

10

UDC 616.993.162-022.39-084.47-036.8

USSR

SERGIYEV, P. G., BEYSLEKHEM, R. I., MOSHIKOVSKIY, Sh. D., DENINA, N. A.,
KELLINA, O. I., SHUYKINA, E. Ye., SERGIYEV, V. P., DUGIANINA, N. N., TRIYERS,
I. I., SHCHERBAKOV, V. A., YARUKHAMEDOV, M. A., USKOV, N. Ye., LCSIKOV, I. N.,
and NEDOSPELOVA, Ye. I., Institute of Medical Parasitology and Tropical Medicine
Imeni Ye I. Martsinovskiy, Ministry of Health USSR, Moscow

"Results of Mass Vaccinations against Zoonotic Cutaneous Leishmaniasis"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 5,
Sep/Oct 70, pp 541-551

Abstract: Preventive mass vaccinations with a virulent strain of Leishmania
tropica major were found to give reliable protection against cutaneous leish-
maniasis. Only virulent strains can be used for vaccination. The degree of
inoculation with such strains is almost 100%, the inoculative process having,
as a rule, a favorable effect. The maximum size of the vaccination lesion does
not exceed 2 cm in diameter in 3/4 of the subjects vaccinated. In practically
all cases, the process does not last more than 5-6 months. Morbidity occurred
in the group vaccinated with the low-virulence strain, among those without
lesions, and among those whose lesions were less than 0.5 cm in diameter.

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USSR

SERGIYEV, P. G., et al., *Meditinskaya Parazitologiya i Parazitarnyye Bolezni*,
Vol 39, No 5, Sep/Oct 70, pp 541-551

Secondary pyococcal infections represented the only complications observed; allergic exanthem was noted occasionally. In order to prevent local and general allergic reactions after vaccination, it is necessary to exclude persons who have had cutaneous leishmaniasis. If past disease cannot be revealed by means of anamnesis or medical examination, the intracutaneous leishmanin test is recommended. The level of the virulence in inoculative strains should be periodically tested, since insignificant initial virulence or its weakening during culturing make a given strain unfit for preparation of inoculum.

2/2

AA0044248.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

243952 GASES OR LIQUIDS ANALYSIS where the gas analyser comprises an infra-red radiation source (1); a shutter system (2); photoelectric pickup (3) for the reference signal; working cell (4); optical-acoustical radiation receiver consisting of receiving chambers (5,6) and a microphone (7) arranged in tandem. A phase measuring device consists of an amplifier (8), phase shifter (9), limiter (10), phase detector (11) and a secondary instrument, millivoltmeter (12).

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The instrument zero is set by the phase shifter (9). It can also be done by a screen placed between the radiation receiver chambers, or by varying the reference signal phase. The chambers (5,6) have different volumes, which shifts the phases of the pressure oscillations in these chambers, so that the phase of the signal at the radiation receiver output is a function of the component to be determined concentration in the working cell.

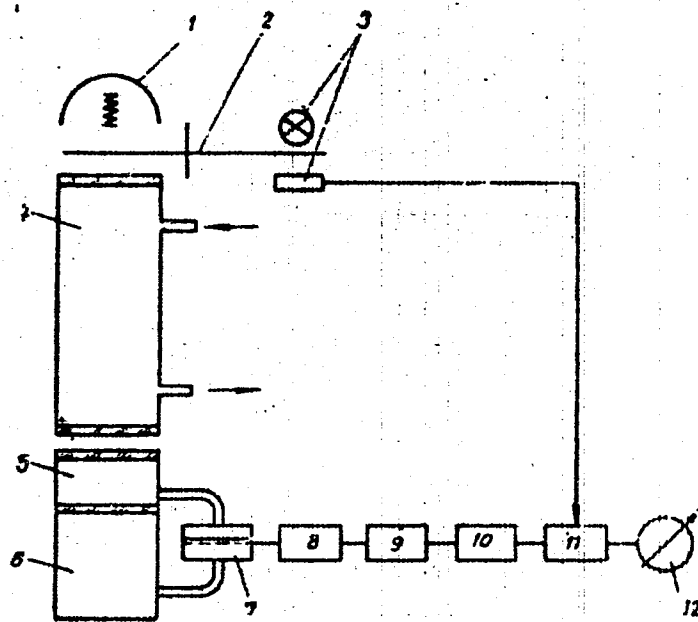
5.5.64 as 898645/26-25. IOSITENIL, I.T. et al. AUTOMATION EXPERIMENTAL & DES.OFFICE. (3.10.69) Bul 17/14.5.69. 421. Int.Cl.G 01n.

21

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19770755

AA0044248



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AA0044248

AUTHORS: Lositskiy, I. T., Melamed, A. G., Rylov, V. A.

Opytno-Konstruktorskoye Byuro Avtomatiki

5/3

19770757

1/2 G22 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ATOMIC ORDER IN IRON ALUMINUM ALLOYS STUDIED BY THE MOESSBAUER
EFFECT -U-
AUTHOR--(02)-LCSIYEVSKAYA, S.A., KUZMIN, R.N.
COUNTRY OF INFO--USSR
SOURCE--FIZ. METAL. METALLOVED. 1970, 29(3), 569-77
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--IRON ALLOY, ALUMINUM CONTAINING ALLOY, MOSSBAUER EFFECT,
INTERMETALLIC COMPOUND, ALUMINIDE, ALUMINUM ALLOY, ORDERED ALLOY, SOLID
SOLUTION

CENTRAL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0334

STEP NO--UR/C126/70/029/003/0569/0577

CIRC ACCESSION NO--AP0126090

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--A0126090

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

ABSTRACT. THE TITLE STUDY WAS CARRIED OUT WITH FE,AL ALLOYS CONTG. AL 20-31 AT. PERCENT COOLED TO 24DEGREES AND QUENCHED FROM 400, 520, 600, AND 900DEGREES AFTER A HOLDING TIME OF 50 HR. THE STRUCTURE OF FE SUB3 AL IS REGARDED AS COMPOSED OF 4 EQUIV. SUBLATTICES. THE PROBABILITIES ARE CALCD. OF VARIOUS CONFIGURATIONS OF FE ATOMS IN FE,AL ALLOYS WITH VARYING CONCNS. OF AL AND WITH VARYING DEGREES OF ORDERING. ALLOYS WITH 20-5 AT. PERCENT AL SHOWED THE APPEARANCE OF A STRONG COMPONENT WITH AN EFFECTIVE FIELD OF 255 KOE, AND THIS IS EXPLAINED BY CONC. DISORDERING. THE FIELD DEPENDS ON AL CONCNS. AT THE NUCLEI OF FE ATOMS WITH VARIOUS CONFIGURATIONS. THE PRESENCE OF FE SUB13 AL SUB3 WAS NOT DETD. FROM THE MOESSBAUER STUDY OF FE,AL ALLOYS WITH 20-5 AT. PERCENT AL THE 2 PHASE REGION (DISORDERED ALPHA SOLID SOLN. AND FE SUB3 AL IS MUCH MORE NARROW THAN WAS ASSUMED PREVIOUSLY. FACILITY: MOSK. GOSUNIV. IN. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.793:661.183.2:541.183

BULATOVA, R. F., KOGAN, V. S., KUZIN, I. A., and LOSKUTOV, A. I.

"Low-Temperature Adsorption on Metallized Carbon"

Leningrad, Zhurnal Prikladnoy Khimii, Vol XLIV, No 1, Jan 71, pp 217-219

Abstract: Metallizing of active carbon at room temperature and normal atmospheric pressure produces a considerable increase in its thermal conductivity, with only a slight deterioration in its adsorption capability.

SKT carbon with full and partial copper metallizing was tested under cryovacuum conditions to determine if the above effects appeared there as well.

It was found that partially metallized SKT carbon granules are the most effective for use in cryovacuum devices using any considerable thickness of sorbent. Time required for establishment of adsorption equilibrium remains practically constant with this type of carbon for layer thicknesses from 2 up to 30 mm. Adsorption capacity for $p = 1 \cdot 10^{10}$ mm Hg and $T = 20.4^\circ$ is independent of layer thickness.

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USSR

UDC 621.374.33

LOSKUTOV, B. P., LEBEDEV, V. I., and GUSEV, A. V.

"Calculation of the Duration of Blanking Processes in Five Diode Circuits for Activating an Integrated Transistor"

V sb. Mikroelektronika. Vyp. 1 (Microelectronics. No 1--collection of works), Moscow, Atomizdat, 1971, pp 63-74 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6G305)

Translation: A quantitative study is made of the blanking processes in integrated microcircuits in which semiconductor diodes made simultaneously with the transistors are actually formed by the integrated transistor structures. The analysis is done by solving continuity equations for the minority nonequilibrium carriers in the base and collector of the integrated drift transistor with regard to the effect of barrier capacitances. It is shown that in a single microcircuit, diodes can be produced with a resorption time from hundredths of a ns to several μ s, using five diode circuits for transistor activation. Bibliography of ten titles.
N. S.

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USSR

UDC: 621.372.061

GUSEV, A. V., LOSHUTOV, B. P.

"An Integrated Linear Transmission Circuit"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Technology--collection of works), Vyp. 5, Moscow, "Svyaz", 1970, pp 116-132 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7A53)

Translation: A method is proposed for static calculation of a linear transmission circuit made in the form of an integrated silicon chip. The circuit is a time selector which reproduces the input signal at the output with minimum distortion for a certain time interval determined by the duration of the applied selector signal. Transition processes in the circuit are considered. Conditions for improving the temperature stability and linearity of the transmission factor are determined as well as the speed of the circuit. Five illustrations, bibliography of eight titles. N. S.

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USSR

UDC [537.226 + 537.311.33] : [537 + 535]

LOSKUTOV, K. N.

"Change in Lifetime of Unbalanced Photocurrent Carriers in AgBr Monocrystals Under the Effects of Temperature and Constant Bias Lighting"

Sb. nauch. tr. Perm politekhn. in-t (Scientific Transactions of the Perm Polytechnical Institute -- collection of works) No 84, 1971, pp 3-6 (from RZh-Fizika, No 11, 1971, Abstract No 11E1136)

Translation: Modulated illumination acted on a crystalline layer of AgBr, obtained by the flow of fused salts between glass plates. The relaxation curves for the photoconductivity and the effect on them of the temperature and the constant illumination were studied. The lifetime of the photoelectrons, determined from the relaxation curves, varied with the temperature along with the temperature variation of the photoconductivity, with a maximum at $\approx 40^{\circ}\text{C}$. Constant illumination bias varies the lifetime of the photoelectrons in the same direction as the photoconductivity: i.e., the amount of photoconductivity is determined basically by the lifetime of the photoelectrons. P. V. Meyklyar
1/1

USSR

UDC: 8.74

ISAKOV, V. F., LOSKUTOV, N. G.

"On Selecting an Algorithmic Language for Programming Problems in Semantic Data Processing"

V sb. Statistika rechi i avtomatich. analiz teksta (Statistics of Speech and Text Analysis--collection of works), Leningrad, "Nauka", 1971, pp 435-443 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V983)

Translation: The authors substantiate selection of ALGEM language for "Minsk" class computers when describing algorithms of information-logic problems. An algorithm of text analysis on a digital computer for purposes of compiling a count of the most frequently used words and word combinations in Russian texts on electronics is taken as an example. The criterion for isolation of word combinations is selected, and a flowchart of the algorithm is described. I. Bystrov.

