PIMENOV, V.P., kandidat tekhnicheskikh nauk; POSSE, A.V., kandidat tekhnicheskikh nauk.

Overturn of inverters. Elektrichestvo no.6:65-70 Je '56. (MIRA 9:9)

1.Nauchno-issledovatel'skiy institut posteyannogo toka Ministerstva elektrostantsii.
(Electric current converters)

TIMENCV.V.

6

621.315.051.034

D.C. POWER TRANSMISSION SCHEME: STALINGRAD-DONBASS. V.F. Pimenov, A.V. Posse, A.M. Reiser, [illegible] and V.[illegible]. Elektr. Stantsii, 1956, No. 11, 12-16. In Russian.

Describes the 800 kV d.c. scheme for transmission of 750 MW over 470 km, giving details of the converter connections: 8 converter groups of 100-120 kV each, with 2 valves per branch in series with the three-phase bridge circuits and two valves in series as bypass for each of these groups. Insulation with respect to earth is suggested by mounting valve groups on suitably insulated platforms. A photograph of a valve and plans of the converter house and the outdoor plant are given. Static capacitors are to be used in addition to three 37.5 MVAr synchronous condensers. The single-circuit overhead line has twin steel-cored Al conductors, (712 mm² Al plus 93 mm² steel), 400 mm spaced, with steel earth-wire (70 mm²). A sketch of a flexible support is given. Material requirement for the line is tabulated. The cost of the d.c. scheme is slightly higher than for 400 kV a.c., but it was adopted in order to gain experience before embarking on 1000-2000 km schemes.

F. Buseman

NEYMAN, L.R.; TOLSTOV, Yu.G., doktor tekhn. nauk; PIMENOV, V.P., kand. tekhn. nauk; POSSE, A.V., kand. tekhn. nauk; SAKOVICH, A.A., kand. tekhn. nauk; BUTAYEV, F.I., kand. tekhn. nauk; MEL'GUNOV, N.M., inzh.; SOMIN, M.R., inzh.

[Long-distance high-voltage direct-current transmission] Peredacha energii postoiannogo toka vysokogo napriazheniia na dal'nie rasstoianiia. Pod red. L.R. Neimana. Moskva, 1958. 64 p. (MIRA 11:10)

1. Russia (1923- U.S.S.R.) Sovet Ministrov. Gosudarstvennyy nauchno-tekhnicheskiy komitet. 2. Chlen-korrespondent Akademii nauk SSSR (for Neyman).
(Electric power distribution)

PIMENOV, V.I.; [illegible]

Compressor [illegible]

PIMENOV, V. S.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 640 - I

BOOK Call No.: AF369704

Author: PIMENOV, V. S.
Full Title: AVIATION ENGINE
Transliterated Title: Aviatsionnyy dvigatel'

PUBLISHING DATA

Originating Agency: DOSAV (All-Union Voluntary Society for the Promotion of Aviation)
Publishing House: Publishing House of the DOSARM (All-Union Voluntary Society for the Promotion of the Army)
Date: 1951 No. pp.: 84 No. of copies: Not given
Editorial Staff: Not given

PURPOSE: A popular booklet for all seeking general information on aviation power plants and their components.

TEXT DATA

Coverage: This booklet gives general information on aviation piston and jet engines. The following matters are discussed: the development of aircraft engines, engines in modern aircraft, principal components, operation, propellers, jet engines, designers of Soviet aircraft engines, perspectives of future development and use of reciprocating and jet engines.
No. of References: None
Facilities: Names of all principal designers and engine types are mentioned in the text.

1/1

PIMENOV, V.V., nauchn. sotr.; TAROYEVA, [illegible]; KEL'SEYEVA, Z.N., nauchn. [illegible]

[illegible]

[illegible]

[illegible]

PIMENOV, Vladimir Vladimirovich; SHEKHTER, D.I., red.; PETROVA, O.B., tekhn.red.

[Pudozh; a study on the city and district] Pudozh; ocherk o gorode i raione. Petrozavodsk, Gos.izd-vo Karel'skoi ASSR, 1957. 30 p. (MIRA 12:11)
(Pudozh District--Economic conditions)

ACC NR: AP7009069 (N) SOURCE CODE: UR/0413/67/000/003/0043/0043

INVENTOR: Zaytsev, V. G.; Tarilov, V. N.; Pimenov, Yu. A.

ORG: None

TITLE: A measurement probe. Class 21, No. 190956

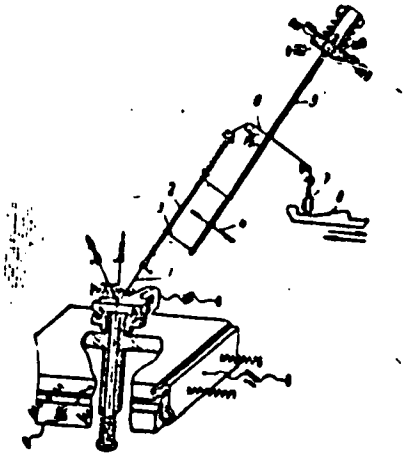
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1967, 43

TOPIC TAGS: electronic measurement, electric measuring instrument

ABSTRACT: This Author's Certificate introduces a measurement probe made in the form of a spring-loaded needle feeler equipped with a feed mechanism for putting the feeler in contact with the element to be measured, e. g. solid circuit contact areas. To improve accuracy in locating the feeler, the feed mechanism is equipped with a holder which is connected by flat springs to a bar suspended on a diaphragm, and simultaneously coupled through a flexible cable to a spring-loaded rod resting against a slider which controls longitudinal motion of the feeler.

Card 1/2 UDC: 621.317.729.2

ACC NR: AP7009069



1—feeler; 2—holder; 3—flat springs; 4—diaphragm; 5—bar; 6—flexible cable; 7—rod; 8—slider

SUB CODE: 14, 09/ SUBM DATE: 06Dec65

Card 2/2

L 1364-66 EWT(m)/EPF(c)/EWP(j)/EWA(c) RPL WW/RM

ACCESSION NR: AP5020834 UR/0020/65/163/004/0935/0938

AUTHOR: Pimenov, Yu. D.; Kholmogorov, V. Ye.; Terenin, A. N. (Academician)

TITLE: Spectral detection of molecular anion radicals during adsorption of vapors of electron acceptor molecules on oxides

SOURCE: AN SSSR. Doklady, v. 163, no. 4, 1965, 935-938

TOPIC TAGS: spectrometry, absorption spectrum, anion, EPR spectrum, electrochemistry, electron acceptor

ABSTRACT: The absorption and EPR spectra were obtained for several electron acceptor molecules adsorbed on ZnO, TiO_2 and MgO to determine whether molecular anion radicals were formed. Vapors of p-benzoquinone, fluoranil, chloranil, bromanil, trinitrobenzene and tetracyanoethylene were admitted for adsorption onto samples of the oxides under 10^{-5} mm Hg vacuum. The benzoquinone and chloranil anion radicals were identified from their absorption maxima in the 450 millimicron region and from the accompanying EPR signals. Absorption

Card 1/2

L 1364-66

ACCESSION NR: AP5020834

2

bands of the anion semiquinones shifted toward the long wave as the affinity of the molecules for electrons increased. The broad absorption bands in the 500-700 millimicron region intensified with increased surface concentration and were accompanied by broadened and intensified EPR signals. They were attributed either to the transfer of charge in binary associations formed from anion radicals and neutral quinone molecules or to dimers of two anion radicals having no paramagnetism. The spectra for tetracyanoethylene were interpreted to be analgous to those of the quinones. The spectra of trinitrobenzene indicated reaction of the unpaired electron with the nucleus of the nitrogen atom of the nitro group, and the broad band was ascribed to intermolecular charge transfer. Orig. art. has: 4 figures and 1 table

ASSOCIATION: None

SUBMITTED: 22Mar65 ENCL: 00 SUB CODE: OP, MP

NR REF SOV: 004 OTHER: 015

dg

Card2/2

PIMENOV, Yuriy Ivanovich; TSYRLIN, I.I., red.; SIDOROVA, A.A., tekhn. red.

