL, MOLYBDENUM STEEL, TITANIUM
 CONTAINING STEEL, ZIRCONIUM CONTAINING STEEL, VANADIUM CONTAINING STEEL,
 NIOBIUM CONTAINING STEEL/(U)25KH2GML LOW ALLOY STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--1995/1332

STEP NO--UR/0128/70/000/001/0015/0017

ACCESSION NO--AP0116792

UNCLASSIFIED

2/2 022
CIRC ACCESSION NO--AP0116792
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT. THE EFFECT WAS STUDIED OF MICROAMTS. OF TI, ZR, V, AND NB ON THE STRUCTURE AND IMPACT STRENGTH OF STEEL 25KH2GML (C 0.26-0.29, SI 0.18-0.29, MN 1.35-1.60, CR 1.70-2.00, MO 0.58-0.70, S 0.016-0.022, AND P 0.017-0.023 WT.PERCENT). THE STEEL WAS MELTED IN AN INDUCTION FURNACE, DEOXIDIZED WITH FE-SI (500G-100KG) AND WITH AL (80G-100KG), AND ALLOYED WITH 0.05-0.5PERCENT OF ONE OF EACH OF THE ABOVE MENTIONED ELEMENTS. STEEL WAS NORMALIZED FOR 4 HR AT 920DEGREES, TEMPERED AT 650DEGREES, AND COOLED IN AIR. TI FORMED OXIDES, SILICATES, NITRIDES, AND SULFIDES AS WELL AS (FE, MN, TI) SULFIDES AND OXYSULFIDES TIS-TIO SUB2. ZR BEHAVED SIMILARLY TO TI EXCEPT THAT IT REACTED MORE ACTIVELY WITH S. NB FORMED SULFIDES, SILICATES, NITRIDES, AND CARBOSULFIDES, AND AFFECTED DISTRIBUTION OF CARBIDES. AT SMALLER THAN OR EQUAL TO 0.15PERCENT NB CARBIDES FORMED A NETWORK ALONG GRAIN BOUNDARIES, AND SMALLER THAN 0.35PERCENT NB CARBIDES BECAME COARSER WITH SIMULTANEOUS DECREASE OF IMPACT STRENGTH. AT 0.15-0.4PERCENT NB THE IMPACT STRENGTH WAS FAIRLY HIGH (5.5 KG,M-CM PRIME2). THE MOST FAVORABLE ADDITIVE WAS V, WHICH AT 0.15PERCENT SHOWED HIGHEST IMPACT STRENGTH OF ALL ADDITIVES (6.5 KG,M-CM PRIME2) AND UP TO 0.2-0.3PERCENT DID NOT AFFECT UNFAVORABLY THE STRUCTURE. THE ADDN. OF V 0.1-0.2PERCENT IS RECOMMENDED.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--MONTE CARLO ALGORITHM FOR CALCULATING UNSTEADY FIELDS OF NEUTRONS
AND RADIATIVE CAPTURE GAMMA RAYS IN PROBLEMS OF NUCLEAR GEOPHYSICS -U-
AUTHOR-(03)-GCMHERSHTADT, V.YA., DENISIK, S.A., LUKHMINSKIY, B.E.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. 1970, 28(1), 51

DATE PUBLISHED-----70

SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, EARTH SCIENCES AND
OCEANOGRAPHY
TOPIC TAGS--WELL LOGGING, MONTE CARLO METHOD, ALGORITHM, NEUTRON FLUX,
GAMMA RADIATION, RADIATIVE CAPTURE, NEUTRON ABSORPTION

CONTROL MARKING--NO RESTRICTIONS .

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1246

STEP NO--UR/0089/70/028/001/0051/0051

CIRC ACCESSION NO--AP0115263

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0115263

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EQUATION FOR CALCG. THE PROBABILITY THAT A N WOULD NOT BE CAPTURED AFTER A GIVEN NO . OF COLLISIONS IS PRESENTED AND IS USED IN CALCNS. OF THE SPACE TIME DISTRIBUTION OF N AND OF RADIATION CAPTURE GAMMA QUANTA IN CYLINDRICAL AND COAXIAL MEDIA (E.G., BOREHOLES FILLED WITH H SUB2 O OR OIL, OIL BEARING STRATA, ETC.). CALCNS. SHOW THAT THE PULSED (N, GAMMA) METHOD IS PREFERABLE TO PULSED (N, N) METHODS IN NUCLEAR GEOPHYSICS RESEARCH.