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Acc. Nr:

AP 0036881

Abstracting Service:
CHEMICAL ABST. 4-70

Ref. Code:

UR 0456

78750a Reaction of p-toluidine with 1,2,3,4-tetrachloroan-
 thraquinone under shock compression. Fokin, E. P.; Deribas,
 A. A.; ~~...~~ A.; Mali, V. I. (Inst. Org. Khim., Novosi-
 birsk, USSR). *Khim. Vys. Energ.* 1970, 4(1), 80-91 (Russ).
 A mixt. of 1,2,3,4-tetrachloroanthraquinone (I) and p-MeC₆H₄NH₂
 (II) was subjected to 200 kbar pressure in a steel container to give
 the following results (amts. I and II before, and amts. I, 1-(phenyl-
 amino)-2,3,4-trichloroanthraquinone (III), and 2-(phenyl-
 amino)-1,3,4-trichloroanthraquinone (IV) after reaction in g
 given): 1.04, 0.31, 0.55, 0.48, 0.024; 1.04, 1.55, 0.84, 0.12, —;
 1.04, 6.2, 1.00, —, —. Heating 1.04 g I and 0.62 g II in 40 ml
 Me₂SO 70 hr at 80° gave 0.9 g III and 0.13 g IV. J. Panchartek

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REEL/FRA
19721801

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1/2 018 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--REACTIONS OF POLYHALOGENANTHRAQUINONES WITH NUCLEOPHILES VII.
REACTION OF 1, 2, 3, 4, TETRAFLUOROANTHRAQUINONE WITH DIETHYL, DIBUTYL,
AUTHOR--(03)-LOSKUTOV, V.A., NEKRASOVA, L.N., FOKIN, YE.P.
COUNTRY OF INFO--USSR
SOURCE--IZVESTIYA SIBIRSKOGO OTDELENIYA AKADEMII NAUK SSR, NO 4, SERIYA
KHIMICHESKIKH NAUK, 1970, NR 2, PP 119-124
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--FLUORINATED ORGANIC COMPOUND, ANTHRAQUINONE, ALIPHATIC AMINE,
AROMATIC AMINE, CHEMICAL REACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1992/1868 STEP NO--UR/0289/T0/000/000/0119/0124
CIRC ACCESSION NO--AP0112848
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0112848

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 1, 2, 3,
4, TETRAFLUOROANTHRAQUINONE REACTS WITH DIETHYL, DIBUTYL, DIISOBUTYL, AND
DIBENZYLAMINES IN BENZENE TO GIVE THE CORRESPONDING 1, (N, DIALKYLAMINO),
2, 3, 4, TRIFLUOROANTHRAQUINONES WITH YIELD 70-80 PERCENT. IN DIMETHYL
SULFOXIDE DIETHYL AND DIBUTYLAMINES FORM WITH 1, 2, 3,
4, TETRAFLUOROANTHRAQUINONE 2, (N, DIALKYLAMINO), 1, 2, 3,
4, TRIFLUOROANTHRAQUINONES AND DIISOBUTYL AND DIBENZYLAMINES, THE
CORRESPONDING 1, ISOMERS. THE FUNDAMENTAL PRODUCT OF THE REACTION OF
1, DIETHYL (DIBUTYL, DIISOBUTYL) AMINO, 2, 3, 4, TRIFLUOROANTHRAQUINONES
WITH DIETHYL DIBUTYL, DIISOBUTYLAMINES IS 1, 4, BIS (N, DIALKYLAMINO), 2,
3, DIFLUOROANTHRAQUINONES BOTH IN BENZENE AND DIMETHYL SULFOXIDE.
FACILITY: NOVOSIBIRSK INSTITUT ORGANICHESKOY KHIMII SO AN SSSR.

UNCLASSIFIED

USSR

UDC 669.295:621.785.539

PERMYAKOV, V. G., TRUSH, I. KH., LOSKUTOV, V. F., PISARENKO, V. N., and
YAKOVCHUK, YU. YE., Kiev Polytechnic Institute

"Effect of Titanium on Growth Kinetics of Boronized Layer"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 11, 1973, pp
71-72

Abstract: A study was made of the effect of titanium on the growth kinetics and properties of the boronized layer during the saturation of iron-titanium alloys in commercial boron carbide, as well as the effect on grain growth in the transition zone. Synthetic alloys smelted from Amco iron and pure titanium (0.59, 1.12 and 1.64 wt.% Ti) were used for the study. All the alloys had grain No. 6 before boronization. Prismatic specimens 15 x 10 x 10 mm in size were boronized at 900, 950, 1000, 1050 and 1100° C for 3 and 5 hours. Kinetic curves were constructed for all the studied alloys plotting the depth of the boronized layer as a function of the saturation time and temperature. It was found that increasing the titanium content of the studied alloys results in a significant decrease in the maximum depth of the boronized layer.

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USSR

PERMYAKOV, V. G., et al., Metallovedeniye i Termicheskaya Obrabotka Metallov, No 11, 1973, pp 71-72

Titanium dissolves in FeB, which is accompanied by an increase in hardness. Considering the inhibiting effect of titanium on grain growth in the transition zone and matrix and the peculiarities of its effect on the growth of the boride layer, it is advisable to add 0.5-0.6% Ti to steels that are to be boronized.

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USSR

USSR 860134.00137100-1100

BELOTSKIY, A. V., LOSRETOV, V. F., and BERKINOV, V. G., High Technological Institute

"Properties of 60S2 Steel After Nitriding"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No. 11, Nov 74, pp 58-60

Abstract: A study was made of the effect of nitriding on the surface hardness, fatigue strength, and corrosion resistance of 60S2 spring steel. Improved steel of the following chemical composition was used: 0.59% C; 1.0% Si; 0.7% Mn; 0.02% Cr; 0.02% S; and 0.022% P. Specimens 50 x 5 x 0.5 mm were hardened in an x-ray chamber in an atmosphere of dissociated ammonia. Nitriding at 350-400° C considerably increased the surface hardness of the steel. Combined nitriding at 650-750° C with subsequent hardening led to the formation of a hard layer of nitrous-carbonic martensite with a high degree of hardness. The nitriding of springs made of 60S2 steel raised the fatigue strength as well as corrosion resistance in water and aqueous salt and acid solutions.

USSR

UDC 621.3-523.8

LOSKUTOV, V.I., Doctor of Technical Sciences

"The Application of Multiprocessor Computer Complexes in Management"

Moscow, Mekhanizatsiya i Avtomatizatsiya Proizvodstva, No 12, Dec 70, pp 45-46

Abstract: The systems described are in the AIST series, developed by the Siberian branch of the USSR Academy of Sciences. The AIST Zero is the smaller complex, and the AIST One is the larger. The structure is similar in both systems, the differences being primarily larger or more powerful components in the AIST-One.

The basic structure is a set of two or more processing computers (M-220 in the AIST-Zero, BESM-6 in the AIST-One) and a control processor (Minsk-22 in the AIST-Zero, Ural-14 in the AIST-One). The production processors share memory and peripherals through a commutator switch controlled by the monitor processor. Internal peripherals include high-speed drums, magnetic tapes, and discs. External peripheral lines are connected both to user interfaces such as teletypes, flexowriters, and cathode ray tubes and to real-time data collection apparatus, card readers, paper tape readers, plotters, and so forth.

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USSR

LOSKUTOV, V.I., Mekhanizatsiya i Avtomatizatsiya Proizvodstva, No 12, Dec 70, pp 45-46

The AIST-Zero is designed to serve 10-15 teletypes, 2-3 batch type I/O devices, and 3-4 channel real-time data. The AIST-One will service 150-200 teletypes, about 10 CRTs, 15-20 batch type devices, and 8-10 channels of real-time information. The larger computer is expected to have at least 128,000 words of core storage, 1 million words of high-speed drum storage, and 10 million words of disc storage. Special equipment required for control purposes includes an interrupt register and a device status register.

Although these systems are initially designed for use in scientific installations, providing time sharing services to research workers, there is an obvious application for such equipment in production management. This management involves several levels of interaction, ranging from simple machine controls to long-range planning. Multiprocessor systems of the AIST type offer an obvious opportunity to integrate all of these functions so that the necessary information for each level of management or control can be extracted from a standardized data base.

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USSR

621.314.58

LOSKITOV, Ye. D.

"Investigation of Low-Frequency Modulation of Output Voltage of Frequency Converter"

Izv. Leningr. elektrotekhn. in-ta (Bulletin of Leningrad Institute of Electrical Engineering), 1970, Issue 86, pp 196-197 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B440)

Translation: The paper analyzes low-frequency modulation at the output of a frequency converter with a clearly expressed d-c component resulting from the presence of pulsations at the input of the voltage inverter. It is shown in particular that there is a number of discrete values of the inverter, in the vicinity of which the low-frequency modulation occurs. The results of the analysis are confirmed by an experimental investigation on a 3-phase frequency converter with a two half-cycle single-phase rectifier at the input. 1 ill. N. S.

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USSR

UDC: None

LOSKUTOV, Yu. M. and LEVENTUYEV, V. P.

"Resonance Scattering of Electromagnetic Waves by Electrons in a Magnetic Field and Electron Polarization"

Moscow, Yadernaya Fizika, Vol. 11, No. 2, 1970, pp 411-415

Abstract: Resonance phenomena, are observed when the energy of a photon incident on electrons in a magnetic field coincides with the difference between electron energy levels, can be observed only in the presence of clearly expressed energy levels, when the width of the level is much less than the difference between two neighboring levels. With the scattering of electromagnetic waves by electrons moving in the magnetic field, this condition is satisfied only at comparatively high electron energies. The author analyzes the relativistic and non-relativistic cases and obtains the scattering cross section as a function of the frequency and angular distribution of the primary photons and of the electron polarization. He shows that the electron beam is polarized during resonance scattering and points out that the resonance scattering process may to some extent be controlled by the intensity of the incident photon beam.

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1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--PHOTON EMISSION BY ELECTRON REFLECTED FROM A MAGNETIC FIELD -U-
AUTHOR--(02)-LOSKUTOV, YU.M., ZAKHARTSOV, V.M.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK MOSKOVSKOGO UNIV. FIZ. ASTRON. USSR, VOL. 11, NO. 1, P.
53-6 1970
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--PHOTON EMISSION, ELECTRON SCATTERING, ELECTRON POLARIZATION,
MAGNETIC FIELD EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1328 STEP NO--UR/0188/70/011/001/0053/0056
CIRC ACCESSION NO--AP0109412
UNCLASSIFIED

2/2 020

CIRC ACCESSION NO--AP0109412

UNCLASSIFIED

PROCESSING DATE--23OCT70

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

ABSTRACT. INVESTIGATION OF ELECTRON REFLECTION FROM A MAGNETIC FIELD WHICH FILLS UP A SEMISPHERE. THE DIFFERENTIAL SCATTERING OF DAMPED RADIATION AND ENERGY LOSS DURING A SINGLE REFLECTION ARE DETERMINED. IT IS SHOWN THAT THE PHOTON RADIATION DUE TO REFLECTION CAUSES POLARISATION OF ELECTRONS IN THE DIRECTION OPPOSITE TO THE FIELD. THE DEGREE OF THIS POLARISATION IS NEARLY UNITY FOR NONRELATIVISTIC ELECTRONS.

UNCLASSIFIED

Acc. Nr:

AP0041845

Abstracting Service:
CHEMICAL ABST.

4-78

Ref. Code:

UR0502

L

86836y Mechanism of the depression of the thyroid gland function with thyroid hormones. Baranov, V. G.; Loskutova, E. A.; Propp, M. V. (Inst. Fiziol. Im. Pavlova, Leningrad, USSR). *Probl. Endokrinol.* 1970, 16(1), 43-6 (Russ). Triiodothyronine (T₃) administered to hypophysectomized rats at 10 μg/100 g daily for 7 days decreased the height of the follicular epithelium and the level of ¹³¹I uptake by the thyroid gland and restored these parameters to normal after administration of thyrotropic hormone (TSH) i.m. at 0.5 units daily for 10 days. Height of the follicular epithelium and ¹³¹I uptake were higher in TSH-treated rats than in those subjected only to hypophysectomy. T₃ seems to act directly on the thyroid gland, causing morphol. and functional changes characteristic of decreased function, and 1 of the mechanisms seems to be blocking the action of TSH on the gland.