[In the region around Moscow] V Podmoskov'e. Moskva, Gos. izd-vo "Iskusstvo," 1958. 82 p. (MIRA 11:10)
(Moscow Province--Description and travel)

S/109/61/006/05/025/027
D201/D303

9,2572

AUTHORS: Karlov, N.V., Pimenov, Yu.P., and Prokhorov, A.M.

TITLE: A 10 cm frequency band paramagnetic amplifier utilizing Fe^{3+} ions in corundum

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 5, 1961, 846

TEXT: It has been recently shown by experiment that the Fe^{3+} ions in corundum can be utilized in paramagnetic amplifiers in the 3 cm band of frequencies (Ref. 1: L.S. Korniyenko, A.M. Prokhorov, ZhETF, 1959, 36, 919) and (Ref. 2: J.E. King, K.W. Iernune, J. Appl. Phys. 1959, 30, 1844). It would be of interest to show that this material could be used for building a РПУ (RPU) in the 10 cm frequency band. For this application several levels of the Fe^{3+} ion could be used. The authors studied experimentally one level only, for which they used the resonant system of the paramagnetic amplifier already in hand. The trigonal axis of the crystallic

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22278

A 10 cm frequency band ... S/109/61/006/005/025/027
D201/D303

electric field was perpendicular to the external magnetic field. In this case the energy levels of two non-equivalent systems of Fe^{3+} ions coincide. The transition between lower levels was used for amplification. These levels for parallel orientation could be characterized by quantum numbers $M = \pm 1/2$. As the subsidiary transition $-1/2 \longleftrightarrow -3/2$ was used. The frequency of the subsidiary radiation was $\sim$14,000 mc/s. In the resonator used the high frequency magnetic field of the signal was perpendicular to the external magnetic field and to the trigonal axis of the crystal. Amplification and generation was observed at 2°K. The magnitude of the constant magnetic field was about 380 oersted. The small value of the gain-band width product in this case was mainly due to the fact that the sample of the corundum in hand had too small a number of iron ions. It could be inferred from these preliminary experiments that, as it seems, corundum with Fe^{3+} is a material suitable for making a paramagnetic amplifier in the decimetric frequency band. There are 2 references: 1 Soviet-bloc and 1 non-Soviet

Card 2/3

A 10 cm frequency band ... S/109/61/006/005/025/027
D201/D303

bloc. The reference to the English-language publication reads as follows: J.E. King, R.W. Terhune, J. Appl. Physics, 1959, 30, 1844. [Abstractor's note: This is essentially a complete translation].

SUBMITTED: September 26, 1960

Card 3/3

21656

9.2570 ([redacted]2903)

S/109/61/006/003/011/018
E140/E135

AUTHORS: Karlov, N.V., Pimenov, Yu.P., and Prokhorov, A.M.

TITLE: Saturation and Recovery Time of Paramagnetic Amplifiers

PERIODICAL: Radiotekhnika i elektronika, 1961, Vol.6, No.3, pp. 410-415

TEXT: The purpose of this article is to determine the dependence of gain factor on signal power, recovery time after saturation, in dependence on gain factor, and methods of shortening the latter in a three-level amplifier with signal transition between levels 1 and 2 and pumping transition between level 1 and 3. Under the effect of strong signals the gain decreases because of changes in the populations N_2 and N_1. This effect is studied in resonator and travelling-wave paramagnetic amplifiers. The analysis leads to the conclusion that for any given amplifier the dynamic characteristics can be improved only by reducing the relaxation time. Comparing the resonator and travelling-wave amplifiers, the authors' calculations show that the latter are somewhat less susceptible to saturation (Fig.1) where the broken

Card 1/3

21656

S/109/61/006/003/011/018
E140/E135

Saturation and Recovery Time of Paramagnetic Amplifiers

lines correspond to the travelling-wave case, the solid line to the resonator case. Improvements in relaxation time may be obtained by increasing the operating temperature, which it is claimed has other beneficial effects, such as increase in the energy density of the pumping field and increase in magnetic quality. A second possibility is the addition of paramagnetic impurities which should reduce the "vacant" transition 2 - 3. Certain other advantages of this procedure have been considered in the literature (H.E.D. Scovil and G. Feher, Phys.Rev., 1957, 105, 762, Ref.5; and E.O. Schulz-Du Bois, H.E.D. Scovil and R.W. De Grasse, Bell System Techn. J., 1959, 38, 335, Ref.6). Analysis shows that reduction of the relaxation time by increasing only a single relaxation probability permits obtaining the maximum number of active molecules, and with lower pumping field radiation, to improve the amplitude and relaxation characteristics of the paramagnetic amplifier.
There are 2 figures and 6 references: 2 Soviet and 4 English.

Card 2/3

21656
S/109/61/006/003/011/018
E140/E135

Saturation and Recovery Time ....

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Physics Institute imeni P.N. Lebedev, AS USSR)

SUBMITTED: April 7, 1960

Fig. 1

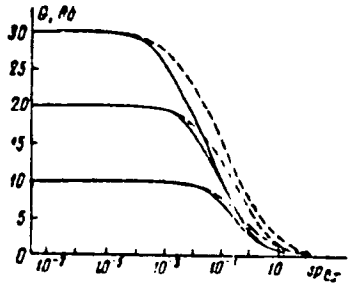

Рис. 1

Card 3/3

21657

9.2570 (also 2503, 2603, 2903)

S/109/61/006/003/012/018
E140/E135

AUTHORS: Karlov, N.V., Pimenov, Yu.P., and Prokhorov, A.M.

TITLE: The Sensitivity of Radio Receivers With Paramagnetic Amplifiers

PERIODICAL: Radiotekhnika i elektronika, 1961, Vol.6, No.3, pp. 416-421

TEXT: In view of the low intrinsic noise of paramagnetic amplifiers it is useful to examine the possible gain in sensitivity for equipment employing them. Here distinction must be made between the reception of regular, practically monochromatic signals, and the reception of noise signals. The present calculations take this distinction into account. For the case of regular signal reception the use of the paramagnetic amplifier sharply improves the sensitivity, for specific numerical values considered by the author, up to factors of 40-80. In the case of noise receivers it is found that resonator type paramagnetic amplifiers are useful if the gain bandwidth factor is not less than that of the radiometer in the absence of the paramagnetic amplifier. At the same time resonator type paramagnetic amplifiers

Card 1/2

21657

S/109/61/006/003/012/018
E140/E135

The Sensitivity of Radio Receivers With Paramagnetic Amplifiers

with gain above 20 dB do not operate sufficiently stably. The travelling-wave type paramagnetic amplifier, not as effective at gains equal to 10 dB, gives theoretically better results above 20 dB, but also exhibits instabilities at the higher gain. There are 2 figures and 4 references: 3 Soviet and 1 English.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Physics Institute imeni P.N. Lebedev, AS USSR)

SUBMITTED: April 7, 1960

Card 2/2

L 15701-63 EWA(k)/EWT(1)/EWP(q)/EWT(m)/BDS/T-2/3W2/EEC(b)-2/ES(t)-2
AFFTC/ASD/ESD-3/RADC/APGC IJP(C)/AM/MG/JD/JHB/KH
ACCESSION NR: AP3006473 S/0109/63/008/009/1642/1643

78
75

AUTHOR: Pimenov, Yu. P.; Prokhorov, A. M.