UNCLASSIFIED

AA0043562

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UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 1/1

242440 LEVEL METER incorporates two eddy current coils 2 and 3 placed inside a small floating housing 4. The coil 2 is on the surface level and the coil 3 at a certain distance below the liquid level. The signal from the lower coil is proportional to the water level and disturbances, whereas the signal from the coil on the surface is proportional to the disturbances only. After subtracting, the signals are processed and used for driving an indication instrument 8.

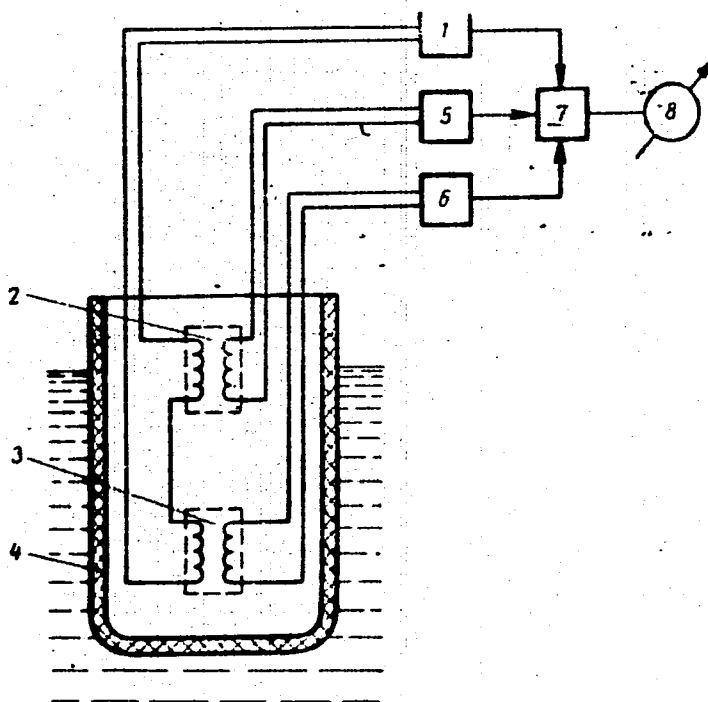
30.10.67 as 1194701/18-10. L.I. TRAKTENBERG & V.P. DENISKIN (8.9.69) Bul 15/25.4.69. Class 42e. Int. Cl.G 01 f.

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19762017

AA0043562



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19762018

AA0043563 -

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UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 470

242441 LIQUID LEVEL METER now developed is suitable for the accurate determination of small level changes. It comprises a positional regulator (3) with an adjustable sensitivity range and connected into the drive (5) control circuit. An indicator (1) is connected to the output of the blade (2) used to process the indicator signals.

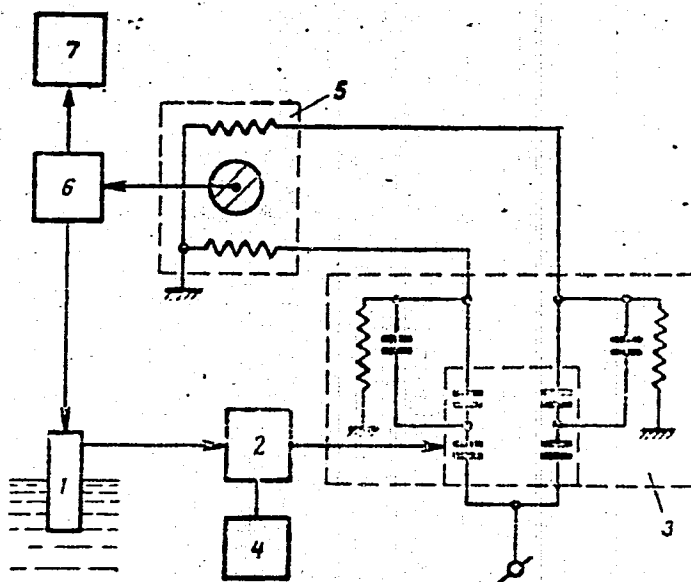
9.10.67 as 1188655/18-10. V. P. DENISKIN & L. I. TRAKHTENBERG. (1.9.69) Bul 15/25.4.69. Class 42e. Int.Cl.G 01f.

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21

19762019

AA0043563



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19762020

J.C.