BJR

LD

02

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FEEL/FRAME
19751726

1/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--RAPID PYROLYSIS OF IRSHA BORODINO LIGNITE -U-
AUTHOR--(03)-TYUNYUKOV, B.K., LISIN, D.M., LOSKUTOVA, YE.N.
COUNTRY OF INFO--USSR
SOURCE--KHIM. TVERD. TOPL. 1970, (2), 113-19
DATE PUBLISHED-----70
SUBJECT AREAS--PROPULSION AND FUELS, CHEMISTRY
TOPIC TAGS--PYROLYSIS, THERMAL EFFECT, CHEMICAL REACTION RATE, SOLID FUEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0967 STEP NO--UR/0467/70/000/002/0113/0119
CIRC ACCESSION NO--AP0133053
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133053

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF CONTACT TIME AND TEMP. ON THE YIELDS AND COMPN. OF THE TITLE PYROLYSIS PRODUCTS WERE STUDIED IN A LAB. APP. LIGNITE OF 0.4-0.1 MM PARTICLE SIZE WAS CONTINUOUSLY HEATED IN A FALLING LIGNITE FLOW WITHOUT A HEAT CARRIER AT 250-700 AND AT 400-800DEGREES AND CONTACT TIMES OF 0.53-1.63 AND 10.1-98.0 SEC, RESP. AT 10-20 SEC OUTPUT TIME AN INCREASE IN TEMP. FROM 550 TO 700DEGREES CAUSED DECREASES IN THE YIELD OF TAR AND H SUB2 O FROM 12 TO 8 AND FROM 8 TO 4PERCENT, RESP.; WITH CONTACT TIMES SMALLER THAN 1 SEC THE DECREASE OF THE YIELDS WITH INCREASING TEMP. WAS SMALLER. AT THE SAME TEMP., THE YIELDS OF TAR AND H SUB2 O INCREASED WITH DECREASING CONTACT TIMES; FOR EXAMPLE, AT 700DEGREES WITH CONTACT TIME DECREASING FROM 10-20 TO SMALLER THAN 1 SEC, THE YIELDS INCREASED BY 1.5 AND 4PERCENT, RESP. THE YIELDS OF GAS INCREASED WITH INCREASING TEMP. AND CONTACT TIME. FACILITY: INST. FIZ.-KHIM. DSNOV PERERABOT. MINER. SYR'YA, NOVOSIBIRSK, USSR.

UNCLASSIFIED

USSR

UDC 617-001.28-092.9-085.217.22

LOSKUTOVA, Z. F. and SAKSONOV, P., Institute of Biophysics, Moscow

"Particular Features in the Action of Sympathomimetic Amines in Radiation Injuries"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 76, No 8, Aug 73, pp 83-85

Translation: The toxicity of adrenalin, adrenalon, pervitin, phenamine, veritol, ephedrine, and sympathol for irradiated frogs and mice increases by a factor of 2 and more in comparison to their toxicity for nonirradiated animals. In comparison with nonirradiated animals, the action of all seven of the amines upon the reflex activity of the central nervous system is diminished to a considerable degree. The awakening action of phenamine and pervitin in irradiated mice that are under the action of hexenal is manifested to a considerably lesser degree than in the case of nonirradiated ones. In irradiated animals, ephedrine even intensified the hypnotic effect of hexenal. 3 tables.

1/1

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Radiobiology

USSR

UDC 615.214.24:547.854.5 (HEXENALUM).03:617-001.28-092.9

LOSKUTOVA, Z. F. and SAKSONOV, P. P.

"Narcotic Effect of Hexobarbital Combined With Aminothiols Radioprotectors in Irradiated Animals"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 4, 1973, pp 59-60

Abstract: Mice were gamma-irradiated (900 r) and 1 1/2 to 2 hours later injected intraperitoneally with hexenal (75 mg/kg) or hexenal combined with beta-mercaptoethylamine, cystamine hydrochloride, or cystamine hydrobromide (100 mg/kg each). The narcotic effect was assessed from the beginning and duration of the side position. All three compounds intensified the narcotic effect of hexobarbital 2.8 to 7 times in the nonirradiated mice and 6.8 to 17.7 times in the irradiated animals compared to the control, and they significantly lengthened the time the animals remained on their sides. There was no significant difference between the animals as far as time of onset of the side position was concerned, but the period of excitation of the mice that received hexobarbital together with the radioprotectors was less pronounced. The narcotic effect lasted longest in the animals that received hexobarbital and cystamine hydrobromide.

1/1

USSR

UDC: 621.372.061

DOMRACHEV, V. N., LOSSOVSKIY, V. A.

"A Double-T Nonlinear RC Filter"

Kiev, IVUZ: Radioelektronika, Vol 15, No 3, Mar 72, pp 338-342

Abstract: The circuits of passive and active double-T RC filters with series opposing voltage-variable capacitors are analyzed. An expression is found for the output voltage when a harmonic signal acts on the input, and the amplitude-frequency response is determined.

1/1

- 30 -

USSR

UDC: 621.375

DOMRACHEV, V. N. and ~~LOSSOVSKIY, V. A.~~

"R-C Amplifier With Inverse Feedback Through a Nonlinear Band Filter"

Leningrad, Priborostroyeniye, No 1, 1972, pp 10-12

Abstract: Forced oscillations in a circuit given in a book published in 1966 (A. M. Bonch-Bruyevich, Radioelektronika v eksperimental'noy fizike -- Electronics in Experimental Physics -- Moscow, izd-vo "Nauka") are analyzed in the present article. The Kirchhoff laws are written from the equivalent diagram of the amplifier circuit, and from them is derived a second-order differential equation in terms of the ratio of the instantaneous output voltage to E_m , where $E_m/2$ is the interpolation step from the Stirling formula. The experimental resonance curves of the amplifier are plotted for various amplitudes of the input voltage, from which it can be seen that the output voltage in the transition from one stable state to another is increased or decreased in jumps. This confirms theoretical results regarding the presence of a bistable zone. The authors, associated with the Kazan Aviation Institute, note that similar amplifiers with different slopes of the amplitude-frequency characteristic can be used as highly selective filters.

1/1

USSR

UDC: 621.372.061

IL'IN, G. I., LOSSOVSKIY, V. A.

"Passage of Signal and Noise Through a Nonlinear Tank Circuit With PN-Junction Capacitance"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970, vyp. 122, pp 78-85 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A109)

Translation: An expression is derived for the probability density function of amplitudes at the output of a tank circuit subjected to a stationary harmonic signal and normal wide-band noise. It is shown that in the case of low noise dispersion, the density function is close to normal. It is noted that circuits of this kind may be used to improve signal-to-noise ratio since resonance phenomena take place on different frequencies when the circuit is subjected to noise or an additive mixture of signal and noise. One illustration, bibliography of seven titles. N. S.

1/1

USSR

UDC: 621.372.061

BEREZHNOY, V. I., LOSSOVSKIY, V. A.

"A Nonlinear Filter With Π -Shaped Amplitude-Frequency Characteristic"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970, vyp. 122, pp 72-77 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A151)

Translation: The authors consider a nonlinear filter with a resonance system in which the capacitance of a sharp blocked PN junction and the capacitance of two series-opposed junctions are used as the storage elements. It is shown that the amplitude-frequency characteristic of the filter contains two non-identical amplitude discontinuities which cannot be made equal in value without changing the circuit. The passband of the filter depends on the voltage output factor of the blocked junction; the passband decreases as does the magnitude of the amplitude discontinuities with a reduction in the voltage output factor. Two illustrations, bibliography of five titles.
N. S.

1/1

- 48 -

Acc. Nr: AT0043975 **L**

Ref. Code: UROSOS

PRIMARY SOURCE: Geofizicheskiy Sbornik, Kiev, 1970, Nr 33,
pp 71-77
LOSSOVSKIY, YE. K.

ON ANALYTICAL SOLUTION OF THE PROBLEM CONCERNING INTENSITY
OF TOTAL MULTIPLY REFLECTED WAVES

(Institute of Geophysics, Academy of Sciences, Ukrainian SSR)

Summary

A problem on intensity of a total multiple reflected wave in an idealized n-layered plane-parallel model is considered (n may be necessarily large). The solution is reduced to demonstrating the Leibniz nature of the series that characterizes the relationship between the amplitude of a total reflected wave and parameters of the corresponding multilayered medium. The sum multiple reflected waves, originated in the overlying medium are shown to be essentially weaker than the primary reflections from depth.

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add 12

USSR

UDC: 621.391:519.2

LOSIAKOV, S. N.

"Use of Geometric Concepts in Studying Problems of Interference Resistance"

Tr. Mosk. in-ta radiotekhn., elektron. i avtomatiki (Works of the Moscow Institute of Radio Engineering, Electronics and Automation), 1970, vyp. 40, pp 3-34 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A37)

Translation: A geometric method is used to determine the conditions under which the effect of sinusoidal and pulse interferences on radio reception can be completely compensated. Bibliography of two titles. N. S.

1/1

USSR

UDC: 621.396.621.59:621.396.669.8

LOSYAKOV, S. N., NERONOV, V. V., LITVIN, V. M.

"A Reception Device for Radio Communication Lines with 'Floating' Frequency"

Moscow, Otkrytiya, Izobreneniya, Promyshlennyye Obratzysy, Tovarnyye Znaki, No 3, 1970, p 50, patent No 259969, filed 26 Jul 68

Abstract: This Author's Certificate introduces: 1. A reception device for radio communication lines with "floating" frequency. The device contains a wide-band amplifier with automatic transmission factor control, a frequency converter with a mixer and beat oscillator with "floating" frequency controlled by a synchronization unit, and an intermediate-frequency narrow-band amplifier. As a distinguishing feature of this patent, the effectiveness of lumped interference suppression is improved and overloading of the signal processing line channel by this kind of interference is prevented by incorporating into the device an auxiliary mixer and a stable fixed-frequency oscillator. These additional elements shift the frequency spectrum of the signal from the output of the wide-band amplifier to the frequency range of the beat oscillator. The beat oscillator voltage and the output voltage of the auxiliary mixer are fed to the inputs of a low-frequency beat detector made in the form of a mixer, low-frequency filter and inertial amplitude detector connected in series. The output voltage of the amplitude detector is

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USSR

LOSYAKOV, S. N., et al, Otkrytiya, Izobreneniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 3, 1970, p 50, patent No 259969, filed 26 Jul 68

fed to the transmission factor control circuit of the wide-band amplifier through a blocking capacitor which prevents the possibility of zero beats between the beat oscillator voltage and signals from the radio line transmitter. 2. A modification of this device in which the distinguishing feature is prevention of the possibility of low-frequency beats between the beat oscillator voltage and signals from the radio line transmitter at a low degree of synchronism by connecting the beat oscillator with "floating" frequency to the mixer in the main channel through a delay line with a lag time which is greater than the ratio of the pass-band of the narrow-band IF amplifier to the rate of change in the "floating" frequency, but is less than the time constant of the inertial amplitude detector.

2/2

Acc. Nr: **AT0049892**

Abstracting Service: **CHEMICAL ABST. 5/70**

Ref. Code: **UR0441**

LOTAKOV A.A.

92550s Formation of graphite in Fe-Ce cast iron. Birnsonov, G. V.; Lotakov, A. A. (Inst. Probl. Materialoznavstva, Kiev, USSR). *Dopov. Akad. Nauk Ukr. RSR, Ser. A* 1970, 1, 80-3 (Ukraine). The transformation of the graphite inclusions was studied as a function of the amt. of ferrocerium, temp., and delay time, by using the metallographic method. The formation of globular graphite is explained by the electron donor capacity of the rare-earth atoms owing to the $4f^s \rightarrow 4f^{s-1}5d^1$ electron transitions and by the selective acceptor capacity of the C atoms in Vertman-Samaric clusters, nuclei, and crystals.