TITLE: Quantum paramagnetic amplifier based on Cr^{3+} ions in the rutile lattice

SOURCE: Radiotekhnika i elektronika, v. 8, no. 9, 1963, 1642-1643

TOPIC TAGS: quantum paramagnetic amplifier, paramagnetic amplifier, quantum amplifier, Cr^{3+} ion, ion, rutile, titanium dioxide, amplifier

ABSTRACT: Single-crystal rutile (TiO_2) with a 0.1% admixture of paramagnetic Cr^{3+} ions was employed in a cavity-tuned amplifier operating on the 10-cm wavelength at a temperature of 4.2K. The trigonal axis of the crystal was parallel to the static magnetic field, so that the energy levels of two nonequivalent Cr^{3+} ion systems coincided. The static magnetic field was formed by an electromagnet using a superconductive niobium winding. A junction with magnetic quantum numbers $M = \pm 1/2$ was used between the lower layers for amplification. In the cavity the $h\bar{f}$ magnetic field of the signal was perpendicular to the external magnetic field and to the trigonal crystal axis. With an amplifier voltage gain of 19 db, the recovery time for the gain to settle at the 16-db

Card 1/2

L 15701-63
ACCESSION NR: AP3006473

level following the removal of the saturating signal was 1.2 msec. Spin-lattice relaxation time was measured by the pulse saturation of the line of the paramagnetic resonance junction used for signal amplification. The saturation pulses had a duration of 1 msec at a repetition rate of 200 cps. The relaxation curve is described by one exponential. Spin-lattice relaxation time is 0.5 msec. "The authors thank R. P. Bashuk and A. S. Bebchuk for the production of single-crystal rutile, and A. A. Manenkov for his assistance in the work." Orig. art. has: 1 formula.

ASSOCIATION: none

SUBMITTED: 16Jan63 DATE ACQ: 30Sep63 ENCL: 00

SUB CODE: SD, GE NO REF SOV: 002 OTHER: 000

Card 2/2

PIMENOV, Yu.P.; PROKHOROV, A.M.

Quantum paramagnetic amplifier with Cr^{3+} ion in a rutile grid.
Radiotekh. i elektron. 8 no.9:1642-1643 S '63. (MIRA 16:9)
(Masers)

L 24702-65 EWP(m)/EWT(m)/EWA(h) WH

ACCESSION NR: AP5001825 S/0056/64/047/006/2055/2063

AUTHOR: Manenkov, A. A.; Martirosyan, R. M.; Pimenov, Yu. P.; Prokhorov, A. M.; Sychugov, V. A.

TITLE: Transient processes in three-level radio-frequency masers

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 6, 1964, 2055-2063

TOPIC TAGS: maser, three level maser, ruby maser, transient state maser, maser transient effect, paramagnetic maser, rutile maser

ABSTRACT: An investigation is made of transient processes in rf three-level paramagnetic masers. The investigation to a certain extent is also applicable to the optical range. The active substances used were ruby and rutile (TiO_2) doped with Cr^{3+}. The emission from the ruby and rutile masers was in the 21- and 10-cm ranges, respectively. The concentration of Cr^{3+} in ruby was 0.03% and in rutile 0.06%, and both masers operated at a temperature of 4.2K. The experimental results indicate that the steady-state amplitude is reached after a series of transient damped oscillations with subsequent exponential

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L 24702-65

ACCESSION NR: AP5001825

attenuation. The differences between the stages of a transient in ruby and rutile masers are discussed. A theoretical analysis of transient processes in masers is carried out on the basis of kinetic equations similar to those used by H. Statz and G. A. de Mars (Quantum Electronics, Columbia University Press, N. Y., 1960, 530 pp.) but generalized for a three-level maser. A solution of a system of nonlinear equations is obtained as a linear approximation in analytical form. The theoretical computations agree well with the experimental data. The results indicate that in a ruby maser oscillations with amplitude equal to, or higher than, the steady state occur. In the case of large deviations of the population and amplitude from the steady-state values, nonlinear effects are very likely to occur. These, in a ruby maser, cause nonsinusoidal oscillations at the start of a transient; the duration of the first peaks is considerably shorter than the duration of those near the steady-state level, where oscillations approach a sinusoidal form. Orig. art. has: 12 formulas and 4 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics, Academy of Sciences, USSR)

Card 2/3

L 24702-65
ACCESSION NR: AP5001825

SUBMITTED: 14May64 ENCL: 00 SUB CODE: EC

NO REF SOV: 003 OTHER: 013 ATD PRESS: 3167

0

Card 3/3

L 27226-65 EWG(j)/EWA(k)/FBD/EWT(1)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/EWA(m)-2/EWA(h) Pn-4/Po-4/Pf-4/Peb/Pi-4/Pl-4 LJP(c) WG

ACCESSION NR: AP5002898 S/0109/65/010/001/0045/0053

47
41
B

AUTHOR: Alfeyev, V. N.; Pimenov, Yu. P.

TITLE: Theory of multiresonator selective through-type quantum amplifiers

25

SOURCE: Radiotekhnika i elektronika, v. 10, no. 1, 1965, 45-53

TOPIC TAGS: quantum amplifier, maser amplifier

ABSTRACT: The shortcomings of existing resonator-type and TW quantum amplifiers regarded as radiotechnical devices are listed. To enable researchers to improve these amplifiers, a new theory is offered; it is based on the classical theory of coupled circuits and on the method of wave S- and T-matrices (scattering and transmission) and general matrices. Two-, three-, and four-resonator amplifiers, some of them containing an active substance, are analyzed. A new "regeneration factor" $\alpha = Q_n/Q_m$ (where Q_n and Q_m are loaded and negative Q-factors, respectively) is introduced. New formulas for gain and

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L 27226-65

2

ACCESSION NR: AP5002898

relative passband (amplitude-frequency characteristic) are developed in terms of the regeneration factor. The case of a preselecting amplifier is also covered. "In conclusion, the authors wish to thank A. M. Prokhorov for his attention to the work and valuable advice, and V. B. Shteynshleyger for his criticisms accepted by the authors." Orig. art. has: 3 figures, 42 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 06Sep63 ENCL: 00 SUB CODE: EC

NO REF SOV: 003 OTHER: 003

Card 2/2

[illegible]

Theory of [illegible] heavy [illegible] [illegible] electron. [illegible]

L 27222-65 EWG(j)/EWA(k)/FBD/EWT(1)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/EWA(m)-2/EWA(h) Pn-4/Po-4/Pf-4/Pab/Pi-4/Pl-4 IJP(c) WG

ACCESSION NR: AP5002899 S/0109/65/010/001/0054/0061

AUTHOR: Alfeyev, V. N.; Pimenov, Yu. P.

54
41
B

TITLE: Theory of multiresonator reflex quantum amplifiers 25

SOURCE: Radiotekhnika i elektronika, v. 10, no. 1, 1965, 54-61

TOPIC TAGS: quantum amplifier, maser amplifier, amplifier

ABSTRACT: Multiresonator reflex amplifiers with an active substance in the last resonator are considered with a view toward widening their passband up to that of TW amplifiers without sacrificing their other valuable characteristics. As circuits with direct or quarter-wave coupling have identical properties, the formulas developed in the article have a general nature. The multiresonator circuit is replaced by an equivalent quadripole whose matrix is used to develop formulas for the power gain, amplitude-frequency characteristic, and relative passband; conditions for maximum flatness of the characteristic are established.

Card 1/2

L 27222-65

ACCESSION NR: AP5002899

2

It is shown that the multiresonator amplifier can ensure the required selectivity and protect the active substance from strong noise. "The authors wish to thank A. M. Prokhorov and V. B. Shteynshleyger for their attention to the work." Orig. art. has: 5 figures and 40 formulas.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: EC

NO REF SOV: 002 OTHER: 002

Card 2/2

ACC NR: AP6017299 SWT(k)/EWT(m)/T/EWT(t)/ETI IJP(c) JH/JD

(A) SOURCE CODE: UR/0130/66/000/005/0083/0085

AUTHORS: Danilkin, V. A.; Grigor'yeva, A. A.; Pimenov, Yu. P.; Chikin, V. A.; Pavlov, Ye. S.