Acc. Nr.:

AT0046531

Ref. Code:

UR0144

D

USSR

UDC 621.313.333

GREBENNIKOV, VASILII IVANOVICH, Postgraduate of Novocherkassk Polytechnical Institute, DENISOV, ALEKSANDR ALEKSANDROVICH, Candidate of Technical Sciences, Docent of Novocherkassk Polytechnical Institute

"Parametric Regulation of the Speed of an Asynchronous Thyristor Electric Drive with Subordinate Control in the Rotor Circuit"

Novocherkassk, Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika (News of the Institutions of Higher Learning, Electromechanics), No 1, 1970, pp 61-65 (from Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika, No 1, 1970, p 114)

4

1/2

Reel/Frame

19781789

AT0046531

Translation: This article contains a study of a block diagram of a non-reversing asynchronous electric drive with speed regulation by varying the stator voltage by means of thyristors. Contactless switching of resistances in the rotor circuit as a function of speed is recommended to increase the operating moments of the motor. Formulas are presented for efficient selection of the resistance stages. A control system is described for thyristor switching in the rotor circuit. The peculiarities of using feedback with respect to current during step switching of resistances in the rotor circuit are investigated. There are 3 illustrations and a 4-entry bibliography.

2/2

19781790

di

USSR

UDC 621.318.5

Engineers DEHISOV, A.G., ZINAKOV, V.K., SHAPIRO, A.M.

"Certain Problems Of Application Of Magneto-Controlled Sealed Contacts"

Moscow, Pribory i sistemy upravleniya, No 11, Nov 1971, pp 18-20

Abstract: The paper lists various applications of magneto-controlled sealed contacts (MC) which include signaling and protection circuits, telephone switching apparatus, computers, and domestic equipment such as refrigerators. Various spark-quenching circuits used to increase the lifetime of MC are discussed; the circuits are based on the use of RC elements, semiconductor diodes, semiconductor variable resistances (varistors), and silicon stabilitrons. MC are often used in conjunction with low-power transistors and integral circuits; the peculiarities are discussed of MC which appear in a regime of switching very small voltages and currents and which must be considered in planning such apparatus. It is concluded that MC are extremely promising switching elements and a rapid increase of their output and an expansion of their sphere of application must be expected in the coming years. Progress in this field will considerably accelerate development and the introduction into series production of functional modules constructed on the basis of MC. A thorough study of the properties of MC makes it possible to avoid errors during planning of apparatus using them and to recognize new possibilities for their use.

1/1

USSR

UDC 621.318

Engineers DENISOV, A.G., ZINAKOV, V.K., PASHEV, V.A.

"Magneto-Controlled Contacts--Contemporary Switching Elements"

Moscow, Pribory i sistemy upravleniya, No 11, Nov 1971, pp 13-15

Abstract: The paper shows the basic advantages of magneto-controlled sealed contacts (MC) as compared with electromagnetic and semiconductor switching elements, the principles of their operation, the basic parameters (including those of five native MC), the construction of MC with dry contacts and contacts wetted by mercury, and the basic trend of growth. 3 ref. 3 fig. 3 tab.

1/1

USSR

UDC: 621.385.6

DENISOV, A. I., RAPOPORT, G. N.

"Approximate Calculation of the Maximum Efficiency of an O-Type Oscillator With Resonance Decelerating System in the Presence of Losses"

Kiev, IVUZ: Radioelektronika, Vol 15, No 3, Mar 72, pp 296-301

Abstract: Approximate formulas are derived for the maximum efficiency and optimum length of the interaction space in an O-type resonance oscillator as functions of the loss parameter of the distributed cavity. It is found that the maximum attainable efficiencies (η_{max}) of an orotron, as well as resonance TWT's and BWO's with strong feedback on the reflected wave, is limited to a certain extent by losses in the distributed cavity. The maximum efficiency and length of the interaction space in such devices are proportional to the square root of the loss parameter of the distributed cavity. A loaded distributed cavity has an optimum coupling factor of 2. The region of applicability of the given approximate formulas is determined. The initial conditions are realized for a reflected-wave feedback factor close to unity.

1/1

USSR

UDC: 621.396.6-181.5

~~DENISOV, A. I.~~, DOBROVOL'SKIY, G. F., LOMVTSEV, A. M., STROYEV, I. S.,
Active Members of the Scientific and Technical Society of Radio Engineering,
Electronics and Communications

"Setting and Mounting Micromodules With Planar Leads on Printed Circuit Borads"

Moscow, Radiotekhnika, Vol. 26, No 5, May 71, pp 99-101

Abstract: A new method is proposed for stand-off mounting of micromodules with planar leads on printed circuit boards. Essentially, the module is held away from the board by a "bridge" of lacquer. After completion of the mounting process, the "bridge" is destroyed by heat. With the proposed method, the entire process of assembly can be mechanized and simultaneously shortened. Sources of contamination which have an adverse effect on the electrical parameters of the board can be completely eliminated, and the finished units can be repaired.

1/1

USSR

D
UDC: 621.374.33

VASIL'YEV, Ye. A., DENISOV, A. S., SUVOROV, V. M., SHCHETKOVSKIY, A. I.