M. Shefel

4

87

REEL/FRAME
19801824

1/2 015 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--OXIDATIVE THERMAL DEGRADATION OF SOME OLIGOSILOXANES -U-
AUTHOR--SOBOLEVSKIY, M.V., CHERNYSHEV, E.A., ~~LOTAREV, M.B.~~, VISHNEVSKIY,
P.N., NAZAROVA, D.V.
COUNTRY OF INFO--USSR
SOURCE--PLAST. MASSY 1970, (2), 26-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--THERMAL DEGRADATION, OXIDATION, SILOXANE, MOLECULAR STRUCTURE,
BENZENE DERIVATIVE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REFEL/FAME--1987/1057 STEP NO--UR/0191/70/000/002/0026/0027
CIRC ACCESSION NO--AP0104455
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--11SEPT0

CIRC ACCESSION NO--AP0104455

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. THE OXIDATIVE THERMAL DEGRADATION OF OLIGOHETEROCYCLOSILOXANES, OLIGODIMETHYLSILOXANES, OLIGODIETHYLSILOXANES (I), AND OLIGOMETHYLPHENYLSILOXANES OF STRUCTURE II WAS STUDIED BY THERMOGRAVIMETRIC ANAL. UNDER ISOTHERMAL CONDITIONS AT 200-350DEGREES. II HAD THE MAX. RESISTANCE TO OXIDN., WHEREAS I WAS LEAST RESISTANT TO OXIDN. AND ABSORBED O AT 200DEGREES. THE ABSORPTION RATE OF O WAS PROPORTIONAL TO TEMP. FOR ALL OF THE SILOXANES TESTED.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--OXIDATIVE THERMAL DEGRADATION OF SOME OLIGOSILOXANES -U-
AUTHOR--SOBOLEVSKIY, M.V., CHERNYSHEV, E.A., LOTAREV, M.B., VISHNEVSKIY,
P.N., NAZAROVA, D.V.
COUNTRY OF INFO--USSR
SOURCE--PLAST. MASSY 1970, (2), 26-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--THERMAL DEGRADATION, OXIDATION, SILOXANE, MOLECULAR STRUCTURE,
BENZENE DERIVATIVE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY RFEL/FRAME--1987/1057 STEP NO--UR/0191/70/000/002/0026/0027
CIRC ACCESSION NO--AP0104455
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC-ACCESSION NO--AP0104455

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

ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. THE OXIDATIVE THERMAL DEGRADATION OF OLIGOHETEROCYCLOSILOXANES, OLIGODIMETHYLSILOXANES, OLIGODIETHYLSILOXANES (I), AND OLIGOMETHYLPHENYLSILOXANES OF STRUCTURE II WAS STUDIED BY THERMOGRAVIMETRIC ANAL. UNDER ISOTHERMAL CONDITIONS AT 200-350DEGREES. II HAD THE MAX. RESISTANCE TO OXIDN., WHEREAS I WAS LEAST RESISTANT TO OXIDN. AND ABSORBED O AT 200DEGREES. THE ABSORPTION RATE OF O WAS PROPORTIONAL TO TEMP. FOR ALL OF THE SILOXANES TESTED.

UNCLASSIFIED

Acc. Nr:

A70047569

Abstracting Service:
CHEMICAL ABST.

5/70

Ref. Code:

UR0139

L

92841n Nature of the acceleration of ordering processes during the alloying of Ni,Mn with iron, cobalt, and chromium. Prushinskii, V. V.; Panin, V. E.; Fadin, V. P.; Lotkov, A. I. (Sib. Fiz.-Tekh. Inst. im. Kuznetsova, Tomsk, USSR). *Izv. Vyssh. Ucheb. Zaved., Fiz.* 1976, 13(1), 73-8 (Russ). Ordering processes of alloying were studied of Ni₂(Mn, M) alloys, where M = Fe, Co, or Cr. The study reveals that the basic reason for the acceleration of the ordering processes in the alloys is the change of the mechanism of ordering from homogeneous in Ni₂Mn to heterogeneous in ternary alloys. HMJR -

MIT

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REEL/FRAME
19791135

18

USSR

UDC: 621.375.82

LOTKOVA, E. N., IVANOV, M. N., SAVCHENKO, V. F., and SOBOLEV, N. N.

"Radiation Generation in the Five-Micron Region With a CO_2+N_2+He Mixture"

Moscow, V sb. Kvant. elektronika (Quantum Electronics--collection of works) "Sov. radio," No 1(13), 1973, pp 137-139 (from RZh--Fizika, No 7, 1973, Abstract No 7D1024)

Translation: Generation is obtained in the five-micron region in a laser tube with a CO_2+N_2+He mixture cooled by liquid nitrogen. The oscillation was observed, and an amplification of 40 lines corresponding to the oscillatory-rotatory transitions of the CO molecule in the $v'-v''$ interval from 4-3 to 12-11 was measured.
Authors' abstract

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USSR

UDC 533.9.07

ARETOV, G. N., VASIL'YEV, V. I., LOTOTSKIY, A. P., and SHVORTSOV, YU. V.

"Parameters of the Nitrogen Plasma Jet of a Heavy-Current Pulse Accelerator"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, No 11, Nov 73, pp 2324-2331

Abstract: Experiments on the generation of a jet of nitrogen plasma in a coaxial accelerator with a quasi-steady plasma focus are described. Devices of this kind make it possible to obtain streams of ionized gas with a high directed velocity, as well as high-temperature zones with dense plasma. The discharge current reached 500 ka at a voltage in the condenser battery of up to 10 kv. The parameters of the obtained plasma were measured. Its density attained $6 \cdot 10^{17} \text{ cm}^{-3}$, the velocity in the front was $1.5 \cdot 10^7 \text{ cm/sec}$, the energy of the plasma stream amounts to about 4 kilojoules. The tendency of change of the plasma density in the focus in relation to the initial conditions is ascertained. 8 figures. 11 references.

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USSR

UDC 621.382

KARPOV, YU. S., LOTOTSKIY, B. YU., CKUNEV, YU. T., PASYNKOV, V.V., CHIRKIN, L.K.

"Varistors"

V sb. Poluprovodn. pribory i ikh primeneniye (Semiconductor Devices And Their Application--Collection Of Works). No 23, Moscow, "Sov. radio," 1970, pp 305-317 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11B265)

Translation: The mechanism of varistor action is considered, and the basic parameters and characteristics of varistors of domestic manufacture are presented, as well as the results of computation of certain characteristics of varistors, assuming that heating of the point contacts is a basic effect leading to nonlinearity of the current-voltage characteristic in the operating range of the change of currents and voltages. It is shown that by introducing an impurity with a different ionization energy into silicon carbide, it is possible to change within wide limits the value of the coefficient of nonlinearity of the current-voltage characteristic. The results are presented of investigations of the noise properties of varistors; and the dependence of the noise factor on the operating conditions of varistors and the temperature of the environment. 7 ill. 1 tab. 5 ref. Summary.

1/1

1/2 017 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--CHANGES IN INNERVATION OF THE VULVA IN POSTCLIMACTERIC WOMEN -U-
AUTHOR--LOTOTSKI, V. L
COUNTRY OF INFO--USSR
SOURCE--ARKH ANAT GISTOL EMBRIOL 58(1): 46-55. ILLUS. 1970.
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--REPRODUCTIVE SYSTEM, GYNECOLOGY, GERIATRICS, CELL PHYSIOLOGY,
HISTOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/0246

STEP NO--UR/9076/70/058/001/0046/0055

CIRC ACCESSION NO--AP0134051

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--A0134051

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HISTOLOGICAL INVESTIGATIONS OF THE MUCOCUTANEOUS JUNCTION WERE PERFORMED IN 52 SENILE WOMEN. PARTICULAR ATTENTION WAS PAID TO THE NEUROHISTOLOGICAL PATTERN OF THIS AREA, ESPECIALLY PREDISPOSED TO VARIOUS PATHOLOGICAL TRANSFORMATIONS WITH AGING. ATROPHIC PROCESSES INVOLVING EPITHELIUM AND CONNECTIVE TISSUE STROMA OF THE MUCOCUTANEOUS JUNCTION BECAME MORE INTENSIFIED WITH TIME ELAPSING AFTER MENOPAUSE (ON AN AVERAGE UP TO AGE 60). RELATIVE STABILIZATION OF THE ATROPHIC MORPHOLOGIC PICTURE OF THE MUCOCUTANEOUS JUNCTION GENERALLY OCCURS 20 YR FROM THE CESSATION OF MENSES. AT THIS TIME THE RECEPTOR APPARATUS OF THE INVESTIGATED VULVA AREA UNDERGOES DIVERSE CHANGES. DEGENERATIVE PROCESSES IN THE FREE NERVE ENDINGS OCCUR. AT THE SAME TIME CHANGES OF A REACTIVE TYPE MAY BE OBSERVED IN INCAPSULATED GLOMERULAR RECEPTORS. SINCE THE FREE NERVE ENDINGS ARE REGARDED AS THE BASIS FOR TROPHIC NERVOUS REGULATION, THE INVOLUTIONARY CHANGES AFFECTING VULVA TISSUES ARE CONSIDERED TO BE OF A NEURODYSTROPHIC NATURE. FACILITY: A. L. POLENOV Leningrad Res. INST. NEUROSURG., LENINGRAD, USSR.

UNCLASSIFIED

UDC 51

USSR

LOTOV, A. V.

"Study of a Procedure for Improving the Stability of an Economic Plan in the Example of Foreign Trade"

V sb. Issled. operatsiy. Modeli, sistemy resheniya. Vyp. 3 (Operations Research. Models, Systems, Decisions. Vyp. 3 -- collection of works), Moscow, 1972, pp 20-33 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V538)

Translation: A statement of the problem of minimizing the effect of disturbances on implementing the adopted plan for development of the economy is proposed. A study is made of one type of such disturbances, namely the effect of price instability in the world market on the economy of the country. A method is proposed for correcting the optimal decision as a result of the implementation of which the decision becomes more stable with respect to such disturbances.

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USSR

UDC: 621.396.69:621.319.4

CHERNOBROVKIN, D. I., SAKHAROV, Yu. G., LOTOV, V. I.

"Investigation of the Characteristics of Aging of Thin-Film Capacitors"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiodetaili (Electronic Technology. Scientific and Technical Collection, Radio Components), 1970, vyp. 1 (18), pp 31-34 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V354)

Translation: The authors give the results of an investigation of the process of aging of thin-film capacitors based on germanium monoxide with various conditions of the ambient medium. It is shown that careful development of the atomizing conditions is an important factor in improving the reliability of the capacitors. Bibliography of 2 titles. Ye. M.

LOTOV, Ye. I.

JPRS 55570
29 MAR 72

UDC: 613.816:061.22(47)

THE HISTORY OF FOUNDATION AND ACTIVITIES OF THE ALL-UNION SOCIETY FOR CONTROL OF ALCOHOLISM

Article by Ye. I. LOTOV, doctor of medical sciences, and A. V. Pavlyukhina, Department of History of Medicine, All-Union Scientific Research Institute of Social Hygiene and Public Health Organization named N. A. Semashko, Moscow; Moscow, Sovetskoye Zdravookhraneniye, Russian, No 2, 1972, submitted 28 September 1971, pp 45-69

"It is unlikely that we could find another sociohygienic problem that has been studied for so long and so much, that would have such an extensive international literature, around which such active propaganda developed, about which so many pamphlets, articles and appeals have been written, so many conferences have convened, and so many mass experiments have been performed, as what the well known social hygienist, A. V. Volkov [1] wrote about alcoholism. These lines, which were written over 45 years ago, reflect the complexity of the problem of fighting against alcoholism.

According to the data of WHO (World Health Organization), there has been a sharp rise in mortality due to alcoholism in the last five years; in many countries it is surpassed only by mortality due to cardiovascular disease and cancer. In spite of this, the consumption of alcoholic beverages in the entire world not only fails to decline but even increases from year to year.