ORG: none

TITLE: Influence of evacuation on the hydrogen and aluminum oxide content in aluminum and its alloys

SOURCE: Tsvetnyye metally, no. 5, 1966, 83-85

TOPIC TAGS: aluminum, vacuum degassing, hydrogen, aluminum oxide / AK6 aluminum alloy, D1 aluminum alloy

ABSTRACT: The effect of degassing on the hydrogen and aluminum oxide content in aluminum and aluminum alloys AK6 and D1 was determined. The investigation supplements the results of M. B. Al'tman i dr. (Liteynyye aluminevyye splavy, Oborongiz, 1961, s. 150). The hydrogen content was determined after V. A. Danilkin i dr. (Zavodskaya laboratoriya, 1961, No. 3) and the aluminum oxide content after the method of O. Z. Werner (Anal. Chem., 1941, 121, S. 299). The experimental results are presented graphically (see Fig. 1). A brief discussion of the necessary and sufficient conditions of the formation of hydrogen bubbles in the melt is presented. The discussion is based on the work of N. M. Chuyko (Gazy v litom metalle. Izd. Nauka, 1964, s. 14). It is concluded that vacuum degassing of aluminum and its

Card 1/2 UDC: 669.715.017

L 37701-66

ACC NR: AP6017299

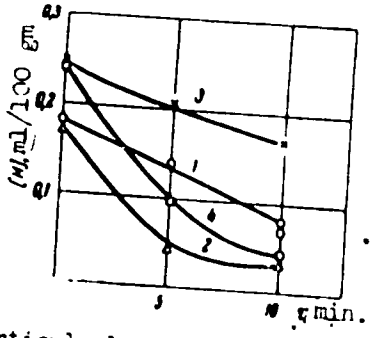

Fig. 1. Dependence of the hydrogen content on the duration of argon purging under vacuum. ($P_{residual}$ = 4 mmHg). 1 - Al, upper layer; 2 - Al, lower layer; 3 - AK6, upper layer; 4 - AK6, lower layer.

alloys, particularly when combined with argon purging, results in a considerable decrease of the hydrogen content of the melt. The vacuum chamber was designed by I. L. Teytel. Orig. art. has: 3 graphs and 2 equations.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 005

Card 2/2

ACC NR: AP7005580 SOURCE CODE: UR/0020/67/172/002/0309/0312

AUTHOR: Yershov, B.V.; Pimenov, Yu.P.; Fedorov, V.B.; Prokhorov, A.M. (Academician)

ORG: Physics Institute im. P.N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Two-photon absorption of CaF_2: Ho^{+++} crystals

SOURCE: AN SSSR. Doklady, v. 172, no. 2, 1967, 309-312

TOPIC TAGS: calcium fluoride, holmium, two photon absorption, luminescence, crystal impurity, PHOTON, LASER RADIATION

ABSTRACT:

An investigation was made of artificially grown CaF_2 crystals containing 0.3 wt% Ho^{+++}. The samples were cylindrical, 1 cm in diameter and 4—5 cm long. They were irradiated, either separately or simultaneously, by a ruby laser and an Nd-glass laser with pulses of 7.8 and 11.3 joules, respectively. Pulse duration was in the millisecond range. The two-photon processes were detected by the green luminescence (λ = 5512 Å) arising after preliminary nonradiative transition from a two-photon-excited absorption level to the initial level $^5S_2$ of this line. The observed two-photon transitions were of three kinds, corresponding respectively to the absorp-

Card 1/2 UDC: 535.37

ACC NR: AP7005580

tion of 2 ruby photons, 2 Nd-glass photons, and 1 ruby photon and 1 Nd-glass photon. As in experiments on $CaF_2 : Eu^{++}$, in which two-photon absorption was first reported [W. Kaiser, C. G. B. Garrett, Phys. Rev. Letters, 7, 1961, p. 229], the nonlinearity of intensity relationships was one of the validity criteria for the assumption of a two-photon mechanism: with only one laser luminescence grew with the square of the irradiation intensity; with two lasers, its magnitude was greater than the sum of the separate effects of each laser. Oscillograms showed that the Nd-glass luminescence lagged approximately 10^{-3} sec behind the ruby luminescence, which indicates a relative slowness of the transition from the $^5F_4$ absorption level to the $^5S_2$ initial level of the green line. The relative timing of the laser pulses could be adjusted by selection of a suitable circuitry. Stimulated luminescence of $CaF_2 : Ho^{+++}$ at 77°K was previously demonstrated by Yu. K. Voron'ko, A. A. Kaminskiy, V. V. Osiko, and A. M. Prokhorov (Pis'ma ZhETF, v. 1, no. 1, 1965, p. 5). Orig. art. has: 2 figures. [JM]

SUB CODE: 20/ SUBM DATE: 12Nov66/ ORIG REF: 002/ OTH REF: 003/
ATD PRESS: 5116

Card 2/2

USSR / Radiophysics

I

Abs Jour : Ref Zhur - Fizika, No 4, 1957, N 9920

Author : Rimenov, Yu.V.
Inst : Leningrad Physical Technical Institute, Leningrad
Title : Steady-State Processes in a Plane Diode with External Magnetic Field

Orig Pub : Zh. tekh. fiziki, 1956, 26, [illegible]

Abstract : The author considers the process of the settling of the initial current in a planar magnetron under the influence of a pulse voltage. The Grinberg total current method is used to solve the problem. At a sufficiently high emission-current density and under the condition that the electrons do not overtake each other, the process of passage of current under the influence of a suddenly applied voltage can be represented in the following manner.

Card : 1/3

USSR / Radiophysics

Abs Jour Ref Zhur - Fizika, No 4, 19[illegible], N 9920 I

Abstract First stage. Prior to application of the voltage, there are no electrons in the interelectrode space. After a pulse voltage is applied there is formed in the interelectrode space an electron layer, which reduces the field at the cathode to zero. The first stage terminates at the instant T when the field at the cathode vanishes.

Second stage. The electron layer formed in the interelectrode space shifts towards the anode, with the front of this layer dividing the interelectrodes space into two parts, one of which containing no electrons, and the other one filled with electrons. The second stage is terminated at the instant T_1, when the frontal electrons reach the anode.

Third stage. The entire interelectrode space is filled with electrons, including those that escaped prior to the instant of time T, as well as those escaping afterwards. The third stage terminates at the instant of time T_2, when the ele-

Card : 2/3

USSR / Radiophysics

Abs Jour Ref Zhur - Fizika, No 4 19[illegible] N [illegible]20 I

Abstract : trons escaping from the cathode at the instant of time T reach the anode.
Fourth stage. The only electrons in the interelectrode space are those that have escaped from the cathode after the instant of time T, when the field at the cathode vanished.
The fundamental equations are derived for various stages of the process at very large emission current density, and by going to the limit the author then considers the case of an infinitely large emission current density and a constant anode voltage.

Card 3/3

Pimenov, Yu. V.

AUTHOR: PIMENOV, YU. V. 57-6-5/36

TITLE: Stabilisation Processes in a Plane Diode with External Magnetic Field. II. (Ustanavlivayushchiyesya protsessy v ploskom diode s vneshnim magnitnym polem, II, Russian)

PERIODICAL: Zhurnal Tekhn.Fiz. 1957, Vol 27, Nr 6, pp 1182-1191 (U.S.S.R.)

ABSTRACT: This is the second part of the work in Zhurnal Tekhn.Fiz., 1956, Vol 26, Nr 9, page 1955. Contrary to this work the author here shows that electrons do not even overtake one another if they turn towards the cathode. Therefore the method given there can also be used for this method of operation. For reasons of simplicity only the case of a constant anode voltage and of an infinitely great emission is investigated. The character of the electron motion in the magnetron after the turn of the head electrons is analyzed and the author shows that the formation of counterflows immediately after the turn of the head electrode is not possible and that in reality a compression of the electron cloud takes part without mixing the particles. The single stages of the process are investigated and the corresponding formulae are deduced.

Card 1/2

PIMENOV, Yu. V.

AUTHORS: Grinberg, G. A., Pimenov, Yu. V. 57-10-19/33

TITLE: On Diffraction of Electromagnetic Waves on Infinitely Thin Ideally-Conducting Flat Screens (K voprosu o diffraktsii elektromagnitnykh voln na beskonechno tonkikh ideal'no provodyashchikh ploskikh ekranakh)

PERIODICAL: Zhurnal Tekhn.Fiz., 1957, Vol. 27, Nr 10, pp. 2326-2339 (USSR)

ABSTRACT: A new method for the solution of difraction problems of the electromagnetic waves on infinitely thin ideally-conducting screens is given. The method is based upon the solution of two independent integral equations with simple structure and is on principle to be used for flat screens of every form. The necessity of taking into account the socalled conditions at the fin which determine the character of the possible specialities of an electromagnetic field at a sharp edge of the infinitely thin ideally-conducting screen is removed here. These conditions are replaced by the obvious demand for the approaching to zero of the component normal to the circuit of the current induced to the screen. It appears from the obtained equation that in the case of sufficeintly small values of kl (k = the wave number and l = a certain length which characterizes the dimensions of the screen) the solution of the investigated wave problem is taken back to such one of a series of successive electrostatic problems

Card 1/2

On Diffraction of Electromagnetic Waves on Infinitely Thin Ideally-57-[illegible] Conducting Flat Screens.