"A Nanosecond Coincidence Circuit"

Tr. 7-y Konferentsii po yadern. elektron. T. 2, Ch. 2 (Works of the Seventh Conference on Nuclear Electronics. Vol 2, Part 2), Moscow, Atomizdat, 1970, pp 167-170 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7G314)

Translation: In this coincidence circuit, each channel consists of an input limiter based on two semiconductor diodes, two amplifiers, a transistorized limiter, and a shaper based on transistor with delay line connected in the emitter circuit, with a sampling element common to all channels and based on a tunnel diode, and an output emitter follower. The circuit is made in the form of a standardized module with bilateral printed circuit; this prevents "creep-through" in a single channel. Bibliography of two titles. N. S.

1/1

USSR

UDC 621.372.833

SEDYKH, V. M., DENISOV, D. S., LYAPUNOV, N. V., SAPRYKIN, I. I.

"Calculating Nonreflecting Supporting Discs in Coaxial-Strip Junctions"

Radiotekhnika. Resp. mezhved. nauchno-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1970, vyp. 15, pp 55-61 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4B173)

Translation: Expressions are obtained for calculating the voltage standing wave ratio of a support disc as a function of its geometric dimensions and operating frequency. There are 2 illustrations and a 5-entry bibliography.

1/1

USSR

UDC 621.372.831.1

SEDYKH, V. M., DENISOV, D. S., LYAPUNOV, N. V., SAPRYKIN, I. I.

"Calculating the Equivalent Coupling Diagram of Two Coaxial Lines with Different Sizes of Conductors"

Radiotekhnika. Resp. mezhved. nauchno-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1970, vyp. 15, pp 61-65 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 48172)

Translation: The compensating shift for which the coupling has minimum reflection is calculated. There are 2 illustrations and a 5-entry bibliography.

1/1

USSR

UDC 621.791

GEYNISH, Z. V., KALININ, B. P., DENISOV, A. V., BUCHINSKIY, V. N., Engineers,
and POTAP'YEVSKIY, A. G., Candidate of Technical Sciences

"The Use of Expendable-Electrode Argon Pulsed-Arc Welding for the Fabrication
of Chemical Equipment"

Moscow, Khimicheskoye i Neftyanoye Mashinostroyeniye, No 10, Oct 72, p 24

Abstract: VNIIP^Tkhimnefteapparatury [All-Union Scientific Research, Planning
and Technological Institute of Chemical and Petroleum Equipment] has developed
a technique for the consumable-electrode argon pulsed-arc welding of stainless-
steel angle, T and lap joints for the fabrication of parts and components for
column-type apparatuses (trays, spouts, boxes etc.). The use of pulsed-arc
welding makes it possible to raise labor productivity, improve product quality
and appearance, and reduce product deformation. Pulsed-arc welding with
06Kh19N9T and 07Kh25N13 wires assures high mechanical weld-joint properties.
Such joints are not susceptible to cracking or intercrystalline corrosion.
The weld seams have the usual austenitic-ferritic structure. The technique
makes it possible to weld not only austenitic steels, but also semiferritic
steels, for example OKh13. The developed welding technique has been introduced
1/2

USSR

GEYNISH, Z. V., et al., Khimicheskoye i Neftyanoye Mashinostroyeniye, No 10,
Oct 72, p 24

at the Chernovitskiy Machine-Building Plant for the fabrication of stainless-
steel parts and components for column-type apparatuses, resulting in an annual
economic effect of about 17,000 rubles.

2/2

USSR

UDC 613.644-07

DENISOV, E. I., and MIKITASOV, A. M., Institute of Labor Hygiene and Occupational Diseases, Academy of Medical Sciences USSR

"Calculation of the Equivalent Intensity of Unstable Noise"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, 1973, pp 50-51

Abstract: A new formula is presented for determining the equivalent intensity of unstable industrial noise on the basis of noise meter and time-and-motion study data. The computations are reduced to simple arithmetic operations by two tables provided. Different intensities experienced during a shift are corrected with respect to time with the first table. These values then undergo sequential paired summation with corrections specified by the second table. Thus a single intensity value results. Table values are designed for an 8-hour shift but can be corrected for use with other time periods.

1/1

80

USSR

UDC 613.644

DENISOV, E. I., Institute of Industrial Hygiene and Occupational Diseases,
Academy of Medical Sciences USSR

"New Sanitary Noise Standards"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 5, 1970, p 47

Translation: The Ministry of Health USSR approved the "Health Standards and Regulations for Limiting Noise on the Premises of Industrial Enterprises," No 785-69, dated 30 April 1969. The standards and regulations were prepared by the noise and vibration laboratory (I. K. Rasumov, director) of the Institute of Labor Hygiene and Occupational Diseases, Academy of Medical Sciences USSR, on the basis of its own data and with due regard for international recommendations. The document establishes permissible noise levels, conditions and rules for measuring it, principal ways of controlling noise and preventing its injurious effects.