Medical historians are called upon to investigate the experience in fighting against alcoholism in Russia and the USSR, to analyze its causes, to demonstrate advances, achievements, and mistakes made in organizing the fight against alcoholism in our country and thus to direct the knowledge of history to serve the present and the future. History shows that there were beneficial efforts in this field in the late 1920s and early 1930s that could be applied today.

The work done by the All-Union Society for the Control of Alcoholism, which was in the center of the fight against alcoholism in the USSR, was extremely interesting and educational. It would be interesting to recall the names of the people who contributed much effort, labor, and energy to this matter and were able to enlist millions of workers in the fight against the age-old evil and instill in them faith in their success. Heavy drinking was

I/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--ON THE RELATION BETWEEN THE PULSAR NP 0532 AND A RADIO SOURCE OF
SMALL ANGULAR DIAMETER -U-
AUTHOR--(02)-MATVEYENKO, L.I., LOTOVA, N.A. L
COUNTRY OF INFO--USSR
SOURCE--ASTRONOMICHESKII ZHURNAL, VOL. 47, NO. 3, 1970, P. 483-486
DATE PUBLISHED-----70
SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS
TOPIC TAGS--PULSAR, COSMIC RADIO SOURCE, SPECTRUM, NEBULA, RADIO EMISSION,
SUPERNOVA
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605012/CO1 STEP NO--UR/0033/70/047/003/0483/0486
CIRC ACCESSION NO--AP0140258
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140258

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS SHOWN ON THE BASIS OF THE SPECTRA AND THE PULSE DURATION, THAT THE SOURCE OF SMALL ANGULAR DIAMETER IN CENTRAL PART OF THE CRAB NEBULA MAY BE ASSOCIATED WITH THE PULASR AND HIS MAGNETOSPHERE. THE RELATION POSITION OF PULSAR ALONG THE LINE OF SIGHT WITH RESPECT TO THE CENTER OF THE NEBULA IS ESTIMATED FROM THE ROTATION OF PLANE POLARISATION OF RADIO EMISSION OF THE NEBULA AND FROM TOTAL NUMBER OF ELECTRONS ON THE LINE OF SIGHT. THE PULSAR LIES WITHIN THE NEBULA WITH THE UNCERTAINTIES IN THE VALUES OF THE PARAMETERS OF MEDIUM AND POSITION THE SHELL OF THE NEBULA. THE SIZE OF PULSAR IN THE SUPERNOVA REMNANT VELA X IS ALSO ESTIMATED. FACILITY:
AKADEMIIA NAUK SSR, FIZICHESKII INSTITUT, MOSCOW, USSR.

UNCLASSIFIED

USSR

ANDZHAPARIDZE, O. G., LOTTE, V. D., and YUROVSKAYA, G. B.

"The Leukosis-Like Virus in Cell Cultures Transformed by Blood From Leukotic Patients"

Moscow, Doklady Akademii Nauk SSSR, Vol 196, No 1, 1971, pp 217-219

Abstract: The viral etiology of human leukemia is postulated on the basis of indirect data and analogy with leukemia in mammals and birds. Cultures of human diploid cells (hdc), strain W1-38, were inoculated with blood and blood elements from patients with acute hemocytoblastosis and from healthy donors. In five cases out of nine, inoculations from acutely ill patients transformed the culture; its cells acquired an epithelioid character and lost their capacity for contact growth inhibition. The altered hdc cultures differed from normal ones in higher metabolic activity and higher growth potential. The altered cells lost their former karyotype and changed into heteroploid cells. Karyological analysis showed that cells of all altered lines had two anomalous marker chromosomes: a large submetacentric one, larger than Group A chromosomes; and a large acrocentric, larger than the acrocentric chromosomes of Group D. Transplantation of altered cells into a hamster cheek pouch produced,

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USSR

ANDZHAPARIDZE, O. G., et al, Doklady Akademii Nauk SSSR, Vol 196, No 1, 1971, pp 217-219

in 45 cases out of 89, neoplasma of the epidermoid carcinoma type, mixed. The altered cultures consistently showed mycoplasma which, when introduced into a fresh hbc culture, did not alter the new culture. New cultures were frequently transformed by acellular homogenates and ultrafiltrates of the altered cells. Under electron microscopy, cytoplasm of altered cells showed the presence of membrane bodies of complex contour, containing virus-like structures. The bodies tended to localize in the perinuclear area near, or among, the Golgi complex. The bodies resembled mitochondria or lysosome cells, but had one, two, or three double contour sheaths, of which one or two formed internal spiral structures. They also contained formations of one double contour sheath with homogeneous filament material, containing virus-like particles, which are described in detail. At a later stage in the experiments (40 min), the membrane bodies and virus-like particles were replaced by a small number of immature, still-evolving forms and mature forms of leukosis-like virus in the extracellular space and cell surface. The immature cell particles corresponded to type A virus particles; while the mature particles corresponded to type C virus particles. The A-type particles formed on the cell surface,

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USSR

ANDZHAPARIDZE, O. G., et al, Doklady Akademii Nauk SSSR, Vol 196, No 1, 1971, pp 217-219

and often later formed two virus particles in an identical area. Type C virus particles are mature virus particles formed from type A particles through inner structural changes. Type C virus particles were found in the extracellular space and often had an irregular form, with an eccentric nucleotide of varying electron-optical density. Examination of controls and experimental cultures revealed no structures of the membranous type. Both cultures showed the presence of many mature and dividing mycoplasmic bodies, as well as elementary bodies 100 m μ in diameter forming on mycoplasmic surface. It was concluded that hdc transformation seems to be associated with inoculation of this culture with formed elements and blood from patients with acute hemocytoblastoma. The nature of membrane bodies and their role in the alteration process remains unclear, despite previous research. The possibility that membrane bodies with virus-like particles could be mycoplasma with elementary bodies is not ruled out. The leukosis-like virus isolated here in altered cells is similar morphologically to those already isolated from mice and birds, as well as those from humans, cats, dogs, and cows. It is possible that one or more agents isolated in transformed cells is responsible for altered cultures of human diploid cells.

3/3

- 20 -

USSR

UDC 536.46:533.6

KRIVULIN, V. N., LOVACHEV, L. A., BARATOV, A. N., MAKEYEV, V. I.

"Study of the Effect of Acceleration on the Concentration Limits of Ignition"

V sb. Gorennye i vzyv (Combustion and Explosion -- Collection of Works),
Moscow, "Nauka", 1972, pp 296-298 (from RZh-Mekhanika, No 3, Mar 73, Abstract
No 3B943)

Translation: Experimental results from a study of the effect of acceleration on the ignition limits of natural gas in air are presented. The experiments were conducted on a device that consisted of a rotating reaction vessel. It was established that under plane propagation along the acceleration vector the ignition limits are compressed and upon achieving an overload of $100 g_0$ ($g_0 = 9.8 \text{ m/sec}^2$) the hot mixtures lose the ability to propagate flames. At the same time the ignition limits are weakly dependent on the overload upon the propagation of flame counter to the acceleration vector. 6 ref. Authors' abstract.

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Combustion

USSR

UDC 541.126.4

IOVACHEV, L. A. Institute of Chemical Physics, Moscow, Academy of Sciences USSR

"Theory of Flame Propagation Limits in Gases"

Moscow, Doklady Akademii Nauk SSSR, Vol 193, No 3, 21 Jul 70, pp 634-637

Abstract: The mechanism of flame extinction under the effect of convection is studied. In the transition to reduced pressure or in the dilution of hot mixtures for ignition, the initial heated volume must be increased (increase in ignition energy). The time required for establishment of stationary flame propagation and the convection force moving the heated volume with respect to the fresh mixture are thereby increased. The increase in the swirling velocity of the heated volume by the fresh mixture with simultaneous decrease in the fundamental flame velocity, which changes with pressure and composition of the hot mixture, but which is independent
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USSR

LOVACHEV, L. A., Doklady Akademii Nauk SSSR, Vol 193, No 3, 21 Jul 70, pp 634-637

of the force of gravitation acceleration, leads to the observed fact that the radius of the heated sphere increases, although the fundamental flame velocity retains its final value. The degree of dilution or pressure drop corresponding to this limiting state determines the experimentally observed flame propagation and the boundary conditions for ignition. An increase in the ignition energy beyond the limiting value cannot lead to flame propagation. Cold flames may propagate beyond these limits, at correspondingly lower fundamental velocities.

The problem of theoretically determining the flame propagation limits involves solution of a system of nonstationary equations of energy conservation, the diffusion equations of all materials participating in the reaction, as well as the Navier-Stokes equation and the continuity equation. A sufficiently strict formulation of such an equation system can be used with boundary and initial conditions. Nevertheless, even by computer, the calculation is not easy. A simplified method is therefore used. The results for lean hydrocarbon mixtures are reported and discussed.

1/2 010 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--SHAFT FURNACES AND THEIR CONSTRUCTIVE CHANGES DURING THE
DEVELOPMENT OF LEAD SMELTING -U-
AUTHOR--LOVCHIKOV, V.S. L
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., TSVET. MET. 1970, 13(1), 156-62
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--SMELTING FURNACE, LEAD
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3008/0633 STEP NO--UR/0149/70/013/001/0156/0162
CIRC ACCESSION NO--AT0137718
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0137718
ABSTRACT/EXTRACT--(U) GP-0-
REVIEWED BRIEFLY.
USSR.

ABSTRACT. PB SMELTING FURNACE DESIGN IS
FACILITY: MOSK. INST. STALI SPLAVOV, MOSCOW,

UNCLASSIFIED

USSR

UDC 612.821

LOVCHINKOV, V. A., and ROSHCHINA, L. V.

"Nature of the Distribution of Dogs by Size of the 'Maximum' Dose of Caffeine for Them"

Leningrad, Metodiki Otsenki Svoystv Vyshey Nervnoy Deyatel'nosti, "Nauka," 1971, pp 77-84

Abstract: In this article, the nature of the distribution of dogs by the size of "maximum" doses of caffeine was investigated. Establishing a normal distribution made it possible to suggest a method of breaking all dogs into groups based on the statistical parameters of the distribution. Twelve bibliographic entries.

1/1

- 75 -

USSR

UDC [537.226+537.311.33]:[537+535]

2

BERCHA, D. M., ZAYACHKOVSKIY, M. P., SLIVKA, V. YU, LOVGA, I. V., TURVANITSA, I. D., AND CHEPUR, D. V.

"Effect of Piezoresistance in BiSeI Crystals"

V sb. Poluprovodn. elektronika (Semiconductor Electronics -- Collection of Works), Uzhgorod, 1971, pp 53-58 (from RZh-Fizika, No 10, Oct 71, Abstract No 10YE651 by G. G. RUDOVOL)

Translation: An investigation was made of the effect of piezoresistance and electrical conductivity in acicular BiSeI single crystals, as well as their temperature dependence in the 270-115° K temperature range. It was established that the piezoresistance coefficient is complexly (peakwise) temperature-dependent. It is suggested that the semiconductor has several donor levels, which are depleted in turn. This results in several peaks, dependent on the number of impurity levels. However, the peak found in the 130-140° K temperature region is due to a phase transition of the second kind. In the 230° K region the piezoresistance does not involve a phase transition but is due to a change in the activation energy of impurity levels. Such an assumption is confirmed by the fact that in experimental studies a shift in the minimum is observed from specimen to specimen, while the minimum remains constant at $T=133^{\circ}$ K.

1/1

USSR

UDC: 8.74

~~LOVITSKIY, V. A.~~

"Classification of Memory Structures, Report II"

Probl. Bioniki. Resp. Mezhdved. Temat. Nauch.-tekhn. Sb. [Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection], 1972, No 8, pp 146-153 (Translated from Referativnyy Zhurnal Kibernetika, No 11, 1972, Abstract No 11V548, by the author)

Translation: Verbal problems are studied. They can be solved by a system, the memory of which is either a tree-form structure, an associative grid or a pyramid structure.