The suggested method is demonstrated by the investigation of the diffraction on an infinitely thin andideally-conducting disk There are 4 Slavic references.

ASSOCIATION: Leningrad Physical Technical Institute of the AN USSR (Leningradskiy fiziko-tekhnicheskiy institut AN SSSR)

SUBMITTED: April 15, 1957

AVAILABLE: Library of Congress.

Card 2/2

24(4)(3)

AUTHORS: Grinberg, G.A., Pimenov, Yu.V. SOV/57-28-10-12/20

TITLE: Plane Problem of Diffraction on a Parabolic Cylinder With Finite Dimensions (Ploskaya zadacha diffraktsii dlya parabolicheskogo tsilindra konechnogo razmera)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, Vol 28, Nr 10, pp 2301-2306 USSR

ABSTRACT: This is a study of the plane problem of diffraction of electromagnetic waves on infinitely thin, ideally conducting and finite screens. The boundary case is investigated where the wave length by far exceeds the dimensions of the screens. As an example this paper includes an approach to the problem of reflection of electromagnetic waves on a parabolic section of a cylinder of finite dimensions. It is assumed that the primary field is generated by an oscillator in the focal point of the field. It is shown that even at wave lengths which by far exceed the dimensions of the mirror a certain directivity of radiation may be found. E.N. Kolesnikova and T.A. Chernova helped with the calculations. There are 2 figures and 1 reference, [illegible] is Soviet.

Card 1/2

24.3000

AUTHORS: Grinberg, G. A., Pimenov, Yu. V.

TITLE: On the Subject of Diffraction of Electromagnetic Waves by an Ideally Conducting Plane With a Round Hole

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1959, Vol 29, Nr 10, pp 1211-1211 (USSR)

ABSTRACT: The paper states that in Ref 1-3 a method was given for the solution of problems of diffraction of plane electromagnetic waves by ideally conducting planes. In the present study this method is applied to a case of planes having a round hole. The study is limited by the assumption that $\gamma = ka = 2\pi a/\lambda \gg 1$, where λ is the wavelength, k is the wave number, and a is the radius of the hole. The formulas developed are, strictly speaking, approximate, but it is claimed that at values of $\gamma = 5$ they give radiation characteristics very close to exact. First, equations are given for determining the components of the "shadow currents" $\vec{j}_2$; i.e., currents induced on the shady side of the screen, for the case of a normal impinging of a plane wave. Through a series of manipulations and integration within the boundary limits of $b = \eta - \xi$ and $d = \eta + \xi$, where $\eta \geq 1$

Card 1/3

On the Subject of Diffraction of Electromagnetic Waves by an Ideally Conducting Plane With a Round Hole

75326
SOV/[illegible]

and [illegible], two systems of equations are obtained, one for moderate values of and the other for sufficiently large values, the values for not being numerically given. From these equations the "shadow currents" may be determined. When the wavelength is small compared to the diameter of the hole, these currents decrease rapidly as the distance from the edge of the hole increases. The full current is then calculated as per Ref 1. To this purpose the vector potential A corresponding to the full current is first determined from a system of equations given by the author for two cases: when the "shadow currents" must be accounted for and when they are so small that they may be neglected. In the latter case the Huygens-Kirchoff principle allows one to simplify the equations for vector potential A. The greater the value of λ the more correct is the result obtained by using the method presented in the paper. Figures are shown on which the exact curves of variation of radiation values are represented, as well as those obtained by applying the expressions developed in the paper for the cases

Card 2/3

On the Subject [illegible]
Waves by an Ideally [illegible]
Hole

When the "[illegible]" [illegible]
[illegible] N. Solov'yeva, N. [illegible] Chem. [illegible]
[illegible]
There are [illegible]

ASSOCIATION: Technical Physics Institute, Academy of Sciences, [illegible]
Leningrad Physics Institute, AN [illegible])

SUBMITTED: February [illegible]

Card 3/3

YEROKHIMOVICH, Yu.I.; [illegible], I.V. (Moskva)

Calculation of a specific integral containing Bessel's function. Zhur. vych. mat. i mat. fiz. 4 no.3:596-599 My-Je '64. ([illegible])

YERUKHIMOVICH, Yu.A.; PIMENOV, Yu.V.

Diffraction of a plane electromagnetic wave by an ideally conductive sphere with a large diameter. Radiotekh. i elektron. 8 no.3:394-399 Mr '63. (MIRA 16:3)
(Electromagnetic waves--Diffraction)

S/109/63/008/003/004/027
D413/D308

AUTHORS: Yerukhimovich, Yu. A., and Pimenov, Yu. V.

TITLE: The diffraction of a plane electromagnetic wave on an ideally-conducting sphere of large diameter

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 3, 1963, 394-399

TEXT: A solution is obtained by the Huyghens-Kirchhoff method (i.e., by assuming the induced current density on the illuminated surface to be proportional to the magnetic component of the external field) to the diffraction of a plane electromagnetic wave on an ideally-conducting sphere of large diame; the components of the secondary field are expressed in terms of Lommel and Bessel functions. Computed values of the components for $2\pi a/\lambda = 5$ and 10 (a being the radius of the sphere) are shown graphically and compared with accurate values derived from Fedorov's

Card 1/2

The diffraction of... S/109/63/008/003/004/027
D413/D308

asymptotic solution (Radiotekhnika i elektronika, v. 3, no. 12, 1958, 1451). This comparison indicates the limits of validity of the method, which may be useful in giving approximate solutions for diffraction on a sphere and certain other bodies of revolution. The authors thank G. Z. Ayzenberg for his advice, and also mention B. Ye. Kinber and A. A. Fedorov. There are 3 figures.

SUBMITTED: March 17, 1962

Card 2/2

PIMENOVA, A.M., kand.med.nauk

Treatment of alveolar pains following tooth extraction. Stomatologiia 38 no.6:62-64 N-D '59. (MIRA 13:4)

1. Iz kafedry khirurgicheskoy stomatologii (zav. - prof. A.I. Yevdokimov) Moskovskogo meditsinskogo stomatologicheskogo instituta (direktor - dotsent G.N. Beletskiy).
(TEETH--DISEASES)

PIMENOVA, A.M., kand.med.nauk

Comparative characteristic of methods for the surgical treatment of cysts of the jaws. Stomatologiia 36 no.1:37-40 Ja-F '57. (MIRA 11:1)

1. Iz kafedry khirurgicheskoy stomatologii (zav. - prof. A.I. Yevdokimov) Moskovskogo meditsinskogo stomatologicheskogo instituta (dir. - dotsent G.N.Beletskiy)

(JAWS--SURGERY) (CYSTS)

PIMENOVA, A. M.

Dissertation: "A Comparison of Methods of Surgical Treatment of Maxillary Cysts (Cystectomy and 'Tsistoromiya' (Cystotomy?)." Cand Med Sci, Moscow Medical Stomatological Inst, Ministry of Health RSFSR, Moscow, 21 Jun 54. (Meditsinskiy Rabotnik, Moscow, 4 Jun 54.

SO: SUM 318, 23 Dec. 1954.

1. PIMENOVA, A. S.

2. USSR (600)

7. "Typhula Fungus in the Storage of Cabbage", Sad i Ogorod, No 3, 1951, p 78.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

PIMENOVA, A. S.

"Diseases of Melons and Watermelons in Northern Regions," Sad i Ogorod, no. 6, 1949, pp. 72-75. 80 Sal3

So: Sira-Si-90-53, 15 Dec. 1953

PIMENOVA, A. S.