The standards regulate the maximum noise spectra from a family of curves recommended by the TK-43 Acoustics' committee of the International Organization for Standardization and characterized by a level of sound pressure in the octave band with a mean geometric frequency of 1,000 hz. Specifically, a maximum spectrum with an index of 45 has been set for places intended for intellectual work study rooms, design bureaus, etc.); with an index of 55 for places intended for offices (typing pools, manual calculating machines, etc.); with an index of 60 for control

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USSR

DENISOV, E. I., Gigiyena Truda i Professional'nyye Zabolevaniya, No 5, 1970, p 47

stations and observation points; and with an index of 70 for laboratories with noise sources. A curve with an index of 80 was prepared for the premises of industrial establishments. The curve has sound pressure levels of 99, 92, 86, 83, 80, 76, and 74 db in octaves of 63, 125, 250, 500, 1,000, 2,000, 4,000, and 8,000 hz, respectively. In making a rough evaluation of noise, it is possible to use noise levels of dbA, the permissible values of which are 5 db greater than the indices of the maximum spectra. The standards provide corrections for the length of exposure to noise during a work shift, and for the type of noise (corection of 5 db for tonal or pulsed noise measurable by a standard noise gauge).

The standards include measures for technical and medical prevention of the unfavorable effects of noise, including periodic medical checkups of individuals working under conditions where the noise exceeds permissible levels, and contra-indications for allowing individuals to work in noisy shops. They are based on Soviet data derived from research not only on the ear, but on the body as a whole. The standards permit the development, with subsequent approval by the Ministry of Health USSR and Gosstroy (State Committee for Construction USSR), of specific occupational standards based on ergonomic requirements, but they must not exceed the maximum noise levels established.

Publication of the new "Standards and Regulations" and the beginning of series production of noise and vibration gauges with octave filters by the Taganrog plant Vibropribor will help to ensure better control of industrial noise.

2/2

AA0046440

UR 0482

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

241313 NEEDLE BEARINGS OF THE CARDAN TYPE, are assembled on the illustrated equipment, which consists of a hollow, cylindrical mandrel (1) with two equally distributed series of openings (2 and 3) for admission of the needles, and a disc (5) arranged coaxially with the mandrel and fitted with radially-situated slots, the number of which is equivalent to the number of needles. A special pusher rod which operates in conjunction with the plunger (8) and the conical projection (9). Method of assembly of the needles, which are pushed down the radial slots by the pusher rod into the centre of the head, is outlined briefly.

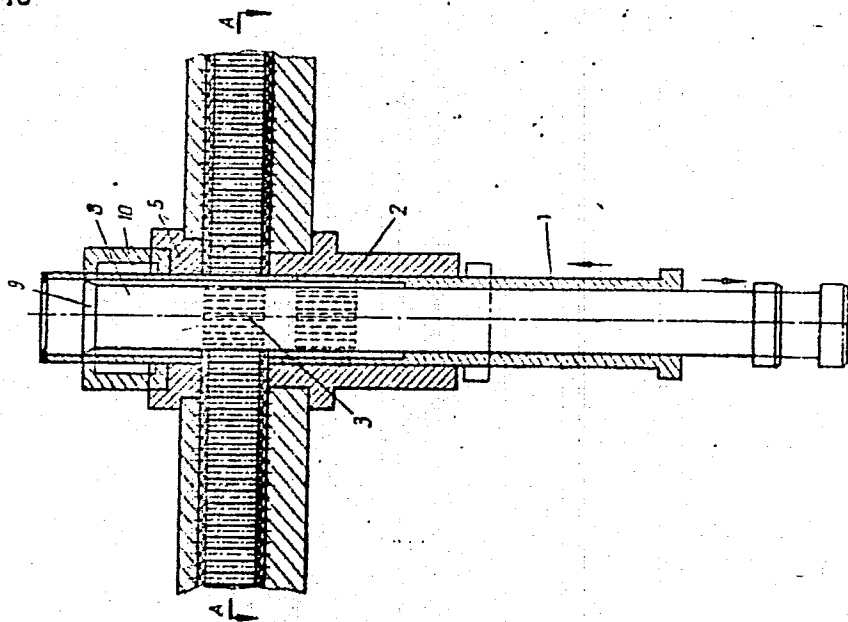
22.5.67. as 1158904/25-28, DENISOV, G.I. (15.8.69)
Bul. 13/1.4.69. Class 87a, Int. Cl. B 25b.