1/1

USSR

UDC: 8.74

LOVITSKIY, V. A.

"Classification of Memory Structures, Report 1"

Probl. Bioniki. Resp. Mezhd. Temat. Nauch.-tekhn. Sb. [Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection], 1972, No 8, pp 138-145 (Translated from Referativnyy Zhurnal Kibernetika, No 11, 1972, Abstract No 11V547, by the author)

Translation: An approach is studied to classification of memory structures, by which a system can solve verbal problems. The essence of the approach is that the form of the structure is determined by the type of input signal and properties of elements of which the structures are formed.

1/1

1987E

LOVITSKIY, V.A.

Mathematics

177 CYBERNETICS

127

30 Oct 70

112. USSR

VASILYEV, V. O.
"Particulars of the Control of Social Systems"

Kiev, *Uchenye Zapiski*, No 3, May-Jun 1970, pp 20-29

Translation of author's abstract: Social control is the process of deliberate influence of the subject of control on human components and the interrelationship of the controlled system. The control of complex social formations as a variety of independent activity represents in itself one of the specialized functions in the social division of labor which by its essence includes the forecasting of the possible trends of development and methods of the forecasting of the possible development components, acceptance of activity of the appropriate system or its components (possibilities), and the organization of subsequent selection of one of the forecasting for transforming this solution into reality.

A specific concept of social control is formed by authority. In a broad, general sociological sense, the concept of "authority" signifies the sociologically understood, objectively single-valued orientation of will by the control function bearers, mode of action, and, in an extreme case, the fate of the subordinate person (or group of persons, etc.). In complex social systems the origins of control and authority require such structural particularities as structural stability, hierarchical capacity, and pyramid formation.

3/1

Soviet Press Digest

30 Oct 70

1. MATHEMATICAL PROBLEMS OF CYBERNETICS

113. USSR

Mathematics

SUSALOV, V. S.
"Search algorithm for object found by incomplete set of characteristics"

UDC: 62-155.001.67:52.9
62-155

Ufa, *Uchenye Zapiski*, No 1, 1970, p. 10-11

Ufa, *Uchenye Zapiski*, No 1, 1970, p. 10-11
Ufa, *Uchenye Zapiski*, No 1, 1970, p. 10-11
Ufa, *Uchenye Zapiski*, No 1, 1970, p. 10-11

Translation: This work is devoted to an exposition of the rules for information processing in a verbal memory system, reduced to a problem of heuristic searching of the verbal memory of man. The author believes that verbal memory can be viewed as a system of search within a given problem or rules of solutions. According to contemporary ideas, the verbal memory system has a hierarchical structure; the first level of memory is a tree-like structure. The author offers a classification for information problems solved using only the finite level of memory. The classification was completed using examples from a Russian language taskbook for the second grade. An algorithm for solution of several of these problems is given; the algorithm is described in an associative programming language based on ALGOL and an expanded version - ALGOL.

3/1

USSR

UDC 51:155.001.57:518.9

IGNATENKO, Yu. G., LOVITSKIY, V. A.

"Modeling of the Process of Human Determination of the Value of Information"

Probl. Bioniki. Resp. Mezhved. Nauchno-tekhn. Sb. [Problems of Bionics, Republic Interdepartmental Scientific and Technical Collection], No 4, 1970, pp 60-70, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V658 by the authors).

Translation: Results are presented from experiments using determination of the value of information presented as a function of a number of factors. The data produced are compared with the results of human activity. The model was realized on a Ural-4 computer. 11 Biblio. Refs.

USSR

UDC 51:155.001.57:612.82

~~LOVITSKIY, V. A.~~

"Forgetting of Information"

Kibernet. i Vychisl. Tekhn. Resp. Mezhved. Sb. [Cybernetics and Computer Engineering, Republic Interdepartmental Collection], No 4, 1970, pp 73-79, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V669 by the author).

Translation: An algorithmic model of human memory is suggested, on the basis of which a certain phenomena, in particular the forgetting of information, are studied.

USSR

LOVITSKIY, V. A., MARCHENKO, Yu. S.

"System for Diagnosis and Prediction of Diseases Based on Pathology of the Human Gustatory Analyzer. Report II."

Probl. Bioniki. Resp. Mezhdved. Temat. Nauch.-Tekhn. Sb. [Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection], 1972, No 9, pp 52-61 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V716, by the authors).

Translation: A system for preliminary diagnosis of diseases based on data on gustatory analyzer pathology is run on the Ural-4 digital computer.

1/1

USSR

LOVITSKIY, V. A., MARCHENKO, Yu. S.

"System for Diagnosis and Prediction of Diseases Based on Pathology of the Human Gustatory Analyzer. Report I."

Probl. Bioniki. Resp. Mezhd. Temat. Nauch.-Tekhn. Sb. [Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection], 1972, No 9, pp 45-52 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V715, by the authors).

Translation: Data on disorders of the gustatory analyzer in various diseases are used as a basis for a system of preliminary diagnosis.

1/1

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USSR

UDC 51:155.001.57:612.82

IGNATENKO, Yu. G., LOVITSKIY, V. A.

"Algorithm of Learning of Model of Certain Processes in Verbal Memory System. 2."

Kibernet. i Vychisl. Tekhn. Resp. Mezhd. Sb. [Cybernetics and Computer Engineering, Republic Interdepartmental Collection], No 7, 1970, pp 35-37, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V671 by the authors).

Translation: For Part 1, see Abstract 6 V670. A program realization of the algorithm for learning the model of verbal memory developed earlier by the authors is presented, written in an associative programming language. Realization of the algorithm formulates the first level of the model, a system which classifies words in natural language.

LOVITSKIY, V.D.

SO: JPRS 54396
03 Nov 71

UDC 616.74-073.97

METHOD FOR PROCESSING MUSCLE BIOPOTENTIALS FOR INPUT INTO AN ELECTRONIC COMPUTER

Article by V. N. Zhishko, A. A. Ignatov, V. D. Lovitskiy, S. S. Shadrinskoy, Moscow, *Muscle Physiology/Electromyography* (Russian), Vol 5, No 4, 1971, submitted for publication 12 May 1970

Electromyography is one of the principal methods making it possible to investigate the process of muscle contraction in the intact body. Electromyography plays an important role in clinical medicine and in study of motor acts and fatigue in the physiology of work and sports. Investigations of muscle biopotentials are of great interest for drawing conclusions concerning the mechanisms of coordination of movements, especially in the man-machine system.

Due to the complexity in analyzing electromyograms (EMG) many physiologists and physiologists make extensive use of the illustrative-descriptive method. A distinguishing feature of this method is a verbal description of changes in the EMG without citing any quantitative (numerical data), usually with a demonstration of the corresponding oscillograms.

In addition to the illustrative-descriptive method, work has now been undertaken on a method for qualitative analysis of the EMG based on the assignment of the EMG to a certain type on the basis of their external appearance (Yu. S. Yusevich, 1958, 1963). Qualitative analysis of the EMG is of considerable diagnostic importance in clinical practice. However, a study of the fine dynamics of change in muscle biopotentials is possible only when using quantitative methods for their evaluation.

Methods for quantitative EMG analysis involve a mandatory conversion of one or more indices of the investigated process into digital form, that is, determination of the numerical value of this index. Several types of devices are now known for processing EMGs (N. G. Krol', S. P. Cutman; V. B. Bolodkov; Jacobson).

muscle physiology/electromyography

1/1

USSR

UDC 51:155.001.57:612.82

KOSHEL', G. D., LOVITSKIY, V. I.

"Algorithm of Learning of Model of Certain Processes in Verbal Memory System. 1."

Kibernet. i Vychisl. Tekhn. Resp. Mezhd. Sb. [Cybernetics and Computer Engineering, Republic Interdepartmental Collection], No 7, 1970, pp 52-54, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V670 by the authors).

Translation: A model is studied of certain processes in the verbal memory system, called EVIVS, and a description of the algorithm used to study this model is presented.

1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ROLE OF ASPARTIC ACID IN BIOSYNTHESIS OF NICOTIN AND ANABASINE -U-
AUTHOR--(03)--LOVKOVA, M.YA., ILIN, G.S., KLIMENTYEVA, N.I.
COUNTRY OF INFO--USSR
SOURCE--FIZIOLOGIYA RASTENIY, 1970, VOL 17, NR 2, PP 409-416
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BIOSYNTHESIS, PLANT PHYSIOLOGY, ASPARTIC ACID, ALKALOID,
PYRIDINE, PYRROLIDINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1982/1579 STEP NO--UR/0326/70/017/002/0409/0416
CIRC ACCESSION NO--AP0052781
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--A0052781

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR INVESTIGATION OF BIOSYNTHESIS OF NICOTIN AND ANABASINE C PRIME14-N PRIME15 ASPARTIC ACID WAS INTRODUCED INTO N. TABACUM SEEDLINGS AND N. GLAUCA SHOOTS AS PRECURSOR OF ALKALOIDS. AFTER TERMINATION OF THE EXPERIMENT NICOTIN AND ANABASINE PREPARATIONS WERE ISOLATED FROM THE PLANT MATERIAL AND THEIR OXIDATIVE DECOMPOSITION INTO NICOTINIC ACID WAS CARRIED OUT. IT IS SHOWN THAT ASPARTIC ACID IS A PRECURSOR OF NICOTIN AND ANABASINE BUT ITS ROLE IN BIOSYNTHESIS OF THESE ALKALOIDS IS NOT THE SAME. THUS, ON INCORPORATION INTO NICOTIN THE NITROGEN OF ASPARTIC ACID IS MAINLY USED FOR BIOSYNTHESIS OF THE PYRIDINE RING AND THE CARBON ATOMS PARTICIPATE IN FORMATION OF BOTH THE PYRIDINE AND PYRROLIDINE RINGS OF THE ALKALOID. ON THE CONTRARY, IN BIOSYNTHESIS OF ANABASINE, ASPARTIC ACID MAINLY PARTICIPATES IN FORMATION OF THE PIPERIDINE RING OF THE ALKALOID AND IS INCORPORATED INTO THE PYRIDINE HETEROCYCLE TO A MUCH SMALLER DEGREE. PATHS OF PARTICIPATION OF ASPARTIC ACID IN BIOSYNTHESIS OF NICOTIN AND ANABASINE ARE DISCUSSED.

UNCLASSIFIED

AA 0040693

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent,

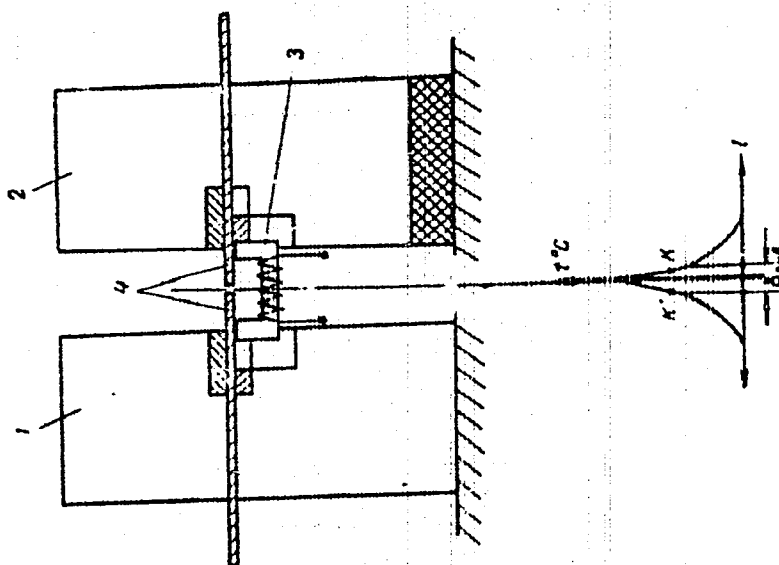
241567 CONTROLLING RESISTANCE BUTT WELDING USING
CURIE POINT where the ends of steel rods

4 (or strips) which are to be welded and a magnetic core 3 of a measuring coil form a magnetic circuit. As the welding current is switched on and the temperature of the steel rods increases above Curie point, the ferromagnetic properties of the steel are lost, which changes the electric conditions of the measuring coil. The measuring device is set to trigger a mechanism to force the ends of the rods together when the temperature above Curie (760 - 780°C) has spread within the limits of points K'K. This method ensures stable thermal conditions during resistance welding and thus improves the quality of the product. To reduce disturbance introduced by the welding current frequency, it must be ensured that the latter is below the frequency of the measuring signal.