"Antiseptic Watering as a Method of Controlling Streak of Tomatoes," Sad i Ogorod, no. 4, 1949, pp. 71-72. 80 Sel'

So: Sira-si-90-53, 15 Dec. 1953

PIMENOVA, A. S.

"Diseases of Vegetable Seed Plants," Sa. [illegible], [illegible] 4-5, 1948 pp. 19-23. SO Sal3

So: Sira-Si-90-53, 15 Dec. 1953

PIMENOVA, A. S.

20888. Pimenova, A. S. Bolezni dyn' i arbuzov v severnykl rayonakl. sad i ogorod, 1949, No. 6, s. 72-75.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949.

IMENOVA, A. S.

Cabbage - Diseases and Pests

Mucous bacterial blight of cabbage and the fight against it. Sad i ogr., No. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1953, Unclassified.

GORELYSHEV, N.V., dots., kand.tekhn.nauk; AKIMOVA, T.N., student; PIMENOVA, I.I., student

Mechanical properties of bitumen in thin layers. Trudy MADI no.23:42-54 '58. (MIRA 12:1)
(Asphalt concrete) (Bitumen)

KAN, G.S., starshiy nauchnyy sotrudnik; PIMENOVA, K.A., mladshiy nauchnyy sotrudnik

Effect of streptomycin on the respiratory reflexes appearing during stimulation in chronic experiments on the chemoreceptors of the carotid sinus using lobeline. K izuch.roli nerv.sist.v pat., immun.i lech.tub. no.2:331-340 '61. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - G.S.Kan) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza.

(LOBELINE) (STREPTOMYCIN) (CAROTID SINUS--INNERVATION) (RESPIRATION) (REFLEXES)

PIMENOVA, K.A.

Effect of pneumoperitoneum on aseptic leucocytosis induced by parenteral infusion of milk [with summary in English]. Biul.eksp. biol. i med. 43 no.4:57-60 Ap '57. (MIRA 10:10)

1. Iz eksperimental'nogo otdela (zav. - kand.med.nauk G.S.Kan) Leningradskogo instituta tuberkuleza (dir. - prof. A.D.Semenov, nauchnyy konsul'tant - deystvitel'nyy chlen AMN SSSR V.N.Chernigovskiy). Predstavlena deystvitel'nym chlenom AMN SSSR. V.N. Chernigovskim.

(PNEUMOPERITONEUM, ARTIFICIAL, eff.
on aseptic leukocytosis induced by parenteral infusion of boiled milk in cats)

(LEUCOCYTOSIS, exper.
aseptic, induced by parenteral infusion of boiled milk in cats, eff. of artif. pneumoperitoneum)

PIMENOVA, K.A.

Effect of pneumoperitoneum on an inflammatory reaction of the rabbit ear caused by thermal burn. [with summary in English]. Biul. eksp.biol. i med. 46 no.8:41-44 Ag '58 (MIRA 11:10)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - kand.med.nauk G.S. Kan) Leningradskogo instituta tuberkuleza imeni A.Ya. Shternberga (dir. - prof. A.D. Semenov, nauchnyy konsul'tant - deystvitel'nyy ch[illegible] AMN SSSR V.N. Chernigovskiy) Predstavlena deystvitel'nym chlenom AMN SSSR V.N. Chernigovskim.

(PNEUMOPERITONEUM, ARTIFICIAL, eff.
on exper. inflamm. reaction induced by thermal burn in rabbit ear, neurol. significance (Rus))

(INFLAMMATION, exper.
eff. of artif pneumoperitoneum on inflamm. reaction induced by thermal burn in rabbit ear, neurol. significance (Rus))

PIMENOVA, K.A., mladshiy nauchnyy sotrudnik

Changes in some indices of the function of external respiration and blood circulation in rabbits during the formation of postvaccinal immunity to tuberculosis. K izuch.roli nerv.sist.v pat., immun.i lech.tub. no.2:281-287 '62. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - G.S.Kan) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza.
(BCG VACCINATION) (RESPIRATION) (TUBERCULOSIS)(BLOOD--EXAMINATION)

PIMENOVA, K.A., mladshiy nauchnyy sotrudnik

Physiological premises for understanding the mechanism of the action of therapeutic pneumoperitoneum. K izuch.roli nerv.sist.v pat., immun.i lech.tub. no.2:349-359 '61. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii terapii (zav. - G.S.Kan) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza.

(PNEUMOPERITONEUM, ARTIFICIAL) (TUBERCULOSIS)

ZLATKINA, T.I., mladshiy nauchnyy sotrudnik; KAN, G.S., starshiy nauchnyy sotrudnik; PIMENOVA, K.A., mladshiy nauchnyy sotrudnik

Effect of streptomycin on the oxygen content in the arterial blood of health rabbits. K izuch.roli nerv.sist.v pat., immun.i lech.tub. no.2:327-330 '61. (MIRA 15:10)

1. Iz laboratorii eksperimental'noy patologii i terapii (zav. - G.S.Kan) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza.

(STREPTOMYCIN) (BLOOD--OXYGEN CONTENT)

PIMEN

USSR/General Problems of Pathology - Inflammation. T-1

Abs Jour : Ref Zhur - Biol., No 4, 1958, 17145

Author : Pimenova, K.A.
Inst : -
Title : The Effect of Pneumoperitoneum on Aseptic Leucocytosis Caused by the Parenteral Injection of Milk.

Orig Pub : Byul. eksperim. biol. i meditsiny, 1957, 43, No 4, 57-60.

Abstract : An aseptic intramuscular injection of 3 ml of milk caused the development of leucocytosis in cats. An injection of 100-150 ml of air into the peritoneal cavity somewhat weakened the leucocytic reaction, whereas an injection of 300-400 ml caused its accentuation.

Card 1/1

PIMENOVA, K.A.(Leningrad)

Data on neural mechanisms in febrile reactions. Arkh.pat. 17 no.3:3-8 Jl-S '55. (MLRA 8:12)

1. Iz otdela eksperimental'noy patologii (zav.-kandidat meditsinskikh nauk G.S.Kan) Leningradskogo tuberkuleznogo instituta (dir.-kandidat meditsinskikh nauk A.D.Semenov, nauchnyy konsul'tant-deystvitel'nyy chlen AMN SSSR prof. V.N.Chernigovskiy)

(FEVER, experimental,
induced with killed Bacillus mesentericus, neural mechanism)

(BACILLUS
mesentericus, induction of exper.fever with killed cultures neural mechanism)

(NERVOUS SYSTEM, physiology,
regulation of exper.fever induced with killed Bacillus mesentericus)

PIMENOVA, K. A.:

PIMENOVA, K. A: "Experimental material on a study of the mechanism of therapeutic pneymonperitoneum." State Order of Lenin Inst for the Advanced Training of Physicians imeni S. M. Kirov, Leningrad, 1956. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN MEDICAL SCIENCE.)

SO: Knizhnaya Letopis', No. 18, 1956

KALYUZHNAYA, P.F.; PIMENOVA, K.N.; GAVRILOVA, Z.I.

Rate of discharge of iron, nickel, and chromium ions during the electrolytic deposition of a Fe-Ni-Cr alloy. Ukr.khim.zhur. 30 no.11:1141-1142 '64. (MIRA 18:1)

L 17820-65 EWT(m)/EWP(t)/EWP(b) Pad IJP(c)/ASD(m)-3 JD/HW/JG
ACCESSION NR: AP4045198 S/0080/64/037/009/2060/2061

AUTHORS: Kalyuzhnaya, P.F.; Pimenova, K.N.; Gavrilova, Z.P.