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18

19781666

AA0046440



2/2

19781667

7/8

USSR

UDC: 539.4:536.453

DENISOV, G. P.

"Temperature Dependence of Creep Parameters for EI437B Alloy"

V sb. Mekhanika (Mechanics--collection of works), Kuybyshev, 1972, pp 82-87
(from RZh-Mekhanika, No 9, Sep 72, Abstract No 9V883)

Translation: The author investigates the temperature dependence of creep parameters appearing in the equation of state of a rheonomic body. It is shown that return deformation after removal of the load is insignificant in comparison with the general overall deformation. The dependence of creep rate on stress and temperature is sharply nonlinear. Temperature has the strongest influence on the viscous coefficient, and a considerably weaker influence on the elastic coefficient. The proposed equation of state of a rheonomic body is experimentally verified. Satisfactory agreement is observed between theoretical and experimental results. G. P. Mel'nikov.

1/1

USSR

UDC: 533.697

ARONOV, B. M., DENISOV, I. N., TSYBIZOV, Yu. I.

"Investigation of a Supersonic Ejector Nozzle With Short Mixing Chamber"

Tr. Kuybyshev. aviats. in-t (Works. Kuybyshev Aviation Institute), 1970, vyp. 45, pp 60-70 (from RZh-Mekhanika, No 5, May 72, Abstract No 5B445)

Translation: The paper presents the results of an experimental study of an ejector nozzle with a short mixing chamber of cylindrical shape. The measurement of static pressure revealed the physical flow pattern. The thrust characteristics of a subsonic nozzle, and of a nozzle with and without natural ejection are shown in comparison. Bibliography of 10 titles. Resumé.

1/1

USSR

UDC 629.7.036.3:533.697.4

ARONOV, B. M., DENISOV, I. N., TSYBIZOV, YU. I.

"Study of a Supersonic Ejector Nozzle With a Short Mixing Chamber"

Tr. Kuybyshev aviats. in-t (Works of Kuybyshev Aviation Institute), 1970,
No. 45, pp 60-70 (from RZh-Aviatsionnyye i raketnyye dvigateli, No 4,
Apr 72, Abstract No 4.34.95)

Translation: An experimental study of an ejector nozzle with a short mixing chamber of cylindrical shape is described. Measures taken to measure the static pressures made it possible to determine the approximate physical picture of the flow. The thrust characteristics of a subsonic nozzle and a nozzle with and without natural ejection are given for comparison. 7 ill., 10 ref. Resume.

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- 133 -

Pathology

USSR

UDC 616.9-022.38-039,616.3-008.1001.33

BANKHANEN, V. D., DENISOV, K. A., ARTEMOV, A. A., SITNIKOVA, G. M., SHAPTALA, V. A., and KHILINSKIY, V. P., Chair of Nutritional Hygiene and Epidemiology Donets Medical Institute imeni A. M. Gor'kiy, and Department of Nutritional Hygiene, Donets Municipal Sanitary Epidemiological Station

"Classification of Food Poisoning and Principles Underlying Its Compilation"

Moscow, Voprosy Pitaniya, No 6, Nov/Dec 71, pp 54-58

Abstract: Problems concerning classification of food poisoning and criteria to be considered are discussed, including the evolution of concepts of etiology, mechanisms of transmission, pathology and symptomatology, treatment and prevention, and data on international classification. A classification is proposed in which food poisonings are divided into four etiological categories: bacterial, nonbacterial, fungal, and of unclarified nature. According to the pathogenesis, the bacterial category is subdivided into two groups: toxininfections and bacterial toxicoses; while the nonbacterial category is subdivided into three groups specifying the pathogenic agents: additives, products inedible by man, and products which become temporarily or partly toxic

1/1

USSR

UDC 669.71.472(088.8)

POPCHENKOV, I. N., GOL'DIN, YE. L., DENISOV, L. I.

"Device for Trapping Dust From Gases"

USSR Author's Certificate No 280861, filed 1 Nov 66, published 3 Dec 70 (from RZh-Metallurgiya, No 7, Jul 1971, Abstract No 7G214P)

Translation: A device for trapping dust from gases released from Al-electrolyzers with a self-igniting anode and an upper conductor including a second-stage gas exhaust in the form of a hood above the operating opening of the electrolyzer is introduced. For more effective trapping of dust, the side walls of the hood are executed in the form of suspended movable shields with perforated sheets and turnable jalousie flaps attached to them. The overall view of the device forming the panel gas exhaust and the overall view of the device forming the side gas exhaust are presented.