22.1.68 as 121242L/25-27. A. D. LOVLYA et alia.
(4.9.69) Bul 14/18.4.69. Class 21h. Int. Cl. B 23k.

19750313

AA0040693



LD

19750314

AA0040693

AUTHORS: Lovlya, A. D.; Lozhkin, V. M.; Formakovskiy, M. Yu.;
Daragan, V. V.; and Koltzyrev, D. N.

19750315

9/3

USSR

UDU 621.365.16.019.3

LOVPACHE, K.YU., VARTANOVA, G.A., SHANIN, YU.N., SAKULIN, G.P.

"Study Of The Effect Of Prolonged Storage Under Conditions Of Higher Than Usual Humidity On The Vacuum In A M-Type Electron Device"

Elektron.tekhnika. Nauch.-tekhn.sb. Tekhnol. i organiz. proiz-va (Electronics Technology. Scientific-Technical Collection. Technology And Organization Of Production), 1971, Issue 3(43), pp 47-51 (from RZh--Elektronika i yeye primeneniye, No 11, Nov 1971, Abstract No 11A173)

Translation: Information is presented on the change of the overall pressure in M-Type metal-glass devices during storage under conditions of higher than usual humidity. The data were obtained by measurement of the current of the electron gas discharge in devices with an axial magnetic field. It is shown that a change of the vacuum takes place primarily because of an increase of the partial pressure of hydrogen, methane, and a mixture of carbon monoxide with nitrogen.
Summary.

1/1

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USSR

UDC 550.834.05

BALASHKAND, M. I., SHEVELEV, V. A., TETERIN, A. I., MIKHEYEVA, L. V.,
MAYOROV, V. V., LOVLYA, S. A., Ramenskoye Department of the All-Union
Scientific Research Institute of Geophysics

"A Gas Detonation Installation"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki,
No 2, Jan 73, Author's Certificate No 362131, Division G, filed 24 Aug 67,
published 13 Dec 72, p 74

Translation: This Author's Certificate introduces a gas detonation installation consisting of tanks with oxidizer and fuel, measuring vessels, a detonation head, an explosive chamber, an exhaust chamber, electromagnetic valves, tubing, pipelines, and a unit for controlling the electromagnetic valve system. As a distinguishing feature of the patent, the reliability of explosion cutoff is improved by making the explosive detonation head in the form of cavities separated by valves. One of the cavities is equipped with a device for igniting the gas mixture, and is connected to the explosion chamber by a channel with check valve.

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74

USSR

UDC 576.858.23.07+616.988.23-084.48

BAGDASAR'YAN, G. A. and LOVTSEVICH, Ye. L.

Indikatsiya i Inaktivatsiya Kishechnykh Virusov v Ob'yektakh Vneshney Sredy
(Detection and Inactivation of Enteroviruses in Environmental Objects), Moscow,
1972, 128 pp

Translation:

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G. A. Bagdasar'yan...

5

Detection of enteroviruses and their spread in water of
different degrees of pollution. G. A. Bagdasar'yan...

12

Survivability of enteroviruses in water of different degrees
of pollution. G. A. Bagdasar'yan...

25

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Effectiveness of methods of purifying drinking water of entero-
viruses. Ye. L. Lovtsevich...

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Effectiveness of methods of inactivating enteroviruses in
drinking water. Ye. L. Lovtsevich...

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1/2

USSR

BAGDASAR'YAN, G. A. and LOVTSEVICH, Ye. L., Indikatsiya i Inaktivatsiya
Kishechnykh Virusov v Ob'yektakh Vneshney Sredy, 1972, 128 pp

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CHAPTER 4. Detection and Inactivation of Enteroviruses in Everyday Objects. Ye. L. Lovtsevich...	103
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- 90 -

LOVTSEVICH, Ye. L.

JPRS 55320
1 Mar 72

UDC: 616.9-078

SANITARY MICROBIOLOGICAL RESEARCH DEALING WITH PREVENTION OF BACTERIAL AND VIRAL INFECTIONS

Article by L.Ye. Korsh, G.A. Baidar'yan, V.V. Vladavets, Yu.G. Tsilyayeva, Ye. L. Lovtsevich, T.I. Akhmedov, E.A. Melnikova (Moscow); Moscow, VESTNIK ZDORAVIYA (MEDITSINSKIY BULV. 55B), Russian, No 1, 1972, pp 71-78

One of the decisive factors in nonspecific prophylaxis of bacterial and viral infections is institution of health improving hygienic measures. Prompt development of first and foremost sanitary measures is determined largely by the results of systematic sanitary microbiological investigations of environmental objects (water, air in buildings, soil).

Sanitary microbiology, which has been studying the quality of drinking water and sanitary state of reservoirs, soil, and air, jointly with hygienists, have developed sensitive methods and accumulated extensive experimental and factual data, which permitted recommendation of norms that are used in routine sanitary practice to regulate the quality of water.

From the standpoint of prophylaxis of intestinal infections, improvement of routine methods of rating the quality of water and sanitary condition of reservoirs with respect to bacterial contamination is becoming very important. One of the directions of work in this area is evaluation of the existing microbiological approaches to isolation of the E. coli group of bacteria as indicators of the degree of fecal pollution of water. For this purpose, the sanitary significance of bacteria included in the E. coli group was investigated, on the basis of fermentation of glucose at 43°, according to GOST (All-Union State Standard) 5216-50, for several years in different climatic zones of the nation, in reservoirs of different types and with different degrees of pollution. It was established that the glucose temperature test does not permit precise differentiation between bacteria that are predominant from the sanitary point of view and E. coli that have lost this property and water bacteria. This was confirmed not only for the reservoirs in the South but also in the temperate zone. The quality of water in reservoirs, with respect to fecal contamination, is best characterized by lactose-fermenting variants of Enterobacteriaceae, studied on lactose media at a temperature of 37° and demonstrated best by the method of membrane filters (L.Ye.

USSR

UDC 669.71.051

LOVTSOV, D. P., ABRAMOV, A. A.

"Study of Metal and Alloy Density in the Liquid State"

Usadochn. protessy v splavakh i otlivkakh -- V sb. (Shrinkage Processes in Alloys and Castings -- collection of works), Kiev, Naukova Dumka Press, 1970, pp 159-160 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G115)

Translation: Methods of analyzing the density of liquid steel by hydrostatic suspension in a salt melt with known density and tapping a fixed volume in a permanent mold having the same temperature as the liquid melt were tested. It was established that for aluminum and its alloys at temperatures of 650-800° after introduction of the alkali metal the density first drops and then increases. The effects obtained are connected with the behavior of the gases in the melt.

1/1

USSR

LOVTSOV, V. V., RIVKIN, L. A., POTEKHIN, B. I., ANDRIYANOV, A. M.

"New Air Distributors with Twisted Supply Streams"

Naladka i Proyektir. Sistem Prom. Ventilyatsii i Konditsionir. Vozdukh [Adjustment and Planning of Commercial Ventilation and Air Conditioning Systems -- Collection of Works], Moscow, 1971, pp 10-21, (Translated from Referativnyy Zhurnal, Mekhanika, No 4, 1972, Abstract No 4 B509 by A. S. Malyutin).

Translation: New air distributors have been created, distinguished by great damping of relative velocities and temperatures, as well as simplicity of design: an input pipe, a wall ejection air distributor, a floor ejection air distributor. Comparative are presented on the air distributors with similar devices created earlier, showing that when the new air distributors are used, the quantitative loads can be increased and the working temperature difference can be up to 50°. The air distributors suggested allow the quantity of supply air to be changed between 10 and 150% of the nominal quantity without reducing the quality of air distribution.

1/1

- 109 -

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DEHYDRATION OF CYCLOPENTANECARBINOL,1, PRIME13 C --U--

AUTHOR--(05)--LOVTSOVA, A.N., REUTOV, O.A., LIPPMAA, E., PEHK, T., SHATKINA,
T.N.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 726

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--DEHYDRATION, CYCLOPENTANE, CARBON ISOTOPE, METHYLENE,
CYCLOHEXENE, CHEMICAL REACTION MECHANISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1885

STEP NO--UR/0062/70/000/003/0725/0726

CIRC ACCESSION NO--AP0123673

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123673

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEHYDRATION OF CYCLOPENTYL CARBINOL TAGGED WITH PRIME 13 C AT THE METHYLENE GROUP, BY HEATING TO 340 DEGREES WITH H SUB 3 BO SUB 3, GAVE MIXED OLEFINS CONTG. 70 PERCENT CYCLOHEXENE, 14 PERCENT 1, METHYLCYCLOPENTENE, 12 PERCENT METHYLENE CYCLOPENTANE AND 4 PERCENT UNIDENTIFIED MATERIAL. THE CYCLOHEXENE COMPONENT CARRIED THE TAGGED ATOM TO THE EXTENT OF 8 PERCENT IN THE 4, AND 5, POSITIONS, INDICATING THAT THE INITIALLY FORMED CYCLOHEXENE IS ISOMERIZED TO SOME 30-5 PERCENT. THE DEHYDRATION MECHANISM IS DISCUSSED. FACILITY: INST. ELEMENTORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC:

LOVYAGIN, A. S.

"Effect of the Random Shifts in Central Frequency on the Spectrum of a Quasiperiodic Pulse Sequence"

Kiev, Akustika i Ul'trazvukovaya Tekhnika, No 5, 1970, pp 71-73

Abstract: The author studies the effect of the discrete frequency fluctuation in the sinusoidal duty cycle of a pulse sequence. An expression for the signal spectrum is obtained by means of the modulating function spectrum, for instance, of small fluctuations. The results of the work can be used for calculating the spectra of pulse-modulated ultrasonic signals. Original article: one figure, seven formulas, and one bibliographic entry.

1/1

1/2 035

UNCLASSIFIED

PROCESSING DATE--11SEP70

TITLE--ONE MORE 'ORBITA' -U-

AUTHOR--LOVYAGIN, F. L

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, PRAVDA, 18 MARCH 1970, P 6

DATE PUBLISHED--18MAR70

SUBJECT AREAS--NAVIGATION, SPACE TECHNOLOGY

TOPIC TAGS--GROUND TV RECEIVER, STATION, GROUND COMMUNICATION EQUIPMENT,
COMMUNICATION SATELLITE, COMMUNICATION NETWORK/(U)ORBITA STATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1989/1584

STEP NO--UR/9012/70/000/000/0006/0006

CIRC ACCESSION NO--AN0108004

????????????

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AN0108004

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN "AN-12" AIRCRAFT HAS DELIVERED EQUIPMENT TO THE CHUKOTSK VILLAGE OF BILIBINO WHICH WILL BE USED IN THE CONSTRUCTION HERE OF AN "ORBITA" TELEVISION STATION. SOON TENS OF THOUSANDS MORE NORTHERNERS WILL BE ABLE TO WATCH TELEVISION BROADCASTS FROM MOSCOW. TELEVISION SCREENS WILL GLOW IN THE HOMES OF MINERS, CONSTRUCTION WORKERS, REINDEER BREEDERS AND HUNTERS. AT THE PRESENT TIME APPROXIMATELY EVERY THIRD INHABITANT OF THE KOLYMA AND CHUKOTSK AREA IS A TELEVISION VIEWER. (4).