TITLE: Internal stresses in electrolytic deposits of Fe-Ni-Cr alloy

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 9, 1964, 2060-2061

TOPIC TAGS: Fe Ni Cr alloy, electrodeposition, electroplating, internal stress, stressed electrodeposit, hydrogen effect, anodic pretreatment, alternating current application, cathode surface cleaning, oxide film formation, electroplate adhesion, current yield

ABSTRACT: The possibility of overcoming the effect of hydrogen on the properties of Fe-Ni-Cr cathodic electrodeposits by applying an alternating current on the direct current in the electrolysis process, and by anodic pretreatment of the cathodic surface was investigated. Application of AC (using AC:DC current density ratios of 1:3, 1:4, 1:6, 1:8, 1:12) somewhat reduced stresses in the electrodeposit, but independently of the current density ratios. However, the current yield decreased, especially at high AC current densities. Preliminary 20-30 second anodic treatment of the cathode surface with 10% NaOH cleaned the surface of impurities and promoted forma-

Card 1/2

L 17820-65
ACCESSION NR: AP4045198

tion of a thin oxide film which was not strongly bonded to the metal and readily combined with the hydrogen at the cathode at the start of the electrolysis. The Fe-Ni-Cr deposits on such pretreated cathodes have less stresses and improved adhesion to the base metal. Prolonged anodic treatment of the steel samples caused formation of the oxide film as a separate phase which hindered formation of a strong bond between the electrodeposit and the base [illegible]

ASSOCIATION: None

SUBMITTED: 18Jul63 ENCL: 00

SUB CODE: GC NR REF SOV: 003 OTHER: 000

Card 2/2

KALYUZHNAYA, P.F.; PIMENOVA, K.N.

Electrolytic coating of metals with a Fe-Ni-Cr alloy.
Zhur.prikl.khim. 35 no.5:1057-1065 My '62. (MIRA 15:
(Iron-nickel-chromium alloys)
(Protective coatings)

37[illegible]

S/080/62/035/005/008/015
D204/D307

AUTHORS: Kalyuzhnaya, P. F. and Pimenova, K. N.

TITLE: The electrolytic coating of metals with a Fe-Ni-Cr alloy

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 5, 1962, 10[illegible]-1065

TEXT: The present work was carried out to determine the possibility of preparing corrosion resistant Fe-Ni-Cr coatings electrolytically. The following conditions were found to be optimum: electrolyte - $KCr(SO_4)_2 \cdot 12H_2O$ 400, $NiSO_4 \cdot 7H_2O$ 50, $(NH_4)_2SO_4 \cdot FeSO_4 \cdot 6H_2O$ 35, trisodium citrate 70 and NaF 5 g/l; pH 1.6 - 1.8; [illegible] (1Kh18N9T) steel anodes; cathode current density (D) 14 - 16 amp/dm² at 25°C and 18-20 amp/dm² at 40°C. At 25°C the Cr content of the coating decreased and that of Fe increased with D, up to a minimum/maximum at 14 - 16 amp/dm² and rose/fell thereafter; the Ni content was almost independent of D. At 40°C the Cr rose to a

Card 1/3

The electrolytic coating ... S/080/62/035/008/[illegible]
S204/S307

maximum at 22 amp/dm^2, Fe decreased and Ni went through a [illegible] at 15 - 20 amp/dm^2 with increasing D. Current efficiency [illegible] the alloy, Cr and Fe rose with increasing D; $\eta_{Ni} \propto D$. Current efficiencies η_{alloy} and η_{Fe} decreased with increasing temperature [illegible] D = [illegible] amp/dm^2 to a minimum at 30°C and increased with temperature [illegible] at D = [illegible] amp/dm^2, to a maximum at 40°C. η_{Cr} decreased with [illegible] temperature and η_{Ni} remained constant at D's equal to [illegible] amp/dm^2. Best results were obtained using a bell with [illegible] (250 g H_2SO_4/l is the anolyte) and maintaining the pH of the [illegible] anolyte at 1.8 - [illegible] throughout the process, with D = [illegible] - [illegible] amp/dm^2, at 25 - 30°C, with a current efficiency ≤15%. Coatings [illegible] were weakly bonded to the metal base, but could be made adherent by heating in vacuum for 5 hours at 1000°C. Microhardness of the alloy was equal to that of 1Kh18N9T sheet steel before and was ~15% lower after the hot-vacuum treatment. The coatings were resistant to 5% H_2SO_4 but tended to flake off owing to dissolution.

Card 2/3

The electrolytic coating ... S/080/62/035/005/004/015
S204/S307

of the base metal through fine cracks. There are 5 figures and
4 tables.

SUBMITTED: May 5, 1961

Card 3/3

OSTROVSKIY, N.I.; LIBIZOV, N.I.; DOBROVOL'SKAYA, A.P.; PIMENOVA, L.D.; SEMENOVA, L.P.

Alkaloids in ergot as related to habitat in the U.S.S.R. [with summary in English]. Apt.delo 8 no.1:29-34 Ja-F '59. (MIRA 12:2)

1. Iz Vsesoyuznogo nauchno-issledovatel'skogo instituta lekarstvennykh i aromaticheskikh rasteniy Ministerstva zdravookhraneniya SSSR.

(ERGOT) (ALKALOIDS)

ZAPUTRYAYEV, B.A.; KHALETSKIY, A.M.; PIMENOVA, L.D.

Synthesis of aryl amides of 2-oxocyclopentanecarboxylic acid. Zhur. ob. khim. 31 no. 2:387-389 F '61. (MIRA 14:2)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Cyclopentanecarboxylic acid)

ZAPUTRYAYEV, B.A.; KHALETSKIY, A.M.; PIMENOVA, L.D.

Bromination of methyl 2-oxocyclopentanecarboxylate. Zhur. ob. khim. 31 no.3:737-739 Mr '61. (MIRA 14:3)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(Cyclopentanecarboylic acid) (Bromination)

PIMENOVA, L.M.

Development of students' independence in the course of their work in industry. Politekh.obuch. no.11:43-47 N '59.
(MIRA 13:2)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
(Leningrad--Vocational education)
(Field work (Educational method))

See: [illegible]

[illegible]

S : [illegible]

PIMENOVA, M. I., Cand Biol Sci -- (diss) "Comparative characteristics of certain lactic streptococci." Mos, 1957. 18 pp with diagrams (Mos Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov), 110 copies (KL, 52-57, 105)

NAZAROVA, Z.N.; PIMENOVA, M.I.

5-haloidfurylacrylic acids and their derivatives. Zhur.ob.khim. 27 no.10:2842-2845 O '57. (MIRA 11:4)

1.Rostovskiy na Donu gosudarstvennyy universitet.
(Acrylic acid)

CA

19

The ceramic clays of the regions of Amvrosiyevka and Kostyantynivka. N. Pimenova. *J. Geol.* (U. S. S. R.) 6, No. 2, 95-7(1939); *Chem. Zentr.* 1943, I, 1819.—The ceramic clays of the Amvrosiyevka region lie directly on

METALLURGICAL LITERATURE CLASSIFICATION

DIKILNOVA M. M.

USSR/Microbiology. General Microbiology. Physiology and Biochemistry

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 62260

Author : Dikilnova M.M.
Inst : -
Title : Acetoin and Diacetyl in the Metabolism of Lacto-Lactic Streptococci

Orig Pub : Mikrobiologiya, 1957, 26, No 3, 263-270

Abstract : The physiologic properties of 3 strains of lactic acid streptococci were studied, from which one (23-x) was related to Streptococcus lactis, and two (714 and 13) -- to Str. diacetylactis; by fermenting the glucose of the first two it was proved that they were homo-fermenting, and the latter -- fetero-fermenting. The fermentation was studied on media with glucose and salts of organic acids. Addition, to the medium, of pyruvate on a glucose base caused the formation

Card : 1/2

USSR/Microbiology - General Microbiology. Systematics, Morphology, F
Cytology.

Abs Jour : Ref Zhur Biol., No 22, 1958, 99199

Author : Pimenova, M.N.
Inst : -
Title : Certain Observations on the Systematics of Lactic Acid Streptococci

Orig Pub : Mikrobiologiya, 1958, 27, No 2, 177-181

Abstract : The author considers Streptococcus diacetilactis not as a variant of S. lactis, but as an independent species. To distinguish them from S. diacetilactis, a series of lactic acid streptococci were named S. acetoinicus.