1/1

- 22 -

172 036 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--NEW COLOR FILM ON THE FLIGHT OF SOYUZ-6, SOYUZ-7 AND SOYUZ-8 -U-
AUTHOR--DENISOV, N. *D*
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, PRAVDA, 8 APRIL 1970, P 3
DATE PUBLISHED--08APR70
SUBJECT AREAS--SPACE TECHNOLOGY
TOPIC TAGS--RENDEZVOUS SPACECRAFT, SPACECRAFT MANEUVER, MOTION
PICTURE/(U)SOYUZ 6-MANNED SPACECRAFT, (U)SOYUZ 7 MANNED SPACECRAFT,
(U)SOYUZ 8 MANNED SPACECRAFT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0976 STEP NO--UR/9012/70/000/000/0003/0003
CIRC ACCESSION NO--AN0107497
UNCLASSIFIED

2/2 036

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSIGN NO--AN0107497

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PRAVDA CORRESPONDENT DENISOV REVIEWS A NEW POPULAR SCIENCE COLOR FILM ENTITLED "LAUNCH AFTER LAUNCH" (START ZA STARTOM) WHICH TELLS OF THE GROUP FLIGHT OF THE "SOYUZ-6," "SOYUZ-7" AND SOYUZ-8" SPACECRAFT. DENISOV NOTES THAT ALL OF THE SCENES IN THE FILM POINT TO A SINGLE THEME, THAT SOVIET SCIENCE CONSIDERS THE CREATION OF ORBITAL STATIONS AS THE MAIN ROAD OF MAN INTO SPACE. PARTICULAR DETAILS OF THE GROUP FLIGHT ARE DISCUSSED BY ACADEMICIAN B. YE. PATON AND SPECIALISTS IN GEOLOGY, GEOGRAPHY, METEOROLOGY, MEDICINE AND OTHER FIELDS. THE FILM INCLUDES SCENES OF THE LAUNCHING OF THE THREE SPACECRAFT ON THE 11TH, 12TH AND 13TH OF OCTOBER 1969, SHOTS TAKEN FROM THE SPACECRAFT DURING RENDEZVOUS MANEUVERS, AND TASKS PERFORMED BY THE SEVEN CREW MEMBERS IN SPACE, INCLUDING WELDING EXPERIMENTS, SCIENTIFIC OBSERVATIONS OF THE EARTH AND ATMOSPHERE, MEDICAL AND BIOLOGICAL EXPERIMENTS, ETC. ANOTHER SEQUENCE SHOWS THE OPERATIONS CARRIED OUT BY THE COMMAND MEASUREMENT COMPLEX IN CONTROLLING THE GROUP FLIGHT.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--NATURE OF UNIAXIAL ,MAGNETIC, ANISOTROPY IN OBLIQUELY DEPOSITED
MAGNETIC FILMS -U-
AUTHOR--(02)-KONDORSKIY, YE.I., DENISOV, P.P. *D*
COUNTRY OF INFO--USSR
SOURCE--FIZIKA METALLOV I METALLOVEDENIE, APR. 1970, 29, (4), 880-883
DATE PUBLISHED----APR70
SUBJECT AREAS--PHYSICS, MATERIALS
TOPIC TAGS--MAGNETIC ANISOTROPY, TEMPERATURE DEPENDENCE, FERROMAGNETIC
FILM, COBALT, CRYSTAL ORIENTATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0437 STEP NO--UR/0126/70/029/004/0880/0883
CIRC ACCESSION NO--AP0129662
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129662

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TEMP. DEPENDENCE OF THE UNIAXIAL MAGNETIC ANISOTROPY CHARACTERIZING OBLIQUELY DEPOSITED CO FILMS WAS STUDIED WITH A VIEW TO DISCOVERING THE NATURE OF THE ANISOTROPY. TWO DISTINCT TYPES OF ANISOTROPY WITH DIFFERENT TEMP. CHARACTERISTICS WERE OBSERVED, IN ACCORDANCE WITH SIMPLE THEORY. FOR FILMS DEPOSITED AT SMALL ANGLES OF INCIDENCE THE MAIN PART WAS PLAYED BY ANISOTROPY ASSOCIATED WITH THE FIELDS OF MAGNETIC CHARGES; IN SUCH FILMS CHAINS OF CRYSTALLITES NORMAL TO THE PLANE OF INCIDENCE OF THE ATOMIC BEAM TENDED TO BE FORMED.

UNCLASSIFIED

Acc. Nr: **AP0040889** *V*

Ref. Code:

UR 0103

PRIMARY SOURCE: Avtomatika i Telemekhanika, 1970, Nr 1, pp88-96

ANALYSIS OF PERIODIC CONDITIONS IN PULSE SYSTEMS
WITH SIGNAL QUANTIZATION BY LEVEL BY MEANS OF Z-TRANSFORMATION

R. N. DENISOV

There are considered two methods of the precise analysis of the set-in oscillations in pulse systems with the signal quantization by level with and without a backlash. One of the methods is based on the determination of the periodic solution of the system equations, the other is based on the representation of the signal at the input of the continuous part in the form of the sum of elementary oscillations. A numerical example is given.