ZZZZZZZZZZZZ

UNCLASSIFIED

LOVYAGIN, R. N.

SPRS 58008
672

XVI-7. GROWTH REQUIREMENTS AND THE FORMATION OF DEFECTS IN THIN EPITAXIAL SILICON FILMS BY THE ION DEPOSITION METHOD

Article by V. P. Tchelakov, E. N. Lovyagin, A. I. Toronov, Ye. A. Klyuchukov, L. A. Alasandrov, S. I. Gopin, Novolitskiy, Ivanchikov, Ili Skopitsin, Professor P. A. Stetsko, Polymoskovskiy, Kiselev, J. P. Zhuk, Moscow, U.S.S.R., 1-17 June 1974, p. 2651

The methods of nitryl resolving, replica and electron microscopy by transmission electron microscopy were used to study the surface structure of silicon in the presence of thermal etching of it in an ultra high vacuum and the growth mechanism of the epitaxial film. It is demonstrated that after etching, macro- and microcracks are formed on the substrate surface. During the film growth process, shifting of these stages is observed.

A study was made of the types of defects and their distribution in the film with respect to thickness. The interrelation was established between the configuration of the developed growth surface and the location of the defects formed. On the growth surface reactions take place which lead to the appearance of coherent interstitial separations with increased carbon concentration and subsequent conversion of them into epitaxial layers of silicon carbide.

Quantitative estimates were made of the epitaxial growth parameters and the elastic strains arising during transformation of the coherent separations into carbide particles.

1/2 027 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--EPITAXY OF SILICON DURING CATHODIC SPUTTERING -U-

AUTHOR--(04)--ALEKSANDROV, L.N., LOVYAGIN, R.N., KRIVDROTOV, YE.A.,
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COUNTRY OF INFO--USSR

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SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--CATHODE SPUTTERING, SILICON, EPITAXIAL GROWTH, SINGLE CRYSTAL
FILM, MAGNETIC FIELD PLASMA EFFECT

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PROCESSING DATE--18SEP70

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PREPN. OF EPITAXIAL THIN FILM LAYERS OF SI ON THE SINGLE CRYST. SI BEARING PLATE (18 TIMES 5 TIMES 1 MM) WITH SURFACE ORIENTATION (111) BY THE METHOD OF CATHODIC SPUTTERING (USING A LOW VOLTAGE ARC WITH MAGNETICAL PLASMA FOCUSING) IN AR AT 1-2 TIMES 10 NEGATIVE PRIME3 TORR WAS STUDIED. THE RELATION BETWEEN FLOW STRENGTH OF SPUTTERING, TEMP. OF THE BEARING PLATE, AND STRUCTURE OF SI FILMS DETD. BY ELECTRON DIFFRACTION IS PRESENTED. FOR 1800 V AND C.D.1.2 MA-CM PRIME2, THE LAYERS OBTAINED AT ROOM TEMP. ON BEARING PLATE ARE AMORPHOUS, AT 250DEGREES (GRAIN 60-80 ANGSTROM) THEY ARE POLYCRYST., AT 450DEGREES THERE IS A MAIN ORIENTATION. AT 750DEGREES A SYSTEM OF SPOTS CONSIDERABLY DOUBLED WAS OBSD. ON THE ELECTRON PATTERNS, EPITAXIAL LAYERS ORIENTED ALONG (111) FORMED AT 800DEGREES. AT 850DEGREES AN ENTIRE SINGLE CRYSTAL FILM FORMS. ANALOGOUS DEPENDENCE WAS OBSD. AT THE HIGHER C.D. (TO 2.4), BUT THERE ARE SOME DIFFERENCES. DEFECT SINGLE CRYSTAL FILMS ARE FORMED AT 800DEGREES UNDER THESE CONDITIONS. THIS DEFECT OF EPITAXIAL FILMS DECREASES WHEN THE TEMP. INCREASES TO 850DEGREES. A PERFECT SINGLE CRYSTAL STRUCTURE WAS OBSERVED AT 900DEGREES. THE VALUE OF OUT OF FLATNESS IS MAX. 150 ANGSTROM.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ULTRASONIC DEFECTOSCOPY OF GRILLED TUBES -U-

AUTHOR--(05)-PRONYAKIN, V.T., ANIKEYEV, YA.F., GORSHKOV, A.V., LOVYAKIN,
YE.H., NEMIROVSKIY, M.G.
COUNTRY OF INFO--USSR

SOURCE--SVERDLOVSK, DEFEKTOSKOPIYA, NO. 1, 1970, PP 16-19

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SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., METHODS AND EQUIPMENT,
MATERIALS
TOPIC TAGS--NONDESTRUCTIVE TEST, QUALITY CONTROL, ULTRASONIC INSPECTION,
CERAMIC MATERIAL, PIEZOELECTRIC MATERIAL/(U)TSTS19 CERAMIC

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PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0100670

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ALTHOUGH MANY DEFECTOSCOPIC DEVICES HAVE BEEN SUCCESSFULLY USED FOR QUALITY CONTROL OF THIN WALLED TUBES, THEIR USE FOR THE CONTROL OF GRILLED TUBES IS IMPOSSIBLE BECAUSE OF THE INTERFERING PULSES REFLECTED FROM THE RIBS OF THE TUBE. EXPERIMENTAL STUDY OF HOW THE AMPLITUDES OF THE TRANSMITTED AND REFLECTED ULTRASONIC PULSES ARE AFFECTED BY THE RIBBED SECTION OF THE TUBE HAS SHOWN THAT A DIFFERENCE IN THE INTERFERENCE EFFECTS OF THE TRANSMITTED AND REFLECTED SIGNALS IS OBSERVED DEPENDING ON THE SHAPE OF THE RIBBING. AS A RESULT, THIS FACTOR PREDETERMINES THE CHOICE OF CONTROL METHOD. THIS PAPER DESCRIBES EXPERIMENTS OF DEFECTOSCOPIC CONTROL OF THIS TUBING TYPE USING PIEZOELECTRIC ELEMENTS MADE OF THE TSTS-19 CERAMIC WITH RESONANT FREQUENCIES FROM 2 TO 5.25 MHz. IT WAS FOUND THAT DEFECTS WITH A DEPTH OF MORE THAN 25 MICRONS ON THE INNER SURFACE OF THE TUBES UNDER THE RIBBING WERE RELIABLY RECORDED; SENSITIVITY TO DEFECTS ON THE OUTER SURFACE WAS MUCH LOWER, WITH A DEPTH THRESHOLD OF 60 MICRONS. THE AUTHORS EXPRESS THEIR GRATITUDE TO P. I. VIT'KO, WHO ASSISTED IN THE EXPERIMENTS.

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USSR

UDC 632.9546.631.472

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"Detoxification and Removal of the Herbicide SKHIB in the Soil"

Moscow, Khimiya v Sel'skom Khozyzystve, No 7, Vol 11, 1973, pp 65-67

Abstract: In field experiments the herbicide SKHIB (5-chloro-N-isopropenyl-benzimidazolone) was effective against annual weeds when applied to cotton fields prior to the germination of the cotton seeds. The time required for the deactivation of SKHIB is 2 to 5 months. During fixation in the soil and during its application in higher doses, its toxicity increases. A high water content of the soil accelerates the deactivation of the herbicide being almost completely deactivated after 8 weeks. Dose of 5 and 10 kg/hectare on soils containing a normal humidity were deactivated in 18 and 22 weeks respectively. Deactivation was determined by a biological method. The herbicide is only weakly leached from the soil. The major part remains in the surface layer.

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USSR

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UMAROV, A. A., ROZHKOVA, N. K., IMAMALIYEVA, A. I., ZAKIROV, T. S., LOY, N. P., MIRAKHDAROV, KH., Institute of Chemistry of Plant Substances, Academy of Sciences of the Uzbek SSR

"A Defoliant"

USSR Author's Certificate No 325967, filed 23 Sep 70, published 25 Feb 72 (from RZh-Khimiya, No 22, Nov 72, Abstract No 22N479 P)

Translation: A defoliant is proposed which contains K_2CO_3 . The herbicide is distinguished by the fact that the severity of its effect is reduced by using 2-butylthiobenzothiazole (butylcaptax). The K_2CO_3 and butylcaptax are taken in a ratio of 1:1 or 2:1. The proposed mixture is tested for defoliating the thin-fiber grade of cotton plant. Application is done in the phase when 4-5 bolls have opened. On the 12-th day, leaf fall-off reached 82.5-93.7%; dry leaf content was 1.8%. T. A. Belyayeva.

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USSR

UDC: 669.721.042.62

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ARUSOO, A. K., KARRO, Kh. Kh., LAUGIS, Yu. Ya., LOOTUS, Ya. K., LOYGOM, V. V.,
SAKKOS, Kh. A., TIYSMUS, Kh. A.

"MHD Drives for Pumping of Liquid Magnesium"

MGD v Metallurgii i Liteyn. Proiz-ve [MHD in Metallurgy and Foundry Production -- Collection of Works], Kiev, 1972, pp 126-130 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G202, by G. Svodtseva).

Translation: The Tallin Polytechnical Institute has developed and introduced to metallurgical production several induction MHD drives for feeding liquid Mg from a continuous refining furnace to a casting conveyor. The basic technical data are presented on the MHD drives and a schematic diagram of the power portions is presented. The drives operate under manual control. During tapping, the static head and hydraulic resistance are increased. This means that conservation of constant productivity requires that the supply voltage be increased by 1.2-1.8 times. The channel of the pump is replaced every three to five days. A diagram of the activity of the MHD drive under manual control is presented.

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USSR

UDC 669.018.5:620.181:538.21

DOVGALEVSKIY, Ya. M., VLASKINA, K. I., LOYKO, A. D., and POZROVSKIY, Yu. I.,
Saratov Institute of the Mechanization of Agriculture

"Study of the Influence of $\alpha\gamma$ -Phase in Magnico-type Magnetic Solid Alloys on
the Decrease of Brittleness"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 5,
1973, pp 123-127

Abstract: The increased tendency to brittle failure of magnico-type magnetic
solid cast alloys on a Fe-Ni-Al-Co base was investigated on specimens of
ANKo⁴ alloy. The specimens were smelted down in a high-frequency furnace with
quartzite lining and were then ground up to 10 x 10 x 55 mm. Fractures of
Magnico alloys in a highly coercive condition and with $\alpha\gamma$ -phase separations
were studied by means of fractional photography. The presence of $\alpha\gamma$ -phase
separations results primarily in the appearance of transcrystalline fracture.
Three figures, one table, five bibliographic references.

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USSR

SUYETIN, P. YE., LOYKO, A. E., KALININ, B. A., and GERASIMOV, YU. F.

"Measuring the Interdiffusion Coefficients of Gases at Low Temperatures"

Minsk, Inzhenerno-Fizicheskiy Zhurnal, Vol 19, No 5, Nov 70, pp 933-935

Abstract: The authors measured the interdiffusion coefficients of eight pairs of gases: H_2 -He, H_2 - D_2 , H_2 -Ne, H_2 -Ar, He-Ne, He-Ar, D_2 -Ne, Ne-Ar in the temperature range of 115-296° K. Included in the article is a drawing of the arrangement used in the research, the diffusion chamber of which was cooled with liquid nitrogen. The temperature was maintained within +0.3° C and the temperature differential along the length of the chamber did not exceed 0.3° C. The samples were checked periodically from the chamber. The authors introduced corrections in their computations for the heat expansion of the diffusion chambers and capillaries, but none for the thermal diffusion (< 0.1%). The measurements were accurate within 1.5% and were determined mainly by the accuracy of measuring the concentration. The diffusion coefficients of the eight pairs of gases were measured in the above range and the data from the pairs He-Ar, He-Ne and Ne-Ar were found to be in good agreement with other data; the temperature dependence of the interdiffusion coefficients of the gases at low temperatures was found for the first time for the pairs

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