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AUTHOR Pimenova, M N, Maksimova, I V and Balitskaya, R M

TITLE Studies on the composition of microflora accompanying algae during their mass cultivation in open reservoirs

PERIODICAL Mikrobiologiya, v 31, no 2, 1962, 332 338

TEXT Occasionally bacterial contaminants may amount to 50% of the total population of a reservoir inoculated with *Chlorella vulgaris* and *Ankistrodesmus* The bulk of contaminant bacteria are non-sporeforming organisms belonging to the following four genera *Pseudomonas*, *Flavobacterium*, *Acromobacter* and *Serratia* Pseudomonads prevail The number of sporeforming bacteria is usually small but they tend to increase under conditions unfavorable for the growth of algae Oligonitrophils are frequently present and the presence of cellulose decomposing bacteria was also noted Fungi are infrequently encountered, being mainl represented by organisms belonging to the genus *Trichoderma* Nitrifying bacteria and *Azotobacter* were not detected Bacteria found in reservoirs inoculated with *Chlorella* are more numerous than those present in reservoirs inoculated with *Ankistrodesmus*

ASSOCIATION Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta im M V Lomonosova (Department of Soil Biology, Moscow State University, im M V Lomonosov)

SUBMITTED June 16, 1961

Card 1/1

L1590

S/220/62/031/005/002/002
D291/D308

AUTHORS: Maximova. I.V. and Pimenova, M.N.

TITLE: The effect of antibiotics on the growth of Chlorella vulgaris and associated microflora in a joint culture

PERIODICAL: Mikrobiologiya, v. 31, no. 5, 1962, 904-909

TEXT: The effect of various concentrations of several antibiotics on the growth of Chlorella vulgaris strain 87 and colonies of Pseudomonas ovalis, Achromobacter harthlebii and Bacillus cereus, cultured in modified Craig-Trellis medium in 250 ml flasks, was studied; the cultures were continuously stirred and an air-CO_2 mixture was bubbled through. It was observed that the antibiotic concent rations capable of inhibiting the growth of Chlorella were considerably less when the cultures were subjected to continuous stirring. With the exception of nistatin, all the antibiotics tested were found to be capable of inhibiting bacterial growth at concentrations which did not retard

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The effect of antibiotics ... S/220/62/031/005/002/002
D291/D308

the growth of Chlorella. These were as follows: penicillin, 500 Y/ml.; laevomycetin, 35 /ml.; colimycin, 5 /ml.; and tetracyclin, 25 /ml.. No adverse effect on the photosynthesis of the algae was caused by these concentrations. The possibility of adaptation of Chlorella to relatively high concentrations of antibiotics in the growth medium was explored. Some evidence of adaptation, as measured by a more gradual reduction in growth than that occurring in control cultures subjected to an identical antibiotic treatment, was noted. A detailed study was made of the effect of laevomycetin (at a concentration of 25 /ml.) on mixed algal-bacterial cultures. It was observed that the rates of reproduction of B. cereus and Ps. ovalis were greatly reduced, while the growth of A. harthlebii was completely inhibited. No adverse effects on Chlorella were noted and the activity of the antibiotic remained constant during several days of observation. There are 3 figures and 4 tables.

ASSOCIATION: Biologo-pochvenyy fakultet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova (Faculty of Biology and Soil Science, Moscow State University im. M.V. Lomonosov)

Card 2/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001340910013-9"

L 27421-66 EWT(1) SCTB DD

ACC NR: AP6017697 SOURCE CODE: UR/0220/65/034/003/0483/0490

AUTHOR: Maksimova, I. V.; Toropova, Ye. G.; Pimenova, M. N.

ORG: Soil Biology Faculty, Moscow State University im. M. V. Lomonosov (Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Release of organic matter by green algae grown in mineral media

SOURCE: AN SSSR. Mikrobiologiya, v. 34, no. 3, 1965, 483-490

TOPIC TAGS: algae, chlorella, plant development, microbiology

ABSTRACT: When Chlorella pyrenoidosa and Chlorella vulgaris are grown in liquid mineral media, a substantial amount of organic matter accumulates in the filtrate, the amount increasing with the yield of algae. The ratio of the amount of organic matter in the medium to the amount of organic matter in the cells changes in the course of algal development. During the first two days, when the yield is small, the organic matter of the filtrate is about 30% of that in the cells. This value then decreases, ranging from 5 to 10% throughout the development of the culture. Light intensity and temperature have no appreciable effect on the accumulation of organic matter in the medium. Different species of chlorella release into the medium approximately the same amount of organic matter per unit of biomass.

Cell autolysis is not the main reason for the accumulation of organic

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matter in the medium. The increase in content of organic matter in the medium results chiefly from increase in the algal yield and is probably to be ascribed to the entry into the medium of organic matter from the maternal cell that does not take part in the formation of aplanospores and is released at the moment they leave the cell. The authors thank Professor V. N. Shanenko for his attention in this work. Orig. art. has: 2 figures and 3 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 14Feb64 / ORIG REF: 005 / OTH REF: 010

Card 2/2

PIMENOVA, M.N.; POLYANSKAYA, G.G.; SHVARTSMAN, P. Ya.; YANUSH, I.M.

Study of the mutagenic action of a medium containing ethylenimine on Drosophila larvae. Vest. LGU 19 no.21:153-155 '64
(MIRA 18:1)

ACCESSION NR: AP4031822

S/0220/64/033/002/0221/0223

AUTHOR: Shaposhnikov, V. N.; Pimenova, M. N.; Maksimova, I. V.; Zhdannikova, Ye. N.; Ramenskaya, A. A.

TITLE: Seasonal periodicity in the growth of green algae under laboratory conditions

SOURCE: Mikrobiologiya, v. 33, no. 2, 1964, 221-223

TOPIC TAGS: algae cultivation, Chlorella vulgaris, Chlorella ellipsoidea, Scenedesmus obliquus, Scenedesmus quadricauda, Ankistrodesmus falcatus

ABSTRACT: A two-year study was made of the growth of algae under laboratory conditions, that is, constant composition of medium, temperature, and illumination. The investigations were conducted with pure cultures of Chlorella vulgaris (strain 87), Chlorella ellipsoidea, Scenedesmus obliquus, Scenedesmus quadricauda, and Ankistrodesmus falcatus. The nutrient medium for Chlorella consisted of KNO_3, 1.82 g/l; K_2HPO_4, 0.42 g/l; $MgSO_4 \cdot 7H_2O$, 0.96 g/l;

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ACCESSION NR: AP4031822

$FeSO_4$, 0.005 g/l; $CaCl_2$, 0.011; EDTA, 0.1 g/l, and Arnon microelement solutions, A_4 (1 ml) and B_7 (1 ml). Scenedesmus and Ankistrodesmus algae were grown in a nutrient medium consisting of $Ca(NO_3)_2 \cdot 4H_2O$, 2.0 g/l; K_2HPO_4, 0.36 mg/l; $MgSO_4 \cdot 7H_2O$, 0.2 g/l; $FeSO_4$, 0.005 g/l; EDTA, 0.1 g/l, and Arnon microelement solutions, A_4 (1 ml) and B_7 (1 ml). The initial pH of the medium ranged from 5.3 to 5.6. Air containing 2% CO_2 was bubbled through the suspension continuously (that is, 24 hours per day). TBS-30 lamps with a light intensity of 2000 lux at 27—28C were used for illumination. The experiments which were conducted through 1961 and 1962 produced quite similar data. No seasonal periodicity was observed in the development of algae grown under laboratory conditions. The number of cells was determined monthly in the 7- and 10-day yields with a difference not exceeding 20—30%. Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 31Jan63 DATE ACQ: 07May64 ENCL: 00

SUB CODE: LS NO REF SOV: 010 OTHER: 001

Card 2/2

ZHDANNIKOVA, Ye.N.; PIMENOVA, M.N.; MAKSIMOVA, I.V.; BALITSKAYA, R.M.

Preservation of algal collections; lasting preservation of protococcal algae on agar slants and in sand at 3-4° C. Vest. Mosk.un.Ser.6: Biol., pochv. 19 no.1:45-49 Ja-F '64. (MIRA 17:4)

1. Kafedra mikrobiologii Moskovskogo universiteta.

MAKSIMOVA, I.V., TOBOLOVA, Ye.G.; PIMENOVA, M.N.

Release of organic substances by green algae, grown on mineral media. Mikrobiologiia 34 no.3:483-490 My-Je '65. (MIRA 18:11)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.