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DENISOV, S. I., MOROZ, YU. A., and ROSTOVISEV, S. T.

"Electric Conductivity of Iron-Titanium-Containing Materials in the Solid Phase"

Sb. Tr. Vses. n.-i i proyekt. in-t titana (Collection of Works of the All-Union Scientific Research and Design Institute of Titanium), 1970, 5, pp 14-22 (from RZH-Metallurgiya, No 11, Nov 70, Abstract No 11G154)

Translation: Laboratory experiments for the determination of the specific electric conductivity of oxides, chemical compounds of the system $Fe_2O_3-FeO-TiO_2$, and charge materials, used for smelting Ti-slag, are conducted. The electric conductivity of all the materials studied increases considerably with increasing temperature; at room temperature their magnitudes are variable, at 1300° they approach each other while reaching high magnitudes of $\sim 10 \text{ ohm}^{-1} \cdot \text{cm}^{-1}$. 7 ill., 4 tables, 7 bibl. entries. Authors' abstract

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MOROZ, YU. A., and DENISOV, S. I.

"Technological Features of Single-Stage Continuous Melting of Titanium Slag"

Sb. tr. Vses. n.-i. i proyekt. in-t titana (Collected works of All-Union Scientific-Research and Planning Institute for Titanium), 6 1970, 15-17, (from Referativnyy Zhurnal-Metallurgiya, No 1, 1971, Abstract No 1 G185 by the authors)

Translation: The reasons for disruption of the continuous process of melting of titanium slag in one stage, such as bubbling of the slag, movement of processes of charge melting ahead of processes of reduction, rapid melting through the space around the electrodes, sintering of charge on the furnace top, and formation of refractory "chills" in the furnace charge, are studied. These technological difficulties are eliminated when high ratios of furnace power to charge mass are provided, as when melting is performed in single-phase, single-electrode furnaces or when wood waste is used in the charge during melting in the ordinary three-phase, three-electrode electric furnaces. 8 biblio. refs. 1/1

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DENISOV, S. I., RASPOPIN, V. G., and DECTYAREV, V. S.

"The Role of the Briquetting Stage in Processing Charge During the Smelting of Titanium Concentrates"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 12-15

Translation: On the basis of results from research on smelting powder and briquetted charges from iron-titanium concentrate from the Samotkanskoye deposit (64% TiO_2 , 24% FeO), conducted on an open-type industrial furnace with a capacity of 10,500 kilovolt-amperes, it was established that as a result of decreasing periods of idle time between smeltings, the time that the furnace is live in processing powder charge is considerably greater (95.5%) than in smelting briquets (90.5%). It was also shown that furnace productivity for slag in smelting powder charge is higher than in smelting briquets (3.40 as against 3.27 tons per hour). However, in smelting this charge, increased losses of concentrate with the dust of escaping gasses (more than 3.6%) takes place. This can be reduced by covering the furnace with a crown and setting up a system of capturing the dust. Technical-
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DENISOV, S. I., et al., Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 12-15

economic calculations show that the several advantages gained in smelting briquetted charge do not justify the high costs of the briquetting stage, as a result of which smelting powder charge is more profitable. Two tables and two bibliographic entries.

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DENISOV, S. I., MOROZ, YU. A., and BLINOV, B. S.

"Technological Sampling of Iron-Titanium Concentrate of the Obukhovskiy Deposit"

Sb. tr. Vses. n.-i. 1 proyekt. in-t titana (Collection of Works of the All-Union Scientific Research and Design Institute of Titanium), 1970, 5, pp 7-14 (from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11 G144)

Translation: According to its mineralogical composition, the kinetics of reduction of Fe oxides, and other properties, the concentrate of the Obukhovskiy deposit basically resembles that of the Samotkanskiy deposit. Much more solid briquettes can be prepared from the Obukhovskiy concentrate than from the Samotkanskiy, although, a large quantity of sulfide pulp alkali is needed for this (14-15% as compared to 9-11% for the Samotkanskiy concentrate). Standard Ti-slugs (TiO_2 80%) can be produced from the studied concentrate. However, slag smelted from the concentrate of the Obukhovskiy deposit contains large quantities of impurities (by 4.2%), and in addition, it is leaner in TiO_2 (by 4.4%) content as compared to slag smelted from the Samotkanskiy concentrate. 6 ill., 5 tables. Author's abstract.

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